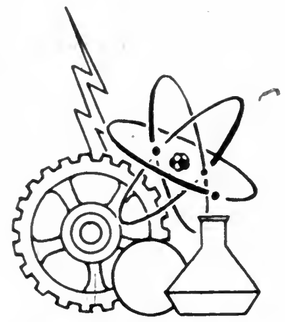
Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

July 3, 1962 ✦ Volume 780 ✦ Number 1



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 3, 1962 Volume 780 Number 1

PATENTS

NOTICES

Annual Index of Patents

The 1961 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price: Buckram bound, $6.00.

Foreign Patents Received in the Scientific Library as of May 31, 1962

Source	Date received	Highest number
Australia:		
(*Abstracts*)	Apr. 18, 1961	63,890
(*Patents*)	May 23, 1962	236,249
Austria	May 31, 1962	221,050
Belgium	May 24, 1962	572,100
Canada	May 28, 1962	641,401
Czechoslovakia	Apr. 27, 1962	100,300
Denmark	May 10, 1962	92,445
East Germany	May 21, 1962	23,090
Egypt	Apr. 20, 1962	2,606
Finland	May 7, 1962	32,010
France:		
(*Patents*)	May 21, 1962	1,278,400
(*Medicaments*)	Mar. 22, 1962	300M
(*Additions*)	May 21, 1962	76,850
Germany:		
(*Auslegeschriften*)	Apr. 27, 1962	1,124,890
(*Patents*)	Apr. 3, 1962	1,109,847
Great Britain	May 31, 1962	896,850
India	Dec. 6, 1961	75,131
Ireland	May 1, 1962	23,050
Italy	May 16, 1962	587,000
Japan	May 31, 1962	900/62
Netherlands	May 7, 1962	101,153
Norway	May 10, 1962	99,794
Pakistan	Apr. 26, 1962	110,398
Philippine Republic	Apr. 13, 1962	458
Poland	May 21, 1962	45,795
Rumania	Mar. 15, 1962	41,632
Sweden	Mar. 20, 1962	178,079
Switzerland	May 17, 1962	360,957
U.S.S.R.	May 24, 1962	145,485

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

Disclaimers

2,627,676.—*Nathan Hack*, Santa Monica, Calif. CORRUGATED SOLE AND HEEL TREAD FOR SHOES. Patent dated Feb. 10, 1953. Disclaimer filed May 28, 1962, by the assignee, *Ripple Sole Corporation*.

Hereby enters this disclaimer to claims 1 to 5 inclusive of said patent.

2,806,904.—*Ralph B. Atkinson*, Beverly Hills, and *Steven G. Ellis*, Van Nuys, Calif. VARIABLE AREA MAGNETIC RECORDING APPARATUS. Patent dated Sept. 17, 1957. Disclaimer filed June 6, 1962, by the assignee, *Ralph B. Atkinson*.

Hereby enters this disclaimer to claims 1 and 4 of said patent.

Adjudicated Patents

(C.A.N.C.) Neely Patent No. 2,480,667 (267—107), for wire spring for upholstered spring structures, *Held* invalid and infringed. *Universal Inc.* v. *Kay Mfg. Corp.*, 301 F.2d 140; 133 USPQ 121.

(D.C. Pa.) Sendzimir Patent No. 2,110,893 (117—71), for process for coating metallic objects with layers of other metals, *Held* invalid and not infringed. *Armco Steel Corp.* v. *U.S. Steel Corp.*, 203 F. Supp. 654; 132 USPQ 542.

(D.C. Pa.) Sendzimir Patent No. 2,136,957 (118—28), for apparatus for coating metallic objects with layers of other metals, *Held* invalid and not infringed. *Id.*

(D.C. Pa.) Sendzimir Patent No. 2,197,622 (117—51), for process for galvanizing sheet metal, *Held* invalid and not infringed. *Id.*

(D.C. Mich.) Bain Patent No. 2,667,750 (61—40), for method and apparatus for sinking shafts. Claims 1–3 *Held* invalid and not infringed. *Bain* v. *M. A. Hanna Company*, 203 F. Supp. 379; 133 USPQ 592.

(D.C. Md.) Starkey and Ramsburg Patent No. 2,685,536 (117—93), for method for electrostatically coating articles. Claims 1 to 11 *Held* valid and infringed. *Ramsburg Electro-Coating Corp.* v. *Proctor Elec. Co.*, 203 F. Supp. 235; 133 USPQ 3.

(D.C. Md.) Starkey and Ramsburg Patent No. 2,794,417 (118—626), for apparatus for electrostatically coating articles. Claims 3 and 4 *Held* valid and infringed. *Id.*

New Applications Received During May 1962

Patents	7,782
Designs	453
Plant Patents	12
Reissues	29
Total	8,276

Issue

Patents	1,310	No. 3,041,614 to No. 3,042,923, incl.
Designs	35	No. 193,130 to No. 193,164, incl.
Reissues	4	No. 25,193 to No. 25,196, incl.
Total	1,349	

(D.C. Md.) Crouse Patent No. 2,893,893 (181—48), for method and apparatus for electrostatic coating. Claims 1–3, 5, 6, and 8–10 *Held* valid and infringed. *Id.*

(D.C. Md.) Ramsburg Patent No. 2,893,894 (117—93), for method and apparatus for electrostatic coating. Claims 1–8 *Held* valid and infringed. *Id.*

(D.C. Mass.) Oace, Snell and Le Page Reissue Patent No. 23,843 (206—59), for insulating tape, *Held* not infringed. *Plymouth Rubber Co.* v. *Minnesota Mining & Mfg. Co.*, 203 F. Supp. 595; 133 USPQ 173.

(D.C. Md.) Simmons Reissue Patent No. 24,602 (117—93), for method and apparatus for spray coating articles. Claims 1, 6 to 10, 12, 13 and 15 to 21 *Held* valid and infringed. *Ramsburg Electro-Coating Corp.* v. *Proctor Elec. Co.*, 203 F. Supp. 235; 133 USPQ 3.

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1962

Total number of pending applications (excluding Designs)	191, 242
Total number of pending Design applications	5, 865
Total number of applications awaiting action (excluding Designs)	100, 882
Total number of Design applications awaiting action	2, 096
Date of oldest new application	Jan. 26, 1961
Date of oldest amended application	Nov. 3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 66.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) Manlan, J. A. (acting), AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, O. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	7–21–61	8–30–61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	10–31–61	9–21–61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	4–4–61	4–5–61
4. (VI) FALLER, E. A., Material or Article Handling	6–29–61	6–19–61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	6–29–61	7–3–61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	4–4–61	4–13–61
7. (IV) ANDERSON, E. G., Optics	5–1–61	5–15–61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5–9–61	7–18–61
9. (VI) BRANSON, J. H., Pumps; Fans	7–31–61	6–13–61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	6–26–61	6–29–61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	6–23–61	7–3–61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	5–19–61	5–3–61
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	4–12–61	3–31–61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	3–6–61	2–24–61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	6–6–61	7–6–61
16. (II) ROSE, R. H. (acting), Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	5–11–61	5–19–61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	6–27–61	6–19–61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	6–5–61	5–29–61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	4–28–61	4–28–61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	7–14–61	6–19–61
21. (III) MADER, R. C., Textiles	5–2–61	5–12–61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	5–16–61	5–15–61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	6–23–61	6–19–61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	6–28–61	6–1–61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	4–12–61	4–21–61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5–1–61	5–4–61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6–12–61	6–14–61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	5–15–61	6–1–61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	5–29–61	5–1–61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6–27–61	7–6–61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	5-1-61	4-20-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	4-17-61	5-1-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	5-8-61	5-22-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-4-61	3-7-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	6-29-61	7-5-61
36. (V) EVANS, R. L., Measuring and Testing (part)	4-10-61	5-4-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-21-61	3-17-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-1-61	6-2-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	4-17-61
40. (V) DRUMMOND, F. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-5-61	5-1-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-14-61	4-3-61
42. (II) CAPELLI, S. W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-1-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-16-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	1-26-61	2-6-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	10-12-61	6-6-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-2-61	3-30-61
47. (VI) ARNOLD, P., Mining, Quarrying; and Ice Harvesting; Motor Vehicles; Land Vehicles	6-20-61	6-9-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-13-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	4-14-61	4-14-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-5-61	4-17-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	4-25-61	4-19-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	9-13-61	9-26-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	5-22-61	6-12-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-3-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	3-30-61	3-16-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-2-61	6-12-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	6-21-61	5-2-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	7-24-61	6-19-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	5-22-61	5-3-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-27-61	11-3-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	9-7-61	9-13-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-1-61	6-1-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-1-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	3-16-61	3-13-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	2-28-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	3-13-61	4-11-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	5-4-61	5-5-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	7-26-61	8-15-61
81. (III) HANNAH, A. B., Industrial Arts	2-5-62	2-16-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	2-2-62	2-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	3-30-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-20-61	5-9-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	12-5-61
95. ANGEL, C. D., Metallic Building Structures	7-7-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	4-18-61	5-17-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents.....Numbers 2,379,404 to 2,380,912 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

AIR PRODUCTS, INC.
v.
MARQUETTE MANUFACTURING CO., INC.
No. 6735. Decided April 11, 1962
[49 CCPA—; —F.2d—; 133 USPQ 192]

1. TRADEMARK—OPPOSITION—DESCRIPTIVENESS—EVIDENCE—THIRD PARTY REGISTRATIONS—"REDI" AS A PREFIX.

Where the prefix "Redi" was used by both parties to the opposition proceeding on appeal in their marks "Redi-Set" and "Redi-Arc" for its descriptive connotation, and it was similarly shown in fifteen third party registrations of record for various goods, *Held* that the registrations were "some evidence of the lack of distinctiveness per se of the prefix 'Redi' and hence of its inability to here function as an indicator of source or origin of the goods."

2. SAME—SAME—SAME—DISTINCTIVENESS.

"A non-distinctive prefix such as 'redi' when combined with other words or syllables may acquire with such other words or syllables, sufficient distinctiveness to serve as a trademark indicating the source or origin of the goods on which it is used. However, the words 'arc' and 'set' which opposer and applicant use respectively with the common prefix 'redi' are descriptive of the goods, i.e., the arc drawn by opposer's welder and the set of equipment which applicant supplies as its welding apparatus. Such distinctiveness as is here present thus resides only in the combined words as unitary marks which must be compared in their entireties."

3. SAME—SAME—CONFUSING SIMILARITY—"REDI-SET" AND "REDI-ARC"—"REDI" AS A PREFIX.

On the issue whether applicant's mark "Redi-Set" when applied to cutting and welding outfits was likely to cause confusion or mistake or deception of purchasers because of its similarity to opposer's registered mark "Redi-Arc," for welding machines, *Held* that "* * * comparing the entire marks, it is our opinion that they differ so in sound, meaning and appearance that there is no likelihood of confusion, mistake or deception of purchasers arising by reason of the common use of the non-distinctive prefix 'redi' which on the present record is shown to be incapable per se of indicating source or origin of the goods on which it is used."

4. SAME—SAME—SAME—SAME—SAME.

"The mere fact that opposer had used its mark 'Redi-Arc' on its goods prior to applicant's use of its mark 'Redi-Set' on its goods is not sufficient to establish that the prefix 'Redi' had acquired such trademark significance that opposer was entitled to preclude registration of a mark by another merely because it too used the common descriptive prefix 'Redi.'"

5. SAME—SAME—SAME—COMMON DESCRIPTIVE PREFIX.

"Where the only similarity of the marks is found in a common prefix which has been recognized for its descriptive connotation rather than as an indicator of source or origin of the goods on which it is used, it is insufficient for an opposer, * * *, to prove merely a prior use thereof. It is essential in such a situation that opposer establish facts from which a determination can be made that such descriptive and common connotations of such prefix are subordinate to its acceptance as an indicator that opposer was the source of the goods on which the mark was applied."

6. SAME—CONFUSING SIMILARITY—COMMON DESCRIPTIVE PORTION.

"Where * * * the sole point of similarity of the marks is found in the common portions thereof which are descriptive of the goods or of some property thereof, such common portions, in the absence of evidence to the contrary, must be considered to indicate the nature of the goods rather than the source of the goods. It is the likelihood of confusion, mistake or deception of purchasers as to the source of the goods on which applicant's mark is used which is recog

nized by the Lanham Act as a basis for refusing registration under section 2(d)."

APPEAL from the Patent Office. Opposition No. 38,164.

REVERSED.

Shanley & O'Neil, Paul T. O'Neil and *Robert J. Patch* for appellant

Carlsen and Carlsen, Andrew E. Carlsen for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

The trademark Trial and Appeal Board (125 USPQ 247) sustained the opposition instituted by appellee as opposer against appellant as applicant to register its mark "REDI-SET" for "cutting and welding outfits." (Application Serial No. 41,427, filed November 27, 1957.) The opposition was predicated on opposer's prior Registration No. 612,985, issued September 27, 1955 on its mark "Redi-Arc" for "welding machines," and the alleged likelihood of confusion or mistake or deception of purchasers by reason of applicant's use of its mark on its goods. Applicant alleges first use of its mark on July 25, 1957.

The single issue presented here is whether applicant's mark "REDI-SET" when applied to applicant's goods is likely to cause confusion or mistake or deception of purchasers because of its similarity to opposer's registered mark "Redi-Arc."

While there are technical differences in the specific goods on which the parties use their respective marks, we do not consider these differences to be of significance here. As was stated in *Hollywood Water Heater Co.* v. *Hollymatic Corp.*, 47 CCPA 782, 274 F.2d 679, 124 USPQ 452, "Section 2(d) of the Trademark Act of 1946 and the unquestioned weight of modern authority in this field does not require a finding of confusing similarity of goods as a basis for sustaining a trademark opposition * * *."

The issue here must be determined primarily by a comparison of the marks in issue. Considered as wholes, the only similarity in sound and meaning of the marks is in the common use of the prefix "Redi." In appearance they are similar in that both are hyphenated compound words with each suffix comprising a three letter word. While in a proper case the prefix "Redi" might be shown to possess distinctiveness as an indicator of source or origin of the goods to which it is applied, the present record does not afford us sufficient evidence of such distinctiveness. Instead, the prefix "Redi" is here used in both marks for its descriptive connotation.[1] [1] It is similarly shown in the fifteen third party registrations of record [2] for various goods. These registrations are, therefore, some evidence of the lack of distinctiveness per se of the prefix "Redi" and hence of its inability to here function as an indicator of source or origin of the goods. *Shoe Corporation of America* v. *The Juvenile Shoe Corporation of America*, 46 CCPA 868, 266 F.2d 793, 121 USPQ 510.

[2] A non-distinctive prefix such as "redi" when combined with other words or syllables may acquire with such other words or syllables, sufficient distinctiveness to serve as a trademark indicating the source or origin of the goods on which it is used. However, the words "arc" and "set" which opposer and applicant use respectively with the common prefix "redi" are descriptive of the goods, i.e., the arc drawn by opposer's welder and the set of equipment which applicant supplies as its welding apparatus. Such distinctiveness as is here present thus resides only in the combined words as unitary marks which must be compared in their entireties. *Shoe Corporation of America* v. *The Juvenile Shoe Corporation of America*, supra; *Vita-Var Corporation* v. *Galvicon Corporation*, 48 CCPA 771, 284 F.2d 953, 138 USPQ 195; *E. L. Bruce Company* v. *American Termicide Co.*, 48 CCPA 762, 285 F.2d 462, 128 USPQ 341.

[3] Thus, comparing the entire marks, it is our opinion that they differ so in sound, meaning and appearance that there is no likelihood of confusion, mistake or deception of purchasers arising by reason of the common use of the non-distinctive prefix "redi" which on the present record is shown to be incapable per se of indicating source or origin of the goods on which it is used.

The marks in issue here are similar only insofar as both use the prefix Redi. Opposer's record here fails to establish facts to support a finding that such prefix has significance as an indicator of the source or origin of the goods on which it was applied. The term "Redi" as used by opposer and by applicant is used in the same sense as it is used in several of the third party registrations of record as descriptive of the availability of the goods for immediate use. As such it is descriptive of a property of the goods here in issue. [4] The mere fact that opposer had used its mark "Redi-Arc" on its goods prior to applicant's use of its mark "REDI-SET" on its goods is not sufficient to establish that the prefix "Redi" had acquired such trademark significance that opposer was entitled to preclude registration of a mark by another merely because it too used the common descriptive prefix "Redi." We think, therefore, that the Trademark Trial and Appeal Board was in error in finding on the present record that the prefix "Redi," in effect had "trademark significance."

This court in a long line of decisions has refused to accord any great weight to terms such as the prefix "Redi" in determining whether marks are confusingly similar. See: *The May Department Stores Co.* v. *Schloss Bros. & Co., Inc.*, 43 CCPA 980, 234 F.2d 879, 110 USPQ 282 and cases there cited.

[5] Where the only similarity of the marks is found in a common prefix which has been recognized for its descriptive connotation rather than as an indicator of source or origin of the goods on which it is used, it is insufficient for an opposer, as here, to prove merely a prior use thereof. It is essential in such a situation that opposer establish facts from which a determination can be made that such descriptive and common connotations of such prefix are subordinate to its acceptance as an indicator that opposer was the source of the goods on which the mark was applied.

This situation which prevails on the record here is similar to that which prevailed in *Eastern Wine Corp.* v. *Winslow-Warren, Ltd.*, 137 F.2d 955 (CCA 2), cert. den. 320 U.S. 758, where the court in hold-

[1] The prefix "Redi" is but a phonetic spelling of the word "Ready" which Webster's New International Dictionary defines as:

2. Fitted, arranged, or placed, for immediate use; * * *.

7. Offering itself at once; immediately at hand; opportune; available; handy; * * *

[2] The following third party registrations appear in the record:

REDI HEET, 218,048	Redi-flo, 626,836	REDI POP, 649,233
REDIFLUXED, 524,179	REDI-FLOW, 627,752	REDI-FLAME, 665,527
REDI-FLO, 600,162	Redi-Jet, 628,853	Redimix, 668,941
Redi Mixer, 611,716	REDI BREEZE, 636,406	Redi-Vac, 671,775
Redi-Baker, 614,283	REDI FRY, 647,037	REDISOL, 672,736

ing that the mark "Chateau Montay" did not infringe on the mark "Chateau Martin" said at page 959:

Here the plaintiff chose to build its business around the use of a name "Chatean" which was previously in common use in advertising wines. It took the risk that competitors, old and new, would also use that common name. * * * Plaintiff, therefore, could not and did not pre-empt every use of "Chateau" * * *.

[6] Where, as here, the sole point of similarity of the marks is found in the common portions thereof which are descriptive of the goods or of some property thereof, such common portions, in the absence of evidence to the contrary, must be considered to indicate the nature of the goods rather than the source of the goods. It is the likelihood of confusion, mistake or deception of purchasers as to the source of the goods on which applicant's mark is used which is recognized by the Lanham Act as a basis for refusing registration under section 2(d). We are unwilling on the present record to predicate such likelihood on the tenuous proposition advanced by opposer that the marks in issue both utilize a term of common descriptive connotation such as "Redi," which has not been shown to have been used in either mark in other than its common descriptive sense.

For the foregoing reasons, the decision of the Trademark Trial and Appeal Board is reversed.

REVERSED.

WORLEY, *Chief Judge*, and MARTIN, *J.*, concur in result only.

RICH, *J.* (dissenting):

Opposer is the owner and undisputed prior user, by at least three years of the registered trademark "Redi-Arc" for "welding machines."

Appellant sells four types of oxy-acetylene "cutting and welding outfits" under the trademark "REDI-SET." These outfits include, inter alia, oxygen and acetylene regulators, a welding torch or torch handle with mixer, welding tips, goggles, hose, and instruction, information, and repair parts books.

Opposer manufacturers and sells both "arc and gas welding equipment including welding machines, welding and cutting outfits, electrodes and welding supplies." Opposer has sold its gas welding and cutting outfits under the trademarks "Aero-Jet," "Star-Jet" and "Super-Jet." Clifford M. Akins, vice president and director of opposer, stated by affidavit that the trademark "Redi-Arc" has been used on "arc welding machines and torches" and that the mark "Redi-Fast" is being used by his company for battery chargers. The Notice of Opposition also asserts a possible future use by opposer of "'Redi-Jet,' as a trademark on welding and cutting outfits, as it expands its line of this type of welding equipment."

In answering opposer's interrogatories, appellant admitted that some welding operations can be satisfactorily performed through the use of either arc welding equipment or gas welding equipment. While not admitting that it is common in the trade for electrical welding machines and gas torches and welding and cutting outfits to be marketed through the same or partially the same channels, appellant did note that a "publication of the National Welding Supply Association * * * [discloses that] * * * 393 of 408 distributors [over 96%] of welding equipment who are members of the association handle electric and gas welding equipment."

The sole issue is whether appellant's "REDI-SET," as a whole, so resembles opposer's registered mark "Redi-Arc" as to be likely, when

applied to appellant's goods, to cause confusion or mistake or to deceive purchasers.

In its decision sustaining the instant opposition, the Board said:

The term "REDI" although suggesting that the products to which it is applied are available for instant use is not without trademark significance. Considering, therefore, that the marks "REDI-SET" and "REDI-ARC" are both composed of the term "REDI" followed by the merely descriptive word "SET" and "ARC," it is concluded that the similarities between these marks are such that confusion, mistake or deception of purchasers is reasonably likely to occur.

Considering the undisputed prior use of "Redi-Arc" by opposer, opposer's manufacture and sale of both electric arc welders and gas welding outfits and the similar practices of others in the trade, I have no doubt that at least some people already familiar with the "Red-Arc" line, upon seeing gas welding outfits for sale under the "REDI-SET" mark, are likely to conclude that there is a common source. They do not have to know what the source is. It is enough that they imagine it is the same source.

It is common for concerns to have a family of products with similar marks on them. Obviously the suffix "Arc" could not be used on a gas welding outfit and it would seem normal to use the prefix "Redi-" with an appropriate suffix such as "Set." The similarities between the two marks, considered as a whole, are too obvious for discussion. The majority opinion concedes similarity in appearance, that both are hyphenated, and both have identical prefixes and three-letter suffixes. The differences are not such as to make confusion unlikely. Neither are the differences in the goods. I cannot understand how it can be said that "the only similarity of the marks is found in a common prefix."

Appellant strenuously argues that "Redi-" is descriptive and that "Arc" and "Set" are too, hence that opposer's entire mark is descriptive, weak, and entitled to little protection. Not only are these arguments inconsistent with appellant's strenuous efforts to register "REDI-SET," but clearly "Redi-" is not descriptive, merely suggestive. "Redi-Arc," being registered on the Principal Register, is presumably a good trademark, not descriptive, and it sufficiently resembles "REDI-SET," in my judgment, to prevent registration of the latter on such closely similar goods under the conditions prevailing in this trade.

As to the third-party registrations, in the *Shoe Corporation* case, cited by the majority, the word "Lazy" was discounted as an origin indicator in marks for shoes in view of its incorporation as the first word in five other registrations of marks for shoes. Of the 15 third-party registrations in footnote 2 of the majority opinion there is but one (524,179) remotely related to this case. It is for welding rods and is not a hyphenated mark. The others truly are for "various goods" ranging from corn poppers and frying griddles to vacuum cleaners and oil burners. I think that notwithstanding such uses—even assuming the marks are in use so as to condition the public mind, an assumption supported by no proof whatever—"REDI-" plus a three-letter suffix may have very great origin-indicating ability and significance in the welding field. I think citation to a dictionary showing that "ready" is a word of the English language and stating what it means would have more relevance here than the third-party registrations.

It seems to me apropos to quote here a paragraph from a very recent Board opinion, *Union Carbide Corp.* v. *Midwest Mower Corp.*, 132 USPQ 689 (1962), involving another "ready" mark, to wit, "EVEREADY." The applicant, seeking to register "EVER-

READY," put over 100 third-party registrations into the record. Applying views previously expressed by this court, the Board said (132 USPQ at 691):

It has been argued that "EVEREADY" is a weak mark. The term "EVEREADY" or "EVER-READY" does have a definite suggestive meaning and the record discloses innumerable registrations thereof for a wide variety of goods. If a trademark, however weak, is to retain any validity, its owner must be protected where the circumstances are such that a substantial likelihood of confusion would result by the use of identical marks. See: *King-Kup Candies, Inc.* v. *King Candy Company*, [48 CCPA 948, 288 F.2d 944], 129 USPQ 272.

I would affirm.

U.S. Court of Customs and Patent Appeals

IN RE ANGELO E. BARTLETT AND ELWOOD J. FLETCHER

No. 6791. Decided April 11, 1962

[49 CCPA—; 300 F.2d 942; 133 USPQ 204]

1. DESIGN—PATENTABILITY—NOVELTY—IN RE JOHNSON CONSTRUED.

"A careful reading of the *Johnson* opinion [36 CCPA 1175, 175 F.2d 791, 82 USPQ 199 (1949)] and an inspection of Shoemaker, 'Patents for Designs,' page 76, which it cites, will show that the court was not stating a test for patentability at all, but a test only for novelty of the design. In fact what the court said, though not presented as a quotation, is a quotation from Shoemaker's section 46, the first section in his chapter V, on novelty. He said: 'If the general or ensemble appearance effect of a design is different from that of others in the eyes of ordinary observers, novelty of design is deemed to be present. The degree of difference required to establish novelty occurs when the average observer takes the new design for a different, and not a modified already-existing, design.' • • • This court accepted that as sound law in 1949 and we do now. But novelty, as the *Johnson* opinion was careful to point out, is only one of the prerequisites to patentability and, finding compliance with the above test for novelty is not sufficient in itself, to determine patentability, or the existence of a 'patentable distinction.'"

2. SAME—SAME—SAME—SAME.

"By the *Johnson* case test, adopted from Shoemaker, the appellants' design appears to us to be clearly novel. The average observer, in our judgment, would inevitably take appellants' design to be a different design from that shown in Sweet's catalog, rather than a modification of the latter. The two appearances, created by the tile in Sweet's catalog and by applicants' tile respectively, are not only easily distinguished by the practiced eye but they make different overall impressions so that purchasers might very well have preferences for one over the other. In short, they do not look alike and the existence of statutory novelty is beyond question."

3. SAME—SAME—SAME—UNOBVIOUSNESS.

"Whether the design is unobvious is a question not unrelated to novelty, • • •; and the differences in degree and in kind which one can observe are the only criteria of decision available to us."

4. SAME—SAME—UNOBVIOUSNESS.

"Appellants have produced a distinctly new and different impression. They did not do so by modifying what is shown in the reference but by adopting a new approach. We cannot better describe it than to say that instead of using a marbleizing technique which produces a bidirectional pattern they adopted a blob-smearing technique which produces a distinctive and strongly unidirectional pattern. Judging, as we must, from the basis that the single reference depicts the most relevant prior art, what we see is that appellants' design was obviously the result of creative rather than imitative efforts, origination rather than close copying. The difference in kind between the designs is, in our opinion, such as to eliminate the possibility that the prior art contains a suggestion of the design sought to be patented. We are unable, therefore, to conclude that it was obvious."

5. SAME—SAME—PARTICULAR SUBJECT MATTER—DESIGN FOR PLASTIC FLOOR TILE.

The decision of the Board of Appeals refusing appellants' claim to an ornamental design for plastic floor tile is reversed.

APPEAL from the Patent Office. Serial No. 46,680.

REVERSED.

Edward J. Willey (*Samuel Stearman*, of counsel) for appellants.

Clarence W. Moore (*Jere W. Sears*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*.

RICH, *J.*, delivered the opinion of the court.

This appeal is from the affirmance by the Patent Office Board of Appeals of the rejection of appellants' single claim, which is in prescribed form, for "The ornamental design for a Plastic Floor Tile as shown." Appellants' application is Serial No. D-46,680, filed June 21, 1957.

The rejection is that the design is unpatentable over a single reference:

Sweet's Architectural File Catalog for 1954, section 12i, catalog Ke, page 5, item ONYX (423).

The reference is an illustration of a single square rubber floor tile which is predominantly black, with irregular, sometimes wavy, randomly distributed streaks, blobs and traces of white of varying degrees of intensity appearing on its surface. The white and gray surface decoration is of the general type sometimes referred to as "marbled." It would not be too far afield to compare it to the intermixture of fat and lean in meat, which is one of the examples given in defining "marbling" by Webster's New Collegiate Dictionary. The inclusions of white in the reference tile appear to have a general orientation parallel to one edge of the tile, which orientation is barely definite enough to be recognizable as such. Furthermore, whatever parallelism with an edge exists, it does not appear to go in either direction and may be described as bidirectional.

The "drawing" of the application at bar, FIG. 1, is a plan view in the form of a photographic reproduction of a square floor tile showing a pattern of figures of mixed white and gray coloration on a black background. The pattern has a random, as distinguished from a regular, design and looks as though one had deposited drops of white and gray pigments on a black base and had then wiped them, in a partly dried condition, all in one direction parallel to one edge of the tile. The result is smeared blobs, the tails of which stream out behind them. Appellants have described them as "comet-like bodies." The effect is distinctly unidirectional, like burning embers falling through darkness if viewed with the comet tails up, not merely one of general parallelism with one edge of the tile.[2]

[1] A sample of such tile having been produced at the argument, it can be seen therefrom that the white material which is mixed into the black base material to form the surface pattern is sometimes visible on the surface while being slightly submerged below a thin surface layer of black base, somewhat obscuring the white material and giving it a gray cast. Thus the pattern is a mixture of white and gray on black.

[2] While the application presents the design in black, white and gray, samples of tiles exhibited by appellants' counsel at the argument show that the design is executed, commercially, in a variety of color combinations as is usual in the tile business. For example, one tile has a light brown base color and the smeared blobs are of white, two darker shades of brown, and olive; another tile has a light gray base color and the smeared blobs are of black, brown, olive, yellow, and a color resembling that of tomato juice. Thus the *design*, as a matter of surface ornamentation, which applicant seeks to protect, appears to be independent of specific color and inclusive of dark pattern on light background as well as light pattern on dark background. We so regard it.

The Patent Office appears to have derived from this court's opinion in *In re Johnson*, 36 CCPA 1175, 175 F.2d 791, 82 USPQ 199 (1949), relied on by both the Board and the Solicitor, a point of law or legal test for determining the patentability of designs. Appellants accept the so-called test and both parties have argued the case on the basis of it, reaching diametrically opposite conclusions. The supposed test, quoting from the Solicitor's brief which substantially quotes from the Board's opinion, is, "that the degree of difference [from the prior art] required to establish a *patentable* distinction occurs when the average observer takes the new design for a different, and not a modified, already-existing design." [Our emphasis.]

[1] A *careful* reading of the *Johnson* opinion and an inspection of Shoemaker, "Patents for Design," page 76, which it cites, will show that the court was not stating a test for patentability at all, but a test only for *novelty* of the design. In fact what the court said, though not presented as a quotation, is a quotation from Shoemaker's section 46, the first section in his chapter V, on novelty. He said:

> If the general or ensemble appearance-effect of a design is different from that of others in the eyes of ordinary observers, *novelty* of design is deemed to be present. The degree of difference required to establish *novelty* occurs when the average observer takes the new design for a different, and not a modified already-existing, design. [Emphasis ours.]

This court accepted that as sound law in 1949 and we do now. But novelty, as the *Johnson* opinion was careful to point out, is only one of the prerequisites to patentability and finding compliance with the above test for novelty is not sufficient, in itself, to determine patentability, or the existence of a "patentable distinction."

It is not altogether clear in this case whether the rejection rests on lack of novelty. The Examiner said in his answer:

> It is the Examiner's position that the instant design is substantially anticipated by the Sweet's item and that no patentable distinction is seen thereover. It is further the Examiner's belief that while the exact shape and arrangements of the paint spatter-like bodies may be discernible upon a close and detailed analysis the same is not deemed to provide the present design with any new, distinctive or ornamental appearance such as would warrant the grant of a design patent, the general overall appearance still being that of Sweet's design. [He then cited the *Johnson* case *novelty* test.]

In affirming, the Board, after citing the *Johnson* case as giving a test for a *patentable* distinction from the prior art and saying that mere novelty of detail is not sufficient to warrant a holding of "patentable unobviousness over the prior art," concluded that "the instant design is but a modification of the prior art." It then held:

> We do not believe that a new and patentably distinct effect has been achieved; * * * we are of the opinion that the overall effect is not significantly or unobviously different so as to create a patentably different design.

We are left wondering whether, by the *Johnson* case test, the Board held that the instant design is not novel. If it believed that it was not, there was no need for the Board to speak of unobviousness or patentable difference. We shall assume, however, because of the uncertainty, that the Patent Office rejection is based on both lack of novelty (by the *Johnson* case test) and obviousness in view of the reference disclosure and shall deal with both issues.

[2] By the *Johnson* case test, adopted from Shoemaker, the appellants' design appears to us to be clearly novel. The average observer, in our judgment, would inevitably take appellants' design to be a different design from that shown in Sweet's catalog, rather than a modification of the latter. The two appearances, created by the tile in Sweet's catalog and by applicants' tile respectively, are not only easily distinguished by the practiced eye but they make different overall impressions so that purchasers might very well have preference for one over the other. In short, they do not look alike and the existence of statutory novelty is beyond question.

But there remains the issue of unobviousness of appellants' design in view of the reference. Its solution, as has always been recognized, is not easy and as the Solicitor realistically concludes in his brief, "the determination of patentability in design cases must finally rest on the subjective conclusion of each judge." [3] Whether the design is unobvious is a question not unrelated to novelty, however, and the difference in degree and in kind which one can observe are the only criteria of decision available to us. As stated above, we see no overall similarity, as did the Board. [4] Appellants have produced a distinctly new and different impression. They did not do so by modifying what is shown in the reference but by adopting a new approach. We cannot better describe it than to say that instead of using a marbleizing technique which produces a bidirectional pattern they adopted a blob-smearing technique which produces a distinctive and strongly unidirectional pattern. Judging, as we must, from the basis that the single reference depicts the most relevant prior art, what we see is that appellants' design was obviously the result of creative rather than imitative efforts, origination rather than close copying. The difference in kind between the designs is, in our opinion, such as to eliminate the possibility that the prior art contains a suggestion of the design sought to be patented. We are unable, therefore, to conclude that it was obvious.

[5] The decision of the Board is reversed.

REVERSED.

WORLEY, *Chief Judge* (dissenting):

I am in complete agreement with the Examiner and Board that there is nothing here of a patentable nature. Indeed, it is as devoid of patentability as the subject matter of *In re James G. Balmer, Jr.*, 47 CCPA 883, 276 F.2d 405, 125 USPQ 339. My reasons there are equally applicable here.

To give appellant a monopoly will effectively prevent others in this field from exercising even the simplest kind of ordinary skill.

U.S. Court of Customs and Patent Appeals

IN RE WILLIAM B. DICKINSON AND BERNARD L. ZENITZ

No. 6751. Decided March 22, 1962

[49 CCPA—: 299 F.2d 954; 133 USPQ 39]

1. INTERFERENCE—COMMISSIONER REQUIRED TO INITIATE INTERFERENCE PROCEEDINGS—35 U.S.C. 135.

   "There is no question but that under 35 U.S.C. 135, the Commissioner is required to initiate interference proceedings by giving notice to the parties whenever, *in his opinion*, an application would interfere with any pending application or with any unexpired patent."

2. COMMISSIONER OF PATENTS—PROMULGATION OF RULES—35 U.S.C. 6.

   Held, with respect to the Commissioner of Patents, that "* * * under 35 U.S.C. 6, subject to the approval of the Secretary of Commerce, he 'may establish regulations, not inconsistent with law, for the conduct of proceedings in the Patent Office.'"

3. SAME—DELEGATION OF DUTIES.

   Held that "* * * unless specifically prohibited by law, the Commissioner may delegate his duties."

4. SAME—LIMITATIONS ON COMMISSIONER OF PATENTS—JURISDICTION OF BOARD OF PATENT INTERFERENCES.

"• • • in performing his duties, the Commissioner cannot usurp the functions or impinge upon the jurisdiction of the Board of Patent Interferences established by 35 U.S.C. 135."

5. SAME—DELEGATION OF DUTIES—35 U.S.C. 135—INTERFERENCE.

Held that the Commissioner could delegate to the Primary Examiner and the Assistant Commissioner his responsibilities under 35 U.S.C. 135, and they could decide in the first instance whether a case had been presented by applicant prima facie entitling him to an award of priority relative to the filing date of the patentee whose patent claims he had copied.

6. INTERFERENCE—RULE 204(b)—REDUCTION TO PRACTICE—UTILITY—JURISDICTION OF THE BOARD OF PATENT INTERFERENCES.

Where, with respect to a showing made under Rule 204(b) as to a patented compound, it was agreed that all the requirements of that rule were fulfilled except "as to when the utility of the compound was conceived or ascertained" *Held* that "In stating in their third affidavit that 'the utility was obvious to us at the time we submitted the compound for testing which was prior to August 16, 1955,' appellants completed their prima facie case"; that "For the Primary Examiner or the Board of Appeals to require more than this sworn allegation was tantamount to a decision with reference to a significant facet of the interference itself"; and that "Whether or not utility is obvious or requires testing is a question entirely within the jurisdiction of the Board of Patent Interferences."

7. SAME—SAME—SAME—SAME—SAME—35 U.S.C. 135.

"The 'opinion' of the Commissioner that is required in section 135 pertains to the factual question of whether the claims of the application would interfere with the claims of the patent, and whether a prima facie case has been alleged. The question of priority is to be determined by the Board of Patent Interferences and such factors, as what is necessary to show reduction to practice in a particular case, come within the exclusive jurisdiction of that board. It should be kept in mind, however, that a patentee ought not to be compelled to go through an interference proceeding without reasonable cause."

8. SAME—SAME—AFFIDAVITS OF THE NATURE SPECIFIED IN RULE 131.

"Although Rule 204(b) indicates that the required affidavit must be in the nature of that specified in Rule 131, obviously, any provision of Rule 131 which requires more than the statute contemplates in connection with a Rule 204(b) proceeding would not be applicable, as in the case at bar. Since in our opinion appellants have established a prima facie case by means of their three affidavits, any provisions of Rule 131 which may require more, as in the case of swearing back of a reference, do not apply here."

9. U.S. COURT OF CUSTOMS AND PATENT APPEALS—REMAND.

"• • • as to claims 4 and 5, we remand this cause to the Patent Office for further proceedings not inconsistent with this opinion."

APPEAL from the Patent Office. Serial No. 695,518.

REVERSED IN PART AND REMANDED.

Laurence and Laurence (*Dean Laurence* and *Herbert I. Sherman*, of counsel) for appellant.

Clarence W. Moore (*Joseph Schimmel*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Board of Appeals of the United States Patent Office affirming the Examiner's rejection of claims 1 to 5, all of the claims of appellants' application for a patent.

The application was filed November 12, 1957 and relates to certain piperidine carboxylic acid derivatives and to a process of preparing them. The compounds claimed are disclosed to be "physiologically active" and "useful as analgesics and narcotics." Claim 1 is representative of the appealed claims and reads as follows:

1. A compound selected from the class consisting of ethyl 1-methyl-4-phenylisonipecotate N-oxide free base and ethyl 1-methyl-4-phenylisonipecotate N-oxide acid addition salt of a pharmacologically acceptable acid.

Appealed claims 1, 2 and 3 were copied from Patent No. 2,785,168 which had issued to Tiffany on March 12, 1957 on an application filed August 16, 1955. Appealed claim 4 recites a specific compound within the scope of claim 3 and disclosed but not claimed as a species by Tiffany. Appealed claim 5 recites a process for preparing the compound of claim 2. This process is disclosed but not claimed by Tiffany.

The issues in this case relate to the requirements and application of 35 U.S.C. 135 and Rules 204(b) and 131.[1]

When appellants' application was filed, it was accompanied by a request that an interference be declared between the application and the Tiffany patent. As required by the portion of Rule 204(b) *before* the semicolon therein, appellants also filed with their application an affidavit stating that they had made the claimed invention prior to the filing date of the Tiffany patent.

The Examiner refused to declare an interference, requiring in effect a second affidavit in accord with the portion of Rule 204(b) *after* the semicolon therein. Such an affidavit was submitted. Relative to the utility of the claimed compound, this second affidavit stated:

We submitted the sample of ethyl 1-methyl-4-phenylisonipecotate N-oxide, prepared as described above, for testing in the biological laboratories for pharmacological properties with the expectation that it would have analgesic activity;

Thereupon the Examiner stated in pertinent part:

Since the affidavit does not *disclose* a date as to when ethyl 1-methyl-4-phenylisonipecotate was found to have analgesic activity nor whether such activity in the compound was discovered prior to August 16, 1955, the requested interference will not be declared.

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[1] 35 U.S.C 135 states:

Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be. The question of priority of invention shall be determined by a board of patent interferences (consisting of three examiners of interferences) whose decision if adverse to the claim of an applicant, shall constitute the final refusal by the Patent Office of the claims involved, and the Commissioner may issue a patent to the applicant who is adjudged the prior inventor. A final judgment adverse to a patentee from which no appeal or other review has been or can be taken or had shall constitute cancellation of the claims involved from the patent, and notice thereof shall be endorsed on copies of the patent thereafter distributed by the Patent Office.

A claim which is the same as, or for the same or substantially the same subject matter as, a claim of an issued patent may not be made in any application unless such a claim is made prior to one year from the date on which the patent was granted.

Rule 204(b) states:

204. Interference with a patent; affidavit by junior applicant.

• • • • • • • • • • • •

(b) When the filing date or effective filing date of an applicant is subsequent to the filing date of a patentee, the applicant, before an interference will be declared, shall file an affidavit that he made the invention in controversy in this country, before the filing date of the patentee, or that his acts in this country with respect to the invention were sufficient under the law to establish priority of invention relative to the filing date of the patentee; and, when required, the applicant shall file an affidavit (of the nature specified in Rule 131) setting forth facts which would prima facie entitle him to an award of priority relative to the filing date of the patentee.

Rule 131 states:

131. Affidavit of prior invention to overcome cited patent or publication. (a) When any claim of an application is rejected on reference to a domestic patent which substantially shows or describes but does not claim the rejected invention, or on reference to a foreign patent or to a printed publication, and the applicant shall make oath to facts showing a completion of the invention in this country before the filing date of the application on which the domestic patent issued, or before the date of the foreign patent, or before the date of the printed publication, then the patent or publication cited shall not bar the grant of a patent to the applicant, unless the date of such patent or printed publication be more than one year prior to the date on which the application was filed in this country.

(b) The showing of facts shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference, or conception of the invention prior to the effective date of the reference coupled with due diligence from said date to a subsequent reduction to practice or to the filing of the application. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or their absence satisfactorily explained.

At this point, the appealed claims stood rejected in view of the Tiffany patent and the case was appealed to the Board of Appeals.

Subsequently appellants submitted a third affidavit which stated in relevant part:

> • • • the utility of ethyl-4-methyl-4-phenylisonipecotate N-oxide hydrochloride [claim 4] as an analgesic agent was obvious to us prior to the time we made the compound and prior to August 16, 1955, the filing date of Tiffany, U.S. Patent 2,785,168;
>
> • • • the utility was obvious to us at the time we submitted the compound for testing which was prior to August 16, 1955.

The second and third affidavits were accompanied by various laboratory notebook exhibits and supplementary affidavits.

The position of the Examiner appears to have been that since the Rule 204(b) affidavits must be "of the nature specified in Rule 131," the requirements of the latter rule must be satisfied. The Examiner held that a "reduction to practice" within the meaning of Rule 131(b) includes establishment of the utility of the claimed compound and that the affidavits do not show reduction to practice in this regard. In particular, the Examiner noted that even though appellants had stated in the third affidavit that the analgesic utility was obvious, the second affidavit shows that a compound had been submitted for testing. In other words, the Examiner appears to have found an inconsistency between the alleged obviousness of utility and the fact that tests were made.

The Board affirmed the Examiner, finding support in *Blicke* v. *Treves*, 44 CCPA 753, 241 F. 2d 718, 112 USPQ 472, for its position that "the instant compounds are not of such a nature that they were reduced to practice merely by making them."

Two other issues were raised below by appellants. Before the case was considered by the Board of Appeals, appellants urged by petition to the Commissioner, first, that there is no statutory basis for that portion of Rule 204(b) which follows the semicolon therein since the affidavit required by that portion relates to a question of priority which "shall be determined by a board of patent interferences."[2] In other words, appellants urged in their petition to the Commissioner that the final portion of Rule 204(b) is inconsistent with 35 U.S.C. 135, and that the Commissioner has exceeded the rule-making authority given him by 35 U.S.C. 6.[3]

Appellants also urged as a second point in their petition to the Commissioner as follows:

> Assuming, arguendo, statutory basis exists for Rule 204(b) and that an applicant can be required to present facts which would prima facie entitled him to an award of priority relative to the filing date of a patentee: It is submitted the determination of whether such facts as may be presented in a case are sufficient on the question of priority rests with a board of patent interferences and is not within the jurisdiction of a Primary Examiner.

The Supervisory Examiner, as delegate of the Commissioner, dismissed this petition because it was "addressed to non-petitionable matters." On petition for reconsideration, the Assistant Commissioner, as a further delegate of the Commissioner, ruled that appellants' contention that the last clause of Rule 204(b) is invalid "is without merit" on the ground that 35 U.S.C. 135 "vests the Commissioner with the authority to determine whether or not an interference exists and whether an interference proceeding should be instituted," and that the criteria of Rule 204 represent "a valid and reasonable exercise of that power."

[2] 35 U.S.C. 135

[3] 35 U.S.C. 6 states in relevant part:

> 6. Duties of Commissioner
>
> • • • He may, subject to the approval of the Secretary of Commerce, establish regulations, not inconsistent with law, for the conduct of proceedings in the Patent Office.

As to the second point of appellants' petition, the specific relief requested was "a change in the interpretation of Rule 204(b) so that the Primary Examiner of Division 6 be directed to hold the second affidavit in compliance with the rule." The Assistant Commissioner did not rule specifically on the jurisdictional question but, rather, looked directly to the relief sought and stated in effect that this represented a question for the Board of Appeals.

All three issues, namely, the validity of the last clause of Rule 204(b), the jurisdictional question, and the question of the actual sufficiency of the three affidavits in question, were raised before the Board of Appeals. The Board's position on the last of these has been discussed supra. The Board declined to pass on the validity question, stating that Rule 204(b) "has been found valid by the Assistant Commissioner." As to the jurisdictional question, the Board stated:[4]

> We are unable to concur with appellants on their second point. It is true that Rule 204(b) does not specify the official who rules on the sufficiency of affidavits under that rule, but it is quite clear that the rule is part of "the procedure to determine whether "in the opinion of the Commissioner" (35 U.S.C. 135) an application interferes with a patent. A determination must be made, since the mere ministerial receipt of the affidavits would render the rule meaningless in purpose and practice. The Commissioner may, of course, delegate various of his duties to subordinate officials and the performance of the duties necessitated by Rule 204(b) is entrusted to the Examiner, just as the performance of duties under Rule 202 is entrusted to a Law Examiner. The delegation of the duties in question to the Examiner is indicated by the last sentence of section I and the first two sentences of paragraph (d) of section Y of the Introduction to the Rules of Practice. Procedure under Rule 204(b) is not a determination of priority under the second sentence of 35 U.S.C. 135 but is merely in the nature of a preliminary inquiry to determine whether an interference should be declared. The Examiners of Interferences do not take jurisdiction until the interference is formally declared under Rule 209 and, until that time, the Examiner retains jurisdiction. See Rule 211.

The three issues before the Board are now before us for consideration. There are a number of principles involved in a discussion of these issues which are basic and non-controversial. To these we will give our attention first.

[1] There is no question but that under 35 U.S.C. 135, the Commissioner is required to initiate interference proceedings by giving notice to the parties whenever, *in his opinion*, an application would interfere with any pending application or with any unexpired patent. [2] Further, under 35 U.S.C. 6, subject to the approval of the Secretary of Commerce, he "may establish regulations, not inconsistent with law, for the conduct of proceedings in the Patent Office." [3] Also, it is equally clear that, unless specifically prohibited by law, the Commissioner may delegate his duties.

[4] On the other hand, in performing his duties, the Commissioner cannot usurp the functions or impinge upon the jurisdiction of the Board of Patent Interferences established by 35 U.S.C. 135.

In applying these principles to the case at bar, it is obvious that the Commissioner could promulgate a rule to cover the factual situa-

[4] The Board was apparently referring here to the third edition of Rules of Practice dated September 1955. It has not been urged before us that the current 4th edition includes any changes pertinent to the issues in this case.

tion that is presented in this and similar cases. This he did in establishing Rule 204(b). [5] Also, he could delegate to the Primary Examiner and the Assistant Commissioner his responsibilities under section 135, and they could decide in the first instance whether a prima facie case had been presented by applicant.

It is agreed that all the requirements of 204(b) were fulfilled except "as to when the utility of the compound was conceived or ascertained." [5]

It is at this point that we disagree with the Board. [6] In stating in their third affidavit that "the utility was obvious to us at the time we submitted the compound for testing which was prior to August 16, 1955," appellants completed their prima facie case. For the Primary Examiner or the Board of Appeals to require more than this sworn allegation was tantamount to a decision with reference to a significant facet of the interference itself. Whether or not utility is obvious or requires testing is a question entirely within the jurisdiction of the Board of Patent Interferences.

[7] The "opinion" of the Commissioner that is required in section 135 pertains to the factual question of whether the claims of the application would interfere with the claims of the patent, and whether a prima facie case has been alleged. The question of priority is to be determined by the Board of Patent Interferences and such factors, as what is necessary to show reduction to practice in a particular case, come within the exclusive jurisdiction of that board. It should be kept in mind, however, that a patentee ought not to be compelled to go through an interference proceeding without reasonable cause.

[8] Although Rule 204(b) indicates that the required affidavit must be in the nature of that specified in Rule 131, obviously, any provision of Rule 131 which requires more than the statute contemplates in connection with a Rule 204(b) proceeding would not be applicable, as in the case at bar. Since in our opinion appellants have established a prima facie case by means of their three affidavits, any provisions of Rule 131 which may require more, as in the case of swearing back of a reference, do not apply here.

The Board and the Solicitor rely heavily upon *Blicke* v. *Treves*, supra, to support their position. That case is clearly distinguishable. It was an interference proceeding and the question of whether a prima facie case had been established was not involved. On the other hand, *Blicke* v. *Treves* states a principle which *is* pertinent and applicable in the case at bar:

> As this court has repeatedly stated, whether a composition of matter must be tested in order to establish a reduction to practice, and if so, what tests are necessary, is a question which must be decided on the basis of the facts of the particular case involved. *Payne* v. *Hurley*, 21 CCPA (Patents) 1144, 71 F. 2d 208, 21 USPQ 624; *St. Pierre* v. *Harvey*, 43 CCPA (Patents) 918, 233 F. 2d 337, 110 USPQ 47.

This issue should be resolved by the Board of Patent Interferences and not in these proceedings.

For the above reasons, we reverse the decision of the Board with reference to claims 1, 2 and 3.

Coming now to claims 4 and 5, we do not agree with the contention of the Solicitor that all of the appealed claims "stand or fall together." Rule 204(b) is not involved insofar as these two claims

[5] Solicitor's Brief

are concerned because they were not copied from the Tiffany patent. Therefore these claims must be dealt with by the Patent Office, as they have not been, on an entirely different basis.

In view of the fact that the proceedings below and before this court, and the arguments by counsel, pertain only to the requirements and practice under Rule 204(b), we believe that we should not render a decision concerning claims 4 and 5 until further appropriate actions have been taken below.

[9] Therefore, as to claims 4 and 5, we remand this cause to the Patent Office for further proceedings not inconsistent with this opinion.

REVERSED IN PART AND REMANDED.

WORLEY, *Chief Judge*, sat but did not participate in decision.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,133,642, G. W. Pierce, Electrical systems; **2,133,643**, same, Electrical system and apparatus; **2,133,645**, same, Electrical system; **2,133,646**, same; **2,133,648**, same; **2,266,070**, same, Electro-mechanical vibrator apparatus, **filed** July 12, 1954, D.C.N.J. (Newark), Doc. 574/54, *Helen Russell Pierce* v. *Boonton Radio Corporation*. Action terminated administratively without prejudice (notice May 9, 1962). **Same, filed** Apr. 15, 1954, same, Doc. 296/54, *Helen Russell Pierce* v. *International Telephone Corporation*. Decree as above.

2,133,643. (See 2,133,642.)

2,133,645. (See 2,133,642.)

2,133,646. (See 2,133,642.)

2,133,648. (See 2,133,642.)

2,266,070. (See 2,133,642.)

2,370,235, L. J. Du Mais, Portable picture screen, **filed** Apr. 11, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c638, *Da-lite Screen Co., Inc.* v. *Knox Manufacturing Company*. Dismissed by stipulation with prejudice under Rule 41A Dec. 21, 1961.

2,441,960, P. Eisler, Manufacture of electric circuit components; **3,002,260**, Shortt and Langton, Printed circuit component and method of manufacturing same, **filed** Apr. 25, 1962, Ct. Cls., Doc. 127/62, *Technograph Printed Circuits, Ltd. et al.* v. *The United States*.

2,479,552, C. B. Blessing, Garment packaging device, **filed** Aug. 31, 1956, D.C., E.D. Wis. (Milwaukee), Doc. 56–C–181, *National Paper Band Company et al.* v. *Luetzow Industries et al.* By stipulation, action and all counterclaims dismissed with prejudice but without adjudication as to validity or infringement of patent May 7, 1962.

2,510,438, K. M. Tuohy, Contact lens, **filed** Apr. 27, 1962, D.C., S.D.N.Y., Doc. 62/1631, *Plastic Contact Lens Co.* v. *Conlenseo, Inc. et al.*

2,569,724, Mackie and Duluk, Convertible folding top with automatic seal at rear quarter, **Appeal, filed** Apr. 13, 1962, C.C.A., 1st Cir., Doc. 5991, *Convertible Top Replacement Co., Inc.* v. *Aro Manufacturing Co., Inc. et al.* **Same, Cross-Appeal, filed** Apr. 23, 1962, same, Doc. 5993, *Aro Manufacturing Co., Inc. et al.* v. *Convertible Top Replacement Co., Inc.*

2,580,427, C. A. Helland, Recording system, **filed** July 26, 1957, D.C., N.D. Ill. (Chicago), Doc. 57c1267, *Minneapolis-Honeywell Regulator Company* v. *Midwestern Instruments, Inc.* Patent held valid and claims 3 and 13 through 17 thereof held infringed June 30, 1960; defendant enjoined July 25, 1962.

2,589,344, S. Cohn et al., Method of and apparatus for treating tubular textile fabrics; **2,589,345**, same, Method of treating tubular textile fabric; **2,597,528**, F. R. Redman, Apparatus for treatment of tubular knitted fabrics; **2,597,530**, same, Method of treating fabric, **filed** Apr. 10, 1959, D.C., S.D.N.Y., Doc. 145/88, *Tubular Textile Machinery Corporation* v. *Redman Process American Corporation et al.* Order dismissing claims and counterclaims and terminating action Aug. 11, 1960.

2,589,345. (See 2,589,344.)

2,597,528. (See 2,589,344.)

2,597,530. (See 2,589,344.)

2,638,620, G. Civitelli, Doorstop, **filed** May 2, 1962, D.C. Mass. (Boston), Doc. 62/320–F, *Gennaro Civitelli* v. *J. Russell & Co., Inc.*

2,651,423, Rose and Osajnak, Apparatus for loading bulk material into a ship's hold, **filed** May 4, 1962, C.C.A., 4th Cir., Doc. 8654, *Heyl & Patterson, Incorporated, Appellant and Cross-appellee* v. *McDowell Company, Incorporated et al., Appellees and Cross-appellants.*

2,687,724, Tiberi and Kish, Inoculant injector instrument; **2,821,193**, same, Multiple injection inoculator instrument, **filed** May 3, 1961, D.C., S.D.N.Y., Doc. 61/1595, *Z & W Manufacturing Corporation* v. *Scientific Equipment Manufacturing Corporation*. Stipulation and order of voluntary dismissal Aug. 24, 1961.

2,754,539, A. J. Toti, Fowl defeathering method; **2,805,443**, same, Fowl defeathering apparatus, **filed** Aug. 15, 1956, D.C., W.D.N.C. (Asheville), Doc. 1182, *Honolulu Oil Corporation* v. *Shelby Poultry Company*. Stipulation and decree restraining defendants May 2, 1962.

2,805,443. (See 2,754,539.)

2,821,193. (See 2,687,724.)

2,826,253, Wright and Swofford, Bore wall cleaner, **filed** Apr. 30, 1962, D.C., W.D. Okla. (Oklahoma City), Doc. 9682, *Marvin K. Swofford et al.* v. *Weatherford Oil Tool Co., Inc.*

2,832,293, Adams and Yung Ho Sun, Vane pump, **filed** May 7, 1962, D.C., S.D. Ohio (Cincinnati), Doc. 5043, *American Brake Shoe Company* v. *Vickers Incorporated*.

2,832,293(a) Adams and Yung Ho Sun, Vane pump; **2,853,023**, J. R. English, Fluid energy translating apparatuses; **Re. 24,048**, F. J. Wright, Hydraulic apparatus, **filed** May 2, 1962, D.C., E.D. Mich. (Detroit), Doc. 22/541, *Vickers, Incorporated* v. *American Brake Shoe Company*.

2,853,420, H. Lowey, **filed** Oct. 26, 1959, D.C., S.D.N.Y., Doc. 152/105, *Forest Laboratories, Inc.* v. *Consolidated Midland Corporation*. Stipulation and order of discontinuance May 3, 1962.

2,876,424, T. Stiler, Transformer, **filed** May 4, 1962, D.C., E.D. Pa. (Philadelphia), Doc. 31/398, *Ted Stiler* v. *Universal Combustion Company*. **Same, filed** May 22, 1962, D.C., S.D.N.Y., Doc. 62/1835, *Ted Stiler* v. *Sinclair Refining Company*. **Same, filed** Apr. 30, 1962, same, Doc. 62/1637, *Ted Stiler* v. *Sinclair Oil Corporation*. Dismissed May 22, 1962.

2,943,471, S. H. Newman, Cigarette lighter, **filed** May 4, 1962, D.C., S.D.N.Y., Doc. 62/1694, *Bentley Lighter Corporation* v. *Schick Service, Inc.*

2,949,403, Andreadis and Miklean, Dihydroxyacetone compositions for tanning the human epidermis, **filed** Aug. 16, 1960, D.C., S.D.N.Y., Doc. 60/3219, *John T. Andreadis et al.* v. *Nestle Le Mur Company, Inc.* Stipulation and order of dismissal May 2, 1962.

2,982,322, J. H. Seltz, Card-carrying case or pocket secretary, **filed** May 2, 1962, D.C., S.D.N.Y., Doc. 62/1682, *Bri-Son Company, Inc* v. *Ambassador Leather Goods et al.*

2,995,087, R. E. Edney, Blasting plug, **filed** Apr. 17, 1962, D.C., S.D. Ind. (Evansville), Doc. 62-C-36, *Robert E. Edney* v. *Austin Powder Company.*

3,000,376, Levey and Harvey, Spray gun, **filed** Apr. 27, 1962, D.C., S.D. Tex. (Houston), Doc. 14/308, *Spraying Systems Company* v. *The Spee-Flo Company.*

3,005,282, G. K. Christiansen, Toy building brick, **filed** May 21, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/702 TC, *Interlego A.G.* v. *Revell, Incorporated.*

3,005,282(*a*), G. K. Christiansen, Toy building brick; **Reg. No. 668,622** (LEGO AND DESIGN), Legetojsfabriken Lego, Billund A/S, Toys, **filed** Apr. 18, 1962, D.C., M.D. Pa. (Scranton), Doc. 7660, *The Interlego A.G.* v. *The Leslie-Henry Co., Inc. et al.*

Re. 24,048. (See 2,832,293.)

Re. 24,557, G. H. Scherr, Means for assessing the effect of various agents on the growth of microorganisms, **Appeal, filed** C.C.A., 8th Cir., Doc. 16/870, *George H. Scherr* v. *National Bio-Test, Inc.* Judgment of District Court affirmed (notice May 4, 1962).

Des. 178,025, L. M. Thurlow, Slipper, **filed** May 1, 1962, D.C. Oreg. (Portland), Doc. 62/161, *Laurence M. Thurlow* v. *Thurlow Glove Company.*

REISSUES

JULY 3, 1962

Matter enclosed in heavy brackets **[ ]** appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

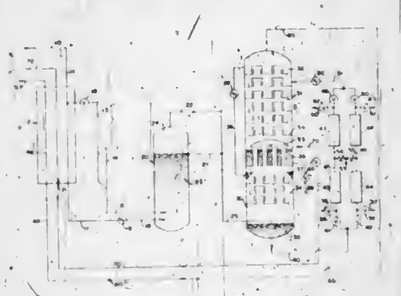
25,193
METHOD AND APPARATUS FOR SEPARATING GASEOUS MIXTURES

Clarence J. Schilling and Lilburn Carroll Claitor, Allentown, Pa., assignors, by mesne assignments, to Air Products and Chemicals, Inc., Trexlertown, Pa., a corporation of Delaware

Original No. 2,997,854, dated Aug. 29, 1961, Ser. No. 681,130, Aug. 16, 1957. Application for reissue Jan. 3, 1962, Ser. No. 165,983

21 Claims. (Cl. 62—13)

(Filed under Rule 47(a) and 35 U.S.C. 116)



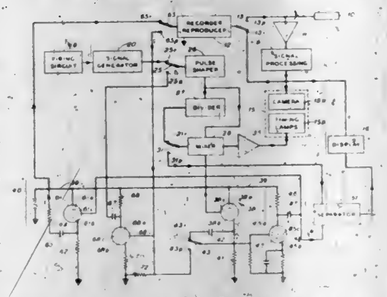
1. Method of separating in a low temperature fractionating operation components of gaseous mixtures including high boiling point impurity, in which operation compressed and cooled gaseous mixture is fed to a high pressure fractionating zone wherein the mixture undergoes preliminary separation producing liquid high boiling point fraction and gaseous low boiling point fraction and in which liquid high boiling point fraction is fed to a low pressure fractionating zone wherein the separation is continued producing liquid high boiling point product and gaseous low boiling point product, which method comprises providing a stream of compressed gaseous mixture and passing the stream of compressed gaseous mixture in heat exchange effecting relation with cold product of the operation to cool the stream of gaseous mixture to a relatively low predetermined temperature such that liquid will not form in an ensuing expansion step, expanding the cool stream of gaseous mixture to a relatively low pressure and further cooling the gaseous mixture within the superheat region, providing liquid material including components of the gaseous mixture, intermixing the stream of expanded gaseous mixture with the liquid material to cool the expanded gaseous mixture to at least [its saturation] *the precipitation* temperature *of the high boiling point impurity* at the existing pressure and separating the resulting intermixture to provide a [saturated] vapor portion and a liquid portion, feeding [saturated] vapor portion to the high pressure fractionating zone, forming a fluid stream including the liquid portion of the intermixture and substantially the total high boiling point impurity of the stream of gaseous mixture, and passing the fluid stream through filter and adsorber zones and then to the low pressure fractionating zone, the fluid stream including the total liquid high boiling point fraction fed to the low pressure fractionating zone.

25,194
METHOD AND APPARATUS FOR TIMING SEISMIC RECORDINGS

Aubra E. Tilley, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Original No. 2,803,809, dated Aug. 20, 1957, Ser. No. 430,593, May 18, 1954. Application for reissue Oct. 2, 1961, Ser. No. 146,399

4 Claims. (Cl. 340—15.5)



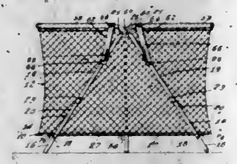
3. Apparatus for recording and analyzing a seismic detector signal comprising means for generating an electrical voltage of constant frequency, a shaping circuit connected to said generating means for producing a series of reference timing pulses from said voltage, a reproducible recording medium, a permanent recording medium, means for recording said reference timing pulses and said seismic detector signal on both said reproducible recording medium and said permanent recording medium, means for reproducing said detector signal and said pulses from said reproducible recording medium, signal modifying means for modifying said reproducible seismic detector signal, means for supplying said reproduced timing pulses to said shaping circuit to sharpen the edges of said reproduced timing pulses, and means for recording said modified seismic detector signal and said reproduced sharpened timing pulses on said permanent recording medium, whereby said original seismic detector signal and said modified seismic detector signal are both recorded on said permanent recording medium and may be compared on the basis of the common timing pulses.

25,195
FOLDABLE PLAY PEN

Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., a corporation of Indiana

Original No. 2,991,486, dated July 11, 1961, Ser. No. 733,038, May 5, 1958. Application for reissue Nov. 24, 1961, Ser. No. 155,258

8 Claims. (Cl. 5—98)

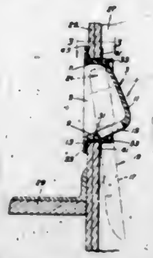


1. A play pen, comprising a pair of leg-forming frames pivotally interconnected at their upper ends and movable

between extended and collapsed positions, a cross-member adjacent the lower end of each of said frames connecting the opposed sides thereof, a pair of rigid floor panels of equal width pivotally mounted on said cross-members adjacent the remote ends of said panels, a ground-engaging support [interconnecting] *pivotally connected to* the adjacent ends of said floor panels to provide [a pivotal axis for said floor panels] for collapse and extension of said floor panels with said frames and supporting the adjacent ends of said panels along substantially their entire length when they are in extended position, a pair of foldable rails pivotally interconnected to said leg-forming frames and supporting flexible side walls disposed between said rails and the floor panels, and a plurality of braces interconnecting each of said rails to one of the leg-forming frames for releasably maintaining said rails in an extended position and allowing said rails to be folded and extended independently of the leg-forming frames and floor panels.

25,196
KNIFE RACK
Murray W. Davis, 230 Frances Ave., Flushing, Mich.
Original No. 2,924,410, dated Feb. 9, 1960, Ser. No. 638,303, Feb. 5, 1957. Application for reissue Oct. 24, 1960, Ser. No. 64,688
5 Claims. (Cl. 248—37.6)

1. A knife rack comprising an open front resilient receptacle adapted to be inserted in an opening in a room wall and having top and back walls, respectively, and a bottom wall provided with transverse laterally spaced



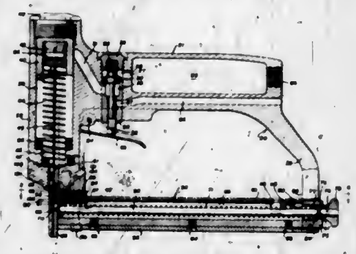
slots therein opening through said bottom wall for receiving knife blades inserted downwardly therethrough below said bottom wall with the knife handles resting on said bottom wall, said slots being spaced from the front of the receptacle to space the blades behind a room wall when said receptacle is inserted in an opening in a room wall, said receptacle having an external front lateral flange adapted to lie in front of a room wall to prevent the receptacle from falling rearwardly through the opening and being dished and of sufficient depth for positioning of said handles therein in the rear of its open front, and knobs on said top and bottom walls for snapping behind a room wall for retaining the receptacle in an opening in a wall.

PATENTS

GRANTED JULY 3, 1962

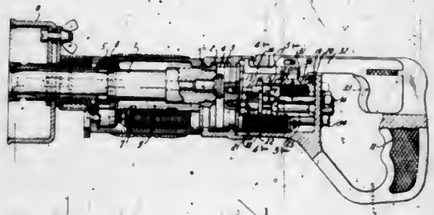
GENERAL AND MECHANICAL

3,041,614
PNEUMATIC STAPLER AND MAGAZINE THEREFOR
Marcel P. D'Haem and Howard R. Fischer, Utica, N.Y., assignors to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Filed May 10, 1960, Ser. No. 28,115
12 Claims. (Cl. 1—44.4)



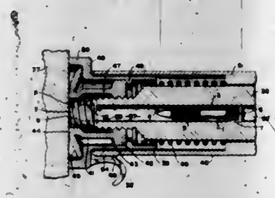
1. A magazine for discharging staples, comprising a track for slidably supporting the staples, a magazine track base, a magazine cover hinged to one side of the magazine track base and being longitudinally movable between locked and released positions with and from the forward end of the magazine, spring means biasing said cover toward the forward end of the magazine and into locking engagement therewith and when retracted therefrom serving to open the cover, a staple follower overlying the track, a follower pull rod connected to the follower to pull the follower rearwardly, said follower being retractable to the rear end of the magazine and engageable with the cover when being retracted thereto to move the cover rearwardly against the spring bias to free the cover from its engagement with the forward end of the magazine whereby the cover will be automatically opened under the action of its spring upon the retraction of the follower.

3,041,615
INERTIA OPERATED SEAR BLOCK
Robert T. Catlin, Trumbull, Conn., and Newton M. Reed, Herkimer, N.Y., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Aug. 17, 1960, Ser. No. 50,179
7 Claims. (Cl. 1—44.5)



1. In a powder actuated tool, having a barrel, a striker which is spring urged for movement to fire a power load chambered in the barrel, and striker controlling sear means manually movable to a position to release said striker for power load firing movement, a device for preventing drop firing of the tool due to any component of a force acting in either direction along a line parallel to the axis of the barrel, said device comprising an inertia block reciprocable along a line parallel to the axis of the barrel, balanced resilient positioning means opposing movement of said inertia block in either direction away from a position of rest, and means on said inertia block moved into movement blocking opposition to said striker controlling sear means whenever said inertia block has been substantially displaced from said position of rest.

3,041,616
FASTENING APPARATUS
Robert W. Henning, Fairview, Elmer F. Pfaff, Mantua, and Rowland J. Kopf, Rocky River, Ohio, assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Original application Feb. 17, 1954, Ser. No. 410,787, now Patent No. 2,954,717, dated Oct. 4, 1960. Divided and this application July 20, 1959, Ser. No. 828,420
8 Claims. (Cl. 1—44.5)



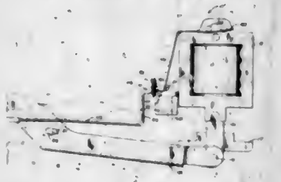
1. An explosive actuated fastener driving tool including a housing and a barrel, said barrel having a bore adapted to receive a fastener for driving including means back of said fastener for receiving the discharge of an explosive cartridge therein for driving said fastener through said bore toward the barrel muzzle for penetrating a workpiece after the piercing portion of said fastener has been driven through said bore, said housing and barrel being mounted for axial relative movement with respect to each other between a forward thrust position of said housing and a safety position rearwardly thereof, jaw means mounted adjacent said barrel muzzle for holding captive thereat a perforated fastener stopping plug member adapted to be impaled on said workpiece by the forwardly projecting piercing portion of said fastener having an enlarged plug abutment section incapable of passing through said plug member, said jaw means on said tool being operatively mounted for movement between an operative position where said jaw means extend in constraining relation about said plug member for holding said member in the path of said fastener against forward movement of said member for stopping said fastener only when its piercing portion has emerged a predetermined distance through said plug member beyond the muzzle for workpiece penetration and an inoperative position outwardly from said path to permit removal of said plug member from the tool, connecting means responsive to said relative movement whereby said jaw means is movable into said operative position as said housing and barrel are axially moved relative to each other in one direction to said forward position and said jaw means is movable to said inoperative position as said housing and barrel are moved in the opposite direction relative to each other.

3,041,617
AUTOMATIC NAILING MACHINES
Edward Alden Parr, 419 Leland Ave., Palo Alto, Calif.
Filed Mar. 8, 1957, Ser. No. 644,944
7 Claims. (Cl. 1—46)



1. In an automatic nailing machine, a striking mechanism having a tubular member with a driver longitudinally movable therein, a shoe on the lower end of said tubular member, said shoe having a hole therethrough adapted to normally receive the lower end of said driver, said shoe being pivotally mounted on a lower eccentric point thereof to swing on its pivot by gravity when said driver is retracted and said machine is raised with respect to the floor and means to position the hole in said shoe under a hopper on said tubular member to receive a nail from the same and to swing back into normal position when said machine is lowered to the floor.

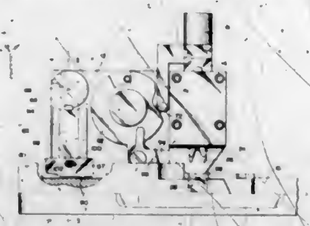
3,041,618
ACTUATING MECHANISM
Henry Ruskin, Bayside, and Alex Ciechanowski, East Meadow, N.Y., assignors to Swingline, Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 30, 1959, Ser. No. 809,961
2 Claims. (Cl. 1—106)



1. An actuating mechanism for an electrically operated stapling machine comprising a solenoid having a movable armature, a movable actuating member having a paper trip portion at one end thereof and a regulating portion at the other end thereof provided with a switch controlling recess therewithin, a normally open fixed switch having a spring loaded throwing arm normally disposed within said switch controlling recess, a cam follower operatively connected to said actuating member adjacent said switch controlling recess, a cam abuttable with said cam follower, said regulating portion being rotatable about said cam, an upwardly movable lever arm connected to said solenoid armature and in abutting relationship with said actuating member, and a return spring connected to said lever arm and loadable by movement of said lever arm, so that movement of said lever arm disengages said throwing arm from said switch controlling recess only after full actuation of said stapling machine has occurred and said return spring member is loaded by said actuation.

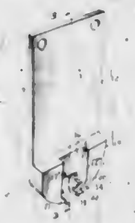
3,041,619
DETENT FOR CRIMPING MACHINE
Kent J. Batcheller, Newton, and Daniel R. McDougall, Salem, Mass., assignors to Kent Mfg. Corp., Newton Upper Falls, Mass., a corporation of Massachusetts
Filed June 6, 1961, Ser. No. 115,161
4 Claims. (Cl. 1—177)

1. In a machine for crimping the wire-gripping portions of electric connectors supplied thereto in a connected series, said machine having a base with a track thereon and an upright frame having a vertical guideway, a detent slidable in said guideway, said detent comprising a vertical member fitted in said guideway and a shoe on said member horizontally adjustable in the direction of



the track, a small tooth on the bottom of said shoe arranged to catch behind a part of a connector member in a series on said track to hold said series positively against retrograde movement on said track, and releasable spring means pressing said shoe down on said track.

3,041,620
ATTACHMENT FOR A POWER STAPLER
Jess Brown, Chicago, Ill., assignor to Catherine E. Rhinevault, Chicago, Ill.
Filed Mar. 23, 1961, Ser. No. 97,781
4 Claims. (Cl. 1—187)

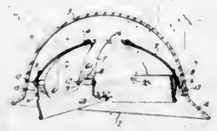


1. An attachment for a power stapler or the like comprising an elongated body one end of which includes a means for closing in a wrap around arrangement the ends of a staple, said means comprising an open end staple receiving head provided with a work receiving slot extending in the direction of the longitudinal length of said body, said staple receiving head recessed to provide a slide area through which a driven staple is adapted to pass, said recess extending on either side of and being of a length greater than said work receiving slot and providing oppositely disposed confronting forming ends in communication with said open end work receiving slot, and means provided by said recess for guiding the driven staple as it is moved in the direction of said work receiving slot, and means in said recess on either side of said slot and cooperating with said forming ends to cause the driven staple to wrap around a work piece disposed in said work receiving slot.

3,041,621
SAFETY HAT
Brock F. Brockway, Mill Valley, Calif., assignor to E. D. Bullard Company, Sausalito, Calif., a corporation of California
Filed Aug. 3, 1959, Ser. No. 831,136
6 Claims. (Cl. 2—3)

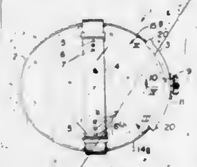
1. A safety hat and suspension harness therefor comprising a hat body, a plurality of fastener elements fixed within the hat body, a companion fastener element detachably engaging each fixed fastener element and having a slot therein, a plurality of headstraps each having

a loop at both ends, one loop of each strap engaged in said slot of a companion fastener element, an adjusting cord engaging the other loops of the head straps, a flexible mounting band comprising a marginal strip with integral supporting tabs extending transversely therefrom,



an integral stud fastener element on each supporting tab and engaging the slot in the companion fastener, and means for adjustably connecting opposite ends of the mounting band to provide a sweat band of desired head size.

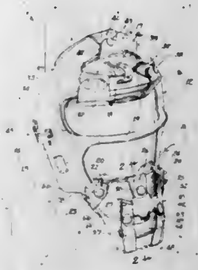
3,041,622
ADJUSTABLE HEADBAND
Francis J. Gurtowski, Reading, Pa., assignor to The Electric Storage Battery Company, Philadelphia, Pa.
Filed Sept. 11, 1959, Ser. No. 839,510
3 Claims. (Cl. 2—8)



1. An adjustable headband for welding shields and the like, comprising an adjustable, flexible headband strap having upstanding, flexible portions on opposite sides thereof which are adapted to extend upwardly, and terminating at the sides of the wearer's head, each terminating in an integral, transverse loop, a separate, flexible crown strap having end portions of such thickness as to snugly fit inside said loops, each of said end portions having a plurality of longitudinally spaced holes, and a projection of a size corresponding to that of said holes extending outwardly from each of said upward extensions for selective insertion in any of said respective holes for symmetrically adjusting the crown strap, the extremities of said crown strap having holes for pivotal mounting of said welding shield, whereby said pivotal mounting holes may be adjustably raised or lowered.

2. A headband for supporting a welding shield or the like, comprising a crown strap and an adjustable headband strap, both of flexible material, said headband strap including overlapping end portions, each having rack teeth in opposed, spaced relationship, a hair guard comprising an arcuate base of channel cross-section having closed loops integrally formed on each end plane thereof and having a separate cover portion in the form of an arcuate, flexible strip whose end portions snugly fit inside, and extend through and are held by said loops, a stud integrally secured to a central portion of said base and extending through a central hole formed in said cover portion, and an adjusting knob having a spur gear integrally formed thereon in meshing relationship with said rack teeth and having a central cylindrical opening into which said stud telescopically fits, fastening means for securing said knob to said stud, said cover portion having outwardly projecting lugs, said knob having radially extending grooves on the under surface confronting said cover portion which are yieldingly and selectively engageable by said lugs by virtue of yielding of said flexible strip so as to maintain said knobs in any desired rotated position.

3,041,623
AUXILIARY PROTECTIVE EXTENSION FOR BASEBALL MASKS AND THE LIKE
Frederick W. Glahe, La Grange, Ill., assignor to Wilson Athletic Goods Mfg. Co., Inc., River Grove, Ill., a corporation of Delaware
Filed July 12, 1960, Ser. No. 42,433
4 Claims. (Cl. 2—9)



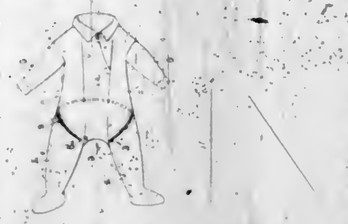
1. In combination with a baseball catcher's mask or the like having a frame and guard bar structure including a bottom chin guard portion having an outer surface which is curved from side to side, a pad extending across the inner surface of said chin guard portion, and means including flexible tabs on said pad and embracing said chin guard portion at spaced positions for holding the pad in place, an auxiliary protective extension for the bottom of the mask comprising a formed shell of relatively thin, hard and stiff material which has a mid-portion curved to conform generally to the curvature of the outer surface of said chin guard portion of the mask structure, said mid-portion of the shell having a top marginal portion engaging the outer surface of said chin guard portion and a portion extending downwardly a substantial distance below the chin guard portion, said shell also having side wing portions extending outwardly from opposite sides of the mid-portion thereof to positions overlying opposite side portions of said chin guard portion, and said flexible tabs on the pad embracing said side wing portions of the shell as well as the chin guard portion of the mask structure for holding the shell in place relative to the mask.

3,041,624
HAIR SPRAY SHIELDS
Joseph John Cutrona, Jr., 177 Beech St., Paterson, N.J.
Filed May 25, 1959, Ser. No. 815,723
4 Claims. (Cl. 2—11)



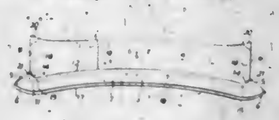
1. A device of the class described comprising: a sheet of thin stiff imperforate waterproof material adapted to be bowed outwardly to a desired configuration, said sheet having opposed lateral side edges and a top and bottom portion; shaping means for maintaining said sheet bent to said outwardly bowed configuration, said shaping means comprising an elongated strip of malleable, form-retaining material secured to said sheet and extending substantially laterally thereof along a major portion of the face of said sheet.

3,041,625
STRETCHABLE GARMENT FOR INFANTS
Jean E. Joseph, 6 Ruthland Road, Great Neck, N.Y.
Filed May 8, 1961, Ser. No. 108,551
1 Claim. (Cl. 2—80)



In a stretchable garment for a growing infant, formed of stretchable material and adapted to expand both lengthwise and crosswise in conformity with the infant's growth: an upper torso covering part and a lower leg covering part, said upper torso covering part having a neck opening and arm openings and having a front portion extending to the crotch and a back portion extending to below the waistline, said lower leg covering part having a seat covering portion, said upper and lower parts of the garment being permanently joined at the lower end of the front portion to form a crotch covering portion, and means separably connecting said parts along a line extending from one lateral end of the crotch obliquely upward along the front of the garment then across the rear below the waistline then obliquely downward along the front to the opposite lateral end of the crotch, said means comprising a slide fastener extending along said line from one end to the other, the disposition of said connecting line allowing two-way stretch in the front of the garment and also in the waist and crotch regardless of axial nonstretchability of the slide fastener itself.

3,041,626
COLLARS FOR SHIRTS
Bert Light, 4 Bath St., City Road, London E.C. 1, England
Filed June 5, 1959, Ser. No. 818,341
Claims priority, application Great Britain Jan. 16, 1959
2 Claims. (Cl. 2—131)



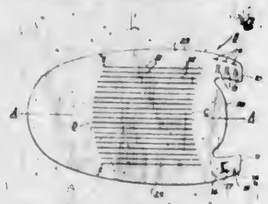
1. A shirt collar comprising: a face ply formed in one piece and having a lower neckband portion and an upper cape portion adapted to be turned down over the neckband portion along a fold line which extends along the junction of the neckband and cape portions; a back ply formed in one piece in substantial correspondence with the face ply and secured to the face ply in register therewith; a neckband interlining section flatwise confined between the neckband portion of the face and back plies and shaped in substantial correspondence thereto, the upper edge of the neckband interlining section being recessed to give the same an elongated medial portion and a pair of diverging end portions which extend obliquely outwardly from the ends of the medial portion; a cape interlining section intermediate the face and back plies shaped in substantial correspondence with the cape portion of the face and back plies and disposed mainly within the cape portions of said plies, but having a lower marginal edge portion which extends beyond the lower edge of the cape portions of said plies and between the neckband portions thereof; the edge of said lower marginal edge portion of the cape interlining section having an elongated medial portion which corresponds in shape to the elongated medial portion of the upper edge of the neckband interlining section, and diverging end portions which extend obliquely from the ends of the elongated medial edge portion, the lower marginal edge portion of the cape interlining section overlapping the upper marginal edge portion of the neckband interlining section to an extent which disposes the oblique edge portions at the ends of the two interlining sections in edge-to-edge contiguity; and means securing the overlapping marginal edge portions of the interlining sections to one another, the edge-to-edge contiguity of the oblique edge portions locating the two interlining sections in proper relationship to one another prior to securement of said sections together, and preventing interference between the interlining sections when the collar is folded along said fold line.

3,041,627
LIP GUARD
Hershel L. Davis, P.O. Box 476, Lakeland, Fla.
Filed Feb. 10, 1959, Ser. No. 792,443
14 Claims. (Cl. 2—174)



1. A lip guard comprising a body section having forward and rear edge portions, a pair of members connected to said body section and extending generally forwardly of the rear edge portion of said body section on opposite sides thereof to form a biting surface by their rear edge portions, the forward edge portion of each member being formed outwardly from the forward end of its rear edge portion to define individual lip shields.

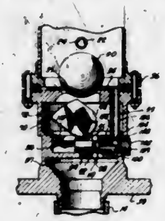
3,041,628
NOVELTY CAP
Alvin K. Fish, Winnetka, and Harry R. Block, Highland Park, Ill., assignors to Slack Manufacturing Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 8, 1961, Ser. No. 87,923
5 Claims. (Cl. 2—195)



1. A novelty cap comprising a flat blank of thin, flexible material, said blank having a configuration which is substantially an elliptical segment greater than a semi-ellipse regarded along the major axis of the ellipse, the truncated end of the blank being provided with a pair of opposed tabs adjacent the periphery of the blank, said tabs respectively having male and female interlocking elements whereby, the blank, upon deformation of the tabs may be brought into mutually overlapping relation and said elements interlocked to retain the tabs in said relation to form, with the outer side edge portions of the blank, a headband, the opposite end of the blank providing a continuously, upwardly convex visor transversely

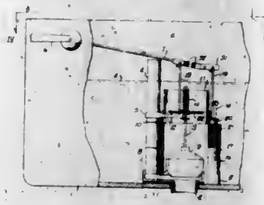
of the blank, the area of the blank intermediate said tabs and visor extending from the headband forming portions of the blank being provided with a plurality of closely-spaced slits in the direction of said major axis and defining a plurality of narrow bands whereby overlapping and skewing of the tabs at substantially 90° to their flat position separates and urges said bands into individual arches, to define a crown said tabs and the unslit truncated end portion of the blank merging together, said slits terminating along a common line adjacent said truncated end and along a common arcuate line at the visor end which is convex toward the outer margin of the visor to provide a line of weakness whereat the blank, upon assembly, will fold to cause the visor to assume said convex upward configuration at an obtuse angle to the crown and the outermost ones of the slits defining the inner margin of the head-band at each side.

3,041,629
FLUSHING APPARATUS
Verneur E. Pratt, P.O. Box 97, Fullerton, Calif.
Filed Feb. 2, 1959, Ser. No. 790,522
2 Claims. (Cl. 4—28)



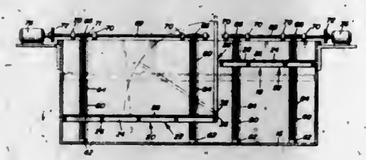
1. In an apparatus for flushing toilet bowls the combination which comprises a vertically disposed cylindrical tank having an air vent opening in the top portion thereof, an outlet in the bottom portion thereof and an inlet adapted to be connected to a source of water under pressure, a first impermeable buoyant ball disposed within the tank, for closing the air vent opening when the water within the tank reaches a predetermined level, a second impermeable ball disposed within the tank for closing the outlet, means including a bracket having a discharge opening therethrough for connecting the outlet of the tank to the toilet bowl, means including a return pipe connected between the top of the tank and the bracket for venting the air vent opening to atmosphere and for draining off any water that flows through the air vent opening into the discharge opening within the bracket, a conduit connected between the tank and the bracket for draining water from the tank into the discharge opening, a plug valve coupled to the conduit and including a valve seat on one end of the conduit and a plunger slidably disposed within the bracket for selectively engaging the valve seat to close the conduit, the plunger including a gear rack, a cam member rotatably mounted within the bracket and having a segmental pinion gear on one portion thereof and a cam surface on another portion thereof, the pinion gear meshing with the gear rack on the plunger to slide the plunger away from the valve seat and open the conduit when the cam member is rotated in one direction and to slide the plunger toward the valve seat to close the conduit when the cam member is rotated in the other direction, the cam surface being positioned to engage and lift the second ball from the outlet when the cam member is rotated in said one direction after the conduit is opened, means for biasing the plunger toward the valve seat and means for rotating the cam member in said one direction.

3,041,630
WATER CLOSET FLUSHING APPARATUS
Richard Wendell Williams, Dix Drive, Blissman Acres, East McKeesport, Pa.
Filed July 27, 1959, Ser. No. 829,876
8 Claims. (Cl. 4—37)



1. A water closet valve comprising a basically cylindrical open-ended housing having one end thereof disposed on the bottom of a water closet tank and surrounding the flush valve seat therein in substantially concentric spaced relation thereto, the said housing being disposed vertically upward therefrom to a height less than the normal full level of the tank in condition for flushing, a flushing lever positioned above the upper extremity of the said housing within the said water closet tank and communicating with a flushing handle mounted exteriorly of the said tank, a buoyant ball valve aligned with the said flush valve seat and being concentrically disposed within the said housing, a resilient mounting communicating with the said buoyant ball valve and having its uppermost extremity mounted on the flushing lever, and a gate valve pivotally mounted proximate the lower extremity of the said housing and opening inwardly thereinto.

3,041,631
ADJUSTABLE FALSE BOTTOM FOR SWIMMING POOLS
Harry C. Fogle, Box 245, Oilton, Okla.
Filed June 29, 1960, Ser. No. 39,484
4 Claims. (Cl. 4—172)



1. In combination with a swimming pool of the type including a bottom and peripheral upstanding and adjoining side walls defining an area in which to receive water, at least one pair of foraminous false bottom members disposed over adjacent portions of said pool bottom, means mounting said bottom members in said pool for independent adjustable parallel movement in elevation toward and away from said bottom, said bottom members, when horizontally aligned, having closely adjacent edges extending from one side of the pool to the opposite side and immediately adjacent an upstanding plane extending between said adjacent edges and generally paralleling the direction of movement of said bottom members, said bottom members together having a total plan area substantially equal to the plan area of the bottom of said pool, a partition wall, means pivotally securing said partition wall along one side edge thereof to one of said bottom members along its edge adjacent the other bottom member for movement about an axis extending substantially parallel to said last mentioned edge between positions overlying said one bottom member and projecting upwardly between said bottom members.

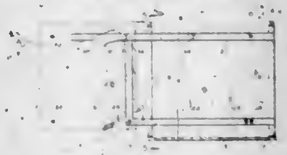
3,041,632
ONE-PIECE SHEET METAL SINK RIM GUARDS OR THE LIKE AND METHOD FOR MAKING THE SAME
George W. Lenz, Jr., 3006 Colonial Hill Road, Louisville, Ky.
Filed July 31, 1961, Ser. No. 128,110
4 Claims. (Cl. 4—187)



1. A one-piece hollow sink rim guard of generally semicircular cross section throughout formed of sheet metal and having an intermediate straight portion, a first leg portion extending at a right angle to said intermediate portion, a second leg portion extending at a right angle to said intermediate portion and parallel to said first leg portion, the junctions of said leg portions with said intermediate portion forming arcuate corners, and the outer wall of each of said leg portions, corners and intermediate portion having a thickness greater than that of the inner wall thereof.

3. A method for forming a one-piece sheet-metal sink rim guard or the like having a straight intermediate portion joined at arcuate corners with a pair of parallel side legs projecting at right angles to said intermediate portion comprising, providing an imperforate flat metallic sheet of generally rectangular configuration, placing said sheet within a press between relatively movable platens respectively mounting a pinch-rim die extending continuously in the form of a pair of guards having the respective side legs of each guard joined in prolongation of the opposite side legs of the other guard and a die recess of a form commensurate with said die, arranging said sheet symmetrically between said die and said recess, moving said platens relatively toward each other into contact with said sheet and simultaneously drawing metal from the peripheral edge region of said sheet inwardly toward said die and stretching metal from the central portion of said sheet outwardly toward said die, continuing the relative movement of said platens and pinch trimming from the remainder of said sheet an intermediate article comprising two guards joined to each other, removing said intermediate article from said press and subsequently dividing said intermediate article into two similar guards by transversely separating a pair of parallel legs of said intermediate article at the mid-points thereof.

3,041,633
COMBINATION DESK AND COUCH
David Beadell, 7240 SW. 125th St., Miami, Fla.
Filed Feb. 9, 1961, Ser. No. 88,124
3 Claims. (Cl. 5—2)



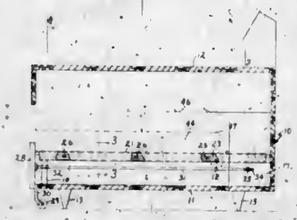
1. A combination desk and couch comprising a desk having a front wall, a side wall and an overhanging top wall mounted on said front and side walls, a drawer slidably mounted on said front wall below said overhanging top wall, said side wall having an opening, a plurality of cross members secured at their ends to said desk and extending in a plane beneath said top wall substantially parallel to said side wall, a pair of channel shaped track members extending transversely and secured to said cross members, said track members being spaced and substantially parallel to each other with one end extending through said opening in said side wall, a third channel shaped track member connected to one of said pair of channel shaped track members at said one end and extending substantially right angle thereto in the direction of said other of said pair of channel shaped track members, said other of said pair of channel shaped track members having an inner side wall portion and an opening in said inner side wall portion beyond the position of said opening in said side wall of said desk, a couch frame, said couch frame having a caster secured to its lower surface at three of its corner portions, a swivel member secured at its fourth corner portion, roller means mounted on said couch frame in alignment with said casters mounted at two of said four portions, one of said casters and said roller means being received by said other of said pair of channel shaped track members while said swivel member is received by said one of said pair of channel members whereby upon the outward sliding movement of said couch frame, said track members will guide said couch frame through said opening in said desk and upon the arrival of said swivel member at said third channel shaped track member, said couch frame may swing through an arc of substantially 90 degrees with said roller means passing through said opening in said side wall portion of said channel shaped track member.

3,041,634
CONVERTIBLE BED
Sumner C. Willis, White Plains, N.Y., assignor to Castro Convertible Corporation, New Hyde Park, N.Y., a corporation of New York
Filed May 2, 1958, Ser. No. 732,714
5 Claims. (Cl. 5—13)



5. In an improved sofa bed mechanism of the character described, an intermediate section, a connecting section, an end section, said sections being pivoted serially together and adapted when folded to lie with the intermediate section generally horizontal the end section generally parallel above it and with the connecting section generally vertical and perpendicular to said intermediate and end sections, and when unfolded being adapted to lie generally horizontally in a straight line, a front swing link and a rear swing member connected to said mechanism to suspend it from a stationary frame, a crank member pivoted at a first point to said intermediate section near its forward end, means for swinging said crank member downward and forward to generally perpendicular relation with said intermediate section when said sections are unfolded and backward and up beneath or alongside said inner section when said sections are folded, a first leg pivoted to said end section and adapted when said sections are unfolded to extend down to support said end section horizontally above the floor, and a second leg connected to said crank member for folding and unfolding, said second leg being pivoted to said intermediate section immediately in front of said crank member and being coupled thereto by a pin and slot connection to fold and unfold so as to clear a front portion of the frame, said pin sliding along said slot as said crank member folds so that said second leg folds at a faster rate than said member.

3,041,635
SOFA-BED
Richard T. Holtzclaw, Montgomery, Ala., assignor of fifty percent to Perfection Mattress & Spring Company, Birmingham, Ala., a corporation of Alabama
Filed June 20, 1960, Ser. No. 37,150
1 Claim. (Cl. 5—18)



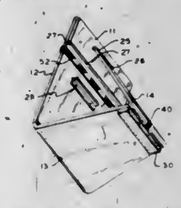
A sofa-bed comprising a supporting frame, a first flat and continuous cushion supporting section carried by said supporting frame, channel-shaped members mounted at the sides of said first cushion supporting section with the lowermost flanges thereof extending inwardly beneath and secured to said first cushion supporting section and the uppermost flanges thereof extending inwardly and spaced above said first cushion supporting section to define guideways between the upper surface of said first cushion supporting section and said uppermost flanges, a second flat and continuous cushion supporting section mounted above said first cushion supporting section with the edges at the side thereof riding in said guideways and adapted for outward movement from a position over said first cushion supporting section to a lateral position relative thereto to position said second cushion supporting section for supporting a cushion while it is positioned over said first cushion supporting section and to position both cushion supporting sections for supporting cushions when said second cushion supporting section is moved to said lateral position, a plurality of spaced apart rollers carried by said first cushion supporting section and projection upwardly therefrom in position to engage the under surface of said second cushion supporting section whereby said second cushion supporting section is supported at spaced intervals and is adapted for free movement relative to said first cushion supporting section, and depending support members carried by the outer portion of said second cushion supporting section.

3,041,636
INVALID LIFTER AND TRANSPORTING DEVICE
Arthur B. Twedt, 1126 NE. 190th Place, Troutdale, Oreg.
Filed Nov. 29, 1960, Ser. No. 72,502
5 Claims. (Cl. 5—81)



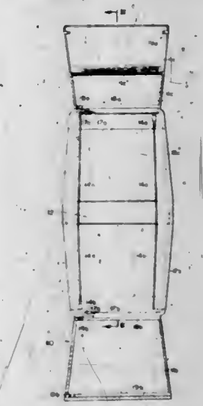
1. An invalid lifting and transporting device comprising a first pair of substantially parallel and inclined side members, one on each side of said device, a transverse wheel-supported axle connected between the lower ends of said first pair of side members, a second pair of substantially parallel and inclined side members, one on each side of said device and each crossing one of said first pair of side members, means interconnecting the side members on each side of the device adjacent where they cross, a member in tension interconnecting the side members on each side of the device adjacent their lower ends, a rotatable seat extending between and rotatably mounted on the upper ends of said second pair of side members, wheels mounted adjacent the lower ends of said second pair of side members, a swingable arm with an end pivotally connected to the upper end of each of said first pair of side members, and supporting means extending between and connected to said swingable arms.

3,041,637
BACK RESTS
William M. Emery, 44 Pittsford Way, New Providence, N.J.
Filed May 23, 1960, Ser. No. 30,879
4 Claims. (Cl. 5—327)



1. A back rest having a basic triangular construction of three members comprising a base member with two opposite and parallel ends, a back supporting member hinged to one of said ends and a brace member hinged to said opposite end, said hinges and the relative length of said members being such as to provide for the loosely contacting of the upper rear side of the back supporting member intermediate of its ends by the end of the brace member and means sufficiently elastic to hold said two of said members in said contacting relationship and yet allow said triangular construction to be folded flat with the brace member between the back supporting member and the base member without disconnecting said elastic means.

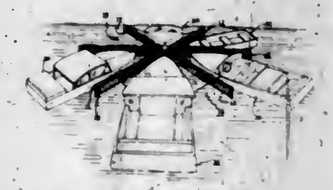
3,041,638
UTILITY BAG WITH REMOVABLE LINING
Salvatore A. Lo Vico, New York, N.Y.
(194—21 111th Road, Queens, N.Y.)
Filed Jan. 26, 1960, Ser. No. 4,668
8 Claims. (Cl. 5—344)



1. A bag comprising a spreadable envelope composed of a plurality of interconnected portions including an

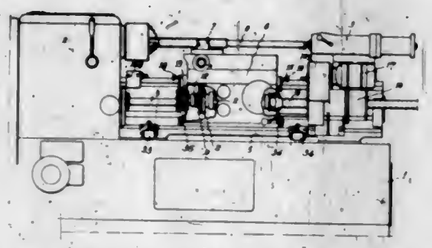
inner pair and an outer pair of said portions foldable relatively to one another about parallel lines, said inner pair of portions being provided, along edges transverse to said lines, with mating first closure means for detachably joining said inner pair together along said edges with said outer pair folded therebetween, said inner pair being further provided, along their junctions with said outer pair, with second closure means detachably connecting said outer pair of portions thereto, said outer pair being provided with means for joining them together upon their detachment from said inner pair by the opening of said second closure means, thereby forming a unit removable from said inner pair in the closed condition of said first closure means.

3,041,639
MULTIPLE BOAT ANCHORAGE
Gerald D. Atlas, 2940 W. Balmoral, Chicago, Ill.
Filed July 6, 1959, Ser. No. 825,299
7 Claims. (Cl. 9—8)



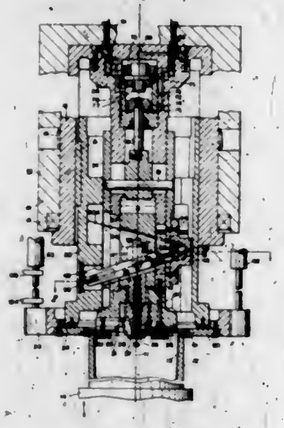
1. A boat anchorage comprising a buoy having an anchor chain depending therefrom in axial alinement therewith, elongated arms extending radially from said buoy so as to lie in a substantially horizontal plane above the water level, baffle means carried by said arms and extending downwardly therefrom and providing together with said arms a plurality of slips radially disposed about said buoy.

3,041,640
THREAD CUTTING MACHINE WITH MEANS TO ENGAGE FEED SCREW MEANS
Pierre Edouard Renoux, Colombes, France, assignor to Cri-Dan, Paris, France, a company of France
Filed Aug. 5, 1959, Ser. No. 831,743
Claims priority, application France Sept. 12, 1958
22 Claims. (Cl. 10—105)



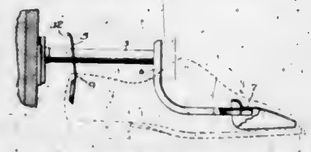
1. A thread-cutting machine, chiefly for cutting threads of a considerable length, comprising a headstock, a tailstock alined with the headstock, a bed carrying said headstock and tailstock, a carriage slidingly carried by said bed to slide in the direction defined by the alined headstock and tailstock, a tool-holder carried by said carriage to move forwardly therewith during the thread-cutting stroke and then to execute a rearward stroke, a camshaft revolubly carried by the carriage on an axis parallel with the axis of the headstock and tailstock, means wherethrough the camshaft is driven by the headstock, a depth-defining cam for the tool on the tool-holder and a cam defining the inward and receding movements of the tool-holder, a box carrying said cams and driven by the camshaft, a master screw forming a coaxial extension of the camshaft and controlling the sliding movement of the carriage over the bed, releasable means interconnecting the master screw with the camshaft, a control box through which the master screw extends and carried by the bed, means for longitudinally shifting and holding fast said control box with reference to the bed, a nut threadedly engaging the master screw and carried inside the control box, means adapted to lock said nut against rotation during rotation of the master screw, an electric motor adapted to drive into rotation said nut in the same direction as the master screw and at a higher speed than the latter to provide the return stroke of the tool-holder, means for disconnecting the cam-carrying box from the camshaft during the thread-cutting stroke of the tool-holder and the return movement of the tool-holder.

3,041,641
THREADING MACHINE WITH COLLAPSIBLE TAP HAVING MEANS TO PERMIT REPLACEMENT OF CUTTER BITS
Edward J. Hradek, Cleveland, and Harry W. Brown, Sr., Willowick, Ohio, assignors to The National Acme Company, a corporation of Ohio
Filed Sept. 24, 1959, Ser. No. 842,148
12 Claims. (Cl. 10—145)



1. A threading machine for threading a workpiece comprising, in combination, a frame, a body mounted on said frame and having an axis, thread forming tools mounted for lateral movement on said body for threading any said workpiece, interengaging cam surfaces acting on said tools effecting lateral movement of said tools upon relative axial movement thereof, means on said frame to relatively axially and rotatively move a workpiece and said body for taper threading operations, taper control means connected between said body and said cam surfaces to effect lateral movement of said tools in accordance with relative axial threading receding movement a first distance of said workpiece and said body, said first distance moving said cam surfaces axially a second distance to establish a tapered thread on any said workpiece, motive power means including a piston and cylinder in said frame, linkage means connecting said motive power means to said taper control means, limit means having first and second conditions as actuated by relative axial movement of said workpiece and said body, means connecting said limit means to control actuation of said motive power means, completion of a threading operation moving said taper control means to the receded position whereupon said limit means is actuated to said first condition to retract said motive power means a third distance to retract one of said cam surfaces a fourth distance to laterally collapse said tools to permit axial separating movement of said tools and any workpiece without relative rotational movement therebetween, and means to retract said piston a fifth distance whereby when said taper control means is in said receded position said fifth distance permits retraction of one of said cam surfaces a sixth distance via said taper control means to release said tools at said interengaging cam surfaces to permit lateral removal of said tools from said body.

3,041,642
SHOE SHINE SHOE HOLDERS
Elwood E. Smith, Chicago, Ill.
(3020 Hollyridge Drive, Hollywood 28, Calif.)
Filed Mar. 14, 1960, Ser. No. 14,853
2 Claims. (Cl. 12—53.7)



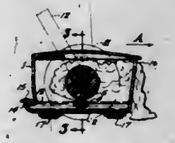
1. A shoe shine shoe holder comprising a horizontally arranged bar, supporting means at the inner end of said bar for mounting the holder on a support, a frame member having a vertically projecting part at one end affixed adjacent its upper end to the other end of said bar and the other end of said frame extending horizontally forward, a toe cap affixed to said other end of said frame, and a locking slide movably and adjustably mounted on said bar but retained in locking engagement when canted to shoe retaining position on the holder, said slide consisting of a single upright and substantially flat metal plate having an opening intermediate its ends conformably receiving therein the bar, the upper end of said plate having a rearwardly bent lip and the lower portion a rearwardly projecting part for engaging the interior of the heel of the shoe, the vertical dimension of the opening in said locking slide being so proportioned relative to the vertical cross section of the bar that rearward pressure applied to the slide below said bar freely moves the slide rearwardly until its lower rearwardly projecting part forcibly engages the interior of the heel of the shoe and upon release of the applied pressure the portion of said slide above said lower rearwardly projecting part cants rearwardly from a vertical plane about and is automatically locked onto said bar, said slide being retained in said locking position until released by engagement and forward pressure being applied to said rearwardly bent lip.

3,041,643
BOOT SUPPORT OF INVERTED U-SHAPED CONFIGURATION
Glenn E. Struble, Hamilton, Ohio, assignor to Diamond National Corporation, a corporation of Delaware
Filed Mar. 23, 1959, Ser. No. 801,065
2 Claims. (Cl. 12—128)



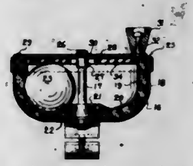
1. A boot-upper support comprising a single piece of foldable sheet material having an inverted U-shaped configuration and comprising a generally horizontal concavo-convex connecting panel, and a pair of depending elongated support panels foldably connected at upper end portions to opposite sides of said connecting panel, said connecting panel and support panels including a common hinge connection therebetween comprising an outwardly extending, bowed fold-line, said support panels being bowed outwardly and transversely along their entire length due to being folded at said common hinge connection, said connecting panel including gripping means for facilitating the manual insertion and removal of the boot-upper support in a boot-upper.

3,041,644
RUG SHAMPOOING MACHINE
William P. Wallace, Detroit, Mich., assignor to The American Waterlock Corporation, Ortonville, Mich., a corporation of Illinois
Filed Dec. 9, 1959, Ser. No. 858,473
10 Claims. (Cl. 15—50)



1. In a rug shampooing device, a housing, a pair of wheels for moving said housing over a rug to be cleaned, scrubbing means mounted on said housing for contact with the rug, a pair of sponge roller rotatably journaled within said housing and mounted with their peripheries in flexing contact, means for rotating said rollers, and means for supplying a foamable liquid detergent to at least one of the said rollers, and an opening in said housing positioned to permit foam generated by said rollers upon rotation thereof in the presence of the foamable detergent to be dispensed from said housing onto the rug being cleaned.

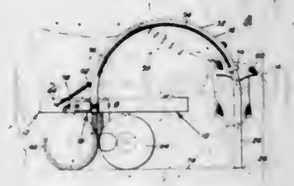
3,041,645
GOLF BALL WASHER
Louis B. Smith, 137 E. Garfield Ave., New Castle, Pa.
Filed Dec. 19, 1958, Ser. No. 781,703
4 Claims. (Cl. 15—97)



1. In a portable golf ball washer, a cup-shaped cylindrical casing, a cup-shaped cylindrical sponge lining the inner wall of said casing, a centrally located post extending from the bottom of said casing outwardly of the open end of said casing and terminating at a point outside thereof, means connecting said post to the bottom of said casing and securing the post and casing against relative translatory movement, a cup-shaped circular cover having a position closing the open end of said casing and an opening receiving said post and rotatably connected to said post near the outer end thereof, said cover being supported on said post for movement away from said position closing the casing to provide access to said casing, a washer-shaped friction disc concentrically secured to the underside of said cover and disposed about said post, and cover rotating means for rotating said cover relative to said casing and frictionally engaging and advancing a golf ball therein for cleaning the same, said cover rotating

means comprising a lever having one end pivotally connected to the upper side of said cover near the periphery thereof for movement in a plane parallel to the plane of said cover into and out of engagement with said post and having a part in the center thereof including a notch adapted to engage a groove in said post disposed in the plane of said lever so as to prevent the axial displacement of said cover on said post, and a knob on the other end of said lever for moving said lever into and out of engagement with said post and rotating said cover.

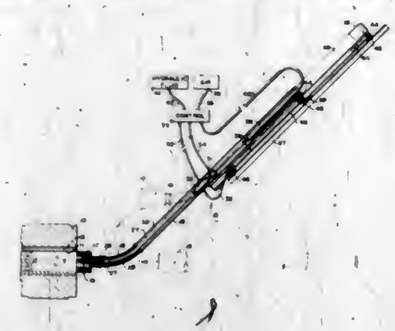
3,041,646
SHOE TOE SHINER
Otto M. Dyer, Jr., Lafayette Plaisance, Apt. 1205, Detroit, Mich.
Filed Apr. 29, 1960, Ser. No. 25,734
5 Claims. (Cl. 15—97)



5. A shoe toe shiner comprising a support platform adapted to support a shoe, a pair of spaced support means carried by said platform adapted to receive the toe of a shoe supported by said platform therebetween, engaging means mounted on said support means for upstanding reciprocal movement and adapted to engage the opposite ends of a shine cloth below a shoe toe disposed between said support means over which the mid-portion of said cloth passes, motor means and connecting means operatively connected between said engaging means and said motor means, said motor means effecting opposite reciprocal movement of said connecting means to effect reciprocating movement of said cloth over said shoe to shine the latter, said connecting means including a positive connection between said motor means and each of said engaging means when effecting its downward movement and a resilient connection therebetween when effecting its upward movement, said motor means including supporting wheels carried by said platform and drivingly connected with said engaging means by the connecting means for reciprocation of said engaging means in response to reciprocation of said platform across the surface supporting said wheels.

3,041,647
EXTRUSION CONTAINER CLEANING APPARATUS
Alan J. Deacon, Port Credit, Ontario, and Ernest Nelson McKee, Mimico, Toronto, Ontario, Canada, assignors to Anaconda American Brass Company, a corporation of Connecticut
Filed Feb. 13, 1961, Ser. No. 88,929
4 Claims. (Cl. 15—104.1)

1. A semi-automatic cleaning device for use in removing scale from a billet chamber in an extrusion press comprising a cutter head assembly, a curved rigid guide tube supporting said cutter head assembly, a flexible shaft operatively connected to said cutter head assembly and slidably disposed within said guide tube, positioning means for moving said guide tube to and from its operating position adjacent said billet chamber, translating means for linearly inserting and removing said cutter head assembly from said billet chamber, driving means on said translating means for rotating said flexible shaft and thereby driving said cutter head assembly, and



control means for selectively operating said positioning, translating and driving means.

3,041,648
MOP HOLDER HAVING AN ADJUSTABLE HANDLE
Leland Gradinger, Kansas City, Kans., and Wilbur L. Six, Kansas City, Mo., assignors to Golden Star Polish Manufacturing Co., Incorporated, Kansas City, Mo., a corporation of Missouri
Filed July 20, 1960, Ser. No. 44,142
3 Claims. (Cl. 15—147)

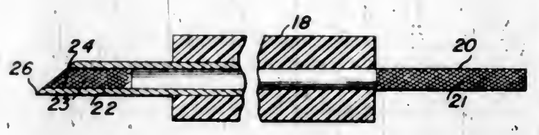


1. A holder for a mop hood having a pocket in which said holder is enclosed comprising, an elongate frame having a longitudinal rod, a handle having an eye portion, a connecting member for attaching said handle to said rod, said connecting member including spaced arms having a connecting portion forming a bearing portion for connection of said rod on the frame, means securing said bearing portion for rotation of the handle about said rod transversely of the longitudinal axis of said frame, one of said arms having an extension provided with an opening and said extension having a rounded surface surrounding said opening and a boss extending in the direction of said other arm, said boss forming a bearing portion for the eye portion of said handle, a plate member engaging said eye portion on a side opposite said extension and having an opening aligning with the opening in said extension, a resilient washer in said opening in said extension, and means for securing said plate member to said extension, said means including a bolt extending through said plate and extension and a nut engaging against said washer and the rounded surface of said extension whereby tension on said eye portion of the handle may be adjusted for movement of the handle longitudinally of the longitudinal axis of said frame.

3,041,649
TOOL FOR REPAIRING ELECTRICAL CONNECTIONS
Burthel B. Isenhour, 170 Dryden Drive, San Antonio, Tex.
Filed Nov. 25, 1959, Ser. No. 855,338
3 Claims. (Cl. 15—236)

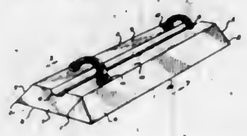
1. A tool for cleaning and setting contacts of electric sockets, said tool comprising a slender elongated handle

of insulating material, and a hollow tubular member projecting longitudinally from one end of said handle, said



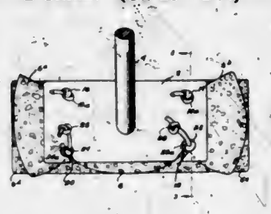
tubular member having an outside diameter of a size to fit between adjacent contacts of a socket and an inside diameter to receive one of the contacts therewithin.

3,041,650
SKI-SCRAPERS
Russell Day, 8 St. Ann's Circle, Cahokia, Ill.
Filed Jan. 21, 1960, Ser. No. 3,804
10 Claims. (Cl. 15—236)



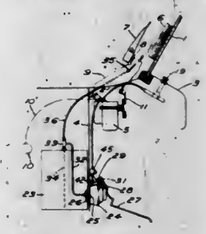
1. A ski-scraper comprising a solid prism-shaped block having oppositely presented beveled faces forming longitudinal parallel edges, said block also being provided with an elongated semicircular groove sized for flush-fitting engagement with a ski-pole, and tightening means for drawing the groove of said block tightly against said ski-pole in secured relationship therewith.

3,041,651
COMBINATION HEADER AND DETACHABLE SPONGE MOP FOR HANDLING CLEANING FLUIDS
George W. Jardine, 12 Lake Road, Waltham, Mass.
Filed July 13, 1959, Ser. No. 826,654
1 Claim. (Cl. 15—244)



A combination mop and applicator device comprising a relatively thin rigid holder plate having a handle extending upwardly therefrom, said holder plate presenting a rectangularly shaped member having side edges and two opposite ends extending between the side edges, and elongated slab of sponge material located against the underside of the rigid plate and presenting slab ends which project beyond the ends of the holder to provide an unsupported protective marginal thickness of sponge material extending slightly beyond the ends of the holder plate in parallel relationship therewith, said slab being formed at two opposite ends thereof with cord retaining slots extending medially inwardly of the slab to underlie respective ends of the rigid holder plate, said holder plate further being formed with oppositely disposed sets of notches which occur immediately above the lines of termination of respective underlying slots in the slab and knotted cord elements detachably engaged in the said notches and extending around the slab sides and through the said slots for removably receiving the slab against the rigid plate, said cords adapted to alternately compress and release portions of the sponge material adjacent the ends in directions transversely of the sponge when the mop is reciprocated against a surface thereby to facilitate handling of a cleaning fluid contained in the slab of sponge material.

3,041,652
WINDSHIELD CLEANING SYSTEM
Erwin C. Horton, Hamburg, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Continuation of applications Ser. No. 415,544 and Ser. No. 415,619, Mar. 11, 1954. This application July 7, 1958, Ser. No. 748,558
17 Claims. (Cl. 15—250.02)



10. A window cleaning system comprising a wiper motor adapted for driving a wiper across a window surface, a motor control valve slidable on the motor casing between parked and full running positions, first stop means carried by said motor casing, first control means comprising a cable and a control member for selectively moving said control valve, said cable comprising a wire movable within a flexible casing and operatively connected at one end to said control valve and at its other end to said control member, second stop means carried by said wire for abutting said first stop means to prevent movement of said control valve beyond full running position, a washer unit having means for delivering washing fluid to a window surface, second control means for selectively actuating said washer unit, and means responsive to operation of said washer unit for automatically initiating wiper operation during washer operation, said last-named means being operatively connected to said cable casing and operable to move said cable bodily as a unit for moving said control valve from its position as determined by said first control member to full running position and then back again while being inoperable to overcome the friction in said first control means and cause relative movement therein.

3,041,653
WINDSHIELD WIPER ASSEMBLY
Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Feb. 8, 1960, Ser. No. 7,385
8 Claims. (Cl. 15—250.42)



1. A windshield wiper blade comprising a supporting element adapted to receive pressure-distributing yoke means having claws at each end thereof for engaging around the side edges of said supporting element, a squeegee element carried by said supporting element, side

portions of said squeegee element contiguously underlying the outer side edges of said supporting element, and one of said elements being formed with upwardly deformed offsets for receiving said claws, said offsets being of a depth sufficient to prevent distortion of said contiguously underlying side portions of said squeegee.

3,041,654
WINDSHIELD WIPER BLADE
John W. Anderson, 578 Broadway, Gary, Ind.
Filed Mar. 25, 1957, Ser. No. 648,270
18 Claims. (Cl. 15—250.42)



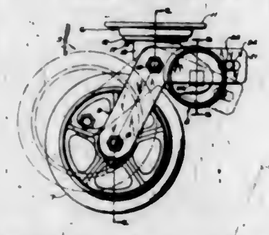
1. In a windshield wiper blade assembly, an elongate flexible wiper means, a pressure-applying holder, resilient elongate flexor means adapted to cooperate with said wiper means, said flexor means being operatively connected at longitudinally spaced-apart points to said holder to receive pressure therefrom, and relatively friction-free bearing means for supporting said flexor means for slight longitudinal movement relative to said wiper means.

3,041,655
EAVES GUTTER CLEANING DEVICE
William H. Entler, 518 NW. Hoyt St., Portland, Oreg.
Filed July 26, 1960, Ser. No. 45,464
2 Claims. (Cl. 15—600)



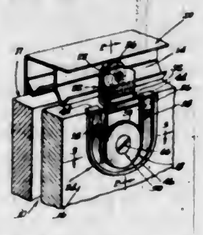
1. In an eaves gutter cleaning device of the character described including an elongated conduit pipe assembly with a substantially reverse bend portion at the top and controlled connected means at the bottom for delivering water under pressure into the conduit pipe assembly, a scraper-nozzle secured on the upper end of the conduit pipe assembly, said scraper-nozzle having a substantially cylindrical top portion, means for securing said top portion to said conduit pipe assembly, a bottom flat scraper blade portion on said scraper-nozzle extending substantially at right angles to the axis of said top portion of said scraper-nozzle and adapted to ride along on the bottom of the eaves gutter, a curved integral intermediate portion on said scraper-nozzle connecting said scraper blade portion and said top portion, and a water jet channel on said scraper-nozzle extending down from said top portion and having an outlet on said intermediate portion above the top face of said flat scraper blade portion so as to cause the water from said jet channel to spread over and be discharged from said top face of said scraper blade portion, whereby said device can be moved along an eaves gutter with said scraper blade portion riding on and scraping the bottom of the eaves gutter while the water discharged over the top of said blade portion will complete the cleaning of the eaves gutter.

3,041,656
TORSIONAL CASTER
Robert J. Goodall, Albion, Mich., assignor to Albion Industries, Inc., Albion, Mich., a corporation of Michigan
Filed May 31, 1960, Ser. No. 32,826
7 Claims. (Cl. 16—44)



1. A torsional elastic caster, comprising a base assembly having a base plate, a bearing plate with a pair of downwardly and outwardly extending substantially parallel arms, and means rotatably joining said base plate and bearing plate for rotation relative to each other; a fork assembly having a pair of substantially parallel bell crank shaped arm members with a caster wheel mounted for rotation on the ends of said bell crank-shaped arm members, and means for pivotally mounting said bell crank shaped arm members on the arms of said bearing plate adjacent but spaced outwardly of the central portion of said base plate; and an elastic torsion means connecting the outer ends of said bearing plate arms with the outer ends of said bell crank shaped arm members remote from the ends of same on which said caster wheel is mounted, said elastic torsion means having a center portion member at the outer ends of the arms of said bearing plate, means joining said center portion member in fixed non-rotatable position to said arms of said bearing plate, an outer cylindrical sleeve portion and means shiftably connecting same to said outer end portions of said bell crank shaped arm members, a resilient sleeve assembly, and means joining said resilient sleeve assembly to said center portion member and outer cylindrical sleeve portion of said elastic torsion means.

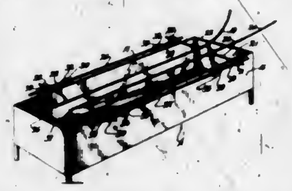
3,041,657
ADJUSTABLE DOOR HANGER
Delmar D. McNinch, Rock Falls, Ill., assignor to Lawrence Brothers, Inc., Sterling, Ill., a corporation of Illinois
Filed Aug. 31, 1960, Ser. No. 53,298
8 Claims. (Cl. 16—105)



4. An adjustable door hanger comprising: bracket means adapted to be affixed permanently to a door and

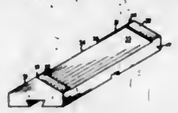
defining a channel; a tongue slidably received in said channel; roller means on said tongue adapted to ride in horizontally extending rail means associated with the doorframe; drive plate means freely rotatably mounted on said bracket means in communication with said channel and defining a flat, helical camway open toward said tongue; and cam follower means on said tongue including a plurality of vertically spaced pins for riding in said camway whereby rotation of said plate causes linear displacement of said tongue relative to said bracket means and thereby vertical adjustment of the position of said door.

3,041,658
APPARATUS FOR TREATING POULTRY
Vernon C. Almquist, Western Springs, Ill., assignor, by mesne assignments, to Armour & Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 764,561
2 Claims. (Cl. 17—11.2)



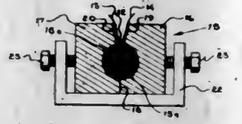
1. Apparatus for treating poultry comprising, a container adapted to contain heated liquid, conveyor means for passing the head-neck-wing portion of said poultry through the heated liquid, in said container, substantially parallel spaced guide bars associated with said container for contacting said poultry in the wing-pit area to maintain only the head-neck-wing portion of said poultry beneath the surface of said liquid, said guide bars having one end portion flared outwardly and upwardly, with the opposite end portion flared outwardly, and means for securing said guide bars to said container.

3,041,659
RUBBER MIXER
William A. Clark, Port Credit, Ontario, Canada, assignor of fifty percent to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio, and fifty percent to Skinner Engine Company, Erie, Pa., a corporation of Pennsylvania
Filed Apr. 16, 1959, Ser. No. 816,659
7 Claims. (Cl. 18—2)



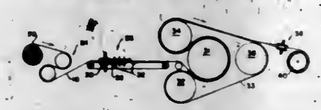
1. A mixer for heavy plastic materials comprising a double cylindrical chamber having a bladed rotor in each of the cylinders thereof, said chamber being provided with a bottom discharge opening, and a slidably mounted closure member for said opening, the upper side of said member comprising two plane surfaces meeting at a line substantially centrally of said chamber, the surfaces sloping inwardly from the side edges of said closure member to a ridge, said ridge lying between the blades of said rotors and in a horizontal plane intermediate the plane of said rotors and the lower portions of the cylinders, downwardly disposed surfaces on said mixer at the ends of said chamber lying in planes tangent to said cylindrical chamber and adapted to cooperate with said closure member to form a closure, the upper sides of said member at the ends thereof being parallel to the intermediate portions and disposed a short distance thereabove, said upper sides being adapted to be in close proximity to said downwardly disposed surfaces.

3,041,660
METHOD AND APPARATUS FOR CURING THERMOSET RESINS
Miller H. Fink, Centralia, Mo., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri
Filed July 25, 1960, Ser. No. 45,048
6 Claims. (Cl. 18—6)



5. Apparatus for continuously curing an elongated raw mass of thick liquid thermosetting plastic comprising movable shielding film having a product contacting central portion and a pair of opposite marginal edges, a product forming die having inner forming surfaces and an elongated slot running substantially the length of said die and communicating the exterior thereof, said slot being of a width to receive said pair of opposite marginal edges of said film when thrust therethrough yet provide a small opening therebetween, said opposite marginal edges extending through said slot substantially the length thereof to permit air to be expelled therebetween, and moving means to move said shielding film through said die.

3,041,661
PROCESS AND APPARATUS FOR MAKING CONVEYOR BELTING
Robert H. Elliott, Lincoln, Mass., assignor to American Biltrite Rubber Co., Inc., Chelsea, Mass., a corporation of Delaware
Filed Aug. 25, 1960, Ser. No. 51,918
3 Claims. (Cl. 18—6)

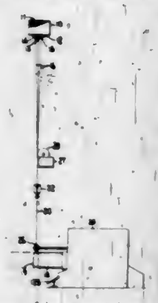


1. The process of continuously producing flat round-edge belting with elastomeric covering material while curing the same, which comprises the following steps, viz.—
(1) leading a flat ribbon of flexible sheet material to each edge of the uncured belting,
(2) folding the ribbon about the opposite edges of the belting,
(3) temporarily and progressively securing marginal portions of the flexible ribbon to the flat faces of the belting,
(4) while forming in the ribbon a bight of semi-circular cross section extending longitudinally along each edge,
(5) progressively heating and molding the elastomeric covering material of the belting and thereby causing it to flow progressively into and fill the bight of the ribbon, and
(6) removing the ribbon for reuse after the material has set.

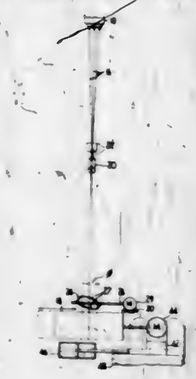
3,041,662
METHOD AND APPARATUS FOR FORMING GLASS FIBERS
John Kermit Cochran, Pine Township, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Filed Feb. 5, 1960, Ser. No. 6,923
10 Claims. (Cl. 18—8)

2. Apparatus for forming a glass fiber strand which comprises a bushing, a guide for grouping the filaments

drawn from the bushing into a strand, means for applying a size to the filaments and means for drawing the strand over the guide, said drawing means comprising a base, a carriage mounted on the base for longitudinal movement thereon between first, second and third positions, the third position being intermediate the first and second positions, a cylinder mounted on the carriage for movement therewith in an axial direction, a traverse mounted adjacent the cylinder so as to be in line with the bushing, guide and one end of the cylinder when it is in the first position, means for rotating the cylinder, means for moving the carriage, means for actuating the carriage moving means to cause the carriage to move from the first position toward the second position, means for rotating the traverse, means for actuating the traverse rotating means, said traverse rotating actuating means being responsive after a delay to the means for actuating movement of the carriage from the first position toward the second position, means for controlling oscillating movement of the carriage between the second and third positions and means for returning the carriage to the first position and stopping the rotation of the cylinder and traverse.



3,041,663
METHOD AND APPARATUS FOR FORMING FIBERS
Franklin H. Green, Shelbyville, Ind., assignor to Pittsburgh Plate Glass Company, County of Allegheny, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1958, Ser. No. 782,429
5 Claims. (Cl. 18—8)



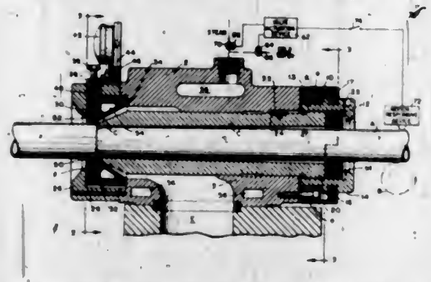
1. An apparatus for forming glass fibers which comprises a stationary container for a supply of molten glass, a bushing in the bottom of the container and means for drawing glass filaments from the bushing including means for applying a size to the filaments, a stationary guide for grouping the filaments into a strand, a rotatable tube for winding the strand thereon, means for rotating the tube, a rotatable traverse mounted adjacent the tube in a fixed position relative to the guide for distributing the strand on the tube in an open wind, means for rotating the traverse, and means for continuously reciprocating the tube in an axial direction throughout the length of the strand package formed on the tube a plurality of times during the winding.

3,041,664
APPARATUS FOR FORMING FIBERS
Franklin H. Green, Shelbyville, Ind., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1958, Ser. No. 782,429
3 Claims. (Cl. 18—8)



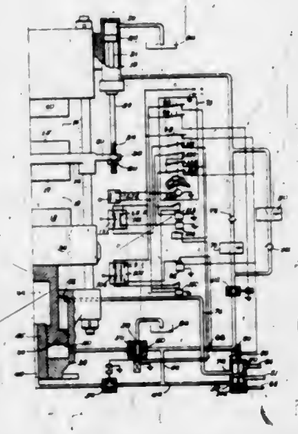
3. An apparatus for forming glass fibers which comprises a container for a supply of molten glass, a bushing in the bottom of the container and means for drawing glass filaments from the bushing including a guide for grouping the filaments into a strand, a rotatable tube for winding the strand thereon, means for rotating the tube, a traverse mounted adjacent the tube for distributing the strand on the tube in an open wind, means for reciprocating the traverse in a path which is parallel to the axis of the tube and means for reciprocating the guide in a line parallel to the axis of the tube and in coordination with the reciprocation of the traverse.

3,041,665
CROSS-HEAD FOR INHIBITOR EXTRUSION
Emery J. Bowers, China Lake, and Rodney D. Sutherland, Pomona, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 24, 1960, Ser. No. 31,490
4 Claims. (Cl. 18—13)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An extrusion type coating device of the type wherein the articles to be coated will ignite at a predetermined temperature and the articles to be coated are passed through a mandrel having an opening and into a coating chamber which is connected to a source of coating material and first means for heating said coating material and mandrel the improvement comprising second means for cooling said coating material and mandrel, means responsive to the motion of said articles for rendering said first means operative when said articles are moving through said mandrel and rendering said second means operative when said articles are stationary in said mandrel, thereby preventing said articles from reaching said predetermined temperature.

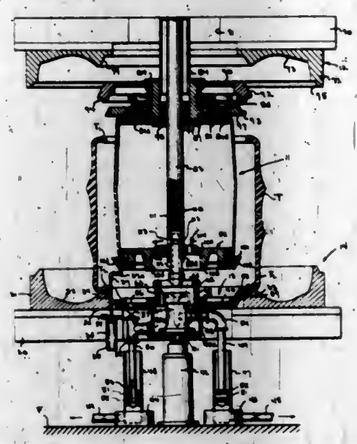
3,041,666
MULTIPLE OPENING HOT PLATE PRESS
Richard E. Dorenbos, Greenhills, and Joseph W. Tomka, Cincinnati, Ohio, assignors, by mesne assignments, to Nordberg Manufacturing Company, a corporation of Wisconsin
Filed Jan. 20, 1959, Ser. No. 787,970
8 Claims. (Cl. 18—17)



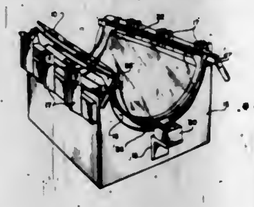
8. In a multiple opening press; a top platen; a movable intermediate platen defining with said top platen an upper mold; a movable platen defining with said intermediate platen a lower mold; spaced lift cylinders having rods slidably receivable through said intermediate platen; adjusting nuts threadably received on said rods for supporting said intermediate platen; said intermediate platen being movable with said rods through a stroke insufficient to close the upper mold; a main cylinder having a ram for supporting said movable platen; means for actuating said cylinders simultaneously; said ram being effective to close said lower mold and to move said intermediate platen axially of said lift cylinder rods to close said upper mold; and means for reversing the action of said main cylinder and ram for moving said intermediate platen into supported position on said adjusting nuts for venting said upper mold, and for opening the lower mold for venting thereof.

3,041,667
VULCANIZING PRESS
Edward J. Harris, 590 Delaware Ave., Akron, Ohio
Filed Aug. 27, 1959, Ser. No. 836,476
10 Claims. (Cl. 18—17)

1. A vulcanizing press of the character described, comprising; first and second complemental mold sections movable relatively of each other between open and closed positions with said mold sections defining an annular curing chamber when closed; former supporting means shiftably carried by said first mold section; a pneumatic former having axial ends that are secured to said former supporting means with said former projecting axially of said first mold section towards said second mold section; means for shifting both axial ends of said former relatively of said first mold section to a condition of projection beyond the same; a bead seat carried by said former supporting means and being positioned between said former and said first mold section in substantial concentricity therewith; and means for urging the axial end of said former that is adjacent said first mold section away from said bead seat.

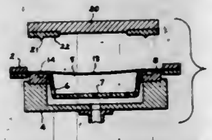


3,041,668
METHODS FOR FORMING SHEET PLASTICS
Louis F. Bonza, La Crescenta, Andrew J. Byrne, Burbank, and Bruce W. Smith, Pacoima, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 19, 1956, Ser. No. 560,132
1 Claim. (Cl. 18—19)



The method of forming a transparent plastic sheet part comprising arranging a layer of lubricant on a first face of the sheet part, arranging a thin flexible film on said layer, heating the part to a plastic condition, arranging the heated part with the film in adjacent facing relation to a die surface, then applying air pressure to the other face of the sheet part to form said first face and film to the die surface, bleeding accumulated excess lubricant from between the part and film during forming of the part and then removing said layer and film from the part.

3,041,669
VACUUM FORMING APPARATUS
Wilfred J. Marshall and Julius B. Horvay, Louisville, Ky., assignors to General Electric Company, a corporation of New York
Filed Oct. 19, 1959, Ser. No. 847,367
2 Claims. (Cl. 18—19)



1. Apparatus for vacuum forming an article having a peripheral flange from a sheet of thermoplastic material comprising a mold including walls defining a mold cavity

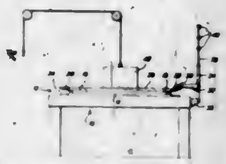
and a flange portion surrounding said cavity, means comprising a frame surrounding said flange portion for holding a heated sheet of thermoplastic material in contact with said flange portion, means for exhausting the space between said sheet and said mold cavity whereby said sheet is caused to assume the shape of said cavity, said flange portion including a recess therein defining a cutting edge extending around said cavity between said frame and said cavity, and means for trimming the portion of said shaped sheet overlying said flange portion to form a flange of desired thickness and width about said cavity shaped portion of said sheet comprising a member movable relative to said mold and including a face portion for engaging and compressing to uniform thickness the portion of said sheet overlying said flange portion while said sheet is still warm and a shearing element cooperatively arranged with respect to said cutting edge to shear said sheet during compression thereof by said face portion, said mold flange portion including a groove extending about said cavity between said cavity and said cutting edge for receiving excess sheet material during said compressing operation and thereby assist in anchoring said shaped sheet to said mold flange portion after said sheet has been sheared.

3,041,670

METHOD AND APPARATUS FOR FORMING ARTICLES OF PLASTIC HAVING INTEGRAL SHEEN

Neil O. Broderson, Rochester, N.Y., assignor to Capital Plastics, Inc., Rochester, N.Y., a corporation of New York

Filed Apr. 13, 1960, Ser. No. 23,597
7 Claims. (Cl. 18—26)



5. A method of forming articles of polymerizable plastic composition which comprises forming a suspension of light-reflecting lamellae in a polymerizable plastic composition in sticky liquid form, introducing said suspension into a container to provide a mass thereof having a free surface and a depth of at least 0.05 inch, contacting the free surface of the sticky mass with a member having an extended plane surface substantially coextensive with said free surface, and causing relative oscillatory movement between said container and said member in a plane substantially parallel to said free surface to subject said mass to oscillatory motion in planes parallel to the plane of the extended surface of the member while causing at least partial induration of said plastic composition to orient the lamellae in substantially parallel relation to said free surface.

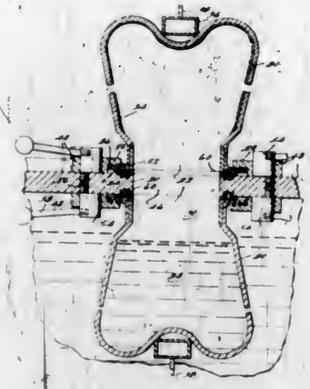
3,041,671

APPARATUS FOR MOLDING HOLLOW ARTICLES

Lloyd J. Ericson, Keokuk, Iowa, assignor to Sheller Manufacturing Corporation, Detroit, Mich., a corporation of Indiana

Filed Aug. 17, 1959, Ser. No. 834,187
5 Claims. (Cl. 18—26)

1. Apparatus for casting a hollow article from a solidifiable material comprising a frame, a substantially horizontal member mounted on said frame for rotational movement about a substantially horizontal axis and having an opening therein, a pair of molds disposed on opposite sides of said opening in a confronting relationship so as to form an enclosed chamber for a liquid form of said material therein and means clamping said molds to said member, a treating fluid tank disposed adjacent to and below said member, and means on said frame operable to provide for relative movement of said fluid tank and said



member so that one of the molds on said member is moved into said tank for treating of the liquid material therein to solidify some of said material, and means for rotating said member.

3,041,672

MAKING SPHEROIDAL POWDER

James W. Lyle, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York

Filed Sept. 22, 1958, Ser. No. 762,296
6 Claims. (Cl. 18—47.3)



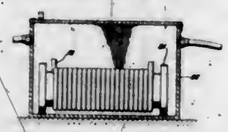
1. Method of producing finely-divided spheroidal-shaped particles of metals and metal compounds by striking a wall-stabilized arc between a stick electrode having an arc constricting passage and a nozzle electrode, introducing an consumable wire or rod composed of said metals and metal compounds into the collimated plasma effluent of such arc, passing a gas stream coextensive with such collimated plasma through the nozzle passage of the nozzle electrode to shear off molten material from the tip of the consumable wire whereby small droplets are formed and removed from the arc zone, and then solidifying and collecting the so-produced finely-divided particles.

3,041,673

METHOD OF CURING THERMOSETTING JACKETS ON MULTICONDUCTOR CABLES

Don F. Goodwine, Alhambra, Calif., assignor to Pacific Automation Products, Inc., Glendale, Calif., a corporation of California

Filed Mar. 14, 1960, Ser. No. 14,984
4 Claims. (Cl. 18—53)



1. A method of curing a thermosetting protective jacket on a multiconductor cable so as to provide a cured jacket

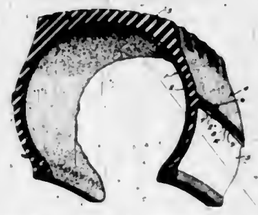
with a smooth, non-lumpy outer surface which retains its flexibility at temperatures of approximately −65° F., comprising the steps of: providing an elongated inner core of a plurality of electrical conductors, each of which is covered by insulation; covering said inner core of conductors with an uncured, continuous thermosetting protective jacket having a substantially smooth, cylindrical, inner surface so as to provide spaces between the outer surface of said inner core and the substantially smooth, cylindrical inner surface of said jacket; covering said uncured, thermosetting protective jacket with a continuous, flexible, thermoplastic, substantially fluid-tight curing and retaining cover so as to have the retaining cover conform to the surface of the jacket; subjecting both the inner surface of the thermosetting jacket and the outer surface of the thermoplastic retaining cover to pressurized and heated fluid for a sufficient time to cure the jacket and for forcing the jacket into tight frictional contact with said retaining cover while said jacket and cable are stationary to provide substantially cylindrical inner and outer surfaces to said jacket when cured, the temperature of the heated fluid being lower than the deformation temperature of the insulation for the electrical conductors and sufficiently high to cure the thermosetting jacket for a predetermined time, and removing the curing and retaining cover after the jacket is cured.

3,041,674

WHITE SIDEWALL TIRE

Corwin Nathan Spencer, Akron, and William Henry Myers, Stow, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Apr. 23, 1956, Ser. No. 579,786
7 Claims. (Cl. 18—61)



1. In the manufacture of a pneumatic white sidewall tire characterized by a rubbery white sidewall member having a circumferential axially protruding black rib edge portion marginally framing and meeting at a line of juncture a rubbery white sidewall member, a method of making said line of juncture between said white member and said rib symmetrical, comprising the steps of construction and unvulcanized tire band with an unvulcanized rubbery white sidewall member having a veneer edge overlapping in part an unvulcanized rubbery black rib, molding a radially extending annular lip on said veneer-covered rib at the desired point of juncture of said black member with said white member as the tire is vulcanized, to thereby reduce the thickness of said veneer to a very thin layer at the extreme edge of said lip and buffing said rib on its generally annular outer surface flush with the axial inner margin of the base of said lip to expose black stock in the rib and a symmetrical line of juncture between said white member and said black member.

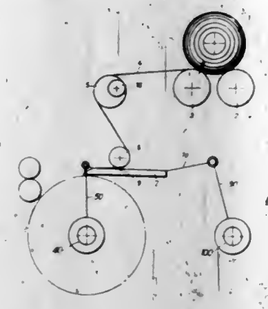
3,041,675

SUPPLYING LAP TO THE NIPPERS OF COMBING MACHINES

Werner Naegeli, Winterthur, Switzerland, assignor to Joh. Jacob Rieter & Co. Ltd., Winterthur, Switzerland, a corporation of Switzerland

Filed May 28, 1958, Ser. No. 738,540
Claims priority, application Switzerland, June 7, 1957
2 Claims. (Cl. 19—116)

1. In a combing machine having a carrier roller for supporting the lap roll and forming a stationary nip therewith, an oscillating nipper, a feed roller supported by and oscillating with said nipper, and a stationary frame rotatably supporting said carrier roller and swingably supporting said nipper: lap deflecting means engaging the lap between said stationary nip and said feed roller for compensating the changes of the length of the path of the



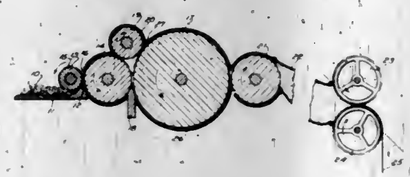
lap between the stationary nip and said feed roller during each combing operation, said deflecting means being positively oscillated in synchronism with the nipper for deflecting the lap to an extent compensating the change of length of the path between the stationary nip and the feed roller due to the movement of the nipper.

3,041,676

APPARATUS FOR PRODUCING A HETEROGENEOUS DIFFUSION OF FIBERS

Joshua H. Goldman, Box 14, Hadlyme, Conn.

Filed May 19, 1958, Ser. No. 736,339
8 Claims. (Cl. 19—155)



1. An apparatus for distributing fibers by centrifugal force in a non-parallel non-oriented relation, comprising a rotatably mounted chelater roll, a distributor roll rotatably mounted adjacent said chelater roll and rotating in the same direction, a diffusion roll rotatably mounted adjacent said distributor roll and rotating in the opposite direction, said rolls rotating at progressively higher speeds, said diffusion roll imparting a centrifugal throwing force to the fibers passing through the apparatus, and shielding extending concentrically around the non-adjacent surfaces of said chelater, distributor and diffusion rolls and spaced not more than .020" therefrom.

3,041,677

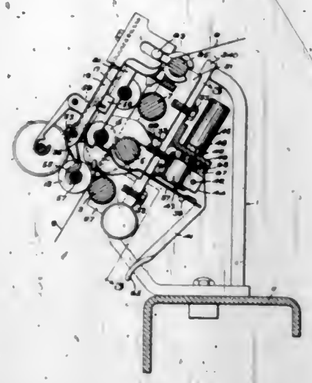
TOP ROLL WEIGHTING DEVICES

Richard K. Butler, Whitman, Mass., assignor to Machinecraft, Inc., Whitman, Mass., a corporation of Massachusetts

Filed May 31, 1960, Ser. No. 32,740
18 Claims. (Cl. 19—267)

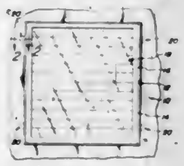
1. A spinning frame having in combination top and bottom drawing rolls, a roller beam, roll stands, means overlying and engaging the necks of the top rolls, a rail mounted on the roll stands extending parallel to the rolls, coil springs in fixed locations on the rail in spaced rela-

tion to the roll stands and with their axes parallel to the common plane defined by the nips of the rolls, and



means transmitting tension from the springs to the means engaging the roll necks.

3,041,678
WINDOW MOUNTING ASSEMBLY AND METHOD OF INSTALLING SAME
Carroll G. Copp, Jr., 821 Cypress Ave., Venice, Fla.
Filed Sept. 26, 1958, Ser. No. 763,541
2 Claims. (Cl. 20—11)



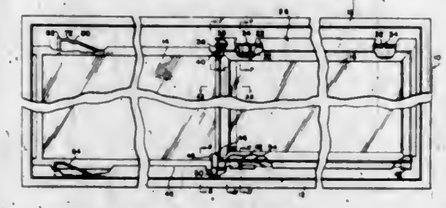
1. A window frame assembly in combination with a wall including an opening defined by at least a pair of opposed mounting surfaces, mounting clips secured on said mounting surfaces and projecting into said wall opening, each of said mounting clips including a mounting portion secured on one of said mounting surfaces and an orienting portion spaced from said one surface, a window frame mounted in said opening and including jamb element mounted on the orienting portion of said clips, rotatable fastening means extending through said jamb elements and mounting portions and engageable at one end on said mounting surfaces and including a head portion overlying said jamb elements, and a plaster stop-strip clampingly engaged between said mounting portions of said clips and said mounting surfaces and underlying said jamb element, said mounting and orienting portions of said clips being connected by a resilient connecting portion, said fastening means extending through said resilient connecting portion, said orienting portion comprising a terminal edge of said mounting clips parallel to said mounting surfaces and a spaced linear abutment portion of said resilient connecting portion, said jamb elements having a substantially I-shaped cross-section including a web and transverse inner and outer flanges forming at one side a window receiving channel, abutment portions on said web projecting away from said channel and engaging said mounting clips, said terminal edge of the mounting clips engaging at the intersection of the inner flange and web opposite said channel, said linear abutment portion engaging an adjacent surface portion of said outer flange.

3,041,679
REFRIGERATOR AND FREEZER DOOR CONSTRUCTION
Howard J. Tennis wood, Adrian, Mich., assignor to Revco, Inc., Deerfield, Mich., a corporation of Michigan
Filed Sept. 29, 1958, Ser. No. 764,061
8 Claims. (Cl. 20—35)



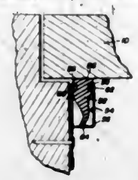
8. In a door for an insulated cabinet, in combination; a door core consisting of an inner shell member and an outer shell member; a door frame adapted to perimetrically surround said shell members; said door frame having a dividing cut on its perimeter to enable assembly around said shell members; removable securing means for bringing together and securing said dividing cut; said inner and outer shell members and said door frame when assembled forming an enclosure for insulating materials; said door frame having a door pull attached to one side thereof and hinges attached to its other side; said door frame upon removal of said securing means being separable from said shell members and when so separated and reassembled in an inverted position with respect to said shell members changing a right hand opening door to a left hand opening door and vice versa; and ornamental panel; a heat equalizer sheet of thermal-conductive metal; means mounting said ornamental panel in juxtaposition with said heat equalizer sheet on said door core; and a plurality of nubbins holding said heat equalizer sheet spaced from said outer shell member; said mounting means comprising a resilient edging trim having a C-shaped portion and a bead which is sprung over the edges of said ornamental panel and said heat equalizer sheet to hold them in a subassembly; said edging trim having a flange carrying fasteners to releasably secure said flange to said door core.

3,041,680
PIVOTAL SLIDABLE WINDOW
John Gurniak, Elkins Park, Pa., assignor to Michael Flynn Manufacturing Company (also known as Michael Flynn Manufacturing Co.), Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 5, 1960, Ser. No. 20,126
7 Claims. (Cl. 20—42)



1. A window structure comprising a rectangular frame having at least one rectangular window panel movable therein, said window frame including oppositely positioned channels, said window panel having oppositely positioned guide means slidable in corresponding channels, slidable pivot fingers on opposite edges of said panel, said fingers each being elongated in shape and slidable in said channels, a cam block in at least one of said channels in the path of movement of said guide means, the corresponding guide means being slidable over the cam block to move said panel transversely of said frame, an inclined cam track in each of said channels, said cam tracks being transversely aligned with each other at predetermined positions in said channels, said cam tracks each having a slot of a width slightly larger than the longitudinal width of the pivot finger movable in the corresponding channel and smaller than the length of said finger, said slot terminating in a circular aperture of a diameter slightly greater than the length of said finger.

3,041,681
WEATHER STRIP
Charles M. Goodwin, Rte. 2, Mount Vernon, Ohio
Filed Jan. 27, 1960, Ser. No. 4,967
2 Claims. (Cl. 20—69)



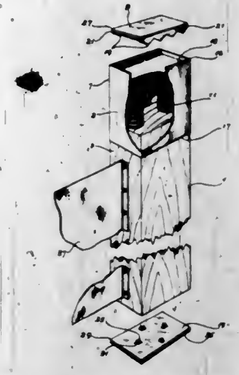
2. A weather strip comprising a holder for mounting on a jamb of a closure, said holder including a pair of opposed elongated inner and outer panels, said inner panel including a laterally offset, longitudinally extending portion receiving the opposed portion of the outer panel therein, said outer panel comprising a reversely bent longitudinal marginal portion interlockingly engaged with the corresponding longitudinal marginal portion of the inner panel for securing the panels together, said offset and said opposed portions of said inner and outer panels providing a mounting flange for the holder and having apertures therein for fasteners for securing said holder on the jamb, the other longitudinal marginal portion of the outer panel being laterally outwardly offset and defining, in conjunction with the opposed portion of said inner panel, a channel, a resilient sealing strip mounted in the channel and protruding therefrom for abutting engagement by the closure, and means for yieldingly securing the sealing strip in the channel, said sealing strip having preformed longitudinal grooves in its side portions, said securing means comprising inturned longitudinal flanges on the holder engaged in the grooves and spaced from at least one of the side walls thereof for permitting limited free inward and outward movement of the sealing strip in said holder, said sealing strip including a tapered, readily flexed inner portion freely operable in the channel and engaged with the inner wall thereof for yieldingly resisting inward movement of said sealing strip in response to impact therewith by the closure.

3,041,682
FOAMED SEALING STRIP PRODUCTS
Sterling W. Alderfer, 464 N. Portage Path, Akron 3, Ohio, and Harry D. Bodley, 205 Melbourne Ave., Akron 13, Ohio
Original application May 21, 1957, Ser. No. 660,602. Divided and this application Apr. 27, 1959, Ser. No. 814,125
5 Claims. (Cl. 20—69)



1. A sealing strip having a longitudinal core of polyurethane foam, a flexible casing folded around the core and having sealed lapping edge portions forming a flap along one side thereof, and a series of foam-filled passages extending part way into said flap from said core.

3,041,683
TELESCOPABLE MEMBER
Elliot Clarke, Lyme, Conn. (P.O. Box 124, Hamburg, Conn.)
Filed July 6, 1959, Ser. No. 825,366
3 Claims. (Cl. 20—99)

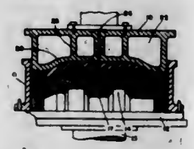


1. A telescopic member comprising a sleeve having an axis, a closed end and an open end, a post having an end received within the open end of said sleeve, and a U-shaped compression coil spring interposed between and engaging said post end and closed end of said sleeve, said spring having an axis of symmetry parallel to said sleeve axis said spring having convolutions with sides frictionally engaging said sleeve.

3,041,684
FUMIGATION OF GRAIN
Joseph Carl Dawson and Raymond P. Millard, Ferguson, Mo., assignors to Ferguson Fumigants, Inc., Ferguson, Mo., a corporation of Missouri
Filed July 6, 1959, Ser. No. 825,168
9 Claims. (Cl. 21—121)

1. Apparatus for fumigating grain in storage in a grain storage structure having an opening at the top and an air duct at the bottom extending to the outside of the structure, said duct being connected to a fan outside the structure adapted to cause movement of air vertically through the grain, comprising an air-tight bonnet of flexible sheet material releasably secured in place to the structure over said top opening with a substantially air-tight seal, said bonnet having a tubular arm projecting outward therefrom, an air-tight plenum chamber of flexible sheet material releasably secured to the fan with a substantially air-tight seal, said plenum chamber having a tubular arm projecting outward therefrom, a length of air-tight flexible plastic tubing connected between said arms, and means for introducing fumigant into the closed air circuit constituted by the structure, the duct, the fan, the plenum chamber, the tubing and the bonnet.

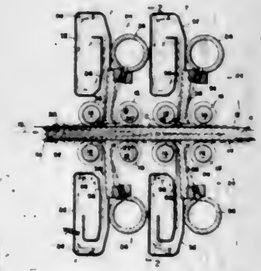
3,041,685
DIAPHRAGM MOLDING MACHINE
Russell W. Taccone, Erie, Pa., assignor to Taccone Corporation, a corporation of Pennsylvania
Filed July 14, 1961, Ser. No. 124,082
9 Claims. (Cl. 22—42)



1. A molding machine comprising a head, means to support a flask below said head, a backup plate on said

head, said backup plate having a flat peripheral surface, depression thereon defining a smooth continuous concave surface merging with said flat surface, a diaphragm made of flexible material and being at least ½ inch in thickness and substantially flat in normal condition, said diaphragm overlying said flat surface and being attached thereto, said diaphragm being adapted to rest on said concave surface over substantially the entire area thereof during molding, the outer dimension of said backup plate corresponding substantially to the inner dimension of said flask, and means to force gas under pressure between said backup plate and said diaphragm.

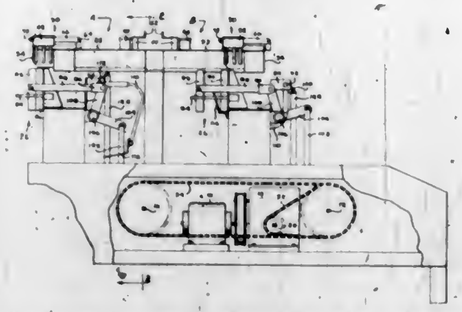
3,041,686
COOLING METHODS AND APPARATUS FOR PROVIDING A RAPIDLY MOVING UNIFORM LAYER OF LIQUID COOLANT
Robert William Hazelett, Malletts Bay, and Richard Hazelett, Winooski, Vt., assignors to Hazelett Strip-Casting Corporation, Winooski, Vt.
Filed Dec. 21, 1959, Ser. No. 861,134
16 Claims. (Cl. 22—57.4)



1. In the art of casting molten metal while the molten metal is constrained by a moving casting belt, the method of creating a rapidly moving uniform layer of liquid coolant travelling along the surface of the casting belt over an area to be cooled comprising the steps of ejecting a plurality of parallel jets of the liquid coolant, impinging said jets at a slight angle against a guide surface spaced from the surface of the belt and extending near to the surface of the belt, diverging said jets laterally across said guide surface to form an initial layer of coolant covering the guide surface and travelling along the guide surface, discharging said initial layer of coolant from said guide surface as a free-travelling sheet of coolant travelling over the space between said guide surface and the casting belt and impinging said free-travelling sheet of coolant at a slight angle against the surface of the casting belt for creating said rapidly moving uniform layer of liquid coolant travelling along the surface of the casting belt.

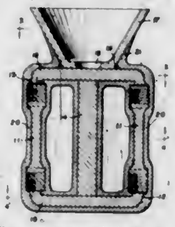
5. Cooling apparatus for providing a rapidly moving layer of liquid coolant travelling along the surface of a casting belt of the type used to constrain molten metal while the metal solidifies, said cooling apparatus comprising coolant application means having a guide surface extending near to the casting belt and terminating in a discharge edge which is spaced a small distance from the casting belt and is directed toward the casting belt in the direction of flow of said rapidly moving coolant layer, a coolant conduit for the liquid coolant, a plurality of nozzles connected with said conduit for providing a plurality of jets of the liquid coolant, said nozzles being aimed toward said guide surface, said liquid jets impinging on said guide surface for diverging said liquid jets into a layer of coolant covering the guide surface and moving along the guide surface toward said discharge edge, whereby a sheet of the liquid coolant is discharged from said discharge edge as a free-travelling sheet travelling across said small distance and impinging onto the casting belt to form the rapidly moving layer of coolant travelling along the surface of the casting belt.

3,041,687
CASTING MACHINE
Bernard A. Weideman, Sussex, and Jerome J. Groff, Milwaukee, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,014
11 Claims. (Cl. 22—79)



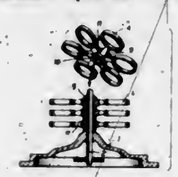
1. An automatic casting machine including a plurality of casting units, each having a sectional mold adapted to be closed for pouring and opened for discharge of a casting therefrom, comprising, a reservoir for each mold adapted to hold liquid, means for maintaining a constant liquid level in said reservoirs, an outlet in each reservoir above the level of the liquid therein, an unconfined displacement member movable within each reservoir adapted to raise the liquid level and cause a quantity of liquid to pour from each outlet into the respective molds, mold actuating means for each mold adapted to open each mold after the pour and close each mold after the discharge of a casting therefrom, conveyor means for carrying the castings from the machine, carrier means for each mold adapted to receive the castings from the molds and carry them to said conveyor means for deposit thereon, and actuating means including a plurality of cams mounted on a cam shaft for each unit driven by a single prime mover, said actuating means adapted to actuate said displacement members, mold actuating means.

3,041,688
SHELL MOLD FOR INVESTMENT CASTINGS AND METHOD OF MAKING SAME
Arthur G. Wilder, Los Altos, Calif., assignor to Sierra Metals Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 15, 1958, Ser. No. 755,245
3 Claims. (Cl. 22—193)



1. The process of making a shell mold for an investment casting, which comprises making a wax pattern which includes a counterpart of the article to be cast and a counterpart of a gate for conducting liquid metal into the cavity of the mold, attaching to said pattern the bottom of a pouring cup of refractory material, said cup having an aperture in said bottom for access to said gate, then dipping said assembly into a slurry comprising a comminuted refractory mineral dispersed in a liquid vehicle, the temperature of the slurry being lower than the fusing point of the wax, so as to coat the counterparts and a portion of the cup with a layer of said slurry, permitting the assembly to dry at a temperature less than the fusing point of the wax so as to make a coating of sufficient thickness to form a self-sustaining structure after the wax is removed, and then heating the structure to a temperature high enough to remove the wax.

3,041,689
REMOVABLY MOUNTING CLUSTERS OF SUPERPOSED FUSIBLE PATTERNS ABOUT A DISPOSABLE CENTRAL ROD
Lucien Péras, Billancourt, France, assignor to Regie National des Usines Renault, Billancourt, France
Filed Apr. 22, 1960, Ser. No. 24,178
Claims priority, application France Aug. 27, 1953
2 Claims. (Cl. 22—196)



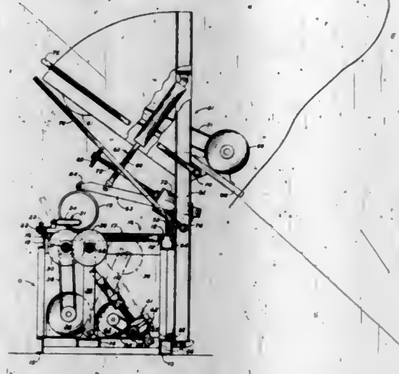
1. Method of carrying out the precision casting of multiple identical parts according to the lost wax process, which consists in forming clusters of patterns made from easily fusible material, each cluster comprising a hub-like portion adapted to form one section of the sprue and formed with a central cavity, each hub-like portion having integral radial spokes extending therefrom for the purpose of forming the radial feed ducts leading to the actual casting cavities, and casting patterns disposed endwise of said spokes, and removably mounting each cluster so that the hub-like portions are axially but slidably superposed on a rod disposed vertically and adapted to slide through a bottom plate having a funnel-shaped pattern-facing side, disposing the assembly in a mold box, filling said mold box with refractory material, inverting said box, removing said rod and bottom plate, and melting the fusible material in order to provide the cavities defining the impressions for the castings, the feed ducts connecting said sprue to said impresions, as well as a funnel-like casting sprue for the casting metal.

3,041,690
PROCESSING SEMICONDUCTOR MATERIAL
Robert W. Mytton, Garden Grove, and Phyllis E. Stello, Newport Beach, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Original application Dec. 31, 1956, Ser. No. 631,844. Divided and this application July 18, 1960, Ser. No. 43,603
6 Claims. (Cl. 22—216.5)



1. The method of processing semiconductor material of the class of semiconductor materials which react with or adhere to quartz, which comprises: spraying the inner surface of a quartz crucible having a clean, roughened inner surface with a slurry consisting essentially of substantially pure powdered silicon nitride in a vaporizable liquid carrier; vaporizing said carrier to form an adherent coating consisting essentially of said powdered silicon nitride on said inner surface; and casting said semiconductor material in said crucible.

3,041,691
PIPE SUPPORTING APPARATUS FOR CUTTING AND THE LIKE
Vincent P. Vanier, 5080 Kearney Ave., Oakland, Calif.
Filed Feb. 24, 1959, Ser. No. 794,889
6 Claims. (Cl. 214—1)



1. Apparatus of the character described comprising conveyor means adapted to support a pipe or the like, a plurality of drive discs extending laterally through said conveyor means and connected for driven rotation about a fixed axis longitudinally of said conveyor, a second plurality of freely rotatable pivot discs mounted for controlled movement through said conveyor means adjacent said drive discs for raising pipe above said conveyor, said pivot discs rotatable about a longitudinal axis movable between a position wherein the tops of the pivot discs are subjacent the tops of the drive discs and laterally spaced therefrom and a position wherein the tops of the pivot discs are aligned with the tops of the drive discs and the pivot discs are in staggered overlapping relation to said drive discs, and pressure means controllably contacting said pipe stop same in rolling contact for fixing said pipe in position.

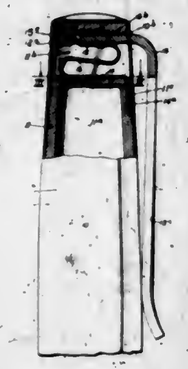
3,041,692
COMBINED CLAMP AND ARTICLE HOLDER
Edwin R. Olila, 14840 Greenview Ave., Detroit 23, Mich.
Filed Mar. 6, 1961, Ser. No. 93,675
2 Claims. (Cl. 24—3)



1. A combined necktie clasp and article holder comprising
an elongated forward clasp arm of a length sufficient to extend across the major part of the width of the necktie,
a rearward clasp arm having a length substantially shorter than said forward clasp arm,
said forward clasp arm having a forward portion adapted to extend across the necktie and a rearward portion bent reversely thereto and extending from one end thereof toward said rearward clasp arm,
means pivotally connecting said rearward portion of said forward clasp arm to said rearward clasp arm,
an elongated cup-shaped article receptacle secured to

one of said arms and having a recess therein with a mouth facing the other arm,
said receptacle having a side wall extending around said recess with a portion thereof disposed between said recess and said pivotal connecting means,
said arms being movable relatively to one another into recess-closing and recess-opening positions respectively,
and resilient means for urging said arms toward one another into recess-closing position.

3,041,693
CLIP MOUNTINGS FOR FOUNTAIN PENS
Albert E. Simon, Jr., Glenside, and Harold E. Steinberg, Philadelphia, Pa., assignors to The Esterbrook Pen Company, Camden, N.J., a corporation of New Jersey
Filed Oct. 20, 1960, Ser. No. 63,814
3 Claims. (Cl. 24—11)



1. In a mounting for a clip associated with the cap of a fountain pen or the like, the combination with said cap of an inner liner therefor extending the full length of the same; said liner having a recess at its upper end open at one side thereof; the wall of the cap being slotted at a point opposite the open side of said recess, a spring tension element disposed within the recess of the liner and comprising a loosely folded section of spring metal having a plurality of leaves wherein the upper leaf terminates in complemental fastening means and the lower leaf has a depending portion lying between the inner wall of the cap and the wall of the inner liner; the latter being recessed for its reception whereby said spring element is locked in place, a rigid clip having a portion substantially parallel with said cap and a portion substantially at right angles thereto extending into the recess of the inner liner; said latter-named clip portion having its end shaped to engage the complemental fastening means at the inner end of the upper leaf of the spring tension element.

3,041,694
FASTENING DEVICE
Thelma D. Hansen, P.O. Box 761, Vale, Oreg.
Filed Aug. 4, 1960, Ser. No. 46,615
3 Claims. (Cl. 24—103)



1. A fastening device comprising a button, a resilient spiral pin secured centrally beneath said button and depending therefrom and adapted to be screwed into an object, and a relatively long, compressible, resilient spiral guard mounted beneath said button in spaced, concentric relation to said pin and extending beyond the lower end thereof for engagement with the object, said guard adapted to be axially compressed and tensioned between the button and the object as the pin is screwed thereinto.

3,041,695
FISHING LINE FASTENER
Ernest Ouellette, Rue Principale, Sub. 1, Brownsburg, Quebec, Canada
Filed June 20, 1960, Ser. No. 37,258
Claims priority, application Canada June 15, 1960
2 Claims. (Cl. 24—126)



1. A fastener for securing a fishing line to a swivel, comprising a body having a threaded cylindrical portion and a frustoconical portion having a conical surface, the swivel being securable to said cylindrical portion, said body having a bore extending axially from the end of said frustoconical portion and then radially at an angle and opening on the conical surface of said body through which a line extends to lie against said conical surface, and a sleeve having an internally threaded portion engageable with said threaded portion of said body and a frustoconical portion coaxial with and complementary to the frustoconical portion of said body and capable of coming substantially into full wedging contact therewith when said sleeve is tightened on said body, said two frustoconical portions being adapted to clamp the entire portion of line disposed therebetween.

3,041,696
SNAP-ON HANGER CLOTHESPIN
Gustave Ferri, Jr., North Leominster, Mass., assignor to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,436
1 Claim. (Cl. 24—137)



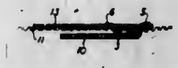
A snap-on hanger clothespin comprising a pair of opposed arms, each of said arms having an outer face, an inner face and spaced-apart parallel side faces, each of said arms having a gripping jaw portion at the end thereof, the gripping jaw at the end of one arm being opposed to the gripping jaw at the end of the other arm, one of said arms having in its inner face a horizontal groove of substantially partial cylindrical cross section, spaced-apart circular disc members fixed in said groove and spaced from said respective side walls and having a partial-cylindrical section thereof extending from said groove, the other of said arms having in its inner face a horizontal groove of substantially partial-cylindrical cross section opposite to the horizontal groove in the inner face of said one of said arms, spaced-apart circular disc members fixed in said groove in offset contacting relation at a side face thereof to said circular disc members at a side face thereof in said horizontal groove in the inner face of said one of said arms and having a partial-cylindrical section thereof extending from said groove, said partial-cylindrical sections of said discs fixed in one groove extending into said other groove into contact with the wall thereof, thereby to form a pivot mounting between said arms, whereby said arms are held against relative tilting and relative axial movement, each of said gripping jaw portions having in its inner face a notch, a bearing surface, and a tip portion, in that order, said tip portion being inclined downwardly and towards the other face from said bearing portion towards the bottom of said jaw portion, each of said arms having a recess in its inner face beneath the horizontal groove and the notch, whereby there is caused a tight gripping action of the jaws, each of said arms having in its outer face spaced-apart horizontal grooves positioned between said pivot mounting and said notch, and spring means for urging said jaws together, said spring means being in contact only with the outer faces and with said side wall faces and being locked positively against any movement out of its position with respect to said arms, said spring means having portions thereof positioned above the bottommost portion of said pivot mounting, said spring means having a portion thereof positioned in one of said horizontal grooves in said outer face of one arm and another portion thereof positioned in one of said horizontal grooves in said outer face of the other arm, whereby any possible contact of the article to be held between said jaw portions and said spring means is prevented.

3,041,697
SEPARABLE MAGNET ASSEMBLIES
Frances Budreck, Chicago, Ill., assignor to Universal Magnetic Lock, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 8, 1960, Ser. No. 48,131
5 Claims. (Cl. 24—201)



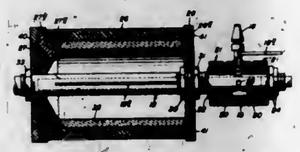
1. As a new article of manufacture, a two-part magnetic connector comprising first and second magnet assemblies, each assembly including a permanent magnet of the ceramic type and in the form of a flat disk presenting oppositely facing pole faces and a narrow continuous side face, and a pole cup of magnetic material, having a bottom wall and a continuous side wall presenting an open rim and extending closely around the side face of the magnet, the over-all extents of the side walls of the pole cups of the two assemblies being substantially equal in order that the two assemblies may be coupled by positioning them with the rims of the side walls of the pole cups in edge-to-edge relationship, the magnet of each assembly being of less height than the side wall of its respective pole cup, the magnet of the second assembly being fixed within its respective pole cup in such manner that its outer pole face lies in a plane spaced a slight distance from the plane of the open rim of the side wall of its pole cup, the magnet of the first assembly being provided with a central opening therethrough, a guide post carried by the pole cup of the first assembly and projecting into said opening, said magnet of the first assembly being slidable back and forth between a retracted position wherein it is disposed wholly within the confines of its pole cup and with one pole face thereof attracted to the bottom wall of its said pole cup, and an advanced position wherein, when the assemblies are coupled, the other pole face thereof projects beyond the rim of the side walls of its respective pole cup and is attracted to the adjacent pole face of the magnet of the second assembly to the end that the magnet of the first assembly coacts with the side wall of the pole cup of the second assembly to hold the two assemblies against relative lateral displacement, and spacer means positioned between said one pole face and the magnet of the first assembly and the bottom wall of the pole cup of such assembly for limiting the extent of magnetic attraction between such pole face and bottom wall to a value below that of the magnetic attraction between the adjacent pole faces of the two magnets when the two assemblies are coupled.

3,041,698
FASTENING DEVICES FOR WEARING APPAREL
Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker, Limited, Birmingham, England, a British company
Original application Mar. 19, 1958, Ser. No. 722,482, now Patent No. 2,998,627, dated Sept. 5, 1961. Divided and this application Feb. 15, 1961, Ser. No. 90,586
2 Claims. (Cl. 24—227)



1. A sheet-metal fastening element co-operable with an eye member for connecting together overlapping parts of garment apparel, said element consisting of a flat plate constituting an elongated front tongue, a plurality of clenchable attachment prongs for securing the front tongue to the front face of the garment material, and a transversely-extending spacing plate lying substantially parallel and in contact with the underside of the root end portion of said front tongue and integrally connected therewith along one edge, said spacing plate integrally carrying said attachment prongs and seating on the outer face of the garment material to elevate in the manner of a cantilever said front tongue by a height suitable for receiving the eye member, the forward transverse edge of said spacing plate forming an abutment stop having a height substantially equal to said height of elevation of the front tongue and disposed beneath the front tongue at a location intermediate its length, whereby inward movement of the co-operating eye member for the entire length of the front tongue is prevented, at least two-thirds of the length of said front tongue projecting forward beyond said abutment stop to form a box-like space extending between the under surface of said front tongue and the garment material to which the element is attached, said space being entirely open and unobstructed along three sides for receiving the eye member.

3,041,699
APPARATUS FOR SLIP-CASTING CERAMIC MATERIALS
William A. Daniel, Van Nuys, Calif., assignor to The Bendix Corporation, a corporation of Delaware
Original application Sept. 23, 1955, Ser. No. 536,155. Divided and this application Mar. 7, 1960, Ser. No. 13,188
1 Claim. (Cl. 25—29)



Ceramic casting apparatus comprising an arbor, means mounting said arbor for rotation about a horizontal axis,
means for introducing ceramic slip into said apparatus along said arbor,

a mold body of hollow cylindrical shape including a porous inner surface,

a pair of end members mounted on said arbor and securing said mold body coaxial with the arbor and spaced therefrom,

the first one of said end members being transparent at least in the region adjacent to the inner surface of one end of said mold body to afford observation of the cross-section and inner surface of material centrifugally cast within said mold body,

the second of said end members including a portion internally recessed between the region of said mold body and said arbor,

the surface of recessed portion of said second end member being porous and constituting a molding surface for a reinforcing section of bodies cast within said mold body,

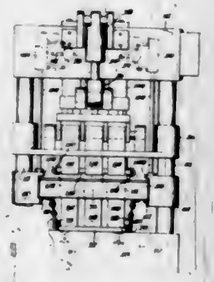
said mold body and second end member being demountable from said arbor as a unit to allow removal of cylindrically cast bodies therein and positioning for pour-casting of a reinforcing section adjacent to said second end member.

3,041,700
APPARATUS FOR COATING PIPES
Carl K. Smith, 133 Gibson Lane, Corpus Christi, Tex.
Filed Apr. 25, 1960, Ser. No. 24,481
2 Claims. (Cl. 25—38)



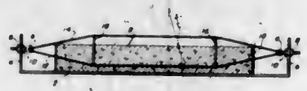
1. Pipe coating apparatus comprising means for supporting a pipe for movement along a longitudinal axis, a tubular member mounted for rotation about said axis and through which the pipe may move, means for supplying a coating material to the external surface of the pipe at a location mediate the ends of the member as the pipe moves through the member, means on the member positioned for engagement with the material on the pipe to move the material with the pipe, a tubular element surrounding the member and through which the pipe may move in concentric relation to the element and formed with an internally restricted portion shaped for engagement with the material on the pipe to compress the material against the pipe.

3,041,701
BRICK PRESS
Major Earl Gates, 773 Vista Grande, Los Altos, Calif.
Filed Mar. 4, 1959, Ser. No. 797,291
10 Claims. (Cl. 25—60)



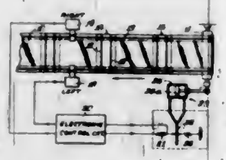
1. A press of the character described for shaping bulk material comprising in combination a mold box open at top and bottom, relatively moving upper and lower rams adapted respectively to enter the open top and bottom of the mold cavity to compress material therein, said lower ram adapted to close the bottom of the mold, a mold filling chute of substantially the same section as the mold cavity and laterally offset from the operating axis of said rams, means for reciprocating said mold and lower ram back and forth laterally from a position in alignment with said rams to one in alignment with said chute, means for raising said mold when in alignment with said chute for filling the mold, means for maintaining operative engagement of mold and chute during filling of the mold, and means for lowering said mold relative to said lower ram on completion of said compressing operation, whereby said mold is filled by an upward movement and the compressed material is ejected by a lowering movement of said mold.

3,041,702
METHOD OF MAKING A PRESTRESSED REINFORCED CONCRETE STRUCTURE
Alvin R. Schwab, Glen Rock, N.J., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 15, 1957, Ser. No. 690,295
6 Claims. (Cl. 25—154)



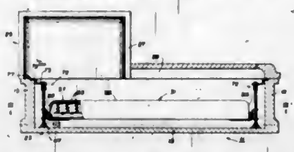
1. The method of making a prestressed reinforced concrete structure comprising providing a prestressing bed having an abutment at each end, positioning two tension members in said bed with the ends supported at said abutments, inserting a compression member between said tension members intermediate their ends to bend them out of alignment, applying the necessary pretensioning force to said tension members, then pouring concrete around only one of said tension members to form a concrete structure, and after the concrete has at least partially set removing the other of said tension members.

3,041,703
WEFT THREAD ALIGNMENT CONTROL SYSTEM
George A. Prell, Itasca, Ill., assignor to GPE Controls, Inc., a corporation of Illinois
Filed Jan. 12, 1959, Ser. No. 786,226
4 Claims. (Cl. 26—51.5)



2. A control system for aligning the weft threads in a moving fabric web, comprising: a control roller over which the web passes, the roller having a fixed end and a movable end for adjusting the relationship of the edges of the web; a hydraulic cylinder; a piston in said cylinder and having a rod portion connected with the movable end of said roller, controlling its position; a source of hydraulic fluid under pressure; a movably mounted discharge nozzle for directing hydraulic fluid from said source to said cylinder, the amplitude of displacement of said discharge nozzle determining the pressure of fluid in the cylinder and the rate of movement of said piston and the movable end of the roller; means for establishing a control signal as a function of the variation of the weft threads of said web from alignment; and control means responsive to said control signal for moving said discharge nozzle to align the weft threads.

3,041,704
BURIAL CASKET
Leslie G. Gruber, 4530 Shady Grove Road, Memphis, Tenn.
Filed June 20, 1960, Ser. No. 37,198
3 Claims. (Cl. 27—12)



3. In a burial casket, an adjustable unitary bed construction comprising a frame and inner-spring mattress combination; said frame including spaced side members, spaced end members interconnecting said side members adjacent the opposite ends thereof, and an intermediate member parallel with said side members, said intermediate member being connected adjacent opposite ends thereof respectively to said end members; said mattress including a cushion adjacent the upper part thereof, a plurality of springs interposed between said cushion and said frame, and a fabric cover enclosing said cushion and attached to said frame; and means attached directly to said intermediate member for supporting said bed in said casket without the need of a separate supporting bed.

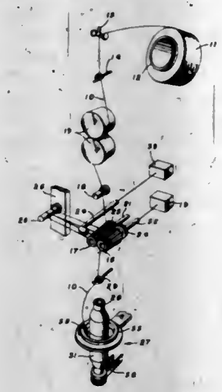
3,041,705
APPARATUS FOR PRODUCING A CRIMPED TOW
Mario Sonnino, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Original application Nov. 4, 1955, Ser. No. 545,043, now Patent No. 2,960,752, dated Nov. 22, 1960. Divided and this application Jan. 27, 1960, Ser. No. 5,074
1 Claim. (Cl. 28—1)



Apparatus for use in continuously producing a crimped tow of filamentary material including polyacrylonitrile filamentary material comprising, in combination: means for continuously wetting a tow with a hot aqueous fluid comprising mainly water; a tow crimper of the stuffing-box type; means for continuously feeding the hot, wetted tow under substantially uniform tension to the feed-in end of said crimper, said means including a guide roll over which the tow passes and a plurality of guides through which the tow passes enroute to said guide roll, at least one of said guides being rigidly held in position, said guides aiding in aligning the filaments along their longitudinal axis and being so positioned with respect to each other and to the said guide roll that the moving tow is under tension both before and after it leaves said guide roll; a conveyor adjacent the outlet end of said tow crimper for continuously removing the crimped, hot tow therefrom in a relaxed state; and quenching means comprising a J-box for continuously cooling the crimped, hot tow to a temperature below 120° F.

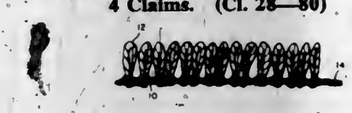
3,041,706
APPARATUS FOR PROCESSING COLD-DRAWABLE TEXTILE FILAMENTS
James E. Bromley and William H. Hills, Pensacola, Fla., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 70,020
5 Claims. (Cl. 28—1)

1. An apparatus for crimping a yarn, comprising a frame, a pair of yarn crimping gears mounted on the frame, means for driving the yarn crimping gears, an idle roll mounted on the frame at a location spaced from one of the yarn crimping gears for cooperating with said one gear to form a plurality of wraps in a heated yarn



in such a manner that the yarn engages only a portion of said one gear, and a nozzle mounted inside said wraps for directing a cooling medium onto that portion of said one gear not engaged by the yarn to prevent a temperature rise in said one gear.

3,041,707
PILE FABRICS AND PROCESS FOR TREATING SAME
Joseph M. Perri, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 13, 1958, Ser. No. 773,570
4 Claims. (Cl. 28—80)



1. A new article of manufacture comprising a pile fabric having a porous backing and a tufted surface, said surface being comprised of a major portion of flammable fibers selected from the group consisting of cellulosic and acrylic fibers, rendered flame-retardant by the presence of a coating of an intumescent flame-retardant material confined substantially to said backing and the portion of said tufted surface adjacent said backing, said coating being present on at least one-sixteenth inch of said fibers adjacent to said backing.

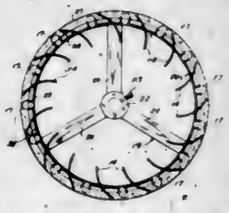
3,041,708
METHOD OF MAKING A BRACKET
Jacob Holtz, 3650 Richmond St., Philadelphia, Pa.
Filed June 23, 1960, Ser. No. 38,347
1 Claim. (Cl. 29—150)



The method of making a bracket for fastening a leg to an article of furniture which method includes taking a substantially rectangular blank 10, punching spaced, substantially triangular segments out of one long side of said blank to produce an isolated, central tab 22,

punching a hole 14 near the outer edge of said tab,
punching linearly aligned holes 14, 16 near the edge of the marginal portions 20 on either side of said tab,
punching symmetrical holes 12 near the edges of the opposite short sides of said blank,
bending said tab and said adjacent marginal portions in one direction along a line passing through the junction of said tab with the remaining portion of said blank to form an elongated section which includes said tab and said marginal portions and which is disposed substantially normal to the remaining portion 24 of the blank,
and reverse bending said remaining portion 24 to form a collar for receiving the leg,
with said elongated section extending radially outwardly from said collar for fastening to a flat surface of an article of furniture.

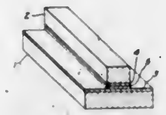
3,041,709
MANUFACTURE OF BLOWER WHEELS
Arthur E. Friedman, Shaker Heights, and Emmett F. Kennedy, Maple Heights, Ohio, assignors to Air Controls, Inc., Cleveland, Ohio
Filed Apr. 23, 1956, Ser. No. 579,785
3 Claims. (Cl. 29—156.8)



1. A method of forming a blower wheel comprising, severing a strip of sheet metal at spaced points by punching longitudinal rows of elongated openings adjacent marginal edges of the strip and slitting the strip from intermediate the ends of the openings of one row to intermediate the ends of the openings of the other row thereby dividing said strip into sections having connecting portions connecting the sections with the marginal edges of the strip, forming said sections into blades, deflecting said blades to an angular position, bending portions of said marginal edges upwardly from the plane thereof to form a series of locking members spaced apart and interconnected by portions of said marginal edges intermediate the portions from which the locking members are formed, said locking members having closed ends spaced from said intermediate portions and legs extending upwardly from said intermediate portions and interconnected in spaced relation by said closed ends, forming said strip into a cylinder with said locking members extending substantially radially thereof, providing blower wheel rings of material capable of being readily bent, and bending said rings transversely around and into tight engagement with the closed ends of said radially extending locking members and said intermediate portions of the marginal edges to compress said locking members substantially radially whereby the locking members, when bending of said rings is complete, are under substantially radial compression and said rings are under tension to retain the rings in place relative to said marginal edges.

3,041,710
ARTICLE AND METHOD OF JOINING VITREOUS MATERIAL
Donald D. Geer, Cleveland, Ohio, assignor to General Electric Company, a corporation of New York
Filed June 5, 1957, Ser. No. 663,654
4 Claims. (Cl. 29—195)

3. In combination, a glass member having on a surface thereof an adherent vapor deposited coating of an alloy comprising approximately 6–11% aluminum, 1.5–4.5% iron and the balance essentially copper, a metal



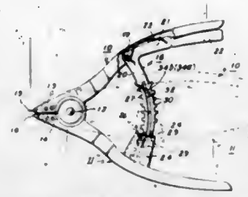
surfaced member, and a metallic soft solder joining the metal surfaced member to the coated surface of said glass member.

3,041,711
LASH ADJUSTER BODY PULLING TOOL FOR DIESEL ENGINES
Clifford F. Phillips and Posy G. Stultz, Jr., Roanoke, Va., assignors to Charles M. O'Boyle, Wilmington, Del.
Filed Oct. 22, 1958, Ser. No. 768,872
3 Claims. (Cl. 29—213)



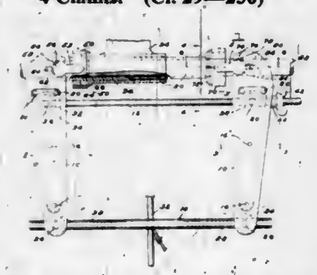
1. For use with a valve bridge of a diesel engine in an inverted position having recesses opening upwardly with opposed pairs of slots through the recess walls also opening upwardly in which recesses are press fitted valve bodies having outstanding flanges at their upper portions seated on the upper ends of the recess walls and extending across the upper ends of the pairs of slots, a pulling tool comprising a tubular housing having a lower open end for fitting about the valve body flange to locate the tool to the work with the axis of the housing substantially coincident with the axis of the valve body, guide means in an upper portion of the housing in alinement with said axes, an actuating pivot pin in the guide means restrained thereby to a movement in line with said axes, actuating means for moving the actuating pin upwardly in the guide means, a linkage hung from the actuating pin and movable up and down in the housing, a jaw pivot pin supported in the linkage below and in substantial alinement with the actuating pivot pin and disposed in the lower portion of the housing with its ends guided up and down by the internal walls of the housing, said lower portion of the housing having slots spaced angularly from the ends of the jaw pivot pin, and jaws slidable and swingable up and down in and out of the housing slots and mutually pivoted at their upper ends to the jaw pivot pin.

3,041,712
TOOLS FOR HANDLING SPLIT SPRING RETAINING RINGS
Hugo Wurzel, Bronx, N.Y., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 19, 1960, Ser. No. 23,300
3 Claims. (Cl. 29—229)



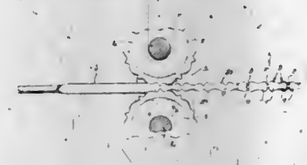
1. A pliers-type tool for handling split spring retaining rings during their assembly in the grooves of shafts, housing bores and the like comprising, in combination, a pair of lever arms pivotally interconnected intermediate their ends for relative angular motion, the ends of the arms extending to one side of the point of their connection mounting plier tips and the opposite ends being formed as tool handles adapted to be manually brought together, pawl and ratchet means for preventing uncontrolled self-opening of said handle ends under the tension of a ring with which the tool is engaged including an elongated ratchet segment pivotally connected to one handle end and extending towards the other said end and a guide sleeve affixed to the other handle end having an end wall provided with an opening through which said segment moves as said handle ends swing towards and away from one another and mounting fixed pawl means cooperatively related to said ratchet segment, and limit-stop means operative between the segment and the sleeve end wall for limiting relative angular motion of said handle ends and thereby the spacing of the plier tips, said last means comprising an elongated arcuate slot provided in the segment and a stop nut and a securing screw combination operative in the slot and being adapted to be secured in a desired position of adjustment therealong in which it is adapted to abut said sleeve end-wall.

3,041,713
PULLER TOOL
Ernst Harold Gronlund, 107 St. Clair River Road, Algonac, Mich.
Filed June 6, 1960, Ser. No. 33,970
4 Claims. (Cl. 29—256)



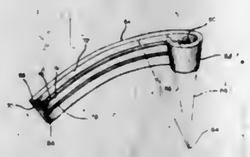
1. A tool for removing a fitting from the propeller shaft of a boat comprising, in combination, a pair of opposed substantially complementary arms having two opposed bifurcated working ends, one for each arm, said working ends disposed normally in the same horizontal plane, the bifurcated working end of each arm provided with a ring-shaped collet retainer pivotly supported from the working end of the arm for limited relative swingable movement with respect to and substantially within the linear plane of the arm, each collet retainer provided with a ring-shaped collet mounted within the retainer with the opening through each collet aligned with the opening through its retainer and aligned with the opening between the two forks of its arm, the ring-shaped collet and the ring-shaped collet retainer of one of said arms each being split rings to permit lateral assembly over a shaft, adjustable mechanism connecting said arms together at points spaced from their two working ends, said adjustable mechanism operable to exert a pressure tending to urge the working end of one arm toward the opposed working end of the opposite arm while the collets of the two arms encircle a straight shaft extending through said collets and through the bifurcated working ends of the two arms.

3,041,714
METHOD OF FORMING SLIDERS FOR SLIDE FASTENERS
Alfred E. Carlile, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed June 9, 1958, Ser. No. 740,872
9 Claims. (Cl. 29—409)



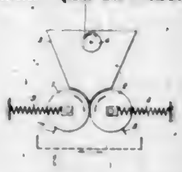
1. The method of forming sliders of the class described by a series of successive operations, which includes the steps of progressively feeding a continuous strip of flat metallic stock between a pair of opposed contour rolls for deforming the marginal edges thereof so as to provide a connected series of partially formed slider blanks, feeding said strip to means for further deforming the same to the shape of a series of interconnected slider blanks which are substantially of a final deformed shape, and feeding said strip to severing means for cutting individual slider blanks from said strip.

3,041,715
METHOD OF MAKING VALVE SPRING RETAINER LOCKS
Samuel H. Norton, University Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Apr. 18, 1958, Ser. No. 729,338
10 Claims. (Cl. 29—417)



1. The method of making a series of valve spring retainer locks which comprises edge-bending a length of flat valve lock material in the plane of the flat material to form a curved arcuate supply strip, thereafter end-bending the end of the curved flat supply strip in an arc extending laterally out of the plane of the flat material to a curvature of the arc of the valve lock with the outer surface of the lock being curled into a conical shape with the top and bottom edges in planes at right angles to the axis of the lock, and cutting locks from the end of the material as it is curled.

3,041,716
METHOD OF TREATING METALLIC POWDERS
Jean Hérenguel, Versailles, France, assignor to Commissariat a l'Energie Atomique, State Administration, Paris, France
Filed Jan. 17, 1957, Ser. No. 634,710
Claims priority, application France Jan. 18, 1956
1 Claim. (Cl. 29—420.5)



In the process of manufacturing aluminum bars from aluminum powder consisting of very small flaky superficially oxidized particles of a size of less than 10 microns, the steps of compacting said aluminum powder between rolls rotating at slightly different speeds under a pressure sufficient to break the superficial oxide film of the aluminum particles, thereby facilitating the cold bonding of said particles and producing elongated particles of aluminum, crushing said elongated particles to smaller particles the shortest length of which is 600 microns, compressing said compacted and crushed particles first in the cold state, compressing said cold-compressed particles in the hot state, and finally extruding said particles to thereby produce bars having a surface without cracks even at the angles.

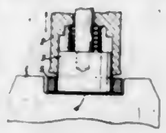
3,041,717
METHOD OF FORMING A COMPOSITE TUBULAR OBJECT
Fred L. Brown, Chicago, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed June 20, 1958, Ser. No. 743,300
14 Claims. (Cl. 29—446)



1. A method of producing from a plurality of metal sheets a composite cup composed of a plurality of cups one within the other, comprising superimposing one metal sheet upon another and drawing the metal sheets simultaneously into cup shapes one within the other, the cups being stressed during the drawing operation to strain the outer cup more than the inner cup, the physical properties of the metals of the sheets forming the cups being such that, upon release of the drawing stresses, the amounts of natural spring back of the cups are sufficiently different that the cups grip each other with intimate contact between their adjacent mating surfaces.

3,041,718
MANUFACTURE OF ALUMINIUM CONTAINERS
Arthur Leslie Stuchbery, Enfield, England, assignor to The Metal Box Company Limited, London, England, a British company
Filed Sept. 26, 1958, Ser. No. 763,527
Claims priority, application Great Britain Oct. 18, 1957
5 Claims. (Cl. 29—470)

1. A method of manufacturing a metal container comprising the steps of seating a metal bottom-forming disc in a die, loosely seating a metal ring of a metal similar to but softer than said bottom-forming disc on the bottom-forming disc in alignment therewith, applying a downward force on the metal ring with a punch while confining the metal ring against inward flow with the metal of the metal ring flowing upwardly around the punch while being confined by the die to form a container wall to-



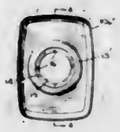
gether with the simultaneous pressure bonding of the lower end of the container wall to the bottom-forming disc to integrally connect the bottom-forming disc and the container wall.

3,041,719
METHOD OF MAKING A COMPOSITE TUBE
Robert C. Haseltine, Plainville, Mass., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed May 5, 1959, Ser. No. 811,048
7 Claims. (Cl. 29—517)



1. The method of making a plural duct composite tube of polygonal cross-section comprising forming an outer cylindrical metal tube and a plurality of inner cylindrical metal tubes, the inner tubes each having an overall diameter not greater than one-half the inner diameter of the outer tube, forming said outer tube to a polygonal cross-section and forming each of the inner tubes to a complementary polygonal cross-section to that of the outer tube with the corners thereof being rounded, inserting said inner tubes into said outer tube until said outer tube is filled with said inner tubes, drawing the assembled tubes simultaneously over plugs of polygonal cross-section complementary to the polygonal cross-section of the outer tube and positioned in the inner tubes and through polygonal cross-section forming reducing means and shaping the tubes into substantially sharply defined polygonal cross-sections, whereby the outer tube is plastically deformed inwardly by the drawing operation to secure same to the inner tubes.

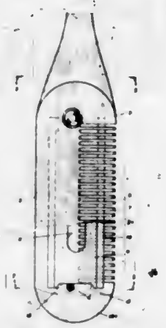
3,041,720
ESCUTCHEON PLATE
Leo J. Pantas, Riverside, Conn., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Apr. 5, 1960, Ser. No. 20,107
3 Claims. (Cl. 29—556)



1. A method of forming a decorative additional escutcheon for the knob of a door comprising, providing a previously formed silversmith's relatively shallow hollow-ware article of the type having a flat bottom forming both the bottom of the containing portion of the article and the base on which the article is intended to sit, forming an embossed upstanding portion in the bottom of the article, depressing a central portion of said embossed portion substantially to the level of the bottom of the article to form a plane surface substantially parallel to

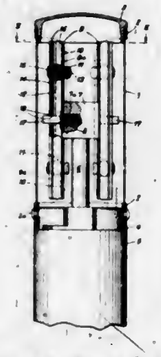
the bottom of the hollow-ware article, forming a circular hole through a center portion of said depressed portion so as to leave a depressed annular seat in said depressed portion surrounding said opening, and forming notches in the edge of said annular seat extending inwardly from said hole.

3,041,721
CUTTING COMBS
Louis Quinio, Sr., 532 Second Ave., Tarentum, Pa.
Filed Nov. 18, 1960, Ser. No. 70,153
1 Claim. (Cl. 30—30)



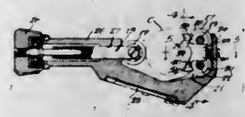
A composite comb and cutting implement for styling hair comprising a flat substantially elliptical shaped body portion having teeth along one edge for combing hair and having a handle extending thereon, a removable comb element having teeth corresponding to the teeth of said elliptical shaped body and a cutting blade disposed between said body and removable comb element, said elliptical shaped body having threaded pins extending centrally thereon for receiving thumb nuts and said removable comb element having drill holes spaced to receive the threaded pins and to maintain the teeth in alignment with the elliptical shaped body portion and said cutting blade having recessed ends with rounded shoulders for abutting said threaded pins but being movable therebetween to adjust the blade edge relative to the ends of the comb teeth within the limits of the spacing of the shoulders in the blade to prevent the cutting edge of the blade from extending to and beyond the end of said teeth.

3,041,722
SHEARING HEAD OF MECHANICAL SHAVER
Jean Szemzö, Bellariastrasse 55, Zurich, Switzerland
Filed May 23, 1958, Ser. No. 737,267
Claims priority, application Switzerland May 27, 1957
6 Claims. (Cl. 30—43)



1. A shearing head of a mechanical shaver comprising a cylindrical perforated shear plate, a power-driven rotatable member extending inside said shear plate along the longitudinal axis thereof, knives mounted on said rotatable member to provide centrifugal shearing contact against the inner periphery of said shear plate upon rotation of said power-driven rotatable member, said member having clamping plates mounted thereon adapted to hold the middle portion of each knife while the outer portions thereof arch outwards toward said shear plate, and limiting means arranged between said member and said clamping plates to provide a compensating effect for limiting the frictional pressure of said knives against said shear plate.

3,041,723
TUBE CUTTER
George E. Franck, Riverside, Ill., assignor to Imperial-Eastman Corporation, a corporation of Illinois
Filed Sept. 16, 1959, Ser. No. 840,394
4 Claims. (Cl. 30—102)

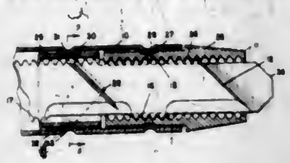


1. In a tube cutter having a U-shaped body including a handle shank portion extending from one end of the U-shaped body, a first wheel having a tube cutting, peripheral edge, means mounting said wheel on said body adjacent said shank portion thereof for rotational movement about an axis, a second wheel having a tube cutting, peripheral edge, a third wheel having a tube cutting, peripheral edge, and a pair of parallel, axially spaced shafts mounting said second and third wheels respectively on the other end of the U-shaped body for rotational movement about parallel axes accurately parallel to and equidistant from the axis of said first wheel and with said cutting edges of the second and third wheels lying in a single cutting plane with said first wheel cutting edge, tube guiding means comprising: a pair of blocks carried on said other end of the body one each on opposite sides of said cutting plane and adjacent to said second and third wheels for movement alternatively toward and away from said axis of the first wheel, said blocks each having a base portion fitted between said shafts, said base portion having opposite parallel faces slidably engaging said shafts for precluding movement of the blocks in the direction of a line perpendicular to the axes of said shafts, said blocks each further having a face confronting said axis of the first wheel including a pair of substantially planar surfaces extending angularly to each other from a line of intersection extending parallel to said axes and being in the plane of the first wheel axis which bisects the space between the second and third wheel axes to engage along a pair of circumferentially spaced lines a tube extending transversely between said wheels thereby to align the longitudinal center line of the tube with said first wheel axis and said line of intersection; and spring means urging the blocks toward said axis of the first wheel with a force sufficient to cause said blocks to maintain said alignment of the tube.

3,041,724
EXTENSION TOOL
Vincent S. Bobkowski, 1560½ S. Bundy Drive, Los Angeles, Calif.
Filed June 28, 1961, Ser. No. 120,418
3 Claims. (Cl. 30—162)

3. In an extension tool, an elongated tool element arranged to have working surface portions thereof successively extended from the end of the extension tool, said

elongated tool element having at least one longitudinal edge constituting screw threads over its entire longitudinal length, the opposite longitudinal edge including threaded portions periodically spaced therealong, said working surfaces being disposed between said threaded portions, said elongated tool element also including transverse score



lines adjacent to said threaded portions, respectively, so that portions of said tool element may be broken at said score lines to expose next successive working surfaces, said working surfaces being recessed within the edge containing said threaded portions so that the protrusion of said threaded portions protects said working surfaces.

3,041,725
HYDRAULIC CUTTING IMPLEMENT
Francis B. Harries, Dirkchinburg, P.O. Melmoth, Zululand, Union of South Africa
Filed Apr. 25, 1961, Ser. No. 105,334
Claims priority, application Union of South Africa May 2, 1960
11 Claims. (Cl. 30—180)



1. A pruning and cutting implement comprising a cutting head having a cutting blade, an anvil for cooperating with the cutting blade and slidably mounted on the head, a slave hydraulic cylinder fast with the cutting head, a slave plunger within the hydraulic cylinder and cooperating therewith and fast with the anvil, bias means to bias the anvil to an initial position away from the cutting blade, a master hydraulic cylinder hydraulically connected to and of lesser cross sectional area than the slave hydraulic cylinder, a master plunger within the master hydraulic cylinder for cooperating therewith and having a volumetric displacement in the master cylinder of the same order as the volumetric displacement of the slave plunger within the slave hydraulic cylinder, whereby hydraulic fluid in the master cylinder is displaceable by the master plunger into the slave cylinder to displace the slave plunger and anvil against the action of the bias means towards a final cutting position wherein the cutting blade is close to the anvil and wherein it performs a cutting action in cooperation with the anvil.

3,041,726
ADJUSTABLE GUARD FOR ELECTRIC CLIPPERS
Pierson H. Hitson, 3652 Whiting Ave., Montgomery, Ala.
Filed Jan. 26, 1961, Ser. No. 85,037
10 Claims. (Cl. 30—201)



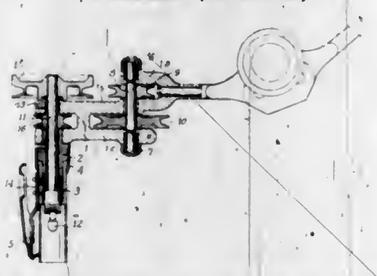
1. In combination, a conventional type barber's hair clipper embodying a clipper body having a bottom, a cutter head extending across the leading front of the clipper body at the leading end of said bottom, stationary shoulder means provided on the clipper body at the trailing end of the bottom, a guard comprising a plate opposed to and paralleling said bottom, means on the leading end of the plate and adjustably cooperable with said cutter head to establish and maintain the length of the hair being cut, and means at the rearward end of the plate for detachably connecting the plate with said shoulder means.

3,041,727
REPLACEABLE ANTERIOR TOOTH CONSTRUCTION
James H. Moyer, Columbus, Ohio, assignor to The Columbus Dental Manufacturing Co., Columbus, Ohio, a corporation of Ohio
Filed Dec. 9, 1957, Ser. No. 701,651
4 Claims. (Cl. 32—9)



1. A replaceable anterior tooth construction comprising a substantially coextensive body and backing each terminating in exposed gingival and incisal ends respectively, a tenon formed on the rearward side of said body and extending the full length thereof, said backing having a mortise formed therein and extending the full length thereof which is complemental to and receives the tenon, said tenon having side edges converging toward the gingival end of the body and said mortise having cooperating sides similarly converging so that the tenon can be inserted from the incisal end of the mortise and thrusts at the incisal edge of the body will tend to enhance the contact of the side edges of the tenon with the cooperating sides of the mortise, and cooperating stop shoulders on the tenon and mortise intermediate the length thereof for providing a positive stop to limit movement of the tenon into the mortise toward the gingival end thereof, said cooperating stop shoulders serving to locate the tooth body and the backing positively in their substantially coextensive relationship and to act as bearing surfaces for aiding in absorbing the thrust forces developed in said body during occlusion.

3,041,728
DENTAL ENGINE
Marcel Garnier, Besancon, France, assignor to Ets. Etienne Garnier & Fils, Besancon, France, a French company
Filed Feb. 10, 1958, Ser. No. 714,209
Claims priority, application France Feb. 21, 1957
3 Claims. (Cl. 32—23)



1. In a dental engine; the combination of an extensible arm; a drive pulley rotated by a dental engine motor; and a wrist-joint assembly comprising a body pivotally

mounted on said extensible arm of the dental engine, a first shaft rotatably supported on said body, means on said body for rotatably supporting a dental tool in drive-coupling engagement with said first shaft, first and second pulleys secured on said first shaft, a second shaft rotatably supported in said body parallel to, and spaced from said first shaft, spaced apart third and fourth pulleys secured on said second shaft in the planes of rotation of said first and second pulleys, respectively, the common plane of rotation of said second and fourth pulleys containing the pivoting axis of said body relative to said extensible arm, an auxiliary drive belt continuously engaged with and running around said first and third pulleys, and a main drive belt driven by said drive pulley of the dental engine and guided along said extensible arm so as to pass from the latter to said wrist-joint assembly in the plane of rotation of said second and fourth pulleys, said main drive belt being selectively engageable with one of said second and fourth pulleys so that, when said main drive belt engages said second pulley, said first shaft is driven directly from said main drive belt and, when said main drive belt engages said fourth pulley, said first shaft is driven by way of said second shaft, said first and third pulleys and said auxiliary drive belt thereby to alter the rotational speed of said first shaft.

3,041,729
PLIERS FOR RELEASING RETAINING CLAMP FROM DENTAL MATRIX BAND
Benjamin F. Toffiemire, P.O. Box 677, Lafayette, Calif.
Filed Apr. 13, 1961, Ser. No. 102,735
4 Claims. (Cl. 32—63)



1. In pliers for releasing a retaining clamp from overlapped end sections of a looped matrix band which encircles a patient's tooth, the clamp being applied over the occlusal edges of said end sections of the band and being substantially U-shaped to define a pair of legs straddling said end sections and having an arch interconnecting the legs adjacent to said occlusal edges: a pair of coacting jaws adapted to be introduced over the arch of the retaining clamp, each defining a free end adapted for projecting gingivally relative to the banded tooth; a pair of operating handles swingably secured together for closing and opening movements; each handle having one of the jaws fixed thereto; the jaws being movable toward and away from one another by actuating the handles; and stop means on the pliers adjacent to the free ends of the jaws disposed to bear against the arch of the retaining clamp for limiting movement of the jaws in a gingival direction so as to confine the free ends of the jaws to the arch of the retaining clamp, whereby the legs of the clamp will be spread apart and thus be released from said end sections of the band, when the arch is compressed by moving the jaws of the pliers toward one another; each jaw having an undercut bevel at its gingival-facing end to define a sharp edge adapted to bite into said arch of the retaining clamp to thereby prevent ejection of the clamp from between the jaws on initial compressive pressure of the jaws thereagainst; the undercut bevels of the pair of jaws converging relative to one another in a direction toward the gingivally-projecting free ends of the jaws; the sharp edges of the jaws, while retaining their bite on said arch, constituting means whereby the pliers may be utilized for removing the released clamp from the patient's mouth.

3,041,730
DIP STICK WIPER
Emanuel Feigin, 19 Castle House Drive, Dobbs Ferry, N.Y.
Filed Apr. 13, 1959, Ser. No. 806,166
12 Claims. (Cl. 33—126.7)



1. In combination, a wiper and a dip stick having upper and lower portions separated by a wider intermediate portion, said wiper comprising an essentially rigid but resiliently distortable continuous loop adapted to be received over and to substantially surround said stick, said loop normally assuming a flattened configuration longer in length but narrower in width than said intermediate portion of said dip stick and being resiliently distortable to a less flattened configuration larger in both length and width than said intermediate portion of said dip stick, the inside surface of said loop being defined by material suitable for wiping said dip stick.

3,041,731
INSIDE VERNIER MEASURING DEVICE
Ernest Keszler, 3525 Broadway, Chicago, Ill.
Filed Apr. 12, 1960, Ser. No. 21,774
8 Claims. (Cl. 33—143)

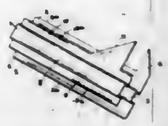


1. A measuring device, comprising a barrel, a slide slideably mounted in said barrel, said barrel being equipped with endplates to maintain the slide within said barrel, said slide having an opening extending therethrough and a guide mounted within said opening with said slide being movable on said guide, said guide being equipped with endplates, a spring mounted on said guide and extending between said slide and one of said guide endplates, said barrel being equipped with a plurality of circumferentially-related slots, a vernier scale external to said barrel and equipped with a portion extending through a first of said slots, said portion being secured to said slide, a setscrew extending through said first slot and fixed to said slide to lock said slide to said barrel, a measuring glide secured to said slide and extending outwardly therefrom through a second of said slots, two pusher plates secured to said slide and extending outwardly therefrom through third and fourth slots of said slots to help in moving said slide on said guide against said spring, said barrel being equipped with a true scale for coaction with said vernier scale, said barrel being equipped with a measuring glide for coaction with the slide measuring glide, with the free ends of the glides being ground to a radius to provide measuring points.

3,041,732
MULTIPLE PURPOSE MEASURING TOOL AND HOLDER THEREFOR

Robert M. Christner, Ben Avon Borough, Pa. (907 Vermont Ave., Apt. 1, Pittsburgh 34, Pa.)

Filed Feb. 21, 1958, Ser. No. 716,592
3 Claims. (Cl. 33—143)

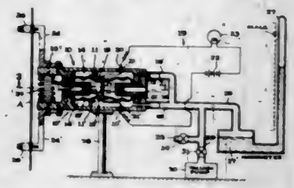


1. A measuring instrument of the class described comprising one sheet metal member comprising a rectangular sheet of metal having one straight edge and having a laterally-extending point projecting from the other edge at one end of the sheet, said sheet having a wide flat dove-tailed central ridge on one face coextensive with its full length and forming on the opposite face a channel of dove-tailed section extending the length of said member, a second rectangular sheet metal member of the same length having a pointed extension projecting laterally from one edge, the pointed projection on said second member being spaced inwardly from the end thereof, the second member also having a similarly-shaped wide flat central dove-tailed ridge formed on one face thereof coextensive with its length with a corresponding channel of dovetailed section being formed in its other face, the ridge of the first member being contoured to the same shape as the contour of the channel of the second member and being slidably fitted therein, the pointed extensions projecting in the same direction from corresponding edges of the two members the same distance from the center line of the ridge, the second sheet metal member being narrower in overall width than the first whereby the longitudinal marginal edges of the first sheet extend beyond the marginal longitudinal edges of the second sheet, the said marginal edges of the two sheets having cooperating scales thereon for measuring relative movement between the two members, the point-forming extension on the second member being spaced inwardly from the end thereof a distance such that when the points of the two members are together the ends of the two members will be aligned.

3,041,733
GAUGING APPARATUS PARTICULARLY ADAPTED FOR MEASUREMENT OF SMALL CHANGES IN DIMENSIONS OR DISPLACEMENTS

Lindsay C. Friend, Baltimore, Md., assignor to The Bendix Corporation, a corporation of Delaware

Filed Feb. 18, 1959, Ser. No. 794,086
5 Claims. (Cl. 33—149)



4. A device for measuring small changes in length of an object comprising first and second chambered members adapted to be relatively physically displaced in proportion to variations in length of the object being measured, each of said members including mounting means for attaching and supporting said object;

resilient means urging said members apart;

first and second flexible diaphragms whose displacement is a function of the pressure drop thereacross attached to said first and second chambered members respectively thereby defining first and second pressure sensing chambers;

a flexible wall connecting said members and together defining an intermediate chamber sealed at a predetermined pressure;

a pressure responsive gauge including interconnecting large area and small area liquid containing chambers;

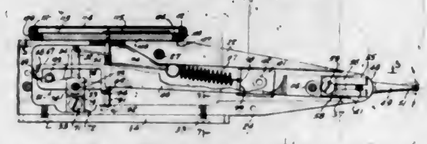
means producing variable gas pressures interconnecting said large area chamber and said first and second chambers; and

electrical indicating means including a pair of contacts attached to said diaphragms and projecting into said intermediate chamber responsive to movement of said diaphragms for indicating the displacement thereof, whereby changes in the height of the liquid in said small area chamber varying with the pressure required to cause an output from said indicating means are proportioned to changes in the length of said object between said mounting means.

3,041,734
DIAL INDICATOR

Martin A. Lobel, 82 Penn Drive, West Hartford, Conn., assignor of twenty percent to Arthur R. Carling, twenty percent to David E. Alton, twenty percent to Abraham D. Horn, and twenty percent to Nathan Aaron, all of West Hartford, Conn.

Filed Oct. 3, 1958, Ser. No. 765,171
3 Claims. (Cl. 33—172)



1. An indicator comprising a housing, a feeler finger pivotally mounted on said housing, a lever connected at one end to said finger and pivotable therewith, said lever being substantially greater in length than said finger whereby the distance traversed by the outer end of said finger is greatly amplified by the other end of said lever, an indicator shaft mounted in said housing and rotatable on its own axis, a bell crank pivotally mounted within said housing, a pair of oppositely extending legs on said bell crank, each of said legs being in continuous engagement with spaced apart portions of said other end of said lever whereby the movement of said lever produces a unidirectional movement of said bell crank, a radially extending arm on said bell crank, and a spring mounted within said housing, a single filament, one end of said filament being connected to said spring, the other end of said filament being connected to the outer portion of said arm, an intermediate portion of said filament being helically wound around said shaft, said filament being made of a plastic material having a minimal but sufficiently controlled resilience to protect the instrument when said finger is subjected to sudden shocks without sacrificing any dimensional stability of said filament, and an aperture in said indicator shaft intermediate its ends, an intermediate portion of said filament within said helical winding being laced through said aperture.

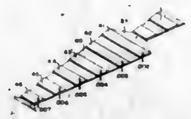
3,041,735
GAUGE

Thomas J. Allen, 323 El Modena Ave., Newport Beach, Calif.

Filed Apr. 13, 1959, Ser. No. 806,043
3 Claims. (Cl. 33—174)

1. A device for measuring the clearance between a shaft and a bearing comprising a strip of detachable

segments, each segment having a plurality of raised portions of predetermined thickness, said segment being tapered and said raised portions being of progressively

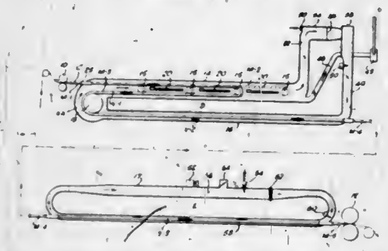


increasing thickness and constant volume from a first end portion to a remote end portion, the range of thickness of said raised portions covering the anticipated clearance to be measured.

3,041,736
METHOD AND APPARATUS FOR DRYING REGENERATED CELLULOSE TUBING

Earl A. Peterson, Downers Grove, Elio E. Tarika, Chicago Heights, and Norman T. Rossen, Oaklawn, Ill., assignors to Union Carbide Corporation, a corporation of New York

Filed Mar. 28, 1958, Ser. No. 724,723
7 Claims. (Cl. 34—12)



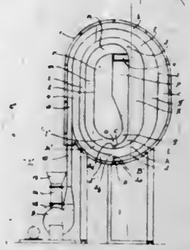
1. A continuous two-stage method of drying and rehumidifying gel regenerated cellulose tubing which comprises continuously passing said tubing having a moisture content of from 55% to 65% into a first stage dryer, continuously inflating said tubing as it passes into said first stage dryer, continuously maintaining said tubing inflated as it passes through said first stage dryer, continuously subjecting said inflated tubing in said first stage dryer to a drying medium comprising a stream of drying air at a velocity of from 1000 to 2500 feet per minute heated to a temperature of from 140° to 185° until the moisture content thereof is from 7% to 15% which is lower than that desired in the final product, continuously withdrawing the thus dried inflated tubing from said first stage dryer, continuously passing the thus withdrawn inflated tubing into a second stage equalizer wherein it is subjected to an atmosphere of appropriate relative humidity at a velocity of from 750 to 3000 feet per minute and at a temperature of from 140° F. to 160° F. until the moisture content of the tubing is equilibrated to such atmosphere; the equilibrating atmosphere being of a relative humidity corresponding to the desired final moisture content of the product of from 8% to 20% and which is greater than that of the tubing originally subjected to the equilibrating atmosphere.

3,041,737
PNEUMATICALLY ACTING DRIERS

André Mark, 54 Cours Lafayette (Rhone), Lyon, France

Filed Feb. 20, 1959, Ser. No. 794,565
Claims priority, application France Feb. 25, 1958
12 Claims. (Cl. 34—57)

12. A pneumatic drier comprising a gas conduit coiled on itself in a substantially vertical plane to form in said plane successive convolutions each extending through 360°, each having an uppermost and a lowermost zone, said gas conduit having an inlet and having an outlet; means to supply drying gas stream into the inlet of said conduit; means to introduce a material to be dried into said gas stream in the form of substantially discrete particles to

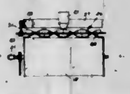


cause said material to be pneumatically conveyed by said gas stream between said inlet and said outlet; means to separate the material from the gas issuing from said outlet; and gas and material recycling means between the lowermost zones of two successive convolutions of said gas conduit.

3,041,738
FEED DEVICE FOR DEHYDRATING MACHINE

Chester A. Ray, Allegan, Mich., assignor to Overton Machine Company, a corporation

Filed Dec. 19, 1958, Ser. No. 781,663
12 Claims. (Cl. 34—112)

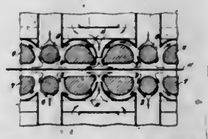


1. A machine adapted for dehydrating a cohesive, viscous food material or the like comprising a drier drum, means for rotating said drier drum, a feed spiral and means for rotating said feed spiral, said drier drum and said feed spiral being mounted for rotation on parallel axes and said feed spiral being in radially proximate relation to the drier drum and configured to distribute the food material or the like onto the drum laterally from the center of the feed spiral with said feed spiral and said drum coacting to move the food material or the like with the food material acting as a moving medium therebetween.

3,041,739
NOZZLE ARRANGEMENT FOR DRYING AND HEAT-TREATMENT PLANTS FOR WEB MATERIAL

August Meier-Windhorst, Gellertstrasse 26, Hamburg, Germany

Filed Aug. 7, 1957, Ser. No. 676,792
Claims priority, application Germany Dec. 15, 1956
2 Claims. (Cl. 34—156)



1. In apparatus for treating elongated web material, means for freely suspending the web material comprising a plurality of nozzles each having a tip portion terminating adjacent the web, said tip portions being arranged in a row of confronting pairs on opposite sides of said web material, means supplying gaseous treating medium to said nozzles, means defining discharge openings between

adjacent nozzles on each side of the web material, and a series of baffle elements arranged in a row of confronting pairs in said discharge openings and spaced closer to said web material than said nozzle tip portions, said nozzle tip portions, baffle elements and discharge openings providing flow of said treating medium operable to support the web in a stable state of free suspension and effect substantially uniform treating of said web material.

3,041,740
AIR SQUEEGEES FOR MOTION PICTURE FILM OR OTHER WEBS
William Allen, Bellerose, N.Y., assignor to S.O.S. Cinema Supply Corp., New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 823,956
10 Claims. (Cl. 34—160)



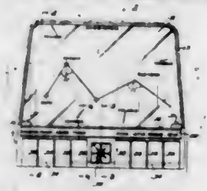
1. An air squeegee comprising a hollow elongated body, closed at one end and having an inlet at its other end, said body being formed with an elongated slot extending longitudinally of the body and communicating with the interior of the body, means on the body extending longitudinally of slot and adjacent thereto, and having a transversely curved convex elongated outer surface, and means on the body overlapping said slot at an angle thereto and overlapping said curved surface to direct air passing from the body through the slot onto said curved surface.

3,041,741
SPACE FLIGHT SIMULATOR
Charles L. Barker, Jr., Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 16, 1960, Ser. No. 15,507
22 Claims. (Cl. 35—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)



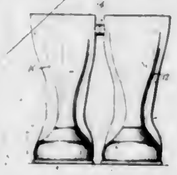
2. A space flight simulator for producing a condition of weightlessness which will be experienced during a manned flight into outer space comprising a continuous track lying in one plane, a second track disposed in a plane substantially vertically related to said one plane, a transition track connected at one end to said second track and having a movable end section at its other end adapted for attachment to said continuous track; switching means for said section of said transition track for connecting and disconnecting said section of said transition track to said continuous track; a vehicle disposed adjacent said track; a plurality of rail shoe assemblies carried by said vehicle for connecting said vehicle to said tracks; means for controlling movement of said vehicle, means for slowing down said vehicle, and means to propel said vehicle over said tracks at velocities sufficient to produce a condition of weightlessness within said vehicle during selected periods of movement of said vehicle over said second track.

3,041,742
SELECTIVELY OPERABLE STAR FINDER
Daniel T. Meisenheimer, Milford, and Louis W. Syarto, Fairfield, Conn., assignors to the A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland
Filed June 30, 1959, Ser. No. 824,097
16 Claims. (Cl. 35—43)



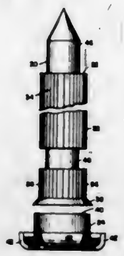
1. An instructional sky scanner for aid in locating and identifying celestial bodies while viewing the same in the night sky comprising, a plurality of transparent viewing plates each bearing a constellation diagram illuminable by edge lighting of the plate, manually graspable framework constructed to engage marginal edges of said plates in a manner to support the plates in face-to-face slightly separated parallel relation with one broadside surface of each plate exposed to light from the sky and the opposite broadside surface of each plate exposed to the eyes of an observer of the sky and with edges of said plural plates occupying a common plane, a chamber in said framework to which only said coplanar edges of said plates are exposed, a source of light in said chamber, a light baffling gate in said chamber mounted to be shiftable in relation to each of said plate edges between a position to permit and a position to prevent the passage of light from said source to the edge of a selected one of said plates, a sliding structure mounted for rectilinear movement in said chamber operatively related to said gate to impel the same from one to another of said positions, and at least one handle device operative to actuate said sliding structure within said chamber and accessible from the outside thereof for manual operation.

3,041,743
FOOTWEAR HOLDING MEANS
Shirley M. Monsma, 229 E. Duball, South Bend, Ind.
Filed Dec. 23, 1959, Ser. No. 861,612
4 Claims. (Cl. 36—1)



1. A holder for keeping the right and left upper portions of a pair of footwear together, comprising a permanent magnet, a means for attaching said magnet near the top of one of said upper portions, a member of magnetic attractable material, and a means for attaching said member near the top of the other of said upper portions so that a child may quickly differentiate his pair of footwear from other similar pairs having recognized one half of his pair.

3,041,744
LIFT AND DOWEL FOR LADIES' SHOES
Pincus Brauner, 81 Hamilton Ave., Haverhill, Mass.
Filed Jan. 23, 1961, Ser. No. 84,415
3 Claims. (Cl. 36—34)



1. A dowel for ladies' shoes comprising a nail having a stem with a cylindrical shoulder at its head end, an eyelet having a barrel-shaped body mounted on said shoulder and generally coextensive in an axial direction with the shoulder, said barrel-shaped body flaring outwardly at its end adjacent the head end of the nail, and a plurality of claws extending from the flared end of the barrel-shaped body away from the stem and each turned smoothly from that end toward the other end of the barrel-shaped body.

3,041,745
FORKED SPIKE HEEL
Edward Dittrich, Rte. 2, Medford, Wis.
Filed Aug. 11, 1961, Ser. No. 130,872
7 Claims. (Cl. 36—34)



1. In a shoe having a heel, the lower end portion of said heel terminating in a pair of spaced and laterally flared portions to increase the lateral stability of said heel, the terminal portions of said flared portions extending outwardly beyond the beginning portions of said flared portions.

3,041,746
ATTACHMENT MEANS FOR SHOE HEELS
Jozef M. Rakus, P.O. Box 1749, Washington 13, D.C.
Filed Apr. 1, 1960, Ser. No. 19,342
6 Claims. (Cl. 36—36)



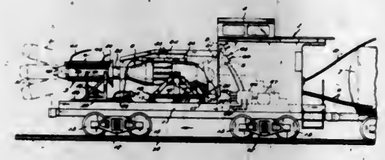
1. In a shoe heel construction for attachment to an upper shoe body the invention which comprises a wear lift, said lift having a recessed area in its upper surface with an inwardly extending lip extending around the opening to said recess, a heel base, a suction cup having a downwardly and outwardly flared lip portion for interengagement with the recess under the lip portion of the lift, means to secure the suction cup through the heel base to the shoe body, whereby said lift is secured to said heel base upon the creation of the decreased pressure zone between the suction cup and the interior of said wear lift, and releasable means extending through the lift and interengaging with the suction cup whereby to selectively retain or break the suction of said suction cup.

3,041,747
HEEL WITH DETACHABLE LIFT
Heinrich Pfeil, 2 Nendlberg, Prutting, near Rosenheim, Upper Bavaria, Germany
Filed Aug. 28, 1959, Ser. No. 836,760
Claims priority, application Germany, Aug. 10, 1959
3 Claims. (Cl. 36—42)



1. In a shoe heel construction having a free elongated end portion of substantially uniform overall cross-section, a longitudinally-extending recess formed in the lower end of the heel, said recess comprising a first and second portion of different cross-sectional dimensions, said first portion having a larger cross-section than said second portion to provide a horizontal shoulder portion therebetween, a heel lift on said end portion and longitudinally projecting therefrom, an elongated shank member attached to said heel lift and shaped to conform to said recess and be received therein, said shank member having a first and second section, said first section having a larger cross section than said second section to provide a step portion, said sections dimensionally conforming to the said portions whereby said shank member is tightly received in said recess, and said step abuts said shoulder.

3,041,748
SNOW REMOVAL APPARATUS
Donald C. Wetzel, Berea, Ohio, assignor, by mesne assignments, to Cleveland Technical Center, Inc., Cleveland, Ohio, a corporation of Delaware
Filed May 19, 1961, Ser. No. 111,252
17 Claims. (Cl. 37—19)

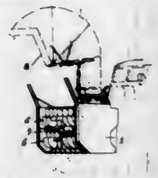


1. Apparatus for removing snow comprising a vehicle adapted to travel along the ground; a jet engine having a discharge conduit through which the engine blast is discharged at high velocity, said engine being mounted on said vehicle so its blast discharges in the direction toward which the vehicle travels; and a duct, having an inlet and outlet, mounted on said vehicle with its inlet adjacent the discharge conduit of said engine, the internal cross sectional area of said duct being substantially from 1.5 to 2.5 times the internal cross sectional area of said discharge conduit of said engine, whereby ambient air is entrained into said duct by the blast discharging from said engine, to increase substantially the mass flow of the gases discharging from said duct.

3,041,749
DISINTEGRATING AND FEEDING MEANS FOR SNOW BLOWERS

Armand Lamy, 5287 Waverly St., Montreal, Quebec, Canada, assignor of fifty percent to Ubald Boisvert, Montreal, Quebec, Canada

Filed Dec. 29, 1958, Ser. No. 783,373
Claims priority, application Canada Jan. 18, 1958
2 Claims. (Cl. 37—43)

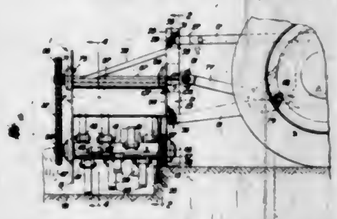


1. In a snow remover, a front casing having a back wall and open at the front for receiving snow therein, said back wall having a central mouth for feeding the snow to a snow ejecting impeller, a horizontal rotatable shaft transversely arranged within said casing and in front of said mouth and having a first part disposed opposite said mouth, and other parts disposed laterally with respect to said mouth, radial elongated blades fixed to said first part of said shaft and sector shaped blades fixed to said other parts of said shaft, said sector shaped blades having a leading part with respect to the direction of rotation of said shaft disposed in a plane perpendicular to said shaft and having a trailing part inclined towards said mouth, said elongated and sector blades having a straight radial leading edge for slicing and disintegrating snow and other material, the trailing edge of said sector shaped blades being alined transversely of said shaft with the leading edge of the next blade nearer said mouth, and a hammer tooth fixed to the radially outer end of the leading portions of said elongated and sector shaped blades, each tooth consisting of an elongated solid body of rectangular cross section having a side face removably secured to and in contact with a face of the blade and having a front face lying in a radial plane passing through said shaft and parallel to the leading edge of the associated blade, the outer end portion of said front face being forwardly inclined to form a tapered end portion defining an acute edge radially outwardly projecting from the outer edge of the associated blade, and leading from the front face of said body.

3,041,750
EXCAVATOR MECHANISM FOR ATTACHMENT TO A TRACTOR

Ivan L. Garnand, Rte. 3, Twin Falls, Idaho

Filed Aug. 28, 1959, Ser. No. 836,798
9 Claims. (Cl. 37—92)

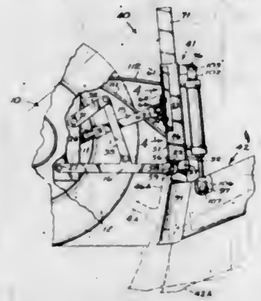


1. Excavating mechanism for digging ditches or cleaning debris out of the same comprising a housing, an elongated rotary digger reel extending longitudinally of a ditch along a bottom of the housing and including a cylinder journaled in said housing for rotation therein, centrifugally extensible shovel bars on said cylinder revoluble thereby to dig a ditch and throw earth and debris dug out of the ditch outwardly of opposite sides of the housing, means for attaching said housing to a rear power lift of a tractor for raising and lowering of said mechanism into and from ditching position and draft of said mechanism in the line of travel of the tractor to progressively dig a ditch, driven means protectively mounted on said housing operatively connected to said cylinder to rotate the cylinder and means for operatively connecting a rear power take-off shaft of a tractor to said driven means, said drive means being disposed above the cylinder and shovel bars so that the reel may be spaced in close proximity to the tractor and be protected by the housing from the earth thrown by the shovel bars.

3,041,751
DITCHER APPARATUS

Robert C. Chattin, 2400 Bannock St., Boise, Idaho

Filed Oct. 22, 1958, Ser. No. 768,865
5 Claims. (Cl. 37—98)

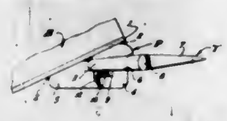


1. Ditcher apparatus adapted to be suspended on the hitch arms of a tractor comprising, in operative position, a substantially upright tool frame portion and means for securing the same to the hitch arms of such a tractor, an elongated beam portion slidably and nonrotatably mounted on the tool frame portion for reciprocal movement up and down thereon, a ditcher implement having a pair of elongated wings with convergent front ends and divergent rear ends secured to said beam portion and carried at the base thereof, said wings being positioned with the convergent ends of the wings spaced adjacent to the base of said beam portion and with the wings extending rearwardly and inclining laterally outwardly and upwardly from said convergent ends, and a remotely-controlled, elongated, double-acting fluid jack operatively connected at one end to said frame portion and at its other end to said implement at a point near the convergent ends of the wings, expansion or contraction of said jack being operable to adjust along a linear path the position of said implement relative to said tool frame.

3,041,752
MOUNTING MEANS FOR DIGGER TEETH

Clifford J. Evans, Pasadena, Calif., assignor to Jetco, Inc., Alhambra, Calif., a corporation of California

Filed June 16, 1959, Ser. No. 820,720
5 Claims. (Cl. 37—142)

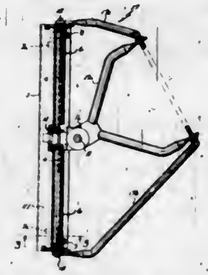


1. A digger tooth mounting comprising: a supporting member having a pocket for the reception of a tooth shank; said pocket having opposed surfaces engageable with said shank while said shank is positioned in said pocket; said supporting member having an elongated slot opening along one side into said pocket; a coiled spring disposed in said slot with its coils projecting into said pocket from the open side of said slot; said slot being open at the end thereof farthest removed from the mouth of said pocket; and a retainer pin removably carried by said member in the open end of said slot for preventing displacement of said coiled spring therefrom.

3,041,753
MOUNTING MEANS FOR PLOW BLADE

Lucian Koloseus, Wels, Ober-Oesterreich, Austria (13 Wielemannstrasse, Vienna 18, Austria)

Filed Apr. 29, 1960, Ser. No. 25,761
Claims priority, application Austria Apr. 30, 1959
4 Claims. (Cl. 37—144)

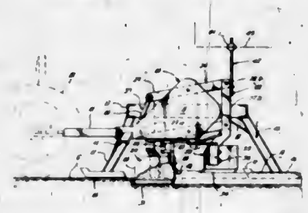


1. A work handling tool of the type referred to comprising a blade, a pair of coaxially aligned, tubular supports rigidly secured at their inner ends to a connecting member, a pair of torsion bar springs projecting laterally from said connecting member and positioned coaxially within said supports, said blade pivotally mounted upon said tubular supports, stop means on said support and said blade preventing rotation of said blade in one direction, means connecting said torsion bar springs to said blade whereby said springs resiliently urge said blade in said one direction.

3,041,754
GRADE LINE MARKER

Aaron G. Reynolds, Rte. 1, Box 250, McAllen, Tex.

Filed Jan. 15, 1958, Ser. No. 709,115
17 Claims. (Cl. 37—170)



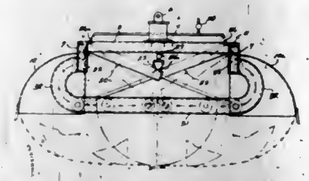
1. A grade line marker, comprising a frame movable over the ground level, a gathering member and a digging member supported on the frame, force-transmitting means on the frame for moving each of said members below the ground level so as to selectively raise and lower a row of the ground as the frame is moved thereover, and gauge means for enabling a person to determine the elevation of said row from a point distant from the frame.

3,041,755
CLAMSHELL TYPE BUCKET

Ray Ferwerda, 1050 NW. 163rd Drive, North Miami, Fla.

Filed May 31, 1960, Ser. No. 32,726
10 Claims. (Cl. 37—187)

1. A clamshell bucket comprising a pair of spaced, parallel tracks; a pair of oppositely facing, complementary bucket sections positioned between said tracks; means providing a rolling engagement between said sections and said tracks in such manner that said sections follow the contour of said tracks; said tracks having curved end portions whereby said sections are tilted way from each other

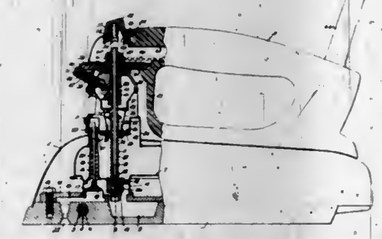


when moved adjacent said end portions; and power means for reciprocatively moving each said section from the longitudinal middle region of said tracks to the respectively curved end portions associated therewith to alternately open and close said bucket.

3,041,756
STEAM AND LIQUID SPRAY IRON

Harold S. Foster, Ontario, Calif., assignor to General Electric Company, a corporation of New York

Filed June 19, 1957, Ser. No. 666,659
17 Claims. (Cl. 38—77)



1. In a steam and liquid spray iron, an electrically heated soleplate including a flash steam generator, a liquid reservoir above said soleplate, means including a control valve providing communication from said reservoir to said steam generator, a steam outlet passage including a pressure regulating valve therein discharging through said soleplate, a steam pressure equalizing means between said steam generator and said reservoir, a fill passage for said reservoir including a valve seat therein and fill valve member cooperable therewith, a liquid spray nozzle discharging from an elevated position with respect to said soleplate and including steam and liquid supply conduits therefor, valve means in each of said conduits for control of said spray nozzle, and a three-position valve stem and valve stem operating member interconnected with said control valve, said pressure regulating valve, said fill valve, and said spray nozzle valves.

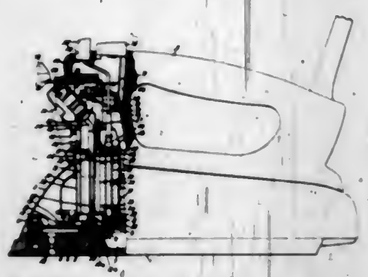
3,041,757
STEAM AND LIQUID SPRAY IRON

Alfred G. Swenson and Harold S. Foster, Ontario, Calif., assignors to General Electric Company, a corporation of New York

Filed June 19, 1957, Ser. No. 666,660
24 Claims. (Cl. 38—77)

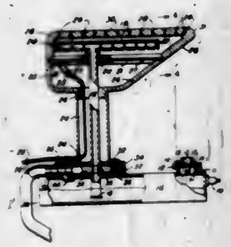
1. In a liquid spray iron, a liquid reservoir, means generating and supplying steam under pressure into said reservoir, a spray nozzle on said iron having a steam tube in communication with the steam space of said reservoir and terminating in a spray aperture, a liquid tube in communication with the liquid space in said reservoir, said liquid tube being positioned internally of said steam tube with an outlet discharging liquid into said spray

aperture, an end cap slidably positioned over the end of said steam tube adapted to close off and open said aper-



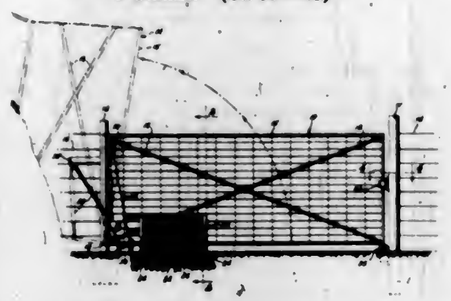
ture in the steam tube to the atmosphere depending upon the position of said cap, and manually operable means for moving said cap.

3,041,758
PORTABLE ELECTRIC PUFF IRONS
Roy L. McIntyre, 17520 SW. Redfern Ave., Lake Grove, Oreg.
Filed Aug. 1, 1961, Ser. No. 128,422
2 Claims. (Cl. 38—99)



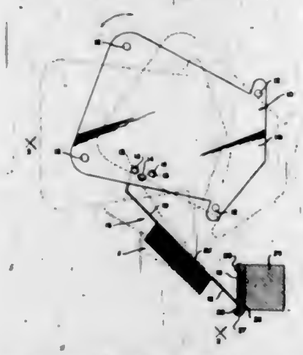
1. In a portable electric steam puff iron: a hollow, closed base tank having a fill pipe; a removable pressure sealing cap complementary to said fill pipe, said cap being provided with manual pressure release means; automatic safety means for said base tank; a valves assembly unit secured on said base tank; a water supply pipe extending upwardly from within said base tank through said valves assembly unit to a point above said base tank; a water distributor containing a plurality of water outlets secured on the upper end of said water supply pipe; an encased electrical heating element circumscribing said water supply pipe at a point below said water distributor; a selector switch positioned within said valves assembly unit; air access means intersecting said selector switch and having its outer end extending beyond said valves assembly unit; a sliding valve engaging with the inner end of said air access means and having a vertical opening disposed therethrough, said sliding valve intersecting said water supply pipe; an inlet spout between said selector switch and the interior of said base tank; a check valve positioned within said inlet spout; means for supplying compressed air; an air supply hose connecting with said outer end of said air access means and said means for supplying compressed air; a standard secured on top of said valves assembly unit and encasing said water supply pipe; and an head consisting of upper and lower portions, said lower portion secured to the upper end of said standard and supporting said encased heating element, said upper portion having a plurality of steam vent holes through its upper surface and seatedly engaging said lower portion, said head portions enclosing said heating element and said water distributor.

3,041,759
AUTOMATIC GATES
Gottlieb H. Treiber, Kerrville, Tex., assignor to Morris G. Morgan, Kerr County, Tex.
Filed Oct. 11, 1960, Ser. No. 61,942
6 Claims. (Cl. 39—43)



1. A vehicle operated gate assembly comprising a gate, means mounting said gate for pivotal movement between a normal position closing a roadway and an open position about an axis normal to the plane of the gate and located near one of its corners, treadles on either side of the gate in the path of the vehicle passing through the gate, means pivotally mounting each treadle on said roadway at one end only for movement between a raised and a depressed position about an axis parallel to the plane of said gate, said axis being located at the end of the respective treadle remote from said gate, a fixture attached to said gate near its lower edge and spaced from the axis of pivot of the gate, sheaves, means mounting said sheaves above said fixture, a cable interconnecting the end of each treadle which is adjacent said gate to said fixture, each cable passing over one of said sheaves, the cable length being such that when the gate is closed the treadles slope upwardly from their axes of pivot toward the gate and depression of the treadles to the plane of the roadway will cause movement of the gate to open position and means responsive to movement of the gate to open position for storing energy to close the gate when the treadles no longer bear vehicle weight.

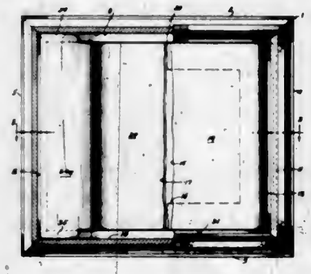
3,041,760
MOVABLE MERCHANDISE INDICATOR
Robert J. Slavsky, Detroit, Mich., assignor to Shaw & Slavsky, Inc., Detroit, Mich.
Filed Mar. 6, 1961, Ser. No. 93,741
2 Claims. (Cl. 40—10)



1. A movable merchandise indicator comprising a flat panel and a wire mounting means, the panel being arranged in a vertical plane and being formed of at least one thin, flat sheet of substantially rigid material and being shaped as an arrow for pointing in a generally horizontal direction in the plane of the sheet; the wire

mounting means comprising a thin, springy wire having one end permanently secured to the panel at the bottom edge of the panel at a location which is a greater distance, measured horizontally, from the point of the arrow than is the center of gravity of the panel, and depending from the panel, but in the plane of the panel, at an acute angle relative to the bottom edge thereof and extending towards the direction that the arrow is pointed; the opposite end of the wire being bent into a mounting formation, normally located directly beneath the point of the arrow, for engaging and for being secured to the front edge of a shelf; the central portion of the wire being coiled into a closely wound coil spring formation of substantial length and of a large number of substantially uniform size coils and with the ends of the coil spring being at a considerable distance from the respective ends of the wire, the portions of the wire extending from the spring ends being straight and axially aligned and of a shorter length than the length of the coil spring, and the coil spring being axially parallel to the straight portions of the wire, whereby, when the mounting formation of the wire is secured to a shelf edge, the panel arrow will point towards the shelf and will rock towards and away from the shelf substantially within the plane of the panel upon being exposed to air movements or manual contact.

3,041,761
PICTURE DISPLAY MEANS
David M. Knox, 310 E. 55th St., New York 22, N.Y.
Filed Mar. 16, 1960, Ser. No. 15,293
8 Claims. (Cl. 40—152)



1. An ensemble for the display of pictures comprising:

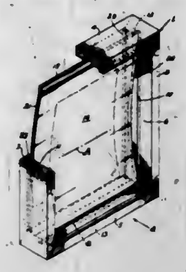
a generally rectangular-shaped frame formed with a generally rectangular-shaped four-sided aperture;

means forming grooves respectively on the first and second sides of said aperture, the first and second sides being opposite one another and the grooves facing one another;

a generally rectangular-shaped picture assembly in said aperture comprising a picture made of flexible material and flexible sheet means supporting the picture, the dimensions of the picture assembly as between said first and second sides of the aperture being greater than the distance between the sides to provide for two opposite edges of said assembly to be disposed in and make a sliding contact respectively with said grooves and the dimensions of the assembly as between the third and fourth sides of the aperture being substantially the same as the distance between the sides to provide for the other two edges of the assembly to respectively make sliding contact with the third and fourth sides of the aperture, said flexibility and said sliding contact providing for the assembly to be bendable into a contoured shape; and

mechanism on said frame connected to and extending between said third and fourth sides and forming a barrier means across said aperture to be engaged by said assembly for controlling the degree of bending.

3,041,762
PICTURE DISPLAYS
David M. Knox, 310 E. 55th St., New York 22, N.Y.
Filed Mar. 16, 1960, Ser. No. 15,486
2 Claims. (Cl. 40—152)



1. An ensemble for the display of pictures or the like comprising:

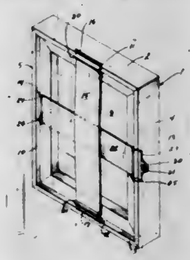
a frame formed with first and second planar, rectangular shaped surfaces oriented parallel with each other and also formed with third and fourth planar, rectangular shaped surfaces oriented parallel with one another and also normal to the first and second planar surfaces, the planar surfaces forming a rectangular shaped aperture;

means forming grooves respectively on said first and second planar surfaces, each groove being generally rectangular in cross section and the grooves facing one another;

a picture assembly in said aperture comprising a picture and sheet means supporting the picture, both the picture and the sheet means being made of flexible material, the dimensions of the picture assembly as between the first and second planar surfaces being greater than the distance between the surfaces to provide for two opposite edges of said assembly to be disposed in and make a sliding contact respectively with said grooves, and the dimensions of the picture assembly as between the third and fourth planar surfaces being substantially the same as the distance between the surfaces to provide for the other two edges of said assembly to respectively make sliding contacts with said third and fourth planar surfaces, the said flexibility and the said sliding contact of said edges both providing for the assembly to be freely bendable into a contoured shape; and

retaining strips on said third and fourth planar surfaces engaged by said assembly when the same is bent into contoured shape.

3,041,763
PROPS FOR PICTURE FRAMES
David M. Knox, 310 E. 55th St., New York 22, N.Y.
Filed Jan. 9, 1961, Ser. No. 81,457
4 Claims. (Cl. 40—152.1)



1. For a picture ensemble: an annular-shaped frame having means for mounting a picture assembly and the

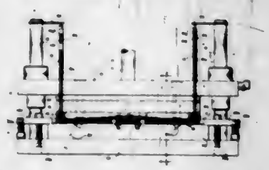
frame being formed with a pair of diametrically opposed slots; a prop for holding said frame generally upright on a surface supporting the frame, the prop being made of resilient material and having a length greater than the distance between said slots, one end of the prop being disposed in and making a sliding engagement with one of said slots, the sliding engagement and the resiliency providing for insertion and withdrawal of said one end, and the other end of the prop being free from the frame for contact with said surface and the other end of the prop being configured to enter the other of said slots and make a sliding engagement therewith, the sliding engagement and the resiliency providing for insertion and withdrawal of the other end.

3,041,764

METHOD FOR SIMULATED ORNAMENTATION

Conrad L. Leblanc and James E. Crane, Leominster, Mass., assignors, by mesne assignments, to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware

Filed Feb. 15, 1957, Ser. No. 640,474
10 Claims. (Cl. 41—10)



1. A method of ornamenting the surface of a thermoplastic object with simulated beads, precious stones and other ornaments, comprising forming three-dimensionally shaped bottomless pieces of metal foil three dimensional within the marginal edges, heating said surface, and embedding the margins of said pieces in said heated surface.

5. In a machine for ornamenting thermoplastic surfaced objects with simulated beads, precious stones and other ornaments, the combination with a power press of a ram assembly provided with heating means and a plurality of punches, guide bars cooperating with said assembly, a press bed having a nest for receiving the object to be ornamented, said ram assembly being movable along a plane transversely positioned with respect to said bed, a perforated control plate spaced between said nest and assembly, suspended by said assembly, and perpendicularly movable with respect to said assembly, and a foil blank coaxially positioned between said nest and plate; said punches having three-dimensionally terminal surfaces within terminal peripheral cutting edges and being registrable with the perforations in said plate.

7. A thermoplastic object ornamented by simulated beads, precious stones and other ornaments, the ornaments consisting of bottomless three-dimensional metal foil pieces heat sealed and embedded in the surface of said object at least at its terminal margins.

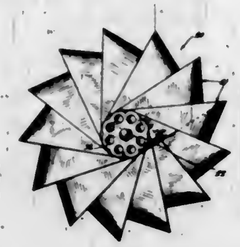
3,041,765

ARTICLE AND METHOD OF FORMING A BOW

Thomas J. J. Paar, Chicago, Ill., assignor to Chicago Printed String Company, Chicago, Ill., a corporation of Delaware

Filed Dec. 1, 1958, Ser. No. 777,421
3 Claims. (Cl. 41—10)

1. An ornament formed from a plurality of elongate flat pieces of ribbon, comprising a plurality of discrete ribbon strips having opposed distal end portions thereof arranged in face-to-face relationship, means for retaining said end portions in face-to-face relationship, each of said ribbon strips having a center portion interposed between said distal end portions twisted 180 degrees from the plane of said distal end portions, said twisted central portion of each ribbon strip defining a funnel-like configuration, each of said funnel-like configurations having an exposed lower distal edge portion disposed away from



the strip distal end portions with which formed, said exposed lower distal edge portion of each of said ribbon strips being in abutting engagement with a portion of the center funnel-like configuration of an adjacent ribbon strip, the engaged portion of funnel-like configuration of said adjacent ribbon strip being disposed adjacent the strip distal end portions with which it is formed.

3,041,766

ARTIFICIAL FLOWER STRUCTURE

André Emile Decamp, 45 Chemin des Peupliers, Caluire, France

Filed Nov. 17, 1958, Ser. No. 774,319
2 Claims. (Cl. 41—13)



1. An artificial flower comprising a substiantially hollow tubular member simulating a stem of a flower, an armature wire disposed therein, flower corolla means coupled with said tubular member and said armature wire, said tubular member having an aperture communicating with the interior thereof on the side wall of the stem, a second stem having a first section thereof within said tubular member and a further section integral with said first section projecting through said aperture externally of said tubular member, and surfaces of said first section and said armature wire interengaging to predeterminately orient said second stem with respect to said tubular member, said first section being provided with a longitudinally extending groove for embracing the external surface of said armature wire, and means simulating a leaf extending from said second section.

3,041,767

ARTIFICIAL TREES

Stephen Ranoha, 1850 N. Milwaukee Ave., and Bernard H. Schallinger, 1801 N. Wolcott Ave., both of Chicago, Ill.

Filed Dec. 5, 1960, Ser. No. 73,901
5 Claims. (Cl. 41—15)



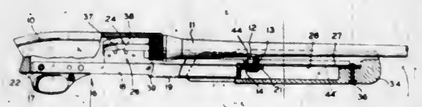
1. A branch for an artificial tree, said branch formed of a strip of metal foil, said metal foil having a longitudinal securing portion along one marginal edge thereof and a plurality of foil fingers extending transversely from one side of said longitudinal securing portion, each of said fingers having a plurality of spaced, transverse, parallel indentations along the length thereof to form a plurality of facets and cause said fingers to assume a generally curving arcuate shape, a branch rod, and said strip having its longitudinal securing portion helically wound and secured to said branch rod with the fingers extending outwardly from said branch rod in an arcuate shape.

3,041,768

FIREARM WITH TRIGGER ASSEMBLY AND SLIDE ARM ASSEMBLY SUPPORTED BY BARREL LUG

Julius E. Brooks, Jr., Branford, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Sept. 1, 1960, Ser. No. 53,405
5 Claims. (Cl. 42—16)



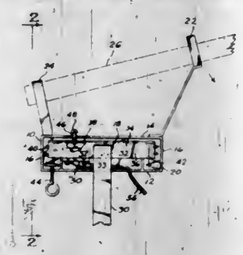
1. In a slide action firearm including a barrel having opposed ends, a trigger assembly and a receiver, a forearm movable relative to the barrel from a firing position to an ejection position, said trigger assembly being removably secured to the receiver and to the barrel, said trigger assembly being suspended and supported at a point on the receiver and at a spaced point located between the ends of the barrel, a slide arm assembly carried by the trigger assembly and keyed to the barrel at said spaced point, said slide arm assembly being movable in reciprocatory fashion relative to said trigger assembly and relative to said barrel, said forearm secured to said slide arm assembly and cooperating with the barrel to enclose the slide arm assembly so that when the forearm moves from one position to the other, marginal regions surrounding the barrel are entirely free of obstructions or protuberances.

3,041,769

SIGNALLING FISH ROD HOLDER

Ray C. Bray, 4714 NE. 22nd Ave., Portland, Oreg., and Virgil J. Remillard, P.O. Box 303, Sherwood, Oreg.

Filed Sept. 15, 1960, Ser. No. 56,219
3 Claims. (Cl. 43—17)



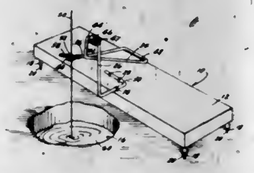
1. A signalling fish rod holder comprising a stationary support, a casing pivotally mounted on the support and enclosing a portion of the latter, resilient means interiorly of the casing disposed engageably between the casing and an enclosed portion of the support, the resilient means resisting relative rotation of the casing and support, fish rod holding means on the casing adapted to pivot the casing relative to the support against the action of the resilient means when a fish pulls on the fish line, a signalling device, and a pair of switch elements one on each of the casing and stationary support and adapted to engage each other upon pivotal movement of the casing, the switch elements being operatively connected with the signalling device for causing actuation of the latter upon inter-engagement of the switch elements.

3,041,770

FISH PULL SENSING DEVICE

Alexander W. Witbro, 915 Memory Lane, West De Pere, Wis.

Filed Oct. 19, 1959, Ser. No. 847,138
5 Claims. (Cl. 43—17)



1. A fish pull senser comprising a pivot pin bearing, means to support the bearing, a balance arm having a transverse pivot arm extending upwardly therefrom and a pivot pin at the upper end thereof rotatable in said bearing, said balance arm being suspended by said pivot arm in offset relation to said bearing and therebeneath, said balance arm having a weight at one side of the bearing and a fish line coupling at the other side of the bearing, said balance arm being free to pivot about said bearing in response to fish pull on a line connected to said coupling, between a first position in which the moment arm of the force pulling on the line and tending to rotate the balance arm about the pivot is relatively great and the moment arm of the weight opposing said force is relatively small and a second position in which the force moment arm is relatively small and the weight moment arm is relatively great.

3,041,771

ILLUMINATED FISHING BOBBER

Micheal Hreno, 785 Crest Drive, Monessen, Pa.

Filed Jan. 23, 1959, Ser. No. 788,554
1 Claim. (Cl. 43—17.5)

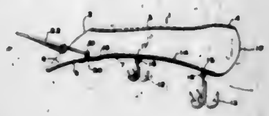
An illuminated fishing bobber comprising in combination a hollow body and means in said body for illuminat-

ing said body, said body comprising a first semi-circular transparent section having a flange on the peripheral edge thereof and a second semi-circular opaque section that is adapted to have the peripheral edge thereof engaged by the flange of said first section, said opaque section having an opening in the center thereof, the opening having a raised annular boss for the reinforcing thereof, a tube having an opening in the inner end thereof and an outer open end extended into said body through the opening in said opaque section, means for rigidly securing said tube to said raised annular boss, the outer open end of said tube having threads thereon, a closure cap having an eye pivotally mounted in the center thereof threaded onto



the threads on said tube, a gasket in said closure engaging the outer open end of said tube, and said illuminating means positioned in said tube and comprising an elongated metal strip having a flange on one end provided with a contact, a flange on the opposite end provided with a socket to receive a light bulb which extends through the opening in the inner end of said tube, and a pair of diametrically opposed arcuate shaped arms that are formed integrally with the center of said strip and extending toward each other provide means to engage a battery and retain the battery in engagement longitudinally thereof with said strip, the light bulb at one end and the contact on the flange on said one end of said strip.

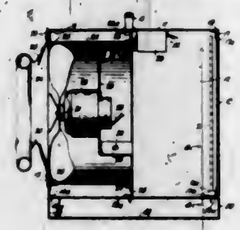
3,041,772
FISH LURE
Charles J. Laszlo, 3135 E. 93rd St., Cleveland, Ohio
Filed May 2, 1958, Ser. No. 732,509
1 Claim. (Cl. 43—42.06)



A fish lure comprising an elongated tubular body having a series of longitudinally spaced holes in the bottom surface thereof, and a continuous metal strap having oppositely facing eyes formed in the same in spaced relation intermediate the strap ends, said strap between such eyes passing through an intermediate hole in the body, with one eye projecting through another hole interiorly for line connection and the other eye inserted through a further hole exteriorly for attachment of a hook thereto. said strap thus lying along the exterior of said bottom surface adjacent said interiorly projecting eye and along the interior of said bottom surface adjacent said exteriorly projecting eye.

3,041,773
INSECT ATTRACTING AND KILLING DEVICE
Michael Gagliano, Kansas City, Mo., assignor to Lenmike Corporation, Kansas City, Mo., a corporation of Missouri
Filed Feb. 13, 1959, Ser. No. 793,052
2 Claims. (Cl. 43—139)

1. Apparatus for attracting, trapping, killing and storing winged insects comprising an elongate hollow casing having front, rear, side, top and bottom walls enclosing a volume of space, a relatively short fan conduit housed in and adjacent one end of the casing, penetrating the front wall thereof and running at least substantially axially of said casing, said fan conduit of substantially lesser length than the axial length of said casing whereby the conduit overlies only a portion of the floor of said casing at the front thereof, an insect attracting light mounted adjacent the end of said conduit next the end of said casing and outside thereof, a fan mounted in said conduit adapted to blow air into said casing and out the rear wall thereof, at least a portion of the rear wall of said



casing opposite said conduit and in a line with the air blast therefrom screened to permit egress of air but not insects therethrough, the screened end of the casing opposite said conduit of at least as great area as said conduit whereby to minimize turbulence in exit of the fan blast from said casing, electrical means positioned within the casing in front of said screen for killing insects, said electrical means extending across at least substantially the entire area of said screen, and an insect receiving tray forming the bottom wall of said casing underlying the entire casing body including said fan conduit and electrical killing means and entirely positioned below and out of the direct line of the fan blast.

3,041,774
COMBINED BOOK SUPPORT AND CARRIER
Charles R. Walker, Rte. 5, Albertville, Ala.
Filed Dec. 5, 1960, Ser. No. 73,734
4 Claims. (Cl. 45—64)



1. A combined note book and book support and carrier, comprising: a tray-like member including a face panel having inner and outer surfaces and marginal flange portions extending away from the inner surface of said face panel and defining therewith a receptacle for books, papers or like articles, a writing panel hingedly connected to the lower margin of said face panel whereby said writing panel can be folded to overlie the outer surface of said face panel when the device is being used as a book carrier and as a closed notebook, and an elastic band-type element embracing said tray-like member to serve as a retaining means for books or like articles when carried in said receptacle and to serve as means for holding a book open and against the opposite book supporting surface of said face panel, said member can be supported upright from a desk-type surface and on one of said flange portions as a base to serve as an easel-type support

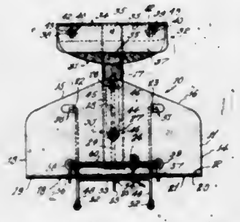
for a book or the like positioned against the outer surface of said face panel, said writing panel serving to prevent tipping of said upright member rearwardly away from the hinged edge of said writing panel.

3,041,775
TABLE CORNER GUARD
Herbert R. Brown, Jr., P.O. Box 22, Patton, Calif., and Gus P. Saros, 650 H St., San Bernardino, Calif.
Filed Mar. 18, 1960, Ser. No. 15,883
1 Claim. (Cl. 45—68.4)



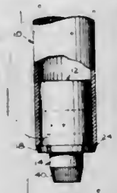
For use in lessening the chances of serious injuries to youngsters; a corner-capping guard adapted to function as a safeguard and designed and adapted to be manually applied to the dangerously sharp rigid corner on a coffee table, end table or the like comprising a pad made of relatively thick foam rubber and having a triangular top wall and complemental marginal walls at right angles to the top wall and also to each other and depending from the outer marginal edges of said top wall, the interior attachable side of said top wall being provided across the base portion only with a strip of adhesive material covered until ready for use by a removable non-adhesive tape, the interior surfaces of said complemental marginal walls being wholly free of attaching and retaining means, whereby but a single wall, said top wall, is attachable to the intended table surface.

3,041,776
BOOK AND MAGAZINE HOLDER
Bruce L. Clayton, 1501 Bellevue St., Greensboro, N.C.
Filed May 5, 1961, Ser. No. 107,979
3 Claims. (Cl. 45—85)



1. In a holder for books or the like, including an upright base, a bottom flange extending forwardly of said base and adapted to receive a book or the like thereon, an intermediate plate, means slidably connecting said intermediate plate to said base for vertical adjusting movement relative thereto, and adjustable support means for varying the angle of inclination of said base and intermediate plate; the improvement comprising an inverted U-shaped page holder comprising a web formed with front and rear depending flanges, said web extending across said intermediate plate above the same, said front and rear flanges straddling said intermediate plate forwardly and rearwardly thereof, a pair of lateraly spaced pins connecting said front and rear flanges together, said intermediate plate being formed with a pair of laterally spaced holes slidably receiving said pins therein to connect said page holder to said intermediate plate for forward and rearward movement relative thereto, and expansive spring means interposed between said intermediate plate and said rear flange to load said page holder to a rearmost position.

3,041,777
ADJUSTABLE LEG FOR TABLES AND THE LIKE
Milton Schwartz, Plainview, N.Y., assignor to Advance Food Service Equipment, Inc., Westbury, N.Y., a corporation of New York
Filed Mar. 13, 1961, Ser. No. 95,168
3 Claims. (Cl. 45—139)



1. In combination with a pipe adaptable for use as a leg on tables and the like, means for extending the length of said pipe by selected increments comprising an internally threaded cylindrical member having a radially extending terminal flange, said member extending into said pipe with said flange in abutting engagement with an end surface thereof; an externally threaded foot coaxially disposed within said member and in threaded engagement therewith, said cylindrical member defining an axial passage extending therethrough including an enlarged passage portion adjacent a first end of said member and a reduced passage portion adjacent a second end of said member, said internal threads being formed on said enlarged passage portion, said foot including an enlarged portion on a first end thereof and a reduced portion on a second end thereof, said enlarged portion of said foot being externally threaded and having a greater outer diameter than the inner diameter of said reduced passage portion.

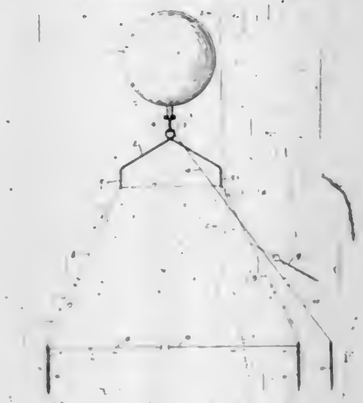
3,041,778
PUPPET ASSEMBLY KIT
Saundra B. Seron, 1170 Say Road, Santa Paula, Calif.
Filed Dec. 19, 1958, Ser. No. 781,544
7 Claims. (Cl. 46—22)



1. A puppet assembly kit of disassembled component for use by children in assembling a puppet adapted to fit over the hand, said kit comprising a pair of similar elongated main body members rounded at one end, an elliptically shaped mouth lining adapted to be folded along its minor axis and to be stitched along one half its periphery to the rounded end of one of said body members and to be stitched along the other half of its periphery to the rounded end of the other of said body members, the opposite lateral edges of said body members rearward of the fold in said elliptical mouth lining member being adapted to be stitched together to form a tubular sleeve, a plurality of discs of graduated sizes and shapes, a plurality of which are adapted to be secured

to the rounded end area of one of said body members in superimposed relation to one another to simulate the eyes and nose of a puppet, means adapted to be attached rearwardly of the eyes to simulate hair, certain of said eye and nose discs having large central openings therethrough permitting the same to be held assembled to the puppet body member and readily shifted to and retained in different adjusted positions by means of tie means passing through said openings and into an underlying portion of one of said body members.

3,041,779
TOY SKY LAUNCHING STATION
William L. Carter and Thurston Shiflett, both of 1861 Collier Drive, Birmingham 8, Ala.
Filed Mar. 27, 1961, Ser. No. 98,696
3 Claims. (Cl. 46—74)



1. A toy sky launching station comprising, a balloon containing lighter than air gas, a wire bracket, said bracket having an approximately inverted V shape, a round eye formed in the bracket at its top and a round eye shape formed in each end of the bracket, a depending metal part, this part being connected to the balloon, and being connected in the upper eye of the bracket, two similar metal pins, each of said pins having a point for easily inserting it in the earth, and also having an integral round eye portion, a comparatively long piece of cord, said pins being inserted spaced apart in the earth, said cord being inserted through the said eyes of the pins and the two end eyes of the bracket with ends of the cord joined together; a bobby pin, said bobby pin being attached by its rounded end to said cord and being of a size to be pulled by manual means through the said four eyes, the open end of the bobby pin being of a size to clamp and easily removably hold a toy size parachute for release by contact with the eye; a safety anchoring piece of cord, a third pointed pin having an integral eye, this pin being inserted in the earth near one of the other similar pins, said safety cord having one end attached to said third pin with its other end attached in upper eye in the bracket.

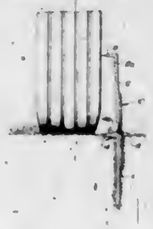
3,041,780
RUBBER BAND SHOOTING FIGURE
Jack P. Rodgers, 1300 Corpew Ave., Norfolk, Va.
Filed June 4, 1958, Ser. No. 739,806
5 Claims. (Cl. 46—118)

5. As a new article of manufacture, a toy of a fanciful configuration having a cowboy-like appearance, comprising a horizontally disposed base, a body member pivotally mounted on said base, at least one support member adapted to selective snap against the body member, at least one arm pivotally connected to said body member, an actuating line connected to said arm for pivoting said arm, and said arm and said support member adapted to



have a resilient band connected thereto and stop means on the body member whereby the body member is retained in an upright position when the resilient band is being discharged.

3,041,781
LAWN EDGING DEVICE
George A. Richter, 2842 N. Pershing Ave., San Bernardino, Calif.
Filed July 22, 1960, Ser. No. 44,751
1 Claim. (Cl. 47—33)

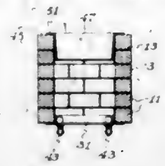


A lawn edging device adapted to be inserted into the ground of a lawn or the like, comprising: an elongated, vertical ground-engaging member, an elongated, horizontal edging member extending substantially the same length as said vertical member and means for hinging said horizontal edging member on the upper portion of said vertical member without other portions of said device extending thereabove, whereby said edging member is adapted to be moved upwardly to allow the wheel of a cutting device to travel over the underlying grass and is adapted to be re-positioned to cover the grass over which the wheel of the cutting device traveled, said vertical and horizontal members being L-shaped in section and each member having long and short legs, the inner surface of said long leg of said horizontal L-shaped member being hingedly connected by said means on the outer surface of said short leg of said vertical L-shaped member, said short leg of said horizontal member extending downwardly and being used as an anchoring flange for said horizontal member, whereby each member is identical in shape and is adapted to be provided from a single L-shaped member.

3,041,782
PORTABLE PLANTER
Don F. Bachman, 4207 E. 7th Place, Tulsa, Okla.
Filed Dec. 9, 1958, Ser. No. 779,122
1 Claim. (Cl. 47—39)

A portable planter comprising an open rectangular horizontal frame comprised by two relatively long legs and two relatively short legs, a vertical side wall supported on each leg of the frame, a pair of horizontally spaced crossbars extending between the relatively long legs and disposed one adjacent but spaced from each relatively short leg, downwardly depending wheels carried

by both crossbars, at least two of the wheels being disposed adjacent opposite ends of one of the crossbars, the wheels being carried by vertical spindles, socket sleeves



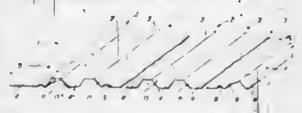
extending upward from the crossbars, the spindles being carried by the crossbars in the socket sleeves, and an open-topped plant receptacle supported by the vertical side walls.

3,041,783
PLANT SUPPORTS
Victor J. Pezdek, 613 8th St., Oakmont, Pa., and Lincoln E. Smith, 5424 Broad St., Pittsburgh 6, Pa.
Filed Apr. 6, 1959, Ser. No. 804,235
14 Claims. (Cl. 47—44)



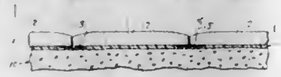
1. A modular plant support unit comprising an open-mesh grid having rigidly interconnected elements, a plurality of parallel legs protruding from a boundary edge of said grid, a plurality of open receptacles connected with elements of said grid in a region thereof conterminous with the boundary edge of said grid opposite to that from which said legs protrude, and said receptacles having a central opening whose axis is parallel to said legs and whose diameter is greater than the diameter of said legs.

3,041,784
JOINT STRUCTURE OF OVERLAPPED SHEETS
Grant T. Facer, Lafayette, Calif., and Stanley A. Kilpatrick, Spokane, Wash., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,347
6 Claims. (Cl. 50—220)



1. A weatherproof lap joint for roofing sheets comprising a pair of roofing sheets overlapped at their marginal side edge portions, the overlapping edge portion of the upper sheet having an upstanding marginal corrugation provided with a substantially flat top and a pair of downwardly and outwardly inclined full walls, the outermost wall of the said corrugation terminating in a sinuously curved lip, the overlapped edge portion of the lower sheet having sinuously bent portions including a bead defining a sinuous recess within which the sinuously curved lip of the upper sheet is snugly received, said lower sheet also having an upwardly and inwardly inclined partial wall section for engaging a part of the outermost wall of the corrugation of the upper sheet and a second upwardly and inwardly inclined partial wall section connected to and disposed at a different angle to the horizontal from said first-mentioned partial wall section, said last-mentioned wall section normally being out of contact with the corrugation of the upper sheet, and a downwardly and outwardly inclined full wall section on said lower sheet connected to said second-mentioned partial wall section, said full wall section being normally in contact with the innermost wall of the corrugation of the upper sheet and for the full length of the said innermost wall, the point of juncture between said full wall section and said second-mentioned partial wall section comprising a crest in contact with the underside of the flat top of the corrugation of the upper sheet at a point which is offset from the central portion of said flat top, said crest serving as a support for the corrugation of the upper sheet and said full wall section of the lower sheet terminating in a flange which resiliently contacts the underside of a trough in the upper sheet.

3,041,785
MULTIPLE UNIT CERAMIC TILE ASSEMBLY
Herbert G. Macdonald, Corona, Calif., and David J. Barbour and Karl M. Claus, Zanesville, Ohio, assignors to The Mosaic Tile Company, Zanesville, Ohio, a corporation of Ohio
Filed Jan. 9, 1959, Ser. No. 785,917
3 Claims. (Cl. 50—268)

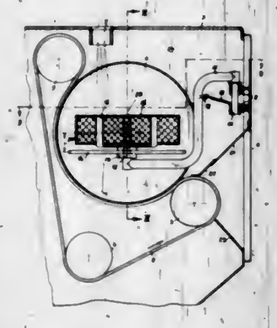


1. A multiple unit ceramic tile assembly consisting of a plurality of individual complementary ceramic pieces, each of said pieces having front and back major faces and edge surfaces, each of said major faces being at least substantially planar and said major faces being parallel to and spaced from each other, said edge surfaces extending between and generally normal to said front and back major faces, said pieces being arranged with all of their corresponding major faces lying in at least substantially the same plane and with their edge surfaces in selected spaced relationship, and bonding and spacing means for said tile pieces consisting of small, discrete, spaced masses of set-up synthetic resinous material each of said masses being securely bonded directly to and in contact with only edge portions of the back surfaces of at least two of said tile pieces and to only portions of the edge surfaces of the same ones of said tile pieces contiguous to said edge portions of said back surfaces, each of said masses being homogeneous and substantially solid throughout and fully occupying the space between said portions of said edge surfaces and bridging between said portions of said edge surfaces, there being at least two of said masses bonding each of said tile pieces to other adjacent tile pieces, the resinous material in said masses being compatible with adhesives capable of retaining said assembly on a surface, stable at room temperature, flexible to a degree providing for slight angular movement of adjacent tile pieces relative to each other and being resistant to deformation and maintaining said selected spaced relationship of said tile pieces, preventing engagement of adjacent tile pieces with each other and resisting separation of adjacent tile pieces, all under forces normally encountered in shipping, handling and laying such assemblies.

3,041,786
BARREL JET CLEANING MACHINE
Alfred Schnetzer, Schaffhausen, Switzerland
Filed Mar. 14, 1960, Ser. No. 14,903
7 Claims. (Cl. 51—9)

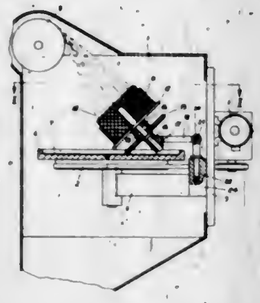
1. In combination with a tumbling machine including a casing, horizontally disposed roller means journalled in

said casing, a pair of laterally spaced disc-like side plates journalled in said casing, endless conveyor means trained over said roller means and beneath said side plates to provide a workpiece tumbling pocket, means for rotating said roller means and said side plates and effecting movement of said conveyor means, and a blast media projection device mounted on said casing above said conveyor means for directing blasting media downwardly



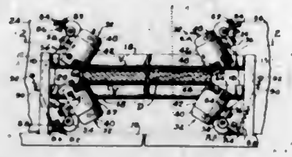
into said pocket; a support member detachably mounted on said casing, a horizontally disposed workpiece support member journalled on said support member for rotation about a generally upright axis at a position beneath said blast media projection device, and means for rotating said workpiece support member including a driven member movable into and out of driven engagement with one of said side plates.

3,041,787
BLASTING MACHINE
Alfred Schaetzer, Schaffhausen, Switzerland, assignor, by mesne assignments, to Bell Intercontinental Corporation, South Bend, Ind., a corporation of Delaware
Filed Oct. 21, 1959, Ser. No. 847,831
5 Claims. (Cl. 51—9)



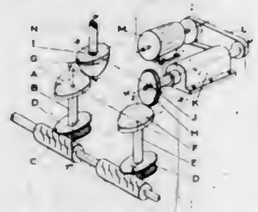
1. A blasting machine comprising in combination, a table disposed in horizontal attitude and adapted to support thereon a plurality of workpieces and driven to rotate about a vertical axis, a blast media hurling device disposed to throw blast media toward said table, and a second workpiece support device comprising an open top basket-shaped container and removably mounted means mounting said container above said table to dispose the open end portion thereof in apposition to the thrown blast media, and a drive wheel keyed to said basket and rotatably carried upon said mounting means and being thereby disposed in canted attitude relative to said table with a peripheral portion of said wheel resting in friction-driving relation upon said table at a position offset from the axis of rotation thereof.

3,041,788
CHAMFERING APPARATUS FOR SLAB DOORS
Jack Carlow, 4309 Don Carlos Drive, Los Angeles, Calif.
Filed May 23, 1960, Ser. No. 30,931
5 Claims. (Cl. 51—87)



1. A sanding device having a pair of rollers mounted for guiding a slab door, comprising the combination of bearing plates having apertures, pivoted sanding units including motors, shells fixed to said motors, mounting arms projecting from said shells, slotted arms pivoted in the apertures of said plates and fastened in sliding relation to said mounting arms, revolving sanding wheels carried by said motors and limiting fences carried by said shells, whereby said sanding wheels may be pivotally moved about the apertures in said bearing plates and radially adjusted with respect to said apertures, so that said sanding wheels of said units may yieldably move into contact with opposing surfaces of a slab door for chamfering the longitudinal edges thereof.

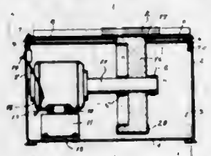
3,041,789
MACHINE FOR THREE-DIMENSIONAL COPYING
Bernard Cretin-Maitenaz, Joinville-le-Pont, France, assignor to Societe des Lunetiers Cottet, Poichet, Tagnon & Cie, Paris, France
Filed Apr. 7, 1960, Ser. No. 20,616
Claims priority, application France Apr. 7, 1959
4 Claims. (Cl. 51—101)



1. A machine for copying the surface of a model on a part to be cut, comprising a stand, two mounts respectively supporting the model and the part to be cut, said two mounts being rotatably mounted on the stand about two parallel axes, two rectilinear and parallel slides carried by the stand in a plane perpendicular to the axes of the mounts, a carriage slidably mounted in said slides, a table mounted on said carriage in oscillation about an axis parallel to the plane of the slides and perpendicular to said slides, a copying follower embodying an operative surface of revolution defined by an axis and a meridian and mounted on said table rotatably about an axis coinciding with said axis of said surface or revolution, the weight of said table causing said follower to bear against the surface of the model at a point lying substantially in the plane passing through the axis of rotation of the model mount perpendicularly to the oscillation axis of said table, a part-cutting grinding wheel having an operative surface of revolution defined by an axis and a meridian identical to the meridian of the operative surface of said follower, said grinding wheel being mounted on said table rotatably about said axis of its surface of revolution, driving means to rotate said grinding wheel which consequently cuts a point on the surface of said part by duplicating the corresponding point on the surface of the model, further driving means to rotate the model and the part about their axes at equal speed

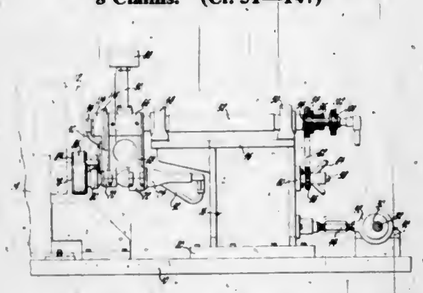
and to thereby extend the duplication to all points on a circle on the model swept by said follower, and still further means to traverse said carriage along its slides, as the result of which traverse motion the operative point on the operative surface of said grinding wheel traverses the axis of rotation of the mount and thereby extends the cutting action to the whole surface of circles coaxial with that axis.

3,041,790
MICROTOME KNIFE SHARPENER
Henry L. Ettman, 6348 Wydown Blvd., Clayton, Mo.
Filed Sept. 14, 1959, Ser. No. 839,754
2 Claims. (Cl. 51—102)



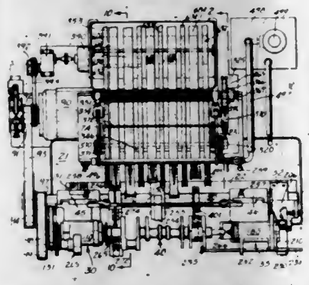
1. A machine for sharpening microtome knives comprising a casing, a wheel provided in said casing, said wheel having a peripheral face, means for effecting rotation of said wheel, microtome knife guide and support means provided on said casing for presentation to the peripheral face of said wheel of the edge of a microtome knife to be sharpened, said wheel rotation means being adapted to rotate the wheel in a direction away from the edge of a presented knife, a continuous facing member of uniform thickness mounted on the peripheral face of said wheel and being co-extensive therewith and being completely supported thereby, said wheel and said facing member being each constructed of material having substantially high heat conductivity so as to adapt the said machine during usage for rapid thermal transfer and to render said machine thereby independent of extrinsic cooling means; said facing member being resistant to pitting and development of surface irregularities, the outer surface of said facing member being polished to a substantially mirror finish for providing adhesive characteristics for repeated accommodation thereon of various size abrasives without pit formation.

3,041,791
SPECIAL BELT SANDER FINISHING MACHINE
Douglas W. Willott, La Grange, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 30, 1960, Ser. No. 59,696
8 Claims. (Cl. 51—147)



1. In a polishing machine or the like comprising a base member, track means fixed to said base member, a carriage slidably supported on said track means, drive mechanism fixed to said base member and operably connected to said carriage to cause reciprocation thereof on said track means, spaced bearing means provided on said carriage, shaft means rotatably supported by said bearings, one end of said shaft means extending beyond said carriage, a radially extending support arm fixed to said one end of said shaft means, an abrading unit adjustably secured to said support arm and being radially spaced from said shaft means, manual means to rotate said shaft means and move said abrading unit in a circumferential path about said shaft means, a fixture for supporting a cylindrical workpiece in coaxial alignment with said shaft means and in abrading engagement with said abrading unit during reciprocable and circumferential movement of said abrading unit, and manual means to vary abrading engagement pressure between said abrading unit and said cylindrical workpiece during said reciprocable and circumferential movement.

3,041,792
LAPPING MACHINE
Elphege D. La Fleur, Lancaster, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Sept. 14, 1959, Ser. No. 839,717
20 Claims. (Cl. 51—154)

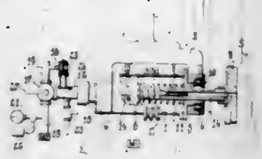


1. In a lapping machine of the character described for finishing simultaneously different predetermined portions of a workpiece by rotation and reciprocation thereof against an abrasive medium held against the portions being finished the combination which comprises headstock and footstock means for clamping a workpiece therebetween, main drive means in said machine for rotating a workpiece when clamped between said headstock and footstock means, a plurality of lapping jaws for holding said abrasive medium against predetermined portions of a workpiece to be finished, lapping arm means mounted in said machine for supporting said lapping jaws individually positioned for engaging the portions of a workpiece to be finished, means for swinging said headstock and footstock means from an outward loading position for receiving a workpiece and spaced from said lapping jaws to an inward lapping position for engagement of a workpiece by said lapping jaws, and means automatically operable as said headstock and footstock means are swung from the outward loading position to the inward lapping position to clamp a workpiece between said headstock and footstock means.

3,041,793
AUTOMATIC MACHINE FOR GRINDING AND POLISHING A SURFACE OF MASONRY
Akio Shimizu, 35 Minamigata, Gobe-cho, Anpachi-gun, Gifu-ken, Japan
Filed Aug. 1, 1960, Ser. No. 46,497
2 Claims. (Cl. 51—180)

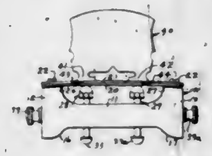
1. An automatic machine for grinding and polishing a masonry surface, said machine comprising a cylinder, a piston slidably mounted in the cylinder, a rod coupled to said piston and defining an axis, said rod being coupled to said cylinder and being rotatable on said axis in response to rotation of the cylinder, said rod being movable in axial direction together with said piston, a grinding member on

said rod, means for rotating the rod, means for introducing a pressure medium into the cylinder to move the piston and thereby said rod, pressure responsive means coupled to the cylinder and coupled to and adapted to control the means for introducing fluid into the cylinder when pressure in the cylinder varies with respect to a predetermined value, and a pressure adjuster means coupled



to said cylinder and comprising a valve which is adapted to be opened when the pressure in the cylinder is above a predetermined value to allow the discharge of said medium from the cylinder, said grinding member being adapted for being rotated and applied to said surface under substantially constant pressure irrespective of irregularities in the surface.

3,041,794
MUSICAL INSTRUMENT BRIDGE FITTER
Frank Saam, 11441 Coplin Ave., Detroit, Mich.
Filed Apr. 14, 1960, Ser. No. 22,274
4 Claims. (Cl. 51—185)



1. A fitter for fitting the feet of a stringed musical instrument bridge to the top curved surface of a stringed musical instrument, comprising: a body having a cross piece and an integral leg at each end thereof extending above and below the same; a resilient means provided with sanding grit on the outer surface thereof mounted between the upper ends of said legs; a pair of laterally spaced apart gauge rods adjustably mounted through said cross piece and having the upper ends thereof disposed to engage said resilient means and the lower ends thereof disposed to engage the top curved surface of a stringed musical instrument when the fitter is placed thereon so that the resilient means is flexed to a contour identical to the top curved surface of the stringed musical instrument; and, locking means for releasably locking said gauge rods in the adjusted positions when the fitter is mounted on a stringed musical instrument.

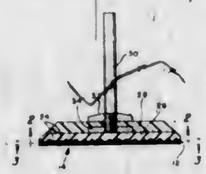
3,041,795
SHEET CLAMPING DEVICE
Melvin E. Chick, Bartlesville, Okla., assignor of one-half to Burt McClintock, Bartlesville, Okla.
Filed July 27, 1961, Ser. No. 127,310
10 Claims. (Cl. 51—194)

6. Apparatus comprising in combination a rotatable truncated conical support axially mounted on a cylindrical member having an axial bore for mounting on a mandrel; a cylindrical collar having a bore loosely fitting said cylindrical member and slidable thereon; first means mounted on said cylindrical member having a free end extending over a section of the smaller end of said conical support, spaced therefrom and flexibly displaceable against said support; second means mounted on said collar for displacing said first means against said support and fixing
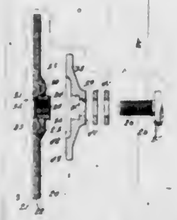


said collar on said cylindrical member; and third means for attaching said cylindrical member to said mandrel.

3,041,796
WAFFLE BACK ABRASIVE DISC
Roy J. Walters, 2188 S. 99th St., Milwaukee 19, Wis.
Filed Jan. 26, 1960, Ser. No. 4,685
5 Claims. (Cl. 51—195)



1. In combination with a back-up pad having abutment means protruding from one side, an abrasive sheet comprising, a base sheet, an abrasive surface on one side of said base sheet, and abutment means on the other side of said base sheet having a pressure sensitive adhesive contact thereon, said abutment means cooperating with said back-up pad abutment means to prevent lateral shifting of the abrasive sheet with respect to the pad.

3,041,797
GRINDING WHEEL
Edward K. Moffly, Paoli, Pa., assignor to A. P. de Sanno & Son, Incorporated, Phoenixville, Pa., a corporation of Pennsylvania
Filed Sept. 21, 1959, Ser. No. 841,253
1 Claim. (Cl. 51—195)



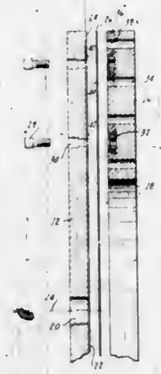
A grinding wheel mounting including a spindle having a threaded end, in combination with a grinding wheel having a body provided with a radially outer flat disc-like portion and a raised hub portion near the center of the wheel at the side of the grinding wheel toward the spindle and interconnected with the disc-like portion, and having a spindle nut threaded on the spindle, having a hub-like portion and having a flange rigidly connected with the hub-like portion and extending radially outwardly beyond the hub-like portion of the spindle nut on the side of the grinding wheel remote from the spindle, the flange portion of the spindle nut and the disc-like portion of the body being flush at the side of the grinding wheel remote from the spindle, the hub-like portion of the spindle nut having a groove which is in co-molded interlocked relation with the material of the raised hub, and the flange portion of the spindle nut having axial projections which are in co-molded interlocked relation with the material of the raised hub, the outer radial confines of the flange portion being within the raised hub portion of the body, the hub-like portion of the spindle nut extending axially toward the spindle beyond the raised hub portion and in further combination with an adapter flange surrounding the spindle but free from interthreading therewith, having a center opening which surrounds and engages the extension from the hub-like portion of the spindle nut, having a rim which engages the disc-like portion of the wheel body, and having a recess which receives the raised hub of the wheel body.

3,041,798
SURFACING RUNNER
Charles S. Cusick, La Vale, Md., and William R. Schwab and Robert V. Lange, Ford City, Pa., assignors to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Filed Oct. 1, 1959, Ser. No. 843,886
6 Claims. (Cl. 51—195)



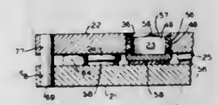
1. A surfacing device comprising a runner block mounted for rotation about a substantially vertical axis and in a substantially horizontal plane, a relatively thin and flexible metal plate connected to said block for limited universal movement therebetween, a resilient member interposed between said block and said plate and covering substantially the entire face of said runner block and a surfacing means adhered to said plate.

3,041,799
ABRASIVE DISC AND COOLANT ARRANGEMENT
Roger A. Kemman, Beloit, Ill., assignor to Besly-Welles Corporation, South Beloit, Ill., a corporation of Illinois
Filed Dec. 31, 1959, Ser. No. 863,354
2 Claims. (Cl. 51—209)



1. For use in a grinding machine, a grinding disc adapted to be mounted on the spindle of a grinding machine and having a backing plate with an axially located coolant inlet, the front surface of the backing plate being relieved to provide a coolant chamber extending outwardly in a radial direction from the coolant inlet and having a continuous circumferential outer axially projecting edge adjacent the peripheral edge of the supporting plate to provide approximately 360° of outward radiation of the coolant from the coolant inlet, a non-abrasive intermediate plate generally coextensive with the backing plate mounted over and closing the relieved area of the backing plate's front surface and abutting the projecting edge to thereby define the coolant chamber therewith, an abrasive disc separate from but mounted on the intermediate plate, and having a plurality of openings therethrough, and a plurality of corresponding openings in the intermediate plate aligned with the openings in the abrasive disc to provide communication between the coolant chamber and the disc openings.

3,041,800
APPARATUS FOR SHAPING CRYSTALS
Roy O. Heisel, P.O. Box 371, Florin, Calif.
Filed May 4, 1960, Ser. No. 26,777
4 Claims. (Cl. 51—277)



1. An apparatus for use in forming a pair of parallel planar faces on a crystal, said apparatus comprising: first and second plates, said second plate including a transverse bore; a crystal-holding plug member fitting in said bore for axial movement therethrough and presenting a planar end face aligned in parallel relation with said second plate for engaging and holding said crystal, said plug member being cup-shaped and including side walls outwardly engaging the inner surface of said bore, said side walls being formed with a plurality of inclined openings; adhesive material affixed to said inner surface of said bore and disposed in said inclined openings for securing said plug member in said bore; and means for spacing said plates apart in parallel relation.

3,041,801
CLOSURE FOR VACUUM PACKAGE
John W. Harrison, Winchester, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Mar. 31, 1959, Ser. No. 803,132
5 Claims. (Cl. 53—37)



5. A method of packaging an article which comprises the steps of placing the article to be packaged in a bag made of a thin piece of biaxially oriented irradiated polyethylene, twisting the open end of the polyethylene bag into a substantially closed neck portion and then crimping a heated band of metal around said substantially closed neck portion whereby the polyethylene twisted into said substantially closed neck portion will shrink by conduction of heat into a fused mass excluding air through said open end.

3,041,802
METHOD OF FORMING A SEALED CONICAL CONTAINER

Thomas N. Cummings, Chicago, Benjamin R. Peterson, Jr., Wheaton, and Thomas B. Shiu, Chicago, Ill. (all % C.P.S. Manufacturing Co., 4801 S. Western Ave., Chicago, Ill.), assignors of one-quarter to Nicholas A. Cummings, Chicago, Ill.

Filed Nov. 24, 1954, Ser. No. 470,926
4 Claims. (Cl. 53—39)

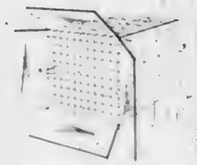


1. The method of closing an open-topped, conical container which is filled above its rim with a deformable material, comprising applying to said container a wrapper of flexible sheet material to produce a conical extension of said container terminating above said deformable material, said wrapper having a band of heat-sealable material around the inside of its terminal portion; forcing at least three points on said terminal portion inwardly to meet at the axis of the container so as to form radially-directed, double-thickness vanes with bands of heat-sealable material between confronting portions thereof; and forcing together and sealing said confronting portions of said vanes without substantially deforming the portion of said deformable material projecting above the rim of said container.

3,041,803
CARTONING MACHINE

Goffredo Gamberini, Bologna, Italy, assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Mar. 8, 1960, Ser. No. 13,631
4 Claims. (Cl. 53—61)

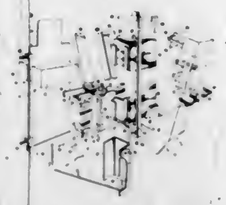


1. In a machine for loading packs into a carton so that the packs are arranged in a plurality of layers of packs, each layer containing a plurality of rows of packs, each row containing a plurality of packs, the combination of a horizontal platform; means for feeding a predetermined number of packs onto said platform to form a row on said platform; an elevator disposed adjacent said platform and movable in a vertical plane located adjcent to said platform; means for transferring rows one after the other from said platform onto said elevator and lowering said elevator to form a layer having a predetermined number of vertically displaced rows; a forming tube disposed adjacent to said platform and adapted to hold a carton for delivery of packs thereto; and means for transferring a predetermined number of layers one after the other from said elevator into said tube to fill the carton, said means being further operative to move the carton in a step-by-step fashion as each layer is delivered thereto in a direction disengaging the carton from said tube.

3,041,804
CARTON FORMING AND CARD PACKAGING MACHINE

Robert N. Eichorn, Endicott, N.Y., and Robert G. Dexter, Harvard, Mass., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 3, 1960, Ser. No. 33,695
5 Claims. (Cl. 53—124)



1. In a carton forming and card packaging machine for forming a carton and packaging cards, card stacking means including card supports for receiving a stack of cards, card clamping mechanism for selecting a stack of cards and depositing it in the card stacking means, means for moving the card clamping means out of the path of the card stacking means, plunger means for depressing the stack of cards and card supports, a carton blank support plate connected to the card supports so as to simultaneously move the same distance as the card supports when they are depressed, a scoring unit for scoring the carton blank at the exact height of the depressed stack of cards, means for transporting the carton blank adjacent the card stack, a card transport unit to transport the stack of cards from the card stacking mechanism, and a carton forming unit having a plurality of forming members, the carton being formed about the cards by the forming unit and the transport means as the cards and carton blank are being transported through the forming unit by the transport means.

3,041,805
PACKAGING APPARATUS

Charles Fulco, 5425 Virginia Ave., Shreveport, La.

Filed July 25, 1960, Ser. No. 44,963
17 Claims. (Cl. 53—152)

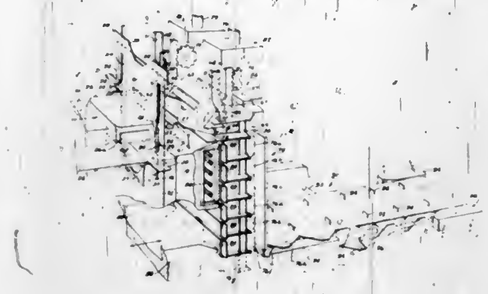


1. In a packaging machine, the combination with a rotatable wheel having a plurality of circumferentially arranged sections of commodity receiving chambers, said chambers extending transversely of the plane of rotation of said wheel, each chamber having an open end lying substantially in a second plane parallel to said wheel plane and having an outer open side remote from the axis of rotation of the wheel, means for releasably supporting the open sides of cartons respectively over said open chamber sides of each said section, intermittently operable commodity depositing means positioned adjacent the circumferential path of travel of said open chamber ends, means operable in timed relation to said depositing means for rotating said chamber end openings into registration with the depositing means to successively deposit commodities in said chambers, and means for guiding the commodities deposited in the chambers of each section outwardly through the respective open chamber sides and into the carton supported thereover.

3,041,806
MACHINE FOR FORMING LINED PACKAGES

Robert V. Burt, Cincinnati, Virgil E. Gex, Wyoming, and Abraham Bart, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 28, 1960, Ser. No. 25,395
13 Claims. (Cl. 53—172)

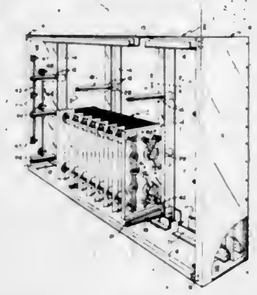


1. Apparatus for forming a lined package around an article comprising means for holding a paperboard liner and an outer wrapper in superposed relation, means for moving an article against said liner and wrapper and into a forming pocket disposed over a chute for holding a plurality of partially wrapped articles in a vertical stack, a vertical plunger member for moving the partially wrapped article downwardly in said chute thereby folding the upper and lower trailing sides of the wrapper into superposed relation so that the article is enclosed on four sides, means for heat sealing the overlapped portions of the wrapper as it moves downwardly, a pair of reciprocating tucking arms near the bottom of said vertical chute for forming one end tuck, means for advancing the partially wrapped article into a folding channel, a pair of folding members in said channel for forming the top and bottom end folds and means beyond said folding members for heat sealing said end folds to complete the package around said article.

3,041,807
ELECTROSTATIC PRECIPITATOR

Allan R. Getzin, Jeffersontown, and Robert A. Palmore, Louisville, Ky., assignors to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed May 8, 1959, Ser. No. 811,955
4 Claims. (Cl. 55—143)

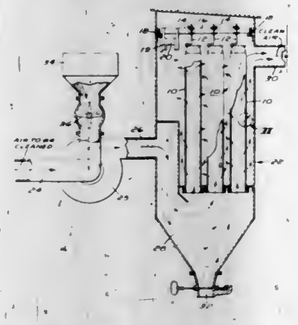


1. An electrical dust precipitating unit comprising a housing having spaced openings to accommodate gas flow therethrough, spaced support beams extending across one of the openings of said housing transverse the direction of gas flow, aligned track holding means in said support beams, spaced opposed track members extending along the direction of gas flow between said openings of said housing, each of said opposed track members having one end engaging in cantilever fashion with said track holding means on said support beams and the other end free, plate electrode assembly means slidably mounted on said opposed track members, said plate electrode assembly means including at least two separate side-by-side plate assembly units, each unit being slidably mounted between adjacent opposed track members and having electrical contact members on the side thereof, said electrical contact members being positioned to matingly engage with electrical contact members on the unit adjacent thereto.

3,041,808
FILTER

Clyde A. Snyder, Mishawaka, Ind., assignor to Bell Intercontinental Corporation, South Bend, Ind.

Filed Sept. 26, 1960, Ser. No. 58,405
6 Claims. (Cl. 55—304)

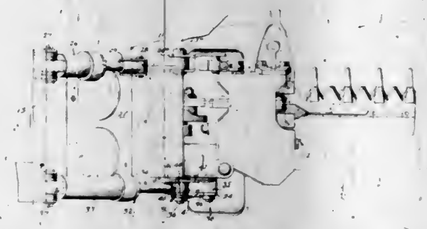


1. In a filtering system, a flexible, tube-like filter device supported upon a member and adapted to be shaken for removal from time to time of filtered accumulations therefrom, said filter device comprising a fabric tube arranged for end passage thereinto of an air flow to be filtered and wherein air flow is directed therethrough, said fabric having separately air-deposited and air flow-retained thereon at the air intake side thereof a first relatively thin deposit of cellulose fibres and a second relatively thick deposit of filter aid material, the second deposit being thereby completely separated from said fabric by the first deposit, and means for periodically shaking said fabric tube for removing both deposits therefrom.

3,041,809
SUSPENSION FOR MOWER UNIT

Arthur C. Anderson, Wildwood Crest, and Tengel Andersen, Wildwood Gardens, N.J., assignors to A. C. Anderson Corporation, Wildwood, N.J., a corporation of New Jersey

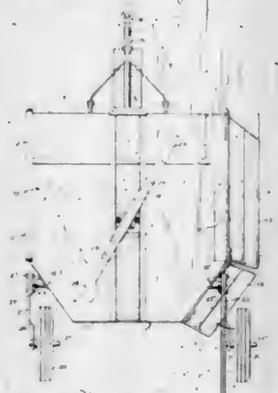
Filed Dec. 16, 1960, Ser. No. 76,228
7 Claims. (Cl. 56—25)



1. A suspension for mounting a cutter bar assembly on a vehicle comprising a rigid member pivoted at its inner end to the vehicle and at the outer end to said cutter bar

assembly, means to lower and raise said rigid member on its inner pivot, and an articulated linkage comprising an extensible member and a connecting link pivoted to said extensible member by an intermediate pivot, said linkage extending substantially parallel to said rigid member, having an inner pivot at its inner end on said vehicle, and having an outer pivot at its outer end on said cutter bar assembly, said extensible member being operable between a retracted position disposing said cutter bar assembly in upright position on the outer pivot of said rigid member, and an extended position disposing said cutter bar assembly in horizontal position on the outer pivot of said rigid member, the inner and outer pivots of said rigid member and the inner and outer pivots of said articulated linkage defining a parallelogram in the retracted position of said articulated linkage, and the inner and outer pivots of said rigid member and the inner and intermediate pivots of said articulated linkage defining a parallelogram in the aforesaid extended position of said articulated linkage.

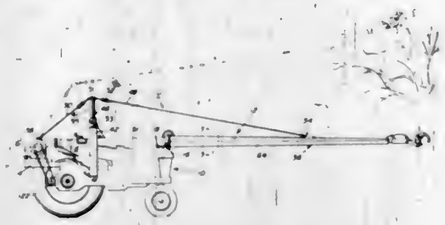
3,041,810
ROTARY MOWER FOR CUTTING HAY
Joe E. Roberts, Dothan, Ala., and Marc G. Davenport, Albany, Ga., assignors to Lilliston Implement Company, Albany, Ga., a corporation of Georgia
Filed Sept. 10, 1959, Ser. No. 839,119
6 Claims. (Cl. 56—25.4)



1. In a rotary mower having a travelling support provided with a substantially vertical shaft journaled for rotation on said support, a cutting blade secured to said shaft for rotation beneath said support, and a driving device associated with said shaft and adapted for connection with the power take-off device of a tractor, the combination in which said support includes a platform, a depending skirt attached to said platform and extending along one side edge and the rear edge below the cutting plane of said blade, the front and opposite side edge being open beneath said platform for the entrance of material to be cut at the front and the discharge of cut material from said open side, and grill means attached to said platform and extending outwardly substantially horizontally from said open side for substantially the full length of said last mentioned side for assisting in the windrowing of material cut by said blade, said driving device being arranged to rotate said blade in a direction to cause it to turn from the front of said platform toward said open side.

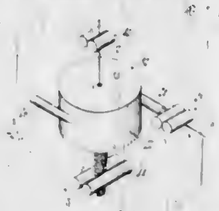
3,041,811
TREE SHAKER
Wilmot L. Sides, Rte. 1, Goldthwaite, Tex.
Filed Sept. 18, 1959, Ser. No. 840,865
12 Claims. (Cl. 56—328)

1. A tree shaker adapted to be mounted on a vehicle and including a frame, a boom, means mounting the inner end of said boom on said frame for pivotal movement, a rod in said boom, a grapple at the outer end of said rod,



stroke adjusting means connecting a power source with the inner end of said rod and adapted to positively reciprocate said rod back and forth.

3,041,812
PROCESS AND APPARATUS FOR MAKING NOVELTY YARN
Preston F. Marshall, Walpole, Mass., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Original application Dec. 10, 1959, Ser. No. 858,694. Divided and this application Feb. 29, 1960, Ser. No. 15,017
11 Claims. (Cl. 57—6)



7. A method of making a core-constructed yarn comprising continuously passing a straight tensioned continuous core strand axially through a generally cylindrical body of fluid whirling about a central axis, continuously overfeeding a continuous wrapping strand into said generally cylindrical body of fluid whirling about a central axis generally tangentially thereof, continuously maintaining an overfed portion of said wrapping strand within said body in slack condition, randomly forming doubled-backed loops in said wrapping strand, winding said loops in doubled configuration in the form of a close-spaced and partially overlapping helix for a plurality of turns about said core strand and entangling and snarling said loops with one another and with said core strand by the whirling motion of said fluid body, and continuously removing the looped and wound bulked core-constructed yarn from said fluid body.

3,041,813
METHOD AND APPARATUS FOR PRODUCING CRIMPED SYNTHETIC YARN
Heinrich Enneking, Wattwil, Switzerland, assignor to Heberlein Patent Corporation, New York, N.Y., a corporation of New York
Filed July 7, 1960, Ser. No. 41,340
Claims priority, application Switzerland July 9, 1959
5 Claims. (Cl. 57—34)

1. Apparatus for producing fully synthetic crimped yarn of reduced stretchability, consisting essentially of means for feeding yarn to be treated and constituting a first restraining point, yarn conveying means constituting a second restraining point, a heatable contact surface disposed between said first and second restraining points and

over which the yarn is adapted to move in passing from said first to said second restraining points, a false twisting device between said contact surface and said second restrainipg point, a third restraining point so disposed that the yarn in passing between the second and third restraining points again passes over said contact surface, and



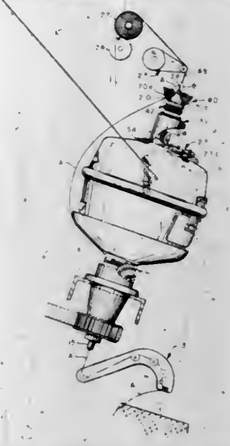
an adjustable yarn guide so positioned relative to the heatable contact surface as to control the length of contact of the yarn with said heatable surface during its second passage thereover.

3,041,814
APPARATUS FOR PRODUCING CRIMPED YARN
Max R. Held, Roslyn, N.Y., assignor to Heberlein Patent Corporation, New York, N.Y., a corporation of New York
Filed July 7, 1960, Ser. No. 41,341
3 Claims. (Cl. 57—34)



1. Apparatus for crimping a synthetic yarn which comprises yarn feeding means, yarn conveying means, a heatable contact surface disposed therebetween for the passage of said yarn thereover, a first false twisting device intermediate said heatable contact surface and said yarn conveying means, a second yarn conveying means and a yarn receiving means so positioned that said yarn again passes over said contact surface, an adjustable yarn guide so positioned relative to the heatable contact surface as to control the length of yarn contacting the heatable contact surface during the second passage of the yarn thereover, and a second false twisting device positioned intermediate said contact surface and said yarn receiving means.

3,041,815
STRAND TENSIONING AND METERING APPARATUS
Norman E. Klein, Pendleton, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware
Filed May 23, 1956, Ser. No. 586,864
44 Claims. (Cl. 57—58.3)



35. A strand tension device comprising a member having an end peripheral surface and a radially outer peripheral surface and being mounted for rotation about an axis; rotation-resisting torque means arranged for operative connection to said member to apply a rotation resisting torque to said member; a substantially axially disposed strand guide; said member having a strand engaging means having a strand engaging torque transmitting surface transverse to said axis and operatively connected through said member to said rotation-resisting torque means, for guiding a strand between said axially disposed guide and the radially outer peripheral surface of said member; and strand guide means disposed in spaced-apart relation to said member and transversely spaced from said axis, said last named strand guide means being mounted for rotation about said axis.

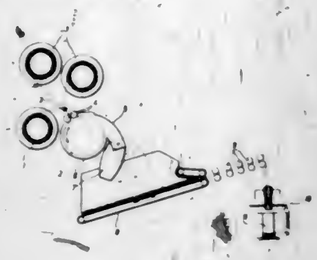
3,041,816
METHOD OF MAKING SEWING THREAD AND PRODUCT THEREOF
Reinhold F. Stuewer, Scranton, Pa., assignor to Grove Silk Company, Scranton, Pa., a corporation of Pennsylvania
No Drawing. Filed Sept. 29, 1960, Ser. No. 59,171
7 Claims. (Cl. 57—140)

1. The method of preparing a sewing thread from multi-fil yarn of synthetic fiber, which comprises individually twisting strands of multi-fil yarn in the same direction, bringing the strands together and applying a plying twist in the opposite direction so that the thread has a lesser number of turns per inch than that of the original twist, passing the plied thread through an air-jet bulking operation so that the individual filaments are caused to form loops and inter-engage and the thread attains an increased denier of 5 to 25 percent, and again twisting the bulked thread in said opposite direction.

3,041,817
YARN MAKING PROCESS
Ernst Fehrer, Auf der Gugl 28, Linz, Austria
Filed Oct. 28, 1958, Ser. No. 770,104
Claims priority, application Austria Nov. 9, 1957
6 Claims. (Cl. 57—156)

1. A process of making yarn from coco fibers or like relatively hard and short fibers, which comprises

(*a*) spinning said fibers into a relatively coarse yarn at least 10 millimeters in diameter;
(*b*) continuously feeding said yarn at a predetermined speed to a disintegrating zone;
(*c*) continuously disintegrating said yarn in said zone into the constituent fibers;



(*d*) continuously forming said constituent fibers into a web;
(*e*) continuously withdrawing said web from said zone at a speed greater than said predetermined speed; and
(*f*) continuously twisting said web into a relatively fine yarn having a diameter of less than 6 millimeters.

3,041,818

INDEXING MECHANISM

Kaj H. Jensen, Bareville, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania

Filed July 16, 1958, Ser. No. 748,959
1 Claim. (Cl. 58—28)

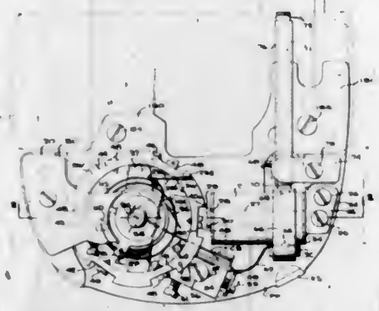
An indexing mechanism having a first and second contact adapted to be periodically closed for imparting a driving force to an electric timepiece comprising: a toothed wheel to be driven; an elongated spring member having one end fixedly mounted; said spring member extending past said toothed wheel and in engagement therewith; a resilient member having one end fixedly mounted and the other end extending toward and in close proximity to said spring member; said first and second contacts being carried by said spring member and said resilient member, respectively; a guide plate positioned between the ends of said spring member and having an essentially elliptical guidehole therein through which said spring member passes; a balance staff; a cam on said balance staff for imparting essentially elliptical movement to the other end of said spring member; said cam engaging said other end of said spring member to cause said spring member to follow the essentially elliptical contour of said guidehole; whereby the essentially elliptical movement of said spring member causes said spring member to drive said toothed wheel and to cause said first contact to periodically wipe across said second contact, thereby imparting the driving force to the electric timepiece.

3,041,819

OSCILLATING BALANCE WITH HAIRSPRING AND EXPANSION LIMITING MEANS

George G. Ensign and Glenn T. Soper, Elgin, Ill., and Ossian Lundahl, Orlando, Fla., assignors to Elgin National Watch Company, Elgin, Ill., a corporation of Illinois

Original application Apr. 15, 1952, Ser. No. 282,388, now Patent No. 2,865,163, dated Dec. 23, 1958. Divided and this application Dec. 22, 1958, Ser. No. 782,329
6 Claims. (Cl. 58—28)



1. In a timepiece, the combination of a support, a balance oscillatable on the support, a hairspring fixedly connected to the balance and to the support and effective in cooperation with the balance for determining the rate of oscillation thereof, an outer convolution of said hairspring being expanded in radius during each oscillatory stroke in one direction, electrical means for maintaining the balance in oscillation and including an electrical coil and a contact system with an actuator carried in oscillation synchronously with the balance for effecting momentary contact closure and energization of the coil as the balance swings past neutral axis at the center of a stroke whereby to deliver an impulse to the balance effective in the direction of its prevailing oscillatory stroke, and a device carried by the balance and moving therewith at a distance from the balance axis greater than that of the expansion of the said hairspring convolution during maximum normal ampiltudes of oscillation of the balance, said distance being selected so that the device during an abnormally great oscillation amplitude of stroke in said one direction is brought into engagement with the said convolution of the hairspring consequent upon the abnormal expansion thereof whereby a restricting effect is produced upon the said device for preventing the balance and actuator from performing an oscillatory stroke of two turns and thereby effecting a false second contact closure near the end of an oscillatory stroke.

3,041,820

DEVICE FOR POSITIONING AND PREPARING JOINED LINKS FOR SEPARATION

Clay G. Timmerman, Rte. 1, Hampton, Iowa

Filed Aug. 11, 1959, Ser. No. 833,075
5 Claims. (Cl. 59—7)



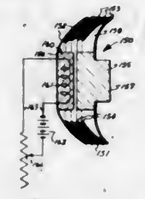
1. A device for detaching chain links having split sleeves at one end thereof and projections at their other ends for lateral movement into or separation from a split sleeve of an adjacent link when disposed at a predetermined angle thereto, comprising, base means, vertically disposed slot means mounted on the base means for receiving an intermediate portion of one chain link with the split sleeve thereof projecting above the base means, said slot means permitting lateral displacement of said one chain link in one direction, limit means mounted on top of said base means for barring lateral movement in a direction opposite to said one direction of a second chain link connected to said one chain link by reception of its other end projections within the split sleeve of the one chain link, adjustable means mounted on top of the base means in spaced relation to the limit means to present an abutment edge at one end portion adjustably spaced above the base means against which the second chain link may be held at said predetermined angle to said one chain link, and punch means slidably mounted on top of the base means in axial alignment with said split sleeve for impact engagement with said second chain link to facilitate manual displacement of the split sleeve of said one chain link on the punch means for separation from the second chain link within the slot means in said one direction, in response to a hammer blow applied to the punch means.

3,041,821

ACTUATOR EMPLOYING CERTAIN OXIDES THAT REVERSIBLY ELABORATE AND TAKE UP OXYGEN

John E. Lindberg, Jr., 3296 Springhill Road, Lafayette, Calif.

Original application Sept. 8, 1958, Ser. No. 759,717. Divided and this application Sept. 13, 1960, Ser. No. 55,734
9 Claims. (Cl. 60—23)



1. An actuator device, including in combination a container completely enclosing a volume; means to expand the volume of said container to balance the pressure in said volume with forces outside said container; a charge of material chosen from the group consisting of the oxides of silver, copper, and cobalt inside said container to give off gas when the temperature is lowered and to take in gas when the temperature is raised, reversibly; an excess charge of oxygen in said container when the temperature is lowered, said charge of oxygen being taken in by said material when said temperature is raised; and means to heat and cool said material so as to increase and decrease the pressure inside said container, the resultant expansion and contraction of said container being suitable for applying an actuating force to another device.

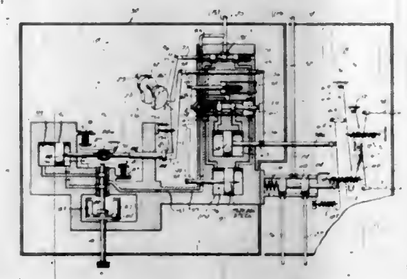
3,041,822

NOZZLE CONTROL FOR TURBOJET ENGINE

John M. Embree, Farmington, Conn., assignor, by mesne assignments, to Chandler-Evans Corporation, West Hartford, Conn., a corporation of Delaware

Continuation of application Ser. No. 551,824, Dec. 8, 1955. This application Apr. 21, 1960, Ser. No. 23,855
14 Claims. (Cl. 60—35.6)

1. In a turbojet engine having an air compressor, a variable area exhaust gas nozzle, and a manually positionable engine speed and power control lever; a control apparatus comprising: first means, including a contoured schedule cam positioned by said lever, for varying the jet area of said nozzle, in relation to the position of said lever, in accordance with a preselected schedule therebetween, as determined by the contour of said cam; second means, responsive to the speed of said compressor, and including a contoured speed cam positioned by said lever, for always continuously modifying said schedule, within preset limits of said speed, in accordance with a preselected variable function of said compressor speed, as determined by the contour of said speed cam; said first



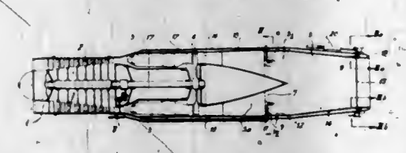
and second means so coacting that said area is continously varied as a preselected composite function of said lever position and compressor speed such that said compressor speed has a different, preselected value for each position of said lever, throughout the speed and power operating range of said engine, as determined by the contours of said schedule and speed cams.

3,041,823

CONTROL FOR VARYING THE CROSS-SECTIONAL AREA OF A NOZZLE

Jean H. Bertin, Neuilly-sur-Seine, Louis A. J. Bauger, Vanves, and Marcel Kadosch and François M. L. Maunoury, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France

Filed Sept. 14, 1953, Ser. No. 379,896
Claims priority, application France Sept. 18, 1952
2 Claims. (Cl. 60—35.6)



1. In a jet propulsion unit having a main variable-area propelling nozzle with an outlet facing rearwardly of said unit, the combination of an aerodynamically operating auxiliary nozzle for varying the area of said main propelling nozzle in the vicinity of said outlet and opening towards the interior of said main propelling nozzle, to form, when supplied with pressure fluid, a substantially annular transverse screen-like jet restricting the outlet area of said main propelling nozzle, and of a secondary propelling nozzle adjacent said main propelling nozzle and also facing rearwardly of said unit, to form, when supplied with pressure fluid, a rearwardly issuing secondary thrust-producing jet to assist propulsion, valve means being provided for inversely varying the supplies of pressure fluid to said auxiliary nozzle and to said secondary nozzle.

3,041,824

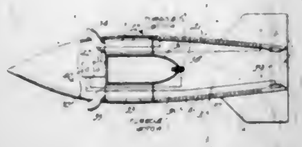
PROPULSION SYSTEM

John W. Berhman, Pompton Plains, N.J., assignor to Amalgamated Growth Industries, Inc., New York, N.Y., a corporation of Delaware

Filed May 1, 1956, Ser. No. 581,857
2 Claims. (Cl. 60—35.6)

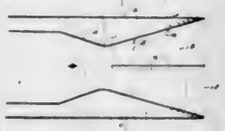
1. A power plant comprising a ramjet including an elongated duct open at both ends, a combustion chamber

within said duct and discharging at the downstream end of said duct, means for supplying and burning fuel with the air admitted at the inlet end of said duct, whereby hot ionized products may be developed within said combustion chamber, and means for establishing an elongated continuous electric arc along substantially the length of said combustion chamber, said means for establishing an



electric arc comprising an annular downstream electrode contained within said combustion chamber near the downstream end thereof, a substantially central upstream electrode, said upstream electrode having a central opening therein, means for establishing a continuously discharging electric arc between said electrodes, and means for supplying fuel through said central opening and therefore directly into the center of the arc discharge.

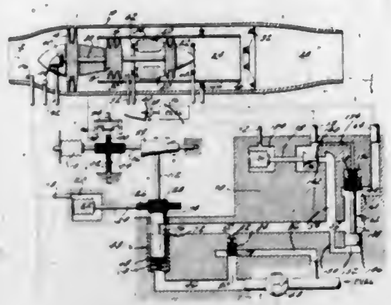
3,041,825
FLOW STABILIZING MEANS FOR CONVERGING-DIVERGING NOZZLE
Joseph S. Alford and Richard P. Taylor, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Nov. 18, 1958, Ser. No. 774,718
3 Claims. (Cl. 60—35.6)



1. A convergent-divergent jet exhaust nozzle comprising: a converging wall which defines the throat area of the nozzle; a diverging wall which defines the exit area of the nozzle; a wall surrounding the diverging wall and forming a plenum chamber therebetween; and means for stabilizing the position of a shock wave formed within the diverging wall portion of the nozzle during overexpanded flow conditions, said means comprising a plurality of generally axially elongated slots opening through said diverging wall and spaced about the periphery thereof, said slots extending from adjacent the throat area to adjacent the exit area and connecting areas of varying local static pressure upstream and downstream of said shock wave to the plenum chamber for damping shock wave movement by communicating the local static pressure variations caused by shock wave movement to said plenum chamber.

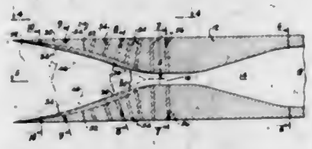
3,041,826
TURBOFAN AFTERBURNER FUEL CONTROL
Richard J. Coar, Jupiter, Fla., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 27, 1959, Ser. No. 789,365
10 Claims. (Cl. 60—35.6)

1. A fuel control system for a turbofan engine having a fan, an internal engine including an afterburner, and a bypass burner, said system including means for metering fuel proportional to the airflow rate through said fan, means responsive to an engine pressure indicative of internal engine airflow for admitting a portion of said metered fuel to said internal engine afterburner and



means for admitting the remainder of said metered fuel to said bypass burner.

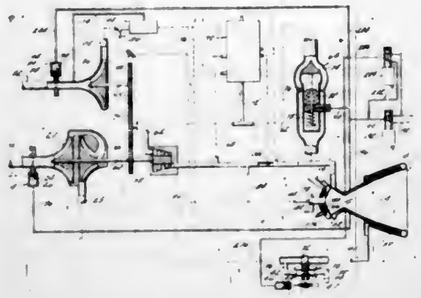
3,041,827
SUPERSONIC INLET
Antonio Ferri, Rockville Centre, N.Y., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Feb. 25, 1959, Ser. No. 795,492
9 Claims. (Cl. 60—35.6)



1. An air inlet structure for an air breathing jet engine comprising a body member having an air inlet passage; said inlet passage having an axis and said body member having a plurality of substantially identical finger-like members extending upstream therefrom and equally spaced about said inlet passage axis to form the inlet passage centrally between said members, said finger-like members being tapered in width as measured circumferentially about said axis such that the spacing between said members is a maximum at their upstream ends, the outer surface of each said finger-like member forming a smooth continuation of said body member and the inner surface of each said finger-like member is inclined to the inlet axis to form a supersonic compression surface for the air inlet.

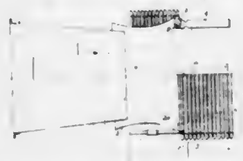
3,041,828
OXIDIZER FLOW CONTROL
Claude O. Broders, Simsbury, and Paul M. Rahilly, Newington, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 30, 1959, Ser. No. 824,133
6 Claims. (Cl. 60—35.6)

1. In a propellant flow and control system for a liquid rocket engine, a combustion chamber, conduit means through which fuel is supplied to said combustion chamber, conduit means through which oxidizer is supplied to said combustion chamber, means for pumping fuel and oxidizer through said conduits, and an oxidizer flow control in said oxidizer conduit means, said control including valve means for regulating oxidizer flow through said oxdiizer conduit means, means for scheduling the area of said valve means as a function of the discharge pressure of said pumping means, and means for bypassing oxidizer in said oxidizer conduit around said valve means



prior to the initiation of combustion in said combustion chamber.

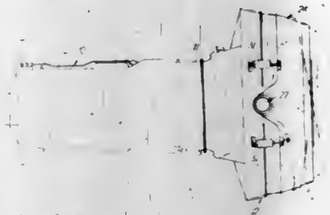
3,041,829
IMPROVEMENTS TO JET DEFLECTING DEVICES, PARTICULARLY FOR DISCHARGE NOZZLES OF PROPULSION UNITS
Paul Gelin, Paris, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France
Filed May 27, 1959, Ser. No. 816,156
Claims priority, application France June 5, 1958
8 Claims. (Cl. 60—35.54)



1. In a jet propulsion unit having a propulsive nozzle designed for producing a jet issuing axially therefrom, a device comprising a concealable set of guide vanes disposed externally of the nozzle and arranged, when exposed, to define successive, laterally directed passages for the jet, half-blades intended to deflect the jet from the axis of said nozzle into said passages, said half-blades having flat surfaces and tapered edges and being rotatable about first axes of rotation normal to the axis of said nozzle outside said jet and about second axes of rotation coinciding with the geometrical axes of said half-blades, said second axes intersecting the nozzle axis normally thereto and also being normal to said respective first axes, first operating means for moving said half-blades about said first axes of rotation from a withdrawn position outside the jet into a non-active position within the jet for which said half-blades offer their tapered edges to the jet, and second operating means for moving said half-blades on themselves about said second axes of rotation so that said half-blades gradually present their flat surfaces perpendicularly to the jet and deflect said jet into said passages of said set of guide vanes.

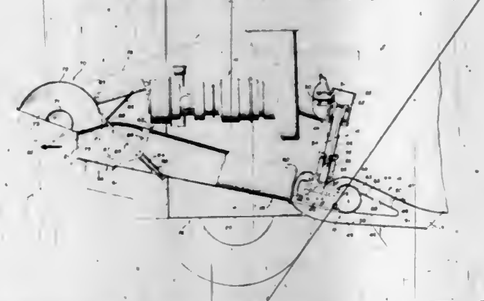
3,041,830
STEERING DEFLECTOR FOR A TURBO-FAN ENGINE
Samuel David Thomas and Maurice Ian Taylor, Allestree, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Aug. 8, 1960, Ser. No. 47,969
Claims priority, application Great Britain Aug. 17, 1959
2 Claims. (Cl. 60—35.55)

1. In a vertical lift aircraft: a turbo-fan engine having fan means driven by turbine means, said turbo-fan engine having a longitudinal thrust axis and being pivotally mounted on the aircraft for movement about a pivotal axis transversely intersecting said thrust axis, said turbo-fan engine having an annular casing surrounding said fan means, said annular casing having a rear pivotable deflector portion movable with respect to its forward portion about a single pivotal axis coinciding with the engine pivotal axis, said pivotal deflector portion being part-spherical and mating with a part-spherical surface on the forward portion of the annular casing to remain in sealing en-



gagement therewith throughout pivotal movement of the deflector portion relative to the forward portion, said part-spherical surfaces being centered on said single pivotal axis, means for pivoting the turbo-fan engine with respect to the aircraft, and means for pivoting said pivotable deflector portion relative to said forward portion of the annular casing, such relative pivotal movement of said deflector portion causing an exhaust gas deflection from the turbo-fan engine supplementary to that obtained by pivoting the entire turbo-fan engine relative to the aircraft.
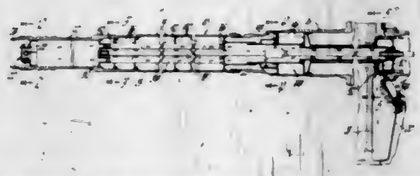
3,041,831
JET PROPELLED AQUATIC VEHICLE
Dietrich E. Singelmann, Buffalo, N.Y., assignor to Bell Aerospace Corporation
Filed Sept. 12, 1960, Ser. No. 55,457
5 Claims. (Cl. 60—35.55)



1. In an aquatic vehicle having a hull,
a ducting system located in the aft portion of said hull and including upper and lower walls,
said ducting system being inclined generally upwardly in the aft direction and having, forwardly thereof, an intake mouth opening through the bottom of the hull just forwardly of the rear of the hull and having, rearwardly thereof, a discharge mouth projecting rearwardly of the hull and above the level of said hull bottom,
a generally annular manifold disposed within said ducting system downstream of said inlet mouth spaced from both the upper and lower walls of said ducting system and being open at its inner side to provide both top and bottom water inlets into the manifold, and having an outlet portion discharging downstream to said discharge mouth of the ducting system,
a high rotational speed pump impeller disposed within said manifold for inducting water thereinto,

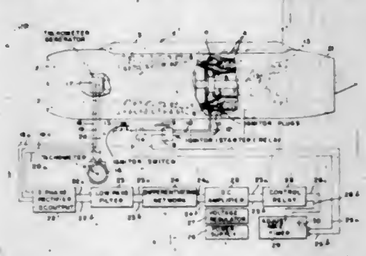
pump shaft means projecting vertically from said impeller upwardly from said ducting system,
and a substantially horizontal turbine having an output shaft,
the pump shaft means projecting above the ducting system into directly driven connection with said output shaft,
said turbine and ducting system being disposed in vertically stacked relation.

3,041,832
LUBRICATION VENT FOR A TURBINE ENGINE
Robert P. Atkinson, Indianapolis, and Frederick W. Hoeltje, Speedway, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 12, 1959, Ser. No. 812,778
6 Claims. (Cl. 60—39.08)



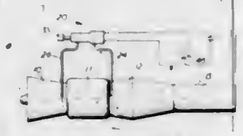
1. A turbine engine comprising a hollow power shaft extending substantially throughout the length thereof, such shaft including forward, intermediate and rear sections, a turbine construction operatively connected to said rear shaft section to rotatably drive said shaft, means formed on said engine to the rear of said turbine construction to form a radial vent air outlet passage communicating the interior of said shaft to engine exhaust, a lubrication vent system for supplying air axially within said shaft to said outlet passage, said system comprising conduit means for conducting oil laden vent air from a lubricant containing reservoir to said forward shaft section, means for removing some of the oil from the laden air for return to the reservoir including a substantially cup-shaped baffling cap closing the forward end of said forward shaft section, a plurality of vent air inlet passage in the side wall of said cap for thereafter directing vent air radially inwardly and into the interior of said forward shaft section, a plurality of vent air tubes coaxially mounted within said intermediate shaft section and in communication with said forward shaft section, and a single relatively large vent tube mounted in said rear shaft section establishing communication between said plurality of vent tubes and said vent air outlet passage.

3,041,833
TURBO JET AND TURBO PROP ENGINE RELITE DEVICE
Paul J. Vore, 4417 Needmore Road, Dayton 24, Ohio
Filed July 6, 1961, Ser. No. 122,358
6 Claims. (Cl. 60—39.09)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with a turbo jet engine having a combustion chamber, a rotary compressor for supplying air to said combustion chamber, and means for supplying fuel to said combustion chamber to form with said air a combustion mixture in said combustion chamber, ignitor means for said combustion chamber for igniting the combustion mixture in said combustion chamber, gas turbine means driven by said combustion products from said combustion chamber and connected to said compressor for driving the same, tachometer generator means driven by said compressor having a three phase A.C. electrical output proportional to speed, means for rectifying, smoothing and differentiating the output of said generator means to produce an electrical pulse potential of one polarity when the r.p.m. of the generating means driven by the compressor increases and of the other polarity when the r.p.m. of the generator means decreases, and means responsive only to the pulse output of the polarity produced when the r.p.m. decreases for energizing an electrical timing circuit including a timer device connected to said ignitor device for energizing said ignitor for the duration of time controlled by said timer following the energization thereof by said electrical timing circuit.

3,041,834
SEALING FAILURE SENSOR
David Omri Davies, North Kingsway, Derby, and Frederick Langham Grint, Belper, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Mar. 7, 1960, Ser. No. 13,089
Claims priority, application Great Britain Mar. 25, 1959
7 Claims. (Cl. 60—39.09)

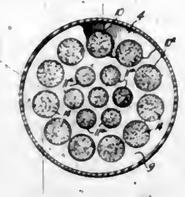


1. In combination: a gas turbine engine comprising a compressor, a turbine having a turbine disc and turbine blades carried thereby, a duct for supplying cooling air from said compressor to one face of said turbine disc, a seal forming part of said duct and adapted to permit passage therethrough of a restricted quantity of cooling air; a control means responsive to a pressure change functionally related to a pressure change in said duct adjacent said turbine disc and the inlet of said duct, said control means including a high pressure chamber and a low pressure chamber separated by a pressure responsive member movable by a change in pressure in one of said chambers, and a warning device operable by said pressure responsive member for indicating failure of said seal; and a testing device operatively connected to said control means and selectively operable for at least momentarily creating a pressure change therein while said gas turbine engine is running to thereby test operation of said control means.

3,041,835
IGNITION AID
Charles B. Henderson, Alexandria, and Joe M. Burton, Springfield, Va., assignors to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia
Filed Feb. 5, 1959, Ser. No. 791,488
12 Claims. (Cl. 60—39.47)

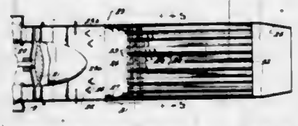
1. In a gas generating apparatus wherein a plastic monopropellant is extruded from a fuel chamber through an orifice in an apertured member into a combustion chamber in the form of a shape-retentive, continuously extruding column, the leading face of which is burned in said combustion chamber to generate gases, the improvement

comprising an igniter wafer of solid propellant mounted on the downstream surface of the apertured member and



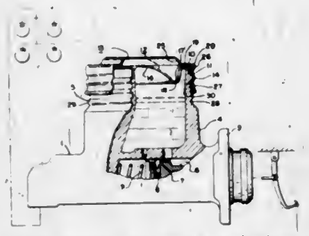
provided with an orifice positioned in registry with said orifice in said apertured member.

3,041,836
MEANS FOR ELIMINATING SCREECH IN JET PROPULSION SYSTEMS
John Carlton Truman, West Peabody, Mass., and Roger Tinkham Newton, Devon, Pa., assignors to General Electric Company, a corporation of New York
Continuation of abandoned application Ser. No. 391,589, Nov. 12, 1953. This application Sept. 11, 1959, Ser. No. 839,419
2 Claims. (Cl. 60—39.69)



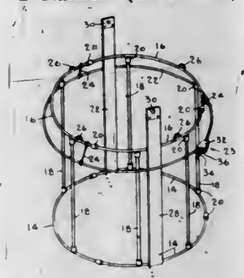
1. In a jet propulsion system including a duct defining a combustion zone, screech-eliminating means mounted in the interior of said duct and extending approximately the length of the zone, said means comprising: a liner for said duct; a plurality of radially inwardly directed corrugations on the liner wall, said corrugations extending longitudinally substantially the length of said liner; and a series of perforations located in the forward portion in said liner, said corrugations and said perforations cooperating to prevent the build-up of high intensity transverse, circumferential and radial pressure oscillations without muffling or reducing the normal noise of burning.

3,041,837
MASTER CYLINDER RESERVOIR
Gerald B. Jacoby, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 29, 1960, Ser. No. 46,136
6 Claims. (Cl. 60—54.6)



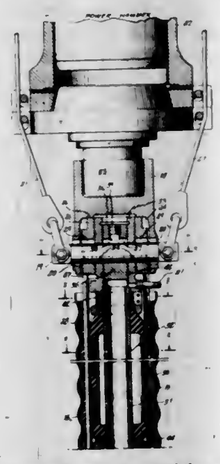
1. In a vehicle hydraulic brake actuating fluid system, the combination of, wall means forming a master cylinder reservoir chamber including a fill opening wall means at the top portion of the chamber, a loose baffle member positioned across the top of said fill opening wall means and having an annular portion resting on the top surface of said fill opening wall means, a separate cover threadedly engaging the exterior periphery of the fill opening wall means and having an annular portion engaging and seating said annular portion of said baffle member on the said top surface of said fill opening wall means, passage means through said baffle providing fluid connection between space between said cover and said baffle and said reservoir chamber, and other passage means in said annular portion of said baffle between the said annular portion and said annular portion of said cover forming vent means from said space between said baffle and said cover with atmosphere.

3,041,838
BARRIER WALL FOR MANHOLE CONSTRUCTION
Herschel J. Sieben, 9900 Lee Circle, Kansas City, Mo.
Filed May 8, 1959, Ser. No. 811,888
2 Claims. (Cl. 61—41)



1. A barrier wall for constructing manholes comprising, a self-supporting frame having first and second rigid rings spaced from each other by a plurality of vertical supports fastened between said rings, said rings being of substantially the same diameter and parallel to each other with said first ring lying flat on the ground, a plurality of boards arranged vertically side by side around said spaced rings with the ends thereof sticking into the ground, a third ring encircling the upper ends of said boards, said third ring having means for adjusting its diameter so it can be drawn up tightly around said boards to hold them tightly against said second ring to thereby form a solid barrier wall, said third ring supported from said second ring around the outside of said frame by a plurality of hooks.

3,041,839
CONCRETE PILE FORM WITH PNEUMATICALLY EXPANSIBLE AND CONTRACTIBLE REMOVABLE DRIVE CORE
John J. Kupka, Gladstone, N.J., assignor to McKiernan-Terry Corporation, Harrison, N.J., a corporation of New Jersey
Filed Feb. 24, 1959, Ser. No. 795,036
8 Claims. (Cl. 61—53.72)



6. A concrete pile form comprising a shell and a removable drive core in said shell, said core including a

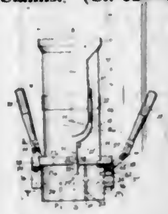
center pipe, a split drive tube in spaced relation about said center pipe and having a surrounding sleeve of expansible gripping material expansible into engagement with said shell, an expansion sleeve on said center pipe and in communication therewith, said expansion sleeve being in yielding expanding engagement with said split drive tube, a drive ring in engagement with the upper end of said drive tube and a transverse key securing said center pipe and drive ring in connected relation and including lost motion permitting independent relative motion of said drive ring, drive tube and center pipe.

3,041,840

PURIFICATION APPARATUS FOR THE REMOVAL OF IMPURITIES FROM FLUIDS, IN PARTICULAR FOR MASS SPECTROMETER CIRCUITS

Daniel R. Charles, Sceaux, André Jean Velte, Suresnes, Paul Dreyfus, Antony, and Georges Pamelard, Creteil, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a French state administration

Filed June 24, 1958, Ser. No. 744,231
Claims priority application France June 25, 1957
8 Claims. (Cl. 62—40)



1. A purification apparatus for removing impurities from a soiled fluid which comprises, in combination, a supporting block, a cup shaped vessel above said block having a tubular downward extension engaging said block with a tight fit, said downward extension being open, said block being provided with an input channel extending therethrough and opening into the upper face of said block on the outside of said tubular extension, said input channel serving to feed soiled fluid to the apparatus, single outlet means serving to convey the outflow of purified fluid, said outlet means traversing said block and opening into said tubular extension, an annular part surrounding said tubular extension and applied with a fluidtight fit on the upper face of said block, an upward cylindrical casing assembled in a fluidtight fashion with said annular part and extending around said vessel to a level higher than the top thereof, a second vessel open at the top and fixed at its periphery to the top of said casing in a fluidtight manner, and cooling means located in said second vessel, said second vessel extending into the first one so as to be located at a short distance from the inner wall thereof and thus to leave between said inner wall and said second vessel an annular free passage of small width but of a cross section sufficient for the passage of the soiled fluid.

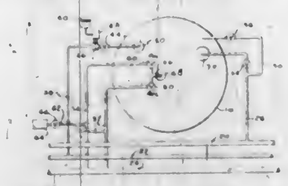
3,041,841

STORAGE MEANS FOR A LIQUEFIED GAS

James J. Henry, New York, N.Y., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas

Filed June 24, 1958, Ser. No. 744,238
1 Claim. (Cl. 62—45)

In the storage of a low boiling liquefied gas which needs to be maintained at an extremely low temperature for maintaining the material in a liquefied state comprising an insulated storage tank of large capacity, a liquid header, an inlet in communication with the tank through which liquefied gas is introduced into and withdrawn from the tank, and means communicating the liquid header with the inlet for passage of liquefied gas into and out of the tank for filling and emptying, respectively; a vapor header, a vapor outlet in communication with the interior of the tank in the upper portion thereof for venting vapors from the tank, and means communicating the vapor outlet with the vapor header for the removal of vapors that are formed; a relief header, a relief outlet in communication with the interior of the tank in the upper portion thereof, means communicating the relief outlet with the relief header, pressure responsive means operative normally to close the connecting means between the relief header and the relief outlet to prevent passage of vapor therethrough but which is



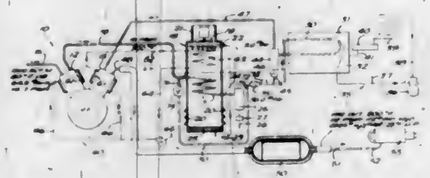
rendered inoperative to permit passage of vapors responsive to the existence of positive pressures within the tank beyond a predetermined maximum and subatmospheric pressures within the tank beyond a predetermined minimum, a source of supply of inert gas, a passage communicating the supply of inert gas with the means communicating the relief outlet with the relief header, and pressure responsive means operative normally to close the inert gas passage to block the flow of gases therethrough but which is rendered inoperative to permit passage of inert gas therethrough responsive to the existence of subatmospheric pressures beyond a predetermined minimum within the tank.

3,041,842

SYSTEM FOR SUPPLYING HOT DRY COMPRESSED AIR

Gustav W. Heinecke, 1317 W. Ramona Road, Alhambra, Calif.

Filed Oct. 26, 1959, Ser. No. 848,735
6 Claims. (Cl. 62—93)



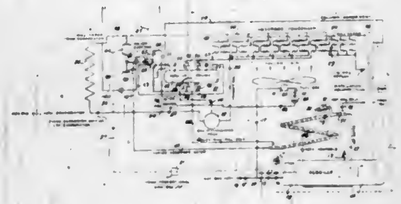
1. That method of supplying dry hot pressurized air to pneumatic tools to operate the same without risk of leaving a deposit of water within the tool which method comprises, compressing atmospheric air to a pressure of several atmospheres, cooling said compressed air by heat exchange with water and atmospheric air in an evaporative type water cooling device, separating moisture condensing from said cooled compressed air, passing the cooled partially dried air in heat exchange with refrigerant in a zone out of heat exchange relation with said evaporative cooling device in a zone remote from said evaporative cooling device to condense therefrom substantially all remaining moisture, further compressing the dried air, conveying the hot dry compressed air into the working chamber of a pneumatic tool and allowing the same to expand toward atmospheric pressure while operating said tool, said method being characterized in that a portion of said compressed air is bypassed around said water cooling device and then merged with the remainder after such remainder has been cooled in said water cooling device, and varying the portion of the air so bypassed inversely to changes in the wet bulb temperature of the ambient air and in a manner to maintain the temperature of the air leaving said water cooling device within a predetermined range despite fluctuation in the wet bulb temperature.

3,041,843

ABSORPTION TYPE REFRIGERATION SYSTEM

Judson S. Swearingen and Herman Levin, San Antonio, Tex., assignors to National Tank Company, Tulsa, Okla., a corporation of Nevada

Filed Sept. 8, 1958, Ser. No. 759,821
14 Claims. (Cl. 62—105)



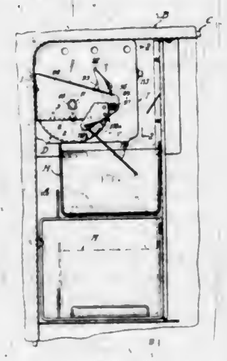
2. In a method of absorption refrigeration, fractionating a refrigerant solution into a refrigerant vapor and a liquid absorbent therefor, condensing the refrigerant vapor into a refrigerant liquid conducting the refrigerant liquid and expanding the latter into an evaporator, exhausting refrigerant from the evaporator, flowing the liquid absorbent from the fractionation step into a commingled stream with the refrigerant exhausted from the evaporator, increasing the rate of flow of the liquid absorbent as the pressure of the refrigerant exhausted from the evaporator increases, cooling the commingled refrigerant and liquid absorbent to reconstitute the refrigerant solution, and returning the refrigerant solution to the fractionation step.

3,041,844

AUTOMATIC ICE CUBE MAKER

Lyle F. Shaw, Muskegon, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Feb. 24, 1960, Ser. No. 10,611
10 Claims. (Cl. 62—135)



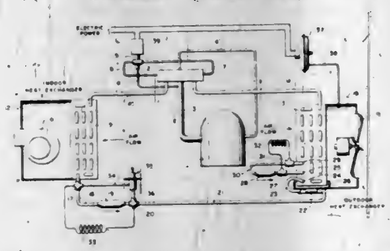
1. In an ice cube making machine, a container for water; means including a conduit having a valve for filling the container with water; means for biasing said valve to closed position; electrically-operated means for opening said valve; means controlling energization of said electrically-operated means including a circuit, a first normally-open switch in said circuit, a second normally-closed thermally-responsive switch in said circuit, said electrically-operated means and said switches being arranged in series relation in said circuit to energize said electrically-operated means upon closure of said first switch; time-controlled means for closing said first switch to complete said circuit to energize said electrically-operated means to open said valve for a time interval to fill said container with water; and means thermostatically controlling said second switch and operative to open said second switch after said time interval, in the event said first switch fails to open, to interrupt said circuit to deenergize said electrically-operated means and to close said valve by operation of said biasing means.

3,041,845

DEFROSTING SYSTEM FOR HEAT PUMPS

Allen Trask, Utica, N.Y., assignor to International Heater Company, Utica, N.Y., a corporation of New York

Filed Feb. 25, 1960, Ser. No. 11,009
5 Claims. (Cl. 62—140)



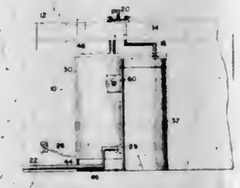
2. A heat pump having a reversible cycle refrigeration circuit including an indoor heat exchanger and an outdoor multiple circuit heat exchanger disposed in an upright position, compressor and reversing valve means for effecting refrigerant flow through said circuit in either direction, a drain pan under said outdoor heat exchanger, a separate circuit within the bottom portion of said outdoor heat exchanger, said separate circuit having a first part in heat exchange relation with the other circuit of said heat exchanger and a second part in heat exchange relation with said drain pan and means for evaporative control of refrigerant flow into said outdoor heat exchanger during heating cycles, said control means being connected between said separate circuit and the other circuit in said outdoor heat exchanger.

3,041,846

COLD WATER MEANS

Robert L. Clarke, Decatur, Ill. (21 Autumn Court, Colonia, N.Y.), and Ralph T. Mullins, 613 S. Eaton, Albion, Mich.

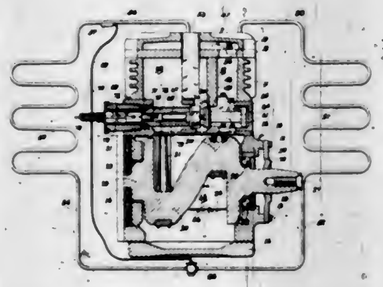
Filed Apr. 4, 1960, Ser. No. 19,811
3 Claims. (Cl. 62—177)



1. A small, compact and cabinet mountable water cooler of the type described comprising, in combination, an elongated cold water tank, an inlet conduit through the side of said tank, an outlet conduit on the top of said tank, a semi-cylindrical housing for said cold water tank, said housing closed to the passage of air therethrough, insulation material separating said housing from

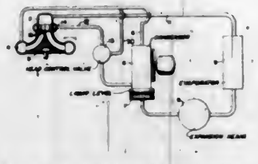
said cold water tank, a cooling coil spirally wound around said tank, a capillary tube spirally wound around said tank adjacent to said cooling coil, said capillary tube connected to one end of said cooling coil near the top of said tank, a separate and hollow cooling cabinet secured to the housing for said water tank, said cabinet separated from said housing to the passage of air, a foot secured to said cooling cabinet with the sole thereof in the same plane as the plane of the bottom of said housing for said cold water tank, a compressor unit centrally mounted in said cooling cabinet, condenser coils from said compressor extending around three of the inside walls of said cooling cabinet, said cooling cabinet being louvered at the top and open at the bottom thereof to facilitate the flow of cooling air over said condenser coils and through said cooling cabinet only, said foot elevating said cooling cabinet to provide a lower cooling air inlet, said cooling coils and said capillary tube passing through said housing for said cold water tank and said cooling cabinet and connected to the intake of said compressor and the outlet of said condenser coils, respectively, and a thermostat secured to the outside of said cooling cabinet and connected to and regulating the temperature of the water at the outlet of said cold water tank, said water cooler being of size, constructed and adapted for mounting in a kitchen cabinet and so that tap water is supplied to said cold water tank through said water inlet whereupon it is cooled therein by refrigerant passing through said cooling coils and said cooled water can be removed from said tank through said water outlet, and cooling air for said condenser coils will pass through said cooling cabinet only.

3,041,847
COMPRESSOR CAPACITY CONTROLLERS
Donald G. Harter and William J. Haley, Decatur, Andrew P. Boehmer, Des Plaines, and Boubene M. Jaremus, Barrington, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 21, 1960, Ser. No. 16,554
9 Claims. (Cl. 62—193)



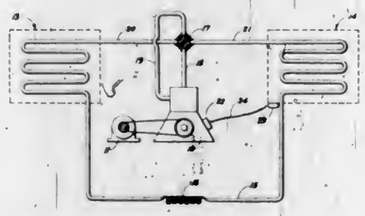
1. In a refrigerating system including an evaporator and a compressor having working space for a piston and a crankcase having a lubricant filled sump therein, the combination of means for varying the gas flow from said evaporator to the working space of said compressor and for returning lubricant to said sump comprising a compartment including an inlet chamber operatively connected to said evaporator and an outlet chamber operatively connected to the working space of said compressor, valve means for regulating flow between said chambers, means for modulating said valve between an open and closed position dependent on the pressure in said evaporator, means communicating said inlet chamber with the crankcase of said compressor for returning lubricant thereto, and means communicating said outlet chamber with said crankcase for providing positive lubricant flow between said inlet chamber and said crankcase.

3,041,848
VARIABLE HEAD COMPRESSOR
Harold A. Greenwald, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed June 1, 1959, Ser. No. 817,187
2 Claims. (Cl. 62—197)



2. A closed circuit refrigeration system including a centrifugal compressor, a condenser, a liquid receiver, an expansion means and an evaporator connected in a closed circuit in that order, means for bypassing part of the fluid output compressed by the compressor and feeding it into the compressor inlet in a direction having a substantial component tangential to the inlet to impart a preswirl to the entering fluid, and means for controlling the amount of fluid so bypassed in accordance with the compressor output.

3,041,849
HEAT PUMP SYSTEMS
James R. Harnish, York, Pa., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 25, 1959, Ser. No. 842,504
6 Claims. (Cl. 62—215)

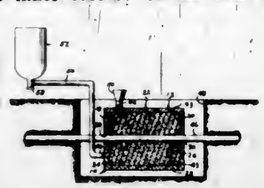


1. A heat pump comprising an outdoor heat-exchanger, and indoor heat-exchanger, and a compressor, said compressor comprising multi-cylinder compression means, refrigerant flow lines connecting said compressor unit and heat-exchangers in a closed refrigerant circuit, means for directing refrigerant from said compressor through said closed refrigerant circuit, first to said outdoor heat-exchanger during a cooling operation and first to said indoor heat-exchanger during a heating operation, means for expanding refrigerant in the second heat-exchanger of the series, means for maintaining at least one of said cylinders unloaded during said cooling operation and for operating said compressor fully loaded at least part time during said heating operation, and a motor only of sufficient size to operate said compressor when unloaded during said unloaded cooling operation.

3,041,850
WATER LINE FREEZING DEVICE
Robert N. Nunn, Oklahoma City, Okla. (614 E. Arbor, Midwest City, Okla.)
Filed Apr. 29, 1960, Ser. No. 25,683
3 Claims. (Cl. 62—293)

1. A water line freezing device for use in temporarily freezing the liquid within a short length of liquid con-

taining pipe, comprising: a two-part expansion chamber each part having a semi-circular recess in opposing ends defining a circular opening in each end of said chamber for the reception of the length of pipe, each part of said chamber comprising spaced side and end walls and a panel member extending therebetween; a resilient member connected to the inner surface of the end walls of said



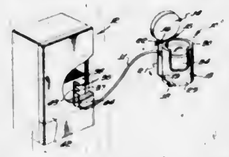
chamber for enveloping the length of pipe; loosely packed fibrous material within said chamber and means for introducing a gaseous refrigerant into said chamber, said means including a tubular member connected, at one end, with one wall of one part of said chamber in communication with the interior of the latter, said tubular member adapted to be connected, at its other end, with a source a gaseous refrigerant under pressure.

3,041,851
REFRIGERATION
Randolph N. Stenerson, East Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,313
3 Claims. (Cl. 62—304)



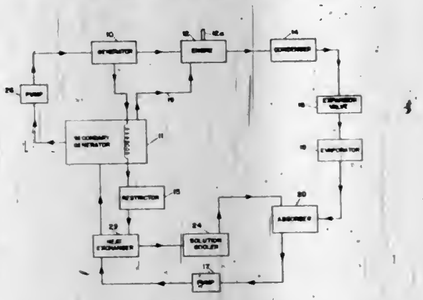
1. A metal structure adapted to be refrigerated comprising a relatively rigid body of compacted dendritic metal powder of a relatively good heat conducting material, said body having a large number of specially constructed, minute, internal voids of capillary size occupying a substantial fraction of the total volume of said body, said internal voids being in communication with an exterior surface of said body through a large number of surface interstices therein, and a volatile liquid contained within said voids so that exposure of said surface of said body to an ambient atmosphere which is nonsaturated with respect to vapor of said liquid produces evaporative cooling of said surface and heat may be conducted from the interior of said metal body and dissipated therefrom for a substantial period of time before the supply of said liquid within said pores is exhausted.

3,041,852
REFRIGERATED GARBAGE STORAGE DEVICE
Jessie H. Palmer, 5035 Louise Drive, La Canada, Calif.
Filed Sept. 28, 1959, Ser. No. 842,727
2 Claims. (Cl. 62—334)



1. A unitary self-contained refrigerated garbage storage device for domestic use, said device having a hermetically sealed refrigeration system free of internal restrictor valves or moving parts and charged with refrigerant in readiness for the installation of its refrigerant condensing portion against a cooled heat-absorbing wall of a domestic refrigerator to condense refrigerant vapor therewithin thereby to provide the user with a refrigerated garbage storage device which can be attached to and indirectly cooled by a conventional domestic refrigerator without need for making changes in the latter or disturbing the path of refrigerant flow in the latter; said garbage storage device comprising, a top-opening insulated compartment normally closed by an insulated cover, the interior of said compartment having a heat conducting interior side wall adapted to house a removable container for garbage to be refrigerated, a hermetically sealed closed loop of flexible conduit of material having good heat conducting properties, a portion of said conduit being arranged helically of and secured in good heat exchange relation to said compartment side wall to cool the same, the opposite ends of said helical portion extending outwardly through the outer wall of said insulated compartment in generally closely-spaced parallel relation and extending to a refrigerant condensing portion of said closed loop located remotely from said insulated compartment with the upper end of said helical portion being connected to the uppermost part of the condensing portion of said loop, said condensing portion and the adjacent lengths of the conduit connected thereto being adapted to be installed through the door and within the food compartment of a conventional domestic refrigerator with the condensing portion of said closed loop held pressed against a refrigerated heat absorbing interior wall of the refrigerator food compartment, the portions of said closed loop conduit adjacent said condensing portion extending across and pressed into the resilient gasket material for the doorway rim, and a charge of a refrigerant medium sealed within said closed loop of a type which liquefies in said condensing portion and returns by gravity flow to the lower end of said helical portion of the loop and which liquid then changes to vapor through heat absorbed from the interior of said garbage compartment and flows back to the top of said condensing portion to be recondensed.

3,041,853
REFRIGERATING PROCESS AND APPARATUS FOR THE SAME
Stanley Harwich, 1471 Carroll St., Brooklyn 13, N.Y.
Filed Nov. 25, 1955, Ser. No. 548,876
2 Claims. (Cl. 62—489)



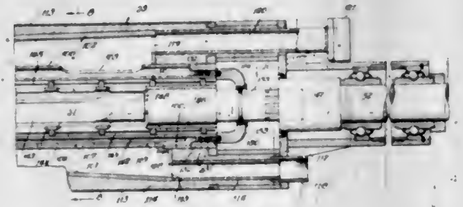
1. In a refrigeration system of an absorption type including a first generator containing a refrigerant absorbent solution, a second generator having a first section and a second section in heat exchange relationship, a multi-stage turbine including a first input and a second input, a condenser, an evaporator and an absorber; a first circuit comprising means for delivering a gaseous refrigerant from said first generator through a first input of said multi-stage turbine to said condenser wherein said gase-

ous refrigerant is liquified, means for causing said liquified refrigerant to be delivered to said evaporator wherein said liquified refrigerant is evaporated, means for delivering said evaporated refrigerant to said absorber wherein said evaporated refrigerant is absorbed within a strong refrigerant-absorbent solution; means for delivering said refrigerant absorbent solution to the first section of said second generator wherein a gaseous refrigerant is to be generated; and a second circuit comprising means for delivering a strong refrigerant-absorbent solution from said first generator to said absorber through said second section of said second generator; and further means for conducting a gaseous refrigerant from said first section of said second generator to said second input of said multi-stage turbine, and means for delivering said refrigerant-absorbent solution less said gaseous refrigerant to said first generator.

3,041,854
REFRIGERATION SYSTEM FOR HEAT EXCHANGERS

Jess G. Arganbright and John C. Walsh, Cedar Rapids, Iowa, assignors to Cherry-Burrell Corporation, Chicago, Ill., a corporation of Delaware

Filed Apr. 15, 1957, Ser. No. 652,840
2 Claims. (Cl. 62—527)

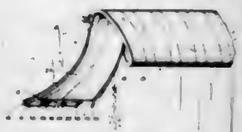


1. In a refrigeration system of the class described, an evaporator comprising the combination of a horizontally disposed tubular member through which a product to be cooled may be passed, an outer shell spaced from and enclosing said tubular member to form a chamber therebetween, an inlet manifold disposed on the lower side of said shell along substantially the entire length thereof, the portion of said shell covered by said inlet manifold having a plurality of orifices throughout its length providing communication between said manifold and chamber, an outlet manifold disposed on the upper surface of said shell, at least one port in said shell providing the communication between said chamber and outlet manifold, and means for supplying liquid refrigerant to said inlet manifold at a velocity sufficiently high to cause refrigerant particles to impinge on the outer surface of said tubular member.

3,041,855
MULTI-CHANNEL GOOSENECK CONSTRUCTION WITH SUBSTANTIALLY UNINTERRUPTED AND EVEN INNER AND OUTER SURFACES

Wilfred F. Hanlein, Livingston, N.J., assignor to Forstner, Inc., Irvington, N.J., a corporation of New Jersey

Filed Jan. 26, 1959, Ser. No. 788,987
3 Claims. (Cl. 63—5)



1. In an expansible band, a plurality of helically wound spring metal strips comprising a first channel-shaped strip including parallel marginal flanges extending equal distances and in the same direction from said first strip, a second channel-shaped strip including parallel marginal flanges that extend equal distances from said second strip in a direction opposite to that of the marginal flanges of said first strip, and means interconnecting said first and second strips including at least one interconnecting strip located between said first and second strips and cooperating therewith to provide for relative expansible movement between said strips axially of their windings, said interconnecting strip including a body portion that is formed with a marginal flange on one edge thereof and an oppositely extending marginal flange on the other edge thereof, oppositely disposed surfaces being defined between the marginal flanges and on said body portion, said surfaces being substantially relatively symmetrical, each said surface being even, and each said surface extending from the outer side edge of a flange on said interconnecting strip to a line, the projection of each line on to the respective other surface being inwardly displaced on said respective other surface with respect to the outer side edge of the opposite flange of said interconnecting strip, wherein the width of each surface is less than the full width of said interconnecting strip, each said strip overlapping an adjacent strip, each of said first and second strips having at least one of said flanges of said interconnecting means interposed between its said marginal flanges, said surfaces defining with said first and second strips a smooth and substantially even inner and outer surface for said band when said band is disposed in the contracted position thereof.

3,041,856
EAR ORNAMENT WITH THREE-POINT RESILIENT SUPPORT WITHIN THE TRAGUS, THE ANTI-TRAGUS AND THE ANTI-HELIX

James Neal, % Modulli Incorporated, 413 W. Chicago Ave., Chicago 10, Ill., assignor to Paul M. Fay, Chicago, Ill.

Filed Nov. 2, 1960, Ser. No. 66,784
7 Claims. (Cl. 63—14)



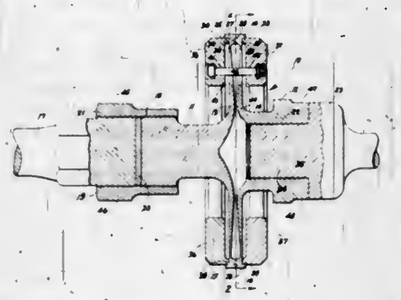
1. A composite ear ornament including a base member including an elongated narrow strut part dimensioned so as to be capable of having one end thereof received within the pocket of the external ear which lies behind and below the intertragic notch near the bottom of the concha, and of having the other end thereof received within the crevice which lies behind the anti-helix near the top of the concha, said elongated strut part being bowed or curved in a direction wherein the medial region thereof lies substantially flat against the medial region of the concha and avoids contact with the raised rib at the juncture between the helix and the tragus, said one end of the strut part being of hollow construction providing an internal chamber having a cylindrical wall, there being a slot in said wall, said slot being elongated circumferentially of said wall and lying at that side of said one end facing away from the direction of said curve, a shaft extending across said chamber, a lever part pivotally secured at its proximate end to said shaft and projecting radially outwardly through said slot and of such length that its distal end is adapted to fit within the crevice which lies behind the anti-tragus, means yieldingly biasing said lever and strut angularly

apart so that upon application of pressure to the strut and lever parts tending to decrease their angularity relative to each other, the base member as a whole may be contracted immediately prior to application of the base part to the external ear, an ornament proper adapted to overlie the intertragic notch, and means adapted to extend through said intertragic notch for securing said ornament proper to said one end of the strut part.

3,041,857
FLEXIBLE COUPLINGS

James H. Anderson and Harry E. Aughenbaugh, Spring Garden Township, York County, Pa., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Mar. 25, 1960, Ser. No. 17,646
11 Claims. (Cl. 64—15)

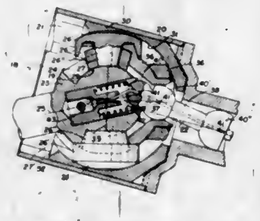


1. A flexible coupling for connecting two shafts which are approximately axially aligned comprising two hubs, each hub having means to fix it to the end of a corresponding shaft and each having an integral flexible disc, said discs each terminating in a marginal rim, said rims being in opposed face relation, a spacer member between one of said hubs and the corresponding shaft, a pair of annular clamping rings one each seated against the reverse faces of said rims, means serving to draw said clamping means together to maintain said rims in frictional engagement, and means for aligning said rims when said clamping means are drawn together comprising a counterbore defining a peripheral edge portion on the opposed face of one of said rims and an intermediate protuberance on the opposed face of the other of said rims, said protuberance being seated in said counterbore and wherein said clamping ring is seated against said last mentioned rim such that the outer section thereof is rotated to force said protuberance against said edge portion.

3,041,858
UNIVERSAL JOINT

Ernest Wildhaber, Brighton, N.Y.
(124 Summit Drive, Rochester 20, N.Y.)

Filed Apr. 10, 1961, Ser. No. 101,965
13 Claims. (Cl. 64—21)

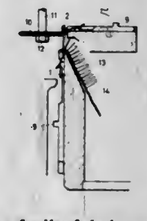


1. A universal joint comprising two members each having ways uniformly spaced about an axis, connecting elements engaging said ways to transmit torque between said members, retaining means for guiding said elements, said means reaching into the ways of one of said members, and means acting on said retaining means for maintaining said elements in the bisector plane of the axes of said two members at least approximately, said retaining means having arms shaped to permit displacement about the universal joint center exceeding the displacement required in operation at the largest angularity of the axes of said members by at least one half thereof, to facilitate assembly.

3,041,859
KNITTING MACHINE

Birger Lund Andersen, Edv. Eriksensgt. 14, and Kristian Lund Andersen, Kloverveien 1, both of Fredrikstad, Norway, and Brede Lie, Hammerstadgt. 21D, Oslo, Norway

Filed Jan. 14, 1957, Ser. No. 633,957
Claims priority, application Norway Jan. 18, 1956
8 Claims. (Cl. 66—92)
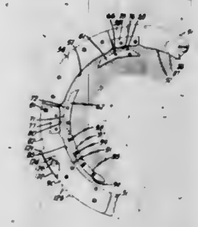


1. In the knitting of pile fabric using cooperating cylinder needles and dial elements to draw relatively elongated loops of pile yarn retained extended by the dial elements until completion of pile loop holding stitches by the cylinder needles; the method of forming cut pile including the step of, while the loops are retained in the drawn condition by the dial elements, severing the bight ends of the drawn loops against the dial to sever the loops to form the cut pile.

3,041,860
MEANS FOR AND METHOD OF OPERATING THE SINKERS OF KNITTING MACHINES

Herman E. Crawford, Kernersville, N.C., assignor to The H. E. Crawford Company, Incorporated, Kernersville, N.C., a corporation of North Carolina

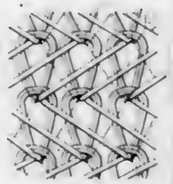
Filed Apr. 30, 1959, Ser. No. 810,125
8 Claims. (Cl. 66—108)



1. In a multifeed circular knitting machine having a needle cylinder, latch needles movably mounted therein, sinkers associated with said needles, cam means at each of said feeds for operating said needles along the same stitch drawing path during rotary and reciprocating movements of said cylinder, cam means at each of said feeds for operating said sinkers in timed relation to said needles, said sinker operating cam means acting to move said sinkers along first substantially identical paths at said feeds during rotary movement of said cylinder, and said sinker operating means acting to move said sinkers along their first path at one feed and a second path at another feed in one direction of reciprocatory movement of said cylin-

der, and along a second path at said one feed and along their said first path at said other feed in an opposite direction of reciprocatory movement of said cylinder.

3,041,861
WARP KNIT FABRIC
Robert Allen Kasey, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 22, 1958, Ser. No. 730,194
1 Claim. (Cl. 66—195)



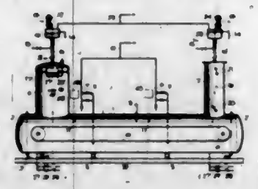
A greige tricot fabric knitted with a normal Jersey stitch from two 27 filament zero twist yarns composed of polyethylene terephthalate 40 denier continuous filaments exhibiting residual shrinkage when relaxed in boiling water at atmospheric pressure for 5 minutes, one yarn having 1% shrinkage and the other having 10% shrinkage, the knit of the fabric being such that, when viewed from the back, the loops of 10% shrinkage yarn are on top of the loops of 1% shrinkage yarn, the differential shrinkage of the two yarns providing a fabric of improved covering power after the fabric is finished by scouring at boil for ½ hour in relaxed condition, the light transmission when so finished being approximately 40% of the light transmission of otherwise corresponding fabric wherein the yarns are of equal shrinkage.

3,041,862
FLASH LAMP AND IGNITION MEANS THEREFOR
Robert M. Anderson, Euclid, and Louis A. Demchock, Jr., Cleveland, Ohio, assignors to General Electric Company, a corporation of New York
Filed July 5, 1960, Ser. No. 40,716
10 Claims. (Cl. 67—31)



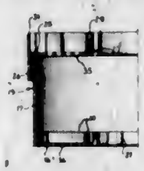
9. A flash lamp comprising a sealed envelope having an oxidizing atmosphere therein, a quantity of readily combustible filamentary material loosely arranged within said envelope and consisting essentially of zirconium, and ignition means disposed in said envelope within effective ignition range of said combustible material, said ignition means comprising a filament connected across a pair of lead-in wires and coatings of a fulminating substance on said lead-in wires and embedding portions of said filament, said fulminating substance comprising a powder admixture of magnesium, zirconium, potassium perchlorate and marble flour in the approximate proportions by weight of between 0.5–7.5% of magnesium, 40–85% of zirconium, 5–33% of potassium perchlorate and 5–35% of marble flour, said admixture ingredients being bonded together by a binder of nitrocellulose having a nitrogen content between 11.8–12.2% and an average molecular chain length between 175–300 mers.

3,041,863
APPARATUS FOR CONTINUOUS HEAT TREATMENT OF TEXTILE MATERIAL WITH PRESSURIZED GASEOUS HEATING MEDIUM
Asahiko Goto, Nada-ku, Kobe, Japan, assignor to Kobe Steel Works, Ltd., Kobe, Japan
Filed Jan. 17, 1961, Ser. No. 83,337
1 Claim. (Cl. 68—5)



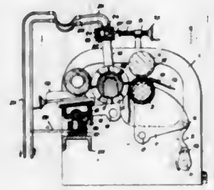
An apparatus for continuously heat treating a continuous textile material with a pressurized gaseous heating medium, comprising, in combination, a horizontally arranged cylindrical heat treating tank, means for feeding the treating medium at an elevated temperature and under pressure to said tank, a vertical inlet drum arranged on the top and in communication with the tank, a vertical outlet drum arranged on the top and in communication with the tank, an endless conveyor running through the interior of the tank, guide means in said inlet drum for dropping, while swinging across the width of the conveyor, the material introduced into the inlet drum onto the conveyor so that the material is continuously conveyed through the interior of the tank by the conveyor in a wavy form thereon and under fully relaxed and non-tensioned state, a nozzle arranged above each of the drums and associated with a liquid receptacle thereabove, said nozzle being provided with a peripherally grooved bore therethrough communicating at the top with the bottom of the liquid receptacle and at the bottom with the top of the associated drum, said peripherally grooved bore having a cross sectional dimension pre-adjusted in accordance with the cross sectional dimension of the fibrous material to be treated so that the fibrous material can smoothly pass through the nozzle without causing any noticeable pressure leakage therethrough, whereby the heating condition within the tank is maintained substantially constant and the material is continuously and uniformly heat treated with the medium in the tank.

3,041,864
LINT TRAP
Clifford F. Czech, Ripon, Wis., assignor to McGraw-Edison Company, Ripon, Wis., a corporation of Delaware
Filed Jan. 12, 1960, Ser. No. 1,889
3 Claims. (Cl. 68—18)



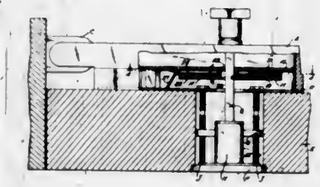
1. A lint trap for a washing machine having an upright oscillating agitator, said lint trap comprising, in combination, a cylindrical plastic container defining an enclosed chamber and having a central opening in its bottom wall adapted to fit over and rest on the agitator intermediate the upper and lower ends of the agitator, a cover including a wall member adapted to be removably secured to such container and having a central opening shaped to fit over the agitator, said cover wall member and the bottom of said container being perforated to afford passage for the flow of wash water through the container, the perforations in said cover being dimensioned to pass lint particles entrained in the wash water and the perforations in the container being dimensioned to intercept such particles.

3,041,865
DEVICE FOR ADJUSTING THE THICKNESS IN ROTARY TANNERY MACHINES
Ermanno Gianoglio, Milan, Italy, assignor to S.p.A. Luigi Rizzi & C., Modena, Italy, a company of Italy
Filed Mar. 29, 1960, Ser. No. 18,398
Claims priority, application Italy Sept. 21, 1959
6 Claims. (Cl. 69—42)



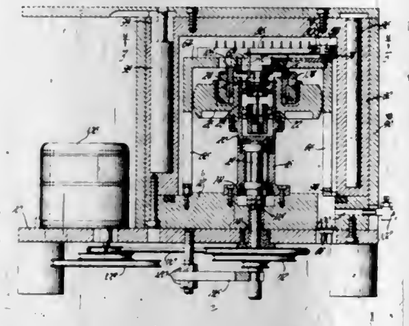
1. A device for adjusting the working thickness in rotary tannery machines comprising substantially supporting rollers and transporting rollers for the skins and an operating or processing cylinder carrying the tools for the working or processing of the skins, characterized by a hydraulic servocontrol comprising hydraulic jacks controlled by a valve which in turn is actuated by an adjusting member for maintaining the distance between the axis of the supporting roller and the operating or processing cylinder at a predetermined value and to keep that value constant depending on the selected adjusted position of the adjusting member.

3,041,866
LOCK CONSTRUCTION
Samuel Segal, 441 West End Ave., New York, N.Y.
Filed July 8, 1959, Ser. No. 825,833
9 Claims. (Cl. 70—1.5)



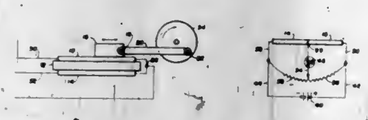
3. A safety device for a lock of the type to be positioned on the back of a door having a back plate to which a tumbler lock member is connected by attachment screws extending transversely through an opening in the body of the door and also of the type having an external key actuated tumbler on the exterior of the closure with an internally projecting operating blade and a lock on the interior of the closure having an opening to receive said blade, said blade projecting into said opening and operating said lock, said device being positioned between said tumbler and lock and preventing access to said lock when said tumbler and blade are removed, said device including a shallow box on the back of the lock, a sliding plate in the box, means biasing said plate in one direction to close off said lock opening and a latch to hold said plate against movement in said direction, said plate having an outstanding obliquely directed member automatically releasing said latch upon assembly of the lock against the closure, said back plate on the back of the door upon mounting of the lock upon the back of the door serving to contact said plate and unlatch said latch to permit said plate to be moved in said direction under the action of said biasing means.

3,041,867
TESTING APPARATUS FOR BEARINGS
Allan C. Knudsen, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,910
8 Claims. (Cl. 73—9)



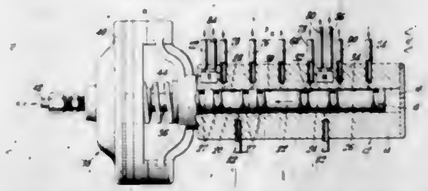
1. Testing apparatus for bearings having inner and outer races with anti-friction elements therebetween, said apparatus comprising a support member, drive transmitting means rotatably mounted in the support member, a bearing holder on said transmitting means and adapted to support a pair of bearings in axial alignment with said transmitting means and drivingly engage one race of each bearing, force exerting means adapted to engage the other race of each bearing for establishing an axially directed preload force on said bearings, stop means secured to said support member and adapted to prevent rotation of the said other race of each bearing, drive means for said transmitting means for imparting rotation to the said one race of each bearing, and force measuring means connected with the force exerting means for measuring preload force variations on said bearings during rotation.

3,041,868
APPARATUS FOR TESTING LUBRICANTS
Edward Schaschl and Glenn A. Marsh, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Feb. 18, 1959, Ser. No. 794,017
12 Claims. (Cl. 73—10)



1. A lubrication tester comprising, in combination, an electrically-conductive abradable element, a second element having a temperature-resistance characteristic similar to that of the abradable element, means supporting said elements in an electrically-insulated, thermally-connected relationship, means for subjecting said abradable element to mechanical friction in the presence of the lubricant to be tested, and electrical means for measuring the change in the ratio of the resistance of the abradable element to the resistance of the second element.

3,041,869
VAPOR FRACTION ANALYZER
Stanford B. Spracklen, Hurricane, Donald N. Campbell, St. Albans, and Charles G. Fellows, Alum Creek, W. Va., assignors to Union Carbide Corporation, a corporation of New York
Filed Sept. 11, 1956, Ser. No. 609,160
3 Claims. (Cl. 73—23)



1. In a multi-component vapor fraction analyzer, flow control means to provide simultaneous continuity of flow in at least two fluid streams, comprising an outer housing member and an internal member slideably engaged in said outer housing member and moveable between two registering positions with respect to passages of said outer housing member; said housing member having positioned therein reference cell means for developing an output signal proportional to the thermal characteristics of a reference gas, measuring cell means for developing output signals proportional to the thermal characteristics of successive specific components of vapor sample, outlet and inlet means for directly connecting to the inlet and outlet respectively of a sample passage means which is suitable for a periodic trapping therein of constant volumes of multi-component vapor samples, means for connecting the inlet of a separation column to said outlet of said sample passage means through said housing member, and means for connecting the outlet of said separation column to the inlet of said measuring cell means through said housing member.

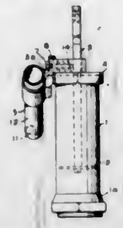
3,041,870
WATER DETECTION IN HYDROCARBON FUELS
William S. Levine, Floral Park, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Mar. 26, 1958, Ser. No. 724,032
4 Claims. (Cl. 73—53)



1. The method of determining the presence of undesirable amounts of water of the order of about 40 parts per million or more in distillate fuels comprising placing a measured quantity of the test fuel in an enclosed test zone, adding a small amount of an oil-soluble wetting agent to the fuel sample, adding a small amount of water-soluble dye to the fuel sample, treating a white, unsized paper with a water-soluble wetting agent and drying the paper before use, vigorously agitating the fuel sample in the presence of the dry paper whereby the presence of water is indicated by the number and intensity of colored dots which appear on the unsized white paper when the fuel contains an excessive amount of suspended water.

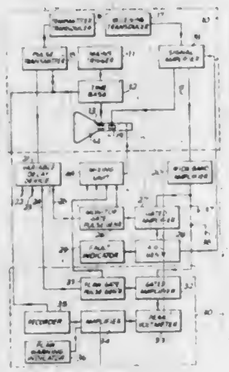
3,041,871
VISCOSIMETER
Hans J. Loblich, Isestrasse 49, Hamburg 13, Germany
Filed July 19, 1957, Ser. No. 672,972
6 Claims. (Cl. 73—57)

1. A viscosimeter, comprising a container for a liquid to be tested; a cover for said container defining an orifice located concentrically therein; a plunger, including a calibrated shaft portion fitted in said orifice for slidable movement reciprocally therethrough, and a head portion fitted in said container in diametric, radially spaced, relation thereto, and for reciprocal movement longitudinally thereof; a plunger brake mounted on said cap, said brake being disposed for movement into engagement with said plunger shaft portion whereby to restrain downward



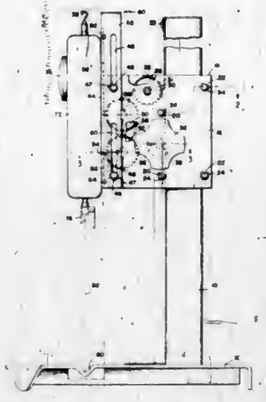
movement thereof through said orifice; and means, including a liquid-friction timing device rotatably mounted on said cap, adapted alternately to disengage and to engage said plunger brake with said shaft to permit determination of the downward movement of said plunger by means of the calibrated shaft portion thereof in a timed sequence.

3,041,872
APPARATUS FOR ULTRASONIC TESTING OF MATERIALS
Thomas G. Brown, Kelvin Works, Kelvin Ave., Hillington, Glasgow SW. 2, Scotland, and Alexander Bryce Calder Rankin and Roy William George Haslett, both of Husun Works, New North Road, Barkingside, Essex, England
Filed Feb. 17, 1956, Ser. No. 566,279
Claims priority, application Great Britain Feb. 21, 1955
11 Claims. (Cl. 73—67.9)



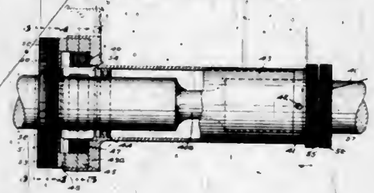
6. Apparatus for the ultrasonic testing of materials comprising transducer means for injecting ultrasonic wave energy into and picking up ultrasonic wave energy from the material, and generating electric signals from the energy picked up, a source of pulses, means coupling said source to said transducer means and applying said pulses to inject said wave energy, an amplifier coupled to said transducer means and transmitting said signals, gain control means in said amplifier, means synchronized with the source of pulses for producing a signal at a selected time following each pulse, coincidence means coupled to said amplifier and to said last named means whereby only the echoes from the back of the material being tested are passed therethrough, which is at the selected time, means including a reference voltage connected to said coincidence means and providing a control voltage connected to said gain control means to control the gain of said amplifier in accordance with the amplitude of said back echo.

3,041,873
LOAD TESTING APPARATUS
Albert L. Godshall, Lansdale, Pa., assignor to Ametek, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,269
8 Claims. (Cl. 73—93)



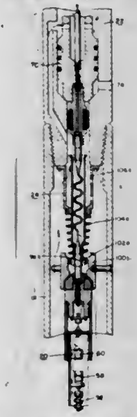
1. A load testing device comprising a support means and means mounted on said support means for applying a load to the apparatus to be tested including a member, means guiding said member for linear movement, means mounted on said member for engagement with the apparatus to be tested for measuring the applied load, and means for actuating said member through a linear movement to apply a load through said measuring means to the apparatus to be tested said means for actuating said member through a linear movement comprising a tightly coiled ribbon spring mounted for coiling and uncoiling movement, an extending free end of said ribbon spring being connected to said member, and a spring means connected to said member to urge said member in a direction opposite to said ribbon spring toward a reference position with a bias which overcomes the bias of said ribbon spring.

3,041,874
VARIABLE TRANSFORMER CONTROL AND INDICATING SYSTEM
Erwin J. Saxl, Harvard, Mass.
Filed Jan. 29, 1958, Ser. No. 711,848
6 Claims. (Cl. 73—136)



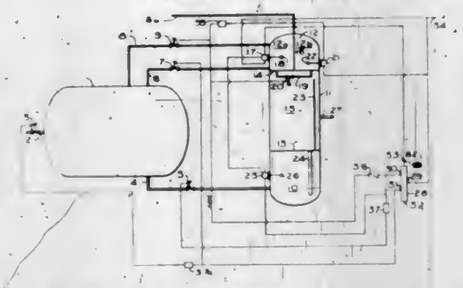
1. In combination with a shaft subject to torque, an electrical device for detecting torque in said shaft comprising: a tubular casing mounted concentrically on said shaft and having one end fixed to said shaft and another end free to rotate about said shaft; a transformer core mounted on said free end and having pole pieces disposed substantially radially on opposite sides of said shaft; a pair of primary sensing coils wound on said pole pieces about axes substantially radial to said shaft and adapted when energized to induce a magnetic field between said pieces; a secondary sensing coil disposed transversely on said shaft between said pole pieces and disposed parallel to the electrical field induced by said primary sensing coils when no torque is applied to the shaft; a first induction coil rotatably disposed around said shaft adjacent the free end of said casing; a second induction coil mounted on said free end and disposed to receive induced current from said first induction coil, said second induction coil being connected to said primary sensing coils; a third induction coil mounted on said casing and connected to said secondary sensing coil; and a fourth induction coil rotatably disposed around said shaft adjacent said third induction coil and disposed to receive induced current from said third induction coil.

3,041,875
SURFACE RECORDING DRILL STEM TESTING COMBINATION
Carl E. Reesby, Houston, Tex., assignor, by mesne assignments, to Halliburton Company, a corporation of Delaware
Filed Sept. 30, 1957, Ser. No. 686,905
5 Claims. (Cl. 73—155)



1. Apparatus for concurrent surface indication of an earth formation characteristic during a drill stem testing operation, comprising means to isolate a formation from other fluids within a well bore, conduit means in connection with said isolating means for communicating fluids from said formations to the earth's surface, and valving means mounted within said conduit near said isolating means for initiating and terminating fluid flow through said conduit, said conduit, said valving means and said isolating means each having threaded connections for assembly, a formation characteristic sensing means mounted with said apparatus in sensing communication with said formation for producing an electrical indication in response to said characteristic, electrical communication means in connection from said sensing means through said valving means including, a resilient support mounted in axial alignment with a first threaded connection and a rigid support mounted in axial alignment with a complementary second threaded connection and with said resilient support, guiding means disposed with said rigid support for centering said resilient support during connection, an insulated fluid tight electrical connector having a first and second complementary portion adapted for relative rotation, said first portion mounted with said resilient support and said second portion mounted with said rigid support for fluid tight insulated electrical connection upon assembly of said first and second threaded connections, a traveling electrical connection means attached to an electrical conductor hoisting cable, an electrical connection landing means in connection with said electrical communication means within said conduit above said valving means for receiving said traveling connection into fluid tight insulated electrical and mechanical engagement including means for supporting said traveling connection means against removal from said landing means by any forces upon said traveling means other than a tensional force of predetermined magnitude applied through said cable, and receiving means at the earth's surface in connection with said cable for receiving the electrical indication produced by said sensing means.

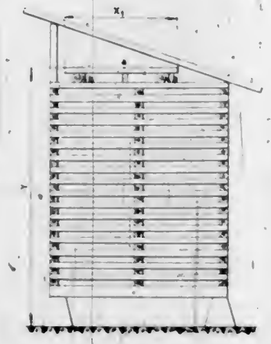
3,041,876
APPARATUS FOR METERING LIQUIDS
Frank J. Barra, William F. Chaple, and Robert E. McMinn, Oklahoma City, Okla., assignors to Black, Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware
Filed Mar. 20, 1958, Ser. No. 722,680
2 Claims. (Cl. 73—224)



1. A liquid metering apparatus comprising, a metering vessel, said metering vessel having an inlet, an outlet and an overflow line, valve means in said inlet, said outlet and said overflow line of said metering vessel, an auxiliary vessel, said auxiliary vessel having upper and lower transverse partitions positioned completely across the interior of said auxiliary vessel and dividing said auxiliary vessel into an upper, an intermediate and a lower chamber, an upright partition within said upper chamber dividing said upper chamber into a first section and a second section, means equalizing pressure between said metering vessel and both sections of said upper chamber, a drain connecting said first section of said upper chamber to said second section of said upper chamber, valve means in said drain, a first float positioned in said first section of said upper chamber, a first control mechanism operably connected to said first float, a second float positioned in said second section of said upper chamber, a second control mechanism operably connected to said second float, a third float positioned in said lower chamber, a third control mechanism operably connected to said third float, a duct connecting said lower chamber to said intermediate chamber, the lower edge of said duct extending below the lowest operating level of said third float, means equalizing pressure between said lower and said intermediate chambers of said auxiliary vessel, said outlet from said metering vessel connecting into said lower chamber of said auxiliary vessel, said overflow line from said metering vessel connecting into said first section of said upper chamber of said auxiliary vessel, an outlet from said intermediate chamber of said auxiliary vessel, a two position pressure actuated pilot valve, a source of supply gas connected into said pilot valve, means connecting said source of supply gas from said pilot valve to said valve means and said control mechanisms to cause said metering vessel to fill and empty whereby the liquid contained therein is effectively metered, and a time delay restriction valve in the means connecting from said pilot valve to said valve means in said inlet of said metering vessel to delay the opening of said valve means in said inlet until sufficient time has elapsed to allow the draining of the upper chamber of said auxiliary vessel.

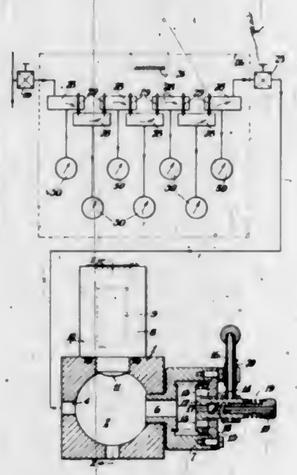
3,041,877
DEVICE FOR THE CONTINUOUS DETERMINATION OF THE DRYING CAPACITY OF FREE AIR
Miklós Rosner, Budapest, Hungary, assignor to Lignimpex Fa-, Papir-és Tüzelöanyag Külkereskedelmi Vállalat, Budapest, Hungary
Filed Aug. 28, 1957, Ser. No. 680,815
2 Claims. (Cl. 73—335)

2. A device for the continuous determination of drying capacity of the open air used for the natural drying of wood, agricultural products and other materials, comprising a measuring element to the surface of which automatically and continuously previously defined quantities of moisture are advancing according to a velocity depending on the drying capacity of the air, the air passing freely along the surfaces of the measuring element, said element being releasably supported, and the arrangement not influencing the temperature, direction, velocity, humidity



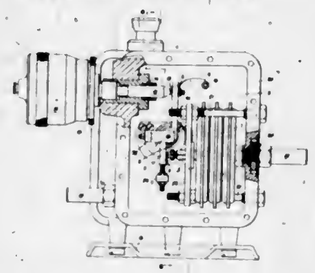
and evaporating potential of the open air, said arrangement of the measuring element not hindering the examination of the drying thereof, the determined values of the moisture content being ascertained at a reading scale on which the deviations of the actual drying capacity of the air from the meteorological average may be read in drying-durations and moisture contents, relating to the drying of previously chosen wooden or agricultural products, drying simultaneously with the measuring element.

3,041,878
HYGROMETERS
John McInroy, Whitnash, Leamington Spa, England, assignor to The Hymatic Engineering Company Limited, Redditch, England, a company of Great Britain
Filed Dec. 7, 1959, Ser. No. 857,643
Claims priority, application Great Britain Dec. 8, 1958
6 Claims. (Cl. 73—335)



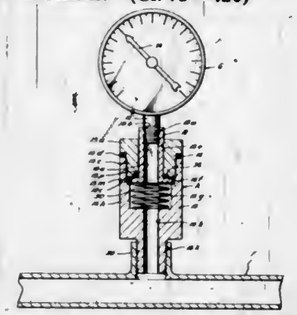
1. A hygrometer comprising an observation chamber adapted to be pressurised by the gas to be tested from a source and then exhausted, said chamber being provided with means to illuminate the chamber with a beam of light enabling mist formed in the chamber to be observed directly or indirectly, and a multistage restrictor valve comprising a plurality of needle valves arranged in sequence between the source and chamber and through which the gas to be tested is supplied to the observation chamber, each of the valves providing a reduction in the pressure of the gas without a reduction in the local temperature below the dew point thereof.

3,041,879
PRESSURE MEASURING DEVICES
John Everard Grandidge, Lingfield, England, assignor to Mechanism Limited, Croydon, England
Filed Jan. 20, 1959, Ser. No. 787,992
5 Claims. (Cl. 73—398)



1. A pressure measuring device comprising: a longitudinally expansible pressure capsule connected for response to the pressure to be measured; a movable member connected for displacement by said capsule; a pivotally mounted lever; spring means biasing said lever into engagement with said movable member; a micrometer screw calibrated for measurement of said pressure; first electrical contact means displaceable by said screw; second electrical contact means displaceable by pivotal movement of said lever for engagement with and disengagement from said first contact means; a contact closure indicating circuit including said first and second contact means; and indicating means including a control electrode connected to said circuit for response to said engagement and disengagement, the current flow through said contact means for actuation of said indicating means being of the order of .000001 ampere.

3,041,880
REVOLVING GAUGE CONNECTION
John H. McCarvell and Willis C. Carlisle, both of 1525 Prince St., Houston, Tex.
Filed Dec. 3, 1959, Ser. No. 857,041
2 Claims. (Cl. 73—420)



1. An apparatus for mounting a gauge having a stem therewith on a flow line, pressure vessel, or the like, comprising:

(*a*) a first connector housing member adapted to be connected to a flow line or the like and having a bore in communication with the interior of the flow line,

(*b*) a second connector housing member having a bore therethrough in communication with said bore of said first connector housing,

(*c*) means on said first and second connector housing members for releasably securing same together,

(*d*) a rotatable tube connected to said stem and extending through the bore of said second connector housing member for rotation relative thereto,

(*e*) a laterally extending shoulder on said second housing member,

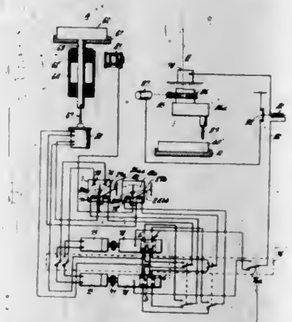
(*f*) a seal ring mounted on said laterally extending shoulder laterally outwardly from and out of contact with the longitudinal surface of said tube,

(*g*) a laterally extending flange on said rotatable tube longitudinally movable in said bore of said first housing member and adapted to engage said seal ring to prevent fluid flow from said bore of said first housing member through said bore of said second housing member,

(*h*) a lower shoulder in said first housing member, and

(*i*) a spring seated on said lower shoulder in the bore of said first housing member below said flange and engageable with said flange for urging same into sealing contact with said seal ring.

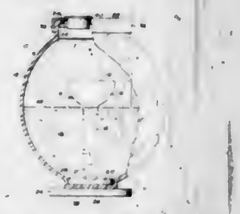
3,041,881
METHOD AND DEVICES FOR DETERMINING VECTORIAL QUANTITIES, PARTICULARLY FOR DYNAMIC BALANCING OF ROTORS
Heinrich Hack, Darmstadt, and Ludwig Arras, Gross-Zimmern, Germany, assignors to Carl Schenck Maschinenfabrik G.m.b.H., Darmstadt, Germany, a corporation of Germany
Filed Jan. 15, 1959, Ser. No. 786,946
Claims priority, application Germany Jan. 16, 1958
3 Claims. (Cl. 73—463)



1. Apparatus for balancing a rotating workpiece, comprising a transducer for providing an alternating datum voltage in accordance with unbalance-responsive oscillations of the rotating workpiece, voltage supply means having two component alternating voltages synchronous with said datum voltage and 90° phase-displaced from each other, said voltage supply means having circuit means for superimposing said two component voltages upon each other to form a resultant reference voltage, wattmetric means having two input circuits connected to said transducer and to said circuit means respectively to be controlled by said datum voltage and said reference voltage, said wattmetric means having an output member responsive to the product of said datum and reference voltages, potentiometric means forming part of said voltage supply means and having displaceable structure for varying the proportion of said two component voltages to set the phase angle between said re-

sultant reference voltage and said datum voltage to a selected one of the values 0° and 90°, whereby the amount of displacement of said structure is indicative of the angular position of the workpiece unbalance and the maximum response of said member is indicative of the unbalance magnitude, said output member of said wattmetric means forming a movable contact, two stationary contacts engageable by said movable contact when said movable contact deflects from zero position in one and the other direction respectively, a reversible motor mechanically connected with said displaceable structure, and a control circuit connecting said two stationary contacts with said motor for operating the motor in opposite directions respectively depending upon which of said two stationary contacts is engageable by said movable contact at a time, whereby said potentiometric means are controlled by said motor to set said wattmetric output member to zero.

3,041,882
DRIVER INDICATOR DEVICE
Theodore C. Griffiths, 295 Hallock, Jamestown, N.Y.
Filed Jan. 19, 1960, Ser. No. 3,341
2 Claims. (Cl. 73—492)



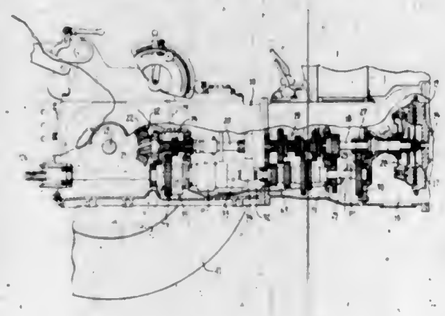
1. An apparatus to give a composite indication of the driving skills and care of a vehicle operator comprising in combination, a sealed container having a normally upright position with respect to a driven vehicle, a second container within said sealed container having an upper open end in communication with the interior of said sealed container, a liquid in one of said containers, said liquid remaining therein during normal driving vibrations while said sealed container is in said upright position and no sharp inertia changes are transmitted to said liquid, and means facilitating selected portions of said liquid to transfer from said container having the liquid therein to said other container when said liquid receives sudden independent inertia changes caused by an irregular motion in said vehicle, said portions being proportioned to the extent of said inertia changes, and second means for indicating the composite amount of liquid received by said other container.

3,041,883
TRANSDUCER FOR A PENDULOUS GYROSCOPIC ACCELEROMETER
Vernon H. Aske, Hopkins, and Arthur D. Glick, Roseville, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 19, 1958, Ser. No. 774,952
7 Claims. (Cl. 73—504)



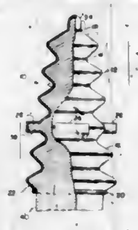
3. A pendulous gyro accelerometer of the class described comprising: a base, a turntable rotatably mounted for rotation about a first axis on said base; a pendulous gyro having mutually perpendicular spin reference, output, and input axes positioned on said turntable so that said input axis is parallel to said first axis; means for providing a signal indicative of movement of said gyro about said output axis away from an initial position; motor means connected between said turntable and said base and adapted when energized to rotate said turntable relative to said base; means for energizing said motor means with a signal indicative of the signal from said signal producing means; and means for measuring the direction and magnitude of rotation of said turntable relative to said base including a first member and a second member, said first member being mounted on said turntable for rotation therewith about said first axis, a second member mounted on said base adjacent to said first member, a plurality of opaque and clear sections disposed at substantially equal angular increments about one of said members concentrically with said first axis, a first and a second zone of opaque sections on the other of said members substantially identical in angular width and in spacing to said plurality of opaque and clear sections of said one of said members, said zones being offset from one another by one-fourth of the interval defined by an opaque section and an adjacent clear section, light sensitive means positioned adjacent to said other of said members, and light producing means adapted to illuminate simultaneously a plurality of said intervals on said one of said members.

3,041,884
POWER TAKE-OFF DRIVE FOR TRACTORS
Lee E. Elfes, Birmingham, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed Nov. 4, 1959, Ser. No. 850,910
4 Claims. (Cl. 74—15.86)



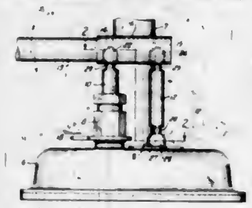
1. The combination in a tractor having a speed change transmission with a power input shaft driven from the tractor engine through a main clutch and a power delivery shaft for driving the rear traction wheels of the tractor, a power take-off shaft projecting at the rear of the tractor, an auxiliary shaft driven from the tractor engine independently of said main clutch, a sliding gear drive operable to establish a positive driving connection from the power delivery shaft to said power take-off shaft, a clutch operable to establish a driving connection from said auxiliary shaft to said power take-off shaft, through the medium of a series of coacting friction elements engageable while the auxiliary shaft is rotating, and manually operable control means including a hand lever effective in one position to engage said positively acting drive and disengage said friction clutch, effective in a second position to disengage both said drive and said clutch, and effective in a third position to disengage said positively acting drive and to engage said friction clutch.

3,041,885
BELLOWS
Clifford S. Christiansen, Port Clinton, Ohio, assignor, by mesne assignments, to Baldwin-Montrose Chemical Company, Incorporated (Baldwin Division) Pontiac, Mich., a corporation of Indiana
Filed May 11, 1959, Ser. No. 812,305
17 Claims. (Cl. 74—18.2)



1. A bellows for sealing a reciprocating rod or the like in an opening, comprising an elongated flexible relatively impervious member having alternating large and small diameter portions along the length thereof forming adjacent convolutions, air exhaust and intake means operably associated with said bellows around the outer edge of at least one of said portions of said flexible member to prevent undesirable deformations of said bellows on rapid collapsing and expanding thereof, and filter means relatively pervious with respect to said flexible member operably associated with said air exhaust and intake means to prevent foreign matter from entering said bellows through said air exhaust and intake means.

3,041,886
LEVER ASSEMBLAGE
Neil F. Atherton, Bayside, Wis., assignor to Applied Power Industries, Inc., a corporation of Wisconsin
Filed Feb. 19, 1960, Ser. No. 9,819
2 Claims. (Cl. 74—102)



1. A lever assemblage for use with a pump of the reciprocating piston type comprising, a lever having a manipulating handle and a fulcrum socket remote from the handle and also having a second socket located between the handle and the fulcrum socket, a load actuating rod having a spherical end pivotally cooperable with said second socket and being reciprocable by said lever to actuate the pump piston along a fixed axis, a link having a spherical end pivotally cooperable with said fulcrum socket and being universally swingable relative to said fixed axis, and a sleeve slidably embracing said lever and having therein an open ended slot coacting with said rod and a keyhole slot coacting with said link to maintain said spherical ends pivotally confined within said sockets when the sleeve is shifted along the lever.

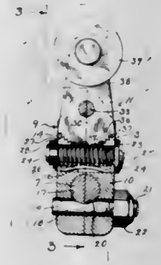
3,041,887
DRIVE SHEAVE
Erhard Zumbrunnen, Magliaso, Lugano, Switzerland, assignor to Viso S.A., Magliaso, Lugano, Switzerland
Filed Sept. 15, 1959, Ser. No. 840,039
Claims priority, application Switzerland Sept. 16, 1958
4 Claims. (Cl. 74—229)

1. The combination, with a transmission belt comprising a cord with equispaced spherical offsets thereon, of a drive sheave engageable by said belt and provided with equispaced peripheral depressions of general hemispherical configuration closely conforming to said offsets, the peripheral of said sheave being further provided with pairs of cord-supporting rectilinear portions extending in circumferential direction on opposite sides of respective



depressions, each pair of rectilinear portions being perpendicular to the sheave radius which passes through the center of the depression flanked thereby and lying at a level corresponding to that of the sheave-contacting surface of said cord at the point of its emergence from an offset received in said depression.

3,041,888
ADJUSTABLE ACTUATING ARM
William F. Dehn, Wauwatosa, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 2, 1960, Ser. No. 26,010
7 Claims. (Cl. 74—559)



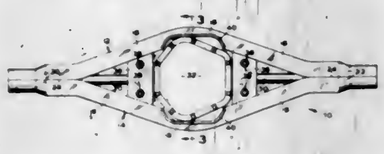
6. In a device having a rotatable control shaft, an actuating arm for said shaft comprising: a block having a body portion mounted on and pivotable about the control shaft and a bifurcated portion radially spaced from the control shaft and comprising spaced bifurcated parts defining a slot therebetween; means to clamp the body portion of the block securely to the control shaft in a selected position of rough angular adjustment with respect to the control shaft; a rotatable threaded adjusting shaft disposed within the slot; an arm portion disposed within the slot and pivotally mounted intermediate its ends on the bifurcated portion of the block outwardly from the adjusting shaft, said arm portion having an outer end extending away from the control shaft that is adapted to receive a sensing device and an arcuate inner end extending toward the control shaft with teeth thereon that are in meshing engagement with the adjusting shaft whereby rotation of the adjusting shaft causes the arm portion to be pivoted to move the outer end thereof to a position of fine angular adjustment with respect to the control shaft; and resilient means disposed within the slot and acting between the body portion of the block and the adjusting shaft to hold the adjusting shaft in a tight engagement with the teeth of the arm portion.

3,041,889
VIBRATION DAMPENER
Fred L. Haushalter, 2185 Scott Lake Road, Pontiac, Mich.
Original application Jan. 26, 1959, Ser. No. 789,027, now Patent No. 2,977,819, dated Apr. 4, 1961. Divided and this application May 2, 1960, Ser. No. 26,210
11 Claims. (Cl. 74—574)



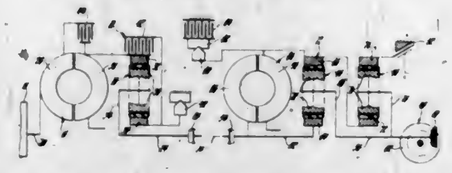
1. The combination with spaced apart inner and outer relatively rotatable members provided with opposed cylindrical surfaces concentric with the axis of rotation of said members and providing an annular space therebetween, a yieldable connection between said rotatable members disposed within said annular space and comprising a separate preformed composite insert including a relatively thin substantially annular metal strip within said annular space between and concentric with said cylindrical surfaces, and elastic material constituting vibration dampening means for said rotatable members bonded permanently in surface-to-surface relation to the radially opposite surfaces of said strip and disposed in surface-to-surface frictional engagement with the opposed cylindrical surfaces of said rotatable members, the radial width of the annular space aforesaid being less than the initial combined overall cross-sectional thickness of said strip and elastic material in the free state of said elastic material, whereby said entire insert is under compression between said cylindrical surfaces.

3,041,890
FRAME TYPE AXLE
Loren J. O'Brien, Grabill, Ind., assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Apr. 13, 1960, Ser. No. 21,974
1 Claim. (Cl. 74—607)



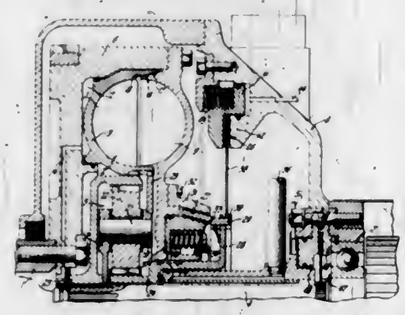
In a vehicle having wheel supports the combination comprising, an axle frame including upper and lower inwardly facing channel members spaced apart most widely at their medial portions and converging at their ends, each of said channel members having inwardly extending legs, which legs in the medial portion of said channel members are provided with a flanged portion thereby strengthening said members, the ends of said upper and lower channel members being fixedly connected and rounded thereby being adapted to receive wheel supports, a gear housing positioned between the medial portions of said channel members, and having opposed bosses thereon, a pair of shafts, with one being disposed in each of said bosses and extending outwardly from said gear housing and between said upper and lower channel members for transmitting power to the wheel supports, means suspending said gear housing between the medial portion of said upper and lower channel members including a pair of struts positioned on the sides of said gear housing and each strut having the ends thereof attached to inwardly extending legs of said channel members and reinforcing the same, a U-bolt carried by each of said struts and extending around a boss of said gear housing whereby power is transmitted from the gear housing through said shafts to the wheel supports independently of the loads imposed on said frame.

3,041,891
TRANSMISSION
Robert L. Black, Allen Park, and Sheldon E. Thorson, Ann Arbor, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 694,980
15 Claims. (Cl. 74—677)



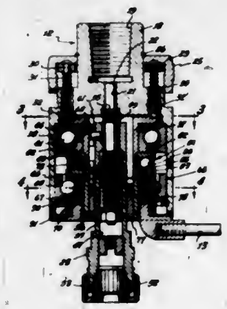
1. In a variable speed drive train for transferring drive between a vehicle engine and wheel driven axle gearing, the combination of a front transmission unit positioned immediately adjacent the engine and driven thereby, the front unit comprising a hydrodynamic torque transmitting device, means locking up the hydrodynamic torque transmitting device, and change speed gearing for providing a plurality of drive ratios therethrough, a rear transmission unit disposed in close proximity to the axle gearing for transmitting drive thereto, the rear unit including a hydrodynamic torque transmitting device and change speed gearing for furnishing a plurality of drive ratios therethrough, and a torque transfer member drive connecting the front and rear units, the front and rear transmission units being so correlated as to deliver drive to the axle gearing in a plurality of automatically attainable final drive ratios representing a combination of the drive ratios from each transmission unit.

3,041,892
TRANSMISSION
Hans O. Schjolin, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 25, 1956, Ser. No. 580,628
15 Claims. (Cl. 74—732)



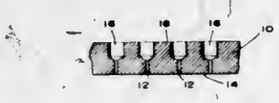
1. In a transmission having a drive shaft and a driven shaft; a hydrodynamic drive device including a pump connected to said drive shaft and a turbine; a first pressure actuated friction device for connecting said pump and said turbine; planetary gearing including an input element driven by said turbine, an output element connected to the driven shaft and a reaction element adapted to establish drive through the planetary gearing; a second pressure actuated friction device adapted to afford a direct connection between the pump of said hydrodynamic drive device and one of the elements of said gearing so as to provide one speed ratio through the gearing; a third pressure actuated friction device for holding said reaction element to provide drive through the gearing at a different speed ratio; a brake for retarding rotation of the driven shaft; a control system including a source of fluid under pressure for operating said pressure actuated friction devices; and control means for engaging said brake while disengaging said friction devices.

3,041,893
BALL-BEARING REVERSING TAPPING ATTACHMENT
Allan S. Johnson, Newport Beach, Calif. (845 W. 16th St., Costa Mesa, Calif.)
Filed July 24, 1959, Ser. No. 829,303
12 Claims. (Cl. 74—798)



1. In a reversible tool-holder having a driving component, a driven component, torque transmitting means for transmitting direct drive between said components torque transmitting members for transmitting torque in reverse direction between said components and means for selectively operating one or the other of said torque transmitting means, said reverse driving means comprising a ball race having balls and means comprising a thrust bearing interposed between the direct drive means and reverse drive means.

3,041,894
SPINNERETTE PRODUCTION METHOD
John A. Cupler II, Cupler Drive-La Vale, Cumberland, Md.
Filed Dec. 17, 1959, Ser. No. 860,152
7 Claims. (Cl. 76—107)

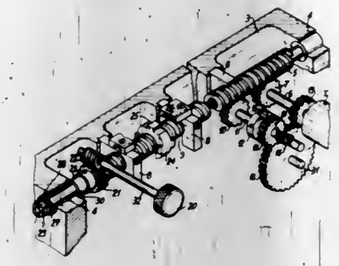


1. A method of producing stainless steel spinnerettes having high resistance to corrosion and a Brinell hardness number exceeding 250, comprising forming a capillary orifice through a surface of a heat hardenable stainless steel blank having an annealed Brinell hardness number below 250, and then heat hardening said blank to a Brinell hardness number exceeding 250.

3,041,895
MACHINE-TOOL OR MEASURING MACHINE
Germain Roliat, Geneva, Switzerland, assignor to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a corporation of Switzerland
Filed Dec. 8, 1958, Ser. No. 778,710
Claims priority, application Switzerland Dec. 30, 1957
6 Claims. (Cl. 77—4)

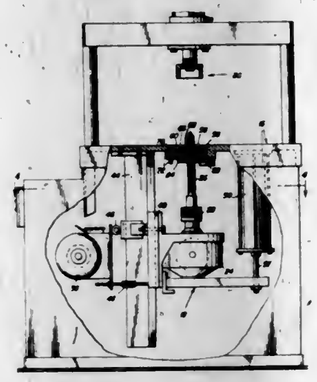
1. An indicating device for indicating the displacement of a support member of a machine comprising:

a screw carried by said support member and parallel thereto,
bearings rigidly fastened to said support member, said screw being journaled in said bearings,
a pinion driven in rotation upon longitudinal linear motion as well as upon rotary motion of said screw,



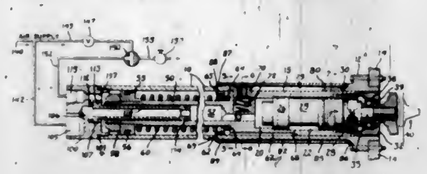
a synchronous transmitter of said indicating device having a rotary member driven by said pinion in angular displacement corresponding to the linear displacement of said support member,
and mechanical means for setting said indicating device to zero including means for engaging and rotating said screw.

3,041,896
INVERTED DRILLING MACHINE
George A. May, % May Machine Co., S. 7th St. at Vine, Lebanon, Pa.
Filed Oct. 25, 1960, Ser. No. 64,826
4 Claims. (Cl. 77—33.5)



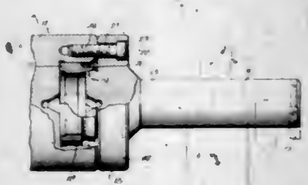
1. A drilling machine comprising, frame means, table means mounted horizontally on said frame means, vertical rail means suspended downwardly from said table means, carriage means slidably mounted on one vertical side of said rail means below said table means, drill spindle means rotatably mounted in said carriage means and extending upwardly therefrom through said table means, variable ratio flexible drive means operatively connected to said carriage means for movement therewith on a side of the rail means opposite said one side and drivingly connected to said spindle means for rotation thereof, hydraulic feed means directly mounted on said table means in parallel spaced relation to said one side of the rail means and operatively connected to said carriage means for upwardly feeding said rotating drill spindle means through work located in spaced relation above the table means.

3,041,897
AUTOMATIC MACHINE TOOL
Eugene Linsker, Dayton, Ohio, assignor to Buckeye Tool Corporation, Dayton, Ohio, a corporation of Ohio
Filed Apr. 8, 1959, Ser. No. 804,993
5 Claims. (Cl. 77—33.5)



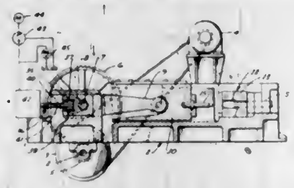
1. A power tool of the character described comprising a tubular casing having mounting means adjacent one end thereof, a piston in said casing defining therewith a linear action fluid motor, a hollow piston rod extending from said piston toward said one end of said casing, a hollow headpiece supported for sliding movement in said one end of said casing and secured to said piston rod for movement therewith, passage means connecting the interiors of said piston rod and said headpiece, a rotary fluid motor mounted in said headpiece and adapted to receive a supply of motive fluid through said passage means, means for mounting a cutting tool for rotation by said rotary motor and for linear movement with respect to said one end of said casing together with said piston rod and said headpiece, a fitting at the other end of said casing including means for supplying pressure to said linear action motor and said rotary motor selectively from separate sources and from a commonly controlled single source, a bulkhead dimensioned to fit within said casing in surrounding relation to said piston rod defining a variable volume chamber with said piston on the opposite side thereof from said fitting, and means for supporting said bulkhead in fixed position within said casing including a passage adapted for connection to supply operating fluid to said chamber and to convert said linear action motor from single-acting to double-acting type.

3,041,898
TOOL CENTERING DEVICE
Bernard R. Better, Chicago, Ill., assignor to Scully-Jones and Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 9, 1958, Ser. No. 707,940
1 Claim. (Cl. 77—58)



Means for mounting a tool holder in rigid and centered relation on a spindle or like member of a machine tool or the like, comprising a tool holder having a tapered rigid surface and a second rigid surface, a tapered, thin-walled, resiliently yieldable surface on said spindle member matable with said tapered surface of the tool holder for centering thereof on the spindle member, a rigid second surface on the spindle member engageable by said second tool holder surface, and means for securing the tool holder on the spindle member with said tapered surfaces matingly engaged to dispose the holder coaxially of the spindle member and with said second surfaces in rigid engagement for rigidifying the holder, said tapered, thin-walled, resiliently yieldable surface being provided on a ring-like element having a press fit in a recess of the spindle.

3,041,899
RELIEF MEANS FOR PREVENTING INTERRUPTION OF THE FORMING CYCLE OF AN UPSET FORGING MACHINE DUE TO OVERLOAD OF GRIPPER DIE
William Leroy Benninghoff, Waite Hill Road, Willoughby, Ohio
Filed Aug. 22, 1958, Ser. No. 756,557
1 Claim. (Cl. 78—13)



In an upset forging machine including a frame, a gripper die mounted therein and having laterally separable parts, holding means for holding the parts in closed gripping relation to a length of stock and resisting separation of the parts with a predetermined holding force, a header slide, an upsetting tool carried thereby and arranged to enter and cooperate with the gripper die to upset and form metal stock upon movement of the slide on its facing stroke, a power driven drive shaft, force transmitting means, including a pitman and crankshaft, connecting the drive shaft and slide for driving the slide through a complete cycle including a forming stroke and a return stroke, said force transmitting means including a yieldable lost motion fluid pressure device operable to relieve and reduce the driving force applied to the slide by the force transmitting means when the gripper die opening force created by the cooperation of the tool and stock is less than, but has approached, said holding force, and to maintain said driving force at reduced value while affording continued operation of the force transmitting means throughout the remainder of a forming cycle, a movable support for the crank shaft supporting the crank shaft for movement transversely of its axis generally toward and away from the gripper die, said force transmitting means including a main driving gear on the drive shaft drivingly engaging a main driving gear on the crank shaft, the axes of said gears defining a plane at approximately right angles to the direction of the movement of the support, said support being carried by the frame and supported thereon for rocking movement about the axis of the drive shaft, and said device being operatively connected to the support for yieldably opposing said rocking movement of the support in the direction wherein the crank shaft is movable away from the die.

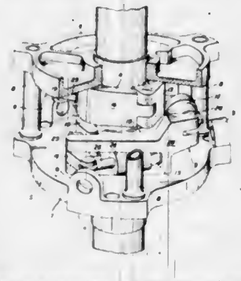
3,041,900
FIN STRAIGHTENING COMB
William Wagner, North Miami Beach, Fla. (1020 E. 15th St., Hialeah, Fla.)
Filed Jan. 19, 1960, Ser. No. 3,437
2 Claims. (Cl. 81—15)

1. A heat exchanger fin-straightening comb of the character described, said fin-straightening comb being adapted to be pulled along a plurality of fins in order to straighten them, said fin-straightening comb comprising a pull handle and a plurality of axially and laterally projecting fins provided at one end of said handle, said fins being substantially uniform in thickness and occupying uniformly spaced parallel planes, said fins having trapezoid shaped side faces with a wide base at the forward end of each fin and a slanted side edge extending out of the plane of the hnadle and meeting the base at an acute angle so as to provide a laterally extending pointed wedge for entering between the heat exchanger fins with the



side surfaces thereof in engagement with the distorted heat exchanger fins to straighten them by a longitudinal combing stroke.

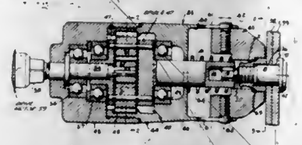
3,041,901
MAKE-UP AND BREAK-OUT MECHANISM FOR DRILL PIPE JOINTS
Richard N. Knights, Hucclecote, England, assignor to Dowty Rotol Limited, Cheltenham, England, a British company
Filed May 16, 1960, Ser. No. 29,274
Claims priority, application Great Britain May 20, 1959
6 Claims. (Cl. 81—53)



1. A break-out mechanism of the kind referred to comprising an upper pipe gripping jaw assembly and a lower pipe gripping jaw assembly, mounting means interconnecting said assemblies to provide for relative turning movement of one assembly with respect to the other substantially about the pipe axis, a lug formed on the upper jaw assembly in a position displaced towards the lower jaw assembly, a lug formed on the lower tong assembly in a position offset towards the upper jaw assembly, both said lugs being transversely separated in a common plane to which the pipe is perpendicular, and a hydraulic actuator pivotally interposed between said lugs to effect relative turning movement of the jaw assemblies.

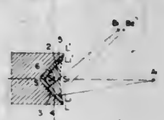
3,041,902
MOTOR OPERATED HAND TOOL FOR SETTING FASTENERS
George S. Wing, Palos Verdes Estates, Calif., assignor to Hi-Shear Rivet Tool Company, Torrance, Calif., a corporation of California
Original application May 27, 1957, Ser. No. 661,874. Divided and this application July 13, 1959, Ser. No. 826,808
4 Claims. (Cl. 81—56)

1. A tool for tightening a threaded fastener of the type wherein a collar is threaded onto a threaded pin, comprising: a cage having an axis of rotation and an inner cavity, a ring gear having inwardly directed gear teeth within said cavity attached to said cage and centered on the said axis of rotation, a wrench carrying fastener-engaging surfaces, a spider member, a central drive gear member, said members and wrench having a common axis of rotation coincident with the axis of rotation of the cage, a planetary gear journaled only by said spider, and interconnecting the drive gear and the ring gear, a drive shaft, a socket carried by said cage for rotation therewith, and collar-



engaging surfaces within the socket and surrounding the wrench, one of said members being attached to said wrench, and the other of said members being attached to said drive shaft, the cage, wrench, and planetary gear being freely rotatable relative to structure exterior of the tool.

3,041,903
METHOD OF MANUFACTURING (BRASSIERE) CUPS
Maurice M. Rousseau, 41 Rue de la Tranchee, Poitiers, France
Filed Aug. 28, 1957, Ser. No. 680,792
Claims priority, application France Mar. 6, 1957
6 Claims. (Cl. 82—1)

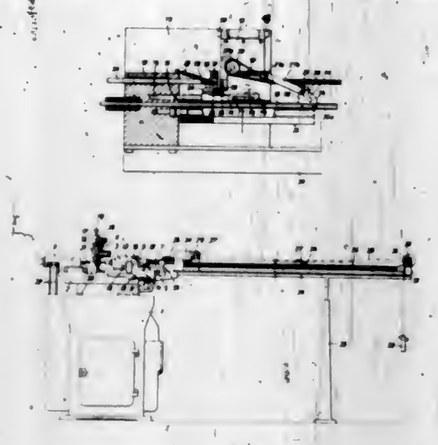


1. A process for the manufacture of a brassiere padding from a soft deformable mass of material comprising, rotating said mass on an axis, penetrating said mass with a curved cutting tool to form a first concave surface of revolution, then penetrating said mass again with said tool to generate a second concave surface of revolution continuous with said first to form in part a tapered peripheral edge of said padding, then moving the tool in said axial direction and penetrating said mass a third time and rotating said mass to generate a convex surface of revolution extending from said edge to an apex coincident with said axis and adapted to form the outer surface of said padding.

3,041,904
AUTOMATIC LATHE
Léon Konrad, Evilard, Switzerland, assignor to Usines Tornos, Fabrique de Machines Moutier S.A., Moutier, Switzerland, a joint stock company of Switzerland
Filed Nov. 5, 1959, Ser. No. 851,185
Claims priority, application Switzerland Nov. 6, 1958
6 Claims. (Cl. 82—2.7)

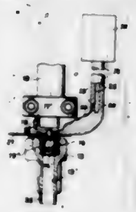
1. In an automatic lathe, the combination of: a sleeve; a sliding head stock arranged for catching a stock bar, driving said stock bar in rotation, feeding the same through said sleeve, releasing it, moving back and catching it again; a guiding device behind said head stock to guide and support stock bars fed thereby; pushing means arranged for bearing against the rear end of stock bars fed by said head stock, and for preventing said stock bars from any backward motion when the head stock releases them and moves backward; a servo-motor exerting a predetermined thrust on said pushing means both for causing said pushing means to bear against the rear end of stock bars fed, and for pulling them back to a rearmost position when one of said stock bars has been worked out; means arranged for connecting said pushing

means to stock bars fed with respect to axial motion; and means arranged for transmitting the backward motions



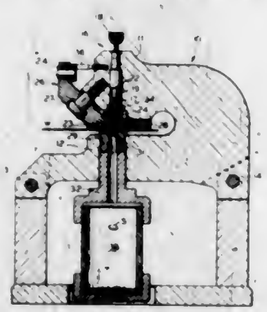
of said head stock to said pushing means when the latter are in their foremost position.

3,041,905
COOLING, LUBRICATING, AND CHIP REMOVING SYSTEM FOR NIBBLING MACHINES
Gerhard Gabriel, Waiblingen, Germany, assignor to Trumpf & Co., Stuttgart-Weilimdorf, Germany
Filed July 23, 1958, Ser. No. 750,452
Claims priority, application Germany July 31, 1957
7 Claims. (Cl. 83—100)



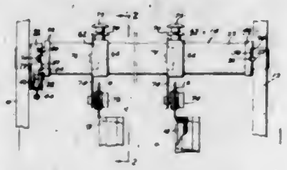
1. A stamping machine of the character described comprising, in combination: a frame having an upper portion and a lower portion; an elongated vertically reciprocable shearing member connected to said upper portion and a second shearing member supported by said lower portion beneath said reciprocable shearing member, said members having cooperating shearing edges adapted to cut chips out of a work sheet interposed therebetween, and said second shearing member having a vertical bore for reception of a part of said reciprocable shearing member fitting with cutting clearance in said bore when said reciprocable shearing member is reciprocated in a direction toward said second shearing member whereby said shearing edges cut a chip out of said work sheet and cause the chip to enter said bore, said elongated reciprocable shearing member alternatively opens and closes said bore during its reciprocation; holding means for said work sheet connected with one of said portions and having at least one channel leading toward the shearing edge of said second shearing member; a source of lubricating liquid connected with said holding means for supplying lubricating liquid into said channel; and means operatively connected with said second shearing member for creating vacuum in said bore, the machine operating in such manner that, when said reciprocable shearing member is reciprocated in a direction away from said second shearing member, said last mentioned means draws air and lubricating liquid into said bore for cooling and lubricating said second shearing member and for withdrawing the chips from said bore.

3,041,906
EXPLOSIVE HOLE FORMING APPARATUS
Charles B. Gilman, Cheshire, Conn., and Charles J. De Caro, Brecksville, Ohio, assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Aug. 14, 1959, Ser. No. 833,838
2 Claims. (Cl. 83—177)



1. A fixture operative to form holes in sheet metal stock explosively comprising a frame having a generally C-shaped configuration and including an anvil element and a head element, a die having an aperture movably mounted in the anvil element, said aperture having a predetermined configuration in cross-section, a firing mechanism mounted in the head element, a turret carrying a plurality of axially movable cartridge chambers rotatably mounted in the head element, said turret being rotatable about an axis which forms an acute angle with respect to the horizontal, said turret being operable in step-by-step fashion to move a cartridge chamber into alignment with the die and the firing mechanism so that the firing mechanism is operable to actuate a cartridge disposed in the chamber, said chamber when in alignment with the firing mechanism being spaced from said die so as to receive a sheet of metal stock therebetween, means for moving the die towards the chamber effective to clamp the metal stock rigidly between the die and the chamber to create a gas seal, said chamber being buttressed by the head element whereby the turret is free of clamping stress actuation of said cartridge being effective to blow an opening in the sheet metal, said opening having a cross sectional configuration corresponding to the cross section of the aperture formed in the die.

3,041,907
SLITTER MECHANISM
William Gallagher, Jr., Grenloch Terrace, N.J., assignor to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey
Filed Feb. 21, 1961, Ser. No. 90,882
7 Claims. (Cl. 83—482)



1. In a slitter for slitting paper webs by advancing a web between upper and lower opposed overlapping spring-pressed knives, a mechanism for engaging and disengaging the knives to allow introduction of a web therebetween comprising a center tube mounted in said slitter, an outer tube rotatably and slidably mounted over said center tube, means securing the upper knives to said outer tube, and means providing selective and sequential lateral and rotational actuation of said outer tube including a cam ring secured on one end of said outer tube defining a plurality of circumferentially arrayed steps extending axially therefrom, camming means operable for coacting with said steps for laterally moving said outer tube to provide an axial positioning of the upper knives and to provide a limited rotation of said outer tube for radial movement of the upper knives, means resiliently biasing said steps against said camming means, and means limiting rotation of said outer tube.

3,041,908
CUTTING APPARATUS FOR SHEET MATERIAL
Edward T. Dubats, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 13, 1957, Ser. No. 677,889
2 Claims. (Cl. 83—568)



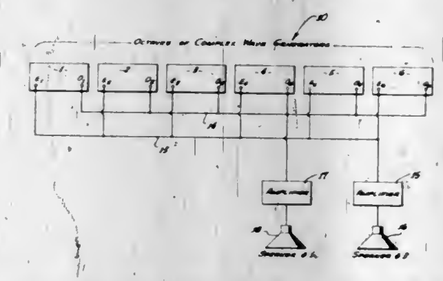
2. An apparatus for cutting sheet material comprising a base, a depressible table hinged at one end to the base, a first cutting blade mounted rigidly on the opposite end of the table in spaced relation thereto and substantially parallel to the base, means for guiding sheet material between the top of the table and the first blade, a second blade mounted pivotally on the base and urged resiliently into cutting relationship with the first blade, resilient means normally urging the table upwardly to hold the blades out of cutting engagement, a rigid stabilizer frame interconnecting the base and the table, one end of the stabilizer frame being mounted pivotally on the base about an axis parallel to the axis of pivoting of the table and intermediate said ends of the table, the opposite end of the stabilizer frame being provided with a pair of slide projections, and guide means secured to the underside of the table along the opposite sides and adjacent said opposite end of the table, the guide means being for guiding the slide projections along said opposite sides to allow pivoting of the table as the table is depressed, so that the stabilizer frame provides support for the opposite sides of the table along said opposite end of the table to preclude twisting of the table to maintain the first blade substantially parallel to the base.

3,041,909
ELECTRONIC PIANO
Benjamin F. Miessner, Harding Township, Morris County, N.J., assignor, by mesne assignments, to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed July 23, 1957, Ser. No. 673,725
9 Claims. (Cl. 84—1.14)



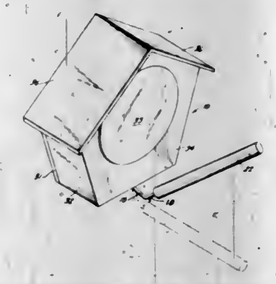
1. For use in a musical instrument, an electric tone generator comprising in combination, a vibratory reed, mounting means supporting said reed at one end thereof so that the reed cantilevers freely away from the mounting means, said reed being shaped in transverse section to substantially restrict vibration of the reed to a path parallel to a single plane of vibration extending longitudinally along the reed, mechanical impulse exciting means coacting with said reed to impulsively excite the latter for free vibration in said path, means on said reed located a substantial distance from said one end thereof and defining a thin tone generating edge exposed toward said one end of the reed and extending laterally with respect to the reed at a substantial angle to said plane to be carried by the reed through a path which is cyclically moved toward said one end of the reed by upper partial vibration of the reed, and an electrical pickup defining a pickup face confronting said tone generating edge in generally conforming relation thereto to be vibrationally passed by said edge upon vibration of the reed.

3,041,910
ELECTRICAL CIRCUIT ARRANGEMENT FOR COMPLEX WAVE GENERATORS
Donald J. Leslie, % Electro Music, 313 S. Fair Oaks Ave., Pasadena, Calif.
Filed Jan. 29, 1959, Ser. No. 789,968
3 Claims. (Cl. 84—1.22)



1. In an electronic organ system or the like: a set of generators for producing impulses corresponding to musical notes in a range of several octaves; means providing a pair of separate electrical channels in one of which substantially only fundamental impulses and all odd harmonics from all of the generators exist, and in the other of which substantially only even harmonics from all of the generators exits; and separate transducers for the respective channels.

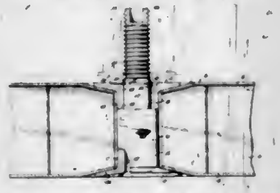
3,041,911
BIRD OPERATED MUSIC BOX
Michael Marder, New York, N.Y.
Filed Feb. 29, 1960, Ser. No. 11,931
4 Claims. (Cl. 84—94)



1. A bird operated music box assembly comprising a vertically arranged base; a music box mounted on said base, said music box having a rotatable governor or the like, said governor or the like having arms; a bird perch pivotally mounted on said base, said perch having an

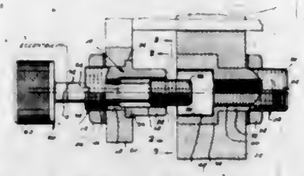
outwardly extending perch portion and having operatively associated therewith a blocking member movable from a blocking position in the path of rotation of said governor or the like to an inoperative position out of said path when a bird is on said perch; and a spring operatively connected to said base normally urging said blocking member into said path of movement of said governor or the like.

3,041,912
HONEYCOMB SPACER STUD AND INTERLOCKING GROMMET
David B. Kreider and Fred M. Delgadillo, Santa Ana, Calif., assignors to Shur-Lok Corporation, Anaheim, Calif., a corporation of California
Filed Nov. 25, 1958, Ser. No. 776,346
3 Claims. (Cl. 85—1)



1. In a fastener for anchorage in a through opening in a sandwich panel embodying spaced parallel skin sheets and a low density honeycomb core: a spacer including at one end a head adapted for compressive engagement with one of said skin sheets, a stem adjoining said head, adapted to extend into said opening, and terminating in an annular abutment shoulder, and a reduced neck extending coaxially from said shoulder, the combined length of said stem and neck being approximately equal to the thickness of said panel, a frusto-conical expander mandrel, having a taper of less than 15° with reference to the spacer axis, and having a larger end integrally joined coaxially with the end of said neck, and a threaded stud integrally joined to the smaller end of said mandrel and projecting coaxially therefrom, the larger diameter of said mandrel being approximately equal to that of said neck and the smaller diameter thereof being approximately equal to the outer diameter of said threaded stud, said spacer having an annular groove defined between said larger end of the mandrel and the adjacent end of said reduced neck, the respective side margins of said groove being defined by the respective end margins of said larger end of the collar and said stem; and a grommet comprising a circumferentially continuous cylindrical collar having a bore of a diameter as to snugly but freely receive said neck, having an inner end to seat against said annular abutment shoulder, and having at its outer end an annular head including a circumferentially continuous annular lip projecting radially inwardly from the wall of said bore and axially spaced from said inner end of the collar at a distance such as to be received in said annular groove when said inner end is seated against said abutment shoulder, thereby locking the grommet to said spacer, said annular head being positioned for compressive engagement with the other of said skin sheets around said opening when the grommet is thus locked to the spacer, said lip having an axial width just slightly less than that of said groove, having an inner diameter slightly smaller than the larger end diameter of said mandrel and at least as large as the outer diameter of said threaded stud, whereby said grommet may be freely slid over said threaded stud until said lip engages said expander mandrel, and whereby said grommet may then be forced axially over said mandrel, with said lip being expanded by said mandrel positively positioned in acurate registration therewith by the piloting action of said neck in said collar until it passes the larger end of said mandrel and drops into said groove.

3,041,913
ECCENTRICALLY ADJUSTABLE FASTENER
George W. Liska, West Covina, Calif.
Filed May 7, 1959, Ser. No. 811,613
2 Claims. (Cl. 85—1)



1. A fastener comprising a first part having a circular socket which opens at one end through one end of the part and a threaded shank at the other end of the part on an axis eccentric to the axis of said socket, a second part having a pin at one end slidably inserted in said socket and a threaded shank at the other end on an axis eccentric to the axis of said pin, said pin being insertable into and removable from said socket through said one end of the socket and said threaded shank on the second part extending beyond said one end of the first part in a direction away from the threaded shank of the first part, a clamp screw for releasably securing said pin in said socket including a stem extending loosely through a central opening in said second part on the axis of said pin and having a threaded inner end threaded in the first part and an enlarged head on the outer end of said stem beyond said other end of said second part, and a nut threaded on each shank.

3,041,914
DELAY FUSE ELEMENTS FOR DELAY ELECTRIC DETONATORS AND DELAY ELECTRIC DETONATORS CONTAINING THEM
Owen Allen Gurton, Fairlie, and Robert Walter Moody, West Kilbride, Scotland, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain
Filed Feb. 2, 1959, Ser. No. 790,409
Claims priority, application Great Britain Feb. 19, 1958
4 Claims. (Cl. 86—1)



1. A method for the production of nonincendive delay fuse elements, comprising the steps of; assembling at least three straight cylindrical ductile metal tubes containing axial cores of delay fuse composition within a cylindrical casing of said ductile metal in a generally parallel relationship, said tubes being disposed symmetrically about the longitudinal axis and close to the inner surface of said casing; inserting a core of said metal into the axial space of said assembly whereby said cylindrical tubes surround the same, said axial metal core being of a size sufficient to substantially fill said axial space and having an outer surface of a shape to maintain the tubes in symmetrical relationship about said axis; drawing the assembly to reduce its diameter to a predetermined value, to render substantially continuous the metal of said tubes, said axial core, and said casing, and to distort the cores of said tubes into a non-circular cross-section, said distorted cores remaining separated from one another

by the metal tubes and the axial metal core, said core being in the form of an interrupted ring having a substantial thickness of the metal on at least one of its boundaries.

3,041,915
PROCESS FOR THE MANUFACTURE OF NET-LIKE STRUCTURES FROM SYNTHETIC FIBERS
Kaspar Ryffel, Domat-Ems, Graubunden, Switzerland, assignor to Inventa, A.G. fur Forschung & Patentverwertung, Zurich, Switzerland
Filed June 4, 1958, Ser. No. 739,691
Claims priority, application Switzerland July 27, 1957
2 Claims. (Cl. 87—12)



1. A process for the manufacture of net-like structures having tight and slide-resistant knots, made of polycaprolactam fibers containing low-molecular constituents and having angular cross section, which comprises extruding said polycaprolactam into fibers and quenching them into an oily liquid, knotting the fibers into a net, and subjecting the net to a tension of approximately 1 kg. for approximately 5 minutes.

3,041,916
AFOCAL OPTICAL DEVICE HAVING A MOUNTING PROVIDING PROTECTION AGAINST DANGEROUS RADIATION
Serge Clavé and Marcel Clavé, both of 9 Rue Olivier-Metra, Paris, France
Filed Mar. 11, 1960, Ser. No. 14,330
Claims priority, application France Mar. 13, 1959
6 Claims. (Cl. 88—1)



1. An afocal optical device having a mounting adapted to protect an observer's zone against dangerous radiation emanating from a source thereof separated from said zone by a radiation-proof wall, said mounting comprising a tube extending through said wall and provided with a plurality of radiation blocking screens extending part way across said tube, alternate screens being attached to opposite sides of said tube to provide a zig-zag passage therebetween, an even number of cylindrical mirrors and a set of plane mirrors cooperating with the cylindrical mirrors to direct an entering beam of light around the turns of this passage, consecutive cylindrical mirrors being axially spaced by a distance substantially equal to $\frac{1}{2}(R_1+R_2)\cos i$, where R_1 and R_2 indicate the radii of curvature of said cylindrical mirrors and i indicates the angle of incidence of at least one of said plane mirrors being located at the end of said device nearest said radiation source and being pivotally mounted to permit a selection of the beams of light to be reflected by it onto the next mirror.

3,041,917
UNDERWATER INSTRUMENT VIEWING DEVICE
Jack E. Glatt, Park Ridge, Ill., assignor of one-third to William L. MacShane, Rolling Meadows, Ill.
Filed Sept. 24, 1959, Ser. No. 842,131
5 Claims. (Cl. 88—1)

1. A viewing mechanism for an underwater instrument comprising a housing, an instrument mounted within said housing and having a dial for reading directed upwardly therefrom, a prism mounted directly over the dial of the instrument and the housing covering the back side of the prism and forming a water-tight enclosure therearound,



said housing spaced from the back side of the prism and defining an air pocket between the prism and the housing to avoid any neutralizing or cancelling effect of the prism when the instrument is immersed in water.

3,041,918
BLOCK TYPE ALBADA FINDER WITH CURVED PICTURE FRAME
Friedrich Papke, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Mar. 18, 1959, Ser. No. 800,169
Claims priority, application Germany Mar. 22, 1958
13 Claims. (Cl. 88—1.5)

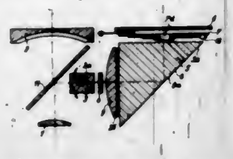


1. In an "Albada" type finder for photographic cameras including a front lens having an inner concave surface provided with a semi-transparent mirror, a picture defining frame disposed in substantially the focal plane of the mirror for imaging of the frame by the mirror at substantially infinity, a central light permeable block having an outer surface, in superposed relation with said concave inner surface, and an inner surface, and an ocular lens at the inner end of said block, the picture frame being disposed at the junction of said block and said ocular lens: the improvement comprising said ocular lens having a substantially rectangular and plane surface area cemented to the inner surface of said block and substantially perpendicular to the optical axis of the finder; an open rectangular frame supporting zone peripherally bounding and contiguous to said surface area and non-planar with said surface area, said zone comprising zone surfaces sloping laterally outwardly from the edges of said surface area and toward the insight end of said ocular lens, and intersecting at rectilinear diagonals extending between the corners of said surface area and the outer corners of said zone, each of said zone surfaces being convexly arched longitudinally thereof between said diagonals in such manner that the laterally outer edge of each of said zone surfaces is convex toward the plane of said surface area; and a frame of light reflective material substantially covering the surfaces of said zone facing said mirror.

3,041,919
COMBINED RANGE AND VIEW FINDER
Carl Baur, Baldham-Kolonie, and Georg Konigl, Munich-Pasing, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Dec. 10, 1957, Ser. No. 701,830
Claims priority, application Germany Dec. 20, 1956
5 Claims. (Cl. 88—2.4)

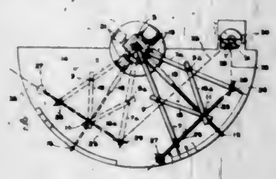
1. In a combined range and view finder, in combination, view finder means having an ocular; range finder means cooperating with said view finder means and in-

cluding an objective having a lens of negative refraction power and a second unifocal lens of positive refraction power, said objective together with said ocular providing the same degree of afocality and magnification as said view finder means, and said second lens having a range finding portion which participates in the range finding



function of the range finder means and a collimating portion located beyond said range finding portion; and frame image means cooperating with said range finder means and ocular for producing a framing image, said collimating portion of said second lens and said ocular cooperating to act as a collimator for said frame image means and said frame image means being located at a substantial distance from said second lens.

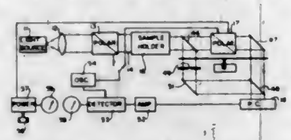
3,041,920
SPECTROSCOPIC COMPUTER
Donald O. Landon, Summit, N.J., assignor to Spex Industries, Inc., Scotch Plains, N.J., a corporation of New York
Filed Apr. 4, 1960, Ser. No. 19,930
1 Claim. (Cl. 88—14)



In a spectroscopic computer, a computer base, a light source and a slit movably mounted on said base, two arms of equal length each having one end connected to a common pivot on said base, an optical grating carried at the other end of one of said arms and an exit slit carried at the other end of the other of said arms, two additional arms each having one end pivotally connected to the center of one of said two arms and another end commonly, pivotally connected to a drive element, a drive rod connected to said drive element and to a counter, a reversible power source connected to said drive rod, a rod pivotally connected to another end of one of the first said arms and slidably connected to said drive element, said first two and last said rod forming the sides and base of a triangle respectively; whereby, upon activation of said power source, the length of the base of said triangle is changed such that the wavelength of the light diffracted through said exit slit is proportional to the sine of the angle of incidence of the light on said grating plus the sine of the angle between the base and the side of the triangle formed by the arm carrying said grating, and means for recording variations in said diffracted beam.

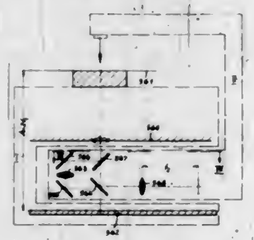
3,041,921
POLARIMETER APPARATUS
Edward G. Pickels, Atherton, and George K. Turner, Palo Alto, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Nov. 17, 1958, Ser. No. 774,323
7 Claims. (Cl. 88—14)

1. A polarimeter for measuring the optical rotation characteristics of a sample comprising a source of light, a first polarizer for plane polarizing the light, means for mounting said polarizer, a sample holder disposed whereby the plane polarized light travels through the sample contained in the holder, analyzing means comprising a second polarizer, means for mounting said second polarizer, means for dithering one of said polarizers through a small angle at a predetermined frequency,



the mounting of said dithered polarizer having a resonant frequency substantially equal to the dither frequency, means for receiving the light transmitted by the second polarizer and forming an output electrical signal, and means for receiving said electrical signal and forming an output signal indicative of the rotation imparted to the polarized light by the sample.

3,041,922
OPTICAL DEVICE FOR A CORRECT ADJUSTMENT AND READING OF THE SLIDABLE DISPLACEMENT OF A CARRIAGE IN A MACHINE
Kurt Räntsch, Wetzlar, Germany, assignor to M. Hensoldt & Söhne Optische Werke A.G., Wetzlar, Germany
Filed Mar. 5, 1959, Ser. No. 797,381
Claims priority, application Germany Mar. 8, 1958
15 Claims. (Cl. 88—14)



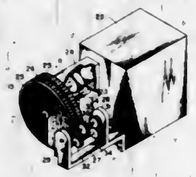
1. In an optical device for accurately adjusting and reading the amount of displacement of a rectilinearly slidable workpiece table in a machine, such as a machine tool, linear measuring device and the like having a surface defining a measuring plane, a frame, a horizontally slidable table, a horizontal guide way for said table, another horizontal guide way for said first mentioned guide way and extending at right angles to the latter and arranged on said frame for rectilinear movement, a horizontally disposed measuring grid arranged in a plane parallel with said table and spaced therefrom a predetermined distance, a reading device mounted on said frame and having a reticle, optical means mounted on said frame for projecting a portion of said measuring grid onto said reticle of the reading device, said optical means including self-compensating prismatic and reflecting optical elements which retain their position when owing to inaccuracies in said guideways said slidable table is tilted in one or both directions of said guideways and compensate the deflection of the measuring rays in both rectilinear directions, said prismatic and reflecting optical elements causing the projection by reflection of a portion of the measuring plane and a portion of said measuring grid in superimposition onto said reticle, said portions of the measuring plane and measuring grid respectively being arranged a predetermined distance in vertically spaced relation one above the other in said frame, and said grid being arranged a predetermined spaced distance from said optical means.

3,041,923
STRESS PHOTOMETER
Franz T. Geyling, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 14, 1959, Ser. No. 859,183
3 Claims. (Cl. 88—14)



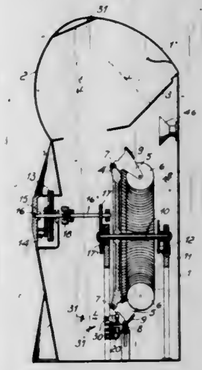
1. In combination a solid structural body transparent to light, means for physically loading said body, means for illuminating said body with light having a given plane of polarization, an optical device having a polarization plane transverse to the light energy propagation direction and normal to said given plane positioned in the path of light transmitted through said body, and means for gathering data on circular contours from the resulting photoelastic stress pattern, said gathering means comprising a circular disc having graduations in rotational degrees marked about its periphery, a hollow cross member rotatably mounted on a shaft joining said disc at its center point, a light energy reflecting screen having a radial slit extending from its center to a point on its circumference attached to said cross member and rotatable about said shaft with said cross member, and a light intensity sensing device slidably mounted within said cross member with the light admitting aperture of said device positioned in said slit, said light sensing device being adapted for positioning at any location along said slit.

3,041,924
MOTION PICTURE CAMERA FOR OPTICAL PYROMETRY
Herbert Kurt Strass, Newport News, Va., assignor to the United States of America as represented by the Administrator of National Aeronautics and Space Administration
Filed Nov. 18, 1959, Ser. No. 853,983
3 Claims. (Cl. 88—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



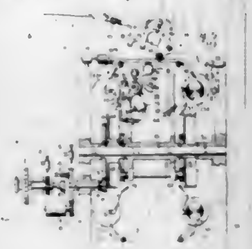
1. A recording optical pyrometer comprising the combination of a high speed motion picture camera having a lens and a filter arrangement comprising a pair of identical circular filter discs, said filter discs being mounted to centrally rotate about a common axis parallel with the sight axis of the lens and offset therefrom a distance greater than the distance between said sight axis and the periphery of said lens, the radius of said discs being greater than the distance between said common axis and the portion of said lens farthest therefrom, each disc exhibiting a continuously linearly varying transmission density characteristic as a radial line completely traverses a planar surface thereof, the arrangement of said identical circular filter discs each to the other being such that the density gradients of the two filter discs increase in opposite angular directions, said discs being contrarotatable for uniformly linearly varying the intensity of illumination admitted therethrough to said lens, and means connecting the drive mechanism of said camera with said discs for rotating said discs at equal velocities in angularly opposite directions at a rate to produce one complete revolution of each of said discs during the exposure of a predetermined plurality of frames of film within said camera.

3,041,925
APPARATUS FOR THE AUTOMATIC PROJECTION UPON SELECTION OF SOUND FILMS
Vincenza Bavaro, Milan, Italy, assignor to Societa A.R.L.M.G.S.-Moviesbox General System, Milan, Italy, a corporation of Italy
Filed Oct. 11, 1960, Ser. No. 61,874
Claims priority, application Italy Oct. 15, 1959
11 Claims. (Cl. 88—16.2)



1. An apparatus for the automatic projection of a sound film selected from a plurality of sound films, comprising a housing, a film collector including a plurality of movable film carrying elements, means for moving said film carrying elements from an inoperative position into an operative position, said film collector including further an immovable optical system adapted to cooperate with each of said sound films disposed in said respective film carrying elements upon moving the latter into operative projection position, said optical system including a light source and a plurality of reflection mirrors disposed in said housing, a screen disposed in said housing and a window forming part of said housing and disposed opposite said screen to permit viewing of said screen from outside of said housing, the last one in the series of said plurality of mirrors being disposed in said housing to reflect a light beam substantially perpendicularly onto said screen, a magnetic head in synchronism with said optical system, coin receiving means in said housing, manually operated film selecting means, a shaft having two parts, a coupling connecting said parts, electric driving means for operation of said film carrying elements, an electromagnet, a circuit including said electric driving means and said electromagnet, the latter rendering operative said coupling in response to the insertion of a coin into said coin receiving means, each of said film carrying elements comprising a box receiving the corresponding of said sound films and disposed laterally with respect to the corresponding of film carrying elements, means for winding and unwinding, respectively, each of said films in the operative position thereof within the range of said optical system for projection and sound-production of said film, and guiding and tensioning rollers in said box to feed said film past said optical system.

3,041,926
AUTOMATIC PLURAL FILM PROJECTION APPARATUS
Pietro Granelli, Rome, Italy, assignor to Società Internazionale Fonovisione, Rome, Italy, an Italian company
Filed July 5, 1960, Ser. No. 40,911
Claims priority, application Italy July 10, 1959
6 Claims. (Cl. 88—17)



1. A machine for selectively projecting a plurality of films, said machine comprising, in combination, a plurality of feed reels, a plurality of take-up reels, means rotatably supporting said feed reels and said take-up reels in pairs with each of said feed reels having a corresponding alined take-up reel, each pair comprising a feed reel adapted to carry a separate wound film and a take-up reel having a core adapted to hold an end of said film; a selector device comprising a manually actuated knob, a numbered disc connected with said knob and means connected with the first-mentioned means for moving said reels to a position corresponding to the selected position of said knob and disc and for locking said disc in said position; and a mechanical and optical projection device comprising a swingable pressure arm, a motor, means operatively connecting said motor with said swingable pressure arm, means operatively connecting the second-mentioned means with the third-mentioned means for driving said motor to lower said swingable pressure arm when the second-mentioned means are actuated, a switch engaged by said swingable pressure arm when it is lowered, a projection lamp operatively connected with said switch, another motor, means operatively connected with said other motor for unwinding the selected film from its feed reel and upon its take-up reel, means operatively connecting said switch with said other motor for energizing said other motor when said switch is closed, means adapted to engage said feed reel and connected with the first-mentioned motor for actuating the first-mentioned motor to raise said swingable pressure arm when the film has been unwound from said feed reel, contacts adapted to be closed by said swingable pressure arm when it is raised, means adapted to engage said feed reel for rewinding said film upon said feed reel, and means connected with said contacts, the third-mentioned means and the last-mentioned means and operable upon the closing of said contacts to disconnect the first-mentioned motor from the third-mentioned means and to connect it with the last-mentioned means for the rewinding of said feed reel.

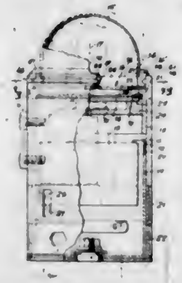
3,041,927
ABNORMAL COLOR SENSE CORRECTING APPARATUS
Kunika Ushio, 879 Kaneko-ko, Niihama, Ehime, Japan
Filed Apr. 21, 1958, Ser. No. 729,653
3 Claims. (Cl. 88—20)

1. An abnormal color sense in proving apparatus comprising a viewing plate having a translucent screen therein, a complementary color translucent screen adjacent to said translucent screen, a cover pivotally mounted over said complementary color translucent screen, a projector on which said translucent screens are mounted, a light source in said projector directed toward said translucent screen, a light conducting passageway in said projector from said light source to said complementary color translucent screen, and a plate having at least two pluralities of colored filters, the filters in each plurality being in diametrically opposed pairs with the color of one filter



in each pair being complementary to the color of the other filter in the pair, said plate being rotatably mounted in said projector for positioning one of the filters in a pair between the light source and said translucent screen and the other filter in the pair between said light source and said passageway, the filter between the light source and the passageway being complementary in color to the filter between the light source and the translucent screen.

3,041,928
DEVICE UTILIZING A LIGHT VALVE ACTUATED BY A LIGHT ACCEPTANCE UNIT
Donald W. Norwood, 1470 San Pasqual St., Pasadena, Calif.
Filed May 18, 1959, Ser. No. 813,744
19 Claims. (Cl. 88—23)



1. A device comprising a housing, a light responsive element carried by said housing, means actuated by said element in accordance with the light energization thereof, a light acceptance unit mounted on said housing in a predetermined active position for rotary movement relative to the housing and adapted to be detached from the housing, said acceptance unit in said active position being located to pass light to said element and being constructed to define the angle from which light can be accepted by said device for transmission to said element, a light valve assembly removably positioned along the path of light between said acceptance unit and said element and adjustable to vary the transmission of light therebetween along said path, said valve assembly including two parts which are relatively rotatably adjustable to different light transmitting conditions, and means securing said two valve parts together for relative adjusting movement, said light acceptance unit having a portion blocking detachment of said valve assembly from the housing so long as the light acceptance unit remains attached to the housing but freeing said two valve parts for removal when said acceptance unit is detached from the housing, said securing means being constructed to continue to retain the valve parts together after detachment from the housing, and means for relatively rotatively adjusting said valve parts to different light transmitting conditions in response to rotary movement of the light acceptance unit relative to said housing while said acceptance unit is in said active position.

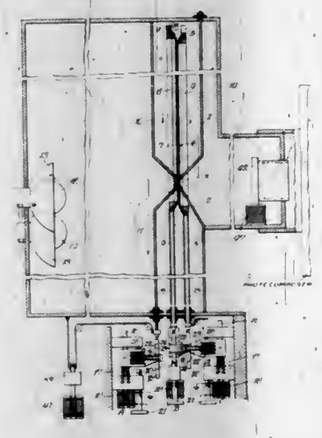
3,041,929
LIGHT VALVE STRUCTURE
Donald W. Norwood, 1470 San Pasqual St., Pasadena, Calif.
Filed May 18, 1959, Ser. No. 813,752
12 Claims. (Cl. 88—23)



1. A photographic device comprising a light responsive element, a translucent three dimensional light collector dome through which light passes to said element, and a light valve positioned in the path of said light between said dome and said element and including two thin plates of opaque material in closely proximate face to face relation mounted for relative rotation about a predetermined axis between a maximum light passing position and a minimum light passing position and each having an apertured light passing area, said light passing areas of the two plates being positioned to register with one another to different extents varying in accordance with the relative rotary settings of the two plates to thereby vary the effective light passing area of the valve, said apertured areas of the two plates being shaped to extend through a substantial radial distance with respect to said axis, one of said apertured areas having a portion at substantially its radially inner end projecting circularly toward the other of said areas and positioned to register with substantially the radially inner end thereof in said minimum light passing position of the plates and while the radially outer portions of the apertured areas remain out of registry, and said radially outer portions of the apertured areas being positioned to move progressively into registry upon relative rotation of the sections toward said maximum light passing position, said one apertured area being elongated radially and having a first essentially straight side edge extending substantially radially with respect to said axis, and having a second essentially straight side edge spaced laterally from said first side edge and converging slightly theretoward as the two advance radially outwardly, said second side edge having a radially inner portion which continues to a point at which it is relatively close to but offset laterally from said axis and forms a side of said circularly projecting portion of said one area, said circularly projecting portion having another side edge generally parallel to said first mentioned edge of said one aperture, said one apertured area having a radially outer edge extending between outer ends of said first and second edges, said one apertured area having a radially inner edge extending laterally from said first edge to said circularly projecting portion of said one apertured area.

3,041,930
APPARATUS AND METHOD FOR SIMPLIFIED PHOTOCOMPOSITION CORRECTIONS
William W. Davidson, Jr., 26 Bogart Ave., Port Washington, N.Y.
Continuation of abandoned application Ser. No. 159,592, May 2, 1950. This application Aug. 3, 1960, Ser. No. 47,198
12 Claims. (Cl. 88—24)

1. Photocomposition correction apparatus including a character-selecting photocomposing means of a type used for ordinary textual composition of films suitable after processing for block use in making a printing plate, having a projection lens arranged to project a focused light beam from characters in the photocomposing means selected one at a time under the ultimate control of an operator at a keyboard; first and second film holders with the first film holder positioned to hold its film in the focal plane of the beam from said lens, and the second film holder beyond the first film holder from the lens and in relationship to the first film holder to produce same-size latent image on unexposed film on the first film holder from visible images on developed film of the second film holder representing textual matter of which a part needs correction; means for moving each of the film holders to advance its film through successive steps of equal and predetermined length corresponding to line spacing, said moving means being adjustable by the operator as to the length of steps independently for the two film holders through a range of adjustment which includes a step at least as short as a single line spacing, said apparatus including operator-controlled light means for exposing images of lines which are correct on the developed film onto the unexposed film, and control means for successively operating said apparatus to expose successive line areas of the unexposed film by selecting at will exposure through the lens to selected characters in the photocomposing means or exposure to an image on the film in said second film holder illuminated by said operator controlled light means, said apparatus including control means for causing the advance of the first film

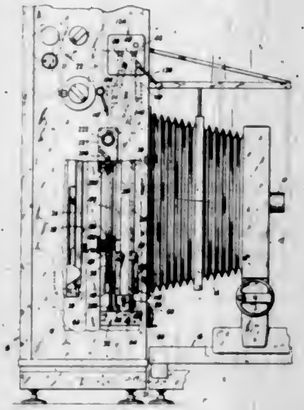


holder for successive exposures and its advance at will without exposures, and including means for causing the second film holder at will to advance without advance of the first film holder, to advance with advance of the first film holder, or to remain stationary while the first film holder advances; said second film holder and its advancing means being adapted to hold a film bearing at least a full image for block use in plate making of the image being produced on the unexposed film carried by the first film holder and to advance it through the successive steps for the lines thereof; said apparatus including means for confining exposure to a desired narrow area corresponding to the height of line image matter being copied, said last-named means being adjustable for various type sizes.

12. The method of producing a finally corrected, developed film of photographically composed text matter for block use in making a printing plate which consists of first producing a latent image of said text matter in the desired type face on an original film through individual character selection in a photocomposing machine and exposure of said characters into lines on the original film with the proper relationship between character size and character, word and line spacing so that when, after development and proofreading, there are no errors to be corrected, the original film so produced is ready for block use in the production of a printing plate; which method

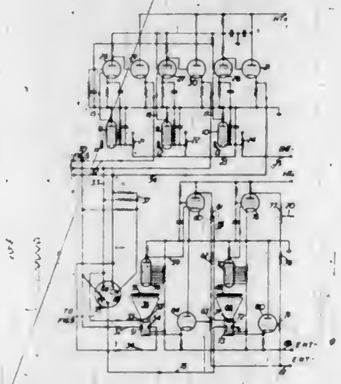
also includes the further steps, when corrections are found to be necessary, of placing a fresh film in the photocomposing machine in place of the original film, and placing a developed film, the visible image on which is a reverse of the latent image on the original film, in position for copying portions thereof onto the fresh film and then producing a new latent image on the fresh film by copying some lines, which do not require correction, from the developed film onto the fresh film and by exposing other line areas of the fresh film, representing lines which were incorrect on the original film, to new composition by the photocomposing machine, selectively advancing the two films relatively as required to provide the desired line spacing on the fresh film, the character size and line spacing of the latent image of the new composition on the fresh film being the same as the character size and line spacing of the latent image of the text copied onto the fresh film from the developed film, and the entire latent image on the fresh film having the proper relationship between character size and character, word and line spacing so that when, after development and proofreading, there are no further errors to be corrected, the fresh film so produced is ready for block use in the production of a printing plate; and which method also includes the steps, as many times as corrections are found to be necessary, of repeating said further steps, using a new fresh film and a new developed film the visible image on which is a reverse of the latent image on the last produced film, until a final film shall be produced and developed which proof-reading shall disclose to contain no errors.

3,041,931
HALFTONE CAMERA
Andrew K. Anander, Glen Cove, N.Y., assignor to Powers Chemco, Inc., Glen Cove, N.Y., a corporation of New York
Filed Mar. 31, 1958, Ser. No. 725,249
6 Claims. (Cl. 88—24)



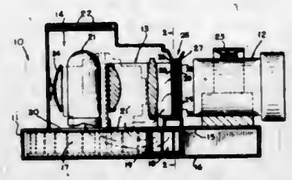
1. In a halftone screen camera having a housing defining an exposure area, a storage chamber on one side and operatively associated with said housing, a plurality of halftone screens, a frame for each of said screens, means for supporting each of said frames for transverse movement from said storage chamber into said housing, means for moving a selected frame from said storage chamber into said housing to travel its associated screen from a storage position to a position parallel to and in front of the focal plane of said camera, means on each of said frames supporting its associated screen in vertical disposition, said supporting means including spaced support elements, means mounting said support elements for parallel movement and back and forth relative to said frame to move its associated screen in and out of a preselected exposure position in said housing, means for actuating said support mounting means, said actuating means including a resilient element for yieldably urging said screen into said exposure position and drive elements for moving said screen out of exposure position, and movable stop elements on said housing for limiting the travel of said halftone screen at said selected exposure position.

3,041,932
PHOTOGRAPHIC COLOUR REPRODUCTION APPARATUS
Arthur R. Kilminster, Birmingham, England, assignor to Hunter-Penrose Limited, London, England, a British company
Filed Sept. 18, 1958, Ser. No. 761,878
Claims priority, application Great Britain Sept. 24, 1957
25 Claims. (Cl. 88—24)



1. Photographic colour reproduction apparatus, comprising a scanning cathode ray tube including means for developing a spot of substantially white light on the face of the tube and means operable to deflect said spot of light, a time base circuit connected to the deflector means and operable to generate line and frame time base waveforms to control the scanning of a raster on the face of the tube by said spot of light for the illumination of a coloured original, control means in the time base circuit operable to modulate the speed of scan of the raster by controlling the shape of the line and frame time base waveforms, a first, a second and a third photoelectric device having respectively associated therewith a blue, a green and a red filter through which light transmitted form an original as a result of the scanning thereof passes to activate said photoelectric devices, an analysing cathode ray tube having deflector means connected to the photoelectric devices and responsive to electric signals originating as outputs from said photoelectric devices to determine a sequence of positions of a spot of light on the face of said analysing tube according to the colours of areas of the original scanned in sequence, a fourth photoelectric device arranged to receive light from said spot of light and operable thereby to produce a colour signal, a selecting screen interposed between the analysing cathode ray tube and the fourth photoelectric device and having a predetermined optical density for each area thereon to select colours for correction by varying the intensity of the light received by the fourth photoelectric device according to the position of the spot of light on the face of the analysing tube, and correction means connected to the fourth photoelectric device and to the time base circuit control means and operable to convert the colour signal into a colour and tone corrected modulating signal for transmission to said time base circuit control means to modulate the speed of scan of the raster thereby to apply a colour and tone correction to light transmitted from the original.

3,041,933
SLIDE PROJECTOR
Henry J. Emmel, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed Nov. 18, 1959, Ser. No. 853,729
4 Claims. (Cl. 88—26)



4. In a slide projector including an optically aligned light source and projection lens assembly and also including a source of air for cooling said light source, and a reciprocable mechanism for alternately moving a slide into and out of projection position, the combination of means defining a slide receptacle for receiving a slide when the latter is moved into projection position by said reciprocable mechanism and aligning the same in optical alignment with respect to said light source and projection lens assembly, said receptacle comprising opposed sides one of which is cut away at the middle to permit free movement of said reciprocable mechanism and including a plurality of projections directed inwardly from one side of the receptacle, said projections being disposed adjacent the extremities of one vertical edge of said receptacle and adjacent the cut away portion of the opposite vertical edge of said receptacle and together defining a plane such that a slide disposed in engagement with said projections is in the substantial focal plane of said projection lens assembly, and means for directing a portion of air from said source toward said slide disposed in said receptacle to retain the slide against said projections and thereby in focus.

3,041,934
OBJECTIVE FOR MICROSCOPE
Paul L. Ruben, Rochester, and George F. Ziegler, Gates, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Nov. 10, 1960, Ser. No. 68,479
3 Claims. (Cl. 88—57)

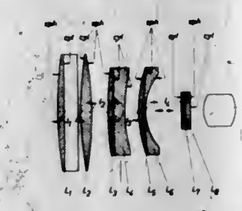


1. A microscope objective having a numerical aperture of substantially 0.20 and an image magnification of at least 10 ×, the combination of a front double concave lens I spaced a distance S_1 rearwardly of an object surface to be observed, a double convex lens II spaced a distance S_2 rearwardly of lens I, a meniscus lens III spaced a distance S_3 rearwardly of lens II and being concave toward the front with the rear surface thereof more strongly curved than the front surface thereof, a meniscus lens IV having the convex surface thereof facing the front and the rear surface thereof having the strongest curvature and being spaced a distance S_4 rearwardly of lens III, and a double convex lens V spaced a distance S_5 rearwardly of lens IV, all of said lenses being mutually optically aligned and air spaced, the respective individual focal lengths F_I, F_{II}, F_{III}, F_{IV}, F_V, and the respective air spaces S_1, S_2, S_3, S_4, S_5 all named in order from the front toward the rear being as stated in the statement of inequalities below wherein F denotes the equivalent focus of said objective,

$$.20F<-F_I<.25F$$
$$.45F<F_{II}<.75F$$
$$.70F<F_{III}<.75F$$
$$1.2F<-F_{IV}<1.3F$$
$$.80F<F_V<.85F$$
$$.12F<S_1<.14F$$
$$.03F<S_2<.04F$$
$$.004F<S_3<.005F$$
$$1.18F<S_4<1.28F$$
$$.0005F<S_5<.0006F$$

wherein the refractive index of the glass from which the double concave and the meniscus negative lenses are made is 1.700 or greater and the Abbe number thereof has a maximum values of substantially 31.0, the front double convex positive lens having a refractive index which is at least .080 less than said negative lenses and is less than or equal to .100 over the refractive index of the meniscus positive lens, the difference in Abbe numbers between the front double convex lens and negative lenses being at least 20.0 and the difference in Abbe numbers of the front double convex lens and meniscus positive lens being less than or equal to 15.0, the difference in refractive index between said meniscus negative lenses and the rear double convex lens being at least .060 and the difference of Abbe numbers therefor being at least 20.0.

3,041,935
ANAMORPHOTIC LENS SYSTEM
Jan Louis Wulff Jacobsen, % Arnold & Richter KG, Turkenstrasse 89, Munich 13, Germany
Filed Aug. 18, 1958, Ser. No. 755,473
1 Claim. (Cl. 88—57)



An anamorphic optical system comprising an objective in combination with an afocal anamorphic lens system including a first anamorphoser adapted to produce an image compression in a first direction and a second anamorphoser adapted to produce an image expansion in a second direction at right angles to said first direction, the image compression factor in said first direction and the image expansion factor in said second direction having a quotient equal to the desired anamorphic factor of the system and wherein said first anamorphoser comprises a rear positive cylindrical component and two spaced apart negative cylindrical components while the second anamorphoser comprises a pair of spaced apart cylindrical components one of negative power and the other of positive power, the rear negative component of

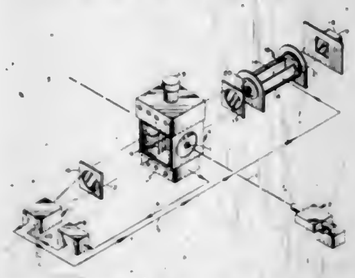
said first anamorphoser and the negative component of said second anamorphoser having equal power and being arranged to be situated at a common point on the optical axis of the system and being constituted by a single spherical lens component and thereby adapting said spherical lens component for common focussing adjustment along the optical axis of the system, and wherein the anamorphic lens system has two achromatic rear lens components including an afocal achromatising doublet consisting of a cemented pair of cylindrical lenses of different dispersion and having their cylinder axis at right angles to one another and aligned with said first and second directions to achromatize the other lens components of the system, said five lens components being so shaped and arranged that the lens radii R, the refractive index n, the Abbe number, the distances l between the lens components and the thickness d of the lens components have the values set forth in the following table, each category being numbered by subscripts in order from front to rear:

	R	n	Abbe number	l	d
L_1	R_1 = +554 sph	n = 1.5225	59.64		d_1 = 4
	R_2 = +67.5 cyl			l_1 = 11.8	
	R_3 = +173 cyl				
L_2	R_4 = −1,280 sph	n = 1.5225	59.64		d_2 = 6
	R_5 = +332 sph			l_2 = 9.1	
L_3	R_6 = +87.5 cyl	n = 1.5225	59.64		d_3 = 5
L_4	R_7 = +245 cyl	n = 1.6200	36.34		d_4 = 13.7
	R_8 = +68.5 sph			l_3 = 2.3 to 23.5	
L_5	R_9 = +89 sph	n = 1.6200	36.34		d_5 = 3.2
L_6	R_{10} = +39 sph	n = 1.5567	58.54		d_6 = 1.0
	R_{11} = −245 cyl			l_4 = 53.8 to 26.1	
L_7	R_{12} = +174 sph	n = 1.6200	36.34		d_7 = 1.0
L_8	R_{13} = −74 cyl	n = 1.5225	59.64		d_8 = 2.5

3,041,936
MEANS FOR TAKING HIGH SPEED PHOTOGRAPHS

Joseph A. Hull, Danvers, Mass., assignor, by mesne assignments, to Unilectron, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Oct. 31, 1957, Ser. No. 693,570
8 Claims. (Cl. 88—61)



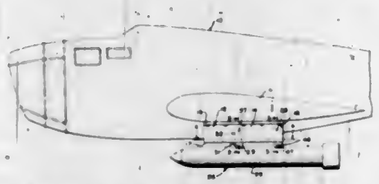
1. In combination in a device for taking high speed photographs of a projectile in flight, a light screen interposed in the path of the projectile, pulse generating means, means for charging said pulse generating means with electrical energy, a spark discharge device for releasing the energy of said pulse generating means and producing a luminous arc, means connected to said light screen and said spark discharge device to initiate spark discharge when said projectile interrupts said light screen, a Kerr cell, a polarizer in front of said Kerr cell and an analyzer behind said Kerr cell, a lens system for focusing light from the arc of said spark discharge device upon the projectile when it is adjacent said light screen, said Kerr cell, polarizer and analyzer being aligned with said lens system, light-sensitive means behind said analyzer, and means for interconnecting said Kerr cell and said pulse generating means whereby said Kerr cell is pulsed to pass light from the arc of said spark discharge device to said light-sensitive means.

3. A device for illuminating a subject comprising: a pulse generator, means for subjecting said pulse generator to a sudden potential gradient, said means including energy storage means, a spark discharge device for releasing energy from said energy storage means and producing radiant energy for illuminating the subject simultaneously with application of said potential gradient to said pulse generator, and optical shutter means including a Kerr cell connected to said pulse generator to receive a voltage pulse upon application of said potential gradient to said pulse generator whereby said Kerr cell will pass radiant energy from said spark discharge device for illuminating the subject.

3,041,937
ROCKET CONTROL SYSTEM

John F. Toomey, 250 Tulip Ave., Floral Park, N.Y.

Filed Oct. 9, 1952, Ser. No. 313,994
6 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a rocket launching apparatus including a pair of mutually spaced members for supporting a rocket in a loaded position therein, a conductor mounted on said members and insulated therefrom, said rocket containing an explosive and a rocket propellant for propelling the rocket along said members as the propellant is fired, igniter means in said rocket responsive to an electrical impulse received thereby from an external source of electrical energy for firing said propellant, a first contact element supported by said rocket at the forward end portion thereof, an igniter circuit including said contact element and said conductor for applying said impulse to the igniter means when the rocket is in said loaded position, an arming circuit including the contact element and rendered operative when said contact element is in engagement with the conductor and as the rocket is propelled along said members, switch means included within said arming circuit for maintaining said arming circuit in an open condition until the acceleration of the rocket has decreased to a predetermined value and the rocket has been propelled from the members, a second contact element supported by said rocket at the rear end portion thereof, a firing circuit in said rocket, switch means included within said firing circuit for rendering said firing circuit operative as the second contact element moves into engagement with said conductor as the rocket is propelled along said members, an inertial device arranged within said firing circuit and actuated from an initial position to a firing position in response to a sudden shock received thereby, and a primer operatively connected to said inertial device and included within said firing circuit and fired as said inertial device is actuated to said firing position thereby to explode the rocket upon impact thereof with a target.

3,041,938
GUN REST WITH MAGNETIC HOLDING MEANS

John T. Seabrook, 5401 Park Road, Falls Church, Va.

Filed July 19, 1960, Ser. No. 43,809
7 Claims. (Cl. 89—37)

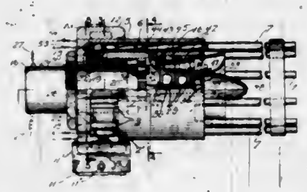


4. A rest for a gun, comprising a horizontally disposed base, a vertically adjustable standard operatively connected to said base, means for maintaining said standard immobile in its adjusted positions, a bar adjustably connected to said standard, means for maintaining said bar stationary in its adjusted positions, magnetic means on said bar, said bar including a vertically disposed leg and a horizontally disposed leg, said magnetic means comprising a magnet affixed to the vertical leg, a magnet affixed to the horizontal leg of the bar, a plate for coaction with said last named magnet, manual operable screw members extending through said legs and through said magnets, and magnetic support means.

3,041,939
MULTI-BARREL GUN WITH A PLURALITY OF FIRING STATIONS AND AN AMMUNITION DRUM

David Dardick, New York, N.Y., assignor to Dardick Corporation, a corporation of Delaware

Filed Oct. 6, 1959, Ser. No. 844,773
15 Claims. (Cl. 89—126)

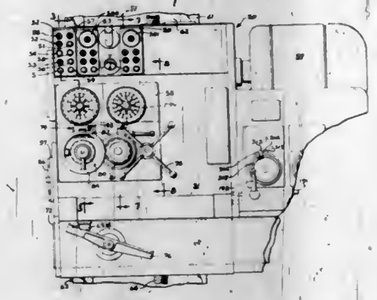


1. A multi-barrel gun comprising a stationary breech structure having breech rails arranged in a circular row and having arcuate breech surfaces, one for each rail, concentric and co-equal in radius of curvature, said breech rails providing a circular row of equally arcuately spaced individual firing stations; an ammunition drum-gun barrel assembly comprising a cylindrical ammunition drum co-equal in radius of curvature with said arcuate surfaces, mounted for rotation on its cylinder axis concentrically with said arcuate surfaces, said drum having a circular row of equally angularly spaced open ammunition chambers arranged around its circumference for the reception successively individually of a round of ammunition between each firing station and the next succeeding firing station in the direction of rotation of said assembly, and for closure successively individually by said arcuate breech surfaces individually at each of said firing stations, and gun barrels, one for each chamber, carried by said drum for rotation therewith, said barrels being arranged in a circular row concentric with said cylinder axis; motor means operatively coupled to said assembly for rotating said assembly; and reaction means powered by firing gases from said barrels for supplying a supplementary rotational force to said assembbly during firing.

3,041,940
MACHINE TOOL

Garner H. Schurger, Fond du Lac, and Hugh W. De Pree, Milwaukee, Wis., assignors to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin

Original application Sept. 5, 1956, Ser. No. 608,061, now Patent No. 2,984,159, dated May 16, 1961. Divided and this application Jan. 15, 1958, Ser. No. 709,062
1 Claim. (Cl. 90—14)



In a horizontal boring, milling and drilling machine, the combination comprising a vertical column mounted for translation on horizontal ways, a drive motor for translating said column on said ways, a headstock mounted for vertical movement on said column, a drive motor for said headstock, an underarm mounted in said headstock for reciprocation into and out of the same, a feed transmission in said headstock, means operatively connecting said feed transmission and said underarm for reciprocating said underarm when said transmission is rotated by said headstock drive motor, means for reversing the direction of translation of the underarm, and a control circuit for controlling said underarm to perform underarm shaping operations, said circuit comprising, in combination, an electric circuit including a start button for initiating operation of said headstock drive motor to reciprocate said underarm, an outer limit switch closed when said underarm reaches a predetermined outermost position, an inner limit switch closed when said underarm reaches a predetermined innermost position, a first control relay energized when said outer limit switch is closed for reversing the direction of movement of the underarm, a second control relay energized when said inner limit switch is closed for reversing the direction of movement of said underarm and for energizing an indexing relay, said indexing relay when energized stopping said headstock drive motor and thereby movement of the underarm and energizing said column drive motor for indexing said column transversely of the path of movement of said underarm, and a time-day-open relay operative in response to energization of said second control relay for determining the length of time said indexing relay remains energized and thereby the amount said column is indexed, outward movement of said underarm being initiated by said second control relay when said index relay is deenergized by the opening of said time-delay-open relay, whereby the shaping cycle of the underarm is automatically repeated.

3,041,941
MANUFACTURE OF CONTAINERS OR THE LIKE

Karl-Heinz Danielzig, Darmstadt, Germany, assignor to Habra-Werk Wilhelm F. Ott, Darmstadt, Germany, a corporation of Germany

Filed July 23, 1958, Ser. No. 750,491
Claims priority, application Germany July 25, 1957
14 Claims. (Cl. 93—12)

1. In an apparatus for simultaneously making a plurality of containers, in combination, a plurality of pairs

of opposite pressing members, the individual pressing members of each pair being movable in one direction toward and away from each other between a spread position and a pressing position tending to abut each other; elongated guide means extending in another direction for supporting said pairs of pressure members for movement along the length of said guide means between an initial position in which adjacent pairs of pressure members are spaced farther from each other and a final position in which adjacent pairs of pressure members are spaced more closely to each other in said other direction; a plurality of supporting means adapted to support an elongated channel-shaped web and mounted for movement in direc-



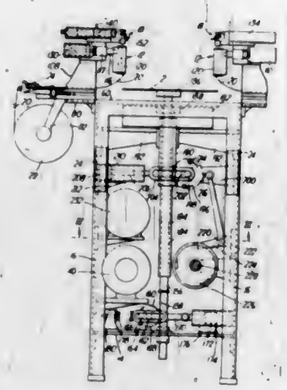
tion of said guide means and spaced intermediate adjacent pairs of pressure members; and operating means acting on said pressing members for effecting movement of said pressing members of each pair from said spread position to said pressing position in which spaced unsupported sections of said web are superimposed and placed into contact with each other while the web contracts and simultaneously moves said pairs of pressing members along said guide means from said initial position to said final position while said pressing members of each pair move along paths slanted to each other and to said directions whereby container blanks are formed in said web between said superimposed sections.

3,041,942
METHOD OF ASSEMBLING MULTI-WALL BULK PAK SHIPPING CONTAINERS
Edward F. Repking, Glasgow, Mo., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Sept. 15, 1958, Ser. No. 761,263
3 Claims. (Cl. 93—36.01)



2. The method of erecting a polygonal tubular container having inner and outer telescoping sleeve members and an interiorly locked end closure comprising the steps of erecting the outer sleeve to open ended tubular relation, infolding top and bottom flaps thereof into flatwise relation with respective interior end marginal portions, positioning a closure panel in one end of the sleeve and directing locking flanges thereabout inwardly of the sleeve, erecting an inner sleeve member to tubular relation and partially collapsing the same by inwardly directing adjacent portions thereof, inserting the inner sleeve within the outer sleeve until its bottom end edges are in abutment with the inner face of the closure panel and urging the locking flanges of the closure panel in edgewise abutment with respective flaps of the outer sleeve, restoring the sleeve to polygonal form with wall portions in parallel relation to the counterpart portions of the outer sleeve.

3,041,943
BOX MAKING MACHINE
Arthur George Turner, Norwich, England, assignor of one-half to F. W. Frost (Engineers) Limited, Norfolk, England, a British company
Filed July 28, 1959, Ser. No. 830,002
15 Claims. (Cl. 93—41)



1. A box making machine for securing together the side and end flaps of box blanks at the corners of a box by a length of stay material comprising a body framework mounting means carried by the framework for holding a supply of stay material, feeding means for passing box blanks intermittently through the machine, a stay material applying station to which the box blanks are fed by said feeding means and to which stay material is fed by movement of a blank out from said station and cutting means severing the stay material from the box, said cutting means being positioned on the body framework adjacent the stay material applying station in the direction of feed of the box blank through the machine and being arranged to cut the stay material on each blank after the blank has passed out from said stay material applying station, and means for returning the cut end of the stay paper connected to the supply to the stay paper applying station.

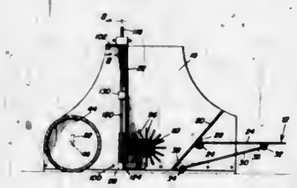
3,041,944
MACHINE ADAPTABLE FOR USE IN THE MANUFACTURE OF ONE-PIECE EXPANDABLE ENVELOPES AND OTHER BOX FORMS
Julius Minkow, Roslyn Heights, N.Y., assignor to Red Rope Stationery Industries, Inc., Brooklyn, N.Y., a corporation of New York
Filed Sept. 5, 1961, Ser. No. 135,877
8 Claims. (Cl. 93—49)



1. In a machine for forming a box structure from a flat blank comprising a bottom wall section intermediate and contiguous with a front and a rear wall section including flap-forming parts extending from each side end of said sections with adhesive on predetermined locations thereon so that each side wall of the box structure resulting from the folding of said blank shall consist of a

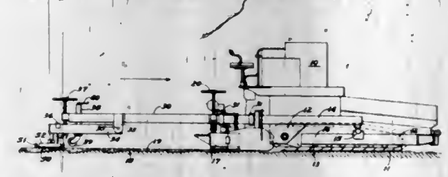
flap extending from the bottom wall positioned intermediate and overlapped by a flap extending from each of the other sections, a frame, a plunger serving as the form about which the blank is to be folded, reciprocatably mounted on the frame, a first pair of spaced members positioned on the frame to receive said plunger between them, means to locate the blank intermediate said plunger and said first pair of members so that the plunger in its movement towards and then between said first pair of members, will draw the blank between said first pair of members whereupon said blank will be folded into a channel form determined by said blank sections, a first pair of folding blades reciprocatably mounted on the frame for movement across the plane of one of the opposite walls of said channel whereby first the flaps extending from said one wall are folded to contact the end faces of said plunger respectively and as the plunger continues in its movement, the flaps extending from the bottom wall section are folded to overlap respectively, said flaps first folded; each of said folding blades constituting said first pair having two spaced fingers extending towards the second of said opposite channel walls; those of said fingers which are first passed by the plunger, causing the first mentioned folding of flaps and the other of said fingers causing the folding of the flaps extending from the bottom section, a second pair of folding blades reciprocatably mounted on the frame for movement across the plane of the second of said opposite walls of said channel whereby the flaps extending from said second opposite wall of the channel form are folded to overlie the end faces of the plunger respectively and constitute the outermost flaps of the now completely folded box structure, a second pair of spaced members positioned on the frame transverse said first pair of spaced members, to receive said plunger between them after the folding over of said outermost flaps, whereupon on continued movement of the plunger, all of the flaps will be pressed against the side end faces of the plunger, thereby effecting proper sealing due to the presence of said adhesive, means to control the movement of said plunger and folding blades in a predetermined timed relation, as to sequence, extents and directions respectively and means to operate said control means.

3,041,945
ROAD PAVER
Ted McKinney, R.F.D., Box 17, Hamilton, Mont.
Filed Apr. 3, 1959, Ser. No. 803,937
9 Claims. (Cl. 94—46)



1. A road paver comprising, parallel side walls interconnected by a rearwardly sloping front wall adjacent forward ends of the side walls and a rear end wall disposed forwardly of rear end portions of said side walls, said front and rear end walls defining a hopper between the side walls, supporting wheel means rotatably mounted by said side walls intermediate the front and rear end walls, roller means freely slidable vertically between defined limits on said side walls rearwardly of said rear end wall, side edging means mounted along bottom edges of said side walls and extending beyond said roller means and front wall, vertical adjusting means operatively connected to said side walls and wheel means for vertically adjusting said side walls and side edging means above the ground and thereby operatively position said roller means, and feeding means disposed between said side walls and mounted on said wheel means for rotation about a transversely extending axis, said feeding means distributing paving material uniformly between said side walls, for discharge from the hopper upon said surface to be paved.

3,041,946
SCRATCH COAT LEVELING ATTACHMENT
Jerry G. Watters, Cedar Rapids, Iowa, assignor to Iowa Manufacturing Company of Cedar Rapids, Cedar Rapids, Iowa, a corporation of Iowa
Filed Apr. 13, 1959, Ser. No. 806,132
1 Claim. (Cl. 94—46)

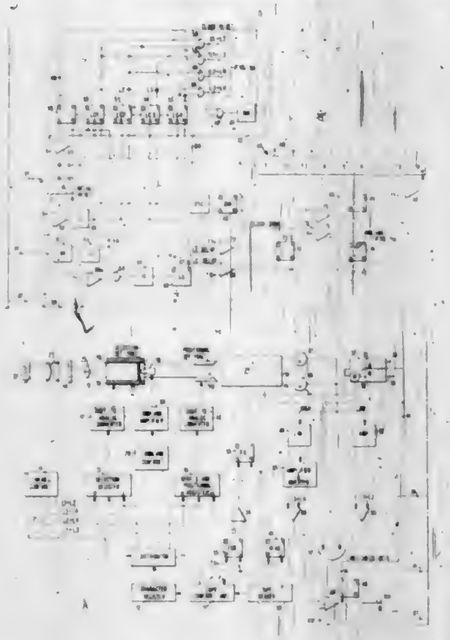


In a paving machine of the kind described, including a pair of laterally spaced screed arms pivoted at their forward ends to the side of the machine for vertical movement relative thereto, a screed assembly supported by said screed arms and having a paving material applying under surface extending transversely of said screed arms, adjustable means between the trailing ends of said screed arms and the trailing end of said screed in order to alter the fore and aft inclination of said surface with respect to the roadway thereby also causing alteration of the elevation of said screed arms during operation of said machine, the combination therewith of scratch coat leveling apparatus, said apparatus comprising: a pair of laterally spaced leveling arms rigidly secured at their forward ends to the trailing ends of said screed arms to form rigid rearward extensions thereof; a pair of laterally spaced adjusting arms pivoted at their forward ends adjacent the rear ends of said leveling arms for vertical movement relative to said leveling arms, said adjusting arms being relatively short compared to said leveling arms and extending rearwardly from said pivots to just beyond the rearward ends of said leveling arms; a screed leveling plate assembly carried by said adjusting arms and having a surface adapted to slidably engage the surface of the paving applied by said screed assembly and to support the latter, said surface extending transversely of said adjusting arms and said plate assembly being pivoted about a transverse horizontal axis between and adjacent the rearward ends of said adjusting arms; and means to permit independent and fine adjustment of said plate assembly relative both to said screed assembly and leveling arms in order to compensate for said alterations in the elevation of said screed and leveling arms, said means including arm adjusting means operative between each of said leveling arm ends and their respective adjusting arms for adjustably positioning said adjusting arms and plate assembly relative to said leveling arms, and plate assembly adjusting means for adjustably positioning said plate assembly about said axis relative to said adjusting arms.

3,041,947
CATHODE RAY TUBE PRINTER
Lawrence E. Mulock, Endicott, N.Y., and Milton P. Albert, University City, Mo., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 16, 1959, Ser. No. 853,187
10 Claims. (Cl. 95—4.5)

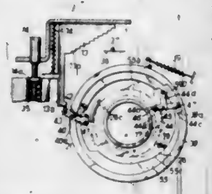
1. In a cyclically operable printer system of the class described, a cathode ray tube, cyclically operable means

for supplying input data to said tube, selection circuitry and positioning circuitry associated with said tube and controlled by said input data to cause said tube to cyclically display data information, a cyclically operable recording camera for recording the displayed information onto film, said camera including means for advancing



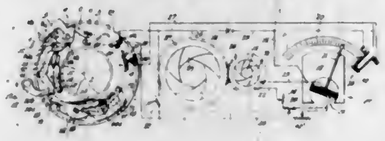
a frame of film after a plurality of displays have been recorded, switching means controlled by said film advancing means, and circuit means controlled by said switching means for automatically test operating said selection and positioning circuitry during each film advancing cycle of said camera.

3,041,948
PHOTOGRAPHIC CAMERA HAVING AUTOMATIC DIAPHRAGM SETTING
Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed May 31, 1960, Ser. No. 32,871
Claims priority, application Germany May 30, 1959
9 Claims. (Cl. 95—10)



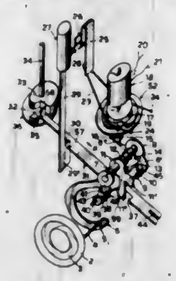
1. In a photographic camera, in combination, an adjustable diaphragm; an exposure regulator; coupling means including a driving member connected with the regulator and an actuating member connected with the diaphragm, for effecting automatic adjustment of the latter; a mounting means for the diaphragm and said actuating member, comprising a manually shiftable, adjustable carrier variously positionable with respect to said driving member, on which the diaphragm and actuating member are mounted and carried, said mounting means and carrier enabling adjustment of the diaphragm to be effected for taking into consideration exposure factors other than the diaphragm setting, said coupling means including further a tensional, unidirectionally positive separable driving connection between said driving and actuating members whereby the diaphragm may not only be shifted automatically from a starting end position to an adjusted position as determined by existing light conditions but also shifted manually by actuation of said carrier for considering said other exposure factors.

3,041,949
MEANS FOR AUTOMATICALLY REGULATING EXPOSURE TIME IN A CAMERA
Karl A. Bührle, Hofen (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Feb. 10, 1959, Ser. No. 792,379
Claims priority, application Germany Feb. 12, 1958
16 Claims. (Cl. 95—10)



1. In a photographic camera, in combination, a photoelectric element; an electromagnetic device energized by said element, said device including a movable deflection part having a path of movement between minimum and maximum positions, said part being positionable at an intermediate position as determined by the level of energy supplied by the photoelectric element in responding to existing light conditions; a substantially unvarying source of energy separate from said photoelectric element, for energizing the electromagnetic device to effect a deflection of the deflection part thereof to the said maximum position; a shutter; means for effecting opening of the shutter; means operative after movement of the said shutter toward open position, for connecting said source of energy to the electromagnetic device to effect maximum deflection of the said deflection part; releasable means for holding the shutter in open position after movement of the shutter thereto; and means rendering inoperative said immediately preceding means in response to said deflection part attaining its said maximum deflection.

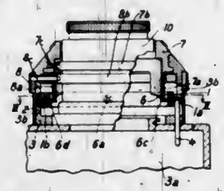
3,041,950
CAMERA
Gerhard Werrmann, Nurnberg, Germany, assignor to Carl Braun Camerawerk, Nurnberg, Germany, a firm
Filed Mar. 2, 1960, Ser. No. 12,474
Claims priority, application Germany June 5, 1959
3 Claims. (Cl. 95—10)



1. In a photographic camera, the combination which comprises: a film advancing device; a shutter cocking shaft; a slide member interposed between said film advancing device and said shutter cocking shaft; a diaphragm having an adjusting member which is movable

into an end position by said slide member when the latter is moved under the influence of said film advancing means; a shutter release device operatively associated with said slide member; a photo-electric measuring device having a rotatable component the position of which is dependent on the amount of light being measured; and means for automatically setting said adjusting member of said diaphragm, said means including an axially extending control cam carried by said rotatable component of said photo-electric measuring device, blocking means operatively associated with said shutter release device and said rotatable component for blocking movement of the latter, and said control cam carried thereby, upon actuation of said shutter release device, and a lever system connected to said adjusting member and being pivoted by said slide member, said lever system having a feeler which engages said control cam while the latter is blocked, whereby upon actuation of said shutter release device said control cam will be held in the position it occupies at the moment and said adjusting member of said diaphragm will be set into a position corresponding to the light conditions as measured by said photo-electric measuring device while said control cam thereof is held in a blocked condition.

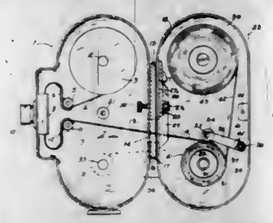
3,041,951
PHOTOGRAPHIC CAMERA WITH BUILT-IN PHOTO-ELECTRIC LIGHT METER COUPLED WITH CAMERA ADJUSTING MEMBERS
Heinrich Broschke, Wetzlar (Lahn), Germany, assignor to Ernst Leitz G.m.b.H., Optische Werke, Wetzlar (Lahn), Germany
Filed June 26, 1959, Ser. No. 823,159
Claims priority, application Germany June 27, 1958
6 Claims. (Cl. 95—10)



1. In a photographic camera, having an objective and a built-in photo-electric light meter with an instrument pointer and a follow-up pointer, the combination, comprising: an exposure time adjusting member and a first curved adjusting member associated therewith for common movement; a diaphragm adjusting member and a second curved adjusting member associated therewith for common movement; a differential lever system arranged in a tubular housing of said camera and comprising; a first ring defining a one arm lever arranged inside said housing and pivotally connected therewith, a second ring arranged inside said first ring, a first and a second shaft stud for pivotally interconnecting said first and second rings, defining a two arm lever, said first and said second ring surrounding the objective of said camera, means cooperating with two of said lever arms for respectively engaging said curved adjusting members associated with said exposure time and diaphragm adjusting members, and means cooperating with the remaining lever arm for transmitting the setting steps of said adjusting members to the follow-up pointer of said light meter.

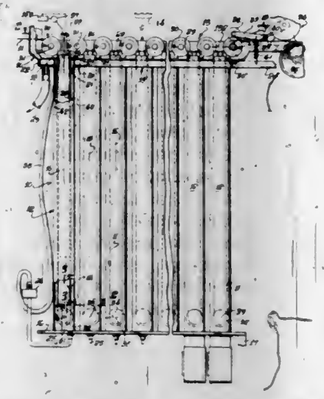
3,041,952
COMBINATION CAMERA AND FILM DEVELOPER
Seymour Schreck, Huntington Station, N.Y., assignor to Specialties, Incorporated, Syosset, N.Y.
Filed Nov. 2, 1959, Ser. No. 850,263
10 Claims. (Cl. 95—14)

1. In a photographic device, motion picture camera means for exposing photographic film contained therein, said camera means having an opening in the casing thereof, another adjacent casing having an opening for matching the camera opening, means including a pair of diverging track elements attached to one said casing, means including a pair of diverging elements attached to the other said casing for engaging said track elements to lock said casings together, said openings being effectively in register when said casings are locked together, a roll of



material having developer fluid absorbed therein and mounted in said other casing for rotation, a rotatable element mounted in said other casing for winding said film and material contiguously therearound, said film passing through said openings, and means connecting drive means of said motion picture camera with said element to cause rotation thereof.

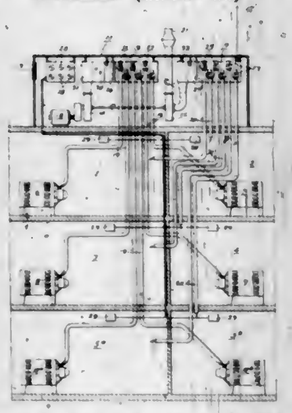
3,041,953
FILM DEVELOPING APPARATUS
Mervin E. Fulton, 3461 E. Tulare Ave., P.O. Box 980, Tulare, Calif.
Filed Nov. 24, 1958, Ser. No. 775,801
21 Claims. (Cl. 95—94)



20. Apparatus for developing a strip of film comprising a plurality of generally vertically extending tanks for containing film treating fluids through which said film is to be passed, means for guiding said film strip through said tanks successively, said guiding means including a plurality of generally vertically extending guide structures receivable in said tanks respectively, at least one of said guide structures having a hollow vertically extending portion, and a plurality of guide rollers rotatably carried by said guide structures respectively near the lower ends thereof, said means in guiding the film through the individual tanks being constructed to direct the film first downwardly into the tank along one side of said hollow vertically extending portion of said one guide structure and then about the underside of the roller carried by that guide structure and upwardly along the opposite side of said hollow portion thereof toward the top of the tank, said guide structures and tanks being relatively vertically movable to withdraw the guide structures from the tanks, said hollow portion of said one guide structure containing a fluid circulation passage through which a fluid is circulated through the interior of said hollow portion

and then outwardly in opposite directions therefrom to its exterior and into contact with the film at opposite sides of said hollow portion.

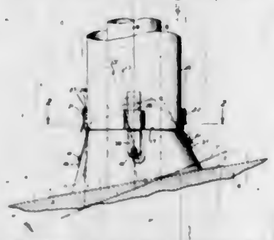
3,041,954
SYSTEM FOR AIR CONDITIONING HOLDS
Henrik Conradi, Norrkoping, and Nils de Frumerie and Sven Bertil Andersson, Goteborg, Sweden; said Conradi assignor to Stal Refrigeration AB, Norrkoping, Sweden, and said de Frumerie and said Andersson assignors to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Oct. 5, 1959, Ser. No. 844,435
Claims priority, application Sweden Oct. 8, 1958
3 Claims. (Cl. 98—33)



3. In a system for air conditioning a plurality of separate cargo spaces in ships, a separate fixed-output local means for circulating and cooling the air and separate condition-measuring means in each space, a common air conditioning unit at a central point for all the spaces, said unit having means to precondition outdoor air, a conduit means to supply a selected quantity of said preconditioned outdoor air to the different spaces and to discharge a corresponding quantity of air from said spaces at high velocity, said conduit means including a separate duct for each space, open at one end in said space and at the other end in said unit, a damper in each duct at its connection to said unit for indivdiual adjustment of the air quantity, means for regulating the unit to supply a considerably increased quantity of air to secure a sufficient ventilation of the spaces when said separate local circulating means are inoperative, and a reading instrument for each measuring means at said central point to afford central control of the associated damper and regulation of the air condition in the associated space by varying the quantity of the supplied and discharged air respectively.

3,041,955
CAP ASSEMBLY
Robert L. Hatcher, Oakland, Calif., assignor to Noll Manufacturing Company, Berkeley, Calif., a corporation of California
Filed July 3, 1959, Ser. No. 824,885
1 Claim. (Cl. 98—46)

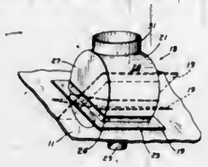
A cap assembly for use on roofs of different slope and having a vent pipe extending vertically therethrough comprising a sheet metal base including a truncated cone disposed with its larger portion adjacent said roof and surrounding said vent pipe and its smaller portion spaced above said roof; a first pair of sheet metal straps having a predetermined width; a first pair of securing means each disposed exteriorly on said truncated cone at one end of a horizontal diometer thereof for privotally engaging the lower end of a respective one of said first pair of straps and mounting said first pair of straps on opposite sides of said truncated cone to be disposed in an upright position; a second pair of sheet metal straps; a second pair of securing means each disposed exteriorly on said truncated cone at one of two opposite locations substantially evenly spaced circumferentially from said first securing means for engaging the lower end of a respective one of said second pair of straps and mounting said second pair of straps on opposite sides of said truncated cone to be disposed in an upright position; a sheet metal tube substantially circular in transverse cross section and at its lower margin, said tube being adapted to be disposed in a substantially verical position with said lower margin resting upon a particular part of said truncated cone depending upon the slope of said roof, said lower margin and said particular part of said truncated cone deforming relative to each other to afford substantially continuous abutment therebetween; a first pair of channels in said tube interrupting said abutment and constituted by outwardly displaced, diametrically opposite, axially extending portions of said tube adjacent and extending to said margin, each one of said first pair of channels being of substantially greater circumferential width than said predetermined width of one of



said first pair of straps; a second pair of channels in said tube interrupting said abutment and constituted by outwardly displaced, diametrically opposite, axially extending portions of said tube adjacent and extending to said margin and substantially evenly spaced circumferentially from said first pair of channels; means in said tube forming a first pair of circumferentially extending slits spaced from said margin and in axial alignment with said first pair of channels, each of said first pair of slits having a greater circumferential extent than said predetermined width of one of said first pair of straps; and means in said tube forming a second pair of circumferentially extending slits spaced from said margin and in axial alignment with said second pair of channels, said first pair of straps being adapted to be passed between said truncated cone and said outwardly displaced portions of said first pair of channels and through said first pair of slits from the inside to the outside of said tube and to be bent downwardly on the outside of said tube in any of the various pivoted positions of said first pair of straps relative to said first pair of securing means depending upon the slope of said roof, and said second pair of straps being adapted to be passed between said truncated cone and said outwardly displaced portions of said second pair of channels and through said second pair of slits from the inside to the outside of said tube and to be bent downwardly on the outside of said tube in any of the various positions of said tube on said truncated cone depending upon the slope of said roof.

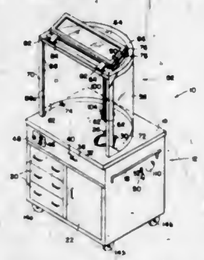
3,041,956
ROOF TYPE AERATING DEVICE
John E. Miles, Mason City, Iowa, assignor to Aer-Vac Incorporated, Mason City, Iowa, a corporation of Iowa
Filed Sept. 30, 1959, Ser. No. 843,572
3 Claims. (Cl. 98—55)

1. A grain aerating apparatus for storage bins having a flat inclined roof portion provided with an opening to receive said apparatus, said apparatus comprising, in combination, a wind turbine positioned above said inclined roof portion, an aerating member suspended downwardly beneath said roof portion, and a roof adapter means for supporting said turbine and aerating member in vertical axial alignment on said inclined roof portion, said roof adapter means including a hollow housing forming an air circulating chamber, said housing having contoured wall portions which support an upper air connection at the upper portion of said hollow housing and a lower air connection, coaxially aligned therewith, at the lower portion of said housing, said upper air connection being of a greater diameter than said lower air connection, first means securing said upper air connection to said wind turbine, second



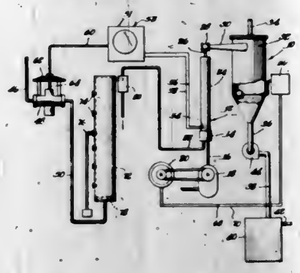
means securing said lower air connection to said aerating member, a frame unit having a flat base section adapted to be secured to the top side of said roof portion, said base section having an opening therein, the peripheral edges of said opening being complementarily contoured to receive and seat the contoured wall portions of said hollow housing within said opening, the contoured portions of said hollow housing permitting tilting movement of said housing relative to the frame unit while said housing is maintained contiguous with said contoured opening, whereby said housing is movable to an adjusted position wherein the axis of said air connections are in a substantially vertical plane, and means to secure said housing in said adjusted position to said base section.

3,041,957
MOBILE LABORATORY
John M. Liptay, Manhasset, N.Y., assignor to Laboratory Furniture Company, Inc., Mineola, N.Y., a corporation of New York
Filed Aug. 14, 1959, Ser. No. 833,768
8 Claims. (Cl. 98—115)



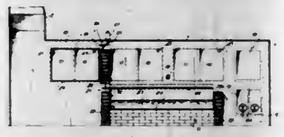
1. A mobile laboratory for conducting experiments comprising a cabinet, rollable means on said cabinet by which the same may be moved, said cabinet having a table top, a transparent uninterrupted enclosure on said top defining an unobstructed work area in which experiments may be conducted and viewed from without, said enclosure having an entranceway to said work area defined therein, door means on said enclosure variable in size movable to variably reduce the size of the enclosure entranceway, a constantly open air inlet defined between said door means and the top of said enclosure entranceway when said door means is moved to reduce the size of the enclosure entranceway, and means on said mobile laboratory to cause the movement of air through said air inlet.

3,041,958
METHOD AND APPARATUS FOR CONTROLLING PROCESSING TEMPERATURES
Victor R. Abrams, Rockford, Ill., and Thomas C. Werge, Hayward, and James F. Ryan, Jr., Castro Valley, Calif., assignors to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois
Filed Mar. 6, 1956, Ser. No. 569,874
11 Claims. (Cl. 99—251)



1. An apparatus for processing a product comprising means for receiving stock material, means for directing processing steam at a given temperature through said first mentioned means in intimate contact with stock material contained therein, means responsive to the temperature of the stock material for controlling flow of the processing steam to said first mentioned means, and thermal accumulator means providing a portion of said processing steam directing means between said first mentioned means and said controlling means for effectively smoothing out changes in the flow of processing steam.

3,041,959
MEANS FOR BARBECUING MEAT
Herbert J. Oyler, 202 S. Montreal, Dallas, Tex.
Filed Aug. 15, 1960, Ser. No. 49,693
6 Claims. (Cl. 99—260)

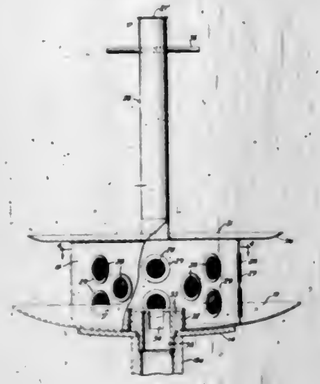


5. In a device of the class described, a housing; front and rear transverse walls extending across the housing and terminating at a point intermediate the top and bottom, and being spaced from the ends thereof; a pan suspended from the walls; a transverse partition extending across the housing, substantially in line with the front wall; a cooking rack supported by the transverse walls above the level of the pan; a passage between the front wall and the partition; a flue communicating with the passage, an enclosed warming oven disposed in the housing above the level of the passage and between the passage and the flue, whereby heated gases passing from the passage to the flue pass under the warming oven.

3,041,960
COFFEE MAKING APPARATUS
Howard R. Hall, 729 Washington Ave., Wilmette, Ill.
Filed Mar. 5, 1959, Ser. No. 797,424
4 Claims. (Cl. 99—316)

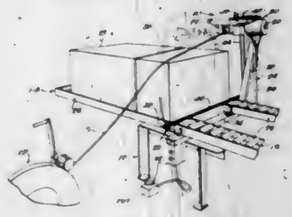
3. An extractor assembly for use in brewing coffee from finely divided coffee beans in a coffee urn having an upwardly concave internal bottom surface, said assembly comprising a closed hollow body portion having a peripheral wall, an outwardly projecting upwardly concave dished skirt connected to and encircling said body

portion at its lower end, the height of said skirt being only a minor proportion of the height of said body portion, at least one filter element in the peripheral wall of said body portion, said filter element comprising a fine mesh wire screen covering an opening in said peripheral



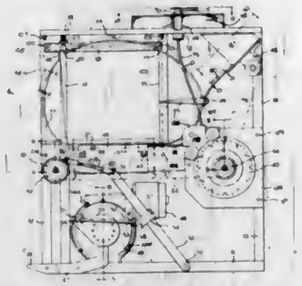
wall, said screen being adapted to block the passage into said body portion of finely divided coffee beans while permitting the passage therethrough of brewed coffee solution, and discharge means for coffee solution comprising a conduit connected to the lower end of said body portion and leading to a point below said dished skirt.

3,041,961
STRAP FEEDING AND GUIDING DEVICE
Frank A. Cechner, La Grange, and Olle P. Sterner, Skokie, Ill., assignors to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware
Filed June 2, 1958, Ser. No. 739,159
13 Claims. (Cl. 100—25)



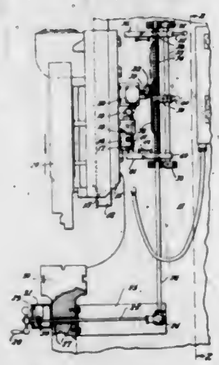
5. A strap feeding and guiding device for a banding station in a packaging line, comprising in combination, means forming an inwardly open strap guiding track partially encircling the bundle at the banding station, a strap feeder mounted at one end of said strap track and having a feed wheel engageable with the strapping to feed it into and through said strap track, power means connected to said feed wheel for rotating it in strap feeding direction, a generally horn-shaped, two-part, lead-in guiding trough having a fixed trough part and a movable trough part for guiding the strapping to said feed wheel, means mounting said movable trough part for movement between trough closed and open positions, strap ejector means movable with said movable trough part and engageable with the strapping for laterally removing the strapping from said strap feeder when said movable trough part moves to trough open position at the end of the strap feeding operation, and manually operable means for controlling the operation of said power means, said means movably mounting said movable trough part and said strap ejector means.

3,041,962
BANDING MACHINE
Ernest R. Workman, 3334 W. 63rd St., Chicago, Ill.
Filed Dec. 31, 1956, Ser. No. 631,725
12 Claims. (Cl. 100—26)



1. In a banding machine, a guideway for positioning a loop of wire fed axially from a supply source about a bundle, said guideway including: a pair of elongated members having confronting sidewalls formed with cooperating grooves therein to receive said wire for guiding the same; linkage means connecting the members together in such a manner as to permit the confronting sidewalls thereof to swing toward each other to a first position for joining the grooves and from each other to a second position to open the grooves for permitting withdrawal of the wire therefrom; resilient means connected to said members for biasing the same to the first position and cam driven means for moving the member to the second position against the action of the resilient means.

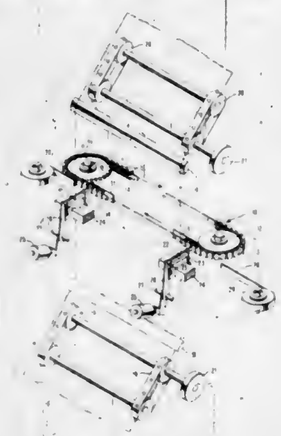
3,041,963
STOP DEVICE FOR PRESS BRAKES AND THE LIKE
Merrill W. Hazelton and Carl J. Ostendorf, Cincinnati, Ohio, assignors to The Cincinnati Shaper Company, Cincinnati, Ohio, a corporation of Ohio
Filed Jan. 2, 1959, Ser. No. 784,499
12 Claims. (Cl. 100—256)



1. In a vertical press brake and the like having a frame, a bed, and a ram reciprocable on said frame with respect to said bed; a bracket secured to said bed and extending rearwardly therefrom free of said frame, a pair of mating bevel gears operatively mounted at the rear end of said bracket, a horizontal shaft passing through said bed, having a bearing in said bed and connected to one of said pair of bevel gears, a vertical shaft connected to the other of said pair of bevel gears, guide means for said vertical shaft secured to said frame and slidingly embracing said vertical shaft, said vertical shaft having a threaded portion, a bottom stop in threaded engagement with the threaded portion of said vertical shaft, means preventing rotation of said bottom stop, a bottom limit switch secured

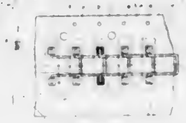
to said ram in a position to abut said bottom stop to terminate downward movement of said ram, and means for rotating said horizontal shaft for adjusting the vertical position of said bottom stop.

3,041,964
CONTINUOUS TYPE BELT
Victor R. Simpson, Owego, and Thomas W. Thompson, Endwell, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 11, 1960, Ser. No. 1,761
4 Claims. (Cl. 101—111)



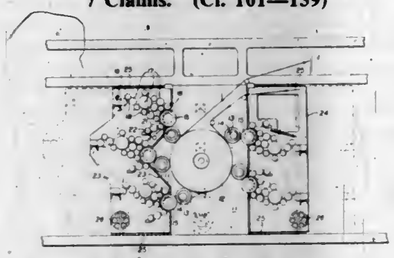
4. In a printer apparatus having a print mechanism comprising a plurality of type members, a plurality of hammers selectively operable for striking said type members along a print line, means for moving said plurality of type members in a uniformly spaced manner along said print line and in a continuous path including a thin composite belt member adapted to carry said plurality of type members, said type members being removably attached to said belt member by compressive clamping action of metallic members engageable with opposite surfaces of said belt member, said composite belt member comprising a single thin flat sheet steel core tension member having ends joined to form a continuous type carrying loop, and a uniform thin impact energy absorbing plastic coating bonded to the outer surface of said steel core, whereby said coating isolates said core from corrosion causing metal contacts.

3,041,965
TYPE MEMBERS FOR A HIGH SPEED PRINTER
Rentaro Sasaki, Tomioka City, Japan, assignor to Oki Electric Industry Company Ltd., Minato-ku, Tokyo, Japan, a corporation of Japan
Filed Mar. 2, 1959, Ser. No. 796,583
Claims priority, application Japan Mar. 20, 1958
1 Claim. (Cl. 101—111)



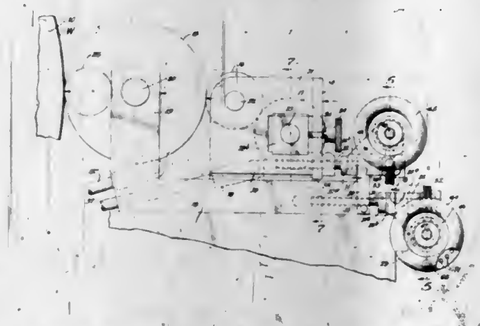
In combination with a type-carrying belt for use in a high speed printer of the kind described, type members having faces carrying print and having a pair of rearwardly extending lugs passing through apertures in said belt, said type members being arranged along said belt in linear spaced relationship, holes formed in said lugs, and spring means for each type consisting of an individual wire loop for each type member, each end being engaged in the holes formed in each pair of lug, the medial part of the loop of wire being formed to extend to and engage within the open loop end of the wire loop carried by an adjacent type member.

3,041,966
MULTICOLOR WEB OFFSET PRESS
Burton C. Polglase, Jr., White Plains, N.Y., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed Sept. 24, 1959, Ser. No. 842,092
7 Claims. (Cl. 101—139)



1. A multicolor web offset press comprising an impression cylinder, a plurality of blanket and plate cylinders grouped therearound, a fixed frame supporting the said impression, blanket and plate cylinders, a corresponding plurality of inking mechanisms and water motions, a pair of movable carriages positioned on opposite sides of the impression cylinder and supporting the said ink motions and water motions, each such carriage supporting a plurality of said ink motions and water motions and being movable horizontally for tripping off the ink motions, each water motion comprising a transfer roller and a form roller, means supporting the form roller for pivotal movement about the axis of the transfer roller, yielding means for urging the form roller into contact with the plate cylinder, whereby the said yielding means maintain the water motion form roller in contact with the plate cylinder when the carriage which supports the water motion is moved back to trip off the ink motion, and stop means for limiting movement of the water motion form roller when the carriage is in printing position.

3,041,967
CYLINDER SUPPORT AND MOVING MEANS FOR PRINTING MECHANISM
Ernst Daniel Nystrand, Green Bay, Wis., assignor to Paper Converting Machine Co., Inc., Green Bay, Wis., a corporation of Wisconsin
Filed May 14, 1959, Ser. No. 813,204
10 Claims. (Cl. 101—182)



1. In a printing mechanism, a frame, an impression cylinder rotatably carried on said frame, elongated guide

means on said frame oriented generally in a direction outward of said cylinder, pedestal means for a plate cylinder slidably mounted in said guide means, pedestal means for a transfer cylinder also mounted in said guide means and above the plate cylinder pedestal means, a plate cylinder rotatably mounted on said plate cylinder pedestal means, a transfer cylinder rotatably mounted on said transfer cylinder pedestal means, a fluid pressure cylinder unit connected between said frame and the transfer cylinder pedestal means, said cylinder unit being so oriented with respect to the longitudinal direction of said guide means as to bring said transfer cylinder into contact with said plate cylinder and said plate cylinder into contact with said impression cylinder while urging said transfer cylinder pedestal means downward against said guide means, means on said plate cylinder pedestal means limiting the movement of said transfer cylinder pedestal means relative to said plate cylinder pedestal means, and means on said frame limiting the movement of said plate cylinder pedestal means relative to said frame, said cylinder unit being reversely operative to separate said cylinders only sufficiently to avoid ink transfer therebetween.

3,041,968
INK FOUNTAINS FOR ROTARY PRINTING PRESSES

Henry W. Moser, Haddonfield, N.J., and William Grobman and Ewald Otto P. Eskilson, Philadelphia, Pa., assignors to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey

Filed Oct. 1, 1957, Ser. No. 687,568
4 Claims. (Cl. 101—365)



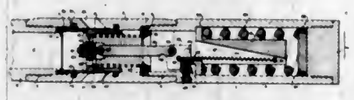
1. In an ink fountain for priniting machines, a fountain roll, a flexible blade converging downwardly towards the side of the roll and forming therewith a trough for the ink from which the ink is withdrawn as a film on the roll surface as the roll rotates, means for closing the ends of the trough, and means for adjusting the lower edge of the blade with respect to the roll surface to regulate the thickness of said film and the linear extent thereof axially of the roll, said blade adjusting means including a plurality of individually flexible tongue elements underlying and spaced from the lower edge portion of the blade in longitudinal series substantially aligned with said blade, wedge elements corresponding in number to said tongue elements movably interposed between the blade and each of said flexible tongue elements and of greater thickness than the distance between the blade and said flexible tongue elements for transmitting pressure from the said elements to the blade in localized areas tending to resiliently displace the blade toward the roll surface, and means for individually adjusting the positions of the wedge elements between the blade and the flexible tongue elements away from or toward the lower edge of the blade to vary said pressure by wedging coaction between said elements and said blade.

3,041,969
GAS PRESSURE DEVICES

Edward C. Filstrup, St. Joseph, Mich., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed Apr. 27, 1959, Ser. No. 809,276
5 Claims. (Cl. 102—25)

1. A blasting device comprising a substantially tubular body having a wall, a lateral outlet in the wall, means for introducing gas under pressure into the body, a sleeve valve slidable within the body in response to gas pressure therein and normally positioned to span and seal said outlet, the valve having a greater effective cross-sectional area at one end than at the other end whereby the valve is urged to open position by increasing gas pressure in the



body, a pivot link having a pivot point resiliently mounted for longitudinal movement within the body, rigid connecting means hingedly connected to the sleeve valve and to the pivot link, stationary means to restrain counterclockwise rotation of the pivot link and to normally maintain the pivot link in a stable condition, and resilient means urging the pivot link toward the sleeve valve.

3,041,970
GAS LIBERATING DEVICES

Harry Clark Foster, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed July 14, 1959, Ser. No. 827,055
4 Claims. (Cl. 102—25)

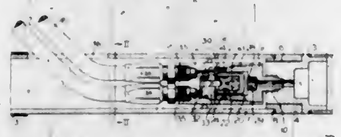


1. A device for instantaneously liberating a charge of compressed gas as a work performing medium comprising an obturated, substantially cylindrical housing having a main chamber for containing a charge of compressed gas, means for introducing gas under pressure into the chamber, a secondary control chamber and a discharge port proximate one end of the longitudinal axis of the housing, a main valve slidable in the housing between the main chamber and the secondary control chamber and normally positioned to span and seal the discharge port, the diameter of the valve in the secondary control chamber being greater than the diameter of the valve in the main chamber, a passageway between the chambers, an exhaust tube extending through the main valve and the main chamber from the secondary control chamber to the opposite end of the housing, a vent to the outside of the housing in communication with the exhaust tube, and automatic control valve means normally closing said vent and responsive to a predetermined pressure in the chamber to open the vent and allow the pressure in the secondary chamber to be quickly reduced.

3,041,971
BLASTING APPARATUS

Harry Clark Foster, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed Nov. 12, 1959, Ser. No. 852,337
3 Claims. (Cl. 102—25)



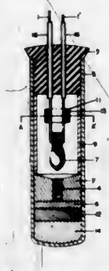
1. Blasting apparatus comprising a compressed gas blasting cartridge, a series shooting valve securely affixed

to the blasting cartridge, said valve having a body, an axial bore within the body, an outlet to the cartridge at one end of the bore, an inlet line and a second outlet line in side-by-side relationship at the other end of the bore, a hollow cylindrical valve member closed at one end and housed within the bore, rigid cylindrical valve positioning means within the bore extending into the valve member forming a slidably sealing relationship therewith and maintaining the valve member in spaced relationship with the bore, means of communication through the wall of the valve member, the inlet line entering the bore radially externally to the valve member and means within the valve body connecting the inlet line and the second outlet line, said connecting means being normally closed by the valve member.

3,041,972
ARC RESISTANT ELECTRIC INITIATOR

Thomas Z. Ball, New Ringgold, Pa., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware

Filed Dec. 15, 1958, Ser. No. 780,482
8 Claims. (Cl. 102—28)

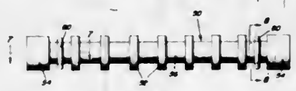


1. A delay electric initiator comprising a shell, an electric ignition element disposed within said shell, a pair of electrical conductors leading to said ignition element, said conductors being potentially engaged into a single low resistance electrical circuit but maintained out of such engagement by insulation having a dielectric strength of at least 200 volts, said insulation being located near said ignition means in position to be exposed to and destroyed by heat generated by internal arcing occurring within said initiator.

3,041,973
RECOVERABLE TAMPING PLUG

Benjamin F. Sanders, Rte. 1, Branchland, W. Va.

Filed Mar. 27, 1959, Ser. No. 802,351
3 Claims. (Cl. 102—30)

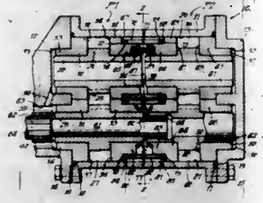


1. A recoverable and reusable tamping plug for blasting comprising a unitary elongated rod-like and solid body of a non-magnetic resiliently yieldable and deformable material for insertion in shot holes, integral annularly enlarged sealing rings on said body in longitudinally spaced relation thereon and of a diameter and resiliency sufficient to enter a shot hole and thereafter establish a sealing engagement with a shot hole wall in which the tamping plug is inserted, a magnetic element surrounding said body between a pair of adjacent rings whereby to facilitate recovery of the plug from the material shot down by the blast with a magnetic plug recovery device, a tapered inwardly recessed inner end on said plug to facilitate its insertion into a shot hole and its position against a blasting charge therein.

3,041,974
PUMPS

Edwin R. Judkins, East Cleveland, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed May 25, 1956, Ser. No. 587,282
4 Claims. (Cl. 103—4)

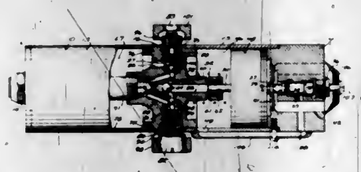


1. An intermesning gear type pump assembly including means defining an enclosing housing having a pair of intersecting chambers formed therein, a first gear pump unit, a second gear pump unit, both said pump units being disposed in said chambers and being axially spaced from each other, means connecting said pump units in continuous driving relation, gear impellers for each unit having axially extending journals and intermeshing at the juncture of said chambers, pairs of bushings surrounding said journals and providing each gear pump unit with a pump cavity therein, means defining inlet means and outlet means in said housing communicating respectively with said cavities, at least one pair of said bushings of each unit being axially movable, each pair of said movable bushings being disposed between said first gear pump unit and said second gear pump unit and having inner faces forming the end walls of each said pump cavity and adapted to make endwise sealing contact with the sides of said impeller, each said pair of movable bushings having opposed outer faces, axially spaced from each other, sealing means in contact with each of said movable bushings forming with said outer faces and said enclosing housing a pair of intersecting, substantially annular, pressure chambers, and fluid passage means affording communication between said pressure chambers and said outlet means whereby said movable bushings are forced into endwise sealing contact with the sides of said impellers.

3,041,975
FLUID ACTUATED HYDRAULIC POWER UNIT

Neil F. Atherton, Bayside, and Joseph L. Johnston, Hartland, Wis., assignors to Applied Power Industries, Inc., a corporation of Wisconsin

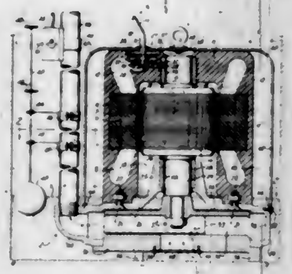
Filed May 26, 1960, Ser. No. 31,919
15 Claims. (Cl. 103—50)



1. A fluid actuated hydraulic pump comprising, a unitary body having a motor chamber formed in one end and a hydraulic reservoir in the other end axially alined with said motor chamber, a motor piston reciprocable within said chamber, a motor valve block closing the end of said motor chamber remote from said reservoir, said motor valve block including inlet and exhaust passages, a hydraulic valve block interposed between said motor chamber and said reservoir, said hydraulic valve block including a pumping chamber opening to one side thereof and hydraulic inlet and discharge passages, a piston re-

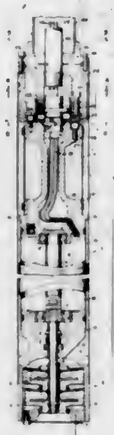
ciprocable in said pumping chamber and having a portion coacting with said motor piston, and a tubular member secured at one end to the opposite side of said hydraulic valve block and extending through said hydraulic reservoir and out the adjacent end of said body, said hydraulic discharge passage communicating between said pumping chamber and said tubular member to thereby form an axially extending hydraulic discharge passageway.

3,041,976
MOTOR PUMP CONSTRUCTION
John T. Maynard, West Allis, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed July 2, 1958, Ser. No. 746,274
3 Claims. (Cl. 103—87)



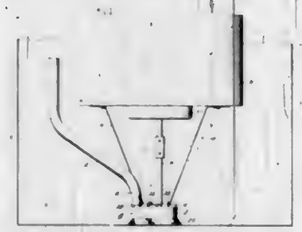
1. In a sump pump having an electric drive motor to periodically pump a fluid from a collecting chamber, a thin shell encircling said motor and secured at spaced locations to establish a cooling chamber disposed in heat exchange relation to said motor, and water passage openings adjacent the lower portion of the cooling chamber to admit fluid thereto as fluid rises in the collecting chamber, the fluid in the cooling chamber slowly discharging through said water passage openings incident to a pumping operation and thereby cooling the motor during the pumping operation.

3,041,977
SUBMERSIBLE MOTOR-PUMP UNIT
Clinton A. Boyd, Delavan, Wis., assignor to Sta-Rite Products, Inc., Delavan, Wis., a corporation of Wisconsin
Filed Feb. 9, 1959, Ser. No. 791,929
7 Claims. (Cl. 103—87)



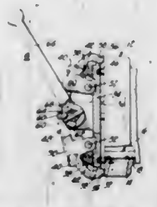
1. In a submersible motor-pump unit, a pump housing, an outer casing secured to an end of the pump housing to provide an integral structure and extending a substantial distance axially from said housing, said pump housing having a portion extending radially inward of said casing to form an abutment, a separate motor package freely disposed within the casing and including a motor and pumping means, said pumping means being operably connected to the motor and disposed within said pump housing, one end of said motor package bearing against said abutment, and clamping means operably associated with said casing and engageable with the opposite end of the motor package to force the motor package inwardly within the casing against the abutment on said pump housing to firmly secure said motor package within the casing.

3,041,978
EVAPORATIVE COOLER
Peter Kranz, Darien, Conn., assignor to General Electric Company, a corporation of New York
Filed Jan. 15, 1960, Ser. No. 2,755
7 Claims. (Cl. 103—103)



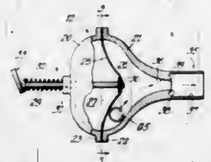
1. An evaporative cooler comprising: a liquid reservoir having a bottom wall; an impeller for pumping liquid from said reservoir; a housing for said impeller; and a resilient fleixble strainer formed with said housing, said strainer extending downwardly from said housing and being resiliently self-urged against the bottom wall of said reservoir to provide a liquid tight seal between said strainer and said bottom wall whereby to strain all of the liquid which flows between said impeller housing and said bottom wall to the impeller.

3,041,979
PUMP WITH RELEASABLE END COVER
Murray G. McLean, North Tustin, Stephan R. Orth, Costa Mesa, and Warren Doble, North Hollywood, Calif., assignors to Jabsco Pump Company, Costa Mesa, Calif., a corporation of California
Filed June 6, 1960, Ser. No. 34,314
5 Claims. (Cl. 103—117)



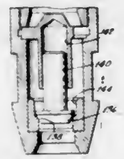
4. In a pump, the combination of: a housing having an end wall and provided therein with an impeller chamber which has an open end in said end wall of said housing and which extends longitudinally of said housing away from said end wall thereof; an impeller in said impeller chamber and rotatable therein about an axis which extends longitudinally of said housing; means for rotating said impeller about said axis; an end cover mounted on said housing for movement longitudinally thereof between a closed position wherein it engages said end wall of said housing and closes said open end of said impeller chamber and an open position wherein it disengages said housing and opens said open end of said impeller chamber; cam means on said end cover and engaging said housing for moving said cover from said closed position to said open position, said cam means including rocker arms pivotally mounted on said end cover and having outer ends in engagement with said end wall of said housing at circumferentially spaced points and having inner ends, said cam means further including a rotatable cam carried by said end cover and engaging said inner ends of said rocker arms; and spring means acting on said end cover and said housing for biasing said end cover toward said closed position.

3,041,980
PUMP
Curtis E. Behrens, Effingham, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 7, 1960, Ser. No. 1,058
8 Claims. (Cl. 103—150)



1. A fluid pump comprising a housing defining a chamber, an inlet tube passing through said housing and having one end extending tangentially into the chamber providing for the free flow of fluid into the chamber, a discharge tube connected to said chamber, and means within said chamber and operative to alternately draw fluid into said chamber through said inlet tube and to discharge fluid from said chamber through said discharge tube, said inlet tube end being spaced from said drawing and discharge means and said housing within said housing for turbulently resisting discharge of fluid from the chamber through the inlet tube to cause a resultant flow of fluid through the inlet tube into the chamber.

3,041,981
STANDING VALVE FOR FREE WELL PUMP
Clarence J. Coberly, San Marino, Calif., assignor to Kobe, Inc., Huntington Park, Calif., a corporation of California
Division of application Ser. No. 487,303, Feb. 10, 1955, now Patent No. 2,869,470, dated Jan. 20, 1959. Continuation of application Ser. No. 639,497, Feb. 11, 1957, now abandoned. This application Jan. 16, 1961, Ser. No. 83,352
4 Claims. (Cl. 103—229)



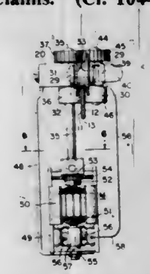
1. In a standing valve assembly for a free well pump, the combination of: a valve body providing a seat and a closed cylinder coaxial with said seat; a valve engageable with said seat and having a coaxial stem slidable in said cylinder, there being a flow restricting clearance between said stem and said cylinder; and a wall on said valve body coaxial with said seat and said cylinder and extending axially away from said seat in the direction of opening movement of said valve and having an end spaced from said seat, so that said valve must move in its direction of opening movement a substantial distance before moving past said end of said wall, there being a flow restricting clearance between said valve and said wall when said valve is between said seat and said end of said wall.

3,041,982
SYSTEM FOR LIFTING A TRACK SECTION
Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna 1, Austria
Filed Apr. 28, 1958, Ser. No. 731,326
Claims priority, application Austria May 3, 1957
2 Claims. (Cl. 104—7)



1. A system for successively aligning an elongated, substantially horizontal track, comprising a first aligned elongated section of said track; a second elongated section of said track longitudinally spaced from said first section and to be aligned therewith; first and second supports respectively arranged on said track sections, said first support being movable on said first track section and having first and second portions spaced along said track sections, the first portion being vertically above said second track section and the second portion resting on said aligned track section direction; track lifting means on the first one of said portions nearer said second support and operable for lifting a longitudinally coordinated element of said second track section; track tamping means on the first one of said portions further remote from said second support for securing said track element in a lifted position when said first support moves towards said second support; marker means on said first support at a fixed vertical distance from said track element; optical means on said second support for establishing a fixed line of sight from said second support toward said marker means, said marker means being aligned with said line of sight when said track element is lifted; indicating means on said second portion of the first support operatively connected to said optical means for indicating alignment of said marker means with said line of sight; and control means on said first support for controlling operation of said track lifting means.

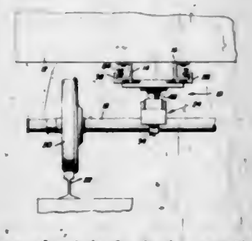
3,041,983
TOY MONORAIL TROLLEY SYSTEMS
Thomas K. Liversidge, Wayne, and Hans Lingenfelder, Wawa, Pa. (both % Harmonic Reed Corp., 1111 Lancaster Ave., Rosemont, Pa.)
Filed June 12, 1961, Ser. No. 116,624
7 Claims. (Cl. 104—93)



1. A monorail vehicular device for use with a rail having opposite spaced and insulated conductive face portions comprising a trolley body having spaced grooved supporting wheels for engagement with the upper edge

of the rail, a motor, members at opposite ends of said trolley body on horizontal pivotal axes for supporting said motor from said trolley body, spaced driving rollers on vertical pivotal axes disposed intermediate said supporting members for engagement with the opposite faces of the rail intermediate said supporting members, members connecting said motor and said rollers in driving relation, and an energizing circuit for said motor including said rollers.

3,041,984
RAILROAD JOURNAL AND WHEEL AXLE JACK SKIDDING DEVICE
Patrick A. Dunn, 318 Pool Drive, and Larry A. Dunn, 2911 Spokane, both of San Antonio, Tex.
Filed Feb. 23, 1961, Ser. No. 91,199
8 Claims. (Cl. 105—199)



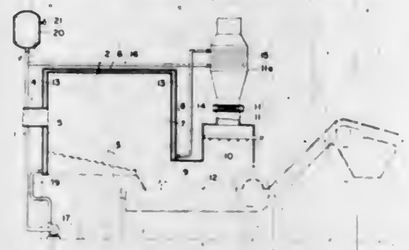
1. A skidding wheel jack device applicable to a railroad car having center sills disposed therebeneath and between rail wheels mounted on an axle, comprising axle mounting means rotationally fixed to the axle for axle mounting purposes, sill anchoring means adjustably mounted on the sills for anchoring thereof below the railroad car in alignment with and above the axle, lifting means mounted by said axle mounting means on opposite sides of the axle for displacing the axle relative to the sill anchoring means and connecting means operatively connecting the lifting means to the sill anchoring means and operative in response to displacement of the lifting means to transmit the load of the railroad car to the axle and yieldably resist angular displacement of the axle whereby said railroad car with a damaged axle and/or journal may be side-tracked.

3,041,985
TWO-CAR TRUCK WITHOUT CENTER PIN
Friedrich Emil Brill, Siegen, Westphalia, and Konrad Trümper, Weidenau, Sieg, Germany, assignors to Rheinstahl Siegener Eisenbahnbedarf Aktiengesellschaft, Siegen, Germany, a corporation of Germany
Filed Jan. 8, 1958, Ser. No. 707,698
8 Claims. (Cl. 105—199)



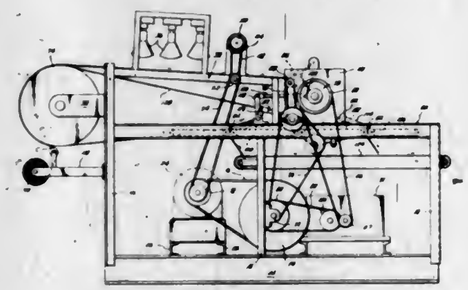
1. A multiple-axle truck adapted to carry adjacent articulatedly connected ends of cars of a train without center-pin train-mounting means, comprising a horizontally rigid truck frame, two substantially parallel tandem-mounted spaced wheel sets carrying said frame in fixed non-displaceable relationship thereto, each of said wheel sets including an axle and two wheels, at least four connecting links for connecting adjacent ends of articulated connected train cars to said frame, said connecting links being spaced apart to form the corners of a horizontal rectangle, a first joint for each connecting link pivotally connected thereto, spring means attached to said frame and supporting said joint, and a second joint for each connecting link attached to a car and pivotally attached to said link, the axes of said pivot joints being substantially parallel to the axis of said wheels, the first and second pivot joints at each link being spaced apart in a vertical direction and wherein said wheels are of smaller diameter than conventionally used wheels.

3,041,986
INCINERATOR PLANT AND METHOD
Bertram B. Reilly, Pittsburgh, Pa., assignor to Dravo Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 19, 1958, Ser. No. 775,001
9 Claims. (Cl. 110—10)



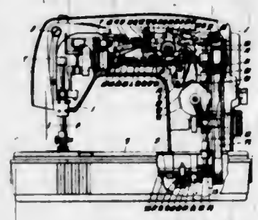
9. The method of incineration which comprises burning refuse in a combustion chamber, heating a fluid in a closed environment surrounding the chamber by the heat of combustion within the chamber, exhausing the products of combustion from the chamber through a conduit to the atmosphere, scrubbing the products of combustion with a liquid at a station in the conduit as they pass to the atmosphere, and circulating the heated fluid from the closed environment to a location within the conduit intermediate the scrubbing station and the atmosphere whereby the scrubbed gases are heated by the fluid and the moisture content thereof is lowered.

3,041,987
MACHINE FOR MAKING CLOTH BAGS
Charles I. Kaplan and Elmer W. Mylius, Houston, Tex., assignors to Standard Bag Company, Houston, Tex., a corporation of Texas
Filed Apr. 22, 1960, Ser. No. 24,048
4 Claims. (Cl. 112—10)



1. A machine for making bags comprising cutting means through which a strip of fabric is passed to cut the strip into free separate identical pieces, folding rolls, conveyor means positioned to receive the pieces discharged from the cutting means and to convey the same to said rolls, stop means located beyond the rolls and parallel to the axes thereof in position for engagement with the leading edges of the pieces to center the pieces over the rolls, aligning rollers positioned between the folding rolls and the stop means cooperating with the latter to align the centers of the pieces transversely of the folding rolls, and means positioned for coaction with the pieces and folding rolls to cause the pieces to be drawn between the folding rolls to fold the pieces.

3,041,988
ORNAMENTAL-STITCH CHANGING MECHANISMS IN ZIGZAG STITCH SEWING MACHINE
Toshio Fujita, Moriguchi City, Osaka-fu, Japan, assignor to Sanwa Mishin Seizo Kabushiki Kaisha (Sanwa Sewing Machine Mfg. Co., Ltd.), Fuse City, Japan
Filed Aug. 31, 1959, Ser. No. 837,049
Claims priority, application Japan Sept. 12, 1958
6 Claims. (Cl. 112—158)



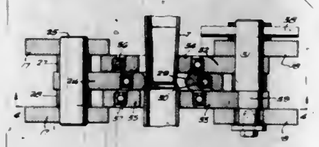
1. In a zigzag stitch sewing machine having a hollow frame, a main drive shaft rotatably mounted in said frame, a needle bar mounted in said frame for reciprocating and lateral swinging movements, drive means connecting said shaft and said needle bar for reciprocating the same, a cam shaft rotatably mounted in said frame and driven from said main shaft, a master cam fixed to said cam shaft, a pivotally mounted member engaging said master cam, mechanism operable by said member to impart swinging movements to said needle bar, mid-point adjusting means to vary the location of the pivot point of said member to change the mid-point of said swinging movements, amplitude adjusting means associated with said mechanism to vary the effective movement of said member to adjust the amplitude of said swinging movements and means for driving a work feeding means from said shaft and including feed direction reversing mechanism, the combination of three cam units fixed to said cam shaft, each unit comprising a plurality of cams, a clip pivotally mounted on said frame adjacent each cam unit, a plurality of cam followers pivotally mounted on each clip, there being a separate follower for each cam of each unit, means connecting one clip with said mid-point adjusting means, means connecting the second clip with said amplitude adjusting means, means connecting the third clip with said feed direction reversing mechanism, a plurality of cam follower positioning members pivotally mounted on said frame adjacent said cam followers, there being a separate positioning member for each cam follower, each positioning member engaging the associated cam follower, a lug on each positioning member, a cylindrical cam fixed to a shaft rotatably mounted in said frame adjacent said positioning members, a dial on said last named shaft exteriorly of said frame for facilitating rotation of said cylindrical cam, a plurality of cam tracks on said cylindrical cam, each of said lugs engaging a separate track and one or more lobes on each track, whereby upon setting said dial for a desired stitch pattern, the appropriate lobes on said tracks will engage the associated lugs to move the associated positioning members and thereby move the associated cam followers into operative engagement with the associated cams of said cam units, rotation of said cam units serving to pivotally move said clips in accordance with the contour of the selected cams to adjust the mid-point adjusting means, the amplitude adjusting means and the feed direction reversing mechanism to provide the desired stitch pattern.

3,041,989
DIE WITH PLASTIC LINER
Lawrence S. Tanner, 11300 E. 9 Mile Road, Warren, Mich., and Alfred Lindinger, 25800 Madison Court, St. Clair Shores, Mich.
Filed June 4, 1959, Ser. No. 818,135
1 Claim. (Cl. 113—49)



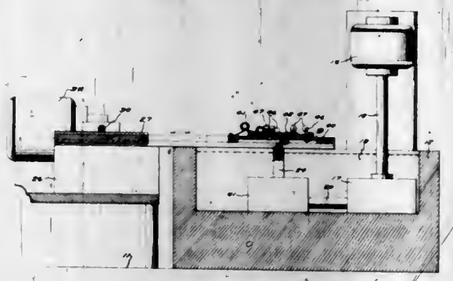
A die consisting of a female portion having a cavity formed therein and open at one end and formed from a block of suitable material, the face of said die at said end being cut away inwardly from the inner face of said cavity and a metallic wear resistant ring mounted on said cut away portion and extending inwardly from the inner face of said cavity, said ring being formed in sections, the inner face of said cavity being lined with a hardened plastic material terminating at its inner face flush with the inner face of said ring sections and positioned below said ring sections.

3,041,990
TUBE TAPERING MACHINE
Cecil K. Le Fiell, Los Angeles, Calif. (13700 Firestone Blvd., Santa Fe Springs, Calif.)
Filed Oct. 9, 1959, Ser. No. 845,538
8 Claims. (Cl. 113—53)



1. A device of the class described comprising in combination, means for rotating a workpiece about its axis, annular forming means disposed in encircling relationship to the workpiece, means for rotatably mounting the annular forming means, backup means engageable with the workpiece on both sides of said annular forming means, and means for moving said annular forming means and backup means in opposition to each other in a direction transverse to the axis of the workpiece to deform the workpiece as it rotates.

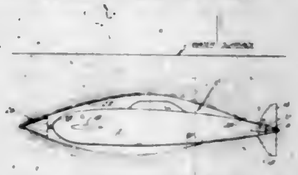
3,041,991
SOLDERING DEVICE
Howard A. Dvorak, Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 30, 1957, Ser. No. 687,040
1 Claim. (Cl. 113—126)



A soldering device comprising a base, a vat mounted on the base, a nozzle extending vertically from the vat

and in communication with solder within the vat, the nozzle having a horizontally-disposed elongated orifice opening above the vat for attaining a vertical sheet-like fountain of solder above the surface of solder contained within the vat, a pump positioned within the vat and connected to the nozzle for forcing solder through the nozzle, a pair of horizontally-spaced elongated racks supported by the base and movable in a horizontal path above the orifice of the nozzle, rack teeth on the upper surface of the racks along one portion of their lengths, a splined shaft spanning the racks and meshed with the teeth of the racks, a motor connected to the shaft for horizontal lateral movement of the racks relative to and above the nozzle, a mask having a pattern of vertical apertures therethrough supported on the racks along another portion of their lengths and horizontally bridging the racks above the nozzle, the width of the mask being at least equal to the width of the elongated orifice of the nozzle, and a spring clip fixed to the upper surface of the mask having a free end for holding an article on the mask whereby the article undersurface exposed by apertures of the mask is solder coated as the racks move the article and mask laterally through the vertical sheet-like fountain.

3,041,992
LOW DRAG SUBMARINE
John G. Lee, Farmington, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 10, 1960, Ser. No. 28,119
4 Claims. (Cl. 114—16)



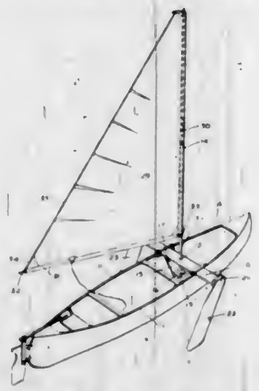
1. A vehicle adapted to operate completely submerged in a liquid, means for propelling said vehicle at relatively high speeds, while submerged in said liquid, means for reducing friction drag on the outer surface of said vehicle comprising a streamlined body forming a bulbous discontinuity on the leading edge of the vehicle for forming a gaseous cavity enveloping a substantial portion of the vehicle immediately downstream of said discontinuity, means for adjusting the relative position of said bulbous portion along the longitudinal axis of the vehicle, and means for varying the contour of said bulbous discontinuity about said axis.

3,041,993
SIGNAL TRANSLATING SYSTEM
Donald D. Robertson, Hartsdale, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 27, 1945, Ser. No. 637,409
7 Claims. (Cl. 114—23)



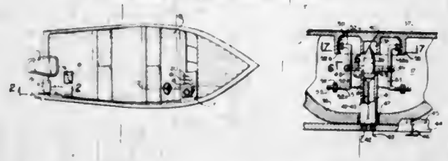
1. A torpedo steering system comprising a rudder, actuating means for deflecting said rudder in one or the opposite direction, control means for said actuating means for determining the direction of deflection of said rudder thereby, said control means comprising a pair of normally disabled first amplifiers each having a relay in its output circuit and said relays being associated with said actuating means to effect deflection of said rudder in one direction or the other in accordance with which of said relays operates, and an echo ranging system for enabling one or the other of said amplifiers in accordance with the direction, relative to the torpedo, of the source from which echoes received by the system emanate, said echo ranging system comprising a pair of hydrophones mounted upon opposite sides of the torpedo, a normally disabled pulse generator coupled to said hydrophones, a receiver including a pair of signal translating channels for each of which a respective hydrophone constitutes the input element and a respective one of said first amplifiers constitutes the output element, each of said channels including also a second amplifier coupled to the respective hydrophone and a detector coupling the second amplifier to the respective first amplifier, a limiter between each hydrophone and the respective second amplifier, means for simultaneously enabling said pulse generator for periods of preassigned duration and recurrence rate and disabling the detectors for the duration of said periods, gain control means coupled to the input circuit of each of said second amplifiers and energized in part by the power received by said second amplifiers during said periods for controlling the bias upon said second amplifiers to increase to gain thereof at a prescribed rate immediately following each of said periods and means included in the coupling between each detector and the associated first amplifier for converting echo signal pulses applied to the detector into enabling voltages for the amplifier of duration at least as long as the operate time of the respective relay.

3,041,994
KIT SAIL FOR BOATS
James H. Brodie, 1972 Grand Ave., St. Paul 5, Minn.
Filed Aug. 1, 1960, Ser. No. 46,691
8 Claims. (Cl. 114—39)



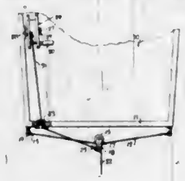
1. A conversion kit for equipping a boat for sailing, said conversion kit consisting of a system of cantilevers, beams, brackets and clamps combined to function as an integral structure to transmit bending and torsional stresses applied by wind forces on a sail to a cantilever mast into the hull of a boat, said conversion kit comprising a sail, a cantilever mast supporting said sail, a transverse torsion beam to overlie and span the gunwales of a boat, a mast support bracket depending from said transverse torsion beam, said transverse torsion beam containing at the center thereof an aperture to receive said mast, said mast support bracket being rigidly attached to said transverse torsion beam and containing thereon a socket to receive the base of said mast, said socket being spaced in a substantially vertical direction away from said aperture in said transverse torsion beam and said mast support bracket working in conjunction with said transverse torsion beam to serve as a lever arm anchoring the base of said cantilever mast to resist horizontal bending stresses in said cantilever mast and to firmly support said cantilever mast in an upright position on said transverse torsion beam, said transverse torsion beam being equipped with clamping members to grip the two opposite gunwales of a boat.

3,041,995
AUTOMATIC PILOT FOR NAVIGABLE CRAFT
Paul R. Newcomb, 2564 Holman Ave., Silver Spring, Md.
Filed Oct. 14, 1959, Ser. No. 846,437
4 Claims. (Cl. 114—144)



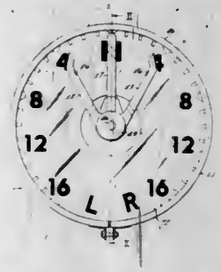
1. A steering system for a craft comprising in combination, a primary rudder for said craft having a relatively large effective area and being rotatable to any one of a plurality of positions, an auxiliary rudder having a relatively small surface area as compared to said primary rudder to effect relatively small long-range turning moments on said craft, means for controlling the position of said auxiliary rudder to thereby automatically control the steering of said craft comprising driving means coupled to said auxiliary rudder for moving said auxiliary rudder to one or the other of two predetermined positions oppositely inclined respectively to the center line of said craft, control means for said driving means comprising a rotatable magnetic member which rotates about a central pivot with changes in heading of said craft, conductive means carried by said member and comprising a conductive deposit of arcuate configuration spaced from and partially surrounding said central pivot, portions of said member adjacent the ends of said conductive deposit comprising an electrical insulating material, electrical contact means located on said craft at a predetermined reference position related to a desired orientation of said craft and adapted to engage and disengage with said conductive means as said member rotates with changes in heading of said craft and thereby alternatively moving said conductive deposit and said electrical insulating material into contact with said contact means, said contact means being in engagement with said member at the locus of movement of said conductive deposit during rotation of said member about its pivot, means for operating said auxiliary rudder to one of its two predetermined positions when said contact means is in engagement with said conductive deposit and for moving said auxiliary rudder to the other of its two predetermined positions when said electrical contact means is in engagement with said electrical insulating material.

3,041,996
WATER SKI TOWING GEAR
Edwin E. Roberts, 14312 11th SW., Seattle, Wash.
Filed Apr. 9, 1959, Ser. No. 805,234
1 Claim. (Cl. 114—235)



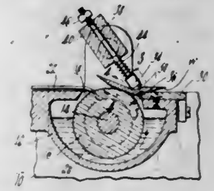
Water ski towing gear comprising, a bridle adapted to be mounted at the stern of a boat, a sheave working on said bridle, a through-socket defining member carried by said sheave, a water ski tow line threaded through said socket, an elastic member connected by one of its ends to said line, line reeling means operatively connected to the other end of said elastic member, and a stop on said line between said socket and said elastic member for seating in said socket while said line is towing a water skier whereby said reeling means is relieved of ski towing strain on said line, said elastic member taking up any slack in said line between said stop and said reeling means.

3,041,997
MAXIMUM AND MINIMUM INDICATOR
Sidney J. Hartwell, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Jan. 11, 1960, Ser. No. 1,756
7 Claims. (Cl. 116—129)



1. An indicating member comprising: a hollow shaft support; a nonrotatable shaft mounted through said hollow shaft support in an axial slidable relation thereto; a pair of adjacent clutch assemblies mounted in sliding relation on one end of said shaft, each of said assemblies having a plate with a pointer and being rotatably mounted on said shaft; an instantaneous indicator rotatably mounted on said shaft; an instantaneous indicator rotatably mounted about a point on said shaft spaced from said assemblies and between each said pointer for engagement with a tab on each said pointer; resilient means connected to each of said assemblies to urge each said pointer toward said indicator; a member fixed to said shaft and adjacent to said clutch assemblies; and a biasing means coupled to said shaft and urging said member against said clutch assemblies.

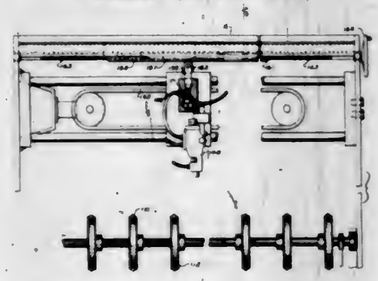
3,041,998
PRESSER ELEMENTS ON CEMENTING MACHINE
George W. Heiseler, Saugus, Mass., assignor to Boston Machine Works Company, Lynn, Mass., a corporation of Massachusetts
Filed Jan. 27, 1960, Ser. No. 5,003
5 Claims. (Cl. 118—251)



1. In a cementing machine having a container for a pool of liquid cement, a horizontal roll mounted in said container, means for rotating said roll, and a top plate on said container having an edge near the surface of said roll and adjustably spaced therefrom; a series of presser buttons closely spaced together in a line, and means resiliently pressing said buttons toward the margin of the top surface of said top plate at said edge, said pressing means comprising a bracket mounted above said roll, a

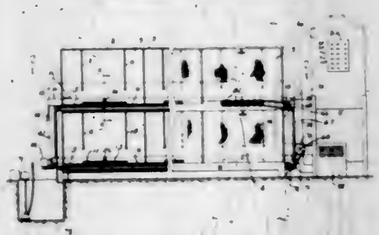
series of plungers slidably carried by said bracket, each said plunger having one of said buttons mounted on its lower end, and spring means resiliently pressing each said plunger and its button downward.

3,041,999
COATING APPARATUS HAVING SPRAY PATH ADJUSTING MECHANISM
Robert B. Bagshaw, Huntingdon, Pa., assignor to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 837,373, Sept. 1, 1959, which is a division of application Ser. No. 715,114, Feb. 13, 1958. This application Mar. 14, 1961, Ser. No. 95,679
7 Claims. (Cl. 118—323)



1. A coating apparatus including a movable carriage, a conveyor extending beneath said carriage for supporting articles to be coated, a spray gun supported by said carriage, valve means including a valve operating member movable with said carriage for controlling flow of fluid to said spray gun, means for reciprocating said carriage in opposite directions along a fixed path, cam means positioned along said fixed path and engageable with said valve operator member and means for adjusting the effective length of said cam means to control the portion of said path in which said valve operator member engages said cam means, including a centrally disposed fixed raised cam member, oppositely movable end cam segments in contiguous overlapped relation therewith, said segments comprising internally threaded portions in axial alignment and of opposite thread, and a screw threaded shaft operatively engaged in said portions, whereby upon rotation of said shaft, said segments will be oppositely and simultaneously moved to enlarge or diminish the effective length of said cam means and the effective spray gun range.

3,042,000
FARROWING EQUIPMENT
Paul H. McMurray and John M. Haggard, Delphi, Ind., assignors, by mesne assignments, to A. O. Smith Harvestore Products, Inc., Kankakee, Ill., a corporation of Delaware
Filed June 2, 1958, Ser. No. 739,365
5 Claims. (Cl. 119—20)



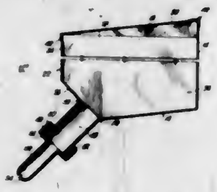
1. A farrowing apparatus comprising, an animal enclosure adapted to accommodate a sow and her offspring, the enclosure being provided with a plurality of connecting walls which act to provide a complete animal enclosure, a foraminated floor disposed adjacent the connecting walls and having a fixed raised portion adapted to support a sow thereupon, waste removal means co-operatively associated with the foraminated floor, confining walls spaced above the raised floor portion and disposed to cooperate with the connecting walls of the enclosure to restrict the movement of a sow supported on the raised floor portion to the raised floor portion whereby the offspring of a sow may thrive in the comparative safety of the area of the enclosure adjacent the raised portion into which the sow is unable to gain access and nourishment of the offspring of the sow is facilitated by making the udders of the sow readily accessible.

3,042,001
AUTOMATIC POULTRY CURTAIN RAISER
Orville L. Dubie, P.O. Box 671, Toccoa, Ga., and Larry Winford Wolfe, 454 Boulevard, Gainesville, Ga.
Filed Nov. 2, 1959, Ser. No. 850,259
9 Claims. (Cl. 119—21)



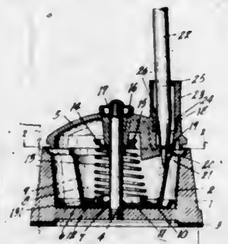
1. An automatic poultry curtain for selectively covering openings in the outside walls of poultry coops and which is automatically positioned to provide protection for the poultry against inclement weather comprising a flexible curtain, cables spaced along the length of the curtain in a vertical position, said cables having ends secured to a horizontal rotatable shaft within said poultry coop, means to secure the cables to the curtain, and temperature controlled reversible driving means to rotate the shaft to position the curtain.

3,042,002
MULTIPLE CALF FEEDER
Irene M. Liell, Rte. 1, Blue Springs, Mo.
Filed Aug. 10, 1959, Ser. No. 832,709
1 Claim. (Cl. 119—71)



A calf feeder comprising an open top tank having a rectangular back wall, a rectangular bottom wall, a pair of upright ends, and a front wall having a pair of rectangular panels, the longitudinal axes of the back and bottom walls and said panels being horizontal, the transverse axes of the back and one of the panels being vertical, the transverse axis of the bottom wall sloping upwardly as the back wall is approached, the other panel joining the bottom wall and said one panel and having its transverse axis inclined downwardly as the bottom wall is approached, the upper edge of said back wall being spaced above the upper edge of said one panel; a rectangular lid covering the open top of said tank and resting on the upper edges of said back wall, said ends and said one panel; hinge means mounting one margin of said lid on the upper edge of said back wall, said lid having a flange thereon at the margins thereof adjacent and opposed to said one margin, said flange depending from said adjacent and opposed margins along said ends and said one panel proximal to the upper edges thereof when said lid rests upon the latter; a plurality of partitions in the tank parallel with said ends and joining said walls, sub-dividing the tank into a number of wells; an elongated tube registering with each well respectively through said other panel and secured to the latter in perpendicular relationship thereto with the longitudinal axes of the tubes inclined downwardly and outwardly from the outer face of the other panel; and a nipple for attachment to the outermost and lowermost terminal end of each tube respectively, each tube having an annular outturned flange adjacent its said terminal end, each nipple having a bell portion provided with an annular groove therein on the inner surface thereof for complementally receiving the flange of the corresponding tube, said bell portion having a flexible element thereon interconnecting the bell portion with the nipple and disposed for permitting the bell portion to be shifted in one direction until said nipple is aligned with the corresponding tube and to be shifted into the opposite direction to snap onto the tube with the flange of the latter seated within the groove of the bell portion.

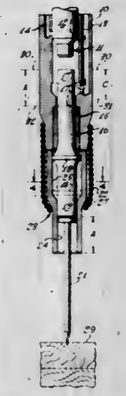
3,042,003
PENCIL POINTER
Edward L. Cayo, Coloma, Mich.; Julius Cayo, executor of said Edward L. Cayo, deceased, assignor to Virgil Dorstewitz, Coloma, Mich.
Filed Feb. 16, 1956, Ser. No. 565,880
6 Claims. (Cl. 120—91)



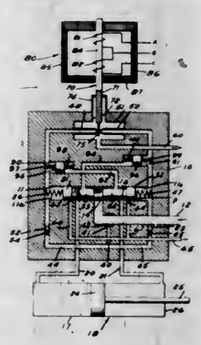
2. A pencil pointer comprising a body member, an abrasive element mounted on said body member for lateral sliding movement, said abrasive element having an interior annular conically tapered abrasive surface, a pencil holder carrier mounted on said body member for movement in a circular path and having a concaved seat provided at a central opening adapted to receive the tip of a pencil and a pencil holder mounted on said carrier member for rotative adjustment on an upright axis central of said seat and having a pencil socket disposed at an angle to its axis of adjustment, whereby the angle at which the pencil is presented to the abrasive element may be varied.

3,042,004
NAIL DRIVING ATTACHMENT FOR PNEUMATIC TOOL
Howard R. Fischer and William F. Kearney, Utica, N.Y., assignors to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Filed July 8, 1960, Ser. No. 41,519
4 Claims. (Cl. 121—32)

1. A tool retainer for a power hammer including a hammer cylinder and a hammer piston reciprocable in the latter, comprising an anvil having a rear portion adapted to project into the front end of the hammer cylinder to receive impacts from the hammer piston, said anvil having a collar adapted to seat against a shoulder at the front end of the cylinder to limit rearward movement of the anvil into the cylinder, a sleeve surrounding the anvil and seated at its rear end against the front end of the cylinder, the sleeve having an internal shoulder adapted to seat against the anvil collar to limit forward movement of the anvil relative to the sleeve, and yieldable means for retaining the sleeve in contact with the cylinder, said yieldable retaining means comprising a helical wire surrounding the cylinder and sleeve, the rear portion of the wire having threaded engagement with the front end of the cylinder, the sleeve having a smooth conical external shoulder, the front end of the wire having an inwardly directed flange providing a seat for the external shoulder on the sleeve, the wire being open at its front end and the sleeve having a reduced extension beyond the said shoulder projecting through said opening.



3,042,005
DYNAMIC PRESSURE FEEDBACK SERVO VALVE
Samuel A. Gray, Burbank, Calif., assignor to Hydraulic Research and Manufacturing Company, Burbank, Calif., a corporation of California
Filed Apr. 28, 1959, Ser. No. 809,429
3 Claims. (Cl. 121—41)



1. In a hydraulic control mechanism: a fluid pressure actuator mechanism adapted to be connected to a device to be actuated, said actuator having a part movable in opposite directions by fluid pressure; an actuator fluid pressure conduit system connected with said actuator mechanism for supplying pressure fluid to selectively operate said part in opposite directions; control means

for controlling said fluid pressure in said conduit system, said means including a valve; yielding means normally balancing said valve at a neutral position whereat pressure fluid to said actuator is cut off; a hydraulic control system for said control means including a main supply passageway and branch passageways from said main passageway, said branch passageways being connected to normally apply fluid pressure of equal value to the opposite ends of said valve and having respective restricted orifices therein upstream of said connection; means downstream of the connections of said branch passageways to vary the pressure in one of said branch passageways relative to the pressure in the other of said branch passageways; and load feed-back means comprising a pair of cylinders each having one end connected to a respective branch passageway downstream of the orifice thereof; a piston slidably mounted in each of said cylinders; yielding means for each piston normally holding the respective pistons in a neutral position; and conduits for said cylinders connecting the other ends thereof with the actuator pressure system to apply a corrective pressure to respective sides of the movable part of the actuator urging same in a direction opposite to the direction of movement imparted by pressure fluid for moving said part to actuate said device to be actuated.

3,042,006

FLUID PRESSURE ACTUATED POWER UNIT

John R. Butorac, Milwaukee, Wis., assignor to Applied Power Industries, Inc., a corporation of Wisconsin

Filed Nov. 14, 1960, Ser. No. 68,920

2 Claims. (Cl. 121—46)



2. In an air actuated power unit, a cylinder, a pair of spaced disks forming a piston reciprocable within said cylinder, said disks having a hollow rod secured thereto and extending outwardly beyond the cylinder, and the end one of said disks having ports communicating with opposite sides thereof, means for introducing air under pressure into said cylinder between said disks to move said piston and rod relative to the cylinder, a plunger secured to said cylinder and dividing the interior of said rod into separate chambers, said plunger being of less diameter than the interior of said rod to provide a restricted passage, and a body of liquid confined within said rod and constantly covering said plunger, said liquid being transferrable through said passage from one of said chambers to the other to retard the movement of said piston.

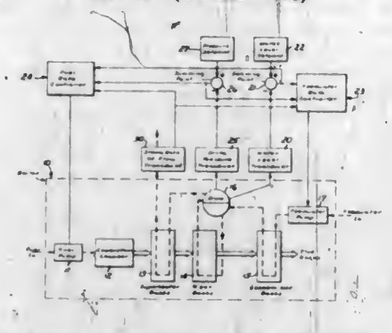
3,042,007

BOILER CONTROLLER

Kun L. Chien, Fullerton, Erdem I. Ergin, Corona del Mar, and Cheng Ling, Fullerton, Calif., assignors to Beckman Instruments, Inc., a corporation of California

Filed July 28, 1958, Ser. No. 751,419

5 Claims. (Cl. 122—448)



1. In a control system for a boiler having a steam outlet, a drum, fuel pumping means for supplying fuel, and feedwater pumping means for supplying feedwater, the combination of: first transducer means positioned in the steam outlet for producing a steam rate signal as a function of rate of flow of steam to a load; second transducer means positioned in the drum for producing a first pressure signal as a function of the pressure in the drum; third transducer means positioned in the drum for producing a first water level signal as a function of the water level in the drum; means for producing a pressure setpoint signal; means for producing a water level set-point signal; first summing means for producing a second pressure signal which is the difference between said pressure setpoint signal and said first pressure signal; second summing means for producing a second water level signal which is the difference between said water level setpoint signal and said first water level signal; a fuel rate controller having means for varying the rate of flow of fuel from the fuel pumping means in response to variations in the inputs to such controller; means for coupling only said steam rate, second pressure and second water level signals to said fuel rate controller as inputs; means for coupling the output of said fuel rate controller to the fuel pumping means in controlling relationship; a feedwater rate controller having means for varying the rate of flow of feedwater from the feedwater pumping means in response to variations in the inputs to such controller; means for coupling only said steam rate, second pressure and second water level signals to said feedwater rate controller as inputs; and means for coupling the output of said feedwater rate controller to the feedwater pumping means in controlling relationship.

3,042,008

STRIKING MACHINE, CHIEFLY NAILING, CLAMPING AND THE LIKE PERCUSSION MACHINES

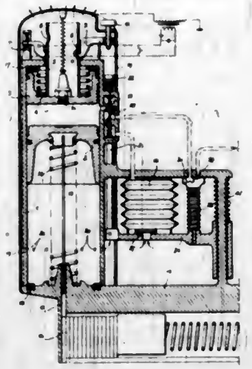
Maurice Liesse, Cachan, France
(27 Ave. Beaurepaire, Saint-Maur (Seine), France)

Filed Oct. 26, 1959, Ser. No. 848,642

6 Claims. (Cl. 123—7)

1. A striking machine, chiefly a nailing, clamping or punching machine, comprising a cylinder, a driving piston moving inside said cylinder, proportioning means for simultaneously feeding a combustible gas and a combustion-supporting gas individually and in positively determined volumetric quantities into said cylinder; means for igniting the explosive mixture in said cylinder to produce driving impulses of the piston, a tool subjected to the impulses of said driving piston, a spring urging said piston back into its inoperative position, releasable locking means

preventing the machine from operating after each operative cycle, and a member adapted to control conjointly



the operation of said proportioning means and the release of the locking means.

3,042,009

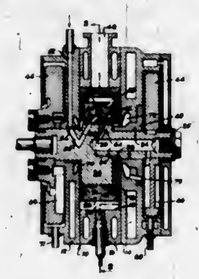
COOLING ARRANGEMENT FOR ROTARY MECHANISMS

Walter Gray Froede, Neckarsulm, Ernst Höppner, Furfeld, and Hanns-Dieter Paschke, Neckarsulm, Germany, assignors to NSU Motorenwerke Aktiengesellschaft, Neckarsulm, and Wankel G.m.b.H., Lindau, Bodensee, Germany

Filed Oct. 1, 1959, Ser. No. 843,768

Claims priority, application Germany Oct. 2, 1958

13 Claims. (Cl. 123—8)



1. A rotary mechanism comprising an outer member having axially-spaced end walls and a peripheral wall interconnecting said end walls to provide a cavity between said walls; a shaft co-axial with said cavity and having an eccentric portion; an inner member extending into said cavity with its end surfaces disposed adjacent to said end walls; bearing means supporting said inner member on said shaft eccentric portion so as to rotate about the axis of said shaft eccentric portion and so as to have a planetary motion relative to the outer member during operation of the mechanism, said inner member having circumferentially-spaced apex portions engaging said peripheral wall to form a plurality of working chambers therebetween and said inner member having internal passage means with inlet and outlet ports; passage means for supplying a cooling liquid having lubricating properties to said inlet port for flow of said cooling liquid through said internal passage means of the inner member and for supplying a portion of said liquid to said bearing means for lubrication thereof; gearing interconnecting said inner and outer members; and annular seal means carried by the inner member at an end surface thereof and having sealing engagement with the adjacent end wall of the outer member, said annular seal means being disposed radially outwardly of said inlet and outlet ports, radially outwardly of said gearing and radially outwardly of said bearing means.

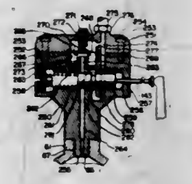
3,042,010

FUEL INJECTOR

Rollin J. McCrory, Worthington, and Robert W. King and Robert M. Conklin, Columbus, Ohio, assignors, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

Original application May 16, 1958, Ser. No. 735,795, now Patent No. 2,959,159, dated Nov. 8, 1960. Divided and this application Mar. 16, 1960, Ser. No. 15,302

19 Claims. (Cl. 123—32)



1. In a free-piston engine having a cylinder, piston, and compressors, a fuel injection system, comprising: a body member having a cavity for retaining pressurized fuel and having a discharge outlet in said cylinder; a fuel container having a first chamber and a second chamber; a flexible partition between said first chamber and said second chamber containing fuel communication means between said compressor and said first chamber whereby gas supplied from said compressor flexes said partition to pressurize said fuel; communication means between said second chamber and said cavity for supplying pressurized fuel to said cavity; a reciprocal plunger, having a conduit therein, disposed between said cavity and said discharge outlet to provide intermittent communication between said cavity and said discharge outlet; and actuator means engaging said plunger and operable to reciprocate said plunger.

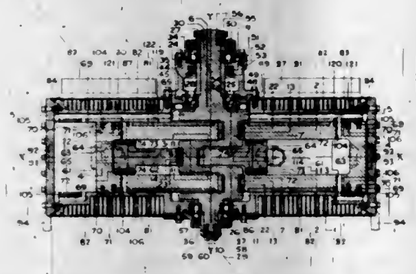
3,042,011

RECIPROCATING PISTON AND DOUBLE SLIDE AND SLIDE END PLATE ENGINE AND PUMP

Denzil Dyne Fenton-Smith, 16 Mount Felix, Walton-on-Thames, England

Filed Dec. 28, 1953, Ser. No. 400,490

9 Claims. (Cl. 123—50)



1. In a reciprocating engine, a barrel, said barrel extending longitudinally, slides situated in said barrel, said slides disposed longitudinally to said barrel, said slides so disposed that there is a space between them, each of said slides disposed along a portion of the periphery of said barrel such that there is a space between the upper longitudinally extending inner edges of said slides and a space between the lower longitudinally extending inner edges of said slides, said slides reciprocate in said barrel,

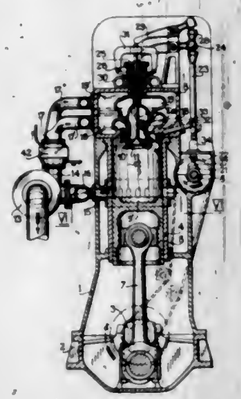
a piston situated in said barrel in said space between said slides, said piston engages said slides, said piston engages said barrel along that upper portion of the periphery of said barrel not occupied by a said slide in said space between said upper longitudinally extending inner edges of said slides, and said piston engages said barrel along that lower portion of the periphery of said barrel not occupied by a said slide in said space between said lower longitudinally extending inner edges of said slides, said piston reciprocates in said barrel in said space between said slides, slide end plates situated in said barrel, said slide ends plates disposed transversely to said slides, said slides joined together at their ends by said slide end plates, said slide end plates and said slides reciprocate as a unit in said barrel, said piston has a movement of opposite directional sense to said slides and said slide end plates, barrel end covers at the ends of said barrel.

3,042,012

TWO-STROKE INTERNAL COMBUSTION ENGINES

Alfred Buchi, Hurden, Schwyz, Switzerland; Hermann Walder, executor of the will of said Alfred Buchi, deceased, assignor to Ingenieurbureau Dr.-Ing. Alfred J. Buchi A.G., Winterthur, Switzerland, a Swiss company

Filed Aug. 4, 1958, Ser. No. 752,926
Claims priority, application Switzerland Sept. 17, 1957
6 Claims. (Cl. 123—65)



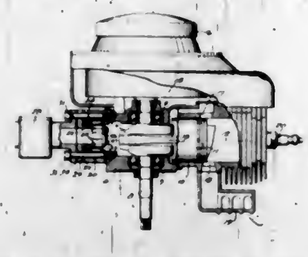
1. A supercharged two-stroke internal-combustion engine comprising a cylinder, piston means reciprocable in said cylinder, a cylinder head, said cylinder having outlet ports located adjacent the bottom dead center position of said piston means, air inlet duct means for said cylinder in said cylinder head, said cylinder head having a circular opening with the circumference thereof defining a valve seat, a tubular outer valve component, an inner valve component mounted concentrically of said outer valve component with said outer and inner valve components constituting an inlet valve, said tubular outer valve component having a perimetric portion adapted to rest on said seat and further having a seat thereon for said inner valve component, said outlet ports providing means for a tangential outflow of the scavenging air and exhaust gas thereby rotating the gases in said cylinder, and said air inlet duct means comprising a space upstream of said inlet valve component for producing a rotation of air in said space in the same direction as imparted to the gases in said cylinder by said outlet ports, said air inlet duct means comprises a space upstream of both said valve components and both of said spaces are spirally formed to form chambers having different flow cross-sections, whereby said respective air streams rotate at different velocities in said cylinder.

3,042,013

FUEL SUPPLY MEANS FOR ENGINES

Eugene L. Nelson, Cedarburg, Wis., assignor to Tecumseh Products Co., Tecumseh, Mich., a corporation of Michigan

Filed Sept. 12, 1960, Ser. No. 55,334
4 Claims. (Cl. 123—73)



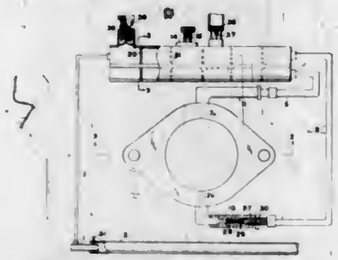
1. For use in an internal combustion engine having a fuel induction crankcase housing a crank operatively connected to and revolvable in the central plane of an engine piston, a substantially cubical fuel mixture supply device having several fuel inlet openings communicable through the side walls thereof with the crankcase, said inlet openings being bounded by adjacent surfaces disposed respectively approximately parallel and perpendicular to said plane, and a reed valve swingable outwardly away from each of said surfaces and coacting with the adjacent opening to control the flow of fuel therethrough into said crankcase.

3,042,014

ANTI-SMOG MEANS

Joseph S. Falzone, 62 Crescent Court, Old Bethpage, N.Y., assignor of twenty percent to James P. Malone and fifty percent to Ann C. Falzone, Nassau, N.Y.

Filed Apr. 12, 1961, Ser. No. 102,465
4 Claims. (Cl. 123—119)



1. Fuel handling means for internal combustion engines of the type having a carburetor, an intake manifold and an exhaust pipe comprising a filter mounted in said exhaust pipe, connection means between said carburetor and said intake manifold, and means connecting said filter to said connection means including a tank connected to the input side of said connection means and a pipe connecting said filter to said tank, a portion of said filter being blocked off, said tank comprising a cylinder having a plurality of partitions perpendicular its axis, said partitions having a plurality of pinholes.

3,042,015

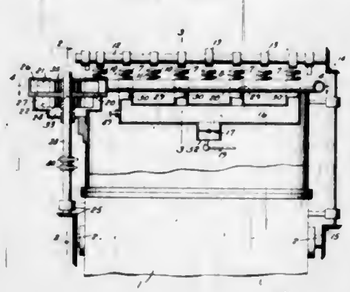
HIGH OR LOW COMPRESSION INJECTION FUEL SYSTEM

Adolphe C. Peterson, 4623 Bruce Ave. S., Minneapolis, Minn.

Filed June 20, 1957, Ser. No. 667,013
13 Claims. (Cl. 123—119)

1. In a fuel distributing means for combustion engines having a plural number of combustion units each unit

including a combustion cylinder, a reciprocable piston in the combustion cylinder, a means for supply to the combustion cylinder of the main charge of air for combustion, and an exhaust from the combustion cylinder; a conduit circuit for fuel mixture circulation therein; a plural number of fuel mixture discharge passages discharging from said conduit circuit all of restricted and substantially equal flow capacity; each of said combustion units having discharge of fuel mixture thereto from said conduit circuit by at least one of said passages; a fluid impeller means interposed in said conduit circuit for actuation to induce



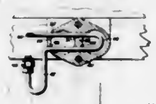
circulatory movement of fuel mixture in said conduit circuit; a means in association with said fluid impeller means to continuously introduce air from atmosphere to said conduit circuit under pressure exceeding pressure in said conduit circuit and having capacity to maintain pressure exceeding atmospheric pressure in said conduit circuit; a means to continuously introduce fuel to said conduit circuit under pressure exceeding pressure in said conduit circuit; means actuating said fluid impeller means to maintain rapid circulation of fuel mixture in said conduit circuit.

3,042,016

GAS VAPORIZER ATTACHMENT

Clarence A. Christian, P.O. Box 2621, San Antonio, Tex.

Filed Feb. 9, 1961, Ser. No. 88,083
7 Claims. (Cl. 123—122)



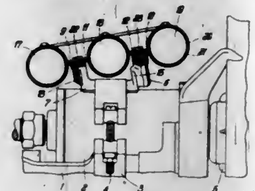
1. In combination with an internal combustion engine of the type having an exhaust manifold, an intake manifold with an intake riser and a multiple barrel carburetor communicating with said intake riser, said carburetor having a plurality of combustible mixture passages therein each registering with a corresponding passage in said riser, a fuel vaporizer attachment comprising an adapter plate disposed and secured between said carburetor and riser, said adapter plate having a plurality of passages therethrough each registering with corresponding passages in said riser and intake manifold, a vaporizer having a heat exchange portion extending across those passages in said body through which combustible mixture flows from the carburetor to the intake manifold during normal, less than full throttle engine operation, means communicating one end of said vaporizer with said exhaust manifold for placing exhaust gases in heat exchange relation with said combustible mixture.

3,042,017

MOUNTING DEVICE FOR THE SPARK COILS OF INTERNAL COMBUSTION ENGINES

Helmut Ausserbauer and Anton Biernatzki, Ingolstadt, Germany, assignors to Auto Union G.m.b.H., Ingolstadt (Danube), Germany

Filed Feb. 8, 1961, Ser. No. 87,811
Claims priority, application Germany Feb. 10, 1960
12 Claims. (Cl. 123—195)



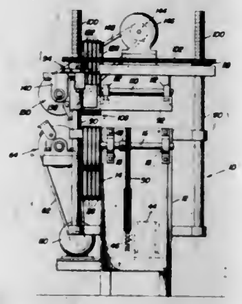
3. Mounting device for the spark coils of internal combustion engines comprising a base member, a generator having a cylindrical housing supporting said base member, said base member extending parallel to said generator, said base member having a rounded, concave portion for engaging said cylindrical housing, strap means for securing said generator and said base member to said engine and means for securing said spark coils to said spaced upright posts at a skew angle to the engine air flow.

3,042,018

STONE FACING MACHINE

Elmer F. Mangis, Gossett Road, Frankfort, Ind.

Filed Aug. 17, 1959, Ser. No. 834,176
11 Claims. (Cl. 125—23)



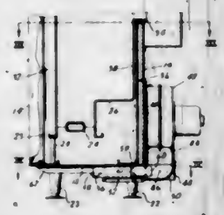
1. A stone facing machine comprising a conveyor assembly for feeding a stone to be faced, at least one facing head disposed adjacent to and at one side of said conveyor for facing a stone as the stone is moved past said facing head, said facing head including a rotatable carrier journalled for rotation about an axis extending along the direction of movement of said conveyor assembly, at least one cutter on said carrier, said cutter including a cutter arm pivotally secured to said carrier for movement about an axis spaced from and extending substantially parallel to the axis of rotation of said carrier, the other end of said arm normally projecting beyond the peripheral edges of said carrier and provided with a cutting tool having a cutting edge facing in the direction of rotation of said carrier, stop means carried by said carrier and engageable with said cutter arm to establish a limit position of swinging movement of the outer end of said arm in the direction of rotation of said carrier to a position spaced rearwardly, relative to the direction of rotation of said carrier, of that position which would normally be assumed by the free end of said arm by centrifugal forces acting thereon upon rotation of said carrier at operating speed.

3,042,019
SERVING TRAY FOR HORS D'OEUVRES AND THE LIKE
Eleanor N. Taylor, 430 Bondsville Road, Downingtown, Pa.
Filed Dec. 15, 1959, Ser. No. 859,790
1 Claim. (Cl. 126—43)



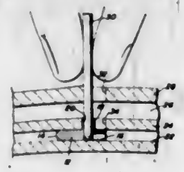
As a new product of manufacture, a combined serving tray and grill for hors d'oeuvres and the like, comprising an integrally formed dish having a circular center recess, a channel surrounding the recess and separated from the recess by a narrow circular rib, a flat brim surrounding the channel, and a plurality of narrow radial ribs subdiving the channel into a plurality of sector shaped pockets; a plurality of relatively shallow receptacles conformed to fit snugly into the pockets, whereby each receptacle is supported against movement by a pair of adjacent radial ribs, the circular rib, and that portion of the channel adjacent the brim; an open stand and a fuel cup supported therein, said stand having three legs in the form of a tripod and conformed to fit snugly into the central recess, whereby the bottom ends of said legs rest on the surface of said dish within the center recess and are firmly supported against lateral movement by the circular rib, the legs of the tripod being spaced to receive the fuel cup between them, said legs being joined at a level above their bottom ends by a spider supporting the cup at an elevation above the dish bottom, and said legs being joined adjacent their top ends by an annular band.

3,042,020
SPACE HEATER
Paul E. Maurice, Ludlow, Mass., assignor to Heatbath Manufacturing Company, Inc., Indian Orchard, Mass., a corporation of Massachusetts
Filed Sept. 16, 1960, Ser. No. 56,462
5 Claims. (Cl. 126—110)



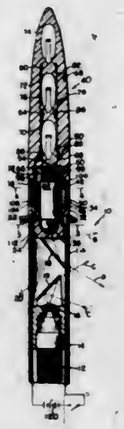
1. In a space heater comprising a substantially closed shell formed by top and base panels, front and rear panels and end panels, and having a heater unit mounted in said shell; a vertical duct disposed interiorly of said shell and formed in part by said back panel, said back panel having an opening for communication with said duct adjacent its lower end, a blower mounted on said back panel with an intake passage communicating with said opening, a second duct having a discharge opening facing the front of the space heater and directed beneath said base panel, said second duct being connected to the discharge side of said blower, an L-shaped member having its vertical portion secured to said back panel and its horizontal portion underlying and spaced from said base panel, said horizontal portion forming an extension of said second duct and having a horizontal baffle plate pivotally mounted thereon, said baffle plate having a central vertical vane extending into said second duct and a pair of vertical side vanes spaced on each side of the central vane and outwardly directed from their inner edges with relation to said central vane.

3,042,021
BYPASS TYPE INSERT PLUG FOR BODY PASSAGEWAY
Thane Read, Rte. 1, Box 470, Tempe, Ariz.
Filed Nov. 25, 1958, Ser. No. 776,357
1 Claim. (Cl. 128—1)



The method of bypassing sperm flow from the vas deferens body passageway into the interior of the scrotum between the sperm secreting gland to which one end of the vas deferens is communicated and the ejaculatory duct to which the other end of the vas deferens is communicated, said method consisting of the steps of making an incision in the wall of the scrotum and in the wall of the vas deferens, blocking off the vas deferens between the incision and ejaculatory duct, and maintaining communication through the incision in the wall of the vas deferens between the interior of the vas deferens and the interior of the scrotum thereby bypassing sperm flow into the interior of the scrotum.

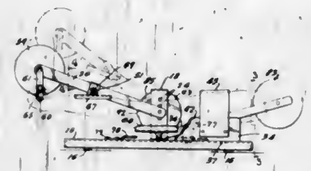
3,042,022
ILLUMINATION MEANS FOR DIAGNOSTIC INSTRUMENT
Gilbert J. Sheldon, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed May 25, 1959, Ser. No. 815,387
4 Claims. (Cl. 128—23)



1. An illuminating device for attachment to the front end of an endoscope or the like comprising a flexible light transmitting probe portion, a plurality of flexible electric lamps formed in cavities in said portion in spaced alignment along the longitudinal axis thereof, electrical leads extending through said portion and connected to filaments

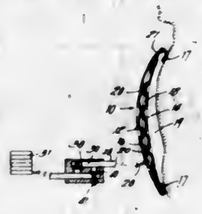
in said lamps for energizing them, and means for securing said portion to the endoscope at the front thereof and in alignment therewith.

3,042,023
EXERCISER
Wallace B. Yates, 351 S. Blanchard St., Findlay, Ohio
Filed May 23, 1960, Ser. No. 30,851
5 Claims. (Cl. 128—25)



1. A therapeutic exerciser for the muscles effecting movement at a joint between an upper, movable body member and a lower, movable body member, said exerciser including a small, easily portable platform adapted for placement on the floor or on any flat surface, means for holding the upper body member in a stationary, comparatively raised position on the platform, an area on the platform for receiving the joint at a lower level than the stationary position for the upper body member, a pressure receiving bar pivotably mounted to swing on an axis adjacent said area and with said axis parallel to the axis of the main movement of the joint received in said area, and means on the bar for engaging the lower body member, all moving parts of said exerciser being restricted in location and movement to space above the platform.

3,042,024
INFLATABLE DOUBLE-WALLED RESUSCITATION GARMENT
Emanuel S. Mendelson, Telford, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Original application June 26, 1959, Ser. No. 823,265. Divided and this application July 11, 1960, Ser. No. 47,574
2 Claims. (Cl. 128—30)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A chest respirator comprising a collapsible, inflatable casing adapted to cover a portion of the body, said casing having an outer panel of air impermeable, rubber coated fabric superimposed on an inner panel of extensible, air impermeable material, said panels secured to each other at their peripheral edges to form a chamber therebetween, a plurality of uniformly spaced means securing said panels to each other at spaced points thereof for limiting separation of said panels with inflation of said chamber, means for introducing an alternating pressure between said panels, whereby said casing is rigidly inflated and said inner panel is moved inwardly to contact said body under positive pressure and outwardly away therefrom with negative pressure applying a breathing action to the body and said outer panel functions as a reaction member, a conduit connecting said means for introducing an alternating pressure between said panels and said casing, and check valve means in said conduit for maintaining a minimum pressure in said casing whereby said casing functions as a reaction member during negative and positive cycles.

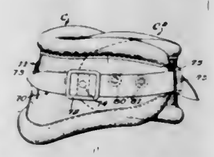
3,042,025
APPARATUS FOR TREATING BODY AND SPINAL DISTORTIONS
Robert P. Jackson, 9500 5th Ave., Inglewood, Calif.
Filed Mar. 1, 1955, Ser. No. 491,265
21 Claims. (Cl. 128—33)



8. Apparatus for treating body and spinal distortions comprising: an elongated sectional and foldable frame in which the sections are hingedly joined for movement between extended and folded positions; means carried by said frame at said joint of said frame operable to prevent collapse of the frame when in said extended position; said frame providing when extended an elevated intermediate portion and downwardly inclined portions extending in opposite directions from said elevated portion so as to rest upon a floor or other surface for supporting said frame; body-supporting members mounted on said portions of said frame; and means for vibrating the body-supporting member mounted on said elevated portion.

9. Apparatus for treating body and spinal distortions comprising: an elongated sectional and foldable frame in which the sections are hingedly joined for movement between extended and folded positions; means carried by said frame at said joint of said frame operable to prevent collapse of the frame when in said extended position; said frame providing when extended an elevated intermediate portion and downwardly inclined portions extending in opposite directions from said elevated portion so as to rest upon a floor or other surface for supporting said frame; body-supporting members mounted on said portions of said frame; and means for vibrating the body-supporting member mounted on said elevated portion; said vibrating means being carried by said elevated body-supporting member.

3,042,026
CERVICAL COLLARS
Louis P. Monfardini, Winter Park, Fla., assignor to Florida Brace Company, Winter Park, Fla., a corporation of Florida
Original application Mar. 24, 1959, Ser. No. 801,540. Divided and this application Nov. 7, 1960, Ser. No. 67,772
2 Claims. (Cl. 128—75)



1. A cervical collar comprising a pair of diametrically opposed units selected from an assortment of units of various sizes, each unit being formed wide at the center and tapering to relatively narrow opposite end portions, cushion binding around the peripheral opposite edges of each unit, each unit having mounted in the surface thereof a plurality of horizontally spaced male snap fastener elements, said male fastener elements being exposed when said opposed units are positioned in diametrically opposed relation with their respective narrow ends in alternately

lapped relation to form said annular collar, and detachable flexible strap means detachably mounted around each side of the assorted units of the collar over said lapped ends having an adjustable buckle with a female snap fastener element adjacent each end selectively engaged with a respectively adjacent male fastener element, to thereby join the units together to form said annular collar.

3,042,027
CERVICAL COLLARS
Louis P. Monfardini, Winter Park, Fla., assignor to Florida Brace Corporation, Winter Park, Fla., a corporation of Florida
Filed Mar. 24, 1959, Ser. No. 801,540
3 Claims. (Cl. 128—75)



1. A reversible cervical collar formed of a pair of diametrically opposed interchangeable units of different size which may be joined together to form a unitary collar, one of said units being formed of vertically adjustable upper and lower sections, adjustable means securing said sections together, said adjustable means comprising at least one elongated extensible and retractable vertical element connected at its respective upper and lower ends to the adjacent marginal surfaces of the respectively connected upper and lower sections intermediate the end marginal surfaces of said upper and lower sections, and angularly positioned elongated extensible and retractable elements secured at their ends adjacent the end marginal surfaces of said upper and lower sections of said one unit, and flexible securing means carried by the upper corners of said upper section of said one unit and detachably engaged with the other interchangeable unit for securing said units together to form a unitary collar.

3,042,028
ORTHOPEDIC BRACE
Werner J. Iller, Dayton, Ohio, assignor to Globe Industries, Inc., Dayton, Ohio, a corporation of Ohio
Filed Aug. 9, 1955, Ser. No. 527,248
16 Claims. (Cl. 128—80)



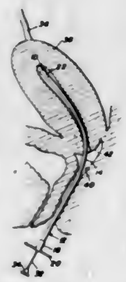
5. An orthopedic brace having a waistband assembly with a portion thereof extending downwardly therefrom, a leg member, bearing means arranged within said downwardly extending portion and pivotally interconnecting the leg member to the waistband assembly, said bearing means comprising two discrete horizontally spaced apart bearings within said downwardly extending portion so arranged that upon the application of transverse loading of the leg member a vertical couple is caused to act through the bearing means to counteract transverse loading and permit freedom of fore and aft movement of the leg member.

3,042,029
DIAPHRAGM
Oscar E. Johansson, Fair Lawn, N.J., assignor to Sandvik Steel, Inc., Fair Lawn, N.J., a corporation of New York
Filed June 2, 1958, Ser. No. 739,382
2 Claims. (Cl. 128—127)



1. A vaginal diaphragm comprising a thin flexible cup which is dome-shaped with an open mouth defined by an integral peripheral rim which is a torus when in a condition of rest whereby it is cylindrical in radial cross-section with respect to the circular path of the axis of its generating circle, and a reinforcing flat ring which is enclosed within said rim and is coextensive with said circular path of the center of its generating circle, said flat spring tending to hold said rim in a true circular condition but permitting said rim to be flexed therefrom, said flat ring being formed of a flat strip of spring metal which has parallel faces and side edges and which has been flat wound at a predetermined radius whereby the strip remains in flat condition when in a condition of rest with said parallel faces in planes parallel to the plane of said circular path, said flat ring being radially flexed by moving diametrically opposite portions of said rim toward each other and said flat ring being thereby formed into an arcuate "bow" shape with the flexible cup forming a pocket which may be flexed readily and with said rim being resiliently formed into an arcuate "bow" with each of two sides of the "bow" being an arcuate portion of substantially the same curvature as the rim in rest condition and with the ends of said arcuate portions being interconnected by portions of substantially greater curvature.

3,042,030
SPHERICAL TYPE INSERT PLUG FOR BODY PASSAGEWAY AND TOOL THEREFOR
Thane Read, Rte. 1, Box 470, Tempe, Ariz.
Filed Nov. 25, 1958, Ser. No. 776,242
2 Claims. (Cl. 128—127)



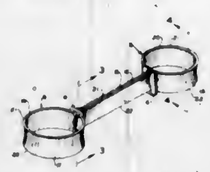
1. The method of temporarily blocking the Fallopian tubes comprising the steps of supporting a spherical ball subject to magnetic attraction in a magnetic field, moving the magnetic field and ball through the vaginal cavity, through the cervix and into the uterus, positioning the magnetic field and the ball at the lower end of the Fallopian tube, and ejecting the ball out of the magnetic field and into the Fallopian tube to a position where the Fallopian tube frictionally retains the ball in position thereby blocking the Fallopian tube and preventing flow therethrough.

3,042,031
PATIENT RELEASE PROOF POSITIONING MEANS
Janet J. Reed, P.O. Box 5432, Pasadena, Calif.
Filed Mar. 4, 1960, Ser. No. 12,769
1 Claim. (Cl. 128—134)



A patient release-proof positioning device comprising:
waist strap means having perforations therein and adapted to encircle the patient's waist;
adjusting members each having a looped stem and an enlarged base permanently mounted on said stem, the stem of at least one of said adjusting members being adapted to be inserted through overlying perforations to adjust the waist strap means in a close fit around the patient's waist;
retaining split spring metal rings having the ends of the ring aligned with the ring and concealed by a perpendicularly offset portion of the ring, said retaining rings being adapted to be worked into the loops of the stems of the adjusting members;
and a pair of side straps having perforations therein and adapted to be passed around the bed frame and connected to the waist strap means at each side of the patient's waist and secured in position by further of said adjusting members passed through overlying perforations of said side straps and retained in adjusted position by further of said split spring metal rings worked into the loops of said further adjusting members, the parts of the device being thereby positively joined to form a unitary device, effective when in operative position to prevent the patient from moving his body toward either side of the bed and from moving toward the head and foot of the bed, and from releasing said device.

3,042,032
BABY RESTRAINERS
Arthur M. Vogel, 4712 Oak Ave., Gulfport, Miss.
Filed Apr. 22, 1960, Ser. No. 24,112
2 Claims. (Cl. 128—134)



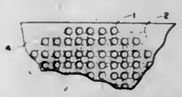
1. A baby restrainer comprising a continuous stretchable band having substantial width and a pair of plates each provided with an aperture, the band being placed through the apertures of the plates whereby each plate will be slidably mounted on the band and will respectively define diametrally adjustable loops at opposite ends of the band, the apertures in the plates being defined by a pair of opposing arcuate margins adapted to engage outwardly presented lateral faces of the band, said apertures also including a pair of opposing straight margins adapted to engage the longitudinal edges of the band, said arcuate margins being complementary and being spaced more closely together at their centers than at their ends, and the straight margins being separated by a distance substantially less than the width of the band, whereby the band will be caused to engage said arcuate margins and thereby caused to assume a concave shape.

3,042,033
CONNECTING MEMBER
Paul F. Early and Benjamin Smilg, Dayton, Ohio, assignors to Globe Industries, Inc., Dayton, Ohio, a corporation of Ohio
Filed July 27, 1959, Ser. No. 829,900
1 Claim. (Cl. 128—142)



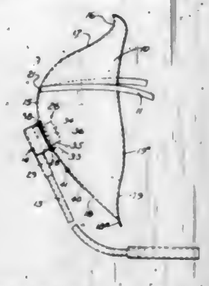
In combination: a breathing mask having protruding therefrom an inhalation tube and an exhalation valve, said exhalation valve being provided externally with one element of a mating mounting means; a demand valve connected to a source of oxygen; and a connecting member for interconnecting the demand valve to the breathing mask and for mounting upon said exhalation valve, said connecting member comprising a base, means releasably securing the base to the demand valve, said base having an opening in a portion thereof, said connecting member including duct means interconnecting the opening in the base with the inhalation tube to permit flow of oxygen from the demand valve through the opening to the interior of the breathing mask, means releasably securing the end of the duct means remote from the base to the protruding portion of the inhalation tube, said duct being so constructed as to permit free flow of oxygen from the demand valve to the interior of the breathing mask, said connecting member further having a flange extending from the base in spaced relation to the duct which is provided with the other element of the said mating mounting means, and means releasably securing the end of the flange remote from the base externally to the protruding portion of the exhalation valve.

3,042,034
FACE MASKS
Lou A. Gruenewaelder, 6917 Pershing Ave., University City 5, Mo.
Filed Apr. 21, 1958, Ser. No. 730,005
3 Claims. (Cl. 128—146)



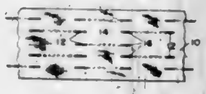
1. A face mask comprising a flexible body portion having a plurality of marginally secured plies each of which is provided with a plurality of perforations in a defined area, said areas in the respective plies being in substantial registration, and a porous polyurethane filtering element of substantially greater area than said defined area, said filtering element being disposed between said plies, said plies also being secured together around the periphery of said filtering element so as to snugly confine the filtering element between the plies, said plies being substantially air impervious except at said perforations so that air passing through the plies will travel through said perforations and filtering element.

3,042,035
MASK
George Coanda, North Hollywood, Calif., assignor to Don Baxter, Inc., Glendale, Calif., a corporation of Nevada
Filed Dec. 9, 1958, Ser. No. 779,202
8 Claims. (Cl. 128—146)



1. A gas administration mask comprising: a plastic chamber adapted to fit over a patient's nose and mouth; a flexible, flat outwardly extending flange around the edge of said chamber; a uniform curved area integrally connecting said flange to said chamber; an outlet on said chamber; a piece of thin, flexible sheet material forming a flapper valve over said outlet; and a single eyelet rotatably attaching one end of said valve to the outside of the chamber.

3,042,036
BANDAGE
Ivan V. Abadjieff, 20 Bergin Lane, Worcester, Mass.
Filed Nov. 21, 1958, Ser. No. 775,652
8 Claims. (Cl. 128—156)



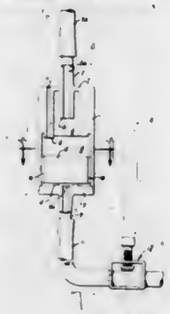
1. A bandage comprising a sheet of flexible fabric bandaging material and a set of devices attached thereto, said devices forming sharp points extending obliquely from a surface of said bandage in a plurality of different directions away from a member to be bandaged.

3,042,037
DRESSING FOR WOUNDS
John Tracey Scales, Stanmore, and George David Winter, London, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed June 12, 1961, Ser. No. 116,481
Claims priority, application Great Britain June 16, 1960
10 Claims. (Cl. 128—156)



1. A dry dressing for wounds in which the side to be applied to the wound comprises a porous layer of textile material capable of sticking to the exudate from the wound, and which is composed of fibres of such low tensile strength that when the dressing is peeled off the wound part of said layer which has not stuck to the wound tears away readily from that part which has stuck to the wound and can thereby be removed without disturbing the wound.

3,042,038
SEGREGATION CHAMBER AND FLOW METER
Robert C. Beacham, Richmond, Calif., assignor to Cutter Laboratories, Berkeley, Calif., a corporation of California
Filed Mar. 14, 1958, Ser. No. 721,481
2 Claims. (Cl. 128—214)



1. An air segregator and drip meter for transfusion sets comprising: a transparent segregation chamber provided at its upper end with an inlet connection and with an air vent having a first valve seat and provided at its lower end with an outlet port having a second valve seat; a drip meter nipple formed in the upper end of said chamber merging with said inlet connection and depending into said chamber; and a guided float valve closure member disposed in said chamber operable to seat on said second valve seat when said chamber is substantially empty of liquid and to seat on said first valve seat when the liquid content of said chamber reaches a predetermined level.

3,042,039
COLONIC IRRIGATOR
Edward J. Dahlstrom, 1487½ 48th Ave., San Francisco, Calif.
Filed Nov. 12, 1959, Ser. No. 852,579
4 Claims. (Cl. 128—227)



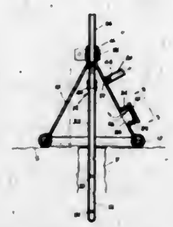
1. In a portable irrigation apparatus: an elongated, open ended nozzle having a straight, unobstructed through bore extending between its open ends; said nozzle being adapted to be positioned vertically within a toilet bowl providing an upper end portion and a lower end portion, said upper end portion being adapted to be inserted into the anal canal of a person seated on such bowl, a valve member extending over the lower open end of said nozzle closing its open lower end and means pivotally connecting said member with said nozzle for swinging said member away from said lower end to open position and back to closed position closing said open lower end, a conduit for delivering irrigating fluid to said nozzle connected at one end thereof with said nozzle at a point intermediate its said upper and lower end portions, and manually actuatable means connected with said member for swinging the latter from said closed position to said open position and vice versa whereby irrigating fluid delivered into said nozzle from said conduit will be discharged from the upper end of said nozzle and into the colon when said member is in said closed position and such liquid so discharged will be drained through said nozzle and out of the lower open end thereof when said member is moved to said open position, valve means in said conduit movable from an open position opening said conduit to flow of said liquid to said nozzle to a closed position closing said conduit to said flow, oppositely movable valve actuating means connected with said valve means for so moving said valve means upon movement of said valve actuating means in one direction or the other of said opposite directions, a part of said manually actuatable means extending between and connecting said valve actuating means with said member for moving said member to said closed position thereof when said valve actuating means is moved in one direction for moving said valve means to its said open position, and for moving said member to said open position thereof when said valve actuating means is moved in a direction opposite to said one direction to its said closed position.

3,042,040
ATTACHMENT FOR TAMPON APPLICATOR
George M. Galik, 19 Porach St., Yonkers, N.Y.
Filed June 30, 1959, Ser. No. 823,940
2 Claims. (Cl. 128—263)



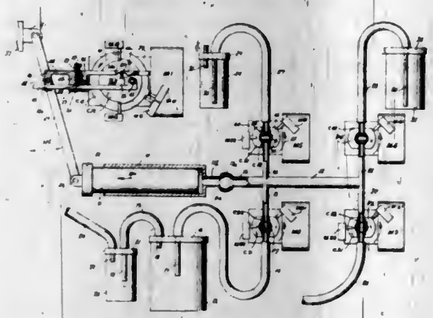
1. In a tampon applicator of the type including inner and outer telescoping members, a sheet of relatively stiff flexible material having an aperture therewithin, said aperture being of slightly smaller diameter than the outer diameter of said outer telescoping member, said sheet having a portion thereof surrounding a portion of said aperture adapted to be flexed out of the plane of said sheet to enlarge said aperture, said outer telescoping member passing through said aperture to detachably connect said sheet to said outer telescoping member.

3,042,041
DEVICE FOR DRAINING WOUNDS
Mario E. Jascalevich, Weehawken, N.J. (435 60th St., West New York, N.J.)
Filed Mar. 9, 1960, Ser. No. 13,898
6 Claims. (Cl. 128—276)



1. A device for draining wounds comprising a cup-like member of air-impermeable material, said member having an edge at the open end thereof adapted to engage the skin in spaced relation to a wound, a wound drainage tube extending through the wall of said member and in sealed relationship therewith for connection to suction means, said wound drainage tube being of a length to permit the tip thereof to be inserted in the wound, a passage extending through the wall of said member adapted for connection to a second suction means and evacuation of the air in said member to thereby maintain the member in self-sustaining pressure engagement with the skin, and an orifice in the wall of said member to allow the limited entry of ambient air into the member.

3,042,042
STOMACH PUMP
Joachim Hillard Blanck, 152—30 Melbourne Ave., Flushing, N.Y.
Filed Mar. 14, 1958, Ser. No. 721,424
11 Claims. (Cl. 128—276)



5. Intubation apparatus comprising a drainage tube, means applying suction to said tube, pump means exhausting said suction means and including a piston having a suction stroke and a return stroke, a reservoir for flushing liquid, normally inactive means, including said pump means, operable to first withdraw flushing liquid from said reservoir and then to alternately force flushing liquid into said tube and withdraw flushing liquid from said tube, first control means operable, when periodically activated, to activate said normally inactive means, second control means operable, responsive to a decrease in the vacuum in said suction means, to activate said pump means to exhaust said suction means until a pre-set higher vacuum is re-established therein, and interlock means effective during operation of said second control means to render said first control means ineffective to initiate activation of said normally inactive means when said piston is in a position other than the end of said return stroke.

3,042,043
CELLULOSE WADDING SHEETS FOR THE LINING OF BABY'S NAPKINS
Fernand Wuhrlin, Usine des Plis (Eure), Hondouville, France
Filed Apr. 1, 1957, Ser. No. 650,017
2 Claims. (Cl. 128—284)



1. Strip diaper material for forming disposable linings for baby diapers, comprising superposed, co-extensive, longitudinally elongated, rectangular outside sheets, rectangular inside sheets disposed between said outside sheets and co-extensive in length therewith, the longitudinal edges of said inside sheets being disposed laterally inwardly of the longitudinal edges of said outside sheets,

said strip material having longitudinally spaced lines of weakening extending laterally entirely across the strip to divide it into individual pads which may be separated by tearing the strip along the lines of weakening and which may serve as individual disposable linings for baby diapers, each pad having symmetrically curved notches with their bases along the lines of weakening, said notches being spaced laterally inwardly from the longitudinal edges of said inside sheets, said notches conforming to approximately half the circumference of the upper part of a baby's thigh, and a plurality of indentations in said outside sheets between successive lines of weakening and laterally outwardly of said inside sheets providing depressions in one face and protuberances in the opposite face of a sheet, whereby the depressions in the face of one outside sheet receive the protuberances in the face of the other outside sheet to secure said outside sheets together.

3,042,044
SEAMLESS EXTRUDED PLASTIC RECTAL TUBES
David S. Sheridan, P.O. Box 147, Argyle, N.Y.
Filed July 2, 1958, Ser. No. 746,135
3 Claims. (Cl. 128—348)



1. A seamless rectal tube made by extrusion of waterproof, flexible plastic material, said tube consisting of a distal end portion, a proximal end portion and a middle tubular portion of substantially uniform cross-section throughout its length, said portions being formed integrally with one another providing a seamless structure, said distal end portion including a retaining bulb and an open-end nipple extending from said retaining bulb, said bulb being formed solely by double tapering of the tube walls and being defined by a central section of larger inside and outside diameters than said middle tubular portion, the wall thickness of said retaining bulb increasing substantially in proportion to the diameter of the bulb whereby the bulb possesses a controlled rigidity, and said proximal end portion including a tubing adapter and an open-end tip extending from said adapter, said adapter being formed solely by double tapering of the tube walls and being defined by a central section of larger inside and outside diameters than said middle tubular portion, said proximal open-end tip being defined by a short straight section of diameter approximately equal to the diameter of said middle tubular portion.

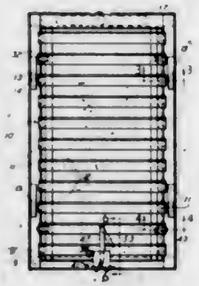
3,042,045
MEDICO-SURGICAL TUBES HAVING INTEGRAL CONNECTORS FORMED IN THEIR ENDS
David S. Sheridan, P.O. Box 147, Argyle, N.Y.
Filed July 2, 1958, Ser. No. 746,134
2 Claims. (Cl. 128—349)

1. An extruded, seamless, non-fibrous, flexible medico-surgical tube formed of waterproof, flexible, plastic material with smooth inside and outside walls comprising a ported distal end, a connector formed as an integral part on the proximal end, and a longitudinally extended tubular section joining the distal end with said connector, said connector being defined by an open-end tip, a portion which extends distally of said tip and tapers outwardly to a widest part having an outside diameter between about 1.2 and 2 times as large as the outside diameter of said tip, said widest part being between about ½ and 2 inches from said tip, and a portion which tapers inwardly from said widest part joining said connector to said tubular section, the inside diameter of said connector being greater at said widest part than the inside



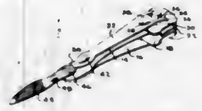
diameter of said tip and said tubular section, said connector having a controlled rigidity as compared to the remainder of said tube by controlled thickness of the walls which are proportional in thickness to the outside diameter of the connector.

3,042,046
SUN BATHING APPARATUS
Harold F. Willems, 2116 Washington Road, Kenosha, Wis.
Filed Sept. 22, 1960, Ser. No. 57,669
1 Claim. (Cl. 128—372)



Apparatus for dividing sun rays on a sun bather by forming slow moving shadows to give the bather's body cells rest periods, comprising a stationary frame, means attached to said frame and including adjustable supports for disposing said frame in at least a substantially horizontal position at a selected elevation, a shield mounted on said frame and having first solid portions uniformly spaced apart a selected distance and being of a material capable of intercepting said rays and having other portions interposed between said solid portions and being capable of transmitting said rays therethrough, rollers attached to said shield for reciprocably mounting the latter on said frame, an electric motor attached to said shield and having a connector with a stroke of the length equal to the total length of said distance and one of said solid portions in the direction of said stroke for reciprocating said shield through said stroke on said rollers, additional solid portions of said material being mounted on said shield in a plane parallel to said first solid portions and being movable with said shield and also being movable with respect to said shield, and a timing motor connected to said additional solid portions for moving the latter adjacent said other portions and aligned therewith for intercepting said rays directed at said other portions after a selected period of time, said timing motor including an electrical switch connected to said electric motor for disconnecting the electric power thereto after said period of time has elapsed.

3,042,047
MANICURE APPLIANCES
Stephen J. Plaskon, 4 Valley View Ave., Derby, Conn.
Filed Mar. 17, 1959, Ser. No. 800,016
1 Claim. (Cl. 132—75.5)



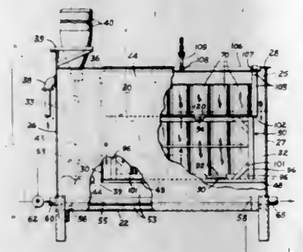
A manicure appliance comprising a main body portion including a pair of elongated substantially superimposed spring arms, rivet means securing said arms to one another and passing therethrough adjacent one of their pairs of ends with the other ends of the arms being normally biased away from one another, said arms at their outer ends having substantially flat end portions normally biased apart, said end portions being bent to be substantially parallel to one another with each having an end edge and lateral side edges, cutting blades on the lateral side edges of the respective end portions adjacent to but spaced inwardly from said end edges thereof, a convex cutting blade on the end edge of each of said end portions, said convex blades being moved into edge-to-edge contact simultaneously with the movement of the first-named blades into a contacting relationship, a bolt extending transversely through said last-named ends and projecting outwardly from said arms, said bolt having a notch, a lever arm pivotally mounted at its proximal end in said notch of said bolt, said lever arm having a pointed V-shaped distal end and being arranged to be located adjacent one of said spring arms in an inoperative position, the pointed end being adjacent to but spaced inwardly from said rivet when said lever arm is in said inoperative position, a file member connected for lateral rotational movement around said rivet means as an axis, said file member having a file carrying portion extending outwardly from one side of the rivet and a short extension projecting from the opposite side thereof, said short extension having a V-shaped notch formed therein and being of a length such that it receives the pointed end of said lever arm when the file is pivoted to a position to form an extension of said main body portion whereby the file member is effectively maintained in said extended position.

3,042,048
COMB
John Mostik, 604 Liberty Drive, Wheaton, Ill.
Filed June 18, 1959, Ser. No. 821,235
1 Claim. (Cl. 132—149)



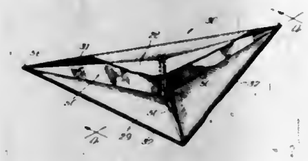
A comb adapted to be grasped by the fingers of the hand to perform a hair sculpturing operation, said comb comprising a body portion, a plurality of spatially arranged teeth extending downwardly from said body portion, and an outwardly and downwardly extending claw located at one end of said body portion to be engageable by the palm of a hand when the comb is in a hair combing position, said claw including intersecting curvilinear portions on the underside thereof, the adjacent ends of said curvilinear portions forming a downwardly extending peak for separating the first finger from the remaining fingers of a hand when the hand grasps said claw, whereby the upper side of the claw is adapted to be engaged by at least one finger to quickly change from its hair combing position to its hair sculpturing position.

3,042,049
WASHING MACHINE
Walter C. Reiman, Troy, Ohio, assignor to The Braun Brothers Packing Company, Troy, Ohio, a corporation of Ohio
Filed Dec. 2, 1958, Ser. No. 777,718
5 Claims. (Cl. 134—108)



1. A machine for washing hollow meat molds comprising, a washing liquid submerison tank, a partition dividing said tank into a washing compartment and an impeller compartment, means including said partition defining an opening connecting said compartments for the flow of washing liquid therethrough, an impeller received within said impeller compartment and arranged to direct liquid through said opening into said washing compartment, a mold frame adapted to be lowered into said washing compartment including means for supporting a plurality of said molds in spaced relation one to the other submerged in the path of liquid flow through said opening, means forming a liquid return path into said impeller compartment from said washing compartment, and surface drain means in said impeller compartment positioned in intercepting relation to said return path for the removal of foam from the liquid surface.

3,042,050
THERMAL BARRIER
Thomas R. Finlayson, Milwaukee, Wis., assignor to Gleason Reel Corp., Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 16, 1960, Ser. No. 8,994
16 Claims. (Cl. 135—1)



10. In a collapsible barrier, collapsible cell means enclosed by superposed flexible walls, mechanically operable articulate means collapsible within said cell means and adapted to be rigidified and erected therewithin for holding the said walls thereof spaced apart, and means operable from outside the cell means for selectively rigidifying and collapsing said articulate means.

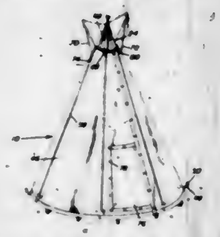
3,042,051
AIR-SUPPORTED SHELTERS
Joseph B. Mauldin, 1736 Columbia Road, NW., Apt. 401, Washington, D.C.
Filed Aug. 6, 1959, Ser. No. 831,995
7 Claims. (Cl. 135—1)

7. In an air-supported shelter, the combination of a base structure extending in the form of a horizontal rectangle, a shelter body of flexible sheet material capable of being held in an erected condition by a positive fluid pressure within the shelter, and means for securing said shelter body to said base structure, said shelter body when

in said erected condition having a generally rectangular bottom edge, a main portion defining part of a horizontal cylinder and an end portion defining part of another horizontal cylinder the longitudinal axis of which extends at right angles to the longitudinal axis of the cylinder formed by said main portion.



3,042,052
PORTABLE TEPEE
James S. Des Rosier, 2500 Saint Anne, Butte, Mont.
Filed Dec. 8, 1959, Ser. No. 858,179
5 Claims. (Cl. 135—1)



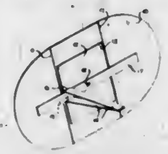
1. A tepee comprising a collapsible, conical frame structure including a plurality of upwardly converging poles terminating in crossed upper end portions, a ring within the confines of the frame structure pivotally connecting the upper portions of all of the poles whereby said poles may be swung substantially into parallelism for collapsing the frame structure, said ring having spaced slots therein, said poles being rockable transversely on the periphery of the ring, studs on the poles loosely engaged in the slots, retaining nuts threaded on said studs, and a flexible cover mounted on the poles.

3,042,053
PORTABLE SHELTER
Effie Gabriel, 1151 Ogden St. Extension, Bridgeport, Conn.
Filed Oct. 20, 1959, Ser. No. 847,559
1 Claim. (Cl. 135—5)



A portable shelter comprising two arched rigid frame members each having substantially straight front and rear terminal portions for insertion in the ground to support the frame members substantially perpendicularly to the ground with the members in parallel vertical planes and spaced laterally from each other, each frame member having a substantially straight front portion perpendicular to the ground and curved portions extending upwardly and then downwardly and rearwardly to form an arch, a pair of articulated brace members connecting the frame members to hold the frame members in spaced relation, one of said brace members being disposed adjacent the junction of the front portion and said curved portion and the other being disposed adjacent the top of the arch formed by the curved portion, and an elongate flexible cover strip connected to and spanning the space between said frame members and supported by said brace members to provide shelter from the sun and rain, said cover strip extending from points adjacent said rear terminal portions to at least the straight front portions whereby the back edge of the cover strip is close to the ground while the front edge of the cover strip is elevated enough to permit an unobstructed forward view from the interior of the shelter, the portions of the frame members intermediate said terminal portions rising a distance above the ground level to elevate said cover strip sufficiently to permit a person to sit beneath the cover strip when the shelter is supported on the ground, said articulated brace members being collapsible to permit the frame members to be brought together in compact relation to facilitate moving and handling of the portable shelter.

3,042,054
DISPOSABLE SUN AND RAIN SHIELD
Ernest K. Coberly, Jr., 308 Cape May Ave., Pittsburgh 16, Pa.
Filed May 24, 1960, Ser. No. 31,421
6 Claims. (Cl. 135—19.5)



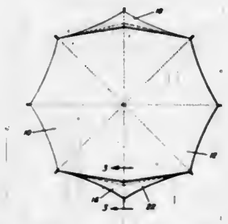
1. A disposable rain and sun shield comprising, in combination, a shielding member of substantially stiff water-repellent material foldable inwardly only along a plurality of spaced substantially parallel fold lines disposed therein, a handle member secured to the inner side of the shield member, and a locking member pivotally secured to the inner side of said shielding member and swingable to a locking position transverse of said fold lines and handle member, said handle member being foldable inwardly along a plurality of spaced fold lines therein adapted to be folded with said locking member in said transverse position within the spacing of said handle member fold lines.

3,042,055
UMBRELLA CONSTRUCTION
Bogdan Todorovic, Santa Monica, Calif. (10763 Wilshire Blvd., Los Angeles 24, Calif.)
Filed Sept. 4, 1959, Ser. No. 838,134
4 Claims. (Cl. 135—20)



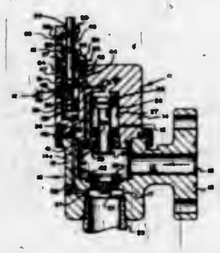
1. An eccentric umbrella which has a shaft, a slide mounted on the shaft and means adjacent to the end of the shaft by which to form a pivot mount, a plurality of longer ribs and a plurality of shorter ribs pivoted at their inner ends to said mount, a plurality of elongated stretchers connected between the mid-portions of said longer ribs and to said slide, extensible elongated stretchers connected to said shorter ribs and to said slide, said extensible stretchers including members which are extensibly connected together and which when retracted fully form a solid link, and a reinforcing flexible elongate member connected to a mid-portion of at least one of said longer ribs outwardly of its connection to the corresponding stretcher and to a mid-portion of at least one of the stretchers connected with one of said longer ribs.

3,042,056
EAVE TROUGH CONSTRUCTION
Bogdan N. Todorovic, Santa Monica, Calif. (10763 Wilshire Blvd., Los Angeles 24, Calif.)
Filed Sept. 9, 1959, Ser. No. 838,878
3 Claims. (Cl. 135—33)



1. A drainage device for an inclined flexible cover, said drainage device comprising an elongated, flexible, generally triangular panel mounted on the upper side of the cover and having its marginal portions secured thereto, said panel including an inwardly folded longitudinal portion defining a trough extending from end to end of said panel, and means for holding the trough open.

3,042,057
HIGH AND LOW PRESSURE CUT-OFF VALVE
Maurrice M. Zorgdrager, Houston, and Marvin R. Jones, Harris County, Tex., assignors to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Filed Sept. 4, 1959, Ser. No. 838,195
9 Claims. (Cl. 137—70)



1. A pressure responsive valve comprising, a body having a flowway therethrough, a valve seat in the flowway, a main valve member cooperable with the seat to control flow through the flowway, a cylinder closed at one end, a piston in the cylinder connected to the main valve member, a conduit leading to a chamber formed in the closed end of the cylinder by the piston, said conduit supplying fluid to actuate the piston and main valve member to valve closing position, a slide valve including a slide valve member connected in and controlling said conduit, at least one pressure responsive surface on said slide valve member exposed to a control pressure, means urging the slide valve member against control pressure on said one surface, and means maintaining the slide valve member in an intermediate closed position while said control pressure is within a predetermined range, said maintaining means yielding and permitting the slide valve member to move to open position due to an unbalance in the forces resulting from the urging means and control pressure acting on the slide valve member when the control pressure is above or below a predetermined range.

3,042,058
HIGH OUTPUT DIFFERENTIAL ELECTRO-MAGNETIC VALVE
René Lucien, Neuilly-sur-Seine, France, assignor to Societe a Responsabilite Limitee: Recherches Etudes Production R.E.P., Paris, France, a corporation of France
Filed Feb. 21, 1958, Ser. No. 716,579
Claims priority, application France Feb. 22, 1957
4 Claims. (Cl. 137—82)



1. An electrically-actuated hydraulic fluid distribution-valve comprising a valve body, two opposed electromagnetic coils on the body and adapted to be energized by currents passing therethrough, a magnetic circuit operatively disposed with respect to and energized by said coils and including an armature displaceable under the influence of said coils, valve faces on the valve body, each of said valve faces being provided with a port, the ports being axially aligned along a first axis and being positioned relative to the armature such that when said armature moves the opening of one of the ports is increased and the opening of the other of the ports is reduced, resilient supports for said armature permitting displacement thereof relative to said valve-body and in a direction along a second axis substantially perpendicular to the axis of said axially aligned ports, and a movable valve element operatively connected to and movable with said armature and having faces cooperating with said valve faces, the faces of the movable element being parallel to said second axis, said valve body being provided with supply and exhaust passages coupled to said ports for the transferral of hydraulic fluid under pressure, movement of the movable element in one direction increasing pressure at one port and reducing it at the other, said valve body being provided with further passages connected to said supply passage to receive hydraulic fluid under pressure, each of said further passages being operatively associated with respective of said ports whereby the fluid pressure in said further passage is proportional to said increasing and reducing of pressure at said ports, said electro-magnetic coils when deenergized being adapted to maintain said armature and thereby said movable element in a position wherein said ports are equally and partially obturated, leakage through the ports passing continuously to said exhaust passage, said ports being related to the faces of said movable element so that the difference between the hydraulic pressure at the said further passages is a direct function of the difference in the strength of the currents in said electro-magnetic coils.

3,042,059
QUANTITY AND QUALITY CONTROLLED CHLORINATING INSTALLATION
Karl-Heinz Arenhold, Karlsruhe-Durlach, Germany, assignor to Chlorator G.m.b.H., Grotzingen, Karlsruhe, Germany, a German company
Filed June 28, 1960, Ser. No. 39,305
Claims priority, application Germany July 4, 1959
7 Claims. (Cl. 137—89)

1. An installation for admixing chlorine to water flowing through a bypass branched off from a water main and returned into the same, said installation comprising, in combination, a dosing valve assembly having an input side and an output side, a feed pipe for feeding chlorine under pressure to said dosing valve assembly connected to the input side thereof, a suction pipe adapted to be connected at one end to said bypass for suction action by the flow of water through the bypass and connected at the other end to the output of said dosing

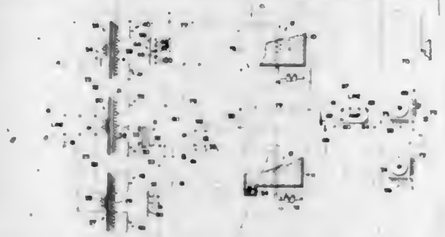
valve assembly, said assembly including a movable valve disk interposed between said suction pipe and said feed pipe to expose one side of the disk to a vacuum in the suction pipe and the other to chlorine pressure, the position of said valve disk controlling the flow of chlorine from the feed pipe into the suction pipe, a yieldable pressure means disposed on the chlorine pressure side of the disk and pressing the same toward a valve-closing position, a vacuum-controlled pressure means disposed on the chlorine side of the disk, said vacuum-controlled pressure means including a flexible diaphragm exposed to the vacuum in the suction pipe for flexing said diaphragm in accordance with said vacuum, and an actuating member coupled to the diaphragm and acting upon the disk to press the same toward a valve-opening position, the differential between the opposing pressures of the yieldable pressure means and the actuating member controlling the position of the disk, chlorine-sensitive control means adapted to be connected to said



water main downstream from the return connection of said bypass to said main, said chlorine-sensitive means including means sensitive to and controlled by the chlorine content of the water, means connecting said chlorine-sensitive means to said dosing valve assembly to exert pressure upon the disk-actuating member thereof in the valve-opening direction in accordance with the chlorine content as detected by said chlorine-sensitive control means, and flow-sensitive valve control means adapted to be connected to said main, said flow-sensitive control means including a control means controlled by the rate of flow of water in said main and connected to said dosing valve assembly to exert pressure upon said disk-actuating member in the valve-opening direction in accordance with the rate of flow of water, whereby the total pressure exerted by said actuating member upon the disk is a composite function of the pressures produced by the vacuum-controlled pressure means, the chlorine-sensitive control means and the flow-sensitive control means.

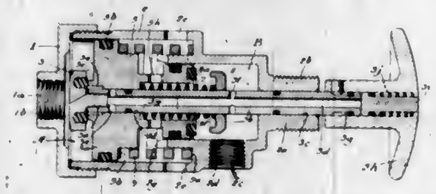
3,042,060
CENTER OF GRAVITY CONTROL APPARATUS
Arthur W. Lindemann, Columbia Heights, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 12, 1956, Ser. No. 609,401
13 Claims. (Cl. 137—101.25)

1. A fuel quantity responsive apparatus for use with a vehicle having a first and a second fuel container, comprising: a first and a second fuel responsive impedance device arranged to be located one in each of the fuel containers; a first alternating voltage source; a second alternating voltage source of variable magnitude and of a phase opposite to said first voltage source; a third source of alternating voltage of a phase in quadrature with said first voltage source; a fourth source of alternating voltage of a phase opposite to said third voltage source; circuit means connecting said first and second fuel responsive impedance devices to said first voltage source so as to derive a first and second signal of a first phase and of magnitude indicative of the quantity of fuel in said first and second containers respectively; circuit means connecting said first and second fuel responsive impedance devices to said third and fourth voltage sources so as to derive a third and fourth signal of a second and an opposite phase respectively and of magnitude which varies with the quantity of fuel in said first and second containers respectively; first phase responsive means operable in a first manner by signals of said first phase and in a second manner by signals of the opposite phase to said first phase; circuit means connecting said first and second fuel responsive impedance devices and said second voltage



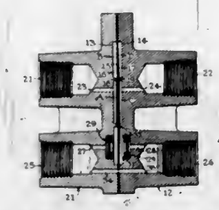
source to said first phase responsive means to apply said first and second signals and a rebalance signal of phase opposite the first phase from said second voltage source thereto; means controlled by said first phase responsive means arranged to control the magnitude of said second voltage source until the rebalance signal therefrom balances said first and second signals; second phase responsive means operable in a first manner by signals of said second phase and in a second manner by signals of the opposite phase to said second phase; and circuit means connecting said first and second fuel responsive impedance devices to said second phase responsive means to apply said third and fourth signals thereto, said second phase responsive means actuated by the difference between said third and fourth signals.

3,042,061
AUTOMATIC SHUTTLE SAFETY VALVE
Harold L. Dobrikin, Chicago, Ill., assignor, by mesne assignments, to Berg Airlectro Products Co., Chicago, Ill., a corporation of Illinois
Filed Nov. 8, 1956, Ser. No. 621,077
8 Claims. (Cl. 137—102)



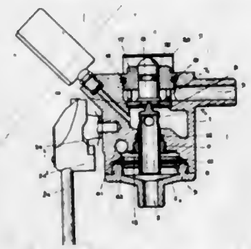
3. A safety control valve for air pressure systems and the like comprising a valve housing, a piston slidably mounted in said housing and dividing said housing into at least a pair of chambers, an air pressure inlet in one of said chambers, an air pressure outlet in the other of said chambers, an air passage in said piston positioned to place said chambers in communication one with the other, valve means associated with said piston and effective to open and close said passage, yielding means in said housing effective to urge said piston towards said inlet, said valve means including a stem slidable in said piston and extending outwardly of said housing and valve members fixed on said stem at opposite ends of said piston.

3,042,062
PRESSURE SELECTOR
Thomas M. Holloway, Waukesha, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 25, 1959, Ser. No. 822,777
2 Claims. (Cl. 137—112)



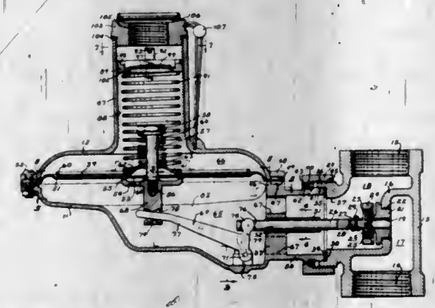
1. A pressure selector comprising a housing containing a chamber; a diaphragm extending through the chamber, said diaphragm being clamped around the outer periphery of the chamber and being slack in the entire unclamped portion thereof, said diaphragm dividing the chamber into first and second sub-chambers; valves, one located in each sub-chamber and each comprising a fixed element carried by the housing and a movable element carried by the diaphragm, the valves being opened and closed in reverse senses by movement of the diaphragm in opposite directions, the elements of each valve being arranged to contact each other along a line which divides the associated sub-chamber into a central space and an encircling annular space, the spaces in each sub-chamber being in communication with each other when the associated valve is open and being isolated from each other when that valve is closed; a first inlet port communicating with one of the two spaces in the first sub-chamber and a second inlet port communicating with the corresponding space in the second sub-chamber; a common outlet passage; and restricted interconnecting passages connecting the other spaces in the sub-chambers with the common outlet passage, the cross-sectional areas of the other spaces constituting substantial portions of the total cross-sectional areas of the sub-chambers, whereby as the diaphragm moves toward the sub-chamber containing the lower inlet pressure there is a significant increase in the area of the diaphragm subject to the higher inlet pressure.

3,042,063
DISTRIBUTING DEVICE
Paul André Guinard, 7 Ave. Pozzo di Borgo, Saint-Cloud, France
Filed Oct. 8, 1958, Ser. No. 766,092
Claims priority, application France Oct. 11, 1957
2 Claims. (Cl. 137—115)



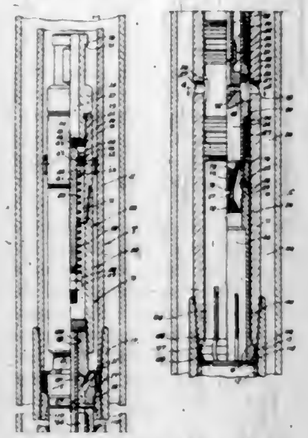
1. Distributing device for fluids under pressure provided with discharge means, particularly for the fitting out of spraying motor-pump groups, including a body in which is provided a central bore with an enlarged internally threaded end, a discharge valve disposed at the other end of said bore and including a plate-shaped closing spring fixed at one end upon said body, provided at the other end with a regulating screw and arranged so as to bear with its central part upon the head of the discharge valve, a tubular member sliding in said bore and including at its end a push-rod contacting said discharge valve, an annular elastic membrane fixed upon said tubular member, a nut formed piece screwed in the enlarged end of the central bore to tighten the periphery of said membrane against the body, an inlet pipe for the fluid under pressure provided in said nut formed piece, so as to subject one face of said membrane to the inlet pressure of the fluid, an admission chamber provided in the body around the tubular push-rod below the discharge valve, side ports provided in said tubular push-rod so as to connect the inlet pipe with said chamber, a transverse channel in the body, provided at both ends with distributing pipes, two spring loaded supply valves to connect the admission chamber with said channel close to the distributing pipes, means to selectively control the opening of said supply valves, a conduit connecting the central part of the transverse channel and the enlarged end of the central bore to transmit the pressure downstream of said supply valves to the face of the membrane opposite the face thereof subjected to the inlet pressure of the fluid, two pieces including converging-diverging passages and disposed in the transverse channel on either side of said conduit, and a ball freely disposed in the central part of said channel between said pieces.

3,042,064
GAS PRESSURE REGULATOR
Joseph A. Pommersheim, Norwalk, Ohio, assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 2, 1957, Ser. No. 650,144
11 Claims. (Cl. 137—116.5)



1. In a gas pressure regulator, a body having a passage therethrough and a movable main valve for controlling flow of gas through said passage, a fluid pressure responsive element movably mounted within said body, said pressure responsive element having a through opening and at least one side exposed to a first chamber within the body containing gas under pressure from said passage to be controlled by said main valve, motion transmitting linkage means operably connecting said element and said main valve, a second chamber being provided in the body on the other side of said element, a relief valve mounted to move with said pressure responsive element, said relief valve controlling fluid flow through said opening and being located in said first chamber, means normally urging said relief valve to close said opening, and coacting positive stop means on said relief valve and on said body and independent of said linkage means, said coacting positive stop means being located in said first chamber for opening said relief valve to vent gas pressure from said first chamber to said second chamber upon predetermined movement of said pressure responsive element in the direction which it is displaced by increasing gas pressures in said first chamber.

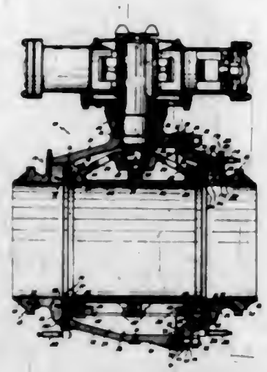
3,042,065
WELL TOOLS
Shelby J. Graves, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Apr. 13, 1959, Ser. No. 805,869
8 Claims. (Cl. 137—155)



1. A flow control device adapted for use in a well flow conductor having a longitudinal flow passage and a lateral inlet port therein communicating with the flow passage thereof, said flow control device including: an elongate tubular mandrel having a longitudinal bore providing a central flow passage; a tubular member secured within the bore of said mandrel in sealing relationship at its ends with said mandrel and defining with its bore a portion of said central flow passage and with said mandrel a longitudinal annular flow passage surrounding said portion of said central flow passage within said mandrel; an outlet opening from said annular passage to the exterior of said mandrel adjacent the upper end of said annular passage; a lateral aperture in said mandrel adjacent the lower end of said tubular member and communicating with one of said central flow passages and said annular flow passage, said lateral aperture being adapted for communicating with the lateral inlet port of the flow conductor for admitting fluids from said lateral port through said lateral aperture; seal means spaced longitudinally on the exterior of said mandrel on opposite sides of said lateral aperture therein and adapted to seal between said mandrel and the well flow conductor for directing fluids into said lateral aperture; said other of said central flow passage and said annular flow passage providing for flow of fluids therethrough past said lateral aperture without communication with said lateral aperture whereby two separate flow passages are provided; check valve means in the lower portion of the bore of said mandrel below said annular flow passage for preventing back flow of fluids through said mandrel; and control valve means carried in the upper portion of the bore of said mandrel above said annular passage for controlling flow from said central flow passage, said control valve means cutting off all upward flow therepast from the central flow passage when closed and being openable to permit upward flow therepast.

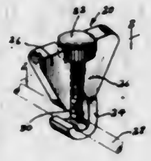
3,042,066
BALL TYPE LUBRICATED PLUG VALVE
Adolph Wolfensperger, Pittsburgh, Pa., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 27, 1958, Ser. No. 738,114
13 Claims. (Cl. 137—246.11)

1. In a ball type lubricated plug valve assembly, a body having opposed aligned fluid passages, annular recesses within said body surrounding said passages, seat rings in said body recesses mounted for displacement at least axially of said passages on said body, mating surfaces of said rings and recesses being essentially parallel with a slight relief provided between the radially inward portions of said surfaces, a ported ball having spherical seating surfaces and rotatable between a position where its port aligns with and a position where it closes said passages



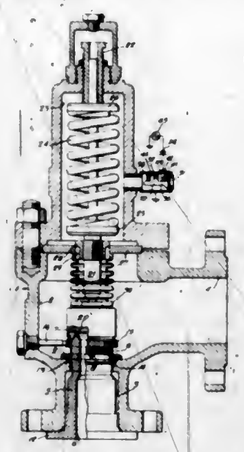
supported wholly on spherical seating surfaces on said seat rings, circumferentially extending groove means in said spherical seat surfaces in essentially true alignment with the radially outer edge of said mating surfaces along lines of radius of said spherical surfaces, and means for introducing fluent sealant and lubricating plastic into said groove means for establishing a uniform layer of sealant and lubricant plastic between said spherical surfaces on said ball and said seat rings.

3,042,067
TUBE CLAMP
Walter Hidding, 505 Banbury Road, Arlington Heights, Ill.
Filed June 9, 1960, Ser. No. 7,605
5 Claims. (Cl. 137—315)



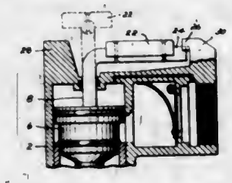
1. A pinch clamp comprising: a screw element; and a body member formed of resilient material and including a C-shaped jaw adapted to receive a section of flexible tubing, said body member further including a bore provided internally with threads complementary to the threads on the shank of said screw element, said bore progressively passing an end of said screw element into pinching engagement with a portion of the section of flexible tubing received in said jaw, said bore having a radially opening portion along the entire axial length thereof, said radially opening portion being generally less than 180 degrees in extent whereby positively to house said screw element, the edges of said radially opening portion being capable of sufficient flexing to permit assembly of said screw element with said body member by urging said screw element radially into engagement with said bore through said radially opening portion.

3,042,068
SAFETY RELIEF VALVE
Ronald V. Smith, Pennsauken, N.J., assignor to J. E. Lonergan Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 23, 1959, Ser. No. 808,455
5 Claims. (Cl. 137—315)



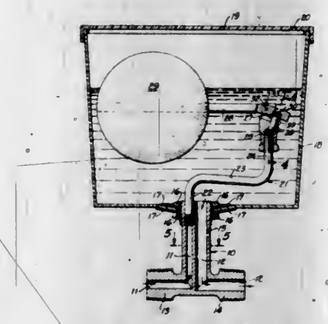
1. A valve comprising a valve body defining a main chamber, and inlet and outlet ducts thereto, a valve nozzle mounted in said inlet duct and having a bore terminating in a valve seat within said main chamber, said valve nozzle having a smaller diameter than said inlet duct for a major portion of its length adjacent said main chamber and engaging said inlet duct in a localized area remote from said main chamber, the outside dimension of said nozzle diminishing from said area of engagement toward the valve seat, means defining a recess in said inlet duct adjoining said main chamber, a sealing element mounted in said recess and operable to bridge the clearance between said inlet duct and said valve nozzle adjoining said main chamber to prevent passage of fluid from said main chamber into the clearance space intermediate said nozzle and said inlet duct, and a frangible nut threaded on said valve nozzle to engage said valve body and compress said sealing element into sealing engagement with the valve body and the nozzle and retain said valve nozzle in firm engagement with said valve body, said frangible nut having diagonally-opposed weakened areas affording ready rupture of said nut in said area for easy removal of said nut from engagement with said valve nozzle whereby upon removal of said nut, said nozzle may be displaced from said inlet duct by a purely axial force on said nozzle outwardly from said main chamber.

3,042,069
MEANS FOR PROTECTING VALVE HANDLES
George M. Schutter, West Newton, and Robert G. Young, Jr., Beverly, Mass., assignors to Scully Signal Company, Melrose, Mass., a corporation of Massachusetts
Filed June 3, 1959, Ser. No. 817,913
4 Claims. (Cl. 137—382)



1. A nozzle for dispensing fluid under pressure comprising a body and a movable valve therewithin, means for controlling the movement of said valve, said means comprising a rod extending through the said body and being rotatable with respect to said body between open and closed position for said valve, an elongated handle connected perpendicular to said rod extending along the outer surface of said body in said closed position and extending transverse to said body in said open position, releasable means for holding said handle in fixed relation to said body, and a pair of opposed raised portions on said body adjacent opposite ends of said handle in said closed position and extending beyond the profile of said handle in said closed position to protect said handle while permitting free access thereto.

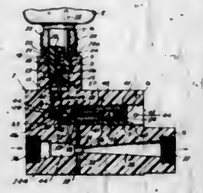
3,042,070
PRESSURE BREAK FOR POULTRY WATERING EQUIPMENT
Reed S. Kofford, P.O. Box 453, Van Nuys, Calif.
Filed May 9, 1960, Ser. No. 27,569
5 Claims. (Cl. 137—448)



1. A pressure break for poultry watering equipment comprising a T fitting, said T fitting having a horizontally directed inlet portion adapted to be connected to a high pressure source of water supply, a horizontally directed outlet portion adapted to be connected to the watering equipment and a vertically directed portion, an L-shaped water inlet passage extending through said inlet portion and said vertical portion, an L-shaped water outlet passage extending through said outlet portion and said vertical portion, a substantially cylindrical water tank formed of semi-transparent polyethylene mounted on the upper end of the vertical portion of said T fitting, the bottom of said water tank having a central circular opening, said vertical portion extending through said opening, fastening means surrounding said opening on opposite sides of the bottom of said tank to secure said tank on said vertical portion, a water supply tube having a vertically directed lower end screw threadedly mounted in the upper end of said water inlet passage, said tube being bent to provide a vertically directed upper end disposed adjacent to the side of said water tank, an outlet fitting mounted on the upper end of said water supply tube, said fitting having an angularly directed tubular water outlet, said water outlet being connected to said water supply tube through said outlet fitting, the upper end of said outlet fitting being bifurcated to provide a pair of spaced arms defining a yoke, an elongated lever arm, a ball float carried by one end of said lever arm, the other end of said lever arm extending between said arms, a pivot pin having a straight portion extending through aligned openings in said lever arm and said arms, said pivot pin having a bent portion extending across the top of said arms, the end of said lever arm remote from said ball float being bent to extend across said water outlet, said end of said lever arm being cut away to provide a recess, a resilient valve seat mounted

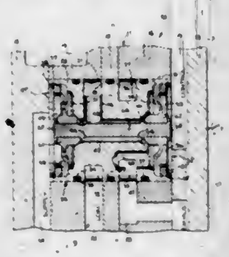
in said recess, said valve seat being adapted to close off said water outlet upon the upward movement of said ball float in response to the water level in said water tank.

3,042,071
LIQUID FEEDING APPARATUS
John E. Van Tuyl, Cleveland, Ohio, assignor to Albert C. Mader, Parma, Ohio
Filed July 1, 1957, Ser. No. 669,145
3 Claims. (Cl. 137—454.5)



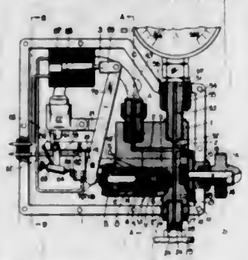
1. In a system for feeding an additive at a predetermined rate into a confined moving liquid, a combination comprising a housing having a generally cylindrical opening therein; inlet means in the housing for supplying additive to and outlet means in the housing for removing additive from said generally cylindrical opening, said inlet means and said outlet means being offset laterally from each other; a first valve seat in said generally cylindrical opening between said inlet means and said outlet means; a generally cylindrical valve body manually actuable toward and from said first valve seat within the confines of said generally cylindrical opening having an axially extending flow opening therein, said valve body having a circumferential channel in its exterior surface outwardly of said axially extending flow opening; sealing means downstream of said first valve seat between the housing and the valve body at each of the two ends of the circumferential channel; a passageway downstream of said first valve seat leading from the exterior of the valve body to the axially extending flow opening in the valve body; a passageway leading from the axially extending flow opening in the valve body to the circumferential channel; a second valve seat and valve located interiorly of the valve body, said second valve seat and valve being adapted to permit or prevent flow between the passageways leading to and from the axially extending flow opening in the valve body; means in the valve body resiliently backing the second valve; and means at the trailing end of the valve body barring access to the second valve.

3,042,072
DIAPHRAGM TYPE VALVE STRUCTURE
Alfred H. Humphrey, Kalamazoo, and Stanley M. Loveless, Oshtemo Township, Kalamazoo County, Mich., assignors to General Gas Light Company, Kalamazoo, Mich., a corporation of Michigan
Filed Feb. 18, 1959, Ser. No. 794,060
1 Claim. (Cl. 137—454.6)



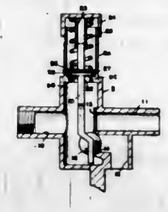
A valve construction, comprising: a valve casing having a cylindrical opening therein and having a pair of fluid pressure conduits communicating with said opening at the ends thereof, said casing also having a pair of axially spaced passages communicating with said opening through the side wall thereof; a valve housing slidably received within said opening, said housing having three radially outwardly extending circumferential flanges defining two axially spaced grooves in said housing, said grooves being in registry with said passages, respectively; a circumferentially extending recess in each of said flanges and an O-ring in each of said recesses and sealingly contacting the side wall of said opening to isolate said grooves from each other; said valve housing having a longitudinally extending central passageway therethrough and having a pair of enlarged chambers at the ends thereof, said conduits communicating with said chambers; means defining a valve seat between each chamber and the adjacent end of said passageway; a first, imperforate, flexible diaphragm mounted on said housing and located within and extending transversely across one of said chambers to divide said one chamber into a pair of noncommunicating portions, the adjacent conduit communicating with the portion of said one chamber remote from the adjacent valve seat; a second, perforate, flexible diaphragm mounted on said housing and located within and extending transversely across the other of said chambers, said diaphragms each having a valve element thereon sealingly engageable with the valve seat adjacent thereto; a valve rod connected to said diaphragms and extending through said passageway and movable between positions where one or the other of said valve elements sealingly engages its associated valve seat; said housing having a first port extending between one of said grooves and said one chamber at the portion thereof adjacent said valve seat; said valve housing having a second port axially spaced from said first port and extending radially between said passageway and the other of said grooves.

3,042,073
AUTOMATIC REGULATING VALVE
Eizaburo Murakami, 619–19 Osaki Honcho, Shinagawa-ku, Tokyo, Japan
Filed Nov. 2, 1959, Ser. No. 850,147
Claims priority, application Japan Nov. 24, 1958
3 Claims. (Cl. 137—495)



1. A pressure responsive valve means, comprising a valve having a slidable valve member and a valve seat against which said valve member seats, an adjusting slide slidable relative to said valve seat, a lever pivoted on said adjusting slide and having one end bearing on said valve member for sliding said valve member, a Bourdon tube having one end fixedly mounted relative to said valve and having the interior thereof connected to said valve for being acted on by the pressure on one side of said valve, the other end of said tube being pivotally linked with said lever on the opposite side of said pivotal mounting of said lever from the end bearing on said valve member, and quick acting means coupled between the other end of said Bourdon tube and the other end of said lever, whereby when said Bourdon tube changes shape in response to a change in pressure to which it is exposed, said valve member is moved in relation to said valve seat.

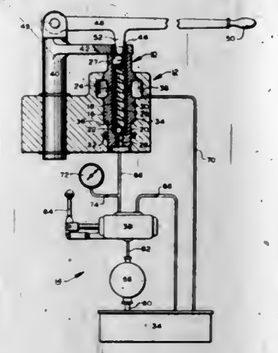
3,042,074
FLUID DISTRIBUTION SYSTEMS AND CONTROLLING FLUID MOTOR WITH PISTON ACTUATED REVERSING VALVE MEANS
Clinton L. Graybill, Superior, Mont., assignor to Graybill Industries, Inc., Superior, Mont., a corporation of Montana
Filed Jan. 12, 1959, Ser. No. 786,086
1 Claim. (Cl. 137—509)



In a pressurized water distribution system including a water supply line under pressure from a source and a plurality of lateral branch lines in communication at one of their ends with said main lines; the improvement comprising a pressure sensitive flow interrupting control valve having a hollow valve body, said body having an inlet connected to said water supply line, said body having an outlet provided with a valve seat and connected to said branch lines, said body having a discharge opening, provided with a valve seat, a ball valve within said housing and adapted for alternate valving cooperation with said valve seats for alternately directing water received from said source to said branch lines and to said discharge opening, said ball being arranged relative to the seats so as to be constantly urged against the seat with which it cooperates, fluid pressure responsive motor means, a restricted passage connecting the interior of the hollow valve body with the motor means in such a manner as to move the motor means in one direction in response to pressure in the branch line outlet, means urging said motor means in a direction opposite to said one direction, a delayed motion resilient connector means interconnecting said motor means and said ball for alternately and successively shifting said ball valve into valving cooperation with said valve seats, said connector means comprising a yoke having a top end and a bottom end and connected at its top end to said motor means and yieldingly connected near its bottom end to said ball valve, the motor, ball and connector means being so arranged relative to the seats that when the motor means moves in said one direction the connector means will urge the ball away from the discharge opening seat and toward the branch line outlet seat, whereby when said discharge opening is closed by said ball, water will flow from said inlet through said outlet and in to said branch lines and whereby water under back pressure from said outlet will actuate said motor means to apply and gradually increase the tension on said yielding connection of said ball valve to said yoke to snap the ball valve from said discharge opening to said outlet to thereby seal off the outlet opening and thereby permit bypass of water from said inlet out through said discharge opening.

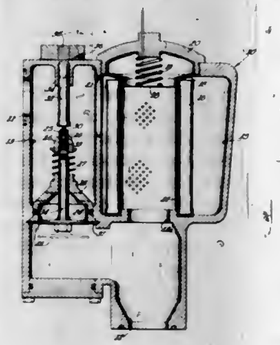
3,042,075
PRESSURE RESPONSIVE VALVE
Raymond B. Pettibone, Detroit, Mich., assignor to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Original application Nov. 1, 1954, Ser. No. 465,799, now Patent No. 2.970,467, dated Feb. 7, 1961. Divided and this application Sept. 26, 1960, Ser. No. 61,047
1 Claim. (Cl. 137—539)

A pressure responsive valve comprising: a body member; means forming a uniform cylindrical bore through the body; means forming a valve seat at one end of the bore; a valve element in the bore and associated with the valve seat; spring means in the bore to urge the valve element toward the valve seat; and a spring retainer at the other end of the bore, an outlet passage through the wall of said body member between said valve seat



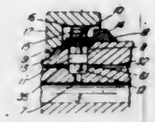
and said spring retainer, said retainer being spherical in shape and having a press fit size relation with a length of said bore to permit positioning of said retainer anywhere within that length, thereby enabling establishment of spring load dependent on where in said length the retainer is positioned.

3,042,076
FILTER SIGNAL DEVICE
William J. Scavuzzo, Clark, N.J., assignor to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Filed Jan. 27, 1959, Ser. No. 789,354
7 Claims. (Cl. 137—557)



1. An indicator for use with a valve comprising a stem adapted to seat and unseat a valve, biasing means acting on said stem adapted to keep the valve seated when a differential pressure across it is below a predetermined pressure, a magnetized actuator rod operatively connected to said stem for movement thereby, a signal device, one end of said rod being disposed in a seated position adjacent the signal device to hold it in a non-signal position when the stem maintains the valve seated, means for moving the signal device to a signal position when the stem unseats the valve, said stem having a bore therein, a slidable rod in said bore fixed to the actuator rod, and means for urging the actuator rod and stem extended to their maximum length so that said actuator rod seats when said stem seats the valve.

3,042,077
FLUID HANDLING MEANS
Rogor Strange Waddington, The Hayloft, 71 Dorking Road, Epsom, Surrey, England, and Bruce Duval, 39 Cheam Road, Ewell, Surrey, England
Filed Feb. 26, 1957, Ser. No. 642,503
Claims priority, application Great Britain Feb. 27, 1956
7 Claims. (Cl. 137—604)



7. Apparatus for mixing liquids, which apparatus comprises a primary-liquid conduit formed with a venturi passageway, a valve chamber formed with a secondary-liquid inlet port for the supply of secondary-liquid thereinto, a thin wall portion common to the valve chamber and the primary-liquid conduit and dividing the valve chamber from the throat of the venturi passageway, a secondary-liquid passageway formed through said thin wall portion and a piston movable within said valve chamber to cover said secondary-liquid inlet port progressively and said secondary-liquid passageway in fluid tight, over-area engagement therewith.

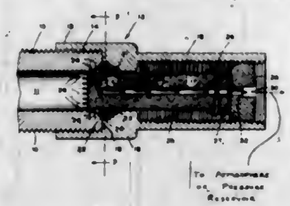
3,042,078
VOLUME FLOW REGULATING DEVICE
Axel Rosell, Stockholm, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Filed Mar. 6, 1959, Ser. No. 797,706
Claims priority, application Sweden Mar. 7, 1958
7 Claims. (Cl. 137—625.3)



1. A device for regulating the volume flow of a gaseous medium through an opening, as of an air duct, comprising in combination, a flow-resisting medium-permeable body entirely covering the flow area of said opening, and shiftable damper means movable for adjustment independently of the action of the medium thereon, sealingly and variably engaging at least one face of said body transversely of the line of flow of the medium through the body, said flow-resisting body comprising elements which divide the flowing medium into a multiplicity of passageways aligned with the direction of flow of said medium through the opening, and said elements being of such size and character as to impose frictional flow resistance of substantially greater magnitude than the dynamic pressure for the corresponding volume flow of the medium through the opening.

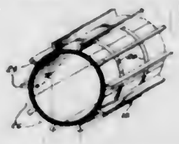
3,042,079
ADJUSTABLE VENT
James L. Swift and Francis C. Evans, Staten Island, N.Y., assignors to American District Telegraph Company, Jersey City, N.J., a corporation of New Jersey
Filed Apr. 15, 1958, Ser. No. 728,697
3 Claims. (Cl. 138—42)

1. In an externally adjustable rate vent for a low pressure penumatic system, the combination comprising a threaded nipple-like element communicating with said pressure system, a generally cylindrical hollow body member having a first portion with internal threads in threaded engagement with said nipple-like element and having a second portion with internal threads, the hollow centers of said nipple-like element and said body member being in axial alignment, a porous carbon rod communicating at one end thereof with ambient atmosphere, a disc member having external threads in threaded engagement with said internal threads of said second portion of said body member, means to interconnect said rod and said disc member whereby said disc member supports said rod coaxially within said body member and with said one end of said rod projecting into said nipple-like element, rotation by externally applied means of said disc member changing the axial position of said rod relative to said body member whereby the extent of projection of said rod into said nipple-like element is changed, said body member and said nipple-like element having



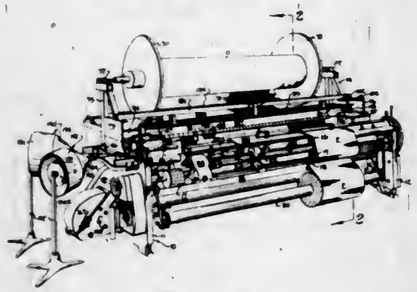
adjacent but spaced internal beveled corner surfaces forming an annular chamber, and a washer element located partially within said chamber and arranged to be in sealing contact with said spaced surfaces and with the surface of said rod, thereby to prevent communication between the inside of said nipple-like element and the inside of said body member except through said porous carbon rod and to control the venting rate of said pressure system proportional to the area of said rod exposed to the pressure of said system, contact between said washer element and said spaced surfaces preventing axial movement of said washer element as said rod is moved in an axial direction.

3,042,080
MEANS FOR MOVING EXTREMELY COLD LIQUIDS
Cornelius D. Dosker, Louisville, Ky., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed July 2, 1958, Ser. No. 746,150
2 Claims. (Cl. 138—100)



1. A conduit for the transmission of large volume of a liquefied natural gas at about atmospheric pressure comprising elongate hardwood staves of relatively thin cross-section formed to lengths up to 100 feet arranged in end-to-end and in side-by-side relation to form a pipe, the meeting end edge of said staves being staggered so that no more than one abutting edge between staves occurs in any one cross-section, longitudinally spaced apart bands of a metal capable of retaining its strength and ductility at the extremely low temperature of the liquid fitting tightly about the assembled staves, laterally spaced apart rib members fixed to the outer surfaces of the staves and extending lengthwise of the conduit, an outer wrap of weather-resistant material about the ribbed sections to provide an opening between the wrap and the assembled staves with the opening being divided crosswise by the ribs into compartments, an insulating material of low thermal conductivity filling the space between the rib members, the inner surface of the outer wrap and the outer surface of the banded staves, the means interconnecting said staves comprising slots extending into the end and side edges of the staves in position to be aligned one with the others of the staves when arranged in end-to-end and in side-by-side relation, and splines formed with elongate wooden elements of thin cross-section extending crosswise between the adjacent edges of the staves and into the aligned slots for cross-tying the staves one to the other for the transfer of load and effecting the assembled relation, whereby cold is transmitted through the staves to the metal bands and causes contraction thereof by an amount greater than the contraction of the staves under equivalent temperature change with resultant increase in the tightness of the metal bands about the assembled staves.

3,042,081
HIGH SPEED CARPET LOOM AND METHOD OF WEAVING
John T. MacIsaac, Jr., Spray, and Charles B. Sumpter, Jr., Leaksville, N.C., assignors to Fieldcrest Mills, Inc., Spray, N.C., a corporation of Delaware
Filed Aug. 27, 1959, Ser. No. 836,491
18 Claims. (Cl. 139—46)



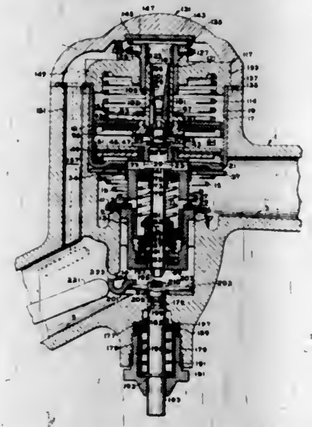
1. A method for interweaving ground warps and pile yarns into a pile fabric on a fly shuttle type loom having pile wires extending in the same general direction as the ground warps and pile yarns, means for picking shuttles from one side only of the loom and also having spaced-apart shuttle guide hooks forming a shuttle guide; said method comprising forming a shed of ground warps, positioning pile yarns above the pile wires with portions of the yarns extending downwardly between the pile wires and between the shuttle guide hooks, then passing a shuttle through the shuttle guide to carry and insert a weft yarn therethrough, through the shed and over the pile yarns, beating up the inserted weft yarn, raising the pile yarns above the shuttle guide, and repeating the steps as prescribed.

3,042,082
THREAD TENSIONING OR BRAKING DEVICES FOR SHUTTLES
Erich Grünke, Hinwil-Zurich, Switzerland, assignor to Emil Forster, Hinwil-Zurich, Switzerland
Filed Dec. 2, 1959, Ser. No. 856,717
4 Claims. (Cl. 139—217)



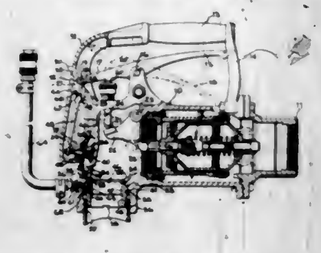
1. A thread tension device for a loom shuttle comprising as a unitary structure, in combination, a fixed brake shoe mounted on a fixed support in said shuttle and disposed on one side of the thread path within said shuttle, a displaceable brake shoe on said support disposed on the opposite side of said thread path, resilient means on said support in engagement with and urging said displaceable brake shoe toward said fixed brake shoe, means mounted on said support and concentric therewith for infinitely adjusting the position of said displaceable brake shoe and for retaining said displaceable brake shoe in an adjustable position of minimum spacing from said fixed brake shoe, and means movable on said support and concentric therewith for adjusting the pressure of said resilient means independently of the spacing of said displaceable shoe from said fixed shoe.

3,042,083
AUTOMATIC NOZZLE
Christian W. Kruckeberg, Fort Wayne, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Oct. 30, 1959, Ser. No. 849,917
19 Claims. (Cl. 141—208)



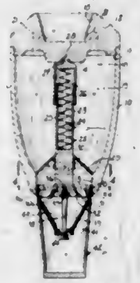
1. An automatic nozzle comprising a body defining a liquid inlet passage, an outlet passage, a spout communicating therewith and a port connecting said passages, a first, double acting fluid motor comprising first and second chambers, a main valve connected for operation by said first motor to open said port when said first chamber is pressurized and for closing said main valve when said second chamber is pressurized, a second, double acting fluid motor, comprising third and fourth chambers, an eductor having a liquid inlet, a vacuum inlet and an outlet, a vent connecting said eductor outlet with said third chamber, a control passage for conducting liquid from said inlet passage to said first chamber and said eductor liquid inlet, to energize said eductor, a normally closed pilot valve for said control passage, manual means for variably opening said pilot valve to energize said eductor and to variably pressurize said first chamber, means for preventing opening of said main valve until the pressure in said first chamber exceeds that required to energize said eductor, means including a normally closed trip valve for supplying liquid from said control passage to said second and third chambers, a liquid level sensing tube having its outlet communicating with said fourth chamber and having its inlet adjacent the spout outlet, channel means, including a normally open first valve, for connecting said fourth chamber to the eductor vacuum inlet so that, upon closure of said sensing tube, said eductor will evacuate said fourth chamber to start said second fluid motor, means responsive to the starting of said second motor for opening said trip valve to pressurize said second and third chambers, for closing said main valve if it is open, and maintain the operation of said second motor, means, including a second normally open valve, for connecting the eductor outlet with said spout, means operable by said second motor, during the maintained operation thereof, for closing said first and second valves.

3,042,084
AUTOMATIC DISPENSING NOZZLE
Wallace D. Boone and Arthur F. Briede, Cincinnati, Ohio, assignors to Dover Corporation, a corporation of Delaware
Filed Oct. 26, 1959, Ser. No. 848,802
7 Claims. (Cl. 141—225)



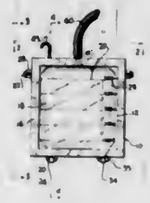
1. An automatic nozzle for dispensing liquid into a container comprising self-closing valve means, means including an operating lever for opening said valve means, pivotally mounted latch means, vacuum responsive means including a reciprocable member, trip means including a pivotally mounted lever connected to said member and pivotally mounted concentrically with the latch means for engaging said latch means upon movement of said member, means interposed between the pivotally mounted lever and said latch means biasing said latch means into automatic latching engagement with the operating lever upon actuation thereof to open position, and means including conduit means for creating and supplying vacuum to said vacuum responsive means for actuating said reciprocable member to trip and release said valve means when the liquid in said container reaches a preselected level.

3,042,085
CONDIMENT HOLDER
William Morris, 297 Park St., West Haven, Conn.
Filed May 11, 1959, Ser. No. 812,329
5 Claims. (Cl. 141—353)



1. In a dispenser for holding a material to be dispensed such as a condiment, an upright casing having an opening in the bottom thereof and provided internally with means defining a valve seat adjacent and above the opening, the casing being provided with an imperforate closure cap at the upper part thereof, an upwardly arranged valve stem movable vertically in the casing, means engageable with the stem and said closure and biasing the stem downwardly toward the closed position thereof and cooperating with the closure to tend to maintain the stem in concentric relation to said opening, the last-named means including a tubular upwardly biased cap in telescoping relation to the stem and having a part cooperating with a boss on the first-mentioned cap having a recess providing a seat for said tubular cap, an orifice-sealing member on the lower part of the stem in fixed relation thereto and for cooperation with the valve seat, a material-receiving cup for support from the valve stem and extending upwardly into said opening in the casing below the valve seat, and means below the orifice-sealing member and fixed thereto and having a releasable connection to the cup, the last-named means supporting the cup in said opening so that the cup may be filled with material when the cup is pressed upwardly to unseat the orifice-sealing member.

3,042,086
DEVICE FOR FILLING BLOOD CONTAINERS
Paul Winchell, Whitestone, N.Y., assignor to Chelwin Productions, Inc., New York, N.Y., a corporation of New York
Filed Jan. 30, 1961, Ser. No. 85,863
6 Claims. (Cl. 141—390)



1. A device for collecting and transmitting blood, comprising a holder including two generally rectangular plates, each of said plates having a rectangular margin, a plurality of spaced studs extending from one side of the margin of one plate, the margin of the other plate having a plurality of spaced studs, said plates being hinged together at corresponding marginal edges, each of said plates having an outwardly bulging center portion, said center portions defining a cavity when the holder is closed with the margins abutted and the studs of the one plate fitted into the holes of the other plate, disengageable clamping means for interlocking the plates together; and a flexible, expansible, transparent container for blood disposed in said cavity, said center portions of the plates limiting expansion of the container when the container is being filled with blood, said container having a rectangular margin interposed between abutted margins of the plates, said margin of the container having a plurality of spaced holes, said studs passing through the spaced holes in the margin of the container, so that the container is prevented from collapsing while being filled with blood.

3,042,087
CHAIN SAW PROTECTIVE SHEATH
Kamille O. Otoupalik, P.O. Box 146, Missoula, Mont.
Filed Jan. 19, 1960, Ser. No. 3,447
2 Claims. (Cl. 143—32)



1. A protective sheath for a chain saw driven by a power unit and having a cutting peripheral portion, said peripheral portion having a round forward end and opposite substantially straight sides extending rearwardly from said round forward end, said sheath comprising elongated side walls top and bottom walls and a rounded end wall all spaced apart to provide a pocket therewithin, a lining for said top, bottom, and rounded end walls, said lining comprising a unitary strip of steel disposed within said pocket bearing against said top and bottom walls and against said rounded end wall, said strip extending rearwardly, bent upwardly and extending outwardly from the sheath, near the rearward end thereof, and resilient

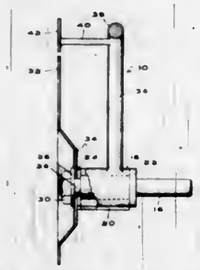
means attached at one of its ends to said extended ends of said lining and adapted at its opposite end for engagement with the power unit of the chain saw.

3,042,088
KERF SPREADER FOR MECHANICAL CHAIN SAWS
Camille Fillon and Robert Beauregard, both of Weedon, Wolfe County, Quebec, Canada
Filed Jan. 3, 1961, Ser. No. 80,372
3 Claims. (Cl. 143—32)



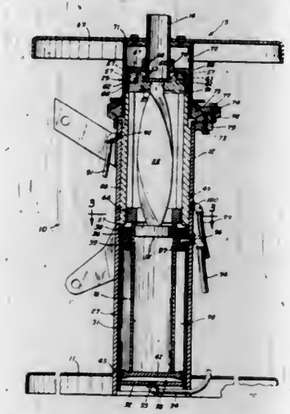
1. In combination with a portable mechanical chain saw having a housing and a saw chain guiding blade protruding from said housing, a kerf spreader comprising a bracket secured to said housing, a telescopic arm made of telescopically engaged elements which are freely and slidably movable with respect to each other, the innermost element freely pivotally attached at one end to said bracket for pivotal movement of said arm in the general plane containing said blade, a wedge-like kerf engaging element pivotally mounted at the outer end of the outermost element of said telescopic arm for firm, stationary engagement with the kerf made by the chain saw, spring means urging said elements of said telescopic arm into retracted position, additional spring means urging pivotal movement of said telescopic arm into a pivoted limit position along one longitudinal edge of said blade, whereby said kerf engaging element remains stationary irrespective of the movements of said chain saw during sawing, said last named movements causing pivotal movement of said arm and slidable movement of the elements of said arm.

3,042,089
FLUSH CUTTING PORTABLE ROTARY SAW WITH FLUSH GUARD
Donald N. Lyons, Greensville Post Office, Greensville, Ontario, Canada
Filed Mar. 15, 1961, Ser. No. 95,929
3 Claims. (Cl. 143—159)



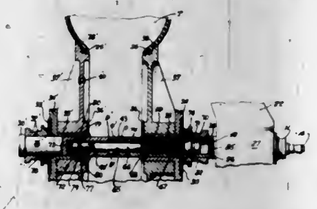
1. A flush cutting portable rotary saw of the type described, comprising a normally horizontal rotatable shaft, a bearing for said shaft, a circular saw blade having a body portion of a predetermined thickness of material, means for mounting said saw blade on an end portion of said shaft whereby said saw blade is arranged so that the outer face of the saw blade is unobstructed, a guard plate having a thickness corresponding substantially with the thickness of the body of said saw blade, and means carried by said bearing and terminating at its upper end in a plane above the periphery of the saw blade for supporting said guard plate substantially in alignment with the body of said saw blade whereby said guard plate is substantially flush with the saw blade and follows the saw blade into the kerf formed thereby.

3,042,090
ROTATABLE WHEEL SUPPORT FOR TIRE HANDLING MACHINES
James R. Foster, Fort Dodge, Iowa, assignor to The Coats Company, Inc., Fort Dodge, Iowa, a corporation of Iowa
Filed May 27, 1960, Ser. No. 32,289
4 Claims. (Cl. 144—288)



1. A machine for handling a tire and wheel assembly comprising, an upright tubular standard, a wheel support rotatably mounted on said standard, first means mounted within said standard for rotational movement, a one-way clutch means operatively connected to said wheel support and to said first means to rotate said wheel support in one direction in response to rotation of said first means in one direction, linearly movable second means reciprocally mounted within said standard, and means interconnected with said first means and said second means to rotate said first means in response to linear movement of said second means, whereby upon linear movement of said second means in one direction said first means is rotated in one direction to rotate said wheel support.

3,042,091
MEANS FOR LOCKING THE HALF SPINDLES OF SPLIT RIM TIRE MOUNT
James W. Dunton, Oakland, Calif., assignor to Elrick Rim Co., Inc., Oakland, Calif.
Filed May 31, 1960, Ser. No. 32,719
5 Claims. (Cl. 144—288)



1. In a tire buffing machine of the type in which a fork-like yoke has vertically disposed openable arms adapted to be secured in parallel relation provided with axially alignable hollow half spindles substantially midway their ends, each said half spindle slidably carrying a half rim disc for receiving and supporting a tire therebetween; means for locking said half spindles in axial alignment while abutting each other comprising a piston plunger

supported in one of said half spindles for guided sliding movement axially thereof, spring means on said plunger normally retracting the same into said one of said half spindles, means for charging fluid under pressure into said one of said half spindles for extending said plunger therefrom into the other one of said half spindles, a by-pass passage in said one of said half spindles controlled by said plunger when shifted as aforesaid for admitting fluid under pressure between said discs for inflating said tire on said half rims, latching means in said other one of said half spindles adapted to engage that portion of said plunger therein for securing said plunger in extended position relative to said half spindles, and cam means on that side of the disc carried by said other one of said half spindles remote from the abutting end of the latter for operatively engaging said latching means and movable by the internal pressure of the fluid between said discs to engage said latching means for moving the latter into securing relation with said plunger for securing the latter in extended position during inflation of said tire.

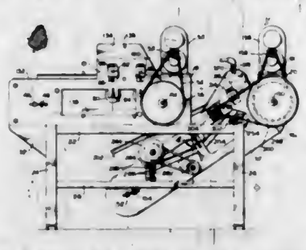
3,042,092
MECHANIC'S HAMMER
Paul R. Ekstrom, 1826 Clinton Ave., Alameda, Calif.
Filed June 8, 1959, Ser. No. 818,807
2 Claims. (Cl. 145—36)



1. A mechanic's hammer, comprising a hammer head of deformable material having an annular groove formed around its central portion and an opening passing diametrically through the hammer head at said groove, an elongated handle, a split ring proportioned to engage snugly in said groove and having two semi-circular halves, a pin having a threaded distal end secured to the inner side of one of said halves and projecting diametrically therefrom by a distance exceeding the outside diameter of said split ring, said pin being proportioned for close-fitting engagement through said opening in the hammer head, the other of said halves being formed with an opening through which the threaded distal end of said pin passes, said handle having a threaded axial bore proportioned for interengagement with said threaded distal end of said pin whereby rotation of said handle relative to the hammer head will press the end of the handle against the second named half of said ring to urge the ring halves together in clamping relation on the hammer head, the confronting ends of said halves of said split ring being formed with interlocking tongues and grooves adapted to prevent relative rotation between said halves when the hammer strikes a glancing blow.

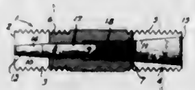
3,042,093
DATE DICING MACHINE
Earl J. Hesse and John L. Margaroli, Oakland, Calif., assignors to George W. Ashlock Company, San Leandro, Calif., a corporation of California
Filed July 17, 1958, Ser. No. 749,293
4 Claims. (Cl. 146—78)

1. A machine for dicing pitted fruit such as dates comprising a first endless conveyor having an upper reach to carry individual units of fruit to be diced, means for driving said conveyor, first station slicing means comprising a plurality of parallel spaced apart rotatably mounted slicing knives positioned above the upper reach of said conveyor but having their lower cutting edge portions extending beneath the plane of the upper surface of the upper reach of said first conveyor, whereby said knives slice the units of fruit into separated strips of substantially uniform width, means for rotating said knives so that said lower cutting edge portions thereof move in the direction of movement of said upper conveyor reach and at substantially the same rate of movement, a second endless conveyor adaped to receive the separated strips of fruit which issue from said first conveyor, said second conveyor having an upwardly inclined upper reach portion and having a plurality of kerfed parallel transverse



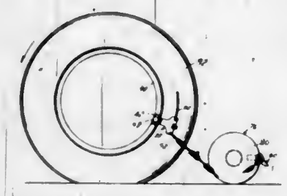
troughs to accommodate longitudinally therein said separated strips of fruit, means for driving said second conveyor to cause said fruit strips to ascend the upper reach portion thereof, second station slicing means comprising a plurality of parallel spaced apart rotatably mounted slicing knives disposed over the upper reach portion of said conveyor at right angles to said troughs and having their lower cutting edge portions extending into said kerfs to subdivide said separated strips of fruit into smaller separated parts, and means for rotating said knives so that said lower cutting edge portions thereof move in the direction of movement of the upper reach of said second conveyor and at substantially the same rate of movement.

3,042,094
LOCKING SCREW WITH EXPANDING MEANS AT EACH END
Martin J. Liljeberg, 3982 W. 220 St., Fairview Park, Ohio; Elsa I. Liljeberg, executrix of said Martin J. Liljeberg, deceased
Filed Sept. 30, 1959, Ser. No. 843,465
1 Claim. (Cl. 151—31)



In combination, a hollow generally cylindrical stud having end portions which are split circumferentially to facilitate expansion, and an axially elongated expander fitting within said stud and having means for expanding both of said end portions simultaneously; each of said end portions having external threads extending axially a distance at least equal to the external diameter of the stud, said stud having an axial length at least three times said diameter and having a slot at each end thereof extending axially a distance which is at least half the axial length of the adjacent external threads, said stud having a machined internal surface providing a passage through the stud including internal threads between the end portions of the stud and frusto-conical internal surfaces on opposite sides of said last-named threads, said frusto-conical surfaces gradually decreasing in diameter toward the same end of the stud; said expander having a machined external surface of a size to fit said machined internal surface including external threads engaging said internal threads and frusto-conical external surfaces on opposite sides of said last-named external threads for engaging said frusto-conical internal surfaces, said frusto-conical external surfaces being part of said first-named means.

3,042,095
SELF-LOCKING TIRE CHAIN
Frank W. Knowles, 2021 Alaska St., Seattle 8, Wash.
Filed Oct. 3, 1960, Ser. No. 59,912
6 Claims. (Cl. 152—213)



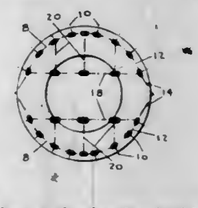
1. A tire chain, said chain comprising two base members each base member having an attaching means on its inner end for attaching the base member to a rim on which a tire is mounted, said base members being attached to said rim on opposed sides, each of said base members being of sufficient length to extend from the rim to approximately the middle of the side wall of the tire, said chain comprising two sets of links, the two sets of links running circumferentially around the tire on opposed sides, said two sets being connected by lateral sets of links, each circumferential set of links being flexibly connected at a first end to the base member, an outwardly directed link rigidly attached to each base member, a hook on a second end of each circumferential set of chains, said hook having a slot for cofitting with said outwardly directed link, a holder for said tire chain, said holder having means for releasably holding the hook in a position to cofit with said catch when the tire chain is on the tire and the tire is rotating, said outwardly directed link being directed in a direction opposed to the direction of said circumferential set of links at the first end of the base member so as to receive said hook after the circumferential set of links have circled the tire.

3,042,096
RETRACTABLE SNOW CHAINS
George K. Buergel and Alma Buergel, both of 6 Stone Road, Plainview, N.Y.; and Edoardo Braggiotti and Mary R. Braggiotti, both of 86—61 208th St., Queens Village, N.Y.
Filed Mar. 7, 1961, Ser. No. 94,060
4 Claims. (Cl. 152—216)



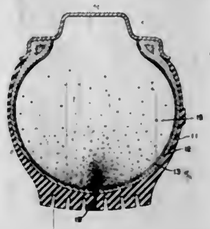
1. A tire and chain unit structure comprising a rotating wheel of a vehicle including a tire, a chain unit mounted upon the tire having a pair of rim chains one adjacent each side of the tire and having a plurality of uniformly spaced chains traversing the tread of the tire and connected at opposite ends to the rim chains, the traversing chains having a stable position relative to the rim chains, a plurality of grooves in the tread of the tire each adapted to fully receive therein one of the traversing chains, the chain unit having a first condition wherein the traversing chains rest upon the surface of the tread out of registered relation to the grooves, and a second condition wherein the traversing chains are registered with and fully received in the grooves, means for exerting a constant radially directed retracting force upon the chain unit while the latter is in its first condition, and the chain unit having in said first condition creeping movement over the surface of the tread as the tire rotates, so that upon the traversing chains creeping over the tire tread into register with the next adjacent grooves they are drawn by the retracting force radially into the grooves.

3,042,097
TIRE CHAIN
Frank J. Skrip, 2247 Wilson Ave., Pittsburgh, Pa.
Filed Aug. 17, 1961, Ser. No. 132,059
6 Claims. (Cl. 152—239)



1. In combination, a tire having inside and outside sidewall sections and a tread section, two sections of chain, each comprising two lengths of peripheral chain sufficient in length to extend more than one-half way around the periphery of said tire, one length of chain of each section being longer than the other, the longer chain lying along said inside sidewall, said sections of chain having the two lengths of chain joined with cross links, said cross links being shorter lengths of chain that cross over the tread of the tire, each of said sections of chain being used with an identical section of chain to substantially surround said tire and being fastened onto said tire by the extended length of the longest chain of one section that diagonally crosses said tread of said tire to the outside sidewall of said tire where it is joined to the outside peripheral chain of said other section.

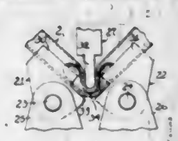
3,042,098
PUNCTURE-SEALANT COMPOSITION AND TUBELESS PNEUMATIC TIRE CONTAINING SAME
Leonard E. Reinowski, Mount Clemens, Herbert B. Hindin, Grosse Pointe Woods, and Robert D. Seeley, St. Clair Shores, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed July 1, 1958, Ser. No. 745,968
12 Claims. (Cl. 152—347)



9. In a tubeless pneumatic tire casing having an integral air-retaining liner, the improvement comprising a puncture sealant composition inside said casing, said puncture sealant comprising, in intimate admixture, a particulate mixture of from 5 to 75 parts by weight of carbon black and correspondingly from 95 to 25 parts of vulcanized rubber particles, said vulcanized rubber particles varying in size within the range of from 6 mesh to 200

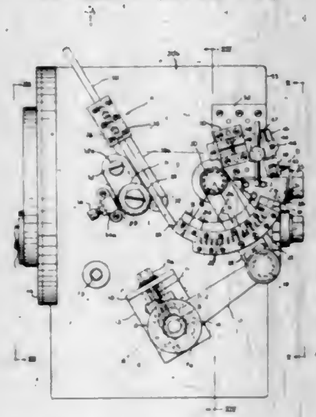
mesh, the particles of said sealant being capable of matting together under the influence of moderate heat and pressure, whereby when said liner is punctured, escaping air carries said particles into the puncture in the liner wherein the particles are subjected to compression and heat to thereby become matted together and retard the escape of air through the puncture.

3,042,099
METHOD OF BENDING TUBULAR MEMBERS
William H. Neely, Cleveland, Ohio, assignor, by mesne assignments, to Hoover Ball & Bearing Co., Saline, Mich., a corporation of Michigan
Filed Apr. 23, 1959, Ser. No. 808,345
5 Claims. (Cl. 153—2)



1. In a method of bending a tubular member, the improvement which comprises inwardly longitudinally crimping opposite sides of said member in the bending zone, and thereafter bending said member in said zone about a transverse axis through said opposite sides.

3,042,100
APPARATUS FOR MAKING VALVE SPRING RETAINER LOCKS
Samuel H. Norton, University Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Apr. 18, 1958, Ser. No. 729,337
13 Claims. (Cl. 153—64)



1. In a machine for forming valve locks from a flat strip of material by forcing the material in an endwise direction and guiding the end on a curved forming surface laterally disposed of the strip, apparatus for forcing the flat strip of material forwardly including means for supporting one surface of the material, means for gripping an opposite surface of the material in a plurality of spaced locations along the strip with a relatively light gripping pressure to prevent excessive deforming pressure on the strip including a series of gripping fingers having gripping ends projecting toward the strip and inclined forwardly toward the strip to wedge thereagainst when the fingers are moved forwardly and having rounded portions at the other ends, pockets in the fingers adjacent the rounded ends, a mount for the fingers having sockets receiving the rounded ends, pins extending adjacent the pockets and provided with tongues projecting into the pockets in the fingers holding them in the sockets, resilient means drawing the pins in a direction to tend to pivot the fingers into gripping engagement with the surface of the strip of material, and feeding means for intermittently carrying the fingers and said supporting means forwardly in intermittent steps to carry the strip of material forwardly.

3,042,101
DIELECTRIC WELDING DEVICE
Shepard A. Spunt, 167 Fuller St., Brookline 46, Mass.
Filed Aug. 29, 1957, Ser. No. 680,952
4 Claims. (Cl. 156—380)



1. A welding device comprising a die-like structure including at least a pair of electrically conducting components and a pair of electrically insulating components defining a cavity within which at least a pair of relatively thick plastic elements are adapted to fit, one electrically conducting component constituting a bed electrode, said pair of electrically insulating components constituting spacers, said spacers being in position along opposed edges of said bed electrodes, interlocking means for securing said spacers in said position, and a rim in conjunction with the other of said electrically conducting components constituting a cover, said rim snugly enveloping said spacers and said bed electrode.

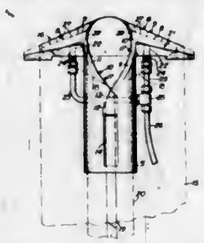
3,042,102
COLLAPSIBLE DRUM FOR BUILDING TIRES AND OTHER ANNULAR ARTICLES
Charles P. Yamokoski, Cuyahoga Falls, Paul L. Sunthimer, Stow, and Joseph E. Brinza, Cleveland, Ohio, assignors to Superior Mold & Die Company, Stow, Ohio, a corporation of Ohio
Filed Apr. 27, 1960, Ser. No. 25,097
9 Claims. (Cl. 156—420)



1. A collapsible drum for building tires and other annular articles including hub means adapted to be secured to a driving shaft, said hub means comprising a sleeve, a hub-like member built integrally on one end of the sleeve and a second hub-like member secured to the other end of the sleeve, a spool means rotatively mounted for limited arcuate movement on the sleeve of the hub means between the hub-like members thereof, a pair of arcuately short, diametrically opposed main segments of a drum, post means secured to each main segment and slidably received for radial movement in and out of the ends of the spool means, link means pivotally connecting the ends of the main segments to the hub-like members to move the segments inwardly upon limited arcuate movement of the hub means in relation to the spool means, four more segments completing the periphery of the drum, each segment being pivotally secured along one edge of a main segment to form a pair of segments extending to and between each side of the main segments,

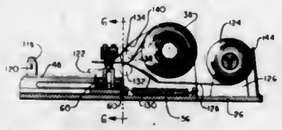
each pair of segments having bevel cut overlapping ends, each of said four segments having a pair of inwardly directed, integral bell-cranks extending substantially parallel with the post means, links pivotally secured to the spool means and to the bell-cranks and having end portions extending into engagement with the spool means to limit the outward movement of the four segments, lock means carried by the spool means and engaging with the bell-cranks to hold the segments in expanded drum forming position, and cam means operatively connecting the lock means to a hub-like member for releasing the lock means during the first portion of the relative movement between the hub means and the spool means whereby continued relative movement moves each of the four segments pivotally inwardly about the edges of the main segments and moves all of the segments bodily inwardly on the post means.

3,042,103
PLASTIC FILM TUBE FORMER
James A. McDevitt and Bonnie C. Miller, Mount Vernon, Ohio, assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Sept. 30, 1958, Ser. No. 764,424
6 Claims. (Cl. 156—466)



1. A tube former for forming a tube from a flat web, said tube former comprising an elongated head adapted to be generally horizontally mounted, a tubular body depending from said head intermediately of the ends of said head and opening upwardly through said head in the form of a web receiving and shaping throat, said head having a lower rear straight edge portion for initial contact with a flat web and rounded outwardly and downwardly sloping upper shoulders for aiding in reversing the direction of movement of an upwardly moving web, said throat being defined in part by overlap and underlap portions for turning web edge portions as a web is drawn downwardly through said body into an overlapped side seam to complete the formation of a web into a tube conforming generally in shape to the interior of said body, and means for directing air under pressure out through said shoulders to provide an air cushion web support for a web passing over said head.

3,042,104
AUTOMATIC TAPE DISPENSER WITH SEPARATE PRINTED TAPE FEED
Theodore S. Bevier, 7548 Cabrillo, La Jolla, Calif.
Filed Oct. 28, 1958, Ser. No. 770,164
6 Claims. (Cl. 156—510)

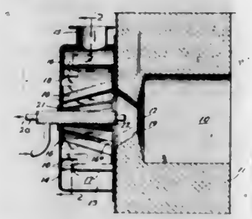


1. A dispenser for a roll of tape having a pressure-sensitive surface on one face thereof comprising frame means having means adjacent one end thereof for rotatably supporting a roll of tape, cutting means carried by said frame means forwardly of said tape supporting means, a feed head carried by said frame means immediately below said cutting means and being normally in substantially vertical alignment therewith and forming a cutting block for said tape, said feed head having a top surface for adhesively engaging the pressure-sensitive face of said tape when positioned between said cutting means and said feed head, means urging said feed head upwardly into engagement with said cutting means, tape receiving means carried by said frame means adjacent the other end thereof for receiving and retaining the free end of the tape from said feed head, actuating means for successively moving said feed head downwardly away from said cutting means and against the force of said upwardly urging means and then forwardly in the direction of said tape receiving means to withdraw a portion of tape from said roll and transfer the end carried by said feed head to said tape receiving means, and retracting means successively urging said actuating means and said feed head rearwardly whereby said feed head, upon transfer of tape therefrom, is moved rearwardly by the retracting means and then upwardly by said urging means to engage the adhesive face of said tape and force same into cutting engagement with said cutting means.

ERRATUM

For Class 156—567 see:
Patent No. 3,042,560

3,042,105
BURNER AIR DIRECTING MEANS
Gordon M. Bitterlich, Wayne, Pa., assignor to Thermal Research & Engineering Corporation, Conshohocken, Pa., a corporation of Delaware
Filed Jan. 29, 1959, Ser. No. 790,004,
3 Claims. (Cl. 158—1.5)

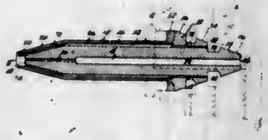


2. In a combustion device for fluid fuel comprising a substantially tubiform combustion chamber having rear and side walls and being open at the front, means defining an inlet opening to said combustion chamber substantially at the midpoint of said chamber rear wall extending through the rear wall thereof, a combustion air supply housing mounted outwardly adjacent the rear wall of said combustion chamber defining an enclosed air chamber, said housing including a front wall positioned in engagement with the rear surface of the rear wall of said combustion chamber, a rear wall spaced from said housing front wall and a peripheral side wall, means defining a central opening in said housing front wall coaxial with the inlet opening in said combustion chamber and of a diameter at least equal to the diameter of said inlet opening at a point adjacent the rear surface of the rear wall of said combustion chamber, means to supply combustion air to the interior of said air chamber adjacent the peripheral side wall thereof and cause the combustion air to flow through said combustion chamber inlet opening into said combustion chamber, a generally cylindrical tube of substantially uniform diameter smaller than the diameter of said combustion chamber inlet opening coaxial with said combustion chamber

inlet opening and extending through the rear wall of said housing and terminating at said inlet opening adjacent the front wall of said housing, means to supply fuel to said combustion chamber through said cylindrical tube, a series of air directing vanes extending from the rear wall of said housing to the front wall of said housing and disposed concentrically about the axis of said combustion chamber inlet opening, said vanes being spaced from each other providing openings therebetween and positioned to impart a swirling movement to the combustion air entering the combustion chamber through said inlet opening, the vanes extending from the rear wall of said housing at a point adjacent said cylindrical tube and diverging substantially uniformly outward away from each other and the axis of said inlet opening in a direction toward said combustion chamber and terminating at the front wall of said housing adjacent the peripheral edge of said central opening, and baffle means positioned intermediate said vanes and the peripheral side wall of said air chamber surrounding said vanes, said baffle means being operable to distribute the air uniformly about the ends of the vanes adjacent the rear wall of said air chamber.

3,042,106
JACKET AND CORE MEMBER TORCH TIP ASSEMBLY

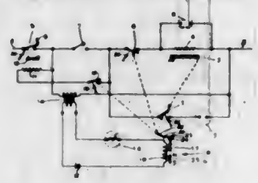
Ephraim Werner, Pittsburgh, Pa.
Filed May 16, 1956, Ser. No. 585,210
7 Claims. (Cl. 158—27.4)



1. A torch tip adapted to be fitted into a standard cutting torch head comprising, in combination, a core member having a central axial bore therethrough, said core member having an exterior tapered portion adjacent one end thereof and a radially extending ring member adjacent the other end thereof, said ring member being integral with said core and having, on the outer surface thereof, a means for seating the tip in the torch head and having an annular groove adapted to form a gas chamber upon the seating of the tip within the torch head, said tapered portion of said core member having spaced longitudinally positioned grooves in the surface thereof extending from the points of the beginning of said tapered portion to the one end of said core member, a jacket member positioned about, and extended beyond the said one end of, said core member in spaced relationship therewith along the portion of said core member between said ring member and the points of the beginning of said tapered portion, whereby an annular chamber is formed between the outer surface of said portion of said core member and the inner wall of said jacket, and engaging the tapered portion of said core member, whereby the inner wall of the jacket defines with said grooves in the surface of said tapered portion a plurality of spaced passageways, said jacket having a radially extending flange integral therewith engaging the ring member, said ring member having a plurality of spaced longitudinally positioned passageways therethrough, each of said passageways having a rear portion and a forward portion, said rear portion communicating and contiguous with said forward portion, said forward portion communicating with said annular chamber, the cross-sectional area of said forward portion being greater than the cross-sectional area of said rear portion, said ring member having a plurality of spaced passageways extending therethrough, each of said passageways being in communication with both the said annular groove and with each of the said longitudinally positioned passageways at the forward portion thereof, the cross-sectional area of each of said latter passageways being greater than the cross-sectional area of said rear portion and smaller than the cross-sectional area of said forward portion, whereby there is provided a torch tip to use natural gas at approximately 0.5 pound per square inch gauge together with oxygen gas at approximately 50 pounds per square inch gauge to form a preheat gas mixture within the torch tip.

3,042,107
AUTOMATIC CONTROL OF COMBUSTION FURNACES

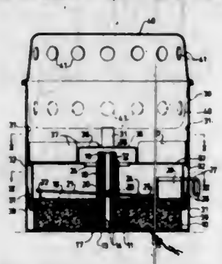
Christof Walter Burckhardt, Geneva, Switzerland, assignor to The Rheostatic Company Limited, Slough, England, a British company
Filed June 14, 1957, Ser. No. 665,755
Claims priority, application Great Britain June 20, 1956
2 Claims. (Cl. 158—28)



1. In a fuel burner control apparatus for use with a fuel burner including an electric motor for supplying fluid fuel to the burner, an electric circuit including a normally open switch having means biasing it to closed position for energizing the burner motor, and an electromagnetic relay for controlling operation of the switch in the circuit of the burner motor, the improvement in which said relay comprises a permanent magnet and an electrically-operable operating coil in which the permanent magnet biases the relay in a direction to overcome the bias of said switch to open said switch when the coil is unenergized, an electric circuit for supplying electric current to the operating coil of the relay, and a light-sensitive photocell in the circuit of the operating coil of the relay constructed to be sensitive to the presence of a flame at the burner to permit the flow of electric current to energize said operating coil and overcome the bias applied to the relay by the permanent magnet, thereby removing the bias of the relay from said switch, said operating coil of the relay being constructed to operate the relay in the same direction as the bias applied to the relay by the permanent magnet if the photocell should be short circuited.

3,042,108
APPARATUS FOR BURNING LIQUID FUEL

Karl Oskar Arne Boij, Agatan 5, and Bertil Karl Axel Johansson, Agatan 26, both of Tranas, Sweden
Filed July 28, 1959, Ser. No. 830,139
Claims priority, application Sweden Aug. 9, 1958
3 Claims. (Cl. 158—94)



1. In apparatus for burning volatile liquid, the combination comprising a fuel container closed except for an opening in the top thereof, a layer of closely compacted and fuel absorptive fibrous material filling said container from the bottom thereof to a predetermined highest fuel level, a layer of relatively loosely compacted and porous material in said container above said closely compacted absorptive material, each of said layers being substantial in depth relative to the other, and said porous material having therein voids and passages sufficiently large to keep liquid fuel from being drawn thereinto by capillary action from said absorptive fibrous material yet sufficiently small to inhibit any dangerous accumulation of explosive gases, a wick extending upwardly through said closely compacted absorptive material and said loosely compacted porous material and thence through said top opening, thereby to draw liquid fuel from the container by capillary action, and means circumscribing said top opening and extending from the top of said container between the wick and the loosely packed material to prevent the flow of liquid from the loosely packed material through said top opening when the container is positioned on the side thereof.

3,042,109
ARTIFICIAL LOG FIRE BURNER

Robert H. Peterson, Altadena, Calif., assignor to Robert H. Peterson Co., Pasadena, Calif., a corporation of California
Filed May 6, 1960, Ser. No. 27,350
8 Claims. (Cl. 158—113)

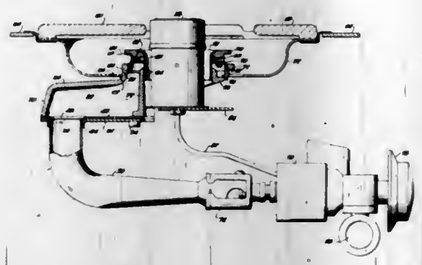


1. In a fireplace burner unit of the type adapted to be rigidly mounted in a foraminous grate and connected to a source of combustible gas, an elongated burner pipe having radial ports extending through its upwardly facing side wall, a flame interceptor positioned closely above said burner pipe and arranged to divide flames from said ports into parallel sheets, bracket means to clamp said burner pipe to a grate and including deformable means cooperable with said burner pipe in supporting said flame interceptor immediately above said burner pipe, and a manually adjustable injector adapted to be connected between a gas source and the inlet end of said burner pipe to vary the ratio of incoming gas and air to control the color of the flame.

3,042,110
TOP SURFACE BURNER FOR GAS RANGE

Victor Weber and Charles D. Branson, Greensburg, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 703,031
2 Claims. (Cl. 158—116)

1. In a burner assembly, the combination comprising a burner body having spaced annular inner and outer walls defining an inlet passageway therebetween, a supporting ring carried by an upper portion of said outer wall, an annular burner head having an annular rib member on the undersurface thereof resting on said ring for supporting said burner head thereon, said rib member having means cooperating with said ring to define a series of burner ports, a cylindrical member extending downwardly from said burner head for engagement with an upper portion of said inner wall, said supporting ring being spaced from said cylindrical member to define an outlet passageway therebetween for a flow of gaseous fuel from said inlet passageway to said series of burner ports, an annular flange extending outwardly from said burner head and being spaced above said series of burner ports, and an annular projection on the outer wall of said burner body being disposed below said series of burner ports and cooperating with said annular flange to define an accumulation chamber therebetween for unburned gaseous fuel, said annular projection being larger than said annular flange to direct an upward flow of air



past the accumulation chamber, and means on said rib member defining an additional port spaced above and between a pair of said series of burner ports, said additional port communicating with said outlet passageway to provide sufficient gaseous fuel for maintaining a flame in the area of said additional port.

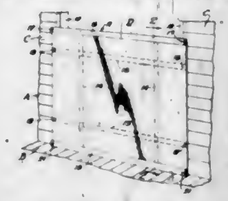
3,042,111
MAGNETIC WINDSHIELD AND WINDOW COVERS

William Wytovich, 645 Alvaro St., Reno, Nev.
Filed Sept. 25, 1959, Ser. No. 842,240
2 Claims. (Cl. 160—352)



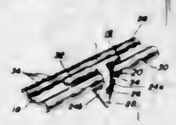
1. A cover for vehicle windshields comprising a flexible sheet of water repellent material having reinforced peripheral edge portions, a plurality of spaced non-magnetic patches stitched to said marginal edge portion and providing bar magnet holders, each patch having a central slotted portion providing a pocket, a bar magnet arranged in said pocket and independently stitched to the marginal edge portion of the cover, the cross-sectional thickness of the magnet being greater than the cross-sectional thickness of the patch to facilitate attachment of the magnet to a magnetizable surface, an elongated inelastic cord provided at opposite free ends with snap fasteners, said cover being provided on a median outwardly facing surface portion adjacent but inwardly of the transverse ends and longitudinal marginal edges with attaching eyes, said snap fasteners being secured to said eyes and causing said cord to extend lengthwise across said outwardly facing surface, and separate loop-shaped hold-down cords secured to the opposite corner portions of said cover, the points of attachment of the hold-down cords being adjacent to the longitudinal marginal edge of the cover and just inwardly of the respective transverse marginal edges.

3,042,112
GRAIN DOOR AND METHOD OF FORMING
Michael J. Ford, Hartsdale, N.Y., and Barton H. Ford, Omaha, Nebr., assignors, by mesne assignments, of one-half to International Paper Company, New York, N.Y., a corporation of New York, and one-half to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed Dec. 8, 1958, Ser. No. 778,790
5 Claims. (Cl. 160—368)



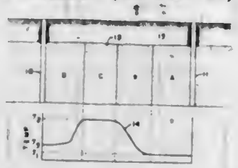
1. In a temporary closure, a first laminated, generally rectangular, paperboard panel interiorly equipped with a plurality of thin flat, spaced-apart straps all parallel to a pair of edges of said panel, said panel having a corrugated core interposed between liners, a second laminated paperboard corrugated core-equipped panel also strap-equipped and secured in face-to-face relation to said first panel with the straps of the two panels disposed generally transversely relative to each other, with the straps in each panel extending transversely to the direction of the flutes in the core of its associated panel, said second panel having a dimension in the direction of its straps longer than the dimension of the first panel transverse of its straps to provide an overlapping edge portion in said second panel, said overlapping edge portion being folded on itself to provide a closure reinforcing member adjacent the edge of said first panel.

3,042,113
WEB-TO-TUBE FASTENINGS
Hyman Kramer, 2764 E. 16th St., Brooklyn, N.Y.
Filed Nov. 12, 1959, Ser. No. 852,320
16 Claims. (Cl. 160—404)



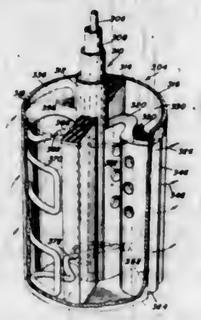
1. For use in tubular frame furniture construction having supporting elements comprising strips of webbing extending between and secured at their end portions to spaced frame parts made of tubing, a webbing strip-to-tubing fastener comprising a clip member having general T-configuration in at least front elevation and including an elongated bar-like head part having length corresponding substantially to the length of the webbing strip to be fastened and an integral prong-like vertical leg part consisting of a shank comprising an area which is blanked out from one longitudinally central, side edge portion of the head part and depends substantially at a right angle to the remaining portion of said head part, and extending from said shank an arrowhead-shaped point having laterally extending locking barbs, said leg part lying generally in a plane which is substantially coplanar with that containing the longitudinal center line of the head part, and said barbs being spaced from the under side of the head part an amount corresponding substantially to the thickness of the wall of the tubing and being furthermore displaced from the general plane of the leg part in direction and amount as to render their relatively upper working edges capable of snapping under at least one side edge of an opening provided in said tubing upon the leg part being forcibly inserted in said opening, said barbs also serving initially to secure the fastener to the webbing strip when preassembled thereto.

3,042,114
PROCESS FOR RECOVERING OIL FROM UNDERGROUND RESERVOIRS
Bertram T. Willman, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed Sept. 29, 1958, Ser. No. 764,102
4 Claims. (Cl. 166—11)



1. In a secondary recovery method of recovering oil from the producing section of an oil-bearing reservoir which underlies a unit flooding pattern of wells for the reservoir, wherein said pattern includes at least one input well and one output well, and wherein said method includes the steps of injecting an aqueous fluid into said section through each input well in said pattern and withdrawing oil through each output well in said pattern, the improvement which comprises injecting said aqueous fluid at a temperature greater than the temperature of said producing section and in a quantity sufficient to heat from 0.2 to 0.6 of said section to the temperature of said injected fluid, reducing the pressure of said section as may be necessary to a pressure not greater than the saturation pressure of water at the temperature of said injected fluid, injecting a gas which is substantially inert to said oil into said section through each input well in said pattern to drive said injected aqueous fluid toward each output well in said pattern, also injecting cool water through each said input well into said section after the injection of said fluid and before the injection of said gas is terminated, the quantity of water injected being sufficient to cool the portions of said section from which said injected fluid is driven by said gas and also to provide said portions with adequate permeability to water.

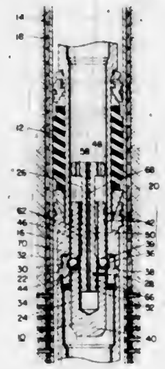
3,042,115
APPARATUS FOR FORMING AND/OR AUGMENTING AN ENERGY WAVE
Clarence W. Brandon, 1806 Meridian Ave., Tallahassee, Fla., assignor of twelve and one-half percent to Orpha B. Brandon, Birmingham, Ala., five percent to Harvey B. Jacobson, Washington, D.C., and fifty percent to N. A. Hardin, Catherine H. Newton, and Hazel H. Wright, all of Forsyth, Ga.
Filed June 3, 1954, Ser. No. 434,299
7 Claims. (Cl. 166—59)



1. An apparatus for producing pulsations in a surrounding medium comprising a body, means mounting

the body for rotation about an axis in a surrounding medium, said body having heating and cooling chambers therein each in heat exchange relation with the medium through the wall of the body, means for supplying combustion component gases into said heating chamber for combustion therein, means for refrigerating said cooling chamber by expansion of one of said combustion compounds during passage therethrough.

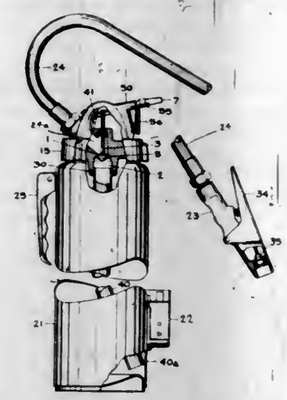
3,042,116
EXPENDABLE SEALING PLUG
Frank W. Sharp and Erskin L. Medford, Jr., Duncan, Okla., assignors, by mesne assignments, to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Sept. 30, 1959, Ser. No. 843,551
9 Claims. (Cl. 166—179)



1. A sealing plug of the expendable type for use in closing-off the bore of a well tool or other conduit comprising, in combination, a hollow receiving and supporting member having interior upwardly and downwardly facing abutments, said hollow member being adapted for connection to said well tool or other conduit; and a plug including, a tubular body member having a closed lower end, said tubular body member slidably located in said hollow member, a plunger member mounted for movement in said tubular body member, and releasable latching means in the form of at least one spherical ball carried by said tubular body member, said plunger member engaging said latching means and holding said latching means in position projecting beyond the surface of said body member to engage said abutments to hold said tubular body member in said hollow member when said plunger member is in an upper position, said plunger member having relief means thereon for receiving said latching means to permit said latching means to move relatively inwardly of said body member away from said abutments and out of projecting engaging position to release said tubular body from said hollow member for movement in either longitudinal direction relative to said hollow member upon movement of said plunger member to a lower position.

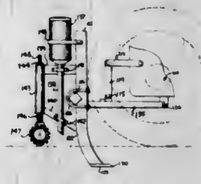
3,042,117
PORTABLE HAND FIRE EXTINGUISHER
James A. Sievert, Menominee, Mich., assignor to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin
Filed May 21, 1959, Ser. No. 814,779
5 Claims. (Cl. 169—31)

1. In a fire extinguisher comprising a shell containing an extinguishing agent under pressure, said shell being rendered pressure-tight by a head assembly having a valve for discharging the contents of the extinguisher, said head assembly being removable for recharging the extinguisher, a riser tube for conveying extinguishing agent to the valve in the head assembly, a handle for



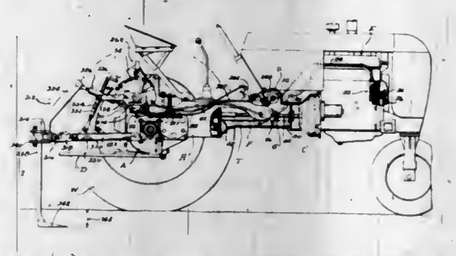
carrying the extinguisher, the lower end of the riser tube and the handle benig permanently attached to opposite sides of the extinguisher shell.

3,042,118
SUBSOILER
Leonard Norris, Reinbeck, Iowa
Filed June 18, 1959, Ser. No. 821,212
2 Claims. (Cl. 172—1)



2. A method of raising row crops comprising preparing a seed bed for a row crop, planting said row crop, then subsoiling the soil between each row of said row crop to a greater depth than the depth penetrated by that of ordinary plowing and into the subsoil, and then pulverizing the soil on the surface between said rows.

3,042,119
HYDRAULIC POWER LIFT AND CONTROL DEVICE
John F. Talak, Silvis, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Original application May 29, 1950, Ser. No. 165,077, now Patent No. 2,815,703, dated Dec. 10, 1957. Divided and this application Sept. 16, 1957, Ser. No. 688,799
2 Claims. (Cl. 172—9)



1. In a control for a tractor mounted implement of the type adapted to seek and maintain a predetermined depth as a result of its fore-and-aft inclination relative to the tractor and including a pair of laterally spaced longitudinally extending draft members pivoted to the tractor for up-and-down swinging movement and pivoted

to the implement for draft connecting the implement to the tractor, the combination of a rigid upwardly extending mast on the implement; a link connected, upwardly of said draft members, between said mast and said tractor and comprising an extensible fluid motor; a source of fluid pressure on the tractor; valve means on the tractor; a fluid connection between said source of fluid pressure and said valve means; a fluid connection between said valve means and said extensible fluid motor, said valve means having a direction of operation controlling fluid flow in said connections to cause said fluid motor to extend, and a direction of operation controlling fluid flow in said connections to cause said fluid motor to retract; a rock-shaft on said tractor; means connected to said longitudinally extending draft members and also connected to said rock-shaft for rocking said rockshaft in response to up-and-down movement of said implement; means connected to said rockshaft and to said valve means to actuate said valve means in response to rocking of said rockshaft, and said valve means being arranged to control fluid flow in said fluid connections by reason of actuation of said valve means in the direction caused by a downward movement of said implement, to cause said extensible fluid motor to extend, so as to rock said mast backwardly and incline said implement upwardly to seek a shallower depth of operation.

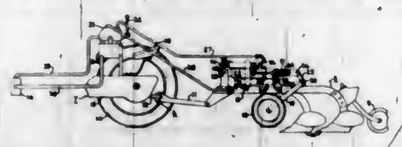
3,042,120
TWO WAY PLOW
Loyd E. Heckathorn, Garden Grove, and Samuel J. Coughran, Fullerton, Calif., assignors to Towner Manufacturing Company, Santa Ana, Calif., a corporation of California
Filed Feb. 5, 1960, Ser. No. 7,018
11 Claims. (Cl. 172—210)



1. In a reversible plow, the combination of: a frame having front and rear ends; plowing means pivotally mounted on said frame for movement relative thereto about an upright axis; two arms connected to said plowing means on opposite sides, respectively, of said axis; movable pivoting means selectively engageable with said arms for selectively pivoting said plowing means in opposite directions about said axis from one of two operating positions to the other thereof, said pivoting means being shiftable between two actuating positions wherein it is respectively engageable with said arms; hitch mounting means on said frame at said front end thereof for attachment to a hitch means for raising and lowering said frame; means interconnecting said hitch mounting means and said pivoting means and responsive to raising of said frame by the hitch means for moving said pivoting means to pivot said plowing means about said axis; and toggle means connected to said pivoting means for selectively shifting said pivoting means between said actuating positions.

3,042,121
DEPTH CONTROL FOR PLOWS
Norton O. Broetzman, Oconto Falls, and August E. Elfe, Suring, Wis., assignors of one-third to Howard W. Eslien, Oconto Falls, Wis.
Filed Dec. 15, 1955, Ser. No. 553,364
2 Claims. (Cl. 172—239)

1. A depth control device for a vehicle drawn plow comprising, a ground engaging member mounted on the frame of the plow for movement to various positions of elevation relative to the plowshare, a hydraulic cylinder mounted on the plow frame, a piston reciprocable within said cylinder and having a rod extending therefrom and coupled to said ground engaging member to position the same and normally establish the plowing depth, said piston being subjected to a controllable source of fluid pres-



sure on its opposite sides, adjustable means mounted on said piston rod for movement therewith and cooperable with said cylinder for limiting the reciprocable movement of said piston between two positions, and a pair of reversely functioning fluid pressure relief elements communicating with the opposite sides of said control member.

3,042,122
AIR AND OIL PRESSURE RECOIL MECHANISM FOR PLOWS
Peter B. Anderson, P.O. Box 40, Southey, Saskatchewan, Canada
Filed Sept. 22, 1958, Ser. No. 762,491
2 Claims. (Cl. 172—265)

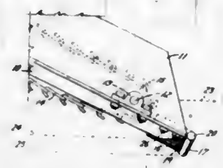


1. In a soil working plow structure including a cross frame member, and having a cylinder adapted to receive and retain therein air under pressure and including a piston for the cylinder and a piston rod connected therewith, arms fixed on the cross frame member projecting rearward and downwardly inclined, a shovel carrying plow beam having its upper end attached to the cross frame member arms pivoted to move vertically, said plow beam having an integral arm rearwardly projecting therefrom, an upstanding column fixed on the cross frame member, means pivotally suspending the cylinder from said column, and means pivotally attaching the piston rod for the cylinder to the plow beam arm, said cylinder when the piston rod is so attached inclining rearwardly from the vertical when the shovel carrying plow beam is in working relation to the soil with said cylinder movable towards the vertical when the plow beam moves upwardly, and with the leverage exertable on the piston rod by the plow beam through the integral arm thereon decreasing as the pressure within the cylinder of air compressed by the piston increases.

3,042,123
DIGGER BLADE
Lyle L. Fry, Gering, Nebr., assignor to Lockwood Graders, Gering, Nebr., a corporation of Nebraska
Filed Nov. 7, 1960, Ser. No. 67,736
1 Claim. (Cl. 172—720)

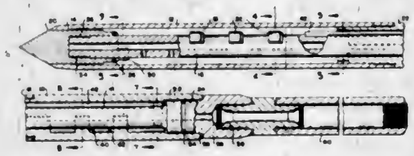
A digger blade for a root crop harvester comprising: an elongated metallic band having substantially parallel front and rear edges adapted to travel longitudinally of and submerged beneath a crop row with its front edge substantially at right angles to the axis of said row; an elongated round rod welded to and along the front edge of

said band to provide a semi-cylindrical front edge thereon, said rod having a greater diameter than the thickness of said band, the medial portion of said band being depressed in a relatively wide V-shape, the extremities of



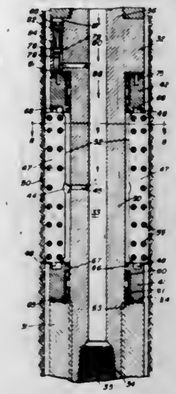
said band being in a common plane spaced above said depressed medial portion, said rod being deformed to follow the longitudinal contour of said band, said rod being longer than and projecting oppositely outward from the extremities of said band.

3,042,124
SOIL SAMPLING EQUIPMENT
Anders G. L. Andersson, 1415 Queens Ave., West Vancouver, British Columbia, Canada
Filed Oct. 27, 1959, Ser. No. 848,992
6 Claims. (Cl. 175—20)



1. Soil sampling equipment comprising in combination a tubular housing, a sample tube detachably connected at its upper end to the housing and formed at its lower end with a cutting edge, a piston slidably mounted within said sample tube and adapted to seal off the lower end thereof, a piston rod connected to the upper end of the piston and extending upwardly through the sample tube and the housing, said piston rod being formed at its upper end with an enlarged head portion adapted with the piston in its fully extended position to engage the upper edge of the housing whereby downward pressure applied to the upper end of the rod is transmitted to both the housing and the piston, a plurality of arcuate lugs on the rod spaced-apart longitudinally thereof, a plurality of arcuate segments formed on the inner surface of the housing and spaced-apart longitudinally thereof, said lugs and said segments adapted to cooperate releasably to lock the rod and the housing in downwardly drivable engagement upon partial retraction of the piston through the sample tube and in upwardly drivable engagement upon further retraction of the piston to its fully retracted position, a plurality of stop members on the inner surface of the housing intermediate said arcuate segments, said stop members cooperating with the arcuate lugs to limit the rotational movement of the rod relative to the housing thereby to facilitate alignment of the lugs and the segments for intercoupling said rod and said housing, vent means between the piston and the inner surface of the sample tube effective with the piston in its partially retracted position to vent the section of the sample tube below the piston, and means associated with the piston and adapted upon movement of the piston upwardly from its partially retracted position to seal off the vent means whereby during the further retraction of the piston to its fully retracted position a vacuum is created above a soil sample forced into the sample tube upon downward movement of the housing after said initial partial retraction of the piston.

3,042,125
FULL HOLE DEFLECTION TOOL
Dan McLean Duncan, Los Angeles, Calif.
Filed June 10, 1957, Ser. No. 664,588
21 Claims. (Cl. 175—73)



8. In a tool for use in drilling operations; a cylindrical body; a fluid pressure expandable sleeve rotatably mounted on bearing means on said body; means including said sleeve and said body forming a substantially sealed space between said sleeve and said body; means to supply fluid pressure to said sealed space to expand said sleeve; gripping elements carried by said expandable sleeve for engagement with the wall of a well bore; and means limiting expansion of said sleeve.

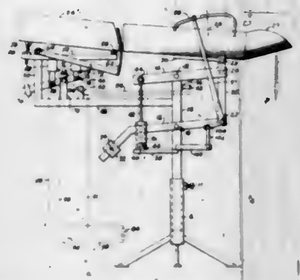
3,042,126
DRILL BITS
Clinton W. Craig, 1004 Hull St., Clovis, N. Mex.
Filed May 3, 1961, Ser. No. 107,531
2 Claims. (Cl. 175—385)



1. A drill bit for drilling holes in soil and leaving the soil in the hole being drilled, comprising a straight vertical shank having at its lower end a narrow straight horizontally directed major scraping blade radially disposed with respect to said shank, substantially triangular in cross-section and having an inclined approximately flat upper face, and a horizontally directed lower face intersecting said upper face at a blunt acute angle to provide a primary scraping edge, and a horizontally directed straight minor scraping blade radially disposed with respect to said shank, located below and at an approximate

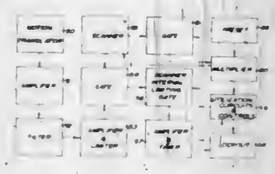
right angle to said major blade, said minor blade having a length substantially less that of said major blade, an approximately flat upper face, and a horizontally directed lower face intersecting said upper face at a blunt acute angle to provide a secondary scraping edge.

3,042,127
WEIGHING AND BAGGING MACHINE
Walter Alan Charley, 400 Birch St., La Crescent, Minn.
Filed Mar. 10, 1960, Ser. No. 14,144
1 Claim. (Cl. 177—68)



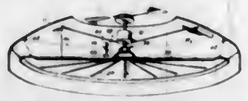
A weighing machine comprising, a support, beam scale means pivotally mounted on said support, an elongated pan having an open end adapted to receive material to be weighed, means pivotally mounting said pan on said beam scale means, a stop on said beam scale means engageable with said pan to limit pivotal movement of said pan to a position slightly inclined downwardly from its open end, an indicating arm pivotally mounted on said beam scale, means connecting said arm to said support for swinging said indicating arm about its pivot in response to movement of said beam scale means and an indicating scale on said pan in indicating relationship to said indicating arm.

3,042,128
CONDITION RESPONSIVE DEVICE WITH MOTION DETECTING MEANS
Robert E. Bell and Roger B. Williams, Jr., Toledo, Ohio, assignors, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed May 8, 1957, Ser. No. 657,826
7 Claims. (Cl. 177—210)



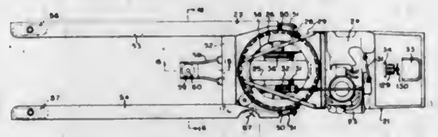
5. In a condition responsive mechanism having a stationary system of elements, and a system of elements movable with respect to said stationary system, a restricted area light source, a photoelectric cell, a projection lens, an optical system mounted on said stationary system and including said projection lens directing light from said source to said cell, a member having a series of sections of alternately high and low levels of translucence coupled to the movable system and moving through the optical system transverse to the path of light therein between said source and said cell, a pulse detector connected to said cell, a position indicator and means rendering said indicator effective only upon the termination of pulse detection in said detector.

3,042,129
GROUND EFFECT VEHICLE HAVING AN ADJUSTABLE PRESSURE PLATE
Thomas B. Wade, 3201 Peacock Lane, Rolling Meadows, Ill.
Filed Oct. 28, 1959, Ser. No. 849,403
7 Claims. (Cl. 180—7)



1. A vehicle comprising in combination: a shell defining a duct having an upwardly directed opening at one end and a downwardly directed opening at the opposite end, said openings being in communication with each other; means supported in said duct for drawing air through said one end and for forcing such air out through said opposite end; a substantially imperforate pressure plate disposed within said duct in downstream relation to said air-drawing-and-forcing means and having a periphery spaced from the internal periphery of the duct and defining with said shell an annular orifice through which such air is forced; and support structure connecting said plate to said shell, said structure comprising a pivotal connection enabling selective pivoting of said plate with respect to said shell about a substantially horizontal axis.

3,042,130
GROUND MOVER AND RETRIEVER VEHICLE FOR AIRPLANES
Henry J. Wiebe, Cincinnati, Ohio, assignor to General Aeromation, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 27, 1959, Ser. No. 849,095
16 Claims. (Cl. 180—14)

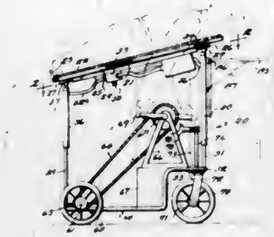


1. A ground mover and retriever vehicle for airplanes comprising a forward chassis and a rear chassis, a tubular member supporting said rear chassis, a power driven wheel mounted in said tubular member, a drum rotatively supported about said tubular member, an outer tubular member about said drum, said forward chassis extending from said outer tubular member, wheels in the forward end of said forward chassis, and means between said drum and outer tubular member for raising and lowering said outer tubular member upon rotation of said drum.

3,042,131
INVALID'S CART
John Dovci, Hazleton, Pa., by decree of distribution and assignment to Michael Dovci, Burnham, Pa.
Filed May 19, 1960, Ser. No. 30,188
1 Claim. (Cl. 180—27)

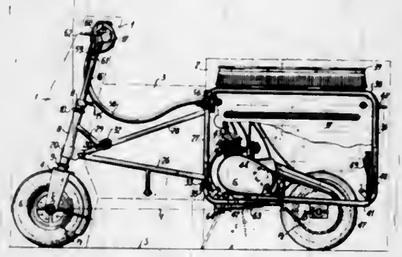
A self-propelled invalid cart comprising a frame, an inclined support having a planar supporting surface for resting a patient thereon in a position of repose carried by said frame, telescopic upright members extending from the corners of said frame and supporting said inclined support, front and rear axles carried by said frame, wheels carried by said front axle, at least one of said wheels steerable, steering means supported on said frame and operatively connected to said steerable wheel, means to lock said steering means, non-steerable wheels carried by said rear axle, lifting means between the front and rear axles

and the opposite ends of said inclined support, said lifting means individually operable to move either of the opposite ends of said support selectively, and drive means for said cart mounted on said frame, said steering means comprising a vertically extending shaft rotatably supported in said frame, one end of said shaft operatively secured to said steerable wheel, the free end of said shaft having a handle fixed thereto, a spring biased locking pin having



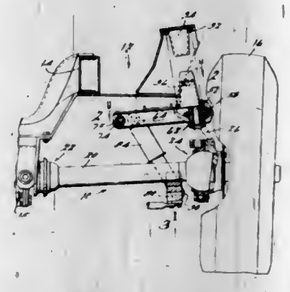
one end normally residing in a detent in said frame to prevent rotation of said shaft, said locking pin extending vertically from said frame in spaced parallel relation to said rotatable shaft, the upper end of said locking pin secured to an operating lever, said operating lever pivotally secured to said rotatable shaft whereby pivotal movement thereof moves said locking pin against said spring bias out of said detent to allow said shaft to be rotated.

3,042,132
TWO-WHEELED MOTOR VEHICLE OF THE SCOOTER TYPE
Victor Albert Bouffort, 31 Place de l'Hotel-de-Ville, Bondy, Seine, France
Filed Dec. 27, 1960, Ser. No. 78,356
Claims priority, application France Dec. 29, 1959
4 Claims. (Cl. 180—32)



4. In a motor scooter, the combination of a rear part including a chassis having a box-like configuration, an engine resiliently suspended to said chassis, a rear wheel having a driving axis mounted to said chassis, said driving axis being operatively connected to said engine, a front part including a sleeve, handle bars detachably mounted in one end of said sleeve and a fork member detachably mounted in the other end thereof, a front wheel mounted in said fork member, a pyramid-like connecting member detachably connecting said rear part to said front part, an apex portion of said pyramid-like connecting member hingedly connected to said sleeve, a base portion of said pyramid-like connecting member having one part resiliently engaging said chassis adjacent the center of gravity of said motor scooter and another part rigidly connected to said chassis, and a brace-like member operatively connected between said sleeve and said pyramid-like connecting member while said motor scooter is in its running position to transmit the shocks to which said fork member is subjected to said pyramid-like connecting member in a rearward direction and towards the ground whereupon said pyramid-like connecting member retransmits the shocks to said chassis through said one part of said pyramid-like connecting member resiliently engaging said chassis, said front part and said pyramid-like connecting member capable of being stored in said chassis.

3,042,133
INDEPENDENT WHEEL SUSPENSION
Miguel A. Ordorica, Lambertville, Mich., assignor to Willys Motors, Inc., Toledo, Ohio, a corporation of Pennsylvania
Filed Oct. 6, 1959, Ser. No. 844,749
4 Claims. (Cl. 180—43)

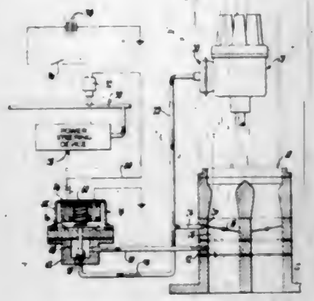


4. In a self-propelled steerable vehicle having a main frame and a plurality of ground wheels, an independent suspension mechanism for at least one of said wheels to be steered about a steering axis comprising: a shaft housing extending transversely of the vehicle and swivelly supported at its inner end on the main frame for up and down swinging movement and formed at its outer end with a hollow ball portion, a spindle assembly formed at its inner end with a socket portion engaging said hollow ball portion, said spindle assembly including a knuckle rigidly secured thereto and extending upwardly therefrom, a control arm disposed above and generally parallel to said shaft housing pivotally connected at its inner end to said frame, a body supported on the outer end of said control arm for rotational movement relative thereto about a substantially horizontal axis and engaged with said knuckle for applying a downwardly directed force thereto, said body having means supporting said knuckle at an upper portion thereof for pivotal movement about said steering axis, compression spring means extending between said frame and said body on said control arm whereby the movement of said spring means is substantially along a straight line, and a drive shaft for said wheel disposed in said housing.

3,042,134
IDLE SPEED INCREASING DEVICE
Alfred E. Majewski, Livonia, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 9, 1960, Ser. No. 74,956
2 Claims. (Cl. 180—77)

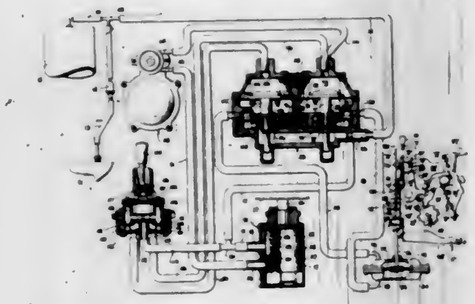
1. A vehicle engine idle speed controlling device including in combination a vehicle power steering mechanism, a manifold, a carburetor mounted on said manifold, said carburetor having an induction passage and a throttle valve rotatably disposed therein, an electrical charge distributing device including servo means for advancing and retarding spark, conduit means communicating said spark controlling distributor servo with said induction passage proximate the throttle valve, and valve and conduit means connecting said servo to said mani-

fold, said valve means being responsive to operation of said power steering means for admitting manifold vacuum



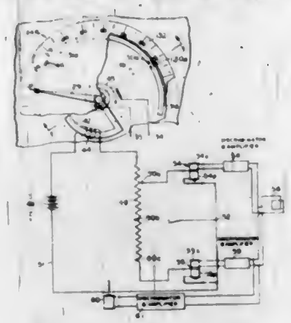
to said servo means whereby the spark will be advanced and engine idling speed increased.

3,042,135
AUTOMATIC VEHICLE DOOR LOCKING SYSTEM
William C. Riester, Williamsville, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Nov. 18, 1960, Ser. No. 70,320
14 Claims. (Cl. 180—82)



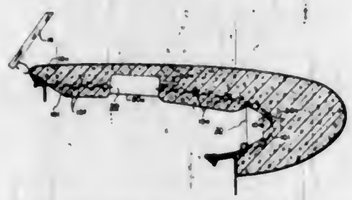
1. A door locking system for an automotive vehicle comprising a door in said vehicle, a latch lock for said door, motor means operatively coupled to said latch lock, a source of energy, control means for placing said motor means in communication with said source of energy to thereby cause said motor means to exert a locking force on said latch lock, biasing means associated with said control means for normally producing a force which causes said control means to prevent communication between said energy source and said motor means, a movable element on said vehicle which produces movement only when said vehicle is in motion, motion detecting means adapted to be actuated by said movable element to provide fluid pressure impulses while said movable member is moving, means for transmitting said fluid pressure impulses to said control means whereby said fluid pressure impulses actuate said control means against the force produced by said biasing means and thereby cause said control means to effect said communication between said energy source and said motor means to cause said motor means to exert a locking force on said latch lock, and a controlled bleed operatively associated with said control means for permitting said biasing means to return said control means to a condition wherein it terminates communication between said energy source and said motor means after the termination of the supplying of fluid pressure impulses to said control means by said motion detecting means, whereby said locking force exerted on said latch lock by said motor means while said vehicle is in motion ceases after said vehicle comes to rest.

3,042,136
ELECTRONIC SPEED CONTROL SYSTEM FOR MOTOR VEHICLES AND ROADS
Egil Havnen, 464 Woodcliffe Ave., North Bergen, N.J.
Filed Dec. 18, 1959, Ser. No. 860,542
6 Claims. (Cl. 180—82.1)



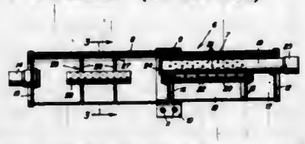
6. A control for automatically setting a vehicle brake comprising a switch having two movable elements, the position of one element being dependent on the speed of the vehicle; the second element having a coil associated therewith; a variable source of potential connected to said coil; wayside station means for varying said source of potential; means for moving the second element in the same general direction under an increase of potential to the coil as the first element moves when the speed of the vehicle is increased; means for setting said brake when the two elements become engaged; bias means for urging the second element counter to said direction; and a stop for the second element to limit motion of the second element in the counter direction.

3,042,137
VEHICLE INSTRUMENT AND DASHBOARD ASSEMBLIES
Thomas O. Mathues, George W. Beck, Raymond C. Davis, and Robert W. Forward, all of Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 9, 1959, Ser. No. 838,944
14 Claims. (Cl. 180—90)



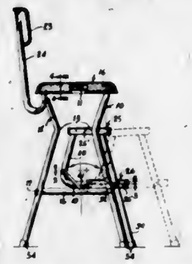
1. A dashboard assembly for a motor vehicle comprising, a covering of sheet material having a shelf portion and a laterally projecting curved cushion portion, an expanded metal insert means having said covering attached thereto along edges thereof, foam material provided in space between said covering and said insert means, and electrical conducting means separate and distinct from said metal insert means though embedded in said foam material in locations adjoining said insert means so as to be insulated therefrom and to provide freedom from chafing relative thereto which can thus avoid short circuits with resultant electrical fires, as well as freedom from hard to find rattles avoided between said electrical conducting means and said insert means because said electrical conducting means is embedded in said foam material as insulating support between said insert means and said conducting means while simultaneously as shock resistant mounting therefor.

3,042,138
EXHAUST MUFFLER
Richard Reinert, 764 Morgan St., Cincinnati 6, Ohio
Filed Feb. 7, 1961, Ser. No. 87,663
8 Claims. (Cl. 181—64)



1. An engine muffler comprising, in combination, an elongated shell including telescopically adjustable, separable sections, and a baffle unit slidably adjustably and removably mounted in the shell, said baffle unit including a pair of spaced plates mounted transversely in the shell and having exhaust gas passages therein, and a perforated, longitudinal tube mounted in said plates in spaced relation to the shell, said tube including perforated end portions projecting a substantial distance beyond the plates.

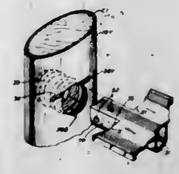
3,042,139
STEP STOOL
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed May 18, 1960, Ser. No. 29,828
6 Claims. (Cl. 182—33.5)



1. A step stool, comprising pairs of front and rear legs rigidly connected at their upper ends, a brace rigidly interconnecting said legs toward their lower ends, a back rest mounted on the rear legs, a seat mounted on the upper ends of the front and rear legs, a ladder having an upper step and a lower step offset forwardly therefrom, said pair of steps being interconnected by pairs of generally L-shaped members and ground-engageable legs, and a pair of generally U-shaped links pivotally interconnecting said L-shaped members to said brace for pivotal movement of said ladder from a retracted position generally underlying the stool seat to an extended operative position in which it is disposed forwardly of said seat, said pair of links being connected to said brace in a common horizontal plane with one of said pairs of links being pivotally connected to said brace between the front stool legs and the other of said pair of links being pivotally joined to said brace between the front and rear stool legs, the pivot connection between said ladder and said one of said pair of links lying forwardly of said front legs when said ladder is extended and rearwardly of said front legs when said ladder is retracted.

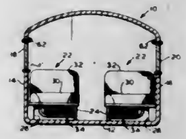
3,042,140
STEPLADDERS
Gene E. Basile, Newark, and Edward T. Gillman, Rutherford, N.J., assignors to Putnam Rolling Ladder Co., Inc., New York, N.Y.
Filed Apr. 15, 1960, Ser. No. 22,601
3 Claims. (Cl. 182—46)

1. A stepladder having two front side rails of elliptical cross section with circular bearing apertures formed at equal spaced relation along the length of the rails and a plurality of step plates, the improvement in the side rails and the step plates which consists in forming the step plates with reinforcing ribs of square cross section extending beyond the plates for engaging the circular apertures in the rails and forming slots in a part of the curve



formed by the periphery of the rails in position tangent to the bearing apertures and to the elliptical curvature of the rails for receiving the end portions of the step plates and thereby securing the latter against rotation relative to the rails, and a plastic material filling the bearing apertures and the slots to form a homogeneous rails step plates assembly.

3,042,141
ESCAPE LADDER
George L. Hartman and Harry E. Bradford, Lima, Ohio, assignors to Superior Coach Corporation, a corporation of Ohio
Filed Oct. 5, 1960, Ser. No. 60,678
7 Claims. (Cl. 182—95)



1. In combination with a seat of a vehicle, said seat including a supporting frame and a removable cushion, an escape ladder located below said cushion when said ladder is in a collapsed position, said ladder comprising a plurality of ladder sections, each including side supports and rungs, each section being substantially no longer than the width of the cushion under which it is located, means pivotally connecting adjacent ends of said sections, a pair of supporting links pivotally connected to an outer end portion of one of said sections, said links being spaced apart a distance no greater than the distance between the side supports of at least one of said sections which is at least partially supported on said links when collapsed, and means pivotally connecting said links to legs of the vehicle seat supporting frame.

3,042,142
STEP-LADDER ATTACHMENT
Christopher L. Butler, 1407 S. Morin St., Eustis, Fla.
Filed Aug. 25, 1959, Ser. No. 835,866
3 Claims. (Cl. 182—129)

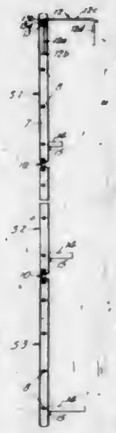
1. An attachment for a ladder comprising a panel, clamps secured to the undersurface of the panel for mounting the panel on the head of a step-ladder, an inverted frustro-conical-shaped stud extended upwardly from the panel, a tray having an opening therein provided with a beveled edge formed to coact with the stud for providing a swivel mounting of the tray on the panel, said tray being of trapezoidal formation and having an L-shaped bar secured to a long edge thereof and a solid bar

adapted to be removably poistioned in said L-shaped bar whereby said bar will bridge a window frame when said



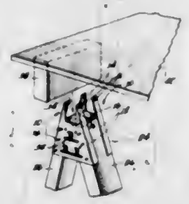
step-ladder and said attachment are positioned in operational engagement with said window frame.

3,042,143
PORTABLE COLLAPSIBLE FIRE ESCAPE DEVICE
Almer A. Silen, Little Fork, Minn.
Filed Jan. 2, 1959, Ser. No. 784,545
1 Claim. (Cl. 182—163)



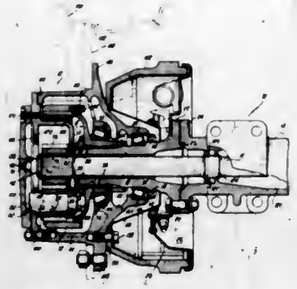
A portable fire escape device comprising a plurality of rigid ladder sections, each having a pair of spaced rails consisting of parallel flat strip portions integrally united by a thin web portion, the rails of each section being interconnected by a plurality of vertically spaced rungs extending between and connected to the web portions of said rails, said sections being successively hinged together at abutting end portions thereof for folding of said sections into compact parallel side-by-side relationship by hinge connections between the lower ends of the rails of one section and the upper ends of the rails of an adjacent section, each hinge connection comprising a pair of spaced elongate hinge plates whose end portions are pivotally connected to opposite sides of the web portions of the rails coupled thereby, said hinge plates having medial portions for enclosing therebetween the opposed flat strip portions of the coupled rail sections when in folded condition, said hinge plates preventing relative lateral movement between adjacent ladder sections, mechanism mounted on the upper end portions of the rails of the top ladder section for supporting the entire sectional device from the sill of an upper window of a building, said mechanism comprising generally U-shaped hook elements for engaging the window sills to suspend the sections therefrom, said hook elements including vertical shank portions and attachment bracket for each of said shanks pivotally connected to a rail of said section adjacent the upper end thereof for limited swinging about a horizontal axis parallel to the plane of the ladder section, said brackets having an outstanding horizontal flange apertured to slidably receive the associated shank, said shanks terminating in enlarged abutment members adapted to engage said bracket to limit upward movement of said shanks, said shanks being adapted for free falling and upward movement with respect to said sections for free extensible and retractable movement with respect thereto, the upper portion hooks being adapted for inward swinging movement about the vertical axis provided by their shanks to overlie and rest upon the upper end of said upper ladder section and retracted substantially parallel side-by-side relationship for compact storage thereof, and spacer elements swingably mounted on each ladder section for collapsing inwardly against the rung structure when the device is folded and swingable outwardly to a position generally perpendicular to said ladder sections, the length of the spacer elements on said sections progressively increasing downwardly and said spacer elements when in the outwardly projecting position having free outer end portions adapted to abut with the vertical wall of a building and maintain the unfolded sections in outwardly declining angular relationship with respect to said wall.

3,042,144
SUPPORT-FORMING BRACKET
Charles O. Larson, P.O. Box 358, Sterling, Ill.
Filed Apr. 6, 1959, Ser. No. 804,195
2 Claims. (Cl. 182—185)



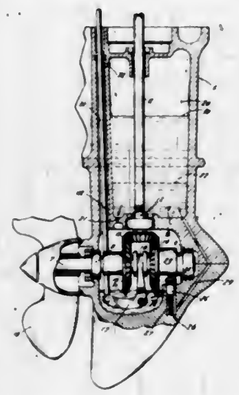
1. A bracket assembly for interconnecting a cross member and a pair of leg members of predetermined different sizes in converging relationship to form a support, and comprising a pair of similar clamping members each including a substantially triangular face plate with a slot extending downwardly from the apex for receiving a support member, said clamping members being disposed in spaced relationship and having elongated flanges extending along the edges of said face plate with the flanges on each clamping member extending toward corresponding flanges on the other clamping member for receiving and engaging inserted leg members, each face plate having an outer set of apertures adjacent the flanges for receiving securing means to be passed through said apertures and into the inserted leg members, each face plate having inner and intermediate sets of holes for selective use with different sizes of leg members, the intermediate set including a pair of upper holes and a pair of lower holes arranged to parallel the flanges proximate thereto and the inner set including an upper hole and a pair of lower holes arranged to parallel the upper and lower holes of the intermediate set, said outer set of apertures lying between said flanges and said intermediate set of holes, and fastener means having shanks arranged to pass through one set of holes for holding the plates in position against the inserted leg members, the lateral spacing between the holes of the inner and intermediate sets being such as to accomodate predetermined different sizes of leg members with the inner faces of the leg members in abutting engagement with the fastener shanks extending through said one set of holes.

3,042,145
AXLE OUTER END
Leo A. Bixby, Niles, Mich., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 625,095, Nov. 29, 1956. This application May 20, 1960, Ser. No. 30,689
10 Claims. (Cl. 184—6)



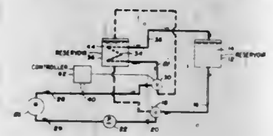
1. In a drive axle assembly, an axle housing, a closed outer end wheel hub rotatably mounted on the outer end of said housing and enclosing a gear chamber adapted to contain fluent lubricant, an axle shaft rotatable within the axle housing and extending into said chamber, a sun gear on said shaft within said chamber, an internal ring gear mounted on said axle housing and disposed within said chamber so as to be partly immersed in lubricant, a planet gear carrier rotatable with said hub and disposed within said chamber, a plurality of planet gear shafts on said carrier and planet gears mounted in bearings on said planet gear shafts meshed with both the ring gear and sun gear, means within the outer end of said hub forming an axially inwardly open annular lubricant receiving pocket for receiving lubricant picked up from said chamber by said gears and discharged laterally outwardly from said gears and disposed opposite the outer ends of said planet gear shafts, and means providing lubricant passages leading from an open end opposite said pocket through said planet gear shafts to said bearings.

3,042,146
LUBRICATION OF A MARINE PROPULSION DEVICE
William J. Shimanckas, Waukegan, Ill., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,773
10 Claims. (Cl. 184—6)



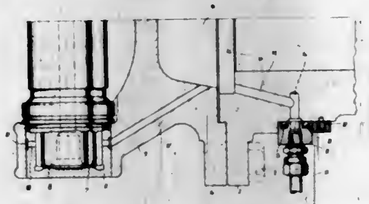
1. In a marine propulsion device having a submersible gear case and an oil storage reservoir at a higher level and power-operated gears and shafts in said gear case, means for pumping from said gear case to said reservoir surplus oil beyond that required for the lubrication of said gearing, said pumping means having an oil inlet so located as to define a working level of oil in said gear case well below the top thereof, means for driving the pumping means from one of said shafts whenever the shafts and gearing are in operation, and means providing a restricted metering communication between the reservoir and gear case having flow capacity less than that of said pumping means for the gravity flow of oil from the reservoir to the gear case at a rate less than the rate at which the pumping means removes oil from the gear casing, whereby to maintain continued circulation of oil between the reservoir and the gear casing during shaft and gear operation while keeping surplus oil drained from the gear casing.

3,042,147
LUBRICATING SYSTEM
Le Roi E. Hutchings, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Nov. 25, 1959, Ser. No. 855,462
4 Claims. (Cl. 184—6)



1. A lubrication system comprising an engine having a lubricant inlet and outlet, a valve connected to the lubricant inlet of said engine, a second valve connected to the outlet of said engine, said valves acting to connect the engine to one of two lubricant circuits hereafter defined, means responsive to a variable related to the viscosity of the lubricant leaving the engine for actuating said valves to connect the engine in the first of said circuits when the variable is above a predetermined level, and in the second of said circuits when the variable is below said level, a first lubricant circuit including a first lubricant reservoir, and a second lubricant circuit including heat-exchange means and a second lubricant reservoir serially connected therewith, said heat-exchange means being adapted to transfer heat from lubricant flowing in said second lubricant circuit to lubricant in said first reservoir.

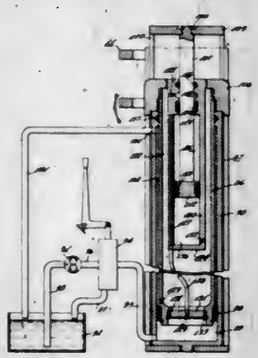
3,042,148
LUBRICATING DEVICE FOR JOINTS OF UNIVERSAL JOINT SHAFTS AND THE LIKE
Willi Kempf, Essen, Germany, assignor to Gelenkwellenbau G.m.b.H., Essen, Germany
Filed Nov. 27, 1959, Ser. No. 855,604
Claims priority, application Germany Nov. 27, 1958
2 Claims. (Cl. 184—6)



1. In combination with a universal joint: a shaft having a flange, a universal joint body also having a flange, said flanges being interconnected to drivingly interconnect said shaft and said body, a lubricant feeding ring having a feeding bore and surrounding and engaging said shaft

adjacent the flange of said shaft, said feeding bore being connectible to a lubricant feeding line, a cavity in the region of the center of said body and confined by said shaft, a first passage connecting said cavity to said feeding bore, bearing means carried by said universal joint body and located radially outwardly from said cavity and offset therefrom in axial direction of said body, a second passage leading from said cavity to said bearing means, said shaft having a shoulder engaging said lubricant feeding ring on the flange side thereof, and a locking ring mounted on said shaft and engaging the other side of said lubricant feeding ring.

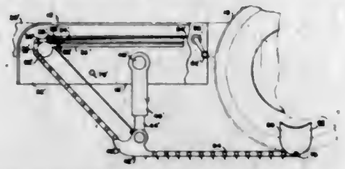
3,042,149
LIFT TRUCK MAST PULLDOWN CYLINDER ASSEMBLY
Samuel T. Comfort, Homewood, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed June 1, 1961, Ser. No. 114,134
15 Claims. (Cl. 187—9)



1. A vertical mast for a lift truck comprising: a first mast section secured to the lift truck; a second mast section mounted on said first mast section for vertical reciprocal movement relative thereto; a lift ram having a pair of relatively expansible and contractible elements; means mounting one of said elements on said first section, the other of said elements being spaced vertically from a position of load supporting contact with said second section by a predetermined distance when said lift ram is in its contracted condition; a hydraulic ram disposed within said other element of said lift ram having cylinder and piston components, one of said components being secured to said second section and the other of said components being secured to said other element; and an open fluid passage between the pressure chamber of said lift ram and the pressure chamber of said hydraulic ram, said hydraulic ram urging said second section and other element toward said position of contact with one another when the fluid in its pressure chamber is subjected to pressure.

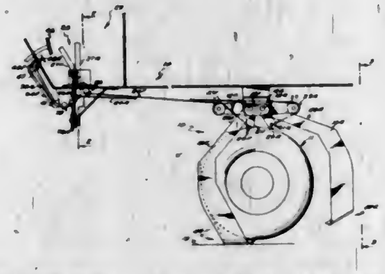
3,042,150
EMERGENCY BRAKE AND ANTI-SKID DEVICE
Michael Lukawsky, 871 N. 22nd St., Philadelphia, Pa.
Filed Jan. 26, 1960, Ser. No. 4,801
1 Claim. (Cl. 188—4)

An emergency brake and anti-skid device for an automotive vehicle having a chassis and front and rear wheels, said device including a housing carried by said chassis adjacent each of said wheels, horizontal guide channels carried by the opposite sides of said housing, a normally horizontal sleeve carried by said housing at a point above the ground, a plunger in said sleeve, a spring biasing said plunger outwardly of said sleeve, a spiked shoe carried by said plunger, a rotatable drum carried by said housing, a cable connected to said drum and to said plunger, a chain connected to said shoe and to said cable, and movable in said guide channels, the length of said cable being such that, when it is unwound from said drum, said sleeve will move to a substantially vertical position and said shoe will contact the ground, and so that, when said cable is wound on said drum, said sleeve will move to its upper horizontal position above the ground and said plunger will be moved inwardly of said sleeve against the action of said spring, a rearward extension carried by said



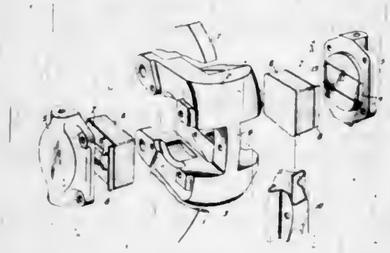
shoe and so arranged that, when said shoe drops into contact with the ground, said extension forms a track on which said rear wheel rides, and a normally open clamp carried by said rear extension and including side walls hinged to said extension and having ears disposed above said extension, said side walls being weighted so as to move in opposite directions by gravity and so that, when a wheel rides on said ears, said side walls are moved into clamping position against the sides of said wheel.

3,042,151
EMERGENCY CHOCK BRAKING APPARATUS FOR A WHEELED VEHICLE
Irvin V. Walker, Inglewood, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Mar. 16, 1960, Ser. No. 15,290
2 Claims. (Cl. 188—4)



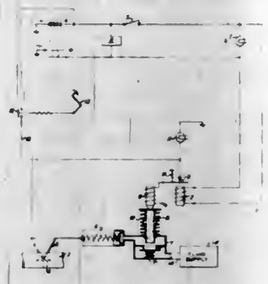
1. An emergency chock braking apparatus for a wheeled vehicle, comprising: a wheeled vehicle wherein at least one pair of wheels is provided with chock means normally held out of engagement therewith but controllably releasable by an operator of the vehicle for gravity-caused pivotal downward movement into at least partially underlying engagement therewith whereby to immobilize the vehicle with respect to an underlying road surface, the chock means associated with each wheel including a front chock and a rear chock, with the front chock being pivotally downwardly and rearwardly movable into at least partially underlying engagement with respect to the wheel for immobilizing the wheeled vehicle against forward movement and with the rear chock being pivotally downwardly and forwardly movable into at least partially underlying engagement with respect to the wheel for immobilizing the wheeled vehicle against rearward movement; separately independently and jointly controllably operable front and rear chock-releasing means carried by the wheeled vehicle in a driver compartment portion thereof located for actuation by a driver of the vehicle; separately independently and jointly controllably operable front and rear chock-resetting means carried by the wheeled vehicle in a driver compartment portion thereof located for actuation by a driver of the vehicle; and coupling means comprising multiple lever and longitudinal tensile members interconnecting the chock-resetting means with respect to the chock means, said chock-resetting means being provided with trip means normally engaged therewith and holding said chock-resetting means in chock-lifting position and being interconnected with said chock-releasing means whereby operation of said chock-releasing means will operate said trip means to release the corresponding chock-resetting means; said separately independently and jointly controllably operable front and rear chock-releasing means comprising independently operable foot pedals selectively pedally operable by a driver of the vehicle and coupling means positioned for engagement by and actuation by a conventional brake pedal when pedally depressed substantially beyond a normal brake engagement point, said coupling means effectively cooperating with said foot pedals for operating both of them when said coupling means is actuated by said conventional brake pedal whereby to release both of said chock-resetting means and corresponding front and rear chocks.

3,042,152
FLUID ACTUATED DISC BRAKES AND HOUSINGS AND FRICTION ELEMENTS THEREFOR
Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London County, England a British company
Filed Mar. 18, 1958, Ser. No. 722,265
Claims priority, application Great Britain Apr. 1, 1957
11 Claims. (Cl. 188—73)



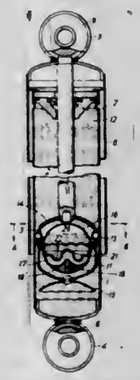
1. A disc brake comprising a rotatable disc, a non-rotatable housing having a portion extending over and slightly spaced from a portion of the periphery of said disc and side walls integral with said portion, one adjacent each of the radially extending surfaces of said disc, said housing having a guide channel on each side of said disc extending from the outer periphery of said housing toward the axis of said disc, each of said channels being of a depth to divide said side walls on each side of said disc and to form a pair of spaced U-shaped members straddling said disc and a connecting web spaced from the outer periphery of the disc, a cylinder mounted on each of said side walls and bridging said channel, a piston in said cylinder slidable towards said disc, a friction element comprising a pad of frictional material having a backing plate with a slot extending inwardly from an edge thereof, held and guided in each of said channels, said piston having a button projecting from its end towards said disc to engage said slot to permit sideways removal of said friction element while retaining the opposed faces of the friction pad and piston in contiguous relationship, said pad of friction material having a groove aligned with the slot in said backing plate and extending from one edge of said friction pad and of greater width than said slot to receive said button, and means removably mounted on said web to stop radial movement of said friction element in said channel.

3,042,153
ELECTROPNEUMATIC SERVOCONTROL DEVICE FOR THE ENGINE BRAKE OF VEHICLES
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a company of Italy
Filed Feb. 5, 1959, Ser. No. 791,420
Claims priority, application Italy Feb. 21, 1958
1 Claim. (Cl. 188—99)



Engine brake apparatus comprising an engine exhaust conduit, a throttle in said conduit, a cylinder, a piston in said cylinder and connected to said throttle for operating the same, a supply of pressure fluid, an electrovalve coupling said supply to said cylinder for operating said piston, a first switch coupled to said electrovalve, a source of voltage, a second switch coupling said source to said electrovalve via said first switch, an operator braking mechanism coupled to said second switch and adapted, on an operator-controlled braking operation to close said second switch, an electromagnetic device operatively associated with said first switch and adapted to open the same when provided with electrical power of predetermined magnitude, and a battery and dynamo coupled to said device, said battery and dynamo supplying to said device a magnitude of power in accordance with the speed of said dynamo, said throttle being rendered operative upon operation of said mechanism and with less than said predetermined magnitude of power being supplied to said electromagnetic device by said battery and dynamo.

3,042,154
TELESCOPIC HYDRAULIC SINGLE-TUBE DASHPOT, MORE PARTICULARLY FOR USE IN MOTOR VEHICLES
Willi Zeidler, Dusseldorf, Germany, assignor to Firma Rheinmetall G.m.b.H., Dusseldorf, Germany
Filed Apr. 1, 1959, Ser. No. 803,484
Claims priority, application Germany Apr. 5, 1958
13 Claims. (Cl. 188—100)



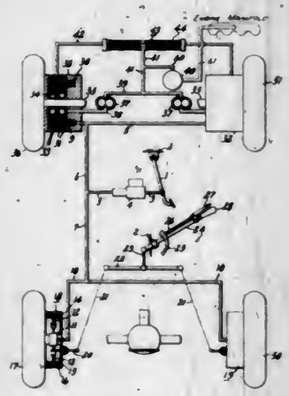
1. A telescopic hydraulic dashpot, more particularly for use in motor vehicles, comprising a single tube having a damping liquid therein, a piston rod extending into

the tube, a hollow piston on the piston rod, a hollow body with an air cushion therein and floating in the damping liquid in the piston to compensate for the effect of the volume of the piston rod, and the hollow body having a stable equilibrium position and consisting of a self-righting floating bell capable of movement within the damping liquid in the piston independently of the adjacent components of the dashpot, the hollow body being externally of spherical shape.

3,042,155
COMBINATION DISK AND DRUM VEHICLE BRAKING SYSTEM

Oliver K. Kelley, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 6, 1958, Ser. No. 772,219
1 Claim. (Cl. 188—264)



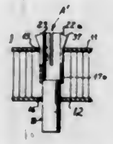
A vehicle braking means comprising in combination, front vehicle disc brakes including a stator member, at least one stator disc connected to said stator member, a rotor member, at least one rotor disc mounted on said rotor member adjacent to said stator disc, a hydraulic wheel cylinder for actuating said front wheel brakes, a vericle associated with each of said front vehicle brakes, a fluid pump operated by said wheel, a hydraulic fluid cooling system in communication with said pump to provide cooling of said disk brake, rear wheel brakes each including, a brake support member, a brake drum rotatably mounted adjacent said brake support member, brake shoes mounted on said brake support member, a hydraulic wheel cylinder actuating said rear wheel brakes, a hydraulic fluid brake actuating system in communication with said front wheel hydraulic wheel cylinder and said rear hydraulic wheel cylinder for actuating said brakes, a friction material on said brake shoe means of said rear wheel brake characterized by a quick fade and quick recovery of coefficient of friction to provide equal distribution of braking effort for low temperatures of said friction material and transfer of braking effort to the front disc brakes upon heating of said friction material above said low temperature.

3,042,156
EXPANDIBLE SPACER

Frederick W. Rohe, 879 S. East St., Anaheim, Calif.

Filed May 6, 1957, Ser. No. 657,371
10 Claims. (Cl. 189—34)

1. In combination with a lightweight panel structure including spaced parallel skin sheets and a low density core bridging between and joining said sheets and having therein a hole normal to said skin sheets, said panel having circular openings in respective skin sheets communicating with the respective ends of said hole; and a spacer comprising a tubular jacket having at one end a circumferentially continuous skirt portion and at its other end a furcated portion, said furcated portion having a segmental axially projecting neck of a length substantially the same as the thickness of said one skin sheet and received in one of said openings, said furcated end portion further including an annular segmental substantially flat radial shoulder integral with said neck, extending radially outwardly from the base of said neck and including a plurality of flexible elongated segments having a substantially uniform wall thickness substantially reduced below the radial thickness of said jacket through said shoulder, joining said skirt portion to said annular shoulder whereby said shoulder may assume a contracted

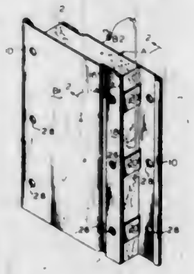


condition of sufficiently small diameter for passage of said shoulder through said one opening and reception of said segmental neck portion in said one opening during installation of the spacer; and a cylindrical liner sleeve received in and frictionally held by said jacket and supporting said segmental end portion in expanded condition with said segmental neck snugly engaged in said one opening and substantially flush with the outer surface of said skin sheet, with said shoulder bearing against the inner face of said one skin sheet, with the end of said skirt portion of the jacket in adjacent relation to the other skin sheet, and with the adjacent end of said liner sleeve projecting into the opening in said other skin sheet.

3,042,157
SECTIONAL HOUSING FOR AIR CONDITIONING

Don Dorfman, 403 E. Allens Lane, Philadelphia 19, Pa.

Filed Jan. 16, 1959, Ser. No. 787,301
3 Claims. (Cl. 189—34)

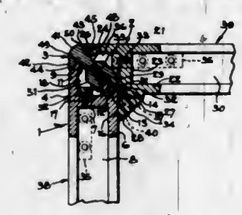


1. A panel section adapted to be detachably secured to a plurality of like sections to form a housing for air conditioning equipment, said section comprising a pair of spaced sheets and an interposed layer of insulation, said spaced sheets having at least two edges thereof off-set with respect to one another, each of said sheets having a first edge overturned to form a bead and at least one aperture formed in said sheet adjacent said first edge and said bead, each of said sheets having a second edge parallel to said first edge and longitudinally off-set from said sheet, a sealing strip applied to said second edge against said off-set and at least one aperture formed in said sealing strip and in said second sheet adjacent said second edge whereby said first edge is adapted to overlie and to be detachably secured to the second edge of a like section at said apertures adjacent said edges, and said second edge is adapted to overlie and to be detachably secured to the first edge of a like section at corresponding apertures in order to form a portion of a housing for air conditioning equipment, which housing is both moisture-proof and resistant to the permeation of air.

3,042,158
DISPLAY CASE CONSTRUCTION

Frank L. Michaels, Hebron, Ky., assignor to The Michaels Art Bronze Company, Inc., Erlanger, Ky., a corporation of Kentucky

Filed June 26, 1961, Ser. No. 119,483
6 Claims. (Cl. 189—36)



3. In a display case corner joint construction of the type including a pair of longitudinally abutting frame members which define a way between them and which present wedge shaped abutting lips disposed angularly in said way and including a bar which engages said lips in wedging fashion, the improvement which comprises, a leg presented by each frame member, said leg extending toward each other but terminating short of each other at their outer ends, each leg presenting at its outer end a forwardly angulated surface and a longitudinal rib, said bar including an integral nose portion which interfits between the outer ends of said legs, said nose portion presenting at each side thereof a surface which facially engages the respective angulated surface, and a groove in which the respective rib is seated.

3,042,159
CONTOURED SPOT-WELDED LAP JOINT AND METHOD

Charles N. Anderson, Kent, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Nov. 28, 1958, Ser. No. 776,816
5 Claims. (Cl. 189—36)



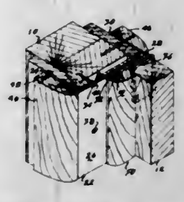
1. A structural joint adapted to withstand tensional stresses, comprising a pair of sheet-like members having lapped surfaces in faying contact with one another to form an interface extending over substantially the entire area of lap between the surfaces, and means along the interface interconnecting the surfaces to transmit said stresses across the joint, said surfaces being so complementally contoured that said interface is curvilinear when the members are in the unstressed state and rotational forces occurring across said member during stressing are counteracted to prevent separation of the surfaces.

3,042,160
FRAMING AND TRIM ARRANGEMENT FOR WALL OPENINGS

Frank E. Price, 315 Pohlman, Chillicothe, Ohio

Filed July 1, 1959, Ser. No. 824,425
2 Claims. (Cl. 189—46)

1. An adjustable frame for a wall opening, said frame comprising interlocking metal members consisting of a first member and a second member and which are adapted for positioning in said wall opening in overlapping engagement, said members being of L-shaped cross-section and each having first and second leg portions, said first leg portion of each member engaging the face of said wall opening and the second leg portion of each member extending into the opening adjacent the periphery thereof in overlapping leg relation, a metal strip means having an end portion doubled back on itself and which strip is secured to the back of the second leg portion of said

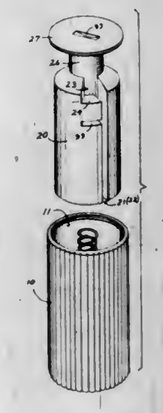


second member and defining a channel therewith for snugly receiving the second leg portion of said first member, said metal strip means having a slot therein for adjustably positioning said L-shaped members with respect to each other to accommodate for variations in wall thickness at said opening, and attaching means extending through at least one of said leg portions and through the slot in said strip means and into the wall about said opening for securing said metal members to each other and to said wall.

3,042,161
DISAPPEARING-TYPE ANCHOR

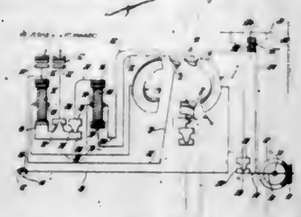
Fred J. Meyer, Jr., P.O. Box 17, Greens Farm, Conn.

Filed Oct. 3, 1958, Ser. No. 765,201
4 Claims. (Cl. 189—90)



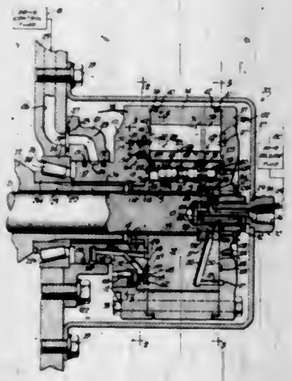
1. An anchor device comprising a housing adapted for fixed attachment at a desired location, the housing having an axial bore opening externally at its upper end, a substantially cylindrical plunger element forming part of said anchor device and attached to fit slidably within the axial bore and having an elongated cavity opening externally at its lower end, a knob projecting from the inner surface of the axial bore, a longitudinal groove in the surface of the plunger element for receiving the projecting knob an annularly directed shoulder intersecting said groove to lock said plunger in retracted position, a circumferential slot in the surface of the plunger element opening into the groove for receiving the knob to lock the plunger element in a desired position, and means within the housing and the elongated cavity for urging the plunger element in a normally extended position.

3,042,162
TRANSMISSION
Gilbert Kenneth Hause, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Apr. 24, 1957, Ser. No. 654,771. Divided and this application Sept. 30, 1959, Ser. No. 843,558
2 Claims. (Cl. 192—4)



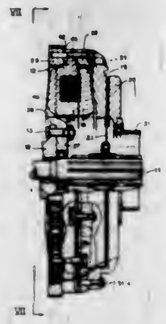
1. A transmission comprising in combinaton an input shaft driving a hydrodynamic torque transmitter which drives an output shaft in alignment with the input shaft, the torque transmitter including an impeller and a turbine both surrounding the input shaft for circulating liquid and including an output casing operatively connected to the turbine, said casing surrounding the turbine and impeller and being continuously connected to said output shaft, a stationary casing surrounding the output casing, first locking means attached to the output casing at its maximum diameter, and cooperating locking means on the stationary casing for engaging the first locking means to prevent rotation of the output shaft.

3,042,163
RETRACTABLE VANE FLUID CLUTCH
Robert Lapsley, Berrien Springs, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 26, 1957, Ser. No. 705,253
25 Claims. (Cl. 192—58)



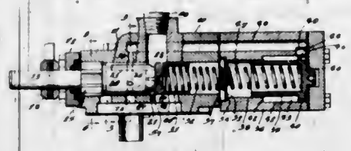
1. In a fluid clutch, a cylindrical vane carrier having a plurality of spaced apart vane chambers in the outer surface thereof, said vane chambers extending between the ends of said carrier, a coaxial cam ring assembly surrounding the said vane carrier and having inwardly extending portions at the ends of the vane carrier, a fixed vane secured to said carrier within each of said vane chambers and having a part partially closing the opening in the cylindrical surface, a movable vane having a head portion mounted for movement within each of said vane chambers and cooperating with said fixed vane part to define a fluid chamber therebetween, the ends of the said movable vane disposed in sealing relation with the said inwardly extending portions, and means for selectively supplying fluid under pressure to all of the fluid chambers to retract said vanes within said carrier or for supplying fluid under pressure to said vane chambers to extend said vanes into sealing relation with said cam ring assembly.

3,042,164
ELECTROMAGNETIC CLUTCHES
Jean Maurice and Michel Rist, Paris, France, assignors to Societe Anonyme Française du Ferodo, Paris, France, a corporation of France
Original application July 6, 1955, Ser. No. 520,278, now Patent No. 2,865,480, dated Dec. 23, 1958. Divided and this application Oct. 7, 1958, Ser. No. 765,807
Claims priority, application France July 12, 1954
4 Claims. (Cl. 192—84)



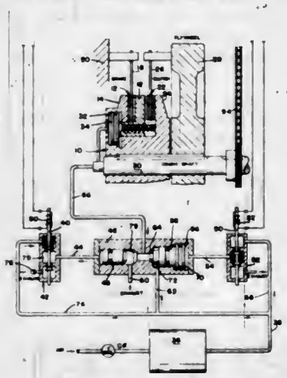
1. A mounting arrangement for mounting an electromagnetic clutch unit in combination, a driving shaft having a flanged rear end for mounting said electromagnetic clutch unit thereon, said clutch unit including an annular magnet core having a rear magnetic attracting face, an annular armature disposed rearwardly of said magnet core and having a front magnetic face operatively associated with said core attracting face, circumferentially disposed connecting means connecting said armature with said magnet core to prevent relative rotation between the armature and the magnet core, a first friction plate disposed rearwardly of said armature and having a rear friction face and angularly spaced apertures disposed radially of said shaft, first screws extending through said apertures in said first friction plate and screwed in the magnet core, a second friction plate disposed rearwardly of said first friction plate and having a front friction face and angularly spaced mounting apertures disposed radially of said shaft, second screws extending through the second mentioned apertures in the second friction plate and screwed in the armature, said first and second friction faces being arranged for frictional engagement with a driven friction disc disposed therebetween whereby said friction faces will frictionally engage said driven disc upon energization of the magnet core to attract said armature, said arrangement comprising a mounting dished flywheel plate having a central portion fixed to said driving shaft flanged end and a peripheral portion having substantially the same diameter as said magnet core, a rear abutment annular face on said peripheral portion, said magnet core having a peripheral front abutment annular face cooperating with said rear abutment face and third mounting apertures angularly spaced circumferentially on said magnet core, said first plate having circumferentially disposed fourth apertures, said third and fourth apertures registering with each other, and third screws extending through said third and fourth apertures and screwed into said peripheral portion, both of said abutment faces being disposed in position for axial abutment in assembly of said unit, and said mounting plate having at least an intermediate portion extending between said central and peripheral portions and slightly axially spaced from said magnet core when said abutment faces are in relative axial abutment.

3,042,165
FLUID ACTUATED FRICTION CLUTCH
Edward C. Yokel, Racine, Wis., assignor to Twin Disc Clutch Company, Racine, Wis., a corporation of Wisconsin
Filed May 1, 1957, Ser. No. 656,739
14 Claims. (Cl. 192—85)



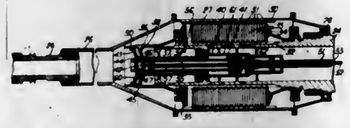
1. The combination of a liquid actuated clutch including friction plates movable between released and engaged positions, a source of liquid pressure, a casing having an inlet port communicating wtih the liquid pressure source and a bore, a selector valve movable in the bore between positions connecting and disconnecting the inlet port to the clutch, a pressure regulating valve shiftable in the bore for determining the value of the clutch engaging pressure and having one end exposed to the supplied liquid pressure and in opposed relation to the adjacent end of the selector valve, a member slidable in an axially aligned bore portion having a larger diameter than the first named bore and exposed to and movable by the source pressure when the selector valve is in connecting position, spring means interposed between the pressure regulating valve and member whereby the spring means is loaded by movement of the member, and means for regulating movement of the member at a controlled rate.

3,042,166
FLUID TORQUE LIMITER
Edward V. Crane, Canton, Ohio, assignor to E. W. Bliss Company, Canton, Ohio, a corporation
Filed Sept. 22, 1958, Ser. No. 762,649
4 Claims. (Cl. 192—85)



1. In combination with fluid pressure operable clutch means having friction linings subject to depletion through use, and including a clutch fluid pressure cylinder having a piston to urge said linings into pressure contact one with the other to transmit torque, wherein the volume of said cylinder increases in proportion to the depletion of said linings, the improvement in torque control means comprising: fluid pressure exhaust means connected to said cylinder; valve means interposed between said exhaust means and said cylinder; a chamber in said valve means; a valve piston in said chamber adapted by movement in said chamber to control the flow of fluid from said cylinder through said exhaust means; a second valve means having a pilot chamber therein of constant volume; fluid pressure connecting means between said pilot chamber and said first mentioned chamber; means to provide fluid pressure in said pilot chamber and said connecting means to urge said valve piston into a closed position with respect to said exhaust means; and means to exhaust the fluid pressure from said pilot chamber at a controlled rate, whereby the pressure from said clutch cylinder will move said valve piston into a partially open position, and whereby the rate of pressure drop in said clutch cylinder is a function of the controlled rate of pressure drop in said constant volume pilot chamber.

3,042,167
FRICTION CLUTCHES
James Alexander Petrie, Littleover, Derby, and Kenneth Edward George Bracey, Findern, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Jan. 5, 1960, Ser. No. 627
Claims priority, application Great Britain Feb. 23, 1959
5 Claims. (Cl. 192—86)



1. A friction clutch comprising: an input drive member and an output drive member; at least one friction drive element carried by each of said drive members, said friction drive elements being adapted to be moved into and out of engagement with each other; a double acting fluid operated piston, said piston comprising an inner piston plate having an outer cylindrical wall portion; a radially outwardly projecting member for urging said friction drive elements into driving contact with each other; a hollow inner sleeve; said piston plate and said outwardly projecting member and said hollow inner sleeve being fixedly connected together, said piston plate having opposite faces of equal effective area, one of said drive members being sealed against said cylindrical wall portion and said hollow inner sleeve and defining with said piston a first fluid chamber on one side of said piston plate; a hollow shaft connected to said one drive member and extending inwardly of said sleeve and coaxially through said piston plate, said shaft being sealed against said sleeve; a sealing member carried by said shaft and sealed against said cylindrical wall portion, said shaft and sealing member defining with said piston a second fluid chamber on the opposite side of said piston plate from said first fluid chamber, said piston being axially movable relative to said one drive member, said shaft and said sealing member; and means defining passageways for supplying fluid to said fluid chambers whereby on selectively varying of fluid pressure in at least one of said fluid chambers, the piston is moved axially so as to actuate the clutch.

3,042,168
FRICTION COUPLING
Richard Binder, Schweinfurt (Main), Germany, assignor to Fichtel & Sachs A.G., Schweinfurt (Main), Germany, a corporation of Germany
Filed July 14, 1959, Ser. No. 827,074
Claims priority, application Germany July 25, 1958
7 Claims. (Cl. 192—107)

1. In a friction coupling, in combination,
(*a*) a motion transmitting member;

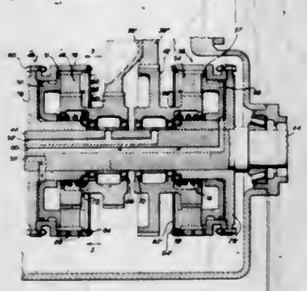
(*b*) a motion absorbing member, said members being rotatable relative to each other about an axis; and

(*c*) a friction face on each of said members opposite the friction face of the other member and engageable therewith, said faces, when engaged during relative rotation of said members, jointly defining an annular friction surface bounded by two circles centered on said axis and spaced from each other by the width of said surface;



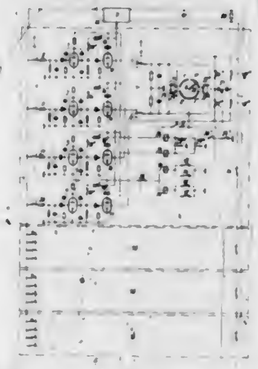
(*d*) the friction face of one of said members including a plurality of circumferentially consecutive portions, said portions having each a width perpendicular to said circles smaller than said width of said surface, and being offset relative to each other in the direction of spacing of said circles in a meandering pattern, said portions being in said surface when said friction faces are engaged.

3,042,169
TRANSMISSION
Daniel M. Schwartz, Salt Lake City, Utah, assignor to The Eimco Corporation, Salt Lake City, Utah, a corporation of Delaware
Filed Dec. 27, 1957, Ser. No. 705,544
1 Claim. (Cl. 192—113)



A friction clutch assembly of the multiple-disc type, comprising coaxial driving and driven members, a housing continuously rotatable with the driving member, cooperating friction discs, alternate friction discs being rotatable with the driven member and with said housing, means for selectively engaging and disengaging said cooperating friction discs for coupling and uncoupling the driving and driven members of the assembly, a casing surrounding said assembly, said casing adapted to receive lubricant to a predetermined level, a portion of said housing and at least a portion of the rotatable members carried by the casing extending below the said predetermined lubricant level, said housing including a wall member surrounding a portion of the driven member and providing restricted clearance therebetween, lubricant outlet means in a peripheral wall of said housing whereby lubricant may be continuously removed from the housing through the peripheral outlet means at a rate substantially greater than the rate of entry of leakage lubricant from the casing into the housing through the restricted clearance so as to limit lubricant on the cooperating friction discs to a film and thereby substantially eliminate lubricant drag when the cooperating friction discs are disengaged.

3,042,170
METHOD AND APPARATUS FOR CONTROLLING ANY DESIRED NUMBER OF INDIVIDUAL MOVEMENTS OF A MECHANICAL DEVICE
Ludwig Tschirf, Fritz Gärtner, and Franz Janovsky, Vienna, Austria, assignors to Maschinenfabrik Heid Aktiengesellschaft, Vienna, Austria
Filed Nov. 18, 1958, Ser. No. 774,665
Claims priority, application Austria Nov. 20, 1957
19 Claims. (Cl. 192—142)

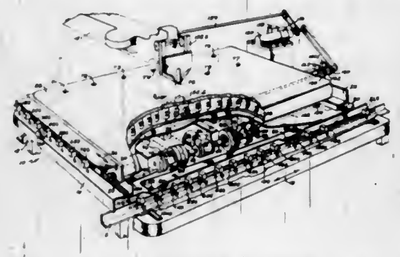


6. An apparatus for controlling the motion of a driven element, comprising a storage medium having first and second control signals alternately recorded thereon, first and second detector means respectively responsive to said first and second control signals, first drive means for advancing said recording medium at a predetermined rate past said first and second detector means, second drive means adapted to displace said driven element at a predetermined speed, actuating means independently controlled by the output of said first and second detector means for rendering said second drive means operative upon the occurrence of either of said control signals, signal-generator means coupled with said second drive means for producing a succession of first and second reference signals alternating in step with said first and second control signals upon correct synchronization of said first and second drive means, signal-comparison means jointly controlled by said signal-generator means and by said first and second detector means for producing an output in response to coincidence of either of said first and second control signals with a differently numbered reference signal, and control means responsive to said output for temporarily modifying the operation of at least one of said drive means in a manner restoring substantial synchronism between said first and second control signals and correspondingly numbered reference signals.

3,042,171
PROGRAMMED CONTROLLER
Glenn R. Rose, St. Paul, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Nov. 4, 1957, Ser. No. 694,338
4 Claims. (Cl. 192—143)

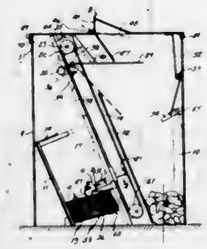
1. A programmed controller comprising support means for moving a member in different angular directions including a first table constrained to move in a first rectilinear path and a second table mounted on said first table constrained to move in a second rectilinear path normal to said first path, an electric motor, first electromagnetic means for clutching said motor to said first table, second electromagnetic means for clutching said motor to said

second table, a stepping switch having first and second levels of contacts and respective wiper arms operated in unison to engage said contacts in succession, panel means including selectively engageable plugs and jacks, a first group of spaced switches disposed for actuation by said first table, a second group of spaced switches disposed for actuation by said second table, said plugs and jacks when engaged connecting one switch of said first group to the first contact of said first level, a second switch of said first group to the second successive contact of said first level and so on whereas said plugs and jacks when engaged also connect one switch of said second group to the first contact of said second level, a second switch of said sec-



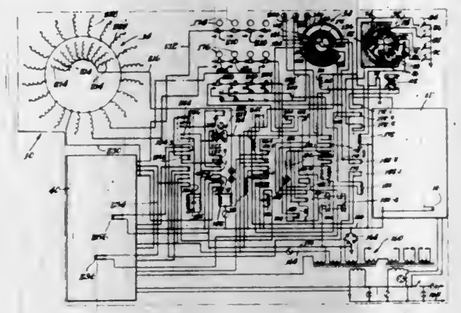
ond group to the second successive contact of said second level and so on, means in circuit with said first group of switches for energizing said first electromagnetic means to cause said motor to move said first table in said first path until said one switch of said first group is actuated to deenergize said first electromagnetic means, means responsive to deenergization of said energizing means for energizing said second electromagnetic means if the position of said second table called for by the particular plug and jack engagement is out of line from said first path to thereby cause said motor to move the second table in said second path until said one switch of said second group is actuated to deenergize said second electromagnetic means.

3,042,172
MACHINE FOR STORING AND EXCHANGING USED WIPING CLOTHS FOR FRESH WIPING CLOTHS
Sherry Victor Bowlby, 815 Mun Nell St., Wichita, Kans.
Filed Oct. 28, 1958, Ser. No. 770,040
2 Claims. (Cl. 194—4)



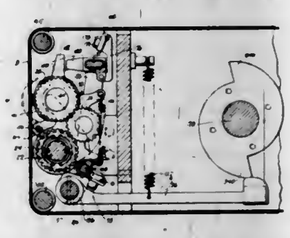
1. In a machine of the character disclosed the combination of a carrier for discharging a fresh cloth from the top of a stack of fresh wiping cloths, means for operating said carrier, a controller for said means and a used cloth displaceable barrier comprising a rock shaft having a lever arm engageable by an inserted used cloth, a trackway carried by said rock shaft extending transversely to opposite sides of said shaft, a roller operating in said trackway for overbalancing said rock shaft in reverse directions and said controller including a switch mounted on said trackway and positioned for operation by said roller.

3,042,173
COIN CONTROLLED PHONOGRAPH
Howard M. Thomas, North Tonawanda, and Charles A. Mellon, Clarence, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Nov. 10, 1959, Ser. No. 852,143
13 Claims. (Cl. 194—15)



1. In an automatic coin controlled phonograph, the combination of record selecting means for controlling the selection of records priced differently for playing, a movable credit accumulator element, crediting means for moving said accumulator element in a crediting direction, coin sensing means, value assigning means interconnecting said coin sensing means with said crediting means to effect displacement of said accumulator element in said crediting direction in response to the sensing of a coin by said sensing means and in accordance with a predetermined schedule of coin values, credit cancelling means for displacing said accumulator element in a debiting direction opposite from said crediting direction, means interconnecting said selecting means with said credit cancelling means for effecting operation of the latter in response to the execution of a record selecting operation by said selecting means, and record price compensating means connecting said selecting means with said crediting means to effect displacement of said accumulator element in said crediting direction in response to operation of said selecting means to select a lower priced record.

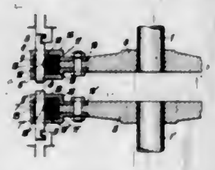
3,042,174
POSITIONING PRINTER
Bernard Howard, Ramsey, N.J., assignor, by mesne assignments, to Mite Corporation, New Haven, Conn., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,604
38 Claims. (Cl. 197—2)



1. A printer comprising a print wheel, a carrier arm carrying said print wheel, a shaft spaced from the axis of the print wheel and carrying said arm to afford movement of the print wheel toward or away from a recording medium, a driving gear rotated by said shaft, an idler carried by said arm and meshing wtih said gear, and a driven gear rotatable with the print wheel and meshing with the idler, means for rotating said shaft to select a desired character on the print wheel, and means for moving the free end of the arm toward the recording medium

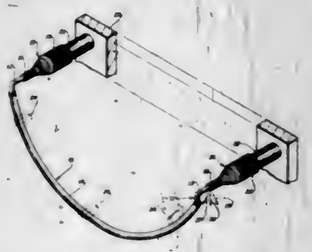
when a character is to be printed, said driving and driven gears having the same diameter whereby the print wheel maintains parallelism to the recording medium as it is moved toward or away from said medium.

3,042,175
MACHINE FOR EMBOSSING PRINTING PLATES
Gerhard Güttel, Berlin, Germany, assignor to Adrema-Werke G.m.b.H., Berlin, Germany
Filed June 26, 1959, Ser. No. 823,039
Claims priority, application Germany June 30, 1958
6 Claims. (Cl. 197—6.7)



1. In a device for embossing die plates, the combination of a rotatable die carrier, said carrier including a pair of round discs arranged in coaxial spaced relation to one another, an annular ring disposed about the edge of each of said discs, said ring having a hollow interior providing an annular chamber, said ring having a plurality of openings establishing communication with said chamber, a plurality of sets of complementary embossing dies removably mounted in said openings in the annular ring, annular clamping means disposed within said annular chamber, and said clamping means having portions for engaging and retaining said dies in said ring openings.

3,042,176
TYPE BAR SUPPORT
Edward J. Brann, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed May 17, 1961, Ser. No. 110,731
5 Claims. (Cl. 197—42)



1. In a typewriter having a segment with a plurality of type bars pivotally mounted thereon, a substantially rigid arcuate head rest element having a pair of bent off ends, a pair of coil springs each having an end which is adapted to receive and releasably grip an associated one of said bent-off ends of said arcuate element, and means for securing the other ends of said coil springs to said segment whereby said arcuate element may yieldably support and arrest the outer ends of said type bars.

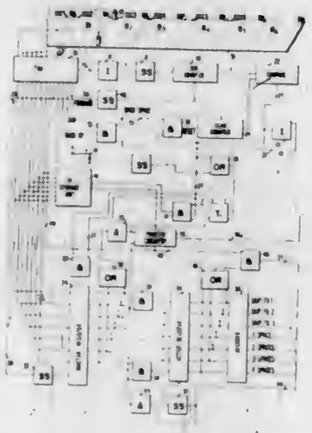
3,042,177
DOCUMENT HOLDER USED WITH AN ACCOUNTING MACHINE
James C. Nelson, San Gabriel, Calif., assignor to Business Systems Incorporated, Los Angeles, Calif., a corporation of California
Filed May 2, 1960, Ser. No. 26,097
18 Claims. (Cl. 197—130)

1. The combination comprising an accounting machine having a carriage mounted for lateral shifting movement and carrying a rotatable platen roller, a holder for receiving and supporting a stack of work sheets to be used successively in said machine, and a connection attaching said holder to said carriage for lateral shifting movement therewith and at a location near said platen to facilitate feeding of the work sheets from said holder to the platen, said carriage including an elongated shiftable member extend-



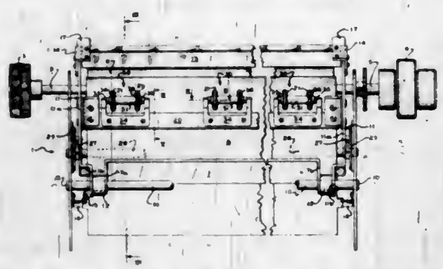
ing essentially parallel to said roller near the upper side thereof, a series of smaller rollers for pressing a work sheet against the first mentioned roller and mounted for shifting movement relative to the carriage and first mentioned roller with said elongated member, said connection including a connector element on the holder detachably connectible to said shiftable member to removably mount the holder thereon.

3,042,178
CARRIAGE CONTROL
Gerald N. West, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 2, 1959, Ser. No. 844,090
10 Claims. (Cl. 197—133)



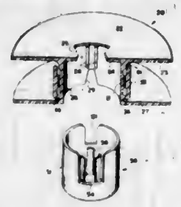
1. A control for the carriage of a business accounting machine comprising, a record information means containing information to be printed, sensing means to read the record to be printed, said record information means also containing a carriage control character related to a following record to be printed, an inactive carriage control character register for storing the carriage control character relating to the following record to be printed, printing means to print the record to be printed, an active carriage control character register conditioned in response to a start print signal to receive the carriage control character signal from the inactive register, a print circuit indicating a signal when printing of a record is complete, and carriage circuit control means responsive to the end of print signal for moving the carriage to its next stop position as indicated by the carriage control character in the active register simultaneously with the sensing of an unrelated carriage control character and a record to be printed.

3,042,179
SHEET FEEDING MECHANISM
Menahem Stern, East Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Oct. 19, 1959, Ser. No. 847,167
8 Claims. (Cl. 197—138)



1. In a sheet feeding mechanism for a business machine, two cooperating feed members operable to grip a sheet therebetween and effect feeding movement thereof: one of said feed members comprising an elongated platen of substantially uniform diameter, the other of said feed members comprising a short roller having a peripheral, outwardly opening groove; and a ring of elastomeric material seated in said groove, said ring constituting the effective sheet gripping and feeding structure of said roller; said groove being substantially V-shaped in cross section, the portions of the ring which engage the side walls of the groove being convexly curved relative to said side walls.

3,042,180
INKING RIBBON SPOOL
John W. H. Bishop, Montreal, Quebec, Canada, assignor to Bishop Spools, Inc., New York, N.Y., a corporation of New York
Filed Feb. 12, 1960, Ser. No. 8,375
8 Claims. (Cl. 197—175)



1. A spool for an inking ribbon including a tubular hub, a pair of ribbon end fastening devices positioned on said hub diametrically opposite each other, means defining a window in said hub midway between said fastening devices, said window having a pair of opposite edges extending circumferentially on said hub, a rib extending across said window projecting at its center into the interior of said hub, and means positioned along said pair of circumferentially extending edges of said window projecting outwardly from said hub.

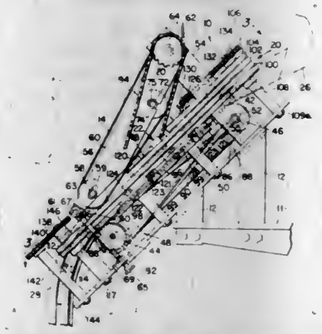
3,042,181
TANGLED SPRING SEPARATOR
William E. Rise, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 27, 1960, Ser. No. 4,925
6 Claims. (Cl. 198—33)

1. In a device for automatically feeding and orienting individual articles in a predetermined condition from a common mass in a container to an exit, a curved peripheral trackway extending from the bottom of said container to the top thereof adjacent said exit, oscillating means for agitating the container so as to elevate said articles up the trackway, means located adjacent the trackway for ejecting from the trackway all the advancing articles except those advancing in a single file in a predetermined condition, a movable striker member sup-



ported within said container above said common mass and having no contact therewith, power means to rapidly move said striker member at speeds whereat sharp momentary blows may be imparted to the ejected articles, and means to guide the ejected articles into the path of movement of said striker member whereby the ejected articles will be given a sharp blow to facilitate acquisition of the predetermined condition.

3,042,182
CONTAINER HANDLING DEVICE
James P. Whelan, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts
Filed Apr. 8, 1960, Ser. No. 21,017
9 Claims. (Cl. 198—33)

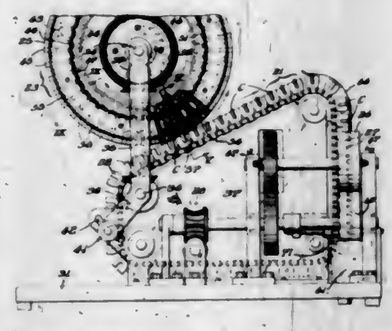


1. A device for aligning elongated articles longitudinally comprising a plurality of continuously moving belts defining a four-sided elongated tapering path through which the articles are caused to advance from the larger end to the smaller end thereof, the smaller end of said path being of a size such as to permit endwise passage of an elongated article arranged longitudinally of the path, one of said continuously moving belts traveling in the direction of advance of the articles through the path, the remaining continuously moving belts traveling in an opposite direction, said oppositely moving belts operating to engage and move randomly arranged articles to cause them to assume a longitudinally aligned position on said one continuously moving element to permit advance of successive, longitudinally aligned articles endwise through said smaller end of the path.

3,042,183
ARTICLE HANDLING APPARATUS
Charles E. Ackley, Philadelphia, Pa., assignor to R. W. Hartnett Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 3, 1959, Ser. No. 803,894
22 Claims. (Cl. 198—62)

1. In a power driven machine for handling articles all of which are essentially of the same size and shape, an

endless belt conveyor, a multiplicity of carrier elements connected to said conveyor, conformable retaining means in said carrier elements for receiving and positively retaining individual articles with opposite lateral sides of the articles exposed and projecting at right angles to the path of said conveyor, hopper means adapted to contain a supply of said articles, adjustable feed disc means ar-



ranged above said conveyor for receiving said articles from said hopper means centrally thereof and for retaining and dispensing said articles to the retaining means of said carrier elements at the periphery thereof, means for driving said conveyor at a predetermined speed, interconnected driving means for driving said feed disc means at a peripheral linear speed which is equal to that of said conveyor.

3,042,184

EGG COLLECTING DEVICE

Seymour Peterson, Dassel, Minn., assignor to Storm Industries, Inc., Dassel, Minn., a corporation of Minnesota

Filed June 29, 1960, Ser. No. 39,612
6 Claims. (Cl. 198—131)



1. Egg collection trays formed from a flexible plastic material for use with an endless flexible egg collection conveyor, said trays each comprising a generally elongated base portion, means associated with said base portion for detachably securing said tray to said conveyor, a cross-sectionally reduced area defined by said base portion of said tray for cushioning the reception of an egg, and a plurality of upstanding barrier elements integrally formed with said base portion so as to selectively cradle an egg received therein.

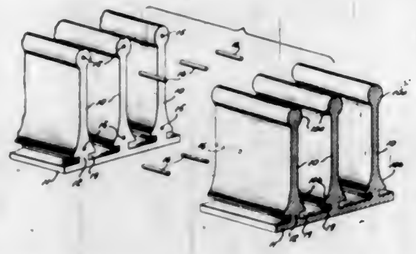
3,042,185

MULTI-CHANNEL DOCUMENT CONVEYOR

Garrett A. Welch III, Roslyn, N.Y., assignor, by mesne assignments, to International Postal Supply Corporation, a corporation of Massachusetts

Filed June 8, 1959, Ser. No. 818,653
5 Claims. (Cl. 198—160)

1. In a conveyor for feeding channeled documents by bottom edge engagement with conveyor belting an elongated one-piece rigid metallic conveyor channel extrusion length formed with a plurality of solid parallel channel sides walls and with a common plate-like base spanning the lower ends of the plurality of channel side walls and providing a belt-underlying surface at the channel bottom between the side walls, and a rib at the lower end of each wall constituting an integral confluent bridge between the wall and the base, the rib being narrower than the lower end of the wall and laterally overhung



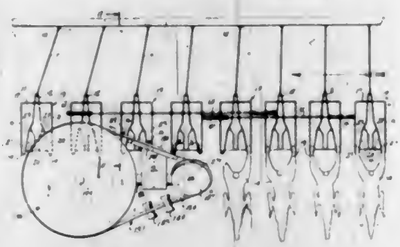
at each side by said lower end to provide belt edge-guarding recesses at opposite sides of the rib.

3,042,186

CONVEYING APPARATUS FOR INDIVIDUAL OBJECTS

Robert Everett Varney, Orlando, Fla., assignor, by mesne assignments, to American Machinery Corporation, Orlando, Fla., a corporation of Florida

Filed Apr. 29, 1960, Ser. No. 25,655
26 Claims. (Cl. 198—185)



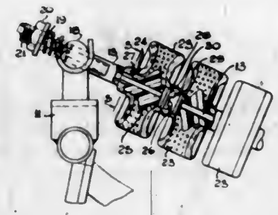
1. In apparatus for conveying a series of separate objects the combination with a conveyor extending along and supported for travel thereof along a given path, of a plurality of object supporting elements arranged in succession along said path, means supporting said elements on said conveyor for travel thereof with said conveyor along said path, each of said elements having a rigid form and being adapted to hold an object brought into engagement therewith by movement of said object in a given direction relative to said element for supporting said object for travel thereof with said element along said path, said element being adapted for release of said object from said engagement upon movement of said object in a direction generally opposite to said given direction, said element supporting means providing for movement of said elements individually relative to said conveyor transversely of said path, means disposed adjacent said path at a given location therealong for engaging said elements in succession and restraining said elements against movement thereof transversely of said path while providing for said travel thereof along said path, and disengaging means disposed adjacent said given location and in a predetermined relation to said element restraining means so as to be engaged by said objects in succession as they travel along said path for effecting said opposite movement of said objects in succession so as to disengage said objects from said elements.

3,042,187

ROLLER SUPPORTS FOR CONVEYOR BELTS

Olaf John Barclay Orwin, Quinton, Birmingham, England, assignor to Fisher & Ludlow Limited, Birmingham, England, a company of Great Britain

Filed Sept. 18, 1959, Ser. No. 840,874
Claims priority, application Great Britain Sept. 20, 1958
7 Claims. (Cl. 198—192)



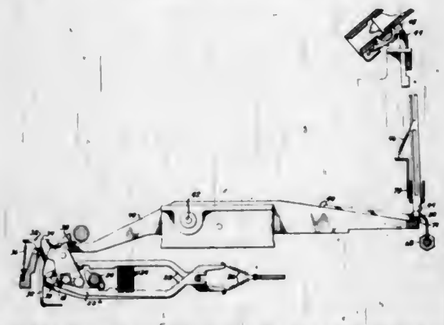
1. A roller support for a conveyor belt comprising, a flexible shaft of bowed configuration, means mounting opposite ends of said shaft for relative angular movement in the plane of bowing, a plurality of roller elements mounted for free rotation on said shaft, said roller elements being disposed in axially spaced side-by-side relationship, opposite axially extending dogs of rigid form on the opposed ends of adjacent roller elements, said axially extending dogs on adjacent roller elements having inter-engaging mutually opposed axially extending recesses and projections, and those parts of the projections and recesses which in a radial direction are furthest from the central axis of the shaft having their axially opposed end faces spaced apart in a direction axially of the shaft.

3,042,188

ESCAPEMENT CONTROL FOR TYPOGRAPHICAL LINECASTING MACHINES

Ernst L. Midgette, Brooklyn, N.Y., assignor to Harris-Intertype Corporation, Brooklyn, N.Y., a corporation of Delaware

Filed May 8, 1961, Ser. No. 108,355
3 Claims. (Cl. 199—23)



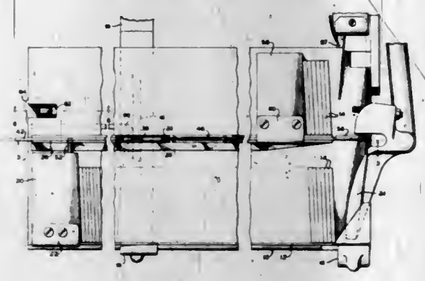
1. In a typographical linecasting machine under the control of an automatic operating unit, the combination of a plurality of escapement-reed operating levers activatable by said operating unit; a plurality of escapement reeds corresponding to said operating levers and adapted to actuate a plurality of escapements for releasing matrices from a magazine of said typographical machine; a universal locking bail disposed transversely and adjacent the rearwardly projecting ends of said reed operating levers and positively timed with the driving mechanism of the operating unit to be rocked into engagement with the rearwardly projecting portion of an actuated reed operating lever after said lever has been raised to actuate a corresponding matrix magazine escapement and hold said lever in its raised position until a succeeding escapement actuating cycle is initiated.

3,042,189

TYPOGRAPHICAL LINECASTING MACHINE GALLEY

Janos Alexander Aranyi and Costas Bilonas, New York, and Emanuel Sarfaty, Brooklyn, N.Y., assignors to Harris-Intertype Corporation, Brooklyn, N.Y., a corporation of Delaware

Filed May 4, 1961, Ser. No. 107,809
6 Claims. (Cl. 199—61)



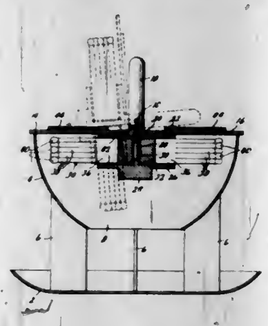
1. For a typographical linecasting machine, a slug accumulating galley having a primary shelf and a secondary shelf; individual galley slides for each shelf; a slug intercepting switch shiftably attached to one of said shelves and adapted when retracted to enable assembly of slugs on the other of said shelves; a trigger element attached to one of said slides and adapted when its associated shelf is filled with slugs, to a predetermined capacity, to cause said switch to be projected to its effective position to cause slugs to accumulate on the other of said shelves.

3,042,190

MATCH HOLDER AND DISPENSER

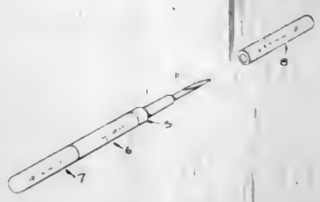
John B. Merila, 3025 Troost Ave., Kansas City 9, Mo.

Filed Sept. 20, 1961, Ser. No. 139,427
5 Claims. (Cl. 206—20)



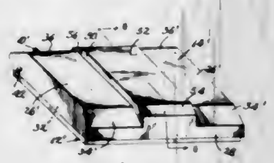
1. A match holder and dispenser comprising a bowl-shaped container open at the top, a cover hinged to said container whereby to open pivotally upwardly, a normally vertical handle pivoted to said container coaxially with said cover and extending both upwardly from said cover and downwardly into said container, a transverse projection fixed to said handle within said container and projecting horizontally beneath said cover to a point transversely offset from the axis thereof, whereby as said handle is pivoted said projection will open said cover, and matches carried by said handle beneath said projection and extending horizontally beneath said cover transversely to the cover axis, whereby as said handle is pivoted to open said cover, said matches will be extended upwardly from said container.

3,042,191
TOOTHPICK HOLDER
Leonard T. Riche, 362 Livingston St., Brooklyn 17, N.Y.
Filed Mar. 2, 1961, Ser. No. 92,885
3 Claims. (Cl. 206—37)



1. In a toothpick holder the combination of a main section, an extension section having an enlarged portion, two cap sections, the outer faces of said main, extension and cap sections being cylindrical and in alinement, said sections having aligned small openings, diminished portions extending from opposite ends of said main section for entering one of said caps and the enlarged portion of said extension section, a diminished portion on said extension section for entering the other of said caps, the cylindrical outer surfaces of said main, extension and cap sections having successive portions of an advertising medium formed thereon, the small openings of said main section receiving and holding a toothpick having oppositely extended pointed ends with one of the ends extending from said main section ready for use when one of said cap sections is removed from said main section and said other cap section is secured to said extension section secured to said main section and serves as a handle, said main section at one and the same time anchoring said toothpick and said other cap section in place.

3,042,192
BEVEL STOP FOR JEWEL BOXES AND THE LIKE
Melvin B. Herrin, Philadelphia, Pa., assignor to Regent Paper Box Co., Philadelphia, Pa., a firm
Filed Oct. 12, 1960, Ser. No. 62,113
1 Claim. (Cl. 206—45.19)



A jewel box comprising a shallow box-like base with upstanding front, rear and side walls, a removable shelf in said base, and a cover hingedly connected to the base, said cover having a flat top wall and downwardly extending front, rear and side walls, said front and rear walls having beveled portions disposed between the flat body portion and the downwardly extending walls thereof, said beveled portions serving as stops coacting with the top edges of the walls of the base to limit inward closing movement of the cover, said cover having a centrally disposed integral enlargement having a flat top portion with beveled front and rear end portions between the flat top portion and the front and rear depending walls of the cover, said beveled front and rear end portions being in alignment with the first-named beveled portions of the front and rear walls of the cover, said centrally disposed enlargement providing a countersunk portion for the cover thereby enlarging the storage space in the box at the center thereof.

3,042,193
SELF-SEALING SHINGLE
Frank J. Wendt, Chicago, Ill., assignor to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 13, 1958, Ser. No. 715,129
5 Claims. (Cl. 206—60)



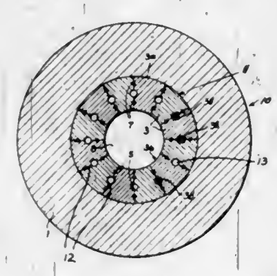
1. A bundle of self-sealing flexible shingles comprising strips of weather resistant flexible material having cutouts extending partially inwardly from an edge thereof to form butt portions, each shingle having a face side and a back side, said shingles being adapted for application in overlapping relation to form a roof with the butt portions exposed, said shingles being characterized by a band of a sealing adhesive extending lengthwise across the face side of each shingle at a distance from said edge at least as great as the width of the butt portion and a band of nonadhering material extending across and being attached to the back side thereof in superimposed relation with and of a width at least equal to that of said band of adhesive, said shingles being stacked in coinciding face to back relation whereby said band of adhesive upon the face of each shingle except the last shingle on the face side of said bundle is contiguous to the nonadhering band upon the back of an adjacent shingle, a cover disposed over the exposed face side of the last shingle in the bundle and presenting a nonadherent surface to the adhesive band on said last shingle, and including means for retaining said stacked shingles in a self-contained bundle.

3,042,194
CARTON AND PACKAGE INCLUDING SAME
Charles L. Champlin, Rittman, Ohio, assignor to Packaging Corporation of America, a corporation of Delaware
Filed Feb. 16, 1959, Ser. No. 793,554
8 Claims. (Cl. 206—65)



1. An article package including a carton having top and bottom walls and side walls joined thereto to provide an open-ended tube, and a plurality of row-arranged cylindrically shaped articles accommodated in said carton, said articles having substantially flat top and bottom ends in juxtaposition to the said carton top and bottom walls, respectively, to confine said articles against endwise movement, the length of said side walls being less than the length of the row arrangement of the articles so that the ends and sides of the end articles project beyond the end limits of said side walls, end flaps offstanding convergently from the end limits of said side walls and engaging the projecting cylindrical sides of said end articles and serving to restrain article movement endwise of said carton tube, said end flaps being provided at their upper and lower ends with securing tabs hinged only to said end flaps and initially independent from adjacent marginal portions of said top and bottom walls, said tabs being folded relative to their respective end flaps to overlie substantial areas of the top and bottom ends of the accommodated end articles and disposed in surface to surface contact with said carton top and bottom walls, and adhesive means for securing said tabs to said carton top and bottom walls, whereby substantial areas of said end article top and bottom ends provide backing surfaces to aid in effecting the adhesive bond between said carton top and bottom walls and the respective securing tabs to thus maintain said end flaps in position for their aforesaid end article engagement.

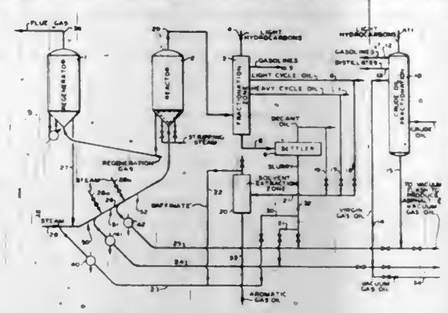
3,042,195
RECEIVER FOR METAL EXTRUSION PRESSES AND LIKE POWER-DRIVEN MACHINES
Ernst Müller, Duisburg, Germany, assignor to Hydraulik G.m.b.H., Duisburg, Germany
Filed Dec. 15, 1958, Ser. No. 780,379
Claims priority, application Germany Dec. 18, 1957
1 Claim. (Cl. 207—15)



A billet container assembly for use with a female extrusion die; an extrusion ram, and ancillary apparatus comprising: an outer jacket having a circular cylindrical bore therethrough; an inner sleeve assembly the outside surface of which is complementary to and mates with and is shrink fitted in said bore, said sleeve assembly having an inner billet receiving chamber uniformly formed so that said ram can slide therealong to apply the requisite pressure to the contained billet to extrude the same through the appropriately mounted said die, the portion of said sleeve assembly immediately adjacent said chamber being of a material of higher wear resistance than that of the balance of said sleeve assembly, said sleeve assembly being divided into a plurality of segments by planes which if extended pass through the billet container's longitudinal axis, each pair of abutting segment faces having four channels formed by four pairs of respectively mating grooves extending parallel to said axis with four of said grooves in one of said faces and the other four of said grooves in the abutting other face, the innermost and outermost of said channels being packing wire channels, one of the remaining channels being for a heating medium, and the solely remaining channel being for a cooling medium; packing wires, one assembled in each of said packing wire channels.

3,042,196
CATALYTIC CONVERSION OF HYDROCARBON OILS WITH THE USE OF DIFFERENT TYPES OF FEED OILS
Edwin M. Payton and James W. Slover, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 18, 1959, Ser. No. 853,816
3 Claims. (Cl. 208—113)

1. In a fluid catalytic cracking operation in which a fluid catalyst mass of particles is employed and in which there are cracked in the presence of the catalyst a refractory paraffinic oil obtained by solvent extraction of a cycle oil formed in the system, a virgin gas oil obtained from a crude oil by fractionation of the same, and a topped crude obtained from said crude oil by fractionation of the same, the steps which comprise admixing steam and catalyst and then adding successively to the

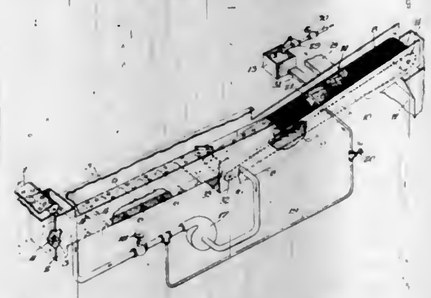


mixture of steam and catalyst the oil streams in the order mentioned under cracking conditions.

3,042,197
HYDROGENATION PROCESS UTILIZING A PLATINUM - THIOCYANATE - ALUMINA CATALYST
Robert C. Binning, Xenia, Ohio, and Marvin Z. Woskow, McAllen, Tex., assignors, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed June 6, 1960, Ser. No. 33,920
5 Claims. (Cl. 208—143)

1. A hydrogenation process which comprises contacting a hydrogenatable feedstock with hydrogen gas under suitable hydrogenation conditions with a catalyst consisting essentially of between about 0.05 and 1 percent by weight of platinum and between about 0.05 and 6 percent by weight thiocyanate ion, supported on alumina.

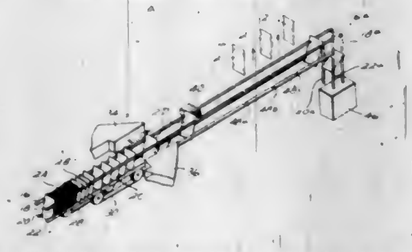
3,042,198
METHOD AND APPARATUS FOR CLEANING WOOD CHIPS
Michael Slavich, Pendleton, Oreg., assignor to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 4, 1959, Ser. No. 791,196
6 Claims. (Cl. 209—44)



6. Apparatus for separating waste material from wood chips which comprises a chamber provided with means for introduction of fluid in a turbulent state, and with means for introducing wood chips contaminated with said waste material and exit means from said chamber communicating with an elongated trough downwardly inclined from said exit means, provided with a plurality of riffles located substantially normal to the long dimension of said trough and forming with the bed of said trough lying toward said exit means an obtuse angle, a tank positioned below the lower end of said downwardly inclined trough, an upwardly inclined foraminous conveyor positioned below the lower end of said downwardly inclined

trough having its lower terminal portion within said tank and its upper terminal portion above said tank and beyond the same in a direction away from said trough, and means for recovery from said fluid of small chips and the like which pass through said foraminous conveyor and collect in said tank.

3,042,199
DATA PROCESSING SYSTEM
W. Gordon Welchman, Lexington, and Heinz M. Zeutschel, West Newton, Mass., assignors to Itek Corporation, Waltham, Mass., a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 58,114
18 Claims. (Cl. 209—73)



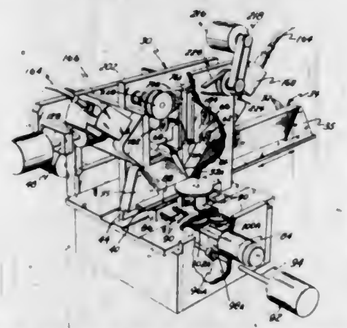
3. In a data processing system comprising a plurality of guide rails for edge-supporting data-bearing sheets and means for creating an air pressure gradient along said rails whereby to rapidly propel said edge-supported sheets along said rails in a predetermined direction, the improvement comprising a section in each rail having a gap therein whose width is greater than the thickness of one of said sheets, and means for selectively removing sheets from said rails through said gaps.

3,042,200
VIBRATORY SORTING APPARATUS
Herman P. Nowak, Salem, Mass., assignor to Raytheon Company, Waltham, Mass., a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,751
7 Claims. (Cl. 209—99)



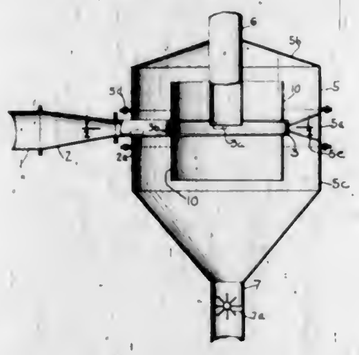
1. A device for sorting small articles according to thickness, comprising a pair of elongate gauge rails positioned substantially side by side in spaced apart relation, said rails having convergent downwardly inclined first faces extending in respective given planes, the given plane of one of said first faces being disposed at a relatively small angle with respect to a horizontal plane passing therethrough, said rails each having a second face extending in a given plane divergently downwardly and outwardly from the first face, said one of said first faces having a lip connecting the first face to the respective second face, said lip projecting beyond the plane of the second face whereby relief from wedging of said articles in the space between said rails is obtained, said lip extending longitudinally of the rail and having a rounded surface, and the rail opposite the lip having a slightly rounded edge extending longitudinally thereof and facing said lip in approximately parallel relation thereto, whereby electrostatic potential between said rails is substantially eliminated, and means for vibrating said rails simultaneously to translate articles therealong to a position where they drop through the space between the rails in accordance with their thicknesses.

3,042,201
DATA PROCESSING
Manfred R. Kuehnle, Lexington, Heinz M. Zeutschel, West Newton, and Victor F. Wilson, Waltham, Mass., assignors, by mesne assignments, to Itek Corporation, a corporation of Delaware
Filed Sept. 29, 1959, Ser. No. 843,132
21 Claims. (Cl. 209—111.5)



10. Data processing apparatus for detecting and isolating a desired coded date sheet from a plurality of coded data sheets mounted on a rail in a manner permitting detachment therefrom when said rail is compressed, said apparatus comprising: code sensing means disposed in a scanning area, means for moving said rail to cause said data sheets to move past said code sensing means, air jet means for causing said sheets to pivot about said rail and be blown past said code sensing means, a plurality of sequentially actuated chip separating elements, means for moving said elements in a predetermined sequence to cause one sheet at a time to enter said scanning area, a gate for catching each successive sheet in the scanning area after said sheet has been scanned by said code sensing means, means for releasing said gate when the scanned sheet is not the one desired.

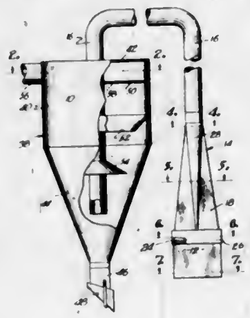
3,042,202
CYCLONE CLASSIFIER
Lincoln T. Work, 36 W. 44th St., Maplewood, N.J.
Filed July 3, 1958, Ser. No. 746,431
11 Claims. (Cl. 209—144)



1. An apparatus for removing fine particles from particulate laden gaseous streams which comprises an

outer shell, inlet means for passing a gaseous stream into said shell, an involute race tangentially attached to said inlet means having a diameter less than that of the shell, tubular means extending substantially equally upwardly and downwardly from said involute race and concentric therewith, gas outlet means extending from the upper part of said shell and opening at said race, and particle outlet means in the lower part of said shell.

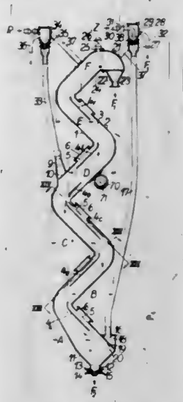
3,042,203
AIR-FLOW MATERIAL SEPARATOR
Francis E. Clute, Rocky Ford, Colo., assignor to J.E.T. Pellet Mill Corporation, Rocky Ford, Colo., a corporation of Colorado
Filed Aug. 17, 1959, Ser. No. 834,092
8 Claims. (Cl. 209—144)



1. Separating apparatus for comminuted material having particles of different specific gravities comprising an upright body having an inlet, and an outlet spaced above the inlet, said body being hollow for flow of artificial currents of air from the inlet to the outlet, there being a pair of spaced portions forming a part of said body for free vertical flow of said air, and a central, substantially conical portion, progressively decreasing in diameter as the inlet end of said conical portion is approached for cyclonic flow of said air, and communicating with said pair of spaced portions therebetween, whereby lighter particles are drawn from said pair of spaced portions into the central portion and carried to said outlet, and heavier particles return by gravity within said pair of spaced portions to the inlet when the material is introduced into the air stream at said inlet.

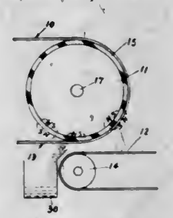
3,042,204
PROCESS AND APPARATUS FOR SEPARATING GRANULAR SOLIDS INTO TWO OR MORE END FRACTIONS
Theodor Eder, Reisnerstrasse 32, Vienna III, Austria
Filed Apr. 2, 1958, Ser. No. 725,846
Claims priority, application Austria Apr. 3, 1957
22 Claims. (Cl. 209—157)

6. Apparatus for classifying granular material consisting of particles of different sizes by gravity which comprises means defining a flow passage for a fluid upcurrent, said flow passage comprising at least two superimposed and series-connected flow sections adapted to conduct said upcurrent under substantially laminar flow conditions to form separating stages having a predetermined velocity of flow, a feed inlet connected to said flow passage above the lowermost of said flow sections to feed said mixture to said flow passage, said means defining said flow passage comprising adjacent to each of said flow sections a collecting surface which is inclined with respect to the horizontal and exposed to said flow section and arranged to collect particles subsiding in said flow section, at least one secondary conduit, by passing substantially at least one section of the flow passage, said secondary conduit being arranged to transfer solids from the collecting surface adjacent to at least one of said flow sections, except the lowermost one, under the action of gravity and to drop them into said passage at a point
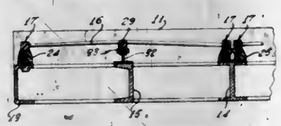


below a major part of the length of the next lower flow section, a fluid inlet at the lower end of the passage, and end fraction outlets at the upper and lower ends of said flow passage.

3,042,205
MAGNETIC SEPARATOR WITH MAGNETIC RUBBER ELEMENT
Robert F. Merwin, 4010 State St., Erie, Pa.
Filed May 19, 1958, Ser. No. 736,247
10 Claims. (Cl. 209—218)



1. A magnetic separator comprising a conveyor pulley, and a conveyor belt on said pulley, said pulley having a permanent magnet attached to and extending around outside the outer periphery thereof, said magnet being in the shape of a generally continuous hollow cylinder of uniform thickness, said cylinder being disposed around the outer periphery of said pulley and having one magnetic pole at one end thereof and the other magnetic pole at the other end thereof, said permanent magnet being made of relatively fine pieces of magnetizable material support in a non-magnetic matrix, said pieces being generally uniformly distributed through said non-magnetic matrix.

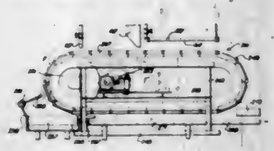
3,042,206
SCREEN DECK
Francis B. Olender, Wallington, N.J., assignor to Hewitt-Robins Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 15, 1959, Ser. No. 859,801
11 Claims. (Cl. 209—395)



1. In a rod deck for a vibrating screen, the improvement which comprises a pair of rod supporting members,

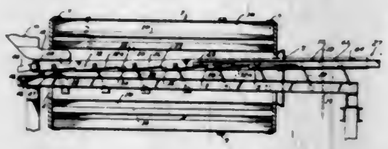
each of said members including an elongated strlip of flexible material, said strips being bendable in a vertical plane and having spaced rod-receiving openings formed in a side face thereof, and a series of spaced lugs extending downwardly from each of the strips, said lugs having enlarged portions at their lower ends; and resilient holder means for releasably engaging with the lugs on the respective rod supporting members and positioning the rod supporting members in spaced relation with respect to each other.

3,042,207
ORE CONCENTRATOR
Edmond F. Gobatti, Rte. 3, Box 252A, Pueblo, Colo.
Original application Sept. 26, 1958, Ser. No. 763,667, now Patent No. 2,989,184, dated June 20, 1961. Divided and this application Oct. 6, 1960, Ser. No. 64,676
4 Claims. (Cl. 209—433)



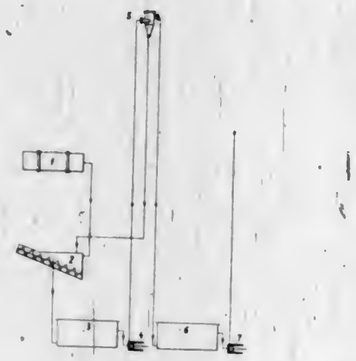
1. A concentrator comprising an endless power-driven conveyor having an elongated upper run and a lower run, means for circulating the conveyor, means for bodily reciprocating the conveyor, the conveyor having upstanding side edges and a plurality of upstanding riffles extending transversely between and spaced apart longitudinally of the side edges to define along the upper conveyor run an elongated sluice trough, an open-topped receptacle disposed beneath the end of the conveyor toward which the upper conveyor run moves, an elongated stationary sluice box having a plurality of upstanding riffles disposed transversely and spaced apart longitudinally thereof and having a material receiving end, and overflow means on the receptacle and communicating with the receiving end of the sluice box to deliver to the sluice box material discharged from the conveyor and overflowing the receptacle, the open-topped receptacle being separate from the sluice box and the overflow means overlying the receiving end of the sluice box.

3,042,208
COMBINED WASHER, SEPARATOR AND GRADER FOR LOOSE MATERIALS
John B. Holmes, R.D. 1, Burton, Ohio
Filed Jan. 31, 1961, Ser. No. 86,167
13 Claims. (Cl. 209—442)



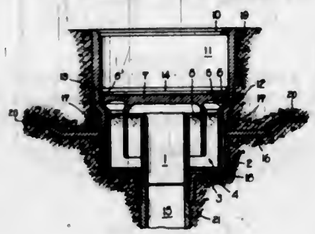
1. An apparatus for washing and conveying loose material and removing the washing liquid therefrom, and comprising a power driven, generally horizontal rotary drum having an inlet opening at one end for admitting loose material and liquid, a discharge opening at the other end for discharging liquid therefrom, and an imperforate peripheral wall, buckets carried at the inner peripheral wall of the drum and rotatable therewith for hoisting a mixture of the liquid and the loose material upwardly at one side of the drum and for pouring off free liquid, accumulated on top of the material settling out in the buckets during their rise, as they approach the upper portion of their path of rotational movement with the drum, and for discharging the mixture of residual liquid and loose material further along the upper portion of said path, an elongated conveyor extending lengthwise of the drum and having a discharge end, a bottom wall, and an opening at the top through which the residual liquid and loose material discharged from the buckets can be received on the bottom wall, power means to vibrate the conveyor generally endwise so as to cause the material to advance toward said discharge end of the conveyor, said bottom wall comprising a series of imperforate wall portions arranged in a row endwise of the conveyor, each portion sloping upwardly in a direction toward the discharge end of the conveyor at an angle to the bottom wall as a whole so that the upper end of each portion is spaced above the level of the lower end of the portion next in succession to it in said direction, said conveyor having liquid discharge passages adjacent the lower ends of the portions, and said portions being positioned relative to each other so that the material discharged from each portion falls onto the imperforate wall of the portion next in succession to it in said direction.

3,042,209
METHOD FOR THE CONTINUOUS PURIFICATION OF LIME MILK USED IN SUGAR MILLS
Miklós Czirfusz, Petohaza, Hungary, assignor to Licencia Találmányokat Értékesitö Vállalat, a firm
Filed Dec. 17, 1958, Ser. No. 781,116
1 Claim. (Cl. 210—73)



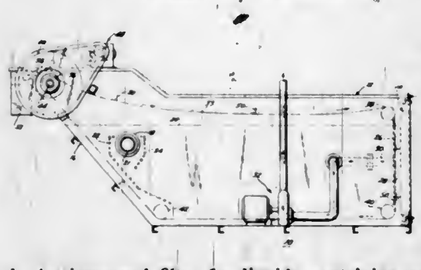
A method for the continuous purification of lime milk to be used in sugar mills comprising the steps of
producing impure lime milk having solid impurities therein,
introducing said impure lime milk containing said solid impurities into a space wherein said solid impurities settle to the bottom of said space,
continuously removing said solid impurities from a portion of said space while said lime milk is being introduced therein,
continuously feeding the lime milk substantially free of said solid impurities from another portion of said space into a receiving space,
continuously conveying the lime milk from said receiving space into a cyclonizing zone wherein the lime milk is divided into pure lime milk and sludge,
continuously feeding the pure lime milk into a further receiving space from which the pure lime milk is to be fed to the sugar mill for use thereby,
and continuously removing the sludge from said cyclonizing zone and feeding the sludge into said first-named space.

3,042,210
DRAINAGE TRAP
Kyuhachi Hattori, Tokyo, Japan, assignor to Kasho Kabushiki Kaisha, Tokyo, Japan, a company of Japan
Filed June 12, 1959, Ser. No. 819,962
Claims priority, application Japan July 24, 1958
4 Claims. (Cl. 210—163)



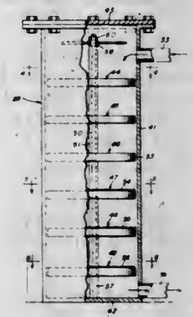
2. A floor drain, comprising an outer drain body one end of which is attachable to a drain pipe, said outer drain body being for embedding in a concrete floor, an inner drain body supported on said outer drain body so as to be removable from said outer drain body and extending downwardly into said outer drain body toward the end attachable to a drain pipe, one of said drain bodies having thereon an upwardly extending inner pipe above the point at which said outer drain body is attachable to a drain pipe, and an inverted cup having a solid bottom positioned on said inner drain body, the sides of said cup extending downwardly toward the bottom of said outer drain body between and spaced from said inner drain body and said upwardly extending pipe and terminating short of the bottom of said outer drain body, the inside of the bottom of said cup being spaced above the top of said upwardly extending pipe, said outer drain body being comprised of an upper portion and a lower portion rotatably connected to each other for movement relative to each other about the vertical axis of said outer drain body, and adjustment means on one side of one of said portions of said outer drain body engageable with the other portion of said outer drain body for moving said portions toward and away from each other in the direction of the vertical axis only at said one side of said outer drain body.

3,042,211
FILTER FOR LIQUIDS CONTAINING MAGNETIC SLUDGE
Ahmad M. El-Hindi, East Syracuse, N.Y., assignor, by mesne assignments, to Hoffman International Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 27, 1959, Ser. No. 836,478
3 Claims. (Cl. 210—222)



1. An improved filter for liquids containing magnetic sludge and solids, said filter comprising a tank for receiving and holding a quantity of liquid to be filtered, a magnetic filter assembly having a plane face collecting surface positioned within said tank, a baffle plate positioned closely in front of said collecting surface and defining a narrow space open to said liquid along the sides and bottom, an outlet pipe having its mouth opening into said narrow space generally at the center thereof, and scraper blades movable linearly across the collecting surface of said filter assembly to remove material clinging thereto, the magnetic field developed by said assembly being non-reversing along the line of movement of said blades, said filter assembly including a plurality of permanent magnets positioned on the rear side of said surface and having their north poles only positioned along at least one line parallel to the line of movement of said blades and having their south poles only positioned along at least another line parallel to said line of movement.

3,042,212
LATEX RECONDITIONING APPARATUS
Jack J. Zbar, Dalton, Ga., assignor to Lawtex Corporation, Dalton, Ga., a corporation of Georgia
Filed Dec. 11, 1959, Ser. No. 858,918
10 Claims. (Cl. 210—237)

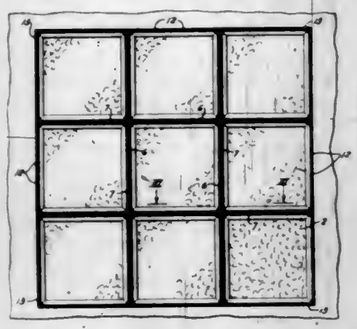


1. A filter unit for removing textile strings and coagulated rubber from latex comprising a casing having a vertically disposed axis and an inlet and an outlet positioned adjacent the upper and lower ends, respectively, of said casing so that the latex may flow therethrough by gravity, at least one unscreened filter element positioned adjacent but below the casing inlet and having a plurality of arms extending horizontally across the interior of said casing in substantially radial relationship with respect to the axis of said casing, and at least one additional filter element positioned below said first-named element but above the level of the casing outlet and having a mesh screen extending horizontally across the interior of said casing for catching coagulated rubber in said latex, said arms constituting substantially the only obstruction to vertical flow of the latex offered by said unscreened filter element, whereby textile strings of appreciable length present in the latex may be caught and held on said arms in positions substantially parallel to the direction of flow of the latex through the filter, thereby substantially reducing the tendency to clog the filter by accumulation of said strings in horizontal positions on said screened filter element.

3,042,213
FILTER GASKET
Robert A. Bub, Penn Hills, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 14, 1959, Ser. No. 833,858
1 Claim. (Cl. 210—323)

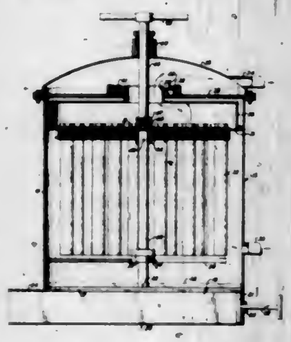
A filter unit comprising a plurality of rectangular filter frames of uniform size arranged side by side in parallel rows to form a bank of frames, a filter in each frame, sealing means surrounding said bank of frames in engagement therewith, a plurality of compressible sealing strips at right angles to each other between said frames and joined together in pairs forming crosses having arms,

the center of each cross being located at the corner intersection of four of said frames, the ends of said strips being provided with tongues and notches connecting the crosses together, said surrounding sealing means having compressible arms extending inward between the frames



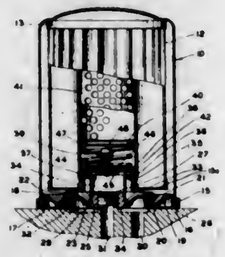
and connected with the ends of the adjoining cross arms, and fastening members extending through the opposed sides of said frames and said arms between them and clamping the arms tightly between the frames to seal the spaces between the frames.

3,042,214
FILTER APPARATUS
Kostas S. Arvanitakis, Farrell, Pa., assignor to Arvan Products, Inc., Sharpsville, Pa., a corporation of Pennsylvania
Filed Dec. 16, 1958, Ser. No. 780,869
1 Claim. (Cl. 210—330)



A cake-type filter apparatus comprising a cylindrical tank having a bottom formed of chordal segments, a support spider having a central thrust bearing rigidly connected to the lower portion of the tank's inner wall and spaced above the bottom, and an inlet at its lower portion above said spider; a seal plate having a central opening sealed to and extending horizontally across the top of said tank; a dome mounted on said seal plate having an outlet and a central bearing opening; and a filter support and tank cleaning assembly including a central shaft extending through the openings in the dome and seal plate and through the spider thrust bearing, a bearing flange rigidly affixed to the shaft and rotatably supported on said thrust bearing, said shaft including an upper operating portion and a lower support portion, a filter supporting plate rigidly affixed to the top of said support portion, a plurality of filter tubes removably mounted only in said plate, a cap sealably covering said plate and including a central upstanding flange passing through said seal plate opening, sealing means affixed to said plate and sealably engaging the outer surface of said flange, said shaft operating portion having its lower end rigidly affixed to the filter supporting plate to enable rotation thereof, a wiper blade affixed to the bottom end of the shaft lower portion adjacent said bottom, said bottom having an opening, a discharge hopper positioned below said opening having a valved outlet and a piston mounted therein for discharging sludge through said outlet.

3,042,215
THROWAWAY OIL FILTER
Frederick R. Gruner, Westfield, N.J., assignor to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Filed Mar. 3, 1960, Ser. No. 12,589
2 Claims. (Cl. 210—443)

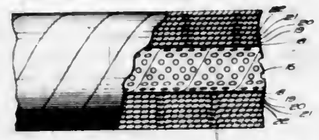


2. A throwaway type filter comprising a cup shaped shell, a filter element disposed within said shell, a member closing the end of said shell for sealing said element therein, means for interfastening the peripheries of said member and said end, said member being made of thin sheet metal shaped to form a substantially vertical annular band extending upwardly from said end's lower portion in telescoped relation therewith and an inclined annulus joined with the upper end of said band and extending downwardly and inwardly therefrom and a second substantially vertical band joined with and extending upwardly from the lower end of said annulus and a second inclined annulus joined with the upper end of said second band and extending downwardly and inwardly therefrom and terminating with a central opening, a tubular part located in said opening, means for interfastening said part and the lower end of said second annulus, the latter having at least one hole formed therethrough and said part having means for connecting it with a throwaway filter mounting tubular part, a ring gasket positioned on the lower surface of said bottom member radially inwardly adjacent to said second band and projecting below the lower end thereof, and means within said shell for causing fluid flowing through said hole and the first named tubular part to flow through said filter element, said sheet metal being thin enough to permit said bottom member to act like a diaphragm spring when said parts are interconnected and said member is placed under stress and said bands substantially resisting bulging of said member, said ring gasket being tubular and fitting the inner side of said second band in telescoped relation therewith and being long enough to project a substantial distance below said second band's lower end.

3,042,216
FILTER CONSTRUCTION
Joshua H. Goldman, Box 14, Hadlyme, Conn.
Filed Feb. 5, 1959, Ser. No. 791,350
7 Claims. (Cl. 210—494)

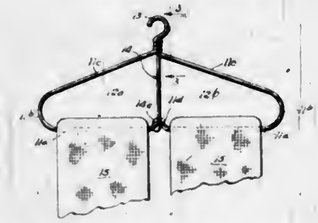
1. A method of forming a fluid filter cartridge comprising the steps of spirally winding a narrow perforate metal strip on a mandrel at an angle to the axis to form a tubular core, and simultaneously winding alternate narrow strips of a separator and a filtering medium in

alternate adjacent layers on said core at an angle to the axis until the desired diameter is obtained, said strips



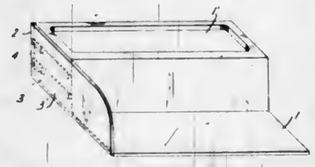
being spirally wound while advancing along the mandrel with overlap between turns.

3,042,217
HANGER CONSTRUCTION
Jerry B. Shores, R.R. 1, Yorktown, Ind.
Filed July 6, 1959, Ser. No. 825,150
2 Claims. (Cl. 211—45)



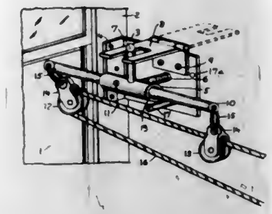
2. A device of the class described, comprising an elongated bent wire body delimiting an elongated opening, one elongated side of said body being provided with a laterally outwardly extending hook-like member for effecting suspension of said body, the axis of suspension substantially bisecting the longitudinal axis of said opening and disposed substantially perpendicular thereto, and an elongated narrow wire arm having one end thereof pivotally connected to substantially the midpoint of the opposite elongated side of said body, the other end of said arm being bent to conform substantially to the configuration of said hook-like member; said arm, when in one position of pivotal adjustment, bridging said elongated opening and having said other end in registered relation with respect to said hook-like member.

3,042,218
TOILET SHELF
Antti Aaroni Pohjaniemi, Pori 6, Finland
Filed Sept. 4, 1959, Ser. No. 838,122
Claims priority, application Finland Sept. 6, 1958
3 Claims. (Cl. 211—90)



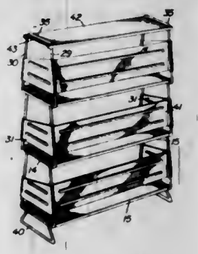
1. A shelf arrangement comprising, in combination, a box-shaped rear part having a pair of opposite side walls; a shelf plate projecting forwardly from said box-shaped rear part; first elongated dove-tail means substantially parallel to said shelf plate on at least one of said side walls of said box-shaped rear part; and side guard means for said shelf plate including a wall having a face of a length substantially equal to the combined widths of said box-shaped rear part and said shelf plate and having on said face thereof second elongated dove-tail means adapted to cooperate with said first dove-tail means for removable attachment of said guard means to said box-shaped rear part.

3,042,219
SAFETY WINDOW WASHLINE HOLDERS
Benjamin Goldberg, 603 Brighton Beach Ave., Brooklyn 35, N.Y.
Filed Mar. 23, 1961, Ser. No. 97,873
4 Claims. (Cl. 211—119.08)



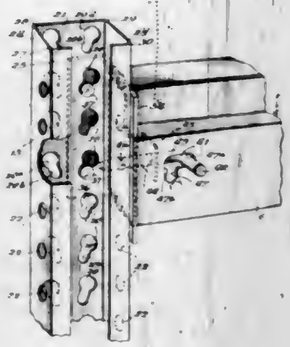
1. A safety washline holder, comprising in combination: a bracket for attachment to the exterior side of a window frame and to support and hold locked in positions a pivotally-connected pulley-supported shaft, said bracket having a hinged U-shaped latch plate, the U-space of which is intended to engage a longitudinal section of the pulley-support shaft for locking said shaft in vertical position and to engage a projecting stud on said shaft for locking said shaft in horizontal position, said pulley-support shaft provided with a projecting threaded stud near its center to turn in a corresponding tapped hole in said bracket for support and pivot purpose and for spacing adjustment between said bracket and said shaft, and two pulleys held one at each end of the pulley-support shaft.

3,042,220
SHELF STACKS
Tage Harald Eugén Jakobsson, Herserudsvagen 56, Lidingo, Sweden
Filed Mar. 31, 1959, Ser. No. 803,184
9 Claims. (Cl. 211—148)



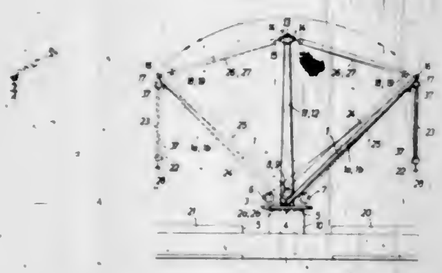
1. A shelf stack, comprising shelves and detachable upright end members each including two generally vertically extending spaced lengths of rigid wire which support the shelves stacked one above another, characterized in that the two spaced upright rigid wires of each end member are bent into a saw-tooth-like configuration such as to form, corresponding to each shelf position, horizontal supports directed towards each other for supporting hook sectioned shelf fittings, each said wire having downwardly diverging wire portions which are embraced by hook-like gripping elements formed integrally with a corresponding end cross piece and adapted to cooperate in a wedge-like manner with said diverging wire portions so as, in a pushed-down position of said cross brace, to urge the wires into abutting engagement with the ends of said shelf fittings, respectively, whereby the shelves are securely anchored to the upright end members of the shelf stack.

3,042,221
PALLET RACK
George E. Rasmussen, Park Forest, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 19, 1960, Ser. No. 50,617
4 Claims. (Cl. 211—148)



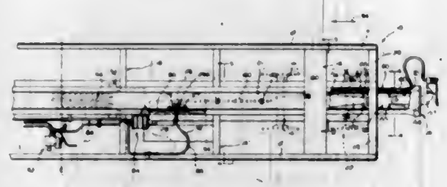
1. A beam for use in a supporting structure comprising, a hollow body portion secured at one end to an end flange, a bolt support secured at its inner end to the end flange and at its outer end projecting into the hollow body portion away from the end flanges, the end flange having an opening through it, the outer end of said bolt support having an opening through it positioned to align with the opening through the end flange, and a bolt supported in both openings for movement therethrough, said hollow body portion having a passage for external access to said bolt.

3,042,222
CARGO BOOM
Guenther W. Lehmann, 789 Mapunapuna St., Honolulu, Hawaii
Filed Apr. 13, 1959, Ser. No. 806,124
8 Claims. (Cl. 212—3)



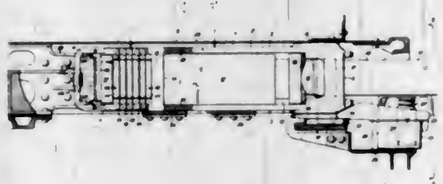
1. A cargo lift gear comprising two kingposts, a boom consisting of two legs, pivotal bearing means connected to the lower ends of the boom legs and mounting the boom for pivotal movement between said kingposts, and to either side of the plane defined by the kingposts, a load-bearing crosspiece connecting the upper ends of the boom legs, a hoisting gear including upper and lower hoisting block means, the upper hoisting block means being supported by said crosspiece substantially midway between the boom legs and the two boom legs defining an unobstructed clearance to permit the hoisting gear to pass between the legs, and topping lift blocks attached to the upper ends of the boom legs at their outsides and to the kingposts for controlling the position of the boom.

3,042,223
TRAINLINE ARRANGEMENT FOR CUSHION UNDERFRAME WITH LONG TRAVEL CHARACTERISTICS
Kenneth J. Austgen, Griffith, Ind., assignor to Pullman Incorporated, Chicago, Ill., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 68,992
6 Claims. (Cl. 213—1)



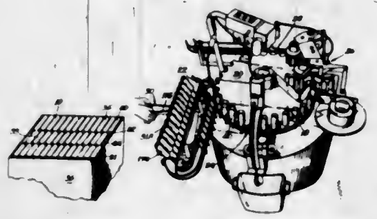
1. In a railway car, the combination of a buff and draft column extending longitudinally of the car, a coupler at each end of the car for transmitting buff and draft forces to said column, transversely spaced car body members receiving said column therebetween with said column being movable lengthwise relative to said car body members when subjected to buff and draft forces, and a trainline extending from one end of the car to the other, said trainline including a median portion rigidly mounted with respect to said car body members, flanking portions mounted on and carried by said column, and a flexible conduit at each end of the medium portion connected respectively to the adjacent ends of said flanking portions of the trainline for connecting all of said trainline portions in series.

3,042,224
DRAFT ASSEMBLY
Emil H. Blattner, deceased, late of Williamsville, N.Y., by Elizabeth Blattner, executrix, Rochester, N.Y., assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Apr. 2, 1959, Ser. No. 803,778
14 Claims. (Cl. 213—41)



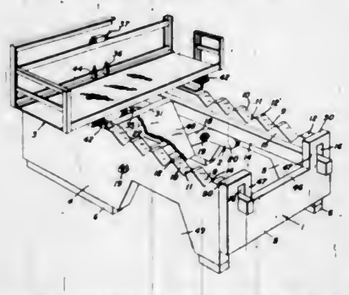
4. The combination with a center sill having a draft gear pocket between front and rear stop lugs and a coupler, of a selective travel draft assembly comprising a yoke in said pocket and connected forwardly thereof for forward movement with and rearward movement relative to said coupler, said yoke normally projecting between said rear stop lugs and having a rear wall spaced rearwardly from said pocket, an intermediate wall fixed to said yoke intermediate longitudinal extremities thereof and dividing said yoke into longitudinally spaced front and rear pockets, front and rear cushioning units respectively in said front and rear yoke pockets, and follower means in each of said yoke pockets between the cushioning unit therein and the corresponding of said stop lugs, said rear cushioning unit in buff receiving buffing forces from said coupler through said front cushioning unit and intermediate wall and in draft being blocked out of action by said intermediate wall.

3,042,225
APPARATUS FOR HANDLING AND FILLING ERECTED CARTONS
Thomas N. Cummings, Chicago, Benjamin R. Peterson, Jr., Wheaton, and Thomas B. Shiu, Chicago, Ill., assignors, by direct and mesne assignments, to CPS Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application Dec. 14, 1954, Ser. No. 475,262, now patent No. 2,805,095, dated Sept. 3, 1957, which is a division of application Ser. No. 379,332, Sept. 10, 1953. Divided and this application Dec. 10, 1956, Ser. No. 627,243
2 Claims. (Cl. 214—1)



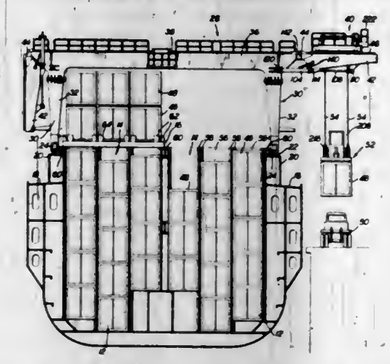
2. In combination with a loading station of a machine for filling erected containers consisting of a support rail and an adjacent fixed side rail, the two permitting the reception of a selected number of containers in a single row only, and a third rail mounted on said machine, said third rail being movable from a position adjacent the loading station and corresponding to the fixed rail to a remote position so as to leave one side of the loading station open, an independent member for releasably holding said selected number of containers in a straight row and along one side of the containers, whereby when the row of containers is inserted on the support rail and against the fixed side rail and the third rail is moved so as to engage the walls of the container which are clasped, the releasable means may be drawn away from the machine leaving the containers in the loading station.

3,042,226
BILLET TURNER
Robert B. Maciejczak, 4221 W. 45th Ave., Gary, Ind.
Filed Nov. 7, 1958, Ser. No. 772,544
1 Claim. (Cl. 214—1)



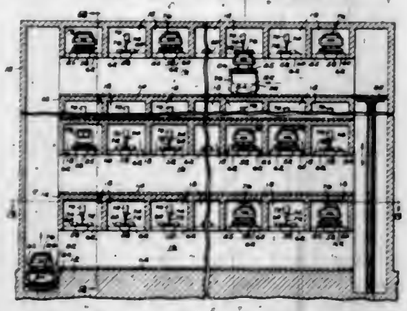
A billet turning apparatus comprising a pair of laterally spaced supporting members respectively having horizontal upper edges with a series of notches at spaced intervals along the length thereof, said notches being arranged in laterally aligned pairs in which billets are received and supported on said members in parallel positions, each of said notches comprising a pair of angularly inclined surfaces for engagement with two sides of a billet supported therein, the angular inclination of each of said pair of surfaces being such that the top side of each of the billets supported in said notches is inclined downwardly at an angle of less than 45° relative to a horizontal plane, a billet handling carriage mounted for vertical movement and horizontal movement relative to said supporting members and normally occupying a retracted position under the billets supported thereon, means for raising and lowering said carriage to remove and return billets with respect to their supported positions on said members, said carriage having a flat horizontal surface to which the billets are transferred upon upward movement and in being transferred thereto are rotated in one direction through said angle, said supporting members having billet turning lands arranged at one side of each of said notches, means for shifting said carriage horizontally in a direction lengthwise of said supporting members, said carriage horizontal shifting means being operable after actuation of said carriage vertically to lift billets out of said notches for moving such billets to positions in which one of their lower corners are arranged over said turning lands, said turning lands being effective upon subsequent lowering operation of said carriage to engage and continue the rotation of said billets through an angle of 90° as they are returned to positions supported in said notches.

3,042,227
SHIPBOARD FREIGHT CONTAINER TRANSFERRING APPARATUS
Keith W. Tantlinger, Grosse Pointe Shores, Mich., assignor to Sea-Land Service, Inc., a corporation of Delaware
Filed Sept. 26, 1958, Ser. No. 763,739
24 Claims. (Cl. 214—15)



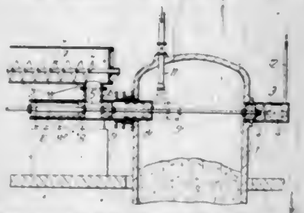
1. Shipboard freight container transferring apparatus comprising a marine vessel having a flat and normally horizontal stowing area, a gantry having a trackway extending laterally of the vessel in a plane substantially parallel to that of said stowing area, a traveling bridge movable along the trackway, a spreader comprising a generally rectangular frame adapted to be detachably coupled successively to a plurality of box-like containers for transfer between said stowing area of the vessel and an adjacent land area on movement of the bridge along the trackway, a pair of longitudinally spaced parallel walking beams extending laterally of the vessel and pivotally suspending the spreader on a longitudinal axis substantially central of the beams, hoisting cables depending from the bridge and having four runs of substantially equal length each connected to an end portion of one of the beams suspending the beams from the bridge in substantial parallelism to the gantry trackway, means actuating the cables to hoist the beams and spreader until the spreader engages the bridge and becomes tilted thereby so that the plane of the spreader is parallel to the plane of the trackway, and tilt lock means cooperating with the spreader and beams to secure the spreader rigidly to the beams and maintain the parallel relationship of the spreader and trackway while the cable actuating means is operated to pay out the cables to lower the beams, spreader and coupled container onto said stowing area of the vessel.

3,042,228
STORAGE SYSTEM
John W. Frangos, 2 Brimball Hill Drive, Beverly, Mass.
Filed Aug. 4, 1960, Ser. No. 47,489
8 Claims. (Cl. 214—16.1)



1. A parking system for motor vehicles and the like comprising in combination, a building structure embodying a plurality of floors disposed in vertically spaced relation and including a road bed along each floor with clearance space thereabove for passage of a load and storage space above and open to the clearance space, an elevator disposed for vertical movement to the road beds, a load carrying dolly adapted to be carried on the elevator and provided with wheels for movement along the road beds, means for lifting a load from the dolly into the storage space, means for retaining the load in the storage space independently of the lifting means, and means for releasing the load retaining means.

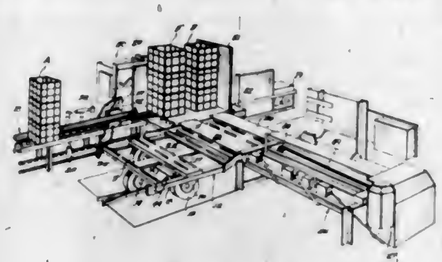
3,042,229
FEED ARRANGEMENT
Rudolf Winter, Duren, Rhineland, Germany, assignor to O. Dörries A.G., Duren, Rhineland, Germany, a firm
Filed Sept. 7, 1960, Ser. No. 54,510
6 Claims. (Cl. 214—17)



1. In an apparatus for intermittently feeding a substance into a fluid-tight vessel, the combination which comprises: a first cylinder communicating with said vessel; a supply conduit communicating with said first cylinder; first and second spaced apart pistons slidably arranged in said first cylinder; connecting means connecting said first and second pistons to each other for movement in unison and maintaining said pistons in such spaced apart relationship that in one position of said two pistons the space between them communicates with said supply conduit; a second cylinder communicating with said vessel and arranged opposite said first cylinder; and a third piston slidably arranged within said second cylinder, said third piston being connected to said connecting means so as to be movable with said first and second pistons in unison therewith.

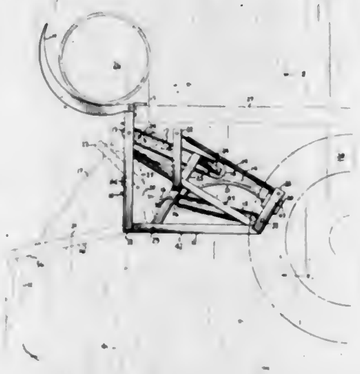
3,042,230
CASE LOADING APPARATUS
Julius J. Barski, Chicago, Ill., assignor to Warren Du Broff, Highland Park, Ill.
Filed July 21, 1960, Ser. No. 44,453
10 Claims. (Cl. 214—41)

1. In dolly loading apparatus, a horizontally traveling conveyor, a frame beside said conveyor providing a platform, abutment means on said frame positioned above said conveyor, pusher means beside said conveyor adapted to translate onto said platform articles stopped on said conveyor by said abutment means, and a transfer mechanism aligned with said platform and pusher means and spaced therefrom, said mechanism being equipped with



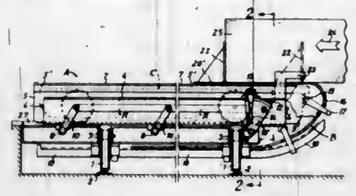
an extensible, cantilvered element and means for reciprocating the same relative to said platform to receive articles therefrom and deposit the same on a dolly interposed between said mechanism and platform, said platform being equipped with inclined recess means for supporting the cantilevered end of said element at the elevation of said platform.

3,042,231
DEVICE FOR UNLOADING CYLINDRICAL OBJECTS
Henry Cyphert, R.D. 2, Clarion, Pa.
Filed Mar. 2, 1959, Ser. No. 796,303
5 Claims. (Cl. 214—77)



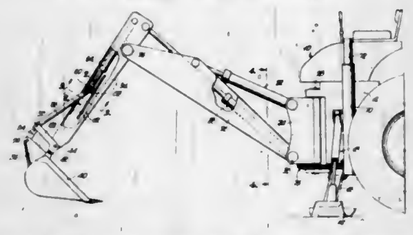
1. A device for lowering objects comprising a rigid frame, means on said frame to attach it to a platform adjacent the edge thereof with said frame extending downwardly from said platform, a cradle arm swingably attached to said frame at one end, a second arm swingably attached to said frame at one end and having a pulley on the other end, means on the other end of said cradle arm to receive a said object, a cable attached to said cradle arm at one end, another part of said cable being connetced to said frame and passing around said pulley, a spring, said spring being connected to said frame at one end and to said second arm at the other end, said spring urging said cradle arm to swing up to bring said means on said cradle arm above the level of said platform, and means to limit the movement of said arm downward when a said object is supported thereon and to limit the movement of said arm to a position with said means on said cradle arm above said platform.

3,042,232
UNIT RECEIVING MEANS
Karl Gustav Olsson, Solna, Sweden, assignor to Casius Corporation Limited, Montreal, Quebec, Canada
Filed Jan. 18, 1960, Ser. No. 2,874
Claims priority, application Sweden Jan. 19, 1959
7 Claims. (Cl. 214—83.34)



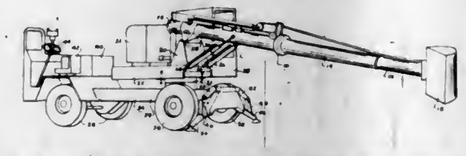
1. An arrangement for receiving substantially parallelepipedic units of substantial size and low strength delivered in a horizontal direction, as from a moving conveyor belt support, and for placing said units on a transport truck, said arrangement comprising in combination a pair of spaced, parallel runways extending in the direction of delivery of the units to be received, a sectional conveyor belt structure composed of parallel, transverse rigid members hingedly coupled together to form, when resting on said runways, a platform of definite length bridging the space between said runways and capable of receiving and supporting at least one complete unit, a transport truck separate from said runways and having wheeled frame capable to enter the space between said runways, means at that end of said runways, where the units enter, for feeding down a main portion of said conveyor belt structure into a storage space below said runways preparatory to the receipt of a unit thereon and for guiding said belt structure up on said runways to let it form said platform thereon, section by section, as the unit enters, so that the unit will become rested on said platform, means on said transport truck extending in the full length thereof and longitudinally of said runways to receive said platform with the unit thereon from said runways, and means for adjusting relative to each other the levels of said runways and said platform receiving means of the truck to thereby effect shifting of the unit-loaded platform from said runways to said truck.

3,042,233
MULTIPLE JOINT BACKHOE
Marion C. Wills, Topeka, Kans., assignor, by mesne assignments, to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 15, 1958, Ser. No. 780,473
2 Claims. (Cl. 214—138)



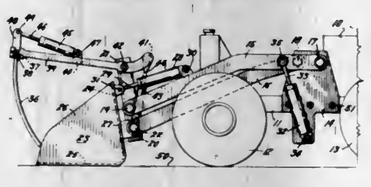
1. In a backhoe provided with boom and bucket structure; a horizontally swingable support for said structure; a horizontal sprocket wheel secured to said support; a chain engaging the wheel for oscillating the same to thereby swing the support; power means secured to each end respectively of said chain for actuating the latter, each power means having a vertically reciprocable rod; and idlers between the rods and the wheel for guiding the chain, the idlers comprising vertical sprocket wheels, the chain having intermediate links meshing with the horizontal wheel and end links meshing with the vertical wheels, the intermediate links being turned at right angles to the end links.

3,042,234
MATERIAL MOVING AND PLACING APPARATUS
George Davis, Dowagiac, Mich., assignor to Davis Engineering, Inc., Dowagiac, Mich., a corporation of Michigan
Filed Aug. 4, 1960, Ser. No. 47,451
17 Claims. (Cl. 214—141)



1. A material working and handling apparatus, comprising a vehicle, a platform on said vehicle rotatable on a vertical axis, power means for rotating said platform, a support means projecting upwardly from said platform and having two spaced members thereon, a boom pivotally mounted on said support means, said boom including a tubular base section, a pivot means with a horizontal axis connected to said base section and supported by said spaced members, hydraulic cylinders reacting between said base section and said platform for raising and lowering said base section about said pivot means, a tubular telescopic section in said base section slidable axially relative to said base section, three longitudinal tracks spaced around the periphery of said telescopic section, flanged rollers for each of said tracks, an annular means rotatably mounted on the exterior of said base section adjacent said telescopic section, means for mounting said rollers on said annular means, a cable having two portions extending parallel with said base section and a portion connecting said portions for movement with said annular means, a double acting hydraulic means connected to said portions for rotating said annular means and for thereby rotating said telescopic section relative to said base section, a hydraulic cylinder in said base section connected at one end to said base section and at the other end to said telescopic section for moving said telescopic section longitudinally relative to said base section, an end section rigidly secured at one end to said telescopic section and extending parallel therewith, a material handling device pivotally attached to the other end of said end section, hydraulic means mounted on said end section for pivoting and retaining in a selected position said material handling device, a hydraulic line connected to said last mentioned cylinder and extending along the upper side of said base section, a sheave for supporting said line above said base section, and a resilient means connected to said sheave and to said base section for retaining said last mentioned line in a taut condition.

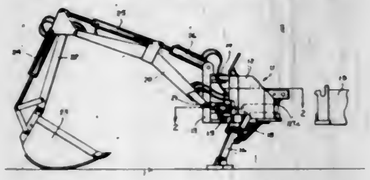
3,042,235
FRONT-LOADING POWER SHOVEL
Merlin F. Stewart, Box 447, Center, Colo.
Filed Sept. 28, 1960, Ser. No. 58,944
4 Claims. (Cl. 214—145)



1. A front loading shovel for a powered vehicle comprising: a scoop-shaped shovel; means for mounting said

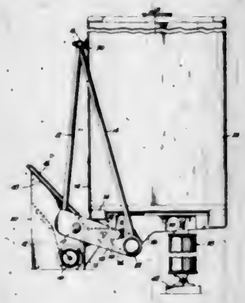
shovel forwardly of said vehicle; means for raising and lowering said shovel relative to said vehicle; a shovel frame mounted rearwardly of said shovel so as to move vertically therewith; a first pivot means on and adjacent the top of said shovel frame, a pair of gate arms mounted on said first pivot means and extending forwardly therefrom in spaced relation; a second pivot means on and adjacent the forward extremities of said gate arms; a gate plate pivotally suspended from said second pivot means between the forward extremities of said gate arms; first operating means connected with said gate arms for swinging the latter vertically about the axis of said first pivot means; and a second independently-operated operating means connected with said gate plate for swinging the latter horizontally about the axis of said second pivot means.

3,042,236
TRENCHER TURRET ROTATING APPARATUS
John S. Pilch, % Ware Machine Works, Inc., P.O. Box 140, Ware, Mass.
Filed Dec. 14, 1959, Ser. No. 859,436
4 Claims. (Cl. 214—151)



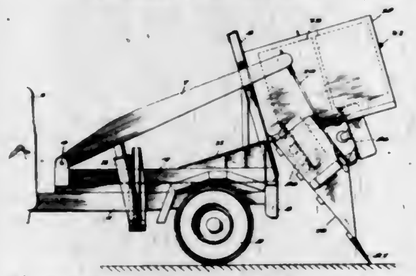
1. In a device of the character described, a support, a boom support pivotally connected to said support for pivotal movement about a vertical axis and means for pivoting said boom support relative to said support, said means comprising a pair of hydraulic jacks each connected at one end to said support and each connected to said boom support by a separate chain consisting of only two links, said chains each being connected only adjacent their opposite ends to one of said hydraulic jacks and to said boom support and stop means on said boom support for controlling the movement of said chains.

3,042,237
BIN TILTING DEVICE
Marion E. Dole, Beatrice, Nebr., assignor, by mesne assignments, to Hoover Ball and Bearing Company, Saline, Mich., a corporation of Michigan
Filed Nov. 26, 1957, Ser. No. 699,032
4 Claims. (Cl. 214—314)



1. A tilting device for a rectangular bin having a bottom end provided with supporting legs and a material discharge and discharge opening closure means therefor comprising a hinged outwardly opening door for closing said material discharge opening, said door being disposed adjacent a lower end portion of a side wall thereof; a rotatably mounted bin holding and supporting device comprising a rigid frame structure contacting the said side wall of said bin at a position above said side door and detachably supporting the bottom end of the bin; means for rotationg said bin holding and supporting device substantially 45°; a relatively fixed material receiving means; a face plate having a material receiving opening therethrough, which opening is larger than said hinged door, said plate rigidly being disposed on said relatively fixed material receiving means, said face plate being angularly disposed at substantially 45° to the horizontal, being disposed in the path of travel of said discharge means of said bin, and being alined to meet the said side wall of said bin around said door with a flush contact upon rotation of the bin holding device; and gasket means disposed between said plate and the said side wall of the bin upon said rotation, said relatively fixed supporting means supporting said bin against further tilting when the bin is rotated to provide said flush contact.

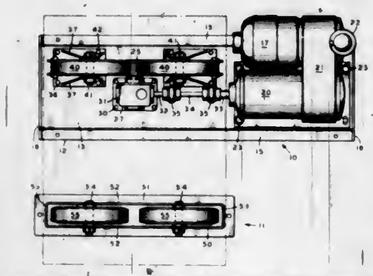
3,042,238
CONTAINERS FOR TRANSPORTING AND DUMPING MATERIALS
Mac B. Bryan, Lake Charles, La., and Henry C. French, Knoxville, Tenn., assignors to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed Aug. 3, 1959, Ser. No. 831,351
6 Claims. (Cl. 214—317)



1. A container of the character described, comprising a master carrying case including a body portion and a bottom discharge door hinged to the body portion for downward swinging movement relative thereto, a plurality of insert containers aligned in rows and columns with at least two insert containers in each row and each column within the carrying case and seated upon the bottom door thereof, each of the insert containers including a body portion and a bottom discharge door hinged to the body portion for downward opening movement relative thereto upon opening movement of the first-mentioned bottom discharge door, bracket means on the body portion of each insert container adjacent the top thereof and means inside and rigid with the body portion of the carrying case adjacent the top thereof cooperating with the bracket means for supporting the body portions of the insert containers within the carrying case during the opening movements of the doors to prevent the insert containers from falling downwardly out of the carrying case.

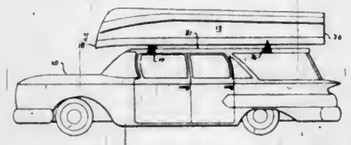
3,042,239
TURNING ROLL ASSEMBLY
Cleveland N. Cooper, Webster Groves, Mo., assignor to Pandjiris Weldment Co., St. Louis, Mo., a corporation of Missouri
Filed Mar. 24, 1958, Ser. No. 723,442
6 Claims. (Cl. 214—340)

1. In a turning roll assembly for supporting and rotating a work piece, a base, a pair of wheels disposed in side by side relation, support means movably mounted on said base for carrying each said wheel, a drive roll disposed between said wheels and drivingly engaging said wheels to rotate said wheels in the same direction, means for rotating said drive roll whereby to turn said wheels and said work piece, a tie rod interconnecting said support



means including means for adjusting the length of the rod to vary the distance between said support means simultaneously, whereby to urge the wheels against the drive roll with a balanced predetermined pressure, and means fastening the support means to said base in the adjusted position.

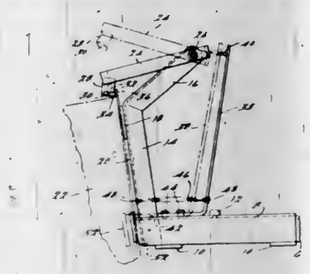
3,042,240
CAR TOP BOAT LOADER
Theodore E. Cline, 1448 Magnolia Ave., Elkhart, Ind.
Filed Apr. 22, 1960, Ser. No. 24,106
7 Claims. (Cl. 214—450)



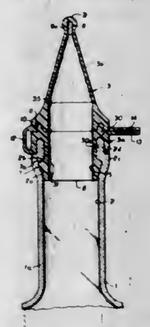
1. An apparatus for loading boats and other articles onto the top of an automobile and the like, comprising a horizontal support member of a length substantially the same as the width of the automobile top, a fixture secured to each end of said member for attaching said member in fixed position to the automobile, a tubular member of substantially the same length as said support member attached to said support member along one side thereof and positioned below the top of said support member, a means closing one end of said tubular member, a second tubular member telescopically disposed in said first tubular member and having an extended position beyond the side of the automobile and a retracted position substantially fully within said first tubular member, means for locking said second tubular member selectively in its extended and retracted positions, a second support member of substantially the same length as said first support member, fixtures secured to each end of said second support member for attaching said second support member in fixed position to the automobile, and a lug secured to each end of and projecting above said second mentioned support member, the inwardly facing surface of said lugs being parallel with each other and extending toward the side to which said second tubular member extends.

3,042,241
BARREL LIFT MECHANISM
Walter F. Bauman, Richmond, Mich., assignor to Ironrite, Inc., Mt. Clemens, Mich., a corporation of Michigan
Filed July 21, 1960, Ser. No. 44,468
8 Claims. (Cl. 214—653)

1. In a mechanism for lifting objects having an upstanding flange at the upper end thereof and adapted for mounting on a mobile supporting member, the combination comprising a frame including an upstanding member having a forwardly directed contact surface thereon adapted to contact the side of the object to be lifted, lever means pivotally mounted on said frame and movable to and from an inoperative position and an engaging position, engaging means on said lever means for gripping the inner surface of the upstanding flange on the object, said lever means when in said engaging position disposed with said engaging means thereon in vertical spaced relation above and forwardly of the center of contact of said contact surface and in opposing spaced relationship thereto and directed substantially perpendicular toward a plane therebetween, said lever means when in said inoperative position disposed with said engaging means thereon arcuately spaced upwardly from said engaging position, contact means on said frame for contacting the side of an object to be lifted and actuable thereby, and latching means for holding said lever means in said inoperative position and for releasing said lever means enabling gravitational movement thereof to said engaging position in response to actuation of said contact means by an object to be lifted.



3,042,242
STOPPER WITH SAFETY SEALS
Walter Abt, Blonay, Switzerland, assignor to Inredeco, Inc., Dover, Del., a corporation of Delaware
Filed Feb. 13, 1961, Ser. No. 88,764
4 Claims. (Cl. 215—41)



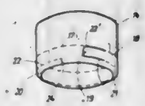
1. A stopper for a container having a neck, said stopper comprising a stopper lower portion having means for connection thereof to said container neck with said stopper, lower portion extending above said neck, said stopper lower portion having a top edge, said stopper lower portion having a through axial bore, a stopper upper portion having a bottom edge and a cavity extending to said bottom edge, said stopper upper portion also having an outlet passage from said cavity to its outer surface of smaller diameter than the diameter of said bore, means releasably sealing said outlet passage, said stopper portions having co-operating snap means releasably securing them together

with the bottom edge of said upper portion sealingly resting upon the upper edge of said bottom portion, tear flanges attached to said stopper portions and extending radially therefrom respectively from the bottom edge of said upper portion and upper edge of said bottom portion, said snap means permitting turned orientation of said stopper portions for registration of said tear flanges, said stopper portions being snapped together with said tear flanges in registration, said tear flanges being secured together, said stopper portion being thereby locked from separation, said tear flanges being severable to permit separation of said stopper portions.

3,042,243
SEALING CAP FOR BOTTLES, JARS, CANISTERS AND SIMILAR CONTAINERS

Hermann Ritzenhoff, 14, an der Schaferbuche, Marburg an der Lahn, Germany

Filed Aug. 2, 1960, Ser. No. 47,068
9 Claims. (Cl. 215—46)



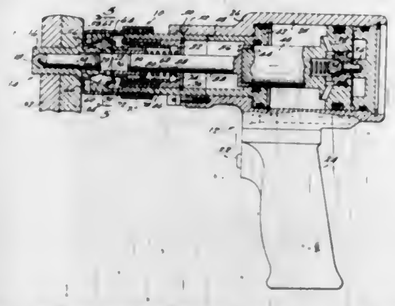
1. A sealing cap for bottles, jars, containers, and the like comprising a cap having a permanent portion and a removable sealing band, said sealing band being integral with and attached to the lower edge of said permanent portion, a weakening line girdling said cap at the lower edge of said permanent portion at which weakening line the removable sealing band is attached, a tongue formed in said sealing band of narrower width than said sealing band and defined at its upper edge by an upper cut extending circumferentially along said upper weakening line and at its lower edge by a lower circumferential cut, a lower weakening line in said sealing band extending circumferentially from said lower cut and a transverse slit extending into said sealing band from the lower edge, and meeting with said lower weakening line, a narrow strip formed in said sealing band formed between said tongue and said lower weakening line and the lower edge of the sealing band and extending to said transverse slit adjacent to said tongue and the lower weakening line and a separable portion of said sealing band lying between said upper and lower weakening lines and adjoining said tongue whereby said tongue and said separable portion are removed integrally separated from said narrow strip by pulling on said tongue.

3,042,244
NOSE ASSEMBLY FOR FASTENER APPLYING TOOLS

George J. Van Hecke, Detroit, Mich., assignor to Huck Manufacturing Company, Detroit, Mich., a corporation of Michigan

Filed June 12, 1958, Ser. No. 741,651
10 Claims. (Cl. 218—30)

1. In a fastener applying tool, a tubular barrel having an outer end adapted to be telescoped over a fastener, an expandable and contractible annular jaw assembly disposed coaxially within said barrel end, said jaw assembly having radially inwardly extending projection means comprising radially and axially inwardly inclined surface portions on the inner portion of said jaw assembly so that on movement of a fastener axially inwardly of said barrel outer end into engagement with said surface portions said jaw assembly is expanded, means operatively associated with said jaw assembly and said barrel outer end for urging said jaw assembly toward a forward and contracted position for moving said projection means into gripping engagement with a fastener disposed concentrically therein, a plunger mounted in a coaxial relation with said jaw assembly for movement between a position within the jaw assembly and a position spaced axially inwardly of the

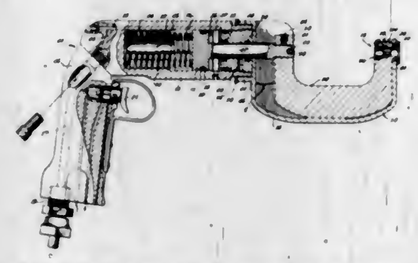


barrel from said jaw assembly, and means operatively associated with said plunger and said barrel for applying an axial force to said plunger relative to said barrel for driving the fastener.

3,042,245
RIVET PULL GUN

Albert M. Schwartz, Palos Verdes Estates, Calif., assignor to Brown-Line Corporation, El Segundo, Calif., a corporation of California

Filed Feb. 20, 1961, Ser. No. 90,308
8 Claims. (Cl. 218—42)

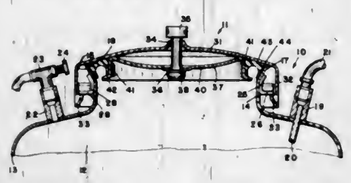


1. A tool having a pair of cooperating elongated adjacently disposed elements adapted to perform an operation at a point on a member, one of which elements functions by having a portion drawn away from a portion of the other element, said tool being adapted to effect such drawing movement of said one portion from the other portion despite the presence of an obstruction spaced from a member and extending past a line normal to the member from said point on said member, but leaving access to said point from one side thereof, said tool comprising: a first yoke, said yoke comprising a first elongated element having a longitudinal cross-section such as to extend from said point, in circumvention of said obstruction to a location beyond said obstruction; a second yoke, said second yoke including a second elongated element similar in configuration to said first yoke and disposed adjacent the latter, said second element being slideable relative to the first element within the space between the member and the obstruction and upon such sliding movement, a portion of the second element is drawn away from a portion of the first element, and the first element carrying the said second element; and means disposable beyond said obstruction, said means having a fixed portion secured to the first element, and a reciprocable portion connected to the second element, whereby upon actuation of said reciprocable portion of said means, the second element to which the reciprocable portion is connected is caused to slide relative to the first element thereby drawing away the said portion of the second element from said portion of the first other element cooperating therewith.

3,042,246
CLOSURE MEANS FOR PRESSURIZED SYRUP TANKS AND THE LIKE

Frank Welty, 4962 Lockwood Blvd., and Raymond Welty, 4307 Lake Road, both of Youngstown, Ohio

Filed Oct. 6, 1958, Ser. No. 765,590
5 Claims. (Cl. 220—40)



1. Self-sealing closure means for a pressurized container comprising a container, said container having a circular and vertically extending large mouth opening, a circular outwardly directed flange at the outer end of said opening, said flange having a smooth inner periphery defining a first sealing surface, locking means, said locking means comprising a plurality of radially projecting circumferentially extending spaced segmental flanges secured to the outer periphery of said container adjacent said circular vertically extending large mouth opening, each of said flanges having a generally horizontally extending portion, an intermediate portion and an offset portion disposed in a plane substantially below the plane of said generally horizontally extending portion, a removable closure cap comprising a circular cover disc having a skirt depending from the outer periphery thereof, said cover disc overlying said large mouth opening, a plurality of circumferentially spaced locking elements carried by said skirt and engaging said flanges to lock said closure cap to said container, a clamping disc on the inner side of said cover disc, means mounting said clamping disc from said cover disc, said clamping disc having a vertically extending outer peripheral surface defining a second sealing surface, said first and said second sealing surfaces being disposed in spaced concentric relation, a resilient annular sealing element mounted on said clamping disc and having sealing contact with said first and said second sealing surfaces, and said resilient annular sealing element being deformed into sealing relation with respect to said first and said second sealing surfaces only when said locking elements engage said intermediate portions and said offset portions of said flanges.

3,042,247
PREFABRICATED PACKING-CASES FOR DATES AND OTHERS

Louis Bonnet, 25 Blvd. Baille, Marseille, France

Filed Nov. 17, 1958, Ser. No. 774,315
Claims priority, application France Nov. 18, 1957
1 Claim. (Cl. 220—44)

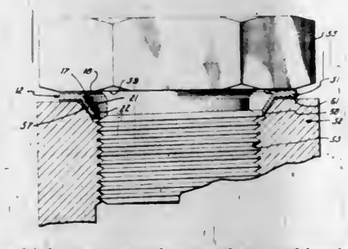


A packing box for foodstuffs comprising a tray having a base and a continuous wall extending upwardly from the periphery thereof, a plurality of grooves in the top edge of said wall and extending downwardly at the external face thereof, said wall and base being made of a stiff, dense, air-tight and water-tight material, a first upper cover of air-permeable material having a top and a continuous wall depending from the periphery thereof, said wall being of similar shape to the wall of the tray and being of somewhat larger dimensions to permit engagement slidably over the wall of the tray, the depth of the lid wall being less than the height of the tray wall, and a second lower cover identical to the upper cover for slidable engagement in inverted position onto the lower part of the tray until the free edge of the two covers abut such that the two covers together completely enclose the tray, said grooves in the external face of the tray wall extending downwardly to a point below the lower edge of the upper cover positioned thereon, whereby upon removal of the lower cover the tray and upper cover then constitute a box having a direct circulation of air through the grooves.

3,042,248
HIGH PRESSURE CLOSURES

Rudolph E. Krueger, 2808 N. Naomi St., Burbank, Calif.

Filed Apr. 7, 1958, Ser. No. 726,752
5 Claims. (Cl. 220—46)

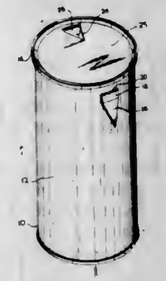


1. In a high pressure closure the combination comprising a first joint member having a sealing surface, a second joint member having a sealing surface, an annular metallic spacer body between the first joint member and the second joint member, a first annular metallic sealing lip extending from the spacer body, and a second annular metallic sealing lip extending from the spacer body to define an annulus between the first and second lips, each lip having an annular portion diverging away from the spacer body and toward a joint member, each diverging annular portion having only a line contact with the sealing surface of the respective adjacent joint member in final operative sealing position.

3,042,249
COMBINED CAN OPENER AND FOOD CAN

Peter Favolise, 356 Asylum St., Norwich, Conn.

Filed July 31, 1961, Ser. No. 128,043
9 Claims. (Cl. 220—48)



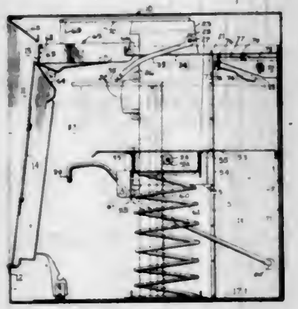
1. A can opener comprising a cylindrical can body, a blade having an arcuate flange welded to the can body near one end thereof, said blade being generally triangular with a free apical end extending radially outwardly of the can body and directed toward the other end of the can body, whereby one cylindrical can body may be disposed ad-

jacent to another cylindrical can body and axially parallel therewith, with the apical end of the blade located at the top of the other can body, and whereby axial movement of the one can body with respect to the other can body causes the blade to pierce said top to form a generally triangular hole with excess metal of the top forced downwardly into the other can body to clear said triangular hole.

3,042,250
NEWSPAPER VENDING APPARATUS

Lee S. Watlington, 1204 N. Linden, Bloomington, Ill.

Filed Nov. 17, 1960, Ser. No. 69,989
6 Claims. (Cl. 221—41)



1. A newspaper vending machine comprising

(*a*) a housing, the front wall of which is provided with a delivery opening,

(*b*) a downwardly inclined delivery chute extending from said delivery opening inwardly of said housing,

(*c*) a box-like structure positioned interiorly of said housing and having an open front facing the front wall of said housing,

(*d*) a horizontally extending movable platform within said box-like structure for supporting a vertical stack of horizontally disposed newspapers,

(*e*) means for successively moving in a vertical direction through said box-like structure said platform and the stacked newspapers as they are successively vended from said housing,

(*f*) said means including a spring in said box-like structure and beneath said platform and adapted to move the same vertically therethrough,

(*g*) a substantially inverted U-shaped carriage supported by said box-like structure adapted to be reciprocally moved transversely thereover, through a horizontal plane,

(*h*) means movably connecting the free arms of said inverted U-shaped carriage to the opposite side walls of said box-like structure adjacent the top wall thereof,

(*i*) said carriage pivotally supporting vending fingers freely projectable through slots formed in the top wall of said box-like structure and adapted to be freely moved transversely over the uppermost paper in one direction,

(*j*) said fingers having penetrating points carried by the free end thereof for engaging the uppermost paper when said fingers are moved in an opposite transverse direction with respect thereto so as to move the uppermost paper on to said delivery chute and out of said delivery opening,

(*k*) actuating means for moving said carriage reciprocally over said box-like structure,

(*l*) said actuating means having one end connected to said carriage and the opposite end extending exteriorly of said housing, with said opposite end manually movable through a horizontal plane in a first direction away from said front wall of said housing and in a second direction toward said front wall,

(*m*) means connecting said one end of said actuating means to said carriage for moving said carriage rearwardly over said box-like structure in an opposite direction to the first direction of movement of said actuating means, and in a forward direction over said box-like structure reversely to the second direction of movement of said actuating means so as to vend a paper through said delivery means,

(*n*) means for guiding said connecting means through a horizontal plane during movement of said actuating means,

(*o*) means for guiding said carriage reciprocally for movement through a horizontal plane over said box-like structure,

(*p*) a closure pivotally carried by the top wall of said box-like structure for normally closing said delivery opening,

(*q*) locking means pivotally carried by said carriage and normally in contact with said closure for preventing pivotal movement thereof in one direction out of said delivery opening,

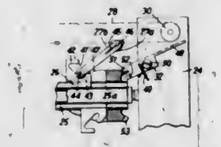
(*r*) said locking means pivotally connected to said carriage so as to be moved therewith out of contact with said closure so the latter may be pivoted out of said delivery opening by the paper being vended,

(*s*) said locking means pivotally held out of locking position by said closure when said closure is pivoted out of closing position during the vending of a newspaper therethrough.

3,042,251
FEEDING MECHANISM FOR AUTOMATIC LATHES

Leon Konrad, Evilard, Switzerland, assignor to Usines Tornos Fabrique de Machines Moutier S.A., Moutier, Switzerland, a joint-stock company of Switzerland

Filed Nov. 5, 1959, Ser. No. 851,184
Claims priority, application Switzerland, Nov. 6, 1958
4 Claims. (Cl. 221—81)

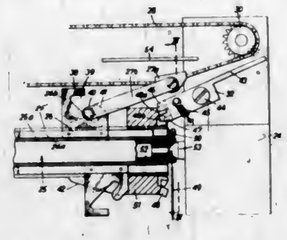


1. In a feeding mechanism for automatic lathes, the combination of: a revolver drum constituted by a plurality of guiding means, each of said guiding means being adapted for receiving a stock bar, said revolver drum being adapted to be moved for successively bringing each of said guiding means in a feeding position; an endless chain; a servo-motor driving said chain; a plurality of pushing means movable axially between a rearmost and a foremost position of the said guiding means, said plurality of pushing means being respectively associated with said guiding means to bear against the stock bars contained in said guiding means; driving means carried by said chain and operatively connected to the pushing means associated with the guiding means which is in feeding position, each of said pushing means comprising a portion provided with an opening and said driving means having a projection extending into said opening to drive the pushing means associated with the guiding means situated in said feeding position forward against the latter and then backward toward a rearmost position, and means to urge said projection out of said opening when said chain has moved said pushing means backward into their rearmost position.

3,042,252
FEEDING MECHANISM FOR AUTOMATIC LATHES

Leon Konrad, Rte. Principale 52, Evilard, Switzerland

Filed Nov. 5, 1959, Ser. No. 851,196
Claims priority, application Switzerland Nov. 6, 1958
10 Claims. (Cl. 221—81)

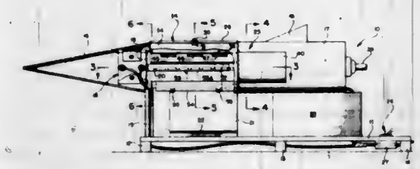


1. In a feeding mechanism of the character described, in combination, support means; elongated carrier means including a plurality of guiding means in parallel arrangement for carrying and guiding a plurality of members respectively movable along said guiding means, said elongated carrier means being mounted on said support means for step by step movement in a direction transverse to said guiding means between a plurality of consecutive positions in which said plurality of guiding means are consecutively located in a feeding position aligned with a feeding path; moving means for moving said elongated carrier means step by step between said plurality of consecutive positions; feeding means adapted to engage the member which is guided by a guiding means located in said feeding position and to move said member along said feeding path in one direction while guided by the respective guiding means; driving means for moving said feeding means engaging the member in that guiding means which is located in said feeding position along said feeding path from an initial position located at one end of said guiding means to an end position and along a return path part of which is located outside said feeding path back to its initial position; and actuating means carried by said driving means for actuating said moving means for moving said carrier means from one into the next of said consecutive positions while said feeding means is moved by said driving means along that portion of its return path which is located outside of said feeding path.

3,042,253
CIGARETTE DISPENSER AND LIGHTER

Howard K. Dougherty, 3906 E. 57th St., Maywood, Calif.

Filed Oct. 27, 1960, Ser. No. 65,336
6 Claims. (Cl. 221—145)

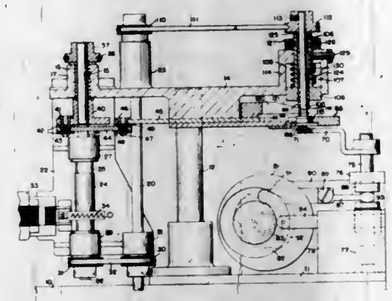


6. A cigarette lighter comprising: an inverted U-shaped channel having perforations through the sides thereof; a heating element positioned at one end of said channel; and means to draw air from inside of said channel through said one end thereof and through said perforations both (1) to hold a cigarette in contact with said heating element, and (2) to levitate said cigarette at a position between the sides of said channel at the position of said perforations through the sides thereof.

3,042,254
BUTTON LOADING MECHANISM FOR SEWING MACHINES

Roy H. Hendrickson, Rochester, N.Y., assignor to Rochester Button Company, Rochester, N.Y., a corporation of New York

Filed June 17, 1959, Ser. No. 820,975
9 Claims. (Cl. 221—173)

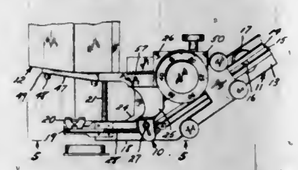


9. Apparatus for loading a perforated button into a sewing machine having generally horizontally disposed button-holding jaws from the rear of said jaws, comprising a transfer arm mounted for oscillation about a vertical axis and for reciprocation in the direction of said axis, a plurality of pins extending upwardly from said arm parallel to said axis for holding a button on said arm, and means operatively connected to said arm to successively swing said arm about said axis from a button-receiving position below a source of button supply to button loading position to insert a button carried by said pins between said jaws from the rear of said jaws, then to lower said arm vertically to disengage said pins from the button, then to swing the arm back to initial angular position and to raise said arm vertically again to return it to starting, button-receiving position.

3,042,255
SHANK BUTTON FEEDER EJECTION MEANS

Oscar Halbreich, Forest Hills, N.Y., assignor to Kem Button Corporation, Brooklyn, N.Y., a corporation of New York

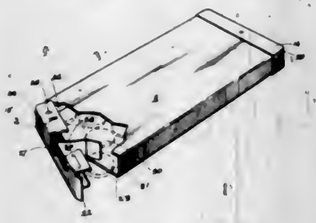
Filed Jan. 11, 1960, Ser. No. 1,731
2 Claims. (Cl. 221—186)



1. In a shank button feeder, including an elongated button feeding chute element and means for raising and lowering the inner end of said chute element, the improvement comprising: means for positively singly ejecting successive buttons from the lower end of said chute element upon the raising of said lower end of said chute element, said means including adjustably fixed cam means, lever means pivotally mounted upon said chute element, said lever means including a first portion contacting said cam means and a second portion having an elongated slot therein, said chute element having guiding track means thereon, a first block supported by said guiding track for movement substantially parallel to the line of movement of said buttons, said block having a recess therein, a second block disposed within said recess in said first block and being slidable with respect thereto to a limited degree, means connecting said second block with said slot in said

lever means, said second block having means extending outwardly of said first block, a button-engaging member pivotally mounted on said first block and selectively insertable into the path of buttons in said chute element, said outwardly extending means being engageable with said button-engaging means for imparting pivotal motion thereto.

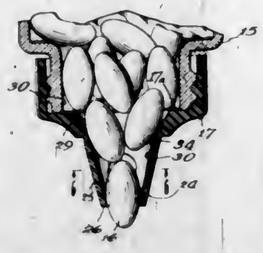
3,042,256
TABLET DISPENSING DEVICE
Edward Sanner, Erie, Pa., assignor to said Edward Sanner and Norbert E. Sanner, both of Erie, Pa., as joint tenants
Filed Nov. 27, 1959, Ser. No. 855,646
1 Claim. (Cl. 221—301)



A container comprising a hollow body open at one end and of a size suitable to be held in a hand, said body being rectangular in cross section and having an inside width suitable to support a single layer of tablets lying on edge therein, a cover in the form of a channel disposed over the open end of said body, said cover having flanges overlying the sides of said body adjacent the open end thereof, detents extending outwardly from said body adjacent one end thereof, a slot in one side of said channel, each said detent being received in said slot, and a tongue in the form of a flat piece of material fixed to the bottom of said channel at the distal end thereof and extending toward the end thereof having said slot therein, said tongue having an intermediate part bent from said channel and toward said distal end and extending a distance therefrom substantially equal to the diameter of one of said tablets to be dispensed, said tongue terminating in an end portion inclined to said intermediate part extending from said intermediate part and toward said distal end and terminating a distance greater than the diameter of one said tablet when said cover is closed, said intermediate part and said end portion defining a hook adapted to receive a single said tablet when said cover is in closed position, said end portion swinging between a tablet received in said hook and a tablet next to it as said cover is opened whereby a single tablet may be dispensed, the distal end of said cover being adapted to be grasped betwen the thumb and forefinger of a user while said body is held in the palm of said user's hand whereby said user can open said cover and dispense a said tablet into his mouth without touching said tablet.

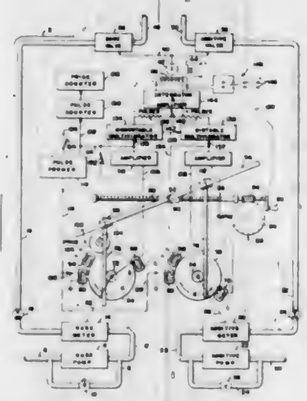
3,042,257
CAPSULE DISPENSER
Donald E. Dailey, Evansville, Ind., assignor to Mead Johnson & Company, a corporation of Indiana
Filed Mar. 2, 1959, Ser. No. 796,379
1 Claim. (Cl. 221—309)

A dispensing closure for a capsule container having a mouth, said closure embodying a unitary structure and comprising a container engaging vertical portion, means defining a first conical inner surface portion adjoining the container engaging portion of the closure by means of a horizontal shoulder portion and merging with said inner surface portion, and an open ended tapered nozzle portion extending from said first said inner surface portion and having a second conical inner surface portion, the second conical inner surface portion forming a smaller angle with the longitudinal axis of the closure than the angle formed therewith by the first conical surface portion, the first surface portion and shoulder portion providing a transition between the container engaging vertical portion and the second named surface portion, said tapered nozzle being truncated normally to the said lon-



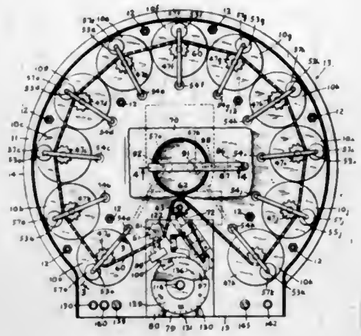
gitudinal axis and having a pair of slots therein the side edges of which are parallel to the said longitudinal axis, the slots being diametrically opposed to each other, said slots being separated by a pair of diametrically opposed capsule gripping resilient fingers of generally similar configuration, each finger having a circumferential angular extent with respect to said axis of the order of 60°, at the tip thereof.

3,042,258
METERING MEANS
Fred M. Mayes, Richardson, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed May 23, 1958, Ser. No. 737,435
12 Claims. (Cl. 222—26)



1. In fluid dispensing apparatus, a displaceable element providing an endless circulating recording channel, a fluid meter driving said element at a rate proportional to the fluid flow through said meter, first means responsive to pulses to produce records of said pulses on said element, second means located beyond the first means in the direction of displacement of said element for sensing said records and emitting pulses corresponding to the sensed records, means for varying the spacing between the first and second means, unit price indicating means connected to said last-mentioned means, means for delivering to the first means pulses emitted from the second means to produce records by the former, and means for erasing said records from the element prior to rearrival of said records at the position of the first means.

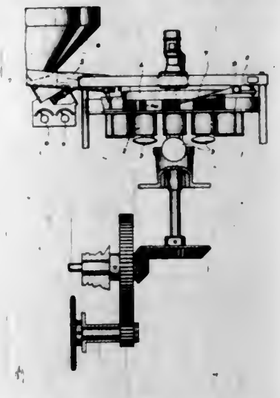
3,042,259
PAINT COLORANT DISPENSING MACHINE
John P. Engel, Miller Place, N.Y., assignor to Sapolin Paints, Inc., Brooklyn, N.Y., a corporation of New York
Filed Nov. 10, 1958, Ser. No. 772,877
9 Claims. (Cl. 222—33)



1. A paint colorant dispensing machine which comprises a framework, an array of colorant supply vessels mounted on said framework, a separate gear pump connected to each of said supply vessels, each gear pump having an intake connected with the interior of its supply vessel and a delivery conduit from which colorant pumped from that supply vessel is delivered, a rotatable drive shaft connected to each of said gear pumps, each of said gear pumps delivering a predetermined fixed amount of colorant through its delivery conduit for a given predetermined amount of angular rotation of its pump shaft, means including a driven rotatable main shaft driving said pumps, a star wheel having cam teeth mounted to rotate with said main shaft, a guideway on said framework, a drive rod mounted for reciprocation in said guideway, a spring biasing said rod toward retracted position, said rod being pushed in a forward stroke from retracted position by said cam teeth and returned to retracted position by said spring biasing means, a disc wheel having ratchet teeth mounted for rotation on said framework, a pawl on the end of said drive rod, said pawl rotating said ratchet wheel an equal angular amount on each forward stroke of said drive rod, a scale having a zero position and mounted to rotate with said ratchet wheel, said scale being presettable with reference to a fixed index, said scale moving toward its zero position a given amount upon each forward stroke of said drive rod and indicating the amount of colorant delivered by said pumps.

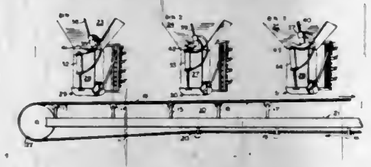
3,042,260
METERING DEVICE FOR PACKING MACHINES
Hermann Thürlings, Viersen, Rhineland, Germany, assignor to Hansella-Werke Albert Henkel A.G., Viersen, Rhineland, Germany
Filed Aug. 6, 1959, Ser. No. 832,056
Claims priority, application Germany Aug. 18, 1958
4 Claims. (Cl. 222—56)

3. In a metering device for use in connection with a packing machine: a turntable having an upper working surface in a substantially horizontal plane and being rotatable about its vertical axis, said turntable being provided with an upstanding peripheral flange, a plurality of metering cups for receiving the material to be dispensed, said cups being arranged along a circular line substantially coaxial with said turntable and being supported by the latter, feeding means for feeding material to be dispensed to said cups, control means connected with said feeding means and operable for varying the delivery thereof, a disc-like brush having its effective brushing surface arranged along a substantially horizontal plane for brushing excessive material from said cups, said brush being eccentrically arranged with regard to said circular line while extending over a portion of the path of movement of said cups for brushing off excessive material from said cups, said brush defining with the flange of said turntable a



crescent-shaped passage, and feeler means extending into said crescent-shaped passage for feeling the quantity of material brushed off from said cups into said passage and operatively connected to said control means for adjusting the same in conformity with the condition of said feeler means to thereby vary the delivery of said feeding means accordingly.

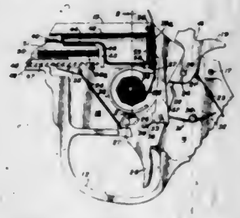
3,042,261
HOPPER GATE APPARATUS AND CONTROL
Edd H. Lovette, 2121 Pershing St., Durham, N.C., assignor of twenty-five percent to Hubert O. Teer, Jr., and twenty-five percent to Mary Teer Barringer, both of Durham, N.C.
Filed Oct. 27, 1958, Ser. No. 769,916
4 Claims. (Cl. 222—70)



1. A remotely and centrally operable electrical mix control for an aggregate mixing apparatus having gate means, including means projecting therefrom and movable therewith along a fixed path of opening, pivoted on each of a plurality of gravity feed hoppers successively placed above and along an electrically driven conveyor comprising: individual electrically operable actuators mounted on each of said hoppers and adapted to open the respective gate means pivoted thereon; a plurality of solenoids including movable armatures stationed at each of said gate means at various positions adjacent the path of opening thereof; separate pin means connected to each armature and arranged upon energization of its respective armature to move across and block at the position of the pin means the respective gate projecting means path of opening to which it is adjacent; a power source; first manually positionable switching means arranged to selectively establish circuits between said source and predetermined ones of said solenoids thereby enabling selected ones of said paths to be blocked at predetermined positions prior to the opening of any of said gate means; second switching means to connect said source to said conveyor; third manually positionable switching means to selectively establish circuits between said source and pre-

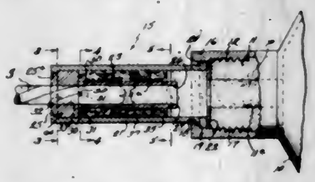
determined ones of said actuators, said circuits including said second switching means and a fourth switching means, energization of said actuator circuits thereby being made dependent on operation of both said second and fourth switching means; all of said switching means being centrally and remotely located from said hoppers thereby enabling the operator of said control to draw said aggregate selectively from various combinations of said hoppers and in various amounts as regulated by the setting of said first and third switching means.

3,042,262
COMBINED WATER AND CAP PISTOL
Thomas C. Powell, 3138 Bristol Road, Fort Worth, Tex.
Filed Dec. 3, 1959, Ser. No. 857,117
3 Claims. (Cl. 222—79)



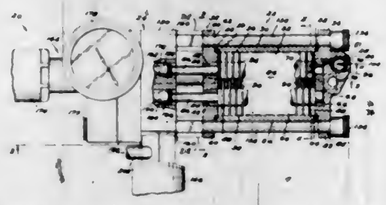
1. A toy pistol comprising:
a casing including a barrel,
a spring loaded hammer pivotally mounted in said casing rearwardly of said barrel,
a trigger including a sear pivotally mounted in said casing, said sear being positioned for coaction with said hammer,
a transverse longitudinally movable striker plate mounted in said casing and positioned to be struck by said hammer,
a bladder in said casing and in contact with said striker plate on the side thereof opposite said hammer,
a tube within said barrel and in communication with said bladder, and
means moving caps on to said striker plate in the path of said hammer.

3,042,263
STRIPED PASTE DISPENSER
John Gallo, Sr., 64 Broad St., Boston, Mass.
Filed Nov. 13, 1959, Ser. No. 852,809
1 Claim. (Cl. 222—94)



A dispensing device for striped paste comprising an internally threaded open ended cap adapted to engage the threaded end of the collapsible tube, a hollow tubular member extending from and having one end in communication with the open end of said cap, a plug having a bore therethrough closing the other end of said tubular member, a tube of lesser diameter than said tubular member secured to said plug and extending inwardly into said tubular member, said tube having an open end in communication with said bore, a disc having a central opening slidably surrounding said tube and having its rim contacting the inside of said tubular member, coloring matter in the space between said disc and said plug, said tube having apertures therethrough adjacent said plug, said bore being grooved with the ends of the grooves being located adjacent said apertures in said tube, said grooves being arranged spirally, and additional grooves interiorly of said tube, said additional grooves being spaced intermediate of said grooves in said bore, said apertures being tapered from the outside of said tube towards the interior thereof.

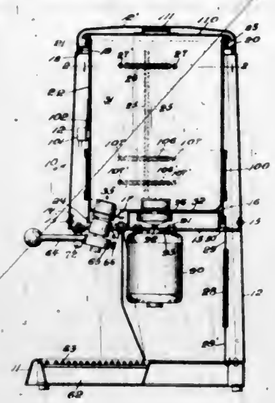
3,042,264
DEMAND MIXING AND DISPENSING MACHINE
Donald E. Trumbull, Inglewood, Arthur J. Devine, Lawndale, and George S. Pyles, Rolling Hills, Calif.; said Pyles assignor to Pyles Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Oct. 1, 1959, Ser. No. 843,823
11 Claims. (Cl. 222—142)



1. A demand mixing machine for mixing together as needed at least two pumpable components and for dispensing the resultant composition without a substantial back-log of composition in the machine which comprises: a mixing chamber having a back end and a front end with an inlet for each of said components in the region of said back end and a relatively constricted outlet in the region of said front end for said composition, whereby the overall flow path of said components and composition in said chamber is from the region of said back end to the region of said front end, said chamber from the region of said back end to the region of said front end having the shape of a pair of overlapping, longitudinally aligned cylinders whereby said chamber has a pair of longitudinally aligned axes of radial symmetry; mixing means in said chamber transversely arranged to said overall flow path, said mixing means comprising a pair of longitudinal shaft means in coaxial alignment with the corresponding longitudinal axis of radial symmetry and extending through openings through the back end of said mixing chamber, each shaft means inside said mixing chamber comprising a plurality of transversely disposed, parallel, generally radially symmetrical vane means interposed between the vane means of the other shaft means, each of said vane means having an outside diameter slightly less than the inside diameter of the cylinder portion of the mixing chamber in which said vane means is disposed, at least some of said vane means of each shaft means having openings therethrough disposed at an angle with respect to the rotation of the shaft means to impel components transversely radially inwardly of the overall flow path and from one cylindrically shaped portion of the mixing chamber to the other cylindrically shaped portion thereof; prime mover means for rotating said shaft means; and separate conduit means for each of said components from the supply sources thereof to the chamber inlets therefor.

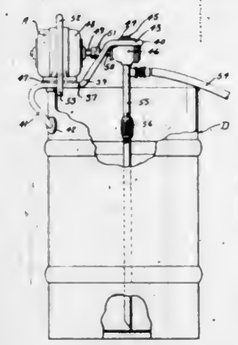
3,042,265
BEVERAGE DISPENSING APPARATUS
Joseph J. Rodth, Swansea, Mass., assignor to The Dane Corporation, a corporation of Massachusetts
Filed Dec. 31, 1957, Ser. No. 706,419
8 Claims. (Cl. 222—146)

4. In a beverage dispensing apparatus, a housing, a removable beverage pot within said housing, a sleeve surrounding said pot in heat transfer relation therewith and having an opening therein, a heater element secured to said sleeve, a temperature responsive device and resilient means



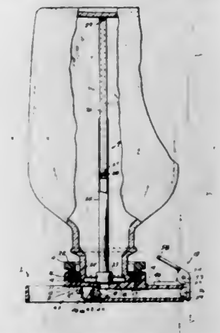
secured to said device for mounting the same on said sleeve in a position to extend through said opening and operable for holding said temperature responsive device in engagement with said pot.

3,042,266
SPRAYING DEVICE FOR LIQUID FERTILIZER
Carl P. Mies, 3916 Thomas Ave. S., Minneapolis, Minn.
Filed Oct. 19, 1960, Ser. No. 64,240
1 Claim. (Cl. 222—180)



A portable spraying attachment for detachable connection with a drum or like container comprising a tubular base frame of a substantially U-shape in plan including spacer parallel legs and a connecting bight portion, said legs including a substantially horizontal base portion, upwardly and inwardly extending arm portions and a substantially horizontally disposed top portion, a depending rotary pump secured to said top portion having an outwardly projecting pump shaft extending between the arm portions and an inlet and an outlet, the outer ends of said leg portions being curved downwardly and inwardly for intimate engagement with the outer surface of the drum, an electric motor rigidly fastened to the base portion, and an upright U-shaped frame extending about said motor and secured to the base portion and projecting below said base portion for intimate engagement with the inner surface of the drum, said upright frame projecting above said motor defining a carrying handle, a flexible hose connected with the outlet and a suction pipe connected to the inlet and rigidly secured to the pump extending into said drum and engaging the bottom wall thereof.

3,042,267
LIQUID DISPENSING DEVICE
Chauncy G. Reynard, Fort Wayne, Ind., assignor to C. G. Reynard Inc., Fort Wayne, Ind., a corporation of Indiana
Filed May 19, 1958, Ser. No. 736,043
13 Claims. (Cl. 222—185)



1. A dispensing device for a liquid comprising a support provided with an opening and a pair of passages disposed alongside one another and having open outer ends at one side of the device, a container for a liquid having an opening communicating with the opening in the support and one of the passages through which the liquid may be released, means for connecting the other passage with the interior of the container for venting air through the passage, means mounted on the support, and a pair of resilient valve means connected to the mounted means at a location exteriorly of the passages for opening and closing the said outer ends for respectively controlling the flow of liquid and air through said passages.

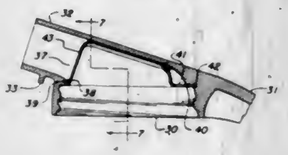
3,042,268
SEALANT GUN
George S. Pyles, Birmingham, Mich., assignor to Pyles Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Apr. 10, 1959, Ser. No. 805,466
6 Claims. (Cl. 222—327)



1. A sealant gun comprising, in combination, a rigid cylindrical barrel open at both ends, a cylindrical plastic cartridge removably receivable within the barrel and having a spout-like prolongation at its forward end adapted to project through the open forward end of the barrel and having a radially projecting circumferential flange overhanging the rear end of the barrel, a plunger in the cartridge for urging contents in the cartridge toward said prolongation, said cartridge having an external linear dimension sufficiently less than the corresponding internal linear dimension of the barrel whereby the forward external end face of the cartridge is spaced inwardly of the forward internal end face of the barrel and the cartridge is linearly suspended within the barrel when the cartridge flange overhangs and is seated against the rear end of the barrel, said cartridge being capable of limited

linear elongation within the barrel under internal pressure within the cartridge of its contents without having the forward end face of the cartridge engage the forward internal end of the barrel, and a valved closure cap assembly releasably coupled with the rear end of the barrel closing the rear end of the cartridge and holding the cartridge flange against the rear end of the barrel, said closure cap having associated therewith a self-relieving fluid pressure regulator mechanism operable to control the flow of fluid under pressure therethrough into the cartridge.

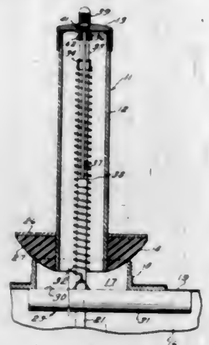
3,042,269
FRUIT JAR POURING SPOUT
William E. Turner, P.O. Box 142, Summerville, Ga.
Filed Mar. 27, 1959, Ser. No. 802,408
1 Claim. (Cl. 222—484)



In a jar top, the combination which comprises a body having an internally threaded recess for receiving a threaded neck of a container in the lower surface of the recess and with a spout extended from one side of the body and in communication with the said recess, a liner of substantially semi-circular formation positioned in said body and providing therein a pouring passage on one side of said liner and venting passages on the opposite side of said liner, said liner having outwardly extending flanges on the longitudinal edges thereof, said body having oppositely disposed aligned grooves therein for receiving the flanges of said liner, said spout having a transversely extending bead at the inner end thereof and said body having a transversely extending slot therein that is positioned in parallel alignment with the bead on said spout, said liner having a groove at one transverse edge thereof for engagement with the bead on said spout and a flange at the opposite transverse edge thereof for engagement with the slot in said body wherein said liner is retained in position in said body, said liner having a relatively large central opening therein in communication with said pouring passage and a pair of parallel longitudinally extending V-shaped grooves therein providing said venting passages for relieving the vacuum in said body, a closure positioned on the end of the spout, said closure having a flange provided with a bayonet slot therein, a handle extended from the side of the body opposite to that from which the spout extends, and said spout having a projection extended outwardly therefrom, and spaced inwardly from the outer end thereof, so that the projection is positioned to be engaged by the bayonet slot in the flange of said closure to thereby provide locking means for securing the closure cap on the end of the spout and also to engage the rim of a container into which products are poured through the spout, said spout also having threads on the outer surface thereof outwardly of the projection thereon and said closure cap having an internally threaded flange thereon adapted to be threaded on the end of the spout.

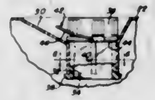
3,042,270
REMOVABLE VENTED SPOUT
Charles R. Stearns, 2550 High St., Oakland, Calif.
Filed Dec. 21, 1959, Ser. No. 861,421
14 Claims. (Cl. 222—484)

1. In a removable spout attachable over an opening in a container, the combination comprising a tube having provision at a lower end for disposition against said opening, a removable cover engageable at the upper end of said tube, a resilient element extending longitudinally with said tube, a cross member secured to the lower end of said resilient element and having laterally extend-



ing portions for abutment against the inside surface of said container adjacent said opening therein, and means for attaching the upper end of said resilient element to said tube.

3,042,271
CONTAINER WITH RETRACTABLE PROJECTABLE SPOUT
Thomas W. Winstead, Baltimore, Md., assignor to Hedwin Corporation, Baltimore, Md., a corporation of Maryland
Filed July 30, 1959, Ser. No. 830,654
10 Claims. (Cl. 222—529)



1. A plastic container for liquids, powders and semi-solids comprising a hollow container body having walls of self-sustaining rigidity, and a filling and pouring spout formed integrally with one wall and opening into the interior of said body, said spout being of semi-rigid flexible plastic material, retractible into and projectible from the interior of said body through said one wall, and terminating at its outer extremity in an integral cylindrical tubular neck portion, the annular wall of which is initially directed inward of said container and rollably reversible upon itself, and a cylindrical closure member insertable in said neck portion for engagement within said annular wall when the spout is retracted and including means engageable with said neck portion and removably underlying the extremity thereof, for reversing said neck portion upon itself when the spout is projected.

3,042,272
CONTAINER WITH DISPENSING OPENING AND A SPOUT REVERSIBLY CONNECTABLE TO SAID OPENING
John W. Anderson, 578 Broadway, Gary, Ind.
Continuation of application Ser. No. 666,691, June 19, 1957. This application June 24, 1959, Ser. No. 822,477
3 Claims. (Cl. 222—539)

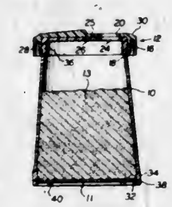
1. A dispensing container for powder, granular material and the like, said container having at least one generally flat wall of sheet material, said wall being formed with a shallow depression having a flat bottom, said bottom being provided with a circular aperture, the edge portion defining said aperture being provided with a plurality of

radially extending notches providing arcuate segmental ledges therebetween for supporting the base of a spout, the central portion of each of said ledges being struck downwardly to provide stops, a spout having a flange at the base end thereof, and a plurality of lugs struck from said flange in spaced relation matching the notches in said bottom, the end portions of said lugs being bent to lie in a plane beyond and parallel to that defined by said flange and spaced from said flange a distance equal to the thickness of said wall, the discharge end of said spout extend-



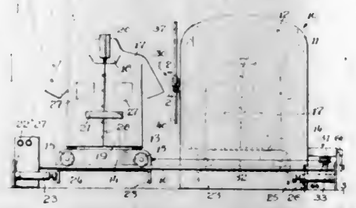
ing through said aperture into the contents of the container with its flange resting upon said segmental ledges, and a tab of flexible material having on one face a pressure-sensitive, permanently adhesive coating, said tab overlying said depression and part of said wall and being stuck to said wall and said lugs of said spout, and being peelable from said parts for removal and reversal of said spout, with its lugs engageable under the end portions of said ledges for retaining the flange of the spout against said ledges.

3,042,273
FLANGED CLOSURE CAP FOR RESILIENTLY YIELDABLE PLASTIC CONTAINER
Robert E. Bauer, Flourtown, Pa., and William J. Lawrence, Jr., Clifton, N.J., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 30, 1959, Ser. No. 802,930
1 Claim. (Cl. 222—548)



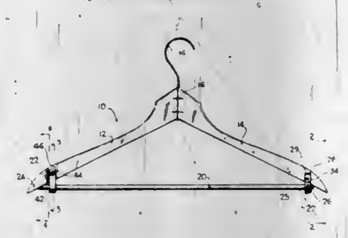
In a resiliently yieldable plastic container, for grated cheese and other particulate material, having a body of cross section that is circular at the top, a sidewall, an upper closing element extending over the said top and provided with at least one opening for delivery of said material therethrough, and a resiliently yieldable plastic closing cap rotatably mounted on the body, the improvement comprising a flat portion of the cap overlying and in rotational contact with the closing element and provided with at least one hole at a position to be brought into registration with the said opening by rotation of the cap, two annular concentric flanges extending downwardly from said flat portion and in spaced relationship to each other in their downwardly extending parts, and means uniting the two flanges at their upper parts only to the said flat portion of the cap, the inner one of the flanges provided at its lower extremity with an inwardly extending annular bead rotatably engaged in an annular groove of the sidewall, and the outer one of the flanges being constructed of a resiliently yieldable material, so that force sufficient to rotate the closing cap is absorbed by the resiliency of the outer flange without substantial deformation of the normally circular cross section of the top of the container.

3,042,274
AUTOMATICALLY OPERATED SPRAYING APPARATUS
David Abraham Freeman, 1600 Foster St., Evanston, Ill.
Filed Nov. 13, 1959, Ser. No. 852,647
11 Claims. (Cl. 223—57)



1. In combination with a moving member to be sprayed, a spraying system for spraying in timed relation with said moving member, comprising a spray nozzle disposed in position to direct spraying medium at said moving member, a solenoid actuated valve arranged to control flow of spraying medium to said nozzle, a switch for controlling energization and deenergization of said solenoid actuated valve, movable cam means disposed to control opening and closing of said switch and for movement with respect thereto, and means coupling said cam means to said moving member for synchronizing movement of said cam means and said member in opposite directions.

3,042,275
RELEASABLE GARMENT HANGER
Ovaldo Wendorf, 325 Broadway, Newark, N.J.
Filed Sept. 8, 1960, Ser. No. 54,636
2 Claims. (Cl. 223—88)

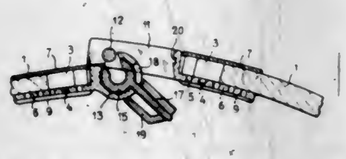


1. A garment hanger comprising a generally inverted V-shaped body having angularly disposed arms, a round crossbar having one end pivotally mounted in a slot opening downwardly at a free end of one of said arms, a loop secured near said free end of the one arm and depending therefrom, said crossbar passing through said loop, and a spring clamp secured near a free end of the other of said arms, said clamp having spaced flexible fingers engageable with the other end of said crossbar, said loop having an inner bottom portion normally spaced from said crossbar when the crossbar is engaged by the spring clamp, whereby the loop supports the crossbar at the one end thereof when the other end of the crossbar is disengaged from said spring clamp, said spring clamp being inverted U-shaped opening downwardly and having its bight extending through a slot in said other arm with a countersunk screw holding said bight against lateral movement in the slot in said other arm, the flexible fingers of said spring clamp being disposed in recesses in opposite sides of said other arm, and screw means engaged with said fingers and adjustably tensioning and spacing said fingers in said recesses.



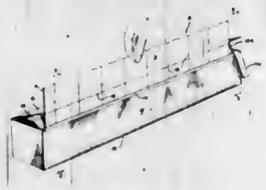
The combination with a resilient wire clothes hanger having a body portion of triangular form and comprising a pair of oppositely sloping shoulder portions and a horizontal portion joining ends of the shoulder portions, of an attachment for the hanger, said attachment having an inverted U or channel form and comprising a straight intermediate portion and end portions extending thereabove and beyond the ends of the same, said attachment having an opening entirely the length of said intermediate portion and extending into said end portions and terminating therein, at least one internal reenforcing cross piece between the depending sides of the intermediate portion of the attachment and below the opening therein, said horizontal portion of the hanger lying in the opening of the intermediate portion of the attachment and supported by said cross piece, the length of said opening in the attachment being less than the length of the horizontal portion of the hanger, the shoulder portions of the latter being at the ends of said opening and adjoining the end portions of the attachment, whereby there is a mutual pressure between said end portions of the attachment and the corresponding shoulder portions of the hanger.

3,042,277
WRISTBAND FOR WATCHES
Giuseppe Stradella, Recco, Province of Genoa, Italy, assignor to S.p.A. De Marchi Frattelli, Turin, Italy
Filed May 5, 1959, Ser. No. 811,062
Claims priority, application Italy May 9, 1958
2 Claims. (Cl. 224—4)



1. In a wristband for watches including two sections provided each at one end with means for attachment to the watch and at its opposite end with a safety closure component, one of the said safety closure components comprising a fork-shaped section including a transverse pin bracing the arms of the fork; and the other of the said safety closure components comprising a socket having a circumferential wall cylindrically curved into hook-shape to provide a mouth, an aperture in said circumferential wall, a cylindrical latch member rotatable in the socket, the said latch member being forked in its cross-sectional profile to provide a mouth and including a radial tongue outwardly extending through the said aperture, said aperture having circumferentially spaced ends thereby to limit the rotational displacement of the latch member in the socket between a condition in which the mouth of the forked latch member is aligned with the mouth of the socket to thereby receive the said pin, and a condition wherein a branch of the forked latch member is in the said tongue in the last named condition, and a clip covering the tongue matching in thickness the thickness of the fork-shaped section thereby filling the space between the said arms of the fork in the last named condition.

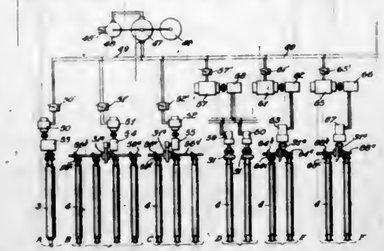
3,042,278
IMPROVED PACKAGING MATERIAL AS AN ARTICLE OF MANUFACTURE
Jane Fiske McCullough, P.O. Box 31, North Bennington, Vt.
Filed July 21, 1960, Ser. No. 44,445
7 Claims. (Cl. 225—39)



1. A merchandisable article of manufacture, comprising a single wrapping and packaging unit, for articles to be transported by mail or the like, formed of a single corrugated flexible sheet having a layer of smooth and flexible sheet material of substantially equal area secured to the crests on one face of said corrugated sheet and of a strength to resist easy tear or puncture, when written upon for addressing purposes, and forming the obverse side of said wrapping unit; and a continuous coating of a substantially dry self-adhering-only adhesive covering the entire reverse and exposed corrugated face of said corrugated sheet and covering and following the crests and valleys of said exposed corrugated face, whereby said wrapping unit may be used as the sole and flexible protective wrapping for an article, to be wrapped, with the coated surface innermost which will not adhere to the article so wrapped but will adhere to its coated portions that may be folded upon itself, or whereby two pieces of said wrapping unit may have their coated corrugated surfaces brought into face-to-face contact by the user with the crests of said pieces projecting in nesting and adhering contact with the valleys of the opposite piece to form a substantially rigid double-faced corrugated board that may be fashioned into a carton-type container by the user substantially as described.

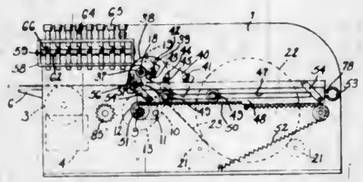
3,042,279
PROCESS AND APPARATUS FOR PRODUCING POLISHED GLASS
Edmond Laverdisse, Auvelais, Belgium, assignor to Les Glaceries de la Sambre, Societe Anonyme, Auvelais, Belgium, a company of Belgium
Filed Apr. 3, 1957, Ser. No. 650,391
Claims priority, application Belgium Apr. 18, 1956
2 Claims. (Cl. 226—111)

1. A glass treating system comprising a plurality of zones including, at least, glass polishing, grinding and washing zones for effecting sequential glass processing steps, a plurality of rollers for conveying a continuous strip of glass through the zones, a source of rotary power adapted for driving the rollers, and a plurality of mechanical driving devices having free wheeling characteristics in the direction of glass conveyance and coupling said source to the rollers in the respective zones for the driving of the same while permitting the rollers in the zones to be rotated by said continuous strip; said source



a corresponding zone for driving the same at a determinable speed, and an alternator driven by at least one of said direct current motors, the latter said alternator and direct current motor constituting a frequency changer, and at least one alternating current motor connected to said alternator and operatively connected to the rollers corresponding to said one direct current motor for driving said rollers.

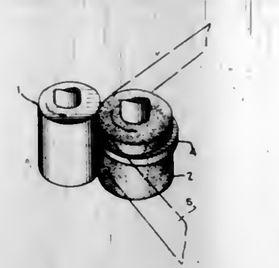
3,042,280
DISPENSING APPARATUS
Hermann Brummer, Hirschhorn am Neckar, Germany
Filed Apr. 15, 1959, Ser. No. 806,531
11 Claims. (Cl. 226—135)



1. A tape dispenser comprising a supporting frame, a delivery roller and a pressure-applying roller adapted to cooperate to feed tape between them, means to drive said delivery roller, means for rotatably mounting said rollers on the frame and mounting one thereof for bodily movement toward the other including a rockable frame in which said one roller is mounted, means releasably holding said rockable frame in position in which said rollers are separated, spring means urging said one roller toward its mate, a plurality of selectively movable actuating keys each of which is movable to release said holding means, a member movably mounted on the supporting frame and engaged with said driving means upon release of said rockable frame to be moved toward said keys, and a stop member associated with each key and positioned by depression of said key to engage said movable member and disengage it from said driving means and to also move said pressure-applying roller away from said delivery roller to arrest the delivery of tape.

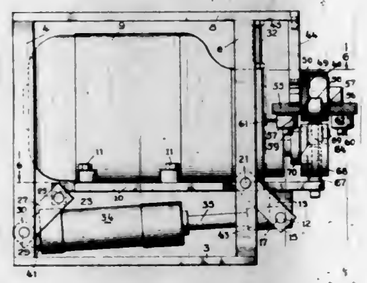
3,042,281
ROLLER
Joseph A. Balvin, Hicksville, and Wolfgang Fredrick Heine, Huntington Station, N.Y., assignors to Mohawk Business Machines Corporation, Brooklyn, N.Y., a corporation of Maryland
Filed Aug. 20, 1959, Ser. No. 835,054
4 Claims. (Cl. 226—181)

1. A self contained assembly comprising a roller having a cylindrical peripheral surface, a circular groove in the



greater than the outside diameter of the cylindrical surface of said roller, and being freely rotatable in said groove whereby upon contact with material, the surface of the ring extends beyond the cylindrical surface of the roller thereby stripping said material from said roller.

3,042,282
FEEDING DEVICE
Hollinshead T. Martin, Evanston, and Roger H. Laughlin, Prospect Heights, Ill., assignors to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 3, 1960, Ser. No. 67,075
12 Claims. (Cl. 226—190)

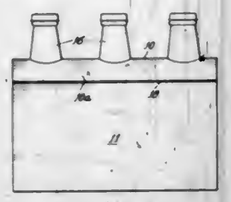


4. A strap feeding device comprising a frame, a roll rotatably mounted in fixed position relative to said frame, a second roll, a motor operatively connected to said second roll for rotating it, and means for moving said second roll into cooperative relationship with said first mentioned roll and out of said relation to a position permitting movement of strap radially of said first mentioned roll, said rolls being adapted to cooperate to move a length of strap longitudinally as said second roll is rotated by said motor.

3,042,283
BOTTLE CARRIER
Richard E. De Paul, Norristown, Pa., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,736
2 Claims. (Cl. 229—40)

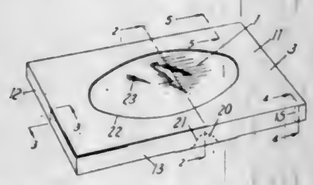
1. An open end carrier for bottles, such carrier being formed from foldable paperboard and comprising a pair of side wall panels, a rectangular bottom wall section hingedly carried by each side wall panel on its lower edge, means for connecting the two bottom sections in lapped relation to form a composite bottom panel, a centrally located, upstanding retaining member for an open end

of the carrier, said retaining member being provided from triangular portions, each formed from adjacent corner areas of the connected bottom sections, such triangular portions being foldable upwardly of the bottom along diagonal fold lines, the inwardly disposed part of each triangular portion being severed from its bottom section to allow it to swing relatively to the attached part,



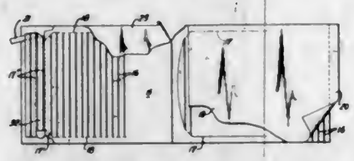
whereby the two inwardly disposed parts may be arranged in face-to-face contact, extending normal to the bottom wall and inwardly of the carrier, and means for securing the two parts in such face-to-face contact to hold the retaining member in upstanding condition, the inwardly disposed part on the exterior lapping wall section extending over and in edge contact with the upper surface of the inner lapping section.

3,042,284
CARTON
Kenneth T. Buttery and Curtis D. Rice, Kalamazoo, Mich., assignors to KVP Sutherland Paper Company, Kalamazoo, Mich.
Filed Feb. 29, 1960, Ser. No. 11,906
2 Claims. (Cl. 229—51)



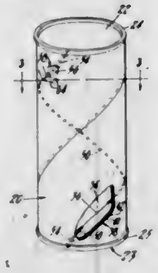
1. A carton formed of an integral blank cut and scored to provide a receptacle including a bottom, rear, front and end walls, a cover hingedly connected to the rear wall and including front and end walls of a width corresponding to the width of the front and end walls of the receptacle, the rear ends of the receptacle and cover end walls being connected by inwardly foldable corner flaps, the receptacle end walls having corner flaps on their front ends disposed on the inner side of the receptacle front wall, said receptacle front and end walls having inner wall members on their outer edges folded inwardly thereon and adhesively secured thereto with their edges adjacent the bottom and with the inner front wall member overlapping and adhesively secured to the corner flaps on the front ends of said end walls, the cover end walls having inner wall members on their outer edges folded inwardly thereon and adhesively secured thereto with their edges adjacent the top, the cover front wall having spaced inner wall members on their outer edges extending from the ends thereof and folded inwardly thereon and adhesively secured thereto in overlapping relation to said end wall front corner flaps, said front wall having a sealing flap between its spaced inner front wall members fracturably connected thereto and positioned upon and secured to the under side of the receptacle bottom when the receptacle is sealed, said cover front wall having a fracturable portion above said sealing flap to facilitate the opening of the receptacle when sealed.

3,042,285
COMPOSITE CONTAINER
Donald Paul Smith, 4530 Woodfin Drive, Dallas, Tex.
Filed Apr. 11, 1960, Ser. No. 21,532
5 Claims. (Cl. 229—51)



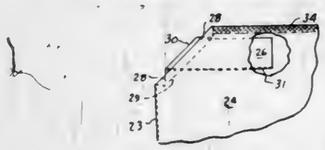
1. A commodity package comprising, a tubular multiple-ply body of paperboard, a commodity having a shape corresponding to said tubular body housed therein, caps secured to opposite ends of said tubular body to seal said commodity therein, the inner ply of said body being scored circumferentially and longitudinally to define an access door concealed by the outer ply of said body, the longitudinal score line being exteriorly covered and concealed by a local rupturable portion of the outer ply of said body, a tear strip extending across said rupturable portion of said outer body ply for removing only said local rupturable portion to obtain access to said door, the inner ply of said body having an edge portion extending beyond and interiorly covering the longitudinal door defining score line therein, and a flexible liner secured to the inner surface of said inner ply and having a loose portion extending beyond said extending edge portion of the inner ply to provide a sealing flap.

3,042,286
CONTAINER
Ralph Kennicott Pottle, Georgetown, Conn., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 17, 1958, Ser. No. 781,152
3 Claims. (Cl. 229—51)



1. A cylindrically wound tear string container having end members secured thereto in end seams, comprising an inner body ply of moistureproof material, a main body ply wound upon and adhesively secured to said inner ply and having a helical line of opening defined by a butt joint, an outer ply helically wound upon and adhesively secured to said body ply, a helically wound tear string on the inner surface of said outer ply disposed in overlying relation to said butt joint, said outer ply having a pull tab defined by a substantially U-shaped line of severance adjacent one end of said tear string, said outer ply having a weakness line disposed helically inwardly of said tear string one end and in spaced relation to said line of severance, said weakness line lying transversely of said tear string for cooperation with said pull tab when the latter is lifted and drawn to effect complete separation of said pull tab from said outer ply, and said tear string having said one end thereof adhesively secured to said pull tab and the other end secured to the container, whereby when said pull tab is manually drawn outwardly from the container said weakness line will rupture to separate the pull tab from the container and permit grasping thereof, and upon further manual drawing of said separated pull tab said tear string will create a helical line of tear in the outer ply outwardly of said helical line of opening to facilitate quick opening of the container therealong by a subsequent twisting action.

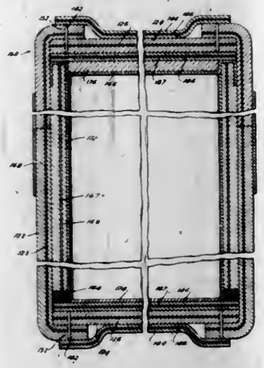
3,042,287
SPOUT TYPE BAG FOR POWDERED AND THE LIKE MATERIALS
Frank J. Chandler, Detroit, Mich., assignor to Paton-Chandler Process Company, Detroit, Mich., a partnership
Filed Jan. 2, 1959, Ser. No. 784,658
1 Claim. (Cl. 229—62.5)



A spout type bag for powdered and the like materials, said bag having opposed front and back walls, each of said walls having oppositely facing first and second surfaces, said walls being joined together at their side edges and across their bottoms with their first surfaces facing one another, continuations of said front and back walls at one upper corner forming a plurality of diagonal folds between said first surfaces, said diagonal folds including a first fold adjacent a side edge of said bag and extending inwardly between said walls with portions of said second surfaces facing one another, a second fold adjacent said first fold and extending outwardly therefrom between said walls with portions of said second surfaces facing away from one another toward the portions of said second surfaces in said first fold thereby forming a covering for the same, and a third fold adjacent said second fold and extending inwardly between said walls with portions of said second surfaces facing one another, there being an opening at the inner side of said third fold leading therebetween into the interior of said bag, said front and back walls being joined together across their top edges above said opening, said third fold and said opening constituting a receiving tube for a filling machine spout during filling, said third fold being movable inwardly between said walls to form a single fold whereby said portions of said second surfaces of said second fold uncover said portions of said second surfaces of said first fold to form a clean sealing surface.

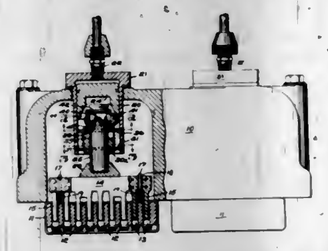
3,042,288
FIBER DRUM AND ITS METHOD OF FORMATION
Herbert L. Carpenter, Sr., Amityville, N.Y., assignor to The Greif Bros. Cooperage Corporation, Delaware, Ohio, a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 764,610
2 Claims. (Cl. 229—67)

1. An improved fiber drum comprising a shrunken tubular shell having a plurality of sides and made of wound laminated layers of fibrous material, each side of said shell being transversely convex, and the corners joining said sides together being rounded, a fixed rigid closure disc secured to one end of said shell, a tubular liner within said shell having a plurality of sides and made of wound laminated layers of fibrous material, each side of said liner being transversely convex, and the corners joining the sides of said liner together being rounded, said liner being longer than said shell, said liner being embraced by said shell in substantially tight surface-to-surface contact, with said shell being under tension and said liner being under compression, wherein a rigid container is formed whereby said liner and said shell resist loads as an integral one-piece unit, the moisture content of said liner and shell being substantially equalized, a removable closure at the other end of said shell being similar in construction as said shell and having a rigid closure disc similar to the above mentioned disc and a tubular apron having a sliding telescopic fit with the exterior surface of said liner, said apron having a plurality of sides and made of wound laminated layers of fibrous material,



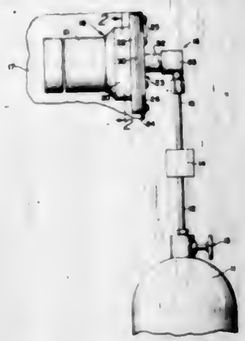
each side of said apron being transversely convex and the corners joining the sides of said apron together being rounded, the radius of curvature of said corners being substantially less than said sides, the outer cross-sectional dimensions of said liner being less than the inner cross-sectional dimensions of said apron, and said apron and said liner being so constructed and arranged such that forces applied transversely to said drum cause the liner to expand into tight engagement with the apron of the removable closure.

3,042,289
COMPRESSOR LOADERS-UNLOADERS
Stanley J. Mikina, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 15, 1957, Ser. No. 652,771
14 Claims. (Cl. 230—30)



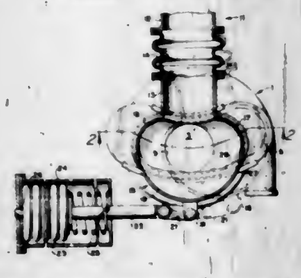
1. In a loader-unloader for a cylinder of a gas compressor having suction valve reeds, a comb for depressing said reeds, and an auxiliary cylinder having an inlet for receiving discharge gas, the combination therewith of a piston in said auxiliary cylinder having a tapered surface, a plurality of balls in contact with said surface, a comb contacting member having one end adjacent to said comb and having a tapered surface at its other end in contact with said balls opposite said first mentioned tapered surface, and a retainer for said balls attached to said auxiliary cylinder, said surface of said piston diverging towards said member, said surface of said member converging towards said piston.

3,042,290
INFLATION ASPIRATOR LOCK
Robert J. Fraebel, Red Bank, N.J., assignor to The Garret Corporation, Los Angeles, Calif., a corporation of California
Filed July 18, 1960, Ser. No. 43,612
6 Claims. (Cl. 230—95)



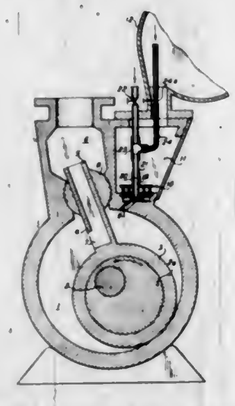
1. In apparatus for inflating a container, an aspirator comprising a body having inlet and outlet ends, said body being formed for attachment to the container to be inflated; nozzle means projecting into said body at the inlet end thereof for directing a jet of fluid into said body, said nozzle means being arranged for communication with a source of fluid under pressure; check valve means mounted for swinging movement into said body at the inlet end thereof, said check valve means being adapted to swing inwardly in response to fluid flowing through said nozzle means into an open position providing for the entrance of ambient atmosphere into said container and to swing outwardly in response to pressure of fluid in the container to a closed position preventing the escape of air from said container; and locking means including a member normally adapted to be urged into engagement with said check valve means to hold said check valve means in said closed position, said fluid under pressure acting on said locking means to move said member away from said check valve means to permit said check valve means to open to admit ambient atmosphere.

3,042,291
VARIABLE HEAD COMPRESSOR
Harold A. Greenwald, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed June 1, 1959, Ser. No. 817,264
6 Claims. (Cl. 230—114)



1. A variable head compressor comprising: a housing having an inlet and an outlet; a centrifugal impeller within said housing adapted to draw a fluid into said inlet and discharge the same through said outlet; an inlet duct adapted to feed fluid to said compressor inlet and having its axis angularly disposed with respect to the rotational axis of the impeller, the end of said duct adjacent to said compressor inlet defining a swirl chamber supported for transverse displacement relative to said inlet, said chamber being shaped so as to impart a swirl in one direction to said fluid when displaced to one side of said inlet and a swirl in the opposite direction when displaced to the other side of said inlet and being provided with an outlet port registerable with said compressor inlet throughout the range of said displacement, and actuator means operable to displace said chamber relative to said inlet thereby to control the direction and amount of pre-swirl imparted to said fluid.

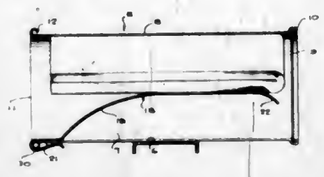
3,042,292
VACUUM PUMP WITH GAS BALLAST DEVICE
Albert Lorenz, Hanau, Germany, assignor to W. C. Heraeus G.m.bH., Hanau (Main) Germany, a corporation of Germany
Filed May 22, 1959, Ser. No. 815,194
Claims priority, application Germany May 30, 1958
3 Claims. (Cl. 230—207)



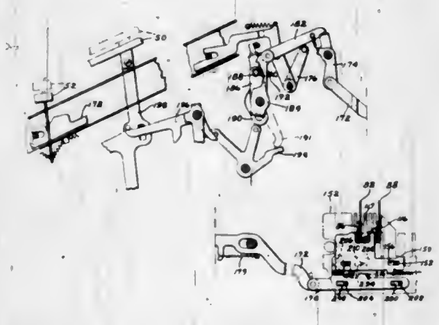
1. In a vacuum pump having a housing, at least one piston chamber within said housing, a piston eccentrically revolvable in said piston chamber and oil-sealed therein, a suction chamber intermittently communicable with said piston chamber, said piston chamber having an exhaust opening, an exhaust chamber connected to said exhaust opening, an exhaust valve adapted to close said exhaust opening toward said exhaust chamber during the suction stroke of said piston, conduit means for intermittently passing a gaseous medium from the outside of said pump into said piston chamber, said conduit means passing through said exhaust chamber and being connected substantially centrally to said exhaust valve, the end of said conduit means passing through said exhaust valve and facing toward said exhaust opening of said piston chamber forming a valve seat, a valve disk adapted to engage with said valve seat to close said conduit means during the exhaust stroke of said piston, leaf spring means for holding said valve disk under a very slight pressure in engagement with said valve seat when said valve disk is not being actuated by said gaseous medium passing from the outside of said pump through said conduit means.

3,042,293
NEWSPAPER RECEPTACLE
Rolford D. Miller, 5323 S. Kimbark Ave., Chicago 15, Ill.
Filed Nov. 23, 1960, Ser. No. 71,251
3 Claims. (Cl. 232—17)

1. A readily mountable and removable article support for attachment to a tubular receptacle for a newspaper or the like for maintaining the article above the receptacle bottom wherein the receptacle has an open end reinforced by an outwardly turned hem, said article support comprising a one-piece leaf spring having a reversely turned forward clamp portion and a body portion; said clamp portion including a terminal lower part and an intermediate upper part disposed in converging angular relation, and a bight resiliently connecting said terminal part to said intermediate part with said bight being adapted to snugly engage a receptacle hem to retain said article support therein; said body portion including a convexly curved forward part projecting sharply upwardly from the rear of said upper part, and a straight rear part; and a down-turned rear extremity on said body portion for preventing accidental tearing of the article and being adapted to support the rear of said body portion when said body portion is greatly downwardly deflected under load.
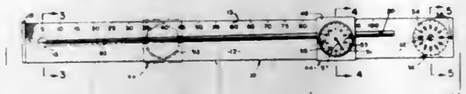


3,042,294
CALCULATING MACHINE WITH INSTRUCTION MODIFYING MECHANISM
Arthur M. Pasinski, Detroit, and Martin Siegel, Oak Park, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 20, 1958, Ser. No. 768,200
2 Claims. (Cl. 235—60.47)



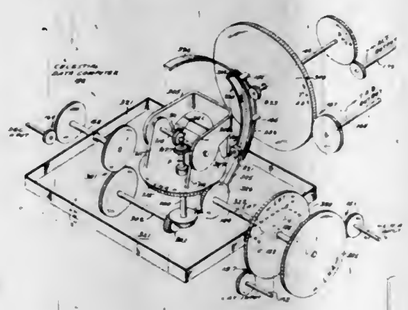
1. In a calculating machine, an instruction representing element, a lever operable to sense said element, said lever having a normal starting position and a second starting position, a cam operable to pivot said lever from either of said starting positions, a spring acting to pivot said lever on said cam to said second starting position, a shiftable extension member carried by and movable along said lever, said extension member having a normal position representative of the instruction function and a second position representative of a function opposite of the function represented by said element, a spring acting to shift said shiftable member to the second position thereof, a second lever normally engaging and holding said extension member in the normal position thereof, a key operated slide, a stop member carried by said slide and normally holding said first lever in the normal position thereof and retractable to release said first lever, a latch member carried by said slide and normally latching said stop member to said slide, normally engaged latch means on said slide and on said second lever releasable by and upon retraction of said stop member by said slide, a latch actuator operable to release said latch member, and means on said cam to activate said latch actuator.

3,042,295
COMPUTER
Roy K. Coates, 9342 Glenoaks Blvd., Sun Valley, Calif., and Charles D. Howard, Van Nuys, Calif. (9342 Glenoaks Blvd., Sun Valley, Calif.)
Filed Apr. 20, 1961, Ser. No. 104,292
2 Claims. (Cl. 235—61)



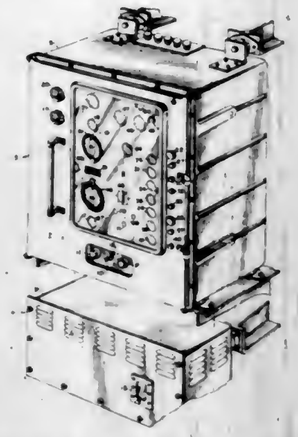
1. A computing device comprising an elongated hollow bar having an elongated inclined slot in a side thereof, an elongated member within the bar having a longitudinal slot in it, the said member being pivoted at one end thereof adjacent one end of the bar, a rotatable cam within the hollow bar adjacent the other end thereof and engageable with the other end of said elongated member for adjusting its position, a single cursor mounted to slide longitudinally on said hollow bar, said cursor carrying a dial and a cooperating rotatable pointer, a slidably mounted rack carried by said cursor mounted to slide transversely as respects the said hollow bar, a pin carried by the rack extending through the slot in the side wall of the hollow bar and engaging in the elongated slot in the pivoted member within the hollow bar, and a pinion on the shaft of the said pointer engageable with the said rack whereby upon longitudinal movement of the cursor the rack is caused to move transversely whereby to drive the said pinion and actuate the said pointer.

3,042,296
CELESTIAL DATA COMPUTER
Victor E. Carbonara, Manhasset, and E. Douglas MacDonald, East Williston, N.Y., assignors to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Filed June 19, 1958, Ser. No. 743,105
12 Claims. (Cl. 235—61)



1. A celestial data computer comprising a frame, a member along a designated declination axis carried by said frame, a head angularly displaceable by said member, declination input means coupled to said member to angularly set said head to correspond to the declination of a selected star, a star-arm extending from said head, means for angularly displacing said head in accordance with the local hour angle, means for angularly shifting said frame to correspond with the latitude of the selected star, whereby said star-arm is positioned in analog relation to the selected star in a celestial sphere representation, bail means coupled to said star-arm, and mechanism operable by said bail means for deriving navigational data relative to the selected star through the star-arm analog positions.

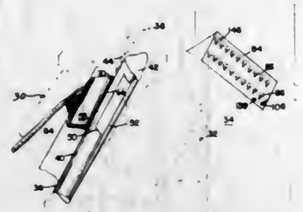
3,042,297
ATTACK DIRECTOR
Lewis W. Imm, Los Angeles, Roy I. Case, Glendale, and Chester Brandon, La Canada, Calif., assignors to General Precision Inc., a corporation of Delaware
Filed Feb. 19, 1954, Ser. No. 411,334
59 Claims. (Cl. 235—61.5)



1. In a device for determining the horizontal range from a vessel to a submerged target, means for obtaining a rotary motion representative of the direct distance from said vessel to said target, means for providing a value representing the sine function of the angle of depression of the submerged target relative to the attacking vessel, means responsive to the rotary motion representing the direct distance from the vessel to the target and to the sine function of the angle of depression for multiplying the direct distance from said vessel to said target by the sine function of the angle of depression to obtain a product equal to the depth of said target, means responsive to the sine function of the angle depression for converting the sine function of the angle of depression to the tangent function of half the said angle, means responsive to the target depth and the tangent function for obtaining the linear product of target depth and said tangent function, means including an integrator loop responsive to said linear product for converting said linear product to a rotary motion representative of the product of target depth and said tangent function and for determining when said rotary motion has become proportional to said linear product, and means responsive to the difference between said rotary motion representative of the product of target depth and said tangent function of the angle of depression and said rotary motion representative of the direct distance from said vessel to said target to obtain a rotational output representative of the horizontal range.

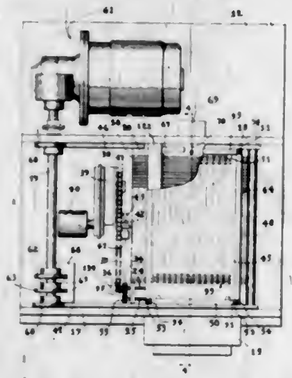
3,042,298
ARTICLE AND MACHINE FOR VERIFYING CHECKS AND THE LIKE
Frank Kenneth Hurd, Atlanta, Ga., assignor to Jack F. Glenn, Hugh W. Fraser, Jr., and A. M. Adamson, trustees for the Employees' Saving and Profit Sharing Trust Fund of the Citizens and Southern National Bank
Filed Oct. 31, 1958, Ser. No. 771,038
21 Claims. (Cl. 235—61.7)

1. In a slip positioning and retaining member for use on a bookkeeping machine having printing surface and a sensing arrangement for comparing information, a slip positioning bar movably mounted on said machine adjacent said printing surface to hold a slip inserted therein for printing by said machine, a slip guide on said bar against which said slip may be positioned to guide same in proper alignment into said machine and said bar, said bar having an open sensing space therein through which sensing elements may extend, and a sensing device on



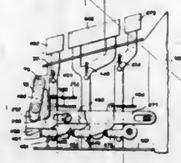
said machine behind said sensing space, said bar being movable from a sensing to non-sensing position to bring said slip into sensing position with said sensing device to sense data on said slip.

3,042,299
SENSING DEVICE FOR DATA CARDS AND THE LIKE
Alex Sherman, Anaheim, Calif., assignor, by mesne assignments, to Square D Company, Detroit, Mich., a corporation of Michigan
Filed June 23, 1958, Ser. No. 743,935
14 Claims. (Cl. 235—61.11)



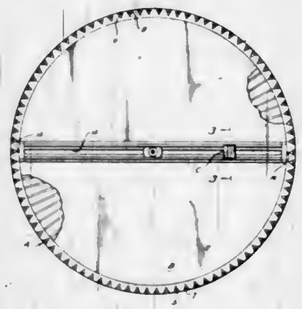
4. Apparatus for sensing the arrangement of perforations in a data card which is perforated in accordance with a prearranged code, comprising a pair of members between which a card to be sensed is adapted to be disposed, one of said members being swingable about a pivot toward and away from the other and said one member normally being spaced from said other to provide for unimpeded movement of said card therebetween, means providing an entrance slot in which a card to be sensed is adapted to be inserted, means responsive to the entrance of said card into said slot for moving said card between said members for sensing, means for moving said one member about its pivot toward said other member upon disposition of a card therebetween, a plurality of sensing means carried by respective members and cooperable to control respective electrical sensing circuits in accordance with the presence or absence of a card perforation thereadjacent when said members are moved together, and means responsive to the position of said card and preventing movement of said one member toward the other and effecting immediate ejection of said card through said slot in the event said card is improperly positioned for sensing between said members.

3,042,300
CONTROL MECHANISM FOR AN ADDING MACHINE
Walter A. Anderson, Trumbull, Conn., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware
Original application Dec. 29, 1955, Ser. No. 556,217, now Patent No. 2,942,776, dated June 28, 1960. Divided and this application Dec. 14, 1959, Ser. No. 2,794
6 Claims. (Cl. 235—62)



1. In an adding machine having a power source, a cycling shaft and a normally open clutch adapted to be closed to connect said shaft to said power source for machine cycling action; the combination with a plurality of different function instituting cycling keys, of members individually related to said keys and movable each from a normal to an operated position, means to urge individually said members toward their operated positions, individual means associated with each member to hold it in normal position, each such means being releasable by one of said keys to cause the operation of its related member, a clutch controlling means subject to operation by any of said members to close said clutch, means controlled by each of said members through operation thereof to block the related key against restoration, a restoring means for said members and said clutch controlling means and including means governed by said shaft to permit normally the operation of any of said members and adapted to restore any operated member in the course of a cycle as well as to cause said clutch automatically to open at the conclusion of the cycle, and means whereby any holding means is controlled by its related key to become effective only if such key is permitted to restore.

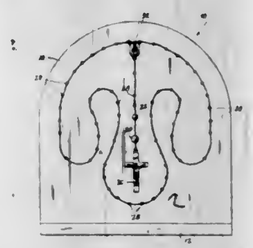
3,042,301
TRIGONOMETRIC FUNCTION FINDING DEVICE
Milton A. Seale, 904 Rosebud, Victoria, Tex.
Filed Oct. 5, 1959, Ser. No. 844,370
2 Claims. (Cl. 235—88)



1. A trigonometric function finding device comprising a base having a plane surface with a circular degree scale, groups of function value designations arranged in radial lines on said surface, each group being arranged in a definite pattern and each line of groups corresponding with a degree marking on said scale, a cursor pivotally mounted on said base centrally with respect to said degree scale and having an index pointer movable along said scale, a radial slot in said cursor, and a minute scale on said cursor at the side of said slot, there being a plurality of function names grouped with each minute marking on said finder scale, said minute markings and name groups being spaced from the pivot of said cursor the same as the corresponding function value designations from said base surface and said groups of function values on said base surface arranged in the pattern of the corresponding function names on said cursor so as to indicate by intimate association and corresponding positioning a desired function value within said slot of a particular minute interval positioned at the side of said slot and a particular angular degree selected by said cursor.

2. A function finding device as described in claim 1 further including a minute finder incorporating a magnifying glass slidable on said pivoted cursor to facilitate visible correlation of particular function values exposed within said slot and minute markings and function names at the side of said slot.

3,042,302
PEG BOARD ROSARY
George A. Mues, 9429 Sequoia Drive, Affton 23, Mo.
Filed Aug. 4, 1958, Ser. No. 752,962
1 Claim. (Cl. 235—90)

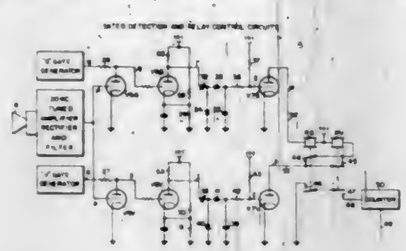


A peg board rosary comprising, in combination, a base for supporting said peg board rosary in upright position, spaced wells in said base for receiving peg beads, a top for each well pivotally mounted on said base adapted to prevent spilling of peg beads when in closed relation, a panel supported by said base extending upwardly therefrom at an acute angle thereto, thereby improving stability of the peg board rosary, said panel being forwardly of said peg bead wells thereby hiding them from view, openings in said panel for receiving peg beads, said openings being distributed over said panel in a pattern simulating rosary beads spread thereover, a cross and a medallion on said panel disposed in rosary relation to said openings, and a plurality of rosary peg beads in said wells adapted to be disposed in and removed from said panel openings, each of said peg beads including a spindle disposable in an opening in the panel and a head of larger diameter than the diameter of the openings, a selected number of peg beads having heads of larger size than the remainder.

3,042,303
OBJECT OR VEHICLE DETECTION SYSTEM
Hugh C. Kendall and John H. Auer, Jr., Rochester, Norman A. Bolton, Scottsville, and Klaus H. Frielinghaus, Rochester, N.Y., assignors to General Railway Signal Company, Rochester, N.Y.
Filed Apr. 24, 1959, Ser. No. 808,736
20 Claims. (Cl. 235—99)

1. In a system for detecting objects passing a fixed energy reflective surface, transmitting means for producing a beam of intermittent pulses of energy directed at said fixed reflective surface, receiving means responsive both to normal pulses of energy reflected from said fixed reflective surface and to object pulses reflected from the re-

flective surfaces of said objects passing between said fixed reflective surface and said transmitting means, gating circuit means connected to said receiving means to provide a first output signal for each energy pulse reflected from said fixed surface and a second output signal for each pulse reflected from said reflective surface of each of said objects, whereby the passage of an object in front of said



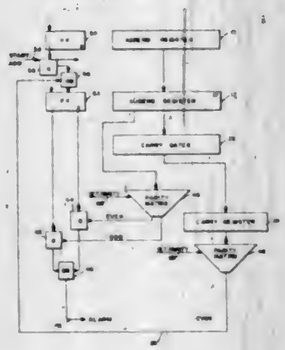
fixed reflective surface normally prevents said first output signal from being provided by said gating circuit means and output means governed by said first and second output signals of said gating means for providing an output indicative of the passage of a single object only in response to the occurrence of at least one of said second signals followed by the recurrence of at least one of said first signals.

3,042,304

ADDER CIRCUIT

Eddie T. Hall, Hopewell Junction, John D. Newton, Kingston, and James R. Wood, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 30, 1959, Ser. No. 823,996
6 Claims. (Cl. 235—153)



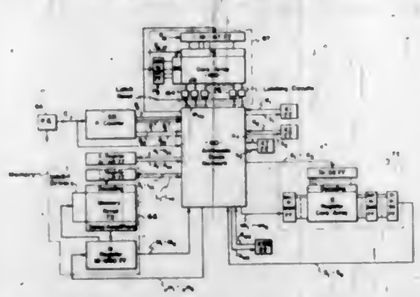
1. A binary adder circuit having a plurality of stages, comprising an addend register and an augend register, each register having a bistable device corresponding to each said stage, means to store a binary number including a parity indication in each said register, means adapted to transfer signals representative of one of said numbers to the other register to produce a half add result, means for delaying and then applying said transferred signals to sample said half add result and to generate carries in accordance therewith for completing the binary addition process and storing the resultant sum in said other register, and error checking circuitry associated with said adder including means for determining the parity of the aggregate of said carries, summing means for adding that parity to the sum of the parities of the augend and addend and means for comparing the output of said summing means with the parity of the sum stored in said other register.

3,042,305

PROGRAM CONTROL APPARATUS

Walter G. Edwards, Manhattan Beach, James F. Hudson, Hermosa Beach, and Edmund F. Klein, San Pedro, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Mar. 10, 1958, Ser. No. 720,384
22 Claims. (Cl. 235—157)



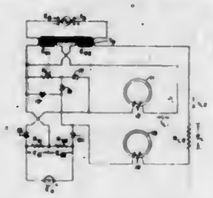
1. A digital data processing program control system comprising in combination: an array of non-linear magnetic devices; a plurality of latch means; a plurality of control lines each connected to and controlled by a respective one of said latch means; a plurality of sense lines, each connected to and effective upon formation of a signal thereon to set a respective one of said latch means and each sense line being inductively linked to a set of at least one of said magnetic devices, at least one of said sense lines being inductively linked to a plurality of said magnetic devices, and at least one of said magnetic devices being linked to a plurality of said sense lines; magnetic device selecting and driving means to sequentially select and change the state of single ones of the magnetic devices of said array to thereby form a signal on each sense line inductively coupled thereto; and sets of data processing logical circuitry each respective set connected to and controlled by a respective one of said control lines.

3,042,306

MAGNETIC-AMPLIFIER MULTIPLYING CIRCUITS

William A. Geyger, Takoma Park, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 20, 1959, Ser. No. 794,782
2 Claims. (Cl. 235—178)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A magnetic square law circuit for producing an output voltage proportioned to the square of a D.-C. input signal comprising a fist square wave voltage source, a second square wave voltage source, a ocnverter stage having a first saturable core with a winding thereon, a first resistor and a first unilateral impedance means, means serially interconnecting the winding of said first saturable core, said first resistor and said first unilateral impedance means to said first square wave voltage source, a multiplier stage having a second saturable core with a winding thereon, a second resistor and a second unilateral impedance means, means serially interconnecting the winding of said second saturable core, said second resistor and said second unilateral impedance means to said second square

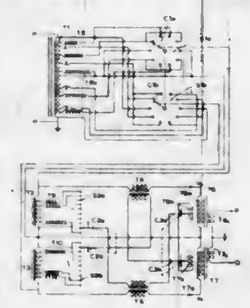
wave voltage source, a third resistor and a fourth resistor, said third and fourth resistors having equal resistance values and being serially connected with a center tap therebetween, means connecting said third resistor to said converter stage, means connecting said fourth resistor to said multiplier stage, means applying a D.-C. input signal across said serially connected third and fourth resistors whereby one-half of the D.-C. signal is applied to said converter stage and the other half of the D.-C. signal is applied to said multiplier stage thereby to produce at the output of the multiplier stage a voltage proportional to the square of the D.-C. signal.

3,042,307

TRIGONOMETRIC FUNCTION GENERATORS

Richard Herbert Booth, Beaconsfield, and Alexander Torrence MacDonald, Gerrards Cross, England, assignors to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain

Filed Apr. 25, 1958, Ser. No. 730,961
Claims priority, application Great Britain Apr. 30, 1957
5 Claims. (Cl. 235—186)



1. A circuit for deriving signals proportional to the sine and cosine of desired angles comprising means for deriving a first signal proportional to the sine of a major part of a desired angle, means for deriving a second signal proportional to the cosine of the same part of said angle, first output terminals for a first output signal, second output terminals for a second output signal, means connected from said second output terminals for deriving a first incremental signal proportional to the product of said second output signal and the tangent of a minor part of said desired angle, means connected from said first output terminals for deriving a second incremental signal proportional to the product of said first output signal and the tangent of said minor part of said desired angle, means for adding said first incremental signal to said first derived signal and for applying the resultant to said first output terminals thereby to produce said first output signal, and means for adding said second incremental signal to said second derived signal and for applying the resultant to said second output terminals thereby to produce said second output signal, whereby said first and second output signals are respectively proportional to the sine and cosine of the desired angle.

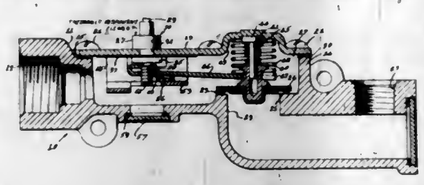
3,042,308

OVEN CONTROL VALVE

Frank E. Cerveny, Berwyn, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed June 13, 1960, Ser. No. 35,676
2 Claims. (Cl. 236—99)

1. In a preassembled thermostatic valve and in combination with a valve body having an inlet and an outlet and an upwardly opening port having an upwardly facing annular seat extending thereabout, a cover plate for said valve body, a thermally responsive element mounted on said cover plate and having a power member on the inside of said cover plate and extensible inwardly with respect to said cover plate upon increases in temperature and having temperature sensing means on the outside of said cover plate, a valve guided on the inside of said cover plate for engagement with said seat, spring means biasing said valve into engagement with said seat, an operating lever fulcrumed on the inside of said cover plate



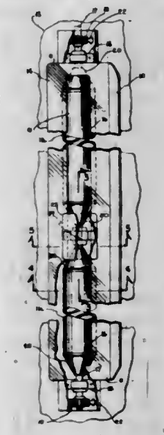
intermediate the ends of said operating lever and beneath said power member, said operating lever having operative supporting connection with said valve at one end and with said power member at its opposite end and retaining said valve to said cover plate, and spring means biasing said lever in a valve closing direction and maintaining said lever in engagement with said power member and said fulcrum.

3,042,309

VEHICLE-ALIGNING APPARATUS

Robert W. Smith and Robert A. Vaughan, Columbus, Ohio, assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed June 6, 1958, Ser. No. 740,252
3 Claims. (Cl. 238—4)



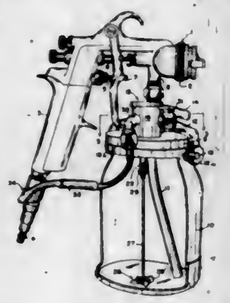
1. Apparatus for bringing the front and rear wheels along one side of a motor vehicle into relative alignment during parking of the vehicle, comprising: an elongated cradle having a relatively narrow, longitudinally extending, flat, wheel-supporting surface upon which the front and rear wheels along one side of a vehicle may be driven; an elongated wheel-guiding member extending longitudinally of said cradle adjacent one side of the flat surface of said cradle and projecting generally upwardly above the level of said flat surface for guiding engagement with one of the vertical side surfaces of a vehicle wheel driven onto the flat surface of said cradle; elongated, generally cylindrical roller means positioned adjacent the opposite side of the flat surface of said cradle in transversely spaced relation to said wheel-guiding member, said roller means having an axis of rotation disposed in parallel relation to said wheel-guiding member and a peripheral portion extending substantially above the level

of the flat surface of said cradle for engagement with the opposite vertical side surface of a vehicle wheel driven upon said flat surface; means supporting said roller means for axial rotation; and means connected with said roller means for preventing rotation of the peripheral portion thereof which extends above the level of said flat surface in a direction away from said wheel-guiding member.

3,042,310
HAND PAINT SPRAY GUN AGITATOR

Reinhold A. Franke and Griffin Jones, San Antonio, Tex.

Filed Nov. 23, 1960, Ser. No. 71,370
2 Claims. (Cl. 239—142)
(Granted under Title 35, U.S. Code (1952), sec. 266)



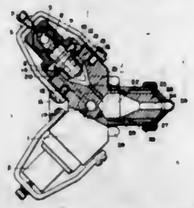
1. In a hand paint spray gun and agitator for immiscible liquids, a cylindrical liquid container having an open upper end, a horizontal cover for closing the upper end of the container, a liquid spraying head fixed on said cover having a liquid supply tube therefrom leading substantially to the bottom of the container at one side of the center thereof and a rigid air supply conduit connected to said spraying head, forming a manipulating handle for the spray gun, a closed turbine chamber fixed on the upper side of said cover at one side of said liquid supply tube, an air turbine wheel rotatable in said turbine chamber on an axis perpendicular to the upper face of said cover, a stirrer shaft removably fixed to said turbine wheel for rotation thereby, extending downwardly into said container substantially to the bottom thereof, a bladed stirrer fixed to the lower end of said shaft having inclined blades thereon for agitating a liquid in the container in an upward direction during rotation of said shaft, said turbine chamber having an air inlet in one side thereof for directing air against the side of the turbine wheel for rotation thereof, an air outlet disposed in angular relation to the said inlet in the direction of rotation of the turbine wheel for exhausting the air from the chamber following the rotation of the turbine wheel by air from said inlet, and a by-pass air supply conduit connecting the first mentioned air supply conduit to said air inlet for continuously supplying air to said inlet for rotation of said bladed stirrer when air is supplied to the first mentioned air supply conduit.

3,042,311
SPRAY GUNS AND THE LIKE

Harry Edwards, John Alexander Partridge, Norman Shanks, and John Wilcock, all of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed Jan. 16, 1961, Ser. No. 83,110
Claims priority, application Great Britain Jan. 21, 1960
4 Claims. (Cl. 239—143)

1. Apparatus for generating and dispensing polyurethane foam-forming mixtures and the like comprising: a housing having a mixing chamber, at least two inlet passages leading to said mixing chamber for introducing separate ingredients into said mixing chamber, and an outlet passage for dispensing foam-forming mixture from said mixing chamber; a non-return valve disposed in each of said inlet passages, providing unidirectional flow of an ingredient therethrough; said housing also including a pre-mixing chamber in each of said inlet passages be-

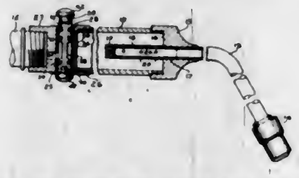


tween said non-return valves, and said mixing chamber; and inert gas supply passage means communicating with each of said pre-mixing chambers, whereby separate ingredients, introduced into each of said inlet passages, are individually mixed with an inert gas in said pre-mixing chambers prior to entering said mixing chamber for combining the same.

3,042,312
SPRAYING DEVICE

George B. Packard, Shrewsbury, Mass., assignor to Barco Manufacturing Co., Inc., Worcester, Mass., a corporation of Massachusetts

Filed Oct. 14, 1959, Ser. No. 846,491
1 Claim. (Cl. 239—315)



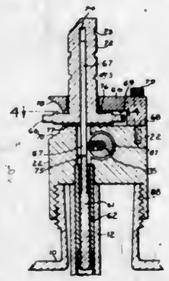
In a spraying apparatus comprising a conduit for introducing water under pressure, a chemical pellet container forming a continuation of said conduit, a spray nozzle operatively connected to said pellet container and a valve interposed in said conduit for controlling the flow of water therethrough, that improvement in which said valve comprises a hollow casing having oppositely disposed threaded ends and a passage therebetween providing inlet and outlet ports connected respectively to said conduit and to said pellet container, said casing having a cylindrical bore intersecting said passage and extending transversely thereof and opening outwardly at the opposite sides of said casing, a stationary sleeve fitted within said bore, said sleeve having a cylindrical inner surface forming the side wall of the valve chamber, a valve stem which is longer than said sleeve mounted to slide endwise within said sleeve, said stem having manually engageable buttons projecting exteriorly of said casing at both ends of said sleeve for moving said stem endwise within said sleeve, said sleeve and said casing providing an annular space which is opposite to and communicates with said outlet port, said stem having a reduced portion which with said sleeve forms an annular recess within said valve chamber, said sleeve having an opening connecting said annular recess with said inlet port, said sleeve having also an annular band of holes spaced from said opening longitudinally of said sleeve which are located opposite to said annular space and are adapted to connect said annular recess through said annular space to said outlet port, said valve stem being provided with spaced equal area balancing pistons on the opposite ends thereof the inner end surfaces of which define the ends of said annular recess, a peripheral seat ring groove

around the piston which is adjacent to said inlet port, a seat ring in said groove, two spaced apart seat ring grooves around the piston which is adjacent said outlet port, seat rings in each of the last named grooves, said seat rings being so positioned along said valve stem that in one endwise position of said valve stem both said inlet and outlet ports are in communication with said annular recess and in the other endwise position of said valve stem said inlet port is in communication with said annular recess while said outlet port is cut off from said annular recess by that portion of said piston having said two spaced apart seat rings which is between said two spaced apart seat rings covering said annular band of holes in said sleeve, the holes of said band of holes being of less diameter than the diameter of the cross section of the seat ring which moves over said holes when said valve stem is moved endwise in said sleeve.

3,042,313
FLUID METERING DEVICE

George B. Packard, Shrewsbury, Mass., assignor to Barco Manufacturing Co., Inc., Worcester, Mass., a corporation of Massachusetts

Filed Nov. 3, 1960, Ser. No. 67,048
1 Claim. (Cl. 239—318)

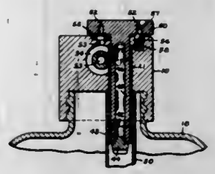


A fluid metering apparatus comprising a container for fluid, a head removably mounted thereon which has a vertical opening communicating with the interior of the container, a metering device including a threaded nut forming a continuation of the opening and an adjustable screw in the nut, the threads of the screw and nut providing an elongated fluid metering passage of variable length, means for educting fluid from the container through said passage, a cover removably secured on the head which has a vertical opening therethrough, means for removably securing the cover on the head with said vertical openings in axial alignment, said cover and head having a lateral opening therebetween intersecting a vertical passage therethrough which is aligned with the screw, a stem forming an extension of and serving to rotate the screw which extends freely through said vertical passage and across the lateral opening, a manually rotatable regulating disk mounted in said lateral opening which is removably keyed to the stem, a translucent hollow cap enclosing the end of the stem and fixed to said disk to rotate therewith and providing a downwardly opening space closed at its upper end, said vertical opening in the cover being larger in diameter than said cap so that the cap is freely rotatable, said cover being removable to provide for the removal of the cap and disk as a unit for access to the stem for rotatively removing the screw from the nut, and fluid sealing means between said disk and the adjacent surfaces of the cover and head which prevents fluid escaping through said vertical and lateral openings, the lower end of the nut projecting downwardly into the container and comprising an eduction tube secured on said end of the nut and the screw being smaller in diameter than the vertical opening in the head and removable upwardly through the passage in the head without requiring removal of the tube.

3,042,314
REGULATABLE FLUID MIXING AND SPRAYING DEVICE

George B. Packard, Shrewsbury, and Charles W. Monigle, Millbury, Mass., assignors to Barco Manufacturing Company, Inc., Worcester, Mass., a corporation of Massachusetts

Filed July 24, 1961, Ser. No. 126,201
4 Claims. (Cl. 239—347)



1. A spraying apparatus comprising a conduit for water under pressure, a container for a liquid, a head on the top of the container, a spray nozzle on the head, said head having a venturi passage between said conduit and said nozzle which provides a partial vacuum, an eduction tube depending from said head and connected for introducing liquid into the partial vacuum developed in said passage, said head having an air inlet for admitting air to said passage to reduce the partial vacuum, a valve associated with said tube for controlling the liquid flow through said tube, a valve carried by the head for controlling the admission of air through said inlet, and a manually settable dial device interconnecting and operating said valves simultaneously, said valves being moved to progressively close the air intake and simultaneously increase the delivery of liquid according to an orderly variation in the dial setting.

3,042,315
AIR AND LIQUID SPRAY GUN

Joseph R. Besser, 3325 N. Harlem Ave., Chicago, Ill.

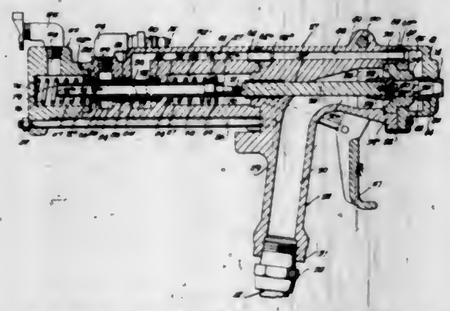
Filed Nov. 25, 1960, Ser. No. 71,537
5 Claims. (Cl. 239—413)



1. A portable hand operated pressure cleaning and drying gun comprising, a high pressure air tube, a downwardly extending cylindrical atomizing nozzle housing integrally and angularly formed on the outlet end of said high pressure air tube and having the same diameter as said tube, said nozzle housing having an opening in its downwardly extending rear wall intermediate its ends, a low pressure fluid tube connected at its outer end with said downwardly extending rear wall of said nozzle housing and having its internal bore in alignment with said opening in said nozzle housing intermediate the end portions thereof and communicating with the interior thereof, a venturi meter assembly mounted within the upper end of said nozzle housing, said assembly embodying a body with a longitudinal bore and a tapered needle pointed at its upper end, a rotatable cylindrical nozzle rotatably and threadedly mounted upon the exterior discharge end of said cylindrical nozzle housing, a transverse pin secured across the open end of said cylindrical nozzle and said tapered needle being pivotally secured to said pin for adjusting the location of said needle within said longitudinal bore in said assembly, an air valve element assembled upon the inlet end of said high pressure air tube, an operating member pivotally mounted with said air valve element, a three-way valve assembled on the opposite end of said low pressure fluid tube, a flexible conduit for con-

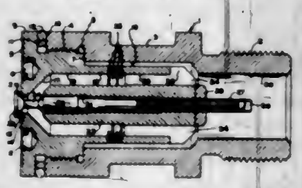
veying liquids connected at one end with said three-way valve, an air passage in the outer wall of said three-way valve, a rotating valve pin, an operating lever at one end of said valve pin, a transverse passageway through said valve pin, an air passage way in said valve pin and joining said transverse passageway at right angles therewith, movement of said lever rotates said valve pin for simultaneously covering and uncovering the intake end of said air passageway in said pin and the air passage in the wall of said three-way valve for selectively allowing fluid from a source of liquid supply to be conveyed through said flexible conduit and said low pressure fluid tube when the air passage in said three-way valve wall is closed.

3,042,316
PLASTER APPLYING APPARATUS
Lloyd H. Hobson, Lemont, Ill., assignor to Plastering Development Center, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 13, 1960, Ser. No. 62,461
10 Claims. (Cl. 239—415)



1. In a spray gun for plaster and the like, a body equipped with a passage, said passage having an inlet at one end and a nozzle outlet at the other end, a valve in said passage effective to close the same and positioned adjacent to but spaced from said nozzle outlet, a second passage in said body communicating with the first-mentioned passage between said valve and outlet, a third passage in said body communicating with said second passage, fourth and fifth passages in said body communicating with said third passage, valve means in said body operative to selectively isolate said fourth and fifth passages from said third passage, means for coupling a source of compressed air containing accelerator to said fourth passage and a source of compressed air to said fifth passage, and trigger means coupled to said valve and valve means for first communicating said fourth and third passages and thereafter opening said valve and finally isolating said fifth and third passages.

3,042,317
VARIABLE AREA VALVE
Harold C. Simmons, South Euclid, Ohio, assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 9, 1959, Ser. No. 858,422
1 Claim. (Cl. 239—453)



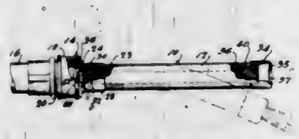
A variable area valve comprising a valve body having a passage for conducting fluid therethrough and a valve seat; an axially yieldable, laterally rigid spring means integrally joining together one portion of said body for axial movement with respect to another portion that contains said seat; said spring means comprising a tubular portion of said body that is transversely slotted to provide axially adjacent pairs of diametrically opposed and circumferentially offset bridges; and a valve member axially and laterally fixedly secured to said one portion and having a head disposed adjacent to said seat and extending into said another portion in radially spaced relation whereby fluid pressures of different magnitude acting on said valve member moves said head thereof axially toward or away from said seat without sliding friction of said valve member in said another portion.

3,042,318
ADJUSTABLE NOZZLE
Ho Chow, Yonkers, N.Y., and William Blasnik, Demarest, N.J., assignors, by mesne assignments, to International Patent Research Corp., New York, N.Y., a corporation of New York
Filed July 15, 1960, Ser. No. 43,148
9 Claims. (Cl. 239—458)



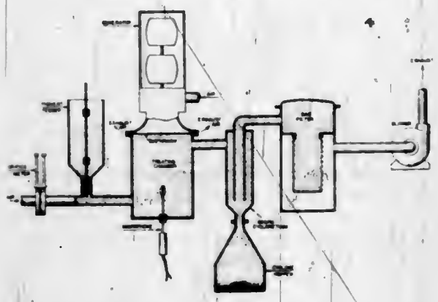
1. A nozzle comprising a fixed structure including an outer housing and a conduit member fixed relation to and located inside said housing a forward portion of said conduit member being spaced radially inwardly from the forward portion of said housing and having a valve surface and an outlet opening located rearwardly of said valve surface, and a valve member received between the forward portions of said housing and said conduit member, articulately mounted on said fixed structure for movement forwardly and rearwardly relative thereto, and having a valve surface sealingly engageable with and movable away from the valve surface of said conduit member, the forward portion of said housing having an opening through which a portion of said valve member is visible, said valve member portion and said housing having index marks cooperating with one another to indicate the relative positions of said valve surfaces for different relative positions of said conduit member and said valve member.

3,042,319
COMBINED NOZZLE AND VALVE CONSTRUCTION
Gorman C. Burd, 1531 S. Cove Blvd., Toledo, Ohio
Filed Jan. 23, 1961, Ser. No. 84,291
13 Claims. (Cl. 239—576)



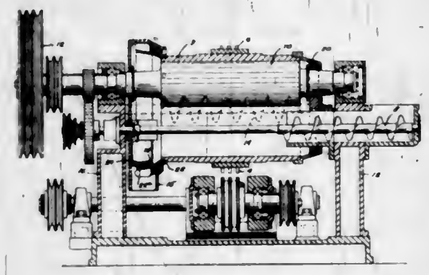
1. A nozzle construction including, in combination, a tubular body formed of nonmetallic yieldable material, a coupling construction attached to one end of said body, an elongated flexible tubular element formed of a plurality of normally close convolutions of linear material disposed within the body, one end region of the flexible element being in fluid tight relation with the outlet end of the body, closure means for the opposite end region of the flexible tubular element, said tubular body being adapted to be flexed whereby to flex said tubular element and separate convolutions thereof to accommodate flow of fluid through the coupling construction to the interior of the flexible tubular element for discharge through the outlet end of the tubular body.

3,042,320
TREATMENT OF MINERAL SUBSTANCES
Malcolm S. Burgess, Macon, Ga., assignor to Burgess Pigment Company, Sandersville, Ga., a company of Georgia
Filed Apr. 22, 1958, Ser. No. 730,164
3 Claims. (Cl. 241—26)



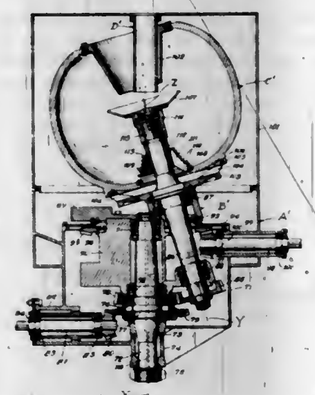
1. A method for the treatment of clays which comprises subjecting the clay in the form of discrete particles suspended in an aeroform fluid to the influence of sonic energy of an intensity greater than 150 decibels, and a frequency from about 0.5 to about 3.5 kc., whereby particle size is reduced.

3,042,321
PAPER FIBRE PROCESSING MACHINE AND METHOD OF WORKING PULP FIBRES
Anton Joseph Haug, 64 Taylor St., Nashua, N.H.
Filed Oct. 1, 1958, Ser. No. 764,676
2 Claims. (Cl. 241—157)



1. In a machine for mechanically working fibrous paper making material the combination of a frame, a revolving cylinder mounted in the frame for receiving and guiding fibrous material in a circular path of travel around the inside of the cylinder, means for feeding material into the cylinder, an outlet housing fixed to the machine frame and located around an open end of the revolving cylinder to provide a passageway through which material may pass out of the open end of the cylinder, a roller located through the cylinder for engaging and rolling fibrous material, rotating conveyor means supported in the circular path of travel of the fibrous material and periodically deflecting portions of the fibrous material in directions axially of the cylinder, a cylindrical fiber brushing component rotatable with the revolving cylinder within the said outlet housing, said fiber brushing component consisting of a conical extension presenting inner fiber engaging surfaces which terminate in spaced relation to the end wall of said outlet housing and an inner fiber brushing component yieldably supported on the outlet housing in spaced relation to the outer fiber brushing component to define a restricted fiber brushing passageway of annular conformation and said inner fiber brushing component including a pair of pivoted members each of which is variably spaced from an adjacent serrated surface of the outer fiber brushing component and each of said pivoted members being formed with serrated portions for engaging and rolling fibers passing through the restricted fiber brushing passageway.

3,042,322
ROTATING AND GYRATING BALL MILL
Loren G. Symons, North Hollywood, Calif., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 27, 1955, Ser. No. 511,665
1 Claim. (Cl. 241—175)



In a grinding mill, a base, a sub-base mounted thereon for rotation about a generally upright first axis, a hollow bowl mounted on a shaft extending upwardly from the sub-base for simultaneous rotation about its axis inclined at a predetermined angle to and intersecting the first axis, the bowl having a top opening surrounding the first axis in all bowl positions, means disposed in the first axis to deliver a generally constant stream of material to be ground normally through said top opening into the interior of the bowl in the general direction of the intersection of the two axes, a body of grinding media in the interior of the bowl, means located entirely below the open top of the bowl to drive said rotary sub-base and said bowl shaft for rotating the bowl simultaneously about both axes at a speed effective to maintain the media and the material undergoing grinding centrifugally against the inner surface of the bowl with a thrust of the order of several times gravity, and at the same time to impart to the media and material a substantial wave-like movement across the equator of the bowl, and a generally annular concave discharge at an end of the bowl, surrounding but radially spaced from the bowl axis, formed and adapted to permit the escape of ground material along and from the inner surface of the bowl, while resisting the passage of the media.

3,042,323
LIFTER-LINER LINING FOR ROTARY BALL MILLS
Newton L. Hall, P.O. Box 83, Salt Lake City, Utah
Filed Nov. 17, 1958, Ser. No. 774,178
1 Claim. (Cl. 241—183)

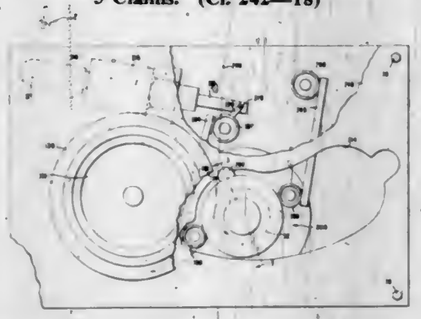
A lifter-liner lining for a horizontal rotary ball mill of uniform shell diameter, clear interior, and imperforate shell, open at both ends for respectively receiving and discharging material to be ground, comprising; sectional and

circumferential lifter plates with imperforate headers extending consecutively within several spaced rows of straight alinement along the length of the interior of said mill shell, the headers of said lifter plates extending radially from the concaved inner surface of said lifter plates measured in magnitude between five and fifteen percent of the diametral measurement of said mill shell, said rows of lifter plates with headers being interposed between groups of uniform circumferential liner plates,



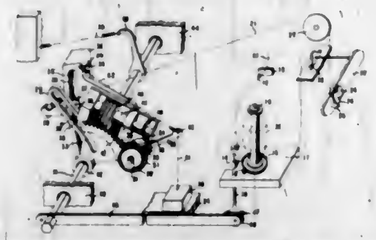
said lifter plates with headers alined in regular rows with said headers being of diverse heights, said liner plate groups and said lifter plate rows, included in total combination a lifter-liner lining detachably attached directly to the interior of said mill shell and adapted to develop mill load actions to engage a composite circulating load of discrete material to be ground, said load actions being governed by the normal speed of mill and the diametral height of header on said lifter plates.

3,042,324
WINDUP EQUIPMENT
George Allison Kinney, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,180
5 Claims. (Cl. 242—18)



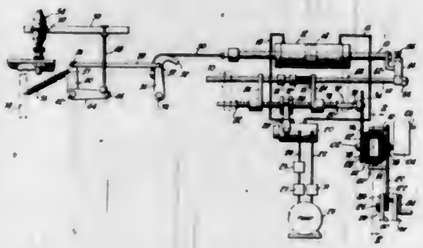
1. In a high speed windup system the combination comprising a supporting frame structure, a windup roll chuck, means rotatably mounting said chuck on said frame structure, a movable assembly on said frame structure adjacent said chuck, a drive roll and yarn traversing mechanism, a first seismic eccentric rotation accommodating means resiliently supporting and mounting said drive roll and yarn traversing mechanism on said movable assembly in operative association with said chuck, power drive means on said movable assembly operatively connected with said drive roll and traversing mechanism, means mounting said movable assembly on said frame structure to maintain a minimum spacing between the traversing mechanism and the windup roll chuck and constant contact between said drive roll and a yarn package mounted on said windup roll chuck during windup of yarn on said package, said means rotatably mounting said chuck on said frame structure comprising a second seismic eccentric rotation accommodating resilient supporting and mounting means for said chuck and a means for maintaining the axis of said windup chuck in constant parallel alignment with the axis of said drive roll.

3,042,325
BUILDER MOTION
Allan B. Hughes, Wilmington, Del., and Sherman A. Rogers, Landenberg, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Sept. 29, 1960, Ser. No. 59,344
3 Claims. (Cl. 242—26.3)



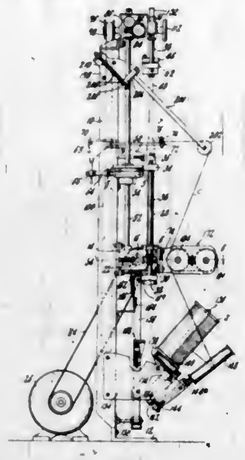
1. An adjustable radius arm comprising two arm members on a shaft, each member having an elongated cam slot therein, one of said members being fixed to said shaft and the other being mounted for rotation thereon, a follower plate having cam rollers riding in said cam slots to provide a movable coupling between said arm members, oscillatory motion means connected to said follower plate, and means interconnected with said oscillatory motion means normally locking said arm members together, which means includes a stepping device for cyclically rotating said rotatable member relative to said fixed member in predetermined increments thereby moving said follower plate toward or away from said shaft by moving said cam rollers in said slots.

3,042,326
TRAVERSE CONTROL MECHANISM
Douglas J. Lamb, Gulf Breeze, and William H. Hills, Pensacola, Fla., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Aug. 27, 1959, Ser. No. 836,401
7 Claims. (Cl. 242—26.3)



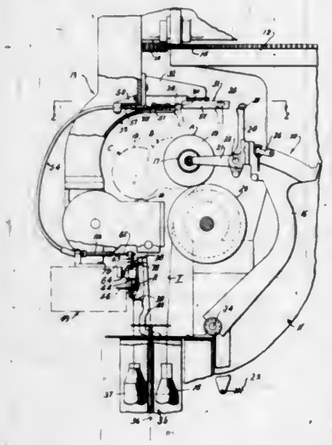
4. In a traverse control mechanism in combination with a ring rail and lifter elements supporting said rail for reciprocation thereof along a portion of a bobbin, piston means connected to the lifter elements for driving said lifter elements, valve means to reverse the stroke of said piston means, a rotatably and slidably mounted screw having opposite ends oppositely threaded, stop blocks threaded onto each end of the screw, means rigidly attached to said screw to control said valve means, and contact means connected to and movable with said piston means to strike one of the stop blocks upon each stroke of said piston means so that said screw and said valve control means are caused to slide to actuate said valve means, said contact means being adjustable relative to the position of the piston means to shift the portion of the cylinder traversed by the piston means and thereby shift the traversing stroke along the bobbin for changing the configuration of the yarn package wound thereon.

3,042,327
QUILL WINDER
Nelson B. Henry, Decatur, Ga., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 10, 1958, Ser. No. 708,333
4 Claims. (Cl. 242—27.1)



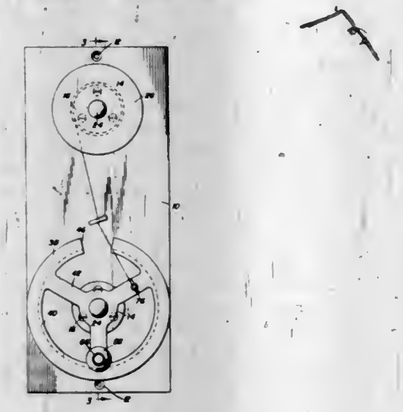
1. In a machine of the type described a carriage mounted for vertical movement, means for rotatably supporting a quill on said carriage, means for revolving said quill supporting means, means for guiding a yarn to be wound onto said quill under tension, means for moving said carriage from a starting position including delayed action means for rendering the carriage moving means ineffective for a predetermined period of time, said delayed action means including a driving worm and driven worm wheel and means for engaging the worm along the worm wheel for a limited period of time, and means for returning said carriage to its starting position.

3,042,328
SPOOLER TYPE WINDER
Robert J. Mahoney, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Apr. 6, 1959, Ser. No. 804,516
2 Claims. (Cl. 242—35.6)



1. A winder having, in combination, a winding unit including an active bobbin and a cheese and means for drawing thread from the bobbin and winding the same onto the cheese, means supporting a reserve bobbin and holding the thread thereof alongside but spaced from said first thread, a tying unit movable along a predetermined path past said winding unit including a knotter engageable with said reserve thread and operable to tie the same to the trailing end of a broken thread on said cheese during movement of the tying unit past the winding unit, means for sensing breaking or exhaustion of said first thread including a member on said winding unit moved to a predetermined position in response to breaking of said first thread; a deflector carried by said tying unit in advance of said knotter and normally disposed in a position to engage said reserve thread and cam the same out of the path of the oncoming knotter, an actuator operable to disable said deflector in the absence of a thread running between said active bobbin and said cheese including a part mounted on said tying unit for engagement with said member and moved thereby out of a normal position in passing by the member, and means carried by said tying unit and subsequently engageable with said member and actuated thereby during continued movement of the tying unit to return said deflector to said normal position.

3,042,329
LIGATURE MEASURING DEVICE
Albert Signorella, 128 Cottage St., New Bedford, Mass.
Filed Sept. 19, 1960, Ser. No. 56,905
5 Claims. (Cl. 242—48)

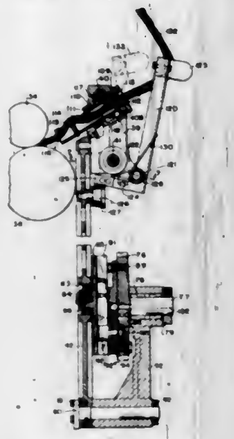


1. A device for forming ligatures of a uniform length from a continuous ligature strand comprising a base, support means on said base for receiving a continuous ligature strand, a flat ligature measuring pulley rotatably mounted on said base in a spaced relation to said support means, a clamp screw provided at one side of said pulley for releasably fastening an end of a continuous ligature strand thereto, said pulley having a rim with a peripheral channel therein for receiving a plurality of turns of the ligature strand, said pulley also having an open slot extending transversely through said rim and channel of said pulley to enable passage of a cutting device therethrough whereby to sever said plurality of turns and form therefrom a bundle of ligatures of uniform lengths, said base having an axle projecting therefrom, said pulley having a hub movably received on said axle, and spaced spokes connecting said hub to said rim, said slot being disposed intermediate a pair of adjacent spokes and said clamp screw being provided on one of said adjacent spokes.

3,042,330
BALLING HEAD

Chester J. Haug, Cleveland, George S. Van Deusen, Lyndhurst, and Jack H. Selby, Chagrin Falls, Ohio, assignors to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Filed June 22, 1959, Ser. No. 821,938
3 Claims. (Cl. 242—54.4)

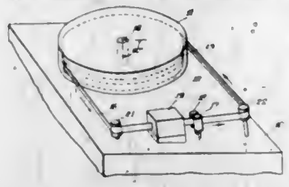


1. In combination with a continuous textile sliver delivering mechanism having sliver exit means, a balling mechanism operatively associated with said delivering mechanism and comprising an arbor upon which the sliver is to be wound, means for rotating said arbor in timed relationship to the operation of said delivering mechanism, a crosshead supported for reciprocation in opposite directions from a central position and longitudinally of said arbor and provided with sliver guide means, the distance between said sliver guide means and said sliver exit means being shortest when the crosshead is in central position and variably greater when said crosshead reciprocates therefrom, an oscillating traverse arm operatively connected to said crosshead, means to oscillate said arm in timed relationship to said delivering mechanism to reciprocate said crosshead, and a sliver compensating mechanism for maintaining constant sliver length between said exit means and said guide means and comprising a lever carried by said crosshead on the side thereof that is toward said delivering mechanism and rockable transversely of said crosshead on an axis parallel to said arbor, said lever on one side of its pivotal connection being provided with compensating sliver guide means located intermediate said exit means and said crosshead sliver guide means, said lever on the opposite side of said pivotal connection having an actuating portion including a cam element, said traverse arm at a point spaced from said crosshead mounting a cam element cooperating with said first cam element, and spring means carried by said crosshead and acting on said lever to maintain both of said cam elements in contact with each other whereby when said crosshead is in central position said compensating sliver guide means is located a maximum distance from the crosshead sliver guide means to provide a substantial bow in said sliver but when said crosshead reciprocates from central position the arcuate movement of the traverse arm cam element lowers said element and said spring means acts on said lever to rock the latter to move the compensating sliver guide means transversely of and toward said crosshead to positions closer to the crosshead sliver guide means to reduce the magnitude of said sliver bow in proportion to the increase in the distance between said exit means and said crosshead sliver guide means.

3,042,331
TAPE RECORDER

Raymond C. Bierman, Clarendon Hills, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Filed May 21, 1958, Ser. No. 736,818
3 Claims. (Cl. 242—55.13)

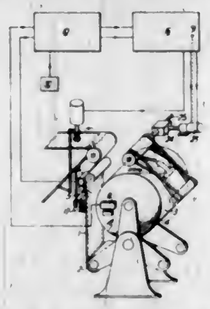


1. Web transport apparatus including in combination means for supplying an elongated, flat web along a first line of travel in a first plane perpendicular to the plane of the web, means for taking up the web along a second line of travel in a second plane parallel to the first plane, a first guide positioned to engage the web in the first line of travel and direct the web toward the second line of travel, a second guide positioned to engage the web from said first guide and direct the same along the second line of travel, said first and second guides having inversely corresponding conical surfaces with the radii which define the contour of said surface of said first guide being of decreasing magnitude in a direction toward the second plane and the radii which define the contour of said surface of said second guide being of decreasing magnitude in a direction toward the first plane, the conical axes of said first and second guides being disposed at corresponding angles with respect to the first and second planes for maintaining the plane of the web perpendicular to the first and second planes during web travel toward and away from said guides thereby preventing distortion or twisting of the web.

3,042,332
SPLICING OF PREPRINTED WEBS

Edward Thomas Astley, London, England, assignor to J. F. Crosfield Limited

Filed July 5, 1961, Ser. No. 121,902
Claims priority, application Great Britain July 4, 1960
4 Claims. (Cl. 242—58.3)



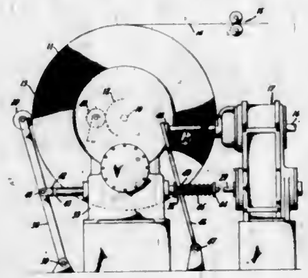
1. Apparatus for sticking a moving web of paper carrying a repeated pattern to a rotating reel of paper carrying a corresponding pattern comprising: control means including a register determining device receiving signals representing the passage of patterns on the reel and on the moving web past predetermined points and operative to cause the sticking when the interval between the signals representiing the passage of patterns on the web and the reel indicates that the patterns on the attached webs will be subtantially in register; means operable to vary the relative speed of the web and the new reel by a given amount which is independent of the register error to vary the rate of change of register between them; and means

preventing the operation of the speed-varying means until a predetermined time has passed since the commencement of the search for an in-register condition of the web and reel without the operation of the register-determining means.

3,042,333
TENSION MAINTAINING WIND OR UNWIND CONTROL

Stuart Wilder, Jr., Columbus, Ind., assignor to The Reliance Electric and Engineering Company, Cleveland, Ohio, a corporation of Ohio

Filed June 5, 1961, Ser. No. 115,002
9 Claims. (Cl. 242—75.5)

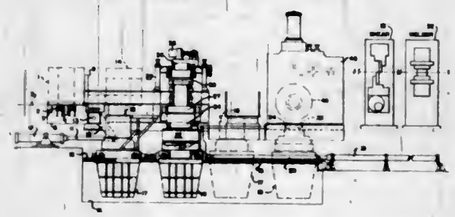


1. Means for automatically controlling the rate of rotation of a storage roll for flexible material comprising, in combination with such a roll, a length of flexible material wound on said roll, means for forwarding said material relative to said roll, rotary means driven at a constant ratio with respect to said forwarding means, a speed-varying transmission including an input shaft connected to be driven from said rotary means, an output shaft, and an element shiftable oppositely to vary oppositely the speed of said output shaft relative to the speed of said input shaft, a worm wheel having a constant-ratio driving connection with said roll, a worm having a constant-ratio driving connection with said output shaft, mounted for axial reciprocation, and meshing with said worm wheel, spring means yieldably resisting axial movement of said worm under the influence of the driving reaction of said worm on said worm wheel, means operatively connecting said worm to shift said shiftable element oppositely in response to opposite axial movement of said worm, a movable backing abutment for said spring means, and means variably positioned in accordance with variations in the effective radius of flexible material wound on said roll and operatively connected to move said abutment.

3,042,334
PREPARATION OF STRIP-LIKE MATERIAL FOR PROCESSING

Robert J. Erskine, Howland Township, Trumbull County, Ohio, assignor to The Wean Engineering Company, Inc., Warren, Ohio, a corporation of Ohio

Filed June 5, 1959, Ser. No. 818,458
12 Claims. (Cl. 242—79)
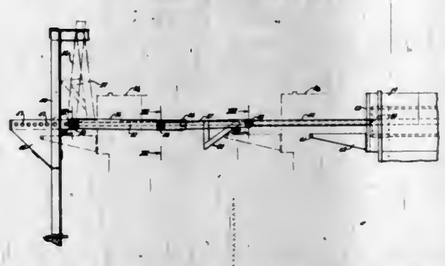


1. The method of preparing a coil of metallic strip material for processing, which comprises placing the coil with its axis in a generally horizontal plane, partially unwinding the coil, cutting unsound metal from the unwound end of the strip material, rewinding the extended strip material on the coil, transferring the coil to another position, and then unwinding the coil and feeding the strip into a processing line.

3,042,335
COILING MANDREL AND STRIPPER MECHANISM

Westley L. Ensign, 314 N. 78th Ave. W., and Harold A. Markland, 819 N. 61st Ave. W., both of Duluth, Minn.

Filed Dec. 6, 1957, Ser. No. 701,067
11 Claims. (Cl. 242—81)

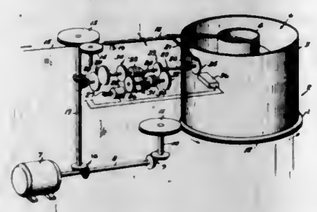


1. In a reel for winding wire fabric, the combination with a bearing support mounted for guided movement in opposite directions over a rectilinear path between operating and retracted positions, of a mandrel rotatably mounted on and projecting axially outwardly from said support in a direction parallel to said path, said mandrel having a diametral winding slot extending axially inwardly from its outer end, a stripper head mounted in said slot for relative movement in an axial direction with respect thereto, said stripper head having end portions projecting beyond diametrically opposite edges of said slot, a control shaft extending axially through said bearing support and connected with said stripper head, and means for holding said shaft and thereby said stripper head against movement during initial retracting movement of said bearing support and for moving said shaft and stripper head with said bearing support during final retracting movement thereof.

3,042,336
PACKAGING WIRE

Frederich B. Krafft and Frank K. Roberts, Muskegon, Mich., assignors to Anaconda Wire and Cable Company, a corporation of Delaware

Original application Mar. 27, 1957, Ser. No. 648,935, now Patent No. 2,959,279, dated Nov. 8, 1960. Divided and this application Jan. 22, 1960, Ser. No. 10,828
9 Claims. (Cl. 242—83)



7. Apparatus for packing wire in an annular container having a cylindrical wall and an axial core comprising a rotatable table adapted to support and axially rotate said container at constant angular velocity, a capstan adapted to deliver said wire to said container at constant linear velocity, a wire guide adapted to direct said wire from said capstan to a point within said annular container, means for oscillating said guide at a frequency equal to the frequency of rotation of the container,

whereby the point of delivery of said wire moves through a path lying between the inside surface of said cylindrical wall and the outside surface of said axial core, a motor in driving engagement with said table, capstan and oscillating means, means normally holding the oscillation of said guide in positive synchronization with rotation of said table, and means for periodically altering the frequency of oscillation of said guide to a value substantially different from the frequency of rotation of the table for a time substantially less than that required for one full rotation thereof.

3,042,337
WINDING DEVICE
Thomas James Dinneen, Rte. 1, Warrenton, Va.
Filed Sept. 23, 1960, Ser. No. 58,012
1 Claim. (Cl. 242—85.1)



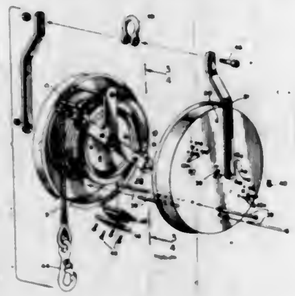
A winding device for cord comprising an elongated resilient material block having identical enlarged opposite end portions, an integral reduced waist portion intermediate said enlarged ends, each of said ends including portions defining an elongated slot transversely through the full width of the block and extending longitudinally of said block from each end thereof, the longitudinal slots terminating on opposite sides of said reduced waist in an enlarged elongated cut-out portion to receive the ends of a cord wound around said reduced waist, the longitudinally extending slots having a width less than the diameter of the cord whereby an end of the cord can be held during winding thereof, and said elongated cut-out portion having a greater width than the cord.

3,042,338
MEASURING TOOLS
Ture Anders Ljungberg, Badstigen 6, Stuvsta, Sweden
Filed Feb. 16, 1960, Ser. No. 9,115
4 Claims. (Cl. 242—107.2)



1. A measuring tool comprising a casing having a mouth portion, a flexible measuring tape having a concavo-convex profile coiled within said casing, a channel-shaped guide member having side walls fixedly mounted in said mouth portion, said guide member having a width slightly smaller than the width of said measuring tape when flattened, said measuring tape being freely slidable in and extending through said guide member when said measuring tape is in said concavo-convex profile, a locking means for said measuring tape consisting of a slide member having a wedging portion, guide lugs mounted on said guide member for mounting said slide member therein, said slide member being movable in said guide member in the direction of the length of said measuring tape from a first position in which said measuring tape has said concavo-convex profile and is freely slidable in said guide member to a second position in which said wedging portion of said slide member wedges the profile of said measuring tape to a flattened position thereby urging the edges of said measuring tape against said side walls of said guide member to effectively lock said measuring tape in said guide member, and a manually operable mechanism for moving said slide member between said first and second positions.

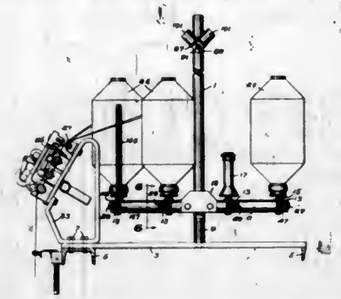
3,042,339
SUSPENSION SAFETY-DEVICE
Robert C. Gschwind, 6957 N. Caldwell Ave., Chicago, Ill.
Filed Oct. 6, 1959, Ser. No. 844,828
2 Claims. (Cl. 242—107.4)



1. A workman's safety-suspension device comprising, a support, means for suspending the support above a workman, a spring-recoil drum journaled on the support, a coiled cable having one end attached to the drum and leading exteriorly of the support, a pair of axially-spaced grooved brake-shoe disks integrated with the drum, a pair of Y-shaped members fixed on the support with the axis of the drum adjacent the crotch of the members and the free ends of the members all extending outwardly of the periphery of the brake-shoe disks, trunnions connected to the ends of the stem part of the Y-shaped members, a pair of arcuate-shaped leaf springs each secured at one end to the trunnions on the stem ends of the Y-shaped member, brake shoes fixed on the inner surfaces of the leaf springs for engagement with the brake-shoe disks, a pair of V-shaped levers fulcrumed at their respective crotches to the free ends of one of the arms of the Y-members, rods spanning and connected to the respective free ends of the V-shaped levers, means connecting one of the rods on the V-shaped levers with the other ends of the leaf springs and positioning the leaf springs substantially concentrically of the brake-shoe disks, springs connecting the V-shaped levers with the support and maintaining the brake shoes retracted from contact with the brake-shoe disks to permit the payout and the take-in of the cable over the other rod during the normal movements of a workman, said springs being de-activated by a sudden strain on the cable caused by other than a normal movement of a workman, whereby the V-shaped levers are shifted to engage the brake-shoes with the brake-shoe disks and retain the drum against further movement until the other-than-normal strain on the cable is released.

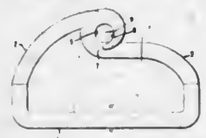
3,042,340
CREEL
Richard K. Butler, Whitman, Mass., assignor, by mesne assignments, to Machinecraft, Inc., Whitman, Mass., a corporation of Massachusetts
Filed Dec. 30, 1958, Ser. No. 783,902
15 Claims. (Cl. 242—131)

1. In spinning and roving frames having roller beams and drawing rolls on the latter, a creel having in combination rotatable bobbin supports, fixed vertical spindles on which the bobbin supports rotate, horizontal creel rails on which the spindles are mounted, cross-arms holding the creel rails in horizontally spaced and parallel relation to each other, and uprights holding the creel rails



elevated above the level of the roller beams, each cross-arm supporting a plurality of creel rails between the uprights and the drawing rolls at each side of the frame.

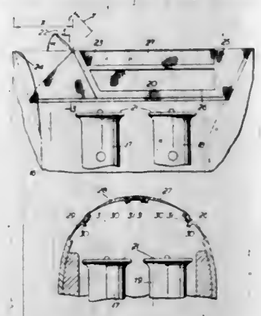
3,042,341
TRAVERSE THREAD GUIDE
Marion Ross Hope, Chattanooga, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 23, 1958, Ser. No. 750,437
2 Claims. (Cl. 242—157)



1. A self-loading thread guide comprising a supporting base adapted for straight line reciprocal motion, the said base containing two associated surface members in substantially the same plane and protruding outwardly from the opposite ends of the supporting base and arranged along the line of reciprocation of the supporting base, the relative rates of protrusion being such that substantially midway along the said base the one surface member which forms a by-pass face, protrudes further from the supporting base than the other said surface member which forms a loading face, a thread retaining circular throat being formed between the two said surface members by a one turn spiral the tip of which overlaps the said surface member forming the loading face, the clearance between the said tip and loading face surface member forming a yarn-line loading slot.

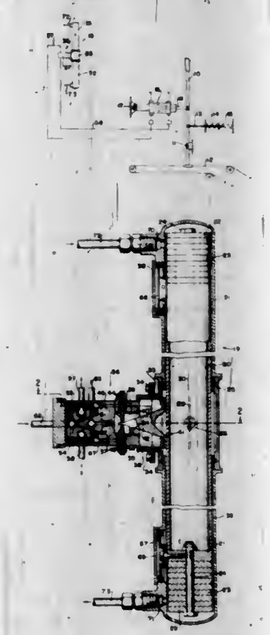
3,042,342
William Francis Wiles, Linby, and John Roland Evans, Spondon, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Aug. 8, 1960, Ser. No. 47,966
Claims priority, application Great Britain Aug. 24, 1959
6 Claims. (Cl. 244—23)

1. In an engine compartment adapted to form part of a vertical take-off aircraft: at least one vertically arranged gas turbine engine mounted in the compartment; a fixed structure extending across the top of the compartment, said fixed structure defining aperture means directly above the engine air intake; closure means mounted on said fixed structure and movable between a closed position in which said aperture means is closed and an open position in which vertical entry of air is allowed through said aperture means; means defining an orifice located forwardly of said fixed structure; a scoop movable independently of said closure means to a position in which it projects outwardly of said fixed structure at the rearward end of said orifice, said scoop being adapted to direct ram air through said orifice and into the engine air intake when said closure means is in said closed position, said



scoop having an effective cross-sectional area projecting outwardly of said fixed structure and seen looking horizontally which is substantially less than the effective cross-sectional area of said orifice.

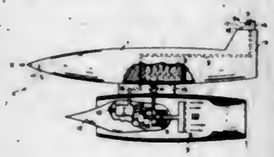
3,042,343
INERTIAL CONTROL SYSTEM
Conrad H. Cooke, Linhigh, and Thomas C. Hill, Aberdeen, Md., assignors to Martin-Marietta Corporation, a corporation of Maryland
Filed Oct. 25, 1956, Ser. No. 618,320
19 Claims. (Cl. 244—76)



1. An inertial control system for aircraft of the type having a control element for guiding the aircraft, comprising, in combination, a fluid actuator operatively connected to said control element and adapted when energized to exert a force thereon, an elongated inertia element having substantially equal concentrated mass members at each end, disposed on a common centerline, means for mounting said inertia element in said aircraft for pivotal movement about an axis midway between said concentrated mass member, said axis being slightly offset with respect to said centerline, resilient means acting on

said inertia element tending to retain said inertia element in a predetermined position in said aircraft, and hydraulic valve means actuated by pivotal movements of said inertia element to energize said fluid actuator.

3,042,344
PRESSURE PICK-UP FOR A JET ENGINE FUEL SYSTEM
Frederick G. Etheridge, Whittier, Calif., assignor to North American Aviation, Inc.
Filed Nov. 26, 1956, Ser. No. 624,288
8 Claims. (Cl. 244—76)



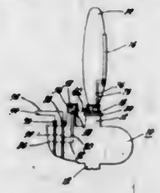
1. A pressure control system in combination with a vehicle formed on a longitudinal axis and having a forward and rearward end, said vehicle having a jet engine, said system comprising: a wedge type member secured on the rearward end of said vehicle and comprising at least one inclined surface portion forming a set angle relative to said longitudinal axis, said wedge type member extending in a rearward direction and terminating at a forward end thereof in a generating means for generating an oblique shock wave when said wedge type member moves relative to an aerodynamic environment at a predetermined range of supersonic speeds, altitude and when said longitudinal axis forms a predetermined angle of attack; pitot tube means secured to said wedge type member at a fixed distance rearward of said generating means and so positioned on said wedge type member so as to face the forward end of said vehicle to generate a normal shock wave adjacent thereto during said predetermined range of supersonic speeds, altitude and angle of attack; control means operatively connected to said pitot tube means; means connecting said control means to the engine of said vehicle for selectively controlling the thrust thereof dependent on the changes in pressure losses occurring through said generated oblique shock wave and said normal shock wave and sensed by said pitot tube means.

3,042,345
CONTROL-AUGMENTING LANDING GEAR
Raymond Prunty Holland, Jr., 204 W. College Blvd., Roswell, N. Mex.
Filed Aug. 5, 1957, Ser. No. 676,056
6 Claims. (Cl. 244—104)



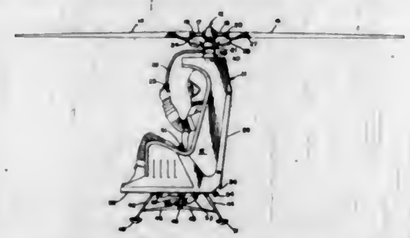
1. On an aircraft, a landing gear comprising two or more leg members extending beneath said aircraft, resilient foot members attached at the lower extremities of said leg members, said foot members being displaceable vertically relative to said aircraft, bearing pad interrupting means between each of said leg members and said aircraft interrupting the upward travel of said foot members in upward positions predetermined relative to said aircraft, a common spring member connectedly interposed between said leg members, an individual spring member interposed locally between the aircraft and each individual foot member, said spring members constraining said foot member against upward motion relative to said aircraft, said interrupting means stopping the resilient deflection of said common spring member at said predetermined upward position of said leg member, and said individual spring members remaining resilient at said predetermined upward positions of said leg members.

3,042,346
WIRING HARNESS FOR ELECTRICALLY HEATED VARIABLE PITCH PROPELLER BLADE
James F. Hawley, Tipp City, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,603
3 Claims. (Cl. 244—134)



1. In a variable pitch propeller, a hub, a propeller blade journalled therein for rotation about its longitudinal axis to different pitch positions, an electrical heater on said blade, a first terminal assembly operatively connected to said hub, a strap attached to said blade and carrying a second terminal assembly, an arcuate member having a flange attached to said blade by said strap, a plate operatively connected to said hub and overlying a portion of said flange, and a cord having end leads connected to said terminal assemblies and an intermediate flexible portion comprising closely wound helical convolutions capable of extension and contraction during rotation of the blade relative to said hub, said convolutions being restrained against outward movement relative to said blade due to centrifugal force during propeller rotation by said plate and flange.

3,042,347
EMERGENCY EJECTION SEAT
Donald J. Halsey, Arlington, Tex., assignor, by mesne assignments, to Ling-Temco-Vought, Inc., Dallas, Tex., a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,325
4 Claims. (Cl. 244—141)



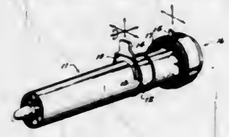
1. An emergency ejection seat comprising, an aircraft ejection seat adapted to be ejected from an aircraft, ejection means and guide means for said seat, said seat being ejected by said ejection means and guided from the aircraft by the guide means, a landing gear on said ejection seat for absorbing the landing shock, spin stabilizing means for preventing rotation of the seat, a rotor connected to the top of said seat, said rotor having a hub, a plurality of blades pivotally connected to said rotor hub for folding alongside said ejection seat, and fluid unfolding means connected between one of said blades and said hub for gradually unfolding said one blade at a predetermined rate, said unfolding means comprising a cartridge actuated hydraulic means.

3,042,348
READILY MOVABLE RAILWAY SWITCH
William M. Lutts, Sr., 4102 Berkshire Ave., Louisville, Ky.
Filed Apr. 11, 1960, Ser. No. 21,176
3 Claims. (Cl. 246—453)



1. In a railway track resting upon tie plates attached to cross ties and having two fixed double-rail tracks converging into a single double-rail track with a switch-point assembly comprising a first movable switch-point forming a part of one converging double-rail track and a second movable switch-point comprising a part of the other converging double-rail track, a pair of head rods spaced from each other along the axis of said tracks and pivotally attached to and supporting each of said switch-points adjacent the forward ends of said switch-points, a flat plate resting upon the upper surface of a cross-tie disposed between said spaced rods and supporting said assembly for movement thereof, a roller-mounting bracket movable with said head rods and extending above said supporting tie and having end portions attached respectively to and supporting said rods at points approximately mid-way between said switch-points, said bracket having a central portion containing spaced bearing recesses, a roller mounted beneath said central portion and having a shaft rotatably engageable at its ends in said recesses thereby to permit said roller to move along said flat plate while carrying the weight of said assembly, said roller having a diameter sufficiently large to position said brackets, said rods supported by said bracket and said switch-points supported by said rods, at an elevation disposing said switch-points out of contact with said tie plates during movement of said switch-point assembly from one switching position to its alternate switching position, and means for moving said first and second switch-points selectively into and out of engagement with the respective fixed rails of said single double-track, said switch-point assembly being adapted to tilt transversely about the axis of the roller whereby upon engagement of one of said forward ends of said switch-point assembly with its corresponding fixed rail, said one of said switch-points is lowered to bring the rear end thereof into contact with said tie plates and the forward end of the other switch-point is raised to hold the rear end thereof out of contact with said tie plates.

3,042,349
REMOVABLE AIRCRAFT ENGINE MOUNTING ARRANGEMENT
John C. Pirtle and Thomas L. Hampton, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Nov. 13, 1959, Ser. No. 852,883
2 Claims. (Cl. 248—5)



1. In a mounting arrangement for supporting an engine from an airframe,

a mount including:

a thin, arcuate web having one edge attached to said engine in one transverse plane,

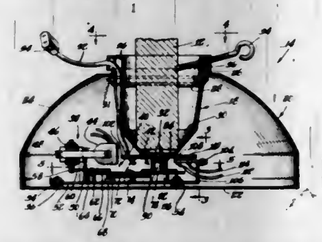
said web extending less than half way around said engine and generally parallel with the engine,

a ball joint support means attached to said web near the mid point and axially spaced from the transverse plane to which the airframe may be attached to resist axial and vertical loads,

a pair of links connected to said airframe and extending generally tangentially to said engine,

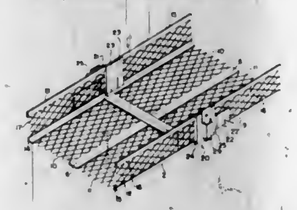
each link connected to said web by a pivotal joint on either side of said ball joint means to resist vertical and side loads while allowing free axial expansion of the engine.

3,042,350
CHRISTMAS TREE STAND
Julius J. Lencioni, Chicago, Ill., assignor to Mell-Hoffmann Manufacturing Company, Chicago, Ill., a corporation of Delaware
Filed July 26, 1960, Ser. No. 45,347
2 Claims. (Cl. 248—45)



1. An ornamental display stand including a base to rest on a supporting surface and throat means spaced thereabove, receiving means mounted for rotation about a vertical axis and for limited vertical movement along the said vertical axis and extending through said throat means and adapted to receive the base of an ornamental element, power means for rotating said receiving means relative to said throat means and including a gear mounted for rotation about the vertical axis of rotation of said receiving means, and overriding clutch means connecting said gear and said receiving means and including therebetween a telescopic connection and mutually cooperable ribs and grooves operable when the ribs and grooves are in mutual engagement to rotate the receiving means and operable to permit the ornamental element and the receiving means to stall upon encountering an obstruction by disengaging the rib and groove means with vertical shifting of the receiving means through its telescopic connection with said gear while permitting the power means to continue in operation.

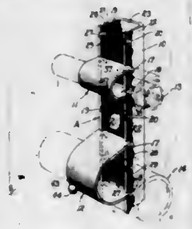
3,042,351
CABLE TRAYS
Marvin A. Du Bois, 2600 169th St., Hammond, Ind.
Filed May 27, 1960, Ser. No. 32,281
6 Claims. (Cl. 248—49)



2. A cable tray assembly comprising a pair of cable trays, each of said trays comprising a single unitary

sheet of metal formed into a tray of a substantially U-shaped cross section, and each of said trays being formed of integral sections of expanded and non-expanded metal for the purpose of rigidity and ventilation, a strap member connected to each vertical adjoining edge of each of said cable trays, the strap member connected to one of the vertical edges of one of said trays including a portion extending beyond the edge thereof and including an opening therethrough, and the strap member connected to the adjoining edge of the other of said trays being provided with a laterally extending tongue to cooperate with and extend through said opening to rigidify and interconnect the cable trays in abutting edge relationship, and a removable locking pin having an offset portion engaged with said tongue to releasably retain the interengagement between the straps of the abutting tray members.

3,042,352
PIPE HANGER
George F. Stamper, 3050 Mark Ave., Santa Clara, Calif.
Filed Apr. 22, 1960, Ser. No. 24,055
8 Claims. (Cl. 248—68)



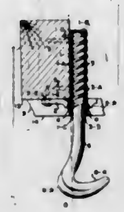
1. A pipe and conduit hanger comprising, in combination, an elongated channel member adapted to be secured, with its open side exposed, to a building element, a plurality of notches in the exposed, longitudinal edge of each side flange of said channel member, said notches being arranged in laterally aligned pairs spaced apart lengthwise of the support member, each of said notches having an undercut portion therein, an arched, pipe embracing clip adapted to overlie and embrace a pipe of selected diameter, when such pipe is mounted transversely across the open side of said channel member between two laterally aligned pairs of said notches, the side portions of said clip being of a length to extend into the notches on each side of such pipe, a laterally extending flange on the free end of each of said side portions, and of a size to extend into the undercut portions of a pair of aligned notches into which the side portion on which said flange is provided is inserted, thereby to attach such pipe to the channel member.

3,042,353
CABLE CLAMP
Joseph B. O'Mara, Hastings on Hudson, N.Y., assignor to Anaconda Wire & Cable Company
Filed Nov. 8, 1960, Ser. No. 67,948
11 Claims. (Cl. 248—74)



10. A clamp for a messenger supported cable comprising a vertical base plate, horizontal messenger receiving walls defining a groove in said base plate, means for locking a messenger in said groove, an upwardly opening, cable-supporting hook extending from said base plate and providing an unobstructed plane between the midpoint of the opening of said hook and said messenger, whereby said hook will support said cable should said messenger be released from said groove.

3,042,354
RECEPTACLE BRACKET
Charles M. Goodwin, Rte. 2, Mount Vernon, Ohio
Filed Apr. 22, 1960, Ser. No. 24,176
5 Claims. (Cl. 248—205)



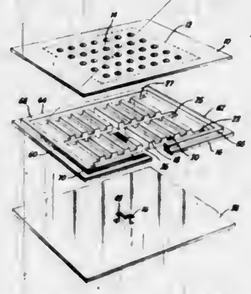
1. A load supporting device adapted to be mounted on a supporting structure comprising a hook having a threaded shank, a bracket assembly including a front plate and a base plate rigidly secured together, the central portion of at least one of said plates being formed with an arcuate groove opposing a surface of the other plate, said groove and surface forming a generally cylindrical chamber, said chamber having threads therein mating with the threads on said shank, said plates being provided with opposing arcuate tabs extending beyond their adjacent edges, said tabs forming an extension of said cylindrical chamber, a ring extending around said extension and in frictional contact therewith, said threaded shank extending through said extension and into said chamber, the threads of the shank mating with the threads in the cylindrical chamber.

3,042,355
ADJUSTABLE SUPPORT
William A. Stevens, Houston, Tex., assignor to Royal-Texas, Inc., Houston, Tex., a corporation of Texas
Filed May 27, 1959, Ser. No. 816,190
1 Claim. (Cl. 248—328)



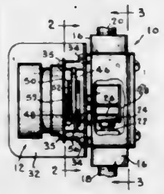
A flexible and adjustable support for a syringe or the like, comprising: an upper suspension member including an integrally extending arcuate hook for engagement with a horizontal rod, and merging into a downwardly extending neck portion having an aperture and a slot therethrough, in a plane generally parallel to the plane of said arcuate hook; a first depending bead joined to the bottom of said neck portion; a ball-chain joined to said depending bead; a second depending bead joined to the opposite end of said ball-chain; and a second hook joined to said second depending bead, said second hook being engageable with said aperture and including an offset foot piece integral therewith, said foot piece having a sufficient length to engage a face of said neck portion of said upper suspension member when said foot piece is passed through said aperture of said upper suspension member, and said ball-chain being engageable with said slot, whereby an article carried thereby can be selectively elevated to a desired vertical position.

3,042,356
VACUUM HOLD-DOWN APPARATUS
Hector Audino, 102 Bennett Road, Teaneck, N.J.
Filed Jan. 25, 1960, Ser. No. 4,557
2 Claims. (Cl. 248—363)



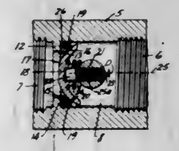
1. Vacuum hold-down apparatus comprising a thin perforated non-porous metal plate; a flexible mat positioned under said plate, said mat having a corrugated upper surface and a flat lower surface, said upper surface having lands and valleys, said valleys being in registration with the perforations in said plate, said mat having a first channel which extends transversely to said lands and a second channel extending parallel to said lands and intersecting said first channel; and a rigid supporting member positioned under said mat and having first and second short intersecting slots which in the region of intersection of said channels are in registration with said first and second channels respectively.

3,042,357
MOTOR OPERATED VALVE
Richard K. Engholdt, Milwaukee, Wis., assignor to Erie Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 13, 1959, Ser. No. 846,169
4 Claims. (Cl. 251—78)



1. A motor operated valve having a pivotally mounted valve member adapted to control the flow of fluid through the valve comprising, an actuating mechanism operatively connected to the valve member adapted to pivot said member between open and closed positions, return spring means for said actuating mechanism adapted to bias said mechanism to its valve closing position, a motor operatively connected to said actuating mechanism and adapted to drive said mechanism and thereby pivot the valve member from its closed to its open position, said motor being of the type which can be stalled without damage thereto so that no means must be provided to automatically disengage said motor from the valve member when the member reaches its fully open position, reducing gear means between said motor and said actuating mechanism, and electromagnetically operated clutch means for said motor, said clutch means being actuated by the windings of said motor and adapted to disengage said motor and at least part of said reducing gear means from said actuating mechanism when said motor is de-energized to thereby reduce the drag which said return spring means must overcome when acting to return said actuating means to its valve closing position.

3,042,358
VALVE WITH SPHERICAL CLOSURE
Arthur A. Anderson, St. Paul, Minn., assignor to The Specialty Mfg. Co., St. Paul, Minn., a corporation of Minnesota
Filed Oct. 27, 1958, Ser. No. 769,788
5 Claims. (Cl. 251—172)

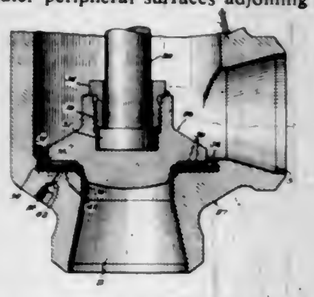


1. A valve comprising, a tubular body having an elongated bore defining a chamber, inlet and outlet passages extending from said chamber, a fixed annular abutment for a valve seat at the outlet end of said bore, having a stop surface coaxially and perpendicularly disposed to the longitudinal axis of said bore, an annular floating valve seat movable radially in contact with said stop surface, the outside diameter of said seat being smaller than said bore and said seat having a concavely spherical seat surface, a barrier wall member having a convexly spherical surface for contact with said seat surface, a flexible and compressible sealing ring confined in said chamber at the outer periphery of said seat, the outer and inner peripheries of said sealing ring being in continuous contact with the inner and outer surfaces respectively of said bore and seat, and said sealing ring having an anular edge portion disposed to make sealing contact with the spherical surface of said barrier wall member when under fluid pressure, said tubular body being formed with a bearing opening for a stem having an axis of rotation extending approximately through the center of the sphere defined by said spherical surface of said barrier wall member and approximately parallel to said annular stop surface, a rotary stem fitting in said bearing, and means operatively connecting said stem to said barrier wall member for rotating said member across said sealing ring and spherical seat surface for opening and closing the valve, said floating seat being freely movable radially in contact with said stop surface to compensate for inaccuracies in the location of said stem in relation to the axis of said chamber and said sealing ring being operative to seal the joint between said floating seat and said bore.

3,042,359
VALVE SEAT AND DISC ARRANGEMENT
Kurt B. Bredtschneider, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Sept. 22, 1959, Ser. No. 841,522
5 Claims. (Cl. 251—172)

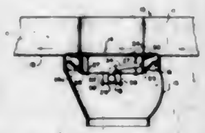
1. In a valve, a valve casing, a movable valve closure member therefor, seat means within the casing for contacting the said closure member with the said seat means in fluid sealing relation, sealing means interposed between said closure member and the seat means of the said cas-

ing, the said sealing means comprising inflatable membrane means having spaced apart inner and outer thickened annular portions defining peripheral limits thereof, the said membrane means having a plurality of intermediate thin walled serrations comprising successive concentric lands and recesses joining said annularly spaced apart thickened portions and extending annularly between said thickened annular portions substantially transversely to the central axis thereof, the latter thickened portions defining the respective inner and outer peripheral limits of said inflatable membrane, the said thickened portions also defining an annular closed chamber on one side of the said membrane means when the latter means is assembled in the casing, the closed chamber being fluid sealed on outer peripheral surfaces adjoining said thick-



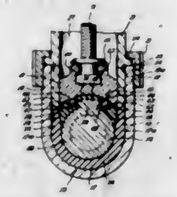
ened annular portions of the membrane means, actuating means cooperating with the closure member for effecting said fluid sealing contact predeterminately between said valve closure member and the said seat means, the said closure member in its valve closing contact within said casing bearing against outer surfaces defining respectively the lands of the said serrations and at least one outer transverse annular surface of the thickened annular portions of said membrane means, and fluid means communicating with said annular closed chamber for inflating and moving said serrations of the membrane means predeterminately in a direction toward said closure member contact without disturbing the initial contact of said closure member with the outer annular surface of said thickened portion of the membrane means whereby to supplement the fluid sealing area of said contact of the closure member with said intermediate serrations of the membrane means.

3,042,360
VIBRATORY CONVEYOR DISCHARGE GATE
Robert A. Sneddon, Columbia Falls, Mont., assignor to Anaconda Aluminum Company, New York, N.Y., a corporation of Montana
Filed Oct. 25, 1957, Ser. No. 692,367
2 Claims. (Cl. 251—175)



1. A discharge gate for a substantially circular discharge opening in the floor of a vibratory conveyor channel member comprising a substantially circular closure plate of diameter somewhat less than the discharge opening, a cylindrical member of less diameter than said closure plate centrally secured to the bottom of said closure plate, a bottom plate formed with a conical annular surface secured to the lower end of said cylindrical member, the conical surface of the bottom plate forming with the outer surface of the cylindrical member and with the marginal portion of the lower surface of the closure plate an annular channel having its open side facing outwardly from the closure plate, an annular tubular extensible bladder positioned in said channel, a pivot shaft secured to said gate, a closure lever secured to said gate for swinging it on said pivot shaft between a closed position in which it is disposed substantially centrally in and inclosing relation with said discharge opening and an open position in which it leaves said discharge opening substantially unclosed, a source of compressed air, a valve through which said bladder is connected selectively to said compressed air source and to the atmosphere, and a valve operating member positioned for actuation by said closure lever to connect the bladder to the compressed air source and to the atmosphere respectively as the closure plate is moved to and from its closed position, whereby when the closure plate is in said closed position the bladder is inflated and extended through the open face of the channel in which it is mounted to completely close the marginal portion of the discharge opening and when the closure plate is moved from its closed position the bladder is deflated and withdrawn into said channel.

3,042,361
RUBBER-SEALED GATE VALVE
John C. Garrott, % Garrott Brass & Machine Co., P.O. Box 2204, Houston, Tex.
Filed Mar. 21, 1960, Ser. No. 16,240
8 Claims. (Cl. 251—187)



1. A gate valve comprising a casing having a flow passage therethrough, a gate chamber intersecting said flow passage, a generally U-shaped flexible gasket seated in the bottom of the gate chamber and extending upwardly along opposite sides thereof about said flow passage, a gate member shaped to interfit with said gasket movably mounted in the gate chamber for controlling said flow passage, said gate member comprising a closure portion and a head portion spaced above the closure portion, interengaged connector elements integral with said portions and co-operatively shaped to permit limited relative movement of the portions in the plane of the gate member, a flexible resilient member interposed between said portions and molded directly to said portions and to said connector elements completely enclosing said connector elements, said flexible resilient member being compressible between said portions by movement of the head portion toward the closure portion to seal between the gate member and the enclosing walls of the gate chamber, a bonnet member closing said gate chamber and having portions closing the spaces between the walls of said chamber and the adjacent ends of said head portion above the upper ends of the arms of said gasket, and an operating stem extending into said gate chamber and connected to said head portion.

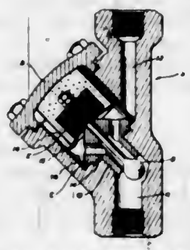
3,042,362
BUTTERFLY VALVE
Selwyne P. Kinney, Crafton, Pa., assignor to S. P. Kinney Engineers, Inc., Carnegie, Pa., a corporation of Pennsylvania
Filed Mar. 25, 1958, Ser. No. 723,703
2 Claims. (Cl. 251—306)

1. A butterfly valve comprising a body with a passageway therethrough, the body having an annular recess in the walls forming the passageway, a sealing band of rubberous material in the recess with a thick solid central portion and a thinner flange along each side, the central portion of the band projecting into the passageway through the body, a narrow metal band in the recess disposed on each side of the thick central part of the sealing band and overlying each flange, screws passing through the metal bands and through the flanges of the sealing band and screwed into the body, and a damper



mounted to rotate in the body from an open to a closed position, the periphery of the damper in closed position contacting the thick central portion of the sealing ring, said sealing band being formed with a nonresilient coarse wire netting reinforcing band integrated therewith extending into each flange far enough so that said screws also pass through the netting, whereby said reinforcing band is put under tension by forces acting to dislodge the sealing band from the valve body.

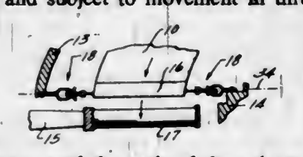
3,042,363
STEAM TRAPS
Douglas B. Deeks, 197 Forest Hill Road, Toronto, Ontario, Canada
Filed June 2, 1960, Ser. No. 33,588
7 Claims. (Cl. 251—362)



1. In a steam trap, a valve seat freely fitted therein, means for retaining said seat firmly in one immovable set position comprising bimetallic means engageable with said seat, and means co-operating with said bimetallic means to engage it with said seat under pressure during non-operating conditions of said trap, said bimetallic means being biased to increase its pressure on said seat under operating conditions of heat caused by steam pressure or hot condensate, and retain said seat immovable in said set position under said latter conditions.

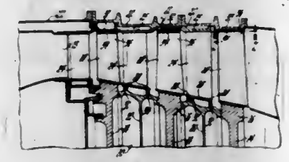
3,042,364
SEALING MECHANISM
Brian H. Rowe, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Dec. 12, 1960, Ser. No. 75,250
8 Claims. (Cl. 253—39)

1. Sealing mechanism for a tip turbine fan powerplant comprising, an annular scroll for the passage of exhaust gases and subject to movement in three planes,



frame members out of the path of the exhaust gases on each side of the scroll and contiguous therewith, a flange projecting from said scroll on each side lengthwise thereof generally toward said frame members and having a bead on the edge thereof, first plate means forming a tongue pivotally connected to said flange at said bead and extending toward said frame member, second plate means secured to said frame to form a female member extending toward and grasping said tongue in a sealing relation, said plate means lying in substantially a common plane to form a seal between said scroll and frame member.

3,042,365
BLADE SHROUDING
Ralph J. Curtis, Berkley, and Cleveland F. Nixon, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 8, 1957, Ser. No. 695,351
2 Claims. (Cl. 253—39)

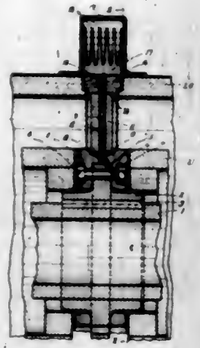


1. The combination of a rotatably mounted rotor member having a plurality of radially projecting blades thereon, a casing having an inner surface circumferentially surrounding said rotor member, a portion of said inner surface being in radial alignment with said rotor blades, and an annular lining of abradable clearance material secured to said radially aligned inner circumferential surface, said annular lining having an inner circumferential surface exposed to said blades of said rotor, said inner circumferential surface being provided with two series of generally longitudinally, parallel, integral ridges thereon, said two series of ridges intersecting one another generally at an angle of 90° so as to form an open-faced grid pattern with regular indentations between the ridges, and a vitreous enamel filling the said indentations to provide a substantially smooth surface, said open-faced grid pattern being oriented on said inner circumferential surface of said annular lining so as to coact with the tips of said rotor blades with the angle between the ridges and the direction of blade movement about 45°, thereby forming a seal therewith.

3,042,366
AXIAL FLOW GAS TURBINE
Ernst Rudolf Magnus Holmquist, 16, Lundgrensgatan, Gothenburg, Sweden
Filed May 4, 1959, Ser. No. 810,954
Claims priority, application Sweden May 5, 1958
2 Claims. (Cl. 253—39.15)

1. In an axial flow gas turbine, a turbine shaft, a blade wheel central portion fixedly connected to said shaft, a ring of ceramic material concentrically surrounding but separate from said central wheel portion and being radially spaced therefrom, a plurality of blades of ceramic material extending radially between said blade wheel central portion and said ring, said blade wheel central portion being provided with recesses evenly and angularly spaced therearound and each recess having a configuration corresponding to the cross-section of one of said blades, said blades having their inner ends radially slidable, but non-rotatable in said central portion recesses and being radially unsecured thereby, a steel ring concentrically confining the periphery of and being attached to said ceramic ring, cooling flanges on said steel ring, a

stationary annular channel being provided around said steel ring, said cooling flanges being situated within said

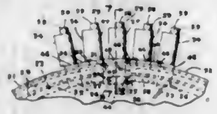


channel and said channel being provided with an inlet and an outlet opening for a cooling fluid.

3,042,367
FLUID SEAL
Harvey W. Welsh, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 17, 1958, Ser. No. 749,297
2 Claims. (Cl. 253—69)

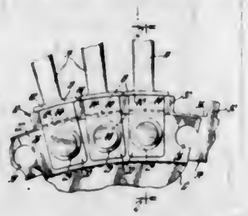
1. In an axial flow elastic fluid machine having alternate stator vanes and rotor blades, an axially extending outer case member surrounding said vanes and blades, a shroud ring surrounding said rotor blades, said shroud ring having a main axially extending shroud portion adjacent the outer ends of said rotor blades and having axially extending circumferentially spaced portions intermediate said main portion and said case member, a stator support ring surrounding and supporting said stator vanes, said support ring having axially extending circumferentially spaced portions radially spaced from and axially overlapping the spaced portions on said shroud ring, a radially extending circumferential flange on the inside of said case member, circumferentially spaced slots in said flange receiving said circumferentially spaced portions on said shroud ring and said support ring to prevent rotation of said rings relative to said case member but permitting radial movement of said rings relative to each other and said case member, and a flexible seal between said shroud ring and said support ring for preventing leakage of gases flowing between said vanes and blades into the space between said rings and said case member.

3,042,368
REMOVABLE LOCK FOR BLADE WHEEL ASSEMBLY
Richard L. Cook, Wellsville, N.Y., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed June 29, 1960, Ser. No. 39,698
5 Claims. (Cl. 253—77)



1. A blade wheel comprising:
(*a*) a rim on said wheel remote from the axis thereof and having a circumferentially extending groove therein,
(*b*) a slot means defining a blade rim insertion slot formed on the circumference of said rim and extending inwardly from the circumference in alignment with the circumferential groove of said rim,
(*c*) at least one undercut groove extending transversely in the circumferential groove of said rim,
(*d*) at least one undercut groove extending transversely in said slot means,
(*e*) a plurality of blades mounted in the circumferential groove of said rim,
(*f*) said blades having at least one projection engaging the surfaces of the undercut groove of the circumferential groove to restrain said blades in said wheel under centrifugal action,
(*g*) a last blade inserted into said slot means,
(*h*) said last blade having key means thereon adapted to engage the surfaces of the undercut groove of said slot means on rotation of said last blade to hold said last blade against radial separation from said slot means,
(*i*) a skirt means formed on said last blade to hold said last blade and said first mentioned blades in peripheral abutment on rotation of said last blade,
(*j*) said key means and said skirt means to coact to lock said last blade and said first mentioned blades in assembled position.

3,042,369
PINNED BLADE SEALING MEANS
Harvey W. Welsh, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 11, 1959, Ser. No. 792,664
3 Claims. (Cl. 253—77)



1. A rotor assembly comprising a rotor, a plurality of blades pivotally secured to and circumferentially spaced around the outer rim of said rotor, said blades each having a tang depending from a platform, pin means pivotally mounting each of said blade tangs in overlapping relationship to the rim of said rotor, each of said platforms extending circumferentially beyond said tangs and substantially abutting adjacent platforms, the construction and arrangement of said platforms and tangs defining openings between the rotor rim and adjacent tangs and the undersides of said platforms through which fluid may pass, and a combined vibration damping and fluid seal member mounted on all said pin means against said rotor and tangs between said tangs and rotor and extending radially into substantially abutting relationship to said platforms covering said openings, said member damping blade vibrations and blocking the flow of fluid through said openings.

3,042,370
VANE RING ASSEMBLY
Harvey W. Welsh, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 7, 1957, Ser. No. 688,706
2 Claims. (Cl. 253—78)



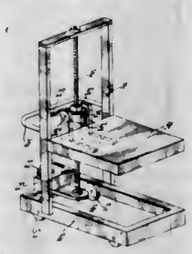
1. A vane ring assembly comprising a plurality of circumferentially arranged arcuate sections together forming a ring-like body, each of said sections comprising an outer shroud, an inner hollow shroud, and vanes between said shrouds; and means connecting the arcuate sections of said inner shrouds, said means comprising tongues fixed within said hollow member on one of said sections and extending circumferentially therebeyond, the hollow member of an adjacent section telescopically receiving said tongues a part rigidly fixed to said tongues at their ends and having a tapered hole therein extending radially of the ring, mutually coaxial guide means and fastening means on said adjacent section, and a tapered pin progressively movable radially of the ring into and through said guide means and hole into engagement with said fastening means for connecting said sections together, said hole being slightly offset relative to the axis of the guide means and fastening means, said pin having a conical surface for contact with the said part upon radial movement of said pin for circumferentially moving said connecting means and one section towards the other section.

3,042,371
VARIABLE CAMBER BLADING
Roy A. Fanti, Springfield, Mass., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 4, 1958, Ser. No. 759,044
2 Claims. (Cl. 253—78)



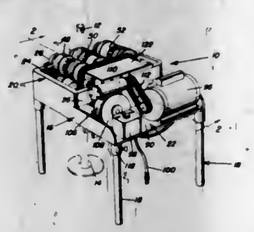
1. An airfoil blade construction for a compressor or the like comprising a rigid metal spar-like spanwise member having upper and lower surfaces forming a part of the upper and lower airfoil surfaces, upper and lower bimetallic sheets with each sheet comprising a pair of metal layers having different expansion coefficients, said sheets being of different metal than that of said spar, said sheets extending from the upper and lower airfoil surfaces respectively to form a streamlined continuation thereof along the chordwise axis of the blade, said sheets being fixedly joined together at one chordwise end thereof to form one spanwise edge of the blade, the other chordwise ends of said sheets being spaced apart, and means for rigidly mounting at least one of said sheets at the other of its chordwise ends to said spanwise member, and second upper and lower bimetallic sheets substantially similar to said first-mentioned sheets and extending from said upper and lower airfoil surfaces in a chordwise direction opposite from said first-mentioned sheets, said second sheets being joined together at one end to form the other spanwise edge of said blade and being spaced apart at their juncture with the airfoil surfaces of said spar-like members.

3,042,372
POWERED JACK SCREW ASSEMBLY
Philip B. Zeigler, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,428
2 Claims. (Cl. 254—7)



1. A powered jack screw device comprising a frame member, a stationary screw supported in vertical disposition by said frame member, an electric motor assembly surrounding said screw, said assembly including a housing provided with means for supporting a work load and having end plates, the armature of said motor incorporating a tubular shaft enveloping said screw and journalled in said plates, a ball nut secured to said tubular shaft outward of one of said plates, a friction brake mechanism for said shaft outward of the other of said plates, said brake mechanism being normally maintained energized by spring means associated therewith, and electromechanical means carried by said housing and in circuit with said motor whereby upon energization of the motor circuit said brake is automatically de-energized.

3,042,373
PIPE PULLING MACHINE
Lou L. Berkman, 142 South St., Middletown, N.Y.
Filed June 29, 1960, Ser. No. 39,611
6 Claims. (Cl. 254—29)



1. A pipe pulling machine comprising frame means, a plurality of parallel roller grip means journaled in said frame means including a set of horizontally arranged roller means spaced from each other unequal amounts so as to accommodate and grip different sized pipes therebetween including remotely located roller means and adjacent roller means, flexible means drivingly interconnecting said remotely located roller means, gear

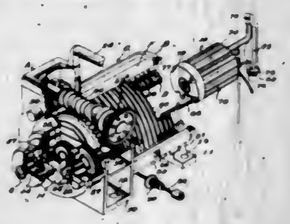
means drivingly interconnecting said adjacent roller means and input gear means drivingly connected to said first mentioned gear means.

3,042,374
STEEL AND ALUMINUM PULLEY BLOCK
Emmett D. Livingston, 5 Division St., Box 333, Norwich, N.Y.
Filed Sept. 22, 1959, Ser. No. 841,613
2 Claims. (Cl. 254—134.3)



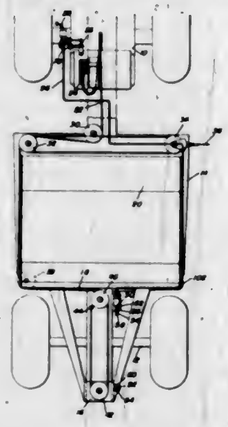
1. In a pulley block, the combination which comprises a pair of parallel substantially triangular shaped side plates, each of said side plates having an arcuate base portion and straight side portions extending from the opposite ends of said base portion to converge at their opposite ends at the apex thereof, a steel pulley positioned between said side plates and rotatably mounted therein adjacent the junction of one end of said base portion and one end of one of said side portions, a plurality of aluminum pulleys also positioned between said side plates and rotatably mounted therein in spaced succeeding relation to said steel pulley, said aluminum pulleys being so mounted that their axes follow the curvature of said base, vertically disposed arms positioned adjacent the puter surfaces of said side plates, means mounted in the apex of said side plates for pivotally mounting said side plates between said arms at one end thereof, a flange hingedly connected to the opposite end of each arm, a pin extending through said flanges, a hub mounted on said pin, a cable receiving clevis positioned between said flanges and secured to said hub, said side plates having relatively spaced openings therein positioned adjacent said pulleys in the path of the pivotal movement of said arms and stop pins adapted to be selectively mounted in the openings in said side plates and engaging said arms for limiting the movement of said side plates in relation to said arms.

3,042,375
PORTABLE HOIST
Edward J. Fahey, Kennett Square, Pa., and Edwin B. Pierce, Wilmington, Del., assignors to All American Engineering Company, Wilmington, Del., a corporation of Delaware
Filed May 20, 1959, Ser. No. 814,605
5 Claims. (Cl. 254—174)



1. A winch comprising a drum with a hollow bore open at one end, said drum having an exterior surface, said surface being formed with annular grooves, a cable reeved around said drum in said grooves, end supports for each end of said drum, said supports having bearing units for rotatably mounting each end of said drum, an electric motor detachably mounted completely within the bore of the drum, said motor having a rotor with an internally splined socket and a stator, a female electric socket, with lead connections from said stator to said female electric socket, a gear train mounted in one of said end supports, a power take-off shaft coupled to said internally splined rotor socket, said shaft having a pinion in driving connection through said gear train with said drum, an electromagnetic brake having a solenoid and a male electric coupling jack connectable with said female electric socket, electric circuit for said motor, said circuit when closed maintaining said brake solenoid energized to hold said brake released when said female socket and male jack are connected and said brake applying to hold said drum from rotation when said motor is removed from said open end of the drum.

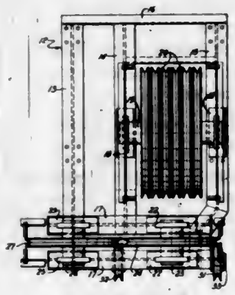
3,042,376
AUTOMATIC CLUTCH KICKOUT
John I. Miller, 1264 3rd St., Phillipsburg, Kans.
Filed July 7, 1954, Ser. No. 441,763
2 Claims. (Cl. 254—187)



1. An earth-moving device having a reciprocating ram, a winding drum, a cable secured to said ram and on said drum, a clutch device operable to control rotation of said drum and movement of said ram, a clutch operating lever, a hydraulic fluid cylinder mounted in proximity to said lever, a piston in said cylinder, a piston rod extending from said cylinder into the path of movement of said lever, said piston being moved to retracted position when said lever is in clutch engaging position, a driving hydraulic fluid cylinder mounted adjacent to said ram, a piston in said driving cylinder, a piston rod extending from said driving cylinder, a conduit communicating said cylinders, a quantity of liquid in said cylinders and said conduit sufficient to fill said conduit and one of said cylinders, means engageable with said driving cylinder and operable on predetermined movement of said ram to transfer the liquid from said driving cylinder into said driven cylinder for restraining movement of said ram.

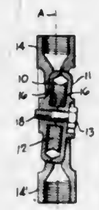
3,042,377
OIL WELL DERRICK CROWN BLOCK
Joseph R. Woolslayer and Cecil Jenkins, Tulsa, Okla., assignors to Lee C. Moore Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 29, 1960, Ser. No. 5,448
3 Claims. (Cl. 254—190)

1. Oil well drilling apparatus comprising a derrick having a front and back and two sides and having top beams forming its upper end, a crown block frame adjustably mounted on said top beams, means for detachably connecting the frame to the beams in any one of three different predetermined positions along a line extending from side to side of the derrick, said positions consisting of two side positions and an intermediate position, a row of parallel sheaves journaled in the frame on a common axis, a first fast line sheave journaled in the frame directly behind said row of sheaves on an axis extending from front to back of the derrick, a second



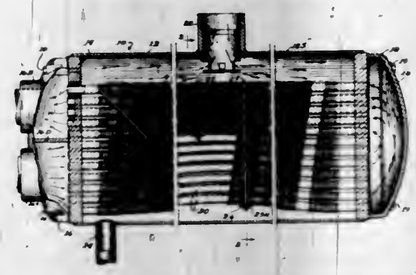
fast line sheave journaled in the frame beside the first fast line sheave and in substantially the same plane, the two fast line sheaves being disposed substantially edge to edge, the first fast line sheave having a diameter approximately equal to the distance between said intermediate position of the frame and its side position at the side of the derrick adjacent the second fast line sheave, and the second fast line sheave having a diameter approximately equal to the distance between said intermediate position of the frame and its other side position.

3,042,378
PULLEY ASSEMBLY
Don F. Preston, Pacific Palisades, Calif., assignor to General Fire Extinguisher Corporation, a corporation of California
Filed Sept. 18, 1958, Ser. No. 761,866
5 Claims. (Cl. 254—190)



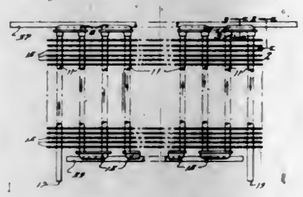
1. A pulley assembly comprising: a pair of mating and complementary housing halves of general cup shaped configuration designed to have their open ends in face-to-face engagement and lie in a common plane, each having a tangential passage in a portion of its peripheral wall; a pulley wheel; and fastening means for securing said pulley housing halves in said face-to-face engagement to enclose said pulley wheel, said halves being circumferentially adjustable to vary the angle between their respective passages, and said passages being canted at an angle with respect to said common plane, such that said passages lie on a common axis when positioned 180 degrees apart thereby enabling threading of said pulley assembly without uncoupling said halves.

3,042,379
CONDENSERS
James Nelson Hinde, Highland Park, Ill., assignor to Bell & Gossett Company, a corporation of Illinois
Filed June 29, 1959, Ser. No. 823,678
3 Claims. (Cl. 257—43)



3. In a shell and tube condenser, a casing including a shell and tube sheets with housings associated with the tube sheets to provide coolant inlet and outlet passages, said shell having a top inlet for gas and a lower outlet for condensate, a plurality of finned tubes extended between and through said tube sheets, said tubes being arranged in laterally spaced vertical stacks with the fins of vertically adjacent tubes in said stacks being in substantial engagement one with the other, and means embracing the tubes of each stack as a group and clamping such tubes together, in the central portions of the stacks all of the tubes below the upper tube of the stack being curved into an upwardly bowed arrangement and with the upper tube substantially straight.

3,042,380
HEAT EXCHANGER CONSTRUCTION
John Karmazin, % Karmazin Products Corp., Wyandotte, Mich.
Filed Apr. 20, 1959, Ser. No. 807,623
5 Claims. (Cl. 257—148)

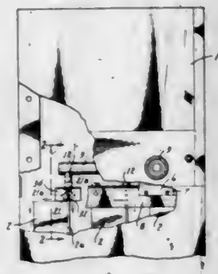


5. In a heat exchange unit, a plurality of spaced parallel tubes of substantially equal length, a plurality of generally U-shaped return conduits interconnecting the adjacent ends of adjacent ones of said tubes to provide a continuous path of flow through said tubes, each of said return conduits having an enclosing wall on the side thereof opposite from said tubes provided with a groove of arcuate cross section therein, a pair of supporting members arranged one on each side of the core adjacent said return conduits and having portions thereof seated in the grooves of said return conduits and bonded to said return conduits in said grooves whereby said tubes are maintained in a predetermined spaced assembly relation.

3,042,381
DEFROSTING MEANS FOR REFRIGERATING PLATES
Edwin M. Lasak and William E. Lauterbach, Chicago, Ill., assignors to Dole Refrigerating Company, Chicago, Ill., a corporation of Illinois
Filed July 8, 1960, Ser. No. 41,631
3 Claims. (Cl. 257—187)

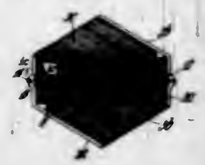
1. In defrosting means for refrigeration plates and the like in which a plurality of plates are simultaneously to

be defrosted, a plurality of generally hollow water distribution elements each being formed of a plurality of longitudinal walls joined together at acute angles, one for each plate to be defrosted, means for yieldingly and releasably securing one such element along the upper edge of each plate including a pair of spaced flexible gripping members with generally parallel edge portions formed along the bottom of a pair of walls on each element, each edge portion having spaced recesses therein adapted to form with



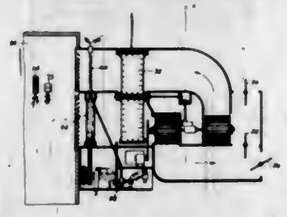
an opposed face of the plate, water discharge openings, the recesses being so arranged as to provide relatively closely spaced outlets effective to maintain a flow of water downwardly across the plate surfaces throughout generally the entire plate wall area, and means for supplying water to the interior of each of said water distribution elements including a header and connecting ducts between said header and each element, each of said ducts opening into a water distribution element and having an aperture therein to direct water along the interior of said elements toward the water discharge openings.

3,042,382
PLATE TYPE HEAT EXCHANGERS
Waldemar Hryniszak, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed Oct. 27, 1958, Ser. No. 774,571
Claims priority, application Great Britain Oct. 31, 1957
1 Claim. (Cl. 257—245)



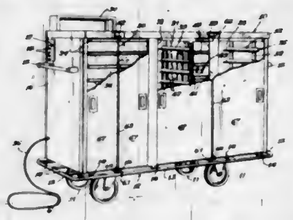
A heat exchanger comprising an assembly of hexagonally shaped flat sheets, side walls spacing said sheets, each side wall having two portions at an angle to each other; each side wall lying along adjacent sides of a hexagonal sheet at opposite corners thereof, a rectangular shaped corrugated sheet disposed between each pair of sheets with the two shorter edges lying parallel to two opposed parallel portions of the side walls and the corrugations running parallel to said shorter edges, the corrugations between each pair of sheets being parallel to one another and the side walls being disposed in adjacent pairs of sheets to provide inlets and outlets for a flow channel between one pair of sheets which are displaced from those for the flow channel between an adjacent pair of sheets, inlet and outlet means for conducting one heat exchanging fluid to the inlets and from the outlets of alternate flow channels and inlet and outlet means for conducting another heat exchanging fluid to the inlets and from the outlets of the remaining flow channels, the inlet and outlet means for at least one said fluid comprising inlet and outlet headers for the inlets and outlets for that heat exchanging fluid, one header being on the inlet face and the other on an outlet face of the heat exchanger, said headers consisting of tubular members having a slot formed therein for a distance intermediate their ends, and slots formed in a circumferential direction for a distance equal to half the circumference of the members at each end of the longitudinal slot, the portion of the duct bounded by the slots being open at the side thereof facing the said slots and having side portions continuing the duct wall remote from the said slots, means joining the said side portions to the heat exchanger to form a header having tubular portions at each end thereof and a portion of domed cross-section in between, and end plates at each end of the heat exchanger which seal the ends of the domed portions of the duct and to which the tubular ends of the duct are bonded.

3,042,383
UNIVERSAL AIR CONDITIONER
Neal A. Pennington, Tucson, Ariz.
Filed July 10, 1958, Ser. No. 748,562
4 Claims. (Cl. 257—281)



1. In combination with a device for anhydrously cooling an enclosure, which device includes a first air-passage, for admitting outdoors air to the enclosure, and a distinct second air-passage, for conveying exclusively air exhausted from the enclosure and for discharging the same, and means for impelling air through these two passages respectively, and means for evaporatively cooling the outgoing air in the second passage, and means to supply water to said evaporative means, and mean for anhydrous heat-exchange between the air in the two passages outdoorward of the evaporative means, said heat-change means comprising sectors of air-permeable non-hygroscopic highly heat-absorbent material and means to bring each sector successively into heat-exchange contact with each of the two air-streams; the combination therewith of means for rendering the device universal, so that the device may be used to heat as well as cool the entering air, such means comprising: a heater in one of the two passages indoorward of the heat-exchange means; a thermostat responsive to dry-bulb temperature of air treated by the device; means controlled by said thermostat to turn the heater on in response to air at the thermostat attaining a predetermined minimum dry-bulb temperature, and to turn the heater off in response to said air attaining a predetermined maximum dry-bulb temperature; and means controlled by the thermostat to reduce the supplying of water to the evaporative cooling means in response to the air at the thermostat attaining a predetermined minimum dry-bulb temperature, and to restore the full supplying of water in response to said air attaining a predetermined maximum dry-bulb temperature, the two predetermined minima not necessarily being the same, and the two predetermined maxima not necessarily being the same, means for recirculating a portion of the outgoing air from the outlet passage into the inlet passage, a humidistat responsive to the moisture content of air treated by the device, and means controlled thereby, to increase the supplying of water to the evaporative means in response to the air at the humidistat attaining a predetermined minimum dew-point, and to reduce the supplying of water to the evaporative cooling means in response to said air attaining a predetermined maximum dew-point; and interlocking control means between the thermostat, the humidistat, and the water supply means, for independently increasing the supplying of water in response to high temperature or low humidity, and dependently decreasing the supplying of water in response to low temperature and high humidity.

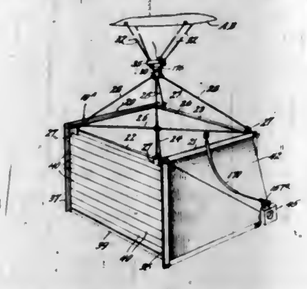
3,042,384
FOOD SERVING CART
Henry J. Bauman, Richfield, Minn., assignor to Nutting Truck and Caster Company, Faribault, Minn.
Filed Aug. 10, 1959, Ser. No. 832,607
1 Claim. (Cl. 257—293)



A food serving cart comprising in combination, a frame, wheels supporting said frame, an enclosed cabinet supported on said frame, a thermally insulated, electrically heated chamber within said cabinet, a thermally insulated, refrigerated chamber within said cabinet, a material experiencing a change of state and releasing heat at a temperature that maintains said heated chamber at a desired temperature in thermal communication with an electric heating element and with the interior of said heated chamber, two spaced plate-like heat absorbing members in said refrigerated chamber, each of said plate-like members comprising two edge-sealed metal sheets containing therebetween a material that experiences a change of state and absorbs heat at a temperature that maintains said refrigerated chamber at a desired temperature, slidably removable brackets maintained in said heated chamber and said refrigerated chamber, a plurality of vertical columns of drawers in said heated chamber supported on said slidably removable brackets, a plurality of vertical columns of trays in said refrigerated chamber supported on said slidably removable brackets, said refrigerated chamber having the same number of columns of trays as said heated chamber has columns of drawers and each column of trays having the same number of trays as each column of drawers has drawers, center-hinged doors on said cabinet to provide access to said heated and insulated chamber, said doors connected to said chamber through perforated members attached to said enclosed cabinet above and below the opening to said chambers, upper and lower hinge extension pins extending from the hinges on said doors, said lower pin being disengageable from said perforated door holding member when said doors are lifted to contact the upper of said perforated members, whereby said doors may be removed from said cabinet by lifting to disengage the hinges, and a refrigerator connected to provide refrigeration to said refrigerated chamber, whereby to provide a cabinet from which all drawers, trays, doors and holding brackets are removable to present an unobstructed interior for cleaning after use.

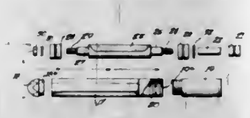
3,042,385
CABLE LAYING SYSTEM
Charles H. Smith, Annapolis, Md., assignor to Flight Refueling Incorporated, Baltimore, Md., a corporation of Delaware
Filed Oct. 29, 1959, Ser. No. 849,481
30 Claims. (Cl. 258—1.2)

1. Apparatus for the rapid and safe laying of communications cable over difficult terrain from an aircraft, which comprises a demountable package containing wire convolutions, means suspending said package from said aircraft at a single point and permitting but a relatively



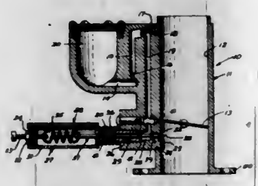
narrow angle of yaw, and means on said package for minimizing yaw and stabilizing the package in flight, the outfeed of the cable from the package being in the aft direction.

3,042,386
CONCRETE VIBRATOR TOOL
Andrew Wyzenbeek, 850 Lake Shore Drive, Chicago, Ill.
Filed Sept. 26, 1960, Ser. No. 58,352
4 Claims. (Cl. 259—1)



1. In a vibrator for compacting concrete, and the like, an elongated hollow housing, a bearing adjacent each end of said housing, an eccentric rotor rotatably mounted in said bearings, said housing having a shape in transverse section intermediate the ends of said housing of a regular polygon of not more than six sides.

3,042,387
FUEL SHUT OFF DEVICE OR DEGASSER
Kenneth P. King, 2105 Lee High Drive NE., Huntsville, Ala.
Filed Dec. 1, 1959, Ser. No. 856,458
1 Claim. (Cl. 261—41)



In a device of the character described, a carburetor including a main body portion provided with a vertically disposed bore, a throttle valve in said bore, a feed bowl having a horizontally disposed first passageway communicating with its lower end, a vertically disposed second passageway having its lower end communicating with said first passageway through a restricted jet, there being a first and second spaced apart air bleed establishing communication between the upper portion of said second passageway and said bore, a vertically disposed third passageway having its upper end communicating with said second air bleed, there being a transfer hole establishing communication between said third passageway and said bore, there being an idle fuel discharge port below said transfer hole, said port establishing communication between said third passageway and said bore, said port including a cylindrical portion contiguous to

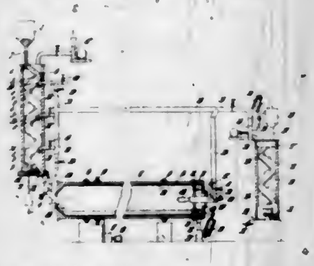
said bore and a tapered flaring portion contiguous to said third passageway; there being a fourth passageway arranged at right angles with respect to the lower end of said third passageway; a support member including a shank threadedly engaging said fourth passageway, the outer end of the shank being open and the interior of the shank being hollow, there being an atmospheric vent in said shank communicating with the interior of the shank, said atmospheric vent adapted to selectively dispel the vacuum in said third passageway, said support member further including an enlarged hollow casing having a closure on its outer end, an adjustable screw member extending through said closure, a spring member positioned in said casing and having one end connected to said screw member, an adjustable pin having one end connected to the other end of said spring, the other end of said pin being tapered, a cylindrical section contiguous to said tapered end, the tapered end and cylindrical section of said pin being mounted for coaction with and movement through the cylindrical portion and tapered flaring portion of the bore, a circular flange contiguous to said cylindrical section, said spring member biasing said pin to the position in which said flange abuts the adjacent end of said shank and serves as the stop member for said pin, said pin being movable responsive to vacuum in said carburetor bore and against the action of said spring member to a position in which said flange closes said port, and a coil spring circumposed about said shank.

3,042,388

MANUFACTURE OF AGGREGATE SUITABLE FOR USE IN CONCRETE AND LIKE COMPOSITE MATERIALS

Christopher L. Sainty, Hassocks, England, assignor to Structural Concrete Components Limited, Hassocks, England

Filed Dec. 8, 1958, Ser. No. 778,728
Claims priority, application Great Britain Dec. 17, 1957
8 Claims. (Cl. 263—32)



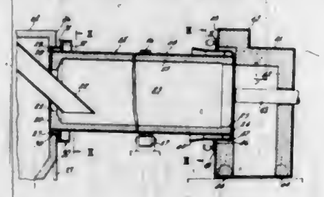
1. The method of manufacturing a fired aggregate for use in concrete and like materials from moist or partially dried pellets of argillaceous material which comprises the steps of flowing said moist or partially dried pellets through a drying and preheating zone by gravity in a consecutive series of alternately oppositely directed paths inclined at an angle sufficient to provide a uniform flow and intermixture of the pellets, confining the whole of the flowing pellet material to said inclined paths feeding the dried and preheated pellets to a firing zone, controlling the rate of flow of pellets through the drying and preheating zone by intermittently stopping the flow of the pellets only on the lowest of their inclined paths, introducing hot gases from the firing zone to the drying and preheating zone and causing the whole of said introduced gases to pass in countercurrent flow through the mass of pellets lying along the inclined paths, passing a sufficient quantity of heated air from a cooling zone to the drying and preheating zone and causing the whole of such introduced air to pass in countercurrent flow through the mass of pellets in the inclined paths to carry off the moisture for drying, separately supplying an additional quantity of heated air from the cooling zone to the firing zone at the region thereof to which the dried and preheated pellets are fed to pass into contact with the pellets, and controlling the rate of cooling in the cooling zone.

3,042,389

AIR SEAL FOR ROTATING CYLINDERS SUCH AS KILNS AND THE LIKE

David H. Gleskieng, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Dec. 15, 1958, Ser. No. 780,297
5 Claims. (Cl. 263—32)



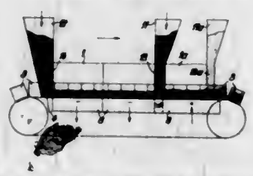
1. Apparatus comprising in combination a stationary member and a rotating cylinder telescopically arranged therein, said cylinder coacting with said stationary member to define an annular opening therebetween disposed in circumscribing relationship to said cylinder, and closing means circumscribing said cylinder adjacent said stationary member and closing said annular opening, said closing means comprising an annular ring member circumscribing said cylinder, said member having a narrow inner circular edge portion adapted to rest on and make loose contact with the outer periphery of said cylinder and having a flat annular surface adapted to engage said stationary member and to close said annular opening and weighted means extending axially away from a back side of said ring opposite said annular surface, said weighted means extending from a location on said back side that is radially outward of said inner edge portion and providing together with the weight of the ring a center of mass axially backward of said edge portion for tilting said surface whereupon said tilting and rotation of said cylinder moves said ring member into engagement with said stationary member.

3,042,390

SEALS FOR THE GAS HOODS OF SINTERING MACHINES

Hans Rausch, Oberursel (Taunus), and Kurt Meyer, Frankfurt am Main, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany

Filed July 11, 1958, Ser. No. 747,990
1 Claim. (Cl. 266—21)



In a sintering apparatus having a sintering band movable beneath and in edge sealed engagement with a gas hood and said band carrying a bed of material to be sintered, the improvement comprising in combination therewith hoppers at the entry and delivery ends, respectively, of the hood, said hoppers extending in sealing contact with the ends of the hood and down to adjacent the surface of the band, at least one additional hopper intermediate said entry and delivery hoppers and separating

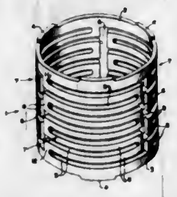
said hood into compartments, wind boxes beneath said band corresponding in length to said compartments, respectively, and flowable granular material in said hoppers and forming gas seal columns of granular material down through said hoppers onto the surface of and entirely across the surface of said bed of material on said band so that said compartments are gaseously isolated from each other.

3,042,391

COMPRESSION SPRING

Jerry Glaser, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Filed Sept. 25, 1959, Ser. No. 842,255
6 Claims. (Cl. 267—1)



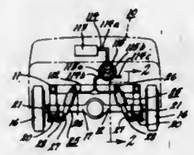
1. A compression spring of generally tubular construction comprising: spaced annular end members; a plurality of individual axially extending segments circumferentially spaced apart by axial slots and disposed between said annular end members, each of said segments including a plurality of spaced, parallel, circumferentially extending elements connected at alternate ends in a substantially zigzag formation; and means securing said individual segments to said annular end members.

3,042,392

COMBINATION SHOCK ABSORBER AND AIR SPRING

William F. Schmitz, Bert P. Griffith, and Paul J. Long, Jr., Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 4, 1960, Ser. No. 6,759
8 Claims. (Cl. 267—31)



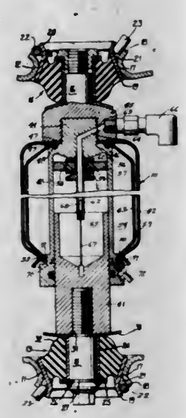
1. A shock absorber and air spring unit assembly, comprising, a hydraulic direct-acting tubular shock absorber having relatively movable telescopic parts including a tubular outer casing member and a rod extending therefrom at one end thereof, a resiliently flexible tubular wall unit forming an annular air spring member having an inner wall portion and an outer wall portion closed at one end by a rolling wall portion formed of said inner and outer wall portions on relative reciprocation therebetween, said inner wall portion engaging said casing in full support thereof on said casing on said relative reciprocation between said inner and outer wall portions, said inner wall portion having the free end thereof positioned between opposite ends of said casing, means at the said free end of said inner wall portion securing the same to said casing, means at the free end of said outer wall portion providing attachment and support thereof on said rod, wall means including said shock absorber casing and said air spring member providing a closed fluid pressure receiving chamber for receiving fluid under pressure to resist thereby telescopic movement of the said shock absorber parts, and fluid connection port means in said wall means for supply and exhaust of fluid to and from said chamber.

3,042,393

MOUNTING FOR VEHICLE STRUT

John P. Heiss, Flint, and Herbert W. Templeton, Southfield, Mich., assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Apr. 27, 1959, Ser. No. 809,286
4 Claims. (Cl. 267—35)



1. A vehicle suspension system for supporting a vehicle body member relative to a vehicle wheel member comprising a spring for supporting the weight of the body member over said wheel member and resilient bushing means between said spring and at least one of said members in force-transmitting series relation between said spring and said one member, said spring having a high mass and low spring rate and said bushing having a relatively much smaller mass and a relatively higher spring rate, said bushing deflecting initially at a generally constant rate but providing a rapidly increasing spring rate upon further application of force, said bushing comprising an outer conical housing element and a backing plate element facing the open end of the housing with a generally conical volume of resilient material therebetween and partially confined thereby, providing initial deflection of the resilient material until the backing plate element substantially confines and comprises said resilient material in the conical volume and appreciable further deflection of the bushing upon an increase in force is prevented, whereby upon the application of an impact to the suspension the bushing initially compresses while the spring is unaffected due to the inertia thereof and continued application of the impact force causes deflection of the spring providing an over-all generally constant deflection rate for said suspension.

3,042,394

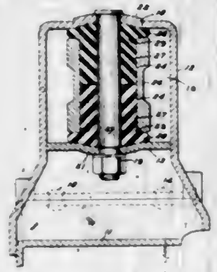
REAR SPRING BUSHING

Alphonse J. Bliss, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Feb. 29, 1960, Ser. No. 11,795
1 Claim. (Cl. 267—54)

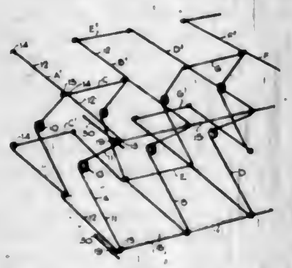
In a vehicle suspension system, a support member, a suspension member pivotally mounted upon said support member, one of said members including a pivot shaft and a pair of spaced axially abutments and the other of said members including a cylindrical sleeve concentrically surrounding said pivot shaft between said abutments, and a pair of elastomer bushings insulating said

shaft and said sleeve from each other, each of said bushings comprising a one-piece non-reinforced resilient element having a relatively soft annular body portion positioned between said shaft and said sleeve to provide a high degree of relative movement therebetween in a radial direction during vehicle operation to dampen vibrations and harshness resulting from road irregularities, each of said bushings also having an integral flange portion at one end thereof projecting radially outwardly beyond the periphery



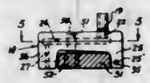
of said body portion and positioned between one end of said sleeve and the adjacent abutment, said flange being relatively hard and having a durometer hardness value considerably higher than the hardness value of said body portion to resist relative movement between said support member and said suspension member in an axially direction to provide lateral stability for said vehicle, each of said bushings having an intermediate fused area of progressively changing durometer hardness between the low durometer body portion and the high durometer flange portion.

3,042,395
SPRING ASSEMBLY
George F. Cole, Barston, Hampton-in-Arden, and Alfred Turley, Bushbury, Wolverhampton, England, assignors to Vono Limited, Tipton, England, a British company
Filed June 1, 1960, Ser. No. 33,284
Claims priority, application Great Britain Sept. 9, 1959
3 Claims. (Cl. 267—108)



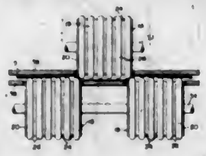
1. A spring assembly comprising a plurality of transverse rows of spring units, each row being formed from a single length of wire and comprising several spring units each of which comprises a substantially M-shaped figure lying on its side in the operative position so as to have upper and lower outer arms arranged horizontally and each outer arm being connected to the central apex of the M by an inclined inner arm, with spring coils formed at the central apex and at the outer apex between each outer arm and its associated inner arm, and a coil formed at the free end of each outer arm, being the end which is remote from the associated inner arm, the several spring units being located in spaced parallel planes and all connected together by virture of the fact that the said free end of an outer arm of one unit is extended at right angles to the plane of the unit to form an integral connecting portion by being joined integrally with the corresponding free end of an outer arm of the next adjacent unit and so on from end to end of a transverse row, one transverse row being connected to another by means of wires threaded through the said coils at the said free ends of the outer arms of the units in one row and through the coils at the said outer apices of the units in the adjacent row.

3,042,396
ADJUSTABLE FEEDER SHOE
Herman L. Cole, Dallas, Tex., assignor of one-half to Toni Ladymon, doing business as Albert Ladymon Company, Dallas, Tex.
Filed Sept. 1, 1961, Ser. No. 135,477
5 Claims. (Cl. 271—26)



1. In a feeder shoe for presses, the combination of an upper portion including a top wall, a depending front wall having a bottom, and a depending rear wall, said top wall having an air passage therethrough adapted to be connected to a source of suction, said front wall having portions defining a plurality of spaced pick up air passages therein opening through the bottom of said front wall and communicating with said first-mentioned air passage, and a lower portion comprising a transverse member extending between said front and rear walls and side wall portions extending upwardly on opposite sides of said top wall, the bottom of said transverse member being normally aligned with said bottom of said front wall, and means for varying the relative position of said transverse member to said bottom of said front wall to vary the effective distance of the openings therein from the paper to be picked up to accommodate various grades of paper.

3,042,397
SHEET FEEDING MECHANISM
Robert R. Tarbuck, West Chester, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 21, 1959, Ser. No. 788,219
8 Claims. (Cl. 271—51)

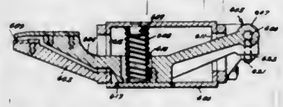


1. A sheet feeding mechanism comprising, first and second shafts, a pair of sheet feeding rollers mounted on the first shaft in spaced relation, and a sheet feeding roller mounted on the second shaft interposed between and in sheet gripping relation with the pair of rollers on the first shaft for feeding sheets between the rollers, each of said rollers comprising a hub and a plurality of elastic tires mounted on said hub.

3,042,398
SHEET GRIPPING MEANS FOR CUTTING AND CREASING PRESS
Albert F. Shields, Forest Hills, N.Y., assignor to S & S Corrugated Paper Machinery Company Inc., Brooklyn, N.Y., a corporation of New York
Original application June 15, 1954, Ser. No. 436,937, now Patent No. 2,905,067, dated Sept. 27, 1959. Divided and this application Sept. 18, 1957, Ser. No. 684,797
2 Claims. (Cl. 271—79)

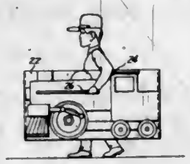
1. A gripping member for engaging the leading edge of a sheet, said member comprising a hollow slat of a

generally rectangular cross-section whose dimension from front to rear is greater than its height; a plurality of spaced stationary jaws removably carried by said slat and a plurality of complementary movable jaws; individual biasing means for each of said movable jaws disposed entirely within said slat and urging said movable jaws into engagement with their associated stationary jaws; said movable jaws being rigid members extending laterally through said slat with portions of said slat overlying opposite surfaces of said movable jaws; one end of each of said movable jaws being mounted on a pivot secured to said slat and positioned forward thereof; said stationary jaws projecting horizontally and to the rear



of said slat; said slat having apertures aligned with said movable jaws through which means are extendable to operate said movable jaws out of engagement with their associated stationary jaws; each of said movable jaws having an opening in alignment with the aperture of said slat associated with the respective movable jaw; a retaining means removably secured to said movable jaw and extending over said opening to retain said biasing means within said slat; said apertures being large enough to permit said retaining means and said biasing means to pass therethrough so that said biasing means may readily be changed; fastening means extending through said slat from front to back and operatively securing said movable and said stationary jaws to said slat.

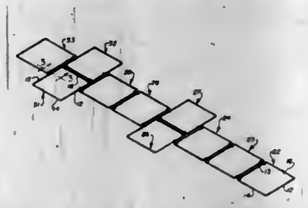
3,042,399
CARDBOARD TOYS
Clement J. Lewendowski, 2756 W. Cermak Road, Chicago 8, Ill.
Filed Dec. 30, 1959, Ser. No. 862,911
2 Claims. (Cl. 272—1)



1. A packing carton and toy combination comprising a carton having peripheral sides formed of a continuous strip folded at opposite corners of its periphery, and its top and bottom comprising overlaid flaps extending from said sides and folded at corresponding edges of said sides to form the top and bottom closures of said carton, said top and bottom flaps being adapted to be folded inwardly or removed when the combination is no longer to be used as a carton, said continuous strip being long enough to fit around a child's body, the outside of said sides having the opposite views of a suitable play image illustrated thereon and extending over substantially the entire height of said sides between said opposite corners, and means on said sides engageable by the hands of a child for support of said combination when used as a toy draped about its body to provide mobility thereto.

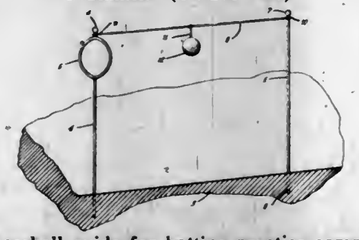
3,042,400
GAME APPARATUS
J. D. O'Rear, 905 Longwood Ave., Hayward, Calif.
Filed July 5, 1960, Ser. No. 40,756
2 Claims. (Cl. 273—1)

1. Apparatus of the character described comprising a plurality of generally aligned rigid square sections, means on a side of each section adjacent the corners thereof, pivotally engaging the adjacent side of an adjacent section whereby said sections may be folded into overlapping aligned relation and unfolded into operative coplanar longitudinally extending relation, a pair of sections adjacent one of said aligned section sides normally disposed



in perpendicular relation to the longitudinal extent of said first mentioned sections, means slidably and pivotally connecting said one side with an adjacent side of each of said pair of sections, and means pivotally connecting said pair together for folding about an axis normal to the axes of folding of said first mentioned sections.

3,042,401
BASEBALL GUIDE FOR BATTING PRACTICE
Charles Denegre, 1008 Jackson Bldg., Birmingham 3, Ala.
Filed July 31, 1961, Ser. No. 127,959
3 Claims. (Cl. 273—26)

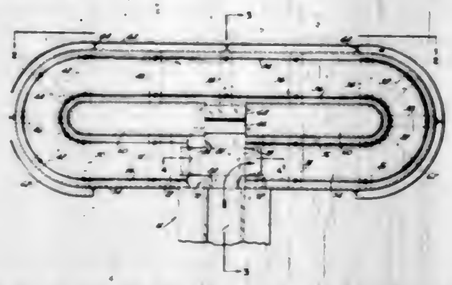


1. A baseball guide for batting practice comprising, a metal rod as supporting means, the lower end of the rod inserted in the ground, the other end of the rod having an integral knob thereon; a second metal rod, the lower end of this rod also inserted in the ground, a ring, this ring being formed integral in the upper end portion of the second rod, a knob, this knob being formed integral on the outer edge top portion of the ring, said rods being spaced approximately six feet apart and in perpendicular positions; a piece of strong elastic cord, said cord being attached by its ends to the said knobs, a short piece of similar strong elastic cord, this piece of cord being attached by one end thereof to the center of said piece of cord supported by attachment to the said knobs, a regular size baseball, said baseball being attached to the lower free end of said short piece of elastic cord.

3,042,402
BOWLING BALL RETURN AND STORAGE DEVICE
John M. Ernst, Shelby, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Nov. 27, 1957, Ser. No. 699,336
17 Claims. (Cl. 273—47)

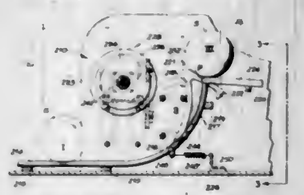
1. Bowling ball storage apparatus for use with a ball return track of a bowling alley comprising a deflector, means mounting said deflector adjacent the discharge end of said track, a ball storage device having a closed ball receiving and storing track to receive balls delivered thereto by said deflector, means mounting said storage device adjacent said deflector such that balls delivered thereto are stored in a substantially closed arcuate configuration generally coplanar with said deflector and the delivery end of said track and means for effecting the movement

of said balls in said configuration relative to said discharge end of said track, said closed track being con-



structed so that balls at rest thereon can be rolled directly past the discharge end of said return track.

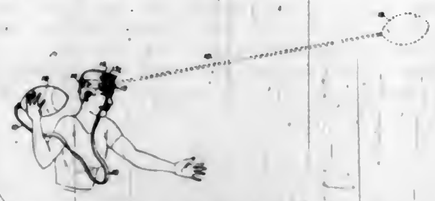
3,042,403
BOWLING BALL STOP MECHANISM
Harold A. Jones, Shelby, Ohio, and Fred J. Schmidt, Stamford, Conn., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed June 30, 1958, Ser. No. 745,452
7 Claims. (Cl. 273—47)



1. Mechanism for checking the rolling movement of a bowling ball along a bowling ball return of a bowling alley, said return having an infeed track section, storage rack and an upsweep track section for delivering bowling balls into said storage rack, comprising a rotatably mounted wheel having a resilient peripheral ball-engaging surface located in the path of travel of a ball en route along said infeed track section, means rotatably supporting said wheel a distance less than the maximum diameter of a bowling ball from said track for positively engaging said ball rolling along said track, means for rotating said wheel at a relatively low rate of speed in comparison to the rotation of said ball en route along said track, said upsweep track section of said return comprising arcuate rails substantially concentric with and spaced from said ball-engaging surface of said wheel, an arcuate snubbing member, the degree of curvature of said snubbing member being substantially the same as that of said rails of said upsweep section, means pivotally mounting said snubbing member for movement between the rails of said upsweep section, means normally biasing said snubbing member towards said wheel into frictional engagement with a ball being moved along said upsweep section at a slow rate of speed by said wheel and means maintaining said snubber in resilient engagement with said ball until said ball is moved clear of said upsweep section by said wheel for delivery to said storage rack.

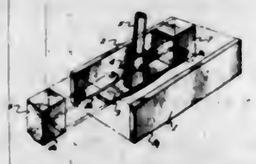
3,042,404
FOOTBALL PRACTICE GEAR
George R. Masters, 4425 Morris Courts, Fort Worth, Tex., assignor of one-fourth to Linus F. Hardin, Finis G. Cross, and Marvin De Woody, Houston, and N. H. Conder, Baytown, Tex.
Filed Apr. 26, 1961, Ser. No. 105,615
1 Claim. (Cl. 273—55)

A practice gear for football players comprising:
an adjustable head band,
rings mounted on the front of said head band, one said ring being located in the center thereof and a second said ring to the left and a third said ring to the right thereof,
an elastic tether,
a snaffle hook on one end of said tether and adapted to engage one of said rings,



an ellipsoidal football,
a loop of flexible material in one end of said football, the extending ends of said loop being secured inside of the end of said football,
a ring in said loop, and
a swivel connecting the last named ring with the end of said elastic tether opposite said snaffle hook.

3,042,405
GOLF CLUB
Karsten Solheim, Redwood City, Calif. (10412 N. 37th St., Phoenix 20, Ariz.)
Filed Mar. 23, 1959, Ser. No. 801,245
8 Claims. (Cl. 273—80)



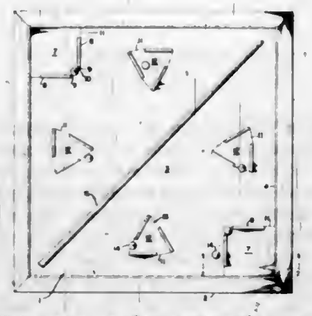
6. In a golf club, a head comprising two parallel plates at least one of which is adapted to function as a club face, a first block separating said plates at one end, a second block separating said plates at the opposite end, a substantially straight elongated bar connected between said blocks, a hosel adapted to receive a shaft connected to said bar in a position between said plates and a shaft inserted into said hosel.

3,042,406
MISSILE FOR HYPODERMIC MEDICATION
Haskell I. Gregory, Marion, Tex. (P.O. Box 336, Lytle, Tex.)
Filed Aug. 25, 1958, Ser. No. 756,774
3 Claims. (Cl. 273—106.5)



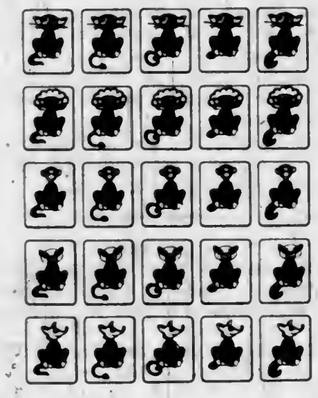
1. In a missile for hypodermic medication of animals, adapted to be projected by a bow, a shaft having a barrel telescopically connected to its forward end and slidable thereon, a plunger formed on the end of said shaft within said barrel, the said plunger and said barrel forming a syringe containing a medicament, a hollow injection needle attached to the forward end of said barrel and communicating interiorly thereof, elastic means biasing said shaft longitudinally of said barrel, yieldable means restraining said shaft in extended position against the tension of said elastic biasing means and releasable upon impact of said needle with a target, and yieldable means embracing said needle and engaging the forward end of said barrel for resisting penetration of said needle into the target and withdrawing the same therefrom.

3,042,407
DISK GAME
Dyonizy W. Gorgol, Oakdale, N.Y.
Filed Mar. 25, 1960, Ser. No. 17,585
3 Claims. (Cl. 273—126)



1. In a disk game, a flat rectangular game surface defining a field of play for disks, a retaining wall surrounding said game surface, a plurality of strips defining a rectangular enclosure in each of a pair of opposed corners of said game surface, additional strips defining a plurality of equilateral triangular enclosures on said game surface spaced from the edges thereof, a plurality of disks on said game surface and slidable thereon, there being openings in all of said enclosures with said openings having a width slightly greater than the diameter of said disks to enable said disks to pass freely therethrough, the openings in said triangular enclosures being at angles to a line drawn bisecting the game surface between the opposed corners having the rectangular enclosures, said line defining an unobstructed path therebetween and manually manipulatable means for propelling said disks upon said game surface from enclosure to enclosure in a predetermined manner.

3,042,408
GAME
Kenneth G. Johnson, Madison, Wis. (3014 N. Cramer, Milwaukee 11, Wis.)
Filed July 5, 1957, Ser. No. 670,305
3 Claims. (Cl. 273—135)



1. A game comprising a pack of cards, said pack comprising a plurality of picture-bearing cards, said pictures being the combination of first pictorial indicia, second pictorial indicia, and third pictorial indicia, each of said indicia being a pictorial representation of a portion of an object which has physical reality, each card unique with respect to all of the other picture-bearing cards and carrying a single complete picture made up of said first, second, and third pictorial indicia, said cards being divided into a plurality of classes, each class divided into a plurality of groups, each card within each group being unique within the group but corresponding to another card within each other group in the same class and each of the other classes and at least one playing board comprising a plurality of blank spaces of substantially equal size arranged in lines and rows.

3,042,409
GOLF CLUB WITH SIGHTING MEANS
Ralph E. Johnson, 33 W. Church St., Newark, Ohio
Filed Dec. 21, 1959, Ser. No. 860,932
1 Claim. (Cl. 273—164)

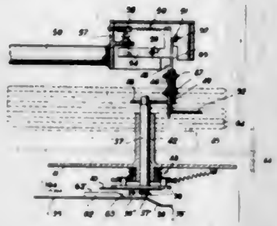


In a golf club, the combination of a club head having a top face and a ball-striking face, said top face having a first sighting guide defined thereon, said first sighting guide comprising a line extending at least substantially perpendicularly to the longitudinal axis of said striking face and at least substantially over the center of gravity of said club head, and a shaft portion coupled to said club head and extending generally upwardly of said club head from a junction between said club head and said shaft portion spaced laterally from said first sighting guide, said shaft portion having means thereon spaced from said top face of said club head for defining a second and at least substantially pointed sighting guide vertically aligned centrally with said first sighting guide, said second sighting guide being disposed in its entirety between vertical planes passing respectively through the outer extremities of said striking face and the side of said club head opposite said striking face, said second and at least substantially pointed sighting guide comprising a pointed offset in said shaft portion extending adjacent said club head inwardly of the major portion of said shaft in the direction of said first sighting guide, whereby a golfer using the club can vertically position his eye above the ball to be hit with said striking face by aligning his eye with said first and second sighting guides.

3,042,410
RECORD STACK HEIGHT COMPENSATING MECHANISM FOR THE NEEDLE OF TONE ARM OF AUTOMATIC RECORD CHANGERS
Manlio Brandizzi, 2264 36th St., Mar Del Plata, Province of Buenos Aires, Argentina
Filed June 12, 1959, Ser. No. 819,865
24 Claims. (Cl. 274—10)

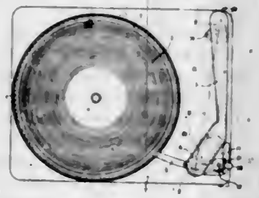
1. In an automatic record changer having a base plate, a central spindle, a turntable mounted on said central spindle and being adapted to successively receive one by one record of a stack of records arranged on said spindle

and spaced apart from said turntable, each record having a groove, a shaft, a tone arm including at least one needle and swingably mounted on said shaft, a record changer means for supporting a supply stack of records on said spindle spaced from said turntable and for successively separating the bottom record from said supply stack and positioning said bottom record on said turntable to form a stack of records on said turntable, said record changer means maintaining said supply stack spaced apart from said stack on said turntable during said separation and positioning, a height compensating mechanism for maintaining said needle always at the same angle



with regard to the groove of each record on the top of the stack on said turntable independently of the height of the stack of records located on said turntable, said height compensating mechanism including means for stepwise changing the height of at least one of said shaft and spindle with regard to said base plate and which last mentioned means are synchronized with said record changer means, and restoring means for gradually and directly restoring, with controlled movement, said one of said shaft and spindle to its starting position with regard to said base plate, said restoring means being operable as soon as the last record of said stack of records has been played.

3,042,411
RECORD PLAYERS
Dominikus Weise, Munich, Germany, assignor to Perpetuum-Ebner, Fabrik für Feinmechanik und Elektrotechnik Steidinger & Co. Kommanditgesellschaft, a corporation of Germany
Filed May 27, 1960, Ser. No. 32,199
9 Claims. (Cl. 274—14)



1. In a record player having a turntable adapted to support a phonograph record, driving means for rotating said turntable, a tone arm pivotable relative to said turntable and having a sound head at one end thereof adapted to hold a needle, and means for guiding said tone arm from an inoperative position spaced from said turntable toward said turntable and upon a record thereon, said means comprising an inclined stationary slideway at one side of said turntable for sliding said tone arm by gravity from said inoperative position near the upper end of said slideway downwardly toward said turntable and to a position in engagement with the edge of the record, locking means for maintaining said tone arm in said inoperative position, means for releasing said locking means to permit said tone arm to slide downwardly along said slideway, and means for moving said tone arm from said engaging position over the edge of said record to insert said needle into the starting groove of said record.

3,042,412
PHONOGRAPHIC RECORD-PLAYER TONE-ARMS
Jean Léon Albert Borthayre, 39 Rue d'Espagne, Bayonne (Basses Pyrenees), France
Filed Mar. 4, 1957, Ser. No. 643,836
Claims priority, application France Mar. 8, 1956
5 Claims. (Cl. 274—23)



1. A sound pickup arm for record players, comprising an arm mounted for pivotal movement about both substantially vertical and horizontal axes and having a free end swingable about said axes and constituting a pickup head engageable beneath said arm with a record, and handle means extending upwardly from said arm and connected thereto only adjacent said free end thereof for maneuvering said arm to engage said pickup head with a record, said handle means being universally flexible to slacken immediately upon engagement of said pickup head with a record and being of such resiliency as to be self-sustaining in upright position and as to permit lateral deflection thereof without imparting lateral displacement to said arm.

3,042,413
RECORDED ADAPTER FOR PHONOGRAPH RECORDS
Claude E. Frink, 1790 NW. 83rd Terrace, Miami, Fla.
Filed Dec. 27, 1960, Ser. No. 78,656
1 Claim. (Cl. 274—42)



A supplemental record adapter for a disc phonograph record comprising a circular member of uniform cross-section formed from plastic material of predetermined elasticity and having a channel around the inner periphery formed by an upper and a lower lip for frictional engagement with the outer edge portion of said record,

said upper lip positioned over one outer margin of said record sloping downward in a radial direction toward the axis thereof and terminating at the recorded groove in said record a predetermined distance from the edge thereof,

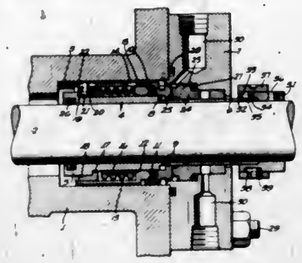
a spiral recorded groove in the outer surface of said upper lip for the initial playing thereof when said record is played,

said second lip extending over the opposite outer margin of said record a predetermined distance for retaining said adapter on said record.

3,042,414
PRESETTING MEANS FOR MECHANICAL SEALS
Herbert E. Tracy, Alhambra, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 31, 1956, Ser. No. 631,824
7 Claims. (Cl. 277—11)

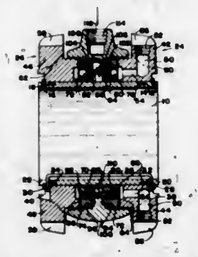
1. In a seal assembly of the class described including a housing providing a seal chamber, a shaft projecting from said housing through said chamber, sealing means in said chamber for preventing the passage of fluid from said housing along said shaft including a sleeve co-axially

mounted upon said shaft, and means for effecting operation of said sealing means, including spring means adapted to be placed under compression responsive to movement of said sleeve on said shaft, that improvement wherein said sleeve projects axially from said housing, and including means interconnected with said sleeve exteriorly



of said housing for shifting said sleeve relative to said shaft, gauge means shiftably carried by said sleeve shifting means and engageable with said housing, said gauge means and said shifting means having means for limiting movement of said shifting means and consequently said sleeve, and means for securing said shifting means in a selected position on said shaft.

3,042,415
SHAFT ROTATING SEAL
Richard M. Smoll, Wichita, Kans., assignor to The Carlson Company, Inc., Wichita, Kans., a corporation of Kansas
Filed Dec. 5, 1960, Ser. No. 73,716
6 Claims. (Cl. 277—22)



1. A balanced shaft rotating seal comprising, in combination, a generally cylindrical collar, each end portion of said collar having two axially spaced grooves on the outside surface thereof constructed to receive a snap ring and an O-ring, said collar having a keyway in each end portion thereof, and two O-rings, said O-rings being positioned in the inner ones of said grooves in said collar, two cast end rings, each of said end rings having two diametrically opposed abutments on the radially outer surface thereof, one of said abutments on one of said end rings having an aperture therein opening to the interior of said ring, said aperture being threaded to be attached to a rotating air outlet conduit, each of said end rings having two groups of eight radially extending heat conducting fins on the radially and axially outer surfaces thereof, said fins in each of said groups of fins on each of said rings being integral with said end rings and equally spaced between said abutments, the inside surface of each of said rings having a flat centrally located annular sealing surface on a projecting portion of said rings, said inside surface of said one of said sealing rings having an axially extending opening therein communicating with said aperture in said abutment, said opening in said inside surface of said one of said sealing rings being positioned radially within said sealing surface thereon, said rings being positioned in mirror image relation on opposite end portions of said collar for rotation therewith with the radially inner surfaces thereof in sealing engagement with said O-rings, two snap rings, said snap rings being received by the outer ones of said grooves in said collar to position said end rings on said collar, two carbon sealing rings slidably received by said collar and positioned in mirror image relation between said end rings, each of said sealing rings having a projecting portion having a flat annular sealing surface on the outer side thereof in direct heat conducting contact and sealing relation with said sealing surfaces of said end rings, said end rings and said sealing rings defining with said collar generally annular cavities, each of said sealing rings having six circumferentially spaced holes therethrough in fluid communication with said cavities, each of said holes being countersunk at the axially inner side of each of said sealing rings to form an annular ledge, six helical springs, said holes in said sealing rings being axially aligned with said springs being received in facing holes of both of said sealing rings with the ends of said springs engaging said ledges, said springs being in compression to urge said sealing rings apart and to urge said sealing surfaces thereon into sealing engagement with said sealing surfaces on said end rings, each of said sealing rings having an opening therein facing inwardly, said openings in said sealing rings being axially aligned, the axially inner portion of the radially outer surface of each of said sealing rings being reduced in diameter, a generally annular housing surrounding said sealing rings, the radially inner surface of said housing being shaped to conform to the radially outer surface of said sealing rings, said radially inner surface of said housing having two spaced circumferential grooves formed therein, and two additional O-rings, said last-named O-rings being received by said grooves in said radially inner surface of said housing to engage the radially outer surface of said sealing rings in sealing and binding engagement, a relatively narrow radially inwardly projecting flange on said radially inner surface of said housing, said flange having a hole therethrough and said hole being aligned with said openings in said sealing rings, a pin received by said openings in said sealing rings and passing through said hole in said flange, a radially extending and axially centrally located aperture in said housing, said aperture in said housing being threaded to receive a stationary air inlet, said aperture being in fluid communication with a generally annular space between said sealing rings, said device being constructed and adapted so that said collar can be mounted on a rotatable shaft with a key in said shaft and said keyway in said collar to lock same together and with said aperture in said housing connected to a stationary air inlet and said aperture in said one of said end rings connected to a rotatable air outlet, said apertures in said housing and said one of said end rings being in fluid communication through said space between said sealing rings, said apertures in said sealing rings, one of the annular cavities defined by said sealing rings and said end rings and said opening in said one of said end rings so that a fluid under pressure from a stationary source can be continuously supplied to the rotatable air outlet in said one of said end rings.

3,042,416
TELESCOPIC ANTENNA
Richard S. Paluszkiewicz, Hamtramck, and Eugene P. Geyer, Detroit, Mich., assignors to Pioneer Specialty Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 8, 1959, Ser. No. 785,715
6 Claims. (Cl. 277—30)

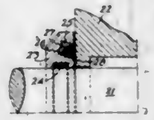
1. In a telescopic structure, a pair of slidably interfitted members including a radially inner extensible member which is laterally flexible and a radially outer supporting mast member in which said extensible member is

slidable to extend to a varying extent from said mast member, an axially projecting extremity of said mast member encircling said extensible member relatively closely, an elastic sealing element having one portion secured to said extremity of said mast member and another portion projecting axially outwardly from said mast member and slidably peripherally overengaging a surface portion of said extensible member beyond said extremity of said supporting mast member, said other portion of said elastic sealing element having an internal diameter slight-



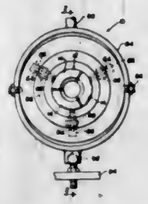
ly less than the external diameter of said extensible member for providing a slight interference fit therewith upon projection of said extensible member therethrough, and retaining means exteriorly engaging said sealing element at a surface located axially from the extremity of said other portion of said sealing element and having an arcuate portion located axially beyond the termination of said one portion of said sealing element and being matable with and in rockable engagement with a complementary arcuate portion of said mast member for retaining said sealing element to said mast member.

3,042,417
CENTRIFUGAL SEAL
Karl Gustav Einar Derman, Savedalen, and Nils Bertil Reinhold Snare, Goteborg, Sweden, assignors to Aktiebolaget Svenska Kullagerfabriken, Goteborg, Sweden, a corporation of Sweden
Filed Feb. 20, 1959, Ser. No. 794,580
Claims priority, application Sweden Feb. 24, 1958
9 Claims. (Cl. 277—25)



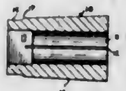
1. A centrifugal seal between a first member and a second member rotatable relative thereto, said members having confronting axial end surfaces, characterized by an annular groove in the axial end surface of said rotatable member, the said groove being concentric with the axis of rotation and having co-axial frusto-conical walls, an elastic O-ring sealing element under tension on the inner of said frusto-conical walls whereby when said rotatable member is at rest the said O-ring is urged into continuous sealing engagement with the confronting surface of the other member, the elasticity of said O-ring being such that under the influence of the centrifugal forces at a certain speed, said O-ring will expand into contact with the outer of said frusto-conical walls and thereby be disengaged from the confronting surface.

3,042,418
CHUCK MECHANISM FOR COLLETS
George Sorsa, Huntington Station, and Robert E. Curran, Huntington, N.Y. (both % Royal Products Co., 88 Union St., Mineola, N.Y.); said Sorsa assignor to said Curran
Filed Jan. 25, 1960, Ser. No. 4,316
12 Claims. (Cl. 279—50)



1. A chuck comprising an adapter member to be attached to a rotating spindle, an opening defined in said member to receive a collet, means loosely connected with said adapter member to engage with said collet and connect the same with said adapter member for rotation therewith, said collet having contractible jaws, collet actuator means between said member and collet axially slidable relative to said collet to contract said collet jaws, operable means on said member to slide said actuator means to contract said jaws, and means slidable on said member to operate said operable means.

3,042,419
NYLON DRILL CHUCK
Richard L. Swanson, 3420 Grubb Road, Erie, Pa.
Filed Mar. 24, 1959, Ser. No. 801,634
1 Claim. (Cl. 279—103)

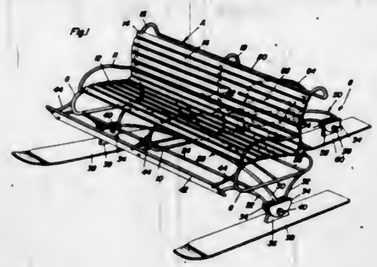


A hollow chuck for a machine tool made of material having the properties of nylon having an external tapered surface, said hollow in said chuck being cylindrical and adapted to receive and frictionally engage the cylindrical end of a shaft to transmit torque between said chuck and said shaft, said external tapered surface adapted to be received in an internally tapered member whereby the internal surface of said hollow of said chuck is adapted to be urged into frictional engagement with said shaft, and a slot cut through the side walls of said chuck from said hollow to the outside and extending the full length of said tapered surface from one end thereof to the other, said hollow in said chuck teminating adjacent a reduced size bore in the form of a keyway, said slot extending from said one end through said bore and terminating in the portion of said chuck which defines said keyway.

3,042,420
SKI SLED
Cyril Akmentin, 136 Minnechang Drive, Glastonbury, Conn.
Filed Aug. 18, 1960, Ser. No. 50,519
5 Claims. (Cl. 280—16)

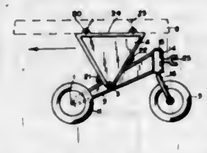
1. A sled comprising a passenger accommodating chassis embodying a frame construction having depending legs provided with spaced parallel cleats, skis constituting runners, said skis having centralized upstanding lugs and said lugs being separably and hingedly mounted between their respective cleats, said frame construction having horizontal and vertical slats conjointly providing

a seat and a backrest constituting an elongated bench, said frame construction also being provided at the front thereof with outstanding arms connected to a horizontal member constituting a foot board, a trailing ski pivotally connected to the rear of the frame structure for lateral swing-



ing movement, and a seat on said trailing ski, said frame being provided at the back thereof with a handle bar and beneath the handle bar with foot treadles for receiving the hands and feet, respectively, of an occupant of the last-named seat for steering the sled.

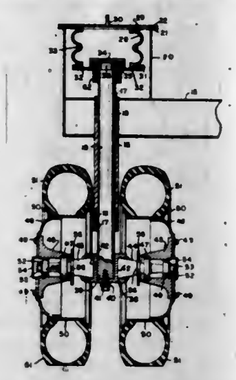
3,042,421
TRAILER FOR TRANSPORTATION OF ELONGATED FREIGHT
Fritz Buske and Gerhard Kuschel, both of Leipzig, Germany, assignors to VEB Schwermaschinenbau S. M. Kirow, a corporation of Germany
Filed May 16, 1961, Ser. No. 110,480
10 Claims. (Cl. 280—81)



1. A trailer for the haulage of elongated freight partially supported on a lead vehicle, comprising an upwardly and rearwardly inclined frame of a plan outline generally in the form of an isosceles triangle with rearwardly directed apex, a pair of steerable front wheels swingably secured to the forward end of said frame at opposite ends of the triangle base, a tail assembly pivotally secured to said frame at said apex, said assembly including at least one rear wheel swingable about a generally vertical axis, a support of generally triangular elevational outline for said freight forming a generally horizontal platform above said frame, and pivot means swingably securing said support at the apex of its triangular outline to an intermediate portion of said frame for rocking movement about a horizontal axis.

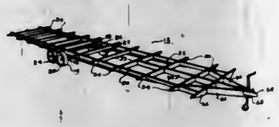
3,042,422
DUAL FRONT WHEEL ASSEMBLY WITH AIR SUSPENSION MEANS
Edward V. Garnett, 3963 Walnut St., Denver, Colo.
Filed Jan. 18, 1960, Ser. No. 3,115
13 Claims. (Cl. 280—96.2)

1. A dual front wheel assembly for trucks and the like having a frame, comprising a beam extending transversely of said frame and attached thereto; a sleeve extending downwardly from said beam adjacent each end thereof; a king pin movable both pivotally and longitudinally in each said sleeve and extending both above and below said sleeve; a pair of wheels mounted for rotation on opposite sides of the lower end of each said king pin; a hollow air spring, formed of flexible material and adapted to be inflated with air, disposed above the upper end of each said king pin; thrust bearing means between the upper end of each said king pin and the lower end of the corre-



sponding air spring; and means connecting the upper end of each said air spring with said beam.

3,042,423
VEHICLE FRAME
August M. Bock, Elkhart, Ind., assignor to Bock Industries of Elkhart, Indiana, Inc., Elkhart, Ind., a corporation of Indiana
Filed Sept. 28, 1959, Ser. No. 842,714
1 Claim. (Cl. 280—106)



A bed for trailers, mobile homes and similar vehicles comprising, two longitudinal tubular members of rectangular cross section, a plurality of equally spaced channel iron cross members disposed between and joined at their ends to said longitudinal members, outriggers spaced along and joined to the outside of said longitudinal members, the bottom side of said outriggers sloping upwardly and outwardly, a central rib extending longitudinally between said longitudinal members and projecting beyond the most forward cross member, two diagonal members connected to the forward end of said rib and extending through said most forward cross members to said longitudinal members, a truss beneath each longitudinal member longitudinally overlapping and extending rearwardly of said central rib, each truss consisting of an elongated tubular member of rectangular cross section, a channel shaped mmeber with the open side up joined to the underside of the longitudinal member and tapering upwardly and forwardly from said elongated member, a channel shaped member with the open side up joined to the underside of the longitudinal member and tapering upwardly and rearwardly from said elongated member, and an undercarriage disposed beneath and connected to said elongated tubular members for supporting said frame.

3,042,424
AUTOMOTIVE AXLE SUSPENSION CONSTRUCTION
James A. Davis, 1854 Hanscom Drive, South Pasadena, Calif.
Filed Apr. 1, 1960, Ser. No. 19,284
4 Claims. (Cl. 280—106.5)

1. A vehicle axle suspension system which comprises: an axle unit; a unitary vehicle frame, said frame including a tubular frame member having an open end; and a

connecting rod, one end of said connecting rod being tightly clamped around said axle unit, the other end of said connecting rod extending into said tubular frame member through its said open end so as to be completely enclosed within said tubular frame member, said other end of said connecting rod being pivotally connected to



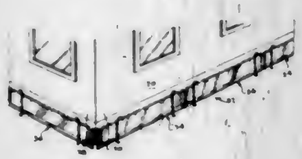
said tubular frame member at a point remote from the open end thereof; and spring means in engagement with said tubular frame member and said connecting rod intermediate the ends thereof and between the point of pivot of said connecting rod and the one end of said connecting rod clamped around said axle unit.

3,042,425

HOUSE TRAILER PROTECTIVE APRON

Carrol M. Cathey, 5111 Summers Lane, and Loren F. Wade, 4424 Bartlette St., both of Klamath Falls, Oreg., and Alwyn R. Bechtold, 1010 NE. Klamath Ave., Roseburg, Oreg.

Filed Aug. 7, 1959, Ser. No. 832,248
2 Claims. (Cl. 280—150)



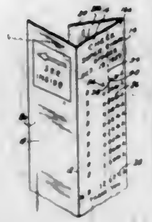
1. The combination with a house enclosure and means supporting said enclosure above a ground surface, of a protective apron extending about and depending from the perimeter of the base of said enclosure, said apron comprising a plurality of vertically disposed elongated panel units each embodying an upper panel section and a lower panel section extensible and retractable with respect to the upper panel section arranged in confronting end to end relation positioned so as to extend about the perimeter of the base of said enclosure, each of said units when said upper and lower panel sections are extended relative to each other being of a height to bridge the space between the base of said enclosure and a ground surface on which said enclosure is supported, each unit having the lower panel section disposed behind the inner face of the upper panel section, there being a recess in the lower panel section adjacent the lower end thereof, a vertically-disposed bar positioned contiguous to the inner face of the upper panel section and having the upper end dependingly connected to the upper panel section and having a hook on the lower end thereof engaging in the recess of the lower panel section to hold the latter in retractable position and releasable from engaging in the recess of the lower panel section to permit the latter to assume its extensible position, the upper end of the upper panel section of each unit being connected to said enclosure base for swinging movement of the apron from the vertical position to a nested position beneath said enclosure base, and bolt means on the upper panel section and detachably engageable with means on the base of said enclosure for holding the apron in the nested position.

3,042,426

FOLDED CASH REGISTER TAPE

Sheldon N. Cohen, New York, N.Y., assignor to Check-Out Advertising, Inc., New York, N.Y., a corporation of New York

Filed Nov. 5, 1959, Ser. No. 851,114
4 Claims. (Cl. 283—62)



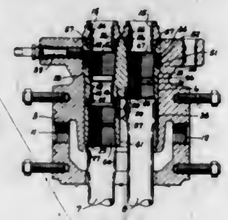
1. A paper tape for use in a cash register comprising a tape strip having a front face, a back face and opposite side edges, said tape strip being formed with two longitudinally extending fold lines spaced inwardly from said opposite side edges to define a medial section bounded at opposite sides by said fold lines and two wing sections each bounded at one side by a fold line and at its other side by one of said side edges, said medial section being divided longitudinally by a line of perforations such that said tape may be split along said line of perforations, said front face of said medial section being adapted to have a column of figures imprinted thereon by said cash register, said perforations being positioned on said medial section such that said column of figures is superimposed thereon, said wing sections being folded back along said fold lines and against the back face of said medial section, said wing section being adapted to receive printed advertising messages, said tape in its folded state being rolled for use in a cash register.

3,042,427

MULTIPLE STRING TUBING HANGERS

William W. Word, Jr., Houston, Tex., assignor, by mesne assignments, to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed June 26, 1957, Ser. No. 668,090
11 Claims. (Cl. 285—140)



1. An improved tubing hanger contoured for abutment with the complete bore of a tubing head and for supporting a multiple string of tubing comprising a lower hanger body, a tubing head having a guide and a seat to receive and guide said hanger body onto said seat, a pair of independent tubing passages through said lower hanger body, a means on said lower hanger body to suspend and seal one string of tubing in one of said tubing passages, an upper hanger body having tubing passages corresponding with those of said lower tubing hanger, a seat on said lower hanger body to receive and support said upper hanger body, guide means on said upper and lower hanger bodies to cooperate with said tubing head guide to align their passages independent of the string of tubing, a second means on said upper hanger body to suspend and seal another string of tubing through said other tubing passage in said lower tubing hanger, and seal means to seal the upper tubing hanger with said tubing head.

3,042,428

COPPER-ALUMINUM TUBULAR CONNECTOR

Emmett G. Gardiner, Erie, Pa., assignor to General Electric Company, a corporation of New York

Filed Apr. 5, 1954, Ser. No. 420,895
4 Claims. (Cl. 285—173)



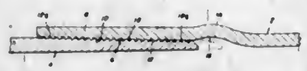
1. In a refrigeration system, a fluid conducting part formed of aluminum tubing and another fluid conducting part formed of tubing of a metal that can readily be soldered, a tubular fluid conducting transition piece connecting said tubing in fluid flow relationship and formed of a tubular layer of aluminum and a tubular layer of a readily solderable metal, a pressure tight joint integrally uniting the readily solderable tubular metal part of the transition piece and the tubing of the readily solderable metal, and a pressure tight joint integrally uniting the tubular aluminum of said transition piece and said aluminum tubing, said transition piece being formed of dissimilar wrought metals, metallurgically bonded together at their interface.

3,042,429

THREADED WELL CASING JOINT HAVING COMPRESSIVE LOADING MEANS

John W. Kelso, Dravosburg, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Oct. 30, 1959, Ser. No. 849,892
1 Claim. (Cl. 285—334)



An integral non-upset well casing threaded joint comprising an internally threaded belled end portion and an externally threaded portion adapted to be screw threadedly connected thereto, a bulge in said belled portion providing an annular internally opening concave portion axially spaced from the end of said belled end portion and adjacent the end of the internal threads, said bulge protruding on the exterior of said belled end portion and having a wall thickness substantially the same as the remainder of the well casing, each of said threaded portions having a run-out at its inner end, said bulge permitting the outer end of said external threads to be advanced beyond the inner end of the internal threads and underlying the bulge whereby when the joint is placed in tension the bulged portion tends to straighten out thereby forcing the internal surface of said bulge into contact with said underlying threads and placing them in compression.

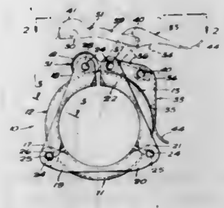
3,042,430

FAST ACTION COUPLING AND CLAMPING ASSEMBLY

Granville M. Guy, Los Angeles, Calif., assignor to Poly Industries, Inc., a corporation of California

Filed Aug. 25, 1958, Ser. No. 756,802
4 Claims. (Cl. 285—365)

2. A breakaway band clamp and coupling device adapted to have its opposite ends held embracing and closed about the converging surfaces of a radially flanged annular joint by a readily disconnectible toggle mechanism, said device comprising a plurality of generally similar articulated sectors formed from sheet metal of arcuate shape and cooperable to contact substantially the entire circumference of said joint, said sectors each being provided with diverging opposite side walls, the inner rim edges of said side walls being outturned to form radially disposed parallel tabs at the opposite ends of each sector,



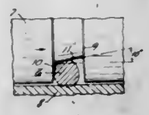
pin means pivotally connecting the overlapping portions of said tabs adjacent said sector ends, and toggle latch means including an operating lever pivotally supported between the tabs at one end of said device, said toggle latch means pivotally supporting a hook bolt having an inwardly facing notch at its outer end, and pin means supported between the tabs at the other end of said clamp device and having its midportion shaped to be engaged with the notched end of said hook bolt.

3,042,431

VALVE PLUNGER SEALING DEVICE

Benjamin H. Kryzer, St. Paul, Minn., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey

Filed Feb. 17, 1959, Ser. No. 793,788
4 Claims. (Cl. 277—170)



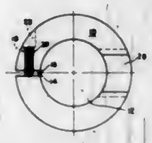
1. In a valve having a plunger movable longitudinally in a substantially cylindrical chamber, improved sealing means comprising, an annular recess formed in said plunger and defined by spaced uninterrupted annular end surfaces extending substantially crosswise of the axis of the plunger and a substantially conical surface extending between said end surfaces from one to the other; and a sealing ring of elastic material confined in said recess, of less width than the spacing of said end surfaces at their junction with said conical surface to permit limited movement of said ring along said conical surface, said ring being under tension and in continuous sealing contact with said conical surface in all positions in said recess, said ring protruding from said recess to be held under compression against the wall of said chamber when in one end position in said recess, the angle of said conical surface relative to the axis of the plunger and the spacing of said end surfaces being such as to retain said sealing ring in close proximity to said wall when said ring is in the opposite end position in the recess, whereby fluid under pressure tending to flow past the ring in either direction is effective to force the ring into sealing engagement with the wall of said chamber.

3,042,432
DEVICE FOR FASTENING BOARDS TO TUBULAR SUPPORTS AND THE LIKE
Kurt Feige, Neuss am Rhine, Germany, assignor to Betonbau G.m.b.H., Neuss am Rhine, Germany
Filed Oct. 6, 1958, Ser. No. 766,372
Claims priority, application Germany Oct. 12, 1957
9 Claims. (Cl. 287—51)



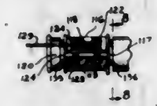
1. A device for detachably connecting a board to a post, which comprises in combination: a wedge-shaped member and an arched substantially U-shaped yoke member non-detachably connected to said wedge-shaped member, one end of said substantially U-shaped member forming a hook defining a first passage and bearing for said wedge-shaped member, the other end of said wedge-shaped member forming an eye and defining a second passage and bearing for said yoke member in spaced relationship to said first passage and bearing, said wedge-shaped member being displaceable within said passages whereby said device is adapted selectively fully to embrace and secure to each other a post and a board to be connected thereto and both embraced by said wedge-shaped member and said yoke member or to allow disengagement of said device from said board and said post.

3,042,433
SHAFT GRIPPING ELEMENT
Richard F. Koen, P.O. Box 200, Lutherville, Md.
Filed Oct. 26, 1959, Ser. No. 848,747
1 Claim. (Cl. 287—52)



A prestressed shaft gripping element comprising a heavy metallic ring having concentric outer circumference and a circular hole slightly smaller than the shaft over which it is intended to extend, the gripping element being formed with two abutting parallel faces, said faces being substantially parallel with a plane passing through the central rotating axis of the gripping element, a threaded aperture through one of the abutting faces perpendicular to the plane passing through the axis of the element, a screw for expanding the gripping element threadably receivable in said aperture, the inner end of the screw adapted to contact the opposite abutted face of the gripping element for expanding the gripping element to a size to extend over the said shaft, whereby the gripping element will grip the shaft when the expanding screw is retracted out of context with the opposite abutted face, an open sided dove-tail slot provided at one side and through the wall of the gripping element perpendicular to the rotating axis of the element for receiving a locking member for locking the element to a work element.

3,042,434
PORTABLE, MAN-CARRIED, POWER-DRIVEN TOOL
Daniel W. Heiniger, Kankakee, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed July 15, 1959, Ser. No. 827,239
3 Claims. (Cl. 287—58)



1. In combination, a pair of separable, substantially tubular sections arranged to be received one within the other in telescoping relation, the outer of said sections having a slot extending longitudinally thereof, an outwardly extending flange integral with each marginal edge portion of said outer section on opposite sides of said slot and with said flanges being substantially in parallel relation, a pair of camming elements arranged adjacent only one of said flanges, said flanges and camming elements each having an aperture with all of said apertures being in registration, a bolt passing through said apertures, a lever pivotally mounted on said bolt intermediate said camming elements, said lever when moved into engagement with said camming elements effecting a contraction of the outer tubular section about the inner section whereby to securely clamp said sections together.

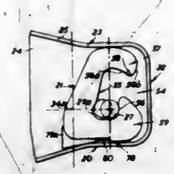
3,042,435
SELF-LOCKING GATE LATCH
Martin A. Wieseler, Myron P. Wieseler, and Raymond M. Wieseler, all of Fairview Township, Hand County, S. Dak. (all of R.F.D. 1, Orient, S. Dak.)
Filed Mar. 15, 1960, Ser. No. 15,083
7 Claims. (Cl. 292—213)



3. A gate latch comprising a gate post fixture embodying an attaching plate provided with a box-like housing having top, bottom, front, rear, and side walls, said top wall being removable, said side walls having aligned openings providing bearings, said side walls also having exterior outstanding flanges providing limit stops; and a U-shaped latch having a bight portion journalled for angular rotation in said bearings and spaced parallel arms arranged to operate exteriorly of the side walls and normally resting atop the limit stop flanges.

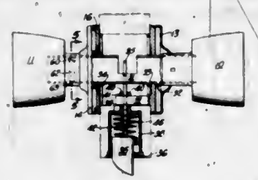
3,042,436
RELEASABLE FASTENING DEVICES
Philip Swingewood Jeavons, Birmingham, England, assignor to Wilmot-Breeden Limited, Birmingham, England
Filed Oct. 15, 1957, Ser. No. 690,293
Claims priority, application Great Britain Oct. 16, 1956
17 Claims. (Cl. 292—221)

1. A releasable fastening device comprising two parts between which relative translatory movement in spaced substantially parallel planes occurs during the fastening operation, said parts being arranged for relative angular movement about an axis and one of said parts having a portion projecting into the plane of the other part to engage the latter during the fastening operation in which the projecting portion trails said axis, such engagement producing relative angular movement of the parts in a positive angular direction into a relative fastening position, said axis moving during said fastening operation in a plane substantially at right angles to the planes in which



said relative translatory movement occurs and which passes through the area of contact of the parts when in said fastening position, and means for manually effecting relative angular movement of the parts, as a result of direct engagement with one of the latter, in the reverse direction to release the fastening.

3,042,437
PASSAGE SET
Walter J. Duvall, P.O. Box 866, Chula Vista, Calif.
Filed May 9, 1960, Ser. No. 27,625
1 Claim. (Cl. 292—358)



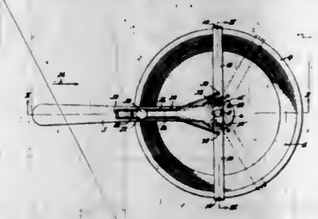
In a lock set having an elongated cylindrical spindle, a mounting member having a central opening which fits around said spindle, said mounting member being movable longitudinally along said spindle between two predetermined positions to adjust said lock set for doors of two different thicknesses, said spindle having adjacent one end thereof a pair of shoulders projecting outwardly from the outer surface of said spindle, each of said shoulders having a substantially radially directed outer side edge extending along the side of said shoulder which is disposed toward the adjacent end of said spindle, said outer side edges of said shoulders being spaced longitudinally apart from each other along said spindle by a distance substantially equal to the difference in the different thicknesses of doors on which said lock set is adapted to be mounted, said mounting member having a notch disposed adjacent to and connecting with said central opening, said notch being adapted to fit over the outermost of said shoulders, said mounting member being movable over said outermost shoulder only when said notch is aligned with said outermost shoulder, said mounting member being rotatable with respect to said spindle to move said notch selectively into or out of alignment with said outermost shoulder to selectively permit or prevent the movement of said mounting member along said spindle, said mounting member being movable between two pre-determined positions, in one of which said notch is out of alignment with said outermost shoulder and said mounting member abuts against the radially directed outer side edge of said outermost shoulder to adjust said lock set for doors of greater thicknesses, and in the other of which said mounting member is moved past said outermost shoulder and abuts against the radially directed outer side edge of the innermost of said shoulders to adjust said lock set for doors of lesser thicknesses.

3,042,438
FIREPLACE TOOLS
John B. Turner, Lake Road, R.D. 1, P.O. Box 328, Norwich, N.Y.
Filed May 1, 1959, Ser. No. 810,351
4 Claims. (Cl. 294—11)



1. A fireplace tool comprising a pair of outer bars secured together at upper ends thereof and pivoted to an inner bar nesting between said outer bars, said bars being pivoted intermediate the ends thereof, said outer bars having upper portions which are parallel and lie in a first plane which contains the axis on which said inner bar pivots relative to said outer bars, said outer bars having lower portions curved in the same direction away from said first plane and curved in opposite directions away from a second plane passing through said inner bar perpendicular to said first plane, said inner bar having an upper portion parallel to and between the upper portions of said outer bars and having a lower portion lying in said second plane but curved away from said first plane and terminating in hook means extending toward said first plane, said inner bar having handle means at the upper end thereof to permit it to be pivoted out of its nesting position.

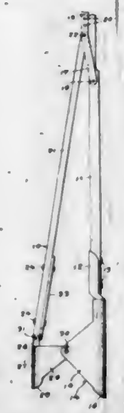
3,042,439
PIE TIN HANDLING DEVICE
Lowell J. King, 821 W. Lexington, Independence Mo.
Filed Oct. 8, 1959, Ser. No. 845,158
6 Claims. (Cl. 294—30)



1. A pie tin handling device comprising an elongated normally horizontal supporting handle, a pair of horizontal arms pivoted coaxially on said handle on a vertical axis and extending radially outwardly therefrom, a depending inwardly directed hook affixed to the outer end of each of said arms, a depending inwardly directed hook affixed to said handle at the same distance from said arm pivot as the hooks affixed to said arms, and operating means constituting an elongated member movably attached to said handle and extending longitudinally therealong, said member being connected at one end to each

of said arms and being operable from a point on said handle remotely spaced from said arm pivot to rotate said arms about said arm pivot.

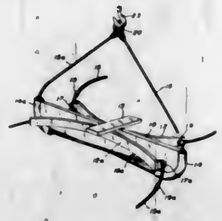
3,042,440
POST HOLE DIGGER
Alfred Henry Weil, Sr., 3014 E. Crawford Ave., St. Francis, Wis., and William Minier, Rte. 2, Bradford, Ill.
Filed Mar. 17, 1959, Ser. No. 800,022
1 Claim. (Cl. 294—50.9)



In a post hole digger including an upright bar, a semi-cylindrical shovel arranged in a vertical position adjacent the lower end of said bar and connected thereto, said shovel being provided with a cutting edge on the lower end thereof, an upright lever disposed adjacent said bar, a semi-cylindrical scoop arranged in face to face relation with respect to said shovel and having the upper end thereof connected to said lever for pivotal movement relative to said lever, the lower end of said scoop being provided with a curved cutting edge, the lower end of said scoop being adjacent to and spaced above the cutting edge of said shovel, means connecting said scoop to said shovel for pivotal movement from the face to face position to a position in which said scoop is horizontal and has the curved cutting edge thereof wholly within said shovel and abutting the adjacent face of said shovel, and a handle operatively connected to the upper end of said lever and to said bar for effecting the movement of said scoop, the improvement consisting in an upright plate carried by said lever operable to close the end of said scoop remote from said shovel when said scoop has been moved to the horizontal position to thereby prevent spilling of dirt from said scoop, said plate being free of and spaced above the upper end of said scoop when the scoop is in the face to face position with respect to said shovel so as to facilitate free entry into said scoop of dirt as loosened by said scoop and shovel cutting edges responsive to a downward digging force applied to said bar.

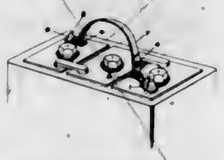
3,042,441
SLING FOR LIFTING CYLINDRICAL ARTICLES
Floyd Duane Jeffs, 1589 S. 2nd E., Orem, Utah, and Lorenzo Leoland Snow, 480 N. 7th W., Provo, Utah
Filed Mar. 10, 1961, Ser. No. 94,742
3 Claims. (Cl. 294—74)

1. A sling for lifting a pair of cylindrical articles comprising a bar, a pair of outwardly curved brackets rigidly affixed to opposite sides of said bar and adapted to encompass a portion of the circumference of the respective articles, first and second guide means fixed to opposite ends of said bar, an eye fixed to the back of one of said brackets adjacent one end, another eye fixed to the back of the other bracket adjacent the opposite end, a first cable strung through said first guide means, passing under the bar, through the eye at the opposite end, forming a loop at the front of the bracket and dead-ended to the back of this bracket adjacent said first guide means, a second cable strung through said second guide means and the other eye and forming a loop and dead-ended



in a similar relation to the other bracket, and a lifting ring to which the other ends of said cables are attached, the loops in said cables being adapted to encompass the remainder of the circumference of the respective articles, whereby a force on said lifting ring tightens said cables on the articles enabling the articles to be lifted in an upright position.

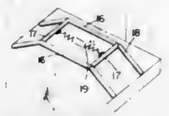
3,042,442
BATTERY LIFTER
John W. Schukraft, Towson, Md., assignor to The Murray Corporation, a corporation of Maryland
Filed Dec. 15, 1959, Ser. No. 859,788
10 Claims. (Cl. 294—92)



10. A battery lifter comprising:
(*a*) a flexible strap and an elongated plate at each end,
(*b*) means at one end of each plate to engage a battery post while preventing rotation of said means relative to the post, the plate other end being offset upwardly from and substantially parallel to the said one end,
(*c*) pivot hinge means on the plate offset end, a part of the hinge means projecting upwardly and being connected rigidly to the strap end, the strap end being rigid adjacent said connection, the hinge means pivoting the plates to the strap ends to swing about an axis normal to the strap length to either side of the pivot of said pivot hinge means with substantially equal facility on either side of the said pivot and
(*d*) means on the offset end of each plate to limit the pivotal movement of the hinge means and strap to less than a straight angle,
(*e*) whereby the offset plates with post engaging means at each end of the strap are adapted to engage battery posts by vertical dropping thereover with the offset ends of the plates up when either side of the strap is up.

3,042,443
DEVICE FOR HOLDING GOLF BAGS
Frank J. Laher, 120 Camino Sobrante, Orinda, Calif.
Filed Apr. 28, 1960, Ser. No. 25,339
4 Claims. (Cl. 296—3)

1. In combination with a golf cart, apparatus for holding a plurality of golf bags comprising an upper surface of said cart disposed to directly support said bags from beneath, a rack secured to said golf cart in the region of said surface and constructed to define a supporting frame at a predetermined height above said surface, said frame defining a golf bag receiving opening, the extent of said predetermined height being sufficiently limited to cause



golf bags disposed within said frame to lie across said cart, and means disposed across said opening to releasably engage golf bags positioned therein, said means comprising a resilient deformable member extending transversely of said cart to generally divide said opening into a forward and a rear portion.

3,042,444
MOTOR VEHICLE BODY CONSTRUCTION
Ferdinand Porsche, Stuttgart, and Erwin Komenda, Korntal, Germany, assignors to Dr. Ing. h.c. F. Porsche KG, Stuttgart-Zuffenhausen, Germany
Filed Apr. 22, 1960, Ser. No. 24,080
Claims priority, application Germany Apr. 25, 1959
2 Claims. (Cl. 296—28)



1. A side-wall construction for a vehicle body, especially of the self-supporting type, for motor vehicles in which the side-wall body panel extends in one piece essentially over the entire length of the vehicle and is provided with a door aperture, said side-wall body panel including rim portions having flanges for connection with flanges of adjoining stamped body parts, at least some of the sections of the rim portions of said side-wall body panel being stamped out in an essentially U-shaped manner to form substantially parallel leg portions, one of which is free, said free leg portion extending at a distance from the side wall and essentially parallel thereto, said side-wall panel constituting within the outer regions thereof at least a part of the wheel casings, said wall panel comprising inwardly U-shaped angularly bent rim portions thereof, said last-mentioned rim portions extending essentially in the vehicle longitudinal direction and constituting channels, said channels being open on the side thereof opposite the road surface, and an essentially horizontally-extending stamped body part closing off the open side of said channel.

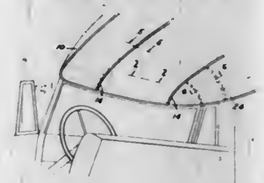
3,042,445
COMBINATION GLARE SHIELD AND SHADE DEVICE
William C. Lamar, 5941 Holmes St., Kansas City, Mo.
Filed June 30, 1960, Ser. No. 40,099
6 Claims. (Cl. 296—97)

5. A combination glare shield and shade device for support under a transparent panel having ends curving into sides of a motor vehicle body, said device including an elongated sheet-like member having a length less than the space between said curving ends of the transparent panel and of sufficient flexibility to form an arch in the longitudinal direction thereof, support members connected with ends of said sheet-like member and having sockets projecting from said ends and having internal threads, and shanks provided with resilient tips on outer ends thereof and having external threads engaging the internal threads of the sockets, said shanks being turnable in said sockets to bring



said resilient tips into bearing frictional contact with the curving sides of the transparent panel to impart said arch while holding the sheet-like member at desired angles of inclination responsive to the arch produced in said sheet-like member.

3,042,446
HEADLINER PANEL AND ROOF ASSEMBLY
Lloyd E. Stahl, Monroe, Mich., assignor to Woodall Industries, Incorporated, Detroit, Mich., a corporation of Michigan
Filed Sept. 28, 1959, Ser. No. 842,737
4 Claims. (Cl. 296—137)

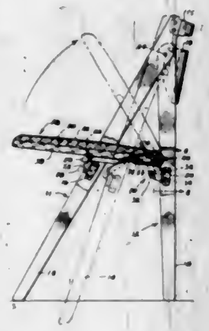


3. A laminated headliner panel assembly structure adapted to be held upwardly against the underside of an automobile body roof comprising, in combination: a headliner panel comprising a self-supporting relatively rigid fracturable inelastic but somewhat flexible fibrous composition foundation lamination provided with a bead-like deformation therein extending thereacross and laterally offset from the plane of the foundation lamination, and a cushiony relatively non-fracturable and elastic sponge rubber-like finish lamination secured to the underside of the foundation lamination and extending over and bridging the depression of the bead-like deformation therein, said cushiony elastic sponge rubber-like finish lamination being yieldable without buckling or rupture to permit contraction and/or expansion of the foundation lamination along the line of the bead, said bead adapted to permit bending of the foundation lamination along a compound curvature; and a resilient panel supporting strip associated with said body roof and tensioned upwardly toward the roof and having a panel margin receiving channel receiving the margin of the headliner panel including the margin of the foundation lamination and the margin of the finish lamination grippingly engaging both and embedding an edge of the channel within the sponge rubber-like finish lamination whereby said sponge rubber-like finish lamination accommodates within itself for relative movement of the panel foundation and strip.

3,042,447
FOLDING CHAIR
Michael A. Wilkinson, Owego, N.Y., assignor to Stakmore Co., Inc., Owego, N.Y., a corporation of New York
Filed June 1, 1960, Ser. No. 33,222
8 Claims. (Cl. 297—58)

1. A folding chair including front and rear leg assemblies, each of which has legs at opposite sides thereof

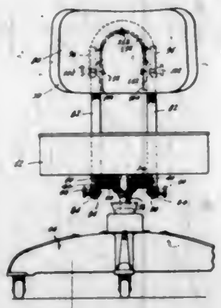
rigidly connected to opposite ends of upper and lower rail elements, a pivot connecting each of the front legs with the corresponding rear leg near the upper end of one of the leg assemblies, a seat constantly hinged to the lower rail element of the rear leg assembly, links connecting the seat to a rail of the other leg assembly, the links being connected at their rearward ends to the seat at a location intermediate the front and rear of the seat, brackets connected on the front of a rail element of the front leg assembly, pivot connections on the bracket offset ahead of the connected rail element and connecting the links to said bracket on the front leg assembly, said links extending some distance beyond the pivot connections and in a direction away from the rearward ends of the links, and an abutment surface on each of the brackets below the pivot connection and in position to stop further movement of the extending front end of its



associated link as the link swings on the pivot connection to the folded position of said link, the seat having a flat bottom extending over substantially the full area and to all of the edges thereof and having an intermediate area recessed above the level of said bottom surface and with said intermediate area beginning at substantial distances inward from both of the side edges of the seat, the connection between the seat and the rail of the rear leg assembly comprising rearward brackets connected to the front of the rail intermediate its ends and extending forwardly and then upwardly into the recess, other brackets in the recessed area secured to the seat and pivotally connected to the rearward brackets, the links to said other leg assembly being connected to the seat by pivot connections to said other brackets within the recessed area, and said links extending downwardly from the recessed area and forwardly adjacent to the flat bottom of the seat and being inward from the side edges of the seat when the chair is in setup condition to make said links inconspicuous.

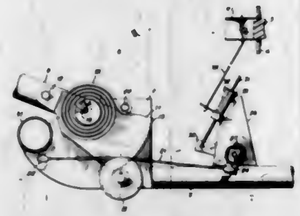
3,042,448
CHAIR
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., a corporation of Indiana
Filed Oct. 21, 1957, Ser. No. 691,392
16 Claims. (Cl. 297—301)

1. A swivel chair, comprising in combination with a back and seat assembly, a bracket mounted on the underside of said seat assembly, and a pair of plates rigidly mounted on said bracket adjacent the rear thereof; a supporting member disposed between said plates, a base having a vertically extending rod, a yoke rotatably carried in fixed axial position on said rod for supporting said back and seat assembly, a pivot pin extending through said yoke, plates, and supporting member rearwardly of said rod and defining a pivot axis for effecting relative tilting movement between said supporting member and one of said seat assembly and back, and yielding means acting between one of said back and seat



assembly and supporting member to oppose said tilting movement.

3,042,449
RECLINE SEAT CONTROL MECHANISM
John W. Hutchinson, Coral Gables, Raymond R. Fenn, Miami Springs, and Lester L. Preiss, Miami, Fla., assignors to Flight Equipment and Engineering Corp., Miami, Fla., a corporation of Florida
Filed Dec. 30, 1959, Ser. No. 862,956
5 Claims. (Cl. 297—366)

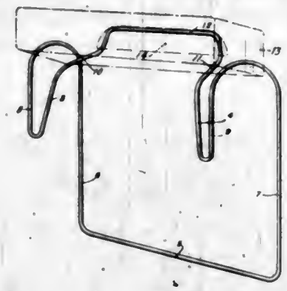


1. Control mechanism for a recline seat of the type in which a seat frame is provided with an element that is rotatable responsive to movement of the seat back and is normally maintained against rotation by the snubbing action of a cable wound around the element, said mechanism comprising a member biased to apply tension to the cable, a rod connected to the member, a plate having an opening through which the rod extends, and actuating means for moving the plate from a position in which the plate is substantially normal to the rod and the rod is loose in the opening to a position in which the plate is canted with respect to the rod and frictionally engages the rod to move with the plate and move the member and relieve the tension on the cable, thereby freeing the rotatable element for rotation.

3,042,450
MOTOR VEHICLE SEAT HEAD REST
Henderson Burk Standley, 552 S. Hillside, Wichita, Kans.
Filed June 12, 1961, Ser. No. 116,569
1 Claim. (Cl. 297—399)

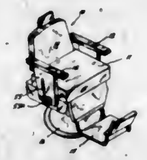
A motor vehicle head rest formed of a cushion and a single continuous piece of wire which comprises an inverted U-shaped bracket having end members provided with arms which project downwardly therefrom and are adapted to be positioned to nest over the upper edge of the back of a seat, a horizontal crossbar connecting the lower ends of two of said arms to form a head rest of one continuous piece said end members also being provided with arms which are bent over and extend upwardly

forming posts the upper ends of which are connected only by a single horizontal crossbar which forms a cushion



support by fitting under a sleeve on the rear side of the cushion.

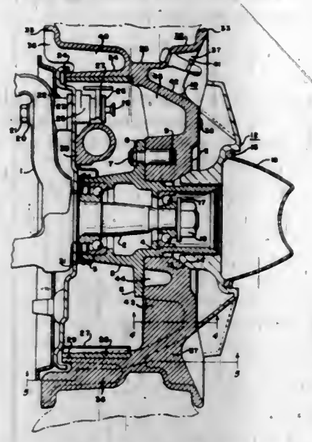
3,042,451
BARBER CHAIR ARM STRUCTURE
Harry S. Shubart, Evanston, Ill., assignor to Emil J. Paidar Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 30, 1961, Ser. No. 85,829
9 Claims. (Cl. 297—422)



1. A nonyielding vertical arm assembly for mounting on the frame of a barber chair comprising a base having a pair of vertically spaced horizontal mounting bars and a pair of vertical spacer bars attached at their ends to the mounting bars, a column having a pair of vertical bars attached at their lower ends to said vertical spacer bars, a vertical planar base panel positioned outwardly over said base, an armrest mounted at the upper end of said vertical column bars, and a hollow shroud surrounding said column bars including an inner panel and an outer panel separated by side blocks therebetween, and securing bolts extending through said inner and outer panels and said base panel and through both of said vertical spacer bars and said vertical column bars for supporting said shroud and base panel.

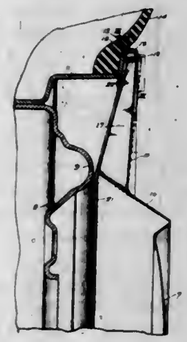
3,042,452
VEHICLE WHEEL STRUCTURE
Kenneth B. Bly, Bedford, Walter E. Taylor, Seymour, and Thomas G. Thomas, Bedford, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 16, 1958, Ser. No. 767,606
4 Claims. (Cl. 301—6)

1. An integral vehicle wheel structure comprising in combination, a drop center rim having an annular drop center portion, an annular flange extending from said drop center portion forming, a brake drum positioned in spaced relation within said rim with one edge at the axial center of said rim, a plurality of fins angularly spaced between and connecting said rim and said drum to provide radiation of heat to the atmosphere, a wheel hub, a rim supporting wall connecting said hub and said drop center portion of said rim, a plurality of fins angularly spaced about the inboard side of said wall connecting said hub and drop center portion to create turbulence of air within the brake drum, a plurality of spaced radial fins connecting said wall and said rim on the outboard side of



said wall to provide radiation of heat from said wall and said drum to the atmosphere upon rotation of said wheel.

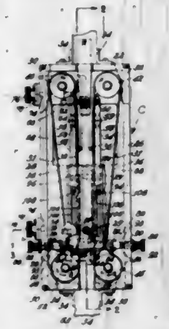
3,042,453
WHEEL COVER
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Feb. 13, 1959, Ser. No. 793,006
2 Claims. (Cl. 301—37)



1. In a wheel structure including a wheel body and a multi-flange tire rim supported by the wheel body and having a generally radially inwardly facing terminal flange provided with a radially inwardly opening groove, a cover member having a crown portion dimensioned to overlie the wheel body and provided with a generally radially outwardly facing side wall from which project a plurality of generally radially outwardly extending cover retaining arms of generally U-shaped cross-section and substantially rigid in their lengthwise direction, said arms being substantially spaced apart uniformly circumferentially and with substantial circumferential areas of the side wall of the cover member intervening therebetween, said side wall areas being resiliently flexible radially, said arms having retaining terminals on their radially outer ends comprising a spaced pair of generally circumferentially facing retaining terminal flanges having edges projecting generally radially outwardly and which normally project to a slightly greater diameter than said tire rim flange, said arms being deflected radially inwardly by the engagement of said terminals retainingly with said rim flange groove and said cover member flexible intervening wall portions being resiliently flexed

radially as a result of said radially inward deflection of the arms and tensionably thrusting said arms toward said rim flange and thus said terminals firmly into retaining engagement with the rim flange.

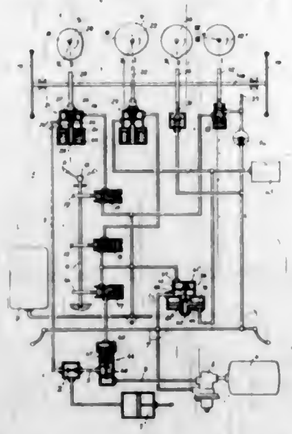
3,042,454
ARTICLE CONVEYING MECHANISM
Oswald E. Eissmann and Hans G. Krohne, Richmond, Va., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed Oct. 30, 1959, Ser. No. 849,863
19 Claims. (Cl. 302—2)



1. In an article conveying system for transferring articles from a delivery station to a discharge station remote therefrom, guide means defining the path of travel of articles from said delivery station to said discharge station, means operatively associated with said guide means for effecting the transfer therein of articles from said delivery station to said discharge station, means adjacent said discharge station for positively engaging said articles and conveying them for a portion of their travel to said discharge station, means to separate said articles from the action of said transfer means on said articles as said articles are conveyed by said conveying means whereby the continuous uninterrupted flow of articles is maintained, and means for preventing retrograde movement of said articles separated from the action of said transfer means.

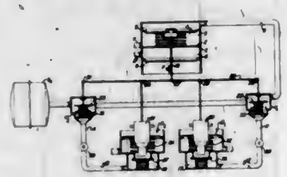
3,042,455
SINGLE CONTROL OF DIRECT OR AUTOMATIC BRAKING SYSTEMS OF THE COMPRESSED AIR TYPE, NOTABLY FOR RAILWAYS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Nov. 16, 1959, Ser. No. 853,369
Claims priority, application France Dec. 8, 1958
5 Claims. (Cl. 303—26)

1. A control arrangement for air pressure actuated braking systems of a railway traction engine comprising a brake cylinder, an automatic brake system and a direct brake system adapted to actuate said brake cylinder, said control arrangement including two pressure reducing valves to control respectively the braking pressure of the direct brake system and that of the automatic brake system, a selector having two service positions, valve means to control the feed of compressed air to the pressure reducing valves and means to isolate the brake cylinder from the automatic brake system said valve means and last means being placed under the dependence of said selector to insure, in one of the positions of the latter, the feed of the pressure reducing valve for the control of the automatic brake system and the venting to the atmosphere of the pressure reducing valve for the control of the direct brake system, and to insure in the other position of the selector the feed of the pressure reducing valve for the direct brake system and the venting to the atmosphere of the pressure reducing valve of the automatic brake system as well as the isolation of the brake cylinder with respect to the automatic brake system, and a manual control member for progressively and simultaneously actuating the two pressure reducing valves in



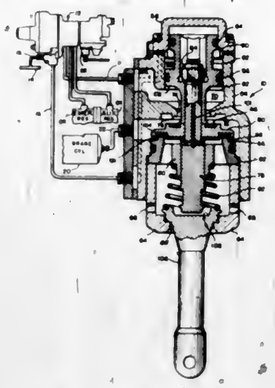
order to effect identical variations, in accordance with its position, of the braking pressure in the direct brake system or automatic brake system placed in service by said selector.

3,042,456
PNEUMATIC BRAKE SYSTEM
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a company of Italy
Filed Nov. 5, 1958, Ser. No. 772,108
Claims priority, application Italy Nov. 5, 1957
1 Claim. (Cl. 303—29)



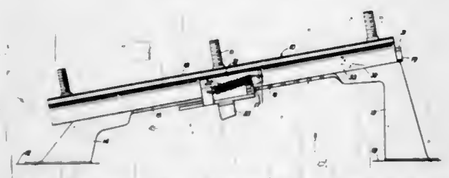
A pneumatic braking arrangement for operating a plurality of braking sections and comprising a source of pneumatic medium, a supply valve for each of said sections for controlling the supply of pneumatic medium thereto, a cut-off valve for each of said supply valves and connected thereto for distributing said pneumatic medium thereto and lever means operatively coupled to said supply valves and cut-off valves to selectively block off the supply of the pneumatic medium to the sections in response to pressure losses therein, said lever system comprising a lever for each of said valves, said levers being pivotally connected together and arranged in pairs, each pair being constituted by a lever for a supply valve and a lever for the associated cut-off valve, said pairs of levers normally permitting uniform displacement of the lever system whereby each said supply valve and associated cut-off valve is open to provide fluid communication between said source and said section, said lever system being unbalanced with a loss of pressure in one of said sections to displace said cut-off valve associated with said one section to a closed position to interrupt the fluid connection between said source and said one section.

3,042,457
BRAKE CYLINDER RELEASE VALVE
James I. Morgan, Hales Corners, Wis., assignor to The Prime Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 9, 1961, Ser. No. 81,315
17 Claims. (Cl. 303—69)



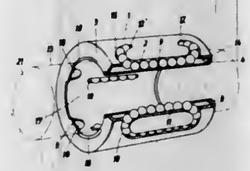
1. A control valve for a railroad air brake system having a brake pipe pressure line, an air reservoir pressure system and an air pressure actuated brake cylinder, said control valve comprising, a housing having a reservoir inlet passage, a brake pipe pressure inlet passage, a brake cylinder outlet passage, and an exhaust passage, a valve passage connecting said reservoir inlet passage to said exhaust and brake cylinder passages, a valve member mounted in the housing for movement in one direction to connect said reservoir passage with said brake cylinder passage and movable in the opposite direction to connect said brake cylinder passage to said exhaust passage, piston means operatively connected to the valve member and responsive to the pressure in said brake pipe passage to urge said valve member in the one direction, universally movable means for moving the valve member and piston means in the opposite direction to vent the brake cylinder passage to said exhaust passage and to close the reservoir passage, said valve member being held in reservoir passage closing direction by the pressure in said reservoir inlet passage acting on the piston means, means for relieving the pressure in the reservoir inlet passage, and means inter-connecting the universally movable means and the relieving means whereby the initial motion of the movable means will relieve the pressure in the reservoir inlet passage.

3,042,458
PRELOADED BALL BEARING SEAT SLIDE CONSTRUCTION
Joseph R. Kirk, Rockford, Ill., assignor to Atwood Vacuum Machine Company, Rockford, Ill., a corporation of Illinois
Filed Jan. 28, 1959, Ser. No. 789,726
15 Claims. (Cl. 308—3.8)



1. A slide structure comprising in combination a pair of parallel, relatively reciprocable, opposed elongated channel members, each channel member having a web and opposed side walls, providing a load bearing surface on the web thereof, at least two longitudinally spaced bearing balls disposed between said channel members of a diameter in relation to the depth of the channels thereof to space the channel members apart and rollably support one of said channel members upon the other by virtue of said balls having point rolling engagement on diametrically opposite sides thereof with said load bearing surfaces provided in said channel members, race-forming flanges projecting laterally from the side walls on one of said channel members, the other channel member having on the side walls thereof laterally projecting flanges with inturned race-forming edge portions the races on which are opposed to the races defined on the aforesaid race-forming flanges on the first mentioned channel member, the races on the two members being located on converging lines inclined from a vertical at approximately 45° that intersect substantially at right angles to one another at one of the aforesaid points of rolling engagement of the bearing balls, and additional bearing balls disposed between said channel members in said races on said converging lines and maintaining said channel members in assembled relation to one another and the first mentioned balls while preventing lateral displacement of said channel members relative to one another.

3,042,459
RETAINER FOR BALL BEARINGS
Alfred Magg, Friedrichshafen, Germany, assignor to Zahnradfabrik Friedrichshafen, Aktiengesellschaft, Friedrichshafen am Bodensee, Germany
Filed July 31, 1961, Ser. No. 128,263
Claims priority, application Germany Aug. 13, 1960
10 Claims. (Cl. 308—6)

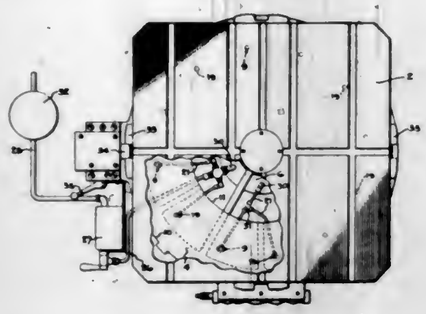


1. A linear movement bearing comprising a pair of concentric sleeves having respective, coacting slots for effecting circulation of balls therebetween as said bearing is moved axially on a shaft, each of said sleeves having an integral radial flange means at the same end thereof, the flange on one of said sleeves effecting concentric support of the other of said sleeves at that end, the other end of one of said sleeves having a radial flange means interlockingly engaged with the corresponding end of the other of said sleeves and maintaining said latter end of said sleeves in keyed and concentric relation.

3,042,460
SLIDE BEARING CONSTRUCTION
Charles E. Gilbert, Sr., and Donald Winget, Jr., Cincinnati, Ohio, assignors to Cincinnati Gilbert Machine Tool Company, a corporation of Ohio
Filed July 15, 1960, Ser. No. 43,195
6 Claims. (Cl. 308—9)

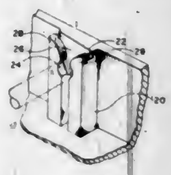
1. A slide bearing construction comprising first and second members presenting respective planar bearing faces which are cooperable with one another to support a load, one of said members being relatively movable with respect to the other, one of said members having a plurality of normally closed valve means located in spaced relation to one another at the bearing face of said member, each of said valve means being positionally operable to open position by engagement with the other of said bearing faces when the spacing between the two faces is less than a predetermined distance, means for supplying said valve means with compressed gas whereby a film of said

gas corresponding in thickness to said predetermined distance may be established and maintained between said faces in response to valve actuation, and means providing



a mobile liquid at least at the margins of the area over which said faces are in engagement with each other to impede the escape of compressed gas from the margins of said area.

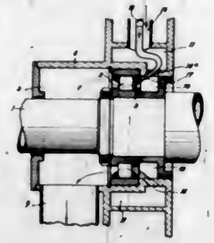
3,042,461
DOLLY FOR CLEANING APPARATUS WITH IMPROVED WHEEL BEARINGS
Aaron H. Smith, Lynn, Mass., assignor to Signal Manufacturing Co., Lynn, Mass., a corporation of Massachusetts
Filed Nov. 20, 1958, Ser. No. 775,257
3 Claims. (Cl. 308—15)



1. In a dolly, wheel wells open at the bottom for housing wheels provided with shafts therein, said wells enclosing the wheels so that only the lower portions thereof extend and are accessible from outside the well, each well having spaced parallel walls between which the wheel shafts are adapted to be journaled, bearings on said walls containing bearing openings for receiving the ends of a wheel shaft, and downwardly facing openings narrower than the diameter of the shaft affording access to the bearing openings, the portions of the bearings at opposite sides of the narrower openings being free to yield relative to each other in a plane perpendicular to the shaft and to flex to and from the plane of the wall.

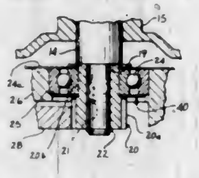
3,042,462
ARRANGEMENT FOR LUBRICATING AND COOLING ROTATING PARTS
Hans Rosskopf, Dammarie-les-Lys, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France
Filed May 16, 1960, Ser. No. 29,436
Claims priority, application France May 27, 1959
3 Claims. (Cl. 308—187)

1. A lubricating and cooling system comprising rotating parts, and means rotatably supporting said parts, said means defining passageways terminating in the close vicinity of said rotating parts and directed toward said parts, said passageways being fed with cooling air under pressure, duct means in said passageways, said duct means terminating in the close vicinity of said rotating parts while being directed toward said parts and being fed with lubricating oil under pressure, whereby a com-



pact lubricating oil jet surrounded by cooling air under pressure is directed onto said rotating parts.

3,042,463
BEARING SEAL
John P. Bruck, Toledo, Ohio, assignor to American-Lincoln Corporation, Toledo, Ohio, a corporation of Ohio
Filed Jan. 4, 1960, Ser. No. 232
2 Claims. (Cl. 308—187.1)

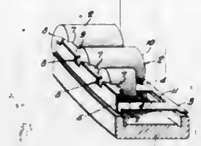


1. In combination with a grease seal for a bearing-supported rotating shaft in which the bearing has an inner race and an outer race with an intermediate portion which is permeable to the flow of lubricant, a shoulder on said shaft in engagement with the inner race of the bearing, a dished annular plate member having a central hole through which said shaft extends, said member having a diameter such that an outer circular edge of said member can contact the outer race of the bearing with the member extending radially across at least the premeable portion of said bearing, said member having an inner circular edge portion around said central hole, said edge portion having a plurality of projections extending therefrom in a direction away from said bearing, force applying means to apply force against said projections of said plate member to move said member to a substantially flat configuration against said bearing, means for rotating said force applying means, said force applying means engaging said projections to rotate said plate member as said force applying means is rotated, and means to retain said force applying means against axial displacement on said shaft and to press said plate member between said force applying means and said bearing to urge said bearing portion toward said shaft shoulder.

3,042,464
ROLLER CAGE FOR CYLINDRICAL ROLLER BEARINGS
Karl Evald Andreas Göthberg, Backasen, Lerum, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Goteborg, Sweden, a corporation of Sweden
Filed Jan. 12, 1960, Ser. No. 1,972
6 Claims. (Cl. 308—217)

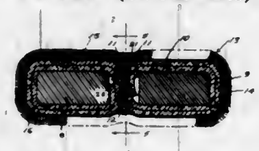
1. A roller cage for roller bearings comprising a generally cylindrical portion having a plurality of circumferentially spaced pockets therein for the rollers, a radial flange projecting from only one of the peripheral edges of said cylindrical portion, a plurality of circumferentially spaced abutments on said flange projecting axially inward

of the cage to engage an end of each roller and retain the same against axial movement, a plurality of support members on said flange intermediate adjacent abutments and projecting axially inward of the roller cage a distance less than one-half the axial length of the roller pockets therein and disposed for positioning between adjacent rollers to engage therewith and retain the rollers against radial



movement in said pockets, said abutments and support members being displaceable in a direction axially outward of the cage to permit insertion and removal of the rollers from said pockets, said abutments and support members being located radially at one side of the pitch circle of said rollers and said cylindrical portion being located radially at the other side of said pitch circle.

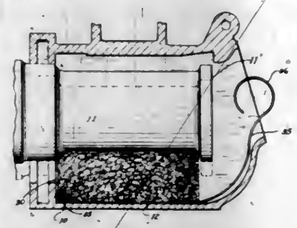
3,042,465
JOURNAL LUBRICATOR PAD
William J. Sockell, Sr., 921 Willow Vista Road, Raleigh, N.C.
Filed June 29, 1960, Ser. No. 39,645
1 Claim. (Cl. 308—243)



A lubricator pad adapted to be interposed in a journal box between the journal box bottom and a journal thereof, said pad including a pair of elongated flexible and resilient core members of a sponge-like material, an inner coving of an absorbent knitted fabric having wound end portions forming substantially parallel chambers, said core members being contained in and substantially filling said chambers, and an outer covering including a porous fabric envelope, of a thickness substantially less than the thickness of said inner covering, completely enclosing said inner covering and core members and a loop pile mass secured to said fabric envelope and constituting the exterior of said outer covering, said loop pile mass being formed of yarn having good wicking and capillary characteristics, said yarn being secured by lock stitching to the inner surface of the fabric envelope to provide a substantially solid inner yarn surface of the outer covering disposed in contact with said inner covering.

3,042,466
JOURNAL LUBRICATING PAD
Edwin S. Pearce, Indianapolis, Ind., assignor to Railway Service and Supply Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Dec. 31, 1958, Ser. No. 784,111
8 Claims. (Cl. 308—243)

1. A lubricating pad for railway-car journal boxes, comprising a unitary parallelepipedal block of foamed resilient material of the open-cell type and a cover therefor, said cover having walls substantially completely covering all faces of the block and having adjacent at least one end edge of the block an opening through which the block, in compressed condition, can be inserted into and removed from within the cover, said cover being formed of a base fabric provided over substantially the entire exterior surface of the walls, including its end walls, with a pile comprising loops of coarse string adapted to engage and feed lubricant to the cylindrical



bearing surface of an associated journal and to the opposed thrust-transmitting surfaces of the collar and flange at the ends of the journal.

3,042,467
CHAIR ARM-MOUNTABLE ACCESSORY-CARRYING DEVICE
Willard D. Germick, Doylestown, Pa., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Jan. 24, 1961, Ser. No. 84,592
1 Claim. (Cl. 311—17)

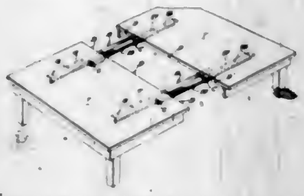


A chair arm-mountable accessory-carrying device, comprising: an open-topped receptacle for carrying accessory items, the outer side of said receptacle being hingedly provided adjacent the top with shelf-tray means normally lying in downwardly extending relationship immediately alongside of the outer side of the receptacle but being controllably movable into a substantially horizontal, outwardly extending position and being provided with underneath pivotally mounted downwardly and inwardly directed prop means engageable with engaging supporting means carried by the outer side of the receptacle for firmly supporting said shelf-tray in said horizontal position when desired, exterior portions of said receptacle being provided with first engaging means comprising apertured and slotted engaging means; support means provided with second engaging means comprising projecting headed pin-engaging means adapted to be removably inserted into and supportingly received by said first engaging means for firmly mounting said support means outwardly of said receptacle; the inner side of said receptacle being provided with third engaging means comprising apertured and slotted engaging means arranged in a plurality of differently angularly positioned orientations with respect to a transverse axis extending transversely through the inner and outer sides of the receptacle; and supporting strap means having opposite ends provided with fourth engaging means comprising headed projecting pin engaging means controllably insertible into selected ones of said third engaging means for effectively fastening said strap means over a chair arm to the inner side of said receptacle in a selected angular orientation relative thereto such as to compensate for angular positioning of the chair arm over which said supporting strap means is to be fastened the outer surface of the downwardly folded shelf-tray being also provided with first engaging means comprising apertured and slotted engaging means adapted to removably receive said second engaging means and mount said support means; said open-topped receptacle being provided adjacent the top thereof with a flexible protective water-impervious cover adapted to be thrown over the open top of the receptacle for protective purposes when desired.

3,042,468
METALLIC SLIDE ASSEMBLY FOR EXTENSION TABLES

Henry Rudow and Maurice Rudow, Baltimore, Md., assignors to Lockfast Manufacturing Co., Inc., Baltimore, Md., a corporation of Maryland

Filed July 27, 1960, Ser. No. 45,747
10 Claims. (Cl. 311—71)

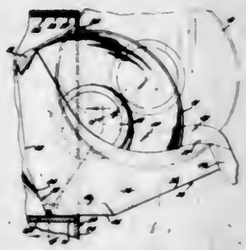


1. A metallic slide assembly for an extension table comprising a pair of juxtaposed sheet metal slides, each one of said slides having a horizontal flange with a plurality of openings along one end thereof for receiving fasteners to attach said slide to the bottom of a table section, with said openings in the respective slides at the remote ends of the pair thereof, a vertical web extending from each divergently directed horizontal flange for abutting contact below said horizontal flanges and adapted for relative reciprocable movement adjacent to each other, a slidable retainer clip at each end of the assembly embracing said vertical webs adjacent to the free edges thereof remote from said flanges, and a continuous raised protuberance on each horizontal flange along said one end thereof and extending beyond the series of openings therein to provide reenforcement for the flange and a smooth juncture plane between each slide and the table-top section affixed thereto, said protuberance being inclined upwardly from the outer end of the flange to the inner portion thereof to impart a "crown" to the table in compensation for the sag resulting from the insertion of a table leaf in the extension of the table.

3,042,469
MEANS FOR FILING AND HANDLING PHONOGRAPH RECORDS

Alexander C. Lowther, 1732 White St., Alexandria, La.

Filed Jan. 12, 1961, Ser. No. 82,213
1 Claim. (Cl. 312—13)

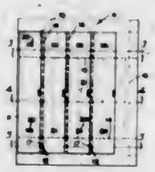


In a device of the character described, a plurality of similar vertically disposed envelopes arranged in side by side relation with respect to each other, an insert movably and pivotally mounted in each envelope for holding a record therein, each of said envelopes comprising a pair of spaced parallel vertically disposed side members integrally joined at the upper and lower and rear portions thereof, the front portion of the envelope being open, each of said inserts comprising first and second vertically disposed side walls arranged in side-by-side relation with respect to each other, said second side wall being slightly larger than said first side wall whereby a portion of said second side wall is arranged above the upper edge portion of the first side wall, the front portion of the insert being closed, the lower portion of said insert being open, said insert including a generally straight lower first edge portion, a second edge portion arranged angularly with respect to said first edge portion, a third edge portion arranged angularly with respect to said second edge portion, a flap on said second side wall arranged in overlapping relation with respect to said first side wall and said flap being secured to said first side wall in the vicinity of the third edge portion, said insert further embodying a fourth edge portion and said fourth edge portion being arranged angularly with respect to said third edge portion, each of said side walls including an upper edge portion of generally concave arcuate formation, a tab on the upper front portion of said insert, the rear end of the insert being closed, there being registering apertures in the lower front portions of the envelopes and inserts, and a fitting including a cylindrical portion extending through said registering apertures, and said fitting having outer circular flanges engaging the outer surfaces of the envelope.

3,042,470
LOCKER UNIT

Robert G. Money, 28511 Euclid Ave., Wickliffe, Ohio

Filed May 4, 1959, Ser. No. 810,746
4 Claims. (Cl. 312—198)

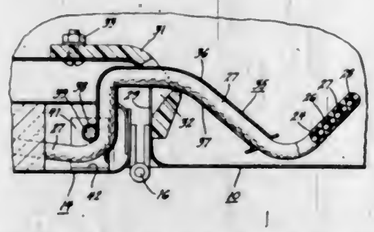


1. A locker unit for garments and the like comprising a plurality of compartments in side-by-side relation having a common rear wall, a door for each compartment, each of said doors being parallel to the common rear wall of said unit when closed, divider partitions between each compartment parallel to each other and diagonal to said rear wall extending from said rear wall to the respective doors to provide a plurality of oblique parallelepiped enclosed compartments, said doors extending vertically between said divider partitions.

3,042,471
FLEXIBLE CONDUIT HINGE FOR DOMESTIC APPLIANCES

Robert E. Haslup, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 16, 1959, Ser. No. 853,151
4 Claims. (Cl. 312—223)



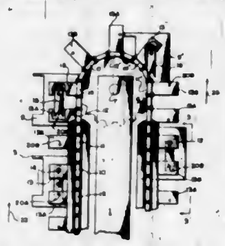
1. In combination, a first member, a second member, means hingedly securing said members together for swinging movement relative to one another, an electric circuit associated with said members having a component on said first member and another component on said second member, said electric circuit including a flexible conductor extending between said members and connecting said components, a single rigid unitary conduit surrounding that portion of said connecting conductor disposed intermediate said members, said conduit being pivotally mounted on one of said members at the hinged side thereof for rotation therewith and for movement as a unit relative thereto, a wall of said conduit being upon swinging said one member relative to the other of said members engageable with a wall portion of said other member, and the engagement of said conduit with said other member limiting rotation of the unitary conduit about its said pivotal mounting with respect to said members to an arc substantially less than the arc of relative swinging movement of the members for minimizing flexure of said flexible conductor.

3. In combination, a cabinet having a chamber therein provided with means defining an access opening normally closed by a door secured to the cabinet by a hinge for swinging movement relative thereto throughout a predetermined arc, an electric circuit associated with said cabinet having a component thereon and another component mounted on and swingable with said door, said electric circuit including a flexible conductor extending between said cabinet and said door and connecting said components, a single rigid unitary conduit surrounding that portion of said connecting conductor disposed intermediate said cabinet and said door, said conduit being pivotally mounted on said door at the hinged side thereof for rotation therewith and for shifting movement as a unit relative thereto, a wall of said conduit being upon swinging said door relative to said cabinet engageable with a wall portion of the cabinet, and the engagement of said conduit with said cabinet limiting rotation of the unitary conduit about its said pivotal mounting with respect to the cabinet to an arc substantially less than said predetermined door swinging arc for minimizing flexure of said flexible conductor.

3,042,472
VERTICALLY MOVABLE FILING CABINET

Charles J. Ibel, Brentwood, N.Y., assignor to Supreme Steel Equipment Corp., Brooklyn, N.Y., a corporation of New York

Filed Feb. 4, 1960, Ser. No. 6,810
6 Claims. (Cl. 312—268)

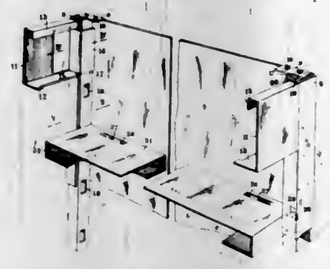


1. In a filing cabinet or the like having a pair of spaced vertical supports, a pair of sprockets mounted at the top and bottom of each support, a vertical link chain passing over each of said pair of sprockets, means for actuating said sprockets and chains, a plurality of spaced horizontal shelves between said chains, the ends of said shelves being pivotally held on corresponding links of the respective chains, the improvement which comprises a plurality of pairs of spaced brackets mounted on a pair of adjacent links of said chains and extending outwardly therefrom, a pivot on the upper of each pair of brackets, a shelf on which said pivot is fixed, a pin in the lower of said pair of brackets and extending toward said shelf, an additional bracket between each said pair of brackets and on a chain link between said adjacent links, a pin on said additional bracket and in alinement with said first pin and pivit when said pair of brackets and additional bracket are in horizontal position, a pendant on said pivot and depending toward said lower bracket, the lower end of said pendant having an inverted V-shaped notch, the distance between the pivot of said pendant and apex of said notch being equal to the distance between the pins of adjacent brackets.

3,042,473
METAL FURNITURES ADAPTED TO BE DISASSEMBLED

René Vincens, Dieppe, Seine-Maritime, France, assignor to Societe Civile de Recherches et d'Etudes Industrielles, Neuville les Dieppe, Seine-Maritime, France

Filed May 18, 1959, Ser. No. 813,780
Claims priority, application France May 19, 1958
6 Claims. (Cl. 312—257)



1. A knock-down, readily-assembled, convertible metal cabinet comprising two identical lateral rectangular panels defining the side walls of said cabinet, each panel having two vertical edges bent twice at right angles to form two U-section channels facing each other, two pairs of U-sectioned cross members each comprising an upper cross member and a lower cross member, one of said pairs being at the front of said cabinet and the other of said pairs being at the back of said cabinet, four U-sectioned perforated members constituting rack means, first lugs securing said rack means perpendicularly to the ends of said cross members, the dimensions of said U-sectioned perforated members being slightly smaller than those of said panel channels so as to be adapted to be force-fitted therein, second lugs bent at right angles secured at the top and bottom of said rectangular panels, a plurality of shelves, the edges of said shelves being bent at right angles a first time downwards and another time inwards to form a peripheral channel, and four fasteners mounted in the corners of said peripheral channel for engaging said rack means.

3,042,474
SPARK PLUGS

La Vern M. Aurand, Millington, and Raymond E. Schwyn, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 9, 1959, Ser. No. 825,998
8 Claims. (Cl. 313—141)



8. A spark plug comprising a metal shell, a ceramic insulator in said shell having a centerbore therethrough and an electrode in said centerbore, said electrode consisting essentially of about 5% to 30% by weight silver and the remainder a hard heat resistant metal in which said silver is substantially insoluble, at least a major portion of said silver being unalloyed and present as a network of elongated stringers which extend generally parallel to the longitudinal axis of the electrode.

3,042,475

NEW DYESTUFFS AND PROCESS FOR COLOURING TEXTILE MATERIALS THEREWITH

Robert Norman Heslop, Norman Legg, Jack Frankland Mawson, William Elliot Stephen, and James Wardleworth, all of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Nov. 6, 1959, Ser. No. 851,243
Claims priority, application Great Britain Sept. 4, 1956
12 Claims. (Cl. 8—1)

1. Process for the coloration of a textile material selected from the class consisting of silk, wool, regenerated protein and cellulose textile materials which consists essentially of reacting the said textile material, in aqueous solution, with a water-soluble dyestuff selected from the class consisting of azo, anthraquinone, pthalocyanine and nitro-group-substituted water-soluble dyestuffs, having a substituent selected from the class consisting of 2-pyrimidylamino and 4-pyrimidylamino radicals carrying halogen substituents at the 4:6- and 2:6-positions, respectively, in conjunction with a treatment of the said textile material with an acid-binding agent.

3,042,476

METHOD FOR DUPLICATING THE DYE OF AN ORIGINAL ON A DYE CARRIER

Ernst Rohner, Zurich, Switzerland, assignor to Pretema A.G., Zurich, Switzerland

Filed Mar. 21, 1960, Ser. No. 16,485
Claims priority, application Germany Mar. 24, 1959
3 Claims. (Cl. 8—25)

1. A method for duplicating a master dyeing obtained from an original dye mixture on a given dye carrier material, which comprises

(1) dyeing samples of said dye carrier material, each with one of a determined number of different primary-color dyestuffs in one of a determined number of different dyestuff concentrations, whereby individual samples of each primary-color dyestuff in each dyestuff concentration is obtained;

(2) measuring and plotting against wavelength the spectral re-emission values of each of these samples;

(3) measuring and plotting against wavelengths the spectral emission values of said master dyeing;

(4) plotting against dyestuff concentration those re-emission values taken from the curves obtained by (2) which correspond to the wavelengths for which the re-emission ratio of each primary color proportionate to the remaining primary colors has a minimum value;

(5) preparing a dyebath of a mixture of all of said primary-color dyestuffs containing each dyestuff in that concentration which corresponds in the curves obtained under (4) to the re-emission value taken from the curve obtained under (3) for the wavelength corresponding to the said re-emission minimum ratio of the respective primary color, and

(6) dyeing goods of the said dye carrier material, thereby obtaining dyeings substantially duplicating said master dyeing.

3,042,477

NEW COLOURATION PROCESS

Harry Rose Hadfield, Ronald Herbert Ricketts, Joseph Simons, and William Elliot Stephen, all of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 10, 1957, Ser. No. 664,511
Claims priority, application Great Britain June 15, 1956
6 Claims. (Cl. 8—55)

1. Process for the coloration of artificial fibers, selected from the class consisting of polyamides, polyurethanes, polyacrylonitriles, and polyvinyl alcohol fibers which comprises applying thereto an aqueous suspension of a water-insoluble dyestuff consisting essentially of a dyestuff chromophoric group selected from the class consisting of nitro, azo, and anthraquinone dyestuff series, and containing a halogeno-1:3:5-triazin-2-ylamino group having from 1 to 2 halogen atoms attached to the triazine ring.

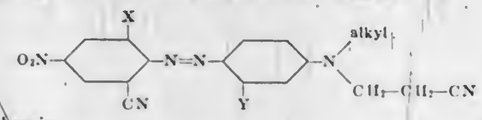
3,042,478

PROCESS OF DYEING AND PRINTING POLYETHYLENE GLYCOL TEREPHTHALATE FIBERS WITH DISPERSE DYESTUFFS

Ernest Merian, Bottmingen, and Curt Mueller, Basel, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,096
Claims priority, application Switzerland Apr. 30, 1958
8 Claims. (Cl. 8—55)

1. In a process for the dyeing of polyethylene glycol terephthalate fibers with disperse dyestuffs, the step of dyeing the fibers with dyestuff of the formula



wherein

X represents a member selected from the group consisting of hydrogen, chlorine and bromine,

Y represents a member selected from the group consisting of hydrogen and methyl,

and the alkyl radical contains 1 to 4 carbon atoms.

3,042,479

CHLOROFLUOROHYDROCARBONS IN DRY CLEANING COMPOSITIONS AND PROCESS

Augustine Hicks Lawrence, Jr., and John H. Dowling, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 29, 1960, Ser. No. 72,279
7 Claims. (Cl. 8—142)

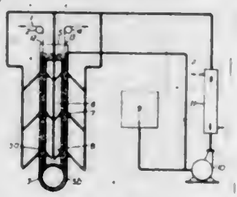
1. A process for dry-cleaning textile fibers and other garment materials which comprises washing said material with a dry-cleaning liquid composition comprising a chlorofluoro hydrocarbon having a boiling point from 8° to 75° C., a freezing point below 0° C., and containing not more than 2 carbon atoms and at least 1 fluorine atom per carbon atom in the molecule.

3,042,480

METHOD OF APPLICATION OF FLUIDS TO TEXTILE MATERIALS

Vasant B. Chipalkatti and Krishnan Manivannan, Delhi, India, assignors to Shri Ram Institute for Industrial Research, Delhi, India, a society of India

Filed July 17, 1958, Ser. No. 749,268
11 Claims. (Cl. 8—151)



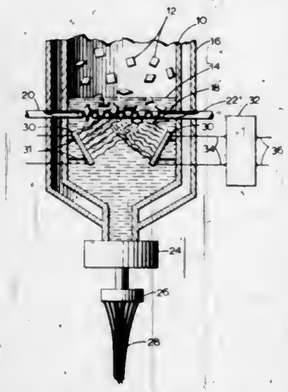
1. An improved method of treating textile material which comprises continuously passing a length of the material through a vertically elongated column containing a bed of fluidizable discrete solid particles while continuously flowing a textile treating fluid into and through said column at a velocity sufficient to overcome the gravitational force on said particles and maintain them in a fluidized state, said fluid being injected into said column in the form of jets directed oppositely into said bed, each with an upward component of motion, and impinging oppositely against opposite sides of the material in the column at an angle to the material.

3,042,481

MELT-SPINNING METHOD

Alva C. Coggeshall, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

Filed Aug. 5, 1960, Ser. No. 47,804
1 Claim. (Cl. 18—54)



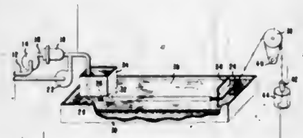
In the process of melting nylon chips wherein nylon chips are melted by contact with a melting grid disposed in a melt reservoir and the resulting melt is withdrawn therefrom, the improvement comprising contacting nylon chips with a heated melting grid to melt same, maintaining the level of the resulting melt in the reservoir to a level above the melting grid, transmitting ultrasonic compressional waves through the resulting melt, said waves being emanated interiorly of said reservoir, and focusing said waves towards said grid to concentrate the energy of said waves in the vicinity where the nylon chips are initially melted.

3,042,482

PROCESS AND APPARATUS FOR WET SPINNING SLUB YARN

Rudolph Woodell, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Original application Apr. 30, 1958, Ser. No. 731,954. Divided and this application Nov. 23, 1959, Ser. No. 854,851
7 Claims. (Cl. 18—54)



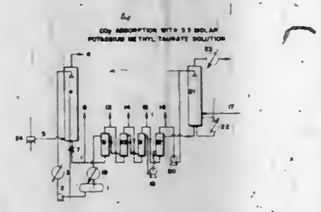
1. In a process for producing continuous filament yarn by extruding filament-forming solution through spinneret orifices and into a coagulating liquid flowing through a tube to form separated filaments, flowing the coagulating liquid through the tube at sufficient liquid velocity to transport the filaments through the tube and completing coagulation of the filaments during passage through the tube to form filaments which do not stick together, converging the non-adherent coagulated filaments from the tube within a bath to form a yarn and withdrawing the yarn from the bath, the improvement of intermittently bulking the yarn to form bunches of non-adhered, entangled filaments which comprises discharging the non-adherent coagulated filaments into said bath, from said tube, directly against a baffle to bulk the yarn and withdrawing the yarn from the bath at a rate providing a ratio of yarn speed to said liquid velocity of between 0.50 and 1.30, said ratio being 15% to 50% less than the corresponding ratio when the yarn is withdrawn from the bath without bulking against the baffle, to form tight bunches of at least 2.5 times the denier of the unbulked yarn and of a length from ⅛ inch to 4 inches spaced at intervals between bunches of 0.5 inch to 20 inches, said bunches consisting of non-adhered filaments which are individually looped upon themselves and upon each other at intervals along their lengths into an entangled mass of ring-like loops, whorls and coils that are not readily pulled apart.

3,042,483

PROCESS FOR SEPARATING CARBON DIOXIDE FROM GAS MIXTURES

Arthur Wolfram, Herbert Kaltenhäuser, Harald Lorenz, and Günther Relken, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

Filed July 23, 1959, Ser. No. 828,987
Claims priority, application Germany July 29, 1958
9 Claims. (Cl. 23—2)



1. In a process for the substantial removal of carbon dioxide from gas mixtures by absorbing the carbon dioxide from said gas mixtures in a concentrated aqueous solution of an alkali metal salt of an amino acid which has at least one hydrogen atom bound to nitrogen and, therefore, is capable of forming a carbamic acid with carbon dioxide, and then desorbing the absorbed carbon dioxide from said solution, the improvement which comprises desorbing that part of the absorbed carbon dioxide which is in excess of a concentration of carbon dioxide of 0.1 to 0.2 mol of carbon dioxide per mol of dissolved salt of said amino acid, and again absorbing carbon dioxide, at a temperature below 60° C., in the regenerated solution, to give a total amount of carbon dioxide in the range from 0.5 to 1.1 mols of carbon dioxide per mol of dissolved salt.

3,042,484

COMPOSITION AND A METHOD FOR TREATING MOLTEN METALS

Walter Dale Maring, Shelby, Ind.

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,917
2 Claims. (Cl. 23—14)

1. A calthrate complex of carbon-dioxide and argon, said complex containing from 1 to 30% argon, the remainder being essentially carbon-dioxide, said complex being stable at about —100 degrees Fahrenheit but unstable at higher temperatures.

3,042,485
PREPARATION OF METAL BOROHYDRIDES
Lawrence J. Edwards, Zellenople, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 25, 1959, Ser. No. 795,315
8 Claims. (Cl. 23—14)

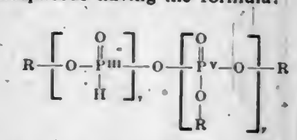
1. A method of preparing a borohydride of a metal selected from the group consisting of alkali metals, alkaline earth metals, aluminum, zinc, titanium and thorium which comprises the step of contacting a tetralkoxyborate of the said metal with silane in the presence of an iert solvent for the said tetraalkoxyborate said solvent being selected from the group consisting of ammonia, amines and ethers, and recovering the metal borohydride formed.

3,042,486
PRODUCTION OF URANIUM DIOXIDE
Frank A. Forward and Ian Harry Warren, Vancouver, British Columbia, Canada, assignors to Eldorado Mining and Refining Limited, Ottawa, Ontario Canada, a company of Canada
No Drawing. Filed Jan. 4, 1960, Ser. No. 48
7 Claims. (Cl. 23—14.5)

1. The process of producing reactor grade uranium oxide which comprises the steps of reacting uranyl carbonate particles dispersed in an aqueous carbonic acid solution with carbon dioxide and a reducing gas selected from the group consisting of hydrogen, carbon monoxide and a mixture thereof, at a temperature above about 150° C. and under positive partial pressures of reducing gas and carbon dioxide in the presence of a hydrogenation catalyst and a finite amount of a catalytic promoter selected from the group consisting of anthraquinone, 1-hydroxy anthraquinone, 1-amino-anthraquinone, 2-ethyl anthraquinone, anthraquinone sulphonic acid, alizarin, and ascorbic acid, continuing the reaction to convert uranyl carbonate to uranium oxide, and recovering uranium oxide from the reaction mixture.

3,042,487
SALTS OF DEHYDRATION PRODUCTS OF ACIDS OF PHOSPHORUS AND PROCESS OF MAKING THE SAME
Bruno Blaser, Urdenbach-Dusseldorf, and Karl-Heinz Worms, Dusseldorf, Germany, assignors to Henkel & Cie. G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany
No Drawing. Filed Jan. 28, 1959, Ser. No. 789,525
12 Claims. (Cl. 23—107)

5. A process for producing a mixed anhydrous compound of phosphorus having the formula:



wherein x and y are integers from 1 to 2 and R is a radical selected from the group consisting of hydrogen, NH_4, alkali metals, alkaline earth metals and aliphatic organic amines having from 1 to 6 carbon atoms, which comprises partly dehydrating a mixture of (1) an anhydrous acid of phosphorus having only phosphorus atoms with an oxidation number of 5 selected from the group consisting of orthophosphoric acid, pyrophosphoric acid, tripolyphosphoric acid, polyphosphoric acid and metaphosphoric acid and (2) an anhydrous acid of phosphorus having only phosphorus atoms with an oxidation number of 3 selected from the group consisting of phosphorous acid and pyrophosphorous acid, said two acids being in a molecular ratio of from 7:3 to 3:7, by heating in a vacuum to a temperature between about 70° C. and about 120° C. for a time sufficient to split off water from said mixture, removing said water as formed and recovering said mixed anhydrous compound.

3,042,488
PREPARATION OF PERMONOSULPHATES
Anthony MacDonald Hildon, Dunstable, and John Geoffrey Marshall, Eversholt, near Bletchley, England, assignors to Laporte Chemicals Limited, Luton, England, a British company
No Drawing. Filed Jan. 12, 1960, Ser. No. 1,850
Claims priority, application Great Britain Mar. 11, 1958
11 Claims. (Cl. 23—114)

1. A process for preparing permonosulphates and bisulphates comprising reacting hydrogen peroxide directly with a compound selected from the group consisting of pyrosulphates of sodium, potassium, lithium, caesium, ammonium, calcium, strontium, barium, magnesium and zinc at a temperature range between about room temperature and 50° C.

3,042,489
PRODUCTION OF SULFURIC ACID
Eugene W. Schoeffel, Kronenwetter, Wis., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 20, 1958, Ser. No. 775,126
6 Claims. (Cl. 23—167)

1. In a non-catalytic process for preparing sulfuric acid by the direct oxidation of sulfur, the steps which comprise: introducing one part of sulfur and at least four parts of water by weight into an acid-resistant reactor; introducing gaseous oxygen into said reactor, said oxygen being present in an amount in excess over that amount theoretically required to convert all the sulfur to sulfur trioxide; maintaining the reactor contents at a temperature between about 275 and 360 degrees centigrade and under a pressure of at least 800 pounds per square inch; and separating sulfuric acid from the reaction product.

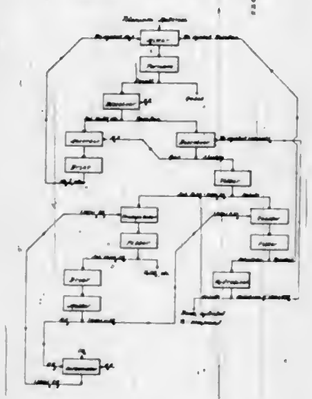
3,042,490
THIONYL CHLORIDE-CARBONYL CHLORIDE REACTION PRODUCT
Thomas W. Sauls and Joseph J. Wimberly, College Park, Ga., assignors to Tennessee Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed July 7, 1960, Ser. No. 41,253
2 Claims. (Cl. 23—174)

1. A composition of matter consisting of the product of the reaction between one mole of $COCl_2$ and one mole of $SOCl_2$ at a temperature of 25°–40° C. under atmospheric pressure.

3,042,491
PURIFICATION OF CAUSTIC ALKALI BY ION EXCHANGE
David F. Smith, Newtown, Conn.
(120 Grove St., Bay Head, N.J.)
No Drawing. Filed Oct. 29, 1957, Ser. No. 692,994
9 Claims. (Cl. 23—184)

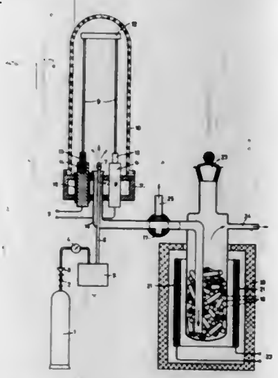
1. In a process for removing anion impurities selected from the class consisting of chloride and chlorate from strong aqueous caustic alkali having a concentration of from 40 to 55 percent by weight by contact with an anion exchanger of the strong base type containing an anion exchangeable with the anion impurity, the method of regenerating the exchanger for re-use which comprises contacting the exchanger with an aqueous solution of a strongly ionized electrolyte selected from the class consisting of soluble alkali metal carbonates, sulfates and phosphates and displacing the regenerating solution from the exchanger with the strong aqueous caustic alkali to be purified, the said regenerating solution being at a concentration below 1.0 normal so as to substantially avoid precipitation of the electrolyte on the exchanger in contact with the strong aqueous caustic alkali.

3,042,492
METHOD OF MAKING TITANIUM DIOXIDE
Alfred M. Thomsen, 265 Buckingham Way, Apt. 402, San Francisco 27, Calif.
Filed Oct. 26, 1959, Ser. No. 848,706
3 Claims. (Cl. 23—202)



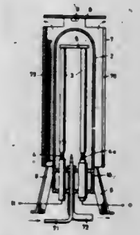
1. The method of manufacturing a partially purified, highly reactive, basic oxy-compound of titanium from titaniferous material, containing as impurities other metallic compounds besides titanium, which comprises; commingling said titaniferous material with sodium sulphide in sufficient amount to form a readily fusible mixture and fusing said mixture, thus converting it into a mixture of sodium titanates and sulphides of the metallic impurities present therein; commingling said fused product with water to obtain a solution of sodium compounds, essentially sodium hydroxide, while an insoluble mixture of metallic sulphides and titanates remains as an undissolved residue; separating said solution from said residue and reserving both for subsequent treatment; commingling said residue with a solution of ammonium bisulphate, thus decomposing the metallic sulphides present therein with the formation of the corresponding metallic sulphates and with attendant evolution of hydrogen sulphide gas; absorbing said gas in the reserved solution of sodium compounds consisting essentially of sodium hydroxide, thus converting said hydroxide to sodium sulphide; dehydrating said solution of sodium sulphide and recycling it to the fusion step as the sodium sulphide specified therein; separating the reaction product of ammonium bisulphate with metallic sulphides and titanates, previously described, into a soluble and an insoluble portion, the soluble portion being essentially metallic sulphates and ammonium sulphate, the insoluble portion being essentially a partially purified basic oxy-compound of titanium; commingling the soluble portion with ammonium carbonate in sufficient amount to precipitate the metallic sulphates present therein as the corresponding carbonates, the ammonium carbonate being simultaneously converted into ammonium sulphate; separating the precipitate thus produced; dehydrating the resulting solution, consisting essentially of ammonium sulphate, and heating same to produce gaseous ammonia and ammonium bisulphate; converting said ammonia into ammonium carbonate for subsequent recycling to the step where ammonium carbonate is prescribed; recycling said ammonium bisulphate to that step wherein metallic sulphides are decomposed with ammonium bisulphate, with evolution of hydrogen sulphide gas, as the ammonium bisulphate prescribed therein.

3,042,493
PROCESS FOR RE-USING CARRIER BODY HOLDERS EMPLOYED IN THE PYROLYTIC PRECIPITATION OF SILICON
Konrad Reuschel, Pretzfeld, and Norbert Schink, Erlangen, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a German corporation
Filed Mar. 1, 1961, Ser. No. 92,562
Claims priority, application Germany Mar. 2, 1960
7 Claims. (Cl. 23—223.5)



1. The method of producing hyperpure semiconductor material for electronic purposes by pyrolytic precipitation of said semiconductor material from a gaseous compound thereof, which comprises mounting within a reaction vessel a carrier body of the same semiconductor material between holders of carbon; heating said carrier body to a high temperature at which precipitation of semiconductor material from said gaseous compound takes place and introducing into said reaction vessel said gaseous compound together with a reduction gas while discharging the waste gases from the vessel; subjecting a supply of said holders to the effect of the waste gases leaving the reaction vessel to thereby remove metal oxide and phosphate impurities from the carbon of said latter holders; and thereafter using the purified holders to mount said carrier body in the reaction vessel for repeating the pyrolytic process.

3,042,494
METHOD FOR PRODUCING HIGHEST-PURITY SILICON FOR ELECTRIC SEMICONDUCTOR DEVICES
Heinrich Gutsche, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany
Filed May 23, 1958, Ser. No. 737,254
Claims priority, application Germany May 29, 1957
12 Claims. (Cl. 23—223.5)



1. In a method of producing silicon of high purity, for use in electrical semiconducting devices, in which method silicon is precipitated onto a hot carrier body of silicon by gas-phase chemical conversion of a halogen compound

of silicon by contact thereof with the hot body, the improvement comprising carrying out said method in an at least partly transparent reaction vessel at least partly comprised of a siliceous material of the group consisting of glass and quartz, the hot body being heated to about 1100° to 1200° C. by passage of an electric current therethrough, and maintaining the temperature of the inner walls of the vessel at between about 300° C. and 800° C. during the precipitation period, to minimize formation of a coating of high molecular weight silicon halogenide on the surfaces of the reaction vessel.

3,042,495
METHOD AND APPARATUS FOR MEASURING DISSOLVED OXYGEN

Ray I. Wilson, Covina, and Jan W. Haagen-Smit, San Gabriel, Calif., assignors to Beckman Instruments, Inc., a corporation of California

Filed June 19, 1959, Ser. No. 821,593
21 Claims. (Cl. 23—230)



1. In a method of measuring trace amounts of dissolved oxygen in water, the steps of: passing the water sample containing dissolved oxygen over metallic lead; and measuring the change in lead ion content of the sample resulting from the contact with the lead, the quantity of dissolved oxygen in the incoming sample being proportional to the change in lead ion content.

3,042,496
DIAGNOSTIC COMPOSITION

Otis E. Fancher and Dale A. Stauffer, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Mar. 27, 1959, Ser. No. 802,281
7 Claims. (Cl. 23—253)

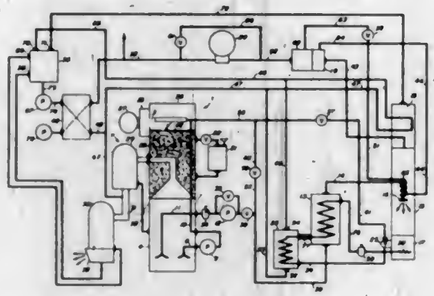
1. A diagnostic composition for detecting glucose which comprises glucose oxidase, a metalloporphyrin, a complex-forming compound containing amino-donor groups selected from the class consisting of 2-aminobenzothiazole, nicotinic acid and pyridine to activate said metalloporphyrin and a color-forming substance taken from the group consisting of 2,7-diaminofluorene and o-tolidine, oxidizable by hydrogen peroxide in the presence of the activated metalloporphyrin.

3,042,497
CO_2 SCRUBBER

Wayne W. Johnson, Vallejo, Karl H. Kimball, San Francisco, and Donald E. Douglass, Napa, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Mar. 9, 1959, Ser. No. 798,309
3 Claims. (Cl. 23—260)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Apparatus for removing carbon dioxide from atmosphere, the apparatus being of a type employing a heat-responsive absorbent solution characterized by an ability to absorb carbon dioxide when relatively cool and to release said carbon dioxide when relatively warm; said apparatus comprising an absorption tower including atmosphere and absorbent solution inlets at its upper end, a baffle disposed medially of said tower, a bed of stream-deflecting particles between said baffle and said inlets, a bottom sump portion, and spray means communicating with said absorbent solution inlet for forcefully directing absorbent solution and said incoming atmosphere downwardly through said particle bed into said sump, said baffle having a riser conduit for receiving atmosphere from the sump, an independent air purifier communicating with said riser, means including a first pump for recirculating a major portion of said absorption solution from said sump directly back to said absorption solution inlet, an absorption solution regenerator tower, and a solution-circulating circuit communicating said regenerator tower with said absorption tower sump and with

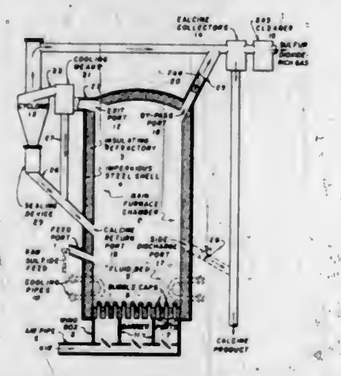


the absorption solution inlet, said regenerator including a heater disposed in its lower end for raising the solution temperature sufficiently to effect said carbon dioxide release, and said circuit including a second pump and valve means for metering the amount of absorbent solution to be regenerated, said regenerator tower heater being limited in its stripping efficiency to a minor portion of the absorbent solution and said metering pump and valve means being operable to so limit the supply of said solution to said regenerator tower.

3,042,498
APPARATUS FOR ROASTING SULFIDES

George Hugh Charles Norman, Copper Cliff, Ontario, Canada, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 6, 1958, Ser. No. 733,312
Claims priority, application Canada June 4, 1952
6 Claims. (Cl. 23—277)



4. An improved apparatus for fluid-bed roasting of metallic sulfides which comprises a single fluid-bed roasting chamber; a port located in the wall of said roasting chamber for feeding said finely-divided solids thereinto; a hearth at the bottom of said roasting chamber having at least one gas inlet port for introducing an oxidizing gas containing a substantial proportion of free oxygen into said roasting chamber; a first solids-gas exhaust port located in the upper region of said roasting chamber for removing exhaust gases having entrained therein finely-divided roasted solids; a primary solids-gas separator for separating from said exhaust gases the bulk of the finely-divided solids entrained therein; a solids-gas intake port in said primary separator connected to said first solids-gas exhaust port in said roasting chamber; a solids outlet port in said primary solids-gas separator; means for returning said separated bulk of the finely-divided roasted solids from said solids outlet port into said roasting chamber in an amount substantially greater than the amount of unroasted sulfides being fed into said roasting chamber; a secondary solids-gas separator; a solids-gas outlet port in said primary separator connected to a solids-gas inlet port in said secondary solids-gas separator; a solids outlet port for product discharge and a gas outlet port in said secondary solids-gas separator; a second solids-gas exhaust port located in the upper region of said roasting chamber; and means connecting said second solids-gas exhaust port in the roasting chamber to a solids-gas inlet port in said secondary solids-gas separator for conveying solids-containing exhaust gases from said roasting chamber to said secondary solids-gas separator and provided with means for controlling the flow of solids-containing exhaust gases therebetween.

3,042,499
BURNER-MUFFLER

David P. Williams, Sr., 30 6th Ave., Santa Cruz, Calif., assignor of eighty-three and one-half percent to John E. Morris, Oakland, Calif., as trustee

Filed Sept. 29, 1958, Ser. No. 763,940
2 Claims. (Cl. 23—277)



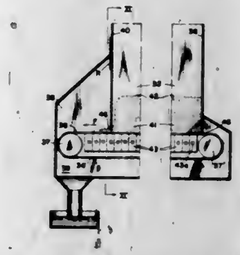
1. An exhaust gas cleanser comprising a cylinder with a closed end and having an exhaust outlet extending therefrom, a pair of concentric radially perforated tubes disposed within said cylinder for defining within the inner tube a reaction chamber and with the outer tube extending axially beyond the inner tube towards said closed end, a gas pervious heat insulating material disposed between said tubes, an annular exhaust gas manifold, a tubular wall extending axially from the inner of said two tubes into connection with an end of said manifold, inlet means on said manifold for connection to engine exhaust, a burner tube disposed coaxially within said tubular wall and concentric with said manifold and defining with said tubular wall an annular passage through which gases from said manifold pass, a burner disposed axially of and within said burner tube and directed to spray a combustible mixture through said tube toward said reaction chamber, and ignition means within said burner tube adjacent said burner for forming a flame which traverses said tube to enter said reaction chamber axially of said exhaust gas flow.

3,042,500
PROCESS FOR OBTAINING CHEMICAL REACTIONS IN A FLUIDIZED PHASE AND DEVICES FOR CARRYING OUT THESE PROCESSES

Albert Godel, Paris, France, assignor to Compagnie Industrielle de Procedes et d'Applications S.A., Fribourg, Switzerland, a corporation of Switzerland

Original application Oct. 28, 1954, Ser. No. 465,384, now Patent No. 2,866,696, dated Dec. 30, 1958. Divided and this application Aug. 18, 1958, Ser. No. 763,770
Claims priority, application France Oct. 29, 1953
3 Claims. (Cl. 23—284)

1. An apparatus for treating a fluidized granular material, comprising a horizontal endless conveyor having a grating; a reactor having a rear wall contacting the grating of said conveyor adjacent the rear end thereof and a front wall located above said conveyor adjacent the front end thereof and spaced from said grating, whereby a gap is formed through which said conveyor extends, means below said grating for introducing a fluidizing gas under pressure through said grating into a chamber of said reactor defined by said walls thereof, said fluidizing gas being adapted to maintain a granular material in a

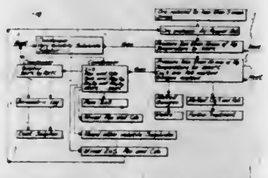


fluidized layer above said conveyor in said chamber, other walls defining an enclosure within which said front and rear ends of the conveyor are located, means connected with the first-mentioned means for maintaining in said enclosure and outside said gap a pressure preventing the escape of fluidized granular material through said gap so that only the heavier agglomerated masses are carried through the gap by the conveyor, and a movable shutter carried by said front wall above the gap and constituting a sealing device to prevent the escape of the fluidized granular material and of the gas.

3,042,501
SEPARATION AND RECOVERY OF VOLATILE SULPHIDES FROM SULPHIDE MATERIALS

Harvey L. Noblitt, 143 1st Ave., Ottawa, Ontario, Canada

Filed Oct. 28, 1955, Ser. No. 543,466
1 Claim. (Cl. 23—294)



The method of recovering sulphides of zinc, lead, tin, cadmium, mercury, arsenic, antimony, bismuth, indium and gallium, which comprises the steps of crushing a material containing a plurality of said sulphides, completely drying said crushed material, deaerating said dried material to create a vacuum not exceeding 10 mms. of mercury surrounding said material, heating said deaerated material in said vacuum to a temperature in the range of 415–1420° C., maintaining the total vapor pressure in said vacuum not exceeding 10 mms. of mercury during the entire duration of said heating step to volatilize said sulphides, passing said volatilized sulphides into one end of a condenser, and cooling said condenser to differentially condense said volatilized sulphides during their passage therein.

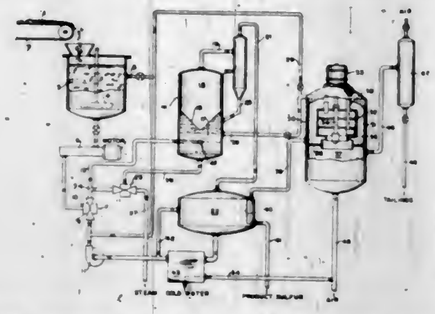
3,042,502
RECOVERY OF ELEMENTAL SULFUR FROM SULFUR BEARING MATERIALS

Patrick J. McGauley, 36 Revere Road, Port Washington, N.Y.

Filed May 7, 1957, Ser. No. 657,582
3 Claims. (Cl. 23—308)

1. In the method of recovering elemental sulfur from native sulfur bearing materials containing gangue fines,

gangue sands, and sulfur fines which comprises forming an aqueous slurry of the sulfur bearing material, heating the aqueous slurry to a temperature above the melting point of sulfur to form a three-phase pulp containing liquid water, liquid sulfur fines, gangue fines, and gangue

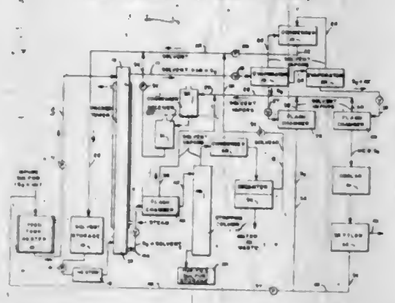


sands, coagulating the liquid sulfur fines into non-colloidal sulfur aggregates, separating the gangue fines from the pulp by hydroclassification, and centrifuging the resulting pulp at a temperature sufficient to maintain the sulfur in the liquid state while continuously maintaining the solids in a water flooded condition.

3,042,503
PURIFICATION OF SULFUR

William N. Tuller, White Plains, N.Y., and Frank L. Jackson, Weston, Conn., assignors to Freeport Sulphur Company, New York, N.Y., a corporation of Delaware

Filed Oct. 9, 1958, Ser. No. 766,221
5 Claims. (Cl. 23—310)



1. A process for purifying crude mined sulfur containing not more than about 2% of carbonaceous impurities which comprises, melting said sulfur, thereafter continuously flowing the melted sulfur at a viscosity below 95 Saybolt seconds through an extraction zone, continuously flowing a hot liquid solvent for said impurities selected from the group consisting of cycloaliphatic hydrocarbon compounds, aromatic hydrocarbon compounds and halogenated aliphatic hydrocarbon compounds in countercurrent contact with said flowing sulfur, thereby taking up the impurities in the solvent, collecting the thus purified molten sulfur from one end of the extraction zone and collecting the solvent containing the impurities dissolved therein from the other end of said extraction zone.

3,042,504
DEWATERING OF AQUEOUS PASTES OR SLURRIES OF THERMAL CARBON BLACK

Frederick Denis Carter, 2 Brooklyn Gardens, Cheltenham, England

No Drawing. Filed Mar. 25, 1960, Ser. No. 17,496
Claims priority, application Great Britain Sept. 12, 1952
8 Claims. (Cl. 23—314)

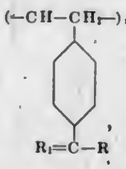
1. A process for dewatering an aqueous suspension of thermal carbon black having a solids concentration of up to 12% by weight comprising the steps of adding an amount of between 30 and 130% by weight of the carbon black of a second liquid which is volatile, substantially immiscible with water and which possesses a higher adhesion tension than water for the carbon black, simultaneously with said addition subjecting the mixture to violent searing action by high-speed agitation to form wet granules of carbon and continuing the agitation for a substantial period after the formation of the granules so that the total time of agitation is at least 15 minutes, separating the granules from the residual liquid of the mixture by draining and then drying the granules to evaporate liquid contained therein.

3,042,505
MULTI-FUNCTIONAL MIDDLE DISTILLATE ADDITIVE

William C. Hollyday, Jr., Plainfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 18, 1960, Ser. No. 63,259
5 Claims. (Cl. 44—62)

1. A petroleum distillate fuel composition having an improved pour and improved stability against sedimentation which comprises essentially a petroleum distillate fuel boiling in the range between 250° F. and about 750° F. which has been improved with respect to pour point by the incorporation therein of a pour depressing effective amount in the range from about .001 to 0.5 wt. percent of a pour depressant which comprises essentially a condensation product of an acylated polystyrene and an amino compound, which condensation product has the following structure



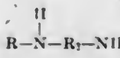
wherein R is a straight chain alkyl group of about 7 to 15 carbon atoms, wherein x is a number from 3 to 20, and wherein R_1 is an amino group.

3,042,506
FUEL COMPOSITIONS

Eldon B. Cole, Tulsa, and Phillip M. Niles, Sand Springs, Okla., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 22, 1958, Ser. No. 781,890
13 Claims. (Cl. 44—62)

1. A fuel oil composition consisting essentially of a distillate fuel oil and a small amount, sufficient to effectively stabilize said oil against deterioration, of an oil-compatible, oxyalkylated condensation product obtained by reacting about 20 to 95 weight percent of the condensation product of a fatty diamine having the structural formula:

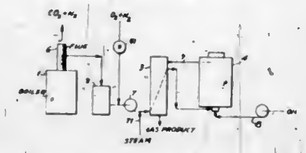


in which R is an aliphatic hydrocarbon chain of at least about 6 carbon atoms and R_2 is a divalent aliphatic hydrocarbon radical containing about 2 to 8 carbon atoms and a lower aldehyde of one to four carbon atoms, with about 5 to 80 weight percent of an alkylene oxide of 2 to 4 carbon atoms, said fatty diamine-aldehyde condensation product being prepared by reacting about one mole equivalent of the aldehyde with about 0.5 to 2 moles equivalent of the fatty diamine.

3,042,507
METHOD FOR CRACKING AND SUBSEQUENT GASIFYING OF HYDROCARBONS

Giovanni Hilgers, Hau, Post Bechen uber Bergisch Gladbach, Germany

Filed Mar. 24, 1960, Ser. No. 17,353
Claims priority application Germany Mar. 28, 1959
7 Claims. (Cl. 48—215)

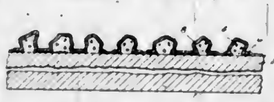


1. A method of cracking and gasifying a hydrocarbon oil to produce an illuminating gas of high calorific value, comprising cracking the oil with steam at a temperature not higher than about 900° C., and with a dwelling time of the hydrocarbon in the reaction space of not more than about a second, gasifying free carbon, formed in the cracking, by introducing oxygen (O_2) and sufficiently suppressing the formation of carbon dioxide (CO_2) in said gasifying of free carbon, by introducing carbon dioxide (CO_2) into said reaction space during the gasifying of free carbon, to prevent the temperature from rising above about 900° C. during said free carbon gasification.

3,042,508
NON-LOADING METAL-BACKED ABRADER AND METHOD FOR ITS PRODUCTION

Russell J. Haigis and Austin L. Stowell, New Britain, Conn., assignors to The Stanley Works, New Britain, Conn., a corporation of Connecticut

Filed May 28, 1959, Ser. No. 816,363
7 Claims. (Cl. 51—295)



2. An abrader resistant to loading by abraded particles comprising a metal backing, cutting teeth integrally formed in said metal backing over one surface thereof, and a superposed coating on said one surface consisting essentially of fluoroethylene polymer selected from the group consisting of polytetrafluoroethylene, polytrifluorochloroethylene, copolymers containing tetrafluoroethylene and copolymers containing trifluorochloroethylene, said coating being at least 0.1 mil in thickness and less than the height of the cutting teeth, and said coating being heat-stable.

3,042,509
ABRASIVE AND POLISH COMPOUND

Paul W. Soderberg, Howell, Mich., assignor to Bruce Products Corporation, Howell, Mich., a corporation of Michigan

No Drawing. Filed Nov. 27, 1959, Ser. No. 855,515
4 Claims. (Cl. 51—305)

2. A lapidary polishing composition for application to a buffing element consisting essentially of the following constituents:

Constituent:	Percent by weight
Abrasive	5 to 88
Lubricating binder	12 to 95

said lubricating binder consisting essentially of:

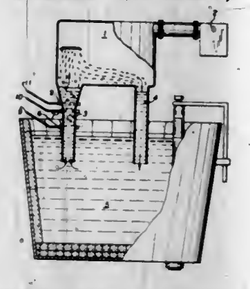
Constituent:	Percent by weight
Polyethylene glycol	20 to 80
Polyethylene glycol ester	20 to 80

both said glycol and said ester being water soluble solids at room temperatures.

3,042,510
DEGASIFICATION OF MOLTEN STEEL

Werner Armbruster, Hanau (Main), and Hermann Maas, Hattingen (Ruhr), Germany, assignors to W. C. Heraeus G.m.b.H., Hanau (Main), Germany, and Ruhrstahl Aktiengesellschaft, Witten (Ruhr), Germany, both corporations of Germany

Filed Nov. 19, 1959, Ser. No. 854,087
Claims priority, application Germany Nov. 25, 1958
6 Claims. (Cl. 75—49)

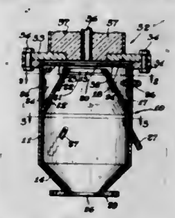


1. In a method for degasifying molten steel in which the molten metal gives off at least part of the gases which are contained in it into an evacuated chamber situated above the surface of the molten metal and in which the molten metal is conveyed into the evacuated chamber through a first tube by aid of an introduced gas and returns through a second tube into the melt, the step of introducing gases into the first tube at a plurality of superimposed delivery points positioned at a zone diverging in the direction of gas flow.

3,042,511
APPARATUS FOR CONDENSATION OF A METAL VAPOR

John N. Reding, Jr., Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Feb. 9, 1959, Ser. No. 792,049
6 Claims. (Cl. 75—67)



5. In a process for abruptly cooling of a metal vapor to solidify the metal in a sub-micron particle size wherein the metal vapor is discharged from a vaporization furnace through a discharge line into an enlarged quench zone and a liquid is sprayed into the quench zone, the step to prevent the solidification of the metal on surfaces ahead of the quench zone which comprises passing the metal vapor from the furnace discharge line downwardly into an intermediate zone prior to discharging the vapor into the quench zone, said intermediate zone being encircled by a falling film of quench liquid covering the walls of the intermediate zone.

3,042,512
WEAR RESISTANT CAST IRON

William H. Moore, New Rochelle, N.Y., assignor, by mesne assignments, to Meehanite Metal Corporation, a corporation of Missouri

No Drawing. Filed June 4, 1959, Ser. No. 818,006
2 Claims. (Cl. 75—123)

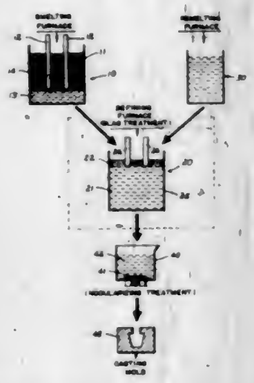
1. A cast iron containing manganese in the range of 2.5% to 10.0% and molybdenum in the range of 0.4% to 1.5%, total carbon in the range of 3.0% to 4.0% and silicon in the range of 1.0% to 3.5%, said cast iron being

further characterized by an as-cast matrix of martensite with substantially no free carbides and with excess carbon in the nodular graphite form.

3,042,513
PRODUCTION OF NODULAR IRON

Lester C. Crome, West Alexandria, Ohio, assignor to The Dayton Malleable Iron Company, Dayton, Ohio, a corporation of Ohio

Filed Dec. 11, 1958, Ser. No. 779,760
4 Claims. (Cl. 75—130)



2. In a process for the production of nodular iron castings from a molten mix produced by the direct reduction of iron ore, the steps comprising heating said iron ore in the presence of a carbonaceous reducing material to form a molten iron mix, treating said molten iron mix with a slag material including calcium and carbon while maintaining said iron in molten condition, withdrawing said thus treated molten iron from said treating step, admixing with said withdrawn molten iron a nodularizing agent, and casting said molten iron after treatment with said nodularizing agent to form said nodular iron castings.

3,042,514
DIFFUSION-TRANSFER REVERSAL PROCESS

Curt B. Roth, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 6, 1959, Ser. No. 831,953
23 Claims. (Cl. 96—29)

1. A process of forming a positive silver image in an image receiving layer which comprises imagewise exposing a silver salt print-out emulsion layer containing a water-soluble silver salt so as to form metallic silver in the exposed areas of said print-out layer and then contacting said exposed silver salt emulsion layer under pressure with said image receiving layer in the presence of pure water, whereby said water-soluble silver salt in the unexposed portions of the emulsion is dissolved in said pure water, transferred to the receiving layer and converted into metallic silver in the presence of a nucleating agent for promoting image formation which is located in said image receiving layer, thereby transforming the dissolved silver salt which is transferred and deposited in said receiving layer into a visible image.

3,042,515
PRINT-OUT COMPOSITIONS FOR PHOTOGRAPHIC PURPOSES AND PROCESS OF USING SAME

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed Jan. 16, 1959, Ser. No. 787,112
19 Claims. (Cl. 96—48)

7. A print-out member consisting of a support and a colorless film deposited thereon consisting essentially of a film-forming plastic wherein there are dispersed at least one arylamine and at least one halogen containing compound which releases halogen-containing free radicals on exposure to light and which is reactive in said film on exposure to light to produce a colored reaction product as a result of said exposure to light; there being between 0.1 and 1 part of weight of arylamine per part by weight of film-forming plastic and between 0.01 and 0.5 part by weight of halogen-containing compound per part by weight of film-forming plastic, said halogen-containing compound being a halogenated hydrocarbon selected from the group consisting of compounds having a bond dissociation energy of not less than about 40 kilogram calories per mol to produce a halogen selected from the group consisting of Cl, Br and I as a free radical.

3,042,516
PRINT-OUT COMPOSITIONS FOR PHOTOGRAPHIC PURPOSES AND PROCESS OF USING SAME

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed Sept. 22, 1959, Ser. No. 841,460
12 Claims. (Cl. 96—48)

12. A method of developing stable brilliantly colored images which comprises preparing a composition consisting essentially of (1) a film-forming plastic base material selected from the group consisting of cellulose derivatives and polymers of vinylidene monomers, (2) at least one arylamine, (3) at least one halogenated hydrocarbon compound having an energy of formation of the free halogen radical of not less than about 40 kilogram calories per mol, selected from the group consisting of compounds which produce free radicals upon exposure to light of a suitable wave length and (4) at least one sulfur-containing compound selected from the group consisting of organic sulfides in which the sulfur is attached directly to a carbon atom and inorganic sulfides in which the sulfur is attached directly to a metal atom; there being present in said film between 0.1 and 1.0 part of arylamine by weight, per part of film-forming plastic, between 0.1 and 2.0 parts of halogenated hydrocarbon compound by weight, per part of film-forming plastic and between 0.01 and 0.3 part by weight of sulfur compound by weight, per part of film-forming plastic; said composition being prepared in a solvent for the film-forming plastic; depositing said composition on a support; evaporating said solvent, leaving a photosensitive film wherein the arylamine, halogenated hydrocarbon and sulfur-containing compounds are dispersed in said film-forming plastic base material on said support; exposing selected portions of the resulting article to ultraviolet light; and thereafter fixing the resulting brilliantly colored image by exposing the surface of said image bearing article to a moist oxygen-containing gas.

3,042,517
LATENT IMAGE PHOTOGRAPHIC SYSTEM

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,569
16 Claims. (Cl. 96—48)

1. A dry photographic film suitable for the production of visible images by exposure to a combination of light and heat, comprising (I) a film-forming plastic selected from the group consisting of cellulose derivatives and addition polymers; (II) an N-vinyl compound selected from the group consisting of N-vinylamines, N-vinylamides and N-vinylimides; and (III) a halogenated hydrocarbon compound selected from the group of compounds which produce free radicals upon exposure to light of a suitable wave length and in which there is present at least one active halogen selected from the group consisting of

chlorine, bromine and iodine which is attached to a carbon atom having not more than one hydrogen atom attached thereto; there being between 0.1 and 2 parts by weight of N-vinyl compound and between 0.1 and 2 parts by weight of halogenated hydrocarbon per part of film-forming plastic, by weight.

3,042,518
LIGHT SENSITIVE PHOTOGRAPHIC COMPOSITIONS

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed Jan. 8, 1960, Ser. No. 1,161
11 Claims. (Cl. 96—48)

1. A dry photographic film suitable for the production of visible images by exposure to a combination of light and heat, comprising (I) a film-forming plastic selected from the group consisting of cellulose derivatives and addition polymers; (II) an N-vinyl compound selected from the group consisting of N-vinylamines, N-vinylamides and N-vinylimides; (III) a halogenated hydrocarbon compound selected from the group consisting of halogenated hydrocarbon compounds having an energy of formation of a free halogen radical of not less than 40 kilogram calories per mol and in which at least one active halogen selected from the group consisting of chlorine and bromine is attached to a carbon atom having not more than one hydrogen atom attached thereto; and (IV) an inorganic iodine compound selected from the group consisting of alkali-metal and alkaline earth metal iodides, iodates and periodates, there being between 0.1 and 2 parts by weight of N-vinyl compound, between 0.1 and 2 parts by weight of halogenated hydrocarbon, and between 0.05 and 1 part by weight of inorganic iodine compound each per part of film-forming plastic, by weight.

3,042,519
LATENT IMAGE PHOTOGRAPHIC SYSTEM

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed Jan. 8, 1960, Ser. No. 1,162
10 Claims. (Cl. 96—48)

1. A dry photographic film, suitable for the production of visible images by exposure to suitable radiation, comprising at least one solid saturated hydrocarbon selected from the group consisting of straight chain and branched chain hydrocarbons having the general formula C_nH_{2n+2} wherein n ranges from about 10 to about 70 having dispersed therein at least one N-vinyl compound selected from the group consisting of N-vinylamines, N-vinylamides, and N-vinylimides; and a halogenated hydrocarbon compound selected from the group consisting of halogenated hydrocarbon compounds having an energy of formation of a free halogen radical of not less than 40 kilogram calories per mol and in which at least one active halogen selected from the group consisting of chlorine, bromine and iodine is attached to a carbon atom having not more than one hydrogen atom attached thereto.

3,042,520
BLEACHING BATH FOR PROCESSING COLOR FILM

Carl E. Johnson, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 23, 1959, Ser. No. 808,306
9 Claims. (Cl. 96—60)

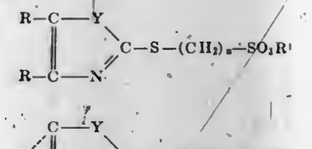
1. In a process of color photography, the method of removing silver from the film after dyestuff image formation by the action of a bleaching bath which comprises treating said film with such a bath containing an alkali metal ferricyanide and n-hexoxyethanol.

3,042,521
ANTIFOGGANTS AND STABILIZERS FOR PHOTOGRAPHIC SILVER HALIDE EMULSION

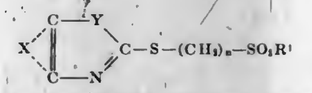
Fritz Dersch and Emil B. Rauch, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 26, 1957, Ser. No. 705,151
6 Claims. (Cl. 96—66)

5. The process of minimizing and preventing fog in light-sensitive silver halide materials comprising a base having a light-sensitive silver halide emulsion thereon which comprises exposing said emulsion and developing the same in the presence of an antifoggant and stabilizer selected from the class consisting of those of the following formulae:



and



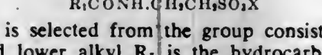
wherein R^1 is selected from the class consisting of hydrogen, an alkyl, hydroxyalkyl, carboxyalkyl, aryl, aralkyl and a cation; R is selected from the class consisting of hydrogen, alkyl, aryl and carboxyalkyl; X represents the atoms necessary to complete a ring system selected from the class consisting of those of the benzene and naphthalene series; Y is selected from the class consisting of oxygen and sulfur and n is a whole number of from 2 to 3.

3,042,522
PHOTOGRAPHIC FILM AND A COMPOSITION FOR IMPROVING THE SLIPPAGE CHARACTERISTICS THEREOF

Aaron J. Ben-Ezra, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 13, 1958, Ser. No. 741,723
11 Claims. (Cl. 96—87)

1. A photographic film comprising a base carrying as its uppermost layer a light sensitive silver halide gelatin emulsion layer containing a uniform mixture of an acylated taurine compound having the general chemical formula



wherein R is selected from the group consisting of hydrogen and lower alkyl R_1 is the hydrocarbon residue of an acid selected from the group consisting of aliphatic and alicyclic acids having from 10 to 20 carbon atoms and X is an alkali metal and a dimethyl polysiloxane for imparting increased slippage to said film, the amount of said taurine and of said polysiloxane ranging from 0.1 to 0.5 percent based on the volume of the coating solution from which said silver halide emulsion layer is prepared.

3,042,523
PHOTOGRAPHIC FILM HAVING A POLYSTYRENE BASE

Jay J. Uber, South Hadley, Mass., assignor to The Plastic Coating Corporation

No Drawing. Filed July 13, 1959, Ser. No. 826,414
4 Claims. (Cl. 96—87)

1. A photographic film comprising a flexible polystyrene base sheet carrying on its surface an adherent

layer comprising gelatin, nitrocellulose having a viscosity characteristic no higher than 1840 centipoise and a material selected from the group consisting of phenol, a cresol and mixtures of cresols which, in turn, carries on its surface a layer of a photographic silver halide emulsion.

3,042,524
PLASTICIZED GELATIN AND RELATED PROTEINACEOUS COLLOIDS

Charles P. Albus, Easton, Pa., and Donald E. Sargent, Burnt Hills, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 12, 1958, Ser. No. 714,699
2 Claims. (Cl. 96—94)

1. A photographic element comprising a support and a gelatin layer containing a light-sensitive silver halide salt wherein said gelatin layer is plasticized with a plasticizing amount of 1,2,4-butanetriol.

3,042,525
MASS HORMONIZATION OF MEAT-PRODUCING ANIMALS

William Earl Mattox, Indianapolis, Ind., assignor to Mattox and Moore, Inc., Indianapolis, Ind., a corporation of Indiana

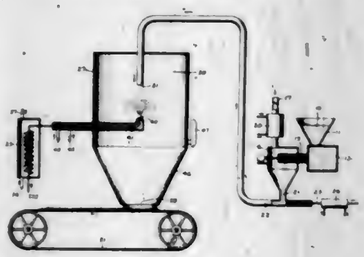
No Drawing. Filed Mar. 11, 1957, Ser. No. 644,983
1 Claim. (Cl. 99—2)

A hormonizing concentrate for addition to drinking water of meat-producing animals to increase the meat-producing efficiency of said animals, comprising a liquid polyethylene glycol solution of diethylstilbestrol and a solubilizing agent, said solubilizing agent being a quaternary ammonium salt.

3,042,526
POWDER AGGLOMERATING METHOD AND APPARATUS

Newton E. Spiess, Jr., and Neil E. Sullivan, Oakdale, N.Y., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 16, 1957, Ser. No. 684,209
15 Claims. (Cl. 99—56)



1. The method of agglomerating pulverulent material which comprises projecting a localized stream of an inert gas carrying said material into a relatively large agglomerating chamber, and projecting a second localized stream comprising an inert gas and an atomized liquid which is capable of wetting said pulverulent material into said chamber in such a way that the two streams impinge directly on each other at an angle greater than 90° thereby to effect intimate mixing of the powder and the atomized liquid and wetting of the powder in a mixing zone, maintaining an agglomerating zone for the wetted particles surrounding said mixing zone, and maintaining said material in suspension in said mixing and agglomerating zones for a period of time sufficient for the liquid to wet the material and for the wetted material to form agglomerates.

3,042,527
PIE WASH

Herbert L. Cantrell, 405 S. 4th, Lamar, Colo.

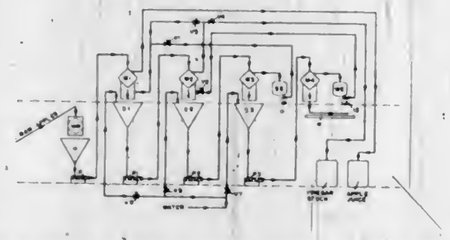
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,456
3 Claims. (Cl. 99—92)

1. A method of treating commercial pies which comprises rolling out and shaping upper pie crusts from a mixed and blended dough made of flour and shortening in a ratio of about 12 pounds or flour to about 4 pounds 8 ounces of shortening and with about 8 pounds 8 ounces of water and 4 ounces of salt, and then prior to baking, washing the rolled out and shaped upper crusts with a wash mixture consisting of about one pound of an egg product selected from one of the class of whole eggs and egg whites stiffly beaten with about eight ounces of a liquid selected from one of the class consisting of milk and water and then blending the stiffly beaten mixture with about eight ounces of corn starch, the resulting mixture being beaten until it is thick and forms stiff peaks, whereby to form after baking an integral, tender, crinkly crust.

3,042,528
PRODUCTION OF APPLE JUICE AND VINEGAR STOCK

James A. Rowse, Mason, N.H., assignor to The New England Vinegar Works, Inc., Littleton, Mass., a corporation of Massachusetts

Filed Nov. 27, 1959, Ser. No. 855,768
10 Claims. (Cl. 99—105)



1. A process of producing apple juice and vinegar stock which consists in screen centrifuging crushed apples to extract apple juice for storage and to discharge pomace; slurrying the pomace in the presence of a relatively strong apple juice extract, and screen centrifuging the resulting slurry to extract vinegar stock for storage and to discharge a second pomace; slurrying the second pomace in the presence of a relatively weak apple juice extract, and screen centrifuging the resulting slurry to extract a relatively strong extract for temporary storage and to discharge a third pomace; slurrying the third pomace in the presence of water, and screen centrifuging the resulting slurry to extract a relatively weak extract for temporary storage and to discharge a fourth pomace for discarding.

3,042,529
COMPOSITIONS AND METHODS FOR IMPROVING MEAT

Simone Marie-Antoinette Radouco-Thomas, 44 Route des Acacias, Geneva, Switzerland

No Drawing. Filed Dec. 9, 1959, Ser. No. 858,327
Claims priority, application Great Britain Dec. 17, 1958
11 Claims. (Cl. 99—107)

1. Compositions for the improvement of meat comprising ascorbic acid and a substance selected from the group consisting of an adrenergic amine, a salt thereof, serotonine, 5-hydroxy-tryptophane and tryptophane, the ratio of said substance to said ascorbic acid being between 1:500 and 1:10 by weight.

3,042,530
SHORTENING EMULSIFIER AND METHOD FOR PREPARING THE SAME

David P. Kidger, Glen Rock, N.J., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

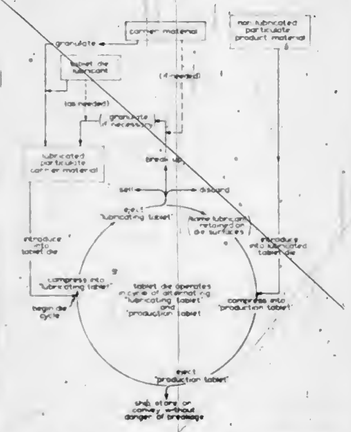
No Drawing. Filed Jan. 16, 1959, Ser. No. 787,136
13 Claims. (Cl. 99—118)

1. A shortening agent comprising a major amount of a glyceride material having shortening properties and a small amount sufficient to improve creaming properties in said shortening of the mixture produced by the reaction between an aliphatic hydroxy polycarboxylic acid, an aliphatic dihydric alcohol and monoglycerides.

3,042,531
METHOD OF MAKING A COMPRESSED TABLET

Bernardine J. Leal, Irvington, and Peter J. Pinto, Union City, Calif., assignors to Leslie Salt Company, San Francisco, Calif., a corporation of Delaware

Filed Dec. 9, 1959, Ser. No. 858,506
15 Claims. (Cl. 99—141)



1. A process for manufacturing compressed tablets, comprising: introducing into a tablet-diet a first composition comprising a tableting material lubricated with a pharmaceutical tablet-die lubricant; compressing this said first composition into a lubricating tablet; ejecting this said lubricating tablet; introducing into the same tablet-die a second composition comprising a non-lubricated tableting material; compressing this said second composition into a production tablet; ejecting this said production tablet; and repeating the cycle of "lubricating tablet-then production tablet" until a desired amount of tablets is formed.

3,042,532
METHOD AND APPARATUS FOR SEASONING FOODS

Gordon Daline, Excelsior, Minn.
(P.O. Box 572, Tacoma, Wash.)

Filed Oct. 28, 1959, Ser. No. 849,262
10 Claims. (Cl. 99—171)

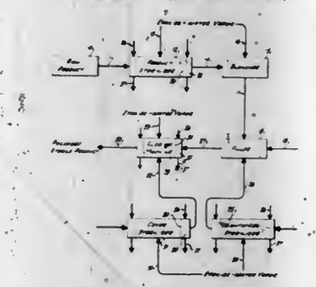


1. The method of seasoning foods during the cooking thereof consisting in initially providing a wrapper of normally impervious material provided with a plurality of recesses formed therein, filling said recesses before wrapping the food therein with seasoning material of a type to spread over the surface of the foods being cooked when said wrapper is wrapped therearound, wrapping the food to be cooked with said wrapper sheet containing the seasoning material, and cooking the food with the wrapper and seasoning material therearound to retain a substantial portion of the juices of the food within the wrapper while constantly basting the surface of the food being cooked with the seasoning material carried by the recesses of the wrapper.

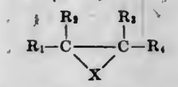
3,042,533
METHOD OF STERILIZATION

John E. W. McConnell, 149 Gordon Road, Walnut Creek, Calif., and Charles P. Collier, 222 W. Pueblo St., Santa Barbara, Calif.

Filed Dec. 6, 1955, Ser. No. 551,257
9 Claims. (Cl. 99—182)



1. A method of sterilization which comprises subjecting an article to be sterilized to contact with a gaseous sterilizing medium comprising as a major active ingredient a compound having the formula



wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, hydrocarbon radicals and halogenated hydrocarbon radicals and in which X is selected from the group consisting of oxygen and the imine group, NH; said compound having a bactericidal effect and also having a substantial vapor pressure at 212° F.; said medium also comprising at least a substantial proportion of water vapor; said contact being at a temperature not substantially greater than about 212° F. and for a time less than about 10 minutes sufficient to accomplish sterilization of heat resistant spores of NCA FS1518 and NCA PA3679.

3,042,534
REFRACTORY BRICK AND PROCESS

Russell Pearce Heuer, Bryn Mawr, Pa., assignor to General Refractories Company, a corporation of Pennsylvania

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,674
Claims priority, application Union of South Africa May 4, 1959
12 Claims. (Cl. 106—58)

7. A basic refractory brick of improved corner formation, unfired and suitable for use in a furnace without kiln firing, which comprises super-coarse, medium-coarse and fine refractory particles of the class consisting of magnesia and mixtures of magnesia and chrome ore containing at least 20 percent of magnesia and the balance of the refractory material chrome ore by weight, bonded together, said fine particles being composed of magnesia free from chrome ore and through 48 mesh per linear inch making up between 20 and 50 percent on the weight of the refractory particles, said super-coarse and medium-coarse particles together making up between 50 and 80 percent on the weight of the refractory particles, said super-coarse particles composing 25 to 75 percent on the weight of the total coarse particles and being through 3 mesh and at least 90 percent on 6 mesh, and said me-

dium-coarse particles composing 25 to 75 percent on the weight of the total coarse particles and being at least 90 percent through 6 mesh and on 28 mesh.

3,042,535
AGGREGATE TREATMENT
Carl L. Hiltrop and John Lemish, Ames, Iowa, assignors to Iowa State College Research Foundation, Ames, Iowa, a corporation of Iowa
No Drawing. Filed July 22, 1959, Ser. No. 828,682
3 Claims. (Cl. 106—85)

1. In a method of improving the failure resistance of an aggregate-containing construction material, the steps of contacting argillaceous rocks with a gaseous methyl chlorosilane, and blending said rocks with a cementitious material to form said construction material, said contacting step being characterized by sufficient gas penetration of said rocks to maintain the argillaceous material therein in its original three-dimensional configuration and thereby prevent the development of rock reaction shells.

3,042,536
VINCULUM FOR POROUS ALKALINE EARTH METAL SILICATE INSULATING MATERIALS
Dana L. Bishop, Ottawa Lake, Mich., assignor, by mesne assignments, to Owens-Corning Fiberglas Corporation, a corporation of Delaware
No Drawing. Filed Oct. 22, 1957, Ser. No. 691,543
4 Claims. (Cl. 106—104)

1. A vinculum composition for use pre-formed hydrous calcium silicate insulating materials, said vinculum comprising a dry comminuted mixture consisting essentially of about 49% by weight of an indurated reaction product of an aqueous suspension of reactive lime and silica in the molar ratio of about 0.95 to 1.0 mol of lime to about 1.0 mol of silica, about 20% amosite asbestos, about 30% hydraulic calcium aluminate cement, and about 1% powdered methyl cellulose.

3,042,537
GYPSUM PLASTER
W. J. Newell, 421 Conner Ave., and James E. Madden, 4709 Calmont St., both of Fort Worth, Tex.
No Drawing. Filed June 23, 1961, Ser. No. 125,900
8 Claims. (Cl. 106—110)

1. A gypsum plaster consisting essentially of gypsum and a minor amount of colloidal silica obtained by vapor phase hydrolysis of a hydrolyzable silicon compound at a temperature below the vaporization temperature of silica, said colloidal silica comprising about ¼% to about 10% by weight of said gypsum.

3,042,538
PLIABLE FILLER FOR MASK CUSHIONING MEANS
Norbert D. Thompson, Fort Myers, Fla., assignor to Galleher, Inc., Sarasota, Fla., a corporation of Ohio
No Drawing. Filed Sept. 22, 1959, Ser. No. 841,439
5 Claims. (Cl. 106—268)

1. A contour retaining filler for a cushioning cell of an inhaler mask consisting essentially of a mixture of methylene-bisstearamide and castor oil in the approximate ratio of 1:2 parts by weight.

3,042,539
PROCESS FOR THE PREPARATION OF ZINC OXIDE PIGMENTS
Lajos Csonka, Ferenc Horkay, Ferenc Szántó, János Szerecz, and Jenö Gönczy, all of Budapest, Hungary
No Drawing. Filed June 1, 1959, Ser. No. 817,026
Claims priority, application Hungary Jan. 15, 1959
2 Claims. (Cl. 106—296)

1. A process for rendering zinc oxide pigments organophilic, comprising reacting an aqueous suspension of the pigment with a solution of a salt selected from the group consisting of alkali salts and ammonium salt of a fatty acid selected from the group consisting of fatty acids having 16 to 18 carbon atoms and a fatty acid having 18 carbon atoms and containing an OH-group, the alkali salt of the fatty acid being used in an amount of 2.5 to 6% based on the pigment weight, then heating the solution to a temperature in the range of 60° to 80° C., separating the precipitated pigment from the liquid, and drying and disintegrating it.

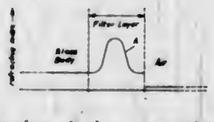
3,042,540
WATER DISPERSIBLE PIGMENTS AND THE PRODUCTION THEREOF
Samuel Cabot, 241 Perkins St., Boston, Mass.
No Drawing. Filed Jan. 30, 1956, Ser. No. 562,014
5 Claims. (Cl. 106—308)

1. A water dispersible pigment comprising an alkali metal soap body of a saponified polymerized drying oil of a consistency, in an unthinned state, approximately that of molasses and pigment particles of colloidal fineness dispersed therein.

3,042,541
METHOD OF TREATING A CASTING MOLD AND THE TREATED MOLD
Benjamin B. Kaplan, West Hartford, Conn., assignor to Albi Manufacturing Company, Inc., Rockville, Conn., a corporation of Connecticut
No Drawing. Filed Apr. 16, 1958, Ser. No. 728,788
12 Claims. (Cl. 117—5.1)

1. The method of treating a mold for use in casting metals which comprises applying to the surface of the mold which is to come into contact with the molten metal a coating of a mold wash composition comprising an aqueous dispersion containing (1) a carbohydrate; (2) an acidic material selected from the class consisting of monoammonium phosphate, diammonium phosphate, phosphoric acid, ammonium sulfate, sulfamic acid, ammonium sulfamate and ammonium bromide; and (3) a resin selected from the class consisting of urea-formaldehyde, melamine-formaldehyde, and dicyandiamide-formaldehyde condensation products and mixtures thereof, and drying said coated mold.

3,042,542
GLASS BODIES PROVIDED WITH COLORED LAYERS AND A METHOD FOR PRODUCING THE SAME
Hugo Anders, Wurttemberg, Germany, assignor to Carl Zeiss, Wurttemberg, Germany
Filed May 18, 1959, Ser. No. 813,992
Claims priority, application Germany May 21, 1958
3 Claims. (Cl. 117—33.3)



1. A light filtering device, comprising a transparent glass body having opposite surfaces, and a colored transparent layer of a material comprising a mixture of at least two inorganic substances of different refractive power arranged on at least one of said opposite surfaces, the substances having a higher refractive power being selected from the group consisting of iron, nickel, manganese, chromium, the lower oxides of niobium, the lower oxides of tantalum, and the lower oxides of titanium, and the substances having a lower refractive power being selected from the group consisting of cerium fluoride, thorium fluoride, magnesium fluoride, and silicium dioxide, with the employed substances being heterogeneously

distributed in said layer in such a manner as to produce therein an index of refraction that is higher within the layer than at its surfaces where it is substantially equal to that of the glass body.

3,042,543
MAGNETIC PARTICLES AND METHOD OF MAKING SAME
William J. Schuele, Philadelphia, Pa., assignor to The Franklin Institute of the State of Pennsylvania, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 7, 1960, Ser. No. 67,462
9 Claims. (Cl. 117—62)

7. A method for producing microscopic acicular particles having a core of non-magnetic material and a surface film of metallic iron which comprises forming an aqueous dispersion of negatively charged acicular core particles of a material capable of being heated to a temperature of the order of 300° C. without loss of acicular shape selected from the group consisting of silicates and non-magnetic metal oxides, having a length in the range between about 500 A. and about 5 microns, a transverse dimension in the range between about 30 A. and 0.1 micron, a ratio of length to transverse dimension of from about 15:1 to about 150:1, and a surface area of from about 100 to about 350 $m.^2/g.$, precipitating on said core particles a surface film of ferric oxide, separating the resulting particles from the aqueous medium, and thereafter heating the so separated particles to an elevated temperature in an atmosphere of a reducing gas to convert said surface film of ferric oxide on said particles to metallic iron.

3,042,544
YARNS OF STAPLE GLASS FIBERS AND COMPOSITIONS AND METHODS FOR MANUFACTURING SAME
Alfred Marzocchi, Pawtucket, R.I., and Gerald E. Rammel, North Attleboro, Mass., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
No Drawing. Filed Dec. 17, 1954, Ser. No. 476,074
20 Claims. (Cl. 117—72)

13. In a resinous system reinforced with yarns of staple glass fibers, the improvement which comprises a coating on the glass fiber surfaces formulated of ingredients consisting essentially of 5–25 parts by weight of a water soluble polyether polymeric lubricant, 25–5 parts by weight of a plasticizer, 0.1–5.0 parts by weight of a non-ionic surface active agent and 0.1–9.0 parts by weight of an anchoring agent selected from the group consisting of an organo silicon compound having an organic group attached directly to the silicon atom containing a functional group within a group formed of less than 8 carbon atoms in straight chain arrangement and a Werner complex compound in which an acido group coordinated with the trivalent nuclear chromium atom contains a highly functional group within a group formed of less than 8 carbon atoms in straight chain arrangement, and in which the coating is present within the range of 0.5–10 percent by weight of the glass fibers.

3,042,545
EPOXY RESINS AS ADHESIVES FOR BONDING POLYURETHANE TO METAL
Robert N. Kienle, Grosse Pointe, and Daniel T. Szura, Royal Oak, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 12, 1959, Ser. No. 833,138
6 Claims. (Cl. 117—75)

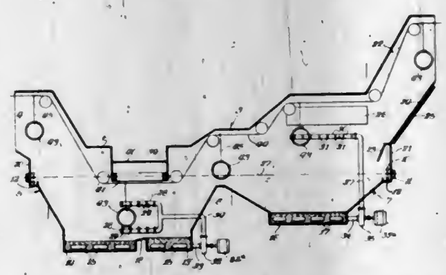
1. A process of bonding urethane polymers to metal surfaces with a degree of adhesion of at least 80 pounds per inch at a static 90° pull comprising the steps of coating a metal surface with a layer of fluid, incompletely cured 1,2-epoxide resin containing from about 6 to about 10 parts by weight of an amine curative per hundred parts of resin, said layer having a film thickness of at least 0.023 gram per square inch of metal surface, applying a lamina of fluid, incompletely cured polyurethane prepolymer containing an amine curative upon said layer of 1,2-epoxide resin, and subsequently fully co-curing said 1,2-epoxide resin and said polyurethane prepolymer.

3,042,546
METHOD AND APPARATUS FOR IMPREGNATION OF POROUS ARTICLES
Erik Henningsen, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 717,962
5 Claims. (Cl. 117—95)



1. The method of impregnating a plurality of elongated fibre tubes with a saturant having a specific gravity greater than that of the unimpregnated tubes and less than that of the impregnated tubes comprising the steps of disposing said elongated tubes vertically within a common zone in a body of the saturant and concurrently confining each of said tubes along its outer wall to preclude extensive lateral movement and contact between the tubes while permitting independent vertical movement, retaining said tubes in said body of saturant until complete impregnation is achieved, whereby said tubes independently rise in said saturant when first disposed therein and then sink during the impregnation, and removing said tubes from said saturant.

3,042,547
MEANS FOR AND METHOD OF PAINTING
Montgomery B. Pickett, Glen Ellyn, Ill., assignor to G. S. Blakeslee & Co., Cicero, Ill., a corporation of Illinois
Filed July 15, 1959, Ser. No. 827,303
8 Claims. (Cl. 117—102)



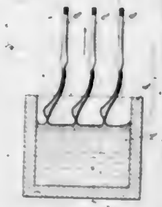
4. The method of painting an article with a paint including a volatile solvent the vapor of which is toxic and heavier than air, which comprises heating a body of said paint and thereby producing in an enclosed space a vapor of such solvent, cooling such space effective for producing therein a lower concentrated vapor zone and an upper painting zone overlying and opening into said concentrated vapor zone and substantially free of solvent vapor, disposing the article in said painting zone, projecting onto the article in said painting zone hot paint withdrawn from said body of paint while maintaining said painting zone free of solvent vapor in condensible amount, drying the

paint on the article in the painting zone by rapid evaporation of the solvent content of the paint by the heat thereof supplemented by the surface heat of the article, and removing the painted article from said painting zone through an exit area free of solvent vapor.

3,042,548
POLYESTER RESINOUS COATING FOR SPECTACLE TEMPLE BARS

James P. Aikens, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York

Filed Apr. 29, 1959, Ser. No. 809,660
6 Claims. (Cl. 117—113)



1. The method of forming a hard but flexible resinous coating on spectacle temple bars of aluminum metal which comprises the steps of mixing a finely divided thixotropic rendering agent with a polymerizable linear unsaturated polyester resin and a minor amount of copolymerizable aromatic vinyl cross linking monomer in the proportion of about 0.5 to 10% by weight of the polyester resin and monomer, agitating the resulting mixture to disperse the thixotropic rendering agent therein in substantially uniform manner to form a thixotropic mixture which exhibits liquid coating characteristics when a metal temple bar is dipped therein, cooling the thixotropic mixture to a temperature of at least 35° F., and then dipping at least one aluminum metal temple bar into the prepared composition, withdrawing the temple bar from the said composition and then curing the resin to form a hard but flexible coating of flexural strength between about 1800 and 17,500 p.s.i. which is capable of withstanding bending manipulation without crazing or cracking.

3,042,549
SILICONE TREATED COTTON

Ralph A. Arnold, 911 Urban Ave., Durham, N.C., and Joseph M. Gidding, 985 Lexington Ave., New York, N.Y.

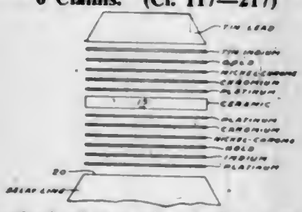
No Drawing. Filed Nov. 4, 1958, Ser. No. 771,723
3 Claims. (Cl. 117—140)

1. As an article of manufacture fibrous absorbent cotton U.S.P. impregnated with 0.01 to 10 percent by weight of a silicone polymer whereby the water repellency of the article is improved.

3,042,550
SOLID DELAY LINE IMPROVEMENTS

Richard E. Allen and George M. Deegan, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed May 23, 1958, Ser. No. 737,389
6 Claims. (Cl. 117—217)



1. The method of preparing surfaces of a transducer for solderable union with a solid delay line and its back electrode which comprises application to each of its two broad surfaces a base coat of a noble metal by vacuum deposition, depositing a layer of chromium on said base coat, overlaying the chromium with a gradient coating containing approximately 80% Ni and 20% Cr with the content of Cr being highest at the chromium interface and lowest at the exposed surface, and finally overlaying the gradient coating with a layer of gold.

3,042,551
IMPREGNATION OF POROUS METAL

Henry James Harkness Perry, The Lings, Little Abington, Cambridgeshire, Abington, England

No Drawing. Filed June 23, 1960, Ser. No. 38,135
Claims priority, application Great Britain June 30, 1959
2 Claims. (Cl. 117—224)

1. A method of forming a porous nickel electrode for a fuel cell impregnated with a lithium salt relatively evenly distributed in the electrode which comprises providing an aqueous solution of a lithium salt and a nickel salt dissolved in the solution in such concentration as to form a viscous solution impregnating a porous nickel electrode with the solution and subsequently heating the impregnated electrode to drive off water from the electrode.

3,042,552
TOBACCO PRODUCTS

Sheldon Rosenberg, Westport, and Otto K. Schmidt, Springdale, Conn., assignors to American Machine & Foundry Company, a corporation of New Jersey

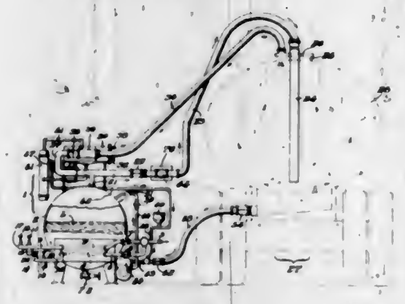
No Drawing. Filed May 19, 1958, Ser. No. 736,011
11 Claims. (Cl. 131—17)

1. A composition of matter comprising in combination finely divided tobacco, ethyl hydroxyethyl cellulose which acts as an adhesive and tetra ethylene glycol which acts as a fungistatic and a humectant.

3,042,553
METHOD OF AND APPARATUS FOR CLEANING TANKS OF VEHICLES

Thomas J. Kearney, Detroit, and Bruce A. Young, Lathrup Village, Mich., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan.

Filed Oct. 20, 1959, Ser. No. 847,534
6 Claims. (Cl. 134—11)



1. In a method of internally cleaning receptacles used in storing, transporting or processing commodities such as oils, grease, crude petroleum products, petroleum asphalt and the like, the steps which comprise continuously boiling in a vapor generator a chlorinated hydrocarbon solvent selected from the group consisting of trichlorethylene, perchlorethylene and methylene chloride, continuously introducing the hot vapors so generated into a receptacle to be cleaned and allowing said vapors to dissolve adhering matter from the inner surface of said receptacle, continuously conducting uncondensed vapors and any air incidentally mixed therewith from the top of said receptacle, continuously cooling the gaseous mixture removed from the receptacle to condense the solvent vapors therefrom and then exhausting the air to the atmosphere, removing entrained water from the solvent so condensed, then continuously returning the solvent so recovered to said vapor generator for re-use in cleaning and finally passing unheated outside air through the tank to purge it of solvent odors and recovering the remaining traces of solvent vapor from the air before releasing the air to the atmosphere.

3,042,554
PROCESS AND COMPOSITION FOR RUST-PROOFING FERROUS STOCK

Melvin H. Swann, Havre de Grace, Md., assignor to the United States of America as represented by the Secretary of the Army

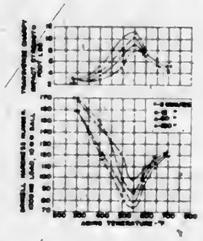
No Drawing. Filed Dec. 29, 1959, Ser. No. 862,727
2 Claims. (Cl. 148—6.15)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of rust-proofing encrusted ferrous stock comprising, immersing said stock to simultaneously remove rust and grease and leave a protective coating thereon in a bath at 10° to 60° C. consisting of 2 to 6.5% by volume of ethylene glycol monobutyl ether in combination with .25 to 1.0% by volume of an acid stable nonionic surface active agent used in an aqueous medium containing 2.6 to 17% by volume of an 85% orthophosphoric acid and 2% by weight to the limit of solubility of ferric oxalate, utilizing the iron of the rust removed by the bath to produce an excess of ferric ions in the presence of an excess of oxalate ions to form a protective coating of ferrous oxalate on the stock, removing the stock from the bath, and washing the stock with water to obtain a coating insoluble in both water and acid.

3,042,555
IMPACT RESISTANT ALUMINUM ALLOY PLATE

Henry P. George, Elkins Park, and Harold W. Euker, Jenkintown, Pa., assignors to the United States of America as represented by the Secretary of the Army

Filed Oct. 2, 1958, Ser. No. 765,002
1 Claim. (Cl. 148—32.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

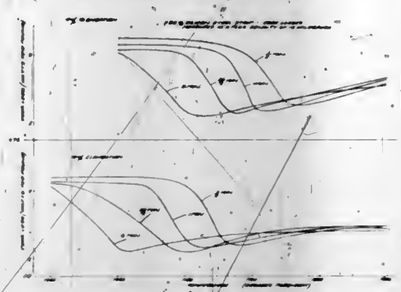


An armor plate about ½ inch thick composed of an aluminum base alloy consisting of 5.1–6.1% zinc, 2.1–2.9% magnesium, 1.2–2.0% copper, 0.18–0.40% chromium, 0.30% manganese (maximum), 0.50% silicon (maximum), 0.70% iron (maximum), 0.20% titanium (maximum) and balance substantially all aluminum, said plate having a front face and a rear face with varying degrees of hardness therebetween produced by a heat treatment to said rear face of about 550° F. for about 3 hours while simultaneously maintaining the front face at a temperature below about 300° F., and characterized by said front face having a Brinell hardness of the order of 150 and a Rockwell 45T hardness about 20 at the rear face, said front face having a yield strength of at least about 70,000 p.s.i. and a tensile strength of at least about 80,000 p.s.i. and said rear face characterized by a yield strength of about 21,000 p.s.i. and a tensile strength of about 42,000 p.s.i.

3,042,556
PROCESS FOR TREATING STEEL

George R. Hemmeter, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York

Filed Feb. 2, 1960, Ser. No. 6,190
4 Claims. (Cl. 148—111)

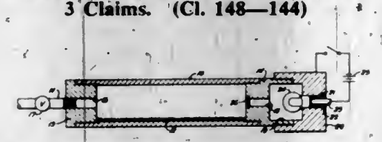


1. A process of treating silicon strip steel having a silicon content between 0.25 percent and 3.5 percent and hot rolled to a thickness between .05 and .125 inch, said process comprising the steps of: cold rolling said strip to an intermediate thickness which when reduced to final gauge will produce a predetermined elongation between 2 and 12 percent in the strip, heating said strip at a normalizing temperature for a period sufficient to effect recrystallization without appreciable grain growth, cold rolling said strip to final gauge, and annealing said strip at a temperature ranging from 1650 to 2100 degrees Fahrenheit for a predetermined period of time ranging from 15 seconds to 15 minutes at a temperature which will produce a minimum core loss for said predetermined period of time and said predetermined elongation, increasing said elongation causing a decrease in the annealing temperature required to produce said minimum core loss.

3,042,557
METHOD OF HEATING THE INTERIOR OF AN ENCLOSURE

Roy L. Chenault, Seneca, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Apr. 16, 1959, Ser. No. 806,946
3 Claims. (Cl. 148—144)



1. A method of casehardening the inside surface of a metal tube comprising introducing to the tube a fuel charge along with sufficient oxygen for complete combustion of the fuel, sealing the ends of the tube, igniting the charge to heat the inside surface momentarily above its critical temperature, and quenching the inside surface by conduction of heat therefrom.

3,042,558
COLD FORMING LUBRICANT AND METHOD OF APPLYING SAME

William L. Kubie, Peoria, Ill., assignor to Aluminum Research Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 28, 1959, Ser. No. 816,389
10 Claims. (Cl. 148—6.14)

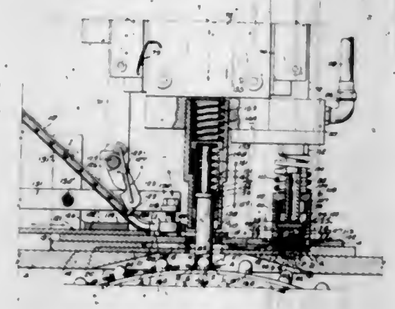
1. A method of applying an adherent lubricant coating to a metal article comprising applying to said article a uniform coating of a 5 to 20% by weight aqueous dispersion of lubricating agent, said dispersion containing as an essential ingredient a carboxylic polymethylene in

a ratio of about 1 to 44 parts per 100 parts by weight of said lubricating agent, and evaporating the volatile constituents of the said coating, said lubricating agent having the formula $(R^1COO)_nR^2$, wherein n is an integer from 1 to 3, R^1 is a monovalent hydrocarbon radical having at least 7 carbon atoms and R^2 is a radical selected from the group consisting of hydrogen, a metal, and a monovalent hydrocarbon group.

3,042,559
PROPELLANTS
Henry B. Hass, West Lafayette, Ind., assignor to Purdue Research Foundation, West Lafayette, Ind., a corporation of Indiana
No Drawing. Filed June 1, 1948, Ser. No. 30,513
10 Claims. (Cl. 149—47)

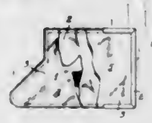
1. A solid propellant composition comprising: an acetal of polyvinyl alcohol with a nitroaldehyde, said acetal having an oxygen balance of from zero to minus 80, said acetal being the major thrust-producing component of the said propellant, and, incorporated therewith, a compound selected from the group consisting of polynitro paraffins and lower-alkyl esters of nitroacetic acid in amount up to about 28 percent of the total propellant mass.

3,042,560
APPARATUS FOR APPLYING GASKETS TO WASHERS
John P. Lynch, Kansas City, Frank W. Osborn, Independence, and Edward L. Hessler, Kansas City, Mo., assignors to Black Sivalls & Bryson, Inc., Kansas City, Mo., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,400
26 Claims. (Cl. 156—567)



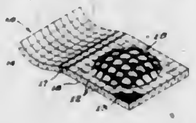
11. An apparatus for securing resilient gasket rings to washers, including a support having a horizontal top provided with a discharge opening, a turntable having a circular series of openings, means for rotatably mounting the turntable on said top for bringing the openings in the turntable consecutively over the discharge opening, means for feeding washers into the openings of the turntable, a crosshead reciprocably supported above said top, a main piston having a shank depending from the crosshead in laterally offset relation with respect to the discharge opening to register with one of the openings in the turntable which contains a washer, a cylinder slidable over the main piston and having a closed end provided with an opening for passing said shank, a spring between the crosshead and cylinder for yieldingly urging the cylinder in projected position with respect to the main piston, said other end of the cylinder being provided with a circular series of spaced apart openings, a nozzle fixed to the said other end of the cylinder and having a corresponding series of smaller orifices in connection with said openings, said nozzle having concentric annular faces for establishing circular seals with the washers on the respective inner and outer sides of the series of orifices in the nozzle, a circular series of secondary pistons on the main piston adapted to enter some of said openings of the series of openings in said cylinder, said main piston having openings therethrough in registry with the other of said openings of the circular series of openings, means for admitting an adhesive into the cylinder for flow through the openings in the main piston and around the secondary pistons for filling the circular series of openings in said cylinder, a tubular plunger, means yieldingly supporting the tubular plunger from the crosshead in registry with the discharge opening, a drying wheel rotatable under said top and having radial pins adapted to be successively registered with the discharge opening, means for feeding gasket rings under the tubular plunger and onto a washer contained in the opening of the turntable that is registering with the discharge opening, and means for reciprocating the crosshead to bring the said nozzle into contact with the washer registering with the nozzle for applying adhesive to the washer and for moving the tubular plunger to press a gasket ring into contact with the adhesive on a washer registering with the discharge opening and to project the washer with the gasket ring onto a pin of the drying wheel then registering with the discharge opening.

3,042,561
TRANSPARENT LIGHT AND HEAT INSULATING WINDOW PANES AND SHIELDS
Wasaku Iwashita, 4-396 1-Chome Daita, Setagaya-ku, Tokyo, Japan
Filed Feb. 19, 1958, Ser. No. 716,092
3 Claims. (Cl. 154—2.7)



1. A light reflecting, heat insulating transparent laminate comprising at least a lamina of metal pre-coated formanious, thin, woven, non-metallic fabric and a lamina of transparent glass sheet material bonded thereto wherein the threads of said fabric have been individually pre-coated with metal by vacuum vaporization of said metal over and through the threads of said fabric causing deposition thereon thereby increasing the light reflecting and heat insulating qualities thereof while maintaining the foraminous character of said woven non-metallic fabric.

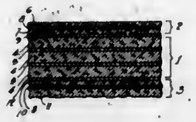
3,042,562
PRODUCT AND METHOD FOR PRODUCTION OF ARTICLES HAVING COMPOUND CURVES
Norman R. Peterson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,935
17 Claims. (Cl. 154—43)



1. A substantially homaloidal sheet of sufficient thickness to be rigid and having at least two generally opposite surfaces; a plurality of slits extending into said sheet to a depth greater than one-half the thickness of said sheet; the slits that originate from any one surface defining a plurality of adjacent columns, and the slits from opposite surfaces being interdigitated with one another; said sheet

having formed therein at least one compound curve, and at least the slits formed in said curve being filled with a hardenable material.

3,042,563
DECORATIVE LAMINATED PAPER BOARD AND THE METHOD FOR ITS PRODUCTION
Walter V. Shearer, West Springfield, and Garrison Householder, Granby, Mass., assignors to The Plastic Coating Corporation
Filed Nov. 13, 1959, Ser. No. 852,781
14 Claims. (Cl. 154—45.9)



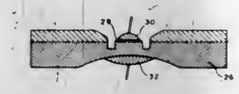
1. A decorative laminated paper board comprising an internal paper board core lamination consisting of a plurality of sheets of a paper board each of which is adhered to an adjacent sheet by a layer of a water-insoluble adhesive, with its machine direction in parallel alignment to that of the adjacent sheet; the said paper board core lamination having adhered to one of its surfaces by a layer of a water-insoluble adhesive deposited from an aqueous solution a backing paper lamination consisting of two sheets of paper adhered together with their machine directions in parallel alignment by a waterproof film of a thermoplastic resin; and the said paper board core lamination having adhered to its opposite surface by a layer of a water-insoluble adhesive deposited from an aqueous solution a facing paper lamination consisting of two sheets of paper adhered together with their machine directions in parallel alignment by a waterproof film of a thermoplastic resin, the said facing lamination having its outer surface decorated, being positioned with the parallel machine directions of its sheets at right angles to the parallel machine directions of the sheets of the said paper board core lamination, and being under tension in its cross-machine direction created by the greater shrinkage of the said facing laminate in the cross-machine direction than the shrinkage of the core lamination in its machine direction upon drying after being adhered to the said core lamination, which tension causes stress within the body of the decorative laminated paper board.

3,042,564
CARPET WITH REINFORCEMENT
Kenneth E. Hankins, Carlisle, Pa., assignor to C. H. Masland & Sons, Carlisle, Pa., a corporation of Pennsylvania
Original application Sept. 8, 1958, Ser. No. 759,667. Divided and this application Sept. 10, 1959, Ser. No. 839,131
1 Claim. (Cl. 154—49)



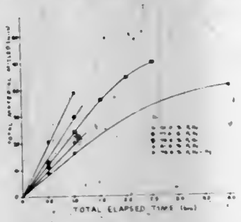
A carpet having a pile and a back, and a plate of elastomeric material which covers and protects a certain area of the pile adjacent to an uncovered area of the pile, comprising a top portion of said plate of elastomeric material which extends substantially flush with the top of the uncovered pile and upward of the pile covered by said plate, and a lower portion of said plate of elastomeric material which has the upper ends of the covered pile embedded in it, said elastomeric material of the plate being molded and bonded to the embedded ends of the covered pile, and said plate being spaced from said back, supported by lengths of the covered pile between said lower portion of the plate and said back and cushioned by said lengths.

3,042,565
PREPARATION OF A MOATED MESA AND RELATED SEMICONDUCTING DEVICES
Kurt Lehovec, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Jan. 2, 1959, Ser. No. 784,600
2 Claims. (Cl. 156—17)



1. A method for producing a mesa-type structure in a semiconductor including the steps of impinging a jet of electrolyte on a surface of semiconductive material, polarizing said jet negatively with respect to said semiconductive material at said surface, removing material from said semiconductive material by so proportioning the current density and the flow rate of said jet that the etching rate of semiconductivity material is substantially less at the axis of said jet than at the periphery of said jet thereby producing a stagnant pool of said electrolyte at said axis of said jet whereby a mesa is cut out of said semiconductive material and a moat is formed around said cut-out mesa to isolate said mesa from the remainder of said surface.

3,042,566
CHEMICAL MILLING
John A. Hardy, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,561
8 Claims. (Cl. 156—18)

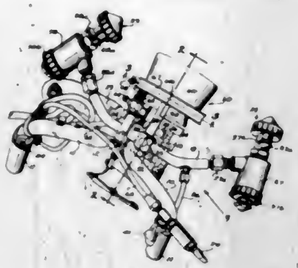


5. A process for chemically milling refractory metals and metal alloys containing metals selected from the group consisting of nickel, molybdenum, chrominum, iron and cobalt comprising contacting same and a phosphoric milling composition at a temperature in excess of 500° F., the phosphorus content of said acid composition expressed as phosphorus pentoxide being at least about 62% by weight of said composition.

3,042,567
METHOD AND APPARATUS FOR DEPOSITING CONTINUOUS ROVING
Rupert W. King, Eastlake, Ohio, assignor, by mesne assignments, to Ibis Enterprises Limited, Hamilton, Bermuda, a corporation of Bermuda
Filed Apr. 18, 1960, Ser. No. 22,774
4 Claims. (Cl. 156—38)

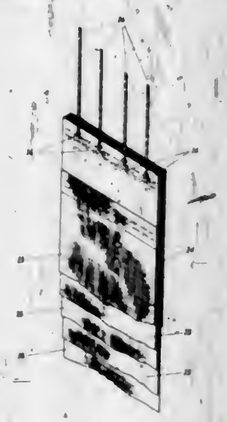
4. A method of laying up a reinforced plastic laminate on a surface, including the steps of feeding a continuous roving of fiber strands toward said surface, applying a turning force to the strands of said roving around the di-

rection of travel of said roving as an axis before depositing said continuous roving in a desired pattern over the



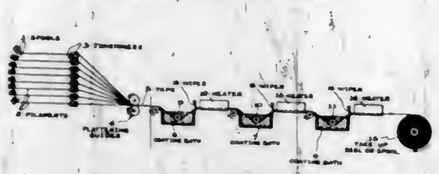
surface, and feeding liquid plastic on said roving to form the reinforced plastic laminate with the roving strands embedded therein.

3,042,568
METHOD AND APPARATUS FOR THE MANUFACTURE OF LAMINATED FABRIC BELTING
Richard Egon Ludowici, Warwick Edward Lukins, and Ray Emmerson Simmons, all of Sydney, New South Wales, Australia, assignors to J. C. Ludowici & Son Ltd., Sydney, New South Wales, Australia, a company of New South Wales
Filed Feb. 23, 1960, Ser. No. 10,361
3 Claims. (Cl. 156—137)



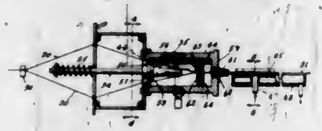
3. An improved method for the manufacture of laminated fabric belting, said method consisting of drawing fabric sheet of indefinite length from a spool and in a continuous operation, passing said sheet through a tensioning device, drying the sheet to remove excess moisture, cooling the sheet, passing the sheet through a coating bath, scraping excess coating material from the sheet, heating the sheet to solidify the coating, fixing a tailer to one end of said fabric sheet and winding the tailer and coated fabric sheet on another spool, connecting the other end of each coated fabric sheet to a heat resistant leader, mounting a plurality of spools having the coated fabric sheets thereon on independent movable carriers, connecting said leaders to a pull through unit, drawing the leaders and the respective sheets under tension between heaters, through a supplementary heating zone, between laminating rollers and pressure rollers and through a cooling zone, thence over a guide roller or rollers, severing the leaders from the laminated belt when said leaders pass through the pull through unit, passing the laminated belt under tension around a winding roller, stopping the heating operation and severing the tailers from the respective sheets prior to said tailers reaching the laminating rollers.

3,042,569
METHOD OF MAKING AN UNWOVEN FIBROUS TAPE
Theodore R. Paul, Pittsburgh, Pa.
Filed Nov. 19, 1958, Ser. No. 774,984
4 Claims. (Cl. 156—166)



1. A method for producing unwoven tape material, comprising the steps of passing a plurality of rovings past guide members having directionally guiding engagement with a respective one of said rovings, gathering said rovings into a tape wherein said rovings are disposed in parallel, side-by-side relation, thereafter passing said gathered parallel rovings through a solution of thermosetting resin coating material, passing the coated fibers between relatively fixed members which are spaced respectively one on each side of said tape and proportioned to provide a distance therebetween effective for scraping excess resin carried thereon from the surface of said tape and also forcing some of said resin into the body of said tape to provide a sizing action, heating the sized resin-impregnated material to effect solvent removal as a principal operation, and thereafter repeating for at least one additional cycle the impregnating-sizing-heating operations to produce a substantially solventless and appropriately proportioned tape material having coalesced resin effective for maintaining said parallel fibers in their gathered positions.

3,042,570
APPARATUS AND METHOD FOR PRODUCING REINFORCED MOLDING COMPOSITION
Rexford Bradt, Warsaw, Ind., assignor to Fiberfil Corporation, Warsaw, Ind., a corporation of Indiana
Filed Feb. 20, 1958, Ser. No. 716,393
16 Claims. (Cl. 156—180)



1. In apparatus for impregnating and coating a plurality of strands of filamentary material with a thermoplastic resin and for combining such strands into a bundle, a coating chamber having an inlet opening for the strands and an outlet opening for the bundle, means for maintaining said chamber filled with a molten thermoplastic to a level above said openings, means at said inlet opening for arranging in predetermined relation strands entering said chamber, said arranging means including an element which with the entering strands substantially closes the inlet opening to inhibit the escape of molten plastic therethrough, said element being of heat-conductive material and in heat-receiving contact with the molten thermoplastic, a gathering and stripping orifice receiving the strands and located in alignment with the outlet opening and intermediate the length of the chamber whereby the strands will be exposed to the molten thermoplastic both before and after their passage through the orifice, and means for drawing the strands through the chamber.

3,042,571
IMPROVED METHOD OF BONDING FILTER ELEMENTS
Harold Ernest Jackson, Plympton St. Maurice, England, assignor to Tecalemit Limited, Brentford, England
Filed Sept. 5, 1958, Ser. No. 759,167
13 Claims. (Cl. 156—191)



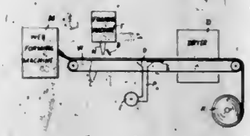
1. A method of bonding a filter material in sheet form to an adjoining holding means in the construction of a filter element unit, which method comprises first forming a bead of an adhesive substance on at least one end edge of a filter sheet by depositing said adhesive substance along said edge, while the adhesive is in a soft state and allowing said bead to dry and harden so that the filter sheet may be handled and manipulated into the form of a filtering element; then, shaping said sheet into a circular form; then applying a holding means devoid of adhesive thereon to the bead of adhesive of said edge of said filter sheet and subjecting said bead to a softening step and, while so softened, pressing said bead against said adjoining holding means; and then subjecting said bead to a rehardening step to cause the edges of the filter material to be bonded to said means.

3,042,572
METHOD OF ASSEMBLING AND CEMENTING PINS IN THE GROOVE OF A FALLER BAR
Gaston J. Verhulst, Blackstone, Mass., assignor to G. J. Verhulst Reneedling Co., Inc., Blackstone, Mass., a corporation of Massachusetts
Filed May 28, 1958, Ser. No. 738,358
3 Claims. (Cl. 156—250)



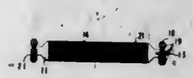
1. The method of making a faller bar comprising the steps of providing a metal bar having a continuous open groove extending longitudinally of the bar and a set of equal length tapered metal pins, each pin having a sharp point and a thick butt end, providing a narrow strip of stiff material which is penetratable by said pin points and is capable of holding said pins rigidly in position with the butt ends and pin points protruding, providing a support having a set of equally spaced parallel grooves to carry said pins, placing one of said pins in each groove with all points extending in one direction, mounting the strip close to the pointed ends of said pins in said grooves, forcing said pins along said grooves and thrusting the pointed ends of the pins through said strip but leaving the butt ends projecting rearwardly and locating the projecting points of the pins in substantially one plane, roughening the butts of said pins, inserting said pin butts in said faller bar groove while the pins are held by said strip in a spaced and fixed relationship, filling said bar groove around the fixed pin butts with a liquid thermosetting resin which adheres to metal, curing the resin while the pins are held in place by said strip, to cement the fixed pins in said faller bar groove, said strip being heat resistant to the temperature of curing said resin, and thereafter curing the resin and removing said strip from the pins of the completed faller bar.

3,042,573
PROCESS AND APPARATUS FOR MANUFACTURING IMPREGNATED FIBROUS MATERIALS
Douglas Roberts, Worcestershire, England, assignor to Witco Chemical Company Limited, London, England, a British company
Filed Dec. 15, 1958, Ser. No. 780,575
Claims priority, application Great Britain Dec. 24, 1957
12 Claims. (Cl. 156—285)



1. A process for manufacturing impregnated fibrous sheet material which consists in applying an impregnant in the form of a foam as a coating on to one surface of a web of fibrous sheet material, and then feeding the coated web past a position at which suction is applied to the opposite surface of the web to suck the impregnant into said fibrous sheet material.

3,042,574
METHOD OF MAKING LAMINATED STRUCTURES
Jerome Hochberg, Newburgh, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 29, 1958, Ser. No. 757,995
4 Claims. (Cl. 156—286)

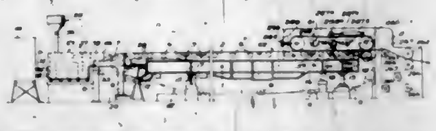


1. The method of preparing dense laminates which comprises:
(*a*) arranging a plurality of superposed plies of reinforced polytetrafluoroethylene sheet material in direct contact with each other,
(*b*) placing said superposed plies in an air impermeable envelope at least one side of which is collapsible,
(*c*) evacuating a substantial portion of the air from within said envelope to a pressure of less than about 380 mm. of mercury within said envelope,
(*d*) heating said plies while under said sub-atmospheric pressure to at least 621° F. to bond said plies into an integral laminate,
(*e*) cooling said laminate, and
(*f*) removing said laminate from said envelope.

3,042,575
METHODS OF IMPROVING THE YIELD IN ALKALINE DIGESTION OF CELLULOSIC MATERIAL
Nils Josef Christoffer Hartler, Lidingo, Sweden, assignor to Stiftelsen Svensk Cellulosaforskning, Stockholm, Sweden, a corporation of Sweden
No Drawing. Filed Nov. 16, 1959, Ser. No. 852,964
Claims priority, application Sweden Nov. 24, 1958
5 Claims. (Cl. 162—80)

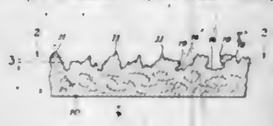
1. In the preparation of pulp for papermaking by the digestion of wood chips in an alkaline medium at a temperature of between 160° and 200° C., the improvement which comprises carrying out the digestion in the presence of a reducing agent selected from the group consisting of hydrogen and metal borohydrides.

3,042,576
METHOD AND APPARATUS FOR PRODUCING NONWOVEN FIBROUS SHEETS
Carlyle Harmon, Scotch Plains, and Frank Kalwaites, Highland Park, N.J., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts
Filed June 17, 1957, Ser. No. 666,009
8 Claims. (Cl. 162—114)



8. The method of producing a unitary, nonwoven patterned fibrous sheet from an aqueous slurry of fibers which comprises: removing liquid from the slurry to form a layer of wet fibers in mechanical and frictional engagement while supporting the same upon a freely permeable, flexible, papermaking surface having a predetermined topography and a predetermined arrangement of passages therethrough, said fibers being free of hydration bonds; and while said fibrous layer is so supported directing streams of water in a predetermined pattern against the fibrous layer to thereby produce fluid flow along predetermined courses, over said papermaking surface and through said passages to move individual fiber elements of the layer in directions into packed groups of fibers disposed in an arrangement corresponding to said predetermined courses of fluid flow.

3,042,577
SURFACE TREATMENT OF WET FELTS
George W. Thomas, Cloquet, Minn., assignor to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,940
10 Claims. (Cl. 162—115)



1. In the method comprising disturbing the formation of a mobile board-forming levelized mass of fiber and water in process of being dewatered from an aqueous slurry on a felting screen to a wet felt for drying to a rigid board, by directing an aqueous jet onto the levelized surface of the mass in a manner to form irregular depressions and elevations in said surface, said mass containing additive binder for the fibers dispersed in the water and subject to removal from the fibers by dispersion in water passing through the fibers, the improvements wherein said aqueous jet contains binder for the fibers dispersed therein to substitute in function for said first-mentioned binder, whereby on further reduction in water content, substitute binder from the jet remains in the aqueous residue of the jet to function with respect to the fibers washed by said jet.

3,042,578
INSULATING PRODUCT AND ITS MANUFACTURE
Paul S. Denning, Kissimmee, Fla., assignor to Johns-Manville Perlite Corporation, a corporation of Illinois
No Drawing. Filed Sept. 19, 1955, Ser. No. 535,305
25 Claims. (Cl. 162—171)

25. A molded light weight insulating material consisting essentially of particles of expanded perlite some of which are as fine as 100 mesh in size, the perlite particles being in substantial contact, said contact being characterized by point contact as distinguished from surface contact, thereby leaving a multitude of connecting interstices between the particles, and a minor amount of short fiber lying in said interstices and constituting a fiber network to hold said perlite in the molded shape, and a binding constituent consisting essentially of organic material.

3,042,579
BACTERICIDAL PROCESS USING p-HYDROXY-DIPHENYLAMINE
Ernst Jacobi and Dietrich Erdmann, Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany, a corporation of Germany
No Drawing. Filed Aug. 17, 1959, Ser. No. 833,911
Claims priority, application Germany Aug. 30, 1958
3 Claims. (Cl. 167—31)

1. Method of killing bacteria which comprises subjecting the bacteria to the action of p-hydroxy-diphenylamine.

3,042,580
AEROSOL GENERATING PREPARATIONS
Ernst Jacobi and Hans Bremer, Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany, a German corporation
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,718
Claims priority, application Germany Jan. 30, 1958
6 Claims. (Cl. 167—39)

1. A composition for use in the preparation of aerosols consisting essentially of 1,5-endomethylene-3,7-di-nitroso-1,3,5,7-tetraaza-cyclooctane in a concentration of approximately 5 to 55% and a member of the group consisting of insecticides, fungicides, bactericides, repellents, and organic dyestuffs.

3,042,581
NEW SALTS OF ISONICOTINIC ACID HYDRAZONE COMPOUNDS AND A PROCESS OF MAKING SAME
Henry Penau, Paris, and Guy Hagemann, Vincennes, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France
No Drawing. Filed Oct. 16, 1957, Ser. No. 690,449
Claims priority, application France July 15, 1954
11 Claims. (Cl. 167—65)

1. The salt of the isonicotinic acid hydrazone of benzaldehyde-m-sulfonic acid with an antibiotic having a basic group, said antibiotic being selected from the group consisting of streptomycin, dihydrostreptomycin, erythromycin, framycetin, and neomycin, said salt having a substantially lower toxicity and a substantially higher growth inhibiting effect on tubercle bacilli than the antibiotics themselves and their reaction products with isonicotinic acid hydrazide.

3,042,582
MITOMYCIN RECOVERY FROM FERMENTATION BROTH
Alexander Gourevitch and Bernard Chertow, Syracuse, and Joseph Lein, Fayetteville, N.Y., assignors, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 11, 1958, Ser. No. 779,520
7 Claims. (Cl. 167—65)

1. In a process for the production of mitomycin from a mitomycin-containing whole broth, the step of adding to the whole broth at least about 0.001% by weight of the whole broth of an alkali metal alkyl sulfate wherein the alkyl radical has from 8 to 18 carbon atoms.

3,042,583
WATER-SOLUBLE PROTEIN FROM FISH AIR BLADDER AND INFANT COLIC TREATMENT THEREWITH
Hans Kosenkranius, 2069 Seymour Ave., Cincinnati 37, Ohio
No Drawing. Filed Oct. 15, 1958, Ser. No. 767,293
11 Claims. (Cl. 167—74)

1. The process of recovering proteins from the air bladder of *Centropomus undecimalis*, comprising the steps of extracting the air bladder with hot water and filtering the extract.

3,042,584
TREATMENT AND USE OF ENZYMES FOR THE HYDROLYSIS OF STARCH
Earl R. Kooi, La Grange, Clarence F. Harjes, Hinsdale, and John S. Gilkison, Chicago, Ill., assignors to Corn Products Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 22, 1960, Ser. No. 77,531
2 Claims. (Cl. 195—31)

1. A process for selective removal of transglucosidase activity from a fungal amylase preparation obtained from an organism selected from the group consisting of members of the Aspergillus genus and members of the Rhizopus genus, said preparation containing transglucosidase and glucamylase activities, which comprises treating said amylase preparation in aqueous medium with a clay mineral in an amount up to 50 grams of clay mineral per 100 units of glucamylase activity and not greater than that which will remove 46 percent of the glucamylase activity to adsorb the transglucosidase on the clay mineral, separating the medium from the clay mineral, and recovering said medium substantially free from transglucosidase activity, said recovered medium containing at least 54 percent of the glucamylase activity of the original preparation.

3,042,585
FERMENTATION PROCESS FOR PRODUCING L-GLUTAMIC ACID
Tetsuo Ogawa, Tokyo, Toshinao Tsunoda, Kanagawa-ken, and Shinji Okumura and Asaichiro Ozaki, Tokyo, Japan, assignors to Ajinomoto Company, Inc., Tokyo, Japan, and Sanraku Distillers Company, Inc., Tokyo, Japan
No Drawing. Filed Feb. 21, 1961, Ser. No. 104,191
Claims priority, application Japan Apr. 20, 1957
8 Claims. (Cl. 195—47)

1. A fermentative process for the production of L-glutamic acid which comprises cultivating ATCC No. 13,403 in a culture medium consisting essentially of a crude hydrolyzed mash of starch, as the carbon source, and sodium nitrate, as the nitrogen source, and having a pH of between approximately 5.0 and 9.0, under aerobic conditions until appreciable quantities of L-glutamic acid are formed therein.

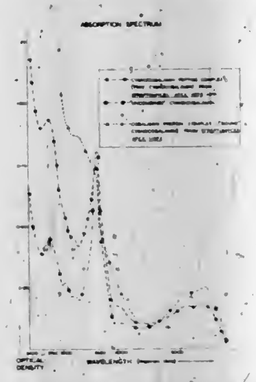
3,042,586
PURIFICATION OF STREPTOKINASE
Malcolm Siegel and Gabriel Palombo, Concord, N.H., and Werner Baumgarten, North Hills, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Sept. 29, 1959, Ser. No. 843,062
4 Claims. (Cl. 195—66)

1. The method of purifying streptokinase which comprises bringing into contact with DEAE cellulose a solution of streptokinase in a phosphate buffer having a molar concentration of from 0.005 to 0.015, washing the cellulose with a phosphate buffer having a molar concentration between 0.02 and 0.06 to remove impurities, and removing streptokinase from the cellulose with a phosphate buffer having a molar concentration between 0.06 and 0.15.

3,042,587
STABILIZED DESOXYRIBONUCLEASE PREPARATION
Werner Baumgarten, North Hills, and Reginald F. Johnson, Morrisville, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 29, 1960, Ser. No. 72,324
3 Claims. (Cl. 195—68)

1. The method of stabilizing a preparation containing pancreatic desoxyribonuclease which comprises adding to it a salt having its cation selected from the group consisting of calcium and barium, the salt being added in an amount such that the calcium ions are present in the range of 1.35% to 4.2% and the barium ions are present in the range of 4.7% to 14.8% by weight based on the desoxyribonuclease.

3,042,588
PROCESS FOR PRODUCING COBALAMIN-PEPTIDE COMPLEXES
John Godfrey Heathcote, Grange Park, St. Helens, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company
Filed Mar. 26, 1958, Ser. No. 724,109
Claims priority, application Great Britain Apr. 4, 1957
4 Claims. (Cl. 195—80)



1. A process of producing a cobalamin-peptide complex wherein a suitable nutrient medium is fermented with a cobalamin-producing organism and thereafter subjecting a product of the fermentation containing bound cobalamin-protein complex in solution to the action of a degrading agent and continuing such action until the molecular weight of the degraded product constituting the cobalamin-peptide complex is below about 15,000 but substantially above that of uncombined cobalamin, to produce a product which is effective against pernicious anemia upon oral administration.

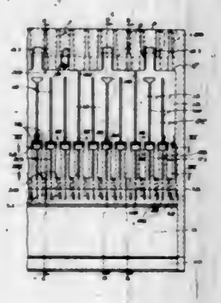
3,042,589
COKE OVEN CONSTRUCTION
Carl Otto, 8 The Beachway, Manhasset, N.Y.
Filed Jan. 3, 1961, Ser. No. 80,261
7 Claims. (Cl. 202—139)



1. A coke oven battery comprising a plurality of spaced apart coking chambers and heating walls therebetween,

each of said coking chambers being variably tapered over the length of the chamber and having a steeper taper at the pusher side of said chamber than at the coke side of said chamber.

3,042,590
HIGH CHAMBERED COKING RETORT OVEN
Joseph Van Ackeren and Edward J. Helm, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Apr. 13, 1961, Ser. No. 102,807
17 Claims. (Cl. 202—144)



7. A heating flue system for high chambered horizontal coking retort ovens, comprising: a vertical combustion flue constituted of oppositely disposed liner wall portions to form the sides of coking chambers alongside the heating flue and spaced tie wall portions interconnecting the liner wall portions and forming transverse partition walls between the internal flue space formed by said liner and tie wall portions and similar flue spaces on the opposite sides of the transverse partition walls; a base portion for supporting said heating flue and the adjoining portions of the coking chambers; a pair of regenerators below said base portion; regenerator riser ducts centrally located within each of said transverse partition walls and each extending upwardly from the top of the base portion of the heating flue to an intermediate level higher up in the flue, with the riser duct in each partition wall terminating in two elevated outlet high burner branch ports, located respectively in the flue spaces along the opposite sides of the partition walls; low burner regenerator ducts and ports located in the base portion of the heating flue and communicably connecting a pair of said regenerators directly with the bottom of the flue space within said heating flue for combustion in a lower combustion zone therein; a high burner regenerator duct located in the base portion for the heating flue along one side of the low burner regenerator ducts and communicably connecting one regenerator of said pair with the riser duct in one of said partition walls at the top of the base portion of the heating flue; and a separate high burner regenerator duct located in the base portion for the heating flue along the opposite side of the low burner regenerator ducts from the side at which the high burner duct for said one regenerator is located, said separate high burner regenerator duct likewise communicably connecting the other regenerator of said pair with the riser duct in the other of said partition walls at the top of the base portion of the heating flue, said elevated outlet ports being located in ledges projecting from the partition walls slightly into the gas flow spaces of the flues, and opening upwardly in the flues inwardly from the side faces thereabove of the upper portions of the partition walls between the flues for vertical flow generally parallel with the flow of gas from lower down in the flues.

3,042,591
PROCESS FOR FORMING ELECTRICAL CONDUCTORS ON INSULATING BASES
Erwin E. Cado, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed May 20, 1957, Ser. No. 660,420
7 Claims. (Cl. 204—15)

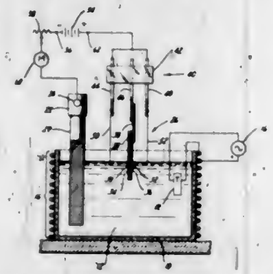
7. The method of producing a printed pattern of conductive material on a permanent insulating base, said method comprising the steps of: molding the surface of the insulating base to provide recessed and non-recessed surfaces in accordance with the printed pattern desired; applying to the surface of said base, including the recessed and nonrecessed surfaces thereof, a film of conductive material; contacting the surface of said base with an applicator carrying a continuously distributed coating of masking material whereby masking material contacts and is transferred only to the non-recessed surfaces of said base leaving the conductive film exposed at the recessed surfaces thereof; electroplating a coating of conductive material on the exposed conductive film at the recessed surfaces of said base; and removing said masking material and the portions of conductive film underlying the masking material at the non-recessed surfaces of said base.

3,042,592
POWER SUPPLY FOR CHROMIUM PLATING
Glenn R. Schaer, Columbus, Ohio, assignor, by mesne asignments, to General Development Corporation, Miami, Fla., a corporation of Delaware
Filed June 5, 1959, Ser. No. 818,302
3 Claims. (Cl. 204—51)



1. In the art of chromium plating a metal object wherein the object is constituted the cathode to be chromium plated in an electrolytic circuit with an anode and plating solution comprising an aqueous solution of chromic and sulfuric acids adapted for chromium plating, the improvement which comprises applying a three-phase, half wave rectified voltage to said anode and cathode, one of said phases having its normal phase relationship reversed.

3,042,593
ELECTROCHEMICAL METHOD FOR CLEANSING SEMICONDUCTIVE DEVICES
William Michlin, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Sept. 23, 1957, Ser. No. 685,536
13 Claims. (Cl. 204—141)



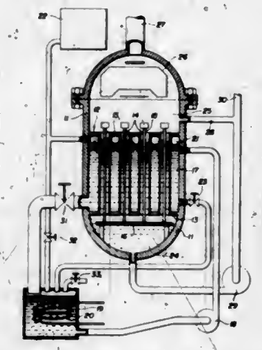
1. A method for cleansing a semiconductor device which comprises a body of semiconductive material and a rectifier electrode positioned thereon containing at least one metal selected from the group consisting of aluminum, gallium and indium, said method comprising the steps of: applying an electrolyte to said electrode and

to the surface portion of said body surrounding said electrode while maintaining said electrode at a potential positive with respect to said electrolyte; said electrolyte consisting essentially of water, a first substance composed of at least one compound selected from the group consisting of sodium hydroxide and potassium hydroxide, for supplying said electrolyte with hydroxyl ions, and a second substance composed of at least one compound selected from the group consisting of sodium cyanide and potassium cyanide, for supplying said electrolyte with cyanide ions, said first and second substances having respective concentrations in said water such that the hydroxyl ion concentration therein is between about 0.025 molal and about 1.5 molal, the cyanide ion concentration therein is between about 0.1 molal and about six molal, and the quotient of said hydroxyl ion concentration divided by said cyanide ion concentration has a maximum value of about 0.25.

3,042,594
VIBRATION COMPACTION
Joseph J. Hauth, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Mar. 7, 1960, Ser. No. 13,404
3 Claims. (Cl. 204—154.2)

1. A method of compacting a powder consisting of different size range fractions within a metal container comprising vibrating the container in a vibrator giving a vertical shake to the container at frequencies above and below its resonant frequency including a harmonic of the resonant frequency and also sweeping the frequency of vibration across the resonant frequency several times thereby following the change in resonant frequency caused by compaction of the powder.

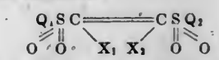
3,042,595
NEUTRONIC REACTOR
John Cobb, Mountain View, Charles M. Rice, Palo Alto, Wayne L. Ross, Mountain View, and Kenneth W. Sauer, Palo Alto, Calif., assignors to American Radiator and Standard Sanitary Corporation, a corporation of Delaware
Filed Apr. 15, 1957, Ser. No. 652,900
2 Claims. (Cl. 204—154.2)



1. The method of operating a boiling neutronic reactor having a core, a light water coolant, a separate water moderator and fissionable material disposed in said light water coolant, the reactor being one which has the operating characteristic of functioning with positive and negative void coefficient of reactivity comprising: maintaining a relationship between the relative proportions of coolant and moderator to each other and to the amount of fissionable material to maintain for relatively small incremental heat removal a positive void coefficient of reactivity, under which the reactor is automatically load following responsive to vapor pressure developed, varying the moderator level to increase the range of control of reactivity to supply relatively large load demands while maintaining positive void coefficient of reactivity.

3,042,596
PHOTOISOMERIC PREPARATION OF TRANS BIS ORGANOSULFONYL ETHYLENES
James D. Johnston, Baton Rouge, La., assignor to Pittsburgh Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed July 15, 1960, Ser. No. 42,971
7 Claims. (Cl. 204—158)

1. The method of converting the cis isomer of a compound having the formula



wherein Q_1 and Q_2 are selected from the group consisting of alkyl, aryl, haloaryl and nitroaryl and X_1 and X_2 are selected from the group consisting of hydrogen and halogen to the trans isomer comprising treating said cis isomer with bromine in the presence of ultraviolet light.

3,042,597
METHOD FOR THE CONCENTRATION AND SEPARATION OF METALS
Ernst Joseph Schumacher, Ruschlikon, Zurich, Switzerland, assignor to J. R. Geigy A.-G., Basel, Switzerland
Filed Oct. 13, 1959, Ser. No. 846,143
Claims priority, application Switzerland Jan. 31, 1957
12 Claims. (Cl. 204—180)



1. A process for concentrating the ions of at least one metal, comprising dissolving material containing said at least one metal in an ionizing solvent, placing the solution thus formed in the space between an anode and a cathode, establishing between said anode and said cathode and through said ionizing solvent a concentration gradient of a complexing base having a steepness of from 10^{-30} to 1 mol. per litre per cm., said complexing base being present in an amount of about 1 to 10^3 times the equimolecular amount of the said at least one metal, the concentration gradient increasing from the anode to the cathode, the complexing base being one which will form metal containing complex anions with the ions of said at least one metal and which takes part in the instantaneous interconversion of the ions of said at least one metal in the ionizing solvent, and while containing the ionizing solvent so as to prevent free convection while permitting ion migration, applying a current through said ionizing solvent from the anode to the cathode for a time sufficient for the complex anions and ions of said at least one metal to reach an equilibrium position with regard to the gradient in the cathode-anode interspace, whereby the metal-containing anions and metal ions of said at least one metal are collected in a small zone in the ionizing solvent in which substantially half of the metal containing ions are in anionic form.

3,042,598
SHIELDED THORIUM FUEL ELEMENT
Russell L. Crowther, Saratoga, Calif., assignor to General Electric Company, a corporation of New York
Filed Oct. 3, 1960, Ser. No. 59,993
6 Claims. (Cl. 204—193.2)

1. A fuel element for use in a nuclear reactor which comprises an inner fertile portion comprising Th^{232} which is converted at least in part to U^{233} by neutron ir-

radiation, and an outer portion comprising a neutron shield material selected from the class consisting of Np^{237}, Np^{238}, and Am^{241} and having strong neutron resonances

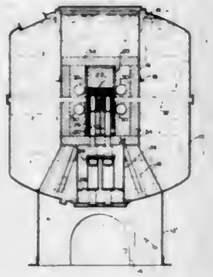


in the range of from about 0.05 e.v. to about 10.0 e.v. to absorb from the neutron flux neutrons of energies in this range and substantially reduce neutron capture in Pa^{233} present during the conversion.

3,042,599
LOW POWER NUCLEAR REACTORS

Arthur T. Biehl, Danville, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Nov. 26, 1956, Ser. No. 624,295
14 Claims. (Cl. 204—193.2)



1. A low power nuclear reactor core formed of a homogeneous mixture of polyethylene and U 235 enriched UO_2 particles having a diameter of 10–30 microns, said polyethylene being pre-irradiated to about 3 megarep.

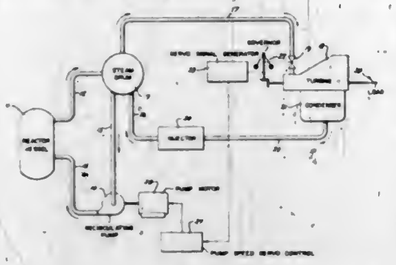
4. A core assembly for a low power nuclear reactor comprising a fluid tight core tank, a horizontally extending thin partition member disposed therein dividing said tank into upper and lower chambers, a solid form hydrogen moderated UO_2 core disposed in said tank, said core having a first sub-critical mass portion disposed above said partition member and supported thereby and having a second sub-critical mass portion disposed beneath said partition member, means supported by said tank and disposed within said lower chamber operable to hold said second core portion against said partition member in reactive relation with said first core portion, said means including a heat responsive member disposed within said core operable in response to a predetermined increase in temperature of said core to release said second core portion and allow the same to drop downwardly within said lower chamber out of reactive relation with said first core portion.

3,042,600
REACTOR CONTROL

Robert D. Brooks, Ballston Lake, N.Y., assignor to General Electric Company, a corporation of New York

Filed Nov. 28, 1956, Ser. No. 624,931
11 Claims. (Cl. 204—193.2)

1. An apparatus which comprises a nuclear reactor adapted to contact a liquid moderator-coolant with a nuclear chain reacting assembly, means for controlling said assembly to heat and partially vaporize said coolant, separator means for separating the vapor and liquid portions of the heated coolant discharged from said assembly, an energy extracting load means connected in vapor-receiving relation to said separator means, means for returning said liquid portion to said reactor, detecting means sensitive to changes in power demand on said load means, and means responsive to said detecting means and connected to increase the flow of liquid moderator-coolant through chain reacting assembly in response to increased

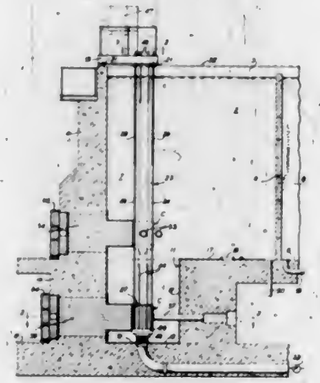


load demand and to decrease the flow of liquid moderator-coolant through said chain reacting assembly in response to decreased load demand to regulate the power output thereof to meet and follow operational changes in the power demand by varying the ratio between said vapor and liquid portions of said moderator coolant therein.

3,042,601
LIGHT WATER MODERATED NUCLEAR RESEARCH REACTOR

Ernest Loeb, Silver Spring, Md., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a corporation of Delaware

Filed Nov. 21, 1958, Ser. No. 775,494
3 Claims. (Cl. 204—193.2)

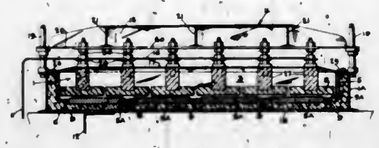


1. In a pool type research reactor, a pool having a tank depending from the bottom of said pool, said tank communicating with said pool, said tank having discharge means defined therein, at least one irradiation station in each said pool and said tank, a nuclear core within said pool, said core having a header attached thereto, means to selectively move said core into operating position at one of said stations, connecting means for connecting said header to said discharge means when said core is operably disposed at each of said stations, and circulating means disposed exterior to said tank and connected to said discharge means to forcibly circulate pool water through said core during operation of said reactor, said connecting means comprising coupling means coupling said header to said discharge means when said core is disposed at said tank station and a removable cover having an aperture defined therethrough for said tank, said aperture in said cover cooperating with said header when said core is disposed at said pool station.

3,042,602
HORIZONTAL ELECTROLYTIC CELL

Vittorio de Nora, Milan, Italy, assignor to Oronzio de Nora Impianti Elettrochimici, Milan, Italy, a corporation of Italy

Filed Oct. 25, 1960, Ser. No. 66,378
9 Claims. (Cl. 204—220)

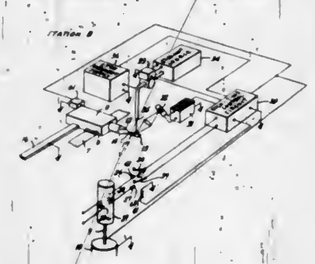


1. An apparatus for conducting the electrolysis of electrolytes which comprises an elongated inclined trough, a metal frame comprising transverse and longitudinal members, anodes suspended from said transverse members of said frame, a flexible, rupturable, plastic sheet cover attached to the sides of said trough, openings in said cover through which said anodes protrude, a mercury cathode flowing along the base of said trough, a cathode contact surface in said trough base comprising alternate longitudinal conductive and non-conductive surfaces, said conductive surfaces being lower and narrower than said non-conductive surfaces whereby during periods of reduced mercury flow the conductive surfaces remain covered with mercury, and means for imposing an electrical current on said anodes and said cathode.

3,042,603
THICKNESS MODIFYING APPARATUS

Donald E. Kelley, Glenside, Willard H. Moll, Lansdale, Stuart L. Parsons, Gwynedd Valley, and Gerald F. Pascale, Norristown, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed May 26, 1959, Ser. No. 815,938
6 Claims. (Cl. 204—228)

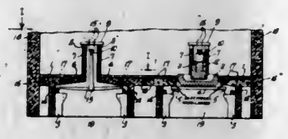


1. Apparatus for altering the thickness of a region of a solid body from its initial thickness to a given thickness, comprising means for mechanically gauging said initial thickness of said region, means coupled to said gauging means for producing an electrical quantity the value of which depends on the magnitude of said gauged thickness, means for storing said electrical quantity, means actuatable to alter the thickness of said body, the latter means being adapted to alter said thickness of said region when said body is in a given position stationary with respect to said thickness-altering means, means for actuating said thickness-altering means when said body is stationary in said given position, means responsive to said value of said electrical quantity to maintain said thickness-altering means actuated for the time required by said thickness-altering means to alter said thickness of said region from said gauged thickness to substantially said given thickness and thereafter to deactuate said thickness-altering means, and means for supplying said stored electrical quantity from said storing means to said means responsive to said electrical quantity concurrently with the actuation of said thickness-altering means and when said body is stationary in said given position.

3,042,604
FURNACES FOR ELECTROLYTIC PRODUCTION OF ALUMINUM

Reidar Hegland, Zurich, Switzerland, assignor to Aluminium-Industrie-Aktien-Gesellschaft, Chippis (Switzerland), Chippis, Switzerland, a joint-stock company of Switzerland

Filed Mar. 27, 1961, Ser. No. 98,506
Claims priority, application Switzerland Mar. 29, 1960
8 Claims. (Cl. 204—244)



1. In a furnace house for furnaces used in the electrolytic production of aluminum, the combination comprising a floor provided with a plurality of openings, generally rectangular pots in said openings respectively having their tops substantially at the level of the floor and arranged in a straight row extending along aligned longitudinal axes of the pots, said floor including parts in the form of cantilevers extending transversely of said longitudinal axes from anchorages towards regions between successive pots in the row, each pair of cantilevers which extend from opposite directions towards the corresponding region being spaced at said region, anodes dipping into the pots, and structures for supporting said anodes, each structure being located in the corresponding region between adjacent pots in the row and supporting the anodes in said adjacent pots, said structure including a pair of pillar means extending upwardly from the cantilevers respectively at said corresponding region and located between the vertical planes of the longitudinal sides of the pots permitting servicing of the pots along their longitudinal sides by the travel of servicing devices, such as crust-breakers, along said longitudinal sides from one pot to the next without obstruction from said pillar means.

3,042,605
ELECTROPLATING RACKS

William E. Belke, Chicago, Ill., assignor to Belke Manufacturing Co., Chicago, Ill., a corporation of Illinois

Application Sept. 27, 1957, Ser. No. 686,616, now Patent No. 2,958,642, dated Nov. 1, 1960, which is a division of application Ser. No. 511,264, May 26, 1955, now Patent No. 2,820,757, dated Jan. 21, 1958. Divided and this application Sept. 19, 1960, Ser. No. 56,822
1 Claim. (Cl. 204—297)

An electroplating rack comprising an elongated vertically extending metal spine comprising a flat body formed at its upper end with a downwardly open V shaped hook, said body being covered over all except at its hook with an initially plastic layer of electric insulation, the said body being provided with a plurality of transversely extending apertures spaced from each other, and each aperture being provided with a tip structure for supporting articles to be electroplated, one of said apertures being provided with an electrically conducting bushing having a tapered end and a threaded bore, the said tapered end being longitudinally grooved and provided with converging sharp edges bordering its grooves and adapted to cut a new bright contacting surface in the aperture in said body when the tapered end is forced into said aperture, a threaded shank in the bore of said bushing and extending through the bushing and through the aperture of said

body and projecting from the other side of said body, an elongated non-circular nut having a threaded bore receiving said shank on which it is threaded, and said nut having a frusto-conical end engaging the adjacent side of said body and centering said shank in said aperture, said nut drawing the nut and the bushing into said aperture to effect a tight electrical connection, said shank projecting beyond said nut with its threaded end, and having an insulating cover nut provided with a threaded bore for receiving the threaded end of the shank, and having a counterbore large enough to rotate about said tapered nut, the said cover nut engaging the plastic insulation on said body and excluding electrolyte from engagement with the tapered nut and threaded shank at this side, two pairs of wire



tip members arranged on the opposite sides of said bushing and having parallel portions engaged by a washer at their central portions and secured against an annular shoulder on said bushing, each of said wires having a diagonal diverging portion extending from each side of said bushing, and each of the wires being provided with a straight parallel portion, a diagonally inwardly extending portion, and a straight, bare end portion, one pair of said wires extending transversely to the axis of the bushing and the other pair of said wires being bent forwardly and diagonally from the bushing, providing four resilient pairs of wire ends spaced from each other to support objects to be electroplated, the wires, washer, nut, and bushing being covered over all with plastic insulation having a circular cup shape about the bushing engaging the insulation on the spine and excluding electrolyte except at the ends of the wires.

ERRATA

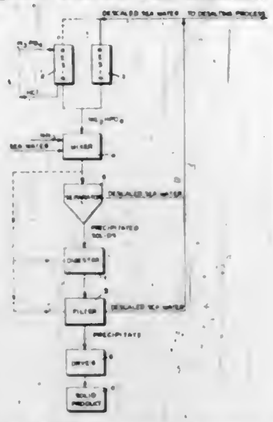
For Class 208—113 see:
Patent No. 3,042,196

For Class 208—143 see:
Patent No. 3,042,197

3,042,606
DESCALING SEA WATER

Murrell L. Salutsky, Silver Spring, and Grover L. Bridger, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
Filed May 31, 1960, Ser. No. 32,753
7 Claims. (Cl. 210—28)

1. A method for removing scale-forming compounds from sea water and recovering said compounds in useable form which comprises contacting an ion exchange resin in sequence with phosphoric acid and a sodium chloride solution to yield separately hydrochloric acid solution and disodium phosphate solution, adding said disodium phosphate solution and ammonia in stoichio-



metric amounts to a predetermined amount of sea water to precipitate the scale-forming elements, and separating the precipitates from the mother liquor.

3,042,607
DRILLING FLUID

George R. Morris, 1117 S. Toledo, Tulsa, Okla.
No Drawing. Filed Jan. 6, 1960, Ser. No. 695
3 Claims. (Cl. 252—8.5)

1. An additive for drilling fluid consisting essentially of ground material selected from the group consisting of peach seeds, olive stones, cherry stones, apricot seeds, avocado seeds and plum seeds ranging in size from about 4 mesh to about 200 mesh size, said ground material being coated with a first solution consisting essentially of water and substantial amounts of caustic soda and quebracho, and coated with a second outer coating of carboxymethylcellulose.

3,042,608
ADDITIVE FOR A WELL SERVICING COMPOSITION

George R. Morris, Three Springs Ranch, Long Lane, Mo.
Filed Apr. 17, 1961, Ser. No. 103,361
13 Claims. (Cl. 252—8.5)

3. A well servicing composition comprising the combination of a first material selected from the class consisting of an oil base drilling mud, a water base drilling mud and a cement; and an additive mixed with said first material in an amount sufficient to substantially reduce circulation losses of said first material; said additive containing an amount of ground particles of a C-stage resinoid material effective to reduce lost circulation, a major portion of said particles being relatively flat, chip-shape in appearance and sufficiently thick as to exhibit substantial flexural strength when bridging an opening in the borehole wall, the size of said particles being sufficiently large to be retained on a 150 U.S. sieve and selected so that the largest size thereof is pumpable and capable of bridging the largest expected formation opening for causing loss of said first material.

3,042,609
PREVENTION OF CORROSION IN SYSTEMS CONTAINING A CORROSIVE AQUEOUS MEDIUM

William B. Hughes, Webster Groves, Mo., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 9, 1959, Ser. No. 845,325
18 Claims. (Cl. 252—8.55)

7. A process of preventing corrosion of metals in water flooding and water disposal systems which is characterized

by injecting into an underground formation an aqueous solution of a compound selected from the group consisting of an aldehyde sulfoxylate and a salt thereof.

3,042,610
ACIDIZING OF WELLS

Peggy M. Dunlap, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 4, 1959, Ser. No. 797,048
3 Claims. (Cl. 252—8.55)

1. In a method of treating a well, the step which comprises introducing into said well a composition comprising an aqueous solution of acid containing dissolved therein in a concentration between about 2.8 and about 3.5 molar a water-soluble salt of calcium and in a concentration of at least 0.1 percent by weight of said aqueous solution of acid a water-soluble organic compound possessing surface-active properties and being selected from the group consisting of polyoxyethylene ether of dehydroabietyl amine, cocotrimethyl ammonium chloride, di-n-butyl amine, polyoxyethylene ether of nonyl phenol, polyoxyethylene ether of dodecyl phenol, polyethylamine aniline, propyl pyridine, butyl pyridine, and amyl pyridine.

3,042,611
WATERFLOODING

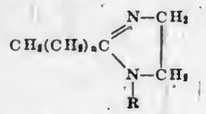
John T. Patton, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
No Drawing. Filed May 1, 1959, Ser. No. 810,251
4 Claims. (Cl. 252—8.55)

1. In a method of recovering oil from a subterranean oil reservoir, the step of flooding the reservoir with water containing an amount of dextran sufficient to increase the viscosity of the water, said water being further saturated with calcium carbonate and containing a quantity of preservative sufficient to reduce the tendency of the dextran to degrade.

3,042,612
LOW FLUID LOSS COMPOSITION

Albert H. Roebuck, Fort Worth, Tex., and James B. Scott, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Oct. 26, 1959, Ser. No. 848,505
15 Claims. (Cl. 252—8.55)

1. A low liquid loss additive consisting essentially of at least .0025 part of a finely divided solid containing particles varying in size from about 0.005 to 2 microns, an amount of .015 to .08 part of an organo sulfonate dispersing agent, an amount of .01 to .08 part an agglutinant and an amount sufficient to reduce fluid loss of an at least partially oil-soluble surface active agent selected from the group consisting of polyamines, alkyl substituted imidazolines having the formula



in which n is at least 10 and R is selected from the group consisting of hydrogen and alkyl and substituted alkyl groups containing from 1 to 3 carbon atoms and N-acyl sarcosines.

3,042,613
PREPARATION OF LUBRICANT ADDITIVE AND LUBRICANT COMPOSITION CONTAINING SAME

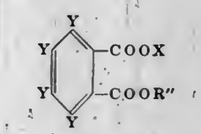
Norman E. Lemmon, Hammond, and Albert R. Sabol, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Nov. 20, 1958, Ser. No. 775,118
11 Claims. (Cl. 252—32.7)

1. In the process of preparing an additive combination for hydrocarbon lubricating oils, which additive combination consists essentially of a polymeric high molecular weight unsaturated polybasic carboxylic acid and an alkaline earth-containing phosphorus sulfide-hydrocarbon reaction product obtained by reacting a normally nongaseous hydrocarbon with a phosphorus sulfide at a temperature of from about 150° F. to about 600° F., hydrolyzing the resultant phosphorus sulfide-hydrocarbon reaction product at a temperature of from about 200° F. to about 500° F., and reacting said hydrolyzed reaction product with sufficient amount of a basic alkaline earth compound to obtain a basic alkaline earth-containing phosphorus sulfide-hydrocarbon reaction product having an excess alkalinity of at least 2 milligrams NaOH per gram of product, the improvement of making said basic alkaline earth-reacted hydrolyzed reaction product suitable for admixing with a polymeric high molecular weight unsaturated polybasic carboxylic acid in the ratio of from about 20:1 to about 20:2, respectively, in a hydrocarbon lubricating oil without thickening said basic admixture, which improvement comprises blowing said alkaline earth-containing phosphorus sulfide-hydrocarbon reaction product with carbon dioxide at a temperature of from about 100° F. to about 350° F. for a time sufficient to reduce the alkalinity of said alkaline earth-containing phosphorus sulfide-hydrocarbon reaction product to a value of about zero milligram NaOH per gram of product prior to admixture with said polymeric high molecular weight unsaturated polybasic carboxylic acid.

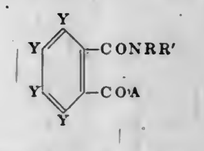
3,042,614
GREASES CONTAINING TETRAHALOPHTHALYL COMPOUNDS AND ORGANOPHILIC SILICEOUS MATERIALS AS THICKENERS

Robert E. Halter, Verona, Paul R. McCarthy, Allison Park, and Joseph J. McGrath, Monroeville, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Apr. 15, 1960, Ser. No. 22,401
18 Claims. (Cl. 252—33.6)

1. A lubricating composition comprising a dispersion in a lubricating oil of a sufficient amount to thicken the lubricating oil to a grease consistency of a tetrahalophthalyl compound selected from the group consisting of metal salts of a tetrahalophthalic acid; tetrahalophthalates having the formula:



where X is selected from the group consisting of hydrogen and a metal selected from the group consisting of sodium, potassium, lithium, calcium, barium, strontium, aluminum and zinc; Y is selected from the group consisting of chlorine, bromine and iodine; and R'' is selected from the group consisting of aliphatic, alicyclic and aromatic hydrocarbon radicals having from 1 to 22 carbon atoms; and tetrahalophthalamates having the formula:



where A is selected from the group consisting of OR, OM and NRR'; M is a metal selected from the group consisting of sodium, potassium, lithium, calcium, barium, strontium, aluminum and zinc; Y is selected from the

group consisting of chlorine, bromine and iodine; and R and R' are selected from the group consisting of hydrogen and aliphatic, alcyclic and aromatic hydrocarbon radicals having from 1 to 22 carbon atoms.

3,042,615

GREASES THICKENED WITH LITHIUM SOAPS AND CALCIUM SOAPS OF FATTY ACIDS CONTAINING 12–14 CARBON ATOMS

Leslie U. Franklin and Julius C. Gebhart, Port Arthur, Tex., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 5, 1960, Ser. No. 6,858
5 Claims. (Cl. 252—40)

1. A lubricating composition comprising a mineral lubricating oil thickened to the consistency of a grease with about 1.7 to about 17 percent by weight of a lithium soap of a fatty acid having from 16 to 22 carbon atoms and about 0.3 to about 8 percent by weight of a calcium soap of a saturated fatty acid having from 12 to 14 carbon atoms.

3,042,616

PROCESS OF PREPARING MAGNETIC INK

Robert J. Brown, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 26, 1958, Ser. No. 757,401
13 Claims. (Cl. 252—62.5)

2. A process of preparing magnetic ink suitable for use in high speed magnetic printing which comprises the steps of wetting a magnetic carrier substance having a particle size of about 10 microns and having a high permeability with a solution of a water insoluble resin maintained at temperatures of about 100° F., adding said wetted substance with agitation to an aqueous solution of a viscous organic material support medium to form thereby small spherical liquid droplets discretely maintained in said support medium and comprising solid magnetic carrier-resin material surrounded by a sheath of water immiscible solvent, cooling said mixture by the addition of water to cause gellation of the droplets, washing and air drying the gel particles to cause said particles to solidify thereby as spherical magnetic carrier-resin magnetic ink particles.

5. A process of preparing magnetic ink suitable for use in magnetic printing machines which comprises the steps of wetting a magnetic carrier substance having a particle size in the order of microns and having a high permeability with a solution of a water insoluble resin capable of being affixed to a record material, providing an aqueous slurry of a finely divided water-insoluble inert inorganic solid support medium for said wetted substance, agitating the mixture to form spherical liquid droplets discretely maintained in the support medium and comprising magnetic carrier, resin and a partially water miscible solvent and then extracting the solvent therefrom to cause thereupon solidification of the magnetic carrier-resin particles as essentially solid spheres.

3,042,617

MAGNETIC BODIES AND METHODS OF PREPARATION THEREOF

Howard Lessoff, Milton, Mass., assignor to Radio Corporation of America, a corporation of Delaware

Filed Dec. 31, 1958, Ser. No. 784,388
8 Claims. (Cl. 252—62.5)

1. A magnetic body having a value of Q greater than 100 at about 100 megacycles consisting essentially of sintered particles of cubic nickel-zinc ferrite containing about 50 mol percent Fe_2O_3 and having incorporated therein between 0.5 and 10.0 mol percent barium oxide.

3,042,618

PREPARATION OF A BISTABLE FERRITE CIRCUIT ELEMENT

James M. Brownlow, Fishkill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 9, 1959, Ser. No. 819,056
3 Claims. (Cl. 252—62.5)

3. A method of forming a high speed, open flux path ferrite memory element which comprises the steps of mixing 32.2 grams of magnesium oxide, 38.7 grams of manganese sesquioxide and 135.7 grams of ferric oxide, corresponding to formula $Mg_{.8}Mn_{.3}Fe_{1.7}O_4$, wet ball milling the mixture for 10 hours, oven drying at 110° for two hours, calcining in air at 1000° for three hours, repulverizing the mass to a fine powder, mixing 40 grams of pyroxylin and 500 grams of amyl acetate therewith, ball milling for four hours, pouring onto a glass surface covered with a thin layer of gelatin, placing on a spining table, spin drying, cutting the resultant thin sheet of ferrite into bars having a length of 0.75 inch, a width of 0.12 inch and a thickness of 0.0004 inch (9 microns), separating the bar ferrite elements from the support surface by dissolving out the gelatin with warm water, placing the individual elements in a platinum boat lined with alumina, sintering at 1400° C. for five minutes and slowly cooling to room temperature.

3,042,619

FERRITE COMPOSITION FOR BISTABLE MAGNETIC CIRCUITS

James M. Brownlow, Fishkill, and Ernest C. Schuenzel, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 31, 1959, Ser. No. 863,357
4 Claims. (Cl. 252—62.5)

1. A magnetic material consisting of the reaction product produced by heating together in a covered receptacle an intimate mixture of between 13–25 mol percent of an oxide selected from the group consisting of ZnO and CdO, 10–30 mol percent MgO, 12–35 mol percent MnO, and 30–45 mol percent Fe_2O_3 in a non-reducing atmosphere at a temperature within the range of 1000°–1650° C. from 15 minutes to 24 hours said material having a low switching constant of not more than about 0.7 oersted microsecond.

3,042,620

ANTI-SEEP AGENT

Neal E. Dry, U.S. Army, and William P. Scott, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,828
2 Claims. (Cl. 252—72)

1. The method of imparting anti-seepage properties to an aqueous ethylene glycol composition which comprises incorporating in said aqueous composition tributoxy ethyl phosphate as an anti-seep agent in an amount on a weight basis varying from about .01 to .50 part of the phosphate per 100 parts of the ethylene glycol.

3,042,621

DETERGENT COMPOSITION

Hans George Kirschenbauer, Allendale, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 1, 1957, Ser. No. 693,801
14 Claims. (Cl. 252—99)

1. A detergent composition which upon admixture with water is adapted to yield a non-acidic pH condition and an acidic pH condition successively to the resulting cleaning solution which comprises about ½ to 99% by weight of a water-soluble detergent selected from the group consisting of water-soluble organic neutral and alkaline anionic and non-ionic detergents, and a water-soluble acidic compound having a coating of a water-dispersible material resulting in a retarded rate of solubility, said acidic compound being present in excess so that it renders the solution acidic when dissolved, said composition dissolving sufficiently upon admixture with water so that the resulting cleaning solution initially exhibits a non-acidic pH condition which is converted to an acidic pH condition upon dissolving of said water-soluble acidic compound after a predetermined time.

3,042,622

ABRASIVE CLEANING COMPOSITION

Hans George Kirschenbauer, Allendale, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 1, 1957, Ser. No. 693,803
16 Claims. (Cl. 252—99)

1. An abrasive cleaning composition which upon admixture with water is adapted to yield an alkaline pH condition and an acidic pH condition to the resulting cleaning solution in a predetermined order of succession which comprises a mixture of a major proportion of a water-insoluble siliceous abrasive material, about ½ to 25% by weight of a water-soluble alkaline inorganic builder salt which upon contact with water renders the solution alkaline, about ½ to 25% by weight of a water-soluble normally solid acid which upon contact with water renders the solution acidic, one of the two latter ingredients dissolving sufficiently upon admixture of said composition with water so that the resulting cleansing solution initially has one of said pH conditions and the other ingredient having a coating of water-dispersible material resulting in a retarded rate of solubility so that it is not sufficiently soluble in said solution initially but subsequently dissolves in said solution to convert it to the other of said pH conditions.

3,042,623

SYNTHETIC DETERGENTS AND SURFACE-ACTIVE AGENTS

David H. Greene, Long Beach, Calif., assignor to Universal Detergents, Inc., Fort Worth, Tex., a corporation of Delaware

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,417
7 Claims. (Cl. 252—137)

1. A composition having enhanced cleaning and detergent and water-softening properties consisting essentially of, on a dry weight basis: (*a*) from 40 to 55 parts of a mixture of (1) an alkyl aryl sulfonate normally incapable of forming solutions and true liquids at concentrations of above about 2 to 10% in water, and (2) an alkali metal sulfonate of mixed hydrocarbons substantially comprising alpha and beta methyl naphthalenes and dimethyl naphthalenes, said alkali metal sulfonate being virtually free from olefins and constituting from 40 to 70% of said mixture; (*b*) from 30 to 38 parts of a water-soluble polyphosphate, and (*c*) from 20 to 30 parts of an ammonium sulfate; said composition being adapted to form water solutions at all concentrations up to about 48% of said solids at normal temperatures, detergent properties of said composition materially exceeding the detergent properties of the said mixture when used alone.

3,042,624

MANGANESE COMPLEXES OF AZO COMPOUNDS AS INFRARED ABSORBERS

Ralph A. Coleman, Middlesex, and John L. Rodgers, Somerville, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Feb. 10, 1959, Ser. No. 792,256
4 Claims. (Cl. 252—300)

1. A method of increasing the infrared absorption of materials which comprises incorporating therein at least 0.01% by weight of the manganous complex of an azo compound selected from the group consisting of 4-hydroxy-3-(2,4-diaminophenylazo)benzenesulfonic acid, 4-hydroxy - 3-(2-hydroxy - 1-naphthylazo)benzenesulfonic acid, and 4-hydroxy-3-(2-hydroxy-1-naphthylazo)benzenesulfonamide.

3,042,625

PROCESSES FOR BREAKING PETROLEUM EMULSIONS

Willard H. Kirkpatrick, Sugar Land, and Virgil L. Seale, Houston, Tex., assignors to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed Oct. 28, 1960, Ser. No. 65,563
13 Claims. (Cl. 252—342)

1. A process for breaking emulsions of the water-in-oil type which comprises subjecting said emulsion to the action of an organic, dicarboxy acid mixed ester of (*a*) a polyoxypropylated alkyl phenol-formaldehyde condensation products having 4–15 phenolic nuclei, said alkyl phenol being at least 75% difunctional alkyl phenol with the alkyl groups of the phenol having an average number of carbons in the range of 4–15, the weight ratio of oxypropylene groups to condensation product falling between about 1:2 and 9:1, respectively, and (*b*) polyoxyalkylene glycol having a molecular weight of at least 1200, said glycol selected from the group consisting of polyoxypropylene glycol and oxyethylene-oxypropylene glycol in a weight ratio of oxyethylene groups to oxypropylene groups not exceeding 4:1, the weight ratio of polyoxypropylated condensation product to polyoxyalkylene glycol being between about 1:6 and 6:1, and separating the resolved water and oil phases of the broken emulsion.

3,042,626

POLYMERIZATION CATALYST AND PROCESS

John MacMillan Bruce, Jr., Claymont, and Ivan Maxwell Robinson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 21, 1956, Ser. No. 585,974
4 Claims. (Cl. 252—429)

1. A catalyst composition for use in the polymerization of ethylenically unsaturated hydrocarbons consisting essentially of the product formed by admixing in the presence of a liquid hydrocarbon diluent (1) a titanium tetrahalide, (2) a tin halide, and (3) an organometallic compound selected from the class consisting of lithium aluminum tetraalkyls and magnesium diaryls, said organometallic compound being employed in molar proportions to the titanium tetrahalide varying from 0.3 to 10, and said tin halide being employed in amounts sufficient to increase polymerization rates.

3,042,627

METHOD OF PREPARING PLATINUM METAL-ALUMINA CATALYST

Carl D. Keith, Munster, Ind., and William P. Hettinger, Jr., Hinsdale, Ill., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

No Drawing. Filed June 7, 1957, Ser. No. 664,161
7 Claims. (Cl. 252—441)

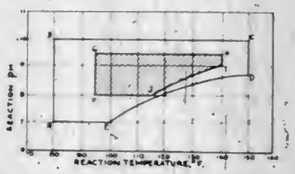
1. A method of preparing a platinum metal-alumina catalyst characterized by a low halogen ion content which

comprises commingling alumina in an aqueous medium with a platinum metal-halogen containing compound wherein the halogen of said platinum metal compound is selected from group VIIB of the periodic table having an atomic number from 35 to 53, drying the catalyst, heating to a calcination temperature of at least 800° F. in an inert atmosphere, and further calcining the catalyst in an oxidizing atmosphere to reduce halogen to a low concentration.

3,042,628
PRODUCTION OF ALUMINA AND CATALYST CONTAINING SAME

Robert H. Cramer, Woodbury, and Edward J. Rosinski, Almonesson, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

Filed Mar. 12, 1958, Ser. No. 721,015
12 Claims. (Cl. 252—465)



1. A process for producing hydrous alumina consisting essentially, on a total solids basis, of about 5 to about 50 percent by weight alpha alumina monohydrate and about 50 to about 95 percent by weight of alumina trihydrate, predominately in the form of beta alumina trihydrate, which comprises reacting aluminum metal of at least 99.9 percent purity having a surface area greater than about 1000 square inches per pound with excess water, in the absence of acid, and in the presence of a material selected from the group consisting of mercury and a mercury compound present in an amount corresponding to between about $.25\times10^{-6}$ and about 100×10^{-6} pounds of mercury per square inch of surface of aluminum metal, controlling the temperature of the reaction mixture to within the range of 80° F. to 140° F. and the pH within the range of 7 to 10, the reaction temperature and pH being correlated to lie within the area ABCDE of FIGURE 1 of the accompanying drawing for a period of between about 8 and about 96 hours during which period substantially all of the aluminum metal is converted into said hydrous alumina.

3,042,629
DYNAMOELECTRIC BRUSH

Paul Smisko, St. Marys, Pa., assignor to Stackpole Carbon Company, St. Marys, Pa., a corporation of Pennsylvania

No Drawing. Filed July 11, 1960, Ser. No. 41,738
5 Claims. (Cl. 252—507)

1. A brush for current carrying use in conjunction with electrical apparatus composed of carbon and zirconium monochloride, said zirconium monochloride being present in an amount within the range of about 1 to 30 weight percent based on the resulting brush.

3,042,630
COMPOSITIONS CONTAINING BIS(3-METHOXYPROPYLIDENE)PENTAERYTHRITOL

Walter S. Ropp, Hockessin, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 21, 1959, Ser. No. 814,675
6 Claims. (Cl. 260—2)

1. A composition comprising (1) bis(3-methoxypropylidene)pentaerythritol; (2) an aliphatic polyhydric compound having more than 2 primary hydroxy groups per molecule and comprising at least 10% primary hydroxyl groups; and (3) an acidic condensation catalyst, components (1) and (2) being present in approximately stoichiometrically equivalent amounts.

3,042,631
POLYURETHANE PREPOLYMER AND EXPANDED PRODUCT PREPARED THEREFROM

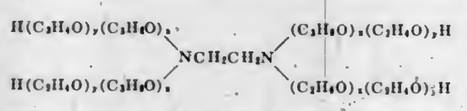
Carl V. Strandskov, Chicago, Ill., assignor to Simoniz Company, a corporation of Delaware

No Drawing. Filed Aug. 3, 1956, Ser. No. 602,065
4 Claims. (Cl. 260—2.5)

1. An expanded porous resin product comprising the foamed conjoint reaction product of a polyalkylene ether glycol essentially of the formula

$$HO(C_2H_4O)_a(C_3H_6O)_b(C_2H_4O)_cH$$

having an average molecular weight of about 1,000–12,000 and about 5–95% oxyethylene content in which a and c each has an average value of about 5–20 and b has an average value of about 15–35, a molar excess of an organic diisocyanate in a molar ratio up to about 12.5 mols of said diisocyanate per mol of glycol, and about 1–35% by weight of a compound essentially of the formula



having an average molecular weight of about 2,000–12,000 and an oxyethylene content of about 5–95% and in which x has an average value of about 2–20 and y has an average value of about 1–50, to form a prepolymer, followed by the reaction of this prepolymer with water in an amount of about 0.5–10% by weight of the glycol and diisocyanate.

3,042,632
CATALYST COMPOSITION AND PROCESS OF PREPARING POLYURETHANE FOAM CONTAINING SAME

William E. Erner, Wilmington, Del., assignor to Air Products and Chemicals, Inc., a corporation of Delaware

No Drawing. Filed June 5, 1958, Ser. No. 739,993
3 Claims. (Cl. 260—2.5)

1. The method of preparing a polyurethane foam article which method includes the steps of: dissolving an aqueous solution in a polyether glycol having an equivalent weight of about 1000 per free hydroxyl group to provide a polyol mixture, said aqueous solution containing triethylene diamine in a concentration within the range from about 0.5 to 2 molar, and said aqueous solution containing tetraalkyl ammonium hydroxide having an ionization constant greater than 0.01 in a molar concentration within the range from about 20% to about 60% of the molar concentration of the triethylene diamine, and dispersing throughout said polyol mixture from about 15 parts to about 60 parts of an organic diisocyanate per 100 parts of said polyether glycol, to form a reaction mixture which undergoes a transformation to a polyurethane foam article in the presence of tetraalkyl ammonium hydroxide and triethylene diamine as co-catalysts for said reaction mixture.

3,042,633
RUBBER POWDER

Woodrow W. White, Oxford, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 19, 1957, Ser. No. 653,745
12 Claims. (Cl. 260—3)

7. The method of making free flowing resin coated rubber powder of particles of 10 to 200 mesh size from latex which comprises first flocculating the latex and then depositing resin selected from the group consisting of phenol-aldehyde, resorcinal-aldehyde, urea-aldehyde, melamine aldehyde and aniline-aldehyde resins in which the aldehyde is selected from the group consisting of formaldehyde and acetaldehyde on the wet rubber flocs of the flocculated latex to coat the same, dewatering the coated flocs, and drying, said resin being precipitated from a soluble state in an aqueous acid medium in admixture with the flocculated rubber latex particles onto said flocculated rubber latex particles, said rubber being selected from the group consisting of natural rubber and synthetic rubber emulsion polymerizates of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with compounds which contain a $CH_2=C<$ group and are copolymerizable with butadienes-1,3.

3,042,634
POLYMERIZATION OF MONOOLEFINS IN THE PRESENCE OF COMMINUTED VULCANIZED RUBBER

Ivan Mankowich, Cheshire, Conn., Frank P. Chiavetta, Covina, Calif., and Raymond A. Chartier, Painesville, Ohio, assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 20, 1958, Ser. No. 743,490
4 Claims. (Cl. 260—4)

1. The process of making a rubber-resin product which comprises heating a mixture comprising comminuted rubber that has been vulcanized, water and resin-forming monomeric material selected from the group consisting of the monoolefines styrene, alpha-methyl styrene, and acrylonitrile, and mixtures of such monoolefines with material selected from the group consisting of butadiene and divinyl benzene in amount up to one-fourth the weight of said monoolefines, at a temperature from 125° C. to 250° C. until polymerization of said monomeric material, and recovering a dry rubber-resin product therefrom that may be masticated to a uniform smooth blend, the ratio of said monomeric material to said rubber being in the range of 1:3 to 3:1, the amount of water being from 1 to 25 parts per part of rubber, and said rubber being selected from the group consisting of natural rubber and synthetic rubber polymers of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of compounds which contain a $CH_2=C<$ group and are copolymerizable with butadienes-1,3, and synthetic rubber copolymers of about 96 to 99.5 parts of isobutylene and correspondingly 4 to 0.5 part of isoprene.

3,042,635
COMPOSITION COMPRISING ASPHALT AND MIXTURE OF RESINS AND METHOD OF PREPARING SAME

Paul R. Wood, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 9, 1959, Ser. No. 845,316
10 Claims. (Cl. 260—5)

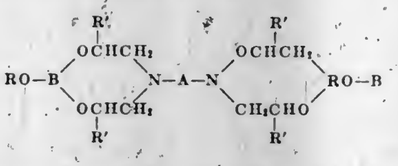
1. A composition comprising 100 parts by weight of asphalt and 1 to 20 parts by weight of a mixture of material selected from the group consisting of virgin polyisobutylene having a Staudinger molecular weight of 40,000 to 1,500,000 and virgin synthetic rubber copolymers of 70 to 99.5 parts of isobutylene and correspondingly 30 to 0.5 parts of a conjugated diolefine selected from the group consisting of butadiene-1,3, isoprene, 2-3-dimethyl butadiene-1,3 and piperylene, said copolymer having a Staudinger molecular weight of 40,000 to 1,500,000 and material selected from the group consisting of natural rubber and synthetic rubber polymers of materials selected from the group consisting of butadienes-1,3 selected from the class consisting of butadiene-1,3, isoprene, 2,3-dimethyl butadiene and piperylene and mixtures of said butadienes-1,3 with up to 60% by weight of such mixtures of compounds which contain a $CH_2=C<$ group and are copolymerizable with butadienes-1,3, the weight ratio of the former material to the latter material being in the range from 3:1 to 1:3.

3,042,636
BORACYCLOOCTANE CONDENSATION POLYMERS

Bernard Rudner and Mead S. Moores, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Dec. 17, 1959, Ser. No. 860,064
11 Claims. (Cl. 260—9)

1. The polymeric reaction product of a bis-(azaboradioxacyclooctane) of the formula:

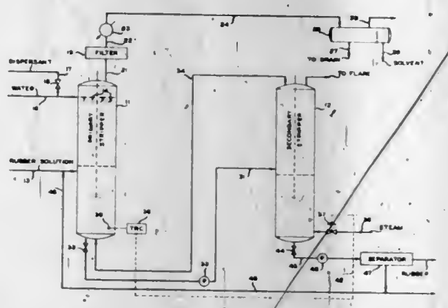


wherein R is a member selected from the group consisting of hydrogen, lower alkyl and furfuryl, R′ is a member selected from the group consisting of hydrogen and lower alkyl, and A is a divalent normal lower alkylene chain having from 2–6 carbon atoms which is attached to each nitrogen through a different carbon atom; with a polyhydric alcohol selected from the group consisting of (*a*) saturated aliphatic polyols having from 2 to 6 carbon atoms and from 2 to 4 hydroxyl groups, each on separate carbon atoms, (*b*) hydroxy(polyalkoxy)alkanols of the formula $HO(C_nH_{2n}O)_mH$ in which n is an integer having a value of 2 to 4 and m is an integer having a value of 1 to 5, (*c*) bisphenols having from 12 to 23 carbon atoms, and (*d*) cellulose.

3,042,637
RECOVERY OF POLYMERS FROM SOLUTION

Willie W. Crouch, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 23, 1960, Ser. No. 30,817
5 Claims. (Cl. 260—17.5)



1. In the process of recovering a rubbery polymer prepared by polymerizing a monomer mixture containing at least a major portion of a conjugated diene of 4 to 8 carbon atoms from a solution of said polymer in a solvent by steam stripping, the improvement comprising adding to the stripping zone an alkali metal lignin sulfonate.

3,042,638
ARTIFICIAL SNOW
Charles A. Dragotta, Bergenfield, and Albert C. Cereghino, Jr., Livingston, N.J., assignors to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 29, 1960, Ser. No. 11,919
3 Claims. (Cl. 260—23)

1. An improved artificial snow composition comprising, in combination, a flocking agent comprising between about 1 percent and about 20 percent of said composition, said flocking agent including a long chain fatty acid having from between 12 and 22 carbon atoms, a fluidizing agent in an amount of between about 1 percent and 20 percent of said flocking agent, said fluidizing agent being an ester of a short chain polyol having from 1 to 4 carbon atoms and a long chain fatty acid having from 12 to 22 carbon atoms, a propellant comprising polyhalogenated lower alkanes in an amount of about 60 percent and 90 percent of said composition, a binding agent comprising synthetic resin polymer in an amount of about between .25 percent and 2 percent of said composition, and a solvent for said binding agent which is miscible with said flocking agent.

3,042,639
MAGNETIC IRON OXIDE COATING COMPOSITIONS FOR RECORDING TAPE
Pierrepont Adams, Darien, and Lawrence E. Knees, New Canaan, Conn., assignors to Reeves Soundcraft Corp., Springdale, Conn., a corporation of Connecticut
No Drawing. Filed June 11, 1956, Ser. No. 590,361
12 Claims. (Cl. 260—23)

1. A composition for forming a flexible coating on synthetic resin flexible tape bases consisting essentially of a water insoluble, synthetic organic film-forming resin solution, capable of forming a flexible film, acicular gamma iron oxide dispersed therein and about 1–10 percent by weight of an amine salt, based on total solids, in which the amine salt is an N-alkyl alkylene diamine in which the alkyl groups range in size from C_8 to C_{18} with the average about C_{12}, and the alkylene groups average 2–6 carbon atoms, and the salt forming acid is a high molecular weight organic acid having about 8 to about 25 carbon atoms.

3,042,640
POLYPROPYLENE AND WAX COATING FORMULATION
John J. Gersic, Elmhurst, and Lawrence B. Nelson, Garden City, N.Y., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Jan. 20, 1960, Ser. No. 3,478
8 Claims. (Cl. 260—28.5)

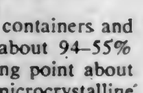
1. A wax composition for coating milk containers and similar articles consisting essentially of: about 94–55% by weight of paraffin wax having a melting point about 120–150° F., about 5–25% by weight of microcrystalline wax having a melting point about 150°–200° F., and about 1–10% by weight of a mixture of liquid propylene polymer and solid propylene polymer in which the solid to liquid ratio is between about 1 to 1 and about 1 to 7.

3,042,641
FOUNDRY MOLDING COMPOSITION CONTAINING A POLYALKYLENIMINE
Theo John West, Concord, and John L. Dewey, Pleasant Hill, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 30, 1959, Ser. No. 849,739
3 Claims. (Cl. 260—29.2)

1. A foundry molding composition comprising foundry sand, clay, water, and as an essential additament, 0.005 to 1 percent by weight of a water-soluble polyalkylenimine having a molecular weight of at least 500 and being polymerized from at least one monomer selected from the group consisting of ethylenimine, 1,2-propylenimine, 1,2-butylenimine, 2,2-dimethylethylenimine, 2,2,3-trimethylethylenimine and 2,2-dimethyl-3-n-propylethylenimine.

3,042,642
AQUEOUS TEXTILE COATING COMPOSITION CONTAINING A PERFLUOROALKYL ACRYLATE AND A METHYL PYRIDINIUM HALIDE
Carlo G. De Marco, Cochituate, and Gil M. Dias, Fall River, Mass., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Filed Oct. 6, 1959, Ser. No. 844,830
9 Claims. (Cl. 260—29.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A liquid composition for rendering a textile permanently water-resistant and oil-resistant even after repeated launderings, comprising an aqueous dispersion of an aqueous solution of a methyl pyridinium halide having the general formula:



wherein R is an aliphatic monovalent hydrocarbon radical having from 12 to 22 carbon atoms, A is selected from —O— and —CONH—, and Hal is halogen, and of a water emulsion of a perfluoroalkyl acrylate having from 4 to 10 carbon atoms in the alkyl group; said pyridinium halide being present in a ratio of from about 1 to about 4.5 parts by weight per 1 part of said perfluoroalkyl acrylate.

3,042,643
COMPOSITION COMPRISING BUTYL RUBBER LATEX, STYRENE-BUTADIENE COPOLYMER LATEX, AND HYDRAULIC CEMENT
Frederick J. Foster, Cheshire, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 30, 1960, Ser. No. 52,766
8 Claims. (Cl. 260—29.7)

1. A latex and hydraulic cement composition comprising 5 to 25 parts solids of latices of Butyl rubber and SBR rubber per 100 parts of hydraulic cement, the ratio of Butyl rubber to SBR rubber being in the range of 3:1 to 1:3, said Butyl rubber being a copolymer of 95 to 99.5 parts of isobutylene and correspondingly 5 to 0.5 parts of isoprene, and said SBR rubber being a copolymer of 75 to 30 parts of butadiene-1,3 and correspondingly 25 to 70 parts of styrene.

3,042,644
VINYLIDENE POLYMER PLASTISOLS AND METHOD OF PREPARING SAME
Elmer E. Cowell, Webster Groves, Mo., and Joseph R. Darby, St. Louis, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,671
19 Claims. (Cl. 260—31.8)

1. An improved plastisol which comprises a vinylidene polymer selected from the group consisting of homopolymers of vinylidene halide and copolymers of vinylidene halide with ethylenically unsaturated monomers copolymerizable therewith containing at least 80% by weight of vinylidene halide, homopolymers of vinyl halide and copolymers of vinyl halide with ethylenically unsaturated monomers copolymerizable therewith containing at least 80% by weight of vinyl halide dispersed in from about 25 to about 150 parts per 100 parts by weight of polymer of a primary liquid plasticizer therefor and from about 1 to about 25 parts per 100 parts by weight of polymer of a high boiling liquid aromatic hydrocarbon mixture, having a boiling point above the boiling point

of nonylbenzene, obtained as the high boiling residue from the alkylation product of an aromatic hydrocarbon of the benzene series with an alkylating agent selected from the group consisting of olefins and alkyl halides containing from 9 to 18 carbon atoms.

3,042,645
ALKYL SALICYLATES AND MIXTURES THEREOF WITH PHENOLS AS SOLVENTS FOR POLYESTER COMPOSITIONS AND METHOD OF PREPARING SAME
Arthur B. Beindorff, Decatur, Ala., and Hobson D. De Witt, New Wilmington, Pa., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
No Drawing. Filed July 23, 1959, Ser. No. 828,935
20 Claims. (Cl. 260—32.2)

1. A new composition of matter comprising a solution of a synthetic linear condensation polyester dissolved in a solvent selected from the group consisting of methyl salicylate, ethyl salicylate, isopropyl salicylate and mixtures of said salicylates with from 3 to 50 percent, based on the total weight of the solvent, of a phenol, said polyester being selected from the group consisting of (A) polyesters formed by the reaction of at least one dicarboxylic acid selected from the group consisting of aromatic dicarboxylic acids and aliphatic dicarboxylic acids and at least one glycol of the series $HO(CH_2)_nOH$ wherein n is an integer from 2 to 10, (B) the polyesters of (A) modified by 0.05 mol percent to 1.0 mol percent, based on the total weight of said dicarboxylic acid, of a chain terminator selected from the group consisting of polyalkylvinyl ethers having one terminal hydroxyl group wherein the alkyl group contains 1 to 4 carbon atoms, and compounds having the formula,

(I) $$R—O—[(CH_2)_mO]_x(CH_2)_n—OH$$

wherein R is selected from the group consisting of alkyl groups containing 1 to 18 carbon atoms and aryl groups containing 6 to 10 carbon atoms, m and n are integers from 2 to 22, and x is an integer from 1 to 100, indicative of the degree of polymeriaztion, and (C) the polyesters of (B) containing 0.05 mol percent to 4.0 mol percent, based on the total weight of said dicarboxylic acid, of said chain terminator, modified by 0.05 mol percent to 2.4 mol percent, based on the total weight of said dicarboxylic acid, of a chain-branching agent selected from the group consisting of pentaerythritol, compounds having the formula,

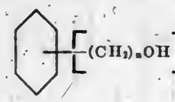
(II) $$R—(OH)_n$$

wherein R is an alkylene group containing from 3 to 6 carbon atoms and n is an integer from 3 to 6, compounds having the formula,

(III) $$R—(CH_2OH)_3$$

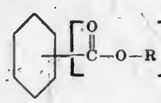
wherein R is an alkylene group containing from 2 to 6 carbon atoms, compounds having the formula,

(IV)



wherein n is an integer from 1 to 6, and compounds having the formula,

(V)



wherein n is an integer from 3 to 4 and R is an alkyl group containing 1 to 3 carbon atoms.

3,042,646
BIS(2-CHLOROETHYL) FORMAL AND MIXTURES THEREOF WITH PHENOLS AS SOLVENTS FOR POLYESTER COMPOSITIONS AND METHOD OF PREPARING SAME
Arthur B. Beindorff, Decatur, Ala., and Hobson D. De Witt, New Wilmington, Pa., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
No Drawing. Filed July 23, 1959, Ser. No. 828,934
20 Claims. (Cl. 260—33.2)

1. A new composition of matter comprising a solution of a synthetic linear condensation polyester dissolved in a solvent selected from the group consisting of bis (2-chloroethyl) formal and mixtures of bis (2-chloroethyl) formal with from 3 to 50 percent, based on the total weight of the solvent, of a phenol, said polyester being selected from the group consisting of (A) polyesters formed by the reaction of at least one dicarboxylic acid selected from the group consisting of aromatic dicarboxylic acids and aliphatic dicarboxylic acids and at least one glycol of the series $HO(CH_2)_nOH$ wherein n is an integer from 2 to 10, (B) the polyesters of (A) modified by 0.05 mol percent to 1.0 mol percent, based on the total weight of said dicarboxylic acid, of a chain terminator selected from the group consisting of polyalkylvinyl ethers having one terminal hydroxyl group wherein the alkyl group contains 1 to 4 carbon atoms, and compounds having the formula,

(I) $$R—O—[(CH_2)_mO]_x(CH_2)_n—OH$$

wherein R is selected from the group consisting of alkyl groups containing 1 to 18 carbon atoms and aryl groups containing 6 to 10 carbon atoms, m and n are integers from 2 to 22, and x is an integer from 1 to 100, indicative of the degree of polymerization, and (C) the polyesters of (B) containing 0.05 mol percent to 4.0 mol percent, based on the total weight of said dicarboxylic acid, of said chain terminator, modified by 0.05 mol percent to 2.4 mol percent, based on the total weight of said dicarboxylic acid, of a chain-branching agent selected from the group consisting of pentaerythritol, compounds having the formula,

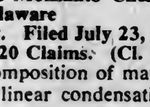
(II) $$R—(OH)_n$$

wherein R is an alkylene group containing from 3 to 6 carbon atoms and n is an integer from 3 to 6, compounds having the formula,

(III) $$R—(CH_2OH)_3$$

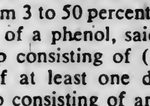
wherein R is an alkylene group containing from 2 to 6 carbon atoms, compounds having the formula,

(IV)



wherein n is an integer from 1 to 6, and compounds having the formula,

(V)



wherein n is an integer from 3 to 4 and R is an alkyl group containing 1 to 3 carbon atoms.

3,042,647
COMPOSITION CONSISTING OF POLYPYRROLIDONE AND A CHLORINATED PHENOL AND PROCESS FOR PREPARING SAME
William B. Black, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
No Drawing. Filed Apr. 9, 1959, Ser. No. 805,120
17 Claims. (Cl. 260—33.4)

1. A new composition of matter consisting of poly-

pyrrolidone and a solvent selected from the group consisting of mono-, di-, and trichlorinated phenols.

3,042,648

COMPOSITION COMPRISING AN ACRYLONITRILE POLYMER AND A 2,4-DIAMINO-5-ARYL-6-HYDROXY PYRIMIDINE DYE

Charles E. Lewis, Somerville, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application Jan. 11, 1957, Ser. No. 633,525. Divided and this application Apr. 25, 1958, Ser. No. 730,803

3 Claims. (Cl. 260—41)

1. A composition of matter comprising (1) a polymer consisting of 85 to 100% acrylonitrile with 0 to 15% of at least one non-basic monoethylenic monomer copolymerizable with acrylonitrile and (2) a dye selected from the group consisting of 2,4-diamino-5-(p-anisylazo)-6-hydroxypyrimidine and 2,4-diamino-5-(p-tolylazo)-6-hydroxypyrimidine.

3,042,649

COMPOSITION INCLUDING A SATURATED HYDROCARBON POLYMER STABILIZED WITH OXYGENATED OR SULFURIZED CARBON BLACK

Walter L. Hawkins, Montclair, and Field H. Winslow, Springdale, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 2, 1958, Ser. No. 732,468

7 Claims. (Cl. 260—41)

1. A composition comprising an essentially saturated hydrocarbon polymeric material selected from the group consisting of polyethylene, polypropylene, polybutene-1, poly-3-methyl butene-1, poly-4-methyl pentene-1, poly-4,4-dimethyl pentene-1, polydodecene-1, poly-3-methyl pentene-1, copolymers of ethylene and an alpha-olefin selected from the group consisting of propane and butene-1, and copolymers of styrene and isobutylene, and carbon black particles of a maximum size of 1000 angstroms contained in an amount of from 0.5 percent to 5 percent by weight of the said polymeric material, the said carbon black particles being selected from the group consisting of oxygenated channel carbon black particles, oxygenated furnace carbon black particles, sulfurized channel carbon black particles, and sulfurized furnace carbon black particles, the said oxygenated carbon black particles having a volatile content of at least 10 percent essentially resulting from oxygenation, and the said sulfurized carbon black particles having a sulfur content of at least 1 percent by weight, the said sulfur content as determinable by analysis after toluene extraction.

3,042,650

BLOCK POLYESTERS AND PROCESS FOR PRODUCING SAME

Theodore E. Bockstahler, Moorestown, N.J., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed June 16, 1958, Ser. No. 742,001

23 Claims. (Cl. 260—45.4)

1. A process for the preparation of substantially linear high molecular weight unsaturated polyesters with controlled molecular configuration which consists essentially of reacting a high molecular weight linear condensation polyester free from nonbenzenoid unsaturation, the molecule chains of which are terminated with a grouping selected from the group consisting of hydroxyl and carboxyl, with a compound selected from the group consisting of a monoglycol ester of α,β-monoethylenically unsaturated dicarboxylic acids, a bisglycol ester of α,β-monoethylenically unsaturated dicarboxylic acids, and a polyester formed by the reaction of glycols or mixtures thereof with α,β-monoethylenically unsaturated dicarboxylic acids, said polyester molecule chains being terminated with a grouping selected from the group consisting of hydroxyl and carboxyl, at a temperature of from about 150° to about 250° C.

3,042,651

POLYMERIZABLE COMPOSITION CONTAINING UNSATURATED POLYESTER, AN ACRYLIC ESTER, A MONOVINYL BENZENE AND A VINYL ESTER OF AN ALKYL CARBOXYLIC ACID

Charles R. Martens, Parma Heights, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed June 19, 1959, Ser. No. 821,381

11 Claims. (Cl. 260—45.4)

1. A polymerizable composition containing (*a*) 60 parts by weight of linear, unsaturated polyester comprising an esterification product of an unsaturated dibasic C_4 to C_5 aliphatic carboxylic acid and a saturated C_2 to C_6 glycol having an acid value in the range of from 25 to 80, said polyester being dissolved in a mixture composed of from 2 to 35 parts by weight of an acrylic ester selected from the group consisting of alkyl acrylates, alkyl alkacrylates, and alkyl chloracrylates and the balance of 100 parts of polyester solution being a monovinyl benzene, and (*b*) from 0.1 to 2 parts per hundred parts of (*a*) of a vinyl alcohol ester of a saturated C_{10} to C_{20} alkyl carboxylic acid.

3,042,652

ELASTOMERIC COMPOSITION COMPRISING A BENZENE-SOLUBLE CHLOROPRENE POLYMER AND A BENZENE-INSOLUBLE RADIATION CROSS-LINKED CHLOROPRENE POLYMER

Rudolph Pariser, Brandywine Hundred, and Robert D. Souffie, Mill Creek Hundred, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 31, 1959, Ser. No. 830,734

7 Claims. (Cl. 260—45.5)

1. An easily processable elastomer comprising an intimate blend of (*a*) a plastic, benzene-soluble chloroprene polymer and (*b*) a cross-linked, benzene-insoluble chloroprene polymer obtained by exposing a chloroprene polymer in latex form to ionizing radiation producing the effect obtained by exposure to at least 3×10^6 rads of 0.5 to 5.0 mev. beta radiation at a dose rate of about 10^6 to 10^7 rads per second, the ratio of (*a*) to (*b*) on a weight basis being between about 1:4 and about 4:1, said chloroprene polymers being selected from the group consisting of polychloroprene and copolymers of chloroprene with up to about 10 percent by weight of another polymerizable ethylenically unsaturated monomer.

3,042,653

HEAT STABILIZATION OF POLYCARBONATES

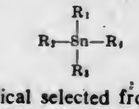
Bart Paul Jibben, Arnhem, Netherlands, assignor to N.V. Onderzoekingsinstituut Research, Arnhem, Netherlands, a corporation of the Netherlands

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,910

Claims priority, application Netherlands Apr. 10, 1959

13 Claims. (Cl. 260—45.75)

1. A polycarbonate stabilized against degradative effects of heat by the addition of a small amount of a compound selected from the group consisting of aryl tin oxides, aryl tin hydroxides, and compounds of the formula:



wherein R_1 is a radical selected from the group consisting of alkyl, cycloalkyl, and aryl radicals, and R_2, R_3, and R_4 are aryl radicals.

3,042,654

POLYSTYRENE STABILIZED WITH METHYL METHACRYLATE

Henno Keskkula, Midland, and Arthur A. Pettis, Saginaw, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,950

1 Claim. (Cl. 260—45.85)

A composition of matter consisting essentially of polystyrene and, as a stabilizing agent therefor, from 2 to 4 percent, based on the weight of the polystyrene, of monomeric methyl methacrylate.

3,042,655

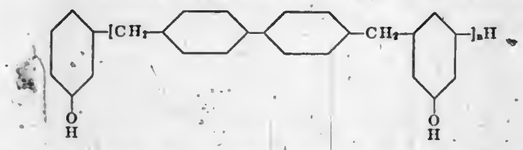
NOVOLAK AND METHOD OF MANUFACTURE THEREOF

John T. Massengale, West Chester, and Frederick C. Bender, Chester, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Jan. 22, 1960, Ser. No. 4,009

13 Claims. (Cl. 260—51)

1. A novolak having the following general formula



wherein *n* is a whole number ranging from 4 to 10.

2. A method of preparing a novolak which comprises reacting 4,4'-bis-(chloromethyl) biphenyl with phenol at a mol ratio of from 0.65 to 0.95 of biphenyl per mol of phenol in the presence of a metallic halide catalyst at refluxing temperature.

3,042,656

UNSATURATED POLYESTER INCLUDING AS REACTANTS BENZENE TRICARBOXYLIC ACID AND A GLYCOL MONOALKYL ETHER

Horst E. Frey, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed July 18, 1960, Ser. No. 43,279

16 Claims. (Cl. 260—77)

1. An unsaturated polyester consisting essentially of the reaction product of (*a*) benzene tricarboxylic acid selected from the class consisting of trimellitic acid, trimellitic anhydride, trimesic acid, hemimellitic acid and hemimellitic anhydride, (*b*) alkylene glycol monoalkyl ether containing 1 to 8 ether groups, 2–3 carbon atoms in each alkylene unit and 1–8 carbon atoms in the alkyl group, (*c*) alkenedioic acid selected from the class consisting of maleic acid, fumaric acid, citraconic acid and anhydrides thereof, and (d) alkylene glycol having 2–8 carbon atoms, all reacted under polyesterification condensation reaction conditions with continuous removal of water produced in the reaction, said reactants being charged to the condensation zone, in a mole ratio basis of: benzene acid to ether, about 10:1–1:1; benzene acid to alkenedioic acid, 9:1–1:9; and about sufficient glycol to react with remaining free-carboxyl groups.

3,042,657

NEW SILICO-URETHANE PREPARATION

Douglas Peter Dodgson, Eastrigg, Riding Mill, England, assignor to Monsanto Chemicals Limited, London, England, a British company

No Drawing. Filed May 25, 1959, Ser. No. 815,328

8 Claims. (Cl. 260—77.5)

1. The method of preparing a solid silico-urethane which comprises contacting at least one polyisocyanate of the group consisting of aryl diisocyanates, aryl triisocyanates, aliphatic diisocyanates and aliphatic triisocyanates with an ester of orthosilicic acid containing esterifying radicals of the group consisting of alkyl radicals having up to 12 carbon radicals, phenyl, tolyl and benzyl radicals; of which at least two of said radicals are readily hydrolyzable alkyl radicals of up to 3 carbon atoms, in the presence of the quantity of water required to hydrolyze the said readily hydrolyzable ester groups.

3,042,658

PROCESS FOR PRODUCING POLYETHYLENEUREA

William H. Libby, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed June 1, 1959, Ser. No. 817,089

4 Claims. (Cl. 260—77.5)

1. The process for producing polyethyleneurea which comprises heating cyclic ethylene urea to a temperature in the range of about 100° to 200° C. in the presence of a strongly basic catalyst for the polymerization selected from the class consisting of alkali metals, alkali metal oxides, alkali metal hydroxides, alkali metal hydrides, alkali metal amides, and alkali metal salts with weak acids having acidity of the order of that of ethyleneurea, and isolating solid polyethyleneurea from the polymerization mixture.

3,042,659

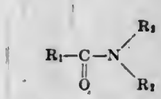
ACTIVATORS FOR THE POLYMERIZATION OF 2-PYRROLIDONE

Archie E. Follett, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Apr. 20, 1959, Ser. No. 807,270

15 Claims. (Cl. 260—78)

1. A process for polymerizing 2-pyrrolidone which comprises the steps of forming under essentially anhydrous conditions a mixture containing monomeric 2-pyrrolidone, a catalytic amount of an alkaline polymerization catalyst, and a few percent based on the weight of the mixture of a N-monocarbonyl pyrrolidone polymerization activator, with a slight excess of catalyst over activator being present in said mixture and a few percent based on the weight of said mixture of an open chain organic acid amide having the following chemical formula:



wherein R_1 is selected from the group consisting of hydrogen, a phenyl radical, and an alkyl radical having from 1 to about 8 carbon atoms and R_2 is selected from the group consisting of hydrogen and an alkyl radical having from 1 to about 8 carbon atoms and subjecting said mixture to a temperature in the range of —70° C. to 100° C.

3,042,660

PRODUCTION OF RESINS FROM PETROLEUM HYDROCARBONS

John Habeshaw, Dollar, and Robin William Rae, Falkirk, Scotland, assignors to British Hydrocarbon Chemicals Limited, Piccadilly, London, England, a British company

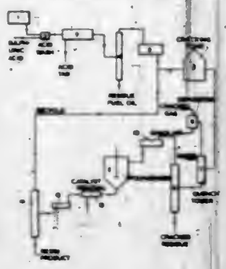
Filed June 5, 1958, Ser. No. 740,061

Claims priority, application Great Britain June 21, 1957

5 Claims. (Cl. 260—82)

1. The process for the production of resins from petroleum hydrocarbon pyrolysis products which comprises thermally cracking in the presence of steam at a temperature between 600° and 800° C. and for 0.1 to 10 seconds a catalytically cracked petroleum fraction boiling in the range 212° to 262° C., the catalytically

cracked petroleum fraction having been subjected to an acid-refining treatment with sulphuric acid, followed by redistillation to discard between 5% and 10% of the fraction as residue, cooling the thermally cracked products and distilling to separate a fraction boiling in the range 150° to 300° C., polymerising the latter fraction



in the presence of between 0.01 and 1% by weight of a Friedel-Crafts catalyst selected from the group consisting of aluminum chloride, stannic chloride, boron trifluoride and their complexes, separating by distillation the resinous product from the hydrocarbon boiling up to about 300° C., and recycling this hydrocarbon to the cracking step.

3,042,661

HYDROXYLATION OF ELASTOMERS

Isidor Kirshenbaum, Westfield, Clifford W. Muessig, Roselle, and Ralph M. Hill, Mountainside, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,319

19 Claims. (Cl. 260—83.3)

7. A process for introducing hydroxyl groups into a rubbery copolymer having a minimum mole percent unsaturation of about 0.5 and containing as constituent monomers therein a major proportion of a conjugated C_4 to C_8 diolefin and a minor proportion of a monoethylenically unsaturated compound copolymerizable therewith which comprises contacting a reaction mixture containing said copolymer and dispersed therein about 3 to 10 weight percent, based on said copolymer, of a boric acid compound with a gas containing molecular oxygen, said boric acid compound being selected from the group consisting of boric acid and boron compounds capable of generating boric acid upon contact with water.

3,042,662

PROCESS FOR HALOGENATING COPOLYMERS

Delmer L. Cottle, Highland Park, Leon S. Minckler, Jr., Metuchen, and Theodore Lemiszka, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 26, 1959, Ser. No. 815,830

6 Claims. (Cl. 260—85.3)

6. A process for halogenating a butyl rubber copolymer of a major portion of a C_4 to C_8 isoolefin and a minor portion of a C_4 to C_{14} multiolefin with a halogenating agent selected from the group consisting of chlorinating and brominating agents which comprises, dissolving said butyl rubber copolymer in a C_3 to C_{10} inert solvent, admixing therewith 0.1 to 10 parts by weight per 100 parts by weight of copolymer of a molecular weight stabilizer selected from the group consisting of aliphatic alcohols, aliphatic ethers, and mixtures thereof, and halogenating said butyl rubber copolymer at a temperature of 0 to 65° C. and in the presence of said stabilizer with a member of the group consisting of chlorinating and brominating agents until said copolymer contains at least 0.5 wt. percent halogen but no more than 3 atoms of halogen per double bond in said copolymer.

3,042,663

HYPONITRITE CATALYSTS FOR POLYMERISATION OF ETHYLENICALLY UNSATURATED COMPOUNDS

Gerald Scott, Manchester, England, assignor to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

No Drawing. Filed July 28, 1958, Ser. No. 751,152

Claims priority, application Great Britain Aug. 7, 1957

5 Claims. (Cl. 260—88.7)

1. A process for the polymerization of a compound containing the group $>C=CH_2$ which comprises polymerizing said compound in the presence of a catalytic amount of a catalyst selected from the group consisting of bis(1-methoxy-cyclopentyl)hyponitrite; bis(1-methoxy-cyclobutyl)hyponitrite; bis(1-ethoxy-cyclohexyl)hyponitrite; and bis(1-methoxy-cyclohexyl)hyponitrite.

3,042,664

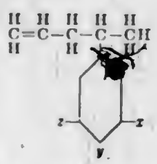
ALKENYL ARYL MONOMERS, POLYMERS THEREOF AND POLYMERIZATION PROCESSES

John A. Price, Swarthmore, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Mar. 27, 1959, Ser. No. 802,288

13 Claims. (Cl. 260—91.5)

1. A normally solid polymer of at least one compound having the general formula:



wherein x, y and z are each members of the group consisting of hydrogen, chlorine and methyl and z is hydrogen when y is a member of the group consisting of chlorine and methyl.

3,042,665

PROCESS FOR POLYMERIZING VINYL CHLORIDE IN AQUEOUS SUSPENSION

Erwin M. Jankowiak, Midland, and Alfred R. Nelson, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 13, 1959, Ser. No. 812,793

3 Claims. (Cl. 260—92.8)

1. A process for polymerizing a monomeric material composed predominantly of vinyl chloride comprising the sequential steps of dispersing said monomeric material containing catalytic quantities of an oil-soluble peroxide polymerization catalyst in an aqueous phase consisting essentially of from 2 to 4 parts by volume of water per part of monomer, from 0.02 to 0.15 percent by weight of said monomeric material of a water-soluble cellulose ether selected from the group consisting of methyl cellulose and methyl hydroxypropyl cellulose, from 0.02 to 0.15 percent by weight of said monomeric material of ionic emulsifying agent and from 0.02 to 0.15 percent by weight of said momomeric material of a water-soluble polyvalent metal salt coagulant for said emulsifier wherein said metal cation is of a metal having a valence greater than 1 and maintaining dispersion of the polymerizing particles with agitation at a temperature of from 25° to 65° C. until polymerization is complete, to produce substantially uniform, free-flowing particles having high capacity for plasticizer absorption.

3,042,666

POLYETHER DERIVATIVES

Robert Paul Gentles, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Feb. 24, 1959, Ser. No. 794,844

Claims priority, application Great Britain Feb. 26, 1958

5 Claims. (Cl. 260—209)

1. Process for the manufacture of polyether derivatives of polyhydroxylic compounds by reacting a polyhydroxylic compound selected from the group consisting of trimethylolethane, pentaerythritol, tetramethylolcyclohexanol, sucrose, α-methyl glucoside, mannitol, inositol, quebrachitol and polyvinyl alcohol which is soluble in dimethyl sulphoxide and incapable of being melted without decomposition below 120° C., with a compound selected from the group consisting of alkylene oxides, epihalohydrins, mixtures thereof and mixtures thereof with polyepoxides, said reaction being conducted in dimethyl sulphoxide as a reaction medium and at a temperature between about 50 and 150° C.

4. A process as set forth in claim 1 in which the polyhydroxylic compound is sucrose.

3,042,667

PROCESS FOR PRODUCING DEXTRAN DERIVATIVES AND PRODUCTS RESULTING THEREFROM

Per Gustaf Magnus Flodin and Bjorn Gustaf-Adolf Ingelman, Uppsala, Sweden, assignors to Aktiebolaget Pharmacia, Uppsala, Sweden, a company of Sweden

Filed Mar. 10, 1959, Ser. No. 798,541

8 Claims. (Cl. 260—209)

3. The process, which comprises reacting an aqueous solution of 10 to 70% by weight of a hydroxyl group-containing dextran substance with a bifunctional organic substance capable of reacting with the hydroxyl groups of the dextran substance, in the ratio of at least 10 molecules of the bifunctional substance per molecule of the dextran substance, in the presence of an alkaline reacting substance as catalyst, the said bifunctional organic substance being selected from the group consisting of epichlorohydrin, dichlorohydrin, diepoxybutane, bis-epoxypropyl ether, ethyleneglycol-bis-epoxypropyl ether and 1,4-butane-diol-bis-epoxypropyl ether, carrying out the reaction at a temperature between about 15° C. and about 90° C. and thereby forming a gel, subjecting said gel to heat treatment at an elevated temperature not exceeding 90° C., and recovering the resultant gel product.

3,042,668

MODIFIED GALACTOMANNAN GUMS AND METHOD OF PREPARING SAME

Anthony Monti, Brooklyn, N.Y., and Nathan R. Pike, Glenville, Conn., assignors to American Molasses Company, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 2, 1960, Ser. No. 73,182

13 Claims. (Cl. 260—209)

5. A process of producing a modified polysaccharide gum from locust bean gum, which comprises mixing approximately 24 parts of sugar by weight with 1 part of said gum and from 25 to 100 parts by weight of water, heating the resultant mixture of gum, sugar and water at about 180° F. until a solution forms in which the gum is in a state of colloidal dispersion, drying the solution to a moisture content of less than 1%, cooling the dried product and pulverizing the cooled product.

3,042,669

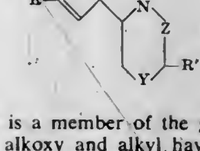
CELLULOSIC DERIVATIVES OF TRIAZINYL-BENZOTRIAZOLES

Richard J. Boyle, Neshanic, and Jerry P. Milionis, South Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application June 11, 1959, Ser. No. 819,536. Divided and this application June 28, 1960, Ser. No. 39,222

8 Claims. (Cl. 260—214)

1. Cellulose having at least 0.01% of the total free hydroxyl groups esterified by compounds of the formula



in which D is a 2-(ortho-hydroxyaryl)benzotriazole, in which the aryl group is a carbocyclic radical of less than three six-membered rings and in which E is selected from the group consisting of chlorine, the group NHD, sulfoalkylamino and carboxyalkylamino wherein D is as hereinbefore defined.

3,042,670

SELECTIVE REDUCTION OF STEROIDAL DIENONES

Elliot L. Shapiro, Cedar Grove, and Eugene P. Oliveto, Glen Ridge, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed June 13, 1961, Ser. No. 116,675

7 Claims. (Cl. 260—239.55)

1. A process for preparing a 3-keto-Δ^4-steroid which comprises reacting a 3-keto-$\Delta^{1,4}$-steroid with an anhydrous reducing medium comprising a metal selected from the group consisting of an alkali and an alkaline earth metal having an atomic weight less than 41, and a solvent selected from the group consisting of lower primary aliphatic amines, lower secondary aliphatic amines, and ammonia.

3,042,671

BENZOPYRIDOCOLINES

Joseph G. Lombardino, Brooklyn, and William M. McLamore, Kew Gardens, N.Y., and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 7, 1959, Ser. No. 844,878

11 Claims. (Cl. 260—243)

1. A compound selected from the class of thiabenzopyridocolines having the structural formula:

wherein each R is a member of the group consisting of hydroxy, lower alkoxy and alkyl having 1 to 5 carbon atoms and when both R groups are taken together they form a methylenedioxy group, R' is a member of the group consisting of hydrogen, lower alkenyl, alkyl, trifluoromethyl, hydroxyalkyl, acyloxyalkyl, lower alkoxyalkyl, benzyl, chlorobenzyl, phenylethyl, thenyl, furfuryl benzoylamino, p-chlorobenzoylamino, thenoylamino, furoylamino phenyl, p-chlorophenyl, p-tolyl, p-methoxyphenyl, thienyl and furyl, each alkyl moiety having from one to five carbon atoms and said acyl moiety being derived from a hydrocarbon carboxylic acid having from two to eight carbon atoms, R'' is a member of the

group consisting of hydrogen and lower alkyl, Y represents a member of the group consisting of sulfur, oxosulfur and dioxosulfur, and Z is a member of the group consisting of methylene and carbonyl; and the pharmaceutically acceptable acid addition salts and the pharmaceutically acceptable quaternary ammonium salts of those compounds wherein Z is methylene.

2. 2-thia-4-oxo - 9,10 - di(lower alkoxy) - 1,2,3,4,6,7-hexahydro-11b-H-benzopyridocoline.

3,042,672
PRODUCTION OF 3-AMINOPROPYL ISOCYANURATES

Billy E. Lloyd, Memphis, Tenn., assignor to Allied Chemical Corporation, New York, N. Y., a corporation of New York

No Drawing. Filed Mar. 24, 1960, Ser. No. 17,264
4 Claims. (Cl. 260—248)

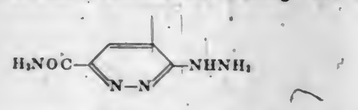
4. A process for producing 3-aminopropyl isocyanurates which comprises reacting a material selected from the group consisting of bis(2-cyanoethyl) isocyanurate and tris(2-cyanoethyl) isocyanurate with hydrogen and ammonia in the presence of a metallic hydrogenation catalyst selected from the group consisting of nickel, platinum, palladium, cobalt, iron and copper at temperature of about 70° to 180° C.

3,042,673
3-HYDRAZINO-PYRIDAZINE-6-CARBOXAMIDE

David Liberman, Paris, France, assignor to Chimie et Atomistique, Paris, France, a French body

Filed July 9, 1959, Ser. No. 826,025
Claims priority, application France July 26, 1958
1 Claim. (Cl. 260—250)

A member selected from the group consisting of: 3-hydrazino-pyridazine-6-carboxamide having the formula:



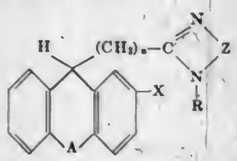
and the therapeutically administrable acid addition salts thereof.

3,042,674
XANTHENE AND THIAXANTHENE CYCLIC AMIDINES

John A. Faust, Santa Barbara, Calif., and Melville Sahyun, 316 Castillo St., Santa Barbara, Calif.; said Faust assignor to said Sahyun

No Drawing. Filed July 12, 1960, Ser. No. 42,195
6 Claims. (Cl. 260—251)

1. Compounds selected from the group consisting of (A) compounds having the formula:



wherein A is a member selected from the group consisting of oxygen and sulfur; X is a member selected from the group consisting of hydrogen and halogen; R is a member selected from the group consisting of hydrogen and lower alkyl; Z is a member selected from the group consisting of ethylene, propylene, isopropylene, isobutylene, hydroxyethylene, hydroxypropylene, hydroxyisopropylene and hydroxyisobutylene; and *n* is an integer less than four; and (B) the acid addition salts thereof.

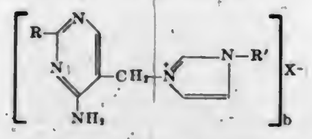
3. 10-(1,4,5,6-tetrahydro - 2 - pyrimidylmethyl)thiaxanthene hydrochloride.

3,042,675
IMIDAZOLIUM QUATERNARY SALTS AND METHODS OF PREPARING SAME

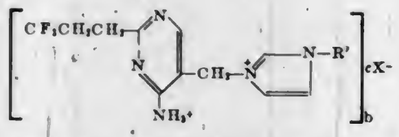
Edward F. Rogers, Middletown, and Robert L. Clark, Woodbridge, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,104
14 Claims. (Cl. 260—256.4)

1. An imidazolium compound selected from the group consisting of compounds of the formula



wherein R is a perfluoroloweralkyl radical, R′ is selected from the group consisting of allyl and lower alkyl, X is a non-toxic anion, and *b* is a positive number having a value such that the negative charge of the anion X is neutralized by *b* moles of cation and



wherein R′ and X are as previously defined, and *b* and *c* are positive numbers having values such that *b* moles of cation is neutralized by *c* moles of anion X.

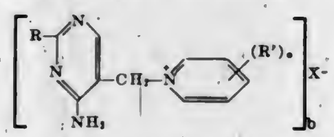
11. The process which comprises reacting an acid addition salt of a 2-perfluoroloweralkyl-4-amino-5-hydroxymethyl pyrimidine ester of a strong acid with a 1-lower alkyl imidazole to form a 3-(2-perfluoroloweralkyl-4-amino - 5-pyrimidylmethyl)-1-lower alkyl imidazolium quaternary salt.

3,042,676
PYRIDINIUM QUATERNARY SALTS AND METHODS OF PREPARING THE SAME

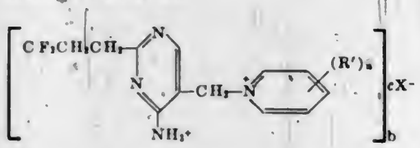
Edward F. Rogers, Middletown, and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,107
10 Claims. (Cl. 260—256.4)

1. A pyridinium compound selected from the group consisting of compounds of the formula



wherein R is a perfluoroloweralkyl radical, R′ is a lower alkyl radical, *n* has a value of 1 to 3 inclusive, X is a non-toxic anion, and *b* is a positive number having a value such that the negative charge of the anion X is neutralized by *b* moles of cation and



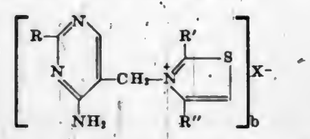
wherein R′, *n* and X are as previously defined, and *b* and c are positive numbers having values such that the positive charge of *b* moles of cation is neutralized by *c* moles of anion X.

3,042,677
THIAZOLIUM QUATERNARY SALTS AND METHODS OF PREPARING SAME

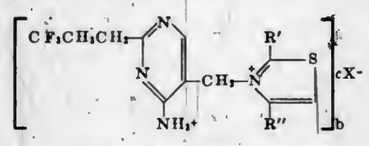
Edward F. Rogers, Middletown, and Robert L. Clark, Woodbridge, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,106
14 Claims. (Cl. 260—256.5)

1. A thiazolium compound selected from the group consisting of compounds of the formula

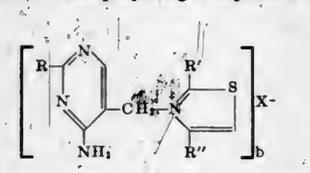


wherein R is a perfluoroloweralkyl radical, R′ and R″ are selected from the group consisting of hydrogen and lower alkyl, X is a non-toxic anion, and *b* is a positive number having a value such that the negative charge of the anion X is neutralized by *b* moles of cation and

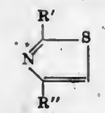


wherein R′ and R″ and X are as previously defined, and *b* and *c* are positive numbers having values such that the positive charge of *b* moles of cation is neutralized by *c* moles of anion X.

13. The process for preparing compounds of the formula



wherein R is a perfluoroloweralkyl radical, R′ and R″ are selected from the group consisting of hydrogen and lower alkyl, X is an anion, and *b* is a positive number having a value such that the negative charge of the anion X is neutralized by *b* moles of cation which comprises reacting an acid addition salt of a 2-perfluoroloweralkyl-4-amino-5-hydroxymethyl pyrimidine ester of a strong acid with a thiazole compound having the formula



wherein R′ and R″ are as previously defined.

3,042,678
PREPARATION OF DIPHENYL-PYRIDYL- AND DIPHENYL-QUINOLYL-METHANES

Wilhelm Mathes, Ludwigshafen (Rhine), and Anton Wolf, Heidelberg, Germany, assignors to Dr. F. Raschig G.m.b.H., Ludwigshafen (Rhine), Germany, a limited-liability company of Germany

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,773
5 Claims. (Cl. 260—283)

1. The process of preparing the isomers of diphenyl-pyridyl- and diphenyl-quinolyl-methanes which comprises reactively contacting an aldehyde selected from the group consisting of the isomeric pyridine- and quinoline-aldehydes with benzene in the presence of an acid dehydrating agent at a temperature below 100° C.

3,042,679
1-CHLORO-2-CARBAMYLOXY-3-(N-PIPERIDINO)-PROPANE

John R. Clark, Nutley, N.J., assignor to S. B. Penick and Company, New York, N.Y., a corporation of Delaware

No Drawing. Original application Jan. 8, 1959, Ser. No. 785,562. Divided and this application Aug. 23, 1961, Ser. No. 139,326
1 Claim. (Cl. 260—294.3)

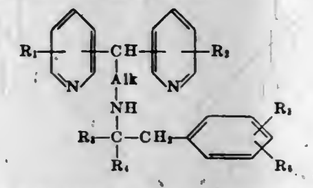
A composition of matter having the molecular structure 1-chloro-2-carbamyloxy - 3 - (N-piperidino)-propane monohydrate.

3,042,680
ω-DI(PYRIDYL)-ALKANE DERIVATIVES OF 1-ARYL-2-AMINO-ALKANES

Kurt Thiele, Frankfurt am Main, Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed Nov. 13, 1961, Ser. No. 152,009
Claims priority, application Germany Nov. 18, 1960
3 Claims. (Cl. 260—296)

1. A compound of the formula



wherein Alk is alkylene of 2 to 4 carbon atoms of which 1 to 2 carbon atoms form the bridge between the CH and NH groups connected thereby, each of R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen and lower alkyl and each of R_5 and R_6 are selected from the group consisting of hydrogen, lower alkyl, halogen, hydroxyl and lower alkoxy.

3,042,681
INSULANT COATING COMPRISING POLYVINYL ALCOHOL, ASBESTOS, CEMENT AND AGGREGATE

Robert C. Sefton, Pittsburgh, Pa., assignor to Steel City Industries, Inc., a corporation of Pennsylvania

No Drawing. Filed May 25, 1959, Ser. No. 815,248
6 Claims. (Cl. 260—296)

1. An insulant coating comprising polyvinyl alcohol about 0.5% to 2.5%, asbestos about 7.5% to 16%, gypsum about 30% to 50%, Portland cement about 5.5% to 13.5% and light weight aggregate about 25% to 40%.

3,042,682
PREPARATION OF PYRIDINE ALCOHOLS

Robert S. Aries, 77 South St., Stamford, Conn.

No Drawing. Filed Sept. 12, 1958, Ser. No. 760,573
5 Claims. (Cl. 260—297)

1. Method for the preparation of monomethylol derivatives of alkylpyridines which comprises reacting an alkylpyridine selected from the group consisting of 2-picoline, 4-picoline, and 5-ethyl-2-methylpyridine with formaldehyde under a blanket of an inert gas at a pressure between about 1 and about 150 atmospheres, at a temperature between about 200° C. and about 320° C., for a period between about 3 and about 7 minutes, the molar ratio of formaldehyde to alkylpyridine being between 0.35:1 and 0.65:1, then rapidly cooling the reaction mixture to below 100° C., and recovering the monomethylol derivative therefrom.

3,042,683
PHTHALOCYANINE COLOURING MATTERS

Harold Thompson Howard and Christopher David Marrable, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 17, 1960, Ser. No. 36,730
Claims priority, application Great Britain July 2, 1959
5 Claims. (Cl. 260—314.5)

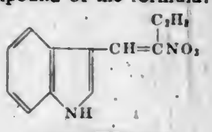
3. Copper tetra-[di-(β-acetoxyethyl)sulphamyl]phthalocyanine.

3,042,684
3-β-ETHYL-β-NITROVINYLINDOLE

Edwin Harry Paterson Young, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,420
Claims priority, application Great Britain Feb. 13, 1956
1 Claim. (Cl. 260—319)

An indole compound of the formula:



3,042,685
PROCESS OF MAKING 6-FLUORO TRYPTAMINE

André Allais, Paris, and Jean Meier, Coeuilly-Champigny, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,690
Claims priority, application France Apr. 18, 1958
6 Claims. (Cl. 260—319)

1. In a process of producing 6-fluoro tryptamine, the steps which consist in

(*a*) subjecting 6-fluoro indole to the action of formaldehyde and dimethylamine in an aqueous acidic medium to produce 6-fluoro gramine;

(*b*) stirring said 6-fluoro gramine with dimethyl sulfate in an inert organic solvent to cause quaternization;

(*c*) adding an alkali metal cyanide to an aqueous solution of the resulting methosulfate of 6-fluoro gramine and heating to 60–65° C.; and

(*d*) hydrogenating 6-fluoro 3-indolyl acetonitrile produced thereby to 6-fluoro tryptamine by means of hydrogen in the presence of a nickel catalyst and a lower alkanol saturated with ammonia.

2. A process of producing 6-fluoro-indole which comprises the steps of

(*a*) subjecting 2-nitro-4-fluoro-toluene to the action of a lower alkyl ester of oxalic acid in the presence of an alkali metal lower alkanolate to yield the alkali metal salt of the lower alkyl ester of 4'-fluoro-2'-nitro phenyl pyruvic acid;

(*b*) reducing said ester by means of a reducing metal in the presence of an acid medium;

(*c*) saponifying the resulting 6-fluoro indole-2-carboxylic acid ester by means of an alkali metal hydroxide in alcoholic solution to 6-fluoro indole-2-carboxylic acid;

(*d*) heating said carboxylic acid in an inert solvent to temperatures below 220° C. to split off carbon dioxide;

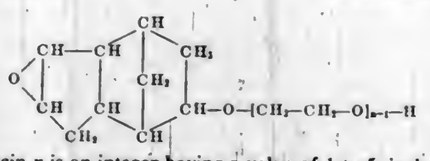
(*e*) and recovering said 6-fluoro-indole.

3,042,686
EPOXYDICYCLOPENTYL ALCOHOLS AND PROCESS FOR PREPARING SAME

Joseph L. O'Brien, Elkins Park, and Constance A. Lane, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Mar. 10, 1960, Ser. No. 13,986
6 Claims. (Cl. 260—348)

1. A compound of the formula



wherein *n* is an integer having a value of 1 to 5, inclusive.

3,042,687
REACTION PRODUCTS OF EPOXIDISED OILS

Herbert Walter Chatfield, Croydon, and Geoffrey A. Weeks, Upminster, England, assignors to A. Boake, Roberts & Company Limited, London, England, a British company

No Drawing. Filed July 25, 1958, Ser. No. 750,857
6 Claims. (Cl. 260—348)

1. An oxirane compound containing internal oxirane oxygen consisting essentially of the reaction product of an epoxidized long chain fatty acid material selected from the group consisting of epoxidized drying oils, epoxidized semi-drying oils, epoxidized non-drying oils and the epoxidized mono and polyhydric alcohol esters thereof other than the glycerol esters of the acids of said oils and which said fatty acid material had an iodine value of not less than 80 before epoxidation, and an acid oxychloride selected from the group consisting of phosphorous oxychloride, sulfuryl chloride, chromyl chloride, thionyl chloride, and phosgene.

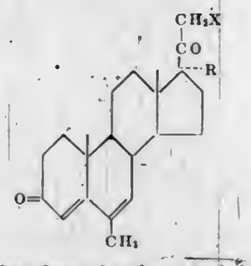
2. In the method of producing a long chain fatty aliphatic compound containing internal oxirane oxygen the steps of mixing a reactant acid oxychloride selected from the group consisting of phosphorous oxychloride, sulfuryl chloride, chromyl chloride, thionyl chloride, and phosgene with an epoxidized long chain fatty acid material selected from the group consisting of epoxidized drying oils, epoxidized semi-drying oils, epoxidized non-drying oils and the epoxidized mono and polyhydric alcohol esters of the acids thereof other than the glycerol esters of the acids of said oils and which said fatty acid material had an iodine value of not less than 80 before epoxidation, heating the said mixture and effecting the production of said oxirane compound.

3,042,688
PROCESS FOR THE PRODUCTION OF 6-METHYL-3-KETO-$\Delta^{4,6}$-STEROID COMPOUNDS

Bruno Camerino, Milan, and Bianca Patelli, Stradella, Italy, assignors to Società Farmaceutici Italia, Milan, Italy, a corporation of Italy

No Drawing. Filed Nov. 16, 1960, Ser. No. 69,550
Claims priority, application Italy Nov. 20, 1959
6 Claims. (Cl. 260—397.3)

1. A process for making a steroid compound of the general formula:



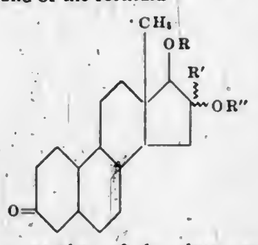
wherein R is taken from the class consisting of H, OH, OR', R' is an acyl radical of a carboxylic acid having not more than 9 carbon atoms, and X is taken from the class consisting of H and F, which comprises treating the corresponding 4,5-epoxide with concentrated sulphuric acid in acetic acid, said epoxide being taken from the group consisting of the 4α,5- and 4β,5-epoxides.

3,042,689
16-HYDROCARBON SUBSTITUTED 16,17-DIHYDROXYESTREN-3-ONES, THEIR ESTERS AND ETHERS, AND INTERMEDIATES FOR THEIR PRODUCTION

David A. Tyner, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,382
17 Claims. (Cl. 260—397.4)

1. A compound of the formula



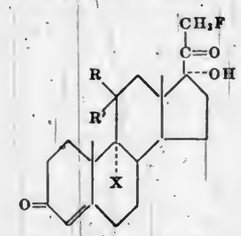
wherein R is a member of the class consisting of hydrogen, lower alkyl and lower alkanoyl; wherein R' is a member of the class consisting of lower alkyl, lower alkenyl and lower alkynyl; wherein R'' is a member of the class consisting of hydrogen and lower alkanoyl; and wherein there is a double bond in one of the positions selected from the group consisting of position 4(5) and position 5(10).

3,042,690
9 HALO-21-FLUORO-STEROIDS OF THE PREGNANE SERIES

Josef Fried, Princeton, N.J., and Josef E. Herz, Lomas, Mexico, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 26, 1960, Ser. No. 31,825
4 Claims. (Cl. 260—397.45)

1. A steroid of the general formula:



wherein, R is hydrogen, R' is β-hydroxy and together R and R' is keto, and X is halogen.

3,042,691
5α,21-DIBROMO-6β-FLUORO-21-METHYL-PREGNANES AND PROCESS FOR MAKING SAME

Hans-Jurgen E. Hess, Groton, and Sanford K. Figdor and George M. K. Hughes, Gales Ferry, and Walter T. Moreland, New London, Conn., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed May 11, 1960, Ser. No. 28,187
5 Claims. (Cl. 260—397.47)

4. 5α,21-dibromo-6β-fluoro-21-methyl-pregnane-3β,17α-diol-20-one.

3,042,692
EPOXY ETHER POLYAMIDES

Thomas W. Findley, La Grange, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Apr. 8, 1957, Ser. No. 651,161
7 Claims. (Cl. 260—404.5)

1. A polyether polyamide of 10–22 carbon fatty acids in which the acyl groups of said fatty acids are cross-linked through ether groups located on contiguous carbons of the fatty acid chains.

3,042,693
ORGANOMETALLIC COMPOUNDS

Thomas H. Coffield, Farmington, and Rex D. Closson, Northville, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 18, 1957, Ser. No. 690,906
4 Claims. (Cl. 260—429)

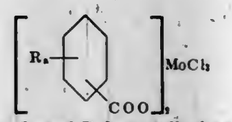
1. A compound having an aromatic hydrocarbon molecule coordinated with manganese, the compound being stabilized by additional coordination with two carbonyl groups and a cyano group, the aromatic hydrocarbon molecule contributing six electrons, the carbonyl groups each contributing two electrons and the cyano group contributing one electron to the manganese, thereby giving the manganese a total of eleven additional electrons and resulting in the manganese atom having the electron configuration of krypton.

3,042,694
MOLYBDENUM CARBOXYLATE COMPOUNDS

Melvin Leo Larson, Royal Oak, Mich., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Apr. 2, 1959, Ser. No. 803,590
9 Claims. (Cl. 260—429)

1. A molybdenum benzoate chloride having the formula:



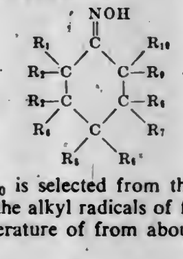
in which *a*=1 to 5, and R is a radical selected from the group consisting of alkyl radicals having 1 to 10 carbon atoms, halide substituted alkyl radicals having 1–10 carbon atoms, acyloxy radicals having 1–10 carbon atoms, alkoxy radicals having 1 to 10 carbon atoms, the nitro radical, the phenyl radical, halide and hydrogen.

3,042,695
CUPROUS COMPLEXES

Christian F. Horn, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,298
4 Claims. (Cl. 260—438)

1. The cuprous complex produced by the reaction of a cuprous salt of an inorganic mineral acid with a cyclohexanone oxime of the formula:



wherein R_1 to R_{10} is selected from the group consisting of hydrogen and the alkyl radicals of from 1 to 6 carbon atoms, at a temperature of from about 20° C. to about 100° C.

3,042,696
PREPARATION OF ALUMINUM ALCOHOLATES

Clyde Lee Aldridge, Baker, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

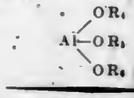
No Drawing. Filed July 20, 1956, Ser. No. 599,014
11 Claims. (Cl. 260—448)

1. A method of rapidly oxidizing an aluminum alkyl of the following formula:



wherein each R represents an alkyl radical containing from 2 to 30 carbon atoms which comprises contacting

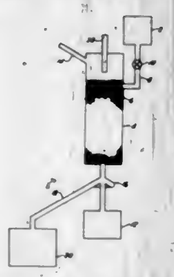
said aluminum alkyl with an oxygen containing gas at temperatures of 5° to 125° C. and pressures of 50 to 1000 p.s.i.g., said oxygen containing gas having an oxygen partial pressure equivalent to that of oxygen in air at such pressure range for a period of time to oxidize a substantial portion of said aluminum alkyl to the corresponding aluminum alcoholate of the following formula:



3,042,697
PROCESS FOR MAKING PHOSPHORUS ACID ESTERS

Robert E. Halter, Verona, and Robert J. Hartle, Gibsonia, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Oct. 28, 1958, Ser. No. 770,197
7 Claims. (Cl. 260—461)



1. A continuous process for the preparation of esters of phosphorus which comprises passing a phosphorus-containing compound selected from compounds having the following structural formulae:



and



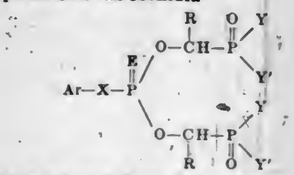
wherein X is a halogen selected from the group consisting of chlorine and bromine; Y and Z are selected from the group consisting of halogen, a hydrocarbon radical and —OR, wherein R is a hydrocarbon radical; and A is selected from the group consisting of oxygen and sulfur downwardly through a column containing packing material, passing vapor of an alcohol upwardly through said column, maintaining temperature and pressure conducive to the reaction between said phosphorus-containing compound and said alcohol in said column, and thereafter obtaining an ester of phosphorus adjacent the base of said column.

3,042,698
ORGANIC PHOSPHORUS COMPOUNDS

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 22, 1959, Ser. No. 841,443
9 Claims. (Cl. 260—461)

1. Compounds of the formula



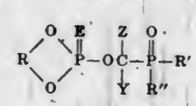
wherein Ar is selected from the group consisting of aromatic hydrocarbon radicals and halogen-substituted aromatic hydrocarbon radicals which are free from aliphatic unsaturation and contain from 6 to 12 carbon atoms; X is selected from the group consisting of oxygen and sulfur; E is selected from the group consisting of oxygen and sulfur; R is selected from the group consisting of hydrogen, aromatic hydrocarbon radicals having from 6 to 12 carbon atoms, and alkyl radicals having from 1 to 11 carbon atoms and the cyclohexyl radical; and Y and Y′ are selected from the group consisting of alkyl, alkoxy, and aromatic hydrocarbon and hydrocarbonoxy radicals having up to 12 carbon atoms, and the halogenated derivatives of said radicals.

3,042,699
ORGANIC PHOSPHORUS COMPOUNDS

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,206
17 Claims. (Cl. 260—461)

1. Compounds of the formula



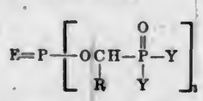
where R is a bivalent hydrocarbylene radical selected from the group consisting of lower alkylene radicals having from 2 to 3 carbon atoms in the ring, and a total of from 2 to 10 carbon atoms, halogen, and alkyl substitution products thereof, arylene radicals having from 6 to 10 carbon atoms wherein the carbon-oxygen bonds are on adjacent carbon atoms of the aryl ring; E is selected from the group consisting of sulfur and oxygen; Y is selected from the group consisting of hydrogen, and the radicals: alkyl and alkenyl radicals of from 1 to 17 carbon atoms, alicyclic hydrocarbyl radicals which have from 3 to 10 carbon atoms, benzenoid hydrocarbons which have from 6 to 18 carbon atoms, furyl, thienyl, and said Y radicals carrying a substituent selected from the group consisting of —CN, halogen, -alkyl, —COOalkyl, —Oalkyl, and —Salkyl where alkyl denotes an alkyl radical having from 1 to 5 carbon atoms; Z is selected from the group consisting of hydrogen and alkyl radicals of from 1 to 3 carbon atoms; and Y and Z taken together complete an alicyclic ring selected from the group consisting of cycloalkylene and cycloalkenylene radicals having from 5 to 6 carbon atoms in the ring and a total of from 5 to 10 carbon atoms; and R′ and R″ are each selected from the group consisting of hydrocarbyl, hydrocarbyloxy, halohydrocarbyl, and halohydrocarbyloxy radicals which are free from aliphatic unsaturation have from 1 to 12 carbon atoms.

3,042,700
ORGANIC PHOSPHORUS COMPOUNDS

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 16, 1959, Ser. No. 846,817
9 Claims. (Cl. 260—461)

1. Compounds of the formula



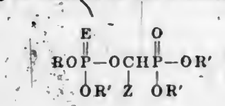
wherein R is selected from the group consisting of hydrogen and hydrocarbyl radicals having from 1 to 11 carbon atoms, and each Y is selected from the group consisting of hydrocarbyl, hydrocarbyloxy, halohydrocarbyl, and halohydrocarbyloxy radicals which have from 1 to 12 carbon atoms, and E is selected from the group consisting of oxygen and sulfur.

3,042,701
ORGANIC PHOSPHATES

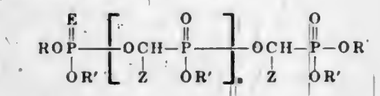
Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 21, 1959, Ser. No. 847,684
11 Claims. (Cl. 260—461)

1. A pentavalent phosphorus ester selected from the class consisting of diesters of the formula



and polyesters of the formula



wherein R is selected from the group consisting of haloalkyl, haloalkenyl, alkoxyhaloalkyl, and aryloxyhaloalkyl radicals of from 1 to 12 carbon atoms wherein halo denotes a member of the group consisting of chlorine and bromine, R′ is selected from the group consisting of R, hydrocarbyl, and halohydrocarbyl radicals of from 1 to 12 carbon atoms each, Z is selected from the group consisting of hydrogen, hydrocarbyl, halohydrocarbyl, cyanohydrocarbyl, carboalkoxyhydrocarbyl, alkoxyhydrocarbyl, alkylthiohydrocarbyl radicals of from 1 to 17 carbon atoms, and the thienyl and furyl radicals, *n* is a number having an average value of at least 1, and E is selected from the group consisting of oxygen and sulfur.

3,042,702
ORGANIC PHOSPHORUS COMPOUNDS

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,206
3 Claims. (Cl. 260—461)

1. O,O-bis{α - [bis(2-chloroethoxy)phosphinyl]benzyl} phenylphosphonothioate.

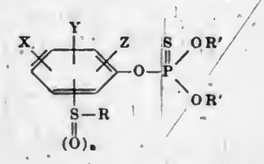
3. O,O-bis[1-(ethoxyphenylphosphinyl)ethyl] phenylphosphonothioate.

3,042,703
THIOPHOSPHORIC ACID ESTERS AND THEIR PRODUCTION

Ernst Schegk, Wuppertal-Elberfeld, and Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Sept. 20, 1960, Ser. No. 57,150
Claims priority, application Germany Mar. 22, 1956
17 Claims. (Cl. 260—461)

1. A compound of the formula



wherein X, Y and Z stand for a member selected from the group consisting of hydrogen, hydroxy, lower alkyl having up to 4 carbon atoms, chlorine and nitro groups, R stands for a member selected from the group consisting of an alkyl radical having up to 4 carbon atoms and chlorophenyl, R′ stands for an alkyl radical having up to 4 carbon atoms, and *n* is a number selected from the group consisting of zero and 1.

3,042,704
METHYL BORATE PROCESS

Charles Everett Hansen and Roland L. Hughes, Kansas City, Mo., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,130
8 Claims. (Cl. 260—462)

1. A method of recovering methyl borate which comprises reacting trimethoxyboroxine with a methyl borate-methanol mixture, distilling the reaction mixture at not greater than about 200 millimeters of mercury pressure, and recovering methyl borate from the overhead product of the distillation.

3,042,705
PREPARATION OF ARYL NITRILES BY CATALYZED REACTION OF AROMATIC HYDROCARBONS WITH HYDROGEN CYANIDE

William L. Fierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,561
12 Claims. (Cl. 260—465)

1. A method of preparing arylnitriles which comprises reacting an aromatic hydrocarbon selected from the group consisting of benzene, diphenyl, and naphthalene with hydrogen cyanide at a temperature in the range of about 450°–1000° C. in contact with a catalyst selected from the group consisting of a group VIII noble metal on a refractory support, and high-surface-area refractory oxides, and recovering an aryl nitrile selected from the group consisting of benzonitrile and naphthonitrile, wherein the aryl radical is derived from the aromatic hydrocarbon reactant.

3,042,706
PROCESS FOR PURIFYING PYRETHRUM EXTRACTS

Joseph Benjamin Haus, East Paterson, N.J., and Robert Wunner Price, Pearl River, N.Y., assignors to S. B. Penick and Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 22, 1960, Ser. No. 3,981
11 Claims. (Cl. 260—468)

1. The process for purifying crude pyrethrum extracts which comprises mixing a crude extract containing pyrethrins with about 95 percent aqueous methyl alcohol, separating the alcohol layer, removing therefrom methyl alcohol and water by distillation below 75 degrees centigrade, suspending the resultant residue in a low boiling saturated aliphatic hydrocarbon, separating the insoluble material, removing the hydrocarbon by distillation and reconstituting the pyrethrum extract by dissolving the final residue of pyrethrin actives in an organic solvent.

3,042,707
PROCESS FOR MAKING ESTERS OF SUBSTITUTED POLYHYDRONAPHTHALENE ACIDS

Robert Joly, Montmorency, and Julien Warnant, Neuilly-sur-Seine, France, assignors, by mesne assignments, to Roussel-Uclaf, S.A., Paris, France, a corporation of France

No Drawing. Filed Apr. 30, 1958, Ser. No. 731,871
Claims priority, application France June 14, 1957
1 Claim. (Cl. 260—468)

The process of preparing the levorotatory in ethanol lower alkyl esters of 3β-acetoxy-2α-methoxy-7-oxo-1,2,3,4,4aα,7,8,8aα-octahydronaphthalene-1β-carboxylic acid, wherein said lower alkyl is a member selected from the group consisting of methyl and ethyl which comprises the steps of

(*a*) subjecting a member selected from the group consisting of the levorotatory in ethanol 3β-hydroxy-2α-methoxy-7-oxo - 1,2,3,4,4aα,7,8,8aα - octahydro-

naphthalene-1β-carboxylic acid and its zinc salt to the action of acetic acid anhydride in the presence to a tertiary base selected from the group consisting of pyridine, methyl ethyl pyridine and triethylamine and precipitating the levorotatory in ethanol 3β-acetoxy-2α-methoxy-7-oxo-1,2,3,4,4aα,7,8,8aα-octahydronaphthalene - 1β - carboxylic acid by acidifying the reaction mixture;

(*b*) converting said carboxylic acid into its alkali metal salts;

(*c*) subjecting said alkali metal salt in a homogeneous medium in a mixture of water and a neutral hydroxyl group-free organic solvent to the action of a di-(lower alkyl) sulfate selected from the group consisting of dimethyl sulfate and diethyl sulfate and

(*d*) recovering said levorotatory in ethanol lower alkyl ester of 3β-acetoxy-2α-methoxy-7-oxo-1,2,3,4,4aα,7,8,8aα - octahydronaphthalene - 1β - carboxylic acid.

3,042,708
SEPARATION OF ESTERS OF NAPHTHALENE

Ivor W. Mills, Glenolden, Henry C. Beck, Wallingford, and James L. Jezl, Swarthmore, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Dec. 11, 1959, Ser. No. 858,873
5 Claims. (Cl. 260—469)

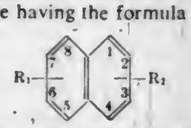
1. A process for the separation of mono and diesters of naphthalene carboxylic acids comprising the steps of esterifying the acids with a low molecular weight alcohol selected from the group consisting of methanol, ethanol, n-propyl alcohol, and isopropyl alcohol in the presence of an inorganic acid catalyst dissolving the mixed esters in a monocyclic aromatic hydrocarbon solvent and cooling the solution to a temperature at which a substantial proportion of the monester is selectively precipitated.

3,042,709
ESTERIFICATION OF NAPHTHALENE DICARBOXYLIC ACIDS

Robert J. Convery, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Apr. 28, 1960, Ser. No. 25,377
6 Claims. (Cl. 260—475)

1. The process of contacting 2,6-naphthalene dicarboxylic acid under esterification conditions with an esterification catalyst and an alcohol having the formula ROH in which R is an alkyl group having 1 to 3 carbon atoms, in the further presence of a solubilizer comprising a substituted naphthalene having the formula



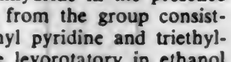
where R_1 is selected from the group consisting of a carboxyl group, an aldehyde group and an ester group containing 2 to 4 carbon atoms and R_2 is selected from the group consisting of a methyl group and an ester group containing 2 to 4 carbon atoms and recovering as a product diester corresponding to the naphthalene dicarboxylic acid feed.

3,042,710
ETHENOID CARBONYL COMPOUNDS

Jack Dickstein, Elkins Park, and Rose-Marie Hoegerle, North Hills, Pa., assignors to The Borden Company, a corporation of New Jersey

No Drawing. Filed Oct. 3, 1960, Ser. No. 59,798
5 Claims. (Cl. 260—482)

1. An ethenoid carbonyl compound selected from the group consisting of alkacroylacetyl acetone, 3-methylene-acetyl acetone, alkyl 2-methylene-3,3'-dialkoxypropionate, and substances of the formula



said alk and alkyl components, R and R' being alkyl groups having 1–6 carbon atoms.

3,042,711
CHLORINATION REARRANGEMENT AND PRODUCTS

John R. Clark, Nutley, N.J., assignor to S. B. Penick and Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 8, 1959, Ser. No. 785,562
10 Claims. (Cl. 260—482)

5. The process which includes: heating a mixture of thionyl chloride with a 1-carbamyloxy-2-hydroxy-3-substituted propane compound wherein the 3-substituent is an ortho substituted phenoxy radical selected from the group consisting of loweralkylphenoxy, loweralkoxyphenoxy; and halophenoxy, to effect chlorination and rearrangement thereby producing the corresponding 1-chloro-2-carbamyloxy-3-substituted propane compound.

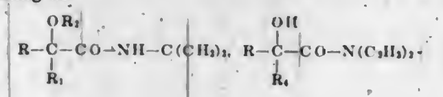
7. 1-chloro-2-carbamyloxy-3-substituted propane compounds wherein the 3-substituent is an ortho substituted phenoxy radical selected from the group consisting of loweralkylphenoxy, loweralkoxyphenoxy, and halophenoxy.

3,042,712
CARBOXYLIC ACID AMIDES

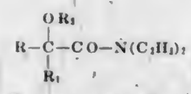
Ingeborg Hennig, Kelkheim (Taunus), Ernst Lindner, Franfurt am Main, and Heinrich Ott, Eppstein (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed July 28, 1959, Ser. No. 829,973
Claims priority, application Germany Aug. 8, 1958
6 Claims. (Cl. 260—490)

1. A carboxylic acid amide selected from the group consisting of



and



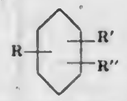
in which R and R_1 represent alkyl groups containing from 2 to 3 carbon atoms, R_2 is a member of the group consisting of hydrogen, acetoxy, and propionoxy, R_3 is a member of the group consisting of acetoxy and propionoxy and R_4 represents an alkyl radical containing 3 carbon atoms.

3,042,713
ALKYL AROMATIC SULFONIC ACID

Wayne C. Schar, Monmouth, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed June 24, 1959, Ser. No. 822,421
5 Claims. (Cl. 260—505)

1. A process for producing an alkyl aromatic sulfonic acid which comprises reacting an alkyl benzene having the formula:



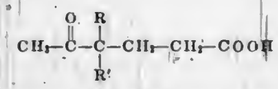
wherein R is a C_5 to C_{20} alkyl radical, R' is selected from the group consisting of hydrogen and C_5 to C_{20} alkyl radicals, and R'' is selected from the group consisting of hydrogen and C_1 to C_4 alkyl radicals with a sulfonating agent in the presence of color-inhibiting amounts of a lower alkanoyl amide.

3,042,714
4-ARYL, 4-ALKARYL-5-OXOHEXANOIC ACID

Everett M. Schultz, Ambler, and Edward J. Cragoe, Jr., Lansdale, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 15, 1954, Ser. No. 443,695
6 Claims. (Cl. 260—515)

1. A 4,4-disubstituted-5-oxohexanoic acid having the general formula



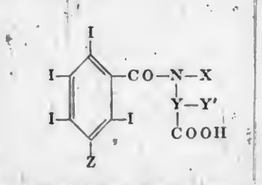
and alkali metal salts thereof wherein R is a mononuclear aryl radical and R' is a mononuclear arylmethyl radical.

3,042,715
IODINE-CONTAINING BENZOIC ACID AMIDES AND A PROCESS OF MAKING SAME

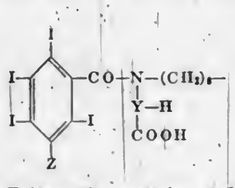
Werner Obendorf and Peter Meindl, Linz, Austria, assignors to Osterreichische Stickstoffwerke Aktiengesellschaft, Linz, Austria

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,974
Claims priority, application Austria Dec. 3, 1958
11 Claims. (Cl. 260—518)

1. A polyiodated benzoic acid amide compound selected from the group consisting of compounds having the formula



wherein Z is selected from the group consisting of the hydrogen atom, the amino group and the acetylamino group, Y is selected from the group consisting of the methylene radical, the polymethylene radicals containing 2 to 6 carbon atoms and the phenylene radical, Y' is selected from the group consisting of the hydrogen atom, the lower alkyl radicals and the phenyl radical and X is selected from the group consisting of the alkyl radicals having 1 to 6 carbon atoms, the cycloalkyl radicals having 5 to 6 carbon atoms, the phenyl radical, the hydroxyalkyl radicals having 1 to 2 carbon atoms, the alkoxyalkyl radicals having 2 to 4 carbon atoms and the group



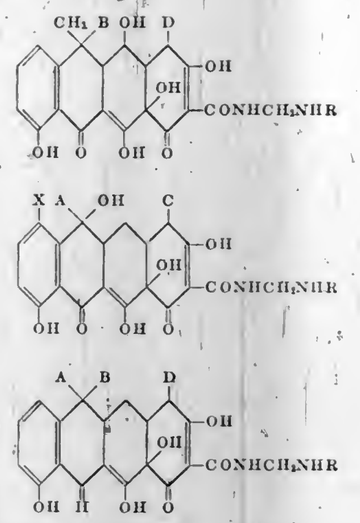
wherein Y and Z have the meaning defined above and the salts thereof with non-toxic bases.

3,042,716
MANNICH BASES OF TETRACYCLINE COMPOUNDS AND AMINO ACIDS

Robert K. Blackwood, Gales Ferry, and Karl J. Brunings, New London, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 4, 1961, Ser. No. 156,950
5 Claims. (Cl. 260—519)

1. A compound selected from the group consisting of



and the acid-addition and base salts thereof,

wherein

A is selected from the group consisting of hydrogen and methyl,

B is selected from the group consisting of hydrogen and hydroxy,

D is selected from the group consisting of hydrogen and dimethylamino,

X is selected from the group consisting of chloro and bromo, and

R together with the associated amino group constitutes the monovalent radical of an amino acid selected from the group consisting of ω-aminoalkanoic and α,ω-diaminoalkanoic acids of from three to six carbon atoms.

3. Amido-N-(lysinomethyl)tetracycline.

3,042,717
PROCESS FOR THE PRODUCTION OF AROMATIC DICARBOXYLIC AND POLYCARBOXYLIC ACIDS

Walter Schenk, Heidelberg, Germany, assignor to Henkel & Cie G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Feb. 15, 1961, Ser. No. 89,344
12 Claims. (Cl. 260—522)

1. The process of producing terephthalic acid, which consists essentially of heating an alkali metal salt of a benzene polycarboxylic acid with at least three carboxyl groups in the molecule to a temperature between 300° C. and the decomposition temperature of said starting material and the reaction products in a substantially anhydrous, substantially oxygen-free atmosphere of an inert gas converting the alkali metal salts of terephthalic acid formed thereby into the corresponding free acid, and separating said free acid from the reaction mass.

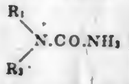
3,042,718
UREA COMPOSITIONS

Peter Evans and Dennis Godfrey Brooke, both of Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Dec. 9, 1959, Ser. No. 858,320
Claims priority, application Great Britain Dec. 17, 1958
3 Claims. (Cl. 260—555)

1. Urea having improved free flowing properties and improved resistance to caking which consists essentially

of particulate urea and from 0.0001% to 0.5% by weight of a substituted urea of the formula



in which R_1 is a radical selected from the group consisting of cyclohexyl, phenyl, tolyl, xylyl, n-butyl phenyl, n-dodecyl phenyl, alkoxy phenyl, amino phenyl, carboxy phenyl, halogenophenyl, nitro phenyl, nitro tolyl, phenyl-phenyl, anthraquinonyl, hydroxynaphthyl, pyridyl, methy-pyridyl, butyl, nonyl, tetradecyl, hexadecyl and octadecyl, and R_2 is a radical selected from the group consisting of hydrogen, cyclohexyl, phenyl, tolyl, xylyl, n-butyl phenyl, n-dodecyl phenyl, alkoxy phenyl, amino phenyl, carboxy phenyl, halogenophenyl, nitro phenyl, nitro tolyl, phenyl-phenyl, anthraquinonyl, hydroxynaphthyl, pyridyl, methy-pyridyl, butyl, nonyl, tetradecyl, hexadecyl and octadecyl.

2. Particulate urea as claimed in claim 1 wherein R_1 is a tolyl group and R_2 is hydrogen.

3,042,719

N-ACETYL AMINOPHENOL PROCESS

John H. Hahn, Mehlville, and John F. Quinn, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,500

17 Claims. (Cl. 260—562)

1. In the process for the purification of a crude discolored N-acetyl aminophenol selected from the group consisting of N-acetyl aminophenol and lower alkyl substituted N-acetyl aminophenols containing as impurities products of oxidation of corresponding aminophenol the steps which comprise acidifying an aqueous solution of said crude N-acetyl aminophenol to a pH of from about 1 to about 5 with a mineral acid, filtering the solution which is at a temperature of from about 50° C. to about 100° C. and cooling the filtrate while slowly adding thereto at least about 0.05 part per 100 parts of N-acetyl aminophenol of an alkaline reducing sulfite as the N-acetyl aminophenol crystallizes from the solution, the foregoing steps being carried out in a non-oxidizing atmosphere.

3,042,720

HYDROXY-ALKYL-AMINOACETYL XYLIDIDES

George Paabo, Toronto, Ontario, Canada, assignor to Fine Chemicals of Canada Limited, Toronto, Ontario, Canada, a corporation of Ontario

No Drawing. Filed May 18, 1959, Ser. No. 813,668

3 Claims. (Cl. 260—562)

1. N,N-bis(2-hydroxyethyl)-aminoacetyl-2,6-xylidide.

2. B - (2 - methyl - 1,3 - dihydroxypropylamino)-2,6-dimethyl-acetanilide.

3,042,721

DI-LOWER ALKYL-AMINOPHENYL-LOWER ALKYLENE HYDRAZINES

Thomas Samuel Gardner, Rutherford, John Lee, Essex Fells, Jacob Finkelstein, West Englewood, and Edward Wenis, Leonia, N.J., assignors to Hoffmann-La Roche Inc., Roche Park, Nutley, N.J., a corporation of New Jersey

No Drawing. Filed May 12, 1959, Ser. No. 812,603

6 Claims. (Cl. 260—569)

1. A compound selected from the group consisting of di-lower alkyl-aminophenyl-lower alkylene hydrazine and acid addition salts thereof with medicinally acceptable acids.

3,042,722

OXIDATION OF CYCLIC OLEFINS

Emil F. Jason and Ellis K. Fields, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,890

6 Claims. (Cl. 260—586)

1. The preparation of a ketone of a cyclic mono-olefin which comprises: oxidizing in the liquid phase a cyclic olefin hydrocarbon selected from the group consisting of cyclic mono-olefin hydrocarbon and 1-alkyl hydrocarbon derivatives thereof with a molecular oxygen-containing gas in the presence of an inert, mildly acidic reaction medium buffered to a pH above 5 and up to 7 and a catalyst system consisting essentially of bromine and a heavy metal oxidation catalyst, and recovering from the resulting reaction mixture a ketone of a cyclic mono-olefin.

3,042,723

PREPARATION OF BORON ALKYLS

Herbert Jenkner, Hannover-Wulfel, Germany, assignor to Kali-Chemie Aktiengesellschaft, Hannover, Germany

No Drawing. Filed Sept. 26, 1960, Ser. No. 58,173

Claims priority, application Germany Sept. 26, 1959

5 Claims. (Cl. 260—606.5)

1. A method for the preparation of boron trialkyls comprising reacting an anhydrous boron compound selected from the group consisting of boron trioxide, alkali metal borates, and alkaline earth metal borates, which boron compounds were dehydrated in vacuo at a temperature below about 250° C., with a lower alkyl aluminum chloride at a temperature of about 50° to 250° C., and distilling off the formed boron trialkyl.

3,042,724

PREPARATION OF NAPHTHALENETHIOL

David S. Hoffenberg, Stamford, and Robert G. Haldeman, Norwalk, Conn., and William B. Hardy, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 22, 1959, Ser. No. 841, 440

4 Claims. (Cl. 260—609)

1. A process for the preparation of naphthalenethiol which comprises reacting a naphthol with hydrogen sulfide in the presence of a thoria dehydration catalyst at substantially atmospheric pressure and at a temperature of from about 350° C. to about 600° C.

3,042,725

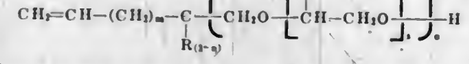
ALKYLENE OXIDE ADDUCTS OF TERMINALLY UNSATURATED POLYOLS

Clare A. Carter, South Charleston, Louis F. Theiling, Jr., Charleston, and Robert J. Knopf, St. Albans, W. Va.

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,573

6 Claims. (Cl. 260—615)

1. An alkylene oxide adduct of a terminally unsaturated polyol of the formula:



wherein R is an unsubstituted monovalent aliphatic hydrocarbon group containing from 1 to 10 carbon atoms; R′ is a member selected from the class consisting of hydrogen and alkyl groups containing from 1 to 6 carbon atoms; *m* is a whole positive integer of from 0 to 10; *n* is a whole positive integer of from 2 to 3; and *x* is a whole positive integer of such value that said adduct has a molecular weight within the range of from about 750 to about 1400.

3,042,726

INHIBITED POLYMERIZABLE COMPOSITIONS

Richard Edward Cook, Epsom, England, assignor to The Distillers Company Limited, Edinburgh, Scotland

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,679

Claims priority, application Great Britain June 24, 1959

4 Claims. (Cl. 260—652.5)

1. A composition comprising chloroprene and at least 0.001% by weight of the chloroprene of a polymerization inhibitor selected from the group consisting of ammonium N-nitroso-phenylhydroxylamine and homologues thereof.

3,042,727

PREPARATION OF FLUOROFORM

Franciszek Olstowski, Freeport, and John Donald Watson, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 4, 1959, Ser. No. 817,984

7 Claims. (Cl. 260—653)

1. A process of preparing fluoroform which comprises contacting hydrogen and a compound having the formula CF_3X, wherein X represents a halogen selected from the group consisting of Br and I, at a temperature ranging from about 450° C. to about 900° C. for a residence time ranging from about 0.1 second to about 10 seconds, and separating fluoroform from the reaction product.

2. A process of preparing fluoroform which comprises contacting hydrogen and a compound having the formula CF_3X, wherein X represents a halogen selected from the group consisting of Cl, Br and I, at a temperature ranging from 450° C. to about 900° C. for a residence time ranging from about 0.1 second to about 10 seconds, in the presence of a copper catalyst, and separating fluoroform from the reaction product.

3,042,728

PROCESS FOR THE PRODUCTION OF ETHYLENE DICHLORIDE

Donald H. Hirsh and Charles E. Hodges, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

Filed Apr. 15, 1960, Ser. No. 22,545

3 Claims. (Cl. 260—662)

1. In the production of ethylene dichloride in a cyclic operation by the reaction of ethylene, hydrogen chloride and oxygen, the improvement which comprises scrubbing the effluent gas from the reactor with dimethyl phthalate prior to recycling the stream to the reactor.

3,042,729

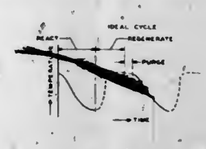
CYCLIC ENDOTHERMIC REACTION PROCESSES

Bernard F. Mulaskey, El Sobrante, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Sept. 30, 1959, Ser. No. 843,580

6 Claims. (Cl. 260—680)

1. In a cyclic process for carrying out an endothermic hydrocarbon dehydrogenation reaction, comprising alternate on-stream and off-stream periods wherein heat for the endothermic reaction is supplied by combustion during the off-stream regeneration period of carbonaceous material deposited in a body of dehydrogenation catalyst-containing particulate material during the on-stream reaction period, and which process is characterized by insufficient deposition of carbonaceous material to supply the heat necessary to sustain a desired high conversion level in the dehydrogenation reaction at a predetermined feed inlet temperature, the improvement of adding organic



basic nitrogen compounds to the hydrocarbon feed in an amount sufficient to cause increased deposition of carbonaceous material during the reaction period such that during the regeneration period increased heat is absorbed by said body of catalyst-containing particulate material, whereby said increased heat is supplied to sustain a higher conversion in the dehydrogenation reaction.

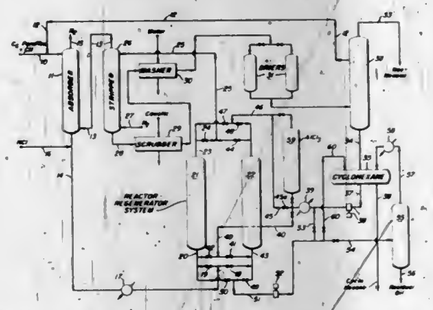
3,042,730

REGENERATIVE ISOMERIZATION TECHNIQUE

Clifton N. Sechrist and Joseph F. Jennings, Texas City, and Joe T. Kelly, Dickinson, Tex., assignors, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Aug. 7, 1959, Ser. No. 832,269

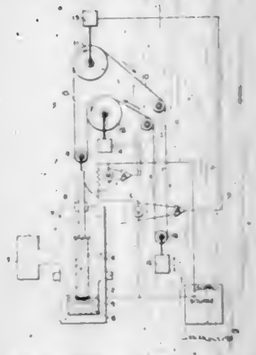
9 Claims. (Cl. 260—683.74)



1. In an isomerization system where a paraffin having 4 to 7 carbon atoms is contacted with an $AlCl_3$-on-adsorbent catalyst under isomerization conversion conditions wherein the catalyst declines in activity during on-stream periods, the method of at least partially restoring said catalyst activity which comprises contacting the catalyst with an inert hydrocarbon at a temperature in the range of about 100 to 300° F. to remove paraffins, promoter and deleterious deposits from the catalyst, treating said contacted catalyst with a solution of aluminum chloride in an inert hydrocarbon at a temperature higher than conversion temperature but in said 100 to 300° F. range, and cooling the catalyst to a conversion temperature in the range of 60 to 180° F. in the presence of the aluminum chloride-containing inert hydrocarbon.

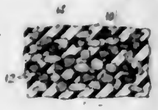
ELECTRICAL

3,042,731
MOVEMENT MECHANISM FOR ELECTRODE CONTROL IN VACUUM ARC FURNACES
Helmut Gruber and Helmut Scheidig, Hanau (Main), Germany, assignors to W. C. Heraeus G.m.b.H., Hanau (Main), Germany, a German body corporate
Filed July 27, 1959, Ser. No. 829,592
Claims priority, application Germany Aug. 5, 1958
1 Claim. (Cl. 13—13)



An apparatus for adjustably moving a consumable electrode of an arc furnace to maintain the length of an arc at a predetermined length during melting of the same, said apparatus comprising a pair of electric motors adapted to rotate continuously in opposite directions to each other, a first pulley associated with one of said motors for rotation in the direction of said first motor, a second pulley associated with the other of said motors for rotation in the direction of said second motor, a third pulley connected to the electrode for movement therewith, a counterweight carrier pulley, and an endless flexible conveyor member passing around said pulleys, said pulleys being arranged so that an increase in speed of said first motor will advance the electrode and an increase in the speed of said second motor will retract the electrode.

3,042,732
ANODES FOR ALKALINE CELLS
Karl Kordesch, Lakewood, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Filed Oct. 14, 1959, Ser. No. 846,420
10 Claims. (Cl. 136—30)



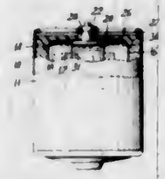
1. For use in primary and secondary alkaline cells employing an electrochemical system chosen from the group consisting of manganese dioxide-zinc, silver oxide-zinc, nickel oxide-zinc and mercuric oxide-zinc, an improved anode which comprises the combination of powdered zinc and at least one of the powdered materials selected from the group consisting of lead oxide, metallic copper, copper oxide, and metallic magnesium; said selected material being present in an effective amount to substantially prevent gassing on deep discharge of said cell; said powdered zinc and said powdered selected material being substantially intermixed throughout said anode.

3,042,733
BATTERY CONSTRUCTION
Dean L. Toda, Bellaire, Tex., and William H. Delerhoi, Jr., Westlake, and Fred L. Granger, Lakewood, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed May 19, 1960, Ser. No. 30,319
3 Claims. (Cl. 136—110)



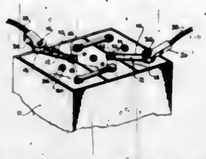
1. A galvanic battery comprising a closed container; a plurality of flat galvanic cells arranged in stacked relation within said container; and a compression member between said stacked cells and an end of said container, said stacked cells and said member being maintained in compression within said container; said member being of a non-resiliently yieldable material which will slowly and steadily give way under a volume expansion of said stacked cells without a pressure build-up in order to accommodate expansion of said stacked cells upon discharge of said battery, thereby preventing distortion of said container while maintaining said stacked cells in compression.

3,042,734
ALKALINE CELL CLOSURE
Robert Carmichael, Lakewood, and John L. S. Daley, Bay Village, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed Feb. 25, 1960, Ser. No. 11,100
11 Claims. (Cl. 136—133)



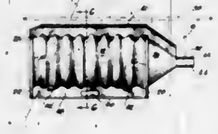
1. A sealed galvanic cell comprising a cupped polarized metallic container having disposed therein an anode and a cathode with a separator therebetween and an alkaline electrolyte; said cell being sealed at the open end of said cupped container by a cell closure which comprises an annular U shaped gasket of a hard di-electric plastic which is resistant to cold flow, said gasket having a central aperture therein, an annular apertured unpolarized metallic cover recessed in said U shaped gasket and an oppositely polarized metallic terminal which passes through said apertures in said gasket and said cover; said gasket being under radial compression between said cover and said terminal and between said cover and said container.

3,042,735
BATTERY CORROSION ELIMINATOR
Abe Sklar, 75 Omaha Ave., Rockaway, N.J.
Filed Nov. 16, 1959, Ser. No. 853,205
2 Claims. (Cl. 136—181)



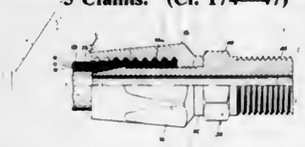
1. A holder for an anti-corroding device for a wet cell acid battery comprising a flat rectangular-shaped body composed of two telescopic sections, each section having a ring on its outer end, one of said rings having a plurality of spaced resilient teeth on its inner periphery on one side thereof and having a plurality of lugs on said inner periphery between said teeth on the other side thereof, said teeth and lugs extending radially inward and adapted to hold a circular flat copper member.

3,042,736
PROTECTIVE COVER
George F. Salisbury, Kenilworth, Ill., assignor to W. H. Salisbury & Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 12, 1960, Ser. No. 49,268
11 Claims. (Cl. 174—5)



1. A protective cover for electrical equipment on high voltage power lines comprising a tubular sleeve formed from an electrically insulating material, said sleeve having thin corrugated walls and provided with a straight slot extending between its ends, means integral with the sleeve ends biasing the edges of the slot together and an exterior longitudinal flange on said sleeve opposite said slot, said flange connected to and extending between said biasing means and serving to strengthen said sleeve, the interior dimension of said sleeve large enough so the sleeve can enclose electrical equipment commonly mounted on high voltage lines, one end of said sleeve having a large opening communicating with its interior whereby after said sleeve is forced against a high voltage line so the line passes through said slot into the sleeve interior, the sleeve can be shifted over the line until electrical equipment mounted on said line passes through said opening into the interior of the sleeve.

3,042,737
HOSE ASSEMBLY INCORPORATING A GROUND WIRE
Robert E. Brumbach and Hans A. Johansen, Mantua, Ohio, assignors to Samuel Moore & Company, Mantua, Ohio, a corporation of Ohio
Filed May 20, 1960, Ser. No. 30,614
5 Claims. (Cl. 174—47)



1. In combination, a composite tubing and a coupling assembly, said composition tubing comprising an inner tube of polymeric material, an outer sheath of polymeric material encasing said inner tube, a flattened strip electrical discharge element disposed intermediate said inner tube and said outer sheath and extending generally linearly and parallel to the axis of said tubing and coextensive with the length of the tubing, an end of said discharge element adjacent one end of said tubing being exposed to the exterior circumference of said tubing, said coupling assembly comprising a ferrule element having an internally threaded portion receiving said one end of said tubing therein, an elongated insert member, said insert member having an axially extending passageway therethrough, means on said ferrule member adapted for coaction with means on said insert member for holding said insert member in predetermined telescoped relation in said ferrule member, said insert member being received in said inner tube and expanding the latter radially outwardly and urging said tubing into positive gripping engagement with said threaded portion of said ferrule member, and the exposed end of said discharge element is displaced in positive electrical contact with said threaded portion of said ferrule member.

3,042,738
ANTENNA CONNECTOR CLIP
Paul J. Tebay, Alpena, S. Dak.
Filed Mar. 26, 1959, Ser. No. 802,207
1 Claim. (Cl. 174—52)



In combination a cabinet for containing apparatus with an electrical connection between the interior and the exterior, and a removable panel for providing access to the interior of the cabinet, means whereby said panel may be applied and removed while the electrical connection is maintained, said last-mentioned means including a generally U-shaped spring clip of relatively thin sheet material and of a size to receive and frictionally and resiliently grip opposite sides of said removable panel, whereby upon the removal of said panel the clip and panel may be separated without interfering with the connection to the interior of said cabinet, a pair of conductors carried by the connector clip and extending therealong from the interior to the exterior portion, the conductors being insulated from each other, and a plurality of terminal attaching means carried by the clip, one being connected to each end of each conductor.

3,042,739
CORD HOLDER ATTACHMENT FOR ELECTRICAL OUTLETS
Burnie M. Craig, Pasadena, Calif., assignor to Henry Keck Associates, South Pasadena, Calif., a partnership
Filed Aug. 17, 1959, Ser. No. 834,322
1 Claim. (Cl. 174—66)

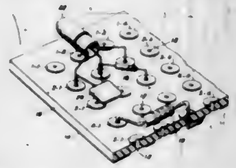
A cord holder adapted to be mounted between the face plate of an electrical outlet and a wall upon which the face plate is arranged, said cord holder including: a rectangular, planar, inwardly directed, continuous, securing flange adapted to be secured parallel to the wall surface, said flange being defined by opposed end portions spaced apart less than the height of the face plate and by side portions which are spaced apart less than the width of the face plate, allowing said flange to be firmly secured between the face plate and the adjacent wall surface; an integral, rectangular, continuous, spool forming, wall member extending abruptly forwardly and flaring

outwardly from the periphery of all four sides of said securing flange; a resilient, rectangular, continuous, marginal flange formed integrally with and extending forwardly and outwardly from all four sides of the wall member, said marginal flange flaring forwardly less abruptly than the flaring of the spool forming wall member; and a rectangular, integral, outwardly flaring and



rearwardly extending flange extending from said marginal flange across all four sides of the spool forming wall member, said last mentioned flange terminating in a peripheral, rectangular, outwardly directed, stiffening bead, said marginal flange, said rearwardly extending flange, and said bead having aligned cord receiving slots therein.

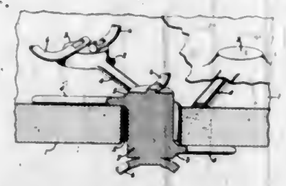
3,042,740
MOUNTING BOARD FOR ELECTRIC CIRCUIT ELEMENTS
Raymond H. Bosworth, Watchung, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 30, 1960, Ser. No. 72,606
3 Claims. (Cl. 174—68.5)



3. A mounting board for electric circuit elements which comprises a rigid plate of insulating material having two opposite parallel faces, a plurality of discrete circular spots of conducting material fixed to one face of said plate and arranged in a two-dimensional array, the diameter of each spot being substantially one half of the center-to-center spacing between spots, a connected film of conducting material fixed to the opposite face of said plate and pierced by a like plurality of apertures, each aperture being congruent with one of said spots, said plate being further pierced by a plurality of channels extending through said plate from one face to the other face, one open end of each channel being substantially centered in a spot, the other open end of each channel being substantially centered in an aperture.

3,042,741
ELECTRIC CIRCUIT BOARD
Edward H. Cumpston, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 29, 1959, Ser. No. 816,816
6 Claims. (Cl. 174—68.5)

1. An electric circuit board comprising a sheet of inorganic dielectric material having a plurality of apertures therethrough, electrically conductive pins positioned in desired ones of said apertures, and electric circuitry fused to both the outer surface of said sheet and the sides of desired ones of said pins, said pins being of sufficient length to extend beyond the surface of the



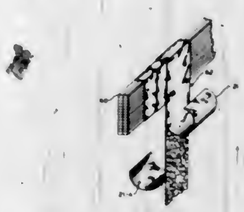
sheet and the circuitry, and a lead for a component connected to said board welded to the end of one of said pins.

3,042,742
SPRING
Edwin E. Foster, 1805 Camp Craft Road, Austin, Tex.
Filed Oct. 17, 1960, Ser. No. 62,946
10 Claims. (Cl. 174—69)



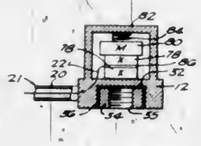
1. A coil spring comprising a ribbon permanently stressed into a plurality of tightly wound convolutions when in repose, each of said convolutions tightly engaging the preceding convolution when in repose, said ribbon having a tendency to assume a concave-convex cross section, said ribbon being composed of a flexible plastic ribbon and a metallic ribbon embedded within said plastic ribbon, said plastic ribbon having a formed transverse curvature.

3,042,743
COIL FOR ELECTRICAL ROTATING MACHINE
Loren C. Jones, Columbus, Ohio, assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 15,251
8 Claims. (Cl. 174—120)



1. An insulated electrical conductor comprising a conductor portion and an insulating portion surrounding said conductor portion, said insulating portion comprising a composite wrapping formed of glass cloth backing material and mica material having interstices therein formed by surfaces of said backing material and surfaces of said mica material; a thin layer of a reactive surface treating material selected from the group consisting of methacrylato chromic chloride, vinyltrichlorsilane, vinyltriethoxysilane, amino-functional silane, on the surfaces of said mica material and backing material; and a polymerized thermosetting resin completely filling all of said interstices and in intimate bonded relationship with all of said surfaces of said backing material and mica material, said resin being selected from the group consisting of polyester resins, epoxy resins and combinations thereof.

3,042,744
TESTING SYSTEM AND INSULATED MOUNTING THEREFOR
Bernard A. Shoor, Pasadena, Calif., assignor to Endevco Corporation, Pasadena, Calif., a corporation of California
Filed Nov. 3, 1958, Ser. No. 771,579
7 Claims. (Cl. 174—138)



1. In combination:

a vibration detector having detecting means for generating electrical signals in response to vibration of an object on which the detector is mounted;

a base structure carrying said detector and having an outer wall surface to be mounted on said object during testing, and also having a bore extending into said base structure from said outer surface and providing inner wall surfaces to receive attachment means;

ceramic insulation permanently disposed on said outer wall surface and on inner wall surfaces of said bore; and

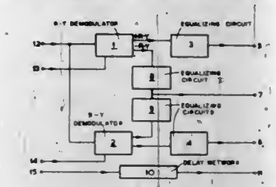
attachment means fixedly disposed within and surrounded by said ceramic insulation on said inner wall surfaces and insulated from said base structure by such ceramic insulation.

3,042,745
LINE TIE
Harrison L. Williams, Euclid, Ohio, assignor to Preformed Line Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 31, 1959, Ser. No. 837,095
11 Claims. (Cl. 174—173)



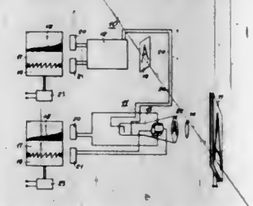
1. An appliance for securing a linear body to a mounting device comprising a linear element preshaped to include two laterally spaced portions lying in a common plane for at least a portion of their lengths and axially coextensive for at least a portion of their lengths, and an intermediate portion diagonally connecting opposite ends of said spaced portions, said intermediate portion having an arched shape so as to project from said common plane.

3,042,746
HIGH LEVEL COLOUR DEMODULATION SYSTEM
Patrick Augustus Wigley and Ronald Lister, Scarborough, Ontario, Canada, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 20, 1958, Ser. No. 775,233
Claims priority, application Canada Nov. 20, 1957
4 Claims. (Cl. 178—5.4)



1. A receiver for color television signals of the type comprising a first signal substantially relating to the brightness of a scene, and a second signal consisting of an auxiliary carrier-wave modulated in quadrature with third and fourth signals, said third signal having a larger bandwidth than said fourth signal, each of said third and fourth signals consisting of a given combination of signals relating to respective color components of the scene, the combinations permitting formation of color difference signals of different bandwidths by linear operations, said receiver comprising first and second synchronous demodulators, means applying said second signal to said demodulators, means applying oscillations of the frequency of said auxiliary carrier-wave to said demodulators, said oscillations having respective phases whereby said second signals are demodulated in said first and second demodulators in the direction of the axes of first and second color difference signals to provide first and second output signals respectively, and first and second equalizing network means connected to said first and second demodulators respectively for equalizing said first and second output signals respectively, said network means having phase characteristics providing such a phase displacement of said output signals, for signals outside of the frequency band of said fourth signals, that the resultant signals outside of said frequency band have the phase that would occur on demodulation of said second signal in the direction of the axis of said third signal.

3,042,747
ELECTRONIC TRANSMITTING SYSTEM
Aurelio Beltrami, Via Circo 4, Milan, Italy
Filed Nov. 23, 1956, Ser. No. 624,119
9 Claims. (Cl. 178—5.6)



1. An electronic system for the transmission of video signals comprising a receiver and a transmitter for generating video signals which are receivable by said receiver; at each of said transmitter and said receiver a double transducing device comprising a rotatable member and a driving means therefor; said member having a line frequency oscillogram and a frame frequency oscillogram formed thereon; a first means at each of said transmitter and said receiver responsive to both of said oscillograms for generating a reticle; said driving means at the transmitter comprising a first motor and at the receiver a sec-

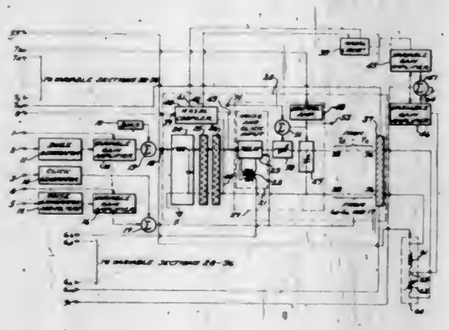
ond motor; a first device to generate voltages at rigorously constant frequency arranged to feed the first motor controlling the rotation of the rotating member of the transducing device placed at the transmitter; said first device comprising a pendulum having a first oscillogram thereon, a source of radiations including a beam modulated by said first oscillogram, a transducing element for transforming said beam into an electric voltage, a drum, an electric rotating field motor for rotating said drum, said drum carrying at least one oscillogram, another source of radiations having a beam modulated by the last recited oscillogram, a transducer for receiving said last recited radiations and transforming them into electric voltages connected to feed the second motor of the transmitters transducing device.

3,042,748

DYNAMIC ANALOG SPEECH SYNTHESIZER

George Rosen, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Aug. 25, 1958, Ser. No. 757,170
9 Claims. (Cl. 179—1)



1. A speech synthesizer comprising lumped transmission line circuitry having a series of sections, each of said sections including capacitance and inductance elements, control means for said lumped transmission line circuitry, said control means being constituted by an additional section of circuitry including signal summation components simulating sound-producing portions of the human anatomy and electrically connected in current-feeding relationship to said lumped transmission line circuitry to control continuously throughout the sound-producing cycle, the electrical value of said capacitance and inductance elements while retaining the product, the electrical value of said capacitance and inductance elements constant, means including inductance connected to the output of said lumped transmission line circuitry to reproduce said sound producing cycle, means to excite said lumped transmission line circuitry for varied audio sounds with an electrical signal of variable frequency and amplitude characteristics patterned upon the sound waves of the human vocal tract.

3,042,749

PORTABLE SOUND REPRODUCING APPARATUS

Jarl A. Johnson, 3004 Longwood Drive, Pasadena, Tex., assignor of thirty-three and one-third percent to Val Jean McCoy, Harris County, Tex.

Filed Sept. 2, 1958, Ser. No. 758,393
3 Claims. (Cl. 179—1)

1. A portable sound reproducing system comprising a case, a speaker housed in said case, a battery housed in said case, an amplifier housed in said case and electrically connected to said battery and speaker, an input jack connected to the amplifier, transistors in said amplifier, two of said transistors arranged in a push-pull output



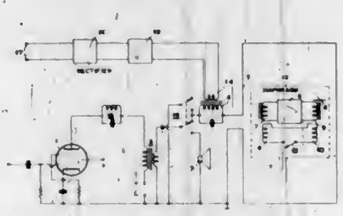
stage, a throat microphone connected to said input jack, and a strap connected to the case arranged to support said case about a person's neck.

3,042,750

REMOTE LISTENING AND CONTROL SYSTEM

Gerrit Jan Siezen, Baarn, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 29, 1958, Ser. No. 764,185
Claims priority, application Canada Nov. 27, 1957
7 Claims. (Cl. 179—2)



1. A remote control system comprising a magnetic loop, apparatus comprising a low frequency signal amplifier adapted to energize said loop, receiver means responsive to the signals in said loop, said receiver means including amplifier means, means associated with said amplifier means adapted to selectively render it regenerative to transmit a high frequency signal to said loop, tuned means in series with said loop resonant at said high frequency, and means associated with said tuned means and responsive to said high frequency signal for providing a control voltage.

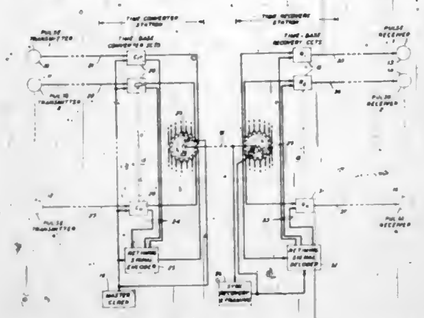
3,042,751

PULSE TRANSMISSION SYSTEM

Robert S. Graham, Bernardsville, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 10, 1959, Ser. No. 798,404
17 Claims. (Cl. 179—15)

1. A time division transmission system for a plurality of asynchronous pulse trains comprising, means for converting the time base of each of said pulse trains to a common time base, means responsive to said time base converting means for deriving coded pulse signals indicative of the change in time base for each of said pulse trains, means for multiplexing said converted pulse trains and said coded pulse signals on a common time-divided transmission facility, means for demultiplexing the signals on said transmission facility, and means responsive to the demultiplexed coded pulse signals for recovering



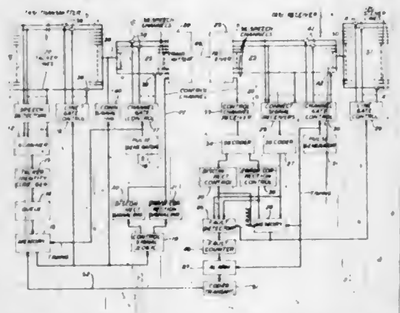
the original time base of each of said demultiplexed pulse trains.

3,042,752

FAILURE DETECTING APPARATUS

Robert J. Fulmer, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 25, 1959, Ser. No. 815,578
14 Claims. (Cl. 179—15)



6. In a time assignment speech interpolation system wherein active ones of a plurality of signal sources are assigned on a time division basis to idle ones of a lesser plurality of transmission channels, means for preceding signals from each of said sources with a coded identification of the originating source, means connected to said transmission channel for detecting said coded identifications, means for generating a fault signal each time one of said coded identifications is absent, means for counting consecutive ones of said fault signals for each of said transmission channels, and means for disabling each of said transmission channels for which a preselected number of consecutive fault signals are thus counted.

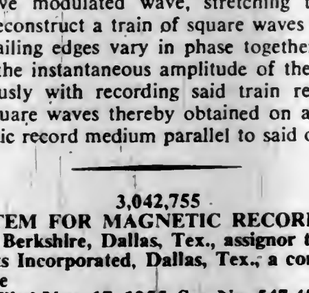
3,042,753

MAGNETIC RECORDER

Hiroshi Iwamura, Tokyo, Japan, assignor to Nippon Denkionkyo Kabushikikaisha, Tokyo, Japan, a corporation of Japan

Filed Nov. 10, 1960, Ser. No. 68,402
Claims priority, application Japan May 23, 1960
6 Claims. (Cl. 179—100.2)

1. A magnetic recorder comprising an erasing magnetic head, a recording and reproducing magnetic head, a shield case for magnetically shielding at least one of said magnetic heads, a shifter for shifting a magnetic medium which is travelling past said magnetic heads to separate the medium from said magnetic heads, a shift spring urging said shifter in the direction in which said magnetic medium is separated from said magnetic heads, an electromagnetic means which is arranged and energized to move said shifter against said shift spring so as to contact said magnetic medium with said magnetic heads, a resilient arm which is mounted on said shifter, and a



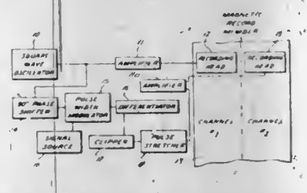
shield front cover attached to said resilient arm for magnetic shielding of the front face of said magnetic head having said shield case when contacted with the front face of said shield case.

3,042,754

TWO CHANNEL PHASE MODULATION

Louis B. McManis, Houston, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Apr. 14, 1961, Ser. No. 103,111
7 Claims. (Cl. 179—100.2)



1. A method of recording a signal on a movable magnetic record medium which includes the steps of generating a train of periodic square wave oscillations, recording said train on one channel of the magnetic medium, varying the position of one of the leading and trailing edges of each square wave of the train with respect to the other in accordance with the instantaneous magnitude of the signal to obtain a pulse width modulated wave, differentiating the pulse width modulated wave, clipping all of the differentiated spikes of voltage corresponding to the reference one of the leading and trailing edges of the square wave modulated wave, stretching the retained spikes to reconstruct a train of square waves whose leading and trailing edges vary in phase together in accordance with the instantaneous amplitude of the signal, and simultaneously with recording said train recording the train of square waves thereby obtained on a channel of the magnetic record medium parallel to said one channel.

3,042,755

SYSTEM FOR MAGNETIC RECORDING

Robert H. Berkshire, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Nov. 17, 1955, Ser. No. 547,453
12 Claims. (Cl. 179—100.2)

1. A system for multi-channel magnetic recording or reproducing comprising a plurality of multi-unit electromagnetic heads fixed in position and lying in a common plane and angularly disposed about a central axis with each said head radially displaced from said central axis differently from the radial displacement of all other heads, and a plurality of backup roller assemblies lying in a

common plane parallel and adjacent to the first-mentioned plane with each said assembly angularly aligned with one of said multi-unit electromagnetic heads and each backup roller of each said assembly radially aligned with a unit of the respectively aligned multi-unit electro-



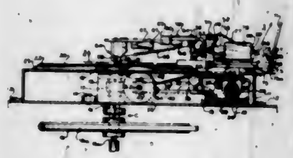
magnetic head, a magnetizable coated disk rotatably fixed between the parallel and adjacent first and second-mentioned planes, each of said roller assemblies maintaining said disk in operative engagement with its respective angularly aligned head.

3,042,756
ROTATABLE MAGNETIC TRANSDUCER
Walter S. Buslik, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 21, 1956, Ser. No. 629,812
10 Claims. (Cl. 179—100.2)



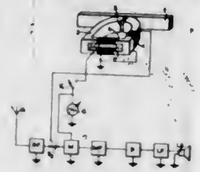
1. A magnetic transducer comprising rotatably mounted magnetic conducting means, said means comprising the sole magnetic circuit which circuit is closed except for a central aperture and at least one magnetic recording and reproducing gap and stationary coil means passing through the central aperture and surrounding a portion of the path of motion of the magnetic conducting means.

3,042,757
STYLUS RECORDING WITH SUPERIMPOSED HIGH FREQUENCY EXCITATION
Robert Wagner, Ford Road, Denville, N.J.
Filed Jan. 17, 1958, Ser. No. 709,634
16 Claims. (Cl. 179—100.4)



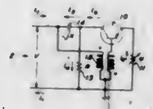
1. In recording apparatus having recording means including a stylus for engaging a record and converting a band of electrical signals representing intelligence, into a correspondingly modulated groove in said record, of a width determined by the tip radius of the stylus and the bias force exerted by the stylus on the record, said apparatus also having means for causing relative linear travelling movement between said stylus and said record, for distributing said modulated groove along the surface of said record; means for obtaining an increase in the width of the modulated groove obtainable with a stylus of given tip radius exerting a bias force of given magnitude, against the record, comprising: oscillatory means for causing relative lateral vibration between said stylus and said record at a frequency above said band at which, for a given linear groove speed, the linear travel of the stylus in the direction of the groove during each vibration cycle is at most equal to the cross sectional dimension of the portion of the stylus engaging the record, to cause the stylus in each lateral excursion responsive to said vibration partially to overlap the path which the stylus described in the last preceding excursion.

3,042,758
COMBINATION OF RADIO RECEIVERS AND MAGNETIC RECORD REPRODUCING DEVICES
Simon Duinker and Jacob Koorneef, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 22, 1957, Ser. No. 654,314
Claims priority, application Netherlands June 8, 1956
4 Claims. (Cl. 179—100.11)



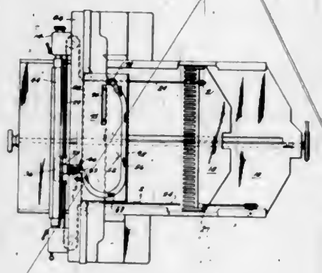
1. The combination of a superheterodyne radio receiver and a magnetic record reproducing device composed of a ferromagnetic material, said radio receiver comprising a high frequency amplifying stage, a local oscillator stage, a mixer stage, an intermediate frequency stage, a detector, and a low frequency stage, an input winding magnetically coupled to said reproducing device on one portion thereof, a first selective connection between said input coil and the local oscillator, a permanent connection between the oscillator and the mixer stage, a magnetic record carrier adapted to move past said reproducing device, the magnetic alternating flux in said device caused by the local oscillator being modulated by signals magnetically registered on the carrier, an output winding coupled to a second portion of said reproducing device, and a second selective connection between said output winding and the mixing stage.

3,042,759
NEGATIVE IMPEDANCE REPEATERS
Arthur L. Bonner, Andover, Mass., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 5, 1959, Ser. No. 831,869
12 Claims. (Cl. 179—170)



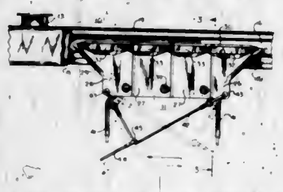
1. A negative impedance converter presenting a phase angle substantially independent of gain which comprises an amplifying device having a current-emissive electrode, a current-receiving electrode, and a control electrode for current flowing between said current-emissive and current-receiving electrodes, a terminating impedance intercoupling said control electrode and one of the remaining electrodes of said amplifying device, said terminating impedance consisting substantially of pure resistance, combined input and output means intercoupling said control electrode and the other of said remaining electrodes of said amplifying device, a phase-inverting positive feedback circuit path intercoupling said current-receiving electrode and said control electrode, and a phase-shifting network included in said positive feedback circuit path, said phase-shifting network providing substantially the entire phase angle of the converter.

3,042,760
CABLE CARRIER FOR PHOTOELECTRICALLY CONTROLLED PAPER CUTTING MACHINES
Carl Thumim, Westbury, N.Y., assignor, by mesne assignments, to Miehle-Goss-Dexter, Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,489
4 Claims. (Cl. 191—12)



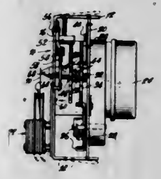
1. In a paper cutting machine having an electric control circuit comprising an electric sensing component mounted for reciprocal traverse, a flexible conductor means for connecting to said component, and a stationary shelf for supporting said flexible conductor means as said component reciprocates, said shelf having an edge adjacent and generally parallel to the path of traverse of said sensing component, said conductor means being disposed in a tubing substantially fully supported on said shelf, said conductor means being secured at one end to said component, the other end of said conductor means being secured to said shelf, there being a generally U-shaped bend in said conductor means wherein said conductor means continually flexes to effect traverse of said U-shaped bend on said shelf as said component moves, said conductor being supported substantially throughout its length on said shelf at all times.

3,042,761
CURRENT COLLECTOR FOR ELECTRIFIED TROLLEY SYSTEMS
Wilbur Mayer, Fairfield, Iowa, assignor to The Louden Machinery Company, Fairfield, Iowa, a corporation of Iowa
Original application May 14, 1954, Ser. No. 429,827, now Patent No. 2,918,540, dated Dec. 22, 1959. Divided and this application Nov. 28, 1958, Ser. No. 777,546
4 Claims. (Cl. 191—59.1)



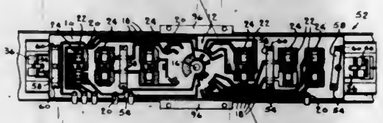
1. A movable current collector assembly for operation with a continuous length of electrified track comprising, a plurality of longitudinally aligned articulated T-shaped insulating segments, a pair of spaced end segments each having a tapered leading edge, a flexible current conducting member secured at each end thereof to said end segments and disposed along each side of said T-shaped segments, and a plurality of current collecting contact shoes secured to each of said flexible members, each of said contact shoes having an outwardly facing angularly disposed contact surface.

3,042,762
ELECTRIC TIMING MECHANISM
Frank Palladino, Uniondale, N.Y., assignor to Precision Coin Devices, Inc., Stewart Manor, N.Y., a corporation of New York
Filed Nov. 17, 1960, Ser. No. 69,938
16 Claims. (Cl. 200—38)



1. An electric timing mechanism of the character described comprising a low-power, low-voltage electric motor connected in an electric circuit, an escapement member having spaced teeth operable by said motor, a first ratchet wheel, means rotatably supporting said first ratchet wheel in position for engagement of a tooth thereof by the said escapement member for rotation thereby, a second ratchet wheel, means mounting said second ratchet wheel coaxially with said first ratchet wheel and in spaced relation thereto for rotational movement and for movement towards and away from said first ratchet wheel, manually engageable means for rotating said first ratchet wheel, a projection on the side of each of said ratchet wheels facing the other, said projections overlapping one another and having parallel, sloping, facing surfaces, whereby rotation of said first ratchet wheel will bring said projections in contact and axially displace said second ratchet wheel away from said first ratchet wheel, a normally closed switch in the circuit of said electric motor and means on said second ratchet wheel engaging said switch for opening the same upon axial movement of said second ratchet wheel away from said first ratchet wheel.

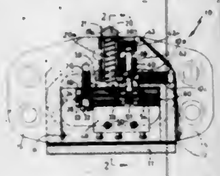
3,042,763
TIMER
Donald M. Strathearn, Arlington Heights, Ill., assignor to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,704
8 Claims. (Cl. 200—38)



1. A circuit board for an interval timer comprising, a non-conductive board including a searching circuit printed thereon which has starting points located in a prescribed path, circuit means moveable in the prescribed path to determine the presence of an operating condition at one of the starting points, program selection switches integral with and slidable on the board, and selection cir-

cuits printed on the board and connected to the searching circuit, said switches having normal and actuating positions with respect to the selection circuits whereby upon actuation of a selection switch the circuit condition sought by the moving circuit means is established.

3,042,764
ELECTRIC SWITCH AND SEALING ELEMENT THEREFOR
Eduard Hermle, Kirchstrasse 20, Neuhausen auf den Fildern, Germany
Filed Apr. 3, 1959, Ser. No. 803,945
Claims priority, application Germany Apr. 12, 1958
7 Claims. (Cl. 200—47)



1. An electric limit switch comprising, in combination: a housing; at least one actuating means each including a spring biased push-button reciprocably installed in said housing and constantly urged in a direction to extend from the housing, a spring biased bolt reciprocably received in said housing and parallel with the respective push-button, each bolt comprising an annulus and a stud, stop means connected with each push button and engageable with the annulus of respective bolt, and spring means for constantly urging the annulus of each bolt into engagement with the respective stop means; a switching unit for each actuating means received in said housing, each switching unit including a movable contact member operable by the respective stud when the push-button associated therewith is displaced in a direction to extend further into said housing and the stop means connected therewith is displaced; and a sealing element installed in said housing for separating each stud from each contact member, said sealing element comprising a plate-like carrier of metallic material having an aperture for and adjacent to the contact member of each switching unit, and a foil of elastic material connected and in permanent surface-to-surface sealing contact with said carrier, said foil constituting diaphragm means for sealing each aperture in the carrier and comprising a circular corrugation surrounding each contact member and a reinforced motion transferring portion disposed concentrically within each corrugation, each actuating means adapted to actuate the contact member of the respective switching unit through the respective motion transferring portion and through the respective stud when the push button associated with the latter is displaced to extend further into said housing.

3,042,765
COMBINED WALL RECEPTACLE AND SWITCH
David H. Hunt, Simsbury, Conn., assignor to The Spencer Turbine Company, Hartford, Conn., a corporation of Connecticut
Filed June 8, 1959, Ser. No. 818,695
2 Claims. (Cl. 200—61.6)

1. A receptacle for the connector on a vacuum cleaner hose comprising; a body portion having a cylindrical wall defining an axial bore therein to receive said connector and a radial opening extending through said wall and communicating with said bore, a supporting block mounted upon the exterior of said wall adjacent to said radial opening, an electric switch mounted on said supporting block and having a spring pressed operating plunger extending therefrom into said radial opening, the inner end of said radial opening being of a reduced diameter to provide a seat, an operating ball movable in said radial opening and seated upon said seat and ex-



tending into said bore, and a resilient disc-shaped member between said ball and plunger, the said ball being movable upon the insertion of said hose connector into said bore to cause movement of said plunger through said resilient member for operating said switch.

3,042,766
VACUUM LOAD-BREAK SWITCH
Hugh C. Ross, San Jose, Calif., assignor, by mesne assignments, to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware
Filed Oct. 28, 1958, Ser. No. 770,156
10 Claims. (Cl. 200—62)

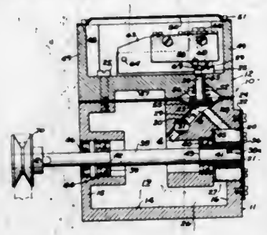


1. A load-break switch for high power transmission lines, comprising a pair of fixed terminals spaced apart, a first conductive switch arm movably mounted on one of the terminals and movable into or out of contact with the other terminal to open or close a circuit therebetween, a second switch arm mounted on one of the terminals and normally conductively connecting with the other terminal to complete a circuit therebetween independently of said first switch arm, means operatively interposed between said first and second switch arms to effect sequential opening thereof in the circuit, and means operatively interposed between said first and second switch arms to effect sequential closing thereof in an order reversed to the order of said sequential opening.

3,042,767
MOTION INDICATOR
Norman L. Grostick, Lexington, Mich., assignor to The Bin-Dicator Company, Detroit, Mich., a corporation of Michigan
Filed July 14, 1958, Ser. No. 748,402
17 Claims. (Cl. 200—81)

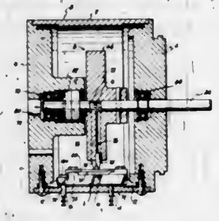
1. A motion indicator for indicating the change in speed of a moving part which comprises a housing having a hydraulic fluid reservoir, a pump cavity spaced from the reservoir and a pressure chamber spaced from the reservoir and the pump cavity, an impeller rotatably mounted in said pump cavity; a shaft on which said impeller is

mounted, means for rotatably mounting said shaft in said housing, said shaft having one end projecting out of said housing and having means thereon adapted to be operatively connected to said moving part, means within said housing defining an inlet passageway from said reservoir to said pump cavity, means within said housing defining an outlet passageway from said pump cavity to said pressure chamber, means within said housing defining a sepa-



rate exhaust passageway from said pressure chamber to said reservoir, means positioned in said exhaust passageway for variably restricting said exhaust passageway, a flexible diaphragm mounted in said housing and forming a pressure-responsive flexible wall of said pressure chamber, and signalling means adjacent said diaphragm and externally of said pressure chamber adapted to be actuated by movement of said diaphragm.

3,042,768
SWITCH ASSEMBLY
Richard D. May, Westport, Conn., assignor to Electric Regulator Corporation, Norwalk, Conn., a corporation of New York
Filed June 19, 1958, Ser. No. 743,055
20 Claims. (Cl. 200—81.9)



1. A switch assembly comprising a base, a fixed contact operatively connected thereto, and a movable contact operatively connected to said base and comprising a first part located to one side of and normally spaced from said fixed contact in line of a given direction and a second part connected to said first part and extending to the opposite side of said fixed contact, said second part including a flexible portion mounted on said base so as to be permitted to flex in a direction other than said given line of direction, flexure of said portion thereby causing said first part of said movable contact to move in said given direction toward and to engage said fixed contact.

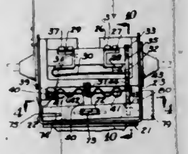
3,042,769
FLUID FUEL FLOW CONTROL SYSTEM FOR FORCED DRAFT HEATING UNITS
Ned G. Campbell, Columbus, Ohio, assignor to Norman Products Company, Columbus, Ohio, a corporation of Ohio
Filed Oct. 13, 1960, Ser. No. 62,418
4 Claims. (Cl. 200—83)

1. A diaphragm-actuated switch comprising a housing having a flexible diaphragm therein adapted to be subjected to differential pressure, contact points in spaced relationship within said housing in cooperative relationship with said diaphragm, said contact points being spaced radially from the center of the diaphragm and away from the plane thereof, a connecting contact member carried by said diaphragm for movement therewith into engagement with said spaced contacts upon the occurrence of a proper pressure differential in said housing, said connecting contact member being a ring carried concentrically with



the diaphragm and projecting outwardly from the plane thereof toward said contact points, and a magnet carried by said diaphragm adjacent said contact member for cooperating with said spaced contacts as the connecting contact member moves close thereto to complete the contact engagement with a snap action, said magnet being disposed within the ring and being disposed within the outermost extremity thereof.

3,042,770
PRESSURE SWITCH
Lyle Beeman, 1050 Beaconsfield, Grosse Pointe Park, Mich.
Filed Feb. 3, 1958, Ser. No. 712,721
20 Claims. (Cl. 200—83)

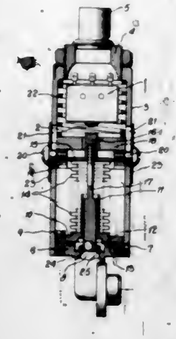


1. In a pressure switch, the combination comprising a casing, a leaf spring having one end thereof pivoted about an axis to said casing and the other end free in such a manner that the entire length of said spring swings about said axis, longitudinally resilient tension means connecting longitudinally spaced points on said leaf spring and acting to longitudinally compress and bow said leaf spring, pressure-responsive means operable on an intermediate portion of said spring to flex the same and thereby cause the same to snap into a reversely bowed position, and switch means connected to the free end of said leaf spring and responsive to the snap action movement thereof.

3,042,771
PRESSURE SWITCH
John V. Oliveau, Greenwich, Conn., assignor to Aerotec Industries, Inc., Greenwich, Conn., a corporation of Connecticut
Filed Sept. 25, 1959, Ser. No. 842,278
8 Claims. (Cl. 200—83)

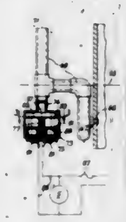
1. A pressure switch which comprises a housing, a switch mounted in said housing and having an actuating element, an expansible bellows mounted at one end in said housing, the other end of said bellows being movable by the expansion of said bellows to contact said actuating element of said switch to operate said switch, said movable end of said bellows comprising magnetic material, a magnetic holding element positioned to be contacted by the magnetic material of said movable end to hold said end upon movement of said end beyond the distance required to operate said switch, said housing having a stop to limit the movement of said magnetic holding element

toward said bellows, and means biasing said magnetic holding element to said stop, said magnetic holding ele-



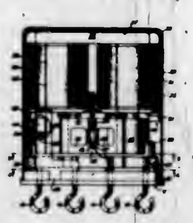
ment being displaceable from said movable end of said bellows to release said end, said housing having an inlet to said bellows.

3,042,772
SAFETY DEVICE FOR WASHING MACHINES
Rudolph R. Steinberger, East St. Louis, St. Clair County, Ill.
Filed Feb. 1, 1961, Ser. No. 86,356
3 Claims. (Cl. 200—84)



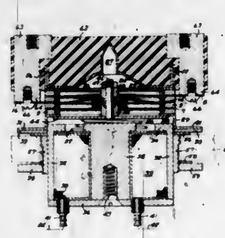
1. A safety device for a motor-driven washing machine transmission having a casing containing a normal operating level of oil therein, wherein the casing is connected with a water-containing washing structure from which water leakage may occur into the transmission and raise said operating level; comprising a transversely extending liquid spill-over pipe located at a level for liquid spill-over above said operating level, an air breather pipe having a downward inlet below said spill-over pipe adapted to form a connection with said casing at a point adjacent to but above the normal operating oil level and beneath abnormal levels caused by water leakage, said breather pipe having a first portion extending upward from said connection and connecting with said liquid spill-over pipe and also having a second portion forming an upward extension above said liquid spill-over pipe, said second portion of the breather pipe having a free outlet to the atmosphere outside of the casing and above the liquid spill-over pipe, a container located below the liquid spill-over pipe, a pipe connection extending up from the container and to said liquid spill-over pipe, insulated contacts in said container, said contacts being adapted for location in a circuit which contains means adapted to de-excite the motor in response to an electrical connection established between said contacts such as by entry into said container of liquid from said casing when the liquid level in the casing reaches the level of the inside of said liquid spill-over pipe.

3,042,773
RELAY
Arthur C. Keller, Bronxville, and Robert Lee Peek, Jr., New York, N.Y., and Charles Schneider, Chatham, N.J., and Charles F. Spahn, Jr., Roslyn Heights, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,568
11 Claims. (Cl. 200—104)



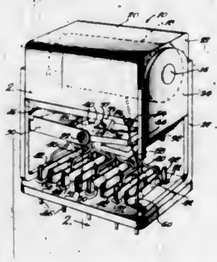
1. A relay comprising in combination a separating plate having a first and second side, a header secured parallel to and a spaced distance from the first side of said separating plate, a one-piece U-shaped core secured to said separating plate so that the base and a portion of the legs are on the second side of said operating plate while the remaining portion of the legs extend through said separating plate toward said header, said core legs having circular cross section, a pair of windings respectively disposed about the portion of said core legs on the second side of said separating plate, a pair of spaced pin conductors secured to said separating plate and extending in both directions therefrom, said pin conductors being electrically insulated from said separating plate, the end leads of said windings being electrically connected to the portion of said pin conductors on the second side of said separating plate, an inner cover member affixed to said separating plate hermetically enclosing said winding and the portions of said core and said pin conductors on the second side of said separating plate, a pair of hinge supports attached to said separating plate and extending normally therefrom toward said header, said hinge supports having beveled faces, a V-shaped spring hinge having its ends secured to the beveled faces of said hinge supports, a balanced armature affixed at its center to the apex of said spring hinge, the ends of said armature having cylindrical pole faces, said spring hinge positioning said pole faces in juxtaposition with opposite sides of the portion of said core legs extending on the first side of said separating plate, first spring guide pins attached to the ends of said armature, second spring guide pins attached a spaced distance from and axially aligned with said first guide pins, armature-restoring compression springs disposed about said first and second spring guide pins, said armature-restoring spring normally biasing said pole faces away from said core legs, a stop member secured to said separating plate and extending therefrom toward said header, said stop member positioned adjacent the periphery of one of said pole faces, said stop member in combination with said armature-restoring springs normally maintaining said pole faces a spaced distance from said core legs, a plurality of terminals extending through said header and electrically insulated therefrom, some of said terminals being electrically connected to the portion of said conductor pins on the first side of said separating plate, a plurality of V-shaped spring make and break members having the end of one arm of the V secured to some of said terminals, said spring members positioned so that an unsecured arm of one spring make member is in juxtaposition with an unsecured arm of one spring break member, said unsecured arms being bifurcated, a plurality of spring transfer members having one end secured to other of said terminals, the unsecured ends of said spring transfer members extending between the unsecured juxtaposed arms of said spring make and break members, said transfer members being normally in contact with said break members and a spaced distance from said make members, gold contact faces affixed to the unsecured ends of said spring make and break members and said spring transfer members, contact actuating members symmetrically mounted on said armature and engaging said spring transfer members, and an outer cover member affixed to said header hermetically enclosing the relay.

3,042,774
VACUUM SWITCH
Jack S. Hawkins, San Jose, Calif., assignor, by mesne assignments, to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware
Filed Mar. 27, 1959, Ser. No. 802,478
19 Claims. (Cl. 200—104)



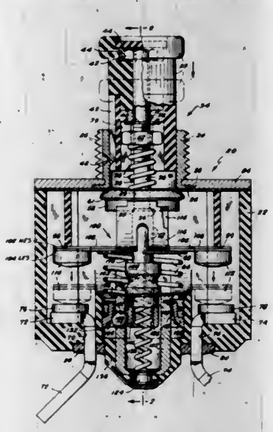
1. A vacuumized switch comprising a plurality of metallized dielectric rings, a metallic terminal ring interposed between two adjacent dielectric rings, a contact ring spaced from said terminal ring and supported on one of said dielectric rings and movable into or out of engagement with said terminal ring, said terminal and contact rings being integrally united to the associated dielectric rings to form a hermetically tight ring assembly, an end plate structure hermetically closing each opposite end of the ring assembly to form a hermetically sealed envelope, and switch actuating means supported on said envelope and operatively connected with the contact ring to selectively move the contact ring into or out of engagement with said terminal ring to make or break a circuit therethrough.

3,042,775
RELAY
John S. Jordan, Galion, Ohio, assignor to North Electric Company, Galion, Ohio, a corporation of Ohio
Filed Sept. 9, 1959, Ser. No. 838,959
7 Claims. (Cl. 200—104)



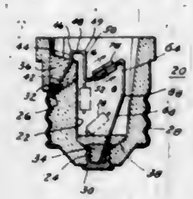
1. In a relay structure having a coil core, a header disposed in spaced parallel relation to the core, a plurality of movable contacts on said header movable in the direction of the axis of said core, an elongate armature extending in the direction of said core in the space between said header and said core, said armature being mounted for movement in a predetermined arc about a transverse pivot axis disposed generally centrally thereof and extending in spaced parallel relation to said header, actuators extending generally perpendicularly from said armature to said movable contacts, a first pole piece fixed to one end of said core and including a portion extending between said armature and said core at one side of said pivot axis, and a second pole piece fixed to the other end of said core and including a portion parallel to the said portion of said first pole piece and extending between said armature and said header at the opposite side of said pivot axis, the improvement comprising that the said portions of said pole pieces are inclined away from the axes of said core and said header respectively toward said armature at an inclination equal approximately to one-half the arcuate movement of said armature whereby the armature at the mid-point of its movement is substantially parallel to said header and at one extremity of its arcuate movement is substantially parallel to said portions of said pole pieces, and that said actuators at the said mid-point of armature movement are engaged with substantially the center line of the respective movable contacts to minimize imposition of twisting forces on said contacts.

3,042,776
ELECTRICAL SWITCHES
Ralph G. Arey, Brockton, and David E. Clarke, Norton, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,327
17 Claims. (Cl. 200—116)



1. An electrical switch comprising a base; contact means on said base; movably mounted means carrying movable contact means for engagement with said first-named contact means; manually operable means mounted in said switch for movement relative to said movably mounted means; thermally responsive means for latching said manually operable means and said movably mounted means together as a unit for movement in a contacts-closing direction; mechanical latching means for latching said manually operable means in a contacts-closed position when the latter is latched to said movably mounted means by said thermally responsive means; compressive biasing means compressively urging said mechanical latching means into latching engagement with said manually operable means when the latter is in the contacts-closed position; and said switch also including means providing for snap closing of said first-named and movable contact means.

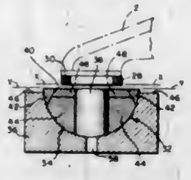
3,042,777
PROTECTORS FOR ELECTRIC CIRCUITS
Andrew L. Pertici, St. Louis, Mo., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Aug. 11, 1958, Ser. No. 754,486
17 Claims. (Cl. 200—123)



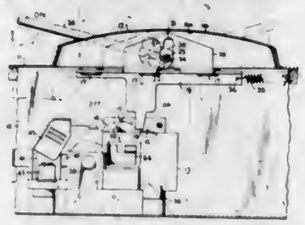
1. An electric fuse of the plug type that comprises a plug-type housing with a plurality of terminals, one of said terminals being at the bottom of said housing and another of said terminals being at one side of said housing, and an elongated fusible link that is disposed within said housing and is electrically connected to said terminals, said fusible link having a plurality of bends intermediate the ends thereof to define a first portion that extends upwardly in said housing from said one terminal and inclines toward that side of said housing which is opposite to said one side of said housing, a second portion that is contiguous to and extends generally vertically upwardly from the first said portion, a third portion that is contiguous to and inclines downwardly from said second portion toward said one side of said housing, a fourth portion that is contiguous to and extends generally vertically upwardly from said third portion and is adjacent said one side of said housing, a fifth portion that is contiguous to and extends generally horizontally from said fourth portion toward said one side of said housing, and a sixth portion that is contiguous to and extends generally vertically downwardly from said fifth portion toward said other terminal, the bends between said second and third portions and said third and fourth portions of said fusible link being abrupt, said third portion of said fusible link having a central wide section intermediate two narrow sections, said central wide section having a large opening therein, said narrow sections of said third portion having weak spots therein, each of said second and fourth portions having a wide section and a narrow section, said wide sections of said second and fourth portions of said fusible link being adjacent and contiguous to said third portion, said third portion having a generally U-shaped slug of zinc mechanically secured to and overlying substantially all of said central wide section except one edge of said central wide section, said slug overlying and underlying said large opening in said central wide section and having portions thereof extending into said large opening to permanently lock said slug to said central wide section, said slug being soldered to said central wide section at said edge of said central wide section.

3,042,778
ELECTRICAL CONTACTING DEVICE
Albert E. Anderson, 91 Blue Hill River Road, Milton, Mass.
Filed Apr. 15, 1959, Ser. No. 806,674
11 Claims. (Cl. 200—147)

1. An electrical contact device comprising first and second contact members having first and second contact surfaces respectively, said first surface being non-magnetic, said second member having a magnet for producing a magnetic field between said contact surfaces and means for concentrating said magnetic field in substantially coplanar relation with said second contact surface, said magnetic field arranged to cause movement of the path of arc-carrying ions in a direction perpendicular to the axes of said members while simultaneously causing distortion of said path of arc-carrying ions between said members.



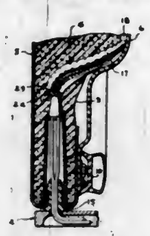
3,042,779
ENCLOSED ELECTRIC SWITCH
George E. Gauthier, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Filed Dec. 4, 1959, Ser. No. 857,395
5 Claims. (Cl. 200—172)



1. An enclosed electric switch comprising a generally box-like enclosure having an open top wall, an openable cover supported on said enclosure and normally closing said open top wall, an electric switch unit mounted within said enclosure and including an operating member movable between "on" and "off" positions, a manually operable handle supported on said cover and movable between two extreme positions corresponding to said "on" and "off" positions of said switch unit operating member, an intermediate operating member slidably mounted on the inner surface of said cover and having an elongated aperture therein, a cam roller positioned in said elongated aperture, means connecting said cam roller for operation by said manually operable handle member to cause reciprocating sliding movement of said intermediate operating member upon movement of said manually operable member, spring means constantly biasing said sliding intermediate operating member in one direction of movement thereof, said elongated aperture having an inclined wall portion adapted to act on said cam roller when said handle is in either of said extreme positions to urge said cam roller in a direction to maintain said handle in such extreme position.

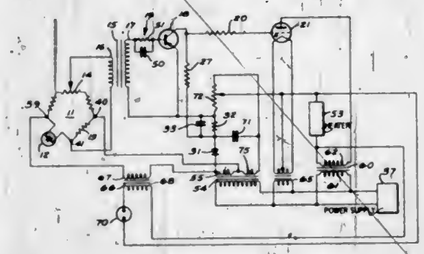
3,042,780
RESIN FOAM INSULATED CABINET STRUCTURE INCLUDING IMPROVED ELECTRICAL CONDUCTOR ARRANGEMENT
Kishin J. Gursahaney, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 28, 1960, Ser. No. 58,934
2 Claims. (Cl. 219—19)

1. An insulating wall structure comprising inner and outer panels, a layer of plastic foam between said panels and spaced from one of said panels, an electrically energized element mounted on said one panel, a layer of fibrous inorganic insulating material enclosing said element, a pair of insulated electrical conductors having portions thereof disposed in the space between said foam layer and said one panel, said conductors having their one ends connected to said element and their other ends extending into said foam layer, and means for preventing ignition of said plastic foam upon failure of the insulation on said conductor comprising a metal sheath enclosing said conductors and formed to maintain the portions of said



conductors within said space in spaced relation, the opposite ends of said sheath respectively terminating within said layer of fibrous inorganic insulating material and within said layer of plastic foam.

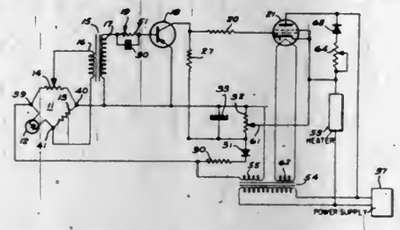
3,042,781
CONTROL CIRCUIT
John R. Bray, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Aug. 14, 1959, Ser. No. 833,779
7 Claims. (Cl. 219—20)



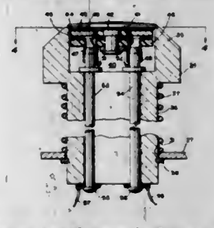
7. A heater control circuit, comprising a temperature sensing bridge having a thermistor therein, a power supply connected across the bridge for applying an input voltage thereto, an amplifier, a transformer connected to the amplifier and across the bridge for applying a signal of one phase to the amplifier when the bridge is unbalanced in one direction and a signal of the opposite phase when the bridge is unbalanced in the other direction, a heater, a thyratron connected to the amplifier and the power supply for applying power to the heater in response to a control signal from the amplifier, a phase shifting network connected to the input of the amplifier for adjusting the phase of the control signal relative to the phase of the power applied to the thyratron, and a feedback transformer having a primary winding connected in parallel with the heater and a secondary winding connected in series with the power supply and the bridge.

3,042,782
CONTROL CIRCUIT
John R. Bray, Pensacola, Fla., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware
Filed Aug. 14, 1959, Ser. No. 833,831
10 Claims. (Cl. 219—20)

10. A heater control circuit, comprising a heater, an A.C. power supply, a first rectifier connected in series with the heater across the power supply for conducting current to the heater on every negative half cycle of the power supply to provide a base rate of heat generation, a second rectifier connected in parallel with the first rectifier and in series with the heater and adapted to conduct current to the heater during positive half cycles of the power supply, and a temperature sensing network connected to the second rectifier for controlling the conduction of said second rectifier to regulate the amount of heat generated by the flow of current through the second rectifier.



3,042,783
THERMAL-SENSING UNIT
Charles S. Mertler, Mansfield, Ohio, assignor to Stevens Manufacturing Company, Inc., a corporation of Ohio
Filed Mar. 2, 1960, Ser. No. 12,410
9 Claims. (Cl. 219—37)

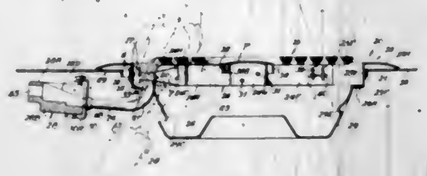


1. A temperature sensing unit for a vessel heatable on a heating unit mounted on a support bracket and adapted to be connected at a terminal block to a frame, said temperature sensing unit comprising, in combination, a substantially horizontally disposed plate support adapted to be fixedly mounted relative to the support bracket for the heating unit, an insulator sensor body, slide bearing means slidably receiving said sensor body relative to said plate support generally vertically at the center of the heating unit, spring means acting to urge said body upwardly relative to said plate support, temperature responsive cap means on the top of said body, said cap normally disposed above the level of the heating unit by the urging of said spring means to engage the underside of any vessel on the heating unit, first and second electrical connections to said temperature responsive cap means, first and second non-telescoping connector pins passing longitudinally through said sensor body from the lower end of said body to a point near said cap means and electrically connected to said first and second electrical connections of said cap means, respectively, first and second terminals in said terminal block, first and second contact pins fixedly carried relative to the heating unit and engageable with said first and second terminals in said terminal block, and first and second flexible wires leading substantially horizontally from the lower ends of said connector pins in said body to said first and second contact pins, respectively, for external electrical connection to said temperature responsive cap means.

3,042,784
ELECTRIC HEATING UNIT
Leroy C. Hanson, Elmhurst, Ill., assignor to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
Original application May 28, 1957, Ser. No. 662,041. Divided and this application Mar. 24, 1960, Ser. No. 17,411
9 Claims. (Cl. 219—37)

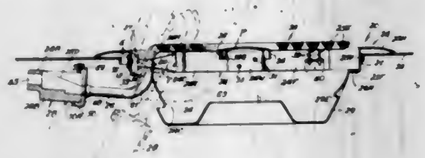
9. In a surface unit for the cooking top of electric stoves in which a spirally coiled sheath-type electric

heating element having terminal wires extended from the ends of the sheath is supported on a mounting unit, the improvement that comprises a terminal block formed from insulating material and having a plurality of terminal pockets defined in part by a bottom wall and open at the top and at one end thereof, said bottom wall having locking recesses in its lower surface adjacent the forward edge of the bottom wall, terminal clips connected to said terminal wires, separate protective plates



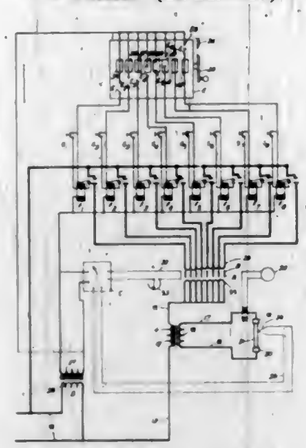
fixed on and close to the respective ends of said sheaths in a normal relation thereto and in position to close the ends of the respective pockets of said terminal block when said ends of said sheaths are inserted into said pockets to rest on said bottom wall, and latching fingers on the lower edges of said plates positioned to engage said locking recesses when said terminal clips are inserted into said pockets and to clamp said ends of said sheaths against said bottom wall and prevent inadvertent withdrawal of the terminal clips from said pockets.

3,042,785
ELECTRIC HEATING UNIT
Leroy C. Hanson, Elmhurst, Ill., assignor to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
Continuation of application Ser. No. 662,041, May 28, 1957. This application Mar. 24, 1960, Ser. No. 17,734
11 Claims. (Cl. 219—37)



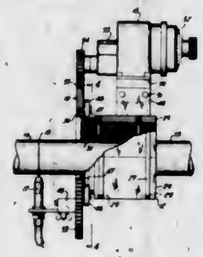
1. A surface heater of the class described comprising mounting means including an annular wall extending downwardly around and defining an upright opening, and an electrical heating unit of tubular sheathed embedded resistor type shaped in the form of a flat winding which is horizontally supported at the top of the opening and has a plurality of terminal stems extending downwardly therefrom in the opening and is swingable to an upraised position at one side of the opening, the heating unit being pivotally interconnected at said one side of the opening with the wall of the mounting by a hinge connection located adjacent to the periphery of the winding and pivotally operable about a pivotal axis line transecting the opening at an elevation therein at said one side thereof for swingability of the winding about said pivotal axis line to said upraised position, the said terminal stems having end portions thereof disposed in generally parallel relation and extending collectively outward from the opening at a level below and in a direction transverse to the said pivotal axis line and pivotally operable about said pivotal axis line to swing downwardly as the winding swings to the upraised position thereof.

3,042,786
ELECTRICAL HEATING APPARATUS
Scott R. Babcock, Loves Park, and Herbert E. Peterson, Winnebago, Ill., assignors, by mesne assignments, to American Brake Shoe Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 14, 1958, Ser. No. 754,959
5 Claims. (Cl. 219—50)



1. In an electrical heating apparatus, the combination of a step-down transformer, the output winding of which is adapted to be connected across the material or part to be heated or warmed with low voltage, high amperage heating current, the input winding of said transformer having one end adapted to be connected with an alternating current power source, a saturable core reactor comprising core material, a saturating winding and a pair of load windings one of which has a plurality of taps and which are connected respectively to the power source and the other end of the first named input winding, switch means connected with said taps for selectively connecting in the circuit one or more or all of the sections of the tapped winding according to the rate of heating desired, a sensing head subject to the heating temperature, and means connected with the sensing head on the one hand and with the power source on another hand and with the control winding on another hand for feeding amplified direct current into said saturaing winding to cause the current to said first named input winding to vary as necessary for the maintenance of a substantially uniform heating temperature at the sensing head.

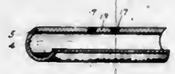
3,042,787
WELDING METHOD AND APPARATUS
Stanley F. Kotecki, Milwaukee, Wis., assignor to Cyclo-Magic, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 6, 1960, Ser. No. 746
7 Claims. (Cl. 219—60)



1. A welding device comprising a frame formed of a pair of complementary sections attachable to an article

upon which an annular weld is to be applied, each of said frame sections having mating semi-circular grooves forming an annular track disposable coaxially of the contemplated weld and having diametrically opposed joints, a carriage provided with an annular series of at least three diametrically offset rollers journalled thereon and coacting directly with said track to guide the carriage for rotation about the axis of the proposed annular weld, a motor mounted upon said frame and being drivingly connected to said carriage, and a welding member revolvable by said carriage along said article to apply the weld thereto.

3,042,788
WELDING SYSTEM WITH SCANNING WELD CURRENT
Julius E. Foster, 91 Mountain Way, Rutherford, N.J.
Filed Apr. 13, 1959, Ser. No. 806,074
20 Claims. (Cl. 219—67)



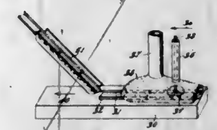
1. In a welding system, for welding two ferrous metal elements along a seam at their engaging surface areas, the combination with a source of electrical energy and means energized therefrom to establish a welding current stream in said metal elements in a path to cross the seam between said two metal elements and through said seam and surface areas in a direction substantially perpendicular to said surface areas; of electro-dynamic means disposed adjacent and along the seam to be welded and operative to generate a moving magnetic flux field to react on the magnetic field induced by the welding current for electrodynamically causing the flow section of said current stream to move along a predetermined dimension of the seam between the engaging surface areas, in order to scan said areas and to establish a welding action between said two metal elements over said scanned engaging areas.

3,042,789
METHOD OF TREATING WORKPIECES BY SPARK EROSION
Otto Niederhoff, Remscheid, Germany, assignor to Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany
Filed June 25, 1959, Ser. No. 822,863
Claims priority, application Germany July 17, 1958
2 Claims. (Cl. 219—69)



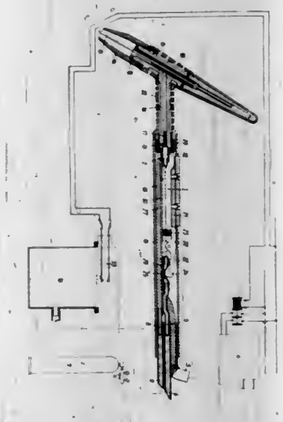
1. In the method of processing the surface of a workpiece by spark erosion by means of an electrode and which comprises a traversing motion of the electrode relative to the said surface while erosion proceeds and along a path which correctly maintains the width of the spark gap while continuously advancing unused parts of the electrode to the working zone, the improvement which consists in rotating the electrode about an eccentric axis to impart to a peripheral face portion thereof a progressive in-feed movement towards the workpiece to maintain the correct spark gap while said face portion traverses the workpiece.

3,042,790
PROCESS OF ELECTRIC ARC WELDING, MACHINE AND WELD INSERT
Wallace C. Johnson, Hamden, Conn., assignor to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 8, 1960, Ser. No. 7,213
24 Claims. (Cl. 219—73)



1. The process of electric arc welding, which comprises molding metallic power into metallic slugs, laying down a line of metallic slugs along and in electric contact with the work, maintaining an arc between a consumable welding electrode and the successive slugs, applying flux to the arc, and progressing the electrode and the arc longitudinally of the line of slugs while maintaining a heat input which completely melts the slugs at a single pass and forms a weld puddle of molten metal, including metal from the work, metal from the slugs and metal from the consumable electrode.

3,042,791
APPARATUS FOR SHIELDED ARC WELDING
Olaf Reeh, 1 Adalbert-Stifter-Strasse, Munich-Unterpfaffenhofen, Germany
Filed Aug. 31, 1959, Ser. No. 837,192
Claims priority, application Austria Sept. 29, 1958
4 Claims. (Cl. 219—75)



1. An apparatus for shielded arc welding comprising a source of protective gas, a receiver for said gas, a torch including an electrode and a handle, a protective gas conduit connecting said source and said electrode, and in said handle an electric conduit for said electrode, an elastic hose forming part of said gas conduit, a valve controlling said hose, spring means normally holding said valve in hose closing position, an auxiliary conduit connecting said receiver with said gas conduit and opening thereinto at a place between said valve and said electrode, and a hand operated lever protruding from said handle and opening said valve when gripped by the operator and pressed against the handle.

3,042,792

METHOD AND DEVICE FOR THE MACHINE SOLDERING OF A CRYSTAL TO THE CATHODE PORTION OF CRYSTAL DIODES

Theodorus Christoph Balder, Mollenhutseweg, Nijmegen, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 13, 1960, Ser. No. 29,073
10 Claims. (Cl. 219—85)



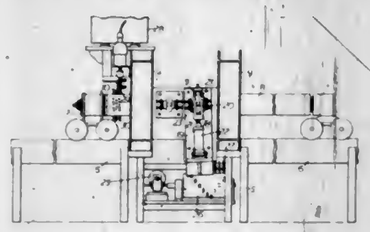
1. A method of machine soldering a crystal to one end of a rod provided with a flat disc comprising placing a glass bulb around said disc and a portion of said rod, inserting a quantity of solder and a crystal which are superposed between the disc and the end of a tube that is slidable in said glass bulb, supplying a non-oxidizing atmosphere to said glass bulb through said tube, and supplying heat for soldering to the soldering area simultaneously from two opposing sides through the tube and through said rod.

3,042,793

APPARATUS FOR PERFORMING REPETITIVE OPERATIONS AUTOMATICALLY UPON THE PERIPHERY OF A CYLINDRICAL TUBE OR THE LIKE

Richard G. Lewis, Upper Swell, Stow-on-the-Wold, England, assignor to Birwelco Limited, Birmingham, England, a British company

Filed Sept. 7, 1960, Ser. No. 54,441
2 Claims. (Cl. 219—103)



1. In apparatus for performing repetitive operations automatically upon the periphery of a cylindrical work piece at angularly and linearly spaced positions, the provision of means for supporting the work piece for turning movement on its axis and linear movement in an axial direction, gripping means for gripping the work piece intermittently, feeding means for imparting turning movement of the gripping means about the axis of the work piece, said gripping means comprising a pair of pivotally coupled levers and brake shoes mounted thereon for gripping the work piece, fluid actuatable means interconnecting the levers to move the brake shoes into and out of gripping engagement with the work piece, an arm on each lever and a fixed guide surface in slidable engagement with the arm to effect linear movement of the gripping means in the direction of the axis of the work piece during turning movement of the gripping means, and a fluid actuatable piston in operative connection with the gripping means to impart the turning movement thereto, clamping means for holding the work piece when it is released by the gripping means and during the performing of an operation on the work piece and means for controlling the sequence of the operations of the gripping means, feeding means and clamping means and for initiating the performance of the each operation on the work piece.

3,042,794

MANUFACTURING FUSE-LINKS HAVING A RIVET INSERT OF A LOW FUSING POINT METAL

Paul C. Hitchcock, Newburyport, Mass., assignor to The Chase-Shawmut Company, Newburyport, Mass.

Filed Jan. 12, 1960, Ser. No. 1,970
6 Claims. (Cl. 219—150)



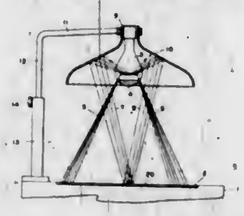
1. A method for manufacturing fuse links having a rivet insert of a low fusing point metal comprising the steps of inserting a rivet of a metal having a relatively low fusing point into a perforation provided in a fuse link of a metal having a relatively high fusing point, of thereafter heating the rivet sufficiently while inserted into said perforation to soften the low fusing point metal without causing complete liquefication thereof, and of upsetting the rivet by pressure while still heated and softened.

3,042,795

PHOTOCOPY MACHINE

Eugene Kron, Floral Park, N.Y., assignor to Nord Photocopy and Electronics Corp., Hyde Park, N.Y.

Filed Oct. 1, 1958, Ser. No. 764,721
1 Claim. (Cl. 240—2)



A photocopy machine of a type having a plane copying area comprising a light bulb centrally spaced above and in direct operating relation to said copying area, an opaque spot fixedly mounted on the bottom center of said bulb, the size of said opaque spot being chosen to cut off direct light from the center of said copying area but permitting direct light rays on the edges of said area, a reflector connected to and mounted symmetrically around and above said bulb to reflect indirect light rays to the center of said copying area, and means to match said direct and indirect rays including means to adjust the distance from said bulb to said plane, so that said direct and reflected light rays have substantially the same intensity to thereby provide uniform light intensity on said area.

3,042,796

FLASHLIGHT ASSEMBLY FOR UNDERWATER USE

Taber de Forest, P.O. Box 151, Chester, Conn.

Filed June 29, 1960, Ser. No. 39,552
2 Claims. (Cl. 240—6.4)



1. A waterproof flashlight assembly including an elongated and generally cylindrical flashlight housing adapted to completely enclose flashlight batteries and by which the batteries are held against transverse displacement, a switch actuator on the outside of the cylindrical housing, an illumination portion at one end of the housing and

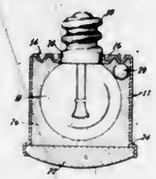
in line with the longitudinal axis of said generally cylindrical housing and from which a light beam is projected, a cap at the other end of the housing and which is removable for replacing batteries within the housing, an auxiliary plastic case of substantially greater length than width and completely enclosing the flashlight and of larger cross section than the flashlight, the case being elongated in the same direction as the flashlight housing and being of different construction at its opposite ends, one end having an unobstructed and transparent window in front of the illumination portion, and the other end of the case being expandable into an open condition for admitting the flashlight into the case, said other end being rolled up about an axis transverse of the elongated length of the case to close said other end after the flashlight has been inserted into the case, and releasable and adjustable fastening means at the rolled-up end of the case for preventing the rolled portion of the case from unrolling, the portion of the case over the switch actuator on the cylindrical housing being pliant and loose with respect to said actuator whereby the actuator can be operated through the plastic side of the case.

3,042,797

EXPLOSION-PROOF PHYSICIAN'S LAMP

Harry S. Rubens, Massapequa, N.Y., assignor to Engelhard Hanovia, Inc., a corporation of New Jersey

Filed June 4, 1959, Ser. No. 818,159
4 Claims. (Cl. 240—59)



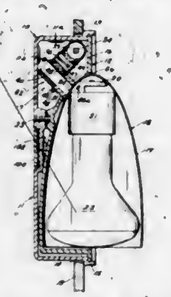
1. In an explosion-proof lamp, an incandescent light bulb provided with a base cap, an outer cylindrical metal envelope hermetically encompassing said bulb to form a space therebetween and being supported exclusively by the base, a non-inflammable transparent liquid enclosed in said space, said envelope being sealed at one side by an annular, concentrically corrugated closure having said base cap sealed therethrough, and a condensing lens mounted at the other side of said envelope to form the other closure of said envelope.

3,042,798

BERTH LIGHT

Brian G. Copping, New York, N.Y., assignor to Swivelier Company, Inc., Nanuet, N.Y., a corporation of New York

Filed May 7, 1959, Ser. No. 811,669
13 Claims. (Cl. 240—78)



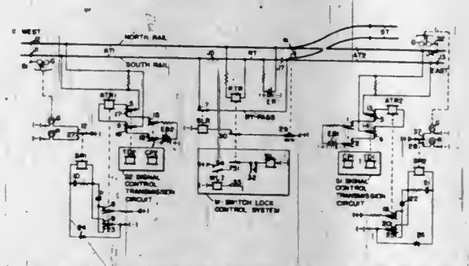
1. A recessed lamp fixture assembly comprising a box having an open side, a face plate forming a closure for said open side, a joint means secured to said face plate at one side thereof facing the inside of said box, a lamp shade disposed on the other side of said face plate and secured to said joint means; a recess defined by a formation in said face plate; said joint means being constructed to permit said shade to be entered into and withdrawn from said recess; said joint means including a first and a second pivotal axis for said lamp shade positioned transverse with respect to each other; said joint means also including a first and a second tubular cylindrical member pivotally secured to one another with their cylindrical axes transverse and intersecting; said first pivotal axis being positioned perpendicular to said first member cylindrical axis; said second pivotal axis being coaxial with said second member cylindrical axis.

3,042,799

BROKEN DOWN JOINT PROTECTION FOR SWITCH LOCK RELEASE TRACK CIRCUITS

Thomas J. Judge, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.

Filed June 29, 1959, Ser. No. 823,529
4 Claims. (Cl. 246—41)



1. In a block signaling system for railroads provided with a stretch of track comprising first and second running rails utilized as conductors for electrical track circuits controlling wayside signals and divided into an intermediate track section with an adjoining track section at each end thereof; insulated joints for electrically isolating the first and second running rails of said intermediate track section respectively from the first and second running rails of said adjoining track sections, by-pass circuit means for electrically connecting the respective second running rails of said adjoining track sections to each other, cross bonds at each end of said intermediate track section for electrically connecting the respective first running rails of said adjoining track sections with the second running rail of said intermediate track section, intermediate track circuit means utilizing said running rails of said intermediate track section for detecting the presence of a train on said intermediate track section, and overall track circuit means including an occupancy responsive means and utilizing the running rails of both said adjoining track sections and said second running rail of said intermediate track section for detecting the presence of a train on said adjoining track sections, whereby said intermediate track circuit is incapable of electrically actuating the occupancy responsive means of said adjoining track circuits upon the breaking down of any one of said insulated joints.

3,042,800

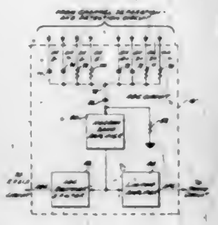
SELECTIVE AUTOMATIC GAIN CONTROL CIRCUIT

Norman P. Gluth, Orange County, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed July 1, 1960, Ser. No. 40,285
4 Claims. (Cl. 325—402)

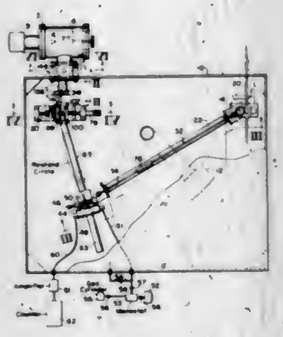
1. A circuit for developing an automatic gain control voltage and an automatic phase control voltage in response to a plurality of trains of repetitive pulses having

the same repetition rate and being individually applied to different pairs of terminals, the pulses of each of said trains being applied to either one or the other of the terminals of the pair of terminals associated therewith, the pulses of each of said trains of pulses being initiated at different times and the time intervals between initiation of successive pulses having a predetermined value, half of said trains having pulses occurring at succeeding times being of one polarity and the pulses of the remaining trains being of the other polarity, said circuit being nonresponsive to noise and other pulse patterns; said



circuit comprising: summing and phase-shifting means coupled to said terminals for combining said trains of pulses into a composite signal including a fundamental periodic wave component having a period proportional to the repetition rate of said pulses; resonant means tuned to the period proportional to the repetition rate of said pulses and coupled to said means; rectifying and filtering means coupled to the output of said resonant means for developing an automatic gain control voltage; and a limiting amplifier connected to the output of said resonant means for developing an automatic phase control voltage.

3,042,801
APPARATUS FOR ANALYZING A SAMPLE OF MATERIAL
Jerome E. Holliday, Delmont, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 30, 1959, Ser. No. 862,844
5 Claims. (Cl. 250—51.5)



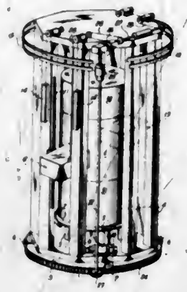
5. Apparatus for analyzing a sample of material comprising a first container containing an X-ray source and means for supporting said sample, means for evacuating air from said first container, a second container adjacent said first container having a generally horizontal base, means for evacuating air from said second container, a connection between said containers including a valve, a grating within said second container, said grating having a spherical concave surface, a vertical shaft in said second container spaced from said grating on the side thereof having the spherical concave surface, the distance between the axis of said shaft and the pole of said grating being one-half the radius of said spherical concave surface, said shaft passing through a wall of said second container, means on the outside of said second container for turning said shaft, a first horizontal arm attached to said shaft for movement therewith, a proportional counter mounted on the end of said first arm remote from said shaft, means mounting a slit on the said remote end of said first arm, said slit being on a straight line between said proportional counter and the pole of said grating, a generally vertical member attached to one end of said arm, a diagonal member attached to and extending between the top of said generally vertical member and the other end of said arm, said mounting means having a horizontal hole therethrough, a second horizontal arm slidably mounted in said hole, a second mounting means attached to the end of said second arm remote from said first mounting means, said second mounting means including a slide mounted on said base for horizontal movement toward and away from said shaft, means on said slide mounting said grating for movement about an axis parallel to the axis of said shaft, for tilting movement toward and away from said shaft and for tilting movement transversely to said last named movement, and means mounting a second slit on said second container in a straight line between said sample mounting means and the pole of said grating.

3,042,802
RADIATION DETECTORS
Richard Just, Flushing, and Adnan Waly, Rego Park, N.Y., assignors to Specialty Engineering & Electronics Company, Brooklyn, N.Y., a partnership
Filed Jan. 6, 1959, Ser. No. 785,264
11 Claims. (Cl. 250—83)



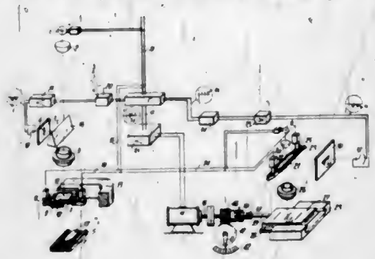
1. A dosimeter assembly comprising a cover and a case engageable therewith, said cover being constituted by a cup-shaped shell and a lead shield disposed on the bottom thereof, said case being constituted by a housing receivable within said cover and having a rectangular recess formed in one side of the housing inwardly of the periphery thereof and a window formed in the other side thereof communicating with said recess, a sensitive glass element receivable in said recess and having one face exposed through said window and one edge exposed at said periphery, a fritted coating of non-reflecting, non-fluorescent material on the unexposed surfaces of said glass element, and a base secured to said housing abutting said one side therein, said base having a well in registration with said recess and containing a shield.

3,042,803
METHOD AND APPARATUS FOR THE INVESTIGATION OF NEUTRON PROPAGATING MEDIA
Julien Martelly, Paris, France, assignor to Etablissement Public: Commissariat a l'Energie Atomique, Paris, France
Filed Aug. 4, 1958, Ser. No. 752,925
9 Claims. (Cl. 250—83.1)



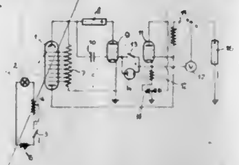
1. Apparatus for investigating the neutron-propagating characteristics of a medium, comprising means supporting a sample of said medium having a well-determined geometrical structure, one or more neutron sources generating a neutron flux through a substantially closed surface completely surrounding the sample, means for controlling the neutron emission of said sources, and means for directly measuring the resulting neutron flux received within a certain volume in the sample, said volume being bounded by a surface within said surrounding surface.

3,042,804
HIGH PRECISION READING DEVICE
Miron Koulikovitch, Geneva, Switzerland, assignor to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a corporation of Switzerland
Filed Mar. 21, 1960, Ser. No. 16,319
Claims priority, application Switzerland Apr. 10, 1959
7 Claims. (Cl. 250—206)



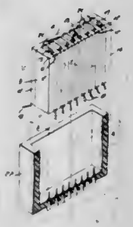
1. In a high precision reading device of the graduation marks of a precision scale comprising a photoelectric microscope having an optical sighting unit, a deflector for making an optical axis oscillate periodically to and fro about a fixed median position and a photoelectric cell collecting the rays reflected by the surface of a precision scale and comprising further an analogical reading device expressing in linear way the position error between said optical axis of said optical sighting unit and one graduation mark of said precision scale, said analogical reading device comprising a projecting device having an oscillating mirror the oscillatory movement of which is synchronized with the oscillatory movement of said deflector, the combination of a second photoelectric cell, a screen, a slot in said screen, said second photoelectric cell being located behind said screen, a slide, and a second scale carried by said slide, said second scale presenting further graduation marks, said oscillating mirror reflecting onto said photoelectric cell the image of one of said further marks of said second scale.

3,042,805
LIGHT MEASURING APPARATUS
Sipko Luu Boersma, Delft, Netherlands, assignor to N.V. Optische Industrie de Oude Delft, Delft, Netherlands
Filed Apr. 18, 1960, Ser. No. 23,022
Claims priority, application Netherlands Apr. 22, 1959
4 Claims. (Cl. 250—207)



4. A light measuring device, comprising, in combination, a photomultiplier, a voltage supply circuit for said photomultiplier including a condenser as a source of reference voltage to stabilize the output voltage of said supply circuit, a reference light source of predetermined intensity adapted to irradiate said photomultiplier during standardization intervals, a source of reference potential of predetermined value, comparing means to compare during such standardization intervals the output potential of said photomultiplier with said reference potential, means to apply to said condenser a control potential in response to a difference between said output potential and said reference potential to thereby change said reference voltage to a point where said output potential and said reference potential are equal, and means to disconnect said condenser from said control potential applying means whereby said condenser maintains its charge during measuring intervals between said standardization intervals.

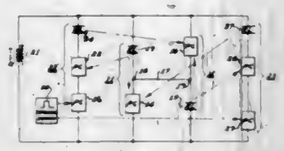
3,042,806
PHOTOCELL ASSEMBLY FOR READING PUNCHED RECORDS
Marvin Lubin, La Grange, Ill., assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed May 6, 1958, Ser. No. 733,323
8 Claims. (Cl. 250—211)



1. In combination: a photoelectric cell capable of producing a controllable variable electrical current output at a plurality of electrical leads comprising a base of insulating material having a supporting surface; spaced electrodes on said surface; and individual paths of photoconductive film on said surface between said electrodes adapted to be selectively exposed to a source of light; one of said electrodes having a configuration which adjoins all the paths of photoconductive film between said electrodes; and an opaque shield over said electrodes and paths of photoconductive film; said shield having light-admitting openings therethrough with a single one of each of said light-admitting openings registering with a corresponding single path of said photoconductive film be-

tween the electrodes, each of said light-admitting openings being confined to register with a single path of said photoconductive film.

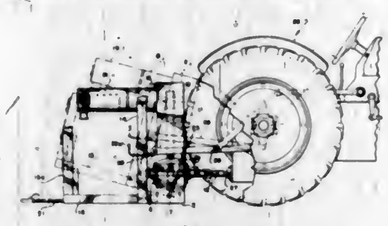
3,042,807
BISTABLE ELECTRO-OPTICAL NETWORK
James F. Vize, Rhinebeck, N.Y., assignor to General Electric Company, a corporation of New York
Original application Dec. 27, 1957, Ser. No. 705,680, now Patent No. 2,997,596, dated Aug. 22, 1961. Divided and this application Jan. 19, 1961, Ser. No. 83,731
8 Claims. (Cl. 250—213)



1. A binary counter network comprising at least three electrically distinct connection points, a first electroluminescent cell and a first photoconductor connected in parallel between the first and second of said points, a second electroluminescent cell and a second photoconductor connected in parallel between the second and third of said points, the first electroluminescent cell and the second photoconductor being positioned in radiation-coupled relationship, the second electroluminescent cell and the first photoconductor being positioned in radiation-coupled relationship, a third electroluminescent cell having one terminal connected to said third point, said third electroluminescent cell and said second photoconductor being positioned in radiation-coupled relationship, a fourth electroluminescent cell having one terminal connected to said third point, said fourth electroluminescent cell and said first photoconductor being positioned in radiation-coupled relationship, a third photoconductor connected in electrical series relationship with said third electroluminescent cell and positioned in radiation-coupled relationship with said second electroluminescent cell, a fourth photoconductor connected in electrical series relationship wtih said fourth electroluminescent cell and positioned in radiation-coupled relationship with said first electroluminescent cell, means for connecting said first point to a first source of potential, means for connecting said third point to a second source of potential, and a switching means for momentarily connecting said third and fourth photoconductors to said first point through a low impedance path so that the series circuit consisting of said third electroluminescent cell and said third photoconductor and the series circuit consisting of said fourth electroluminescent cell and said fourth photoconductor are simultaneously placed in parallel between said first and third points.

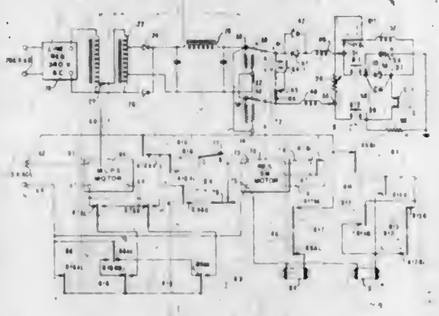
3,042,808
PORTABLE A.C.-D.C. WELDER AND POWER SUPPLY
Lowell L. Jackson, 362 Cunningham Road, Marietta, Ga.
Filed May 23, 1961, Ser. No. 111,996
8 Claims. (Cl. 290—1)

2. A portable welding and electric power generating assembly comprising: a triangular frame, a blower housing mounted to extend axially from one side of said frame and having a blower therein, a generator mounted to and extending axially from said housing, a first pulley wheel mounted within the frame in alignment with the blower and generator, means drivingly connecting said first pulley wheel to the blower and generator, a second pulley wheel mounted within the frame and having a driving shaft extending from the frame side opposite that which the generator is mounted on, a universal joint connector on the end of said shaft, said first and second pulley wheels drivingly interconnected, and pickup means mounted on the upright legs of said triangular frame whereby lift arms of a vehicle may be connected to the assembly for lifting



of the assembly for transporting as well as to position said driving shaft proximate a power takeoff means for driving connection therewith through the universal joint to operate the generator.

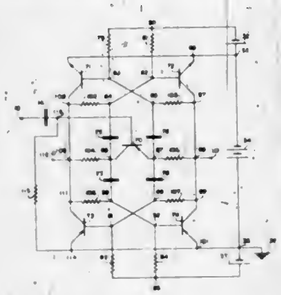
3,042,809
CURRENT SENSING MARGINAL CHECK CONTROL SYSTEM
Walter E. Parry, La Grangeville, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 14, 1959, Ser. No. 813,245
8 Claims. (Cl. 307—80)



7. Apparatus for selectively decoupling a variable auxiliary source of electrical energy which is connected in series opposing relationship intermediate a load and a primary source of electrical energy, comprising: a current branch, means connecting said current branch in shunt relationship with said auxiliary source, means for thereafter decreasing the magnitude of said auxiliary source to substantially zero, means for thereafter reversing the polarity of said auxiliary source, means for thereafter increasing the magnitude of said auxiliary voltage whereby said auxiliary source is now effective to supply current to said current branch in opposition to current supplied said current branch by said primary source, means effective when the net current in said current branch is substantially zero for shorting a portion of said current branch, means to thereafter reduce the magnitude of said auxiliary source to zero and disconnect said auxiliary source from said current branch.

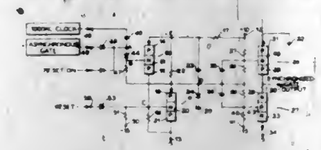
3,042,810
FIVE TRANSISTOR BISTABLE COUNTER CIRCUIT
Robert W. Rochelle, Bucknell Manor, Va., assignor to United States of America as represented by the Secretary of the Navy
Filed Jan. 21, 1958, Ser. No. 710,377
2 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a binary counter circuit an input terminal, a D.C. power source, first and second output terminals, first and second pnp load transistors, first and second npn load transistors, each of said transistors having a base, an emitter and a collector, the positive terminal of said power source being connected to the emitters of said first and second pnp load transistors, the negative terminal of said power source being connected to the emitters of said first and second npn transistors, the collectors of said first pnp and said first npn transistors being connected to said first output terminal, the collectors of said second pnp and said second npn transistors being connected to said second output terminal, a first D.C. biasing source having a negative terminal connected to he positive terminal of said power source, a second D.C. biasing source having a positive terminal connected to the negative terminal of said source, a first biasing network interconnecting the bases of said first pnp and said first npn load transistors and said second output terminal, a second biasing network interconnecting the bases of said second pnp and said second npn load transistors and said first output terminal, means connecting said first and second biasing networks in parallel between the positive terminal of said first biasing source and the negative terminal of said second biasing source and input means for reversing the conductive states of said pnp and npn load transistors including a steering transistor with normal and inverted alpha characteristics that are equal, said steering transistor having a base terminal, an emitter terminal and a collector terminal, a first input coupling means connecting said base terminal of said steering transistor to said input terminal of said binary counter circuit, a second input coupling means connecting said emitter terminal of said steering transistor to said first output terminal of said binary counter circuit, a third input coupling means connecting said collector terminal of said steering transistor to said second output terminal of said binary counter circuit, first capacitor means connecting the bases of said first pnp and said first npn load transistors to said emitter terminal of said steering transistor and second capacitor means connecting the bases of said second pnp and said second npn load transistors to the collector terminal of said steering transistor, said first and second capacitor means having a low impedance over the frequency range in which said counter circuit operates.



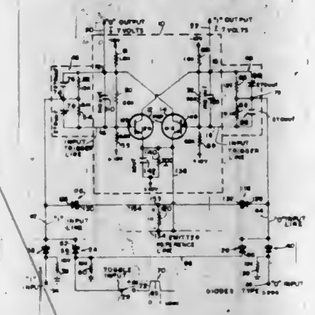
3,042,811
SYNCHRONIZED GATED TRANSISTOR TRIGGER CIRCUIT
Genung L. Clapper, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 29, 1958, Ser. No. 738,773
3 Claims. (Cl. 307—88.5)

1. A gated trigger circuit which comprises a transistor having emitter, collector and base electrodes, means normally biasing said transistor into one of two stable states, a source of asynchronous pulses, a source of synchronized clock pulses, gating means connected to the base electrode of said transistor, said gating means responsive to an asynchronous pulse to condition said transistor for a transfer to the other of said stable states, and responsive to the next succeeding clock pulse to effect the transfer of said conditioned transistor to produce a synchronized output pulse, latching means controlled by said transistor for latching said transistor in its transferred state, said gating means being responsive to the first downswing of a



clock pulse following termination of said asynchronous pulse to offset said latching means and effect transfer of said transistor back to its original state, and means for developing a potential at said base electrode whose level is adjusted in accordance with the state of said trigger circuit to preset said transistor for a transfer from said one state to said other state and also from said other state back to its original state.

3,042,812
MULTIVIBRATORS WITH PARTICULAR INPUT CIRCUITS
Ray Lorenz, Brooklyn Center, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 5, 1958, Ser. No. 753,347
33 Claims. (Cl. 307—88.5)

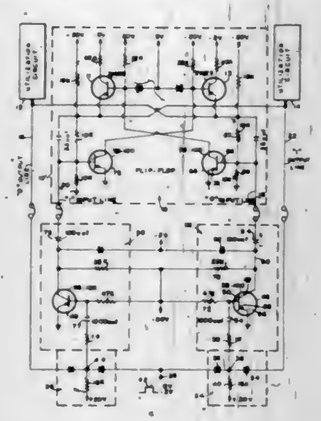


26. A plurality of multivibrator circuits each having two input lines, active element means coupled at two inputs respectively to said input lines, a potential reference line coupled to said element means, and clamping means for each multivibrator circuit D.C. coupled between the two input lines and the potential reference line thereof for preventing the amplitude of any input signal on the so-coupled input lines from substantially exceeding the potential on said reference line; and a line intercoupling each of the potential reference lines of the different multivibrator circuits for providing a common potential reference for each of said circuits.

3,042,813
PULSE DISCRIMINATING AND CONTROL CIRCUIT FOR MULTIVIBRATOR CIRCUITS
Carl A. Johnson, St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed June 12, 1959, Ser. No. 819,945
20 Claims. (Cl. 307—88.5)

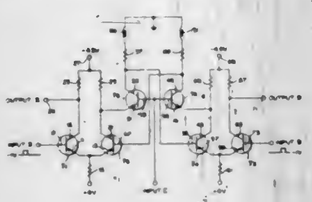
5. For use with a utilization circuit which may be triggered only by an input signal which has at least a predetermined amplitude, the improvement comprising means responsive to a trigger signal for causing said input signal and allowing the input signal to attain said predetermined

amplitude and substantially no more or less as long as the trigger signal when beginning at time t_0 lasts to at least time t_1 and even though the trigger signal endures to time t_2 or longer, where times t_0, t_1, and t_2 are respectively later occurring, said means including: means for generating and gradually changing said input signal to an amplitude limit



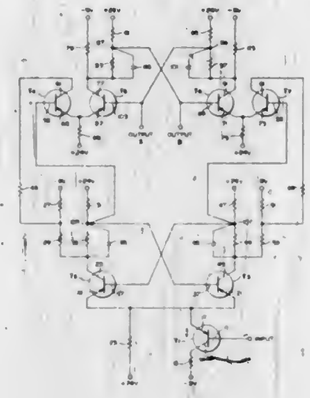
of said predetermined amplitude in substantially no less time than (t_1-t_0), means responsive to the trigger signal at time t_0 for starting said generating means, and a timing circuit operative from time t_0 in response to, and only during the existence of, said trigger signal for causing the generation of said input signal to stop at time t_2 or earlier if the trigger signal ends earlier but not later if the trigger signal ends later.

3,042,814
NON-SATURATING TRANSISTOR FLIP-FLOP UTILIZING INDUCTANCE MEANS FOR SWITCHING
Carl M. Campbell, Jr., Broomall, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 27, 1960, Ser. No. 38,868
8 Claims. (Cl. 307—88.5)



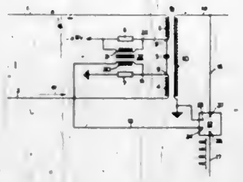
1. A bistable transistor circuit comprising a pair of flip-flop transistors, each of said transistors having an emitter, a base and a collector, an auxiliary transistor in parallel with each of said flip-flop transistors, each of said auxiliary transistors having an emitter, a collector, and a base, a source of first potential coupled to the emitters of all of said transistors, a source of second potential coupled to the collectors of all of said transistors, a third source of potential coupled to the bases of said auxiliary transistors, switching means coupled between the bases and collectors of said flip-flop transistors and adapted to receive pulses, and inductive means coupled to said switching means and to said flip-flop transistors, whereby upon activation from said switching means said inductive means react to turn off the conducting flip-flop transistor, to change the bistable transistor circuit from one bistable state to its other bistable state and thereby produce an output signal at the respective auxiliary transistor.

3,042,815
HIGH-SPEED, NON-SATURATING TRANSISTOR STEERING FLIP-FLOP
Carl M. Campbell, Jr., Broomall, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 27, 1960, Ser. No. 38,939
7 Claims. (Cl. 307—88.5)



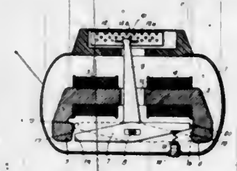
4. A bistable transistor device comprising
an input flip-flop having a pair of driver transistors each having a control electrode and two main current carrying electrodes, the control electrode and a main current carrying electrode being cross-coupled,
input means common to the other main current carrying electrodes of said driver transistors,
an auxiliary transistor associated with each said driver transistor and having a control electrode and two main current carrying electrodes,
the control electrode and one main current electrode of each said auxiliary transistor being coupled to the corresponding main current carrying electrode of its associated driver transistor,
a master flip-flop having a pair of output transistors, each with a control electrode and two main current carrying electrodes, the control electrodes and a corresponding main current carrying electrode of each being cross-coupled, a direct connection between the other main current carrying electrode of one of said output transistors and the corresponding current carrying electrode of one of said auxiliary transistors,
a direct connection between the other main current carrying electrode of one of said output transistors and the corresponding current carrying electrode of one of said auxiliary transistors,
a second direct connection between the other main current carrying electrode of the other of said output transistors and the corresponding current carrying electrode of the other of said auxiliary transistors, and
potential means coupled across said output transistors said auxiliary transistors supplying current through common impedances to said direct connections,
whereby either of said auxiliary transistors, when conducting, supplies an unbalancing current to its associated driver transistor, tending to inhibit conduction through the other driver transistor cross-coupled thereto.

3,042,816
SYMMETRICAL CURRENT CIRCUIT FED BY DIRECT CURRENT
Einar Andreas Aagaard, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,220
Claims priority, application Netherlands Sept. 14, 1957
3 Claims. (Cl. 307—89)



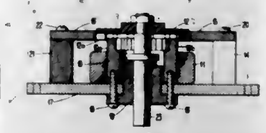
1. In a transmission circuit for the transmission of information from a first current circuit having two electrically symmetrical halves to a second current circuit, wherein the first current circuit has a first point connected to a direct current source, a second point connected to ground, and a third point having a voltage dependent upon the open or closed state of the first current circuit, means for determining the state of said first current circuit substantially independently of longitudinal interference in said first current circuit comprising potential detecting means, a fourth point on said first current circuit symmetrical with said third point, and a transformer having a first winding connected between said third point and said detecting means and a second winding connected between said fourth point and ground, said windings being relatively arranged so that current in said second winding due to longitudinal interference induces a voltage in said first winding substantially compensating for the effect of longitudinal interference currents in said first winding.

3,042,817
OSCILLATING ELECTRIC MOTOR WITH ARMATURE HAVING A LINEAR GAP
Adolf Mohr, Buhlertal, Baden, Germany, assignor to Avog Elektro- und Feinmechanik G.m.b.H., Buhlertal, Baden, Germany, a corporation of Germany
Filed June 12, 1959, Ser. No. 820,059
Claims priority, application Germany June 14, 1958
7 Claims. (Cl. 310—38)



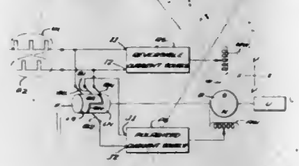
1. An oscillating electric motor, comprising a stator having a magnetizable field structure and electric excitation coils mounted on said structure, said structure having a pair of mutually opposed pole faces defining a pole space located on one side of said structure, fixed pivot means and an armature pivotally mounted thereon for forward and reverse pivotal movement thereabout and within said pole space said pole faces and said armature together defining at least one air gap lying within said pole space. said pivot means including, spring means joined with said armature and forming an oscillatory system together therewith, and a driver arm rigidly joined with said armature and extending from said one side to the other side of said structure, said arm having a driving end protruding from said other side.

3,042,818
STEPPING MOTOR
Donald F. Busch, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,220
7 Claims. (Cl. 310—49)



1. A stepping motor comprising a circular rotor supported on a shaft having a plurality of peripherally located uniform and angularly distributed magnetizable elements, means for journaling said shaft in relatively frictionless bearings, an electromagnet having a core element with two sets of diametrically disposed pole projections at one end concentrically positioned within the periphery of said rotor, a permanent magnet having a pole piece with a plurality of angularly spaced radially inward extending projections disposed along the outer circumference of said rotor and separated therefrom by an air gap and corresponding to the first set of projections on said electromagnet core and producing a magnetic flux path therein of a given direction, a second pole piece having a plurality of angularly spaced radially inward extending projections diametrically disposed with respect to the permanent magnet pole piece along the outer circumference of said rotor and separated therefrom by an air gap and corresponding to the second set of projections of said electromagnet core, and means for intermittently energizing said electromagnet in such a manner as to create a magnetic flux path in said electromagnet core which is in opposite direction to the magnetic flux path produced by said permanent magnet to cause incremental rotation of said rotor when said electromagnet is magnetized and a similar incremental rotation of said rotor in the same direction produced by said permanent magnet field when said electromagnet is de-energized.

3,042,819
DIFFERENTIAL COUNTING SYSTEM
Charles J. Kennedy, Pasadena, Calif., assignor to Endevco Corporation, Pasadena, Calif., a corporation of California
Filed Sept. 30, 1959, Ser. No. 843,500
10 Claims. (Cl. 310—49)



1. A stepping device comprising
a motor having a stator unit and a magnetized rotor unit, said stator unit having main and auxiliary winding means thereon, said rotor unit having a series of stationary positions relative to said stator unit according to the polarity of current applied to said main winding means;
a reversible current source connected to said main winding means;
a first switch element comprising a first slip ring and a first commutator segment means, said first slip ring and said first commutator segment means being electrically connected;

a second switch element comprising a second slip ring and a second commutator segment means, said second slip ring and said second commutator segment means being electrically connected;

the two commutator segment means comprising the same number of commutator segments, commutator segments of the two commutator segment means being arranged alternately, said commutator segments being located in corresponding contact positions when said rotor unit is in the respective stationary positions;

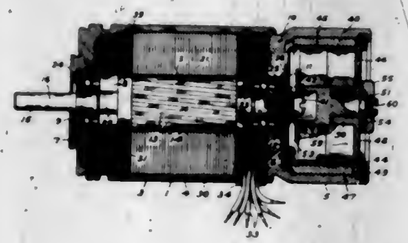
a first pair of brushes contacting said two slip rings respectively;

a second pair of brushes contacting a commutator segment of each of said two commutator segment means respectively when said commutator segments are in said contact positions;

the brushes of one pair being connected to said winding means for applying a transverse biasing field to said rotor until when said rotor is in any of said stationary positions whereby said rotor tends to rotate in one direction or another according to the polarity of said biasing field and the position of said stator;

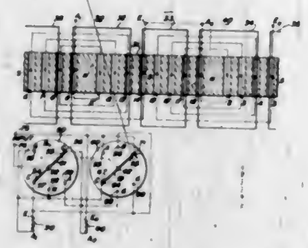
two signal input circuits connected to said other pair of bushes respectively for alternately receiving signal from two sources respectively, and means interconnecting said input circuits and said current source for reversing the current supplied to said main winding means each time a signal is received by said signal input sources.

3,042,820
SERVO MOTOR WITH ADJUSTABLE VELOCITY DAMP
Albert Diamond, Newport Beach, Calif., assignor, by mesne assignments, to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Filed Apr. 16, 1958, Ser. No. 729,016
3 Claims. (Cl. 310—93)



1. A servo motor with adjustable velocity damp comprising: a motor having a stator and a rotor rotatably mounted upon a shaft within said stator; a cup-shaped member affixed to one end of said rotor shaft and rotatable therewith; a housing enclosing said stator and said cup-shaped member; and means stationarily mounted with respect to said housing for establishing a magnetic field of adjustable intensity having lines of flux traversing said cup-shaped member to create a damping force upon said rotor proportional to its rotational velocity including permanent magnet members and a keeper member radially spaced apart to provide an air gap within which the sides of said cup-shaped member are disposed, said permanent magnet having two separate members adjacent each other and adjustable with respect to each other to vary the effective magnetomotive force of said permanent magnet member and adjust said damping force upon said rotor.

3,042,821
SINGLE PHASE INDUCTION MOTOR
Gottlieb Theodor Stoll, Esslingen (Neckar), Germany, assignor to Curt Stoll K.G., Maschinen- u. Apparatebau, Neidlingen, Leck, Germany
Filed Nov. 10, 1959, Ser. No. 852,090
Claims priority, application Germany Mar. 7, 1959
12 Claims. (Cl. 310—166)



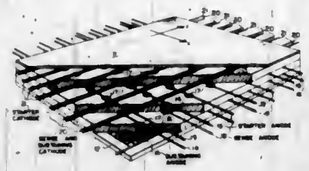
1. A single phase alternating current motor comprising a stator having coil slots spaced substantially uniformly over its operative surface, an even number of main windings formed of coils and having their individual coils distributed in the slots of said stator, each of said main windings having external terminals, means for connecting said external terminals together and to a source of alternating energy to provide several selective combinations of series and parallel connected coils for said motor to provide selective numbers of magnetic poles, and auxiliary windings on said stator, said auxiliary windings each comprising a short-circuited ring having two of its sides situated in different stator slots together with coils of said main windings, said rings each extending over a finite portion of said stator, said auxiliary windings being inductively energized by said main windings and being so positioned with respect to said main windings as to generate when energized a number of auxiliary magnetic poles equivalent to the number of magnetic poles generated by said main windings in each combination of series and parallel coils in which said main windings are connected, said auxiliary magnetic poles being spaced electrically and spacially from the magnetic poles generated by said main windings.

3,042,822
TREATED CARBON BRUSH
Robert H. Savage and Maurice Guarnier, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 21, 1960, Ser. No. 70,706
17 Claims. (Cl. 310—228)



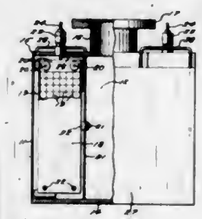
11. A chunk type carbon electrical contact making brush comprising in combination, a carbon brush matrix body, a plurality of lubricant chunks dispersed throughout said body and a vanadium compound in said brush, said brush produced in part by adding V_2O_5 thereto and firing at least above the melting point of V_2O_5.

3,042,823
HIGH SPEED ELECTRONIC MEMORY
Dennis D. Willard, Santa Clara County, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 28, 1958, Ser. No. 776,852
2 Claims. (Cl. 313—6)



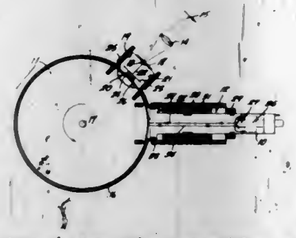
1. A data storage device comprising a body of electrically insulating material including a plurality of laminations bonded together and having a plurality of gas-filled cavities arranged in rows and columns therein, sense cathode and starter cathode conductors between first and second of said laminations and intersecting said cavities by columns, starter anode conductors between second and third of said laminations and intersecting said cavities by rows, sense anode conductors between third and fourth of said laminations and intersecting said cavities by rows, sustaining anode conductors between fourth and fifth of said laminations and intersecting all of said cavities, means including said starter anodes and starter cathodes for initiating an electrical discharge in one of said cavities, means including said sustaining anodes and said cathode conductors for sustaining an electrical discharge in said cavities, and means including said sense anode and sense cathode for detecting the presence of an electrical discharge in a selected one of said cavities.

3,042,824
IMPROVED VACUUM PUMPS
William A. Lloyd, Sunnyvale, and Renn Zaphiropoulos, Los Altos, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California
Filed June 22, 1960, Ser. No. 38,028
14 Claims. (Cl. 313—7)



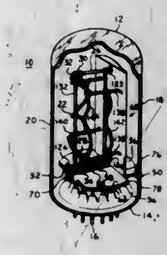
1. A getter ion vacuum pump apparatus having an anode-cathode area including a cathode of reactive material and an anode, means for establishing an electrical field between said cathode and anode, a magnetic field means adapted to produce a magnetic field through said cathode and anode whereby a glow discharge is produced in said anode-cathode area resulting in the sputtering of getter material from said cathode, said pump having a gas access area communicating with said anode-cathode area, and a gas permeable means between the anode-cathode area and the gas access area and means for applying an electrical potential thereon for confining the electric field within said anode-cathode area to thereby confine the glow discharge within said anode-cathode area and preventing it from occurring in said gas access area.

3,042,825
DRUM TARGET IMAGE ORTHICON
Joseph E. Bambara, Brooklyn, and John W. Christensen, Forest Hills, N.Y., assignors to Columbia Broadcasting System, Inc., New York, N.Y., a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,139
12 Claims. (Cl. 313—89)



1. An electron image tube comprising an evacuated enclosure, photocathode means adapted to emit electrons in response to illumination from a scene, movable electric charge storage means within the enclosure arranged to receive electrons from the photocathode means on a first surface spaced at a distance from the photocathode means and store corresponding electric charges, and means for reading out the charges stored in the storage means directly from said first surface at a position spaced from the photocathode means.

3,042,826
INDICATOR TUBE
John H. McCauley, Elizabeth, and Steven Gavurnik, Gladstone, N.J., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 2, 1959, Ser. No. 850,236
7 Claims. (Cl. 313—109.5)



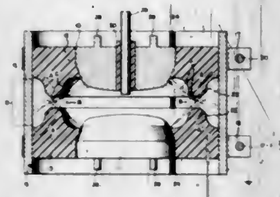
7. A cold cathode, gaseous indicator tube comprising an envelope containing a gaseous atmosphere adapted to sustain cathode glow, a generally L-shaped conductive electrode support bracket including a base plate and a back plate, said back plate having a front surface and a rear surface, a sheet of insulating material adjacent to the rear surface of said back plate, means holding said back plate and said sheet of insulating material in a unitary rigid assembly, a first pair of apertures in said back plate, a second pair of apertures in said sheet and aligned with said first pair of apertures, a plurality of filamentary cathode glow electrodes, a pair of support posts extending through said first pair of apertures in said back plate and secured to said sheet of insulating material, said posts being insulated from said back plate and supporting said cathode electrodes, a brace support secured between one of said posts and the base plate of said bracket, a rigid bar secured between said posts for maintaining said support posts and said electrodes rigid within said envelope, and anode electrode rods secured to said back plate and lying in operative relation to said cathode electrodes.

3,042,827
MOTOR VEHICLE HEADLIGHT CONSTRUCTION AND POLARIZED GLASSES USED THEREWITH
Orlando Lopez, Provenir y Habana Arroyo Apolo, Havana, Cuba
Filed Sept. 30, 1958, Ser. No. 764,335
6 Claims. (Cl. 313—112)



1. A headlight comprising a sealed beam illuminating unit including an outer lens, a polarized lens disposed in parallel spaced relation with respect to said outer lens, and gravity controlled means for mounting said polarized lens for rotation with respect to said outer lens independently of said outer lens.

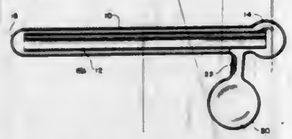
3,042,828
SWITCH
Vernal Josephson, Palos Verdes Estates, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,241
5 Claims. (Cl. 313—214)



1. A spark gap switch comprising: a pair of electrodes, mountable and spaced from each other in a substantially coaxial alignment; a pair of annular insulating members, each supporting in the central portion thereof one of said electrodes; a conductive sleeve surrounding said pair of annular insulating members, said sleeve defining in the periphery thereof an axial slot; clamp means engaging the outer surface of said sleeve to reduce its diameter and thus tightly engage said pair of annular insulating members to maintain said electrodes in a predetermined spaced relationship; and an annular detent along the inner surface of each of said pair and defining an annular surface remote from said electrodes such that it is always in the shadow of any conductive vapors generated by arcing in the space intermediate to said electrodes whereby conductive vapors generated in the space between or adjacent to the electrodes may flow between the annular detents to impinge upon the conductive sleeve without materially affecting the electrical properties of the spark gap switch.

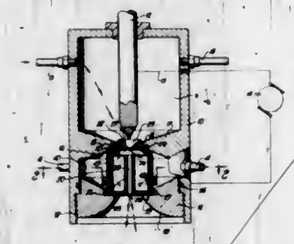
3,042,829
SAPPHIRE SPECTRUM TUBE FOR MICROWAVE EXCITATION
Curtis J. Humphreys, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 22, 1960, Ser. No. 16,900
12 Claims. (Cl. 313—221)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A spectrum tube for microwave excitation comprising an outer transparent envelope of glass-like material having its interior completely sealed off from the outside atmosphere and filled with a carrier gas, a sapphire tube for containing a source material to be vaporized and then microwave excited housed within said transparent envelope, said sapphire tube being open at both



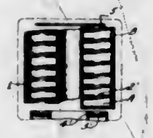
ends thereof, whereby when the spectrum tube is placed within a suitable field of microwave energy radiation the carrier gas will first excite and then as the spectrum tube becomes heated the source material will vaporize and show its spectrum.

3,042,830
METHOD AND APPAPATUS FOR EFFECTING GAS-STABILIZED ELECTRIC ARC REACTIONS
Harry K. Orbach, Whittier, Calif., assignor, by mesne assignments, to MHD Research, Inc., Newport Beach, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,628,
11 Claims. (Cl. 313—231)



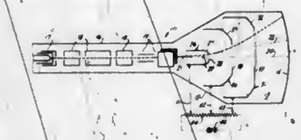
1. Gas ionizing apparatus of the character described, comprising a body forming a chamber, a first electrode within said chamber, a second tubular electrode in said body having an internal gas mixing passage and arc gap spacing from said first electrode beyond the inlet end of said passage so that the arc enters the second electrode, means for admitting to said chamber a first gas to be heated in said gap and discharged through said passage, means for feeding a second coolant gas into a space about said second electrode and in contact therewith, and means for passing the preheated coolant gas then into the heated gas stream within the arc extent inside the second electrode.

3,042,831
VELOCITY MODULATION ELECTRON DISCHARGE DEVICES
Norman Charles Barford, Prittlewell, Southend, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed Nov. 13, 1946, Ser. No. 709,665
In Great Britain Mar. 22, 1945
Section 1, Public Law 690, Aug. 8, 1946
Patent expires Mar. 22, 1965
25 Claims. (Cl. 315—3.5)



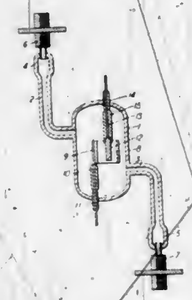
2. An electron discharge device of the velocity modulation type comprising a helically coiled length of hollow wave guide adapted to have a high frequency wave propagated therethrough, the walls of said wave guide having at least one series of aligned apertures arranged in spaced relation to and substantially parallel to the longitudinal axis of the helical wave guide, and means for projecting a beam of electrons through said series of apertures.

3,042,832
HIGH-SENSITIVITY CATHODE-RAY TUBE
Harvey M. Owren, Livermore, Calif., assignor to Abtronics, Inc., Livermore, Calif., a corporation of California
Filed Apr. 16, 1959, Ser. No. 806,886
11 Claims. (Cl. 315—18)



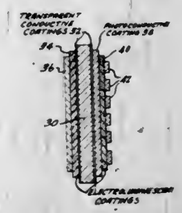
1. A high-sensitive cathode-ray tube comprising an electron beam source, deflecting means for controllably deflecting an electron beam therefrom, a screen for intercepting said beam, and a plurality of electrodes disposed along said beam path intermediate said deflecting means and said screen and establishing substantially semi-spherical electric fields symmetrically about the tube axis with lines of force radiating from a point which is disposed on said tube axis and is displaced from said deflection means for further deflecting said beam radially outward of the tube axis to spread same upon said screen.

3,042,833
GAS DISCHARGE TUBES
Vincent Willis, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Dec. 28, 1959, Ser. No. 862,227
Claims priority, application Great Britain Dec. 29, 1958
1 Claim. (Cl. 315—111)



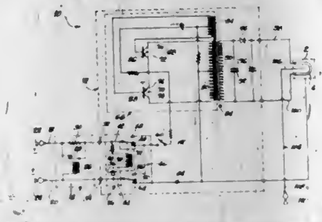
A gas discharge tube suitable for use as a gas detector, comprising in combination a glass envelope having an inlet and an outlet tube, a cathode comprising a substantially cylindrical tubular member made of platinum, a platinum anode in the form of a rod of substantially circular and constant cross section located substantially axially within the said tubular member, the space between the cathode and the anode being sufficient to permit reasonable gas flow between them, and yet not so great as to give rise to an unstable anode glow, and tungsten leads to the electrodes, which leads are sealed into the glass envelope through plugs of glass having a co-efficient of expansion intermediate between that of tungsten and that of the envelope glass, the electrode leads inside the discharge tube, and any portions of the cathode and anode other than the cylindrical tubular member part of the cathode and the part of the anode which is surrounded by the cathode, are covered by an insulating material.

3,042,834
ELECTROLUMINESCENT DEVICE
Frederick H. Nicoll, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 28, 1955, Ser. No. 549,267
9 Claims. (Cl. 315—169)



1. An electroluminescent device comprising a transparent sheet at least the opposite surfaces of which are conductive, a first plurality of spaced elongated conductors extending along and spaced from one of said surfaces of said sheet, electroluminescent material intervening between said first plurality of conductors and said one surface of said sheet, a layer of photoconductive material on the other of said surfaces of said sheet, a second plurality of spaced elongated conductors extending along and spaced from the side of said layer of photoconductive material remote from said sheet, said second plurality of conductors extending transversely to said first plurality of conductors, and electroluminescent material intervening between said second plurality of conductors and said layer of photoconductive material at least in the regions of cross-over of said conductors of said first plurality and said second plurality, the conductors of at least said second plurality being transparent.

3,042,835
BATTERY POWERED TIMING LIGHT
Robert E. Badger, Twin Lakes, Wis.
(8028 28th Ave., Kenosha, Wis.)
Filed Dec. 21, 1959, Ser. No. 861,100
1 Claim. (Cl. 315—171)



A battery powered timing light for internal combustion engines comprising in combination:

a flash lamp;
a pair of leads adapted to be connected with random polarity to a battery;
a rectifier and control solenoid connected in series between said leads whereby said solenoid is energized when said leads are connected to the battery with one polarity and is not energized when said leads are connected with opposite polarity;
a reversing switch having a pair of movable contacts and two pairs of fixed contacts, one pair in association with each movable contact, said movable contacts respectively connected to said leads and engaging a first fixed contact of each pair when said solenoid is deenergized, said movable contacts mechanically connected to said solenoid and respectively movable into engagement with the second fixed contacts of each pair when said solenoid is energized;
the second fixed contacts of each pair connected respectively to said first fixed contact of the other

pair whereby said first fixed contacts of each pair constitute output switch terminals having constant polarity regardless of the polarity of said leads;

a transistorized high voltage power supply requiring a supply voltage of predetermined polarity connected to said output switch terminals and to said flash lamp; and

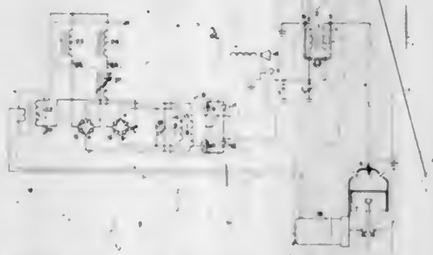
a high voltage trigger lead having one end positioned adjacent said flash lamp and the other end adapted to be connected to a high voltage component of an operating engine.

3,042,836

ENGINE SPEED REGULATOR

Robert C. Hamilton, Pasadena, and Harold Mandrolan, La Canada, Calif., assignors to the United States of America as represented by the Secretary of the Army

Filed Nov. 20, 1959, Ser. No. 854,525
6 Claims. (Cl. 317—5)



1. A speed control for an internal combustion engine comprising an alternator driven by said engine, first and second electrical filters, said first filter being tuned to pass a signal just below a desired frequency output of said alternator and said second filter benig tuned to pass a signal just above said desired frequency, first, second, third and fourth rectifiers, a saturable reactor comprising first, second, and third windings, said third winding having a center tap, an output of said alternator being connected through said first filter and said first rectifier to said first winding, an output of said alternator being connected through said second filter and said second rectifier to said second winding, said third and fourth rectifiers being connected in series across said third winding and being poled for unidirectional current flow through said third winding in a first direction, a source of control current being connected between control connections comprising a first connection to said center tap and a second connection made between said series connected third and fourth rectifier elements, said reactor having predetermined characteristics of either operating in the saturated or unsaturated regions responsive to the frequency output of said alternator, said third winding providing a substantial short circuit to said source of control current when said reactor is saturated and a high impedance when said reactor is unsaturated, said reactor being unsaturated at the desired frequency output and saturated at other than the desired frequency output of said alternator, and a speed determining means of said engine being electrically coupled to said third winding and responsive to the impedance of said third winding.

3,042,837

FAIL SAFE OVERLOAD PROTECTIVE SYSTEM

Robert P. Alley, Shirley, and Walter F. Dowdle, Lincoln, Ill., assignors to General Electric Company, a corporation of New York

Filed Nov. 17, 1958, Ser. No. 774,534
5 Claims. (Cl. 317—41)

1. An overload protective control system for a dynamo electric machine adapted to be energized from a pair of supply terminals, comprising a pair of thermally responsive devices having negative temperature coefficients connected in parallel relationship and adapted to be mounted in a dynamo electric machine in predetermined locations, a voltage dropping resistor connected in series with the parallel combination of said thermally sensitive devices, the series parallel combination of said dropping resistor and said thermally-responsive devices having terminals adapted for connection to the supply terminals so that the thermally-responsive devices are supplied with voltage derived from the supply terminals through the dropping resistor, a second resistor included in a branch circuit in parallel with said voltage dropping resistor, and means for protectively deenergizing said dynamo electric machine in response to increased temperatures in said machine, said last-named means including an electroresponsive device having an operating coil connected in parallel with said thermally sensitive devices to be supplied with a voltage derived therefrom and having an armature operated to a first position in response to a predetermined temperature of said thermally sensitive devices and operated to a second position in response to a predetermined higher temperature, and a contact in said branch circuit opened in said first position of said armature and closed in said second position for effecting a reduction in the temperature differential between the operations of said electroresponsive device to said first and second positions.

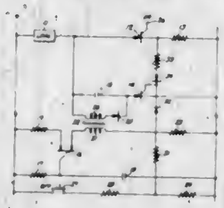


3,042,838

DIRECT CURRENT STATIC ELECTRIC SWITCH

Burnice D. Bedford, Scotia, and Leon J. Goldberg, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Dec. 16, 1960, Ser. No. 76,246
4 Claims. (Cl. 317—52)



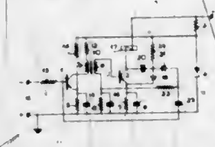
1. A switching circuit including in combination a pair of controlled rectifiers each having control gate elements, a first one of said controlled rectifiers being adapted to be connected in series circuit relationship with a load device across a source of electric energy, a quenching circuit including a quenching capacitor connected in series circuit relationship with said remaining controlled rectifier and adapted to divert load current from said first controlled rectifier, a charging device comprising a source of oscillatory current and a rectifying network operatively coupled in circuit relationship with said quenching capacitor for precharging said quenching capacitor with a potential having a polarity such that its negatively charged plate is connected to the positive electrode of said first mentioned controlled rectifier, an On triggering circuit coupled to the gate element of the first controlled rectifier for switching the circuit to its On condition, an Off triggering circuit coupled to the gate element of the remaining controlled rectifier for turning on said remaining controlled rectifier and thereby switch the circuit to its Off condition, and an overload sensing device connected in series circuit relationship with the load device for sensing an overload condition instantaneously, said overload sensing device being electrically coupled to the control gate element of said remaining controlled rectifier for turning off the circuit instantaneously in response to an overload condition.

3,042,839

DIRECT-VOLTAGE MONITORING CIRCUIT

Willem Hermes, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 29, 1959, Ser. No. 849,582
Claims priority, application Netherlands Dec. 2, 1958
7 Claims. (Cl. 317—146)



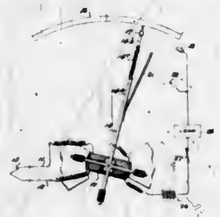
1. A direct-voltage monitoring circuit arrangement including an amplifier having input and output circuits, a first electronic amplifying element having a control electrode and a main current path, means for applying said monitored direct voltage to said control electrode, a regenerative feedback circuit coupled between said output and input circuits, a source of reference voltage, means for applying said reference voltage to said control electrode, said reference voltage having a polarity to bias said amplifying element to a substantially cut-off condition when the value of said monitored direct voltage lies below a first threshold value, said amplifier oscillating when the value of said monitored direct voltage lies above said first threshold value, said main current path including a relatively high load resistance causing saturation of said main current path when the value of said monitored direct voltage exceeds a second threshold value lying above said first threshold value, the amplification factor of the amplifier including said regenerative feedback circuit becoming less than unity upon said saturation whereby the amplifier ceases to oscillate.

3,042,840

INSTRUMENT TYPE RELAY

Edward M. Eadie, Jr., Westfield, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas

Filed June 4, 1959, Ser. No. 818,140
12 Claims. (Cl. 317—152)



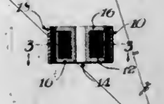
1. A load-current-contact-aiding type instrument including a movable contact element and associated stationary contact element one of which is flexibly mounted, a magnetic contact system including movable magnetic and fixed magnetic contact elements one of which is flexibly mounted, the said magnetic contact elements being constructed to close substantially simultaneously with the said movable contact element and associated stationary contact element.

3,042,841

ENCASED MAGNETIC CORE

Samuel Bryan, Silver Spring, Md., assignor, by mesne assignments, to Sprague Electric Company, a corporation of Massachusetts

Filed Oct. 16, 1958, Ser. No. 767,727
4 Claims. (Cl. 317—158)



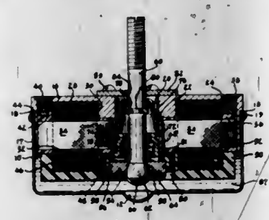
1. An encased magnetic bobbin core comprising a spool of insulating material having flanges of a relatively small diameter in the order of a fraction of an inch, elongated strain-sensitive magnetic material wound in a substantially toroidal shape around said spool within said flanges to a height which maintains it within said flanges, a protective sleeve, the wall of said sleeve including a thin durable outer layer of relatively hard and tough paper and a thin layer of relatively soft compressible vulcanized fiber, said layers being several thousandths of an inch in thickness and said inner layer being thicker than said outer layer, said spool being inserted within said sleeve, the outside diameter of said flange being substantially larger than the relaxed inside diameter of said sleeve to provide a substantially permanent interference-fit relationship between said flanges and said sleeve, and the composite structure of said wall providing sufficient yielding compression about said flanges when they are inserted within said spool in said substantial interference-fit relationship to provide a remarkably rigid permanent and shock-resistant sealed assembly.

3,042,842

ELECTROMAGNETIC DEVICE

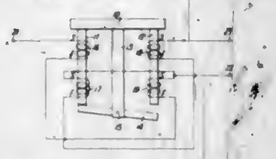
Irvin W. Cox, West Allis, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Apr. 14, 1958, Ser. No. 728,285
11 Claims. (Cl. 317—185)



1. In an alternating current electromagnetic device, in combination, a housing having a cavity therein and being open at one end, a laminated elctromagnet in one end of said cavity to close said open end and having a pole face, means surrounding said pole face to provide a relatively large surface area in the plane thereof, armature means having a relatively large surface area opposed to the surface area of said pole face, means mounting said armature means for reciprocatory movement in the other end of said cavity, actuator means connected to said armature means and extending to the exterior of said housing, and damping fluid completely filling and being confined in said other end of said cavity around said armature means.

3,042,843
POLARIZED A.C. RINGERS
Huw Bryant Edwards and Victor Michael Anderson, Beeston, England, assignors to Ericsson Telephones Limited, London, England
Filed Nov. 19, 1958, Ser. No. 774,880
Claims priority, application Great Britain Jan. 8, 1958
4 Claims. (Cl. 317—188)



1. An A.C. ringer comprising: a pair of cores, a yoke attached to said cores, a permanent magnet also attached with one end to said yoke inbetween said cores so as to define an E-shaped structure, an armature pivotally mounted on the other end of said permanent magnet; first and second winding means on one of said cores; third and fourth winding means on the other one of said core, a first and a second terminal means for forming a series circuit connection of said winding means in the following sequence: first terminal, first winding means third winding means, second winding means, fourth winding means, second terminals and a center tap for grounding said windings and being disposed between said second and third winding means so that inductance and resistance as appearing between said first terminal and said tap and the respective inductance and resistance between said tap and said second terminal are substantially equal independent from the respective position of said armature.

3,042,844
SEMICONDUCTOR INDUCTANCE
Yasushi Watanabe, 35 Nakasugiyamadori, Sendai, Japan, and Jun-ichi Nishizawa, 56 Komegafukuro Nakachyo, Sendai, Japan
Filed July 24, 1959, Ser. No. 829,345
Claims priority, application Japan July 29, 1958
7 Claims. (Cl. 317—234)



1. A semi-conductor inductance having at least two contiguous semi-conductor regions comprising, electrical connections for applying potential to said semi-conductor inductance, a semi-conductor region having a higher volume resistivity to electrical conduction than the other semi-conductor region, said higher volume resistivity semi-conductor region having the characteristic of resisting change in the number of current carriers therein when a potential is applied thereto and to said other semi-conductor region so that current carriers are caused to flow in said semi-conductor regions and from said other region into the higher volume resistivity region, said other region comprising a semi-conductor region for diffusing current carriers therein to create a current flow time lag within said semi-conductor thereby to cause the semi-conductor inductance to function as an inductance with a high inductive reactance value.

3,042,845
CAPACITOR STRUCTURE
Michael A. Rosenberg, Granada Hills, Calif., assignor to San Fernando Electric Manufacturing Company, San Fernando, Calif., a corporation of California
Filed Aug. 10, 1959, Ser. No. 832,752
6 Claims. (Cl. 317—242)

5. A capacitor structure comprising: a cylindrical foil capacitor formed of convolutions of alternate conductive foil strips and dielectric strips, said dielectric strips being made of a synthetic resin material, said material having a temperature coefficient that helps give the capacitor characteristic changes in radial dimension and capacitance at temperatures above and below a predetermined temperature; and means for effectively reducing said temperature coefficient including a sleeve snugly disposed around



the lateral surface of said capacitor, said sleeve exerting slight radial compressive forces along said capacitor in a predetermined range of temperature environments, said sleeve being formed of material having a lower temperature coefficient than said capacitor, said forces being made as great as possible without altering the desired capacitance at room temperature.

3,042,846
DUAL CAPACITOR TERMINAL
George I. Lawson, Veedersburg, Ind., assignor to P. R. Mallory & Co., Inc., a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,857
3 Claims. (Cl. 317—256)

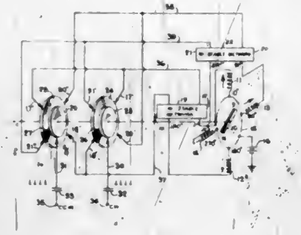


3. In a dual capacitor: a pair of stacked disc elements of dielectric material having conductive areas on the surfaces thereof; terminal means comprising a single length of conductive material bent into a generally hairpin shape, one end extending between and making contact with the conductive areas on inner surfaces of said disc elements, and the other end bent back upon itself and ending in a U-clip configuration wherein one of the legs of the U extends at an angle with respect to the other leg, the legs of the clip each engaging opposed conductive areas on the outer surfaces of said discs holding them together, whereby shearing the conductor at the hairpin bend provides a pair of terminals for the dual capacitor.

3,042,847
ROTOR CONTROLLED STEPPER MOTOR
Elvin C. Welch, Inglewood, Calif., assignor to Automation Development Corporation, a corporation of California
Filed Jan. 9, 1959, Ser. No. 785,938
4 Claims. (Cl. 318—254)

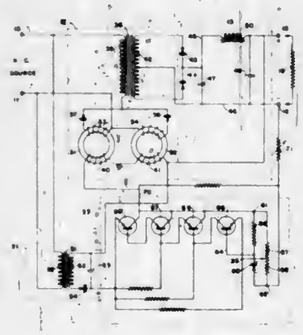
1. A stepper motor comprising, in combination: a magnetic rotor; a first pair of stator windings spatially positioned on diametrically opposite sides of said rotor; a second pair of stator windings spatially displaced ninety degrees from said first pair respectively; first control means connected to said first pair of stator windings and responsive to successive electrical signals for successively alternately energizing each winding of said first pair to establish a first magnetic field in one direction along a first axis and in an opposite direction along said first axis;

second control means connected to said second pair of stator windings and responsive to successive electrical signals for successively alternately energizing each winding of said pair to establish a second magnetic field in one direction along a second axis and then in an opposite direction along said second axis, said second axis being at right angles to said first axis, and said rotor aligning itself



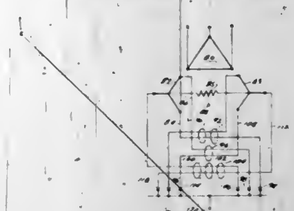
with the resultant of said first and second magnetic fields; input means for receiving a series of successive electrical signals; actuating means connected to said input means; and means coupling said actuating means to said rotor for movement therewith for effecting connection of said actuating means alternately to said first and second control means each time said rotor moves through a discrete step.

3,042,848
VOLTAGE REGULATOR
Paul Muchnick, Norwalk, and Donald W. Tanner and Nathaniel Silver, Stamford, and Leo L. Helterline, Jr., Norwalk, Conn., assignors, by mesne assignments, to Raytheon Company, a corporation of Delaware
Filed July 22, 1957, Ser. No. 673,200
6 Claims. (Cl. 321—19)



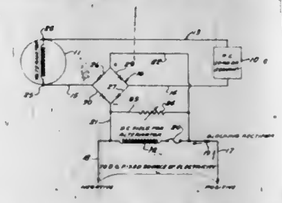
1. A voltage regulator comprising; a saturable reactor connected between an alternating current source and a rectifier which produces direct current at a pair of output terminals; a control coil associated with said saturable reactor and adapted to vary the reactance of said reactor when a direct current through the coil is varied; a control circuit connected across the output terminals and including in series connection, said control coil, a sensing circuit with a voltage reference component, and an adjustable resistor; a controllable impedance connected across said control coil in series with a direct current power supply for varying the current in the coil; and coupling means connected between the sensing circuit and said controllable impedance for controlling the impedance in response to an error voltage derived from the sensing circuit.

3,042,849
SATURABLE BALANCING REACTORS FOR RECTIFIER SYSTEMS
Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 3, 1958, Ser. No. 726,214
11 Claims. (Cl. 321—27)



8. In a multiphase rectifier system; a current balancing reactor connected in series with each phase; said reactors having a substantially zero air gap; said reactors being unsaturated for a relatively short portion of their respective phase; the iron cross-sectional area of each of said reactors being adjustable to adjust the current of their respective phase until the current of each phase is balanced; each of said reactors being further associated with a further rectifier phase conducting current 180° displaced from each of said first mentioned phases; the conductors of said first and second mentioned phases conducting current in opposite directions through their respective reactor.

3,042,850
ELECTRICAL FIELD EXCITATION CIRCUITS FOR ALTERNATORS
Robert D. Kern, Waukesha, Wis., assignor to Gener AC Corp., Wales, Wis., a corporation of Wisconsin
Filed Aug. 3, 1959, Ser. No. 831,242
5 Claims. (Cl. 322—27)



4. In an electrical circuit including a single source of fixed D.C. excitation power and an A.C. load; an alternator having a D.C. field winding; an electrical excitation circuit including the fixed D.C. source of excitation power and alternator; a bridge type rectifier; and electrical connections connecting the bridge type rectifier in series with the A.C. load and in parallel with the fixed D.C. source of excitation power and with the alternator field, there also being included in the circuitry a blocking rectifier in series with the fixed D.C. source of excitation power, a fuse in series with the alternator field, and a voltage sensitive variable resistance shunted across the bridge type rectifier.

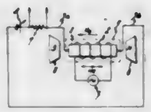
3,042,851
A.C. VOLTAGE REGULATING SYSTEM
Gerald R. Little, St. Louis, Mo., assignor to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Sept. 3, 1957, Ser. No. 681,527
5 Claims. (Cl. 323—51)

1. In a voltage regulating system, in combination, mechanically movable means for regulating an A.C. voltage, means for sampling the regulated voltage, means employing the regulated voltage as input for generating a

constant reference voltage, and means for comparing the sampled voltage with the constant reference voltage and utilizing the resultant to effect movement of the mechanically movable regulating means, the reference voltage generating means comprising means for producing an output reference voltage of substantially square form, and the voltage comparing and utilizing means including a summing amplifier for amplifying the resultant voltage followed by filter means for eliminating unwanted frequencies in the amplified resultant voltage.

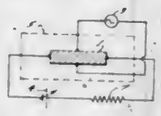


3,042,852
SEMICONDUCTOR CRYISTOR CIRCUIT
Martin Carl Steele, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 29, 1957, Ser. No. 649,482
2 Claims. (Cl. 323—94)



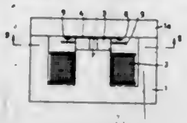
1. In combination, a body of semiconductive material having a resistivity which varies inversely with temperature in a given temperature range but which sharply decreases due to impact ionization when an electric field of greater than a given value is applied to the body and the body is at a temperature which is lower than a given value within said range; conductive means connected to said body for applying a voltage thereto and thereby establishing an electric field through the body; and a coil formed of a material which is superconductive at the temperature at which the resistivity of the body sharply decreases, wound around said body, whereby when said body is maintained at a temperature and in an electric field such that its resistivity has sharply decreased, small variations in the magnetic field applied by said coil produce substantially larger variations in said resistivity.

3,042,853
SEMICONDUCTOR ELECTRICAL APPARATUS
Martin C. Steele, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 24, 1957, Ser. No. 667,597
12 Claims. (Cl. 323—94)



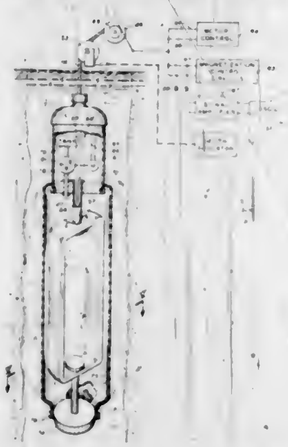
1. In combination, a body formed of a material which exhibits a sharp change in resistivity due to impact ionization under predetermined conditions of temperature and applied electric field; means for maintaining said body at a temperature at which impact ionization can occur; means for applying a biasing electric field to the body of a value such that further change in applied electric field in a given sense will result in said sharp change in resistivity; and means for applying an alternating electrical signal to said body for varying the electric field applied to said body in accordance with the variations in amplitude of said signal for producing sharp changes in said resistivity.

3,042,854
HALL-VOLTAGE GENERATOR
Karl Maaz, Nurnberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Sept. 23, 1958, Ser. No. 762,824
1 Claim. (Cl. 323—94)



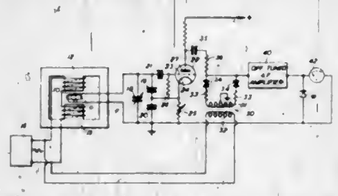
A Hall generator, comprising a magnetic-field structure having a substantially E-shaped core portion and a yoke portion mounted on said core portion, said core portion having a center leg forming a field gap together with said yoke portion, a Hall plate located in said gap and having a pair of contact electrodes and a pair of Hall electrodes defining respective axes within a plane transverse to the direction of the field in said gap, an excitation winding disposed on said center leg, a compensating winding also disposed on said center leg, a current supply circuit connected to said contact electrodes for passing energizing current through said Hall plate, and means connecting said compensating winding with said circuit for energizing said compensating winding in proportion to the current in said circuit and minimizing error voltages across said Hall electrodes due to the current supplied to said Hall plate.

3,042,855
METHOD OF AND APPARATUS FOR REDUCING REMNANT MAGNETIC FIELDS IN NUCLEAR MAGNETISM WELL LOGGING
Robert J. S. Brown, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Nov. 22, 1957, Ser. No. 698,142
2 Claims. (Cl. 324—.5)



1. A well logging tool for identifying atoms by spin magnetic induction measurements including an apparatus having a polarizing coil and means for energizing said coil to polarize atomic particles of hydrogenous fluids contiguous to the side walls of said well, the improvement comprising an expandable bag enclosing said coil, a reservoir of flowable material connected to the interior portions of said bag, said flowable material within said reservoir having a spin magnetic induction characteristic requiring a substantially longer polarization period than the polarization period for said hydrogenous fluids contiguous to the side walls of said well, and means for transferring said material into said expandable bag to exclude drilling fluids within said well bore from at least the volume established by the dimensions of said coil, whereby said flowable material may be polarized and spin magnetic induction signals may be received from said flowable material only through employment of a polarization period substantially longer than the polarization period for said hydrogenous fluids.

3,042,856
NUCLEAR MAGNETIC RESONANCE DETECTORS
Edward Watson, Hayes, England, assignor, by mesne assignments, to Fairey Aviation Limited, Hayes, England, a company of Great Britain
Filed Oct. 20, 1958, Ser. No. 768,305
Claims priority, application Great Britain Oct. 21, 1957
10 Claims. (Cl. 324—.5)



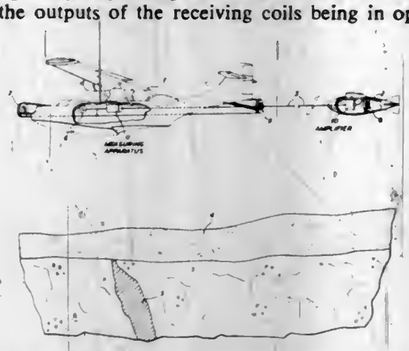
1. A nuclear magnetic resonance detector including a test coil for receiving a specimen, means for establishing a magnetic field transverse to the axis of the coil having a field strength to produce a nuclear magnetic precession frequency in the specimen, a tuned circuit including the test coil, means for producing in the said tuned circuit a high frequency signal at a radio-frequency which differs from the precession frequency by an amount approximately in the audio range, means for periodically altering one of said frequencies from a first constant value to a second constant value so as to pass rapidly through a condition of resonance of said specimen and thereafter remain at one of said constant values to thereby produce a signal component at a beat frequency corresponding to the difference between the resonance frequency and the radio-frequency, means for eliminating the radio-frequency signals to provide a resultant frequency signal in accordance with said component, frequency-responsive means, and means for supplying to said frequency-responsive means said beat frequency signal and having an output dependent on the frequency of said resultant frequency signal.

3,042,857
ELECTROMAGNETIC PROSPECTING APPARATUS
Vaino Ronka, 69 Hurlingham Crescent, Don Mills, Toronto, Ontario, Canada
Filed Dec. 14, 1959, Ser. No. 859,374
28 Claims. (Cl. 324—4)

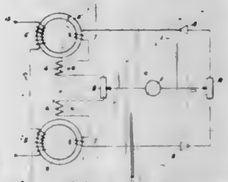
4. Electromagnetic prospecting apparatus comprising an aircraft, a transmitting coil carried by the aircraft, a source of alternating current for energizing the transmitting coil to set up a primary electromagnetic field that causes a secondary electromagnetic field due to anomalies in the earth over which the aircraft flies, a bird, a tow cable connecting the bird to the aircraft, a first receiving coil carried by the bird and sensitive to the primary and secondary fields and producing an output voltage V_1 due to the primary field, and means for compensating for unwanted changes in V_1 due to small changes in the distance r_1 between the transmitting coil and the receiving coil, comprising a second receiving coil carried by the bird at a distance r_2 from the transmitting coil and so arranged that it produces an output voltage V_2 due to the primary field of such magnitude V_2 that

$$\frac{V_2}{V_1} = -\frac{r_2}{r_1}$$

r_1 and r_2 being large compared to the difference between them, the outputs of the receiving coils being in opposition, and the bird carrying the receiving coils at substantially the same elevation as the transmitting coil with the axes of the receiving coils parallel to each other.



3,042,858
ELECTROMAGNETIC CIRCUITS FOR INDIRECTLY EXCITED ELECTROMAGNETIC FEELERS
Bořivoj Dubský, Oldřich Straka, and Josef Jahelka, Prague, and Václav Sedláček, Horni Pocernice, Czechoslovakia, assignors to Vyzkumný a zkušební letecký ustav, Letnany, near Prague, Czechoslovakia
Filed Sept. 23, 1958, Ser. No. 762,844
Claims priority, application Czechoslovakia Oct. 22, 1957
4 Claims. (Cl. 324—34)

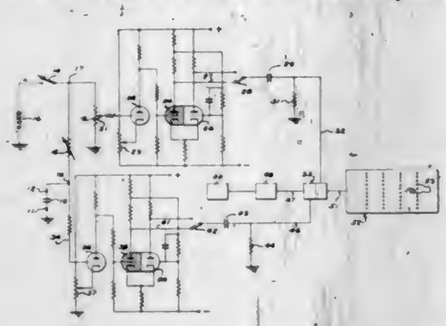


1. In combination with an electromagnetic feeler comprising first and second core means respectively having first and second exciting coil means supplied with alternating current and operative to produce an alternating magnetic field which is deformed in response to torsional stressing of the feeler, and first and second pickup coil means having voltages of opposite polarity induced therein by deformation of the magnetic field, with the induced voltages being proportional to the magnitude of the torsional stressing; a measuring circuit comprising first and second auxiliary coil means wound on said first and second core means, respectively, for providing polarizing voltages of the same phase as said induced voltages, and bridge circuit means including at least first and second branch circuit electrical paths, said first pickup coil means and said first auxiliary coil means being connected in series in said first branch circuit electrical path, said second pickup coil means and said second auxiliary coil means being connected in series in said second branch circuit electrical path.

3,042,859
CAPACITANCE MEASURING CIRCUIT
Harry R. Shillington, Glen Ellyn, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 13, 1957, Ser. No. 645,689
2 Claims. (Cl. 324—60)

2. In a capacitance measuring test set, a multi-stage counter adapted to be operated by the application of

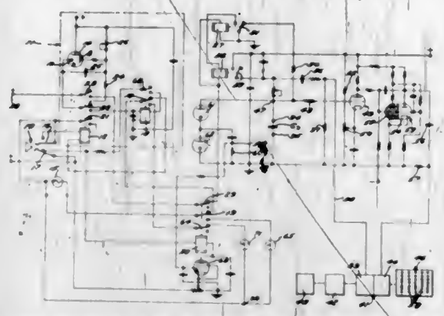
pulses, an oscillator for generating pulses, a gating circuit interconnecting the oscillator and counter for blocking the passages of pulses, a first one-shot multivibrator, a first differentiating circuit connected through a dual position switch to the first one-shot multivibrator for producing and applying a pulse to the gating circuit to operate said gating circuit to pass pulses to the counter, whereby, when said dual position switch is placed in its first position, said differentiating circuit is connected to the normally conducting half of said first one-shot multivibrator and a pulse of one polarity is produced and, when said dual position switch is placed in its second position, said first differentiating circuit is connected to the normally non-conducting half of said first one-shot multivibrator and a pulse of a different polarity is produced, a source of charging potential, means for applying said charging potential to a capacitor under test, means responsive to



the application of said charging potential to said capacitor for operating said first one-shot multivibrator, a second one-shot multivibrator, a second differentiating circuit connected through a dual position switch to the second one-shot multivibrator for producing and applying a pulse to the gating circuit to restore said gating circuit to the blocking condition, whereby, when said dual position switch is placed in its first position, said second differentiating circuit is connected to the normally conducting half of said second one-shoft multivibrator and a pulse of one polarity is produced and, when said dual position switch is placed in its second position, said second differentiating circuit is connected to the normally non-conducting half of said second one-shot multivibrator and a pulse of a different polarity is produced, and means responsive to the accumulation of a predetermined charge on said capacitor for operating said second one-shot multivibrator.

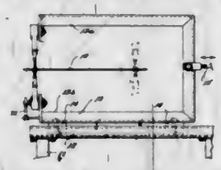
3,042,860
CAPACITANCE MEASURING AND DIELECTRIC STRENGTH TEST SET
Harry R. Shillington, Glen Ellyn, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 26, 1959, Ser. No. 789,131
5 Claims. (Cl. 324—60)

5. A circuit for simultaneously accomplishing capacitance measuring and dielectric strength tests on capacitors, which comprises a source of testing potential, relay means, a counter for recording the capacitance value of a capacitor under test, a timer circuit, means for concomitantly rendering said timer circuit and said relay means operable, means responsive to the operation of said relay means for simultaneously initiating operation of said counter and for applying said testing potential to a capacitor under test, pulse generating means, means for actuating said pulse generating means upon the accumulation of a first predetermined charge on the capacitor under test to generate a stop pulse and terminate the operation of said counter, means rendered effective upon the further accumulation of a charge on said capacitor under test to a second predetermined level without breakdown for interrupting application of said testing potential to said capacitor and for terminating operation of said timer circuit, and means connected to said timer circuit



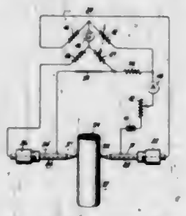
and responsive to the operation of the timer for a predetermined time, indicative of capacitor breakdown, for interrupting application of said testing potential to said capacitor.

3,042,861
CONTINUOUS RESISTIVITY GAUGE
Harry Eugene Brys, Butler, Pa., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed July 24, 1958, Ser. No. 750,787
16 Claims. (Cl. 324—62)



6. In an apparatus for continuously measuring the surface resistivity of a metallic strip having an electrically resistive coating, a C-frame having limbs, means for positioning a strip between said limbs, whereby the limbs of said C-frame extend respectively over the two sides of the strip being tested, means for reciprocating said frame transversely of said strip to scan the same, a yieldable support mounted on each of said limbs, a strip contacting brush supported on each of said yieldable supports, said brushes being in alignment with each other, each of said contacting brushes comprising a shank holding a bunch of fine metallic wires, said shanks and yieldable supports respectively having cooperating means for releasably holding said shanks on said yieldable supports.

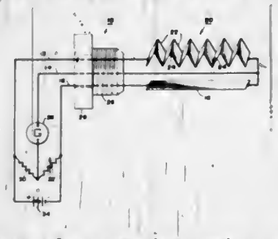
3,042,862
HARDNESS MEASUREMENT
Robert F. Edgar and Russell E. Tompkins, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 30, 1958, Ser. No. 783,879
8 Claims. (Cl. 324—64)



3. In a device for measuring the depth of hardness of a surface hardened specimen, the combination com-

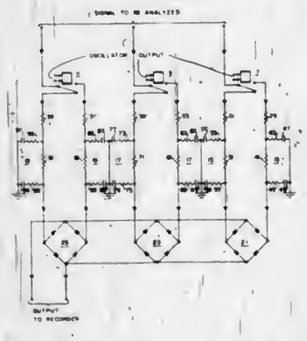
prising a current electrode making contact with a predetermined area on the surface of said specimen to inject current substantially over that surface area and obtain a localized resistance measurement, the size of said electrode being a predetermined fraction of the hardened film of the specimen so that substantially all of the voltage drop takes place within the hardened film, potential electrodes to determine the potential drop produced by said current within the film, one of said potential electrodes being positioned within the area of current injection, and means coupled to said current and potential electrodes for measuring the resistance in the selected portion of the specimen which includes the hardened film.

3,042,863
APPARATUS FOR MEASURING CREVICE CORROSION
Glenn A. Marsh and Edward Schaschl, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Nov. 25, 1959, Ser. No. 855,384
6 Claims. (Cl. 324—71)



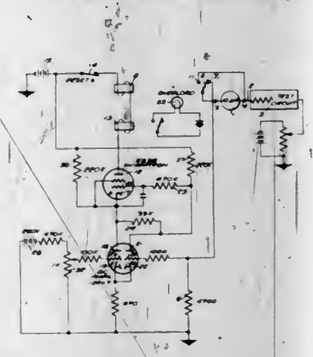
1. An apparatus for measuring crevice corrosion comprising a first ribbon-like specimen of corrodible, electrically-conductive metal, a second ribbon-like specimen of a corrodible metal having temperature-resistance charteristics similar to that of the first specimen, said second specimen being transversely rebent to form a plurality of accordion-like pleats, means for supporting said first and second specimens for exposure to a corrosive environment, and electrical means electrically connected to the terminal ends of said specimens for measuring the ratio of the resistances of said specimens.

3,042,864
ELECTRICAL WAVE ANALYZER
Josiah J. Godbey, Richardson, Tex., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 28, 1958, Ser. No. 776,923
6 Claims. (Cl. 324—77)



1. Apparatus for determining the characteristics of an electrical signal comprising a variable frequency source of multiphase alternating current adapted to be varied in accordance with indications of frequencies present in said electrical signal, an input circuit for said electrical signal, plural synchronous switch means equal in number to the number of phases of said multiphase variable frequency source and each of which is connected to said input circuit and is operated by one phase of said multiphase, variable frequency source, said switch means being adapted to periodically reverse the polarity of said electrical signal in accordance with each phase of said multiphase, variable frequency source, filter means connected to the output of each of said switch means, full wave rectifier means connected to the output of said filter means and measuring means connected to the combined outputs of said rectifier means.

3,042,865
METER PROTECTION CIRCUIT
Grant F. Stetzler, Temple, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 12, 1959, Ser. No. 786,343
2 Claims. (Cl. 324—110)

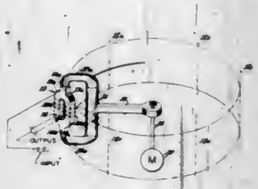


1. A protective system for a current sensitive electric meter comprising a gas tube having at least an anode, cathode, and a control electrode, a source of anode potential for the gas tube, a fast-operating mercury relay having an actuating winding and a contact tongue operable between a normally closed contact in a current path in series with the meter and a normally open contact connected to a circuit adapted to shunt the meter on operation of the relay, means connecting the anode to the source through the winding of the relay, a pair of triodes, means for statically biasing one of the triodes, means responsive to the current in the meter for biasing the other triode, and means for applying the potential difference between the plates of the triodes between the cathode and control electrode of the gas tube, on occurrence of an overload current through the meter the potential difference being such as to cause the gas tube to operate the mercury relay, on operation of the relay the contact tongue being adapted to shunt currents across the meter through the shunt circuit before the current path in series with the meter is broken.

3,042,866
MEANS FOR SAMPLING A PLURALITY OF D.C. SIGNALS
Ladislav Kadlec, Jackson Heights, N.Y., assignor to Avien, Inc., Woodside, N.Y.
Filed Aug. 27, 1959, Ser. No. 836,397
4 Claims. (Cl. 324—117)

3. An apparatus for indicating the magnitude of a D.C. signal provided by a low level D.C. voltage source comprising: a saturable magnetic core; an input winding and an output winding wound about said core, said windings being coupled together only by said core, said magnetic core being provided with a pair of parallel paths

for the flux produced by said magnet and said input winding comprising a pair of windings serially arranged in a bucking relationship, each of said pair of windings being wound upon a different one of said pair of parallel paths whereby signals generated in said pair of windings by flux variations cancel out; means for coupling said input winding to said D.C. voltage source whereby there is induced in said core a bias flux proportional to said D.C. signal; a magnet having a field capable of producing a flux saturating said core; means to temporarily subject said core to the field of said magnet so as to induce



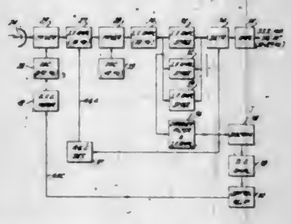
flux in said core at least part of said flux being opposite in polarity to said bias flux and to produce output current pulses of a first and a second polarity in said output winding, said pulses having a duration indicative of said magnitude of said D.C. signal; means for clipping the said pulses of said first polarity so as to pass only said pulses of said second polarity; means in cascade with said clipping means for integrating said pulses of said second polarity to produce a control signal indicative of the D.C. input signal; and means responsive to said control signal for providing an indication of the magnitude of said D.C. input signal.

3,042,867

COMMUNICATION SYSTEM WITH COMPENSATING MEANS FOR NON-LINEAR AMPLITUDE DISTORTIONS

Leland E. Thompson, Merchantville, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Oct. 11, 1956, Ser. No. 615,296
7 Claims. (Cl. 325—50)



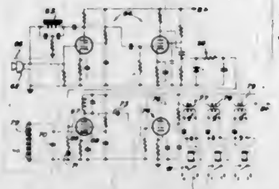
1. A communication system comprising means for heterodyning an original signal up in frequency to the radio frequency range to produce a radio frequency signal, a class B power amplifier fed by said radio frequency signal and operating to amplify the same for transmission, said power amplifier having a nonlinear input-output characteristic and inherently operating to produce an output signal whose amplitude is nonlinearly related to the radio frequency input signal thereto, means for receiving the transmitted signal, means for heterodyning the received signal down in frequency to the intermediate frequency range, means for demodulating the intermediate frequency signal to reproduce the original signal, and circuit means connected in said system preceding said demodulating means for compensating for the nonlinearities in said input-output characteristic.

3,042,868

DUAL PATH REMOTE CONTROL SYSTEM

Henry P. Kalmus, 3000 University Terrace NW., Washington, D.C., and Max L. Libman, "Tree Haven," Rte. 5, Fairfax County, Va.

Filed Oct. 23, 1959, Ser. No. 848,327
12 Claims. (Cl. 325—64)



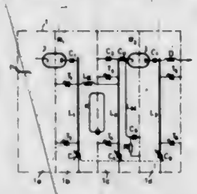
1. Remote control apparatus comprising a dual path control signal transmitter including a manually operable actuating device, means for simultaneously producing an acoustic signal and an electrical field signal by manual actuation of said device, and dual control signal responsive means spaced from said transmitter comprising means responsive only to the simultaneous reception of said two signals to operate a control device, said last means including means separately responsive to each of said two signals.

3,042,869

ULTRA-HIGH FREQUENCY HETERODYNE RECEIVER CONTAINING TANK CIRCUIT ARRANGEMENT

Wolf Dietrich Gosslau, Dusseldorf, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 28, 1960, Ser. No. 39,383
Claims priority, application Germany Aug. 8, 1959
5 Claims. (Cl. 325—436)



1. An ultra-high frequency heterodyne receiver comprising first and second tank circuit chambers having centrally disposed inner conductors, a source of signal oscillations, means applying said signal oscillations to said first chamber, means for coupling said signal from said first chamber to said second chamber, a mixing device having a control electrode, means providing local oscillations connected to said mixing device, means inductively coupling the signal oscillations in said second chamber to said control electrode, and means for substantially reducing oscillations of the frequency of said local oscillations at the input of said receiver comprising a capacitor connected between said control electrode and a potential antinode point on the inner conductor of said second chamber.

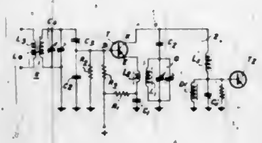
3,042,870

HIGH FREQUENCY TRANSISTOR OSCILLATOR

Willy Minner and Heinz Rinderle, Ulm (Danube), Germany, assignors to Telefunken G.m.b.H., Berlin, Germany

Filed Nov. 7, 1958, Ser. No. 772,464
Claims priority, application Germany Nov. 15, 1957
9 Claims. (Cl. 325—451)

1. A high-frequency oscillator circuit comprising, in combination: a transistor having an input circuit electrode, an output circuit electrode, and a substantially grounded electrode common to both circuits, said transistor having such characteristics that, at the high frequencies at which said oscillator circuit operates, the phase shift between the input voltage and the output current of said transistor is between —60° and —120°; power means for biasing said electrodes to provide gain between the input and output circuits; a frequency determining first parallel-resonant circuit connected with said output electrode; and a second parallel-resonant circuit



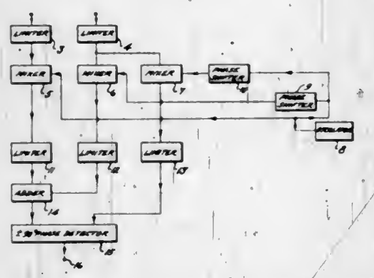
connected with said input electrode, said parallel-resonant circuits being reactively coupled with each other in such a manner that the secondary voltage has a phase shift relative to the primary voltage, said second parallel-resonant circuit being tuned to the oscillator frequency if the transistor phase shift is —90° but, if the transistor phase shift deviates from —90°, being detuned in such direction and in such an amount corresponding to such deviation from —90° that the total phase shift in the feed-back path containing the two coupled circuits is 0° or 180°, whereby oscillation at maximum amplitude is attained.

3,042,871

PULSE PHASE COMPARISON SYSTEM

Clarence E. Bergman, Fairfax County, Va., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Apr. 22, 1960, Ser. No. 24,180
3 Claims. (Cl. 328—133)



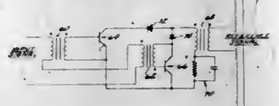
1. A system to phase compare a first intermediate frequency pulse signal to a second intermediate frequency pulse signal comprising an input circuit for each of said pulse signals, each of said input circuits including a limiter, three mixer means, the first of said mixer means receiving the output signal from one of said limiters, the said second and third mixer means receiving the output signal from the other of said limiters, oscillator means generating a continuous wave signal applied directly to said first mixer means, first means to phase shift said generated continuous wave signal for application to said second mixer means, second means for phase shifting said generated continuous wave signal for application to said third mixer means, means to add the output signals from said first and second mixer, and means to phase compare the resultant signal from said adding operation to the output signal from said third mixer means.

3,042,872

TRANSISTOR DEMODULATOR

Charles B. Brahm, Rockville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Mar. 4, 1959, Ser. No. 797,184
2 Claims. (Cl. 329—50)



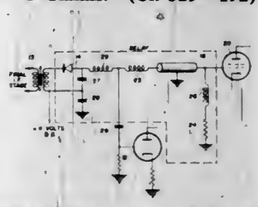
1. In a demodulator, in combination, means to supply a constant amplitude alternating reference voltage, first and second transistors of the same conductive type, each transistor having an emitter, base and collector, means connecting the emitter and collector of each transistor in parallel across said reference voltage supply means, the emitter of one transistor being connected to the collector of said other transistor, means to supply a variable amplitude alternating signal voltage across the emitter and base of each transistor simultaneously, said alternating signal voltage being of the same frequency as said reference voltage, and a load in series with said reference voltage supply means, one of said transistors conducting and supplying to said load a first output signal of one polarity proportional to said signal voltage when said signal voltage is substantially in phase with said reference voltage, the other of said transistors conducting and supplying to said load a second output signal proportional to said signal voltage with a polarity opposite said first output signal when said signal voltage is substantially 180° out of phase with said reference voltage.

3,042,873

DELAY LINE CIRCUITRY FOR COLOR TELEVISION RECEIVERS

Frank Patterson Smith, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation

Filed Nov. 29, 1954, Ser. No. 471,618
3 Claims. (Cl. 329—192)



1. A luminance-signal circuit for a color television receiver comprising a circuit for delaying luminance signals a predetermined period of time including a signal delay line having input and output circuits, means terminating said output circuit with an impedance substantially equal to the impedance of said delay line, a video signal amplifier coupled to said output circuit, and a signal detector connected directly to said input circuit and having an impedance substantially matching the terminating impedance of said delay line, said detector being essentially the sole terminating impedance for said input circuit.

3,042,874

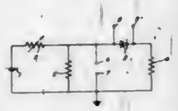
SEMICONDUCTOR BALANCING UNIT

Robert L. Watters, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed May 2, 1960, Ser. No. 26,361
6 Claims. (Cl. 330—14)

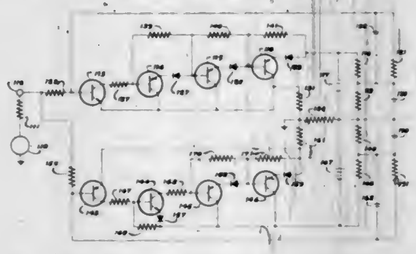
1. A balancing unit comprising: a narrow junction degenerate semiconductor diode device exhibiting a negative resistance region in the low forward voltage range of its current-voltage characteristic; bias means coupled to said

diode device establishing a direct current load line which intersects said characteristic in said negative resistance



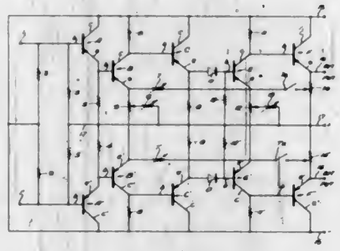
region; and a resistance in series circuit with said diode, said resistance having a value substantially equal to one half the absolute value of the diode negative resistance.

3,042,875
D.C.-A.C. TRANSISTOR AMPLIFIER
John W. Higginbotham, Bel Air, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Jan. 29, 1960, Ser. No. 5,545
11 Claims. (Cl. 330—17)



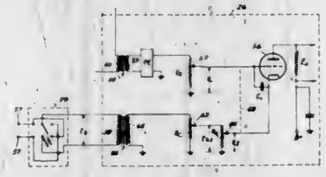
1. An amplifier capable of amplifying A.C. signals and D.C. signals of either polarity from a signal source comprising, first and second amplifier sections, first and second power source means connected to supply operating power to said first and second amplifier sestions respectively, first and second bias circuit means connected in parallel with said first and second power source means respectively to produce constant operating bias for said amplifier section associated therewith, first and second feedback circuit means coupling said operating bias to the input of said first and second amplifier sections respectively, said first amplifier section including first and second transistors of first and second conductivity types respectively, said second conductivity type being opposite that of said first conductivity type, said second amplifier section including third, fourth, and fifth transistors of said second, first, and second conductivity types respectively, first and second input resistances connected for coupling signals from said signal source into the input of said first and third transistors respectively, said second and fourth transistors being connected to receive and amplify the output signals of said first and third transistors respectively, said fifth transistor being connected to receive and amplify the output signals of said fourth transistor, both said amplifier sections being biased such that input signals introduced to said amplifier from said signal source will be predominantly amplified by said first amplifier section when of a first polarity while said second amplifier section will predominantly amplify said input signals of a second polarity opposite said first polarity, a load circuit, the output circuits of said first and second amplifier sections including first and second resistive elements respectively said first and second resistive elements being connected at a common point, said load circuit being connected to said common point, said first and second resistive elements providing inverse D.C. feedback to said first and second amplifier sections respectively so as to maintain the no-input-signal condition across said load circuit substantially at zero and to provide feedback to bias said amplifier sections during amplification of A.C. input signals, whereby input signals of said first and second polarities will appear across said load circuit as amplified by said first and second amplifier sections respectively in proportion to the input power thereto.

3,042,876
DIFFERENTIAL TRANSISTORIZED AMPLIFIER
John B. Pegram, Los Angeles, Calif., assignor, by mesne assignments, to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 30, 1958, Ser. No. 712,102
6 Claims. (Cl. 330—19)



3. A transistor amplifier that is insensitive to temperature variation including two channels each having a plurality of transistor amplifier stages and a plurality of transistor isolating and impedance reducing stages, with each isolating stage being intermediate a pair of amplifying stages, means introducing an input signal differentially across both channels, means obtaining a differential output signal from both channels, inter-channel feedback means coupling an amplifying stage in one channel with a different amplifying stage in the other channel, and intra-channel feedback means in each channel coupling a later stage therein with a previous stage, said inter-channel coupling means including a variable resistance network commonly coupling a given amplifying stage in each channel with an energizing source of voltage, and said intra-channel feedback means in each channel including a resistance coupling a later stage with said given stage, means for selectively connecting and disconnecting said intrachannel feedback in each channel, whereby when said intra-channel feedback is disconnected in both channels the amplifier may be differentially balanced by adjusting said variable resistance network, the resistance in the intra-channel feedback being adjustable to vary the control exerted by the intra-channel feedback means.

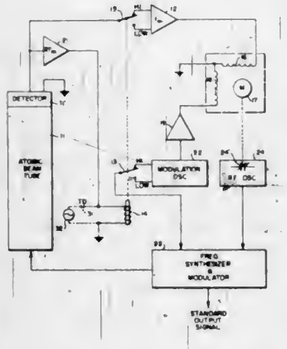
3,042,877
HUM COMPENSATOR
Robert E. Barnes, 114 E. Grove St., Algona, Iowa
Filed Dec. 19, 1958, Ser. No. 781,726
5 Claims. (Cl. 330—149)



1. In a signal analyzer which is adapted to be connected to a signal producing mechanism where a desired and undesired signal voltage arising from any source in the signal producing mechanism are superimposed on each other and are connected to the gain control of an

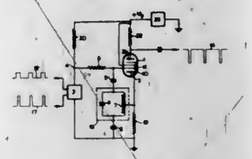
amplifying tube in the signal analyzer and where the undesired signal voltage exists separately across terminals, said gain control comprising a first potentiometer resistance grounded at one end, the total signal voltage to said amplifier tube connected across said first potentiometer resistance, the slide contact of said first potentiometer resistance connected to the grid of said amplifying tube whereby the gain of said tube may be varied, the undesired signal voltage across said terminals connected across a second potentiometer resistance grounded at one end in phase with the undesired signal voltage on said first potentiometer, the slide contact of said second potentiometer resistance connected to the cathode of said tube whereby the magnitude of the undesired signal voltage applied to said cathode may be varied, the slide contacts of said first and second potentiometers ganged together for simultaneous operation, the taper of the potentiometers selected so that the product of the amplification of the grid applied signal voltage and the magnitude of the undesired component of the signal voltage being applied to the grid is equal to the product of the amplification of the cathode applied signal voltage and the magnitude of the undesired signal voltage on the cathode of said tube so that the undesired signal voltage component is automatically cancelled in the tube regardless of the gain of the tube and only the desired signal voltage is amplified by the tube, and polarity reversing means connected between said terminals and said second potentiometer to make certain the undesired signal voltage on the cathode is in phase with the undesired signal voltage on the grid.

3,042,878
FREQUENCY CONTROL APPARATUS FOR AN ATOMIC BEAM TUBE
Arthur Orenberg, Lexington, Mass., assignor to National Company, Inc., Melrose, Mass., a corporation of Massachusetts
Filed Oct. 3, 1960, Ser. No. 59,925
4 Claims. (Cl. 331—3)



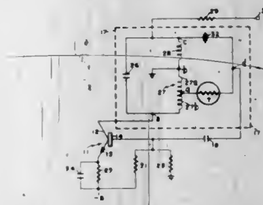
1. Frequency control apparatus for use with an atomic beam tube having a detector or the like, said apparatus comprising means for producing a radio frequency signal and applying it to said beam tube, means to produce a modulating signal of variable level for angle modulation of said radio frequency sighal, means to vary the center frequency of said radio frequency signal as a function of the voltage component detected by the detector having the same frequency as the modulation signal, and means to decrease the level of said modulation signal to decrease the modulation band-width when the frequency of said radio frequency signal is in the vicinity of the true resonance frequency of the beam tube.

3,042,879
CONTROLLABLE OSCILLATOR
Antonius Boekhorst, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 2, 1958, Ser. No. 725,999
Claims priority, application Netherlands Apr. 25, 1957
10 Claims. (Cl. 331—20)
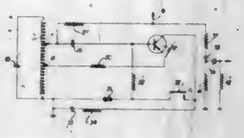


5. A controllable oscillator comprising an electron discharge device having, in the order named, a cathode, first and second control electrodes, and an output electrode, an inductance capacitance circuit resonant at a given frequency interconnecting said first and second control electrodes in regenerative feedback relationship, a blocking circuit comprising a capacitor and resistor, said capacitor being connected between said first control electrode and one terminal of said inductance capacitance circuit, phase detecting circuit means providing a direct output voltage varaible in response to deviation between the frequency of oscillation of said oscillator and the frequency of an externally derived synchronization signal, one end of said resistor being connected to said first control electrode, circuit means connecting the output of said phase detecting circuit means serially between the other end of said resistor and said cathode, and output circuit means connected to said output electrode, the time constant of said blocking circuit being short with respect to the period of said given frequency.

3,042,880
BRIDGE-STABILIZED OSCILLATOR
Robert E. Gibson, Burlington, and Sholly Kagan, Boston, Mass., assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Sept. 17, 1958, Ser. No. 761,642
8 Claims. (Cl. 331—110)



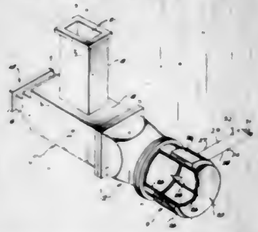
1. A bridge-stabilized oscillator circuit comprising:
(*a*) amplifying means having input and output circuit means;
(*b*) first, second and third series-connected reactances;
(*c*) a fourth reactance coupled in parallel with said first, second and third reactances to form a resonant circuit therewith; and
(*d*) a crystal and a resistance connected in series, the combination being coupled in parallel with said first and second reactances, respectively, the junction of said resistance and said crystal being coupled to said input means, the junction of said fourth reactance and said third reactance being coupled to said output means.

3,042,881
TONE GENERATOR CIRCUITS
Robert C. Burgener, Hilliards, and Alexander Finlay, Columbus, Ohio, assignors, by mesne assignments, to C. G. Conn, Ltd., Elkhart, Ind., a corporation of Indiana
Filed June 27, 1958, Ser. No. 745,023
5 Claims. (Cl. 331—117)



1. A tone generator circuit for a musical instrument including in combination, a resonant circuit having an inductor, a transistor having emitter, collector and base electrodes, said inductor having a pair of intermediate taps thereon defining a section having an impedance substantially less than the total impedance of said inductor, means connecting said emitter and said base electrodes to different taps on said inductor, said means including a resistor connected in series between said emitter electrode and said inductor to provide negative feedback in the emitter circuit to compensate for temperature changes in said transistor, transistor biasing means connected to said base and collector electrodes and including a resistor connected in series with said base electrode, a capacitor connected in parallel with the last-named resistor to bypass high frequency parasitic oscillations, keying means coupled to said biasing means for selectively rendering said transistor conductive to sustain oscillations in said resonant circuit, and an output connection to said inductor for deriving an oscillating tone signal therefrom.

3,042,882
FAIL-SAFE MICROWAVE FERRITE SWITCH
Richard S. Jamison, Los Angeles, and Harold A. Rosen, Santa Monica, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Sept. 19, 1958, Ser. No. 762,685
4 Claims. (Cl. 333—7)



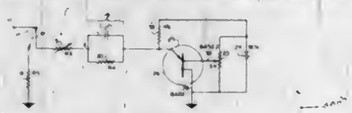
1. A microwave switch for a system having a high-power energy cycle and low-power energy cycle, comprising waveguide structure having a termination section with a short-circuit end portion for propagating both of said energies in a linearly polarized mode from an input receiving said energies in similarly polarized modes, an elongated element of gyromagnetic material mounted substantially centrally on said end portion with its longitudinal axis lying substantially along the direction of propagation of said energies, means inductively coupled to said element for establishing a static magnetic field lengthwise through said element substantially parallel to to the direction of propagation of energy only during said low-power energy cycle, said magnetic field having a strength to provide substantially 45 degree rotation of low-power energy in either direction, and an output waveguide mounted on said waveguide structure at a ninety degree angle with respect to said input for coupling of only the rotated low-power energy.

3,042,883
FREQUENCY WAVE-FILTER
Anton Eduard Pannenborg and Arnold Edmond Marie Calon, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 12, 1954, Ser. No. 442,738
Claims priority, application Netherlands July 24, 1953
6 Claims. (Cl. 333—10)



1. A frequency wave-filter comprising a first waveguide having an input end and an output end, a waveguide system comprising a second waveguide having a loop-shaped path substantially closed upon itself for electrical waves, said first and second waveguides having a common wall portion, aperture means extending through said common wall portion whereby a directional coupling is provided between said first and second waveguides, a source of electric waves coupled to said input end, load means coupled to said output end, and means for partially attenuating the electric waves in said waveguide system whereby electric waves in said output end are canceled for at least one frequency.

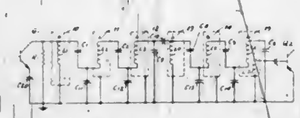
3,042,884
HIGH Q TUNED NETWORK UTILIZING BIASED DOUBLE-BASE DIODE AS INDUCTIVE ELEMENT
Ivan Ladany, Alexandria, and Robert J. Kearney, Ames, Iowa, assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 28, 1961, Ser. No. 92,423
10 Claims. (Cl. 333—76)
(Granted under Title 35, U.S. Code (1952), sec. 266)



10. A solid state tuned network comprising a double-base diode biased to have an inductive characteristic, a capacitance-resistance circuit connected to the emitter electrode of said double-base diode to provide a series resonant network, the resistance of said capacitance-resistance circuit being connected in parallel with the capacitance thereof and having a value selected to compensate for the parallel resistance of the double-base diode, first resistance means connected in series with the resistance of said capacitance-resistance circuit and having a value selected to substantially reduce the net series resistance of the tuned network, and second resistance means connected in parallel with the series connection of said first resistance means, said resistance of said capacitance-resistance circuit and said double-base diode to reduce second order harmonics generated in said resonant network.

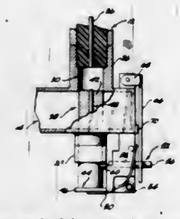
3,042,885
TUNED CIRCUIT FILTER
Richard T. Myers, Lynchburg, Va., assignor to General Electric Company, a corporation of New York
Filed June 17, 1959, Ser. No. 820,986
2 Claims. (Cl. 333—76)

1. A band pass filter circuit comprising a first parallel resonant L-C circuit including an inductor and voltage dividing capacitor in shunt with said inductor, a second parallel resonant circuit including an inductor and a plurality of voltage dividing capacitors in shunt with said inductor, one end of the inductor of said second parallel resonant circuit being connected to the junction of the voltage dividing capacitors of said first resonant circuit, an input terminal connected to one end of said first resonant circuit, the other end of each of said first and



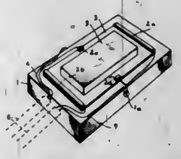
second resonant circuits being connected to a common reference point, said plurality of capacitors in said second resonant circuit including the capacitor of said first resonant circuit connected between the said junction and the common reference point, output terminals connected to said second parallel resonant circuit whereby said filter circuit has a balanced frequency response on either side of the band pass center frequency.

3,042,886
MICROWAVE MEANS
Oscar C. Lundstrom, Sunnyvale, Calif., and Daniel K. Yee, Cincinnati, Ohio, assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed July 3, 1959, Ser. No. 824,746
2 Claims. (Cl. 333—98)



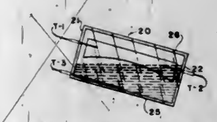
1. A microwave switching device comprising a rectangular waveguiding structure having first and second broad sides and first and second narrow sides, said first and second broad sides having first and second apertures, respectively, centrally disposed opposite each other intermediate said first and second narrow sides; a coaxial line having an inner conductor and an outer conductor disposed normal to said first broad side of said waveguiding structure, said outer conductor being electrically connected to said first broad side thereof about said first aperture and said inner conductor terminating at a point exterior to the volume defined by said first and second broad and narrow sides; an elongated dielectric member disposed through said second aperture transversely to said wave-guiding structure; means for maintaining said elongated member in first and second stable positions, said first position being immediately adjacent the inner extremity of said coaxial line and said second position being spaced therefrom; and an elongated conductive element disposed longitudinally within said elongated dielectric member in alignment with said inner conductor of said coaxial line, said elongated conductive element having the extremity thereof nearest said coaxial line exposed and the remaining extremity thereof within said elongated dielectric member protruding into the volume defined by said first and second broad and narrow sides of said waveguiding structure thereby to couple said coaxial line to said waveguiding structure when said elongated dielectric member is in said first stable position.

3,042,887
MAGNETIC-FIELD RESPONSIVE RESISTANCE DEVICE
Friedrich Kuhrt and Karl Maaz, Nurnberg, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Filed Sept. 16, 1959, Ser. No. 840,424
Claims priority, application Germany Sept. 15, 1958
16 Claims. (Cl. 338—32)



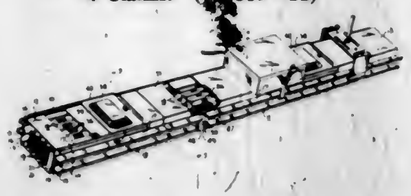
1. A magnetic-field responsive resistance device for a Hall generator comprising a thin, fragile, flat rectangular resistance wafer of crystalline semiconductor substance having two terminals on respective opposite plate sides and two Hall electrodes centrally of the other two opposite sides respectively, four circuit leads attached to said respective terminals and electrodes, and two rigid plates of rectangular shape covering the respective flat surfaces of said wafer and forming a rigid unit together with said wafer, said two plates consisting of ceramic sinter material, said semiconductor material and sinter ceramic having thermal coefficients of expansion of about the same decimal order of magnitude.

3,042,888
POSITION RESPONSIVE POTENTIAL DIVIDER
Donald M. Park, Raleigh, N.C., assignor to Park-Baker Electronic Development Corporation, Raleigh, N.C., a corporation of North Carolina
Filed Aug. 21, 1961, Ser. No. 132,964
12 Claims. (Cl. 338—44)



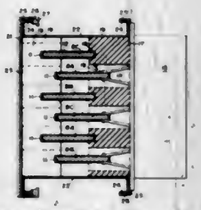
1. A position responsive potential dividing device comprising a sealed housing including a chamber therein and being adapted to tilt from a normal position in varying amounts and directions; and electrically conducting liquid partially filling said chamber and adapted to shift position with said tilt; first, second and third electrical conductors extending from respective external terminals through said housing into and terminating at isolated points within said chamber, said conductors being electrically insulated externally of and having exposed electrically conducting surfaces within said chamber; conducting means absorbent to said liquid fixedly positioned within said chamber and electrically connected to certain of said surfaces whereby to form part of a series electrical path which includes two of said points and the respective terminals associated therewith and a shunt electrical path which includes said other point and its terminal, said series path including said absorbent conducting means and said shunt path including said liquid in all positions normally assumed by said housing; said tilt acting to vary the contact between said absorbent conducting means and said liquid whereby to vary the electrical resistance between pairs of said points in a predetermined manner thereby enabling a voltage applied across the terminals connected to said two points to divide through said other point and the terminal connected thereto according to the amount and direction of said tilt.

3,042,889
BUSWAY SYSTEM
Frank C. Johnston, West Hartford, Conn., and Paul Krauss, Burlington, Vt., assignors to General Electric Company, a corporation of New York
Filed May 26, 1958, Ser. No. 737,954
4 Claims. (Cl. 339—22)



1. An electric bus bar conductor assembly comprising an elongated tubular conductive member having a cross-sectional height substantially greater than its cross-sectional width providing a pair of elongated closely spaced generally parallel wall portions connected together by edge portions, one of said edge portions having a plurality of longitudinally spaced elongated apertures for receiving a contact stab to contact the inner surfaces of said opposed wall portions, a coating of resilient insulating material surrounding said bus bar conductor in intimate thermal and mechanical contact therewith, said insulating material having a plurality of longitudinally spaced elongated apertures aligned with said conductor apertures and of slightly lesser size than said conductor apertures whereby an effective dead-front plug-in opening is provided, and a pair of solid contact plugs, one at each end of said conductor for overlapping side-by-side connection with similar contact plugs of other tubular conductive members, each of said plugs being integrally bonded to the interior of said tubular conductive member and extending to the outside thereof beyond the end of said insulating coating.

3,042,890
PLUG-IN LOW-IMPEDANCE BUS DUCT
Dennis H. Gamble, Brighton Township, Beaver County, and Charles L. Weimer, Patterson Heights, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 30, 1958, Ser. No. 770,776
5 Claims. (Cl. 339—22)



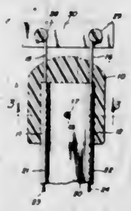
1. In a three-phase bus duct, in combination, a housing of generally rectangular cross section, said housing having spaced openings in opposite sides thereof, the openings in opposite sides being offset from each other longitudinally of the housing, at least six bus bars disposed in the housing, said bars being equally and closely spaced vertically with adjacent bars being of a different phase to provide a low impedance characteristic, alternate bars being offset horizontally toward the opposite sides of the housing having the openings therein, and a plug-in unit having stab connectors disposed in a single plane transversely of the housing and extending through one of said openings in the housing and spaced to engage directly the alternate bus bars which are offset toward the side of the housing on which the plug-in unit is mounted to facilitate their engagement by the stab connectors.

3,042,891
BATTERY TERMINALS
Richard A. Navarro, 906 Walton St., Houston 9, Tex.
Filed Oct. 29, 1959, Ser. No. 849,490
5 Claims. (Cl. 339—45)



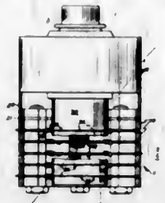
1. A quickly separable battery post terminal, comprising in combination a terminal body consisting of first and second complemental body sections, the first body section being adapted to be mounted upon a battery post and being provided with a cylindrical socket having a closed inner end and an open outer end, said second body section having a cylindrical plug slidably and removably disposed in said socket, a compression spring provided in said socket between the closed inner end of the latter and said plug for urging the plug outwardly from the socket, a latch member slidably mounted on said first body section for sliding movement in a plane perpendicular to the axis of said socket, said plug being provided with a recess slidably receiving said latch member whereby to retain the plug in the socket against the action of said spring, an actuating element pivotally mounted on said second body section and operatively connected to said latch member for sliding the latter out of its plug retaining position in the recess of said plug whereby the plug may be ejected from said socket by said spring, and remotely controlled means connected to said actuating element for operating the same.

3,042,892
CONNECTOR FOR ANTENNA LEAD-IN
Lester D. Hayworth, 45432 Kingtree Ave., Lancaster, Calif.
Filed Feb. 4, 1959, Ser. No. 791,144
1 Claim. (Cl. 339—100)



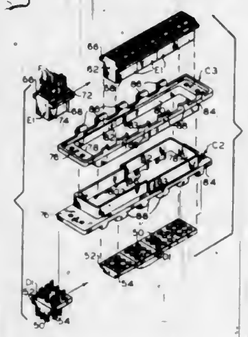
A connector for an antenna lead-in comprising a body of one piece construction, said body having spaced parallel longitudinally extending sockets therein that are extended inwardly from one end thereof, said body also having a transversely extending slot therein communicating at its opposite ends with said sockets, pins having pointed inner ends and looped outer ends, with the pointed inner ends of said pins being extended into the opposite end of said body into said sockets and positioned to extend into the antenna lead-in and contact the wires therein that are positioned on the opposite ends of a web forming the antenna lead-in that is positioned in the slot in said body for wedging the antenna lead-in in said sockets and said slot, an opening extending through the transverse central axis of said body, a bolt and nut assembly extended through said opening, the slot therein and the web in the antenna lead-in, with the bolt and nut assembly being positioned centrally of said sockets for clamping the antenna lead-in in said body and for insuring positive connections between the pins in said body and the antenna lead-in.

3,042,893
ELECTRON TUBE SOCKET
David Don Chin, San Francisco, and Lloyd P. Grisell, Millbrae, Calif., assignors to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Filed June 8, 1959, Ser. No. 818,703
4 Claims. (Cl. 339—112)



1. A socket for an electron tube, said socket comprising a series of insulating rings stacked alternately with pairs of abutting separate metallic rings, each of said metallic rings having inwardly protruding contact fingers, said contact finger on each pair of metallic rings being aligned in paired abutting relation and the contact fingers of each pair of contact rings being aligned with the contact fingers of each other pair of contact rings to form rows of contact fingers parallel to the axis of the socket, the contact fingers of each of said pairs of fingers having a turned flange on an edge thereof to form a V-guide entrance edge, one of said contact fingers on said pairs of contact fingers having a second flange on the edge opposite said entrance edge, said second flange being folded toward the other of said contact fingers in said pair forming a stop.

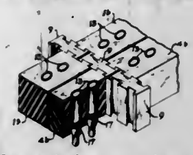
3,042,894
ELECTRICAL COUPLING DEVICE FOR MINIATURE TERMINALS
Benjamin Fox, 403 Gribbel Road, Wyncote, Pa.
Filed July 17, 1958, Ser. No. 749,211
8 Claims. (Cl. 339—142)



1. In an electrical coupling device for miniature terminals, a plurality of insulated core elements each having oppositely disposed shoulders, spaced lugs on said shoulders, a shell transversely securing said core elements therein, and arcuate tabs on said shell biting into said shoulders intermediate said lugs.

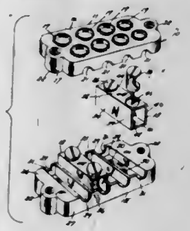
3,042,895
INTERLOCKED ELECTRICAL CONNECTORS
François Robert Bonhomme, Courbevoie, Seine, France, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,859
Claims priority, application France March 28, 1959
2 Claims. (Cl. 339—176)

1. A separable electrical connection device which comprises in combination at least two socket plates of general parallelepipedal shape, a first one and a second one, and at least two plug plates of corresponding parallelepipedal shape, a first one and a second one, each of said socket plate being provided with a plurality of sockets normal to one of the faces thereof, a plurality of plugs carried by each of said plug plates and normal to one of the faces thereof, said two socket plates adjoining each other, said two plug plates adjoining each other, said two socket plates having respective faces parallel to the longitudinal axes of said sockets located in alinement with each other,



said two alined faces being provided with grooves and tongues, a coupling plate provided with tongues and grooves adapted to cooperate with said grooves and tongues of the corresponding socket plates respectively by sliding engagement, said two plug plates having respective faces parallel to the longitudinal axes of said plugs located in alinement with each other, said two last-mentioned alined faces being provided with grooves and tongues, and a coupling plate provided with tongues and grooves grooves and tongues of the corresponding plug plates readapted to cooperate by sliding engagement with said spectively.

3,042,896
TERMINAL BLOCK CONSTRUCTION
Benjamin Doktor, 372 Thornton Road, Englewood, N.J.
Filed Jan. 20, 1958, Ser. No. 709,963
9 Claims. (Cl. 339—198)

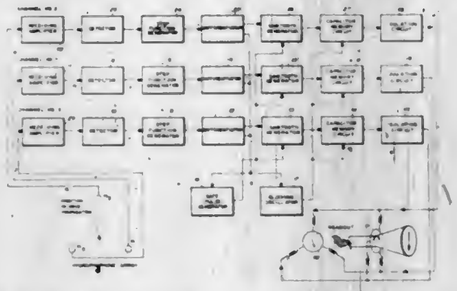


1. A terminal connector comprising a contact wall, a circular cylindrical lock member including end faces and rotatably supported about its central longitudinal axis substantially parallel to the plane of said contact wall and being substantially tangent thereto, said lock member having formed in its peripheral face a circumferentially extending groove having a base substantially along a plane perpendicular to said longitudinal axis and of substantially smooth curved continuously varying depth, substantially from the peripheral surface of said lock member to a depth not exceeding the radius thereof, said lock member being rotatable to bring successive portions of said groove into confronting relationship with said contact wall to delineate a passageway therewith of varying cross-section, and means connected to said lock member for rotating said lock member.

3,042,897
PASSIVE WAVE PROPAGATION DIRECTION INDICATOR
Milton D. Papineau, San Diego, Calif. (424 Olohana St., Honolulu 15, Hawaii)
Filed May 27, 1959, Ser. No. 816,347
8 Claims. (Cl. 340—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

5. A wave propagation direction indicator comprising in combination, a trio of transducers spatially disposed a

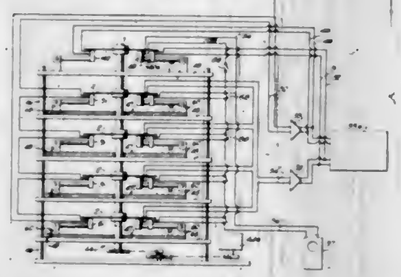
predetermined distance from each other to form substantially an equilateral triangular configuration, each of the transducers of said trio of transducers being adapted for receiving propagated energy and producing an electrical output signal in response thereto at the time of reception thereof, a trio of channel means each of which is connected to each of said trio of transducers for respectively initiating the generation of a trio of increasing output voltages in response to the electrical output signals timely produced thereby, gate means coupled to said trio of channel means for simultaneously discontinuing the increase of the aforesaid trio of increasing output voltages at a predetermined time after said trio of transducers have produced their electrical output signals, means connected to the aforesaid channel means for respectively storing said trio of increasing output voltages at their discontinued voltage levels, means coupled to said storing means for resolving and reading out the trio of voltages stored therein in terms of the direction of travel of said propagated energy, and blocking oscillator means connected between said trio of channel means and said storing means for blanking said storing means after the voltages stored therein are resolved and readout by the aforesaid resolving and readout means.



3,042,898
RECORDING AND REPRODUCING APPARATUS FOR SEISMIC REFLECTION MAPPING

John H. Hidy, Van Nuys, Calif., assignor to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware

Filed June 28, 1956, Ser. No. 594,466
7 Claims. (Cl. 340—15.5)

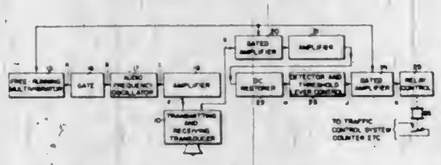


1. In a transducing apparatus for use in seismic surveying systems employing a plurality of reproducible disc-type records, the combination of a frame, a stack of spaced apart plates on said frame, a driven shaft, a plurality of aligned shafts each supported by one of said plates and disposed coaxially with said driven shaft, all of the shafts having an end portion spaced from the end portion of an adjacent shaft, and structure interconnecting the end portions of adjacent shafts to complete a drive connection therebetween, said structure including separable members one of which is secured to one of said shafts, means detachably securing the other of said separable members to the end portion of a shaft adjacent said one shaft so that, when detached, said other member can be moved axially of said adjacent shaft to permit insertion of a record through the space between the end portion of said one shaft and the end portion of said adjacent shaft, and an element spaced from said shafts for interconnecting said separable members to complete a drive connection therebetween.

3,042,899
ULTRASONIC VEHICLE DETECTION SYSTEM

Hugh C. Kendall and John H. Auer, Jr., Rochester, Norman A. Bolton, Scottsville, and Klaus H. Frielinghaus, Rochester, N.Y., assignors to General Railway Signal Company, Rochester, N.Y.

Filed June 16, 1959, Ser. No. 820,691
16 Claims. (Cl. 340—38)

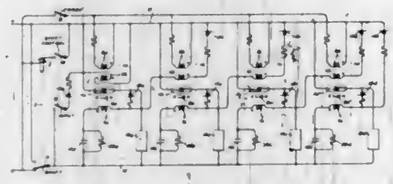


1. In a system for detecting the presence of an object, transmitting means for directing a beam of regularly occurring sound pulses toward said object and impinging only in the absence of said object upon a fixed sound reflecting surface which is more distant than said object receiving means located to receive said sound pulses after their reflection from said object when it is present or from said fixed surface in the absence of any object, the repetition rate of said pulses being selected to cause the interval between successive pulses to equal substantially the transit time of a pulse from said transmitting means to said fixed surface and thence back to said receiving means, time gating means nonresponsive to said receiving means only during a time interval overlapping the time of transmission of each pulse but not the expected time of reception of reflection pulses from said object when said sound pulses impinge thereon, whereby any reflected sound pulses received by said receiving means in the interval between successive transmitted pulses and at a time when said receiving means is not rendered responsive by said gating means producing an output from said gating means, and output means governed by the output of said time gating means for indicating the presence of one of said objects.

3,042,900
SHIFT REGISTERS

Everett W. Werts, Normal, Ill., assignor to General Electric Company, a corporation of New York

Filed Oct. 29, 1959, Ser. No. 849,516
6 Claims. (Cl. 340—168)

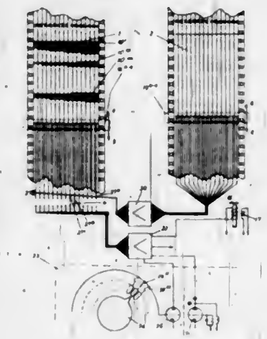


1. A shift register circuit comprising: a power supply circuit including a pair of conductors adapted to be energized from a source of direct current potential; a plurality of consecutively arranged information shifting stages forming an ordered array, each stage including a relay having bistable switch contacts and electrical windings for closing and opening said switch contacts depending on the direction of current flow therein; a plurality of transfer capacitors each connected in series with the switch contacts in one of said stages across said pair of conductors, whereby said transfer capacitors are charged from said source of potential when the associated switch contacts are closed; shift switching means for completing a series discharge circuit for each of said transfer capacitors through the electrical windings of the relay in its associated stage and through the electrical windings of the relay in the next succeeding stage, the current flow in said discharge circuit being in a direction to open the switch contacts in the stage associated with each transfer capacitor and to close the contacts in the next succeeding stage.

3,042,901
DISTRIBUTOR-CONTROLLED MAGNETIC STORAGE UNIT

Gerhard Dirks, 44 Morfelder Landstrasse W., Frankfurt am Main, Germany

Filed Mar. 30, 1955, Ser. No. 498,048
Claims priority, application Germany Oct. 1, 1948
3 Claims. (Cl. 340—172.5)

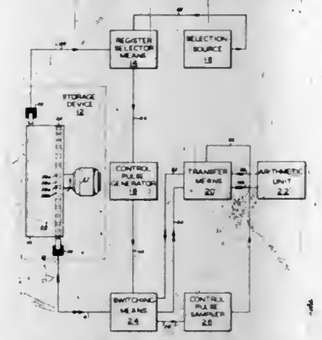


1. In a selective magnetic storage device, in combination, an elongated magnetizable signal carrier having a plurality of tracks divided into consecutive sections designated to be word areas, each subdivided into denominational areas extending transversely of said carrier for carrying character-representing signals therein; sensing and recording means for cooperation with said signal carrier and including a plurality of signal heads arranged along a line extending transversely of said carrier and respectively associated with said tracks; moving means for producing a step-wise controllable movement of said signal heads relative to said carrier in the longitudinal direction thereof over a plurality of denominational areas in one step of movement, for causing said signal heads to traverse sequentially a plurality of denominational areas; electronic storage means connected in parallel to the respective signal heads; electronic switching means for selectively controlling the transfer of signals to said electronic storage means through said signal heads to and from said carrier during said movement, said electronic switching means being advanced successively in switching condition under the control of signals provided by said signal heads upon the occurrence of the denominational areas under corresponding signal heads; comparing means; and means for transferring signals between said comparing means and said sensing and recording means in dependence on the results of the comparison in said comparing means between signal sequences derived from the signal carrier and signal sequences from another source.

3,042,902
INFORMATION LOCATION APPARATUS

Robert L. Weida, Whitestone, and Edgar Wolf, Bronx, N.Y., assignors, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware

Filed Apr. 3, 1956, Ser. No. 575,851
1 Claim. (Cl. 340—172.5)



In data processing apparatus including a cyclic memory having a plurality of data storage registers each having an associated designator portion, and means for permanently storing sequential steps of a principal data processing program to be performed by said apparatus together with the respective addresses of the data storage registers whose contents are to be processed as called for by respective program steps:

means for effecting address modification and program execution on the modified address, both during execution of the principal program and without substantial delay in the execution of the principal program, comprising:

(*a*) means for inserting into, and storing in the designator portion associated with a randomly desired storage register a single designator signal,

(*b*) detecting means for subsequently probing said designator portions in sequence,

(*c*) means responsive to the detection of the stored designator signal, for performing the data processing operation called for by the then effective permanently stored program step with respect to the register associated with such designator pulse rather than the register called for by said then effective permanently stored program step, and

(*d*) means also responsive to the detection of the stored designator signal, for substantially simultaneously deleting the stored designator signal while retaining data in its associated register to permit future processing of such data and to permit subsequent execution of said then effective program step with respect to the storage register called for by such step rather than the register called for by said inserting means.

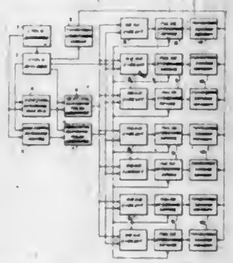
3,042,903
MEANS FOR TRANSFERRING INFORMATION BETWEEN PLURAL MEMORY DEVICES

Eugeni Estrems, Saint Mande, and Maurice Papo, Paris, France, assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Jan. 15, 1957, Ser. No. 634,284
3 Claims. (Cl. 340—172.5)

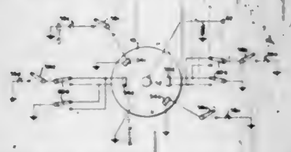
1. An electrical data information storage device which comprises, a first information data memory means comprising plural arrays of magnetic storage means where each array further comprises a plurality of coordinately arranged magnetic cores in which data in modified binary code is stored in the form of a pattern of saturated and

unsaturated cores, a plurality of second memory means each of which corresponds to one of said plural arrays, horizontal scanning means common to said plural arrays and adapted to scan selected corresponding horizontal portions of each array of said first memory means, vertical scanning common to said plural arrays and adapted to scan selected corresponding vertical portions of each array of said first memory means, a plurality of reading means, one for each array, responsive to said common



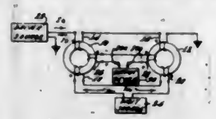
horizontal scanning means and to said common vertical scanning means for extracting all of the elements defining a predetermined plurality of characters in said combinational code from said selected corresponding portions of said first memory, cyclic control means, and timing generator means responsive to said cyclic control means for operating said scanning means to produce a plurality of predetermined interlaced scans of different selected portions of said first memory in successive cycles for transferring data from said first memory to said second memory.

3,042,904
LOGICAL AND MEMORY ELEMENTS AND CIRCUITS
Andrew E. Brennemann, Ralph B. De Lano, Jr., and Donald R. Young, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 9, 1956, Ser. No. 621,348
5 Claims. (Cl. 340—173.2)



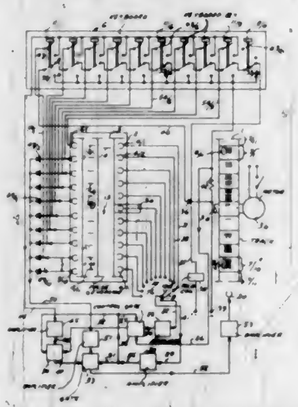
1. A logical circuit element comprising a body of material having the property that an applied polarizing field is effective to strain said material and an applied strain is effective to produce a change in polarization in said material; first, second, third, and fourth individual pairs of electrodes on said body; one electrode of each of said pairs of electrodes secured to a first major face of said body and the other of each of said pairs of electrodes secured to a second major face of said body opposite said first major face of said body; said first, second, third, and fourth pairs of electrodes being separated by first, second, third, and fourth portions of said body of material, respectively; and said first, second, and third portions of said body of material being sonically equidistant from said fourth portion of said body of material, whereby polarizing fields simultaneously applied by any of said first, second, and third electrode pairs effective to strain said first, second, and third portions of said body of material, respectively, generate sonic waves all of which thereafter simultaneously strain said fourth portion of said body of material.

3,042,905
MEMORY SYSTEMS
Walter F. Kosonocky, Newark, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 11, 1956, Ser. No. 627,694
7 Claims. (Cl. 340—174)



1. In a magnetic system, a plurality of pairs of magnetic cores, each of said cores having a substantially rectangular hysteresis loop and each having two remanent states, a separate winding linked to each different pair of cores, another winding linked to all said cores, said other winding linking the two cores of any pair in opposite senses, and means for changing the remanent state of a desired core of a desired one of said core pairs comprising means for applying a signal to the separate winding of said desired core pair in a direction to change each from an initial to the other of said states, and means for applying another signal concurrently to said other winding in a direction to change said desired core from said initial to said other state and to oppose the change of the other core of said desired core pair from said initial state.

3,042,906
STORAGE OF SIGNALS
Gerhard Dirks, 44 Morfelder Landstrasse, Frankfurt am Main, Germany
Filed Apr. 16, 1958, Ser. No. 728,812
5 Claims. (Cl. 340—174.1)



1. In a signal storage apparatus, in combination, signal storage means carrying at least one signal storage track for recording signals thereon, a given length of said track being divided longitudinally into a predetermined number of signal storage areas of substantially equal unit length, each area being capable of accommodating a predetermined number of consecutive signal elements; recording means associated with said track for recording said signal elements thereon depending upon application of corresponding pulses to said recording means; pulse generator means including a track member carrying consecutively along a track a plurality of equally spaced pulse generating elements, and a plurality of sensing means equally spaced from each other consecutively along said track member and capable of delivering a pulse whenever a sensing means and a pulse-generating element are moved past one another across a pulse-generating position, said plurality of sensing means including a number thereof equal to said predetermined number of signal elements that can be accommodated in one of said signal storage areas, the number and spacing of said pulse-generating elements differing from the number and spacing of said sensing means in a vernier-like manner so that during the time period required for one of said pulse-generating elements to change from a pulse-generating position relative to one of said sensing means to another pulse-generating position relative to the next consecutive sensing means the other pulse-generating elements assume consecutively pulse-generating positions relative to the other sensing means, respectively, so as to cause during said time period the generation of a sequence of pulses corresponding to said predetermined number of signal elements; means for moving said recording means relative to said signal storage means in direction of said track thereof, and for moving in synchronism therewith said track member relative to said sensing means in such a manner that said time period substantially coincides with the time required for one of said storage areas to be moved a distance corresponding to said unit length thereof relative to said recording means; circuit means for transmitting said pulses from said sensing means to said recording means; control means for selectively controlling the transmission to said recording means of a desired number of pulses out of said sequence thereof generated during any one of said time periods; and means for allocating the recording of said pulses transmitted during consecutive time periods to consecutive selected signal storage areas, respectively.

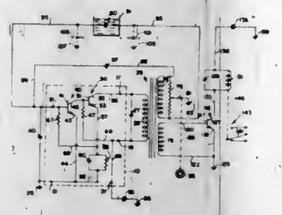
3,042,907
SMOKE DETECTOR
George F. Redway, 33 Noel Drive, Ossining, N.Y.
Filed Nov. 15, 1957, Ser. No. 696,795
8 Claims. (Cl. 340—237)



4. A device responsive to excessive smoke formation comprising a pair of electrodes supported in position to be subjected to contact with the smoke, a body of insulating material separating said electrodes upon which carbon particles or soot will be deposited upon the occurrence of excessive smoke forming conditions, potential supply means connected to said electrodes capable of applying a potential difference to said electrodes insufficient to cause substantial current to flow from one electrode to the other when smoke formation is below a desired minimum but high enough to cause an increased flow of current when a sufficient deposit of soot or carbon is accumulated on the portion of the insulating body separating said electrodes, and means responsive to said increased flow of current between said electrodes for producing a useful effect, said supply means capable of maintaining said increased flow of current for a sufficient time to burn off the conducting soot deposit accumulated on the insulating body when soot depositing conditions have been corrected.

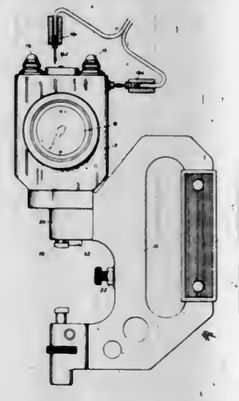
3,042,908
FLUID LEVEL SENSOR
Robert P. Pearson, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 2, 1959, Ser. No. 837,748
14 Claims. (Cl. 340—244)

8. Apparatus of the class described comprising, in combination: a capacitance network having a pair of input terminals, a first branch including a first capacitor having spaced electrodes for producing a first current of a first phase and of a magnitude variable with the presence or absence of fluid, between the electrodes, a second branch including a second capacitor for producing a



second current of a phase opposite the first phase; means connecting the first and second branches to form a first junction; an amplifier having an input and an output; means connecting the output of said amplifier to the input terminals of said capacitance network; and means connecting the first junction to the input of said amplifier.

3,042,909
GAGE HAVING BOTH DIAL AND ELECTRICAL INDICATORS
Lambert R. Pistoles, 502 Harvey St., Philadelphia, Pa.
Filed Sept. 11, 1959, Ser. No. 839,423
9 Claims. (Cl. 340—265)



1. An electrical gage indicator comprising a housing having a bore therein adapted to be mounted in alignment with a gaging pin, a master pin slidable in the lower portion of said bore and adapted to engage said gaging pin, a contact pin supporting block in said bore having a plurality of yieldingly mounted contact pins adapted to be sequentially engaged by said master pin, means accessible from the upper end of said bore for adjusting said pins longitudinally of said bore, an indicator lamp disposed on said housing for each contact pin, means for supplying electrical energy to said lamps through said contact pins and master pin, a dial indicator mounted in a side wall of said housing, and means including rack teeth on said master pin for simultaneous actuation of said dial indicator.

3,042,910
ALARM EQUIPPED CABINET FOR FIRE EXTINGUISHER
Frank T. Shull, 39th and Perry Sts., NE., Brentwood, Md.
Filed June 16, 1960, Ser. No. 36,580
4 Claims. (Cl. 340—280)

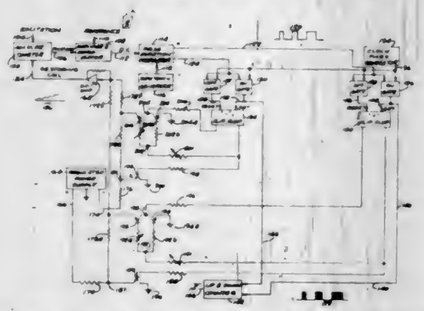
1. A protective cabinet means for preventing unauthorized use of equipment housed therein comprising a spring-

biased self-opening door in one wall thereof, an electric alarm circuit contained therein including first and second switch means in series between a power source and an audible alarm means adapted to be energized thereby; said first switch means comprising a door operated push-button switch mounted in said cabinet adjacent said door and normally held in an open circuit position by said door when said door is shut and biased to closed circuit position in response to the opening of said door, and lock means for said door including lock operated and emergency latching means for authorized and emergency or



unauthorized opening thereof, respectively, said second switch means being normally closed and operated by and in unison with lock operated latching means whereby upon authorized opening of said door said second switch means is actuated to open circuit position by unlocking said lock operated latching means and said alarm circuit remains de-energized when said door is opened, but when said emergency latch means is used to effect emergency or unauthorized opening of said door, said second switch means is held in closed position by said lock operated latch means and said first switch means is biased to closed circuit position by the opening of said door whereby said alarm circuit is completed and said alarm is energized.

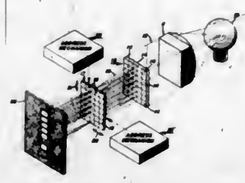
3,042,911
DIGITAL TO ANALOG CONVERTER
Ronald Y. Paradise, Hillsdale, and Bob N. Naydan, Passaic, N.J., assignors to General Precision, Inc., Little Falls, N.J., a corporation of Delaware
Filed Jan. 15, 1960, Ser. No. 2,670
7 Claims. (Cl. 340—347)



6. In combination; sensing means for producing an output which is an analog of the magnitude of a sensed physical quantity; a clock pulse generator; a pulse duration modulator responsive to said sensing means for modulating said clock pulse generator in accordance with the output of said sensing means, the output of said sensing means being converted into a duration modulated pulse having a duration in accordance with the magnitude of said sensed physical quantity in digital form; utilization means, responsive to digital information applied thereto; means for applying said converted output in digital form as an input to said utilization means; a regulated feedback power supply for initiating a constant amplitude feedback pulse; a D.C. amplifier for deriving a D.C. output proportional to the energy contained in said feedback pulse when applied as an input thereto; means for feeding back the D.C. output of said D.C. amplifier as an input to said sensing means; a first junction point between said feedback power supply and said D.C. amplifier; a first PNP transistor, including an emitter in series with said junction point; a collector for said first transistor which is grounded; a base for said first transistor; a load past said first junction point of such resistivity as to pass any leakage current of said first transistor; a second junction point, past said load; a second PNP transistor including an emitter in series with said second junction point; a collector for said second transistor; a third PNP transistor, the emitter of which is grounded, including a collector for said third PNP transistor, connected to the collector of said second transistor through a collector junction point; a base for said second transistor, a base for said third transistor, said bases being connected through a base junction point; a gate circuit responsive to said clock pulse duration adapted to supply either a positive or negative bias from opposed terminals depending on whether or not said gate circuit is actuated by said clock pulse; connecting means, including a transistor base load, connecting one of said terminals to the base of said first transistor; connecting means including a second transistor base load connecting said same one terminal to the junction of the bases of said second and third transistors, both of said transistor base loads being of equal resistivity; connecting means including a load connecting the other of said opposed terminals to the junction of the collectors of said second and third transistors; both of said connecting means being so arranged that normally a negative bias is supplied by said gate circuit to said transistor bases so that said transistor bases are normally negative with respect to their collector, the pulse from said feedback power supply to said first junction point being normally shorted to ground by said first transistor, and, any current leakage past said first junction point over the load past said junction point being shorted to ground through the back to back second and third transistors, the equivalent voltage of said second and third transistors being cancelled by said back to back relationship, said feedback pulse from said feedback power supply passing to said D.C. amplifier only when said gate supplies positive bias to said transistor bases in response to said clock pulse duration.

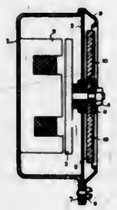
3,042,912
DECODING APPARATUS
Roswell W. Gilbert, East Orange, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas
Filed Jan. 30, 1959, Ser. No. 790,227
5 Claims. (Cl. 340—347)

5. An apparatus and optical system for decoding coded information comprising a source of collimated light; a single code plate having a plurality of patterns each formed of a plurality of transparent and opaque areas; a multiple lens device disposed in the path of the collimated light and including lens elements corresponding in number to the number of patterns on the code plate; said lens elements forming discrete, focused light beams which strike the code plate and have their focal points in the plane of the code plate; means positioning the code plate along two mutually perpendicular axes lying in the plane of the code plate so that certain of the light beams will pass through selected transparent areas of selected pat-



terns; a screen member positioned to receive light beams passing through the code plate thereby forming on the screen member visible characters in correspondence with the particular position of the code plate.

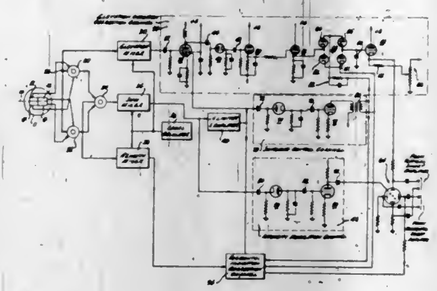
3,042,913
ELECTROACOUSTIC WARNING HORN FOR MOTOR VEHICLES
Mario Zavattaro, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed July 14, 1959, Ser. No. 827,058
Claims priority, application Italy July 16, 1958
5 Claims. (Cl. 340—388)



1. In an electroacoustic warning horn having an electromagnet, an armature operatively associated with said electromagnet responsive to energization thereof, a resilient diaphragm to which said armature is centrally affixed, the combination comprising a substantially rigid vibrating diffusion disc centrally affixed to said diaphragm and said armature, a plurality of circular grooves of triangular section on the outer face of said disc, said grooves being of uniformly increasing diameter and concentrically positioned to provide a concentration of the emitted energy with greater sound audibility and less disagreeable timbre, and a circular recess on said disc, said recess being centrally located and of reduced thickness.

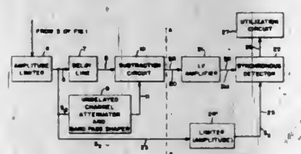
3,042,914
RADAR TARGET INDICATOR CORRECTION SYSTEM
Lester C. Van Atta and Frederick W. Cleary, Pacific Palisades, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 26, 1954, Ser. No. 452,307
9 Claims. (Cl. 343—5)

1. A radar target indicator correction system comprising: a simultaneous lobing radar receiving system including a scanning antenna having an axis and being adapted to be pivoted to cause the axis to follow a predetermined scan pattern for scanning a region in which a target may be located; a cathode ray visual presentation indicator having first and second orthogonal electron beam positioning means; means coupled to said scanning antenna and to said first and second electron beam positioning means to cause a cathode ray beam to follow said predetermined scan pattern; and error signal means coupled to said scanning antenna to develop first and second orthogonal error signals representative of the respective angular positions of a target with respect to the antenna axis when the target lies within the antenna beam, said error signal means including a first indication correction channel responsive to the phase and amplitude of the first of said error signals and being coupled to said first electron beam positioning



means to correct the position of the cathode ray beam in one dimension, and a second indication correction channel responsive to the phase and amplitude of the second of said error signals and being coupled to said second electron beam positioning means to correct the position of the cathode ray beam in a second dimension orthogonal to said one dimension; whereby said target is presented at a single point on said indicator corresponding to the true angular position of said target.

3,042,915
SIGNAL PROCESSING ARRANGEMENT
Eugene C. Nordell, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 9, 1957, Ser. No. 651,762
9 Claims. (Cl. 343—7.7)

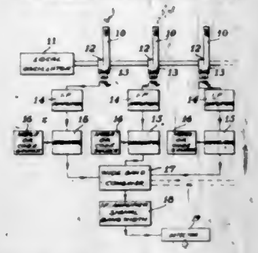


1. In combination, a moving object indicator arrangement for use in a pulse echo object detector comprising means for periodically transmitting pulses at a carrier frequency to remote objects in space, means for receiving echoes at a carrier frequency of said pulses returned from said objects, a first delay device responsive to received echoes at a carrier frequency for providing said received echoes with a time delay corresponding to that between successively transmitted pulses, means for subtracting said delayed and undelayed received echoes to provide difference signals, means for amplitude limiting undelayed received echoes at a carrier frequency, a synchronous detector adapted to provide a video frequency output signal having an amplitude dependent upon the relative phases of applied carrier frequency signals, said detector responsive to the relative phase of said difference signals and said carrier frequency amplitude limited echoes for providing phase compared signals at a video frequency level, and means for utilizing said last-named phase compared signals.

3,042,916
DIRECTIONAL SYSTEM FOR WAVE PROPAGATED SIGNALS

Walter Wilson Hugh Clarke, City View, Ontario, Canada, assignor to Her Majesty the Queen in right of Canada, as represented by the Minister of National Defense

Filed Mar. 22, 1957, Ser. No. 647,919
Claims priority, application Canada Jan. 10, 1957
6 Claims. (Cl. 343—100)

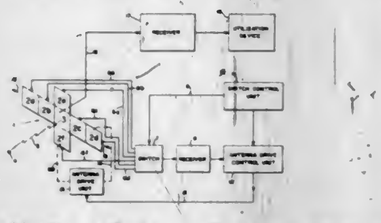


1. Apparatus for reducing the effective side lobe level of a multi-element directional antenna system used for wanted wave propagated signals external to said apparatus comprising, a plurality of amplifier means for the corresponding electric signals internal of said apparatus, each amplifier means for said internal electric signals connecting to a respective one of said antenna elements, said amplifier connections being phased to provide a directional pattern having a main lobe and side lobes, a source of modulating wave for each said amplifier means, each modulating wave having a unique waveform different from the waveform of the other modulating waves, each modulating wave having frequency components extending over a bandwidth substantially greater than the range of frequencies present in the wanted wave propagated signals, and separate modulating means for the respective amplifier means connected to modulate the electric signals being transferred by the respective amplifier means in accordance with the respective modulating waves.

3,042,917
ANTENNA TRACKING SYSTEM

William C. Elhoff, Constantia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Dec. 22, 1958, Ser. No. 782,193
2 Claims. (Cl. 343—117)

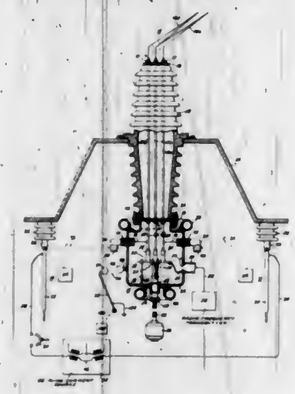


1. In combination, a first, controlled, positionable, directive beam antenna for receiving signals from a remote signal source, a plurality of second, controlling, positionable, directive beam antennas for receiving signals from said signal source, the directivity of each of said second antennas being different but fixedly spaced with respect to one another, a source of a plurality of controlling signals, each of said controlling signals being associated with a respective one of said second antennas, first anntenna positioning means, means for sequentially sampling the signals received in each of said second antennas in a predetermined manner with time to derive sampled signals, means responsive to a maximum intensity characteristic of said sampled signals for applying the respective controlling signal associated with the anntenna producing said maximum sampled signal characteristic to said first antenna positioning means, said first antenna positioning means responsive to the polarity of said applied controlling signal for driving said first antenna in a direction to receive signals from said signal source and responsive to the intensity of said applied controlling signal for driving said controlled antenna at a rate dependent upon the relative linear separation between said first antenna and the second antenna associated with said last-named controlling signal.

3,042,918
ANTENNA ICE CLEARING SYSTEM

Edward J. Casey, Media, Pa., assignor to General Electric Company, a corporation of New York

Filed Dec. 23, 1960, Ser. No. 78,034
12 Claims. (Cl. 343—704)



5. An antenna switching arrangement comprising a plurality of spaced-apart feeder lines for supplying current to an antenna, a tubular insulating housing surrounding said feeder lines, a plurality of stationary disconnect contacts respectively connected to one end of said feeder lines, a conductive casing supported on one end of said tubular insulating housing and surrounding said stationary disconnect contacts, movable disconnect contacts within said housing for respectively mating with said stationary disconnect contacts, means for mechanically connecting said movable contacts together for movement in unison, actuating means coupled to said movable contacts for causing said movable contacts to move in unison into and out of engagement with said stationary contacts, a radio frequency transmission line for conveying radio frequency current to said switching arrangement, conductive means for connecting said movable contacts in parallel with each other and in series with said radio frequency transmission line, means for electrically connecting said feeder lines to said housing when said disconnect contacts are in engagement whereby said housing is then at substantially the same potential as said disconnect contacts, and means for conducting de-icing current to and from a predetermined pair of said feeder lines when said disconnect contacts are out of engagement comprising a set of stationary de-icer contacts disposed externally of said conductive housing, insulating means for mounting said stationary de-icer contacts on said conductive housing and for maintaining at least one of said stationary contacts at a higher voltage than said casing while de-icing current is flowing through said de-icer contacts, means for electrically connecting said stationary contacts to said predetermined pair of antenna feeder lines, and a set of conductive switch blades for respectively engaging said stationary de-icer contacts to provide a power circuit through which de-icing current can be conducted to and from said pair of feeder lines.

3,042,919
DEPOSITORY MACHINE COMBINED WITH CAMERA MEANS

Luther G. Simjian, Greenwich, Conn., assignor to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware

Filed Jan. 25, 1960, Ser. No. 4,371
12 Claims. (Cl. 346—22)

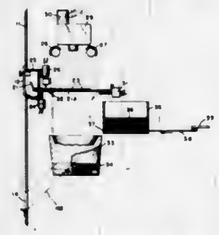


1. In a depository machine for use by a depositor, the combination of: storage means disposed in the machine comprising a plurality of receptacles, each receptable adapted to move sequentially from a supply position to a deposit acceptance position and to a storage position; motive means for moving said receptacles to said positions; aperture means disposed on said machine for providing the depositor with access to the receptables and enabling deposit of an article and of a deposit slip when a receptacle is disposed at the deposit acceptance position; image recording means disposed to view the article and deposit slip deposited in the receptacle; control means operable by the depositor for rendering the article and deposit slip received by the receptacle inaccessible to the depositor and for causing said image recording means to produce a recorded image showing the article and deposit slip disposed in the receptacle in associated relation with one another; means coacting with said receptacle when disposed at said acceptance position to sense the presence of the deposit slip and prevent operation of the machine in the absence of a deposit slip on said receptacle, and means responsive to the operation of said control means actuating said motive means to move the receptacle containing the article and deposit slip to said storage position while advancing another receptacle from said supply position to the deposit acceptance position.

3,042,920
DEPOSITORY MACHINE COMBINED WITH CAMERA MEANS

Luther G. Simjian, Greenwich, Conn., assignor to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware

Original application Nov. 1, 1957, Ser. No. 693,986, now Patent No. 2,936,684, dated May 17, 1960. Divided and this application Mar. 18, 1960, Ser. No. 15,851
3 Claims. (Cl. 346—22)

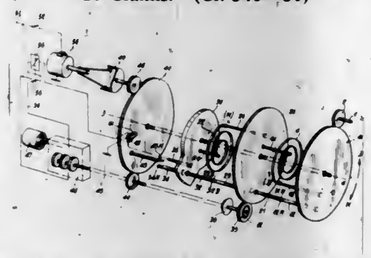


1. In a depository machine which includes image recording means and a storage receptacle disposed inaccessible to the depositor using the machine, the combination of: an enclosure; deposit acceptance means adapted to receive a deposit disposed in said enclosure; a slidable door forming a part of the enclosure and coacting therewith for selectively exposing and concealing said deposit acceptance means; manually operable switching means disposed accessible to the depositor when the door is concealing the acceptance means and disposed inaccessible to the depositor when the door is positioned for exposing the deposit acceptance means; a pass plate receiving aperture adapted to receive a pass plate provided with identifying indicia disposed on said enclosure; a receiving passage connected to said aperture for receiving the pass plate after insertion through the respective aperture; means for temporarily retaining the plate in the passage; sensing means disposed for sensing the presence of said plate in the passage and actuated in response to the plate being retained in the aperture; locking means adapted to coact between said door and said enclosure for normally maintaining said deposit acceptance means concealed; said locking means being operated in response to the actuation of said sensing means whereby to release the door and upon sliding motion thereof expose the normally concealed deposit acceptance means; image recording means disposed to view the deposit received at said deposit acceptance means and upon actuation, record an image of the deposit; means operable in response to the actuation of the image recording means for guiding the deposit from the acceptance means to the storage receptacle; a supply of receipt material disposed in the enclosure; receipt printing and issuing means disposed in said enclosure and adapted to receive said receipt material; guide means coacting with said issuing means for guiding a portion of the receipt material in proximity to said pass plate when the latter is retained in the passage; said printing means when actuated causing said pass plate to come in contact with said receipt portion for transferring thereto the identifying indicia; means disposed for releasing said pass plate from said passage to a position accessible from the exterior of the enclosure in response to the operation of said printing means; said receipt issuing means when actuated adapted to dispense said indicia carrying receipt portion to a position accessible from the exterior of the enclosure; control means connected to said receipt printing and issuing means, said image recording means and to said pass plate release means for causing operation of said respective means, and said manually operable switching when actuated causing operation of said control means when the door is positioned for concealing the deposit acceptance means.

3,042,921
APPARATUS FOR RECORDING MAXIMUM VALUES OF A VARIABLE QUANTITY

Albert Delpoux, Paris, France, assignor to Electricite de France (Service National), a French national service

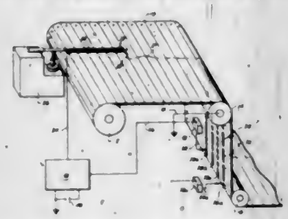
Filed Dec. 19, 1960, Ser. No. 76,664
Claims priority, application France Dec. 30, 1959
16 Claims. (Cl. 346—30)



1. A recording apparatus for recording maximum values of a variable occurring over a predetermined testing period, said apparatus comprising an input wheel capable at any given time of angular movement propor-

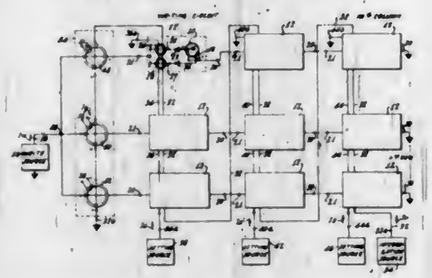
tional to the value of the variable under test, a transfer wheel, a connecting wheel, an output wheel, a first spring for transmitting movement of the input wheel to the transfer wheel and capable of storing in memory descending movements of the transfer wheel, a second spring for transmitting movement of the transfer wheel to the connecting wheel and capable of storing in memory ascending movement of the transfer wheel, a first positive transmission means in parallel with said first spring to transmit ascending movements to the transfer wheel from the input wheel, a second positive transmitting means in parallel with said second spring to transmit descending movements to the connecting wheel from the transfer wheel, a third positive transmission means for transmitting to the output wheel ascending movement of the connecting wheel, means for recording the position of the output wheel at predetermined time intervals, unidirectional means to block descending movements of the transfer wheel during each recording, and means to drive the output wheel in a descending direction after each recording until said third positive transmission means re-establishes a connection between said output and connecting wheels, if such connection was previously interrupted.

3,042,922
MULTIPLE TRACE RECORDER WITH TRACE IDENTIFIER
Robert P. Ledbetter, P.O. Box 7344, Oklahoma City 12, Okla.
Filed Aug. 22, 1960, Ser. No. 50,906
11 Claims. (Cl. 346—45)



1. A system for recording a variable comprising a recording chart; tracing means responsive to said variable for scribing a trace on the chart representative of said variable; means for moving said chart relatively to said tracing means; and control means for imparting a predetermined identifying characteristic to said trace, said control means comprising a track on said chart having an identifying characteristic corresponding to that imparted to said trace, and means for transmitting the characteristic of said track to said tracing means.

3,042,923
MAGNETIC SWITCHING SYSTEMS FOR MAGNETIC RECORDING
Hewitt D. Crane, Palo Alto, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,592
15 Claims. (Cl. 346—74)

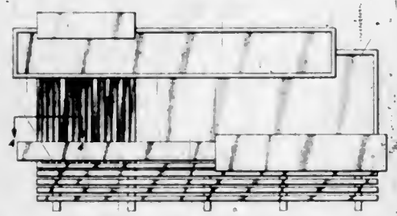


1. A switching network comprising a plurality of transducers, a plurality of writing circuits, said writing circuits each comprising a pair of current paths linked in opposite senses to a different one of said transducers, a separate magnetic control device connected in each said path, said control devices each having two remanent states, said writing circuits being connected in series with each other for receiving a single writing signal, a plurality of setting means each linking the control devices of a different writing circuit, an interrogation circuit linking each of said control devices, means for applying separate setting signals to said setting circuits for establishing said control devices in desired ones of said remanent states, means for applying an interrogation signal to said interrogation circuit, said single writing signal being applied to said writing circuits concurrently with said interrogation signal, said writing signal being steered through one or the other of said paths of each said writing circuit in accordance with the remanent states of said control devices.

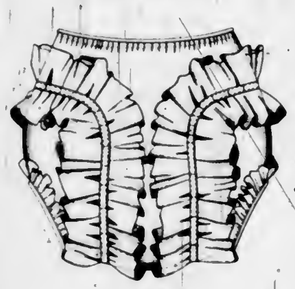
DESIGNS

JULY 3, 1962

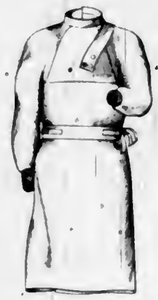
193,130
BILLBOARD
Donald O. Wilcox, Fort Pierce, Fla., assignor to General Development Corporation, Miami, Fla., a corporation of Florida
Filed June 8, 1961, Ser. No. 65,521
Term of patent 14 years
(Cl. D1—12)



193,131
BABY PANTS
Harold A. Owen, N. Little Creek Road, Dover, Del.
Filed Dec. 4, 1961, Ser. No. 67,787
Term of patent 14 years
(Cl. D3—17)



193,132
SURGEON'S GOWN
Edwin Burnell Rhoads, Merion, Pa., assignor to Rhoads and Company, a partnership comprising Emma L. Rhoads, Merion, Jay R. Rhoads, Bryn Mawr, and Edwin Burnell Rhoads, Merion, Pa., engaged in business in Philadelphia, Pa.
Filed July 10, 1959, Ser. No. 56,738
Term of patent 3½ years
(Cl. D3—26)



193,133
COMBINED TOOTHPASTE DISPENSER, GLASS HOLDER AND BATHROOM CABINET
Joseph La Reis, 3727 E. 5th St., Tucson, Ariz.
Filed Oct. 26, 1961, Ser. No. 67,272
Term of patent 14 years
(Cl. D4—3)



193,134
DOOR HANDLE OR SIMILAR ARTICLE
Lawrence J. Fay, Elgin, Ill., assignor to Equipto Electronics Corporation, Naperville, Ill., a corporation of Illinois
Continuation of applications Ser. No. 62,113, Sept. 12, 1960, and Ser. No. 64,453, Mar. 23, 1961. This application Nov. 15, 1961, Ser. No. 67,698
Term of patent 7 years
(Cl. D10—8)



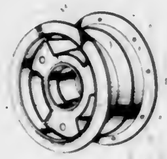
193,135
TRACTOR
Joseph A. Hill, Glen Ellyn, Ill., assignor to Jacobsen Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Filed Mar. 3, 1961, Ser. No. 64,144
Term of patent 3½ years
(Cl. D14—3)



193,136
TOP FOR THE BED OF A PICKUP TRUCK
Millard M. Martin, 20892 Redwood Road, Castro Valley, Calif.
Filed Jan. 6, 1961, Ser. No. 63,469
Term of patent 3½ years
(Cl. D14—27)



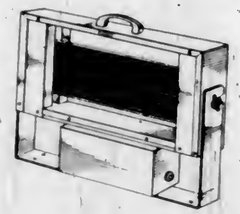
193,137
WHEEL
Ronald A. Geisler, 12531 Caswell Ave., Los Angeles 66, Calif.
Filed Sept. 11, 1961, Ser. No. 66,715
Term of patent 14 years
(Cl. D14—30)



193,138
LOUNGE CHAIR
Folke E. H. Ohlsson, Millbrae, Calif., assignor to Dux Incorporated, Burlingame, Calif., a corporation of California
Filed Aug. 22, 1960, Ser. No. 61,847
Term of patent 7 years
(Cl. D15—11)



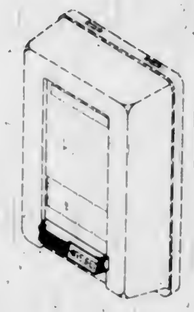
193,139
OZONE GENERATOR
Julian H. Karp, Los Angeles, Calif., assignor to Electrogen Industries, Inc., Los Angeles, Calif., a corporation
Filed Apr. 5, 1961, Ser. No. 64,629
Term of patent 3½ years
(Cl. D16—2)



193,140
SURGICAL CLIP
Adolph M. Brown, 9735 Wilshire Blvd., Beverly Hills, Calif.
Filed Oct. 9, 1959, Ser. No. 57,877
Term of patent 14 years
(Cl. D17—3)



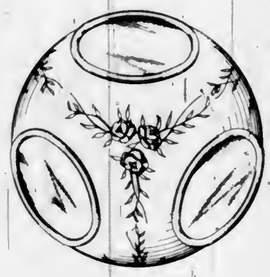
193,141
SWITCH BUTTON
Joseph J. Gribble, Fox Point, Wis., and David E. Scott, Royal Oak, Mich., assignors to Square D Company, Park Ridge, Mich., a corporation of Michigan
Filed June 9, 1960, Ser. No. 60,901
Term of patent 14 years
(Cl. D26—13)



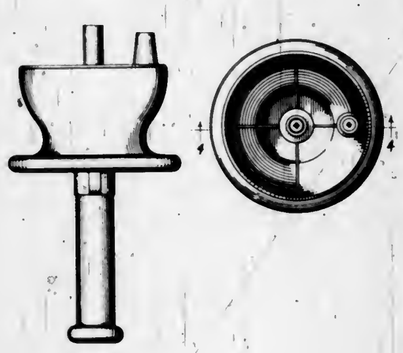
193,142
TELEVISION ANTENNA
Robert Liftin, Bronxville, N.Y., and Alfred C. Denson, Rockville, Conn., assignors to Regent Electronic Development Co. Inc., New York, N.Y., a corporation of New York
Filed Oct. 25, 1961, Ser. No. 67,252
Term of patent 14 years
(Cl. D26—14)



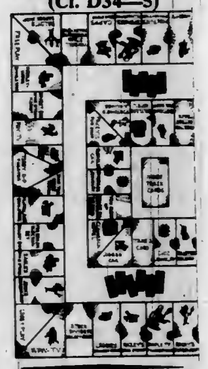
193,143
MULTIPLE WINDOW PICTURE FRAME OR THE LIKE
Charles Sadek, Bronx, N.Y.
(924 Broadway, New York, N.Y.)
Filed May 7, 1959, Ser. No. 55,809
Term of patent 3½ years
(Cl. D29—20)



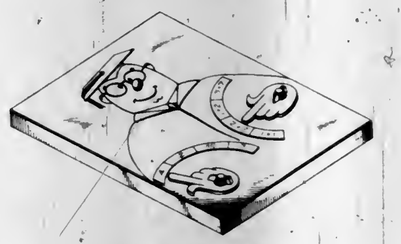
193,144
REEL FOR LINE CASTING
David F. Marriott, Pacific Palisades, and Le Roy T. Carter, Torrance, Calif., assignors to Brandex, Inc., Torrance, Calif., a corporation of California
Filed Oct. 24, 1960, Ser. No. 62,600
Term of patent 3½ years
(Cl. D31—4)



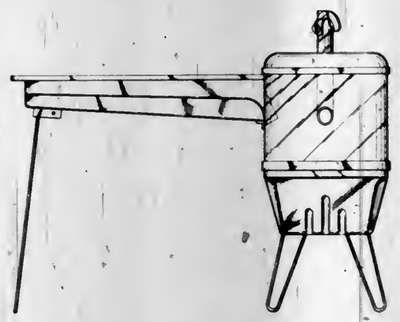
193,145
GAME BOARD
Leroy H. Bengtson, Jr., and Barbara S. Bengtson, Oklahoma City, Okla. (both of 1129 SW. 46th, Oakland 9, Calif.)
Filed Dec. 16, 1959, Ser. No. 58,687
Term of patent 3½ years
(Cl. D34—5)



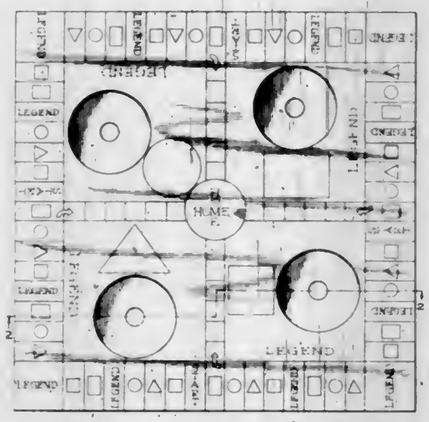
193,146
EDUCATIONAL GAME BOARD
Richard L. Riddle, 3405 Potomac St., and LeRoy S. Moskowitz, 3710 Coy St., both of Winston-Salem, N.C.
Filed Oct. 31, 1961, Ser. No. 67,326
Term of patent 3½ years
(Cl. D34—5)



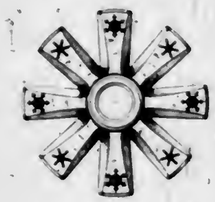
193,147
GAME DEVICE
Edward G. Brown, 1170 Dover Center Road, Westlake, Ohio
Filed Nov. 3, 1961, Ser. No. 67,373
Term of patent 3½ years
(Cl. D34—5)



193,148
EDUCATIONAL GAME BOARD OR SIMILAR ARTICLE
James T. Kenney and Charles J. O'Loughlin, Silver Spring, Md., assignor of 33⅓ percent to John E. Becker, Takoma Park, Md.
Continuation of design applications Ser. No. 62,156 and 62,157, Sept. 15, 1960. This application Mar. 13, 1962, Ser. No. 69,240
Term of patent 14 years
(Cl. D34—5)



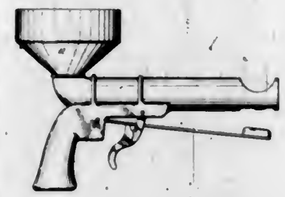
193,149
SKI POLE BASKET
James D. Bond, Newport Beach, and David R. Crenshaw, Pomona, Calif., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Continuation of design applications Ser. No. 63,870, Ser. No. 63,871, and Ser. No. 63,872, Feb. 8, 1961. This application Nov. 20, 1961, Ser. No. 67,720
Term of patent 14 years
(Cl. D34—14)



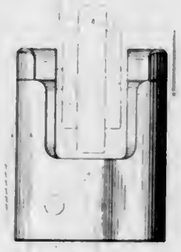
193,150
TOY CAR TRAILER
Allan J. Alvaney, Arlington Heights, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 63,052
Term of patent 14 years
(Cl. D34—15)



193,151
TOY BALL PROJECTOR AND CATCHER DEVICE
Duane W. Tressler, 507 Tradition Way, Mobile, Ala.
Filed July 7, 1961, Ser. No. 65,842
Term of patent 14 years
(Cl. D34—15)



193,152
DRESSER FOR CENTERLESS GRINDERS AND THE LIKE
Jerome H. Newman, 13971 Skyline Blvd., Oakland, Calif.
Filed Nov. 7, 1960, Ser. No. 62,920
Term of patent 3½ years
(Cl. D37—1)



193,153
RIDING LAWN MOWER
Alfred J. Przybylowicz, Grosse Pointe Farms, and Douglas N. Cabell, Livonia, Mich., assignors to Moto-Mower, Inc., Oak Park, Mich., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 59,643
Term of patent 3½ years
(Cl. D40—1)



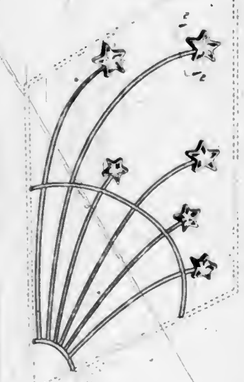
193,154
CUP
Herman Gartzman, 161 S. Poinsettia Place, Los Angeles 36, Calif.
Filed Aug. 12, 1960, Ser. No. 61,710
Term of patent 3½ years
(Cl. D44—9)



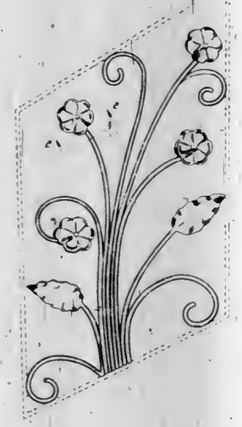
193,155
NIGHT LIGHT
Robert Goldman and Lillian Goldman, Louisville, Ky., assignors to Lill, Inc., Salem, Ind., a corporation of Indiana
Filed Aug. 18, 1961, Ser. No. 66,414
Term of patent 3½ years
(Cl. D48—20)



193,156
RAILING PANEL
James J.O'Donaughy, 5295 Boundry Road, and James Stewart, 5075 Boundry Road, both of Vancouver, British Columbia, Canada
Filed Oct. 24, 1960, Ser. No. 62,603
Term of patent 3½ years
(Cl. D54—2)



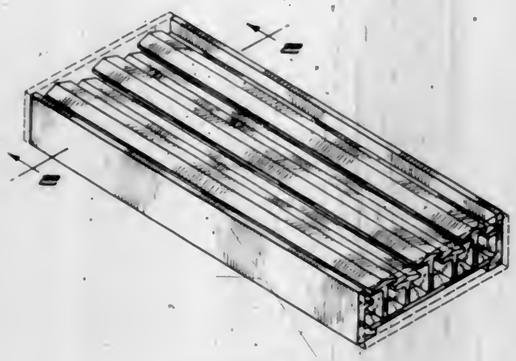
193,157
RAILING PANEL
James J. O'Donaughy, 5295 Boundry Road, and James Stewart, 5075 Boundry Road, both of Vancouver, British Columbia, Canada
Filed Oct. 24, 1960, Ser. No. 62,604
Term of patent 3½ years
(Cl. D54—2)



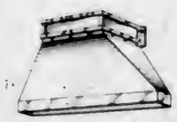
193,158
COMBINED PACKAGING AND SERVING CONTAINER
Frank A. Buonauro, 1219 Summit Ave., Union City, N.J.
Filed Mar. 10, 1961, Ser. No. 64,213
Term of patent 14 years
(Cl. D58—25)



193,159
VENTILATING PANEL FOR A COMPUTER CABINET OR THE LIKE
Walter F. Creigh, Newport, Minn. (Univac Park, St. Paul 16, Minn.)
Filed Sept. 8, 1960, Ser. No. 62,067
Term of patent 14 years
(Cl. D62—4)



193,160
OVER-DOOR INSECT REPELLING FAN
Henry Zeller, 1055 E. 1st St., Loveland, Colo.
Filed May 29, 1961, Ser. No. 65,399
Term of patent 14 years
(Cl. D62—4)



193,161
AIRPLANE
Philip E. Le Veille, Glendale, and Merrill H. Kelly, Northridge, Calif., assignors to, Lockheed Aircraft Corporation, Burbank, Calif.
Filed Dec. 23, 1960, Ser. No. 63,309
Term of patent 3½ years
(Cl. D71—1)



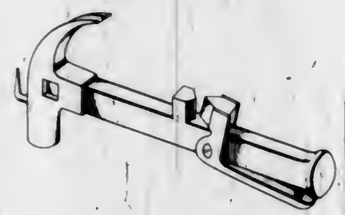
193,162
GARMENT HANGER
James L. Hvale, Chicago, and Richard T. Kennedy, Oaklawn, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 14, 1961, Ser. No. 66,338
Term of patent 14 years
(Cl. D80—8)



193,163
HIBACHI OR SIMILAR ARTICLE
Ralph Levi, New Rochelle, N.Y., assignor to Imperial International Corp., New York, N.Y., a corporation of New York
Filed Mar. 29, 1961, Ser. No. 64,531
Term of patent 3½ years
(Cl. D81—10)



193,164
COMBINATION TOOL
Guy D. Jaquish, Box 600, Tracy, Calif.
Filed June 2, 1961, Ser. No. 65,434
Term of patent 14 years
(Cl. D93—4)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 3RD DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Air Products and Chemicals, Inc.: *See*—
Schilling, Clarence J., and Claitor. Re. 25,193.
California Research Corp.: *See*—
Tilley, Aubra E. Re. 25,194.
Claitor, Lilburn C.: *See*—
Schilling, Clarence J., and Claitor. Re. 25,193.
Davis, Murray W. Knife rack. Re. 25,196, 7–3–62, Cl. 248—37.6.
Hamilton Cosco, Inc.: *See*—
Hamilton, Earl F. Re. 25,195.
Hamilton, Earl F., to Hamilton Cosco, Inc. Foldable play pen. Re. 25,195, 7–3–62, Cl. 5—98.
Schilling, Clarence J., and L. C. Claitor, to Air Products and Chemicals, Inc. Method and apparatus for separating gaseous mixtures. Re. 25,193, 7–3–62, Cl. 62—13.
Tilley, Aubra E., to California Research Corp. Method and apparatus for timing seismic recordings. Re. 25,194, 7–3–62, Cl. 340—15.5.

LIST OF DESIGN PATENTEES

Alvaney, Allan J., to Sears, Roebuck and Co. Toy car trailer. 193,150, 7–3–62, Cl. D34—15.
Becker, John E.: *See*—
Keuney, James T., and O'Loughlin. 193,148.
Bengtson, Barbara S.: *See*—
Bengtson, Leroy H. and B. S 193,145.
Bengtson, Leroy H., Jr. and B. S. Game board. 193,145, 7–3–62, Cl. D34—5.
Bond, James D., and D. R. Crenshaw, to Ekco Products Co. Ski pole basket. 193,149, 7–3–62, Cl. D34—14.
Brandex, Inc.: *See*—
Marriott, David F., and Carter. 193,144.
Brown, Adolph M. Surgical clip. 193,140, 7–3–62, Cl. D17—3.
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Gartzman, Herman. Cup. 193,154, 7–3–62, Cl. D44—9.
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Gribble, Joseph J., and D. E. Scott, to Square D Co. Switch button. 193,141, 7–3–62, Cl. D26—13.
Hill, Joseph A., to Jacobsen Mfg. Co. Tractor. 193,135, 7–3–62, Cl. D14—3.
Hvale, James L., and R. T. Kennedy, to Ekco Products Co. Garment hanger. 193,162, 7–3–62, Cl. D80—8.
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Martin, Millard M. Top for the bed of a pickup truck. 193,136, 7–3–62, Cl. D14—27.
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Ohlsson, Folke E. H., to Dux Inc. Lounge chair. 193,138, 7–3–62, Cl. D15—11.
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Riddle, Richard L., and L. S. Moskowitz. Educational game board. 193,146, 7–3–62, Cl. D34—5.
Sadek, Charles. Multiple window picture frame or the like. 193,143, 7–3–62, Cl. D29—20.
Scott, David E.: *See*—
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Wilcox, Donald O., to General Development Corp. Billboard. 193,130, 7–3–62, Cl. D1—12.
Zeller, Henry. Over-door insect repelling fan. 193,160, 7–3–62, Cl. D62—4.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 3RD DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Aagaard, Einar A., to North American Philips Co., Inc. Symmetrical current circuit fed by direct current. 3,042,816, 7-3-62, Cl. 307—89.

Aaron, Nathan: *See*—
Lobel, Martin A. 3,041,734.

Abadjieff, Ivan V. Bandage. 3,042,036, 7-3-62, Cl. 128—156.

Abrams, Victor R., T. C. Werge, and J. F. Ryan, Jr., to W. F. and John Barnes Co. Method and apparatus for controlling processing temperatures. 3,041,958, 7-3-62, Cl. 99—251.

Abt, Walter, to Inredeco, Inc. Stopper with safety seals. 3,042,242, 7-3-62, Cl. 215—41.

Abtronics, Inc.: *See*—
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Ackley, Charles E., to R. W. Hartnett Co. Article handling apparatus. 3,042,183, 7-3-62, Cl. 198—62.

Acme Steel Co.: *See*—
Brown, Fred L. 3,041,717.
Rasmussen, George E. 3,042,221.

Adams, Pierrepont, and L. E. Knees, to Reeves Soundcraft Corp. Magnetic iron oxide coating compositions for recording tape. 3,042,639, 7-3-62, Cl. 260—23.

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Hurd, Frank K. 3,042,298.

Adrema-Werke G.m.b.H.: *See*—
Güttel, Gerhard. 3,042,175.

Advance Food Service Equipment, Inc.: *See*—
Schwartz, Milton. 3,041,777.

Aerotec Industries, Inc.: *See*—
Oliveau, John V. 3,042,771.

Aer-Van Inc.: *See*—
Miles, John E. 3,041,956.

Agfa Aktiengesellschaft: *See*—
Baur, Carl, and Konigl. 3,041,919.

Aikens, James P., to Bausch & Lomb Inc. Polyester resinous coating for spectacle temple bars. 3,042,548, 7-3-62, Cl. 117—113.

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Friedman, Arthur E., and Kennedy. 3,041,709.

Air Products and Chemicals, Inc.: *See*—
Erner, William E. 3,042,632.

Ajinomoto Co., Inc.: *See*—
Ogawa, Tetsuo, Tsunoda, Okumura, and Ozaki. 3,042,585.

Akmentin, Cyril. Ski sled. 3,042,420, 7-3-62, Cl. 280—16.

Albert, Milton P.: *See*—
Mulock, Lawrence E., and Albert. 3,041,947.

Albi Mfg. Co., Inc.: *See*—
Kaplan, Benjamin B. 3,042,541.

Albion Industries, Inc.: *See*—
Goodall, Robert J. 3,041,656.

Albus, Charles P., and D. E. Sargent, to General Aniline & Film Corp. Plasticized gelatin and related proteinaceous colloids. 3,042,524, 7-3-62, Cl. 96—94.

Alderfer, Sterling W., and H. D. Bodley. Foamed sealing strip products. 3,041,682, 7-3-62, Cl. 20—69.

Aldridge, Clyde L., to Esso Research and Engineering Co. Preparation of aluminum alcoholates. 3,042,696, 7-3-62, Cl. 260—448.

Alfieri, Giuseppe, to Marelli S.p.A., Fabbrica Italiana Magneti. Electropneumatic servocontrol device for the engine brake of vehicles. 3,042,153, 7-3-62, Cl. 188—99.

Alfieri, Giuseppe, to Marelli S.p.A., Fabbrica Atallana Magneti. Pneumatic brake system. 3,042,456, 7-3-62, Cl. 303—29.

Alford, Joseph S., and R. P. Taylor, to General Electric Co. Flow stabilizing means for converging-diverging nozzle. 3,041,825, 7-3-62, Cl. 60—35.6.

American Engineering Co.: *See*—
Fahey, Edward J., and Pierce. 3,042,375.

Allais, André, and J. Meier, to Roussel-UCLAF, S.A. Process of making 6-fluoro tryptamine. 3,042,685, 7-3-62, Cl. 260—319.

Allen-Bradley Co.: *See*—
Dehn, William F. 3,041,888.

Allen, Richard E., and G. M. Deegan, to Corning Glass Works. Solid delay line improvements. 3,042,550, 7-3-62, Cl. 117—217.

Allen, Thomas J. Gauge. 3,041,735, 7-3-62, Cl. 33—174.

Allen, William, to S.O.S. Cinema Supply Corp. Air squeegees for motion picture film or other webs. 3,041,740, 7-3-62, Cl. 34—160.

Alley, Robert P., and W. F. Dowdle, to General Electric Co. Fail safe overload protective system. 3,042,837, 7-3-62, Cl. 317—41.

Allied Chemical Corp.: *See*—
Lloyd, Billy E. 3,042,672.

Allis-Chalmers Mfg. Co.: *See*—
Comfort, Samuel T. 3,042,149.
Gieskieng, David H. 3,042,389.
Hartwell, Sidney J. 3,041,997.
Loeb, Ernest. 3,042,601.

Almquist, Vernon C., to Armour & Co. Apparatus for treating poultry. 3,041,658, 7-3-62, Cl. 17—11.2.

Alton, David E.: *See*—
Lobel, Martin A. 3,041,734.

Aluminium-Industrie-Aktien-Gesellschaft: *See*—
Hegland, Reidar. 3,042,604.

Aluminum Research Corp.: *See*—
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Amalgamated Growth Industries, Inc.: *See*—
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American Air Filter Co., Inc.: *See*—
Getzin, Allan R., and Palmore. 3,041,807.

American Biltrite Rubber Co., Inc.: *See*—
Elliott Robert H. 3,041,661.

American Brake Shoe Co.: *See*—
Babcock, Scott R., and Peterson. 3,042,786.

American Can Co.: *See*—
Pottle, Ralph K. 3,042,286.

American Cyanamid Co.: *See*—
Boyle, Richard J., and Millonis. 3,042,669.
Coleman, Ralph A., and Rodgers. 3,042,624.
Hoffenberg, David S., Haldeman, and Hardy. 3,042,724.
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American District Telegraph Co.: *See*—
Swift, James L., and Evans. 3,042,079.

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Bruck, John P. 3,042,463.

American Machine & Foundry Co.: *See*—
Eissmann, Oswald E., and Krohne. 3,042,454.
Ernst, John M. 3,042,402.
Gamberini, Geoffredo. 3,041,803.
Jones, Harold A., and Schmidt. 3,042,403.
Rosenberg, Sheldon, and Schmidt. 3,042,552.

American Machinery Corp.: *See*—
Varney, Robert E. 3,042,186.

American Metal Climax, Inc.: *See*—
Larson, Melvin L. 3,042,694.

American Molasses Co.: *See*—
Monti, Anthony, and Pike. 3,042,668.

American Radiator and Standard Sanitary Corp.: *See*—
Cobb, John, Rice, Ross, and Sauer. 3,042,595.

American Viscose Corp.: *See*—
Massengale, John T., and Bender. 3,042,655.
Price, John A. 3,042,664.

American Waterlock Corp., The: *See*—
Wallace, William P. 3,041,644.

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Anaconda American Brass Co.: *See*—
Deacon, Alan J., and McKee. 3,041,647.

Anaconda Wire and Cable Co.: *See*—
Krafft, Frederich B., and Roberts. 3,042,336.
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Anander, Andrew K., to Powers Chemco, Inc. Halftone camera. 3,041,931, 7-3-62, Cl. 88—24.

Anders, Hugo, to Carl Zeiss. Gladd bodies provided with colored layers and a method for producing the same. 3,042,542, 7-3-62, Cl. 117—33.3.

Andersen, Birger L. and K. L., and B. Lie. Knitting machine. 3,041,859, 7-3-62, Cl. 66—92.

Andersen, Kristian L.: *See*—
Andersen, Birger L. and K. L., and Lie. 3,041,859.

Andersen, Tengel: *See*—
Anderson, Arthur C., and Andersen. 3,041,809.

Anderson, A. C., Corp.: *See*—
Anderson, Arthur C., and Andersen. 3,041,809.

Anderson, Albert E. Electrical contacting device. 3,042,778, 7-3-62, Cl. 200—147.

Anderson, Arthur A., to The Specialty Mfg. Co. Valve with spherical closure. 3,042,358, 7-3-62, Cl. 251—172.

Anderson, Arthur C., and T. Andersen, to A. C. Anderson Corp. Suspension for mower unit. 3,041,809, 7-3-62, Cl. 56—25.

Anderson, Charles N., to Boeing Airplane Co. Contoured spot-welded lap joint and method. 3,042,159, 7-3-62, Cl. 189—36.

Anderson Co., The: *See*—
Krohm, Fred A. 3,041,653.

Anderson, James H., and H. E. Aughenbaugh, to Borg-Warner Corp. Flexible couplings. 3,041,857, 7-3-62, Cl. 64—15.

Anderson, John W. Windshield wiper blade. 3,041,654, 7-3-62, Cl. 15—250.42.

Anderson, John W. Container with dispensing opening and a spout reversibly connectible to said opening. 3,042,272, 7-3-62, Cl. 222—539.

Anderson, Peter B. Air and oil pressure recoil mechanism for plows. 3,042,122, 7-3-62, Cl. 172—265.

Anderson, Robert M., and L. A. Demchock, Jr., to General Electric Co. Flash lamp and ignition means therefor. 3,041,862, 7-3-62, Cl. 67—31.

Anderson, Victor M.: *See*—
Edwards, Huw B., and Anderson. 3,042,843.

Anderson, Walter A., to Underwood Corp. Control mechanism for an adding machine. 3,042,300, 7-3-62, Cl. 235—52.

Andersson, Anders G. L. Soil sampling equipment. 3,042,124, 7-3-62, Cl. 175—20.

Andersson, Sven B.: *See*—
Conradi, Henrik, de Frumerie, and Andersson. 3,041,954.

Ansul Chemical Co.: *See*—
Sievert, James A. 3,042,117.

Applied Power Industries, Inc.: *See*—
Atherton, Nell F. 3,041,886.
Atherton, Nell F., and Johnston. 3,041,975.
Butorac, John R. 3,042,006.

Aranyi, Janos A., C. Bilonas, and E. Sarfaty, to Harris-Intertype Corp. Typographical linecasting machine galley. 3,042,189, 7-3-62, Cl. 199—61.

Arcos Corp.: *See*—
Johnson, Wallace C. 3,042,790.

Arenhold, Karl-Heinz, to Chlorator G.m.b.H. Quantity and quality controlled chlorinating installation. 3,042,059, 7-3-62, Cl. 137—89.

Arey, Ralph G., and D. E. Clarke, to Texas Instruments Inc. Electrical switches. 3,042,776, 7-3-62, Cl. 200—116.

Arganbright, Jess G., and J. C. Walsh, to Cherry-Burrell Corp. Refrigeration system for heat exchangers. 3,041,854, 7-3-62, Cl. 62—527.

Aries, Robert S. Preparation of pyridine alcohols. 3,042,682, 7-3-62, Cl. 260—297.

Armbruster, Werner, and H. Maas, to W. C. Heraeus G.m.b.H., and Ruhrstahl Aktiengesellschaft. Degasification of molten steel. 3,042,510, 7-3-62, Cl. 75—49.

Armco Steel Corp.: *See*—
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Word, William W., Jr. 3,042,427.

Armour & Co.: *See*—
Almquist, Vernon C. 3,041,658.

Arnold, Ralph A., and J. M. Gidding. Silicone treated cotton. 3,042,549, 7-3-62, Cl. 117—140.

Arras, Ludwig: *See*—
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Arvan Products, Inc.: *See*—
Arvanitakis, Kostas S. 3,042,214.

Arvanitakis, Kostas S., to Arvan Products, Inc. Filter apparatus. 3,042,214, 7-3-62, Cl. 210—330.

Ashlock, George W., Co.: *See*—
Hesse, Earl J., and Margaroli. 3,042,093.

Aske, Vernon H., and A. D. Glick, to Minneapolis-Honeywell Regulator Co. Transducer for a pendulous gyroscopic accelerometer. 3,041,883, 7-3-62, Cl. 73—504.

Astley, Edward T., to J. F. Crosfield Ltd. Splicing of preprinted webs. 3,042,332, 7-3-62, Cl. 242—58.3.

Atherton, Nell F., to Applied Power Industries, Inc. Lever assemblage. 3,041,886, 7-3-62, Cl. 74—102.

Atherton, Nell F., and J. L. Johnston, to Applied Power Industries, Inc. Fluid actuated hydraulic power unit. 3,041,975, 7-3-62, Cl. 103—50.

Atkinson, Robert P., and F. W. Hoeltje, to General Motors Corp. Lubrication vent for a turbine engine. 3,041,832, 7-3-62, Cl. 60—39.08.

Atlantic Research Corp.: *See*—
Henderson, Charles B., and Burton. 3,041,835.

Atlantic Refining Co., The: *See*—
Godbey, Josiah J. 3,042,864.

Atlas Chemical Industries, Inc.: *See*—
Ball, Thomas Z. 3,041,972.

Atlas, Gerald D. Multiple boat anchorage. 3,041,639, 7-3-62, Cl. 9—8.

Atwood Vacuum Machine Co.: *See*—
Kirk, Joseph R. 3,042,458.

Audino, Hector. Vacuum hold-down apparatus. 3,042,356, 7-3-62, Cl. 248—363.

Auer, John H., Jr.: *See*—
Kendall, Hugh C., Auer, Bolton, and Frielinghaus. 3,042,303.
Kendall, Hugh C., Auer, Bolton, and Frielinghaus. 3,042,899.

Aughenbaugh, Harry E.: *See*—
Anderson, James H., and Aughenbaugh. 3,041,857.

Aurand, La Vern M., and R. E. Schwyn, to General Motors Corp. Spark plugs. 3,042,474, 7-3-62, Cl. 313—141.

Ausserbauer, Helmut, and A. Biernatzki, to Auto Union G.m.b.H. Mounting device for the spark coils of internal combustion engines. 3,042,017, 7-3-62, Cl. 123—195.

Austgen, Kenneth J., to Pullman Inc. Trainline arrangement for cushion underframe with long travel characteristics. 3,042,223, 7-3-62 Cl. 213—1.

Auto Union G.m.b.H.: *See*—
Ausserbauer, Helmut, and Biernatzki. 3,042,017.

Automation Development Corp.: *See*—
Welch, Elvin C. 3,042,847.

Avco Mfg. Corp.: *See*—
Gibson, Robert E., and Kagan. 3,042,880.

Avien, Inc.: *See*—
Kadlec, Ladislav. 3,042,866.

Avog Elektro -und Feinmechanik G.m.b.H.: *See*—
Mohr, Adolf. 3,042,817.

Babcock, Scott R., and H. E. Peterson, to American Brake Shoe Shoe Co. Electrical heating apparatus. 3,042,786, 7-3-62, Cl. 219—50.

Bachman, Don F. Portable planter. 3,041,782, 7-3-62, Cl. 47—39.

Badger, Robert E. Battery powered timing light. 3,042,835, 7-3-62, Cl. 315—171.

Bagshaw, Robert B., to Waid Industries, Inc. Coating apparatus having spray path adjusting mechanism. 3,041,999, 7-3-62, Cl. 118—323.

Balder, Theodorus C., to North American Philips Co., Inc. Method and device for the machine soldering of a crystal to the cathode portion of crystal diodes. 3,042,792, 7-3-62, Cl. 219—85.

Baldwin-Montrose Chemical Co., Inc. (Baldwin Division): *See*—
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Ball, Thomas Z., to Atlas Chemical Industries, Inc. Arc resistant electric initiator. 3,041,972, 7-3-62, Cl. 102—28.

Balvin, Joseph A., and W. F. Heine, to Mohawk Business Machines Corp. Roller. 3,042,281, 7-3-62, Cl. 226—181.

Bambara, Joseph E., and J. W. Christensen, to Columbia Broadcasting System, Inc. Drum target image orthicon. 3,042,825, 7-3-62, Cl. 313—89.

Barber-Colman Co.: *See*—
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Barford, Norman C., to Electric & Musical Industries Ltd. Velocity modulation electron discharge devices. 3,042,831, 7-3-62, Cl. 315—3.5.

Barker, Charles L., Jr., to United States of America, Army. Space flight simulator. 3,041,741, 7-3-62, Cl. 35—12.

Barnes, Robert E. Hum compensator. 3,042,877, 7-3-62, Cl. 330—149.

Barnes, W. F. and John, Co.: *See*—
Abrams, Victor R., Werge, and Ryan. 3,041,958.

Barra, Frank J., W. F. Chaple, and R. E. McMinn, to Black, Sivalls & Bryson, Inc. Apparatus for metering liquids. 3,041,876, 7-3-62, Cl. 73—224.

Barringer, Mary T.: *See*—
Lovette, Edd H. 3,042,261.

Barski, Julius J., to W. Du Broff. Case loading apparatus. 3,042 230, 7-3-62, Cl. 214—41.

Bart, Abraham: *See*—
Burt, Robert V., Gex, and Bart. 3,041,806.

Basile, Gene E., and E. T. Gillman, to Putnam Rolling Ladder Co., Inc. Stepladders. 3,042,140, 7-3-62, Cl. 182—46.

Batcheller, Kent J., and D. R. McDougall, to Kent Mfg. Corp. Detent for crimping machine. 3,041,619, 7-3-62, Cl. 1—177.

Battelle Development Corp., The: *See*—
McCrory, Rollin J., King, and Conklin. 3,042,010.

Bauger, Louis A. J.: *See*—
Bertin, Jean H., Bauger, Kadosch, and Maunoury. 3,041,823.

Bauman, Henry J., to Nutting Truck and Caster Co. Food serving cart. 3,042,384, 7-3-62, Cl. 257—293.

Bauman, Walter F., to Ironrite, Inc. Barrel lift mechanism. 3,042,241, 7-3-62, Cl. 214—653.

Baumgarten, Werner: *See*—
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Baumgarten, Werner, and R. F. Johnson, to Merck & Co., Inc. Stabilized desoxyribonuclease preparation. 3,042,587, 7-3-62, Cl. 195—68.

Baur, Carl, and G. Konigl, to Agfa Aktiengesellschaft. Combined range and view finder. 3,041,919, 7-3-62, Cl. 88—2.4.

Bausch & Lomb Inc.: *See*—
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Ruben, Paul L., and Ziegler. 3,041,934.
Sheldon, Gilbert J. 3,042,022.

Bavaro, Vincenza, to Societa A.R.L.M.G.S.-Moviesbox General System. Apparatus for the automatic projection upon selection of sound films. 3,041,925, 7-3-62, Cl. 88—16.2.

Baxter, Don, Inc.: *See*—
Coanda, George. 3,042,035.

Bayer Aktiengesellschaft, Farbenfabriken: *See*—
Schegk, Ernst, and Schrader. 3,042,703.

Beacham, Robert C., to Cutter Laboratories. Segregation chamber and flow meter. 3,042,038, 7-3-62, Cl. 128—214.

Beauregard, Robert: *See*—
Fillon, Camille, and Beauregard. 3,042,088.

Bechtold, Alwyn R.: *See*—
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Beck, George W.: *See*—
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Beck, Henry C.: *See*—
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Beckman Instruments, Inc.: *See*—
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Diamond, Albert. 3,042,820.
Pickels, Edward G., and Turner. 3,041,921.
Wilson, Ray L. and Haagen-Smit. 3,042,495.

Bedford, Burnice D., and L. J. Goldberg, to General Electric Co. Direct current static electric switch. 3,042,838, 7-3-62, Cl. 317—52.

Beeman, Lyle. Pressure switch. 3,042,770, 7-3-62, Cl. 200—83.

Behrens, Curtis E., to Borg-Warner Corp. Pump. 3,041,980, 7-3-62, Cl. 103—150.

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Singlemann, Dietrich E. 3,041,831.
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Bell Intercontinental Corp.: *See*—
Schnetzer, Alfred. 3,041,787.
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Bell, Robert E., and R. B. Williams, Jr., to Toledo Scale Corp. Condition responsive device with motion detecting means. 3,042,128, 7–3–62, Cl. 177—210.
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Bonner, Arthur L. 3,042,759.
Bosworth, Raymond H. 3,042,740.
Fulmer Robert J. 3,042,752.
Geyling, Franz T. 3,041,923.
Graham, Robert S. 3,042,751.
Hawkins, Walter L., and Winslow. 3,042,649.
Keller, Arthur C., Peek, Schneider, and Spahn. 3,042,773.
Robertson, Donald D. 3,041,993.
Beltrami, Aurelio. Electronic transmitting system. 3,042,747, 7–3–62, Cl. 178—5.6.
Bendell, David. Combination desk and couch. 3,041,633, 7–3–62, Cl. 5—2.
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Beninghoff, William L. Relief means for preventing interruption of the forming cycle of an upset forging machine due to overload of gripper die. 3,041,899, 7–3–62, Cl. 78—13.
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Berhman, John W., to Amalgamated Growth Industries, Inc. Propulsion system. 3,041,824, 7–3–62, Cl. 60—35.6.
Berkman, Lou L. Pipe pulling machine. 3,042,273, 7–3–62, Cl. 254—29.
Berkshire, Robert H., to Texas Instruments Inc. System for magnetic recording. 3,042,755, 7–3–62, Cl. 179—100.2.
Bertin, Jean H., L. A. J. Bauger, M. Kadosch, and F. M. L. Maunoury, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Control for varying the cross-sectional area of a nozzle. 3,041,823, 7–3–62, Cl. 60—35.6.
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Bevier, Theodore S. Automatic tape dispenser with separate printed tape feed. 3,042,104, 7–3–62, Cl. 156—510.
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Bierman, Raymond C., to Motorola, Inc. Tape recorder. 3,042,331, 7–3–62, Cl. 242—55.13.
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Binning, Robert C., and M. Z. Woskow, to Standard Oil Co. Hydrogenation process utilizing a platinum-thiocyanate-alumina catalyst. 3,042,197, 7–3–62, Cl. 208—143.
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Birum, Gail H., to Monsanto Chemical Co. Organic phosphorus compounds. 3,042,699, 7–3–62, Cl. 260—461.
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Kendall, Hugh C., Auer, Bolton, and Frielinghaus. 3,042,899.
Bonhamme, Francois R., to Curtiss-Wright Corp. Interlocked electrical connectors. 3,042,895, 7–3–62, Cl. 339—176.
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Tracy, Herbert E. 3,042,414.
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Bray, John R., to Monsanto Chemical Co. Control circuit. 3,042,782, 7–3–62, Cl. 219—20.
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Carmichael, Robert, and J. L. S. Daley, to Union Carbide Corp. Alkaline cell closure. 3,042,734, 7-3-62, Cl. 136—133.

Carpenter, Herbert L., Sr., to The Greif Bros. Cooperage Corp. Fiber drum and its method of formation. 3,042,288, 7-3-62, Cl. 229—67.

Carrier Corp.: *See*—
Stenerson, Randolph N. 3,041,851.

Carter, Clare A., L. F. Theiling, Jr., and R. J. Knopf. Alkylene oxide adducts of terminally unsaturated polyols. 3,042,725, 7-3-62, Cl. 260—615.

Carter, Frederick D. Dewatering of aqueous pastes or slurries of thermal carbon black. 3,042,504, 7-3-62, Cl. 23—314.

Carter, William L., and T. Shiflett. Toy sky launching station. 3,041,779, 7-3-62, Cl. 46—74.

Case, J. I., Co.: *See*—
Tulak, John F. 3,042,119.

Case, Roy I.: *See*—
Imm, Lewis W., Case, and Brandon. 3,042,297.

Casey, Edward J., to General Electric Co. Antenna ice clearing system. 3,042,918, 7-3-62, Cl. 343—704.

Casius Corp. Ltd.: *See*—
Olsson, Karl G. 3,042,232.

Castro Convertible Corp.: *See*—
Willis, Sumner C. 3,041,634.

Cathey, Carrol M., L. F. Wade, and A. R. Bechtold. House trailer protective apron. 3,042,425, 7-3-62, Cl. 280—150.

Catlin, Robert T., and N. M. Reed, to Remington Arms Co., Inc. Inertia operated sear block. 3,041,615, 7-3-62, Cl. 1—44.5.

Cayo, Edward L., deceased (J. Cayo, executor of said E. L. Cayo), to V. Dorstewitz. Pencil pointer. 3,042,003, 7-3-62, Cl. 120—91.

Cayo, Julius: *See*—
Cayo, Edward L. 3,042,003.

Cechner, Frank A., and O. P. Sterner, to Signode Steel Strapping Co. Strap feeding and guiding device. 3,041,961, 7-3-62, Cl. 100—25.

Cerveny, Frank E., to The Dole Valve Co. Oven control valve. 3,042,308, 7-3-62, Cl. 236—99.

Champlin, Charles L., Packaging Corp. of America. Carton and package including same. 3,042,194, 7-3-62, Cl. 206—65.

Chance, A. B., Co.: *See*—
Fink, Miller H. 3,041,660.

Chandler-Evans Corp.: *See*—
Embree, John M. 3,041,822.

Chandler, Frank J., to Paton-Chandler Process Co. Spout type bag for powdered and the like materials. 3,042,287, 7-3-62, Cl. 229—62.5.

Chaple, William F.: *See*—
Barra, Frank J., Chaple, and McMinn. 3,041,876.

Charles, Daniel R., A. J. Velte, P. Dreyfus, and G. Pamelard, to Commissariat a l'Energie Atomique. Purification apparatus for the removal of impurities from fluids, in particular for mass spectrometer circuits. 3,041,840, 7-3-62, Cl. 62—40.

Charley, Walter A. Weighing and bagging machine. 3,042,127, 7-3-62, Cl. 177—68.

Chartier, Raymond A.: *See*—
Mankowich, Ivan, Chiavetta, and Chartier. 3,042,634.

Chase-Shawmut Co., The: *See*—
Hitchcock, Paul C. 3,042,794.

Chatfield, Herbert W., and G. A. Weeks, to A. Boake, Roberts & Co. Ltd. Reaction products of epoxidised oils. 3,042,687, 7-3-62, Cl. 260—348.

Chattin, Robert C. Ditcher apparatus. 3,041,751, 7-3-62, Cl. 37—98.

Check-Out Advertising, Inc.: *See*—
Cohen Sheldon N. 3,042,426.

Chelwin Productions, Inc.: *See*—
Winchell, Paul. 3,042,086.

Chenault, Roy L., to United States Steel Corp. Method of heating the interior of an enclosure. 3,042,557, 7-3-62, Cl. 148—144.

Cherry-Burrell Corp.: *See*—
Arganbright, Jess G., and Walsh. 3,041,854.

Chertow, Bernard: *See*—
Gourevitch, Alexander, Chertow, and Lein. 3,042,582.

Chiavetta, Frank P.: *See*—
Mankowich, Ivan, Chiavetta, and Chartier. 3,042,634.

Chicago Pneumatic Tool Co.: *See*—
D'Haem, Marcel P., and Fischer. 3,041,614.
Fischer, Howard R., and Kearney. 3,042,004.

Chicago Printed String Co.: *See*—
Paar, Thomas J. J. 3,041,765.

Chick, Melvin E., ½ to B. McClintock. Sheet clamping device. 3,041,795, 7-3-62, Cl. 51—194.

Chicopee Mfg. Corp.: *See*—
Harmon, Carlyle, and Kalwaites. 3,042,576.

Chien, Kun L., E. I. Ergin, and C. Ling, to Beckman Instruments, Inc. Boiler controller. 3,042,007, 7-3-62, Cl. 122—448.

Chimie et Atomistique: *See*—
Liberman, David. 3,042,673.

Chin, David D., and L. P. Grisell, to Eitel-McCullough, Inc. Electron tube socket. 3,042,893, 7-3-62, Cl. 339—112.

Chipalkatti, Vasant B., and K. Manivannan, to Shri Ram Institute for Industrial Research. Method of application of fluids to textile materials. 3,042,480, 7-3-62, Cl. 8—151.

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Chow, Ho., and W. Blasnik, to International Patent Research Corp. Adjustable nozzle. 3,042,318, 7-3-62, Cl. 239—458.

Christensen, John W.: *See*—
Bambara, Joseph E., and Christensen. 3,042,825.

Christian, Clarence A. Gas vaporizer attachment. 3,042,016, 7-3-62, Cl. 123—122.

Christiansen, Clifford S., to Baldwin-Montrose Chemical Co., Inc. (Baldwin Division). Bellows. 3,041,885, 7-3-62, Cl. 74—18.2.

Christner, Robert M. Multiple purpose measuring tool and holder therefor. 3,041,732, 7-3-62, Cl. 33—143.

Ciechanowski, Alex: *See*—
Ruskin, Henry, and Ciechanowski. 3,041,618.

Cincinnati Gilbert Machine Tool Co.: *See*—
Gilbert, Charles E., Sr., and Winget. 3,042,460.

Cincinnati Shaper Co., The: *See*—
Hazelton, Merrill W., and Ostendorf. 3,041,963.

Clapper, Genung L., to International Business Machines Corp. Synchronized gated transistor trigger circuit. 3,042,811, 7-3-62, Cl. 307—88.5.

Clark Equipment Co.: *See*—
Lapsley, Robert. 3,042,163.

Clark, John R., to S. B. Penick and Co. 1-chloro-2-carbamyloxy-3(N-piperidino)-propane. 3,042,679, 7-3-62, Cl. 260—294.3.

Clark, John R., to S. B. Penick and Co. Chlorination rearrangement and products. 3,042,711, 7-3-62, Cl. 260—482.

Clark, Robert L.: *See*—
Rogers, Edward F., and Clark. 3,042,675.
Rogers, Edward F., and Clark. 3,042,677.

Clark, William A., 50% to The Goodyear Tire & Rubber Co. and 50% to Skinner Engine Co. Rubber mixer. 3,041,659, 7-3-62, Cl. 18—2.

Clarke, David E.: *See*—
Arey, Ralph G., and Clarke. 3,042,776.

Clarke, Elliot. Telescopable member. 3,041,683, 7-3-62, Cl. 20—99.

Clarke, Robert L., and R. T. Mullins. Cold water means. 3,041,846, 7-3-62, Cl. 62—177.

Clarke, Walter W. H., to Her Majesty the Queen in right of Canada, as represented by the Minister of National Defense. Directional system for wave propagated signals. 3,042,916, 7-3-62, Cl. 343—100.

Claus, Karl M.: *See*—
Macdonald, Herbert G.; Barbour, and Claus. 3,041,785.

Clavé, Marcel: *See*—
Clavé, Serge and M. 3,041,918.

Clavé, Serge and M. A focal optical device having a mounting providing protection against dangerous radiation. 3,041,916, 7-3-62, Cl. 88—1.

Clayton, Bruce L. Book and magazine holder. 3,041,776, 7-3-62, Cl. 45—85.

Cleary, Frederick W.: *See*—
Van Atta, Lester C., and Cleary. 3,042,914.

Cleveland Technical Center, Inc.: *See*—
Wetzel, Donald C. 3,041,748.

Cline, Theodore E. Car top boat loader. 3,042,240, 7-3-62, Cl. 214—450.

Closson, Rex D.: *See*—
Coffield, Thomas H., and Closson. 3,042,693.

Clute, Francis E., to J.E.T. Pellet Mill Corp. Air-flow material separator. 3,042,203, 7-3-62, Cl. 209—144.

Coanda, George, to Don Baxter Inc. Mask. 3,042,035, 7-3-62, Cl. 128—146.

Coar, Richard J., to United Aircraft Corp. Turbofan afterburner fuel control. 3,041,826, 7-3-62, Cl. 60—35.6.

Coates, Roy K., and C. D. Howard. Computer. 3,042,295, 7-3-62, Cl. 235—61.

Coats Co., Inc., The: *See*—
Foster, James R. 3,042,090.

Cobb, John, C. M. Rice, W. L. Ross, and K. W. Sauer, to American Radiator and Standard Sanitary Corp. Neutronic reactor. 3,042,595, 7-3-62, Cl. 204—154.2.

Coberly, Clarence J., to Kobe, Inc. Standing valve for free well pump. 3,041,981, 7-3-62, Cl. 103—229.

Coberly, Ernest K., Jr. Disposable sun and rain shield. 3,042,054, 7-3-62, Cl. 135—19.5.

Cochran, John K., to Pittsburgh Plate Glass Co. Method and apparatus for forming glass fibers. 3,041,662, 7-3-62, Cl. 18—8.

Coffield, Thomas H., and Rex D. Closson, to Ethyl Corp. Organometallic compounds. 3,042,693, 7-3-62, Cl. 260—429.

Coggeshall, Alva C., to Monsanto Chemical Co. Melt-spinning method. 3,042,481, 7-3-62, Cl. 18—54.

Cohen, Sheldon N., to Check-Out Advertising, Inc. Folded cash register tape. 3,042,426, 7-3-62, Cl. 283—62.

Cole, Eldon B., and P. M. Niles, to Sinclair Refining Co. Fuel compositions. 3,042,506, 7-3-62, Cl. 44—62.

Cole, George F., and A. Turley, to Vono Ltd. Spring assembly. 3,042,395, 7-3-62, Cl. 267—108.

Cole, Herman L., ½ to T. Ladymon, d.b.a. Albert Ladymon Co. Adjustable feeder shoe. 3,042,396, 7-3-62, Cl. 271—26.

Coleman, Ralph A., and J. L. Rodgers, to American Cyanamid Co. Manganese complexes of azo compounds as infrared absorbers. 3,042,624, 7-3-62, Cl. 252—300.

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Kirschenbauer, Hans G. 3,042,621.
Kirschenbauer, Hans G. 3,042,622.

Collier, Charles P.: *See*—
McConnell, John E. W., and Collier. 3,042,533.

Columbia Broadcasting System, Inc.: *See*—
Bambara, Joseph E., and Christensen. 3,042,825.

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Comfort, Samuel T., to Allis-Chalmers Mfg. Co. Lift truck mast pulldown cylinder assembly. 3,042,149, 7-3-62, Cl. 187—9.

Commissariat a l'Energie Atomique: *See*—
Charles, Daniel R., Velte, Dreyfus, and Pamelard. 3,041,840.
Herénguel, Jean. 3,041,716.

Commissariat a l'Energie Atomique, Etablissement Public: *See*—
Martelly, Julien. 3,042,803.

Compagnie Industrielle de Procedes et d'Applications S.A.: *See*—
Godel, Albert. 3,042,500.

Conch International Methane Ltd.: *See*—
Dosker, Cornelius D. 3,042,080.
Henry, James J. 3,041,841.

Conklin, Robert M.: *See*—
McCrory, Rollin J., King, and Conklin. 3,042,010.

Conn, C. G., Ltd.: *See*—
Burgener, Robert C., and Finlay. 3,042,881.

Conradi, Henrik, N. de Frumerie, and S. B. Andersson: said Conradi assor. to Stal Refrigeration AB, and said de Frumerie and said Andersson assors. to Svenska Flaktfabriken, Aktiebolaget. System for air conditioning holds. 3,041,954, 7-3-62, Cl. 98—33.

Container Corp. of America: *See*—
De Paul, Richard E. 3,042,283.

Continental Can Co., Inc.: *See*—
McDevitt, James A., and Miller. 3,042,103.

Continental Oil Co.: *See*—
Dry, Neal E., and Scott. 3,042,620.
Roebuck, Albert H., and Scott. 3,042,612.

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Strathearn, Donald M. 3,042,763.

Convery, Robert J., to Sun Oil Co. Esterification of naphthalene dicarboxylic acids. 3,042,709, 7-3-62, Cl. 260—475.

Cook, Richard E., to The Distillers Co. Ltd. Inhibited polymerizable compositions. 3,042,726, 7-3-62, Cl. 260—652.5.

Cook, Richard L., to Worthington Corp. Removable lock for blade wheel assembly. 3,042,368, 7-3-62, Cl. 253—77.

Cooke, Conrad H., and T. C. Hill, to Martin-Marietta Corp. Inertial control system. 3,042,343, 7-3-62, Cl. 244—76.

Cooper, Cleveland N., to Pandiiris Weldment Co. Turning roll assembly. 3,042,239, 7-3-62, Cl. 214—340.

Copp, Carroll G., Jr. Window mounting assembly and method of installing same. 3,041,678, 7-3-62, Cl. 20—11.

Copping, Brian G., to Swiveller Co., Inc. Berth light. 3,042,798, 7-3-62, Cl. 240—78.

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Allen, Richard E., and Deegan. 3,042,550.

Cottle, Delmer L., L. S. Minckler, Jr., and T. Lemiszka, to Esso Research and Engineering Co. Process for halogenating copolymers. 3,042,662, 7-3-62, Cl. 260—85.3.

Coughran, Samuel J.: *See*—
Heckathorn, Loyd E., and Coughran. 3,042,120.

Cowell, Elmer E., and J. R. Darby, to Monsanto Chemical Co. Vinylidene polymer plastisols and method of preparing same. 3,042,644, 7-3-62, Cl. 260—31.8.

Cox, Irvin W., to Cutler-Hammer, Inc. Electromagnetic device. 3,042,842, 7-3-62, Cl. 317—185.

Cragoe, Edward J., Jr.: *See*—
Schultz, Everett M., and Cragoe. 3,042,714.

Craig, Burnie M., to Henry Keck Associates. Cord holder attachment for electrical outlets. 3,042,739, 7-3-62, Cl. 174—66.

Craig, Clinton W. Drill bits. 3,042,126, 7-3-62, Cl. 175—385.

Cramer, Robert H., and E. J. Rosinski, to Engelhard Industries, Inc. Production of alumina and catalyst containing same. 3,042,628, 7-3-62, Cl. 252—465.

Crane Co.: *See*—
Bredtschneider, Kurt B. 3,042,359.

Crane, Edward V., to E. W. Bliss Co. Fluid torque limiter. 3,042,166, 7-3-62, Cl. 192—85.

Crane, Hewitt D., to Radio Corp. of America. Magnetic switching systems for magnetic recording. 3,042,923, 7-3-62, Cl. 346—74.

Crane, James E.: *See*—
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Crawford, Herman E., to The H. E. Crawford Co. Means for and method of operating the sinkers of knitting machines. 3,041,860, 7-3-62, Cl. 66—108.

Cretin-Maitenaz, Bernard, to Societe des Lunetiers Cottét Poichet, Tagnon & Cie. Machine for three-dimensional copying. 3,041,789, 7-3-62, Cl. 51—101.

Cri-Dan: *See*—
Renoux, Pierre E. 3,041,640.

Crome, Lester C., to The Dayton Malleable Iron Co. Production of nodular iron. 3,042,513, 7-3-62, Cl. 75—130.

Crosfield, J. F., Ltd.: *See*—
Astley, Edawrd T. 3,042,332.

Crouch, Willie W., to Phillips Petroleum Co. Recovery of polymers from solution. 3,042,637, 7-3-62, Cl. 260—17.5.

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Repking, Edward F. 3,041,942.

Crowther, Russell L., to General Electric Co. Shielded thorium fuel element. 3,042,598, 7-3-62, Cl. 204—193.2.

Csonka, Lajos, F. Horkay, F. Szántó, J. Szerecz, and J. Gönczy. Process for the preparation of zinc oxide pigments. 3,042,539, 7-3-62, Cl. 106—296.

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Cummings, Thomas N., Peterson, and Shiu. 3,041,802.

Cummings, Thomas N., B. R. Peterson, Jr., and T. B. Shiu, ¼ to N. A. Cummings. Method of forming a sealed conical container. 3,041,802, 7-3-62, Cl. 53—39.

Cummings, Thomas N., B. R. Peterson, Jr., and T. B. Shiu, to CPS Mfg. Co. Apparatus for handling and filling erected cartons. 3,042,225, 7-3-62, Cl. 214—1.

Cumpston, Edward H., Jr., to General Electric Co. Electric circuit board. 3,042,741, 7-3-62, Cl. 174—68.5.

Cupler, John A., II. Spinnerette production method. 3,041,894, 7-3-62, Cl. 76—107.

Curran, Robert E.: *See*—
Sorsa, George, and Curran. 3,042,418.

Curtis, Ralph J., and C. F. Nixon, to General Motors Corp. Blade shrouding. 3,042,365, 7-3-62, Cl. 253—39.

Curtiss-Wright Corp.: *See*—
Bonhamme, Francois R. 3,042,895.
Ferri, Antonio. 3,041,827.
Weida, Robert L., and Wolf. 3,042,902.

Cusick, Charles S., W. R. Schwab, and R. V. Lange, to Pittsbugh Plate Glass Co. Surfacing runner. 3,041,798, 7-3-62, Cl. 51—195.

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Cutrona, Joseph J., Jr. Hair spray shields. 3,041,624, 7-3-62, Cl. 2—11.

Cutter Laboratories: *See*—
Beacham, Robert C. 3,042,038.

Cyclo-Magic, Inc.: *See*—
Kotecki, Stanley F. 3,042,787.

Cyphert, Henry. Device for unloading cylindrical objects. 3,042,231, 7-3-62, Cl. 214—77.

Czech, Clifford F., to McGraw-Edison Co. Lint trap. 3,041,864, 7-3-62, Cl. 68—18.

Czirfusz Miklos, to Licencia Találmányokat Értékesitö Vallalat. Method for the continuous purification of linie milk used in sugar mils. 3,042,209, 7-3-62, Cl. 210—73.

Dahlstrom, Edward J. Colonic irrigator. 3,042,039, 7-3-62, Cl. 128—227.

Dailey, Donald E., to Mead Johnson & Co. Capsule dispenser. 3,042,257, 7-3-62, Cl. 221—309.

Daley, John L. S.: *See*—
Carmichael, Robert, and Daley. 3,042,734.

Daline, Gordon. Method and apparatus for seasoning foods. 3,042,532, 7-3-62, Cl. 99—171.

Dana Corp.: *See*—
O'Brien, Loren J. 3,041,890.

Dane Corp., The: *See*—
Rodth, Joseph J. 3,042,265.

Daniel, William A., to The Bendix Corp. Apparatus for slip-casting ceramic materials. 3,041,699, 7-3-62, Cl. 25—29.

Danielzig, Karl-Heinz, to Habra-Werk Wilhelm F. Ott. Manufacture of containers or the like. 3,041,941, 7-3-62, Cl. 93—12.

Darby, Joseph R.: *See*—
Cowell, Elmer E., and Darby. 3,042,644.

Dardick Corp.: *See*—
Dardick, David. 3,041,939.

Dardick, David, to Dardick Corp. Multi-barrel gun with a plurality of firing stations and an ammunition drum. 3,041,939, 7-3-62, Cl. 89—126.

Davenport, Marc G.: *See*—
Roberts, Joe E., and Davenport. 3,041,810.

Davidson, William W., Jr. Apparatus and method for simplified photocomposition corrections. 3,041,930, 7-3-62, Cl. 88—24.

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Davis Engineering, Inc.: *See*—
Davis, George. 3,042,234.

Davis, George, to Davis Engineering, Inc. Material moving and placing apparatus. 3,042,234, 7-3-62, Cl. 214—141.

Davis, Hershel L. Lip guard. 3,041,627, 7-3-62, Cl. 2—174.

Davis, James A. Automotive axle suspension construction. 3,042,424, 7-3-62, Cl. 280—106.5.

Davis, Raymond C.: *See*—
Mathues, Thomas O., Beck, Davis, and Forward. 3,042,137.

Dawson, Joseph C., and R. P. Miliard, to Ferguson Fumigants, Inc. Fumigation of grain. 3,041,684, 7-3-62, Cl. 21—121.

Day, Russell. Ski-scrapers. 3,041,650, 7-3-62, Cl. 15—236.

Daystrom, Inc.: *See*—
Eadie, Edward M., Jr. 3,042,840.
Gilbert, Roswell W. 3,042,912.

Dayton Malleable Iron Co., The: *See*—
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Deacon, Alan J., and E. N. McKee, to Anaconda American Brass Co. Extrusion container cleaning apparatus. 3,041,647, 7-3-62, Cl. 15—104.1.

Decamp, André E. Artificial flower structure. 3,041,766, 7-3-62, Cl. 41—13.

De Caro, Charles J.: *See*—
Gilman, Charles B., and De Caro. 3,041,906.

Deegan, George M.: *See*—
Allen, Richard E., and Deegan. 3,042,550.

Deeks, Douglas B. Steam traps. 3,042,363, 7-3-62, Cl. 251—362.

Deering Milliken Research Corp.: *See*—
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De Forest, Taber. Flash light assembly for underwater use. 3,042,796, 7-3-62, Cl. 240—6.4.

De Frumerie, Nils: *See*—
Conradi, Henrik, De Frumerie, and Andersson. 3,041,954.

Dehn, William F., to Allen-Bradley Co. Adjustable actuating arm. 3,041,888, 7-3-62, Cl. 74—559.

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Toda, Dean L. Delerhoi and Granger. 3,042,733.

De Lano, Ralph B., Jr.: *See*—
Brennemann, Andrew E., De Lano, and Young. 3,042,904.

Delgadillo, Fred M.: *See*—
Krelder, David B., and Delgadillo. 3,041,912.

Delpoux, Albert, to Electricite de France (Service National). Apparatus for recording maximum values of a variable quantity. 3,042,921, 7-3-62, Cl. 346—30.

De Marchi Frattelli, S.p.A.: *See*—
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De Marco, Carlo G., and G. M. Dias, to United States of America, Army. Aqueous textile coating composition containing a perfluoro-alkyl acrylate and a methyl pyridinium halide. 3,042,642, 7-3-62, Cl. 260—24.6.

Demchock, Louis A., Jr.: *See*—
Anderson, Robert M., and Demchock. 3,041,862.

Dempster Brothers, Inc.: *See*—
Bryan, Mac B., and French. 3,042,238.

Denegre, Charles. Baseball guide for batting practice. 3,042,401, 7-3-62, Cl. 273—26.

Dennitg, Paul S., to Johns-Manville Perlite Corp. Insulating product and its manufacture. 3,042,578, 7-3-62, Cl. 162—171.

De Nora, Vittorio, to Oronzio de Nora Impianti Elettrochimici. Horizontal electrolytic cell. 3,042,602, 7-3-62, Cl. 204—220.

De Paul, Richard E., to Container Corp. of America. Bottle carrier. 3,042,283, 7-3-62, Cl. 229—40.

De Pree, Hugh W.: *See*—
Schurger, Garner H., and De Pree. 3,041,940.

Derman, Karl G. E., and N. B. R. Snare, to Svenska Kullagerfabriken, Aktiebolaget. Centrifugal seal. 3,042,417, 7-3-62, Cl. 277—25.

Dersch, Fritz, and E. B. Rauch, to General Aniline & Film Corp. Antifoggants and stabilizers for photographic silver halide emulsion. 3,042,521, 7-3-62, Cl. 96—66.

De Sanno, A. P., & Son, Inc.: *See*—
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Des Rosier, James S. Portable tepee. 3,042,052, 7-3-62, Cl. 135—1.

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Kearney, Thomas J., and Young. 3,042,553.

Deutsche Edelstahlwerke Aktiengesellschaft: *See*—
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Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See*—
Thiele, Kurt. 3,042,680.

Devine, Arthur J.: *See*—
Trumbull, Donald E., Devine, and Pyles. 3,042,264.

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West, Theo J., and Dewey. 3,042,641.

De Witt, Hobson D.: *See*—
Beindorff, Arthur B., and De Witt. 3,042,645.
Beindorff, Arthur B., and De Witt. 3,042,646.

Dexter, Robert G.: *See*—
Eichorn, Robert N., and Dexter. 3,041,804.

D'Haem; Marcel P., and H. R. Fischer, to Chicago Pneumatic Tool Co. Pneumatic stapler and magazine therefor. 3,041,614, 7-3-62, Cl. 1—44.4.

Diamond, Albert, to Beckman Instruments, Inc. Servo motor with adjustable velocity damp. 3,042,820, 7-3-62, Cl. 310—93.

Diamond National Corp.: *See*—
Struble, Glenn E. 3,041,643.

Dias, Gil M.: *See*—
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Dinneen, Thomas J. Winding device. 3,042,337, 7-3-62, Cl. 242—85.1.

Dirks, Gerhard. Distributor-controlled magnetic storage unit. 3,042,901, 7-3-62, Cl. 340—172.5.

Dirks, Gerhard. Storage of signals. 3,042,906, 7-3-62, Cl. 340—174.1.

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Cook, Richard E. 3,042,726.
Heathcote, John G. 3,042,588.

Dittrich, Edward. Forked spike heel. 3,041,745, 7-3-62, Cl. 36—34.

Doble, Warren: *See*—
McLean, Murray G., Orth, and Doble. 3,041,979.

Dobrikin, Harold L., to Berg Airlectro Products Co. Automatic shuttle safety valve. 3,042,061, 7-3-62, Cl. 137—102.

Doktor, Benjamin. Terminal block construction. 3,042,896, 7-3-62, Cl. 339—198.

Dole, Marion E., to Hoover Ball and Bearing Co. Bin tilting device. 3,042,237, 7-3-62, Cl. 214—314.

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Lasak, Edwin M., and Lauterbach. 3,042,381.

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Dorenbos, Richard E., and J. W. Tomka, to Nordberg Mfg. Co. Multiple opening hot plate press. 3,041,666, 7-3-62, Cl. 18—17.

Dorfman, Don. Sectional housing for air conditioning. 3,042,157, 7-3-62, Cl. 189—34.

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Winter, Rudolf. 3,042,229.

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Cayo, Edward L. 3,042,003.

Dortort, Isadore K., to I-T-E Circuit Breaker Co. Saturable balancing reactors for rectifier systems. 3,042,849, 7-3-62, Cl. 321—27.

Dosker, Cornelius D., to Conch International Methane Ltd. Means for moving extremely cold liquids. 3,042,080, 7-3-62, Cl. 138—100.

Dougherty, Howard K. Cigarette dispenser and lighter. 3,042,253, 7-3-62, Cl. 221—145.

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Keskkula, Henno, and Pettis. 3,042,654.
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Dragotta, Charles A., and A. C. Cereghino, Jr., to National Dairy Products Corp. Artificial snow. 3,042,638, 7-3-62, Cl. 260—23.

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Dresser Industries, Inc.: *See*—
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Smith, Robert W., and Vaughan. 3,042,309.

Dreyfus, Paul: *See*—
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Dry, Neal E., and W. P. Scott, to Continental Oil Co. Antiseep agent. 3,042,620, 7-3-62, Cl. 252—72.

Dubats, Edward T., to Western Electric Co., Inc. Cutting apparatus for sheet material. 3,041,908, 7-3-62, Cl. 83—568.

Duble, Orville L., and L. W. Wolfe. Automatic poultry curtain raiser. 3,042,001, 7-3-62, Cl. 119—21.

Du Bois, Marvin A. Cable trays. 3,042,351, 7-3-62, Cl. 248—49.

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Dubsky, Borivoj, O. Straka, J. Jahelka, and V. Sedlacek, to Vyzkumny a zkusebni letecky ustav. Electromagnetic circuits for indirectly excited electromagnetic feelers. 3,042,858, 7-3-62, Cl. 324—34.

Duinker, Simon, and J. Koorneef, to North American Philips Co., Inc. Combination of radio receivers and magnetic record reproducing devices. 3,042,758, 7-3-62, Cl. 179—100.11.

Duncan, Dan M. Full hole deflection tool. 3,042,125, 7-3-62, Cl. 175—73.

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Dunn, Patrick A. and L. A. Railroad journal and wheel axle jack skidding device. 3,041,984, 7-3-62, Cl. 105—199.

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Eadie, Edward M., Jr., to Daystrom, Inc. Instrument type relay. 3,042,840, 7-3-62, Cl. 317—152.

Early, Paul F., and B. Smilg, to Globe Industries, Inc. Connecting member. 3,042,033, 7-3-62, Cl. 128—142.

Eder, Theodor. Process and apparatus for separating granular solids into two or more end fractions. 3,042,204, 7-3-62, Cl. 209—157.

Edgar, Robert F., and R. E. Tompkins, to General Electric Co. Hardness measurement. 3,042,862, 7-3-62, Cl. 324—64.

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Eichorn, Robert N., and R. G. Dexter, to International Business Machines Corp. Carton forming and card packaging machine. 3,041,804, 7-3-62, Cl. 53—124.

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Ensign, George G., Soper, and Lundahl. 3,041,819.

El-Hindi, Ahmad M., to Hoffman International Corp. Filter for liquids containing magnetic sludge. 3,042,211, 7-3-62, Cl. 210—222.

Elhoff, William C., to General Electric Co. Antenna tracking system. 3,042,917, 7-3-62, Cl. 343—117.

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Elrick Rim Co., Inc.: *See*—
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Ensign, Westley L., and H. A. Markland. Coiling mandrel and stripper mechanism. 3,042,335, 7-3-62, Cl. 242—81.

Entler, William H. Eaves gutter cleaning device. 3,041,655, 7-3-62, Cl. 15—600.

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Etheridge, Frederick G., to North American Aviation, Inc. Pressure pick-up for a jet engine fuel system. 3,042,344, 7-3-62, Cl. 244—76.

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Evans, Peter, and D. G. Brooke, to Imperial Chemical Industries Ltd. Urea compositions. 3,042,718, 7-3-62, Cl. 260—555.

Facer, Grant T., and S. A. Kilpatrick, to Kaiser Aluminum & Chemical Corp. Joint structure of overlapped sheets. 3,041,784, 7-3-62, Cl. 50—220.

Fahey, Edward J., and E. B. Pierce, to All American Engineering Co. Portable hoist. 3,042,375, 7-3-62, Cl. 254—174.

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Favolise, Peter. Combined can opener and food can. 3,042,249, 7-3-62, Cl. 220—48.

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Hanson, Leroy C. 3,042,785.

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Flynn, Michael, Mfg. Company: *See*—
Gurniak, John. 3,041,680.
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Foster, James R., to The Coats Co., Inc. Rotatable wheel support for tire handling machines. 3,042,090, 7–3–62, Cl. 144—288.
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Frangos, John W. Storage system. 3,042,228, 7–3–62, Cl. 214—16.1.
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Kendall, Hugh C., Auer, Bolton, and Frielinghaus. 3,042,899.
Friend, Lindsay C., to The Bendix Corp. Gauging apparatus particularly adapted for measurement of small changes in dimensions or displacements. 3,041,733, 7–3–62, Cl. 33—149.
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Fulton, Mervin E. Film developing apparatus. 3,041,953, 7–3–62, Cl. 95—94.
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Gabriel, Effie. Portable shelter. 3,042,053, 7–3–62, Cl. 135—5.
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Galik, George M. Attachment for tampon applicator. 3,042,040, 7–3–62, Cl. 128—263.
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Gallo, John, Sr. Striped paste dispenser. 3,042,263, 7–3–62, Cl. 222—94.
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Gamble, Dennis H., and C. L. Weimer, to Westinghouse Electric Corp. Plug-in low-impedance bus duct. 3,042,890, 7–3–62, Cl. 339—22.
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Garnett, Edward V. Dual front wheel assembly with air suspension means. 3,042,422, 7–3–62, Cl. 280—96.2.
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Brooks, Robert D. 3,042,600.
Casey, Edward J. 3,042,918.
Crowther, Russell L. 3,042,598.
Cumpston, Edward H., Jr. 3,042,741.
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Graham, Robert S., to Bell Telephone Laboratories, Inc. Pulse transmission system. 3,042,751, 7–3–62, Cl. 179—15.
Grandidge, John E., to Mechanism Ltd. Pressure measuring devices. 3,041,879, 7–3–62, Cl. 73—398.
Granelli, Pietro, to Societa Internazionale Fonovisione. Automatic plural film projection apparatus. 3,041,926, 7–3–62, Cl. 88—17.
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Gray, Samuel A., to Hydraulic Research and Mfg. Co. Dynamic pressure feedback servo valve. 3,042,005, 7–3–62, Cl. 121—41.
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Hanson, Leroy C., to Ferro Corp. Electric heating unit. 3,042,785, 7-3-62, Cl. 219—37.

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Johnson, Wayne W., K. H. Kimball, and D. E. Douglass, to United States of America, Navy. CO_2 scrubber. 3,042,-497, 7–3–62, Cl. 23—260.
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Joly, Robert, and J. Warnant, to Roussel-UCLAF, S.A. Process for making esters of substituted polyhydronaphthalene acids. 3,042,707, 7–3–62, Cl. 260—468.
Jones, Griffin L.: *See*—
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Jones, Harold A., and F. J. Schmidt, to American Machine & Foundry Co. Bowling ball stop mechanism. 3,042,403, 7–3–62, Cl. 273—47.
Jones, Loren C., to McGraw-Edison Co. Coil for electrical rotating machine. 3,042,743, 7–3–62, Cl. 174—120.
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Zorgdrager, Maurrice M., and Jones. 3,042,057.
Jordan, John S., to North Electric Co. Relay. 3,042,775, 7–3–62, Cl. 200—104.
Joseph, Jean E. Stretchable garment for infants. 3,041,625, 7–3–62, Cl. 2—80.
Josephson, Vernal, to Space Technology Laboratories, Inc. Switch. 3,042,828, 7–3–62, Cl. 313—214.
Judge, Thomas J., to General Railway Signal Co. Broken down joint protection for switch lock release track circuits. 3,042,799, 7–3–62, Cl. 246—41.
Judkins, Edwin R., to Borg-Warner Corp. Pumps. 3,041,-974, 7–3–62, Cl. 103—4.
Just, Richard, and A. Waly, to Specialty Engineering & Electronics Co. Radiation detectors. 3,042,802, 7–3–62, Cl. 250—83.
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Buttery, Kenneth T., and Rice. 3,042,244.
Kadlec, Ladislav, to Avien, Inc. Means for sampling a plurality of D.C. signals. 3,042,866, 7–3–62, Cl. 324—117.
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Kali-Chemie Aktiengesellschaft: *See*—
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Wolfram, Arthur, Kaltenhäuser, Lorenz, and Relken. 3,042 483.
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Kaplan, Benjamin B., to Albi Mfg. Co., Inc. Method of treating a casting mold and the treated mold. 3,042,541, 7–3–62, Cl. 117—5.1.
Kaplin, Charles I., and E. W. Mylius, to Standard Bag Co. Machine for making cloth bags. 3,041,987, 7–3–62, Cl. 112—10.
Karmaxin, John. Heat exchanger construction. 3,042,380, 7–3–62, Cl. 257—148.
Kasey, Robert A., Jr., to E. I. du Pont de Nemours and Co. Warp knit fabric. 3,041 861, 7–3–62, Cl. 66—195.
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Keller, Arthur C., R. L. Peek, Jr., C. Schneider, and C. F. Spahn, Jr., to Bell Telephone Laboratories, Inc. Relay. 3,042,773, 7–3–62, Cl. 200—104.
Kelley, Donald E., W. H. Moll, S. L. Parsons, and G. F. Pascale, to Philco Corp. Thickness modifying apparatus. 3,042,603, 7–3–62, Cl. 204—228.
Kelley, Oliver K., to General Motors Corp. Combination disk and drum vehicle braking system. 3,042,155, 7–3–62, Cl. 188—264.
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Sechrist, Clifton N., Jennings, and Kelly. 3,042,730.
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Kendall, Hugh C., J. H. Auer, Jr., N. A. Bolton, and K. H. Frielinghause, to General Railway Signal Co. Object or vehicle detection systems. 3,042,303, 7–3–62, Cl. 235—99.
Kendall, Hugh C., J. H. Auer, Jr., N. A. Bolton, and K. H. Frielinghaus, to General Railway Signal Co. Ultrasonic vehicle detection system. 3,042,899, 7–3–62, Cl. 340—38.
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Keskkula, Henno, and A. A. Pettis, to The Dow Chemical Co. Polystyrene stabilized with methyl methacrylate. 3,042,-654, 7–3–62, Cl. 260—45.85.
Keszler, Ernest. Inside vernier measuring device. 3,041,731, 7–3–62, Cl. 33—143.
Kidger, David P., to Swift & Co. Shortening emulsifier and method for preparing the same. 3,042,530, 7–3–62, Cl. 99—118.
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McCrory, Rollin J., King, and Conklin. 3,042,010.
King, Rupert W., to Ibis Enterprises Ltd. Method and apparatus for depositing continuous roving. 3,042,567, 7–3–62, Cl. 156—38.
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Kinney, Selwyne P. 3,042,362.
Kinney, Selwyne P., to S. P. Kinney Engineers, Inc. Butterfly valve. 3,042,362, 7–3–62, Cl. 251—306.
Kirk, Joseph R., to Atwood Vacuum Machine Co. Preloaded ball bearing seat slide construction. 3,042,458, 7–3–62, Cl. 308—3.8.
Kirkpatrick, Willard H., and V. L. Seale, to Nalco Chemical Co. Processes for breaking petroleum emulsions. 3,042,-625, 7–3–62, Cl. 252—342.
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Knights, Richard N., to Dowty Rotol Ltd. Make-up and break-out mechanism for drill pipe joints. 3,041,901, 7–3–62, Cl. 81—53.
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Knudsen, Allan C., to General Motors Corp. Testing apparatus for bearings. 3,041,867, 7–3–62, Cl. 73—9.

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Konrad, Léon, to Usines Tornos, Fabrique de machines Moutier S.A. Automatic lathe. 3,041,904, 7–3–62, Cl. 82—2.7.

Konrad, Léon, to Usines Tornos, Fabrique de machines Moutier S.A. Feeding mechanism for automatic lathes. 3,042,251, 7–3–62, Cl. 221—81.

Konrad, Léon. Feeding mechanism for automatic lathes. 3,042,252, 7–3–62, Cl. 221—81.

Kool, Earl R., C. F. Harjes, and J. S. Glikison, to Corn Products Co. Treatment and use of enzymes for the hydrolysis of starch. 3,042,584, 7–3–62, Cl. 195—31.

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Duinker, Simon, and Koorneef. 3,042,758.

Kopf, Rowland J.: *See*—
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Koppers Co., Inc.: *See*—
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Van Ackeren, Joseph, and Helm. 3,042,590.

Kordesch, Karl, to Union Carbide Corp. Anodes for alkaline cells. 3,042,732, 7–3–62, Cl. 136—30.

Kosenkranius, Hans Water-soluble protein from fish air bladder and infant colic treatment therewith. 3,042,583, 7–3–62, Cl. 167—74.

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Kotecki, Stanley F., to Cyclo-Magic, Inc. Welding method and apparatus. 3,042,787, 7–3–62, Cl. 219—60.

Koulikovitch, Miron, to Societe Genevoise d'Instruments de Physique. High precision reading device. 3,042,804, 7–3–62, Cl. 250—206.

Krafft, Frederich B., and F. K. Roberts, to Anaconda Wire and Cable Co. Packaging wire. 3,042,336, 7–3–62, Cl. 242—83.

Kramer, Hyman. Web-to-tube fastenings. 3,042,113, 7–3–62, Cl. 160—404.

Kranz, Peter, to General Electric Co. Evaporative cooler. 3,041,978, 7–3–62, Cl. 103—103.

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Elssmann, Oswald E., and Krohne. 3,042,454.

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Kuhrt, Friedrich, and K. Maaz, to Siemens-Schuckertwerke Aktiengesellschaft. Magnetic-field responsive resistance device. 3,042,887, 7–3–62, Cl. 338—32.

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Ladymon, Toni: *See*—
Cole, Herman L. 3,042,396.

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Lamy, Armand, 50% to U. Boisvert. Disintegrating and feeding means for snow blowers. 3,041,749, 7–3–62, Cl. 37—43.

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Laszlo, Charles J. Fish lure. 3,041,772, 7–3–62, Cl. 43—42.06.

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Leal, Bernardine J., and P. J. Pinto, to Leslie Salt Co. Method of making a compressed tablet. 3,042,531, 7–3–62, Cl. 99—141.

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Leslie, Donald J. Electrical circuit arrangement for complex wave generators. 3,041,910, 7–3–62, Cl. 84—1.22.

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Lewis, Richard G., to Birwelco Ltd. Apparatus for performing repetitive operations automatically upon the periphery of a cylindrical tube or the like. 3,042,793, 7–3–62, Cl. 219—103.

Libby, William H., to Minnesota Mining and Mfg. Co. Process for producing polyethyleneurea. 3,042,658, 7–3–62, Cl. 260—77.5.

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Light, Bert. Collars for shirts. 3,041,626, 7–3–62, Cl. 2—131.

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Liljeberg, Martin J., deceased; E. I. Liljeberg, executrix. Locking screw with expanding means at each end. 3,042,094, 7–3–62, Cl. 151—31.

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Liversidge, Thomas K., and H. Lingenfelder. Toy monorail trolley systems. 3,041,983, 7–3–62, Cl. 104—93.

Livingston, Emmett D. Steel and aluminum pulley block. 3,042,374, 7–3–62, Cl. 254—134.3.

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Lloyd, William A., and R. Zaphiropoulos, to Varian Associates. Improved vacuum pumps. 3,042,824, 7–3–62, Cl. 313—7.

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Schmitz, William F., Griffith, and Long. 3,042,392.

Lopez, Orlando. Motor vehicle headlight construction and polarized glasses used therewith. 3,042,827, 7–3–62, Cl. 313—112.

Lorenz, Albert, to W. C. Heraeus G.m.b.H. Vacuum pump with gas ballast device. 3,042,292, 7–3–62, Cl. 230—207.

Lorenz, Harald: *See*—
Wolfram, Arthur, Kaltenhauser, Lorenz, and Reiken. 3,042,483.

Lorenz, Ray, to Sperry Rand Corp. Multivibrators with particular input circuits. 3,042,812, 7–3–62, Cl. 307—88.5.

Louden Machinery Co., The: *See*—
Mayer, Wilbur. 3,042,761.

Lovette, Edd H., 25% to H. O. Teer, Jr., and 25% to M. T. Barringer. Hopper gate apparatus and control. 3,042,261, 7–3–62, Cl. 222—70.

Lo Vico, Salvatore A. Utility bag with removable lining. 3,041,638, 7–3–62, Cl. 5—344.

Lowther, Alexander C. Means for filing and handling phonograph records. 3,042,469, 7–3–62, Cl. 312—13.

Lubin, Marvin, to Hupp Corp. Photocell assembly for reading punched records. 3,042,806, 7–3–62, Cl. 250—211.

Lucien, René, to Societe a responsabilite limitee: Recherches Etudes Production R.E.P. High output differential electromagnetic valve. 3,042,058, 7–3–62, Cl. 137—82.

Ludowici, J. C., & Son Ltd.: *See*—
Ludowici, Richard E., Lukins, and Simmons. 3,042,568.

Ludowici, Richard E., W. E. Lukins, and R. E. Simmons, to J. C. Ludowici & Son Ltd. Method and apparatus for the manufacture of laminated fabric belting. 3,042,568, 7–3–62, Cl. 156—137.

Lukawsky, Michael. Emergency brake and anti-skid device. 3,042,150, 7–3–62, Cl. 188—4.

Lukins, Warwick E.: *See*—
Ludowici, Richard E., Lukins, and Simmons. 3,042,568.

Lundahl, Ossian: *See*—
Ensign, George G., Soper, and Lundahl. 3,041,819.

Lundstrom, Oscar C., and D. K. Yee, to Hughes Aircraft Co. Microwave means. 3,042,886, 7–3–62, Cl. 333—98.

Lutts, William M., Sr. Readily movable railway switch. 3,042,348, 7–3–62, Cl. 246—453.

Lyle, James W., to Union Carbide Corp. Making spheroidal powder. 3,041,672, 7–3–62, Cl. 18—47.3.

Lynch, John P., F. W. Osborn, and E. L. Hessler, to Black, Sivalls & Bryson, Inc. Apparatus for applying gaskets to washers. 3,042,560, 7–3–62, Cl. 154—1.5.

Lyon Inc.: *See*—
Lyon, George A. 3,042,453.

Lyons, Donald N. Flush cutting portable rotary saw with flush guard. 3,042,089, 7–3–62, Cl. 143—159.

Lyon, George A., to Lyon Inc. Wheel cover. 3,042,453, 7–3–62, Cl. 301—37.

MHD Research, Inc.: *See*—
Orbach, Harry K. 3,042,830.

Maas, Hermann: *See*—
Armbruster, Werner, and Maas. 3,042,510.

Maaz, Karl, to Siemens-Schuckertwerke Aktiengesellschaft. Hall-voltage generator. 3,042,854, 7–3–62, Cl. 323—94.

Maaz, Karl: *See*—
Kuhrt, Friedrich, and Maaz. 3,042,887.

MacDonald, Alexander T.: *See*—
Booth, Richard H., and MacDonald. 3,042,307.

MacDonald, E. Douglas: *See*—
Carbonara, Victor E., and MacDonald. 3,042,296.

Macdonald, Herbert G., D. J. Barbour, and K. M. Claus, to The Mosaic Tile Co. Multiple unit ceramic tile assembly. 3,041,785, 7–3–62, Cl. 50—268.

Machinecraft, Inc.: *See*—
Butler, Richard K. 3,041,677.
Butler, Richard K. 3,042,340.

Maciejczak, Robert B. Billet turner. 3,042,226, 7–3–62, Cl. 214—1.

MacIsaac, John T., Jr., and C. B. Sumpter, Jr., to Fieldcrest Mills, Inc. High speed carpet loom and method of weaving. 3,042,081, 7–3–62, Cl. 139—46.

MacShane, William L.: *See*—
Glatt, Jack E. 3,041,917.

Madden, James E.: *See*—
Newell, W. J., and Madden. 3,042,537.

Mader, Albert C.: *See*—
Van Tuyl, John E. 3,042,071.

Magg, Alfred, to Zahnradfabrik Friedrichshafen Aktiengesellschaft. Retainer for ball bearings. 3,042,459, 7–3–62, Cl. 308—6.

Mahoney, Robert J., to Barber-Colman Co. Spooler type winder. 3,042,328, 7–3–62, Cl. 242—35.6.

Majewski, Alfred E., to General Motors Corp. Idle speed increasing device. 3,042,134, 7–3–62, Cl. 180—77.

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Lawson, George I. 3,042,846.

Malone, James P.: *See*—
Falzone, Joseph S. 3,042,014.

Mandrolan, Harold: *See*—
Hamilton, Robert C., and Mandrolan. 3,042,836.

Mangis, Elmer F. Stone facing machine. 3,042,018, 7–3–62, Cl. 125—23.

Manivannan, Krishnan: *See*—
Chipalkatti, Vasant B., and Manivannan. 3,042,480.

Mankowich, Ivan, F. P. Chiavetta, and R. A. Chartier, to United States Rubber Co. Polymerization of monoolefins in the presence of comminuted vulcanized rubber. 3,042,634, 7–3–62, Cl. 260—4.

Marder, Michael. Bind operated music box. 3,041,911, 7–3–62, Cl. 84—94.

Marelli S.p.A., Fabbrica Italiana Magneti: *See*—
Alfieri, Giuseppe. 3,042,153.
Alfieri, Giuseppe. 3,042,456.
Zavattaro, Mario. 3,042,913.

Margaroli, John L.: *See*—
Hesse, Earl J., and Margaroli. 3,042,093.

Maring, Walter D. Composition and a method for treating molten metals. 3,042,484, 7–3–62, Cl. 23—14.

Mark, Andre. Pneumatically acting driers. 3,041,737, 7–3–62, Cl. 34—57.

Markland, Harold A.: *See*—
Ensign, Westley L., and Markland. 3,042,335.

Marrable, Christopher D.: *See*—
Howard, Harold T., and Marrable. 3,042,683.

Marsh, Glenn A.: *See*—
Schaschl, Edward, and Marsh. 3,041,868.

Marsh, Glenn A., and E. Schaschl, to The Pure Oil Co. Apparatus for measuring crevice corrosion. 3,042,863, 7–3–62, Cl. 324—71.

Marshall, John G.: *See*—
Hildon, Anthony M., and Marshall. 3,042,488.

Marshall, Preston F., to The Kendall Co. Process and apparatus for making novelty yarn. 3,041,812, 7–3–62, Cl. 57—6.

Marshall, Wilfred J., and J. B. Horvay, to General Electric Co. Vacuum forming apparatus. 3,041,669, 7–3–62, Cl. 18—19.

Martelly, Julien, to Commissarint a l'Energie Atomique, Etablissement Public. Method and apparatus for the investigation of neutron propagating media. 3,042,803, 7–3–62, Cl. 250—83.1.

Martens, Charles R., to The Sherwin-Williams Co. Polymerizable composition containing unsaturated polyester, an acrylic ester, a monovinyl benzene and a vinyl ester of an alkyl carboxylic acid. 3,042,651, 7–3–62, Cl. 260—45.4.

Martin, Hollinshead T., and R. H. Laughlin, to Signode Steel Strapping Co. Feeding device. 3,042,282, 7–3–62, Cl. 226—190.

Martin-Marietta Corp.: *See*—
Cooke, Conrad H., and Hill. 3,042,343.
Higginbotham, John W. 3,042,875.

Marzocchi, Alfred, and G. E. Rammel, to Owens-Corning Fiberglas Corp. Yarns of staple glass fibers and compositions and methods for manufacturing same. 3,042,544, 7-3-62, Cl. 117—72.

Maschinenfabrik Heid Aktiengesellschaft: *See*—
Tschirf, Ludwig, Gärtner, and Janovsky. 3,042,170.

Masland, C. H., & Sons: *See*—
Hankins, Kenneth E. 3,042,504.

Massengale, John T., and F. C. Bender, to American Viscose Corp. Novolak and method of manufacture thereof. 3,042,655. 7-3-62, Cl. 260—51.

Massey-Ferguson Inc.: *See*—
Elfes, Lee E. 3,041,884.

Masters, George R., ¼ to L. F. Hardin, F. G. Cross, M. D. Woody, and N. H. Conder. Football practice gear. 3,042,404. 7-3-62, Cl. 273—55.

Mathes, Wilhelm, and A. Wolf, to Dr. F. Raschig G.m.b.H. Preparation of diphenyl-pyridyl- and diphenyl-quinolylmethanes. 3,042,678, 7-3-62, Cl. 260—283.

Mathues, Thomas O., G. W. Beck, R. C. Davis, and R. W. Forward, to General Motors Corp. Vehicle instrument and dashboard assemblies. 3,042,137, 7-3-62, Cl. 180—90.

Mattox and Moore, Inc.: *See*—
Mattox, William E. 3,042,525.

Mattox, William E., to Mattox and Moore, Inc. Mass hormonization of meat-producing animals. 3,042,525, 7-3-62, Cl. 99—2.

Mauldin, Joseph B. Air-supported shelters. 3,042,051, 7-3-62, Cl. 135—1.

Maunoury, Francois M. L.: *See*—
Bertin, Jean H., Bauger, Kadosch, and Maunoury. 3,041,823.

Maurice, Jean, and M. Rist, to Societe Anonyme Francaise du Ferodo. Electromagnetic clutches. 3,042,164, 7-3-62, Cl. 192—84.

Maurice, Paul E., to Heatbath Mfg. Co., Inc. Space heater. 3,042,020, 7-3-62, Cl. 126—110.

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Hestop, Robert N., Legg, Mawson, Stephen, and Wardleworth. 3,042,475.

May, George A. Inverted drilling machine. 3,041,896, 7-3-62, Cl. 77—33.5.

May, Richard D., to Electric Regulator Corp. Switch assembly. 3,042,768, 7-3-62, Cl. 200—81.9.

Mayer, Wilbur, to The Louden Machinery Co. Current collector for electrified trolley systems. 3,042,761, 7-3-62, Cl. 191—59.1.

Mayes, Fred M., to Sun Oil Co. Metering meags. 3,042,258, 7-3-62, Cl. 222—26.

Maynard, John T., to A. O. Smith Corp., Motor pump construction. 3,041,976, 7-3-62, Cl. 103—87.

McCarthy, Paul R.: *See*—
Halter, Robert E., McCarthy, and McGrath. 3,042,614.

McCarvell, John H., and W. C. Carlisle. Revolving gauge connection. 3,041,880, 7-3-62, Cl. 73—420.

McCauley, John H., and S. Gavurnik, to Burroughs Corp. Indicator tube. 3,042,826, 7-3-62, Cl. 313—109.5.

McClintock, Burt: *See*—
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McConnell, John E. W., and C. P. Collier. Method of sterilization. 3,042,533, 7-3-62, Cl. 99—182.

McCoy, Val J.: *See*—
Johnson, Jarl A. 3,042,749.

McCrory, Rollin J., R. W. King, and R. M. Conklin, to The Battelle Development Corp. Fuel injector. 3,042,010, 7-3-62, Cl. 123—32.

McCullough, Jane F. Improved packaging material as an article of manufacture. 3,042,278, 7-3-62, Cl. 225—39.

McDevitt, James A., and B. C. Miller, to Continental Can Co., Inc. Plastic film tube former. 3,042,103, 7-3-62, Cl. 156—466.

McDougall, Daniel R.: *See*—
Batcheller, Kent J., and McDougall. 3,041,619.

McGauley, Patrick J. Recovery of elemental sulfur from sulfur bearing materials. 3,042,502, 7-3-62, Cl. 23—308.

McGrath, Joseph J.: *See*—
Halter, Robert E., McCarthy, and McGrath. 3,042,614.

McGraw-Edison Co.: *See*—
Czech, Clifford F. 3,041,864.
Henningsen, Erik. 3,042,546.
Jones, Loren C. 3,042,743.
Pertiet, Andrew L. 3,042,777.

McInroy, John, to The Hymatic Engineering Co. Ltd. Hygrometers. 3,041,878, 7-3-62, Cl. 73—335.

McIntyre, Roy L. Portable electric puff irons. 3,041,758, 7-3-62, Cl. 38—99.

McKee, Ernest N.: *See*—
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McKiernan-Terry Corp.: *See*—
Kupka, John J. 3,041,839.

McKinney, Ted. Road paver. 3,041,945, 7-3-62, Cl. 94—46.

McLamore, William M.: *See*—
Lombardino, Joseph G., McLamore, and Laubach. 3,042,671.

McLean, Murray G., S. R. Orth, and W. Doble, to Jabsco Pump Co. Pump with releasable end cover. 3,041,979, 7-3-62, Cl. 103—117.

McManis, Louis B., to Dresser Industries, Inc. Two channel phase modulation. 3,042,754, 7-3-62, Cl. 179—100.2.

McMinn, Robert E.: *See*—
Barra, Frank J., Chaple, and McMinn. 3,041,876.

McMurray, Paul H., and J. M. Haggard, to A. O. Smith Harvestore Products, Inc. Farrowing equipment. 3,042,000, 7-3-62, Cl. 119—20.

McNinch, Delmar D., to Lawrence Brothers, Inc. Adjustable door hanger. 3,041,657, 7-3-62, Cl. 16—105.

Mead Johnson & Co.: *See*—
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Mechanism Ltd.: *See*—
Grandidge, John E. 3,041,879.

Medford, Erakin L., Jr.: *See*—
Sharp, Frank W., and Medford. 3,042,116.

Mechanite Metal Corp.: *See*—
Moore, William H. 3,042,512.

Meier, Jean: *See*—
Allais, André, and Meier. 3,042,685.

Meier-Windhorst, August. Nozzle arrangement for drying and heat-treatment plants for web material. 3,041,739, 7-3-62, Cl. 34—156.

Meindl, Peter: *See*—
Obendorf, Werner, and Meindl. 3,042,715.

Meisenheimer, Daniel T., and L. W. Syarto, to A. C. Gilbert Co. Selectively operable star finder. 3,041,742, 7-3-62, Cl. 35—43.

Mell-Hoffmann Mfg. Co.: *See*—
Lencioni, Julius J. 3,042,350.

Mellon, Charles A.: *See*—
Thomas, Howard M., and Mellon. 3,042,173.

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Merck & Co., Inc.: *See*—
Baumgarten, Werner, and Johnson. 3,042,587.
Rogers, Edward F., and Clark. 3,042,675.
Rogers, Edward F., and Clark. 3,042,677.
Rogers, Edward F., and Sarett. 3,042,676.
Schultz, Everett M., and Cragoe. 3,042,714.
Siegel, Malcolm, Palombe, and Baumgarten. 3,042,586.

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Jacobi, Ernst, and Erdmann. 3,042,579.

Metal Box Co. Ltd., The: *See*—
Stuchbery, Arthur L. 3,041,718.

Metallgesellschaft Aktiengesellschaft: *See*—
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Merian, Ernest, and C. Mueller, to Sandox Ltd. Process of dyeing and printing polyethylene glycol terephthalate fibers with disperse dyestuffs. 3,042,478, 7-3-62, Cl. 8—55.

Merila, John B. Match holder and dispenser. 3,042,190, 7-3-62, Cl. 206—20.

Mertler, Charles S., to Stevens Mfg. Co., Inc. Thermal-sensing unit. 3,042,783, 7-3-62, Cl. 219—37.

Merwin, Robert F. Magnetic separator with magnetic rubber element. 3,042,205, 7-3-62, Cl. 209—218.

Meyer, Fred J., Jr. Disappearing-type anchor. 3,042,161, 7-3-62, Cl. 189—90.

Meyer, Kurt: *See*—
Rausch, Hans, and Meyer. 3,042,390.

Michaels Art Bronze Co., Inc., The: *See*—
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Michaels, Frank L., to The Michaels Art Bronze Co., Inc. Display case construction. 3,042,158, 7-3-62, Cl. 189—36.

Michlin, William, to Philco Corp. Electrochemical method for cleansing semiconductive devices. 3,042,593, 7-3-62, Cl. 204—141.

Midgette, Ernst L., to Harris-Intertype Corp. Escapement control for typographical linecasting machines. 3,042,188, 7-3-62, Cl. 199—23.

Miehle-Goss-Dexter, Inc.: *See*—
Thumin, Carl. 3,042,760.

Mies, Carl P. Spraying device for liquid fertilizer. 3,042,266, 7-3-62, Cl. 222—180.

Miessner, Benjamin F., to The Wurlitzer Co. Electronic piano. 3,041,909, 7-3-62, Cl. 84—1.14.

Mikina, Stanley J., to Westinghouse Electric Corp. Compressor loaders-unloaders. 3,042,289, 7-3-62, Cl. 230—30.

Miles, John E., to Aer-Van Inc. Roof type aerating device. 3,041,956, 7-3-62, Cl. 98—55.

Miles Laboratories, Inc.: *See*—
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Boyle, Richard J., and Millonis. 3,042,669.

Millard, Raymond P.: *See*—
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Miller, Bonnie C.: *See*—
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Miller, John I. Automatic clutch kickout. 3,042,376, 7-3-62, Cl. 254—187.

Miller, Rolford D. Newspaper receptacle. 3,042,293, 7-3-62, Cl. 232—17.

Mills, Ivor W., H. C. Beck, and J. L. Jezl, to Sun Oil Co. Separation of esters of naphthalene. 3,042,708, 7-3-62, Cl. 260—469.

Minckler, Leon S., Jr.: *See*—
Cottle, Delmer L., Minckler, and Lemiszka. 3,042,662.

Mine Safety Appliances Co.: *See*—
Bub, Robert A. 3,042,213.

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Minister of National Defense, Her Majesty the Queen in right of Canada, as represented by the: *See*—
Clarke, Walter W. H. 3,042,916.

Minkow, Julius, to Red Rope Stationery Industries, Inc. Machine adaptable for use in the manufacture of one-piece expandable envelopes and other box forms. 3,041,944, 7-3-62, Cl. 93—49.

Minneapolis-Honeywell Regulator Co.: *See*—
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Lindemann, Arthur W. 3,042,060.
Pearson, Robert P. 3,042,908.

Minner, Willy, and H. Rinderle, to Telefunken G.m.b.H. High frequency transistor oscillator. 3,042,870, 7-3-62, Cl. 325—451.

Minnesota Mining and Mfg. Co.: *See*—
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Mite Corp.: *See*—
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Moffy, Edward K., to A. P. de Sanno & Son, Inc. Grinding wheel. 3,041,797, 7-3-62, Cl. 51—195.

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Money, Robert G. Locker unit. 3,042,470, 7-3-62, Cl. 312—198.

Monfardini, Louis P., to Florida Brace Co. Cervical collars. 3,042,026, 7-3-62, Cl. 128—75.

Monfardini, Louis P., to Florida Brace Corp. Cervical collars. 3,042,027, 7-3-62, Cl. 128—75.

Monigle, Charles W.: *See*—
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Beindorff, Arthur B., and De Witt. 3,042,646.
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Black, William B. 3,042,647.
Bray, John R. 3,042,781.
Bray, John R. 3,042,782.
Bromley, James E., and Hills. 3,041,706.
Coggeshall, Alva C. 3,042,481.
Cowell, Elmert E., and Darby. 3,042,644.
Follett, Archie E. 3,042,659.
Hahn, John H., and Quinn. 3,042,719.
Lamb, Douglas J., and Hills. 3,042,326.

Monsma, Shirley M. Footwear holding means. 3,041,743, 7-3-62, Cl. 36—1.

Monti, Anthony, and N. R. Pike, to American Molasses Co. Modified galactomannan gums and method of preparing same. 3,042,668, 7-3-62, Cl. 260—209.

Moody, Robert W.: *See*—
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Woolslayer, Joseph R., and Jenkins. 3,042,377.

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Moore, William H., to Meehanite Metal Corp. Wear resistant cast iron. 3,042,512, 7-3-62, Cl. 75—123.

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Morgan, Morris G.: *See*—
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Morris, George R. Drilling fluid. 3,042,607, 7-3-62, Cl. 252—8.5.

Morris, George R. Additive for a well servicing composition. 3,042,608, 7-3-62, Cl. 252—8.5.

Morris, John E.: *See*—
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Morris, William. Condiment holder. 3,042,085, 7-3-62, Cl. 141—353.

Mosaic Tile Co., The: *See*—
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Moser, Henry W., W. Grobman, and E. O. P. Eskilson, to Samuel M. Langston Co. Ink fountains for rotary printing presses. 3,041,968, 7-3-62, Cl. 101—365.

Mostik, John. Comb. 3,042,048, 7-3-62, Cl. 132—149.

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Muchnick, Paul, D. W. Tanner, N. Silver, and L. L. Helterline, Jr., to Raytheon Co. Voltage regulator. 3,042,848, 7-3-62, Cl. 321—19.

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Kirshenbaum, Isidor, Muessig, and Hill. 3,042,661.

Mulaskey, Bernard F., to California Research Corp. Cyclic endothermic reaction processes. 3,042,729, 7-3-62, Cl. 260—680.

Muller, Ernst, to Hydraulik G.m.b.H. Receiver for metal extrusion presses and like power-driven machines. 3,042,195, 7-3-62, Cl. 207—15.

Mullins, Ralph T.: *See*—
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Mulock, Lawrence E., and M. P. Albert, to International Business Machines Corp. Cathode ray tube printer. 3,041,947, 7-3-62, Cl. 95—4.5.

Murakami, Eizaburo. Automatic regulating valve. 3,042,073, 7-3-62, Cl. 137—495.

Murray Corp., The: *See*—
Schukraft, John W. 3,042,442.

Myers, Richard T., to General Electric Co. Tuned circuit filter. 3,042,885, 7-3-62, Cl. 333—76.

Myers, William H.: *See*—
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Mytton, Robert W., and P. E. Stello, to Hughes Aircraft Co. Processing semiconductor material. 3,041,690, 7-3-62, Cl. 22—216.5.

NSU Motorenwerke Aktiengesellschaft: *See*—
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Nalco Chemical Co.: *See*—
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National Acme Co., The: *See*—
Hradek, Edward J., and Brown. 3,041,641.

National Cash Register Co., The: *See*—
Edwards, Walter G., Hudson, and Klein. 3,042,305.

National Co., Inc.: *See*—
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National Dairy Products Corp.: *See*—
Dragotta, Charles A., and Cereghino. 3,042,638.
Spiess, Newton E., Jr., and Sullivan. 3,042,526.

National Research Development Corp.: *See*—
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Navarro, Richard A. Battery terminals. 3,042,891, 7-3-62, Cl. 339—45.

Naydan, Bob N.: *See*—
Paradise, Ronald Y., and Naydan. 3,042,911.

Neal, James, to P. M. Fay. Ear ornament with three-point resilient support within the tragus, the anti-tragus and the anti-helix. 3,041,856, 7-3-62, Cl. 63—14.

Neely, William H., to Hoover Ball & Bearing Co. Method of bending tubular members. 3,042,099, 7-3-62, Cl. 153—2.

Nelson, Alfred R.: *See*—
Jankowiak, Erwin M., and Nelson. 3,042,665.

Nelson, Eugene L., to Tecumseh Products Co. Fuel supply means for engines. 3,042,013, 7-3-62, Cl. 123—73.

Nelson, James C., to Business Systems Inc. Document holder used with an accounting machine. 3,042,177, 7-3-62, Cl. 197—130.

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New England Vinegar Works, Inc., The: *See*—
Rowse, James A. 3,042,528.

Newcomb, Paul R. Automatic pilot for navigable craft. 3,041,995, 7-3-62, Cl. 114—144.

Newell, W. J., and J. E. Madden. Gypsum plaster. 3,042,537, 7-3-62, Cl. 106—110.

Newton, John D.: *See*—
Hall, Eddie T., Newton, and Wood. 3,042,304.

Newton, Roger T.: *See*—
Truman, John C., and Newton. 3,041,835.
Truman, John C., and Newton. 3,041,836.

Nicoll, Frederick H., to Radio Corp. of America. Electroluminescent device. 3,042,834, 7-3-62, Cl. 315—169.

Niederhoff, Otto, to Deutsche Edelstahlwerke Aktiengesellschaft. Method of treating workpieces by spark erosion. 3,042,789, 7-3-62, Cl. 219—69.

Niles, Phillip M.: *See*—
Cole, Eldon B., and Niles. 3,042,506.

Nippon Denkionkyo Kabushikikaisha: *See*—
Iwamura, Hiroshi. 3,042,753.

Nishizawa, Jun-ichi: *See*—
Watanabe, Yasushi, and Nishizawa. 3,042,844.

Nixon, Cleveland F.: *See*—
Curtis, Ralph J., and Nixon. 3,042,365.

Nobiltt, Harvey L. Separation and recovery of volatile sulphides from sulphide materials. 3,042,501, 7-3-62, Cl. 23—294.

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Nord Photocopy and Electronics Corp.: *See*—
Kron, Eugene. 3,042,795.

Nordberg Mfg. Co.: *See*—
Dorenbos, Richard E., and Tomka. 3,041,666.
Symons, Loren G. 3,042,322.

Nordell, Eugene C., to General Electric Co. Signal processing arrangement. 3,042,915, 7-3-62, Cl. 343—7.7.

Norman, George H. C., to The International Nickel Co., Inc. Apparatus for roasting sulfides. 3,042,498, 7-3-62, Cl. 23—277.

Norman Products Co.: *See*—
Campbell, Ned G. 3,042,769.

Norris, Leonard. Subsoiler. 3,042,118, 7-3-62, Cl. 172—1.

North Electric Co.: *See*—
Jordan, John S. 3,042,775.

North American Aviation, Inc.: *See*—
Etheridge, Frederick G. 3,042,344.

North American Philips Co., Inc.: *See*—
Aagaard, Einar A. 3,042,816.
Balder, Theodorus C. 3,042,792.
Boekhorst, Antonius. 3,042,879.
Duinker, Simon, and Koorneef. 3,032,758.
Gosslau, Wolf D. 3,042,869.
Hermes, Willem. 3,042,839.
Pannenborg, Anton E., and Calon. 3,042,883.
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La Fleur, Elphege D. 3,041,792.

Norton, Samuel H., to Thompson Ramo Wooldridge Inc. Method of making valve spring retainer locks. 3,041,715, 7-3-62, Cl. 29—417.

Norton, Samuel H., to Thompson Ramo Wooldridge Inc. Apparatus for making valve spring retainer locks. 3,042,100, 7-3-62, Cl. 153—64.

Norwood, Donald W. Device utilizing a light valve actuated by a light acceptance unit. 3,041,928, 7-3-62, Cl. 88—23.

Norwood, Donald W. Light valve structure. 3,041,929, 7-3-62, Cl. 88—23.

Nowak, Herman P., to Raytheon Co. Vibratory sorting apparatus. 3,042,200, 7-3-62, Cl. 209—99.

Nunn, Robert N. Water line freezing device. 3,041,850, 7-3-62, Cl. 62—293.

Nutting Truck and Caster Co.: *See*—
Bauman, Henry J. 3,042,384.

Nystrand, Ernst D., to Paper Converting Machine Co., Inc. Cylinder support and moving means printing mechanism. 3,041,967, 7-3-62 Cl. 101—182.

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Phillips, Clifford F., and Stultz. 3,041,711.

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Ollia, Edwin R. Combined clamp and article holder. 3,041,692, 7-3-62, Cl. 24—3.

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Foster, Harry C. 3,041,970.
Foster, Harry C. 3,041,971.
Fried, Josef, and Herz. 3,042,690.
Gilman, Charles B., and De Caro. 3,041,906.
Henning, Robert W., Pfaff, and Kopf. 3,041,616.

Oliveau, John V., to Aerotec Industries, Inc. Pressure switch. 3,042,771, 7-3-62, Cl. 200—83.

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Olstowski, Franciszek, and J. D. Watson, to The Dow Chemical Co. Preparation of fluoroform. 3,042,727, 7-3-62, Cl. 260—653.

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Onderzoekingsinstituut Research, N.V.: *See*—
Jibben, Bart P. 3,042,653.

Optische Industrie de Oude Delft, N.V.: *See*—
Boersma, Sipko L. 3,042,805.

Orbach, Harry K., to MHD Research, Inc. Method and apparatus for effecting gas-stabilized electric arc reactions. 3,042,830, 7-3-62, Cl. 313—231.

Ordorica, Miguel A., to Willys Motors, Inc. Independent wheel suspension. 3,042,133, 7-3-62, Cl. 180—43.

O'Rear, J. D. Game apparatus. 3,042,400, 7-3-62, Cl. 273—1.

Orenberg, Arthur, to National Co., Inc. Frequency control apparatus for an atomic beam tube. 3,042,878, 7-3-62, Cl. 331—3.

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De Nora, Vittorio. 3,042,602.

Orth, Stephan R.: *See*—
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Otto, Carl. Coke oven construction. 3,042,589, 7-3-62, Cl. 202—139.

Ouellette, Ernest. Fishing line fastener. 3,041,695, 7-3-62, Cl. 24—126.

Outboard Marine Corp.: *See*—
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Owren, Harvey M., to Abtronics, Inc. High-sensitivity cathode-ray tube. 3,042,832, 7-3-62, Cl. 315—18.

Oyler, Herbert J. Means for barbecuing meat. 3,041,959, 7-3-62, Cl. 99—260.

Ozaki, Asaichiro: *See*—
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Paabo, George, to Fine Chemicals of Canada Ltd. Hydroxyalkyl-aminoacetyl xylidides. 3,042,720, 7-3-62, Cl. 260—562.

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Packard, George B., and C. W. Monigle, to Barco Mfg. Co., Inc. Regulatable fluid mixing and spraying device. 3,042,314, 7-3-62, Cl. 239—347.

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Palladino, Frank, to Precision Coin Devices, Inc. Electric timing mechanism. 3,042,762, 7-3-62, Cl. 200—38.

Palmer, Jessie H. Refrigerated garbage storage device. 3,041,852, 7-3-62, Cl. 62—334.

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Getzin, Allan R., and Palmore. 3,041,807.

Palombo, Gabriel: *See*—
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Paluszkiewicz, Richard S., and E. P. Geyer, to Pioneer Specialty Co. Telescopic antenna. 3,042,416, 7-3-62, Cl. 277—30.

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Pannenborg, Anton E., and A. E. M. Calon, to North American Philips Co., Inc. Frequency wave-filter. 3,042,883, 7-3-62, Cl. 333—10.

Pantas, Leo J., to The Yale and Towne Mfg. Co. Escutcheon plate. 3,041,720, 7-3-62, Cl. 29—556.

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Papineau, Milton D. Passive wave propagation direction indicator. 3,042,897, 7-3-62, Cl. 340—6.

Papke, Friedrich, to Voigtlander A.G. Block type albada finder with curved picture frame. 3,041,918, 7-3-62, Cl. 88—1.5.

Papo, Maurice: *See*—
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Paradise, Ronald Y., and B. N. Naydan, to General Precision, Inc. Digital to analog converter. 3,042,911, 7-3-62, Cl. 340—347.

Pariser, Rudolph, and R. D. Souffie, to E. I. du Pont de Nemours and Co. Elastomeric composition comprising a benzene-soluble chloroprene polymer and a benzene-insoluble radiation cross-linked chloroprene polymer. 3,042,652, 7-3-62, Cl. 260—45.5.

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Park, Donald M., to Park-Baker Electronic Development Corp. Position responsive potential divider. 3,042,888, 7-3-62, Cl. 338—44.

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Parsons, C. A., & Co. Ltd.: *See*—
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Edwards, Harry, Partridge, Shanks, and Wilcock. 3,042,311.

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Paschke, Hanns-Dieter: *See*—
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Paul, Theodore R. Method of making an unwoven fibrous tape. 3,042,569, 7-3-62, Cl. 156—166.

Payton, Edwin M., and J. W. Slover, to Phillips Petroleum Co. Catalytic conversion of hydrocarbon oils with the use of different types of feed oils. 3,042,196, 7-3-62, Cl. 208—113.

Pearce, Edwin S., to Railway Service and Supply Corp. Journal lubricating pad. 3,042,466, 7-3-62, Cl. 308—243.

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Clark, John R. 3,042,711.
Haus, Joseph B., and Price. 3,042,706.

Pennington, Neal A. Universal air conditioner. 3,042,383, 7-3-62, Cl. 257—281.

Péras, Lucien, to Regie Nationale des Usines Renault. Removably mounting clusters of superposed fusible patterns about a disposable central rod. 3,041,689, 7-3-62, Cl. 22—196.

Péras, Lucien, to Regie Nationale des Usines Renault. Single control of direct or automatic braking systems of the compressed air type, notably for railways. 3,042,455, 7-3-62, Cl. 303—26.

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Peterson, Adolphe C. High or low compression injection fuel system. 3,042,015, 7-3-62, Cl. 123—119.

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Green, Franklin H. 3,041,664.

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Steele, Martin C. 3,042,853.
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Ranoha, Stephen, and B. H. Schallinger. Artificial trees. 3,041,767, 7-3-62, Cl. 41—15.

Rantsch, Kurt, to M. Hensoldt & Sohne Optische Werke A.G. Optical device for a correct adjustment and reading of the slidable displacement of a carriage in a machine. 3,041,922, 7-3-62, Cl. 88—14.

Raschig, Dr. F., G.m.b.H.: *See*—
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Rasmussen, George E., to Acme Steel Co. Pallet rack. 3,042,221, 7-3-62, Cl. 211—148.

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Rausch, Hans, and K. Meyer, to Metallgesellschaft Aktiengesellschaft. Seals for the gas hoods of sintering machines. 3,042,390, 7-3-62, Cl. 266—21.

Ray, Chester A., to Overton Machine Co. Feed device for dehydrating machine. 3,041,738, 7-3-62, Cl. 34—112.

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Nowak, Herman P. 3,042,200.

Read, Thane. Bypass type insert plug for body passageway. 3,042,021, 7-3-62, Cl. 128—1.

Read, Thane. Spherical type insert plug for body passageway and tool therefor. 3,042,030, 7-3-62, Cl. 128—127.

Recherches Etudes Production R.E.P., Societe a responsabilite limitee: *See*—
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Reding, John N., Jr., to The Dow Chemical Co. Apparatus for condensation of a metal vapor. 3,042,511, 7–3–62, Cl. 75—67.

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Minkow, Julius. 3,041,944.

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Reed, Janet J. Patient release proof positioning means. 3,042,031, 7–3–62, Cl. 128—134.

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Reeh, Olaf. Apparatus for shielded arc welding. 3,042,791, 7–3–62, Cl. 219—75.

Reesby, Carl E., to Halliburton Co. Surface recording drill stem testing combination. 3,041,875, 7–3–62, Cl. 73—155.

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Adams, Pierrepont, and Knees. 3,042,639.

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Péras, Lucien. 3,042,455.

Reilly, Bertram B., to Dravo Corp. Incinerator plant and method. 3,041,986, 7–3–62, Cl. 110—10.

Reiman, Walter C., to The Braun Bros. Packing Co. Washing machine. 3,042,049, 7–3–62, Cl. 134—108.

Reinert, Richard. Exhaust muffler. 3,042,138, 7–3–62, Cl. 181—64.

Reinowski, Leonard E., H. B. Hindin, and R. D. Seeley, to United States Rubber Co. Puncture-sealant composition and tubeless pneumatic tire containing same. 3,042,098, 7–3–62, Cl. 152—347.

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Bray, Ray C., and Remillard. 3,041,769.

Remington Arms Co., Inc.: *See*—
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Renoux, Pierre E., to Cri-Dan. Thread cutting machine with means to engage feed screw means. 3,041,640, 7–3–62, Cl. 10—105.

Rentschler, Waldemar T., to Alfred Gauthier G.m.b.H. Photographic camera having automatic diaphragm setting. 3,041,948, 7–3–62, Cl. 95—10.

Repking, Edward F., to Crown Zellerbach Corp. Method of assembling multi-wall bulk pak shipping containers. 3,041,942, 7–3–62, Cl. 93—36.01.

Reuschel, Konrad, and N. Schink, to Siemens-Schuckertwerke Aktiengesellschaft. Process for re-using carrier body holders employed in the pyrolytic precipitation of silicon. 3,042,493, 7–3–62, Cl. 23—223.5.

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Reynard, C. G., Inc.: *See*—
Reynard, Chauncy G. 3,042,267.

Reynard, Chauncy G., to C. G. Reynard, Inc. Liquid dispensing device. 3,042,267, 7–3–62, Cl. 222—185.

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Roberts, Edwin E. Water ski towing gear. 3,041,996, 7–3–62, Cl. 114—235.

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Rodgers, Jack P. Rubber band shooting figure. 3,041,780, 7–3–62, Cl. 46—118.

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Coleman, Ralph A., and Rodgers. 3,042,624.

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Roebuck, Albert H., and J. B. Scott, to Continental Oil Co. Low fluid loss composition. 3,042,612, 7–3–62, Cl. 252—8.55.

Rogers, Edward F., and R. L. Clark, to Merck & Co., Inc. Imidazolium quaternary salts and methods of preparing same. 3,042,675, 7–3–62, Cl. 260—256.4.

Rogers, Edward F., and R. L. Clark, to Merck & Co., Inc. Thiazolium quaternary salts and methods of preparing same. 3,042,677, 7–3–62, Cl. 260—256.5.

Rogers, Edward F., and L. H. Sarett, to Merck & Co., Inc. Pyridinium quaternary salts and methods of preparing the same. 3,042,676, 7–3–62, Cl. 260—256.4.

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Rohm & Haas Co.: *See*—
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Rohner, Ernst, to Pretema A.G. Method for duplicating the dye of an original on a dye carrier. 3,042,476, 7–3–62, Cl. 8—25.

Rollat, Germain, to Societe Genevoise d'Instruments de Physique. Machine-tool or measuring machine. 3,041,895, 7–3–62, Cl. 77—4.

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Petrie, James A., and Bracey. 3,042,167.
Thomas, Samuel D., and Taylor. 3,041,830.
Wiles, William F., and Evans. 3,042,342.

Ronka, Vaino. Electromagnetic prospecting apparatus. 3,042,857, 7–3–62, Cl. 324—4.

Ropp, Walter S., to Hercules Powder Co. Compositions containing bis(3-methoxypropylidene) pentaerythritol. 3,042,630, 7–3–62, Cl. 260—2.

Rose, Glenn R., to General Mills, Inc. Programmed controller. 3,042,171, 7–3–62, Cl. 192—143.

Rosell, Axel, to Svenska Flaktfabriken, Aktiebolaget. Volume flow regulating device. 3,042,078, 7–3–62, Cl. 137—625.3

Rosen, George, to United States of America, Air Force. Dynamic analog speech synthesizer. 3,042,748, 7–3–62, Cl. 179—1.

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Rosinski, Edward J.: *See*—
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Ross, Hugh C., to Jennings Radio Mfg. Corp. Vacuum load-break switch. 3,042,766, 7–3–62, Cl. 200—62.

Ross, Wayne L.: *See*—
Cobb, John, Rice, Ross, and Sauer. 3,042,595.

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Peterson, Earl A., Tarika, and Rossen. 3,041,736.

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Penau, Henry, and Hagemann. 3,042,581.

Rowe, Brian H., to General Electric Co. Sealing mechanism. 3,042,364, 7–3–62, Cl. 253—39.

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Royal McBee Corp.: *See*—
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Rudow, Henry and M. 3,042,468.

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Ruskin, Henry, and A. Ciechanowski, to Swingline, Inc. Actuating mechanism. 3,041,618, 7–3–62, Cl. 1—106.

Ryan, James F., Jr.: *See*—
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Saam, Frank. Musical instrument bridge fitter. 3,041,794, 7–3–62, Cl. 51—185.

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Savage, Robert H., and M. Guarnier, to General Electric Co. Treated carbon brush. 3,042,822, 7–3–62, Cl. 310—228.

Saxl, Erwin J. Variable transformer control and indicating system. 3,041,874, 7–3–62, Cl. 73—136.

Scales, John T., and G. D. Winter, to National Research Development Corp. Dressing for wounds. 3,042,037, 7–3–62, Cl. 128—156.

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Gruber, Helmut, and Schidig. 3,042,731.

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Schnetzer, Alfred. Barrel jet cleaning machine. 3,041,786, 7–3–62, Cl. 51—9.

Schnetzer, Alfred, to Bell Intercontinental Corp. Blasting machine. 3,041,787, 7–3–62, Cl. 51—9.

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Scott, William P.: *See*—
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Kirkpatrick, Willard H., and Seale. 3,042,625.

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Sefton, Robert C., to Steel City Industries, Inc. Insulant coating comprising polyvinyl alcohol, asbestos, cement and aggregate. 3,042,681, 7–3–62, Cl. 260—29.6.

Segal, Samuel. Lock construction. 3,041,866, 7–3–62, Cl. 70—1.5.

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Shillington, Harry R., to Western Electric Co., Inc. Capacitance measuring and dielectric strength test set. 3,042,860, 7-3-62, Cl. 324—60.

Shimanckas, William J., to Outboard Marine Corp. Lubrication of a marine propulsion device. 3,042,146, 7-3-62, Cl. 184—6.

Shimizu, Akio. Automatic machine for grinding and polishing a surface of masonry. 3,041,793, 7-3-62, Cl. 51—180.

Shiu, Thomas B.: *See*—
Cummings, Thomas N., Peterson, and Shiu. 3,041,802.
Cummings, Thomas N., Peterson, and Shiu. 3,042,225.

Shoor, Bernard A., to Endevco Corp. Testing system and insulated mounting therefor. 3,042,744, 7-3-62, Cl. 174—138.

Shores, Jerry B. Hanger construction. 3,042,217, 7-3-62, Cl. 211—45.

Shri Ram Institute for Industrial Research: *See*—
Chipalkatti, Vasant B., and Muniyannan. 3,042,480.

Shubart, Harry S., to Emil J. Paidar Co. Barber chair arm structure. 3,042,451, 7-3-62, Cl. 297—422.

Shull, Frank T. Alarm equipped cabinet for fire extinguisher. 3,042,910, 7-3-62, Cl. 340—280.

Shur-Lok Corp.: *See*—
Kreider, David B., and Delgadillo. 3,041,912.

Sides, Wilmont L. Tree shaker. 3,041,811, 7-3-62, Cl. 56—328.

Sieben, Herschel J. Barrier wall for manhole construction. 3,041,838, 7-3-62, Cl. 61—41.

Siegel, Malcolm, G. Palombo, and W. Baumgarten, to Merck & Co., Inc. Purification of streptokinase. 3,042,586, 7-3-62, Cl. 195—66.

Siegel, Martin: *See*—
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Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Gutsche, Heinrich. 3,042,494.
Kuhrt, Friedrich, and Maaz. 3,042,887.
Maaz, Karl. 3,042,854
Reuschel, Konrad, and Schink. 3,042,493.

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Sievert, James A., to Ansul Chemical Co. Portable hand fire extinguisher. 3,042,117, 7-3-62, Cl. 169—31.

Siezen, Gerrit J., to North American Philips Co., Inc. Remote listening and control system. 3,042,750, 7-3-62, Cl. 179—2.

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Signode Steel Strapping Co.: *See*—
Cechner, Frank A., and Sterner. 3,041,961.
Martin, Hollinshead T., and Laughlin. 3,042,282.

Signorella, Albert. Ligature measuring device. 3,042,329, 7-3-62, Cl. 242—48.

Silen, Almer A. Portable collapsible fire escape device. 3,042,143, 7-3-62, Cl. 182—163.

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Muchnick, Paul, Tanner, Silver, and Helterline. 3,042,848.

Simjian, Luther G., to Universal Match Corp. Depository machine combined with camera means. 3,042,919, 7-3-62, Cl. 346—22.

Simjian, Luther G., to Universal Match Corp. Depository machine combined with camera means. 3,042,920, 7-3-62, Cl. 346—22.

Simmons, Harold C., to Parker-Hannifin Corp. Variable area valve. 3,042,317, 7-3-62, Cl. 239—453.

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Simons, Joseph: *See*—
Hadfield, Harry R., Ricketts, Simons, and Stephen. 3,042,477.

Simpson, Victor R., and T. W. Thompson, to International Business Machines Corp. Continuous type belt. 3,041,964, 7-3-62, Cl. 101—111.

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Six, Wilbur L.: *See*—
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Siegelmann, Dietrich E., to Bell Aerospace Corp. Jet propelled aquatic vehicle. 3,041,831, 7-3-62, Cl. 60—35.55.

Skinner Engine Co.: *See*—
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Sklar, Abe. Battery corrosion eliminator. 3,042,735, 7-3-62, Cl. 136—181.

Skrip, Frank J. Tire chain. 3,042,097, 7-3-62, Cl. 152—239.

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Slavich, Michael, to United States Gypsum Co. Method and apparatus for cleaning wood chips. 3,042,198, 7-3-62, Cl. 209—44.

Slavsky, Robert J., to Shaw & Slavsky, Inc. Movable merchandise indicator. 3,041,760, 7-3-62, Cl. 40—10.

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Smith, A. O., Harvestore Products, Inc.: *See*—
McMurray, Paul H., and Haggard. 3,042,000.

Smith, Aaron H., to Signal Mfg. Co. Dolly for cleaning apparatus with improved wheel bearings. 3,042,461, 7-3-62, Cl. 308—15.

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Smith, Charles H., to Flight Refueling Inc. Cable laying system. 3,042,385, 7-3-62, Cl. 258—1.2.

Smith, David F. Purification of caustic alkali by ion exchange. 3,042,491, 7-3-62, Cl. 23—184.

Smith, Donald P. Composite container. 3,042,285, 7-3-62, Cl. 229—51.

Smith, Elwood E. Shoe shine shoe holders. 3,041,642, 7-3-62, Cl. 12—53.7.

Smith, Frank P., to International Telephone and Telegraph Corp. Delay line circuitry for color television receivers. 3,042,873, 7-3-62, Cl. 329—192.

Smith, Lincoln E.: *See*—
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Smith, Louis B. Golf ball washer. 3,041,645, 7-3-62, Cl. 15—97.

Smith, Robert W., and R. A. Vaughan, to Dresser Industries, Inc. Vehicle-aligning apparatus. 3,042,309, 7-3-62, Cl. 238—14.

Smith, Ronald V., to J. E. Lonergan Co. Safety relief valve. 3,042,068, 7-3-62, Cl. 137—315.

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Societa Internazional Fonovisione: *See*—
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Societe Genevoise d'Instruments de Physique: *See*—
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Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
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Gelin, Paul. 3,041,829.
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Sockell, William J., Sr. Journal lubricator pad. 3,042,465, 7-3-62, Cl. 308—243.

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Spencer, Corwin N., and W. H. Myers, to The Firestone Tire & Rubber Co. White sidewall tire. 3,041,674, 7-3-62, Cl. 18—61.

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Spunt, Shepard A. Dielectric welding device. 3,042,101, 7-3-62, Cl. 156—380.

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Frey, Horst E. 3,042,656.
Jason, Emil F., and Fields. 3,042,722.
Lemmon, Norman E., and Sabol. 3,042,613.
Sechrist, Clifton N., Jennings, and Kelly. 3,042,730.

Standley, Henderson B. Motor vehicle seat head rest. 3,042,450, 7-3-62, Cl. 297—399.

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Steele, Martin C., to Radio Corp. of America. Semiconductor electrical apparatus. 3,042,853, 7-3-62, Cl. 323—94.

Steinberg, Harold E.: *See*—
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Strass, Herbert K., to United States of America, National Aeronautics and Space Administration. Motion picture camera for optical pyrometry. 3,041,924, 7-3-62, Cl. 88—16.

Strathearn, Donald M., to Controls Co. of America. Timer. 3,042,763, 7-3-62, Cl. 200—38.

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Mills, Ivor W., Beck, and Jesl. 3,042,708.

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Taccone, Russell W., to Taccone Corp. Dalphragm molding machine. 3,041,685, 7-3-62, Cl. 22—42.

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CLASSIFICATION OF PATENTS

ISSUED JULY 3, 1962

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 3, 1962 Volume 780 Number 1

TRADEMARKS

NOTICES

Annual Index of Patents

The 1961 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price: Buckram bound, $6.00.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 43,257 (STAR AND DESIGN), Kampfe Bros., Razors and razor-blades; **Reg. No. 43,258** (DESIGN OF THREE STARS), same; **Reg. No. 56,186** (STAR AND DESIGN), same; **Reg. No. 62,751** (DESIGN OF THREE STARS), same; **Reg. No. 62,752** (STAR AND DESIGN), same, Safety-razors, razor-blades and safety corn-knives; **Reg. No. 62,753** (DESIGN OF THREE STARS), same, filed Apr. 4, 1961, D.C., S.D.N.Y., Doc. 61/1208, *Philip Morris, Inc.* v. *Blu-Strike Blade Co., Inc.* Consent judgment; defendant enjoined July 6, 1961.

Reg. No. 43,258. (See Reg. No. 43,257.)
Reg. No. 56,186. (See Reg. No. 43,257.)
Reg. No. 62,751. (See Reg. No. 43,257.)
Reg. No. 62,752. (See Reg. No. 43,257.)
Reg. No. 62,753. (See Reg. No. 43,257.)

Reg. No. 163,955 (GLO), James H. Rhodes & Company, Steel wool in the form of blocks or pads for cleaning purposes, also on soap, filed Nov. 27, 1956, D.C., S.D.N.Y., Doc. 115/91, *The S.O.S. Company* v. *Kimball Chemical Products Corporation.* Cause dismissed for lack of prosecution June 24, 1959.

Reg. No. 311,230 (AMBASSADOR), Bloch Bros., Whisky; **Reg. No. 591,381** (AMBASSADOR AND DESIGN), Bloch Bros. (Distillers) Limited, same; **Reg. No. 655,928** (AMBASSADOR), Taylor and Ferguson Limited, Gin, filed Aug. 4, 1961, D.C., S.D.N.Y., Doc. 61/2768, *Taylor and Ferguson Limited* v. *Ambassador Liquors, Inc. et al.* Consent judgment; defendants enjoined; defendants' counterclaims dismissed with prejudice Jan. 4, 1962.

Reg. No. 327,807 (WARNER BROS. PICTURES, INC. AND DESIGN), Warner Bros. Pictures, Inc., Motion picture films which have records or sound, words and/or music thereon, etc.; **Reg. No. 391,866**, same; **Reg. No. 568,377** (WARNER COLOR), same, Motion picture photoplays, filed May 16, 1958, D.C., S.D.N.Y., Doc. 133/290, *Warner Bros. Records, Inc. et al.* v. *Warner Music, Inc.* Order enjoining defendant; discontinuance June 10, 1960.

Reg. No. 339,329 (DO-ALL), The DoAll Company, Combination bandsawing and filing machine; **Reg. No. 396,078**, same, Grinders of the machine tool type suitable for precision surface grinding, etc.; **Reg. No. 394,883**, same, Files, file segments, filebands, saws and saw bands; **Reg. No. 424,899** (DOALLOY),

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,359
Date of oldest new application	Sept. 18, 1961
Date of oldest amended application	Sept. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	9-18-61	9-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-17-61	11-20-61
Renewals (All Classes)	4-30-62	5-11-62
Sec. 12 (c) Publications (All Classes)	5-8-62	

Applications filed during the month of May 1962—2,420

Registrations Issued	387—No. 733,600 to No. 733,986
Renewals Issued	60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

same, Dies and cutting tools, etc.; **Reg. No. 429,124**, same, Powdered metal, carbonides, and unfinished and partly finished parts made of or with said materials; **Reg. No. 585,424** (DO ALL AND DESIGN), same, Steel ink, tool steel, electrical apparatus, machine tools, etc.; **Reg. No. 600,333**, same, Desk type staplers, saw pitching gages, etc.; **Reg. No. 610,668**, same, Saw pitching gages used for gaging the pitch of saw teeth, and steel rules; **Reg. No. 679,956**, same, Taps, reamers, end mills, cutters, counter bores, tool bits and slicing and dicing machines; **Reg. No. 679,957** (DO ALL AND DESIGN), same, Tool bits and lathe centers, slicing and dicing machines and precision lapping machines, **filed** Feb. 23, 1962, D.C., W.D. Mich. (Grand Rapids), Doc. 4276, *The DoAll Company v. Do-All Electric Service*. Decree enjoining defendant Apr. 19, 1962.

Reg. No. 357,933 (SPEED WALL), The Glidden Company, Ready mixed paint; **Reg. No. 635,422** (SPREAD-TONE), Rich-Coat Enamel and Varnish Corporation, Rubberized satin finish paint; **Reg. No. 644,058** (SPRED), The Glidden Company, Paints, semi-paste paint bases, etc., **filed** Oct. 9, 1958, D.C., S.D. Ind. (Indianapolis), Doc. 28–C–261, *The Glidden Company v. Rich-Coat Enamel and Varnish Corporation et al.* Order holding plaintiff's trademarks valid and infringed; defendant's Reg. No. 635,422 held invalid Aug. 4, 1960.

Reg. No. 357,933(a) (SPEED WALL), The Glidden Company, Ready mixed paint; **Reg. No. 644,058** (SPRED), The Glidden Company, Paints, semi-paste paint bases, etc., **filed** Oct. 9, 1958, D.C., S.D. Ind. (Indianapolis), Doc. 58c259, *The Glidden Company v. The Sargent-Gerke Co.* Order holding plaintiff's trademarks valid; defendant's Reg. No. 671,722 held invalid Aug. 4, 1960.

Reg. No. 390,678. (See Reg. No. 339,329.)

Reg. No. 391,866. (See Reg. No. 327,807.)

Reg. No. 394,883. (See Reg. No. 339,329.)

Reg. No. 424,899. (See Reg. No. 339,329.)

Reg. No. 429,144. (See Reg. No. 339,329.)

Reg. No. 502,315 (TONI), The Toni Company, Home permanent waving kit, etc.; **Reg. No. 525,770**, same, Creme hair rinse, **filed** Nov. 21, 1958, D.C., S.D.N.Y., Doc. 140/149, *The Gillette Company v. Ed Pinaud, Inc.* Stipulation and order of discontinuance Apr. 20, 1960.

Reg. No. 525,770. (See Reg. No. 502,315.)

Reg. No. 566,623. (See Reg. No. 163,955.)

Reg. No. 568,577. (See Reg. No. 327,807.)

Reg. No. 585,424. (See Reg. No. 339,329.)

Reg. No. 590,265 (OTTAVIA), Ottavia Incorporated, Curtains clips; **Reg. No. 603,070**, same, Textiles, comforters, curtains, bedspreads, etc., **filed** Mar. 22, 1957, D.C., S.D.N.Y., Doc. 118/356, *Ottavia, Inc. v. Kirsch Company*. Stipulation and order of dismissal July 1, 1957.

Reg. No. 591,381. (See Reg. No. 311,230.)

Reg. No. 600,333. (See Reg. No. 339,329.)

Reg. No. 603,070. (See Reg. No. 590,265.)

Reg. No. 610,668. (See Reg. No. 339,329.)

Reg. No. 635,422. (See Reg. No. 257,933.)

Reg. No. 644,329 (HYDROTHERM ETC.), Hook and Ackerman, Inc., Heating boilers, **filed** Dec. 4, 1957, D.C., S.D.N.Y., Doc. 127/260, *Hook & Ackerman Inc. v. Hook Manufacturing Co., Inc. et al.* Stipulation and order of discontinuance Sept. 11, 1958.

Reg. No. 655,928. (See Reg. No. 311,230.)

Reg. No. 668,633 (LEGO AND DESIGN), Legetojsfabriken Lego, Billund A/S, Toys; **3,005,282**, G. K. Christiansen, Toy building brick, **filed** Apr. 18, 1962, D.C., M.D. Pa. (Scranton), Doc. 7660, *The Interlego A.G. v. The Leslie-Henry Co., Inc. et al.*

Reg. No. 679,956. (See Reg. No. 339,329.)

Reg. No. 679,957. (See Reg. No. 339,329.)

Reg. No. 685,666 (CHEMSEARCH), National Disinfectant Company, Cleaning compositions for building floors and walls; **Reg. No. 725,504** (NATIONAL CHEMSEARCH AND DESIGN), National Chemsearch Corporation of Texas, Liquid dust mop treatment that fireproofs mops; disinfestants, etc.; **Reg. No. 725,717**, same, Detergents, solvent degreaser, glass cleaner, soap, antiseptic lotion cleaner and paint remover, **filed** Mar. 23, 1962, D.C., E.D. Mo. (St. Louis), Doc. 62–C–118(1), *National Chemsearch Corporation of Texas v. Chem-Search, Inc.* Consent judgment; injunction granted May 1, 1962.

Reg. No. 725,504. (See Reg. No. 685,666.)

Reg. No. 725,717. (See Reg. No. 685,666.)

Reg. No. 729,929 (MYSTIK), Mystik Adhesive Products, Inc., Pressure sensitive adhesive tapes and rubber and resin adhesives, **filed** Apr. 18, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c844, *Mystik Adhesive Products, Inc. v. Minnesota Mining & Manufacturing Co.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 99,947. Mueller Brass Co., Port Huron, Mich. Filed June 29, 1960.



For Plastic Injection Molded Parts and Plastic Extrusions.
First use Feb. 11, 1960.

SN 115,483. Jonas Bros., Inc., Denver, Colo. Filed Mar. 13, 1961.



For Furs and Pelts.
First use during 1908.
Subj. to Intf. with SN 105,286 and SN 105,287.

SN 124,065. Co-Operative Rose Growers, Inc., Tyler, Tex. Filed July 17, 1961.

NATIONAL BEAUTY

For Rose Bushes.
First use in October 1960.

SN 124,284. Oak Ridge Atom Industries, Inc., Oak Ridge, Tenn. Filed July 19, 1961.



For Lawn Grass Seed, Flower Seeds, Vegetable Seeds, Rooted Flowering Plants, Rooted Vegetable Plants, Bulbs, Trees, and Potting Soil.
First use Feb. 10, 1961.

SN 126,262. Riegel Paper Corporation, New York, N.Y. Filed Aug. 18, 1961.

MONOTHERM

For Laminated Material in Sheet or Strip Form Comprised of a Layer of Plastic Material Combined With One or More Layers of Metallic, Paper or Plastic Materials, for Use Particularly as an Intermediate in the Manufacture of Electronic and Electrical Components.
First use on or about Aug. 5, 1961.

SN 131,413. Southeastern Granite Operating Company, Inc., Elberton, Ga. Filed Nov. 6, 1961.

SUNRISE PINK

No claim is made to the word "Pink" apart from the mark as shown.
For Granite.
First use July 15, 1960.

SN 132,499. Charco-Nut, Inc., Omaha, Nebr. Filed Oct. 27, 1961.



For Charcoal Briquettes.
First use June 5, 1961.

SN 133,648. Excel-Mineral Company, Inc., Los Angeles, Calif. Filed Dec. 8, 1961.

TABBY'S TOILETTE

For Absorbent Materials for Use as an Animal Litter.
First use Nov. 2, 1961.

SN 133,714. Swift & Company, d.b.a. A. C. Lawrence Leather Co., Chicago, Ill. Filed Dec. 8, 1961.

KENTUCKY OAK

For Sole Leather.
First use on or about Nov. 16, 1935.

SN 133,723. Union Carbide Corporation, New York, N.Y. Filed Dec. 8, 1961.

UDEL

For Plastic Film and Sheeting.
First use on or about Nov. 6, 1961.

SN 134,240. Lockport Mills, Inc., Lockport, N.Y. Filed Dec. 18, 1961.

BIG VALUE

Owner of Reg. No. 393,267.
For Cotton Batting and Cotton Batts.
First use Oct. 30, 1935.

SN 134,313. General Foods Corporation, White Plains, N.Y. Filed Dec. 19, 1961.

UNICORE

For Core Binder Flour.
First use on or about Dec. 5, 1960.

SN 134,595. Societe Rhodiaceta, Paris, France. Filed Dec. 22, 1961.

KHEOPS

Owner of French Reg. No. 472,059, dated May 2, 1958 (Paris); Natl. Inst. No. 107,114.
For Natural and Synthetic Fibres, Hair, Bristles.

SN 134,630. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Dec. 26, 1961.

NIRAN

For Synthetic Rubber.
First use Nov. 29, 1961.

Class 2 — Receptades

SN 125,466. Clean-A-Bag Corporation of America, New York, N.Y. Filed Aug. 7, 1961.



Clean-A-Bag

No claim is made to the representation of the shopping bag apart from the mark as shown.
For Shopping Bags.
First use May 1, 1961.

SN 128,822. Ivers-Lee Company, Newark, N.J. Filed Sept. 28, 1961.

IL TWIST-OFF PAK

No rights to registration are claimed for the words "Twist-Off Pak" apart from the mark as shown.
For Envelope-Like Sealed Containers Made of Two Opposed Layers of Sheet Material Such as Cellophane, Metal Foil, or Rubber Hydrochloride, Thermoplastically Sealed Together To Form Compartments Simulating Different Objects, the Envelope-Like Sealed Containers Being Made and Filled by the Applicant for Manufacturers Who Forward the Contents of the Containers to Applicant for Packaging.
First use Sept. 5, 1961.

SN 129,421. Serabbe Manufacturing Company, Chicago, Ill. Filed Oct. 6, 1961.

BOOT VALET

Applicant waives exclusive right to the term "Boot" separate and apart from the mark as a whole.
For Plastic Household Tray for Holding Boots, Flowers, and Laundry.
First use July 14, 1961.

SN 129,485. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Oct. 9, 1961.



For Notion and Millinery Bags.
First use July 18, 1961.

SN 129,486. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Oct. 9, 1961.



Owner of Reg. No. 623,507.
For Notion and Millinery Bags.
First use July 18, 1961.

SN 129,488. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Oct. 9, 1961.



For Notion and Millinery Bags.
First use July 18, 1961.

SN 132,906. The Dow Chemical Company, Midland, Mich. Filed Nov. 28, 1961.

ZIP TAPE

The word "Tape" is disclaimed apart from the mark.
Owner of Reg. Nos. 373,377, 712,331, and others.
For Packaging Containers—Namely, Bags, Pouches, Envelopes, Cartons and Cases, Equipped With Opening Means.
First use on or before Apr. 1, 1940.

Class 4 — Abrasives and Polishing Materials

SN 132,544. Holiday Inns of America, Inc., Memphis, Tenn. Filed Nov. 22, 1961.

INN KEEPERS

Owner of Reg. Nos. 656,932 and 668,167.
For Furniture Cream and Metal Polish.
First use Feb. 22, 1961.

Class 6 — Chemicals and Chemical Compositions

SN 108,586. Naico Chemical Company, Chicago, Ill., by merger from Visco Products Company, Houston, Tex. Filed Nov. 16, 1960.

VISCO

Owner of Reg. No. 611,999.
For Emulsion Breaking Compositions Employed in the Breaking and Resolving of Petroleum Emulsions; Compositions Used as Paraffin Aids Which Are Paraffin Solvents and Paraffin Inhibitors Employed in the Treatment of Oils; Anti-corrosion Chemicals; Desalting Chemicals; Scale Inhibiting Compositions; Microbicides; Surface Active Agents and Water Flooding Chemicals.
First use on or about Nov. 16, 1931, on emulsion breaking compositions employed in the breaking and resolving of petroleum emulsions.

SN 120,579. Standard Sales Co., Inc., d.b.a. Radiator Seal Co., Birmingham, Ala. Filed May 22, 1961.

R-C

For Powder for Use in Stopping Leaks in the Cooling Systems of Internal Combustion Engines.
First use on or about Jan. 1, 1925.

SN 121,145. Tesco Chemicals, Inc., Atlanta, Ga. Filed May 31, 1961.



No claim is made to "Sta-Bil" apart from the mark as shown.
For Chlorine Stabilizer in Crystalline Powder.
First use on or about Mar. 1, 1961.

SN 121,225. Pal-Pen Chemical Co., Carmichael, Calif. Filed June 1, 1961.

PROMATIC-POWER CHARGE

Applicant disclaims the word "Charge" apart from the mark as a whole.
For Dry Cleaning Booster Solvent.
First use Aug. 15, 1960.

SN 121,275. Deady Chemical Company, Kansas City, Kans. Filed June 2, 1961.

RESINEW

For Chemical Additive to Salt Brine To Restore and Regenerate Resinous Zeolite Water Softening and Clarifying Agents.
First use Apr. 5, 1961.

SN 121,342. Armour and Company, Chicago, Ill. Filed June 5, 1961.

ARMOPLEX

Owner of Reg. Nos. 687,436 and 718,765.
For Aliphatic Amides Useful as Slip Agents for Plastics, Particularly Polyethylene Films.
First use May 19, 1961.

SN 123,568. The Seamless Rubber Company, New Haven, Conn. Filed July 7, 1961.

COUNT-DOWN

For Germicide for Space Air Sanitation and Positive Deodorization.
First use June 14, 1961.

SN 126,185. J. L. Prescott Company, Passaic, N.J. Filed Aug. 17, 1961.

Dazzle
PAC-O-FLUFF

Owner of Reg. Nos. 526,640, 676,111, and 689,693.
For Fabric Softener in Dry Powder Form, in Water Soluble Packets.
First use June 7, 1961.

SN 128,327. Shirley Aldred & Company Limited, Worksop, England. Filed Sept. 21, 1961.

ETERNITE

Owner of British Reg. No. 353,173, dated July 8, 1913.
For Chemical Substance for Use in the Process of Case-Hardening.

SN 128,845. Pittsburgh Chemical Company, Pittsburgh, Pa. Filed Sept. 28, 1961.

BPL

For Activated Carbon.
First use Apr. 19, 1954.

SN 128,846. Pittsburgh Chemical Company, Pittsburgh, Pa. Filed Sept. 28, 1961.

CAL

For Activated Carbon.
First use Jan. 7, 1955.

SN 129,229. Onyx Chemical Corporation, Jersey City, N.J. Filed Oct. 4, 1961.

MAPROSYL

Owner of Reg. Nos. 334,345 and 334,346.
For Chemical Product Used as a Wetting and Foaming Agent.
First use on or about Mar. 13, 1961.

SN 129,522. Polaroid Corporation, Cambridge, Mass. Filed Oct. 9, 1961.

POLAROID

Owner of Reg. Nos. 398,917, 689,866, and others.
For Photographic Reagents—Namely, Dyes and Developing Agents, Fixing Agents, Development Accelerating Agents, Anti-Foggants, Processing Solutions, and Stabilizing Solutions.
First use in January 1958.

SN 129,626. Organic Chemical Corporation, Providence, R.I. Filed Oct. 10, 1961.

ORCONEROSOL

Owner of Reg. Nos. 635,752 and 656,587.
For Dyestuffs.
First use Sept. 20, 1961.

SN 129,654. Ball Brothers Company, Incorporated, Muncie, Ind. Filed Oct. 11, 1961.

MICRO-MIX ETCHING CHEMICALS DEEP ETCH

Exclusive use of the words "Deep Etch" and "Etching Chemicals" except as a part of the mark is hereby disclaimed
Owner of Reg. Nos. 623,335 and 630,244.
For Etching Solutions.
First use Aug. 16, 1955.

SN 129,935. General Aniline & Film Corporation, New York, N.Y. Filed Oct. 16, 1961.

FENYLON

Owner of Reg. Nos. 403,794 and 619,739.
For Dyestuffs for Synthetic Fibers.
First use Sept. 26, 1961.

SN 132,310. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Nov. 20, 1961.

DU PONT

Owner of Reg. Nos. 549,432, 641,604, and others.
For Polymerization Catalysts.
First use Mar. 13, 1961.

SN 132,545. Holiday Inns of America, Inc., Memphis, Tenn. Filed Nov. 22, 1961.

INN KEEPERS

Owner of Reg. Nos. 656,932 and 668,167.
For Air Sanitizer and Room Deodorant, Disinfectant, Wax Stripper and Degreaser.
First use Feb. 23, 1961.

SN 133,218. Corn Products Company, New York, N.Y. Filed Dec. 4, 1961.

BIG-W

Owner of Reg. No. 138,868.
For Anti-Freeze and Rust Inhibiting Compositions, De-Icing Compositions, Insecticides, Herbicides, Miticides and Rodenticides.
First use at least as early as Oct. 19, 1960.

Class 8 — Smokers' Artides, Not Including Tobacco Products

SN 121,164. Harry Blatt, New York, N.Y. Filed June 1, 1961.

FIRESIDE

For Smokers' Pipes.
First use Aug. 10, 1960.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 123,617. Carl C. Cook, Mesa, Ariz. Filed July 10, 1961.

LUB-RA-SEAL

For Lubricating Shotshell Over Powder Wads.
First use June 10, 1961.

SN 130,072. The High Standard Manufacturing Corporation, Hamden, Conn. Filed Oct. 17, 1961.

LONGHORN

For Firearms—Namely, Revolvers and Parts Therefor.
First use on or about Sept. 2, 1960.

SN 130,349. The High Standard Manufacturing Corporation, Hamden, Conn. Filed Oct. 20, 1961.

NATCHEZ

For Firearms—Namely, Revolvers and Parts Therefor.
First use on or about Sept. 2, 1960.

SN 130,350. The High Standard Manufacturing Corporation, Hamden, Conn. Filed Oct. 20, 1961.

POSSE

For Firearms—Namely, Revolvers and Parts Therefor.
First use on or about Sept. 2, 1960.

Class 10 — Fertilizers

SN 130,390. Standard Products Company, Inc., White Stone, Va. Filed Oct. 20, 1961.

STAPCO

For Fertilizers.
First use Oct. 4, 1961.

SN 131,298. Merck & Co., Inc., Rahway, N.J. Filed Nov. 3, 1961.

GRAPE-AID

For Chemical Compound for Promoting Plant Growth.
First use Oct. 18, 1961.

Class 12 — Construction Materials

SN 81,112. Bitucote Products Company, St. Louis, Mo. Filed Sept. 10, 1959.

TARCOTE

For Asphalt Surface Sealing and Coating Material.
First use in April 1953.

SN 113,293. New Jersey Lumber and Supply Co., Inc., Clifton, N.J. Filed Feb. 8, 1961.

LUMBERAMA

For Rough and Pre-Cut Lumber, Building Insulation, Wood Paneling, Ceiling Tiles, Asphalt Shingles, Cinder Blocks, Hollow Drainage Tile, Out-Door Prefabricated Metal Cellarway, Aluminum Doors, Storm Windows, and Screens.
First use Jan. 23, 1958.

SN 116,935. Tram, Guebwiller, France. Filed Mar. 31, 1961.

TRAM

Owner of French Reg. No. 2,058, dated Feb. 4, 1960 (Colmar); Natl. Inst. No. 139,116.
For Non-Metallic Composition Boards Made of Textile Fibers for Covering Walls, Partitions, Ceilings and Floors.

SN 117,900. National Fiberglass Corp., Gilroy, Calif. Filed Apr. 14, 1961.

NFC

For One Piece Fiberglass Shower Stalls, Receptors, and Wainscotes.
First use Apr. 1, 1957.

SN 119,293. Interstate Container Corporation, Red Bluff, Calif. Filed May 4, 1961.

SOLIDPLY

For Plywood.
First use Mar. 9, 1961.

SN 120,533. Johns-Manville Corporation, New York, N.Y. Filed May 22, 1961.

FIREDIKE

For Acoustical Units, Particularly Mineral Acoustical Tile.
First use May 5, 1961.

SN 121,781. Allied Building Components Inc., Tacoma, Wash. Filed June 12, 1961.

MINIT MOUNT

For Folding Doors and Hardware Therefor.
First use Apr. 1, 1961.
First use on or about Apr. 28, 1959.

SN 121,874. The Standard Oil Company, Cleveland, Ohio. Filed June 12, 1961.

TROLUMEN

For Bituminous Compound for Impregnating Fiber Sewer and Drain Pipe.
First use June 1, 1961.

SN 125,780. Temp-Seal Southwest, Harbor City, Calif. Filed Aug. 10, 1961.

Temp-Seal INSULATING GLASS

The words "Insulating Glass" and the representation of the glass unit are disclaimed apart from the mark as shown.
For Multi-Pane Transparent Glass Units That Are Hermetically Sealed.
First use Mar. 1, 1961.

SN 125,951. Tubular Structures Corp. of America, Los Angeles, Calif. Filed Aug. 14, 1961.

ANGLE-STRUT

Owner of Reg. No. 672,379.
For Construction Materials, Particularly Structural Steel Members for Use in Storage Racks or Building Construction.
First use Apr. 15, 1961.

SN 126,223. The Gibson-Homans Company, Cleveland, Ohio. Filed Aug. 18, 1961.

SHIELDPERM

For Bedding and Joint Sealer Compounds, Seam Cement, Undercoater, Asphalt-Aluminum Compounds, and Asphalt Based Industrial Coatings and Primers.
First use June 1, 1961.

SN 128,277. C. W. Humphrey Company, West Des Moines, Iowa. Filed Sept. 20, 1961.

SOLAR

For Combination Steel Windows and Doors.
First use Oct. 1, 1958.

SN 128,390. The William L. Bonnell Company, Inc., Newnan, Ga. Filed Sept. 22, 1961.

BONNELITE

Owner of Reg. Nos. 584,101, 613,385, and 670,099.
For Extruded and Rolled Aluminum Shapes Used for Making Stair Nosings, Carpet Edging, Binder Bars and Like Fabricated Articles, and for Commercial Extrusions Generally, All Characterized by a Special Anodized Finish.
First use on or about Apr. 28, 1959.

SN 128,392. The William L. Bonnell Company, Inc., Newnan, Ga. Filed Sept. 22, 1961.

TRIMALURE

Owner of Reg. Nos. 407,735, 649,156, and others.
For Extruded and Rolled Aluminum Shapes Used in Making Store Fronts, Glass House Frames, and the Like, and Accessory Items Therefor, All Characterized by a Special Anodized Finish.

SN 128,965. The Core House Corporation, Cambridge, Mass. Filed Oct. 2, 1961.

CORE HOUSE

In the mark, the word "House" is disclaimed apart from the mark.
For Prefabricated Houses and Components Thereof.
First use May 1, 1955.

SN 130,343. Griesser A.G. (Griesser S.A.) (Griesser Ltd.), Aadorf, Thurgau, Switzerland. Filed Oct. 23, 1961.

ALU-COLOR

For Aluminum Roller Shutters.
First use in March 1957; in commerce Jan. 9, 1961.

SN 130,754. Roy Cassen, Akron, Iowa. Filed Oct. 27, 1961.



For Plywood or Asbestos Board Upon the Front of Which Has Been Bonded and Embossed a Decorative and Protective Coating of Heat and Water Resistant Brick-Like Material.
First use Mar. 15, 1959.

SN 131,305. Process Chemicals Company, Santa Fe Springs, Calif. Filed Nov. 3, 1961.

PRO-PAC

For Synthetic Organic Agent for Compacting Soil.
First use Apr. 15, 1961.

SN 133,528. Brooks-Scanlon, Inc., Bend, Oreg. Filed Dec. 7, 1961.



For Lumber.
First use 1919.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 110,527. The Colorado Fuel and Iron Corporation, Denver, Colo. Filed Dec. 20, 1960.



The mark comprises a silver colored tip at the top of fence posts, the fence posts otherwise being colored green. The drawing is lined for silver and green. No claim is made to the representation of the goods.
For Fence Posts.
First use May 1927.

SN 113,157. Spraying Systems Co., Bellwood, Ill. Filed Feb. 6, 1961.

HOLLOWJET

For Spray Nozzles.
First use on or about June 7, 1960.

SN 113,391. Armor Bronze & Silver Co., Inc., Taunton, Mass. Filed Feb. 10, 1961.



For Copper Products—Namely, Chafing Dishes, Tea Kettles, Pitchers, Vases, Plant Hangers, Plant Holders and Other Household Products.
First use Oct. 7, 1949.

SN 114,129. National Lock Co., Rockford, Ill. Filed Feb. 21, 1961.

FRENCH CLASSIC

For Cabinet Hardware—Namely, Pulls, Handles, Knobs and Hinges.
First use Nov. 20, 1960.

SN 116,729. Karl Hersog, Stuttgart, Germany. Filed Mar. 29, 1961.

OLYMP

Owner of German Reg. No. 647,463, dated Nov. 6, 1953.
For Furnishings for Beauty and Barber Shops—Namely, Shampoo Basins and Bowls, Mixing Valves, Shampoo Sprays.
First use in December 1950; in commerce 1954.

SN 117,817. J. B. Stone & Co. Limited, Sussex, England. Filed Apr. 13, 1961.

ASTAR HEAVY DRIVE

No claim is made to the words "Heavy Drive" apart from the mark as a whole. Owner of British Reg. No. 745,767, dated Sept. 2, 1955.
For Conveyor Belt Fasteners Made of Metal.

SN 117,995. Portable Structures, Inc., Minneapolis, Minn. Filed Apr. 17, 1961.

MINICLAMP

For Miniature Plastic Clamps.
First use Feb. 22, 1961.

SN 118,998. Industrial Corporation of America, Quakertown, Pa. Filed May 1, 1961.

SAF-T-SEAL

For Parts of Overhead Doors, Either Manually or Automatically Operated—To Wit, the Track and Hinge Combination Which Brings the Door Tight Against the Jambs When Closed, and Then Causes It To Move Away From the Jambs for Easy Operation as Soon as the Door Moves Slightly Upwardly From the Floor.
First use Sept. 10, 1960.

SN 119,800. Stile-Craft Manufacturers, Inc., St. Louis, Mo. Filed May 11, 1961.

DYNA-CON

For Pneumatic Quick-Connect Couplings.
First use Apr. 26, 1961.

SN 123,476. The Faucet-Queens, Inc., Chicago, Ill. Filed July 6, 1961.

Faucet-Queen

For Faucet Sprayer-Strainer and Aerator Attachments.
First use Oct. 16, 1935.

SN 127,678. Waldes Kohinoor, Inc., Long Island City, N.Y. Filed Sept. 11, 1961.

PRIDE

For Plastic Slide Fasteners.
First use on or about June 1, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 132,922. Inland Steel Company, Chicago, Ill. Filed Nov. 28, 1961.

INAMEL

For Steel Sheet Especially Adaptable for the Application of Vitreous Enamel Coatings Thereto.
First use in or about October 1961.

Class 15—Oils and Greases

SN 112,662. Wico Corporation, Chicago, Ill. Filed Jan. 27, 1961.

BLAST!

For Lubricating Liquids—Namely, Cleaner and Lubricant and Spray Oil Lubricant.
First use May 1, 1960.

SN 126,991. Desmul Chemical Co., Bellingham, Wash. Filed Aug. 31, 1961.

FE 5

Owner of Reg. Nos. 720,569 and 724,993.
For Liquid Hydrocarbon Fuel Combustion Catalysts.
First use May 1, 1961.

SN 126,992. Desmul Chemical Co., Bellingham, Wash. Filed Aug. 31, 1961.

FE 6

Owner of Reg. Nos. 720,569 and 724,993.
For Liquid Hydrocarbon Fuel Combustion Catalysts.
First use May 1, 1961.

SN 129,030. National Candle Company, Inc., Brooklyn, N.Y. Filed Oct. 2, 1961.

Three Star CANDLES

The word "Candles" is disclaimed apart from the mark shown on the drawing.
For Religious and Ceremonial Candles.
First use June 1934.

SN 129,634. Quaker Chemical Products Corporation, Conshohocken, Pa. Filed Oct. 10, 1961.

MICROLAP

Owner of Reg. No. 409,149.
For Compositions for Honing, Grinding and Lapping Operations Consisting of Emulsions or Solutions Containing Oils, Fats, and Organic and Inorganic Chemicals.
First use Aug. 14, 1961.

Class 16—Protective and Decorative Coatings

SN 103,546. Consumers Cooperative Association, Kansas City, Mo. Filed Aug. 29, 1960.

GALAXIE COLORS

The word "Colors" is disclaimed apart from the mark as shown.
For Paints, Enamels and Stains.
First use Feb. 12, 1960.

SN 103,879. Sun Chemical Corporation, New York, N.Y. Filed Sept. 2, 1960.

COLOR STYLES

For Paints.
First use Aug. 24, 1960.

SN 115,139. G & S Taylor Co., Lyndhurst, N.J. Filed Mar. 8, 1961.

SELECT

For Paints for China, Pottery, and Glass.
First use Feb. 24, 1961.

SN 116,936. Tram, Guebwiller, France. Filed Mar. 31, 1961.

TRAM

Owner of French Reg. No. 2,058, dated Feb. 4, 1960 (Colmar); Natl. Inst. No. 139,116.
For Protective and Decorative Coatings for Walls, Furniture, Partitions, Ceilings and Floors.

SN 117,393. Pittsburgh Chemical Company, Pittsburgh, Pa. Filed Apr. 7, 1961.

Owner of Reg. No. 716,691.
For Coatings—Namely, Hot Applied Coal Tar Base Coatings, Cold Applied Coal Tar Base Coatings, Alkyd Base Coatings, Chlorinated Rubber Base Coatings, Vinyl Base Coatings and Uintaite-Asphalt Base Coatings.
First use Nov. 21, 1960.

SN 127,278. Sun-Chek Distributing Co., Los Gatos, Calif. Filed Sept. 5, 1961.

SUN-CHEK

For Transparent and Translucent Liquid Plastic Coatings for Glass to Filter Out Ultra-Violet Rays of the Sun While Permitting Visible Light Rays To Pass Through the Glass.
First use Feb. 2, 1960.

SN 132,546. Holiday Inns of America, Inc., Memphis, Tenn. Filed Nov. 22, 1961.

INN KEEPERS

Owner of Reg. Nos. 656,932 and 668,167.
For Blended Co-Polymer Floor Finish.
First use Feb. 17, 1961.

SN 132,972. Battenfeld Grease & Oil Corporation, Inc., Kansas City, Mo. Filed Nov. 29, 1961.

ULTRA-GUARD

For Rust-Preventive Undercoating.
First use Sept. 15, 1961.

Class 17—Tobacco Products

SN 134,326. Lane Limited, New York, N.Y. Filed Dec. 19, 1961.

SIR BRUCE

For Smoking Tobacco.
First use November 1959.

SN 134,718. The American Tobacco Company, New York, N.Y. Filed Dec. 27, 1961.

MONTCLAIR

For Cigarettes.
First use Dec. 26, 1961.

Class 18—Medicines and Pharmaceutical Preparations

SN 107,757. Hoffmann-La Roche Inc., Nutley, N.J. Filed Nov. 3, 1960.

VI-PENTA ZESTABS

Owner of Reg. No. 354,576.
For Pediatric Vitamin Supplement.
First use Oct. 19, 1960.

SN 111,901. The Mennen Company, Morristown, N.J. Filed Jan. 16, 1961.

The drawing is lined for blue. The word "Quality" is disclaimed apart from the mark as shown. Owner of Reg. No. 505,807.
For Liquid and Powder Preparations for Application to the Skin To Treat Acne, Athlete's Foot, Sunburn and Insect Bites.
First use Jan. 15, 1960.

SN 123,666. Marion Laboratories, Inc., Kansas City, Mo. Filed July 10, 1961.

ZAMITAM

For Anti-Depressant Capsules.
First use June 27, 1961.

SN 124,973. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

ALUTHYN

For Antacid for the Control and Relief of Excess Gastric Acidity.
First use Jan. 15, 1945.

SN 124,974. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

CHOTHYN

For Lipotropic Agent for Use in Disturbances of Lipid Metabolism.
First use Feb. 1, 1951.

SN 124,979. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

INCHOLIP

For Lipotropic Agent for Use as an Aid in the Prevention of Fat Deposition in the Liver and the Removal of Fat Deposits Already Present.
First use Mar. 13, 1951.

SN 124,980. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

KETOTHYN

For Hydrocholeretic and Choleretic for Use in Biliary Stasis, To Promote Drainage of the Bile Ducts and Retard Cholangitic Infections.
First use Feb. 14, 1950.

SN 124,988. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

VASOTHYN

For Hypotensive for the Lowering of Blood Pressure and the Control of Essential Hypertension.
First use Feb. 1, 1954.

SN 125,631. Texas Scientific Laboratories, Inc., Houston, Tex. Filed Aug. 8, 1961.

teen GLO

For Medicated Salve for Treating, Healing and Preventing Skin Infection.
First use Jan. 1, 1958.

SN 131,089. The Tonsiline Company, Canton, Ohio. Filed Oct. 31, 1961.

ALL THE WAY DOWN

Owner of Reg. No. 83,495.
For Pharmaceutical Preparation for Minor Irritations of the Throat Due to Colds or Smoking.
First use Oct. 26, 1961; in 1897 in another display.

SN 133,219. Corn Products Company, New York, N.Y. Filed Dec. 4, 1961.

BIG-W

Owner of Reg. No. 138,868.
For Veterinary Medicaments—Namely, Mastitis Ointment.
First use at least as early as Oct. 31, 1960.

SN 133,343. The Wellcome Foundation, Ltd., London, England. Filed Dec. 4, 1961.

DARVISUL

Owner of British Reg. No. 751,320, dated Feb. 27, 1956.
For Veterinary Preparations and Substances for the Prevention and Treatment of Coccidiosis.

SN 134,359. Union Carbide Corporation, New York, N.Y. Filed Dec. 19, 1961.

LINDE

Owner of Reg. Nos. 434,784 and 693,728.
For Medical Gases.
First use about 1914.

SN 134,382. Dome Chemicals, Inc., New York, N.Y. Filed Dec. 20, 1961.

DOMEFORM-HC

Owner of Reg. No. 383,764.
For Dermatological Preparation for the Treatment of Skin Irritations and Disease.
First use in or before July 1961.

SN 134,500. Union Carbide Corporation, New York, N.Y. Filed Dec. 21, 1961.

UNION CARBIDE

Owner of Reg. Nos. 698,797 and 690,324.
For Medical Gases.
First use on or about Sept. 11, 1961.

SN 135,667. Chimie et Atomistique (Societe Anonyme), Paris, France. Filed Jan. 12, 1962.

TRECAPLIX

Owner of French Reg. No. 476,158, dated Nov. 27, 1958 (Paris); Natl. Inst. No. 116,514.
For Pharmaceutical Preparation—Namely, an Anti-Tuberculant.

SN 135,943. Abbott Laboratories, North Chicago, Ill. Filed Jan. 17, 1962.

GALLIMYCIN

Owner of Reg. No. 631,633.
For Antibiotic Preparation for Veterinary Use.
First use Aug. 1, 1955.

SN 136,036. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Jan. 18, 1962.

SEBACIL

Owner of German Reg. No. 523,804, dated Aug. 8, 1940.
For Veterinary Preparation for Treatment of Skin Disorders of Animals, Particularly for External Application to Sheep Afflicted With Scabies.

SN 136,092. Weleda A.G. (Weleda Co. Ltd.), Arlesheim, Switzerland. Filed Jan. 18, 1962.

EVERON

Owner of Swiss Reg. No. 144,849, dated Dec. 30, 1952.
For Pharmaceutical Preparations.

SN 136,099. Armour Pharmaceutical Company, Chicago, Ill. Filed Jan. 19, 1962.

ARVA

For Pharmaceutical Preparations, Particularly Amebicides.
First use Dec. 28, 1961.

SN 136,145. The Purdue Frederick Company, New York, N.Y. Filed Jan. 19, 1962.

PAREGUAR

For Antidiarrheal Agent.
First use Nov. 13, 1961.

SN 136,214. The Evron Company, Inc., Chicago, Ill. Filed Jan. 22, 1962.

BETA-SCORB

For Vitamins.
First use Jan. 12, 1959.

SN 136,280. Parke, Davis & Company, Detroit, Mich. Filed Jan. 22, 1962.

ABDEC

For Multiple Vitamin Preparation.
First use on or before Dec. 23, 1941.

SN 136,289. Rhinopto Company, Dallas, Tex. Filed Jan. 22, 1962.

RHINORAL

Owner of Reg. Nos. 576,361 and 681,402.
For Oral Decongestant.
First use Dec. 29, 1961.

SN 136,309. Travenol Laboratories, Inc., Morton Grove, Ill. Filed Jan. 22, 1962.

PRESSOROL

Owner of Reg. No. 683,919.
For Metaraminol Bitartrate.
First use Dec. 21, 1961.

SN 136,375. Jones and Vaughan Inc., Richmond, Va. Filed Jan. 23, 1962.

ATRO HYOS P

For Tablet Drug Preparation for Use as a Sedative-Antispasmodic.
First use Jan. 6, 1953.

SN 136,505. Sterling Drug Inc., New York, N.Y. Filed Jan. 24, 1962.

WIN

Owner of Reg. Nos. 261,030, 725,841, and others.
For Line of Medicinal and Pharmaceutical Preparations.
First use in January 1944.

SN 136,707. White Laboratories, Inc., Kenilworth, N.J. Filed Jan. 26, 1962.

DIPERM

For Antipruritic.
First use on or about Oct. 16, 1961.

SN 136,714. American Cyanamid Company, New York, N.Y. Filed Jan. 29, 1962.

PARIMUNE

For Biological Serum Preparation for Use in the Modification of or Protection Against Measles, Infectious Hepatitis and Poliomyelitis; Attenuation of Chicken Pox and Herpes Zoster and Treatment of Other Refractory Infectious Diseases.
First use Jan. 5, 1962.

SN 136,781. Lemmon Pharmacal Company, Sellersville, Pa. Filed Jan. 29, 1962.

EVASOF

For Fecal Softener.
First use Oct. 31, 1961.

SN 136,891. Darteli Laboratories, Inc., Los Angeles, Calif. Filed Jan. 30, 1962.

DARVITA

For Multi-Vitamin Dietary Supplement.
First use June 16, 1960.

SN 136,915. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 30, 1962.

MYELOGRAFIN

For Contrast Agents Useful in the Visualization of the Spinal Canal and Subarachnoid Space.
First use Jan. 16, 1962.

SN 137,080. Organon Inc., West Orange, N.J. Filed Feb. 1, 1962.

WIGRETTES

Owner of Reg. No. 602,940.
For Analgesic Preparation.
First use Oct. 10, 1960.

Class 19—Vehicles

SN 114,332. MacGregor-Comarain, Paris, France. Filed Feb. 24, 1961.



Priority claimed under Sec. 44(d) on French Reg. No. 491,453, dated Oct. 26, 1960 (Seine); Natl. Inst. No. 152,846.
For Vehicles—Namely, Ships, Fishing Boats and Smacks, Together With Masts, Holds and Hatch Covers Therefor, and Other Vehicles—Namely, Railway Wagons and Motor Trucks and Cover Means for Said Wagons and Motor Trucks and Also Retractable Roofs Therefor.

SN 120,813. MacGregor-Comarain, Paris, France. Filed May 25, 1961.

MAGRONEST

Priority claimed under Sec. 44(d) on French Reg. No. 492,276, dated Dec. 2, 1960 (Seine); Natl. Inst. No. 154,596.
For Vehicles—Namely, Ships, Together With Masts, Holds and Retractable Shipboard Cargo-Carrying Platforms Therefor, and Hatch Covers and Other Vehicles—Namely, Railway Wagons and Motor Trucks, and Cover Means for Such Wagons and Motor Trucks and Also Retractable Roofs Therefor.

Class 20—Linoleum and Oiled Cloth

SN 133,540. Congoleum-Nairn Inc., Kearny, N.J. Filed Dec. 7, 1961.

ILLUSION

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs and Tiles.
First use Dec. 4, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 94,718. Acme-Lite Manufacturing Co., Chicago, Ill. Filed Apr. 11, 1960.

PROJEK-TABLE

For Electrified Foldable Stand.
First use Sept. 15, 1959.

SN 99,533. North Wilkesboro Hardware, Inc., North Wilkesboro, N.C. Filed June 22, 1960.

LOWE'S

The lining on the drawing is for shading only.
For Electric Water Heaters.
First use Apr. 21, 1960.

SN 101,060. Zappia-Paradiso, S.A., Lugano, Switzerland, assignee of Ludwig von Kleydorff, d.b.a. Paradiso, Norwalk, Conn. Filed July 18, 1960.

PARADISO

The English translation of the Italian word "Paradiso" is "paradise."
For Electric Domestic Coffee Brewing Machines and Parts and Associated Equipment Thereof.
First use on and before Apr. 14, 1955.

SN 110,358. Plastic Applicators, Inc., Houston, Tex. Filed Dec. 16, 1960.

PLASTRONICS

For Pulse Magnetizer To Magnetize Tubular Goods in Magnetic Particle Inspection.
First use Oct. 31, 1960.

SN 112,457. Heinrich Baumueller, Fabrik fuer Elektrotechnik, G.m.b.H., Nurnberg, Germany. Filed Jan. 25, 1961.

Ω

BAUMA

Owner of German Reg. No. 730,980, dated Nov. 12, 1959.
For Machines—Namely, Electric Motor and Electrically-Operated Domestic and Kitchen Appliances, Especially Dishwashers, Apparatus for Cominuting Fruits and Vegetables, Apparatus for Removing the Juice From Fruits and Vegetables, and Eating, Stirring and Kneading Machines.

SN 117,186. General Electric Company, Schenectady, N.Y. Filed Apr. 5, 1961.

BONUS LINE

For Fluorescent Lamp Ballasts.
First use Mar. 8, 1961.

SN 117,804. Pines Engineering Co., Inc., Aurora, Ill. Filed Apr. 13, 1961.

DIAL-A-BEND

For Electronically Operated Angle-of-Bend Selector Used on Tube Bending Machines or Tube Bending Presses.
First use Jan. 26, 1961.

SN 117,863. HD Electric Company, Deerfield, Ill. Filed Apr. 14, 1961.

MAX-I-TRAN

Owner of Reg. No. 388,704.
For Split-Core Transformer With Secondary Winding.
First use Mar. 29, 1937.

SN 118,117. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed Apr. 18, 1961.

ROYAL CREST

For Electric Blankets.
First use on or about Sept. 12, 1960.

SN 121,302. Morganite Resistors Limited, Jarrow, England. Filed June 2, 1961.

TERMILODE

Owner of British Reg. No. 809,755, dated Aug. 22, 1960.
For Attenuators, Dummy Loads and Matched Terminations for Use in Pulse and Continuous Wave, Microwave and Ultra High Frequency Electrical Equipment Such as Radar Radio Communication and Like Apparatus.

SN 122,087. Image Instruments, Inc., Newton Lower Falls, Mass. Filed June 15, 1961.



For Electrical Video Data Signal Processing Systems.
First use on or before Dec. 31, 1959.

SN 122,421. The Bendix Corporation, Detroit, Mich. Filed June 20, 1961.

TENNA-COUPLER

For Antenna Couplers.
First use Dec. 12, 1959.

SN 123,410. Communications Control Corporation, Van Nuys, Calif. Filed July 5, 1961.

AUTOFAX

For Electrical Apparatus for Transmitting Data Over a Line and for Receiving Transmitted Data.
First use Apr. 7, 1959.

SN 124,137. Standard Elektrik Lorenz Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany. Filed July 17, 1961.



Owner of German Reg. No. 691,267, dated Dec. 15, 1955.
For Electro-Technical Apparatus, Instruments and Devices; Telecommunication and Telephone Switching Systems for Wirebound and Wireless Operation and Apparatus Therefor, Automatic or Manually Operated Communications Exchanges or Sub-Exchanges, Telephone Subscriber Station Apparatus, Loud-Speaking Devices Alone and in Combination With Telephone-Interconnecting Facilities, Intercommunication and Conference Speaking Devices, High-Speed Speaking Devices, Conference Devices Alone or in Connection With Electric Record Players; Signal Devices, Particularly Alarm Devices; Carrier-Current Devices, Switching Devices, Repeaters and Filters for Electric Waves, Coils, Including Loading Coils, Modulators and Demodulators, Oscillators, Rectifiers, Voltage Regulators, Cathode Protecting Devices, Electric Converters, Gas-Filled and Vacuum Type Discharge Tubes, Batteries, Transistors, Condensers and Condenser Banks; Bare and Insulated Electric Cables, Lines or Leads, Cords, Strands and Wires, Fittings for Electric Cable and Line Installations; Electrically Operated Data Processing Devices; Electrical Calculators and Computers, Programming Control Devices; Electrically Controlled Materials Handling Systems and Apparatus Therefor—Namely, Pneumatic Tube Systems, Belt-Conveyor Systems, Electrically Controlled Sorting Mechanisms for Card-Index Sheets, Cards, Letters, Packages or Files; Component Parts of the Aforementioned Apparatus, and Electrically Operated Automatic Booking Machines.

SN 125,131. Consolidated Electronics Industries Corp., Alliance, Ohio. Filed Aug. 1, 1961.

REV-O-SYNC

For Electric Motors.
First use on or about June 30, 1961.

SN 125,170. Stereotronics Corporation, Los Angeles, Calif. Filed Aug. 1, 1961.

STEREOTRONICS SYSTEM

The word "System" is disclaimed apart from its use with the mark as a whole.
For Complete Kit of Components for Converting Two-Dimensional Television Equipment to Three Dimensions Comprising Devices for Attachment to the Camera and Screen, and a Device for Viewing of the Screen.
First use Mar. 22, 1961.

SN 128,279. Paul Henry MacMahon, Alexandria, Va. Filed Sept. 20, 1961.

AN-TEN-NA-CAN

Applicant disclaims the term "Antenna" apart from the mark as shown.
For Radio and Television Antennas.
First use Aug. 9, 1961.

SN 131,638. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Oct. 5, 1961.

DUOPLATE

For Combination Flush Plates for Duplex Receptacles and Electric Switches.
First use April 1959.

SN 131,799. Brown Engineering Company, Inc., Huntsville, Ala. Filed Nov. 13, 1961.

TELESCHEDULE

For Closed Circuit Communication System for Transmitting Information and Reproducing That Information on Remotely Located Viewing Panels.
First use Aug. 23, 1961.

SN 132,105. Udico Electric Company, Los Angeles, Calif., assignee of Union Die Casting Company, Whittier, Calif. Filed Nov. 14, 1961.

UDICO

Owner of Reg. No. 654,069.
For Electrically Driven Shoe Polishers, Electrically Driven Juicers, Electrically Driven Can Openers, and Electrically Driven Knife Sharpeners.
First use prior to 1958, on electrically driven can openers.

SN 140,316. C. & E. Marshall Company, Chicago, Ill. Filed Mar. 22, 1962.

SONOMATIC

For Ultrasonic Cleaning Equipment Utilizing Electrical Energy and Electronic Components.
First use October 1958.

Class 22 — Games, Toys, and Sporting Goods

SN 104,190. Reliance Products Sales Corp., Woonsocket, R.I. Filed Sept. 9, 1960.

PLAYZOOKIT

The drawing is lined for red and violet, but color is not claimed as a feature of the mark.
For Toy Animal Construction Kits.
First use Mar. 1, 1960.

SN 116,175. Burr Watson, Toronto, Ontario, Canada. Filed Mar. 21, 1961.

Jump-O-Lin KING

Priority claimed under Sec. 44(d) on Canadian application filed Sept. 23, 1960; Reg. No. 122,303, dated May 26, 1961.
For Trampolines.

SN 116,452. Wilson Sporting Goods Co., River Grove, Ill. Filed Mar. 24, 1961.

SANDY-ANDY

For Golf Clubs.
First use Aug. 4, 1960.

SN 117,502. Alfred W. Jones, d.b.a. Aljo Enterprises, St. Paul, Minn. Filed Apr. 10, 1961.

VEGAS VACATION

For Equipment Comprising a Playing Board, Chips and Dice, for Playing a Parlor Board Game.
First use Mar. 23, 1961.

SN 118,153. Ideal Toy Corporation, Hollis, N.Y. Filed Apr. 19, 1961.

PLAYPAL

For Dolls.
First use Mar. 31, 1960.

SN 118,514. W. J. Volt Rubber Corp., Los Angeles, Calif. Filed Apr. 24, 1961.

JIFFY-GYM

For Exercise Device Consisting of a Rubber Strap Which Is Gripped at Either End and Pulled.
First use December 1960.

SN 118,516. W. J. Volt Rubber Corp., Los Angeles, Calif. Filed Apr. 24, 1961.

CUSHION RIDE

For Heel Cushions on Slalom Water Skis.
First use December 1960.

SN 118,687. Hassenfeld Bros., Inc., Central Falls, R.I. Filed Apr. 26, 1961.

MARBLE MAZE

For Equipment for Playing a Game Comprising a Board and Movable Parts.
First use on or about Mar. 24, 1961.

SN 118,784. Ideal Toy Corporation, Hollis, N.Y. Filed Apr. 27, 1961.

Jolly-Junior IDEAL

Owner of Reg. No. 415,218.
For Pre-School Toys—Namely, Take-Apart, Put-Together Trucks, Boats, and Pull-Toys, and the Like.
First use Jan. 26, 1961.

SN 119,584. Wilson Sporting Goods Co., River Grove, Ill. Filed May 8, 1961.

PRO-POCKET

For Baseball Gloves and Mitts.
First use Oct. 1, 1959.

SN 119,585. Wilson Sporting Goods Co., River Grove, Ill. Filed May 9, 1961.

ROTO BILT

For Basketballs.
First use July 20, 1959.

SN 119,759. Leroy W. Donley, d.b.a. Roy Donley A.I.A. and Associates, Los Angeles, Calif. Filed May 11, 1961.

BEACH BUM

For Nautical Floats Constituted by Buoyant Flotation Units Incorporated in a Flexible Container.
First use Apr. 12, 1961.

SN 120,997. Ernest Jelley, d.b.a. Bob White Target Company, Kansas City, Mo. Filed May 29, 1961.

BOB WHITE

For Clay Pigeons.
First use January 1935.

SN 122,690. Fun in the Sun of Florida, Inc., Miami, Fla. Filed June 23, 1961.

HOPPY

For Animated Animal Figures for Playgrounds.
First use June 16, 1960.

SN 122,777. Co-Ordinated Enterprises, St. Clairsville, Ohio. Filed June 26, 1961.

TELEMOTION

For Motorized Mechanical Hobby Horse Toy Which by Means of an Internal Electronic Filter Amplifier Circuit Is So Caused To Be Mechanically Actuated by Broadcast Sound or Signal Impulses or by Voice Commands.
First use Jan. 28, 1961.

SN 123,760. Par-Tee Golf Ltd., Albertson, N.Y. Filed July 11, 1961.

PAR-TEE GOLF

No claim is made to the exclusive use of the word "Golf" except in connection with the mark as shown. The drawing is lined for green, red and yellow, but no claim is made to color.

For Game Apparatus Sold as a Unit for Playing a Parlor or Indoor Golf Game.

First use on or about June 26, 1961.

SN 125,595. John William Hendrix, Cleveland, Ohio. Filed Aug. 8, 1961.



For Sporting Goods—Namely, Tennis Equipment, Exclusive of Wearing Apparel.

First use on or about Apr. 15, 1957.

SN 128,609. A. G. Spalding & Bros., Inc., Chicopee, Mass. Filed Sept. 25, 1961.

TERPOLYMITE

For Golf Clubs.

First use Sept. 8, 1961.

SN 129,054. John Stacey, d.b.a. Stacey Bait Company, Dayton, Ohio. Filed Oct. 2, 1961.

RATTLE BRAIN

For Artificial Fishing Baits.

First use June 16, 1961.

SN 130,467. Kohner Bros., Inc., New York, N.Y. Filed Oct. 23, 1961.

SKETCH-O-MATIC

For Remote Control Drawing Toy.

First use Aug. 30, 1961.

SN 130,614. Colt's Patent Fire Arms Manufacturing Company, Incorporated, Hartford, Conn. Filed Oct. 25, 1961.

WOODSMAN

For Archery Bows.

First use Aug. 8, 1961.

SN 130,999. Anderson & Thompson Ski Co., Seattle, Wash. Filed Oct. 31, 1961.

A T

Owner of Reg. No. 648,876.

For Ski Equipment—Namely, Skis, Ski Poles, Ski Bindings, Ski Edges, Ski Boot Trees, Ski Tow Rope Grippers, Ski Carriers and Storage Racks, Ski Carrying Cases, Skier Rucksacks, Skier Pack Boards, Skier Pack Sacks, Ski Goggles, and Ski Crash Helmets.

First use on or about Sept. 1, 1958.

SN 131,000. Anderson & Thompson Ski Co., Seattle, Wash. Filed Oct. 31, 1961.

A & T

Owner of Reg. No. 648,876.

For Ski Equipment—Namely, Skis, Ski Poles, Ski Bindings, Ski Edges, Ski Boot Trees, Ski Tow Rope Grippers, Ski Carriers and Storage Racks, Ski Carrying Cases, Skier Rucksacks, Skier Pack Boards, Skier Pack Sacks, Ski Goggles, and Ski Crash Helmets.

First use on or about Jan. 1, 1935.

SN 131,927. Alvimar Manufacturing Co., Inc., New York, N.Y. Filed Nov. 14, 1961.

AQUA-MAR

For Plastic Swimming Pools Both Rigid and Inflated.

First use on or about Jan. 1, 1960.

SN 131,979. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Nov. 14, 1961.

SEA KING

For Water Skis, Aquaplanes and Water Saucers.

First use 1954 on water skis; in 1931 on outboard motors.

SN 132,109. Wen-Mac Corporation, Los Angeles, Calif. Filed Nov. 15, 1961.

HUSTLER

For Model Engines for Toy Airplanes.

First use February 1959.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 92,627. Maurey Manufacturing Corporation, Chicago, Ill. Filed Mar. 11, 1960.

MAUREY FUL-GRIP

Owner of Reg. No. 585,915.

For Bush-Type Sheaves With Heavy Duty Pulleys, V-Belts and the Like.

First use Aug. 7, 1950.

SN 99,531. North Wilkesboro Hardware, Inc., North Wilkesboro, N.C. Filed June 22, 1960.

LOWE'S

The lining on the drawing is for shading only.

For Machinery and Tools Including Lawnmowers, Tillers and Wheelbarrows.

First use Apr. 18, 1960.

SN 106,506. Kugelfischer Georg Schafer & Company, Schweinfurt, Germany. Filed Oct. 17, 1960.

FAG

KUGELFISCHER GEORG SCHÄFER & CO.

Owner of German Reg. No. 724,631, dated Aug. 5, 1959; and U.S. Reg. Nos. 596,690 and 637,666.

For Metal Ball Bearings, Roller Bearings, and Parts Thereof Especially Metal Balls, Metal Rollers, Rolling Rings, Cages, Bearings for Driving Organs and Axles.

SN 108,807. Nason Trading Company, Inc., New York, N.Y. Filed Nov. 21, 1960.

STAPLE KING

For Stapling Machines.

First use January 1960.

SN 108,813. Peters & Russell, Inc., Springfield, Ohio. Filed Nov. 21, 1960.

PAR

Owner of Reg. Nos. 352,327, 703,445, and others.

For Electrically Operated Diaphragm Pumps.

First use Oct. 20, 1960.

SN 118,751. Briggs-Weaver Machinery Company, Dallas, Tex. Filed Apr. 26, 1961.



For Industrial Machinery, Tools and Supplies Including Monorail Systems, Cranes, Conveyors, Pumps, Motors, Lathes, Broaching Machines, Pipe and Bolt Threaders, Milling Machines, Power Driven Saws, Hoists, Fork Lift Trucks, Tractmobiles, and Hand Tools.

First use Feb. 24, 1961.

SN 120,145. George N. Hybertsen, Salem, Oreg., assignee of Wiley T. Stockett, Jr., Greeley, Colo. Filed May 16, 1961.

WATERGUN

For Reciprocating Hydraulic Drives.

First use Dec. 1, 1960.

SN 121,769. State Steel Products, Inc., Industry, Calif. Filed June 9, 1961.

Syncro-Matic

For Vibrating Screen Separators Having Horizontal, Vertical and Gyratory Motion Components for Use in Grading, Separating, and Screening Wet and Dry Materials or Objects.

First use April 1959.

SN 122,023. Polytype SA, Fribourg, Switzerland. Filed June 14, 1961.

Bangerter

Priority claimed under Sec. 44(d) on Swiss Reg. No. 184,882, dated Mar. 3, 1961.

For Machines for Paper and Foil Manufacture; Machines for Improving the Quality of the Products of the Paper, Metallic Foil and Transparent Foil Industry; Embossing Calenders; Coating, Painting, Varnishing and Sizing Machines.

SN 122,082. H-P Tool Mfg. Corp., d.b.a. H-P Tool Manufacturing Corporation and H.P. Tool Manufacturing Corp., Philadelphia, Pa. Filed June 15, 1961.

BLUE LINE

For Small Hand Tools—Namely, Chisels, Punches, Screw Drivers, Bull Points, Stone Cutter Tools, Star Drills, Rivet Busters, Caulking Tools, and Brake Adjusting Tools.

First use May 17, 1961.

SN 122,499. Aluma Products Corporation, Detroit, Mich. Filed June 21, 1961.

ALUMA-CAST

For Aluminum Mufflers.

First use Jan. 24, 1961.

SN 124,720. Crompton & Knowles Packaging Corporation, Bellwood, Ill. Filed July 26, 1961.

CARTON KING

No registration rights are claimed for the word "Carton" apart from the mark shown, but applicant waives none of its common law rights in the mark shown or any feature thereof.

For Cartoning Machines for Forming, Filling, Closing and Handling Cartons.

First use June 22, 1961.

SN 125,094. Protectoral, Inc., Rochester, N.Y. Filed July 31, 1961.

PROTECTOROL

For Protective Roller Attachment for Rotary Lawn Mowers.

First use Apr. 1, 1961.

SN 126,523. Imperial International Corp., New York, N.Y. Filed Aug. 23, 1961.

FOREST HILLS

For Stainless Steel Flatware and Tableware.

First use July 31, 1961.

SN 127,180. B-M-B Company, Inc., Holton, Kans. Filed Sept. 5, 1961.

BEAST

Owner of Reg. No. 716,822.
For Rotary Mowers.
First use January 1961.

SN 128,018. The Do-All Company, Des Plaines, Ill. Filed Sept. 18, 1961.

TC

For Saw Bands.
First use on or before Feb. 17, 1961.

SN 128,557. The Heald Machine Company, Worcester, Mass. Filed Sept. 25, 1961.

HEALDRILL

The drawing is lined to show the background of the trademark as a reddish-brown color. Owner of Reg. No. 612,489.
For Drilling Machine.
First use Dec. 8, 1960.

SN 129,319. Zellweger Ltd., Uster, Switzerland. Filed Oct. 5, 1961.

USTER SPECTOMATIC

Owner of U.S. Reg. No. 703,214.
For Control Equipment for Regulating the Operation of Textile Fabricating Machinery.
First use approximately January 1960; in commerce May 1960.

SN 131,688. Jagenberg-Werke AG, Dusseldorf, Germany. Filed Nov. 9, 1961.

MULTI-SHEAR

For Rotary Slitters and Parts Thereof.
First use Nov. 24, 1959; in commerce Nov. 24, 1959.

SN 131,707. The Pie-Matic Company, Inc., San Antonio, Tex. Filed Nov. 9, 1961.

PIE-MASTER

For Automatic Pie Making Machine.
First use Mar. 2, 1959.

SN 131,826. Engel Sheet Metal Equipment, Inc., St. Louis, Mo. Filed Nov. 13, 1961.

e m ENGEL METAL METHODS m

For Machine Tools for Cutting and Forming Sheet Metal and the Like.
First use Aug. 1, 1958.

SN 131,833. Goerlich's, Inc., Toledo, Ohio. Filed Nov. 13, 1961.

KAR-GARD

For Exhaust Mufflers for Motor Vehicles.
First use Nov. 23, 1960.

SN 131,980. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Nov. 14, 1961.

SEA KING

For Outboard Motors and Marine Winches.
First use in 1931 on outboard motors.

SN 134,279. Smith-Corona Marchant Inc., New York, N.Y. Filed Dec. 18, 1961.

SCM

For Typewriters.
First use Nov. 16, 1959.

Class 24 — Laundry Appliances and Machines

SN 115,447. John B. Delander, d.b.a. Torette Manufacturing Company, St. Paul, Minn. Filed Mar. 13, 1961.

THERMO LEX

For Ironing Board Pads and Covers.
First use Feb. 10, 1961.

Class 26 — Measuring and Scientific Appliances

SN 78,895. Nautec Corporation, Chicago, Ill., by change of name from Motor Products Corporation, Duncan Parking Meter Division, Chicago, Ill. Filed Aug. 3, 1959.

THE DUNCAN-MILLER "60"

Owner of Reg. No. 605,126.
For Parking Meters.
First use Nov. 11, 1954.

SN 103,411. The Photo Porst, Nurnberg, Bavaria, Germany. Filed Aug. 25, 1960.

HAPOMATIC

Owner of German Reg. No. 736,434, dated May 9, 1960.
For Photographic Apparatus and Cameras and Parts Thereof, Accessories for Photographic Apparatus and Cameras—Namely, Shutters, Casings for Photographic Apparatus and Cameras, Stands and Tripods, Film Holders and Plate Holders, Plates, Films, Exchangeable Lenses and Sights, Filters, Enlarging Apparatus, Equipment Necessary for Photographic Work, Installations and Auxiliary Devices and Parts Thereof—Namely, Dishes, Basins, Driers, Frames, and Clamps.

SN 110,256. Cherne Test Ball, Inc., Hopkins, Minn. Filed Dec. 15, 1960.

TEST-BALL

For Device for Testing Soil Pipe.
First use May 18, 1953.

SN 121,469. Di-Matic Controls, Inc., Brooklyn, N.Y. Filed June 6, 1961.

DI-MATIC

For Electrical Device and Circuit for Detecting Malfunction in Electrically-Operated Equipment and Automatically Stopping the Same.
First use on or about June 30, 1960.

SN 121,790. Avtron Manufacturing Inc., Cleveland, Ohio. Filed June 12, 1961.

AVTRON

For Electrical Measuring, Indicating, Recording and Controlling Equipment—Namely, Transformers, Reactors, Load Banks, Chronographs, Counters, Timers, Relays, Controls, Regulators, and Amplitude, Frequency and Modulation Meters.
First use May 1, 1957.

SN 121,870. George W. Sisk, Kansas City, Mo. Filed June 12, 1961.

TELEMETRON

For Measuring Rules.
First use May 18, 1961.

SN 121,871. George W. Sisk, Kansas City, Mo. Filed June 12, 1961.

THEAMETRON

For Measuring Rules.
First use May 18, 1961.

SN 123,874. Continental Oil Company, Ponca City, Okla. Filed July 13, 1961.

VIBROSEIS

For Electrical and Electronic Apparatus for Seismic Exploration for Oil—Namely, Electrically-Controlled Signal Generating Equipment, Magnetic Tape Recording Equipment, Amplification Equipment, Correlating Equipment, and Other Associated Electrical and Electronic Apparatus for Seismic Exploration.
First use on or about Feb. 22, 1961.

SN 124,338. Bronica Camera Kabushiki Kaisha, d.b.a. Bronica Camera Inc., Itabashi-ku, Tokyo, Japan. Filed July 20, 1961.

BRONICA

Owner of U.S. Reg. No. 704,604.
For Cameras and Parts Thereof.
First use May 4, 1959; in commerce May 4, 1959.

SN 124,411. Borg-Warner Corporation, Chicago, Ill. Filed July 21, 1961.

BORG-WARNER B-W CONTROLS

Applicant disclaims any rights to the word "Controls" when used descriptively and not as a trademark. Owner of Reg. Nos. 513,546, 607,848, and others.
For Volt-Ohm-Meters, Signal Generators, Volt Meters, Transducers for Measuring Pressures and Other Scientific Applications, Measuring and Scientific Data-Handling Systems, Tape-Recorders for Scientific Purposes, Power Supplies for Measuring and Scientific Appliances, R-F Wattmeters, Standing Wave Ratio Indicators, Accelerometers, and Parts Thereof for Replacement and Repair.
First use on or prior to June 1, 1961.

SN 125,270. Airpath Instrument Company, St. Louis, Mo. Filed Aug. 3, 1961.

AIRPATH

For Aircraft Magnetic Compasses.
First use September 1937.

SN 126,143. Anken Chemical and Film Corporation, Newton, N.J. Filed Aug. 17, 1961.

ATTACHÉ

For Portable Photocopying Machines.
First use July 19, 1961.

SN 127,443. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Sept. 7, 1961.

CORSAIR

For Compasses.
First use Jan. 15, 1947.

SN 127,687. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Sept. 11, 1961.

SURECHO

For Depth Sounders.
First use Apr. 26, 1950.

SN 127,875. Rotolite Corporation, Stirling, N.J. Filed Sept. 14, 1961.

EXPEEDITER

For Photographic Copying Machine.
First use July 8, 1960.

SN 128,731. Flight Research, Incorporated, Sandston, Va. Filed Sept. 27, 1961.

AUTOLUME

For Automatic Power Regulators for Controlling the Level of Illumination Produced by Artificial Light.
First use July 27, 1961.

SN 129,457. Jean Charles Joseph Blosse, Sannois, Seine-et-Oise, France. Filed Oct. 9, 1961.

BLOSCOP

For Photographic Viewfinders, Precision Micro-Viewers and Optical Spy Glasses for Doors and Other Opaque Surfaces.
First use Apr. 3, 1944; in commerce June 1948.

SN 129,713. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 12, 1961.

MOVEXOOM

Owner of German Reg. No. 747,577, dated Apr. 14, 1961; and U.S. Reg. No. 607,669.
For Photographic and Cinematographic Apparatus, Instruments and Devices.

SN 129,715. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 12, 1961.

SOLETTA

Owner of German Reg. No. 748,268, dated May 2, 1961.
For Photographic and Cinematographic Exposure and Reproduction Apparatus and Parts Thereof.

SN 131,581. John Harris Jones, d.b.a. Bellwood Laboratories, Bellwood, Ill. Filed Nov. 8, 1961.

VISICART

For Viscosimeters.
First use Oct. 25, 1961.

SN 133,833. Sprague Products Company, North Adams, Mass. Filed Dec. 11, 1961.

TRANSFARAD

For Instruments Designed for Testing and Measuring the Performance of Electrical Capacitors.
First use Oct. 28, 1960.

SN 133,851. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Dec. 12, 1961.

LABOMIX

Owner of German Reg. No. 751,795, dated Aug. 11, 1961; and U.S. Reg. No. 720,970.
For Photographic and Cinematographic Apparatus, Instruments and Devices and Parts Thereof.

SN 133,964. Lear, Incorporated, Santa Monica, Calif. Filed Dec. 13, 1961.

TALISMAN

The drawing is lined for gold.
For Automatic Pilot Apparatus, Telemetering Devices and Guidance Systems, and Components Thereof for Air and Space Vehicles, Generally Comprising Gyroscopes for Detecting the Sense and Rate of Departure of the Vehicle From a Predetermined Course in One or More of the Three Principal Axes, and for Utilizing Electrical or Other Signals Derived From the Respective Positions of the Gyroscopes To Operate Mechanism To Return the Vehicle to the Predetermined Course.
First use Nov. 29, 1960.

SN 133,976. Monroe Calculating Machine Company, Orange, N.J. Filed Dec. 13, 1961.

600

Owner of Reg. No. 721,908.
For Computing Machines Including Adding-Listing Machines.
First use not later than February 1957.

SN 134,077. American Gage & Machine Company, Chicago, Ill. Filed Dec. 15, 1961.

SUN RING

For Photographic Flash Apparatus.
First use on or about Apr. 26, 1961.

SN 134,143. Monatomics, Inc., Burbank, Calif. Filed Dec. 15, 1961.

PROTECTRON

For Miniature Pocket Gieger Counters.
First use Oct. 25, 1961.

SN 134,166. United Gas Corporation, Shreveport, La. Filed Dec. 15, 1961.

DEWSCOPE

For Dew Point Detector Instruments.
First use Nov. 24, 1961.

SN 134,213. Esterline Angus Instrument Company, Inc., Indianapolis, Ind. Filed Dec. 18, 1961.

TEMPEN

For Stylus for Use With Event Recorders.
First use Nov. 1, 1961.

SN 134,278. Smith-Corona Marchant Inc., New York, N.Y. Filed Dec. 18, 1961.

SCM

For Accounting Machines, Adding Machines, Bookkeeping Machines, Cashiers (Machines Combining an Adding Machine and a Cash Drawer), Photocopying Machines, Telecommunication Equipment, Data Processing Machines and Calculating Machines.
First use Jan. 25, 1960, on accounting machines, bookkeeping machines, and cashiers.

SN 134,290. Telecomputing Corporation, Los Angeles, Calif. Filed Dec. 18, 1961.

DIGITESTER

For Digital Test Equipment—Namely, Apparatus for the Digital Measurement of Electrical Parameters Including Voltage, Current, and Resistance.
First use February 1954.

SN 134,349. Research Specialties Co., Richmond, Calif. Filed Dec. 19, 1961.

CHROMATOFILM

For Thin Film Chromatography Equipment.
First use Aug. 31, 1961.

SN 134,494. Radiation Counter Laboratories, Inc., Skokie, Ill. Filed Dec. 21, 1961.

RCL

Owner of Reg. Nos. 518,490, 518,491, and 535,579.
For Instruments for Measurement of Radioactivity and the Like.
First use on or about July 1, 1961.

Class 27—Horological Instruments

SN 128,380. Amano Tokushu Kikai Kabushiki Kaisha, Kohoku-ku, Yokohama, Japan. Filed Jan. 15, 1962.

For Time Recorders, Time Stamps and the Like.
First use October 1957; in commerce August 1959.

SN 128,381. Amano Tokushu Kikai Kabushiki Kaisha, Kohoku-ku, Yokohama, Japan. Filed Jan. 15, 1962.

amano

The mark consists of the word "Amano."
For Time Recorders, Time Stamps and the Like.
First use March 1958; in commerce August 1959.

SN 128,811. Fils et Petit-Fils de Paul Schwars-Etienne, Succ. de Paul Schwars-Etienne et Cie, La Chaux-de-Fonds, Switzerland. Filed Sept. 28, 1961.

BALTIC

Owner of Swiss Reg. No. 168,057, dated Nov. 22, 1957.
For Watches, Watch Movements, Watch Cases, Watch Dials and Parts of Watches.

Class 28—Jewelry and Precious-Metal Ware

SN 132,003. The Yale and Towne Manufacturing Company, New York, N.Y. Filed Nov. 14, 1961.

YALE

Owner of Reg. Nos. 63,654, 716,139, and others.
For Jewelry.
First use at least as early as the year 1936.

Class 29—Brooms, Brushes, and Dusters

SN. 100,132. Liquid Glaze, Inc., Lansing, Mich. Filed July 1, 1960.

SAFTEDGE CONTOUR

For Wool Buffing Pad for Use on a Machine Tool Used in Buffing and Polishing of Automobiles and Other Metal Finishes.
First use Oct. 1, 1956.

Class 30—Crockery, Earthenware, and Porcelain

SN 117,731. Porzellanfabrik Waldershof A.G. vorm. Johann Haviland, Waldershof, Bavaria, Germany. Filed Apr. 12, 1961.

JOHANN HAVILAND BAVARIA GERMANY

The term "Bavaria Germany" is claimed only in connection with the mark as shown.
For China Dinnerware.
First use as early as 1924; in commerce as early as 1924.

SN 117,732. Porzellanfabrik Waldershof A.G. vorm. Johann Haviland, Waldershof, Bavaria, Germany. Filed Apr. 12, 1961.

JOHANN HAVILAND R BAVARIA

The term "Bavaria" is claimed only in connection with the mark as shown.
For China Dinnerware.
First use as early as 1924; in commerce as early as 1924.

Class 31—Filters and Refrigerators

SN 117,891. Union Tank Car Company, d.b.a. The Lindsay Company, St. Paul, Minn. Filed Apr. 14, 1961.

SUPER FLOW

For Water Softeners.
First use Nov. 1, 1952.

SN 124,681. Carl Schleicher & Schuell Company, Inc., Keene, N.H. Filed July 25, 1961.

BAC-T-FLEX

Owner of Reg. No. 609,584.
For Filters Formed by Casting Cellulose Derivatives on Glass in the Form of a Film, as Distinguished From a Filter Made of Paper.
First use Apr. 13, 1954.

SN 133,131. Briggs & Stratton Corporation, Milwaukee, Wis. Filed Dec. 1, 1961.

OIL-FOAM

For Air Cleaner for Internal Combustion Engine.
First use July 11, 1960.

Class 32 — Furniture and Upholstery

SN 97,043. Dayco Corporation, Dayton, Ohio. Filed May 13, 1960.

HAYWOOD

For Mattresses, Pillows, and Cushions.
First use December 1959.

SN 101,445. Ling-Temco-Vought, Inc., Dallas, Tex., assignee, by mesne assignments, of University Loudspeakers, Inc., White Plains, N.Y. Filed July 25, 1960.

SELECT-A-STYLE

For Series of Panels for Cabinets for Loudspeakers, Radios, Phonographs.
First use May 14, 1960.

SN 107,343. The Interior Steel Equipment Company, Cleveland, Ohio. Filed Oct. 28, 1960.

SIMPLEX

For Punch Support Posts and Shelf Height Adjusting Clips for Detachable Connection With Such Posts.
First use July 1960.

SN 109,524. Sealy, Incorporated, Chicago, Ill. Filed Dec. 2, 1960.

SEALYFOAM

Owner of Reg. Nos. 426,168, 677,335 and others.
For Mattresses, Box Springs and Cushioning Material for Mattresses, Box Springs and Upholstered Furniture.
First use Nov. 1, 1960.

SN 118,851. Superior Sleeprite Corporation, Chicago, Ill. Filed Mar. 30, 1961.



Applicant disclaims the representation of the mattresses (drawn in white and solid black) in the accompanying drawing. Owner of Reg. No. 604,962.
For Mattresses.
First use Jan. 3, 1947.

SN 121,538. Charak Furniture Company, Boston, Mass. Filed June 7, 1961.

CHARAK

For Bedroom Furniture, Dining Room Furniture, Living Room Furniture and Occasional Furniture.
First use about 1919.

SN 122,317. Jackes-Evans Manufacturing Company, d.b.a. Medart Products, Inc., St. Louis, Mo. Filed June 19, 1961.



The word "Construction" is disclaimed apart from the mark as shown.
For Metal Lockers, Shelving and Cabinets.
First use June 21, 1960.

SN 126,557. Beautycraft Furniture Industries, Inc., Miami, Fla. Filed Aug. 24, 1961.

deucette

For Convertible Couches and Sofas, Some With End Table Additions, All Converting on a Pivoting Steel Case To Swing Out and Form a Sleeping Bed.
First use Apr. 25, 1961.

SN 130,387. Evelyn L. Smith, Philadelphia, Pa. Filed Oct. 20, 1961.

INDIS PENCIL

No claim is made to the word "Pencil" apart from the mark.
For Wall Desk.
First use Oct. 13, 1961.

SN 131,277. Drexel Enterprises, Inc., High Point, N.C. Filed Nov. 3, 1961.

PERENNIAN

For Living-Room, Bedroom, Dining Room and Office Furniture and Occasional Tables.
First use Aug. 11, 1961.

SN 134,694. Standard Dayton Corporation, Dayton, Ohio. Filed Dec. 26, 1961.

RITE-HITE

Owner of Reg. No. 641,171.
For Support Structures for Displaying Merchandise Offered for Sale in Supermarket Types of Business.
First use May 15, 1954.

SN 135,043. Joseph W. Osten, Jr., d.b.a. Joseph W. Osten and Associates, Wilmette, Ill. Filed Jan. 2, 1962.

SPREAD BED

For Hassock-Type Benches Adapted for the Storage of Bedspreads, Comforters, Pillows and Other Bedding.
First use Nov. 14, 1961.

SN 135,085. Baby World Company, Inc., New York, N.Y. Filed Jan. 3, 1962.

COMFY-CARRY

For Cradle Seat.
First use Mar. 2, 1960.

SN 135,208. Leachman Industries, Inc., Des Moines, Iowa. Filed Jan. 4, 1962.



For Casual and Patio Furniture.
First use Mar. 3, 1961.

SN 135,288. The Morley Company, Portsmouth, N.H. Filed Jan. 5, 1962.

FLEX-IT

For Mattress Handles.
First use Dec. 18, 1959.

Class 33 — Glassware

SN 130,991. Skloexport, Podnik Zahranicniho Obchodu pro Vyvoz Skla, Prague, Czechoslovakia. Filed Oct. 30, 1961.



Owner of Czechoslovakian Reg. No. 107,776, dated July 23, 1949.
For Glass and Glass Wares.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 115,935. Moore's Wholesale Builders Supply, Inc., Richmond, Va. Filed Mar. 17, 1961.



For Domestic Hot Water Heaters.
First use Nov. 1, 1960.

SN 126,403. Utah Hydro Corporation, Salt Lake City, Utah. Filed Aug. 21, 1961.

HYDRO FLAME

No claim is made herein to the word "Flame" apart from the mark as shown.
For Conversion Burners, Fireplace Burners, and Gas Furnaces.
First use 1957 on conversion burners.

SN 127,667. Riley Stoker Corporation, Worcester, Mass. Filed Sept. 11, 1961.

RILEY

Owner of Reg. Nos. 604,480 and 642,074.
For Steam Generating Units Including Fuel Burning Equipment and Boilers.
First use 1932 on boilers; and 1914 on fuel burning apparatus.

SN 130,225. Moffats, Limited, Weston, Ontario, Canada. Filed Oct. 18, 1961.

MOFFAT

Owner of Canadian Reg. No. N.S. 239/51,708, dated Mar. 5, 1931.
For Domestic and Commercial Cooking Stoves.
First use Jan. 1, 1910; in commerce July 15, 1948.

SN 131,172. Nordischer Maschinenbau Rud. Baader, Lubeck, Germany. Filed Oct. 9, 1961.

TUBOMATIC

Owner of German Reg. No. 749,559, dated June 5, 1961.
For Autoclaves; Preserving and Sterilizing Apparatus for Preservation and Sterilization of Perishable Goods, Particularly Food Products.

Class 36 — Musical Instruments and Supplies

SN 118,389. F. W. Woolworth Co., New York, N.Y. Filed Apr. 21, 1961.

AUDITION

Owner of Reg. No. 715,081.
For Phonographs and Supplies for Phonographs and Phonograph Records, Including Needles, Brushes, Record Cleaning Cloths, Record Sleeves, and Record Inserts.
First use Apr. 22, 1958.

SN 123,745. Greentree Electronics Corporation, Los Angeles, Calif. Filed July 11, 1961.

AMERIPAK

For Plastic Reel Container for Recording Tape.
First use May 2, 1961.

SN 123,984. Hickory Records, Nashville, Tenn. Filed July 14, 1961.

HICKORY

For Phonograph Records.
First use on or about Jan. 28, 1954.

SN 126,876. Lowe Music Publishing Corp., Philadelphia, Pa. Filed Aug. 29, 1961.

FAVOR

For Grooved Phonograph Records.
First use Aug. 23, 1961.

SN 128,262. Edu-Tek, Incorporated, St. Louis, Mo. Filed Sept. 20, 1961.

LINGUATAPES

For Tape Recordings of Foreign Languages.
First use July 10, 1961.

SN 129,510. The Magnavox Company, Fort Wayne, Ind. Filed Oct. 9, 1961.

MICROMATIC

For Record Changers.
First use Nov. 1, 1960.

Class 37 — Paper and Stationery

SN 125,863. Allied Paper Corporation, Chicago, Ill. Filed Aug. 14, 1961.

ALLIED EGRY

For Paper Business Forms.
First use Mar. 31, 1961.

SN 131,910. Wausau Paper Mills Company, Brokaw, Wis. Filed Nov. 13, 1961.

WAUSAU ASTROPAQUE

Owner of Reg. Nos. 547,013, 616,865, and 725,062.
For Opaque Sulphite Paper.
First use Sept. 1, 1961.

SN 135,956. Bergstrom Paper Company, Neenah, Wis. Filed Jan. 17, 1962.

PENPAC

For Pouch Forming Ream Wrapper Which Incorporates Office Printing Papers Therein.
First use Nov. 3, 1961.

SN 137,514. Ellingsworth Mfg. Co., Chicago, Ill. Filed Feb. 8, 1962.

DUO-TANG

Owner of Reg. No. 386,907.
For Looseleaf Covers and Looseleaf Index Dividers.
First use September 1932.

Class 38 — Prints and Publications

SN 97,555. Hartford Provision Company, Stamford Division, Inc., d.b.a. Hartford Provision Company, Stamford, Conn. Filed May 20, 1960.

SCHOOL-O-GRAM

For Informative Leaflets for School Dietary Programs.
First use Sept. 6, 1957.

SN 114,875. P. M. Payne, d.b.a. Payne Publishers, Washington, D.C. Filed Mar. 3, 1961.

"ALL-PURPOSE CALENDAR"

Applicant makes no claim of exclusive use of the word "Calendar" for the goods.
For Calendar.
First use Feb. 3, 1958.

SN 122,764. Byers Color Laboratory, Inc., Portland, Oreg. Filed June 26, 1961.

VIVIGRAM

For Bulletins Published at Irregular Intervals in Connection With the Business of Making Color Prints From Photograph Color Negatives.
First use Jan. 30, 1961.

SN 123,438. Sales Promotions, Inc., New York, N.Y. Filed July 5, 1961.

SALES PLANS

For Monthly Merchandising and Advertising Guide Sold to Department Stores and Specialty Stores.
First use 1931.

SN 125,995. American Association of Retired Persons, Washington, D.C. Filed Aug. 15, 1961.

MODERN MATURITY

For Magazine Published Bi-Monthly.
First use October 1958.

SN 131,206. Goodheart-Willcox Company, Inc., Chicago, Ill. Filed Nov. 2, 1961.

BUILD-A-COURSE

For Educational and Vocational Books.
First use Sept. 13, 1960.

SN 131,852. Alexander Maconachie, Sydney, New South Wales, Australia. Filed Nov. 13, 1961.

HUMANOLOGY

Owner of Australian Reg. No. A115,924, dated July 6, 1961.
For Text Books, Instruction Leaflets.

SN 132,806. Edward J. Bobit, d.b.a. Bobit Publishing, Glenview, Ill. Filed Nov. 27, 1961.

AUTOMOTIVE FLEET

For Monthly Trade Magazine.
First use Nov. 1, 1961.

SN 133,670. Virginia Harrell, d.b.a. Mississippi Valley Stockman-Farmer Company, Vicksburg, Miss. Filed Dec. 8, 1961.

MISSISSIPPI VALLEY STOCKMAN-FARMER

Owner of Reg. No. 423,892.
For Agricultural Magazine.
First use Aug. 20, 1961; June 5, 1945, as to "Mississippi Stockman Farmer."

SN 134,842. Scholastic Magazines, Inc., New York, N.Y. Filed Dec. 28, 1961.



For Books.
First use December 1959.

Class 39 — Clothing

SN 91,287. Shelburne Shirt Co., Inc., New York, N.Y. Filed Feb. 19, 1960.

STRATOKOOL

For Men's and Boys' Sport and Dress Shirts.
First use in or about January 1945.

SN 101,734. Atlas Underwear Corporation, Piqua, Ohio. Filed Aug. 1, 1960.

BI-PLY

For Men's and Boys' Underwear.
First use in or about 1938.

SN 107,791. Ripon Knitting Works, Ripon, Wis. Filed Nov. 3, 1960.

PLAYSOLE

For Sole Structure for Slippers for Men, Women, Boys, and Girls.
First use Oct. 14, 1960.

SN 110,936. Endicott Johnson Corporation, Endicott, N.Y. Filed Dec. 28, 1960.

"LIVING FORMULA X-500"

For Leather Made Up Into Men's, Children's, and Women's Shoes.
First use Dec. 19, 1960.

SN 112,117. Cambridge Rubber Company, Taneytown, Md. Filed Jan. 19, 1961.

SNEEX

For Men's, Women's, and Children's Footwear—Namely, Shoes.
First use Jan. 12, 1926.

SN 114,043. Power Sportswear Co., Inc., New York, N.Y. Filed Feb. 20, 1961.

HEATHER-MIST

For Women's Sweaters.
First use Sept. 1, 1960.

SN 117,484. H. L. Green Company Inc., New York, N.Y. Filed Apr. 10, 1961.

ROYAL CHOICE

For Women's, Men's and Children's Shoes and Slippers; Boys' Athletic Shirts, T-Shirts, Boxer Shorts; Men's Athletic Shirts, T-Shirts, Briefs, Dress Shirts, Sport Shirts, Boxer Shorts; and Women's and Children's Panties and Slips.
First use Mar. 5, 1951.

SN 120,811. Litt-Gluck Co., New York, N.Y. Filed May 25, 1961.

dudley

For Ladies' Dresses.
First use Sept. 19, 1940.

SN 123,246. Tidykins, Inc., New York, N.Y. Filed June 30, 1961.

LUSTRE STRETCH

For Slacks for Boys and Girls.
First use June 15, 1961.

SN 125,016. Don Juan Sportswear, Inc., New York, N.Y. Filed July 31, 1961.

DON JUAN

The name "Don Juan" is fanciful.
For Men's and Boys' Shirts.
First use Jan. 14, 1929.

SN 125,446. Winfrank Stylists, Inc., New York, N.Y. Filed Aug. 3, 1961.



For Men's and Women's Suits, Coats, Slacks, Belts, Raincoats, Hats and Shoes; Men's Neckwear, Hose, Dress and Sport Shirts; and Women's Dresses, Blouses.
First use December 1960.

SN 125,625. Snow & Baker, Inc., New Bedford, Mass. Filed Aug. 8, 1961.

WHITEFIELD



For Men's, Women's, and Children's Overalls, Dungarees, Coveralls, Jumpers, Shopcoats, and Aprons.
First use 1910.

SN 127,575. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Sept. 11, 1961.

CAPITANO

For Shoes for Men and Boys.
First use May 19, 1961.

SN 128,444. Hug & Co. A.G., Herzogenbuchsee, Switzerland. Filed Sept. 22, 1961.



The word "Switzerland" is disclaimed apart from the mark as shown.
For Shoes for Use of Men, Women, Boys, and Girls.
First use Jan. 6, 1961; in commerce Jan. 6, 1961.

SN 128,693. Unishops, Inc., Jersey City, N.J., by change of name from United Shirt Shops, Inc., Jersey City, N.J. Filed Sept. 26, 1961.



The drawing is lined for orange. The name "Peter Bruce" is the combination of the first names of applicant's sons—namely, "Peter" and "Bruce."
For Men's and Boys' Dress Shirts, Sport Shirts, Sweaters, Slacks, Coats and Sport Coats, Outdoor Jackets; Men's and Boys' Suits.
First use July 1, 1960.

SN 129,131. Federated Department Stores, Inc., Cincinnati, Ohio. Filed Oct. 3, 1961.

Fed-Rose

For Women's Hosiery.
First use Sept. 15, 1961.

SN 129,951. Loomtogs, Inc., New York, N.Y. Filed Oct. 16, 1961.

SHANLOOM

For Fabric Made Into Ladies' Garments—Namely, Slacks, Shorts, Skirts, and Jackets.
First use Oct. 2, 1961.

SN 130,334. The Council of Organized Purchasers, Inc., Toledo, Ohio. Filed Oct. 20, 1961.

FAMILY LOOM

For Wearing Apparel—Namely, Infants' Hosiery, Training Pants, Plastic Waterproof Baby Pants, Bibs; Girls' and Ladies' Hosiery, Panties; Boys' and Men's Hosiery.
First use in May 1961.

SN 130,997. Anderson & Thompson Ski Co., Seattle, Wash. Filed Oct. 31, 1961.

A T

Owner of Reg. No. 648,876.
For Wearing Apparel for Skiers—Namely, Ski Sweaters, Ski Pants, T-Shirts, Socks, Ski Boots, Ski Boot Laces, After Ski Boots, Ski Hats, Caps and Headbands, Ski Gloves and Mitts.
First use on or about Sept. 1, 1958.

SN 132,357. Melville Shoe Corporation, New York, N.Y. Filed Nov. 20, 1961.

EVER-SOLE

For Shoes.
First use Nov. 10, 1961.

SN 132,504. Goodstein Bros. & Co., Inc., New York, N.Y. Filed Nov. 21, 1961.

LAMILITE

For Men's and Boys' Outer Wear—Namely, Coats.
First use Sept. 11, 1961.

SN 132,526. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed Nov. 22, 1961.

HANFORD SQUARE

For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers and Vests.
First use Oct. 25, 1961.

SN 132,780. A–1 Manufacturing Company, Los Angeles, Calif. Filed Nov. 27, 1961.

WESKINS

For Trousers.
First use Sept. 28, 1961.

SN 132,797. Anvil Brand, Incorporated, High Point, N.C. Filed Nov. 27, 1961.

BULLDOGGER

Owner of Reg. No. 627,894.
For Dungarees for Men and Boys.
First use on or about June 30, 1955.

SN 132,831. Genesco, Inc., Nashville, Tenn. Filed Nov. 27, 1961.

THE Broker

For Suits, Top Coats, Overcoats, Slacks, Sport Coats and Jackets for Men, Boys and Youths.
First use Aug. 1, 1960.

SN 132,839. I. Jablow & Co., Inc., New York, N.Y. Filed Nov. 27, 1961.

MOBY DICK

For Boys' Cotton Shirts, Flannelette Robes, and Polo Shirts.
First use Nov. 4, 1961.

Class 40—Fancy Goods, Furnishings, and Notions

SN 125,709. The American Fabrics Company, Bridgeport, Conn. Filed Aug. 10, 1961.



For Laces, Embroideries and Narrow Woven Fabrics in the Nature of Findings.
First use 1925.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 123,167. Bates Manufacturing Company, Lewiston, Maine. Filed June 30, 1961.

SUPER DISCIPLINED

Owner of Reg. Nos. 545,351, 605,225, and 682,960.
For Piece Goods To Be Used in Making Articles Such as Women's, Men's, and Children's Clothing.
First use June 1960.

SN 125,708. The American Fabrics Company, Bridgeport, Conn. Filed Aug. 10, 1961.



For Piece Goods of Cotton, Linen and Synthetic Fibres, Luncheon Sets, Pillow Cases, Bed Sheets, Furniture Scarfs, Doilies, Runners, Towels, Table Cloths, and Chair Back Sets.
First use 1925.

SN 129,940. Hartford Textile Corporation, New York, N.Y. Filed Oct. 16, 1961.

BEAU-LUX

For Piece Goods of Expanded Plastic Sheeting Laminated to Textile Material, Unexpanded Plastic Sheeting Laminated to Textile Material, and Expanded Plastic Sheeting Laminated to Unexpanded Plastic Sheeting, for Making Into Coats, Jackets, and the Like.
First use July 28, 1961.

SN 130,648. The L. B. Price Mercantile Co., St. Louis, Mo. Filed Oct. 25, 1961.

Lady Price

The name "Lady Price" is not the name of any particular person, living or dead. Owner of Reg. Nos. 501,641, 504,666, and 549,666.
For Curtains and Draperies, Bed Spreads, Sheets and Pillow Cases, Blankets, Rugs, Table Cloths, Bath Sets and Towels, Furniture Slip Covers, Ironing Board Covers and Pads.
First use at least or as early as March 1953.

SN 130,649. The L. B. Price Mercantile Co., St. Louis, Mo. Filed Oct. 25, 1961.



The name "Lady Price" and the silhouette design of a lady's head is not the name and silhouette of any particular person, living or dead. Owner of Reg. Nos. 501,641, 504,666, and 549,666.

For Curtains and Draperies, Bed Spreads, Sheets and Pillow Cases, Blankets, Rugs, Table Cloths, Bath Sets and Towels, Furniture Slip Covers, Ironing Board Covers and Pads.
First use at least or as early as March 1953.

SN 132,119. Bartmann & Bixer, Inc., New York, N.Y. Filed Nov. 16, 1961.

KENNETH

Owner of Reg. No. 364,403.
For Curtains, Draperies, and Bedspreads, and Fabrics Adapted To Be Made Up Into Curtains, Draperies, and Bedspreads.
First use July 31, 1934.

SN 132,124. The Chemstrand Corporation, Decatur, Ala. Filed Nov. 16, 1961.

CHEMPRESS

For Crease Retentive Fabric for Use in Garments Such as Skirts, Trousers, and the Like.
First use Oct. 17, 1961.

SN 132,525. Cameo Curtains Inc., New York, N.Y. Filed Nov. 22, 1961.

WundaLiner

For Separable Linings for Draperies.
First use Sept. 1, 1961.

SN 132,778. World Carpet Mills, Inc., Dalton, Ga. Filed Nov. 24, 1961.

WORLD

For Textile Carpeting.
First use February 1954.

Class 43—Thread and Yarn

SN 131,996. Rocky Creek Mills, Incorporated, Turnersburg, N.C. Filed Nov. 14, 1961.

ROCKY CREEK

For Synthetic Yarn for Weaving, Knitting, and Tufting.
First use Jan. 1, 1941.

Class 44—Dental, Medical, and Surgical Appliances

SN 120,901. Progressive Products, Inc., La Mesa, Calif. Filed May 26, 1961.



Owner of Reg. No. 636,506.
For Teething Aids in the Form of a Liquid Filled Container Formed of Pliable Material; and in the Form of a Plurality

of Liquid Filled Containers Formed of Pliable Material With the Containers Interconnected and Arranged in a Continuous Band; and in the Form of a Spoon Made of Plastic Material.
First use Feb. 22, 1961.

SN 125,456. Ampoules, Inc., Hudson, Ohio. Filed Aug. 7, 1961.

HYPULE

For Component Parts of Disposable Hypodermic Ampoules.
First use July 3, 1961.

SN 129,043. Remington Research, Inc., New York, N.Y. Filed Oct. 2, 1961.

LADY MAYFAIR

For Electric Hair Driers.
First use Aug. 25, 1961.

SN 129,916. Chattanooga Pharmacal Co., Chattanooga, Tenn. Filed Oct. 16, 1961.

COVER-SLING

For Fabric Envelopes for Applying to the Neck Moist Heat From Therapeutic Steam Packs.
First use Mar. 29, 1961.

SN 131,291. Gladys E. MacDonald, d.b.a. Ethical Line, Grosse Pointe Farms, Mich. Filed Nov. 3, 1961.

ETHICAL

For Examination Gowns, Bed Gowns and Surgical Gowns for Use by Patients in Hospitals, Clinics and Doctor's Offices and for Blanket Supports for Hospital Beds.
First use May 1, 1961.

SN 132,658. Electro-Mechanical Development Company, Houston, Tex. Filed Nov. 24, 1961.

i-v monitor

The word "Monitor" is disclaimed apart from the mark as shown in the drawing.
For Intravenous Feeding and Blood Transfusion Pump Apparatus Having a Feed Line Air Bubble Detector To Effect Automatic Cut-Off of the Pump.
First use Oct. 20, 1961.

Class 46 — Foods and Ingredients of Foods

SN 77,793. Aloha Papaya Company, Ltd., Honolulu, Hawaii. Filed July 16, 1959.

LEILANI

The Hawaiian word "Leilani" means "heavenly flowers."
For Fresh Fruits and Vegetables and Fresh Fruit Cocktail and Frozen Fresh Fruit Cocktail.
First use Nov. 1, 1937.

SN 90,083. J. S. McManus, d.b.a. J. S. McManus Produce Co., Weslaco, Tex. Filed Feb. 1, 1960.



The portrait is fanciful and is not intended to depict any particular individual.
For Fresh Vegetables and Tomatoes.
First use at least as early as 1940.

SN 106,527. C. J. Patterson Company, Kansas City, Mo. Filed Oct. 17, 1960. CONCURRENT USE restricted to Kansas and Wisconsin. Concurrent use with SN 112,132.

PANTRY PRIDE

For Bread.
First use Dec. 5, 1959.

SN 109,184. Holiday Foods, Inc., Waterloo, Iowa. Filed Nov. 28, 1960.



The words "Premium Quality" and "Brand" are disclaimed apart from the mark as shown. The drawing is lined for shading. Owner of Reg. Nos. 658,368, 664,821, and 706,110.
For Fruit Preserves, Spices, Unpopped Popcorn, Smoked Oysters, Anchovies, and Fruit Cakes.
First use May 1956 on fruit cakes; November 1949 as to "Holiday."

SN 112,132. Continental Baking Company, Rye, N.Y. Filed Jan. 19, 1961. CONCURRENT USE restricted to all the states of the United States with the exception of Kansas and Wisconsin. Concurrent use with SN 106,527.

PANTRY PRIDE

For Bread.
First use Aug. 15, 1958.

SN 112,368. Don Deck, d.b.a. Deck Produce Company, McAllen, Tex. Filed Jan. 24, 1961.



For Fresh Vegetables.
First use March 1958.

SN 120,384. Central Soya Company, Inc., Fort Wayne, Ind. Filed May 19, 1961.

HI-QUAL

For Livestock and Poultry Feed.
First use Apr. 17, 1961.

SN 122,793. Harry Fisher, d.b.a. Fisher Feeds, Portland, Oreg. Filed June 26, 1961.

ENZ-A-BAC

For Cattle and Sheep Feed.
First use during January 1961.
Subj. to Intf. with SN 138,353.

SN 122,993. Beatrice Foods Co., Chicago, Ill. Filed June 28, 1961.

MAGIC FREEZE

Applicant disclaims title to the descriptive word "Freeze." Owner of Reg. No. 418,773.
For Ice Milk; Sherbet; Mellorine; and Vegetable Fat Frozen Desserts.
First use May 1, 1953; May 22, 1945, as to "Magic-Freeze."

SN 128,810. The Facs Manufacturing Company, Inc., San Antonio, Tex. Filed Sept. 28, 1961.

Pesos

For Corn Chips.
First use July 27, 1961.
Subj. to Intf. with SN 128,732.

SN 130,695. Henderson's Portion Pak, Inc., Coral Gables, Fla. Filed Oct. 26, 1961.

OUR BIG SAM

For Frozen Meats.
First use Oct. 16, 1961.

SN 130,697. J. S. Hoffman Company, Chicago, Ill. Filed Oct. 26, 1961.

DELICIA

Owner of Reg. Nos. 154,484, 400,740, and others.
For Process Cheese Food.
First use June 22, 1920.

SN 131,031. General Foods Corporation, White Plains, N.Y. Filed Mar. 19, 1962.

TOP 3

For Cereal Breakfast Food.
First use on or about Aug. 15, 1960.

SN 133,353. Vim-Pak, Inc., Tualatin, Oreg. Filed Dec. 5, 1961.

ENZ·A·BAC

For Livestock Food Supplement.
First use Dec. 3, 1960.
Subj. to Intf. with SN 122,793.

SN 134,822. Mars, Incorporated, Chicago, Ill. Filed Dec. 28, 1961.

FEATHERTOP

For Candy Bars.
First use Dec. 6, 1961.

SN 134,824. Mars, Incorporated, Chicago, Ill. Filed Dec. 28, 1961.

MOOKY

For Candy Bars.
First use Dec. 6, 1961.

SN 134,947. Corn Products Company, New York, N.Y. Filed Jan. 2, 1962.

DEX-KREME

For Fondant.
First use at least as early as Nov. 3, 1961.

SN 135,139. Hi-Vi Dog Food Co., Rush Springs, Okla. Filed Jan. 3, 1962.



RUSTY

For Dog and Cat Food.
First use July 1, 1951.

SN 136,107. Boots Pure Drug Company Limited, Nottingham, England. Filed Jan. 19, 1962.

SWEETEX

Owner of British Reg. No. B771,934, dated Dec. 6, 1957.
For Dietetic Sweetening Agents.

SN 136,262. Merck & Co., Inc., Rahway, N.J. Filed Jan. 22, 1962.

CEBIPAK

Owner of Reg. No. 722,891.
For Chemical Composition for Use in Treating Foods, Particularly Meats.
First use Jan. 10, 1962.

SN 138,368. American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.



For Fresh Eggs.
First use October 1958.

SN 138,372. American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

ARCTIC SEAL

For Fresh and Frozen Fish and Shellfish.
First use Mar. 8, 1957.

SN 138,374. American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

Dainti

For Pies, Cookies, Cakes, and Candies.
First use July 1960.

SN 138,375. American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

Wincrest

Owner of Reg. No. 343,745.
For Coffees.
First use Aug. 19, 1958; Sept. 21, 1936, for "Win-Crest."

SN 138,376. American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

ACME Play Boy

Owner of Reg. No. 561,424.
For Dog Foods.
First use June 12, 1959; Oct. 30, 1942, as to "Play Boy" on dog meal.

SN 138,377. American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

Supreme

For Breads.
First use Apr. 10, 1960.

Class 48 — Malt Beverages and Liquors

SN 110,000. Sunshine Brewing Co., Reading, Pa. Filed Dec. 9, 1960.

CHAMPEER

For Malt Liquor.
First use on or about Nov. 18, 1960.
Subj. to Intf. with SN 111,523.

SN 111,523. Metropolis Brewery of N.J., Inc., Trenton, N.J. Filed Jan. 9, 1961.

CHAMPALE

For Malt Liquor.
First use June 5, 1939.
Subj. to Intf. with SN 110,000.

Class 49 — Distilled Alcoholic Liquors

SN 129,175. Standard Food Products Corp., d.b.a. Dornewyck Co., Long Island City, N.Y. Filed Oct. 3, 1961.

DUKHOV

For Vodka.
First use July 12, 1961.

SN 130,472. H. C. Macpherson, d.b.a. Macpherson & Company, San Francisco, Calif. Filed Oct. 23, 1961.

A&B

For Scotch Whisky.
First use Sept. 1, 1961.

SN 131,039. Barrett Hamilton, Inc., d.b.a. Barrett Hamilton Distillery, Little Rock, Ark. Filed Oct. 31, 1961.

COPPER GOOSE

For Whisky.
First use Aug. 11, 1961.

SN 132,642. Continental Distilling Corporation, Philadelphia, Pa. Filed Nov. 24, 1961.

INVER HOUSE

For Whisky.
First use Nov. 10, 1961.

SN 133,470. Heublein, Inc., Hartford, Conn. Filed Dec. 6, 1961.

LONG BALL

For Vodka.
First use Nov. 9, 1961.

Class 50 — Merchandise Not Otherwise Classified

SN 115,481. Jonas Bros., Inc., Denver, Colo. Filed Mar. 13, 1961.

JONAS BROTHERS

For Taxidermy Items, in the Form of Artificial Animal Body Parts and Members for Use in Mounting Fish, Birds, Reptiles, Animals, Game Heads and Whole Mounts.
First use during 1908.
Subj. to Intf. with SN 105,286 and 105,287.

SN 125,479. Duncan-Morris Company, Akron, Ohio. Filed Aug. 7, 1961.

LIFE-LITE

For Highway Reflectors.
First use June 20, 1961.

SN 127,299. You Do, Inc., New York, N.Y. Filed Sept. 5, 1961.

YOU DO

For Sets of Educational or Training Material, Each Set Comprising Related Aural and Visual Components, the Aural Components Consisting of Sound Record Discs and Tapes, and the Visual Components Comprising Printed Charts, Projection Transparencies and Motion Picture Film.
First use May 15, 1961.

SN 127,337. Paul L. Gagnon, Hoboken, N.J. Filed Sept. 6, 1961.

PORT-O-RUNG

For Temporary Metal Ladder Rung.
First use Aug. 22, 1961.

SN 127,362. Sales Promotion Products, Inc., Cleveland, Ohio. Filed Sept. 6, 1961.

BANNER KING

For Advertising Display Device Comprising Replaceable Banners and Apparatus for Mounting the Same on Upright Poles and Supports.
First use Mar. 9, 1960.

SN 128,029. Flexible Safety Zoning Co., Inc. (Illinois corporation—new corporation), Chicago, Ill., assignee of Flexible Safety Zoning Co., Inc. (Illinois corporation), Cicero, Ill. Filed Sept. 18, 1961.

FLEXOGUIDES

For Traffic and Parking Guides Attachable to Pavements.
First use Sept. 5, 1961.

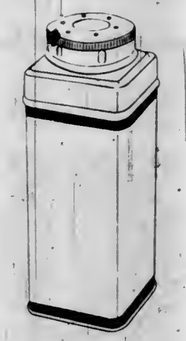
Class 51 — Cosmetics and Toilet Preparations

SN 87,436. Laboratoires Roja, Societe Anonyme, Nanterre (Seine), France. Filed June 6, 1961.

RICIL'S

Owner of French Reg. No. 372,906, dated Dec. 12, 1946 (Paris); Natl. Inst. No. 401,275.
For Conditioner and Stimulant for Eyelashes.

SN 90,065. Johnson & Johnson, New Brunswick, N.J. Filed Feb. 1, 1960.



The mark consists of two red narrow horizontal bands of cross-hatching, one at the bottom and one near the top of the vertical face of the body of the container. No claim is made to exclusive rights in the configuration of the container, per se.
For Talcum Powder.
First use February 1935.

SN 105,691. Talk O' the Town, Highland Park, Ill. Filed Oct. 3, 1960.

Talk O' the Town

For Cosmetics and Toilet Preparations—Namely, Skin Astringents and Oils; Powder; Skin Creams; Body Deodorants; Eye Pencils, Sticks and Creams; Skin Lotions; Lipstick; Rouge; Mascara and Skin Fresheners.
First use Apr. 4, 1959.

SN 118,606. Johnson Products Co., Inc., Chicago, Ill. Filed Apr. 26, 1961.

ULTRA WAVE

Owner of Reg. No. 608,913.
For Preparation for Straightening the Hair.
First use May 26, 1953.

SN 128,437. Jacque Hedley, Inc., Lebanon, Ind. Filed Sept. 22, 1961.

CLEOPATRA SAILS

For Perfume.
First use Sept. 9, 1961.

SN 128,926. Sea Breeze Laboratories, Inc., Pittsburgh, Pa. Filed Sept. 29, 1961.

SEA BREEZE

Owner of Reg. No. 92,041.
For Before and After Shave Lotion.
First use Aug. 23, 1961.

SN 136,093. Weleda A.G. (Weleda Co. Ltd.), Arlesheim, Switzerland. Filed Jan. 18, 1962.

EVERON

Owner of Swiss Reg. No. 144,849, dated Dec. 30, 1952.
For Cosmetic Preparations.

Class 52 — Detergents and Soaps

SN 94,649. The Brand X Corporation, Cincinnati, Ohio, assignee of Harry H. Chafvin, Jr., d.b.a. The Gleema Company, Cincinnati, Ohio. Filed Apr. 8, 1960.

BRAND "X"

The word "Brand" is disclaimed apart from the mark shown on the drawing.
For Cleaning Compound for Use on Windows, Mirrors, Chrome, Tile, Plastics, Ceramics and the Like.
First use Jan. 15, 1960.

SN 105,132. Napoleon A. Barbeau, d.b.a. Barbeau Supply Co., St. Paul, Minn. Filed Sept. 26, 1960.

DETERGO

For Chemical Concentrate All-Purpose Cleaner in Liquid Form, for Use in Building Maintenance.
First use Jan. 1, 1951.

SN 126,456. Knoebel Mercantile Company, d.b.a. Knoebel Mercantile Co., Denver, Colo. Filed Aug. 22, 1961

Nobel

For Stainless Steel Cleaner; Solvent Degreaser; Liquid Hand Soap.
First use Feb. 2, 1961, on stainless steel cleaner.

SN 129,228. Onyx Chemical Corporation, Jersey City, N.J. Filed Oct. 4, 1961.

MAPROSYL

Owner of Reg. Nos. 344,951 and 345,172.
For Detergent Sold to Others for Incorporation in Rug and Upholstery Shampoos, Liquid Dishwashing Compounds, Hair Shampoos, Fabric Cleaners and Similar and Related Products.
First use on or about Mar. 13, 1961.

SN 129,423. Maurice H. Simson, d.b.a. Alpha Chemical Company, Baltimore, Md. Filed Oct. 6, 1961.

LA FRANCE

Owner of Reg. Nos. 547,898 and 727,133.
For Chemical Cleanser for Cleaning Marble Sills, Floors, Furniture, Woodwork, Linoleum, Windows and Glassware.
First use Aug. 6, 1932.

SN 129,789. M. Pier Company, Inc., d.b.a. M. Pier Company and as Tiz Products, Inc., Crystal Lake, Ill. Filed Oct. 12, 1961.

TIZ-

Owner of Reg. Nos. 596,889, 701,517, and others.
For Hair Shampoo.
First use Sept. 20, 1961.

SN 131,068. Lloyd E. Quandt, d.b.a. "Purge," Baltimore, Md. Filed Oct. 31, 1961.

"PURGE"

For Type-Metal Flux and Detergent.
First use May 1, 1961.

SN 132,547. Holiday Inns of America, Inc., Memphis, Tenn. Filed Nov. 22, 1961.

INN KEEPERS

Owner of Reg. Nos. 656,932 and 668,167.
For Glass Cleaner, General Purpose Detergent, Concentrated Hand Soap, Carpet and Upholstery Shampoo, and Spot Remover.
First use Feb. 22, 1961.

SN 132,561. Lanvin-Parfums, Inc., New York, N.Y. Filed Nov. 22, 1961.

CRESCENDO

Owner of Reg. No. 372,516.
For Bath Soap and Toilet Soap.
First use Sept. 20, 1961, on toilet soap.

SN 133,370. Damkoehler Chemical & Paper Company, Oconto, Wis. Filed Dec. 5, 1961.

FBC

For Detergents for Use in Dairies.
First use July 1, 1952.

SN 133,371. Damkoehler Chemical & Paper Company, Oconto, Wis. Filed Dec. 5, 1961.

CBC

For Detergents for Use in Dairies.
First use July 1, 1950.

SN 133,757. Benchmark, Inc., Wyandotte, Mich. Filed Dec. 11, 1961.



For Detergents and Cleaning Compounds in Both Powder and Liquid Forms for Industrial Cleaning Purposes.
First use May 1956.

SN 133,819. Purex Corporation, Ltd., Lakewood, Calif. Filed Dec. 11, 1961.



Owner of Reg. Nos. 505,311 and 717,303.
For Wax Remover and High Potency Cleaner.
First use Apr. 25, 1960.

SN 134,012. Colgate-Palmolive Company, New York, N.Y. Filed Dec. 14, 1961.

CHAMPAGNE FROST

Owner of Reg. No. 717,293.
For Hair Shampoo.
First use July 19, 1961.

SN 134,358. Tiedemann & McMorran, Inc., San Francisco, Calif. Filed Dec. 19, 1961.

Sun-Blest

For General Household Cleanser.
First use October 1959.

SERVICE MARKS

Class 100 — Miscellaneous

SN 105,189. Monitron Service Corporation, New York, N.Y. Filed Sept. 26, 1960.

MONITRON

For Service of Monitoring Use of Machinery and Equipment for Others Through the Use of Electronic Data Processing Equipment.
First use July 16, 1958.

SN 113,876. Value Engineering, Inc., Boston, Mass. Filed Feb. 16, 1961.



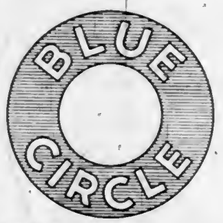
The lining shown in the drawing is an integral part of the mark and not for the purpose of indicating color.
For Consulting and Advisory Engineering Services—Namely, Cost Reduction Techniques and Training of Engineering and Management Personnel To Apply Same to Production.
First use Apr. 11, 1959.

SN 115,036. The Brass Rail, Inc., New York, N.Y. Filed Mar. 7, 1961.

CUSTOMATIC

For Designing and Operating Restaurants for Others Which Feature Automatic Food Dispensing Machines.
First use Feb. 23, 1961.

SN 124,993. Blue Circle, Inc., Knoxville, Tenn. Filed July 31, 1961.



The drawing is lined for blue.
For Restaurant Services.
First use in 1932.

SN 125,193. Brazier Foods, Inc., Decatur, Ga. Filed Aug. 2, 1961.



For Restaurant Services in Connection With the Establishment, Construction, Maintenance, Operation, and Promotion of a Chain of Licensed Food Service Businesses.
First use Jan. 7, 1958.

SN 125,194. Brazier Foods, Inc., Decatur, Ga. Filed Aug. 2, 1961.

THE BRAZIER

For Restaurant Services in Connection With the Establishment, Construction, Maintenance, Operation, and Promotion of a Chain of Licensed Food Service Businesses.
First use Jan. 7, 1958.

Class 101 — Advertising and Business

SN 81,698. First National Iron Bank, Morristown, N.J. Filed Sept. 21, 1959. CONCURRENT USE restricted to New Jersey and New York. Concurrent use with SN 97,276.

ROTO CREDIT

The word "Credit" is disclaimed apart from the mark as shown.
For Personal Credit Service.
First use Aug. 11, 1959.

SN 97,276. First Bank and Trust Company of South Bend, South Bend, Ind. Filed May 17, 1960. CONCURRENT USE restricted to the United States with the exception of New Jersey, New York, Connecticut, Pennsylvania, Maryland and Delaware. Concurrent use with SN 81,698.

ROTO-CREDIT

For Personal Credit Service.
First use Mar. 20, 1959.

Class 102 — Insurance and Financial

SN 119,531. Lincoln Savings and Loan Association, Los Angeles, Calif. Filed May 8, 1961.



The person depicted in the service mark is Abraham Lincoln, sixteenth president of the United States.
For Savings and Loan Service.
First use on or about Oct. 1, 1958.

SN 131,588. Lawyers Title Insurance Corporation, Richmond, Va. Filed Nov. 8, 1961.



Owner of Reg. No. 666,977.
For Underwriting of Title Insurance.
First use Feb. 1, 1961; Feb. 15, 1934, as to the design feature of the mark and the words "Lawyers Title."

Class 103 — Construction and Repair

SN 128,855. Redd Pest Control Company, Inc., Jackson, Miss. Filed Sept. 28, 1961.



For Pest and Termite Control.
First use on or about Sept. 1, 1958.

SN 130,362. Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla. Filed Oct. 20, 1961.



For Earth Drilling Services for Others.
First use June 15, 1961.

Class 106 — Material Treatment

SN 116,313. Jonas Bros., Inc., Denver, Colo. Filed Mar. 23, 1961.

JONAS BROS.

For Fur Tanning Services.
First use during 1908.
Subj. to Intf. with SN 105,286 and SN 105,287.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 126,669. Nationwide Motorists Association, Inc., Chicago, Ill. Filed Aug. 25, 1961.



The drawing is lined for red, but no claim is made to such color. No claim of exclusive right is made to the outline of the label.
For Indicating Membership in Applicant.
First use Feb. 6, 1957.

SN 133,025. Sigma Kappa Sorority, Indianapolis, Ind. Filed Nov. 29, 1961.



Owner of Reg. No. 244,810.
For Indicating Membership in Applicant.
First use September 1920.

SN 133,026. Sigma Kappa Sorority, Indianapolis, Ind. Filed Nov. 29, 1961.



Owner of Reg. No. 244,810.
For Indicating Membership in Applicant.
First use September 1920.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

733,600. DESERTAN. General Split Corporation. SN 100,120. Pub. 4–17–62. Filed 7–1–60.

733,601. TRANSORB. U.S. Filter Corporation. SN 116,938. Pub. 4–17–62. Filed 3–31–61.

733,602. GEN-GARD. The General Tire & Rubber Company. SN 123,419. Pub. 4–17–62. Filed 7–5–61.

733,603. WONDERWEAVE. Dreher Leather Mfg. Corporation. SN 127,463. Pub. 4–17–62. Filed 9–8–61.

Class 2 — Receptades

733,604. NOMAR. Inland Container Corporation. SN 92,159. Pub. 4–17–62. Filed 3–4–60.

733,605. P PALMINI AND DESIGN. Palmini Engineering Corporation. SN 106,273. Pub. 4–17–62. Filed 10–12–60.

733,606. MODERNE. Wilbert W. Haase Co. SN 124,084. Pub. 4–17–62. Filed 7–17–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

733,607. WINKIE TALKIE. A. J. Siris Products Corporation. SN 126,809. Pub. 4–17–62. Filed 8–28–61.

Class 4 — Abrasives and Polishing Materials

733,608. TONE. Simoniz Company. SN 119,059. Pub. 4–17–62. Filed 5–1–61.

Class 6 — Chemicals and Chemical Compositions

733,609. ENPEOL-SULFONAT. Dehydag Deutsche Hydrierwerke GmbH. SN 73,668. Pub. 4–17–62. Filed 5–14–59.

733,610. SULFOXAL. Dehydag Deutsche Hydrierwerke GmbH. SN 73,671. Pub. 4–17–62. Filed 5–14–59.

733,611. MEC. The Norac Company, Inc. SN 77,130. Pub. 4–17–62. Filed 7–6–59.

733,612. S-T. The Pfizer Corporation. SN 77,137. Pub. 4–17–62. Filed 7–6–59.

733,613. PH AND DESIGN. Pharmacia Laboratories, Inc. SN 82,288. Pub. 4–17–62. Filed 9–28–59.

733,614. ENTHONE. Enthone, Incorporated. SN 84,657. Pub. 4–17–62. Filed 11–5–59.

733,615. PECCO. Richard C. Bradley, d.b.a. Plastic Engineering and Chemical Co. SN 99,197. Pub. 12–27–60. Filed 6–17–60.

733,616. PURGE. The Asgrow Seed Company. SN 108,251. Pub. 4–17–62. Filed 11–14–60.

733,617. TES-TUBE AND DESIGN. Tesco Chemicals, Inc. SN 112,503. Pub. 4–17–62. Filed 1–25–61.

733,618. VITANYSE. Yardney Chemical Inc. SN 113,253. Pub. 4–17–62. Filed 2–7–61.

733,619. POLYTRAP. Smith Equipment and Supply Company. SN 113,308. Pub. 4–17–62. Filed 2–8–61.

733,620. MICROMITE. Tamms Industries Co. SN 113,314. Pub. 4–17–62. Filed 2–8–61.

733,621. FLOSPERSE. Interchemical Corporation. SN 113,340. Pub. 4–17–62. Filed 2–9–61.

733,622. MULTICEL. Tamms Industries Co. SN 113,576. Pub. 4–17–62. Filed 2–13–61.

733,623. NEAT-SHU. The Cramer Chemical Company. SN 114,446. Pub. 4–17–62. Filed 2–27–61.

733,624. SCENTRY-GARD. American Cyanamid Company. SN 114,671. Pub. 4–17–62. Filed 3–1–61.

733,625. ALGI-KLEER. Paddock of Texas, Inc. SN 114,990. Pub. 4–17–62. Filed 3–6–61.

733,626. AERO-SOLESSENCE. Albert Verley & Company. SN 115,019. Pub. 4–17–62. Filed 3–6–61.

733,627. BIRD-STOP. Animal Repellents, Inc. SN 115,291. Pub. 4–17–62. Filed 3–10–61.

733,628. MONOFORM. The Flintkote Company. SN 116,114. Pub. 4–17–62. Filed 3–21–61.

733,629. CYTROL. American Cyanamid Company. SN 118,119. Pub. 4–17–62. Filed 4–19–61.

733,630. BALCOOL. Balfour, Guthrie & Co., Limited. SN 120,687. Pub. 4–17–62. Filed 5–24–61.

733,631. PEN-E-TRATE. Biscayne Tank Manufacturing Co., Inc. SN 120,773. Pub. 4–17–62. Filed 5–25–61.

733,632. PENNDRATE. Pennsalt Chemicals Corporation. SN 122,716. Pub. 4–17–62. Filed 6–23–61.

733,633. PITT-CONSOL 646. Pitt-Consol Chemical Company. SN 122,718. Pub. 4–17–62. Filed 6–23–61.

733,634. UDET. Universal Detergents, Inc. SN 122,866. Pub. 4–17–62. Filed 6–26–61.

733,635. BEATAD. Hercules Powder Company. SN 123,316. Pub. 4–17–62. Filed 7–3–61.

733,636. THYRO. Conifer Laboratories, Inc. SN 123,412. Pub. 4–17–62. Filed 7–5–61.

733,637. CHEMKIT. Chem Lab Products, Incorporated. SN 123,520. Pub. 4–17–62. Filed 7–7–61.

733,638. GRACE AND DESIGN. W. R. Grace & Co. SN 127,006. Pub. 4–17–62. Filed 8–31–61.

733,639. ELMER'S FLOOR GRIP. The Borden Company. SN 130,322. Pub. 4–17–62. Filed 10–20–61.

Class 10 — Fertilizers

733,640. ION-O-SOL. Midland Cooperatives, Incorporated. SN 120,111. Pub. 4–17–62. Filed 5–16–61.

733,641. GREENLAWN. Cooperative Grange League Federation Exchange, Inc. SN 124,631. Pub. 4–17–62. Filed 7–25–61.

733,642. REF GREEN. Plymouth Cordage Company. SN 126,608. Pub. 4–17–62. Filed 8–24–61.

Class 12 — Construction Materials

733,643. TEKPAK. United States Plywood Corporation. SN 38,721. Pub. 8–5–58. Filed 10–10–57.

733,644. REPRESENTATION OF A HOUSE IN A CIRCLE ON A SQUARE BACKGROUND. Owens-Corning Fiberglas Corporation. SN 89,371. Pub. 4–17–62. Filed 1–20–60.

733,645. HILITE. Security Aluminum Corporation. SN 103,485. Pub. 4–17–62. Filed 8–26–60.

733,646. MICRO-FLEXBOARD. Johns-Manville Corporation. SN 104,531. Pub. 4–17–62. Filed 9–15–60.

733,647. STRESSDEC. Lee H. Patchen. SN 115,946. Pub. 4–17–62. Filed 3–17–61.

733,648. BLACK MAGIC. Swiss Laboratory Inc. SN 122,487. Pub. 4–17–62. Filed 6–20–61.

733,649. P–7. The Joseph Dixon Crucible Company. SN 124,261. Pub. 4–17–62. Filed 7–19–61.

733,650. TUFCON AND DOG DESIGN. Plastering Development Center, Inc. SN 128,087. Pub. 4-17-62. Filed 9-18-61.

733,651. SHASTAWOOD. Scott Lumber Company, Inc. SN 128,107. Pub. 4-17-62. Filed 9-18-61.

733,652. TEXTRAFINE. Pittsburgh Plate Glass Company. SN 128,207. Pub. 4-17-62. Filed 9-19-61.

733,653. SATELLITE. The William L. Bonnell Company, Inc. SN 128,391. Pub. 4-17-62. Filed 9-22-61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

733,654. ROLLMASTR. Towlsaver, Inc. SN 115,548. Pub. 4-17-62. Filed 3-13-61.

733,655. HY STYLES. Harding Chemical Corp. SN 127,602. Pub. 4-17-62. Filed 9-11-61.

733,656. V VELOS AND DESIGN. Rees, Pitchford & Company, Limited. SN 127,649. Pub. 4-17-62. Filed 9-11-61.

733,657. COR-TITE. The Colonial Plastics Manufacturing Company. SN 127,704. Pub. 4-17-62. Filed 9-12-61.

Class 14—Metals and Metal Castings and Forgings

733,658. FLEXIBRAZE. Western Gold and Platinum Company. SN 127,165. Pub. 4-17-62. Filed 9-1-61.

733,659. VERTOMAX. Arcos Corporation. SN 127,174. Pub. 4-17-62. Filed 9-5-61.

733,660. KENT CREEK. Joseph Behr & Sons, Inc. SN 127,187. Pub. 4-17-62. Filed 9-5-61.

733,661. WICARIT. N.V. Wallramit Hardmetaal Maatschappij. SN 127,418. Pub. 4-17-62. Filed 9-7-61.

733,662. SEANAIL. Pneumodynamics Corporation. SN 127,871. Pub. 4-17-62. Filed 9-14-61.

Class 16—Protective and Decorative Coatings

733,663. ENTHONE. Enthone, Incorporated. SN 84,054. Pub. 4-17-62. Filed 11-5-59.

733,664. LINAQUA. Textron Inc., assignee of Spencer Kellogg and Sons, Inc. SN 113,774. Pub. 4-17-62. Filed 2-15-61.

733,665. ACRYTEX. The O'Brien Corporation. SN 119,549. Pub. 4-17-62. Filed 5-8-61.

733,666. SAYF. The Gerson Stewart Corporation. SN 119,694. Pub. 4-17-62. Filed 5-10-61.

733,667. NAPKO. Napko Corporation. SN 119,784. Pub. 12-19-61. Filed 5-11-61.

733,668. TEX-TOP. Tabo Chemical Corporation. SN 122,391. Pub. 4-17-62. Filed 6-19-61.

Class 18—Medicines and Pharmaceutical Preparations

733,669. RICH-TINT. Rich-Tint Corporation. SN 93,362. Pub. 4-17-62. Filed 3-21-60.

733,670. AVOL. Ro-Mar Products Co. SN 110,363. Pub. 1-2-62. Filed 12-16-60.

733,671. BLIS AND DESIGN. Homer T. Wolf, d.b.a. Visconsi Distributors. SN 113,168. Pub. 8-1-61. Filed 2-6-61.

733,672. LIDOTHESIN. Willows Francis Limited. SN 119,089. Pub. 4-17-62. Filed 5-1-61.

733,673. UROQID-A. Beach Products, Inc., assignee of Richard B. Jenkins, d.b.a. Beach Pharmaceuticals. SN 122,003. Pub. 4-17-62. Filed 6-14-61.

733,674. CAN-DU. D & S Labs., Inc. SN 126,087. Pub. 4-17-62. Filed 8-16-61.

733,675. PRO/STOMA. Standard Laboratories, Inc. SN 126,808. Pub. 4-17-62. Filed 8-28-61.

733,676. CZO. The S. E. Massengill Company. SN 127,023. Pub. 4-17-62. Filed 8-31-61.

733,677. AYERST EPITRATE. American Home Products Corporation, d.b.a. Ayerst Laboratories. SN 129,444. Pub. 4-17-62. Filed 10-9-61.

733,678. SAV-A-STOP. Sav-A-Stop, Incorporated. SN 129,985. Pub. 4-17-62. Filed 10-16-61.

733,679. HYDROMET. Merck & Co., Inc. SN 130,288. Pub. 4-17-62. Filed 10-19-61.

733,680. MEDI-GEL. Lucky Tiger Manufacturing Company. SN 130,471. Pub. 4-17-62. Filed 10-23-61.

733,681. SERLOK. Armour Pharmaceutical Company. SN 131,257. Pub. 4-17-62. Filed 11-3-61.

733,682. SERLOC. Armour Pharmaceutical Company. SN 131,258. Pub. 4-17-62. Filed 11-3-61.

733,683. TEEJEL. The Purdue Frederick Company. SN 131,395. Pub. 4-17-62. Filed 11-6-61.

733,684. CER-O-STREP. The Upjohn Company. SN 131,430. Pub. 4-17-62. Filed 11-6-61.

733,685. HOLOPON. Byk-Gulden Lomberg Chemische Fabrik G.m.b.H. SN 131,654. Pub. 4-17-62. Filed 11-9-61.

733,686. BOGOLO. Byk-Gulden Lomberg Chemische Fabrik G.m.b.H. SN 131,655. Pub. 4-17-62. Filed 11-9-61.

733,687. RATATUI. Carter Products, Inc. SN 131,657. Pub. 4-17-62. Filed 11-9-61.

733,688. GELUCEN. Warner-Lambert Pharmaceutical Company. SN 131,734. Pub. 4-17-62. Filed 11-9-61.

733,689. MYCINAIRE. The Pfeiffer Co. SN 131,868. Pub. 4-17-62. Filed 11-13-61.

733,690. TAKAZYME. Parke, Davis & Company. SN 132,365. Pub. 4-17-62. Filed 11-20-61.

733,691. MIXOBAR. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 132,798. Pub. 4-17-62. Filed 11-27-61.

733,692. DESTOFRANIL. Geigy Chemical Corporation. SN 132,995. Pub. 4-17-62. Filed 11-29-61.

733,693. INDALITAN. Geigy Chemical Corporation. SN 132,996. Pub. 4-17-62. Filed 11-29-61.

733,694. JEXIN. William Cooper & Nephews, Inc. SN 133,541. Pub. 4-17-62. Filed 12-7-61.

Class 19—Vehicles

733,695. OLYMPIA. Kit Manufacturing Company, d.b.a. Kit Manufacturing Company, Inc. SN 117,195. Pub. 4-17-62. Filed 4-5-61.

733,696. SEAPET. Mitsui & Co., Ltd. SN 127,868. Pub. 4-17-62. Filed 9-14-61.

733,697. DURAPRENE. The Rapids-Standard Company, Inc. SN 127,954. Pub. 4-17-62. Filed 9-15-61.

Class 20—Linoleum and Oiled Cloth

733,698. MAGI-KARPIT. Crown Rubber Company. SN 113,003. Pub. 4-17-62. Filed 2-3-61.

Class 21—Electrical Apparatus, Machines, and Supplies

733,699. SIERRA-LOK. Sierra Electric Corporation. SN 90,787. Pub. 12-13-60. Filed 2-11-60.

733,700. FAX MIMEOFAX. Kabushiki Kaisha Kurosawa Shoten, d.b.a. Kurosawa & Co., Ltd. SN 108,789. Pub. 4-17-62. Filed 11-21-60.

733,701. TBA. Sprague Electric Company. SN 115,538. Pub. 4-17-62. Filed 3-13-61.

733,702. AIRCOTRON. Air Reduction Company, Incorporated. SN 116,858. Pub. 4-17-62. Filed 3-31-61.

733,703. PROTECT-O-TOOL. The Cross Company. SN 120,296. Pub. 4-17-62. Filed 5-18-61.

733,704. EPSI-LINE AND DESIGN. Laboratory for Electronics, Inc. SN 120,539. Pub. 4-17-62. Filed 5-22-61.

733,705. FILTERJET. Chemex Corporation. SN 120,859. Pub. 4-17-62. Filed 5-26-61.

733,706. TRENDTRONICS. Jerald L. Felch. SN 121,374. Pub. 4-17-62. Filed S.R. 6-5-61; Am. P.R. 1-29-62.

733,707. "ECONOFLOOD." Appleton Electric Company. SN 124,024. Pub. 4-17-62. Filed 7-17-61.

733,708. HELDAK. Heldak Lighting Products Corporation. SN 124,363. Pub. 4-17-62. Filed 7-20-61.

Class 22—Games, Toys, and Sporting Goods

733,709. MULTI-FINGERED. Nocona Leather Goods Company. SN 96,245. Pub. 4-17-62. Filed 5-2-60.

733,710. DENNIS THE MENACE. The Hall Syndicate, Inc. SN 100,513. Pub. 4-17-62. Filed 7-8-60.

733,711. SANTA'S VILLAGE. Santa's Village. SN 103,357. Pub. 4-17-62. Filed 8-24-60.

733,712. QUIKPAK. The B. F. Goodrich Company. SN 105,281. Pub. 4-17-62. Filed 9-27-60.

733,713. TOY HEAVEN. J & L Rubens, Inc. SN 113,562. Pub. 4-17-62. Filed 2-13-61.

733,714. CHARLOT BYJ. W. Goebel Porzellanfabrik. SN 114,215. Pub. 4-17-62. Filed 2-23-61.

733,715. PIECES OF EIGHT. Cosom Corporation. SN 114,445. Pub. 4-17-62. Filed 2-27-61.

733,716. NITE-FLYER. George Young & Company. SN 114,667. Pub. 4-17-62. Filed 2-28-61.

733,717. GOLDEN NUGGET. Siberian Fish Products Company, Inc. SN 115,007. Pub. 4-17-62. Filed 3-6-61.

733,718. MIDWEST. M. T. & D. Company. SN 115,353. Pub. 4-17-62. Filed 3-10-61.

733,719. GOLDEN GOOSE. John Letters and Company Limited. SN 116,892. Pub. 4-17-62. Filed 3-31-61.

733,720. STA-PUT AND ARROW DESIGN. Standard Tool & Die Co. SN 117,547. Pub. 4-17-62. Filed 4-10-61.

733,721. FIGURE-CIZER. Arthur M. Levin. SN 122,095. Pub. 4-17-62. Filed 6-15-61.

733,722. DEEP DIVE RUNT. James Heddon's Sons. SN 122,806. Pub. 4-17-62. Filed 6-26-61.

733,723. GARLOO. Louis Marx & Company, Inc. SN 127,345. Pub. 4-17-62. Filed 9-6-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

733,724. MIDAS MUFFLER SHOPS AND DESIGN. Midas, Inc. SN 83,999. Pub. 4-17-62. Filed 10-26-59.

733,725. PACKAGE AND DESIGN. Package Machinery Company. SN 105,538. Pub. 4-17-62. Filed 9-30-60.

733,726. PRINTAPUNCH. Dashew Business Machines, Inc. SN 110,041. Pub. 5-23-61. Filed 12-12-60.

733,727. REDDILIFT. Stokvis Multiton Corp. SN 113,572. Pub. 4-17-62. Filed 2-13-61.

733,728. EX-SHIELD. Mercury Metal Products, Inc. SN 119,782. Pub. 4-17-62. Filed 5-11-61.

733,729. "SMOG-GO" AND DESIGN. Bo-Giro Products, Inc. SN 120,484. Pub. 4-17-62. Filed 5-22-61.

733,730. RIVINIUS. Rivinius, Inc. SN 120,572. Pub. 4-17-62. Filed 5-22-61.

733,731. SNACK CENTER LEHIGH AND DESIGN. Lehigh, Inc. SN 123,659. Pub. 4-17-62. Filed 7-10-61.

733,732. SMOKE CENTER LEHIGH AND DESIGN. Lehigh, Inc. SN 123,660. Pub. 4-17-62. Filed 7-10-61.

733,733. SWEET CENTER LEHIGH AND DESIGN. Lehigh, Inc. SN 123,661. Pub. 4-17-62. Filed 7-10-61.

733,734. SHALCO IN LETTER S. The National Acme Company. SN 123,672. Pub. 4-17-62. Filed 7-10-61.

733,735. KLEEN SWEEP. The Shelby Manufacturing Company. SN 126,806. Pub. 4-17-62. Filed 8-28-61.

733,736. POPPER. The Auto-Soler Company. SN 126,847. Pub. 4-17-62. Filed 8-29-61.

733,737. H (EMBLEM). Hamac-Hansella Aktiengesellschaft Maschinenfabrik Viersen. SN 127,008. Pub. 4-17-62. Filed 8-31-61.

733,738. WHITEY. Whitey Research Tool Co. SN 127,824. Pub. 4-17-62. Filed 9-13-61.

Class 26—Measuring and Scientific Appliances

733,739. NU RAY. Curtiss-Wright Corporation. SN 75,547. Pub. 11-17-59. Filed 6-11-59.

733,740. BAILETRONIC. Bailey Meters & Controls Limited. SN 101,371. Pub. 4-17-62. Filed 7-25-60.

733,741. JIFFY WEIGHT LOCATOR. Herndon D. Jackson, d.b.a. Jiffy Company. SN 109,877. Pub. 4-17-62. Filed 12-8-60.

733,742. MIRACLE MOVEMENT. Federal Products Corporation. SN 115,135. Pub. 4-17-62. Filed 3-8-61.

733,743. HI-SAFE-T. Thomas A. Healy. SN 115,342. Pub. 4-17-62. Filed 3-10-61.

733,744. SPETEMP. Raymond I. Martin, d.b.a. Ray Martin Enterprises. SN 115,363. Pub. 4-17-62. Filed 3-10-61.

733,745. SCULMATIC. Scully Signal Company. SN 115,530. Pub. 4-17-62. Filed 3-13-61.

733,746. ACS AND DESIGN. Litton Systems, Inc. SN 116,409. Pub. 4-17-62. Filed 3-24-61.

733,747. APPLIED COMMUNICATIONS SYSTEM AND ACS DESIGN. Litton Systems, Inc. SN 116,410. Pub. 4-17-62. Filed 3-24-61.

733,748. SILVER-KING. General Controls Co. SN 117,356. Pub. 4-17-62. Filed 4-7-61.

733,749. AUTOSCORE. Astra Corporation. SN 119,462. Pub. 4-17-62. Filed 5-8-61.

733,750. JIG-O-MAT. Payne Metal Enterprises Limited. SN 121,114. Pub. 4-17-62. Filed 5-31-61.

733,751. ED-SET. Budd Stanley Company, Inc. SN 121,264. Pub. 4-17-62. Filed 6-2-61.

733,752. GUIDE LINE. Western Tablet & Stationery Corporation. SN 121,885. Pub. 1-9-62. Filed 6-12-61.

733,753. SHOCKMASTER. General Dynamics Corporation. SN 122,614. Pub. 4-17-62. Filed 6-22-61.

733,754. I-SAFE. American Optical Company. SN 125,793. Pub. 4-17-62. Filed 8-11-61.

733,755. STANLOK. Standard Optical Mfg. Company. SN 126,054. Pub. 4-17-62. Filed 8-15-61.

733,756. INSTRUCTRON. American Systems Incorporated. SN 126,292. Pub. 4-17-62. Filed 8-21-61.

733,757. FELT MASTER. Economics Laboratory, Inc. SN 126,323. Pub. 4-17-62. Filed 8-21-61.

733,758. MONOPASS. Optics Technology, Inc. SN 126,379. Pub. 4-17-62. Filed 8-21-61.

733,759. LARC. Sperry Rand Corporation. SN 126,395. Pub. 4-17-62. Filed 8-21-61.

Class 27—Horological Instruments

733,760. NUTYME. Elgin National Watch Company. SN 126,749. Pub. 4-17-62. Filed 8-28-61.

Class 28—Jewelry and Precious-Metal Ware

733,761. SARAHSHEEN. Sarah Coventry, Inc. SN 126,317. Pub. 4-17-62. Filed 8-21-61.

733,762. BOLERO. Jacques Kreisler Manufacturing Corporation. SN 126,350. Pub. 4–17–62. Filed 8–21–61.

733,763. MARVELLA COUTURA AND DESIGN. Marvella, Inc. SN 126,366. Pub. 4–17–62. Filed 8–21–61.

733,764. MAYFAIR AND DESIGN. Glamour Jewelry, Inc. SN 126,591. Pub. 4–17–62. Filed 8–24–61.

733,765. VIVANT. Oneida Ltd. SN 126,676. Pub. 4–17–62. Filed 8–25–61.

733,766. BEAU BAIT. Haberman Inc. SN 126,762. Pub. 4–17–62. Filed 8–28–61.

733,767. BLAZITE. Waltham Watch Company. SN 126,973. Pub. 4–17–62. Filed 8–30–61.

Class 31 — Filters and Refrigerators

733,768. SIMPLE AS ABC OIL FILTER AND DESIGN. Liberty Industries, Inc. SN 90,927. Pub. 4–17–62. Filed 2–15–60.

733,769. NUPRO. Nuclear Products Company. SN 124,281. Pub. 4–17–62. Filed 7–19–61.

Class 32 — Furniture and Upholstery

733,770. HERMAN MILLER. Herman Miller, Inc. SN 120,212. Pub. 4–17–62. Filed 5–17–61.

733,771. STREAMLINE. Dayco Corporation. SN 127,210. Pub. 4–17–62. Filed 9–5–61.

Class 33 — Glassware

733,772. STOPRAY AND DESIGN. Glaverbel, Société Anonyme. SN 133,849. Pub. 4–17–62. Filed 12–19–60.

733,773. COLORBEL AND DESIGN. Glaverbel, Société Anonyme. SN 133,850. Pub. 4–17–62. Filed 12–19–60.

Class 34 — Heating, Lighting, and Ventilating Apparatus

733,774. CORN CABIN DELICIOUS POPCORN PRODUCTS AND DESIGN. Corn Cabin Company. SN 96,943. Pub. 4–17–62. Filed 5–12–60.

733,775. REPRESENTATION OF TWO DUCKS. Buensod-Stacey Corporation. SN 114,313. Pub. 4–17–62. Filed 2–24–61.

733,776. HYLITE. Engineered Ceramics Manufacturing Company. SN 124,535. Pub. 4–17–62. Filed 7–24–61.

733,777. HYZOX. Engineered Ceramics Manufacturing Company. SN 124,536. Pub. 4–17–62. Filed 7–24–61.

733,778. HYZIRC. Engineered Ceramics Manufacturing Company. SN 124,537. Pub. 4–17–62. Filed 7–24–61.

733,779. HYCARB. Engineered Ceramics Manufacturing Company. SN 124,538. Pub. 4–17–62. Filed 7–24–61.

733,780. HYMUL. Engineered Ceramics Manufacturing Company. SN 124,540. Pub. 4–17–62. Filed 7–24–61.

733,781. VALUE. Waldorf Heater Company. SN 124,608. Pub. 4–17–62. Filed 7–24–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

733,782. PRECISION AND DESIGN. Precision Gasket Corporation. SN 99,782. Pub. 4–10–62. Filed 6–27–60.

733,783. P AND DESIGN. Precision Fittings, Inc. SN 120,123. Pub. 4–17–62. Filed 5–16–61.

733,784. WINTER SURE. The Firestone Tire & Rubber Company. SN 126,645. Pub. 4–17–62. Filed 8–25–61.

Class 36 — Musical Instruments and Supplies

733,785. FUTURA AND DESIGN. Futura Mfg. Co. SN 114,203. Pub. 4–17–62. Filed 2–23–61.

Class 37 — Paper and Stationery

733,786. LEITZ. Louis Leitz. SN 87,239. Pub. 4–17–62. Filed 9–11–61.

733,787. TRANSO RE-SEALERS. Arvey Corporation. SN 87,395. Pub. 4–17–62. Filed 12–16–59.

733,788. CCA AND DESIGN. Container Corporation of America. SN 106,060. Pub. 4–17–62. Filed 10–10–60.

733,789. TERATHENE. Acme Backing Corporation. SN 106,300. Pub. 4–17–62. Filed 10–13–60.

733,790. "DOUBLE-ENDER." L. & C. Hardtmuth, Inc. SN 108,629. Pub. 4–17–62. Filed 11–17–60.

733,791. PPC MILWAUKEE AND DESIGN. Phoenix Products Company, Inc. SN 113,443. Pub. 4–17–62. Filed 2–10–61.

733,792. TECHNOGRAPH. L. & C. Hardtmuth, Inc. SN 116,510. Pub. 4–17–62. Filed 3–27–61.

733,793. AUTOSCORE. Astra Corporation. SN 119,463. Pub. 4–17–62. Filed 5–8–61.

733,794. POLYGLEAM. Crocker, Burbank Papers Inc. SN 133,935. Pub. 4–17–62. Filed 12–13–61.

733,795. TYCOON. The Dow Chemical Company. SN 134,207. Pub. 4–17–62. Filed 12–18–61.

Class 38 — Prints and Publications

733,796. HATHAWAY HOME. Vorhof-Duenke Company. SN 65,731. Pub. 4–17–62. Filed 1–12–59.

733,797. BLUE BOOK. Outdoors, Inc. SN 94,607. Pub. 4–17–62. Filed 4–7–60.

733,798. OSTEOPATHIC NEWS. Schering Corporation. SN 107,591. Pub. 4–17–62. Filed 11–1–60.

733,799. THE CONSULTING PSYCHOLOGIST. Nordli, Wilson Associates. SN 114,038. Pub. 4–17–62. Filed 2–20–61.

733,800. TV TEASER. Newspaper Enterprise Association, Inc. SN 114,507. Pub. 4–17–62. Filed 2–27–61.

733,801. ANS-R-BOX. Irwin, Neisler & Co. SN 116,728. Pub. 4–17–62. Filed 3–29–61.

733,802. INPLANT FOOD MANAGEMENT. Inplant Publishing Corporation. SN 119,001. Pub. 4–17–62. Filed 5–1–61.

733,803. REPRESENTATION OF OPEN BOOK AND CROSSED QUILLS. C. R. Gibson & Company. SN 119,766. Pub. 4–17–62. Filed 5–11–61.

733,804. 1961–1965 VIRGINIA ETC. AND DESIGN. Virginia Civil War Commission. SN 120,835. Pub. 4–17–62. Filed 5–25–61.

733,805. CCA AND DESIGN. Color Corporation of America. SN 122,513. Pub. 4–17–62. Filed 6–21–61.

733,806. CEP CHEMICAL ENGINEERING PROGRESS AND DESIGN. American Institute of Chemical Engineers. SN 122,985. Pub. 4–17–62. Filed 6–28–61.

733,807. CHEMICAL ENGINEERING PROGRESS. American Institute of Chemical Engineers. SN 122,986. Pub. 4–17–62. Filed 6–28–61.

733,808. FAITH DIGEST. T. L. Osborn Evangelistic Association, Inc. SN 125,411. Pub. 4–17–62. Filed 8–4–61.

733,809. T. L. OSBORN'S FAITH DIGEST. T. L. Osborn Evangelistic Association, Inc. SN 125,412. Pub. 4–17–62. Filed 8–4–61.

733,810. NUCLEAR NOTES FROM SQUIBB. Olin Mathieson Chemical Corporation. SN 126,946. Pub. 4–17–62. Filed 8–30–61.

733,811. MIKE SHAYNE PRIVATE EYE. Dell Publishing Co., Inc. SN 127,098. Pub. 4–17–62. Filed 9–1–61.

733,812. NPN BULLETIN. McGraw-Hill Publishing Company, Inc. SN 127,241. Pub. 4–17–62. Filed 9–5–61.

733,813. GRP AND DESIGN. Roberto Bachi. SN 129,332. Pub. 4–17–62. Filed 10–6–61.

733,814. LINDA LARK REGISTERED NURSE. Dell Publishing Co., Inc. SN 129,345. Pub. 4–17–62. Filed 10–6–61.

733,815. ANSWER MASTER. Harcourt, Brace & World, Inc. SN 129,860. Pub. 4–17–62. Filed 10–13–61.

733,816. COUNTRY BEAUTIFUL. Country Beautiful Foundation, Inc. SN 129,924. Pub. 4–17–62. Filed 10–16–61.

733,817. ANIMAGIC. Videocraft International, Limited. SN 130,013. Pub. 4–17–62. Filed 10–16–61.

733,818. CYCLO-PEDIA. Eugene G. Portuesi. SN 130,241. Pub. 4–17–62. Filed 10–18–61.

733,819. A CHILD'S WORLD. New York Herald Tribune Inc. SN 130,375. Pub. 4–17–62. Filed 10–20–61.

733,820. FLEET MANAGEMENT NEWS. Transportation Supply Publishing Corporation. SN 130,525. Pub. 4–17–62. Filed 10–23–61.

Class 39 — Clothing

733,821. CUSTOM MAID. Custom Maid Brassiere Co. SN 65,827. Pub. 4–17–62. Filed 1–14–59.

733,822. PLAY CHUMS AND DESIGN. Godman Shoe Company, assignee of The H. C. Godman Company. SN 88,229. Pub. 4–17–62. Filed 12–30–59.

733,823. TAJ OF INDIA AND DESIGN. Products of India, Inc. SN 113,362. Pub. 4–17–62. Filed 2–9–61.

733,824. GLORIA SWANSON. Sheffield Hosiery Mills, Inc. SN 118,291. Pub. 4–17–62. Filed 4–20–61.

733,825. SWISS MASTERS. Genesco Inc. SN 119,452. Pub. 4–17–62. Filed 4–17–61.

733,826. FRENCH MASTERS. Genesco Inc. SN 119,453. Pub. 4–17–62. Filed 4–17–61.

733,827. RUGGLESPUN. Garland Knitting Mills. SN 119,958. Pub. 4–17–62. Filed 5–15–61.

733,828. FISHERMAN KNIT AND DESIGN. Camp and McInnes, Inc. SN 120,960. Pub. 4–17–62. Filed 5–10–61.

733,829. STYLETONE. Kayser-Roth Corporation. SN 122,202. Pub. 4–17–62. Filed 6–16–61.

733,830. SIR ELEGANCE. H. Daroff & Sons, Inc. SN 122,519. Pub. 4–17–62. Filed 6–21–61.

733,831. CONCERTINA. Maidenform, Inc. SN 123,334. Pub. 4–17–62. Filed 7–3–61.

733,832. SHAPE 'UP. Burlington Industries, Inc., assignee of Sidney Blumenthal & Co., Inc., d.b.a. The Adler Company. SN 125,353. Pub. 4–17–62. Filed 8–4–61.

733,833. SHAPE-ETTE. Burlington Industries, Inc., assignee of Sidney Blumenthal & Co., Inc., d.b.a. The Adler Company. SN 125,354. Pub. 4–17–62. Filed 8–4–61.

733,834. NEW-ITY. Hat Corporation of America. SN 125,918. Pub. 4–17–62. Filed 8–14–61.

733,835. SCOTSTWEED AND DESIGN. Merit Clothing Company. SN 126,114. Pub. 4–17–62. Filed 8–16–61.

733,836. MAGIC-GLOV. Crescendoe Gloves, Inc. SN 126,151. Pub. 4–17–62. Filed 8–17–61.

733,837. SLIMHAND. Crescendoe Gloves, Inc. SN 126,152. Pub. 4–17–62. Filed 8–17–61.

733,838. THE MAINE WOODSMAN. Congress Sportswear Company, Inc. SN 126,435. Pub. 4–17–62. Filed 8–22–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

733,839. GEOMETRICAL DESIGN. Aldon Rug Mills, Inc. SN 106,876. Pub. 4–17–62. Filed 10–21–60.

733,840. TREASURE CHEST. Montgomery Ward & Co., Incorporated. SN 116,331. Pub. 4–17–62. Filed 3–23–61.

733,841. SUPER BARONET. Couristan, Inc. SN 122,168. Pub. 4–17–62. Filed 6–16–61.

733,842. HOBBLEHILL. Fieldcrest Mills, Inc. SN 128,730. Pub. 4–17–62. Filed 9–27–61.

733,843. NEWPORT EAGLE. Preservation Society of Newport County. SN 128,920. Pub. 4–17–62. Filed 9–29–61.

733,844. NEWPORT DOWRY. Preservation Society of Newport County. SN 128,921. Pub. 4–17–62. Filed 9–29–61.

733,845. NEWPORT LEGACY. Preservation Society of Newport County. SN 128,922. Pub. 4–17–62. Filed 9–29–61.

Class 44 — Dental, Medical, and Surgical Appliances

733,846. RECTISERT. American Home Products Corporation, assignee of Mallon Chemical Corporation. SN 86,299. Pub. 4–17–62. Filed 11–30–59.

733,847. RECTALYT. American Home Products Corporation, assignee of Mallon Chemical Corporation. SN 86,300. Pub. 4–17–62. Filed 11–30–59.

Class 46 — Foods and Ingredients of Foods

733,848. MARCA DOS PUERQUITOS. John Engelhorn & Sons, d.b.a. Engelhorn Packing Company. SN 77,527. Pub. 4–17–62. Filed 7–13–59.

733,849. YOUNG'S BEST. J. D. Young, d.b.a. Youngstown Grape Distributors. SN 86,377. Pub. 4–17–62. Filed 11–30–59.

733,850. VITA-N-RICH. Zeb E. McDaniel. SN 86,801. Pub. 4–26–60. Filed 12–7–59.

733,851. LAKELAND. Basin Produce Company, Inc. SN 88,006. Pub. 4–17–62. Filed 12–28–59.

733,852. BOVRIL. Bovril, Limited. SN 92,862. Pub. 4–17–62. Filed 3–15–60.

733,853. LIQUIMIX. National Dairy Products Corporation. SN 94,796. Pub. 8–29–61. Filed 4–11–60.

733,854. IFF. International Flavors & Fragrances Inc. SN 95,827. Pub. 4–17–62. Filed 4–26–60.

733,855. VIOLET'S. Violet's Bakery Inc., d.b.a. Violet's Bakery. SN 97,270. Pub. 4–17–62. Filed 5–16–60.

733,856. SHASTA. Consolidated Foods Corporation, d.b.a. Shasta Beverages, assignee of The Shasta Water Company. SN 99,882. Pub. 4–17–62. Filed 6–28–60.

733,857. DOFO AND DESIGN. Dofo, Danske Ostemejeriers Faellessalg og Osteeksport. SN 104,571. Pub. 4–17–62. Filed 9–14–60.

733,858. JACK MILLER ETC. AND DESIGN. Jack D. Miller. SN 104,740. Pub. 8–1–61. Filed 9–19–60.

733,859. REPRESENTATION OF TWO CHILDREN AND AN EAR OF CORN. Wright Popcorn & Nut Co. SN 106,018. Pub. 4–17–62. Filed 10–7–60.

733,860. BOWERS COCOANUT FROSTED AND DESIGN. Chas. J. Webb Sons Co., Inc. SN 106,450. Pub. 4–17–62. Filed 10–14–60.

733,861. BOWERS CRISP GOLDEN AND DESIGN. Chas. J. Webb Sons Co., Inc. SN 106,451. Pub. 4–17–62. Filed 10–14–60.

733,862. GOLDILOCKS. Continental Baking Company. SN 107,915. Pub. 4–17–62. Filed 11–7–60.

733,863. HOLLYWOOD PRO-GHETTI. National Bakers Service Inc. SN 108,134. Pub. 4–17–62. Filed 11–9–60.

733,864. DELICA-SEA. Ellyda Imports, Inc. SN 108,162. Pub. 4–17–62. Filed 11–10–60.

733,865. DESIGN SHOWING AN OLD-STYLE MILLING OPERATION. Bay State Milling Co. SN 109,295. Pub. 4–17–62. Filed 11–30–60.

733,866. JAMONILLA. Vejle og Omegns Andels-Svineslagteri, Vejle, Tulip Brand Factory. SN 110,119. Pub. 4–17–62. Filed 12–12–60.

733,867. FORE. Leaf Brands, Inc. SN 111,508. Pub. 9–19–61. Filed 1–9–61.

733,868. MEMORIE. Venus Foods, d.b.a. Memorie Foods. SN 111,827. Pub. 4–17–62. Filed 1–18–61.

733,869. COLOMBO'S AND DESIGN. Colombo's Italian Pizza Bakery, Inc. SN 111,862. Pub. 4–17–62. Filed 1–16–61.

733,870. BL–60. Stauffer Chemical Company. SN 112,330. Pub. 4–17–62. Filed 1–23–61.

733,871. T-BAR. Sports Candies, Inc. SN 112,415. Pub. 4–17–62. Filed 1–24–61.

733,872. NATIONAL "EASY SLICE." National Tea Co. SN 112,753. Pub. 4–17–62. Filed 1–30–61.

733,873. POST HUCKLE FLAKES. General Foods Corporation. SN 113,597. Pub. 4–17–62. Filed 2–13–61.

733,874. STOCKTON AND DESIGN. Tillie Lewis Foods, Inc., by change of name from Flotill Products, Incorporated. SN 113,632. Pub. 4–17–62. Filed 2–14–61.

733,875. PEL-PAK. Pelolan Packing Company, Inc. SN 114,137. Pub. 4–17–62. Filed 2–21–61.

733,876. YORKSHIRE. John Morrell & Co. SN 114,243. Pub. 4–17–62. Filed 2–23–61.

733,877. SUPER-ALB. Ralph Ettlinger, d.b.a. Ralph Ettlinger & Sons. SN 114,459. Pub. 4–17–62. Filed 2–27–61.

733,878. EL REY. J. Mario Tamayo and Brothers, d.b.a. Tamayo Hnos. SN 114,552. Pub. 4–17–62. Filed 2–27–61.

733,879. WOLF. Wolf Brand Products. SN 114,900. Pub. 4–17–62. Filed 3–3–61.

733,880. COUP. Instant Foods Corporation. SN 115,235. Pub. 4–17–62. Filed 3–9–61.

733,881. BOXTO. N.V. Export-Centrale "Boxtel." SN 115,617. Pub. 4–17–62. Filed 3–14–61.

733,882. BROUGHTON AND DESIGN. Broughton's Farm Dairy, Inc. SN 116,622. Pub. 4–17–62. Filed 3–28–61.

733,883. B BROUGHTON AND DESIGN. Broughton's Farm Dairy, Inc. SN 116,623. Pub. 4–17–62. Filed 3–28–61.

733,884. EDA'S. Lehman Dietetic Confections, Inc. SN 117,025. Pub. 4–17–62. Filed 4–3–61.

733,885. VALIGROWN. Kern Fruit Company (California corporation—new corporation), assignee, by mesne assignments, of Kern Fruit Company (California corporation). SN 117,109. Pub. 4–17–62. Filed 4–4–61.

733,886. OCEAN GARDEN. Pesquera Del Pacifico, S. de R.L. SN 117,996. Pub. 4–17–62. Filed 4–17–61.

733,887. MUG DESIGN. Apollinaris Bruunen A.G. SN 118,125. Pub. 4–17–62. Filed 4–19–61.

733,888. WESTERN KITCHEN. Purity Stores, Inc. SN 119,048. Pub. 4–17–62. Filed 5–1–61.

733,889. GRAVY MASTER'S. Graymaster Company, Inc. SN 119,280. Pub. 4–17–62. Filed 5–4–61.

733,890. OAK HILL. Markham Bros. & Co. SN 120,814. Pub. 4–17–62. Filed 5–25–61.

733,891. CHEF DAI-SEE-FOO. American Home Products Corporation, d.b.a. American Home Foods. SN 120,848. Pub. 4–17–62. Filed 5–26–61.

733,892. CARAWHEAT. John Mackintosh & Sons Limited. SN 121,009. Pub. 4–17–62. Filed 5–29–61.

733,893. CARAMAC. John Mackintosh & Sons Limited. SN 121,010. Pub. 4–17–62. Filed 5–29–61.

733,894. FIGURE CONTROL. Duffy-Mott Company, Inc. SN 123,004. Pub. 4–17–62. Filed 6–28–61.

733,895. ALICE LOVE AND DESIGN. Alice Love Products, Co. SN 123,488. Pub. 4–17–62. Filed 7–6–61.

733,896. ONE-PIE AND DESIGN. Medomak Canning Company. SN 123,490. Pub. 4–17–62. Filed 7–6–61.

733,897. JUNETEX. June Dairy Products Company, Inc. SN 125,603. Pub. 4–17–62. Filed 8–8–61.

733,898. POLAR BIRD. Royal Valley Fruit Growers Association, d.b.a. Royal Valley Fruit Growers Ass'n. SN 126,046. Pub. 4–17–62. Filed 8–15–61.

733,899. KRUSTEAZ. Continental Mills, Inc. SN 126,506. Pub. 4–17–62. Filed 8–23–61.

733,900. HON-E-POL. Pollen Products Company. SN 127,422. Pub. 4–17–62. Filed 9–7–61.

733,901. CHIQUITA BANANAS AND DESIGN. United Fruit Company. SN 130,131. Pub. 4–17–62. Filed 10–17–61.

733,902. SURREY. Chunky Chocolate Corp. SN 131,272. Pub. 4–17–62. Filed 11–3–61.

733,903. NAB-A-DIET. National Biscuit Company. SN 131,497. Pub. 4–17–62. Filed 11–7–61.

733,904. NO-PUP. Kellogg Company. SN 131,845. Pub. 4–17–62. Filed 11–13–61.

Class 47 — Wines

733,905. DIXIE SILHOUETTE AND DESIGN. Southern Utah Winery, d.b.a. Dixie Valley Products. SN 110,484. Pub. 4–17–62. Filed 12–19–60.

Class 48 — Malt Beverages and Liquors

733,906. BADGER BREW. Effinger Brewing Company. SN 121,640. Pub. 4–17–62. Filed 6–8–61.

Class 49 — Distilled Alcoholic Liquors

733,907. RON LLAVE AND DESIGN. Licoreria Roses Inc. SN 23,486. Pub. 4–17–62. Filed 1–30–57.

733,908. RON LLAVE. Licoreria Roses Inc. SN 23,487. Pub. 4–17–62. Filed 1–30–57.

733,909. VODAK. J. A. Dougherty's Sons, Inc., Distillers. SN 108,963. Pub. 4–17–62. Filed 11–23–60.

Class 50 — Merchandise Not Otherwise Classified

733,910. CHARLOT BYJ. W. Goebel Porzellanfabrik. SN 114,218. Pub. 4–17–62. Filed 2–23–61.

Class 51 — Cosmetics and Toilet Preparations

733,911. TOCATTA. John Robert Powers Products Co. Inc. SN 82,786. Pub. 4–17–62. Filed 10–6–59.

733,912. GURL-CURL. Lucky Tiger Manufacturing Company. SN 91,816. Pub. 4–17–62. Filed 2–29–60.

733,913. CREATION. Societe Maurice Blanchet, Parfums De Luxe, d.b.a. Coryse Salome. SN 100,471. Pub. 4–17–62. Filed 7–7–60.

733,914. GLEE. John P. Bundock, Jr., d.b.a. Glee Industries. SN 107,240. Pub. 4–17–62. Filed 10–27–60.

733,915. WHITE GLOVE. The Mennen Company. SN 108,556. Pub. 4–17–62. Filed 11–16–60.

733,916. BARNANGEN. Barnängens Tekniska Fabrikers Aktiebolag. SN 113,262. Pub. 4–17–62. Filed 2–8–61.

733,917. ISR. Bonne Bell Inc. SN 114,178. Pub. 4–17–62. Filed 2–23–61.

733,918. CORDON BLEU. Avon Products, Inc. SN 114,402. Pub. 4–17–62. Filed 2–27–61.

733,919. JAISCIENT. Sterling International Trading Co. Limited. SN 115,088. Pub. 4–17–62. Filed 3–7–61.

733,920. IMAGE OF YOUTH. Jacqueline Cochran, Inc. SN 118,661. Pub. 4–17–62. Filed 4–26–61.

733,921. CLAIR-FILL. Clairol Incorporated. SN 122,064. Pub. 4–17–62. Filed 6–15–61.

733,922. AFFECTION. The Kendall Company. SN 125,992. Pub. 4–17–62. Filed 5–3–61.

733,923. REJUVATONE. I. Posner, Inc. SN 126,473. Pub. 4–17–62. Filed 8–22–61.

733,924. VITABRONZE. Clairol Incorporated. SN 126,984. Pub. 4–17–62. Filed 8–31–61.

733,925. PMT. Wilson Laboratories, Inc. SN 127,066. Pub. 4–17–62. Filed 8–31–61.

Class 52 — Detergents and Soaps

733,926. ENTHONE. Enthone, Incorporated. SN 84,655. Pub. 4–17–62. Filed 11–5–59.

733,927. PLEASE. Arrow Laboratories, Inc. SN 96,388. Pub. 4–17–62. Filed 5–4–60.

733,928. NO-SPOT. Frank Miller & Sons, Incorporated. SN 97,677. Pub. 4–17–62. Filed 5–23–60.

733,929. FLORSWEEP. Frank Miller & Sons, Incorporated. SN 97,678. Pub. 4–17–62. Filed 5–23–60.

733,930. AIRIFOAM. The Chemithon Corporation. SN 110,404. Pub. 4–17–62. Filed 12–19–60.

733,931. MYSTIC. Dumas Milner Corporation. SN 113,816. Pub. 4–17–62. Filed 2–16–61.

733,932. KWIP. Kwip Manufacturing Company. SN 113,923. Pub. 4–17–62. Filed 2–17–61.

733,933. BICLORIN. Colgate-Palmolive Company. SN 114,685. Pub. 4–17–62. Filed 3–1–61.

733,934. COLOR WHEEL. Chesebrough-Pond's Inc. SN 115,439. Pub. 4–17–62. Filed 3–13–61.

733,935. SWIM. Hagan Chemicals & Controls, Inc. SN 115,805. Pub. 4–17–62. Filed 3–16–61.

733,936. OAKITE AND DESIGN. Oakite Products, Inc. SN 125,316. Pub. 4–17–62. Filed 8–3–61.

733,937. QUADRA-KLEAN. Texas Refinery Corp. SN 125,563. Pub. 4–17–62. Filed 8–7–61.

733,938. RE-BO. Mercer Hand Soap Co. SN 126,938. Pub. 4–17–62. Filed 8–30–61.

Service Marks

Class 100 — Miscellaneous

733,939. IAC. International Automation Corporation. SN 78,787. Pub. 4–12–60. Filed 7–31–59.

733,940. MILLIGAL. Barkley & Dexter Laboratories, Inc. SN 94,553. Pub. 4–17–62. Filed 4–7–60.

Class 101 — Advertising and Business

733,941. GIANT WASH. Giant Wash, Inc. SN 47,851. Pub. 4–17–62. Filed 3–17–58.

733,942. TELENUMBER AND DESIGN. National Merchandising Corp. SN 70,239. Pub. 4–17–62. Filed 3–25–59.

733,943. NAMES YOU KNOW. Ace Mailing Service, Inc., d.b.a. Co-Op Mailing Service. SN 100,677. Pub. 4–17–62. Filed 7–12–60.

733,944. ABS. Integrated Data Processing, Inc. SN 113,112. Pub. 4–17–62. Filed 2–6–61.

733,945. FLORAFAX DELIVERY AND DESIGN. National Florist Delivery, Inc. SN 119,545. Pub. 4–17–62. Filed 5–8–61.

733,946. THE EXECUTIVE COMMITTEE. Robert Nourse. SN 119,717. Pub. 4–17–62. Filed 5–10–61.

733,947. TEMPORARY TALENT AND DESIGN. James H. Pair, d.b.a. Temporary Talent. SN 122,107. Pub. 4–17–62. Filed 6–15–61.

733,948. CIRCLE GREEN AND DESIGN. United Trading Stamp Corporation. SN 122,974. Pub. 4–17–62. Filed 6–27–61.

733,949. COMPTOHELP. Victor Comptometer Corporation, assignee of Comptometer Corporation. SN 123,280. Pub. 4–17–62. Filed 7–3–61.

Class 102 — Insurance and Financial

733,950. MAIL-SAVER. California Federal Savings and Loan Association. SN 122,264. Pub. 4–17–62. Filed 6–19–61.

733,951. PIONEER SERVICE AND DESIGN. Pioneer Service Company, Inc. SN 126,795. Pub. 4–17–62. Filed 8–28–61.

Class 103 — Construction and Repair

733,952. LE FEBURE. Le Febure Corporation. SN 92,269. Pub. 4–17–62. Filed 3–7–60.

733,953. ATSA. Southern Saw Service Inc. SN 123,571. Pub. 4–17–62. Filed 7–7–61.

Class 105 — Transportation and Storage

733,954. GIFTOUR. Garber's Travel Service, Inc. SN 82,505. Pub. 4–17–62. Filed 10–1–59.

733,955. B AND ARROWS DESIGN. Burnside Messenger Service, Inc. SN 113,487. Pub. 4–17–62. Filed 2–13–61.

733,956. STANDARD AIRWAYS SA AND DESIGN. Standard Airways, Inc. SN 118,294. Pub. 4–17–62. Filed 4–20–61.

733,957. "GOLD FLAG SERVICE." U.S. Truck Lines, Inc. of Delaware. SN 129,547. Pub. 4–17–62. Filed 10–9–61.

Class 107 — Education and Entertainment

733,958. THE HARMONICATS. Jerry Muradian, d.b.a. Jerry Murad. SN 121,847. Pub. 4–17–62. Filed 6–12–61.

Collective Membership Mark

Class 200

733,959. THE NOSTS. The Nosts. SN 123,128. Pub. 4–17–62. Filed 6–29–61.

Certification Marks

Class B—Services

733,960. UNION LABEL ETC. AND DESIGN. Stove Mounters' International Union of North America. SN 114,368. Pub. 4–17–62. Filed 2–24–61.

733,961. UNION LABEL ETC. AND DESIGN. Stove Mounters' International Union of North America. SN 114,369. Pub. 4–17–62. Filed 2–24–61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

733,962. Harry Hirshberg Company, Inc., Haverhill, Mass. SN 116,726. Filed P.R. 3-29-61; Am. S.R. 5-1-62.

HEAT SEAL

For Lining and Reinforcement Material for Shoes.
First use Mar. 13, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

733,963. Pennsylvania Pump and Compressor Company, Easton, Pa. SN 117,990. Filed 4-17-61.

GASCHEK

For Valves for Compressor Discharge Lines.
First use Aug. 12, 1954.

Class 19—Vehicles

733,964. Pullman Incorporated, Chicago, Ill. SN 113,556. Filed P.R. 2-13-61; Am. S.R. 5-21-62.

LO-DEK

For Railway Freight Vehicles.
First use Apr. 29, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

733,965. Harrison Radio Corp., d.b.a. Ham Headquarters, U.S.A., New York, N.Y. SN 92,519. Filed P.R. 10-28-59; Am. S.R. 5-7-62.

HAM HEADQUARTERS, USA

For Radio Transmitting, Amplifying, and Receiving Equipment and Parts Thereof.
First use Oct. 15, 1956.

733,966. Amco Wire Products Corp., Chicago, Ill. SN 112,699. Filed P.R. 1-19-61; Am. S.R. 5-15-62.

STAK-EASY

For Racks for Holding Utensils in Electric Dish Washing Machines and for Storing Purposes.
First use Sept. 15, 1958.

Class 22—Games, Toys, and Sporting Goods

733,967. Brunswick Corporation, Chicago, Ill. SN 111,321. Filed P.R. 1-5-61; Am. S.R. 5-9-62.

PRO MODEL

For Bowling Balls.
First use July 6, 1960.

733,968. Harry L. Morrill, Jr., Marietta, Ga. SN 116,051. Filed P.R. 3-20-61; Am. S.R. 5-7-62.

SPELL-N

For Equipment Sold as a Unit for Playing Card Games.
First use Mar. 10, 1961.

Class 26—Measuring and Scientific Appliances

733,969. Contacts of Kansas, Inc., Wichita, Kans. SN 90,830. Filed P.R. 2-12-60; Am. S.R. 4-27-62.

Contacts of Kansas Inc.

For Contact Lenses.
First use Apr. 24, 1959.

733,970. Thompson Ramo Wooldridge Inc., Cleveland, Ohio. SN 103,746. Filed P.R. 8-31-60; Am. S.R. 5-8-62.

THE EYES OF AUTOMATION

For Cameras.
First use June 27, 1960.

733,971. B & W Associates, Michigan City, Ind. SN 126,144. Filed 8-17-61.

B & W LIE DETECTOR ELECTRONIC PSYCHOMETER

For Lie Detectors.
First use June 1944.

Class 37—Paper and Stationery

733,972. Evans Specialty Company, Inc., Richmond, Va. SN 72,302. Filed P.R. 4-27-59; Am. S.R. 5-3-62.

TACKY FINGER

For Finger Tip Moisteners.
First use February 1955.

733,973. Joshua Meier Company, Inc., New York, N. Y. SN 83,535. Filed P.R. 10-19-59; Am. S.R. 4-30-62.

"MAGA-SEEN"

For Magazine Binders.
First use Sept. 17, 1959.

733,974. The Joseph Dixon Crucible Company, Jersey City, N.J. SN 100,982. Filed P.R. 7-18-60; Am. S.R. 5-4-62.

NON-SKID

For Ball Pens and Refills for Ball Pens.
First use Sept. 21, 1959.

733,975. Frederick Nassar, d.b.a. House of Negatives, Tampa, Fla. SN 114,030. Filed P.R. 2-20-61; Am. S.R. 5-9-62.

↓ TAP ↓
GRAB - N - SNAP

For Envelopes.
First use Nov. 5, 1960.

Class 38—Prints and Publications

733,976. Siler's Inc., New Orleans, La. SN 99,601. Filed P.R. 6-23-60; Am. S.R. 3-2-62.

"BOUND-TO-LAST"
THE LIFE OF
THE PAPER
WHY PAY MORE?

For Books in Library Bindings.
First use Aug. 1, 1959.

Class 39—Clothing

733,977. Inter-American Industrial Services Corporation, Boston, Mass. SN 115,477. Filed 3-13-61.

HEWETSON

For Men's, Women's, and Children's Shoes.
First use Jan. 1, 1956.

733,978. Baltimore Trouser Co., Inc., Baltimore, Md. SN 120,072. Filed 5-16-61.

austin-hill

For Wearing Apparel of Men and Women—Namely, Ladies' and Men's Slacks, and Walk Shorts and Ladies' Shirts.
First use Dec. 1, 1959.

Class 47—Wines

733,979. Riccardo Alvino, San Francisco, Calif. SN 99,025. Filed P.R. 6-15-60; Am. S.R. 10-2-61.

CHIANTI ALVINO

For Chianti Wine.
First use Feb. 17, 1960.

733,980. The Taylor Wine Company, Inc., Hammondsport, N.Y. SN 119,591. Filed P.R. 5-8-61; Am. S.R. 4-9-62.

TAYLOR
NEW YORK STATE
BURGUNDY

For Burgundy Wine.
First use Mar. 16, 1961.

Class 50—Merchandise Not Otherwise Classified

733,981. The Program Aids Company, Inc., Mount Vernon, N.Y. SN 96,984. Filed P.R. 5-12-60; Am. S.R. 5-11-62.

PLAK-AWARDS

For Plaques, Medals, Emblems, Trophies, Award Cups, and Insignias.
First use Feb. 11, 1959.

Class 51—Cosmetics and Toilet Preparations

733,982. Fabergé, Inc., New York, N.Y. SN 128,346. Filed 9-21-61.

MATISSE RED

For Lipsticks and Nail Enamels.
First use Feb. 26, 1958.

Class 52 — Detergents and Soaps

733,983. The Pillsbury Company, Minneapolis, Minn., assignee of Tidy House Products Company, Shenandoah, Iowa. SN 100,552. Filed P.R. 7-8-60; Am. S.R. 4-25-62.

DISOLV-A-PAK

For Plastic Film Package Containing a Laundry Mix Consisting of a Detergent, and Combinations of Bleach, Water Softener and Deodorizer.
First use May 27, 1960.

733,984. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. SN 118,240. Filed P.R. 4-20-61; Am. S.R. 5-10-62.

POT N PAN

For Powdered Detergent for Cleaning Cooking Utensils.
First use July 2, 1959.

Service Marks

Class 100 — Miscellaneous

733,985. William W. Boynton, d.b.a. Boynton Associates, La Canada, Calif. SN 127,565. Filed P.R. 9-11-61; Am. S.R. 4-16-62.

BOYNTON ASSOCIATES
SCIENTISTS AND ENGINEERS

For Professional Consulting Services Relating to Scientific Research and Development in the Field of Physical Tests and Measurements.
First use Feb. 10, 1961.

Class 102 — Insurance and Financial

733,986. National Boulevard Bank of Chicago, Chicago, Ill. SN 130,936. Filed P.R. 10-30-61; Am. S.R. 5-7-62.

SUCCESS NEEDS A GOOD BANK

For Banking Services.
First use Jan. 8, 1960.

TRADEMARK REGISTRATIONS RENEWED

154,983. ELDORADO. Cl. 37. 5-16-22.
156,710. THE MILWAUKEE CRANE AND CIRCLE DESIGN. Cl. 21. 7-11-22.
157,052. WEARITE. Cl. 39. 7-25-22.
158,263. THE MIEHLE VERTICAL. Cl. 23. 8-29-22.
158,295. MICRO. Cl. 36. 8-29-22.
158,300. ESSYEW. Cl. 11. 8-29-22.
158,402. CHAMPION X. Cl. 21. 9-5-22.
158,630. PHENOID. Cl. 16. 9-12-22.
159,309. SECURITY. Cl. 37. 9-26-22.
159,347. ELECTROMET. Cl. 14. 9-26-22.
159,567. VICTOR. Cl. 25. 9-26-22.
159,656. S-I-S AND DESIGN. Cl. 12. 10-3-22.
159,848. CHADWICK'S. Cl. 43. 10-10-22.
159,924. ATLAS. Cl. 6. 10-10-22.
160,451. EDUCATOR. Cl. 37. 10-24-22.
161,398. LOCUST POST. Cl. 39. 11-14-22.
391,971. COLORPLUS. Cl. 43. 12-2-41.
394,652. PREDATE. Cl. 38. 4-21-42.
394,728. ADDA-STRIP. Cl. 34. 4-28-42.
394,792. CHARLAB. Cl. 12. 4-28-42.
394,826. HARD HIT. Cl. 17. 4-28-42.
394,827. REACH IN AND DESIGN. Cl. 17. 4-28-42.
394,865. MILWAUKEE. Cl. 23. 4-28-42.
394,890. DIAMANTE. Cl. 51. 5-5-42.
394,942. WHITE COLLAR GIRL. Cl. 38. 5-5-42.
394,946. BLACKPRINZ. Cl. 46. 5-5-42.
394,947. CARABROWN. Cl. 46. 5-5-42.
394,948. GOLDPILS. Cl. 46. 5-5-42.
394,952. CHANGE-O-MATIC. Cl. 26. 5-5-42.
394,964. CONCEAL. Cl. 51. 5-5-42.
395,097. CHARLAB. Cls. 6 and 52. 5-12-42.
395,212. GENERAL. Cl. 13. 5-19-42.
395,460. D & C AND DESIGN. Cl. 28. 5-26-42.
395,744. GOOD BITE AND DESIGN. Cl. 17. 6-9-42.
395,830. YIPPI. Cl. 42. 6-16-42.
396,035. FULL SAIL. Cl. 46. 6-23-42.
396,092. TEXLITE. Cl. 12. 6-30-42.
396,195. LIN-O-COOL. Cl. 39. 6-30-42.
396,329. CHUTNUT. Cl. 46. 7-7-42.
396,473. SURELOAF. Cl. 46. 7-21-42.
396,489 STANGUARD. Cl. 37. 7-21-42.
396,787. LYRE AND DESIGN. Cl. 30. 8-4-42.
396,949. AER-O-FOAM. Cl. 6. 8-11-42.
397,167. RIPPLE. Cl. 46. 8-25-42.
397,187. GAINES DOG MEAL AND DESIGN. Cl. 46. 8-25-42.
397,259. HI-PLEX. Cl. 18. 8-25-42.
397,421. CONCRETE SOX ETC. AND DESIGN. Cl. 39. 9-8-42.
397,689. SYSTEMAT. Cl. 37. 9-15-42.
397,748. FARM FAMILY. Cl. 46. 9-15-42.
398,037. GLOW-LITE. Cl. 28. 10-6-42.
398,038. LEVEL. Cl. 46. 10-6-42.
398,039. IROX. Cl. 16. 10-6-42.
398,125. FELLOWS. Cl. 18. 10-13-42.
398,137. URISED. Cl. 18. 10-13-42.
398,163. PHYTANIUM-BLENDED PENTRATE. Cl. 6. 10-13-42.
398,201. 600. Cl. 52. 10-13-42.
398,210. WM. Cl. 26. 10-13-42.
398,238. DAHLIA. Cl. 46. 10-20-42.
398,279. PACIFIC WORSTEDS WOOLENS. Cl. 42. 10-20-42.
398,286. USSP. Cl. 18. 10-20-42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

The following registrations issued May 15, 1956

626,728. BAR-B-KETS AND DESIGN. Cl. 1.
626,732. KNOX-TARNISH AND DESIGN. Cl. 4.
626,737. PARKER PRE-NAMEL. Cl. 6.
626,744. ROSANA. Cl. 8.
626,749. FERTILENE. Cl. 10.
626,751. STERILITE. Cl. 10.
626,756. ELEPHANT-HIDE. Cl. 12.
626,757. FLEXDOOR. Cl. 12.
626,760. VISTA-LITE. Cl. 12.
626,767. "WIPE-AWAY." Cl. 13.
626,768. ORNA-BRAC. Cl. 13.
626,769. SNUBIT. Cl. 13.
626,771. TYDEE. Cl. 13.

626,772. TOOTHPASTER. Cl. 13.
626,773. HANDI-RING. Cl. 13.
626,775. KELTON. Cl. 13.
626,782. COMPINEX PENN. Cl. 15.
626,783. OPB "17." Cl. 15.
626,784. LINK ETC. AND DESIGN. Cl. 15.
626,795. WYNEX. Cl. 16.
626,796. WYCOTE. Cl. 16.
626,798. CIROLOR. Cl. 16.
626,804. VAYLO. Cl. 18.
626,809. AL-LO-GENE. Cl. 18.
626,814. SITOSTIN. Cl. 18.
626,823. USI AND DESIGN. Cl. 19.
626,826. WHEELMASTER. Cl. 19.
626,832. MIMOT. Cl. 21.
626,833. UTA. Cl. 21.
626,836. REDI-FLO. Cl. 21.
626,839. STROMBERG-CARLSON SOUND EQUIPMENT AND DESIGN. Cl. 21.
626,840. ZAVODY V.I. LENINA PLZEN AND DESIGN. Cl. 21.
626,844. PLASTISEL. Cl. 21.
626,850. WARN FLASH AND DESIGN. Cl. 21.
626,856. CONDOR. Cl. 21.
626,859. ARTHUR MURRAY AND DESIGN. Cl. 21.
626,862. FANTOM. Cl. 21.
626,864. UNISPUN. Cl. 21.
626,865. ALSPUN. Cl. 21.
626,867. QUI-KLIP. Cl. 21.
626,871. GLOBE. Cl. 21.
626,872. MULT-A-PLIANCE. Cl. 21.
626,873. MUSI-MATIC AND DESIGN. Cl. 21.
626,874. RADIOCALL AND DESIGN. Cl. 21.
626,875. TEMPOWER. Cl. 21.
626,878. CALMAG. Cl. 21.
626,879. TURNER UNI-GAP AND DESIGN. Cl. 21.
626,882. JET-CHUTE AND DESIGN. Cl. 22.
626,884. OCEANSIDE. Cl. 22.
626,885. CALYPSO. Cl. 22.
626,886. RACE-RAMA. Cl. 22.
626,887. 66. Cl. 22.
626,888. DESIGN OF SHIELD. Cl. 22.
626,889. DAVY JONES. Cl. 22.
626,890. KINK-KEE LEADER. Cl. 22.
626,894. DONUT MASTER. Cl. 23.
626,900. JACKSON & CHURCH J-C AND DESIGN. Cl. 23.
626,902. ZAVODY V.I. LENINA PLZEN AND DESIGN. Cl. 23.
626,917. MITY MASTER. Cl. 23.
626,918. ARROWHEAD. Cl. 23.
626,919. AEROCEM. Cl. 23.
626,920. SONICUT. Cl. 23.
626,921. PHIOMAX. Cl. 23.
626,923. DOUBLE-MATIC. Cl. 23.
626,928. MAGICASE. Cl. 26.
626,934. UNOMAT. Cl. 26.
626,938. ATOMICRONIC. Cl. 27.
626,943. DUO COOLER. Cl. 31.
626,944. HYDRO-CHILL. Cl. 31.
626,945. FREEZE EAZY AND DESIGN. Cl. 31.
626,946. LONERGAN. Cl. 31.
626,947. ROTO COOL ETC. AND DESIGN. Cl. 31.
626,950. MONTCLAIR. Cl. 31.
626,952. LETTERBUG. Cl. 32.
626,954. PATIO KING. Cl. 32.
626,959. PLA-TRANER. Cl. 32.
626,960. CENTSIBLE AND DESIGN. Cl. 32.
626,961. SPINE-A-LINER. Cl. 32.
626,964. SET-T-COT. Cl. 32.
626,965. TA-K-NAP. Cl. 32.
626,967. HARLEIGH COURT. Cl. 32.
626,968. THE MURRAY HILL GROUP. Cl. 32.
626,971. PDQ. Cl. 34.
626,975. GRILLRYTE. Cl. 34.
626,977. PUCHITO. Cl. 36.
626,981. SARACOTE. Cl. 37.
626,991. POCKET PRIDE. Cl. 37.
626,993. PREVIEW. Cl. 37.
626,995. RETMA RADIO-ELECTRONICS-TELEVISION ETC. AND DESIGN. Cl. 38.
627,000. DESIGN OF MUSICAL NOTES. Cl. 38.
627,001. PHOTORAMA. Cl. 38.
627,007. BROILER GROWING. Cl. 38.
627,010. DRI-BABE. Cl. 39.
627,011. SOFT SHOULDERS. Cl. 39.
627,013. FEATHERWARM. Cl. 39.
627,017. MIAMI MISS AND DESIGN. Cl. 39.
627,022. MONTE VERDE. Cl. 39.
627,026. BUMPY BOUNCEY. Cl. 39.
627,027. RH. Cl. 39.
627,040. TOBETTE JUNIOR. Cl. 39.
627,042. MAIDEN MAINE. Cl. 39.
627,048. BEAUTIFBUTE. Cl. 42.
627,050. NYROCALE AND DESIGN. Cl. 42.
627,054. SUPERLITE 11. Cl. 42.
627,055. SUPERLITE V. Cl. 42.
627,056. SUPER 8. Cl. 42.
627,058. HANGOUT. Cl. 42.
627,071. CHESTERFIELD. Cl. 42.
627,072. FONTAINEBLEAU. Cl. 42.
627,073. MONTEVIDEO. Cl. 42.
627,074. FAIRLANE. Cl. 42.
627,075. HOUR "24" DUTY. Cl. 42.
627,090. MINKGORA. Cl. 43.
627,091. CUPRADOR. Cl. 43.
627,092. EMPECO. Cl. 43.
627,093. KNIGHT BRAND. Cl. 43.
627,094. MECCA. Cl. 43.
627,095. METEOR. Cl. 43.
627,096. PARCIVAL. Cl. 43.
627,097. STRONGHOLD. Cl. 43.
627,107. DR. TOPPER'S DOG CONES AND DESIGN. Cl. 46.
627,113. DOUBLE H AND DESIGN. Cl. 46.
627,128. STRATO OUT OF THIS WORLD AND DESIGN. Cl. 46.
627,137. PAT. Cl. 51.
627,146. VEGO. Cl. 52.
627,147. FEWA AND DESIGN. Cl. 52.
627,157. PUP HUT AND DESIGN. Cl. 12.
627,162. DEVONSHEER PROTEIN WHOLE GRAIN WAFERS. Cl. 46.
627,164. BABY'S BREATH. Cl. 51.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

157,170. PANGBURN'S. Cl. 46. 7-25-22. Pangburn Company, Inc., Fort Worth, Tex. Amended: In the heading and in the statement, column 1, line 10, "and ice cream" is deleted.

206,898. AMOCO-GAS ETC. Cl. 15. 12-15-25. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

278,575. CHUCK WAGON. Cl. 46. 12-23-30. Universal Manufacturing Company. Kimbell Milling Company, Fort Worth, Tex. Amended: In the statement, column 1, line 9, "shelled nuts" is deleted.

396,266. AMERICAN AND DESIGN. Cl. 15. 6-30-42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

396,267. AMERICAN AND DESIGN. Cl. 15. 6-30-42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

396,777. HYDROILICS. Cl. 23. 8-4-42. The Denison Engineering Company. American Brake Shoe Company, New York, N.Y. Amended: In the statement, column 1,

lines 9 through 16, "hydraulic kiln car propellers, automatic bar machines, straightening presses, horizontal presses, bench presses, hydraulic presses with rotary indexing tables, briquetting presses, hydraulic machines for straightening centers, band-type presses," are deleted, line 17, "gears" is deleted and *apparatus* is inserted, lines 18 through 22, "hydraulic elevators, deckling machines for photographic mounting cards, power transmission device for rotary circular kilns, hydraulic billet pushers," are deleted, lines 23 and 24, "hydraulic jacks," is deleted, lines 25 and 26, "assembling presses, vertical open side presses," is deleted.

396,824. AMOCO AND DESIGN. Cl. 4. 8–4–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

396,825. AMOCO AND DESIGN. Cl. 4. 8–4–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

397,089. AMOCO AND DESIGN. Cl. 15. 8–18–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

397,090. AMOCO AND DESIGN. Cl. 15. 8–18–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

397,091. AMOCO AND DESIGN. Cl. 15. 8–18–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

397,092. AMOCO AND DESIGN. Cl. 15. 8–18–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

397,326. AMERICAN—AMOCO AND DESIGN. Cl. 15. 9–1–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

398,886. AMERICAN AMOCO AND DESIGN. Cl. 50. 12–1–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

399,181. AMERICAN AMOCO AND DESIGN. Cl. 21. 12–22–42. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 3 and 17, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

402,666. BLUE BOY. Cl. 46. 8–10–43. Haxton Canning Company, Inc. Haxton Foods Incorporated, Oakfield, N.Y. Amended: In the statement, column 1, line 11, "bottled milk and cream," is deleted.

579,567. AMERICAN AND DESIGN. Cl. 15. 9–8–53. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 4 and 15, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

580,683. AMERICAN. Cl. 15. 10–6–53. The American Oil Company, Chicago, Ill. Corrected: In the certificate, lines 4 and 15, in the heading and signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

637,486. PHIL ROSE OF CALIFORNIA. Cl. 39. 11–20–56. Phil Rose of California, Inc., Los Angeles, Calif. Corrected: In the statement, column 1, line 1, after "California" first occurrence, , *Inc.* should be inserted.

637,729. DOLCELON. Cl. 32. 11–27–56. Castro Decorators, Inc. Castro Convertible Corporation, New Hyde Park, N.Y. Amended: In the statement, column 1, line 1, after "corporation)" , *now by change of name Castro Convertible Corporation, 2000 Jericho Turnpike* is inserted.

662,027. IMPERIAL. Cl. 52. 5–20–58. Helene Curtis Industries, Inc., Chicago, Ill. Amended: In the statement, column 2, line 1, after "concentrate" *for use in beauty parlors for use in giving hair shampoos on the premises* is inserted.

724,725. BLEPHAMIDE. Cl. 18. 12–5–61. Allergan Pharmaceuticals, Inc., Santa Ana, Calif. Amended: In the statement, column 1, lines 2 and 3 are deleted and *1000 South Grand Ave., Santa Ana, Calif.* is inserted, and the drawing is amended to appear:

BLEPHAMIDE

728,975. ARC. Cl. 100. 3–20–62. Atlantic Research Corporation, Alexandria, Va. Corrected: In the statement, column 2, line 4, "pyratechnics" should be deleted and *pyrotechnics* should be inserted.

730,536. ANTRADEX. Cl. 46. 4–24–62. N. V. Maatschappij Antradex, doing business as Antradex Company Ltd., Willemstad, Curacao, Netherlands Antilles. Corrected: In the statement, column 1, line 1, and in column 2, line 5, "Dutch" should be deleted and *Netherlands Antilles* should be inserted.

730,603. GENTLE FELS. Cl. 52. 4–24–62. Fels and Company, Philadelphia, Pa. Corrected: In the heading after "Feb. 9," "1960" should be deleted and *1962* should be inserted.

731,311. THE HARMONICA RASCALS. Cl. 107. 5–8–62. Globe Artists, Inc., Brooklyn, N.Y. Corrected: In the statement, column 1, line 1, "Glove" should be deleted and *Globe* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 4 — Abrasives and Polishing Materials

306,670. Sept. 26, 1933. Vereinigte Wachswarenfabriken A.G., Ditzingen, near Stuttgart, Germany. Pub. by registrant.



For Shoe Paste and Polish, Leather and Shoe Oils and Fats, Ski Wax, Metal Polish and Oils, Fats and Waxes for Treating and Conserving Skis.

408,868. Aug. 29, 1944. Mid-West Abrasive Company, Detroit, Mich. Pub. by registrant.

WATERSAND

For Coated Abrasive Papers.

Class 5 — Adhesives

197,405. Apr. 14, 1925. The Commercial Paste Company, Columbus, Ohio. Pub. by registrant.

Pads-it

For Adhesive Rubber Containing Tabbing Compound for Printers, Publishers, and Binders.

Class 6 — Chemicals and Chemical Compositions

419,470. Feb. 19, 1946. Faesy & Besthoff, Inc., New York, N.Y. Pub. by registrant.

MICRO NU-COP

For Neutral Tri-Basic Copper Sulphate Used To Control Various Agricultural Fungus Diseases.

Class 17 — Tobacco Products

156,016. June 13, 1922. B. Muratti Sons and Company Limited, Manchester, England. Pub. by The United Kingdom Tobacco Company Limited, London, England.

MURATTI

For Cigarettes.

Class 18 — Medicines and Pharmaceutical Preparations

150,455. Jan. 3, 1922. William H. Luden, Reading, Pa. Pub. by Luden's, Inc., Reading, Pa.



For Menthol Cough Drops.

157,486. Aug. 8, 1922. Dairy Association Company, Inc., Lyndonville, Vt. Pub. by registrant.

KOW-KARE

For Medicine for Cows, Used in Treating the Following Diseases—Namely, Abortion, Anaemia, Barrenness, Bloating, Caked Bag, Colds, Cowpox, Garget, Gorging, Lost Appetite, Milk Fever, Retained Afterbirth, Blood Purifier, Corrective for Stomach Troubles, Scouring, and To Alleviate Weakness and Depletion of the Generative Organs.

Class 20 — Linoleum and Oiled Cloth

396,164. June 30, 1942. Carthage Mills Inc., Cincinnati, Ohio. Pub. by registrant.



The woman's head in the trademark is purely fanciful. The word "Genuine" is disclaimed except in the association shown.

For Printed Felt-Base Floor Covering.

Class 21 — Electrical Apparatus, Machines, and Supplies

430,146. June 10, 1947. The Western Union Telegraph Company, New York, N.Y. Pub. by registrant.

Telekrypton

For Telegraph Enciphering and Deciphering Apparatus.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

153,761. Mar. 28, 1922. Husqvarna Vapenfabriks Aktiebolag, Husqvarna, Sweden. Pub. by registrant.

RELIANCE

For Meat Mincers, Meat Grinders, and Meat Choppers.

433,579. Oct. 21, 1947. A and A Manufacturing Company, Gurdon, Ark. Pub. by registrant.



Applicant disclaims the representation of a rake, and the map of the United States, and the term "Sweeps," apart from the mark as shown.

For Garden Tools—Namely, Rakes, Weeders, and Cultivators.

Class 26 — Measuring and Scientific Appliances

153,798. Mar. 28, 1922. Metro Pictures Corporation, New York, N.Y. Pub. by Metro-Goldwyn-Mayer Inc., New York, N.Y.



The word "Pictures" is disclaimed apart from other features shown in the mark.
For Motion Picture Films.

396,766. Aug. 4, 1942. Barnett and Ramel Optical Co., Kansas City, Mo. Pub. by registrant.



For Ophthalmic Products—Namely, Lenses, Frames, and Rimless Mountings.

Class 37 — Paper and Stationery

438,332. Apr. 13, 1948. Richard Best Pencil Company, Inc., Springfield, N.J. Pub. by registrant.

FUTURA

For Wood Encased Lead Pencils.

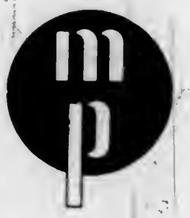
443,127. July 19, 1949. Richard Best Pencil Company, Inc., Springfield, N.J. Pub. by registrant.

DAMASCUS

For Wood-Encased Lead, and Re-Fill Leads for Mechanical Pencils.

Class 38 — Prints and Publications

412,237. Feb. 27, 1945. Modern Plastics, Inc., New York, N.Y. Pub. by Breskin Publications, Inc., New York, N.Y.



For Periodical Publication Published Monthly.

Class 39 — Clothing

20,906. Mar. 29, 1892. John Smedley, Lea Mills, near Derby, England. Pub. by John Smedley, Limited, Cromford, near Matlock, England.



For Hosiery.

393,025. Jan. 27, 1942. The Parsons-Faulkner Company, Ashland, Ky. Pub. by The C. H. Parsons Company, Ashland, Ky.

Lucy Love

The name "Lucy Love" is the nom de plume signature of Clarence L. Stull.
For Ladies' Lingerie—Namely, Vests and Negligees, Hosiery, Slips, Panties, and Gowns—Namely, Nightgowns.

394,449. Apr. 7, 1942. Northern Straw Works, Inc., Philadelphia, Pa. Pub. by Northern Straw Works, Philadelphia, Pa.



The portrait is fanciful.
For Ladies' Hats.

411,390. Jan. 16, 1945. Adler Sons Shoe Corporation, New York, N.Y. Pub. by registrant.

THIN MAN

For Men's Shoes and Sandals Made From Leather, Fabric or Rubber Composition, or Combinations of Such Materials.

411,391. Jan. 16, 1945. Adler Sons Shoe Corporation, New York, N.Y. Pub. by registrant.

WIDE GUYS

For Men's Shoes and Sandals Made From Leather, Fabric or Rubber Composition, or Combinations of Such Materials.

429,666. May 13, 1947. Adler Sons Shoe Corp., New York, N.Y. Pub. by registrant.

ADLER EVERTALLS

For Men's Shoes and Sandals Made From Leather, Fabric or Rubber Composition, or Combinations of Such Materials.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

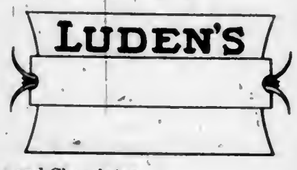
152,525. Feb. 28, 1922. Bernhard Ulman Co. Inc., New York, N.Y. Pub. by The Linen Thread Co., Inc., New York, N.Y.

KRAFTWEAVE

For Woven Textile Fabrics in the Piece Used as Foundation Material for Art Needlework.

Class 46 — Foods and Ingredients of Foods

154,616. Apr. 18, 1922. William H. Luden, Reading, Pa. Pub. by Luden's, Inc., Reading, Pa.



For Candies and Chocolates.

260,125. Aug. 20, 1929. Savannah Sugar Refining Corporation, Savannah, Ga. Pub. by registrant.



For Sugar.

Class 49 — Distilled Alcoholic Liquors

363,915. Jan. 10, 1939. J. T. S. Brown's Son Company, Early Times, Ky. Pub. by J. T. S. Brown's Son Company, Cincinnati, Ohio.



For Whiskey, Gin, Rum, Brandy and Alcoholic Cordials.

Class 51 — Cosmetics and Toilet Preparations

395,651. June 2, 1942. Northam Warren Corporation, Stamford, Conn. Pub. by Chesebrough-Pond's Inc., New York, N.Y.

ALERT

For Liquid Nail Polish.

INDEX OF REGISTRANTS

JULY 3, 1962

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

A and A Mfg. Co., Gurdon, Ark. 433,579, 12(c) pub. 7–3–62. Cl. 23.
AAA Sales Co., Philadelphia, Pa. 626,954, canc. Cl. 32.
Ace Mailing Service, Inc., d.b.a. Co-op Mailing Service, Atlanta, Ga. 733,943, pub. 4–17–62. Cl. 101.
Acme Backing Corp., New York, N.Y. 733,789, pub. 4–17–62. Cl. 37.
Addressograph-Multigraph Corp., Cleveland, Ohio. 397,689, ren. 7–3–62. Cl. 37.
Adler Co., The : *See*—
Burlington Industries, Inc.
Adler Sons Shoe Corp., New York, N.Y. 411,390–1, 12(c) pub. 7–3–62. Cl. 39.
Adler Sons Shoe Corp., New York, N.Y. 429,666, 12(c) pub. 7–3–62. Cl. 39.
Aerocem Ltd., London, England. 626,919, canc. Cl. 23.
Air Reduction Co., Inc., New York, N.Y. 733,702, pub. 4–17–62. Cl. 21.
Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. 733,691, pub. 4–17–62. Cl. 18.
Aldon Rug Mills, Inc., Lenni Mills, Pa. 733,839, pub. 4–17–62. Cl. 42.
Allergan Pharmaceuticals, Inc., Santa Ana, Calif. 724,725. Am. 7(d). Cl. 18.
Allied Chemical Corp. : *See*—
Barrett Co., The.
Solvay Process Co., The.
Alvino, Riccardo, San Francisco, Calif. 733,979. Cl. 47.
Amco Wire Products Corp., Chicago, Ill. 733,966. Cl. 21.
American Brake Shoe Co. : *See*—
Denison Engineering Co., The.
American Cyanamid Co., New York, N.Y. 626,814, canc. Cl. 18.
American Cyanamid Co., New York, N.Y. 733,624, pub. 4–17–62. Cl. 6.
American Cyanamid Co., New York, N.Y. 733,629, pub. 4–17–62. Cl. 6.
American Dietaids Co., Inc., Yonkers, N.Y. 397,259, ren. 7–3–62. Cl. 18.
American Home Foods : *See*—
American Home Products Corp.
American Home Products Corp., d.b.a. American Home Foods, New York, N.Y. 733,891, pub. 4–17–62. Cl. 46.
American Home Products Corp., d.b.a. Ayerst Laboratories, New York, N.Y. 733,677, pub. 4–17–62. Cl. 18.
American Home Products Corp., from Mallon Chemical Corp., New York, N.Y. 733,846–7, pub. 4–17–62. Cl. 44.
American Institute of Chemical Engineers, New York, N.Y. 733,806–7, pub. 4–17–62. Cl. 38.
American Oil Co., The, Chicago, Ill. 206,898, cor. Cl. 15.
American Oil Co., The, Chicago, Ill. 396,266–7, cor. Cl. 15.
American Oil Co., The, Chicago, Ill. 396,824–5, cor. Cl. 4.
American Oil Co., The, Chicago, Ill. 397,089–92, cor. Cl. 15.
American Oil Co., The, Chicago, Ill. 397,326, cor. Cl. 15.
American Oil Co., The, Chicago, Ill. 398,886, cor. Cl. 50.
American Oil Co., The, Chicago, Ill. 399,181, cor. Cl. 21.
American Oil Co., The, Chicago, Ill. 579,567, cor. Cl. 15.
American Oil Co., The, Chicago, Ill. 580,683, cor. Cl. 15.
American Optical Co., Southbridge, Mass. 733,754, pub. 4–17–62. Cl. 26.
American Systems Inc., Hawthorne, Calif. 733,756, pub. 4–17–62. Cl. 26.
Amerotron Corp., New York, N.Y. 627,054–6, canc. Cl. 42.
Anderson-Dulin-Varnell Co., to Great Atlantic Shoe Co., Knoxville, Tenn. 161,398, ren. 7–3–62. Cl. 39.
Animal Repellents, Inc., Griffin, Ga. 733,627, pub. 4–17–62. Cl. 6.
Antradex Co. Ltd. : *See*—
N.V. Maatschappij Antradex.
Apollinaris Brunnen A.G., Bad Neuenahr, Germany. 733,887, pub. 4–17–62. Cl. 46.
Appleton Electric Co., Chicago, Ill. 733,707, pub. 4–17–62. Cl. 21.
Arcos Corp., Philadelphia, Pa. 733,659, pub. 4–17–62. Cl. 14.
Armour Pharmaceutical Co., Chicago, Ill. 733,681–2, pub. 4–17–62. Cl. 18.
Arrow Laboratories, Inc., New York, N.Y. 733,927, pub. 4–17–62. Cl. 52.
Arvey Corp., Chicago, Ill. 733,787, pub. 4–17–62. Cl. 37.
Asgrow Seed Co., The, New Haven, Conn. 733,616, pub. 4–17–62. Cl. 6.
Astra Corp., New London, Conn. 733,749, pub. 4–17–62. Cl. 26.
Astra Corp., New London, Conn. 733,793, pub. 4–17–62. Cl. 37.
Atlantic Research Corp., Alexandria, Va. 728,975, cor. Cl. 100.
Auto-Soler Co., The, Atlanta, Ga. 733,736, pub. 4–17–62. Cl. 23.
Avon Products, Inc., New York, N.Y. 733,918, pub. 4–17–62. Cl. 51.
Ayerst Laboratories : *See*—
American Home Products Corp.
B & W Associates, Michigan City, Ind. 733,971. Cl. 26.
Bachi, Roberto, Jerusalem, Israel. 733,813, pub. 4–17–62. Cl. 38.
Bailey Meters & Controls Ltd., Croydon, England. 733,740, pub. 4–17–62. Cl. 26.
Balch Flavor Co. : *See*—
Balch, Gerald G.
Balch, Gerald G., d.b.a. Balch Flavor Co., Pittsburgh, Pa. 397,167, ren. 7–3–62. Cl. 46.
Balfour, Guthrie & Co., Ltd., New York, N.Y. 733,630, pub. 4–17–62. Cl. 6.
Baltimore Trouser Co., Inc., Baltimore, Md. 733,978. Cl. 39.
Barkley & Dexter Laboratories, Inc., Fitchburg, Mass. 733,940, pub. 4–17–62. Cl 100.
Barnangens Tekniska Fabrikers Aktiebolag, Stockholm-Bromma, Sweden. 733,916, pub. 4–17–62. Cl. 51.
Barnett and Ramel Optical Co., Kansas City, Mo. 396,766, 12(c) pub. 7–3–62. Cl. 26.
Barrett Co., The, to Allied Chemical Corp., New York, N.Y. 159,656, ren. 7–3–62. Cl. 12.
Barwick, E. T., Mills, Chamblee, Ga. 627,071–2, canc. Cl. 42.
Basin Produce Co., Inc., Moses Lake, Wash. 733,851, pub. 4–17–62. Cl. 46.
Bay State Milling Co., Winona, Minn. 733,865, pub. 4–17–62. Cl. 46.
Beach Products, Inc., from R. B. Jenkins, Tampa, Fla. 733,673, pub. 4–17–62. Cl. 18.
Beautiflute, Inc., Keyport, N.J. 627,048, canc. Cl. 42.
Becker, Ada : *See*—
Tyler, Toby, & Co., Inc.
Becker, Eleanor : *See*—
Tyler, Toby, & Co., Inc.
Becker, Frank : *See*—
Tyler, Toby, & Co., Inc.
Behr, Joseph, & Sons, Inc., Rockford, Ill. 733,660, pub. 4–17–62. Cl. 14.
Belford Co., Inc., New York, N.Y. 626,773, canc. Cl. 13.
Bernad Creations, Ltd., Yonkers, N.Y. 626,952, canc. Cl. 32.
Bernal, David Mas De Roda Y, Barcelona, Spain. 394,890, ren. 7–3–62. Cl. 51.
Best, Richard, Pencil Co., Inc., Springfield, N.J. 438,332, 12(c) pub. 7–3–62. Cl. 37.
Best, Richard, Pencil Co., Inc., Springfield, N.J. 443,127, 12(c) pub. 7–3–62. Cl. 37.
Bethco Bedding Corp., Allentown, Pa. 626,961, canc. Cl. 32.
Biscayne Tank Mfg. Co., Inc., Miami, Fla. 733,631, pub. 4–17–62. Cl. 6.
Bloom, Joseph C., d.b.a. Freeze Eazy Industries, Santa Rosa, Calif. 626,945, canc. Cl. 31.
Blumenthal, Sidney, & Co., Inc. : *See*—
Burlington Industries, Inc.
Bo-Giro Products, Inc., Brightwaters, N.Y. 733,729, pub. 4–17–62. Cl. 23.
Bohme Fettchemie G.m.b.H., Dusseldorf, Germany. 627,147, canc. Cl. 52.
Bonne Bell Inc., Lakewood, Ohio. 733,917, pub. 4–17–62. Cl. 51.
Bonnell, William L., Co., Inc., The, Newnan, Ga. 733,653, pub. 4–17–62. Cl. 12.
Borden Co., The, New York, N.Y. 733,639, pub. 4–17–62. Cl. 6.
Bovril, Ltd., London, England. 733,852, pub. 4–17–62. Cl. 46.
Boynton Associates : *See*—
Boynton, William W.
Boynton, William W., d.b.a. Boynton Associates, La Canada, Calif. 733,985. Cl. 100.
Bradley, Richard C., d.b.a. Plastic Engineering and Chemical Co, Fort Lauderdale, Fla. 733,615, pub. 12–27–60. Cl. 6.
Brant Yarns, Inc., New York, N.Y. 627,090, canc. Cl. 43.
Brennan Illinois Iron Works, Inc., Chicago, Ill. 626,768, canc. Cl. 13.
Breskin Publications, Inc. : *See*—
Modern Plastics, Inc.
Brierley Co., The : *See*—
Brierley, Ralph E.
Brierley, Ralph E., d.b.a. The Brierley Co., New York, N.Y. 626,804, canc. Cl. 18.
Broughton's Farm Dairy, Inc., Marietta, Ohio. 733,882–3, pub. 4–17–62. Cl. 46.
Brown's, J. T. S., Son Co., Early Times, Ky., by J. T. S. Brown's Son Co., Cincinnati, Ohio. 363,915, 12(c) pub. 7–3–62. Cl. 49.
Brunswick Corp., Chicago, Ill. 733,967. Cl. 22.
Buensod-Stacey Corp., New York, N.Y. 733,775, pub. 4–17–62. Cl. 34.
Bundock, John P., Jr., d.b.a. Glee Industries, Deerfield, Ill. 733,914, pub. 4–17–62. Cl. 51.
Burlington Industries, Inc. : *See*—
Pacific Mills.
Burlington Industries, Inc., Greensboro, N.C., from Sidney Blumenthal & Co., Inc., d.b.a. The Adler Co., New York, N.Y. 733,832–3, pub. 4–17–62. Cl. 39.
Burnside Messenger Service, Inc., New York, N.Y. 733,955, pub. 4–17–62. Cl. 105.
Byk-Gulden Lomberg Chemische Fabrik G.m.b.H., Konstanz, Germany. 733,685–6, pub. 4–17–62. Cl. 18.
C & H Supply Co. : *See*—
Collins, John E.
California Federal Savings and Loan Association, Los Angeles, Calif. 733,950, pub. 4–17–62. Cl. 102.
California Magnetic Control Corp., North Hollywood, Calif. 626,878, canc. Cl. 21.

Camp and McInnes, Inc., Reading, Pa. 733,828, pub. 4–17–62. Cl. 39.
Carter Products, Inc., New York, N.Y. 733,687, pub. 4–17–62. Cl. 18.
Carter, William, Co., The, Needham Heights, Mass. 627,013, canc. Cl. 39.
Carthage Mills, Inc., Cincinnati, Ohio. 396,164, 12(c) pub. 7–3–62. Cl. 20.
Castleton China, Inc., New Castle, Pa. 396,787, ren. 7–3–62. Cl. 30.
Castro Convertible Corp.: *See*—
Castro Decorators, Inc.
Castro Decorators, Inc. Castro Convertible Corp., New Hyde Park, N.Y. 637,729. Am. 7(d). Cl. 32.
Central Paper Co., Menasha, Wis. 159,309, ren. 7–3–62. Cl. 37.
Central States Industries, Inc., Royal Oak, Mich. 626,960, canc. Cl. 32.
Chalmers Chemical Co., Newark, N.J. 158,630, ren. 7–3–62. Cl. 16.
Champion Spark Plug Co., Toledo, Ohio. 158,402, ren. 7–3–62. Cl. 21.
Chandler, Ernest, Inc., New York, N.Y. 626,884, canc. Cl. 22.
Charlotte Chemical Laboratories, Inc., Charlotte, N.C. 394,792, ren. 7–3–62. Cl. 12.
Charlotte Chemical Laboratories, Inc., Charlotte, N.C. 395,097, ren. 7–3–62. Cls. 6 and 52.
Chem Lab Products, Inc., Downey, Calif. 733,637, pub. 4–17–62. Cl. 6.
Chemex Corp., New York, N.Y. 733,705, pub. 4–17–62. Cl. 21.
Chemicals & Materials Corp.: *See*—
Chemicals & Materials Distributors Corp.
Chemicals & Materials Distributors Corp., d.b.a. Chemicals & Materials Corp., Terre Haute, Ind. 627,146, canc. Cl. 52.
Chemithon Corp., The, Seattle, Wash. 733,930, pub. 4–17–62. Cl. 52.
Chesebrough-Pond's Inc.: *See*—
Northam Warren Corp.
Chesebrough-Pond's Inc., New York, N.Y. 733,934, pub. 4–17–62. Cl. 52.
Chicago Pharmacal Co., Chicago, Ill. 398,137, ren. 7–3–62. Cl. 18.
Chunky Chocolate Corp., New York, N.Y. 733,902, pub. 4–17–62. Cl. 46.
Clairol Inc., New York, N.Y. 733,921, pub. 4–17–62. Cl. 51.
Clairol Inc., New York, N.Y. 733,924, pub. 4–17–62. Cl. 51.
Clark Thread Co., The, Newark, N.J., to Coats & Clark Inc., New York, N.Y. 159,848, ren. 7–3–62. Cl. 43.
Coats & Clark Inc.: *See*—
Clark Thread Co., The.
Cochran, Jacqueline, Inc., Newark, N.J. 733,920, pub. 4–17–62. Cl. 51.
Cohen, Joseph H., & Sons, Inc.: *See*—
Cohen, Joseph H., & Sons, Vanity Clothes, Inc.
Cohen, Joseph H., & Sons, Vanity Clothes, Inc., to Joseph H. Cohen & Sons, Inc., New York, N.Y. 396,195, ren. 7–3–62. Cl. 39.
Colgate-Palmolive Co., New York, N.Y. 733,933, pub. 4–17–62. Cl. 52.
Collet, Paul, & Co. Ltd., Montreal, Quebec, Canada. 626,757, canc. Cl. 12.
Collins, John E., d.b.a. C & H Supply Co., Dallas, Tex. 626,873–4, canc. Cl. 21.
Colombo's Italian Pizza Bakery, Inc., Dallas, Tex. 733,869, pub. 4–17–62. Cl. 46.
Colonial Plastics Mfg. Co., The, Cleveland, Ohio. 733,657, pub. 4–17–62. Cl. 13.
Color Corp. of America, Tampa, Fla. 733,805, pub. 4–17–62. Cl. 38.
Commercial Paste Co., The, Columbus, Ohio. 197,405, 12(c) pub. 7–3–62. Cl. 5.
Compinex Oil Co., New York, N.Y. 626,782, canc. Cl. 15.
Comptometer Corp.: *See*—
Victor Comptometer Corp.
Congress Sportswear Co., Inc., Boston, Mass. 733,838, pub. 4–17–62. Cl. 39.
Conifer Laboratories, Inc., Brainerd, Minn. 733,636, pub. 4–17–62. Cl. 6.
Consolidated Foods Corp., d.b.a. Shasta Beverages, Chicago, Ill., from The Shasta Water Co., San Francisco, Calif. 733,856, pub. 4–17–62. Cl. 46.
Contacts of Kansas, Inc., Wichita, Kans. 733,969. Cl. 26.
Container Corp. of America, Chicago, Ill. 733,788, pub. 4–17–62. Cl. 37.
Continental Baking Co., Rye, N.Y. 733,862, pub. 4–17–62. Cl. 46.
Continental Mills, Inc., Seattle, Wash. 733,899, pub. 4–17–62. Cl. 46.
Co-op Mailing Service: *See*—
Ace Mailing Service, Inc.
Cooper, Daniel, d.b.a. Supercraft Mfg. Co., New York, N.Y. 626,991, canc. Cl. 37.
Cooper, William, & Nephews, Inc., Chicago, Ill. 733,694, pub. 4–17–62. Cl. 18.
Cooperative Grange League Federation Exchange, Inc., Ithaca, N.Y. 733,641, pub. 4–17–62. Cl. 10.
Corn Cabin Co., South Elgin, Ill. 733,774, pub. 4–17–62. Cl. 34.
Cortland Line Co., Inc., Cortland, N.Y. 626,889, canc. Cl. 22.
Coryse Salome: *See*—
Societe Maurice Blanchet, Parfums De Luxe.
Cosom Corp., Minneapolis, Minn. 733,715, pub. 4–17–62. Cl. 22.
Country Beautiful Foundation, Inc., Elm Grove, Wis. 733,816, pub. 4–17–62. Cl. 38.
Courlstan, Inc., New York, N.Y. 733,841, pub. 4–17–62. Cl. 42.
Conventry, Sarah, Inc., Newark, N.J. 733,761, pub. 4–17–62. Cl. 28.
Cramer Chemical Co., The, Gardner, Kans. 733,623, pub. 4–17–62. Cl. 6.
Crescendoe Gloves, Inc., Johnstown, N.Y. 733,836–7, pub. 4–17–62. Cl. 39.
Crocker, Burbank Papers Inc., Fitchburg, Mass. 733,794, pub. 4–17–62. Cl. 37.
Cross Co., Mich., The, Fraser, Mich. 733,703, pub. 4–17–62. Cl. 21.
Crown Rubber Co., Fremont, Ohio. 733,698, pub. 4–17–62. Cl. 20.
Crown Zellerbach Corp., San Francisco, Calif. 626,993, canc. Cl. 37.
Crucible Corp., Chicago, Ill. 626,826, canc. Cl. 19.
Curtis, Helene, Industries, Inc., Chicago, Ill. 662,027. Am. 7(d). Cl. 52.
Curtiss-Wright Corp., Princeton, N.J. 733,739, pub. 11–17–59. Cl. 26.
Custom Maid Brassiere Co., Philadelphia, Pa. 733,821, pub. 4–17–62. Cl. 39.
D.R.M. Corp., Manitowoc, Wis. 626,894, canc. Cl. 23.
D & S Labs, Inc., Newark, N.J. 733,674, pub. 4–17–62. Cl. 18.
Dairy Association Co., Inc., Lyndonville, Vt. 157,486, 12(c) pub. 7–3–62. Cl. 18.
Daner, Samuel J., Newark, N.J. 626,771, canc. Cl. 13.
Darby, Wesley C., d.b.a. Kink-Kee Leader Co., Des Moines, Iowa. 626,890, canc. Cl. 22.
Daroff, H., & Sons, Inc., Philadelphia, Pa. 733,830, pub. 4–17–62. Cl. 39.
Dashew Business Machines, Inc., Los Angeles, Calif. 733,726, pub. 5–23–61. Cl. 23.
Dayco Corp., Dayton, Ohio. 733,771, pub. 4–17–62. Cl. 32.
De La Rue, Thomas, & Co. Ltd., London, England. 626,885, canc. Cl. 22.
Dehydag Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany. 733,609–10, pub. 4–17–62. Cl. 6.
Dell Publishing Co., Inc., New York, N.Y. 733,811, pub. 4–17–62. Cl. 38.
Dell Publishing Co., Inc., New York, N.Y. 733,814, pub. 4–17–62. Cl. 38.
Denison Engineering Co., The, American Brake Shoe Co., New York, N.Y. 396,777. Am. 7(d). Cl. 23.
Devonsheer Melba Corp., West New York, N.J. 627,162, canc. Cl. 46.
Dieges & Clust, New York, N.Y. 395,460, ren. 7–3–62. Cl. 28.
Dixie Valley Products: *See*—
Southern Utah Winery.
Dixon, Joseph, Crucible Co., Jersey City, N.J. 154,983, ren. 7–3–62. Cl. 37.
Dixon, Joseph, Crucible Co., Jersey City, N.J. 160,451, ren. 7–3–62. Cl. 37.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 733,649, pub. 4–17–62. Cl. 12.
Dixon, Joseph, Crucible Co., The, Jersey City, N.J. 733,974. Cl. 37.
Dofo, Danske Ostemejeriers Faellessalg og Osteeksport, Hadersley, Denmark. 733,857, pub. 4–17–62. Cl. 46.
Dolphin Chemical Co., St. Louis, Mo. 626,732, canc. Cl. 4.
Dougherty's, J. A., Sons, Inc., Distillers, Philadelphia, Pa. 733,909, pub. 4–17–62. Cl. 49.
Dow Chemical Co., The, Midland, Mich. 733,795, pub. 4–17–62. Cl. 37.
Dreher Leather Mfg. Corp., New York, N.Y. 733,603, pub. 4–17–62. Cl. 1.
Dri-Babe of California, Inc., Santa Monica, Calif. 627,010, canc. Cl. 39.
Duffy-Mott Co., Inc., New York, N.Y. 733,894, pub. 4–17–62. Cl. 46.
Dumari Textile Co., Inc., New York, N.Y. 395,830, ren. 7–3–62. Cl. 42.
Duralite Window Corp., Knoxville, Tenn. 626,760, canc. Cl. 12.
Durst S.-A., Bolzano, Italy. 626,934, canc. Cl. 26.
Economics Laboratory, Inc., St. Paul, Minn. 733,757, pub. 4–17–62. Cl. 26.
Effinger Brewing Co., Baraboo, Wis. 733,906, pub. 4–17–62. Cl. 48.
Ekco Products Co., Chicago, Ill. 626,918, canc. Cl. 23.
Electro Metallurgical Co., Glen Ferris, W. Va., and Niagara Falls, N.Y., to Union Carbide Corp., New York, N.Y. 159,347, ren. 7–3–62. Cl. 14.
Electronic Devices, Inc., Brooklyn, N.Y. 626,844, canc. Cl. 21.
Elgin National Watch Co., New York, N.Y. 733,760, pub. 4–17–62. Cl. 27.
Ellyda Imports, Inc., New York, N.Y. 733,864, pub. 4–17–62. Cl. 46.
Engelhorn, John, & Sons, d.b.a. Engelhorn Packing Co., Newark, N.J. 733,848, pub. 4–17–62. Cl. 46.
Engelhorn Packing Co.: *See*—
Engelhorn, John, & Sons.
Engineered Ceramics Mfg. Co., Chicago, Ill. 733,776–80, pub. 4–17–62. Cl. 34.
Enthone, Inc., New Haven, Conn. 733,614, pub. 4–17–62. Cl. 6.
Enthone, Inc., New Haven, Conn. 733,663, pub. 4–17–62. Cl. 16.
Enthone, Inc., New Haven, Conn. 733,926, pub. 4–17–62. Cl. 52.
Essex Rubber Co., Trenton, N.J., to Essex Rubber Co., Chelsea, Mass. 157,052, ren. 7–3–62. Cl. 39.
Ettlinger, Ralph, d.b.a. Ralph Ettlinger & Sons, Chicago, Ill. 733,877, pub. 4–17–62. Cl. 46.
Ettlinger, Ralph, & Sons: *See*—
Ettlinger, Ralph.
Evans Specialty Co., Inc., Richmond, Va. 733,972. Cl. 37.
Faberge, Inc., New York, N.Y. 733,982. Cl. 51.
Fasay & Besthoff, Inc., New York, N.Y. 419,470, 12(c) pub. 7–3–62. Cl. 6.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 627,091, canc. Cl. 43.

Federal Products Corp., Providence, R.I. 733,742, pub. 733,742, pub. 4–17–62. Cl. 26.
Felch, Jerald L., Huntsville, Ala. 733,706, pub. 4–17–62. Cl. 21.
Fellows Medical Mfg. Co., Inc., Detroit, Mich. 398,125, ren. 7–3–62. Cl. 18.
Fels and Co., Philadelphia, Pa. 730,603, cor. Cl. 52.
Fertilene Corp. of America, Worthington, Ohio. 626,749, canc. Cl. 10.
Fieldcrest Mills, Inc., Spray, N.C. 733,842, pub. 4–17–62. Cl. 42.
Firestone Tire & Rubber Co., The, Akron, Ohio. 733,784, pub. 4–17–62. Cl. 35.
First Caramel Malting Corp., Paterson, N.J. 394,946–8, ren. 7–3–62. Cl. 46.
Flintkote Co., The, New York, N.Y. 733,628, pub. 4–17–62. Cl. 6.
Flotill Products, Inc.: *See*—
Lewis, Tillie, Foods, Inc.
Fowler, Ben B., Fort Worth, Tex. 626,882, canc. Cl. 22.
Freeze-Eazy Industries: *See*—
Bloom, Joseph C.
Futura Mfg. Co., St. Louis, Mo. 733,785, pub. 4–17–62. Cl. 36.
Gaines Food Co. Inc., Sherburne, N.Y., to General Foods Corp., White Plains, N.Y. 397,187, ren. 7–3–62. Cl. 46.
Garber's Travel Service, Inc., Brookline, Mass. 733,954, pub. 4–17–62. Cl. 105.
Garcy Corp.: *See*—
Garden City Plating & Mfg. Co., Inc.
Garden City Plating & Mfg. Co., Inc., to Garcy Corp., Chicago, Ill. 394,728, ren. 7–3–62. Cl. 34.
Garland, Harold F., Jr., Santa Ana, Calif. 627,000, canc. Cl. 38.
Garland Knitting Mills, Jamaica Plain, Mass. 733,827, pub. 4–17–62. Cl. 39.
Garvenswerke: *See*—
Schoenborn-Buchheim, George.
Geigy Chemical Corp., Ardsley, N.Y. 733,692–3, pub. 4–17–62. Cl. 18.
General Controls Co., Glendale, Calif. 733,748, pub. 4–17–62. Cl. 26.
General Dynamics Corp., Rochester, N.Y. 733,753, pub. 4–17–62. Cl. 26.
General Dynamics Corp., from Stromberg-Carlson Co., New York, N.Y. 626,839, canc. Cl. 21.
General Foods Corp.: *See*—
Gaines Food Co. Inc.
General Foods Corp., White Plains, N.Y. 733,873, pub. 4–17–62. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 396,473, ren. 7–3–62. Cl. 46.
General Motors Corp., Detroit, Mich. 626,872, canc. Cl. 21.
General Split Corp., Milwaukee, Wis. 733,600, pub. 4–17–62. Cl. 1.
General Tire & Rubber Co., The, Akron, Ohio. 395,212, ren. 7–3–62. Cl. 13.
General Tire & Rubber Co., The, Akron, Ohio. 733,602, pub. 4–17–62. Cl. 1.
Genesco Inc., Nashville, Tenn. 733,825–6, pub. 4–17–62. Cl. 39.
Gerson Stewart Corp., The, Cleveland, Ohio. 733,666, pub. 4–17–62. Cl. 16.
Giant Wash, Inc., Wichita, Kans. 733,941, pub. 4–17–62. Cl. 101.
Gibson, C. R., & Co., Norwalk, Conn. 733,803, pub. 4–17–62. Cl. 38.
Gigandet, J. Herbert: *See*—
Reed, Stuart H., and J. Herbert Gigandet.
Glamour Jewelry, Inc., Providence, R.I. 733,764, pub. 4–17–62. Cl. 28.
Glaverbel, Societe Anonyme, Brussels, Belgium. 733,772–3, pub. 4–17–62. Cl. 33.
Glee Industries: *See*—
Bundock, John P., Jr.
Glen Raven Knitting Mills, Inc., Glen Raven, N.C. 627,050, canc. Cl. 42.
Globe American Corp., Kokomo, Ind. 626,871, canc. Cl. 21.
Globe Artists, Inc., Brooklyn, N.Y. 731,311, cor. Cl. 107.
Godman, H. C., Co., The: *See*—
Godman Shoe Co.
Godman Shoe Co., from The H. C. Godman Co., Columbus, Ohio. 733,822, pub. 4–17–62. Cl. 39.
Goebel, W., Porzellanfabrik, Bavaria, Germany. 733,714, pub. 4–17–62. Cl. 22.
Goebel, W., Porzellanfabrik, Bavaria, Germany. 733,910, pub. 4–17–62. Cl. 50.
Goodrich, B. F., Co., The, Akron, Ohio. 733,712, pub. 4–17–62. Cl. 22.
Grace, W. R., & Co., New York, N.Y. 733,638, pub. 4–17–62. Cl. 6.
Gravymaster Co., Inc., Long Island City, N.Y. 733,889, pub. 4–17–62. Cl. 46.
Great Atlantic Shoe Co.: *See*—
Anderson-Dulin-Varnell Co.
Greenberg, Ernest, New York, N.Y. 627,022, canc. Cl. 39.
Gruen Watch Co., The, Cincinnati, Ohio. 626,938, canc. Cl. 27.
H-K Equipment Co., Swan Island, Portland, Oreg. 626,775, canc. Cl. 13.
Haase, Wilbert W., Co., Broadview, Ill. 733,606, pub. 4–17–62. Cl. 2.
Haberman Inc. Cincinnati, Ohio. 733,766, pub. 4–17–62. Cl. 28.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 733,935, pub. 4–17–62. Cl. 52.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 733,984. Cl. 52.
Hall Syndicate, Inc., The, New York, N.Y. 733,710, pub. 4–17–62. Cl. 22.
Ham Headquarters, U.S.A.: *See*—
Harrison Radio Corp.
Hamac-Hansella Aktiengesellschaft, Viersen Rhineland, Germany. 733,737, pub. 4–17–62. Cl. 23.
Harcourt, Brace & World, Inc., New York, N.Y. 733,815, pub. 4–17–62. Cl. 38.
Harding Chemical Corp., Detroit, Mich. 733,655, pub. 4–17–62. Cl. 13.
Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 733,790, pub. 4–17–62. Cl. 37.
Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 733,792, pub. 4–17–62. Cl. 37.
Harnischfeger Corp.: *See*—
Milwaukee Electric Crane & Mfg. Co., Inc.
Harrison Radio Corp., d.b.a. Ham Headquarters, U.S.A., New York, N.Y. 733,965. Cl. 21.
Hat Corp. of America, Norwalk, Conn. 733,834, pub. 4–17–62. Cl. 39.
Haxton Canning Co., Inc., Haxton Foods Inc., Oakfield, N.Y. 402,666. Am. 7(d). Cl. 46.
Haxton Foods Inc.: *See*—
Haxton Canning Co., Inc.
Healy, Thomas A., Brooklyn, N.Y. 733,743, pub. 4–17–62. Cl. 26.
Heatbath Corp., Indian Orchard, Mass. 398,163, ren. 7–3–62. Cl. 6.
Hecht Co., The, Washington, D.C. 626,967, canc. Cl. 32.
Heddon's, James, Sons, Dowagiac, Mich. 733,722, pub. 4–17–62. Cl. 22.
Heldak Lighting Products Corp., Paterson, N.J. 733,708, pub. 4–17–62. Cl. 21.
Hercules Powder Co., Wilmington, Del. 733,635, pub. 4–17–62. Cl. 6.
Herman, John C., & Co., New Cumberland, Pa. 394,826–7, ren. 7–3–62. Cl. 17.
Herman, John C., & Co., New Cumberland, Pa. 395,744, ren. 7–3–62. Cl. 17.
Hirshberg, Harry, Co., Inc., Haverhill, Mass. 733,962. Cl. 1.
House of Negatives: *See*—
Nassar, Frederick.
Husqvarna Vapenfabriks Aktiebolag, Husqvarna, Sweden. 153,761, 12(c) pub. 7–3–62. Cl. 23.
Inland Container Corp., Indianapolis, Ind. 733,604, pub. 4–17–62. Cl. 2.
Inplant Publishing Corp., New York, N.Y. 733,802, pub. 4–17–62. Cl. 38.
Instant Foods Corp., Brooklyn, N.Y. 733,880, pub. 4–17–62. Cl. 46.
Integrated Data Processing, Inc., Orange, N.J. 733,944, pub. 4–17–62. Cl. 101.
Inter-American Industrial Services Corp., Boston, Mass. 733,977. Cl. 39.
Interchemical Corp., New York, N.Y. 733,621, pub. 4–17–62. Cl. 6.
International Automation Corp., Ann Arbor, Mich. 733,939, pub. 4–12–60. Cl. 100.
International Flavors & Fragrances Inc., New York, N.Y. 733,854, pub. 4–17–62. Cl. 46.
Irwin, Neisler & Co., Decatur, Ill. 733,801, pub. 4–17–62. Cl. 38.
Jackson & Church Co., Saginaw, Mich. 626,900, canc. Cl. 23.
Jackson, Herndon D., d.b.a. Jiffy Co., Columbus, Ga. 733,741, pub. 4–17–62. Cl. 26.
Jason Products, Inc., New York, N.Y. 626,856, canc. Cl. 21.
Jenkins, Richard B.: *See*—
Beach Products, Inc.
Jiffy Co.: *See*—
Jackson, Herndon D.
Johns-Manville Corp., New York, N.Y. 733,646, pub. 4–17–62. Cl. 12.
June Dairy Products Co., Inc., Jersey City, N.J. 733,897, pub. 4–17–62. Cl. 46.
Kabushiki Kaisha Kurosawa Shoten, Chuo-ku, Tokyo-to, Japan. 733,700, pub. 4–17–62. Cl. 21.
Kayser-Roth Corp., New York, N.Y. 733,829, pub. 4–17–62. Cl. 39.
Kearney & Trecker Corp., West Allis, Wis. 394,865, ren. 7–3–62. Cl. 23.
Kellems, Vivien, Stonington, Conn. 627,011, canc. Cl. 39.
Kellogg Co., Battle Creek, Mich. 733,904, pub. 4–17–62. Cl. 46.
Kendall Co., The, Boston, Mass. 733,922, pub. 4–17–62. Cl. 51.
Kern Fruit Co., from Kern Fruit Co., Bakersfield, Calif. 733,885, pub. 4–17–62. Cl. 46.
Kerr Industries, Burbank, Calif. 626,756, canc. Cl. 12.
Key Brands Co., Los Angeles, Calif. 627,128, canc. Cl. 46.
Kiddle Kabinette, Inc., d.b.a. Prescription Toilet Preparations, New York, N.Y. 627,164, canc. Cl. 51.
Kimbell Milling Co.: *See*—
Universal Mfg. Co.
Kink-Kee Leader Co.: *See*—
Darby, Wesley C.
Kit Mfg. Co., d.b.a. Kit Mfg. Co., Inc., Long Beach, Calif. 733,695, pub. 4–17–62. Cl. 19.
Kohnstamm, H., & Co., Inc., New York, N.Y. 159,924, ren. 7–3–62. Cl. 6.
Kreisler, Jacques, Mfg. Corp., North Bergen, N.J. 733,762, pub. 4–17–62. Cl. 28.
Kuscher, Jack J., d.b.a. Magicase Co., Westport, Conn. 626,928, canc. Cl. 26.
Kwip Mfg. Co., Santa Monica, Calif. 733,932, pub. 4–17–62. Cl. 52.
Laboratory For Electronics, Inc., Boston, Mass. 733,704, pub. 4–17–62. Cl. 21.
Lamb Electric Co., The, to The Lamb Electric Co., Kent, Ohio. 626,864–5, canc. Cl. 21.
Leaf Brands, Inc., Chicago, Ill. 733,867, pub. 9–19–61. Cl. 46.

Lefebure Corp., Cedar Rapids, Iowa. 733,952, pub. 4–17–62. Cl. 103.
Lehigh, Inc., Easton, Pa. 733,731–3, pub. 4–17–62. Cl. 23.
Lehman Dietetic Confections, Inc., Brooklyn, N.Y. 733,884, pub. 4–17–62. Cl. 46.
Leitz, Louis, Stuttgart-Feuerbach, Germany. 733,786, pub. 4–17–62. Cl. 37.
Letters, John, and Co. Ltd., Glasgow, Scotland. 733,719, pub. 4–17–62. Cl. 22.
Levin, Arthur M., Roanoke, Va. 733,721, pub. 4–17–62. Cl. 22.
Lewis, Tillie, Foods, Inc., from Flotill Products, Inc., Stockton, Calif. 733,874, pub. 4–17–62. Cl. 46.
Liberty Industries, Inc., Brooklyn, N.Y. 733,768, pub. 4–17–62. Cl. 31.
Licoreria Roses Inc., Arecibo, Puerto Rico. 733,907–8, pub. 4–17–62. Cl. 49.
Linen Thread Co., Inc., The: *See*— Ulman, Bernhard, Co. Inc.
Link Petroleum Co., Inc., Laredo, Tex. 626,784, canc. Cl. 15.
Litton Systems, Inc., Beverly Hills, Calif. 733,746–7, pub. 4–17–62. Cl. 26.
Love, Alice, Products Co., Portland, Oreg. 733,895, pub. 4–17–62. Cl. 46.
Lucky Tiger Mfg. Co., Kansas City, Mo. 733,680, pub. 4–17–62. Cl. 18.
Lucky Tiger Mfg. Co., Kansas City, Mo. 733,912, pub. 4–17–62. Cl. 51.
Luden, William H., by Luden's, Inc., Reading, Pa. 150,455, 12(c) pub. 7–3–62. Cl. 18.
Luden, William H., by Luden's, Inc., Reading, Pa. 154,616, 12(c) pub. 7–3–62. Cl. 46.
Luden's, Inc.: *See*— Luden, William H.
Lumbard-Watson Co., Auburn, Maine. 627,042, canc. Cl. 39.
M. T. & D. Co., Cleveland, Ohio. 733,718, pub. 4–17–62. Cl. 22.
Mackintosh, John, & Sons Ltd., Halifax, England. 733,892–3, pub. 4–17–62. Cl. 46.
Magicase Co.: *See*— Kuscher, Jack J.
Maidenform, Inc., New York, N.Y. 733,831, pub. 4–17–62. Cl. 39.
Mallon Chemical Corp.: *See*— American Home Products Corp.
Markham Bros. & Co., Okeechobee, Fla. 733,890, pub. 4–17–62. Cl. 46.
Marley Co., The, Kansas City, Mo. 626,943, canc. Cl. 31.
Martin, Ray, Enterprises: *See*— Martin, Raymond I.
Martin, Raymond I., d.b.a. Ray Martin Enterprises, Niles, Mich. 733,744, pub. 4–17–62. Cl. 26.
Marvella, Inc., New York, N.Y. 733,763, pub. 4–17–62. Cl. 28.
Marx, Louis, & Co., Inc., New York, N.Y. 733,723, pub. 4–17–62. Cl. 22.
Massengill, S. E., Co., The, Bristol, Tenn. 733,676, pub. 4–17–62. Cl. 18.
McDaniel, Zeb E., Plant City, Fla. 733,850, pub. 4–26–60. Cl. 46.
McGraw Electric Co., Chicago, Ill. 626,946, canc. Cl. 31.
McGraw-Hill Publishing Co., Inc., New York, N.Y. 733,812, pub. 4–17–62. Cl. 38.
Medomak Canning Co., Rockland, Maine. 733,896, pub. 4–17–62. Cl. 46.
Meier, Joshua, Co., Inc., New York, N.Y. 733,973. Cl. 37.
Memorie Foods: *See*— Venus Foods.
Mennen Co., The, Morristown, N.J. 733,915, pub. 4–17–62. Cl. 51.
Mercer Hand Soap Co., Princeton, W. Va. 733,938, pub. 4–17–62. Cl. 52.
Merck & Co., Inc., Rahway, N.J. 733,679, pub. 4–17–62. Cl. 18.
Mercury Metal Products, Inc., Hillside, Ill. 733,728, pub. 4–17–62. Cl. 23.
Merit Clothing Co., Mayfield, Ky. 733,835, pub. 4–17–62. Cl. 39.
Metro Pictures Corp., by Metro-Goldwyn-Mayer Inc., New York, N.Y. 153,798, 12(c) pub. 7–3–62. Cl. 26.
Metro-Goldwyn-Mayer Inc.: *See*— Metro Pictures Corp.
Miami Miss, Inc., Miami, Fla. 627,017, canc. Cl. 39.
Micro Musical Products Corp.: *See*— Schwartz, Jacob.
Midas, Inc., Chicago, Ill. 733,724, pub. 4–17–62. Cl. 23.
Midland Cooperatives, Inc., Minneapolis, Minn. 733,640, pub. 4–17–62. Cl. 10.
Mid-West Abrasive Co., Detroit, Mich. 408,868, 12(c) pub. 7–3–62. Cl. 4.
Miehle Printing Press & Mfg. Co., to Miehle-Goss-Dexter, Inc., Chicago, Ill. 158,263, ren. 7–3–62. Cl. 23.
Miehle-Goss-Dexter, Inc.: *See*— Miehle Printing Press & Mfg. Co.
Miller, Frank, & Sons, Inc., Chicago, Ill. 733,928–9, pub. 4–17–62. Cl. 52.
Miller, Herman, Inc., Zeeland, Mich. 733,770, pub. 4–17–62. Cl. 32.
Miller, Jack D., Ville Platte, La. 733,858, pub. 8–1–61. Cl. 46.
Milner, Dumas, Corp., Jackson, Miss. 733,931, pub. 4–17–62. Cl. 52.
Milwaukee Electric Crane & Mfg. Co., Inc., West Allis, Wis., to Harnischfeger Corp., Milwaukee, Wis. 156,710, ren. 7–3–62. Cl. 21.
Minerals Processing Corp., Syracuse, N.Y. 626,751, canc. Cl. 10.
Mitsui & Co., Ltd., Minato-ku, Tokyo, Japan. 733,696, pub. 4–17–62. Cl. 19.
Modern Plastics, Inc., by Breskin Publications, Inc., New York, N.Y. 412,237, 12(c) pub. 7–3–62. Cl. 38.
Monarch Rug Mills, Dalton, Ga. 627,073, canc. Cl. 42.
Montgomery Ward & Co., Inc., Chicago, Ill. 733,840, pub. 4–17–62. Cl. 42.
Morrell, John, & Co., Ottumwa, Iowa. 733,876, pub. 4–17–62. Cl. 46.
Morrill, Harry L., Jr., Marietta, Ga. 733,968. Cl. 22.
Morrill Mfg. Co., Brookhaven, Ga. 627,074, canc. Cl. 42.
Murad, Jerry: *See*— Muradian, Jerry.
Muradian, Jerry, d.b.a. Jerry Murad, Norridge, Ill. 733,958, pub. 4–17–62. Cl. 107.
Muratti, B., Sons and Co. Ltd., Manchester, England, by The United Kingdom Tobacco Co. Ltd., London, England. 156,016, 12(c) pub. 7–3–62. Cl. 17.
Murphy, Brill and Sahner, Inc.: *See*— Schwab, Leopold B.
Murray, Arthur, Enterprises, Inc., New York, N.Y. 626,859, canc. Cl. 21.
N.V. Export-Centrale "Boxtel," Boxtel, Holland. 733,881, pub. 4–17–62. Cl. 46.
N.V. Maatschappij Antradex, d.b.a. Antradex Co. Ltd., Willemstad, Curacao, Netherlands Antilles. 730,536, cor. Cl. 46.
N.V. Wallramit Hardmetaal Maatschappij, Maassluis, Netherlands. 733,661, pub. 4–17–62. Cl. 14.
Napko Corp., Houston, Tex. 733,667, pub. 12–19–61. Cl. 16.
Nassar, Frederick, d.b.a. House of Negatives, Tampa, Fla. 733,975. Cl. 37.
National Acme Co., The, Cleveland, Ohio. 733,734, pub. 4–17–62. Cl. 23.
National Bakers Service Inc., Chicago, Ill. 733,863, pub. 4–17–62. Cl. 46.
National Biscuit Co., New York, N.Y. 733,903, pub. 4–17–62. Cl. 46.
National Boulevard Bank of Chicago, U.S. Banking Assoc., Chicago, Ill. 733,986. Cl. 102.
National Dairy Products Corp., New York, N.Y. 733,853, pub. 8–29–61. Cl. 46.
National Florist Delivery, Inc., Leachville, Ark. 733,945, pub. 4–17–62. Cl. 101.
National Foam System, Inc., West Chester, Pa. 396,949, ren. 7–3–62. Cl. 6.
National Merchandising Corp., Wellesley Hills, Mass. 733,942, pub. 4–17–62. Cl. 101.
National Rayon Dyeing Co., Inc., Newark, N.J. 391,971, ren. 7–3–62. Cl. 43.
National Tea Co., Chicago, Ill. 733,872, pub. 4–17–62. Cl. 46.
Nepenko, Inc., New York, N.Y. 626,968, canc. Cl. 32.
Nesco, Division of New York Shipbuilding Corp.: *See*— New York Shipbuilding Corp.
Newspaper Enterprise Association, Inc., Cleveland, Ohio. 733,800, pub. 4–17–62. Cl. 38.
New York Herald Tribune Inc., New York, N.Y. 733,819, pub. 4–17–62. Cl. 38.
New York Shipbuilding Corp., d.b.a. Nesco, Division of New York Shipbuilding Corp., Milwaukee, Wis. 626,975, canc. Cl. 34.
Nocona Leather Goods Co., Nocona, Tex. 733,709, pub. 4–17–62. Cl. 22.
Norac Co., Inc., The, Azusa, Calif. 733,611, pub. 4–17–62. Cl. 6.
Nordill, Wilson Associates, Worcester, Mass. 733,799, pub. 4–17–62. Cl. 38.
Norris Grain Co.: *See*— Northeast Feeds, Inc.
Northam Warren Corp., Stamford, Conn., by Chesebrough-Pond's Inc., New York, N.Y. 395,651, 12(c) pub. 7–3–62. Cl. 51.
Northeast Feeds, Inc., Oswego, N.Y., to Norris Grain Co., Kansas City, Mo. 627,107, canc. Cl. 46.
Northern Straw Works: *See*— Northern Straw Works, Inc.
Northern Straw Works, Inc., by Northern Straw Works, Philadelphia, Pa. 394,449, 12(c) pub. 7–3–62. Cl. 39.
Nosta, The, Pittsford, N.Y. 733,959, pub. 4–17–62. Cl. 200.
Nourse, Robert, Milwaukee, Wis. 733,946, pub. 4–17–62. Cl. 101.
Nuclear Products Co., Cleveland, Ohio. 733,769, pub. 4–17–62. Cl. 31.
Oakite Products, Inc., New York, N.Y. 733,936, pub. 4–17–62. Cl. 52.
O'Brien Corp., The, South Bend, Ind. 733,665, pub. 4–17–62. Cl. 16.
Oklahoma Oil Products Corp., Chicago, Ill. 626,783, canc. Cl. 15.
Olin Mathieson Chemical Corp., New York, N.Y. 733,810, pub. 4–17–62. Cl. 38.
Olsen, Tinius, Testing Machine Co., Willow Grove, Pa. 394,952, ren. 7–3–62. Cl. 26.
Oneida Ltd., Oneida, N.Y. 733,765, pub. 4–17–62. Cl. 28.
Optics Technology, Inc., Belmont, Calif. 733,758, pub. 4–17–62. Cl. 26.
Orangedale Bryn Mawr Association: *See*— Redlands Orangedale Association.
Osborn, T. L., Evangelistic Association, Inc., Tulsa, Okla. 733,808–9, pub. 4–17–62. Cl. 38.
Outdoors, Inc., Columbia, Mo. 733,797, pub. 4–17–62. Cl. 38.
Owens-Corning Fiberglas Corp., Toledo, Ohio. 733,644, pub. 4–17–62. Cl. 12.
Pacific Mills, Boston, Mass., to Burlington Industries, Inc., Greensboro, N.C. 398,279, ren. 7–3–62. Cl. 42.
Package Machinery Co., East Longmeadow, Mass. 626,947, canc. Cl. 31.
Package Machinery Co., East Longmeadow, Mass. 733,725, pub. 4–17–62. Cl. 23.
Paddock of Texas, Inc., Dallas, Tex. 733,625, pub. 4–17–62. Cl. 6.
Pair, James H., d.b.a. Temporary Talent, Atlanta, Ga. 733,947, pub. 4–17–62. Cl. 101.
Paimini Engineering Corp., South San Gabriel, Calif. 733,605, pub. 4–17–62. Cl. 2.

Pangburn Co., Inc., Fort Worth, Tex. 157,170. Am. 7(d). Cl. 46.
Parke, Davis & Co., Detroit, Mich. 733,690, pub. 4–17–62. Cl. 18.
Parker Rust Proof Co., Detroit, Mich. 626,737, canc. Cl. 6.
Parsons, C. H., Co., The: *See*— Parsons-Faulkner Co., The.
Parsons-Faulkner Co., The, by The C. H. Parsons Co., Ashland, Ky. 393,025, 12(c) pub. 7–3–62. Cl. 39.
Patchen, Lee H., Spokane, Wash. 733,647, pub. 4–17–62. Cl. 12.
Payne Metal Enterprises Ltd., Toronto, Ontario, Canada. 733,750, pub. 4–17–62. Cl. 26.
Peloian Packing Co., Inc., Dinuba, Calif. 733,875, pub. 4–17–62. Cl. 46.
Pennsalt Chemicals Corp., Philadelphia, Pa. 733,632, pub. 4–17–62. Cl. 6.
Pennsylvania Pump and Compressor Co., Easton, Pa. 733,963. Cl. 13.
Pesquera Del Pacifico, S. de R. L., Ensenada, Mexico. 733,886, pub. 4–17–62. Cl. 46.
Pfeiffer Co., The, St. Louis, Mo. 733,689, pub. 4–17–62. Cl. 18.
Pharmacia Laboratories, Inc., New York, N.Y. 733,613, pub. 4–17–62. Cl. 6.
Phillips Petroleum Co., Bartlesville, Okla. 626,887–8, canc. Cl. 22.
Phlomax (Overseas) Ltd., Redhill, England. 626,921, canc. Cl. 23.
Phoenix Products Co., Inc., Milwaukee, Wis. 733,791, pub. 4–17–62. Cl. 37.
Photorama, Inc., Chicago, Ill. 627,001, canc. Cl. 38.
Pillsbury Co., The, Minneapolis, Minn., from Tidy House Products Co., Shenandoah, Iowa. 733,983. Cl. 52.
Pilres Corp., The, Secaucus, N.J. 733,612, pub. 4–17–62. Cl. 6.
Pioneer Service Co., Inc., Eugene, Oreg. 733,951, pub. 4–17–62. Cl. 102.
Pitt-Consol Chemical Co., Newark, N.J. 733,633, pub. 4–17–62. Cl. 6.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 733,652, pub. 4–17–62. Cl. 12.
Plastering Development Center, Inc., Chicago, Ill. 733,650, pub. 4–17–62. Cl. 12.
Plastic Engineering and Chemical Co.: *See*— Bradley, Richard C.
Plymouth Cordage Co., Plymouth, Mass. 733,642, pub. 4–17–62. Cl. 10.
Pneumodynamics Corp., Cleveland, Ohio. 733,662, pub. 4–17–62. Cl. 14.
Pollack, Max & Co., Inc., New York, N.Y. 627,092–7, canc. Cl. 43.
Pollen Products Co., Bakersfield, Calif. 733,900, pub. 4–17–62. Cl. 46.
Porter-McLeod Machine Tool Co., Inc., Hatfield, Mass. 626,923, canc. Cl. 23.
Portuesi, Eugene G., Detroit, Mich. 733,818, pub. 4–17–62. Cl. 38.
Posner, I., Inc., New York, N.Y. 733,923, pub. 4–17–62. Cl. 51.
Powers, John Robert, Products Co. Inc., New York, N.Y. 733,911, pub. 4–17–62. Cl. 51.
Precision Fittings, Inc., Andrews, Ind. 733,783, pub. 4–17–62. Cl. 35.
Precision Gasket Corp., Manchester, Mo. 733,782, pub. 4–10–62. Cl. 35.
Prescription Toilet Preparations: *See*— Kiddie Kabinette, Inc.
Preservation Society of Newport County, Newport, R.I. 733,843–5, pub. 4–17–62. Cl. 42.
Products of India, Inc., New York, N.Y. 733,823, pub. 4–17–62. Cl. 39.
Program Aids Co., Inc., The, Mount Vernon, N.Y. 733,981. Cl. 50.
Pullman Inc., Chicago, Ill. 733,964. Cl. 19.
Purdue Frederick Co., The, New York, N.Y. 733,683, pub. 4–17–62. Cl. 18.
Purity Stores, Inc., Burlingame, Calif. 733,888, pub. 4–17–62. Cl. 46.
Radio Receptor Co., Inc., Brooklyn, N.Y. 626,867, canc. Cl. 21.
Radio-Electronics-Television Manufacturers Association, Washington, D.C. 626,995, canc. Cl. 38.
Raffetto, G. B., Inc., New York, N.Y. 396,329, ren. 7–3–62. Cl. 46.
Rapids-Standard Co., Inc., The, Grand Rapids, Mich. 733,697, pub. 4–17–62. Cl. 19.
Redlands Orangedale Association, to Orangedale Bryn Mawr Association, Redlands, Calif. 398,238, ren. 7–3–62. Cl. 46.
Reed, Stuart H., and J. Herbert Gigandet, Pittsburgh, Pa. 626,772, canc. Cl. 13.
Rees, Pitchford & Co., Ltd., London, England. 733,656, pub. 4–17–62. Cl. 13.
Reichard-Coulston, Inc., New York, N.Y. 398,039, ren. 7–3–62. Cl. 16.
Reynolds, Warren K., Upper Darby, Pa. 626,886, canc. Cl. 22.
Rich-Tint Corp., Portland, Oreg. 733,669, pub. 4–17–62. Cl. 18.
Rivinius, Inc., Eureka, Ill. 733,730, pub. 4–17–62. Cl. 23.
Ro-Mar Products Co., Cleveland, Ohio. 733,670, pub. 1–2–62. Cl. 18.
Rose, Phil, of California, Inc., Los Angeles, Calif. 637,486, cor. Cl. 39.
Rothschild, Fritz S., Montreal, Quebec, Canada. 626,744, canc. Cl. 8.
Royal Valley Fruit Growers Ass'n: *See*— Royal Valley Fruit Growers Association.
Royal Valley Fruit Growers Association, d.b.a. Royal Valley Fruit Growers Ass'n, Reedley, Calif. 733,898, pub. 4–17–62. Cl. 46.
Rubens, J & L, Inc., Highland Park, Ill. 733,713, pub. 4–17–62. Cl. 22.
Rubinstein, Helena, Inc., New York, N.Y. 394,964, ren. 7–3–62. Cl. 51.
Safety Warning Signal Co., Brooklyn, N.Y. 626,850, canc. Cl. 21.
Santa's Village, Arcadia, Calif. 733,711, pub. 4–17–62. Cl. 22.
Savannah Sugar Refining Corp., Savannah, Ga. 260,125, 12(c) pub. 7–3–62. Cl. 46.
Say-A-Stop, Inc., Jacksonville, Fla. 733,678, pub. 4–17–62. Cl. 18.
Scheel, Carl W., d.b.a. Scheel Development Co., Cleveland, Ohio. 626,862, canc. Cl. 21.
Scheel Development Co.: *See*— Scheel, Carl W.
Schering Corp., Bloomfield, N.J. 733,798, pub. 4–17–62. Cl. 38.
Schoenborn-Buchheim, George, d.b.a. Garvenswerke, Vienna, Austria. 626,832–3, canc. Cl. 21.
Schwab, Leopold B., to Murphy, Brill and Sahner, Inc., New York, N.Y. 397,421, ren. 7–3–62. Cl. 39.
Schwartz, Jacob, to Micro Musical Products Corp., New York, N.Y. 158,295, ren. 7–3–62. Cl. 36.
Scott Lumber Co., Inc., Burney, Calif. 733,651, pub. 4–17–62. Cl. 12.
Scully Signal Co., Melrose, Mass. 733,745, pub. 4–17–62. Cl. 26.
Security Aluminum Corp., Compton, Calif. 733,645, pub. 4–17–62. Cl. 12.
Shasta Beverages: *See*— Consolidated Foods Corp.
Shasta Water Co.: *See*— Consolidated Foods Corp.
Sheffield Corp., The, Dayton, Ohio. 626,920, canc. Cl. 23.
Sheffield Hosiery Mills, Inc., Miami, Fla. 733,824, pub. 4–17–62. Cl. 39.
Shelby Mfg. Co., The, Sidney, Ohio. 733,735, pub. 4–17–62. Cl. 23.
Siberian Fish Products Co., Inc., Seattle, Wash. 733,717, pub. 4–17–62. Cl. 22.
Sierra Electric Corp., Gardena, Calif. 733,699, pub. 12–13–60. Cl. 21.
Siler's Inc., New Orleans, La. 733,976. Cl. 38.
Simoniz Co., Chicago, Ill. 733,608, pub. 4–17–62. Cl. 4.
Siris, A. J., Products Corp., New York, N.Y. 733,607, pub. 4–17–62. Cl. 3.
Smedley, John, Lea Mills, near Derby, England, by John Smedley, Ltd., Cromford, near Matlock, England. 20,906, 12(c) pub. 7–3–62. Cl. 39.
Smedley, John, Ltd.: *See*— Smedley, John.
Smith, A. O., Corp., Milwaukee, Wis. 626,836, canc. Cl. 21.
Smith Equipment and Supply Co., Chicago, Ill. 733,619, pub. 4–17–62. Cl. 6.
Snively Groves, Inc., to Snively Groves, Inc., Winter Haven, Fla. 396,035, ren. 7–3–62. Cl. 46.
Societe Anonyme Conte, Paris, France. 626,798, canc. Cl. 16.
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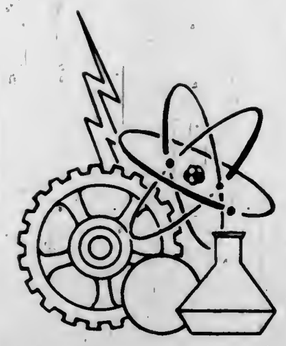
U.S. GOVERNMENT PRINTING OFFICE: O—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

July 10, 1962 • Volume 780 • Number 2



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

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NOTICES

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Patent No. 2,849,008, E. Otten, Hair clip, decided June 1, 1962, Interference No. 90,427, claims 4 and 7.

Patent No. 2,874,153, L. W. Bowman and R. F. Leary, Polymerization of propylene, decided June 12, 1962, Interference No. 92,379, claim 6.

Patent No. 2,916,481, E. R. Gilmont, Crosslinking of polyethylene with novel peroxides, decided June 5, 1962, Interference No. 91,111, claims 5 and 13.

Patent No. 2,921,466, H. N. Nerwin, Jr., Sonic thickness measuring apparatus, decided June 8, 1962, Interference No. 91,686, claims 1, 2, 3, 4, 5, 6, and 8.

Patent No. 2,936,159, F. Boni, Jr., Compartmentized heat exchanger construction, decided June 12, 1962, Interference No. 91,886, claims 1, 2, 6, 7, and 9.

Patent No. 2,951,207, T. Hudspeth, Parametric amplifier, decided June 8, 1962, Interference No. 92,385, claims 3 and 4.

Adjudicated Patents

(D.C. Minn.) Miller Patent No. 2,740,896 (250—65), for method of using heat sensitive copying paper, Claims 1, 2 to 4 and 9 *Held* invalid. *Minnesota Mining & Mfg. Co.* v. *Ditto, Inc.*, 203 F. Supp. 950; 133 USPQ 69.

(D.C.N.J.) Smiley Patent No. 2,949,592 (336—148), for adjustable transformer with stabilized contact track, *Held* invalid. *Superior Electric Co.* v. *General Radio Corp.*, 203 F. Supp. 864; 133 USPQ 308.

Annual Index of Patents

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Reissues	29
Total	8,276

Issue

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Designs	71	No. 193,165 to No. 193,235, incl.
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Reissues	1	No. 25,197
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CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1962

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Total number of pending Design applications	5, 865
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Date of oldest new application	Jan. 26, 1961
Date of oldest amended application	Nov. 3, 1960

M. C. ROSA, Director, Patent Examining Operation

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36. (V) EVANS, R. L., Measuring and Testing (part)	4-10-61	5-4-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-21-61	3-17-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-1-61	6-2-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	4-17-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-5-61	5-1-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-14-61	4-3-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-1-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-16-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	1-26-61	2-6-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles: Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	10-12-61	6-6-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-2-61	3-30-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	6-20-61	6-9-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-13-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	4-14-61	4-14-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-5-61	4-17-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	4-25-61	4-19-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	9-13-61	9-26-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	5-22-61	6-12-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-3-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	3-30-61	3-16-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-2-61	6-12-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	6-21-61	5-2-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	7-24-61	6-19-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	5-22-61	5-3-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-27-61	11-3-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	9-7-61	9-13-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-1-61	6-1-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-1-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	3-16-61	3-13-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	2-28-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	3-13-61	4-11-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	5-4-61	5-5-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	7-26-61	8-15-61
81. (III) HANNAH, A. B., Industrial Arts	2-5-62	2-16-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	2-2-62	2-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	3-30-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-20-61	5-9-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	12-5-61
95. ANGEL, C. D., Metallic Building Structures	7-7-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	4-18-61	5-17-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....Numbers 2,379,404 to 2,380,912 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

CARDINAL ENGINEERING CORPORATION
v.
CHAMPION MANUFACTURING COMPANY
No. 6752. Decided April 11, 1962
[49 CCPA—; 300 F.2d 957; 133 USPQ 197]

1. TRADEMARK—OPPOSITION—MOTION TO DISMISS.
On the basis that appellant had established its right to its "day in court" and should have been allowed the opportunity of offering proof in support of its allegations, the decision of the Trademark Trial and Appeal Board, dismissing, on motion of appellee, appellant's notice of opposition for failure to state a claim upon which relief could be granted, is reversed and remanded.

APPEAL from the Patent Office. Opposition No. 39,856.

REVERSED AND REMANDED.

Charles A. McClure for appellant.

Lawrence H. Cohn for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

WORLEY, *Chief Judge*, delivered the opinion of the court.

This is an appeal from the decision of the Trademark Trial and Appeal Board dismissing an opposition by appellant, owner of the registered trademark "WORKMASTER" for "Masonry Saws," against appellee's application for registration of the mark "HYDRA-MATIC" for the same goods. The dismissal resulted from the Board granting a motion by appellee to dismiss appellant's notice of opposition for failure to state a claim upon which relief could be granted.

The notice of opposition is based on three grounds. Broadly, they are (1) that appellee's mark so resembles appellant's mark as to be likely, when applied to appellee's goods, to cause confusion, or mistake or to deceive purchasers; (2) that appellee's mark, if not deceptively misdescriptive or otherwise deceptive, is merely descriptive; and (3) that appellee's mark, if not merely descriptive, is deceptively misdescriptive or deceptive.

In connection with the first ground, appellant relies on the marks being used on the same goods and takes the position that they are visually and phonetically similar and "are subject to meaningful association with one another." The other two grounds are based on the alleged hydraulic and automatic connotation of "HYDRA-MATIC."

In granting appellee's motion to dismiss, the Board stated that "it is apparent on its face that applicant's mark 'HYDRA-MATIC' does not resemble opposer's mark 'WORKMASTER' in any manner calculated to cause confusion, mistake or deception of purchasers," citing its own decision in *Essex Wire Corporation* v. *Eagle Electric Mfg. Co.*, 120 USPQ 123. The Board further ruled that the allegations of the second ground were not adequate to support a claim of damage. The third ground of opposition was not specifically treated in the Board's decision.

The issue is whether the dismissal of the notice of opposition for failure to state a cause of action was proper.

If the ultimate proofs were limited to the bare record before the Board and here, that is, only to the marks themselves, we would agree

with the Board's conclusion. However, it must be remembered that appellant seeks to show something more than just the mere existence of the competing marks. [1] An analogous situation was before the Assistant Commissioner in *Ethicon, Inc.* v. *The Seamless Rubber Company*, 120 USPQ 114. The marks there were "ETHICON" and "EZON" applied to related surgical supplies. In reversing the action of the Examiner of Interferences granting the applicant's motion to dismiss, the Assistant Commissioner said:

> The question of whether or not applicant's mark, when applied to its goods, so resembles opposer's previously used and registered mark as to be likely to cause confusion is a question of fact and not of law. *Fact questions should ordinarily not be decided on a motion to dismiss.* [Emphasis supplied.]

We, no more than the Board, have any way of knowing the strength or weakness of the proofs appellant might have proffered in support of its allegations, but we do feel that the following excerpt from the Ethicon decision is relevant here:

> * * * opposer should not be deprived of an opportunity to present facts which it believes support its pleading and entitle it to the relief sought, *irrespective of how insurmountable the task may seem at this juncture.* [Emphasis supplied.]

It seems to us that statement has application as well as to appellant's second and third grounds of opposition; viz, alleged descriptiveness and, alternatively, misdescriptiveness. While the Board based its ruling on the allegation of descriptiveness on the fact that appellant does not assert it is presently engaged in the manufacture or sale of a "hydraulically-operated" masonry saw,[1] we are not convinced that appellant should have been denied the opportunity to offer its evidence on those two points, particularly in view of the failure of the Board to treat the allegation of misdescriptiveness.

The fact that appellant opposed registration of appellee's mark does not appear to be an idle gesture but clearly suggests a belief that it would be damaged thereby. Perfecting the appeal here further indicates appellant's conviction that the evidence which it sought to offer would "entitle it to the relief sought."

[1] In our opinion appellant has established its right to its "day in court" and should have been allowed the opportunity of offering proof in support of its allegations.[2]

The decision is reversed and remanded.

REVERSED AND REMANDED.

RICH, *J.*, concurs in result only.

U.S. Court of Customs and Patent Appeals

THE FROSTIE COMPANY *v.* SUN-GLO PACKERS, INC.
SUN-GLO PACKERS, INC. *v.* THE FROSTIE COMPANY
Nos. 6908, 6920. Decided April 11, 1962
[49 CCPA—; 300 F.2d 940; 133 USPQ 206]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—OPPOSITION—AFFIRMATIVE DEFENSE—CROSS-APPEAL—TRADEMARK ACT OF 1946, SECTION 21.
Where opposer appealed to the Court of Customs and Patent Appeals from the dismissal of its opposition and applicant from the dismissal of its request, as an affirmative defense, for cancellation of a registration pleaded by

[1] Section 13 of the Lanham Act reads:
Any person who believes that he would be damaged by the registration of a mark upon the principal register may, upon payment of the required fee, file a notice of opposition in the Patent Office, stating the grounds therefor, * * *. (Emphasis supplied.)
[2] Appellee has not appeared or filed a brief here.

opposer, and opposer elected to have all further proceedings in connection with applicant's affirmative defense conducted as provided by 35 U.S.C. 146, *Held* that "Applicant's affirmative defense is necessarily before this court as an integral part of the opposition proceedings and cannot be separated therefrom for independent adjudication," and that "the election provision of section 21 of the Trademark Act is not applicable to an integral part of the opposition proceeding which this court must review on the appeal from the decision thereof"; and *Held* that applicant's appeal would be treated as a cross-appeal which would be adjudicated with the main appeal.

2. SAME—CROSS-APPEAL—CONSOLIDATION OF APPEALS—APPORTIONMENT OF COSTS.
"We, • • • grant the motion of applicant for consolidation of the two appeals, and the clerk is ordered to apportion the costs of printing the record as provided by the rules of this court."

3. SAME—DIMINUTION OF RECORD.
"Applicant's motion to correct diminution of the record has been considered. Since all the materials referred to in this motion appear now to be certified to the court by one party or the other, there appears to be no basis for the motion and it is accordingly denied."

On motions to consolidate appeals, and correct diminution of record, and on consideration of Notice of Election pursuant to Section 21 of the Trademark Act of 1946.

Motion of Notice of Election DENIED.
Motion To Consolidate Appeals GRANTED.
Motion To Correct Diminution of Record DENIED.

I. William Millen for Sun-Glo Packers, Inc.
John Gibson Semmes for The Frostie Company.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*

PER CURIAM:

The Frostie Company, opposer in Opposition No. 39,606, has appealed from the decision of the Trademark Trial and Appeal Board dismissing the opposition (132 USPQ 24). Sun-Glo Packers, Inc., the applicant, subsequently appealed from the same decision of the Board which also dismissed applicant's affirmative defense which set forth grounds for affirmative relief by way of cancellation of one of opposer's registered trademarks enumerated in its notice of opposition.[1]

The Frostie Company, has now filed a notice that it elects to have all further proceedings in connection with applicant's affirmative defense conducted as provided by 35 U.S.C. 146.[2] Sun-Glo has moved to consolidate the two appeals.

[1] Applicant's affirmative defense is necessarily before this court as an integral part of the opposition proceedings and cannot be separated therefrom for independent adjudication. We hold, therefore, that the election provision of section 21 of the Trademark Act is not applicable to an integral part of the opposition proceeding which this court must review on the appeal from the decision thereof.

For the foregoing reasons, we treat applicant's appeal as a cross-appeal which will be adjudicated with the main appeal. [2] We, therefore, grant the motion of applicant for consolidation of the two appeals, and the clerk is ordered to apportion the costs of printing the record as provided by the rules of this court.[3]

[3] Applicant's motion to correct diminution of the record has been considered. Since all the materials referred to in this motion appear now to be certified to the court by one party or the other, there appears to be no basis for the motion and it is accordingly denied.

Motion of Notice of Election DENIED.
Motion To Consolidate Appeals GRANTED.
Motion To Correct Diminution of Record DENIED.

[1] The Trademark Rules of Practice of the Patent Office provide as follows with regard to pleading an affirmative defense in the answer to a notice of opposition.

Rule 2.106 ANSWER

• • • • • • • •

(b) An answer may contain any affirmative defense, including a request for affirmative relief by way of cancellation of a registration pleaded in the notice of opposition. • • •

[2] Section 21 of the Trademark Act of 1946 (15 U.S.C. 1071) includes the following provision:

Provided, That any party who is satisfied with the decision of the Trademark Trial and Appeal Board shall upon the filing of an appeal to the Court of Customs and Patent Appeals by any dissatisfied party, have the right to elect to have all further proceedings under 35 United States Code, section 146, by election as provided in 35 United States Code, section 141.

The relevant portion of 35 U.S.C. 141 reads:

A party to an interference dissatisfied with the decision of the Board of Patent Interferences on the question of priority may appeal to the United States Court of Customs and Patent Appeals, but such appeal shall be dismissed if any adverse party to such interference, within twenty days after the appellant has filed notice of appeal according to section 142 of this title, files notice with the Commissioner that he elects to have all further proceedings conducted as provided in section 146 of this title.

[3] Sun-Glo also filed a motion to dismiss Frostie's notice of election. This motion, addressed to the Commissioner of Patents, was not acted upon but was certified to this court along with the notice of election. While this motion is not addressed to this court, we are *in effect* granting the motion in holding that the election provision is not applicable in this situation.

U.S. Court of Customs and Patent Appeals

IN RE BURNDY CORPORATION

No. 6736. Decided April 11, 1962

[49 CCPA—; 300 F.2d 938; 133 USPQ 196]

1. TRADEMARK—CONFUSING SIMILARITY—APPEARANCE.
Upon consideration, on appeal, of the issue of confusing similarity between applicant's mark, consisting of the mere external outline of the capital letter "B," heavily shaded on the right and bottom, having superposed thereover an outline of a conventionalized lightning stroke, extending somewhat above and below the letter outline, and shaded on the right and lowermost sides, and the mark of a prior registration, which is a solid, heavy capital letter "B" having the rounded portions of the letter to the right and the enclosed openings of the letter so formed as to resemble somewhat two beads of a bead chain, each bead being spherical with a black right half and a white left half, and the two white hemispheres forming the openings of the letter "B," *Held* that the case "must be decided primarily on the basis of visual similarity of the marks"; that "The marks are not word marks and are not capable of being spoken"; and that "They are design marks and, although each is based on a capital letter 'B,' there are great dissimilarities between them which can be fully appreciated only from seeing them."

2. SAME—SAME—SAME.
"Viewed as a whole, as they must be in deciding this issue, it is the collective judgment of this court that the marks are so distinctly different in appearance that they would not be likely, if in concurrent use, to cause confusion or mistake or to deceive purchasers. Since this is, of necessity, a subjective opinion, no amount of discussion of the matter can add to the statement of our conclusion which is predicated on the apparent visual differences in the marks."

3. SAME—SAME—SAME.
"• • • we do not believe that the marks can be spoken. The letter 'B' can be spoken, but neither of the marks under consideration is simply the letter 'B.' Each is a composite of which the letter is but a part, particularly appellant's mark. In normal use of the marks we do not believe that either of them would be spoken, as, for example, in calling for the goods. They stand, therefore, in the posture of classical trade *marks*, as devices or symbols associated with the goods to designate their origin. We do not believe that one seeing appellant's mark or symbol on goods would be likely to think that they had a common origin with goods bearing the registered mark or

symbol, even when the specific appearance of the latter might be dimmed by faulty recollection."

4. SAME—EVIDENCE—JUDICIAL NOTICE—STATEMENTS IN BRIEF.

"A section of appellant's brief entitled 'Commercial Facts' deals with the business of appellant, the nature of the goods it allegedly sells, and the purchasers who buy them, urging that they would be discriminating. We have no way of knowing the truth of any of the matters stated since the record is devoid of supporting evidence. A brief cannot take the place of proof and in its absence we disregard all such factual assertions where they are not matters of such common knowledge that we can take judicial notice of them."

APPEAL from the Patent Office. Serial No. 60,798.

REVERSED.

Ernest Fanwick (*Robert I. Dennison*, of counsel) for appellant.

Clarence W. Moore for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

RICH, *J.*, delivered the opinion of the court.

This appeal is from the affirmance by the Patent Office Trademark Trial and Appeal Board of the ex parte rejection of appellant's application to register a trademark on the Principal Register, Ser. No. 60,798, filed October 17, 1958. The ground of rejection is that registration is prohibited by section 2(d) of the Trademark Act of 1946 since appellant's mark so resembles the mark of prior Registration No. 534,100, issued November 28, 1950, as to be likely to cause confusion, mistake, or deception of purchasers, assuming use of the marks on the goods of applicant and of the prior registrant respectively.

Appellant's mark may be generally described as consisting of the mere external outline of the capital letter "B," heavily shaded on the right and bottom, over which outline there is superposed an outline of a conventionalized lightning stroke which extends somewhat above and below the letter outline, the latter outline also being shaded on the right and lowermost sides. The goods named in the application are "Electrical Connectors."

The mark of the prior registration, which was granted to The Bead Chain Manufacturing Company, Bridgeport, Conn., is a solid, heavy capital letter "B" having a distinctive feature in that the rounded portions of the letter to the right and the enclosed openings of the letter are so formed as to resemble somewhat two beads of a bead chain.[1] So viewed, each bead is spherical with a black right half or hemisphere and a white left half. The two white hemispheres form the openings of the letter "B." The goods enumerated in the registration are: "Radio contact pins, radio contact prongs, contact points, contact jacks, terminals, and sleeve attachments for outlet caps, in Class 21, Electrical apparatus, machines, and supplies."

The record contains no proofs of any kind as to the nature of the above-named goods and we shall assume, as appears to us to be the case, that some, at least, of the goods named in the registration are electrical connectors of sorts and, therefore, that there is at least partial identity of goods. The sole issue, then, is whether the marks so resemble each other as to fall within the section 2(d) prohibition, as the Board held they did.

[1] Encyclopaedia Britannica (1942), vol. 5, p. 189, under "Chain Manufacture," thus describes bead chain: "Bead or ball chain, commonly used in electric light fixtures, consists of a series of hollow balls joined by solid bars, the latter having a ball or cross-pipe formed at its ends. This chain is also made entirely by automatic machines."

[1] In our view, this case must be decided primarily on the basis of visual similarity of the marks. The marks are not word marks and are not capable of being spoken. They are design marks and, although each is based on a capital letter "B," there are great dissimilarities between them which can be fully appreciated only from seeing them. The Board's opinion is published at 125 USPQ 497 and contains reproductions of the marks, to which reference is hereby made.

[2] Viewed as a whole, as they must be in deciding this issue, it is the collective judgment of this court that the marks are so distinctly different in appearance that they would not be likely, if in concurrent use, to cause confusion or mistake or to deceive purchasers. Since this is, of necessity, a subjective opinion, no amount of discussion of the matter can add to the statement of our conclusion which is predicated on the apparent visual differences in the marks.

[3] The Patent Office Solicitor argues that, as spoken, the marks would have the same sound. As we said, we do not believe that the marks can be spoken. The letter "B" can be spoken, but neither of the marks under consideration is simply the letter "B." Each is a composite of which the letter is but a part, particularly appellant's mark. In normal use of the marks we do not believe that either of them would be spoken, as, for example, in calling for the goods. They stand, therefore, in the posture of classical trade *marks*, as devices or symbols associated with the goods to designate their origin.[2] We do not believe that one seeing appellant's mark or symbol on goods would be likely to think that they had a common origin with goods bearing the registered mark or symbol, even when the specific appearance of the latter might be dimmed by faulty recollection. We therefore disagree with the Solicitor's view that "the several marks would, to the ordinary purchasers, partake of a similar appearance." They do not have similar appearance and we do not understand how they could "partake" of it.

[4] A section of appellant's brief entitled "Commercial Facts" deals with the business of appellant, the nature of the goods it allegedly sells, and the purchasers who buy them, urging that they would be discriminating. We have no way of knowing the truth of any of the matters stated since the record is devoid of supporting evidence. A brief cannot take the place of proof and in its absence we disregard all such factual assertions where they are not matters of such common knowledge that we can take judicial notice of them.

The decision of the Board affirming refusal of registration is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

ROMAN MEAL COMPANY *v.* ROMAN CREST FOODS, INC.

No. 6785. Decided April 11, 1962.

[49 CCPA—; 300 F.2d 926; 133 USPQ 202]

1. TRADEMARK—CONFUSING SIMILARITY—OPPOSITION—EVIDENCE—JUDICIAL NOTICE—MODERN MERCHANDISING PRACTICES IN SUPERMARKETS.

In resolving the issue of confusing similarity between opposer's and applicant's marks, used on food products, judicial notice is taken of modern mer-

[2] See, for example, on the early use of symbols to identify ownership or origin of goods, Nims, "Unfair Competition and Trade-Marks," 4th Ed., § 185, pp. 509–510; and for greater detail see Frank I. Schechter, "The Historical Foundations of the Law Relating to Trade-Marks," especially the frontispiece and the illustration facing p. 117, showing coopers' marks in use in 1420 and seventeenth century cutlers' marks respectively.

chandising methods under which the products would be sold in supermarkets to a common class of purchasers, with the supermarkets offering the purchaser the opportunity to make a personal selection from an array of goods displayed on the display shelves and counters of the supermarket, and with related goods usually displayed together and in relatively close proximity to other goods offered for sale.

2. SAME—SAME—SAME.

"The marks in issue look alike, sound alike and suggest the same mental associations to the extent that a purchaser of opposer's goods on which [he sees] the name 'Roman,' associated with the figure of a Roman soldier, is likely to think that applicant's goods on which he also sees the name 'Roman' associated with another pictorial representation of a Roman soldier, came from a common source."

APPEAL from the Patent Office. Opposition No. 39,027.

REVERSED.

John B. Hosty for appellant.

William F. Nickel for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*

SMITH, *J.*, delivered the opinion of the court.

Opposer-appellant appealed from the decision of the Trademark Trial and Appeal Board (128 USPQ 203), which dismissed the opposition instituted by appellant against appellee's application for registration Ser. No. 47,284, filed March 7, 1958 for a composite mark consisting of the name "Roman Crest" in association with the representation of a head of a Roman soldier. The opposition was based upon opposer's prior registrations [1] of marks in which the words "Roman" and "Roman Meal" are used either alone or with a pictorial representation of a Roman soldier.

The marks of the respective parties to this proceeding are composite trademarks in the sense that they consist of both word marks and a design. While the marks must be considered in their respective entireties, it appears that the dominant and distinguishing feature of both marks is the word "Roman," associated, in the case of applicant, with the representation of the head portion only of a Roman soldier, and in the case of opposer with the full length representation of a Roman soldier. Applicant's mark and one of appellant's registered marks are here reproduced.



Applicant's Mark



Appellant's Reg. No. 251,517

The goods on which the respective parties use their marks are food products. Appellant's registrations list its goods as:

(1) A cereal compound intended to be taken at meals for its nutritive, digestive, and therapeutic properties (Reg. 142,895),

[1] Reg. No. 251,517, issued Jan. 8, 1929, renewed Jan. 8, 1949; Reg. No. 569,545, issued Jan. 20, 1953; Reg. No. 571,085, issued Feb. 24, 1953; and Reg. No. 142,895, issued May 17, 1921.

(2) Cereal breakfast food, bread, biscuits, cookies and crackers (Reg. 251,517),

(3) Bread, biscuits, cookies and crackers (Reg. 569,545), and

(4) A cereal food consisting of a blend of wheat, rye, bran, and flax, for use as a breakfast cereal or for use in baking or other forms of cooking (Reg. 571,085).

Applicant lists its goods in its application for registration as: "Fresh Garlic, Olives, Dry Mushrooms, Dried Figs, Peeled Tomatoes, Tomato Paste, Unshelled Chestnuts and Fresh Fruits and Vegetables."

Appellee has filed no brief and neither party appeared for oral argument. Neither party took testimony. Our resolution of the sole issue of likelihood of confusion, mistake or deception of purchasers, under section 2(d) of the Lanham Act, is, therefore, based upon appellant's brief and upon a consideration of the marks shown and the goods recited in opposer's registrations and in applicant's application for registration.

The present record shows that opposer is the prior user and registrant of marks in which the word "Roman" is used in association with a pictorial representation of a Roman soldier as a trademark for food products.

[1] In resolving the issue presented, we also are taking judicial notice of modern merchandising practices under which the products of the respective parties would be sold in supermarkets to a common class of purchasers. Such supermarkets offer the purchaser the opportunity to make a personal selection from an array of goods displayed on the display shelves and counters of the supermarket. Related goods usually are displayed together and in relatively close proximity to other goods offered for sale.

While it is unlikely that the average purchaser of goods in a supermarket actively associates a trademark with a particular entity as the source or origin of the goods, such a purchaser confronted with making a selection from the literally thousands of separate items is particularly responsive to the ready identification of particular goods by the marks displayed thereon. [2] The marks in issue look alike, sound alike and suggest the same mental associations to the extent that a purchaser of opposer's goods on which the name "Roman," associated with the figure of a Roman soldier, is likely to think that applicant's goods on which he also sees the name "Roman" associated with another pictorial representation of a Roman soldier, came from a common source.

We agree, therefore, with the statement in appellant's brief, that:

While both designs cover different representations of a Roman soldier, the appellant displaying a full-length figure, and the appellee a representation of a head, the psychological association of the marks in their entireties is about the same. As a rule, purchasers of inexpensive food items sold in a mass market do not have clear recollections as to the details of a design mark.

The average purchaser would probably recall that the label had an illustration of a Roman soldier. Whether the design of the soldier was full-length or half-length would probably make little difference as long as the design was associated with the word "ROMAN." It is the word "ROMAN" in association with a design of a Roman soldier that would identify the origin of the products as far as the average purchaser is concerned.

The record here indicates that opposer was the prior user of the mark in which the word "Roman" was associated with the pictorial representation of a Roman soldier. The pictorial representation serves to emphasize the word "Roman" in the mark in that it conveys a visual as well as a word image to the mind of the purchaser. We

think it likely that applicant's composite mark, adopted considerably later than the marks of opposer, will suggest to the average purchaser of food products in a supermarket that applicant's goods, so marked, originate from the same source as the goods of opposer. To the extent this occurs, there is a likelihood of confusion, mistake or deception of the purchaser resulting in the transference of a portion of the good will which opposer as the prior user and registrant is entitled to protect.

While the marks in issue contain other words, e.g. "Meal" in opposer's marks and "Crest" in applicant's mark, we doubt that these verbal differences are sufficient to distinguish the marks. Similarly, the specific differences in the pictorial portions of the respective marks do not seem to us to be sufficient to overcome the similarities of the marks.

Since we find confusion, mistake or deception of purchasers to be likely under the circumstances here presented, we reverse the decision of the Trademark Trial and Appeal Board.

REVERSED.

WORLEY, *Chief Judge* (dissenting):

The Board was clearly correct in dismissing the opposition. I would affirm.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,119,083, E. A. Link, Aviation trainer; **2,439,168**, K. A. Kail, Constant speed propeller simulating means for aviation trainer; **2,442,205**, same, Aviation trainer; **2,443,076**, G. Lowkrantz, Simulated directional gyro for aviation trainer; **2,450,239**, K. A. Kail, Aviation trainer; **2,450,261**, R. L. West, Training equipment for aviators; **2,465,158**, K. A. Kail, Aviation trainer; **2,485,331**, Stuhrman and McKee, Apparatus for training aircraft personnel in radio navigation; **2,627,675**, R. E. Kittredge, Dynamic pressure computer and control loading means operated thereby for grounded viation trainers, **filed** Jan. 15, 1958, D.C.N.J. (Newark), Doc. 43/58, *General Precision, Inc.* (*Link Aviation, Inc. original plaintiff*) v. *Curtiss-Wright Corporation*. Ordered action terminated administratively without prejudice May 9, 1962.

2,211,613, R. M. Bowie, Cathode ray tubes; **2,211,614**, same, Cathode ray tubes and the like, **filed** July 20, 1956, D.C., S.D.N.Y., Doc. 111/248, *Sylvania Electric Products, Inc.* v. *Progressive Electronics, Inc.* Stipulation and order of dismissal Oct. 29, 1956.

2,211,614. (See 2,211,613.)

2,351,925, M. Chernow, Jewelry clip; **2,433,737**, same, **filed** Aug. 22, 1958, D.C., S.D.N.Y., Doc. 137/96, *Marino Jewelry Co., Inc.* v. *Monet Jewelers*. Dismissed for lack of prosecution Nov. 21, 1960.

2,433,737. (See 2,351,925.)

2,439,168. (See 2,119,083.)

2,442,205. (See 2,119,083.)

2,443,076. (See 2,119,083.)

2,445,322, M. C. Fridolph, Body garment; **2,849,003**, C. W. Hine, same, **filed** Nov. 1, 1961, D.C., S.D.N.Y., Doc. 61/3894, *Sarong, Inc.* v. *Lewell Manufacturing Co., Inc.* Stipulation and order of discontinuance Feb. 8, 1962.

2,450,239. (See 2,119,083.)

2,450,261. (See 2,119,083.)

2,465,158. (See 2,119,083.)

2,485,331. (See 2,119,083.)

2,503,308, Wiener and Locker, Photographic tray; **2,503,309**, S. Weiss, Firing mechanism for mortars; **2,550,964**, N. Brookes, Device for determining point at which pipe is stuck in a well, **filed** July 28, 1961, D.C., S.D. Tex. (Houston), Doc. 13/780, *Phillip W. Martin et al.* v. *Houston Oil Field Material Company, Inc.* Stipulation of dismissal; cause dismissed with prejudice Apr. 27, 1962.

2,503,309. (See 2,503,308.)

2,550,964. (See 2,503,308.)

2,621,101, B. Cooper, Toll collection transaction printer; **2,622,138**, same, Toll checking systems; **2,672,393**, same, Treadle controlled toll checking system, **filed** Apr. 3, 1957, D.C., S.D.N.Y., Doc. 119/92, *Taller & Cooper, Inc.* v. *Neptune Meter Company et al.* Stipulation and order dismissing complaints and counterclaims May 1, 1962.

2,622,138. (See 2,621,101.)

2,627,675. (See 2,119,083.)

2,629,134, R. P. Molitar, Method of manufacturing articles from vinyl resins, **filed** Mar. 2, 1962, D.C., S.D.N.Y., Doc. 62/1016, *The Sun Rubber Company* v. *Randolph J. Dorn*. Judgment for defendant May 8, 1962.

2,641,183, J. A. Boyajean, Jr., Image-reproducing plate and cylinder assembly, **filed** May 7, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c959, *Fairchild Camera and Instrument Corporation* v. *Calumet Crafts*.

2,672,393. (See 2,621,101.)

2,685,536, W. A. Starkey et al., Method for electrostatically coating articles, **filed** Apr. 20, 1962, D.C., S.D. Ind. (Indianapolis), Doc. 62–C–157, *Ransberg Electro-Coating Corporation* v. *Ford Motor Company*.

2,700,938, Wolff and Wilcox, Apparatus and method for tablet production; **2,727,473**, J. E. Wolff et al., Coating mechanism, **filed** Nov. 3, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1940, *F. J. Stokes Corporation* v. *Fitzpatco Corporation*. Dismissed by stipulation and order July 27, 1960.

2,701,235, O. M. King, Operating system for swimming pool, **filed** Nov. 16, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 1184/59–Y, *Oswald M. King* v. *Anthony Pools, Inc.* Patent held valid and infringed; defendant enjoined (notice May 8, 1962).

2,711,391, H. L. Kahler, Phosphate-chromate corrosion protection in water systems, **filed** Nov. 18, 1961, D.C. Del. (Wilmington), Doc. 2395, *Betz Laboratories, Inc.* v. *Avisun Corporation*. Order dismissing cause Apr. 12, 1962.

2,727,473. (See 2,700,938.)

2,745,332, L. C. Cotts, Baseboard heat distributor, **filed** May 9, 1962, D.C., W.D. Mich. (Grand Rapids), Doc. 4317, *Louis C. Cotts et al.* v. *Air Control Products, Inc.*

2,750,300, A. J. Kokoff, Glitter cloth, **filed** Dec. 4, 1959, D.C., S.D.N.Y., Doc. 153/273, *Kokoff Manufacturing Corporation* v. *Marba Creations, Inc. et al.* Stipulation and order of dismissal with prejudice and withdrawing counterclaim May 7, 1962.

2,766,007, S. Krilanovich, Camera hoist; **2,842,376**, same, Wheel steering mechanism for camera dollies and the like; **Des. 186,112**, same, Camera dolly, **filed** Aug. 8, 1958, D.C., S.D.N.Y., Doc. 136/285, *J. G. McAllister, Inc. et al.* v. *Camera Equipment Co., Inc.* Order of discontinuance June 14, 1960.

2,766,906, F. V. Bookout et al., Selective bottled beverage vending machine, **filed** May 4, 1962, D.C., E.D. Tenn. (Chattanooga), Doc. 3879, *The Vendo Corporation* v. *Cavalier Corporation*.

2,799,928, A. A. Mays, Electrically operated scissors or shears; **2,815,810**, V. G. Anderson, Process of assembling in the art of changeable picture display devices; **Reg. No. 606,428** (VARI-VUE), Pictorial Productions, Inc., Pictures containing at least two images which are separately visible, etc., **filed** Apr. 6, 1962, D.C., S.D.N.Y., Doc. 62/1409, *Pictorial Productions, Inc.* v. *Warren Dennie et al.* Consent decree; defendants enjoined May 9, 1962.

2,815,810. (See 2,799,928.)

2,842,376. (See 2,766,007.)

2,849,003. (See 2,445,322.)

Re. 25,022 (of 2,871,161), M. L. Spiegel, Sprayable water free alcoholic polyvinylpyrrolidone hair preparation, **filed** Apr. 27, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c893, *Walter Smith* v. *De Mert & Dougherty, Inc.*

Des. 186,112. (See 2,766,007.)

Des. 176,328, J. C. Hampshire, Skillet or similar article; **Des. 183,124**, same, Casserole or similar article, **filed** Dec. 1, 1958, D.C., S.D.N.Y., Doc. 140/232, *Bridgeport Brass Company* v. *Steelmasters, Inc.* Order of discontinuance Jan. 16, 1962.

Des. 183,124. (See Des. 176,328.)

Des. 183,728, O. Englehard, Lace; **Des. 183,815**, R. Silber, same, **filed** Nov. 17, 1958, D.C., S.D.N.Y., Doc. 140/22, *Native Laces & Textiles, Inc.* v. *Raval Lace Company, Inc.* Order dismissing action with prejudice June 1, 1961.

Des. 183,815. (See Des. 183,728.)

REISSUES

JULY 10, 1962

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,197
RECORD REPEATING ATTACHMENT FOR PHONOGRAPH
Emery A. Hicks, 7341 SE. Ogden St., Portland, Oreg. Original No. 2,986,399, dated May 30, 1961, Ser. No. 755,809, Aug. 18, 1958. Application for reissue Dec. 28, 1961, Ser. No. 163,387
8 Claims. (Cl. 274—14)

1. A tone arm control arrangement for a phonograph having a turntable for supporting a record, means for driving the turntable, a tone arm having a pick-up end movable across the turntable for engagement of a tone arm needle with a record on said turntable, said tone arm being inclined downwardly toward its pick-up end, said control arrangement having means including an elongated threaded member extending under said tone arm and bodily movable horizontally toward the pick-up end of the tone arm to effect engagement of said member with said arm to lift said arm to separate said needle from said record and operable when moved back to its original position for lowering said tone arm to effect engagement of said needle with said record, said member also being rotatable about its own axis and being operable when rotated and in contact with the tone arm for shifting the tone arm laterally with respect to said turntable, and means whereby said threaded member may be actuated in all of the ways mentioned above.



PLANT PATENTS

GRANTED JULY 10, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,155
ROSE PLANT
Alain Meilland, Cap d'Antibes, Alpes Maritimes, France, assignor to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania
Filed Sept. 18, 1961, Ser. No. 139,019
1 Claim. (Cl. 47—61)

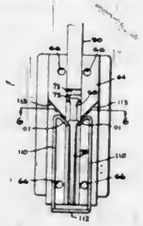
A new and distinct variety of rose plant of the miniature class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a compact and dwarf habit of growth, good hardiness, a perfect miniature form of the flowers, and a Blood Red general color tonality of the flowers.

PATENTS

GRANTED JULY 10, 1962

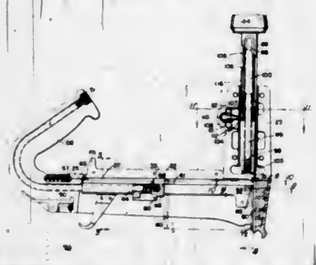
GENERAL AND MECHANICAL

3,042,924
POWER NAILING MACHINE
Lars Frostad, Camillus, N.Y., assignor, by mesne assignments, to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 798,900
6 Claims. (Cl. 1—46)



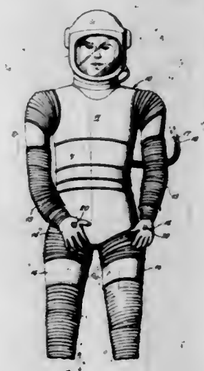
1. A nailing machine, a magazine for containing a supply of nails, a throat plate at one end of the magazine and having a nail discharge passage, means for advancing nails from said magazine to said passage, a nail driver mounted for reciprocation in said passage for driving a nail therefrom into a work piece, yieldable members carried by said plate on opposite sides of said passage and being normally positioned for engagement by the head of a nail to prevent descent thereof by gravity in said passage, and means operable to move said members out of nail engaging position upon positioning said magazine on a work piece.

3,042,925
HAND NAILER
Lars Frostad, Syracuse, and Heiko T. de Man, Liverpool, N.Y., assignors, by mesne assignments, to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 857,184
4 Claims. (Cl. 1—46)



1. A nail driver comprising an elongated body having an upwardly extending head portion at its forward end and a rearward portion, said head portion being formed with a nail delivery passage, said body being formed with an elongated chamber extending rearwardly from said head portion to said rear portion, a nail magazine movable into and out of said chamber and having a nail guideway in registration and communicating with said delivery passage when said magazine is positioned in said chamber, a pusher slidably mounted in said guideway, a spring for urging said pusher along the guideway toward said head portion to advance a row of nails along the guideway toward said delivery passage, releasable means for restraining movement of said magazine out of said chamber, said pusher being retractible from said magazine into said rear portion of the body, and releasable latch means for holding said pusher in retracted position in said rear portion of the body.

3,042,926
PRESSURE SUIT FOR HIGH ALTITUDE FLYING
Leonard F. Shepard, Dover, Del., assignor to International Latex Corporation, Dover, Del., a corporation of Delaware
Filed Sept. 26, 1958, Ser. No. 763,576
8 Claims. (Cl. 2—2.1)

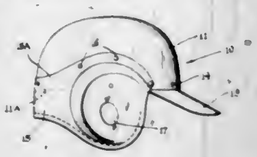


1. A ventilated pressure suit for high altitude flying which comprises a pressurized suit adapted to enclose the body; means for maintaining a substantially fixed pressure in said suit; a differential pressure valve positioned in the surface of said suit having a pressure differential chamber therein, said chamber defining an orifice for communicating the interior of said suit with said chamber and defining a valve opening tor communicating the chamber with the surrounding atmosphere for releasing air from the suit below a fixed pressure differential; a valve closing piston operable in said chamber for closing said valve opening; an upwardly extended shaft centrally positioned on said piston protruding from said chamber above said valve opening; a downwardly extended shaft centrally positioned on said piston and depending in said chamber, said shafts adapted to maintain the piston centrally in the chamber during operation; and a pressure responsive diaphragm positioned below said depending shaft and forming the bottom of said chamber adapted to contact said depending shaft and urge said piston to close the valve when the pressure differential exceeds a fixed amount.

3,042,927
HELMET
Eugene Mauro, 618 11th St., Brooklyn, N.Y., and Saul M. Pestronk, Armonk, N.Y.
Filed Mar. 24, 1959, Ser. No. 801,642
1 Claim. (Cl. 2—3)

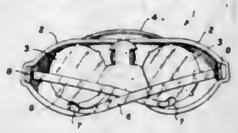
A protective head gear comprising a unitary shock absorbent, full, outer shell adapted to cover one's head,

a sun visor connected to the front peripheral portion of said shell for shading one's eyes, a depending ear and neck shield connected to the side and back peripheral portion of said shell and being formed with a cleft in the region of the back of the neck portion thereof, said shield and shell having overlying peripheral marginal portions along their line of contact, said overlying marginal portions forming a reinforcing strip around the back and temporal regions of said shell, means disposed within the shell for spacing the shell from one's head when it is worn; said means including at least two transversely



extending radial bands connected to opposite peripheral portions of said shell, said bands having the end portion thereof inwardly turned, and a self-adjusting sweat band connected to the end portions of said bands, said sweat band comprising alternate elastic and substantially inelastic portions connected end to end, said inwardly turned end portions being connected to said inelastic portions of said sweat band and spacing said sweat band from said shell, and said shield being separable at said cleft for lateral spreading of the sides of the shield without bending.

3,042,928
GOGGLES
Gerald W. Eberhart, Reading, Pa., assignor to The Electric Storage Battery Company, Philadelphia, Pa.
Filed May 15, 1961, Ser. No. 110,152
1 Claim. (Cl. 2—14)



In a pair of goggles of the cup type having shields surrounding the eyes of the wearer containing a pair of lenses mounted forwardly of the shields and an adjustable member for holding together said shields, in combination, a pair of temples pivotally mounted to the extremities of said shields and foldable so as to be completely contained within said shields, said temples being curved inwardly from front to rear and having substantially straight portions terminating in end portions which are curved upwardly from the straight portions, whereby the goggles may be tilted upwardly and comfortably rested on the forehead of the wearer without having the extreme end portions of the temples dig into the temples of the wearer.

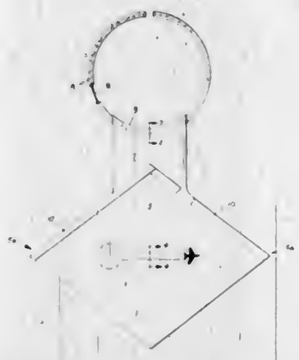
3,042,929
BASEBALL GLOVE
Casimir Kobos, Chicago, Ill., assignor to Wilson Athletic Goods Mfg. Co., Inc., River Grove, Ill., a corporation of Delaware
Filed June 9, 1961, Ser. No. 116,146
2 Claims. (Cl. 2—19)

1. A baseball glove or mitt comprising palm and back portions secured together and provided with finger and thumb stalls in spaced relationship to one another, means on said palm and back portions and secured together to provide a false finger stall extending outwardly from the palm portion between said thumb and finger stalls and spaced therefrom, web elements of generally T-shape interposed between opposite sides of said false finger stall and the adjacent sides of the thumb and finger stalls, said generally T-shaped web elements each having a cross part of tubular section at one end thereof and a stem portion of tubular section secured at one end to the cross part and extending therefrom, lace means adjoining opposite sides of said stem portions of the web elements to the thumb and finger stalls and to opposite side portions of said false finger stall, said lace means extending through marginal regions of the palm and back portions of the



thumb and finger stalls and the false finger stall at positions spaced longitudinally thereof, as well as into and along the tubular stem portions of the web elements at positions spaced longitudinally thereof, said lace means extending across the spaces between the false finger stall and the thumb and finger stalls only through the tubular cross parts of the web elements and said stem portions of the web elements bridging major portions of the spaces between said false finger stall and the thumb and adjacent finger stalls so that exposed portions of the lace means between the webs and the adjacent stalls are short.

3,042,930
BIB LIKE PROTECTIVE DEVICES
Sergio A. Martinez, 2520 SW. 23rd St., Miami, Fla.
Filed Sept. 21, 1959, Ser. No. 841,065
1 Claim. (Cl. 2—49)



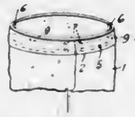
A device of the character described comprising a neck embracing, resilient split ring adapted to be engaged about the neck of the user, the split portion of the ring being disposed at substantially the top thereof, said ring supporting a napkin forming paper structure comprising a diamond-shaped body portion having a vertical short axis and a horizontal long axis, and an integral paper tab which extends from the top of the short axis of the body portion to the bottom portion of the split ring where it is firmly engaged with said ring, the said tab being of a width to cover the tie area of the wearer, but being sufficiently short to suspend the diamond shaped body portion well up over the chest of the wearer, the longitudinal axis of the body portion being of such amplitude as to cause its ends to extend well toward the under arm area of the wearer and stiffening strips secured along the upper edges of the body portion and continued over the surface of the tab into overlapping relation at the center of the tab, said strips being firmly secured to the body portion and tab throughout their length, the body portion and tab being formed of very light-weight, discardable, napkin-like paper and the width of the tab being less than the diameter of the split ring.

3,042,931
FOUL WEATHER OUTER CAPE
Valerie Lucienne Sawyer, 99—15 66th Ave., Forest Hills 74, N.Y.
Filed Dec. 9, 1958, Ser. No. 779,132
4 Claims. (Cl. 2—88)



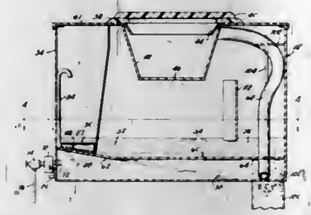
1. A garment formed from sheet waterproof material suitable for use an a rain covering for wear by a person comprising, a section of material generally corresponding in outline to a substantial sector of a circle as a basic sector, the radii defining said basic sector being frontal edges, pleats in the said material extending radially from the center of said circle to the circumference thereof, said pleats being gathered and fastened at a point removed radially from the center of said circle to form a peak for said garment, said frontal edges of said peak forming an angle and carrying therein a sector of material having sufficient length to cover the wearer's forehead, means in the said material at a spaced distance from the center thereof to define a line for gathering said pleats and a tie threaded through said means to permit gathering the said material about the neck of the wearer.

3,042,932
WAISTBAND STRUCTURE FOR GARMENTS
Marvin Eppy, 28 St. Marks Place, New York, N.Y.
Filed Dec. 9, 1958, Ser. No. 779,153
7 Claims. (Cl. 2—236)



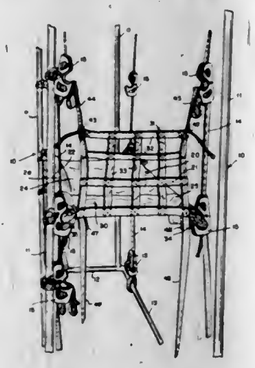
1. In a waistband for body garments having a front centerline and a pair of horizontal pockets extending on each side of said centerline toward but not beyond the sides of said garment, the improvement which comprises strips of relatively stiff, distortable plastic in said pockets, each of said strips being folded longitudinally and substantially filling each of said pockets, said fold being at the front of said garment, and an opening in each pocket for the insertion of said strip.

3,042,933
VEHICLE TOILET
Curtis A. Garver, Millersburg, Ohio, assignor to The Flexible Company, Loudonville, Ohio, a corporation of Ohio
Filed Oct. 7, 1960, Ser. No. 61,154
8 Claims. (Cl. 4—8)



8. A toilet including a seat, a bowl positioned beneath the seat, means positioned below the bowl confining a body of water, said means having partition means separating the body of water into a clear area and a bulk carrying area, means allowing the return of substantially clear water in a given return path from the bulk carrying area to the clear area, a one way valve normally open positioned in the return path of the water from the bulk carrying area to the clear area allowing water to flow from the bulk carrying area to the clear area, means for closing the valve and for simultaneously forcing the water from the clear area into the bowl with a flushing action, said flushing water returning to the bulk carrying area, and valve and conduit means for drawing off the water and bulk from the bulk carrying area.

3,042,934
COMBINED LITTER EXTENSION PILLOW SUPPORT AND BACK REST
Joseph M. Collins, 110 Poha Lane, Hickam 1, Honolulu, Hawaii
Filed Apr. 5, 1960, Ser. No. 20,227
3 Claims. (Cl. 5—9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A litter extension pillow support and back rest to be mounted on a carrying handle equipped litter supporting framework provided with litter supporting saddles, the litter extension pillow support and back rest comprising a rectangular fabric first panel of the width of the litter in one dimension and of a length in its other dimension that is to be added to the length of the litter, a rectangular mesh second panel of the width of the litter with one end stitched to one end of the fabric first panel, a pair of litter handle receiving pockets at the two corners of the fabric first panel adjacent its stitched junction with the mesh second panel and disposed laterally thereof to receive the pair of handles at one end of the litter as sup-

ports for the end of the fabric first panel at its junction with the mesh second panel, a pair of C-shaped resilient spring clamps secured at the two corners of the fabric first panel that are remote from its junction with the mesh second panel for being releasably hooked over spaced horizontal bars of the litter supporting framework in supporting the end of the fabric first panel that is remote from its junction with the mesh second panel, and a first pair of straps with their buckles attached to the corners of the mesh second panel remote from its junction with the fabric first panel for being attached to the litter supporting framework above the litter extension pillow support and back rest in the support of the litter extension back rest.

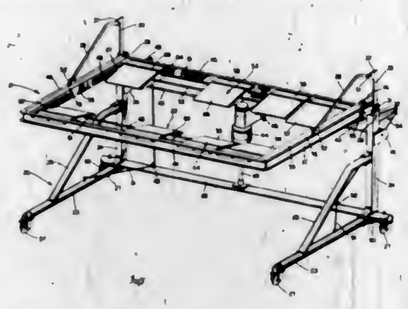
3,042,935
CONVERTIBLE SOFAS
Kaj Duedahl Nielsen, Naestvedvej 32, Soro, Denmark
Filed Feb. 5, 1959, Ser. No. 791,402
Claims priority, application Denmark Feb. 6, 1958
12 Claims. (Cl. 5—57)



1. A convertible sofa having two frame sections and a hinge structure at each end of said frame sections operable to swing said frame sections relatively to each other between a mutual bed position substantially in alignment and a mutual sofa position substantially perpendicular to each other, each hinge structure including a first member and a second member, means supporting one of said frame sections on said first hinge member, means supporting the other of said frame sections on said second hinge member, means pivotally connecting said hinge members, a latch pin extending substantially in the direction of the hinge axis, means for mounting said latch pin to reciprocate on said first hinge member between a projecting position and a retracted position, an edge portion of said second hinge member operable to engage with said latch pin in its projecting position when said frame sections are in mutual sofa position, and control means operable to push said latch pin to its retracted position, and means operable to render said control means effective in response to relative movement of said frame sections in a direction to decrease the angle therebetween from the frame sections latched position.

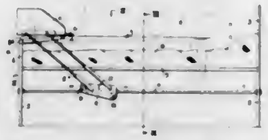
3,042,936
LIFT CONSTRUCTION
Luther M. Patterson, 323 Gooding Ave. NW., New Philadelphia, Ohio
Filed June 25, 1959, Ser. No. 822,915
26 Claims. (Cl. 5—83)

5. Lift construction including a platform member, frame means mounting the platform member for lateral movement relative to the frame means at given lateral speeds, surface means operably connected to the frame means and extending over at least a portion of the platform member, and means mounting the surface means on the frame means relatively laterally movable over the platform member portion in a direction opposite to the lateral movement of the platform member for every lateral movement of the pltaform member relative to the frame means and at substantially the same lateral speed as the lateral movement of the platform member; whereby the portions of the surface means contacting an object to be supported remain stationary laterally relative to the



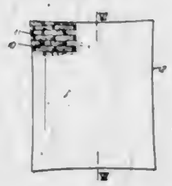
object while the platform member moves laterally beneath the object.

3,042,937
ATTACHMENTS FOR BEDS
Terence Nathan Young, Cronadun, West Coast, New Zealand
Filed Feb. 15, 1961, Ser. No. 89,552
5 Claims. (Cl. 5—332)



1. An attachment for a bed having a head piece, an end piece, and a pair of spaced horizontally disposed parallel side rails each connected at its ends to the head and end pieces, a casing slidably mounted on each of the side rails, a strengthening member extending at right angles to the side rails and secured at its ends to said casings, frame members secured at one end to each of said casings and extending upwardly therefrom in angular relation thereto in a direction toward the end piece of the bed, a compartment member secured to the free ends of said frame members, and means connected to said compartment member and the end piece of the bed operable to cause movement of said attachment longitudinally of the bed.

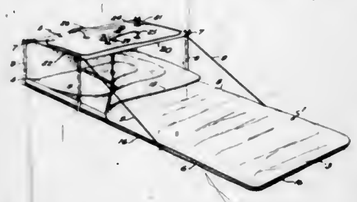
3,042,938
PILLOWS, CUSHIONS, PILLOW CASES OR THE LIKE
Reginald Wyatt Lawson, 91 London Lane, Bromley, Kent, England
Filed May 25, 1959, Ser. No. 815,579
Claims priority, application Great Britain May 28, 1958
1 Claim. (Cl. 5—337)



A sanitary pillow insuring free flow of air and passage of secretions of the nose and mouth, comprising, in combination, a homogeneous openwork criss-cross mass of impermeable, resilient, plastic material providing a washable, unshrinkable honeycomb structure of interconnecting air tunnels connected throughout the length

and breadth of the pillow, a network of elongated loops of plastic material for holding the said criss-cross mass in shape, and a cover of porous material enclosing and concealing said criss-cross mass and said loops.

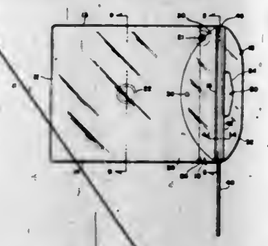
3,042,939
SLEEPING BAGS
Hugo W. Schoellkopf, Jr., 4017 Colgate, and Delbert F. Chandler, 2316 N. Garrett Ave., both of Dallas, Tex.
Filed Sept. 22, 1960, Ser. No. 57,841
2 Claims. (Cl. 5—343)



1. In a sleeping bag, the combination of a main body having a head end and a foot end and comprising a mattress portion adapted to be disposed beneath the user and a cover portion, to extend over the user, said portions being constructed of such relatively thick material, when said main body is folded once and rolled from foot to head with said cover portion initially overlying said mattress portion, that a soft but bulky roll results which is of such relatively large diameter as to be inconvenient for carrying and storage, a rectangular head cover sheet secured to the head end of said main body, said rectangular cover sheet having a length such that part of said sheet can be supported substantially horizontally well above the head end of said main body to shelter the head of a person occupying the sleeping bag when the bag is in use; and having a width equal to the width of said mattress portion when the bag is occupied, and fastening means for securing said sheet in the form of a container to completely enclose said main body when the latter has been folded once from its occupied position and is formed into a roll with said foot end at the center of the roll and said head end at the outside of the roll, said fastening means comprising a series of similar coacting fastening elements secured to said cover sheet, in the plan form of a rectangle, at least three legs of the rectangle thus formed being parallel with and immediately adjacent to a top, a bottom, and one side edge of said cover sheet, with the fourth leg parallel with and spaced from the remaining side edge of said cover sheet so that when said sheet is extended about the once folded rolled main body as an extension of the roll, said pairs of fastening elements can be engaged to secure said sheet to tightly compress the main body to form a smooth, substantially cylindrical body which is free from bulging projections, and has a length shorter than the occupied width of the mattress portion.
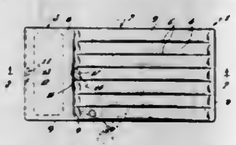
3,042,940
MULTIPURPOSE INFLATABLE SEAT CUSHION
Lester Harold Keaton, 5904 N. Oxford, Indianapolis, Ind.
Filed Feb. 15, 1961, Ser. No. 89,500
5 Claims. (Cl. 5—348)

1. An inflatable multipurpose seat cushion, comprising flexible top and bottom cushion members sealed together at the edges thereof to provide an inflatable cushion, valve means in one of said cushion members whereby air may be forced between said members to inflate the cushion, an outer layer of flexible material sealed at its edges to one of said cushion members, said outer layer having an opening therein to provide an article receiving pocket between said outer layer and said one cushion member, and means defining an elongated narrow slot between said outer layer and said one cushion member, said slot extending along one edge of said cushion and



having one end thereof closed and the other end thereof open to receive a flagstaff so that said seat cushion may be waved as a flag when in a deflated condition.

3,042,941
INFLATABLE MATTRESS
Louis G. Marcus, Watertown, Mass., assignor to Hampshire Manufacturing Corporation, Nashua, N.H., a corporation of New Hampshire
Filed Jan. 20, 1959, Ser. No. 787,920
3 Claims. (Cl. 5—348)

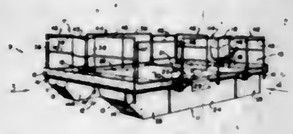


1. An inflatable mattress comprising an airtight covering forming a main compartment and an auxiliary compartment, the covering for said main and auxiliary compartments being of uniform flexible material extending over said compartments, said main and auxiliary compartments being formed by said covering in horizontally adjacent positions so that both said compartments can lie directly on the ground, an inlet valve to the auxiliary compartment, a passage between said compartments including means for controlling air flow between the compartments, and additional resilient means disposed within the covering of the auxiliary compartment for distending said compartment and causing air to be drawn into the compartment by distension of the auxiliary compartment, said covering forming the enclosure for said auxiliary compartment, so that expansion of said auxiliary compartment is unopposed by air pressure in the main compartment, said resilient means extending between and engaging the top and bottom of the auxiliary compartment and being flexible vertically so as to yield when said auxiliary compartment covering is compressed between the user's foot and the ground directly; whereby any compression of the covering of the auxiliary compartment by pressure of the user's foot causes air to be pumped into the main compartment without compression of the main compartment by the user's foot such as to oppose pumping of air therein.

3,042,942
AMPHIBIOUS PONTOON BOAT
Wilson S. Howe, Longmont, Colo., assignor to Combo-Craft, Inc., Longmont, Colo., a corporation of Colorado
Filed Mar. 25, 1960, Ser. No. 17,520
6 Claims. (Cl. 9—1)

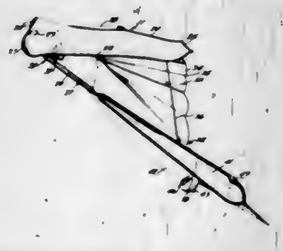
1. An amphibious pontoon boat comprising a rectangular deck having its longitudinal axis extending from the front to the rear of the boat and along the normal direction of movement of the boat in water, a pair of longitudinally extending pontoon floats underneath the

deck with each float being adjacent to a lateral side of the deck and with a longitudinally extended corridor between the floats and underneath the deck, said deck being divided into three sections, a front, center and rear section, which connect together at abutting transverse edges of adjacent sections, a transversely-axised hinge means at the abutting edges interconnecting the sections together and being adapted to permit the front and rear sections to be overfolded upon the center section, each said pontoon float being divided into three sections, a front, center and rear section corresponding with the deck sections, and with the front pontoon sections being affixed to the front deck section, the center pontoon sections being affixed to the center deck section and the rear pontoon sections being affixed to the rear deck section, the front and rear pontoon sections being adapted to be



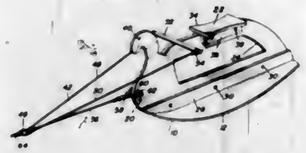
overturned above the deck sections when the front and rear deck sections are overfolded and upon the center deck section, a lock means adapted to lock the front and rear sections in their extended positions, a pair of transversely-directed, retractable trailer wheel mounts, having trailer wheels thereon, mounted at the underside of the center section of the deck in the corridor between the floats, and being adapted to be normally retracted to lie against the underside of the deck, in the corridor as when the boat is used in water, and to be lowered to depend therefrom with the wheels below the pontoons when the boat is being moved on land in a direction transverse to the longitudinal axis of the boat and with the front and rear deck and pontoon sections overfolding the center section, and a trailer pull-tongue adapted to outstand from a lateral side of the center section for pulling the unit on land in a transverse direction.

3,042,943
SWIMMING FLIPPERS
George Katehis, 2270 SW. 26 Lane, Miami 33, Fla.
Filed Nov. 30, 1960, Ser. No. 72,696
5 Claims. (Cl. 9—304)



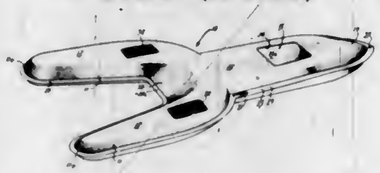
1. In a swimming appliance, a body member shaped to include a sole portion and a heel portion, said body member further including a top wall provided with a plurality of spaced apart apertures adjacent the front end thereof, wing arranged contiguous to the outer side portions of the body member, a support member including a web portion and a pair of spaced apart generally triangular base members, plates hingedly mounted adjacent the outer side edges of said base members, a flexible covering surrounding said support member and plates, said cover including side portions which are connected to the wings, said side portions embodying a plurality of extensible sections which are interconnected by seams that define fold lines.

3,042,944
WATER SPORT RIDING DEVICE
Donald L. Basey, 509 Grandview Drive, Ashland, Oreg., and Tad V. Gandee, Ashland, Oreg. (3429 Edison Ave., Apt. 5, Sacramento 21, Calif.)
Filed Nov. 28, 1958, Ser. No. 777,099
7 Claims. (Cl. 9—310)



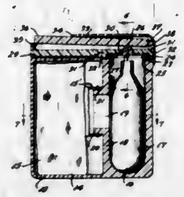
7. In combination with a tow rope being trailed from a draft vehicle, an aquatic device comprising a planing member having a lower surface adapted to plane over the surface of a body of water and an upper surface adapted to support a water sportsman, harness lines attached to said planing member for securement to the rear end of said tow rope, said harness lines including a tow line having means fixed on one end secured to the rear end of said tow rope and means fixed on the other end secured to said device, at least one elongated rein member having means fixed on one end portion connected to said tow rope a spaced distance forwardly of the point at which said tow line is secured to said device, handle means, the rear end portion of said rein member secured to said handle means whereby said handle means may be pulled to transfer the tow of the rope from said tow line to said rein member enabling a water sportsman riding the device to thereafter selectively shift the handle means to opposite sides of the planing member to shift the attitude of the device relative to the water over which it is traveling thereby controlling its direction of travel to some extent.

3,042,945
SWIMMER'S SLED
William M. Saeman, Sunnyvale, Calif. (Box 144, Malibu, Calif.)
Filed May 19, 1959, Ser. No. 814,321
1 Claim. (Cl. 9—310)



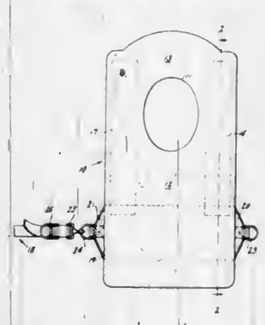
A substantially rigid buoyant platform for supporting a swimmer, said platform comprising a forwardly extending body supporting portion of sufficiently narrow construction to permit overhand arm movements for swimming, a rear portion integral with said forwardly extending portion, said rear portion including a pair of elongated body supporting members spaced apart to provide a rearwardly facing open area therebetween in said rear portion of said platform, said pair of members merging at their forward ends, said body supporting members each being formed on the top and bottom with an inboard surface sloping symmetrically away from a substantially horizontal medial plane through said rear portion, said inboard surfaces extending forwardly and merging to form a pair of cupped torso supporting surfaces disposed top and bottom of said rear portion, the latter said surfaces as viewed in vertical half section taken lengthwise of said rear portion being symmetrically inclined to lead forwardly and away from said medial plane and merging with the top and bottom surfaces of said platform.

3,042,946
PERSONAL INFLATABLE LIFE PRESERVER
Daniel O. Davis, Wilmington, and Landon G. McGill, St. Paul, N.C., assignors to Davis & McGill, Incorporated, St. Paul, N.C., a corporation of North Carolina
Filed July 14, 1960, Ser. No. 42,948
4 Claims. (Cl. 9—316)



4. A personal inflatable life preserver comprising a housing having wall structure defining a chamber for an inflatable container and a chamber for a compressed gas cartridge, having one end constructed to be pierced, said cartridge chamber having an opening providing communication with said container chamber and an opening for receiving the cartridge, an imperforate diaphragm closing said cartridge receiving opening, a firing pin mounted in said diaphragm and projecting therefrom only into said chamber, sealing means between said diaphragm and said housing, an inflatable container attached to said wall structure about said communication opening, and means for producing relative movement between the cartridge and said firing pin for causing the piercing of the cartridge to release the contents thereof.

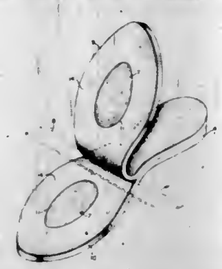
3,042,947
LIFE VEST
Don M. Bashore, Alexandria, Va., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 24, 1961, Ser. No. 105,219
8 Claims. (Cl. 9—338)



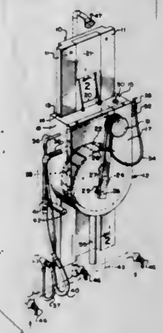
1. A life vest comprising at least two layers of cellular elastomeric material having a head opening extending therethrough, at least one strip of relatively inextensible, flexible material on each side of said head opening extending over the shoulders, said strips being positioned between said layers of cellular material and adhered thereto so as to restrict the elongation of the head opening, and a waist band for attaching the vest to the body of the wearer.

3,042,948
OUTSOLE AND METHOD OF MANUFACTURE
James J. Di Nunzio, Windsor, Vt., assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 28, 1960, Ser. No. 39,242
5 Claims. (Cl. 12—146)

1. A method of making an outsole which comprises forming an outsole blank of one material of a thickness greater than the thickness of at least two outsoles and having an insert of another material positioned to extend from one face of said blank to the opposite face, securing said insert and outsole blank into bonded relationship with each other and then splitting the bonded outsole blank and insert parallel to at least one face and through said insert to form at least two outsoles of desired thickness, each having on the split side a clean, smooth, and sharp juncture between said materials.



3,042,949
BATHING DEVICE
Grover C. Mosely, 3030 S. Raymond Ave., Los Angeles, Calif.
Filed Apr. 24, 1961, Ser. No. 105,076
10 Claims. (Cl. 15—21)



1. A bathing device comprising an elongated support structure adapted to be mounted on a vertical wall of a bathroom and having vertical slide guide means and counterbalance means, a water wheel housing slidably mounted on said slide guide means and operatively connected to said counterbalance means and maintained in a desired adjusted position thereby, a water wheel in said housing having a shaft end portion extending through a wall of said housing, a crank on said shaft end portion, a rock arm pivotally mounted on said housing and operatively connected to said crank arm, a brush secured on said rock arm having a fluid discharge opening therein, a water supply pipe carried by said housing and connected to said brush fluid discharge opening, a water pressure supply to said water wheel arranged to drive said water wheel, and means for raising and lowering said housing.

3,042,950
BOWLING ALLEY CONDITIONING MACHINE
Mike Ludwig, Jr., 841 N. 31st St., and Raymond R. Johnson, 120 Rose Drive-Security, both of Colorado Springs, Colo.
Filed Sept. 30, 1960, Ser. No. 59,678
9 Claims. (Cl. 15—50)

1. A bowling alley conditioning machine comprising a mobile frame, an alley surface rotary polishing brush assembly on said frame intermediate the ends thereof,

motor means operatively connected to said brush assembly for driving said assembly in opposite directions in frictional contact with the alley surface for moving the machine along the alley, a conditioning oil container mounted on said frame forwardly of said brush assembly,



a forwardly-extending spray nozzle on said container, air under pressure means operatively connected to said container for directing a spray of oil from said nozzle onto the alley, and alley surface drying lamps mounted on said frame at opposite sides of said nozzle.

3,042,951

HOLD-DOWN LUG TYPE BRUSH SECTION

Ralph F. Tilgner, Ellicott City, Md., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Filed July 1, 1959, Ser. No. 824,332
13 Claims. (Cl. 15—182)



5. A rotary, power-driven brush section comprising a cylindrical band, a circularized brush strip comprising a channel backing having fill material disposed therein, wound around the band and holding clips of U-shape disposed astride the band and having the legs thereof projecting radially outwardly, and fastening means comprising screws transversely piercing opposed pairs of the legs to draw the legs together, whereby to grip the strip.

7. A circular brush section comprising a circular, internal band constituting a core for the section, a brush strip having two ends and having a channel backing circularly wound upon the band, said backing having double length fill material projecting radially therefrom and being held in place by a filamentary locking core disposed within the bight portions of said fill material, said band having spaced flat lugs radially outwardly projecting about the edges thereof, each lug upon an edge being paired with a lug upon the opposite edge, the lugs upon a side being in a common plane, both ends of said brush strip being disposed between a pair of lugs, and piercing means extending through the outer ends of both lugs of a pair and across the filamentary core and securing the same in place, said piercing means engaging both ends of said brush strip to hold the same between said pair of lugs, and having head means upon both ends securing both lugs together whereby the filamentary core is secured in place against centrifugal force when the section is rotated and whereby the lugs are secured against the sides of the channel backing to secure the brush strip upon the band.

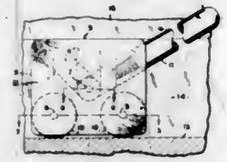
3,042,952

BASEBOARD DUSTER AND APPLICATOR

Cortez J. Bradley, 4219 Chestnut, Kansas City, Mo.

Filed Apr. 1, 1960, Ser. No. 19,251
2 Claims. (Cl. 15—210)

1. A pair of flat plates normally positioned uprightly, a pair of supporting rollers, a pair of pins, the end portions of said pair of pins spacing opposed surfaces of said pair of flat plates in parallel relation sufficiently to receive and support said pair of supporting rollers on said pins, said pair of pins being spaced parallel in the lower end portions of said pair of flat plates, a third pin, the end portions of said third pin being secured in the cen-



tral portion of said pair of flat plates, a handle, one end portion of said handle being pivoted on said third pin, a flat pad, and said flat pad being secured over one outer face of one of said pair of flat plates adapted for friction contact with a surface of a baseboard.

3,042,953

WINDSHIELD WIPER MECHANISM

George C. Batley, Solihull, Birmingham, England, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Sept. 22, 1960, Ser. No. 57,672
Claims priority, application Great Britain Mar. 31, 1960
7 Claims. (Cl. 15—250.2)



1. In a windshield wiper apparatus for cleaning a curved surface, the combination comprising, an oscillatable arm, shaft means connected to one end of said arm for imparting an oscillating motion to said arm, an outer holding member and an inner holding member pivotally mounted on the other end of said arm, a flexible wiper blade affixed to said outer holding member and to said inner holding member, means connected to said outer holding member and said arm for urging said outer holding arm away from said curved surface, means connected to said inner holding member and said arm for urging said inner holding arm toward said curved surface, and means coupled to said outer holding member and to said shaft means for urging said outer holding member and a portion of the flexible blade carried thereby toward said curved surface during a portion of each wiping cycle.

3,042,954

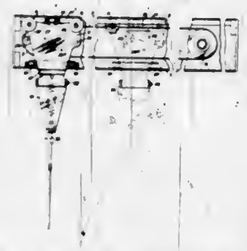
WINDOW OR WINDSCREEN WIPER MECHANISMS

Edward Donald Wynn, Cheltenham, and Charles Geoffrey Longford, Quedgeley, England, assignors to Wynn Developments Limited, Cheltenham, England

Filed Jan. 13, 1960, Ser. No. 2,276
Claims priority, application Great Britain Jan. 14, 1959
5 Claims. (Cl. 15—250.24)

1. A window wiper mechanism comprising a casing, means mounting said casing horizontally in proximity to

a window, guides carried by said casing, a movable carriage, spaced rollers rotatably mounted on said carriage to engage said guides and prevent pivotal movement of said carriage in its plane of movement and also in a plane at right angles to its plane of movement, pulleys rotatably mounted at opposite ends of said casing, a flexible belt encircling said pulleys, an arcuate pad member secured on said belt longitudinally thereof and having a radius approximating that of the pulleys, said pad member substantially conforming with the peripheries of the pulleys when passing around said pulleys, a link pivotally connected to said carriage and to said pad member, a win-



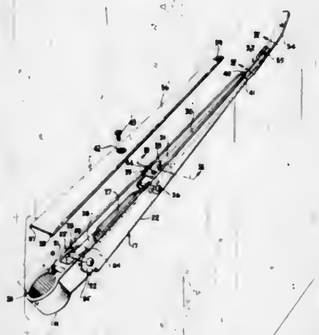
dow wiper arm and blade depending downwardly from said carriage and extending below the casing, means for rotating one of said pulleys to drive said belt and impart a to and fro wiper movement to said wiper arm, a first stop carried by the carriage engageable by the link during movement of the carriage in one direction to limit pivotal movement of the link and distortion of the belt when the link is in compression, and a second stop carried by the carriage and engageable by the link during movement of the carriage in the opposite direction to limit pivotal movement of the link and distortion of the belt when the link is in tension.

3,042,955

WINDSHIELD WIPER ARM

John R. Oishei, Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.

Filed Mar. 11, 1959, Ser. No. 798,765
8 Claims. (Cl. 15—250.35)



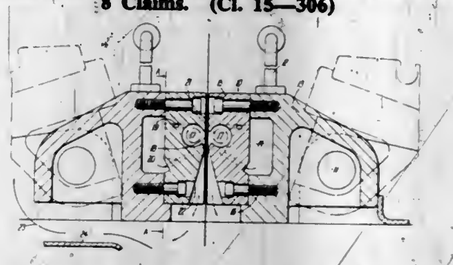
1. A twist resistant wiper arm assembly comprising a primary arm portion with opposed sides means mounted proximate one end of said primary arm portion adapted to be mounted on a rockshaft, means mounted proximate the other end of said primary arm portion for mounting a windshield wiper, an elongated secondary arm portion having a higher resistance to twisting than said primary arm portion, and connecting means for rigidly joining said secondary arm portion to said opposed sides of said primary arm portion between said ends thereof and proximate said end which mounts said windshield wiper with the longitudinal axes of said arm portions extending in substantially the same direction whereby said secondary arm portion imparts torsional rigidity to said primary arm portion.

3,042,956

DEVICES FOR USE IN THE TREATMENT OF FABRICS WITH A FLUIDISED SOLID AGENT

Ronald Stansfield Goy and William Douglas Bennett, Erdington, Birmingham, England, assignors to Dunlop Rubber Company Limited, London, England, a British Company

Filed Mar. 22, 1961, Ser. No. 97,574
Claims priority, application Great Britain Apr. 8, 1960
8 Claims. (Cl. 15—306)



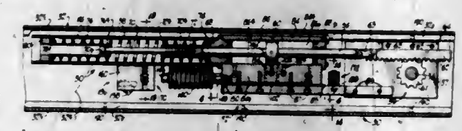
1. A device for removing from a travelling fabric adherent particles derived from a fluidised solid treating agent, comprising a pair of jaws adapted to bear lightly, in their working position, on a fabric passing between them, each of the jaws being provided with a longitudinal cavity in which an axial vortex of air can be generated and which opens over a minor portion of its circumference at the surface of the jaw, and with air passages opening substantially tangentially into such cavity and adapted to create a vortex of air in the cavity and substantially co-axially therewith in a direction such that at the opening of the cavity the air is moving in the direction opposite to the direction of travel of the fabric, the surfaces of the jaws below the entrances to the cavities diverging downwardly when the jaws are in their working position.

3,042,957

DOOR CLOSER

Dan C. Muessel, Niles, Mich., and Harold E. Gramse, South Bend, Ind., assignors to Kawneer Company, Niles, Mich., a corporation of Delaware

Filed Nov. 2, 1959, Ser. No. 850,494
7 Claims. (Cl. 16—62)



1. A door check for use with a double-acting door and movable between a door open and a door closed position and comprising a casing, a fluid chamber in said casing, a piston reciprocably movable in said fluid chamber in response to movement of said door and located centrally of said fluid chamber when in its door closed position, a first opening cycle passageway provided in said casing and extending from one end of the chamber to the other side of the piston when the door is in its door closed position, check valve means in said passageway for permitting fluid flow through said passageway only when said door is opening in a first direction, a first closing speed-closing cycle passageway provided in said casing and extending from said one end of said chamber to a point opposite said piston when in its door closed position, check valve means in said closing speed passageway for permitting fluid flow through said closing speed

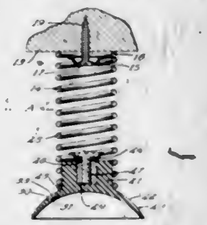
passageway only when said door is closing in a first direction, a second opening cycle passageway provided in said casing and extending from the other end of said chamber to the other side of said piston when the door is in its door closed position, check valve means in said second opening cycle passageway for permitting fluid flow through said second opening cycle passageway only when said door is opening in a second direction, a second closing speed-closing cycle passageway provided in said casing and extending from said other end of said chamber to a point opposite said piston when in its door closed position, check valve means in said second closing speed-closing cycle passageway for permitting fluid flow through said second closing speed-closing cycle passageway only when said door is closing in a second direction, a latching speed-closing cycle passageway provided in said casing and extending between points adjacent said piston when said door is in its door closed position, said closing speed passageways being blocked simultaneously with the opening of said latching speed passageway by said piston during closing movement of the door.

3,042,958
DUAL SUCTION CUP DOOR CHECK AND HOLDER
Robert M. Spears, Highway 123, Sequin Road, Stockdale, Tex.
Filed Dec. 28, 1959, Ser. No. 862,152
5 Claims. (Cl. 16—84)



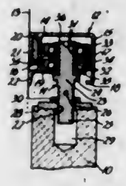
1. A device for controlling movement between relatively movable members comprising a first suction cup adapted to be affixed to one member with a concave cup-side facing outwardly, and a second suction cup adapted to be affixed to the other of said members, said second cup having a concave cup-side facing and aligned with said first-named cup-side, said cups corresponding in size and the marginal edges abutting each other with an air-tight fit whereby a suction formed between the two cups holds them together, one of said cups having manually opened and spring closed valve means functioning when opened to destroy the suction force and to thus allow the cups to be intentionally parted.

3,042,959
DOOR STOP
Edgar T. Strom, Beulah, N. Dak.
Filed Mar. 21, 1958, Ser. No. 722,959
4 Claims. (Cl. 16—86)



1. A door check including a coil spring having a plurality of spaced convolutions, means at one end of said spring for securing the spring to a wall, a suction cup device having an axial projecting shank engaged in the other end of said spring, sleeve means embedded in said axial shank, said suction cup being arranged with its periphery on a plane substantially normal to the axis of spring, said spring being simultaneously flexed laterally and compressed axially by the impact of a closing door to maintain said suction cup peripheral relation, and means attached to said sleeve securing said shank to said spring.

3,042,960
SLIDING DOOR MOUNTING
Erwin E. Spork, 115 Bonney Ave., Clayfield, Brisbane, Queensland, Australia
Filed Dec. 14, 1960, Ser. No. 75,773
Claims priority, application Australia Dec. 17, 1959
9 Claims. (Cl. 16—105)



1. A sliding door mounting having a track assembly adapted to be secured above a door opening, and two or more door hangers adapted to be secured to the top of the door and to be engaged with the track assembly, each door hanger including mounting means adapted to be connected to the door and a pair of disks mounted in fixed vertical relationship to the mounting means and counter-rotatable about vertical axes, the track assembly having spaced front and rear horizontal longitudinal supporting rails adapted to engage under the lower peripheries of the respective disks, the front rail engaging under one disk towards the front of the door and the rear rail engaging under the other disk towards the rear of the door, said two disks of each door hanger being mounted one above the other for rotation about the same vertical axis and said two supporting rails being at different heights corresponding to the lower peripheries of the respective disks, sliding motion of the door along the track assembly causing the disks to be counter-rotated by the supporting rails as the disks move therealong.

3,042,961
OPHTHALMIC MOUNTING HINGES
Arthur J. Tieri, 323 Worcester St., Southbridge, Mass.
Filed Mar. 16, 1960, Ser. No. 15,350
1 Claim. (Cl. 16—128)



In a hinge assembly, a plurality of superimposed parts having planar abutting surfaces, each of said parts being formed with an opening and said openings being aligned to form a passageway therethrough, the passageway in the upper of the superimposed parts being defined by an upwardly and outwardly flared wall throughout the thickness of said part, and the passageway in the lower of the superimposed parts being defined by a wall of less diameter than the passageway in the other parts, said wall forming the passageway in the lower of the superimposed parts being formed with a series of inwardly projecting

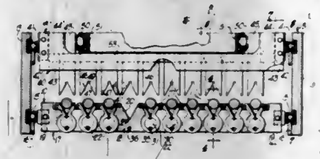
threads, a deformable plastic tubular hinge member arranged in said opening, said tubular hinge member having an upper outwardly flared end portion for snugly engaging and seating in the recess defined by said outwardly tapered wall of the upper part of said passageway, said deformable plastic tubular hinge member including a central portion and a lower reduced end portion, the lower reduced end portion being defined by a shoulder positioned at the area of contact between the lower superimposed part and the next adjacent part and having a diameter less than the diameter of the opening in said lower superimposed part, said deformable plastic tubular hinge member having its bore gradually reduced towards its lower end, and a core for said tubular hinge member formed with a portion of such diameter as to enter and expand said tubular hinge member into engagement with the adjacent walls of the superimposed parts defining the passageway therethrough, said core having its upper end flared outwardly to seat snugly within and abut the adjacent flared end face of the tubular hinge member and the lower end portion of said core having an axial recess formed therein for receiving an expanding tool for exploding the material of the core laterally into engagement with the lower portion of the deformable tubular hinge member to urge the structure of the latter between the projecting teeth of the lower part to thereby lock both the tubular hinge member and the core against axial displacement.

3,042,962
COMBINED HINGE AND HANGER FOR SCREENS AND STORM SASH
Verne Fredricksen, Bayport, Minn., assignor to Andersen Corporation, Bayport, Minn., a corporation of Minnesota
Filed Feb. 16, 1959, Ser. No. 793,576
5 Claims. (Cl. 16—158)



5. A combination hanger and pintle hinge assembly for pivotally mounting screens, storm sash frames and the like within a closure frame, said assembly comprising a pair of snap-on hanger bodies, each body comprising, flexibly yieldable screen frame embracing wings and a wing connecting wall, one of said wings comprising an elongated first plate, said plate being formed with an in-turned lip along a portion of the marginal free edge of the plate, said lip being engageable over one inner edge of the said screen frame, a continuous arcuate out-turned finger tab extending from another free edge of said plate, a second tab extending from another free edge portion of said first plate, the other of said wings comprising an elongated plate formed with an in-turned lip engageable over the opposite inner edge of said screen frame, hinge sections secured to the closure frame at the opposite corners of one side thereof in which said screen and storm sash frames are mounted, pivotal connecting means on each of said second tabs and said hinge sections, each respective connecting means of a hinge section being engageable with the connecting means of the respectively adjacent second tab of its respective adjacent snap-on hanger body.

3,042,963
SAUSAGE LINKING DEVICE
Heinz F. Runge, Madison, Wis., assignor to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 12, 1960, Ser. No. 21,783
8 Claims. (Cl. 17—34)

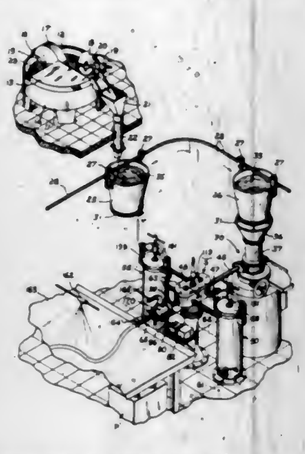


1. In a machine for linking stuffed sausage casing, a movable support having cross bar assemblies which are spaced apart a distance corresponding to the length of link desired, said cross bar assemblies each comprising a support bar member having an upwardly opening V-shaped slot in the upper edge thereof, a casing constricting device mounted on said support bar member, said constricting device being formed of rubber-like material and comprising a plate-like member having an annular bottom portion with a central opening and a top portion formed by upwardly and outwardly directed arms defining between them an upwardly opening V-shaped slot, said device being mounted on the support bar member with the V-shaped slot alligned with the V-shaped slot in the support bar member, said annular bottom portion of said device having the central opening therein connected with the V-shaped slot between the upper arms thereof by a slit extending downwardly from the apex of said V-shaped slot and an insert seated in said central opening with a neck receiving pocket of relatively small size which is positioned at the lower end of said slit, said slit forming a passageway between the V-shaped slot and the neck receiving pocket which is adapted to be opened up by forcing a portion of a stuffed casing down into the V-shaped slot and through the passageway into the pocket where it is held in constricted relation by the resiliency of the material.

3,042,964
FORMATION OF MEAT PRODUCTS
Milton Rosenthaler, Dayton, Ohio, assignor to The Sucher Packing Co., Dayton, Ohio, a corporation of Ohio
Filed July 17, 1958, Ser. No. 749,179
7 Claims. (Cl. 17—35)

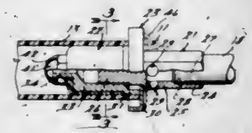
1. A meat forming apparatus comprising a comminuter adapted to receive meat material and perform an emulsifying action thereon and to discharge comminuted material under pressure, a pair of oppositely-acting pumping units, a first conduit set connecting said comminuter to said pumping units to convey meat material under the discharge pressure of said comminuter to one of said pumping units causing filling thereof, a second conduit set operatively interconnected to said pumping units and having an extruder nozzle at the end thereof through which said meat material is forced as a discharge from the other said pumping units during discharging movement thereof, a pair of interconnected valves one in each of said conduit sets and having an operator's control handle movable for coordinating meat filling from said comminuter to one of said pumping units and opening said second conduit to the other of said pumping units for discharge of meat material through said second conduit set, and fluid pressure operated motors on each operatively connected with each said pumping unit for powering said

pumping unit on the discharging stroke thereof and electric hydraulic control means operated by said handle and



connected selectively to apply hydraulic fluid to the one of said units connected through said valves to discharge through said nozzle.

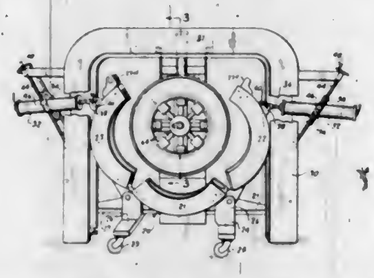
3,042,965
FORMING TOOL FOR PLASTIC PIPE
Robert A. Gray, Jr., and Scott R. Woolford, Port Huron, Mich., assignors to Mueller Brass Co., Port Huron, Mich., a corporation of Michigan
Filed Oct. 19, 1959, Ser. No. 847,116
7 Claims. (Cl. 18—1)



3. In a device for forming flanges on plastic tubing or the like, a mold of heat conductive material comprising a centrally apertured radial wall portion and an axially extending annular outer wall portion, a body of heat conductive material disposed on the outside of said mold and having a heat applying portion adapted to apply heat to the outside mold surface, a mandrel extending coaxially from the inside of said mold, a portion of said mandrel being fabricated of heat conductive material and being in spaced parallel relation with said outer mold portion to form an annular cavity therewith, and means securing together said mold, body and mandrel as an integral unit.

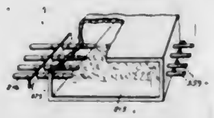
3,042,966
APPARATUS FOR RETREADING TIRES
William Jack Laycox, Walnut Creek, Calif., assignor to Bacon American Corporation, Muncie, Ind., a corporation of Indiana
Filed Sept. 11, 1959, Ser. No. 839,377
1 Claim. (Cl. 18—2)

Apparatus for retreading tires comprising a dolly, a circular tire mold mounted on and supported by said dolly, said mold having an arcuate stationary mold section, arcuate wing sections pivotally connected to the ends of said stationary section, and a latch to hold said wing sections in closed position, a machine for loading and unloading said mold including a stationary frame providing an operative position for molds brought thereto, releasable tire-engaging means insertable through an open center of a prepared tire body to engage the rim beads of the tire body to support the tire body in a plane parallel to the plane of said mold, means connected to said engaging means for moving said engaging means in a plane parallel to the plane of said mold to insert a portion of the tire body into said stationary mold section and to move the tire body further into a crowded position in which the center of the tire body is displaced radially from the axis of the mold toward said stationary mold section, means supported by said frame for laterally moving said engag-



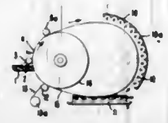
ing means and said moving means toward and away from the plane of the mold, power-actuated means mounted on said frame, means for connecting said power-actuated means to said mold wing sections for swinging said wing sections into a closed position around the tire body when the body is brought into the crowded position by said parallel moving means and said lateral moving means, and resilient means aligned with said parallel moving means and positioned to urge said tire-engaging means from its crowded position to a center position in which the axis of the tire body is aligned with the axis of said mold.

3,042,967
METHOD AND APPARATUS FOR MAKING FOAMED POLYMERIC STRUCTURES
Edwin A. Edberg, Sewickley, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed June 18, 1958, Ser. No. 742,855
10 Claims. (Cl. 18—5)



1. Automatic apparatus for forming foamed polymeric structures from expandable polymeric material, comprising a mold having movable top and bottom portions and first and second opposite sides, said first side having at least one first hole therethrough, said second side having second holes therethrough, an air actuated means for forcing said expandable polymeric material through said first hole so as substantially to fill said mold with said expandable polymeric material, a plurality of hollow steam probes each having an inlet and a plurality of small spaced outlet holes, said steam probes being insertable in said mold through said second holes so as substantially to close said mold thereby to keep said expandable polymeric material from coming out of said mold through said second holes, first means operable after insertion of said probes into said mold for causing steam to be injected into said mold through said probes, and second means operable to retract said probes from said mold after steam is injected into said mold whereby said material is expanded into the shape of said mold.

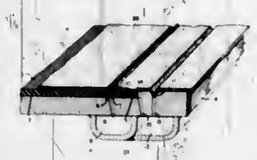
3,042,968
AN APPARATUS FOR PRODUCING OPENWORK PLASTIC SHEET MATERIAL AND THE LIKE
Arthur Kraszeski, Paris, France
(Rte. 9-W, MD-26, Newburgh, N.Y.)
Filed May 20, 1960, Ser. No. 30,687
Claims priority, application France June 10, 1959
1 Claim. (Cl. 18—15)



An apparatus for producing continuously openwork plastic sheet material resembling lace and the like comprising:

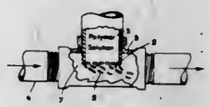
(*a*) a single cylinder,
(*b*) a continuous metal belt having interconnected engraving on its outer surface and a circumference greater than that of said single cylinder,
(*c*) means to rotate said single cylinder and said belt around said single cylinder so that said belt is in direct contact with a portion of the outer surface of said single cylinder,
(*d*) means to continuously deposit a flowable polyvinyl chloride plastisol composition in the recesses of said engraving on a portion of said belt in contact with said single cylinder,
(*e*) means to continuously wipe excess plastisol composition from the non-recessed areas of a portion of said belt in contact with said single cylinder,
(*f*) means to heat said plastisol composition in said recesses to its fusion temperature while that portion of said belt, containing said plastisol being heated, is out of contact with said single cylinder,
(*g*) means to cool a portion of said belt out of contact with said single cylinder and containing said fused plastisol, and
(*h*) means to continuously separate said cooled and fused plastisol from said engraved surface.

3,042,969
APPARATUS AND METHOD FOR MANUFACTURING MATS
Theodore E. Shaul, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 23, 1959, Ser. No. 854,686
4 Claims. (Cl. 18—19)



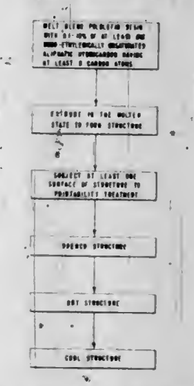
1. A mold for shaping and vulcanizing a mat comprising a mold member with a cavity having the contour and configuration of the finished mat, a trimming edge on said mold member extending around the entire periphery of the mat cavity, a sealing surface adjacent said trimming edge on the cavity side thereof, a vacuum chamber in communication with said sealing surface, a second sealing surface extending around the periphery adjacent said trimming edge on the side opposite to said first sealing surface, a second vacuum chamber in communication with said second sealing surface, a source of vacuum connected to said second vacuum chamber and means to independently control the vacuum in each chamber, whereby vacuum may be effected in either or both chambers as desired.

3,042,970
PARTICULATION OF POLYMER BY EXTRUDING A SOLUTION THEREOF INTO A LIQUID STREAM OF FLUID
Joseph F. Terenzi, South Norwalk, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Aug. 14, 1961, Ser. No. 131,715
7 Claims. (Cl. 18—47.3)



1. A method of separating a highly viscous polymeric solution into particulate cylindrical form which comprises extruding the highly viscous polymeric solution into a stream of liquid volatile non-solvent flowing at a substantially right angle to the extruded solution, the flow of said non-solvent stream having a velocity sufficient to develop enough drag force on the extruded polymeric solution to cause tensile shear of the extruded solution and recovering particles of said polymeric solution from said non-solvent, wherein said particles have a length of less than about two inches and a diameter of from about 1/32 inch to about 1/8 inch and wherein said non-solvent is partially soluble in the solvent for the polymer, is inert to said polymeric material and is of such a character that the polymeric material is substantially insoluble therein.

3,042,971
PROCESS FOR PREPARING HEAT-SEALABLE, PRINTABLE POLYOLEFIN STRUCTURES
Leon E. Wolinski, Buffalo, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 27, 1959, Ser. No. 816,065
13 Claims. (Cl. 18—47.5)



1. A process for manufacturing a heat-sealable printable polyethylene structure which comprises the steps of melt blending a polyethylene resin having a weight average molecular weight of 15,000 to 3,000,000 with 0.1%–10%, based on the weight of said resin, of at least one mono-ethylenically unsaturated aliphatic hydrocarbon, said hydrocarbon having at least 8 carbon atoms, a softening temperature below the lower temperature of the crystalline melting range of said resin, an average normal boiling temperature above the optical melting point of said resin and a melt viscosity below that of the poly-

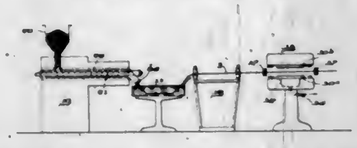
ethylene resin at a temperature above 110° C. to form a mixture; extruding said mixture at a temperature above 150° C. to form a structure; subjecting at least one surface of said structure to a printability treatment; quenching said structure at a temperature between 25° C.–90° C.; drying said structure and cooling said structure.

3,042,972

PROCESS OF MANUFACTURING ARTICLES HAVING OUTER FOAMED PORTIONS

Gerald F. Lafferty, Beaver, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed June 24, 1960, Ser. No. 38,587
5 Claims. (Cl. 18—48)



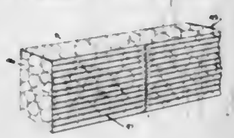
1. A process for producing a shaped article which comprises heating at least one side of a sheet of thermoplastic resin which contains therein an expanding agent for creating a foam structure in the sheet when exposed to heat, the heating being continued until said sheet becomes of a limp character and only the portion of the sheet facing the heat source converts to a foamed structure, vacuum forming said sheet to a desired shape, cooling the shaped article to permit hardening and removing the cooled article from the shaping device.

3,042,973

PROCESS OF MANUFACTURING A SHAPED BODY OF POROUS POLYSTYRENE FOAM OF LOW DENSITY

Frederick B. Brockhues, Haus 442, Vaduz, Liechtenstein, and Wilhelm Muhm, Humboldstrasse 299, Wiesbaden, Germany

Filed June 24, 1957, Ser. No. 667,434
Claims priority, application Germany June 25, 1956
3 Claims. (Cl. 18—48)



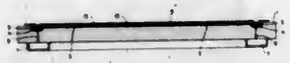
1. A process of manufacturing a shaped body of porous polystyrene foam of low density, said process comprising the steps of placing expandable polystyrene particles into a mold having a plurality of adjoining walls, opposite ones of said walls being spaced apart more than 25 cm., conducting steam through a multiplicity of closely spaced slot-like steam inlet openings in only some of said walls of the mold into contact with the polystyrene particles to expand the same, while retaining the expanding polystyrene particles at closely spaced mold zones across the entire surface of the mold, said mold zones defining the slot-like steam inlet openings therebetween to obtain the low-density porous shaped body of polystyrene foam, having over its entire surface thin reinforcing lines corresponding to the slot-like steam inlet openings between the mold retaining zones, driving moisture out of like ones of said openings in the remaining walls of said mold, the steam conducted into said first named openings pushing said moisture through said last-named openings, and, after expansion of the polystyrene particles is completed, passing a stream of cold water past the slot-like openings and at a distance therfrom so as to cool and moisten the air in said openings and to cool the shaped body through said slot-like openings by convection.

3,042,974

METHOD OF MAKING MATS

John H. Gerstenmaier, Cuyahoga Falls, and Thomas J. Leo, Ray H. Miller, and Theodore E. Shaul, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Jan. 15, 1960, Ser. No. 2,745
9 Claims. (Cl. 18—53)



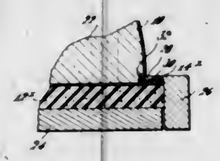
1. The method of vulcanizing a floor mat having a surface configuration comprising placing one surface of a sheet of substantially air impervious vulcanizable mat stock on a heated mold surface of a predetermined configuration, the temperature of said surface being in a range wherein no substantial vulcanization of the mat stock will occur, applying a vacuum between the sheet of stock and mold surface to cause intimate contact between the surface of the mold and mat stock in the absence of positive pressure applying means on the other surface of the sheet of mat stock, maintaining said vacuum to retain the intimate contact to allow the temperature of the mold surface to gradually raise to one at which substantial vulcanization of the mat takes place by heat transfer from the mold surface into the sheet of stock and simultaneously preventing heat radiation from the exposed surface of said mat stock to substantially retain said heat in said mat stock until vulcanization is complete.

3,042,975

WELT IN SHOES WITH MOLDED SOLES

George H. Bingham, Jr., Westminster, and Otto Y. Olsson, Taneytown, Md., assignors to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland

Filed Aug. 26, 1960, Ser. No. 52,077
5 Claims. (Cl. 18—59)



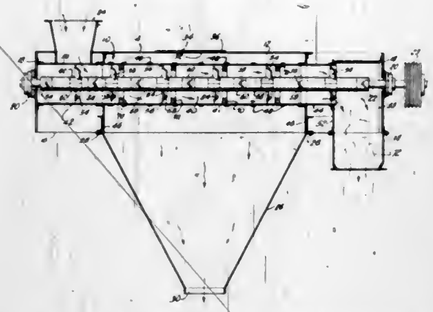
1. The method of applying a welt to a shoe having a rubbery outersole molded to the upper comprising providing a mold having a last for an upper, a bottom plate and peripheral ring member circumscribing the outersole and having an overhanging peripheral projecting with transverse corrugations on its underside, applying a ribbon of vulcanizable rubber of one color to the edge of an outersole blank of vulcanizable rubber of another color, said ribbon being applied to but not beyond the peripheral edge of said blank and being substantially nonflowable at shoe-sole molding temperatures and pressures, placing said ribbon and blank in the mold with an upper, and molding said upper and ribbon to said outersole under heat and pressure.

3,042,976

FIBER OPENING AND CLEANING

Irvin Barnett, Martinsville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed Aug. 2, 1957, Ser. No. 675,951
8 Claims. (Cl. 19—90)



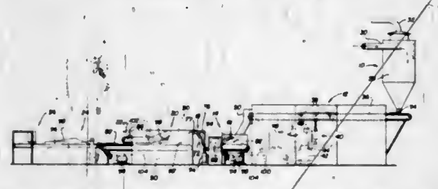
1. Apparatus for opening and cleaning fibrous masses containing waste material, such as dust, comprising a tube having openings in the wall thereof, said openings being of a size to permit passage of the waste materials therethrough, a shaft mounted for rotation on an axis coinciding with the axis of the tube, a plurality of fiber beating means connected to said shaft in axially spaced relationship and extending therefrom to positions adjacent said wall, a plurality of blade means connected to said shaft in axially spaced relationship and extending to positions more remote from said wall than said beater means, said blade means being arranged to direct fluid currents axially and generally centrally of said tube with the effective fiber carrying portion thereof being transversally spaced from said wall, means for rotating said shaft, a chamber communicating with the interior of said tube through said openings, means for creating a negative pressure in said chamber, means for varying the degree of said negative pressure, and means adjacent the inner surface of said tube and extending generally transversely thereof for partially obstructing the flow of said fibrous masses axially of said tube.

3,042,977

SYSTEM FOR MAKING PADS FROM BARK FIBERS

Nicholas V. Poletika and Rodrick E. Black, Fort Bragg, Calif., assignors to Union Lumber Company, San Francisco, Calif., a corporation of California

Filed Mar. 19, 1959, Ser. No. 800,551
15 Claims. (Cl. 19—144.5)



1. In apparatus for the felting of bark fibers in the continuous formation of felted pads: feed conveyor means including a depositing region for fibers being fed into the apparatus, a device responsive to the weight of the fibers being fed and adapted to maintain a relatively constant rate of feed of fibers by said conveyor means, feed compression means comprising a plurality of rolls spaced at decreasing distances above said conveyor means in the direction of conveyance, shredding means adjacent said feed compression means and adapted to rapidly separate individual fibers from said compressed feed, said shredding means including a roll having projecting portions and adapted to rotate at a peripheral speed substantially in excess of the speed of said conveyor means, duct means leading from said shredding means to an expansion chamber, said duct means including an inlet air passage of gradually increasing cross section whereby individual fibers are conveyed to fall in free flight in said expansion chamber, discharge conveyor means in said expansion chamber and in the path of said freely falling fibers, and compression means positioned within said expansion chamber and adapted to compress the loosely felted mass of fibers collecting on said discharge conveyor into a continuous felted pad.

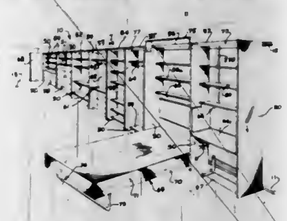
4. In a continuous method for felting bark fibers to produce relatively thin, dense fibrous pads characterized by enhanced shock absorbing properties, resiliency and resistance to compression, the steps of supplying a feed of loose fibers at a predetermined substantially constant rate to a compression zone, progressively compressing and accelerating the feed in such zone to achieve a matting of the fibers, positively feeding the compressed matted fibers into a shredding zone, subjecting the compressed matted fibers in said shredding zone to a very rapid tearing action to separate and expel individual fibers from the zone, applying fluid pressure to individualized fibers at a point remote from said shredding zone to thereby induce an air current to convey the fibers away from the shredding zone, uniformly distributing the fibers into an air stream expanding into a settling zone of reduced pressure, permitting said shredded fibers to fall in free flight in said settling zone onto a moving membrane, whereby said shredded fibers are evenly distributed on said membrane, and conveying the fibers at a predetermined rate away from said settling zone while simultaneously compressing the same to form a felted pad of predetermined uniform density and thickness.

3,042,978

STORAGE

Charles Eames and Don Albinson, Venice, Calif., assignors to Herman Miller Inc., Zeeland, Mich., a corporation of Michigan

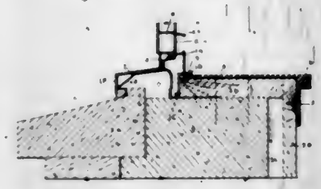
Filed Nov. 6, 1959, Ser. No. 852,589
4 Claims. (Cl. 20—1.11)



1. In combination, a system for furnishing a room having a floor, a ceiling and a wall, said combination comprising: a pair of independent parallel vertically spaced anchor rails mounted to said wall and extending substantially the length thereof generally parallel to said floor; a plurality of divider panels each projecting from said wall a substantial distance into the room; each of said divider panels having a pair of bracket members thereon, one engaging each of said anchor rails, each of said divider panels being independently slidable along said anchor rails; said panels being spaced along said wall to divide the area of said room adjacent said wall into a selected number of compartments; selected units of furniture including those of the type normally supported on a floor disposed in some of said compartments and each mounted to and supported by a pair of said panels forming the compartment in which it is mounted; each of said panels and the portions of said units of furniture confined

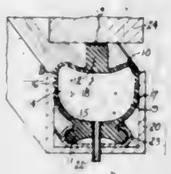
between said panels being spaced from both said floor and said ceiling; each of said compartments being at least partially open at both the top and bottom thereof for allowing the flow of air through said compartments.

3,042,979
WINDOW SILLS AND COVERINGS THEREFOR
William J. McNeil, 719 Kahl Bldg., Davenport, Iowa
Filed Jan. 30, 1958, Ser. No. 712,124
2 Claims. (Cl. 20—11)



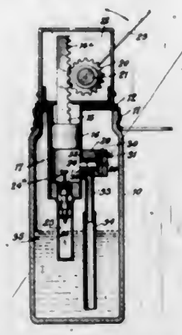
1. In a wall of a building, the combination with a metal window frame, of inner and outer horizontal sill members at the base thereof, a hollow metal base member, inner and outer sill members forming part of the wall, a cap of wood mounted upon the inner sill member, the metal base being secured above the sills, a supporting metal plate mounted upon the inner sill member adapted to contact and secure the outer base member in position, an elastic flexible rubber cover about three-eighths of an inch in thickness secured by a permanent adhesive on the cap, a downwardly extending flange on the inner edge of the metal base member having a horizontal lateral extension integral therewith, the outer edge of the cover extending under and being secured to the extension by the pressure thereof and by an adhesive firmly uniting the cover to the inner sill member.

3,042,980
REINFORCED INFLATABLE SEAL AND METHOD OF MAKING
Daniel Seymour Brinsmade, Bethany, Conn., assignor to The Connecticut Hard Rubber Company, New Haven, Conn., a corporation of Connecticut
Filed Mar. 2, 1960, Ser. No. 12,441
1 Claim. (Cl. 20—69)



An inflatable sealing strip for disposition in a channel between an element of an aircraft and a closing element adjacent said channel to be sealed against external pressure variation, said strip including an integral base portion of flexible silicone rubber adapted to be fixedly disposed in said channel and an essentially annular inflatable element mounted integrally on said base portion, a woven metal fabric embedded in and coextensive with said tubular inflatable element longitudinally and circumferentially, said woven metal fabric being constituted by loosely looped interwoven strands of metal wire linked together in a manner such that on expansion of said inflatable element the loosely woven metal fabric is susceptible to a predetermined limited degree of stretching in both longitudinal and transverse directions to positively prevent rupture of the said inflatable element when subjected to a condition of extreme pressure differential.

3,042,981
ATOMIZER
Rocco Dilione, 4410 NE. 16th Ave., Fort Lauderdale, Fla.
Filed June 23, 1959, Ser. No. 822,393
3 Claims. (Cl. 21—77)



1. A deodorizing device comprising in combination a reservoir containing a liquid deodorant; a piston cylinder fitted with a piston and piston rod adapted to be reciprocated in the piston cylinder by the swinging of a hinged movable member; an air-liquid mixing chamber which connects into said piston cylinder; a liquid intake, one end of which is submerged into the said deodorizing liquid, the other end of which connects into the air-liquid mixing chamber; an air intake connecting into said air-liquid mixing chamber; and an expansion chamber, one end of which exhausts to the atmosphere and the other end of which is connected to the piston cylinder through a sealed mechanism, the seal normally being maintained, except at the point of maximum compression of the air-liquid mixture.

3,042,982
EXPENDIBLE MOULDS FOR PATTERNS IN PRECISION CASTING
Norman Duncan Gerard Mountford, Castle Donington, and Charles William Morley, Alvaston, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
No Drawing. Filed June 24, 1959, Ser. No. 822,424
Claims priority, application Great Britain July 7, 1958
2 Claims. (Cl. 22—195)

2. The method of making an expendible wax pattern for use in the precision casting of metals comprising forming a mould around a model of the article, said mould being formed from a composition consisting essentially of sodium carboxy methyl silicate, sodium carbonate, a refractory and sodium silicate solution capable of being hardened sufficiently for use solely by the application of carbon dioxide and being dispersible by water without further treatment, hardening the mould so formed solely by the application of carbon dioxide, removing the model from the mould, coating the interior of the mould to render it impervious to wax, casting an expendible wax pattern in the mould and removing the mould from the fragile pattern so produced by dispersing the mould material with water.

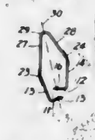
3,042,983
TIE HOLDER
Robert W. Riedler, 505 W. Euclid Ave., Arlington Heights, Ill.
Filed Apr. 13, 1959, Ser. No. 806,114
1 Claim. (Cl. 24—49)

A tie holder comprising a loop member having a front portion and end portion with overlapped sections, a pressure sensitive adhesive on one of the sections adheringly securing it to the other section, said sections having button holes elongated circumferentially of the loop and adapted to be brought into registry for admitting a button therethrough, and displaceable circumferentially of the loop to partially misalign the holes to prevent exit of the button while said sections are adhered to each other,



and said sections having slots extending from respective holes to the edges of the sections and said slots extending transversely of the length of said member and disposed in positions adjacent to the remote ends of the holes in the overlapped position of the sections.

3,042,984
CLIP DEVICE
Kurt W. Merfeld, Manhasset, N.Y., assignor to Kunreuther and Merfeld, New York, N.Y., a partnership
Filed Feb. 3, 1961, Ser. No. 87,014
2 Claims. (Cl. 24—87)



1. A clip of the character described comprising an elongated thin strip of one width throughout the major portion of its length, said strip having flared sides joined by a rounded portion, the flared sides having ends bent angularly to said sides, said strip having corrugations extending onto the flared sides and said ends in maintaining angular relationship of the sides and ends, said ends terminating in flange portions projecting from and extending at substantially right angles to inner surfaces of said bent ends, and said flange portions extending the full width of said strip and terminating in outwardly projecting prongs materially less in width than the width of the flange portions, leaving shoulders at terminal ends of said flange portions.

3,042,985
BINDER FOR OFFICE FOLDER
Anthony Wilmot Dalferes, P.O. Box 3088, Lafayette, La.
Filed Sept. 15, 1960, Ser. No. 56,150
6 Claims. (Cl. 24—153)



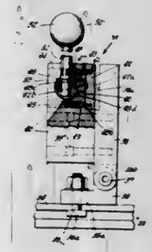
1. A binder for office folder comprising a base, bendable prongs initially upstanding from the base upon which papers to be bound are placed, a guide member removably received over the papers and having slots through which the prongs project, a slide member slidable in the guide member having slots to receive the prongs, binding means on the slide member for bending and clamping portions of the prongs between the two members incident to sliding movement of the slide member in one direction, the depth of clearance between the bottom surface of said slide and the surface of said guide member opposed thereto approximately corresponding to the initial thickness of the portions of the prongs designed to occupy the space between said surfaces, and releasing means on the slide member for prying up the bent and clamped portions of the prongs incident to sliding movement of the slide member in an opposite direction.

3,042,986
QUICK RELEASE SAFETY BELT BUCKLE
Henry W. Racette, Chicago, Ill. (1013 Brookwood, Bensenville, Ill.), and Lloyd L. Grant, Jr., 524 Clarendon St., Addison, Ill.
Filed Feb. 5, 1960, Ser. No. 6,918
1 Claim. (Cl. 24—170)



A belt buckle comprising a frame including a flat base wall and a pair of generally parallel flanges defining a flat belt-receiving way, a latch between said flanges opposing the wall and having a handle portion and a cam portion merging into a corner structure therewith and providing a backbone extending transversely of said flanges, and pintles projecting from opposite ends of the backbone into apertures in the respective flanges, each pintle having a first flange portion coplanar with the cam portion and a second flange portion coplanar with the handle portion, said first and second flange portions presenting an arcuate contour engaging the peripheral edge of the associated aperture and terminating in sharp edges disposed in scuffing relation to the peripheral edge of the respective aperture whereby any incrustations in the apertures are removed by swinging of the latch, said cam portion being transversely curved only in one plane and presenting a flat belt-engaging edge and side edges, the curvature of the cam portion extending from one side edge to the other on a single radius and oriented to progressively engage an associated belt from the side edges toward the center of said cam portion in said way with attendant change in the position of said lever arm and loading upon the pintles during locking of the latch so that said pintles are loaded gradually to facilitate locking and opening of the buckle.

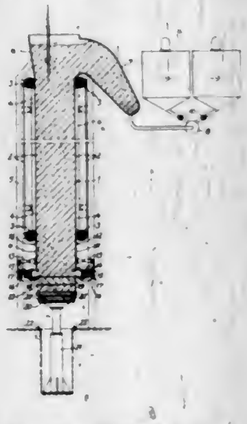
3,042,987
CLAMP
Romeo A. Lalli, Bridgeport, Conn.
(1805 Stratford Ave., Stratford, Conn.)
Original application Apr. 2, 1956, Ser. No. 575,470, now Patent No. 2,889,865, dated June 9, 1959. Divided and this application Oct. 21, 1958, Ser. No. 768,703
2 Claims. (Cl. 24—263)



1. A clamping jaw unit comprising a jaw member having a clamping surface; a bracket removably mounted on said jaw member; a second jaw member movably

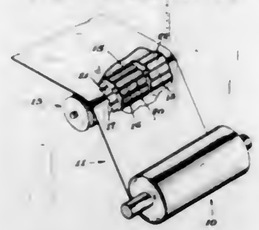
mounted on said bracket, said movable jaw member being adapted to be moved relative to said other jaw member and having a clamping surface directed toward the clamping surface of said other jaw member; spring means normally urging said second jaw member away from said first mentioned jaw member to maintain said jaw members normally spaced, and means for moving said second jaw member against the force of said spring means and toward said first mentioned jaw member, said moving means including a dowel means mounted on said bracket in engagement with the movable jaw member at the rear of the clamping surface thereof, and a shaft rotatably mounted on said bracket in fixed relation to said first jaw member and having a portion forming eccentric cam means provided with a recess for receiving said dowel means, said eccentric cam means being in camming engagement with said dowel means for laterally displacing said dowel means for moving said movable jaw member relative to said other jaw member upon rotation of said shaft for clamping and unclamping an article therebetween, said recess being located to receive the dowel means in the unclamping position of the cam means and accelerating the movement of the second jaw into and out of clamping relation.

3,042,988
PLANT FOR THE MANUFACTURE OF CELLULAR LIGHT WEIGHT BUILDING ELEMENTS
Rolf Erik Goransson, Saltsjo-Duvnas, and Gustav Ingvar Roland Johansson, Hagersten, Sweden, assignors to Casius Corporation Limited, Montreal, Quebec, Canada
Filed Oct. 19, 1959, Ser. No. 847,255
6 Claims. (Cl. 25—2)



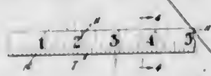
1. In a plant for the manufacture of cellular, light weight building elements of concrete and similar hydraulic cement mixtures, a casting equipment comprising a vertical, open-ended mold shaft of substantial height, an overflow chamber communicating with the upper end of said shaft, means for supplying expandable hydraulic cement mixture to said chamber to cause expansion of the mixture therein and thereby promote the overflow of said expanded mixture into said shaft, means at the lower end of said shaft for controlling the discharge therethrough of the solidified, cellular mass formed from said hydraulic cement mixture as a result of chemical reactions therein, horizontally reciprocatable cutting means arranged beneath the lower discharge end of said shaft to cut the discharged mass into slices, means for receiving said cut-off slices, said latter means comprising a vertically adjustable supporting surface arranged under the lower end of said shaft, and means for elevating said surface into contact with the under side of the mass discharged from said shaft.

3,042,989
SLAT EXPANDER ROLL
Richard D. Foley, Bay City, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 8, 1961, Ser. No. 108,592
5 Claims. (Cl. 26—64)



1. In a slat expander roll for a web comprising a plurality of slats peripherally disposed about and parallel to the axis of said roll, each of said slats comprised of at least a centrally disposed fixed portion and movable portions disposed at opposite ends of said fixed portion, said movable portions adapted to move toward and away from said central fixed portion as said roll is rotated; said movement being in a direction generally parallel to the axis of rotation, the improvement which comprises providing said central fixed portion of each said slat with an exposed roughened surface, and said movable portions of each of said slats with an exposed less rough surface, the difference in roughness being sufficient to maintain tracking of said web.

3,042,990
WOVEN-TYPE MEASURING TAPE
Charles Zelnick, Saginaw, Mich., assignor to The Lufkin Rule Company, Saginaw, Mich.
Filed Sept. 7, 1956, Ser. No. 608,514
16 Claims. (Cl. 28—74)



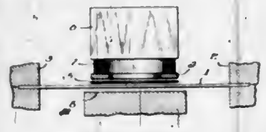
1. A measuring tape having longitudinally extending, aligned, synthetic, plastic warp threads which can be heat set at an elevated temperature, the warp threads comprising fibres heat-set in a condition in which they are stretched to near their elastic limit to a point where resistance to further stretching is near maximum, a sinuous filling of threads interconnecting said warp threads, and graduations on said tape.

3,042,991
ARTIFICIAL FUR OR THE LIKE
Ladislao Rona, Rioja 2424, Olivos, Buenos Aires, Argentina
Filed Feb. 26, 1958, Ser. No. 717,710
5 Claims. (Cl. 28—79)



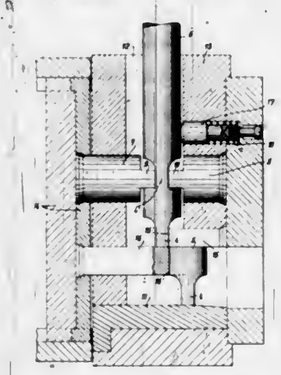
1. An artificial fur product comprising a material such as hair, wool or the like severed from the skin of an animal, said material being arranged in a continuous piece in substantially the same relative position as it occupied on the skin of the animal from which it was cut, said hairs, wool or the like of said material at a common end thereof being matted to form a felted layer in said material, said layer supporting and retaining the free ends of said hairs, wool or the like extending therefrom in said same position.

3,042,992
METHOD OF AND APPARATUS FOR MAKING TENSIONED WIRE GRID ELECTRODE
Andreas Weissfloch, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed Mar. 22, 1955, Ser. No. 495,839
Claims priority, application Germany Mar. 25, 1954
3 Claims. (Cl. 29—25.14)



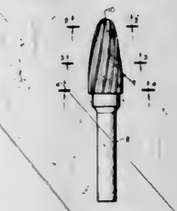
1. A method of making a grid for an electron discharge tube including an annular relatively rigid metallic carrier and grid wires soldered thereto and extending across the central opening thereof, which comprises taking rectilinear wires which are to form said grid wires and applying forces at the ends thereof to impart relatively slight initial tension thereto, placing an annulus of solder against one surface of each of said slightly tensioned wires, placing a relatively rigid annular metallic carrier adjacent said solder annulus and concentric therewith, applying pressure to one side only of said carrier remote from said solder annulus in a direction perpendicular to the axes of said slightly tensioned wires and in spaced relationship with respect to said carrier to press said solder annulus against said wires and deflect such wires, thereby increasing the tension thereon beyond the slight initial tension imparted thereto by said forces applied at the ends thereof, and applying radiant heat to said wires at the opposite upsupported surface thereof for the purpose of melting said solder so as to effect the soldering of said carrier to said wires while said wires are under increased tension by the pressure applied to said carrier.

3,042,993
APPARATUS FOR COLD MOLDING METAL PRODUCTS
Christian Schondelmaier, Lohmuhle, Gutach, Schwarzwaldbahn, Germany
Filed Mar. 7, 1956, Ser. No. 570,008
Claims priority, application Germany Mar. 10, 1955
3 Claims. (Cl. 29—34)



1. An apparatus for cold-molding metal products comprising a body having a substantially vertical channel therein, and a base at the lower end of said channel, said channel being open at its upper end for inserting a solid rod-shaped blank therein so as to rest with its lower end on said base, said channel being so shaped that transverse expansion of a blank therein is unrestricted in all directions, a pair of molding dies disposed at substantially the same level transversally of said channel, one of said dies being stationary and extending into said channel, the second die being adapted to move into and out of said channel and transversally thereto, said channel having an inner width sufficient to accommodate said stationary die, means for reciprocating said second die relative to said stationary die for compressing said blank equally from opposite sides between said dies and within said channel so as to stretch said blank in a longitudinal upward direction only, and for simultaneously flattening said blank to form a diametrally extending web-shaped portion, whereby increasing the original diameter of said blank at said portion is not substantially increased in a transverse direction normal to the direction in which said dies compress said blank, the opposite lower edges and surfaces of said dies at the end of the compression stroke then engaging said blank and forming flat surfaces thereon, while the web extends between said dies and beyond the upper edges thereof and then merges into the uncompressed body portion of said blank, and means disposed between the level of said molding dies and said base for shearing the blank portion, which has been molded by said dies during the preceding compression stroke, off the remainder of said blank simultaneously with the next-following compression stroke of said second molding die.

3,042,994
ROTARY FILES
Hans Ruggeberg, Marienheide, Rhineland, Germany, assignor to R. & R. Carbide Mfg. Co. Inc., Carlstadt, N.J., a corporation of New Jersey
Filed May 4, 1960, Ser. No. 26,808
1 Claim. (Cl. 29—78)

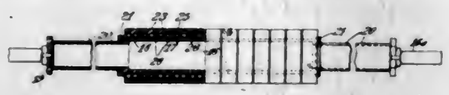


A rotary file comprising a shaft and a head terminating in a tip of reduced diameter, said head having a series of teeth extending from its inner end to said tip along curved lines, each of said teeth having a cutting edge, a trailing edge and a land tapering toward said tip and disposed between said edges at a non-uniform relief angle whose size is smallest at the largest diameter of the head and largest at the smallest diameter of said head so that said trailing edge extends along a helicoidal line and uniform action is maintained throughout the length of said head.

3,042,995
ROLLERS FOR PICKLING BATHS
Bernard George Birkin, Oldham, England, assignor to BTR Industries Limited, London, England, a company of Great Britain
Filed Jan. 13, 1960, Ser. No. 2,220
Claims priority, application Great Britain Jan. 16, 1959
6 Claims. (Cl. 29—116)

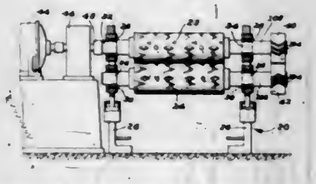
1. A pickling roller assembly for guiding traveling sheet material wetted with corrosive liquid, said pickling roller assembly comprising a shaft having an outer bearing surface of hard corrosion resistant material, roll means

including hard corrosion resistant material disposed around said shaft and freely rotatable thereabout, said roll means having a radially outer sheet-supporting surface and having a radially inner bearing surface of hard plastic corrosion resistant material, annular groove means in one of said bearing surfaces, and bearing means including rotatable bearing elements with outer surfaces
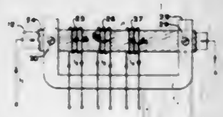


of hard plastic corrosion-resistant material between said shaft and said roll means with said bearing elements disposed in said annular groove means in rolling contact with said radially inner bearing surface of the roll means and with said outer bearing surface of the shaft to permit full circle rotation of the roll means about said shaft under the turning forces exerted on the roll means by the traveling sheet material.

3,042,996
EMBOSSING SHELLS AND METHOD FOR PRODUCING AND ASSEMBLING SAME
Robert F. Nelson, Hillside, N.J., assignor to Modern Engraving and Machine Company, Hillside, N.J., a corporation of New Jersey
Filed Dec. 3, 1959, Ser. No. 856,990
16 Claims. (Cl. 29—148.4)



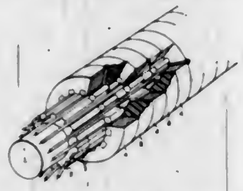
1. A method of preparing and assembling in an operative position a pair of matched and hollow embossing shells having mating patterns thereon, said method comprising: forming mating patterns on the external cylindrical surface of each of two hollow metallic shells of substantially the same size; providing substantially similar slots in predetermined locations in corresponding radial end faces of said shells so that when said slots are brought into precise radial alignment the patterns on said shells will be precisely mated; mounting said shells in rotatable positions in coextensive and substantially close relation with their axes parallel; rotating one of said shells relative to the other shell while maintaining said shells in bodily stationary position and until said slots are brought into precise radial alignment; and securing said shells in this position and in driving connection with each other.

3,042,997
METHOD OF MAKING MAGNETIC DATA STORAGE DEVICES
John R. Anderson and Richard M. Clinehens, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Nov. 18, 1957, Ser. No. 696,987
9 Claims. (Cl. 29—155.5)



1. The method of fabricating a magnetic data storage device comprising the steps of: electroplating a stress susceptible ferromagnetic coating onto an elongated substrate of electrically conductive material; and thereafter applying and maintaining a substantially constant torsional stress to said coating relative to the longitudinal axis of said substrate and of an amount sufficient to establish in said coating an easy direction of magnetization which is oriented at an angle with respect to said longitudinal axis.

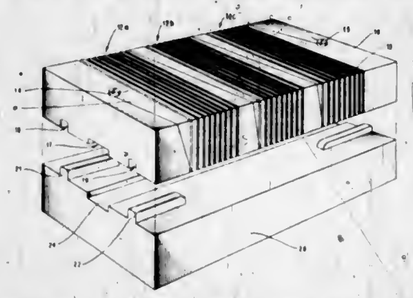
3,042,998
SLIP RING ASSEMBLY
Henry Charles Sweett, Ealing, London, Charles Herbert Arthur Parsley, Grove Park, Chiswick, London, and Jack Smith, Isleworth, England, assignors to The Sperry Gyroscope Company Limited, Brentford, England, a British company
Filed May 2, 1958, Ser. No. 732,749
Claims priority, application Great Britain May 6, 1957
2 Claims. (Cl. 29—155.5)



1. A method of making a slip ring assembly including the steps of forming a predetermined number parallel longitudinal splines along the outer curved surface of a cylindrical support member, said outer surface comprising electrical insulating material, forming an equal number of truncated parallel longitudinal splines along the inner cylindrical surface of a hollow conductive tube for mating with said splines on said support member to form a secure fit, said truncated splines forming hollow channels between the tips of said truncated splines and said support member when said support member and said tube are fitted together, fitting said support member within said tube by mating their respective splines to form said longitudinal hollow channels and to render said support member and said tube coaxial, said fitting also prevents rotation of said tube relative to said support member, cutting said tube into spaced lengths along the longitudinal axis thereof whereby each of said lengths forms a separate slip ring in the position it will have in the finished assembly, inserting a separate wire into each of a number of said hollow longitudinal channels, each wire having a diameter smaller than that of its channel connecting each wire to a different one of said slip rings and filling the spaces between said slip rings with an electrical insulating material.

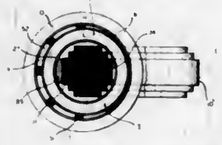
3,042,999
METHOD OF FABRICATING MAGNETIC PRINTER WRITE HEADS
Ralph E. Page, La Grangeville, and Theodore L. Buley, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 29, 1958, Ser. No. 770,489
1 Claim. (Cl. 29—155.5)

A method of fabricating a magnetic printer write head assembly, comprising the steps of wrapping magnetizable iron wires in a coil form on a first jig member, said jig member having a plurality of accurately spaced grooves for receiving each successive coil loop of said wire and for maintaining each loop in an accurate and spaced side by side relationship to the succeeding coil loop, said jig member having a slot in one surface thereof and extending transversely to corresponding portions of the coil loops at a particular area thereof, engaging a second jig member with said first, said second jig member having a slot similar to said first and aligned therewith when said jigs are engaged so that said slots form an elongated cavity with said corresponding portions of the coil loops extending transversely thereacross; flowing a potting compound into said cavity to fill it and enclose said corresponding positions of the coil loops, said potting compound having magnetic properties, removing said second jig from said first jig after said compound has hardened thus exposing the solidified slug formed in said cavity, cutting said wire loops on said first jig at points removed from slug and removing said slug from said first jig member, said slug having pigtail ends of said imbedded coil portions extending from opposed sides thereof; removing said pigtails flush with one surface of said slug, positioning said slug in a cavity in one surface of a supporting member formed of non-magnetic material, said cavity being of the general shape of said slug but of a greater depth so that the slug is confined within the walls of the cavity with the remaining pigtail ends extending



from said slug beyond an outer surface of said supporting member; inserting an individual energizing winding on each of said extending ends, said windings being also accommodated within the confines of said supporting member cavity the leads of each winding being inserted in a related groove extending transversely from said supporting member cavity to a related electrical terminal carried by said supporting member; securing guide and supporting means to said supporting member, said guide and supporting means being positioned to support each pigtail extending beyond its related winding in a desired final operational position, filling the remaining unoccupied portion of said cavity about said windings with said same potting compound having magnetic properties, said last cavity being filled so that one surface thereof is flush with an adjacent outer surface of said supporting member, removing said pigtail guide and supporting means, grinding said pigtail extensions flush with the adjacent surface of said last potted material, and finally attaching the leads of each winding to its associated electrical terminal.

3,043,000
METHOD OF FORMING A CONDUCTIVE COIL ON A CLOSED MAGNETIC CORE
Frederick A. Hatfield, Zanesville, Ohio, assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Apr. 24, 1958, Ser. No. 730,664
4 Claims. (Cl. 29—155.57)



3. The method of forming a conductive coil on the straight winding leg of a closed magnetic core having a plurality of legs surrounding a window, comprising the steps of placing a first insulating tube and end flanges around said winding leg to provide a spool like structure, revolubly supporting and rotating said flanges to thereby rotate the tube and winding wire in inner helical layers on the rotating tube, removing said flanges, displacing said inner helical layers relative to said winding leg to a position wherein the portion of said inner layers within the window of said core are adjacent said winding leg and the axis of said inner helical layers is noncoincident with the longitudinal axis of said winding leg, placing a second insulating tube around said inner helical layers, revolubly supporting and rotating said second insulating tube and winding wire in outer helical layers on the rotating second insulating tube, and displacing said outer helical layers relative to said inner helical layers to a position where the portion of said outer layers within said window is adjacent said inner layers and the axis of said outer layers is noncoincident with the axes of said winding leg and said inner layers, whereby a high copper space factor within said core window is obtained.

3,043,001
MECHANIZED INSERTION OF RADIO TUBE SOCKETS
William Gluck, Bronx, N.Y., assignor to Industrial Electronic Hardware Corp., a corporation of New York
Original application Apr. 20, 1956, Ser. No. 579,664, now Patent No. 2,962,690, dated Nov. 29, 1960. Divided and this application Sept. 26, 1958, Ser. No. 763,512
13 Claims. (Cl. 29—203)

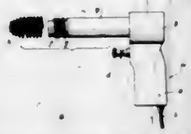


1. A socket inserting machine for inserting radio tube sockets into a board, said machine comprising a magazine holding a series of sockets, means disposed outside of the magazine and movable in a direction longitudinal of the magazine for operating on the peripheral portion of the endmost socket to push the endmost socket into a board while separating the endmost socket from the next socket, releasable means engaging the next socket higher than the bottom socket to hold the stack of sockets against downward movement, and means to feed the series of sockets a distance corresponding to one socket as a part of each socket insertion cycle preparatory to the next socket insertion cycle.

3,043,002
METHOD AND TOOLS FOR REPAIRING MUFFLER ASSEMBLIES
Lowell N. Brown, Overland, Mo.
(9422 Trenton Ave., St. Louis 14, Mo.)
Filed Oct. 5, 1959, Ser. No. 844,376
6 Claims. (Cl. 29—401)

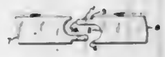
1. The method of removing a defective tail pipe from the muffler proper of an automative vehicle muffler assembly of the type wherein one end portion of the tail pipe terminates within the outlet tubular extension of the muffler, said method comprising: the steps of first operatively connecting a cutoff chisel having a thin blade provided with an arcuate cutting edge to the barrel of a pneumatic hammer of the character disclosed; thereupon

severing said tail pipe along an imaginary line removed a short distance from said extension by means of said chisel; thereafter removing said chisel from the hammer, and then operatively connecting an internal cutter having a blade with an arcuate upper surface to the barrel of the same pneumatic hammer, said blade terminating at its free end in a generally V-shaped guide edge, and



being provided with an integral angularly downwardly projecting fin segment having a sharp cutting edge that merges into the guide edge aforesaid; thereupon slitting the segment of tail pipe remaining in said extension longitudinally from end to end thereof by means of said internal cutter; thereupon withdrawing the cutter; and then removing said longitudinally slit segment from the tubular extension aforesaid.

3,043,003
METHOD FOR FORMING JOINT
David Allan Lever, 60 St. Louis St., Riverside, Ontario, Canada
Filed Mar. 3, 1958, Ser. No. 718,801
4 Claims. (Cl. 29—521)



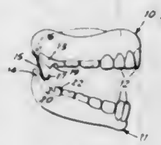
1. A method for producing a joint between two elongated edges of malleable material consisting in preparing each of said edges with a deformable off-center flange constituting a minor proportion of the thickness of the material together with a central arcuate recess at the base of said flange for receiving and deforming the flange of the opposing edge, said flanges and recesses being so proportioned as to accommodate deformation of the respective flanges within opposed recesses to inter-engaging hook shaped elements, engaging each of the flanges with the portion of the arcuate recess on the other edge remote from the flange on the same edge thereof, and then applying edgewise pressure to said edges thereby camming said flanges about the arcuate surfaces of each of the recesses and into interlocking engagement with each other to form a rigid interlocking joint with said respective flanges in hooked relationship.

3,043,004
TUBE SPLITTING TOOL
Leland C. Walter, 910 S. High St., El Dorado, Kans.
Filed May 25, 1960, Ser. No. 31,637
5 Claims. (Cl. 30—91)



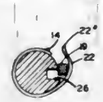
1. A tube splitting tool of the type described comprising, in combination, an elongated bar, said bar being bifurcated at one end thereof to form a yoke, a circular cutting wheel, an axle passing through the axis of said cutting wheel and through the bifurcated end of said bar to thereby mount said cutting wheel on said bar in said yoke, an internally threaded hole in the other end of said bar extending the major length of said bar along the longitudinal axis thereof, an elongated shaft having a shank end and an externally threaded end, a thrust collar, said thrust collar being internally threaded and mounted on the threaded end of said shaft, said shaft with said collar thereon being removably secured in and extending from said hole in said bar, an elongated tube gripping member having a base portion and an extending portion, said base portion being generally rectangular in transverse cross section, hollow over its length and open at its ends, a shoulder formed in the end of said base portion remote from said extended portion by the opening in the inner end of said base portion being reduced in diameter, said base portion of said gripping member adapted to slidably receive said bar with said shaft and collar mounted therein within said base portion so that said cutting wheel extends from one end thereof and the shank portion of said shaft extends from the other end thereof with said collar in contact with said shoulder, said extended portion of said tube gripping member being generally semi-circular and overlying and spaced from said cutting wheel, two gripping points threadedly secured in the extended portion of said member, said gripping points being mounted in said extended portion overlying said cutting wheel and spaced an equal distance on each side of a plane passing through said wheel, an elongated metallic handle for said tool, said handle being knurled and having a hole in one end thereof, said hole in said handle receiving the shank portion of said shank, a lock screw passing through said handle and engaging said shank portion of said shaft to removably mount said handle on said shaft and to prevent rotation between said shaft and said handle, said tool being constructed and adapted so that said tube gripping member can surround a tube and be retained thereon by said gripping points, and said cutting wheel can be placed in cutting engagement with the other side of said tube by rotating said handle which moves said elongated bar relative to said base portion of said tube gripping member, and said tool can then be rocked about said gripping points to cut or split said tube.

3,043,005
DENTURE ANCHORING SYSTEM
Lynwood L. Morris, 3357 18th St., NW., Washington, D.C., assignor of one-half to Henry Clepatch, Washington, D.C.
Filed Mar. 13, 1961, Ser. No. 95,169
10 Claims. (Cl. 32—2)



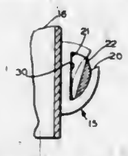
1. In combination, an upper denture plate, a lower denture plate, said plates having opposed surfaces constructed and arranged to approach close parallelism in the closed-bite relative positions of said plates, resilient means fixed to one of said plates and biased to separate said plates by pressure exerted thereby against the other plate, and permanent-magnet means carried by at least one of said plates and constructed and arranged to substantially neutralize the force exerted by said resilient means in the closed-bite positions of said plates.

3,043,006
ORTHODONTIC BRACKETS
Melvin Wallshein, 8645 Bay Parkway, Brooklyn, N.Y.
Filed June 2, 1959, Ser. No. 817,536
4 Claims. (Cl. 32—14)



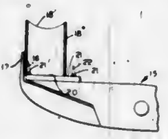
1. In an article for supporting an orthodontic arch wire, a first member adapted to be mounted on a tooth, a bracket member positioned on said first member, comprising a substantially horizontal channel to receive said arch wire and an openable door normally closing said channel, comprising a blade spring fixed at one end to one of said members and formed in substantially one turn about said bracket member; the free end portion of said blade spring being across said channel intermediate the ends of said channel and said blade spring continuing around the underside of the bracket member to said fixed end thereof, whereby on accidental shift of the arch wire wholly out of the channel, a substantial portion of said turn will remain about the bracket member and said arch wire will remain within said turn; the free end of said blade spring being accessible when the article is in use.

3,043,007
ORTHODONTIC BRACKETS
Melvin Wallshein, 8645 Bay Parkway, Brooklyn, N.Y.
Filed June 2, 1959, Ser. No. 817,537
3 Claims. (Cl. 32—14)



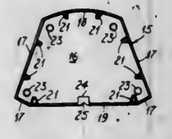
1. In an article for supporting an orthodontic arch wire, a member adapted to be mounted on a tooth and a bracket positioned on said member, comprising a substantially horizontal tubular element having a slit in its entire length for admission of the arch wire laterally therethrough into the hole of said tubular element; the slit requiring its width to be increased by the passage of the wire therethrough; said tubular element having resilient quality whereby on passage of said wire through said slit, the width of the slit will return to its normal dimension; the shape of the hole in the cross-section of said tube being that of the interior of a D-shape; said slit being relatively near one inside corner of said hole of the tube to form a hook at said corner and relatively distant from the other inside corner of the hole of the tube.

3,043,008
DENTAL TOOLS
Harry Barishman, 1676 Ocean Parkway, Brooklyn, N.Y.
Filed Oct. 15, 1958, Ser. No. 767,327
8 Claims. (Cl. 32—17)



1. In a tool of the character described, for holding molding material to be applied onto a patient's tooth to make an impression thereof, a first member, a platform element fixed to said first member, an upright tubular band to be filled with a plastic mass, standing on said platform; said platform closing the lower end of said tubular band, a straight first jaw element extending upwardly from a relatively small part of the supporting surface of said platform, into said band and contacting the inner surface of the wall of said band; a second member, a second jaw element fixed on said second member, means joining said members for relative movement whereby said jaw elements can be brought towards each other to grip the wall of said tubular band between them; said members being relatively movable whereby said jaw elements part to release the tubular band; said first jaw element being withdrawable from the plastic mass when the filled band is released from the grip of said jaw elements.

3,043,009
PREFORMED BASE FOR ORTHODONTIC AND DENTAL CASTS AND METHOD OF ATTACHING THE SAME
Clifford L. Whitman, Hohokus, N.J., assignor to Whitman Laboratories, Inc., Hackensack, N.J., a corporation of New Jersey
Filed Nov. 21, 1958, Ser. No. 775,615
9 Claims. (Cl. 32—32)



1. A molded and finished dental base for use in mounting preformed dental casts which comprises a preformed molded shell of an integral construction having a closed bottom, upstanding sidewalls including a posterior side which is formed at a right angle to the bottom and an open top, a series of spaced upstanding anchoring projections therein formed integrally with said closed bottom and a median rib formed integrally with and inwardly of its posterior side, said rib having a notch extending inwardly from the outer surface of the posterior side which functions as a part of an aligning means for mounting preformed dental casts.

3,043,010
FOOT MEASURING DEVICE
Stephan F. Prohaska, 15036 Grand River, Detroit 27, Mich.
Filed Jan. 26, 1959, Ser. No. 789,203
3 Claims. (Cl. 33—3)



1. A foot measuring device comprising a housing having a flat surface with two spaced openings therein, a contoured head in each of the spaced openings mounted for travel between a retracted and extended position, resilient means yieldably holding the contoured heads in the extended position, indicated means on the housing, actuating means controlled by travel of the contoured heads for operating the indicating means, removable means on the housing for measuring the length of each foot, detachable means on the housing for measuring the width of each foot, means on the housing for releasably holding the contoured heads in a retracted position, a rotatable drum at one end of the housing, a sheet of material attached at one end to the rotatable drum and

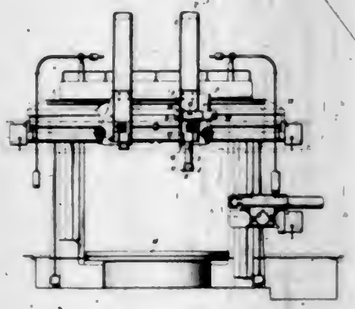
movable over the flat surface of the housing, and an applicator roller movable into contact with the underside of the sheet when the same is being moved over the flat surface of the housing.

3,043,011

APPARATUS FOR SETTING UP MACHINE TOOLS TO PRODUCE ACCURATE LARGE DIAMETER WORKPIECES AND FOR MEASURING SUCH DIAMETERS

Hans Wegmüller, Wettingen, Switzerland, assignor to Schiess Aktiengesellschaft, Dusseldorf-Oberkassel, Germany

Filed Aug. 20, 1958, Ser. No. 756,137
2 Claims. (Cl. 33—46)



1. In a lathe having a frame and a horizontal face plate rotatable on a vertical axis of rotation in the frame, a tool slide slidably supported on the frame for movement transversely of the said axis of rotation, a tool holder slidably mounted on said tool slide and movable thereon parallel to said axis, and a slide carriage slidably movable on said tool slide in a horizontal direction parallel to the direction of movement of said tool slide, said slide carriage having a telescope fixed thereon with a vertical line of sight for viewing the edge of a tool in said tool holder from above, a horizontal scale on a fixed part of said lathe and parallel to the direction of movement of said tool slide, and an optical device mounted on said slide having a horizontal line of sight normal to said scale for reading said scale, said slide carriage being adjustable on the tool slide to position the telescope in alignment with the cutting edge of said tool, means for locking said slide carriage to said tool slide in its adjusted position thereon, the scale and optical device cooperating for indicating the adjustment of the tool slide on said frame to determine the distance of said cutting edge of said tool from the said axis of rotation of the face plate, and a level mounted on said slide carriage to indicate any tilting movement of the slide carriage on the tool slide.

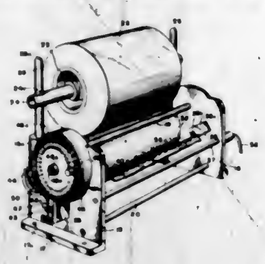
3,043,012

MEASURING DISPENSERS FOR ROLL FILM

Hilmar O. Schuetze, % Great Lakes Stamping & Mfg. Co., Inc., 2500 W. Irving Park Road, Chicago, Ill.

Filed June 3, 1960, Ser. No. 33,814
7 Claims. (Cl. 33—129)

6. A measuring device for sheet material designed to be drawn from a supply source comprising a roll for guiding the material from the supply source toward a point where the material is drawn, a unit operative to rotate with the roll to an extent dispensing a prescribed length of the material as the latter is drawn, a material severing device in the region where the material is drawn, a guide for the material at a point before the severing device and directing the material with an upward slant to by-pass the severing device, a support, and means pivoting the guide to the support for downward movement to aline the material with the severing device when the material is drawn accordingly.

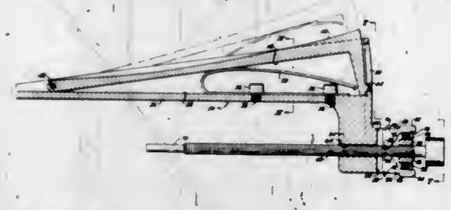


3,043,013

METHOD OF CENTERING THE DISTRIBUTOR HOPPER WITH RESPECT TO THE SMALL BELL OF A BLAST FURNACE AND A GAGE FOR USE THEREWITH

Gregory R. Molinaro, Gary, Ind., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Sept. 26, 1957, Ser. No. 686,359
8 Claims. (Cl. 33—162)



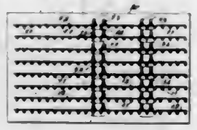
5. A gage for use in determining the space between the distributor hopper and small bell of a blast furnace which comprises a sector shaped housing, said housing having a longitudinal recess therein, a sector shaped gage element in said recess, means pivotally connecting the small end of said gage element to the small end of said housing, a spring in said recess urging said gage element outwardly, a bracket extending from said housing at the large end thereof on the side opposite said recess, and a stop on said bracket extending toward the small end of said housing and adapted to bear against said small bell.

3,043,014

DRYING OF GYPSUM BOARD

Clarence J. Loechl, Arlington Heights, Ill., assignor to The Celotex Corporation, Chicago, Ill., a corporation of Delaware

Filed May 31, 1957, Ser. No. 662,668
2 Claims. (Cl. 34—43)



1. In a drier for drying gypsum wallboard comprising an elongated tunnel-like housing through which heated air is circulated and a conveyor mounted and longitudinally disposed within said drier, said conveyor being adapted for moving said sheets of gypsum wallboard in successive adjacency through the length of said drier so that the leading edge of one of said sheets closely follows the trailing edge of another of said sheets, the improvement

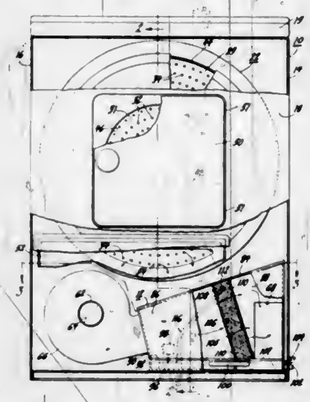
comprising spray means mounted transversely of the direction of travel of said sheets for applying a fluid coolant across the width of the drier conveyor, valve means controlling the supply of cooling fluid to said spray means, said valve means being such that the supply of cooling fluid flowing therethrough is interrupted after a preset time period following its initial operation, said preset time period being only a minor portion of the time of transversal of any one of said sheets past said spray means, and means connected to said valve means and operatively positioned relative to said sheets of wallboard so that said control means is actuated by each end of each of said sheets to open said valve means to initiate its operating cycle, whereby because of the short operating time of the spray means, only the ends of each gypsum sheet are sprayed with coolant and the major portion of its surface is unsprayed.

3,043,015

DOMESTIC APPLIANCE

Byron L. Brucken, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 27, 1958, Ser. No. 724,366
5 Claims. (Cl. 34—80)



3. A clothes dryer, including, a drum for said clothes, means to rotate said drum, means providing a closed circuit air system incorporating said drum, heating means for said drum, means for circulating air through said air duct system, a liquid adsorbent arrangement adapted to filter air leaving said drum including a sump for said adsorbent, a filter element and means for directing said adsorbent over said filter element, heating means adjacent said sump for regenerating said liquid adsorbent, means including air flow reduction means in said duct system for discharging air periodically from said air duct system concurrently with the energization of said heating means for regenerating said liquid adsorbent, and means to interrupt the rotation of said drum during said discharge.

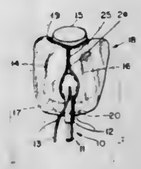
3,043,016

FLEXIBLE HAIR DRYING HOOD

Frances J. Miller, 801 12th NW., Canton, Ohio

Filed May 21, 1958, Ser. No. 736,794
1 Claim. (Cl. 34—99)

In combination, an electric air circulating hair dryer having an outwardly flaring dome of a dimension adapted to surround a person's head and a connection thereto, a sheet defining a pleated tubular hood structure of imperforate heat resistant fabric radially gripping the exterior of said dome and having a contractile band for the dome above the connection thereto, an open axial seam on the tubular hood structure with fastening means therefor around the connection defining a variable sized air passageway for controlling the amount of air that leaves the hood, the tubular center section of the hood being substantially larger in diameter than the contractile band for the dome, and a generally circular elasticized band on the end of said hood opposite said dome of substantially smaller diameter than the center section of the hood, whereby said variable sized air passageway controls the amount of moisture laden air leaving the hood and thereby causes improved heating and circulation of air within the space enclosed by the tubular center section and the end of said hood opposite said dome which is out of the direct path of air circulation from the dome so that when the elasticized band on the end of the hood opposite said dome is placed over wet hair on the head of a person, it effectively dries all of the hair thereon including the hair adjacent the lower cranial lobes.

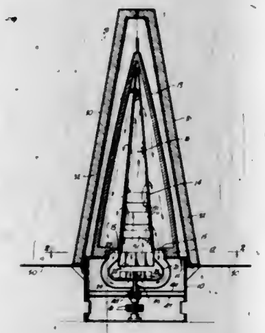


3,043,017

ARTICLE CURING MECHANISM

Edward T. Strickland and Homer C. Amos, Palm Springs, Calif., assignors, by mesne assignments, to Philbrick-Strickland Laminates, Inc., a corporation of Washington

Filed Aug. 22, 1958, Ser. No. 756,646
2 Claims. (Cl. 34—104)

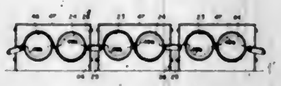


1. A laminate curing assembly comprising, a cabinet having a top, means defining an air chamber in said cabinet, means defining an air outlet from said chamber centrally located in said cabinet top and having a baffle disposed therein, means defining an air inlet to said chamber surrounding the air outlet, a mandrel for supporting a work piece adapted to rest on the cabinet top in surrounding relation with the air inlet, a hollow member of substantially the same length as the mandrel having a plurality of orifices along its length, said hollow member being positioned within the mandrel and overlying the air outlet, a heating coil disposed adjacent the air outlet, a centrifugal blower in said chamber for compressing air and directing air from the chamber through the outlet whereby the air travels through the orifices to increase its velocity and the velocity is converted to heat outwardly of said member by turbulence of the air returning to normal flow velocity and for drawing air back into the chamber through the inlet, and insulating means for surrounding the work piece to control the temperature of the air surrounding the work piece.

3,043,018
SCREEN CYLINDER DRIER FOR FIBROUS MATERIAL

Hans Fleissner, Egelsbach-Frankfurt am Main, Germany, assignor to Firma Fleissner & Sohn, G.m.b.H. & Co., Frankfurt am Main, Germany, a corporation of Germany

Filed June 2, 1958, Ser. No. 739,304
3 Claims. (Cl. 34—115)

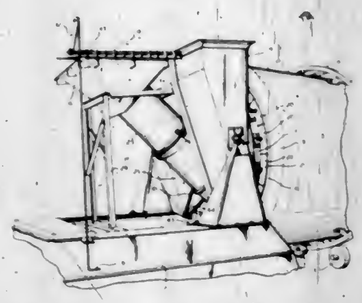


1. A drier comprising a plurality of spaced housings, a pair of screen cylinders in each of said housings, a blower arrangement for each of said cylinders in said housings for producing a partial vacuum in said cylinders to hold fibrous material on said cylinders, each said blower arrangement comprising a pair of coaxially aligned blowers disposed at opposite ends of the respective cylinder, said blowers being also axially aligned with said respective cylinders and having a fan diameter of at least 60% of the diameter of said respective cylinders, each blower having an axial inlet toward the associated cylinder and a pair of diametrically opposite discharge outlets to provide a pair of air circulating paths each including the respective blower and the perforated wall and the interior of the associated cylinder, a perforated roller disposed between the pair of screen cylinders in at least one of said housings for transferring the fibrous material between such last named pair of cylinders, each of said cylinders having its inner surface provided with at least one cover plate to render the section of said cylinder associated with said cover plate not subject to suction, and conveyor means extending between said housings for transferring fibrous material from a cylinder in one housing to a cylinder in an adjacent housing.

3,043,019
ROTARY CHARGING CHUTE FOR AGGREGATE FEEDING

Robert M. Steimel, Aurora, Ill., assignor to Barber-Greene Company, Aurora, Ill., a corporation of Illinois

Filed Apr. 17, 1959, Ser. No. 807,175
5 Claims. (Cl. 34—141)



1. In a drier for aggregate and the like,

a. a rotary drier drum mounted for rotation about an axis inclined at a flat angle with respect to the horizontal and having

b. An aggregate receiving end at the higher end portion thereof having a generally cylindrical peripheral wall portion,

c. and having an aggregate discharge end at the lower end portion thereof,

d. a suction duct at the aggregate receiving end of said drier drum extending within said drier drum and having

e. an air plate having a generally cylindrical outer surface extending within the cylindrical inlet portion of said drier drum,

f. sealing means sealing said air plate to said drier drum

g. a generally cylindrical inclined charging chute extending along the lower end portion of said suction duct within said drier drum,

h. bearing means journalling said charging chute on said suction duct,

i. means rotatably driving said charging chute,

j. and a shroud within said drier drum extending over and downwardly along the discharge end of said charging chute and spaced in advance thereof and accumulating the aggregate at the discharge end of said charging chute to seal the discharge end of said charging chute by the accumulated aggregate and reduce the short circuiting of air through said charging chute.

3,043,020
TRAINING DEVICE FOR MOTOR VEHICLE

Luther G. Simjian, Greenwich, Conn., assignor to Reflectone Electronics, Inc., Stamford, Conn., a corporation of Connecticut

Original application Dec. 4, 1957, Ser. No. 700,648, now Patent No. 3,013,343, dated Dec. 19, 1961. Divided and this application Mar. 3, 1960, Ser. No. 12,649
11 Claims. (Cl. 35—11)



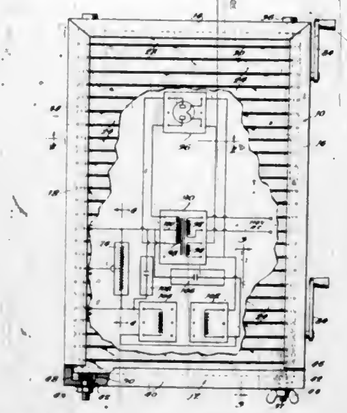
1. A training device comprising: a trainee position; controls for operation by a trainee disposed at said position; an object in view at said trainee position; an elongated terrain means visible at the trainee position with said object being disposed above said terrain means; means for causing said terrain means and object to be movable laterally relative to one another in response to the controls at said trainee position; said terrain means comprising a grating which includes a plurality of parallel transverse elements; each of said elements fastened to endless band means; a set of rollers disposed for supporting said band means; motive means for rotating said band means about said rollers whereby to cause said elements to advance toward said object as viewed from said trainee position; each of said transverse elements provided with a further element which is laterally displaceable on the associated transverse element whereby said further element is adapted to demarcate the boundaries of a path within which the object is to be confined by means of said controls; means for selectively displacing said further elements relative to the associated transverse elements, and said means displacing said further elements being operated in response to the operation of said motive means.

3,043,021
ELECTRONIC INSTRUCTING DEVICE

Orville I. Thompson, Deerfield, Ill., assignor to De Vry Technical Institute, Inc., Chicago, Ill., a corporation of Illinois

Filed Nov. 19, 1958, Ser. No. 775,035
16 Claims. (Cl. 35—19)

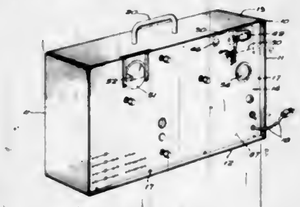
1. An instructional device comprising a plurality of elongated bars of electrical insulating material, each bar having two parallel surfaces, means for retaining said bars adjacent to each other in a unitary assembly with the adjacent parallel surfaces of the bars exerting pressure on each other, and an elongated layer of electrically conducting material disposed between adjacent bars.



3,043,022
TRAINING PANEL FOR ELECTRONIC TECHNICIANS

Allen B. Crews and David Muskat, Inglewood, Calif., assignors to Electronic Training Aids, Inc., a corporation of California

Filed July 2, 1959, Ser. No. 824,520
4 Claims. (Cl. 35—19)



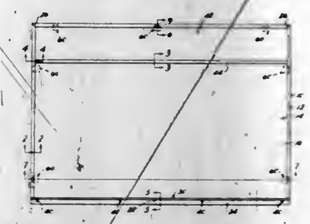
1. In a device of the class described, the combination of: a base sheet formed of electrically non-conducting material and having a rear surface, a plurality of electronic components mounted upon said base sheet surface, metallic leads of the printed circuit type fixed upon said rear surface and electrically connecting said components, terminal connections projecting through said base sheet, means forming an exposed front surface spaced from said rear surface and associated with said projecting terminal connections, means fixed upon said front surface defining electrical symbols adjacent said terminal connections and defining lines connecting said electrical symbols, whereby a schematic wiring diagram is formed on said front surface depicting said electrical components and said printed circuit leads, and jumper wire leads adapted for detachable connection to said terminals.

3,043,023
CHALKBOARD AND SUPPORTING MEANS THEREFOR

Albert D. Colpo, 3797 Kauffman Road, Stow, Ohio

Filed Nov. 21, 1961, Ser. No. 153,949
10 Claims. (Cl. 35—63)

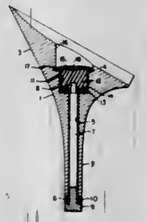
6. The combination in a chalkboard of a polygonal shaped sheet having a surface which will take chalk, an extruded metal frame having an E-shape in cross section surrounding the sheet, the legs of the E being cut away at the corners, the middle and outermost legs of the E engaging the sheet and the innermost leg of the E engaging the wall, the frame having ends butting at the bottom of the frame, a chalk tray of extruded metal having a vertical flange engaging and covering the front of the lower edge of the frame, and a horizontal flange forming the chalk tray and extending forwardly of the vertical flange, and means for fastening the chalk tray to the frame.



3,043,024
SHOCK-ABSORBENT HEEL CONSTRUCTION

Richard J. Haug, Jr., 35 Raymond St., Nashua, N.H.

Filed Aug. 26, 1960, Ser. No. 52,162
6 Claims. (Cl. 36—36)



1. A shock-absorbent heel construction for shoes comprising, in combination; a heel having a lower relatively thin stem portion terminating in a bottom surface and an upper relatively thick flared-out portion terminating in a top surface, said heel formed with a bore extending between said surfaces through said flared-out portion and said stem portion, said flared-out portion formed with an enlarged recess extending about said bore from said top surface, a block of resilient compressible material secured in said recess and positioned externally of said bore, and load-transmitting means slidably received in said bore, said load-transmitting means extending downwardly from said bottom surface and upwardly into said recess for engagement therein with said block for transmitting dynamic loads thereto, said block being of a material selected to resiliently support dynamic loads applied thereto in the normal use of said heel.

3,043,025
ARTICLE OF MANUFACTURE WITH NON-SLIP SUCTION MEANS

William P. Semon, 59 Nassau Ave., Manhasset, N.Y.

Filed Dec. 9, 1960, Ser. No. 75,012
3 Claims. (Cl. 36—59)



1. In an article of manufacture having non-slip suction means on the underface thereof, said article of manufacture including upper and lower plies of resilient material which are secured together in face to face relation provide a seal therebetween, said lower ply having a plurality of depending cup shaped walls integrally con-

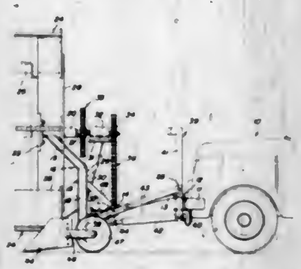
nected therewith and providing a cup shaped recess within each wall forming a suction cup, said upper ply having a plurality of cavities arranged centrally over the cup shaped recesses respectively, said lower ply having apertures therethrough each communicating at its upper end with one of said cavities and at its lower end with one of said cup shaped recesses, and a valve element depending from the upper wall of each of said cavities and adapted to engage with said lower ply for closing off the apertures to thereby prevent the flow of air from said cavities to said cup shaped recesses respectively, and said article of manufacture being adapted to adhere to a supporting surface when weight is applied thereon by the adherence of said suction cups to the supporting surface and to move said valve elements to close the apertures between the cup shaped recesses and said cavities respectively to thereby entrap air in said cavities and said air being released from said cavities for breaking the seal of said suction cups when the pressure on said article of manufacture is released.

3,043,026
NON-CLOGGING CLEAT
William P. Semon, 59 Nassau Ave., Manhasset, N.Y.
Filed Feb. 23, 1961, Ser. No. 91,155
4 Claims. (Cl. 36—59)



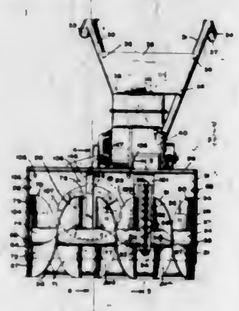
1. In a non-clogging cleat, a base adapted to be affixed to the outer face of the sole of a shoe and having a plurality of depending spikes disposed in angularly spaced relation, a pad of compressible material extending over the lower face of said base between the spikes and having its greatest thickness centrally thereof and gradually decreasing in thickness toward the spikes, and means engaging said spikes securing said pad in position on said base.

3,043,027
SNOW SCOOPER
William Jennings Ruffing, Lusk, Wyo.
Filed Jan. 13, 1959, Ser. No. 786,545
7 Claims. (Cl. 37—43)



1. In a snow removal apparatus, a vehicle including a forwardly arranged power take-off and a front bumper, a first shaft coupled to said power take-off, a second shaft coupled to said first shaft, a frame arranged forwardly of the vehicle and including spaced apart beams embodying lower first portions and upper second portions, said upper portions meeting at a common apex, a hollow sleeve secured to said upper portions at the apex thereof, a third shaft extending through said sleeve, a disc secured to the front end of said third shaft, a plurality of radially disposed arms secured to said disc, scoopers secured to the outer ends of said arms, support members secured to said frame, a fourth shaft supported by said support members, chain and sprocket means connecting said third and fourth shafts together, chain and sprocket means connecting said second and third shafts together, a supporting structure clamped to the vehicle front bumper and including spaced parallel vertically disposed posts, braces having their rear ends pivotally connected to said posts and their front ends secured to said frame, a hydraulic cylinder for raising and lowering the frame, a blade supported adjacent the lower front portion of the frame, and wheels mounted rearwardly of the blade, the area radially outwardly of the path of movement of the scoopers being completely free of obstructions except for said blade.

3,043,028
SNOW REMOVER
Albert B. Merry, 5608 Forest Blvd., and Paul F. Hastings, 1206 Gordon Ave., both of Spokane, Wash.
Filed Dec. 2, 1959, Ser. No. 856,758
5 Claims. (Cl. 37—43)

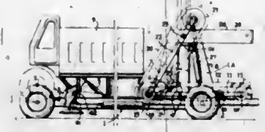


1. In a snow remover comprising a frame, a pair of coaxial transversely extending screw conveyors carried by said frame at the forward portion thereof and discharging toward an intermediate common locality, a blower carried by said frame and disposed rearwardly of said conveyors at the denoted locality thereof, said blower including a housing, a rotor having blades thereon and disposed within said housing, said blades extending from the outer periphery of the rotor and toward the center thereof and being accessible from the sides thereof facing said conveyors, said housing having a discharge spout receiving snow from the ends of said blades and discharging the same in a tangential direction relative to said rotor, the combination of a mounting plate disposed on the front side of said housing and supporting said housing for rotating movement about the axis of said rotor, a crossbar extending across said housing on the rear side thereof and attached to said mounting plate, and a bearing for said rotor carried by said crossbar.

3,043,029
EXCAVATING MACHINE NOTABLY FOR DIGGING TRENCHES
Pierre Jean-Marie Theodore Allard, 8 Rue de Soisy, Eaubonne, Siene-et-Oise, France
Filed Sept. 3, 1959, Ser. No. 837,966
Claims priority, application France Sept. 12, 1958
12 Claims. (Cl. 37—86)

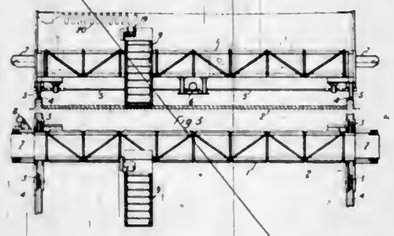
1. In an excavating machine for digging trenches comprising a chassis and means for propelling said chassis relative to the ground: two parallel lateral beams spaced apart from one another, two rollers rotatably mounted, respectively at one end of said lateral beams, on a common shaft, and, at the other end of said lateral beams, two further rollers mounted on aligned shafts whereby each of the lateral beams carries a pair of rollers which are spaced apart and have parallel axes of rotation, two

lateral endless cutter chains respectively held taut on said pairs of rollers, a drum rotatably mounted on said pairs of rollers, a drum rotatably mounted on said shaft between said beams, a middle beam pivoted at one end on said shaft, a second drum mounted at the other end of said middle beam on an axis parallel to said shaft, a middle endless cutter chain held taut between said two drums; beam-supporting means connected to said chassis



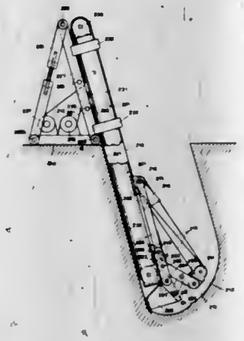
and said beams, for supporting said lateral and middle beams in an adjustable position; adjusting means for adjusting said position of said lateral and middle beams; first driving means operatively connected to said further rollers and second driving means operatively connected to said second drum for driving said lateral cutter chains and said middle cutter chain along their longitudinal axes.

3,043,030
APPARATUS FOR REMOVING SLUDGE FROM SLUDGE COLLECTING BEDS
Ronald B. Wisbey, Slough, England, assignor to Temple-wood Hawksley Limited, Slough, England
Filed May 4, 1961, Ser. No. 107,670
7 Claims. (Cl. 37—102)



1. Apparatus for removing sewage sludge from sludge drying beds, said apparatus comprising a gantry adapted to be disposed above the bed and span the bed transversely, means adapted to move said gantry when so disposed along the length of the bed, and a sludge lifter and elevator mounted on said gantry to reach down to the bed at an inclination forward of the direction of forward movement of the gantry along the length of the bed, said elevator comprising a trough having a bottom wall and two side walls, a shaft at the upper end of said trough, a shaft at the lower end of said trough, a pair of sprocket wheels mounted on each of said shafts at each end of said trough with one sprocket of each pair located inwardly of and adjacent each said side wall and the periphery thereof spaced above said bottom wall of the trough, an endless chain entrained about the two sprockets located adjacent each said side wall, cross bars disposed transversely of said trough and mounted between the two endless chains at spaced intervals throughout the chain lengths, said cross bars including webs projecting outwardly of said chains but short of the bottom wall of the trough along the lower reach defined by said chains, means for driving said upper shaft in a direction moving the lower reach defined by said chains in an upward direction, and a forked digger at the lower end of said trough bottom with the tines of the fork extending forwardly of said lower end to an extent where the tips thereof are substantially directly below a line along which each said cross bar web would initially engage sludge during operation of the apparatus.

3,043,031
RIGID-GUIDE EXCAVATOR PARTICULARLY ADAPTED FOR THE DIGGING OF TRENCHES WITH VERTICAL WALLS
Ignazio Failla, Via Visconti Di Modrone 19, Milan, Italy
Filed June 14, 1960, Ser. No. 35,985
Claims priority, application Italy Apr. 22, 1960
7 Claims. (Cl. 37—103)



1. An excavator comprising a support, an elongated guide disposed in vertical relation along side the support, means connecting the guide to the support for vertical sliding movement, a slide carried by the guide for vertical sliding movement relative to said guide, an excavating shovel, a first arm pivoted at one end to the slide and at its other end to the shovel, a second arm pivotally attached at one end to the first arm intermediate the ends of the first arm, means pivotally connecting the second arm to the shovel, means connected between the other end of the second arm and the slide for effecting swinging movement of the shovel and means carried by said support and connected to said slide for raising and lowering the same.

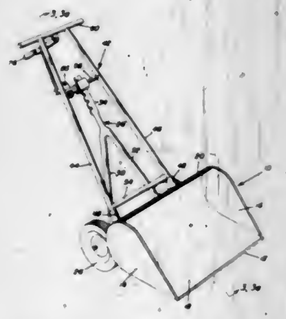
3,043,032
BACK-FILLING BLADE FOR A POWER SHOVEL
Nelson Discenza, 90 Lancaster Road, West Hartford, Conn.
Filed June 30, 1960, Ser. No. 40,001
6 Claims. (Cl. 37—117.5)



1. In combination with an excavating shovel of the type having opposed sides, an open front, and a plurality of laterally spaced digging teeth along the forward lower edge thereof, a back-filling attachment comprising a blade having a front plate, said plate being wider than said shovel whereby said plate extends outwardly of the opposed sides thereof, said plate having an opening therein of substantially the same width as said shovel, the side edges of said opening abutting said opposed sides whereby

the said plate and said shovel together form a continuous dirt-engaging surface, means at the lower end of said plate engaging, overlying and shielding all of said teeth to prevent scarring of the ground when said shovel is converted to back-filling purposes, and means on said front plate securing said attachment to the said opposed sides of the bucket.

3,043,033
UTILITY SCOOP
Hubert Odell Ingram, Moriarty, N. Mex. (309 Schultz NW., Albuquerque, N. Mex.), and Ervan Clayton Cavasos, Moriarty, N. Mex.
Filed July 13, 1959, Ser. No. 826,773
13 Claims. (Cl. 37—130)



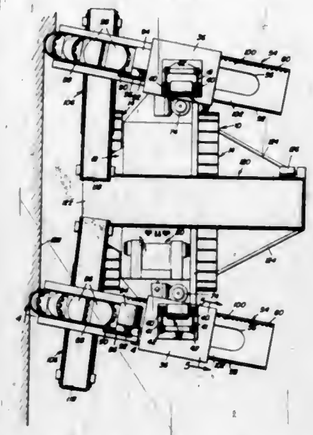
1. A utility scoop comprising, wheel means, material handling means supported by the wheel means above and forwardly of the wheel means and pivotally displaceable from an elevated position to a lower position with respect to the wheel means, handle means pivotally mounted for vertical swinging adjustment on the material handling means above the wheel means and operative to transmit propelling force to the material handling means, and releasable means operatively interconnecting the wheel means and handle means for holding the material handling means in adjusted position with respect to the wheel means and handle means and operative upon release to effect pivotal displacement of the material handling means with respect to the wheel means in response to pivotal displacement of the handle means.

3,043,034
LEVELER
Karl Kober, Park City, Mont.
Filed May 3, 1961, Ser. No. 107,528
1 Claim. (Cl. 37—148)



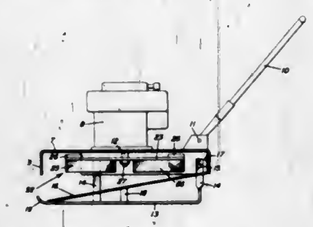
A leveler comprising a hitch embodying a pair of side elements connected together, a pair of angularly arranged braces having their front ends affixed to said side elements, a front runner section providing a front truck comprising a pair of horizontally disposed short angle irons having upstanding ears thereon pivotally connected to the rear ends of said braces, trunnions extending outwardly from said angle irons, a pair of front runners having blocks affixed thereto and bearings on said blocks swivelly receiving said trunnions; a pair of horizontally disposed spaced parallel bars extending between said pair of angle irons and secured thereto, a smoothing blade mounted below said bars and including an inclined portion and a lower horizontally disposed portion; a turntable mounted on said bars intermediate the ends thereof, trunnions affixed to said turntable, the rear portions of said side elements being connected to said last named trunnions, a main frame including a pair of similar side members, and said side members including spaced parallel forwardly disposed front first portions connected to said turntable, second portions arranged angularly with respect to said first portions, spaced parallel third portions arranged rearwardly of said second portions, angularly arranged fourth portions disposed rearwardly of said third portions, spaced parallel apertured lugs extending upwardly from the first portions of said frame, bearing elements on the inner surfaces of the second portions of the frame, a cross element pivotally connected to said bearing elements, an outer tubular member arranged at right angles with respect to said cross element and affixed thereto, and said tubular member adapted to selectively extend between the first portions of the frame, pins adapted to be selectively arranged above said outer tubular member and said last named pins adapted to engage said lugs, an inner tubular member slidably arranged in said outer tubular member, hand pieces connected to the outer end of said inner tubular member, a cross brace extending between the side elements of said hitch for selective engagement by the inner tubular member; a rear runner section defining a back truck comprising a pair of spaced parallel horizontally disposed back runners having blocks thereon with bearings affixed to said last named blocks, angle irons having trunnions swivelly engaging said last named bearings, a pair of spaced parallel horizontally disposed bars extending between said last named angle irons and secured thereto, a smoothing blade mounted between said last named angle irons and arranged below the last named bars, a rear turntable connected to the fourth portions of the main frame and also operatively connected to the rear runner section, a lock pin for said rear turntable, cables engaging said main frame and connected to said front and rear runner sections, first, second and third horizontally disposed spaced parallel tubular support members extending between the third portions of the frame and secured thereto, support pieces affixed to said first support member, brackets affixed to said support pieces, pulleys supported by said brackets; vertically disposed uprights affixed to said second support member, yokes affixed to said uprights and said yokes including upper and lower pieces interconnected by vertically disposed element, cradles pivotally connected to said uprights, support pieces affixed to said second support member and extending upwardly therefrom, brackets connected to said last named support pieces and said last named brackets having pulleys journaled thereon, a counterweight adapted to selectively engage said cradles, lines connected to said counterweight and engaging the last named pulleys, a pair of spaced parallel beams having said lines connected thereto, a scraper blade affixed to said beams, guide members mounted at the ends of the scraper blade, bearing members affixed to said scraper blade and said bearing members having trunnions thereon, a pair of spaced parallel side pieces affixed to the inner surfaces of the third portions of the frame and said side pieces having said last named trunnions pivotally connected thereto, base pieces connected to the lower surfaces of the side pieces, rods connected to said cradles, bearing units operatively connected to said rods and said bearing units being pivotally connected to said yokes, coil spring circumposed on said rods, hydraulic cylinders connected to said second support member, piston rods connected to said cylinders, bell cranks pivotally connected to the fourth portions of the frame, and said bell cranks being connected to said piston rods, and wheels connected to said bell cranks.

3,043,035
SIDE DELIVERY ROTARY EXCAVATOR
Tenny R. Fogelberg, 1850 E. Linda Vista St., West Covina, Calif.
Filed Aug. 2, 1961, Ser. No. 128,797
13 Claims. (Cl. 37—190)



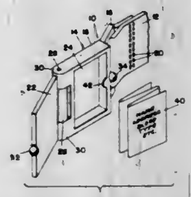
1. A side delivery rotary excavator comprising a main frame, ground engaging support means carried by said frame and adapted to support and move the latter longitudinally over a supporting surface, at least one elongated upright support, means rotatably supporting said upright support on said frame for movement about its longitudinal axis, an elongated generally horizontal support arm carried by said upright support, earth digging means movably mounted on one end of said arm, means mounting the other end of said arm on said support for vertical movement there along, for swinging movement with and upon rotation of said support, and for longitudinal movement of said support arm transversely of said support, and first, second and third drive means operatively connected between said upright support and said mounting means, between said support and said frame and between said arm and said mounting means respectively for vertically adjusting said arm relative to said support, rotating said support and longitudinally adjusting said arm relative to said support respectively.

3,043,036
SNOW PLOW ATTACHMENT FOR ROTARY POWER MOWERS
Leo D. Trojanek, 213 E. Pine, Cadillac, Mich.
Filed June 23, 1960, Ser. No. 38,170
6 Claims. (Cl. 37—195)



1. A snowplow attachment for rotary power lawn mowers of the type including an open-bottom housing having a discharge port and a vertical power-driven shaft rotatable in said housing, said attachment comprising an upwardly and rearwardly inclined snow elevating scoop mounted beneath and in vertical alignment with the housing, and a blower on the shaft operable in the housing for receiving snow wedged upwardly and axially of said shaft by forward movement of said elevating scoop relative to said snow and discharging said snow through the port, said blower comprising an elongated horizontal bar secured to said shaft at its mid portion and extending transversely of said shaft, a plurality of depending blades carried by opposite end portions of said bar and extending longitudinally of the latter.

3,043,037
BELT AND BELT-BUCKLE ASSEMBLY
Jack Lesser, Wyncote, and Leon H. Halber, Philadelphia, Pa., assignors to Atlas Novelty Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed July 27, 1961, Ser. No. 127,285
3 Claims. (Cl. 40—21)



1. A belt and belt-buckle assembly comprising a belt having a free end and a buckle end, a series of holes in said belt adjacent said free end, the holes in said series being spaced from each other longitudinally of said belt, a buckle, a housing on said buckle, said housing having a rear wall defining a closed rear face and a front opening defining an open front face, means connected to said housing to releasably retain a folded data strip within said housing, a front cover plate hinged to said housing and movable into and out of closed position against the open front face of said housing, latch means on said housing and cover plate for releasably holding said cover plate in its closed position against said open front face, an offset bracket at one edge of said buckle, said bracket having an opening, said bracket and opening therein extending in a direction rearwardly of said buckle and having its free end situated rearwardly of the rear wall of said housing, the buckle end of said belt being connected to the free end of said bracket, and a hook on the rear wall of said buckle in spaced relation to said bracket, said hook extending rearwardly of said buckle with its free end in a plane substantially common with the free end of said bracket, said hook being selectively engageable within the holes in said series.

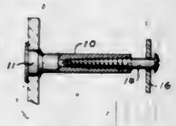
3,043,038
ILLUMINATED DIAL FACE
Chester B. Marble, Ashland, Mass., assignor to General Electric Company, a corporation of New York
Filed Apr. 8, 1960, Ser. No. 20,952
6 Claims. (Cl. 40—130)



1. An illuminated dial comprising, a translucent dial face having front and back surfaces, an opaque member adjacent the back surface of said face, at least one opening in said opaque member, a plurality of opaque indicia provided on the front surface of said translucent dial face adjacent the opening of said opaque member illuminating means including a panel lens for passing light through the opening of said opaque member to illuminate

the portion of the front surface of said dial in the vicinity of said indicia, said translucent face shielding the opaque member and said light conducting lens from view through the front surface of said face.

3,043,039
SCINTILLATING SIGN
Angelo F. Battaglia, 5607 McMahon St., Philadelphia 44, Pa.
Filed Sept. 30, 1959, Ser. No. 843,503
3 Claims. (Cl. 40—138)

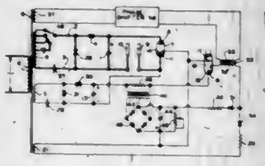


1. A scintillating sign comprising a base member, a rigid post having an axial bore of limited extent, said post extending through and projecting beyond the base member and secured thereto, a scintillating element having an aperture adjacent to its perimeter, said scintillating element having a drive member passed through the aperture of said scintillating element and having a head of greater area than the aperture of said scintillating element, said drive member being provided with a body portion inserted in the bore of the rigid post of such length that when the body portion is so inserted the head is spaced from the post whereby said scintillating member is freely held on the body portion of said drive member.

3,043,040
METHOD OF TRANSFORMING NEW BRICKS INTO BRICKS WHICH SIMULATE AGED BRICKS
Tony Christiano Silva, 1117 W. Chase, El Cajon, Calif.
No Drawing. Filed Sept. 6, 1957, Ser. No. 682,290
4 Claims. (Cl. 41—26)

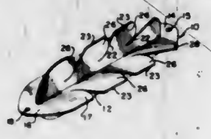
4. The process of forming red, previously fired clay bricks to those simulating aged, red, fired clay bricks which comprises: treating the bricks with asphalt by shredding the asphalt over a pile of bricks and then burning the asphalt.

3,043,041
ELECTRO-FISHING LOW INDUCTANCE IMPULSE CIRCUIT
Conradin Otto Kreutzer, Meersburg (Bodensee), Germany, assignor to Fish Products Company, Lewes, Del., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,686
Claims priority, application Germany Aug. 1, 1957
7 Claims. (Cl. 43—17.1)



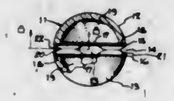
1. An electro-fishing circuit for energizing a pair of spaced electro-fishing electrodes, comprising:
(*a*) an A.C. voltage source;
(*b*) a first or voltage doubling capacitor serially connected to said A.C. source and cooperating therewith to provide a higher voltage source;
(*c*) a first half wave supply circuit for supplying said voltage doubling capacitor with a charging voltage from said A.C. source during cycle alternations in one direction and with zero charging voltage during cycle alternations in the opposite direction;
(*d*) a second or electro-fishing impulse capacitor;
(*e*) a second half wave supply circuit for supplying said second capacitor with a charging voltage from said higher source during cycle alternations in said opposite direction only and with zero charging voltage during cycle alternations in said one direction;
(*f*) a discharge circuit operative, when closed, to discharge said second capacitor across said electro-fishing electrodes; and
(*g*) means for closing and opening said discharge circuit during intervals respectively corresponding to said cycle alternations in said one direction and said opposite direction.

3,043,042
FISHING LURE
Daniel S. Mutti, Rte. 1, Box 13, McGregor, Minn.
Filed Feb. 10, 1960, Ser. No. 7,861
2 Claims. (Cl. 43—42.51)



1. A fishing lure comprising a pair of elongated sheet-like bodies, one of which is provided centrally of the width thereof with a straight longitudinal slot, the other body being mounted in said slot and rigidly bonded to said one body along the line of said slot and projecting from opposite faces of said one body, both edges of both of said bodies being provided with longitudinally spaced cuts dividing the edge portions of both bodies to form wings, each cut having an inner end relatively close to said line and each cut intermediate said inner end and the longitudinal edge of the associated body having its edges diverging to form V-shaped notches, each wing being bent along a line extending from said inner end of the associated cut to the longitudinal edge of the associated body, the bends in said wings all being in the same direction circumferentially transversely of the lure whereby the lure will rotate on its own axis as it moves through the water, both bodies substantially throughout their areas, except for said bent wing portions, being flat.

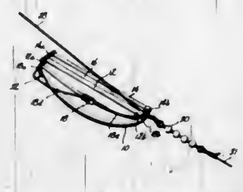
3,043,043
FISHING LINE ATTACHMENT
Robert D. Parry, 1336 Custer Ave., Cincinnati, Ohio
Filed Feb. 4, 1959, Ser. No. 791,179
1 Claim. (Cl. 43—43.1)



An attachment for connection to a fishing line comprising, two opposed hemispheres each having a planar surface of circular outline, said planar surfaces being disposed in parallel spaced relationship, two spaced posts of completely rounded section connecting said hemispheres and extending right angularly between said planar surfaces, the central axes of said posts respectively intersecting a single diameter of each of said planar surfaces, both ends of each of said posts having a point on their periphery in coincidence with said circular outlines of said planar surfaces to which they are connected, each of said posts being provided with a substantially annular V-shaped groove extending completely therearound, the sides of each of said grooves extending continuously from said planar surfaces to an apex at the center of said posts, the size and relative angulation being such that each

groove, when receiving said line, is adapted to secure said line completely around said apex and to wedge parallel parts of said line in said groove against each other.

3,043,044
FISHING SINKERS
Phares H. Metzler, 12999 Standering Lane, Seattle 66, Wash.
Filed June 9, 1959, Ser. No. 819,161
6 Claims. (Cl. 43—44.87)



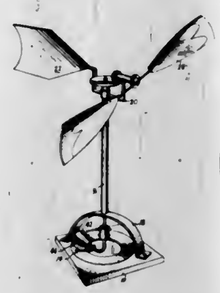
1. A fishing sinker comprising an elongated sinker body having a pair of longitudinally extending rib elements spaced apart transversely to define a substantially straight upwardly and endwise open groove formation along the upper side of such body through and along which a fishing line may extend substantially undeflected for free longitudinal sliding therein, said rib elements on respectively opposite sides of the body having sets of transversely aligned apertures formed at longitudinally spaced locations on the body located above the groove bottom, said sinker body having a transversely extending generally horizontal slot preformed therein at a longitudinal location intermediate the respective sets of apertures, said slot being narrow heightwise of the sinker body and having a relatively narrow entrance at one side of said body and widening in a horizontal plane toward the opposite side to form an internal retaining shoulder behind said entrance, and elongated spring latch means comprising oppositely extending shank portions interconnected by a spring coil formation insertable into said slot through said entrance by compressing the coil sides together to wedge the same through such entrance past said retaining shoulder, with the coil disposed in a longitudinal horizontal plane of the sinker, whereupon expansion of such coil entering the widened portion of the slot retains the coil against withdrawal, lodged against said shoulder, while permitting flexure of such coil freely in said slot, and latch elements carried by said shank portions and lodged removably in said respective sets of apertures under pressure of the spring recoil force to bridge across said groove and thereby retain a fishing line slidably in the base of such groove.

3,043,045
FLY FISHING LINE
Leon P. Martuch, Midland, Mich.
Filed July 20, 1959, Ser. No. 828,013
7 Claims. (Cl. 43—44.98)



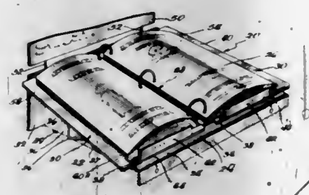
1. A fly fishing line comprising: a core having a smooth plastic coating thereon, said coating containing substantially uniformly distributed throughout its length and thickness a multiplicity of hollow pre-formed microspheroids having a diameter range of from 2 to 60 microns therein sufficiently numerous to impart to said fishing line a specific gravity below approximately 1.15.

3,043,046
INSECT EXTERMINATING DEVICE
James Roy McCoy, 3102 30th St., Lubbock, Tex., and Thomas Jefferson Umphres, Lubbock, Tex.; said Umphres assignor to said McCoy
Filed Feb. 20, 1962, Ser. No. 174,627
4 Claims. (Cl. 43—111)



1. A mechanism for exterminating crawling insects comprising:
(*a*) a base adapted to rest on the ground around a nest of the crawling insects,
(*b*) said base having an opening therein,
(*c*) a member mounted on the base for rotation about the axis of the opening,
(*d*) a roller on the member,
(*e*) said roller journaled for rotation on the member to roll around the edge of said opening,
(*f*) a windmill mounted upon said base, and
(*g*) means for rotating said member responsive to rotation of said windmill.

3,043,047
BOOK SUPPORTING DEVICE
Hector La Fleur, 4527 N. Damen Ave., Chicago 25, Ill.
Filed Feb. 14, 1961, Ser. No. 89,216
10 Claims. (Cl. 45—60)



1. A book holder device adapted to be operatively installed both in a horizontal and vertical position of use comprising, a platform having a book binder means secured thereon, leg means depending from the platform adjacent opposite edges thereof, said leg means adjacent one of said edges being longer than the leg means adjacent the opposite one of said edges whereby the said platform is downwardly sloped when the leg means are engaged against a flat surface, and means releasably secured on said platform for supporting the bottom edges of the pages of a book held on said structure, said last mentioned means being selectively interchangeable in the position thereof relative said binder means so as to be operative in either of said positions of use of the device, said platform having means for removably securing said device on a wall in said vertical position.

3,043,048
DRAWING-TABLES WITH VERTICALLY ADJUSTABLE DRAWING-BOARD
Per Gotthold Bergman, Hyggevagen 21, Spanga, Sweden
Filed Sept. 30, 1959, Ser. No. 843,480
9 Claims. (Cl. 45—131)



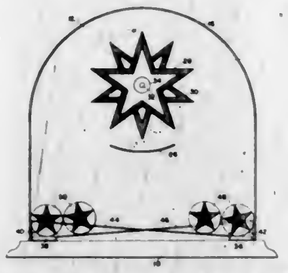
1. Drawing-table with a vertically adjustable drawing-board carried by supporting arms pivotally mounted on a supporting shaft in said table, the inclination of the drawing-board being maintained constant, at the vertical adjustment of said drawing-board, by a parallel motion mechanism, characterized by the fact that the supporting arms are so bent that the parts thereof which adjoin the supporting shaft are substantially horizontal while the parts of said supporting arms which adjoin the drawing-board are directed upwardly when the drawing-board occupies its uppermost position, whereby a table top or the like located behind the drawing-board and above the supporting shaft can extend such a distance inside the supporting shaft that the edge of said table top facing the drawing-board lies in immediate proximity to the drawing-board.

3,043,049
STABILIZER
Jay L. Gleason, 1101 Ocean Drive, Oxnard, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed June 21, 1960, Ser. No. 37,713
4 Claims. (Cl. 45—139)



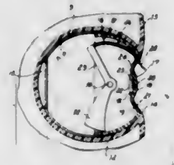
1. A stabilizer, comprising: a hollow object-support member of flexible material comprising flexible enclosing wall means defining therein a hollow interior region, said hollow interior region within the hollow flexible object-support member being filled with a viscous inelastic medium whereby unequal pressure applied to the object-support member by unequally vertically spaced parts of a superimposed object and an underlying floor will cause the viscous inelastic medium to flow away from high pressure regions toward low pressure regions to equalize interior hydrostatic pressure within the interior region and to vary the vertical thickness of the object-support member so as to compensate for variations in the underlying floor from a true horizontal plane in a manner tending to support the object vertically and to stabilize the engagement of the object with respect to the underlying floor and to virtually prevent wobble therebetween, said wall means including inelastic means to prevent the hollow object-support member from stretching in a manner tending to increase the volume of the hollow interior region.

3,043,050
CHILDREN'S PLAYTHINGS
Peter A. Peterson, 1814 SW. 22nd St., Hillard's Apts., Miami, Fla.
Substitute for abandoned application Ser. No. 724,972, Mar. 31, 1958. This application Mar. 29, 1961, Ser. No. 103,671
1 Claim. (Cl. 46—42)



A device comprising, in combination, a housing having a front and a rear wall formed with small cut-outs therein, a dome-shaped top, two partitioning walls within the housing, whereby to form enclosures, said latter walls being formed with small cut-outs therein, a shaft through the partitioning walls, star-shaped members mounted on said shaft, one within each enclosure, respectively, and made to move or rotate reversely, tracks mounted within the enclosures and slanting in opposite directions, balls disposed at the ends of said tracks, levers arranged in said cut-outs in the walls and partitions and adapted, when tapped, to actuate said balls to strike the star-shaped members on opposite sides, whereby to rotate the latter in opposite directions, and a member inserted through said partitions for assisting the return of the balls.

3,043,051
EYE FOR DOLLS
Herbert R. Beebe, Richmond Hill, N.Y., assignor, by mesne assignments, to American Doll & Toy Corp., New York, N.Y., a corporation of New York
Filed Nov. 3, 1959, Ser. No. 850,676
1 Claim. (Cl. 46—166)



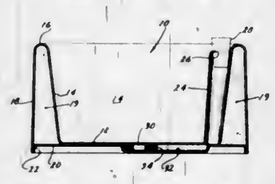
A doll's eye comprising a spherical-shaped eyeball shell having front and rear sections, the front section having an oval-shaped forward edge and a rear wall part in the form of a frustum of a hollow sphere, the rear section having a forward wall part in the form of a frustum of a hollow sphere, the forward wall part of the rear section being secured to the rear wall part of the front section, the front section having an oval-shaped forward wall extending inwardly from the oval-shaped forward edge, said forward wall including a circular central portion and an outer portion surrounding said central portion, said central portion having a forward convex face and said outer portion having a forward concave face, the inner face of the convex portion being coated with colored material to provide a pupil and an iris on the central portion and a sclera coating on the inner face of the outer portion, the outer portion having an arcuate slot adjacent the upper edge thereof, an eyelid of arcuate-shape in section protruding through said arcuate slot, eyelashes secured to the protruding edge of said eyelid, and weighted means connected to the eyelid, said weighted means being pivotally mounted within the front section counterbalancing the eyelid for movement of said eyelid from a narrowly protruding position to a forward covering position with respect to the central portion.

3,043,052
REMOTE CONTROL PROPULSION AND STEERING MECHANISM FOR MODEL WATERCRAFT
Victor Stanzel, P.O. Box 171, Schulenburg, Tex.
Filed Mar. 14, 1960, Ser. No. 14,885
7 Claims. (Cl. 46—243)



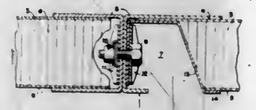
5. The combination with a model boat of means for steering the boat comprising an elongated, flexible element connected to the boat at a location substantially in the vertical plane of the longitudinal axis of and forwardly of the center of gravity of the boat to cause the boat to assume an upwardly and forwardly tilting position in the water upon the exertion of an upward pull on the element and means on the boat extending upwardly therefrom at a location for engagement with the element in upwardly spaced relation to the boat to apply a lateral tilting force to the boat upon the exertion of a lateral pull on the element.

3,043,053
SELF-WATERING FLOWER POT
James R. Peters, Chicopee, Mass., assignor to Plastics Development Corporation, Calais, Vt.
Filed Nov. 16, 1959, Ser. No. 853,324
1 Claim. (Cl. 47—38)



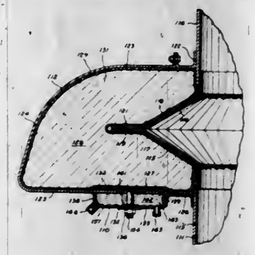
A self-watering flower pot comprising an integrally molded plastic container having a bottom wall merging with inner side walls and connected by curved top walls with outer side walls, said top walls and said inner and outer side walls defining in part a water chamber, a bottom plate secured to said side walls and defining the remainder of said chamber, one of said top walls having an opening therethrough for filling the chamber with water, a plug insertable in said opening and sealing the top of said chamber once it has been filled, said bottom wall having an opening therethrough, a horizontal passageway compositely formed by said bottom plate and said bottom wall, said passageway extending between said bottom wall opening and said chamber, said bottom plate being sealed to said bottom wall peripherally of said passageway, an open cell foamed plastic pad surrounding said opening and disposed therebeneath in said passageway, said sponge having an opening therethrough aligned with and substantially coextensive with said bottom wall opening.

3,043,054
SPHERICAL SELF-SUPPORTING ENCLOSURES
Clarence J. Schmidt, Cuyahoga Falls, Ohio, assignor to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Mar. 23, 1959, Ser. No. 801,056
3 Claims. (Cl. 50—52)



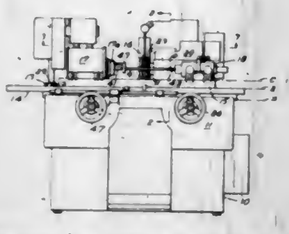
1. A spherical self-supporting enclosure comprising stiff non-metallic modular bodies abutting each other in edge to edge relation in planes radial to the sphere, each body comprising a pair of parallel spherically curved face layers of resin bonded fiberglass, a honeycomb filling of resin bonded fiberglass between said face layers and bonded thereto, a channel-shaped marginal reinforcing wall of resin-bonded fiberglass extending about the modular body with its margins overlapping and bonded to the face layers, a pocket formed in a module adjacent its marginal reinforcing wall, lining means of resin-bonded fiberglass for the pocket, and fastening means insertable through said pocket, the lining means for the pocket, and the marginal wall securing an adjacent module thereto.

3,043,055
EXPANSION JOINT
Gerald F. Davey, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Feb. 26, 1957, Ser. No. 642,592
4 Claims. (Cl. 50—194)



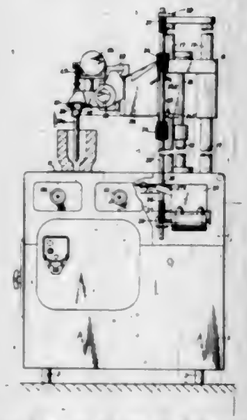
4. An expansion joint for a duct containing gas under pressure and subject to extreme temperature variations, comprising two generally aligned duct portions having their ends spaced from one another, an outwardly-extending sheet metal ring extending from one portion, a housing member attached to the other portion and having an inwardly-directed sheet metal flange, the edges of the ring and flange residing adjacent one another, an inner member, an outer member, the inner member extending transversely away from the edges of the flanges by an amount at least equal to the amount by which the outer member so extends, means drawing the members toward one another to clamp the edges of the ring and the flange therebetween, the members defining a chamber in which the said edges reside, and a fitting extending through one of the members for introducing into the chamber a high-temperature thermo-plastic mastic under pressure to allow expansion and contraction of the enclosure without leakage of gas.

3,043,056
MACHINE TOOL CONSTRUCTION TO ELIMINATE EFFECT OF EXPANSION IN MEMBERS
Jacob Decker and Albert D. C. Stuckey, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed May 18, 1959, Ser. No. 813,732
23 Claims. (Cl. 51—50)



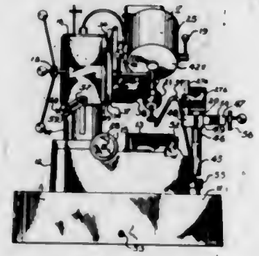
1. In a machine tool having a forming member and having means to receive a member to be formed thereby, supporting structure to hold one of said members for rotation about an axis in a predetermined forming position in front of the other member, said supporting structure having a plurality of separating boundaries dividing said structure into relatively shiftable contacting elements for positioning of said one member into said predetermined forming position, said elements defining single locating lines therebetween at each of said separating boundaries about which expansion and contraction of each element relative to the element on which it is mounted occurs, said locating lines and said axis intersecting a plane at the other member along a straight line when said elements are positioned to hold said one member in said predetermined forming position.

3,043,057
MACHINE FOR ABRASIVE FINISHING OF CONTOURED OR PROFILED SURFACES
Frederick W. Armytage, Foundry Lane, Knottingley, England
Filed June 20, 1960, Ser. No. 37,520
Claims priority, application Great Britain June 20, 1959
8 Claims. (Cl. 51—67)



1. In a machine for the abrasive finishing of contoured surfaces of workpieces, the combination of an abrading tool, means for holding a workpiece, means for moving said workpiece and holder for cutting movement relative to said abrading tool, means for holding said abrading tool and for traversing it over and in contact with the contoured surface of said workpiece to thereby treat the whole of the desired area thereof, a hydraulic tracer valve mechanism mounted to be traversible with said tool, and to cause said tool to follow said contoured surface, a tool-holding and tracer-deflecting mechanism for transmitting deflections of said tool produced by its contact with said contoured surface to said tracer valve and means maintaining said tool in contact with said surface with a substantially constant predetermined pressure.

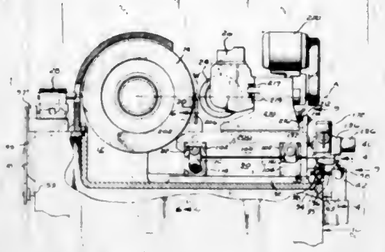
3,043,058
VALVE GRINDING MACHINES
Marvin H. Humbert, Cedar Rapids, Iowa, assignor to Cedar Rapids Engineering Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Aug. 7, 1959, Ser. No. 832,313
1 Claim. (Cl. 51—95)



A valve grinding machine comprising a base having a motor-driven grinding wheel positioned thereon, said grinding wheel adapted to rotate in a horizontal plane and having a vertical grinding surface, a rotatably mounted post extending vertically from said base and above said grinding wheel, a sleeve mounted on the upper portion of said post and adapted for vertical adjustment thereon, a first vertical face on said sleeve, a motor-driven chuck assembly having a second vertical face adjustably mounted on said first vertical face, said chuck assembly adapted to receive an object to be ground, a rack and pinion assembly on said sleeve and said post for moving said sleeve and chuck assembly in a vertical rectilinear path, means for swinging said chuck assembly in a vertical arc for aligning a surface of said object with said vertical grinding surface, scale means on said first and second vertical faces for indicating the relationship between the surface of said object to be ground and said vertical grinding surface, gear means for manually rotating said chuck assembly about the vertical axis of said post in a horizontal arc which passes through the center of said grinding wheel, whereby the surface of said object may be brought into contact with said vertical grinding surface, and a slotted arm pivotally mounted on the lower portion of said sleeve, said arm adapted to secure a rocker arm in a generally horizontal position with its push-rod engaging end in contact with the upper horizontal surface of said grinding wheel, whereby vertical reciprocating movement of said sleeve on said post rocks said push-rod engaging end on said grinding wheel.

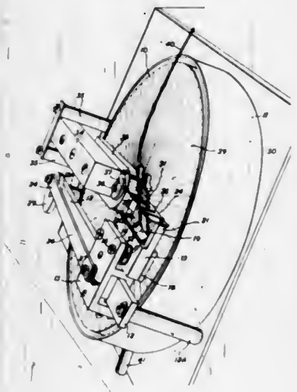
3,043,059
PRECISION FEED MECHANISM
Earl A. Thompson, 1300 Hilton Road, Ferndale, Mich.
Filed Apr. 18, 1960, Ser. No. 22,720
20 Claims. (Cl. 51—103)

1. Precision workpiece feed mechanism for a machine tool, comprising: a base; two carriers on the base; a workpiece holder and a tool, one carried by each carrier; means permitting relative movement between the holder and the tool, the means including a first pair of spaced, aligned pivot points on one carrier, a bar having two sides, each side being connected to one of the first points, a second pair of spaced, aligned pivot points on the base parallel with the first pair of points, each side of the bar being also connected to one of the second points, and the bar having qualities of resistance to torsional forces ade-



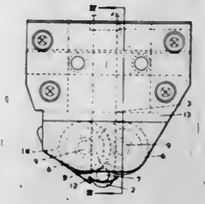
quate to insure parallelism between the two aligned pairs of pivot points under normal working loads.

3,043,060
NEEDLE SHARPENING APPARATUS
George Anketell Bell, West Pymble, New South Wales, and James Lobb, Caringbah, New South Wales, Australia, assignors to Commonwealth Scientific and Industrial Research Organization, East Melbourne, Victoria, Australia, a body corporate of Australia
Filed Oct. 28, 1959, Ser. No. 849,369
Claims priority, application Australia Oct. 30, 1958
18 Claims. (Cl. 51—122)



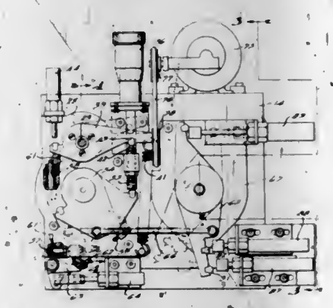
1. Apparatus for sharpening a needle comprising a rotable lap having a working surface, a block contacting said working surface at spaced locations, the block being spaced from said working surface between said locations, said block having an abutment edge substantially parallel to said working surface and spaced therefrom; said working surface and abutment edge defining a support for said needle, the needle having a surface adapted for contacting the working surface so that the surface of the needle is beveled at a determinable angle, the needle having an outer surface adjacent the first said surface thereof and adapted to contact the abutment edge, and spaced guides above the abutment edge, each guide adapted for supporting said needle and cooperating with the abutment edge and the working surface of the lap to maintain the needle in a substantially upright position, the surface of the lap which is adjacent to the first said needle surface being inclined with respect to the vertical at an angle substantially equal to the angle of the beveled surface of the needle.

3,043,061
BELT GRINDING MACHINES
Henry James Plummer, Hadley Wood, Barnet, England, assignor to Bristol Siddeley Engines Limited, Bristol, England
Filed Apr. 28, 1960, Ser. No. 25,434
Claims priority, application Great Britain May 1, 1959
4 Claims. (Cl. 51—141)



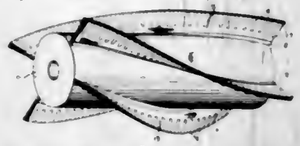
1. A grinding head comprising an abrasive belt, a driving wheel therefor, a contact wheel arranged to be driven by the belt, the contact wheel being positioned in use to hold the belt against a work-piece to be ground, a pair of partly overlapping rotatable discs mounted at each end of the contact wheel and forming a nip, in which the adjacent end of the contact wheel is located and is held therein by the tension of the belt, and supporting means for each of said discs providing free rotation of the disc by the belt via the contact wheel, each disc being of considerably larger diameter than the engaging ends of the contact wheel, the axes of rotation of said discs lying parallel to the axis of rotation of the contact wheel on the side thereof remote from the workpiece.

3,043,062
MACHINE TOOL FEEDING MECHANISM
Gordon E. Lillie, Bellows Falls, Vt., assignor to Bryant Chucking Grinder Company, Springfield, Vt., a corporation of Vermont
Filed Oct. 1, 1959, Ser. No. 843,710
12 Claims. (Cl. 51—165)



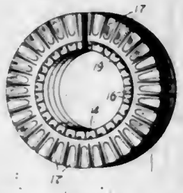
1. In a machine tool feeding mechanism, threadably connected stationary and feed members, means connecting said feed member to a machine tool element, the feed member being adapted to move said machine tool element, first and second drive means independently operable to cause rotation of said feed member, a rockably supported feed operating arm connected to said feed member and movable in unison therewith, a frictional connection between said first drive means and said feed operating arm, and a reciprocable one-way connection between said second drive means and the outer end of said operating arm.

3,043,063
ROTARY TOOL
Ruben O. Peterson, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 8, 1958, Ser. No. 780,657
24 Claims. (Cl. 51—193)



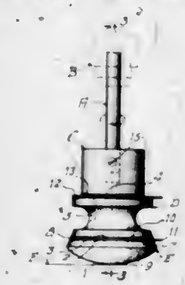
1. A rotary surface-finishing tool comprising a central annular supporting member and a plurality of flat sheet metal fingers extending radially therefrom and lying in planes generally parallel to the axis of rotation of said tool, said fingers being connected to said supporting member by more flexible sheet material and said fingers being flexibly interconnected along their radially extending edges.

3,043,064
ROTARY ABRADING TOOL
Ruben O. Peterson, deceased, late of University Heights, Ohio, by Marie G. Peterson, executrix, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 23, 1959, Ser. No. 854,981
7 Claims. (Cl. 51—193)



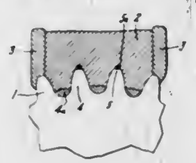
3. A brush element comprising a rotatable support and a plurality of generally flat flexible fingers extending therefrom, said fingers comprising sheets of flexible material pleated to form generally flat elongated strips, said strips being secured to said support and extending radially outwardly therefrom with their flat pleats lying in planes normal to the axis of rotation of said support, and regions of hard abrading material on said fingers extending to the outer working ends thereof but spaced substantially from said support to afford a relatively flexible connection with said support.

3,043,065
APPARATUS FOR MECHANICALLY TREATING METAL AND PLASTIC SURFACES
Stephan H. Terrel, 144 Short Hills Ave., Springfield, N.J.
Filed Jan. 10, 1961, Ser. No. 81,773
4 Claims. (Cl. 51—195)



2. A surface-treating tool including a drive-support block separably connectible to a driving spindle, a facepiece having at one end thereof a segmentally spherical convex abrading face, and an elongated body circular and continuous in transverse cross-section and resilient throughout its length and transverse cross-section, said body having its opposite ends coaxial and connected to said drive-support block and to said facepiece, respectively, and having a portion between said facepiece and said drive-support block substantially less in diameter than said facepiece.

3,043,066
METHOD OF HONING A TOOTHED GEAR MEMBER
Joseph J. Zrodowski, Winchester, Mass., assignor to General Electric Company, a corporation of New York
Filed Aug. 24, 1960, Ser. No. 51,672
2 Claims. (Cl. 51—287)



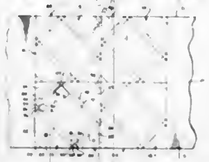
2. A method of honing toothed gear members comprising: providing a gear member having teeth defining working surfaces with periodically repetitive defects therein, casting an abrasive composition in a fluent state directly on the working surfaces of said teeth, confining said composition to said working surfaces, causing the abrasive composition to solidify to form a honing tool, and effecting the honing of said gear member by longitudinally moving said honing tool parallel to the teeth of the member.

3,043,067
SUTURE PACKAGE
Henry J. Rynkiewicz, Brookfield, Conn., and Gilbert B. Ayres, Pearl River, N.Y., assignors, by mesne assignments, to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Aug. 4, 1953, Ser. No. 372,215
3 Claims. (Cl. 53—27)



1. A method of manufacturing a sterile suture package which comprises enclosing a suture in an open-ended plastic envelope, dry-sterilizing the suture and envelope, introducing a sterile conditioning liquid into the envelope and sealing the envelope to form a liquid-tight, sterile suture packet, bringing two sheets of side wall-forming material into alignment and sealing together by a strippable seal at least one but less than all of their outer edges to form an open outer envelope, sterilizing said outer envelope and introducing said sterile suture packet thereinto under sterile conditions, and sealing together the outer unsealed portions of said outer envelope by a strippable seal.

3,043,068
TUCK-IN TYPE BOX
Howard Blonder, P.O. Box 1082, Downey, Calif.
Filed Mar. 8, 1960, Ser. No. 13,684
3 Claims. (Cl. 53—29)



1. A method of forming tuck-in boxes from a rectangular running length of box board comprising the steps of:

(*a*) dividing said running length into a plurality of rectangular pattern blanks wherein the width of the box board accommodates at least one pattern blank placed on the box board so that the sides of the pattern blank are parallel to edges of the box board;

(*b*) forming fold lines in each pattern blank to define a bottom face, two side walls, two cover face portions, two end walls, two tuck-in flaps integral with the end walls respectively, and four side flaps integral with the ends respectively of the side walls,

(*i*) said fold lines being formed to define the outline of the pattern blank such that its bottom face has its longitudinal and transverse axes aligned with respective diagonals of the pattern blank,

(*ii*) the end walls being coextensive and integral with the bottom face along opposite end edges respectively of the bottom face,

(*iii*) the side walls being coextensive and integral with the bottom face along opposite side edges respectively of the bottom face,

(*iv*) the two tuck-in flaps being members respectively of one pair of diagonally opposed corner portions of each pattern blank and being coextensive and integral along one edge thereof with said end walls respectively,

(*v*) the two cover face portions being members respectively of the other pair of diagonally opposed corner portions of each pattern blank and being coextensive and integral along one edge thereof with the side walls respectively, the linear length of each cover face portion from the edge of the side wall to the corner of the pattern blank being sufficient to provide an overlapping gluing portion;

(*c*) folding said sheet along two of said fold lines to overlap the gluing portions of the cover face portions;

(*d*) gluing said overlapped portions together and maintaining said cover face portions adjacent the bottom face;

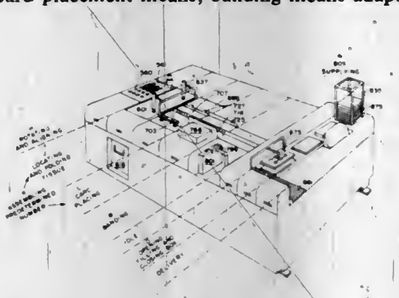
(*e*) shaping the glued sheet to the configuration of a right prism;

(*f*) placing matter to be contained by the box between the bottom face and the cover face portions; and

(*g*) closing the box by inserting the tuck-in flaps to extend in a plane under the cover face portions and to be free of the cover face portions and each other.

3,043,069
AUTOMATIC PROCESSING APPARATUS
John B. Whitehouse, Cochituate, Ralph M. Lamade, Jr., Concord, Carmelo A. Di Maggio, Waltham, and George H. Hall, Watertown, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Aug. 8, 1960, Ser. No. 48,176
16 Claims. (Cl. 53—157)

1. Apparatus for automatically processing sheer items, comprising horizontal holding means characterized by being a plurality of small horizontal platforms defining spaces therebetween and adapted to receive and hold a sheer item aligned within predetermined limits with respect to said holding means; flat plate means adapted to hold a tissue sheet larger than said sheer item; tissue sheet supply means; means for transferring said tissue sheet from said tissue supply means to said flat plate means; conveyor means for picking up said sheer item from said horizontal platforms of said horizontal holding means and placing it on said flat plate means; folder means adapted to wrap the sides of said tissue sheet about said sheer item; means for moving said flat plate means back and forth between a position over said tissue supply means and said folder means; card placement means adapted to eject a card onto the resulting tissue-wrapped item; first transport means associated with said folder means and said card placement means adapted to advance said tissue-wrapped item from said folding means to said card placement means; banding means adapted to

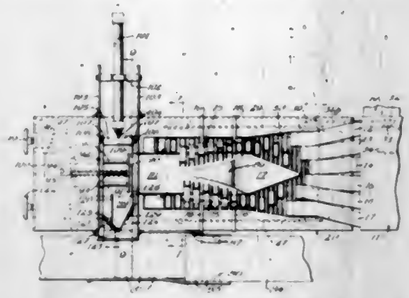


permanently affix a band around said tissue-wrapped item; idle holding station means adapted to temporarily hold the resulting tissue-wrapped item; second transport means adapted to advance succeeding tissue-wrapped items from said card placement means to said banding means and subsequently said banded item to said idle holding station means; box supply means; box opening and closing means; platform means, adapted to receive said banded item from said idle holding station means, associated with said box opening and closing means and adapted to deposit and direct said banded item into the bottom of said box; pusher means adapted to advance succeeding boxes from said box supply means to said box opening and closing means; third transport means for transferring said banded item from said idle holding station means to said platform means; conveyor means for carrying away the resulting filled box; and mechanical driving means adapted to drive, control and time the operation of each of the aforesaid means whereby said sheer item is wrapped, banded, boxed and delivered.

3,043,070
APPARATUS FOR PACKAGING FROZEN CONFECTIONS
Malcolm E. Cammack, St. Paul, Minn., assignor to Crescent Creamery Company, St. Paul, Minn., a corporation of Minnesota
Filed May 27, 1960, Ser. No. 32,433
16 Claims. (Cl. 53—159)

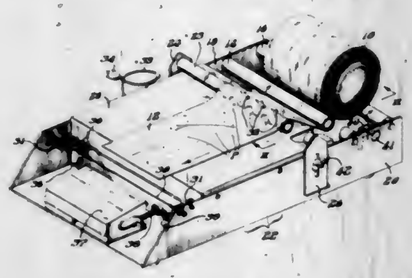
1. A packaging machine for packaging articles, the apparatus including an endless conveyor, a series of pocket forming elements on said conveyor and movable therewith, and arranged in a pair of spaced rows, each of said pocket forming elements being designed to contain an article and having an open inner side, said elements being pivotal on axes parallel to the direction of movement of the conveyor upon movement of said conveyor, means pivoting said elements of each row sequentially inwardly toward the elements of the other row

upon movement of said conveyor to position the open sides of said elements directed downwardly, and guide



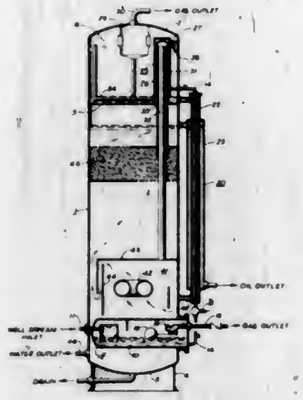
means acting as a closure for said open sides during the downward pivotal movement thereof.

3,043,071
PACKAGING MACHINE
George W. Sadell, West Bristol, Pa., assignor to J. B. Dove & Sons, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 29, 1960, Ser. No. 11,841
1 Claim. (Cl. 53—390)



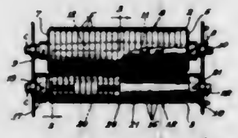
A compact unitary portable machine for use in wrapping fruits, vegetables, and like products, requiring a plastic film wrapping which is capable of breathing, said machine comprising: a box-like metal frame having a work surface and having rotatably mounted beyond the rearward end of said work surface and substantially below the level thereof a pair of transverse spaced-apart support rollers for supporting peripherally a supply roll of thin unperforated transparent plastic film; a toothed perforating roller rotatably supported in said frame on an axis substantially parallel to the axes of said support rollers and of said supply roll, said support rollers and said perforating roller being mounted in such positions that said film may be passed downward in close contact with the rearward surface of one of said guide rollers to a point substanitally below the level of said work surface and then upward about and in close contact with said perforating roller, the central circumferential portion of said perforating roller being provided with a plurality of spaced-apart triangularly-shaped teeth, which protrude substantially from its periphery, whereby when said film is pulled forwardly from said supply roll, the central portion of said film is perforated, leaving both edge regions unperforated; an electric resistance wire mounted in transverse position forward of said work surface for heat-severing said film at any selected point; an electric hot plate mounted forward of said electric resistance wire for heat-sealing said severed film to form a package; and means for passing electric current selectively through either or both said resistance wire and said hot plate.

3,043,072
METHOD AND MEANS FOR TREATMENT OF OIL WELL PRODUCTION
Jay P. Walker and Clarence O. Glasgow, Tulsa, Okla., assignors to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Apr. 13, 1959, Ser. No. 806,000
7 Claims. (Cl. 55—45)



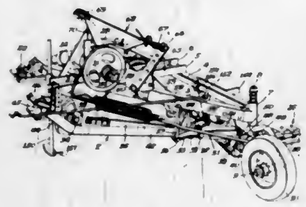
3. The method of treating oil well production, comprising,
- collecting the production into a volume sufficiently large to permit stratification of the oil and emulsion into a strata and free water into a separate strata,
- directing heat into the oil and emulsion strata which will evolve gas,
- continuously withdrawing oil and emulsion from the heated strata as it is raised to a maximum temperature,
- coalescing the oil and water of the oil and emulsion strata after it has been raised to the maximum temperature to produce clean oil,
- condensing water and hydrocarbons from all vapors evolved above the surface of the coalesced oil,
- condensing water and hydrocarbons from all vapors evolved from directly heating the oil and emulsion strata,
- maintaining all the condensed water and hydrocarbons from all these vapors isolated from the clean oil,
- flowing a first portion of the isolated water and hydrocarbons beneath the surface of the clean oil,
- and flowing the remainder of the isolated water and hydrocarbons to the large volume of collected production.

3,043,073
HAY CRUSHING ROLL CONSTRUCTION
James H. Bornzin, La Grange, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 11, 1958, Ser. No. 727,935
1 Claim. (Cl. 56—1)



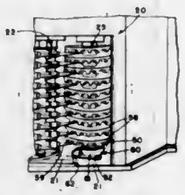
A hay crushing roll comprising a shaft having bearing means adjacent its ends, the said shaft being of less diameter at its ends than at its center portion and said shaft tapering from its center portion towards its ends, and a plurality of disks of elastomer material compressingly engaged on said shaft, the radial thickness of said disks gradually increasing from the center of said roller outwardly, and the surface of said roller being of cylindrical form.

3,043,074
MOWER LIFT DEVICE
Reginald A. Christie, Ancaster, Ontario, and William R. Rowbotham, Hamilton, Ontario, Canada, assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 29, 1959, Ser. No. 809,751
8 Claims. (Cl. 56—25)



1. In a mower having a frame and a cutter bar assembly, means pivotally mounting the cutter bar assembly on the frame enabling vertical swinging movement of the cutter bar assembly between a position upon the ground and an elevated position off the ground, drive means carried on the frame and operatively connected to the cutter bar assembly for driving the latter, driven means on the frame, said driven means comprising a shaft and an element rotatable thereon and means selectively and releasably connecting said element to said driving means, a drum connected to said element, a flexible member connected to said element for winding upon the drum attendant to said element being driven, an operating linkage operatively connected to said mower assembly and said member, and a brake operatively associated with said drum for resisting rotation thereof in winding and unwinding directions of rotation of the drum.

3,043,075
COTTON HARVESTER
Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,693
2 Claims. (Cl. 56—40)



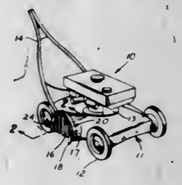
1. In a cotton harvester having an upright housing structure including therein a horizontally disposed floor plate and an upright doffing drum with vertically spaced laterally extending doffing plates thereon supported in the housing structure to rotate about a vertical axis, the improvement comprising: a radial sweep arm disposed beneath the lower of the doffing plates and closely adjacent the floor plate; and means mounting the arm on the drum to effect rotation of the sweep arm in a lateral plane in response to rotation of the drum whereby material will be swept off the floor plate.

3,043,076
WINDROWER SUPPORT ASSEMBLY
Earl L. Scheidenhelm, Mendota, Ill., assignor to Horace D. Hume, Mendota, Ill.
Filed June 6, 1960, Ser. No. 34,126
3 Claims. (Cl. 56—192)



1. A supporting structure for a windrowing apparatus, comprising:
- a rigid frame adapted to be fixed to the frame of a vehicle;
- a pair of parallelogram assemblies respectively mounted at each side of the frame at the front end thereof, each of said assemblies including a first element fixed to said frame, a second element spaced forwardly from said first element, and a pair of spaced parallel braces each pivotally connected to said first and second elements, said braces being extended forwardly and upwardly from their connections with said first element;
- counterbalance means operatively connected between said rigid frame and said assemblies;
- and manual lifting means mounted on said rigid frame independently connected to said parallelogram assemblies adapted to selectively vary the elevation of said second elements relative to said frame individually or in concert.

3,043,077
GUARD FOR POWER MOWERS
Stanley P. Novak, 2 Highland Ave., Belmont Hills, Pa.
Filed Oct. 3, 1960, Ser. No. 60,057
3 Claims. (Cl. 56—255)

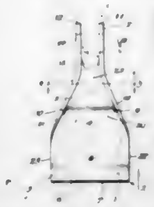


1. A protective guard for the discharge outlet of a rotary power mower, said guard comprising a frame adapted to extend along and be secured to the bounding region of a mower discharge opening, and flexible screen means secured to and extending across the area within said frame, said screen means comprising a plurality of flexible strips extending generally vertically in spaced substantially coplanar relation each having its upper end anchored to said frame and having its lower end free, to thereby deflect and retard relatively large and dangerous particles while passing substantial quantities of grass cuttings.

3,043,078
FORAGE HARVESTER KNIFE STRUCTURE
Robert H. Witt, Hinsdale, and Arthur G. Barows, Downers Grove, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 30, 1959, Ser. No. 843,456
2 Claims. (Cl. 56—289)

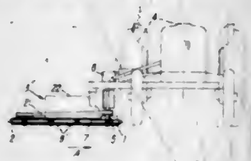
1. A knife for use in a forage harvester comprising an elongated platelike member having a cutting edge at one end, and a pivot means adjacent its opposite end lying

in a plane substantially parallel to that of said cutting edge, said member being curved in longitudinal cross



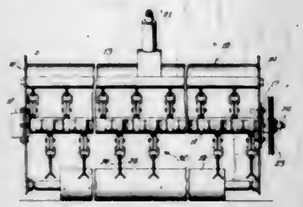
section and said member having upstanding cutting edge portions on the portion thereof adjacent said pivot means, said portions being on the concave side of said member.

3,043,079
CUTTER ARRANGEMENT
William Simpson Aston, Jacksbridge Farm, Lingfield, England
Filed Dec. 22, 1959, Ser. No. 861,397
Claims priority, application Great Britain Apr. 14, 1959
6 Claims. (Cl. 56—290)



1. A cutter assembly for application to V-groove pulleys mounted horizontally on a cutting attachment or machine for agricultural use, said assembly comprising an endless flexible belt of truncated V-shape form, of which at least one pulley-engaging surface has longitudinally spaced, elongated recesses therein extending between the front and rear faces of the belt, and a plurality of cutters carried by said belt, each cutter comprising a cutting blade which projects perpendicularly from the front face of said belt and a belt-attaching portion for substantially embracing said belt, said portion consisting of a plate attached to said blade and bent to form a channel, of which at least one of two opposite limbs is seated in countersunk manner in said recess in at least one pulley-engaging surface of said belt.

3,043,080
BLADE CONNECTION FOR MOWERS
Carl W. Mott, Lake Ozark, Mo., assignor to Mott Corporation, Brookfield, Ill., a corporation of Illinois
Filed Apr. 20, 1960, Ser. No. 23,404
21 Claims. (Cl. 56—294)



1. In a mower having a rotatably driven horizontal shaft having blade supporting lug means projecting generally radially therefrom, the combination of attaching means secured to said lug means, blade structure, and a link having a gap at its radially inner side, said link connecting the blade structure to the outer end of the attaching means, one of said means extending into said gap to prevent rotation of said link in its own plane to prevent said gap from shifting.

3,043,081
END SHOE FOR A CUTTER BAR
Lloyd R. Sandall, Bassett, Nebr.
Filed Nov. 25, 1960, Ser. No. 71,702
6 Claims. (Cl. 56—314)



1. An end shoe for the cutter bar of a mowing machine comprising a normally vertical divider plate, said divider plate having an upper end extension and a first flange projecting laterally from an end thereof, said flange extending downwardly from the junction of said plate with its said extension, a cutter bar seat to fixedly receive the outer end of the mowing machine cutter bar, said seat comprising a second flange fixedly secured to said plate at the lower end thereof and projecting laterally beyond the opposed sides thereof, said second flange having a leading end of substantially ogive configuration, said second flange being fixedly secured to said first flange at the lower end of said first flange and said second flange having an intermediate portion downwardly spaced from said plate to receive said cutter bar therein, said second flange having a normally vertical trailing end plate integral therewith, and a substantially flat ground-engaging shoe sole connected to said divider plate and to said trailing end plate.

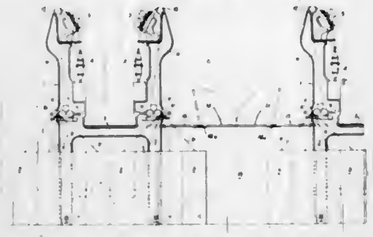
3,043,082
BELT SHIELDS FOR STALK CUTTERS
John A. Northcote, Welland, Ontario, Canada, and John Kulak, Port Colborne, Ontario, Canada, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Feb. 26, 1960, Ser. No. 11,262
4 Claims. (Cl. 56—503)



1. In a rotary implement including a generally horizontal rotor housing, a rotor disposed therein, a vertical shaft carrying said rotor at its lower end and extending upwardly from the housing at its upper end, a belt pulley fixed to the upper end of said vertical shaft, and means to drive said shaft including a drive pulley aligned with said belt pulley and a belt connecting said pulleys, the combination therewith of shield means for said belt comprising a shield housing, a projection fixed to one wall of the latter housing and extending therefrom, a clip carried by said rotor housing to receive said projection when the shield housing is disposed over said belt, a support on said rotor housing adapted to receive the portion of the shield housing generally opposite said clip, and shaped so as to receive and support said shield housing when the latter is shifted in a direction to engage said projection under said clip, means forming an upturned portion on said shield housing extending in a direction generally perpendicular to the direction of movement of said shield housing when engaging said projection with said clip and the generally opposite portion of the latter shield with said

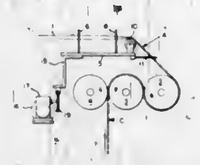
support, and means carried by said support for movement in said perpendicular direction and having means engageable with said upturned edge for locking said shield housing in belt protecting position.

3,043,083
RING SPINNING FRAMES
Joseph Noguera, St. John's Wood, London, England, assignor to Casablancas High Draft Company Limited, Manchester, England, a British company
Filed Feb. 24, 1960, Ser. No. 10,788
Claims priority, application Great Britain Feb. 27, 1959
7 Claims. (Cl. 57—36)



1. A ring spinning frame having support legs, an elevated central operator's gangway platform extending lengthwise along the frame and carried by the said support legs, said platform being sufficiently high above ground level to enable sliver cans to be stored on end therebeneath, two spindle rows extending along opposite sides of said platform at a higher level than the latter, two rows of drafting mechanisms disposed in inwardly facing relationship with one row above each said spindle row and means for delivering sliver from stored cans beneath the platform to said drafting mechanisms.

3,043,084
FALSE TWISTING APPARATUS FOR TOW
John W. Smith, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Sept. 14, 1961, Ser. No. 138,031
8 Claims. (Cl. 57—77.3)



1. Apparatus for applying false twist to tow comprising a driven delivery roll means, a guide means for feeding tow to said roll means, a pair of drag bars embracing and extending obliquely across the path of tow between the guide means and the roll means, and means for oscillating the guide means and drag bars as a unit lengthwise of the roll means whereby to traverse the point of tow feed back and forth along the roll means.

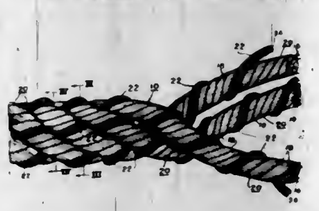
3,043,085
MEANS FOR CONTROLLING THE RATE OF FLOW OF OIL TO A SPINNING OR TWISTING RING
Andrew J. Wayson, Needham, Mass., assignor to Merriman Bros., Inc., Boston, Mass., a corporation of Massachusetts
Filed Apr. 21, 1960, Ser. No. 23,760
6 Claims. (Cl. 57—120)

1. Means for controlling the rate of flow of oil to a spinning ring, said means comprising an oil reservoir, a platform in said reservoir located above the maximum intended oil level therein, a felt positioned on the said platform spaced from said ring, means in the oil reservoir extending upward to the felt for causing oil in said reservoir to flow to the felt, means for draining excess oil from said felt back to said reservoir, and a wick remote from



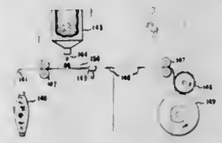
said first named means extending from the felt out of said reservoir to the ring to transmit oil to the ring.

3,043,086
ROPE
Henry Alexander Hood, Price's Lane, Rose Valley, Pa.
Filed Nov. 22, 1960, Ser. No. 70,983
11 Claims. (Cl. 57—140)



4. Rope comprising a plurality of strands twisted in a first direction and twined together, each of said strands comprising a plurality of first yarns twisted in a direction opposite to said first direction, and a second yarn for each strand coiled thereabout in said first direction, said second yarn comprising a multiplicity of continuous filaments which are twisted in said first direction.

3,043,087
PROCESS FOR MAKING ALTERNATING TWIST SLUB YARN USING A FLUID VORTEX
Alvin Leonard Breen, West Chester, Pa., and Martin Victor Sussman, Istanbul, Turkey, assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Original application Dec. 22, 1959, Ser. No. 861,368, now Patent No. 2,997,837, dated Aug. 29, 1961. Divided and this application Jan. 12, 1961, Ser. No. 83,606
4 Claims. (Cl. 57—157)

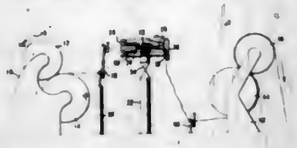


1. A process comprising passing a continuous running filamentary carrier strand axially through a fluid vortex formed by a jet of fluid with velocity at least ½ sonic, thereby twisting the strand and causing it to balloon immediately upstream of the fluid vortex, feeding a second filamentary material to wrap about the ballooning portion of the continuously running strand to form a slub and permitting the slub to be carried by the carrier strand through the fluid vortex where it is wrapped firmly about the carrier strand.

3,043,088
PROCESS FOR MAKING BULKY YARN
Alvin L. Breen, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,566
17 Claims. (Cl. 57—157)

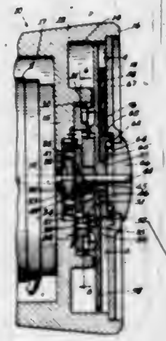
1. A process for making a bulky yarn having a covering of projecting filament ends which comprises feeding

a twisted yarn to a high velocity fluid jet and restraining the yarn from losing any substantial amount of its twist until the jet is reached, applying a false untwist to the yarn by means of the jet, jetting the fluid at a near sonic velocity to convolute yarn filaments and provide a



multitude of projecting filament ends, withdrawing the yarn from the jet after a travel through the jet of less than the shortest filament length, and retwisting the yarn adjacent to the jet to hold the filament convolutions and filament ends in place.

3,043,089
ELECTRIC CLOCK
Edward V. Sundt, 118 Sterling Lane, Wilmette, Ill.
Filed Aug. 3, 1959, Ser. No. 831,239
14 Claims. (Cl. 58—26)



5. In an electric clock, an assembly comprising a transparent cover member having time indicia thereon, a first differential gear reducer supported by the transparent cover member concentrically with a central axis and having an output member behind the transparent cover member, a second differential gear reducer supported by the transparent cover member concentrically with the central axis and driven by the output member of the first differential gear reducer and having an output member behind the transparent cover member, an indicating hand on the output member of the first differential gear reducer behind and visible through the transparent cover member and cooperating with the time indicia on the transparent cover member for indicating time in minutes, and an indicating hand on the output member of the second differential gear reducer behind and visible through the transparent cover member and cooperating with the time indicia on the transparent cover member for indicating time in hours.

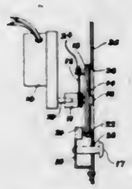
3,043,090
ELECTRIC CLOCK
Edward V. Sundt, 118 Sterling Lane, Wilmette, Ill.
Filed Aug. 3, 1959, Ser. No. 831,281
12 Claims. (Cl. 58—26)

1. An electric clock comprising a synchronous electric motor including a shaft directly driven by the motor at a synchronous speed, a hollow housing secured to the electric motor concentrically with the motor shaft with the motor shaft extending into the hollow housing from one end thereof and the other end of the housing being open, a first assembly in the hollow housing including a first differential gear reducer concentric with the motor shaft and driven thereby, a second assembly including a closure member for the open end of the housing, a second differential gear reducer centrally supported by the closure member, and a third differential gear reducer driven by the second differential gear reducer supported by the closure member concentrically with the second differential gear reducer, means for securing the closure member of the second assembly to the open end of the hollow housing



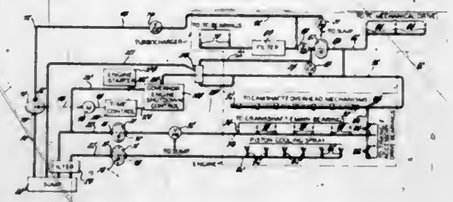
with the second and third differential gear reducers enclosed therein, separable coupling means for coupling the second differential gear reducer to the first differential gear reducer to be driven thereby when the closure member is secured to the open end of the housing, indicating means operated by the second differential gear reducer for indicating time in minutes, and indicating means operated by the third differential gear reducer for indicating time in hours.

3,043,091
VISUAL CYCLE-TIMER
Howard T. Hodges, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 11, 1959, Ser. No. 812,218
3 Claims. (Cl. 58—39.5)



1. A cycle timer comprising a clock motor which is normally running; a drive member rotated by said clock motor; a stationary circular dial marked off in increments of time; a rotatable timing disk coaxial with said drive member and including an index cooperating with said stationary circular dial; a releasable latch mechanism for limiting the rotation of said disk to a single revolution and adapted to hold the disk in a start position relative to said dial; and a slip drive connection between said drive member and said disk to allow the drive member to rotate while said disk is held stationary by said latch mechanism and comprising a pulley on said drive member, and a spring member having a portion wrapped around said pulley to frictionally engage the same and having another portion engaged with said disk whereby said spring member will be put under tension when the disk is held stationary and which tension will be relaxed when said latch is released to cause the disk to momentarily quickly accelerate in the direction of drive and prevent re-engagement of said latch regardless of how lightly the latch is actuated to start the cycle.

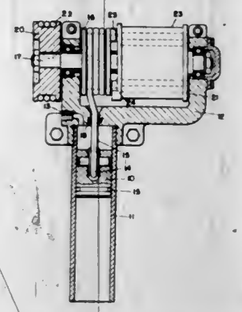
3,043,092
LUBRICATION SYSTEMS AND PROTECTIVE CONTROLS FOR TURBOCHARGED ENGINES
Albert N. Addie, La Grange Park, and James J. Kotlin, Downers Grove, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 18, 1961, Ser. No. 110,969
8 Claims. (Cl. 60—13)



1. In an internal combustion engine having an exhaust gas driven turbocharger, engine control means operable to effect engine shutdown in response to oil pressure below a predetermined minimum, a first means operable to supply pressurized oil for engine lubrication including a first engine driven pump means and passage means for distributing pressurized oil to the several engine and accessory bearings, a second means connected in series with said first pressure supply passage means and operable to pressurize further the oil supplied thereto for lubrication and cooling of the turbocharger, said second pressure supply means including a second engine driven pump means and passage means for distributing the high pressure oil from said second pump means to the several turbocharger bearings, a first valve means operable to prevent reverse fluid flow from said turbocharger bearings toward said second pressure supply means, a second valve means intermediate said first and second passage means and operable to bypass said second pump means when the oil pressure of said turbocharger supply is below that of said engine oil supply and to prevent reverse flow therethrough when said turbocharger supply pressure is above that of engine supply, a third pressure supply pump means connectable to said turbocharger bearing supply passage means and energizable to supply pressurized oil to the turbocharger bearings independently of engine operation, time control means operably connected to said engine control means and adapted to energize said third pump means for limited prelubrication of the turbocharger bearings prior to engine starting and for turbocharger bearing cooling subsequent to engine shutdown, and differential pressure actuated valve means subjected to said engine and turbocharger supply pressures and normally operable to connect said first supply means to said shutdown control means whenever the differential between said supply pressures is in excess of that required for adequate engine and turbocharger lubrication and alternately operable to vent said shutdown control means thereby effecting engine shutdown whenever said pressure differential is below that required for adequate engine and turbocharger lubrication.

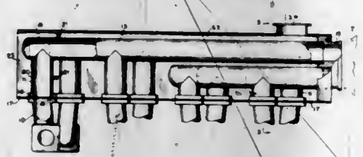
3,043,093
CABLE COUPLED ACTUATOR
Albert M. Stott, Aldan, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 8, 1960, Ser. No. 13,671
1 Claim. (Cl. 60—26.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

In an actuator, the combination of a cylinder having a closed end with an opening therein, a piston movable in said cylinder and completing a firing chamber therein, a pulley journaled in said piston, means for introducing into said chamber a gas generated by the firing of an explosive charge, a load device, and a plastic coated cable fixed at one of its ends to said closed end and extending around said pulley and through said opening to said load



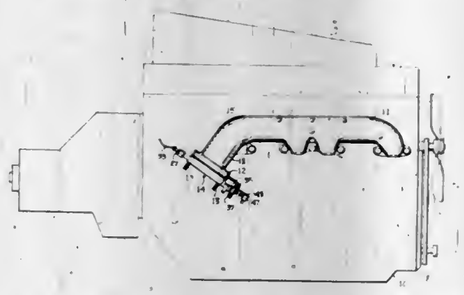
device, said cable sealing said opening against the escape of said gas.

3,043,094
EXHAUST MANIFOLDS
William M. Nichols, Schenectady, N.Y., assignor to Alco Products, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 29, 1960, Ser. No. 11,664
1 Claim. (Cl. 60—29)



An exhaust manifold having a main conduit and a plurality of branch pipes adapted for securement to the cylinders of an internal combustion engine to conduct the exhaust gases therefrom; insulating ceramic liner means disposed within the conduit; said liner means having a close fit with the inside surface of the conduit and having openings therein adjacent each branch pipe; insulating ceramic liner means disposed in each branch pipe, said branch pipe liner means having a close fit with the inside surface of the pipe and having an end portion mating with the opening in the main conduit liner means.

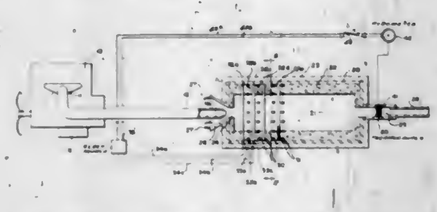
3,043,095
CATALYTIC SMOG INHIBITOR
William J. A. Sturtz, (Old) 1959 Pine Ave., Long Beach 6, Calif.
Filed Apr. 20, 1960, Ser. No. 23,447
9 Claims. (Cl. 60—29)



1. A smog inhibitor for use in the exhaust system of internal combustion engines comprising a catalyst in the form of a hollow sleeve disposed in a spaced apart parallelly extending position within the exhaust system

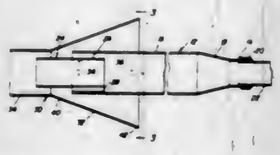
for oxidizing certain of the exhaust gases, a movable exhaust restricting means carried at one end of said sleeve having an operative position for restricting exhausting of low temperature gases from the internal combustion engine during their period of oxidizing, means for heating said exhaust gases for aiding their oxidation, and temperature-responsive means for permitting the heated oxidized gases to move said exhaust restricting means from its operative position to an inoperative position whereby the heated and oxidized gases will be exhausted through the exhaust system.

3,043,096
EXHAUST GAS PURIFIER AND MUFFLER
James H. McLoughlin, New Hartford, N.Y., assignor to National Exhaust Purifier Co., Inc., a company of New Jersey
Filed Mar. 14, 1961, Ser. No. 95,668
8 Claims. (Cl. 60—30)



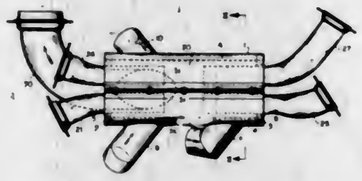
1. An exhaust purifier for use in conjunction with an internal combustion engine comprising a housing having an internal combustion chamber for oxidizing exhaust gases, said chamber having an inlet end for receiving exhaust gases from said engine and an outlet end for discharging oxidized exhaust gases, and means in said combustion chamber for raising and maintaining the exhaust gases at their combustion temperature until the gases are oxidized, said means including a first grid disposed at the inlet end of said combustion chamber and extending transversely to the longitudinal axis of said housing, said first grid being formed by a series of crossed wires that define a plurality of elongated openings, electrical heating means connected to said first grid for electrically heating the wires thereof to raise the exhaust gases to their combustion temperature, and a second gird spaced from said first grid and extending parallel thereto, said second grid being formed by a series of crossed wires that define a plurality of elongated openings oriented at 90° with respect to the elongated openings in said first grid.

3,043,097
EXHAUST PIPE ATTACHMENT
Ross H. Inman, 315 3rd St. NW., Watertown, S. Dak., and Donald A. Inman and Gerald F. Inman, Clinton, Minn.
Filed Oct. 30, 1961, Ser. No. 148,582
7 Claims. (Cl. 60—30)



1. An exhaust pipe attachment for creating a partial vacuum in the outlet end of a rearwardly projecting exhaust pipe, said attachment comprising an elongated pipe having one end adapted for snug telescopic engagement with the outlet end of said exhaust pipe, a dividing tube section of constant and smaller diameter than the other end of said elongated pipe, means rigidly mounting the forward end of said tube section in loosely nested relation within said other end of said elongated pipe, a ram funnel assembly including an outwardly flared front end portion and a generally constant diameter rear end portion, means rigidly supporting said ram funnel assembly in a forwardly projecting position with the minor portion of said front end portion loosely disposed about the rear end portion of said tube section between the other end of said elongated pipe and the rear end of said tube section, the major portion of said front end portion disposed forwardly of and loosely about said other end of said elongated pipe and said constant diameter rear end portion extending rearwardly from a point between said other end of said elongated pipe and the rear end of said tube section to a point spaced rearwardly of the rear end of said tube section.

3,043,098
EXHAUST HEATER-MUFFLER COMBINATION
Stephen J. Hannon, Pittsburgh, Pa., assignor to Hanlon & Wilson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 17, 1961, Ser. No. 145,656
8 Claims. (Cl. 60—31)



1. An exhaust heater-muffler combination comprising a shroud, a core member disposed within the shroud and spaced apart from its inside walls to form an air warming enclosure defined by outside walls of said core member and said inside walls of said shroud, an air inlet duct connected into said air warming enclosure for delivering air to be warmed thereto, an air outlet duct spaced apart from said inlet duct and connected into said air warming enclosure for conveying warmed air from said combination, a partition member disposed within said core member and dividing it into a first chamber and a second chamber, a first exhaust gas conduit means extending through said shroud and having an opening into said first chamber, a second exhaust gas conduit means extending through said shroud and having an opening into said second chamber, said first and second exhaust gas conduit means being adapted to be connected to flows of exhaust gases from individual cylinders of an internal combustion engine so that said first and second exhaust gas conduit means alternately deliver into their respective chambers a flow of exhaust gas from a cylinder of said engine and a gas removal duct having an opening into each of said first and second chambers and extending through said shroud to convey said exhaust gas in said first and second chambers from said combination.

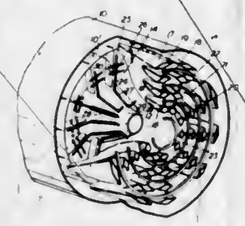
3,043,099
MONOPROPELLANT FUEL
E. Milton Wilson, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Feb. 14, 1955, Ser. No. 488,107
10 Claims. (Cl. 60—35.4)

1. In the method of producing thrust for propulsion by combusting liquid nitroalkane in a combustion chamber, the improvement which comprises combusting said liquid nitroalkane in the presence of lower alkylene oxide.

3,043,100
METHOD OF MINIMIZING BORON OXIDE DEPOSITS IN A JET-TYPE ENGINE
John Macatician, Lake Hopatcong, N.J., and Stephen S. Hubard, deceased, late of Lake Hiawatha, N.J., by James W. Lewis, administrator, Baltimore, Md., assignors to Thiokol Chemical Corporation, Trenton, N.J., a corporation of Delaware
Filed Dec. 11, 1958, Ser. No. 779,794
1 Claim. (Cl. 60—35.4)

A method of minimizing boron oxide deposits within the combustion, turbine and exhaust sections of an air-breathing jet-type aircraft engine operating on a fuel containing at least one material composed only of carbon, oxygen, hydrogen and boron atoms selected from the class consisting of boranes and organoboranes which consists of introducing within such a section in contact with surfaces upon which boron oxide would normally deposit a material selected from the group consisting of hydrogen fluoride and boron trifluoride.

3,043,101
BY-PASS GAS TURBINE ENGINE EMPLOYING REHEAT COMBUSTION
Arthur Henry Lefebvre, Mackworth, Derby, Robert A. Rice, Stretton, Burton-upon-Trent, and John V. Tindale, Alvaston, England, assignors to Rolls-Royce Limited, Derby, England
Filed Feb. 9, 1960, Ser. No. 7,677
Claims priority, application Great Britain Mar. 13, 1959
2 Claims. (Cl. 60—35.6)



1. In a by-pass gas turbine jet reaction engine having a by-pass passage for flow of by-pass air and a jet pipe for flow and discharge of turbine exhaust gases, the improvement comprising: duct means having an upstream end communicating with the by-pass passage and a downstream end extending into the flow of turbine exhaust gases, the discharge end of said duct means having radially spaced discharge outlets separated by a portion closed to flow of by-pass air, the radially spaced discharge outlets discharging by-pass air from the duct means in streams radially separated by said portion within the flow of turbine exhaust gases so that by-pass air and turbine exhaust gases are intimately mixed together; fuel injection means positioned in the flow of turbine exhaust gases in said jet pipe upstream relative to the discharge outlets of said duct means and arranged to inject reheat fuel solely into turbine exhaust gases; and combustion stabilizing means mounted on the closed portion of said duct means, said combustion stabilizing means being arranged to be substantially wholly exposed to the flow of turbine exhaust gases immediately forward of mixture of turbine exhaust gases with by-pass air.

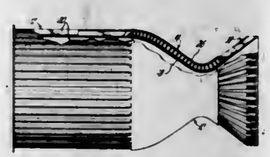
3,043,102
INLETS
William J. Orlin, St. Louis, Mo., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 1, 1952, Ser. No. 302,090
4 Claims. (Cl. 60—35.6)

1. In combination with an aerial missile of the ramjet type, having an open-ended duct extending therethrough in the longitudinal direction for the passage of an airstream through said missile, a supersonic air intake arrangement therefor, including a first constriction near the forward end of said duct, means disposed within said duct and located immediately forward of said first constriction and



protruding forward of the open end of said duct, said means having an opening with an internal constriction therein, and adjustable means disposed coaxially within said duct and located to cooperate with said first mentioned means so as to act as a valve therefor.

3,043,103
LIQUID COOLED WALL
Eugene Dent and Charles R. Moffett, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 10, 1958, Ser. No. 766,555
2 Claims. (Cl. 60—35.6)

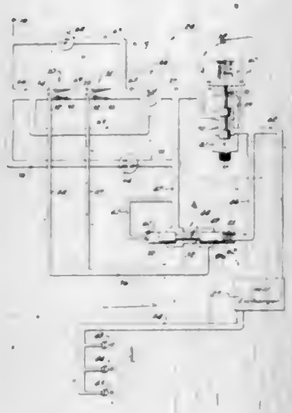


1. A turbine exhaust nozzle of the type including a converging-diverging section in which the section includes a pair of spaced flexible sheet members and a corrugated reinforcing member secured therebetween, said corrugated member comprising alternate ridges and grooves, said ridges and grooves coacting with the sheet members to define a plurality of coolant passages therebetween, the axes of said passages being substantially parallel, a plurality of sets of discontinuous slots formed through adjacent ridges and grooves and extending transversely of said axes, each slot of one set extending continuously from one ridge to an adjacent ridge and across the groove intermediate said ridges, each slot of the other set extending continuously from one groove to an adjacent groove and across the ridge intermediate said grooves, said slots being spaced longitudinally of the ridges and grooves whereby said reinforcing member is rendered deformable in a direction normal to said sheet members.

3,043,104
FLUID PRESSURIZING SYSTEMS WITH LOW TEMPERATURE RISE CHARACTERISTICS
Alexander B. Magnus, Jr., Los Angeles, Calif. (415 N. Dunton Ave., Arlington Heights, Ill.)
Filed July 24, 1959, Ser. No. 829,372
11 Claims. (Cl. 60—39.28)

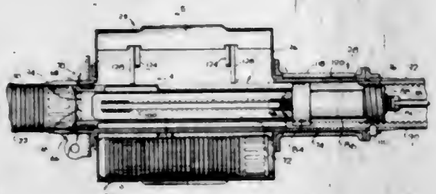
1. A fuel system for a high Mach number jet aircraft, said system including a fuel input duct connecting a source of fuel to a jet engine of said aircraft, said fuel input duct having at least one venturi pump connected in series with and between the input and the output ends of said duct, said venturi pump having a jet nozzle, a constant displacement pump having an intake side and a discharge side, said constant displacement pump having a greater capacity than the maximum fuel demand of said jet engine, said intake side being connected to the output side

of said venturi pump through the output end of said fuel input duct, at least one metering valve connected to the discharge side of said constant displacement pump, combustion chamber nozzle means connected to the output side of said metering valve, a differential pressure control valve, duct means connecting said control valve across said metering valve, and duct means connecting the out-



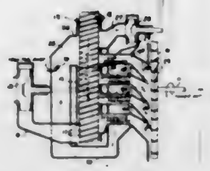
put side of said differential pressure control valve to said jet nozzle, said control valve diverting all of the excess fuel, the flow of which to the engine is blocked by the metering valve, to said venturi pump nozzle for transferring the potential and the kinetic energy of the unconsumed fuel to the potential energy of the fuel on the input side of said constant displacement pump, solely with the aid of said venturi pump.

3,043,105
CHAMBER FOR EXPENDING CONSUMABLE CHARGES AND CHARGING APPARATUS THEREFOR
John P. Hagerty, Box 470, Rte. 8, Tucson, Ariz.
Filed Dec. 19, 1958, Ser. No. 781,504
3 Claims. (Cl. 60—39.47)



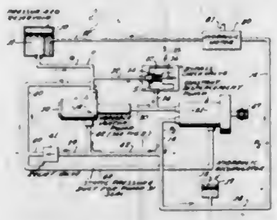
1. Apparatus for sequentially consuming a plurality of charges, said apparatus comprising a chamber in which a charge is consumed, said chamber having an exhaust opening at one end thereof through which products given off by the charge are exhausted, a loading cylinder aligned with said chamber in fixed relationship with respect thereto, said cylinder having an opening in a side wall thereof, charging means movable in said cylinder to transfer a charge from said cylinder into said chamber, means for maintaining a plurality of charges circumjacent said loading cylinder, said means communicating with said opening of said loading cylinder, and means for sequentially transferring said charges directly to said loading cylinder laterally from said latter means when said charging means is at the rear thereof.

3,043,106
GAS TURBINE ENGINE
Richard R. Coleman, Jr., 8904 Larchwood Drive, Dallas, Tex.
Filed Sept. 22, 1959, Ser. No. 841,486
9 Claims. (Cl. 60—39.51)



1. A gas turbine engine including a main shaft; a rotary compressor and a pressure exchange rotor driven by said main shaft; a turbine wheel for driving said main shaft; a housing extending about said pressure exchange rotor, said pressure exchange rotor having a plurality of spaced vanes on its periphery forming with said housing a plurality of chambers, said housing having a plurality of successive ducts communicating with the interior of said housing for delivering gases to said turbine wheel to effect rotation of said main shaft; said rotary compressor having an outlet connected to said housing for delivering fresh air to said chambers; a recirculating duct for withdrawing air from the outlets of said chambers and including a combustion chamber for burning fuel in the withdrawn air to generate hot gases to replace the air withdrawn from said chambers, said hot gases from each of said chambers discharging progressively through said successive ducts; and regenerator means for preheating the air withdrawn from said chambers prior to its entry into said combustion chamber, said regenerator means causing the air to absorb successively smaller amounts of heat from the hot gases flowing to the turbine wheel through said successive ducts whereby the hot gases in said successive ducts are maintained at a substantially uniform temperature and flow at substantially uniform velocities.

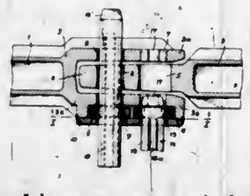
3,043,107
VARIABLE OUTPUT HYDRAULIC SYSTEM USING FIXED DISPLACEMENT PUMP AND VARIABLE OPENING VENTURI PUMP
Alexander B. Magnus, Jr., Los Angeles, Calif. (415 N. Dunton Ave., Arlington Heights, Ill.)
Filed Jan. 5, 1960, Ser. No. 663
11 Claims. (Cl. 60—52)



1. A fluid supply system for receiving fluid at pressure p_1 and delivering said fluid at a substantially constant pressure p_2 to a variable external load as said load varies between 0% load and 100% load, said system including constant displacement and a substantially constant rate of flow pump delivering said fluid at a substantially constant rate, a Venturi pump connected to the input side and in series with said constant displacement pump, a variable orifice in said Venturi pump, a pintle for varying the opening of said orifice, said Venturi pump receiving the fluid at said pressure p_1, and discharging it into said fixed displacement pump at a variable pressure p_3, and

control means for operating said pintle, including a recirculation duct connected to said Venturi pump to vary the amount of the recirculation of the fluid diverted to the recirculation duct in direct proportion to the amount of fluid delivered by said fixed displacement pump in excess of that required by said external load, said control means including a differential control valve means responsive to the difference between p_2 and p_1, said valve means controlling the position of said pintle to have said orifice wide open at said 0% load and closed at 100% load.

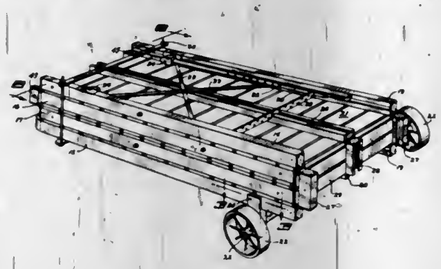
3,043,108
MINE ROOF BAR ARRANGEMENT
Aloys Vanwersch, Heiderweg, Angermund, Bezirk, Dusseldorf, Germany
Filed July 16, 1958, Ser. No. 748,843
1 Claim. (Cl. 61—45)



In a mine roof bar arrangement including two roof bars in substantial longitudinal alignment with a detachable end to end connection, one end of each bar terminating in a longitudinal tongue having a first pair of parallel transverse bores spaced longitudinally of the bar, the other end of each bar terminating in a pair of longitudinal parallel legs defining a fork, each leg having a pair of parallel transverse bores spaced longitudinally of the bar and transversely aligned with the bores of the other leg of the same fork, each bore of each leg having transverse slots disposed diametrically opposite each other and lying in a plane perpendicular to the longitudinal axis of the respective bar while passing through the central axis of the aligned bores of the leg, said end to end connection between the bars comprising one of the tongues positioned between the legs of one of the forks with the bores of the tongue aligned with the bores of each leg of the respective fork, each set of aligned bores in the connection having a pin slidably positioned therein with wedging contact against the wall of the tongue and providing movement of the tongue in a first direction perpendicular to the respective pin and in said plane common to said slots, each pin having a rib extending lengthwise with a taper towards a smaller end of the pin and with the rib slidably guided in one of said slots, said pins having retaining means comprising a pair of ring bodies, each body rotatably secured to one of the legs and positioned coaxially of one of said sets of aligned bores, each ring body having an abutment projecting into its bore, each pin having a longitudinal groove terminating short of said smaller end with stop means, each pin also slidably mounted in one of said ring bodies with said lug slidable in said longitudinal groove, said smaller end of each pin insertable through its respective set of bores but restricted when withdrawn by the stop means engaging the lug and in which position the pin is free for rotation with the body to a second position wherein the rib may be inserted in the other slot of the same bore to wedge the tongue in a direction opposite to said first name direction.

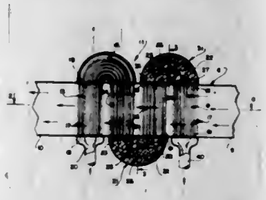
3,043,109
PORTABLE DOCK
John Parker Erickson, 807 N. 10th St., Moorhead, Minn.
Filed Mar. 16, 1960, Ser. No. 15,363
2 Claims. (Cl. 61—48)

1. A portable dock comprising at least first, second, third and fourth elongated dock sections, each having at least two parallel, longitudinally extending dock section beams in longitudinal alinement with corresponding dock section beams of the other sections and a horizontal dock section platform supported by said dock section beams, adjacent ends of said first and second dock section beams being hingedly connected together; a first connector section having a length substantially equal to the vertical depth of said first dock section and positioned between adjacent ends of said second and third dock sections, said first connector section having at least two parallel longitudinally extending connector section beams in longitudinal alinement with the dock section beams



and a connector platform supported by said connector beams, said connector section beams being hingedly connected at their ends to the ends of the corresponding beams of the second and third dock sections; and a second connector section constructed substantially identical with said first connector section and having a length substantially equal to the sum of the vertical depths of the first and second dock sections, the beams of said second connector section being hingedly connected at their ends to the ends of the beams of the third and fourth dock sections; each of the hinges on said portable dock having its pivotal axis lying substantially in the upper platform surface of said dock and transversely thereof.

3,043,110
APPARATUS AND METHOD OF UTILIZING THE CONVERSION OF PARAHYDROGEN TO ORTHOHYDROGEN TO OBTAIN A REFRIGERATING EFFECT
John E. Ahern, Granada Hills, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Jan. 26, 1961, Ser. No. 85,133
12 Claims. (Cl. 62—4)



1. A method of utilizing a source of liquid hydrogen stored in substantially para form as a coolant comprising the steps of introducing the hydrogen in series to a plurality of heat exchange passes, and passing the hydrogen through a catalyst located between one or more pairs of said passes to adiabatically convert a portion of the parahydrogen to orthohydrogen and thereby lower the temperature of the hydrogen.

3,043,111
PROCESS FOR CONDENSING HYDROGENOUS CHLORINE GAS

Heinz Schmidt, Paul Reinshagen, Waldemar Ziemer, and Franz Holzinger, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

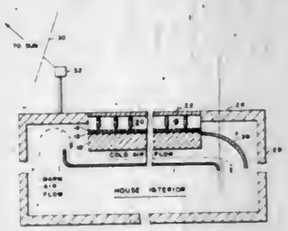
No Drawing. Filed Sept. 12, 1958, Ser. No. 760,564
Claims priority, application Germany Sept. 14, 1957
5 Claims. (Cl. 62—11)

1. A process for condensing hydrogen-containing chlorine gas which comprises cooling said gas in a first stage, while under superatmospheric pressure, to a temperature sufficient to condense a proportion of the chlorine therein that is insufficient to leave an uncondensed residual gas containing an explosive proportion of hydrogen, and further cooling said residual gas in a second stage for condensing additional chlorine and thereby forming a second stage residual gas containing an explosive proportion of hydrogen, said second stage comprising a plurality of small cooling zones capable of confining and rapidly dissipating the heat of any small local explosions of said second stage residual gas.

3,043,112
METHOD AND MEANS FOR PRODUCING REFRIGERATION BY SELECTIVE RADIATION

Alan K. Head, Toorak, Victoria, Australia, assignor to Commonwealth Scientific and Industrial Research Organization, Victoria, East Melbourne, Australia, a body corporate of Australia

Filed Jan. 12, 1960, Ser. No. 2,041
Claims priority, application Australia Feb. 9, 1959
15 Claims. (Cl. 62—56)



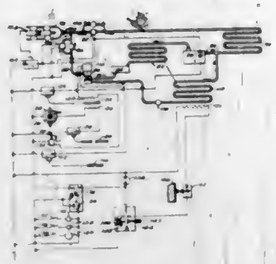
9. The process for producing refrigeration which comprises connecting a selective absorber surface in heat exchange relation to a body to be cooled, transferring heat from said body into said absorber surface, radiating heat from said absorber surface within the range of 8 to 13 microns and pointing said surface toward the sky which has little radiant energy in the range of 8 to 13 microns.

3,043,113
REFRIGERATING SYSTEMS

Glenn Muffly, 1541 Crestview Drive, Springfield, Ohio

Original application June 4, 1957, Ser. No. 663,526, now Patent No. 2,993,347, dated July 25, 1961. Divided and this application May 23, 1960, Ser. No. 31,205.
5 Claims. (Cl. 62—137)

2. A refrigerator comprising a compartment to be cooled, an ice maker element, means for circulating water in contact with said element, an evaporator arranged in heat exchange relationship with said element and with air in said compartment for forming ice on said element and cooling air in said compartment, controllable cooling means for cooling said evaporator, condition responsive control means for alternately energized and de-energizing said water circulating means, drain means for draining water clear of contact with said element during times that said water circulating means is de-energized, and condition responsive control means for energizing said cooling means in response to an increase in temperature of

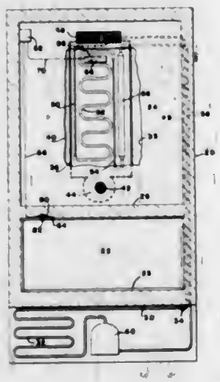


the air in said compartment, whereby said evaporator is operative to cool air in said compartment during non-ice-making periods.

3,043,114
TEMPERATURE CONTROLS FOR REFRIGERATING APPARATUS

John J. O'Connell, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 9, 1961, Ser. No. 81,380
3 Claims. (Cl. 62—209)

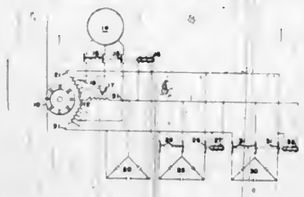


1. Refrigerating apparatus including a first evaporating means for cooling a first fluid and having an outlet, a second evaporating means connected to the outlet of the first evaporating means for cooling a second fluid, a single refrigerant liquefying means for supplying liquefied refrigerant to said first evaporating means and for withdrawing evaporated refrigerant from said second evaporating means, a cycling control for said liquefying means including a fluid motor and a snap-acting switch having a substantial force differential connected to and operated by said fluid motor, a first thermosensitive means thermally associated with said first evaporating means, a second thermosensitive means thermally associated with said second evaporating means, said thermosensitive means being operatively connected to said fluid motor, an electric heater thermally associated with said first thermosensitive means and connected in electrical shunt arrangement with said snap-acting switch, means for decreasing the heat transfer between said second thermosensitive means and said second evaporating means, said cycling control having a substantial temperature differential between open and closed positions of said switch.

3,043,115
METHOD AND APPARATUS FOR THE GENERATION OF ELECTRIC POWER

Earl F. Harter, Murrysville, Pa., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Dec. 30, 1959, Ser. No. 862,985
9 Claims. (Cl. 62—236)

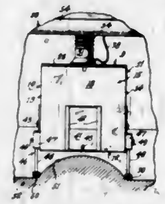


1. In a transportation refrigeration system, a dynamo adapted for use both as a motor and a generator in said system, said system having a compressor, a condenser, an expansion device and an evaporator connected to form a refrigeration circuit and having electric fan motors associated with said evaporator and condenser, said refrigeration system being adapted for use to provide cooling of a vehicle compartment, said dynamo having a rotor mechanically connected to said compressor and to a mechanical power source and having a plurality of phase windings forming an armature winding thereof, each said phase winding comprising a pair of phase winding elements, means connecting each said pair of phase winding elements in series to form the phase windings of a polyphase induction generator, a voltage tap at the high voltage end of said phase windings, a second voltage tap between said phase winding elements providing a first and a second voltage output respectively, said first voltage being greater than said second voltage, means to connect electrically said fan motors to said second voltage output of said generator, a capacitor bank, means connecting said capacitor bank to said first voltage output of said generator to provide excitation for said generator, and means to reconnect said phase winding elements to form a parallel connected motor to drive said compressor when the vehicle is standing adjacent a source of alternating current power and said mechanical power source is shut off.

3,043,116
REFRIGERATOR

Leslie T. Fuller, Rte. 1, Hermleigh, Tex.

Filed July 26, 1961, Ser. No. 126,934
1 Claim. (Cl. 62—244)

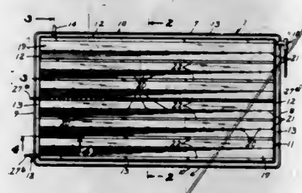


In combination with a vehicle having an air conditioning unit, a refrigerator comprising a hollow housing mounted in said vehicle, said housing including spaced parallel horizontally disposed top and bottom portions, said housing further including spaced parallel vertically disposed side wall members and spaced parallel vertically disposed end wall members, said housing including inner and outer spaced apart casings having insulation therebetween, the top portion of said housing including a stationary section and a hingedly mounted movable section, a support member connected to said stationary section and said support member having a filter arranged adjacent the lower end thereof, said support member including a reduced diameter upper end portion, a flexible tube having one end connected to said reduced diameter upper end portion, the other end of said tube being connected to said air conditioning unit, a motor driven fan mounted in said support member above said filter, a sleeve rotatably connected to said movable section of said top portion and said sleeve including an inclined upper portion, a plurality of spaced parallel louvers mounted in the upper portion of said sleeve, certain of said wall members having spaced parallel downwardly inclined slots therein which define louvered sections, movable closures mounted for movement into and out of opened and closed relation with respect to said louvered sections, brackets mounted in said housing, and reticulated shelves supported on said brackets.

3,043,117
FREEZING MOLD FOR ICE CUBE MAKING MACHINES

Dwight L. Bollefer, Minneapolis, Minn., assignor to Kodiak, Inc., St. Paul, Minn., a corporation of Minnesota

Filed Oct. 28, 1960, Ser. No. 65,829
7 Claims. (Cl. 62—344)



1. In an ice cube making machine of the type having refrigeration apparatus, spray means for forcing a liquid in an upwardly directed spray, and harvesting means for collecting said ice cubes, the improvement of a metallic freezing mold for forming said cubes and disposed in overlying spaced relation to said spray means and having a generally horizontally disposed top surface, said improvement comprising a plurality of substantially straight parallel rows of inverted freezing cells having substantially closed tops and open bottoms, evaporator coil means connected with said refrigeration apparatus and disposed adjacent said rows of cells for refrigerating the wall surfaces of said cells so as to cool liquid sprayed therein, said mold defining a plurality of ejection apertures one each disposed within the top of each of said freezing cells and opening in said top surface of said mold, and the top surface of said mold being formed to define relatively high portions contiguous with each of said ejection apertures and relatively low portions in the intermediately spaced area between said apertures whereby to provide for the drainage and removal of any of said liquid that might pass upwardly through said apertures so as to prevent the contaminating re-entry of the same within said freezing cells.

3,043,118
CLOSED CYCLE HEAT ENGINE

George H. McLafferty, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 20, 1960, Ser. No. 37,355
10 Claims. (Cl. 62—402)

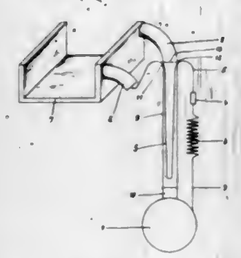
1. In an aircraft structure subject to heating due to movement through the atmosphere at supersonic speeds and having a leading portion with a high equilibrium temperature and a trailing portion, with a lower equilibrium temperature, a closed cycle heat engine comprising

a heat sink associated in heat transferring relation with said leading portion and a heat rejector associated in heat transferring relation with said trailing portion, to extract heat from said leading portion and supply heat to said



trailing portion respectively, means forcing fluid from said heat rejector through said heat sink and power means extracting heat from said fluid discharge from said heat sink and discharging said fluid to said heat rejector.

3,043,119
REFRIGERANT CIRCULATION SYSTEM
Georg Sarukhanian, Berlin-Charlottenburg, Germany, assignor to Siemens-Electrogerate Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Filed Jan. 21, 1960, Ser. No. 3,805
Claims priority, application Germany Jan. 28, 1959
9 Claims. (Cl. 62—513)



1. A refrigerant circulation system comprising a compressor capsule having inlet and outlet ducts, an evaporator having an inlet and outlet, a suction conduit extending between said capsule inlet duct and said evaporator outlet, a condenser connected to said capusle outlet duct, a capillary tube connecting said condenser with said evaporator inlet and having a loop-shaped elongated portion extending longitudinally within said suction conduit, said capillary tube having respective entrance and exit ends which are both located at the evaporator side of said conduit, said conduit having a flaring end portion at its evaporator side, and said tube ends being located in said flaring end portion, and a single solder joint bonding said ends to said conduit and said conduit to said evaporator outlet.

3,043,120
SPEEDOMETER CABLE
Ralph B. Waldron, New Baltimore, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,657
4 Claims. (Cl. 64—2)



1. A speedometer cable comprising a central self-lubricating plastic rod enclosed in at least one braided sheath of self-lubricating plastic filaments and terminating at each end in a connector for transmitting motion to and from the plastic self-lubricating members.

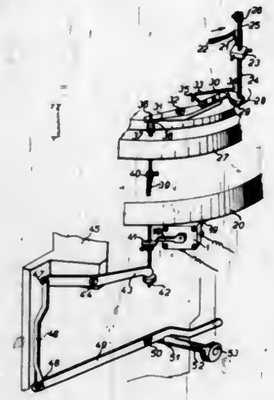
3,043,121
COUPLER FOR SEWER RODS AND THE LIKE
Chester A. Truman, W. 2528 Garland Ave., Spokane, Wash.
Filed June 30, 1961, Ser. No. 120,978
5 Claims. (Cl. 64—6)



1. In a coupler for rod sections such as sewer rods wherein endwise forces or rotative forces are transmitted between the rod section and the coupler by means of an end portion on the rod curved to extend transversely to the rod axis and a seat in the coupler spaced from the end thereof and extending radially with respect to the coupler axis, the coupler having an axial opening extending inward from the rod receiving end thereof to the seat, said opening being large enough for insertion of said curved end into said seat, releasable means operable to hold said rod within the opening with the curved end in said seat and the rod substantially centered in said axial opening comprising a sleeve slidably fitted on said rod, said sleeve having a resilient guide portion at one end readily slidable into said opening, and having a head portion at the other end larger than the opening, with a resilient neck portion extending between said guide portion and head portion, the inner surface of said coupler defining the opening and the outer surface of said neck portion having cooperating pocket and enlargement portions adapted to interengage upon endwise sliding movement of the sleeve into the opening and to resist removal of the sleeve from the opening.

3,043,122
STOPPING MECHANISM FOR KNITTING MACHINES AND MORE PARTICULARLY FOR TWO-CYLINDER CIRCULAR KNITTING MACHINES
Vladimir Hanzl, Trebic-Borovina, and Josef Maler, Trebic-Podklasteri, Czechoslovakia, assignors to Sdruzeni podniku textilniho strojirenstvi, Chrastava, Czechoslovakia
Filed June 12, 1959, Ser. No. 819,844
6 Claims. (Cl. 66—157)

1. In a stop motion arrangement for a knitting machine having latch needles, a support; a fixed contact member on said support; a movable contact member reciprocable between a position of conductive contact with said fixed contact member and an inoperative position; a contact actuator member on said support movable from a first to a second, and thence to a third position; engaging means on said movable contact member and on said actuator member engageable for moving said movable contact member from one position to the other position thereof when said actuating member moves from the second to the third position thereof, and out of engagement when said actuating member is positioned between said first and said second positions thereof; sensing means movable in one direction responsive to an open latch of said knitting machine; and resetting means for moving said sensing means in a direction opposite to said one direction, said sensing means being connected to said contact actuator member for moving the same in a direction toward said third position when said sensing means moves in said one direction, and for moving said actuating



member in a direction toward said first position when said sensing means moves in the opposite direction.

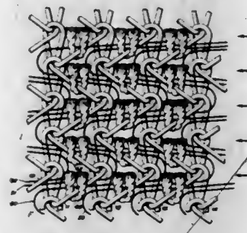
3,043,123
FULL-FASHIONED GIRDLE AND METHOD OF MAKING SAME
Norman H. Goodman, New York, N.Y., assignor to Triumph Hosiery Mills, Inc., New York, N.Y., a corporation of New York
Filed Sept. 8, 1958, Ser. No. 759,669
5 Claims. (Cl. 66—176)



1. An integrally knit full-fashioned girdle blank comprising a straight longitudinal edge along one side of the blank having a selvage and the opposite edge being provided with a plurality of integrally knit depending extensions forming a crotch and leg openings, the courses of said blank reaching between the waist edge to said extensions and the wales extending parallel to the waist edge, the courses of said blank being knit with thermoplastic torque yarns with at least a left torque yarn being knit in some courses and at least a right torque yarn being knit in other courses.

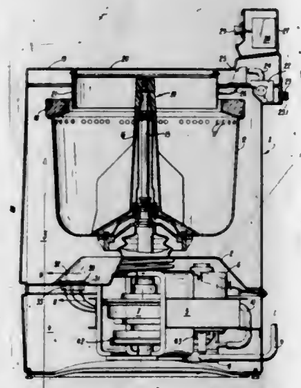
3,043,124
KNITTED PILE FABRICS
John L. Hubbard, Cornwall, N.Y., assignor to The Firth Carpet Company, Inc., New York, N.Y., a corporation of New York
Original application July 25, 1957, Ser. No. 674,142, now Patent No. 2,971,359, dated Feb. 14, 1961. Divided and this application May 23, 1960, Ser. No. 30,997
5 Claims. (Cl. 66—191)

1. A knitted pile fabric comprising a warp knitted tricot base, backing wefts extending back and forth in successive courses, said wefts being laid across the bights of the warp stitch loops of said tricot base, and pile tufts held down between adjacent warp stitch rows by warp ends extending diagonally from one warp row in a given course



to the next adjacent warp row in the next succeeding course.

3,043,125
CLOTHES WASHING MACHINE
Stanley V. Horecky, Villa Park, Ill., assignor to General Electric Company, a corporation of New York
Filed Feb. 29, 1960, Ser. No. 11,708
21 Claims. (Cl. 68—12)

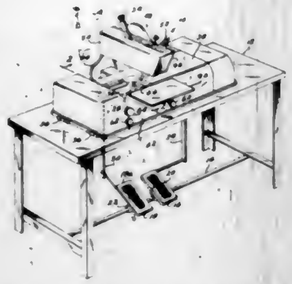


1. A clothes washing machine, comprising a tub to receive liquid and clothes to be washed therein, means for rotating said tub to extract liquid from said tub and said clothes, mechanism for activating said extraction means to initiate rotation of said tub and subsequently to terminate said extraction operation, means including a timer motor to operate said extraction means activating mechanism to initiate said extraction operation and after a predetermined period of operation of said timer motor to terminate said extraction operation, and means responsive to a predetermined minimum rate of extraction of liquid to interrupt operation of said timer motor, circuit means for maintaining said tub rotative while the timer motor operation is interrupted, said interrupting means responsive to a substantial reduction in the rate of extraction of liquid to restore operation of said timer motor to complete its said period of operation.

3,043,126
SKIVING MACHINE
Edwin H. Beck, Lemay, Mo., assignor to Manufacturers Supplies Company, St. Louis, Mo., a corporation
Filed Feb. 23, 1960, Ser. No. 10,113
29 Claims. (Cl. 69—9.5)

1. In a skiving machine having a knife and a feed roll for feeding a blank to be cut toward said knife, the im-

provement comprising a plurality of presser feet mounted for reciprocation in a flat plane and selectively movable



into and out of a cooperative position with said knife and feed roll.

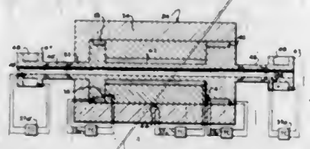
3,043,127
THERMOCHROMATOGRAPHY HEATER
Donald D. De Ford, Evanston, Ill., and Buell O. Ayers, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 11, 1958, Ser. No. 779,677
13 Claims. (Cl. 73—23)



1. A thermochromatographic apparatus comprising a column constructed from a conduit filled with sorbent, said conduit having an inlet port and an outlet port, means for continuously introducing a carrier gas into said column through said inlet port, means for introducing a discrete amount of sample into said column through said inlet port at predetermined times, a sample cell, means for passing the effluent from said column through said sample cell, means in said sample cell for producing a signal representative of the composition of said effluent, a first means disposed in heating relationship with said column for establishing a first temperature gradient by heating said column, second means disposed in heating relationship with said column for establishing a second temperature gradient by heating said column, the lowest temperature of said second temperature gradient being at least as high as the highest temperature of said first temperature gradient, said second means being spaced along said column from said first means; and means for moving said first means ahead of said second means along said conduit from said inlet port toward said outlet port of said conduit and for moving said first and second spaced means in unison along said column while maintaining the same in heating relationship with said column thereby to move two spaced temperature gradients along said column and to isolate within each temperature gradient a component of a sample within said column in equilibrium with said sorbent and having an equilibrium temperature on said sorbent that is within the respective temperature gradients.
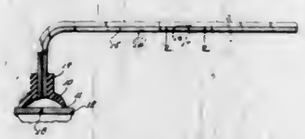
3,043,128
ANALYZER
Buell O. Ayers, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 17, 1958, Ser. No. 761,528
2 Claims. (Cl. 73—23)

1. A thermochromatographic analyzer comprising an elongated conduit containing a material which selectively retards passage therethrough of the constituents of a fluid mixture to be analyzed, means to introduce a fluid mixture to be analyzed into one end of said column, an elongated member of heat conductive material having a central opening therethrough longitudinally of said member, said member enclosing said conduit, a first heating element in thermal contact with one end of said member, a second heating element in thermal contact with the second end of said member, heat insulating material surrounding said member, a third heating element having a central opening therethrough, heat insulating means positioning said third heating element in spaced relationship from said one end of said member longitudinally thereof so as to surround said conduit, a fourth heating element



having a central opening therethrough, heat insulating means positioning said fourth heating element in spaced relationship from said second end of said member longitudinally thereof, so as to surround said conduit, means to move said member and said third and fourth heating elements longitudinally along a substantial length of said conduit so as to selectively impel said mixture therethrough, and means to detect the constituents in the effluent from the second end of said column, said second element being at a higher temperature than that of said first element, said third element being at a temperature at most about that of said first element, and said fourth element being at a temperature substantially higher than that of said second element.

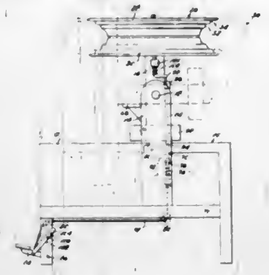
3,043,129
LEAK DETECTOR
Cecil V. King, Chatham, N.J., assignor to N.V. Beleggingsmaatschappij "Margarita," Curacao, Netherlands Antilles, a corporation of Curacao
Filed Feb. 12, 1960, Ser. No. 8,404
22 Claims. (Cl. 73—40)



1. A detector of fluid leaks from a work surface comprising a cup having a deformable portion adapted to hermetically seal off a volume of fluid between said cup and a work surface, said cup having an opening formed in a wall thereof, an indicator tube connected to said cup and in communication with said opening and a discrete plug of foamed liquid positioned in said tube and containing a plurality of discrete bubbles of no larger diameter than the inside diameter of said tube.

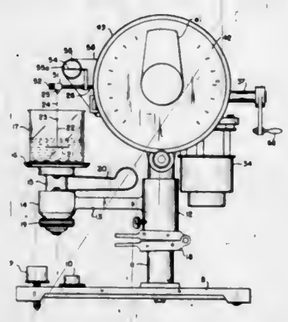
3,043,130
TUBELESS TIRE TESTING APPARATUS
Robert E. Patterson, 344 Brown St., Akron, Ohio
Filed Sept. 22, 1958, Ser. No. 762,549
4 Claims. (Cl. 73—45.6)

1. The combination in apparatus for testing a tubeless pneumatic tire, of a circumferentially split two-part wheel adapted to mount a tubeless tire, quickly releasable means for locking the wheel parts together, gasket means for effecting a seal between the wheel parts when locked together, a shaft extending axially of the wheel and secured to one wheel part, support means for rotatably carrying the shaft in substantially vertical position, means mounting the support means on a horizontal pivot for tilting the support means and shaft into substantially horizontal position, a tank into which a tire mounted



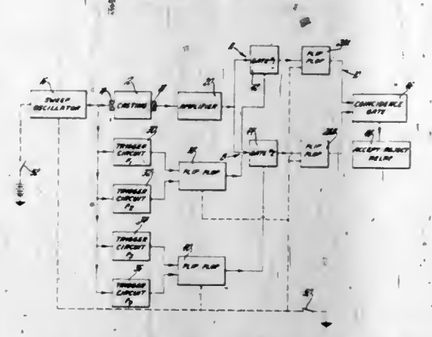
on the wheel is positioned when the support means is tilted, a weight on the support means to counterbalance the weight of the wheel and tire, quickly releasable means for locking the shaft against rotation in the support means, quickly releasable means for locking the support means in vertical position, and means for mounting a conventional tire-carrying wheel on the shaft when at least one wheel part is removed.

3,043,131
TENSIOMETER
Peter Heneage, Pittsburgh, Pa., assignor to Fisher Scientific Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 22, 1960, Ser. No. 16,757
3 Claims. (Cl. 73—53)



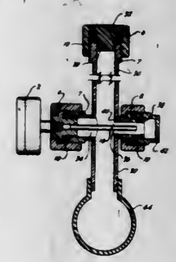
1. A tensiometer comprising a support for a container for the liquid the surface tension of which is to be measured, a ring positioned to be moved through a surface of said liquid, an arm supporting said ring from a point adjacent one end of the arm, a tension wire to which said arm is secured between the ends of the wire and between the ends of the arm, one end of said wire being fixedly mounted, a shaft mounted for rotation about an axis in line with the tension wire and having means for holding the other end of said wire, a motor operatively connected to said shaft to rotate the shaft and thereby apply a torsional stress to the wire tending to rotate the arm about the point where it is secured to the wire and move the ring through the liquid, an electrical circuit for supplying current to said motor, and a switch operated by movement of said arm to cut off the supply of current to the motor after the ring has moved through the surface to be tested, and means to indicate the amount of stress given to the wire by said motor.

3,043,132
SONIC TESTER
Norman W. Schubring, Hazel Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 16, 1958, Ser. No. 767,723
5 Claims. (Cl. 73—67.2)



1. In a device for detecting flaws in a workpiece, the combination of a variable frequency oscillator, a driver operatively interconnected with said oscillator and adapted to induce variable frequency mechanical vibrations in said workpiece, a vibration pickup responsive to the amplitude of the vibrations induced in said workpiece, a plurality of channels operatively interconnected with said vibration pickup and including bandpass filter means, each of said channels being effective to produce an output signal whenever the amplitudes of said vibrations are in excess of some predetermined amount and the frequency thereof is within the limits of the band for said channel, a coincidence circuit interconnected with said channels and effective to produce an output signal only when each of said channels produces an output signal.

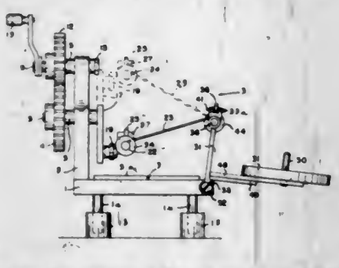
3,043,133
GAGE ATTACHMENT AND AIR REMOVAL ARRANGEMENT FOR SOIL-MOISTURE TENSIOMETERS
Lorenzo A. Richards, 4455 Fifth St., Riverside, Calif.
Filed Mar. 23, 1959, Ser. No. 801,187
3 Claims. (Cl. 73—73)



1. The combination of (1), a soil-moisture tensiometer comprising a transparent soil tube, a porous ceramic cup sealed to said soil tube at one end thereof and a vacuum gage removably attached at the opposite end thereof, said gage communicating with the interior of said soil tube through a gage tube extending into said soil tube; and (2), a servicing unit therefor comprising a body portion having bulb means for producing a vacuum in said unit and three openings into said body portion, one of which is fitted with means for attaching and sealing said unit to the soil tube of said tensiometer and two of said openings are fitted with means for receiving and sealing gage assemblies thereinto, said gage assemblies comprising a Bourdon-type vacuum gage, a plug and a gage tube, said gage being sealed into one end of a channel extend-

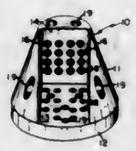
ing lengthwise through said plug and said gage tube being sealed into the opposite end of said channel, the exposed end of said gage tube extending at least one inch beyond said plug.

3,043,134
COATED FABRIC FLEXING DEVICE
James E. Haynes, Jr., Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 8, 1959, Ser. No. 845,292
8 Claims. (Cl. 73—100)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for testing a flat sample of pliable coated sheet material comprising a main support, a pair of transversely spaced substantially parallel elongated fabric clamping members for clamping the entire opposite side edge portions of a sample of the coated sheet material therebetween, means on said support for moving a first one of said elongated fabric clamping members simultaneously longitudinally back and forth and up and down in a rotative gyratory motion in one plane in parallel oriented relation to the other clamping member, means connected to said other of said elongated clamping members and the support for tensioning the last mentioned elongated clamping member in a plane transverse to the plane of said back and forth and up and down direction of movement of the first elongated coated fabric clamping member, and removable collection means carried by said support below and between said transversely spaced elongated fabric clamping members for collecting particles of the coating of the coated sheet material which fall from the coated sheet material during the combined back and forth and up and down movement of said first elongated coated fabric clamping member.

3,043,135
TEST FIXTURE
James G. Coulouriotes, North Wilmington, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,853
6 Claims. (Cl. 73—103)



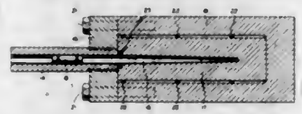
1. A test fixture for transferring an environmental force applied to it by an environmental test equipment to a test component secured to the test fixture, said environmental force having a center of pressure, said test fixture comprising a body having a base surface on which the environment force is applied including a center of gravity of the base surface to coincide with the center of pressure, a test fixture center of gravity spaced from the base surface center of gravity laterally from the direction of the applied environmental force, and mounting means for securing the test component to the test fixture between the test fixture center of gravity and a line through the base surface center of gravity in the direction of the applied environmental force.

3,043,136
FORCE MOMENT TYPE STRAIN GAUGE SUPPORT
Patrick J. Cunningham, Fullerton, and Mari B. Wolf, Anaheim, Calif., assignors to The Task Corporation, Anaheim, Calif., a corporation of California
Filed May 20, 1960, Ser. No. 30,552
13 Claims. (Cl. 73—133)



1. An improved force moment type strain gauge support, comprising a longitudinally axially extending body having web means extending in longitudinal and lateral planes and forming a corner, said body having a longitudinally extending and flattened surface at said corner and facing away from the body axis for supporting a strain gauge adapted to sense strain produced at said surface in response to transmission by said web means of a force moment exerted about the longitudinal extent thereof.

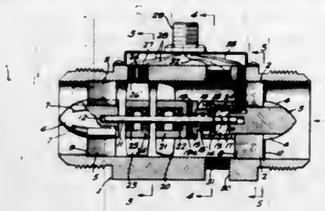
3,043,137
HIGH PRESSURE DEVICE
Austin B. J. Clark, 6371 Oxon Hill Road, Oxon Hill, Md., and Paul T. Boltz, 30 Circle Ave., Potomac Heights, Md.
Filed Sept. 29, 1958, Ser. No. 764,202
1 Claim. (Cl. 73—167)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A high pressure system which comprises a tubular member, a pressure vessel in axial alignment with said tubular member and having an open end which is connected to one end of said tubular member and a closed end opposite to said open end that is connected to said tubular member, the inner wall of said pressure vessel tapering from said open end to said closed end of said vessel, means for admitting a fluid into said tubular member and said pressure vessel, and means for forcing a piston through said tubular member into said pressure vessel thereby compressing said fluid and producing a high pressure in said pressure vessel, said pressure vessel absorbing the energy of said piston and securing the piston against back flow in said tapered section of said pressure vessel.

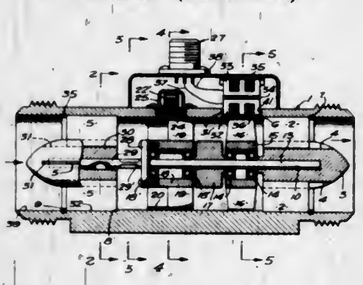
3,043,138
MASS FLOW METER
Charles C. Waugh, Tarzana, Calif., assignor to The Foxboro Company, a corporation of Massachusetts
Filed May 26, 1958, Ser. No. 737,816
8 Claims. (Cl. 73—194)

1. A mass flow meter comprising a flow channel, said channel including an entrance port and an exit port, a first rotatable means in said channel to impose an angular velocity to said fluid, means to apply a braking torque to said first rotatable means to maintain said angular velocity constant, means to sense the magnitude of said torque, a second rotatable means responsive to said fluid angular velocity, means to generate an electrical signal responsive to angular velocity of said second rotatable means,



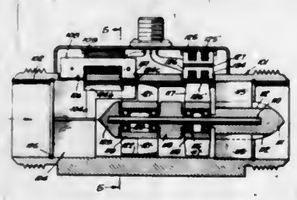
means responsive to said electrical signal to control said torque applying means to maintain constant angular velocity of said fluid.

3,043,139
MASS FLOW METER
Charles C. Waugh, Tarzana, and Kenneth R. Jackson, Los Angeles, Calif., assignors, by mesne assignments, to The Foxboro Company, a corporation of Massachusetts
Filed July 28, 1958, Ser. No. 751,281
7 Claims. (Cl. 73—194)



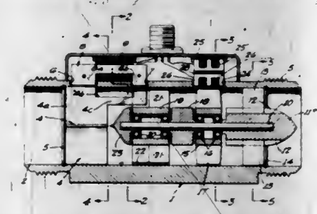
1. A transducer for a fluid mass flow meter, comprising means defining a flow channel, said means including an entrance port and an exit port, rotatable means in said channel rotated by the flow of said fluid in response to the linear velocity of fluid entering said entrance port, means opposing the rotation of said rotatable means and confining said rotation to a small angular displacement, said rotatable means imposing an angular velocity to said fluid flowing past said rotatable means, and means for measuring the angular velocity of said fluid passing from said rotatable means.

3,043,140
MASS FLOW METER
Charles C. Waugh, Tarzana, and Kenneth R. Jackson, Los Angeles, Calif., assignors, by mesne assignments, to The Foxboro Company, a corporation of Massachusetts
Filed July 28, 1958, Ser. No. 751,282
14 Claims. (Cl. 73—194)



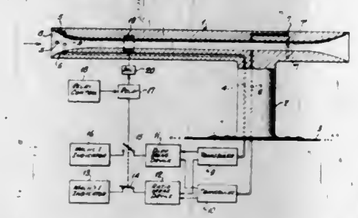
7. A transducer for a fluid mass flow meter comprising a flow channel, said channel including an entrance port and an exit port, rotatable means in said channel rotated in response to the flow of said fluid in said channel and reactive to the linear velocity of said fluid to impart an angular velocity to said fluid, means for applying a constant braking torque to said rotatable means, and means including a radial blade rotor mounted in said channel for sub-stantially unrestrained rotation for measuring the angular velocity of said fluid passing from said rotatable means, the angular velocity as measured by said measuring means thereby indicating the mass flow through said channel.

3,043,141
MASS FLOW METER
Charles C. Waugh, Tarzana, and Kenneth R. Jackson, Los Angeles, Calif., assignors, by mesne assignments, to The Foxboro Company, a corporation of Massachusetts
Filed July 28, 1958, Ser. No. 751,511
22 Claims. (Cl. 73—194)



4. A transducer for a mass flow meter comprising a flow channel including an entrance port and an exit port, rotatable means in said channel rotated by the axial flow of said fluid to impose an angular velocity to said fluid, a hysteresis brake for said rotatable means, said hysteresis brake including an armature mechanically connected to said rotatable means and rotatable therewith, an electromagnet having a pair of magnet poles and a field coil, said armature being rotatably positioned between said magnet poles to pass between said poles, means for passing a magnetizing current through said field coil whereby a braking torque is imposed on said rotatable means, means for measuring the magnitude of said angular velocity of said fluid, and means responsive to said measuring means for varying said magnetizing current to maintain said angular velocity of said fluid substantially constant.

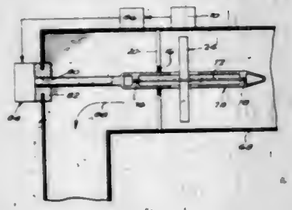
3,043,142
DEVICE FOR MEASURING SUPERSONIC AND SUBSONIC SPEEDS
Phillip Frank Eiland, Jr., and James H. McGinley, State College, Pa., assignors, by mesne assignments, to HRB-Singer, Inc., State College, Pa., a corporation of Delaware
Filed Sept. 23, 1958, Ser. No. 762,723
13 Claims. (Cl. 73—212)



1. A device for measuring Mach number at speeds at which a normal shock wave is generated, comprising an open-ended tubular member adapted to be positioned in a free stream, said tubular member being adapted to produce a fixed normal shock wave therewithin at supersonic speed of said free stream, a first pressure sensing element terminating in the interior of said tubular member closely behind the normal shock wave, and a second pressure sensing element terminating on the exterior of said tubu-

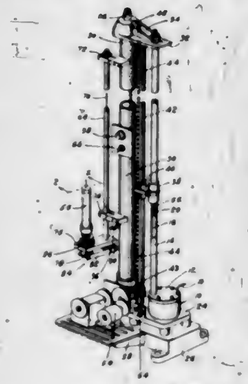
lar member for measuring the free stream pressure, whereby the pressures sensed by said first and second pressure sensing elements can be used to produce an indication of Mach number.

3,043,143
INTEGRATOR
Hans E. Hollmann, Studio City, Calif., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Jan. 27, 1959, Ser. No. 789,343
9 Claims. (Cl. 73—231)



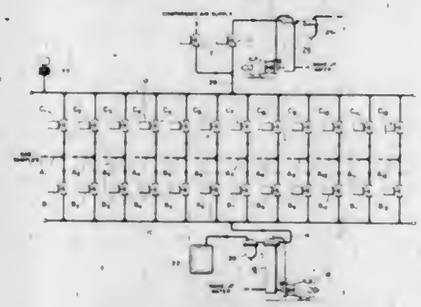
3. A flowmeter comprising: fixed support means; a hollow cylindrical shaft rotatable on said fixed support means; an elongated torsion spring member fixed at first and second points along its length to said hollow shaft and mounted concentrically therewith, said hollow shaft having slots intermediate said first and second points; a bladed member fixed to said torsion member having a blade thereof protruding outwardly through said hollow shaft slots; means to detect angular displacement between said bladed member and said hollow shaft; and means responsive to the output of said detector means for rotating said hollow shaft in a direction tending to reduce said angular displacement to zero.

3,043,144
TEMPERATURE COMPENSATOR FOR MANOMETERS WITH SERVO-FOLLOWERS
Eugene A. Glassey, 5545 Eva Ave., Los Altos, Calif.
Filed Aug. 29, 1960, Ser. No. 52,744
3 Claims. (Cl. 73—401)
(Granted under Title 35, U.S. Code (1952), sec. 266)



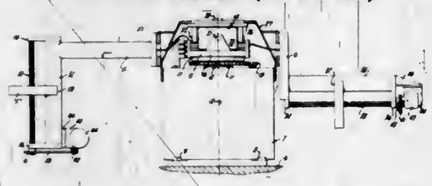
1. Apparatus for measuring the level of a column of liquid corrected to a selected temperature other than ambient, comprising, a first electrically balanced bridge circuit including two vertically arranged hollow inductive windings; a first armature arranged to reciprocably move inside said windings to control the balance of said first bridge circuit, said armature being supported by a float on said column of liquid responsive to the movement of the liquid; means for measuring the unbalance of said first bridge circuit including a servo system responsive to change in column height; a second bridge circuit including two vertically arranged hollow inductive windings; a second armature arranged to reciprocably move in the hollow of said windings to control the balance of said second bridge circuit; a connecting rod connected at one end to the bottom of said second armature and extending below said windings and being vertically reciprocable; a hollow metal tube vertically supported substantially parallel to the plane of movement of said second armature and anchored against movement at its lower end; a rod-like metal element in the hollow of said tube having a coefficient of expansion different from that of said tube fixedly secured by one end at the top of said tube and extending below the point at which said tube is anchored; a lever pivotally connected at one end to the other end of said connecting rod and pivotally connected at a point between its ends to the other end of said metal element; said lever being pivotally anchored at its other end and connected to said tube and metal element to transmit differential movement of said tube and metal element due to temperature changes to move said armature by means of the linkage of connecting rod, lever and metallic element to unbalance said second bridge circuit by an amount of voltage proportional to the temperature change, said linkage being a multiplying linkage having a ratio equal to the ratio of the coefficient of expansion of said liquid to that of the metal of the element; a first potentiometer positioned by said servo system and associated with said second bridge circuit for electrically multiplying said temperature induced unbalance voltage of said second bridge circuit by the liquid height electrical analog voltage to give a correction voltage proportional to the temperature induced change in column height; means for subtractive combination of said correction voltage and the electrical unbalance voltage of said first bridge circuit to develop a difference voltage proportional to the column height corrected to a selected temperature; and a second potentiometer associated with said first bridge circuit for gain control of the column height responsive servo system.

3,043,145
GAS SAMPLE SCANNING APPARATUS
Howard T. Hoffman, Mentor, Ohio, assignor to Bailey Meter Company, a corporation of Delaware
Filed June 10, 1958, Ser. No. 741,159
6 Claims. (Cl. 73—421.5)



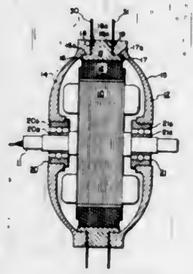
3. A gas sampling apparatus comprising, a plurality of sampling lines for sampling gas at a plurality of locations, a gas analyzing device, first electrically operative valve means associated with said sampling lines respectively for connecting the same to said analyzing device upon energization thereof, second electrically operative valve means associated with each of said sampling lines respectively for connecting the same to a source of air under pressure, and a scanning device operative through a first range of positions at a predetermined rate for sequentially and momentarily energizing said first valves to sequentially connect said sampling lines to said analyzing device at said predetermined rate and operative through a second range of positions at a different rate for sequentially and momentarily energizing said second valves following the sequential energization of said first valves to sequentially blow down each of said sampling lines at said different rate.

3,043,146
WEIGHT ADJUSTER FOR A BALANCER
Fred H. Rued, Lafayette, Calif., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Filed Dec. 29, 1958, Ser. No. 783,420
3 Claims. (Cl. 73—487)



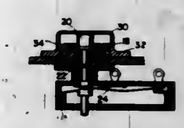
1. A weight adjuster for a balancer comprising, a pedestal, a shaft mounted in said pedestal for rotation about a vertical axis, a universal joint fastened to the upper end of said shaft, a rotor fastened to said universal joint, pairs of generally radial arms extending from said rotor, the arms of each pair being angularly spaced but less than 180° apart, a radial screw shaft journalled on each arm of one pair, a weight in the form of a nut engaging each radial screw shaft, means non-rotatably guiding said weights along their respective arms, means for selectively rotating said radial screw shafts, a vertical screw shaft journalled on each arm of the other pair, a further weight in the form of a nut engaging each vertical screw shaft, means non-rotatably guiding said further weights along said vertical screw shafts, and means for selectively rotating said vertical screw shafts.

3,043,147
GYROSCOPIC DEVICE AND METHOD OF ASSEMBLY
Christian H. Will, Jr., Grand Rapids, Mich., assignor to Lear, Incorporated
Filed Dec. 9, 1957, Ser. No. 701,614
3 Claims. (Cl. 74—5)



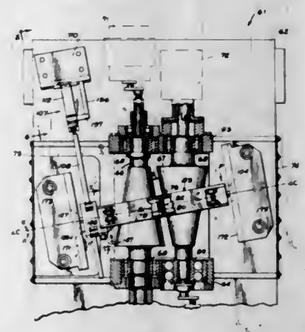
3. A gyroscopic assembly comprising a gyroscope stator having an axle and a gyroscope rotor, a rim, and first and second end bells having mounting surfaces, said rims providing supporting surfaces generally corresponding to said mounting surfaces and permitting said first and second end bells to be initially adjustably shifted relative to said rim into oriented positions, and bonding means to retain said first and second end bells in said oriented position to provide a gyroscopic assembly having a housing, which is in effect a single piece construction, thereby unaffected by stresses and strains due to heat or physical movement of said gyroscopic assembly.

3,043,148
SEAL MEANS FOR A PUSH BUTTON
Theodore H. Krueger, Stratford, Conn.
(% Better Packages, Inc., Shelton, Conn.)
Filed Apr. 15, 1960, Ser. No. 22,497
1 Claim. (Cl. 74—17.8)



In a dispenser for package-sealing tape having a series of push buttons for controlling lengths of tape to be delivered, said push buttons being mounted in a housing, said push buttons having bodies in which the push button elements are loosely movable, said bodies having cylindrical portions projecting outside of the housing, and caps consisting entirely of flexible elastic material having bodies fitting tightly but removable around the cylindrical bodies of the push buttons and engaging the face of the housing, said cap bodies having laterally projecting elastic flange portions providing finger grips, said flanged cap bodies having sufficient elastic strength to retain themselves in position upon the cylindrical bodies of the push buttons without external retaining means, the elastic and frictional engagement of the cap bodies constituting the sole means for retaining the caps on the push button bodies, said caps having thin, flexible portions formed integrally with said cap bodies and extending over and in contact with the movable elements of the push buttons so as to exclude dust but at the same time permit the application of light pressure to operate the push buttons.

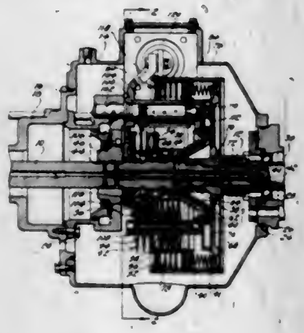
3,043,149
FRICTION DRIVE APPARATUS
Joseph M. Davin and Hans A. Hug, Norwood, Mass., assignors, by mesne assignments, to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Jan. 6, 1960, Ser. No. 841
14 Claims. (Cl. 74—192)



1. A variable speed drive mechanism comprising, a pair of spaced apart parallel shafts formed with oppositely and complementary tapered conical peripheral surfaces, a pair of rollrings encircling said shafts, said rollrings having portions intermediate said shafts engaged with the adjacent portions of the tapered surfaces of the shafts and with one another whereby rotation of one shaft is effective to cause rotation of the other shaft and the relative speeds of rotation of the two shafts are dependent

upon the position of the rollrings along the longitudinal axes of said shafts, means for tilting said rollrings about an axis passing through the centers of the rollrings and the areas of engagement of the rollrings and shafts for moving the rollrings along the longitudinal axes of the shafts and thereby changing the relative speeds of rotation of said shafts, means responsive to the position of the rollrings longitudinally of the shafts for controlling the position of the rollrings.

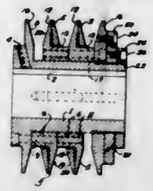
3,043,150
INFINITELY VARIABLE DISC DRIVE
Witold K. Skuba, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 30, 1960, Ser. No. 40,019
4 Claims. (Cl. 74—199)



1. A friction disc drive comprising an assembly of first friction discs, assemblies of second and third friction discs, means for rotatably mounting said first assembly for rotation about a first axis, means for mounting said second and third assemblies for rotation about a second common axis parallel to said first axis, the surfaces of the discs of said first assembly having a contoured, concave profile when viewed in diametrical cross section, the surfaces of the discs of said second assembly having a contoured, convex profile when viewed in diametrical cross section, each of said first discs having a peripheral rim portion, the discs of said first assembly and the discs of said second assembly being situated in alternating, interdigital relationship, a fourth assembly of discs having peripheral rim portions disposed in interdigital relationship with respect to the discs of said third assembly, the rim portions of said second discs being frictionally engageable with the surfaces of the discs of said first assembly, the rim portions of the discs of said fourth assembly being frictionally engageable with the surfaces of the discs of said second assembly, means for applying a clamping pressure to said second assembly whereby a frictional driving relationship is established between said assemblies, and means for adjustably positioning the spacing between said axes to vary the driving speed ratio therebetween.

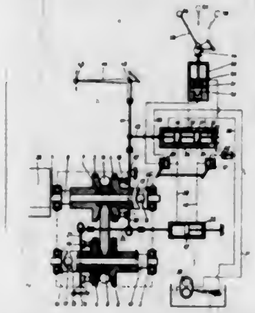
3,043,151
VARIABLE PITCH SHEAVE
Harry R. Keepers, Maysville, Ky., assignor to Browning Manufacturing Company, Maysville, Ky., a corporation of Kentucky
Filed Feb. 19, 1960, Ser. No. 9,747
1 Claim. (Cl. 74—230.17)

In an adjustable sheave wherein a hub mounts a plurality of fixed and slidable discs in alternate relation, and wherein the slidable discs are connected together for joint axial movement relative to said fixed discs, the improvement which comprises an adjustment ring in threaded engagement with said hub, a retaining ring operatively connecting said adjustment ring to one of said slidable discs, whereby rotation of said adjustment ring will effect axial movement of said sliding discs, a locking ring in threaded engagement with said hub immediately adjacent to said adjustment ring, capscrews



connecting said adjustment ring and said locking ring for joint rotary movement, said capscrews additionally acting, when tightened, to draw said two rings toward each other so as to effect wedging and locking action between their threads and the threads on said hub.

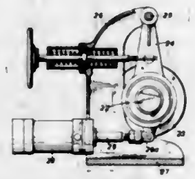
3,043,152
HYDRAULIC CONTROL MECHANISM FOR INFINITELY VARIABLE GEARS
Erhardt Karig and Herbert Steuer, Bad Homburg vor der Hohe, Rudolf Schrodt, Kronberg, Taunus, and Otto Dittrich, Bad Homburg vor der Hohe, all in Germany, assignors to The Reimers Getriebe K.G., Ascona, Switzerland, a Swiss firm
Filed Mar. 14, 1960, Ser. No. 14,730
11 Claims. (Cl. 74—230.17)



1. In an infinitely variable gear mechanism having parallel driving and driven shafts, a pair of conical disks together forming a pulley on each of said shafts, a transmission member connecting said pulleys, at least one disk of each pair being slidable along and rotatable with the shaft, means operatively connected to the slidable disk on the driven shaft to move said disk toward the other disk on the driven shaft and against the transmission member thereon in response to the load acting upon the driven shaft and in response to the prevailing gear ratio, a hydraulic pressure producing device operatively connected to the slidable disk on the driving shaft for exerting thereon the pressure necessary for maintaining and arbitrarily varying the gear ratio; said pressure producing device comprising a cylinder part and a piston part in the cylinder part, one of said parts being slidable with respect to the other, a source of pressure fluid, a control valve, connections from the source of fluid to the control valve and from the control valve to the cylinder on opposite sides of the piston, means operatively connecting the control valve to one of the slidable pulley disks to move the control valve in response to movements of said disks so as to produce a force on the disks opposing displacement thereof, an actuating member for arbitrarily adjusting said valve member, at least one pressure control valve connected in parallel to said connections for limiting the pressure acting upon the slidable pulley disks to any desired value so that, while the gear ratio as set by

said actuating member is maintained, the load to which the gear may be adjusted can only reach a certain limit, whereas, if this load limit is exceeded, the gear ratio will be automatically reduced to produce a lower speed of the driven shaft until a state of equilibrium is reached between the pressure required and the pressure actually produced to maintain the new gear ratio.

3,043,153
FELT AND LIKE GUIDES
Thomas Hindle, Blackburn, and David Dugmore Banks, Feniscowles, near Blackburn, England, assignors to Scapa Dryers Limited, Blackburn, England, a British company
Filed Jan. 20, 1959, Ser. No. 787,953
Claims priority, application Great Britain Jan. 21, 1958
26 Claims. (Cl. 74—241)



5. A band-realigning guide of the kind wherein a band-adjusting guide roll extends transversely across the path of travel of a moving band, and wherein the opposite ends of the guide roll are mounted to turn in bearings, a stationary support for one of said bearings, the latter bearing comprising means defining a fixed axis about which the roll may be swung, a movable support for the other bearing which is adjustable longitudinally of the band so as thereby to vary the angular position of the axis of the roll relatively to the length of the band and thus cause the edge of the band to change its position, said movable support being so adjustable as to allow the axis of the roll to be disposed in a definite selected pre-set position such that the edge of the band is thereby caused to assume a desired normal operating position, relatively quick acting automatic motor means comprising a movable element, which, upon actuation of the motor means, moves in one or another of opposite directions, means for transmitting motion from said movable motor element to the movable bearing support whereby, upon actuation of the motor means, the bearing support is quickly and momentarily shifted from said pre-set position according to the direction in which the edge of the band may have deviated from its normal operating position, said movable motor element being free to move in either direction when the motor means is deactivated so that, when the motor means is deactivated, it permits rapid free return movement of said bearing support at any time to said selected pre-set position, spring means resiliently tending to maintain said bearing support in any selected pre-set position to which it may be adjusted, and independently actuable means operable so to pre-set the movable bearing support as to occupy a definite selected pre-set normal operating position, but without disturbing the normal functioning of said spring means.

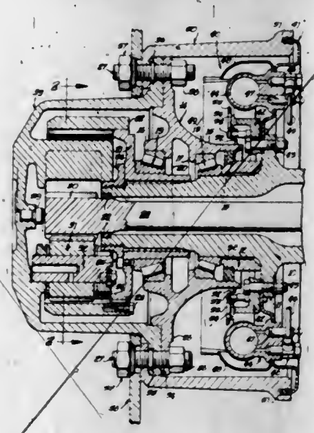
3,043,154
ROCKER JOINT FOR LINK CHAIN
Erhardt Karig, Herbert Steuer, and Otto Dittrich, Bad Homburg vor der Hohe, Germany, assignors to Reimers Getriebe K.G., Ascona, Switzerland, a firm of Switzerland
Filed Feb. 27, 1961, Ser. No. 91,996
Claims priority, application Germany Mar. 14, 1960
1 Claim. (Cl. 74—253)

A rocket joint for a metal link chain comprising interengaging lamellar link plates with bores therein, a link pin in said bores comprising at least two rocking pins adapted to rock on each other, and supporting means within said bores for supporting adjacent link plates relative to each other in a direction vertical to the link plane, said supporting means comprising a tubular member sur-



rounding said rocking pins and having outer surface parts engaging with the walls of said bores in said link plates, and further having opposite apertures facing in the direction of the chain tension, said rocking pins projecting through said apertures and engaging with the walls of said bores.

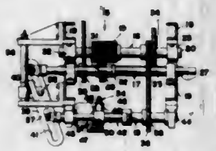
3,043,155
PLANETARY TYPE AXLE ASSEMBLY
Karl Salna, Oak Park, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Nov. 24, 1958, Ser. No. 775,984
4 Claims. (Cl. 74—391)



1. In a driving axle construction having a planetary set of three members, an axle housing, one member of said planetary set fixedly carried on the outer end of said axle housing to extend outwardly therefrom, a hub assembly comprising two hub portions, a set of main bearings mounted on said axle housing inwardly of said one member of said planetary set, a wheel brake assembly carried on said axle housing inwardly of said set of main bearings, one of said two hub portions being rotatively carried by said set of main bearings and being formed to have a portion thereof extending substantially radially outwardly from said set of main bearings, a plurality of openings formed through the radially extending portion of said one hub portion, the other of said two hub portions being integrally formed as a one-piece member with part of the second member of said planetary set and further being formed to enclose said planetary set therewithin when said second member of said planetary set meshes with said one member of said planetary set, said other hub portion further being integrally formed with a radially extending flange having a plurality of openings therethrough and with said flange contiguously disposed to said radially extending portion of said one hub portion, a brake drum having a radially inwardly extending flange portion, a plurality of openings formed through said flange portion of said brake drum, said brake drum posi-

tioned over said brake assembly with said flange portion thereof positioned outwardly of the flange of said other hub portion, a driving shaft carried in said axle housing and connected to drive the third member of said planetary set, and a plurality of threaded studs and nuts for releasably securing said two hub portions together and for removably carrying said brake drum and a wheel disk, each of said studs extending through a hole in said wheel disk, and one of said openings in each of the flanges of said brake drum and said other hub portion, and one of the openings in said radially extending portion of said hub portion.

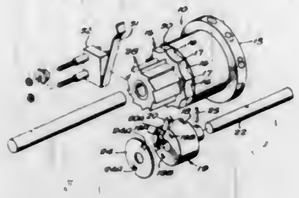
3,043,156
VARIABLE SPEED REPETITIVE CYCLE TRANSMISSION MECHANISM
Gilbert H. Hannon, Sheboygan, Wis., assignor, by mesne assignments, to Hannon Engineering Company, Green Bay, Wis., a corporation of Wisconsin
Filed Sept. 9, 1957, Ser. No. 682,664
4 Claims. (Cl. 74—393)



1. A variable speed transmission mechanism comprising a support, a first drive member rotatably mounted on said support and having a cam surface arranged thereon for rotation therewith, a first driven member mounted on said support for reciprocal movement, a cam follower mounted on said first driven member for engagement with said cam surface, said cam surface actuating said first driven member in a reciprocating manner, a lever arm pivotally mounted on said support, said first driven member being pivotally connected to one end of said lever arm, a second driven member mounted on said support for reciprocal movement and having one end thereof pivotally connected to the other end of said lever arm, a second drive member mounted on said support, a first helical gear mounted on said second drive member, a third driven member, and a second helical gear mounted on said third driven member for rotation therewith, said first and second gears being in meshing engagement with each other, said second gear being arranged for movement longitudinally of said third driven member, means mounted on said second driven member for engaging said second gear for reciprocation in either direction, said cam surface in cooperation with said cam follower and said first driven member in cooperation with said lever arm causing variable speed reciprocal movement of said second gear.

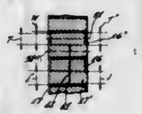
3,043,157
MOTION CONVERTING MECHANISM PARTICULARLY USEFUL IN COUNTERS
Burnell J. Wollar, Barrington, Ill., assignor to General Controls Co., Glendale, Calif., a corporation of California
Filed Nov. 16, 1959, Ser. No. 853,071
2 Claims. (Cl. 74—436)

1. A motion converting mechanism comprising a driving member and a driven member, said driven member having a plurality of concave surfaces along its periphery with adjacent surfaces terminating in a pointed end, said driving member having a peripheral surface complementary with each of said concave surfaces and having a clearance slot for said pointed end, a wall of said clearance slot cooperating with said pointed end to establish a driving connection between said driving and driven members, said driven member having ratchet-like elements spaced along a peripheral portion of the same, a spring-biased pawl mounted on said driving member and engageable and ridable over said ratchet-like elements upon rotation of



said driving member, said clearance slot being in registry with said pointed end when said pawl is in engagement with one of said ratchet-like elements whereby rotation of said driving member causes the pawl to engage one of said ratchet-like elements and move said pointed end into engagement with the wall of said clearance slot.

3,043,158
MEANS FOR MAINTAINING A PAIR OF MATING GEARS IN MESH
Charles H. Herr, Jr., Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed July 15, 1960, Ser. No. 43,030
3 Claims. (Cl. 74—462)

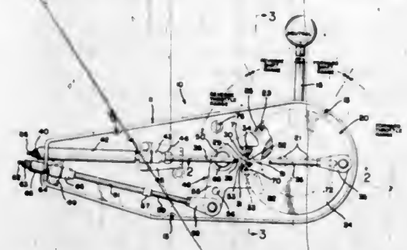


1. In a transmission including a housing, a power transmitting shaft journaled in said housing on a first axis of rotation, a first gear nonrotatably mounted on said shaft in axially slidable relation thereto, a second gear, means rotatably supporting said second gear in said housing on a second axis parallel to said first axis and means for axially shifting said first gear in one direction from a nonmeshing position to a meshing position in which power is transmitted from one of said gears to the other of said gears, the combination comprising: a first set of external teeth formed on said first gear tapering axially in said one direction; a second set of external teeth formed on said second gear tapering axially in the direction opposite to said one direction; and an abutment carried on said shaft for preventing shifting of said first gear in said one direction beyond said meshing position, the axial component of the tangential tooth load on said teeth of said first gear urging the latter in said one direction thereby maintaining said first gear in mesh with said second gear and the backlash between said teeth being sufficient to permit said first gear to be shifted into and out of mesh with said second gear.

3,043,159
SINGLE LEVER CONTROL UNIT
John F. Morse, 21 Clinton St., Hudson, Ohio
Filed May 8, 1961, Ser. No. 108,462
10 Claims. (Cl. 74—472)

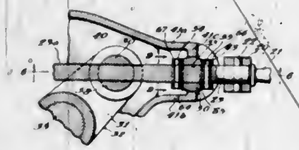
1. A single lever control unit for the throttle and the clutch of an engine comprising, a control lever, a wheel drive member rotatable by said control lever from a neutral position to operate a throttle, a rocker to operate a clutch, means to pivot said rocker in response to the

first portion of rotation from neutral of said wheel drive member, and separate means to pivotally reverse said



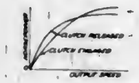
rocker during the return rotation of neutral to said wheel drive member.

3,043,160
VALVE OPERATOR
Henry R. Killian, Park Forest, Ill., assignor to Henry Pratt Company, a corporation of Illinois
Filed Aug. 28, 1959, Ser. No. 836,803
7 Claims. (Cl. 74—509)



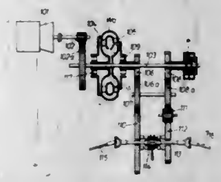
1. A valve operator for a valve requiring about 90° of valve shaft turning motion, comprising: a hollow housing having a crank therein for receiving the valve shaft in a manner insuring turning of the valve shaft and crank together about the axis of the valve shaft, said housing having a laterally extended portion provided with integral upper and lower spaced wall portions and an integral joining wall portion extending between the spaced wall portions, said extended portion of the housing having a bore generally parallel to the valve shaft axis passing through the spaced wall portions and severing said joining wall portion to provide an opening in the housing communicating with the interior thereof; a bearing block mounted in said bore so as to fill the same, said block being swingably supported in the bore portions in said spaced wall portions and being in sealing engagement with said joining wall portion so as to completely close the opening in the housing, said bearing block having a central opening in alignment with said crank and a shaft passing through said central opening for operative connection to the crank, said shaft having means for transferring thrust to the bearing block, said bearing block permitting swinging movement of said shaft during arcuate movement of the crank within the housing.

3,043,161
TRANSMISSION
Robert M. Tuck, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 25, 1956, Ser. No. 580,631
38 Claims. (Cl. 74—645)



1. In a transmission for an engine having a throttle movable from a closed to a full throttle position to control the supply of fuel to the engine, an input member, an output member, a hydrodynamic torque converter having a bladed first pump member connected to said input member operable as a pump when driven and as a hydrodynamic brake stator when retarded, a bladed second pump member rotatably mounted in said torque converter, turbine means connected to drive said output member, a stator member, a first clutch to connect said second pump member to said input member, holding means to hold said second pump member stationary, means to engage said first clutch to provide a higher capacity torque converter when the throttle is in a normal range between closed throttle and substantially full throttle positions and means to engage said holding means to provide hydrodynamic braking when the throttle is in the lower portion of the range of throttle positions below said normal range.

3,043,162
GAS TURBINE DRIVE
Fritz K. Kugel, and Walter Hans Schweizer, Heidenheim, Germany, assignors to J. M. Voith G.m.b.H. Maschinenfabrik, Heidenheim, Germany
Filed Sept. 25, 1957, Ser. No. 686,259
Claims priority, application Germany Sept. 27, 1956
10 Claims. (Cl. 74—732)

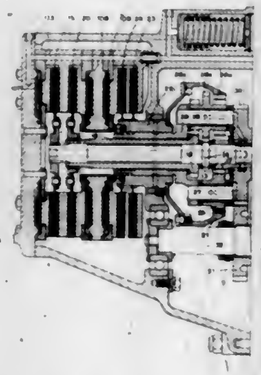


1. A drive for vehicles and installations with similar conditions of operation, which comprises in combination: a gas turbine having an output shaft, a hydrodynamic transmission having an input shaft arranged for driving connection with the output shaft of said gas turbine, said hydrodynamic transmission comprising a torque converter effective during and determining a lower velocity range of said transmission, said transmission also comprising velocity range means by-passing said torque converter and adapted to be made effective to furnish at least one higher velocity range, and power conveying means interconnecting said input and output shafts, the diameter of said torque converter and said power conveying means being so dimensioned and the blading of said torque converter being so designed that in said lower velocity range determined by said torque converter said hydrodynamic transmission is adapted to receive such torques only of said gas turbine which at the respective gas turbine speed are less than the torques delivered at said respective speed by said gas turbine in its working range with thermal overload.

3,043,163
VARIABLE SPEED TRANSMISSION APPARATUS
Howard Frederick Hobbs, Leamington Spa, England, assignor to Hobbs Transmission Limited, Leamington Spa, England, a British company
Filed Aug. 12, 1959, Ser. No. 833,250
Claims priority, application Great Britain Aug. 19, 1958
6 Claims. (Cl. 74—767)

1. In an automatically variable power transmission apparatus comprising two coaxial input clutches mounted on an axis and engageable simultaneously, one of which can be engaged without engaging the other, a planetary gear train comprising at least three sun-wheels and a cage, all co-axial with said axis of said clutches, at least one set of three planetary pinions of different sizes fixed together and carried by the cage on one planetary axis, and at least one other pinion carried by said cage on another planetary axis and meshing with the first of the set of pinions; two of said sun-wheels being drivably connected with said clutches respectively and meshing

one with said other pinion and the other with the second of said set of pinions; the third sun-wheel meshing with the third of said set of pinions; the provision of a gear system including a gear wheel mounted on an output shaft and means drivably connecting the planetary gear train with said gear wheel; and three reaction brakes connected respectively with one of said clutches, said third sun-wheel and said other pinion, said reaction brakes being located on one side of said planetary gear train coaxially with said clutches, and said clutches being



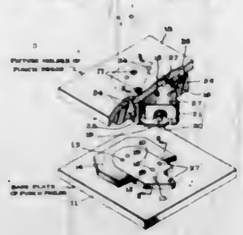
located on the other side of said planetary gear train; a further pinion on said output shaft, a crown wheel engaged by said further pinion, and a differential gear engaged by said crown wheel, the axis of said differential gear being at right angles to the axis of said clutch members, said further pinion driving the crown wheel and the crown wheel driving said differential gear, said crown wheel having its axis transverse to and offset from the axis of said clutches; said crown wheel and differential gear being located between the clutches and the planetary gear train.

3,043,164
DIFFERENTIAL GEAR REDUCER
Edward V. Sundt, 118 Sterling Lane, Wilmette, Ill.
Filed May 11, 1959, Ser. No. 812,210
6 Claims. (Cl. 74—804)



1. A differential gear reducer comprising, a rotatable shaft, a stationary internal toothed annulus concentric with the axis of the shaft, an eccentric carried by the shaft, an external toothed rotor member meshing with the internal toothed annulus and rotatably mounted on the eccentric for oscillation with respect to the annulus and for rotation at a reduced speed in accordance with the relative numbers of teeth on the annulus and rotor member, an output member rotatably mounted concentrically with the axis of the shaft, and a resilient coupling between the rotor member and the output member for rotating the output member as the rotor member is rotated and comprising a plurality of pins carried by one of the members and a plurality of radially resilient arms fixedly carried by the other member and rotatably receiving the pins.

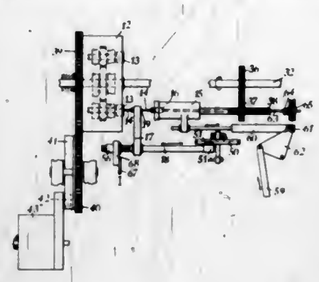
3,043,165
METHOD OF MAKING A CUTTING DIE ASSEMBLY
John E. Tracey, Reisterstown, and Elwood L. Wheeler, Owings Mills, Md., assignors to The Bendix Corporation, a corporation of Delaware
Filed July 29, 1957, Ser. No. 674,927
3 Claims. (Cl. 76—107)



1. In the art of fabricating a cutting die assembly utilizing a single cutting edge, a cutting blade fitted to the exterior contour of a holding block, a stripper plate resiliently mounted to said block within the confines of the blade and a punch plate which cooperates with said blade to shear the part to be produced, the method which consists in providing three flat slabs of material from which the said block and plates are to be made, at least the holding block slab and the punch plate slab being of metallic material, said slabs having mating surfaces, stacking said slabs to provide a composite slab and joining the slabs at their mating surfaces, laying out the profile of the article to be made on a surface of the composite slab, severing the laid-off area from the remainder of the composite slab on a rough out line, finish machining or dressing the now exteriorly accessible profile surface of the rough cut composite section to the final dimensions of the said block and plates, separating the finished holding block, stripper plate, and punch plate, relieving the cutting edge of the blade while the latter is in its flat state to provide the desired die clearance, securing the holding block to a backing plate and disposing the cutting blade around said block with its relieved edge facing inwardly, fastening a plurality of dowel pins to said backing plate in close proximity to the outside edge of said cutting blade and inserting a plurality of wedges between said dowels and said cutting blade to hold said blade tightly against said holding block, packing a plastic material around said cutting blade, wedges and dowel pins and permitting said material to harden, assembling the stripper plate to the holding block by means of resilient members, and assembling the punch plate to an oppositely disposed base plate for shearing cooperation with said cutting blade.

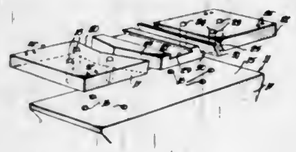
3,043,166
LATHES
Reginald John Dixon, Solihull, Lewis Jones, Coventry, and James Sidney Riley, Earlsdon, Coventry, England, assignors to Wickman Limited, Coventry, England
Filed Oct. 16, 1959, Ser. No. 846,854
Claims priority, application Great Britain Oct. 23, 1958
5 Claims. (Cl. 77—5)

1. A mechanism for use in a lathe of the kind specified comprising in combination, a principal work holder, means supporting the holder for angular movement about an axis spaced from the holder, a secondary work holder mounted for rotation about a second axis and shiftable along the second axis, means for intermittently moving the primary work holder to a position spaced from and confronting the secondary work holder, means for moving the secondary work holder axially to extract a work-piece from the primary work holder when the latter is in said confronting relation and for rotating the secondary work holder and work-piece, a transfer arm having blank receiving means and a tool and mounted for swinging movement intermediate the confronting work holders in a plane transverse to the second axis and for shifting movement parallel to the second axis, means for



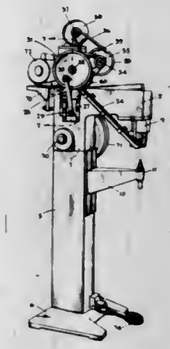
swinging the arm from a first position radially of the second axis at which the arm receives a blank to a second position intermediate the confronting primary and secondary work holders, and means for shifting the arm in one direction while in the second position to insert the blank in the primary work holder and in the opposite direction for applying the tool to the work-piece extracted by the secondary work holder.

3,043,167
ANVIL ASSEMBLY FOR FORGING HAMMERS
William W. Robbins, Chicago, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 19, 1958, Ser. No. 781,733
2 Claims. (Cl. 78—44)



1. An anvil for use with forge hammers, comprising a base, a flat horizontal top surface on said base, said base including a plurality of bores opening outwardly on said top surface, first and second column support plates positioned in laterally spaced relation on said surface to provide therebetween a sow block saddle, a first support plate having a first inner wall adjacent said saddle, said wall diverging in generally V-shaped fashion outwardly from said recess, said wall tapering downwardly and outwardly with respect to said saddle, said second column support plate having a second inner wall adjacent said saddle tapering downwardly and outwardly with respect to said saddle, a sow block disposed in said saddle, said sow block having an upper die supporting surface and a first tapering wall complementing said first inner wall, a second tapering wall on said sow block, means for securing said sow block on said saddle including a wedge member engaging said second wall of said sow block and said second inner wall, and means removably securing said plates to said base comprising a plurality of dowels projecting downwardly from said plates into the bores of said base, said plates being adapted to support said columns.

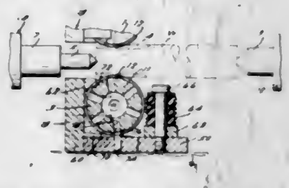
3,043,168
RIVETING MACHINE
Thomas Leslie May and Robert H. Zankl, Miami, Fla., assignors, by mesne assignments, to U.S. Rivet Machine Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 27, 1959, Ser. No. 855,619
4 Claims. (Cl. 78—48)



1. A riveting machine of the character described having a main frame, a rivet hopper supported upon the frame, an inclined chute that communicates with the hopper whereby to receive and convey rivets by gravity downwardly to a discharge end of the chute, power driven means associated with the hopper for placing the rivets in a loading end of the chute, a rivet driving device supported by the frame and that is shiftable in a vertical path, power means for shifting the driving device, a rivet holder having an expandable rivet nest at its lower end, the rivet holder being yieldably and slidably connected to the driving device, the driving device when in an uppermost position functioning to dispose the rivet nest adjacent to the discharge end of the chute, an ejector device that is movable in a path to eject a lowermost rivet in the chute into the rivet nest, crank means for shifting the ejector in a direction to discharge a rivet, the crank being biased in one direction by a spring, means carried by the crank that lies in the path of movement of the rivet setting device whereby the crank is moved laterally upon the downward movement of the setting device to release the ejector, the downward movement of the driving device yieldably shifting the rivet holder and its rivet carrying nest to a point of engagement with a work piece that is disposed in overlying relation to an anvil, means for stopping the rivet holder in both an upper and lower position whereby to dispose the rivet nest in an accurate position with respect to the discharge end of the chute and the work piece, the movement of the driving device, the rivet holder and the ejector all being in a predetermined timed sequence and actuatable by a single foot pedal, the said riveting setting device including a body portion and a lower reduced extension that terminates in a cylindrical punch that is in axial alignment with a rivet that is supported in the nest of the rivet holder, the body portion having at least one flat face, the rivet holder including an elongated body portion having at least one flat face that has sliding engagement with the flat face of the rivet setting body portion, the rivet setting body portion and the body portion of the rivet holder being slidable in a common housing, the flat faces of the rivet setting device and rivet holder each having a mating groove, yieldable key means jointly engaging the grooves, a rocker arm journaled in a frame extension and that has a linked connection with the upper end of the body portion, the rocker arm being intermittently actuated to impart a driving movement to the rivet setting device, the movement of the riveting setting device functioning to shift the rivet holder through the medium of the yield-

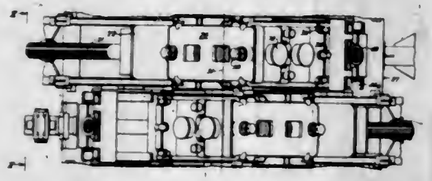
able key means and adjustable stop means for limiting the upper and downward movement of the rivet holder.

3,043,169
APPARATUS FOR PRESSURE FORMING TOOTHED ELEMENTS
Willard B. McCardell, Royal Oak, Mich., assignor to Michigan Tool Company, Detroit, Mich., a corporation of Delaware
Filed May 14, 1959, Ser. No. 813,234
5 Claims. (Cl. 80—16)



3. In combination with a tool for pressure forming teeth on the periphery of a cylindrical workpiece, said tool having a body portion substantially cylindrical in cross section and being provided with teeth thereon the flanks of which extend transversely of the axis of revolution of said body portion, each of said teeth in a radial plane including the axis of revolution of said body portion being conjugate to the teeth to be formed on the workpiece, each of said teeth having a pitch cylinder corresponding with the diameter of a circle which encompasses a cross-sectional area of the interdental space between the teeth of the workpiece equal to the cross-sectional area of the portions of the teeth of the workpiece outside the circle, means for supporting a said workpeice for rotation about the longitudinal axis thereof, means for feeding the workpiece in a direction substantially parallel to the longitudinal axis thereof, and means for reciprocating said tool in a direction transverse to the longitudinal axis of the workpiece.

3,043,170
ROLLING MILL AND RETRACTABLE STAND THEREFOR
Charles C. Wales, Bay Village, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Aug. 28, 1959, Ser. No. 836,789
13 Claims. (Cl. 80—36)



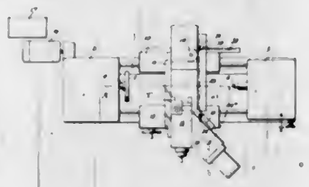
1. A rolling-mill stand comprising a sloping deck, a guide trough having spaced parallel ways secured to said deck and extending from the lower edge beyond the upper edge thereof, a carriage slidable up and down along said ways, said carriage including a base having a pinion-and-spindle housing upstanding thereon, said base and housing together forming a V, a unitary roll housing removably seated in the V, resting on the base of said carriage with one end abutting said pinion-an-spindle housing, means releasably securing said roll housing to said base and power means for moving said carriage on said ways to shift the roll housing from an operative position adjacent the upper ends of the ways to an out-of-the-way position adjacent the lower ends of the ways and vice versa.

3,043,171
TOOL FOR REMOVING OIL FILTERS AND THE LIKE
Albert H. Lederer, 7647 Forest Road, Cincinnati 30, Ohio
Filed Dec. 12, 1960, Ser. No. 75,251
6 Claims. (Cl. 81—90)



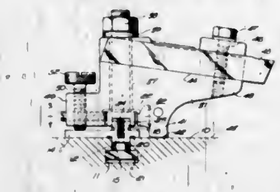
1. A device for removing oil filters and the like comprising a base plate, a plurality of pointed piercing prongs projecting outwardly from one face of said base plate, spacing means on said plate and extending therefrom a distance less than that of the prongs to space said base plate from a surface punctured by said prongs, and means on said base plate for engaging the shank of a wrench, whereby said wrench may be utilized to apply turning forces to said base plate, said prongs acting to impart such turning forces to the surface punctured thereby.

3,043,172
MACHINE TOOL CONTROL
James N. Colebrook, Cincinnati, Ohio, assignor to The Lodge & Shipley Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 11, 1959, Ser. No. 812,541
9 Claims. (Cl. 82—2)



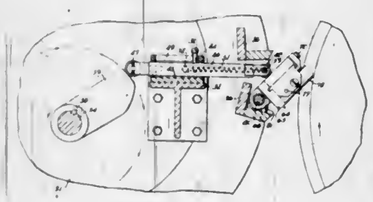
1. In a machine tool having mechanism for mounting and for rotating a workpiece about an axis, a first slide mounted for movement along said axis, a second slide mounted on said first slide for movement therewith and for movement at 90° to said axis and a third slide adapted to carry a tool and mounted on said second slide for movement therewith and for movement at an acute angle to said axis, apparatus for use in maintaining a constant cutting speed on a workpiece comprising: a drive member mounted on said acute angle slide for movement in translation with movement of the slide; a sensing member mounted on said 90° slide for movement in translation; and connections between said drive member and said sensing member for moving the sensing member with movement of the drive member, the connections moving the sensing member a distance equal to the sine of the acute angle of said acute angle slide multiplied by the distance moved by the drive member.

3,043,173
CUTTING-OFF TOOL POST
William E. Twamley, Providence, R.I., and James W. Carroll, Somerset, Mass., assignors to Brown & Sharpe Manufacturing Company, a corporation of Rhode Island
Filed Feb. 5, 1959, Ser. No. 791,361
4 Claims. (Cl. 82—37)



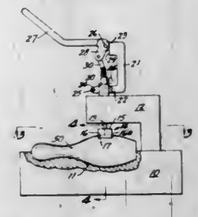
1. A tool post comprising a bearing plate having a tongue on its lower surface to enter a groove in a machine on which it may be mounted and a key which is rounded in cross-section on its upper surface, a channel member receiving said key and resilient means between said channel member and key urging the same apart, said channel member having bulging sides with surfaces on the arc of a cylinder, a tool holding body having a recess with portions of its side walls on substantially the same cylindrical arc rockably receiving said bulging sides, screws in said body to engage said channel member on either side of said budging sides to rockably adjust the same in a horizontal plane and a screw through the body perpendicular to said plate and engaging the same to rock said body about said rounded key to adjust the same in a vertical plane, and a single bolt having ah ead to engage an undercut of a machine groove and extending through said tongue, key, channel member and body with a nut on its upper end to clamp the parts in adjustment and the tool post to the machine.

3,043,174
APPARATUS FOR SLITTING SHEET MATERIAL
Ashton L. Worral, Jr., Cuyahoga Falls, Ohio, assignor to Falls Engineering & Machine Company, Cuyahoga Falls, Ohio, a corporation of Ohio
Filed Apr. 6, 1960, Ser. No. 20,455
4 Claims. (Cl. 82—81)



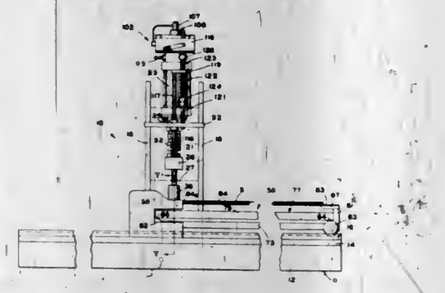
1. Apparatus for slitting an endless band of material comprising; a frame means; a cushion faced, material supporting and advancing drum mounted on said frame means; a rotatable cage supporting a plurality of rows of spaced apart cutting blades on said frame means adjacent said drum, the area of adjacency of said drum and said cage defining a cutting station, each of said rows being presentable one at a time at said cutting station, pivotally mounting the individual blades of each row in groups on said cage, means for locking said cage against rotation with one row at a cutting station adjacent said drum, and means at said cutting station for pivotally advancing said groups of blades in succession through the material about said drum.

3,043,175
DEVICE FOR REPAIRING PLASTIC COATED BOWLING PINS
Frank E. Gallob, Golden Valley, Minn. (1140 Toledo Ave. N., Minneapolis 22, Minn.)
Filed Apr. 2, 1959, Ser. No. 803,788
3 Claims. (Cl. 83—6)



3. A device for repairing plastic coated bowling pins having at least one damaged area in said coating, comprising a base having a depression in the upper surface thereof conforming essentially to the contour of the lateral portion of a bowling pin, a cutter having downwardly extending walls terminating in cutting edges, the cutting edges of adjacent walls adjoining to define an enclosed parameter with said edges being individually concaved and being disposed collectively to define a compoundly curved contour corresponding to the surface at the belly portion of a bowling pin, means for positioning said cutter above the belly portion of a bowling pin retained in said depression while permitting said cutter to move toward and away from said depression and means for moving said cutter toward and away from said depression.

3,043,176
INTERRELATED TOOL AND WORK CONVEYER DRIVES FOR A DISC PUNCH
Le Roy E. Johnson and Chester C. Sperry, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
Filed May 23, 1957, Ser. No. 661,227
10 Claims. (Cl. 83—109)



2. A machine for punching out areas of a sheet and depositing same in a predetermined pattern on a tray, including in combination: a series of vertically movable punches; actuating means for moving said punches through a punching stroke; a carriage positioned below said punches, said carriage being movable in a horizontal direction beneath said punches; means including a pair of pivotally connected plates horizontally disposed on said carriage for movement therewith, said plates having a series of aligned openings therethrough, said openings being alignable with said punches, said plates being adapted to receive a sheet therebetween; a tray positioned on said carriage beneath said plates and movable with said carriage and said plates; means defining an unobstructed path between said tray and said plates whereby portions punched out of said sheet may fall freely onto said tray; switch actuating means on said carriage at

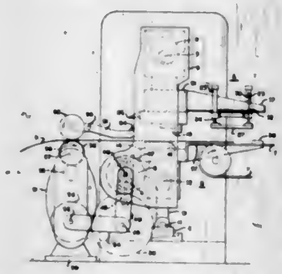
spaced locations thereon corresponding to the desired spacing between successive portions to be punched out of said sheet; a switch positioned adjacent said carriage for actuation by said switch actuating means, said switch being connected to said first mentioned actuating means for at least partly controlling the operation thereof whereby said punches are moved through a punching stroke each time said switch is actuated by said switch actuating means.

3,043,177

SHEAR AND FEED MEANS FOR CONTINUOUSLY ADVANCING STRIP

Albert J. Sarka, Maple Heights, Ohio, assignor, by mesne assignments, to The Wean Engineering Company, Inc.

Filed July 28, 1958, Ser. No. 751,433
1 Claim. (Cl. 83—312)



A shear for shearing continuously advancing strip comprising upper and lower members each having a shearing blade, the shearing blades being located at opposite faces of the strip, the upper and lower members being continuously cyclically operable relatively to each other to shear the strip and so that each of the shearing blades advances during shearing, feed means governed by the shear for controlling the speed of advance of the strip so that just prior to the instant of shearing in each cycle the strip is advancing at a speed approximating the speed of advance of the shear blades and intermediate the instants of shearing the strip is speeded up and then slowed down, each of the upper and lower members carrying a clamping member, the clamping members cooperating to form clamping means for controlling the advance of the strip at the instant of shearing so that at that instant the strip is advanced at the same speed as the shearing blades, and means rendering inoperative the feed means while the clamping means are controlling the strip.

3,043,178

MACHINE FOR PUNCHING VENETIAN BLIND HEAD BARS

Hans K. Lorentzen, Montclair, N.J., assignor to Lorentzen Hardware Mf'g. Corp., Hoboken, N.J., a corporation of New York

Original application Sept. 9, 1950, Ser. No. 184,055, now Patent No. 2,789,639, dated Apr. 23, 1957. Divided and this application Jan. 23, 1957, Ser. No. 635,824
3 Claims. (Cl. 83—467)



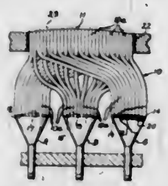
1. A machine for punching channel-shaped sheet metal Venetian blind head bars to provide openings for passage of the central ladder tape or tapes of a blind having tree or more ladder tapes, comprising: punching dies including a die block adapted to receive a head bar, a head bar guide for supporting the head bar in alignment with the die block, a track adjacent the die block and parallel to the head bar guide, support means mounting said die, head bar guide and track in fixed relationship, a projecting prong located adjacent the track opposite the center of the punching dies and adapted to be received within a rout opening of a slat of the blind, a straight line through said prong and said center of said dies being perpendicular to said guide, a slide mounted for movement along the track, the slide being provided with a head-bar-engaging portion receivable within an opening previously formed in the head bar at the end ladder tape, and a projecting prong mounted on the slide opposite the head-bar-engaging portion, thereof, said slide-mounted prong being aligned with said first-mentioned prong and being adapted to be received within a second rout opening of the blind slat, a straight line through said prongs being parallel to said guide and a straight line through said head-bar-engaging portion and said slide-mounted prong being perpendicular to said guide.

3,043,179

FIBER OPTICAL IMAGE TRANSFER DEVICES

Joseph M. Dunn, Sturbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed Oct. 29, 1958, Ser. No. 770,478
4 Claims. (Cl. 88—1)



1. A device of the character described for use with a plurality of image-producing components, said device comprising a plurality of groups of image-transmitting elements, each of said elements embodying at least one light-conducting fiber having a light-transmitting core of a material of relatively high refractive index and having a light-insulating cladding of a material of relatively low refractive index thereon, said image-transmitting elements being arranged in substantially side-by-side relation within respective groups at one end for forming respective separate image-receiving faces which are adapted to be associated with respective image-producing components, the opposite ends of said image-transmitting elements being intermingled for defining a single composite image face in which like elements of each of said groups are arranged in a position corresponding to the respective positions of said elements in said separate image-receiving faces, whereby said composite face is adapted to display a composite image from said plurality of image-producing components.

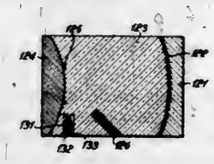
3,043,180

CAMERA WITH BUILT-IN BLOCK TYPE ALBADA VIEWFINDER AND INTEGRATED OPTICAL MEANS FOR VIEWING A MEASURING INSTRUMENT POINTER

Friedrich Papke, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany

Filed Jan. 26, 1961, Ser. No. 85,093
Claims priority, application Germany Feb. 3, 1960
17 Claims. (Cl. 88—1.5)

1. In a photographic camera including a built-in measuring instrument having an indicator pointer, a built-in block type Albada viewfinder including a front optical element having a concave inner surface, a rear optical element having an inner surface facing said concave surface, an intermediate optical block member having end surfaces substantially conforming and cemented to said concave surface and said inner surface of said rear optical element, partially light permeable mirror means disposed in the interface between said front optical element and said block member, a picture limiting frame disposed in the interface between said rear optical element and said block member in substantially the focal plane of said partially permeable mirror means for reflection by the latter at substantially infinity, and a mirror mounted within said block member and lying in a plane oblique to the optical axis of said Albade viewfinder for reflecting light rays, entering laterally through



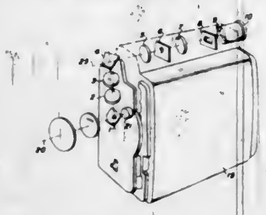
said block member from said pointer, directly through said rear optical element to the eye of an observer utilizing the viewfinder: an improved arrangement for providing, in the field of view of said viewfinder at substantially infinity, an image of said pointer, said arrangement comprising a recess in a lateral surface of said finder block and intersecting the path of light rays reflected by said mirror to the eye of an observer; and optical means integrated with the body of the viewfinder and having a surface positioned in said recess in the path of light rays reflected by said mirror through said rear element, said optical means having a refractive power such as to provide, in substantially its focal plane, an image of said indicator pointer.

3,043,181

TELESCOPIC FINDER FOR MOTION PICTURE CAMERAS

Morris E. Brown and William A. Martin, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Nov. 25, 1959, Ser. No. 855,402
5 Claims. (Cl. 88—1.5)



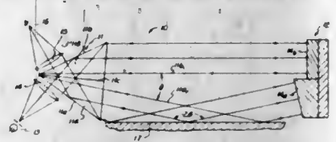
1. An optical system comprising a camera objective having an axis and for receiving light from a subject and focusing it on an image plane, a telescopic finder with its axis at the exit pupil thereof approximately parallel to the objective axis, two plane-parallel reflectors, one obliquely on each axis and the two oriented to intercept part of the light from the subject and by reflection at both reflectors to reflect it to said exit pupil, the objective of said finder being optically between the two reflectors and the entrance pupil of the finder being spaced in front of the front surface of said finder objective about 23/30 of the distance to said reflector on the objective axis, the latter reflector consisting of a partially reflecting, partially transmitting spot on a transparent member, the spot being effectively at least as large as said entrance pupil and smaller than the diameter of the maximum beam of light which passes through said objective, the spot having a reflectivity between .25 and .75.

3,043,182

INTERFEROMETER FOR TESTING LARGE SURFACES

James B. Saunders, Alexandria, Va., assignor to the United States of America as represented by the Secretary of Commerce

Filed Mar. 21, 1960, Ser. No. 16,617
3 Claims. (Cl. 88—14)



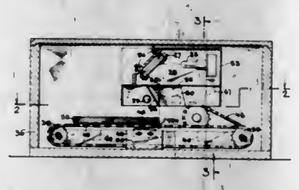
1. In an interferometer wherein a collimated beam of light is divided into reference and test beams which are reflected from a plano reference mirror and a test surface, respectively, and recombined so as to form interference fringes which are indicative of the flatness of the test surface, the combination of: a diffusely reflective test surface whose length is many times greater than the diameter of said test beam disposed relative to the axis of said test beam at an angle of incidence of slightly less than 90°, whereby substantially the entire length of said test surface is illuminated by said test beam and said test beam is reflected from said test surface in a substantially regular manner, and an auxiliary plano mirror disposed normal to the axis of the beam reflected from said test surface so as to cause said reflected beam to retrace its path.

3,043,183

PARTICLE MEASURING INSTRUMENT AND METHOD

Barton L. Weller, Easton, Conn., assignor, by mesne assignments, to Vitramon, Incorporated, Monroe, Conn., a corporation of Delaware

Filed Oct. 20, 1958, Ser. No. 768,345
19 Claims. (Cl. 88—14)

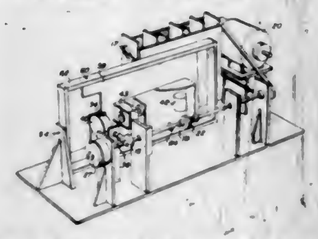


1. The method of determining particle size information of material comprising the steps of moving a Newtonian fluid suspension of the material relative to a variable aperture and varying the aperture relative to the material so as to segregate particles of different sizes in proportion to the opening of said aperture in a manner so that only particles not greater than a particular size are present at a particular opening of said aperture, displaying and scanning the display of the segregated particles, measuring the concentration of the segregated particles of different sizes, and determining the relationship of various sizes of particles of said mtaerial from the measurements.

9. An apparatus for determining particle size information comprising a variable aperture means for providing a sample of material having segregated particles, said aperture means varying in size between predetermined limit dimensions in a predetermined manner, the location of a given particle size in said sample being related to the variation in size of said aperture means in a manner so that only particles not greater than a particular size are present at a particular opening of said aperture means, radiant energy source means for directing energy onto the sample, means for scanning the energy diffused

from said sample, the level of said diffused energy being a function of the concentration of said segregated particles, and indicating means connected to said means for scanning to depict desired particle size information.

3,043,184
METHOD AND APPARATUS FOR ALIGNING LAMPS AND REFLECTORS
Charles S. Fitzgerald and David B. Anderson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed June 26, 1959, Ser. No. 823,100
11 Claims. (Cl. 88—14)

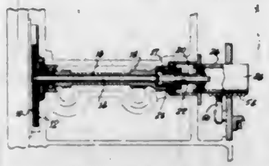


1. The method of accurately aligning an energized lamp with a reflector, comprising: causing relative movement between the lamp and the reflector from one extreme position to the opposite extreme position; generating a first signal representing the maximum intensity of light received from said lamp and reflector at a predetermined locus during said relative movement; causing a return relative movement between the lamp and the reflector from said opposite extreme position toward said one extreme position; generating a second signal representing the intensity of light at said locus during said return relative movement; and stopping said return relative movement when said first and second signals become substantially equal.

6. Apparatus for aligning an energized lamp with a reflector therefor, comprising: means for supporting said lamp; means for supporting said reflector; adjusting means for moving one of said supporting means relative to the other from a first extreme position to a second extreme position and back toward said first extreme position; a light-sensitive device disposed at a predetermined locus for illumination by light transmitted by said lamp and reflector and adapted to generate an electrical signal having a characteristic which is a function of the intensity of said light at said locus; a memory device connected to said light-sensitive device for storing a manifestation of said signal corresponding to the maximum intensity of said light at said locus during the relative movement from said first to said second extreme position; means interrelating said light-sensitive device and said memory device for comparing said stored manifestation to said signal during the relative movement from said second toward said first extreme position; means for sensing substantial equality between the signal characteristic corresponding to said stored manifestation and the signal characteristic occurring during said last-named relative movement; and means controlled by said sensing means for stopping said last-named relative movement in response to said sensing of equality of signal characteristics.

3,043,185
DRIVE MECHANISM FOR AUTOMATIC DISSOLVES IN MOTION PICTURE CAMERAS
Emanuel C. Manderfeld, Hollywood, Calif., assignor to Mitchell Camera Corporation, Glendale, Calif., a corporation of Delaware
Filed Jan. 18, 1960, Ser. No. 3,162
2 Claims. (Cl. 88—16)

1. In a shutter dissolve mechanism for a camera, a multiple bladed apertured shutter in which relative movement between the shutter blades varies the size of the shutter aperture, a motor driven driving shaft adapted to be rotated in a forward or a reverse direction, a driving train for relatively moving the shutter blades, said driving train including a gear toothed member movable in opposite directions and connected to the shutter blades to correspondingly move tthem relatively in opposite directions, a pair of gears driven in opposite directions from the driv-



ing shaft, said gears being each independently movable into and out of mesh with the gear toothed member, movement stops associated with the driving train and limiting the movements of the gear toothed member and the shutter blades in opposite directions, and the driving connection between the driving shaft and the pair of oppositely driven gears including an over-running drive element that forcibly drives said pair of gears when the driving shaft is rotating only in said forward direction.

3,043,186
AUTOMATIC CAMERA CONTROLS
Albert Schnell and Herbert Reinsch, Stuttgart, and Ernst Lieser, Stuttgart-Vaihingen, Germany, assignors to Eugen Bauer GmbH, Stuttgart-Unterturkheim, Germany
Filed Oct. 28, 1959, Ser. No. 849,213
Claims priority, application Germany Oct. 29, 1958
8 Claims. (Cl. 88—16)

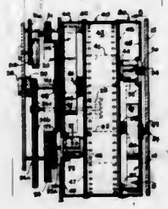


1. In a camera, in combination, a light-sensitive element capable of participating in the automatic control of the setting of the camera; an objective cooperating with said element for directing light toward the latter, said objective having a principal plane; first and second diaphragm means located at said principal plane of said objective for controlling the aperture through which light passes along the optical axis of said objective toward said light-sensitive element, said first and second diaphragm means operating entirely independently of each other and being capable of assuming any desired combination of positions without interfering with each other; and first and second manually operable means respectively cooperating with said first and second diaphragm means for setting the latter entirely independently of each other according to a pair of variable factors which must be taken into consideration in the setting of the camera.

3,043,187
CAMERA AND MAGAZINE
Archie Shaffer, Chicago, Ill., assignor to Shaffer Brothers, Chicago, Ill., a partnership
Filed Mar. 18, 1959, Ser. No. 800,212
7 Claims. (Cl. 88—17)

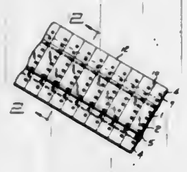
1. In a motion picture camera body section including film advancing and exposing means with associated gear

mechanism for operating said film advancing and exposing means which is without an integral power source for driving said gear mechanism, and a film magazine compartment adapted to receive a film magazine unit, the improvement comprising a film magazine unit adapted to be removably mounted in said magazine compartment, said film magazine unit containing therein means for supporting a reel having a length of unexposed film thereon with said reel rotatably mounted on a transverse axis,



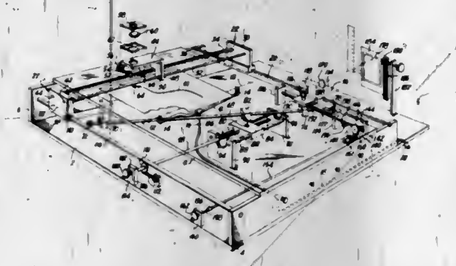
and a second film reel rotatably mounted on a transverse axis spaced from the first said axis, and said magazine also having associated therewith a spring drive means out of direct engagement with said reels and adapted to rotate a drive shaft, said drive shaft being directly engageable with the said gear mechanism, and said drive means providing the entire driving power to the said gear mechanism necessary for continuously advancing and exposing the entire length of film within the said magazine unit.

3,043,188
SPLICE TAPES
Philip Bala, Grass Lake Township, Jackson County, Mich.
Filed Feb. 12, 1960, Ser. No. 8,411
2 Claims. (Cl. 88—19.5)



1. A splicing tape for splicing motion picture film and the like comprising: a strip of joiner material having one face coated with a pressure sensitive adhesive; a strip of tab material extending longitudinally along and overlying each opposite longitudinal margin of said joiner strip and removably secured thereto in contact with said pressure sensitive adhesive on the joiner strip, said tab strips being spaced apart exposing the intermediate portion of the adhesive coated face of the joiner strip and each including a portion projecting laterally beyond the longitudinal marginal edge of said joiner strip, said two projecting portions forming handles for said splicing tape; and a protective strip of material overlying the intermediate exposed portion of the adhesively coated face of said joiner strip between said tab strips and removably secured to the joiner strip in contact with said pressure sensitive adhesive, said protective strip having a width such that opposite marginal portions thereof freely overlie the adjacent margins of said two tab strips secured to said joiner strip; said tape consisting of said joiner strip, said two tab strips and said protective strip being provided with a linearly spaced succession of weakened lines extending transversely across all of said strips, along which lines such strips are separable into individual segments of splicing tape; with that portion of said protective strip freely overlying the tab strip adapted to be grasped for ready removal of said protective strip from said adhesively coated surface of the joiner strip, and said portions of said tab strips projecting laterally beyond said joiner strip adapted to be grasped for application of the adhesively coated face of said joiner strip to portions of film to be spliced, and said tab strips further adapted to be readily removed from said joiner strip upon application of the latter to a portion of said film.

3,043,189
APPARATUS FOR PRODUCING TEMPLATE USED IN AUTOMATIC DATA PLOTTER
Henry B. Riblet, Kensington, Md., assignor, by mesne assignments, to Vitro Corporation of America, New York, N.Y., a corporation of Delaware
Original application July 9, 1957, Ser. No. 670,691, now Patent No. 2,985,499, dated May 23, 1961. Divided and this application Dec. 27, 1960, Ser. No. 78,785
8 Claims. (Cl. 88—24)

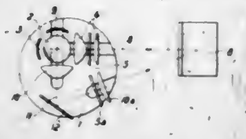


1. Apparatus for producing an opaque photographed calibrated template having transparent closely spaced grid lines which are incrementally spaced apart in proportion to a calibration curve of a function with a measuring unit, said lines representing true values of said function with said measuring unit by said spacing and said template adapted to serve as a screen for projecting a light image of absolute grid lines in superposed relation over a data light trace of the said function from a light-trace readout device to thereby calibrate the data light-trace readout from said device against absolute values of said measuring unit represented by the grid lines, said apparatus comprising, a frame including a generally flat base plate, opposed vertical side plates and opposed end rails elevated above the base which are attached to said side plates, means to support a calibration curve which provides absolute values of data function with said measuring unit, a calibration-curve viewing carriage means mounted for both lateral movement on said end rails and for transverse movement between said end rails which is fitted with a cross hair viewer positionable over the calibration curve to precisely fix the position of said viewing carriage means with respect to a point on the calibration curve, a movable projection unit including a lamp, a slit defining member, lens and carriage mount for projecting lines of light through said slit on a photographic film with the spacing of said lines on said film being determined by the position of said cross hair viewer over said calibration curve to provide by said light projection spaced apart grid lines, a pantograph rod slidably connecting at one end the carriage means for viewing said calibration curve and slidably connecting at the other end to said movable projection means, adjustable pivot means intermediate said connected ends of said pantograph arm for smooth movement of said cross hair viewer along said calibration curve with precisely adjusted positioning of said means resulting thereby, and a film supporting means spaced from said projection means for holding the film exposed through said slit to make said template.

3,043,190
LIGHTING ARRANGEMENT FOR PROJECTOR

Walter Mandler, Midland, Ontario, Canada, assignor, by mesne assignments, to Gretag Aktiengesellschaft, Regensdorf-Zurich, Switzerland

Filed Aug. 1, 1958, Ser. No. 752,655
3 Claims. (Cl. 88—24)



1. In a lighting arrangement for a projector having an object plane the combintion of a light source, a first condensing lens system in the path of light from said light source, a spherical reflecting surface behind said light source on the optical axis of said first lens system, and a supplementary lighting system including a second condensing lens system and a second spherical reflecting surface positioned also behind said light source laterally with respect to said first surface, said second lens system including a first and a second lens of inclined intersecting optical axes and a mirror interposed at the intersection of said axes, said axes and the axis of said first system defining a common plane, the light rays between said first lens and said mirror, and said mirror and said second lens being parallel, said two lens systems focussing similar beams of said light source on said object plane at the point of intersection of said axis of said first system and the axis of said second lens.

3,043,191
METHOD OF APPLYING SPECTACLES PADS

Harry Lanski, 6807 Sheridan Road, Chicago, Ill.

Filed May 15, 1959, Ser. No. 813,449
3 Claims. (Cl. 88—48)



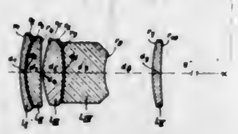
1. A method of fitting spectacles in a prescribed position relative to the wearer's eyes whereby said position is maintained throughout the useful life of the said spectacles through the use of a blank member having a pair of interconnected pads, said method comprising the steps of placing said blank member upon the bridge of the wearer's nose in position to receive a pair of spectacle frames shaping said blank member to conformity with the individual nasal structure so that the pads rest one upon each side surface of the nose substantially parallel thereto, adhering said pads to said spectacle frame and removing the connection between said pads once the frame and the pads have been so joined.

3,043,192
PHOTOGRAPHIC OBJECTIVE

Helmut Eismann and Erwin Konschack, Heidenheim (Brenz), Wurttemberg, and Günther Lange, Koenigsbronn, Wurttemberg, Germany, assignors to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany

Filed Jan. 4, 1960, Ser. No. 453
Claims priority, application Germany Jan. 21, 1959
4 Claims. (Cl. 88—57)

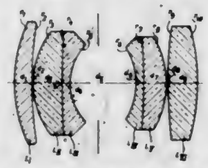
1. A photographic objective consisting of five lenses of which the first lens is a dispersive meniscus concave towards the diaphragm, the second lens is a collective meniscus concave towards the diaphragm, the third lens is an asymmetrical collective lens with its front surface turned towards the second lens being convex and more strongly curved than its rear surface, the fourth lens is an asymmetrical dispersive lens with its rear surface turned towards the diaphragm standing between the fourth and the fifth lens being concave and more strongly curved than its front surface, and the fifth lens is a meniscus-shaped collective lens concave towards the image, and in which the Abbe-ν-number of the first lens is smaller than the Abbe-ν-number of the second lens.



3,043,193
PHOTOGRAPHIC OBJECTIVE

Günther Lange, Koenigsbronn, Wurttemberg, and Heinz Zajadatz, Aalen, Wurttemberg, Germany, assignors to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany

Filed Apr. 25, 1961, Ser. No. 105,513
Claims priority, application Germany June 29, 1960
1 Claim. (Cl. 88—57)



Photographic objective consisting of two inner meniscus shaped dispersive compound members including between them the diaphragm turning their concave sides towards the diaphragm, and of two outer simple collective lenses characterized by the combination of the following features:

(a) $0.52\cdot f<D<0.64\cdot f$
(b) $0.7(r_5-r_6)<D<0.78(r_5-r_6)$
(c) $0.75\cdot f<(r_5-r_6)<0.85\cdot f$
(d) $0.28\cdot f<d_5<0.32\cdot f$
(e) $0.5(r_5-r_6)<d_5<0.55(r_5-r_6)$
(f) $0.54\cdot f<(r_5-r_6)<0.58\cdot f$
(g) $0.75\cdot f<B<0.90\cdot f$
(h) $0.15\cdot f<(d_3+d_4)<0.20\cdot f$
(i) $0.12\cdot f<(d_6+d_7)<0.16\cdot f$
(k) $1.00(r_5-r_6)<D<1.1(r_5-r_6)$

(1) $0.24\cdot f<r_5<-r_6<r_3<-r_8<r_1<-r_{10}<r_2<r_9<-r_7<3.0\cdot f$

wherein are designated

With $r_1 \ldots r_{10}$ the radii of the individual surfaces,
With (d_3+d_4) the thickness of the dispersive meniscus standing in front of the diaphragm,
With d_5 the diaphragm space,
With (d_6+d_7) the thickness of the dispersive meniscus standing behind the diaphragm,
With D the axial distance between the converging surfaces turned away from the diaphragm of the two dispersive meniscus,
With B the overall length, and
With f the focal length of the objective,

and furthermore characterized in that its design values lie so close to the data given in the following table that none of the surface refractive powers ($\Delta n/r$) differs absolutely by more than $0.2\cdot 1/f$ and none of the axial distances (d) differs absolutely by more than $0.02\cdot f$ from the corresponding value given in the table:

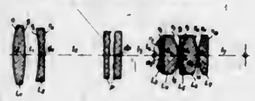
Lenses	Radii	Axial distances	n_d	ν_d	surface refractive powers, $\Delta n/r$
LI	$r_1=+0.65859\cdot f$	$d_1=0.07902\cdot f$	1.69042	54.80	$+1.04832/f$
	$r_2=+1.60723\cdot f$	$d_2=0.00198\cdot f$			$-0.42957/f$
LII	$r_3=+0.38390\cdot f$	$d_3=0.13433\cdot f$	1.61154	58.86	$+1.59297/f$
	$r_4=+12.49388\cdot f$	$d_4=0.03556\cdot f$	1.58496	40.65	$-0.00213/f$
LIII	$r_5=+0.25286\cdot f$	$d_5=0.29633\cdot f$			$-2.31236/f$
LIV	$r_6=-0.30937\cdot f$	$d_6=0.03961\cdot f$	1.67718	32.26	$-2.18891/f$
	$r_7=-2.38763\cdot f$	$d_7=0.10668\cdot f$	1.69042	54.80	$-0.00555/f$
LV	$r_8=-0.41256\cdot f$	$d_8=0.00198\cdot f$			$+1.67349/f$
	$r_9=+1.88293\cdot f$	$d_9=0.13433\cdot f$	1.69042	54.80	$+0.36667/f$
LVI	$r_{10}=-0.80091\cdot f$				$+0.77496/f$

Back focal length $s'=0.604\cdot f$

3,043,194
BINOCULARS

Horst Köhler, Heidenheim (Brenz), and Helmut Knutti, Oberkochen, Germany, assignors to Carl Zeiss, Wurttemberg, Germany

Filed Mar. 6, 1958, Ser. No. 719,691
Claims priority, application Germany Mar. 21, 1957
1 Claim. (Cl. 88—57)



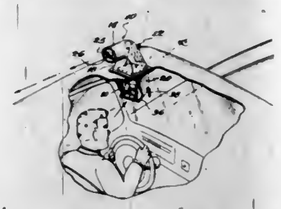
A binocular with a field of view of at least 50° fitted with objectives of a clear diameter less than 35 mm. and with eyepieces of a focal length less than 20 mm., said eyepieces having the distance of the exit pupil from the last lens vertex on the side of the eye greater than the focal length of the eyepiece and amounting to at least 14 mm., said eyepieces consisting of three components, the first component located on the objective side being a divergent meniscus with its concave surface turned towards the objective side and being composed of two lenses of opposite refractive power the outer lens of which facing the objective side being a divergent lens of biconcave shape, the radius of the said concave surface turned towards the objective side being within the limits of 0.6 times and 1.0 times the focal length of the eyepiece, the cemented surface being convex towards the objective side and the thickness of said first component being greater than 0.5 times said focal length, the middle second component being a biconvex collective component composed of two lenses of opposite refractive power cemented together the lens facing the said first component being divergent and the cemented surface being convex towards the objective side and having a radius between 1.0 times and 2.0 times the said focal length and the outer surface on the eyeside of said middle second component being greater than 1.5 times but smaller than 3.0 times the said focal length, and the third component located on the eyeside being a single collective lens the absolute value of the radius of the outer surface facing the eyeside being greater than 3.0 times the said focal length.

3,043,195
VISION DEVICE FOR VEHICLES

Charles W. Moultrie, 1543 E. 85th St., Chicago 19, Ill.

Filed Sept. 29, 1958, Ser. No. 763,889
2 Claims. (Cl. 88—70)

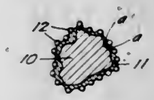
2. In combination with a vehicle having a cab and a roof over said cab, a rear-vision device comprising a periscope-like housing having a horizontal top portion, be inclined wall, a depending vertical central portion and a pair of depending bracket members, a convex lens perpendicularly positioned in said horizontal top portion, a converter having a pair of perpendicularly disposed planar front-surface mirrors mounted on said wall in alignment with said lens, a ground glass screen horizontally positioned in said depending vertical central portion, and a concave viewing mirror pivotally mounted between said bracket members, said housing positioned on said roof so that said lens faces rearwardly of the vehicle, said bracket members depending into said cab through an aperture in said roof and said viewing mirror positioned in said cab in close proximity with said roof.



3,043,196
REFLECTIVE MARKING AGGREGATE

Philip V. Palmquist, Maplewood, Eugene L. McKenzie, North St. Paul, and Thomas L. Harrington, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Sept. 18, 1957, Ser. No. 684,692
6 Claims. (Cl. 88—82)



1. Individual particles of reflective aggregate having an average diameter not over one-half inch, each handleable as a separate article and being adapted for use in providing markers of efficient reflex reflection of incident beams of light striking the same, said particles of reflective aggregate comprising a rigid core member, and an adherent coating over said core member, said coating comprising a light-returning layer of small transparent sphere-lenses with internal specular light-reflecting means underlying said sphere-lenses and in optical connection with the back extremity thereof so as to produce reflex reflection of light directed upon said aggregate, regardless of the angle of incidence of said directed light, said sphere-lenses having a refractive index of at least 1.7.

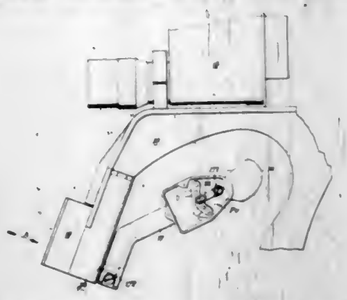
3,043,197
MEANS FOR CONTROLLING GUIDED MISSILES

John W. Piper, Godalming, and William Harry Fryer, Byfleet, England, assignors to Vickers-Armstrongs (Aircraft) Limited, London, England

Filed June 29, 1959, Ser. No. 823,606
Claims priority, application Great Britain July 25, 1958
3 Claims. (Cl. 89—1.7)

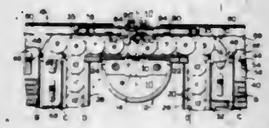
1. In a manually operated device for controlling the flight path of a missile with the natural movements of an operator's thumb, said device comprising a stock member having a depending handle grip, a horizontal axis control lever disposed rearwardly of said grip, pivot means mounting said horizontal axis control lever on the device for pivotal movement from side to side of said stock member, a cup-shaped housing disposed adjacent the free end of said horizontal axis control lever and formed for receiving the thumb of an operator of the device, second

pivot means mounting said housing at its rearward end to the free end of said horizontal axis control lever for pivotal movement upwardly and downwardly, potentiometer means for connection to said missile for varying electric impulses transmitted thereto for controlling horizontal and vertical movements thereof, said potentiom-



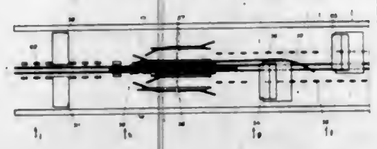
eter means including a first potentiometer mounted adjacent said horizontal axis control lever and being connected thereto for movement thereby and a second potentiometer mounted adjacent said cup-shaped housing and being connected thereto for movement thereby, said potentiometers registering movements of said lever and said cup-shaped housing.

3,043,198
SADDLE TYPE MAGAZINE FEED
Burns Darsie, Rockford, Ill., and Marvin Helfetz, Milwaukee, Wis., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed May 3, 1960, Ser. No. 26,663
4 Claims. (Cl. 89—33)



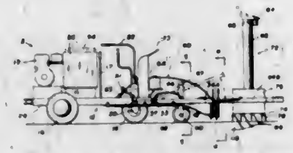
1. For a firearm having a receiver with a longitudinally reciprocating bolt, a magazine for storing a supply of disconnected cartridges and for feeding them to the firearm, the magazine including a lateral feedway for passage of a single column of longitudinally disposed cartridges therethrough from opposite ends to a central feed throat, an opening in the upper portion of the receiver for receiving said feedway, a pair of similar containers joined to opposite ends of said feedway for communication therewith and so as to depend from the ends of said feedway on opposite sides of the receiver, a plurality of laterally spaced partitions extending from the bottom of each of said containers to positions approximately on a level with a floor of said feedway to form chambers for receiving single columns of the cartridges, a spring-biased follower disposed in each of said chambers for biasing the column of cartridges therein upwardly into a lateral pathway extending over the tops of said partitions to said feedway, a pair of guide pawls pivotally mounted on each of said followers and operationally disposed for moving the last cartridge in the associated column in front of the first cartridge in the next succeeding column and converting vertical movement of the cartridges in the next succeeding column to lateral movement along the feedway to the feed throat, and an escapement-shuttle device disposed within said feedway for actuation by the bias of the cartridges from said containers to select a cartridge alternately from said containers and cage the selected cartridge over said feed throat for pick-up by the bolt.

3,043,199
MANUFACTURE OF CROSS-BOTTOMED VALVE BAGS
Willy Niemeyer, Natrup-Hagen, Westphalia, Germany, assignor to Windmoller & Holscher, Lengerich, Westphalia, Germany, a German firm
Filed Oct. 14, 1960, Ser. No. 62,769
Claims priority, application Germany Oct. 16, 1959
7 Claims. (Cl. 93—8)



1. A process for the manufacture of cross-bottomed valve bags, which comprises forming one end portion of a flat open-ended tubular blank into a first base square, thereafter forming the other end portion of the blank into a second base square that overlaps the first base square, applying an adhesive substance to at least the overlapping portion of the second base square, thereafter folding the overlapping portion of the second base square out of the plane of the blank, applying an adhesive substance to at least the previously overlapped portion of the first base square, and thereafter completing the two cross-bottoms substantially simultaneously.

3,043,200
SELF-PROPELLED CONCRETE JOINT TREATING MACHINE AND METHOD
Harry J. Huttash, 8851 Larchwood, Dallas, Tex.
Filed June 20, 1958, Ser. No. 743,228
4 Claims. (Cl. 94—22)

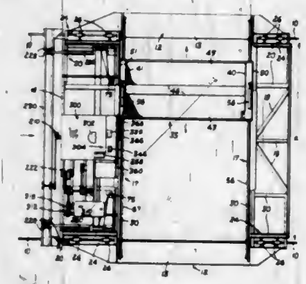


2. A method of cleaning old expansion material from grooves in paving and treating the paving groove for subsequent refilling, comprising the steps of: applying onto the old expansion material a liquified gas having a boiling point sufficiently below standard atmospheric conditions to cause freezing of said material when applied in liquid form and evaporated in the atmosphere for rendering the old expansion material brittle and crystalline, plowing the old expansion material out of the groove, directing a jet of compressed air and abrasive material against the sides of said groove and moving and guiding the jet longitudinally along said groove.

3,043,201
MACHINE FOR DISTRIBUTING FLOWABLE MATERIALS
Glenway W. Maxon, Jr., Dayton, Ohio, assignor to Maxon Construction Company, Inc., Dayton, Ohio, a corporation of Ohio
Filed May 8, 1958, Ser. No. 733,949
7 Claims. (Cl. 94—46)

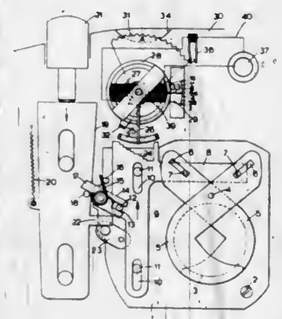
6. A machine for distributing flowable material comprising a generally rectangular main frame including front and rear frame rails connected at their opposite ends by side rail members, wheel carrying trucks mounted at the forward and rear ends of said side rail members and having wheels adapted to engage rail-like forms between which material is to be distributed, said frame being adapted for movement along said form members, a

pair of bucket supporting rails extending in spaced parallel relation across said frame between said side rail members and adjacent said front and rear frame rails respectively, a bucket supporting carriage having rollers engaged with said bucket supporting rails for guidance across said frame, a distributing bucket mounted in said supporting carriage and having a discharge opening at the lower end thereof elongated in a direction from front to rear of said main frame, drive means connected for selective traversing movement of said bucket across said frame to distribute material deposited therein between the forms over which said main frame travels, a strike-off screed depending from said rear frame rail for



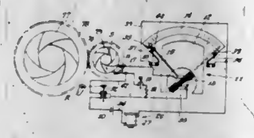
positioning adjacent said forms to strike off material deposited between said forms by said bucket during forward movement of said machine over the forms between distributing operations of said bucket, a height control motor connected between said bucket carriage and said rollers thereon for controlling the elevation of said bucket discharge orifice with respect to the forms upon which said main frame is supported, and remote controls for operating said bucket height control motor including a flexible supply line extending between a stationary position on said frame and said bucket carriage to accommodate the traversing distributing movement of said carriage and said bucket.

3,043,202
PHOTOGRAPHIC CAMERA
Erich Hahn, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed June 20, 1960, Ser. No. 37,259
1 Claim. (Cl. 95—10)



In a photographic camera having a housing, a shutter device including an aperture diaphragm mounted on the housing, a shutter operating mechanism, an electric circuit including a photo-electric moving-coil exposure meter, a coil return spring connected to the moving-coil, and an indicating pointer attached to the moving-coil, which pointer moves over a scale provided on the housing; the provision of a meter stop connected to the moving-coil, exposure factor setting means operatively connected to the aperture diaphragm and slidably mounted in the housing so as to be substantially rectilinearly movable towards the meter stop, which means is provided with a stepped cam to abut against the meter stop when the setting means is moved towards said meter stop, the setting means position when abutting against the meter stop depending upon the position of the latter, a drive spring connected between the housing and the setting means for urging the latter towards the meter stop, a camera release member operably connected to the shutter operating mechanism, a return spring connected to the camera release member to oppose operation of the release member, a transmission member coupled between the camera release member and the setting means in such a manner that the return spring is able to overcome the drive spring and to urge the setting means away from the meter stop when the camera release member is unoperated, while allowing the setting means to move towards the meter stop, under the action of the drive spring, upon operation of the camera release member, a switch in said electric circuit, and a manually movable setting member having a range of movement over which the setting member engages the meter stop to move the latter against the coil return spring to any selected position and a position at which the setting member closes the switch and becomes disengaged from the meter stop when automatic aperture diaphragm setting is required.

3,043,203
PHOTOGRAPHIC CAMERA WITH AUTOMATIC SPEED REGULATOR
Karl Adolf Bührle, Hofen (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Oct. 14, 1958, Ser. No. 767,106
Claims priority, application Germany Oct. 18, 1957
20 Claims. (Cl. 95—10)

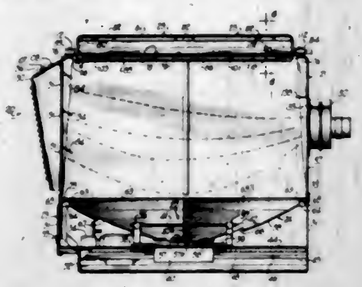


20. In a photographic camera, a releasable shutter; a releasable stop mechanism for halting the released shutter in open condition; a photoelectric element responsive to existing light conditions; an electromagnetic control system for energization by said element and adapted when energized to actuate the stop mechanism and render the same inoperative, thereby to enable the shutter to close; means for releasing the shutter for opening movement and for energizing the control system from the photoelectric element, said system having a time lag varying with the magnitude of its energization, thereby to effect a timed exposure by the shutter which is controlled by existing light conditions.

3,043,204
PHOTOGRAPHIC PRINTER
Harold R. Benson, Lombard, Ill., assignor to The Nuarc Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 10, 1959, Ser. No. 798,522
5 Claims. (Cl. 95—76)

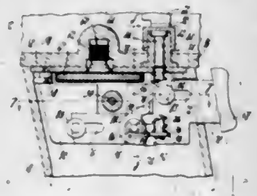
1. A printer for use in making photographic plates and the like, comprising a cabinet, a source of printing light mounted in the lower part of said cabinet for directing light toward the top of said cabinet, a printing frame, mounting means for mounting said frame in the top of said cabinet for pivotal movement about a central axis of said frame thereby to permit the positioning of said frame with either side thereof facing toward said light

source, a pump mounted in said cabinet, pressure responsive means disposed in said frame for fixedly positioning a photographic plate or the like in said frame, an aper-



tured pintle included in said mounting means for said frame, and a fluid connection between said pump and said pressure responsive means, said connection including the aperture in said pintle.

3,043,205
CAMERA SUPPORT AND ACTUATING MEANS
Henry J. Kaminski, Hingham, Mass., assignor to Keystone Camera Company, Inc., Boston, Mass., a corporation of Massachusetts
Filed June 5, 1961, Ser. No. 114,918
16 Claims. (Cl. 95—86)



1. A camera support and operating accessory for use in conjunction with a motion picture camera having a case,

a camera operation drive motor,

a motor control mechanism mounted within said case,

first actuating means mounted on said case including a control element extending outwardly from said case for manual manipulation by the operator of said camera,

means coupling said first actuating means to said motor control mechanism so that manual manipulation of said first actuating means by the operator of said camera will actuate said motor control mechanism to operate said drive motor,

an aperture in the bottom surface of said camera case,

second actuating means connected to said motor control mechanism including a movable element mounted behind said aperture at the bottom of said camera case for operating said motor control mechanism in response to the movement of said movable element,

and accessory attachment means at the bottom of said camera case;

said accessory comprising a handle member having a surface adapted to mate with a surface portion at the bottom of said camera case,

an actuating rod in said handle member mounted for movement in a direction perependicular to and through the plane of said matable surface,

manually releasable fastening means at the top of said handle member adapted to cooperate with said accessory attachment means for releasably securing said matable surface of said handle member in mating engagement with said surface portion of said camera case with said actuating rod in alignment with the exposed portion of said movable element at the bottom of said camera case when said matable surface of said handle member is secured in mating engagement with said camera case,

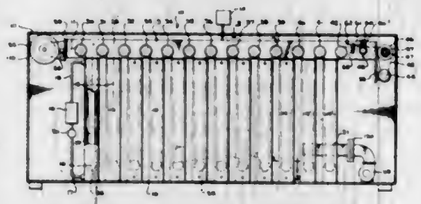
a trigger member having a portion extending outside of said handle member,

a mechanical linkage coupling said trigger member and said actuating rod,

said mechanical linkage being mounted in said handle member to produce movement of said actuating rod through the plane of said matable surface and the bottom of said camera case into contact with said exposed portion of said movable element when said accessory is secured to the camera for operating said motor control mechanism in response to the movement of said trigger member towards said handle member,

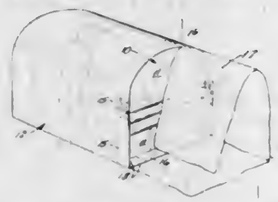
and resiilent means cooperating with said actuating rod acting to bias said actuating rod inwardly of said handle member.

3,043,206
TENSION-FREE FILM DEVELOPING APPARATUS
Mervin E. Fulton, 3461 E. Tulare Ave. (P.O. Box 980), Tulare, Calif.
Filed Sept. 13, 1960, Ser. No. 55,787
12 Claims. (Cl. 95—94)



1. Apparatus for developing an elongated strip of film comprising means for directing said film along a predetermined path first through developing fluid to be developed thereby and then through a drying zone, said means including a series of rollers having portions engaging the film at a series of locations spaced along said path and power operated means for driving a plurality of said rollers, said rollers and said power operated means being constructed to cause the film engaging portions of the different rollers to progressively increase in effective linear speed as the film advances through said fluid and then progressively decreases in effective linear speed in said drying zone.

3,043,207
REMOVABLE CLOSURE FOR WRAPPED BREAD
Alexander G. Janus, Rochester, Minn., assignor to Consumers Merchandising Corporation, Rochester, Minn., a corporation of Minnesota
Filed Feb. 4, 1957, Ser. No. 637,942
8 Claims. (Cl. 99—234)



3. A device for maintaining wrapped bread in easily dispensed and fresh condition comprising, a continuous and generally flat sheet of resilient material having a medial pleated portion extending from one side to the other to provide longitudinal compressibility, and a flange joined edgewise to the flat continuous sheet, said flange providing a bearing surface for frictionally engaging the inner surface of a bread wrapper to provide a closure therewith to protect the progressively exposed end of a loaf of bread.

3,043,208
NEEDLE AND CLAMP FOR USE IN PUMPING HAMS AND THE LIKE
William E. Swartz, McKeesport, Pa., assignor to Hagan Chemicals & Controls, Inc., a corporation of Pennsylvania
Filed Jan. 25, 1960, Ser. No. 4,263
2 Claims. (Cl. 99—257)



1. A connecting device for flexible tubes and the like comprising:

(*a*) a housing;

(*b*) a rigid tubular member mounted on said housing;

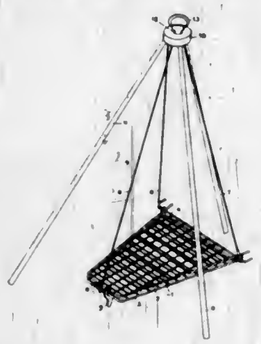
(*c*) two elongated clamp members having cam follower surfaces thereon, said clamp members being mounted on pivots on said housing and having terminals in converging relation near the end of said tubular member;

(*d*) spring means for applying a force tending to open said clamp members;

(*e*) a cam member having two eccentric convex working surface in contact with the cam follower surfaces of said clamp members; and

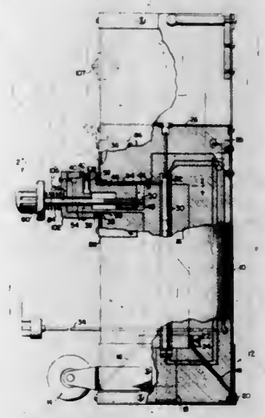
(*f*) means for rotating said cam to cause the terminals of said clamp members to converge on said tubular member.

3,043,209
GRILLER FOR COOKING MEAT AND THE LIKE
Walter R. Sutherland and Charles John Sutherland, both of 18 Tecoma Crescent, Thornton Estate, Goodwood, Cape Province, Union of South Africa
Filed June 9, 1959, Ser. No. 819,117
5 Claims. (Cl. 99—397)



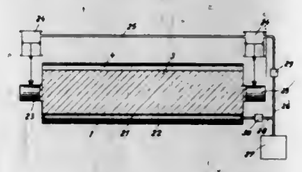
2. A griller comprising a grid formed by a double layer of wire mesh shaped as an isosceles trapezoid having opposite sides, three suspension members for said grid, two of said suspension members being loosely attached to opposite corners of one side of said grid and the third suspension member being flexible and being loosely attached to the opposite side of said grid, a tripod supporting structure having an apex portion, an attachment for the three suspension members at said apex portion of said supporting structure, said apex portion having an aperture therethrough, and said flexible support member extending through said aperture.

3,043,210
PORTABLE THERMAL BONDING DEVICE
Madison H. Briscoe, Athens, Ga., assignor to Circular Banding Company, Inc., Athens, Ga., a corporation of Georgia
Filed Apr. 7, 1961, Ser. No. 101,544
14 Claims. (Cl. 100—93)



1. A portable thermal bonding device for bonding spinning tapes or the like comprising a thermally insulated casing, a gripper jaw assembly accessible with respect to the exterior of said casing for receiving and clampingly gripping a tape to be bonded, a heat storing body enclosed in said casing and connected in direct thermal conductive relationship to said jaw assembly to provide a heat reservoir for supplying heat to said jaw assembly, said body being adapted to store a large quantity of heat relative to the rate at which heat is lost from said body and said jaw assembly, and heating means in said casing for heating said body to an elevated temperature.

3,043,211
ROLLER ASSEMBLIES FOR THE PRESSURE TREATMENT OF MATERIALS
Valentin Appenzeller, Krefeld, Germany, assignor to Eduard Küsters, Krefeld, Germany
Filed Apr. 22, 1959, Ser. No. 808,080
Claims priority, application Germany Apr. 24, 1958
4 Claims. (Cl. 100—170)



1. A roller assembly for the application of pressure to surfaces for calendering, drawing and rolling, said roller assembly including a roller having a tubular rotary cylinder, an elongated stationary rigid core substantially coaxial therewith, said core being mounted within and coextensive with said cylinder, said core being spaced from the inner surface of said cylinder, and an arcuate shaped stationary inflatable member mounted on said core to fill a portion of the space between said core and the inner surface of said cylinder, said inflatable member being

substantially coextensive in length with said cylinder so as produce a continuous uniform pressure along substantially the entire length of said cylinder.

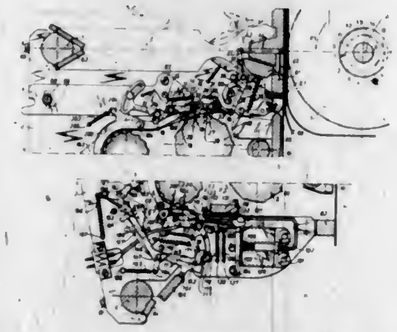
3,043,212
CONTAINER FLATTENING APPARATUS
Victor H. Hasselquist, 1655 Preston Ave., Akron 5, Ohio
Filed June 22, 1959, Ser. No. 822,018
4 Claims. (Cl. 100—233)



1. A self feeding, progressive container crusher comprising a frame, a fixed crushing jaw on said frame, a movable crushing jaw, said jaws being generally vertically disposed and having relatively smooth container engaging faces, means for mounting said movable jaw on said frame for motion toward and away from said fixed crushing jaw, an operating arm, machine element means connected between said frame, said operating arm and said movable crushing jaw for moving said movable crushing jaw toward and away from said fixed crushing jaw upon oscillation of said operating arm, said machine element means causing the crushing faces of said jaws to remain relatively inclined to form a gravity hopper at both the initial and final positions of said operating arm, at which positions said jaws are at their maximum and minimum relative spacings, respectively, successive advance and retract strokes of said arm moving said movable jaw back and forth between the same positions relative to said fixed jaw during the entire crushing operation, the advance strokes causing the lower, uncrushed portions of a container disposed between the jaws to be progressively flattened, with the container partially falling down and eventually out from between said jaws upon successive retract strokes, the minimum spacing of the lower portions of said inclined jaws being substantially equal to the thickness of the crushed container with the relative spacing of the remainder of the jaws exceeding said minimum spacing to accommodate the container until it is fully crushed, said machine element means comprising pivot means for pivotally mounting said arm to said movable jaw, and link means pivoted to said arm at one end and to said frame at the other end, said first named pivot means lying in between the pivots of said link means, and substantially in line therewith, when said operating arm and movable jaw are retracted, to give substantially maximum mechanical advantage to said arm when retracted.

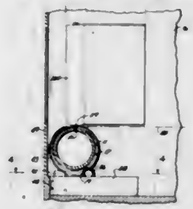
3,043,213
CODED HAMMER CONTROL IN SELECTIVE PRINTING MACHINE
Claude Jules Donabin, Vincennes, France, assignor to Compagnie des Machines Bull (Societe Anonyme), Paris, France
Filed Apr. 14, 1960, Ser. No. 22,144
3 Claims. (Cl. 101—93)

1. In a cyclically operating printing machine which includes a rotatably driven type drum having on its periphery a plurality of series of characters arranged in parallel and divided into groups, the various characters of each series traveling in the course of one cycle past a striking mechanism which is adapted to be actuated at a given instant in a cycle through a decoding device for printing a selected character, under the control of coded control pulses transmitted to said decoding device at predetermined instants in two successive periods of a cycle, at least one control pulse transmitted during the first period selecting a group of characters from a series, and at least one control pulse transmitted at a determined instant during the second period selecting a character from the selected group, the decoding device comprising at least three selecting pawls, an electromagnet energized by the coded control pulses and arranged to successively control said three selecting pawls, two selecting levers, two of said selecting pawls arranged to control respectively the positioning of said two selecting levers, an actuating lever pivotably mounted for releasing said striking mechanism, a pivot means fixed on said actuating lever, a group selecting sector including a plurality of stepped abutments mounted on said pivot means, said two selecting pawls positioning said group selecting sector upon receipt of control pulses during said first period



by said electromagnet, a bar for retaining the third of said selecting pawls, a cam for actuating said bar during said first period, means for actuating said third selecting pawl upon receipt of at least one control pulse during said second period by said electromagnet, a movable pawl supporting member, an actuating pawl pivotably mounted on said movable pawl supporting lever, a driving member moving synchronously with said type drum, the actuation of said third selecting pawl bringing said actuating pawl in contact with said driving member in that the movement of said driving member is transmitted to said movable pawl supporting lever for causing said actuating pawl to encounter at a given instant an abutment of said group selecting sector situated and selectively positioned in its path and to push said actuating lever bearing said grouped selecting sector for releasing said striking mechanism at a given instant in the cycle so as to print the selected character.

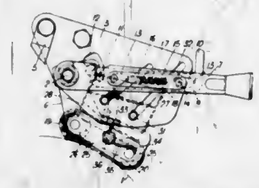
3,043,214
INKING DEVICE
Chris A. Christoff, San Gabriel, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Apr. 11, 1960, Ser. No. 21,370
6 Claims. (Cl. 101—97)



1. In a printing device including a printing drum having a plurality of type characters therearound, means for moving said drum about its center, means for effecting an impression of a selected one of said type characters

against a record medium, and means for applying a coating of ink over said type characters, a roller for removing accumulated ink from said type characters, said roller comprising a helical row of flexible radially extending bristles, and yieldable means rotatably supporting said roller in engagement with said drum whereby said drum engages said bristles to rotate said roller.

3,043,215
PRIMING LIQUID APPLICATOR FOR OFFSET ROTARY PRINTING MACHINES
Albert George Ronald Gates, Edmonton, London, England, assignor to Gestetner Limited, London, England, a British company
Filed Jan. 27, 1961, Ser. No. 85,311
Claims priority, application Great Britain Feb. 1, 1960
21 Claims. (Cl. 101—148)



19. In an offset rotary printing machine, apparatus for applying a priming liquid to the plate on the plate cylinder, such apparatus comprising two priming liquid applicator rollers, means mounting said rollers for movement between an operative position in which the rollers engage the plate cylinder at angularly spaced positions therearound and an out-of-the-way position in which the rollers are spaced from the plate cylinder, means constraining the rollers to rotate at different peripheral speeds in the operative position of the rollers, a reservoir for priming liquid, and wick means leading liquid from the reservoir to the rollers in the operative position of the latter.

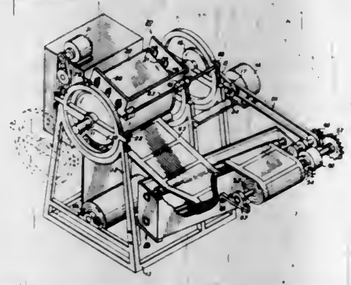
3,043,216
WATER ROLL ARRANGEMENT FOR ROTARY PRINTING PRESSES
Joseph E. Meyer, Westerly, R.I., assignor to The Cottrell Company, Westerly, R.I., a corporation of Delaware
Filed Nov. 19, 1959, Ser. No. 854,133
5 Claims. (Cl. 101—179)



1. In a rotary web printing press a printing unit, a drying unit, at least one chilling roll located at the drying unit and being divided into axially alined sections, a web supply, means for passing the web from said web supply to and through the printing and drying units and around one chilling roll section and repassing the web to and through said units, and around another chilling roll section and means for driving each roll section at a variable speed to control web tension and, thereby, web register.

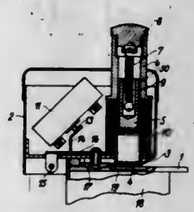
3,043,217
ELECTROSTATIC PRINTING APPARATUS
Lewis E. Walkup, Columbus, Ohio, assignor, by mesne assignments, to Xerox Corporation, a corporation of New York
Filed Dec. 21, 1960, Ser. No. 77,339
2 Claims. (Cl. 101—212)

1. In a xeroprinting apparatus in which images are reproduced from an endless flexible printing plate containing an image pattern comprised of configured insulating material on a conductive support, wherein the said apparatus includes a rotatable first support means adapted to advance a printing plate into operative relation past a plurality of treating stations, said treating stations including a charging station at which the printing plate receives an electrostatic charge that is retained by the insulating material thereon, a developing station at which electroscopic marking particles are presented to the charged insulating material on the plate to effect its development, and a transfer station at which developer on the insulating material is transferred to a moving support web arriving at said transfer station in face-to-face relation with the developed pattern on said plate; the improvement comprising a second support means adapted in cooperation with said first support means to receive and support endless, flexible printing plates of at least two different dimensional lengths, said second support means comprising:



(*a*) a stationary frame disposed spaced from said first support means, said frame having two parallel opposite walls spaced apart at least the width of a printing plate to be supported;
(*b*) a plurality of aligned elongated slots defined in said opposite walls of said frame, each of said slots being arranged with one end opening into the edge of said walls;
(*c*) a plurality of cylindrical rollers each adapted to support a portion of printing plate to be advanced thereover;
(*d*) mounting means to mount each of said rollers for rotation in oppositely aligned of said slots and removable through the open ends thereof; and,
(*e*) securement means adapted to secure each roller relatively in its slot at a position at which said rollers collectively support a printing plate in a taut relation to the portion of printing plate on said first support means.

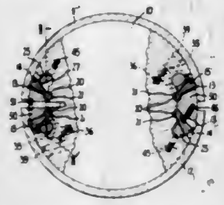
3,043,218
ELECTRO-MAGNETICALLY OPERATED IMPRINTING DEVICE
Richard Wick and Hans Ado Brandt, Munich, Germany, assignors to Firma Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed May 21, 1958, Ser. No. 736,839
Claims priority, application Germany July 10, 1957
17 Claims. (Cl. 101—287)



1. Imprinting apparatus comprising, in combination, a base, a stamping member movable to and from the base

for producing an imprint upon a workpiece interposed between the base and the stamping member, a structure for movably mounting the stamping member, direct-current energizable actuating means for impelling said stamping member against the workpiece from a position of rest, a direct-current operated energizing circuit for said actuating means connected thereto and comprising a condenser chargeable by said current, a resistor and actuating switch means connected between said actuating means, said resistor and said condenser, said switch means connecting in one position thereof said actuating means in said circuit in series with said condenser for charging said condenser and simultaneously energizing said actuating means by direct current during the period of charging said condenser so as to impart a power impulse to said stamping member, while in another position of said switch means said actuating means is disconnected and said condenser is connected in series with said resistor whereby said condenser is permitted to discharge.

3,043,219
PRINTING PRESS MACHINERY
Paul Dietrich, Augsburg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg, A.G., Augsburg, Germany, a corporation of Germany
Filed Nov. 21, 1958, Ser. No. 775,487
Claims priority, application Germany Dec. 7, 1957
3 Claims. (Cl. 101—378)



1. In a device for clamping stereotype printing plates and the like onto the plate cylinder of a rotary printing press, the combination which comprises a set of clamping hooks for clamping engagement with each of the opposite axial edges of said plates, means for separately and individually pivotally mounting said clamping hooks in said plate cylinder for arcuate swinging movement of said hooks selectively into and out of clamping engagement with said plates, said pivotal mounting means supporting each of said hooks substantially continuously throughout the axial extent thereof adjacent the axis of said pivotal mounting, rotatable cam means for swinging each of said hooks in each of said sets of hooks into said clamping position upon rotation of said cam means, spring means for rotating said cam means for one of said sets of hooks for resiliently urging said hooks into said clamping position along one axial edge of said plate, and operative means accessible from an end of said cylinder for rotating said cam means for the set of hooks at the opposite edge of said plate for swinging said hooks into and out of said clamping position.

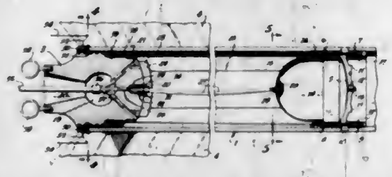
3,043,220
SAFETY FUSEE CAP
John F. Perrigo, Beloit, Wis., and Russell G. Rutherford, Rockford, Ill., assignors to Lakeside Railway Fusee Co., South Beloit, Wis., a copartnership
Filed Sept. 23, 1958, Ser. No. 762,835
8 Claims. (Cl. 102—37.8)

1. As an article of manufacture, a safety fusee cap for protective enclosure of the upper end of a fusee on which an ignitable head is provided, comprising a tubular cardboard sleeve closed at one end adapted to fit closely on the igniting end of the fusee, said one end portion of said sleeve being folded inwardly to define a short inwardly flared end portion with respect to the longitudinal axis of said tubular sleeve, said end portion having a double wall thickness, a sheet metal cup-shaped closure having a substantially flat upper wall of a diameter large enough for closing the said one end portion of said sleeve and disposed over the same and having a downwardly extending annular side wall, means attached to said side wall which carries an annular flange, the diameter of said annular flange being less than the diameter of said one end portion of said sleeve so that said flange fits inside the said one end portion of said sleeve, said flange being flared downwardly relative to said upper wall and radial-



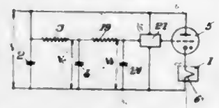
ly outwardly relative to the longitudinal axis of said sleeve, said flange and said means cooperating to clinch the double thickness end portion of said sleeve to said closure, said means defining an annular shoulder radially between said flange and the side wall and spaced from the upper wall, a disk of relatively soft shock absorbing material disposed inside said closure and having its marginal edge portion gripped between said annular shoulder and said upper wall, and an elongated flexible tape secured at one end to said closure, said tape having one end portion thereof entered in the said one end portion of said sleeve between it and the flange on the closure so as to be gripped by the edge of the flange in the clinching of the closure onto said sleeve.

3,043,221
ROCKET PROPULSION METHOD AND MEANS
Frank H. Swanser, 3139 W. 152nd Place, Gardena, Calif.
Filed June 2, 1958, Ser. No. 739,334
6 Claims. (Cl. 102—49)



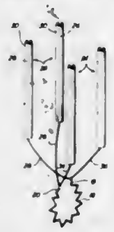
1. In rocket construction, an elongated tubular casing, a head closing one end of said casing, a collapsible fuel tank within the casing and adjacent the head, the opposite end of the casing being open, a motor within the casing and movable from the open end thereof toward the collapsible fuel tank, said motor having a combustion chamber and a nozzle leading from the combustion chamber outwardly of the motor, said casing adapted to hold an oxidizer between the inner end of the motor and the collapsible fuel tank, said motor provided with ducts communicating between the combustion chamber and externally of the motor for receiving the oxidizer contained within the cylindrical casing, and means of communication with the interior of the collapsible fuel tank and the combustion chamber of the motor; comprising a tube resistant to caustics and acids and having a pre-set shape of a conical helix.

3,043,222
ELECTRIC DEVICES FOR IGNITING THE CHARGE OF A PROJECTILE, SAID DEVICES BEING ESPECIALLY INTENDED FOR USE ON ANTI-AIRCRAFT OR ANTI-ARMOUR PROJECTILES
Alfred Kaspaul, Veyrier-Geneva, Switzerland, assignor to Brevets Aero-Mecaniques S.A., Geneva, Switzerland, a society of France
Filed July 29, 1957, Ser. No. 674,860
8 Claims. (Cl. 102—70.2)



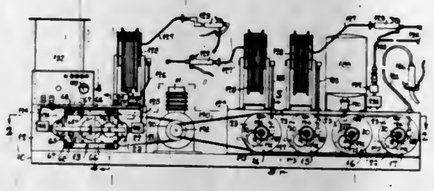
1. A fuse device for igniting a pyrotechnic composition carried by a projectile, comprising, within the projectile: a source of voltage the value of which is adjustable on starting of the projectile, said source being constituted by a primary condenser; a resistance connected with one terminal of said condenser, a secondary condenser mounted in shunt with said resistance on said primary condenser so as to be progressively charged by said primary condenser during flight of said projectile; a detonator mounted for setting off said pyrotechnic composition, an electrical system operatively connected with said detonator for detonating it when the voltage applied thereto exceeds a predetermined value, said system including a gaseous discharge tube the grid of which is fed from said secondary condenser, a third condenser charged by said secondary condenser and connected with the grid of said tube, means for periodically short-circuiting said third condenser from a predetermined delay period following the launching of the projectile, and means sensitive to the proximity of the objective and projectile for acting on said short-circuiting means to interrupt said short-circuiting when the distance between the projectile and the objective passes through a minimum value.

3,043,223
ELECTRIC INITIATOR
Wendall J. Clark, Henrico County, Va., assignor to Texaco Experiment Incorporated, a corporation of Virginia
Filed Nov. 20, 1959, Ser. No. 854,473
3 Claims. (Cl. 102—70.2)



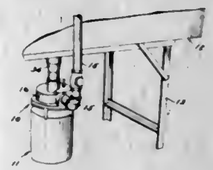
1. An electric initiator safeguarded against premature initiation from high frequency current induced therein comprising a casing having a heat-sensitive ignition composition therein, an electrical resistance heater element in heat exchange relationship to the ignition composition, a first pair of electrical conductors in close proximity to each other terminating at one end externally of said casing and cross-connected to the ends of said resistance element at the other end, a second pair of electrical conductors in close proximity to each other and to said first pair of conductors, said second pair of conductors terminating at one end externally of said casing and cross-connected to the ends of said resistance element at the other end, each of the conductors of said first and second pairs of conductors being of substantially the same length, and dielectric means insulating the conductors of the pairs of conductors from each other.

3,043,224
SELF-CONTAINED SERVICE PUMP ASSEMBLY
William Y. Brown, Charlotte, N.C., assignor to Brown Grease Gun Company, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Aug. 4, 1960, Ser. No. 46,633
2 Claims. (Cl. 103—23)



1. Lubrication apparatus comprising a pump having a shaft by which it is driven, a prime mover for driving said shaft, rotary means loosely mounted on said shaft, driving means interconnecting said prime mover with said loosely mounted rotary means to cause the latter to be continuously rotated, a stationary magnetic ring member concentric with the pump shaft, a coil embedded in said ring member, a friction disk secured upon said rotary means and axially movable of the shaft, said disk being disposed within the field of magnetic flux of said ring member, a second friction disk fixed upon said shaft and disposed between said first disk and said stationary magnetic ring, whereby when said coil is energized the rotation of said first disk will cut the lines of magnetic flux produced by the ring member to cause the first friction disk to be moved axially of the shaft and into engagement with the second friction disk, electric circuit means of said coil including a source of electrical current, a plurality of pressure switches for controlling respectively a plurality of ranges of pressures, means for communicating the pressures at the outlet of said pump to each of said pressure switches, an electrical circuit for each said pressure switch, and switch means for selectively connecting said circuits with said current source.

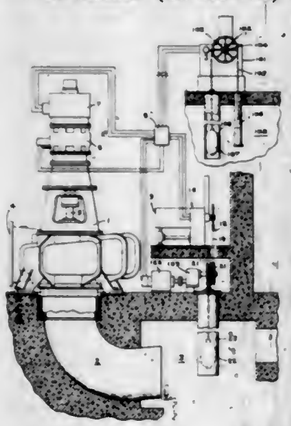
3,043,225
ADJUSTABLE LIQUID LEVEL CONTROL FOR PUMPS
Axel L. Nielsen, 1316 E. Elza, Hazel Park, Mich.
Filed Aug. 10, 1959, Ser. No. 832,620
5 Claims. (Cl. 103—25)



1. A rotary pump control system comprising a pump impeller housing rotatively mounting an impeller, said housing having a liquid intake opening substantially coaxial with said impeller and a discharge opening radially outwardly of the impeller axis, there being a dynamic pressure gradient in said housing ranging from a suction condition at said intake opening to a predetermined dynamic pressure condition at said discharge opening, including a radial zone intermediate thereof at substantially zero pressure, a motor connected to said impeller to drive the same and provided with control means responsive first to hydrostatic pressure to initiate operation of

the motor and then to hydrodynamic pressure to continue the motor operation for a predetermined interval, and means including a single conduit providing a closed fluid pressure connection with the interior of said housing to transmit hydrostatic and hydrodynamic pressures effective therein to said control means to operate the latter, said conduit opening to said housing radially outwardly of the axis of said impeller and maintaining the application of said operating pressure on said control means notwithstanding a drop of hydrostatic pressure in said housing, said conduit opening to said housing in said radial zone, thus to locate the conduit opening at the approximate point relative to said impeller axis at which pressure in the housing changes from positive to negative as pumping by the impeller proceeds.

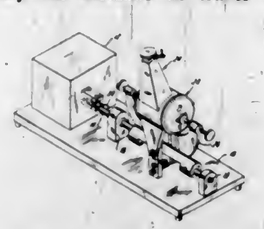
3,043,226
FLOW CONTROL MEANS FOR A PUMPING STATION
Clement W. Camp, West Orange, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Jan. 11, 1961, Ser. No. 82,063
10 Claims. (Cl. 103—26)



3. The combination of a variable flow control means for use with a pumping station including a suction reservoir, said pumping station including a pump, driving means for said pump and speed regulating means operatively interconnecting said pump to said driving means for varying the power flow from said driving means to said pump; said variable flow control means including indicator means for measuring the level in said suction reservoir, said variable flow control means including control means operatively interconnecting said indicator means to said speed regulating means to vary the pump output when the level in said reservoir varies from a preselected level; with a controller including means to indicate the level at a point remote from said pumping station, a first variable resistance means for said controller and connected to the means to indicate level, a balancing variable resistance means connected to said first variable resistance means at one end and to said variable flow control means at the other end to cause said control means to regulate the pump speed on unbalancing of resistance between said first and balancing variable resistance means.

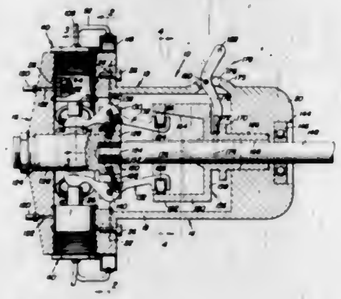
3,043,227
PUMP AND CONTROL THEREFOR
Hazen F. Everett, 120 Bedford Road, Hillsdale, N.J.
Filed Dec. 9, 1960, Ser. No. 74,969
6 Claims. (Cl. 103—38)

1. A pump comprising a generally cylindrical frame having open ends, relatively deformable and flexible diaphragms on the frame at said ends, relatively rigid members on the frame at the ends thereof and defining with said deformable members pump chambers, said relatively rigid members having inlet and outlet openings defined therein, a reciprocating shaft spaced from and parallel with said frame, pivot means fixed relative to said frame between the frame and said shaft, driving means pivotable on said pivot means and connected to said shaft for being driven by the latter, driven means connected to said driving means at an adjustable distance from said pivot means whereby the distance of travel of said driven



means is variable, a rigid assembly slidably supported on said shaft and connected to said driven means so as to be driven with the latter, rods threadably engaged with and supported on said rigid assembly and positioned between said flexible diaphragms and having connection with the same whereby the flexible diaphragms are reciprocated towards and away from the associated rigid members to effect a pumping action, and control means coupled with said rods to control the threaded engagement of the same with said rigid assembly and thereby establishing a mean position for the reciprocation of said resilient members.

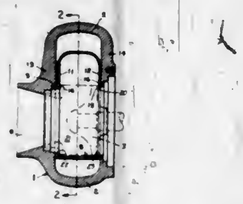
3,043,228
LIQUID PUMP
Worthy L. Bennett, P.O. Box 425, Cottonwood, Ariz., assignor of one-quarter to K. Norton, Cottonwood, Ariz.
Filed Feb. 20, 1958, Ser. No. 716,411
6 Claims. (Cl. 103—38)



1. A multiple fluid metering pump assembly comprising, radial pump housing means, axially elongated pump drive casing means removably connected to one axial side of the housing means in axial alignment therewith, axial support means fixedly mounted in the housing means and projecting into the casing means, elongated lever means pivotally mounted by the axial support means between the housing means and casing means, drive shaft means rotatably journaled by one end of the casing means and the axial support means in coaxial relation thereto, elongated variable cam means having an internal cam surface slidably mounted on the drive shaft means and rotatable therewith, in axial spaced relation to the radial pump housing means, a plurality of radially arranged reciprocating piston and cylinder pump means removably disposed in the housing means and engageable by

contact arm portions of the lever means projecting into the housing means, said lever means also having cam follower portions projecting into the casing means for sequential displacement by the internal cam surface of the cam means in response to rotation of the drive shaft means, control means mounted on the casing means and operatively connected to the cam means for axial adjustment thereof between said axial support means and said one end of the casing means to vary the displacement stroke of the lever means and piston means, and biasing means mounted within each cylinder means for acting on the piston means for holding said piston means in contact with the lever means.

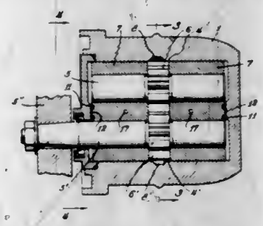
3,043,229
TWIN VOLUTE PUMP
Hubert C. Atwood, Jr., Westfield, and John G. Williams, Springfield, N.J., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Original application May 27, 1957, Ser. No. 661,656, now Patent No. 2,955,540, dated Oct. 11, 1960. Divided and this application May 9, 1960, Ser. No. 27,914
2 Claims. (Cl. 103—103)



1. In a centrifugal pump of the twin volute type, a heavy walled casing of unitary cast construction having a front wall including a suction inlet, said casing including a peripheral wall having a discharge outlet, said heavy walled casing including a rear wall spaced from said front wall, said rear wall defining an opening in axial alignment with said suction inlet, impeller means disposed through the opening in said rear wall and being mounted in said casing for moving fluid from said suction inlet through said discharge outlet, an independent splitter element adapted for insertion as a unit through the opening in the opening defined by the rear wall of said casing and said independent splitter element including spaced side walls detachably mounted in said casing so that said spaced side walls are respectively contiguous with the front and rear walls of said heavy walled casing, said independent splitter element dividing the flow through said casing into two substantially equal portions prior to discharge, said independent splitter element of constant width and of lesser wall thickness than said heavy walled casing, first and second locater means on the interior portions of the front and rear walls of said casing, the side walls of said splitter element respectively disposed in abutment with both of the locater means, and means for rigidly detachably connecting the splitter to said locater means to maintain the splitter in operable position.

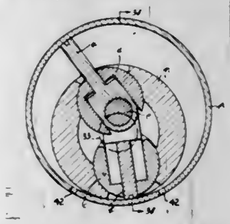
3,043,230
HIGH PRESSURE GEAR PUMP
Hans Molly, Dr. Engen-Essig-Str. 48, Malsch, near Karlsruhe, Germany, assignor of one-half to Otto Eckerle, Malsch, near Karlsruhe, Germany
Filed Apr. 1, 1957, Ser. No. 650,015
Claims priority, application Germany June 30, 1956
26 Claims. (Cl. 103—126)

1. A high pressure geared device comprising a housing having a recess, with inlet and discharge connections and two gear wheels intermeshing and arranged in the recess in said housing, each gear wheel having a shaft extending axially in opposite directions therefrom, bearing bushings on opposite sides of the gear wheels and at least one supported for axial movement in said recess for engaging the lateral faces of the gear wheels as a limit of axial movement, said gear wheels, bushings and housing forming a high pressure chamber and a low pressure chamber each in communication with one of said connections and forming a seal on all sides of the high pressure chamber; said device having passages communicating with the low pressure chamber and extending to the vicinity of the high pressure chamber to points generally surrounding the high pressure chamber, but sufficiently spaced therefrom to leave an effective seal, including passage portions communicating with the tooth spaces outside of but close to the high pressure chamber and passage portions communicating with the periphery of the bearing bushing axially spaced from but close to the high pressure cham-



ber, for receiving any fluid escaping the seal and confining to the vicinity of the high pressure chamber the high pressure forces tending to produce unsealing movements of the parts; said device having passages leading from the high pressure chamber to a location on a bushing which is axially movable, the location being on the face of said bushing axially remote from the high pressure chamber, and to locations generally opposite the high pressure chamber diametrically; seal means at each of said locations for confining the area of effectiveness of the high pressure fluid with effective areas sufficient to more than balance the unsealing forces so as to ensure sealing engagement of each bushing against the lateral faces of the gear wheels, and against the housing adjacent the high pressure chamber and to press the gear wheels toward and in sealing relationship with the housing adjacent the high pressure chamber.

3,043,231
VANE TYPE ENGINE, PUMP, FLUID COMPRESSOR, FLOW METER AND THE LIKE
Alistair Kenyon Bodycomb, 377 Toorak Road, South Yarra, Victoria, Australia
Filed Sept. 14, 1959, Ser. No. 839,850
6 Claims. (Cl. 103—144)



1. A vane type rotary device, for use as an engine, pump, fluid compressor, flow meter, or the like, comprising a casing, a locating shaft disposed centrally inside said casing, a rotar disposed eccentrically in said casing and mounted on a rotary shaft for rotation in said casing about an axis fixed to one side of the axis of said locating shaft, a plurality of vane guides carried in said rotor, and a plurality of vanes carried respectively by said vane guides and mounted on said locating shaft for rotation

about its axis with rotation of said rotor, each of said vanes extending from said locating shaft to said casing through one of said vane guides and being in continuous wiping contact with said casing while said rotor is rotating, each of said vane guides being formed with a slot portion at least slightly wider than the diameter of and opening radially toward said locating shaft and being mounted for oscillation about an axis of its own fixed relative to said rotor and being slidable relative to its vane in a path radial to said locating shaft as the rotor, vane guides and vanes are rotated together, so that the vane guides and vanes are oscillated relative to the rotor in the course of the rotation, the eccentricity of the rotor and the radial distances of the vane guides from the locating shaft during each rotation of the rotor being such that in the course of each such rotation each of said vane guides slides relative to its vane to a central location at which said slot portion of the vane guide overlaps said locating shaft.

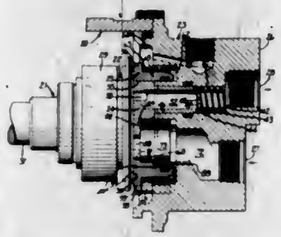
3,043,232
OPPOSED ROTOR RADIAL PISTON PUMPS
Raymond J. Poulin, P.O. Box 808, Topanga, Calif., assignor of one-half to Edward H. Rose, Santa Monica, Calif.
Filed Jan. 22, 1958, Ser. No. 710,523
14 Claims. (Cl. 103—161)



1. A radial piston pump, comprising: a pair of cylindrical rotors having spaced parallel planar surfaces and cylindrical peripheral sidewalls therebetween, and, each having a plurality of radial bores disposed uniformly therein and each of said rotors having a spur gear portion formed integrally therewith; pistons fitting slidably within said bores and being provided with rounded heads normally extended outwardly of said cylindrical peripheral sidewalls of said rotors; said rotors being journalled on parallel shafts having fluid ducts therein, said ducts being apertured laterally of said shafts in axial alignment with said radial bores; said rotors being disposed with their respective planar surfaces in coplanar relationship and their cylindrical sidewalls substantially in tangential contact between said shafts, and with their spur gear portions in mating engagement and effective to counter-rotate said rotors and alternately depress the pistons of each of said rotors inwardly of said bores as said outwardly extended piston heads rotate into abutting contact with said cylindrical sidewall of the other rotor.

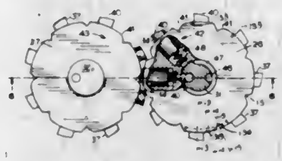
3,043,233
HYDRAULIC PUMP FACE TYPE VALVE PLATE AUTO BALANCING
Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Mar. 20, 1958, Ser. No. 722,683
4 Claims. (Cl. 103—161)

4. A high pressure piston pump or motor comprising:
(*a*) a rotor having a plurality of piston-receiving cylinders therein, and a plurality of passages communicating said cylinders with openings in an end face of said rotor;
(*b*) a valve housing having inlet and outlet passages;
(*c*) an annular guide ring slidably carried by said housing, said guide ring having an annular sealing face disposed against the outer periphery of the rotor end face;
(*d*) first spring means continually urging said guide ring against said rotor;
(*e*) a valve plate disposed within said guide ring and slidably carried by said housing, said valve plate having a sealing face adapted to be disposed against the rotor end face, said plate being ported through said sealing face for successively communicating the inlet and outlet passages of said valve housing with said openings of the rotor;
(*f*) second spring means continually urging said valve plate toward said rotor;
(*g*) a fluid collection zone defined jointly by said guide ring, said housing, and that side of said valve plate which is opposite to its sealing face, said zone excluding and being substantially sealed from valve plate portions on said side communicating with the inlet and outlet passages;
(*h*) an annular passage defined jointly by said guide ring and said valve plate, and freely communicating



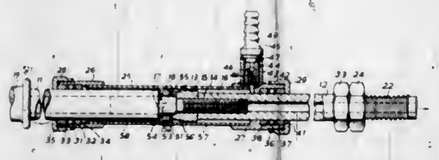
said sealing face of said valve plate with said collection zone; and
(*i*) a groove opening into the sealing face of said valve plate remotely from the porting thereof, said valve plate having a further passage interconnecting said groove and said fluid collection zone;
whereby, during operation, slight continual leakage at said sealing face, tending to move said valve plate with respect to said housing, in a direction away from said rotor end face, will be continually conducted by said annular passage and by said groove and further passage to said collection zone for acting on and thereby assisting said second spring means in moving the valve plate toward said rotor end face to an equilibrium position of slight spacing with respect to said rotor end face for minimizing the quantity of continual leakage and for lubricating said faces with a continuous flow.

3,043,234
OPPOSED-ROTOR RADIAL PISTON MOTOR, PUMP AND POWER GENERATOR
Raymond J. Poulin, P.O. Box 808, Topanga, Calif., assignor of one-half to Edward H. Rose, Santa Monica, Calif.
Filed July 27, 1959, Ser. No. 829,711
22 Claims. (Cl. 103—161)



1. A radial piston pressure generating device, comprising: a pair of cylindrical rotors, each defining a cylinder block, having a plurality of radial bores disposed therein with arcuate peripheral notches regularly spaced therebetween and alternately thereof; pistons fitting slidably within said bores and having segmentally notched arcuate heads normally extending outwardly of the cylindrical sidewalls of said rotors; axially parallel retaining pins disposed through said rotors and through said segmental notches in said piston heads so as to hold the pistons in the bores said rotors being journalled on parallel stationary pintles having fluid inlet and exhaust ducts therein, said ducts opening laterally of said pintles in axial alignment with said radial bores; said inlet ducts opening into grooves formed circumferentially in said pintles and adapted to communicate simultaneously with a majority of said radial bores; said rotors being intergeared for contra-rotation and disposed with their respective circular surfaces in coplanar relationship and their cylindrical sidewalls substantially juxtaposed tangentially intermediate of said pintles, whereby the pistons of each of said rotors are alternately depressed inwardly of said bores upon rotative contact of their heads with said arcuate peripheral notches in the cylindrical sidewall of the other.

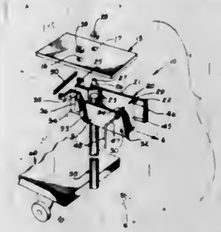
3,043,235
RECIPROCATING PUMP
Robert Sidney Claridge Smith, Chislehurst, Kent, England, assignor to John Selby Hillyer, Kent, England
Filed Sept. 18, 1959, Ser. No. 840,867
8 Claims. (Cl. 103—192)



1. A reciprocating pump comprising two elongated members arranged for relative sliding movement one within the other, one of said members having a cylindrical working surface of uniform diameter and the other of said members having two coaxial working surfaces of different diameters to one another and to the working surface of said one member so that annular spaces of larger and smaller radial thickness respectively are formed between the working surfaces of said one member and said other member, sealing means secured to said one member at opposite ends of its working surface and co-operating respectively with the two working surfaces of said other member to seal the outer ends of said annular spaces, a baffle located between the two working surfaces of said other member and forming a seal against the working surface of said one member, a non-return inlet valve connected for the supply of fluid to the annular space of larger radial thickness, valve means forming a non-return delivery valve arranged to permit transfer of fluid past said baffle in the direction from the annular space of larger radial thickness to that of smaller radial thickness, and an outlet connection connected for the discharge of fluid from the annular space of smaller radial thickness.

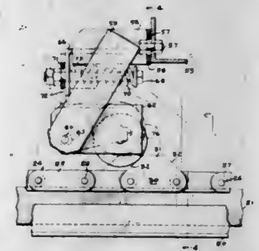
3,043,236
PUSHER FOR TOW LINES
Mario Thomas Sgriccia, Detroit, Mich., assignor to Rapistan-Keystone, Inc., Detroit, Mich., a corporation of Michigan
Filed Nov. 10, 1960, Ser. No. 68,549
6 Claims. (Cl. 104—172)

1. A pusher for tow lines comprising; support means adapted to be secured to a conveyor drive, a pair of pusher plates pivotally connected to said support means, said pusher plates having abutment portions converging to form surfaces adapted to receive the mast of a conveyor truck, said pusher plates forming a gate therebetween adjacent said abutment surfaces, and resilient means continuously urging said gate to a closed position, excess force on said converging surfaces by said mast



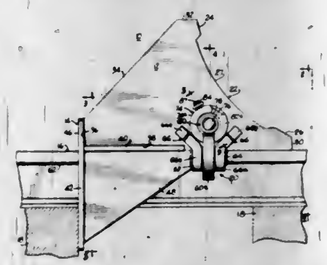
causing said gate to open and release said mast to prevent damage thereto.

3,043,237
CHAIN CONVEYOR FOR DOLLIES
George R. McKee, Louisville, and John McG. Prentice, St. Mathews, Ky., assignors to Logan Co., Louisville, Ky., a corporation of Kentucky
Filed May 15, 1959, Ser. No. 813,385
12 Claims. (Cl. 104—172)



1. A conveying mechanism comprising an endless flexible propelling unit having an upward projection, an article supporting carriage movably supported above said endless unit, and a releasable driving connection between said carriage and said projection. said driving connection comprising a member connected to said carriage, said projection having cam action engagement with said member, and yieldable means connected between said member and said carriage whereby said member is released from driving connection with said projection by said cam action for continued movement of said endless member without propelling said carriage when movement of the latter is arrested.

3,043,238
WHEEL STOP
Stanley W. Hayes, Wayne Township, near Richmond, Wayne County, Ind., assignor to Hayes Track Appliance Company, Richmond, Ind., a corporation of Indiana
Filed Mar. 25, 1957, Ser. No. 648,120
4 Claims. (Cl. 104—258)



1. A wheel stop adapted to be installed upon a rail, including in combination, wheel abutment structure having

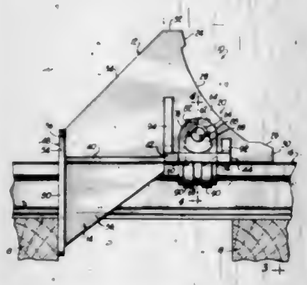
a forward edge defining wheel abutment means and adapted to be mounted on top of the rail, bracket structure secured to said abutment structure and extending into the road bed at opposite sides of the rail, and guiding and holding means secured to said abutment structure forwardly of said bracket structure for holding the stop seated upon the rail, said guiding and holding means including rail head clamping elements at opposite sides of the rail, hinge shafts secured to opposite sides of said abutment structure at substantially the level of and close to the rail head for supporting said clamping elements for movement toward and away from the rail head, and cam means mounted on said abutment structure for positioning said clamping elements.

3,043,239

WHEEL STOP

Stanley W. Hayes, Richmond, Ind., assignor to Hayes Track Appliance Company, Richmond, Ind., a corporation of Indiana

Filed Jan. 2, 1959, Ser. No. 784,750
6 Claims. (Cl. 104—258)



1. A wheel stop for installation upon a rail, including in combination, structure adapted to be placed on the rail, rail clamping means movably mounted relative to said structure for movement between rail clamping and rail releasing positions and normally occupying the latter position when ready for installation, means including a movable vertical shaft adapted to abut against the rail and to be moved upwardly relative to said structure upon seating of the stop on the rail, means including a cross shaft supported on said vertical shaft supporting said clamping means for effecting movement of the latter to rail clamping position upon seating of the stop on a rail, and means including cam means loosely mounted on said cross shaft normally occupying a position permitting upward movement of said vertical shaft and operable upon said upward movement to prevent movement of said movable portion to a position to release the clamping means.

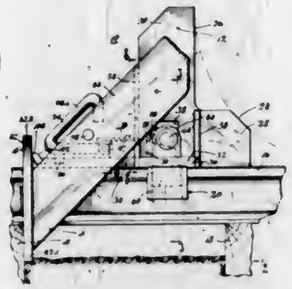
3,043,240

WHEEL STOP

Stanley W. Hayes, Wayne Township, near Richmond, Wayne County, Ind., assignor to Hayes Track Appliance Company, Richmond, Ind., a corporation of Indiana

Filed Mar. 4, 1960, Ser. No. 12,740
12 Claims. (Cl. 104—259)

1. A wheel stop for installation upon a rail, including in combination, wheel abutment structure adapted to be placed on a rail, means including rail clamping elements movably mounted upon the structure for movement between rail clamping and released positions and normally occupying the latter position when ready for installation, a movable supporting element adapted to abut against the rail and to be moved upwardly relative to the structure upon installation of the stop on the rail, means supporting said clamping elements on said supporting element, means for effecting movement of the clamping elements toward



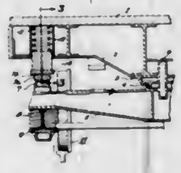
rail clamping position upon placement of the stop on a rail and upward movement of said supporting element, and means including slidable wedge means for moving said clamping elements and slidable to complete movement of said clamping elements to said clamping position.

3,043,241

SUPPLEMENTARY SPRING SYSTEM FOR RAILROAD CARS

Robert C. Ortner, Cincinnati, Ohio, assignor, by mesne assignments, to The Ortner Freight Car Repair Co., Covington, Ky., a corporation of Kentucky

Filed Sept. 14, 1960, Ser. No. 55,940
3 Claims. (Cl. 105—199)



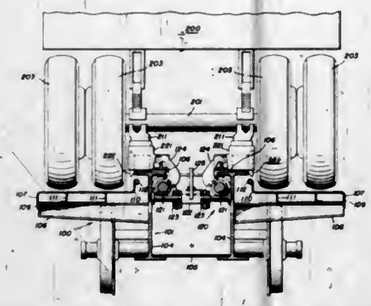
1. In combination in a railroad car having a truck comprising a spaced apart pair of side frames having bolster openings therein, a cluster of springs in each of said bolster openings, a truck bolster extending between said side frames with its opposite ends received in said bolster openings and supported by said spring clusters, said spring clusters comprising the normal spring suspension for said truck bolster, a body bolster pivotally connected to said truck bolster centrally thereof, and a car body secured to and supported by said body bolster, the improvement which comprises a secondary spring system for effectively by-passing said spring clusters upon the application of excessive downwardly directed forces against said car body which would otherwise act to compress said spring clusters beyond their normally compressed condition, which is about one-half solid, said secondary spring system consisting essentially of sets of helical springs secured to said car body and positioned to overlie said truck side frames, said sets of springs each mounting a bearing plate at their lowermost end adapted, upon compression of the said spring clusters beyond their normally compressed position, to bear directly against the underlying truck side frame, whereby to directly transfer from the said car body to said truck side frames a substantial portion of said excessive downwardly directed forces, said secondary spring system including adjustment means for varying the clearance between said bearing plates and said truck side frames.

3,043,242

COMBINATION ROAD AND RAILWAY VEHICLES

Deodat Clejan, Chicago, Ill., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed May 18, 1960, Ser. No. 30,002
2 Claims. (Cl. 105—215)



1. A combination road and railway vehicle comprising a chassis provided with a laterally extending axle carrying at the opposite ends thereof a pair of road wheels, wherein said road wheels may have either a first relatively small radius or a second relatively large radius exceeding said first relatively small radius by a predetermined increment, and a pair of laterally spaced-apart rolling supports both disposed below and securely fastened to said axle intermediate said road wheels and respectively arranged left and right; each of said rolling supports including a saddle both disposed below and securely fastened to said axle adjacent to the associated road wheel and having a depending saddle arm, a truck disposed below and in cooperating relation with said saddle and having an upstanding truck arm, said truck carrying two spaced-apart flanged rollers respectively disposed in front of said axle and in rear of said axle in longitudinal alignment and located inwardly with respect to the associated road wheel, the two flanges respectively carried by said rollers being respectively disposed on the outer sides thereof adjacent to the associated road wheel, and means including a single pin having a diameter of the order of said predetermined increment for pivotally interconnecting said saddle arm and said truck arm, said pin cooperating with a first hole set provided in said arms to establish a high position of said truck disposed a relatively small distance below said axle and cooperating with a second hole set provided in said arms to establish a low position of said truck disposed a relatively great distance below said axle, the distance between said high position and said low position being substantially equal to said predetermined increment, whereby the vertical distance between the lower surface of an adjacent road wheel of said first relatively small radius and the lower surfaces of said rollers when said truck is in its high position and the vertical distance between the lower surface of an adjacent road wheel of said second relatively large radius and the lower surface of said rollers when said truck is in its low position both being substantially equal to each other.

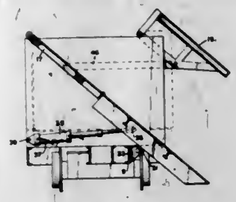
3,043,243

DUMP CAR

Robert W. McAvoy, Oroville, Calif., assignor to Rua and Swendsen, Inc., Nevada City, Calif.

Filed May 19, 1960, Ser. No. 30,149
2 Claims. (Cl. 105—260)

1. In a dumping car, the combination of: a frame, a bottom plate; bearing means for said bottom plate associated with said frame; support means other than said bearing means for said bottom plate under said bottom plate; first and second unslotted end walls fixed to said support means; first and second side walls; means pivotally mounting said side walls on said end walls from a position adjacent the upper portion of said side walls for respective inward and outward movement relative thereto; said bottom plate being pivotally mounted on the bottom of said first side wall and movable to a position laterally beyond said support means; means to



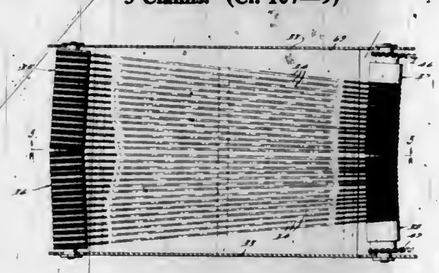
urge said bottom plate laterally beyond said support means while urging said first side wall inwardly whereby said first side wall and bottom plate form an inclined slide; and means interconnecting said two side walls entirely exteriorly of said side walls and end walls to simultaneously urge said second side wall outwardly when said first side wall is urged inwardly.

3,043,244

DOUGH STRETCHING APPARATUS

Eugene O. Engels, 423 Brockway Place, Saginaw, Mich.

Filed May 2, 1960, Ser. No. 26,116
3 Claims. (Cl. 107—9)



1. Apparatus for stretching dough pieces comprising a conveyor on which the dough pieces may be deposited and conveyed in a direction at right angles to the direction of desired stretching, said conveyor consisting of a plurality of individual narrow belts which extend in spaced relation in generally the same direction with at least certain of said belts diverging from each other in the direction of travel of the dough pieces supported thereon, and conveying means for depositing dough pieces on said stretching conveyor and including a discharge section movable longitudinally of the stretching conveyor in order to adjust the point along the length of the stretching conveyor at which the dough pieces are deposited in order to adjust the total amount of stretching performed.

3,043,245

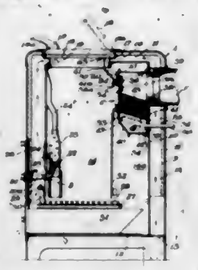
INCINERATORS

John W. Hebert and Paul R. Schubert, Bay City, and Henry L. Coles, Houghton, Mich., assignors to Calcinator Corporation, Bay City, Mich.

Filed Feb. 17, 1955, Ser. No. 488,888
2 Claims. (Cl. 110—8)

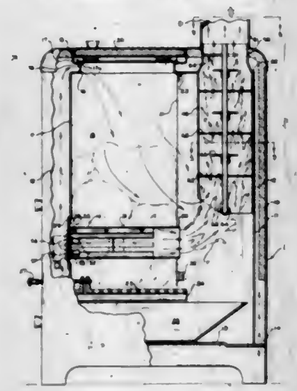
1. In a garbage and refuse incinerator, a housing defining a combustion chamber, burner means in said chamber, a flue leading into said chamber, a casing mounted to cover the entrance to said flue from said chamber and depending therebelow, said casing having an opening therein opposite said flue, catalyst means in said casing below said latter opening, a burner in said casing below

said catalyst means to maintain the same at a predetermined temperature, the casing having an opening in the lower end thereof admitting the off gases of combustion to said casing, a bypass opening door for the opening opposite said flue swingably mounted to swing out away from



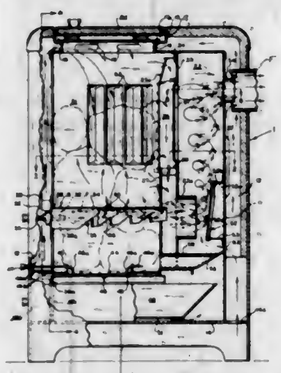
said casing, a charging door for said housing mounted to swing outwardly away from said housing, and means connecting said first mentioned door and charging door so that when the latter is opened the former will also be opened.

3,043,246
DOMESTIC REFUSE AND GARBAGE INCINERATORS
John W. Hebert, Bay City, Mich., assignor to Calcinator Corporation, Bay City, Mich., a corporation of Michigan
Filed Nov. 29, 1957, Ser. No. 699,609
4 Claims. (Cl. 110—8)



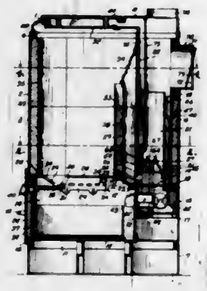
1. In an incinerator for combusting refuse, garbage, and the like; a casing; wall means forming a primary combustion chamber and a generally vertically disposed secondary combustion chamber portion within said casing; a hood and burner means assembly within said primary combustion chamber, said assembly including a generally longitudinally extending hood portion extending toward and communicating with said secondary chamber portion; said assembly also including burner means supported in said primary chamber within the hood portion, having a fuel issuing surface portion with a generally longitudinal axis issuing a fuel fluid in an axial, generally longitudinal stream providing an elongate, torch-like flame under and axially of the hood portion directed toward said secondary combustion chamber portion; said hood portion extending a substantial distance longitudinally beyond said fuel issuing surface portion of the burner means to protect the flame; grate means in the primary chamber below said burner means for supporting refuse, garbage, and the like adjacent the said hood and burner means assembly; a flame dividing member supported within the secondary chamber generally centrally thereof and being spaced, around at least a substantial part of its perimeter, from the wall means forming the secondary chamber; a substantially closed duct on said assembly extending longitudinally within said hood portion and having one end open through said casing to admit primary air and the opposite end open at a location substantially outward axially of the fuel issuing surface portion near the end of said hood portion nearest said secondary chamber to supply said air to the flame at the said end of the hood portion; said secondary chamber portion having an open section of reduced area relative to said primary chamber admitting combustion gases in concentrated flow to said secondary chamber; said hood portion having an open section near said open section of the secondary chamber portion, and the space within said hood portion longitudinally outward of said fuel issuing surface portion being sufficiently unobstructed, to pass at least a portion of said flame from said hood portion to said open section of the secondary combustion chamber portion to impinge on said flame dividing member; and flue means connected with said secondary chamber near the upper end thereof and leading away therefrom out of said casing; said secondary chamber, except for said open section, being normally substantially closed to said primary combustion chamber to prevent the reentry of combustion gases to the primary chamber.

3,043,247
INCINERATORS
John W. Hebert and Phillip G. La Rue, Bay City, Mich., assignors to Calcinator Corporation, Bay City, Mich., a corporation of Michigan
Filed Mar. 24, 1958, Ser. No. 723,470
11 Claims. (Cl. 110—8)



1. In an incinerator for combusting refuse, garbage, and the like; a casing including wall means forming a primary combustion chamber and a generally vertically disposed secondary combustion chamber portion within said casing rearward of the primary chamber; a hood and burner means assembly within said primary combustion chamber, said assembly including a generally longitudinally extending hood portion extending rearwardly toward the lower portion of said secondary chamber portion; said assembly also including burner means supported in said primary chamber substantially immediately under the hood portion, having a fuel issuing surface portion with a generally longitudinal axis issuing a fuel fluid in an axial, generally longitudinal stream providing an elongate, torch-like flame under and axially of the hood portion directed rearwardly toward said secondary combustion chamber portion; said hood portion extending a substantial distance rearwardly beyond said fuel issuing surface portion of the burner means to protect the flame; grate means in the primary chamber adjacent said hood and burner means assembly for supporting refuse, garbage, and the like adjacent the said hood and burner means assembly; the space within said hood portion rearwardly of said fuel issuing surface portion being sufficiently unobstructed to pass at least a portion of said flame axially to the rear end of said hood portion, and a lower section of said secondary chamber portion being open to said hood portion and primary chamber to admit tongues flame from said hood portion, and combustion gases from said primary chamber, to said secondary chamber portion; said wall means forming said secondary chamber including a flame-resistant target surface having forwardly curving side portions, opposite the fuel issuing surface portion and extending generally linearly vertically in longitudinal alignment with said fuel issuing surface portion; and flue means, connected with said secondary chamber portion near the upper end thereof and leading away therefrom out of said casing, exerting a draft pull on said gases and tongues of flame; said burner means being close enough to said target surface to direct tongues of flame and gases at said target surface with sufficient velocity to deflect the gases and tongues of flame laterally in opposite directions to tend to form dual cyclones and said secondary chamber portion above said target surface having a cross-sectional area of such size and shape that said dual cyclones are permitted to be formed with the draft of the flue means acting upon the laterally deflected tongues of flame and gases.

3,043,248
INCINERATOR
Norman L. Martin, Lake Quivira, Kans., assignor to Locke Stove Company, Kansas City, Mo., a corporation of Missouri
Filed July 28, 1958, Ser. No. 751,524
3 Claims. (Cl. 110—8)



3. An incinerator including a casing having a trash burning compartment and a smoke burning chamber, vertical partition means separating said trash burning compartment and said smoke burning chamber and terminating short of the bottom of the casing, a grate extending transversely of the trash burning compartment at the terminal of the partition means and forming with walls of the casing an ash compartment in the lower portion of the casing, said partition means having an opening near the grate to connect the smoke burning chamber with the trash burning compartment, a door covering a trash insert opening in the top of the casing over the trash burning compartment and said door having an inner portion providing a supplemental closure for said opening, a burner below the grate for directing flame through the grate into the trash burning compartment for burning trash therein, a second partition means extending upwardly from the grate and spaced from the first partition means on the trash burning side of said first partition and terminating within the upper portion of the trash burning compartment for providing a downflue connecting the upper portion of the trash burning compartment with said opening to the smoke burning chamber for conducting products of combustion resulting from burning of the trash into the smoke burning chamber, a burner located under the smoke burning chamber and below the opening for locating the flame therefrom across said opening and int he direct path of the products of combustion issuing through said opening, flame and smoke directing means immediately above the opening into the smoke burning chamber and having sides providing a constricted outlet to assure passage of the products of combustion into contact with said flame from the last named burner and into the portion of the smoke burning chamber above said flame and smoke directing means to complete consumption of the products of combustion, a vent flue connected with the casing at the upper portion of the smoke burning chamber, and a partition depending from the top of the casing cooperating with the smoke burning side of the first partition means and terminating substantially at the flame and smoke directing means to provide a downdraft duct having an inlet in communication with said trash insert opening for drawing smoke leaking past the supplemental closure into the burning products of combustion within the smoke burning chamber.

3,043,249
INCINERATORS
John W. Hebert and Phillip G. La Rue, Saginaw, Mich., assignors to Calcinator Corporation, Bay City, Mich., a corporation of Michigan
Original application Mar. 24, 1958, Ser. No. 723,470. Divided and this application Dec. 7, 1959, Ser. No. 857,912
7 Claims. (Cl. 110—8)

7. In an incinerator for combusting refuse, garbage, and the like; a casing including wall means separating said casing into a primary combustion chamber and a generally vertically disposed secondary combustion chamber within said casing rearward of the primary chamber; a burner means assembly within the said primary combustion chamber extending longitudinally rearwardly toward the lower portion of the secondary chamber generally centrally relative to the sides of the casing; a generally vertically disposed bridge wall, having a generally central opening admitting said burner means assembly and providing a generally central passage therefor, spaced forwardly from said wall means at its lower end and open to said primary combustion chamber near its upper end to form a combustion gas concentrating collection chamber in said primary combustion chamber between said bridge wall and a portion of said wall means forming the front of the secondary combustion chamber, said bridge wall, except for said central opening, being substantially imperforate and having relatively narrow, open portions at its side edges only at points remote from said central opening which communicate said primary chamber with said gas concentrating collection chamber; grate means in the primary chamber adjacent said burner means as-

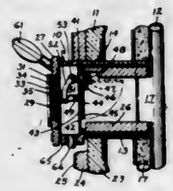
sembly for supporting refuse, garbage, and the like adjacent the burner means assembly, the lower section of said secondary chamber being only open to said gas concentrating collection chamber generally centrally thereof opposite the generally central opening in the bridge wall; the off gases taking the path to the said open portions at the sides of said bridge wall and around behind said bridge wall to the generally central opening in the secondary combustion chamber to reach the secondary chamber; and flue means connected with said secondary chamber near the upper end thereof and leading away therefrom out of said casing.

3,043,250

OBSERVATION WINDOW

George J. Nyberg, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts

Filed Nov. 15, 1960, Ser. No. 69,476
3 Claims. (Cl. 110—179)



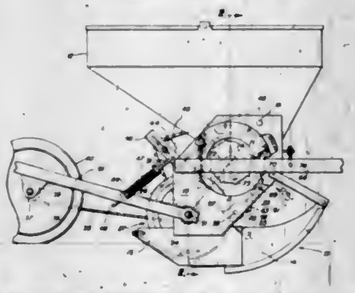
1. An observation window for a furnace wall, comprising an elongated tubular housing adapted to be mounted within an opening through the wall, a cover with a glass pane fastened to the outer end of the housing, a plate with an aperture extending across the housing intermediate of its ends, a door hingedly mounted in the housing for movement from a first normal position covering the aperture to a second observation position away from the aperture, a handle located exterior of the housing and extending into the housing for moving the door from one position to the other, means connecting the housing to the forced draft air source of the furnace for receiving air at slightly greater pressure than the furnace to cause a continuous flow of air from the housing into the furnace, a spring biasing the handle to a position such that the door is in the first position, and protuberances extending between the door and the plate to prevent the door from completely closing the aperture so that a continuous leakage of air takes place around the door and into the furnace even when it is in the said first position.

3,043,251

HILL DROP PLANTING APPARATUS

Marvin D. Jennings, Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Jan. 9, 1961, Ser. No. 81,416
4 Claims. (Cl. 111—15)



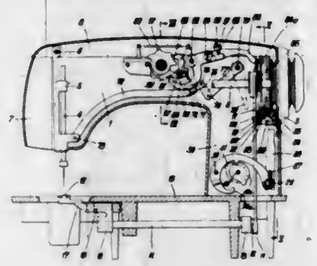
1. In a planter having a frame and a seed hopper mounted on the frame, rotatable seed depositing means including disk means mounted on the frame having a portion of the periphery thereof in operative association with said hopper at a seed receiving area, the radially outer portion of said disk means including a pair of peripherally engaged, axially yieldable annular members of flexible material, means for rotating said disk means, seed feeding means mounted in the hopper and insertable between said flexible members to hold them open for the reception of seed therebetween at circumferentially spaced locations during rotation of said seed depositing means, said flexible members being biased to engagement to hold the seed therebetween and carry them by rotation of the disk means to a discharge point adjacent the ground, an accumulator mounted on the frame for rotation about an axis beyond the periphery of said flexible members between said receiving area and said discharge point and having a part projecting between the flexible members in the path of the seed held thereby to accumulate seed thereagainst, said accumulator part having sufficient frictional engagement with said flexible members to be rotated thereby, and actuating means mounted on the frame and operatively engageable with said accumulator to periodically interrupt the rotation thereof by said flexible members.

3,043,252

ZIGZAG SEWING MACHINE WITH FANCY-STITCH SELECTOR

Wolfgang Engel, Bielefeld, Germany, assignor to Anker-Phoenix Nahmaschinen AG, Bielefeld, Germany, a corporation of Germany

Filed Feb. 10, 1960, Ser. No. 7,938
Claims priority, application Germany June 13, 1959
16 Claims. (Cl. 112—158)



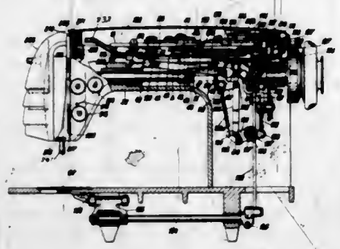
1. A zigzag sewing machine, comprising a needle bar, a stitch-pattern control mechanism having a set of coaxially rotatable control cams for automatic control of fancy-stitch patterns and a cam follower operatively connected with said needle bar and movable into an active position in engagement with a selected one of said cams and into an inactive position out of engagement therewith, said set and said follower being axially displaceable relative to each other for cam selection, a manually actuable control member movable in a single path of planar motion and having given positions of rest spaced from each other along said path, stitch-pattern indicator means with which said manual member coacts to indicate different stitch patterns in said respective positions, a lifter cam and a selector cam having a given cam-contour relation to each other and being both connected with said member to move together therewith, said lifter cam being operatively connected with said follower for lifting the latter off said cam set only when said member is being moved between one and the next one of said positions, and means cooperatively associated with said selector cam to impart one step of relative displacement between said cam set and said follower when said follower is thus lifted.

3,043,253

ZIGZAG AND BUTTONHOLE SEWING MACHINE

Otto Wank and Heinrich Theenhausen, Bielefeld, Germany, assignors, by mesne assignments, to Anker-Phoenix Nahmaschinen A.G., Bielefeld, Germany, a corporation of Germany

Filed May 22, 1957, Ser. No. 660,878
Claims priority, application Germany June 18, 1956
16 Claims. (Cl. 112—158)



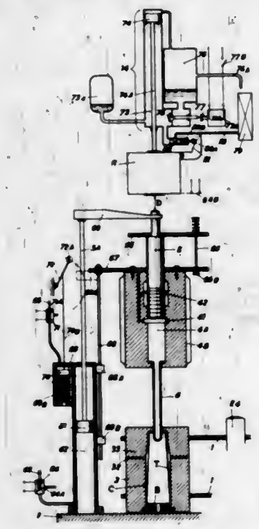
1. A zigzag sewing machine having a lengthwise reciprocating needle bar and provided with cooperating manual and automatic means to control stitching length, the manual means moving during engagement of and being actuated by the automatic stitching length control means, said manual means to control the stitching length including a manually operated handle reciprocable through a predetermined range of movement in accordance with the desired stitching length, manual adjusting means connected to said handle and arranged so that the relative position of said adjusting means determines said range of movement of said handle, coupling elements operable by said manual adjusting means for coupling and uncoupling said handle to and from said automatic means.

3,043,254

MACHINE FOR RAPID FORMING CARTRIDGE CASES

Leon Heidmann, Paris, France, assignor to Forges et Ateliers de Constructions Electriques de Jeumont, Paris, France, a corporation of France

Filed Aug. 26, 1957, Ser. No. 680,097
Claims priority, application France Sept. 6, 1956
6 Claims. (Cl. 113—38.1)



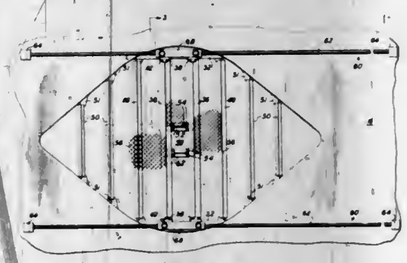
1. In an automatic cyclical machine for shaping containers by internal hydraulic pressure, the combination for increasing the speed of operation and eliminating the effects of leakage comprising, mold means defining a plurality of mold cavities each of which is adapted to enclose a container to be shaped, a movable hydraulic unit comprising a single cylinder, a single piston reciprocable in said cylinder for producing successively low and high hydraulic pressure and an expansible bag attached to the lower end of said cylinder and in communication therewith, means for automatically, successively moving said hydraulic unit between an operative position in which said bag projects into one of said mold cavities and a retracted position in which said bag is withdrawn from said cavity, indexing means automatically operable in timed relationship with said unit moving means for moving the mold means along a predetermined path to successively bring the cavities in position to receive said bag, hydraulic liquid in said cylinder, first piston driving means cooperating with said piston and automatically operable for preparatorily partially inflating slowly said bag with hydraulic liquid under a reduced pressure, whereby leakage is reduced, second piston driving means automatically operable subsequently to said slow inflation of the bag for producing an additional rapid movement of said piston relative to said cylinder when said hydraulic unit is in an operative position with the inflated bag disposed inside a container inserted into one of said cavities, thereby to apply a high fluid pressure shock of short duration to said bag and to apply high internal pressure to said container to expand it rapidly without substantial leakage of said liquid to conform to the surface of said cavity, and a hydraulic circuit in said hydraulic unit for automatically recovering leakage of liquid from the cylinder past the liquid facing end of the piston comprising an annular groove in the inner surface of said cylinder, located to be uncovered when said piston is in its uppermost position and above said groove an annular reserve cavity connected to the atmosphere, and connected to said groove below the top of said reserve cavity, whereby any leakage of liquid between the cylinder and the piston is accumulated and returned to said cylinder by gravity after each operation of said piston.

3,043,255

DRILLING

Robert F. Bauer, Whittier, and Hal Stratton, Pasadena, Calif., assignors to Shell Oil Company and Continental Oil Company, both of Los Angeles, Calif., both corporations of Delaware, and The Superior Oil Company and Union Oil Company of California, both of Los Angeles, Calif., both corporations of California

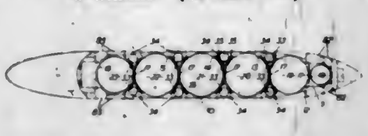
Filed Sept. 23, 1957, Ser. No. 685,686
6 Claims. (Cl. 114—.5)



1. Apparatus for use in drilling a hole in an underwater formation comprising a floating vessel having a cellar opening out of its bottom into the water, a drilling rig platform mounted over the cellar, a first set of elongated supports mounted on the floating vessel on opposite sides of the cellar and spaced a substantial distance under the drilling rig platform, a second set of elongated supports extending transverse to and disposed between the first set of supports so the opposite ends of each support in

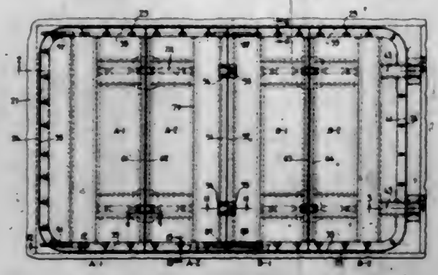
the second set are adjacent a respective support in the first set, means connecting the supports in the second set to be slidable toward and away from each other in a direction generally parallel to the direction in which the supports of the first set extend.

3,043,256
MARINE TANKERS
Ewan Christian Brew Corlett, Worting, near Basingstoke, England, assignor to Wm. Cory & Son Limited, London, England
Filed Apr. 1, 1958, Ser. No. 725,674
Claims priority, application Great Britain Apr. 5, 1957
6 Claims. (Cl. 114—74)



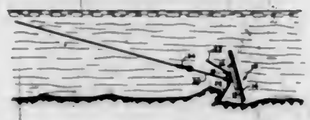
2. A marine tanker for the bulk transport of liquid methane at low temperature and substantially atmospheric pressure comprising the combination of a hull, a main deck, a plurality of transverse liquid-tight bulkheads dividing up the cargo space below the main deck into a plurality of separate main hold compartments, a turret deck narrower than the main deck and extending fore-and-aft above the main deck, a plurality of externally-insulated main tanks for liquid methane cargo each having a configuration that is mainly of upright cylindrical form, said tanks being displaced in a row one in each of the hold compartments and each tank being stepped in at at least one level near the top thereof so as to give the tank a narrow neck portion, and a plurality of smaller externally-insulated wing tanks for liquid methane cargo, said wing tanks being disposed wholly below the main deck in wing spaces between the main tanks toward the sides of the ship and said transverse bulkheads being formed around said wing tanks to enclose each wing tank in its own separate wing hold compartment.

3,043,257
FLUSH DECK HATCH COVERS
Bernard S. Appleton, Woodmere, and James J. Jenkins, Babylon, N.Y., assignors to G.M.E. Corporation, Chicago, Ill., a corporation of New York
Filed Aug. 8, 1957, Ser. No. 677,044
4 Claims. (Cl. 114—202)



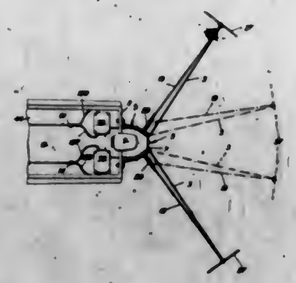
1. A hatch cover installation for a hatchway in the deck of a ship, comprising a pair of panels adapted to extend over such hatchway, said panels lying in side by side relation in substantially a horizontal plane when in closed position, a pivotal mount for one of said panels located beneath the deck of the ship at one end of the hatchway and positioned inwardly of the associated edge of said hatchway, a pivot arm affixed at one end to one of the panels inwardly of its outer edge and below the top surface thereof and pivotally connected at its free end to said pivotal mount for movement of said panel through an arc of substantially 90 degrees, means pivotally connecting the adjacent edges of said panels for upward folding movement thereof between open and closed position, means to guide the opposite edge of the other of said panels in substantially a horizontal plane, a support depending from the deck, positioned inwardly of the periphery of the hatchway, a ledge carried by said support beneath the upper edge thereof, means carried by said panels below the top surface thereof inwardly of their peripheries adapted to seat on said ledge to retain the panels when in closed position with their top surfaces substantially flush with the deck, a sealing rail rigidly mounted with respect to the deck positioned at each side and at each end of the hatchway between said ledge and the upper edge of said support, a gasket mounted on said panels adjacent the peripheries thereof and below the top surface thereof adapted to seat on said sealing rails when the panels are closed and means to effect movement of the guided edge of said panel away from said sealing rail.

3,043,258
LIGHT WEIGHT MUD ANCHOR
Griswold J. Sander, 4823 58th Lane, Woodside, N.Y.
Filed Apr. 28, 1959, Ser. No. 809,492
2 Claims. (Cl. 114—207)



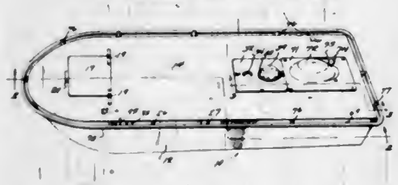
1. A boat anchor comprising, in combination, a base, a pair of angularly related flukes extending upwardly from said base, a center stem pivotally connected at one end to said flukes, securement means at the opposite end of said center stem for attachment to a boat tie line, each of said angularly related flukes comprising a substantially rectangular plate, an angle member securing one end of each of said rectangular fluke plates together in substantially perpendicularly related relationship, said flukes and said angle plate being substantially symmetrical with respect to a plane perpendicular to said base, said base comprising an enlarged tipple plate, a non-abrasive pad secured to one side of said tipple plate, said angle member and said flukes being secured to the opposite side of said tipple plate, and a base weight interposed symmetrically between said tipple plate and said angle member and said flukes.

3,043,259
WINDUP AND SUPPORT MEANS FOR WATER SKI TOW ROPES
Francis H. Sadler, Cabery, Ill.
Filed Nov. 4, 1958, Ser. No. 771,772
7 Claims. (Cl. 114—235)



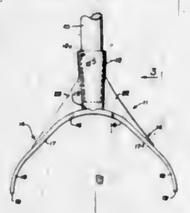
1. Windup and support means for a pair of water ski tow ropes comprising a U-shaped bracket, means for attaching the bracket to a transom of an outboard motor boat astride the motor above water and the propeller of said motor, a pair of support rods for the two ropes respectively, adapted to extend rearwardly from said bracket above water and having front and rear ends, means resiliently attaching the front ends of said rods to opposite sides of the bracket with said rods normally substantially horizontally disposed with the rear ends thereof diverging rearwardly from said bracket, a pair of windup mechanisms related to said ropes respectively, for winding up and unwinding the same singly or simultaneously, means for attaching said mechanisms to the bottom of the boat at opposite sides of the boat in front of said rods respectively, guide means on the rear ends of said rods and on said bracket for guiding said tow ropes to and from the windup mechanisms and whereby said rods and bracket support said ropes above water from the boat to a point remote from the boat, and power means for operating said windup mechanisms.

3,043,260
BOAT
John K. Tank, 2514 C St., Eureka, Calif.
Filed Oct. 7, 1960, Ser. No. 61,213
5 Claims. (Cl. 115—6.1)



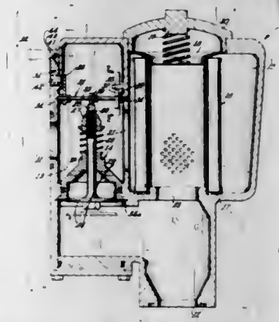
1. In a boat construction, a watertight hull divided into a plurality of longitudinally spaced compartments by watertight bulk heads, a deck covering said hull, a vertically mounted motor in the rearmost one of said compartments, a carburator and gas tank in a separate compartment, a spaced external rail completely surrounding said hull immediately below said deck, motor and carburator controls positioned on said boat adjacent said rail at the stern of said boat for access by a diver or swimmer in the water astern of said boat, and a duplicate set of controls adjacent the bow of said boat for access by a rider on said deck.

3,043,261
PUNTING POLE
George E. Snodgrass, 5247 Monroe St., Denver, Colo.
Filed Sept. 17, 1956, Ser. No. 610,054
1 Claim. (Cl. 115—9)



A punting pole for pushing a boat through shallow water comprising an elongated handle and a head secured to one end of said handle, said head comprising a ferrule for receiving the end of said handle, a fork on the forward end of said ferrule provided by forwardly and outwardly extending divergent arms disposed in a common plane substantially coinciding with and parallel to the longitudinal axis of said handle, the inner surfaces of said arms providing a flat continuous surface having an arcuate central portion merging into a straight flat portion on each arm extending outwardly and forwardly at an angle to the axis of said handle, each straight portion merging into a curved portion terminating at the end of each arm, a tangent to said curved portion at the end of each arm being substantially parallel to the axis of said handle, the width of said straight flat portions being substantially less than the width of said central arcuate portion and flaring outwardly to the ends of said curved portions, whereby the width of the ends of said curved portions are substantially greater than the width of said arcuate central portion.

3,043,262
MAGNETIC FILTER SIGNAL DEVICE
Frederick R. Gruner, Westfield, N.J., assignor to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,518
5 Claims. (Cl. 116—70)

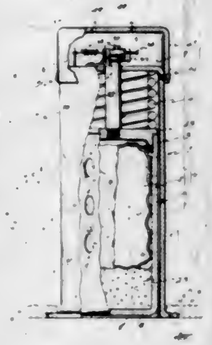


1. An indicator for use with a valve comprising a casing, a magnetic signal device disposed on the outside of said casing, a stem on the inside of said casing adapted to seat and unseat a valve, a rotatable member in said casing, an armature member fixed to said rotatable member within the magnetic field of force of said magnetic signal device, said rotatable member and armature member being positioned for rotation in a plane perpendicular to the field of force of said signal device, said armature member being adapted to hold said signal device in a non-signalling position, locking means fixed to said rotatable member and contacting said stem to prevent the rotatable member from rotating when the stem maintains the valve seated, and means for rotating said rotatable member and said armature member transversely of the magnetic lines of force of said signal device when the stem unseats the valve, and means for moving the signal device to a signal position when the stem unseats the valve.

3,043,263
RELEASE MECHANISM FOR EJECTING SEA SURVIVAL EQUIPMENT FROM DITCHED OR CRASHED AIRCRAFT
James W. Klopp, Broomall, Pa., and Jack Smith, Haddonfield, N.J., assignors to the United States of America as represented by the Secretary of the Navy
Filed Oct. 5, 1960, Ser. No. 60,756
3 Claims. (Cl. 116—124)
(Granted under Title 35, U.S. Code (1952), sec. 266)

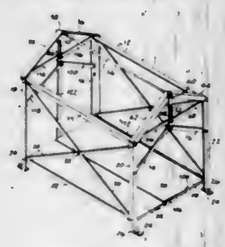
1. A device for releasing a marking buoy from a disabled aircraft which has fallen into a body of water, said device comprising in combination a cylindrical housing having an integral base member at one end thereof suitably mounted on the aircraft, said base member being formed with an aperture therein; an elongated plunger having a notch in one end thereof, said plunger being disposed longitudinally inside of the housing so that the said notch extends through the aperture in the base mem-

ber; a canister having an integral bottom, a wall member having perforations therein and an open top, said canister being slidably positioned inside of said housing; buoyant means placed on the bottom of the canister; a sack of suitable marking dyes positioned in the canister on top of the buoyant means; a cap removably connected to said canister for closing it; thread means located in the cap for receiving the plunger therein; first spring means disposed inside of the housing between its said base member and the said cap on the canister whereby the first spring means is compressed between the cap and the base member when the canister is pulled into the housing by the plunger extending through the aperture in the base member; an arm member pivotally connected to the base member on the outside surface thereof and being adaptable to engage the notch in the plunger to prevent axial movement thereof; second spring means attached to the arm member for



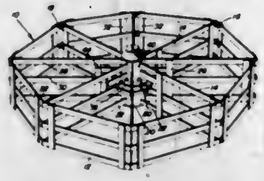
disengaging the arm from the notch in the plunger; means disintegrable upon contact with water suitably connected to the arm member for resisting the movement of the second spring means; a cover having perforations therein, said cover being removably connected to the base member whereby upon contact with a body of water, the water immediately enters through the perforations in the cover and disintegrates the said means resisting the action of the spring means so that the arm is disengaged from the notch in the plunger whereupon the plunger moves axially through the aperture in the base member of the housing causing the first spring means to eject both the plunger and the canister into the body of water, whereupon the canister is held afloat by the buoyant means as the dye leaches out through the said sack and passes through the perforations in the wall of the canister thereby coloring the water.

3,043,264
COLLAPSIBLE PET HOUSE AND CARRYING CASE
Robert W. Felhofer, 4925 W. Concordia Ave., Milwaukee 16, Wis., and Carl M. Fink, 501 N. Grandview Ave., Daytona Beach, Fla.
Filed Sept. 24, 1959, Ser. No. 842,031
11 Claims. (Cl. 119—19)



1. An animal enclosure comprising a collapsible framework including a pair of rigid side frames, front and rear rafters pivotally joined to said side frames, hanger members depending from said front and rear rafters, said hanger members slidably receiving a pivot pin, front and rear joists pivoted at their outer ends to said frames and at their inner ends to said pin, and a removable cover surrounding said framework.

3,043,265
PEN FOR FEEDING CALVES LIQUID AND SOLID FEED
Oscar J. Atchley, El Dorado Springs, Mo. (835 Broad St., Batesville, Ark.)
Filed Feb. 6, 1959, Ser. No. 791,560
6 Claims. (Cl. 119—20)



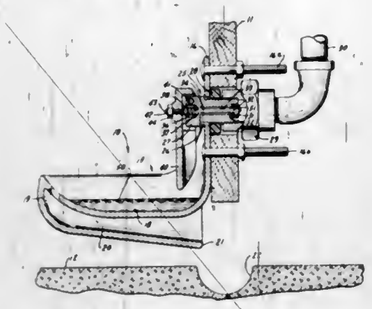
1. A solid and liquid pen type feeding device for stock comprising a generally circular open pen consisting of a peripheral wall composed of a plurality of separably removable hingedly connected sections and a plurality of radially positioned partitions in said pen each engaging said peripheral wall and dividing said pen into a plurality of stalls meeting at the center of the pen, means attaching the outer ends of each partition to said wall at the junction of a pair of adjacent wall sections, means at the center of the pen for securing the inner ends of said partitions, liquid and solid feed supply means at the center of said pen available to each of said stalls, at least several of said partitions having each a horizontally radially extending rail disposed vertically above the lower end of its associated partition, said supply means being carried and supported by said last named rails, each section of said wall having at one end thereof a detachable connection with the adjacent end of a wall section and a partition whereby each wall section comprises an access gate for one of said stalls.

3,043,266
ADJUSTABLE CONTACT MEMBER
Arthur G. Olscheske, Box 147, New Lisbon, Wis.
Filed Feb. 27, 1961, Ser. No. 91,701
2 Claims. (Cl. 119—27)



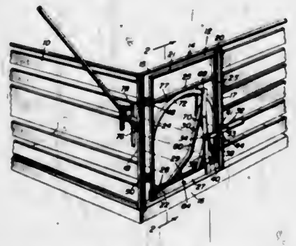
1. The combination is a contact member for use in an animal stall including a suspension bracket, a bare electric wire, said bracket held temporarily and in rigid relationship to said wire, a rod suspended from said bracket and removably mounted thereon in swinging relationship, a second rod, said second rod having an eyelet member secured at one end thereof, said first rod threaded through said eyelet, said rods depending downwardly adjacent to each other, a washer encircling said rods, an abutment formed at the free end of said first rod and between said rods to keep said rods separated, said washer having an inside diameter less than the combined thickness of said rods and said abutment whereby in one position said first rod may slide freely through said eyelet and in another position said rods are held in vertically adjustable position.

3,043,267
LIVESTOCK DRINKING CUP
Ronald S. Blough, Fairfield, Iowa, assignor to Fairfield Engineering and Manufacturing Company, Fairfield, Iowa, a corporation of Iowa
Filed Sept. 1, 1960, Ser. No. 53,415
6 Claims. (Cl. 119—75)



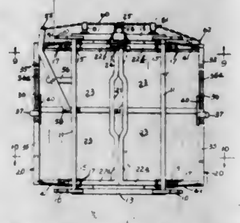
1. An animal drinking cup comprising, in combination, a body adapted to be fixed within an animal pen, said body defining a shallow bowl formed with a rounded bottom, said bowl having a drain opening at one side slightly above the bottom level of the bowl, a valve mounted on said body having a nozzle opening aimed down into said bowl at the side opposite said drain opening so that a stream of water from said nozzle flushes the bowl through said drain opening, means on said body defining a conduit for discharging water from said drain opening clear of said pen, a shiftable paddle mounted on said body so as to cover said nozzle and extend down toward the bottom of said bowl, an operator for said valve coupled to said paddle so that shifting of the paddle by a drinking animal's nose opens said valve to supply water to said bowl and flush the bowl clean.

3,043,268
ANIMAL RESTRAINING DEVICE
William H. Sheriff, R.F.D., Goodell, Iowa
Filed Apr. 6, 1960, Ser. No. 20,427
7 Claims. (Cl. 119—98)



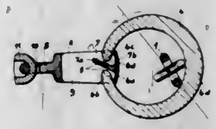
1. In an animal restraining device which includes a frame, said frame having sides, an arcuate guide extending between said sides, said frame also including upper and lower frame members, an essentially triangular movable jaw pivoted at its base to the lower frame member and cooperating with one of said sides to engage an animal, said arcuate guide being substantially concentric about the pivot connection between the jaw base and frame member, means connected with said movable jaw and engaging said guide to constrain the movement of said movable jaw, a lever, means connected between said lever and said movable jaw to pivotally operate said movable jaw, resilient means connected between said movable jaw and said frame to yieldingly oppose the pivotal movement of said movable jaw in one direction and to return said movable jaw to a rest position, said base having a plurality of spaced holes therein selectively alignable with an aperture in said lower frame, a removable pivot member extending through said aperture and one of said holes.

3,043,269
AUTOMATIC STANCHION
Merle Kenneth Kausche, 1432 Francis Ave., Walla Walla, Wash.
Filed Feb. 13, 1961, Ser. No. 88,738
9 Claims. (Cl. 119—98)



1. An automatic stanchion for a stock chute comprising:
a rigid vertical frame adapted to be fixed securely across the stock chute in a transverse position;
hinge means pivotally mounted on said frame for motion about transversely spaced vertical axes;
gate means slidably carried by said hinge means for movement perpendicular to said vertical axes;
first yieldable means operatively connected between said gate means and said frame adapted to urge said gate means toward the center of said frame;
lazy tong means slidably carried by said frame for longitudinal motion relative to the stock chute, said lazy tong means including lever means pivotally connected to said gate means,
and second yieldable means operatively connected between said lazy tong means and said frame adapted to urge said lever means apart at the connection of said lever means to said gate means.

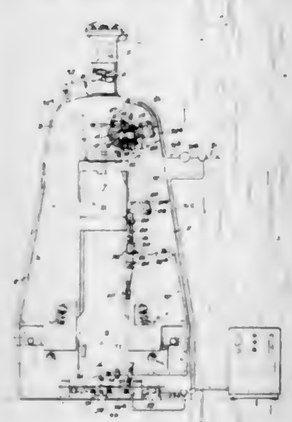
3,043,270
MEANS FOR USE IN SECURING LIVESTOCK AND OTHER ANIMALS
Roger Guillaume and Emile Guillaume, both of 238, Rue de la Station, Vielsalm, Belgium
Filed Oct. 24, 1960, Ser. No. 64,427
Claims priority, application Belgium Nov. 5, 1959
5 Claims. (Cl. 119—119)



1. Manually-releasable means for closing a collar for use in securing an animal, said means comprising a ring for engagement with a downwardly-extending chain forming one side of the collar, said ring being gapped to enable it to be passed sideways on to the chain; a part forming the other side of the collar; and a link for connecting the gapped ring to said part forming the other side of the collar, said link having an opening with which the

gapped ring can be engaged and which is partly obstructed by a stop part provided on the link; said ring, when the ring and link are in use to close the collar to secure the animal, being engaged with the chain and hanging from the link with the gapped portion of the ring uppermost, with the ends of the ring engaged within the opening in the link but separated from each other by the stop part on the link, said stop part projecting into the gap to prevent free rotary movement of the ring; and the ring being disengageable from the chain, to open the collar to free the animal, by moving the ring manually against the action of gravity to move the gapped portion of the ring to a position, within the opening in the link, in which the said gapped portion is clear of the stop part, so that the ring can then be rotated to bring the gapped portion outside the link and into a position in which the chain can pass through the gap in the ring.

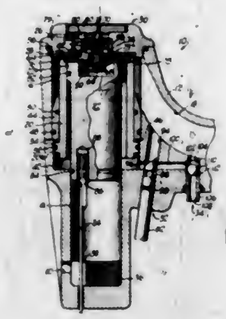
3,043,271
CONTROL SYSTEM FOR IMPACT DEVICE
Wilmer W. Hague, Fayetteville, and Glenn A. Householder, St. Thomas, Pa., assignors to Chambersburg Engineering Company, Chambersburg, Pa., a corporation of Pennsylvania
Filed Mar. 10, 1961, Ser. No. 94,822
14 Claims. (Cl. 121—12)



1. A stroke programmer control system for an impact device having means permitting selection of strokes of more than one length comprising at least one means for actuating each of the stroke length selector means, counting means for counting strokes of the impact device and sequencing means responsive to the counting means and associated with at least one less than the total number of actuating means to terminate a sequence of strokes of a particular length at a selected count and initiate a sequence of blows of another predetermined length.

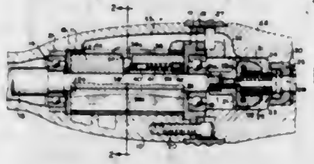
3,043,272
FASTENER DRIVING APPARATUS
Oscar A. Wandel, Mundelein, and Richard H. Doyle, Mount Prospect, Ill., assignors to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 16, 1959, Ser. No. 793,536
12 Claims. (Cl. 121—13)

1. In a fastener driving apparatus, a housing defining a chamber continuously supplied with compressed air, a cylinder movably mounted in said chamber and including a flanged portion in sliding engagement with the wall of said chamber, a piston slidably mounted in said cylinder, a valve seat normally engaged by said cylinder to prevent communication between said chamber and the interior of said cylinder, first means for continuously connecting one side of said flanged portion to the atmosphere, and second means including valve means for selectively supplying compressed air to and exhausting compressed air from the other side of said flanged portion to shift said



cylinder into and out of engagement with said valve seat, thereby to provide means for selectively admitting compressed air from said chamber into said cylinder to drive said piston.

3,043,273
OVERSPEED SAFETY DEVICE
Donald E. Schott, Emerson, N.J., assignor to Thomas C. Wilson, Inc., Long Island City, N.Y., a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,426
1 Claim. (Cl. 121—34)

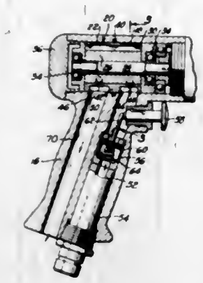


In a pneumatic motor, the combination of a casing having inlet and outlet openings, a rotor mounted within the casing with its axis of rotation eccentric to the casing axis and having a plurality of slots open at its periphery, a plurality of cavities in the rotor open to respective related slots, a blade in each slot receivable substantially entirely within the slot and normally having its outer edge in contact with the inner surface of the casing during rotation of the rotor, each blade having a depression in its surface facing the related cavity, the depression having a cam surface, a ball in each cavity movable by centrifugal force to engage the cam surface in the blade in the related slot and hold the blade against movement out of the slot, and means carried by the rotor for restraining respective balls against movement by centrifugal force below a selected value.

3,043,274
PNEUMATIC HAND TOOL
Robert C. Quackenbush, San Fernando, Calif. (1330 Beaudry Blvd., Glendale 3, Calif.)
Filed Oct. 19, 1959, Ser. No. 847,337
5 Claims. (Cl. 121—36)

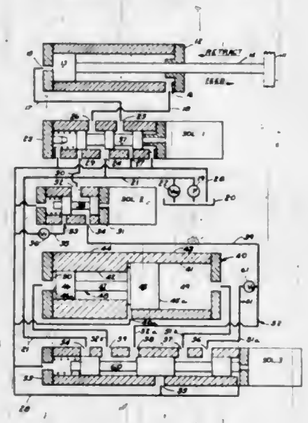
1. In a pneumatic hand tool, the combination of: a housing having a grip portion formed integrally therewith, said housing defining an elongated chamber and said grip portion having an inlet port communicating with one portion of said chamber and an exhaust port communicating with an adjacent portion of said chamber, said inlet and exhaust ports terminating at the lower extremity of said grip portion; seal means mounted in the wall of said chamber between said inlet and exhaust ports; and a pneumatic motor mounted in said chamber including a

casing having an inlet opening in communication with said inlet port and an exhaust opening in communication



with said exhaust port, said sealing means being engageable with the perimeter of said casing to prevent direct communication between said inlet and exhaust ports.

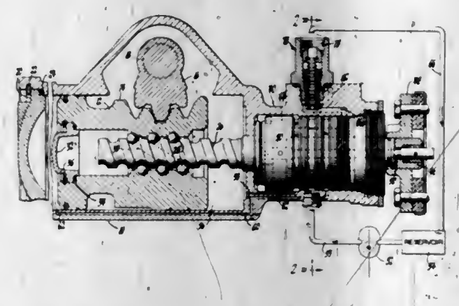
3,043,275
DEVICE FOR CONTROL OF FLUID FLOW RATE
Horace W. Reid, Jr., Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 21, 1960, Ser. No. 77,372
11 Claims. (Cl. 121—38)



1. In a hydraulic system, a hydraulic motor, a first motor line connected to the hydraulic motor, a second hydraulic motor connected to the motor line to receive fluid from the motor line at one rate and a hydraulic pump connected to the motor line to deliver fluid to the motor line at a different rate, means mechanically connecting the second hydraulic motor to the pump to maintain a predetermined ratio between said rates, and a flow control valve in said circuit to regulate one of said rates.

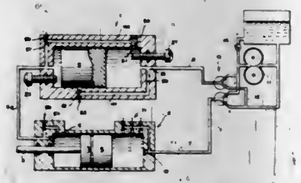
3,043,276
AUXILIARY VALVE FOR USE IN A FLUID POWER STEERING GEAR
William B. Thompson, Newton Center, Mass., and James P. Miller, Bridgeport, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 24, 1959, Ser. No. 842,096
4 Claims. (Cl. 121—38)

4. In an hydraulic servo system including a source of fluid pressure, a fluid motor and an open-center control valve for said motor, said control valve being connected to said source via a pressure conduit and a return conduit, an auxiliary valve located in said return conduit comprising a housing provided with a stepped bore and a passage open to said pressure conduit, a hollow plunger in said bore including a head portion having a sliding fit in an enlarged portion of the bore, the inner edge surface of said head portion in the normal position of the plunger abutting a shoulder formed incident to the stepping of the bore, said plunger further including a body portion having an orifice in the end thereof opposite said head portion and a slot just inward of such end, said slot being open to said return conduit in the normal position of the plunger, said body portion extending from said head por-



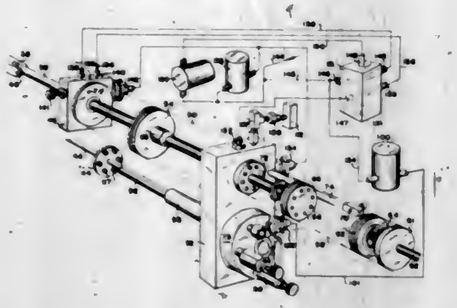
tion in the direction opposite the direction of fluid flow in said return conduit and in its area adjacent said head portion being of a diameter less than that of the surrounding wall of the bore to provide a chamber to which said passage opens, and a spring associated with the plunger and tending to maintain the same in its said normal position, said spring being housed in part by the plunger, the latter becoming displaced with closing of said slot to fluid flow upon the development of a predetermined pressure in said chamber, such displacement being induced by reaction of the fluid in the chamber against said head portion.

3,043,277
HYDRAULIC DOOR OPERATOR SYSTEM AND CONTROL MEANS THEREFOR
Martin Carlson, 9122 13th St., Brookfield, Ill.
Filed July 20, 1960, Ser. No. 44,156
12 Claims. (Cl. 121—44)



1. In an hydraulic door operator system, an hydraulic door operator comprising a double-ended cylinder, a piston in said cylinder, and a piston rod extending from said piston through one end of said cylinder, a source of fluid pressure for said operator, a fluid filled hydraulic circuit connecting said pressure source with the opposite ends of said cylinder for creating a pressure differential between opposite sides of said piston to drive said piston and rod in one direction, and means disposed serially in said hydraulic circuit on the low pressure side of said piston for automatically reducing said hydraulic pressure differential by control of fluid flow in said circuit during the terminal portion of the piston movement in said one direction and while said piston is under full driving pressure from said pressure source, and means for rendering the last named means inoperative during movement of said piston in the opposite direction.

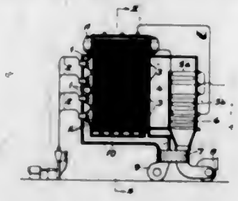
3,043,278
TURRET LATHE CONTROL
Nathan Ackerman, 4 Merrivale Terrace, Lake Success, N.Y.
Filed July 16, 1956, Ser. No. 597,960
6 Claims. (Cl. 121—45)



1. A reciprocating device comprising an air cylinder and a fluid cylinder in axial alignment therewith, a piston rod disposed within said cylinders, a pair of piston heads carried by said piston rod, one of said piston heads being disposed in said air cylinder, the other piston head being disposed within said fluid cylinder, air pressure means associated with said air cylinder for reciprocably moving said piston rod at a relatively rapid rate, fluid control means associated with said fluid cylinder for selectively restraining the movement of the piston rod as it moves in one direction to a predetermined lower rate and to permit the unrestrained return movement thereof in the reverse direction, said fluid control means including a fluid return conduit in communication with each end of said fluid cylinder for permitting the unrestricted return flow of fluid displaced by the movement of said other piston head in said one direction to the opposing end of said fluid cylinder whereby said piston may be unrestrainedly moved in said fluid cylinder in said one direction and selectively operable valve means for diverting said return fluid flow through a restricted path to thereby restrain the movement of said piston in said fluid cylinder in said one direction, and additional means associated with said other piston head to permit the flow of fluid therethrough during the return movement thereof whereby said fluid presents no material restraint to the return movement of said other piston, said additional means comprising a ring surrounding said piston rod disposed in contiguity with the face of said other piston head which trails during the return movement thereof, said other piston head being provided with a plurality of circumferentially spaced axially extending perforations therethrough, a resilient element secured to said piston rod urging said ring into sealing engagement with the trailing face of said other piston head, said resilient element being adapted to yield under the pressure of said fluid against said ring during the return movement of said piston rod, whereby said fluid may flow through the perforations in said piston head.

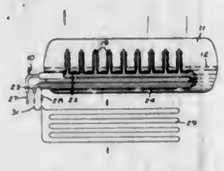
3,043,279
STEAM BOILER PLANT
Uno Olof Blomquist, Vasteras, Sweden, assignor to Aktiebolaget Svenska Maskinverken, Sodertalje, Sweden
Filed June 15, 1955, Ser. No. 515,707
Claims priority, application Sweden June 18, 1954
2 Claims. (Cl. 122—240)

1. A steam boiler plant characterized by: a plurality of substantially horizontal directly superimposed substantially cylindrical combustion chambers, the curved walls of which are formed by two laterally and symmetrically opposed groups of contiguous boiler tubes, each of which extends continuously upwardly from the bottom of the lowermost combustion chamber arcuately and successively around substantially one half of the circumference of each of the superimposed substantially cylindrical combustion chambers to the top of the uppermost combustion chamber, the upper and lower ends of the arcuately shaped portions of the tubes of one of said groups being contiguous to the upper and lower ends of the arcuately shaped portions of the tubes of the other group so that the superimposed combustion chambers defined by said tubes are substantially separated from one another, each of said combustion chambers having an outlet at one end thereof



and an inlet for fuel and air spaced from the outlet; means for circulating boiler fluid upwardly through all said tubes; means for independently feeding fuel and air to the inlet of each of the combustion chambers; and means at the outlet ends of the combustion chambers defining a flue gas duct common to all of said combustion chambers and into which the outlets of all said combustion chambers open so that the combustion gases flow horizontally through the combustion chambers in indirect heat exchange relation with boiler fluid flowing upwardly through the boiler tubes.

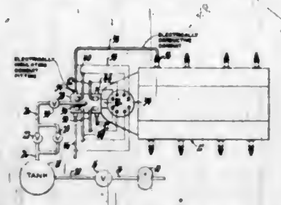
3,043,280
FEEDWATER SYSTEM
Arthur J. Alix, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Sept. 29, 1959, Ser. No. 843,188
5 Claims. (Cl. 122—459)



1. A feed water system for a steam generating unit, comprising

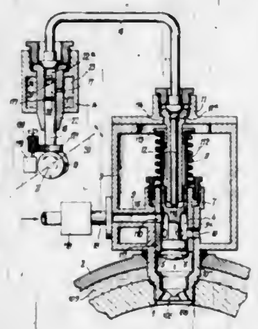
(*a*) a steam-and-water drum,
(*b*) means defining a gas flow passage,
(*c*) an economizer positioned in said gas flow passage with one end downstream of the other end,
(*d*) a series of steam condensers mounted in the drum,
(*e*) a heat exchanger consisting of a first U-shaped tube connected at one end to the said other end of the economizer over which the combustion gases first pass, a second U-shaped tube connecting a source of cold feed water to the said one end of the economizer over which the combustion gases last pass, and heat exchange means for causing the heat to pass from the water in the first tube to water in the second tube, the said other end of the economizer discharging into the heat exchanger, the condensers being connected to the other end of the first U-shaped tube and receiving feed water from the economizer after it passes through the heat exchanger in heat exchange relationship to the incoming feed water.

3,043,281
AIR INJECTION SYSTEM FOR AN INTERNAL COMBUSTION ENGINE
Alfred Candelise, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 4, 1960, Ser. No. 12,856
1 Claim. (Cl. 123—26)



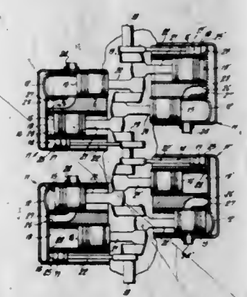
In an air injection system for an internal combustion engine having a source of compressed air, an air discharge and timing valve adapted to be driven in timed relation to the engine, conduit means connecting said air source and said valve, and air introducing means for introducing air into the engine combustion chamber; conduit means for conducting air from said air distribution and timing valve to said introducing means, said conduit including an electrically insulated section adjacent said air distribution and timing valve and an electrically conducting section connecting with said introducing means, and electrical lead means for connecting the engine electrical distributor to said electrical conducting section of said conduit means for conducting electricity to the engine spark plug from the engine distributor.

3,043,282
FREE-PISTON ENGINE
Hermann Jänicke, Ahornstrabe 70, Lochham, near Munich, Germany
Filed July 28, 1960, Ser. No. 45,997
Claims priority, application Germany Aug. 4, 1959
4 Claims. (Cl. 123—46)



1. A free piston engine adapted to be supplied with gaseous fuel comprising an engine cylinder having an inlet port and an outlet port and having disposed therein two oppositely reciprocating pistons defining between them an inner combustion chamber, each of said pistons at its outer side being rigidly connected to a compressor piston by means of a piston rod, the said compressor pistons being slidably mounted in compressor cylinders aligned with said engine cylinder, the compressor means being arranged symmetrically to said engine cylinder, said engine cylinder being supplied with gas by means of supply conduits and inlet orifices after opening of the inlet port and closing the outlet port; a gas reservoir between said inlet orifices and said gas supply, said gas reservoir comprising a single valve body controlling the connection from the gas supply to the gas reservoir and the connection between the gas reservoir and the inlet orifices respectively, so that only one of said connections is effective for supplying gas at any instant; said valve body being positively controlled in accordance with the position of the motor pistons; said gas reservoir being so dimensioned that its contents corresponds to the gas quantity needed for each one power stroke of the engine.

3,043,283
INTERNAL COMBUSTION ENGINES
Salvatore Vitale, % Jack G. Di Prima, 109 Broad St., New York 4, N.Y.
Filed May 12, 1959, Ser. No. 812,767
4 Claims. (Cl. 123—56)

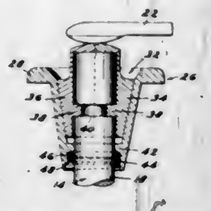


1. An internal combustion engine comprising a housing having walls defining a power cylinder, a compression cylinder, and a control cylinder, an exhaust port defined at the lower portion of said power cylinder, first conduit means connecting the upper portion of said compression cylinder with the lower portion of said power cylinder, second conduit means connecting the upper portions of said compression and control cylinders together and terminating in a compression port adjacent the top of said control cylinder, an inlet passage terminating in an inlet port defined in the upper portion of said control cylinder below said compression port, a crank shaft rotatably mounted in said housing, power, compression and control pistons connected to said crank shaft and reciprocatable in said power, compression and control cylinders, respectively, said power cylinder being connected to said crank shaft to move downwardly under the force of combustion of a fluid charge in the upper portion of said power cylinder while said compression piston is connected to said crank shaft to move upwardly at the same time and said control piston is connected to be moved to a position adjacent its upper limit of movement and covering said inlet port, said power cylinder being arranged to uncover said exhaust port and said first conduit to discharge exhaust gases and take in a new fluid charge from said compression cylinder, said control piston being movable downwardly in said control cylinder to uncover first said compression port of said second conduit and thereafter said inlet port and thereby communicate said compression cylinder with the upper portion of said control cylinder and with said inlet port as said compression piston is moved downwardly in said compression cylinder, said control piston being movable upwardly to first cover said inlet port and thereafter said compression ports.

3,043,284
VALVE ROTATOR
Otto E. Gundstrom, 210 E. Houstonia, Royal Oak, Mich.
Filed May 29, 1961, Ser. No. 113,466
6 Claims. (Cl. 123—90)

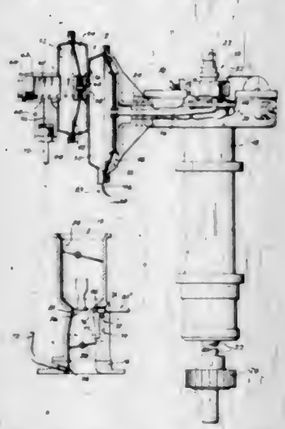
4. A valve rotator for an internal combustion engine, comprising an elongated member supported for reciprocation in opposite directions, a retainer rotatably mount-

ed on said elongated member for reciprocation as a unit therewith, a coil spring encircling said elongated member and at one end engaging said retainer to contract and expand in response to the movement of said elongated member, said spring due to its inherent twisting motion during contraction and expansion acting to rotate said retainer in opposite directions, and a one-way clutch drive between said retainer and said elongated member to transmit twist from said spring to said



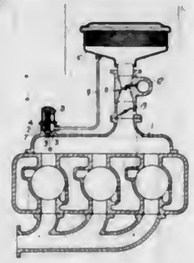
elongated member in one direction only, said one-way clutch drive comprising a coil spring encircling said elongated member and secured at one end to said retainer so that rotation of said retainer in said one direction by said first-mentioned coil spring causes said second-mentioned coil spring to frictionally grip said elongated member whereby said member is rotated with said retainer and rotation of said retainer in the opposite direction by said first-mentioned coil spring causes said second-mentioned coil spring to release said member.

3,043,285
IGNITION DISTRIBUTOR
Eugene C. Bettoni, Birmingham, Mich., assignor to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Filed May 3, 1961, Ser. No. 107,423
6 Claims. (Cl. 123—117)



1. In an internal combustion engine, the combination of an ignition timer, a fuel mixture intake passage-way including a venturi, a throttle valve positioned in said passage-way on the engine intake manifold side of said venturi, a first suction controlled means for varying the position of said timer, a passage connecting said first suction controlled means with said venturi and with said intake passage-way on the venturi side of said throttle valve when closed, a second suction controlled means secured to said first suction controlled means in a manner so as to provide a common separating wall, an opening in said common wall providing communication between adjacently disposed chambers in said first and second suction controlled means, said adjacent chambers forming in effect a single chamber to be evacuated in order to vary the position of said timer, a conduit connecting said second suction control means to said engine intake manifold, said second suction control means having a valve adapted to at times close said opening in said common wall.

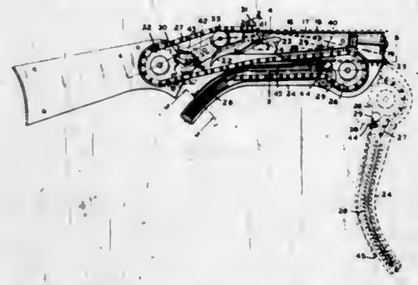
3,043,286
METHOD AND MEANS FOR THE EQUALIZATION OF THE IDLING OPERATION OF A MULTIPLE CYLINDER 2-STROKE CYCLE INTERNAL COMBUSTION ENGINE, PREFERABLY A CARBURETOR ENGINE
Folke Ivar Blomberg, Trollhattan, Sweden, assignor to Svenska Aeroplan Aktiebolaget, Trollhattan, Sweden, a corporation of Sweden
Filed Sept. 16, 1958, Ser. No. 761,394
Claims priority, application Sweden Sept. 18, 1957
8 Claims. (Cl. 123—124)



1. A multiple cylinder two-stroke internal combustion engine comprising an intake manifold positioned to give uneven distribution of fuel between the engine cylinders at idling speeds whereby certain cylinders fire unevenly or not at all due to insufficient fuel supply and certain cylinders fire unevenly or not at all due to overrich mixture, said intake manifold having at least one extra air supply port therein offset with relation to the normal intake from the carburetor of said engine to a position adjacent cylinders firing irregularly or not at all at idling speeds due to insufficient fuel supply and remote from cylinders firing irregularly or not at all at idling speeds due to overrich mixture, a valve positioned to control the extra air supply port in said intake manifold, means operatively associated with said valve for opening it only at idling speeds, and means for automatically operating said valve opening means only at idling speeds, whereby cylinders firing unevenly or not at all at idling speeds due to overrich mixture are given the proper amount of extra air to create a readily combustible mixture and cylinders firing irregularly or not at all at idling speeds due to insufficient fuel supply are given such an amount of extra air as to create non-combustible mixture, this extra air, apart from creating non-combustible mixture increasing the pumping losses in the non-firing cylinders, thus increasing the braking power on the cylinders given the readily combustible mixture.

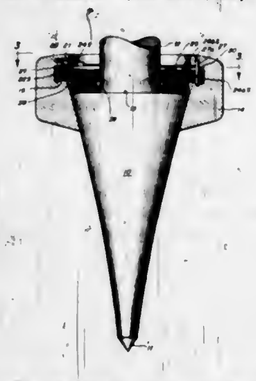
3,043,287
CROSSBOW COCKING DEVICE
Raymond L. Nelson, 1823 E. 84th Terrace, Kansas City 32, Mo.
Filed Mar. 14, 1960, Ser. No. 14,839
2 Claims. (Cl. 124—25)

1. A crossbow, including a stock portion grooved for the reception of an arrow adapted for shooting with a bowstring of the crossbow, a lever being hollow, said lever being pivoted on said stock portion, a length of chain, a cocking idler, said cocking idler being mounted in the hollow portion of said lever, a second cocking idler, said second cocking idler being mounted on said stock portion, said first mentioned and second cocking idlers being spaced from the pivot of said lever and supporting the chain strung thereover, one end of the chain being in the mentioned hollow of said lever, a hook, said hook being secured to the opposite end of the chain to cock the bowstring on the stock portion, pawls, said pawls being pivotally secured respectively to said stock portion and said lever normally preventing the chain from feeding toward the bowstring, said first mentioned and said second cocking idlers being spread further apart as the lever



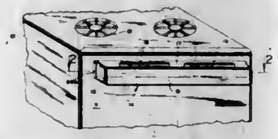
is cocked from the stock portion on the pivot thereto to pull a portion of the chain from the stock portion into an additional space formed by the cocked lever, a spring take-up, said spring take-up being mounted in the mentioned hollow portion of the lever and connected to take up the slack chain as it is fed into the mentioned hollow portion of the lever when the lever is returned to butt against the stock portion thereof, and means to lock said lever to said stock portion.

3,043,288
WORK MEMBER FOR A PERCUSSIVE TOOL
Gordon A. Cooley, Chicago, Ill., assignor to Mechanical Research Corporation, Chicago, Ill., a corporation of Pennsylvania
Filed June 15, 1960, Ser. No. 36,302
13 Claims. (Cl. 125—36)



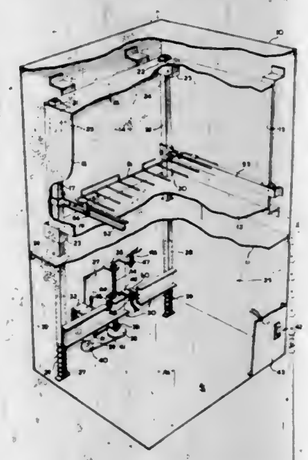
1. A self-extracting work member structure for use with a percussive tool operative to transmit repetitive high-valued impact forces thereto, comprising a work member element for penetrating concrete slabs and the like in response to such impact forces transmitted thereto and having a tapered slab-penetrating portion that may become frictionally gripped by such penetrated slab, the taper of said slab-penetrating portion being acute so as to cause release thereof from any such frictional grip of the penetrated slab in consequence of a limited axial withdrawing movement of said work member element from its position of deepest penetration into such slab, and an elastic energy-storage structure disposed adjacent the upper end of said slab-penerating portion so as to be brought into abutment with such penetrated slab upon penetration thereof to a predetermined depth by said slab-penetrating portion, said energy-storage structure as a result of such abutment being operative to develop between said work member element and penetrated slab an axial force displacing said work member element through such limited axial withdrawing movement and thereby releasing the same from the frictional grip of such penetrated slab.

3,043,289
SAFETY GUARD FOR GAS RANGE ON-AND-OFF VALVES
Morris Fox, 2366 E. 23rd St., Brooklyn 29, N.Y.
Filed Mar. 9, 1960, Ser. No. 13,805
2 Claims. (Cl. 126—42)



1. A safety guard for a gas range having a ferrous front wall and a row of bosses thereon extending forward therefrom and a rotatable on-and-off valve projecting forward from each of the bosses, comprising an elongated hollow housing of non-magnetic material adapted to have a length in excess of the distance between the endmost bosses of said row and including top and bottom walls, a front wall and end walls, the rear of the housing being open, the rear edges of said end walls lying in a common plane, said top and bottom walls extending rearward to said plane, a magnet secured against the inner surface of each of said end walls and having a flat face lying substantially in said plane, cushioning means secured to said end walls adjacent said magnets having a surface thereof extending rearward beyond said plane, said magnets having right-angle extensions of ferrous material secured thereto and having free extremities extending toward each other, the rear surfaces of said extensions lying substantially in said plane, the free extremities of said extensions adapted to be normally positioned spaced from said endmost bosses.

3,043,290
OVEN RACK ELEVATING AND LOWERING MECHANISM
David Gibbons Smith, Toronto, Ontario, Canada, assignor to Moffats Limited, Weston, Ontario, Canada
Filed Mar. 1, 1961, Ser. No. 92,665
1 Claim. (Cl. 126—337)



In a cooking stove, an oven comprising a pair of opposed side walls, a rear wall, a top wall and a bottom wall secured to one another to define a stationary, en-

closed space, the oven having a first pair of vertically aligned apertures, one in the bottom wall and one in the top wall of the oven and both adjacent the rear wall and one side wall, and a second pair of vertically aligned apertures, one in the bottom wall and one in the top wall of the oven and both adjacent the rear wall and the other side wall, a guide roller associated with each aperture in the bottom wall and lying on the side of the aperture adjacent the rear wall of the oven, a guide roller also associated with each aperture in the upper wall of the oven and lying on that side of the aperture remote from the rear wall of the oven, a pair of vertical columns, one column passing through the oven by means of each of the first and second pair of vertically aligned apertures and in contact with the guide rollers associated therewith, means engaging each column within the oven and adapted to support one side of a horizontal shelf, a cross member rigidly connecting the lower ends of the columns together externally of and below the oven, means fixed relative to the oven and in telescopic relationship with the lower ends of the columns to provide for a lower guide and support for the vertical columns against displacement in any horizontal direction and resilient means associated therewith to bias the columns upwardly against the force of gravity, a driving assembly comprising a reversible electric motor carried by a frame member of the stove and electrically connected to a source of power, switch means associated electrically with the motor to connect it with the source of power to drive the motor in either direction, a vertically arranged lead screw drivable by the electric motor to rotate about a vertical axis, the lead screw being journalled in a bracket carried by a frame member of the stove and fixed thereby against movement in the direction of its axis, nut means threaded on the lead screw, means carried by the cross member and embracing the nut means of the driving assembly to secure the nut means against rotation and to the cross member so that rotation of the motor and the lead screw will drive the nut along the lead screw and hence move the cross member, to the vertical columns and the shelf within the oven, and two vertically spaced and aligned limit switches electritcally associated with the electric motor and its source of power and operable by an abutment on the cross member and vertically aligned with the limit switches to limit the distance through which the cross member, the columns and the shelf may be moved in either the upward or downward sense of the vertical direction.

3,043,291
CHAIR FOR TAKING CARDIOGRAMS
David I. Nielsen, 400 Westminster St., Newport Beach, Calif.
Filed July 1, 1960, Ser. No. 40,388
2 Claims. (Cl. 128—2.06)



1. A chair for use in taking electrocardiograms which includes:

a chair structure having a base including legs, a seat, a seat back and arm rests, said seat, seat back and said arm rests being connected to one another and to said base so as to be supported thereby, said arm rests having upper surfaces of a trough-like shape;

an elongated head extending generally parallel to said base mounted on said base below said seat, said head having a front surface located away from said base of a trough-like shape;

means for biasing said elongated head away from said base connected to said base and said head;

an electrode means positioned within each of said surfaces of a trough-like shape, each of said electrode means including an insulator mounted within the trough-like surface within which it is disposed, a metal electrode positioned on each of said insulators, and terminal means connected to each of said metal electrodes.

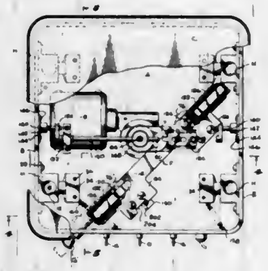
3,043,292
INFLATABLE, DOUBLE-WALLED RESUSCITATION GARMENT
Emanuel S. Mendelson, Telford, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 26, 1959, Ser. No. 823,265
3 Claims. (Cl. 128—30)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A chest respirator comprising a collapsible, inflatable casing adapted to cover the thoracic area of the body, said casing being of substantially rectangular and linear construction and having a pair of superimposed panels of flexible, air impermeable material, said panels being secured to each other at their peripheral edges to form an inflation chamber therebetween and a peripheral portion of said casing including part of said inflation chamber being turned under thereof to form a seal between the body and said casing upon inflation thereof, a plurality of uniformly spaced means securing said panels to each other at various points thereof, means for introducing fluid pressure into said chamber between said panels whereby said casing becomes rigid and assumes a concave shape, strap means secured to said casing for holding said casing on said body, and means for introducing an alternating fluid pressure between said body and said casing to facilitate respiration.

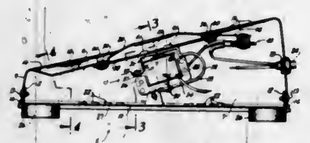
3,043,293
EXERCISING TABLE FOR PROVIDING HORIZONTAL MOVEMENT IN A REVERSIBLE ORBITAL PATH OR IN EITHER OF TWO RECIPROCABLE PATHS WHICH ARE PERPENDICULAR TO EACH OTHER
Granville S. Rider, 9001 Patrick Ave., Pacolma, Calif.
Filed May 2, 1960, Ser. No. 26,230
11 Claims. (Cl. 128—33)

8. A mechanism adapted for use in selectively imparting a plurality of different movements to a movable load-supporting body, including: a prime mover; a shaft driven by said prime mover; a circular cam eccentrically mounted on one end of said shaft; a rigid body having a cavity formed therein in which said cam is rotatably mounted; a first arm extending outwardly from said body and normally disposed relative to said cavity; a second arm having a recess formed in a first end thereof; means for pivotally supporting said second arm from said first arm; means for movably connecting said second arm to said load-supporting body; an extension on said first arm projecting therefrom in a direction away from said first end of said second arm; a locking member; means for slidably supporting said locking member for longitudinal and vertical movement only on said extension and tending to hold said locking member in a position parallel to said extension; spring means for at all times urging said locking member toward said second arm to engage said recess formed therein to removably lock said first and second arms together; interlocking means on said locking member and said extension for maintaining said locking member in a position thereon when said locking



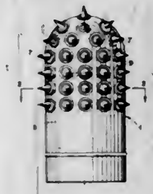
member is in said parallel position wherein said locking member does not engage said recess formed in said second arm; means for vertically moving said locking member relative to said extension as said first and second arms are reciprocated by rotation of said cam to cause said locking member to be moved by said spring means to said position where it engages said recess to lock said first and second arms together and change the motion of said load-supporting body from a first movement to a second movement; and means for moving said locking member on said extension from a position where it engages said recess to a position where it is parallel to said extension with said interlocking means being engaged and the motion of said load-supporting body being changed from said second to said first movement.

3,043,294
VIBRATORY FOOT MASSAGING MACHINE
Gene M. Neff, Racine, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 15, 1959, Ser. No. 846,639
6 Claims. (Cl. 128—33)



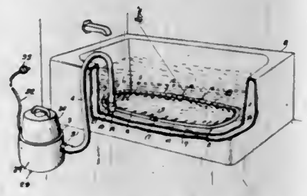
1. In a device of the type having a panel mounted for vibratory motion normal to its faces and a vibration motor for imparting vibration to the panel comprising a core on which is wound a solenoid adapted to be energized by pulsating current, an armature adapted to be magnetically attracted toward the core at each energization of the solenoid, and a flexible hinge connecting the core and the armature of the vibration motor for movement relatively toward and from one another and yieldingly holding them apart: means providing a resilient connection between the armature and the panel by which the motor is supported from the panel for movement of the core and armature relative to the panel and to one another in directions normal to the surfaces of the panel and which yieldingly permits movement of the armature relatively toward and from the panel in said directions to enable the armature to be attracted toward the core and away from the panel with each energization of the solenoid when substantial vibration damping force is imposed upon the panel, thus permitting the armature and core to closely approach one another during each such energization despite the inertia of the core, so that the vibration motor can magnetically generate vibration forces of substantial magnitude which are transmitted to the panel through said resilient connection and which overcome the damping force to a substantial extent, said resilient connection comprising a spring strap having the armature secured to its medial portion and having its end portions spaced substantial distances from the armature and secured to the panel.

3,043,295
TOOTH CLEANING AND GUM MASSAGING INSTRUMENTALITY
Abraham W. Ward, 450 Sutter St., San Francisco, Calif.
Filed Nov. 6, 1959, Ser. No. 851,302
1 Claim. (Cl. 128—62)



A cot useful in cleaning teeth and massaging gums and adapted to be slipped on a finger and to surround said finger, said cot being formed of thin flexible rubber and provided with a multitude of outwardly extending, yieldable pointed protuberances substantially uniformly distributed on all sides of the outside surface of said cot, each of said pointed protuberances being encircled by a low supporting ring lying adjacent to but slightly spaced from the base of said pointed protuberances at the juncture of said protuberances with said cot, said rings being spaced from one another, all of said pointed protuberances and rings being separately raised above the surface of the thin cot body so as not to impair the overall flexibility thereof while providing each pointed protuberance with its individual supporting ring, said pointed protuberances projecting sufficiently beyond the top of the supporting ring as to be able to enter effectively the spaces between the teeth.

3,043,296
HYDROTHERAPY APPARATUS
Benjamin F. Gregory, 3743 College, Kansas City, Mo.
Filed Feb. 15, 1961, Ser. No. 89,433
3 Claims. (Cl. 128—66)



1. A water agitating apparatus for use in a bath tub to produce a rolling pulsation action on the water contained in the tub; said apparatus including a ring member of generally elongated shape and comprising a pipe

having a rigid wall of circular cross section coextensive with the sides and rounding ends of the tub at the bottom thereof; a high volume blower, and a flexible hose connected with the blower and having a connection with the ring member for supplying a high volume flow of air under pressure for divided flow in the ring member in opposite directions from said connection; said wall of the pipe having orifices spaced apart along the entire length of the pipe and located substantially in the horizontal diameter of the pipe and on the inner facing sides of the ring member, said wall of the pipe being inwardly bent at one side of each orifice and outwardly bent at the opposite side of each orifice to face said orifices at an angle with respect to the central axis of the tubing and with the angle of said orifices being directed to discharge said air in jets into the water in the tub to cause a rolling action and pulsation of the water as the air breaks through the hydrostatic head of water in the tub.

3,043,297
LOCKABLE LEG BRACE JOINT
Thomas F. Curnin, 948 Naugatuck Ave., Milford, Conn.
Filed Mar. 24, 1958, Ser. No. 723,200
1 Claim. (Cl. 128—80)

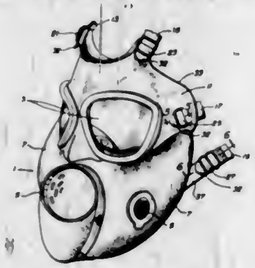


An orthopedic leg brace comprising first and second brace members, a bifurcated extremity on said first brace member, said extremity being of an enlarged cross section and having a transverse parallel-walled slot defined by a pair of bearing pillars, said bearing pillars each having a pair of faced off surfaces which lie transverse to the longitudinal axis of said first brace member, each of said surfaces of each pillar being aligned transversely of said slot with a corresponding surface of the other pillar to form aligned pairs of surfaces, said bearing pillars each having locking lugs extending upwardly an appreciable distance from said faced off surfaces, the lug of each pillar being aligned with the lug of the opposite pillar, said second brace member comprising a flat strip having a thickness which provides a slidable fit for it in said slot of the bifurcated extremity on said first brace member, said second brace member being pivotally connected in said slot to said first brace member by a pivot means extending through said pillars, a locking means comprising a slidable locking member having a slide portion adapted to closely slidably fit on said second brace member and having a locking head of enlarged girth, provided with locking notches adapted to slidably receive the lugs on the bearing pillars to resist arcuate movement of said bearing pillars, said locking member being movable longitudinally on the second brace member and having faced off surfaces which are engageable with the faced off surfaces of said bearing pillars when said locking member is moved into locking engagement with said first brace member, means affixed to said locking member and one of said bearing pillars normally urging said locking member toward said locking lugs and into engagement with said lugs, a release member slidably carried by the second brace member, said release member being connected to said locking member by a link so that the locking member may be released from its locking position by pulling on said release member.

3,043,298
PLASTER OF PARIS BANDAGE CONTAINING HYDROXY PROPYL METHYL CELLULOSE
Leo Brickman, Metuchen, and Martin I. Edenbaum, New Brunswick, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
No Drawing. Filed Apr. 25, 1958, Ser. No. 730,824
4 Claims. (Cl. 128—91)

1. A plaster wrapping comprising a porous flexible carrier impregnated with plaster of Paris having admixed therewith a small amount of hydroxy propyl methyl cellulose.

3,043,299
HEAD HARNESS TAB FOR GAS MASK
Norman Potash, 3314 Devonshire Drive, Baltimore, Md.
Filed May 6, 1958, Ser. No. 733,459
1 Claim. (Cl. 128—141)
(Granted under Title 35, U.S. Code (1952), sec. 266)



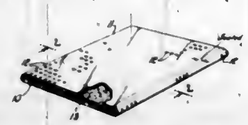
A facepiece for gas mask comprising a faceblank formed of molded, soft resilient rubber and having a marginal portion, said marginal portion being in the form of a sheet so formed as to closely fit the face of a wearer, a plurality of wide, thin, soft, molded resilient rubber hooks on the outer surface of said marginal portion, said hooks being integral with said faceblank and each of said hooks having a free end extending inwardly from said marginal portion, spaced from and generally parallel to the outer surface of said marginal portion.

3,043,300
HEAT-RESISTANT GARMENT
John E. Flagg, Worcester, Mass., assignor, by mesne assignments, to David Clark Company Incorporated, Worcester, Mass., a corporation of Massachusetts
Filed Feb. 27, 1958, Ser. No. 717,956
9 Claims. (Cl. 128—144)



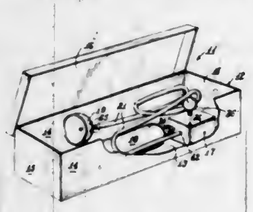
2. A double-walled garment for protection of the wearer against temperature extremes, including a double-walled face mask, the walls of both garment and face mask being spaced and adapted to contain a coolant liquid, the spaces being in communication for circulation of the liquid throughout, and a liquid inlet and outlet for the spaces between the walls.

3,043,301
DRESSING
Oliver S. Plantinga, Princeton, and Robert J. Trewella, Milltown, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
Filed Jan. 21, 1958, Ser. No. 710,243
4 Claims. (Cl. 128—156)



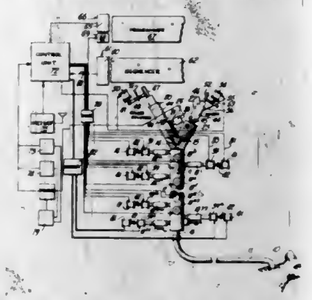
1. A dressing comprising an absorbent pad formed of a nonwoven fabric having openings therethrough, the fibers surrounding said openings being held in place by interlocking and frictional engagement with each other, a flexible non-absorbent perforated film on both sides of said pad, the film on at least one side being formed of a flexible smooth material relatively non-adherent to healing tissues, the perforations in said flexible smooth film having open areas equal to a circle having a diameter of 0.01 to 0.2 of an inch and being present in sufficient number and so distributed as to provide, for each square inch of film surface, an open area of at least 0.0075 square inch, said absorbent pad containing at least two layers of said nonwoven fabric separated by a layer of non-perforated absorbent material.

3,043,302
FLOW CONTROL UNIT FOR PORTABLE INHALATORS
Earl M. Spears, Ann Arbor, and Waldo Papsdorf, Clinton, Mich., assignors to Oxy-Gear Incorporated, Chicago, Ill., a corporation of Illinois
Filed May 8, 1958, Ser. No. 733,987
7 Claims. (Cl. 128—203)



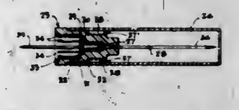
1. A fluid flow-control valve comprising, in combination, a substantially solid body, an inlet passageway and an outlet in said body, a pressure regulator chamber in said body between the inlet and the outlet, a valve fitting having a passageway constituting a communicating passage between the inlet passageway and pressure regulator chamber, said communicating passageway having a valve seat at each end thereof, a diaphragm in said chamber, an abutment in said body in opposed relation to one face of said diaphragm, a valve stem carried by and extending from the other face of said diaphragm, a spring interposed between said abutment and diaphragm to normally urge the valve stem in a direction to seat the valve stem on one of the valve seats, a pin on the free end of the said stem projecting loosely through the communicating passageway, and a ball valve element in said fitting to coact with the other valve seat for closing the communicating passageway, said pin normally holding the ball valve element in non-seating position, and the diaphragm being responsive to pressure in the pressure regulator chamber to control the relative position of the valve stem with respect to its valve seat and to permit seating of the ball valve element when excessive pressure is present in the pressure regulating chamber.

3,043,303
METHOD AND APPARATUS FOR UTILIZING THE PERMANENT LONG TERM AORTA INTUBATION OF A LABORATORY ANIMAL
Joseph W. Still, 1940 Biltmore, Washington 9, D.C.
Filed July 11, 1958, Ser. No. 748,065
19 Claims. (Cl. 128—214)



1. Apparatus for utilizing the permanent long-term intubation of the abdominal aorta or other blood vessel of a laboratory animal for the purpose of collecting a plurality of blood samples from the animal comprising, a conduit, means for attaching an implanted tube of said intubated animal to the conduit, means for filling the conduit and implanted tube with saline solution to provide a barrier to hold the animal's blood within its circulatory system, means operable in repetitive cycles of operation for withdrawing the saline barrier from the conduit and implanted tube to draw the animal's blood into the conduit, means for withdrawing a selected quantity of the animal's blood from the conduit into a sample collecting receptacle to provide a blood sample and for introducing saline solution into the said conduit and implanted tube to provide a new barrier, and means for repeating the cycle of operation for a selected plurality of cycles, the blood samples being withdrawn into a different sample collecting receptacle for each cycle.

3,043,304
HYPODERMIC NEEDLE MOUNT
John L. Higgins, Daytona Beach, Fla., assignor, by mesne assignments, to Brunswick Corporation, a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,708
3 Claims. (Cl. 128—218)



1. A hypodermic needle mount formed of yieldable plastic material for mounting a hypodermic needle on a hypodermic syringe having an axial outlet end provided with a helical locking means formed integrally therewith which comprises; a generally cylindrical body section, a hypodermic needle cannula fixedly secured in said body section and extending axially outwardly from said body section, said body section having a cylindrical mounting section extending longitudinally from said body section, said mounting section having on a peripheral surface thereof a plurality of circumferentially spaced deformable splines extending radially and longitudinally on said peripheral surface, said body section having formed on an outer peripheral surface thereof spaced from said splines and extending longitudinally in an opposite direction from said splines a plurality of circumferentially spaced lugs, and said lugs providing means adapted to form an interlocking engagement with a protective enclosure for said cannula to bring said splines into mount-

ing engagement with said helical locking means of a hypodermic syringe and thereby forming a substantially rigid connection between said helical locking means and said hypodermic needle mount; whereby said cannula is maintained secure against axial and transverse movement relative to said syringe.

3,043,305
DEVICE FOR DELIVERING MEDICAMENTS OR THE LIKE TO A BODY CAVITY
Henry W. Walden, 124 W. 55th St., New York, N.Y., and Richard H. Walden, 230 Hilton Ave., Plandome, N.Y.
Filed Mar. 6, 1959, Ser. No. 797,698
1 Claim. (Cl. 128—251)



A speculum comprising a casing member, a chamber within the casing, a plurality of blades pivotally attached within and extending beyond the casing, and adapted for insertion into a body orifice, said blades in closed position defining an elongated chamber constituting a continuation of the casing chamber, a corresponding plurality of slots in the casing and, extending therethrough, finger pieces respectively attached to the blades within the casing for manually pivoting the blades to separate them after insertion into a body orifice, an opening in the casing formed with a reentrant wall, a coupling and closure member removably fitting against the reentrant wall of said opening, and having a passage extending therethrough from the casing chamber to the outside of the casing, and an ejection tube fitted into the passage of the coupling chamber and extending therefrom through the casing chamber into the elongated chamber, the outer portion of the coupling element being shaped for attachment to a medicament container for delivery of medicament to the ejection tube, whereby medicament from the medicament container is dispensed via the ejection tube, and the ejection tube and closure member are removable for cleaning, a spring clip carried by said coupling element and normally preventing flow of liquid through a resilient walled tube inserted therethrough and connected to the ejection tube, said finger pieces for separating said blades engaging, when moved into blade-opening position, a latch which, when engaged thereby, opens the clip to permit flow of fluid through the resilient walled tube within the clip.

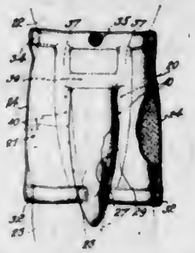
3,043,306
BODY WASTE RECEPTOR APPLIANCE
Robert N. Hergatt, Box 82, Pavonia, Ohio, and Mervin P. Hale, Rte. 2, Mansfield, Ohio
Filed Apr. 8, 1959, Ser. No. 804,962
4 Claims. (Cl. 128—283)

1. A bag holding body waste receptor appliance adapted to be worn against the body comprising a rigid sealing ring having an inner end face for contacting the body, said end face having an annular groove therein, breather holes connecting said groove with the exterior of said ring, said ring having a tapered annular exterior surface, a rigid clamping ring having an interior matching tapered surface slidably fitted over said tapered exterior surface and adapted by relative movement toward said end face to wedge-clamp the mouth of a flexible bag in sealing



engagement with said sealing ring, and means on said clamping ring to attach a body-encircling belt to diametrically opposite portions of said clamping ring to exert said wedge-clamping action on said sealing ring.

3,043,307
GARMENT
Lawrence P. Weston, Rte. 1, Gibbon, Nebr.
Filed Feb. 9, 1961, Ser. No. 88,189
3 Claims. (Cl. 128—295)



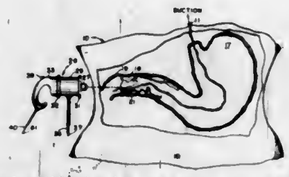
2. In a device of the character described, an outer member made of form fitting stretchable material and said outer member being shaped to include outer arcuate portions joined together at the front thereof by a curved section, said arcuate portions being joined together at the rear by an outwardly bulging section, a water proof bag having a closed bottom and said bag being arranged in the central portion of the outer member and said bag including side sections, said bag further including a front section arranged within and contiguous to the curved section of said outer member, the rear portion of said bag being arranged within and contiguous to the outwardly bulging section of said outer member, said outer member further including a depending portion which surrounds the closed bottom portion of the bag, a pair of hollow inflatable ring members secured within the bottom portion of said outer member, and the lower portion of said bag being secured to said ring members, a hollow inflatable tube of generally circular formation secured within the upper portion of said outer member, a valve connected to said tube, and spaced apart hollow inflatable conduits connecting said tube and ring members together.

3,043,308
SURGICAL CLAMP
Edward I. Seltzer, 507 Cole Ave., Providence, R.I.
Filed Apr. 22, 1960, Ser. No. 24,092
2 Claims. (Cl. 128—346)



1. A surgical clamp comprising an elongated, open-ended, rigid tube, one end of said tube being externally threaded, the other end of said tube having means dividing said end into two distinct openings, a cap member having a cylindrical, internally threaded side wall and an end wall having a pair of spaced openings therein, said end wall being rotatable with respect to said side wall, said cap making threaded engagement with said tube, whereby the overall length of the assembly may be appreciably varied by threadedly manipulating said cap and tube.

3,043,309
METHOD OF PERFORMING INTESTINAL INTUBATION
Horace Frank McCarthy, North Andover, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Sept. 29, 1959, Ser. No. 843,094
6 Claims. (Cl. 128—348)



1. An intestinal intubation method comprising:
(*a*) securing a magnetic member to the tip of an elongated flexible tube;
(*b*) passing the tip and the tube through the esophagus to the stomach of a patient; and
(*c*) applying a maneuverable magnetic field to the magnetic material and directing said tip to the pylorus valve in the stomach.

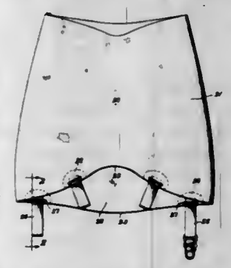
3,043,310
TREATMENT HEAD FOR ATHERMAPEUTIC APPARATUS
Arthur S. Milinowski, Norwalk, Conn., assignor to Diapulse Manufacturing Corp. of America, New York, N.Y., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,680
9 Claims. (Cl. 128—422)



1. An athermapeutic apparatus for administering therapeutical treatments to a patient comprising a cabinet, electrical means within said cabinet and operable to produce periodic pulses of high frequency oscillations of a predetermined wavelength, control means on the face of said cabinet and adjustable by an operator to select desired operating conditions of said electrical means, a drum-shaped treatment head connected to said electrical means and pivotally secured to an arm adjustably affixed to the exterior of said cabinet and adapted to be placed in juxtaposition with any desired portion of the anatomy of a patient, an oscillating circuit including capacitance and inductance elements disposed within said treatment head, and regulating means carried by said treatment head and operable from the exterior thereof to tune the load circuit which includes each individual patient to the oscillating circuit of said treatment head.

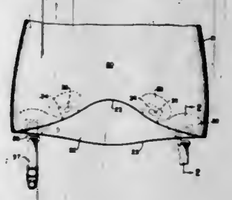
5. A treatment head for athermapeutic apparatus for administering therapeutic treatments and adapted to be placed in juxtaposition with any desired portion of the anatomy of a patient comprising a hollow housing of light metal having a face plate of insulating material on the patient side thereof, an oscillating circuit including inductance and capacitance elements within said housing immediately beneath said face plate and connected to said apparatus, and regulating means operable from the exterior of said housing to adjust one of said circuit elements to tune the load circuit which includes each individual patient to the oscillating circuit of said treatment head.

3,043,311
DEPOSITED LATEX ARTICLES
Harry J. Barth, Dover, Del., assignor to International Latex Corporation, Dover, Del., a corporation of Delaware
Filed Sept. 9, 1958, Ser. No. 760,021
4 Claims. (Cl. 128—521)



1. A deposited latex undergarment adapted to encircle and elastically shape the human torso which comprises a stretchable deposited latex wall having an edge and subject to repeated flexing and stretching during wear having at least one open pocket positioned within the confines of said wall and forming part of an edge of said wall, said pocket having closed sides and an open side, the outside surface of said pocket forming a smooth continuous surface with the surface of the wall adjacent thereto, said pocket having been integrally made during deposition of the latex wall by the formation of a completely closed pocket within the thickness of the wall and subsequent cutting of said closed pocket to form an open pocket, the region of the wall containing said open pocket comprising pliable, stretch-resistant reinforcing means embedded in said wall for resisting stretch occasioned during wear by an accessory secured within said pocket.

3,043,312
DEPOSITED LATEX ARTICLES
William J. Dorsey, Dover, Del., assignor to International Latex Corporation, Dover, Del., a corporation of Delaware
Filed Nov. 13, 1959, Ser. No. 852,782
6 Claims. (Cl. 128—521)



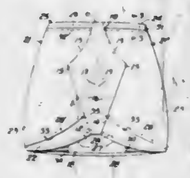
1. A deposited latex garment comprising a deposited latex wall with at least one open pocket integrally formed and positioned within the confines of said wall, said pocket having closed sides, an open side and an integral stanchion of latex uniting opposite sides thereof and defining a passageway in said pocket, the region of the wall containing said pocket comprising reinforcing means em-

bedded in said wall for resisting stress placed upon the stanchion by an accessory adapted to be attached thereto.

3,043,313
GIRDLE WITH DUAL BODY WALLS UNITED BY FRONT AND REAR PANELS

Simon Grishman, Yonkers, N.Y., assignor to William Gluckin & Company, Inc., New York, N.Y., a corporation of New York

Filed Nov. 10, 1960, Ser. No. 68,527
3 Claims. (Cl. 128—547)

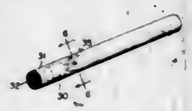


1. A girdle comprising a front panel having narrow upper and lower ends, a circumferentially wide rear panel, dual body walls between said panels, each of said body walls defining the entire side and partial front and rear parts of the girdle, forward and rear edges of said body walls being attached to the front and rear panels, each of said dual body walls comprising two relatively movable overlapped inner and outer sheets of all-way stretch material, the forward edge of one sheet extending substantially the full depth of the girdle, the rear edge of said sheet extending from the upper edge portion of the girdle to a position closely adjacent the lower edge portion thereof, and the upper edge of the other of said sheets being adjacent and spaced from the upper edge of the first named sheet throughout the length thereof.

3,043,314
SMOKING ARTICLES

Frank T. Bartolomeo, 130 Kirkwood Ave., Merrick, N.Y.

Filed Sept. 15, 1958, Ser. No. 761,198
2 Claims. (Cl. 131—9)

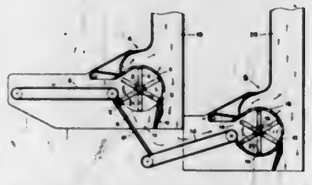


1. A smoking article comprising an elongate body including a wrapper and combustible tobacco filler material therein, the body having a rear butt end portion to be inserted into a smoker's mouth and having an opposite forward end for igniting, an absorbent filter unit embedded in the combustible tobacco filler material of said butt end portion, said unit being of a cross sectional dimension less than the cross sectional dimension of the body and completely enveloped by a substantial portion of said combustible tobacco material, the filter unit having forward and rearward ends directed longitudinally of the body, the tobacco filler material being positioned closely adjacent to the forward end of the filter unit, said article having a plurality of air conducting passages oblique to the length of the body and the passages having air inlet and outlet ends with the inlet ends spaced around the body, the said wrapper having air admitting openings therethrough equal in number to the passages and each in registry with an inlet end of an air passage, the passages converging toward the forward end of the filter unit and with the outlet ends terminating at the said forward end of the filter unit and intersecting subsantially at the longitudinal axis of the body to create a concentrated cooling effect upon the smoke by air flowing inwardly to said intersecting outlet ends to cause deposition of tars and nicotine in the absorbent filter material, the said wrapper being imperforate from said openings to both ends of the body, and said combustible tobacco filler material extending completely about the passages and extending from the passages completely to the said opposite forward igniting end.

3,043,315
TOBACCO THRESHING-WINNOWING MACHINES

Jacobus Th. Verhappen, Eindhoven, Netherlands, assignor to Koninklijke Vereenigde Tabaksindustrieen Mignot & de Block N.V., Eindhoven, Netherlands, a company of the Netherlands

Filed Mar. 10, 1959, Ser. No. 798,423
Claims priority, application Netherlands Mar. 19, 1958
3 Claims. (Cl. 131—146)



1. A machine for threshing tobacco leaves and for winnowing the leaf parts resulting from the threshing, comprising, in combination, a threshing chamber, a rotatable threshing drum contained in said chamber, a separating shaft adjacent said chamber and adapted to have an upflowing current of air produced therein by suction, the wall of said threshing chamber being formed with a first discharge opening providing direct communication between said chamber and said separating shaft, a grid provided in said first discharge opening, the wall of said chamber also being provided with a supply opening for the supply of tobacco leaves to the chamber and with a second discharge opening for discharging leaf portions which do not escape from said chamber through said first discharge opening, said second discharge opening being of sufficient size to permit said leaf portions to pass freely therethrough whereby said leaf portions are effectively removed from said threshing chamber through said second discharge opening, said supply opening and said second discharge opening lying, respectively, before and after said first discharge opening in the direction of rotation of said drum, said second discharge opening providing direct communication between the threshing chamber and a space outside the separating shaft for gravity fall of said leaves from said threshing chamber.

3,043,316
APPLICATOR FOR FLUIDS

Mary E. Bolser, Box 968, Setauket, N.Y.

Filed Feb. 2, 1960, Ser. No. 6,234
2 Claims. (Cl. 132—74.5)

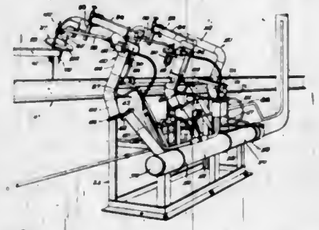


1. A non-dripping applicator for finger nail polish adapted for pressurized flow of viscous liquid comprising a resilient plastic cylindrical container for said fluid having an aperture at one end for introducing said fluid into said container and having a conical outlet nozzle having a centrally disposed orifice therein at the other end, a plurality of integral resilient circular centrally apertured valve diaphragm discs disposed in suitable parallel spaced-apart chamber forming relationship within said nozzle, said apertures of said valve discs being graduated in decreasing size toward said orifice, the apertures of said valve discs and said orifice being in axial relationship, and disposable bristle means secured exteriorly of said nozzle to axially receive the fluid coming from said nozzle orifice whereby finger pressurized flow depresses the valve discs toward the nozzle orifice and release of finger pressure creates a vacuum in the application thereby sucking in air which is trapped in said chambers to form an air plug.

3,043,317
WHEEL HUB COOLING ARRANGEMENT

Horace Hale Hursen, La Grange, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey

Filed Dec. 10, 1959, Ser. No. 858,635
13 Claims. (Cl. 134—45)

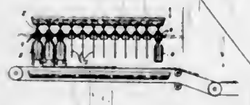


13. An apparatus for cooling a heated casting, comprising a base, a cooling head, means for mounting said cooling head to said base for general reciprocal movement into and out of operative engagement with said casting in order to deliver a spray of cooling fluid to said casting, conduit means for delivering said cooling fluid to said cooling head, a plurality of valve means for controlling the flow of cooling fluid through said conduit means, and additional means operatively connected to said valve means and responsive to predetermined movements of said cooling head toward said heated casting for sequentially actuating said valve means in order to provide a first flow of cooling air and a second flow of cooling water to said cooling head for spraying said casting.

3,043,318
MACHINES FOR WASHING BOTTLES AND LIKE CONTAINERS

Louis Hi, Paris, France, assignor to Societe Anonyme de Construction de Materiel d'Alimentation, Paris, France, a corporation of France

Filed Jan. 25, 1960, Ser. No. 4,246
Claims priority, application France Feb. 2, 1959
7 Claims. (Cl. 134—104)

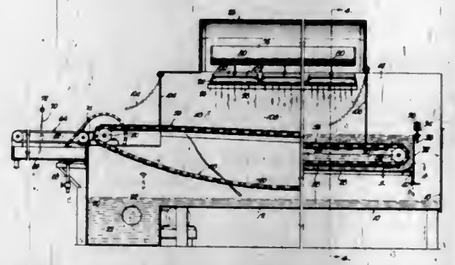


1. In a bottle washing machine, a bottle conveyor, means for directing a stream of liquid down the exterior wall of the bottle to forcibly remove a label from the bottle without damaging the label, and an endless belt conveyor underlying the path of the bottles carried by said bottle conveyor for receiving the label and removing the label and further prevent damage thereto, said means for directing a stream of liquid including a bottle clamp carried by said bottle conveyor, an upper nozzle guide carried by said bottle clamp, a lower deflector bell for deflecting liquid flowing out of a bottle down the exterior wall thereof, and a nozzle connected to a liquid supply and projecting through said bottle clamp for directing the liquid into the interior of the bottle to also wash the interior of the bottle.

3,043,319
APPARATUS FOR FREEZING FOOD PRODUCTS

Ralph S. Zebarth, Hickman Mills, Mo., assignor, by mesne assignments, to Gordon Johnson Company, Kansas City, Mo., a corporation of Missouri

Original application Dec. 16, 1957, Ser. No. 703,150, now Patent No. 3,006,774, dated Oct. 31, 1961. Divided and this application Aug. 4, 1958, Ser. No. 752,754
10 Claims. (Cl. 134—131)



1. A machine for lowering the temperature of products comprising a tank having a pair of sides and a pair of ends; an elongated, relatively shallow, liquid-receving receptacle in the tank having a flat, transversely horizontal bottom sloping downwardly toward one end of the receptacle, there being a liquid outlet in the receptacle at said one end thereof adjacent said bottom, the longitudinal edges of the bottom being attached to the sides of the tank whereby said bottom forms a partition in the tank, the ends of the receptacle being spaced inwardly from the corresponding ends of the tank, said receptacle having an upright end wall swingably suspended from said sides at said one end of the receptacle and spaced from the proximal end of the bottom, presenting said outlet between the end wall and the bottom; adjustable means limiting swinging movement of said end wall away from said end of the bottom; means for pouring a cold liquid into the receptacle to form a pool therein; and a continuous product conveyor having an uppermost flight extending and movable continuously longitudinally of the receptacle toward the opposite end of the latter, said flight being immersed in the pool below the level thereof throughout a major portion of the length of the receptacle whereby at least the lowermost area of the products resting on said flight are carried through the liquid in the pool as the products are advanced along the receptacle by said conveyor, said opposite end of the receptacle being open and said conveyor extending through said open end beyond the receptacle.

3,043,320
PORTABLE SHELTER

Charles William Moss, 1415 Beechwood Drive, Ann Arbor, Mich.

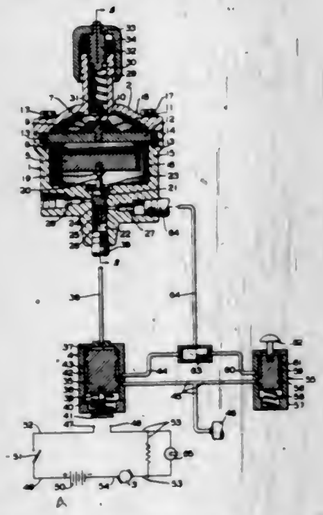
Filed Sept. 4, 1959, Ser. No. 838,353
14 Claims. (Cl. 135—1)



8. A portable shelter comprising a fabric cover having a pair of side walls inclined toward one another and joined together to form an upper edge, a pair of end walls joined to said side walls and extending upward a limited distance below said upper edge and thereabove diverging from one another until reaching said upper

edge so that an overhang is provided at each end of the cover, and a bottom wall connected to the lower edges of said side and end walls, and a frame assembly for supporting said cover, said frame assembly having rigid members extending respectively from said bottom wall adjacent the side walls to the apexes of said overhangs, and means at the corners of the cover defined by the side, end and bottom walls for securing said cover to a supporting surface.

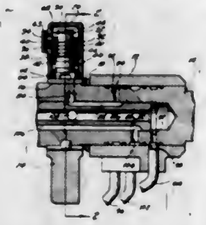
3,043,321
CONTROL SYSTEM EMBODYING VIBRATION RESPONSIVE VALVE DEVICE
Ellis E. Hewitt, Ruffsdale, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed July 3, 1959, Ser. No. 824,857
8 Claims. (Cl. 137—46)



1. An inertia-responsive control mechanism comprising stationarily mounted bearing means, weight means tiltably supported on said bearing means and having a normally vertically disposed central axis, an element coaxially depending from the lower end of said weight means, said element having an inclined side and a coaxially arranged tip, vertically reciprocable valve means biased by a bias pressure to a normal position in which its upper tip-like end coaxially abuts the tip of said element and in which it supplies pressure fluid via a port to a chamber, said weight means and element being tiltable out of vertical responsively to inertia to thereby cause said bias pressure to drive said tip-like end up along the inclined side of said element and thereby shift said valve means to an abnormal position in which it cuts off said chamber from said port and connects said chamber to a vent, and control means controlled by pressure of fluid in said chamber and rendered ineffective or effective to perform a preselected control operation according to whether chamber pressure is respectively above or below a chosen value.

3,043,322
HYDRAULIC PRESSURE GOVERNOR
George W. Schulz, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 24,996
16 Claims. (Cl. 137—54)

1. A fluid pressure governor comprising a valve body, said body being secured to a rotary member, a bipartite valve element disposed in said valve body, a fluid pressure inlet port and a fluid pressure outlet port in said valve body, said valve element being responsive to centrifugal force to control the degree of communication between said ports and to establish a governor pressure signal in said outlet port that is proportional in magnitude to the speed of rotation of said rotary member, said valve element having opposed fluid pressure areas, said areas being subjected to said governor pressure to oppose and tend to balance said centrifugal force, one part of said



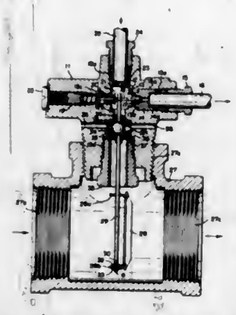
valve element being movable with respect to the other, means for yieldably opposing such relative motion, and cooperating pressure distributing portions on said valve element parts adapted to selectively control the distribution of governor pressure to one of said pressure areas whereby the net effective area of said valve element on which governor pressure is caused to act is changed when the speed of rotation of said rotary member increases from a value less than a predetermined value to a value greater than that predetermined value.

3,043,323
BAKABLE ULTRA-HIGH VACUUM VALVE
John T. Mark and Ira H. Gantz, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 8, 1959, Ser. No. 858,257
9 Claims. (Cl. 137—67)



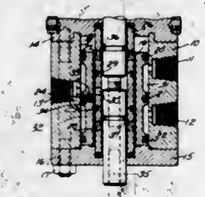
1. A bakable ultra high vacuum valve comprising a first valve member having two adjacent coaxial portions, one of said portions having a cylindrical periphery and the other of said portions having a frusto-conical periphery extending inwardly of said cylindrical periphery, said valve member being made of copper and said one of said portions having a predetermined outer diameter, a ring shaped second valve member made of a harder material than copper and having an inner diameter smaller than said predetermined outer diameter, said cylindrical periphery of said first valve member extending parallel to the longitudinal axis of said first member and to the inner surface of said second valve member, said ring shaped valve member having an annular lip defined in part by a continuation of the outer surface of said ring shaped valve member, said lip having a radius of curvature of from about two to about six mils, means mounting said members in coaxial relation, and means connected to one of said members for moving the same toward and into telescoped relation with respect to the other of said members, said lip opposing said moving means with sufficient force to produce a weld between said members while refraining from a deliberate application of welding heat to said members, during a closure of said valve, and to facilitate rupture of said weld on a subsequent opening thereof.

3,043,324
FLOW VALVE
Hugh M. Morgan, Culver City, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 8, 1960, Ser. No. 41,692
6 Claims. (Cl. 137—87)



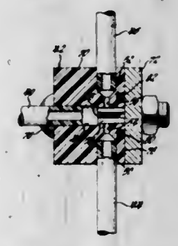
5. In a control device, the combination comprising a housing having two spaced cavities, a control device in one of said cavities, a fluid flow responsive means in the other cavity, a stepped bore extending between said cavities, an actuating stem extending through said bore and operably connected at one of its ends to said control device and at its other end to said fluid flow responsive means, a ball pivot on said stem intermediate its ends, a first elastic sealing ring surrounding said stem adjacent one side of said pivot and positioned in a step of said bore, said ring having a thin sleeve portion of a normally smaller inside diameter than the diameter of said stem and terminating in an enlarged diameter portion and then in a section of a sphere having a radius equal to the radius of said ball pivot, a flange portion extending outwardly from said section, a second elastic sealing ring similar to said first ring and surrounding said stem adjacent the other side of said ball pivot and positioned in said step in spaced relationship with respect to said first ring to form an annular space therebetween, a passage extending from said annular space to the atmosphere, and means for holding said second sealing ring against said pivot and said pivot against said first sealing ring.

3,043,325
PRESSURE RELAY
Richard S. Slawson, Barrington, R.I., assignor to George W. Dahl Company, Inc., a corporation of Rhode Island
Filed Apr. 27, 1960, Ser. No. 25,034
1 Claim. (Cl. 137—112)



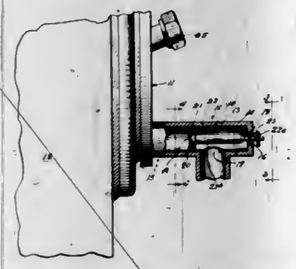
A high pressure selector valve comprising a cylindrical part having a pair of fluid passageways, a body part receiving said cylindrical part for relative movement therebetween, said body having a pair of spaced ports on either side of said passageways, each passageway communicating with a port in said body, an annular groove formed in one of said parts and facing the other part, said groove communicating with each of said ports, said passageways opening into said groove at opposite sides thereof, the interior of said cylindrical part defining a bore communicating with said passageways, a resilient sealing element in said groove in engagement with said parts, said sealing element having a dimension in cross section less than the width of the groove and being yieldably movable therein under fluid pressure from said ports so as to engage the sides of the groove adjacent the passageways and select for flow to the bore the highest of the two pressures appearing at the two parts, an operating stem and a spool surrounding said stem disposed in said bore, said cylindrical part having means sealing the end portions thereof to the body part, said spool having a central port therein, O-rings sealing the spool to the bore at either side of the central port, a pair of bleed passageways opening through the spool remote from the central port and on the other side of said O-rings, means disposed on said stem for selectively sealing off said bleed passageways forcing said cylindrical part to reciprocate in said body by applying fluid pressure to an end portion thereof.

3,043,326
AIR SUSPENSION CONTROL APPARATUS
Charles W. Latreille, Troy, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,633
2 Claims. (Cl. 137—112)



1. A cross-flow control device comprising a body having a flat bottomed cavity formed in one face thereof, said cavity having opposite curved walls and slotted end portions, a first port in said body opening through the flat bottom of said cavity, second and third axially aligned ports in said body opening into said cavity through said curved walls, a flexible strip disposed in said cavity with its opposite ends located in said slots, a perimetrical groove formed in the face of said body surrounding said cavity, an O-ring in said groove and a cover plate secured over said face in abutting engagement therewith whereby said O-ring is compressed to form a fluid tight seal closing said cavity.

3,043,327
VALVE CONSTRUCTION
Alden H. Wakeman, Lake Mills, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 24, 1957, Ser. No. 685,888
3 Claims. (Cl. 137—112)



1. A sanitary valve construction comprising an elongated housing provided with a cylindrical chamber, a

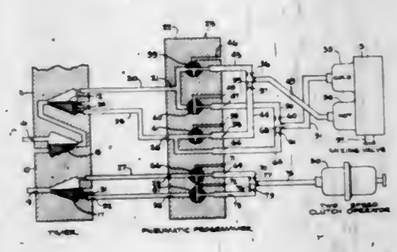
first port formed in said housing adjacent one end of said chamber, a second port formed in said housing adjacent the opposite end of said chamber and axially aligned with the longitudinal axis of said chamber, and a third port formed in said housing and communicating with said chamber and disposed intermediate said first and second ports and having the axis thereof substantially transverse to the longitudinal axis of said chamber, and a piston mounted within said chamber for movement longitudinally thereof, said piston including a head portion in slidable sealing engagement with the interior surface of said chamber, said head portion being movable between a first terminal position intermediate said first and third ports wherein said second and third ports are in communication with one another, and a second terminal position intermediate said second and third ports wherein said first and third ports are in communication with one another, the movement of said head portion from said first to said second terminal positions being automatic when a predetermined pressure differential is attained between said first and second ports, and an elongated stem portion extending transversely from one surface of said head portion and movable therewith, the length of said stem portion being greater than the distance between the first terminal position of said head portion within said chamber and said second port whereby segments of said stem portion are continuously disposed on opposite sides of said second port, said stem portion having first and second sections, said first section being of greater length than the axial length of said second port and being disposed within said second port when said head portion is at said first terminal position, said stem first section cooperating with said second port to form a restrictive passageway, the second section of said stem portion being axially aligned with said first section and interconnecting said first section and said head portion, said stem second section having a length less than the distance between any portion of said head section, when in its first terminal position, and the end of said second port adjacent said chamber and greater than the distance between any portion of said head section, when in its second terminal position, and the end of said second port adjacent said chamber, said stem second section being of greater diameter than said first section and in sealing engagement with the second port when said head portion is in said second terminal position, said third port being substantially always in communication with either said first or second ports.

3,043,328

PNEUMATIC SELECTION SYSTEM

Wesley L. Taylor, Glenview, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed Mar. 6, 1959, Ser. No. 797,716
4 Claims. (Cl. 137—112)



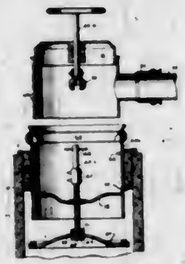
1. In a program selector valve adapted to preselect a program of operation of a plurality of pneumatic motors and the like, a valve block, separate inlets leading into said valve block, said inlets being alternately operable to supply pressure to said valve block and to vent air therefrom, a three position first valve in association with one inlet, a three position second valve in association with said other inlet, two outlet ports leading from said first valve, two outlet ports leading from said second valve, said first and second valves being positionable to connect two outlet ports to an associated inlet and to vent either outlet port to atmosphere, fluid connections between one outlet port for each valve, fluid connections between the other outlet port for each valve, common outlets from each fluid connection, and pressure operated valve means in each fluid connection controlling the flow of fluid under pressure from one outlet port in accordance with the differential in pressure across said outlet port and venting each outlet port to atmosphere upon the selection of a different program during the carrying out of a preselected program and thereby accommodating the changing of a selected program at any time during the carrying out of a preselected program.

3,043,329

IRRIGATION VALVE

Claud E. Helweg, Lubbock, Tex., assignor of twenty percent to Wendell Coffee, Lubbock, Tex.

Filed Apr. 24, 1959, Ser. No. 808,666
3 Claims. (Cl. 137—321)



2. An irrigation riser valve comprising: a cylindrical valve housing with a bottom portion and upper portion; the valve housing having a spider assembly attached at the bottom of the bottom portion; said spider assembly having a valve seat coaxial with the housing at its bottom edge, having an internal threaded bore at the axis thereof, and having an outward extending radial flange; said flange extending to a greater extent than any other portion of said housing; a threaded rod screwed through the threaded bore; a lid attached to the bottom of the rod; so that when the rod is rotated, the lid fits tighly against the valve seat, thus preventing any flow of fluid into the valve housing through the bottom portion thereof; a cup shaped cap attached at the top portion of the valve housing; means connected with the cap for rotating the rod; and a pipe connection extending radially from the upper portion of the housing; so arranged and constructed that the housing is adapted to be telescoped within a pipe and the flange acts as a form so that concrete may be poured into the annular space between the valve housing and pipe.

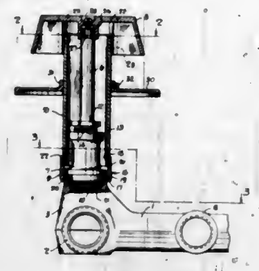
3,043,330

BONNET, ESCUTCHEON AND SLEEVE CONSTRUCTION

Stephen A. Young, R.R. 5, Monticello, Ind.

Filed Apr. 9, 1959, Ser. No. 805,317
4 Claims. (Cl. 137—359)

1. In valve construction of the class described, in combination, a body, a stem and bonnet therefor, a sleeve surrounding and concealing said bonnet, a sleeve holder, said bonnet engaging and positioning the holder, the sleeve



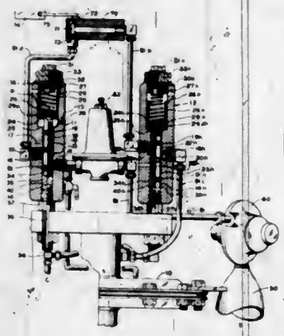
engaging said holder, a handle on said stem, and having a section enclosing a portion of the sleeve.

3,043,331

PRESSURE CONTROLLER

Clifford M. Peters, Longview, Tex., assignor to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 12, 1956, Ser. No. 577,753
11 Claims. (Cl. 137—458)



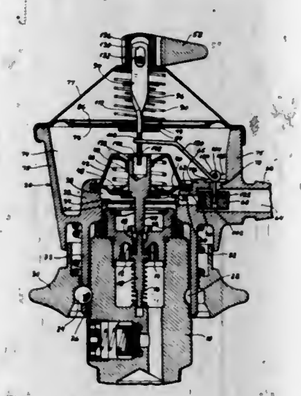
1. An apparatus for increasing and decreasing pressure applied to a pressure responsive mechanism upon a controlled pressure rising above a maximum value or falling below a minimum value comprising, in combination: first and second two-way pilot valves, each having a valve member movable to communicate an outlet port of its pilot valve alternately with an inlet port and with a vent port; conduit means connecting the outlet port of one pilot valve with the inlet port of another pilot valve; and means for moving said valve members, including for each valve member, a pressure responsive means and a resilient means connected to the valve member to apply opposing forces thereto; the relative size of the pressure responsive means and resilient means of each pilot valve being such that as the controlled pressure rises above and falls below said minimum value, said one pilot valve has its valve member moved to communicate its outlet port with its inlet port and with its vent port respectively, and as the controlled pressure rises above and falls below said maximum value, said other pilot valve has its valve member moved to communicate its outlet port with its vent port and with its inlet port respectively, whereby as long as the control pressure is without the range between said maximum and minimum values, pressure applied to a pressure responsive mechanism is reduced but upon the control pressure coming within said range, such applied pressure is increased.

3,043,332

GAS CONTROL UNIT

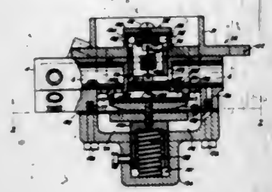
Eric Oscar Henriques and Henning Ölund Rasmussen, Nivaa, Denmark, assignors to A/S Kosangas, Copenhagen, Denmark, a company of Denmark

Filed Aug. 14, 1958, Ser. No. 755,022
5 Claims. (Cl. 137—484.4)



1. A gas control unit, for use in connection with a container for bottled gas having a discharge valve, comprising in combination, a casing having an entrance adapted to receive high pressure gas, and having an outlet spaced apart from said entrance, said casing defining on its interior a high pressure gas chamber intercommunicating with said entrance, a low pressure gas chamber, a gas passage interconnecting said gas chambers and intercommunicating with said outlet, a high pressure first diaphragm disposed within said casing closing one side of said high pressure gas chamber, a high pressure valve spindle connected to said first diaphragm and reciprocably movable therewith between opposite opening and closing positions, a first spring disposed in said casing biasing said first diaphragm and valve spindle to said opening position, a low pressure second diaphragm disposed in said casing closing one side of said low pressure gas chamber, said gas passage including a valve seat, a valve member reciprocably movable in said gas passage forming with said valve seat a low pressure valve, movable connecting means establishing a driving connection between said second diaphragm and said valve member, a second spring disposed in said casing biasing said second diaphragm to a normal position wherein said connecting means will open said low pressure valve, whereby said low pressure valve will normally be open permitting gas to flow through said passage and, respectively, an increase in gas pressure prevailing in said low pressure gas chamber sufficient to overcome the biasing force of said second spring will act upon said second diaphragm to operate said connecting means to close the low pressure valve, a handle member movable between active and inactive positions, said connecting means including a movable control member connected to said second diaphragm and means including a lost motion device interconnecting said two diaphragms, and a lost motion connection between said handle member and said control member, said lost motion connection and device affording limited movement of both diaphragms free from motion transmission to each other when said handle member is in the inactive position, and actuation of said handle to the active position operating to move said connecting means against the power of said springs.

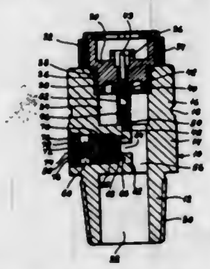
3,043,333
VALVE ASSEMBLY
Keith K. Kugler, Beatrice, Nebr.
(Culbertson, Nebr.)
Filed May 7, 1956, Ser. No. 583,081
2 Claims. (Cl. 137—506)



1. A valve assembly for a metering pump particularly for metering liquid which gives off vapors at Fahrenheit temperatures between 1° and 110° Fahrenheit comprising a cylinder head having an inlet port means, means in said cylinder head providing a first chamber disposed in communication with said inlet port means, and an inlet valve seat surrounding said inlet port means, an inlet valve in said inlet port means, means urging said valve into a closed position against said inlet valve seat, said valve positioned to be opened by suction on its side opposite its inlet valve seat, said cylinder head having second and third chambers disposed alongside each other, a flexible resilient diaphragm disposed between and separating said second and third chambers, said second chamber being separated from said first chamber, a passageway through said cylinder head connecting said first chamber and said third chamber to admit fluid to said third chamber to counteract pressure against said diaphragm from fluid in said second chamber, an outlet valve in said second chamber and attached to said diaphragm and movable therewith, an annular outlet valve seat extending into said second chamber from said cylinder head and cooperative with said valve, means coacting with said outlet valve to bias said outlet valve into a seated position and opening when said diaphragm is pressed by a liquid that is forced in a direction away from said outlet valve seat, an outlet port means extending through said cylinder head from said second chamber to conduct fluid from said second chamber when said outlet valve is in an open position, said outlet port means opening upon said second chamber from within said valve seat whereby when said second valve is seated said outlet port means is closed, said cylinder head having an opening extending therethrough from the outside thereof to said second chamber when fluid is directed into the outer ends of said opening the liquid can flow through said opening into said second chamber.

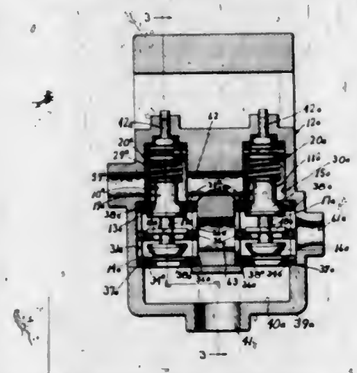
3,043,334
GAS CYLINDER FITTING
Eric Oscar Henriques and Henning Ölund Rasmussen, Nivaa, Denmark, assignors to A/S Kosangas, Copenhagen, Denmark, a company of Denmark
Filed July 17, 1958, Ser. No. 749,283
4 Claims. (Cl. 137—588)

1. A gas cylinder fitting comprising in combination a body, the lower part of which being adapted for insertion into and fastening to a gas cylinder; said body having an upwardly open upper compartment and a downwardly open lower compartment; a partition wall separating said two compartments and being disposed above said lower part of said body; a straight main passage defined in said partition wall connecting said two compartments; a valve bushing having a gas outlet passage inserted in the upper portion of said upper compartment; a valve member received in said upper compartment; resilient means disposed in said upper compartment and coaxial with said valve member and said gas outlet passage urging said valve member towards said valve bushing; said valve member and said valve bushing cooperating to form a discharge valve operable to be opened by force exerted against the valve member and overcoming the power of said resilient means; said body further having a side bore extending into said partition wall from the outer side of said body; a shoulder dividing said side bore from said main passage and having an opening connecting at right



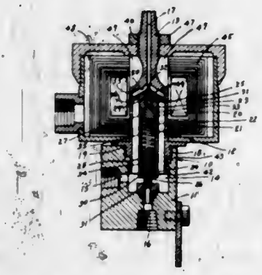
angle said side bore and said main passage; an excess pressure safety valve member received in and disposed entirely within said side bore; means disposed in said bore and operable for resiliently urging said safety valve member against said shoulder; said safety valve member and said shoulder co-operating to form a safety valve, said main passage being positioned in said partition wall eccentrically of the center axis of said upper compartment and at the side of said partition wall opposite said side bore therein, thereby leaving said partition wall sufficiently long for said side bore to be deep enough to enclose said safety valve throughout the length thereof.

3,043,335
FLUID CONTROL VALVE
Nathan C. Hunt, Salem, Ohio, assignor, by mesne assignments, to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Original application Apr. 20, 1953, Ser. No. 349,595, now Patent No. 2,908,291, dated Oct. 13, 1959. Divided and this application Sept. 22, 1959, Ser. No. 841,578
5 Claims. (Cl. 137—623)



1. A safety device for a fluid pressure actuated mechanism, comprising valve body means having a pair of spaced-apart bores, a piston movable axially in each of said bores between two positions and having a pair of valve heads movable therewith within respective bores, a pair of axially spaced facing valve seats in each of said bores, said bores each having an inlet port disposed between a said piston and a valve seat adjacent to said piston and an exhaust port communicating with the other valve seat and an outlet port disposed intermediate said seats, one of said inlet ports communicating with a source of fluid pressure and one of said outlet ports communicating with said mechanism, said pairs of valve heads in one position respectively engaging with one seat of respective seat pairs to close said exhaust ports and disengaging from the other seat of respective seat pairs to establish flow of fluid under pressure to said mechanism through said one outlet port, and said pairs of valve heads in another position respectively engaging with said other seat of respective seat pairs to close said inlet ports and disengaging from said one seat of respective seat pairs to establish communication between said outlet ports and said exhaust ports, conduit means establishing communication between the inlet ports of said bores, and further conduit means establishing communication between the outlet ports of said bores.

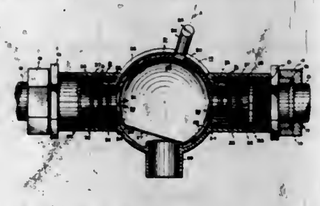
3,043,336
SOLENOID VALVE
Charles Pierre Parent, Indianapolis, and Robert Bruce Spear, Beech Grove, Ind., assignors to Atkomatic Valve Company, Inc., Indianapolis, Ind., a corporation
Filed Apr. 17, 1959, Ser. No. 807,139
7 Claims. (Cl. 137—625.27)



1. A solenoid-operated valve comprising an element formed to provide a chamber, said element having a pair of passages opening into said chamber on opposite sides thereof, an armature, a pair of plungers reciprocably mounted in said armature so as to project oppositely therefrom toward respective ones of said passage openings, said plungers having outward faces formed for seating in said passage openings, said armature being formed with a pair of abutments for preventing movement of said plungers past respective outermost positions relative to said armature, and a spring arranged between said plungers and yieldably urging said plungers into their outermost positions, said armature being reciprocably mounted within said element for movement between a position in which one plunger is seated in one passage opening and a position in which the other plunger is seated in the other passage opening.

3,043,337
MIXING VALVE
Gerhart Jansen, 918 E. South Temple, Salt Lake City, Utah
Filed Jan. 4, 1960, Ser. No. 302
3 Claims. (Cl. 137—625.41)

1. A mixing valve including, in combination, a generally spherical, valve casing shell having a pair of fluid inlet ports and a discharge port, a spherical valve body movably disposed within said valve casing shell and having a pair of fluid admittance apertures and a discharge aperture, all of said apertures being in communication with each other within the valve body, a shaft affixed to said valve body, said casing exhibiting an elongated, slot-like guideway admitting said shaft, and handle means affixed to said shaft for rotating the same, said shaft being arcuately translatable within said guideway and also rotatable by said handle about the shaft's own axis, said pair of fluid admittance apertures of said valve body being offset with respect to registry with said casing shell inlet ports such that movement of said shaft within said guideway will vary only the proportion of the two fluids in the mixture discharged from the valve without altering the rate of flow of the discharge, whereas rotating said shaft about its axis will vary the rate of flow of the discharge without varying the proportion of the two fluids in the mixture, and wherein each of said fluid inlet ports com-



prises: an outer, cylindrical member, a medial, cylindrical guide member concentrically and fixedly disposed within said outer, cylindrical member, and a sealing cylinder having a spherically ground, bearing end abutting said valve body to form a fluid seal therewith, said sealing cylinder having a flared, doubled-back end portion disposed around the end of said medial guide member and disposed between said medial guide member and said outer, cylindrical member, and a compression spring concentrically disposed between the end of said medial member and said flared, doubled-back end portion of said sealing cylinder.

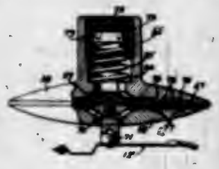
3,043,338
DOUBLE ACTION HYDRAULIC CYLINDER
Alfred H. Hanson, Garrison, N.Y., assignor to Crowell Designs, Inc., Point Pleasant, N.J., a corporation of New Jersey
Filed June 8, 1961, Ser. No. 118,488
9 Claims. (Cl. 137—784)



1. A hermetically sealed double action hydraulic unit comprising a hollow body having means defining a first chamber within said body at one end thereof and means defining a second larger chamber within said body at the other end thereof in communication with the first smaller chamber, a ram within said body extending in spaced-apart relationship with said first and said second chambers and axially movable within said first and second chambers, the surface of said ram and said first chamber wall defining the peripheral walls of a first clearance space, the surface of said ram and said second chamber wall defining the peripheral walls of a second clearance space, a flexible sealing member attached to the end of said ram and having its periphery normally in sliding, sealing contact with said first chamber wall, and an annular, flexible diaphragm in sealed coaxial attachment at its outer peripheral edge to said hollow body intermediate said first and second chambers and in sealed coaxial attachment at its inner peripheral edge to said ram, and having extending between said edges a single annular fold travelling within said second clearance space, said annular diaphragm permitting axial movement of said ram within said body, said flexible sealing member and said annular diaphragm defining therebetween a first volume and a-

second volume within said first and second clearance spaces, respectively, said flexible sealing member being movable under hydraulic pressure to admit fluid to said volumes, said flexible sealing member being biased to return to its normal position thereby preventing the removal of fluid from said volumes, said first and said second clearance spaces dimensioned so that when said ram is moved within said hollow body, thereby moving said sealing member and the annular fold of said diaphragm, the rate of change of said first volume is equal to the rate of change of said second volume; whereby the total of said first and second volumes is maintained constant.

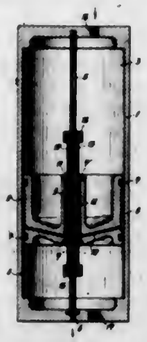
3,043,339
PRESSURE SENSING DEVICE
Hall Langstroth, 1454 Alegriano Ave., Coral Gables, Fla.
Original application Oct. 9, 1956, Ser. No. 621,333, now Patent No. 2,950,421, dated Aug. 23, 1960. Divided and this application May 18, 1959, Ser. No. 814,090
3 Claims. (Cl. 137—788)



1. A pressure sensing device comprising rigid top and bottom housing sections having opposingly dished wall surfaces peripherally delimited by opposing clamp faces; a flexible diaphragm having a peripheral marginal area clamp sealed between the peripheral clamp faces of the dished wall surfaces of said housing sections with its central body portion free to move in opposite directions between said dished wall surfaces, said wall surfaces being respectively formed to provide shear free abutment surfaces for the major portion of said central body portion and centrally centered passages therethrough terminating at their intersections with said wall surfaces in internally oppositely facing recessed seats; respective centrally located shafts having sealed connection with the midportion of said central body portion, oppositely facing seating formations on said shaft adapted for mating arresting engagement in the respective recessed seats in said housing wall surfaces and respective shaft portions extending through said centered passages; means adapting one of said centered passages for connection to an input pressure source and to abuttingly engage a biasing spring; spring means connected to the shaft portion in said one centered passage and reacting against said passage adapting means to oppose the input pressure acting in one direction and maintain said central body portion in a predetermined position between said housing sections; and means adapting the other shaft portion for connection to a suitable sensing element for sensing movements of said diaphragm and body in response to variations in input pressure, said contoured walls and said mating shaft seating formations cooperating to form an uninterrupted backing surface engageable, upon excessive pressure deflection of said diaphragm in either direction, to rigidly back up said diaphragm over its entire central body portion and prevent rupture of the diaphragm.

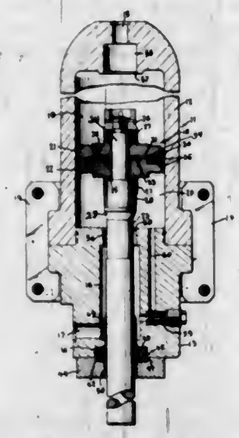
3,043,340
PISTON-OPERATED PRESSURE RESERVOIR
Herbert Rehbock, Mainz, Germany, assignor to Cadillac-Jordan G.m.b.H., Mainz-Mombach, Germany, a firm
Filed May 16, 1961, Ser. No. 110,475
2 Claims. (Cl. 138—31)

1. A piston-operated pressure reservoir comprising a reservoir cylinder, a piston movable in the cylinder and dividing it into a chamber for a gas to be compressed and a chamber for a pressure fluid, an air inlet tube extending through the cylinder from end face to end face and fixed thereto and communicating at at least one of its extremities with the outside air, a first pair of O-shaped axially spaced sealing rings and an annular recess provided in the outer jacket of the piston, a second pair of



O-shaped axially spaced sealing rings and an annular recess provided in the hub of the piston, channels provided in the piston and connecting said annular recesses, and bores provided in the air inlet tube so as to allow outside air to be fed to the annular recess in the hub of the piston and through the channels to the annular recess in the outer jacket of the piston.

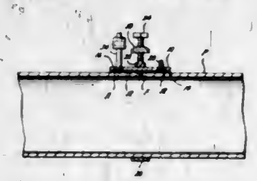
3,043,341
HYDRAULIC ACCUMULATOR
Ronald Frederick Worlidge, Lower Parkstone, Dorset, and Sidney Philip Basevi, Winton, Bournemouth, England, assignors to The Loewy Engineering Company Limited, Bournemouth, England, a company of Great Britain
Filed July 12, 1957, Ser. No. 671,564
5 Claims. (Cl. 138—31)



1. A hydraulic gas-loaded accumulator comprising a vessel, a piston displaceable in said vessel and partitioning the space in said vessel into two compartments of which one is filled with hydraulic liquid and the other one with the loading gas, a piston rod extending through said piston and, extending from one side only of said piston to the outside of said vessel, said piston consisting of two superposed discs, a sealing ring placed between said discs and contacting the inside wall of said vessel, said sealing ring being made of an elastic and compressible material which

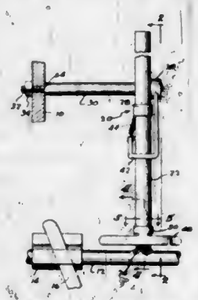
when under compression will behave like a fluid under hydrostatic pressure, said sealing ring having an area smaller than the area of said discs and overlying approximately the outer half of the radius of said discs so as to leave a free space between the central portion of said discs, around said piston rod, said sealing ring being of a thickness so as to provide said free space between said discs at all times and a seat for said piston, formed on said piston rod against which said piston is urged by the fluid medium in the compartment, which is opposite the compartment through which said rod extends, said space between said discs being permanently in free communication with that side of said piston which is opposite to that from which said rod extends.

3,043,342
COLD PATCH WITH INSERTABLE ADHESIVE MEANS FOR REPAIRING PIPES
Thomas T. Graham, 3211 Maroneal St., Houston, Tex.
Filed Dec. 21, 1959, Ser. No. 861,102
2 Claims. (Cl. 138—99)
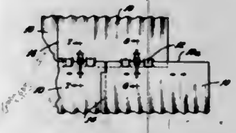


1. A patch for pipes containing fluid under pressure comprising a body having a concave face shaped to conform to the curvature of the external surface of a pipe, an inner pad of resilient material on the face of the body in position for sealing engagement with the pipe about an opening in the wall of the pipe to close the opening, an outer pad of resilient material on said face in position for sealing engagement with the pipe to form with the pipe, body and inner pad a chamber surrounding the inner pad, said body having spaced apart openings in communication with said chamber and opening to the exterior of the body and through one of which a sealing material may be introduced into said chamber while allowing an outflow of gas from the chamber through the other of said openings to completely fill the chamber with the sealing material.

3,043,343
LUBRICATOR MECHANISM FOR A PICKER SPINDLE
Albert J. De Pellegrini, 128 Prospect Heights, Stafford Springs, Conn., and Phillas J. Martell, 22 Main St., Somerville, Conn.
Filed Jan. 22, 1960, Ser. No. 4,064
6 Claims. (Cl. 139—158)



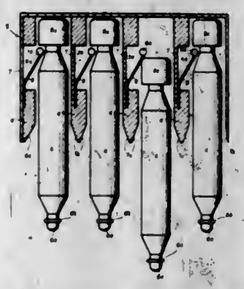
1. In a lubricator mechanism for a picker spindle having a picker slidable therealong, a swingable lubricant reservoir having a lubricant applying means projecting from the bottom disposed so that the lubricant applying means engages said spindle, and an actuator fixedly supported on said reservoir adjacent said lubricant applying means and lying in the path of the picker, sliding movement of said picker toward said reservoir causing engagement of said picker with said actuator and swinging of said reservoir and the lubricant applying means to a position in which the lubricant applying means is out of engagement with said spindle.

3,043,344
LOCKING COMBINATION FOR NESTABLE CULVERT
Hernando J. Montoya, Barranquilla, Colombia, and George W. Underwood, Middletown, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Mar. 27, 1958, Ser. No. 724,424
2 Claims. (Cl. 138—158)



1. In a culvert pipe of the offset seat type composed of semi-circular sections, wherein said sections have slots parallel to, and adjacent the edges of the respective sections, with pairs of said slots being in circumferential alignment when said sections are assembled, a locking structure comprising a two-piece fastening assembly for drawing and holding said sections together during handling prior to permanent placement of said pipe, each of said pieces comprising a strip of sheet metal having at one end an offset flange and shoulder, said flange passing through one of said aligned slots and resting in radial bearing relationship against the inside wall of said section, said shoulder seated in said one slot in circumferential bearing relationship with the edge thereof nearest the edge of the section, one of said pieces having an eye and the other piece having a curved tongue extending outwardly through said eye, forming approximately a 180° bend, such that said sections are held in fixed relationship.

3,043,345
DEVICE FOR FACILITATING INSERTION OF BOBBINS IN RESERVE BOBBIN MAGAZINES
Otto Geiger, Ruti, Switzerland, assignor to Ruti Machinery Ltd., formerly Caspar Honegger, Ruti, Zurich, Switzerland
Filed May 24, 1960, Ser. No. 31,312
Claims priority, application Switzerland Apr. 22, 1960
5 Claims. (Cl. 139—245)



1. In a reserve bobbin magazine, in combination, a plurality of spaced walls forming at least one guideway to receive bobbins therein in parallel, stacked relationship, said guideway having one side open to allow axial insertion of the bobbins therein, means comprising deflectable means for releasably holding the bobbins from

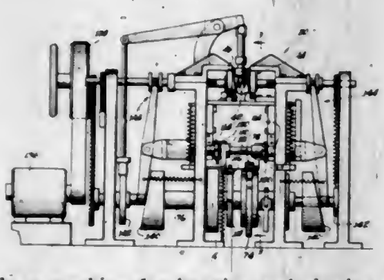
being displaced axially outwardly of the magazine once disposed in said guideway and constructed to allow the bobbins to move in parallel longitudinally of the guideway, said deflectable means comprising at least one resilient member having a free deflectable end portion extending inwardly into said guideway and in a direction away from said open side, said end portion being disposed in position to be deflected by said bobbin when inserted into the guideway and away from the path of travel of said bobbins when being inserted axially into said guideway and constantly biased in a direction toward the bobbins, and said end portion being positioned to engage a butt end portion of said bobbins at least when said bobbins move axially in a direction toward said open side.

3,043,346
WEFT THREAD CUTTING DEVICE
Erhard Kenk, Vaihingen (Enz) Nord, Württemberg, Germany
Filed June 15, 1960, Ser. No. 36,285
Claims priority, application Great Britain June 15, 1959
10 Claims. (Cl. 139—303)



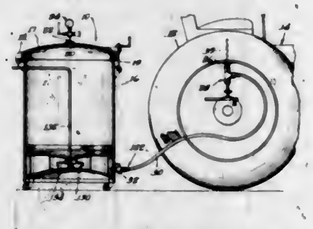
6. In a thread cutting device, in combination, a cutter block having a bore therein extending in one direction, said cutter block having in a wall portion thereof bounding said bore at least one notch extending through said wall portion into said bore, said wall portion being formed with a slot extending in the direction of said bore through said wall portion and across said notch, and into said bore and having a width smaller than the width of said bore; and a cutting pin slidably mounted in said bore for reciprocating movement along the same, and having an end surface traversing said notch during reciprocating movement of said cutting pin whereby a thread located in said notch and extending across said bore, is cut off by said cutting pin while thread fibers are pushed out through said slot.

3,043,347
SPIRAL COMPRESSION SPRING AND METHOD AND MACHINE FOR MAKING SAME
James Piliero, Astoria, N.Y., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,462
14 Claims. (Cl. 140—101)



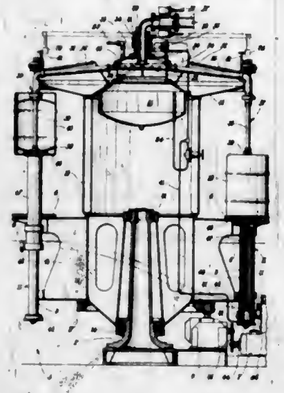
12. In a machine for knotting and shaping a spiral spring having terminal convolutions at opposite ends, the combination of two spring support heads disposed in opposing spaced relation to each other for supporting terminal convolutions of a spring disposed therebetween, two rotary knotting elements, means for effecting movement of said knotting elements into coacting relation to a spring supported between said heads, two spring forming elements mounted in adjacent relation to said respective knotting elements and having normal positions spaced from the axes of the respective knotting elements, means coacting with said forming elements to move the latter from the normal positions thereof across the axes of the respective knotting elements in radially outward directions with respect to the centers of the terminal convolutions of a coacting spring to form reverse bends in each end of the spring embraced by said knotting elements, means for rotating said knotting elements, and each of said knotting elements including a wrapping element spaced from the adjacent spring forming element for engagement with the free end of an adjacent spring terminal convolution as an incident to rotation of the knotting element to wrap the free end of the terminal convolution around the spring inwardly of the innermost one of the adjacent reverse bends to form a knot extending up to said innermost adjacent bend.

3,043,348
APPARATUS FOR INTRODUCING LIQUID INTO AND REMOVING FROM A PNEUMATIC TUBE
Henry Wellsch, Swift Current, Saskatchewan, Canada
Filed Sept. 22, 1958, Ser. No. 762,611
4 Claims. (Cl. 141—38)



1. Means for filling a pneumatic tire with liquid under pressure and removing liquid from the tire, comprising, in combination, a tire valve stem defining a bore extending thereinto from the outer end thereof, a valve sleeve shaped and dimensioned diametrically to fit normally into said valve stem bore from the outer end thereof, the transverse outer dimensions of said sleeve being substantially equal to the corresponding transverse dimensions of said bore, said valve sleeve defining an axial bore therethrough, a valve mounted on said sleeve in biased blocking relation to said bore therein, a tubular extension on the inner end of said sleeve communicating with said bore therein and extending inwardly therefrom, said tubular extension having an external diameter substantially less than the internal diameter of said stem bore, retaining means normally securing said sleeve within said stem bore, a hollow body having connecting means thereon for detachably connecting the body to said valve stem, means forming a fluid supply connection to the interior of said body, a retractable actuating stem extending into said body toward said valve stem and including on the inner end thereof means for engaging said retaining means to release said sleeve for retraction thereof with the valve outwardly of said stem bore into said body with said tubular extension defining with said valve stem an annular liquid path, a retractable connecting tube extending through said actuating stem and having means on the inner end thereof adapted to connect with said sleeve to communicate with said bore therethrough and including means for shifting said valve to open position, and fluid flow control means on the outer end of said tube.

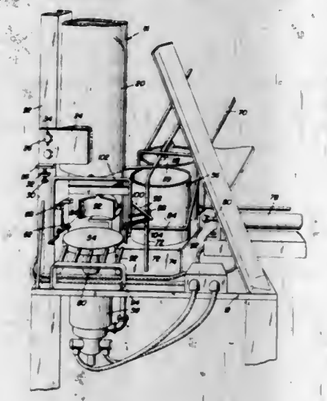
3,043,349
APPARATUS FOR FILLING CONTAINERS WITH LIQUID
Norman James Herbert Bennett, North Kew, Victoria, Australia, assignor to Vickers Ruwolt Proprietary Limited, Richmond, Victoria, Australia, a company of Victoria
Filed Dec. 29, 1959, Ser. No. 862,627
5 Claims. (Cl. 141—39)



1. Apparatus of the rotary turrent type for filling containers with liquid, comprising a reservoir for containing compressed air and having air inlet and outlet control valves, a liquid distributing tank having a number of outlets spaced around its periphery, a corresponding number of valve controlled filling spears each being connected at its upper end to the outer end of one of said distributing tank outlets and projecting downwardly for entry into one of the containers, a corresponding number of lift devices disposed in vertical alignment beneath the respective filling spears, all of the foregoing being supported by a rotary turret so as to turn therewith, means whereby during each revolution of said turret each container is first raised by its lifting device so as to accomodate the respective filling spear and after being filled is lowered so as to be freed from the spear, a corresponding number of valve controlled pipe connections also turning with said turret and adapted to place said air reservoir into communication with the upper part of a container when the latter is in the raised or filling position, so that liquid entering the container by way of a filling spear is subject to air pressure above atmospheric, a differential pressure transmitting instrument connected to the liquid distributing tank and the air reservoir so as to respond to pressure differences arising between them on the filling of a container, a pressure controlling instrument connected to said differential pressure transmitting instrument and to said air inlet and outlet control valves of the reservoir for measuring any pressure difference sensed by said transmitting instrument and in accordance with the magnitude of said pressure difference actuating the air inlet or outlet valves of the reservoir, whereby the air pressure above the liquid in the container is kept substantially equal to the air pressure above the liquid in the distributing tank.

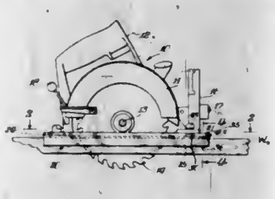
3,043,350
PACKER FOR FLAKE MATERIAL
Guthrie B. Stone, % Stone Conveyor Co. Inc., Honeoye, N.Y.
Filed Oct. 15, 1959, Ser. No. 846,617
7 Claims. (Cl. 141—73)

1. A flake packing machine for compressing and packing flake material into a container of substantially rigid construction comprising an elongated barrel, means for supporting said barrel in vertical position, hopper means at the upper end of the barrel for receiving a predetermined quantity of flake material, a ram connected with the upper end of the barrel and including a plunger vertically movably disposed in the barrel for forcing the flake material downwardly through the barrel, a platform disposed below the barrel and in alignment therewith for receiving a container, said platform being elevatable for bringing the open upper end of the container into engagement with the barrel whereby the flakes compressed by the ram will be compressed into the container, a feed chute communicating with the platform for positioning



containers adjacent thereto, means for moving a container from the chute onto the platform, means separate from said means for moving a container onto the platform for ejecting a filled container off of the platform, and means for raising and lowering said platform, all of said means being switch controlled, the means for moving the container onto the platform being responsive to retraction of the container ejecting means and positioning of the ram in its uppermost position, the downward movement of the ram being controlled by the position of the container, and the ejecting means being controlled by the position of the ram when it returns to a start position.

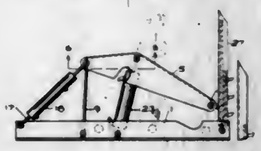
3,043,351
EDGE GUIDE FOR USE WITH POWERED HAND SAWS
Walter B. Davis, Hinsdale, Ill., assignor to Portable Electric Tools, Inc., a corporation of Illinois
Filed Sept. 12, 1960, Ser. No. 55,247
2 Claims. (Cl. 143—43)



1. In a powered hand saw having a rotary blade means for guiding the saw for selectively sawing, through a front surface and along a preselected line thereof, work having an edge defining a surface juxtaposed parallel to said line and extending rearwardly from the front surface, and work having a shoulder defining a surface juxtaposed parallel to said line and extending forwardly from the front surface, comprising: a shoe, for carrying the saw, slidable on the front surface of the work, said shoe having an open portion for extension of the saw blade therethrough; means on the shoe defining a pair of parallel open-ended channels extending longitudinally trans-

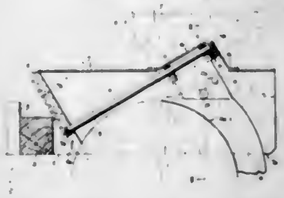
versely to the flat plane of the saw blade; an elongate guide having a front, longitudinally extending edge and a rear, longitudinally extending edge; a pair of parallel slides extending transversely to the guide from portions of the guide spaced corresponding to the spacing between said channels, said slides being arranged for longitudinally slidable positioning in said channels and being carried by the guide to dispose the rear edge of the guide rearwardly of the rear plane of the shoe with the slides extending in one direction into one end of the channels, and dispose the front edge of the guide in the rear plane of the shoe and the rear edge forwardly thereof with the slides extending in an opposite direction into the other end of the channels, said slides having dissimilar cross sections and said channels having dissimilar cross sections corresponding to said slide cross sections whereby each slide fits only one of said channels; and securing means associated with at least one channel means for locking releasably the slide therein.

3,043,352
TWO MOTOR FLUID-PRESSURE LOG TURNER AND LOADER
Jacob Jay Reimer, Box 486, Quesnel, British Columbia, Canada
Filed Sept. 16, 1960, Ser. No. 56,381
3 Claims. (Cl. 143—99)



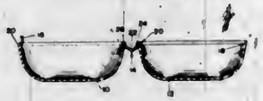
1. In a log turner and loader a base, a yoke, means mounting the yoke rearwardly on a swingable link to the base to move forwardly and backward above said base, a nigger bar, the nigger bar being vertically slidable on an upstanding slide bar on the base to swing forwardly and backward above said base, means pivotally engaging the yoke forwardly to the nigger bar, and hydraulic means on the base intermediately engaging the yoke for raising and lowering the yoke and nigger bar.

3,043,353
SAW GUARD FOR A CIRCULAR SAWING MACHINE
Theo Sherwen, Minchinhampton, and Leonard Gordon Taylor, Corsham, England, assignors to Horstmann & Sherwen Limited, Corsham, England, a company of Great Britain
Filed Nov. 4, 1959, Ser. No. 850,866
Claims priority, application Great Britain Nov. 10, 1958
2 Claims. (Cl. 143—159)



1. For use in a circular sawing machine having a rotary saw blade projecting upwardly through a slot in a work table, a saw guard including an inverted channel-section body the side walls of which are disposable on opposite sides of the projecting blade part, an end nose on the body which is disposable in front of the blade cutting edge, a slide rod mounted lengthwise between said body walls to incline upwardly and rearwardly from said nose, a slideway for said slide rod attachable to a non-rotary part of the machine, and spring means for urging said body into a rest position encasing the blade, from which position the body can be slid rearwardly and upwardly by pressure of a workpiece on said nose, said end nose of the guard body forming an acute angle with the inverted body base, so as to incline rearwardly towards the cutting edge of the saw blade in the downward direction, and being constituted by a replaceable nose member which is secured between the front edges of the body side walls to close off the front body end, the said member being longitudinally slotted at the lower end to clear the operative cutting edge part of the saw blade, the slide rod being of circular-section and extending at approximately ninety degrees to the nose from a lower attachment point located just above the lower nose end to an upper attachment point within a humped casing which straddles an opening, through which the upper rod end passes, in the inverted base of the channel body and the slideway being provided by lugs on a bracket plate.

3,043,354
MOLDED PLASTIC CONTAINER
Edmund J. Fitzgerald, 228 West St., Leominster, Mass.
Filed July 15, 1960, Ser. No. 43,119
1 Claim. (Cl. 150—.5)



A container comprising a bottom and a top, an integral hinge construction connecting the same, said container being molded in one piece of resilient plastic material, said hinge having a central depressed conformation with a raised oppositely directed portion at each side of the center of the hinge, providing for resiliently urging the lid and the box bottom member apart, and means releasably latching said members together in closed condition against the spring action of the hinge, said central depressed conformation being in the form of a V-shaped trough.

3,043,355
OPENING AND CLOSURE DEVICE FOR A FLAT CONTAINER
Anacleto Rossi, Viale Milton 39, Florence, Italy
Filed Feb. 8, 1960, Ser. No. 7,433
Claims priority, application Italy Feb. 11, 1959
9 Claims. (Cl. 150—7)



1. An opening and closing device for a container, comprising a first generally U-shaped springy frame element having a pair of arms extending inwardly of ends of the sides of said element, said arms being flat members having juxtaposed mutually slidable free ends, said arms having tabs at the free ends thereof extending inwardly toward the bight of said element, each of said tabs having a narrow slot therein, and a second generally U-shaped spring frame element normally disposed in the plane of and within the first element, said second element having a pair of other arms extending inwardly of ends of the sides of the second element with free ends of said other arms spaced from each other, said free ends of the other arms being helically twisted and inserted in respective slots of said tabs, said other arms having outer end portions pivotally engaged on the side of the first element, one of the tabs on one of said pair of arms having another slot slidably receiving the other one of said pair of arms, whereby pressure exerted on the sides of the first element inward of said element advances said other arms of the second element toward each other while the free ends of said other arms turn in the first named narrow slots to rotate the second frame element out of the plane of the first frame element, and whereby release of said pressure reverses movement of said other arms to rotate the second frame element to the plane of the first frame element.

3,043,356
TIRE-TRACTION DEVICE
Kenneth W. Mayhercy, St. Paul, Minn. (1034 E. Colfax, Denver 18, Colo.)
Filed Oct. 13, 1961, Ser. No. 144,997
3 Claims. (Cl. 152—208)



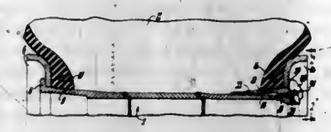
1. A vehicle tire having a circumferentially-open groove in the tread section defined by opposed sinuous walls, a helically-coiled annulus seated in the groove normally below the traction surface of the tire and held against circular shifting in the groove by the engagement of the annulus convolutions with the groove-defining sinuous-walls, and normally-collapsed inflatable-means interposed between the base of the groove and said annulus adapted to be inflated to extend the annulus circumferentially outward of the tread surface of the tire to increase the tractional capacity thereof.

3,043,357
PNEUMATIC TIRES
William W. Bagnuk, Akron, and Donald L. Sweet, Cuyahoga Falls, Ohio, assignors to The General Tire & Rubber Company, a corporation of Ohio
Filed Oct. 12, 1959, Ser. No. 846,007
8 Claims. (Cl. 152—361)



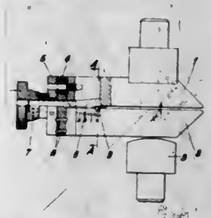
1. A vulcanized tire possessed of improved stability and improved uniform resistance to impact and punctures, said vulcanized tire comprising an inner carcass, a tread portion having spaced lateral edges integrally connected to said carcass but with the center portion spaced from said carcass, and a plurality of breaker strips integrally interposed between said carcass portion and said tread portion and substantially coextensive with said tread portion, one of said breaker strips comprising an elastomeric stock containing at least 10% by weight of randomly disposed, distorted lengths of wire.

3,043,358
VEHICLE WHEEL RIM
Robert H. Scott, Wickliffe, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 23, 1960, Ser. No. 10,276
9 Claims. (Cl. 152—410)



1. A multiple piece vehicle wheel rim for mounting a tire thereon comprising an annular rim base having a radially inwardly recessed annular gutter in an axially outer portion thereof, an annular rigid bead seat band removably mounted about said rim base and including an axially outer portion radially outwardly spaced from said gutter, an annular lock ring seated in said gutter to retain said band on said rim base and including a portion radially inwardly spaced from said portion of said band, and radially opposed mutually engageable seats on said band and rim base axially inwardly from said gutter, the clearance between said portions of said band and said lock ring being greater than that between said seats so that the latter engage before engagement of said portions to transmit certain of the forces imposed on said band directly to said rim base through said seats.

3,043,359
BENDING PRESS
Walter Eckold, Sperriuttertal 540, St. Andreasberg, Oberharz, Germany
Filed Jan. 8, 1958, Ser. No. 707,766
Claims priority, application Germany Feb. 25, 1957
7 Claims. (Cl. 153—15)

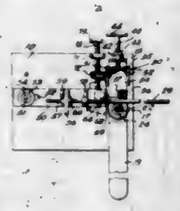


1. A press for forming angle, channel and like sections comprising cooperating jaws which execute a lever type movement to form a blank placed between them by the application of operating pressure to the jaws, a rubber element attached to said cooperating jaws, a plate vulcanized to said rubber element, said rubber element serving to flexibly interconnect said jaws with said plate, a spacer wedge mounted between the jaws and movable longitudinally relative to the length of the jaws, and means secured on the plate and connected to the wedge to adjust the latter and thereby the distance between the jaws depending upon and to accommodate the thickness of the blank to be worked.

3,043,360
FORMING MACHINES
Charles B. Hutchison, Dallas, Tex.
Filed Nov. 19, 1959, Ser. No. 854,191
6 Claims. (Cl. 153—46)

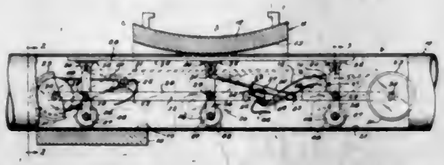
1. A device of the type described comprising: a base; a pivot post carried by the base; a substantially U-shaped bending bracket having a vertical base portion and spaced parallel upper and lower horizontal arm members, said parallel arm members being pivotally mounted

on said pivot post at a point spaced from said base portion, said upper arm member being of greater length than said lower arm member to form a handle member and extending beyond the post a substantial distance to provide lever means for actuating the bending bracket; a vertical rotatable member carried by the bending bracket between said upper and lower arm members and spaced from said post oppositely from said handle member, said rotatable member moving in a circular path about the post when the bending bracket is pivoted; a stop bar having one end remote from said post pivotally and slidably adjustably secured to said base; a first stop means rigidly mounted on the stop bar for engaging one end of a



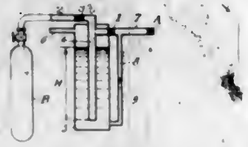
threaded rod which may be disposed between the rotatable member and the post to prevent lateral movement thereof when the bending bracket is pivoted about the post; a second stop means carried by the stop bar for positioning the rod longitudinally relative to the post, said first stop means having partial threads for engaging the threads of the rod; and adjustable means engageable with said stop bar for limiting pivotal movement of said stop bar about said one end, said handle member being disposed in a plane above the stop bar and being movable toward said stop bar at the commencement of pivotal movement of the bending bracket and then over said stop bar.

3,043,361
PIPE WALL SUPPORTING MECHANISM
Clarence L. Kelso, Box 352, Oilton, Okla.
Filed Feb. 24, 1959, Ser. No. 795,166
7 Claims. (Cl. 153—63)



1. A pipe wall supporting mechanism constructed and arranged to be expanded inside a pipe from a carrying position to a position engaging an inner wall of the pipe to maintain said pipe wall from buckling when the pipe is bent, comprising a frame, means to move said frame into and out of the pipe, an elongated stiffly flexible support member having an outer periphery substantially conforming to the inside pipe wall, said member being movable between a wall supporting position and a carrying position, the outer periphery of said member being in relatively continuous axial contact with the inner surface of the pipe wall having the smaller radius when the pipe is bent, a leg pivotally connected to said frame and to said pipe wall support member and constructed and arranged to carry said pipe wall support member apart from said pipe wall when in carrying position and to support said pipe wall support member in pipe wall supporting position, said pivotal connection of said leg to said pipe wall support member including a bracket fixed to said pipe wall support member, an axle rotatably housed in said bracket, means for locking said axle in a fixed non-rotative position with respect to said bracket, and means pivotally connecting said axle to said leg, said means being eccentric with respect to the center line of said axle, said axle being rotatable with respect to said bracket to increase the effective length of said leg to thereby compensate for differences in the inside diameter of a pipe, friction reducing means carried by said leg at the end opposite said pipe wall support member connection, and means controlled remote from said mechanism to move said pipe wall support member including a reversible jack carried by said frame and operatively connected to said leg to move said pipe wall support member into pipe wall supporting position.

3,043,362
APPARATUS FOR MACHINING A PIECE OF WORK BY MEANS OF AN EROSIVE FLUID
André Louis Mennesson, Neuilly-sur-Seine, France, assignor to Societe d'Applications et de Constructions pour Materiel Automobile (S.A.C.M.A.), Neuilly-sur-Seine, France, a society of France
Filed May 26, 1958, Ser. No. 737,841
10 Claims. (Cl. 156—345)



1. An apparatus for machining a surface of a piece of work to remove matter from said surface, which apparatus comprises, in combination, a source of erosive fluid under pressure, said fluid being capable of attacking the matter of said piece of work, conduit means starting from said source and leading to the surface of said piece from which matter is to be removed, said conduit means being adapted to produce a continuous stream of said erosive fluid and having an opening closely adjacent said surface so as to form therewith; a confining passage of small cross section at least a portion of which is constituted by said surface, said passage leading to the open atmosphere, and means for measuring at any time the value of the flow rate of said stream of fluid flowing through said passage to determine when a sufficient amount of matter has been removed from said surface.

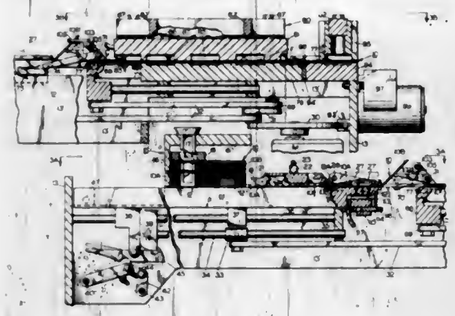
ERRATUM

For Class 156—367 see:
Patent No. 3,043,729

3,043,363
MACHINE FOR AUTOMATICALLY PLACING AND SECURING FILM TRANSPARENCIES IN FILM MOUNTS
Donald W. Byers, 4033 SE. Milwaukee Ave., Portland 2, Oreg.
Filed Mar. 14, 1961, Ser. No. 95,579
14 Claims. (Cl. 156—443)

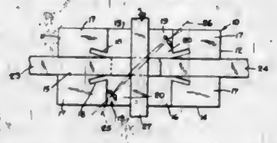
1. In a machine for placing and securing film transparencies in mounts of the character described, a carriage mounted in a supporting frame assembly, means for reciprocating said carriage in a horizontal plane, guides for the mounts positioned along the sides of said carriage, mount-engaging elements on said carriage for moving a mount in one direction with said carriage, stationary mount-restraining means for holding the mount against movement in the opposite direction upon return movement of said carriage, a container for a stack of mounts arranged above said carriage with the bottom mount of the stack positioned for engagement by said mount-engaging

elements, means in said container allowing one mount at a time to be removed from the stack by said carriage, a film guideway leading to the path of said carriage, and automatically operated means synchronized with said carriage reciprocating means for intermittently moving a film



strip along said guideway a distance each time equal to the size of a single transparency in said strip, whereby a transparency will be automatically delivered from said guideway onto each mount on said carriage subsequent to the removal of such mount from said mount stack container.

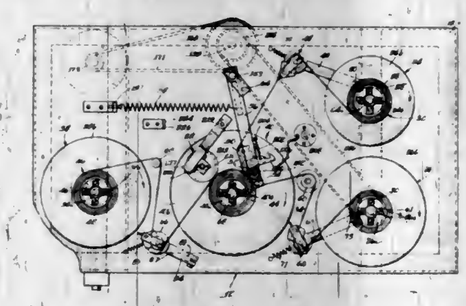
3,043,364
TAPE SPLICER
Herman D. Post, 214—26 41st Ave., Bayside 61, N.Y.
Filed July 5, 1957, Ser. No. 670,006
11 Claims. (Cl. 156—505)



1. In a tape splicer, in combination, a block having a pair of opposed ends and a pair of opposed side edges extending between said ends, said block being formed in a top face thereof with a tape aligning groove extending from one to the other of the ends of said block between said side edges thereof and with an adhesive strip accommodating groove extending from one to the other of the side edges of said block between said ends thereof, said grooves intersecting each other and forming a smooth continuous surface at their intersection and providing said block with four projections extending upwardly from the bases of said grooves and defining the lateral limits of said grooves, said projections respectively being formed with blade guiding notches adjacent the intersection of said grooves for guiding a blade during trimming of a spliced tape; and a pair of blade guiding means respectively located adjacent said side edges of said block in said strip accommodating groove respectively adjacent the opposite sides of the latter groove for guiding a blade to cut across a pair of overlapping tapes in said tape aligning groove prior to the application of an adhesive strip to said tapes.

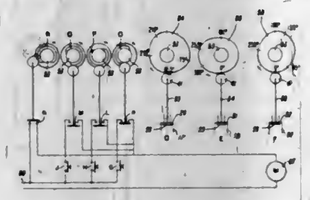
3,043,365
ADHESIVE TRANSFER MACHINE
Eric W. Gustafson, Chicago, Ill., assignor to Kleen-Stik Products, Inc., Chicago, Ill., a corporation of Illinois
Filed July 5, 1957, Ser. No. 670,325
8 Claims. (Cl. 156—540)

1. An adhesive transfer machine comprising: a first feed spindle and a first take-up spindle for respectively holding the feed and take-up sections of a transfer roll of adhesive transfer tape comprising a backing strip and a front exposed adhesive layer, said adhesive layer being separable intact from said backing strip and extending the full width of said backing strip, a second feed spindle and a second take-up spindle for respectively holding the feed and take-up sections of an adhesive-layer-receiving roll of backing strip material having a greater width than said backing strip of said transfer roll so that, upon transfer of said adhesive layer to said backing strip of said adhesive-layer-receiving roll, a non-tacky finger-grip border portion will be left thereon, means for positioning a section of the unwound portion of one of said rolls adjacent a section of the other roll with the adhesive side of said transfer roll confronting the backing strip of the other roll, driving means for rotating said take-up spindles for transferring said rolls from the associated feed spindles to the associated take-up spindles, and pressure-



applying means for forcing said adjacent sections of said rolls together to bring together the adhesive side of said transfer roll and the backing strip of said adhesive-layer-receiving roll, said pressure-applying means including a support arm mounted for movement toward and away from said second take-up spindle, spring means urging said arm toward the latter spindle, a frame pivotally supported from said arm about an axis extending generally parallel to said latter spindle, a pair of pressure members carrried by the frame and located on opposite sides of said latter axis and adapted to contact closely spaced points on said backing layer of said transfer roll, the pressure member to be located at the point of separation of said adjacent sections of rolls having a sharply curving body portion around which the backing strip of the transfer roll may be bent to effect the separation of said adhesive layer therefrom.

3,043,366
VALVE ASSEMBLY SELECTIVELY OPERABLE INCLUDING POWER DRIVE AND REMOTE CONTROL
Harry T. Wentworth, 343 Tichenor Ave., South Orange, N.J.
Filed June 16, 1958, Ser. No. 742,394
5 Claims. (Cl. 158—36)



1. In combination, a valve casing having an upper portion and lower portion the latter of which is divided into two intercommunicating steam compartments having a common inlet for connection to a steam supply and separate outlets for connection to an oil burner, said casing

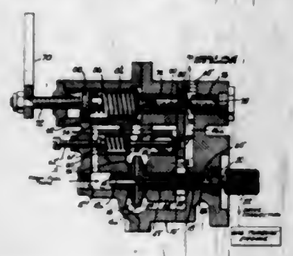
also having an oil compartment provided with an inlet for oil and an outlet, an oil-atomizing oil burner, an oil-atomizing steam connection between one of said steam compartments and said oil burner, a purging steam connection between the other of said steam compartments and the oil burner, and an oil connection between said oil compartment and said burner, an oil-atomizing steam valve means, a purging steam valve means and an oil supply valve means, each of said means including a valve reciprocable in said casing in the respective compartment, with the axes of all of said valves parallel and lying in the same plane, each valve having a stem and being spring biased to closed position, for controlling the flow of fluid through said compartments to said oil burner, a roller carried by each stem, a shaft journalled in and carried by the upper portion of said casing and disposed perpendicular to and in the plane of said valve axes, a plurality of cams fixed on said shaft, one cam being in engagement with each roller for opening and closing said valves, an electric motor geared to said shaft, a source of power for said motor, a plurality of circuits between said source and said motor, each circuit including a switch in series with a push button switch and each circuit, including the switch combinations, being in parallel with one another and in series with the motor, and a series of cams on said cam shaft for controlling opening and closing of said switches as the shaft turns.

3,043,367

GAS TURBINE ENGINE FUEL SUPPLY CONTROLS

Frank J. Abraham, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Dec. 27, 1954, Ser. No. 477,851
12 Claims. (Cl. 158—36.4)



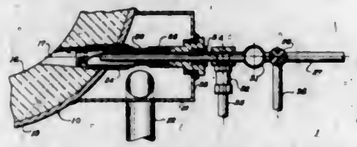
1. Fuel supply control means for a gas turbine engine comprising means forming an inlet passage to receive liquid fuel at relatively low pressure from a supply source, means forming an outlet passage to discharge fuel at relatively high pressure for consumption in the engine, positive displacement fuel pump means interposed operatively between said inlet and outlet passage to raise the pressure of fuel passing therebetween, means forming a by-pass between said inlet and outlet passages, relief valve means controlling flow through said by-pass by variable positioning of said valve means to regulate fuel pressure developed in said outlet passage, and centrifugal pump means having an inlet communicating with said inlet passage and having an outlet, said positive displacement pump means and said centrifugal pump means being adapted to be driven substantially proportionally to gas turbine engine speed, said relief valve means including differential pressure responsive means subjected to outlet passage pressure for urging said relief valve in the sense to open said by-pass and to centrifugal pump outlet pressure for urging said relief valve in the sense to close said by-pass progressively with increase of centrifugal pump outlet pressure, said pressure responsive means being adapted to control positioning of said relief valve in response relatively to said outlet passage pressure and centrifugal pump outlet pressure for varying said outlet passage pressure substantially in proportion to variations of centrifugal pump outlet pressure over at least a material portion of the speed range of a gas turbine engine driving said two pump means.

3,043,368

METHOD OF HIGH SPEED HEATING

John D. Nesbitt, Sylvania, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Continuation of application Ser. No. 457,119, Sept. 20, 1954. This application Apr. 21, 1958, Ser. No. 731,848
1 Claim. (Cl. 158—117.5)



The method of heating a high temperature furnace having annular refractory wall means defining a chamber of substantially cylindrical configuration and having a plurality of inlet port tunnels extending through the wall means and disposed substantially tangentially to the internal surface thereof comprising, in combination: delivering a stream of unaerated gaseous fuel to each inlet port tunnel at a point remote from the outlet thereof; delivering an annular stream of air at a predetermined ratio to the fuel stream to each inlet port tunnel at a point remote from the outlet thereof to flow therethrough contiguous to, parallel, and circumposing the fuel stream; suddenly contracting the contiguous flowing streams of fuel and air at a point remote from the outlet of the tunnel; suddenly re-expanding the contracted contiguous streams of fuel and air at a point closely downstream to the point of contraction to cause partial intermixing of the streams varying in degree with the rate of flow of the stream of fuel and air; and passing the partially intermixed streams of fuel and air from the point of re-expansion to the outlet of the tunnel without further expansion, thereby to prevent the partially intermixed streams from burning in the tunnel; passing the partially intermixed streams of fuel and air from the outlet of the tunnel into the chamber substantially tangentially to the inner surface of the annular wall means; igniting the partially intermixed streams of fuel and air by heat transfer from the annular wall means; and burning the ignited streams as they pass circumferentially around the inner surface of the annular wall means.

3,043,369

COMBINED STORM WINDOW AND SCREEN CONSTRUCTION

Vincent L. Falotico, 309 Felter Ave., Woodmere, N.Y.

Filed Sept. 19, 1958, Ser. No. 761,987
2 Claims. (Cl. 160—91)



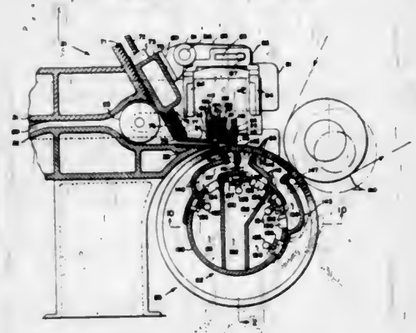
2. A combined storm window and screen construction comprising a rectangular channel frame, upper and lower screens in the same plane within the said frame, a storm pane intermediate the screens, the screens and the intermediate storm pane being all equal in width and the screens and the intermediate storm pane occupying the entire area of the rectangular frame, and upper and lower storm sashes accomodated in a channel of the frame for vertical sliding movement in the same plane, said plane lying behind the screens and intermediate storm pane, the widths of the upper and lower storm sashes being equal and the sum of the heights of the upper and lower storm sashes being substantially equal to the height of the intermediate storm pane, the slidable storm sashes being substantially the same size as the screens, the slidable storm sashes being adjustable between closed positions in which the storm sashes are spaced apart vertically, one in alignment with the upper screen and the other in alignment with the lower screen, and open positions in which the storm sashes are edge-to-edge behind and in alignment with the intermediate storm pane, the storm sashes in open positions opening the areas occupied by the upper and lower screens for the passage of air currents therethrough, the screened openings at different levels permitting inflow of cooler air currents through the lower screen and exhaust of warmer air currents through the upper screen.

3,043,370

MACHINERY AND METHOD FOR PAPER FORMATION

Harry M. Ostertag, Jr., 57 Rosedale Ave., Strafford, Wayne P.O., Pa., and Harry M. Ostertag, deceased, late of Strafford, Pa., by Harry M. Ostertag, Jr., executor, Strafford, Pa.

Filed Mar. 3, 1958, Ser. No. 718,871
11 Claims. (Cl. 162—344)



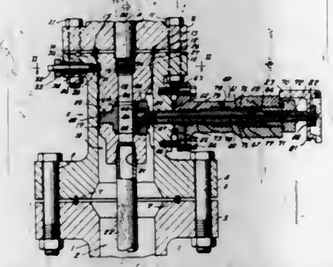
1. In paper making machinery, a substantially hollow rotatably mounted forming roll with an open grilled periphery including pluralities of intersecting longitudinal bars and transverse supporting rings defining therebetween a network of open areas about the periphery, a covering wire mesh forming surface, and means for delivering a continuous flow of dilute stock suspension to the forming surface at variable speed and in variable volume including a delivery nozzle having top and bottom nozzle plates, said nozzle plates being so arranged with respect to each other and the roll as to define therebetween a substantially enclosed forming zone, said bottom nozzle plate being positioned at a slight downward angle with respect to the tangent at the top point of the roll and so as to introduce the stock to the forming surface a selected distance before the top of the roll's path of travel and terminating in close proximity with the roll at such point of introduction, said top nozzle plate extending transversely of the roll beyond the bottom plate to a point generally over the top point in the path of travel of the roll periphery, said longitudinal bars being uniformly spaced about the periphery of the forming roll so that the spacing between adjacent ones of said bars is no less than the difference between the maximum spacing between the top and bottom nozzle plates at the point of introduction of the stock to the forming surface and the minimum spacing of the top nozzle plate above the top point in the path of travel of the forming surface.

3,043,371

VALVED TUBING HANGER

Laurence L. Rector, Fort Worth, Tex., assignor to Rector Well Equipment Company, Inc., Fort Worth, Tex., a corporation of Texas

Filed July 14, 1959, Ser. No. 827,034
5 Claims. (Cl. 166—86)



1. In a device of the class described, a tubing head having an axial bore therethrough; an annular shoulder in the tubing head bore; a hanger body; an annular shoulder on the hanger body arranged to coincide with the shoulder in the bore; a guide member extending inwardly of the bore; a vertical slot in the outer surface of the hanger body arranged to slide over the guide member; a vertical passage in the hanger body; a valve member disposed in the passage, and arranged to open the passage in one position and close same in another position; a passage through the wall of the tubing head; a substantially tubular housing attached to the outer wall of the tubing head and having a bore therethrough coinciding with the passage through the wall of the tubing head; an operating stem slidably and rotatably disposed in the housing and through the wall of the tubing head, the said stem and valve member having detachable, inter-engageable parts whereby the stem may be moved into and out of engagement with the valve member; drive means arranged about the stem and threadedly engaged in the outer end of the housing; complementary shoulder means between the stem and the drive means to cause movement of the stem inwardly upon rotation of the drive means in one direction; and complementary shoulder means between the stem and the drive means to cause outward movement of the stem upon rotation of the drive means in the other direction.

3,043,372

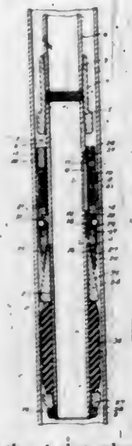
ANCHORING DEVICE

Roy C. Davis, Dallas, Tex., assignor to The Guiberson Corporation, Dallas, Tex., a corporation of Texas

Filed Mar. 2, 1959, Ser. No. 796,479
8 Claims. (Cl. 166—140)

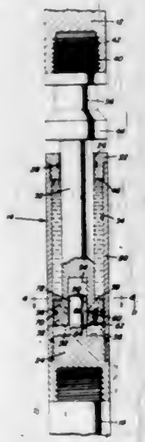
1. In an anchoring device, a tubular body; a J-slot formed in the wall of the body having a longitudinally extending portion; an anchor cage slidably disposed on the body; a pin extending from the wall of the anchor cage into the J-slot for slidably joining the anchor cage to the body; a plurality of slips pivotally suspended to the lower end of the anchor cage and having tapered surfaces on the inner sides thereof; an expander head disposed about the body and having a tapered surface thereon engageable with the tapered surfaces on the slips; frangible means attached to the body for supporting the expander head in engagement with the slips; and a quantity of de-

formable material in the lower end of the longitudinal portion of the J-slot to absorb the impact between the pin



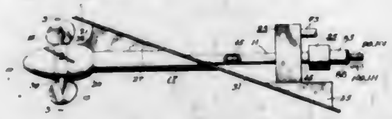
and the lower end of the J-slot when the frangible means is broken by an upward pull on the body.

3,043,373
HYDRAULIC WELL JAR
Louis W. Chenault, 5015 Evergreen Lane, Victoria, Tex.
Filed Dec. 8, 1959, Ser. No. 858,178
14 Claims. (Cl. 166—178)



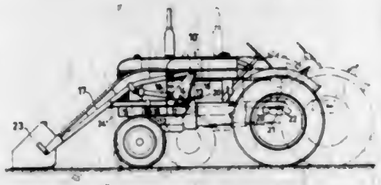
1. A hydraulic jar comprising a hollow body having a chamber therein with top and bottom closures, a piston hammer slidable in said chamber and having an operating stem slidably extending through said top closure, said piston hammer having a fluid tight seal engaging the wall of said chamber at all times and dividing said chamber into top and bottom compartments, said body having a surface disposed in the range of movement and path of travel of said piston hammer and constituting an anvil for the latter, a by-pass means establishing communication between said compartments on opposite sides of said piston hammer for flow of hydraulic fluid therebetween, a control means in said body for established slow leakage of fluid from the top to the bottom compartment during the initial upward movement of said piston hammer in said chamber and establishing unrestricted flow during the remainder upward movement of said hammer piston, said control means being disposed in said by-pass means for controlling flow through the latter between said top and bottom compartments.

3,043,374
PROPELLER AND ROTATING PROPELLER CONTROL MECHANISM FOR MARINE PROPULSION
Robert G. LeTourneau, P.O. Box 2307, Longview, Tex.
Filed Jan. 27, 1959, Ser. No. 789,350
2 Claims. (Cl. 170—160.3)



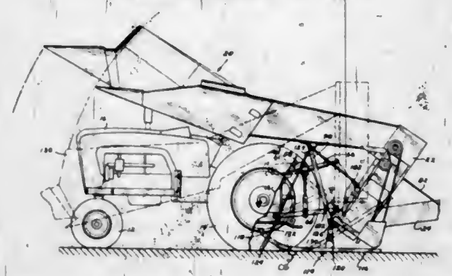
1. A propeller control mechanism for marine propulsion systems comprising, a propeller having blades; a propeller drive gear reduction having an input shaft adapted for connection to a prime mover; a propeller drive tube having one end connected to drive said propeller and having the other end portion extending through said gear reduction; means within said gear reduction for driving said tube as an output shaft; a propeller pitch control gear reduction fixed to said other end of said drive tube so as to rotate with said tube, said pitch control gear reduction having an input and an output; a propeller pitch contrdl shaft extending through said drive tube and geared at one end to said propeller blades so as to vary their pitch when said shaft is rotated, said control shaft being connected at its other end to the output of said pitch control gear reduction; an electric motor having an output shaft and having an electromagnetic friction brake of a type which is automatically released when said motor is energized and set when said motor is de-energized, said electric motor being fixed to said pitch control gear reduction with its output shaft connected to said control gear reduction input; slip rings for conducting electric power to said motor, and means for controlling said motor.

3,043,375
REMOVABLE HOISTING ATTACHMENT FOR TRACTORS
Karl Ragnar Åström, Brannland, Sweden
Filed May 1, 1959, Ser. No. 810,389
Claims priority, application Sweden May 9, 1958
1 Claim. (Cl. 172—273)



In combination, a tractor, respective brackets mounted on the opposite sides of the forward portion of the tractor, each bracket being provided at its rear portion with an aperture and at its forward portion with an outwardly projecting pivot bolt, a U-shaped frame member closely straddling the forward portion of the tractor, the side arms of said U-shaped frame member extending adjacent said brackets, each side arm being provided with an end aperture registrable with one of said first-named apertures and adapted to receive a bolt passing through said one of the first-named apertures, and with a rearwardly opening hook-shaped hinge member receiving a first-named outwardly projecting pivot bolt, each side arm being provided at its free end with an upstanding upright, a pair of vertically spaced bearings in each upright, a boom having an implement at its forward end, means pivotally connecting said boom to the uppermost bearings, hydraulic ram means connected between the lower bearings and the intermediate portion of the boom, said ram means having outwardly movable piston elements tending to elevate the boom when extended, and whereby the weight of the boom and implement will act to rotate the forward portion of the frame member downwardly when the second-named bolts are removed, and a supporting leg provided with a transverse channeled top portion receiving the forward portion of the frame member and with a pointed bottom end engageable in the ground beneath said frame member, said pointed bottom end being driven into the ground when the forward portion of the frame member is rotated downwardly by the weight of the boom and implement, allowing the boom and implement to be supported solely on said frame member and supporting leg and allowing the tractor to be freely moved rearwardly to disengage said first-named outwardly projecting pivot bolts from said hook-shaped hinge members.

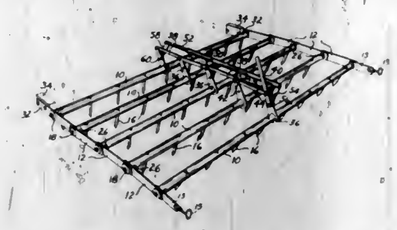
3,043,376
TRACTOR MOUNTED HARVESTERS
Homer H. Green, Minneapolis, Robert R. Radke, Hopkins, and Richard R. Steingas, Lauderdale, Minn., assignors to Motec Industries, Inc., a corporation of Minnesota
Filed Apr. 15, 1959, Ser. No. 806,651
4 Claims. (Cl. 172—274)



1. In a tractor-implement combination, a tractor having a tandem mounted power hitch and an elongated body, the hitch comprising two transversely spaced-apart and hydraulically, actuable lift links which are simultaneously pivotable about a horizontal axis and a third link pivotable about a horizontal axis which is vertically spaced from the first mentioned axis, each link having attaching means, an implement having three attaching means operatively and respectively engaging the link attaching means for supporting the implement on the tractor, the implement including a frame, operating units mounted on the frame, one of which extends in encircling relation to the tractor body, the implement being solely supported by said links, rockers rigidly mounted on the underside of the frame and having ground engageable portions disposed forward of the attaching means of the lower links for engaging the ground and raising the operating units about said attachment means from their encircling relation to the tractor to an overhead relation to the tractor as said lift links are lowered about their axis.

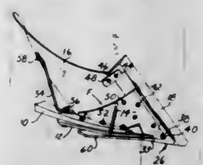
3,043,377
SPIKE TOOTH HARROW
Leon J. Urben, Loves Park, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Nov. 18, 1959, Ser. No. 853,959
10 Claims. (Cl. 172—611)

1. In a harrow of the type having a plurality of substantially parallel tooth bars including a front tooth bar and a rear tooth bar, a plurality of teeth arranged along each of said bars, a plurality of side links interconnecting adjacent bars at the ends thereof and pivotally connected to the associated bars and to adjacent links, a focker arm attached to each of said bars and extending upwardly therefrom, and rocker arm links interconnecting each pair of rocker arms and pivotally connected to the associated rocker arms, the improvement comprising means for maintaining the harrow substantially rigid while permitting floating movement of an intermediate



tooth bar relative to an adjacent bar, said means including slidably interengaging rigid members, one of said members being secured to said front tooth bar in a manner to control rotation thereof and another of said members being secured, against up-and-down movement, to said rear tooth bar.

3,043,378
AGRICULTURAL IMPLEMENTS
Richard W. Bushmeyer and Fred J. Vaughn, Rockford, Ill., assignors to J. I. Case Company, a corporation of Wisconsin
Filed Jan. 15, 1960, Ser. No. 2,740
8 Claims. (Cl. 172—754)

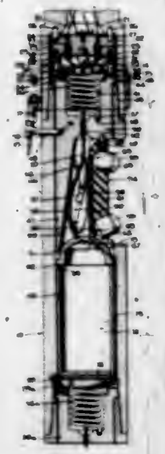


1. In a plow frog, the combination of a point forging having a generally triangular wedge-shaped configuration providing therein a downwardly and rearwardly open longitudinally extending upwardly rounded cavity and a forwardly directed point portion, and said forging presenting a rearwardly directed substantially vertical attaching surface, an inclined moldboard plate permanently united to said attaching surface and extending rearwardly and upwardly therefrom, a beam plate substantially vertically disposed and having an upper edge permanently united to said moldboard plate, and said point forging having a tongue portion extending rearwardly alongside, and permanently united with said beam plate, and said forging providing a sharp attaching bolt hole extending upwardly out of a forward portion of said longitudinally extending cavity.

3,043,379
FORMATION SAMPLER
Forrest V. Porter, Monterey Park, Calif., and Milo Surbatovich, South Chicago, Ill., assignors to Lane-Wells Company, Los Angeles, Calif., a corporation of California
Filed Oct. 1, 1957, Ser. No. 687,430
4 Claims. (Cl. 175—2)

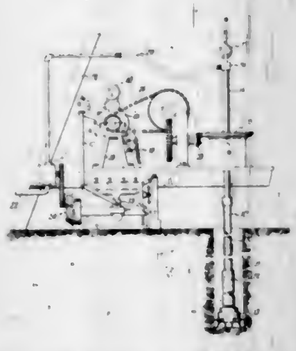
1. A formation sampler comprising: a body member having a cavity therein and an opening establishing communication between the cavity and the medium outside the body member; shaped charge means disposed in the body member and arranged in the form of a closed pattern for freeing a sample of formation material from the wall of a borehole upon explosion thereof; chamber means disposed in the cavity of the body member below the opening; frangible cover means capable of excluding

borehole fluid from the chamber means positioned adjacent the body member opening and the shaped charge means and adapted for disintegration by explosion of the shaped charge means; a frangible carrier for said shaped charge means and adapted for disintegration by the ex-



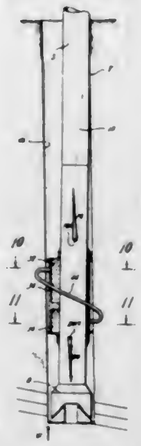
plosion thereof; and spring-loaded closure means on said body positioned against said carrier and held open thereby, said closure means adapted for closing the opening upon release by disintegration of said carrier after the freed sample has had sufficient time to pass through the opening and into the cavity.

3,043,380
MEANS FOR GOVERNING FLUID PUMP IN ROTARY WELL DRILLING RIG
Wallace Clark, R.R. 10, Box 409, Indianapolis, Ind.
Filed Apr. 30, 1958, Ser. No. 731,930
6 Claims. (Cl. 175—26)



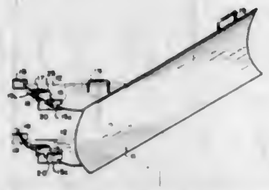
1. In rotary well drilling apparatus, a drill string, a drill bit, a fluid motor suspended within said drill string for rotating said drill bit, a pump for supplying fluid to said drill bit motor, means for driving said pump, an electric motor for rotating said drill string at a constant rate of speed, said electric motor having a rotor and a stator, said rotor being operatively connected to said drill string, means mounting said stator for rotation about the axis of said rotor, means resiliently biasing said stator in one direction, an arm on said stator, and linkage means connecting said arm and the means for driving said pump, said last named means having a movable speed control member responsive, through said linkage means, to movement of said arm.

3,043,381
MEANS FOR CONTROLLING DIRECTIONAL DEVIATIONS IN A WELL BORE
Branch M. McNeely, Jr., 5313 Pine, Houston, Tex.
Filed May 5, 1960, Ser. No. 27,467
10 Claims. (Cl. 175—73)



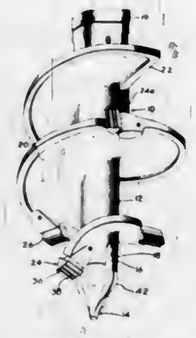
1. An apparatus for controlling directional deviations of a well bore in combination with a rotatable drilling string and a bit attached to the string for rotation therewith in the bore comprising, an outer member in surrounding spaced relation to the string and shaped for frictional engagement with the wall of the bore, means forming first and second sets of peripherally-spaced resilient pressure chambers between and contacting said member and said string, said first and second sets being spaced axially from each other, said second set of pressure chambers having a larger effective area than those of said first set, and means for conducting fluid under pressure from the first set of pressure chambers to the second set of pressure chambers, said chambers in the second set receiving pressure from chambers in the first set being circumferentially positioned about said string to apply a force to move the string in a predetermined direction.

3,043,382
DOZER SCRAPER ATTACHMENT
John A. Meredith, Denver, Colo., assignor to Amalgamated Equipment Co., Denver, Colo., a corporation of Colorado
Filed Feb. 2, 1959, Ser. No. 790,473
2 Claims. (Cl. 175—84)



1. A dozer scraper attachment for earth boring machines having a power driven Kelly drive bar having a plurality of flat faces on its external surface to which earth augers and the like may be attached when it is desired to excavate earth structures to provide cylindrical holes comprising a frame support, a socket receptacle on said frame support adapted to receive and engage a plurality of the flat faces of said drive bar, a dozer scraper blade having a straight blade cutting edge mounted on and supported by said frame support, said dozer scraper blade when in the operative position being disposed tangent to a circle larger than and concentric with the said Kelly drive bar but of lesser diameter than the excavated hole, and a quick attaching lock member mounted on said frame support for selectively engaging a further side of said drive bar to hold said drive bar and socket in frictional engagement each to each whereby said dozer scraper attachment may be readily engaged with said drive bar for rotation therewith when it is desired to move loose materials away from said excavation.

3,043,383
GROUND-DRILLING AUGER
Albert G. Newbold, Lima, Pa., assignor to Trainer Associates Inc., New Castle, Del., a corporation of Delaware
Filed May 28, 1959, Ser. No. 816,496
5 Claims. (Cl. 175—383)



1. A ground drilling auger comprising an axial shaft, a spiral web connected about said shaft, the outer edge of said spiral web being relatively close to said shaft at its bottom end and gradually extending outwardly to a relatively larger radial extension at the upper end of said shaft, auger bits having laterally extended isosceles triangular wedge-shaped heads with their equiangular bases connected to tangs and laterally extended vertex edges disposed in front of said tangs, substantially flat indentations formed at spaced positions about said web for receiving said auger bits, recesses extending within the portions of said web, in back of each of said indentations for receiving said tangs of said auger bits with said wedge-shaped heads disposed in front of said substantially flat indentations, said tangs and said recesses being formed to substantially align said vertex edges and the central planes of said wedge-shaped heads including said vertex edges with a central plane of said web, said bases of said heads being substantially equal in thickness to said web for smoothly diverting the spoil cut by said vertex edges evenly above and below said web as said auger is rotated into the ground in the direction of said spiral, said tangs being inserted within said recesses and, securing means attaching said auger bits to said web, and a ground piercing point being secured to the bottom of said shaft for facilitating the entry of said auger into the ground.

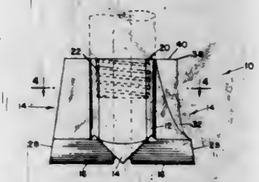
3,043,384
ROTARY EARTH DRILLING BIT
Errol Glenn Gault, P.O. Box 186, Allen, Okla., and Thomas Glenn Gault, P.O. Box 186, Allen, Okla.; Mary A. Gault, administratrix of said Errol Glenn Gault, deceased
Filed Sept. 19, 1958, Ser. No. 762,168
3 Claims. (Cl. 175—385)

1. A rotary drilling bit, comprising, a shank attachable to a drill pipe, a series of blades each extending radially from said shank, the blades terminating radially and circumferentially in spaced overlapping relations, each blade being provided with parts having cutting edges which are in angular relation radially and vertically to a point, the



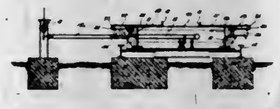
angular relations between the cutting edges of successive blades increasing successively from blade to blade circumferentially around the bit.

3,043,385
REVERSE DRILLING ROCK BIT
Charles Morris Boyle, Kimball, Nebr.
(Box 6086, Hannigen Station, St. Louis 10, Mo.)
Filed Mar. 13, 1958, Ser. No. 721,262
1 Claim. (Cl. 175—401)



A rock drill bit comprising a substantially cylindrical body having blades with parallel side surfaces extended therefrom, said side surfaces of the blades being spaced from and parallel to radially disposed planes positioned on and extended through the longitudinal axis of said body, the lower ends of said blades being V-shaped in cross section and the vertexes thereof being positioned on said radially disposed planes through the axis of the body, the peripheral surfaces of the blades at the lower ends thereof being described on a radius from the axis of the body and being inclined inwardly from the points of intersection of the radially disposed planes and peripheral surfaces at the vertexes of the V-shaped lower ends, and said peripheral surfaces of the blades being relieved at points spaced upwardly from said vertexes to the upper end of the body, and the relieved surfaces being in planes tangent to the peripheral surface of the body and tapering inwardly from said points spaced upwardly from said vertexes to the upper end of the body, the lower portions of the peripheral surfaces of the blades being curved outwardly to meet the arcuate peripheral surfaces of the lower ends of the blades.

3,043,386
PORTABLE SCALE PLATFORM STRUCTURE
Clyde E. Marion, Oakland, Richard T. Bartlett, Castro Valley, and George C. Clark, Oakland, Calif., assignors to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois
Filed Nov. 9, 1959, Ser. No. 851,635
1 Claim. (Cl. 177—126)



In a vehicle transportable weighing scale providing a weighbridge having a rigid frame including longitudinal side members, a weighbridge deck plate extending longi-

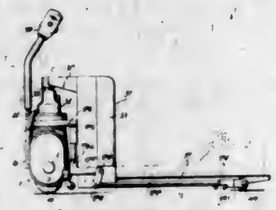
tudinally over each side member in slidable support thereon with its outer longitudinal marginal portion overhanging the side member, and means connecting the deck plate to the side member and permitting by sliding displacement thereof on the associated side member, location of the deck plate selectively in predetermined positions of minimum and maximum overhang of its outer marginal portion relative to the side member, said means comprising a plurality of cylindrical pivot members relatively spaced along the side member, bracket means on the side member supporting each pivot member in a position having its axis normal to the plane of the deck plate, a rigid arm pivotally carried by each pivot member in cantilever extension therefrom beneath the deck plate, for movement in an arcuate path parallel to the plane of the deck plate, a bearing pad on the free end of each arm in supporting contact with the outer marginal portion of the deck plate, a pivot element pivotally connecting the free end of each arm to said outer marginal portion of the deck plate and releasable means effective between each deck plate and its associated side member for retaining the deck plate in the selected one of its predetermined positions of its outer marginal portion relative to the side member.

3,043,387
COMBINED POSTAL SCALE AND PEN
Zalman Nachsi, 630 Bedford Ave., Brooklyn, N.Y.
Filed Apr. 15, 1959, Ser. No. 806,629
4 Claims. (Cl. 177—232)



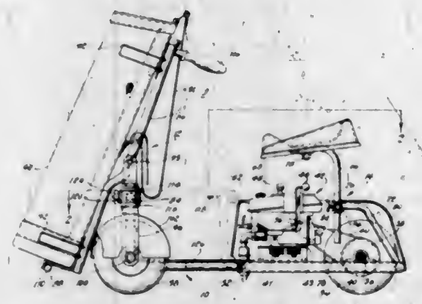
1. In a ballpoint pen having a tubular body, writing means axially slidable within the body between a projected position wherein said writing means extends from one end of said body and a retracted position in which said writing means is retracted into said body, spring means within said body urging said writing means to said retracted position, and means operable on said writing means to advance the latter from said retracted to said projected position thereof against the bias of said spring means, said advancing means being mounted for reciprocation within said body at the other end thereof, said advancing means being in releasable abutment with said writing means and having one end thereof projecting through said other end of the body for manual depression of said advancing means into said body to project said writing means from said first-mentioned end of the body, that improvement which comprises second spring means operable to bias said advancing means toward said first-mentioned end of the body, the bias of said second spring means being such that if the weight of said pen is supported by the projecting end of said advancing means, said last mentioned bias will be sufficient to prevent the remaining portion of said pen from being lowered with respect to said advancing means in the absence of an object suspended from the body and means for locating the position of the advancing means with respect to the pen body whereby the weight of an object suspended from the body will be indicated in response to the lowering of the pen body in proportion to the weight of said object.

3,043,388
CONTROL UNIT FOR A CONVEYANCE
Rudolf Hansen, Hamburg-Hamm, Germany, assignor to Friedrich Jungheinrich, Hamburg-Billstedt, Germany
Filed June 20, 1960, Ser. No. 37,531
Claims priority, application Germany June 29, 1959
22 Claims. (Cl. 180—19)



1. In a control unit for a conveyance, a frame, a ground-engaging driving wheel journaled in said frame, a motor carried by said frame and connected with said wheel for rotating the same, a control element mounted on said frame for pivotal movement about a horizontal axis and spring-urged into a first position about said axis, a steering rod carried by said frame for pivoting about said horizontal axis, a control circuit for said motor including a safety switch on said frame, means operated by pivoting of said control element to said first position to open said safety switch, and means manually operable positively to connect and disconnect said rod and element, said rod and element pivoting as a unit when interconnected.

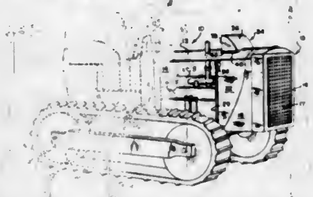
3,043,389
POWER DRIVEN RIDING GOLF CART
Max R. Steinberg, 24051 Church St., Oak Park, Mich.
Filed Apr. 11, 1960, Ser. No. 21,172
16 Claims. (Cl. 180—27)



1. A portable self-propelled vehicle having an operating position and a non-operating position comprising a front steering unit, a telescoping frame including a pair of parallel tubular side members and a pair of parallel tubular extension members having portions which are movable in the interior of said side members to an extended position and a non-extended position corresponding to the operating position and non-operating position of the vehicle respectively, an axle mounted on said side members near the rear thereof, a pair of transversely spaced ground engaging wheels mounted on said axle exteriorly of said side members, a transversely extending U-shaped bracket having its ends connected to the outer ends of said extension members and lying in a plane which is perpendicular to the plane of said frame, a power plant

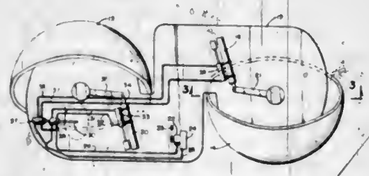
mounted on said side members, drive means connecting said power plant to said axle, a transversely extending bracing member connecting the rear ends of said side members, an upwardly extending mounting bracket having its lower end connected to said bracing member, means for mounting a vehicle seat on the other end of said mounting bracket, said front steering unit comprising a central ground engaging wheel and steering column assembly, detachable means on said U-shaped bracket for journaling said steering column assembly so as to permit said central ground engaging wheel to be turned throughout a substantial angular range, and removable fastening means extending through said side members and said extension members so as to hold said members in an extended position, said fastening means being removed to permit said extension members to be moved into the interior of said side members to the non-extended position, thereby reducing the overall length of said frame.

3,043,390
ENGINE COOLING AIR SYSTEM FOR TRACTORS
James B. Lattay, Lake Waccamaw, N.C., assignor to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 30, 1960, Ser. No. 18,701
3 Claims. (Cl. 180—54)



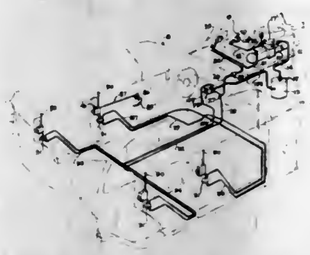
1. A cooling air intake and exhaust system for cooling an engine of a crawler-type tractor or the like of the type having an engine, an exposed radiator mounted forward of the engine, and a fan between the radiator and the engine, and wherein the engine is cooled by circulating a liquid coolant through a radiator mounted at the forward end of the tractor, comprising a means for driving said fan by said engine for propelling cooling air in a forward direction outwardly through said radiator, a hood covering said engine, an air scoop mounted on said hood and projecting upward therefrom, said air scoop having an intake opening facing rearwardly and an outlet through said hood, and duct means including means engaging said engine and encasing said fan in a substantially enclosed chamber to isolate said fan from said engine, said air scoop having its outlet communicating with said chamber to supply cooling air to said fan.

3,043,391
STEERING MEANS FOR TANDEM WHEEL VEHICLE HAVING TILTED AXLES
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed May 19, 1961, Ser. No. 111,377
12 Claims. (Cl. 180—79.2)



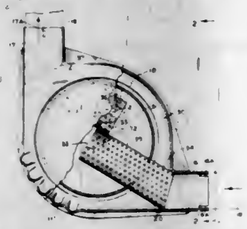
1. In a vehicle having tandemly positioned hemispheroidal wheels on opposite sides with one near the front and the other near the rear, each said wheel having its axis pointed outwardly and downwardly and with the lower portion of said wheel being located under the body, each said wheel generally decreasing in diameter as the distance from the body increases, steering means for said vehicle including a steering control member operable in either of two generally opposite directions from a neutral position for turning said vehicle to the right and left respectively, means governed by said steering control member when operated in one of said directions from neutral to turn said front wheel in a particular direction from the straight-ahead position to thereby turn said vehicle in said particular direction and being governed by said steering control means when operated in the opposite of said directions from neutral to turn said rear wheel in said particular direction to thereby turn said vehicle in the opposite direction.

3,043,392
DOOR LOCKING SYSTEM
William C. Riester, Williamsville, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Dec. 22, 1958, Ser. No. 782,111
6 Claims. (Cl. 180—82)



4. In an automotive vehicle, an engine, an intake manifold for said engine, a carburetor for said engine having an induction passage, a vacuum operated door lock, means for selectively causing vacuum produced by said engine intake manifold to operate said door lock, and means responsive to the aspirating effect produced by air flow through the induction passage of said carburetor at speeds above engine idling speed for providing a second source for producing a vacuum for operating said door lock.

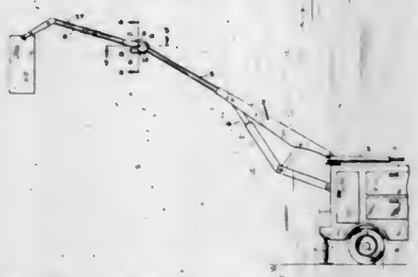
3,043,393
MUFFLERS
William C. N. Hopkins, 1532 SE. 3rd Ave., Portland, Oreg.
Filed Aug. 26, 1957, Ser. No. 680,077
4 Claims. (Cl. 181—57)



1. A muffler for internal combustion engines comprising a generally circular casing comprised of a pair of like dished sections secured together at their peripheral edges, a circular, foraminous baffle extending between casing sections substantially concentrically therewithin to divide the interior of the casing into an inner chamber surrounded by an annular outer chamber, an inlet pipe rigid with the casing and an outlet pipe rigid with said casing, said inlet and outlet pipes having foraminous tubular extensions within said casing and terminating in open end portions disposed closely adjacent the center of the inner

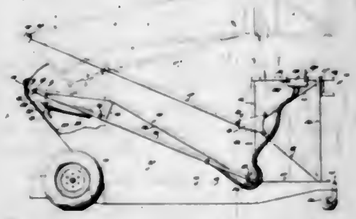
chamber and with such open end portions in side by side relationship.

3,043,394
BOOM ATTACHMENTS
Thomas R. Hall, Portland, Oreg., assignor to McCabe-Powers Body Company, Berkeley, Calif., a corporation of California
Filed Feb. 3, 1960, Ser. No. 6,436
9 Claims. (Cl. 182—2)



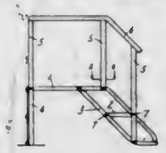
1. A boom attachment for use with a boom provided at its outer end with a sheave-block comprising a pair of aligned spaced parallel members having an aligned bore, each of said members being provided with a pair of outwardly diverging adjacent margins, said boom attachment comprising a bracket provided with a pair of aligned parallel plates spaced for overlapping engagement with said pair of parallel margins, each of said plates being provided with an aperture, a fastener extending through said apertures and said bore whereby to mount said bracket pivotally to said sheave-block, first restraining means operatively connected to said sheave-block and said bracket for preventing said bracket from pivoting in one direction about said fastener, second restraining means operatively connected to said sheave-block and said bracket for preventing said bracket from pivoting about said fastener in the opposite direction, a first elongated arm secured at one end to said bracket, a dielectric insulator secured to the other end of said first arm, a second elongated arm secured to said dielectric insulator, a cross-bar secured to said second arm and extending outwardly therefrom, a pair of parallel supports extending outwardly from said cross-bar, a basket swingably mounted between said supports, and swing control means operatively connected to said basket and at least one of said supports for controlling the degree of freedom of swing said basket has with respect to said supports.

3,043,395
MECHANIZED LADDER DEVICE
Ellis W. Volkel, Perrysville, Ind.
Filed June 2, 1961, Ser. No. 121,289
4 Claims. (Cl. 182—2)



1. An aerial platform device comprising a support, a platform member, an upwardly and rearwardly inclined trough-line supporting member secured on said support and having an upstanding rear wall, an upwardly and rearwardly inclined bottom wall, and respective side walls, a main link structure comprising a transversely extending intermediate rectangular frame of substantial height and width, respective longitudinally extending side frames of substantial height rigidly connected to the ends of said intermediate frame and rigidly braced to said intermediate frame, extending forwardly and rearwardly therefrom, means pivotally connecting the rear ends of the side frames to said side walls adjacent the bottom edge of said rear wall, means pivotally connecting the forward ends of said side frames to the platform member, an auxiliary longitudinally extending rigid frame structure of substantial transverse width spaced above said main link structure, said auxiliary frame structure having transversely spaced rear and front corner portions, means pivotally connecting said rear corner portions to the top ends of said walls, means pivotally connecting said front corner portions to the platform member, and fluid pressure means disposed in said trough-like supporting member and connected between the upper intermediate portion of said bottom wall and the bottom intermediate portion of said transversely extending intermediate frame to rotate said main link structure upwardly and elevate said platform member responsive to operation thereof.

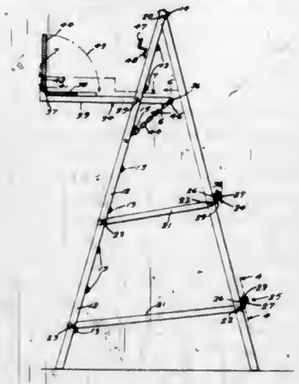
3,043,396
DEMOUNTABLE STEPS AND PLATFORMS FOR MOBILE HOMES
Harold W. Norris, 12–18 Sylvan Ave., Battle Creek, Mich.
Filed Mar. 18, 1959, Ser. No. 800,290
14 Claims. (Cl. 182—106)



1. In a demountable platform having a flat tread with a supporting rim member and upright support members disposed at the sides of said rim member, a releasable supporting connection between said members comprising horizontally projecting studs on said supporting members and coacting downwardly opening notches in the rim of the tread member, said studs having hollow shanks fixedly riveted to their supporting member and having enlarged heads spaced from the supporting member, said members with the notches therein being received between said heads and the sides of the members to which the studs are connected, said shanks and said notches being relatively tapered to facilitate entry of the shanks into the notches, first vertically converging cam surfaces formed on laterally opposite sides of the inner surface of said heads and inclined axially with respect to said shanks, other coacting vertically converging cam surfaces formed on the surface of said notched member opposed to said heads and inclined with respect to said shanks oppositely to said first cam surfaces, the angle of convergence of said first cam surfaces being of the order of 4°, the angle of convergence of said other of said cam surfaces being slightly greater than the convergence of said first surfaces by the order of 1°, said first cam surfaces being inclined laterally at an angle of the order of 4°, said other cam surfaces being inclined laterally at an angle somewhat less than lateral angle of said first cam surfaces by the order of 1°, said first and second cam surfaces tapering longitudinally of their length, the length of said shank being less than the thickness of said member with the notch therein whereby said cam surfaces hold said members laterally together without contact between the shank

and the base of said notch, and a hand rail support detachably secured to the side of said platform by bolts passed through the hollow shanks of said studs.

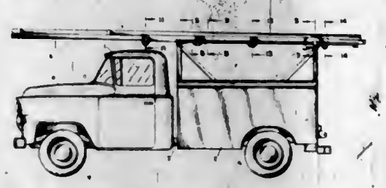
3,043,397
DEER STAND
Allen Horton Tillotson, 601 22nd St., Hondo, Tex.
Filed Aug. 14, 1961, Ser. No. 131,150
1 Claim. (Cl. 182—124)



A deer stand comprising a ladder including side rails connected by spaced rungs and having an upper end and a lower end, a pair of brace legs having upper ends straddling the upper end of the ladder, means pivotally connecting the upper ends of the brace legs to the upper end of the ladder for swinging movement of the brace legs toward and away from the plane of the ladder and toward and away from one another, side braces connected to the brace legs and detachably connected to the ladder for positioning the brace legs coplanar to one another and at an acute angle to the plane of the ladder, at least one cross brace extending between and connected to said brace legs and cooperating with said side braces to retain the brace legs rigid relaive to one another and to the ladder, said cross brace comprising extensibly connected sections for varying the spacing between the brace legs at the point of attachment of the cross brace thereto, a seat structure comprising a pair of arms each having an inner end and an outer end, said arms straddling said side rails, means pivotally connecting the arms, near said inner ends, to the side rails for swinging movement of the arms about a common axis disposed adjacent the upper end of the ladder, means anchored to the ladder, below the arm pivots, and detachably connected to the inner ends of said arms for supporting the arms in substantially a horizontal position, a seat member mounted on and secured to said arms adjacent their outer ends and supported thereby spaced outwardly from the ladder, said arms having upstanding extensions at their outer ends, and a back rest pivotally connected to said extensions for pivotally movement between an upright operative position behind the seat member and a folded position overlying said seat member, said seat structure being swingable to a folded position against and partially straddling the ladder when said arms are disconnected from said last mentioned means.

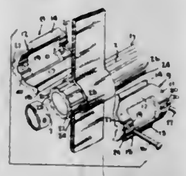
3,043,398
WHEELED VEHICLES HAVING A LADDER ASSEMBLY
Robert G. Bakula, Hanley Hills, Mo., assignor to McCabe-Powers Body Company, St. Louis, Mo., a corporation of Missouri
Filed Oct. 15, 1959, Ser. No. 846,614
7 Claims. (Cl. 182—127)

1. A device of the class described for mounting on a vehicle, said device comprising a rear support fixedly mounted to said vehicle and extending upwardly therefrom, said rear support including a first fixed horizontally disposed cross-brace, a pair of complementary channels pivotally mounted about said first cross-brace and extending forwardly and rearwardly therefrom above said vehicle, first spring means operatively mounted on said first cross-brace for urging the rearmost ends of said channels downwardly, a forward support fixedly mounted to said vehicle and extending upwardly therefrom, said forward support including a second fixed horizontally disposed cross-brace, a pair of diagonal braces pivotally mounted on said second cross-brace and extending rearwardly therefrom, said diagonal braces comprising cylindrical tubes having diametrally aligned apertures substantially near the rearmost ends, second spring means operatively mounted on said second cross-brace for urging the rear ends of said diagonal braces upwardly, guide means fixedly mounted on said complementary channels for guiding said diagonal braces as said channels are pivoted about



said first cross-brace, said guide means including a solid block having an aperture and a rod-like element attached to the bottom of said channels and extending outwardly and forwardly therefrom to a point where it substantially encloses said diagonal brace between said channel, said block, and said rod-like element, locking means for holding said guide means in locked engagement with said diagonal brace when said channels are in the elevated position, a plurality of wheels operatively mounted within each of said complementary channels, an extension ladder disposed between said channels and movably seated on said wheels, means for holding said ladder in relatively stable position with respect to said channels, a bracket attached to said vehicle and extending rearwardly therefrom, said bracket including a horizontal stud, and a second bracket attached to said ladder and sized and located thereon for engagement with said stud when said channels are in the elevated position whereby to retain said ladder in the elevated position.

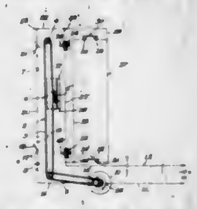
3,043,399
FLEXIBLE LADDER
Earl A. Marryatt, 190 Demarest Ave., Closter, N.J., assignor of fifty percent to Alexander C. Kidd, South Orange, N.J.
Filed Apr. 7, 1961, Ser. No. 101,389
3 Claims. (Cl. 182—196)



1. In a ladder, the combination of rigid tubular rungs, stiles composed of fabrics webbing strips having integrally woven loops to receive the ends of said rungs, two metal plates embracing said rungs with said loops intermediate said plates and said rungs, and rivets extending through said two plates and rungs and connecting said plates and stiles to said rungs, said rungs having outer longitudinally extending grooves, said plates

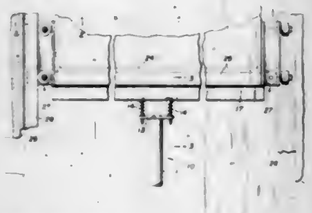
having arcuate cross pieces positioned beyond the edges of said stiles with openings in said plates to clear said stiles, and longitudinally inwardly extending ribs in said arcuate cross pieces to fit directly into said grooves, said rivets extending through said arcuate cross pieces and rungs and secured in place to effect a snug engagement between said rungs and arcuate cross pieces, there being alined grooves and openings in said rungs and arcuate cross pieces to receive said rivets.

3,043,400
MULTIPLE STATION CONVEYOR CIRCUIT
Frank J. Blume, 1551 W. Thomas, Chicago, Ill., and Alan F. Blume, 6908 N. Manheim, Des Plaines, Ill.
Filed Oct. 3, 1960, Ser. No. 59,946
3 Claims. (Cl. 187—3)



1. In a two station conveyor system, a carrier, means in guided engagement with the carrier for directing it between the stations, said carrier having cam means, a normally closed switch at each station in the path of movement of the cam means, means including an electrical motor for driving said carrier, a primary electrical circuit connecting said motor and switches in series, said carrier movable from one station to the other and upon arrival at a station camming the related switch to open position interrupting the circuit and stopping the carrier, and an overriding circuit connected in parallel with said primary circuit for temporarily advancing the carrier to a position off a switch.

3,043,401
SHACKLE SPRING MOUNTING FOR HYDRAULIC ELEVATORS
Alan M. Hallene, Moline, and Richard F. Martin, Rock Island, Ill., assignors to Montgomery Elevator Company, a corporation of Delaware
Filed Nov. 3, 1959, Ser. No. 850,699
5 Claims. (Cl. 187—17)



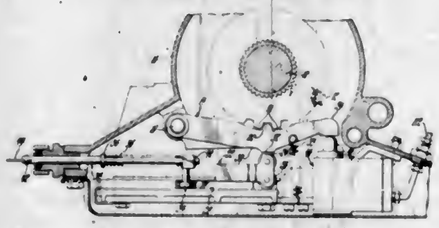
1. In a hydraulic elevator, in combination: an elevator hatchway; a plurality of perpendicular guide rails in the hatchway; hydraulic lifting means including a reciprocable elevator plunger extending upwardly into the center of said hatchway; shackle spring means surmounting said plunger; an elevator car; guides on the elevator car engaging said guide rails; means seating said car on said shackle spring means; and means cooperating with said lifting means and car seating means to position said shackle spring means, said spring means affording limited rocking movement of the elevator car on the plunger to compensate for any misalignment between the guide rails and the plunger, and isolating the car from vibrations generated by the lifting means.

3,043,402
EMERGENCY BRAKING SYSTEM
Verl J. Stephenson, 2065 Verdugo Blvd., Montrose, Calif., assignor of one-half to John F. Ochsner, Los Angeles, Calif.
Filed July 10, 1959, Ser. No. 826,157
3 Claims. (Cl. 188—29)



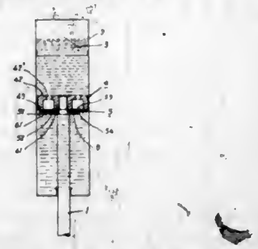
1. In an emergency braking system for a vehicle having a frame supported upon wheels having tires mounted thereupon, the combination of: an emergency brake operatively connected to the frame of said vehicle on each side thereof and juxtaposed to the tires of the adjacent wheels, said emergency brakes being simultaneously movable between an inoperative position in which said brakes are spaced from the perimeters of said tires and an operative position in which said brakes are urged into engagement with the perimeters of said tires; means for maintaining said brakes in said inoperative position and for releasing said brakes for movement into engagement with the perimeters of the respective tires; abutment means mounted on the frame adjacent each emergency brake; and means connected to said brakes for retarding the engagement of said emergency brakes with said tires, said retarding means including piston rod means mounted on each of said brakes adapted to engage said abutment means when said brakes are urged into engagement with said tires to permit gradual braking of said wheels to be accomplished by said brakes.

3,043,403
BRAKE MECHANISM
Oliver K. Kelley, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 10, 1958, Ser. No. 766,543
12 Claims. (Cl. 188—69)



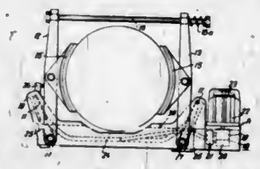
1. In a brake mechanism, the combination of a rotatable locking member, a locking element movable to and from an engaged position relative to the locking member, the locking element being adapted in the engaged position to prevent rotation of the locking member, actuator means for moving the locking element to the engaged position and operative in a restraining position thereof to maintain the locking element in the engaged position and thereby resist a disengaging force urging the locking element from the engaged position, means connected to the actuator means for maneuvering the actuator means to and from the restraining position, and auxiliary means coacting with the locking element to cause the locking element to be maneuvered so as to tend to urge the locking element towards the engaged position to relieve the actuator means from the disengaging force acting on the locking element and thereby permit removal thereof from the restraining position by the maneuvering means.

3,043,404
SHOCK ABSORBERS OF VEHICLES
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed June 15, 1959, Ser. No. 820,461
Claims priority, application France July 18, 1958
3 Claims. (Cl. 188—88)



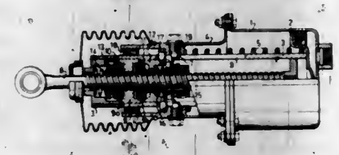
1. In a shock absorber of the type having a piston carried by a piston rod for reciprocation in a sealed cylinder, a novel piston and valve assembly comprising a piston having a head, a depending boss and a depending skirt, said boss and said skirt combining to define an annular fluid passage beneath said piston head, said piston head having perforations therethrough and opening into said annular fluid passages through said piston head, a resilient valve disk underlying said piston, said piston rod being secured to said boss in depending relation and carrying said valve disk, a washer carried by said piston rod and clamping a central portion of said valve disk against said boss, said washer extending radially outwardly of said boss and overlapping a portion of said annular fluid passage, said valve disk having a peripheral portion underlying and normally engaging said skirt, said valve disk having an outer set of fluid passages disposed radially intermediate the periphery of said washer and said skirt for the passage of fluid through said valve disk at low piston speeds, and said valve disk having an inner set of fluid passages disposed in overlying relation to said washer, the resiliency of said valve disk allowing said valve disk to deflect downwardly away from said skirt upon the rapid upward movement of said piston to provide an additional fluid passage of a cross-section depending upon the piston speed to pass fluid through said piston, and the resiliency of said valve disk allowing said valve disk to deflect upwardly into said annular fluid passage upon the rapid downward movement of said piston to move that portion of said valve disk carrying said inner fluid passages away from said washer with the resultant fluid flow through said inner fluid passages.

3,043,405
ELECTRO-HYDRAULIC BRAKE
Walter Sussebach, Olpe, Westphalia, Germany, assignor to Elektro-Mechanik-G.m.b.H., Westphalia, Germany
Filed Mar. 28, 1960, Ser. No. 18,176
Claims priority, application Germany Apr. 3, 1959
4 Claims. (Cl. 188—151)



1. Electro-hydraulic brake with a brake frame structure including a liquid storage container constituting a support base for the brake, a pair of brake levers having brake shoes operating above said container, shaft means for pivotally supporting said levers at said container, wall means in said container constituting a part thereof, hydraulically operated rotary wing means disposed and supported in said liquid container, and mechanical linkage means including said shaft means for positively interconnecting said rotary wing means and said brake levers for torque conversion and transmission, hydrostatic pump means with a first and a second pump thereof, said first pump has a greater conveying capacity than said second pump, and means for switching off said first pump as soon as said rotary wing means engages said wall means.

3,043,406
AIR BRAKE CYLINDERS WITH BUILT-IN SLACK ADJUSTER
Karl Bertil Larsson, Malmo, Sweden, assignor to Svenska Aktiebolaget Bromsregulator, Malmo, Sweden, a corporation of Sweden
Filed Jan. 23, 1961, Ser. No. 84,097
Claims priority, application Germany Jan. 27, 1960
9 Claims. (Cl. 188—196)



1. An air brake cylinder with a built-in automatic brake slack adjuster, comprising, in combination, a cylinder body, a cylinder front head attached to the front end of said cylinder body, a brake piston slidable in said cylinder body, spring means disposed in the brake cylinder between said cylinder front head and said brake piston for returning to the brake piston to its rear end position in the brake cylinder after braking, a tubular piston rod secured to said brake piston and guided in said cylinder front head, a projecting push rod disposed in telescoping relation in said tubular piston rod, means comprising a first abutment in said tubular piston rod and a first push rod engaging means axially displaceable on and lockable to said push rod and disposed in front of said first abutment in said tubular piston rod so as to be engaged by said first abutment and thereby locked to said push rod for carrying the latter along in the forward movement of said brake piston and tubular piston rod in the brake cylinder on braking, means comprising a second abutment in said tubular piston rod and a second push rod engaging means axially displaceable within limits in relation to said cylinder body and cylinder front head and disposed to the rear of said second abutment in said tubular piston rod so as to be engaged by said second abutment and thereby locked to said push rod on the return movement of said brake piston and tubular piston rod in the brake cylinder after braking, and a further abutment abuttable against said cylinder front head and engageable by said second abutment, said tubular piston rod, and said second push rod engaging means for limiting the return movement of said brake piston in the brake cylinder after braking and for subjecting said second push rod engaging means to thrust between said second abutment in said tubular piston rod and said further abutment on said cylinder front head by the force of said spring means to safely lock said second push rod engaging means against displacement in either direction on said push rod when said brake piston is in its rear end position in the brake cylinder.

3,043,407
GRIDS
Earl A. Marryatt, Closter, N.J., assignor, by mesne assignments, to Marryatt Lane & Co., Inc., Fort Lee, N.J., a corporation of New Jersey
Filed Apr. 28, 1958, Ser. No. 731,339
2 Claims. (Cl. 189—34)

1. The combination of a plurality of adjacent grids, each grid consisting of a platform, intermediate support-

ing beams extending downwardly therefrom, a first side beam extending down from the one side of said platform and having a main arcuate recess, a second side beam extending down from the opposite side of said platform and having an arcuate tongue conforming to said recess with the recess of one grid receiving the tongue of an adjacent grid, said second side beam having a laterally extending lip at its lower end, the upper face of said lip inclining laterally downward, said first beam being shorter than said second beam clearing the lip of the second beam of an adjacent grid and interlocking with the second beam of an adjacent grid, the arcuate outer faces of said tongue and recess having its ends nearer the upper face of said platform than its intermediate portion being



described by a radius centering substantially on a plane which runs through the upper face of said platform and the upper face of said lip clearing an arc described by a radius also centering substantially on a plane which runs through the upper face of said platform to facilitate rocking adjacent lateral edges of adjacent grids into interlocking engagement with one another, a tangent through the arc of said outer faces being parallel to the plane extending through said platform, the upper facial areas of said platform adjacent its lateral edges having longitudinally extending ridges, and an inwardly extending enlargement at the lower end of said first lateral beam and the lip of one of said grids rolled over the enlargement of an adjacent grid urging the lower faces of said tongue and recess into engagement with one another.

3,043,408

METALLIC FRAMING ELEMENT

Warren R. Attwood, 4118 S. Wayne Road, Wayne, Mich.

Filed Mar. 23, 1959, Ser. No. 801,329
10 Claims. (Cl. 189—34)



1. A fabricated sheet metal structural beam for building structures comprising an elongated member generally rectangular in cross section and having in its side faces and one of its ends faces longitudinal slots of less width than its respective face, each slot having its edges turned inwardly to provide flanges, said structural beam comprising a pair of separate longitudinally arranged mating tractors having web portions welded together back to back, one of which comprises a metal strip portion formed to provide one edge only of each of the slots in a side face, the other mating member comprising a metal strip portion similarly formed to provide the other slot edge in the side faces, the last mentioned mating member being also formed to provide both the slot edges and inturned flanges in the end face.

3,043,409

PERFORATED STRUCTURAL ANGLE

Hoyt E. Kremer and Kenneth P. Denisty, Grand Rapids, Mich., assignors to The Rapids-Standard Company, Inc., Grand Rapids, Mich., a corporation of Michigan

Filed May 25, 1959, Ser. No. 815,702
1 Claim. (Cl. 189—34)

A constructional element for structural framing and other purposes, and comprising: a right angle member of extended length and capable of being cut to selected shorter lengths as desired, said right angle member having, in cross section, a wide flange and a narrow flange, said wide flange having a repetitious pattern of oblong slots arranged in a first row of slots and extending the length thereof, said first row having pairs of alternately short and longer slots, each of said pairs of slots being spaced apart from each adjacent pair of said slots in said first row less than the length of the longer of said slots, the slots of each of said pair being spaced apart less than the length of the shorter of said slots, the longer of said slots at their centers each being enlarged crosswise of said constructional element; a second row of openings in said wide flange, said openings of said second row being alternately circular and elongated, with the elongated ones of said slots being of the same length as the shorter of said slots of said first row with alternate ones of said elongated slots of said second row being aligned with the said shorter ones of said slots of said first row crosswise of said



constructional element, said circular ones of said openings being equally spaced from adjacent ones of said elongated slots of said second row; alternate ones of said circular openings of said second row being positioned lengthwise of said wide flange midway between adjacent pairs of slots in said first row; a third row of openings in said narrow flange, said third row of openings having a repetitive design of a group of openings, each group consisting of a pair of slots elongated lengthwise of said narrow flange with a circular opening midway therebetween, the length of each of said groups being the same as the length of one of said pairs of alternately short and longer slots of said first row of said wide flange and aligned therewith crosswise of said constructional element; said third row of openings also having elongated slots with their greater axis arranged crosswise of said narrow flange, one being equally spaced between adjacent ones of said groups of slots and aligned crosswise of said constructional element with said alternate ones of said circular openings of said second row of said wide flange.

3,043,410

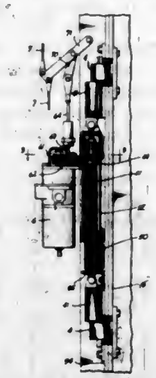
LOCKING MEANS FOR SWING-TAIL AIRPLANES

Raymond E. Pearson, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Aug. 10, 1959, Ser. No. 832,702
2 Claims. (Cl. 189—35)

1. Locking means for joining a first and a second relatively separable and mutually stress-resisting members, or for release and separation thereof, said locking means comprising a plurality of spaced locking pins carried by the first such member, projecting towards the second, latch means arranged in pairs and guided upon the second member for separational movement into locking engagement with corresponding pins and for approach movement to disengage the same, the screw means interconnecting the paired latch means to separate them or to

effect their approach, means to lock the screw means against rotation, and means interconnecting the several



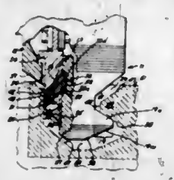
screw locking means for simultaneous and like release or engagement of each thereof.

3,043,411

SYSTEM FOR HANDLING FREIGHT ARTICLES

David J. Wyrough, Maple Heights, Ohio, assignor to National Castings Company, a corporation of Ohio

Filed Oct. 9, 1959, Ser. No. 845,553
7 Claims. (Cl. 189—36)



1. A lifting device comprising an L-member comprising a shank extending lengthwise between a supported end and a free end, and a toe extending laterally from the shank adjacent its free end; a lock supported along the side of the shank opposite to that from which the toe projects; said lock and the first named shank side having cooperating guide and abutment surfaces defining a predetermined ambit of reciprocation of the lock extending lengthwise of the shank and said side; abutment means carried by the lock in reciprocal guide relation therewith along a path in fixed relation with the lock and transverse relation to said ambit and forming an acute angle with that portion of said opposite side extending from its intersection with said path toward said free end; said abutment means being longer than the dimension of the lock along said path; said shank having a recess in said opposite side thereof for receiving the end portion of the abutment means nearer thereto; said recess having a surface facing toward said free end and engageable with said end-portion of the abutment means, when said end-portion occupies said recess, to limit the movement of the lock along said ambit away from the free end.

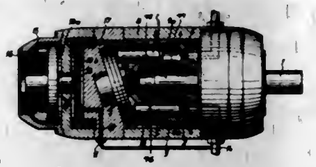
3,043,412

HYDRAULIC MOTOR WITH FRICTION BRAKE

Werner Bartholomäus, Berlin-Dahlem, Erwin Hessler, Berlin-Borsigwalde, and Rudolf Naumann, Dortmund-Wambel, Germany, assignors to Kamper-Motoren G.m.b.H., Berlin-Marienfelde, Germany, a German firm

Filed July 30, 1959, Ser. No. 830,493
Claims priority, application Germany Aug. 1, 1958
9 Claims. (Cl. 192—3)

6. A hydraulic motor comprising a housing, a rotor in said housing including means movable by fluid pressure to effect rotation of said rotor, a brake member slidable in said housing and including a portion engageable with said rotor to stop rotation thereof, a motor piston slidable in said housing and connected to said brake member, and



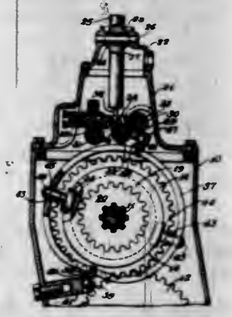
means for directing fluid pressure to said rotor and to at least one side of said motor piston to control the position of said brake in response to the fluid pressure delivered to said rotor.

3,043,413

TRANSMISSION CONTROL

Robert E. McAfee and Paul H. Goldsmith, Fort Wayne, Ind., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

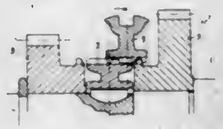
Filed May 25, 1959, Ser. No. 815,659
4 Claims. (Cl. 192—98)



1. In a change speed transmission comprising a housing, a rotatable shaft within said housing, a clutch member shiftable along said shaft and drivingly connected thereto, said clutch member having an annular groove formed in its outer peripheral surface, and a rail shiftable axially along an axis spaced from said shaft, the combination, of motion transmitting means operatively interconnecting the rail and clutch member whereby axial shifting of the rail effects shifting of the clutch member along the shaft including a ring-like annulus encircling and radially spaced from said clutch member, means for connecting said annulus to said housing including a support member fixed to said housing having a cylindrical bearing socket having a semi-spherical bearing seat closing one end of said socket and a plug fixed to a section of said annulus provided with a ball-like end disposed within said bearing socket and seated on said semi-spherical bearing seat, said plug being universally pivotal about the longitudinal axis of said socket with respect to said support member, means for operatively connecting a section of said annulus diametrically opposite said section connected to the housing to said rail including a block fixed to said rail having a cylindrical bearing socket formed therein, and a second plug fixed to said annulus, said plug having a ball-like end disposed within said cylindrical bearing socket formed in said block, said second plug being universally pivotal about and axially movable along the longitudinal axis of said bearing socket with respect to said block and a pair of circumferentially spaced, pivotally mounted shoes carried by said annulus, each of said shoes having a pair of spaced and parallel flat surfaces, said shoes being disposed within said annular groove formed

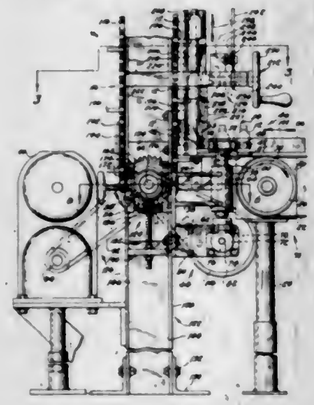
in said clutch member, said spaced and parallel flat surfaces of said shoes being adapted to slidingly engage said clutch member.

3,043,414
DOG CLUTCHES, APPLICABLE NOTABLY TO SYNCHRONIZERS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Dec. 14, 1959, Ser. No. 859,410
Claims priority, application France Dec. 31, 1958
3 Claims. (Cl. 192—114)



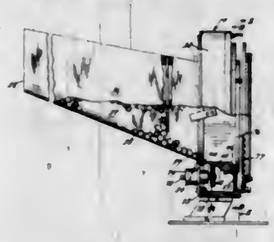
1. A dog clutch coupling device for torque transmission comprising two annular members mounted for relative sliding displacement, said members having engageable teeth, one of said members having a circular groove formed through the teeth, said circular groove having a depth less than the height of engagement of said teeth and having a width greater than the axial length of the teeth of the other of said members, and the teeth of said members having different outlines in their zone of engagement corresponding to the depth of the groove and having an angular clearance in their zone of engagement extending out of said groove, thereby permitting and providing an axial hooking engagement of said teeth in said groove when engaged and under torque.

3,043,415
CONVEYOR
Ralph E. Mottin, Taylor, Albert L. Mix, Garden City, and Leland R. Srigley, Detroit, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 6, 1959, Ser. No. 804,395
14 Claims. (Cl. 198—20)



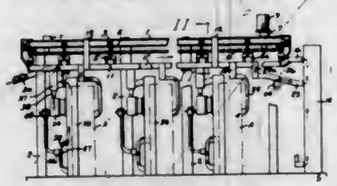
1. Transfer apparatus for transferring objects having a vertical axis between different elevations while maintaining said axis vertical, comprising a pair of transfer devices at said different elevations operable to receive said objects having a vertical axis and move them substantially horizontally and means between said transfer devices operable to successively pick off individual objects having a vertical axis from one of said pair of transfer devices, transfer them substantially vertically between said transfer devices, and position them on the other of said transfer devices while maintaining said axis vertical, the last mentioned means including vertical transfer means, comprising vertically extending guide means positioned to receive the objects with their axes vertical directly from said one transfer device for vertically guiding the objects during vertical transfer thereof, a section of an endless linear member positioned adjacent said guide means for substantially vertical movement along said guide means and having spaced apart fingers attached thereto and extending outwardly therefrom and into said guide means, said fingers being operable in conjunction with said guide means to vertically transfer objects in registration with said guide means on vertical movement of said section of linear member, and means to impart vertical movement to said section of linear member.

3,043,416
CAP HOPPER
Arthur W. Weller, Brooklyn, N.Y., assignor to Resina Automatic Machinery Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed May 27, 1959, Ser. No. 816,092
10 Claims. (Cl. 198—33)



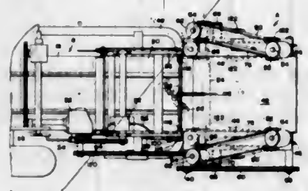
1. In a hopper device for advancing a plurality of oriented hollow caps to a feed chute, the improvement comprising: a relatively fixed housing element, a drum element arranged for rotation within said housing element, means for driving said drum element, cap orientation means associated with said drum element including first and second circular ring members defining an annular space therebetween, and toothed means on one of said ring members engageable within the hollow portions of said capping devices to allow passage of said capping devices into said annular space.

3,043,417
CONVEYING ARRANGEMENTS FOR WORKPIECES
James T. Graham, Southfield Township, Oakland County, and John G. Kay, Detroit, Mich., assignors to F. Jos. Lamb Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 29, 1960, Ser. No. 25,701
11 Claims. (Cl. 198—85)



1. A conveyor arrangement including an endless monorail, carriers mounted on the monorail for movement therealong, means for moving the carriers along said monorail in spaced-apart relation, chuting along which workpieces may travel supported beneath and in uniformly spaced relation to the monorail, brushes mounted on the carriers and positioned to sweep workpieces along the chuting, an elevator for raising workpieces for delivery to the chuting, means for transferring workpieces from the upper end of the elevator to one extremity of said chuting, means for delivering workpieces to the lower end of said elevator, a passage in said elevator for admitting workpieces thereto at a point intermediate said upper and lower ends of the elevator, a discharge chute extending from the opposite extremity of said chuting to said passage for returning workpieces from the chuting to the elevator to be recirculated on to said first mentioned extremity of the chuting.

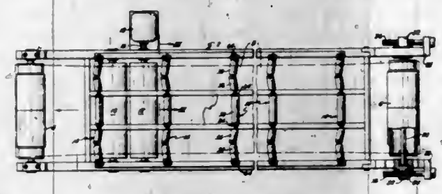
3,043,418
BALE-HANDLING APPARATUS
Charles S. Morrison and Murray W. Forth, Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Jan. 2, 1959, Ser. No. 784,757
15 Claims. (Cl. 198—128)



1. For a baler having a bale case in which bales are successively formed and discharged and including a discharge end through which bales successively emerge: bale-handling apparatus for causing successive emerging bales to travel beyond said discharge end, comprising support means adapted for connection to the baler and including a baler receiver positionable generally as an extension of the bale case and alined with the bale case discharge end; a pair of conveyor belt means on the support means, and spaced apart crosswise of and lying along the receiver and adapted to flank an emerging bale, each belt means having one end proximate to and another end remote from the bale case discharge end and an inner run extending between said ends; means mounting the remote ends of the belt means on the support means in spaced apart relation transverse to the direction of movement of the emerging bale and at a spacing generally on the order of the transverse dimension of such bale, said mounting means respectively including pivots about which the belt means are swingable to dispose their proximate ends selectively between outer positions spaced apart greater than the transverse dimension of a bale and inner positions spaced apart on the order of the spacing of said remote ends; operating means connected to the belt means for initially incurring the outer positions of said proximate ends whereby the belt means diverge toward the bale case discharge end to admit an emerging bale therebetween; control means connected to the belt means and operative in response to a predetermined amount of bale emergence to incur said inner positions of said proximate ends so that the emerging bale is engaged by said inner runs; and means for driving the belt means to cause their inner runs to travel in the direction of bale emergence so as to convey said bale beyond the bale case discharge end.

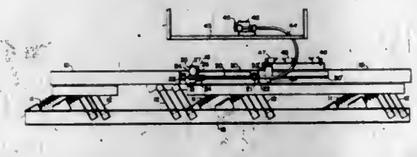
3,043,419
TROUGHED BELT CONVEYOR
Harry C. Morrow, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 28, 1959, Ser. No. 816,557
6 Claims. (Cl. 198—192)

1. A troughed belt conveyor comprising a pair of end rolls for supporting said belt, and a plurality of roll assemblies for supporting the troughed belt, at least part of said roll assemblies including a center roll means for rotatably supporting said center roll in fixed position with its axis substantially parallel to the axis of the end rolls, a roll on each side of said center roll having its axis extending upwardly from said center roll away from the



direction of approach of said belt and a roll at the outer end of each of said last named rolls having its axis extending upwardly from the outer end of the roll adjacent thereto and toward the direction of approach of said belt.

3,043,420
AUTOMATIC SLIDING GATE FOR VIBRATING CONVEYOR
James G. Kelly, Richmond, Va., assignor to The American Tobacco Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 5, 1961, Ser. No. 100,937
5 Claims. (Cl. 198—220)

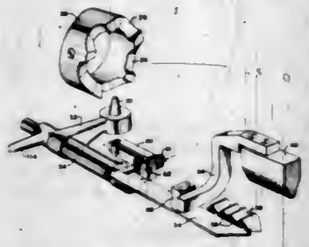


1. A vibrating conveyor having at least one material discharge opening formed in the conveyor trough, a sliding gate positioned in said trough adjacent each of said openings and movable longitudinally along said trough between predetermined limits of travel to close off and to open up said discharge opening, a pair of longitudinally disposed screw shafts one of which is rotatably mounted on each side of the conveyor trough, a pair of ball nuts on each screw shaft, a nut preloading spring connected to the two ball nuts on each screw shaft and urging the balls of the nuts into contact with opposite sides of the grooves in the screw shaft, a support bracket connecting each pair of preloaded ball nuts to the sliding gate, a pair of longitudinally disposed horizontal tracks one of which is mounted on each side of the conveyor trough adjacent each of said screw shafts, a pair of rollers mounted on each support bracket one of which rollers is in contact with the upper surface and the other of which rollers is in contact with the undersurface of the adjacent horizontal track, roller preloading springs connected to each roller and urging each rollet into contact with said horizontal track, and prime mover means connected to each of said screw shafts for rotating said screw shafts and thereby moving said sliding gate between said predetermined limits of travel.

3,043,421
DISTRIBUTOR BAR SAFETY FOR TYPOGRAPHICAL MACHINES
George J. H. Sausele, New Providence, N.J., assignor to Harris-Intertype Corporation, Brooklyn, N.Y., a corporation of Delaware
Filed May 4, 1961, Ser. No. 107,789
3 Claims. (Cl. 199—43)

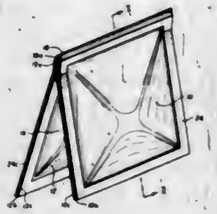
1. In a linecasting composing machine for assembling and distributing a plurality of classes of matrices, means

for selectively releasing matrices from their magazine storage channels for assembly in a line prior to presentation before a slotted mold in which a slug is cast against the line of assembled matrices; a plurality of rotatable distributor screws for returning said matrices to their respective magazine channels; means for presenting said matrices, seriatim after casting, to said distributor screws; means for driving said screws; a clutch between said



driving means and said screws; a distributor bar suspended between said distributor screws and having a plurality matrix tooth combinations, one for each matrix storage channel, the distributor bar suspending means being adapted to permit lengthwise movement of said bar; and means operatively responsive to lateral movement of said bar to cause disconnection of said distributor screw driving clutch.

3,043,422
EASEL TYPE DISPLAY CONTAINER
Gordon Daline, Excelsior, Minn.
(P.O. Box 572, Tacoma, Wash.)
Filed Sept. 4, 1959, Ser. No. 838,303
4 Claims. (Cl. 206—45.24)



1. An easel type display container for separately containing and displaying a plurality of articles comprising a plurality of sealed compartments connected together at the tops thereof, a pair of said compartments having the bottoms thereof spaced apart and respectively forming the legs of an easel, said compartments being formed from layers of flexible material having the marginal edge portions thereof connected together to respectively form the sides and bottoms of said compartments, and opposed intermediate portions of adjacent inner layers forming the inside walls of said compartments being connected together at a point spaced a substantial distance downwardly from the upper edges of said compartments.

3,043,423
GARMENT PACKAGE
Nathan M. Shenker, Brooklyn, N.Y.
(155 Van Wagener Ave., Jersey City, N.J.)
Filed Mar. 18, 1960, Ser. No. 16,029
1 Claim. (Cl. 206—46)

As an article or manufacture, a garment having a body with shoulders and sleeves and a neck, said sleeves extending outwardly, a bag of synthetic plastic sheeting enveloping the garment and having portions following closely the outer outline of the neck and shoulders and around and beneath the underside of the outwardly extending sleeves of the garment and the sides of the garment below said sleeves, whereby the garment is prevented from readily falling within the bag, a garment hanger within the bag having portions engaging beneath



the shoulders of the garment, said hanger having suspending means extending through said neck of the garment, and an opening at the lower end of said bag to permit manual inspection of the garment.

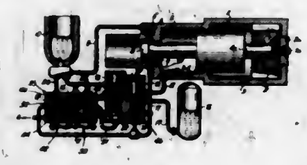
3,043,424
CONTAINERS FOR MASTIC MATERIALS AND TO MEANS FOR MIXING THE CONTENTS THEREOF
Frederick Gordon Howard, Ormskirk, England, assignor to Sealanco Limited
Filed Aug. 13, 1959, Ser. No. 833,458
5 Claims. (Cl. 206—47)



1. A package comprising a closed container charged with a viscous material to be mixed with a second material before use and having a small opening in one end and a deformable tube of substantially uniform cross-section containing the second material and housed in the container and extending substantially through the entire length of the container, the tube being closed but readily openable at its inner end and having an unfilled extension projecting through said opening substantially filling and closing said opening, said opening having a cross-section materially less than that of the filled portion of the tube within the container, whereby on pulling the projecting extension of the tube pressure is exerted on the contents, the inner end is opened and the tube is removed through the opening while its contents are discharged substantially uniformly into the material throughout its entire length within the container.

3,043,425
EXTRUSION PRESS AND CONTROL THEREFOR
August Grohmann and Hermann Prött, Duisburg, Germany, assignors to Hydraulik G.m.b.H., Duisburg, Germany
Filed Dec. 2, 1959, Ser. No. 856,823
Claims priority, application Germany Dec. 5, 1958
2 Claims. (Cl. 207—9)

1. A fluid pressure operated extrusion press comprising cylindrical housing means having a die opening for extruding material therethrough, means for mounting a workpiece in alignment with the die opening for extrusion through the opening, an extrusion ram including a small diameter forward ram portion reciprocatable in said housing to contact the workpiece and extrude it through said die opening, said ram including an intermediate pressure piston portion of relatively large diameter connected to said ram portion and a retracting piston portion of relatively small diameter connected to said intermediate piston portion on the opposite end thereof from said ram piston portion, said cylindrical housing means defining fluid tight cylindrical press and retracting portions for each of said press and retracting piston portions, respectively, a first fluid pressure source, a first return conduit connecting said first fluid pressure source and said retractable piston portion at a location thereon adjacent said intermediate piston portion, check valve means in said first return conduit, a second conduit connecting said first pressure source and said intermediate cylindrical portion on an end thereof adjacent said retractable cylindrical portion, a third conduit connecting said retractable cylindrical portion at an end thereof adjacent said intermediate cylindrical portion and said first pressure source, displaceable control valve means in said third conduit, main operating valve means in said second conduit, second fluid pressure source connected to said main operating valve means, a drain conduit connected to said control valve means, said main operating valve means including displaceable valve members for selectively communicating said first and second pressure sources to said inter-

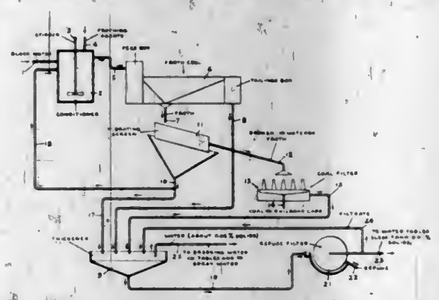


mediate cylindrical portion, said control valve means also including means for selectively connecting said first pressure source to said retractable cylindrical portion and connecting said retracting cylindrical portion to said drain, said third conduit being connected between said first pressure source and said retracting cylindrical portion to move said retracting piston to a retracted position to bring said ram out of contact with the workpiece when the control valve means in said third conduit is correspondingly set, said second pressure source being in communication with said intermediate cylindrical portion when said main operating valve is correspondingly set to move said intermediate piston portion to a starting position with the ram spaced a predetermined distance from the workpiece, said first fluid pressure being communicable with said cylindrical piston portion after said second pressure source is disconnected therefrom by the predetermined setting of said main operating valve means, said retractive piston portion being connected back to said pressure source through said first return conduit and said check valve means when the pressure between said retractive piston and the end of the retractive cylindrical portion adjacent said intermediate cylindrical portion exceeds the amount of said first pressure source as determined by said check valve means.

3,043,426
BLACK WATER CLARIFICATION
William H. Noone, Charlton Heights, W. Va., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Apr. 5, 1960, Ser. No. 20,099
3 Claims. (Cl. 209—12)

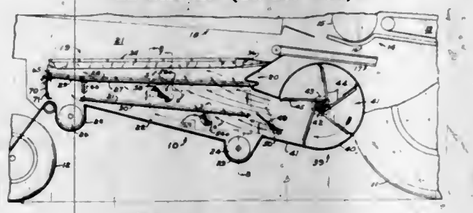
1. A process for the treatment of black water to produce therefrom a clarified water containing less than 0.1% by weight solids, a purified coal product and a separate body of refuse which comprises adding frothing agent to black water containing suspended solids in an amount of about 1–10% by weight of the black water composed of extremely fine coal and refuse particles with the majority of the particles below 44 microns in size,

introducing air into a body of the black water containing frothing agent to form air bubbles which rise to the top of the body and carry with them finely divided solid particles composed of a major amount of coal particles and a minor amount of refuse particles in the form of a froth at the top of the body, removing the froth from the top of the body, discharging tailings which are predominantly refuse contained in the black water from the body, passing said tailings to a thickener, directing the froth from the top of the body onto a vibrating screen having a mesh size small enough to prevent the coal particles from dropping therethrough but sufficiently large to permit passage therethrough of separated water and



finely divided refuse particles, discharging underflow composed of water and finely divided clay particles passing through the vibrating screen, passing at least a part of said underflow to the thickener, passing the broken, partially dewatered froth from the vibrating screen to a filter to separate the coal from the water, discharging the coal from the filter, discharging the filtrate from the filter, withdrawing a slurry of solids from the bottom of the thickener, passing said slurry to a second filter to separate the solids as refuse from the filter, discharging the filtrate from the second filter, and removing from the top of the thickener clarified water having a solids content of less than 0.1%.

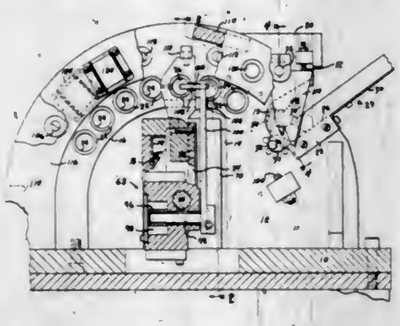
3,043,427
HARVESTING MACHINE
Lloyd L. Eisert, Box 196, Crookston, Minn.
Filed Sept. 19, 1960, Ser. No. 56,810
11 Claims. (Cl. 209—26)



1. In combination with a harvesting machine having a pair of vertically spaced, generally horizontal, reciprocating sieves and having a fan mechanism mounted forwardly and below the sieves for discharging an air stream upwardly through the latter for air separation and discharge of chaff from granular crops, a directional air-flow control mechanism for controlling the direction of flow of the air through the reciprocating sieves and including a pair of elongate air-flow control members each mounted transversely of said sieves and each having front and rear peripheral edges, one of said air-flow control members being disposed below and rearwardly of the front terminal portion of the lowermost of said sieves and the other of said members being disposed between said sieves and having its front peripheral edge spaced rearwardly of the rear peripheral edge of said one mem-

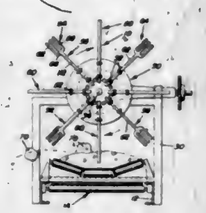
ber, and each of said members having an air-directing surface cooperating with said fan mechanisms for directing the air stream produced by the latter upwardly and rearwardly through said sieves to cause the chaff to be entrained within said air stream for rearward discharge thereby.

3,043,428
GAGING AND SORTING APPARATUS
Earl A. Thompson, 1300 Hilton Road, Ferndale, Mich.
Filed Feb. 10, 1958, Ser. No. 714,320
21 Claims. (Cl. 209—82)



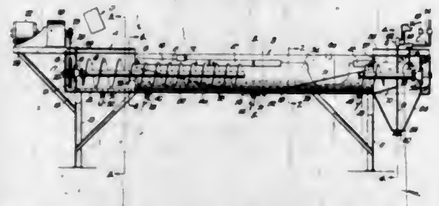
5. An apparatus for sorting articles into a plurality of categories comprising an article supply station, an article carrier shiftable along a predetermined path to and from the supply station, a plurality of article discharge stations positioned along the path to receive articles from the carrier, a grading device positioned to detect the grade of an article prior to its delivery to a discharge station, means for selectively driving the carrier to any one of the discharge stations, a memory device for retaining the grade of an article during travel of the carrier, and means controlled by the memory device for determining the amount of travel along the path whereby each article will be deposited at a discharge station selected in accordance with its detected grade.

3,043,429
ROCK SORTER
Alphonse Osmanski, Rte. 4, Box 512, Pueblo, Colo.
Filed Apr. 5, 1960, Ser. No. 20,211
3 Claims. (Cl. 209—247)



1. For use in connection with a conveyor belt for conveying a heterogeneous mixture of solid particles including larger undesirable particles; a sorter, said sorter including a shaft adapted to be journaled for rotation about an axis generally paralleling, in vertical alignment with and spaced above said conveyor belt, a plurality of arms, means securing said arms to said shaft for rotation therewith and with said arms extending generally radially of the shaft, longitudinal adjustment radially of said shaft and rotational adjustment about the longitudinal axis of said arms, the outer ends of said arms adapted to pass closely to the upper surface of said conveyor belt and through the heterogeneous mixture being carried thereby, some of said arms being adapted to engage and at least momentarily stop the larger particles of said mixture and other of said arms being adapted to engage and laterally deflect the movement of the larger particles last engaged by the preceding one of said arms whereby the larger particles of said mixture will be deflected laterally off one longitudinal side edge of said conveyor, said securing means including a mounting disk, said shaft extending centrally through said disk, said disk being secured to said shaft for rotation therewith, clamping elements secured to said disk and disposed along radii of said disk in pairs of spaced clamping elements, each pair of said clamping elements clampingly engaging the end of one of said arms adjacent said shaft at points spaced longitudinally therealong, said clamping elements being releasable, each of said arms being adjustable radially of said disk, said some arms each comprising a substantially straight rod-like member, said other arms each also comprising substantially straight rod-like members, the free ends of said other arms each being provided with a substantially U-shaped member with the bight portions thereof extending substantially transversely of the corresponding other arms a spaced distance from the ends thereof, the free ends of said other arms lying in a plane containing the legs of the corresponding U-shaped members.

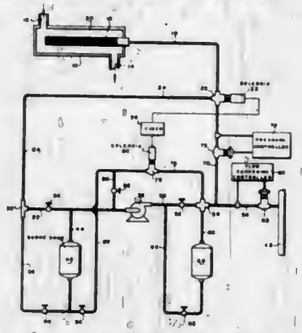
3,043,430
SAND SKIMMER
Henry J. Glsh, Kansas City, Mo., assignor to Stewart Sand & Material Company, a corporation of Missouri
Filed Nov. 18, 1959, Ser. No. 853,953
8 Claims. (Cl. 209—464)



1. Apparatus for removing foreign matter from sand and the like, comprising an elongate horizontal trough having opposed parallel upper side edges and provided with a horizontal bottom having longitudinally spaced perforations, said trough further having a charging end for receiving raw sand and a discharge end, means for mixing water with the raw sand at the charging end of the trough to form a pulp, a rotating screw conveyor disposed in the trough and extending the length thereof, said screw conveyor operating to convey the pulp longitudinally through the trough and to maintain it in an agitated state, means for introducing additional water to said trough through said perforations as the pulp is impelled along the trough, and in an amount to cause overflow along said upper side edges of the trough over substantially the full length thereof whereby materials lighter in specific gravity than the pulp will be floated from the pulp and laterally over said side edges, and waste collectors on the outside of the said trough and arranged to capture said overflow and channel it to a central location.

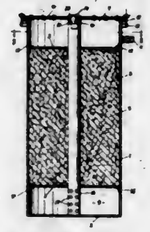
3,043,431
SLURRY FILTRATION
Arthur R. Dudley, Thomas H. Royder, and William D. Allison, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Apr. 23, 1959, Ser. No. 808,342
2 Claims. (Cl. 210—82)

2. A method for obtaining a liquid filtrate fraction from a slurry feed containing a finely divided solid in a liquid medium which comprises continuously turbulently flowing said slurry feed across one surface of a filter element in a filter zone, normally creating a pressure differential between said one surface of said filter element and the other surface of said filter element to cause selective withdrawal of a portion of the liquid component of said slurry feed through said filter element to thereby resolve said slurry feed into a concentrated slurry fraction and a filtrate fraction, continuously withdrawing said concentrated slurry fraction from said filter zone through a concentrated slurry outlet, normally continually withdrawing said filtrate fraction from said filtration zone, and discharging



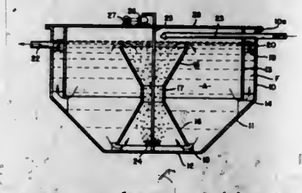
said filtrate fraction into a zone containing filtrate at a pressure higher than that in said filtration zone but less than that attainable in creating said pressure differential, periodically interrupting said normal continual filtrate withdrawal while maintaining said slurry feed undiminished by circulating a portion of said filtrate in a diverted path and allowing the backflow of filtrate from said high pressure zone in a reverse direction into said filtration zone, and withdrawing all of said slurry feed and all of said backflow filtrate portion only through said concentrated slurry outlet during said reverse flow, whereby blinding in said filtration zone is minimized.

3,043,432
APPARATUS FOR RECOVERY OF SILVER FROM SPENT PHOTOGRAPHIC SOLUTIONS
Joseph N. Megesi, Cleveland, Ohio, assignor to Fairco Reclaiming Service, Fairview Park, Ohio, a corporation of Ohio
Filed Jan. 12, 1960, Ser. No. 2,012
4 Claims. (Cl. 210—99)



4. In an apparatus for the recovery of silver values from spent photographic solutions containing silver in solution having a vessel divided into three superimposed sections, lower, central, and upper, the central section being separated from the others by perforated dividers and having the free space therebetween substantially filled with a fluid permeable free metal containing medium, said metal being above silver in the electromotive series, an outlet duct leading from the upper section, a pipe communicating with the lower and upper sections only, said pipe extending into said upper section having an unimpeded discharge outlet at a level above the level of said outlet duct whereby to permit free flow of fluid out of said pipe when the fluid permeable medium becomes clogged, and a cover removably secured to the upper open end of said vessel, the improvement which comprises inlet means piercing the cover including a nipple having a flange at its upper end shouldered against said cover, a tubular portion having an external cross-sectional area less than the internal cross-sectional area of said pipe, the lower extremity of said tubular portion being disposed at a point below said discharge outlet in said pipe and above the level of said outlet duct.

3,043,433
SEWAGE TREATMENT PLANT
Oscar Caton Singer, 1027 Greenhills, Toledo 7, Ohio
Filed May 17, 1961, Ser. No. 110,740
1 Claim. (Cl. 210—197)

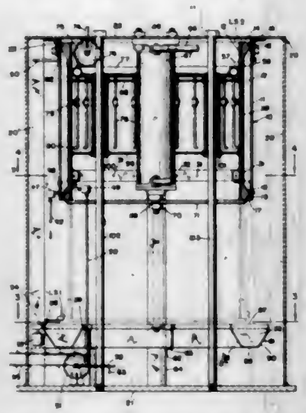


A sewage treatment plant comprising a tank having a cylindrical upper wall portion, a downwardly and inwardly tapering lower wall extension thereof, and an imperforate bottom wall; a pair of reversely arranged vertically disposed frusto-conical tubes disposed generally coaxially within said tank and having a relatively short cylindrical tube integrally connecting the smaller ends thereof providing a venturi throat, the bottom of said frusto-conical tubes being spaced from the bottom wall of said tank; a cylindrical baffle wall within said tank, inwardly spaced from the upper cylindrical wall portion of said tank, defining a quiescent fluid settling chamber therebetween, and outwardly spaced from said frusto-conical tubes defining an annular aeration chamber therebetween, the lower end of said baffle wall terminating at a horizontal plane substantially level with the horizontal plane of the upper end of the tapering lower wall extension of said tank; a trough-like weir on the inner side of said upper cylindrical wall of said tank disposed to maintain the level of liquid within said tank above the upper end of the upper frusto-conical tube, said weir provided with clean liquid outlet means; a sewage inlet conduit disposed above said tank and positioned to introduce raw sewage into the zone defined by the upper one of said frusto-conical tubes; and an aerating head disposed in the lower portion of the lower one of said frusto-conical tubes communicating with a source of air under pressure to provide the emission of an air stream from said aerating head, whereby the sewage liquor in the bottom of said tank is carried upwardly by the air stream through the venturi throat of said frusto-conical tubes to the upper one of said tubes whereupon the pressure is reduced allowing more oxygen from the air stream to be absorbed by the liquor prior to the mixture thereof with the raw sewage entering the system from said sewage inlet conduit.

3,043,434
FILTRATION APPARATUS
George Stram, Hellam, Alexander A. McIntyre, Lancaster, and Donald L. Gelselman, York, Pa., assignors to Capitol Products Corporation, a corporation of Pennsylvania
Filed Oct. 15, 1958, Ser. No. 767,362
15 Claims. (Cl. 210—236)

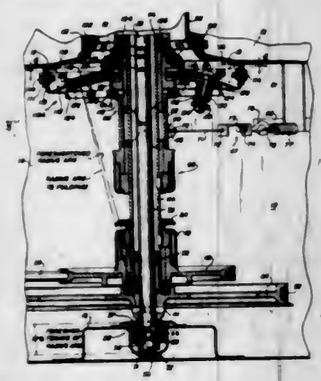
4. In a pressure filter, inner and outer cylindrical coaxial vertical shells normally disposed one within the other in radial spaced relation to form an annular chamber therebetween, annular end closures for said annular chamber fixedly carried by opposite ends of said inner

shell and disposed in sealing engagement with the opposite ends of said outer shell, a cylindrical filter medium fixedly carried by said inner shell and disposed in close proximity to said inner shell between the cylindrical surfaces of said inner and outer shells dividing said annular chamber into annular slurry and filtrate receiving zones, inlet means for supplying slurry to said annular slurry receiving zone and outlet means for discharging filtrate from said annular filtrate receiving zone, an annular manifold within and carried by said inner shell for receiving fluid under pressure, a plurality of ports in



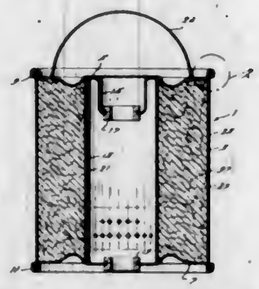
said inner shell distributed throughout the surface thereof, connections between said manifold and all of said ports for introducing fluid under pressure simultaneously through all of said ports into said filtrate zone to loosen the cake formed on said filter medium as a result of a filtering operation, means stationarily mounting one of said shells, means guidingly supporting the other of said shells for unobstructed axial movement between said normal chamber forming position and a position to expose said filter medium for removal of the cake, and actuating means operatively connected with said movable shell for moving the same.

3,043,435
CENTERING AND STABILIZING APPARATUS FOR A COMBINED WASHING MACHINE AND EXTRACTOR
John A. Castricone, Peoria, Ill., assignor, by mesne assignments, to American Motors Corporation, Detroit, Mich., a corporation of Maryland
Filed July 10, 1957, Ser. No. 670,974
6 Claims. (Cl. 210—363)



6. In a washing machine, the combination of a rotatable tub adapted to receive a liquid and material to be washed, means including shaft means for rotating said tub to extract liquid from the material contained therein, means for supporting said tub for gyratory tilting movement about a point, means comprising cooperating stationary and movably engaged spherical friction surfaces for resisting tilting movement of said tub, said spherical friction surfaces being described by a radius substantially different from the distance from the relatively movable surfaces to said point.

3,043,436
PACKING RING
Harold W. Farrey, Racine, Wis., assignor to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed Mar. 4, 1960, Ser. No. 12,806
3 Claims. (Cl. 210—484)



1. The method of packing compressible filter material in a tubular container comprising positioning a retainer ring between the material and a compression ram and utilizing the ram to force the material into the container and the ring into the container until the ring snaps behind the shoulder on the container to hold the material compressed in the container, removing the ram from the container, and attaching an end cap to the container over the ring.

3,043,437
GOLF CLUB DISPLAY
Edward G. Lockie, 4015 Harrison St., Davenport, Iowa
Filed Dec. 12, 1960, Ser. No. 75,302
3 Claims. (Cl. 211—60)



1. Means for displaying golf clubs as a set of woods arranged heads down and grips up and a set of irons arranged heads up and grips down, comprising: a lower support adapted to be affixed to a wall or the like and including a generally horizontal outwardly projecting tray means having first and second side-by-side open-top and generally parallel compartments, said first compartment being elongated in an outward direction and of such lateral dimension as to receive and support therein the heads of the woods in a single row and said second compartment being similarly elongated in said direction but relatively narrower to receive and support the terminal ends of the grips of the irons in another row generally parallel to the row of woods; and an upper support positionable

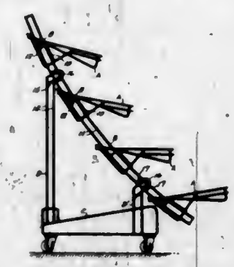
on such wall or the like in spaced relation above and partly overhanging the lower support and including first and second outwardly projecting parts respectively cooperative with said first and second compartments, said first part projecting outwardly a lesser distance than and being laterally offset from vertical alinement with said first compartment and having therein a plurality of outwardly opening notches for respectively receiving the grips of the woods so that the shafts of the woods incline both inwardly and laterally, and said second part being further laterally offset beyond both the first part and the second compartment and having therein a plurality of outwardly opening notches for respectively receiving the shanks of the irons, with the heads of the irons above said second part so that the shafts of the irons incline both inwardly and also laterally of the shafts of the woods.

3,043,438
CLOTHES POLE
Jerry H. Chmielewski, 19909 Van Owen, Canoga Park, Calif.
Filed June 13, 1960, Ser. No. 35,487
5 Claims. (Cl. 211—105.6)



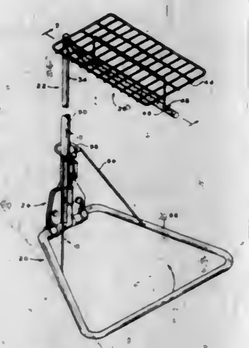
1. A clothes pole of the character referred to including, inner and outer elongate tube sections having inner and outer ends, said inner tube being telescopically engaged in the outer tube, said inner end of the outer tube having circumferentially and longitudinally spaced inwardly disposed stops, said inner tube having a longitudinal slot in its inner end portion, a plug in the tube outward of the slot, a slide in the tube, a pin carried by the slide projecting through the slot and engaging one of the stops and a compression spring between the plug and the slide to normally yieldingly urge the slide longitudinally inwardly and the pin into pressure engagement on the stop and wall engaging tips on the outer ends of the tubes, each of said tips being formed of rubber and including a cup-like body engaged on the outer end of the tube related thereto and having a lateral projection with a laterally downwardly and longitudinally outwardly disposed seat to engage and seat on a projection on a wall.

3,043,439
STAND HAVING SUPPORTS IN ECHELON
Léon Joseph Poillevey, 4 Rue Eugene Delacroix, Grenoble, France
Filed Mar. 16, 1960, Ser. No. 15,469
Claims priority, application France Mar. 18, 1959
2 Claims. (Cl. 211—128)



1. Display apparatus comprising, a pair of inclined curved side posts, the concave curved side of said posts facing toward the front of said display apparatus; each side post comprising a pair of rods each forming an arc and joined by transverse connecting bars; a plurality of tray means extending between said side posts; means including a laterally projecting stub hook hooking over a transverse bar for supporting one point of each end of said tray means from said side posts; and means attached to said tray means bearing against the concave curved side of at least one of said side posts to maintain said tray means at a predetermined angle with respect to said side posts.

3,043,440
FOLDING RACK
Daniel Berlin, 4424 Paul St., Philadelphia, Pa.
Filed Apr. 4, 1960, Ser. No. 19,898
2 Claims. (Cl. 211—178)

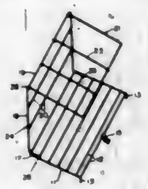


1. In a foldable clothes support, the combination of a standard, a clothes rack pivoted to the upper end of said standard, a base, and a hinge and latch structure pivotally securing said base and the lower end of said standard, said standard including a long member, said base including a long member bent in a plane and having cylindrical ends in spaced alignment, said hinge and latch structure including a latching plate with a hook portion formed at the free end thereof and two clamping plates having corresponding T channels formed therein, said latch plate including a bent intermediate L-shaped portion that forms a channel leading to said hook portion to guide said latching bail into said hook portion upon tilting of said standard whereby said hook portion precludes accidental unlatching of said bail, the leg of each of said T channels being shaped to cooperate together to receive and clamp said standard member and one of said T channel legs being adapted to clamp and anchor an end of said latching plate, the cross-arms of said T channels being generally semi-circular in cross-section and shaped to receive and secure rotatably said base member ends, and a bail having ends secured to said base member and central portion adapted to engage and latch with the hook portion at the free end of said latch plate.

3,043,441
GROCERY BAG HOLDER FOR AUTOMOBILE TRUNKS
John C. Dumford, 7969 Kenwood Road, Cincinnati 36, Ohio
Filed Aug. 11, 1960, Ser. No. 48,992
1 Claim. (Cl. 211—178)

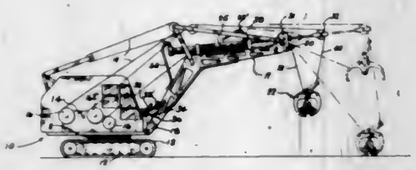
A foldable bag holder arranged to rest on the floor of a trunk compartment of an automobile, comprising a base formed of a perimeter rod and transverse cross-rods attached to said perimeter rod, a foldable rear support pivotally connected to one of said cross-rods and bent at substantially right angles to form a rear upright sup-

port supported by the portion resting on the base when in upright position, and a divided holding frame pivotally



connected to the top of said rear support for engaging and holding bags placed on said base.

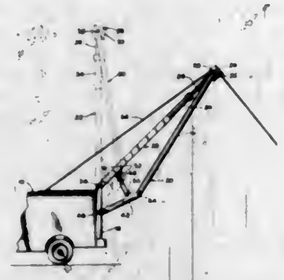
3,043,442
LOADING MECHANISM
Albert R. Wirkkala, Naselle, Wash.
Filed Oct. 19, 1959, Ser. No. 847,208
1 Claim. (Cl. 212—7)



In a loading machine of the character described comprising a loading boom, a fairleader block at the outer end of said boom, a load lifting cable winding drum on the machine, a load lifting cable extending from said drum along the boom and through said fairleader block, a load carrying grapple operatively attached to the outer end of said load lifting cable, an outreaching arm mounted by and extending along the boom, a fairleader at the outer end of said outreaching arm, power means operable to cause said outreaching arm to be moved endwise between a retracted position to position extended well beyond the reach of the boom, a trip line winding drum on the machine, a trip line extending from the trip line winding drum over the fairleader at the outer end of the outreaching arm and operatively connected at its end with said grapple for holding it in suspension in open position and to permit it to close when the trip line is slack; said load lifting cable drum and said trip line winding drum being selectively operable for the controlled winding in or paying out of their respective cables and said power means being operable to effect the extending or retracting of the outreaching arm in conjunction with the cable movement to control the opening and closing of the grapple.

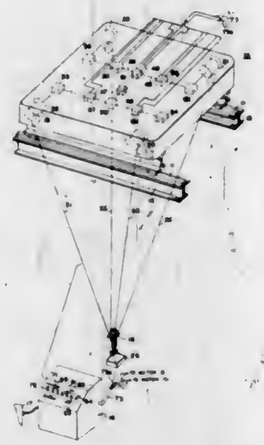
3,043,443
TRUCK DERRICKS
Thomas R. Hall, Portland, Oreg., assignor to McCabe-Powers Body Company, a corporation of California
Filed Dec. 12, 1958, Ser. No. 780,032
11 Claims. (Cl. 212—8)

1. A supporting structure and a boom mounted thereon for movement between an inoperative position overlying said structure and an operative position extending angularly outwardly from one end of said structure, said boom comprising an A-frame including two converging legs connected together at their outer ends and being pivotally mounted at their lower ends on said structure adjacent the top thereof, each of said legs being pivotally connected adjacent its lower end to the upper end of a rearwardly extending first link, a second link pivotally connected at its upper end to the lower end of each first link outwardly from the point of pivotal connection between the first link and its associated leg, each of said second links being, in turn, pivotally connected at its lower end to said structure at a point vertically beneath the pivotal connection between said structure and said leg, extensible hydraulic ram means connected at its lower end to said supporting structure at a point vertically beneath the pivotal connection between said structure and



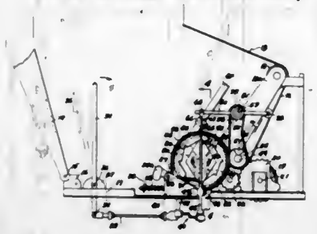
said second link, and means operatively connecting the upper end of said hydraulic ram means to said supporting structure at a point adjacent the pivotal connection of said first and second links whereby extension of said extensible hydraulic ram means effects movement of said boom from inoperative to operative position and retraction of said hydraulic ram means effects return of said boom to inoperative position.

3,043,444
CONTROLLED MOTION CRANE
Donald F. Melton, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Oct. 9, 1958, Ser. No. 766,320
13 Claims. (Cl. 212—20)



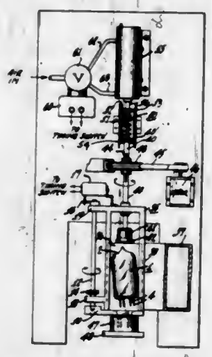
1. A crane unit mounted for positioning a load bearing unit, at least three rotatable cable drums mounted on said crane unit, means for driving each of said cable drums, a cable connected at one end to each of said three rotatable cable drums, a load bearing unit connected at substantially one point thereof to the other end of said cables, whereby said cables converge from said cable drums to the load bearing unit and rotation of said drums in one direction raises said load bearing unit and rotation of said drums in the opposite direction lowers said load bearing unit.

3,043,445
BOOM CONTROLLING DEVICE FOR POWER CRANES
William C. Holmes, 4520 W. Jefferson Ave., Ecorse, Mich.
Filed Jan. 23, 1961, Ser. No. 84,371
14 Claims. (Cl. 212—39)



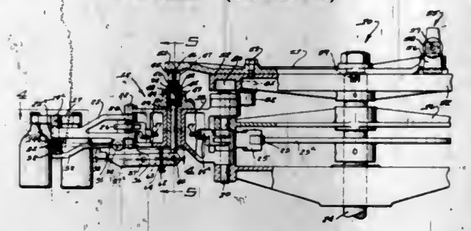
1. In a crane including a base, the improvement comprising a cable drum adapted to control lowering of a boom, a brake wheel, means interconnecting said brake wheel and drum for rotation in unison, a brake assembly retainingly engaging said brake wheel, a manual lever pivoted on said base connected to said brake assembly for releasing the same, a power driven hoistshaft, a normally inoperative clutch adjustably positioned over said hoistshaft, idle gear means on said hoistshaft responsive to said clutch, additional gear means connecting said idle gear means and said drum, and a linkage interconnecting said brake release lever and said clutch for simultaneously interconnecting said idle gear means with said hoistshaft upon release of said brake assembly.

3,043,446
APPARATUS FOR ORIENTING AND INSERTING ELECTRICAL DEVICES
Joseph L. Beers, Newark, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 1, 1960, Ser. No. 12,100
16 Claims. (Cl. 214—1)



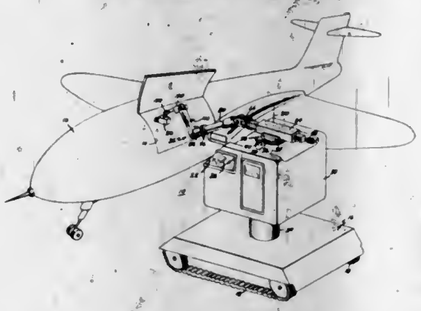
1. Apparatus for indexing and socketing an electrical device having a plurality of lead-ins extending from one end thereof and parallel to the longitudinal axis of said device, said apparatus including a supporting means for supporting an electrical device, means associated with said supporting means for advancing said device axially along its longitudinal axis with said lead-ins extending in the direction of advance, guide means associated with said supporting means for engaging the lead-ins when said device is advanced, said guide means having means for permitting movement of said device through said guide means only when said lead-ins are in proper rotational registry with said guide means, and means for rotating said device when said device is in engagement with said guide means to bring said guide means and said device in rotational registry with each other.

3,043,447
ARTICLE TAKE-OUT MECHANISM
Albert G. Lauck and Robert A. Kurtz, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Dec. 12, 1957, Ser. No. 702,402
9 Claims. (Cl. 214—1)



1. In a revolving turret type article takeout device having at least one takeout arm adaptable to travel, during rotation of the turret, through an article takeout station for taking and transferring molded articles from their supported position on their mold bottom support on the rotary carriage of a molding machine, the improvement thereof comprising an article holder connected on said takeout arm, said holder comprising an opposed pair of corresponding gripping elements operable between open and closed positions which are adapted to grip one or more articles therebetween when closed, a carrying frame for said gripping elements, said frame including a pair of arms pivotally mounted on the takeout arm and operable for movement toward and away from each other, means connected to said pair of arms for automatically opening and closing the gripping elements, a vertical journal mounting on said arms for said gripping elements to provide for vertical movement of the latter thereon, lever means pivoted on the takeout arm and connected at its outer end to each of the said gripping elements for moving them collectively between lowered and raised positions on their said arms of the carrying frame, springs each compressed against one of the arms of the carrying frame and connected to the corresponding gripping element on that arm and biasing said lever means to normally hold the gripping elements in their lowered position, and means operable at the takeout station for actuating said lever means after the gripping elements are closed to overcome the means biasing said lever means and thereby move the gripping elements to their raised position, whereby to raise gripped articles free of their mold bottom support for takeout of the articles from the molding machine.

3,043,448
VEHICLE-MOUNTED MANIPULATOR
Donald F. Melton, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Sept. 19, 1958, Ser. No. 762,143
19 Claims. (Cl. 214—1)



1. A material handling unit comprising a support means, a first means supported by the support means so

as to be projectable and retractable with respect thereto, a second means comprised of first and second sections, the first section being attached at one end to one end of said first means so as to form a pivotal joint with said first means, the second of said sections being movable in a reciprocal and a rotatable direction relative to said first section, said second section being projectable only from one end of said first section, a mechanical linkage connected at one end to the second section to form a second pivotal joint with said second section, and gripping means connected to the other end of said linkage.

3,043,449

LOADING GAGES FOR WAVE TUBE EXHAUSTING MACHINE

Geza B. Fliezar and Jack J. Monahan, Allentown, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 18, 1959, Ser. No. 853,964

4 Claims. (Cl. 214—1)



1. An apparatus for loading like elongate articles, each having an upper end, a tubulation at the lower end and an intermediate base with parallel terminals extending downwardly therefrom and disposed at predetermined spaced positions about the tubulation, in tubulation receiving holders of carriages where they are firmly secured for movement with the carriages successively out of a loading station comprising a vertical support mounted at a fixed position adjacent the loading station, a top arm mounted on the support and extending laterally into the loading station, an end locator pivotally mounted on the top arm and having an aperture therein aligned with the holder of the carriage in the loading station and of a contour to removably receive and locate the upper end of the article, a lower arm mounted on the support and extending laterally toward the loading station, a slide having an inner end and a bifurcated outer end, a guide carried by the lower arm to support the slide and guide the inner end for movement of the slide between a normal position out of the loading station and a loading position in the station, and a bifurcated base locator supported by the bifurcated end of the slide and having recesses spaced to receive the terminals only when the article is in a predetermined position to orient the article relative to the holder where it may be secured with the tubulation in the holder and to cooperate with the end locator to locate the oriented article in vertical alignment with the holder.

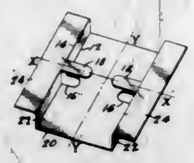
3,043,450

EXPENDABLE PALLET

Conrad Caprin, Sunnyvale, and John L. Wyckoff and Leslie R. Coe, San Jose, Calif., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Nov. 25, 1959, Ser. No. 855,407

4 Claims. (Cl. 214—10.5)



3. A pallet formed of substantially plano-laminar material adapted for transporting a plurality of stackable units by forks of lift trucks comprising: a web element adapted to form a bottom portion for the pallet and side walls extending upwardly from opposite edges of said bottom portion, said side walls being adapted to embrace at least a first layer of stackable units to be transported between said side walls on said pallet, continuous flaps extending freely from said side walls reaching outwardly away from the central region of said bottom portion and adapted to form lifting areas for said truck forks, and tabs extending inwardly from said side walls each opposite and in continuity with one of said flaps and spaced from said bottom portion to overlie at least said first layer of said units, said tabs each extending from its respective side wall in a location intermediate the ends of its associated oppositely extending flap and adapted to being held in said relation by the weight of other units superimposed above said tabs whereby said units cooperate with said tabs to maintain said flaps in fork engaging position.

3,043,451

AUTOMATIC GARAGE BUILDING

André Ghionda, 5 Bis Rue de la Republique, Nice, France

Filed May 4, 1960, Ser. No. 26,886

Claims priority, application France May 5, 1959

6 Claims. (Cl. 214—16.1)



1. A multi-storied automatic garage building for storing and parking vehicles comprising an elevator including a horizontal chassis, a tiltable platform rockably carried by a horizontal pivot on said chassis, control means for inclining said platform, a plurality of car-parking compartments toward which said tiltable platform can be inclined, each compartment including a pivotable platform carried by a further horizontal pivot, a stationary framework supporting said further horizontal pivot, chock means movably disposed in said tiltable platform to maintain a vehicle within predetermined limits while said elevator is moving vertically, locking means including an abutment means on said stationary framework and latching means disposed on said pivotable platform to lock said pivotable platform in an inclined position when the vehicle has been deposited thereon from said elevator, and interconnecting means disposed on said tiltable platform and said pivotable platform to interconnect said platforms to deposit and remove vehicles from said pivotable platform and for actuating said chock and locking means.

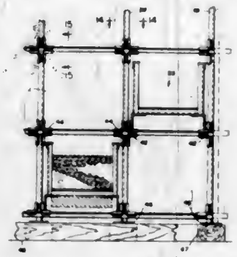
3,043,452

APPARATUS FOR HANDLING STRIP OR BAR MATERIALS

Themus A. Spillios, 1415 Ashland Ave., River Forest, Ill.

Application Oct. 17, 1960, Ser. No. 64,238, now Patent No. 2,992,749, dated July 18, 1961, which is a continuation of application Ser. No. 367,057, July 9, 1953, now abandoned. Divided and this application May 29, 1961, Ser. No. 113,179

5 Claims. (Cl. 214—16.4)



3. In combination, a rigid elongated crate having vertically extending material-retaining sides, an open top and ends and spaced depending longitudinal flanges supporting the crate and defining an inverted channel, a rack for supporting a plurality of such crates, said rack comprising groups of four substantially parallel vertically and horizontally spaced angle irons, the angle irons in a group being disposed to define the corner regions of a compartment having substantially the same cross-sectional configuration as a said crate and into which a crate is adapted to be inserted, the sides of said crate each having a rail extending across the top thereof, and a lift truck having a load support adapted to be inserted into said inverted channel for engaging and inserting a crate into a selected one of said compartments by endwise movement of a crate thereinto, the angle irons cooperating with said flanges and side rails on the crate to guide said crate in its movement thereinto and limit tilting of said crate in a compartment, whereby to avoid contact between the material in the crate and the rack.

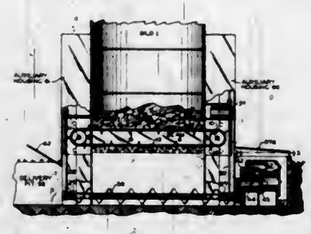
3,043,453

METHOD OF AND APPARATUS FOR BOTTOM-UNLOADING FEED-STORING STRUCTURES

Laurie J. Rautio, Louisville, Ky., assignor to Clayton & Lambert Manufacturing Company, Louisville, Ky., a corporation of Delaware

Filed Aug. 21, 1958, Ser. No. 756,484

22 Claims. (Cl. 214—17)



4. A bottom-unloading feed-storing apparatus for storing a column-forming mass of ensilage, ear corn or like material and for unloading that material from the bottom of the stored column, comprising:

(*a*) a silo-type structure;

(*b*) means operatively associated with that structure to kerf the lower end of a stored column in that structure by cutting a horizontal inverted-groove transversely across the bottom face of said column and progressively deepening said groove within limits extending up to a predetermined height intermediate the top and bottom of said column,

(1) said means including cutting means and means mounting the cutting means for horizontal groove-cutting movement and for vertical groove-deepening movement,

(2) said cutting means being operative, when actuated, to move in a horizontal groove-cutting direction and, when progressively moved upward, to heighten said groove progressively; and

(*c*) means for removing cutting material from said groove.

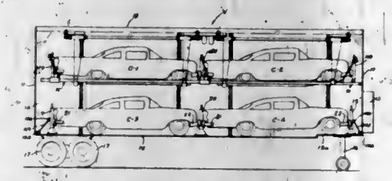
3,043,454

VEHICLE ELEVATING MECHANISM

Gordon O. Butler and William H. Calvert, Oshawa, Ontario, Canada, assignors to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan

Filed Nov. 13, 1959, Ser. No. 852,862

9 Claims. (Cl. 214—75)



1. Apparatus for elevating conveyances within an enclosed vehicle, comprising a plurality of first beam members connected to said vehicle along the upper portion and extending essentially entirely along the length thereof, a plurality of second beam members of generally the same length as the first beam members and vertically movable relative to said first beam members, means connected to said second beam members for supporting the conveyance in an elevated position, means interiorly of the vehicle and connected to said first and second beam members for raising and lowering said second beam members relative to said first beam members to elevate the conveyance within the transporting vehicle to permit another conveyance to be moved into the vehicle and located beneath the conveyance, and hold down means vertically and horizontally adjustable with respect to said second beam members for restraining the conveyance against vertical and horizontal movement during raising and lowering of the second beam members and also during travel of the vehicle.

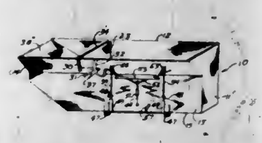
3,043,455

PORTABLE BUNK FEEDER

Clarence Post, Rock Valley, Sioux County, Iowa

Filed June 11, 1959, Ser. No. 819,633

6 Claims. (Cl. 214—83.36)



1. For use with a tractor having a power-take-off drive, a raisable drawbar and an upper hitch point, means for transporting and dispensing livestock feed comprising bin means, clevis means on the bottom of said bin means adapted to embrace said drawbar, pin means slidably disposed on said bin means adapted to slide into holding engagement with said drawbar, upper connection means on said bin means adapted to be connected to said upper hitch point, said bin means being formed with one open end, feed carrying means movably disposed in the bottom

of said bin means adapted to carry feed toward and out of said open end, vertical dividing wall means in said bin means positioned to form a principal hopper in the part of said bin means remote from said open end, said wall means being formed with an opening therein near the feed carrying means so that feed from said principal hopper may be carried therethrough, gate means slidably disposed on said wall means, said gate means being thereby adapted to adjustably close said opening, operating means for said gate means operably connected thereto and including a lever projecting from said bin means toward said tractor whereby the operator of said tractor may adjust said gate means, sloping bottom wall and second vertical wall means in said bin means combining to form an auxiliary hopper, said second vertical wall means being substantially parallel with and adjacent to said first named vertical wall means, said sloping bottom and second vertical wall means having a common edge at a line slightly above the upper edge of said opening in said first-named vertical wall means, said second vertical wall means also being formed with an opening therein, said last named opening extending upward from said common edge, gate means adjustably connected to said second vertical wall means, said last named gate means being thereby adapted to adjustably close said last named opening, control means for said last named gate means and operably connected thereto including a second lever projecting from said bin means toward said tractor, agitator means in said principal hopper and agitator means in said auxiliary hopper and drive means adapted to be connected to said power take-off drive, said drive means being in driving engagement with both said agitators and said feed carrying means to drive them.

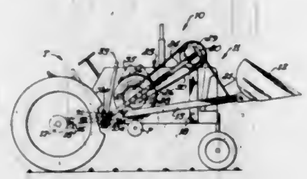
3,043,456
GATE EXTENSION LATCH
Oscar T. Stone, Lakeland, Fla., assignor to Lakeland Equipment Co., Inc., Lakeland, Fla., a corporation of Florida
Filed Nov. 18, 1959, Ser. No. 853,892
3 Claims. (Cl. 214—85)



1. Apparatus providing an extension for the side gate of a vehicle and comprising an extension member, hinge means connecting said extension member and the free edge of the side gate, said hinge means having grooves on opposite sides thereof, latch means mounted on said gate and engageable with the grooves of said hinge means for fastening said extension member in retracted inoperative position generally parallel to said gate and in extended operative position forming a continuation of said gate.

3,043,457
POWER DRIVEN WINDING APPARATUS
Russell H. Anderson, Clinton, Minn.
Filed Dec. 9, 1960, Ser. No. 74,958
2 Claims. (Cl. 214—131)

1. Power driven winding apparatus for use with a tractor of the type having a power take-off drive pulley, said apparatus comprising a support structure adapted to be fixedly connected to the front portion of a tractor in upstanding relation therewith, an elongate axle mounted on the upper end portion of said support structure for rotation about an axis extending transversely of the tractor and having a reel secured thereto for rotation therewith, a driven sprocket keyed to said axle for rotation therewith, an elongate flexible element having one end thereof attached to said reel and wound thereupon, an elongate support arm having one end thereof journaled for rotation about said axle and extending downwardly and rearwardly therefrom, a driven member rotatably mounted intermediate the ends of said arm for rotation relative thereto and being shiftable therewith, said driven rotary member comprising a wheel having a tire mounted thereon and being shiftable so that the peripheral surface



of said tire is moved into and out of engagement with the power take-off pulley of the tractor when the shiftable arm is pivoted about its axis of pivot, a drive sprocket interconnected to said driven rotary member for rotation therewith, an endless drive chain trained around said drive sprocket and said driven sprocket for rotating the latter to thereby cause the flexible element to be wound upon the reel, and brake means mounted on said tractor and being selectively engageable with said tire to prevent unwinding of the flexible element when the same is attached to a load.

3,043,458
VEHICLE FOR TOWING AND TRANSPORTING LOADS
Joseph Klosek, Utica, and Anthony Zorn, Oriskany, N.Y., assignors to Oriskany Garage, Inc., West Utica, N.Y., a corporation of New York
Filed Sept. 17, 1958, Ser. No. 761,508
4 Claims. (Cl. 214—505)



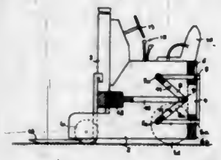
3. A self loading vehicle comprising a chassis, a frame pivoted to said chassis so as to tilt with respect thereto, and a platform longitudinally movable on said tilting frame and supported at opposite ends thereof, on said frame, said frame comprising pairs of reinforcing structural members, said members including at least one pair of longitudinal channel portions, said platform having a downwardly extending support at its forward end, a roller carried by each support, each roller being in engagement with one of said structural members, means on said vehicle maintaining said roller engagement, a cross bar supported on said frame adjacent the rear end of said frame and a roller supported on each end of said cross bar, the rear portion of said platform overhanging said rollers and being supported thereby, and a rigid downwardly extending leg secured to said frame forming a ground support for said frame when in a tilted position, said leg lying intermediate the ends of said platform and forming a rear bumper for said vehicle when said platform is in its non-extended position.

3,043,459
BOAT TRAILER HAVING FRAME TILTING MEANS
Frank B. Whalen, Dallas, Tex., assignor to Lone Star Boat Company, Grand Prairie, Tex., a corporation of Texas
Filed Aug. 17, 1959, Ser. No. 834,144
7 Claims. (Cl. 214—506)



1. In a boat trailer, a frame; a tongue pivotally attached at its inner end to the frame and extending forwardly thereof; an elongated operating shaft extending longitudinally of the tongue; a lever member having a portion pivotally attached to the tongue in spaced relationship forwardly of the pivotal connection between the tongue and the frame, and a portion movable outwardly of the tongue forwardly of said pivotal connection to engage the frame when the lever is rotated about the pivot point therefor; a pivotal connection between the inner end of the operating shaft and a portion of the lever located in spaced relationship from the pivotal connection between the lever and the tongue; and power means carried by the tongue and operatively connected to the outer end of the operating shaft arranged to move the shaft longitudinally of the tongue to thereby rotate the lever into engagement with the frame.

3,043,460
LIFT TRUCKS WITH LIFT MEANS TRANSLATABLE IN THE HORIZONTAL DIRECTION RELATIVE TO THE VEHICLE
Guy Marius Laurencin, Lyon, France, assignor to Friedrich Jungheinrich, Hamburg-Billstedt, Germany
Filed Nov. 4, 1959, Ser. No. 850,888
Claims priority, application France Nov. 28, 1958
7 Claims. (Cl. 214—670)



1. In a wheeled load-carrying vehicle, load-supporing and elevating means mounted on said vehicle for movement forwardly and rearwardly with respect thereto and effective to vary the moment on said vehicle in one direction about a horizontal axis through its centroid, a mass movably mounted on and relatively to said vehicle to apply a varying moment in an opposite direction about said axis, and means positively connecting said load-supporting and elevating means with said mass for opposite movement to simultaneously and oppositely vary said moments.

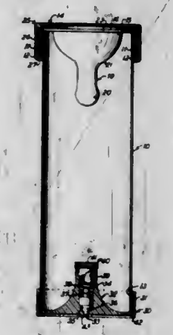
3,043,461
FLEXIBLE PLASTIC BOTTLES
Donald E. G. Glassco, Temple City, Calif., assignor to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
Filed May 26, 1961, Ser. No. 113,016
7 Claims. (Cl. 215—1)

1. A plastic bottle having a flexible bottom containing a centrally and upwardly recessed area at the outside of which the bottom has normal bearing on a planar supporting surface, said recessed area being displaceable downwardly by pressure inside the bottle below the normal bearing portion of the bottom at said outside of the recessed area, and means formed integrally with the bottom about and radially spaced from the central portion of said recessed area; said means normally projecting



downwardly within said area an extent above said normal bearing portion of the bottom but below any bottom surface within said central portion so that upon said downward displacement of the recessed area said means is brought into engagement with said supporting surface to stabilize the bottle.

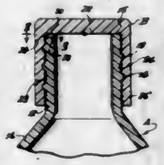
3,043,462
INFANT'S NURSING BOTTLE
Joseph Brill, Jr., Deckerville, and Ray W. McPeters Mount Clemens, Mich.
Filed May 5, 1959, Ser. No. 811,158
1 Claim. (Cl. 215—11)



In an infant's nursing bottle, in combination, a cylindrical tubular body portion of at least substantially uniform cross section throughout its length and open at both ends, external threads adjacent one end of said body, an external bead on said body spaced inwardly from said threads, a nipple having a marginal flange adapted to seat on said one end of said body, a nipple retaining member having an internally threaded skirt for engaging the threads on said body and an inwardly extending flange for engaging the flange on said nipple to secure said nipple in operative position on said one end of said body, said inwardly extending flange engaging the flange on said nipple with said nipple inverted and extending into said body in inoperative position to secure said nipple in unflexed condition in inoperative position, a protective flat top cap of resilient material having a skirt terminating in an inwardly extending flange, said last named flange engaging said bead to hold said cap in position over said retaining member and over said nipple in inoperative position, external threads adjacent the opposite end of said body, a closure threadedly engaging said last named threads, a central boss on said closure projecting within said body, at least substantially the entire outer side wall of said boss being concave to facilitate cleaning, a threaded bore extending through said boss and said closure to provide a vent, a valve seat in said bore, a valve slidably received in said bore, a spring for urging said valve into engagement with said seat, a plug threadedly received in the inner end of said bore for retaining said spring and said valve in said bore, and an aperture in said plug communicating with

said bore and the interior of said body to permit flow of air during use of said bottle, said valve closing said bore during periods of non-use.

3,043,463
PRESSURE EQUALIZING CONTAINER
Richard W. Beall, Jr., Hermosa Beach, Calif. (500 Pointsetta Ave., Manhattan Beach, Calif.)
Filed Sept. 21, 1959, Ser. No. 841,373
4 Claims. (Cl. 215—56)



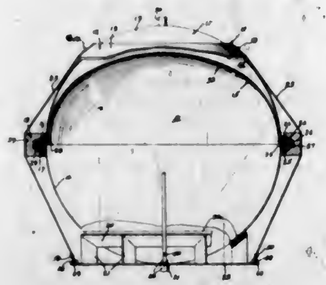
3. A container comprising: a fluid-holding hollow body having a neck projecting outwardly therefrom, with at least the outer portion of said neck being formed of a resilient material, which outer portion terminates in a flat ring-shaped surface; a closure removably mounted on said neck, said closure including a surface which when said closure is mounted on said neck contacts said ring-shaped surface to effect a fluid seal therewith; pressure relief means that is a deformable wall formed as an integral part of the upper portion of said resilient material on said neck, the upper surface of said wall normally being in fluid-sealing contact with said surface of said closure, with a first surface of said wall being at all times in communication with the exterior of said neck, and a second surface of said wall at all times communicating with the interior of said body, which wall when a predetermined pressure in said body is exceeded is deformed to move said upper surface of said wall out of said sealing contact with said surface of said closure; threads formed on the exterior surface of said neck; and threads formed on the interior of said closure that threadedly engage said exterior threads, with the transverse interior cross-section of said closure being greater than the exterior transverse cross section of said neck over which it extends ot provide a passage therebetween that at all times is in communication with the ambient atmosphere and with the interior of said body when said upper surface is out of fluid-sealing contact with said surface of said closure.

3,043,464
NURSING BOTTLE
Nicholas Cerasari, Elsmere, Del. (1103 Spruce Ave., Oak Grove, Wilmington 5, Del.)
Filed Mar. 2, 1959, Ser. No. 796,391
11 Claims. (Cl. 215—100)



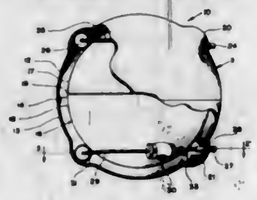
1. A nursing bottle comprising an open top container, a cap for the top opening, a centrally located opening in said cap as means for supporting a nipple in nursing position, a cover which fits over the cap to provide a peripheral compartment substantially between the periphery of the closure and the inner surface of the cover, in said cover an opening for said nipple, and in said cover at least one opening which connects said peripheral compartment with the surrounding atmosphere.

3,043,465
TANK
John W. Horner, Whittier, Calif., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 28, 1959, Ser. No. 849,364
2 Claims. (Cl. 220—5)



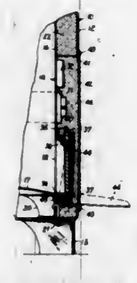
1. A tank and tank mounting assembly which comprises a pair of opposed hemispherical casing halves each having out-turned flanges around the peripheries thereof, a diaphragm spanning the opposed casing halves and having a peripheral flange between the flanges of the casing halves, a clamping ring assembly embracing the flanges of the casing halves and drawing the flanges together in clamped relation to unite the casing halves and to seal the periphery of the diaphragm relative to the casing halves, said clamping ring assembly having means for exerting axial clamping pressure on the flanges of the casing and the periphery of the diaphragm in response to inward radial force thereon, a pair of opposed seat rings embracing and bottomed upon the clamped together casing halves on opposite sides of the clamping ring assembly, straps anchored to and extending between the opposed heat rings and embracing the casing halves and clamping ring assembly and extending transversely across the clamping ring assembly, said straps being anchored to said heating rings along a smaller circumference than the circumference of said clamping ring assembly, wherein the straps diverge outwardly from the seating rings toward said clamping ring assembly and operate under tension to hold the seating rings and clamping ring assembly in operative position.

3,043,466
CONTAINERS FOR CRYOGENIC LIQUIDS AND GASES
Paul J. Gardner, Davenport, Iowa, assignor to The Bendix Corporation, Davenport, Iowa, a corporation of Delaware
Filed July 13, 1961, Ser. No. 123,771
3 Claims. (Cl. 220—14)



1. A container for cryogenic fluids comprising inner and outer spaced vessels, each having opposite end portions diminishing in cross sectional area toward their ends, concentrically arranged, a pair of conduits disposed one between each of the associated end portions of said vessels, each of said conduits having one end connected to the inner vessel and communicating with its interior and each extending more than half way around said inner vessel substantially in the plane of its respectively associated end portions of said vessels and there being connected to said outer vessel and communicating with its exterior, a plurality of heat insulating separating spacers, each disposed between an associated one of said conduits and the end portions of the inner and outer vessels, said spacers having dimensions to engage an area of both vessels at one temperature and to engage a lesser area of at least one of said vessels at a lower temperature.

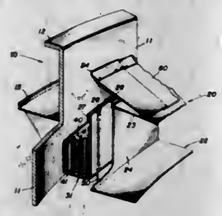
3,043,467
CLEAN-OUT STRUCTURE FOR WATER HEATER
Charles A. Schwebel, 407 W. South St., Steeleville, Ill.
Filed Sept. 5, 1958, Ser. No. 759,236
2 Claims. (Cl. 220—14)



1. A water heater comprising a water tank having a bottom wall and a side wall, a shell spaced about said tank, the side wall of said tank being provided with an opening the lower margin of which is closely adjacent said bottom wall, a closure means disposed solely in the space between the tank and shell, said closure means being disposed over said opening and detachably connected to said tank, means between the closure means and tank sealing said opening, the shell having means enabling access to said closure means and to said opening for clean-out of said tank, a plate pivotally connected to the tank adjacent the said opening for extension and retraction, the plate being pivotally movable to a substantially erect position adjacent the outer side of the closure means and disposed completely in the space between the tank and shell when retracted, and being pivotally movable when extended to a substantially horizontal position below the said opening and extending from the said tank to the said shell, whereby deposits removed from the tank through said opening are transported along the said plate from the tank outwardly of said shell.

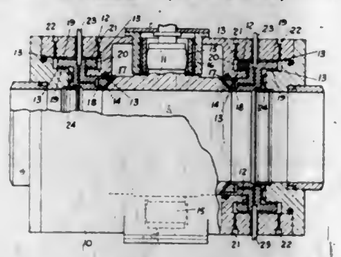
3,043,468
SEALING MECHANISMS FOR STORAGE TANKS
Frank W. Horner, Jr., Park Ridge, Ill., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Filed Feb. 23, 1960, Ser. No. 10,431
11 Claims. (Cl. 220—26)

1. In a tank for storing liquids, such as petroleum products, including an upstanding substantially cylindrical side wall, and a floating roof arranged in said tank and including upstanding substantially cylindrical wall structure spaced radially inwardly from said tank side wall and defining a substantially annular space therebetween; sealing mechanism for said annular space comprising a substantially annular sealing element arranged in said annular space and attached to said roof and movable therewith with respect to said tank side wall, said sealing element including a hollow tubular hermetically sealed casing formed of flexible non-metallic sheet-like material that is impervious to the constituents of petroleum products and to water and to air, said casing including annular inner and outer side walls arranged in opposing spaced-apart relation and also annular bottom and top walls arranged in opposing spaced-apart relation, said casing inner side wall being disposed in direct contact and fixed sealed relation with said wall structure and said casing outer side wall being disposed in direct contact and sliding sealed relation with said tank side wall, said casing bottom wall being submerged in the stored liquid and said casing top wall being disposed well above the level of the stored liquid, said sealing element also including an annular body of self-supporting resilient material of cellular structure enclosed by said casing and extending between said casing inner and outer side walls and constituting a resilient cushion to urge said casing inner side



wall into firm sealed relation with said wall structure and to urge said casing outer side wall into firm sealed relation with said tank side wall during both vertical movements and sidewise movements of said roof with respect to said tank side wall, the material of said casing outer side wall also being highly wear-resistant to prevent undue scuffing thereof in its sliding movements in direct contact with said tank side wall, the inner and outer surfaces of said body being attached to the respectively adjacent surfaces of said casing inner and outer side walls to prevent respective slippages therebetween incident to vertical movements of said roof with respect to said tank side wall, and means including a plurality of circumferentially spaced-apart members carried by said wall structure and attached to said sealing element for positively preventing said sealing element from riding-up said tank side wall and out of said annular space during downward movement of said roof with respect to said tank side wall.

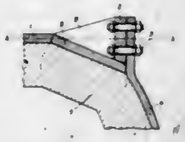
3,043,469
DEVICE FOR PROVIDING A SEAL FOR A HOLLOW BODY CONTAINING A PRESSURIZED FLUID
Edward Blackwell Leach, Compton, England, assignor to Audley Engineering Company Limited, Newport, England
Filed June 9, 1960, Ser. No. 35,025
Claims priority, application Great Britain June 26, 1959
2 Claims. (Cl. 220—46)



1. Means for providing a seal between a hollow body for containing fluid under pressure and a closure member

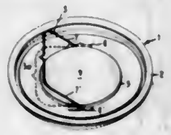
attached to the hollow body, comprising in combination with the hollow body and closure member, at least one annular member mounted between, and capable of a limited amount of axial movement relative to, parts of the hollow body and closure member, a first sealing member which is carried by one end of the annular member for effecting a seal between the adjacent end face of the annular member and one of the said parts of the hollow body and closure member when the annular member occupies a normal position, and which has the form of a ring mounted in a complementary groove in the corresponding end of the annular member, the groove being provided with at least one inlet through which fluid under pressure is admissible to the groove for acting on the sealing ring, and the opposite end face of the annular member having an area which is larger than that of the first mentioned end face of the annular member, and which, when the annular member occupies its normal extreme position, is exposed to the fluid pressure within the hollow body, at least one other sealing element forming a seal between the annular member and the other of the said parts of the hollow body and closure member, and fluid-operable means through the medium of which the annular member is axially movable out of its normal extreme position.

3,043,470
REFRACTORY-LINED VESSEL
Peter Puxkandl, Linz, Austria, assignor to Vereinigte Osterreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz, Austria, a company of Austria
Filed Sept. 12, 1960, Ser. No. 55,442
Claims priority, application Austria Oct. 8, 1959
5 Claims. (Cl. 220—63)



1. A refractory-lined vessel comprising a cylindrical shell carrying at each end an annular flange, a cover part being secured to the annular flange characterized in that a shell portion adjacent to each end of said shell and carrying the flange is of conical shape in respect to a decrease of the diameter of the shell.

3,043,471
END-CLOSURE
John R. Coulson, Hagerstown, Md., and Walter E. Llewellyn, Falling Waters, W. Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 31, 1957, Ser. No. 706,337
1 Claim. (Cl. 220—96)



An end-closure assembly for a cylindrical container comprising a circular cover having a circular raised portion inwardly of and concentric with its outer periphery, the side wall of said circular raised portion being inclined at an acute angle to the place of that portion of the cover from which the raised portion projects, a pair of saddle members secured to said cover at points on opposite sides of and just adjacent to said circular raised portion, a flexible wire bail having curved legs pivotally affixed to said saddle members for swinging movement relative to said cover, said legs being constructed and arranged to engage said side wall with camming action and to maintain the bail in at least a partially-elevated position when there is no pressure on the bail, said wire bail being depressable under the influence of a downwardly directed force thereon such that the legs of the bail can spread laterally to straddle the raised portion and permit the bail to lie relatively flat against the upper face of the cover.

3,043,472
STACK OF INTERFOLDED SHEET UNITS
Paul A. Nemoede, Chicago, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Apr. 20, 1960, Ser. No. 23,402
1 Claim. (Cl. 221—48)

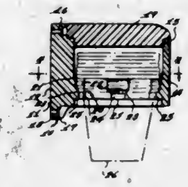


A stack of zig-zag interfolded sheet units adapted for individual unit dispensing; each of said units comprising: a cohesive sheet, either surface of which will cohere to either surface of a sheet of like material; and a protective sheet free from cohesive or adhesive properties relative to itself or said cohesive sheet; each protective sheet having four panels interconnected by three folds, and each cohesive sheet having one less panel and one less fold than the related protective sheet; the cohesive sheet of each unit being disposed adjacent the related protective sheet with the first, second, and third panels of the former disposed in juxtaposition with the second, third and fourth panels, respectively, of the related protective sheet and the first and second folds of the former disposed in juxtaposition with the second and third folds, respectively, of the latter, whereby the first panel of the cohesive sheet of one unit is interposed between the first and second panels of the protective sheet of that unit to form a triple thickness first layer, and the third and fourth panels of the protective sheet form with the second and third panels of the cohesive sheet of that unit double thickness second and third layers; and wherein said units are interleaved with adjacent units with the first layer of one unit being interposed between the last and next-to-last layers of the preceding unit so that the surfaces of each cohesive sheet only contact surfaces of a protective sheet in the package.

3,043,473
PAPER CUP DISPENSER
Julius H. Katz, 2946 E. 3175 South, Salt Lake City 9, Utah
Filed July 8, 1957, Ser. No. 670,506
1 Claim. (Cl. 221—63)

A cup dispenser comprising a body, said body having a vertical bore extending therethrough and internally

threaded at its upper end, a cover threaded into the upper end of said bore, and a plurality of pairs of diametrically opposed bosses integrally formed on said body projecting radially inwardly of the lower end portion of said bore with each of said bosses including an inwardly and downwardly sloping upper end wall, an upper arcuate wall concentric with said bore extending downwardly from the inner lower end of said upper end wall, each said upper arcuate wall being of a length at least equal to the space between adjacent bosses, a sloping intermediate wall of lesser length than said upper end wall extending inwardly and downwardly from said concentric wall, a lower arcuate wall of lesser length than said intermediate wall concentric with said bore extending downwardly from



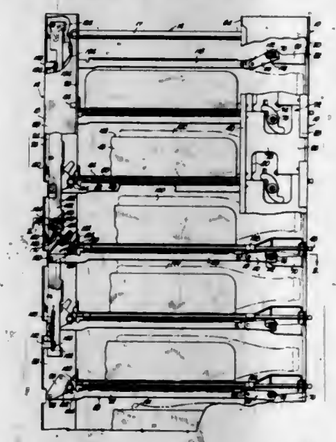
the inner lower end of said intermediate wall, said lower concentric wall being spaced inwardly of said upper concentric wall, and a horizontal bottom wall extending from the lower end of said lower concentric wall to the bore in said body, and spaced above the bottom opening of said bore, said body and said bosses being formed of integral transparent plastic material, said upper end wall providing a guide to direct a paper cup lip into centered position between said upper arcuate walls, said intermediate wall providing a support for the lip of the lowermost cup to be dispensed and further providing a guide to direct the paper cup lip into centered position between said lower arcuate walls during dispensing, said horizontal bottom wall serving as a stop to prevent reinsertion of a cup from the bottom of said dispenser.

3,043,474
MULTI-CHANNELLED AUTOMATICALLY CONDITIONED DISPENSING MACHINE
John L. Mullin, 2734 Sydney Way, Castro Valley, Calif.
Filed June 25, 1959, Ser. No. 822,817
9 Claims. (Cl. 221—109)



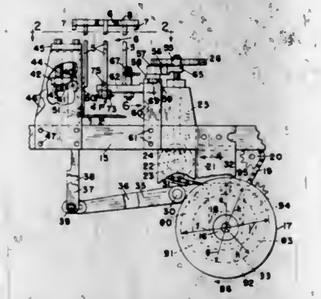
1. A multi-channelled automatically conditioned dispensing machine capable of receiving, storing, and dispensing articles, comprising a plurality of superposed sloping storage channels for receiving and holding articles to be dispensed, a common delivery channel communicating with said storage channels, a pivoted ramp for enabling articles in a storage channel to discharge into the common delivery channel, a blocking latch preventing movement of the articles from a higher storage channel into the common delivery channel, means operated by depression of the pivoted ramp for releasing said blocking latch, a pawl for holding the depressed ramp in its depressed position, a stop to prevent pawl release, and means operated by passage of the last article in the channel for releasing said stop, its pawl and ramp thereby enabling articles in a lower channel to discharge into the common delivery channel.

3,043,475
FAVORED FLAVOR CAPACITY RESERVING MECHANISM
Spencer L. Childers and Lawrence C. Tober, Fresno, Calif., assignors to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Filed Aug. 11, 1958, Ser. No. 754,323
21 Claims. (Cl. 221—125)



1. In article dispensing apparatus, a plurality of dispensing means each having a normal operative condition and an inoperative condition, any of said dispensing means when in its operative condition being separately and selectively actuatable to dispense an article, said dispensing means when in their operative condition being successively actuatable in any order; and control means operably coupled with each of said dispensing means and operable in response to actuation of any of said dispensing means for establishing an inoperative condition of each actuated dispensing means and for maintaining each actuated dispensing means in said inoperative condition thereof until all of the dispensing means have been actuated, whereby repeated operation of any of said dispensing means until the completion of a cycle during which each of said dispensing means has been once actuated is prevented.

3,043,476
FEED MECHANISM FOR THIN FLAT COMESTIBLES
Michael Zwarycz, Wilbraham, Mass., assignor to Crompton & Knowles Packaging Corporation, Holyoke, Mass., a corporation of Massachusetts
Filed May 13, 1959, Ser. No. 812,929
1 Claim. (Cl. 221—221)



In a machine provided with guide means for gravity feeding of superposed flat thin fragile articles of food

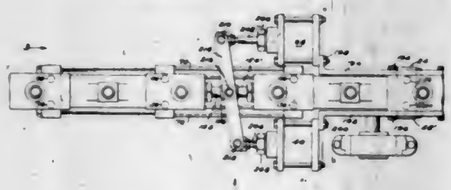
of slightly different thicknesses and operating with vertically movable support means moving from a high position adjacent to the bottom of the guide means down to a given intermediate low position and thereafter having an additional down motion to lowest position, said machine being provided with a pivoted pair of horizontal arms at opposite sides of the guide means movable in a horizontal plane toward and away from the articles, a pair of support fingers, one for each arm, for engagement with the articles on opposite sides thereof and mounted on the arms for relative movement thereto in a direction perpendicular to said horizontal plane, means on each of said arms to pivotally support the fingers for slight upward motion with respect to said arms upon engagement of an article by said fingers when the latter are moving to supporting position, and single cam means operatively connected to one of said arms to cause movement of both arms in said plane toward said articles to effect said slight upward motion when the vertically movable support means is in said given intermediate low position, said horizontal arms being interconnected by a cross tie rod to effect simultaneous movement of the arms in opposite directions, first toward and then away from the articles when said one of said arms is actuated by said cam means.

3,043,477

MATERIAL HANDLING SYSTEM, METERING APPARATUS AND METHOD OF METERING AND MIXING MATERIALS

Donald E. Trumbull, Inglewood, Arthur J. Devine, Lawndale, and George S. Pyles, Rolling Hills, Calif.; said Pyles assignor to Pyles Industries, Inc., Detroit, Mich., a corporation of Michigan

Filed Oct. 1, 1959, Ser. No. 843,868
10 Claims. (Cl. 222—1)



8. That method of metering and mixing plural-part flowable materials comprising: placing each part to be metered and mixed under pressure sufficient to cause it to flow, delivering the plural parts of the material under such pressure to a metering station, proportionally metering the plural parts of the material in the station, discharging the metered parts of material from the station at volumetric proportions directly related to the metered proportions and delivering the metered parts to a mixer, mixing the plural parts in the metered proportional quantities and discharging them from the mixer, interrupting discharge of mixed materials from the mixer and simultaneously trapping and holding the plural parts of the material under said pressure in separate and communicatively independent areas between the source of the parts under said pressure and the metering station and within the metering station and between the metering station and the mixer and within the mixer.

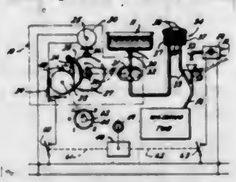
3,043,478

LAUNDRY EQUIPMENT

Lowell V. Adams, Levittown, and Leon Siniawsky, Philadelphia, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed July 1, 1959, Ser. No. 824,250
5 Claims. (Cl. 222—70)

1. A device for introducing laundering aid into a clothes washing machine, comprising a reservoir for laundering aid, a pump communicating with said reservoir and operable for flowing laundering aid from said reservoir and into the washing machine, a rotatable pump shaft for driving said pump, an electric motor drivingly connected to said pump shaft, a switch in circuit with and operable to stop said motor, a rotatable ratchet wheel having a fixed projection adapted to be brought in a position to engage and operate such switch, manually operable means for rotating said ratchet wheel in a direction to locate said projection in a selected position away from said switch, a ratchet pawl engaging said ratchet wheel and actuatable at each operation to rotate said wheel in a direction advancing said projection incrementally toward said switch, and a cam connected with and driven through said pump shaft to operate said ratchet pawl once during each pump driving revolution of said shaft.



3,043,479

AUTOMATIC FEEDING APPARATUS

Karl Gaukstern, Union, N.J., assignor to Ernest R. Tretola, Cranford Township, N.J.

Filed Oct. 13, 1958, Ser. No. 766,850
3 Claims. (Cl. 222—129)

1. A feeding apparatus including a two-part housing, the parts of said housing being rotatable with respect to each other, one of said parts providing a storage compartment and the other of said parts providing a dispensing compartment, a food scoop rotatably mounted within the dispensing compartment and having a path of travel through the bottom of the dispensing compartment, said parts having a communicating opening for feeding food from the storage compartment into the dispensing compartment, a flexible support for said scoop, and means for engaging said support during rotation of said scoop for temporarily delaying rotary movement of said scoop to bias said support whereby upon release of said scoop the food in said scoop is projected forcibly in a directed path, said parts having openings in the walls thereof for forming a discharge opening when said openings communicate with each other, the size of the resultant opening being regulated by rotating the parts of said housing relative to each other, said path being directed through said discharge opening.

3,043,480

FEED MECHANISM FOR LIQUEFIABLE COMMINUTED MATERIAL

Ludwig Wittrock, Marl, Westphalia, Germany, assignor to Gewerkschaft Schalker, Eisenhutte, Gelsenkirchen-Schalke, Germany, a corporation of Germany

Filed Feb. 28, 1961, Ser. No. 92,267
Claims priority, application Germany Mar. 25, 1960
5 Claims. (Cl. 222—146)

1. An extruding device for plastic material, comprising a tubular housing with an inlet for said material and an outlet therefor, said housing being provided with internal teeth forming threads thereon at least in the vicinity of said inlet, a central feed screw with threads matching those of said housing, and a plurality of planetary feed screws with complementary threads matingly engaging



the threads of said central feed screw and said housing while being disposed in an annular space between said central feed screw and said housing, at least said central feed screw extending substantially completely through said housing and terminating at said outlet.

3,043,481

DISPENSING CONTAINERS FOR GRANULAR SUBSTANCES

Leif Hartvig Johansen, Dybwadsgate 3, Oslo, Norway

Filed Oct. 20, 1958, Ser. No. 768,242
Claims priority, application Norway Oct. 19, 1957
1 Claim. (Cl. 222—158)



Apparatus for dispensing predetermined quantities of material, said apparatus comprising a package having a top and bottom and defining an enclosure adapted for containing said material, said package including side and end walls and double top and bottom walls, a planar vertical partition extending from said top wall to said bottom wall in said enclosure to divide the same into isolated chambers, said partition being in entirety uniformly spaced from one of said end walls, one of said chambers constituting a main space for enclosing the material therein, the other chamber constituting a measuring and dipensing chamber, said partition having at least one opening substantially closer to the bottom wall than to the top wall and providing communication between said main chamber and said measuring chamber, the opening permitting a predetermined quantity of material to flow from the main chamber to the measuring chamber with the package upright, the predetermined quantity of material being enclosed in the measuring chamber to the level of said opening, said one end wall being provided with an opening exposing said measuring chamber adjacent the opening in said partition, a transparent member covering said opening in the end wall, said package being provided with an opening at the top thereof in communication with said measuring chamber to enable discharge of said predetermined quantity therefrom, top and bottom flaps on said partition connected in face-to-face relation with said top and bottom walls respectively within said main space for bracing said partition, and top and bottom flaps on said one end wall connected in face-to-face relation with said top and bottom walls respectively, the top flap on said one end wall terminating substantially at said partition.

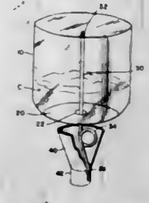
3,043,482

CHEMICAL FEEDER

Myron P. Laughlin, 1705 Beach Drive SE., St. Petersburg, Fla.

Filed May 4, 1959, Ser. No. 810,947
2 Claims. (Cl. 222—161)

1. A plant growth chemical feeder for agricultural implement having plant cutting means including a mounting attachment for mounting on the implement frame, said attachment having a passage therethrough for discharging the material to be fed adjacent to the cutting means of the implement, agitator means including a rod carried by said mounting attachment and projecting upward above said passage, and a chemical container having a metering aperture at its lower end loosely engaging



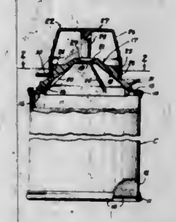
said agitator rod, said rod extending into the interior of said container, said container being resiliently supported by said mounting attachment whereby the moving weight of said container and its contents agitate the chemicals contained in said container and cause discharge thereof through said aperture and the passage through said mounting attachment.

3,043,483

DISPENSING CONTAINER

Clarence W. Vogt, Rte. 4, Weston, Conn.

Filed Nov. 18, 1957, Ser. No. 697,111
10 Claims. (Cl. 222—207)



1. A dispensing container comprising a container for finely-divided solids having a resilient wall and a discharge opening at one end thereof, said solids being discharged through said opening by deflection of said resilient wall, an inverted cup-shaped closure detachably mounted on said container and overlying said dispensing opening, a member having a free end extending from said bottom of said closure, cooperating means on said container and said closure for maintaining the bottom of said closure in spaced relation to said discharge opening and said free end of said member in opposing relation to said discharge opening and means for venting air from said closure to the atmosphere outside said container.

3,043,484

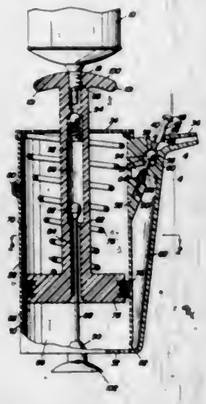
SHAVING SOAP WARMER

Ross T. Jolly, Vista, Calif.
(6322 Marbrisa Ave., Huntington Park, Calif.)

Filed June 4, 1959, Ser. No. 817,936
1 Claim. (Cl. 222—335)

In a dispensing receiver for pressurized fluids, the combination of a cylinder having an outlet communicating with one end portion thereof, a piston reciprocable in said cylinder, a piston rod connected to said piston and projecting slidably outwardly through the other end of the cylinder, said piston and said piston rod being provided with an axial passage adapted at the outer end of the rod for connection to a source of fluid under pressure whereby the stated fluid may be delivered into said one end portion of the cylinder for dispensing through said outlet, a check valve provided in said passage for

permitting flow of fluid only from the outer end of the piston rod into said one end portion of said cylinder, resilient means provided in said cylinder and biasing said piston toward the outlet in opposition to pressure of fluid in said one end portion of the cylinder, normally closed dispensing valve means provided in said outlet, said passage in said piston rod being provided with a restricted passage portion, and additional valve means



comprising a valve stem secured at one end thereof in said one end portion of said cylinder and extending through said restricted passage portion, and a valve element provided on said stem in said passage and receivable in said restricted passage portion for closing the same when said piston is slid away from said outlet by an abnormal pressure of fluid in said one end portion of the cylinder.

3,043,485

TUBE CONTAINER DISPENSING DEVICE

Emil A. Ewert, Kitchener, Ontario, Canada (286 Drewry Ave., Willowdale, Ontario, Canada)

Filed Apr. 17, 1959, Ser. No. 807,114
4 Claims. (Cl. 222—515)



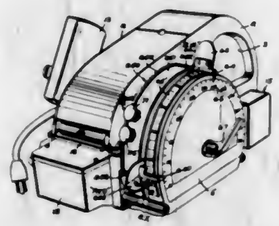
1. The combination with the discharge neck of a paste-containing tube, of a dispensing device comprising an elongated member having a bore extending axially therethrough from one end to the other end thereof positioned so that the bore is in linear alignment with said discharge neck and having the portion of said bore adjacent one end circumposed about and removably attached to said discharge neck with the remaining portion of said bore exteriorly of and above the discharge neck, an extension projecting in an upwardly and outwardly sloping direction from said member intermediate the ends thereof, a horizontally disposed shelf positioned adjacent to and fixedly carried by the upper end of said extension, a resilient strip arranged longitudinally of and above said extension and having the portion adjacent one end extending over and spaced from the other end of the bore of said member and having the portion adjacent the other end pivotally connected to said shelf for swinging movement about a vertical axis, and a cap positioned in closing relation with respect to the other end of the bore of said member and fixedly secured to said one end of said strip.

3,043,486

MANUAL SELECTIVE PLURAL LENGTH TAPE DISPENSER

Britton H. Doyle, Nashua, N.H., assignor to Nashua Corporation, Nashua, N.H., a corporation of Delaware

Filed Jan. 6, 1960, Ser. No. 792
2 Claims. (Cl. 226—136)



1. In a tape dispensing assembly comprising a base machine having a frame,
a support thereon for a supply roll of tape,
separable feed rolls,
an electrically operated actuator for closing and opening the rolls to and from tape feeding relation,
tape cut-off means and operating connection therefor with the actuator,
a motor operable intermittently to drive one of the feed rolls,
measuring means connected to move with one roll proportionately to the tape length fed,
the combination therewith of
(*a* a plurality of length selectors variably positionable in the path of the measuring means at any selected individually different tape lengths in the available range,
(*b*) there being a relatively rotatably disposed cycle-halting trip switch and switch tripper means for each length selector actuatable by the measuring means upon length measuring movement thereof corresponding to the length selections of said selectors,
(*c*) a like plurality of operator actuatable starter switches,
(*d*) and a corresponding plurality of control circuits each containing said motor, said actuator and the starter switch and the trip switch means corresponding to one length selector,
(*e*) said starter switches mounted on the machine accessibly to the operator,
(*f*) and the machine including said selectors and starter switches being constructed and arranged with provisions operatively and positionally differentiating each selector and each starter switch from the other as to relative tape lengths responsive thereto and for correlating the particular starter switch with the corresponding length selector,
(*g*) said trip switch means being aligned for successive engagement by the moving measuring means,
(*h*) and the control circuit for a longer length selector and starter switch including therein relay means subject to the starter switch of said circuit to render inoperative the trip switch of the circuit for any shorter length selector during operation under the control of the longer length selector,
(*i*) and whereby one and the same given selector effects delivery always of a relatively shorter tape length and another given selector effects delivery always of a relatively longer tape length.

3,043,487

BOX FOR PHOTOGRAPHIC MATERIALS

Irving H. Fowle, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 29, 1959, Ser. No. 849,501
2 Claims. (Cl. 229—6)



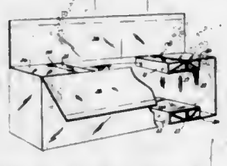
1. A rectangular box of light-tight construction for the packaging and handling of light-sensitive photographic sheet material comprising a tray having a base and rigid side walls extending perpendicularly therefrom on three sides, a lid including a base and rigid side walls extending therefrom perpendicularly on three sides, a side wall common to both said tray and said lid, said wall being formed integral with said base and scored whereby said lid may be closed to telescopically fit inside said tray and a cover including a base and side walls adapted to fit over said tray and closed lid, said cover being hingedly supported at the bottom edge of said tray, whereby upon placement of said box on a level surface with the cover fully opened, said tray assumes an inclined position for easy access to said light-sensitive material.

3,043,488

CONTAINER AND PACKING FOR FRAGILE ARTICLES

John N. Warwick, Caseyville, Ill., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Filed Mar. 17, 1961, Ser. No. 96,492
9 Claims. (Cl. 229—14)



1. In a rectangular slotted carton for fragile articles of the nature of automobile windshields, a container having outer side flaps forming top and bottom closures and inner end flaps; means carried by the end flaps for fixedly positioning interior article retaining members in the container, the article retaining members comprised of paired top and bottom logs having cooperating slots opening towards the interior of the container and disposed substantially longitudinally in the container, said logs disposed transversely of the container and having an opening therein opposite said slots and adapted to receive the positioning means carried by the end flaps.

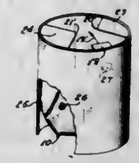
3,043,489

PACKAGE FOR LIQUIDS AND OTHER MATERIALS

Kay Bruce Anderson, 27 Charleton St., New York, N.Y.

Filed Dec. 9, 1959, Ser. No. 858,370
6 Claims. (Cl. 229—14)

1. A container comprising a tubular structure of relatively thin material, one end of said structure having a closure member of thin material extending from a peripheral portion of said edge, the side edges of said closure member being disposed at an angle of greater than 90 degrees with the remaining peripheral portion of said edge and the upper edge of said closure member having a length substantially equal to the length of said remaining peripheral edge portion, said side edges being folded upon themselves, means releasably sealing the folded



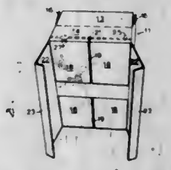
overlying portions of each of said side edges and said upper edge to the remaining peripheral edge portion to close one end of said container and means sealing the other end of said container.

3,043,490

CASES FOR CONTAINERS SEVERABLE TO FORM TRAYS

Edward N. Burnett, Fremont, Mich., assignor to Gerber Products Company, Fremont, Mich., a corporation of Michigan

Filed Sept. 8, 1960, Ser. No. 54,746
9 Claims. (Cl. 229—15)



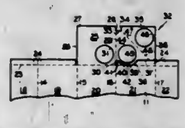
1. In a carton construction, opposed side and opposed end panels, outer and inner pairs of bottom flaps on either side of said carton joined to said panels, said outer bottom flaps having upturned tuck-in flaps along inner longitudinal edges, said inner bottom flaps being cut-away for reception of said tuck-in flaps, said end panels being formed with slots of a length substantially equal to that of said tuck-in flaps and aligned with said tuck-in flaps, said slot comprising extensions of the cut-away portions of said innerflap, and means parallel to and spaced upwardly from the bottom edges of said panels to approximately the upper ends of said slots for severing said panels, said carton construction being characterized by the fact that when said panels are severed by said means the portion of said carton below said means comprising a pair of trays having low sides formed of said tuck-in flaps and the portions of said panels below said means.

3,043,491

CONTAINER AND BLANK THEREFOR

Howard M. Hill, Hamilton, Va.

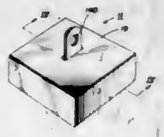
Filed Jan. 15, 1962, Ser. No. 166,197
7 Claims. (Cl. 229—17)



1. A container for liquids comprising a tubular fibre body having four sidewalls terminating at its upper end on three sides in a necked-in area and short top closure member retaining flanges, the fourth side terminating in a necked-in area and an integral top closure member with a substantially triangular sanitary shield attached thereto by an integral substantially triangular interconnecting member, said triangular interconnecting member folded about

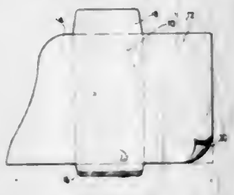
an edge common to said top closure member and adhesively attached thereto in a substantially triangular area defined by a diagonal of said top closure member and two edges thereof, a filling and dispensing opening in said top closure member and said interconnecting member within the triangular area, said triangular sanitary shield integrally hinged to said triangular interconnecting member along the hypotenuse and folded back over said filling and dispensing opening, said triangular interconnecting member having material forming an outwardly extending reinforcement at one edge adjacent said filling and dispensing opening, said material obtained by notching one of said top closure member retaining flanges.

3,043,492
PHONOGRAPH RECORD CASE
Walter G. Stewart, Jr., 1034 Audubon Drive, Memphis, Tenn.
Filed Apr. 24, 1961, Ser. No. 104,977
2 Claims. (Cl. 229—52)



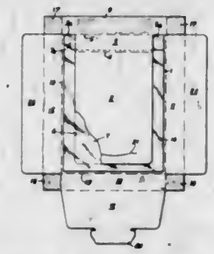
1. A record case comprising a substantially flat rectangular cardboard bottom having a pair of parallel and spaced slots therein, an elongated strip of cardboard including a portion underlying said bottom and including ends respectively extending upwardly through said slots and thence inwardly towards one another to establish portions overlying said bottom and then extending upwardly in close adjacency away from said bottom to establish a handle, said handle being provided with a finger hole therethrough, a substantially flat rectangular cardboard platform slightly smaller in size than said bottom, said platform being provided with a passage therethrough, said platform resting on said overlying portions with said handle extending upwardly through said passage, a downwardly opening substantially box-like cardboard cover comprising a substantially flat rectangular top and sides depending from the edges of said top, said top having an elongated opening therethrough, said cover resting on said bottom with said handle extending upwardly through said elongated opening with said finger hole being above said top, whereby said case is adapted to be carried by a person inserting his finger through said finger hole so that the cover is locked in place.

3,043,493
BANKING ENVELOPE
Frank G. Clegg, Manchester, Conn., assignor to Curtis 1000, Incorporated, West Hartford, Conn., a corporation of Minnesota
Filed Jan. 16, 1961, Ser. No. 82,751
2 Claims. (Cl. 229—72)



1. A banking envelope comprising a central rectangular panel having the full length and width of the envelope, a side panel having substantially the same length and width as said central panel overlying said central panel, a second side panel of substantially triangular shape overlying said first mentioned side panel, said side panels extending from opposite sides of said central panel, a gummed flap extending from the lower end of said central panel sealed to the lower edge of said triangular panel and enclosing the lower end of said panel having the same length and width as said central panel, and an enclosing flap extending from the upper end of said central panel adapted to be folded over the side panel having the same length and width of said central panel and tucked under the upper end of said triangular panel.

3,043,494
RECLOSABLE CARTON
Marion F. Moore, Downers Grove, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Original application June 17, 1957, Ser. No. 665,944, now Patent No. 2,974,854, dated Mar. 14, 1961. Divided and this application Mar. 2, 1961, Ser. No. 92,955
1 Claim. (Cl. 229—87)

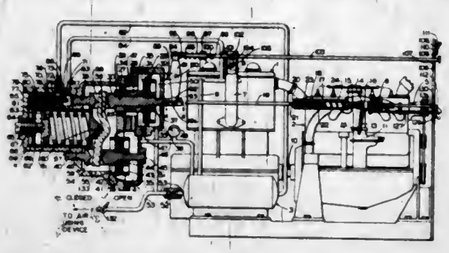


A reclosable carton formed from a blank of foldable paperboard cut and creased to provide an elongated rectangular top wall panel, narrow side wall panels hinged to the sides of the top panel and narrow end wall panels hinged to the ends of the top panel, one of the end wall panels having an infolding flap on its outer edge, a rectangular panel excised from the top panel along three sides to form a window opening, said excised panel comprising an elongated bottom closure section hingedly connected to a narrow end section, such narrow end section having a hinge connection with the end wall opposite the one carrying the infolding flap along a hinge line aligned with the hinge connection between such end wall and the top panel, the narrow end section being comparable in width to its attached end wall, inwardly foldable bottom closure flaps on the outer edges of the side walls cooperating with the bottom closure section of the excised panel and end wall panel to close the bottom of the carton, and a transparent, flexible sheet secured to the inside surface of the top wall panel over the window opening, such transparent sheet having an extended edge portion folded to lie against the adjoining portion of the sheet and such edge portion being secured to the inside surface of the narrow end section of the excised panel along its hinge connection with its attached end wall panel, the lateral edges of such sheet extending beyond the ends of the narrow excised panel section in facing relation to the end portions of the adjacent end wall panel.

3,043,495
AUTOMATIC ENGINE GOVERNOR AND COMPRESSOR UNLOADER APPARATUS
Ellis E. Hewitt, Ruffsdale, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Nov. 26, 1957, Ser. No. 698,953
16 Claims. (Cl. 230—3)

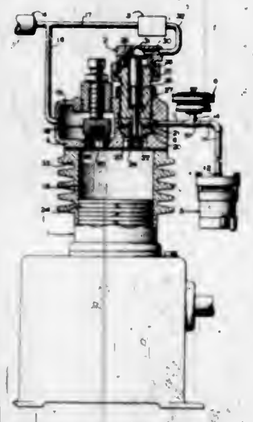
1. In combination, a fluid pressure storage reservoir, a fluid compressor for supplying fluid under pressure to said

reservoir, a power means for driving said compressor, a control means for controlling the supply of fuel to said power means for varying the power output of said power means, choke means connected to said reservoir via which fluid under pressure flows from said reservoir to a place



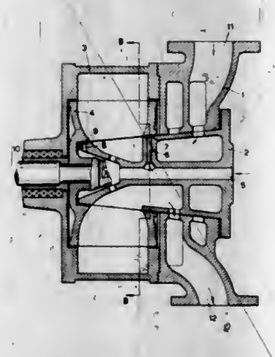
of use, and a fluid pressure operated control device connected to said control means and having abutment means in fluid communication with and subject opposingly to the pressure in said reservoir and to the pressure on the downstream side of said choke means for controlling operation of said control means.

3,043,496
MEANS AND METHOD OF INHIBITING THE RISE OF THE TEMPERATURE OF COMPRESSOR CYLINDER INCIDENTAL TO OPERATION WHILE UNLOADED
William H. Glass, Pittsburgh, and Milton L. Hancock, McKeesport, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Nov. 12, 1958, Ser. No. 773,206
2 Claims. (Cl. 230—30)



1. An air compressing installation comprising an air compressor having a compression chamber and an air compressing piston for compressing air in said chamber, air inlet means for said piston having an inlet valve chamber and an inlet valve for controlling flow from said inlet valve chamber to said compression chamber, unloading means operatable to hold said inlet valve open to unload said compressor, a conduit connected to said inlet valve chamber and having two branches one of which is substantially longer than the other branch, a first check valve in said one branch for permitting flow of fluid therethrough in the direction of said inlet valve chamber and preventing flow in the opposite direction, a second check valve located adjacent to said first check valve in said one branch for permitting flow of fluid therethrough from said inlet valve chamber to atmosphere and preventing flow in the opposite direction, and a third check valve in said other branch adjacent to said inlet valve chamber for permitting flow of fluid therethrough from said inlet valve chamber to atmosphere and preventing flow in the opposite direction.

3,043,497
MEANS FOR THE SUPPORT OF THE ROTOR IN LIQUID RING ROTARY PUMPS
Roberto Gabbioneta, Via Gasparotto 4, Milan, Italy
Filed Dec. 13, 1960, Ser. No. 75,495
Claims priority, application Italy Dec. 29, 1959
1 Claim. (Cl. 230—79)



In a rotary liquid ring pump,

a body having an inner wall including two cylindrical surfaces disposed eccentrically relative to the axis of rotation of said pump,
a driving shaft extending into said body,
a rotor positioned within said inner wall keyed to said driving shaft and having a conical recess to form a conical inner face,
a non-rotating member disposed adjacent said body and said rotor and defining an inlet, as well as an outlet,
a conical distributor disposed coaxially with said driving shaft within said rotor and said non-rotating member, said conical distributor defining an axially disposed channel adapted to receive the return flow of the liquid having a predetermined pressure, and at least one vertical and radially disposed channel extending from said axially disposed channel upwardly to the inner face of said rotor, whereby said pressurized liquid tends to balance the force of gravity on said rotor and contributes to the support thereof.

3,043,498
ROTARY LIQUID RING PUMP WITH MEANS FOR REGULATING THE LOADING OF LIQUID IN THE RING
Roberto Gabbioneta, Via Gasparotto 4, Milan, Italy
Filed Dec. 13, 1960, Ser. No. 75,497
Claims priority, application Italy Dec. 29, 1959
2 Claims. (Cl. 230—79)

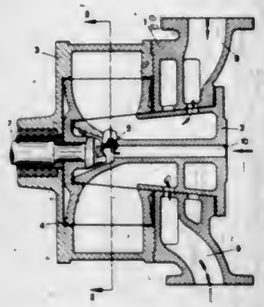
1. In a rotary liquid ring pump for the intake and compression of gas,

a hollow body having an internal wall including two surfaces disposed eccentrically with respect to the axis of rotation of said pump,
a driving shaft rotatably mounted in said hollow body,
a rotor keyed to said driving shaft and rotatably disposed in said body,
a conical distributor disposed coaxially with said driving shaft and partly within said rotor,

a non-rotatable member including an inlet and an outlet and surrounding said conical distributor,

said conical distributor defining at its inner end a chamber and an axially disposed channel communicating with said chamber,

at least one nozzle removably disposed in said conical



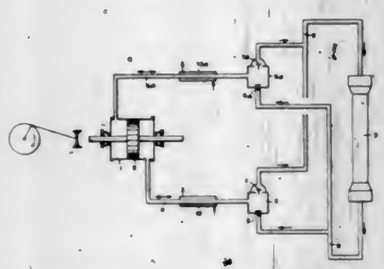
distributor between said chamber and said rotor and positioned such that the liquid fed through said channel and ejected from said nozzle into said chamber acquires a relative velocity in radial direction with respect to the rotation of said rotor, in order to feed said liquid unobstructively through said rotor into said body.

3,043,499

PROCESS AND APPARATUS FOR CIRCULATING HOT GASES, ESPECIALLY UNDER HIGH PRESSURES

Erich Knobloch, Ludwigshafen (Rhine), Karl Adam, Ludwigshafen (Rhine)-Gartenstadt, and Bertram Linnartz, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed Aug. 4, 1958, Ser. No. 753,066
Claims priority, application Germany Jan. 22, 1958
7 Claims. (Cl. 230—188)



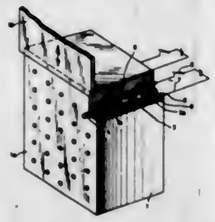
1. A pumping system for the circulation of hot gases comprising a piston pump with a clearance in the pumping chamber, an elongated, gas-conveying extension of said clearance in said pumping chamber terminating in a valved chamber having an entrance and exit adapted to be connected in a hot gas circulatory system, said valved chamber having an inlet valve and an outlet valve, said clearance and said elongated extension of said pumping chamber having a total volume which is at least three times the stroke volume of said piston pump, and heat exchange means in said extension at a point between said pumping chamber clearance and valved chamber for cooling the gas passing through said heat exchange means and thereby adapted to divide said extension into a cool gas section on the pump side of said heat exchange means and a hot gas section on the opposite side of said heat exchange means.

3,043,500

DRIVE FOR MATRIX WIDTH INDICATOR FOR COMPOSING MACHINE PERFORATORS

Josef Bauder, Munich-Solln, and Josef Fischer and Martin Aidn, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany

Filed Apr. 28, 1961, Ser. No. 106,268
Claims priority, application Germany May 9, 1960
4 Claims. (Cl. 234—4)



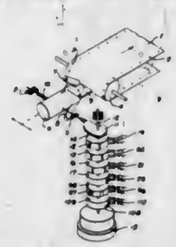
1. A drive device for a matrix width indicator for a composing machine perforator for control tape therefor, comprising key controlled members for respectively limiting the motion of the indicator, said members being constructed in the form of a plurality of individual electromagnetically controlled elements including armatures of electromagnets, said armatures being journalled within bores formed in a block of magnetic material, said bores containing said armature elements and also the windings of the respective electromagnets and extending angularly in mutually staggered relation in one or more rows relative to the direction of motion of a feeler member which controls the motion of the indicator.

3,043,501

DEVICE FOR TRANSFERRING MEASUREMENTS RECORDED BY PRINTED CODE SYMBOLS TO PUNCHED CARDS

Richard Pudelko, Zug, Ernst Huber, Baar, Zug, and Franz Kilchmann, Oberwil, Zug, Switzerland, assignors to Landis & Gyr, A.G., Zug, Switzerland, a body corporate of Switzerland

Filed Feb. 3, 1960, Ser. No. 6,556
Claims priority, application Switzerland Feb. 25, 1959
4 Claims. (Cl. 234—55)



1. Data translating systems for transferring data in punched form, represented by binary type light and dark elements arranged in subdivisions of each of a plurality of fields, to media punched according to said data comprising photoresponsive means for discriminating said light and dark elements, scanning means for displacing said photoresponsive means relative to said data in printed form for scanning the same, a plurality of bistable electronic storage means responsive to the output of said photoresponsive means, first gating means synchronized with said scanning means for selectively activating said storage means in accordance with the subdivision which is being scanned whereby each of said storage means is allocated to a particular subdivision and is in one or the other of said stable states according to whether said subdivision contains a light or dark element, decoding means

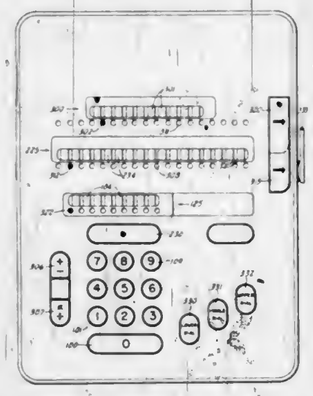
comprising a plurality of decoder circuits connected to said plurality of bistable storage means, each of said decoder circuits being responsive to a particular combination of said states of said storage means, second gating means synchronized with said scanning means for activating said decoding means subsequent to the scanning of a field whereby one of said decoder circuits depending on said combination of states is energized, and a plurality of punching means responsive respectively to said decoder circuits, one of said punching means being energized when the respective decoder circuit is energized thereby translating said data in printed form to data in punched form.

3,043,502

DECIMAL POINT INDICATOR MEANS

Eugene E. Reynolds, Richmond Annex, and William E. Thomas, San Francisco, Calif., assignors to Smith-Corona Marchant Inc., a corporation of New York

Filed Aug. 23, 1957, Ser. No. 679,909
26 Claims. (Cl. 235—61)



1. In a calculating machine having a plural order numeral wheel register and an actuating mechanism therefor, a value entry mechanism operable to adjust the actuating mechanism in accordance with a selected value, and means for tabulating the actuating mechanism relative to the numeral wheels; the combination of a decimal indicator for the numeral wheels, means normally operable in response to depression of the value entry keys to move the decimal indicator one order to the right for each ordinal value entered into the actuating mechanism, a decimal key, means operable upon depression of said key to lock the decimal indicator to the actuating mechanism, a means for initiating the operation of the tabulating means a normally enabled connection between the decimal key and said tabulating initiating means, tabulation terminating means comprising a device standing in a pre-determined order relative to the numeral wheels and operable jointly with the decimal indicator to terminate the operation of the tabulating means, selectively settable means effective in a first position to condition the actuating mechanism for non-repeat operation and effective in a second position to condition the actuating mechanism for repeat operation, and means responsive to movement of said settable means to its repeat conditioning position to disable the connection between the decimal key and the tabulation initiating means.

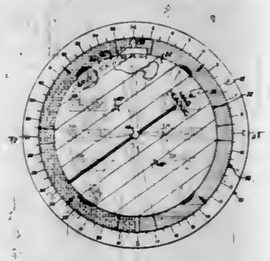
3,043,503

NAVIGATION AID

Shelby M. Kritser, 900 Harrison, Amarillo, Tex.

Filed Apr. 22, 1959, Ser. No. 808,243
4 Claims. (Cl. 235—61)

1. A navigation aid for use with OMNI apparatus giving right-left color indications and TO-FROM word indications with respect to an OMNI bearing to and from an OMNI station comprising a base member, a disc, and a pivot rotatably supporting said disc on said base member, said base member having thereon a circular scale calibrated in angular degrees, said scale peripherally encircling said disc, said disc having a radially disposed indicator thereon for indicating OMNI bearing, said disc being divided into two semi-circular sections along a diametrical line corresponding with said indicator, said semi-circular sections being further divided into two quadrant sections substantially along a diametrical line



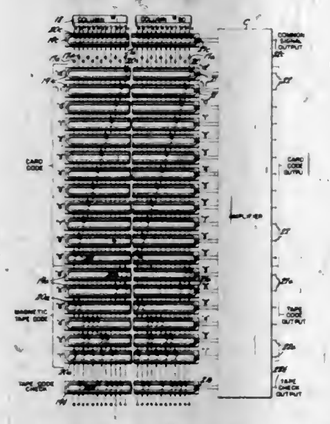
perpendicular to the first said line, said semi-circular sections being of different colors corresponding to right and left with respect to the OMNI bearing, one quadrant section of each semi-circular section carrying a "TO" word designation thereon, and the other quadrant section of each semi-circular section carrying a "FROM" word designation thereon, whereby when said indicator is aligned with the reading on said scale corresponding to the OMNI bearing, the position of the aircraft can be determined upon observing the location of the quadrant section having the color and word designation corresponding to the indications given by the OMNI apparatus.

3,043,504

INDUCTIVELY CONTROLLED CARD READING

Edward J. Rabenda, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 26, 1957, Ser. No. 699,080
12 Claims. (Cl. 235—61.11)



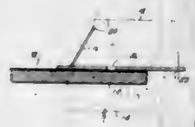
1. Apparatus for reading information recorded on a record medium character by character and producing a coded output representing each character comprising a plurality of sensing means adapted to detect a character on the record medium and generate at least one corresponding electrical signal, a plurality of magnetic elements, a corresponding plurality of output winding means each inductively linked to one of the magnetic elements to produce an output signal in response to acti-

vation of the corresponding magnetic element, and at least one input winding means on each magnetic element, each input winding means being capable, when energized, of activating the corresponding magnetic element to produce an output signal at the corresponding output winding, each sensing means being connected to transmit signals only to the input winding means on the magnetic elements from which corresponding output signals are required to produce the desired output code.

3,043,505
DATA SENSING CIRCUIT

Edgar A. Brown, Owego, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 19, 1958, Ser. No. 781,767
11 Claims. (Cl. 235—61.11)

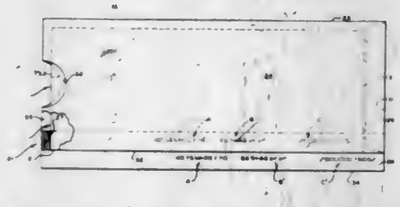


10. A micro-capacitor for use with a device for sensing data stored in the form of apertures on an insulated data carrier, said micro-capacitor comprising a fixed capacitor plate, an insulating coating on said fixed plate, a resiliently mounted metallic finger for the other plate of said capacitor, said data carrier moving on the insulating coating of said fixed plate and said finger riding on the data carrier to vary the spacing between the finger and the fixed plate in accordance with the characteristics of the data carrier, said finger contacting the insulating coating when moving into the area of an aperture on said data carrier thereby producing the maximum value of capacitance for said capacitor.

3,043,506
ENVELOPE CONSTRUCTION

Fred C. Bremer, Saginaw, Mich., assignor of thirty percent to James M. Shackleton, Saginaw, and eighteen percent to Leonard M. Selden, Lansing, Mich.

Filed Mar. 7, 1960, Ser. No. 13,327
4 Claims. (Cl. 235—61.12)

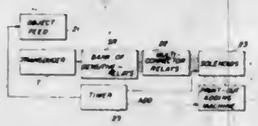


1. A substantially rectangular envelope for use in conjunction with checks or the like having special indicia thereon adjacent their bottom edges so as normally to permit said checks to be moved past scanning apparatus positioned adjacent to the path of movement of said indicia and capable of reacting to the indicia on said checks, said envelope being adapted for movement past said apparatus, being formed of sheet material and having front and rear walls overlying and being joined to one another along one of the longer and one of the shorter sides, the joining of said walls along said one of the longer sides being provided by adhesive means securing said front and rear walls to one another adjacent said one of said longer sides to form a receptacle having an open side and a bottom constituted by said adhesively secured wall portions, said bottom being adapted to support the bottom edge of a check in said receptacle, and at least one of said walls extending beyond said bottom to provide an imperforate extension extending the full length of said one of said longer sides and projecting beyond the confines of said receptacle a minimum distance of ⅜ inch, whereby a check contained in said receptacle may be supported in a position to prevent said scanning apparatus from reacting to the indicia on said check, said imperforate extension including not more than two thicknesses of said sheet material.

3,043,507
APPARATUS FOR MEASURING AND RECORDING VALUES

Loyal H. Davis, Richmond, Va., Herbert Arkin, New York, N.Y., and Otis L. Updike, Jr., Charlottesville, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia

Filed Jan. 31, 1957, Ser. No. 637,527
17 Claims. (Cl. 235—151)

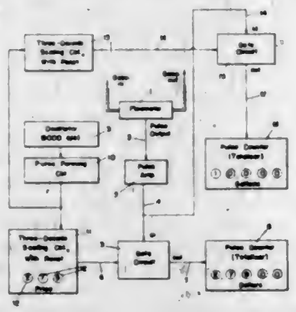


1. A system for measuring the total weight of a predetermined number of objects and the sum of the squares of said weights, comprising a weighing device, means for automatically feeding said objects to said weighing device one by one, a first adding machine section, a second adding machine section, means responsive to said weighing device for successively inserting into said first adding machine section the weights of successive ones of said objects, and means responsive to said weighing device for successively inserting into said second adding machine section the squares of the weights of successive ones of said objects.

3,043,508
ELECTRONIC MULTIPLIER FOR FLUID DISPENSERS

J Rondle Wright, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Sept. 24, 1958, Ser. No. 763,085
10 Claims. (Cl. 235—151)



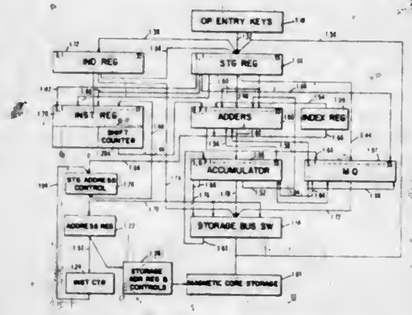
1. In a fluid dispensing system, a flow meter through which passes the fluid being dispensed, said flow meter producing electrical pulses whose recurrence rate is proportional to the rate of passage of fluid through said flow meter, a controllable gate having a control connection, an input, and an output; means for applying the pulse output of said flow meter to the input of said gate, means coupled to said control connection for opening said gate only during an adjustable and presettable portion of the entire dispensing time proportional to the predetermined price per unit volume of the fluid, and means coupled

to the output of said gate for counting and indicating the total number of pulses gated to said gate output during a dispensing operation.

3,043,509
NORMALIZING APPARATUS FOR FLOATING POINT OPERATIONS

Joseph L. Brown, Poughkeepsie, Edward C. Layden, Hopewell Junction, Jordan M. Taylor, Wappingers Falls, and Donald H. Weiss, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 8, 1959, Ser. No. 838,690
6 Claims. (Cl. 235—156)

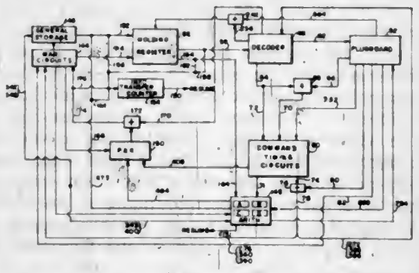


1. In a data processing system, apparatus comprising first means storing signals representing a fraction in the binary notation adapted to shift the signals relative to themselves and place the fraction in normalized form, in which all zeroes between the decimal point position and the first sign digit are eliminated, second means storing signals representing a characteristic associated with the fraction, counting means operably associated with said first storing means for counting the number of shifts taken to normalize the fraction, arithmetic means coupled to said second storing means and said counting means for deriving signals representing a new characteristic from the signals representing the count and the characteristic, and execution means for first initiating shifting of said first storing means to normalize the fraction and then for operating said arithmetic means.

3,043,510
DIGITAL COMPUTER CONTROL

Howard D. Shekels, St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 20, 1957, Ser. No. 697,636
20 Claims. (Cl. 235—157)

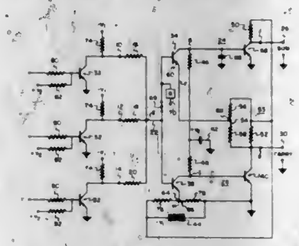


1. In a digital computer, means for receiving a plurality of groups of electrical impulses each encoded at least in part in accordance with a first code or a second code and for decoding each impulse group as received, said means having a plurality of output channels, processing means controllable to perform any of a plurality of operations including at least arithmetic operations coupled to a first of said channels, a decoded impulse group previously encoded in accordance with said first code causing a signal in said first channel and thereby causing the processing means to perform one of said operations in accordance with a plan predetermined by said first code, and given means coupling a second of said channels to said processing means for receiving a signal produced in the second channel by an impulse group previously encoded in accordance with said second code and causing performance of at least one of said operations in accordance with a plan predetermined at least in part by said given means.

3,043,511
LOGICAL COMBINING CIRCUIT

John E. Scott, Rego Park, N.Y., assignor to Sperry Rand, Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Apr. 1, 1959, Ser. No. 803,451
14 Claims. (Cl. 235—172)



1. A binary adder comprising an input summing circuit including respective first and second input terminals and a common output terminal, respective sum and carry output terminals, a sum branch coupled between said common output terminal and the sum output terminal, a carry branch coupled between said common output terminal and the carry output terminal, each of said branches including an electron device, each device including respective input, output and common electrodes, a resistor connected in series with the output electrode of said carry branch device, the sum branch being responsive to a binary 1 at any of said input terminals to provide a 1 at the sum output terminal, the carry branch being responsive to binary 1's on both said input terminals to provide a 1 at the carry output terminal, and means for inhibiting a 1 at the sum output terminal when binary 1's are present at both the input terminals, said means including a bias circuit connected from the output electrode of said carry branch device to the common electrode of said sum branch device for modifying the response threshold of the sum branch device in response to the carry branch device, said bias circuit comprising a voltage divider connected across said resistor and having an intermediate tap connected to the common electrode of said sum branch device.

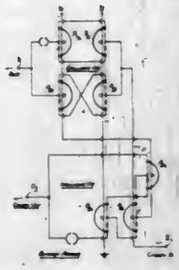
3,043,512
SUPERCONDUCTIVE PERSISTATRONS AND COMPUTER SYSTEMS FORMED THEREBY

Michael J. Buckingham and William M. Fairbank, Durham, N.C.; said Buckingham assignor to Duke University, Inc., Durham, N.C., a corporation of North Carolina

Filed June 16, 1958, Ser. No. 742,363
24 Claims. (Cl. 235—175)

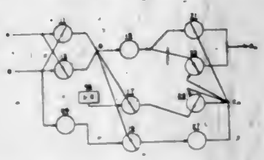
21. A binary adder stage comprising seven persistatron units each including a superconductive ring, top and bottom junctions, a tap on the ring and a drive coil coupled thereto, the junctions of the first and second

units being parallel connected and the junctions of the third and fourth units being cross-connected, the tap of the sixth unit being connected to the bottom junction of the fifth unit, the top junction of the fifth unit being connected to the tap of the seventh unit, the top junction of the sixth unit being connected to the bottom junction of the seventh unit, first and second superconductive inverters, a carry-out terminal connected through said first inverter to the bottom junction of the sixth unit and



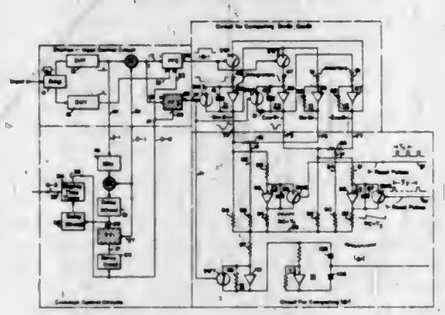
directly to the top junction of the seventh unit, a carry-in terminal connected through the drive coil of the fifth unit to the taps of the first and second units, a sum output terminal connected through the second inverter of the tap of the second unit and directly to the tap of the fourth unit, a first signal input connected serially through the drive coils of the second, fourth and seventh units to the tap of the fifth unit, and a second signal input connected serially through the drive coils of the first, third and sixth units.

3,043,513
MAGNETIC CORE SERIAL ADDER
Eugene W. Sard, Flushing, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 3, 1959, Ser. No. 850,746
3 Claims. (Cl. 235—176)



1. A serial adder circuit comprising a first binary pulse source A and a second binary pulse source B, the respective outputs of said sources comprising the augend and addend input to said adder circuit, an exclusive OR circuit responsive to the outputs of said binary pulse sources A and B, a plurality of magnetic cores each having two directions of magnetization, a first **17**, second **19**, third **21**, fourth **23**, and fifth **25** of said cores being linked by a different one of a plurality of input windings, a different one of a plurality of output windings, and a different one of a plurality of inhibit windings, and a sixth **15**, seventh **27**, and eighth **29** of said cores being linked by respective input and output windings, the output of one of said sources being applied to the input winding linking said eighth core **29**, means including a first delay storage means **28** connecting the output of said exclusive OR circuit simultaneously to an inhibit winding linking said first core **17**, an inhibit winding linking said second core **19**, and the input winding linking said sixth core **15**, a 1-generator **46** having its output connected to the input winding of said first core **17**, means including a second delay storage means **76** connecting the output winding of said sixth core **15** to the inhibit winding linking said fourth core **23** and the input winding linking said third core **21**, means including a third delay storage means **68** connecting the output winding linking said first core **17** to the inhibit winding linking said fifth core **25**, means including a fourth delay storage means **60** connecting the output winding linking said second core **19** to the input winding linking said seventh core **27**, means including a fifth delay storage means **52** connecting the output winding linking said eighth core **29** to the input winding linking said second core **19**, means including a sixth delay storage means **86** connected in common with the respective output windings linking said fifth core **25** and said seventh core **27**, the output of said sixth delay storage means **86** being a carry output applied in series connection to the respective input windings linking said fifth core **25** and said fourth core **23** and the inhibit winding linking said third core **21**, a shift pulse source **110**, respective shift windings linking each of the eight cores and said 1-generator **46** in series connection with said pulse source, and means including a seventh delay storage means **108** connected in common with the respective output windings linking said third **21** and fourth **23** cores, the binary sum of said addend and augend beng derived at the output of said seventh delay storage means **108**.

3,043,514
POSITION PLOTTER
Blanchard D. Smith, Jr., Alexandria, Va., assignor, by mesne assignments, to Melpar, Inc., Alexandria, Va., a corporation of Delaware
Filed Aug. 27, 1956, Ser. No. 606,340
8 Claims. (Cl. 235—181)

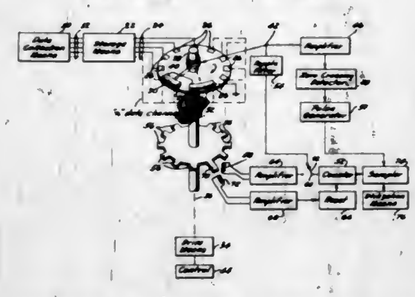


4. Computing apparatus for determining the absolute magnitude of the distance, $|d_r|$ of each of a continuum of points, x,y, of a Cartesian coordinate system from bearing lines in said system, each of said lines being at a bearing angle θ_r, said angle θ_r corresponding to the bearing of a point in space, the location of which is to be determined, with reference to n stations, θ_1 corresponding to the first said station, θ_2 to the second, θ_r to the rth and θ_n to the nth, the location of each of said stations being identified by coordinates $x_r y_r$ in said Cartesian system and said stations transmitting a time potential signal having a duration equal to the angle θ_r, the said apparatus including electrical integrating means for solving the differential equation $\ddot{z}+wz=0$ and having input means on which a potential corresponding to variable z may be impressed and output means from which potentials corresponding to said input means for impressing said time potential signal corresponding to an angle θ_r on said integrating means, whereby potential signals proportional to sin θ_r, cos θ_r are derivable from said output means, means connected to said output means for deriving the magnitude

$$d_r=(x-x_r)\sin\theta_r-(y-y_r)\cos\theta_r$$

and means conected to said deriving means for deriving the absolute magnitude $|d_r|$ from the magnitude d_r.

3,043,515
SIGNAL ANALYZING APPARATUS
Neal S. Anderson, Rolling Hills, Julius S. Bendat, Los Angeles, and Cecil E. Williams, Hawthorne, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 7, 1957, Ser. No. 688,468
18 Claims. (Cl. 235—181)



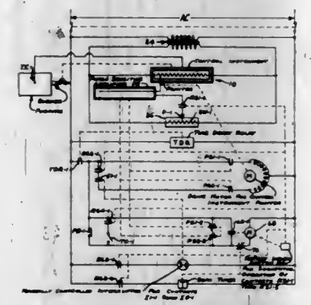
10. Apparatus for analyzing a mathematical function for determining given aspects thereof as a function of an independent variable, comprising in combination: a plurality of data presentation means arranged with respect to one another to permit their sequential successive sampling during a given sampling period, each of said data presentation means depicting in their order of physical arrangement and intended sampling, successive values of said mathematical function for given elemental changes in the value of said independent variable; first means for successively sampling all of said data presentation means in a given sampling time period to develop a first sampling output signal, said first sampling means commencing in its sampling action with a predetermined value of the mathematical function corresponding to a given discrete value of the independent variable; second means for successively sampling all of said data presentation means in a given sampling time period to develop a second sampling output signal, said second sampling means commencing with a different value of the mathematical function corresponding to a second given value of the independent variable displaced from said first given value by at least one elemental change in the value of the independent variable; and means for processing said first and second sampling output signals with one another during said sampling period to determine given aspects of said mathematical function.

3,043,516
TIME SUMMING DEVICE FOR DIVISION, MULTIPLICATION, ROOT TAKING AND INTERPOLATION
Harold W. Abbott, Cohoes, and Vernon P. Mathis, Baldwinsville, N.Y., assignors to General Electric Company, a corporation of New York
Filed Oct. 1, 1959, Ser. No. 843,716
16 Claims. (Cl. 235—195)



1. In combination, a transistor having input electrodes and an output electrode, means for supplying a first electrical quantity to an input electrode poled to cause said transistor to tend to one condition of conductivity, means for performing a time summation of a second electrical quantity and for supplying said summed quantity to an input electrode in a polarity to cause said transistor to switch to the other condition of conductivity when said applied input quantities approximate equality, means for supplying a third electrical quantity, means coupling the output electrode of said transistor in circuit with said last recited supply means and a second time summing means for gating the transfer of said electrical quantity to said second time summing means in accordance with the condition of conductivity of said transistor.

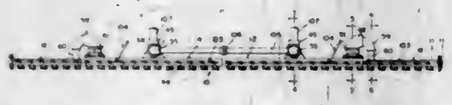
3,043,517
PROGRAM CONTROLLER
Ralph Hanna, Toledo, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 6, 1959, Ser. No. 825,320
13 Claims. (Cl. 236—46)



1. A program controller for moving an indicator along a predetermined path representing all conditions of a variable to be controlled comprising, in combination, means for moving the indicator in both directions along the path, means for generating a signal having a magnitude which is a function of the position of the indicator on the path, a plurality of means, each of which, when operatively connected, is effective to control the rate at which the indicator is moved by said indicator moving means, a plurality of second signal generating means each of which is effective to generate a signal having a magnitude corresponding with that of said first generating means when the indicator is at a predetermined position on the path, control signal generating means effective to receive signals from said first generating means and from one of said second generating means, and to generate a first control signal when the magnitude of a first of the received signals is greater than the magnitude of the second, and a second control signal when the magnitude of the second is greater than that of the first, and ineffective to generate a signal when the received signals are balanced, means effective in each of a plurality of positions to make an operable connection between said indicator moving means and one of said indicator rate control means, while preventing such an operable connection with the others of said indicator rate control means, means effective in each of a plurality of positions to connect one of said second signal generating means with said control signal generating means, while preventing such a connection with the others of said second signal generating means, means effective to change said last two means from a given position to a different position to connect said indicator rate control means in a predetermined sequence and to connect said second signal generating means in a predetermined sequence whenever no signal is generated by said control signal generating means, control means operatively associated with said indicator moving means, and effective in cooperation therewith, in response to the first control signal, to predetermined movement of said indicator moving means in a direction effective to increase the magnitude of the second signal received by said control signal generating means relative

to the magnitude of the first such received signal, and control means operatively associated with said indicator moving means, and effective in cooperation therewith, in response to the second control signal, to predetermine movement of said indicator moving means in a direction effective to increase the magnitude of the first control signal received by said control signal generating means relative to the magnitude of the second such received signal.

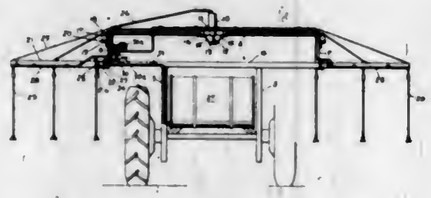
3,043,518
HOT SPRAY BARS
Horace A. Cartwright, Forest Hills, N.Y. (4106 S. Rockford St., Tulsa, Okla.)
Filed July 2, 1959, Ser. No. 824,526
10 Claims. (Cl. 239—124)



6. In a spraying apparatus, a first elongate tubular main spray bar having an inner end and an outer end and having a front and a back side, a dividing septum in and extending lengthwise of said bar and forming in the bar a liquid outflow channel and a liquid return flow channel, the channels being in communication at the inner end of the bar, a combined liquid feed and discharge unit attached to the bar and including means for directing fluid flow from a supply source into said outflow channel and means for receiving fluid from the return flow channel and directing it back to said source, a second elongate tubular spray bar having an inner end and an outer end and having a front and a back side, a dividing septum in and extending lengthwise of said second bar and forming therein a liquid outflow channel and a liquid return flow channel, said channels of the second bar being in communication at the outer end of the second bar, a tubular U-coupling having two legs, one leg being secured to the outer end of and opening into the second bar through said back side thereof, said one leg being in two swivelly coupled parts whereby the second bar may be swung from a horizontal operating position to an upright non-operating position, a division wall extending through the tubular U-coupling and dividing the latter into liquid outflow and return flow passages which align respectively with the liquid outflow and return flow channels when the inner and outer bars are in horizontal operating position, said division wall being divided in two parts at the swivel coupling between said two leg parts whereby one part of the division wall turns to a position in which it presents an edge substantially perpendicular to an adjacent edge of the other part when said second bar is turned to upright non-operating position, means semi-partitioning said outflow and return flow passages at the said adjacent edges of the two wall parts for insuring passage of liquid from the outflow channel of the first bar only to the outflow channel of the second bar and from the return flow channel of the second bar only to the return channel of the first bar when the second bar is in said non-operating position, and valved spray nozzles carried by both bars and adapted to have operative communication with one channel only with their respective bars.

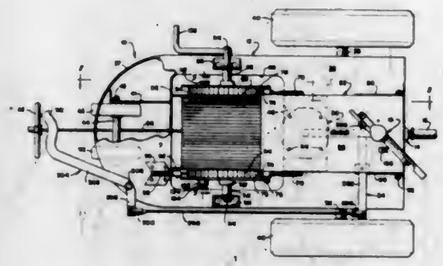
3,043,519
BI-SWING SPRAY BOOMS AND MEANS FOR HYDRAULICALLY ACTUATING THE SAME
James C. Tygart, 705 S. Henritta St., Nashville, Ga.
Filed Apr. 15, 1960, Ser. No. 22,548
2 Claims. (Cl. 239—167)

1. In apparatus of the character described the combination with a traveling wheeled vehicle, of a supporting frame carried thereby, a pair of spray booms, one projecting outwardly from each side of the frame, horizontal pivots supported from the said frame upon which the spray booms are pivoted to swing vertically, a pair of cables the outer ends of which are connected to the booms outwardly of the horizontal pivots, a single vertically disposed hydraulic cylinder and piston rod, a rocking lever pivoted substantially centrally of its length to the end of the piston rod, the inner ends of said cables being connected respectively to the outer ends of said rocking lever to thereby equalize the pull through said cables upon the said two spray booms, a source of pressure fluid, manually operable means for controlling the



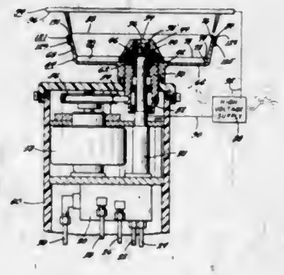
flow of pressure fluid to the cylinder, spraying pipes and spray heads supported by the spray booms, pipes for conducting pressure fluid from the source of fluid supply to the spray pipes and spray heads, and wherein the means for controlling the flow of pressure fluid to the cylinder also includes means for controlling the flow of pressure fluid to the spray pipes and spray heads, said controlling means being arranged to interrupt the supply of pressure fluid to the spray pipes when the pressure fluid is being delivered to the cylinder to elevate the booms, and to supply pressure fluid to the spray pipes and heads when the pressure fluid supply to the cylinder is interrupted and the booms descend to horizontal and spraying position.

3,043,520
PROPELLED SPRINKLING DEVICE
Lewen R. Nelson, 1725 SW. Washington St., Peoria, Ill.
Filed July 21, 1960, Ser. No. 44,481
16 Claims. (Cl. 239—189)



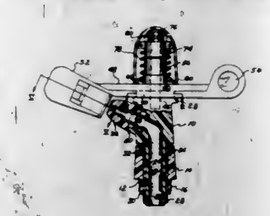
1. A sprinkling device comprising a wheeled frame, a diaphragm assembly expansible in response to the flow of water under pressure therein, a member pivoted to said frame and operatively connected with said diaphragm assembly for pivotal movement in one direction in response in the expansion of said diaphragm assembly, spring means between said frame and said pivoted member resiliently urging the latter to pivot in the opposite direction and thus contract said diaphragm assembly, a drum assembly rotatably mounted on said frame, a cable wound around said drum assembly and having a free end extending therefrom adapted to be anchored to the ground to be sprinkled, means operatively connected between said pivoted member and said drum assembly for rotating the latter in response to the expansion and contraction of said diaphragm assembly to wind up said cable on said drum assembly to thereby propel said wheel frame to the anchored end of said cable, a water inlet housing carried by said frame adapted to be connected with a hose having a source of water under pressure communicating therewith, a sprinkler head carried by said frame in communication with said inlet housing, means communicating said housing in parallel with said diaphragm assembly, said last-mentioned means including a valve mechanism operable in a first position to permit flow of water under pressure into said diaphragm assembly and in a second position to permit exhaust of water from said diaphragm assembly under the action of said spring means, means operatively connected between said pivoted member and said valve mechanism for moving the latter into said first position in response to a predetermined contraction of said diaphragm assembly and into said second position in response to a predetermined expansion of said diaphragm assembly, said housing having flow control valve means disposed therein movable between an opened position permitting flow of water under pressure to said sprinkler head and to said diaphragm assembly and a biased closed position preventing flow of water under pressure to said sprinkler head and said diaphragm assembly, a starting lever movably mounted on said frame and operatively connected with said flow control valve means to move the latter from said closed position to said opened position, latch means operatively connected with said starting lever and carried by said frame for movement between a latched position operable to retain said starting lever in a position to maintain said flow control valve means in said opened position and an unlatched position permitting said starting lever to be biased with said flow control valve means into the closed position of the latter, a stopping lever carried by said frame in a position to be moved by engagement with a ground anchored stake in response to the travel of said wheeled frame into a position adjacent said stake, and means operatively connected between said stopping lever and said latch means for moving the latter from said latched position to said unlatched position in response to the movement of said stopping lever.

3,043,521
ELECTROSTATIC PAINTING APPARATUS
Frank D. Wampler, Brookville, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,734
4 Claims. (Cl. 239—223)



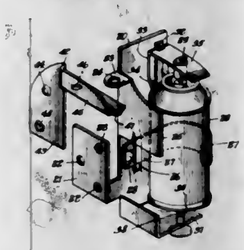
1. In an electrostatic coating arrangement, a centrifugal atomizing head in the form of a cup shaped container having flared side walls and a sharp edged rim, the inner face of said side walls being provided with a recessed annular paint distributing groove, said side walls being uniformly flared directly from the outer edge of said groove.

3,043,522
SPRINKLER CONSTRUCTION
Creighton W. Ryerson, Jackson, Mich., assignor to Ryco Development Company, Inc., Jackson, Mich., a corporation of Michigan
Filed June 19, 1959, Ser. No. 821,531
5 Claims. (Cl. 239—230)



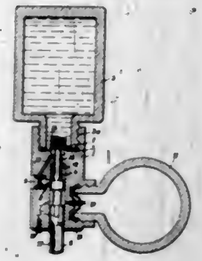
1. A fluid distributing sprinkler comprising a base member adapted to be affixed to a pressurized fluid source, a body member rotatably mounted in said base member, conduit and nozzle means carried by said body in communication with a fluid source, rotary support means mounted on said body concentric to the axis of rotation thereof, an impulse arm rotatably journaled on said support means having a hub and a planar surface adjacent said body member, paddle means carried by said arm adapted to be engaged by and deflected from the fluid stream emitting from said nozzle whereby said arm is rotated relative to said body, a first abutment surface formed on said body adjacent said rotary support defined by a projection extending from said body, a second abutment surface formed on said impulse arm adapted to engage said first surface, said second surface defined within a recess formed in said arm hub opening into said planar surface receiving said projection and recoil spring means interposed between said body and arm adapted to be wound upon rotation of said arm by the reaction of fluid on said paddle and return said paddle to the fluid stream whereby on said return movement of said arm said second surface engages said first surface to impart an impulse to said body producing intermittent rotation thereof.

3,043,523
DOOR OPERATED SPRAY DEVICE
Nils Henry Hogstrom, 5536 N. Bernard St., Chicago, Ill.
Filed June 30, 1960, Ser. No. 39,921
4 Claims. (Cl. 239—274)



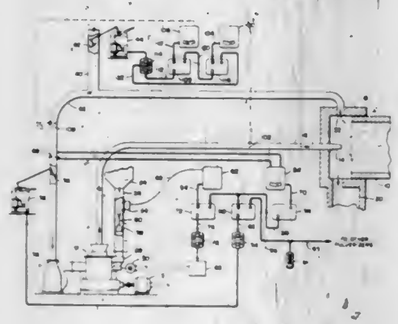
4. A spray device operated by the swinging of a door which has a hinge including a hinge plate secured by screws to the door, a hinge plate secured by screws to the door frame and a hinge pin pivotally securing the hinge plates together, and comprising, a first bracket secured to one of the hinge plates, a second bracket secured to the other hinge plate, a spray means and a spray controlling member therefor carried by the first bracket, and an actuator member carried by the second bracket and engaging and disengaging the spray controlling member during a portion of the swinging movement of the door between closed and opened positions for causing the spray means to produce a spray.

3,043,524
METERING SPRAYER DEVICE
Sonia Boris, née Jokelson, Paris, France, assignor to Societe Technique de Pulverisation (par abreviation STEP), Pantin, France, a company of France
Filed Nov. 8, 1960, Ser. No. 68,047
Claims priority, application France Nov. 10, 1959
10 Claims. (Cl. 239—350)



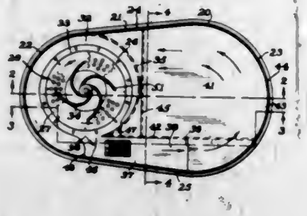
1. A sprayer device comprising a spray nozzle, a container for gas under pressure having an outlet for the latter, a container for material to be sprayed having an outlet for the latter extending to said nozzle, means defining a metering chamber and being movable between a first position, in which only said outlet for gas under pressure opens into said metering chamber, and a second position, in which said metering chamber communicates with said nozzle, and actuating means for selectively disposing said means defining a metering chamber in said first and second positions thereof so that, when in said first position, a metered quantity of gas under pressure determined by the volume of said metering chamber enters the latter from said container for the gas and, when moved to said second position, the metered quantity of gas under pressure escapes from said metering chamber through said nozzle along with material to be sprayed from said container for such material.

3,043,525
PULVERIZER CONTROL
Lyman F. Gilbert, Lyndhurst, Ohio, assignor to Bailey Meter Company, a corporation of Delaware
Filed Mar. 10, 1960, Ser. No. 14,009
8 Claims. (Cl. 241—30)



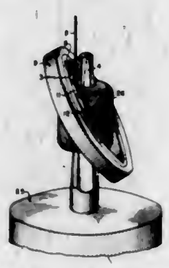
6. The method of controlling the supply of solid material and air to an air swept pulverizer which includes the steps of, controlling the rate of flow of solid material to the pulverizer solely in accordance with variations in actual flow rate of solids entering the pulverizer to maintain a predetermined flow rate of solids material, and varying the predetermined solids flow rate in accordance with the actual flow rate of air to the pulverizer to maintain a predetermined relationship between the flow rate of air and solid material to the pulverizer.

3,043,526
APPARATUS FOR PULPING PAPER STOCK
Edwin Cowles, New York, N.Y., assignor to John W. Bolton & Sons, Inc., Lawrence, Mass., a corporation of Massachusetts
Filed Aug. 29, 1958, Ser. No. 758,097
9 Claims. (Cl. 241—46)



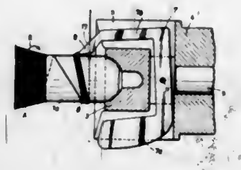
1. Apparatus for pulping and defibering paper stock comprising in combination a tank of ovate outline, a horizontal volute impeller casing below the level of the floor of said tank, said casing having an axial feed orifice and at least one peripheral discharge orifice; a rotary impeller within said casing creating a vortex above said feed orifice and discharging material longitudinally of said tank through said discharge orifice, a tank floor inclining downwardly toward the feed orifice of said casing and urging all stock in said tank into the vortex created by said impeller by gravity and relatively steep, short, ascending stock conduit means, below the level of said floor, connecting said discharge orifice with an end of said tank, said means directing the peripheral discharge of said impeller initially upwardly to a level well above the level of said casing and impeller and into the area of said tank most remote from said impeller casing, said tank being free of midfeather structure above said tank floor.

3,043,527
BALL WINDING MACHINE
Josef Ruf, Memmingerberg, near Memmingen, Allgau, Germany, assignor to Maschinenfabrik Memmingen KG Ing. Theodor Otto, Memmingen, Allgau, Germany
Filed Sept. 22, 1959, Ser. No. 841,512
12 Claims. (Cl. 242—2)



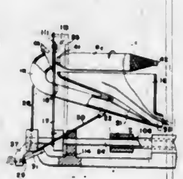
1. Apparatus for forming threaded material into spools, comprising an elongated winding mandrel mounted for rotation about its longitudinal axis, a rotary annular element through which said mandrel extends, thread guide means provided on said rotary element including a bearing eyelet secured thereto, and a shifting lever having an eyelet at its end biased in a direction toward said mandrel, means for mechanically driving said rotary element, an annular guide member, in which said annular element is mounted for rotation, said annular guide member being mounted for pivotal movement, and the pivot axis of said guide member being substantially perpendicular to the longitudinal axis of said mandrel.

3,043,528
METHOD AND APPARATUS FOR AUTOMATICALLY FIXING THE END OF THE THREAD OR YARN OF A WOUND PACKAGE TO THE PACKAGE SUPPORT
Walter Siegenthaler, Erlenbach, Zurich, Switzerland, assignor to Maschinenfabrik Schärer, Erlenbach, Zurich, Switzerland
Filed Mar. 28, 1961, Ser. No. 98,969
Claims priority, application Switzerland Mar. 31, 1960
5 Claims. (Cl. 242—18)



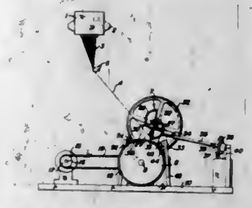
2. Apparatus for automatically fixing the end of the thread or yarn of a wound package to the package support, comprising a rotatable package support, a driver coupled to one end of the support, a freely rotatable bearing head frictionally engaging the other end of the package support, a centrifugal lever pivotally mounted on said bearing head for movement in an axial plane, said centrifugal lever having a lever arm abutting against the surface of the package support in proximity to the frictionally engaged end thereof when the bearing head rotates, said lever arm being provided with an inclined surface adapted, upon rotation of said bearing head, to coincide with the path of the running-up thread forming an auxiliary winding on said support, and to engage underneath said auxiliary winding.

3,043,529
APPARATUS FOR PREPARING COILS OF YARN FOR FURTHER FABRICATION
Stefan Fürst, Monchen-Gladbach, Germany, assignor to Walter Reiners, Monchen-Gladbach, Germany
Filed July 23, 1958, Ser. No. 750,373
Claims priority, application Germany Aug. 1, 1957
8 Claims. (Cl. 242—35.6)



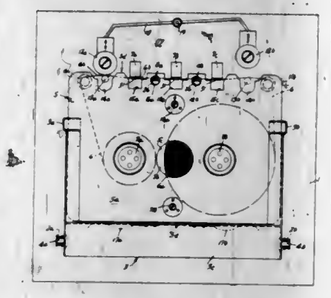
1. An apparatus for unwinding a length of wound yarn end from one location on a yarn package and rewinding a determined length of the unwound yarn end on another location of the package, comprising means for withdrawing a length of wound yarn axially of the yarn package, means for parting from the withdrawn yarn a terminal portion thereof to leave a predetermined length of withdrawn yarn end remaining, means to turn the yarn package about its axis in unwinding direction, the apparatus providing means for withdrawing said remaining withdrawn yarn end in a non-axial direction, and means to turn the yarn package in winding direction to rewind said remaining length onto another location of the package.

3,043,530
APPARATUS FOR PACKAGING STRAND MATERIAL
James H. Healy, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 6, 1958, Ser. No. 733,409
14 Claims. (Cl. 242—43.1)



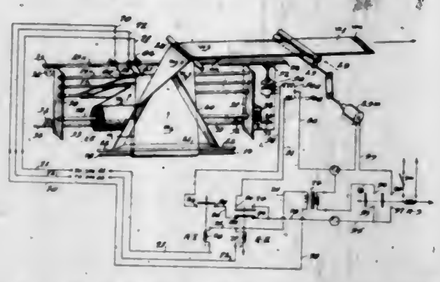
1. In a winding mechanism, a rotatable support adapted to receive and wind a strand thereon, traversing means for engaging the strand and reciprocating said strand axially along the support with a given stroke of travel to thereby wind the strand on the support in a generally helical pattern, means for rotating said traversing means about the axis thereof, and means for moving said traversing means laterally of the axis of said support to progressively change the length of stroke of reciprocation of the strand so that the build-up in thickness of the wound strand at the ends of the stroke of reciprocation is progressively moved axially along the support during the winding operation to thereby provide a wound package having a substantially uniform thickness.

3,043,531
DECK FOR TAPE RECORDING
Leonid Sinkewitsch, Nurnberg, Germany, assignor to Max Grundig, Furth, Bavaria, Germany
Filed Apr. 11, 1960, Ser. No. 21,228
Claims priority, application Germany May 12, 1959
12 Claims. (Cl. 242—55.13)



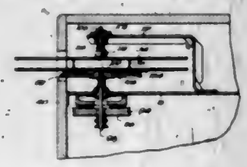
1. In a tape recorder, in combination, a tape deck; a tape-containing cartridge adapted to be removably mounted on said deck and formed with aperture means; tape guiding means turnably mounted on said deck and extending through said aperture means when the cartridge is mounted on said deck, said guiding means comprising an eccentric tape guiding portion formed with recess means of a width only slightly exceeding the width of the tape, said guiding means turnable between a first angular position in which the tape is received in said recess means and a second angular position in which said portion is spaced from the tape whereby the tape is guided by said portion against lateral movements in its own plane when the guiding means is in said first angular position and the cartridge may be removed from the deck when the guiding means is turned to said second angular position; and means for turning the guiding means between said first and second angular positions.

3,043,532
SHEET REGISTRY CONTROL
Herman L. Selden, Chicago, Ill., assignor, by mesne assignments, to G. T. Schjeldahl Company, a corporation of Minnesota
Filed Dec. 22, 1958, Ser. No. 782,036
2 Claims. (Cl. 242—57.1)



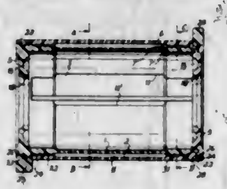
1. In a sheet-feeding machine of the type employing a stationary frame and a sheet-roll carriage shiftable on said frame back and forth relative to a desired sheet-feeding path, improvements comprising: a stationary cross bar on said frame parallelling the line of shifting movement of said carriage; a rack of gear teeth formed on said bar lengthwise thereof; a pinion journalled on said carriage to engage said rack for rotation in opposite directions to shift the carriage as aforesaid; reversing motor means on the carriage driving said pinion; and feeler means comprising a bracket slidably carried on said bar and including three spaced-apart feeler contact fingers carried by said bar, two particular ones of which are closer together than the distance separating them from the third finger; a conductive sheet-supporting feed rod situated near and in parallelism with said cross bar in position to be contacted by said fingers to complete control circuits therethrough; said feed rod being adapted to have sheet webbing trained thereover to insulate the fingers from the rod; means for securing the bracket in set positions along said bar to locate said two particular fingers relative to an edge of the sheet webbing and the third finger contacting said rod; and circuit means connected with said feeler fingers and motor means for starting and stopping the latter responsive to predetermined meander in opposite directions of said edge relative to said two particular fingers in relation to the spacing thereof, whereby to keep the sheet webbing running true between predetermined opposite lateral limits determined by said spacing of the fingers.

3,043,533
REEL MOUNTING MEANS
Willard J. Faulkner and Robert B. Rhoades, Coloma, Mich., assignors to V-M Corporation, Benton Harbor, Mich., a corporation of Michigan
Original application May 16, 1958, Ser. No. 735,778. Divided and this application Aug. 28, 1959, Ser. No. 841,429
4 Claims. (Cl. 242—68.4)



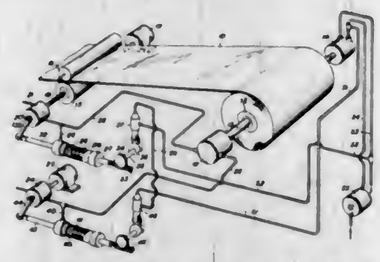
4. Reel mounting means comprising a drive shaft for the reel, a pin aligned with said shaft in spaced relation to one end thereof, means mounting at least one of said pin and shaft for substantially rectilinear axial movement, means effecting relative biasing of the pin and shaft toward each other, a disk of friction material on the shaft adjacent said one end thereof, and opposed convex button members on the adjacent ends of the shaft and pin normally spaced apart a distance less than the axial dimension of the reel, the button member on the shaft projecting slightly axially of said disk, whereby radial movement of a reel between the shaft and pin effects relative yielding movement of said button members for disposition of the reel substantially in axial alignment with the shaft and pin urged into frictionally driven engagement with said disk.

3,043,534
PHOTOGRAPHIC FILM CASSETTES OR CONTAINERS
Rudolf Norris Hejnochowicz, London, England, assignor to Ralph Norris Limited, London, England, a British company
Filed Aug. 22, 1958, Ser. No. 756,719
Claims priority, application Great Britain Aug. 23, 1957
3 Claims. (Cl. 242—71.1)



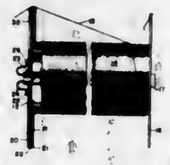
1. A photographic film cassette comprising an inner substantially cylindrical shell, a first end-wall integral with said inner shell and having a central spool spindle bearing aperture formed therein, an outer, substantially cylindrical shell, a second end-wall integral with said outer shell adjacent the opposite end of the inner shell and having a central spool spindle bearing aperture formed therein, an annular ring removably carried on the open end of the outer shell and fitting over the periphery of said end wall of said inner shell, and at least one positioning projection integral with and extending radially of said ring.

3,043,535
HYDRAULIC DRIVE FOR WINDING MACHINES
George Edward Chittenden, Allesley, Coventry, England, assignor to The Keelavite Company Limited, Coventry, England, a British company
Filed Mar. 31, 1958, Ser. No. 725,199
Claims priority, application Great Britain Apr. 5, 1957
5 Claims. (Cl. 242—75.53)



1. Apparatus responsive to changes in the speed ratio between two rotary members, one of which is driven by a hydraulic motor, comprising metering pumps operatively connected to and driven respectively at speeds dependent on the speeds of the two rotary members, at least one of such metering pumps being of the variable capacity type, means for controlling the capacity of said variable capacity metering pump, a main control pressure passage connecting the outlet of said one metering pump to the inlet of the other, a main pressure-responsive device subject to the pressure in the main control pressure passage and arranged to operate the means for varying the capacity of the variable capacity metering pump in a sense tending to maintain a substantially constant pressure in the main control pressure passage and to control the pressure at which working fluid is supplied to the hydraulic motor in accordance with changes in the relative speeds of the two metering pumps, and subsidiary control apparatus operatively connected to the hydraulic motor and to said other metering pump and responsive to variations in the speed of the hydraulic motor, said subsidiary control apparatus automatically modifying in accordance with variations in said hydraulic motor speed the control imposed by the main pressure-responsive device on the pressure at which working fluid is supplied to the hydraulic motor.

3,043,536
YARN PACKAGE PROTECTIVE ADAPTER
Arthur A. Brame and Frank A. Wilkins, Greensboro, N.C., assignors to The Brame Textile Machine Co., Greensboro, N.C.
Filed Dec. 2, 1954, Ser. No. 472,618
3 Claims. (Cl. 242—128)



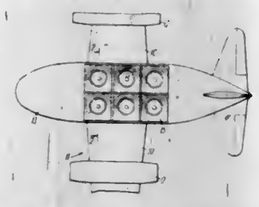
1. For use in the combination of a spool having end flanges affixed to a hollow barrel and a flange cover member having a rim extending over the flange periphery, a spring wire clip, substantially M-shaped, attached to the cover member adjacent the flange so that the rim encloses a spool flange periphery, said clip having foreshortened outer leg members for attachment to the cover member and an intermediate resilient loop extending between and spaced from said leg members and lying in the same plane therewith, said loop being received within the hollow barrel to releasably engage with the barrel interior.

3,043,537
APPARATUS FOR USE IN WITHDRAWING TWISTED YARN FROM YARN PACKAGES
Dennis Raymond Chapman, Kenilworth, and Dennis Ellis Felks, Coventry, England, assignors to Courtaulds Limited, London, England, a company of Great Britain
Filed Dec. 2, 1959, Ser. No. 856,829
Claims priority, application Great Britain Dec. 12, 1958
8 Claims. (Cl. 242—128)



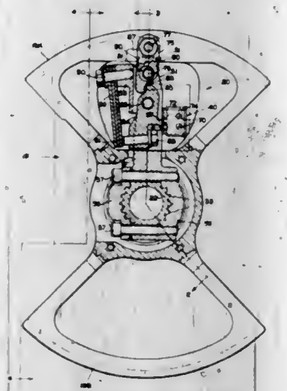
2. In apparatus for withdrawing yarn from a yarn package, a yarn control device for preventing crimp in lively twisted yarn consisting of a sleeve of material having pleats surrounding said yarn package, said pleats being free to expand or to collapse, and the yarn package comprising a support for said sleeve, the relative size of the yarn package and the sleeve being such that only the inner edges of said pleats contact the outer surface of the yarn package, whereby the pressure of said pleats prevents the yarn overrunning while allowing withdrawal of the yarn to proceed unimpeded.

3,043,538
POWER PLANT FOR USE IN JET SUSTAINED AIRCRAFT
Maurice Ian Taylor, Allestree, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Apr. 3, 1961, Ser. No. 100,422
Claims priority, application Great Britain Apr. 11, 1960
8 Claims. (Cl. 244—23)



1. In an aircraft; an engine bay structure, a plurality of jet engines mounted vertically within said engine bay structure for imparting vertical lift to the aircraft, said jet lift engines having spaces therebetween, a hollow air intake casing for each of said jet lift engines, closure means securing said air intake casings to one another and to said engine bay structure, said closure means and said air intake casings and said engine bay structure cooperating to close said spaces to vertical airflow from forward of said air intake casings.

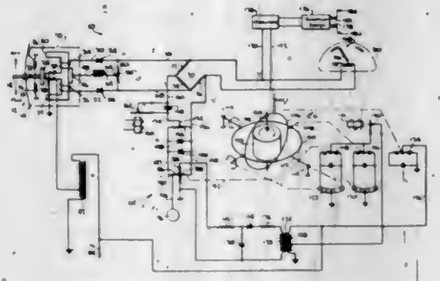
3,043,539
CONTROL STICK TORQUE SENSOR TO SELECTIVELY EFFECT AUTOPILOT AND MANUAL CONTROL OF AIRCRAFT CONTROL SURFACES
Alfred F. Bishop, Pompton Plains, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 8, 1960, Ser. No. 1,221
9 Claims. (Cl. 244—76)



1. Torque sensing means comprising a pulley, a shaft for the pulley, an arm connected to the shaft, control means carried by the arm, lever means pivotally connected to said arm and pulley, a resilient linkage carried by said arm and operatively connected to said pivotal lever means to bias said pivotal lever means relative to said arm and pulley and into cooperative driving relation between said arm and pulley, said resilient linkage and pivotal lever means being drivingly connected in series between the arm and the pulley, means operatively con-

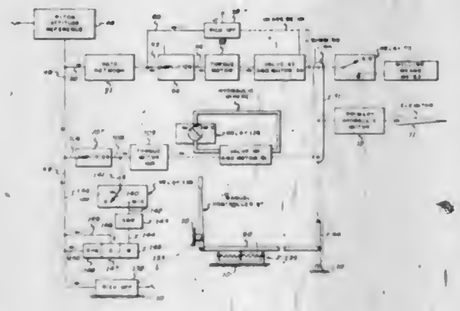
necting the pivotal lever means to the control means carried by said arm, and said pivotal lever means being effective to operate the control means through said operative connecting means upon an excessive toruqe being applied from the pulley to the shaft.

3,043,540
AIRPLANE INSTRUMENTS
Leonard M. Greene, Chappaqua, N.Y., assignor to Safe Flight Instrument Corporation, White Plains, N.Y., a corporation of New York
Filed Nov. 17, 1959, Ser. No. 853,516
29 Claims. (Cl. 244—77)



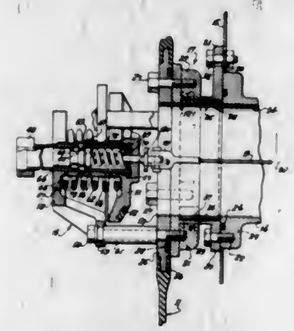
1. An airplane instrument comprising means responsive to forward acceleration of an airplane, means responsive to lift of the airplane, each of said last-named means having a variable output, the response of the first mentioned means being essentially independent of the pitch attitude of the airplane, and means combining said outputs to provide a director indication.

3,043,541
COMBINED MANUAL AND AUTOMATIC SERVO SYSTEM
Irving N. Hutchinson, Syosset, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Oct. 20, 1960, Ser. No. 63,812
13 Claims. (Cl. 244—78)



1. In a combined manual and automatic servo system for controlling the attitude of a dirigible craft about an axis, a primary hydraulic motor having a control valve and a movable housing connected to the craft to follow the motion of the valve, a summing link connected to move the control valve, automatic pilot means providing an output depending on the displacement of the craft from a reference attitude about the axis and providing an output depending on the rate of change of the displacement output, alternatively operable means for providing a first input to said link including a manually operable controller operatively connected to the link and a first hydraulic motor carried by the housing and connected to the link and having a control valve responsive to the displacement output of said automatic pilot means, a second hydraulic motor carried by the housing connnected to provide a second input to the link to damp the system and having a control valve responsive to the rate output of said automatic pilot means, and means for conditioning said alternatively operable means for operation by the automatic pilot means.

3,043,542
FRANGIBLE CONNECTOR ASSEMBLY FOR FUEL CELLS
Robert Neuschotz, 1162 Angelo Drive, Beverly Hills, Calif.
Filed Mar. 10, 1959, Ser. No. 798,473
18 Claims. (Cl. 244—135)

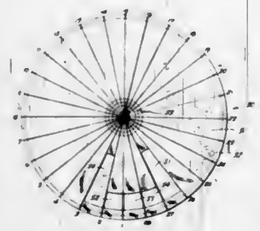


1. In an aircraft, the combination comprising a crash resistant fluid containing cell mounted in the craft and adapted to resist rupture even if torn from its normal position relative to an adjacent portion of the craft by a crash, and a fluid conducting assembly detachably connecting said cell to said adjacent portion of the aircraft, said assembly including a first tubular member connected to said cell in communication with the interior thereof through an opening in a wall of the cell, a second tubular member connected to said adjacent portion of the aircraft and forming essentially a continuation of said first member, and a third tubular member detachably interconnecting said first two members and extending therebetween and having its opposite ends embedded in the material of said first two members respectively at locations between the radially inner and outer surfaces of said first two members so that the material of each of said first two members extends along both the radially outer side and the radially inner side of said third member, said three members forming together a fluid tight joint for conducting fluid between said first two members, said third member being weaker than said first two members and preformed to fail and thereby break the connection between the first two members when the cell is displaced by a crash relative to said adjacent portion of the craft.

3,043,543
PARACHUTES
Jacques André Istel and Lewis Barton Sanborn, Bedford, N.Y., assignors to Parachutes Incorporated, Bedford, N.Y., a corporation of New York
Filed Dec. 18, 1958, Ser. No. 781,280
8 Claims. (Cl. 244—152)

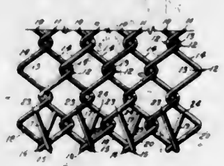
1. A steerable parachute comprising a canopy having a skirt and apex and including a plurality of gores which have an apron sector, said canopy having a rear and front sector, two spaced gores being partially removed to provide two spaced unobstructed openings in said canopy for free passage therethrough of air compressed beneath said canopy during descent, said openings being substantially

the same size, said openings being substantially symmetrically located at the rear part of said canopy, a series of suspension lines extending between adjoining gores, whereby a selective pull on a first suspension line attached to a point at one end of one of said openings produces a local deflection on the canopy resulting in rotation of the canopy in one direction, and a pull on a second suspension line attached to a point at one end of the other of said openings produces a local deflection of the canopy



resulting in rotation of the canopy in the other direction, and opening means, including said first and second suspension lines, provides for a larger and variable effective passage of air by said openings while said canopy is inflated during descent, than it is ordinarily possible for said openings when said canopy is in a deflated condition, said openings being spaced by a gore having a larger elongated unobstructed opening intermediate the apex and skirt of said canopy for free passage therethrough of air compressed beneath said canopy during descent.

3,043,544
CONSTRUCTION OF COLLAPSIBLE SANITARY WIRE BELTS
Fred L. Hooper, Cambridge, Md., assignor to Cambridge Wire Cloth Company, a corporation of Maryland
Filed Dec. 1, 1959, Ser. No. 856,459
3 Claims. (Cl. 245—6)



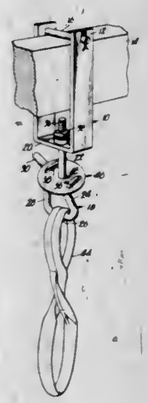
1. A woven wire conveyor belt which can be readily collapsed so that clearance is provided around and between all parts, comprising a plurality of spiral elements which are intermeshed and whereby complete separation of the spiral elements is prevented, and wherein the spiral elements are mounted for movement towards and away from each other, said spiral elements including convolutions that embody arcuate bight portions and oppositely extending straight portions, the ends of the spiral elements being shaped to include loops that are each defined by first and second straight sections, the first and second sections being arranged angularly with respect to each other, said first sections being secured to straight portions that are contiguous to said second sections, there being a curved section interconnecting the first and second sections together, a loop of one spiral element being intermeshed with an end convolution of an adjoining spiral element, and wherein with the belt in collapsed formation, foreign matter can be readily removed therefrom, and wherein with the belt in collapsed position, the belt can be completely sanitized.

3,043,545
FIRE DETECTOR INSTALLATION AND SUPPORT BRACKET THEREFOR
John E. Lindberg, Jr., 3296 Springhill Road, Lafayette, Calif.
Filed Aug. 10, 1959, Ser. No. 832,771
13 Claims. (Cl. 248—49)



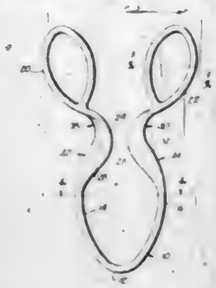
13. A fire detector installation, including in combination: an elongated, substantially filamentary, continuous, one-piece, unjointed, somewhat flexible sensing element; a draw wire secured to one end of said sensing element; and a plurality of support assemblies spaced apart from each other to describe a looped path with the first and last ones close together, said assemblies supporting said sensing element and each comprising a metal support bracket having a cylindrical sleeve and a one-piece tubular plastic bushing snugly fitting in said sleeve and having enlarged portions engaging the ends of said sleeve and extensions of reduced diameter extending beyond said enlarged portions and a seamless circumferentially fully closed opening at least as large as said sensing element extending longitudinally therethrough, said draw-wire being used to be pulled through said openings of said bushings for pulling said sensing elements thereafter, said plastic having a low coefficient of sliding friction.

3,043,546
HANGER ASSEMBLY
Walter A. Reich, Kansas City, Mo., assignor to A. Reich & Sons, Inc., Kansas City, Mo., a corporation of Missouri
Filed Aug. 22, 1960, Ser. No. 51,183
10 Claims. (Cl. 248—215)



8. A hanger assembly comprising a clevis; a hook suspended from the bight of the clevis; a plate shiftable longitudinally on the shank of the hook to and from a position closing the mouth of the hook, a marginal edge of said plate being in engagement with a portion of the hook when the plate is moved to its position closing the mouth of the hook and in locking engagement with the shank; and means for retaining the plate spaced from said portion of the hook when the plate is moved to a position opening the mouth of the hook.

3,043,547
HANGER
Walter A. Reich, Kansas City, Mo., assignor to A. Reich & Sons, Inc., Kansas City, Mo., a corporation of Missouri
Filed Feb. 15, 1960, Ser. No. 8,618
3 Claims. (Cl. 248—317)



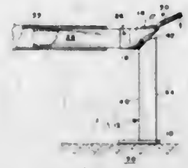
1. A hanger comprising a loop having a pair of crossed legs, each provided with a closed eye formed by the leg being looped and joined to itself, the eyes being in overlapped alignment when the legs are crossed, each of said legs having a reverse bend therein at substantially the point of crossing, the area of the reverse bend of each leg being flattened throughout a substantial part thereof whereby to permit overlying, face-to-face engagement of said legs at the point of crossing thereof, the loop being of resilient material permitting disengagement of said legs and spreading the same apart.

3,043,548
ADJUSTABLE SUSPENSION DEVICE FOR CEILING PANELLINGS
Ove Andreas Jørgensen, 54 Østrupvej, Odense, Denmark
Filed June 7, 1960, Ser. No. 34,536
Claims priority, application Great Britain June 15, 1959
1 Claim. (Cl. 248—327)



In a ceiling panelling comprising a plurality of parallel elongated panelling elements and a number of carrying rails extending in the transverse direction of said elements, means for releasably connecting said elements to said carrying rails, and adjustable suspension means comprising a plurality of upper strap members each having an upper end fixed and extending downwardly from its upper end towards the carrying rails and a plurality of lower strap members having their lower ends connected to the carrying rails and extending upwardly therefrom and having their upper ends overlapping the lower ends of the upper straps, and a toggle clamp lever journalled in one of said strap members and operative to clamp said overlapping end portions together in any adjusted position.

3,043,549
APPARATUS FOR STABILIZING EQUIPMENT
Alvin H. Wilkinson, Talala, Okla., assignor to Auto-Crane Company, Tulsa, Okla.
Filed July 17, 1959, Ser. No. 827,929
5 Claims. (Cl. 248—351)



1. Apparatus for stabilizing, with respect to ground, spring biased equipment of the type described comprising:

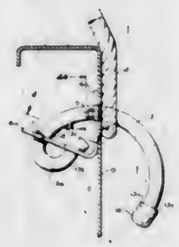
a vertical support member having a forward side, a rear side, a top and bottom restable on said ground;

lever-forming arm means, including an operating handle, pivotally attached, in a substantially vertical plane, about a substantially horizontally oriented connecting pin fastened to a top, forward portion of said support member;

a second pin on said arm means, spaced from and oriented substantially parallel with said connecting pin, and pivotal with said arm means along a raising and then descending arc between a location forward of a top-dead-center position, wherein said second pin is directly above said connecting pin, and a location rearward of said top-dead-center position;

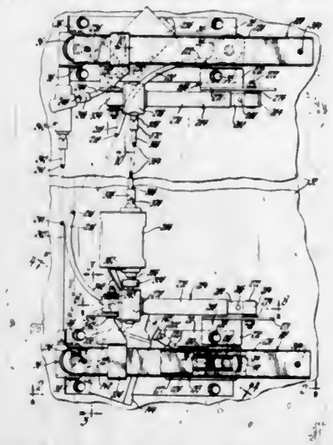
and a longitudinal extension arm pivotal about said second pin in a substantially vertical plane and engageable with said top of said support member to form an angle of approximately 90° therewith upon pivotal movement of said arm means and said second pin to said location rearward of top-dead-center.

3,043,550
RETRACTABLE ROPE HOOK
Edwin J. Garbarino, 1180 Hester Ave., and Antonio Manfre, 2996 Fruitdale Ave., both of San Jose, Calif.
Filed Aug. 14, 1961, Ser. No. 131,332
10 Claims. (Cl. 248—361)



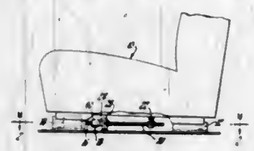
1. In a retractable rope hook adapted to be mounted on a wall structure so as to be extended therefrom through a hole formed therein, the combination comprising an elongated body member of generally arcuate shape slidably supported in a hole formed in wall structure so that said body member may be extended beyond the front of said wall structure when rope is to be anchored thereto, a bracket positioned on the back of said wall structure and having a bracket member extending away from said wall structure, said bracket member having a hole for slidably receiving said elongated body member, and means on said bracket member for holding said elongated body member in extended position when rope under tension is anchored to said body member.

3,043,551
VEHICLE SEAT
James C. Louton, Jr., Hazel Park, and Clyde H. Schamel, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 28, 1957, Ser. No. 692,836
11 Claims. (Cl. 248—404)



1. A vehicle seat adjusting mechanism comprising, a base support, a seat support, and a spaced pair of seat adjusting means, each pivotally secured to said base support and to said seat support, the pair of pivotal axes of one of said adjusting means being located in spaced parallel relationship and the pair of pivotal axes of the other of said seat adjusting means being located in spaced normal relationship, said adjusting means thereby mutually limiting swinging movement of each other relative to said base support and said seat support.

3,043,552
POWER TRANSMITTING MECHANISM FOR VEHICLE SEATS
Albert J. Colautti, Windsor, Ontario, Canada, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 3, 1960, Ser. No. 12,638
10 Claims. (Cl. 248—429)



1. In combination, input and output members, a releasable one-way device, drive transfer means coacting with the one-way device so that drive from the input member in opposite directions thereof to the output member is respectively through and around the one-way device, and brake means, the brake means and the one-way device being so arranged that the brake means only prevents rotation of the output member in one direction of drive from the output member and the one-way device only prevents rotation of the output member in the opposite direction.

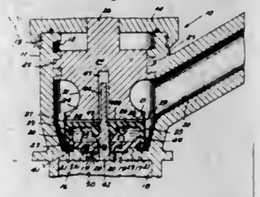
3,043,553
PINCHCOCK
Shiloh Gorman, 803 W. 16th St., Big Spring, Tex.
Filed July 14, 1959, Ser. No. 827,120
1 Claim. (Cl. 251—10)

A pinchcock comprising: a generally U-shaped clamp including a laterally enlarged bight portion having an opening therein for the passage of a hose, said clamp further including a stationary lower jaw, a pair of spaced, opposed, upstanding guides integral with an intermediate portion of the lower jaw, said lower jaw being flat and comprising an enlarged, substantially triangular free end portion providing a base for the clamp, said clamp still further including an arcuate, vertically swingable, resilient upper jaw operable between the guides, said lower



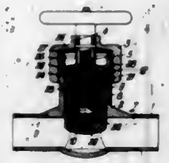
and upper jaws for receiving and pinching the hose therebetween, said upper jaw including an enlarged free end portion located above said triangular free end portion of the lower jaw and providing a foot treadle for closing said upper jaw on the hose, and a fixed, vertical, inwardly laterally facing segmental ratchet on one of the guides for securing the upper jaw in closed position, said upper jaw being laterally biased and yieldingly engaged with said ratchet for retention thereby.

3,043,554
NON-DRIP FAUCET VALVE
Jesus de la Garza, 1116 N. Ditman Ave., Los Angeles 63, Calif.
Filed June 26, 1961, Ser. No. 119,503
10 Claims. (Cl. 251—175)



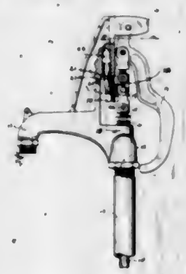
1. A non-drip valve comprising: a hollow valve housing means having inlet means and outlet means connected thereto and having an interior chamber provided with and controllably movably receiving a controllably movable valve-actuating member; effectively apertured valve seat means positioned in spaced opposition to said valve-actuating member and defining therebetween a valve recess, said valve seat means including an inflow portion in effective communication with said inlet means, an outflow portion for communication with said outlet means, and intervening sealing means between said inflow and outflow portions; fluid-pressure-expandable valve means mounted in said valve recess between said valve-actuating member and said valve seat means and having a first portion abuttable with said valve-actuating member and having a second portion defining with said first portion a hollow interior expansion chamber within the valve means provided with communication means in communication with said effectively apertured valve seat means, said second valve portion being positionable adjacent to said valve seat means and being forcibly sealingly abuttable with said sealing means as a result of interior fluid pressure within said expansion chamber; and by-pass means defining communication passage means positioned for interior communication with said expansion chamber within said valve means when said valve-actuating member is moved away from said valve seat means beyond a predetermined distance, thus allowing the pressurized fluid within the expansion chamber to escape and thus allowing inlet fluid pressure to force said second valve portion toward said first valve portion.

3,043,555
GATE VALVE HAVING AN UPSETTABLE SEALING MEMBER OF RUBBER ELASTIC MATERIAL
Rudolf Breher, Bad Oeynhausen, Germany, assignor to Friedrich Stubbe, Vlotho (Weser), Germany
Filed Oct. 29, 1958, Ser. No. 770,414
Claims priority, application Germany Nov. 15, 1957
3 Claims. (Cl. 251—187)



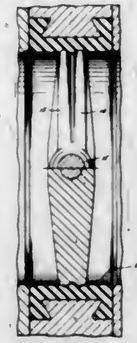
1. A gate valve for hydraulic lines comprising a valve body, a bonnet on the body, a spindle extending through the bonnet into the interior of the body, a pair of aligned passages through the body, a guide sleeve dependent from the bonnet and of a predetermined length, a cup-shaped gate member of upsettable rubber elastic material of soft rubber hardness, and means acting on the trailing region of the gate member to impart passage closing and opening motion and upsetting pressure in the passage closing position to the gate member comprising a reinforcing sleeve of which the trailing end region is embedded in the trailing region of the gate member, the reinforcing sleeve being of an axial length less than the depth of the interior of the cup-shaped gate member so that the leading end of the reinforcing sleeve, in the passage closing direction, trails the leading end of the interior of the gate member, the reinforcing sleeve being slidable on the guide sleeve and telescoping therewith, an inner sleeve within the reinforcing sleeve and the guide sleeve, a feed nut integral with the trailing region of the inner sleeve cooperating with the spindle, and a radial flange at the leading end of the reinforcing sleeve and engaging the leading end of the inner sleeve to move it axially on rotation of the spindle.

3,043,556
MEANS FOR ADJUSTABLY REGULATING THE FLOW OF YARD HYDRANTS
Wayne B. Noland, Avon Lake, Carlisle, Iowa, assignor to Woodford Manufacturing Company, Des Moines, Iowa, a corporation of Iowa
Filed Apr. 8, 1960, Ser. No. 20,893
6 Claims. (Cl. 251—279)



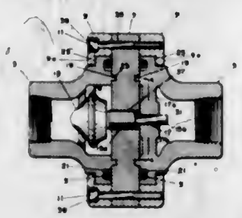
1. An actuating means for use with a yard or like hydrant, said means comprising, in combination, a stationary support member having a shoulder portion, a mounting member extending rigidly from said support member, a handle pivotally mounted on said mounting member, a linkage operatively connected to said handle for movement therewith, and a cam wheel having an outwardly spiraling periphery as it extends in one arcuate direction, said cam wheel being operatively rotatably mounted on said linkage to adjustably engage said shoulder portion when said handle is moved in one direction about its pivotal mounting.

3,043,557
DISC VALVE HAVING PERIPHERY SEALING RIBS
Crawford K. Stillwagon, 5325 Kirby Drive, Houston, Tex.
Filed Apr. 11, 1960, Ser. No. 21,213
10 Claims. (Cl. 251—306)



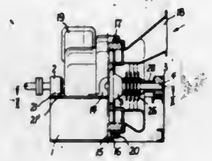
1. A butterfly valve comprising a rigid body with an annular opening therethrough, an annular inner seat of resilient sealing material secured snugly against the inner wall of the body, a valve disc and operating stem therefor for controlling flow through the seat, the stem extending transversely of the opening through the seat and body, said valve disc having spaced peripherally extending rigid ribs one formed on each edge of the disc forming a groove therebetween, the inner diameter of the seat and the outer diameter of the disc ribs being such as to provide a substantial interference therebetween when the disc is in closed position.

3,043,558
INLINE CONTROL VALVE
Gordon Edward Napier, Shore Road, Box 335, Westerly, R.I.
Filed Nov. 12, 1958, Ser. No. 773,279
4 Claims. (Cl. 251—340)



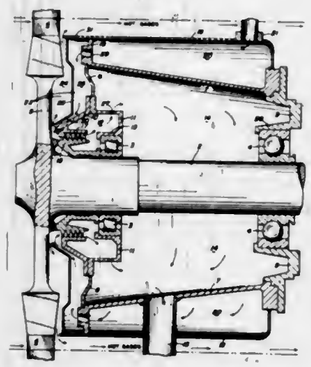
1. An inline control valve comprising in combination a two-piece casing adapted to be placed in a fluid line, one of said casing sections having a valve seat surrounding an axial port formed therein and the other said casing section having a guide member located therein and attached thereto, and a center section comprising a center disk positioned between said casing sections and mounted for turning movement relative thereto, said center disk and each of said casing sections having abutting radial surfaces defining annular grooves, packing means received in each of said grooves, said center disk having an opening through which fluid may pass, a valve head cooperating with said seat having a valve stem threadably engaged to said center disk and axially slidably positioned in said guide member radially inwardly of said opening, said valve stem and guide member having cooperating cross sections such that all rotary motion of said valve head and said valve stem is prohibited, and means for aligning said center disk and casing sections and for holding the inline control valve together.

3,043,559
GAS TURBINE
Fritz Bauer and Christian Schörner, Augsburg, Germany, assignors to Maschinenfabrik Augsburg-Nurnberg A.G., Augsburg, Germany, a corporation of Germany
Filed Oct. 11, 1955, Ser. No. 539,876
Claims priority, application Germany Oct. 22, 1954
30 Claims. (Cl. 253—39)



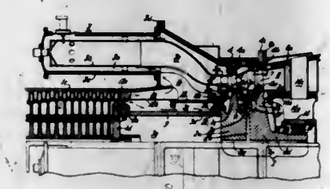
1. In an axial flow gas turbine adapted for high temperature operation free of thermally induced interference and misalignment of moving and stationary components therein, the combination which comprises a main frame for said turbine, a bladed rotor, means for rotatably mounting said rotor on said frame, stationary guiding means for guiding the flow of driving gas about said rotor and adapted for close clearance working association therewith, a housing for said rotor and said stationary guiding means, means for mounting said housing on said main frame, and means for mounting said stationary guiding means on said main frame separately from said rotor mounting means and said housing mounting means for radial and axial expansion movement independently thereof.

3,043,560
TURBINE COOLING SYSTEM
Louis E. Varadi, Danvers, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 28, 1960, Ser. No. 5,312
3 Claims. (Cl. 253—39.15)



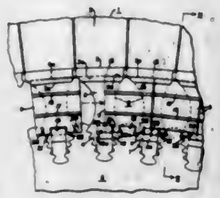
2. In a jet engine having a shaft, bearings mounted on the forward and rearward portions of said shaft, a turbine wheel mounted on one end of said shaft for rotation therewith, a plurality of blades mounted on the periphery of said wheel, a device for cooling said turbine wheel and bearings comprising a first annular shell circumscribing said forward mounted bearing and forming a first annular area, a second annular shell circumscribing said shaft from said first annular shell to said rearward mounted bearing forming a second annular area therebetween, a third annular shell circumscribing said second annular shell forming a third annular area, a forward baffle plate located intermediate said turbine wheel and the forward end of said shells, said baffle plate extending radially inward toward said shaft forming a baffle area, inlet means to said third annular shell, outlet means from said second annular shell, means interconnecting said third annular area to said baffle area, means for interconnecting said baffle area to said first annular area, means interconnecting said first annular area to said second annular area whereby said cooling gases flow through said inlet means to said outlet means thus effecting cooling of said turbine wheel, blades and bearings.

3,043,561
TURBINE ROTOR VENTILATION SYSTEM
George W. Scheper, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,376
5 Claims. (Cl. 253—39.15)



1. In a rotor cooling arrangement for an elastic fluid turbine, a source of elastic fluid under pressure having an initial absolute tangential velocity component, a turbine rotor having at least one turbine bucket-wheel for converting fluid pressure energy to rotational energy, said turbine rotor having a cylindrical rotor member defining a first central chamber disposed to supply cooling fluid to the bucket-wheel, a wall member spaced radiallly from said cylindrical rotor member to define a second coolant fluid supply chamber, passage means admitting fluid under pressure from said source to the second coolant fluid supply chamber, first nozzle means disposed in said cylindrical rotor member and directed backwardly with respect to the direction of rotation of the rotor and so constructed and arranged as to have a first tangential absolute velocity component at turbine rated speed and to receive fluid from the second supply chamber and to discharge jets of fluid having a second tangential velocity component relative to said first nozzle means into said first chamber with a third resultant tangential absolute velocity component, the bucket-wheel defining cooling passages receiving fluid from said first chamber and discharging through a plurality of second nozzle means disposed circumferentially around the wheel, said second nozzle means being so constructed and arranged as to have a fourth tangential absolute velocity component at turbine rated speed and to direct jets of coolant having a fifth tangential velocity component relative to said second nozzle means with a resultant sixth tangential absolute velocity component, the construction and arrangement of said nozzle means being such that the total change between said initial and said third velocity components and between said third and said sixth velocity components of the jets through said first and second nozzle means impart rotational energy to the turbine rotor while the energy thus lost by the jets reduces the temperature of the coolant fluid.

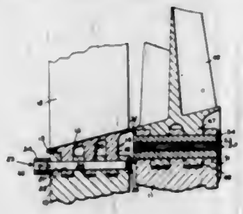
3,043,562
COMBINATION SEALING AND RESTRAINING MEMBER FOR LONG-SHANK TURBO-MACHINE BUCKETS
Francis H. Van Nest, Schenectady, and George R. Fusner, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Apr. 10, 1961, Ser. No. 101,998
1 Claim. (Cl. 253—77)



In combination, a rotor wheel having a rim defining circumferentially spaced axial dovetail slots, a circumferential row of buckets disposed on the rim, each of said buckets having a base disposed in one of said slots, a platform portion radially spaced from the rim, and a connecting radial shank portion, said shanks defining spaces therebetween, a plurality of cover plates each including a radial wall extending circumferentially from one bucket shank to the next adjacent bucket shank and radially substantially from bucket base to bucket platform, whereby said radial wall impedes the flow of motive fluid between bucket shanks, said bucket platforms having axially extending portions defining arcuate grooves in their undersides cooperating to define an inwardly facing circumferential groove, a plurality of circumferentially spaced lugs defined by alternating bucket base and rotor rim portions, said lugs together defining an interrupted outwardly facing circumferential groove radially inward from said platform arcuate grooves, said cover plates being disposed at their radially outermost edge in the platform grooves and at their radially innermost edge in the lug grooves so as to be both radially and circumferentially moveable therein, the radially inner portion of each cover plate also defining at least one cutout arranged to pass axially over a said lug when the cover plate is substantially one-half a bucket pitch from its final position, at least one bendable tab on said cover plate arranged to be bent to prevent circumferential movement of the cover plate, each of said cover plates including at least one arcuate flange extending axially from said cover plate radial wall, whereby the flanges on adjacent cover plates cooperate to define a substantially continuous sealing ring, the radially outer edge of the cover plate being formed on an arc having a radius greater than the radius of said circumferential platform groove, whereby said cover plate will bear at its radially outer corners against the bottom of the platform grooves of adjacent buckets under the action of centrifugal force to frictionally lock said adjacent blade platforms.

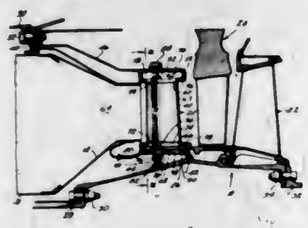
3,043,563
TURBINE ROTOR MOUNTING
Eugene B. Gray, Wilton, Conn., and Chester C. De Pew, Farmingdale, N.Y., assignors, by mesne assignments, to Aerpat A.G., Glarus, Switzerland, a corporation of Switzerland
Filed Apr. 16, 1957, Ser. No. 653,150
4 Claims. (Cl. 253—77)

1. In a gas turbine engine of the type having a rotatable mounting wheel and a blade carried thereby, the wheel and blade being provided with complementing fingers having aligned openings formed therein, a mounting pin receivable in the aligned openings for securing the blade to the wheel, said pin comprising: a stud having a head formed on one end thereof, a longitudinal bore terminating at an inner end within said stud and opening at an outer end from the other end of said stud, and aligned transverse bores intersecting said longitudinal bore; a locking ball in each of said transverse bores and movable between retracted and extended positions; an abutment sleeve receivable over said stud and having an internal recess formed therein for engagement by said locking balls when in said extended position; a plunger having adjacent deep and shallow annular grooves formed therein, said plunger being slidably mounted in said



longitudinal bore between an inner releasing position wherein said deep groove is aligned with said transverse bores to allow movement of said balls to said retracted position and an outer locking position wherein said shallow groove is aligned with said transverse bores to hold said balls in said extended position; means on the outer end of said longitudinal bore for limiting outward movement of said plunger to said locking position; and a compression spring between the inner end of said longitudinal bore and said plunger for urging said plunger against said means and into said locking position.

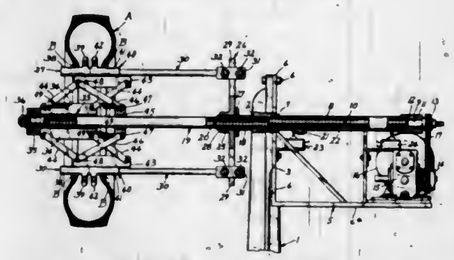
3,043,564
STATOR CONSTRUCTION
Leslie C. Small, Jr., South Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Continuation of application Ser. No. 663,507, June 4, 1957. This application Mar. 14, 1960, Ser. No. 14,581
7 Claims. (Cl. 253—78)



4. A stator unit concentric about an axis and comprising a rigidly supported outer case of circular cross section enveloping a gas passage and having a continuous ring with a smooth forward surface and a plurality of circumferentially spaced slots projecting radially inwardly therefrom, an axially moveable outer shroud in the form of an outer ring having a plurality of circumferentially spaced teeth projecting radially outwardly therefrom and laterally engaging said case slots with radial clearance for torque load transmittal, thermal expansion and outer shroud radial and circumferential positioning purposes joined by metal fusion to an inner ring radially spaced therefrom and having a plurality of radially inwardly opening vane receiving holes constituting the sole apertures therein to form a hollow ring with a smooth after surface and defining an annular cavity communicating with said gas passage through said inner ring holes solely and which annular ring smooth surface bears against said case ring smooth surface for thrust load

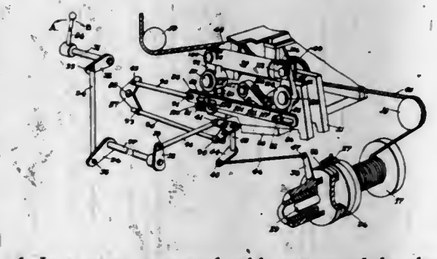
transmittal, gas sealing, and outer shroud axial position limiting purposes, an inner shroud in the form of an outer ring having a plurality of radially outwardly opening vane receiving holes joined by metal fusion to an inner ring radially spaced therefrom to form a hollow ring defining an annular cavity communicating with said gas passage through said outer ring holes solely, vanes projecting between said inner and outer shroud with each of said vanes radially slidably received in and axially and circumferentially positioned by one of said inner and one of said outer shroud vane receiving holes to substantially seal said annular cavities from said gas passage, means to seal the forward ends of said shrouds from said gas passage, and support means to support and position said inner shroud with respect to said outer shroud so that one of said inner shroud holes is in radial alignment with one of said outer shroud holes when said outer shroud abuts said ring and so that said vanes may be moved radially into one of said shroud annular cavities a sufficient distance to disengage said vanes from the other shroud, means movable in one of said shrouds to limit the radial movement of said vanes and to move said vanes with respect to said shroud, and a smooth surfaced projection extending from each end of said vanes to contact one shroud at said vane movement limiting means and said other shroud.

3,043,565
PNEUMATIC TIRE SPREADER
Wallace V. Sornsen, Minneapolis, Minn., assignor to Paul E. Hawkinson Company, Minneapolis, Minn., a corporation of Minnesota
Filed Jan. 23, 1961, Ser. No. 84,143
3 Claims. (Cl. 254—50.4)



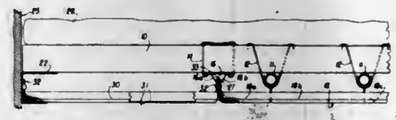
1. In a tire spreader, an elongated axially extensible and retractable member, a plurality of elongated mounting arms disposed in circumferentially spaced parallel relationship about the axis of said member, means mounting said arms for bodily movements radially of said member, a plurality of relatively stationary spreader elements fixedly mounted one each on a different one of said arms, a plurality of relatively movable spreader elements one each axially slidably mounted on a different one of said arms for movements toward and away from said respective ones of said stationary spreader elements, a plurality of pairs of parallel links each pair thereof operatively connecting said member with a different one of said relatively movable spreader elements, a plurality of actuator links one each pivotally connected at one end to a different one of said relatively movable spreader elements, means operatively connecting the other ends of said actuator links to said extensible and retractable member for pivotal and axial sliding movements with respect thereto, and spring means connected to said last-mentioned means and to said extensible and retractable member and yieldingly urging said actuator links in directions of swinging movement to impart radially outward movements to said spreader elements and mounting arms, said parallel links being arranged to impart radially inward movements to said spreader elements and mounting arms against the bias of said springs when said movable spreader elements are slidably moved into engagement with said stationary spreader elements responsive to extending movements of said retractable member.

3,043,566
CONTROL APPARATUS FOR POWER-OPERATED CABLES
Frederick G. J. Grise, New Braintree, Mass., assignor, by direct and mesne assignments, to Lionel Grise, Jr., Ware, Mass.
Filed Aug. 14, 1958, Ser. No. 755,076
20 Claims. (Cl. 254—174)



1. In a power operated cable system of the class wherein a cable winding drum is equipped with a selective 3-position manually-operated control, the latter having a middle neutral or unclutched position at which a brake is applied to said drum, a cable pay out position, on one side of neutral, at which said brake is released, and a cable take up position on the other side of neutral at which said brake is released and a clutch is engaged to rotate said drum from a power source, the combination with said devices and their manually-operated control, of means responsive in the cable take up position of said control to cable tension in excess of a predetermined maximum value for shifting said control to neutral, such as to disengage said clutch and to apply said brake to said drum, said excess tension responsive means including a preloaded spring means whose force, as released by said excess cable tension, is of sufficient magnitude to override an operator's maintenance of said manual control in its cable take up position.

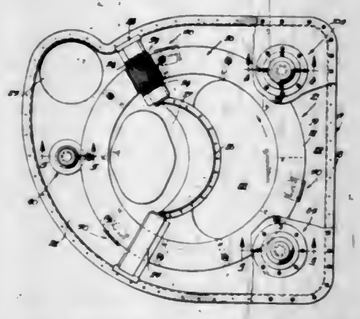
3,043,567
RADIANT ACOUSTICAL SYSTEM
Thomas R. Bergh, Elmhurst, Dale E. King, Downers Grove, Raymond C. Nierzwicki, Chicago, and Parker Thorne, Skokie, Ill., assignors to Airtex Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 17, 1958, Ser. No. 715,734
10 Claims. (Cl. 257—124)



1. A readily attachable and detachable radiant panel unit for use in a building structure having a temperature regulating apparatus including a plurality of fluid pipes arranged in parallel spaced pairs with each pair of pipes disposed between a pair of elongated panel supports having resiliently spreadable gripping portions, said panel unit comprising an elongated thermally conductive metal panel having oppositely disposed side edges, parallel flanges projecting transversely from the plane of said panel at said edges and having interlock portions, said flanges being insertable between the gripping portions of a pair of panel supports by pressing said panel toward the panel supports in a direction transverse to the plane of

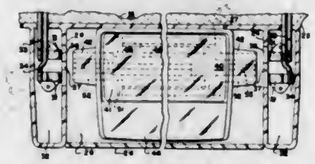
said panel thereby detachably interfitting said interlock portions with the gripping portions of the panel supports for supporting said panel on the building structure, and a pair of elongated thermally conductive heat bridge members integral with said panel and projecting transversely from the plane of said panel along a major portion of its length in inwardly spaced relation from and parallel to said edges, said heat bridge members having curved generally U-shaped outermost portions complementary to the configuration of the pipes and detachably engageable with a pair of pipes in close-fitting thermally conductive relation therewith when said flanges are engaged with the panel supports, said heat bridge members being spaced from each other a distance not substantially greater than twice the distance between said heat bridge members and the respective adjacent side edges of said panel whereby to provide high radiating efficiency over substantially the entire area of said panel, and said panel unit being readily attachable to and detachable from the building structure without disturbing adjacent panel units merely by pressing the panel unit toward and pulling the panel unit away from the building structure to engage and disengage said flanges and said heat bridge members with respect to the panel supports and the pipes, respectively.

3,043,568
REGENERATOR DRIVE AND SUPPORTING ARRANGEMENT
C Paul Kolthoff, Jr., Naperville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 26, 1959, Ser. No. 795,814
6 Claims. (Cl. 257—267)



6. A heat regenerator comprising a casing including outer, upper and lower walls, a rotatable regenerator matrix disposed within said casing, said matrix including a cylindrical member having annular top and bottom walls and outer and inner peripheral walls, said top and bottom walls of said matrix including axially extending peripheral bearing surfaces, a partition within said casing, sealing assemblies connected to said partition and engaging said matrix to divide said casing into a plurality of chambers, means supporting said matrix including a plurality of bearing elements mounted on said lower wall, said bearing elements including means engaging said bottom wall of said matrix; first, second, and third supports within said casing, said first support including an upright spindle supported on the lower wall, a bearing member rotatably mounted on said spindle and being adapted to engage the peripheral bearing surface of said bottom wall in bearing relation, said second and third supports each including an upright shaft, means rotatably supporting said upright shafts on said lower wall, a bearing member on each said shaft and adapted to engage the peripheral bearing surface of said bottom wall, elongated tubular members rotatably supported on said upper wall, said shafts being slidably positioned in telescoping relation within said tubular members, a bearing member connected for rotation with each said tubular member, said bearing members engaging said top wall bearing surface in bearing relation, any pair of said adjacent supports being positioned substantially less than 180° apart whereby said matrix is supported against endwise displacement, and rotating means connected to rotate with one of the shafts, said rotating means engaging said matrix, and driving means for rotating one of said shafts thereby rotating said matrix.

3,043,569
BUTTER STORAGE IN A REFRIGERATOR
Everett C. Armentrout, New Carlisle, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,747
2 Claims. (Cl. 257—291)

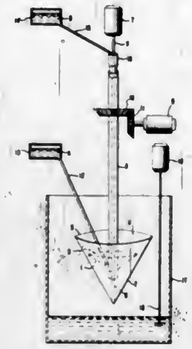


1. A refrigerator provided with a food storage chamber therein and having a refrigerating system associated therewith including a refrigerant evaporator cooling air in said chamber, a support on a part of said refrigerator normally exposed to the cool air within said chamber, a butter receiving dish adapted to be removably located on said support, two separate unconnected electric resistor heating means secured to and carried by said dish, either one of said heating means being adapted to be independently energized while the other is de-energized, a source of electric current supply for said heating means, said electric current supply comprising an electrical receptacle at each opposed side of said support having terminals attached to said source, connectors disposed at each opposite end of said dish for said two separate heating means, the length of said dish intermediate said opposite ends thereof being less than the distance between said sides of said support whereby the dish is selectively shiftable therealong while supported thereon, said dish being shiftable in a direction along the support to move one end thereof against one side of said support with said connector at this one dish end connected to the terminals of one of said receptacles for energizing one of said two heating means and warming butter on the dish within said chamber to a predetermined temperature, said dish being shiftable in another direction along the support to disconnect said connector at said one end thereof from the terminals of said one receptacle for de-energizing said one of said two heating means, and said dish also being further shiftable in said another direction along the support to move its other end against the side of said support opposed to said one side thereof with said connector at this other dish end connected to the terminals of the other of said receptacles for energizing the other of said two heating means and warming butter on the dish within said chamber to a temperature differing from said predetermined warming temperature.

3,043,570
APPARATUS FOR MIXING FLOWABLE MATERIALS
Eugene Dwight Selter, Westfield, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 15, 1957, Ser. No. 678,415
3 Claims. (Cl. 259—96)

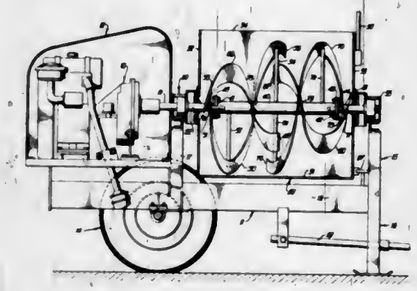
1. An apparatus for admixing a plurality of flowable materials and removing the admixture by centrifugal force

comprising a plurality of conical vessels facing in the same direction and disposed in nesting relationship with each other, each of said vessels mounted for rotation about a vertically disposed axis and having generally upwardly and outwardly sloping walls forming a smooth, uninterrupted surface, said vessels being of different sizes with the smaller vessel positioned completely within each



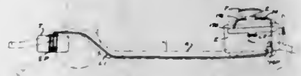
progressively larger vessel so that the top part of each vessel is lower than the top part of each progressively larger vessel and the top part of said smaller vessel is positioned in close proximity to said progressively larger vessel, means for continuously feeding flowable material into each said vessel adjacent its lowermost part, driving means for said vessels, and collecting means for material issuing from the outer vessel.

3,043,571
MATERIALS MIXER
Rassele Edwards Swarthout, Downey, Calif., assignor to Challenge-Cook Bros., Incorporated, Los Angeles, Calif., a corporation of California
Filed Jan. 16, 1961, Ser. No. 82,796
1 Claim. (Cl. 259—152)



A materials mixer which comprises: a mixer bin having a first end and a second end; a rotatable shaft disposed axially in said bin between said ends; a first helical blade having a right-hand curvature, disposed circumferentially about and supported by said shaft in spaced relationship thereto, said blade having a first free curving end thereof disposed closely adjacent to the first end of said bin, and having a second free end thereof disposed at a point beyond the plane of the longitudinal center of said shaft; a second helical blade having a left-hand curvature, disposed circumferentially about and supported by said shaft in spaced relationship thereto, said second blade being mounted within the curvature of said first blade, said second blade having a first free curving end thereof disposed closely adjacent to the first end of said bin and overlying the first end of said first blade in spaced relationship thereto, and having a second free end disposed at a point beyond the plane of the longitudinal center of said shaft; a third helical blade having a left-hand curvature, disposed circumferentially about and supported by said shaft in spaced relationship thereto, said third blade having a first free curving end thereof disposed closely adjacent to the second end of said bin, and having a second free end thereof disposed at a point beyond the plane of the longitudinal center of said shaft, said second end overlapping the second end of said first blade in spaced relationship thereto; and a fourth helical blade having a right-hand curvature, disposed circumferentially about and supported by said shaft in spaced relationship thereto, said fourth blade being mounted within the curvature of said third blade, said fourth blade having a first free curving end thereof disposed closely adjacent to the second end of said bin and overlying the first end of said third blade in spaced relationship thereto, and having a second free end disposed at a point beyond the plane of the longitudinal center of said shaft, said second end overlapping the second end of said second blade in spaced relationship thereto.

3,043,572
SEPARATE THERMOSTAT CONTROLLED LATCH MECHANISM FOR SECONDARY THROTTLES
William F. Ott, Affton, John H. Krein, Florissant, and Harold A. Carlson, Brentwood, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed July 13, 1959, Ser. No. 826,574
11 Claims. (Cl. 261—23)



1. A carburetor for an internal combustion engine, said carburetor comprising a mixture conduit, a throttle valve movably mounted in said mixture conduit for movement from a closed position closing said mixture conduit to an open position opening said mixture conduit, a lockout means holding said throttle valve in said closed position, means for releasing said lockout means to permit opening movement of said throttle valve, and a releasable latch positioned in contact with said lockout means and latching said lockout means to prevent release of said lockout means by said releasing means.

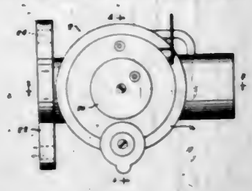
3,043,573
THERMO-TRANSPIRATION PORTABLE AIR CONDITIONER UNIT
Edward F. Chandler, 148 Richmond St., Brooklyn 8, N.Y.
Filed Feb. 16, 1956, Ser. No. 565,798
2 Claims. (Cl. 261—24)



1. In an evaporative type air cooler: a housing defining a closed chamber and having an air inlet opening and an air outlet opening; means for drawing air into the housing through the inlet opening and discharging the air through the outlet opening; a plurality of closely spaced moisture absorbent plate elements fixedly positioned within the chamber, the plate elements defining passages for the body of air moving from the inlet opening to the outlet opening; a supply of water within the chamber;

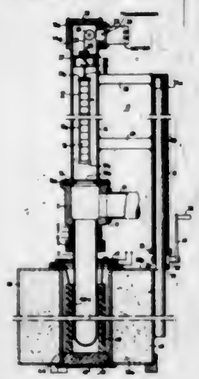
capillary action means for delivering water from said supply to the plate element surfaces; and means positioned in the spaces between the moisture absorbent plate elements for absorbing and dissipating heat, said means including thin metal plates of high thermal conductivity.

3,043,574
FUEL SUPPLY SYSTEM FOR ENGINE
William E. Leibing, P.O. Box 163, South Pasadena, Calif.
Filed Nov. 2, 1959, Ser. No. 850,373
11 Claims. (Cl. 261—41)



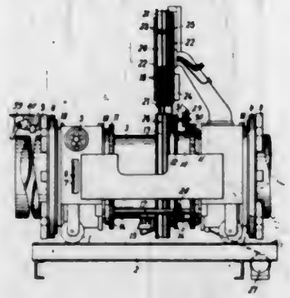
8. In a carburetor: a housing having a fuel chamber, a fuel discharge passage connected to said chamber, a valve controlling said passage, a vent means for said chamber, a valve for closing said vent means, and manifold vacuum controlled solenoid means for closing said passage valve when the manifold vacuum reaches a predetermined degree.

3,043,575
APPARATUS FOR PRODUCING ELECTRIC SEMICONDUCTOR DEVICES BY JOINING AREA ELECTRODES WITH SEMICONDUCTOR BODIES
Reimer Emeis, Ebermannstadt, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a German corporation
Filed Nov. 18, 1960, Ser. No. 70,337
Claims priority, application Germany Nov. 24, 1959
4 Claims. (Cl. 263—41)



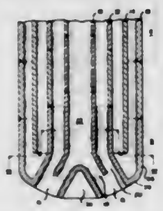
1. Apparatus for producing electric semiconductor devices by alloying area electrodes onto semiconductor bodies, comprising an upwardly open furnace structure, a vertically elongated tubular container of refractory material closed at its lower end, said container having a lower portion located in said furnace to be heated therein and having an upper portion upwardly protruding out of said furnace, vacuum duct means communicating with said upper portion for evacuating said container, an extension tube joined with said container at the top thereof and in coaxial vertical alignment therewith so as to form a single vacuum space together with said container, said extension tube being sealed at the top, a vertically elongated cage structure for receiving a column of alloying molds piled on top of each other, said cage structure being movable in said extension tube and downwardly into said lower portion of said tubular container, and a hoisting device disposed in the upper portion of said tubular extension, said cage structure being pendulously suspended from said device.

3,043,576
PIPE CUTTING MACHINE FOR AUTOMATICALLY DIVIDING A ROTATING AND AT THE SAME TIME AXIALLY MOVING PIPE
Richard Diener, Berlin-Hermsdorf, Germany, assignor to Berliner Maschinenbau A.G. vormals L. Schwartzkopff, Berlin, Germany
Filed Feb. 26, 1959, Ser. No. 795,704
Claims priority, application Germany Feb. 27, 1958
6 Claims. (Cl. 266—23)



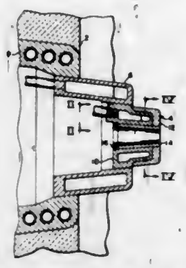
1. In a machine for transversely severing an axially moving and rotating shape, the combination including a wheeled frame, gripping means carried by the frame, surrounding the path of movement of the shape and adapted to grip the same so that the axial movement of the shape moves the frame therewith, said gripping means including a rotatably mounted component that rotates with and at the same speed as the shape, a ring means journalled for rotation relative to said rotatably mounted component, a cutting torch means carried by the ring means, flexible conduit means connected to said cutting torch means for leading fuel thereto, windup means carried by the frame and over which said conduit means are layed, drive imparting means operatively engageable between the rotatable component of the gripping means and the ring and adapted to impart a rotary drive to the ring responsive to the rotation of the shape but at a reduced speed ratio compared with the speed of rotation of the shape and gripping means, and said windup means including a rotatable component operative to accommodate the difference in the speed of rotation between the ring and the shape whereby the shape can be severed due to the rotary movement of the cutting torch means without entangling the flexible conduit means.

3,043,577
LANCE WITH CONDUITS FOR MIXING GASES LOCATED INTERIORLY
Walter V. Berry 2679 Santa Barbara Drive, Pittsburgh 34, Pa.
Filed Oct. 20, 1960, Ser. No. 63,877
4 Claims. (Cl. 266—34)



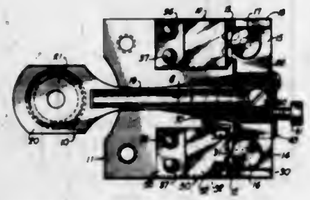
1. A lance comprising an inverted cone shaped shell, a substantially flat disc surrounding the base of said cone and forming an extension of the edges of said cone, said disc having a plurality of oblong holes there through, the holes being divided by a thin wall extending inwardly from a point distant from the surface of said disc approximately equal to the long dimension of said holes as measured on the surface of said disc.

3,043,578
ASSEMBLY FOR INSERTION IN A BLAST FURNACE WALL
Werner C. Cohn, Monroeville, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 22, 1959, Ser. No. 841,635
1 Claim. (Cl. 266—41)



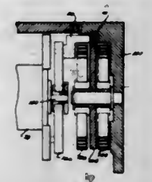
An assembly for insertion in a blast furnace wall comprising a copper body member having a longitudinal opening therethrough and a water cooling chamber surrounding said opening, said opening having a maximum diameter at its outer end and a smaller diameter at its furnace end, a reduced diameter portion on the furnace end of said body member, a preformed refractory nose fitting over said reduced diameter portion and extending beyond the furnace end of said body member, a preformed refractory sleeve fitting snugly within said longitudinal opening and extending into said nose, said body member having a circumferential groove on said reduced diameter portion, said nose having a circumferential groove matching said groove on said reduced diameter portion and a generally tangential opening from its groove to its outer surface, a wire in said grooves separate from said copper body member and said refractory nose, and a copper bearing ring inserted within said longitudinal opening at its outer end and bearing against the end of said sleeve, and means fastening said ring to said body member.

3,043,579
PIVOTALLY MOUNTED APPARATUS
David A. Bristol, Middlebury, Conn., assignor, by mesne assignments, to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Jan. 5, 1960, Ser. No. 541
7 Claims. (Cl. 267—1)



1. Pivotally mounted apparatus including a support member, a pivotal member, and at least one thin flat resilient flexure mounting element interconnecting said support member and said pivotal member while permitting pivotal movement thereof relative to each other, said element at least partially overlying said support member with opposite ends of said element fixedly secured to said support member and said pivotal member respectively, and a retainer holding said element at a point intermediate its ends while permitting longitudinal movement of said intermediate point of said element relative to said support member, said flexure element being so proportioned that the portion of said element between said intermediate point and the end of said element which is secured to said support member buckles in column action upon longitudinal movement of said pivotal member toward said support member.

3,043,580
RETURN MECHANISM FOR FAIL SAFE INSTRUMENTS
James W. Angus, Mineola, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Original application Sept. 28, 1956, Ser. No. 612,780. Divided and this application Oct. 19, 1960, Ser. No. 63,630
8 Claims. (Cl. 267—1)



1. A spring return mechanism for biasing a rotatable member to a predetermined angular position; said spring return mechanism comprising a first spring, a second spring, and a rotatable spring carrier; a first portion of each of said first and second springs being connected to said spring carrier; a second portion of said first spring being connected to said rotatable member; a second portion of said second spring being connected to a relatively stationary member; a stop means on said relatively stationary member; said spring carrier being engageable by said stop means at a predetermined angular position to prevent rotation of said spring carrier in a first direction beyond said predetermined angular position; said second spring biasing said spring carrier for rotation in said first direction; an engaging means; said engaging means removably engaging said rotatable member and said spring carrier when said rotatable member is rotated in a direction opposite said first direction to rotate said spring carrier in a direction opposite said first direction; said first spring biasing said engaging means towards engagement with said spring carrier.

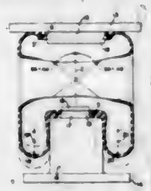
3,043,581
SHOCK ABSORBER SPRING CLAMP
Frederick H. Schmidt, Willowick, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 18, 1959, Ser. No. 813,773
7 Claims. (Cl. 267—8)



1. A clamp for overload springs on shock absorber assemblies or the like which comprises a pair of opposed fragmental cylindrical members, each having a pair of axially extending apertured faces with top and bottom radially extending flanges integral with said faces and

providing concave clamping edges between said faces, the top flange having an axially extending portion on the outer periphery thereof for centering an end coil of a spring on the flange, and fastener assemblies extending through the apertures in said faces and adapted to be tightened for drawing the opposed members toward each other to clamp the gripping edges against the shock absorber housing or the like.

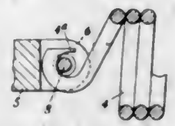
3,043,582
ROLLING LOBE TYPE AIR SPRING AND METHOD OF MANUFACTURE
Arthur B. Hirtreiter, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Oct. 2, 1956, Ser. No. 613,531
17 Claims. (Cl. 267—65)



1. A compression type air spring comprising end walls and a generally cylindrical flexible outer wall joining said end walls to form an air chamber, said outer wall being provided with a bead at each of the ends thereof and the spring being of the type adapted to be loaded axially of said chamber by generally axially directed forces applied to said end walls, said outer wall being formed of substantially inextensible cords embedded in a vulcanized rubbery material with the cords extending from one end of said flexible wall to the other and there anchored to the beads at the respective ends of said outer wall, the cords being formed in at least two groups arranged at equal but opposite angles with respect to an element of the surface thereof which angles are substantially less than the angle of equilibrium for said cords when the spring is inflated and under load, the rubbery material being flexible and stretchable sufficiently as not to offer appreciable resistance to the pantographing of the cords and thus permit substantial radial enlargement of said chamber by the pantographing of the cords at the mid-section thereof to their angle of equilibrium under load to thereby establish a constant cylindrical diameter at the mid-section with the portions between the mid-section and the beads reversely looped inwardly by the movement of the end walls toward each other under load, and means for controlling the spring rate of said spring comprising a piston adjacent at least one end wall projecting axially outwardly thereof with the radially facing outer wall of said piston providing a surface against which the radially inner portion of the looped portion of the spring will engage to thus control the mean diameter of said looped portion and thus control the spring rate, the radial outer diameter of said mid-section remaining constant due to the cords being at their angle of equilibrium under load.

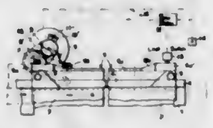
3,043,583
MEANS FOR EFFECTING A CONNECTION BETWEEN A COILED SPRING AND ANOTHER PART
Eugene Harold Warne, Solihull, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Oct. 24, 1960, Ser. No. 64,510
Claims priority, application Great Britain Nov. 2, 1959
1 Claim. (Cl. 267—74)

Connecting means comprising in combination a part having a pair of spaced lugs defining therebetween a recess the base of which is defined by said part, said lugs having formed therein a pair of aligned holes respectively, a pin extending through said holes, a circumferentially extending groove in the portion of the pin between said lugs, a spring having at one end a loop accommodated between the pin and said base of the recess, said loop having a cross-section with a diameter exceeding the distance be-



tween said holes and said base by an amount less than the depth of said groove, whereby said loop prevents axial withdrawal of the pin, and a portion of reduced cross-section at the extremity of said loop, said portion being movable to a position in which it lies between the pin and said base of the recess to permit axial withdrawal of the pin.

3,043,584
VARIABLE-SPEED OPENING AND CLOSING DEVICE
Heinz Kielhorn, Strasse des Komsomol 373, Leipzig W. 43, Germany
Filed Nov. 4, 1959, Ser. No. 850,812
3 Claims. (Cl. 268—53)

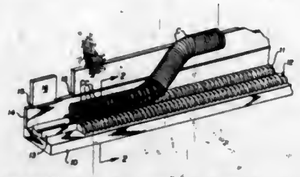


1. In a structure having a frame and a door slidable with respect to said frame, in combination, rail means extending horizontally atop said door, a shaft on said frame extending transversely above said rail means, a driving element carried by and having a surface of rotation centered on said shaft, said surface including a plurality of axially spaced portions of different diameters, said rail means being longitudinally divided into a plurality of sections of different height positioned for tangential contact with respective ones of said portions in successive relative positions between said door and said frame, motor means for rotating said driving element on said shaft, and adjustable mounting means for said shaft on said frame, said mounting means comprising a pivot for said shaft having an axis offset from and parallel to said shaft, and locking means for securing said shaft in one of a plurality of angular positions about said axis, thereby enabling adjustment of the distance between said shaft and said rail means for varying the contact pressure between said driving element and said rail means.

3,043,585
DEVICE FOR SPACING THE CONVOLUTIONS OF A COILED WIRE
Clarence Everett McCormick, Poland, Ohio, assignor to Lee Rubber & Tire Corporation, Youngstown, Ohio, a corporation of New York
Filed May 11, 1960, Ser. No. 28,272
6 Claims. (Cl. 269—22)

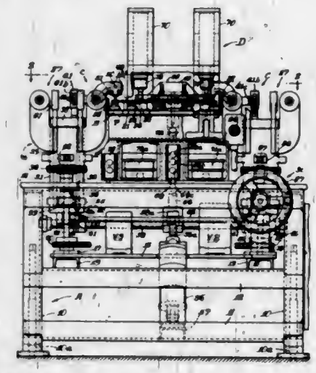
1. A device for evenly supporting and spacing the convolutions of a coiled wire relative to one another and relative to an axial center line extending through the convolutions of said coiled wire and comprising a pair of elongated externally threaded members positioned in horizontally spaced parallel relation to one another longitudinally of said device and arranged to form continuous

spaced supports for a coiled wire positioned thereon, an elongated clamping member movably mounted on said



device and arranged to be moved into horizontal contact with said coiled wire positioned on said threaded members.

3,043,586
APPARATUS TO INDEX AND CLAMP ELECTROTYPE PLATES FOR PUNCHING
George P. Boule, Chicago, Ill., assignor to R. R. Donnelley & Sons Company, a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 710,088
10 Claims. (Cl. 269—49)



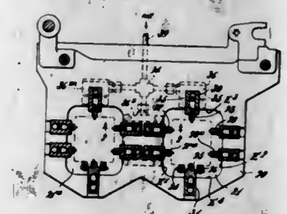
1. In apparatus for punching machining holes in an electrotype plate which has a pair of indexing recesses in predetermined positions with respect to its center line and trim lines, in combination: a frame; a horizontal plate table on said frame on which a plate may rest for effectively unrestricted horizontal movement; a pair of pivoted indexing fingers at opposite sides of the frame which are adapted to engage simultaneously the indexing recesses in an electrotype plate on said table; means for resting said indexing fingers lightly on said plate to permit the plate to be moved to bring the recesses beneath the fingers and permit the fingers to drop into the recesses; and means for thereafter pressing said fingers firmly into the recesses to clamp the plate on the table.

3,043,587
CIRCUIT BOARD HOLDER
Denton W. Underhill, 2054 W. Mountain St., Glendale, Calif.
Filed Dec. 28, 1959, Ser. No. 862,139
10 Claims. (Cl. 269—71)



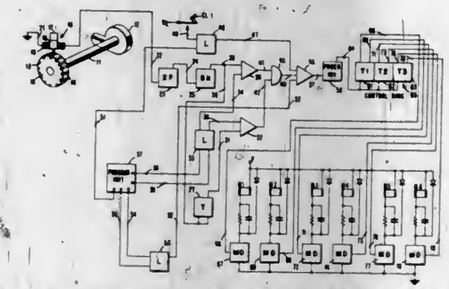
1. In a circuit board holder, the combination of: a base, a standard on said base, a clamp supported upon said standard; an elongated arm mounted in said clamp and longitudinally shiftable therein; a first supporting member slidably mounted on said arm intermediate the extremities thereof, said first supporting member having locating means thereupon adapted to impinge on the perimeter of said arm to locate said first supporting member in a predetermined position with respect to said arm; a second supporting member mounted adjacent one extremity of said arm and co-operative with said first supporting member for holding an object therebetween; and an adjustment member mutually secured to said second supporting member and one extremity of said arm for adjusting said second supporting member with respect to said first supporting member.

3,043,588
LABEL ADJUSTING MEANS FOR LABEL MAGAZINES
Sidney T. Carter, Shrewsbury, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin
Filed Oct. 16, 1959, Ser. No. 846,975
13 Claims. (Cl. 271—33)



1. In combination in a machine which includes a freely separable label magazine having a chamber within which a stack of freely separable labels may be placed, normally fixed prongs defining one wall, at least, of said chamber and a gum-coated picker operative to withdraw labels, one at a time successively, from the lower end of a stack of labels within said chamber, and power-actuated means operative, after each successive label is withdrawn, automatically to shift the labels, constituting the lower part, at least, of the stack, edgewise toward and into contact with said fixed wall thereby to square up the relatively movable labels in the lower part of the magazine.

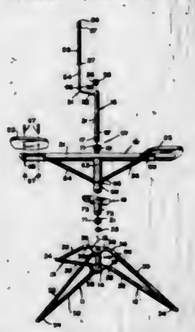
3,043,589
CONTROL FOR INCREMENTAL DRIVE FOR RECORD FEEDING DEVICES
Arthur J. Folmar, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 27, 1961, Ser. No. 98,467
10 Claims. (Cl. 271—51)



1. An output element adapted to be actuated so as to move incrementally; a plurality of actuators for incrementally actuating said output element, said actuators being adapted to operate successively in a predetermined

sequence; power means for operating said actuators; a plurality of magnetic control elements successively operable to control the application of power to said actuators; electrical impulse generating means for providing a series of electrical impulses; an electronic ring having a plurality of stages, each having an output, said ring being adapted to be operated by said electrical impulses; first circuit means connecting said electronic ring under control of said electrical impulse generating means; a plurality of magnetic control element drivers for controlling the operation of said magnetic control elements; and second circuit means connecting the outputs of said stages of said electronic ring to corresponding magnetic control element drivers whereby said magnetic control element drivers are rendered operable to control said magnetic control elements in response to signals from the outputs of said stages.

3,043,590
SELF-PROPELLED CHILD'S MERRY-GO-ROUND
Isadore Horowitz, Shreveport, La., assignor to Universal Manufacturing Co., Inc., Bossier City, La., a corporation of Louisiana
Filed Apr. 4, 1960, Ser. No. 19,552
3 Claims. (Cl. 272—33)



1. A self-propelled merry-go-round comprising a rigid, upstanding post socket having angularly spaced downwardly and outwardly radiating support legs extending therefrom; a centerpost in the form of a crank shaft having a main body section the lower end of which is fixed in said post socket and the remainder of which protrudes upwardly from said post socket and terminates in an offset crank portion; a seat frame including a mounting sleeve journalled on the portion of said main body section protruding upwardly from said post socket; respective bearing means interposed between said mounting sleeve and said centerpost in wide vertically spaced relation and having respective integral, outwardly flanged thrust bearing flanges thereon, the lowermost bearing means being disposed in the lower end of said mounting sleeve with its flange interposed between said mounting sleeve and said post socket to assure free relative rotation between said seat frame and said post socket and said spaced bearing means assuring anti-canting free relative rotation between said mounting sleeve and said centerpost; and means journalled on said crank portion operable by an occupant or occupants seated on said seat frame to create a reaction force against said seat frame thereby imparting rotation to said seat frame and its occupants.

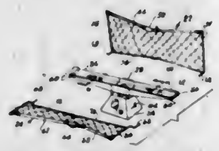
3,043,591
COMBINED SEATING AND RECLINING DEVICE AND EXERCISER
John W. Sellner, 7777 San Fernando Road, Sun Valley, Calif.
Filed Feb. 9, 1959, Ser. No. 791,911
8 Claims. (Cl. 272—58)

6. An exercising device comprising: a pair of body supporting sections hinged together at contiguous end portions thereof; a pair of legs each having a pair of upwardly extending arm portions, the arm portions of each of said pair of legs pivotally depending from opposite side edges of one of said body supporting sections, said legs being attached at intermediate points along said opposite side edges between the hinged end portions and the opposite ends of said body supporting sections; and a



rigid bracing member extending longitudinally of said exercising device and interconnecting each respective pair of legs at a point displaced from the pivot point thereof with said body supporting sections, the interconnecting point between one of said legs and said bracing member being intermediate the ends of said leg, one of said interconnecting points being a pivotal interconnection and the other being a fixed interconnection.

3,043,592
TABLE TENNIS PRACTICE DEVICE
Raymond J. Lohr, Erie, Pa., assignor to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed Apr. 28, 1959, Ser. No. 809,414
17 Claims. (Cl. 273—30)



1. A table tennis practice device comprising a small base, a ball-collecting trough mounted on and extending over the base and projecting from each side of the base, a generally upright backstop mounted on and extending upward directly behind said trough, said trough sloping downward toward said base and having a width corresponding to a single line of table tennis balls, ball ejecting mechanism housed in said base beneath the trough, a drive motor in said base to operate said ball ejecting mechanism cyclically, a train of high ratio reduction gearing between said motor and said mechanism whereby the mechanism is operated at well spaced intervals affording time for the player to recover from one serve before being required to hit the next serve, and ball feed means beneath said trough to feed one ball at a time from said trough for each operation of the ball ejecting mechanism regardless of how many balls have collected in the trough, said backstop being a soft flexible net supported by a frame.

3,043,593
ELECTRIC CIRCUIT FOR CONTROLLING THE PLAYING AND SCORING OF REGULATION BOWLING
Jerry C. Koci, Barrington, Ill., assignor to Chicago Dynamic Industries Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 29, 1958, Ser. No. 770,361
1 Claim. (Cl. 273—43)

An automatic scoring mechanism for scoring regulation bowling comprising an electric circuit,

(*a*) a scoring motor in said circuit including first and second ball switches each energizing said motor for a predetermined period of time,

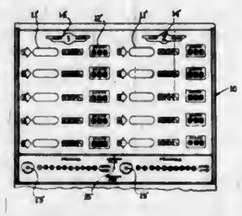
(*b*) a score conditioning disc upon which is circumferentially arranged a plurality of circles of electrical contacts,

(*c*) a plurality of wiper arms each of a different length rotatably carried by said scoring motor and adapted to move in unison in one direction over said disc with said wiper arms so radially related one to another so as to successively complete different scoring circuits as said arms each engage different contacts thereon,

(*d*) said circuit including a score accumulating circuit having a plurality of score conditioning step-up relay units connected to a plurality of grouped contacts of different circles on said disc,

(*e*) one of said arms adapted to bridge said grouped contacts of different circles of contacts on said disc for completing a circuit to said score conditioning step-up relay units,

(*f*) a score registering circuit including selective contacts of selective circles of said circles of contacts on said disc and switch means operatively responsive to the absence of any standing bowling pins and said first and second ball switches for energizing



said motor so as to move said wiper arms over said disc so as to register an unaccumulated attained score,

(*g*) a holding circuit including switches of said step-up relay units connected in series to certain contacts in one of said circles of contacts and switch means operatively responsive to the absence of all standing bowling pins for energizing said motor independently of actuation of said first and second ball switches so as to move said wiper arms over said disc a pre-determined number of times corresponding to an accumulative score that is to be registered,

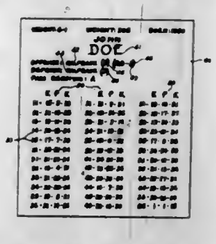
(*h*) a frame indicating means in said score accumulating circuit and adapted to be actuated thereby after any accumulated score has been registered by said score registering circuit,

(*i*) a player indicating means for alternately conditioning for actuation said score accumulating circuit and said score registering circuit between competing players.

(*j*) and a game over circuit energized by a predetermined condition of said frame indicating means to successively de-energize said score accumulating circuit and score registering circuit.

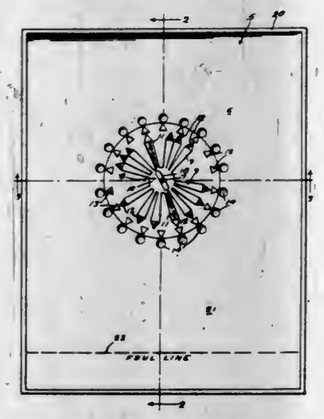
3,043,594
FOOTBALL GAME
John R. Seitz, 915 Wheaton Drive, Lancaster, Pa.
Filed Dec. 12, 1958, Ser. No. 779,979
7 Claims. (Cl. 273—94)

1. A game comprising, in combination, a gameboard on which is depicted a football playing field, a gamepiece movable on said gameboard to indicate the position of the football on said playing field, a first set of eleven playing cards representing an offensive team, there being one card for each playing position such as tackle, a second set of eleven playing cards representing a defensive team, there being one card for each playing position such as linebacker, each of said playing cards bearing three sets of indicia for run, pass and kick plays respectively, a group of numbers on said cards opposite said three sets of indicia and each number in said group designating certain indicia in said sets, chance number selector means operable on each play to produce a number corresponding to one number of said group of numbers on said cards, a plurality of charts each of which is divided into a plurality of indicia bearing sections, an index number on each playing card indicating playing abiltiy, the total of



index numbers on said first set of cards indicating the total offensive power of the offense team and the total of index numbers on said second set of cards indicating the total defensive power of the defensive team, and the particular chart and section thereof used to determine the result of a given play being determined by the number produced by said selector means, the corresponding number in said group of numbers on said playing cards, the particular indicia on said cards designated thereby and the difference in total power between said offensive and defensive teams.

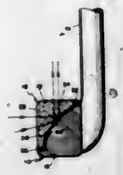
3,043,595
MAGNETICALLY CONTROLLED GAME
Ralph J. Lauper, 5911 Ortega St., Sacramento, Calif.
Filed May 18, 1961, Ser. No. 111,108
3 Claims. (Cl. 273—118)



1. In a game apparatus, a game board having a concaved playing surface, a spinner mounted at the center of said concaved playing surface, adjacent to one end of the game board, said spinner embodying a plurality of arrows radiating from a common center on which indicia are provided, indicating scoring points of the game, a line of removable magnetic pegs rising from said playing surface and arranged in circular line around the periphery of said spinner, a plurality of non-magnetic pegs arranged at random between certain of said magnetic pegs, markers disposed adjacent to said pegs, said spinner adapted to rotate and cease rotation with certain arrows projecting towards pegs, and steel balls sensitive to the magnetic forces of said magnetized pegs adapted to be moved into

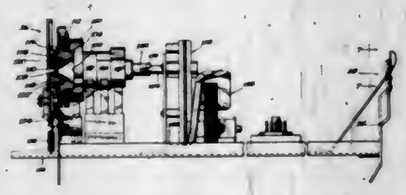
contact with said magnetized pegs attracting said balls, and holding the balls against said magnetized pegs, indicating scoring points of the game.

3,043,596
GOLF CLUB HEAD
Murray H. Ehmke, 543 E. Grande Ave., Escondido, Calif.
Filed Nov. 25, 1957, Ser. No. 698,541
9 Claims. (Cl. 273—163)



1. A golf club head including a reflector having a reflective surface disposed internally of the head and inclined for upward reflection of an image of the green in front of the club head, said reflector having three principal faces, a substantially vertical ball striking face, a substantially horizontal top face and a third face constituting said reflective surface, said reflector being an integral unit and fixed in operative position in said head with said reflective surface disposed at the level of and laterally of said striking face, and said horizontal top face constituting the top surface of the golf club head.

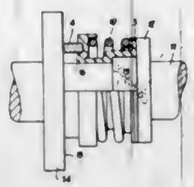
3,043,597
AUTOMATIC PHONOGRAPH
David C. Rockola, Chicago, Ill., assignor to Rock-Ola Manufacturing Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,725
15 Claims. (Cl. 274—10)



1. Program holder means comprising a drum including a cylindrical member and a shaft having end portions projecting beyond the ends of the cylindrical member, means for demountably receiving and supporting the drum including opposed axially aligned socket members for receiving and releasably securing said end portions of the shaft, at least one socket member being rotatable and that socket member and the corresponding end of the drum having elements interlockingly engageable by relative axial movement for producing rotation of the drum upon rotation of that socket member and predetermining a single angular position of the drum relative to the socket member, and means for rotating the rotatable socket member.

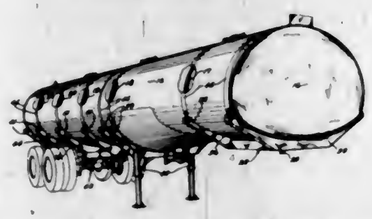
3,043,598
SEALING DEVICE
Leslie Allan Moxon, Alvechurch, Birmingham, England, assignor to Super Oil Seals & Gaskets Limited, Birmingham, England, a British company
Filed Oct. 29, 1958, Ser. No. 770,541
Claims priority, application Great Britain Nov. 1, 1957
2 Claims. (Cl. 277—86)

1. A seal between a shaft and a member relatively to which the shaft rotates, such seal comprising a tube of resilient material surrounding the shaft, a radial flange at each end of the tube, one of said flanges engaging a part which is rotatable with the shaft but is axially fixed thereon, a sealing ring which is secured to the other of said flanges so as to extend axially away from the tube



and bears against the said member, such sealing ring having an internal diameter greater than the external diameter of the shaft, a compression spring surrounding the said tube and extending between and engaging the flanges, and a bulge in the said tube wedged between the said sealing ring and the shaft.

3,043,599
FRAMELESS TRANSPORTATION TANKS
Arnold F. Meyer, Pewaukee, Wis., assignor to The Heil Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 29, 1959, Ser. No. 823,737
6 Claims. (Cl. 280—5)

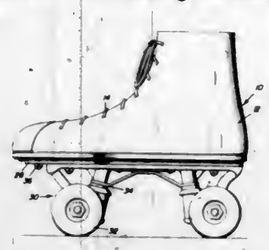


1. In a transportation vehicle having a container, frameless understructure comprising separate longitudinally spaced supporting device each having a cradle engaging beneath said container, one of said cradles comprising longitudinally spaced, transverse, relatively narrow, parallel load-carrying bolsters fitting close against the container; transversely spaced, longitudinally extending support members connecting said bolsters and spaced out of contact with the container, said support members having inner sides and bottom faces; angle members secured to the inner sides of said support members and having flanges above said bottom faces with bolt holes, which flanges project toward one another; a fifth wheel plate of less length than said longitudinal support members; angle members secured to side portions of said plate and having flanges spaced above said plate and formed with bolt holes; bolts engageable with selected bolt holes in the support member angle members securing the latter to the angle members of the plate for adjustably and reversibly connecting the fifth wheel plate in position, said plate having openings positioned to provide access to said bolts; and means securing the container to said cradles.

3,043,600
COMBINATION ROLLER AND ICE SKATES
William P. Voakes, 3148 Risedorph, Flint, Mich., assignor of one-half to William R. McTaggart, Flint, Mich.
Filed July 29, 1960, Ser. No. 46,214
2 Claims. (Cl. 280—7.13)

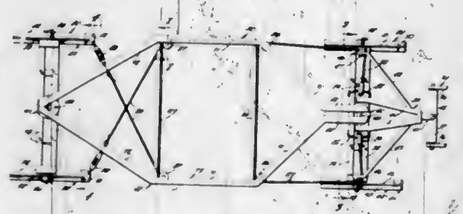
1. A combination roller skate and ice skate structure comprising an upper shoe portion, a sole attached thereto, a supporting plate attached to the sole, a mounting plate,

said mounting plate including a skate assembly mounted thereon, and means interconnecting the mounting plate and the support plate for detachably supporting the mounting plate from the support plate, said means mounting the mounting plate on the support plate including a pair of arcuate members mounted on the support plate with each arcuate member having a recess in the upper inwardly facing edge thereof for receiving the end edges of the



mounting plate, one of said arcuate members having a plurality of longitudinally elongated slots therein, and a plurality of bolt means adjustably secured to the support plate and extending through the elongated slots in said one arcuate member so as to allow for longitudinal adjustment of said one arcuate member as well as the fixedly securing of said one arcuate member to the support plate so as to rigidly mount the mounting plate.

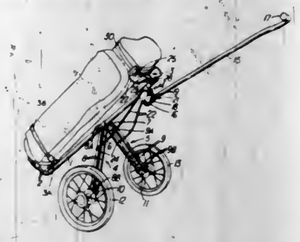
3,043,601
STEERING MECHANISM
Karl Kober, Park City, Mont.
Original application May 3, 1961, Ser. No. 107,528. Divided and this application May 12, 1961, Ser. No. 109,726
4 Claims. (Cl. 280—15)



1. A leveler comprising a main frame, front and rear sled runner truck units arranged adjacent the front and rear portions of the main frame, front and rear turntables swivelly connecting said truck units to said main frame, a hitch connected to said front turn table, braces secured to said hitch, upstanding pegs on said front truck unit, a pair of brackets affixed to said front truck unit, a pair of cables having their front portions swivelly connected to said brackets, and said cables having portions thereof extending below the rear ends of said braces and around said pegs, pulleys on said main frame engaged by said cables, the rear portions of said cables being arranged in criss cross relation with respect to each other and being anchored to the front portions of the rear truck unit.

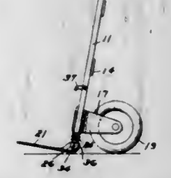
3,043,602
WHEELED CARRIERS, ESPECIALLY GOLF-BAG CARRIERS
Ian Goodhall Meiklejohn, East Wemyss, Fife, Scotland (Kingslaw, Great Britain)
Filed Sept. 29, 1959, Ser. No. 843,142
Claims priority, application Great Britain Oct. 8, 1958
12 Claims. (Cl. 280—38)

9. A wheeled carrier, especially a golf-bag carrier, comprising a load-receiving frame, a pair of wheeled leg structures pivotally mounted on the frame for movement from a collapsed position adjacent to the frame outwards from the frame and laterally apart from each other to an extended position, lever means on the frame, resilient strut means extending between and pivotally connected to the lever means on the one hand and said leg structures on the other hand, said resilient strut means being adapted to resist said lateral outward movement, said strut means on actuation of the lever means causing simultaneous outward and lateral movement of said leg structures, the



resiliency in said strut means serving to restore said strut means to their relative inward position on reversal of the movement of the said lever means, said strut means constituted by an inverted U-shaped member tensioned normally to urge the limbs of the U towards one another, and said strut means being pivotally connected at the base of the U to the said lever means in inverted position and the extremities of the limbs pivotally connected respectively with the leg structures.

3,043,603
HAND TRUCK WITH PIVOTED WHEEL SUPPORTS
Raymond J. Major, Sr., 646 Lowrey Ave., Troy, Mich.
Filed June 8, 1959, Ser. No. 818,786
1 Claim. (Cl. 280—40)



A folding hand truck comprising paired spaced parallel upwardly extending bars having upper ends, lower ends, and intermediate portions; a handle bar interconnecting said bars upper ends, at least one load cross-strap interconnecting said bars intermediate portions, sleeves axially slidably and rotatably disposed on said bars lower ends, dogs on said bars above said sleeves limiting said sleeves upward sliding limit, springs on said bars below and abutting said sleeves, caps on said bars lower ends below and abutting said springs; said sleeves having upper edges; said sleeve upper edges having notches therein receiving said dogs in normal position of use preventing relative rotational movement of said sleeves on said bars; said springs depressably urging said sleeves upwardly with their notches receiving said dogs angularly securing said sleeves relative to said bars; at least one arm extending radially from each said sleeve normally projecting in a plane transverse to the plane of said handle bar and strap, and wheels rotatably disposed on said arms; the downward force of the truck and a load thereon urging said dogs against said sleeves and into their notches; the supporting direction of said sleeves urging said sleeves against said dogs; said sleeves being manually axially slidable against said springs to move said sleeve notches out of engagement with and to a position below said

dogs to permit relative rotational movement of said sleeves and said arms and wheels thereon relative to said bars to swing same to a folded position in a plane parallel to the plane of said handle bar and strap, said springs urging said sleeves upper edges in said folded position into contact with said dogs in the unnotched area of said sleeves upper edges above said sleeve upper edges notches; said sleeve upper edges riding said dogs in spring pressed relationship in the folded position so that upon said sleeves swinging with said wheels and arms to the normal position said notches automatically receiving said dogs under spring pressure and automatically locking on said dogs holding said sleeves, arms, and wheels, in the normal use position.

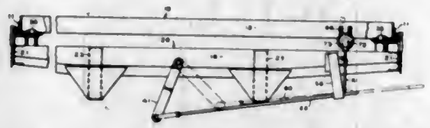
3,043,604
HEIGHT ADJUSTER FOR ROTARY LAWN MOWERS
Glenn R. Rehnberg and Paul E. Rehnberg, Rockford, Ill., assignors to Custom Metal Products Corp., Rockford, Ill., a corporation of Illinois
Filed Apr. 17, 1961, Ser. No. 115,587
3 Claims. (Cl. 280—43)



1. An adjustable wheel mounting means attachment for a mower of the kind wherein an axle for a wheel has a threaded end that is entered selectively in either one of a plurality of vertically spaced holes in the side wall of the housing of the mower and secured therein with a nut for mounting the wheel thereon at different elevations relative to said housing, said mounting means attachment comprising, in combination with said threaded axle and said vertically spaced holes, of an elongated vertical bracket member having vertically spaced bolt holes provided in the lower end portion thereof arranged to register with the aforesaid vertically spaced holes in the housing wall, bolts entered in these registering holes and receiving nuts threaded thereon to fasten said bracket rigidly on said housing, an elongated vertical slide member slidably adjustable vertically on said bracket member, a nut mounted rigidly on the lower end portion of said slide in which the threaded end of said axle is received and secured for rigid mounting on said slide, said slide member having a plurality of holes provided in the upper end portion thereof in vertically spaced relation, and a horizontal spring-pressed latch pin mounted on the upper end portion of said bracket member above and spaced relative to said housing and engageable selectively in either of said holes in said slide member to lock the slide member in either of various positions of vertical adjustment.

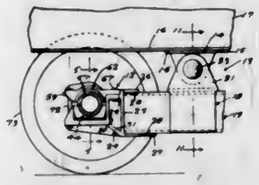
3,043,605
TRUCK TRAILER WITH SHIFTABLE RUNNING GEAR FOR LOAD EQUALIZING
Harry M. McKay, Warrenton, Mo., assignor to The Binkley Company, Warrenton, Mo., a corporation of Missouri
Filed May 25, 1961, Ser. No. 112,574
16 Claims. (Cl. 280—81)

1. In a trailer of the character described, a body frame provided with locking pin sockets spaced therealong, a wheel truck movable along said frame, a locking pin on said truck, resilient means urging said pin toward locking engagement with one of said sockets, manipulating means operable to retract said pin from such engagement, a rod rotatively mounted on and disposed lengthwise of said body frame, a plurality of radially extending lugs spaced longitudinally along and about said rod, a latch for said manipulating means, and means connected to said rod for turning the rod to place a preselected lug in the path of



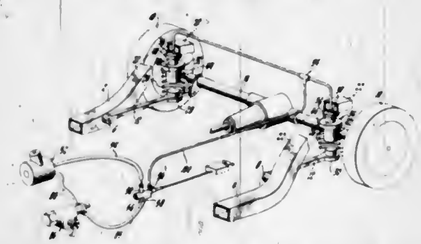
travel of said latch, the preselected lug engaging the latch upon relative movement of the truck and frame in either direction of movement to release said manipulating means at a predetermined position of said truck relative to said frame.

3,043,606
VEHICLE WHEEL AXLE MOUNTING UNIT
John E. Raidel, 15002 Dunton Drive, Whittier, Calif.
Filed Oct. 5, 1960, Ser. No. 60,708
5 Claims. (Cl. 280—104.5)



1. In combination with a tandem wheel suspension for a trailer vehicle including a beam disposed longitudinally beneath the trailer and connected to a frame member thereof for rocking movement about a horizontal axis disposed crosswise of said beam and trailer and midway of the beam ends; a wheel axle mounting unit comprising a lower section rigidly secured to and projecting from an end of the beam and having an outer portion disposed beyond said beam end and defining an upwardly facing support rigidly disposed with respect to the beam, a seat member engaging removably in said support and having an upwardly facing arcuately recessed seat disposed crosswise of the beam and said axle mounting unit and in which the underside of an intermediate portion of an axle is adapted to conformably seat, means securing said axle portion immovably to said seat member, said axle mounting unit including an upper section extending over the axle and disposed directly above said lower section, fastening means detachably securing said upper section rigidly to the lower section, said upper section including an intermediate portion bridging the intermediate portion of the axle and disposed substantially concentrically around an upper part thereof and spaced therefrom, said support and seat member having interengaging means functioning in cooperation with said upper section, when secured by the fastenings thereof to the lower section, for retaining the seat member in engagement with the support and for limited rocking movement relative thereto about an axis disposed approximately crosswise of said axle for oscillating movement of the axle with said seat member relative to the beam and axle mounting unit, an upper cushioning member disposed between said intermediate portion of the upper section and the axle, and a cushioning pad disposed between and engaged by the seat member and support and cooperating with the cushioning member to yieldably resist rocking movement of the axle and seat member relative to the axle mounting unit, said seat member having a substantially flat bottom resting on said cushioning pad, said pad having an opening, said support having an upwardly facing socket disposed in the pad opening, and said seat member having a projection depending from the bottom thereof including a lower end engaging loosely in said socket, said projection and socket forming parts of said interengaging means.

3,043,607
HYDRAULIC LEVELIZING CONTROL FOR VEHICLE SUSPENSION
Larry L. Ruffle, Saginaw, and Raymond J. Schultz, Bay City, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 6, 1960, Ser. No. 74,156
7 Claims. (Cl. 280—124)



2. In a vehicle coil spring suspension having hydraulically displaceable spring seats for maintaining the vehicle in a level attitude, a source of hydraulic pressure, conduit means connecting said source with said displaceable seats, a control device interposed in said conduit means for regulating the displaced position of said spring seats comprising, a housing having a spool valve slidably disposed therein, said housing having three spaced annular cavities formed therein concentrically of said spool valve, said spool valve having circumferential lands formed therein in axially spaced relation such that in one position of said spool all of said cavities of said housing are in common communication with said source, in a second position two of said cavities are in common communication with said source, and in a third position each of said cavities are separated by said lands so that only one of said cavities communicates with said source, said spool having a passage formed internally thereof providing communication between the other two cavities when said spool is in said third position.

3,043,608
SAFETY DEVICE AND TABLE ARRANGEMENT FOR VEHICLE BODIES
Clarence C. Farlee, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 20, 1960, Ser. No. 63,780
2 Claims. (Cl. 280—150)



1. In a vehicle body having a front seat provided with a seat back, the combination comprising, a table member having a generally flat surface on one side thereof, yieldable padding secured to an opposite side of said member and extending over an edge thereof to said one side thereof, and hinge means mounting said member on said seat back for movement between a first generally upright position wherein said one side thereof engages said seat back and said other padded side thereof is presented to a rear seat passenger and a second generally horizontally disposed position wherein said one side thereof provides a writing surface and said padding on said edge thereof is presented to said rear seat passenger, said hinge means including a pair of vertically disposed hinge arms, each pivotally connected adjacent the upper end thereof to said seat back and adjacent the lower end thereof to said table member for swinging movement relative thereto, each of said hinge arms including an extension intermediate the ends thereof, said extensions being located in spaced opposite relationship to each other when said table member is in said first position thereof and being located in abutting opposite relationship to each other when said table member is in said second position to locate said table member in said second position thereof and locate said hinge arms in a generally horizontally disposed position.

3,043,609
REMOVABLE GOOSENECK DRAWBAR HAVING AN ADJUSTABLE CONNECTION WITH A LOW-BED TRAILER
Austin G. Talbert, Lyons, Ill., assignor to Talbert Construction Equipment Company, Lyons, Ill., a corporation of Illinois
Filed Mar. 2, 1959, Ser. No. 796,353
9 Claims. (Cl. 280—423)



1. In combination, a gooseneck drawbar adapted to have its forward end connected to a fifth wheel of a tractor, a ram member having a vertically stepped upper surface supported on the drawbar for horizontal movement thereon, at least one plate mounted on the rear end portion of the drawbar for sliding movement relative thereto in a vertical direction, one end of said plate being adapted to releasably support the forward end of a low-bed trailer and the other end of the plate having a vertically elongated opening through which said ram member extends whereby said plate is supported on the drawbar through engagement with the upper, vertically stepped surface of said ram member, and hydraulic power means carried wholly on the drawbar, said ram member being connected to said hydraulic power means whereby actuation of said power means during transit of the interconnected tractor and trailer shifts said ram member in either of two directions and either raises or lowers said plate and thereby the forward end of the trailer relative to the drawbar.

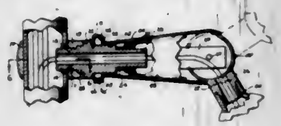
3,043,610
TRAILER HITCH
Felix W. Kosinski, Jr., 705 Sunningdale, Inkster, Mich.
Filed Mar. 17, 1960, Ser. No. 15,695
2 Claims. (Cl. 280—502)

2. In a toggle type, universal mounting hitch for use with a vehicle, the combination of, a flanged body member with vertical flanges; said flanges in substantially parallel relationship; a first and second anchor block; the body of said first anchor block vertically disposed between the inside faces of said flanges; the lower portion of said first anchor block pivotally affixed to said flanges; said pivots positioned on a horizontal axis; said second anchor block secured to said body member with a pair of pivotal links; the upper end of said link pivotally secured to the

body above the first anchor block pivot, while the lower end of the link is secured to the second anchor block below the pivot; and adjustable means secured to said anchor blocks for securing and locking the hitch to a vehicle.

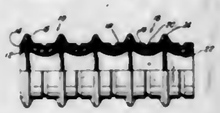


3,043,611
ELECTRIC LIGHTING FIXTURE ASSEMBLY
Edmund Barrett, Philadelphia, Pa., assignor to Ajax Foundry Products, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 25, 1958, Ser. No. 756,846
2 Claims. (Cl. 285—164)



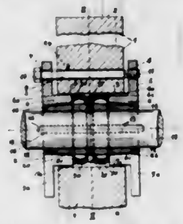
1. An electrical fixture swivel-connector fitting comprising an apertured mounting member adapted for securement to a support structure, a tubular member one end of which is non-rotatably disposed within the aperture of said mounting member, means detachably interlocking the tubular member to the mounting member so that said tubular member may be readily detached from said mounting member while the latter remains firmly secured to a support structure, and electrical fixture supporting means rotatably disposed upon the opposite non-interlocked end of said tubular member for rotation about the tubular axis thereof, said tubular member opposite end being of circular cross-section, and said last named means including a pair of parallel spring clips extending axially of said tubular member and terminating at one end in arcuate formations disposed about the said tubular member opposite end and rotatably secured thereto by an encircling collar, the remote ends of said spring clips having a bridging pivot mounting therebetween a tubular connector for direct securement to an electrical fixture, the pivotal axis of said tubular connector being transversely oriented relative to the rotational axis of said spring clips.

3,043,612
FLEXIBLE MOLDED HOSE
Charles J. Pavlik and Paul A. Songer, Denver, Colo., assignors to The Gates Rubber Company, Denver, Colo., a corporation of Colorado
Filed Dec. 22, 1958, Ser. No. 781,992
3 Claims. (Cl. 285—226)



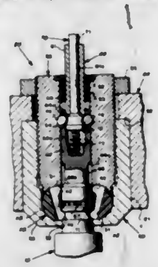
1. A flexible hose member comprising an elongate body of elastomeric material being constituted of clamp receiving sections of cylindrical configuration and rib sections projecting outwardly from said clamp receiving sections, said clamp receiving section having an axial length greater than the axial length of said rib sections, annular clamp receiving grooves disposed in each of said clamp receiving sections intermediate between adjacent rib sections, and the inner surface of said hose tapering outwardly in both directions from the central portion of the clamp receiving section to each rib section to a diameter substantially equal to the external diameter of said clamp receiving sections.

3,043,613
METHOD FOR MOUNTING A PULLEY ON A SHAFT
Demetre Papageorges, 130 Rue Paradis, Liege, Belgium
Filed Dec. 28, 1959, Ser. No. 862,171
Claims priority, application Belgium Mar. 7, 1959
2 Claims. (Cl. 287—52.06)



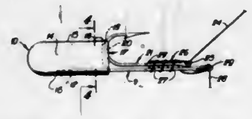
1. A pulley mounting comprising in combination a shaft having a keyway, a biconical bushing mounted on said shaft, a key partially inserted in the keyway in said shaft and partially inserted in a longitudinal opening of said bushing, thereby attaching said bushing to said shaft, a pair of sleeves having a flange and a radial slit each, said sleeves engaging said biconical bushing and having screw holes in their flanges, a pulley inserted between said flanges of said sleeves and engaging said sleeves, said pulley having apertures at the height of said screw holes in the flanges of said sleeves and bolts extending through said holes and through said apertures thereby firmly interconnecting said pulley and said sleeves.

3,043,614
LOAD RELEASING LOCK-ON COUPLING
Albert C. Eichmann, Bethayres, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 30, 1961, Ser. No. 121,260
8 Claims. (Cl. 287—119)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A mechanical coupling comprising: a connector including a cap having a cylindrical bore therein terminating in an aperture smaller than said bore, a sprag assembly received within said cap adjacent said aperture, said sprag assembly comprising a plurality of planar sprags each having a semi-circular body portion terminating in opposed semi-circular lip portions of radii less than that of said body portion, and means assembling said sprags to form an annulus wherein the sprags are free to rotate about an annular axis passing through the axes of said body portions, a hollow shaft received within said cap and having an end portion abutting said sprag assembly, and a cylindrical plunger received within said hollow shaft spring biased for movement along the axis thereof, said plunger having an annular elongated groove therein near the end portion thereof adjacent said sprag assembly, whereby in one displaced position the end portion of said plunger is received within and abuts one lip portion of said sprag assembly to rotate and maintain said sprags in an article engaging position and whereby in another displaced position of said plunger said one lip portion of said sprag assembly is received within said elongated groove to permit said sprags to rotate to an article disengaging position.
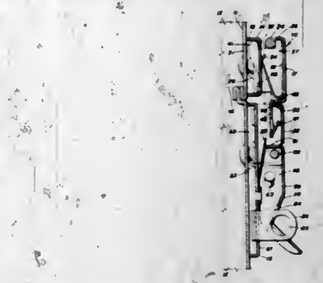
3,043,615
KNOT TYING APPARATUS
Rex P. Dannebaum, 45 Towne Ave., Indio, Calif.
Filed June 13, 1960, Ser. No. 35,773
3 Claims. (Cl. 289—17)



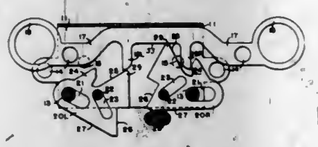
1. In combination with a fish hook and leader, a one-piece apparatus usable for snell tying the leader on the fish hook shank, comprising a forwardly extending shaft including a leader holder, and body means integral with and supporting the shaft, said body means containing a forwardly opening recess constituting a forwardly facing interior shoulder loosely receiving the bight end of the fish hook between transversely oppositely facing recess walls which block rotation of said bight end about the axis of the hook shank projecting forwardly along said shaft in tying position, said body means including magnetic material securing means holding the fish hook bight end by magnetic attraction against a forwardly facing recess interior shoulder and in tying position, said hook and apparatus having an initial position in which the hook bight is held by magnetic attraction against said recess interior shoulder with the leader passing through the hook eye, then rearwardly along the hook shank, then wrapped about the hook shank and shaft in a forward direction and then to said holder, and said hook and apparatus having a snell tie completed position in which the hook bight is removed from said recess and spaced forwardly from said recess interior shoulder with the hook shank and eye projecting beyond the leader holder and the leader passing through the hook eye, then rearwardly along the shank, then wrapped about the hook shank in a forward direction, then extending rearwardly along the hook shank within the wrap turns and away from the hook eye and to the holder.

3,043,616
FASTENER
Paul G. Magnuson, Leicester, Mass., assignor to Worcester Tool & Stamping Co., Inc., Leicester, Mass., a corporation of Massachusetts
Filed Dec. 16, 1959, Ser. No. 860,035
4 Claims. (Cl. 292—3)

3. A fastener for use on a container having a lower tray and an upper cover hinged thereto, comprising an upper portion adapted to be attached to the cover, the upper portion consisting of a plate, a spring, and a latch member, the plate having two parallel slots therethrough, the latch member having ears extending through the slots and extending laterally on the back side of the slots to permit a hinging action between the plate and the latch member, the spring residing between the plate and latch member to bias the latch member to one extremity of the said hinging action, a lower portion including a flange adapted to be attached to the tray, a first means for connecting the lower portion to the upper portion, and said latch member including a second means independent of the first means for engaging the flange and connecting the portions and by pressure and hinging action of the latch member for quickly releasing them.

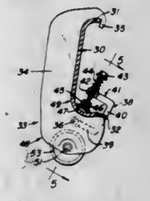


3,043,617
TWO-WAY CLOSURE LOCKS
Dothan L. Shelton, 4420 W. 2nd Ave., Amarillo, Tex.
Filed Nov. 29, 1957, Ser. No. 699,561
11 Claims. (Cl. 292—6)



9. In a locking device, two latch bolts shiftably mounted upon a pivotal support and disposed in mutually reversed relation to each other, mutually opposing keeper engaging segments provided on the latch bolts, a guide pin for each latch bolt, a guideway provided in each latch bolt engageable by the guide pin and effective upon operation of the locking device to shift said latch bolt on its pivot so that the keeper engaging segment thereon is moved in a plane at right angles to the plane of movement of a keeper for releasing said keeper, operating arms extending from the latch bolts, an operating member having dual lugs positioned thereon in reversed relation to each other and adapted to engage the operating arms provided on the latch bolts, and selectively operable to release the respective latch bolts for releasing said keeper.

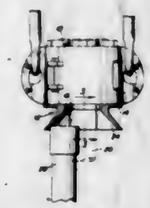
3,043,618
PROTECTIVE DEVICE FOR MOTOR VEHICLES
Diego Petirrojo, 127 Florida St., Buffalo 8, N.Y.
Filed Nov. 1, 1960, Ser. No. 66,591
1 Claim. (Cl. 293—66)



In a protective device for a vehicle bumper of the type that includes a lower portion, a support member adapted to be connected to the bumper and said support member including spaced parallel side portions provided with opposed recesses for receiving the bumper, a hook on the upper end of the support member for engaging the upper portion of the bumper, a pin extending between the lower

side portions of said support member, a bushing on said pin, a clamp having a lower portion affixed to said bushing, said clamp further including an upstanding portion which terminates in a transverse portion and said transverse portion being provided with an enlargement thereon, an adjustable screw member arranged in threaded engagement with said enlargement, a coil spring circumposed on said screw member and said coil spring being arranged above said enlargement, a plate engaging the upper surface of the lower portion of the bumper, and said plate having a shoulder thereon, a ball member supported in said shoulder and engaging the lower end of the screw member, spaced parallel flanges depending from the lower portion of the support member, an axle journaled between said flanges, and a wheel mounted on said axle.

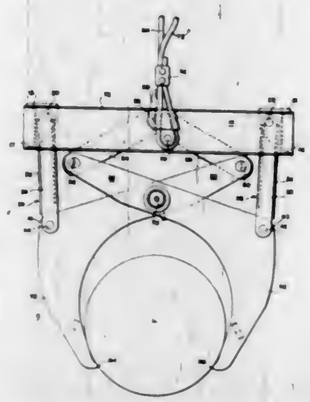
3,043,619
GUIDE FOR OIL WELL PIPE
Albert L. George, Lafayette, La., and William C. Lamb, P.O. Box 411, Lafayette, La.; said Albert L. George assignor to said William C. Lamb
Continuation of abandoned application Ser. No. 701,745, Dec. 10, 1957. This application May 23, 1960, Ser. No. 30,990
4 Claims. (Cl. 294—86)



1. A combination pipe elevator and stabbing device for raising and lowering a pipe comprising, an elevator having a pipe receiving opening extending therethrough, a stabbing device for securing adjacent said pipe receiving opening to guide pipe into said opening so that it may be engaged by the elevator for raising and lowering comprising, a body, said body having a downwardly extending skirt, said skirt defining an opening at its lower edge, a laterally projecting annular flange on said body forming a mounting means for removably securing said body to the underside of said elevator to align said opening in said skirt with said elevator pipe receiving opening, a downwardly flaring surface on said skirt, said surface extending from said lower skirt edge and merging at its upper end toward said elevator pipe receiving opening to form a guide surface to guide pipe into said aligned elevator pipe receiving opening, and means whereby pipe and said body may be moved radially of each other to disengage said body and the pipe, said means comprising a portion extending around a part of the circumference of and substantially the vertical length of said body, detachable means for securing said portion in position on the underside of said elevator and in circumferential alignment with said body whereby said guide surface extends 360° on said skirt, said detachable means also functioning to accommodate removal of said portion whereby said body is radially removable from about the pipe.

3,043,620
LOG HANDLING TONGS
Reid G. Priest, 523 Marine Drive, Port Angeles, Wash.
Filed Jan. 6, 1961, Ser. No. 81,021
5 Claims. (Cl. 294—118)

1. Material handling tongs of the type used in handling heavy loads, including saw logs, pipe and elongated structural members, comprising: a horizontally disposed frame having spaced apart beam members joined together by spacing and stop members at each end; downwardly extending positioning links pivotably secured, on horizontal pins disposed at right angles to said frame members, at each end of said frame; coacting jaw members of substantially bell-crank shape, having upper lever portions, lower jaw portions and intermediate apex portions, terminating in material engaging points; said jaws disposed in a scissor arrangement on a common pivot pin in-



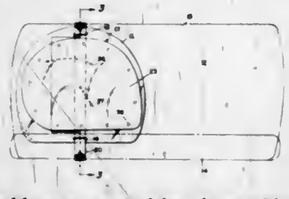
termediate their ends; said jaw members being supported by said positioning links to which they are pivotably secured at their said apex portions by pins disposed at right angles to said jaw portions and parallel to said pins securing said position links in place; lifting links pivoted one at each of the upper ends of said lever portions and to each other at their opposite upper ends; means for securing a single lifting cable to the upper end of said links and means for securing a tripping cable to said frame.

3,043,621
RECLINING CHAIR OF THE MULTIPLE MOVEMENT TYPE
Peter S. Fletcher, Delray Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Filed Apr. 22, 1960, Ser. No. 23,963
7 Claims. (Cl. 297—85)



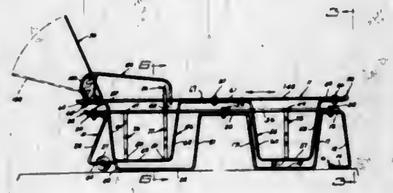
1. A reclining chair comprising a support, body-supporting means including a seat and a back-rest having a pivotal connection therebetween, a second movement link, means pivotally mounting said second movement link on said support, a mounting link, means pivotally and movably mounting said mounting link on said second movement link, a holding link, means pivotally mounting said holding link on said mounting link, means pivotally connecting said holding link to said body-supporting means, front guiding means pivotally mounted on said mounting link and pivotally connected to said seat, rear guiding means pivotally mounted on said support and pivotally connected to said back-rest, said front and rear guiding means and said holding link moving during a first movement phase and maintaining a substantial rigid relationship between said seat and back-rest with said second movement link remaining stationary, said second movement link moving relative to said support and said back-rest turning about its pivotal connection to said rear guiding means during a second movement phase to progressively increase the angular relationship between said seat and back-rest, a leg-rest, and a leg-rest linkage mounting said leg-rest for movement to an elevated leg-supporting position during said first movement phase, said mounting link remaining stationary during said first movement phase and effectively being rigid with said support, said mounting link moving during said second movement phase and effectively being rigid with said seat, and actuating means for said leg-rest operatively connected between said mounting link and said seat and responsive to the relative movement therebetween in said first movement phase to move said leg-rest to said elevated leg-supporting position, the effective rigid relationship between said mounting link and said seat during said second movement phase maintaining said leg-rest in an elevated leg-supporting position and in a substantially rigid relationship to said seat.

3,043,622
MOVABLE SEAT
Samuel Milner, 2039 Warrensville Center Road, South Euclid, Ohio
Filed Oct. 26, 1959, Ser. No. 848,694
10 Claims. (Cl. 297—240)



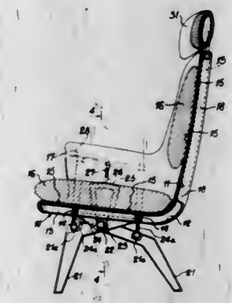
3. A movable seat, comprising, in combination, a base, a top plate, first and second guides connected to one of said plates, first and second sliding pivots operably connected to the other of said plates and slidable in said first and second guides, respectively, said top plate being for seating support of a person, normal and turned positions of said top plate relative to said base plate with said turned position being in the order of 45° to 90° in a first direction, said first and second guides establishing at least part of first and second paths of movement, respectively, of front and rear points on said top plate, said front point being generally at the lateral center of said top plate near the front thereof and movable in said first path initially substantially sideways as said top plate is moved from said normal to said turned position to prevent direct forward movement of said top plate and thus establishing a lock against forward movement of said top plate, and said rear point being generally at the lateral center of said top plate near the rear thereof and movable in said second path generally forward and in said first direction as said top plate is moved from said normal to said turned position.

3,043,623
END LOUNGE GLIDER
Eustace C. Bowen, 5895 S. Telegraph, Taylor, Mich.
Filed Mar. 20, 1961, Ser. No. 96,779
2 Claims. (Cl. 297—273)



1. An end lounge glider, comprising: an elongated base frame adapted to rest on the ground; said base frame comprising a horizontal portion, and a pair of ground engaging vertical side portions connected to the horizontal portion at the sides thereof; an upper cushion supporting frame disposed over and enclosing said first named frame; said upper frame comprising a horizontal portion and a pair of vertical side portions connected to the horizontal portion at the sides thereof; the horizontal portion of the upper frame being disposed over the horizontal portion of the base frame, and the vertical side portions of the upper frame being disposed along the outer sides of the side portions of the base frame; means for movably mounting said upper frame on said first named frame; and, means fixed on said first named frame and connected to the upper frame for gripping by a user of the glider for moving the upper frame longitudinally of the first named frame in a forwardly and backwardly manner.

3,043,624
SEAT FOR PUBLIC USE
Ernest Gilbert Mason, 120 E. 36th St., Apt. 11E, New York 16, N.Y.
Filed Nov. 7, 1958, Ser. No. 772,456
3 Claims. (Cl. 297—303)



1. In combination, a trunnion, a trunnion supporting means, a bracket rotatably mounted on the trunnion, a chair having a seat and a back mounted on the bracket and having its back vertical with respect to the trunnion and its seat surface above the trunnion, spring means between the bracket and the trunnion supporting means, and a member fixed with respect to the chair and cooperating with a second member fixed with respect to the trunnion so that the two members interlock in a plurality of positions with respect to each other, whereby the chair rocks backward and forward and can rock to a selected position and be locked in that position.

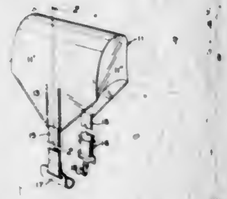
3,043,625
SAFETY BELT
Nils Ivar Bohlin, Goteborg, Sweden, assignor to Aktiebolaget Volvo, Goteborg, Sweden, a corporation of Sweden
Filed Aug. 17, 1959, Ser. No. 834,258
Claims priority, application Sweden Aug. 29, 1958
2 Claims. (Cl. 297—389)



1. In combination with a vehicle comprising a body structure including a floor, a seat, a top mounting firmly

secured to said body structure at a point substantially on a level with the shoulder of a person occupying the seat and floor mountings located respectively at opposite sides of the seat and secured to said body structure, a safety belt to protect the wearer thereof in said seat from being thrown forward upon any sudden deceleration of the vehicle, said safety belt comprising a chest strap extending obliquely across the chest of the wearer and a hip strap joined at one end thereof to the lower end of said chest strap and extending transversely across the wearer at the hip bones, the upper end of said chest strap being connected to said top mounting, one end of said hip strap being connected to that floor mounting which is located on the same side of the seat as said top mounting, said chest strap and said hip strap forming a continuous sling, and connecting means operable to detachably anchor that part of the safety belt formed by the junction between the lower end of said chest strap and the corresponding end of said hip strap to the other floor mounting so that said chest strap is maintained obliquely across the chest of the wearer and said hip strap is maintained transversely across the wearer at the hip joints notwithstanding the application of stress forces developed as a result of sudden deceleration of the vehicle.

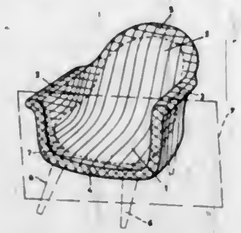
3,043,626
ADJUSTABLE HEADREST CUSHION
Roy Requa, 5801 Federal Blvd., Denver 11, Colo.
Filed May 31, 1960, Ser. No. 32,938
13 Claims. (Cl. 297—397)



1. An adjustable headrest cushion for detachable association with conventional automobile and analogous seat assemblies, comprising a homogeneous block of resiliently-yieldable material adapted to upstand from coaligned engagement with the upper margin of a seat back section in longitudinally and angularly shiftable coaction therewith, a pouch of flexible material conformably confining and separably encasing said block in exposure of the block area coactable with the seat back margin through an open zone of the pouch for direct, frictional seating on said margin, skirt continuations of said pouch outwardly from laterally-opposed open zone margins thereof, slide loops on opposed faces of said skirts aligned transversely and medially of the pouch open zone area, and flexible-strap attaching means adjustably accommodated in said loops across the exposed block area connectible with conventional elements of the seat assembly at each side and adjacent the lower margin of the seat back section adapted to snug the pouch-confined block to a secure frictional grip against the upper margin of said section.

3,043,627
ARTICLE OF FURNITURE
Rudolf Torjusen, Kongsgaardalle 10C, Kristiansand, Norway
Filed Nov. 3, 1959, Ser. No. 850,674
4 Claims. (Cl. 297—456)

1. An article of furniture comprising a body-supporting portion and a frame portion peripherally surrounding and merging into said body-supporting portion being integral with said body-supporting portion, said frame portion comprising a core of a plastic material subjected to a substantial degree of expansion and a relatively rigid layer of like material subjected to a more limited degree of expansion fused to said core, said body-supporting portion consisting of a relatively deformable mass of said material subjected to a degree of expansion substantially equal to that of said core and being supported by said frame portion.

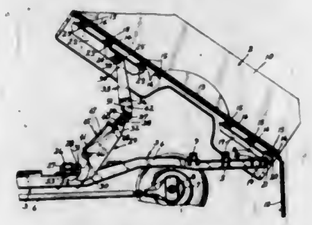


3,043,628
SEMI-TRAILER FRAME AND CHASSIS
Wilbur D. Hockensmith, Jr., 628 Cedar St., Irwin, Pa.
Filed June 23, 1960, Ser. No. 38,235
6 Claims. (Cl. 298—20)



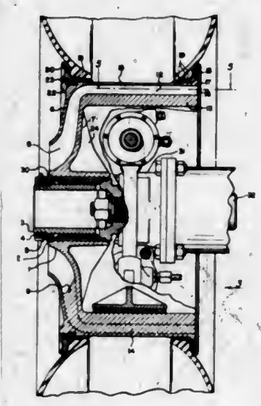
1. A semi-trailer frame for a rearwardly sloping body, comprising a pair of short parallel horizontal beams adapted to be supported by tandem wheels at the back of the frame, a pair of long parallel inclined beams extending forward and upward from the horizontal beams to the front of the frame, the inclined beams having their rear ends overlapping the front ends of the horizontal beams and rigidly secured thereto, cross members rigidly connecting the beams at one side of the frame to those at the opposite side, and a king pin projecting downward from the front end of the frame.

3,043,629
TRUCK BOX TILTING MECHANISM
Dennis H. Schlueter and Edward H. Schlueter, Lehr, N. Dak., assignors to Lehr Manufacturing Corporation, Lehr, N. Dak., a corporation of North Dakota
Filed Dec. 14, 1960, Ser. No. 75,792
4 Claims. (Cl. 298—22)



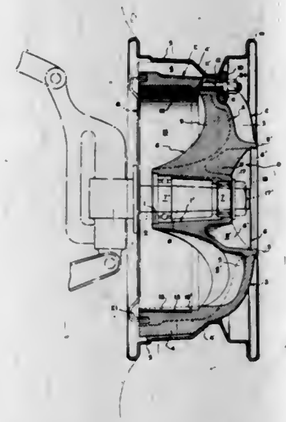
1. A truck box tilting mechanism for use intermediate the chassis and the box frame of a truck of the type in which said box frame is pivotally connected adjacent the rear of the truck chassis for upward and rearward tilting thereof, said mechanism comprising a first lever pivotally connected at one of its ends to said chassis adjacent the forward portion thereof, said first lever having its other end normally directed generally parallel to the longitudinal axis of said truck, a second lever pivotally connected by suitable structure at one of its ends to said box frame adjacent the forward portion thereof, said second lever also having its other end normally directed generally parallel to the longitudinal axis of said truck, a relatively short connecting link element pivotally connected at its opposite ends between said other ends of said first and second levers, the axes of all of the beforesaid pivotal connections being parallel and extending generally transversely with respect to said truck, and a fluid pressure operated motor interposed between said first and second levers for causing relative movement thereof between a lower normal position and an upper position for hoisting said truck box from a lower generally horizontal position to an upwardly tilted position with respect to the rear portion of said truck, said motor being connected to said first lever in spaced relationship to said one end thereof, and said first lever defining a recess which opens in a direction toward said second lever and extends in the opposite direction beyond a line drawn between the connection of said motor to said first lever and the connection of said first lever to said chassis, said recess of said first lever receiving a portion of said structure forming the pivotal connection of said one end of said second lever to said box frame when said mechanism is in said lower position whereby to achieve a closer nesting of said mechanism.

3,043,630
AIR COOLED BRAKE DRUM
Edward J. Heitzman, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 3, 1958, Ser. No. 758,773
3 Claims. (Cl. 301—6)



1. A one-piece cast vehicle wheel and brake drum comprising, a hub, a first radial wall extending from said hub terminating in an annular axially extending wall forming a drum, a plurality of radially disposed fins spaced about the inboard side of said radial wall connecting the wall with the hub, a second radial wall in spaced relation to said first radial wall terminating in an annular axially extending wall forming a rim disposed in spaced relationship to said drum wall, and annularly spaced radially disposed vanes between said first and second radial walls and extending continuously between said drum wall and said rim wall and connectively securing together said rim wall on said drum wall and said radial walls, said vanes forming with said radial walls radial passages and with said rim and drum axial passages as continuations of said radial passages to operate as a centrifugal pump providing continuous passage means from the hub section of said wheel to the opposite side of the wheel coextensive with the said walls and with the drum and rim for continuous circulation of air through the wheel when the wheel is in rotation.

3,043,631
VEHICLE WHEEL
Leo F. Swoboda, Northbrook, Ill., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,703
26 Claims. (Cl. 301—6)

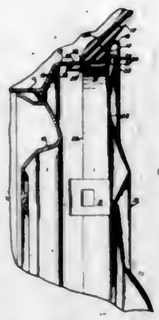


1. In a vehicle wheel assemblage of the demountable rim type the combination of a light metal unitary rim supporting component comprising integrally formed convex and concave portions, a hub portion and a peripheral cylindrical shell portion, means associated with the inner surface of said shell portion and defining a friction surface adapted to be engaged by a brake mechanism, the outer surface of said shell portion including a plurality of upstanding radially extending peripheral rim contacting members formed integrally therewith, said rim contacting members being unconnected with each other adjacent the outer periphery of the component, said concave portion including radially extending spoke members and said convex portion including a plurality of radially disposed and outwardly projecting vane-like members, a demountable rim bearing against a surface portion of small area on each of said peripheral rim contacting members, said rim contacting members maintaining said rim concentric with respect to and spaced from said component, and means for maintaining said rim on said rim contacting members.

3,043,632
WHEEL COVER
Pierce W. Wagner, La Salle, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 21, 1958, Ser. No. 756,318
9 Claims. (Cl. 301—37)

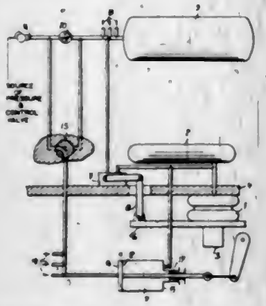
1. A cover for disposition at the outer side of a vehicle wheel, said cover including a main body portion having an underturned flange at the periphery thereof, clip retaining means for securing said cover to a vehicle wheel, said clip retaining means comprising a body part engaging said cover, a first terminal portion engageable with a vehicle wheel, and a second terminal portion positioned between the main body portion and the under-

turned flange of said cover, said second terminal portion having a generally radially inwardly extending extremity,



said generally radially inwardly extending extremity having a serrated edge engaging said cover.

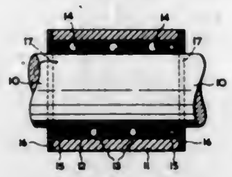
3,043,633
BRAKING SYSTEM FOR ROAD VEHICLES WITH AIR CUSHIONING AND AIR BRAKES
Rudolf Friedrich Hübscher, Schaffhausen, Switzerland, assignor to George Fischer A.G., Schaffhausen, Switzerland
Filed Aug. 7, 1959, Ser. No. 832,399
Claims priority, application Switzerland Apr. 7, 1959
12 Claims. (Cl. 303—22)



1. In a vehicle braking system, said vehicle having a wheel and an individual air cushion for said wheel; a brake for said wheel, a double acting air motor means for said brake having a brake actuating side and a brake releasing side, means connecting the said brake actuating side of said motor means directly to the air cushion of the wheel, a supply of air under pressure, and control means operable for selectively connecting said brake releasing side of said motor means to said supply of air under pressure or to exhaust.

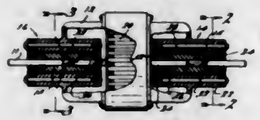
3,043,634
BEARINGS
Samuel Ernest Coley, "Wayside" Penn Lane, Tanworth-in-Arden, England
Filed Aug. 11, 1960, Ser. No. 48,950
3 Claims. (Cl. 308—6)

1. A shaft bearing assembly comprising in combination: a shaft; a housing having an inner surface concentric with said shaft; and bearing means supporting said shaft for axial movement relative to said housing, said bearing means comprising a plurality of shaft-engaging balls, a ball cage surrounding the shaft and having a plurality of openings arranged in helical lines, one of said balls being rotatably disposed in each of said openings and engaging the inner surface of said housing, and a pair of spaced thrust bearings between the cage and said housing to restrain relative axial movement between



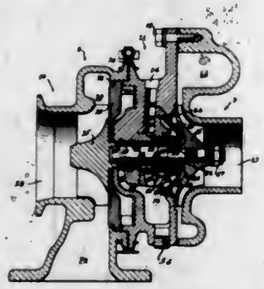
the cage and said housing while allowing relative rotational movement between the cage and said housing.

3,043,635
AIR BEARINGS
Donald O. Bard, Mount Clemens, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 5,715
3 Claims. (Cl. 308—9)



1. A gas lubricated bearing comprising a rotatable member having a radial surface portion and a tapered thrust surface portion, a housing member substantially enclosing said rotary member with a mechanical clearance therefrom, said housing member having side and end portions, each of said side and end portions having a pair of lands operable to form arcuate, wedge-shaped pockets with said radial and thrust surface portions of said rotatable member in the direction of rotation thereof, each of said pairs of lands approaching diametrically aligned points of tangency with a different one of the aforesaid surface portions of said rotatable member.

3,043,636
BEARING FOR HIGH SPEED ROTATING SHAFTS
Hugh MacInnes, Richmond Heights, and Stanley H. Updike, Mentor, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 29, 1960, Ser. No. 39,549
13 Claims. (Cl. 308—121)



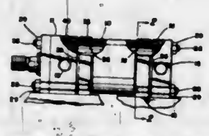
1. Rotary shaft apparatus comprising: a housing; a thrust load receiving shaft in said housing carrying at least two rotatable thrust load producing members in spaced-apart relation; a bearing positioned in spaced-apart relation to said housing and between said shaft-carried, thrust load producing members and circumscribing at least a portion of said shaft in concentric spaced-apart relation thereto and adapted to accept a thrust load produced by said shaft; means for introducing a circumfluous fluid to the space between said housing and said bearing to assist in floating said bearing; at least one aperture formed in said bearing for introducing a portion of said circumfluous fluid to the space between said bearing and said shaft to assist in floating said bearing; a thrust load accepting end flange carried by said bearing adjacent one of said shaft-carried thrust load producing members, an annular groove formed in a surface of said end flange facing said adjacent thrust load producing member; at least one groove formed in said end surface of the flange for permitting flow of fluid from the space between said bearing and said housing to said annular groove; means for preventing unlimited axial movement of said bearing; means for preventing rotation of said bearing, and means for supplying and removing fluid from between said housing and said bearing and from between said shaft and said bearing.

3,043,637
THRUST BEARING FOR DRILLING TURBINES
Karl Biedendieck, Bentheim, Reg. Bezirk, Osnabruck, and Karl Kaufmann, Heidenheim (Brenz), Germany, assignors to J. M. Voith G.m.b.H., Heidenheim (Brenz), Germany
Filed Mar. 14, 1960, Ser. No. 14,582
Claims priority, application Germany Mar. 14, 1959
2 Claims. (Cl. 308—162)



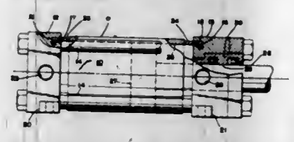
1. In a method of varying, in conformity with drilling pressure, a thrust bearing for the shaft of a drilling turbine, said thrust bearing comprising a plurality of supporting ring means surrounding said shaft and axially spaced from each other by spacer members, and a plurality of thrust disc means in bearing engagement with said supporting ring means and axially spaced from each other by spacer members, said means and members being individually replaceable, the step of replacing at least one of said spacer members by other spacer members of varying length for varying the total engaging surface of said supporting ring means and for varying said thrust disc means in at least one of two axial directions, whereby the effective supporting surface of said thrust bearing is varied in at least one of said two axial directions.

3,043,638
FLUID PRESSURE CYLINDER
Otto J. Maha, Dundee, Ill., assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 19, 1961, Ser. No. 111,262
11 Claims. (Cl. 309—2)



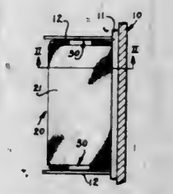
1. In a fluid pressure cylinder, a body having a bore and an external groove near one end thereof, a collar rotatably mounted in said groove, an end cap for closing said bore, means securing said end cap to said collar, said collar comprising a plurality of members welded together for permanent retention in said groove.

3,043,639
FLUID PRESSURE CYLINDER
Otto J. Maha, Dundee, Ill., assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 22, 1961, Ser. No. 111,855
7 Claims. (Cl. 309—2)



1. A fluid pressure cylinder having a body with a cylindrical bore in which a piston is mounted for reciprocation, said body having an exposed circular reference surface at each end thereof of smaller diameter than said body, said reference surfaces being concentric with said bore whereby they may be used as locating surfaces for locating the position of the axis of said bore with respect to a structure upon which the cylinder is to be mounted.

3,043,640
WALL MOUNTED VERTICALLY ADJUSTABLE DESK
Charles Eames, Venice, Don Albinson, Culver City, and Peter J. Pearce, Los Angeles, Calif., assignors to Herman Miller, Inc., a corporation of Michigan
Filed Feb. 4, 1960, Ser. No. 6,678
5 Claims. (Cl. 311—20)

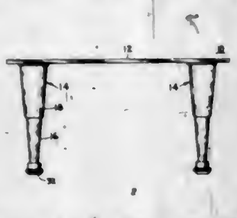


4. Means for adjustably positioning a desk top at two operating heights, comprising: two panels secured to a wall, said panels being spaced one from the other; a support linkage operably connected between the desk top and said panels; said support linkage including a pair of toggle plates; an anchor bar pivotally secured to and connecting corresponding first points on said toggle plates; a fastener plate pivotally secured to and connecting corresponding second points on said toggle plates; said anchor bar and said fastener plates vertically aligned, said anchor bar lying below said fastener plate; said toggle plates pivotally secured to the desk top support at corresponding third points; and said fastener plate secured to the desk top whereby rotation of said toggle plates about said third points varies the height of the desk top with respect to the desk top support and said fastener plate rests on said anchor bar at the two extremities of rotation of said toggle plates, the height of the desk top varying at said two positions of rest.

3,043,641
ADJUSTABLE SUPPORTS
De Witt W. Hanmore, 18 Bellevue Ave., Rumson, N.J.
Filed Sept. 26, 1958, Ser. No. 763,697
4 Claims. (Cl. 311—39)

1. An adjustable table leg including two tapered tubular members telescoped over each other so that one is

an inner member and one is an outer member, the tapers being such that when the leg is extended it has a substantially uniform taper over its entire length, a tubular insert secured within said outer member adjacent to the lower end thereof, said insert being tapered and so dimensioned that it forms a tight fit with the upper end of said inner member when the leg is in its extended form, the inner end of said insert being slanted at an angle to its longitudinal axis, a helical track in the wall



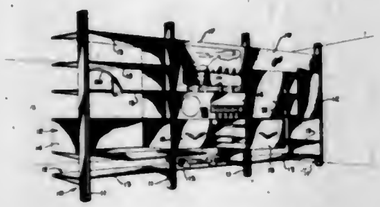
of said insert and extending from the slanted inner end thereof to about midway along the length of said insert, the slanted end of said insert merging smoothly with the upper end of the track, a pin secured to the upper end of said inner member and adapted to ride in said track and be fixed near the end of said track when said leg is extended, and a foot secured to the lower end of said inner member and adapted to be positioned within the outer end of said insert when the leg is collapsed.

3,043,642

SUSPENDED FURNITURE

George Nelson, Quogue, and John F. Pile, Brooklyn, N.Y., assignors to Herman Miller, Inc., a corporation of Michigan

Filed June 26, 1959, Ser. No. 823,042
2 Claims. (Cl. 312—111)



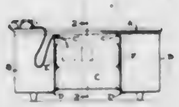
1. In a means of furnishing a room having walls, a floor and a ceiling, the combination comprising: a plurality of horizontally spaced vertical posts each having a front face and a rear face; each of said posts being rigidly secured in said vertical position and supported on the floor of a room; a plurality of service units arranged vertically in tiers between said posts; each of said posts having a pair of flanges projecting toward each other and extending lengthwise of the post forming a continuous slot lengthwise of said post; said flanges defining both an inner and an outer channel also extending lengthwise of the post; said outer channel opening through the rear face of said post; the sides of said post projecting rearwardly beyond said flanges; a plurality of brackets each having one end seated in the outer channel of one of said posts, and being moved vertically along said posts to any selected position; said one end of each of said brackets being nested between said rearwardly projecting sides and holding said bracket against movement laterally of said post; means extending from each of said brackets into the inner of said channels for locking said brackets to said posts in any selected position; all of said brackets projecting rearwardly from said posts; each of said service units being secured to a pair of said brackets rearwardly of said posts and extending between said posts to form the only means joining said posts together between the upper and lower extremities of said posts; the bottom one of the service units of each of said tiers being vertically spaced from said floor.

3,043,643

TELEPHONE WIRING SUPPORT FOR DESKS

Rudolph H. Wilmer, Youngstown, Ohio, assignor to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio

Filed May 16, 1960, Ser. No. 29,232
2 Claims. (Cl. 312—194)



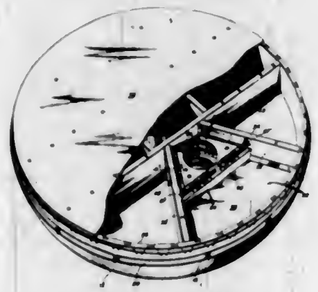
2. An improvement in desks, comprising, in combination, a top, spaced pedestals having inner walls, said top and pedestals together presenting horizontal and vertical wall portions constructed in fixed relation and defining a knee space beneath the said top and between said pedestals, channel members secured in vertical position to said facing inner pedestal walls, said channel members each having the medial portion of related opposite flanges thereof cut away, a block stop in said channel members below the level of the cut-away portions, and a terminal block adapted to be inserted in the channel members through said cut-away portions to be supported upon said block stop.

3,043,644

TENSION CORD SUPPORT ARRANGEMENT FOR SATELLITE INTERNAL STRUCTURE

Fred H. Esch, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 2, 1961, Ser. No. 86,833
5 Claims. (Cl. 312—352)



1. In an instrument carrying satellite having an outer shell, an instrument mounting structure in the shell, said mounting structure including a plurality of ribs forming a compartment, a mounting frame in said compartment comprising a plurality of support plates fastened to said ribs, an instrument container positioned within said mounting frame, said instrument container including parallel spaced plates the edges of which are parallel to the support plates of said mounting frame, said parallel plates having instrument receiving means therein, a plurality of eyelets spaced about the perimeters of said parallel plates and said support plates, and cord means interlacing said eyelets to support said instrument container within said mounting frame.

CHEMICAL

3,043,645

IMPROVED METHOD OF DYEING CELLULOSIC FIBERS WITH INDOCARBON BLACK SULFUR DYESTUFF

Glenn F. Womble, Danville, Va., assignor, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland

No Drawing. Filed July 22, 1959, Ser. No. 828,689
3 Claims. (Cl. 8—37)

1. An improved method of dyeing cellulosic fibers with Indocarbon black sulfur dyestuff, said fibers having improved fastness to both peroxide and chlorine bleaching without impairment of the tensile strength, comprising the steps of impregnating the fibers with the leuco form of said dyestuff, oxidizing said dyestuff to the intermediate stage of oxidation, treating said fibers with a diazotized amine under substantially non-oxidizing conditions, rinsing the fibers with water, soaping the fibers under alkaline conditions, and thereafter again rinsing the fibers with water.

3,043,646

DYEING OF ARTIFICIAL FIBERS

Paul Buecheler, Reinach, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Mar. 16, 1959, Ser. No. 799,442
Claims priority, application Switzerland Mar. 19, 1958
6 Claims. (Cl. 8—40)

1. A dyeing process comprising applying to an artificial fiber material selected from the group consisting of secondary cellulose acetate, cellulose triacetate, and polyethylene terephthalate fibers, from an aqueous dispersion, a member selected from the group consisting of a single anthraquinone dyestuff and a mixture of anthraquinone dyestuffs of the formula



wherein R represents a member selected from the group consisting of radicals of the benzene, diphenyl and naphthalene series,

Y represents a member selected from the group consisting of hydrogen, lower alkyl, lower hydroxyalkyl, lower alkoxyalkyl, lower hydroxy-alkoxyalkyl, lower halogeno-alkyl, phenyl and aminophenyl,

Y represents a member selected from the group consisting of hydrogen, alkyl with 1 to 8 carbon atoms, alkoxy with 1 to 2 carbon atoms, alkenyl with 3 carbon atoms, cyclohexyl and chlorine provided that the latter stands in another than the para-position to the —OX-group.

Z represents a member selected from the group consisting of hydrogen, lower alkyl and lower alkoxy, and

n represents one of the integers 1, 2 and 3.

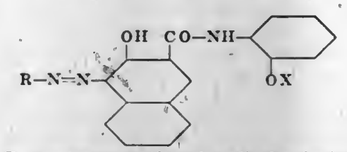
3,043,647

COLOURING OF POLYESTER FIBRES

Georges Kopp, Mont-Saint-Aignan, René Eugène Marcel Gangneux, Rouen, and Alfred Maxime Edouard Baron, Paris, France, assignors to Compagnie Francaise des Matieres Colorantes, Paris, France, a French company

No Drawing. Filed Jan. 3, 1958, Ser. No. 706,896
Claims priority, application France Jan. 5, 1957
4 Claims. (Cl. 8—41)

1. Process for the colouration of polyethylene terephthalate textile material which comprises printing a fabric made from the fibres with a printing paste containing an aqueous dispersion of a dyestuff on the general formula:



in which R represents a phenyl radical substituted by at least one member selected from the group consisting of hydrogen, halogen, alkoxy, nitro, cyano, phenyl amino, alkoxy phenyl amino, and benzene azo group, and X represents an alkyl group, and subjecting the treated fibres to steaming under superatmospheric pressure at a temperature between 101° C. and 150° C.

3,043,648

PROCESS FOR THE FAST DYEING OF NATURAL AND ARTIFICIAL POLYAMIDE FIBERS WITH WATER-SOLUBLE METAL-CONTAINING AZO DYESTUFFS

Hans Martin Hemmi and Albin Peter, Binningen, near Basel, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Dec. 9, 1958, Ser. No. 779,046
Claims priority, application Switzerland Dec. 9, 1955
8 Claims. (Cl. 8—42)

1. A process for the fast-dyeing of fibers selected from the group consisting of wool, silk, nylon and Perlon in the weakly acid region with water-soluble, 1:2-metal-containing azo dyestuffs to give level and fast shades, which comprises dyeing the said fibers in an aqueous liquor consisting essentially of (*a*) a mixture of (1) a basic water-soluble polyglycol ether, produced by combining ethylene oxide with a polyamine of the formula

$$C_{18}H_{35}—O—CH_2—CHOH—CH_2—R_2$$

wherein R_2 stands for a member selected from the group consisting of the radical of an aliphatic diamine which contains not more than 6 carbon atoms and is connected to the adjacent —CH_2— group through a nitrogen atom, and the radical of derivatives thereof quaternated with dimethyl sulfate, and (2) a water-soluble polyglycol ether carboxylic acid of the formula

$$R_3—O—(CH_2CH_2O)_x—CH_2—COOH$$

wherein R_3 stands for a member selected from the group consisting of $C_{18}H_{35}$, alkylphenyl with 8 to 12 carbon atoms in the alkyl group thereof, and dialkylphenyl with 8 to 12 carbon atoms in the alkyl group thereof, and *x* stands for an integer greater than 19; (*b*) an organic acid; (*c*) an acid-binding buffer consisting of an alkali metal salt of an organic acid; (*d*) at least 10%, calculated on the weight of the fiber, of an alkali metal sulfate and (*e*) water, the dyestuff solution being added to the dyeing liquor, containing all the other ingredients, at a temperature below the boil, and conducting the dyeing at boiling temperature up to 100° C.

3,043,649

PROCESS FOR DYEING POLYHYDROXYLATED MATERIALS AND PREPARATIONS THEREFOR

Jacques Wegmann, Basel, Switzerland, assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Feb. 7, 1958, Ser. No. 713,804
Claims priority, application Switzerland Feb. 15, 1957
17 Claims. (Cl. 8—54.2)

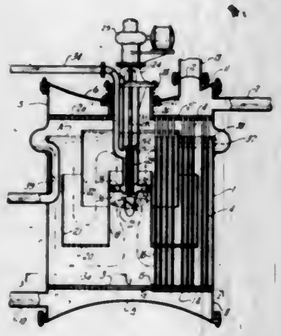
1. Process for dyeing and printing polyhydroxylated cellulosic materials by subjecting to the action of dry

heat the preliminarily substantially dried material on which there has been deposited a coloring mixture consisting essentially of (*a*) from about 20 to about 27% of its weight of urea, (*b*) an alkali and (*c*) a water-soluble organic dyestuff which contains a single reactive halogen atom.

3,043,650
PROCESS FOR DYEING CELLULOSE WITH REACTIVE DYESTUFFS
Jacques Wegmann, Basel, and Josef Renggli, Riehen, Switzerland, assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed Mar. 26, 1959, Ser. No. 801,985
Claims priority, application Switzerland Mar. 28, 1958
11 Claims. (Cl. 8—54.2)

1. A process for dyeing cellulose which comprises: (1) impregnating, in impregnation-liquor, cellulosic fiber with (*a*) acid-binding agent which in aqueous solution has a more alkaline reaction than trisodium phosphate and with (*b*) water-soluble organic dyestuff containing a reactive substituent selected from the group consisting of the acid sulfuric ester group, the acrylamino group, the β-chloropropionylamino group, the β-chloroethylsulfone group, the β-chloroethylamide group, the dichloropyrimidine and monochloro-1:3:5-triazine groups; (2) mechanically removing excess impregnation-liquor; and (3) maintaining the resulting moist impregnated cellulosic fiber at a temperature of at most 40° C. for at least two hours.

3,043,651
CATALYTIC CONVERTER
Kurt F. Pietzsch, 3248 Pinehurst Ave., Pittsburgh 16, Pa.
Filed Apr. 29, 1957, Ser. No. 655,832
4 Claims. (Cl. 23—1)



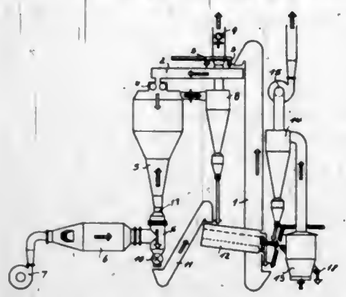
1. In a converter for carrying out exothermic reactions by vapor phase catalysis in the form of an outer shell having a pair of tube sheets mounted in vertically spaced relation to form a chamber therebetween for circulating cooling fluid and having catalyst tubes mounted between said tube sheets and communicating at their ends with inlet and outlet passages outside of said chamber in which the chamber between said tube sheets has inlet and outlet passages for the continuous flow of a cooling liquid with means for causing said cooling liquid to circulate between said tube sheets and for controlling the rate of flow thereof and in which a central draft tube is placed vertically in the center of the converter with its top disposed a distance from the upper tube sheet to provide adequate space for a coolant being propelled upward in said draft tube to discharge radially into the spaces between the surrounding catalyst tubes, the said chamber having an outwardly extending horizontal baffle at the lower end of the central draft tube terminating at its outer periphery in an outer draft tube, which is a large diameter vertical draft tube that extends upward concentrically with the central draft tube terminating at its upper end at a distance from the upper tube sheet essentially the same as the distance of the top of the central draft tube from the same tube sheet, the space above said horizontal baffle being open and an intermediate draft tube placed concentrically between the central draft tube and outer draft tube extending upward forming a flow barrier and with its lower end terminating at adequate distance from said horizontal baffle to cause the coolant discharging from the top of the central draft tube to pass through the spaces between the catalyst tubes in the section above said horizontal baffle in a sinuous path on its way to an outer flow passage, the combination with a propeller within said central draft tube, mounted on a shaft, axially centered in said central draft tube and supported on top of the converter, of a sleeve in said central draft tube coaxial with said propeller shaft having radial arms at the lower end thereof, said sleeve being provided with a partition to form a flow chamber communicatiing with an inlet passage for receiving a cooled cooling fluid, and said arms having perforations for the escape of said fluid into the mixing chamber formed by the top section of the central draft tube above said propeller, said radial arms disposed closely above the propeller being located in said central draft tube at adequate distance from the top of the central draft tube to obtain turbulent mixing of the cooled coolant with the circulating coolant in the mixing chamber to uniformly cool the cooling liquid discharging from the top of said mixing chamber into the spaces between the catalyst tubes, said propeller shaft being journalled by a bearing disposed within said radial arms which bearing is maintained at a safe operating temperature by the coolant passing through the flow chamber of the propeller shaft supporting sleeve into the mixing chamber, and means for withdrawing some of the cooling liquid from the top of said circulating chamber at the same rate as the amount of cooling liquid delivered through said inlet passage.

4. In the method of maintaining substantially uniform cooling throughout the reaction zone of a converter in which heat liberating catalytic reaction takes place between substances in the vapor phase in catalyst tubes at constant elevated temperatures, the steps which consist of continuously passing a large volume of cooling liquid of predetermined temperature from the axial center of the converter into the spaces between the catalyst tubes and cooling the circulating cooling liquid by continuously delivering into the circulating stream of cooling liquid controlled amounts of the same cooling liquid at temperatures substantially below the temperature of the circulating cooling liquid while constantly removing a like amount of the circulating cooling liquid from the converter.

3,043,652
FLUID BED PROCESS FOR GRANULATING FINE-GRAINED MATERIALS
Franz Schytil, Frankfurt am Main, Germany, assignor to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany
Filed Oct. 10, 1957, Ser. No. 689,403
Claims priority, application Germany May 18, 1951
8 Claims. (Cl. 23—1)

1. A process for granulating fine grain materials comprising introducing fluidization gas through the open bottom of a reaction chamber having outwardly diverging walls, the gas velocity decreasing in an upwardly direction in said chamber without the gas being separated from said walls over the major portion of the chamber, dropping fine-grained materials into said gas in said chamber to form a dense fluid bed for agglomerating conditions,

said materials with said bed resting solely upon the pillow of gas formed by the gas entering said chamber, and re-



moving heavy agglomerated particles by gravity flow through the open bottom of said chamber.

3,043,653
RECOVERY OF URANIUM FROM ZIRCONIUM-URANIUM NUCLEAR FUELS
Theodore A. Gens, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed July 8, 1960, Ser. No. 41,706
4 Claims. (Cl. 23—14.5)

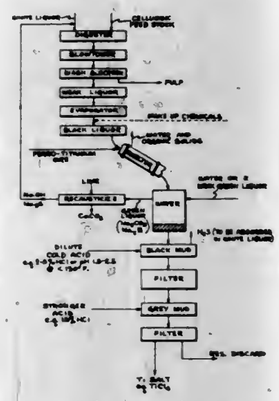
1. In a process for separating uranium from a uranium-zirconium metallic mass in which the initial steps comprise contacting said composition with anhydrous hydrogen chloride in a reaction zone at a temperature in the range 350° C. to 800° C. to form volatile zirconium tetrachloride and a uranium-containing nitric acid insoluble hydrochlorination residue and wherein said zirconium tetrachloride is removed from said reaction zone, the improvement which comprises contacting said nitric acid insoluble hydrochlorination residue with gaseous carbontetrachloride at a temperature within the range 550° C. to 600° C. to form a uranium chloride vapor, and thereafter condensing said vapor in a condensation zone.

3,043,654
TRANSPARENT FERROMAGNETIC MATERIAL AND METHOD FOR PRODUCING THE SAME
Lothar H. Brixner, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 7, 1959, Ser. No. 844,842
10 Claims. (Cl. 23—50)

1. A process for the production of red, transparent, ferromagnetic, hexagonal platelets of $Ca_2Fe_{10}O_{17}$ consisting of reacting at elevated temperatures ferric oxide and a calcium halide selected from the group consisting of calcium chloride, calcium bromide, and calcium iodide in the presense of an oxidizing gas.

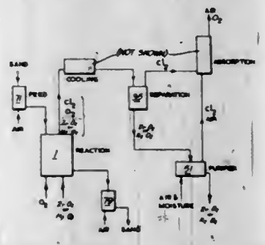
3,043,655
METHOD OF RECOVERING TITANIUM COMPOUNDS
Robert P. Green and Harold Judd, Hamilton, Ohio, assignors to Champion Papers Inc., a corporation of Ohio
Filed Mar. 29, 1960, Ser. No. 18,376
9 Claims. (Cl. 23—87)

1. The method of producing titanium tetrachloride as an adjunct to a pulp-making operation wherein spent pulp digestion liquor containing alkali sulfur compounds is introduced into a smelter for recovery of the caustic chemical content thereof, which method comprises charging an iron-titanium ore into said smelter along with said spent digestion liquor thereby simultaneously to remove water from said spent liquor, burn off the organic contents thereof and expose said ore to the heat and molten caustic chemicals prevailing within said smelter, and thereby producing a mixture of molten caustic chemical and modified titanium ore, the total quantity of elemental and combined sulfur in said liquor being at least equal to that theoretically required to react with the iron present in the ore to produce ferrous sulfide, adding said mixture to water and dissolving water soluble inorganic chemicals of said mixture in said water, separating from the water solution of caustic chemicals a residue of substances insoluble in said water, including the modified titanium ore, acidifying said residue with sufficient hydro-



chloric acid to produce a mixture having a pH of no less than about 1.5 while maintaining a temperature not exceeding substantially 130° F. thereby to dissolve iron from said residue as ferrous chloride while leaving the titanium content of said residue in a chemically active state, separating the undissolved material from the dilute acid after the iron has been dissolved from the residue, and then treating the undissolved material with hydrochloric acid of at least approximately 12% strength to convert the titanium content thereof into essentially iron-free titanium tetrachloride.

3,043,656
PRODUCTION OF ZIRCONIUM AND HAFNIUM OXIDES IN A FLUIDIZED BED
William Hughes, Fairfield, Stockton-on-Tees, and Arthur Wallace Evans, Nunthorpe, Middlesbrough, England, assignors to British Titan Products Company Limited, Durham, England, a company of the United Kingdom
Filed Feb. 19, 1962, Ser. No. 173,880
Claims priority, application Great Britain Aug. 6, 1953
17 Claims. (Cl. 23—140)



1. In a method of preparing metal oxide by establishing a fluidized bed of solids and introducing a halide of a metal of the group consisting of zirconium and hafnium which is in vapor state at 350° C. and oxygen into the bed and carrying away at least a portion of the metal oxide with the gases leaving the bed, the improvement which comprises introducing the metal halide into a lower portion of the bed in a multiplicity of dispersed streams

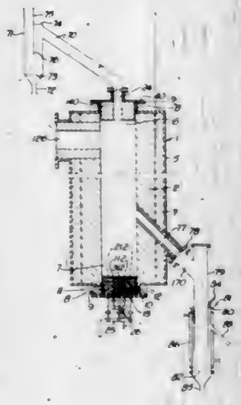
and introducing the oxygen into a lower portion of the bed in a multiplicity of other dispersed streams which are interspersed with the dispersed metal halide streams, the streams entering the bed around the perimeter thereof being streams of oxygen, and maintaining the depth of the bed low enough so that the pressure drop across the conduits is at least one-half the pressure drop across the bed and the ascending streams of metal halide co-mingle intimately with the ascending streams of oxygen in the bed within the perimeter thereof.

3,043,657

PRODUCTION OF METAL OXIDES

William Hughes, Stockton-on-Tees, and Arthur Wallace Evans, Middlesbrough, England, assignors to British Titan Products Company Limited, Billingham, England, a corporation of the United Kingdom

Filed Mar. 14, 1958, Ser. No. 721,579
Claims priority, application Great Britain Aug. 6, 1953
18 Claims. (Cl. 23—142)



2. In a method of preparing metal oxide by establishing a fluidized bed of solids and introducing a halide of a metal of the group consisting of titanium, silicon and aluminium which is in vapor state at 350° C. and oxygen into the bed and carrying away at least a portion of the metal oxide with the gases leaving the bed, the improvement which comprises introducing the metal halide into a lower portion of the bed in a multiplicity of dispersed streams and introducing the oxygen into a lower portion of the bed in a multiplicity of other dispersed streams which are interspersed with the dispersed metal halide streams, the streams entering the bed around the perimeter thereof being streams of oxygen, and maintaining the depth of the bed low enough so that the pressure drop across the conduits is at least one-half the pressure drop across the bed and the ascending streams of metal halide co-mingle intimately with the ascending streams of oxygen in the bed within the perimeter thereof.

3,043,658

STABILISATION OF PER COMPOUNDS

Reginald Henry Banfield, Luton, England, assignor to Laporte Chemicals Limited, Luton, England, a company of Great Britain

No Drawing. Filed July 6, 1960, Ser. No. 41,004
17 Claims. (Cl. 23—166)

1. An aqueous solution of a peroxy compound selected from the group consisting of hydrogen peroxide, organic peracids and inorganic peracids, stabilised with a water-soluble salt of tripyridyl.

3,043,659

PROCESS FOR THE PRODUCTION OF PURIFIED SILICON DIOXIDE

William Hughes, Stockton-on-Tees, and Arthur Wallace Evans and Bernard Harris, Middlesbrough, England, assignors to British Titan Products Company Limited, Billingham, England, a corporation of the United Kingdom

Filed Mar. 10, 1958, Ser. No. 720,470
Claims priority, application Great Britain July 25, 1955
3 Claims. (Cl. 23—182)

1. In a process for the manufacture of purified silicon dioxide, including vapour phase oxidation of silicon tetrachloride with a gas comprising free oxygen, the silicon tetrachloride and oxygen being substantially the only reactants, at a temperature in the range of from 500° C. to 1300° C. in a fluidised bed of particulate solid inert material having a mean particle size of from about 40μ to about 1,000μ to produce silicon dioxide and chlorine which are continuously delivered from the bed, the silicon dioxide consisting of aggregates of fine particles being in a fine flocculent state entrained in the chlorine, and the silicon dioxide particle aggregates being thereafter separated from the chlorine; the step of subjecting said silicon dioxide particle aggregates to the action of a purging gas selected from the group consisting of air, oxygen, oxygen carrying ammonia, a mixture of air and ammonia, and an air-water vapour-ammonia mixture at a temperature of from about 250° C. to about 600° C. to remove contaminants from the silicon dioxide.

3,043,660

PRODUCTION OF SILICON DIOXIDE

William Hughes, Fairfield, Stockton-on-Tees, and Arthur Wallace Evans, Nunthorpe, Middlesbrough, England, assignors to British Titan Products Company Limited, Billingham, England, a corporation of the United Kingdom

Original application Mar. 10, 1958, Ser. No. 720,470. Divided and this application June 2, 1958, Ser. No. 739,418
Claims priority, application Great Britain July 25, 1955
3 Claims. (Cl. 23—182)

1. Process for the manufacture of silicon dioxide of use in the rubber industry as a filler by oxidation in the absence of any substantial hydrolysis, of vapourised silicon tetrachloride with a gas comprising free oxygen, as substantially entirely the only reactants, comprising feeding the reactants into a bed consisting of a hot mass of particulate solid inert material having a mean particle size from about 40μ to about 1,000μ, the velocity of feed of at least one of said reactants being sufficient to maintain said bed in a fluidised state, so that at a temperature in the range from about 500° C. to about 1,300 C. said silicon tetrachloride and said free oxygen react within said bed to form silicon dioxide and chlorine which are continuously delivered from the bed, the silicon dioxide consisting of aggregates of fine particles being in a fine flocculent state entrained in the chlorine, substantially all of the silicon dioxide so produced being entrained in the product gases, and thereafter separating the silicon dioxide from the chlorine.

3,043,661

REMOVAL OF IRON FROM AQUEOUS CONCENTRATED ALKALI METAL HYDROXIDE SOLUTIONS

William I. Childs, Portville, N.Y., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 31, 1961, Ser. No. 99,664
6 Claims. (Cl. 23—184)

1. The method for absorbing and removing iron from an aqueous concentrated alkali metal hydroxide solution containing iron by contacting said solution at a temperature between about 20° and about 90° C. with an insoluble crosslinked copolymer of a mixture of a monovinylaryl monomer having the vinyl group as its sole aliphatic unsaturation and a copolymerizable crosslinking agent which contains at least two groups of the structure CH_2:C:, said crosslinking agent being present in molar amount equal to 0.2 to 20% of said monovinylaryl monomer, said copolymer having attached to the aryl nuclei thereof —CH_2—N-methyl glucamine groups in the hydroxide form and removing the surrounding alkali metal hydroxide solution from said copolymer.

3,043,662

METHOD FOR PRODUCING NITROGEN TRIFLUORIDE, DINITROGEN DIFLUORIDE AND NITROSYL FLUORIDE

Robert D. Lipscomb, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 20, 1959, Ser. No. 834,938
3 Claims. (Cl. 23—203)

1. Process for the preparation of inorganic nitrogen/fluorine compounds which comprises passing a nitrogen oxide and a fluoride of the group consisting of carbon tetrafluoride and carbonyl fluoride through a reaction zone of at least 1000° C. in the substantial absence of any other reactive substance and with a contact time within said zone not exceeding 10 seconds, rapidly cooling the gaseous reaction products and obtaining at least one member of the group consisting of nitrogen trifluoride, dinitrogen difluoride and nitrosyl fluoride.

3,043,663

PROCESS FOR PREPARING SILANE

Harold L. Jackson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 1, 1957, Ser. No. 675,575
9 Claims. (Cl. 23—204)

1. A method for preparing silane which comprises reacting a salt of fluosilicic acid with hydrogen at a temperature of at least 80° C. in the presence of an electropositive metal having an atomic number between 3 and 30, inclusive, and having a standard electrode potential of at least 0.44 volt and in the presence of a reaction medium inert to silane under the reaction conditions, said reaction medium comprising an aluminum trihalide in which the halogens have atomic numbers between 17 and 53, inclusive.

3,043,664

PRODUCTION OF PURE SILANE

Robert W. Mason, Morris Plains, and Donald H. Kelly, Gladstone, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed June 9, 1958, Ser. No. 740,548
5 Claims. (Cl. 23—204)

1. A process for the production of silane free of deleterious diborane, which comprises reacting a silicon halide with an alkali metal aluminum hydride in a solvent medium of the group consisting of tetrahydrofuran, dimethyl ether and diethyl ether in the presence of a minor amount, sufficient to prevent formation of diborane from a boron compound present as an impurity in the reaction mixture, of an alkaline earth metal aluminum hydride, said minor amount being about one tenth by weight of the amount of boron impurity, and removing diborane-free gaseous silane.

3,043,665

PURIFICATION OF BORON TRICHLORIDE

Jack R. Gould, Morristown, and David M. Gardner, Dover, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

No Drawing. Filed Sept. 6, 1955, Ser. No. 532,748
3 Claims. (Cl. 23—205)

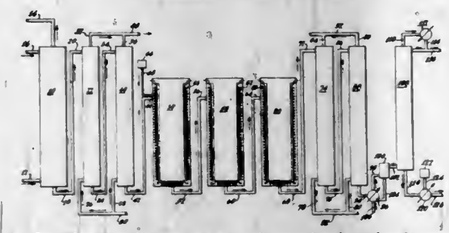
1. A method for the treatment of impure boron trichloride containing at least one of the materials chlorine and phosgene as impurities to provide a boron trichloride product containing readily separable more volatile contaminants which comprises contacting the impure boron trichloride in vapor phase with molten zinc at a temperature of about 420° to 600° C. and recovering a gaseous boron trichloride product containing readily separable more volatile contaminants.

3,043,666

PURIFICATION OF HYDROGEN PEROXIDE

George W. Siwinski, North Tonawanda, N.Y., assignor to FMC Corporation, a corporation of Delaware

Filed Mar. 11, 1960, Ser. No. 14,412
7 Claims. (Cl. 23—207)



1. In the cyclic process of producing hydrogen peroxide by hydrogenating an alkylated anthraquinone carried in a working solvent for said anthraquinone and its corresponding anthrahydroquinone to obtain the corresponding alkylated anthrahydroquinone, oxidizing said alkylated anthrahydroquinone to produce hydrogen peroxide and reform said alkylated anthraquinone, and extracting said hydrogen peroxide with water from said alkylated anthraquinone and said solvent in a water extraction zone, the improvement which comprises separating the recovered aqueous hydrogen peroxide solution in an initial purifying zone from entrained working solution and alkylated anthraquinone present in said aqueous hydrogen peroxide solution, passing said aqueous hydrogen peroxide solution from said initial purifying zone to a digestion zone, maintaining said solution in the presence of a stabilizer for hydrogen peroxide in said digestion zone at a temperature between 150° and 50° C. for a period of 1 to 10 hours to substantially increase the color of said solution without substantial loss of hydrogen peroxide, withdrawing digested aqueous hydrogen peroxide solution from said digestion zone and contacting it with a solvent for alkylated anthraquinone in a solvent extraction zone to remove any alkylated anthraquinone which is now present in said solution, passing said aqueous hydrogen peroxide solution free of alkylated anthraquinone from said solvent extraction zone to a separatory distillation zone, withdrawing vaporized water and low boilers overhead, and withdrawing purified aqueous hydrogen peroxide solution as bottoms from said distillation zone.

3,043,667

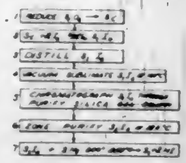
PRODUCTION OF ULTRA-PURE SILICON OR GERMANIUM

Bernard Manning, Waltham, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Oct. 31, 1960, Ser. No. 66,369
2 Claims. (Cl. 23—223.5)

2. A method for the production of an ultra-pure elemental metal selected from the group consisting of sili-

con and germanium comprising the steps of subliming a tetraiodide of said metal at a temperature between about 90° C. to 110° C. within an evacuated atmosphere having a pressure not exceeding 0.4 mm. mercury, dissolving said sublimed tetraiodide in a solvent to form a solution thereof, passing said tetraiodide solution through a purified silica gel adsorbent in order to remove impurities from said tetraiodide solution, recovering said tetraiodide from the solution, passing a mass of said recovered tetraiodide

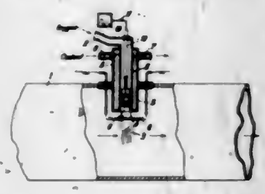


past a series of alternate melting and cooling zones at the rate of from about 1.0 centimeter to 2.5 centimeters per hour, reducing said tetraiodide to an elemental metal by passing a mixture of hydrogen gas and tetraiodide vapors past a suspended metallic body the lower portion of which is heated by induction to a temperature between about 600° C. and 850° C., said metallic body being comprised of the same metal as the metallic constituent of said tetraiodide, and depositing the reduced elemental metal on the heated portion of said body.

3,043,668
METHOD OF MEASURING THE PROPORTION OF COMBUSTIBLE MATTER IN GAS STREAMS

Ludwig von Bogdandy and Heinz-Dieter Pantke, Oberhausen, Germany, assignors to Hüttenwerk Oberhausen A.G., Oberhausen, Rhineland, Germany, a corporation of Germany

Filed July 7, 1959, Ser. No. 825,428
Claims priority, application Germany July 8, 1958
4 Claims. (Cl. 23—232)



2. A process for determining the proportion of combustible components in a gas stream having a variable concentration of said combustible components, comprising the steps of injecting an oxygen-containing gas at a substantially constant rate into said gas stream, igniting combustible components of the gas stream substantially only at the entrance point of the oxygen-containing gas, measuring photoelectrically the intensity of at least a portion of the radiant energy emitted by the resulting flame and converting the obtained electrical output into direct readings of combustible proportion.

3,043,669
CHEMICAL TESTING MEANS

Harold Charles, 48—03 Kissena Blvd., Flushing, N.Y.

Filed Sept. 21, 1960, Ser. No. 57,522
14 Claims. (Cl. 23—253)

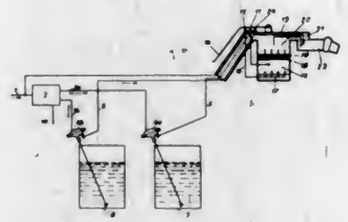


1. Chemical testing means for detecting the presence of a given constituent in a fluid comprising a base and a fibrous nap adhesively bonded to said base, said nap comprising short fibrous elements including a chemical reagent indicator which will change color upon contact with fluid containing said given constituent.

3,043,670
DEVICE FOR MANUFACTURING FOAM

Otto Anton Vieli, Rhazuns, Graubunden, Switzerland, assignor, by mesne assignments, to Werner H. Kreidl, New York, N.Y.

Filed July 14, 1959, Ser. No. 826,955
Claims priority, application Switzerland July 18, 1958
5 Claims. (Cl. 23—285)



1. In a device for the production of synthetic foam by mixing in accordance with a selectively variable predetermined ratio two components in the presence of compressed gas, the combination of a two-branch conduit fed from a source of pressurized gas, a control unit connected to one branch of said conduit, two pumps, each being operable when energized to deliver one of said components, both pumps being connected to said control unit receiving from said control unit pump energizing pulsating gas streams apportioned in accordance with the said ratio, and a foam generating unit comprising a structure defining on its interior in succession a gas chamber interconnected to the other branch of said conduit for receiving compressed gas, an impregnating chamber connected to the pump of one component for receiving delivered therefrom said one component and an expansion chamber, said structure furthermore defining a mixing chamber connected to said expansion chamber and interconnected to the other pump for receiving delivered therefrom the other component, a perforated guide separating said gas and impregnating chambers guiding the compressed gas into the impregnating chamber producing therein with the first component coarse foam, a strainer separating said impregnating and expansion chambers, the pressure of the gas forcing the coarse foam from the impregnating chamber through the strainer into the expansion chamber producing thereby a finely porous foam, said gas chamber, impregnating chamber and expansion chamber being aligned in one direction in said structure, the compressed gas proceeding in that direction throughout from said gas chamber through said impregnating chamber to said expansion chamber, the pressure of said gas thence forcing the finely porous foam from the expansion chamber into the mixing chamber, said second component being intimately mixed with the foam in the mixing chamber, and valve means including a single handle for controlling the delivery of the compressed gas and the two components to the respective chambers.

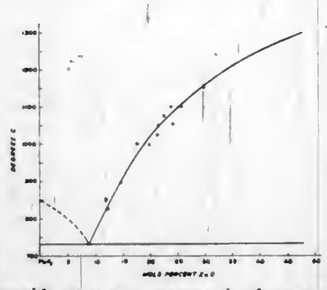
3,043,671
ZINC OXIDE CRYSTAL GROWTH METHOD

James W. Nielsen, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 7, 1960, Ser. No. 20,643
4 Claims. (Cl. 23—305)

1. Method for growing plate-like zinc oxide crystals comprising the steps of dissolving zinc oxide in a solvent

consisting essentially of lead fluoride, the amount of zinc oxide introduced being sufficient to produce saturation of



the lead fluoride at a temperature in the range of about 1030° C. to 1300° C., and cooling the resultant solution at a maximum rate of five degrees per hour.

3,043,672
SUBSTITUTED CATECHOL ANTIOXIDANTS

George G. Ecke, Ferndale, and Alfred J. Kolka, Birmingham, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 22, 1956, Ser. No. 605,481
7 Claims. (Cl. 44—69)

4. Gasoline normally tending to deteriorate in air containing about three milliliters of tetraethyllead per gallon of fuel, from about 0.01 to about 2 percent by weight of 3,5-di-alkyl catechol having alkyl groups containing from 4–10 carbon atoms characterized in that said alkyl groups contain a branched chain on the carbon atom immediately adjacent the phenolic nucleus, and a scavenging amount of an ethylene dihalide.

3,043,673
FILL-RESISTANT FLEXIBLE ABRASIVE SHEET

William A. Klein and John G. Wirsig, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,099
6 Claims. (Cl. 51—298)

2. A flexible coated abrasive sheet which is highly fill-resistant to leather and similar materials comprising a flexible backing and abrasive grains firmly bonded thereto by a total binder present in a high binder to mineral ratio at a gloss value of at least about 5 units, said binder at the surface thereof comprising a hardened phenol-aldehyde resin having uniformly distributed therein an oxy-containing compound compatible with the remaining binder constituents and selected from the class consisting of aliphatic polyhydric alcohols and aliphatic polyethers.

3,043,674
HERBICIDAL HEXACHLOROACETONE-OIL MIXTURE AND STABILIZATION THEREOF

Everett E. Gilbert, Morris Township, Morris County, and Edmund J. Rumanowski, Jersey City, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed July 29, 1959, Ser. No. 830,192
12 Claims. (Cl. 71—2.3)

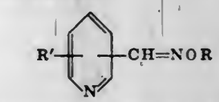
1. A herbicidal composition comprising (1) a mixture of hexachloroacetone and a high aromatic petroleum oil containing olefins and (2) an amount of the reaction product of salicylic aldehyde and an aliphatic polyamine selected from the group consisting of diethylenetriamine, triethylenetetramine, tetraethylenepentamine, ethylenediamine, 1,5-diamino-n-pentane, 1,6-diamino-n-hexane, 1,10-diamino-n-decane, 1,2-diaminopropane, 1,7-diamino-n-heptane, 1,4-diamino-n-butane, diaminoneopentane, 1,3-diaminopropane, 3,3'-iminobispropylamine and 1,3-diaminopropanol-2 sufficient to retard deterioration of the hexachloroacetone, said amount being at least about 0.01% by weight of the hexachloroacetone plus oil.

3,043,675
AGRICULTURAL COMPOSITION AND METHOD

Arnolds Steinhards, Kalamazoo Township, Kalamazoo County, Mich., and Wilhelm Mathes, Ludwigshafen am Rhine, Germany, assignors to Dr. F. Raschig, G.m.b.H., Ludwigshafen am Rhine, Germany, a company of Germany

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,579
6 Claims. (Cl. 71—2.5)

1. An agricultural composition comprising water, a surfactant, and from about 0.1 to about 80 percent of a compound selected from the class consisting of compounds having the formula:



wherein R is a hydrocarbon radical containing from 1 to 12 carbon atoms, inclusive, selected from the class consisting of alkyl, alkenyl, cycloalkyl, cycloalkenyl, cycloalkylalkyl, cycloalkenylalkyl, aralkyl and aralkenyl radicals, and R' is selected from the class consisting of hydrogen and methyl.

3,043,676
N,N-DIALKENYL-α,α-DIPHENYL ACETAMIDES AS HERBICIDES

Alan J. Lemin, Richland Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Jan. 10, 1961, Ser. No. 81,702
11 Claims. (Cl. 71—2.6)

1. The compound N,N-dialkenyl-α,α-diphenylacetamide wherein "alkenyl" is of from 3 to 4 carbon atoms.

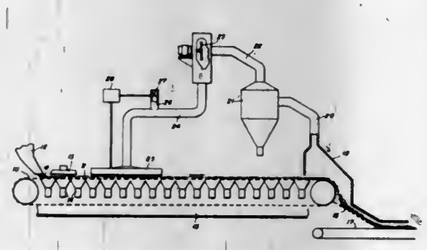
6. Emulsifiable concentrate comprising N,N-dialkenyl-α,α-diphenylacetamide wherein "alkenyl" is of from 3 to 4 carbon atoms, inclusive, a substantially water-immiscible solvent carrier therefor, and a surfactant, said N,N-dialkenyl-α,α-diphenylacetamide constituting 5% to 50% of the composition.

9. The method of preventing germination of seeds and controlling growth of plants which comprises contacting said seeds and plants with a herbicidally effective amount of N,N-dialkenyl-α,α-diphenylacetamide wherein "alkenyl" is of from 3 to 4 carbon atoms, inclusive.

3,043,677
SINTERING METHOD AND APPARATUS

John T. Monaghan, Chicago, Ill., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Sept. 28, 1960, Ser. No. 59,094
2 Claims. (Cl. 75—5)



1. In a sintering process in which a combustible sinter mix is delivered to a traveling grate and laid down as a permeable bed thereon, the bed is ignited at its upper surface, a downdraft of air passes through the bed to

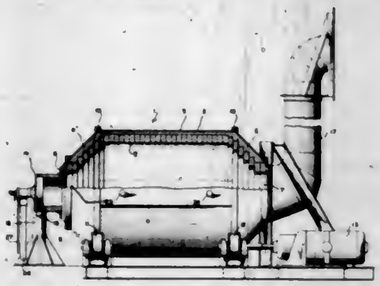
maintain a combustion zone which slopes downwardly from the point of ignition to a "burn-through" point adjacent the discharge end of the grate, and finished sinter discharges from the grate and breaks into fragments with formation of dust, the temperature of the upper surface of the bed being at a maximum immediately adjacent the point of ignition, the combination therewith of a method of handling dust thus formed comprising passing air through the sinter as it breaks on discharging from the grate and thereby picking up dust, separating from this air the major portion of the dust which it has picked up but leaving a minor portion of the dust entrained therein, thereafter directing at least a portion of the latter air and entrained dust back to upper surface of the sinter bed immediately adjacent the point of ignition, and blending and fusing the dust from this air into the bed.

3,043,678

RECLAMATION OF METALLIC VALUES FROM ALUMINOUS DROSS

John W. Lowry, Pocatello, Idaho, Warren S. Peterson, Guilford, Conn., and Thomas W. F. Foster, Concord, Calif., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware

Filed Aug. 12, 1959, Ser. No. 833,668
12 Claims. (Cl. 75—24)



1. A method of reclaiming metallic values from aluminous dross containing a substantial amount of large lumps comprising the steps of intimately tumbling said aluminous dross with a salt flux in solid form consisting of a mixture of sodium chloride, potassium chloride and a small but effective amount of a fluoride constituent adapted to strip oxide coating from aluminum metal values contained in said aluminous dross, in a maner characterized by violent cascading of said aluminous dross and salt flux mixture to break up said lumps of said aluminous dross, said flux being characterized by a melting point not greater than 1380 degrees F., melting said salt flux by applying sufficient heat to said aluminous dross and salt flux mixture, maintaining said mixture at a temperature ranging from 1350° F. to 1500° F., and then stripping the oxides from said dross by the action of said molten flux to release molten aluminous values while tumbling said mixture in a manner characterized by a gentle rolling action, said values agglomerating in a molten metal pool and said molten flux being present in an amount to also provide a protective covering for said molten aluminous values thereby substantially preventing losses of aluminum metal due to oxidation and burning.

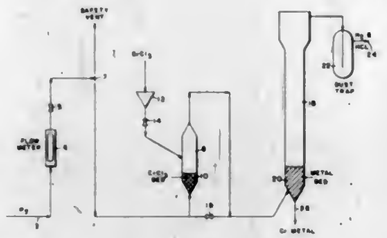
3,043,679

METHOD OF PRODUCING CHROMIUM

Ivor E. Campbell, New Albany, and Joseph H. Oxley, Columbus, Ohio, assignors, by mesne assignments, to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Filed Oct. 20, 1958, Ser. No. 768,223
4 Claims. (Cl. 75—26)

1. The method of continuously producing high-purity chromium metal which comprises entraining finely divided solid chromic chloride having a particle size of less than 60 mesh in hydrogen gas, introducing the hydrogen gas and entrained chromic chloride into a reactor containing a bed of finely-divided high-purity chromium metal having a particle size within the range of 20 to 100 mesh, the hydrogen gas and entrained chromic chloride being introduced at a velocity sufficient to fluidize the bed of chromium metal, maintaining the fluidized bed at a temperature in the range of about 800° to 950° C. such



that the chromic chloride is reduced to chromium metal having an impurity content no greater than that of the chromic chloride and hydrogen gas, depositing the thus produced chromium on the particles of chromium metal in the fluidized bed and removing the coated particles from the reactor, the ratio of hydrogen gas to entrained chromic chloride being such that the hydrogen is at least 50 times the stoichiometric amount required to completely reduce the chromic chloride to chromium metal.

3,043,680

METHOD OF PREVENTING CARBURIZATION IN MOLTEN METALS

Walter C. Hayes, Northridge, and Orson C. Shepard, Stanford, Calif., assignors to North American Aviation, Inc.

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,601
5 Claims. (Cl. 75—66)

1. A method of preventing carburization of an alloy steel in a hot molten metal system selected from the group consisting of sodium, lithium, tin, bismuth, and bismuth-tin, which comprises placing in said molten metal an alloy consisting essentially of approximately 5–30 weight percent of at least one metal selected from the group consisting of manganese, chromium, molybdenum, tantalum, vanadium, niobium, and titanium, and the remainder at least one metal selected from the group consisting of iron and nickel, thereby gettering carbon from said molten metal in said alloy.

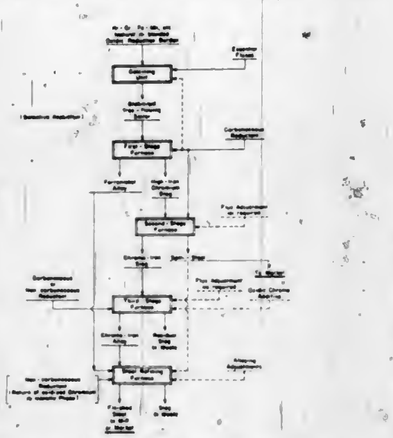
3,043,681

METALLURGICAL PROCESSES

Marvin J. Udy, Niagara Falls, N.Y., and Frank C. Senior, Pittsburgh, Pa., assignors, by mesne assignments, to Strategic Materials Corporation, New York, N.Y., a corporation of New York

Filed Jan. 29, 1959, Ser. No. 790,002
11 Claims. (Cl. 75—133.5)

1. Process for the production of stainless steel from a relatively low-grade complex reduction burden selected from the group consisting of (1) a natural iron oxide-bearing ore containing minor portions of nickel and chromium oxides and (2) a synthetic blend of a plurality of different natural ores constituted to provide a major proportion of iron oxide and minor portions of nickel and chromium oxides, said material being fluxed and thereafter subjected to a first reduction smelting in the presence of a reducing agent in an amount just sufficient to effect the selective reduction to the metallic state of substantially all of the nickel oxide contained in said material and a controlled portion only of the iron oxide content of said material with the production of a molten metallic iron-nickel alloy and a molten iron oxide-bearing slag containing the chromium oxide content of said material, separating and recovering said iron-nickel alloy from said molten slag, subjecting said slag to a second reduction smelting in the presence of a reducing agent in an amount sufficient to effect the selective reduction to the metallic state of a controlled portion of the residual iron oxide contained therein with the production of metallic iron and a molten iron oxide-chromium oxide slag, separating and recovering said metallic iron from said molten slag, subjecting the molten slag to a third



reduction smelting in the presence of a reducing agent in an amount sufficient to effect the reduction to the metallic state of the iron oxide and chromium oxide contained therein with the production of an iron-chromium alloy and a molten residual slag, separating and recovering said iron-chromium alloy from said residual slag, charging the separate iron-nickel and iron-chromium alloys to said refining furnace, and treating the alloys in said refining furnace by blending and smelting the same therein under action of said refining agent for the production and recovery of stainless steel.

3,043,682

LEAD-NICKEL-CADMIUM ALLOYS

Kenneth R. Grube, Hilliards, and Dean N. Williams, Columbus, Ohio, assignors, by mesne assignments, to The Bunker Hill Company, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Feb. 19, 1960, Ser. No. 9,719
3 Claims. (Cl. 75—166)

1. Lead-base alloys consisting essentially of from about 0.3 to about 4.0 percent cadmium, about 0.05 to 0.8 percent nickel, balance lead, said alloys being characterized by greatly improved tensile strength, creep resistance, and bend resistance as compared with unalloyed lead.

3,043,683

NIOBIUM-TITANIUM CHROMIUM ALLOY

Hugh B. Hix, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 23, 1959, Ser. No. 841,683
7 Claims. (Cl. 75—174)

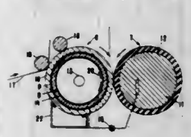
1. A high-strength, corrosion-resistant alloy composed of about 5–30% by weight of titanium, about 1–30% by weight of chromium, to which may be added, if desired, up to about 7% by weight of aluminum, up to about 2% by weight of carbon, up to about 2% by weight of cobalt, up to about 7% by weight of iron, up to about 7% by weight of manganese, up to about 2% by weight of nickel, up to about 2% by weight of silicon, up to about 7% by weight of tantalum, up to about 7% by weight of tungsten, up to about 7% by weight of vanadium, up to about 7% by weight of zirconium, the sum total of the added elements Al, C, Co, Fe, Mn, Ni, Si, Ta, W, V and Zr ranging up to about 7% by weight, the balance being niobium in an amount of at least 50% by weight.

3,043,684

ELECTROSTATIC PRINTING

Edward F. Mayer, Cleveland, Ohio, assignor, by mesne assignments, to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware

Filed Jan. 26, 1955, Ser. No. 484,215
8 Claims. (Cl. 96—1)



1. The method of producing a visual reproduction of a visual object which comprises: providing a first assembly constituting a layer of electrically conductive material and a photoconductive insulating layer of material having a resistivity in the dark of at least 10^{12} ohm-cm. and a resistivity when exposed to light of not more than 10^{10} ohm-cm., disposed thereon and secured thereto and a separate second assembly comprising a layer of electrically semiconductive material and a supporting metal layer secured thereto and lying along the layer of semiconductive material, the resistance across said layer of semiconductive material being between about 10^{7} and 10^{9} ohms, said semiconductive material being selected from materials which are less insulating that the material of the photoconductive insulating layer; disposing said assemblies in intimate relationship with the surface of the photoconductive insulating layer of the first assembly in physical contact with the surface of the electrically semiconductive layer of the second assembly, applying to the supporting metal layer a D.C. electric potential with respect to the layer of electrically conductive material whereby charge is leaked from the source of potential through the area of said physical contact to the photoconductive insulating layer and projecting a light image of said visual object onto the photoconductive insulating layer thus establishing on the layer of photoconductive insulating material an electrostatic reproduction of said light image, separating the portion of the first assembly bearing the electrostatic reproduction of the object to be reproduced from said second assembly and applying a dispersion of charged particles of powdered material to the surface of the photoconductive insulating material bearing the electrostatic reproduction of the image with the resultant formation on the said surface of a powder deposit comprising a visual reproduction of said light image.

3,043,685

XEROGRAPHIC AND MAGNETIC IMAGE RECORDING AND REPRODUCING

Joseph F. Rosenthal, Rochester, N.Y., assignor to Xerox Corporation, a corporation of New York

Filed July 18, 1957, Ser. No. 672,805
2 Claims. (Cl. 96—1)



1. In a method of reproducing a two component image pattern comprising forming a magnetic latent image of a first component of said image pattern in a magnetizable surface and forming an electrostatic latent image of the

second component of said image pattern in a photoconductive insulating surface and developing said magnetic latent image and said electrostatic latent image simultaneously with a composite electrostatically and magnetically attractable developer; the improvement of forming said magnetic latent image and forming said electrostatic latent image on a plate having a single composite reproducing surface formed of separate and distinct coplanar portions of photoconductive and magnetic materials respectively, by applying a magnetic field in image configuration to said surface to form the magnetic latent image portion on the magnetic material portion of said surface, and exposing said surface to an image pattern of light and shadow after the application of a uniform electrostatic field through said plate, to form the electrostatic latent image portion on said photoconductive material portion of said surface.

3,043,686

XEROGRAPHIC COLOR MASKING

John T. Bickmore, Rochester, N.Y., assignor to Xerox Corporation, a corporation of New York

Filed July 8, 1958, Ser. No. 747,256
1 Claim. (Cl. 96—1)



The method of xerographic color masking in which there is formed a superposed composite xerographic latent charge pattern on a xerographic plate including a photoconductive insulating surface layer from two separate image exposures each being to a different primary color component of an original color image comprising charging the photoconductive insulating layer to a first polarity, exposing the photoconductive insulating layer to a first primary color component of an original thereby forming a latent charge pattern of said first polarity wherein the amount of charge remaining on the photoconductive insulating layer is inversely proportional to the amount of light received during exposure to said first primary color component, applying uniform increments per unit area of charge of a second polarity opposite to said first polarity to the surface of the photoconductive insulating layer bearing said latent charge pattern from an adjacent corona discharge device adapted to deposit charge at a rate substantially independent of the potential on said photoconductive insulating layer thereby everywhere reversing the polarity of the photoconductive insulating layer to said second polarity, and charging everywhere to a sensitizing potential while maintaining the charge variations produced by said first exposure, and thereafter and as a separate and distinct operation exposing the photoconductive insulating layer in register to a second primary color component of said original image thereby forming a latent charge pattern of said second polarity in which the amount of charge varies directly with the amount of light received during the first exposure and indirectly with the amount of light received during the second exposure, one of the exposures being greater and producing more charge variation than the other.

3,043,687

PHOTOGRAPHIC COLLOID TRANSFER PROCESS

John W. Linge, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 4, 1959, Ser. No. 810,575
2 Claims. (Cl. 96—28)

1. A method of photographic reproduction which comprises exposing to a two-tone subject a substantially non-hardened gelatino-silver halide emulsion layer, said emulsion being not harder than a gelatin layer containing 0.7 gram of formaldehyde per pound of gelatin freshly coated, developing said exposed emulsion layer with a solution of potassium carbonate and acetamide in the presence of both a gelatin tanning silver halide developing agent and a substantially non-tanning silver halide developing agent to obtain a hardened gelatin and silver image in the areas of the emulsion layer corresponding to the highlights of the subject, and substantially unhardened gelatin, silver and silver halide in the areas of the emulsion layer corresponding to the shadows of the subject, said development being such as to prevent any substantial tanning of the emulsion layer in said areas corresponding to the shadows of the subject, pressing a sheet having an absorbent surface against said emulsion layer while said emulsion layer is moist to cause only the shadow areas of the emulsion to adhere to the sheet, and separating said sheet and emulsion layer to transfer only a stratum of said shadow areas of the emulsion layer to said sheet.

3,043,688

PHOTOGRAPHIC COLLOID TRANSFER PROCESS

Walter J. Weyerts and John C. Barnes, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 20, 1959, Ser. No. 814,378
8 Claims. (Cl. 96—28)

1. A method of photographic reproduction which comprises exposing to a subject a substantially unhardened gelatino-silver halide emulsion layer, said emulsion being not harder than a gelatin layer containing 0.7 gram of formaldehyde per pound of gelatin freshly coated, developing said exposed emulsion layer with an aqueous alkaline solution of a β-lower alkylaminoethanol in the presence of a gelatin tanning silver halide developing agent to obtain a hardened gelatin and silver image in the areas of the emulsion layer corresponding to the highlights of the subject, and substantially unhardened gelatin, silver and silver halide in the areas of the emulsion layer corresponding to the shadows of the subject, said development being such as to prevent any substantial tanning of the emulsion layer in said areas corresponding to the shadows of the subject, pressing a sheet having an absorbent surface against said emulsion layer while said emulsion layer is moist to cause only the shadow areas of the emulsion to adhere to the sheet, and separating said sheet and emulsion layer to transfer only a stratum of said shadow areas of the emulsion layer to said sheet.

3,043,689

NOVEL PHOTOGRAPHIC PRODUCTS AND PROCESSES

Howard C. Haas, Arlington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Aug. 22, 1960, Ser. No. 50,847
18 Claims. (Cl. 96—29)

1. In a photographic product for color diffusion transfer processes comprising a photosensitive element, including at least one silver halide emulsion layer, a color-providing substance associated with said emulsion, said color-providing substances being capable of forming an image-wise distribution of transferable color-providing substances as a function of development; an image-receiving element, including an image-receiving layer, and a rupturable container holding an aqueous alkaline processing solution; said photosensitive element and said image-receiving element being capable of being superposed on each other and said container, being associated with said elements in such a manner that the container, upon being ruptured, is capable of releasing said processing solution between said superposed elements; the improvement of having said image-receiving layer comprise an acetal prepared by condensing polyvinyl alcohol with 4-pyridine carboxaldehyde.

3,043,690

NOVEL PHOTOGRAPHIC PRODUCTS, COMPOSITIONS, AND PROCESSES

Milton Green, Newton, and Howard G. Rogers, Weston, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Oct. 12, 1960, Ser. No. 62,093
29 Claims. (Cl. 96—29)

7. A photographic process which comprises the steps of developing an exposed silver halide emulsion with an aqueous alkaline solution of a silver halide developing agent of the formula:

Ar—S—R

wherein Ar is a 2,5-dihydroxyphenyl radical and R is a member of the group consisting of a carbon-containing heterocyclic, an alkyl, a phenyl and a naphthyl radical; providing an imagewise distribution of mobile image-forming components in the undeveloped areas thereof as a function of and under the control of development; and transferring at least part of said imagewise distribution, by imbibition, to a contiguous image-receiving material to impart a transfer image to said image-receiving material.

3,043,691

PROCESS AND MATERIAL FOR THE DIRECT PRODUCTION OF POSITIVES BY THE SILVER SALT DIFFUSION PROCESS

Edith Weyde, Leverkusen-Burrig, Germany, assignor to Agfa Aktiengesellschaft, a corporation of Germany

No Drawing. Filed May 27, 1957, Ser. No. 661,606
Claims priority, application Germany June 9, 1956
9 Claims. (Cl. 96—29)

5. In the process for the production of direct positive silver images by developing a photographically exposed silver halide emulsion layer in the presence of a silver halide solvent while said silver halide emulsion layer is in direct contact with a transfer layer in the form of a binding agent holding nuclei that cause unexposed silver compounds to be reduced to silver by developing agents, whereby at the unexposed areas of the silver halide emulsion layer soluble silver complexes are formed and are transferred to the transfer layer where they are reduced to positive silver images, and thereafter separating the two layers from each other, the improvement according to which the binding agent is a member of the group consisting of starch ethers and galactomannans, said starch ethers being starch that has been etherified with a radical of the class consisting of aliphatic, araliphatic, hydroxyalkyl, carboxyalkyl, aminoalkyl and cyanoalkyl groups, and the transfer layer is dried before being separated from the emulsion layer.

3,043,692

PHOTOGRAPHIC PRODUCTS AND PROCESSES

Howard C. Haas, Arlington, and Howard G. Rogers, Weston, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Dec. 17, 1958, Ser. No. 780,980
22 Claims. (Cl. 96—29)



1. A photosensitive element for diffusion transfer color processes, said element comprising a support, a polymeric layer having a color-providing substance selected from the group consisting of dyes and dye intermediates disposed therein and a silver halide emulsion layer, said polymeric layer comprising a polymer prepared by acetalizing a portion of the hydroxy groups of polyvinyl alcohol with a compound selected from the group consisting of ortho-, meta- and para-benzaldehyde sulfonic acids and then esterifying the resulting partial acetal with a compound selected from the group consisting of ortho-, meta- and para-acylamidobenzene sulfonyl chlorides, the acyl group of said chlorides comprising less than 4 carbon atoms.

3,043,693

METHOD AND APPARATUS FOR MAKING PRINTING PLATES

Joseph Strauss, Hopewell, N.J., assignor to Trenton Times Corporation, Trenton, N.J., a corporation of Delaware

Filed Feb. 6, 1957, Ser. No. 638,509
6 Claims. (Cl. 96—36)

1. A method of making printing plates which comprises applying a coating of light sensitive shellac base cold-top enamel to one surface of a magnesium plate, drying said enamel while maintaining the same in relatively soft condition, exposing said dried enamel coating to a predetermined light pattern, developing the exposed enamel coating so as to leave only predetermined surfaces of said plate covered by said enamel, applying an acidified aqueous gum arabic solution to the exposed enamel coating, applying an etching ink top to the imaged, coated surfaces of said plate, applying etching powder to the ink top, then heating the plate to dry the ink, and then etching said plate to remove a portion of the metal of the plate to produce said imaged surfaces in relief thereon.

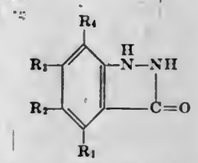
3,043,694

NOVEL CLASS OF 3-INDAZOLINONE DEVELOPING AGENT

Charles R. Barr, Richard W. Henn, and Ilmari F. Salminen, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 23, 1960, Ser. No. 30,777
21 Claims. (Cl. 96—55)

8. An alkaline photographic developer solution containing from 0.1 to 10 grams per liter of an alkali sulfite and as the sole photographic developing agent a compound having the formula:



in which R_1, R_2, R_3, and R_4 are selected from the class consisting of a hydrogen atom, an alkyl group having from 1 to 6 carbon atoms, a substituted alkyl group having from 1 to 6 carbon atoms, an alkoxy group having from 1 to 6 carbon atoms, an aryl group, a pyridyl group, a halogen atom, an amino group, and a —NHCOR group in which R is an alkyl group of from 1 to 6 carbon atoms, such that at least one of the groups R_1, R_2, R_3, and R_4 is an amino group.

17. A process for producing a dye image in an exposed light-sensitive photographic emulsion comprising the steps; development with a developer solution of claim 8, bleaching with an alkali ferricyanide bleach solution and fixing with an alkali thiosulfate composition.

3,043,695

PHOTOGRAPHIC FILMS

Francis Peter Alles, Westfield, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 27, 1959, Ser. No. 795,923
8 Claims. (Cl. 96—83)

1. A photographic stripping film comprising a flexible hydrophobic organic polymer film bearing on one sur-

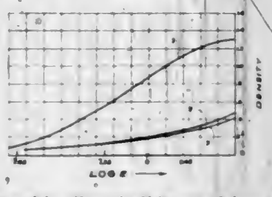
face, in order, a thin layer of a mixture of (1) 40 to 80 parts by weight of an n-butyl methacrylate/itaconic acid copolymer containing 96% to 99.5% by weight of the former and 0.5% to 4% by weight of the latter monomeric units and (2) 60 to 20 parts by weight of a vinylidene chloride/unsaturated ester/itaconic acid copolymer wherein said ester is taken from the group consisting of methyl, ethyl, propyl and butyl acrylate and methacrylate, acrylonitrile, methacrylonitrile and vinyl chloride and the monomeric units of the copolymer are present in the respective amounts by weight of 35% to 96%, 3.5% to 40% and 0.5% to 25%, an anchor layer of a water-permeable organic colloid comprising gelatin and a gelatino-silver halide emulsion layer.

3,043,696

SUBSTITUTED DISULFIDES AS ANTIFOGGANTS FOR SILVER HALIDE EMULSIONS

Arthur H. Herz and Norman W. Kalenda, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Sept. 4, 1959, Ser. No. 838,224
11 Claims. (Cl. 96—108)



6. A photographic silver halide emulsion sensitized with a labile sulfur compound and a gold compound, said silver halide emulsion being stabilized with from 1.0 to 10.0 g./mol. of silver halide of a compound selected from those represented by the following general formula:

$$R{-}NHCH(CH_2)_n{-}S{-}S{-}_n(CH_2)_nCHNH{-}R$$
$$\qquad\qquad\quad COOR_1 \qquad\qquad\quad COOR_1$$

wherein R represents an acyl group of an organic acid selected from the class consisting of an aliphatic carboxylic acid, an aromatic carboxylic acid, an aliphatic sulfonic acid and an aromatic sulfonic acid, R_1 represents a member selected from the class consisting of a hydrogen atom, an alkali metal atom, an ammonium group and an alkyl group, and n represents a positive integer of from about 1 to 4.

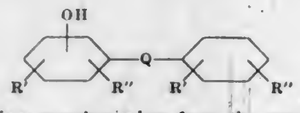
3,043,697

PHOTOGRAPHIC GELATIN-N-VINYLLACTAM SILVER HALIDE EMULSIONS CONTAINING PHENOLIC ANTIFOGGANTS

Frederick Charles Forsgard, New Brunswick, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 27, 1958, Ser. No. 757,460
4 Claims. (Cl. 96—109)

1. A photographic silver halide emulsion comprising on a dry-weight basis 30% to 70% silver halide, 10% to 60% gelatin, 8% to 50% of an organic water-soluble addition polymer taken from the group consisting of homopolymers of at least one N-vinyllactam containing 4 to 5 carbon atoms in the heterocyclic ring and copolymers of such an N-vinyllactam with an ethylenically unsaturated compound taken from the group consisting of vinyl salicylate, vinyl acetate, vinyl oxazolidone, methyl acrylate, acrylamide, methacrylamide, acrylonitrile, vinyl chloride, vinylidene chloride and styrene containing at least 80% by weight of said N-vinyllactam, and 5 to 50 millimoles per mole of silver halide of a phenol antifogging agent taken from the group consisting of (*a*) a hydrocarbon-substituted monohydric phenol of at least 10 carbon atoms having a hydrocarbon substituent in the para-position to the hydroxy group and 0 to 4 additional hydrocarbon substituents in the remainder of the benzene ring, said hydrocarbon substituents being the sole substituents in said phenol and being members taken from the group consisting of alkyl, aryl, aralkyl and cycloalkyl substituents, (*b*) hydrocarbon-substituted mononuclear monohydric phenols of at least 10 carbon atoms wherein the hydrocarbon substituents contains 4 to 12 carbon atoms and is in one of the positions ortho- and meta- to the hydroxyl group and other positions of the benzene ring are unsubstituted, (*c*) a compound of the general formula:



wherein Q is a member taken from the group consisting of a direct carbon-to-carbon linkage, —O—, —S—, $-(CH_2)_n-$ where n is 1 to 4 and



where each of R and R_1 is alkyl of 1 to 18 carbon atoms, and R′ and R″ are each a member taken from the class consisting of hydrogen, alkyl of 1 to 18 carbon atoms, cycloalkyl and aryl, and (*d*) resorcinol.

3,043,698

PHOTOGRAPHIC GELATIN-SILVER HALIDE EMULSIONS CONTAINING β-HYDROXYALKYL ETHERS OF POLYVINYL ALCOHOL

Vaughan Crandall Chambers, Jr., Fair Haven, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 18, 1960, Ser. No. 50,324
10 Claims. (Cl. 96—114)

1. A photographic silver halide emulsion comprising on a dry basis, by weight, 30% to 75% silver halide, 20% to 65% gelatin and 5% to 50% of a water-soluble β-hydroxyalkyl ether of a polyvinyl alcohol, wherein the alkyl group contains 2 to 3 carbon atoms, said ether containing intralinear units represented by the formulae

$$-[CH_2{-}CH{-}(OR){-}]_m \text{ and } [{-}CH_2{-}CH(OH)]_n-$$

where m and n represent the proportions of said units in the polymer and $m{:}n$ is in the ratio of 1:0 to 0.3:1.

3,043,699

ASCORBIC ACID FOR COLOR STABILIZATION IN WHEAT FLOUR

Frederick D. Schmalz and Norton W. Risdal, Minneapolis, Minn., assignors to F. H. Peavey & Company, Minneapolis, Minn., a corporation of Minnesota

No Drawing. Filed July 2, 1959, Ser. No. 824,464
8 Claims. (Cl. 99—85)

1. Unbleached wheat flour for alimentary paste food products having a relatively high carotenoid pigment content imparting a characteristic golden yellow color thereto, said flour containing effective color-stabilizing amounts of l-ascorbic acid less than about 0.01% by weight.

3,043,700

SOUFFLE MIX

Alina S. Szczesniak, Yonkers, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed May 9, 1960, Ser. No. 27,531
8 Claims. (Cl. 99—92)

1. A two-package soufflé mix which comprises a first package containing dried egg white and an egg white improving agent, a second package containing dried pregelatinized starch, water dispersible protein solids, a free flowing powdered fat, the minor proportion of a polysaccharide which has been hydrolyzed sufficiently not to cause excessive viscosity in the mix yet insufficiently to change its polymer character so that it can still be attacked by diastatic enzymes in preference to the pregelatinized starch.

3,043,701

METHOD FOR PRODUCING A BAKED CREAM PIE AND THE RESULTING PRODUCT

Duane E. Wickersham, 329 E. South St., Winchester, Ind.

No Drawing. Filed May 24, 1960, Ser. No. 31,268
3 Claims. (Cl. 99—92)

1. A method for producing a baked cream pie which comprises mixing a quantity of butter in discrete particles into a quantity of flour whereby a quantity of the flour becomes absorbed on the particles of butter, incorporating the mixture into a quantity of milk, adding sugar, admixing a quantity of sweet cream having a butterfat content of 40% into the resultant mixture, holding the thereby produced mixture in a quiescent state to permit the release of entrapped air bubbles incorporated therein during the mixing steps, filling an unbaked formed pie crust and thereafter baking the pie crust together with the filling.

3,043,702

OPTICAL GLASS

Heinz Brömer, Hermannstein, and Norbert Meinert, Wetzlar (Lahn), Germany, assignors to Ernst Leitz Gesellschaft mit beschrankter Haftung, Wetzlar, Germany

No Drawing. Filed Sept. 17, 1959, Ser. No. 840,529
Claims priority, application Germany Sept. 20, 1958
10 Claims. (Cl. 106—47)

1. Optical glass having a high refractory power, medium dispersion with an abnormal partial dispersion and excellent chemical stability consisting essentially of the heat reaction product of, in percent by weight of the glass, 45–70% of a lead salt of the group consisting of lead borate and lead phosphate; 10–30% of boric acid; 8–15% of aluminum oxide; about 7.4–23.3% of a member of the group consisting of 0–15% tantalum oxide, 0–15% zinc oxide, 0–15% cadmium oxide, 0–5% zirconium oxide, 0–15% of an alkaline earth oxide, 0–7% of a rare earth oxide, and mixtures thereof.

3,043,703

METHOD FOR THE PRODUCTION OF HYDRAULIC CEMENT

Richard G. Schlauch, Allentown, Pa., assignor to Fuller Company, Catasauqua, Pa., a corporation of Delaware

Filed Aug. 5, 1958, Ser. No. 753,227
12 Claims. (Cl. 106—100)

1. A method for the production of hydraulic cement comprising establishing cement-forming reaction conditions in a reaction zone, introducing cement-forming materials into the reaction zone, passing gases containing volatilized matter driven off the cement-forming material in the reaction zone while at a temperature above the condensation point of said volatilized matter through a discharge zone, causing the gases passing through said discharge zone to impinge upon a condensing surface, maintaining a cooling medium in contact with said condensing surface, controlling the transfer of heat between said cooling medium and said condensed component to maintain said condensing surface at a temperature below the condensation point of a volatilized component of said gases, whereby said volatilized component will condense on said condensing surface, and to maintain the exposed surface of said condensed component at a temperature at which it is in a tacky phase to facilitate adherence thereto of solid matter entrained in said gases, removing the condensed component from said condensing surface in said discharge zone, and separately discharging from said discharge zone the removed condensed component and adhered solid matter, and the gases from which said component was separated.

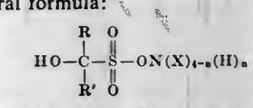
3,043,704

COATING COMPOSITIONS HAVING REDUCED ODOR ON DRYING

Oliver J. Grummitt, Cleveland, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 24, 1956, Ser. No. 561,141
5 Claims. (Cl. 106—252)

1. A coating composition which dries at least in part by oxidation containing from about 0.001% to about 5% by weight of an ammonium sulphonate having the following general formula:



wherein R is selected from the group consisting of aliphatic radicles of at least 10 carbon atoms, cycloaliphatic radicles of at least 6 carbon atoms, and aromatic radicles; R′ is selected from the group consisting of hydrogen and methyl, X is an organic hydrocarbon radicle selected from the group consisting of alkyl, cycloalkyl, arylalkyl and aryl radicals, and n is a number from 1 to 4.

3,043,705

COATED METAL ARTICLES AND COATING COMPOSITIONS THEREFOR

Harry J. Kiefer, Jr., Cleveland, Ohio, assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed May 8, 1958, Ser. No. 733,842
16 Claims. (Cl. 106—287)

9. A coating composition whose film-forming component is an organic solvent solution of film-forming material, said film-forming component having as its essential film-forming moiety (A) at least 50% by weight of at least one epoxidized material secured from sodium-polymerized hydrocarbon drying oil which has a molecular weight below about 10,000 and which has been prepared from 60–100% by weight of C_4–C_6 conjugated diolefin, balance vinyl aromatic monomer selected from the group consisting of styrene and ring-substituted alkyl styrenes having 1–2 carbons in each alkyl group, and which after being polymerized has been epoxidized to an oxirane oxygen content between about .25% and 8% by weight so as to have substantially all of its combined oxygen in the form of oxirane oxygen, and (B) as the remainder, modifying film-forming material which is compatible with said epoxidized material and which in the absence of said oxirane oxygen content in said epoxidized material would be incompatible therewith when said coating composition has been heat-cured.

3,043,706

MIXTURES OF ESTERS OF SULFOSUCCINIC ACID

William Simeon Fair and Kenneth D. Ballou, Charlotte, N.C., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 29, 1959, Ser. No. 843,075
6 Claims. (Cl. 106—287)

1. A mixture consisting essentially of (1) a bis-ester of sulfosuccinic acid with a substantially bi-molecular quantity of a member selected from the group consisting of higher fatty acid glycerides, higher fatty acid glycols, higher fatty acid alcohols and mixtures thereof, said

higher fatty radicals being characterized by a carbon chain length of from C_{12} to C_{20} inclusive and (2) a mixed diester of sulfosuccinic acid with a substantially mono molecular quantity of saturated aliphatic alcohols having from 4 to 10 carbon atoms inclusive and a substantially mono molecular quantity of a member selected from the group consisting of higher fatty acid glycerides, glycols, alcohols and mixtures thereof said higher fatty radicals being characterized by a carbon chain length of from C_{12} to C_{20} inclusive said (1) and (2) being present in a molecular ratio of about 1:3 to about 3:1, respectively.

3,043,707
METHOD OF BLEACHING CLAY AND IMPROVED CLAY PRODUCT
Allen D. Urfer, Crete, and Leyman E. Jackson, Oak Park, Ill., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 25, 1960, Ser. No. 17,473
9 Claims. (Cl. 106—288)

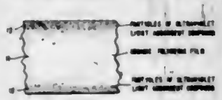
1. In a process for bleaching clay slurries with sodium hydrosulfite the step which comprises dispersing about 0.05% to about 2% of orthorhombic P_2O_5 in the clay slurry prior to the completion of the bleaching.

3,043,708
MODIFIED CARBON BLACK
John William Watson, Sutton Coldfield, Charles Edwin Kendall, Birmingham, and Roy Jervis, Newcastle, England, assignors to Dunlop Rubber Company Limited, London County, England, a company of Great Britain
No Drawing. Filed July 13, 1959, Ser. No. 826,447
Claims priority, application Great Britain July 22, 1958
17 Claims. (Cl. 106—307)

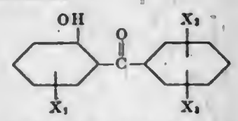
1. A modified carbon black for effecting improvement in natural and synthetic rubbers and the like, and having at least a portion of the reactive sites on the surface of carbon black particles chemically attached through carbon-to-carbon bonds with hydrocarbon groups forming additions to the carbon black and providing increased hydrogen content thereof.

7. A process for the production of modified carbon black which comprises mixing carbon black with a Friedel-Crafts alkylating agent in the presence of a Friedel-Crafts reaction catalyst.

3,043,709
ORGANIC POLYMERIC STRUCTURE HAVING AN ULTRAVIOLET LIGHT ABSORBENT COMPOUND INCORPORATED THEREIN
Leonard Edward Amborski, Buffalo, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 18, 1958, Ser. No. 750,068
20 Claims. (Cl. 117—7)

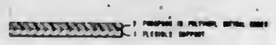


12. A process for imparting resistance to degradation by ultraviolet light to an organic polymeric shaped structure which comprises the steps of applying to the surface of said structure a substituted benzophenone derivative having the formula



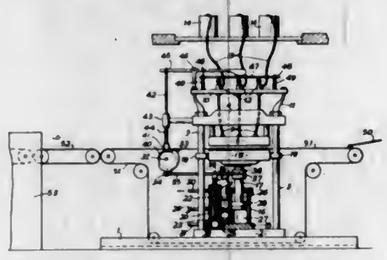
wherein X_1, X_2 and X_3 are each selected from the group consisting of hydrogen, hydroxy, alkyl, alkoxy and halogen; and thereafter heating the treated structure to a temperature above the melting point of said compound and below the melting point of said organic polymeric structure.

3,043,710
FLUORESCENT SCREENS
Stanley Hancock Patten and Arnold R. Kunes, Towanda, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 20, 1959, Ser. No. 794,520
15 Claims. (Cl. 117—33.5)



1. A fluorescent screen comprising a supporting film of a macromolecular hydrophobic polymeric material bearing on one surface a flexible layer of finely divided particles of a phosphor dispersed in a polyvinyl butyral binder, said binder being present in said flexible layer in an amount of 4 to 20 percent by weight based on the weight of the phosphor particles.

3,043,711
METHOD AND APPARATUS FOR THE DEPOSITION OF VISCOUS LIQUID MATERIALS
Evelyn S. L. Beale, Wraysbury, England, assignor to McCorquodale Colour Display Limited
Filed Oct. 17, 1957, Ser. No. 690,825
Claims priority, application Great Britain Oct. 29, 1956
10 Claims. (Cl. 117—38)



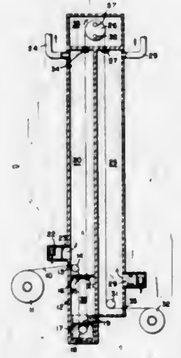
2. An apparatus for depositing a thin layer of viscous liquid coating composition in accurately defined areas on a surface comprising a cavitated matrix which may be engaged with said surface to deposit said composition thereon, motion means for relatively moving the matrix and surface away from each other to cause separation therebetween and control means automatically operative during said separation for controlling the movement of said motion means to produce such movement successively at a first speed and to a first extent wherein at least part of the liquid composition bridges the gap between the surface and matrix, then at a second speed lower than said first speed wherein a lesser part of the liquid composition bridges the separation gap, next at a third speed greater than said second speed to produce a still further separation movement to an extent greater than said first separation and finally to stop such movement.

3,043,712
METHOD OF PORCELAIN ENAMELING FERROUS METAL AND PRODUCT
Robert F. Toomey, Burton, Ohio, assignor to Gil Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed May 27, 1959, Ser. No. 816,040
9 Claims. (Cl. 117—50)

1. The method which comprises treating a cleaned ferrous base metal with an aqueous solution containing dissolved therein an appreciably water soluble inorganic salt

selected from the group consisting of inorganic nitrate and nitrite salts and an appreciably water soluble alkaline material compatible with said salt, the relative amounts of said salt and said material being from about 0.35 to 0.85 mole of said salt to from 0.80 to 1.7 moles of said material and the total amount of said salt and said material in said solution, the time and temperature being sufficient to oxidize the surface of said metal, pickling said metal with an acid solution, depositing elemental nickel on said pickled metal from a nickel solution, applying a porcelain composition to the nickel surface on said metal and fusing the same.

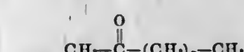
3,043,713
PROCESS FOR COATING NON-FIBROUS ORGANIC SHEET MATERIAL
Robert Jay Boyer, Clinton, Iowa, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 13, 1958, Ser. No. 734,903
5 Claims. (Cl. 117—62)



1. A continuous process for coating regenerated cellulose film which comprises the steps, in sequence, of passing a web of regenerated cellulose film through a moisture-proofing composition containing 30–70% nitrocellulose and 1–10% paraffin wax dissolved in a solvent, said wax having a melting point of at least about 140° F.; driving off the solvent from the coated web at a temperature of at least 190° F.; cooling the coated web to a temperature of 60° F.–100° F.; and, thereafter, humidifying said dried coated web to a moisture content of at least 7.5% by exposing said web to a moist atmosphere at a temperature of 158° F.–185° F.

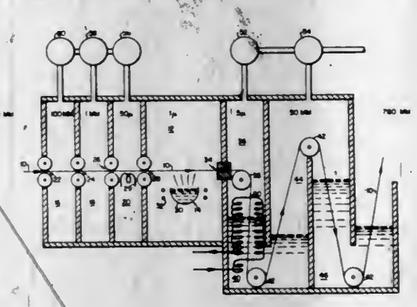
3,043,714
COATING COMPOSITIONS COMPRISING VINYL CHLORIDE-VINYLIDENE CHLORIDE COPOLYMER AND ALDEHYDE-KETONE CONDENSATION PRODUCT MODIFIER AND ARTICLES THEREWITH
Henry J. Bach, Mount Lebanon Township, Allegheny County, Pa., assignor, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland
No Drawing. Filed Feb. 23, 1961, Ser. No. 90,976
15 Claims. (Cl. 117—75)

14. A coated product comprising a base having a baked film adhered to a surface thereof, said film comprising a homogeneous mixture of a copolymer of vinyl chloride and vinylidene chloride containing from about 30% to about 75% by weight of vinyl chloride with the balance of the copolymer being vinylidene chloride and having a specific viscosity of about 0.12 to about 0.30 measured in a 0.4% solution of the copolymer in nitrobenzene and being substantially free of homopolymers of vinyl chloride and vinylidene chloride and of copolymers thereof outside of the stated range of proportions, and at least about 3% by weight, based on the total weight of resin in the mixture, of a thermoplastic aromatic hydrocarbon solvent-soluble condensation product of from 1.3–2.5 mols of aldehyde with 1.0 mol of a ketone having the formula



in which n is an integer from 1–4, said condensation product having a softening point of from 100–175° C.

3,043,715
METHOD AND APPARATUS FOR VACUUM COATING METALLIC SUBSTRATES
Philip J. Clough, Reading, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Aug. 13, 1958, Ser. No. 754,830
4 Claims. (Cl. 117—107)



4. The process of coating a metallic substrate with another metal which comprises the steps of passing the substrate into a vacuum chamber maintained at a pressure below about 10 microns Hg abs., heating the substrate during its passage into said chamber, providing a stream of vapors of said other metal in said vacuum chamber, passing said metallic substrate through said stream of metal vapors, condensing vapors of said other metal on the hot substrate, passing the thus coated substrate into a second chamber, maintaining the second chamber at a pressure lower than the pressure in the coating chamber, immersing the hot coated substrate in a liquid bath in the second chamber to cool the substrate, condensing vapors of the liquid bath immediately adjacent the surface thereof, and passing the substrate through a barometric seal comprising said liquid.

3,043,716
PROCESS OF BONDING POLYOLEFIN RESINS TO POLAR SOLID SUBSTRATES, RESULTANT COATED ARTICLE AND POLYOLEFIN COATING COMPOSITION
Warren Froemming Busse, George Henry Bowers III, and John Brian Armitage, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 14, 1958, Ser. No. 728,068
19 Claims. (Cl. 117—132)



9. A process for adhering a thermoplastic high molecular weight polyolefin, obtained by the polymerization

of 1-olefins selected from the group consisting of ethylene and homologous 1-olefins, to a polar, solid substrate which comprises contacting said solid substrate with said polyolefin in the molten state at a temperature from about 170° C. to about 300° C. in the presence of a s-triazine derivative selected from the class consisting of the polyallyl esters of cyanuric acid and the polyallyl melamines and subjecting the composition to pressure while the polyolefin is molten.

3,043,717

HYDROPHOBIC SHEET MATERIAL AND METHOD OF MAKING THE SAME

Walter M. Budde, Jr., Minneapolis, Minn., assignor to Archer-Daniels-Midland Company, Hennepin County, Minn., a corporation of Delaware

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,088
15 Claims. (Cl. 117—138.8)

9. The method of waterproofing a vinyl alcohol flexible sheet material comprising the steps of mixing epoxide esters of long chain fatty acids of over 6% oxirane value in fatty chains of 12–26 carbon atoms with a strong polycarboxylic acid material having a molecular weight over 180 and a pH value of from 2 to 5 in aqueous solution, coating the mixture onto the said sheet material, heating the said coated sheet material, and effecting an in-situ intermolecular bonding of the said ester of fatty acid material to said flexible sheet material.

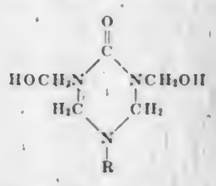
3,043,718

COMPOSITIONS, TEXTILES TREATED THEREWITH, AND PROCESSES FOR THE TREATMENT THEREOF

Melvin D. Hurwitz, Southampton, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application July 9, 1959, Ser. No. 825,885, now Patent No. 3,002,859, dated Oct. 3, 1961, which is a continuation of application Ser. No. 517,062, June 21, 1955. Divided and this application June 28, 1960, Ser. No. 39,228
20 Claims. (Cl. 117—139.4)

17. A process for treating a fabric comprising applying to a cellulosic fabric an aqueous solution of a mixture of 25 to 75 mole percent of a compound of the formula:



where R is selected from the group consisting of 2-hydroxyethyl, 2-methyl-2-hydroxyethyl, and alkyl groups having 1 to 4 carbon atoms, and 75 to 25 mole percent respectively of a water-soluble condensate of formaldehyde with melamine, and drying and curing the condensates on the treated fabric.

3,043,719

PROCESS FOR APPLYING CREASE RESISTANT FINISHES TO CELLULOSIC FABRICS AND PRODUCTS THEREOF

Francis K. Burr, Danvers, and Joseph S. Panto, Dover, Mass., assignors to United Merchants and Manufacturers, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 19, 1960, Ser. No. 50,606
7 Claims. (Cl. 117—139.4)

1. Method of improving the wash and wear and crease resistance properties of cellulosic fabrics, which includes the steps of impregnating the same with reactant precondensate material selected from the class of cellulose reacting materials consisting of urea formaldehyde, melamine formaldehyde, dimethylol ethylene urea, formaldehyde, triazones, and triazines, dissolved in an impregnating solution comprising a major proportion of an aliphatic ketone solvent and a minor proportion of water, and subsequently insolubilizing the precondensate in situ.

3,043,720

CELLULOSIC MATERIALS PLASTICIZED WITH HYDROXYPROPYLSUCROSE

Arthur W. Anderson, George K. Greminger, Jr., and Garth H. Beaver, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 28, 1957, Ser. No. 662,018
4 Claims. (Cl. 117—144)

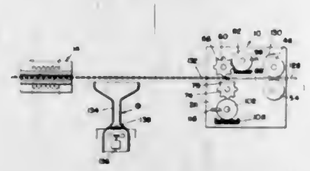
2. A process for producing plasticized cellulosic materials comprising impregnating into said materials an effective amount of octakis(2-hydroxypropyl)sucrose.

3,043,721

APPARATUS AND METHOD FOR BANDING ELONGATED CYLINDRICAL OBJECTS

Jerome G. Burns, Upper Darby, Pa., assignor to International Resistance Company, Philadelphia, Pa.

Filed Jan. 26, 1959, Ser. No. 789,188
10 Claims. (Cl. 117—212)



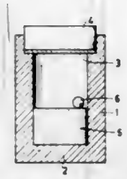
1. Apparatus for applying longitudinally spaced bands on a continuous length filament comprising a vertical mounting plate, a pair of shafts extending through and rotatably mounted on said mounting plate, a separate applicator wheel mounted on each of said shafts juxtaposed to one side of said mounting plate, said applicator wheels being identical and having a plurality of circumferentially spaced teeth extending radially from their outer peripheries, each of the teeth of said applicator wheels having a semi-cylindrical groove in its circumferential outer surface, said grooves extending across the entire circumferential length of the outer surface of said teeth, each of the radial end surfaces of each of said teeth having a groove extending radially along said end surface and extending across the end of the groove in the outer surface of the tooth, said applicator wheels being mounted in the same plane with the circles of the outer surfaces of the teeth of the wheels being on opposite sides of and substantially tangential to a straight horizontal line, a second pair of shafts extending through and rotatably supported on said mounting plate, a separate drive roll mounted on each of the shafts of said second pair juxtaposed to said one side of said mounting plate, said drive rolls being in substantially contacting relation and on opposite sides of the horizontal line passing between said applicator wheels, common means for simultaneously rotating said applicator wheels and one of said drive rolls, and means for applying a liquid coating material to the surfaces of the grooves in the teeth of said applicator wheels.

3,043,722

METHODS AND JIGS FOR ALLOYING AN ELECTRODE TO A SEMICONDUCTIVE BODY

Jan Antonius Houben, Johannes Gerardus Josephus van Meyl, and Nico Bram Speyer, all of Nijmegen, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Sept. 12, 1960, Ser. No. 55,261
Claims priority, application Netherlands Sept. 12, 1959
10 Claims. (Cl. 117—213)



1. A method of making a surface-alloyed electrode to a semiconductive body, comprising separately heating the said body and a mass of electrode-forming material in spaced apart relationship at a temperature at which the mass become molten, thereafter bringing the molten mass and body into abrupt contact with one another and dropping a weight on the contacting mass and body to cause the latter uniformly and intimately to contact one another, and cooling the mass and body to form an electrode alloyed to the body.

3,043,723

PROCESS AND PRODUCT UTILIZING TOBACCO STEMS

Desmond Cleverdon, Romsey, England, assignor to General Cigar Co., Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 17, 1959, Ser. No. 840,506
17 Claims. (Cl. 131—17)

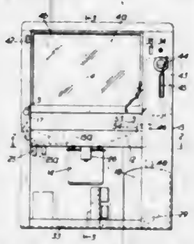
1. The improved process of converting tobacco into a coherent form adapted for smoking, which comprises extracting a quantity of tobacco stems with water to eliminate extractible components to an extent of at least about 20% by dry weight of said stems, wet-grinding the residual stem material, subjecting the resulting aqueous suspension of said stem material to pressurization and intensive shearing homogenization to yield a highly hydrated pulp having a water retention value of at least about 20, combining a quantity of dry-ground tobacco with said pulp, said quantity of dry-ground tobacco being greater on a dry weight basis than the dry solids in said pulp, and drying the combined pulp and dry-ground tobacco into said coherent form.

3,043,724

METHOD OF WASHING GLASSES OR THE LIKE

Leonard Bunn Balshaw, Stokes Valley, Wellington, New Zealand, assignor to Dishmaster Appliances Limited, Petone, New Zealand, a New Zealand company

Filed Apr. 24, 1958, Ser. No. 730,698
3 Claims. (Cl. 134—25)



1. The method of washing glasses and the like comprising the following steps in succession:

(*a*) hot wash with water and detergent at 190° F. for ten seconds;
(*b*) drain for twelve seconds to dispose of wash water and detergent;
(*c*) hot rinse with clear water at 190° F. for ten seconds;
(*d*) drain for twelve seconds;
(*e*) cold rinse with water at about 60° F. for fifteen seconds;
(*f*) drain for five seconds, whereupon the glasses and the like will be clean and at a temperature suitable for immediate use.

3,043,725

PHOTO TRANSISTOR

Robert E. Anderson, Kingsville, and William A. Little, Richardson, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

No Drawing. Filed Nov. 6, 1958, Ser. No. 772,162
8 Claims. (Cl. 148—1.5)

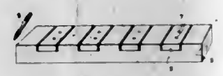
1. A grown-diffused junction silicon photo transistor bar comprising a collector portion containing phosphorus and having N-type conductivity, a base portion containing sufficient aluminum and boron to impart P-type conductivity to said base portion and an emitter portion containing sufficient arsenic to impart N-type conductivity to said emitter portion.

3,043,726

METHOD OF PRODUCING SEMI-CONDUCTOR ELECTRODE SYSTEMS

Pieter Johannes Wilhelmus Jochems, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 9, 1959, Ser. No. 785,829
Claims priority, application Netherlands Jan. 14, 1958
12 Claims. (Cl. 148—1.5)



1. A method for producing a semi-conductor device, comprising providing on the same surface of a semiconductive body and adjacent one another plural fused contacts of the same composition, adding to at least one but to less than all of the fused contacts an active impurity capable of altering the conductivity of the contact when incorporated therein, and thereafter subjecting the assembly to a heat treatment whereby the active impurity becomes incorporated in the contact to which it was added thereby to selectively alter its conductivity and make it different from those contacts to which the said impurity was not added.

3,043,727

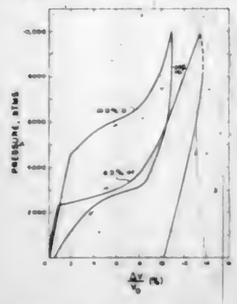
PLUTONIUM ALLOYS CONTAINING CONTROLLED AMOUNTS OF PLUTONIUM ALLOTROPES OBTAINED BY APPLICATION OF HIGH PRESSURES

Reed O. Elliott and Karl A. Gschneidner, Jr., Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 18, 1960, Ser. No. 23,110
5 Claims. (Cl. 148—4)

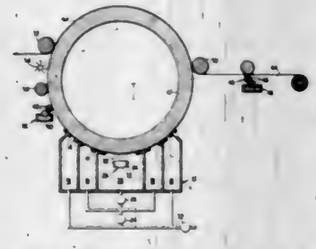
1. A method for making stabilized plutonium alloys having a mixture of allotropes consisting essentially of alpha and delta and thereby obtaining in such alloys hardness, positive coefficient of expansion, and density which are intermediate those of undiluted delta phase and undiluted alpha phase plutonium, characterized by compressing said alloy to at least a pressure which produces rapid

increase in density with a negligible increase in pressure, said alloys comprising binary alloys of plutonium con-



taining about 4.5 a/o of an element selected from the class consisting of indium, erbium, and hafnium.

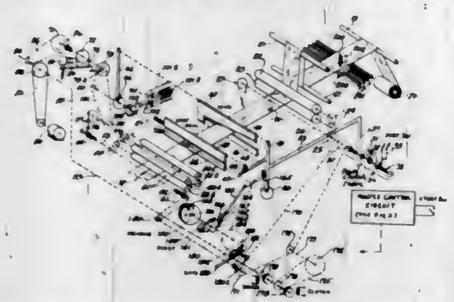
3,043,728
APPARATUS AND PROCESS FOR METALLIC VAPOR COATING
Robert A. Stauffer, Weston, Mass., assignor, by mesne assignments, to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 17, 1958, Ser. No. 721,888
14 Claims. (Cl. 156—231)



1. Apparatus for applying to a substrate a film of metal having a thickness of only a few millionths of an inch, said apparatus comprising a drum having a smooth shiny surface, the drum being rotatably mounted so as to form one wall of a high vacuum coating chamber, means for evacuating said coating chamber to a pressure substantially less than 100 microns Hg abs. a source of metallic coating vapors in the coating chamber capable of creating a vapor pressure of metal vapors substantially in excess of the pressure in said coating chamber, means forming a first vacuum seal with the surface of the drum to permit the uncoated surface of the drum to move into the coating chamber in position to be exposed to metallic coating vapors which condense on the drum, means forming a second vacuum seal with the surface of the drum to permit the thus coated surface of the drum to pass out of the coating chamber, means for adhesively uniting the metallic coating to the substrate by pressing the substrate against the metallic coating with an interposed layer of adhesive, and means for stripping the substrate and the metallic coating from the drum surface.

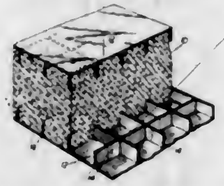
3,043,729
SHEET FEEDING AND SEALING MACHINE
Herman L. Seiden, Chicago, Ill., assignor, by mesne assignments, to G. T. Schjeldahl Company, a corporation of Minnesota
Filed June 27, 1958, Ser. No. 745,165
15 Claims. (Cl. 156—367)

1. In a sheet-feeding machine: separate sheet-infeeding and outfeeding sets of rollers spaced apart along the path of sheet travel; a driving motor and a first electrically-actuated clutch means operable to drivingly connect and disconnect both sets of rollers simultaneously with operating power from said motor; a movable cut-off knife located between said sets of rollers and operable in duty cycles to engage, sever, and withdraw from, a fed length of said sheeting between portions thereof engaged by both sets of rollers; a second electrically-actuated clutch means operable to connect said knife means for cyclic operation by power from said motor; and master control means having circuit connection with



said first and second clutch means and manually operable to actuate said clutch means in predetermined succession to operate said first sets of feed rollers and thereafter to effect duty-cycle operation of said knife means whereby to feed and then cut a length of sheeting the length of which depends on how long said first clutch means remains operated before the second clutch means is operated in each said cycle.

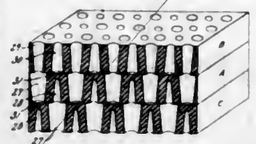
3,043,730
FOAMED CONSTRUCTION ELEMENT
George Mountford Adie, London, England, assignor to The Dow Chemical Company, Midland, Mich.
Filed Sept. 3, 1958, Ser. No. 758,725
Claims priority, application Great Britain Sept. 3, 1957
11 Claims. (Cl. 154—45.9)



1. A constructional element consisting of a body of foamed material selected from the group consisting of plastics and rubber and a protective facing skin of higher tensile strength than the foamed body material and attached to at least one side of the body, said skin having thin, flat ribs projecting from one face and extending in at least two directions across the skin to form a grid, said ribs being all embedded in the foamed body material to anchor the skin to the body, said ribs having such a depth and said body having such a thickness and rigidity that the ribs remain embedded in the body material and do not pass therethrough when a normal compressive force is applied to the skin, whereby said body transmits loads from one side to the other.

3,043,731
COMPRESSIBLE FOAM PRODUCT
Pedro A. Hill, Santa Ana, Calif., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 14, 1959, Ser. No. 846,464
5 Claims. (Cl. 154—54)

4. A method of making a compressible foam product which comprises laterally slicing in a plane substantially parallel to its top and bottom face a slab of foam rubber having a series of reversely tapered apertures therein, the smaller end of said apertures terminating in top stock, to form at least two portions, superposing said portions so that each individual aperture in one portion has a common axis with an individual aperture in the



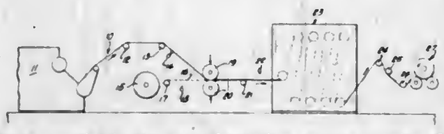
other portions and said terminal top stock is located in a plane between and substantially parallel to the top and bottom faces of the product and adjacent an open end of an aperture which extends continuously through a superposed portion, and adhesively securing said portions together.

3,043,732
TOP LABEL SURPRINTING
Ridgley G. Shepherd, Jr., Weston, Mass., assignor to Dennison Manufacturing Company, Framingham, Mass., a corporation of Massachusetts
Filed Jan. 2, 1957, Ser. No. 632,235
6 Claims. (Cl. 156—230)



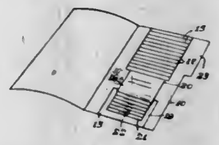
4. In the art of top label transfers having a temporary backing, the method which comprises applying to the face of a backing a transferable opaque thermoplastic resin coating containing non-metallic pigment ink, said resin coating being dissolved in a non-aqueous solvent, drying the coating, and surprinting over the coating with water-insoluble dye dissolved in a non-aqueous solvent for said coating so that the surprinted dye diffuses through the coating and is visible on the opposite side of the coating when the coating is transferred and the backing is removed.

3,043,733
METHOD OF MANUFACTURING AN INSULATING INTERLINING FABRIC
Carlyle Harmon, Scotch Plains, N.J., and William S. Barnard, North Wilbraham, and Cecil E. Johnson, Springfield, Mass., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts
Filed Dec. 5, 1957, Ser. No. 700,862
1 Claim. (Cl. 156—209)



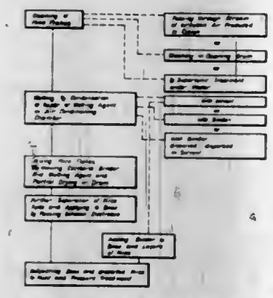
In a method of manufacturing a composite fibrous product comprising at least one layer of a textile fabric containing interengaged threads and at least one layer of a fibrous material containing overlapping, intersecting, loosely assembled fibers, said layers being adhered by the inherent adhesive properties of thermoplastic fibrous materials present in at least one of said layers, the improvement which comprises uniformly wetting with water an entire surface of at least one layer of a plurality of superimposed contacting layers, in a layer assembly of said textile fabric, and said fibrous material to raise the total moisture present in said layer to about 2% to about 25% in excess of the normal moisture equilibrium content (regain) of said layer, and while wetted, applying heat and pressure to the layer assembly, in a predetermined embossing pattern of spaced areas whereby said layers are adhered in said areas but remain substantially unadhered and relatively unaffected in substantially all other portions of said layers, the adhered pattern areas thus formed in the fibrous product having a firm and coalesced bottom surface and being defined by embossed unadhered areas presenting loose and fibrous side surfaces adjacent the adhered pattern areas and loose and fibrous outer surfaces adjacent said side surfaces, the separation between the adhered and unadhered portions thus being sharply and clearly defined whereby excellent hand, softness and loft are created in said composite fibrous product.

3,043,734
FILING DEVICE AND METHOD OF OPERATION
Robert W. Porter, Rockford, Ill., assignor to John Green Press, Inc., Rockford, Ill., a corporation of Illinois
Filed Mar. 6, 1956, Ser. No. 569,841
1 Claim. (Cl. 156—249)



The method of filing sheets in shingled relation on a filing device comprising a carrier sheet having a band of pressure-sensitive adhesive extending thereacross, and a series of strips of uniform width and uniform appreciable thickness, adjacent strips having contacting edges extending transverse to the direction of length of said band of adhesive, said strips being applied to completely cover said band of adhesive but being of a material providing little adherence thereto to facilitate removal of said strips individually from said carrier sheet, the method comprising peeling off a first strip, placing the edge of a sheet in contact with the thus exposed edge of the next adjacent strip, pressing the sheet into adhering engagement with the adhesive exposed by removal of the first strip, and continuing in the same way to replace each successive strip with a sheet.

3,043,735
METHOD FOR PRODUCING MICA LAYERS FOR ELECTRICAL INSULATION
Rudolf Flötgen and Karl Kalb, Kassel, Germany, assignors to Licentia Patent-Verwaltungs-GmbH, Hohe Bleichen, Hamburg, Germany
Filed Dec. 10, 1957, Ser. No. 701,884
Claims priority, application Germany Dec. 10, 1956
14 Claims. (Cl. 156—27)



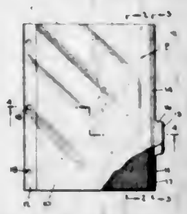
1. A method for producing layers of mica for electrical insulation composed of flakes of mica deposited on

a base, comprising the steps of preparing a suspension of mica flakes in a solvent containing a binder and agitating the suspension in a mixer, and electrostatically charging the mica flakes at a predetermined potential of a high voltage source for drawing the mica flakes from the suspension, scattering them and depositing them onto a base so as to form layers of mica.

3,043,736
METHOD FOR MAKING ADDITIVE FILTERS
George P. Touey, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 2, 1959, Ser. No. 796,259
11 Claims. (Cl. 156—152)

1. The method for the continuous manufacture of tobacco smoke filters which comprises continuously withdrawing crimped continuous tow of synthetic spun filaments from a package of such tow, banding the tow to a width of at least six inches, applying to the banded tow both bonding agent and powdered additive, reforming the tow thus treated into the desired filter shape and wrapping the filter with a wrapper.

3,043,737
TRANSPARENT SHEET PROTECTOR
Harold Engelstein, Far Rockaway, N.Y., assignor to Enbee Transparent Specialty Company, Inc., New York, N.Y., a corporation of New York
Filed May 6, 1957, Ser. No. 657,320
1 Claim. (Cl. 156—196)



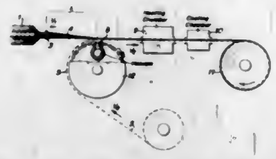
The method of producing protective covers comprising the steps of concurrently feeding two webs of transparent plastic material in superposed coplanar relation and two ribbons of plastic stripping interposed between said webs, adhesively combining said webs and ribbons to form a laminated band in which said webs are interconnected by said ribbons, one of said ribbons being adhesively secured to one edge of each of said webs, the other ribbon being parallel to said first ribbon and being spaced a relatively short distance therefrom to define a narrow channel therebetween, one of said webs being broader than the other to provide an excess margin, bending over said excess margin to lock-in the other edge of said laminated band, periodically cutting said band to provide individual covers of the desired length and die-cutting the channel on each cover to provide an integral tab for receiving an index card.

ERRATUM

For Class 156—209 see:
Patent No. 3,043,733

3,043,738
APPLYING THERMOSETTING RESIN TO POROUS SUPPORT BY USING VACUUM
József Demeter and Jenö Szabady, Budapest, Hungary
Filed Aug. 28, 1958, Ser. No. 757,866
Claims priority, application Hungary Sept. 6, 1957
7 Claims. (Cl. 156—229)

1. The process for applying a layer of thermosetting resin capable of being heat hardened on a carrier support which comprises the steps of applying in a uniform manner and at a predetermined speed a layer of resin lying between the softening and drip point onto one surface of the support which advances at a predetermined speed and is preheated, applying a vacuum on the surface of the support opposite the layer of resin to effect better adherence of the portion of resin in contact with



the support, applying heat above the melting point of the resin to lower the viscosity thereof for absorption into the support, maintaining the latter heat until detrimental gases and condensation byproducts are eliminated from the resin, and then cooling the absorbed resin.

2. Process according to claim 1 in which the upper part of the resin layer is stretched while the lower part adheres to the support.

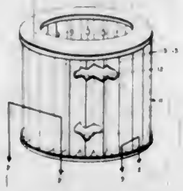
ERRATA

For Class 156—230 see:
Patent No. 3,043,732

For Class 156—231 see:
Patent No. 3,043,728

For Class 156—249 see:
Patent No. 3,043,734

3,043,739
FILTER ELEMENT FORMED OF PLEATED PAPER
Cary S. Giles, Lexington, and Edward W. Merrill, Belmont, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Dec. 31, 1958, Ser. No. 784,114
5 Claims. (Cl. 156—283)



1. In a process for the manufacture of pleated paper filter elements which includes the steps of folding a resin impregnated paper strip into a multiplicity of pleats, heating the pleated strip for a time and a temperature sufficient to at least partially cure the resin thereby setting the pleats and stiffening the paper and thereafter forming the pleated and cured strip into cylindrical filter elements with the pleats extending parallel to the principal axis of the cylinder, the process of reinforcing the pleats against collapse when the pleated filter element is used as a filter which comprises providing a plurality of relatively hard and non-deformable spherical bead-like units said units having at least a surface that becomes adhesive upon being heated to the temperature to which the paper strip is heated and said units having a diameter that is substantial relative to the spacing of the pleats, inserting at least one of said units between each successive pleat on one side of the paper strip after the pleat has been formed in said paper strip and before the strip has been heated to cure the resin contained therein, whereby when the strip is heated each of said units will adhesively secure to the sides of the pleat in which it is inserted and thereby reinforce said pleat against collapse.

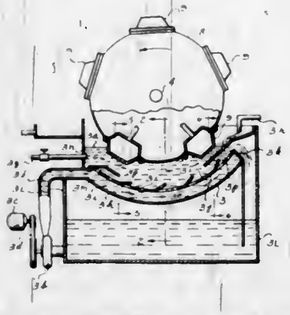
3,043,740
PROCESS FOR IMPROVING THE OPACITY OF CELLULOSE
Herbert Manfred Freud dit Jean Frasch, Nanterre, France, assignor to Framalite, Paris, France, a company of France
No Drawing. Filed July 22, 1957, Ser. No. 673,174
Claims priority, application France July 20, 1956
11 Claims. (Cl. 162—181)

1. Method of improving the opacity of cellulose, which comprises treating suspended cellulose with an aqueous alkaline medium containing TiO_2 formed of acid titanium gel which has been rendered alkaline by action of said alkaline medium and also containing a colloid which in said aqueous alkaline medium has a negative charge.

3,043,741
DRY PREPARATION CAPABLE OF YIELDING A CATION-ACTIVE MELAMINE RESIN SOLUTION BY DISSOLUTION IN WATER
Gustav Widmer, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland
No Drawing. Filed Oct. 20, 1959, Ser. No. 847,449
Claims priority, application Switzerland Jan. 18, 1956
3 Claims. (Cl. 162—167)

1. In the method for improving the wet strength of paper including forming a pulp slurry and sheeting said slurry to form said paper the improvement which consists in impregnating the pulp with a cation-active resin solution which has been obtained by dissolution in hot water of a dry preparation consisting essentially of dry melamine hydrochloride and a dry condensation product of 1 mol of melamine with 3–6 mols of formaldehyde, and in which preparation there are present per mol of melamine formaldehyde condensation product from 0.2 to 2 mols of melamine hydrochloride.

3,043,742
PULP TANK STRUCTURES FOR PULP MOLDING MACHINES AND METHOD
Merle P. Chaplin, South Portland, Maine, assignor, by mesne assignments, to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Original application Sept. 29, 1953, Ser. No. 382,985, now Patent No. 2,938,582, dated May 31, 1960. Divided and this application June 4, 1959, Ser. No. 818,157
6 Claims. (Cl. 162—228)



1. Method of molding fiber pulp articles which comprises: causing a suction forming die cylinder to rotate in partially submerged position in a substantially arcuate pool of pulp, feeding pulp into said pool under pressure through spaced apart pulp inlets at the bottom thereof in a controlled direction substantially corresponding to the direction of rotation of the die cylinder, and simultaneously feeding additional pulp into the same pool through other interspaced pulp inlets also at the bottom thereof and directing the feed of such added pulp in a different controlled direction than that at which the pulp is fed from the first mentioned inlets.

3,043,743
PROTECTING ARTICLES FROM ANIMALS WITH *STREPTOMYCES DISTALLICUS* EXTRACTS
Baron Richard Dana and William Henry Ray, Ashland, Ohio, assignors to Societa Farmaceutici Italia Farmitalia, Milan, Italy
No Drawing. Filed Sept. 1, 1960, Ser. No. 53,375
5 Claims. (Cl. 167—46)

2. A method of protecting articles against attacks by animals which comprises treating said articles with the antibiotic substances produced by the micro-organism *Streptomyces distallicus*.

3,043,744
ANTHELMINTIC COMPOSITIONS AND METHOD OF USE
Norman C. Brown, John E. N. Sloan, and Philip A. Kingsbury, Berkhamsted, England, assignors to William Cooper & Nephews, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Filed Dec. 8, 1958, Ser. No. 778,766
Claims priority, application Great Britain Dec. 20, 1957
7 Claims. (Cl. 167—53)

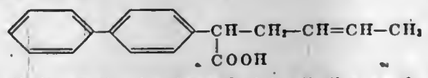
1. A method of combatting helminth infection in domestic animals, which comprises administering to the host having such infection a composition comprising an amount of an ester of 2:2'-dihydroxy-5:5'-dichlorodiphenylmethane sufficient to produce anthelmintic action, the ester being a derivative of an acid selected from the group consisting of acetic, propionic, butyric, caproic, enanthic and lauric acids.

3,043,745
ALLANTOIN AND COAL TAR EXTRACT COMPOSITION AND TREATMENT OF PSORIASIS
Arnold J. Singer, South Orange, N.J., assignor to Reed & Carnick, Kenilworth, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 11, 1959, Ser. No. 858,870
10 Claims. (Cl. 167—58)

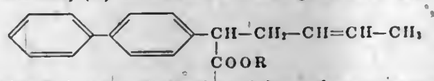
1. The method of treating psoriasis comprising applying to the psoriasis-afflicted area a medicament containing a cooperating mixture of allantoin in a concentration by weight exceeding ½% and a coal tar extract in a concentration exceeding 1% by weight.

3,043,746
2-(4-BIPHENYLYL)-Δ^4-HEXENOIC ACID AND DERIVATIVES AS ANTICHOLESTERINEMIC AGENTS
Guido Cavallini and Elena Massarani, Milan, Italy, assignors to Francesco Vismara S.p.A., Como, Italy
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,033
16 Claims. (Cl. 167—65)

1. A chemical compound selected from the group consisting of (*a*) 2-(4-biphenylyl)-Δ^4-hexenoic acid having the formula:



(*b*) alkali metal salts thereof; (*c*) alkaline earth metal salts thereof; (*d*) esters thereof having the formula:



in which R is a member selected from the group consisting of an alkyl radical containing from 1 to 10 carbon

atoms inclusive and an alkenyl radical containing from 1 to 10 carbon atoms inclusive; and (*e*) 2-(4-biphenylyl)-Δ^4-hexenoic acid amide.

3,043,747

TABLETS COATED WITH CARBOXYMETHYLCELLULOSE SHELLAC COMPOSITION

Stuart Long, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Continuation of applications Ser. No. 768,852, Oct. 22, 1958, now Patent No. 2,997,784, dated Aug. 29, 1961, Ser. No. 768,854, and Ser. No. 768,855, Oct. 22, 1958. This application Feb. 20, 1961, Ser. No. 90,223

20 Claims. (Cl. 167—82)

1. A solid medicinal dosage form coating composition for applying an even and uniform film coating which does not appreciably lengthen in disintegration time on ageing comprising a hydro-alcoholic solution of a water soluble cellulose derivative selected from the group consisting of methylcellulose, hydroxyethyl cellulose and sodium carboxymethylcellulose and suspended shellac.

3,043,748

FERMENTATION OF SUCROSE BY *ASPERGILLUS FLAVUS-ORYZAE*

Harold E. Kistner, Sr., Omaha, Nebr. (504 10th St., Sheldon, Iowa)

No Drawing. Filed May 26, 1960, Ser. No. 31,833

3 Claims. (Cl. 195—36)

1. A process for preparing a growth promoting substance by the fermentation of sucrose by fungi of the species *Aspergillus flavus-oryzae* comprising the steps of inoculating the fungi in a sucrose solution containing inorganic nutrient materials providing a carbon to nitrogen ratio between the ranges of 25 to 1 and 500 to 1, said solution having an initial sucrose concentration between 3 and 5% of the total by weight, developing maximum mycelial growth at a temperature range between 24° C. and 35° C. until the available nitrogen is substantially depleted, and thereafter supplying the developed mycelium with a second solution containing inorganic nutrient materials and sucrose, the sucrose being present in an amount of at least 20% of the total by weight, conducting the fermentation of said second solution in a substantial absence of available nitrogen at about 28° C. to substantial completion, and thereafter removing from the fermented solution the filtrate containing the growth promoting substance.

3,043,749

PREPARATION OF 2-KETO-L-GULONIC ACID

Hsing T. Huang, Groton, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 28, 1960, Ser. No. 45,783

5 Claims. (Cl. 195—47)

1. A process for the preparation of 2-keto-L-gulonic acid from L-sorbose which process comprises cultivating under submerged aerobic conditions at a pH of from about six to about nine a 2-keto-L-gulonic acid-producing species of the genus Pseudomonas in an aqueous nutrient medium comprising L-sorbose, a source of nitrogen, a source of carbon and a source of minerals.

3,043,750

PROCESS FOR PRODUCING VITAMINS IN THE B_{12} GROUP BY MEANS OF PROPIONIC ACID BACTERIA

Elisabeth Becher, Stockstadt (Main), and Konrad Bernhauer and Georg Wilharm, Aschaffenburg, Germany, assignors to Hoffmann-La Roche Inc., Roche Park, Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 15, 1959, Ser. No. 859,574

Claims priority, application Switzerland Dec. 24, 1958

4 Claims. (Cl. 195—96)

1. In a process for producing vitamin B_{12} activity by fermentation of a nutrient medium with a Propionibacterium microorganism, the improvement which comprises employing *Propionibacterium shermanii* Strain 33 as the microorganism.

3,043,751

PROCESS AND EQUIPMENT FOR DETERMINING MICROBIAL SENSITIVITY TO ANTI-MICROBIAL AGENTS

Leon S. Goldman, Brooklyn, N.Y., assignor of ten percent to Harold C. Herman, Los Angeles, Calif.

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,572

18 Claims. (Cl. 195—103.5)

8. A highly water-insoluble nontoxic redox indicator for the detection of the viability of microorganisms consisting of a nontoxic inert supporting agent made of cellulose fibers, and an alkaloidal reagent salt of a cationic redox indicator imbedded in the interstices of the cellulose fibrous supporting agent, said alkaloidal reagent being one of the group consisting of silicotungstic acid and arsenophotungstic acid, said cationic redox indicator being one of the group consisting of triphenyltetrazolium and its chemical derivatives, methylene blue, and neutral red.

3,043,752

PROCESS OF LOW AND HIGH TEMPERATURE FLUIDIZED CARBONIZATION OF COAL

Pierre Foch, Forbach, Moselle, France, assignor to Charbonnages de France, Paris, France, a public institution of France

Filed Oct. 2, 1958, Ser. No. 764,898

Claims priority, application France Oct. 30, 1957

1 Claim. (Cl. 202—9)



A method for the carbonization of coal in a reactor having a low temperature carbonization stage and a carbonization stage separated by a grid for obtaining simultaneously a gas containing a large amount of tar with a high content of high molecular weight products and a highly degasified coke, comprising introducing finely divided crude coal preheated to a temperature below 400° C. into the low temperature carbonization stage of the reactor, maintaining a fluidized mass in said stage, carbonizing said fluidized preheated mass of crude coal at a low temperature in the range of between 450° C. and 600° C. to form semi-coke and to distill gas containing a large amount of tar rich in high molecular weight products; transferring the fluidized mass of semi-coke obtained by said low temperature carbonization directly by overflow and gravity into the carbonization stage of the reactor; maintaining a fluidized mass in said carboniza-

tion stage, carbonizing at the carbonizatiaon stage of the reactor said fluidized mass of semi-coke coming from the low temperature carbonization stage at a high temperature of over 700° C. to obtain a substantially degasified coke; and using the gases issuing from said high temperature carbonization directly through the grid separating both stages of the reactor, both as a fluidizing and low temperature carbonizing agent for the crude coal and as an entraining agent of the tar-rich gases distilled during said low temperature carbonization.

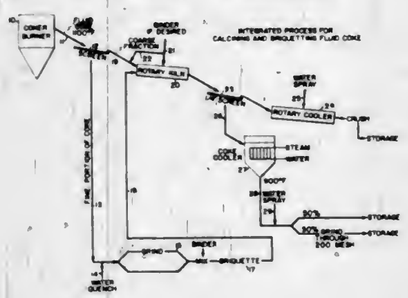
3,043,753

MANUFACTURE OF DENSE COHERENT CARBON MASSES

Edward A. Destremps, Murray Hill, and Edward J. Gornowski, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 3, 1961, Ser. No. 80,479

7 Claims. (Cl. 202—26)



1. A method of making dense coherent carbon masses from fluid coke which comprises withdrawing a stream of green coke particles from a fluid coking system, screening the coke particles into a coase fraction and a fine fraction, adding a binder to the fine fraction and forming said fines into suitable compactions of at least one-half inch size, passing the coarse fraction and the compactions in intimate contact through a rotary kiln heated to temperatures of about 1800° F. to 2800° F., withdrawing calcined coke product from the kiln, screening the compactions and large agglomerates from the calcined product, cooling and crushing the calcined compactions, cooling the product passing through the screen, grinding at least a portion of these screenings to pass through a 200 mesh screen, blending the several calcined coke products to give the desired particle size distribution, adding a carbonaceous binder and forming the resulting mixture into a dense coherent carbon mass.

3,043,754

DECORATIVE ALUMINUM ARTICLE AND METHOD FOR MAKING THE SAME

Ernest H. Hollingsworth and Fred Keller, New Kensington, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 3, 1959, Ser. No. 857,231

14 Claims. (Cl. 204—29)



1. A method of producing a wrought aluminum base alloy article having a permanently decorative pattern of contrasting light and dark bands on the surface thereof comprising casting an ingot of an aluminum base alloy consisting essentially of aluminum and about 0.5 to 3% by weight of iron under such non-uniform freezing conditions adjacent the periphery of the walls of the ingot as to produce distinct zones having particles of aluminum-iron constituent of substantially uniform size in each zone but the size of the particles in contiguous zones differing sharply from each other, the said ingot comprising an outer shell of varying thickness containing relatively large particles of alminum-iron alloy constituent occurring in a substantially non-eutectic-like structure enveloping an inner core containing relatively small, finely divided particles of aluminum-iron alloy constituent occurring in a substantially eutectic-like structure, the boundary between said zones being distinct but undulatory and reflecting the non-uniform freezing conditions existing during formation of the said ingot, scalping at least one surface of the said ingot to such a depth as to cut transversely through the said undulating boundary thereby exposing alternating bands of different sized particles of aluminum-iron constituent, working the said ingot in an axial direction at a temperature below that at which the relatively small particles start to grow to form an elongated wrought product, and subjecting the surface of the said wrought product to an etching treatment to reveal the pattern of contrasting light and dark bands.

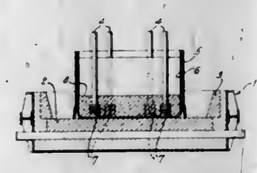
3,043,755

METHOD FOR STARTING ALUMINUM ELECTROLYTIC CELLS WITH SELFBAKING ANODE AND CURRENT SUPPLYING STUDS

Johannes Schmitt, Rheinfelden, Baden, Germany, assignor to Aluminium-Industrie-Aktien-Gesellschaft, Chippis, Switzerland, a joint stock company of Switzerland

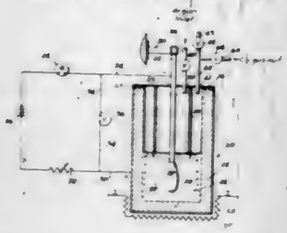
Filed May 25, 1959, Ser. No. 815,749

11 Claims. (Cl. 204—67)



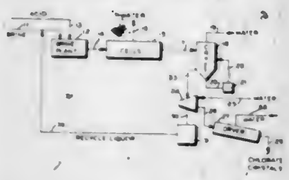
1. The method of putting into operation an aluminum electrolytic reduction cell having a self-baking anode and having a carbon bottom, which method comprises assembling in the cell before putting the cell into operation an embryo anode unit comprising a sheet metal cup which contains an unbaked carbonaceous mass adapted to form the anode upon baking and which rests initially on the carbon bottom of the cell, current supply contact studs extending into said carbonaceous mass, and partially coked carbon bodies made of a material compatible with the carbonaceous mass to insure a strong bond between said mass and said carbon bodies upon baking, and disposed between the lower ends of the contact studs and the bottom of the sheet metal cup, said carbon bodies having a diameter substantially greater than that of the lower part of the contact studs, and in the initial stages having high resistance but nevertheless forming good electrical connections between the studs and the bottom of the metal cup, and passing an electric current in series through the contact studs, through said partially coked carbon bodies, through the bottom of the sheet metal cup and through the carbon bottom of the electrolytic cell to cause the carbon bodies and at the same time the carbonaceous mass to be baked and coked into an intimately bonded integrated unit.

3,043,756
CALCIUM METAL PRODUCTION
George B. Cobel and Paul R. Juckniess, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed July 31, 1958, Ser. No. 752,350
5 Claims. (Cl. 204—69)



1. The method of producing calcium metal electrolytically consisting of electrolyzing a molten salt bath consisting of between 60 and 40 percent $BaCl_2$ and between 40 and 60 percent $CaCl_2$ at a temperature above the melting point of the bath and below the melting point of calcium metal, collecting the calcium metal as a solid on a submerged cathode, and removing the thus collected calcium metal from said cathode.

3,043,757
ELECTROLYTIC PRODUCTION OF SODIUM CHLORATE
Arthur J. Holmes, Tonawanda, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed July 8, 1959, Ser. No. 825,735
3 Claims. (Cl. 204—95)



1. In an electrolytic process for the production of sodium chlorate in which a chlorate brine containing sodium chloride and sodium chlorate is electrolyzed between electrodes selected from the group consisting of steel and composite electrodes, at least the anodes being composite electrodes, said composite electrodes consisting of a core of titanium bearing platinum superficially thereon, the improvement which comprises electrolyzing at a temperature of about 105 to 123° C., simultaneously vaporizing and removing water from the chlorate brine to maintain a chlorate concentration in the chlorate brine of about 675 to 800 grams per liter, removing the chlorate brine from the zone of electrolysis, cooling to crystallize sodium chlorate from the electrolyzed chlorate brine and separating the crystals from the residual liquor, fortifying the residual liquor by adding sodium chloride brine and charging the fortified chlorate brine to the electrolysis.

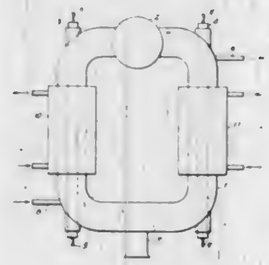
3,043,758
PROCESS OF ELECTROLYTICALLY PICKLING ALLOY STEELS
Friedrich Machu, Vienna, Austria, assignor to Othmar Ruthner, Vienna, Austria
No Drawing. Filed July 20, 1959, Ser. No. 828,039
Claims priority, application Austria Dec. 23, 1958
6 Claims. (Cl. 204—145)

1. Process for electrolytically pickling a stainless steel article which comprises the steps of subjecting said article as the anode to the action of a direct electric current in an electrolyte consisting essentially of an aqueous solution of at least one neutral salt selected from the group consisting of the chloride, sulfate and nitrate of an alkali metal including ammonium, at a current density between about 6 and about 10 amperes per square decimeter for a period of about 10 to 60 seconds, the pH of said electrolyte being maintained between 1.0 and 7.0, and then dipping said article in a solution of a mineral acid selected from the group consisting of sulfuric, nitric, and hydrofluoric acid, and mixtures of nitric and hydrofluoric acids.

3,043,759
PRODUCING LUBRICATING OILS BY IRRADIATION
Chester L. Read, Westfield, and Peter J. Lucchesi, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 14, 1956, Ser. No. 628,214
8 Claims. (Cl. 204—154)

1. A process which comprises exposing a hydrocarbon mixture boiling in the range of 300 to 700° F. and consisting essentially of 60 to 95 weight percent of saturated hydrocarbons, 5 to 40 weight percent of unsaturated hydrocarbons, less than 2 weight percent of aromatics, and less than 25 weight percent of naphthenes, to radiation comprising neutrons and gamma rays having an energy above 1 mev. obtained from a nuclear reactor, at a temperature in the range of 100° to 600° F., a dose rate above 1 equivalent megaroentgens per hour, until 100 to 1400 equivalent megaroentgens have been absorbed, and recovering from the irradiated mixture a high quality lubricating fraction boiling above 700° F., having a viscosity above 35 SSU at 210° F. and a viscosity index above 125 and amounting to at least 50 weight percent of said hydrocarbon mixture.

3,043,760
METHOD FOR PRODUCING BODIES OF PREFERABLY NON-LINEAR POLYATOMIC SYNTHETICS
Gerlinde Bürklin and Erich Kasten, Erlangen, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany
Filed Mar. 12, 1958, Ser. No. 721,017
Claims priority, application Germany Mar. 27, 1957
16 Claims. (Cl. 204—162)



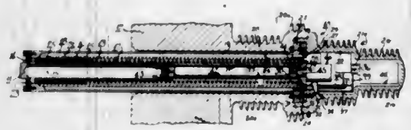
1. A process of making a polyethylene molding powder comprising re-circulating a suspension of polyethylene powder in oxygen-free nitrogen while irradiating the suspension with ultraviolet radiation, the suspension being at about 60° to 90° C., whereby the solubility of the polyethylene in xylol is decreased, said radiation being that of a mercury low-pressure discharge tube having a radiation maximum at about 254 mμ and an energy output of about 18.5 watts, the said irradiating being for at least several hours.

3,043,761
NUCLEAR REACTOR FUEL
Myron B. Reynolds, Alamo, Calif., assignor to General Electric Company, a corporation of New York
Filed Sept. 23, 1958, Ser. No. 762,892
12 Claims. (Cl. 204—193.2)



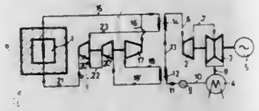
2. A nuclear fuel solid which comprises a frangible ceramic body provided with a plurality of V-shaped grooves of acute included angle disposed longitudinally along a surface thereof.

3,043,762
REACTOR CONTROL ROD ACTUATING SYSTEM
Cecil G. Martin, Cleveland, and Harold H. Humpal, Bedford, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed July 19, 1956, Ser. No. 598,837
10 Claims. (Cl. 204—193.2)



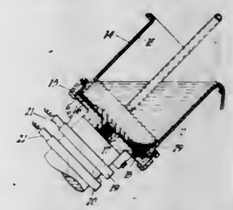
1. An atomic reactor pile of the pressurized coolant type having a reactor pressure vessel casing including as a part thereof a restrictedly communicating, external actuator thimble extension means having heat rejecting surface means to cool it, the same hot pressurized liquid coolant being in both said casing and its said extension means but at a lower temperature in said cooled extension means, a control rod movable into or out of said pile to respectively reduce or increase the reactivity thereof, stored energy means connected to move said rod into said pile, an hydraulic cylinder at least in part in said extension means, a piston in said cylinder and operatively connected to said rod, and hydraulic and electrical actuating and control means comprising; an electric motor, pump means driven thereby and connected to supply a pressure difference of said hot liquid coolant across said piston to overcome said stored energy means and move said rod out of said pile, safety valve means connected to said cylinder across said piston to selectively prevent or permit emergency rapid inward scramming movement of said piston and rod by said stored energy means, safety electrical actuating means operatively connected thereto, normal control valve means operatively connected from said pump to said cylinder on opposite sides of said piston in parallel with said safety valve means for control of normal slower shimming motions, normal electrical actuating means operatively connected thereto, all of said hydraulic and electrical actuating and control means being located in said cooler extension means with said pressurized but lower temperature hot coolant liquid to eliminate the need for any moving seals, pipe penetrations, or secondary cooling and to provide a compact assembly wherein said immersed electric motor may be of minimum size and operate efficiently.

3,043,763
HEAT TRANSFER SYSTEM FOR NUCLEAR POWER PLANT
Werner Spillmann, Kilchberg, Zurich, Switzerland, assignor to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland
Filed Sept. 22, 1959, Ser. No. 841,595
Claims priority, application Switzerland Oct. 7, 1958
5 Claims. (Cl. 204—193.2)



1. A heat transfer system for transferring heat generated in an atomic nuclear reactor to the working medium of a thermal power plant, comprising first and second heat exchangers located outside the reactor, each heat exchanger having two flow paths for heat exchanging media; a power plant circuit including one of the flow paths of each heat exchanger and arranged to lead the working medium in series through the first heat exchanger and then through the second heat exchanger; a turbine; a compressor driven by the turbine; a first heat transfer circuit including flow connections for leading a gaseous heat exchange medium in series through a flow path in the reactor in which the medium may absorb heat generated in the reactor, the turbine, the other of said flow paths of the first heat exchanger, the compressor and back to the flow path in the reactor; a second heat transfer circuit including flow connections for leading a gaseous heat exchange medium in series through a flow path in the reactor in which the medium may absorb heat generated in the reactor, the other of said flow paths of the second heat exchanger, and back to the flow path in the reactor; means in the second heat transfer circuit for circulating a gaseous medium through the circuit; and gaseous heat exchange medium in said first and second circuits.

3,043,764
GALVANIC DETECTOR
Archibald Charles Harvey, London, England, assignor to The Paterson Engineering Company Limited
Filed Apr. 27, 1959, Ser. No. 809,178
Claims priority, application Great Britain Apr. 30, 1958
2 Claims. (Cl. 204—195)

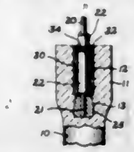


1. In a detector of the state of the chemical constitution of a liquid comprising a galvanic couple formed of electrodes of dissimilar metals adapted to be immersed in said liquid and measuring means for measuring the electric current produced, the improvement comprising an imperforate cup-like vessel for holding the liquid, means mounting the cup for rotation about its axis while inclined to the vertical, at least part of the material of which the cup is constructed forming one of the electrodes with which the liquid is in contact, and a bed of abrasive material heavier than the liquid and within the cup in contact with at least the said one of the electrodes to clean it upon rotational movement of the cup, said abrasive material being electrically non-conductive and chemically inert.

3,043,765
ANODE FOR CATHODIC PROTECTION SYSTEM

William T. Bryan and John L. Arwine, Dayton, Ohio, assignors to The Duriron Company, Inc., Dayton, Ohio, a corporation of New York

Filed Feb. 27, 1958, Ser. No. 717,910
13 Claims. (Cl. 204—196)

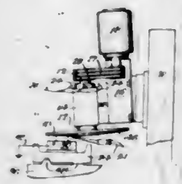


4. An anode construction for a cathodic system of the character described, comprising in combination a metal anode body portion, an elongated axial recess cast into an end of said anode body portion, an electrical conductor leading out of said recess for providing electrical and mechanical connection of said anode into said cathodic protection system, a transverse constriction in said recess and spaced from both inner and outer ends thereof for aiding in mechanically connecting said conductor to said anode body portion, said recess having outwardly of said constriction a substantially uniform cross-section substantially larger than the transverse dimension of said electrical conductor, a fusible plug of a metal lower melting than said metal anode body and formed in said recess interlocked therein with said constriction and engaging and electrically and mechanically connecting said conductor to said anode body portion in said recess, and plastic closure and insulating means closing the outer end of said recess around said electrical conductor effecting a watertight closure of said recess for electrically and chemically insulating said connection of said conductor to said anode in said recess.

3,043,766
ELECTROLYTIC GRINDING APPARATUS

Lynn A. Williams, Winnetka, Ill., assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois

Filed Sept. 14, 1959, Ser. No. 839,688
2 Claims. (Cl. 204—217)

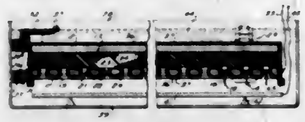


1. An electrolytic grinding device comprising an electrically conductive wheel body having abrasive particles forming a grinding face upon an annular surface thereof, said annular surface being slightly convex and having the form of a frustum of an obtuse cone with the frustoconical surface having an angularity of substantially two degrees with respect to the surface which is normal to the axis of the wheel, means for rotating said wheel about its axis, a work holder, a slide for carrying said work holder, means for guiding said slide for movement in a direction normal to the axis of rotation of said wheel so as to carry work held in said work holder across the grinding face in a direction substantially normal to the radius of said face which is most deeply advanced into the work as said work passes said wheel, means for supplying electrolyte to the interface between the wheel and the work, and means connecting the wheel and the work in an electrolyzing circuit such that the wheel is a cathode.

3,043,767
ELECTROPLATING APPARATUS

Alton E. Tobey, 2203 Mission, Santa Cruz, Calif.

Filed May 12, 1959, Ser. No. 812,647
2 Claims. (Cl. 204—297)



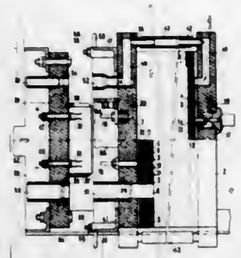
1. An electroplating system for use in the application of a variable thickness hard chrome plating selectively to shank and tip portions of flat headed steel spikes utilized as in fabricating rasp webs and comprising an electrolytic cell container, a horizontally extending anode adapted to be immersed with an upwardly facing surface in electrolyte in said cell, a cathode assembly including a horizontal fixture plate member of substantial thickness with an upper and lower horizontal surface having a plurality of spaced passages extending completely therethrough between said upper and lower surfaces for receiving said steel spikes therethrough, said passages having an annular shoulder therein adjacent said upper surface forming a shallow recess for receiving the flat head of said steel spikes, said passages having a reduced cylindrical cross-sectional area adjacent to and below said shallow recess extending downwardly therefrom for forming a constriction closely about the portion of the steel shank received therethrough to prevent plating of the shank in this region, said passage having an enlarged cylindrical cross-sectional area adajcent to and below said reduced cylindrical area, and terminating in a diverging conical section with respect to the longitudinal axis of said passage for surrounding the remaining portion of a steel shank received therethrough and extending below the lower surface of the fixture plate member, said conical section being substantially one half the depth of said fixture plate member, the lower surface of said fixture plate being disposed parallel to and in spaced relationship with the upper facing surface of said horizontally extending anode so the spike tips of steel spikes received in said passages will point substantially vertically downwardly to said anode surface, a resilient pad disposed over the upper surface of said fixture plate member, a cover plate, means for attaching and locking said cover plate for compressing said pad over the area occupied by the flat heads disposed in said shallow recesses, an insulated conductor attached to said fixture plate, a metal plating adherent to the surfaces of said fixture plate, cover plate and attachment means, and an insulating coating applied to exposed surfaces of said plated fixture plate, cover plate and attachment means surfaces, and an electroplating power supply connected to said anode and cathode assembly.

3,043,768
ELECTRODIALYSIS APPARATUS WITH REVERSAL OF POLARITY

Jacob Ruurd Olie, Santpoort, and Peter Johan van Winsen, Haarlem, Netherlands, assignors to N.V. Bronswerk, Amersfoort, Netherlands

Filed Apr. 5, 1960, Ser. No. 20,118
Claims priority, application Netherlands Apr. 8, 1959
2 Claims. (Cl. 204—301)

1. An improved electrodialytic multi-compartment apparatus comprising a plurality of ion-permeable membranes alternating with flexible frames to form a membrane stack comprising a plurality of narrow compartments bounded on their opposite major faces by said membranes and around their peripheries by said flexible frames; manifold channels leading through series of registering holes in the membranes to constitute continuous passages for the supply and discharge of liquids to the compartments; electrodes for the passage of current through the membrane stack; end plates at both ends of the stack having electrodes; means clamping the unit together in a liquid-tight manner, the improvements consisting in that all the liquid connection pipes for effluent and influent liquids as well as the electric connection leads to the electrodes are mounted so as to lead through one of the two end plates and through a connection plate adjoining the said one end plate, means for de-

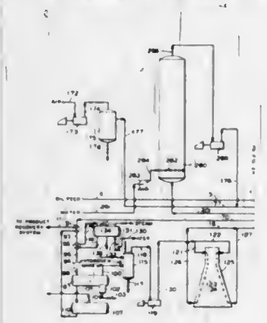


tachably clamping said connection plate onto the said adjoining end plate in a liquid-tight manner, said pipes being situated in the said adjoining plates in such a way that after releasing the connection plate from the adjoining end plate and rotating said adjoining plates with respect to each other over a certain angle and clamping said adjoining plates to each other in the said new position the connections for the electric current as well as the liquid connections for the various liquids are interchanged in a predetermined way.

3,043,769
DESTRUCTIVE HYDROGENATION OF HEAVY HYDROCARBONS

Marvin F. Nathan, New York, N.Y., and Everett W. Howard, Glen Rock, and Henry G. McGrath, Union, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed Oct. 19, 1953, Ser. No. 386,758
5 Claims. (Cl. 208—112)



1. A process for converting a residual oil obtained from a vacuum distillation having a gravity less than 20° A.P.I. and a carbon residue greater than about 0.6 percent by weight to a gas oil product and a heavier asphalt product which comprises contacting said residual oil with a catalyst consisting of a nickel oxide and tungsten oxide supported on alumina at a temperature of 750° to about 850° F., a pressure between about 500 and about 1500 p.s.i.g., in the presence of added hydrogen in the amount between about 2500 and about 30,000 s.c.f.b., controlling the severity factor of the reaction between about 0.09 and about 0.50 and recycling the asphalt product to the reaction zone.

3,043,770
HYDROCRACKING OF POLYNUCLEAR AROMATIC CONTAINING HYDROCARBON OILS

Fred H. Kant, Cranford, Donald L. Baeder, Fanwood, John A. Hinlicky, Irvington, and Chester L. Read, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

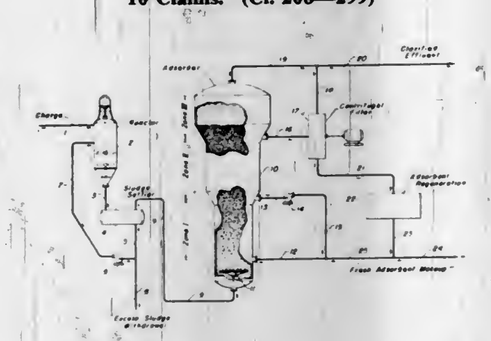
No Drawing. Filed Nov. 17, 1958, Ser. No. 774,145
4 Claims. (Cl. 208—112)

1. A method of converting a hydrocarbon oil feed boiling in the range of about 350° F. rich in polynuclear aromatics selected from the group consisting of heavy hydroformate, heavy catalytically cracked products, heavy cycle stocks from thermal and catalytic cracking and aromatic extracts of these feeds, which comprises hydrocracking said feed at a temperature between about 875° and 1050° F. under a pressure between about 200 and 1000 p.s.i.g. in the presence of platinum on eta alumina produced from aluminum alcoholate as catalyst and at a feed rate of said oil feed between about 0.5 and 3 w.hr./w. in the presence of between about 1000 and 5000 s.c.f. of hydrogen per barrel of said feed thereby converting said feeds to high octane number gasolines in high yields.

3,043,771
PROCESS FOR THE REMOVAL OF SLUDGE FROM A LIQUID STREAM

Herman S. Bloch, Skokie, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Sept. 10, 1959, Ser. No. 839,169
10 Claims. (Cl. 208—299)

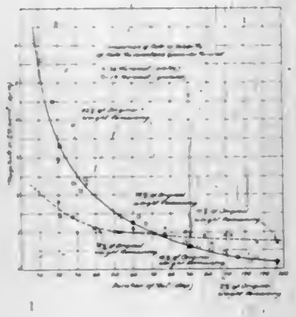


1. A continuous process for the removal of sludge comprising a liquid complex of an acidic catalyst and high boiling hydrocarbon polymers from a hydrocarbon liquid containing the same which comprises mixing solid granular adsorbent with said liquid to form a suspension and adsorbing said sludge onto at least a portion of said adsorbent to form sludge-rich particles and sludge-lean particles, the sludge-rich particles having a settling rate slower than the settling rate of said sludge-lean particles, flowing said suspension upwardly through a particle separation zone at a superficial liquid velocity less than the settling rate of said sludge-lean particles but greater than the settling rate of said sludge-rich particles thereby accumulating a preponderance of sludge-lean particles in the lower portion of said particle separation zone and a preponderance of sludge-rich particles in the upper portion thereof, withdrawing the resultant sludge-rich suspension from said upper portion and thereafter separating clarified liquid from said sludge-rich suspension.

3,043,772
METHOD OF TREATING WATER SYSTEMS AND PRODUCTS USEFUL THEREIN

Robert W. Liddell, Bethel, Pa., assignor, by mesne assignments, to Hagan Chemicals & Controls, Inc., a corporation of Pennsylvania

Filed Aug. 27, 1956, Ser. No. 606,318
11 Claims. (Cl. 210—57)



6. A method of maintaining the desired concentration of phosphate ions in a water system for long periods of time and at a substantially uniform level, which comprises flowing the water in contact with a molecularly dehydrated phosphate consisting essentially of the oxides MO, AMO, and P_2O_5 where M is an alkali metal and AM is an alkaline earth metal, said phosphate being in the form of flat platelets having a thickness no greater than one-fourth inch, all of which pass through a screen having two-inch square openings and all of which are retained on a screen having one-half inch square openings.

3,043,773
HIGH PHOSPHORUS CONTENT EXTREME PRESSURE LUBRICANT ADDITIVE AND METHOD OF PREPARATION THEREOF

Warren W. Cortiss, William D. Gilson, and Allan A. Manteuffel, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,561
20 Claims. (Cl. 252—46.7)

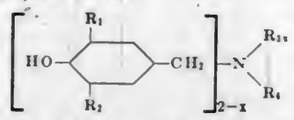
1. A method of preparing a thermally stable, noncorrosive extreme-pressure lubricant additive which comprises mixing a material selected from the group consisting of fatty material and sulfurized fatty material with 0.5–5.0% wt. of a fatty nitrogen compound selected from the group consisting of C_{16-22} fatty amines, C_{16-22} fatty amides, C_{16-22} fatty nitriles, and C_{16-22} fatty amine salts, and reacting said mixture with 0.5–15% wt. of a phosphorus sulfide at a temperature in the range from about 220°–350° F. for a time sufficient to produce a noncorrosive product, as measured by the copper-strip corrosion test.

3,043,774
ORGANIC COMPOSITIONS

Thomas H. Coffield, Birmingham, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Original application Sept. 23, 1955, Ser. No. 536,316, now Patent No. 2,962,531, dated Nov. 29, 1960. Divided and this application Dec. 28, 1959, Ser. No. 6,334
9 Claims. (Cl. 252—51.5)

1. A hydrocarbon lubricating oil normally tending to deteriorate in the presence of oxygen containing, an amount sufficient to inhibit such deterioration, a small antioxidant quantity of a 3,5-dialkyl-4-hydroxybenzylamine having the formula



wherein R_1 is alkyl of from 1–12 carbon atoms, R_2 is alkyl of from 3–12 carbon atoms characterized by being branched on the alpha carbon atom, R_3 is selected from the group consisting of alkyl of 1–12 carbon atoms, cycloalkyl of 5–6 carbon atoms, hydrocarbon aralkyl of 7–11 carbon atoms, hydrocarbon aryl of 6–10 carbon atoms and hydrocarbon alkaryl of 7–12 carbon atoms; R_4 is selected from the group consisting of hydrogen and R_3, and x is a whole number from 0 to 1.

3,043,775
ORGANIC MATERIAL CONTAINING A 4,4'-METHYLENEBIS PHENOL

Thomas H. Coffield, Heidelberg, Germany, and Allen H. Filbey, 2290 Robell Drive, Walled Lake, Mich.

No Drawing. Filed July 24, 1959, Ser. No. 829,201
26 Claims. (Cl. 252—52)

1. Organic material normally subject to oxidative deterioration, containing an antioxidant quantity of a 4,4'-methylenebis(2,6-dialkylphenol) in which all the alkyl groups contain from 3–8 carbon atoms, which alkyl groups are all branched on their respective alpha carbon atoms.

8. Lubricating oil normally susceptible to oxidative deterioration containing from about 0.001 to about 2 percent by weight of a 4,4'methylenebis(2,6-dialkylphenol) in which all the alkyl groups contain from 3 to 8 carbon atoms, which alkyl groups are all branched on their respective alpha carbon atoms.

3,043,776
FERROMAGNETIC OXIDIC MATERIAL

Gerard Heinrich Jonker, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 16, 1958, Ser. No. 728,849
Claims priority, application Netherlands Apr. 18, 1957
11 Claims. (Cl. 252—62.5)

1. A ferromagnetic material having a composition corresponding to about 2 to 21 mol percent of AO, 5 to 45% of MeO, and about 52 to 83% of Fe_2O_3 in which A is a metal selected from the group consisting of barium, strontium, lead and calcium, and Me is a bivalent ion selected from the group consisting of Fe^{++}, Mn^{++}, Co^{++}, Ni^{++}, Zn^{++}, Mg^{++}, Cu^{++}, and the bivalent complex

$$\frac{Li^{+}+Fe^{+++}}{2}$$

and consisting essentially of at least two crystal phases selected from the group of compositions consisting of:

A. Crystals having the composition

$$A_{1-y}Ca_yMe_2Fe_{16}{}^{III}O_{27}$$

in which y has a value up to 0.4, A is a bivalent ion selected from the group consisting of Ba^{++}, Sr^{++}, and Pb^{++}, and Me is a bivalent ion selected from the group consisting of Fe^{++}, Mn^{++}, Co^{++}, Ni^{++}, Zn^{++}, Mg^{++}, and the bivalent metal complex

$$\frac{Li^{+}+Fe^{+++}}{2}$$

said crystals having a c-axis of 32.8 A. and an a-axis of 5.9 A. in the hexagonal system;

B. Crystals having the composition

$$Ba_{(1-a-b-c)}Sr_aPb_bCa_cMe_2Fe_{12}{}^{III}O_{22}$$

in which a has a value up to 0.5, b has a value up to 0.25, and c has a value up to 0.25, Me is a bivalent ion selected from the group consisting of Fe^{++}, Mn^{++}, Co^{++}, Ni^{++}, Zn^{++}, Mg^{++}, and Cu^{++}, said crystals having a rhombohedral structure with a c-axis in the hexagonal system of about 43.5 A. and an a-axis of about 5.9 A.

C. Crystals having the composition:

$$Ba_{3-a-b-c}Sr_aPb_bCa_cMe_2Fe_{24}{}^{III}O_{41}$$

in which a has a value up to 1, b has a value up to 0.6, and c has a value up to 0.3, Me is a bivalent ion selected from the group Fe^{++}, Mn^{++}, Co^{++}, Ni^{++}, Zn^{++}, Mg^{++}, Cu^{++}, and the bivalent complex

$$\frac{Li^{+}+Fe^{+++}}{2}$$

said crystals having a c-axis of about 52.3 A. and an a-axis of about 5.9 A. in the hexagonal system;

D. Crystals having the composition:

$$Ba_{(4-a-b-c)}Sr_aPb_bCa_cMe_{2-d}R_dFe_{36}O_{60}$$

in which a has a value up to 1.0, b has a value up to 0.7, c has a value up to 0.6, Me is a bivalent ion selected from the group consisting of Fe^{++}, Co^{++}, Ni^{++}, Zn^{++}, Mg^{++}, R is a bivalent ion selected from the group consisting of Mn^{++} and Cu^{++}, d has a value up to 0.6, said crystals having a rhombohedral structure with a c-axis in the hexagonal system of about 113.1 A. and an a-axis of about 5.9 A.;

E. Crystals having the composition

$$A_{1-a}Ca_aMe_2Fe_{28}O_{46}$$

in which a has a value up to 0.4, Me is a bivalent ion selected from the group consisting of Fe^{++}, Mn^{++}, Co^{++}, Ni^{++}, Zn^{++}, Mg^{++}, and the bivalent complex

$$\frac{Li^{+}+Fe^{+++}}{2}$$

said crystals having a rhombohedral structure with a c-axis in the hexagonal system of about 84.1 A. and an a-axis of about 5.9 A.

3,043,777
METHODS FOR PREPARING IMPROVED MAGNETIC BODIES

Howard Lessoff, Milton, Robert Laird, Lawrence, and James D. Childress, Maynard, Mass., assignors to Radio Corporation of America, a corporation of Delaware

Filed Dec. 31, 1958, Ser. No. 784,163
8 Claims. (Cl. 252—62.5)

8. In a method for preparing a magnetic body of sintered ferrite crystallites from the group consisting of nickel ferrite, nickel-zinc ferrite, and magnesium-manganese ferrite, the steps of adding carbon black having a mean particle size up to 1000 A. in a proportion between 0.01 and 10 weight percent to a raw batch containing materials in proportions necessary to produce said ferrite and then sintering said batch at temperatures between 950° and 1450° C. in an oxidizing atmosphere.

3,043,778
SOAP BAR COMPOSITIONS

William A. Kelly, Teaneck, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Feb. 20, 1958, Ser. No. 716,273
9 Claims. (Cl. 252—107)

1. A bar of soap which disperses soap scum in hard water and consists essentially of, by weight based on the weight of the entire bar, (*a*) from 5 to 25% of an alkali metal salt of a fatty acid methyl taurate, said fatty acid containing from 12 to 20 carbon atoms and the cationic portion of said alkali metal salt being selected from the group consisting of sodium and potassium; (*b*) from 15 to 60% of a water soluble alkali metal coconut soap, and (*c*) from 2 to 25% of free fatty acid containing from 12 to 20 carbon atoms, said bar having a pH as measured in a 10% aqueous solution of about 8.6 to 9.4.

5. The bar of soap of claim 1 which also contains from 0.1 to 1.0% of 3,4',5-tribromosalicylanilide.

3,043,779
DETERGENT TABLETS

John Pedlow Parke, Bebington, and David Dutton Penketh, Bromborough, England, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 13, 1958, Ser. No. 721,110
Claims priority, application Great Britain Mar. 18, 1957
9 Claims. (Cl. 252—117)

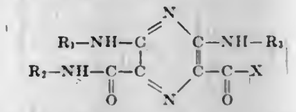
1. A detergent composition in the form of a hard, coherent tablet which does not become soft and slimy or sticky on being used or stored after use and which does not dissolve with undesirable rapidity in warm water, comprising from about 55% to about 85% of a water-soluble alkali metal soap, from about 15% to about 30% of a water-soluble alkali metal fatty-acyl-aminomethane sulphonate wherein the fatty-acyl radical has from about 8 to about 18 carbon atoms, and from about 0.5% to about 10% of a water-soluble salt of an organic acid selected from the group consisting of monocarboxylic and monosulphonic acids having from 1 to 8 carbon atoms in the molecule, the percentages being by weight based on the weight of the entire tablet.

3,043,780
DETERGENT COMPOSITION CONTAINING A 3,5-DIAMINOPYRAZINE-2,6-DICARBOXYLIC ACID DERIVATIVE

Anthony Fenwick Daglish, Cheadle Hulme, England, Rodolphe Vonderwahl, Riehen, near Basel, Switzerland, and George Arnold Tillotson, Hale, England, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed May 23, 1958, Ser. No. 737,215
Claims priority, application Switzerland May 29, 1957
9 Claims. (Cl. 252—117)

1. A detergent composition consisting essentially of a water soluble, synthetic, organic anion-active detergent selected from the group consisting of water soluble soaps and synthetic, organic non-soap anion active sulphated detergents, containing 0.001 to 5% by weight, of the composition, of a 3,5-bis-diamino-pyrazine-2,6-dicarboxylic acid diamide of the general formula:



wherein R_1, R_2 and R_3 each represents a member selected from the group consisting of lower alkyl and phenyl substituted methyl radicals and X represents a member selected from the group consisting of primary amino, secondary amino and tertiary amino groups.

3,043,781
BARIUM SILICATE PHOSPHOR

Richard W. Mooney and Francis N. Shaffer, Towanda, Pa., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1958, Ser. No. 745,335
1 Claim. (Cl. 252—301.4)

The process for preparing a lead activated, barium disilicate phosphor the steps which comprise: mixing together ingredients necessary to form said lead activated barium disilicate phosphor; firing said mixture at a high temperature in a furnace; removing said mixture from said furnace; fragmenting said mixture and admix-

ing therewith a suitable chloride flux comprising at least one member selected from the group consisting of barium chloride, calcium chloride and strontium chloride; refiring said mixture together with said suitable chloride flux at a high temperature in a furnace; removing the resultant phosphor from the furnace; fragmenting said phosphor to break up agglomerates formed by the firing; and washing said phosphor to remove chloride ions and testing to determine if any residual chloride ions remain; continuing the washing until the phosphor shows no trace of chloride ion and recovering a substantially chloride free, lead activated, barium disilicate phosphor.

3,043,782

PROCESS FOR PREPARING A MORE IMPERMEABLE COATING BY LIQUID-LIQUID PHASE SEPARATION

Erik H. Jensen, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Dec. 22, 1958, Ser. No. 781,933
3 Claims. (Cl. 252—316)

1. In the process of preparing a more impermeable coating by liquid-liquid phase separation, the step of spray drying the coacervate coating of a gelable hydrophilic colloid dispersed in an aqueous solution having a pH between about 4 and about 6.

3,043,783

METAL DEACTIVATOR COMPOSITION OF LOW FREEZING PROPERTIES

Julian P. Hatcher, La Grange, George E. Atherton, Argo, and William L. Cox, Mount Prospect, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Mar. 31, 1960, Ser. No. 18,918
2 Claims. (Cl. 252—403)

1. A solution of from about 30% to about 80% by weight of disalicylalpropylenediamine in from about 20% to about 70% by weight of a solvent mixture of from about 5% to about 25% by weight of methanol and from about 75% to about 95% by weight of toluene.

3,043,784

ELECTRICALLY CONDUCTIVE PRINTING INK

Robert K. Remer, Elgin, Ill., assignor to Tribune Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Dec. 22, 1958, Ser. No. 781,882
9 Claims. (Cl. 252—509)

1. An electrically conductive printing ink comprising by weight from about 4 to 15% of carbon black and from about 5 to 20% of neutralized lignosulfonate intimately dispersed in a vehicle containing from about 40 to 55% by weight of water and from about 15 to 30% by weight of a mineral oil based on the total composition, said vehicle consisting essentially of an oil-in-water dispersion.

3,043,785

DEPIGMENTING POLYMERIC COMPOSITIONS WITH ALIPHATIC CARBOXYLIC ACID SETTLING AIDS

Palmer W. Wright, Midland, Bernie A. Kozakiewicz, Bay City, and Arthur F. Roche, Freeland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 15, 1958, Ser. No. 748,592
13 Claims. (Cl. 260—2.3)

1. Method for depigmenting synthetic, thermoplastic polymeric compositions which comprises dissolving a pigmented polymeric composition containing an inorganic pigment that is insoluble in solvents in which said polymeric composition is dissolved in a water-insoluble organic solvent for said polymeric composition that is non-reactive with said polymer and said pigments and in which said pigment is insoluble; intimately mixing each part by weight of the resulting organic solution containing the dispersed pigment with between about 1 and 9 parts by weight of an aqueous phase that contains dissolved therein between about 0.5 and 50 weight percent, based on the weight of the aqueous phase, of a water-soluble aliphatic carboxylic acid that contains not more than about 5 carbon atoms in its molecule; and then physically separating the organic polymeric solution from the settled pigment and the aqueous phase.

3,043,786

OXIDIZED TALL OIL AND PETROLEUM OIL COMPOSITION, METHOD OF MAKING, AND METHOD OF RECLAIMING RUBBER THEREWITH

Chester M. White, Rochester, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Oct. 22, 1958, Ser. No. 768,827
7 Claims. (Cl. 260—2.3)

4. The method of making a composition of matter useful in the reclamation of vulcanized rubber comprising heating and air blowing at a temperature of about 100° C. to 150° C. tall oil to produce an oxidized tall oil concentrate having a viscosity of from about 350 to 700 centistokes at 100° F. and diluting the concentrate with a naphthenic base petroleum oil having a viscosity in the lubricating oil range of viscosities to produce a composition having a viscosity of from about 250 to 600 centistokes at 100° F. and an acid value of at least 120 useful in the reclamation of vulcanized rubber, the concentrate being from about 80 to 95 percent by weight of the composition.

3,043,787

PRINTING INK COMPOSITION CONTAINING POLYPROPYLENE AND PROCESS FOR PRODUCING SAME

Alberto Bonvicini and Luciano Lucchetti, Terni, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

No Drawing. Filed May 25, 1959, Ser. No. 815,310
Claims priority, application Italy May 30, 1958
7 Claims. (Cl. 260—4)

1. A writing and printing ink composition consisting of a stable solution the essential components of which are (1) an agent selected from the group consisting of dyes and pigments, (2) at least 5% by weight, based on the total solids weight, of a fixative selected from the group consisting of (*a*) partially crystalline stereoblock polymers of propylene, said stereoblock polymer being made up of macromolecules comprising inseparable isotactic and atactic chain portions and exhibiting up to 50% crystallinity at the X-rays, (*b*) chlorinated derivatives of said stereoblock propylene polymers containing from about 20% to about 45% combined chlorine, and (*c*) chlorosulfonated derivatives of said propylene stereoblock polymers containing from about 20% to about 45% of total combined chlorine and from about 0.2% to about 3% of combined sulfur, and (3) a solvent in which said essential components are soluble.

2. A writing and printing ink composition as described in claim 1, further characterized in that it also contains a viscosity regulator selected from the group consisting of paraffin base wax, tragacanth, natural and synthetic rubber.

3,043,788

RAPID DRYING EPOXY-ESTER METAL LITHO FINISHES

Wilbur Lee Bressler, Lake Jackson, and Wayne E. Presley, Freeport, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 2, 1958, Ser. No. 764,745
5 Claims. (Cl. 260—18)

1. A modified epoxy ester product, produced by the reaction of an epoxy resin having a molecular weight of from 800 to 2900, and containing from 1 to 25 p.p.m. metallic drier and from 0.05 to 0.2 percent tertiary amine, with a polyunsaturated long-chain fatty acid.

3,043,789

CONDENSATION PRODUCT OF A MONOALKANOLAMINE WITH THE REACTION PRODUCT OF A TERPENE AND AN α,β-UNSATURATED POLYCARBOXYLIC ACID, ANHYDRIDE, OR ESTER THEREOF

Henry A. Cyba, Chicago, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Aug. 22, 1958, Ser. No. 756,519
11 Claims. (Cl. 260—24)

1. The condensation product of an N-aliphatic hydrocarbon substituted monoalkanolamine having from about 6 to about 50 carbon atoms in the aliphatic hydrocarbon substituent with the reaction product, formed at a temperature of from about 150° C. to about 300° C., of a terpene hydrocarbon of the formula $C_{10}H_{16}$ and a compound selected from the group consisting of maleic, fumaric, citraconic, mesaconic, aconitic and itaconic acids and their anhydrides and esters, said condensation product having been formed at a temperature of from about 80° C. to about 200° C. and with the use of from about 0.5 to about 2 equivalents of total acid and potential acid groups in said reaction product per equivalent of hydroxyl groups in the alkanolamine.

3,043,790

BUTADIENE-STYRENE COPOLYMER-CEMENT COMPOSITION AND METHOD OF PREPARATION

Philip F. Sanders, Glen Mills, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 20, 1957, Ser. No. 685,078
5 Claims. (Cl. 260—29.7)

5. A method for making a cement composition which comprises intimately mixing Portland cement, mineral aggregate, a dispersion of styrene-butadiene-1,3 copolymer having a styrene to butadiene weight ratio of about 30:70 to 70:30, water in an amount not in excess of about 40% based on the weight of said Portland cement, and, based on the weight of said copolymer, (*a*) 2–10% of non-ionic surfactant, (*b*) 1–7.5% of anionic surfactant, at least 15% of which is a sodium alkyl sulfate in which the alkyl group contains 9–17 carbon atoms, and (*c*) 1–5% of polyorganosiloxane fluid surfactant, the sum of (*a*) and (*b*) not exceeding about 11% by weight of said copolymer and the weight ratio of (*a*) to (*b*) being within the range of about 0.7:1 to 10:1.

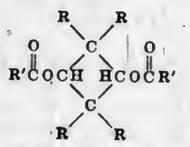
3,043,791

PLASTIC COMPOSITION COMPRISING POLYVINYL CHLORIDE AND AN ESTER OF 2,2,4,4-TETRA ALKYL CYCLOBUTANE-1,3-DIOL

James C. Martin and Kent C. Brannock, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,597
6 Claims. (Cl. 260—31.6)

1. A plastic composition comprising polyvinyl chloride resin and a plasticizing amount of a plasticizer having the formula



wherein R is an alkyl radical having 1 to 2 carbon atoms, and wherein R′ is selected from the group consisting of hydrogen atoms and alkyl radicals having 1 to 3 carbon atoms, said plasticizing amount being 40% to 70% by weight based on the combined weights of said polyvinyl chloride and said plasticizer.

3,043,792

PLASTICIZED RESINOUS COMPOSITION COMPRISING A VINYL CHLORIDE POLYMER AND A TRIALKYL TRIMESATE

Marvin J. Hurwitz, Elkins Park, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Original application Apr. 3, 1958, Ser. No. 726,040. Divided and this application June 15, 1959, Ser. No. 820,112
6 Claims. (Cl. 260—31.8)

1. A plasticized resinous composition comprising a polymer selected from the group consisting of homopolymers of vinyl chloride and copolymers of vinyl chloride with an ethylenically unsaturated monomer copolymerizable therewith, said copolymer containing at least 80% by weight of vinyl chloride copolymerized therewith and said plasticized resinous composition having incorporated therein about 10 to 200% by weight of tri(alkyl)trimesates which are simple esters in which the alkyl groups contain from 7 to 8 carbon atoms.

3,043,793

PROCESS FOR LOWERING THE BRITTLE POINT OF SOLID HEPTANE-INSOLUBLE POLYPROPYLENE

Thomas S. Mertes, Wilmington, Del., and Thomas J. Kelly, Newtown Square, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Jan. 8, 1958, Ser. No. 707,663
1 Claim. (Cl. 260—33.6)

A process for lowering the brittle point of solid heptane-insoluble polypropylene which consists essentially in dissolving said polypropylene at a temperature above 130° C. in an inert liquid hydrocarbon solvent containing 8 to 12 carbon atoms per molecule, admixing therewith a petroleum lubricating oil fraction and heptane-soluble polypropylene in a weight ratio of said oil to said heptane-soluble polypropylene of 1:5 to 2:1, the weight proportion of said heptane-insoluble-polypropylene to the mixture of said lubricating oil and said heptane-soluble polypropylene being from 50:50 to 90:10, removing said hydrocarbon solvent therefrom, and recovering a solid polypropylene composition having a brittle point below minus 10° C. consisting essentially of 50 to 90% by weight of said heptane-insoluble polypropylene and 50 to 10% by weight of a mixture consisting essentially of said petroleum lubricating oil fraction and said heptane-soluble polypropylene in a weight ratio of said lubricating oil to said heptane-soluble polypropylene of from 1:5 to 2:1.

3,043,794

NOVOLAK-DIISOCYANATE SYNTHETIC RESIN, SOLUTIONS THEREOF, AND METHOD OF MAKING LAMINATES

Leonard Feiler, Brooklyn, and Arnold H. Gruben, Bronx, N.Y., and Howard H. Leiner, New Brunswick, N.J., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 22, 1958, Ser. No. 710,408
17 Claims. (Cl. 260—33.6)

1. A synthetic resin prepared by reacting a novolak prepared by reacting formaldehyde and, based on the moles of formaldehyde, from 0.75 to 1.5 moles of an alkyl phenol and, based on the moles of alkylphenol combined in said novolak, from 0.4 to 0.6 mole of an

alkaryl diisocyanate to produce an aromatic hydrocarbon-soluble synthetic resin, said alkyl phenol being selected from the group consisting of nonylphenol, a mixture consisting essentially of about 15 mole percent of nonylphenol and about 85 mole percent of heptylphenol, and a mixture consisting essentially of about 25 mole percent of diheptylphenol and about 75 mole percent of heptylphenol prepared by the alkylation of phenol with an olefin separated from polymer gasoline selected from the group consisting of C_7 and C_9 olefins and said alkyl phenol being selected from the group consisting of monoalkyl phenols and mixtures thereof containing up to 35 mole percent of a dialkylphenol, based upon the weight of the monoalkylphenol and the dialkylphenol.

7. A composition of matter suitable for use as an insulating varnish consisting essentially of a solution of the resin of claim 1 dissolved in a solvent selected from the group consisting of benzene and lower alkyl benzenes.

3,043,795

TRANSPARENT THERMOPLASTIC COMPOSITIONS OF POLYVINYL CHLORIDE, COPOLYMERS OF ALKENYL AROMATIC HYDROCARBON AND ACRYLONITRILE, AND A MUTUALIZING AGENT AND METHOD OF MAKING THE SAME

Carleton W. Roberts, Midland, and Daniel H. Haigh, Beaverton, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 27, 1959, Ser. No. 802,314

9 Claims. (Cl. 260—33.8)

1. A composition of matter comprising from 5 to 20 percent by weight of a resinous thermoplastic copolymer of from 65 to 75 percent by weight of at least one alkenyl aromatic hydrocarbon having the general formula $Ar—CH=CH_2$ wherein Ar represents an aromatic hydrocarbon radical of the benzene series, and from 35 to 25 percent of acrylonitrile, intimately incorporated with from 95 to 80 percent by weight of polyvinyl chloride, and with from 5 to 20 percent, based on the sum of the weights of the polymeric ingredients, of an adduct of hexachlorocyclopentadiene and a vinyl aromatic compound selected from the group consisting of divinylbenzene, monovinyl aromatic hydrocarbons of the benzene series and nuclear chlorinated monovinyl aromatic hydrocarbons of the benzene series.

3,043,796

METALLIZED FIBERS FOR DECREASING CURING TIME OF PLASTIC GLASS FIBER MIXTURES

Leo J. Novak, Elizabeth, N.J., and James G. McCallum, New York, N.Y., assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio

Original application June 19, 1956, Ser. No. 592,315, now Patent No. 2,956,039, dated Oct. 11, 1960. Divided and this application Mar. 21, 1960, Ser. No. 16,508

3 Claims. (Cl. 260—37)

1. The method of making a heat-curable epoxy resin having a shortened heat-curing time which consists in confining a heat-curable epoxy resin composition in an inert and unoxidizing atmosphere containing a heat-decomposable gaseous metal compound of aluminum, heating said epoxy resin composition and said atmosphere while in contact with said resin composition to cause thermal decomposition of said metal compound of aluminum, and deposition of nascent aluminum metal particles onto the surface of the epoxy resin composition, and admixing and blending said aluminum metal particles into said resin composition, said metal particles constituting from about 5 to 50% by weight of said heat-curable resin composition.

3,043,797

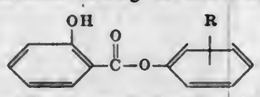
STABILIZED POLY-α-OLEFIN COMPOSITIONS

John William Addleburg, Gerald R. Lappin, and Ben P. Rouse, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,336

10 Claims. (Cl. 260—45.85)

1. A solid poly-α-olefin composition comprising a solid poly-α-olefin prepared from an α-monoolefinic aliphatic hydrocarbon having 2 to 6 carbon atoms contained dispersed therein 0.1% to 10% by weight based on said poly-α-olefin of a stabilizer having the following formula:



wherein R is an alkyl group having 8 carbon atoms.

3,043,798

REACTIONS OF SILICON-NITROGEN CONTAINING COMPOUNDS WITH HYDROXY COMPOUNDS

William M. Boyer, Tinley Park, Ill., and James H. Shultz and Clarence G. Zike, Indianapolis, Ind., assignors to The Richardson Company, Melrose Park, Ill., a corporation of Ohio

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,350

12 Claims. (Cl. 260—46.5)

1. The process of preparing a resinous composition of matter by reacting (*a*) the polymeric reaction product of a halosilane having the formula:

$$RSiCl_3$$

wherein "R" is selected from the class consisting of monovalent alkyl and aryl groups, with ammonia; and (*b*) an organic compound from the class consisting of aliphatic and aromatic polyhydroxyl compounds having at least two hydroxyl groups attached to separate carbon atoms, the principal reaction occurring between the amino groups of said polymeric reaction product and the hydroxyl groups of said organic compound.

3,043,799

POLYESTERS DERIVED FROM DIMETHYLMALONIC ACID AND DIPHENOLS

Roger Paul Joseph Gaston Thiebaut and Yves Pierre Marie Etienne, Vincennes, France, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 3, 1961, Ser. No. 80,011

8 Claims. (Cl. 260—47)

1. A linear highly polymeric fiber-forming polyester of (A) a dibasic carboxylic acid consisting of (1) from 60 to 100 mole percent of dimethylmalonic acid, (2) from 0 to 20 mole percent of a member selected from the group consisting of saturated aliphatic dibasic acids having from 2 to 10 carbon atoms, and (3) from 0 to 40 mole percent of a member selected from the group consisting of carbonic acid, terephthalic acid, isophthalic acid, 4,4′-sulfonyldibenzoic acid, 4,4′-dibenzoic acid, 4,4′-oxydibenzoic acid and 4,4′-alkylenedibenzoic acids wherein the alkylene radicals contain from 1 to 4 carbon atoms, there being no more than two different members selected from the combination of all of the groups of acids (1), (2) and (3), and (B) a dihydroxy compound consisting of from 60 to 100 mole percent of a 4,4′-alkylenediphenol wherein the alkylene radicals contain from 1 to 6 carbon atoms and from 0 to 40 mole percent of a dihydroxybenzene selected from the group consisting of resorcinol, hydroquinone, and toluhydroquinone, said polyester melting at between 200° and 350° C., having an inherent viscosity of at least 0.4 and having improved hydrolytic stability toward aqueous acids and bases due to the dimethylmalonic constituent in the polyester.

3,043,800

HIGH MOLECULAR WEIGHT LINEAR ALKALI-SOLUBLE POLYCARBONATES AND PROCESS FOR THEIR MANUFACTURE

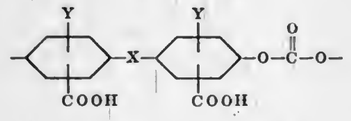
Hermann Schnell, Krefeld-Uerdingen, and Ludwig Bottenbruch, Krefeld-Bockum, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed May 28, 1957, Ser. No. 662,013

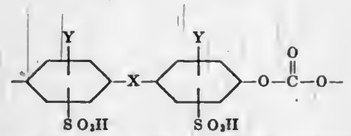
Claims priority, application Germany June 2, 1956

9 Claims. (Cl. 260—47)

1. A high molecular weight linear film-forming polycarbonate which is soluble in aqueous alkali and which consists essentially of recurring units having one of the formulae:



and



wherein X is selected from the group consisting of alkylene and sulfonyl and Y is selected from the group consisting of hydrogen and alkyl.

3,043,801

PREPOLYMER COMPRISING THE REACTION PRODUCT OF A POLYISOCYANATE, A POLYALKYLENE ETHER POLYALCOHOL AND AN AMINE OR PHENOL, REACTION PRODUCT THEREOF WITH FORMALDEHYDE, AND PROCESS FOR PREPARING SAME

Kuno Wagner and Erwin Müller, Leverkusen, Hans Holtschmidt, Koln-Stammheim, and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 31, 1958, Ser. No. 784,085

Claims priority, application Germany Jan. 2, 1958

25 Claims. (Cl. 260—47)

1. A process for the preparation of a cross-linked polyurethane plastic which comprises reacting a prepolymer obtained from an organic polyisocyanate, a polyalkylene ether polyalcohol containing ether bridges selected from the group consisting of oxygen and sulfur ether bridges, and a member selected from the group consisting of hydroxy-alkylated aromatic amines and hydroxy-alkylated phenols with a member selected from the group consisting of formaldehyde and precursors thereof.

3,043,802

LIGHT-SENSITIVE HIGH MOLECULAR POLYCARBONATES

Wilhelm Thoma, Leichlingen, and Heinrich Rinke, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,978

Claims priority, application Germany Aug. 18, 1958

9 Claims. (Cl. 260—47)

1. In the process of making organic polycarbonates by reacting a member selected from the group consisting of organic bis-phenols and their bis-hydroxy alkyl ethers with a member selected from the group consisting of phosgene and diphenyl carbonate, the improvement of making a light-sensitive organic polycarbonate wherein a member selected from the group consisting of organic bis-phenols and their bis-hydroxy alkyl ethers, containing at least one —CH=CH—CO— group in the chain connecting the two phenylene groups is employed.

3,043,803

COPOLYMERS OF FORMALDEHYDE AND ISOCYANIC ACID

Cameron David Lewis, Robert Neal MacDonald, and Carl Earle Schweitzer, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 21, 1959, Ser. No. 814,664

9 Claims. (Cl. 260—67)

1. A copolymer of formaldehyde and isocyanic acid containing from 3 to 75 mol percent of isocyanic acid in its combined form in the said copolymer.

2. A copolymer of formaldehyde and isocyanic acid having the general structure

$$[(CH_2—O)_x—(CONH)_y]_n$$

wherein x and y are positive integers having a value such that $x/y=0.33$ to 33 and n is a positive number sufficiently large that the said copolymer has an inherent viscosity of at least 0.05 when measured at 60° C. in solution in p-chlorophenol containing 0.5% by weight of said copolymer and 2.0% by weight of alpha-pinene.

3,043,804

CURING PROMOTER FOR FURANE RESINS

John Delmonte, Glendale, Calif., assignor to Furane Plastics Incorporated, Los Angeles, Calif., a corporation of California

No Drawing. Filed July 17, 1959, Ser. No. 827,685

9 Claims. (Cl. 260—67)

1. A resinous-composition comprising the product obtained by resinifying a liquid furané resin admixed with an effective amount from 1 to 50 percent of triphenyl phosphite, and an acidic catalyst.

3,043,805

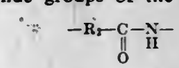
POLYMERIC AMIDES AND THEIR PREPARATION

Marion Burg, Metuchen, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

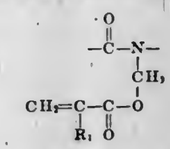
No Drawing. Filed Aug. 5, 1958, Ser. No. 753,196

10 Claims. (Cl. 260—72)

1. A synthetic linear laterally-unsaturated polycarbonamide in which the carbonamide groups are intralinear groups in the main polymer chain, said polycarbonamide having a molecular weight of at least 5000, an intrinsic viscosity of at least 0.4 and at least 80% of the polycarbonamide consisting of recurring intralinear units having a unit length of at least 7, wherein at least 55% of the amido groups are unsubstituted, being present in intralinear carbonamide groups of the formula:

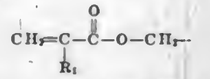


where R_2 is a hydrocarbon radical, said polycarbonamide containing as an integral part of the main polymer chain recurring intralinear groups of the formula:



wherein R_1 is a member taken from the group consisting

of hydrogen, chlorine and alkyl radicals of 1 to 5 carbon carbon atoms, the



groups being present on at least 2% up to about 42% of the intralinear amide groups, any remaining substituents on the amido-nitrogen atoms on the polymer chain being —CH_2—OR groups where R is an alkyl radical of 1 through 5 carbon atoms.

3,043,806
LINEAR POLYESTERS FROM DIMETHYLMALONIC ACID

John R. Caldwell, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

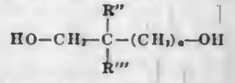
No Drawing. Filed Mar. 20, 1956, Ser. No. 572,633
5 Claims. (Cl. 260—75)

1. A highly polymeric linear polyester of a dicarboxylic acid and a glycol, said polyester having an intrinsic viscosity measured in a phenol and tetrachloroethane solution of at least 0.4 and having a melting point above 150° C., wherein from 10 to 50 mole percent of said acid is dimethylmalonic acid with the remainder of said acid being terephthalic acid and said glycol being

(*a*) polymethylene glycols containing from 2 to 10 carbon atoms

(*b*) 1,4-cyclohexanedimethanol and

(*c*) gem-dialkyl glycols having the formula



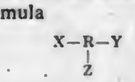
where R'' and R''' each represents an alkyl radical containing from 1 to 2 carbon atoms and *x* represents an integer of from 1 to 3.

3,043,807
POLYURETHANE ELASTOMERS

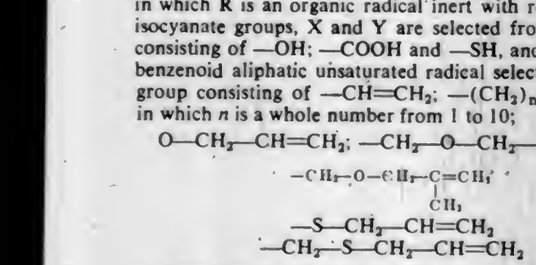
Carl E. Snyder, Cuyahoga Falls, Nelson V. Seeger, Painesville, Ernest E. Fauser, Cuyahoga Falls, and Anthony F. Finelli and John A. Lovell, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,147
11 Claims. (Cl. 260—75)

1. The reaction product resulting from the reaction of (A) an organic diisocyanate free of ethylenic unsaturation, (B) the linear polymer prepared from the reaction of at least one dicarboxylic acid free of ethylenic unsaturation containing at least three carbon atoms and at least one bifunctional reactant selected from the group consisting of glycols and dithiols, said linear polymer having an acid number not greater than 5 and an average molecular weight of from 900 to 5000; and (C) a third ingredient defined by the formula



in which R is an organic radical inert with respect to the isocyanate groups, X and Y are selected from the group consisting of —OH; —COOH and —SH, and Z is a non-benzenoid aliphatic unsaturated radical selected from the group consisting of —$CH{=}CH_2$; —$(CH_2)_n$—$CH{=}CH_2$ in which *n* is a whole number from 1 to 10;



said third ingredient being employed in a sufficient amount to provide at least one pendant non-benzenoid aliphatic unsaturated radical for each 6000 units of molecular weight of said reaction product, the amount of organic diisocyanate employed being approximately molecularly equivalent to the sum of the molecular amounts of (B) and (C).

3,043,808
LINEAR POLYESTERS OF DIMETHYLMALONIC ACID AND NEOPENTYL GLYCOL

Hugh J. Hagemeyer, Jr., Longview, Tex., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 20, 1959, Ser. No. 814,385
8 Claims. (Cl. 260—75)

1. A process for preparing a highly polymeric fiber-forming linear polyester having a melting point of at least 240° C. comprising (A) forming a substantially monomeric condensation product by heating reactants consisting of one mole proportion of dimethylmalonic acid and at least one mole proportion of 2,2-dimethyl-1,3-propanediol in the presence of an acidic condensing agent essentially composed of phosphoric acid until about one mole proportion of water is distilled off, (B) heating said monomeric condensation product in a melt-phase under an inert atmosphere until a prepolymer is formed having an intrinsic viscosity measured in a solution of phenol and tetrachloroethane of from about 0.15 to about 0.5, (C) cooling the prepolymer to a solid form, (D) granulating the prepolymer, (E) heating in a solid-phase the granulated prepolymer at from about 150° C. up to the sticking temperature of the prepolymer granules in an atmosphere until a prepolymer is formed having intrinsic viscosity of at least 0.6 and a melting point of at least 240° C.

3,043,809
PREPARATION OF CHELATING RESINS FROM POLYMERIC VINYLBENZYLAMINE AND GLYCOLONITRILE

Leonard A. Mattano, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 29, 1958, Ser. No. 751,609
2 Claims. (Cl. 260—78)

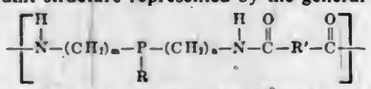
1. A method for making a chelating resin having combined vinylbenzyl aminoacetic acid units by reacting at temperatures between about 15° and about 60° C. polymeric crosslinked vinylbenzylamine in particulate form, copolymerized with about 1 to 8 weight percent of a crosslinking agent containing two vinylidene groups and swollen with a swelling agent conventional for swelling, and in amount sufficient to swell, chloromethylated polystyrene, with a substantially equivalent to form equivalent proportions of glycolonitrile, aminoethyl group basis, whereby polymeric vinylbenzyl aminoacetonitrile is formed and hydrolyzing the nitrile groups of the latter at temperatures between about 80° and about 90° C. with aqueous mineral acid.

3,043,810
LINEAR POLYAMIDES FROM BIS-(OMEGA-AMINOALKYL) PHOSPHINES AND DICARBOXYLIC ACIDS

William G. Deichert, Flushing, N.Y., and Joseph J. Pellon, New Canaan, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 19, 1959, Ser. No. 834,668
13 Claims. (Cl. 260—78)

1. A linear polyamide consisting essentially of the recurring unit structure represented by the general formula



where *m* and *n* each represent an integer from 2 to 12, inclusive, R represents a hydrocarbon radical, and R' represents a divalent hydrocarbon radical containing from 2 to 18 carbon atoms, inclusive.

3,043,811
DYEABILITY OF ACRYLONITRILE POLYMERS

Teddy G. Traylor and Ardy Armen, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 20, 1957, Ser. No. 667,026
8 Claims. (Cl. 260—79.3)

1. Method for improving the dyeability of fully polymerized acrylonitrile polymers that contain at least about 80 weight percent of polymerized acrylonitrile in the polymer molecule which method comprises subjecting the acrylonitrile polymer, while it is in contact with a polar liquid medium that is chemically inert to the polymer and the subsequently defined monomeric compound, to up to about 20 weight percent, based on polymer weight, of a monomeric compound of the general formula:

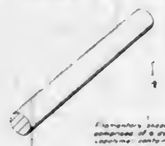
$$HO_3S{-}G{-}CH{=}CH_2$$

wherein G is a bivalent hydrocarbon bridging radical containing from 1 to 12 carbon atoms; and heating the monomeric compound in contact with the acrylonitrile polymer at an elevated temperature above room temperature until at least a portion of said monomeric compound attaches chemically as single units on the chain of the polymer by means of substituted amide linkages with the nitrogens in the polymerized acrylonitrile units in the acrylonitrile polymer chain.

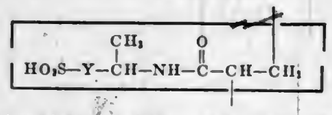
3,043,812
DYE-RECEPTIVE COPOLYMERS

Ardy Armen and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Aug. 16, 1957, Ser. No. 678,498
12 Claims. (Cl. 260—79.3)



1. Polymeric composition consisting essentially of inter-reacted units of: (A) between about 1 and about 20 weight percent, based on composition weight of at least one inter-reacted unit of the structure:



(I)

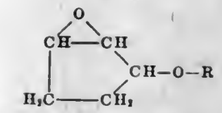
wherein Y is a bivalent bridging radical that contains from 1 to 12 carbon atoms and is selected from the group consisting of bivalent aromatic radicals and alkylene radicals; and (B) between about 99 and about 80 weight percent, based on composition weight, of recurring units of polymerized acrylonitrile.

3,043,813
POLYMER OF ALKENYL EPOXYCYCLOPENTYL ETHERS

John R. Kilsheimer, South Charleston, and Benjamin Phillips and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 3, 1958, Ser. No. 765,044
11 Claims. (Cl. 260—80.5)

1. A copolymer obtained by polymerizing a mixture of monomers comprising an epoxide of the formula:



wherein R represents an alkenyl group containing from 2 through 4 carbon atoms and polymerizable compounds selected from the group consisting of vinyl chloride, acrylonitrile, methacrylonitrile, vinyl acetate, vinyl chloroacetate, vinylidene chloride, methyl acrylate, methyl methacrylate, ethyl acrylate, unsaturated aliphatic esters of saturated aliphatic polybasic acids, unsaturated aliphatic esters of unsaturated aliphatic polybasic acids, unsaturated esters of dibasic aromatic acids and chlorostyrene.

3,043,814
VINYL CHLORIDE INTERPOLYMERS WITH ALLYL ESTERS OF BETA SUBSTITUTED ACRYLIC ACID

Richard H. Martin, Jr., Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 31, 1959, Ser. No. 830,696
7 Claims. (Cl. 260—86.3)

1. A suspension polymerization process for preparing a resinous interpolymer of a monomer mixture consisting of 99.85–99.995 weight percent of vinyl chloride and, correspondingly, 0.15–0.005 weight percent of a monomer of the formula:



where R is selected from the group consisting of an alkyl radical, an aralkyl radical, an aryl radical and an alkaryl radical and R' is selected from the group consisting of a hydrogen atom and a methyl radical, which process comprises dispersing the monomers as droplets in an aqueous medium containing therein a suspending agent and polymerizing the monomers at a temperature of 30–70° C. in the presence of a free radical generating polymerization initiator.

7. An insulated electric wire comprising an electrical conductor carrying an insulating coating of a resinous interpolymer prepared by the process of claim 1.

3,043,815
COPOLYMERS OF 1,1-DIHYDROPERFLUOROALKENE-1 AND PROCESS FOR PREPARATION THEREOF

Billy F. Landrum and Carl Sandberg, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,567
6 Claims. (Cl. 260—87.5)

1. A heat resistant, moldable, thermoplastic copolymer of between about 80 and about 97 mol percent of tetrafluoroethylene and between about 3 and about 20 mol percent of a 1,1-dihydroperfluoroalkene-1 having between 4 and 6 carbon atoms.

3. A process which comprises polymerizing at a temperature between about 30° C. to about 160° C. a monomer mixture of between about 80 and about 99 mol percent of tetrafluoroethylene and between about 1 and about 20 mol percent of a 1,1-dihydroperfluoroalkene-1 having between 4 and 6 carbon atoms in an aqueous medium containing a free radical forming polymerization promoter.

3,043,816

COPOLYMERS OF VINYL CHLORIDE

Richard H. Martin, Jr., Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 31, 1959, Ser. No. 830,699
8 Claims. (Cl. 260—87.5)

6. An insulated electric wire comprising an electrical conductor carrying an insulating coating of a resinous interpolymer of a binary mixture of monomers consisting of vinyl chloride and a poly-N-allyl substituted amine selected from the group consisting of diallylamine, diallylaniline, N,N'-diallylpiperazine, dimethallylamine, N-methyldiallylamine, triallylamine, N,N-diallyl ethylene diamine, N,N'-diallyl ethylene diamine, N,N'N''-triallyl triethylene diamine, N,N,N'-triallyl-p-phenylene diamine and dimethallylethanolamine; said monomer mixture consisting of 99.70–99.99 weight percent of vinyl chloride and, correspondingly, 0.30–0.01 weight percent of the poly-N-allyl substituted amine when the poly-N-allyl substituted amine contains 2 polymerizable terminal ethylenic groups; said monomer mixture consisting of 99.95–99.997 weight percent of vinyl chloride and, correspondingly, 0.05–0.003 weight percent of the poly-N-allyl substituted amine when the poly-N-allyl substituted amine contains 3 polymerizable terminal ethylenic groups.

3,043,817

METHOD OF PRODUCT CONTROL IN AQUEOUS SUSPENSION POLYMERIZATIONS OF ALKENYL AROMATIC COMPOUNDS

Alex K. Jahn and Ernest J. Gillard, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 19, 1958, Ser. No. 761,928
9 Claims. (Cl. 260—88.2)

1. A method of controlling the particle size of a polymeric product produced by the suspension polymerization of an alkenyl aromatic compound which normally passes during polymerization from a liquid to a sticky agglomerative state and thence to a non-sticky granular condition, which method comprises maintaining a polymerization temperature between 70° and 120° C. in a constantly agitated aqueous suspension comprising a polymerizable monomeric alkenyl aromatic compound selected from the group consisting of monoalkenyl aromatic compounds having the general formula:

$$Ar—CH=CH_2$$

wherein Ar represents an aromatic radical of the group consisting of hydrocarbon and nuclear halogenated hydrocarbon radicals of the benzene series, and mixtures of from 99.5 to 99.99 percent by weight of at least one such monoalkenyl aromatic compound and from 0.5 to 0.01 percent of a divinyl aromatic hydrocarbon of the benzene series, dispersed in a liquid aqueous medium containing from 0.017 to 0.4 percent by weight, based on the weight of the water in said aqueous medium, of an alkali salt of a water-soluble sulfonated polyvinyltoluene containing an average of from 0.85 to 1 sulfonate group per vinyltoluene residue in the sulfonated polymer, until an appreciable amount of the monomer is polymerized, then adding to the aqueous suspension when from 8 to 60 percent by weight of the monomers are polymerized and prior to the occurrence of said agglomerative state, from 0.005 to 0.5 percent, based on the weight of the water in said aqueous suspension, of a surfactant selected from the group consisting of anionic and nonionic surface active agents, continuing the polymerization until the monomer is polymerized to a non-sticky granular condition, and separating the granular product from the aqueous liquid.

3,043,818

POLYMERIC COMPOSITIONS

Stanley Tocker, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 20, 1959, Ser. No. 800,653
11 Claims. (Cl. 260—88.2)

1. A process for preparing polymer compositions which comprises subjecting 1–35 mole percent propadiene and 65–99 mole percent of ethylene in a liquid hydrocarbon to a temperature of —40°–300° C. and a pressure of 1–1000 atmospheres in the presence of a catalyst system composed of

(A) a compound containing at least one metal of the group consisting of metals of Groups IVa, Va, and VIa of the Periodic Table, iron, cobalt, copper, nickel and manganese, said metal having directly attached thereto at least one substituent from the group consisting of halogen, oxygen, hydrocarbon and —O-hydrocarbon; and

(B) a reducing compound selected from the group consisting of metal hydrides and compounds having a metal of Groups I, II and III of the Periodic Table above hydrogen in the electromotive series of metals attached directly through a single bond to a carbon atom, said carbon atom selected from the group consisting of trigonal carbon and tetrahedral carbon;

isolating a polymer having pendant methylene and vinyl groups as indicated by infrared absorption bands at wavelengths of 888 cm.$^{-1}$ and 993 cm.$^{-1}$, respectively; and oxidizing said polymer with an agent selected from the group consisting of percarboxylic acids, hydrogen peroxide, potassium permanganate, alkaline hypochlorites, oxides of nitrogen, chromic acid, concentrated nitric acid, periodic acid, the oxides of osmium, vanadium, chromium, selenium and silver, hypobromous acid, hypochlorous acid, lead tetraacetate, chromyl chloride, oxygen and ozone.

8. An oxidized substantially linear copolymer of 65–99 mole percent ethylene and 1–35 mole percent propadiene, said copolymer containing oxygen sufficient to improve its printability, said copolymer having an inherent viscosity of at least 0.3.

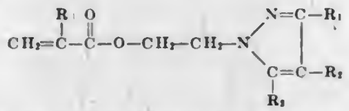
3,043,819

2-(PYRAZOL)ETHYL ACRYLATES, PROCESS FOR THEIR PRODUCTION, AND POLYMERIZATION PRODUCTS THEREOF

John W. Lynn, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

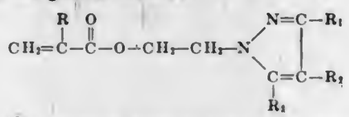
No Drawing. Filed Sept. 15, 1959, Ser. No. 839,995
10 Claims. (Cl. 260—88.3)

1. The unsaturated esters represented by the general formula:



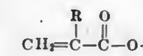
wherein R is a member selected from the group consisting of hydrogen and methyl radicals, and R_1, R_2 and R_3 are members selected from the group consisting of hydrogen and lower alkyl radicals.

4. A process for producing unsaturated esters represented by the general formula:

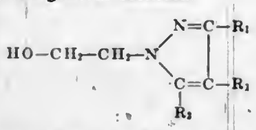


wherein R is a member selected from the group consisting of hydrogen and methyl radicals, and R_1, R_2 and R_3 are

members selected from the group consisting of hydrogen, lower alkyl and phenyl radicals, which comprises forming a mixture of an unsaturated ester represented by the general formula:



wherein R is as above defined and R_4 is a lower alkyl radical, a hydroxyethyl-substituted pyrazole compound represented by the general formula:



wherein R_1, R_2 and R_3 are as above defined, and a transesterification catalyst, there being present in said mixture from five to ten times the stoichiometric amount of the unsaturated ester starting material required to react with the hydroxyethyl-substituted pyrazole compound employed as starting material, and heating the mixture at an elevated temperature.

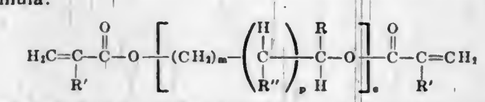
3,043,820

ANAEROBIC CURING SEALANT COMPOSITION HAVING EXTENDED SHELF STABILITY

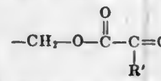
Robert H. Krieble, West Hartford, Conn.

No Drawing. Filed Oct. 14, 1960, Ser. No. 62,531
14 Claims. (Cl. 260—89.5)

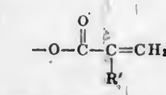
1. A sealant composition having extended shelf life in the presence of oxygen and rapidly polymerizable upon the exclusion of oxygen comprising a mixture of an unoxygenated monomer corresponding to the general formula:



wherein R is a member selected from the class consisting of hydrogen, —CH_3, —C_2H_5, —CH_2OH,



R′ is a member selected from the class consisting of hydrogen, chlorine, —CH_3 and —C_2H_5, R″ is a member selected from the class consisting of hydrogen, and —OH and



m is an integer equal to at least 1, *n* is an integer equal to at least 1, and *p* is one of the following: 0, 1; 0.1–15.0 percent by weight of a catalyst selected from the group consisting of hydrogen peroxide and organic hydroperoxides sufficient to polymerize said monomer at room temperature upon the exclusion of oxygen; and a quinone inhibitor in an amount equal to 10–1000 parts per million and sufficient to prevent gelling of the composition in the presence of oxygen for extended periods of time at room temperature.

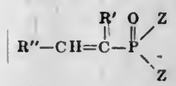
3,043,821

POLYMERIZATION OF VINYL PHOSPHONATES USING ORGANOMETALLIC CATALYSTS

Harry W. Coover, Jr., and Marvin A. McCall, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 2, 1958, Ser. No. 732,438
10 Claims. (Cl. 260—89.5)

1. A process for preparing a polymerized 1-alkenyl phosphonate having an intrisic viscosity of at least 0.6 comprising agitating in an inert diluent at from about —20° C. to about 120° C., a vinyl phosphonate compound having the following general formula:



wherein R′ and R″ each represent a substituent containing no more than 9 carbon atoms selected from the group consisting of a hydrogen atom, an alkyl radical, an alkoxy radical, an alkoxycarbonyl radical, a cyano radical and an aromatic hydrocarbon radical of the benzene series, at least one of R′ and R″ being a hydrogen atom, and each Z represents a substituent containing no more than 6 carbon atoms selected from the group consisting of an alkoxy radical, a chloroalkoxy radical, a bromoalkoxy radical, an iodoalkoxy radical, an amino radical, a methylamino radical, an ethylamino radical, a dimethylamino radical, a methylethylamino radical and a diethyl amino radical, with from about 0.1 to 10% by weight of the vinyl phosphonate of a metal alkyl compound as the sole catalytically active compound, said metal alkyl being selected from the group consisting of a lithium alkyl, a sodium alkyl, a potassium alkyl, a magnesium dialkyl, a zinc dialkyl and an aluminum trialkyl wherein each alkyl radical contains from 1 to 10 carbon atoms.

3,043,822

NEW POLYMERIZATION PROCESS

Arthur Maeder, Therwil, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed July 21, 1958, Ser. No. 749,629
Claims priority, application Switzerland Aug. 1, 1957
20 Claims. (Cl. 260—89.7)

1. A process for the manufacture of polymers by polymerizing in a polymerization medium at least one monomer which contains one polymerizable carbon-to-carbon double bond and one to two basic tertiary amino groups, with the aid of a free radical-forming addition polymerization catalyst, which process comprises saturating the polymerization medium under atmospheric pressure with acetylene and polymerizing the monomer in free base state under atmospheric pressure, a stream of acetylene bubbling through the polymerization medium throughout the polymerization.

3,043,823

PROCESS UTILIZING CARBON DISULFIDE IN AQUEOUS EMULSION POLYMERIZATION OF FLUORINATED MONOOLEFINS

Russell M. Mantell, Princeton, N.J., and John M. Hoyt, Cincinnati, Ohio, assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Aug. 18, 1958, Ser. No. 755,417
7 Claims. (Cl. 260—92.1)

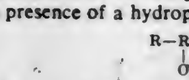
1. In a process for polymerizing a monomer charge consisting of at least one polymerizable fluorinated monolefin having from 2 to 5 carbon atoms at a temperature between 0° C. and 100° C. in the presence of a polymerization initiator and in an aqueous medium having a pH from 7 to about 14 and having a fluorinated dispersing agent, the improvement which comprises adding carbon disulfide to said aqueous medium in an amount between 1 and 50 parts by weight per 100 parts monomer charge.

3,043,824
HYDROPEROXIDE AND SULFOXIDE COMPOUNDS

Alexis A. Oswald, Charles B. Rupar, and Sydney H. J. Greenwood, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,582
11 Claims. (Cl. 260—93.5)

1. A polymerization process which comprises polymerizing an olefin monomer polymerizable by free radicals in the presence of a hydroperoxide of general formula:



wherein R and R′ together contain a total of 2 to 18 carbon atoms, R being selected from the group consisting of hydrogen, alkyl, alkenyl, cycloalkyl and cycloalkenyl radicals and R′ being a C_2 to C_{10} saturated hydrocarbon radical, and R″ is selected from the group consisting of naphthyl and halogen-substituted aryl radicals, the hydroperoxy group and sulfur atom of said hydroperoxide being bonded to different carbon atoms of R′.

3,043,825
PROCESS FOR THE TREATMENT OF LOW PRESSURE POLYOLEFINES

Albert Frese, Franz Bröich, and Paul Kränzlein, all of Marl, Kreis Recklinghausen, Germany, assignors to Chemische Werke Huls Aktiengesellschaft, Marl, Kreis Recklinghausen, Germany, a corporation of Germany

No Drawing. Filed Jan. 6, 1959, Ser. No. 785,120
Claims priority, application Germany Jan. 16, 1958
3 Claims. (Cl. 260—93.7)

1. Process for the purification of a low pressure polyolefine selected from the group consisting of polyethylene and polypropylene containing a catalyst selected from the group consisting of mixtures of organometallic compounds of aluminum with titanium chlorides which comprises washing the polyolefine at from +5 to +30° C. with a 15 to 40% aqueous solution of a readily soluble salt of a strong base and a strong acid, selected from the group consisting of the alkaline earth metal chlorides and bromides and the alkali metal, magnesium and ammonium chlorides, bromides and sulfates, separating the washed polyolefine from the washing solution, rewashing the separated polyolefine with an additional quantity of said aqueous salt solution, separating the polyolefine from the washing solution, washing the separated polyolefine with a 3–10% aqueous solution of sodium hydroxide, separating the polyolefine from said sodium hydroxide solution and washing it with water.

3,043,826
METHOD FOR PRODUCING ORGANOLEPTICALLY BLAND PROTEIN

Nathaniel J. Beaber, Kansas City, Mo., and James H. Obey, Pittsburgh, Pa., assignors to J. R. Short Milling Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 20, 1959, Ser. No. 787,941
1 Claim. (Cl. 260—123.5)

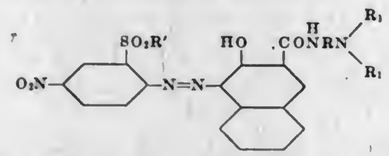
A method for recovering an improved soybean protein product comprising slurrying a soybean material which is substantially oil-free but which contains a substantial proportion of the non-oil solubles of the soybean, the protein content of such soybean material being substantially non-heat-denatured, with an aliphatic monohydric alcohol of 1–3 carbon atoms which is substantially saturated with said non-oil solubles, at a temperature not exceeding about 58° C., separating the alcohol from the soybean material and recycling the alcohol and slurrying additional soybean material therewith, the recycled alcohol being maintained at a temperature above that at which said non-oil solubles are separated therefrom, extracting the resulting alcohol-treated flakes with an aqueous extraction medium at a pH substantially different from 4.8–5.2, separating the aqueous extract from the residue, adjusting the pH of the separated extract to 4.8–5.2 and thereby precipitating a protein curd of at least 35% solids content, recovering such curd, and drying the curd at a temperature not exceeding about 58° C. to recover a light-colored protein product which is bland in taste and capable of forming a thermally irreversible gel.

3,043,827
MONOAZO DYE COMPOUNDS FOR ACRYLIC FIBERS

James M. Straley and Raymond C. Harris, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,561
6 Claims. (Cl. 260—152)

1. The azo compounds having the formula:



wherein R represents a member selected from the group consisting of an ethylene, a trimethylene and a β-hydroxytrimethylene radical, R_1 represents an alkyl group having 1 to 4 carbon atoms, R′ represents an alkyl group having 1 to 2 carbon atoms and



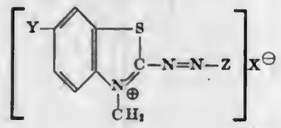
collectively represents a member selected from the group consisting of a morpholinyl radical and a piperidyl radical.

3,043,828
PRODUCTION OF DYESTUFFS

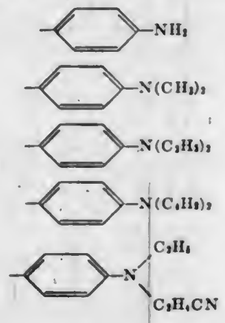
Siegfried Huenig, Marburg (Lahn), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

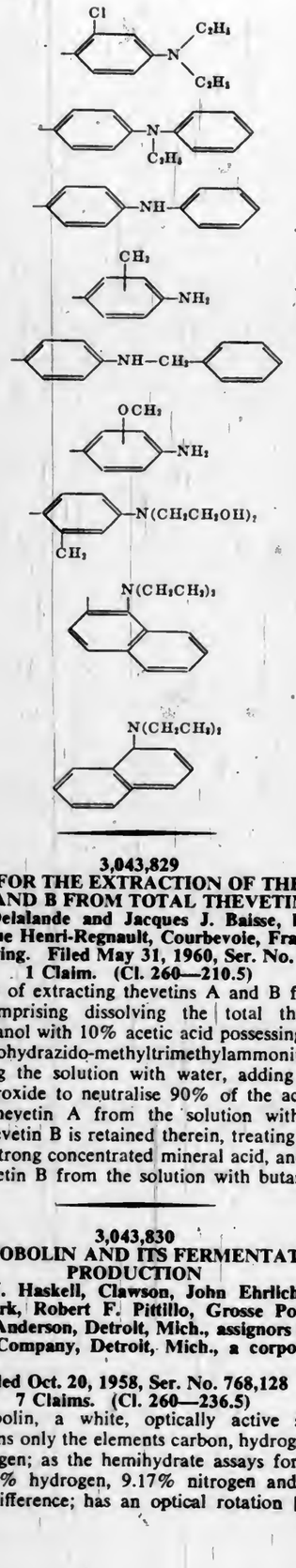
No Drawing. Filed July 1, 1955, Ser. No. 519,674
Claims priority, application Germany July 5, 1954
7 Claims. (Cl. 260—158)

1. A dyestuff of the formula



in which Y is selected from the class consisting of hydrogen, methoxy, ethoxy, acetamino, and nitro, X is an anion, and Z represents a member selected from the class consisting of groups of the formulae





and

3,043,829
PROCESS FOR THE EXTRACTION OF THEVETINS A AND B FROM TOTAL THEVETIN

Michel Delalande and Jacques J. Baisse, both of 16 Rue Henri-Regnault, Courbevoie, France

No Drawing. Filed May 31, 1960, Ser. No. 32,538
1 Claim. (Cl. 260—210.5)

A process of extracting thevetins A and B from total thevetin comprising dissolving the total thevetin in absolute ethanol with 10% acetic acid possessing in slight excess carbohydrazido-methyltrimethylammonium chloride, diluting the solution with water, adding sufficient sodium hydroxide to neutralise 90% of the acetic acid, extracting thevetin A from the solution with butanol while the thevetin B is retained therein, treating the solution with a strong concentrated mineral acid, and extracting the thevetin B from the solution with butanol.

3,043,830
ACTINOBOLIN AND ITS FERMENTATIVE PRODUCTION

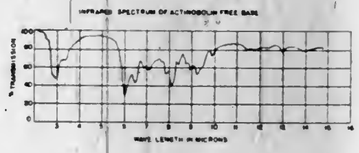
Theodore H. Haskell, Clawson, John Ehrlich, Grosse Pointe Park, Robert F. Pittillo, Grosse Pointe, and Lucia E. Anderson, Detroit, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

Filed Oct. 20, 1958, Ser. No. 768,128
7 Claims. (Cl. 260—236.5)

1. Actinobolin, a white, optically active substance which contains only the elements carbon, hydrogen, nitrogen and oxygen; as the hemihydrate assays for 50.31% carbon, 6.88% hydrogen, 9.17% nitrogen and 33.64% oxygen by difference; has an optical rotation $[\alpha]_D^{28}$ of +59° at pH 7 in phosphate buffer; assays for a molecular weight of 302 by potentiometric titration measurements; is very soluble in water; is moderately soluble in methanol and in ethanol; is non-extractable from aqueous solutions with n-butanol, with ethyl ether, with amyl acetate, with n-heptane and with benzene; gives positive ninhydrin, Folin-Ciocalteu and iodoform tests; forms a deep red coloration with ferric chloride, forms a red-orange color with Pauli diazo reagent; decolorizes an aqueous solution of potassium permanganate in the cold; reduces Fehling's solution; gives negative Molisch, Ehrlich and Elson-Morgan tests; does not absorb hydrogen at room temperature and 2 to 3 atmospheres pressure in the presence of Raney nickel catalyst when dissolved in acetic acid and when dissolved in ethanol; does not absorb hydrogen at room temperature and 2 to 3 atmospheres pressure in the presence of Adams catalyst when dissolved in acetic acid and when dissolved in ethanol; is amphoteric; possesses pK_a values of 7.5 and 8.8; contains one basic nitrogen atom and one non-basic nitrogen atom; contains at least one OH group; contains one



group which does not react with excess hydroxylamine hydrochloride in aqueous ethanol; forms a complex with



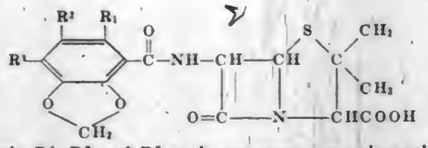
ferric ion which is a deep red color; forms a complex with aluminum ion which has an optical rotation $[\alpha]_D^{26}$ of +138° in water and a maximum ultraviolet absorbance at 263 mμ at ph 7 in phosphate buffer; forms complexes with cupric ion and with cobaltous ion; inhibits the growth of *Sarcina lutea* PCI 1001 W under conditions favorable to the growth of the microorganism; has a single characteristic ultraviolet absorption maximum at wave length 263 millimicrons in 0.1 N hydrochloric acid, at wave length 264 millimicrons in phosphate buffer at ph 7 and at wave length 288 millimicrons in 0.1 N sodium hydroxide; upon treatment with iodine in aqueous sodium bicarbonate solution loses its ability to inhibit the growth of *Sarcina lutea* PCI 1001 W and its ultraviolet absorbance; upon treatment with warm acetic anhydride yields an N-acetyl derivative which melts at 254–5° C. (dec.), has a pK_a of 8.4 and does not inhibit the growth of *Sarcina lutea* PCI 1001 W; upon warming with 6 N sulfuric acid at 100° C. liberates carbon dioxide and loses its ultraviolet absorbance and ability to inhibit the growth of *Sarcina lutea* PCI 1001 W; has a characteristic infrared spectrum substantially as shown in FIGURE 2; forms a sulfate salt having an optical rotation $[\alpha]_D^{26}$ of +54.5° in water and forms an acetate salt having an optical rotation $[\alpha]_D^{26}$ of +58° in water.

3,043,831
SYNTHETIC PENICILLINS

Frank Peter Doyle, 42 Hillside Gardens, Betchworth, Surrey, England, and John Herbert Charles Nayler, Coombelea, Cliftonville, Dorking, Surrey, England

No Drawing. Filed July 17, 1961, Ser. No. 124,342
Claims priority, application Great Britain July 18, 1960
6 Claims. (Cl. 260—239.1)

1. A compound selected from the group consisting of an acid having the formula



wherein R^1, R^2 and R^3 each represent a member selected from the group consisting of hydrogen, nitro, amino, (lower)alkyl, (lower)alkoxy, (lower)alkylamino, di-(lower)alkylamino, (lower)alkanoylamino, chloro, bromo, iodo, fluoro, trifluoromethyl, allyl, allyoxy, hydroxy, sulfamyl, (lower)alkylthio, cyclohexyl, cycopentyl, cycloheptyl, phenoxy, chlorophenoxy, bromophenoxy, (lower)-alkylphenoxy, (lower)alkoxyphenoxy, benzyl, phenethyl, phenylpropyl, phenylthio, chlorophenylthio, (lower)-alkylphenylthio, (lower)alkoxyphenylthio, phenyl, chlorophenyl, bromophenyl, (lower)alkylphenyl and (lower)-alkoxyphenyl and its sodium, potassium, calcium, aluminum and ammonium salts and its nontoxic substituted ammonium salts with an amine selected from the group consisitng of tri(lower)alkylamines, procaine, dibenzylamine, N-benzyl-beta-phenethylamine, 1-ephenamine, N,N'-bis-dehydroabiethylethylenediamine, N,N'-dibenzylethylenediamine, dehydroabiethylamine and N-(lower)-alkylpiperidines.

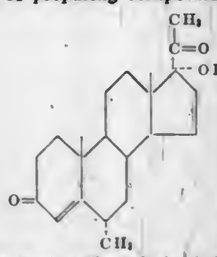
3,043,832

PREPARATION OF 6α-METHYL-17α-HYDROXY-PROGESTERONE AND 17α-ESTERS THEREOF

Pietro de Ruggieri and Carlo Ferrari, Milan, Italy, assignors to Ormonoterapia Richter S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 28, 1961, Ser. No. 106,165
Claims priority, application Italy Feb. 27, 1961
4 Claims. (Cl. 260—239.55)

4. A method of preparing compounds of the formula



wherein R is an acyl radical derived from an aliphatic carboxylic acid having 2–7 carbon atoms, comprising reacting 3β-acetoxy-5α,6α-oxide-17β-cyan-17α-(2'-tetrahydropyranyloxy)-androstane with a methyl magnesium halide selected from the group consisting of methyl magnesium bromide and methyl magnesium iodide, decomposing the reaction product with ammonium chloride to yield 6β-methyl-17α-(2'-tetrahydropyranyloxy)-pregnane-3β,5α-diol-20-one, oxidizing said last-named compound with cyclohexanone and an aluminum alkoxide selected from the group consisting of aluminum isopropoxide and aluminum t-butoxide, and treating the resulting 6α-methyl-17α-(2'-tetrahydropyranyloxy)-4-pregnene 3,20-dione with a compound selected from the group consisting of an aliphatic carboxylic acid having 2–7 carbon atoms and an anhydride thereof in the presence of catalytic amounts of p-toluenesulfonic acid to obtain the corresponding 17α-acyloxy derivative of 6α-methyl-4-pregnene-17α-ol-3,20-dione.

3,043,833

17-CYANOHYDRIN OF 19-NOR ANDROSTENE-DIONE AND 3-DERIVATIVES THEREOF

Pietro de Ruggieri, Milan, Italy, assignor to Ormonoterapia Richter S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed July 14, 1961, Ser. No. 124,003
3 Claims. (Cl. 260—239.55)

3. 3-ethylenedioxy, 17-cyano, 17-ol, estra, 5-ene.

3,043,834

[3-OXO-20-HYDROXY-1,4,17(20)-PREGNATRIEN-16-YLIDEN] ACETIC ACID LACTONE, AND INTERMEDIATES THEREFOR

Kikuo Igarashi, Osaka, Japan, assignor to Shionogi & Co., Ltd., Osaka, Japan

No Drawing. Filed Dec. 11, 1961, Ser. No. 158,529
Claims priority, application Japan Dec. 31, 1958
13 Claims. (Cl. 260—239.55)

1. [3-oxo-20-hydroxy-1,4,17(20)-pregnatrien-16-yliden]-acetic acid lactone.

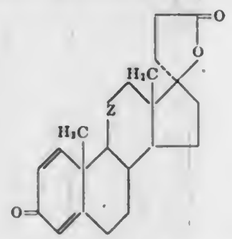
3,043,835

11-OXYGENATED 17α-CARBOXYETHYL-17β-HYDROXYANDROSTA-1,4-DIEN-3-ONE LACTONES

Edward A. Brown, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 1, 1960, Ser. No. 40,167
3 Claims. (Cl. 260—239.57)

1. A compound of the formula



wherein Z is selected from the group consisting of carbonyl and α-hydroxymethylene radicals.

3,043,836

13β-CARBOXY-17β-HYDROXY-10β-METHYLGON-4-EN-3-ONE, DERIVATIVES THEREOF AND INTERMEDIATES THERETO

Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 2, 1961, Ser. No. 107,043
12 Claims. (Cl. 260—239.57)

3. 13β-carboxy-17β-hydroxy-10β-methylgon-4-en-3-one lactone.

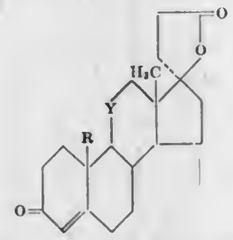
3,043,837

3,11-DIOXYGENATED 17α-CARBOXYETHYLANDROST-4-EN-17β-OL LACTONE, NOR COMPOUNDS CORRESPONDING, AND MANUFACTURING PROCESSES

John A. Cella, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,956
11 Claims. (Cl. 260—239.57)

1. A compound of the formula



wherein R is selected from the group consisting of hydrogen and methyl radicals and Y is selected from the group consisting of hydroxymethylene and carbonyl radicals.

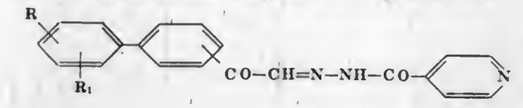
3,043,838

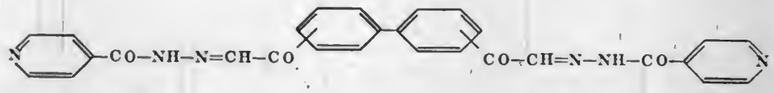
ISONICOTINOYL HYDRAZONES

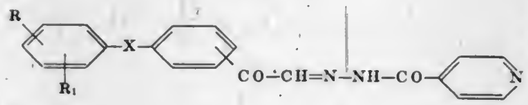
Guido Cavallini and Elena Massarani, Milan, Italy, assignors to Francesco Vismara S.p.A., Casatenovo, Como, Italy, a corporation of Italy

No Drawing. Filed Sept. 30, 1960, Ser. No. 59,501
Claims priority, application Great Britain Nov. 27, 1959
9 Claims. (Cl. 260—240)

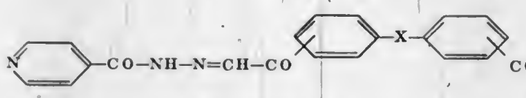
1. A chemical compound selected from the group consisting of compounds having the following formulas:







and



in which R is a mmeber selected from the group consisting of hydrogen, lower alkyl of from 1 to 4 carbon atoms, hydroxy, acetoxy and lower alkoxy of from 1 to 4 carbon atoms; R_1 is a member selected from the group consisting of hydrogen and halogen of atomic weight less than 80; and X is a member selected from the group consisting of oxygen, sulfur, sulfinyl, sulfonyl, methylene, ethylene and vinylene.

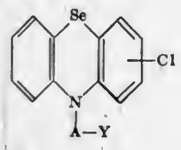
3,043,839

SUBSTITUTED PHENOSELENAZINE COMPOUNDS

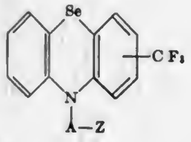
Paul N. Craig, Roslyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed June 15, 1959, Ser. No. 820,105
10 Claims. (Cl. 260—241)

1. A chemical compound of the class consisting of a free base and its nontoxic acid addition salts, said free base being selected from the group consisting of compounds of the formulae:



and



in which A is a divalent alkylene chain containing 2 to 6 carbon atoms; Y is a member selected from the group consisting of N-hydrogenpiperazinyl, N-lower-alkylpiperazinyl, N-(ω-hydroxy-lower-alkyl)-piperazinyl, N-(ω-hydroxy-lower-alkoxy-lower-alkyl)-piperazinyl, 2,5-dimethylpiperazinyl, N-acetylpiperazinyl and N-(ω-acetoxy-lower-alkyl)-piperazinyl; and Z is a member selected from the group consisting of amino, di-lower-alkylamino, pyrrolidinyl, morpholinyl, piperidinyl, thiomorpholinyl, N-hydrogenpiperazinyl, N-lower-alkylpiperazinyl, N-(ω-hydroxy-lower-alkyl)-piperazinyl, N-(ω-hydroxy-lower-alkoxy-lower-alkyl)-piperazinyl, 2,5-dimethylpiperazinyl, N-acetylpiperazinyl and N-(ω-acetoxy-lower-alkyl)-piperazinyl; each of the aforesaid lower alkyl moieties having 1 to 4 carbon atoms; and each of the aforesaid lower alkoxy moieties having 2 to 4 carbon atoms.

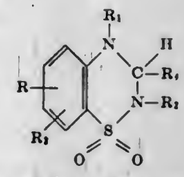
3,043,840

PURIFICATION PROCESS FOR HYDROCHLOROTHIAZIDE

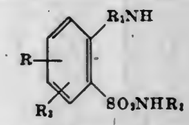
George V. Downing, Jr., Martinsville, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 14, 1959, Ser. No. 846,274
5 Claims. (Cl. 260—243)

1. In the method of producing a thiadiazine compound having the formula:



wherein R is selected from the group consisting of hydrogen, halogen, nitro, lower alkyl and lower alkoxy radicals, R_1 and R_2 are each selected from the group consisting of hydrogen and lower alkyl radicals, R_3 is selected from the group consisting of hydrogen, sulfamyl, and lower alkyl substituted sulfamyl radicals, and R_4 is selected from the group consisting of hydrogen and alkyl radicals having from 1 to 12 carbon atoms, by steps comprising heating a sulfamylaniline compound of the formula



where R, R_1, R_2 and R_3 are as above, with an aliphatic aldehyde of the formula R_4HCO wherein R_4 is as above, the improvement which comprises forming an aqueous solution of said thiadiazine and a thiadiazine-solubilizing, thiadiazine-non-hydrolyzing amount of an amine selected from the group consisting of ammonia and water soluble primary and secondary amines, and crystallizing said thiadiazine compound from the solution.

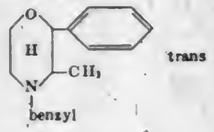
3,043,841

N-BENZYL-2-PHENYL-3-METHYL-MORPHOLINE

Harm Siemer, Konstanz, and Adolf Doppstadt, Konstanz-Litzelstetten, Germany, assignors to Ravensberg G.m.b.H., Chemische Fabrik, Konstanz, Germany

No Drawing. Filed May 6, 1958, Ser. No. 733,270
Claims priority, application Germany May 7, 1957
1 Claim. (Cl. 260—247)

As a new chemical compound



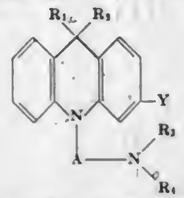
3,043,842

SUBSTITUTED ACRIDANS

Paul N. Craig, Roslyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

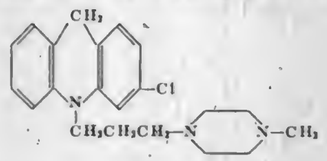
No Drawing. Filed Feb. 9, 1959, Ser. No. 791,850
8 Claims. (Cl. 260—268)

1. A chemical compound of the class consisting of a free base and its nontoxic acid addition salts, said free base having the formula:



in which Y is a member selected from the group consisting of halogen having an atomic weight of less than 80 and trifluoromethyl; R_1 and R_2 are members selected from the group consisting of hydrogen and lower alkyl; A is an alkylene chain of from 3 to 5 carbon atoms with a minimum of 3 carbon atoms separating the two nitrogen atoms to which it is attached; and R_3 and R_4, when individual radicals, are lower alkyl groups and, when taken together, are divalent groups which, together with the nitrogen to which they are attached, form a moiety selected from the group consisting of piperazinyl, lower alkylpiperazinyl, ω-hydroxy-lower-alkylpiperazinyl, ω-hydroxy-lower-alkoxy-lower-alkylpiperazinyl, ω-acetoxy-lower-alkylpiperazinyl, pyrrolidinyl, morpholinyl and piperidinyl; each of the said lower alkyl and lower alkoxy moieties having from 1 to 4 carbon atoms.

4. A chemical compound having the formula:



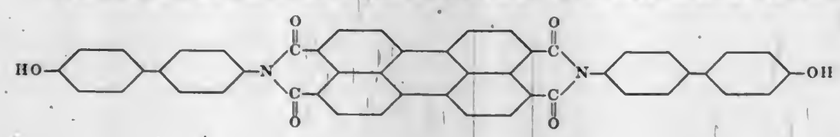
3,043,843

DYESTUFFS OF THE PERYLENE TETRACARBOXYLIC ACID DIIMIDE SERIES

Jacob Koch, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,354
Claims priority, application Switzerland Dec. 5, 1958
1 Claim. (Cl. 260—281)

The perylene tetracarboxylic acid diimide of the formula



3,043,844

LOWER-ALKYL 1-[3-(MONOCARBOCYCLIC-ARYL)-2-PROPENYL]-4-PHENYL-4-PIPERIDYL KETONES AND THEIR PREPARATION

Bill Elpern, Walnut Creek, Calif., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 12, 1958, Ser. No. 734,406
9 Claims. (Cl. 260—294.7)

1. The lower-alkyl 1-[3-(monocarbocyclic-aryl)-2-propenyl]-4-phenyl-4-piperidyl ketone in free base form.

3,043,845

PHENYLMETHYLPIPERIDINE DERIVATIVES

Harold E. Zaugg, Lake Forest, and Robert W. De Net, Waukegan, Ill., assignors to Abbott Laboratories, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,150
4 Claims. (Cl. 260—294.7)

1. Cis-1-methyl-3-benzoyl-4-phenylpiperidine.

3. Cis-1-methyl-(α-hydroxy-α-methylbenzyl)-4-phenylpiperidine.

3,043,846

PROCESS FOR THE PRODUCTION OF AROMATIC POLYCARBOXYLIC ACIDS

Bruno Blaser, Dusseldorf-Urdenbach, and Bernhard Raecke and Hubert Schirp, Dusseldorf, Germany, assignors to Henkel & Cie G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Nov. 12, 1958, Ser. No. 773,157
Claims priority, application Germany Mar. 5, 1956
8 Claims. (Cl. 260—295)

1. In the method of producing alkali metal salts of aromatic carboxylic acids, selected from the group consisting of mono- and dicyclic aromatic and aromatic heterocyclic di- and tricarboxylic acids from the corresponding mono- and dicyclic aromatic and aromatic heterocyclic mono-carboxylic acid salts which comprises, heating the mono-carboxylic salts to be converted to a temperature above 300° C. and below the temperature at which said salt and the reaction products substantially decompose in a substantially oxygen-free inert carbon dioxide atmosphere and in the presence of an acid-binding agent, for a time sufficient to effect said conversion, the improvement which comprises conducting the reaction under a pressure of at least 400 atmospheres, thereby obtaining a molar yield of the di- and tricarboxylic acid product salts which is more than 50% of the monocarboxylic acid salts undergoing conversion.

3,043,847

PRODUCTION OF SALTS OF MERCAPTOTHIAZOLES

Bertrand Ernest Wilde, Wrexham, Wales, assignor to Monsanto Chemicals Limited, London, England, a British company

No Drawing. Filed Feb. 4, 1960, Ser. No. 6,593
Claims priority, application Great Britain Feb. 10, 1959
4 Claims. (Cl. 260—299)

1. In a process for the production of a water-insoluble metal salt of a mercaptothiazole, in which the insoluble metal salt is formed in an aqueous medium from a water soluble metal salt of the mercaptothiazole and a cation of a metal which forms a water-insoluble salt, the improvement which comprises contacting the precipitated insoluble metal salt with 0.5–10% by weight of the mercaptothiazole of a member of the group consisting of ammonia and lower alkyl amines for time and temperature sufficient to reduce the mercaptothiazole content of the water-insoluble salt and isolating a product consisting essentially of a mixture of the mercaptothiazole and metal salt of the mercaptothiazole containing not more than about 7% of the mercaptothiazole.

3,043,848

(2,2,2-TRINITROETHYL)-2-NITRAMINO-2-IMIDAZOLINE

Howard A. Hageman, Englewood, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed July 7, 1950, Ser. No. 172,610
2 Claims. (Cl. 260—309.6)

1. As a new chemical compound, a (2,2,2-trinitroethyl)-2-nitramino-2-imidazoline made by the method of claim 2 and melting at 168–169° C. with decomposition.

2. A method of making a (2,2,2-trinitroethyl)-2-nitramino-2-imidazoline which comprises reacting 2-nitramino-2-imidazoline with an equimolar amount of formaldehyde at a pH above 7, and reacting the resulting reaction product with trinitromethane.

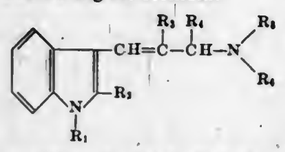
3,043,849

3-(3-SUBSTITUTED AMINO-1-PROPENYL)INDOLES

Jacob Szmuszkovicz, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Apr. 20, 1959, Ser. No. 807,269
6 Claims. (Cl. 260—319)

4. A compound selected from the class consisting of (*a*) a compound having the formula:



wherein R_1 represents a radical selected from the class consisting of hydrogen and alkyl from 1 to 6 carbon atoms, inclusive, R_2 represents a radical selected from the class consisting of hydrogen, alkyl from 1 to 6 carbon atoms, inclusive, aralkyl from 7 to 13 carbon atoms, inclusive, and aryl from 6 to 10 carbon atoms, inclusive; R_3 and R_4 each represent a radical selected from the class consisting of hydrogen and alkyl from 1 to 6 carbon atoms, inclusive; R_5 and R_6 each represent a radical selected from the class consisting of alkyl from 1 to 6 carbon atoms, inclusive, aralkyl from 7 to 13 carbon atoms, inclusive, and aryl from 6 to 10 carbon atoms, inclusive, and R_5 and R_6 taken with the attached nitrogen atom represent the heterocyclic radical selected from the class consisting of piperidino, morpholino, pyrrolidino, 2,2-dimethylpyrrolidino, thiamorpholino, hexamethyleneimino, and piperazino, (*b*) the pharmacologically acceptable acid addition salts thereof, (*c*) quaternary ammonium salts thereof, (*d*) the corresponding N-oxides, and (*e*) the corresponding N-oxide pharmacologically acceptable acid addition salts.

5. 3-(3-dimethylamino-1-propenyl)indole.

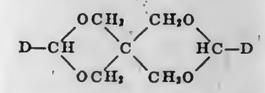
3,043,850

CHEMICAL COMPOUNDS CONTAINING SULFUR AND SPIROBI (META-DIOXANE) GROUPS

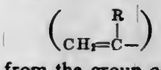
Howard R. Guest, Charleston, Joe T. Adams, St. Albans, and Harry A. Stansbury, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Sept. 26, 1957, Ser. No. 686,277, now Patent No. 2,996,516, dated Aug. 15, 1961. Divided and this application Apr. 26, 1960, Ser. No. 27,236
3 Claims. (Cl. 260—340.7)

1. A process for producing resins containing sulfur and spirobi(meta-dioxane) groups which comprises reacting a 3,9-divinylspirobi(meta-dioxane) compound with a mercaptoalkanol having between two and ten carbon atoms and having at least one reactive thiol group and at least one reactive hydroxyl group at a temperature between 30° C. and 150° C. in the presence of an acid catalyst, at a molar ratio of 3,9-divinylspirobi(meta-dioxane) compound to mercaptoalkanol of at least one said 3,9-divinylspirobi(meta-dioxane) compound having the formula:



wherein D is selected from the group consisting of (R—CH=CH—) and



and R is selected from the group consisting of hydrogen, halogen and lower alkyl.

3,043,851

2-VINYL-4-(DELTA-HYDROXYBUTYL)-1,3-DIOXOLANES

Rudolph F. Fischer, Dobbs Ferry, N.Y., and Curtis W. Smith, Berkeley, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 3, 1960, Ser. No. 66,918
3 Claims. (Cl. 260—340.9)

1. 2-vinyl-4-(delta-hydroxybutyl)-1,3-dioxolane.

3,043,852

PROCESS FOR THE PRODUCTION OF CONDENSATION PRODUCTS OF CARBOXYLIC ACIDS IN THE PRESENCE OF THEIR METALLIC SALTS

Maurice Robert Mills, Sevenoaks, England, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 15, 1959, Ser. No. 820,100
Claims priority, application Great Britain June 16, 1958
13 Claims. (Cl. 260—345.9)

1. Process for obtaining ketonic condensation products comprising heating an acid of the formula:

$$R—CH_2—COOH$$

where R is a non-acetylenic hydrocarbon radical of 6 to 24 carbon atoms, with a metallic soap of said acid, the metal of said soap being selected from the class consisting of group IA metals, group IIA metals of atomic number at least 12, metals of atomic number 24 to 30, beryllium, aluminum, and tin, at a temperature between 220° and 290° C. in the presence of a catalyst selected from the class consisting of boric oxide, boric acid, boric acid salts of weak bases, boric acid salts of volatile bases, boric esters and mixed anhydrides of boric acid and a carboxylic acid of the said formula, and simultaneously removing from the reaction zone the water and carbon dioxide formed during the reaction.

3. Process according to claim 1, wherein R is a straight-chain alkenyl hydrocarbon radical having the group —CH:CH.CH_2.CH:CH—.

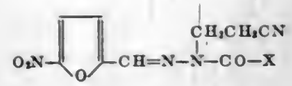
3,043,853

NEW 1-ACYL-1-(2-CYANO-ETHYL)-2-(5-NITROFURFURYLIDENE)HYDRAZINES AND THE PREPARATION THEREOF

Frank F. Ebetino, Norwich, N.Y., assignor to The Norwich Pharmacal Company, Norwich, N.Y., a corporation of New York

No Drawing. Filed Feb. 23, 1960, Ser. No. 10,040
5 Claims. (Cl. 260—347.3)

1. A compound having chemotherapeutic activity upon oral administration and represented by the formula:



in which X represents a member of the group consisting of amino and lower alkyl.

3,043,854
PRODUCTION OF ETHYLENE OXIDE BY CATALYTIC OXIDATION OF OLEFINES

Harry Hermann Alfred Endler, Milan, Italy, assignor to Montecatini Società Generale per l'Industria e Chimica, Milan, Italy, a corporation of Italy

Filed Oct. 17, 1958, Ser. No. 769,277
Claims priority, application Italy Dec. 3, 1954
9 Claims. (Cl. 260—348.5)

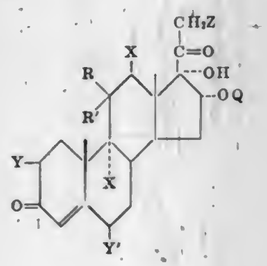
1. A process for preparing ethylene oxide, comprising passing fresh ethylene and fresh air through a plurality of parallelly connected first stage catalytic oxidation zones, scrubbing ethylene oxide from the effluent gases of said first stage zones, removing the ethylene oxide containing scrubbing solution, recycling nine-tenths of the scrubbed effluent gases to the said plurality of first stage zones, and passing the remaining minor amount of the scrubbed effluent gas to a single second stage catalytic oxidation zone, the catalyst in each of said zones constituting a porous refractory carrier material coated with a homogeneous mixture of 20 to 30% silver and 80 to 70% calcium carbonate of a particle size of not more than 5 microns, the said first and second stage oxidation zones being at a temperature of 200 to 300° C. and under a pressure of one to 20 atmosphere, the space velocity in the first stage zones being 7000 to 20,000 $Nm.^3$ per hour, the space velocity in the second stage zone being 2000 to 7000 $Nm.^3$ per hour.

3,043,855
16-ETHERS OF 16,17-DIHYDROXY STEROIDS OF THE PREGNANE SERIES

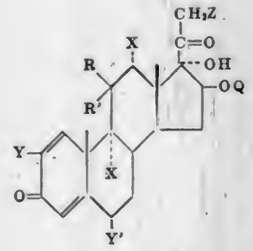
Josef Fried, Princeton, N.J., and Gordon H. Thomas, Birmingham, England, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Aug. 1, 1958, Ser. No. 752,444
12 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of steroids of the general formulae



and



wherein R is hydrogen, R′ is β-hydroxy and together R and R′ is keto; each X is selected from the group consisting of hydrogen, halogen, hydroxy and lower alkoxy; at least one X being hydrogen; Y is selected from the group consisting of hydrogen and methyl; Y′ is selected from the group consisting of hydrogen, fluoro, and methyl; Z is selected from the group consisting of hydrogen, halogen, hydroxy, and acyloxy; and Q is selected from the group consisting of alkyl and aralkyl.

3,043,856
REMOVAL OF GOSSYPOL FROM COTTON SEED PRODUCTS

Tiruvenkata Rajendra Seshadri and Kailash Chander, Delhi, India, assignors to Council of Scientific and Industrial Research, New Delhi, India, a corporation of India

No Drawing. Filed Dec. 11, 1958, Ser. No. 779,547
2 Claims. (Cl. 260—425)

1. A process for purifying cotton seed oil by removal of gossypol therefrom which consists of

mixing said cotton seed oil with a borate solution selected from the group consisting of an aqueous solution of borax and an aqueous solution of borax and sodium hydroxide

the borax in each solution being in the proportion of about 0.5 to 1.5 parts by weight per 100 parts of said cotton seed oil for converting said gossypol present in said cotton seed oil under non-acid conditions into their water-soluble borate complexes,

stirring the mixture at a temperature between 20 and 75° C., and washing the mixture with water between 20 and 98° C. to completely remove the borate complexes from the cotton seed oil.

3,043,857
PREPARATION OF HYDRIDES OF THE FOURTH AND FIFTH GROUP ELEMENTS

Herbert Jenkner, Hannover-Wulfel, Germany, assignor to Kali-Chemie Aktiengesellschaft, Hannover, Germany

No Drawing. Filed Oct. 30, 1957, Ser. No. 693,257
Claims priority, application Germany Nov. 3, 1956
9 Claims. (Cl. 260—429.7)

1. A process for the preparation of hydrogen compounds of silicon, germanium, and tin, comprising reacting a halide of said compounds, said halide containing as only reactive groups halogen directly bound to said metal in an inert liquid organic diluent at a temperature of about −20 to +150° C. with sodium hydride in the presence of at least 1 mol percent, calculated on said sodium hydride, of an activator comprising a compound of the formula $MeR_xR'_y$, wherein Me is a member of the group consisting of boron, gallium, aluminum, y being an integer from 1 to 3 and $x+y=3$, R is a member of the group consisting of hydrogen, lower alkyl, lower alkoxy, and phenoxy, and R′ is a member of the group consisting of lower alkyl, lower alkoxy and phenoxy and isolating the obtained hydride.

3,043,858
SILALKYLTIN COMPOUNDS

Robert L. Merker, Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Aug. 28, 1958, Ser. No. 757,659
7 Claims. (Cl. 260—429.7)

1. A silalkyltin compound having the formula

$$[YR_2SiCH_2(CHZ)_n(CH_2)_m]_{4-x}SnR'_x$$

where each R is a monovalent hydrocarbon radical, each R′ is selected from the group consisting of alkyl and phenyl radicals, Y is hydrogen, Z is selected from the group consisting of hydrogen and the methyl radical, x is an integer of from 1 to 2 inclusive, m is an integer of from 0 to 1 inclusive, and n is an integer of from 0 to 1 inclusive and is 1 only when m is 1.

3,043,859
FLUOROALKYLMERCURY FLUOROCARBOXYLATES AND THEIR PREPARATION

Paul E. Aldrich, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 5, 1960, Ser. No. 26,968
10 Claims. (Cl. 260—431)

1. The process which comprises thermally decomposing, at a temperature of about 200–500° C. and with the elimination of one mole of carbon dioxide per mole of reactant mercuric salt, the mercuric salt of a polyfluorocarboxylic acid wherein the alpha-carbon is bonded only to at least one member of the class consisting of carbon and fluorine and any beta-carbon is bonded to at least one fluorine and at most one hydrogen, the remaining valences of the beta-carbon being satisfied by at least one member of the group consisting of carbon and fluorine.

6. A compound of the formula



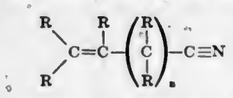
wherein R_f and R^1_f are polyfluorinated hydrocarbon groups of up to 18 carbons wherein alpha-carbon is bonded only to at least one member of the group consisting of carbon and fluorine and any beta-carbon is bonded to at least one fluorine and at most one hydrogen, the remaining valences of the beta-carbon being satisfied by carbon.

3,043,860
PREPARATION OF UNSATURATED NITRILES

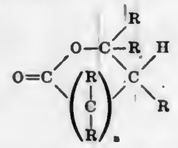
Benjamin Phillips and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,752
6 Claims. (Cl. 260—465.2)

1. A vapor phase process for the preparation of an unsaturated aliphatic nitrile having the following formula:



wherein R is a member selected from the group consisting of hydrogen and alkyl groups containing from 1 to 12 carbon atoms; and n is a whole positive integer of from 2 to 5; which comprises reacting a lactone of the following formula:



wherein both R and n are as indicated above; with anhydrous ammonia in the presence of an activated alumina dehydration catalyst at a temperture of from about 325° C. to about 550° C. and recovering the nitrile therefrom.

3,043,861
BICARBAMIC ACID DIESTER WITH SERINE

William Shive, 843 E. 38th St., and Charles Gordon Skinner, Jr., 1817 E. 40th St., both of Austin, Tex.

No Drawing. Filed Dec. 15, 1959, Ser. No. 859,582
1 Claim. (Cl. 260—482)

Bicarbamic acid diester with serine.

3,043,862
PROCESS FOR THE PRODUCTION OF ENOLACETATES

Theodor Altenschöpfer, Eduard Enk, Fritz Knörr, and Hellmuth Spes, all of Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany

No Drawing. Filed May 25, 1960, Ser. No. 31,535
Claims priority, application Germany June 2, 1959
5 Claims. (Cl. 260—488)

1. In a process for the production of enolacetates by conversion of enolizable carbonyl compounds selected from the group consisting of butyraldehyde, acetone, acetophenone, acetoacetic acid ethyl ester and acetyl acetone with ketene in the presence of an acid catalyst, the step which comprises carrying out such conversion in the presence of a catalyst selected from the group consisting of difluorophosphoric acid and equimolar mixtures of difluorophosphoric acid and monofluorophosphoric acid.

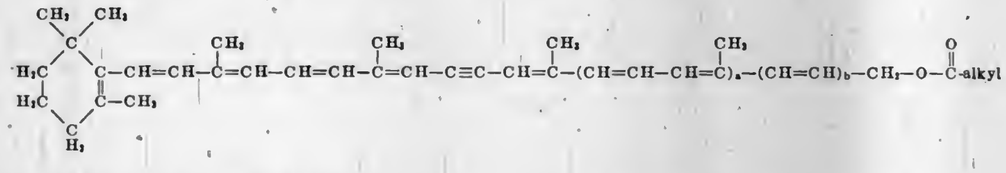
3,043,863
POLYENE ALCOHOLS AND ACYL DERIVATIVES THEREOF

Otto Isler, Basel, Rudolf Rüegg, Bottmingen, and Ulrich Schwieter, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,428
Claims priority, application Switzerland Aug. 28, 1958
8 Claims. (Cl. 260—488)

1. 19 - (2,6,6-trimethyl - 1 - cyclohexen - 1 - yl)-4,8,13,17 - tetramethyl - 2,4,6,8,10,12,14,16,18 - nonadecanonaen-1-ol.

7. A compound represented by the formula



3,043,864
PROCESS FOR THE PRODUCTION OF CYCLOHEXYLSULFAMATES

Noriyuki Okuda and Kikuji Suzuki, Tokyo, Japan, assignors to Dalichi Seiyaku Co., Ltd., Tokyo, Japan, a corporation of Japan

No Drawing. Filed Feb. 9, 1959, Ser. No. 791,789
Claims priority, application Japan Feb. 21, 1958
5 Claims. (Cl. 260—500)

1. A process for producing cyclohexylsulfamates, which comprises forming a liquid reaction mixture of cyclohexylamine and triammonium nitrilosulfate in excess of a 6 to 1 mol ratio to each other, respectively, heating the mixture at 70° to 130° C. to produce tricyclohexylammonium nitrilosulfate with the evolution of ammonia, heating the mixture at 160° to 170° C. to react the tricyclohexylammonium nitrilosulfate with unreacted cyclohexylamine to produce cyclohexylammonium cyclohexylsulfamate, and decomposing the cyclohexylammonium cyclohexylsulfamate with a strong base to produce a cyclohexylsulfamate.

3,043,865
PROCESS FOR RESOLVING A CYCLIC HYDROXY ACID

Gérard Nominé, Noisy-le-Sec, and Jean Céréde, Dugny, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed May 7, 1959, Ser. No. 811,531
Claims priority, application France June 3, 1958
5 Claims. (Cl. 260—501)

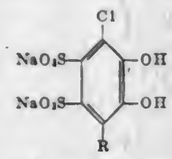
1. The process of resolving racemic 1β-hydroxy-3-carboxy - 6 - methoxy - 9aβ - methyl - 1,2,3a,8,9,9a - hexahydro-$\Delta^{3(3a)}$-benzo[e]indene into its levo-rotary and dextro-rotary enantiomorphs which comprises dissolving said racemic benzo[e]indene in a solution of L-(+)-threo-1-(p-nitrophenyl)-2-amino-propane-1,3-diol in a slightly molar excess with respect to said benzo-[e]indene in a lower alkanol at about room temperature to form an acid addition salt of said benzo[e]indene and said amino-propanediol, adding to said solution a second organic solvent selected from the group consisting of chloroform and isopropyl ether, crystallizing the acid addition salt of the levo-rotary enantiomorph at about room temperature and separating the precipitated crystals from the mother liquor.

3,043,866
CHLOROPYROCATECHOL SULFONIC ACID COMPOUNDS

Phyllis D. Oja, Walnut Creek, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 5, 1958, Ser. No. 778,326
3 Claims. (Cl. 260—512)

1. A chloropyrocatechol sulfonic acid compound having the formula



wherein R is selected from the group consisting of —Cl and —SO_3Na.

3,043,867
METHOD FOR THE PURIFICATION OF AMINOCARBOXYLIC ACIDS

Robert E. Anderson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 16, 1959, Ser. No. 846,802
5 Claims. (Cl. 260—518)

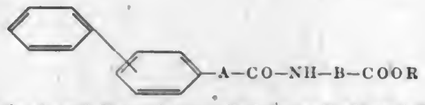
1. A process for the purification of an amphoteric phenyl monomamino monocarboxylic acid, the isoelectric form of said acid being substantially insoluble in water at temperatures up to about 10° C., which consists essentially of selectively sorbing a phenyl monoamino monocarboxylate anion onto a strongly basic quaternary ammonium anion exchange resin in a salt form, dissolving the sorbed amino-carboxylate anion on said resin in aqueous acid, said acid being a member selected from the group consisting of hydrochloric, nitric, sulfuric, phosphoric and acetic acids, separating the resulting aqueous acidic salt solution from said resin, and treating said aqueous acidic salt solution with base until the isoelectric point of the aminocarboxylic acid is reached thereby regenerating the aminocarboxylic acid.

3,043,868
N-XENYLALKANOYLAMINOALKANOIC ACIDS AND ESTERS THEREOF

Carl Peter Krimmel, Mundelein, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 9, 1959, Ser. No. 858,321
7 Claims. (Cl. 260—518)

1. A compound of the structural formula



wherein A and B are lower alkylene radicals and R is a member of the class consisting of hydrogen and lower alkyl radicals.

3,043,869
SEPARATION OF PHTHALIC ACIDS

Stanford J. Hetzel, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed June 2, 1958, Ser. No. 738,934
2 Claims. (Cl. 260—525)

1. Process for separating isophthalic acid from terephthalic acid which comprises contacting an aqueous solution of a water-soluble salt of isophthalic acid and a water-soluble salt of terephthalic acid with a treating agent consisting essentially of mineral acid in amount from 0.5 to 1.5 times the stoichiometric amount based on terephthalic acid salt and less than the stoichiometric amount based on both salts, at a temperature not greater than about 300° F. and a pressure sufficient to prevent excessive vaporization of water and to maintain said solution in liquid phase at said temperature, thereby to precipitate from the solution a terephthalic acid concentrate, and separating the concentrate from the resulting aqueous solution of isophthalic acid salt concentrate.

3,043,870
SEPARATION OF ISOPHTHALIC ACID FROM TEREPHTHALIC ACID

Stanford J. Hetzel, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Oct. 17, 1958, Ser. No. 767,774
4 Claims. (Cl. 260—525)

1. Process for separating isophthalic acid from terephthalic acid which comprises:

(1) contacting a mixture of isophthalic acid and terephthalic acid with a solvent mixture containing 10 to 90 wt. percent of an alkanol having 1 to 10 carbon atoms per molecule, and the remainder an alkyl aryl ketone having up to 12 carbon atoms per molecule, thereby to form a mixture of solid terephthalic acid with a solution of isophthalic acid in said solvent mixture,

(a) the temperature of said contacting being in the range from room temperature to 300° F., and

(b) the amount of said solvent mixture being sufficient to dissolve isophthalic acid and leave terephthalic acid undissolved; and

(2) separating said solid terephthalic acid from said solution.

3,043,871
PRODUCTION OF HEPTADECANE-DICARBOXYLIC ACID-1,17

Karl Büchner, Oberhausen-Sterkrade, Otto Roelen, Oberhausen-Holten, Josef Meis, Oberhausen-Osterfeld, and Helmut Langwald, Oberhausen-Holten, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

No Drawing. Filed Aug. 29, 1957, Ser. No. 681,124
Claims priority, application Germany Sept. 3, 1956
6 Claims. (Cl. 260—537)

1. Process for the production of pure heptadecane-1, 17-dicarboxylic acid which comprises catalytically adding carbon monoxide and hydrogen to a mixture of straight chain C_{18} unsaturated carboxylic acids in accordance with the oxo-synthesis to thereby form the corresponding formyl carboxylic acids, oxidizing said formyl carboxylic

acids with molten alkali to form the corresponding alkaline dicarboxylic acid salts, contacting the salts with a strong acid and recovering pure heptadecane-1,17-dicarboxylic acid from the mixture by treating the mixture with an about equal amount of heptane whereby the other acids pass into solution while the heptadecane-1,17-dicarboxylic acid remains undissolved.

3,043,872
DECOLORIZATION METHOD FOR PIMELIC ACID

Richard L. Roberts, Milton, and John W. Lynn, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 7, 1958, Ser. No. 772,403
3 Claims. (Cl. 260—537)

1. A process for the decolorization of crude pimelic acid produced by the caustic cleavage of sodium 3-cyclohexene-1-carboxylate which comprises treating an aqueous solution of said pimelic acid with an ozone-containing gas, wherein ozone is present in said gas in a concentration of up to 5 percent, at a rate and for a period of time sufficient to decolorize said pimelic acid and recovering decolorized pimelic acid from said aqueous solution by crystallization.

3,043,873
PROCESS FOR THE PREPARATION OF SALTS OF TRICHLORACETIC ACID

Fernand Peto, Le Pecq, Seine-et-Oise, and Marc L. J. Girard, Le Villard, Bozel, Savoie, France, assignors to Nobel-Bozel, Paris, France, a company of France

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,557
Claims priority, application France Nov. 21, 1958
6 Claims. (Cl. 260—539)

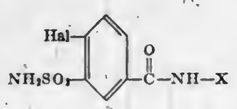
1. A continuous process for the production of an alkali metal salt of trichloracetic acid, which comprises mixing trichloracetic acid, a base selected from the group consisting of caustic alkali and alkali carbonate in substantially stoichiometric proportion with respect to said acid, and water in an amount of from 6 to 12% by weight with respect to said acid, maintaining the reaction mass at a temperature not exceeding 90° C. to obtain a thick paste having a pH between 6 and 8, further admixing said paste with an amount of dry trichloracetate of the same alkali metal such that the total water content in the moist powder thus obtained is less than 7% by weight, and crushing said moist powder at an elevated temperature which is not above 80° C. so as simultaneously to dry the same and break the lumps therein.

3,043,874
4-HALO-3-SULFAMOYLBENZOIC ACID DERIVATIVES AND METHODS FOR PRODUCING SAME

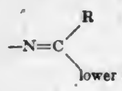
Horace A. De Wald and Milton L. Hoefle, Ann Arbor, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed May 9, 1960, Ser. No. 27,487
11 Claims. (Cl. 260—556)

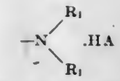
1. A compound of the formula



wherein Hal is selected from the group consisting of bromine and chlorine and X is selected from the group consisting of lower alkoxy,

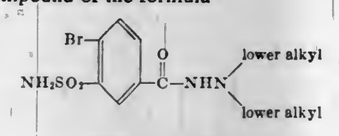


and



wherein R is a member of the class consisting of hydrogen and lower alkyl; R_1 and R_2 are members of the group consisting of hydrogen and lower alkyl; R_1 and R_2 in combination are members of the group consisting of alkylene radicals of fewer than 6 carbon atoms and oxydialkylene radicals of fewer than 6 carbon atoms; and A represents one equivalent of a non-toxic pharmaceutically-acceptable anion.

2. A compound of the formula

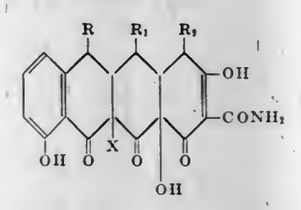


3,043,875
HALOGENATED TETRACYCLINE DERIVATIVES AND PROCESSES FOR THEIR PREPARATION

John J. Beereboom, Waterford, Hans H. Rennhard, Lyme, and Charles R. Stephens, Jr., Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,085.
21 Claims. (Cl. 260—559)

1. A compound selected from the group consisting of compounds of the formula:

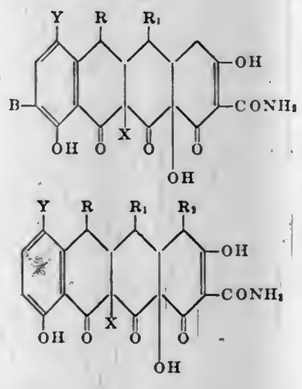


wherein:

R is selected from the group consisting of H and CH_3;
R_1 is selected from the group consisting of H and, when R is CH_3, OH;
R_2 is selected from the group consisting of hydrogen and —$N(CH_3)_2$; and X is halogen;

and the mineral acid salts thereof and alkali and alkaline earth metal salts thereof.

2. A compound selected from the group consisting of compounds of the formulae:



wherein:

R is selected from the group consisting of H and CH_3;
R_1 is selected from the group consisting of H and, when R is CH_3, OH;

R_2 is selected from the group consisting of H and $N(CH_3)_2$;

X and Y are halogen; and

B is selected from the group consisting of chloro, bromo and iodo;

and the mineral acid salts thereof and alkali and alkaline earth metal salts thereof.

3. 11a-chloro-6-deoxy-6-demethyltetracycline.

3,043,876

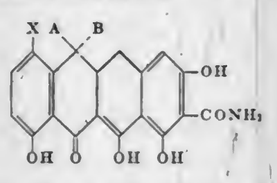
4a,12a-ANHYDRO-4-DESDIMETHYLAMINOTETRACYCLINE AND ANALOGS THEREOF

Hans H. Rennhard, Lyme, Lloyd H. Conover, Quaker Hill, Philip N. Gordon, Old Lyme, and Charles R. Stephens, Jr., Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 29, 1960, Ser. No. 5,336

8 Claims. (Cl. 260—559)

1 Compounds of the formula:



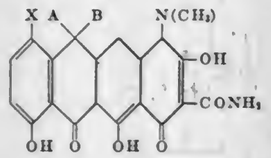
wherein:

X is selected from the group consisting of hydrogen and chlorine;

A is selected from the group consisting of hydrogen and methyl; and

B is selected from the group consisting of hydrogen and hydroxy.

7. The process which comprises treating a compound selected from the group consisting of



wherein:

X is selected from the group consisting of hydrogen and chlorine;

A is selected from the group consisting of hydrogen and methyl; and B is selected from the group consisting of hydrogen and hydroxy; in a reaction inert solvent with a reagent selected from the group consisting of perbenzoic acid and peracetic acid and subsequently isolating the resulting 4a,12a-anhydro-4-desdimethylamino derivative therefrom.

3,043,877

PROCESS FOR THE 12a-HYDROXYLATION OF 12a-DEOXYTETRACYCLINES

Chester E. Holmlund, Pearl River, and William W. Andres, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 28, 1960, Ser. No. 65,587

3 Claims. (Cl. 260—559)

1. The process for the 12a-hydroxylation of 12a-deoxytetracyclines which comprises contacting a 12a-deoxytetracycline with an inorganic oxidizing agent at a temperature of from about 0° C. to about 50° C. and at a pH of from about 2 to about 7, said inorganic oxidizing agent being present in the reaction mixture in amounts ranging from about one-eighth to about twice the molar concentration of the 12a-deoxytetracycline.

3,043,878

MANUFACTURE OF GUANIDINE NITRATE

Elwyn Roberts, Eltham, London, and Thomas Martin, Waltham Cross, England, assignors to Minister of Aviation in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England

Filed May 5, 1959, Ser. No. 811,218

Claims priority, application Great Britain May 6, 1958

3 Claims. (Cl. 260—564)

1. In a process for the manufacture of guanidine nitrate wherein urea is reacted with ammonium nitrate in equimolar proportions in the presence of silica gel to yield anhydrous reaction product containing guanidine nitrate and some unreacted ammonium nitrate, the improvement of adding urea to the anhydrous reaction product to adjust the molar proportion of ammonium nitrate to urea to a value within the range of proportions from about 65:35 to about 30:70 so that the melting point of the resulting anhydrous mixture of guanidine nitrate and urea is well below 100° C., and then crystallizing out crude guanidine nitrate from the anhydrous reaction product and recycling the resulting anhydrous mother liquor to the feed, adding a small amount of water to the crude guanidine nitrate and recrystallizing the crude guanidine nitrate to obtain a purified guanidine nitrate product and an aqueous mother liquor, dehydrating the small amount of water from the aqueous mother liquor before recycling to the feed.

3,043,879

PROCESS FOR PREPARING SULFONES

Horace R. Davis, Jr., and David P. Sorensen, St. Paul, Minn., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed July 25, 1958, Ser. No. 751,065

6 Claims. (Cl. 260—607)

1. In a process for preparing an organic sulfone from an organic sulfide wherein an organic sulfide, selected from the group consisting of

$$(R—S—R')_n \text{ and } (R—S—(R')_n—S—R'')_m$$

wherein R, R' and R'' are selected from the group consisting of alkyl, alkenyl, monocycloalkyl, monocycloalkenyl, hydrocarbon aryl, oxygen heterocyclic and nitrogen heterocyclic radicals and *m* and *n* are integers from 1 to 100, is reacted with an oxidizing agent effective to produce the corresponding organic sulfoxide and the organic sulfoxide is disproportionated to the corresponding sulfone with osmium tetroxide as the disproportionation agent, the improvement which comprises: carrying out the oxidation in a zone separate from the zone where disproportionation occurs in a two-stage continuous manner so that the reaction mixture in the oxidation zone is prevented from contacting reactants in the disproportionation zone.

3,043,880

PROCESS FOR PREPARING 1,2-ETHANEDITHIOL

Jane O. Fournier and Delbert D. Reynolds, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 7, 1961, Ser. No. 115,296

5 Claims. (Cl. 260—609)

1. A process for preparing 1.2-ethanedithiol which comprises reacting a carbonate of the general formula

$$RO\overset{O}{\overset{\|}{C}}OCH_2CH_2SH$$

wherein R represents an alkyl group of from 1–8 carbon atoms, with a hydrosulfide of the general formula MSH wherein M represents a member selected from the group consisting of the NH_4 radical and an alkali-metal atom, at from 0–30° C., in the presence of a base having the general formula MOH wherein M is as above defined, in

the proportions of from 1–5 moles of the said hydrosulfide to each mole of the said carbonate, until the reaction is substantially complete, and acidifying the reaction mixture.

3,043,881

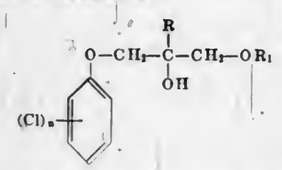
NOVEL HALOGEN-CONTAINING ETHER ALCOHOLS

Marco Wismer, Richland Township, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 22, 1958, Ser. No. 710,401

9 Claims. (Cl. 260—613)

A compound of the structure



wherein *n* represents a whole number from 3 to 5 inclusive, R_1 is a radical derived by removing one hydroxyl group from a saturated polyol consisting of from 2 to 10 carbon atoms, hydrogen and oxygen, and from 2 to 5 hydroxyl groups, and R is a member of the class consisting of hydrogen and lower alkyl radicals.

3,043,882

MANUFACTURE OF RESORCINOL

Bernard Hammond Markham Thompson, Lower Kingswood, England, assignor, by mesne assignments, to Hercules Powder Company, a corporation of Delaware

No Drawing. Filed Aug. 5, 1959, Ser. No. 831,733

Claims priority, application Great Britain Aug. 8, 1958

3 Claims. (Cl. 260—621)

1. In the process for the production of resorcinol wherein (1) a reaction mixture derived from the oxidation of meta-diisopropylbenzene and containing meta-diisopropylbenzene dihydroperoxide is subjected to acid cleavage to produce resorcinol and material less volatile than resorcinol, (2) the material less volatile than resorcinol is heat decomposed while passing steam through said material, (3) the additional quantities of resorcinol and meta-isopropenyl phenol so formed are simultaneously distilled off, and (4) the resorcinol is recovered from the aqueous distillate, the improvement of maintaining the pH of the aqueous distillate at a value between 4 and 7 by carrying out the heat decomposition of the material less volatile than resorcinol in the presence of ammonium sulfate.

3,043,883

MANUFACTURE OF RESORCINOL

Bernard Hammond Markham Thompson, Lower Kingswood, England, assignor, by mesne assignments, to Hercules Powder Company, a corporation of Delaware

No Drawing. Filed Aug. 5, 1959, Ser. No. 831,734

Claims priority, application Great Britain Aug. 8, 1958

3 Claims. (Cl. 260—621)

1. In the process for the production of resorcinol wherein (1) a reaction mixture derived from the oxidation of meta-diisopropylbenzene and containing meta-diisopropyylbenzene dihydroperoxide is subjected to acid cleavage to produce resorcinol and material less volatile than resorcinol, (2) the material less volatile than resorcinol is heat decomposed while passing superheated steam through the material, (3) the additional quantities of resorcinol and meta-isopropenyl phenol so formed as simultaneously distilled off to provide a distillate composed of an upper oil phase containing meta-isopropenyl phenol and some resorcinol and a lower aqueous phase containing water, resorcinol and some meta-isopropenyl phenol, and (4) the resorcinol is recovered from the distillate, the improvement of separating the oil phase from the aqueous phase of the distillate by decantation, introducing the aqueous phase into an evaporator and providing a climbing film of said aqueous phase on the wall of the evaporator, subjecting said film to dehydration at a pressure in the range from about 50 millimeters at an evaporator wall temperature of about 170° C. up to atmospheric pressure at an evaporator wall temperature of about 250° C., collecting from the evaporator an overhead fraction containing water and meta-isopropenyl phenol and recovering from the evaporator an anhydrous residue fraction containing resorcinol substantially free from meta-isopropenyl phenol.

3,043,884

TETRAFLUORO-BENZOQUINONE-1,4 AND A PROCESS FOR ITS MANUFACTURE

Kurt August Wilhelm Wallenfels and Wilfried Johannes Draber, Freiburg im Breisgau, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

Filed Feb. 13, 1958, Ser. No. 715,131

Claims priority, application Germany Aug. 17, 1957

1 Claim. (Cl. 260—623)

Tetrafluoro-hydroquinone-1.4.

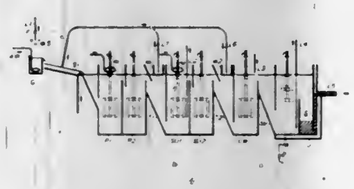
3,043,885

MANUFACTURE OF TRINITROTOLUENE

William Haydn Morris, Pembrey, and John Hubert Hopkins, Burry Port, Wales, assignors to the Minister of Aviation in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England

Filed Apr. 20, 1960, Ser. No. 23,468

3 Claims. (Cl. 260—645)



1. A continuous process for purifying crude 2,4,6-trinitrotoluene particles which comprises warming said particles to a temperature of 1° to 12° C. below the setting point of said particles for at least five minutes, treating said particles with a sodium sulphite solution, washing said particles in cold water, melting said particles, and removing the purified molten trinitrotoluene.

3,043,886

DIARYLMETHANES

Carl Serres, Jr., Hammond, Ind., and Ellis K. Fields, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Aug. 21, 1959, Ser. No. 835,172

10 Claims. (Cl. 260—649)

1. The process for preparing diarylmethanes which comprises reacting a polyarylmethane having the formula: $A—CH_2(Ar—CH_2)_nA$ wherein A is an aryl group, Ar is a divalent arylene group corresponding to A and *n* is an integer from 1 to 4 and wherein A and Ar are selected from the class consisting of aryl and arylene hydrocarbon groups and halogenated derivatives thereof with an aromatic compound corresponding to the aryl group A in the presence of a catalytically effective amount of a Lewis acid and recovering the diarylmethane formed.

3,043,887
PROCESS OF MAKING CHLOROBENZENES
Friedrich Becke, Scheffelstrasse 4, Heidelberg, Germany
No Drawing. Filed Oct. 28, 1959, Ser. No. 849,169
Claims priority, application Germany Oct. 31, 1958
8 Claims. (Cl. 260—650)

1. A process of making at least one chlorobenzene taken from the group consisting of di-, tri-, and tetrachlorobenzenes, comprising heating hexachlorocyclohexane with elemental sulphur in a molar ratio ranging from about 1:⅛ to 1:8, at about 200° to 320° C.

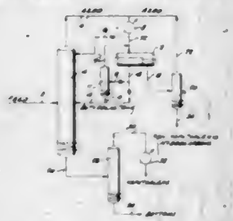
3,043,888
STABILIZATION
Blaine O. Pray and Donald E. Hardies, Wadsworth, Ohio, assignors, by mense assignments, to Pittsburgh Plate Glass Company
No Drawing. Filed Feb. 9, 1959, Ser. No. 791,803
8 Claims. (Cl. 260—652.5)

1. A composition comprising a liquid halogenated aliphatic hydrocarbon containing a stabilizing concentration of an aliphatic aldehyde hydrazone, said aliphatic aldehyde hydrazone containing from 1 to 3 aliphatic groups, each of which groups contains from 1 to 3 carbon atoms.

3,043,889
PRODUCTION OF FLUOROETHYLENES
Lee B. Smith, Woodbridge, and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 22, 1960, Ser. No. 16,634
3 Claims. (Cl. 260—653.5)

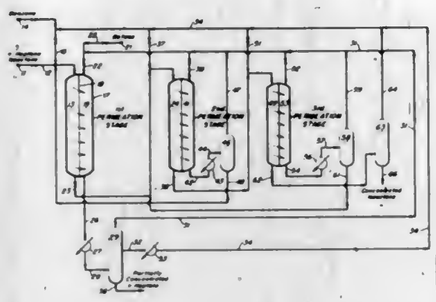
1. The process for making $CClF{=}CF_2$ which comprises charging into a reaction zone a vapor-phase mixture of CCl_2FCClF_2 and hydrogen in mol proportions of not less than 1.25 mols of CCl_2FCClF_2 per mol of hydrogen, subjecting said mixture to heating in said zone to temperatures substantially in the range of 475–550° C. while in the presence of a catalyst consisting of chromium oxide and for contact time substantially in the range of 2–15 seconds to effect per pass conversion of CCl_2FCClF_2 substantially in the range 15–30%, said reaction zone being defined by solid surfaces of non-metallic refractory oxide material of the group consisting of Alundum, porcelain, fused silica and zirconia, and recovering $CClF{=}CF_2$ from the materials exiting the reaction zone.

3,043,890
RECOVERY OF PETROLEUM NAPHTHALENE
Art C. McKinnis, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,526
8 Claims. (Cl. 260—674)



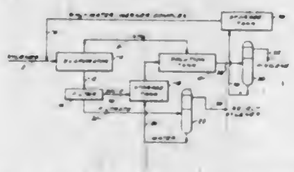
1. A method for the recovery of substantially pure naphthalene from a petroleum fraction boiling above about 400° F., which comprises: (1) subjecting said fraction to azeotropic distillation in admixture with butyrolactone until substantially all the non-naphthalenic hydrocarbons in said fraction which boil within about 10° F. of naphthalene are distilled overhead as an azeotrope with said butyrolactone, and (2) recovering substantially pure naphthalene from the remaining bottoms fraction.

3,043,891
SEPARATION OF HYDROCARBONS
James M. Stuckey, Texas City, Tex., assignor, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Oct. 29, 1954, Ser. No. 465,495
10 Claims. (Cl. 260—674)



1. In the process of separating a mixture of at least two saturated hydrocarbons by introducing said mixture into the feed zone of a permeation apparatus comprised of a feed zone which is sealed from a permeate zone by a thin plastic membrane in which one of the hydrocarbons contained in said mixture of saturated hydrocarbons is more soluble than others, in which process a portion of said mixture of saturated hydrocarbons is permeated through said membrane into the permeate zone and the permeated portion is withdrawn from said permeate zone and a non-permeated portion is withdrawn from the feed zone, said permeated portion being enriched in the saturated hydrocarbon which is more soluble in the membrane, the improvement which comprises increasing the rate of permeation of hydrocarbons through the membrane by contacting the membrane during permeation with an added hydrocarbon solvent for said membrane, said membrane solvent being selected from the group consisting of aromatic hydrocarbons, unsaturated hydrocarbons, and mixtures thereof, and said hydrocarbon solvent being in addition to any hydrocarbons originally occurring in the feed mixture and to any recycle hydrocarbons derived from the feed mixture, and carrying out the permeation in the presence of said hydrocarbon solvent in an amount of the latter sufficient to substantially increase the rate of permeation of saturated hydrocarbons through said permeation membrane.

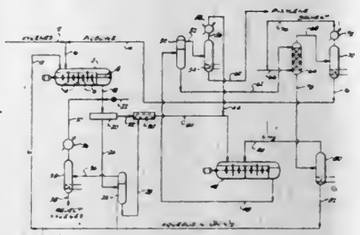
3,043,892
SEPARATION OF ORGANIC COMPOUNDS WITH WERNER COMPLEXES
William D. Schaeffer, Pomona, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Dec. 28, 1959, Ser. No. 862,223
18 Claims. (Cl. 260—674)



1. A method for recovering an organic compound from a clathrate thereof with a Werner complex consisting of a salt of a metal of atomic number above 12 coordinated with at least 2 mole proportions of a heterocyclic nitrogen base, which comprises dissolving said clathrate in an aqueous solution of a nitrogen base having a dissociation constant which is (1) greater than about 10^{-6}, and (2) greater than the dissociation constant of the heterocyclic base of said Werner complex, and separating said organic compound from the aqueous solution of Werner complex.

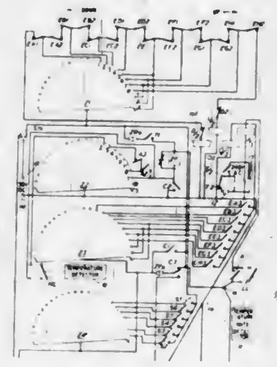
3,043,893
SEPARATION OF ORGANIC COMPOUNDS WITH WERNER COMPLEXES
William D. Schaeffer, Pomona, and Homer E. Rea, Jr., Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Dec. 28, 1959, Ser. No. 862,224
15 Claims. (Cl. 260—674)

4. A method for altering the composition of a feed mixture of organic compounds including at least one aromatic compound differing in molecular configuration from another compound in said mixture, which comprises (1) reacting said feed mixture simultaneously with (*a*) a heterocyclic nitrogen base and (*b*) a water solution of a metal salt capable of forming a water-insoluble Werner complex with said heterocyclic nitrogen base, thereby forming a Werner complex clathrate with one component of said feed mixture, (2) separating non-clathrated organic compounds from the resulting slurry, (3) dissolving said clathrate in an aqueous solution of a volatile nitrogen base boiling below water and having a dissociation constant greater than that of said heterocyclic base, (4) separating the resulting mixture into an organic phase enriched in the clathrated component of said feed mixture and an aqueous Werner complex-volatile base solution, (5) extracting said aqueous Werner complex-volatile base solution with a water-insoluble organic solvent to extract asid heterocyclic base thereby forming an organic extract phase and an aqueous raffinate phase, (6) recovering heterocyclic base from said extract phase, (7) boiling said aqueous raffinate phase to expel said volatile nitrogen base and form an aqueous solution of said metal salt, and (8) recycling said recovered heterocyclic base and said aqueous metal salt solution to step (1).



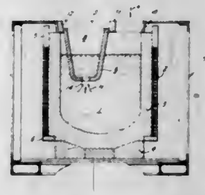
ELECTRICAL

3,043,894
ELECTRIC ARC FURNACES
Jack Ravenscroft, Manchester, England, assignor to The British Iron and Steel Research Association, London, England
Filed Dec. 3, 1958, Ser. No. 778,027
Claims priority, application Great Britain May 16, 1958
18 Claims. (Cl. 13—12)



1. An automatic control system for an electric arc melting furnace having electrodes connectable to a power supply, comprising means for adjusting the electrical power input to the furnace electrodes from the power supply, programme means to automatically control the power input adjustment means in predetermined stepwise sequence, and a timing device to predetermine the minimum duration of programme steps during normal operation of the furnace, and means responsive to a temperature characteristic of the furnace for automatically extending the duration of at least one of the programme steps beyond the minimum duration determined by the timing device.

3,043,895
MULTICHAMBER SMELTING FURNACE
Johann Peter Rohn, Hochkirchen, near Koln, Germany, assignor to Russ-Elektroofen K.G., Koln-Bayenthal, Germany, a German firm
Filed Apr. 27, 1959, Ser. No. 809,132
Claims priority, application Germany Apr. 28, 1958
10 Claims. (Cl. 13—27)

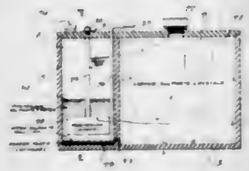


1. An electric melting furnace for smelting metals comprising, in combination, a single, upright, stationary melting chamber made from electrically non-conductive material and having an upper charge opening for charging the melting chamber with metal to be molten therein; at least one electric coil surrounding said melting chamber; and at least one insert chamber arranged within said melting chamber eccentrically with respect thereto and with respect to said coil surrounding said melting chamber and extending from the top of said melting chamber toward the bottom thereof so as to be adapted to dip deeply below the surface of the molten metal in said melting chamber, said insert chamber having a bottom portion formed with at least one aperture therethrough from which the refined and molten metal may enter from said melting chamber into said insert chamber to be maintained in the latter in quiet state and proper temperature and for being removed therefrom, the inner volume of said insert chamber being considerably smaller than the inner volume of said melting chamber.

3,043,896
ELECTRIC DRY CELLS AND STORAGE BATTERIES
Danuta Herbert and Juliusz Ulam, Paris, France, assignors to Electric Techniques Corporation, N.V., Willemstad, Curacao, a corporation of Curacao
No Drawing. Filed Nov. 24, 1958, Ser. No. 775,733
Claims priority, application France Nov. 26, 1957
15 Claims. (Cl. 136—6)

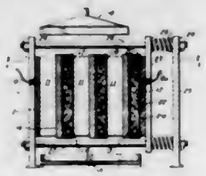
1. An electric cell comprising a negative electrode selected from the group consisting of lithium, lithium alloys, and lithium amalgams, a positive electrode, and an electrolyte solution comprising an electrolyte solvent and an electrolyte, said solvent consisting essentially of at least one amine selected from the group consisting of primary saturated aliphatic amines, secondary saturated aliphatic amines, and tertiary saturated aliphatic amines wherein the hydrocarbon chains attached to the nitrogen atom of the amines of said group are selected from the group consisting of propyl, butyl, and amyl radicals.

3,043,897
WET CELL BATTERY HAVING DEPOLARIZING MEANS
Bethel Bond, 1101 Semands Ave., P.O. Box 101, and Joseph A. South, P.O. Box 165, both of Conroe, Tex.
Filed Oct. 2, 1959, Ser. No. 843,973
1 Claim. (Cl. 136—83)



A battery comprising a case of uniform depth, a planar vertical partition wall dividing said case into two compartments of equal depth, one of said compartments defining a container and the other of said compartments defining a receptacle independent of said container, said container and said receptacle being disposed in juxtaposed relationship with said planar partition wall comprising a single side wall common to said container and said receptacle, a horizontally disposed cathode plate in the bottom portion of said container, an anode, means supporting said anode in said container above and vertically spaced from said cathode plate, a solution including an electrolyte in said container in contact with both of said cathode plate and said anode, said receptacle containing depolarizing material in a substantially dry solid state, said planar partition wall comprising the side wall common to said container and said receptacle having at least one aperture therethrough at a location between said cathode plate and said anode to provide communication between said container and said receptacle, respective terminals connected to said cathode plate and said anode, at least some of the depolarizing material in said receptacle being placed in solution in response to the admission of the solution including the electrolyte to said receptacle from said container through the aperture in said planar partition wall to form a depolarizing solution of greater density than the remaining solution including the electrolyte, the heavier depolarizing solution and the remaining solution including the electrolyte dissociating themselves from each other to define a separation level therebetween, whereby the depolarizing solution enters said container through the aperture in said planar partition wall from said receptacle to continuously displace the remaining solution including the electrolyte in the region immediately above said cathode plate for maintaining the separation level above said cathode plate to cover said cathode plate with a layer of the depolarizing solution and accomplish continuous depolarization of said cathode plate, the height of the separation level between the depolarizing solution and the remaining solution including the electrolyte in said container being substantially equal to the height on said planar partition wall where the aperture therethrough occurs, a unitary top cover on said case closing said container and said receptacle, and a pair of filler plugs removably disposed in said top cover, said filler plugs being located above said container and said receptacle respectively to provide access thereto.

3,043,898
GAS DEPOLARIZED BATTERY
James D. Miller, Long Beach, and Leonard J. Gordon, Sierra Madre, Calif., and Edmund P. Davis, Memphis, Tenn., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Apr. 24, 1956, Ser. No. 580,417
19 Claims. (Cl. 136—86)



1. A cell for generating electric voltage which comprises in combination a consumable anode and; a cathode comprising a porous diffuser, said diffuser having means for circulating gaseous depolarizer through said diffuser, a layer of inert porous carrier material between said anode and cathode so that said anode and cathode have surfaces which face each other and are separated from each other by the carrier material, means for circulating electrolyte in a separate and distinct path from said circulating depolarizer through said porous carrier material, and means for maintaining the distance between the facing surfaces of said anode and cathode constant despite the consumption of the anode by compression of said cell in a manner whereby both said electrodes move toward each other at a rate substantially equal to the rate of consumption of said anode.

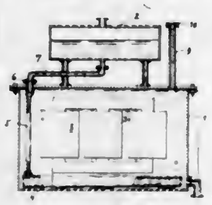
3,043,899
MAGNESIUM BATTERY
Joseph J. Coleman, Freeport, Ill., assignor to Servel, Inc. (Burgess Battery Company Division), Freeport, Ill., a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,700
7 Claims. (Cl. 136—108)



1. A magnesium battery comprising a cylindrical outer container of circular cross section composed of a strong rigid sheet material, a plurality of primary cells arranged within said container, each of said cells comprising a sheet-form magnesium anode, a depolarizer core, a bibulous separator disposed between said anode and said depolarizer core, an inert carbon element in contact engagement with said depolarizer core, and a cell enclosure comprised of a nonconductive sheet material, each of said anodes being

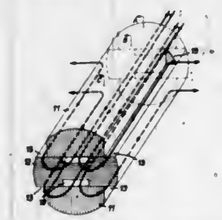
centrally disposed with respect to said outer container; means for providing electrical connection between said cells, sealing means disposed over the tops of said cells, and terminal means connected to said cells and mounted in said outer container.

3,043,900
TRANSFORMER
Franz Reisinger, 21/6 Pilgerimgasse, Vienna 15, Austria
Filed June 30, 1959, Ser. No. 824,011
Claims priority, application Austria July 15, 1958
2 Claims. (Cl. 174—12)



1. An electrical transformer system having a housing with a cover and an oil-drain valve at the bottom; pipe means for filling the housing to capacity with oil and including a high-pressure relief valve, said system comprising a core and coil assembly submerged in the oil, said oil being completely enclosed in said housing and sealed off from the outer air, an expansion tank arranged above the housing, said expansion tank being filled with oil and having communication with the surrounding atmosphere, a bag-like expansion body arranged in the interior of said housing at a dead space between structural members supporting the active transformer parts and consisting of extensible, and pliable, oil-resistant and gas-impermeable material, the interior of said bag being completely shut off from contact with the oil in said casing, and means being provided for connecting said bag-like body with said expansion tank for at least partly filling the bag with oil from the expansion tank for equalizing the differences of oil volume at different operating temperatures, said connecting means including a hose line made of similar material to that of the expansion body, a lead-in pipe connected to said hose line, and pipe means for connecting said lead-in pipe to said expansion tank.

3,043,901
COOLING SYSTEM FOR ELECTRIC CONDUCTORS IN HOLLOW SHAFTS
Harry Gerwing, Berlin, Alex Longree, Mulheim-Ruhr, and Wolfgang Wollschina, Berlin-Heiligensee, Germany, assignors to Licentia Patent-Verwaltungs G.m.b.H., Frankfurt am Main, Germany
Filed Nov. 18, 1960, Ser. No. 70,282
Claims priority, application Germany Nov. 20, 1959
6 Claims. (Cl. 174—15)



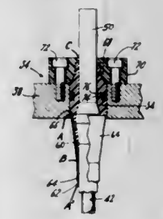
1. A conductor cooling arrangement comprising a hollow rotatable shaft, at least two conductors disposed in said shaft, first insulating means disposed near the shaft axis and separating said conductors, second insulating means surrounding said conductors to insulate them from the shaft, first parallel conduit means defined between the conductors and the first insulating means adjacent and symmetrical with respect to the shaft axis, second parallel conduit means symmetrical with respect to the shaft axis and defined in part between the conductors and the second insulating means, third conduit means connecting said first and second conduit means at one end of the conductors, and common passage means supplying coolant to said first conduit means, whereby corresponding parts of the separated conductors are in contact with coolants at substantially the same temperature.

3,043,902
LINE-GRIPPING AND SPACING DEVICE
Harry J. Klein, Box 150, Emporium, Pa.
Filed Aug. 10, 1959, Ser. No. 832,646
5 Claims. (Cl. 174—146)



1. A line-gripping and spacing device comprising a unitary body formed of a resilient non-conductive material including a pair of unitary gripper heads each having a pair of jaws and a fulcrum integrally joining said jaws deformable to permit opening and closing pivotal movement of said jaws thereabout and resiliently biasing said jaws toward a closed position for gripping a line therebetween, and a pair of operating arms integrally formed with and mounting said gripper heads in spaced relationship for spacing a pair of lines gripped thereby, the individual operating arms of said pair of operating arms, extending to the opposite side of the fulcrum of each gripper head from the jaws thereof whereby to open and close said jaws inversely to movement of said operating arms, said operating arms being normally spaced apart when said jaws are closed and flexible toward each other to open said jaws of each gripper head simultaneously for insertion of said lines therebetween.

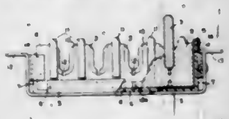
3,043,903
HYDROSTATIC LEAD SEAL AND METHOD OF MAKING SAME
John J. Keane, Guilderland, N.Y., and Harold Kitson, Jr., Ambler, Pa., assignors to General Electric Company, a corporation of New York
Filed May 8, 1958, Ser. No. 734,029
10 Claims. (Cl. 174—152)



4. A seal for sealing electrical conductors in a wall of a shell subjected to internal pressures comprising an insulated current conductive member extending through a wall of said shell a seal in intimate contact with said conductive member and the wall of said shell for preventing escape of the high pressure fluid to the atmosphere, said seal comprising a base layer of insulation on said member made from a hydrocarbon polymer having a melting point in excess of 80° C. and

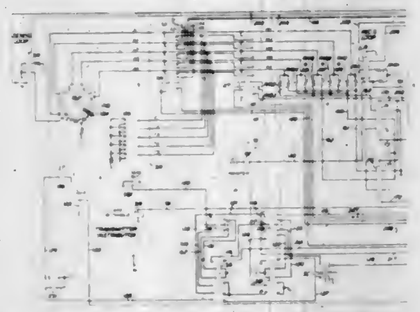
which is hydrolytically and thermally stable, a filled resinous thermoset material capable of withstanding pressures greater than 500 p.s.i. placed in intimate contact with said base layer of insulation, an outer layer of insulated over said resinous material having the same characteristics as the materials in said base layer of insulation, and a supporting member surrounding said conductive member and attached to said shell for resisting forces tending to displace said seal from said housing.

3,043,904
INSULATOR FOR A SET OF ELECTRICAL DISTRIBUTION BARS
Paul Marius Amadon, Vesinet, Seine et Oise, France, assignor to La Telemecanique Electrique, Nanterre, France, a joint-stock company of France
Filed June 22, 1960, Ser. No. 37,926
Claims priority, application France July 3, 1959
6 Claims. (Cl. 174—158)



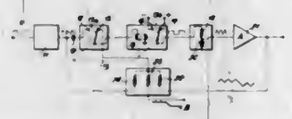
1. A refractory insulator, resistant to lateral forces, of a compact saddle-top design, having end members and a sole-plate adapted to support a set of electrical distribution bars in a metal sheath along with other similar insulators staggered alternately upright and inverted along the length of the set of bars, comprising a refractory support, saddle-shaped seatings in this support adapted to receive the distribution bars, at least one fracture guide formed at the bottom of each saddle-seating and in the direction of the length thereof, and a resilient casing having said support bedded therein, whereby in the event of violent lateral forces, directed fractures take place and the casing firmly retains the parts of the support resulting from the fracture.

3,043,905
TANDEM TRANSMITTER START SYSTEM
Joseph T. Semancik, White Plains, and Charles R. Walker, Port Chester, N.Y., assignors to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York
Filed June 8, 1959, Ser. No. 818,842
7 Claims. (Cl. 178—3)



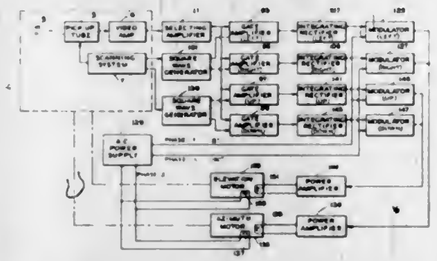
7. A telegraph system comprising a control station, a full-duplex line having a sending channel and a receiving channel and extending from said control station to a plurality of remote stations, signal transmission means at each of said remote stations transmissively associated with said receiving channel, signal transmission means at said control station transmissively associated with said sending channel, means at one of said remote stations for starting said transmission means thereat in response to signals on said sending channel, delay means at each of the other of said remote stations effective in the absence of signals on said receiving channel for a predetermined interval of time for starting said transmission means thereat and means responsive to signals on said receiving channel for enabling said delay means.

3,043,906
ELECTRO-MECHANICAL PRODUCTION OF HALF-TONE BLOCKS
Oluf Sinius Hassing, 57 Taunusstrasse, Neu Isenburg, near Frankfurt am Main, Germany
Filed Aug. 9, 1960, Ser. No. 48,386
Claims priority, application Germany Aug. 17, 1959
4 Claims. (Cl. 178—6.6)



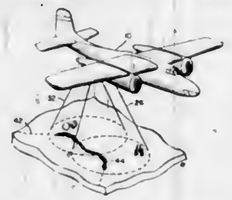
1. An apparatus for the electro-mechanical engraving of half-tone blocks by scanning an original image, comprising first means for producing a saw-tooth voltage synchronous with the block point frequency and having one steep and one slowly descending side, second means for producing an auxiliary signal with branches of equal slope which are linearly ascending and descending, third means for producing an image signal proportionate to said original image, fourth means for the alegbraic addition of the image signal, the auxiliary signal and the saw-tooth voltage, contact means for actuating the second means so that the change-over of the auxiliary signal from the linearly ascending to the linearly descending course, and vice versa, will take place, with said contact means connected to the saw-tooth voltage by said second means during the auxiliary signal, said second means being set so that as the steep side of said saw-tooth is passed, the polarity of said contact means is reversed so that said second means are connected to said fourth mean for said algebraic addition of the image signal, the auxiliary signal and the saw-tooth voltage, and so that in the new position, said contact means are set so that they will reverse the polarity of said contact means back into the first position when said algebraic sum of the image signal, the auxiliary signal and the saw-tooth voltage has reached a predetermined point.

3,043,907
NAVIGATION DEVICE
Wesley L. Martin, Hasbrouck Heights, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 19, 1950, Ser. No. 139,377
8 Claims. (Cl. 178—6.8)



1. In a device of the kind described, a television camera having viewing means adapted to be directed to a field including a reference and to provide an image of the field, and scanning means energized by sweep voltages for scanning the image, said camera producing an electrical signal corresponding to the image, a plurality of means responsive to the signal and gated in synchronism with the scanning means to alternately pass and block the signal, each of said means passing the signal corresponding to one-half of the image and blocking the signal corresponding to the other half of the image, and a servo system responsive to the differential output of pairs of said gated means for centering said viewing means on the reference.

3,043,908
FLUOROGRAPHIC SYSTEM FOR AERIAL SURVEY
Andrew Madsen, San Lorenzo, Calif., assignor to Aircraft Engineering and Maintenance Co., Oakland, Calif., a corporation of California
Filed Sept. 8, 1959, Ser. No. 838,580
11 Claims. (Cl. 178—6.8)



1. In a system for obtaining fluorographic information from the earth's surface, the combination with an aircraft of means for subjecting the earth's surface to ultraviolet radiant emissions of the order of 3000 to 4000 angstroms, said means including a flash tube capable of obtaining a temperature of the order of 6600° Kelvin, and circuit means to trigger the flash tube.

3,043,909
DIRECT-CURRENT RESTORER SYSTEM FOR TELEVISION RECEIVERS
Bernard D. Loughlin, Huntington, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Original application Aug. 4, 1954, Ser. No. 447,763, now Patent No. 2,913,522, dated Nov. 17, 1959. Divided and this application Oct. 8, 1959, Ser. No. 845,252
5 Claims. (Cl. 178—7.5)



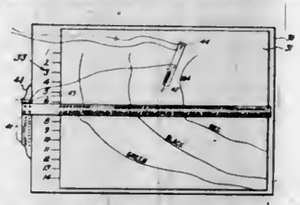
4. A direct-current restorer system for a television receiver comprising: a first circuit responsive to a composite television signal including an average brightness component and including blanking and synchronizing portions extending in one direction and which are undesirably subject to random noise pulses; supply circuit means coupled to said first circuit for introducing periodic pulses therein during the intervals of said portions and extending in said direction to develop in said first circuit with said composite signal a resultant signal having said average brightness component and having portions extending during said intervals to a predetermined reference level unaffected by said noise pulses; and a second circuit responsive to said resultant signal but including a coupling ineffective to translate said average brightness component and including rectifier means responsive to said resultant signal for stabilizing the same at said reference level, whereby said average brightness component is restored in said stabilized signal and is substantially unaffected by said noise pulses.

3,043,910
FIBER OPTICAL IMAGE TRANSFER DEVICES
John W. Hicks, Jr., Fiskdale, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed May 19, 1958, Ser. No. 736,172
5 Claims. (Cl. 178—7.85)



1. An image-transmitting device comprising a plurality of light-conducting fibers which are of substantially uniform cross-sectional configuration throughout their length and which are secured in side-by-side horizontally and vertically stacked parallel relation at one end, said fibers terminating at said one end in optically finished end faces of substantially uniform size which extend substantially normal to the fiber axes adjacent said one end, said end faces cooperating in a predetermined geometrical pattern to define a first image surface which extends in a general plane substantially normal to said fiber axes adjacent said surface, said fibers terminating at their opposite ends in optically finished end faces which obliquely intersect the fiber axes at said opposite ends at a common selected angle so that said opposite end faces are uniformly larger than said one end faces of the respective fibers along one meridian thereof, said opposite fiber ends being secured together with their axes parallel so that said opposite end faces cooperate in a pattern related to said predetermined pattern for defining a second, planar image surface which is larger than said first image surface along at least one meridian thereof and which extends obliquely at said selected angle relative to the fiber axes adjacent said second surface.

3,043,911
TELE-MAP SEMI-AUTOMATIC ENCODER
Henry Hoffmann, Jr., Rome, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 25, 1961, Ser. No. 105,521
5 Claims. (Cl. 178—17)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a device for transmitting map coordinate information over telemetric communication facilities, apparatus for converting the map co-ordinate information into telemetric code information comprising means for detecting contour co-ordinate information, contour identifica-

tion means, means for storing said co-ordinate information, means to read-out said stored information, and means for perforating a teletypewriter tape in response thereto.

3,043,912
INTERCOM FOR AUTOMOBILES
William J. De Laney, 6540 Baker Blvd., Fort Worth, Tex.
Filed July 10, 1957, Ser. No. 670,979
3 Claims. (Cl. 179—1)



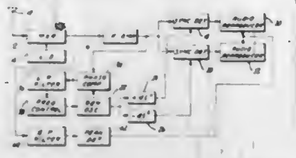
1. An intercommunication system for vehicles having closed passenger compartments, said intercommunication system comprising a control unit and a first speaker-microphone located near the driver of said vehicle, an opening in a longitudinal wall of said vehicle, a second speaker-microphone mounted in said vehicle and directed toward the rear thereof, said second speaker-microphone being located forwardly of said opening, a box mounted between said opening and said second speaker-microphone and including an audio-passage therebetween, a grill over said opening, and means including said control unit electrically connected and energizing both said speaker-microphones.

3,043,913
APPARATUS FOR THE RE-EDUCATION OF THE VOICE
Alfred Ange Auguste Tomatis, 78 Ave. Raymond Poincare, Paris (Seine), France
Filed Nov. 21, 1958, Ser. No. 775,558
Claims priority, application France Nov. 23, 1957
5 Claims. (Cl. 179—1)



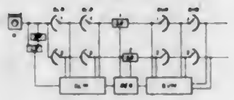
5. Apparatus for the re-education of the voice of a patient comprising means for converting the sounds produced by the patient into electrical signals, an input amplifying stage connected to receive and to amplify such signals, a low-pass filter element connected in series with said input amplifying stage to receive, separate and pass the low frequencies of said signals corresponding to vowel sound components and a high-pass filter element connected in series to said input amplifying stage and in parallel with said low pass filter element to receive, separate and pass the high frequencies of said signals corresponding to good quality sounds, that is, those utilizing the resounding cavities to give the tone of the voice, an output circuit connected in series to and fed by said filter elements for converting the filtered signals back into sounds, and an auxiliary or control chain connected to an outlet of the input amplifying stage and to respective inlets of said high and low pass filter element said control chain comprising one input amplifying stage, means fed by said input amplifying stage for producing control signals of opposite polarities which are fed in turn to said respective inlets of said low-pass filter element and said high-pass filter element, a frequency meter connected to an outlet of the input amplifying stage of the auxiliary or control chain in order to measure the frequency of the harmonic which is predominant in the sound produced by the patient so as to follow the progress of the re-education of his voice.

3,043,914
SINGLE CHANNEL STEREOPHONIC SYSTEM
Harold B. Collins, Jr., Wayne, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,206
12 Claims. (Cl. 179—15)



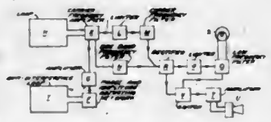
10. A superheterodyne receiver for amplitude modulated, single carrier, stereophonic program signals, said receiver comprising a heterodyne mixer, a local oscillator coupled to said mixer for supplying a local oscillation signal thereto, first and second synchronous detectors each provided with a carrier wave input, a signal input and an output, bandpass signal coupling means coupling the output of said heterodyne mixer to said signal inputs of said first and second synchronous detectors, first and second audio reproducing circuits coupled to said outputs of said first and second synchronous detectors, respectively, a reference signal generator, means coupling the output of said reference signal generator to said carrier wave inputs of said first and second synchronous detectors, respectively, said last-mentioned means causing the signals supplied by said reference signal generator to said first and second synchronous detectors to be in quadrature phase at said carrier wave inputs of said synchronous detectors, phase comparator means separate from said two synchronous detectors, means coupling the output of said reference signal generator to one input of said phase comparator means, means coupling the output of said heterodyne mixer to a second input of said phase comparator means, signal responsive frequency control means coupled to said reference signal generator for controlling the frequency and phase of the signal generated thereby, a low-pass filter circuit coupling the output of said phase comparator means to the input of said control means, a peak detector circuit, a bandpass circuit coupling the output of said phase comparator circuit to the input of said peak detector circuit, and means responsive to the presence of an output signal from said peak detector circuit and coupled to points in said superheterodyne receiver following said heterodyne mixer for suppressing the output signals of said audio reproducers.

3,043,915
CIRCUIT ARRANGEMENT FOR INCREASING THE CAPACITY OF TRAFFIC IN A TELEPHONE SYSTEM
Arvo Treffner and Bernhard Lilisunde, Hagersten, and Karl Gunnar Brunberg, Segeltorp, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Aug. 13, 1958, Ser. No. 754,757
Claims priority, application Sweden Aug. 14, 1957
7 Claims. (Cl. 179—18)



1. In an automatic telephone system including line units, in combination, register means, first selector stages for connecting a line unit of a calling subscriber to said register means by non-numerical selection, second selector stages for connecting said line unit of the calling subscriber to a called line by numerical selection controlled by digit information sent from the subscriber to the register means, marking means for identifying the line unit of the calling subscriber and setting up a connection through free selectors, connecting means in the line unit of the calling subscriber for connecting said unit to said marking means, and cut-off means in the line unit of the calling subscriber for interrupting said connection established by said connecting means between the line unit and the marking means, said telephone system furthermore comprising, to increase the traffic capacity for a given number of connecting means or to decrease the number of connecting means for a given traffic capacity, means for sending, when the connecting path has reached a point of maximum extension, a signal for blocking interruption of said connection by the cut-off means and re-establishing the connection between the line unit of the calling subscriber and the marking means, to permit a reidentification of the calling subscriber during a call.

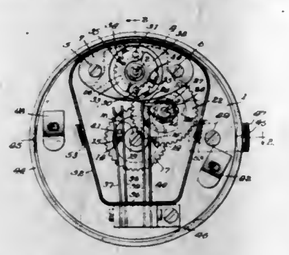
3,043,916
COMMUNICATION BY INDUCTION
Oswald Barber Sneath, London, England, assignor to Multitone Electric Company Limited, London, England
Filed June 17, 1958, Ser. No. 742,660
Claims priority, application Great Britain June 28, 1957
1 Claim. (Cl. 179—82)



Apparatus for communication by magnetic induction, comprising a signal transmitting and receiving loop, a pocket transmitter near said loop, said transmitter including a transistor oscillator which operates at a frequency of at least 15 kilocycles, means for modulating the output of said transistor oscillator with an audio signal, a ferrite inductor tuned to an audio frequency side band, and a filter connected between the output of said modulating means and said ferrite inductor, said filter having a characteristic to reduce the carrier in relation to said side band, a receiver connected to said loop, said receiver including a first resonant circuit connected to the loop and tuned to the frequency of said transistor oscillator, a second resonant circuit connected to the output of said first resonant circuit and tuned to the frequency of said side band, at least one interference pick-up coil, a phase shifting network connected to said pick-up coil, an amplifier connected to the ouput of said phase shifting network, means connecting the output of said amplifier to the first resonant circuit and arranged to feed thereto interference picked up by said coil in anti-phase relation to the output from said loop, demodulation means connected to the outputs of said first resonant circuit and second resonant circuit, and an indicator connected to the output of said demodulation means and arranged to be energized thereby upon detection of a transmitted signal.

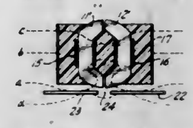
3,043,917
TELEPHONE DIAL
Willy Lohs, Walter Paul, and Heinrich Kallhardt, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed Sept. 2, 1958, Ser. No. 758,522
Claims priority, application Germany Sept. 10, 1957
9 Claims. (Cl. 179—90)

1. A telephone call transmitter comprising a frame, a first and a second spindle, each fixedly fastened at one end to said frame and freely extending in parallel relationship therefrom, impulse contact means disposed adjacent to but spaced from said first fixed spindle, cam means rotatably disposed on said first fixed spindle operatively related to said contact means for actuating the same, and a first pinion also disposed upon such spindle for driving said cam means to effect operative actuation of said contact means, a governor rotatably disposed upon such second fixed spindle and a second pinion also disposed upon



such second spindle for driving said governor, a rotatable main shaft, a finger disk rotatable with said main shaft, a first toothed gear wheel carried by said rotatable main shaft, said first gear wheel meshing with said first pinion, and a second toothed gear wheel rotatably disposed upon said first spindle, said second toothed gear meshing with said second pinion and operatively connecting the latter to said first pinion.

3,043,918
MAGNETIC HEAD AND METHOD OF OPERATION
Howard Norris Fawcett, Briarcliff Manor, N.Y., assignor to Cambridge Instrument Company, Inc., New York, N.Y., a corporation of New York
Filed Aug. 10, 1956, Ser. No. 603,286
12 Claims. (Cl. 179—100.2)



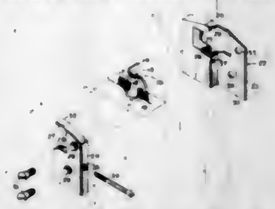
1. A magnetic head for cooperation with a magnetic recording medium comprising a sectional core of magnetic material having a pair of gaps disposed on opposite portions thereof, at least one coil carried by said core, a magnetic shield enclosing said core and coil with at least one of said gaps and adjoining parts of said core magnetically exposed for cooperation with said medium, said exposed core part being affected by stray flux and producing an undesirable signal in said coil, and flux inducing means magnetically coupled with the exposed part of said core for producing a second flux through the core to substantially neutralize the effect of the first said stray magnetic fluxes on said head.

3,043,919
ELECTROMAGNETIC TRANSDUCER HEAD HOUSING AND ASSEMBLY
Wesley Tannenbaum, Tewksbury, Joseph F. Cleary, Norwood, and Leonard T. Ohlson, North Billerica, Mass., assignors to Avco Corporation, a corporation of Delaware
Original application Aug. 19, 1958, Ser. No. 756,028. Divided and this application July 7, 1959, Ser. No. 825,465
1 Claim. (Cl. 179—100.2)

A housing for an electromagnetic transducer head including a pair of pole faces defining a nonmagnetic gap comprising:

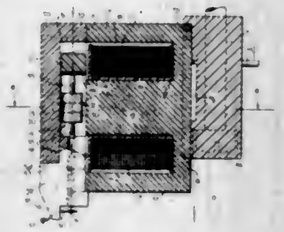
(*a*) a base member including a recess, a channel dimensioned to receive a portion of said head defined therein and a threaded hole;

(*b*) a clamp seated in said recess which includes a complementary channel defined therein to receive another portion of said head, a clearance hole dimensioned to be substantially coaxial with said threaded hole; and



(*c*) means comprising a screw passing through said clearance hole into said threaded hole, said screw including a surface bearing against said clamp for rotating said clamp tending to abut said pole faces when said screw is threaded into said base member.

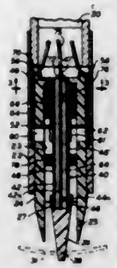
3,043,920
ELECTROMAGNETIC PHONOGRAPH PICKUPS
John H. McConnell, Murray Hill, N.J., assignor to Electro-Sonic Laboratories, Inc., Long Island City, N.Y., a corporation of New York
Filed Feb. 15, 1957, Ser. No. 640,427
7 Claims. (Cl. 179—100.41)



1. In a phonograph pickup: a permanently magnetized rotor core held for oscillatory rotation about a rotor axis and permanently magnetized along a magnetic axis transverse to said rotor axis between two oppositely-directed, opposite-polarity rotor pole faces; a hollow magnetic core enclosure of low magnetic retentivity enclosing with its interior core surfaces all sides of said rotor core; said core enclosure having along its interior core surfaces at least one inward pole projection with a pole end face and an opposite pole face on the opposite portion of said interior core surfaces, windings surrounding said pole projection, the two opposite core pole faces along said interior core surfaces being magnetically interlinked with said two rotor pole faces and passing flux induced by said rotor core through said windings and through two distinct opposite flux paths of said core for generating in said windings a signal output responsive to oscillatory motion of said rotor, said hollow core enclosure constituting a closed magnetic core shield enclosing on all sides the entire axial length of said rotor core and all non-magnetic gaps separating the two rotor pole faces from said core pole faces and suppressing disturbing inter-linkage of external flux with said windings.

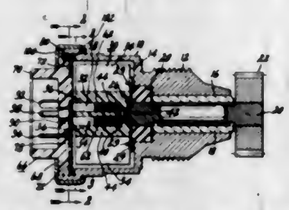
3,043,921
PIEZOELECTRIC TRANSDUCER FOR STEREOPHONIC PHONOGRAPH PICKUP
Frank A. Hester, New York, N.Y., assignor to Clairex Corporation, New York, N.Y., a corporation of New York
Filed Oct. 13, 1958, Ser. No. 766,914
21 Claims. (Cl. 179—100.41)

1. A transducer for a stereophonic phonograph pickup, comprising an elongated flat block of rectangular cross section, said block including two flat slabs having inner faces secured to opposite faces of a thin conductive strip electrode, at least one of said slabs being a piezoelectric element, said strip electrode having its central plane located in the plane of mechanical symmetry of the block, said block having two spaced other elec-



trodes extending along an outer face of one slab at opposite lateral edges thereof, said block being bendable alternately in directions perpendicular to diagonal planes intersecting said central plane, whereby independent voltages are developed between said strip electrode and the respective other electrodes.

3,043,922
ELECTRIC TRANSMITTER
Donald W. Laviana, Pittsford, and William E. Fritz and James R. Cassano, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 5, 1960, Ser. No. 27,064
5 Claims. (Cl. 200—24)

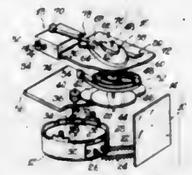


2. A transmitter for an electric speedometer drive including, a housing having a cup-shaped recess, a rotatable brush drum coaxially disposed within said recess, said brush drum having a plurality of pairs of axially extending polygonal cavities therein and an axially extending groove connecting the cavities of each pair, a drive shaft rotatably supported in said housing and connected to said brush drum, a stationary contact assembly attached to said housing having a plurality of circumferentially spaced commutator segments, an outer coaxial slip ring and a center coaxial slip ring thereon, a spring biased brush slidably mounted within each cavity of said brush drum, and means electrically interconnecting the brushes of each pair.

3,043,923
SOLAR SWITCH
Shiro Sonobe, Osamu Tominaga, and Kanji Nomura, Tokyo, Japan, assignors to Nihon Denki Tokei Co., Ltd., Tokyo, Japan
Filed May 7, 1959, Ser. No. 811,729
7 Claims. (Cl. 200—38)

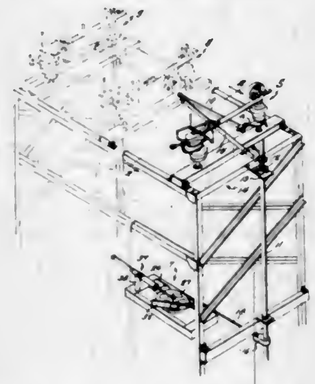
1. A switch control operable by low magnitudes of power and providing a strong rapid thrust for actuating the switch; said control comprising a resilient lever having a pivoted end and a free end, the free end being resiliently displaceable from a reference plane, said lever being operatively associated with said switch and being pivotable between two spaced positions for the control of said

switch, a shaft perpendicular to said plane, and a cam rotatable on said shaft and having faces parallel to said plane, said cam including axially displaced sections each having a peripheral edge for selectively engaging said lever, one edge intersecting said plane and having in part



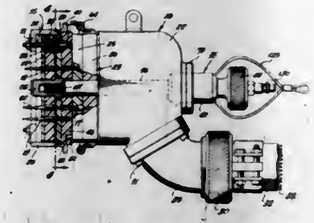
radii substantially exceeding those of the other edge, and means on the cam to displace said free end for engagement by said other edge whereby the lever moves between said edges, said edges being aligned with said positions.

3,043,924
SPRING MOTOR MECHANISM FOR FAST AUTOMATIC OPENING OR CLOSING OF HIGH TENSION ELECTRIC SWITCHES
Tomlinson F. Johnson, P.O. Box 10958, Atlanta, Ga.
Filed Mar. 8, 1961, Ser. No. 94,307
6 Claims. (Cl. 200—48)



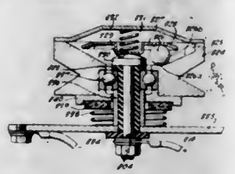
1. Apparatus for operating a group of high tension electric switches of the movable insulator type comprising a horizontal rod connected to the movable insulator of each of said switches for turning the movable insulators as a unit to simultaneously open and close all of the switches; a vertical rotatable shaft having its upper end connected to operate said horizontal rod to move said switches to and from their open and closed positions and having a laterally projecting operating arm fixedly secured thereon intermediate its ends; and means for moving said operating arm to the position in which said switches are closed and to the position in which said switches are open including a rotatable cam follower arm connected to actuate said operating arm; spring biased means for rotating said cam follower arm in one direction and locking the switch in the position to which it has last been moved; a rotatable cam member for engaging said cam follower arm and rotating it in the opposite direction; said rotatable cam member being in the form of a disc mounted for rotation about a vertical axis and having a peripheral arc-shaped upstanding flange on its upper surface, said cam follower arm being mounted for rotation about a vertical axis offset from the vertical axis of said cam member and carrying a dependent blade on its outer free end adapted to move into and out of engagement with said arc-shaped flange as said cam member is rotated; and an electric motor connected to rotate said cam member.

3,043,925
ELECTRICAL CONNECTOR WITH MULTIPLE RELEASE MECHANISM
Robert E. Wilson, Pasadena, Calif., assignor to Cannon Electric Company, Los Angeles, Calif., a corporation of California
Filed Sept. 25, 1958, Ser. No. 763,382
17 Claims. (Cl. 200—51)



1. An electrical connector comprising a receptacle member and a plug member, each member having a shell and a fixed body of insulation material mounted in its shell, one shell having a movable body of insulation material therein, means in said one shell for biasing said movable body away from the fixed body of said one shell, each of said bodies of said one shell having a contact element mounted therein, said contact elements being aligned whereby they become interconnected to close a circuit when said bodies of said one shell are drawn toward each other, and a release mechanism comprising a barrel extending through the other shell and having an open forward end, a stud secured in said movable body and in axial alignment with the barrel, a tubular shaft disposed coaxially in the barrel, the barrel and the shaft being longitudinally slidable relative to each other, the forward end portion of the shaft having a slot formed therein open to the inside and outside of the shaft, a key slidable in the slot in a radial direction with respect to the shaft, the key being engageable with the inside of the barrel, said stud being engageable with said key in the shaft, and means for moving the barrel and shaft longitudinally relative to each other to release the key from engagement with the stud whereby said biasing means separates the movable body from the fixed body of said one shell to break said circuit.

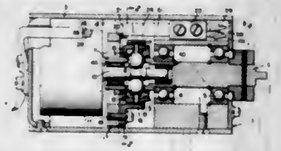
3,043,926
CENTRIFUGAL ELECTRIC SWITCHING DEVICE FOR CONTROLLING THE UNWINDING OF YARN IN TEXTILE MACHINES AND THE LIKE
Jean Rabeux, Paris, and Raymond Jacob, Esubonne, France, assignors to Societe d'Applications Generales d'Electricite & de Mecanique, Paris, France
Filed Apr. 3, 1958, Ser. No. 726,251
Claims priority, application France Feb. 3, 1955
4 Claims. (Cl. 200—61.18)



1. An electrical circuit interrupter responsive to rotary speeds for controlling the unwinding of yarn in textile machines, comprising a rotatable roller capable of engagement with a yarn, stationary braking means in engagement with said roller for braking same, together with said yarn in engagement therewith and controlling means lodged substantially within said roller and responsive to the rotating speed of said roller, said controlling means including a fixed assembly having a continuous

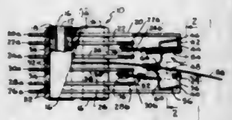
electrical conductive path therethrough, means at least partially insulating said rotatable assembly from said fixed assembly, conductive means movable axially along said rotatable assembly into and away from a contacting position to respectively make and break electrical contact between said fixed and said rotatable assemblies, said fixed and said rotatable assemblies being adapted for connection to an extraneous controlling circuit for regulating the unwinding of said yarn, means for urging said conductive means into said contacting position, and centrifugally actuable means positioned between said rotatable assembly and said conductive means for moving the latter away from said contacting position at rotating speeds of said rotatable assembly in excess of a predetermined speed value.

3,043,927
ACCELERATION AND DECELERATION DETECTOR SWITCH
Stanford C. Lockhart, Akron, and Theodore Frayer, North Canton, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Dec. 7, 1959, Ser. No. 857,837
6 Claims. (Cl. 200—61.46)



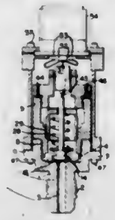
4. A control comprising a frame, an input shaft for operative connection to a rotary member to be driven at a speed proportional thereto, said shaft having a tubular end portion, a plurality of planet gears operatively carried by said shaft at said tubular end portion, a ring gear operatively engaging said planet gears, means forming a sun gear having a spindle operatively engaging said planet gears within said shaft tubular end portion to function as a flywheel in the system, and a leaf spring member secured at one end to said frame and at its other end engaging said ring gear to position it for limited arcuate movement about said input shaft dependent upon the reaction of said ring gear to rotation of said sun gear, the arcuate movement of said ring gear being usable to provide a control action.

3,043,928
SNAP SWITCH
John O. Roeser, Park Ridge, Ill., assignor to Illinois Tool Works, Inc., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,505
11 Claims. (Cl. 200—67)



1. A switch comprising, first and second relatively thin elongated flat metallic members insulatingly spaced in parallel alignment carrying fixed contact means on the ends thereof, movable contact means having a first and movable to a second position relative to said fixed contact means, thin elongated common terminal means insulatingly spaced from and in parallel alignment with said first and second members, said movable contact means comprising spring means, a first movable member, and a contact carrying member pivotally mounted on said first movable member, said spring means engaging said contact carrying member and said common terminal means to maintain the pivotal connection between said contact carrying member and said first movable member and to provide a snap action to movement of said movable contact member, and operator means engageable with said first movable member to actuate said contact carrying member.

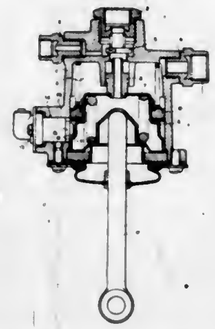
3,043,929
PRESSURE ACTUATED SWITCH
George G. Guthrie, 1164 N. Vancouver St., Tulsa, Okla.
Filed Feb. 25, 1960, Ser. No. 10,921
3 Claims. (Cl. 200—83)



1. A pressure actuated switch comprising a main connecting housing having a small central bore and an enlarged central bore, a pressure sensitive diaphragm disposed in said enlarged bore and covering one end of said small bore, a hollow internal housing threaded into said enlarged bore of said main connecting housing, said housings having abutting surfaces when assembled, a switch, a switch housing having a set of external micrometer threads at one end thereof, said switch being mounted centrally internally near substantially the opposite end of said switch housing, said internal housing having a set of micrometer threads adapted to receive said micrometer threads of said switch housing, said switch having a switch actuator, a rod extending between said diaphragm and said actuator, means for exerting a predetermined force on said rod opposing the force of the pressure applied to said small central bore of said main connecting housing, said means comprising a head portion on one end of said rod with said head portion engaging said diaphragm, seat means positioned on said rod in circumjacent relation thereto and in engagement with said head portion, a spring positioned on said rod in circumjacent relation thereto and engageable at one end with said seat means, means positioned on said rod in circumjacent relation to said spring and engaging the opposite end of said spring for developing a predetermined compressional force in said spring, said last-mentioned means comprising a hollow cylindrical member having an end wall with a central aperture, a set of external threads adjacent an end of said member remote from said end wall, said internal housing having internal threads in threaded engagement with the external threads of said member, said spring being disposed internally of said member with the end wall thereof in engagement with the opposite end of said spring, said rod passing through the aperture in said end wall and said member and said internal housing having abutting transverse shoulders.

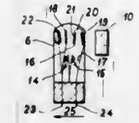
3,043,930
DISTRIBUTOR FOR BRAKING PLANTS WITH EMBODIED STOP-LAMP SWITCH, PARTICULARLY FOR VEHICLES
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed July 7, 1959, Ser. No. 825,595
Claims priority, application Italy July 9, 1958
1 Claim. (Cl. 200—83)

A pressure fluid distributor for a pneumatic braking system comprising a housing, said housing having a fluid pressure inlet and a fluid pressure outlet, a normally closed valve between the pressure fluid inlet and the pressure fluid outlet, a cylindrical plunger disposed within said housing and adapted to slide therein within predetermined limits, said plunger having an inclined outer surface portion extending annularly thereabout, an extension on said plunger for selective engagement with said valve for opening the same when said plunger approaches one of its limits, an electric switch mounted on said housing, said



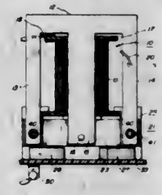
switch having a normally open contact member associated therewith, said contact member extending into the interior of said housing and adapted to contact the inclined outer surface portion of said plunger, and means for effecting movement of said plunger within said housing to initially force said contact member in a direction to close said switch and then to cause said extension to engage and open said valve to allow pressure fluid to flow from the fluid pressure inlet to the fluid pressure outlet.

3,043,931
MAGNETICALLY CONTROLLED SWITCHING DEVICE
Théophile Gruber, Geneva, Switzerland, assignor to Thermindex S.A., Geneva, Switzerland, a firm
Filed Apr. 13, 1960, Ser. No. 22,003
Claims priority, application Switzerland Apr. 14, 1959
5 Claims. (Cl. 200—87)



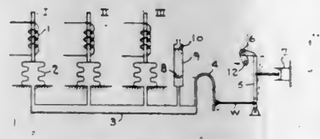
1. A device for controlling the opening and closing of an electric circuit, said device comprising, a contact assembly for the electric circuit to be opened and closed, said assembly including a pair of contacts and movable magnetically attractive resilient means supporting one of said contacts for said one contact to be moved to positions wherein respectively said one contact is closed to the other of said contacts and wherein said one contact is open relative to the other of said contacts, one of said positions of said one contact being reached mechanically by inherent mechanical bias of said magnetically attractive resilient means, and retention magnet means to maintain said one contact in the other of said positions by magnetically retaining said magnetically attractive resilient means against the inherent mechanical bias of said magnetically attractive resilient means, and said device further comprising control magnet means, said control magnet means and said assembly being relatively movable thus to occupy relative positions wherein said control magnet means magnetically attracts said magnetically attractive resilient means to said retention magnet means against the inherent mechanical bias of said magnetically attractive resilient means for said retention magnet means accordingly to maintain said one contact in said other of its positions relative to said other of said contacts, and said control magnet means and said assembly being relatively movable thus to occupy relative positions wherein said magnetically attractive resilient means is attracted from said retention magnet means of the assembly by said control magnet means and brings said one contact to said one of its positions relative to said other of said contacts.

3,043,932
POLARIZED RELAY
George V. Morris, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,725
3 Claims. (Cl. 200—90)



1. A polarized transducer comprising: a magnetic motor constituted by a magnetic structure and at least one energizing coil for establishing magnetic flux in said structure having a polarity determined by the polarity of the energizing current applied to said coil; a resilient armature included in said structure having a free end serving as a magnetic pole, polarized in accordance with the polarity of said flux; a second magnetic structure including a pair of space opposed elongated pole pieces defining a principal air gap therebetween, and a pair of magnets carried at opposed ends of said pole pieces, respectively, and positioned transversely of said air gap at opposed ends thereof to define respective compensating air gaps for neutralizing leakage flux thereby establishing a substantially uniform magnetic flux across said principal gap; and means for positioning said magnetic motor adjacent said second magnetic structure with said free end of said armature symmetrically disposed in said principal gap.

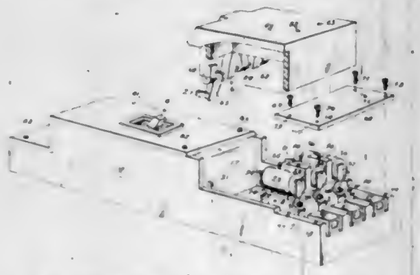
3,043,933
POLYPHASE CIRCUIT INTERRUPTERS
William J. Weinfurt, Elm Grove, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,661
3 Claims. (Cl. 200—97)



1. Means for controlling a polyphase circuit interrupter comprising a plurality of electromagnets, one for each phase, responsive to overload current, a hermetically closed hydraulic system including a hydraulic manifold, a hydraulic compressing means for each electromagnet mechanically operated by the corresponding electromagnet and each being hydraulically connected to said manifold, a pressure operated device operating as a pressure function hydraulically connected to said manifold, a polyphase circuit interrupter having a switch for each phase, and mechanism operatively connecting all of said

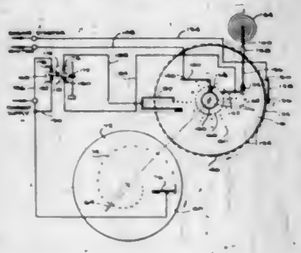
switches with said pressure operated device for simultaneously opening all of said switches upon operation of said pressure operated device.

3,043,934
BOLTED CONNECTION FOR CURRENT LIMITING FUSES
August Bodenschatz, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1959, Ser. No. 855,093
9 Claims. (Cl. 200—114)



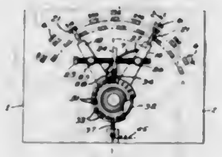
1. In combination: a fuse and a circuit breaker; said circuit breaker being contained in a first housing; said fuse being contained in a second housing and secured thereto by fastening means; said fuse having a first and second terminal; said first housing having a first and second terminal for electrically receiving said first and second terminal of said fuse respectively to electrically connect said current limiting fuse in series with said circuit breaker; said first terminal of said first housing being electrically connected to said circuit breaker; a bolt means separate from said fastening means; said first terminal of said first housing being electrically connected to said first terminal of said fuse by said bolt means; said second housing normally enclosing the area including said bolted connection of said terminals; said first housing having at least a portion thereof removable from said first housing; said removable portion permitting access to said bolted connection of said terminals.

3,043,935
AUTOMATIC STARTING SYSTEM FOR INTERNAL COMBUSTION ENGINES
Weikko Teikari, Box 177, Iron River, Mich.
Filed Apr. 11, 1960, Ser. No. 21,511
10 Claims. (Cl. 200—136.3)



1. In an automatic starting system for engines, a control device comprising a housing, a dial face on said housing, a first shaft in said housing and extending through said dial face, means on said first shaft operatively connecting it to a clock mechanism for rotation thereby, a control disc on said first shaft mounted for rotation therewith within said housing, a plurality of electrical contacts on one face of the disc at different radial distances from the axis thereof, a plurality of annular series of contacts on the opposite face of the disc, each of the annular series being at a different radial distance from the axis of the disc, there being a respectively different number of contacts in each series, a pair of adjustable gears adjacent the disc, a separate manually controlled gear in mesh with each adjustable gear, an electrode eccentrically mounted on each adjustable gear, a first of said electrodes being positionable by its gear to engage a contact on the one face of the disc, a second of said electrodes being positionable by its gear to engage the contacts of one of the annular series of contacts on the opposite face of the disc, an annular contact on one face of the disc, a plurality of spaced contacts on the periphery of the disc, all of the contacts on the disc being electrically connected together in common, a third electrode connected to the ignition of the engine and engageable with the annular contact on the disc, a fourth electrode connected to the starter of the engine and engageable with the peripheral contacts on the disc, a fifth electrode mounted on a movable electrode arm and engageable with the contacts on the opposite face of the disc, a thermally controlled spring operatively connected to the electrode arm for positioning the fifth electrode to contact one of the annular series of contacts, said first, second and fifth electrodes being connected to a source of voltage, and switch means for alternately disconnecting said second and fifth electrodes from said voltage source while respectively connecting the other thereof to the source.

3,043,936
THERMOSTAT-TIMER MECHANISM
Irving Page, Brooklyn, N.Y., assignor to Irropa Incorporated, New York, N.Y.
Filed May 23, 1960, Ser. No. 31,181
15 Claims. (Cl. 200—136.3)

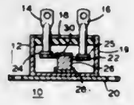


1. A thermostat-timer mechanism comprising a plate, a partial circular row of contacts protruding from the face of said plate and extending through said plate, a contacts sector connecting with the extended portions of said contacts at the back of said plate, a sleeve mounted to and extending from the face of said plate in a fixed relationship to said row of contacts, a pair of pointers in a fixed angular relationship to each other and rotatably mounted on said sleeve, a contact arm mounted on the tip of one of said pointers so as to connect said pointer with said contacts, a heat transfer rod mounted within said sleeve, a bimetallic strip one end of which is connected to said heat transfer rod and the other end of which is captured between said pointers for moving the pointers back and forth and a source of electric current one side of which is connected to said contact arm and the other side of which is connected to said contacts sector.

3,043,937
ELECTRICAL CONTROL MEANS
Leonard Milton, Lake Success, and John S. Lory, Syosset, N.Y., assignors to The Filtron Company, Inc.
Filed July 28, 1959, Ser. No. 830,076
4 Claims. (Cl. 200—142)

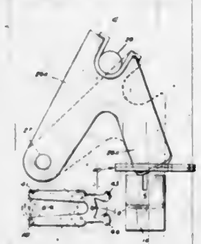
1. A thermal-circuit breaker comprising a cylindrical housing;

an insulative closure at one end of said housing;
a pair of electrical terminals supported on said closure in diametrically spaced relation, said terminals extending outwardly through said closure to provide external terminal tabs for connection to an external circuit, and extending inwardly to present front end surfaces to serve as contacting surfaces for the terminals;
a movable bridging contact member for engaging the two front end surfaces, said bridging contact member consisting of a relatively flat resilient disc having a central portion formed as a tab to have a limited amount of freedom for relative movement



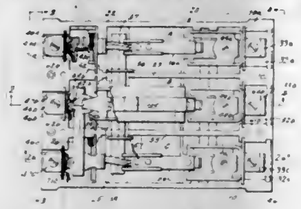
axially to thereby impress a resilient stress on the border portion of the disc to cause said border portion to engage said two front end surfaces of the two terminals; and a pellet of material which softens at a predetermined temperature and disposed to press against said tab to maintain said disc border portion in engagement with said two front end surfaces of the two terminals below said predetermined temperature, and serving, upon softening above said predetermined temperature, to relieve the pressure on said tab, whereupon the resilient stress within the disc separates the disc from one terminal front surface.

3,043,938
ARC SUPPRESSING PLATES AND HOOD FOR ELECTRIC SWITCHES
Daniel F. Daly, Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut
Filed May 24, 1960, Ser. No. 31,407
10 Claims. (Cl. 200—144)



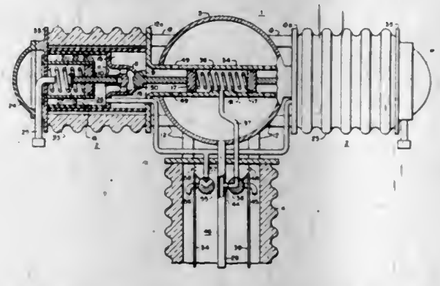
1. In an electric switch, fixed and movable contact members, an arc shield overlying said fixed contact member having a passageway therein for exit of arc gases, means to control and direct the movement of an arc drawn between said fixed and movable contact members incident to their separation comprising magnetically conductive arc-suppressing plate means having parallel arms in a plane substantially perpendicular to the initial path of the arc and lying on opposite sides of said path, said arms controlling and directing the arc movement in one direction, said shield having slots with an open end into which said plate means are insertable, and extensions from said plate means extending oppositely to said arms which control the movement of the arc and direct it opposite to its first direction after it has passed a predetermined point in traveling in said first direction.

3,043,939
SEPARATE PHASE DIRECTED VENTING
Carl Gryctko, Haddon Heights, N.J., and Kenneth D. Ball, Philadelphia, Pa., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 13, 1958, Ser. No. 773,634
1 Claim. (Cl. 200—144)



A multiphase circuit breaker including a first, a second, and a third pole and a case wherein all of said poles are disposed; said poles being arranged in parallel relationship extending between a first and a second end of said case with said second pole being positioned between said first and said third poles; said case having internal formations operatively positioned to substantially isolate said poles from each other; said second end being substantially closed in the regions of said first and said third poles; said first end being closed in the region of said second pole; means, positioned at said first end, constructed for venting arcing gases of said first and said third poles externally of said case; means, positioned at said second end, constructed for venting arcing gases of said second pole externally of said case; each of said phases including a pair of cooperating contacts and an arc extinguishing means positioned within said case adjacent to said second end; each of said phases also including an automatic trip means positioned within said case adjacent to said first end.

3,043,940
COMPRESSED-GAS CIRCUIT INTERRUPTER
Winthrop M. Leeds, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 10, 1958, Ser. No. 708,298
6 Claims. (Cl. 200—148)



1. A compressed-gas circuit interrupter including an arc-extinguishing unit, said unit including a pair of separable arcing contacts and a serially related pair of isolating contacts, said pair of isolating contacts remaining open in the open-circuit position of the interrupter, an operating piston for effecting opening motion of one of said isolating contacts, means defining an isolating chamber, means for sending a blast of compressed gas adjacent the pair of separable arcing contacts, said blast of gas exhausting into said isolating chamber to raise the pressure within said isolating chamber, said operating piston responding to a rise of pressure within said isolating chamber by moving and so effecting opening movement of

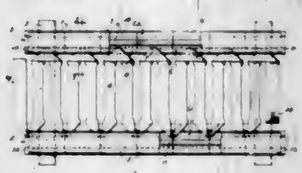
said one isolating contact, and said serially related pair of isolating contacts separating only following interruption of the arc between said pair of separable arcing contacts.

3,043,941
ARCLESS SWITCH
Anthony J. Tonaszuch, 167 West St., Randolph, Mass.
Filed May 18, 1959, Ser. No. 813,947
1 Claim. (Cl. 200—152)



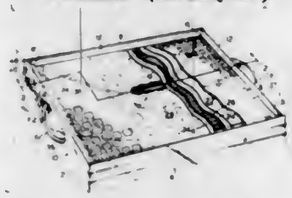
A switch comprising an external component having a substantially continuous insulating surface providing a seat, an internal component having a substantially continuous insulating surface snugly received in said seat, said external component and said internal component being relatively movable, at least an aperture in one of said components communicating with said seat, said aperture providing a restricted mouth region and an enlarged shank region, said shank region presenting internal threading, an externally threaded screw turned into said internal threading, a mass of mercury positioned in said mouth region between said screw and said seat, at least an electrical terminal in the other of said components, said electrical terminal presenting a surface substantially geometrically continuous with the remainder of the adjacent surface of said other of said components, said electrical terminal making contact with said mass at given relative positions of said components, said electrical terminal being insulated from said mass when spaced therefrom by portions of said components providing said insulating surfaces, increments of said one of said components being spaced from increments of said other of said components contiguous therewith by a given tolerance, said increments of said one of said components being spaced from said electrical terminal when contiguous therewith by said given tolerance, said given tolerance being less than .001 inch.

3,043,942
ELECTRICAL HEATING APPARATUS
Theodore H. Wickwire III, Haverford, and George R. Connor, Collegeville, Pa., assignors to Trent, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Apr. 29, 1959, Ser. No. 809,726
1 Claim. (Cl. 219—19)



In an electrical heating unit: refractory means forming a wall of the heating unit, the wall having a pair of spaced slots extending generally parallel to one another; two groups of refractory blocks, each block having a stem-like portion, the stems of one group of blocks being disposed in one of said slots and the stems of the other group of blocks being disposed in the other of said slots and each of said blocks having a pair of spaced projections, the block and projection forming a channel and the channels in the two groups of blocks respectively cooperating with one another to form a pair of continuous mounting channels facing one another and a projection on each of said blocks being located adjacent to said wall; means securing said stems in said slots; and an electrical heating element disposed in said mounting channels and extending therebetween, said projections adjacent said wall operating to maintain the heating element in a position spaced from the wall.

3,043,943
FOOD WARMER
John R. Moot, Cambridge, Mass., assignor to Cornwall Corporation, Boston, Mass., a corporation of Massachusetts
Filed Dec. 24, 1959, Ser. No. 861,866
4 Claims. (Cl. 219—19)



2. A food warmer comprising: a rectangular frame defining a flat horizontal cavity; inwardly projecting flanges around the upper and lower edges of said frame element; a food supporting surface within said frame in contact with the lower surface of the upper flange; a heating member; means for supplying an electrical current to said heating member; thermostat means for controlling the amount of heat given off by said heating member; substantially rigid plastic foam foamed and cured in place to support said food supporting member, heating member, means for supplying current to said heating member, and said thermostat means all in a horizontal sandwiched parallel relationship; and means for connecting said food warmer to an external supply of electrical current.

3,043,944
HEATING UNIT
Leroy C. Hanson, Elmhurst, Ill., assignor to Ferro Corporation, a corporation of Ohio
Filed June 10, 1959, Ser. No. 819,310
12 Claims. (Cl. 219—37)

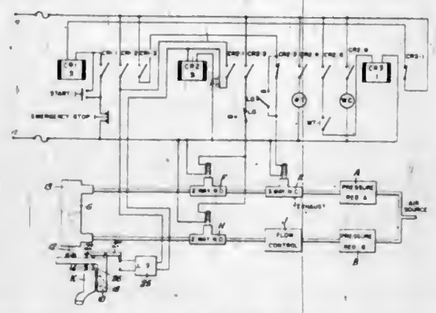


7. A heating unit for a counter-top type stove comprising: a spillage pan, a terminal block mounted on said pan having female contact portions facing inwardly thereof and a guide recess formed therein, a heating coil positioned within the pan provided with male contact portions located to be inserted in the female contact portions of said block and having a guide finger extending slightly outwardly beyond said male contact portions to enter said recess prior to entrance of the male contact portions into the female contact portions, and surfaces adjacent said recess guiding the insertion and removal of the guide finger.

3,043,945
SPOT WELDING NOZZLE PRESSURE CONTROL
Norman Reis, Fords, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Apr. 22, 1960, Ser. No. 24,155
4 Claims. (Cl. 219—127)

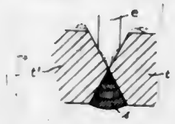
1. Gas shielded arc torch spot welding method which comprises advancing a torch holder under fluid pressure toward the work until the torch nozzle contacts the work,

continuing the fluid pressure to advance the holder beyond the travel of the torch against spring action therebetween, starting the welding cycle when the fluid pressure over-



comes the spring action at a predetermined pressure of the nozzle upon the work, and maintaining said predetermined pressure of the nozzle upon the work for the duration of the welding cycle.

3,043,946
ELECTRODE FOR CLEANING WELD SEAMS
Jean Adrien Perrin, Pagny-sur-Moselle, France, assignor to Societe le Carbone-Lorraine, Paris, France, a French company
Filed May 15, 1959, Ser. No. 813,460
Claims priority, application France May 21, 1958
11 Claims. (Cl. 219—146)



1. An electrode for cleaning weld seams, consisting of a base member of carbon having an elongated cross-section and being longitudinally bored in an even number of places symmetrically located with respect to the longitudinal axis of the base member, and a highly ionising paste filled in said bores.

3,043,947
LIGHT DISTRIBUTING LENS SYSTEM
Harry Albinger, Jr., Ashland, Mass., assignor to General Electric Company, a corporation of New York
Filed Apr. 8, 1960, Ser. No. 20,951
1 Claim. (Cl. 240—1)



An illuminating indicator device, comprising, a light transmitting panel member having front and rear face surfaces, a lamp holder integrally formed with said panel member, a centrally located opening extending through the front and rear surfaces of said light transmitting panel member, a lamp positioned in said lamp holder, means for transmitting light rays from the source of light in said lamp to said panel and through said panel in a direction generally parallel to the face surfaces of said panel, an elongated opening extending through said lamp holder, tape means gripping said lamp to accurately hold said lamp adjacent to said means for transmitting light rays from said lamp to said panel, reflector indentations formed in the front face surface of said panel to intercept said light rays emanating from said lamp and reflect them out through the front of said panel, said indentations being extended further into the panel member as the distance from the lamp to said centrally located opening increases, means formed at the outer periphery of said panel for reflecting light from the portion of said panel behind said reflector indentations forwardly to said reflector indentations so that light is reflected by and passes through said reflector indentations, and other reflector indentations formed in the front surface between said centrally located opening and said reflector means formed at the outer periphery of said panel, and reflector indentations formed in the rear face surface of said panel close to said centrally located opening between said centrally located opening and the means formed at the outer periphery of the panel for reflecting light, said reflector indentations formed in the rear face surface being arranged opposite to the reflector indentations formed in the front face surface and arranged for cooperating with each other to intercept light rays emanating from said source and reflect them out through the front of said panel and to provide a uniform level of illumination in that area of the light transmitting panel in the vicinity of the centrally located opening remote from the lamp holder.

3,043,948
COMBINATION LENS AND LAMP HOLDER
Harry Albinger, Jr., and Chester B. Marble, Ashland, Mass., assignors to General Electric Company, a corporation of New York
Filed Apr. 8, 1960, Ser. No. 20,953
3 Claims. (Cl. 240—1)

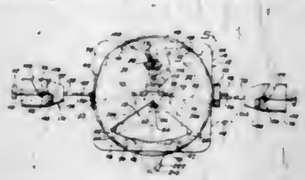


1. An illuminated indicator device comprising a light transmitting plate member having front and rear face surfaces, a generally C-shaped lamp holder integrally formed with said plate member, the front face surface of said plate being arranged generally perpendicular to the axis of said C-shaped lamp holder and the front end surface of said lamp holder being flush with the front face surface of said plate member, an integral wall formed at the other end of said C-shaped lamp holder to provide a U-shaped constriction, a lamp positioned in said lamp holder in front of said U-shaped constriction, insulated conductors leading from the rear end of said lamp, said U-shaped constriction being smaller than said lamp and just of sufficient size to securely grip said insulated conductors, the source of light in said lamp being located between the front face surface of said plate member and the front portion of said constriction, and a light transmitting means for transmitting light rays from said source through said panel in a direction generally parallel to the face surfaces of said panel, said light transmitting means including a truncated conical member integrally connecting the central portion of said C-shaped lamp holder with said light transmitting plate member.

3,043,949
RUNNING LIGHT FOR WATERCRAFT
Donald M. Smith, 17834 Beechwood, Southfield Township, Oakland County, Mich.
Filed Aug. 11, 1958, Ser. No. 754,432
20 Claims. (Cl. 240—7.5)

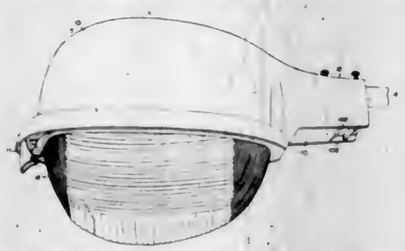
5. A watercraft running light employing an electric bulb of the type having a global portion and a shank portion and having a longitudinal axis, said running light comprising a substantially rigid hollow body structure includ-

ing generally vertical abutting front and rear sections, an open light beam determining depression in the upper outer part of said front section defined by the outer surface thereof, a second smaller globe receiving depression on the inner side of said front section and defined by the inner surface thereof connecting by an aperture with said outer depression, a bulb mounting member secured to said front section over said inner depression and holding said bulb with its globe portion seated in said inner depression and in part projecting into said aperture, said mounting member having a central opening through which



the shank portion of said bulb may project interiorly of said body and defining a bearing surface for embracing the globe portion of said bulb, said bulb when so positioned being adapted to project a beam of light outwardly of said inner and outer depressions, means providing a plurality of ring receiving channels adjacent the surface of said body sections in a plane substantially transversely of said sections and below said outer depression, a locking ring embracing said sections in said channels and releasably holding said sections in abutting relationship, and releasable mounting means rigidly connecting with said ring for securing said body structure in light casting position on said watercraft.

3,043,950
LUMINAIRE
Merle E. Keck, Bay Village, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 26, 1957, Ser. No. 674,397
17 Claims. (Cl. 240—25)



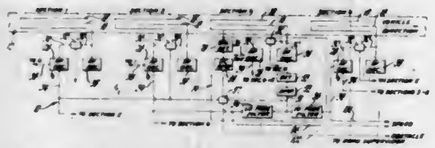
1. In a luminaire, the combination comprising a housing having a bottom opening, a reflector having a bottom opening mounted in said housing and being generally similarly shaped relative to said housing, said reflector having an outwardly extending flange secured thereto at a position adjacent its opening, said flange being engageable with said housing at said housing opening, a slip-fitter and wiring container portion with an open bottom secured to said housing and communicating therewith, said reflector having an aperture therein communicating with said container portion, lampholding means mounted within said container portion and extending through said aperture in an adjacent portion of said reflector, sealing means mounted on the periphery of said lampholding means extending through said aperture, said sealing means having a flat radial side portion which abuts against the reflector when said lampholding means is in its operative position so as to seal said aperture, a refractor having an upward opening and an outwardly extending flange adjacently surrounding said opening, said reflector and refractor flanges being substantially coextensive, gasketing means disposed between said flanges, and means for clamping said flanges together, with said gasketing means compressed therebetween and adjacent to said housing opening so as to seal said refractor to said reflector.

3,043,951
UNIVERSALLY MOUNTABLE LIGHTING FIXTURE
Edwin D. Tillson, Evanston, and Edward J. Krok, Chicago, Ill., assignors, by mesne assignments, to Curtis-Electro Lighting, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 9, 1959, Ser. No. 845,369
1 Claim. (Cl. 240—51.11)



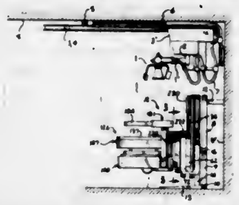
A universally mountable lighting fixture comprising a top reflector having a flat top portion and directly from said top portion a pair of opposite side portions extending diagonally downwardly and outwardly therefrom, said top reflector having open ends and an open bottom, a pair of end plates attached to said reflector and closing the open ends of said reflector, each of said end plates having at its lower portion a pair of spaced enlarged wing portions and a connecting bottom ledge, a central housing attached to said top reflector and having spaced center walls and spaced side walls, each side wall having at its lower portion an enlarged wing portion similar in shape to those of said end plates and a connecting bottom ledge, a pair of sockets mounted on each of said end plates and said center walls of said central housing, a pair of fluorescent light tubes mounted in said sockets and extending between an end plate and a central wall of said central housing, said light tubes having connection with an electrical source of supply, a pair of light transmitting panels, each of said panels having a bottom portion, an open top, spaced side portions, and lower spaced enlarged wing portions each similar in shape to but slightly smaller than an enlarged wing portion of said end plates and said central housing, said panels extending between and resting on the bottom ledge of one of said end plates and on the bottom ledge of one of said side walls of said central housing, and bearing against the inner surfaces of the spaced wing portions of the end plates and the spaced wing portions of the central housing, said fixture adapted by its flat top for direct or suspended attachment to a ceiling, said flat top also being narrow so as to avoid contact with obstructions and adapted by the spaced wing portions of the end plates and the central housing for mounting in a recess in a ceiling.

3,043,952
AUTOMATIC CAR GUIDANCE SYSTEM
John D. Reid, Little Rock, Ark., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 8, 1958, Ser. No. 759,522
9 Claims. (Cl. 246—182)



4. Means for controlling the operation of a series of vehicles traveling on a roadway subdivided into a plurality of adjoining sections, said means comprising a separate transmission line in each of said sections, a control unit for each section coupled to the transmission line in that section, each of said control units supplying its associated transmission line with a current to cause its transmission line to radiate signals containing a command frequency for controlling the speed of any vehicles in the section, frequency control means in each control unit for altering said command frequency in response to an electrical signal, stationary obstacle detection means in each of said sections for sensing the presence of any objects in said section and adapted to produce an electrical signal in response thereto, moving obstacle detection means in each of said sections for measuring the speed of any objects traveling through said section and adapted to produce an electrical signal in response thereto, both of said obstacle detection means being connected to said frequency control means in the control units in surrounding sections whereby said electrical signals are effective to alter the command frequencies to thereby control any vehicles in such sections to avoid a collision with said obstacle.

3,043,953
X-RAY APPARATUS
James R. Craig, Glenview, and George W. Otto, Jr., Elmhurst, Ill., assignors to Profexray, Incorporated, Maywood, Ill., a corporation of Illinois
Filed Apr. 27, 1959, Ser. No. 808,998
11 Claims. (Cl. 250—57)



1. X-ray apparatus comprising a fixed support having bearing means and an arcuate rail radially outwardly of said bearing means, a frame provided with central horizontal shaft mounted in said bearing means, said frame also being supported at its periphery by said rail and being movable along said rail, power operated driving means mounted on said support and operatively connected to the frame for rotating the frame in two directions about the axis of the shaft, table supporting means slidably mounted on the frame, a table carried by said means outwardly of said frame and shiftable toward and away from said frame, said table having a top plane parallel to the axis of said shaft, said table being movable from a horizontal position to various tilted positions in which the top plane is at an angle to the horizontal upon rotation of said frame, driving mechanism operatively connecting the frame and the table-supporting means for moving the table-supporting means and table together along a path at right angles to said top plane, and a carrier frame slidable lengthwise of the table supporting means and adapted to carry X-ray sensitive means in overlying relation to the top of the table and an X-ray source below the table, the carrier-frame also being movable with the table when the latter is shifted at right angles to the plane of the top thereof.

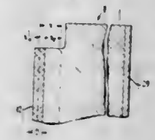
3,043,954
FISSION CHAMBER ASSEMBLY
Leo R. Boyd and Richard G. Bock, San Jose, Calif., assignors to General Electric Company, a corporation of New York
Filed Oct. 12, 1959, Ser. No. 845,885
5 Claims. (Cl. 250—83.1)

4. An ion chamber assembly which comprises a plurality of ion chambers, a plurality of cables, one each of said cables being integrally attached to one of said chambers, said cables being combined together into a bundle with the individual chambers spaced apart from one another in the assembly adjacent one end thereof, a calibration tube having a closed and sealed end disposed immeditaely adjacent the end-most ion chamber in the assembly and extending along said assembly in said bundle past and immediately adjacent each of the



other ion chambers to an open end at the opposite end of said assembly, said ion chambers each comprising an outer tube, an end plug integrally connected to one end of said outer tube, a cable collar integrally connected to the other end of said outer tube, a sleeve of fissionable material disposed on the inner surface of said outer tube, a pair of annular shaped insulators disposed within said outer tube at the ends of said sleeve, and a center cylinder supported between said insulators with its outer surface closely spaced apart from the inner surface of said sleeve.

3,043,955
DISCRIMINATING RADIATION DETECTOR
Stephen S. Friedland, Sherman Oaks, James W. Mayer, Pacific Palisades, and John S. Wiggins, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,560
11 Claims. (Cl. 250—83.3)

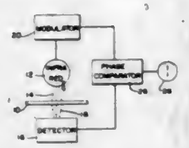


1. An alpha particle radiation detector comprising: a silicon semiconductor crystal having a PN junction within one micron of the incident particle surface; and a ratio of bulk crystal resistivity to incident particle surface resistivity of 10^6 to 1.

3,043,956
MEASURING SYSTEMS USING INFRA-RED RADIATION
Martin J. Cohen, King-of-Prussia, Pa., assignor to Franklin Systems, Inc., West Palm Beach, Fla., a corporation of Florida
Filed Sept. 24, 1958, Ser. No. 763,133
17 Claims. (Cl. 250—83.3)

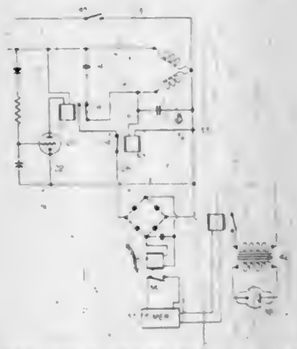
1. Apparatus of the type described, comprising a source of modulated infra-red radiation, an object irradiated by said radiation, an infra-red radiation detector receiving radiation from said object in response to the

radiation of said object by said source, and means for measuring the difference in phase between the modulation



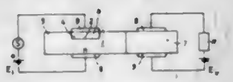
of the radiation from said source and the modulation of the radiation received by said detector.

3,043,957
PROTECTION DEVICE FOR ROTATING ANODE X-RAY TUBE
Edward B. Graves, South Euclid, Ohio, assignor to Picker X-Ray Corporation, Waite Manufacturing Division, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 4, 1960, Ser. No. 270
16 Claims, (Cl. 250—103)



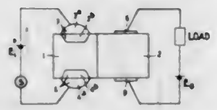
1. In an X-ray device having an X-ray tube including a cathode and a rotatable anode and windings to induce a magnetic field to drive the anode and a high tension circuit connected to the tube, the combination of a winding energizing circuit, exposure control means connected to the high tension circuit to maintain the circuit normally open, a condition responsive means responsive to a back E.M.F. generated in the windings, other means in said energizing circuit to open at least a part of the energizing circuit and to connect the condition responsive means to at least one of the windings when at least such part of the circuit is open, and said condition responsive means when so connected to the exposure control means and to each such winding disconnected from the energizing circuit causing the exposure control means to close the high tension circuit when a back E.M.F. is generated in one such disconnected winding.

3,043,958
CIRCUIT ELEMENT
Gesinus Diemer, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,453
Claims priority, application Netherlands Sept. 14, 1959
7 Claims. (Cl. 250—211)



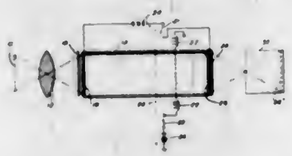
1. A semiconductor device comprising a first, voltage-sensitive, electroluminescent, semiconductive body portion generating radiation integrally united with a second, radiation-responsive, photosensitive, semiconductive body portion, electrical connections to the first and second body portions, and means coupling the body portions together, said second photosensitive body portion consisting essentially of a substance selected from the group consisting of A_{III}-B_V compound, and mixed crystals of A_{III}-B_V compounds, where A_{III} represents an element selected from the group consisting of boron, aluminum, gallium and indium, and B_V represents an element selected from the group consisting of nitrogen, phosphorus, arsenic and antimony.

3,043,959
SEMI-CONDUCTOR DEVICE FOR PURPOSES OF AMPLIFICATION OR SWITCHING
Gesinus Diemer, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,454
Claims priority, application Netherlands Sept. 12, 1959
4 Claims. (Cl. 250—211)



1. A semiconductor arrangement comprising a first semiconductive region containing p and n zones forming at least one junction, contacts to the p and n zones, an input circuit including potential means coupled to the contacts for biasing the junction in the forward direction, whereby carriers are injected into the first region which, when recombined, cause the generation of photons having a given value of energy, a second photoconductive semiconductive region adjacent the said first region and adapted to intercept and absorb a portion of said generated photons, spaced contacts to said second region, and an output circuit including potential means coupled to the contacts to said second region for establishing an electric field therein, said second region being constituted of a semiconductor whose forbidden energy gap is at least equal to the said given value of photon energy, said semiconductor of the second region further containing activator centers establishing in the forbidden energy gap energy levels which are capable of excitation by the said generated photons, but not solely by thermal energy, whereby the current in the output circuit is a function of the intensity of the generated radiation.

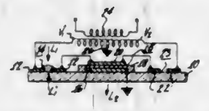
3,043,960
HIGH SPEED SHUTTER
Jeofry S. Courtney-Pratt, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 14, 1960, Ser. No. 62,583
6 Claims. (Cl. 250—213)



1. A camera shutter mechanism having an extremely short exposure interval comprising an electronic image converter tube having a photosensitive electron emitting cathode surface and an electron sensitive fluorescent screen spaced in substantially parallel planes, a source of potential interconnecting the cathode and the fluorescent screen surfaces to draw electrons from the cathode

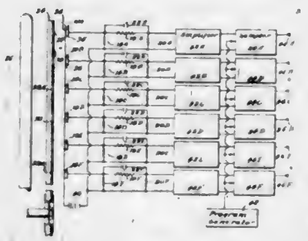
surface to impinge upon the fluorescent screen surface, a first mask interposed between the object to be photographed and the cathode surface to restrict the passage of energy to the cathode surface to a plurality of regularly spaced fine parallel lines, a second mask interposed adjacent the fluorescent screen surface to restrict the passage of electrons to the fluorescent surface to a like plurality of regularly spaced fine parallel lines and electrically controlled means for deflecting electrons traversing the tube from cathode to screen to momentarily direct the electrons to impinge upon the portions of the second mask which pass electrons.

3,043,961
ELECTROLUMINESCENT DEVICE AND CIRCUITS THEREFOR
Benjamin Kazan, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 26, 1955, Ser. No. 530,875
20 Claims. (Cl. 250—213)



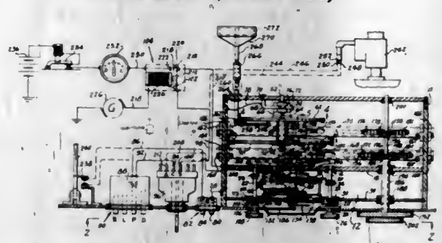
1. A radiant energy transducer comprising an electroluminescent cell, an element of a material whose impedance is variable with incident radiant energy, a constant impendance element, one side of each of said cell and said elements being electrically connected together, and means connected to the other sides of said elements and said cell for applying a first voltage in series with said cell and said variable impedance element and a second voltage in series with said cell and said constant impedance element.

3,043,962
OPTICAL ENCODER
Edward M. Jones, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 18, 1959, Ser. No. 834,604
24 Claims. (Cl. 250—220)



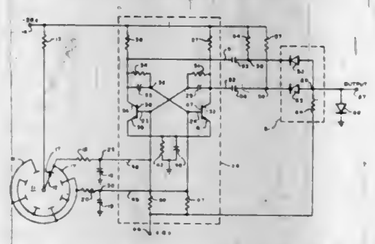
1. An optical device comprising a light source, a photocell confronting the light source, a light shutter disposed between the light source and the photocell, a series photocell circuit including the photocell and a resistance element, and a load electrically coupled to the resistance element characterized by the construction wherein the resistance element comprises a diode, and the photocell circuit includes a direct current source polarized to pass charges through the diode in the forward direction to establish a minimum forward diode current, and a pulse source connected in parallel with the diode and polarized to apply pulses in the forward direction to the diode, whereby the magnitude of the pulses flowing through the diode is proportional to the photocell response.

3,043,963
AUTOMATIC STARTING SYSTEMS FOR INTERNAL COMBUSTION ENGINES
Weikko Teikari, Box 177, Iron River, Mich.
Filed Aug. 15, 1958, Ser. No. 755,233
5 Claims. (Cl. 290—37)



1. An automatic starting system for an internal combustion engine having an ignition and a starting mechanism comprising a housing, a timing mechanism in said housing, said timing mechanism including a timing shaft rotatably positioned in said housing, a disc driven by the shaft a clock mechanism in said housing, said clock mechanism being operatively connected to said timing shaft, means outside said housing for winding and setting said clock mechanism, a plurality of electrical contacts spaced from each other in a predetermined pattern on at least one face of said disc, a pair of spaced electrical contact points in slidable engagement with said one face of said disc, said disc being rotatable relative to said contact points to bring the electrical contacts on said disc into and out of bridging relationship to said pair of contact points, said contact points being connected to a rack movable radially relative to said disc, said rack being in mesh with a pinion, said pinion being mounted on a rotatable rod positioned within said housing and extending outwardly of said housing, said rod being provided with a manually operable adjusting knob outside said housing, one of said contact points being in electrical circuit with a starting mechanism and the other of said contact points being in electrical circuit with a source of electrical energy, a manually operated switch connecting the contacts on the disc to the starting mechanism, a normally closed cut-out switch between the one contact point and the starting mechanism, a generator operated by the engine, and a single electromagnet controlled by the engine when in operation for opening the cut-out switch to disconnect the starting mechanism from the timing mechanism and for connecting the battery to the generator.

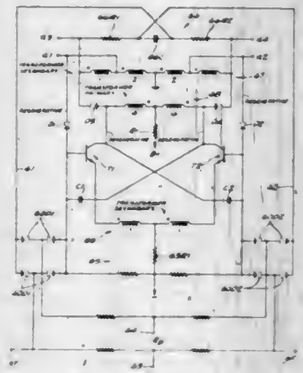
3,043,964
STEP SWITCH PULSE GENERATOR
Herbert A. Seidman, Bronx, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Apr. 28, 1960, Ser. No. 25,300
4 Claims. (Cl. 307—88.5)



1. A pulse generator comprising, a flip-flop circuit having a pair of input terminals and a pair of output terminals, a step switch having the moving contact arm of one bank connected to a source of potential, alternate fixed contact points of said bank being connected to one of said flip-flop input terminals and the remaining fixed con-

tact points thereof being connected to the other said flip-flop input terminal, a differentiating circuit connected to differentiate the two oppositely phased output signals on said flip-flop output terminals and emitting two differential signals, and an OR circuit receiving said two differential signals to produce a train of like-polarized pulse signals substantially synchronous with the time of electrical contacts of said switch bank moving contact arm with said fixed contact points.

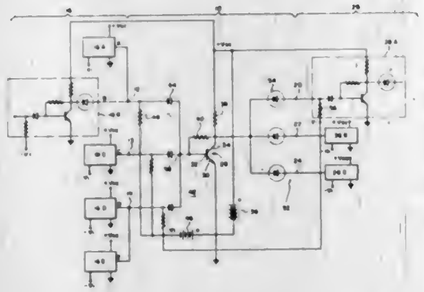
3,043,965
AMPLIFIER CIRCUIT HAVING DEGENERATIVE AND REGENERATIVE FEEDBACK
Alfred D. Scarbrough, Palos Verdes Estates, and Robert N. Mellott, Los Angeles, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 14, 1957, Ser. No. 689,960
12 Claims. (Cl. 307—88.5)



4. A multivibrator comprising: first and second amplifiers each having an output circuit including a pair of electrodes and a current path therebetween, said output circuits being controlled through first and second control electrodes; a transformer having a primary winding having first and second ends and a tap therebetween, said first end being coupled to one electrode of said first amplifier and said second end being coupled to the corresponding electrode in said second amplifier, and a secondary winding having first and second ends and a tap therebetween; means for establishing a voltage difference between center taps in said primary and secondary windings; first coupling means for connecting predetermined points of said secondary winding to said first and second amplifiers to provide respective regenerative feedback paths therefor; and second coupling means connecting the first and second ends of said secondary winding to the corresponding ends of said primary winding to regulate the voltage across the respective output circuits.

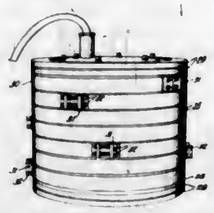
11. The combination comprising: an amplifier circuit having two output circuit electrodes, constituting terminals for a controllable current-conduction path through said output circuit, and a control electrode; a transformer having primary and secondary windings, said primary winding have one end connected to one of said output electrodes; a source of direct-current potential; means for applying said direct-current potential to the other end of said primary winding, said direct-current potential being selected to tend to cause current conduction through said current-conduction path; means for applying input signals to said control electrode to cause current flow through said current-conduction path; means for applying a reference potential to a first end of said secondary winding, said primary and secondary windings being arranged to cause a potential having the sense of said input signal, in response thereto, at a second end of said secondary winding; and means coupling the second end of said secondary winding to said one of said output circuit electrodes to limit the output voltage drop across said output circuit electrodes and thereby prevent saturation in said amplifier.

3,043,966
NONSATURATING BILEVEL TRANSISTOR AMPLIFIER HAVING, IN COMMON PORTION OF INPUT CIRCUIT AND NEGATIVE FEEDBACK CIRCUIT, A DIODE
Robert H. Norman, Glen Oaks, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Feb. 19, 1959, Ser. No. 794,336
2 Claims. (Cl. 307—88.5)



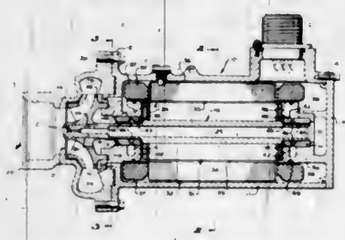
1. A digital logic package responsive to dual-valued signals comprising a common emitter transistor circuit including a transistor having respective emitter, base and collector electrodes, a point of common reference to which the emitter electrode is coupled, a degenerative feedback network including a resistor connected between the base and collector electrodes for supplying to the base electrode a feedback which is variable in response to changes of the transistor output and is limited to avoid operation of the transistor in the saturation region, an input terminal for receiving dual-valued input signals, a diode connected in series circuit between the input terminal and the base electrode, said diode being oppositely poled with respect to the emitter base junction of the transistor, a current path connected from said terminal to the point of common reference whereby said feedback is divided between said current path and the base electrode, means including said current path for back-biasing said diode in response to one of said dual-valued input signals, and for forward-biasing the diode in response to the other of said input signals, whereby first and second different ratios of said feedback division are provided when said diode is back-biased and forward-biased respectively, said transistor being operable in a first state in response to said first ratio of feedback and in a second state in response to said second ratio of feedback, an output circuit including in series a breakdown diode and a resistor connected across said collector and emitter electrodes for subjecting the latter diode to a collector voltage which is above the breakdown voltage of the breakdown diode in response to one of said transistor states of operation and to a collector voltage below said breakdown voltage in response to the other state of operation of the transistor, the respective collector voltages associated with said states of operation being above the saturation voltage of the transistor.

3,043,967
ELECTROSTRICTIVE TRANSDUCER
Walter L. Clearwaters, Old Norwick Road, Quaker Hill, New London, Conn.
Filed Jan. 13, 1960, Ser. No. 2,315
13 Claims. (Cl. 310—8.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



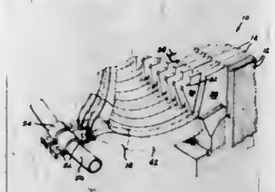
1. In an elestrostrictive transducer having a body of piezoelectric ceramic material, a pair of electrodes on a pair of opposed surfaces of the ceramic material and polarized in a direction extending between the electrode bearing surfaces, the improvement which comprises comparatively thin elastic binding means having a modulus of elasticity on the order of that of steel girding said transducer under tension for continuously applying compressive force to said transducer in the direction corresponding to the direction of polarization, whereby when said transducer expands and contracts in said direction of polarization, said binding means is stretched by said transducer during said expansion thereof and when said transducer contracts in said direction, said binding means follows said contraction whereby the percentage variation in load on the transducer during each expansion and contraction is reduced and the direction of the internal stress is not reversed, the power handling capability of said transducer in said direction is increased and its efficency is increased.

3,043,968
FLUID COOLED ELECTRICAL MACHINE
Elmer F. Ward, Orange, Calif., assignor to The Task Corporation, Anaheim, Calif., a corporation of California
Filed June 19, 1959, Ser. No. 821,610
10 Claims. (Cl. 310—54)



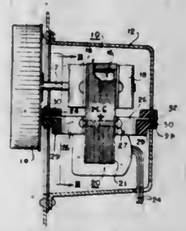
1. A vaporization cooled electrical machine, comprising means including a housing and rotor and stator assemblies within the housing, said assemblies having a gap therebetween and said housing and rotor having thin annular clearances therebetween adjacent end faces of the rotor to provide the only access to said gap, said means forming a passage containing liquid coolant for circulating said coolant within the housing and said gap containing said coolant and said coolant having a vapor pressure such that the coolant vaporizes to form bubbles in the clearances and vapor in the gap at normal operating temperatures of the machine, and said means also forming relatively restricted openings communicating between said passage and the innermost regions of said clearances for permitting limited access of liquid coolant to the clearances from said passage and escape of vapor bubbles from said clearances, whereby coolant confined in the clearances absorbs heat from the rotor and vaporizes to cool the rotor and the gap is kept filled with vapor to effect a substantial decrease in rotor drag.

3,043,969
ARRANGEMENT FOR COOLING COIL END TURNS
Maurice E. Petersen and John J. Broderick, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 3, 1958, Ser. No. 771,474
6 Claims. (Cl. 310—64)



1. A stator core for a dynamoelectric machine comprising a pluraliy of stacked laminations including conductor slots having coils therein, means fitted in contact with opposite ends of said stacked laminations and in axial alignment therewith for holding the core under pressure, a cylindrical can mounted in the bore of the stator and in heat exchange relationship with the core and said means, a heat conducting element on each of the end turns of said coils and having a portion thereof affixed to said means for providing a low resistance path for flow of heat from the end turns to both the can and said laminations.

3,043,970
MOTOR SUPPORT AND VIBRATION ISOLATION MEANS
Bernard W. Hatten and William A. Gallaer, Columbus, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 13, 1959, Ser. No. 846,142
4 Claims. (Cl. 310—91)



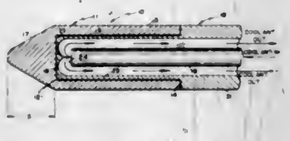
1. The combination with a fractional horsepower motor of the type having a stator and a rotor the axis of rotation of which is offset appreciably from the mass center of the motor, of vibration isolating means for supporting said motor, said means comprising a pair of tabs which are non-circular in cross section carried by and projecting away from said motor, said tabs being positioned so that a line passing therebetween passes through the mass center of said motor and is parallel to the axis of rotation of said rotor, and a pair of grommets formed of elastomeric material and disposed, respectively, on said tabs, said grommets having internal configurations conforming to the configuration of said tabs and having non-circular external configurations corresponding to openings in the structure in which said motor is adapted to be mounted, said means flexibly supporting said motor for torsional movement about an axis passing through the mass center of the motor and disposed parallel to and spaced from the axis of rotation of the motor rotor.

3,043,971
IMPROVED LAMINATED FRAME AND METHOD OF MAKING SAME
Clarence M. Stevens, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 1, 1956, Ser. No. 601,576
8 Claims. (Cl. 310—216)



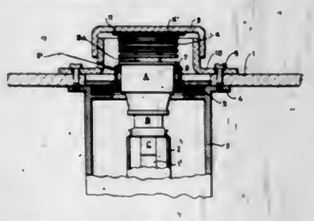
1. The method of forming a laminated frame comprising the steps of enclosing a plurality of stacked laminations in an open ended box to form a rigid assembly, heating said assembly and thereafter rolling it in a direction edgewise of said laminations to form a half frame of semicircular configuration, repeating the above-described process to form an identical semicircular half, removing a side of said box located on the inner peripheral surface thereof for exposing the edges of said laminations, and joining said halves to form said frame.

3,043,972
HIGH TEMPERATURE IMPLEMENT
Tibor S. Laszlo, Melrose, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 23,698
8 Claims. (Cl. 313—32)



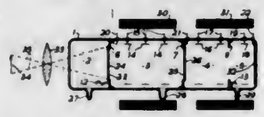
1. A high temperature implement comprising: a tip formed from a refractory material including a peripheral wall, a closed end and an open end, the inside surfaces of the peripheral wall and the closed end defining a recess; nonporous lining means for carrying a coolant to and from said tip terminating in a closed end portion for preventing direct contact between the tip and the coolant, the closed end portion being shaped to mate with the recess and being inserted therein.

3,043,973
COOLING THERMALLY STRESSED PARTS OF ELECTRON TUBES
Peter Deserno and Martin Schnädelbach, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Munich, Germany, a German corporation
Filed May 28, 1958, Ser. No. 738,531
Claims priority, application Germany May 31, 1957
6 Claims. (Cl. 313—40)



1. High frequency apparatus comprising at least one disk type tube having an electrode subject to continuous high thermal loads, said electrode having a cooling head extending through an opening in the outer wall of the high frequency apparatus, a cooling element disposed at the exterior side of said outer wall, means for yieldably pressing said cooling element in good heat conducting engagement with the cooling head of said electrode, the electrode-contacting face of said cooling element being formed from an electrically insulating material, and heat radiating means operatively connecting said element in good heat conducting relationship with said outer wall.

3,043,974
ELECTRON DISCHARGE DEVICES
James Dwyer McGee, London, England, assignor to National Research Development Corporation, London, England
Filed Feb. 27, 1959, Ser. No. 796,099
Claims priority, application Great Britain Mar. 6, 1958
7 Claims. (Cl. 313—65)



1. An electron discharge device comprising a vessel having at least first, second and third chambers, apertured flanges provided in said vessel for separating said chambers, at least the intermediate chamber containing electrodes maintained at high potential when the device is in operation, the said flanges having movable plates associated therewith, the plates being adapted in one position to close the aperture in the associated flange in a vapour-tight manner and in another position to occupy an operative position in relation to said electrodes, at least one of said plates being associated with two said apertured flanges, for closing the aperture of one of said two flanges and for occupying an operative position in association with the other.

3,043,975
IMAGE DISPLAY DEVICE
Glen A. Burdick, Waterloo, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Aug. 5, 1957, Ser. No. 676,331
2 Claims. (Cl. 313—92)



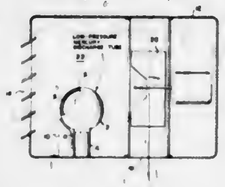
1. A cathode ray tube of the type adapted to employ a plurality of dynamically converged electron beams directed to be deflected over and impinge upon an image display screen, said screen comprising a curvilinear support having discrete light emitting areas arranged thereon to form a plurality of patterns located in radial and tangential relationships with one another, said patterns being spaced from one another radially outwardly from the center of said curved support and disposed substantially tangent with one another in a tangential direction extending normal to the radial direction, said patterns varying in spacing from each other in said radial direction to locate each discrete area substantially coincident with the average location of the center of the impinging beam at each deflection angle.

3,043,976
PHOTOCATHODE FOR PHOTOCELLS, PHOTOELECTRIC QUADRUPLER AND THE LIKE
Dierick Kossel, Wetzlar (Lahn), Germany, assignor to Ernst Leitz, G.m.b.H., Wetzlar (Lahn), Germany, a corporation of Germany
Filed Jan. 14, 1959, Ser. No. 786,847
Claims priority, application Germany Jan. 18, 1958
8 Claims. (Cl. 313—94)



1. Photoelectric cathode for photocells, quadruplers and the like using an interference system comprising a transparent carrier, an interference intermediate layer and a thin photoelectric cathode layer, the cathode layer being the last layer in the direction of movement of the impinging light and the interfaces between the carrier and intermediate layer and between the intermediate layer and the cathode layer being at an angle to the free face of the carrier.

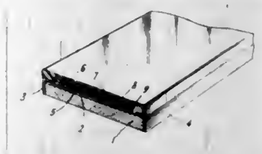
3,043,977
DEVICE AND METHOD FOR PRODUCING NEGATIVE IONS
Harold J. Morowitz, Orange, Conn., assignor, by mesne assignments, to Puritron Corporation, New Haven, Conn., a corporation of Connecticut
Filed Mar. 30, 1960, Ser. No. 18,571
4 Claims. (Cl. 313—102)



1. In a device for producing negative ions, the combination of, a source of photon radiation, a non-metallic envelope for said source having an envelope wall which is adapted to permit photons to pass therethrough, a thin metallic layer coated upon the side of said wall opposite said source, said layer being of a thickness which is great enough to stop a substantial portion of photons which have passed through said wall but being thin enough to permit the escape of photoelectrons from the side of said layer opposite said wall.

3,043,978
ELECTROLUMINESCENT LAMP
Eric L. Mager, Beverly, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Continuation of application Ser. No. 230,738, June 9, 1951. This application Oct. 24, 1958, Ser. No. 769,511
2 Claims. (Cl. 313—108)

1. An electroluminescent lamp comprising a piece of light-transmitting material, a light-transmitting electrically conductive surface on said piece, a layer of an electroluminescent phosphor in a dielectric medium on said conductive surface, and a conductive backing layer of an alloy of aluminum and copper on said layer.

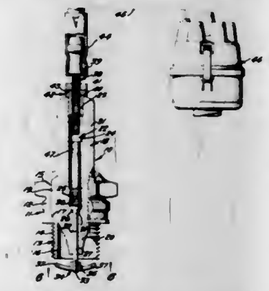


3,043,979
ELECTROLUMINESCENT ELEMENT
Theodorus Leonardus Cornelis van Geel and Hendrik Jacobus Maria Joormann, both of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 9, 1959, Ser. No. 858,362
Claims priority, application Netherlands Dec. 17, 1958
6 Claims. (Cl. 313—108)



1. An electroluminescent element comprising a cup-shaped supporting glass container having bottom wall and upwardly extending wall portions, a layer of moisture-sensitive electroluminescent material mounted within said container and extending generally parallel to the said bottom wall portion, electrodes contacting opposite sides of the electroluminescent layer, one of said electrodes being transparent flexible conductive leads connected to electrodes, and a moisture-impervious body of a sealing agent secured to the container wall portions and sealing the electroluminescent layer within the container and surrounding the conductive leads, said sealing agent having a thickness sufficiently large to prevent external moisture from reaching the electroluminescent layer and at which the minimum length of path from any point of the electroluminescent layer via the sealing agent to the outside is larger than the smallest thickness of a container wall portion, said container being moisture-impervious and being constituted of a material whose comparative moisture imperviousness for a given thickness is substantially greater than a comparable thickness of the sealing agent.

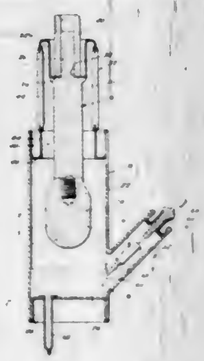
3,043,980
SPARK PLUG WITH INTENSIFIER
Thomas A. Zalesak, R.D. 2, Box 208, Wallkill, N.Y., assignor of forty-nine percent to Our Lady of Fatima Church, Plattekill, N.Y.
Filed July 25, 1960, Ser. No. 45,173
3 Claims. (Cl. 313—124)



1. In a spark plug, a shell including an upper portion and a lower portion, said lower portion being threaded

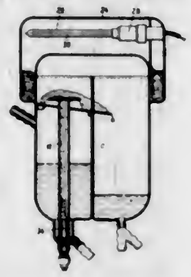
externally, the interior of said shell being hollow, and the upper portion of the shell being larger in cross section than the lower portion thereof, an inner shoulder between the upper and lower portions, a body member having a section seated in the upper portion of said shell and said section abutting said shoulder, a tapered section on the lower end of said body member, and said tapered section being arranged in said lower portion, said body member further including an upwardly disposed section, said body member having a bore therein and said bore including an upper first section, a second section below said first section, there being a threaded section adjacent the bottom of the second section, a tapered shoulder contiguous to said threaded section, said bore further including a third section below said tapered shoulder; a primary electrode including an upper first portion positioned in the second section of said bore, an externally threaded portion of the primary electrode threadedly engaging the threaded section of the bore, said electrode also including a tapered portion engaging the tapered shoulder, and a third section projecting beyond the end of the shell and beyond the body member, and the outer end of the primary electrode being threaded, a firing element comprising a central hub threadedly engaging the outer threaded end of the primary electrode, said firing element further including a plurality of firing lugs; an intensifier element including a threaded shank having a head on its upper end, a fastener threadedly engaging said shank, and a bushing having an upper flange abutting the outer end of said body member, said bushing being threaded internally and threadedly engaging said shank, said bushing being seated in the first upper section of said bore.

3,043,981
DISCHARGE DEVICE
George W. Harvey, La Jolla, and David F. Brower, Del Mar, Calif., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 23, 1959, Ser. No. 801,059
2 Claims. (Cl. 313—169)



1. A vapor-arc discharge device comprising an elongated vertically disposed tubular casing, said casing having closure walls at both ends, a mercury pool-type cathode disposed in the lower portion of said casing, an anode extending through the upper closure wall and spaced above said cathode, said casing having an aperture disposed partially above the surface of the mercury pool, a tubular member extending upwardly and outwardly at an angle from the aperture and having a closure cap at its upper end, an electrode extending through said cap and having its inner end dipped into the surface of the mercury pool at said aperture, said casing and said tubular members being composed of metal intermediate the upper portion of the electrode and the anode and being at the same potential as said cathode, the aperture extending a distance above the cathode surface such that the upper portion of the electrode is electrostatically shielded from the anode and an electrostatic field extends between the anode and said electrode at said inner end when voltage is applied to said anode.

3,043,982
DEVICE FOR THE TREATMENT OF BLOOD OR THE LIKE
Federico Wehrli, 33 Via del Sole, Locarno, Switzerland
Filed Jan. 28, 1957, Ser. No. 636,603
1 Claim. (Cl. 313—220)



For use in an apparatus for saturating blood with oxygen to irradiate the oxygen-saturated blood therein, an elongated straight low pressure ultraviolet quartz lamp having a head piece for the current supply leads at one end thereof and being divided by an axially extending quartz wall into two separate longitudinal ducts communicating with one another only at the end of said lamp opposite to the head piece, said lamp being filled with argon at an absolute pressure of substantially 4 millimeters, whereby the spectrum range of the lamp lacks the spectrum band of 2500 to 2750 angstroms which is detrimental to living proteins.

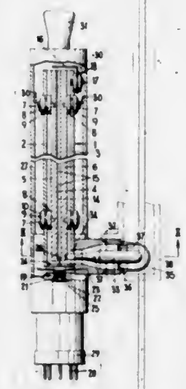
3,043,983
ELECTRON DISCHARGE LAMP
John G. Ray, Topsfield, Mass., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Filed Apr. 6, 1960, Ser. No. 20,477
8 Claims. (Cl. 313—221)



1. An electron discharge lamp comprising a glass envelope containing amalgam forming materials, mercury vapor and means to produce an electron discharge in said lamp and a barrier layer in transparent thickness of an alkali-free lead-borosilicate glass for inhibiting an alkali-mercury amalgam formation disposed upon the inner surface of said envelope.

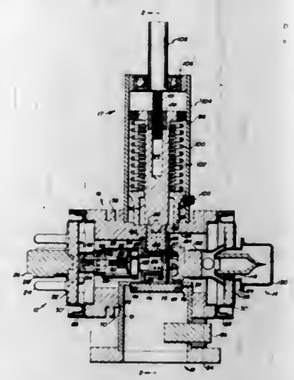
3,043,984
TRAVELLING WAVE TUBES
Lawrence Michael Stephenson, Stanmore, England, assignor to The M-O Valve Company Limited, London, England
Filed July 29, 1959, Ser. No. 830,294
Claims priority, application Great Britain Sept. 11, 1958
1 Claim. (Cl. 315—3.5)

A travelling wave tube including a delay device incorporating a single periodic metal structure, the periodic metal structure partially bounding a channel which extends along the length of the delay device with the elements of the periodic metal structure extending continuously transverse to the length of the channel, an electron gun having an electron source which is disposed adjacent one end of the channel and which projects an electron beam into the channel so that in operation the electron beam travels along the length of the channel adjacent the periodic structure, each element of the periodic metal structure being anchored at both ends and presenting along at least a considerable portion of its length a concave configuration to the interior of the channel such that in operation any thermal expansion of the element caused by the passage of the electron beam will not bring about a movement of any appreciable part of the element into the path of the electron beam, and two further metal structures extending one on either side of the periodic metal structure with one of the further metal structures partially bounding said channel, said further metal structures being electrically insulated from each other and from the periodic metal structure, whereby in operation upon applying suitable potentials to the periodic structure and to the further metal structures such that the periodic structure is at a positive potential with respect to the electron source, said one of the further metal structures is at a negative potential with respect to the periodic metal structure and the other further metal structure is at a negative potential with respect to said one of the further metal structures, the electron beam will be focussed electrostatically, the beam travelling along the channel with an undulatory motion such that it alternately approaches and recedes from the periodic structure with these peaks of the beam forming that set of alternate peaks disposed adjacent the periodic structure being respectively disposed in the vicinities of the gaps between the elements of the periodic structure.

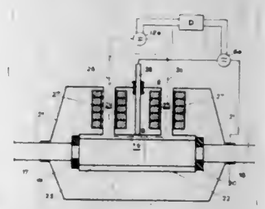


3,043,985
REFLEX KLYSTRON
Rowland W. Haegele, Menlo Park, and Oskar Heil, San Mateo, Calif., and Carl H. Turnblom, Salt Lake City, Utah, assignors to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Filed Mar. 18, 1959, Ser. No. 800,178
7 Claims. (Cl. 315—5.21)

1. A reflex klyston comprising an electron gun, a repeller electrode, body means forming an interaction gap surrounded by a resonant cavity disposed between said electron gun and repeller electrode and coaxial therewith, said resonant cavity having a drift tube section one end of which forms a boundary of said interaction gap, a ceramic tuning slug having a rectangular cross-section disposed within said resonant cavity and insertable through a port formed in said body means, said ceramic tuning slug having a concave semi-cylindrical surface on its end adjacent said drift tube, mechanical means including a metallic bellows covering said port formed in said body means provided for withdrawing and inserting said ceramic tuning slug within said resonant cavity and sealing said port and tuning said resonant cavity from the exterior of said reflex klystron tube.

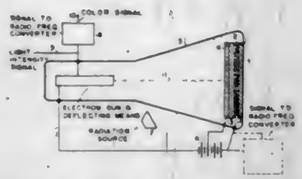


3,043,986
PARTICLE ACCELERATORS
Ilia Podliasky, Asnieres, France, assignor to Commissariat a l'Energie Atomique, French State Administration, Paris, France, a society of France
Filed Mar. 13, 1957, Ser. No. 645,740
Claims priority, application France Mar. 16, 1956
5 Claims. (Cl. 315—5.46)



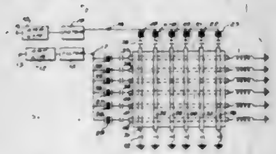
1. In a particle accelerator, the combination of a tubular drift tube, a casing made of a conductive material surrounding said drift tube, out of contact therewith, two tubular elements made of a conductive material in coaxial line with said drift tube at either end thereof and insulated therefrom, said tubular elements being in direct electric contact with said casing, the cylindrical space for the travel of particles that extends through said tubular elements and said drift tube being evacuated, variable self-inductance means directly interposed between said drift tube and the wall of said casing, the whole of said drift tube, casing, tubular elements and variable self-inductance means forming an oscillatory circuit, a source of cyclically varying high frequency voltage, means, distinct from said self-inductance means, for connecting one terminal of said source with said casing, means, distinct from said self-inductance means, for connecting the other terminal of said source with said drift tube, and means responsive to the cyclical variation of frequency of said source for automatically varying the self-inductance of said self-inductance means to maintain resonance in said circuit.

3,043,987
ELECTRIC FREQUENCY CONTROLLED COLOR PHOSPHOR SCREEN
Hyman A. Michlin, 1575 Odell St., New York, N.Y.
Filed Sept. 18, 1957, Ser. No. 684,768
10 Claims. (Cl. 315—26)



4. An apparatus for producing an electroluminescent color image comprising an envelope, means to generate, modulate and scan an electron beam therein; and a target comprising an anisotropic conductive layer, a phosphor layer and a conductor layer in the order named with the free side of the anisotropic conductive layer arranged to be impacted by said scanning electron beam; the phosphor layer having the characteristic of varying its color emission in accordance with the frequency of electric fields applied thereto; means for selectively varying the electron energy of the scanning electron beam impacting each elemental area of the anisotropic conductive layer for a successive interval of time thereby impressing an image in electric frequencies in potentials on the anisotropic conductive layer; and means for applying a potential to the conductor layer thereby on the application of sufficient potential differences between the potentials applied to the anisotropic conductive layer and the potential applied to the conductive layer a color image is produced.

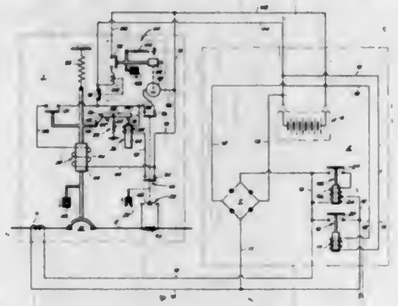
3,043,988
TWO-DIMENSIONAL DISPLAYS
Hyman Hurvitz, 737 Warner Bldg., Washington, D.C.
Filed Apr. 27, 1955, Ser. No. 504,329
16 Claims. (Cl. 315—169)



1. A device for providing two-dimensional displays, comprising at least one elongated conductive element, at least another elongated conductive element, said elongated elements positioned to intersect each other, voltage sensitive material located intermediate said elongated elements at their intersection, a piezo-electric crystal tuned to one frequency connected in series with one of said elements, a piezoelectric crystal tuned to another frequency connected in series with the other of said elements, a separate tuning series condenser and tuning coil pair connected in series with each of said elements, each condenser and tuning coil pair resonant to the frequency of one of said piezo-electric crystals.

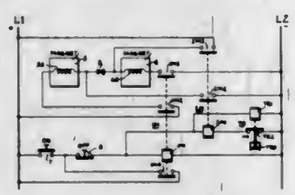
3,043,989
RECLOSING CIRCUIT BREAKER CONTROL SYSTEM
William H. Nash, South Milwaukee, Wis., and Anthony Van Ryan, Ocean Springs, Miss., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,822
4 Claims. (Cl. 317—22)

1. A repeating circuit interrupter having primary switch means in circuit with a source of alternating electrical energy, spring means coupled to said primary switch means and biasing the same toward open position, latch means for holding said primary switch means closed against the force of said spring means, a storage battery, a current transformer in circuit with said source of alternating electrical enregy, a rectifier coupling said storage battery to said current transformer whereby the energy stoage therein may be substantially continuous, fault responsive means for opening said primary switch means on overcurrent including a first electromagnetic operator for tripping said latch means and fault sensitive means in circuit with said source of electrical energy for coupling



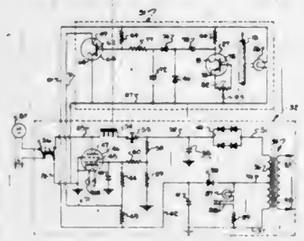
said electromagnetic operator to said storage battery upon the occurrence of a predetermined overcurrent whereby said primary switch means is opened, a second electromagnetic operator having a coil and an armature mechanically coupled to said primary switch means, means for completing an energizing circuit to said coil after said fault responsive means has opened said primary switch means, whereby said primary switch means is reclosed, and step by step lockout means for maintaining said second coil de-energized after a predetermined number of opening and closing operations whereby said primary switch means remain open.

3,043,990
ENERGIZING CONTROL SYSTEM FOR A PLURALITY OF ELECTROMAGNETS
Arvid E. Lillquist, Wauwatosa, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Sept. 23, 1958, Ser. No. 762,772
7 Claims. (Cl. 317—123)



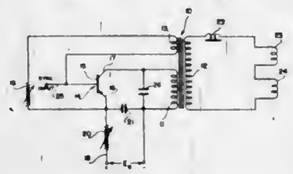
1. The combination with a plurality of electromagnetic devices each of which has an energizing winding, of electroresponsive means energizable to connect the energizing windings of at least two of said devices across a source of D.C. voltage in parallel circuits, electroresponsive time delay means acting a predetermined interval following energization thereof to cause said electroresponsive means to interrupt said parallel circuits and reconnect said energizing windings of said two devices in series across the D.C. source, means for simultaneously energizing said electroresponsive means and said electroresponsive time delay means, and a unidirectional conducting device connected in series with said windings of said two devices to prevent short circuit between said parallel circuits and provide circuit continuity between said windings of said two devices in the transition to series connection thereof across the D.C. source.

3,043,991
STOP MOTION DEVICE AND CONTROL CIRCUIT THEREFOR
Henri W. Schneider and Albert C. Leenhouts, Enschede, Netherlands, assignors to J. F. Scholten and Zonen, N.V., Willemstad, Curacao, Netherlands, a corporation of Curacao, Netherlands Antilles
Filed July 10, 1959, Ser. No. 826,286
12 Claims. (Cl. 317—130)



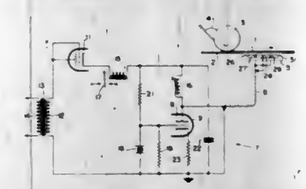
4. An electrical control circuit for a stop motion device comprising, in combination, an electrically operated relay device for performing a control function, an electron discharge device for controlling the actuation of said relay device and arranged to cause actuation of said relay device when conductive, means for producing a control voltage for inoperatively conditioning said relay device and for operatively conditioning said electron discharge device, means including photoelectric control means in said control circuit responsive to the presence of an advancing strand of textile material in a predetermined zone for producing a voltage in opposition to the control voltage applied to said electron discharge device to render it nonconductive, said photoelectric control means being arranged to respond to the absence of said strand from said predetermined zone to bypass said opposing voltage and permit said control voltage to operatively condition said electron discharge device and cause it to conduct, and means responsive to the flow of current in said electron discharge device for changing said control voltage applied to said relay device whereby said relay device is actuated to perform said control function.

3,043,992
SAWTOOTH WAVE GENERATOR
Samuel A. Schwartz, Los Altos, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 24, 1958, Ser. No. 710,914
11 Claims. (Cl. 317—145)



1. A sawtooth wave current generator comprising, a voltage source, a saturable core transformer having primary and secondary windings, normally closed switch means series coupling the primary winding of said transformer with said voltage source and driving said transformer to saturation, a positive feedback winding on said transformer momentarily opening said switch means in response to transformer saturation for re-cycling the generator, and inductive load means series coupled to the secondary winding of said transformer.

3,043,993
GLUE DETECTOR
Frederick L. Maltby, 1417 Edge Hill Road, Abington, Pa.
Filed Dec. 24, 1959, Ser. No. 861,932
6 Claims. (Cl. 317—146)



1. An apparatus for detecting the presence or absence of a conductive glue on a portion of a moving strip of paper comprising, in combination, a sensing element adapted to be positioned adjacent to said paper on the reverse side of said paper from said glued portion and opposite to the glued portion, said sensing element comprising at least a pair of electrodes spaced from each other, said electrodes having dimensions large compared with their spacing, each of said electrodes being adapted to form a capacitor with said glued portion, the capacitors thus formed being connected to each other through said glue, oscillator means coupled to said electrodes and relay means connected to said oscillator responsive to the series impedance of said capacitors.

3,043,994
ENCAPSULATED COIL AND METHOD OF MAKING
Elroy H. Anderson, Arlington Heights, and Carlton F. Heidorn, Palatine, Ill., assignors to Anderson Controls, Inc., Des Plaines, Ill., a corporation of Illinois
Filed Oct. 11, 1957, Ser. No. 689,651
1 Claim. (Cl. 317—158)

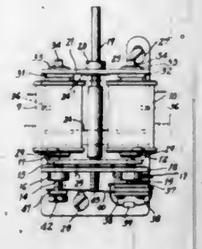


A coil assembly comprising a coil of wire completely enclosed in a continuous, unitary, thermoplastic envelope having a center bore, said coil being axial with said bore and separated from it by a wall of substantially uniform thickness, with the outer layer of turns of said coil being embedded in said envelope, said assembly being formed by winding a coil of wire on a preformed thermoplastic spool having a tubular central segment and a laterally extending end piece integral with each end of said tubular segment and extending radially beyond said coil, mounting said wound spool on a mandrel that fills the center opening, enclosing said wound spool in a mold cavity and injecting fluid thermoplastic of the same composition as said spool into said mold at a temperature high enough to fuse portions of said end pieces, cooling to the solidifying temperature of said thermoplastic and ejecting the resultant encapsulated coil assembly from the mold cavity.

3,043,995
BIPOLAR RECIPROCATING ALTERNATING CURRENT BELL MOTOR
Joseph L. Cassell, New York, N.Y., assignor to The Reeve Electrical Co., Inc., New York, N.Y., a corporation of New York
Filed Nov. 4, 1960, Ser. No. 67,258
3 Claims. (Cl. 317—172)

1. A bell motor comprising a bipolar electromagnet, an armature cooperable with the poles of said electro-

magnet and having projecting guide studs substantially in line with the poles of said electromagnet, a striker rod projecting from said armature between said guide studs, substantially frictionless parallel guides for said striker rod and guide studs providing straight line reciprocating guid-



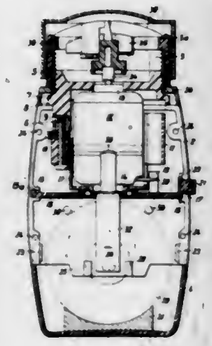
ing means for said armature and striker rod, a short flat permanent bar magnet in back of said electromagnet and having polar extensions at opposite ends of the same in magnetic connection with the poles of said electromagnet and a return spring mechanically connected with one of the guide studs of said reciprocating armature.

3,043,996

DRY SHAVER APPARATUS HAVING DIFFERENT POWER UNITS

Fritz Hartwig and Erwin Dahlke, Oldenburg, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany

Filed Jan. 23, 1959, Ser. No. 788,587
Claims priority, application Germany Jan. 23, 1958
8 Claims. (Cl. 318—17)



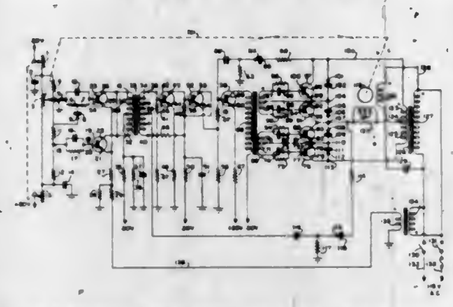
1. A casing body work unit comprising a pair of similar reversed casing halves with each of said halves having an inwardly extending ledge portion, an end plate closing one end of said casing body and having portions thereon extending into said casing body to contact one face of said ledge portions, said end plate adapted to position a shaving head of a dry shaver, a cup-shaped element within said casing body and having portions contacting the opposed faces of said casing half ledge portions, an electric motor mounted within said cup-shaped element and operatively connected to said shaving head, a pair of threaded fastening members passing through the respective corresponding portions of said casing halves, end plate, and cup-shaped element to secure said components together, and an end cap having a power supply unit therein for said motor detachably mounted on the other end of said casing body.

3,043,997

SURGE PROTECTED TRANSISTOR OPERATED SERVO SYSTEM

Charles E. Marshall, Port Washington, N.Y., assignor to Potter Instrument Co. Inc., Plainview, N.Y., a corporation of New York

Filed Feb. 9, 1960, Ser. No. 7,627
10 Claims. (Cl. 318—28)



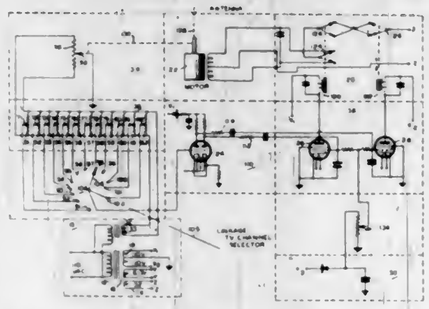
1. In a servo drive system, the combination comprising,
a reference source of electrical potential to produce a reference current,
a differential source of electrical potential for producing a differential current responsive to a variation of a controlled device from a predetermined position,
means for comparing a differential current with said reference current to produce an unbalance current when said variation of a controlled device from a predetermined position occurs, and
at least one power transistor connected to operate in a switching mode in response to said unbalance current to drive an A.C. servo motor coupled to said controlled device.

3,043,998

SELECTIVE REMOTE POSITION CONTROL SERVOSYSTEM

Lawrence M. Lunn, James L. Shields, and Jean C. De Vault, all of Linton, Ind.

Filed Oct. 3, 1960, Ser. No. 60,097
2 Claims. (Cl. 318—29)



1. A remote control antenna positioning system for a television receiver having a channel selector and a rotating television receiving antenna comprising an A.C. source of current supply, a bridge circuit having said A.C. source connected thereto, a first branch of said bridge circuit having a variable impedance element varied by the relative position of said receiving antenna, a second branch of said bridge circuit being preselectedly adjusted by the position of said channel selector of said receiver, phase sensitive means connected to the output of the bridge circuit and responsive to the unbalance of current in said bridge circuit, relay control means connected to the phase sensitive means for detecting the

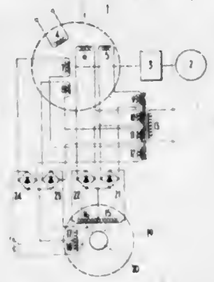
amount of unbalance of current in said bridge circuit, a motor connected to the relay control means for rotating said receiving antenna and adjusting the variable impedance element until the bridge circuit is rebalanced.

3,043,999

SUPPLY ARRANGEMENTS FOR SYNCHRONOUS ELECTRIC MOTORS

Sidney Thomas Anderson, Fawkham, Kent, England, assignor to The General Electric Company Limited, London, England

Filed Nov. 21, 1960, Ser. No. 70,660
Claims priority, application Great Britain Nov. 27, 1959
2 Claims. (Cl. 318—165)



1. A supply arrangement for a synchronous electric motor having stator and rotor components of which one component is provided with magnetic field system, and the other component has an even number, at least four, field windings equally spaced about the axis of rotation of the one component which is arranged to rotate, wherein (i) the said field windings are connected in series in pairs, (ii) a single-phase-input rotary induction regulator having symmetrical multi-phase output windings which are themselves split into two separate windings, the number of such output windings being at least equal to the number of said pairs of field windings, is connected with sources of separate reference voltages each in phase with the supply to the input of said regulator, the connections being such that the outputs from said split pairs of output windings respectively buck and boost their associated reference voltages, (iii) pairs of rectifying means are provided for rectifying the pairs of resultant voltages, each said rectifying means being connected to one of the windings of each said pair of field windings, and (iv) the interconnections between the said split phase windings and the pairs of field windings produce field conditions in the motor for synchronizing the position of the rotor component of the motor with that of the induction regulator.

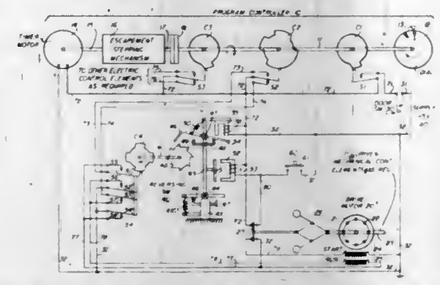
3,044,000

CONTROL CIRCUITS FOR HOME APPLIANCES OR THE LIKE

Nassouh H. Bahra, Mazra, Damascus, Syria, assignor to General Electric Company, a corporation of New York

Filed Oct. 24, 1957, Ser. No. 692,082
13 Claims. (Cl. 318—203)

1. In combination, a reversible electric drive motor, a line connectible to a source of electric power, a program controller having an off position and an on position and a plurality of control positions, manually operable means for operating said program controller from its off position into its on position, an electric timer motor operated from said line for operating said program controller step by step in a timed cycle from its on position through its plurality of control positions and back into its off position, a forward circuit for operating said drive motor in the forward direction from said line, a reverse circuit for operating said drive motor in the reverse direction from said line, means responsive to operation of said program controller into a first of its control positions for completing said forward circuit, means responsive to operation of said program controller into a second of its control positions for interrupting said forward circuit and for preparing said reverse circuit, a reversing switch to complete said prepared reverse circuit,



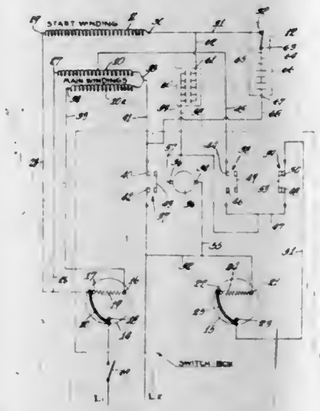
in the speed of forward operation of said motor following interruption of said forward circuit for operating said reversing switch to camplete said prepared reverse circuit, so that dynamic braking of forward operation of said motor is brought about and then reverse operation of said motor is effected.

3,044,001

MOTOR CONTROL CIRCUITS

Elmer A. Roller, Warren, Ohio, assignor to H. K. Porter Company, Inc., a corporation of Delaware

Filed Oct. 6, 1959, Ser. No. 844,763
4 Claims. (Cl. 318—221)



1. A control circuit for connecting a current consuming device to an electrical power system, comprising first and second control switches in said circuit, each having an electric heating element and a bimetallic contact-bridging member affected by its heating element, a relay coil and normally open and normally closed switches under control of said relay coil, said bimetallic members bridging their contacts to provide for flow of current in said system to energize the heating element of said first control switch and in a predetermined time deflect its bimetallic element to open its contacts and divert current flow to energize said relay coil and thereby change the positions of said normally open and closed switches and cause flow of operating current through said current consuming device, and the heating element of said second control switch being affected by an abnormal amount of current flow demanded by said current consuming device to provide sufficient heat to deflect its bimetallic member and interrupt current flow in said system.

3,044,002
MANUAL TO AUTOMATIC TRANSFER MOTOR CONTROL SYSTEM
Jean Charles Lejon, Paris, France, assignor to Societe dite Controle Bailey, Paris, France, a French company
Filed Mar. 11, 1959, Ser. No. 798,788
Claims priority, application France Mar. 15, 1958
7 Claims. (Cl. 318—446)



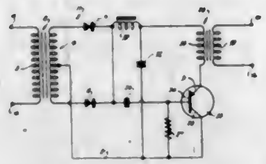
1. In a control system having at least two separate control mechanisms for controlling the positioning of a control element, the combination comprising, a transfer device operative between positions for transferring control of the control element between the two mechanisms, means responsive to coincidence of the outputs of the mechanisms for actuating said transfer device, means for initiating transfer of the controlling of the positioning of the control element from one control mechanism to the other and means made operable by operation of said last named means for effecting variation of the output of one of the mechanisms through a predetermined range to establish said coincidence to thereby effect operation of said last named means.

3,044,003
FREQUENCY TO SIMULATED SYNCHRO OUTPUT CONVERTER
Gus Stavis, Briarcliff Manor, N.Y., and Robert Grossman, Encino, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed Dec. 16, 1959, Ser. No. 860,042
14 Claims. (Cl. 321—3)
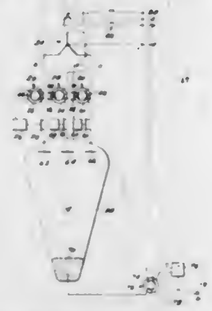


6. Signal conversion apparatus, comprising, a variable frequency source of alternating voltage, means for generating first, second and third alternating voltages of identical frequency displaced in phase from each other by one hundred and twenty degrees, the frequency of which voltages is a linear function of the frequency of said source, means including a delay line for generating a fourth alternating voltage of the same frequency as that of said first, second and third voltages the phase shift of which relative to any one of said first, second or third voltages is a linear function of the frequency of said source, three phase sensitive detector circuits each for generating a unidirectional voltage the magnitude of which varies sinusoidally in accordance with the difference in the phase angles of two alternating input voltages of the same frequency, means for applying said fourth voltage to all of said detector circuits, means for applying a different one of said first, second and third voltages to each of said detector circuits, whereby three unidirectional voltages are obtained, and means for converting said three unidirectional voltages to three alternating voltages of the same constant frequency, the magnitudes of said three alternating voltages being a linear function of the magnitudes of the respective unidirectional voltages.

3,044,004
FREQUENCY DOUBLING CIRCUIT
Jean Pierre Sicard, Palo Alto, Calif., assignor to Lenkurt Electric Co., Inc., San Carlos, Calif., a corporation of Delaware
Filed Apr. 22, 1959, Ser. No. 808,142
6 Claims. (Cl. 321—4)



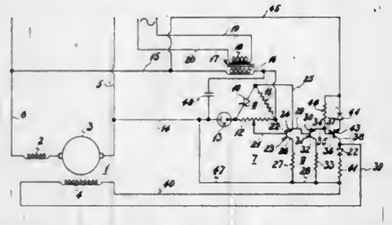
6. A frequency-doubling circuit comprising a full-wave rectifier including a transformer having a primary winding adapted to receive an alternating current input signal, a pair of diodes connected to opposite ends of a secondary winding of said transformer, and connected together to form a first rectifier terminal, and a connection to a center tap of said transformer secondary winding forming a second rectifier terminal; a transistor including at least an emitter, collector, and base; an output transformer including a primary winding inductively coupled to a secondary winding connected between a pair of output terminals; a capacitor connected in series with the primary winding of said output transformer between the emitter and collector elements of said transistor and across the output terminals of said rectifier for biasing said transistor; a resistor connected between the collector and base elements of said transistor; and a capacitor connected in series with said resistor between said rectifier output terminals for controlling transistor conduction in accordance with an alternating component of rectifier output voltage having twice the frequency of the input signal whereby said transistor conducts through said output transformer at twice the frequency of said input signal.

3,044,005
PROTECTION OF MERCURY ARC RECTIFIER
Otto Jensen, Malvern, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 18, 1957, Ser. No. 684,777
2 Claims. (Cl. 321—12)



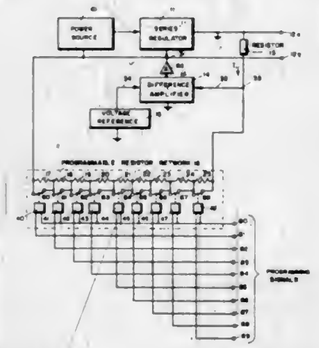
2. In a mercury arc rectifier comprising a plurality of anode leads connected to an A.-C. source, and a cathode lead connected to a D.-C. system, a plurality of saturable reactors and a plurality of high speed anode breakers having operating means associated therewith; one of each of said plurality of saturable reactors and one of each of said anode breakers being associated with a respective anode lead; each of said saturable reactors having an output winding connected in energizing relationship with respect to the operating means of the anode breaker associated with the same respective phase; each of said operating means being operable to operate its respective anode breaker to a disengaged position responsive to reversal of flux of its respective reactor, each of said reactors being of the highly saturable type; each of said reactors being constructed to remain unsaturated for a relatively long length of time after the current through said reactors reverses, each of said anode breakers and each of their respective saturable reactors being constructed to be operated to their disengaged position before the flux of its respective saturable reactor is fully reversed, said cathode lead having a step reactor and a cooperating circuit breaker associated therewith.

3,044,006
TRANSISTORIZED VOLTAGE REGULATOR
William Howard Barnard, Westwood, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 30, 1958, Ser. No. 783,919
3 Claims. (Cl. 322—28)



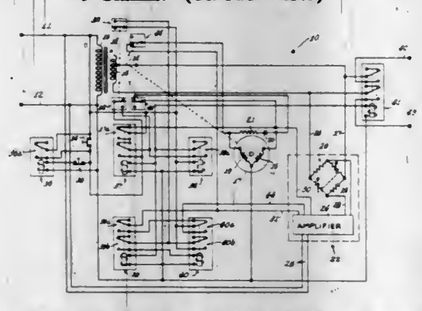
1. A voltage regulator for a D.C. generator having an excitation winding and an output winding comprising a reference bridge, circuit means connecting the input of said reference bridge to the output of said generator, said reference bridge being connected to provide an output inversely proportional to the input deviating from a predetermined value, a transistor circuit adapted to be driven to an "on" or "off" condition, means including an alternating current impressed on the input of said bridge to modulate the output thereof to control said transistor circuit, other circuit means connecting said transistor circuit for energization from said generator output, and means connecting the output of said transistor circuit across said excitation winding.

3,044,007
PROGRAMMABLE POWER SUPPLY
Robert C. Akers, Long Beach, Calif., assignor to North American Aviation, Inc.
Filed Apr. 10, 1958, Ser. No. 727,703
6 Claims. (Cl. 323—22)



1. In combination, a source of direct voltage having first and second output terminals; a third output terminal; a series regulator connected between said first and third output terminals and having an input electrode for controlling the impedance of said regulator; a difference amplifier having an output terminal coupled with said regulator input terminal, a common terminal connected to said third output terminal, and a pair of input terminals; a voltage reference connected between said third output terminal and one of said difference amplifier input terminals, a feedback resistor connected between the other of said difference amplifier input terminals and said third output terminal; and a resistor network programmable in response to digital input signals connected between said other difference amplifier input terminal and said second output terminal.

3,044,008
VOLTAGE REGULATOR
Robert D. Cooley, Litchfield, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed Oct. 13, 1958, Ser. No. 766,751
9 Claims. (Cl. 323—43.5)



1. A voltage regulator comprising an input connectible to a source of electrical energy, an output, an adjustable voltage means connected between the input and output for adjusting the output voltage, regulating means for sensing the deviation of the output voltage from a preselected value and operable to direct the voltage means to maintain the output voltage within a selected range of the value, and a control circuit for causing the output voltage to attain its preselected range only after it has been increased gradually from a minimum value, said circuit including means connected to the voltage means for normally energizing said voltage means to reduce the voltage therefrom, means for rendering said reducing energizing means inoperative when the regulating means controls the voltage means, and means for causing said rendering means to become ineffective upon a disruption of power from said source whereby upon a resumption of power the energizing means causes the voltage means to be energized to reduce its output voltage, said control circuit being connected to said input for obtaining electrical energy therefrom and including means connected between the input and output for opening the output whenever said reducing energizing means controls the voltage means.

3,044,009
VARIABLY COUPLED ROTARY TRANSFORMER WITH COMPENSATING CIRCUITS
Charles W. Lang, Pompton Plains, N.J., and Vincent V. Roberti, Norristown, Pa., assignors to General Precision, Inc., a corporation of Delaware
Filed Aug. 10, 1959, Ser. No. 832,633
11 Claims. (Cl. 323—53)

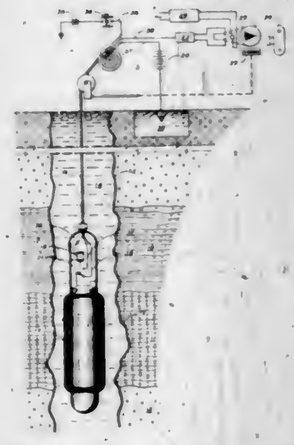
7. A rotary transformer-compensator unit adapted for use in a chain of units, said rotary transformer-compensator unit comprising a first rotary transformer including at least one rotor winding, at least one stator winding, and means for rotating said rotor winding through an angle with respect to said stator winding, said first rotary transformer having given physical characteristics, and a

compensator incorporated with the first rotary transformer, said compensator including a rotor winding and a stator winding, said rotor winding of said compensator being permanently oriented relative to said stator winding thereof to provide maximum coupling therebetween, said compensator having the same given physical characteristics as said first rotary transformer, and a second rotary transformer electrically connected to the first rotary transformer and the compensator, the first rotary transformer



and the compensator being adapted to transmit individual electrical signals to the second rotary transformer, the compensator incorporating into the signal transmitted by the first rotary transformer to the second rotary transformer, the transformation ratio and phase shift of the first rotary transformer, as a means of correcting the signal transmitted by the first rotary transformer to the second rotary transformer, said compensator being in close proximity to said first rotary transformer.

3,044,010
FORMATION LIQUID LOGGING
Stanley B. Jones, Whittier, and Robert J. S. Brown, Fullerton, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Aug. 29, 1955, Ser. No. 531,243
5 Claims. (Cl. 324—.5)



1. A method of determining the liquid content of an earth formation traversed by a well bore independently of irregularities in the diameter and shape of said well bore which comprises the steps of measuring the density of responsive protons of the drilling fluid employed in said well bore and independently of said well bore, then inducing a magnetic field in said well bore containing said fluid and the earth formation adjacent thereto whose liquid content is to be determined, interrupting said magnetic field to permit free precession of the responsive protons in both said drilling fluid and the liquid in said earth formation, detecting the total signal amplitude of said protonic precession at a specified time after interruption of said induced field, separately measuring the contribution to said total signal amplitude by protons in both said drilling fluid and in said formation liquids at a time after said induced field was interrupted, and recording the density of responsive protons in said formation liquids as a direct measurement of the liquid content of said formation, said density of responsive protons in said liquids being proportional to the ratio of said measured amplitude of the signal contributed by said formation liquids to said total signal amplitude, to the ratio of said measured amplitude of the signal contributed by said drilling fluid to said total signal to said measured density of responsive protons in said drilling fluid, without introduction of errors by protons in an unknown volume of drilling fluid contributing to said total signal due to said irregularities of the borehole wherein said measurements are made.

3,044,011
DEVICE FOR TESTING A SPARK IGNITION SYSTEM
Willie Charles Walker, 532 12th Ave., Tuscaloosa, Ala.
Filed July 2, 1956, Ser. No. 595,186
4 Claims. (Cl. 324—15)

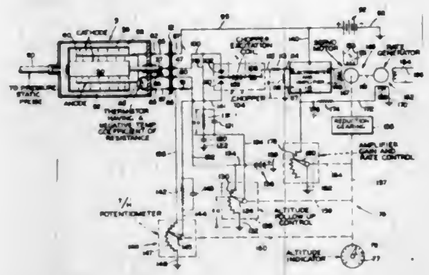


1. A device for testing the ignition system of an internal combustion engine comprising in combination: a standard shunt-type vibrator having a base with at least one unused terminal, the internal structure of which contains a vibratable reed alternately interrupting a first-contacted contact and a second-contacted contact, designated for convenience as the first and second contacts respectively, and a vibrator coil with only two connections, namely, an inside end and an outside end connected to the said first contact and reed respectively, thereby providing both energizing and interrupting means to the vibrator when external connection is made to said reed and first contact; a modification of said vibrator wherein the outside end of the vibrator coil has been moved from the reed to an unused terminal on its base, thus permitting a dropping resistor to be used externally to the vibrator; a suitable socket having test leads connected thereto into which said vibrator is plugged; a dropping resistor with shorting switch connected to socket terminals corresponding to the reed and the now occupied formerly unused terminal so as to enable said vibrator to be used on either a (6) six volt or (12) twelve volt system; a condenser, substantially equivalent to a distributor condenser, wired in series with a simple switch and this combination bridged across said test leads as means adapted to provide a test condenser; said test leads being connected to socket terminals corresponding to said reed and first contact, with their free ends terminating in clips, one of which is uninsulated and the other insulated.

3,044,012
ION AIR DENSITY SENSOR AND ALTITUDE INDICATOR CONTROL SYSTEM
George V. Zito, Northvale, and Edward A. Chilton, Jersey City, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,358
16 Claims. (Cl. 324—33)

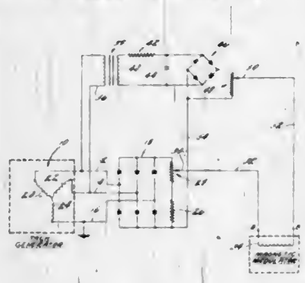
1. In an air density sensor device of a type including a casing, spaced anode and cathode elements mounted

within said casing for providing a sampling zone therebetween, means for supplying air under prevailing atmospheric pressure to within said casing and thereby to said sampling zone, means to ionize the air in the sampling zone, heating means to maintain the air in the sampling zone at a predetermined temperature value, and electrical means operatively connected to the anode and cathode elements so as to provide an output signal directly pro-



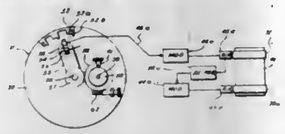
portional to said atmospheric pressure; the improvement comprising temperature responsive means mounted within said casing, and means operatively connecting said temperature responsive means to said electrical means to compensate said output signal for changes in the density of the air in the sampling zone due to a variation in the temperature thereof from said predetermined temperature value.

3,044,013
THREE-PHASE VOLTAGE RESPONSIVE SPEED SENSOR
William C. Peck, Hazardville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 6, 1959, Ser. No. 811,474
4 Claims. (Cl. 324—70)



1. A speed sensing circuit comprising a source of three-phase alternating input voltage having a frequency and amplitude which are a function of speed, a rectifier circuit connected with said input voltage for converting said input voltage into a first direct current signal which varies directly with speed, a step-up transformer connected with one phase of said three-phase input voltage, a resistor and capacitor connected in series with the output of said transformer, said capacitor having a capacitance which varies the reactance of said capacitor inversely with frequency in proportion to the variation in the amplitude of the input voltage as the frequency of said input voltage varies, the voltage across said capacitor thereby remaining substantially constant, a full-wave bridge rectifier for converting the voltage across said capacitor into a second direct current signal, and means for comparing said first signal and said second signal to thereby produce an output signal.

3,044,014
METHOD AND APPARATUS FOR COMPOSITING SEISMIC RECORDS
Louis W. Erath, Houston, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,882
8 Claims. (Cl. 324—77)



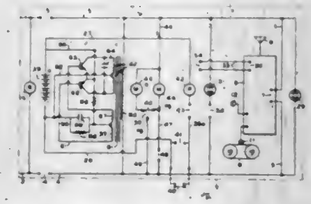
3. A method for testing for proper composition of two repetitive electrical signals of unknown characteristics wherein one of said signals has a time delay imposed thereon by an electronic system, said method comprising the steps of initiating an operating cycle of a recording device, said recording device including a record medium moving during said operating cycle at a constant velocity and a recorded operatively associated therewith to impress thereon a record trace the length of which is representative of time, generating a first transient electrical signal when a fixed point on the record medium has reached a first predetermined point in its path of movement, said first transient signal being a composite signal of multiple frequencies in predetermined phase relationship, transmitting said first transient signal to said recorded whereby an excursion in said trace representative thereof is recorded, initiating a second operating cycle of said recording device, detecting said trace and transducing said excursion into a playback electrical signal, passing said playback signal through said electronic system, generating a second transient signal when said fixed point on the record medium has reached a second predetermined point in the path of movement spaced from said first point a distance representative of said time delay, said second transient signal being of the same multiple frequencies in the same phase relationship as said first transient signal, mixing said playback signal and said second transient signal to form a composite signal, feeding said composite signal to said recorder, and aligning the recorded excursions of said composite signal and said first transient signal as a means to compare said excursions for proportionality.

8. Apparatus for testing for proper composition of two repetitive electrical signals of unknown characteristics wherein one of said signals has a time delay imposed thereon by an electronic system, comprising a recording device including a record drum rotatable at a constant velocity and a recorder, said recorder being operative when said record device is actuated to impress a longitudinal trace around said drum, the length of said trace being indicative of time, transient electrical signal generating means including first and second cooperating elements, said transient signal being generated by relative movement of said first and second elements through the same radial plane, said first element being secured to said drum for rotation therewith through the plane of said second element, and adjusting means for locating said second element in a predetermined angular disposition.

3,044,015
SYSTEM FOR TRANSMITTING A MESSAGE FROM A PROTECTED LOCATION BY RADIO TO A DISTANT RECEIVER
William A. Overkamp, Jr., 4068 Wilmington Ave., St. Louis 16, Mo., and Paul H. Kraus, 4349A Maryland Ave., and Ira Klingensmith, 4346 McPherson Ave., both of St. Louis 8, Mo.
Filed Apr. 28, 1960, Ser. No. 25,344
7 Claims. (Cl. 325—187)

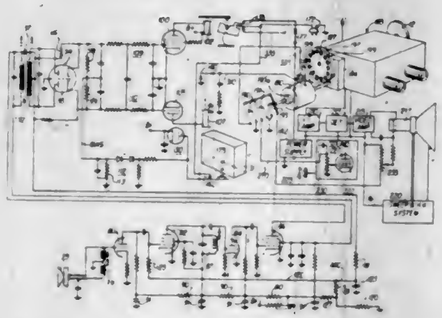
1. A system for transmitting a message from an enclosed protected location by radio to a distant receiver,

comprising, an enclosure in which are enclosed and protected a transmitter and means adapted to produce and deliver a message to said transmitter, a source of current having terminals within said enclosure, a motor within said enclosure and adapted to drive said message-producing means, switching means within said enclosure and connected to close and open the circuits from said terminals to said transmitter and to said motor, an electrically operated timer within said enclosure and connected to control the operation of said switching means, said enclosure being so constructed and arranged as to enclose and protect said source of current and its terminals, said



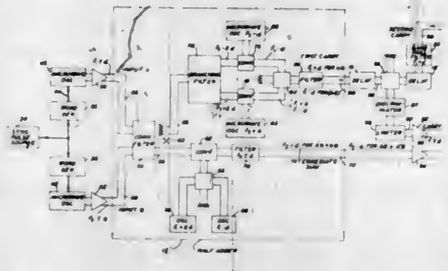
transmitter, said message producing means, said motor, said switching means, said timer, and their connections against access to and against tampering therewith by a burglar from outside of said enclosure, and an alarm switch accessible for operation from outside of said enclosure and connected to close the circuits of said switching means and of said timer, said timer operating upon closing of said alarm switch to cause said switching means to close the circuits of said transmitter and of said motor for a period sufficient to effect sending of the message, said timer operating at the termination of such period to open the circuits of said transmitter and of said motor.

3,044,016
REMOTE CONTROL SYSTEM
Henry Neil Frihart, La Grange, and James J. Krakora, Jr., Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed June 23, 1958, Ser. No. 743,792
4 Claims. (Cl. 325—392)



2. In a remote control system operating by means of signal energy radiated in space, a receiver for signal energy of two different frequencies, including means for receiving the signal energy in space to provide a signal, amplifier means for translating the signal, said amplifier means being subject to gain reduction by application of a control potential thereto, detector means coupled to said amplifier means to provide a first output voltage in response to the signal of one frequency and a second output voltage in response to a signal of the other frequency, means for applying said output voltages to said amplifier means as a gain control potential therefor, stepping switch means responsive to the first output voltage and having first, second and third contacts sequentially established upon operation thereof, control relay means responsive to the second output voltage and having a plurality of contacts, power supply means, motor drive means energizable in first and second modes for driving a control in opposite senses, circuit means intercoupling said first and third contacts of said stepping switch means and said power supply means and said motor drive means and contacts of said control relay means for energizing said motor drive means in the first mode in response to the second output voltage with said circuit means established by said stepping switch means, and further circuit means interconnecting said second contacts of said stepping switch means, and said power supply means and said motor drive means and further contacts of said control relay means for energizing said motor drive means in the second mode in response to the first output voltage with said further circuit means established by said stepping switch means.

3,044,017
MICROWAVE CARRIER LOGIC CIRCUITS
Willard D. Lewis, Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 31, 1956, Ser. No. 631,859
2 Claims. (Cl. 328—92)

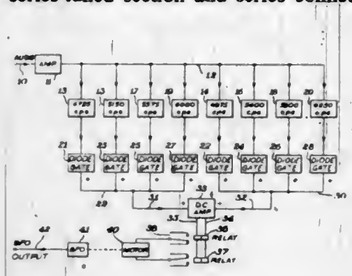


1. In a serial binary computer circuit, a microwave adder circuit having two signal input wave guides, one carry input wave guide, and sum and carry output wave guides, means for applying microwave energy to one of said input wave guides at two different frequencies to represent two types of binary signals, means including a wave guide circuit interconnecting the carry output wave guide and the carry input wave guide of said logic circuit for supplying microwave energy to said carry input wave guide at two different frequencies to represent two types of binary signals, said microwave adder circuit including signal conversion means responsive to the binary signals applied to said input wave guides for producing sum and carry binary signals of the frequency shift type at said sum and carry output wave guides.

3,044,018
FREQUENCY DRIFT DETECTION APPARATUS
John Orr Wilson, Ottawa, Ontario, Canada, assignor to Her Majesty the Queen in right of Canada, as represented by the Minister of National Defence
Filed Jan. 21, 1959, Ser. No. 788,228
1 Claim. (Cl. 328—141)

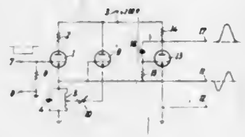
Apparatus for detecting and correcting frequency drift of a narrow band signal which is shifted in frequency to any one of four predetermined frequencies in a double frequency shift system, said apparatus comprising four dual series-tuned frequency discriminators, one of the frequency discriminators being centred over each predetermined frequency by having a lower series-tuned section tuned to a frequency lower than said predetermined frequency and a higher series-tuned section tuned to a frequency higher than said predetermined frequency, a common input connection for said signal to all the series-tuned sections of all the frequency discriminators,

a diode gate associated with each said lower series-tuned section and series connected between the output of the associated said lower series-tuned section and a first load common to all the diode gates associated with said lower series-tuned section, a diode gate associated with each said higher series-tuned section and series connected between



the output of the associated said higher series-tuned section and a second load common to all the diode gates associated with said higher series-tuned sections, and means for adjusting the frequency of said signal in response to differences in loading of the first and second common loads.

3,044,019
QUADRATURE WAVE GENERATOR
Konrad Dinter, Konstanz (Bodensee), Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Jan. 11, 1960, Ser. No. 1,663
Claims priority, application Germany Jan. 15, 1959
4 Claims. (Cl. 328—223)



1. An electrical circuit for producing at least two substantially sinusoidal voltages mutually out of phase by 90° for the duration of each of a series of predetermined input trigger pulses, said circuit comprising:

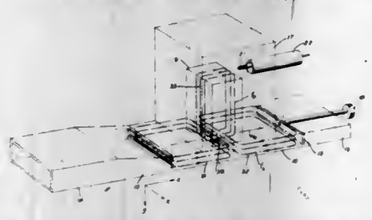
(*a*) a source of power;
(*b*) a normally conductive electronic switching means;
(*c*) a parallel resonant circuit including a shunted inductance in the form of a transformer having primary and secondary windings and a tuning capacitor connected across said secondary winding, said resonant circuit being arranged in series with said switching means across said source to store electric energy in said inductance with said primary winding being connected to said switching means;
(*d*) a regenerative feedback circuit arranged across said resonant circuit and connected to said primary winding thereof;
(*e*) means connected with said switching means for applying thereto a pulse, thereby to render said switching means nonconductive;
(*f*) a first output terminal connected to said resonant circuit;
(*g*) feedback integrating circuit means connected to said first output terminal;
(*h*) means for connecting said secondary winding to said feedback integrating circuit means;
(*i*) a second output terminal; and
(*j*) means for connecting the output of said feedback integrating circuit means to said second terminal.

3,044,020
FREQUENCY OR PHASE SHIFT DEMODULATOR
James E. Russell, Irving, Tex., assignor to Vector Manufacturing Co., Inc., a corporation of Pennsylvania
Filed July 7, 1959, Ser. No. 825,586
16 Claims. (Cl. 329—103)



1. In a frequency modulating carrier detector, a limiter circuit for clipping the signal to produce a substantially square wave output of the same frequency thereof, a variable frequency master oscillator producing a pair of like frequency standard signals of opposite phase with one of said standard signals being advanced substantially 90 degrees in phase with respect to the signal and with the other being retarded substantially 90 degrees in phase with respect to the signal, first and second gate circuits both responsive to said clipped signal with each being energized by a different one of said standard signals each thereby producing an output proportional to different half cycles of said clipped signal, means responsive to the output of both gate circuits for inverting one of said outputs and combining the inverted output with the other output to produce an alternating signal, and means for integrating said alternating signal to detect the modulating signal.

3,044,021
GYROMAGNETIC AMPLIFIER WITH PARALLEL PUMPING
Kenneth M. Poole, New Providence, Ping K. Tien, Chatham Township, Morris County, and Jerald A. Weiss, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 19, 1960, Ser. No. 31,248
6 Claims. (Cl. 330—56)



6. A high frequency signal amplifier comprising a plurality of electromagnetic field supporting structures supportive of mutually orthogonal magnetic field components at a pumping frequency f_p and at a signal frequency f_s lower than said pumping frequency, an element of gyromagnetic material electromagnetically coupled to said mutually orthogonal field components in said structures, means for magnetically biasing said element solely in a direction parallel to the magnetic field components of said pumping frequency, means for introducing into one of said structures a signal at said signal frequency, and means for withdrawing amplified wave energy from said amplifier.

3,044,022
SYSTEM FOR WIDE-BAND NEUTRALIZATION
Ben H. Tongue, West Orange, N.J., assignor to Blonder-Tongue Electronics, Newark, N.J., a corporation of New Jersey
Filed Dec. 19, 1960, Ser. No. 76,680
9 Claims. (Cl. 330—78)

1. In a wide frequency band amplifier system having relay means provided with input and output circuits shar-

ing a common terminal and in which a feedback current is produced through the relay between the input and output circuits that is to be neutralized by an oppositely phased compensatory current in a neutralizing circuit connected external to the common terminal between the input and output circuits, the neutralizing circuit comprising a phase-reversing impedance element connected in series with first capacitance, whereby the compensatory current is of increasing value as a function of increasing frequency insufficient to neutralize the said feedback current at the lower frequencies of the band, but sufficient for substantial neutralization at a single narrow region intermediate the band; the improvement of second capac-



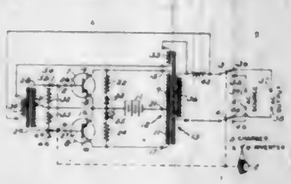
itance connected between an intermediate point of the said impedance element and the common terminal, the second capacitance having a value sufficient to provide a decreasing compensatory current as a function of increasing frequency at the said lower frequencies of value in excess of that required for neutralization in order substantially to widen the said narrow region into a broad region intermediate the band over which sufficient compensatory current for substantial neutralization is achieved, the said first and second capacitance being adjusted to make the value of the compensatory current over the said broad region coincide substantially with the value of the feedback current over the said widened region.

3,044,023

TRANSISTOR INVERTER-BATTERY CHARGER

James Kermit Floyd, Euclid, Ohio, assignor to The Electric Storage Battery Company, a corporation of New Jersey

Filed July 1, 1959, Ser. No. 824,400
5 Claims. (Cl. 331—59)



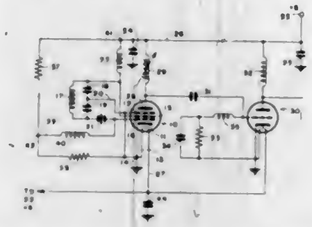
1. A transistor inverter for converting a direct current to an alternating current comprising a pair of transistors each having an input circuit and an output circuit, a source of direct current, a first transformer having a feedback winding, a center-tapped winding and an output winding adapted to be connected to a load, said transistors having their output circuits connected in push-pull relationship through said direct current source to said center-tapped winding on said first transformer, a pair of diodes, each of said diodes being connected across the output circuit of separate ones of said transistors and poled to provide a low impedance path in the inverse direction of transistor current flow, a second transformer having a primary winding coupled to the feedback winding on said first transformer and a center-tapped secondary winding connected to the input circuits of said transistors, said second transformer being adapted to saturate before said first transformer, and a resistor connected to the output winding of said first transformer, said resistor being connected in series with the feedback winding on said first transformer and the primary winding of said second transformer.

3,044,024

ELECTRONIC OSCILLATOR WITH SATURATION BIAS FOR STARTING AND GRID CURRENT BIAS FOR RUNNING

James C. Midkiff, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Feb. 19, 1960, Ser. No. 9,938
3 Claims. (Cl. 331—62)



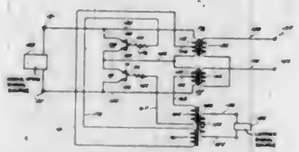
1. An electron-coupled oscillator comprising a vacuum tube having a grounded cathode and inner control grid and plate and screen grid electrodes, a Colpitts-arranged tank circuit comprising the parallel combination of an inductance and voltage-dividing capacitors between said screen grid and said control grid, said combination having an end terminal connected to the screen grid and an end terminal in circuit with the control grid, means including a source of positive potential and a radio-frequency choke for supplying space current to said screen grid, a piezoelectric control crystal for coupling said combination to said control grid to provide frequency stabilization, a voltage-dividing resistor network connected between the high potential side of said choke and said cathode, and a direct current connection from said network to said control grid to impose thereon a starting bias which is opposed by the bias produced by grid-current rectification as the oscillator assumes running conditions, said connection including a radio-frequency choke, the oscillator starting at high transconductance and running in a manner analogous to a Class-C amplifier.

3,044,025

TRANSISTORIZED MODULATOR-DEMODULATOR

Porter T. McCauley, 90 High St., Winnetka, Ill.

Filed July 13, 1959, Ser. No. 826,546
4 Claims. (Cl. 332—52)



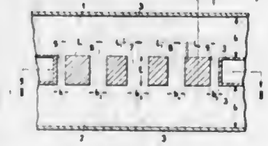
1. An amplitude modulation system for producing a modulated wave comprising a pair of semi-conductor bodies each including a base electrode, a first electrode and a second electrode in contact with said body, a pair of transformers, each including a center-tapped primary winding and a secondary winding, a first input terminal, means connecting said first input terminal to said first electrode of one of said semi-conductor bodies and to one end of one of said primary windings, a second input terminal, means connecting said second input terminal to said second electrode of said other of said pair of semiconductor bodies and to one end of the other of said primary windings, conductor means connecting said second electrode of said one of said semi-conductor bodies to said first electrode of said other of said semi-conductor bodies, conductor means connecting said last- mentioned means to the other ends of each of said primary windings, a third transformer having a pair of secondary windings and a primary winding, each of said secondary windings of said third transformer being connected between the base electrode of one of said semi-conducting bodies and the center tap of a corresponding one of said pair of transformers, conductor means connected to said primary winding of said third transformer for applying thereto a carrier wave, means for connecting said secondary windings of said pair of transformers in series opposing relationship, and output terminal means connected to the free ends of said secondary windings of said pair of transformers to receive therefrom said modulated wave.

3,044,026

TRANSMISSION LINE COUPLING ARRANGEMENTS

Kenneth Guy Patterson, Ealing, London, England, assignor to The General Electric Company Limited, London, England

Filed May 26, 1959, Ser. No. 815,833
Claims priority, application Great Britain May 28, 1958
5 Claims. (Cl. 333—10)



1. A transmission line coupling arrangement of the kind specified in which there are n coupling sections between two transmission lines, n being greater than two, wherein the coupling sections are in series connection with the two transmission lines and the characteristic impedance of each coupling section is approximately proportional to

$$\sin (2r-1)\frac{\pi}{2n}$$

where r is the number of the coupling section counted from one end of the arrangement.

3,044,027

RADIO FREQUENCY LOAD

David D. Chin, San Francisco, Richard F. Lazzarini, San Jose, and Arthur A. Goldfinger, Palo Alto, Calif., assignors to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California

Filed Dec. 30, 1958, Ser. No. 783,868
11 Claims. (Cl. 333—22)



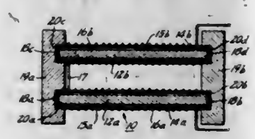
1. A radio frequency load comprising a coaxial transmission line section having relatively movable inner and outer conductors, means carried at one end of said section for connecting the load to an associated coaxial transmission line system, a hollow tapered dielectric member having substantially coaxial interior and exterior conical surfaces, said member carried parallel within said section between the outer and inner conductors with the small end extending towards the associated coaxial transmission line system and being movable with said inner conductor relative to the outer conductor, means forming a fluid-tight seal between the outer conductor and the enlarged end of the dielectric member, means forming a fluid-tight seal between the small end of said member and the inner conductor, an end plate secured to the other end of said coaxial transmission section, said plate and dielectric member serving to form a tapered fluid-tight chamber, means for supplying a fluid into said chamber near the small end thereof, and means for removing said fluid from the large end of said chamber.

3,044,028

MAGNETIC CIRCUIT ELEMENT TRANSDUCER

Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut

Filed Apr. 23, 1958, Ser. No. 730,373
5 Claims. (Cl. 333—71)



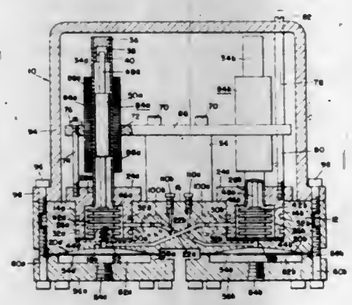
1. An impedance element comprising a pair of linear members of magnetostrictive material, separate casing means for each member, each casing means having substantially completely closed sides and ends within which its respective linear member is completely received in clearance relationship therewith both at the sides and ends thereof, resilient means operatively connected between the ends of each of said casing means and the corresponding ends of their respective linear members, said resilient means constituting the sole operative supports for said linear members within their respective casing means, windings carried by said casing means electrically connected to one another in aiding relation, and disposed about the linear members respectively received therewithin but spaced therefrom, and magnetic connecting means operatively connected between corresponding ends of one casing means and the other, thereby to form a substantially closed magnetic circuit with said linear members, said linear members having different resonant frequencies of vibration.

3,044,029

TRANSDUCER

William B. Pegram, Swarthmore, Pa., assignor to International Resistance Company, Philadelphia, Pa.

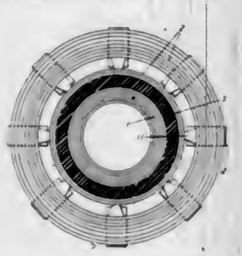
Filed Jan. 12, 1961, Ser. No. 82,294
17 Claims. (Cl. 336—30)



1. A pressure transducer comprising a pair of parallel armature cores of a magnetic material, a separate differential transformer around each of said armature cores, each of said transformers including a primary winding and a pair of secondary windings, the secondary windings of each of said transformers being electrically connected in bucking series relation, the secondary windings of one of said transformers being electrically connected to the secondary windings of the other transformer in

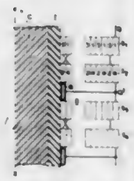
bucking series relation, the primary windings of said transformers being electrically connected in parallel, a separate pressure responsive means connected to an end of each of said armature cores and adapted to move said cores axially within said transformers upon a change in pressure applied thereto, means for applying a pressure to be measured to at least one of said pressure responsive means, and means connecting said pressure responsive means so that a change in the pressure being measured is applied to both of said pressure responsive means to move said armature cores in opposite directions.

3,044,030
INDUCTIVE WINDINGS
Geoffrey Hall, Failsworth, Manchester, and Keith Russell Highton, Chadderton, England, assignors to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain
Filed Nov. 24, 1959, Ser. No. 855,210
Claims priority, application Great Britain Dec. 5, 1958
1 Claim. (Cl. 336—60)



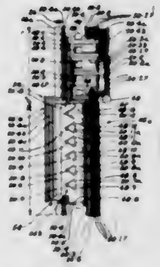
An inductive winding including a plurality of groups of turns, each group comprising, on a common axis, a helically wound section having a plurality of layers, and a plurality of axially spaced spirally wound sections surrounding said helically wound section, the radially inner turn of each spirally wound section being spaced radially from the outermost layer of said helically wound section, the spaces between the inner turns of said spirally wound sections and the outermost layer of said helically wound section forming an axial duct within the winding, the last turn of the outermost layer of the helically wound section of each group being electrically connected to the radially inner turn of the first spirally wound section of the same group, and the radially inner turn of the last spirally wound section of said group being electrically connected to the first turn of the innermost layer of the helically wound section of the next group, whereby the helically wound sections and spirally wound sections of all of said groups are electrically connected in series with one another to form a continuous winding.

3,044,031
INSULATION OF HIGH VOLTAGE TRANSFORMERS
George Fletcher Stearn, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Jan. 2, 1959, Ser. No. 784,728
1 Claim. (Cl. 336—70)



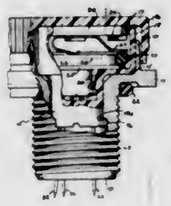
A transformer comprising a substantially linear axially-aligned equipotential surface at low potential, solid insulation means surrounding said surface, a plurality of disc coils surrounding said insulation means, said disc coils being wound in a plurality of groups, each group containing at least two layers and said groups being spaced apart axially of the surface to provide cooling ducts therebetween, and means to increase the uniformity of the electrical stress field in said insulation means comprising an insulated metal conductor ring surrounding said insulation means and positioned between axially-spaced layers of adjacent groups of disc coils and means to maintain the ring at a potential substantially equal to the mean of the potentials of the disc coils of said axially-spaced layers.

3,044,032
CONTACTING TYPE DRUM TUNER FOR HIGH RADIO FREQUENCIES
Francis G. Mason, Weston, Conn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois
Filed Sept. 11, 1958, Ser. No. 760,376
8 Claims. (Cl. 336—142)



1. In a tuner, the combination comprising an electrically insulating cylinder, means rotatably suporting said cylinder, a coil mounted on and extending around said cylinder, a plurality of taps connected to said coil and spaced in a peripheral row around said cylinder, a ring electrode extending around said cylinder parallel to the row of taps, a first contact engageable with said ring electrode, said ring electrode being connected to one end of said coil, and a second contact engageable with said taps in succession, said coil having turn elements extending between the successive taps, some of said turn elements being disposed on said cylinder in the space between said ring electrode and said taps, other of said turn elements extending around said cylinder on the side of said row remote from said ring electrode, certain of said turn elements including spiral coil portions extending around said taps, certain of said turn elements extending in one direction around said cylinder while other of said turn elements extend in the opposite direction therearound.

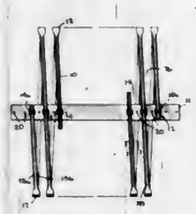
3,044,033
ELECTRICAL CONTROL DEVICE
George J. Mucher, Rochester, N.H., assignor to Clarostat Mfg. Co., Inc., Dover, N.H., a corporation of New York
Filed Dec. 8, 1960, Ser. No. 74,711
9 Claims. (Cl. 338—163)



1. An electrical control device including in combination a mounting, a molding supported by said mounting,

a collector ring supported by said molding, a resistance coil supported by said molding, a cylindrical wall portion of said molding formed of a resilient material, a second cylindrical wall portion of said mounting formed of a rigid material and providing an external backing for said first cylindrical wall, an extreme portion of said first cylindrical wall unsupported by said second cylindrical wall, an inwardly projecting circumferential bead on said extreme portion, a circular cover for said device, a circular bearing portion of said cover extending downwardly therefrom and terminating above said molding, an outwardly facing circular groove of said cover formed to receive said inwardly projecting bead, said bead and said circular groove forming the sole bearing support for said cover, and a contact arm rigidly fastened to said cover whereby rotation of the cover with respect to the mounting will cause the contact arm to sweep the collector ring and resistance coil.

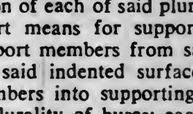
3,044,034
RIBBON TYPE RESISTOR
Robert Vradenburgh, Yonkers, N.Y., Arthur Clayton Scribner, Rowayton, Conn., and Frank H. Haven, Bronxville, N.Y., assignors to Ward Leonard Electric Co., Mount Vernon, N.Y., a corporation of New York
Filed Dec. 21, 1960, Ser. No. 77,459
8 Claims. (Cl. 338—284)



1. A resistor of the ribbon type comprising a mounting strip having surfaces on opposite sides, a plurality of clamps each having spaced parallel sides extending normal to the strip and an inverted U-shaped member having a center panel with side portions, said center panel positioned between said sides and said side portions connecting said center panel with said sides to space said panel from said strip to form a forced circulation passage between said center panel and said strip, fastening means extending through said center panel and said strip from one side to the other to forcefully draw said sides against said insulating strip to prevent twisting of said clamp, a resistor ribbon formed in a plurality of aligned loops with parallel first sections fastened to said clamping means in planar alignment, curved parts successively connecting sections on alternate sides to form a continuous resistive ribbon, said sections comprising an intermediate longitudinally extending member and two sides extending generally normal to said member from opposite longitudinal edges, said sides having longitudinally extending channels cooperating with the channel formed by said sides and intermediate member to stiffly retain said sections in spaced relation to adjacent sections under conditions of forced circulation and vibration.

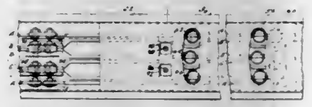
3,044,035
CONTINUOUS ELECTRICAL CONNECTION
Thomas C. Adams, Jr., 2416 Santa Cruz, Dallas 27, Tex.
Filed Feb. 10, 1958, Ser. No. 714,202
3 Claims. (Cl. 339—21)

1. An electrical connector assembly comprising:
(*a*) a continuous socket member including a plurality of cavities extending longitudinally in said member,
(*b*) a ridge forming conductor wire embedded in a wall of each of said cavities and extending throughout the length of said cavities in parallel relation thereto,
(*c*) a plug member having at least two prongs aligned with two of said cavities and engaged with said cavities and associated conductor wires simultaneously,



(*d*) and a relatively short guide attached to and rigid with said plug for engaging one of said cavities and relatively long rigid alignors outlining said prongs individually for jointly assuming any twisting load that is applied upon said plug member relative to said socket member that would normally be assumed by said prongs.

3,044,036
BUS SUPPORT MEANS FOR LOW REACTANCE BUS DUCT
John A. Herrmann, Grosse Pointe Farms, Mich., assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 12, 1957, Ser. No. 695,636
7 Claims. (Cl. 339—22)

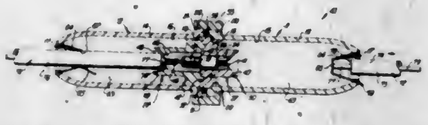


1. In a low reactance bus duct unit comprising an elongated housing means, a first and second bus for each phase of a three phase source, said buses being positioned within said housing means in a ladder type arrangement, said buses being paired off with buses of different phases to give a low reactance system, a plurality of pairs of bus support members, each bus support member of each pair of bus support members being positioned opposite one another and on opposite sides of said plurality of buses, each of said pairs of bus support members being displaced from one another in the direction of the bus run; each of said bus support members having indentations in their surfaces facing said plurality of buses for receiving a portion of each of said plurality of buses; and respective support means for supporting each of said pairs of bus support members from said housing means and for forcing said indented surface portions of said bus support members into supporting relationship with respect to said plurality of buses; each of said supporting means comprising at least one bolt member passing through one side of said housing means and connecting each of said bus support members; each of said bolt members terminating before engagement with another side of said housing means opposite said one side; said housing means comprising a first U-shaped member and a second U-shaped member whose arms extend toward the arms of said first U-shaped member and are spaced therefrom; said one side comprising the web of the first U-shaped member and said another side comprising the web of the second U-shaped member; filler plates connecting each of the U-arms of the first U-shaped member to the U-arms of the second U-shaped member; said first and said second buses of each phase being spaced apart by a distance less than the spacing between buses of adjacent phases; said first buses having laterally offset portions located adjacent ones of said pairs of bus support members to permit connection of said second buses of each phase with plug-in equipment.

3,044,037
HIGH VOLTAGE DISCONNECT SPLICE HEAD

Herbert G. Honig, 4339 San Rafael Ave., Los Angeles, Calif.

Filed May 27, 1960, Ser. No. 32,249
3 Claims. (Cl. 339—89)

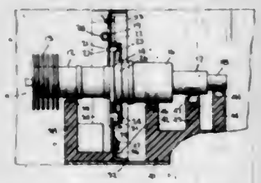


1. In a high voltage electric cable splice head, the combination of: two subheads having two interfitting conductive connection means adapted for temporary electric connection with each other, each subhead having a relatively thin-walled elongated shell in one end of which one of said connection means is mounted; means for temporarily uniting said shells with said two connection means in electric connection with each other, and with said shell ends, aforesaid, in abutting end-to-end sealed relation, said shells having openings at their other ends for admitting cable ends to be spliced into said shells, said cable including a central metallic conductor surrounded by an insulating sheathing, said conductor extending beyond said sheathing a short distance at said cable ends; tapped axial metal sockets provided respectively on said two connection means, said sockets being of a harder metal than said conductors so as to cut threads in the latter and electrically connect said cable ends to said respective connection means when said cable ends are extended axially through said shell outer end openings into said sockets and rotated; bodies of fluid dielectric material substantially filling the space in said shells between said sockets and said shell outer end opening so as to submerge said sockets therein to a substantial depth, the composition of said material causing any portions thereof which are exposed to oxygen to quickly harden to form a seal, said seal protecting unexposed portions of said material from such exposure; and a substantial but rupturable cover embodied with each of said shells for closing said outer end opening thereof to thereby confine said material in said shell pending use of said splice head in the field, said cable ends, in said field use, being pushed through said covers to form holes therein admitting said cable ends, the latter then being screwed into said sockets, and fluid dielectric material displaced by said cable ends being expelled through said holes, hardens quickly by oxidation thereby sealing the space around said cable ends in said holes.

3,044,038
TUBE SOCKET

Alvero C. Gregson, Garden City, N.Y., assignor to Instruments For Industry, Inc., Hicksville, N.Y., a corporation of New York

Filed Apr. 13, 1960, Ser. No. 22,052
2 Claims. (Cl. 339—91)

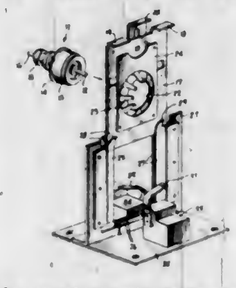


1. A socket for an electron discharge device having at least one electrode terminal in the form of an outwardly extending metal flange, said socket comprising: a metal member having an aperture therein; a spring contact member attached to said metal member adjacent to and overlapping said aperture to bear firmly against one side of said flange; a resilient snap-fastening member attached to the opposite side of said plate and overlapping said flange to hold said electron discharge device in operative position against said spring contact member; and a U-shaped holder for said metal member, said U-shaped holder comprising a pair of resilient slide channels to hold the opposite edges of said metal member in firm contact.

3,044,039
SOCKET

Alvero C. Gregson, Garden City, N.Y., assignor to Instruments for Industry, Inc., Hicksville, N.Y., a corporation of New York

Continuation of application Ser. No. 22,057, Apr. 13, 1960, which is a continuation of application Ser. No. 799,629, Mar. 16, 1959. This application Apr. 17, 1961, Ser. No. 104,202
12 Claims. (Cl. 339—91)



1. A socket for an electronic device having a plurality of longitudinally spaced terminals, one of said terminals having a portion extending laterally outward a greater distance than the other terminals, said socket comprising a plate having an opening large enough to permit a portion of said device to pass through but smaller than the portion of said one terminal whereby the peripheral portion of said one terminal is held by said plate, a plurality of resilient contact members attached around the opening in said plate and bearing resiliently upon said one terminal to make connection therewith, a frame having an opening thereon, spring clamping means attached to said frame to grasp an edge of said plate, said plate being slidable in said clamping means, and said plate with said electronic device cooperating substantially to fill the opening in said frame.

3,044,040
FEMALE CONNECTOR

Billy Erik Olsson, Chicago, Ill., assignor to Malco Manufacturing Company, Chicago, Ill., a partnership

Filed July 15, 1959, Ser. No. 827,212
8 Claims. (Cl. 339—273)

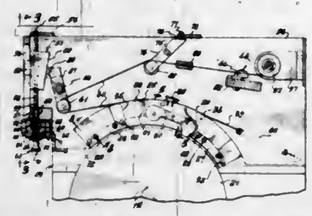


1. An electrical connector adapted to receive a wire-eye terminal, said connector comprising a generally plane floor having first and second sections, said first section being provided with an upraised, generally inclined portion, which is uncovered, stop means upwardly extending from said floor and spaced from said inclined portion to permit disposition of the extreme end of said wire-eye terminal therebetween, and means extending upwardly from said floor to overlie said second section of the floor only and to coact with said wire-eye terminal, said floor means, inclined portion, stop means, and overlie means co-operating to deform and hold said wire-eye terminal in said connector.

3,044,041
MULTI-CHANNEL RECORDING APPARATUS

Henry Salvatori, Los Angeles, and Melvin J. Wells and Hardy Glenn, Torrance, Calif., assignors to Western Geophysical Company of America, Los Angeles, Calif., a corporation of Delaware

Filed May 15, 1957, Ser. No. 659,434
8 Claims. (Cl. 340—15)

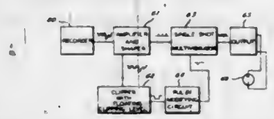


4. In a multi-channel magnetic recording apparatus for reproducing from a moving magnetic recording medium having a plurality of channels in fixed relationship thereon, which apparatus includes a plurality of reproducing heads each of which is mounted for relative movement in a respective one of the channels for reproduction of time-varying signals on the recording medium, means adapted for continuously varying the relative time-scale position of each of said heads during the movement of said medium, which position is a function of the time relationship of the signals received by the respective head comprising: a rigid lever arm pivotable about an axis, cam means operatively connected to said lever arm for imparting predetermined pivotal movement to said lever arm, a plurality of linkages each between a respective one of said heads and a point on said lever arm for transmission of movement to said heads in response to pivotal movement of said lever arm, each of said linkages being adapted to be positioned at a predetermined linkage point on said lever arm, each of said linkage points being at a predeterminable substantially constant distance from said axis, which distances are determined by a non-linear mathemetical function of said time relationship of said signals received by said respective heads whereby each of said heads is movable in the respective channel in response to pivotal movement of said lever arm, the rate of movement of said head being substantially in proportion to said predeterminable distance.

3,044,042
APPARATUS FOR GENERATING AND EMPLOYING TIME PULSES

Louis W. Erath, Paul E. Madeley, and Friedrich W. Hefer, Harris County, Tex., assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Apr. 6, 1956, Ser. No. 576,652
4 Claims. (Cl. 340—15.5)



1. Apparatus for generating a timing sequence of pulses having every *n*th pulse distinguished from the remaining pulses comprising a source of a train of equally time-spaced pulses of voltage, means for selecting every *n*th one of said pulses, and a single shot multivibrator having a pair of tubes each including a plate, cathode, and grid and having plate-cathode and grid-cathode circuits, said train of pulses being supplied in one polarity to the grid-cathode circuit of one tube, said selected pulses being supplied in the opposite polarity to the grid-cathode circuit of the other tube, and said timing sequence of pulses being supplied by the plate-cathode circuit of said other tube.

3,044,043
VEHICLE SIGNALLING APPARATUS FOR WARNING OF APPROACHING ROAD CONDITIONS

Frank S. Wendt, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 21, 1958, Ser. No. 749,983
9 Claims. (Cl. 340—32)

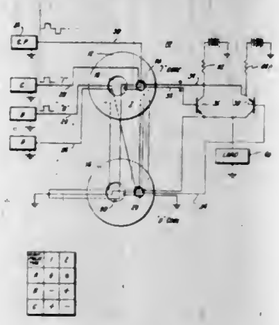


3. An indicating system for use on an automotive vehicle which travels over the surface of a roadway, said system comprising the combination of a roadway surface having groups of signal sources incorporated therewith, each of said groups comprising predetermined numbers of signal sources, said predetermined numbers being respective coded representations of particular approaching road conditions, a pickup mounted on said vehicle in proximity to said surface, said pickup being responsive to said signal sources to develop a signal whenever said vehicle passes over said signal sources, and indicating means responsive to the signal from said pickup, the indicating means including a relay operative in steps in response to the signal to indicate corresponding approaching road conditions.

3,044,044
MAGNETIC TOGGLE

Edwin S. Lee III, San Gabriel, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Sept. 8, 1959, Ser. No. 838,463
7 Claims. (Cl. 340—174)



1. A magnetic device comprising a plurality of magnetic storage elements each having a core characterized by a substantially square hysteresis loop, each of said cores having a relatively large input aperture and a relatively small output aperture spaced from said large aperture and arranged on said cores to define at least a pair of flux paths about each of said apertures of substantially different length to thereby define three distinct stable magnetic states, a first input winding coupled to one of said cores through said larger aperture and to the other core by means of both apertures, whereby the one of said cores is blocked and the other core is unblocked upon the energization of the first input winding, a second input winding magnetically coupled to the one core through both of said apertures and to the said other core through the larger of said apertures whereby the

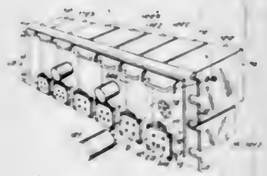
other of said cores is blocked and the one core is unblocked upon the energization of the second input winding, means for delivering binary coded information signals to the first and second input windings to be stored in one of the cores, a drive winding coupled to each of said cores through both of the apertures therefor to control the direction of the flux around the smaller aperture, a signal source capable of delivering bi-directional signals to said drive winding in a timed relationship with the delivery of said information signals, and an output winding means coupled to each of said cores through the smaller apertures to provide bi-directional output signals from one of said cores.

3,044,045
TRANSDUCING METHOD AND SYSTEM
Robert F. Kemp, Redondo Beach, Calif., assignor, by mesne assignments, to Space Technology Laboratories, Inc., El Segundo, Calif., a corporation of Delaware
Filed Jan. 2, 1958, Ser. No. 706,694
12 Claims. (Cl. 340—174.1)



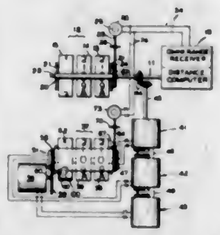
1. A system for presenting low repetition rate phenomena as a continuous visual display comprising: magnetic tape recording means connected to record on magnetic tape signals representative of successive presentations of said phenomena; magnetic tape playback means connected to receive said magnetic tape from said recording means and to continually, concurrently and repeatedly play back tape portions of a predetermined length, each length being sufficient to play back more than one fully presentation of said phenomena; a cathode ray oscilloscope coupled to said playback means for receipt of played back signals therefrom; and gating means connected between said playback means and said oscilloscope to synchronize said oscilloscope with portions of the played back signals representative of full presentations of said phenomena only.

3,044,046
TELEMETERING SYSTEM
Warren J. Dornhoefer, Groton, Mass., assignor to The Warren Manufacturing Company, Inc., Littleton, Mass., a corporation of Massachusetts
Filed Aug. 1, 1957, Ser. No. 675,772
6 Claims. (Cl. 340—184)



1. In a multiplex telemetering system comprising mutually remote stations, the combination of a horizontally elongated and substantially rectangular mounting frame in each station, a number of mutually similar power outlets mounted on said frame and horizontally aligned at equal distances from each other, said outlets being electrically interwired on said frame in parallel connection with each other; transmitter and receiver units, a rectifying power supply unit for energizing said interwired power outlets; said power supply unit and said transmitter and receiver units having each a plug-in connector mating each of said power outlets so that said power supply unit is selectively connectable on said frame with any one of said outlets to energize all said outlets, and any combination of transmitter and receiver units is connectable on said frame with the other outlets; and each of said transmitter and receiver units having further connector means for connection to a communication channel between said stations.

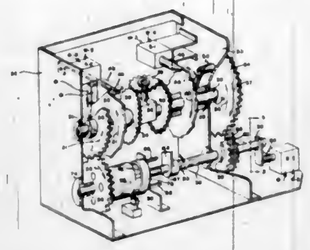
3,044,047
MEANS TO PREVENT ZERO TORQUE ERROR IN A SYNCHRO RECEIVER
John Sobchak, Paramus, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,502
3 Claims. (Cl. 340—198)



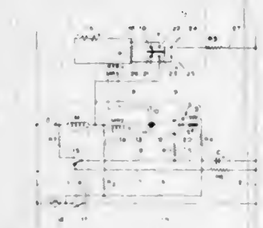
3. For use in an electrical indicator control system of a type including a drum counter means having a frame, a drum rotatably mounted in the frame, said drum having an end wall and an annular wall surface bearing indicia, and driving means to bring said indicia selectively into a viewing position including a synchro having a stator and a rotor, the rotor being rotatable relative to the stator to a first position and to a second position upon a signal voltage in a predetermined sense being selectively applied to the synchro, and said rotor being drivingly connected to the drum; the improvement comprising a pin projecting within the drum from the end wall thereof, a weighted element mounted on the pin and so arranged as to bias the drum and thereby the rotor of the synchro in one sense from a zero torque position relative to the stator of the synchro upon the synchro effecting the rotation of the rotor to the first position and in an opposite sense upon the synchro effecting the rotation of the rotor to the second position to thereby effect the selective adjustment of the drum indicia into the viewing position so that in the selected position of the indicia the synchro applies a torque in opposition to the bias of the weighted element to assure stability of control of the position of the rotor.

3,044,048
INFORMATION STORING AND RELEASING MECHANISM
John G. Lord, Swarthmore, Pa., assignor to Shoup Toll Collecting Devices, Inc., Chester Pike, Pa., a corporation of Pennsylvania
Filed Feb. 19, 1960, Ser. No. 9,772
14 Claims. (Cl. 340—213)

1. A mechanism for storing information relative to the occurrence of a first event, and for releasing said information upon the occurrence of a second event, said mechanism including a movable member, means activated by the occurrence of said first event for moving said member, in a first direction, to a first position, means activated by the occurrence of said second event for moving said member, in a second direction, to a second position, a signal, and means operable upon movement of said member to said second position for energizing said signal.

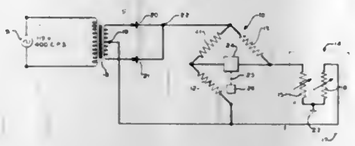


3,044,049
TEMPERATURE ALARM SYSTEMS
Ernest Walter James Everett, Withdean, Brighton, and Robert George Gilbert, Worthing, England, assignors to Speed Developments Company Limited, Marine Works, Hove, Sussex, England
Filed Oct. 4, 1957, Ser. No. 688,243
Claims priority, application Great Britain May 1, 1957
6 Claims. (Cl. 340—227)



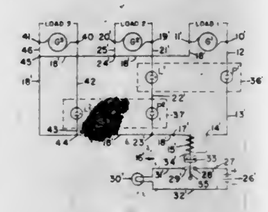
6. Apparatus for giving a warning when there is a sudden high rate of change in temperature, e.g. such as occurs at the outbreak of fire, a thermo-couple assembly to detect such form of change to produce a low E.M.F. signal, a very sensitive relay operable by said signal; a normally cut-out electrically operated warning appliance; a normally cut-out holding circuit served from a source of continuous voltage and adapted when closed to connect said warning appliance to said source of continuous voltage; a master relay to bring in said holding circuit and warning appliance and controlled by said very sensitive relay when such very sensitive relay is actuated by said signal; said master relay being served from said source of continuous voltage; said very sensitive relay having first and second contacts and a moving contact normally separated from said two contacts and actuated by the said low E.M.F. signal to engage the said first one of the contacts to bring in the said master relay to close the holding circuit and subsequently to engage the second one of said contacts to cut out said master relay and holding circuit and restore the apparatus to its normal condition; an electrically energisable actuator normally deenergised to hold said second contact out of the path of movement of said moving contact and adapted when energised to apply displacement to said second contact into the path of free movement of said movable contact, said actuator being connectable for energising to said continuous voltage source in common with said warning appliance.

3,044,050
FIRE DETECTION SYSTEM
Andre T. Abromaitis, East Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Aug. 17, 1959, Ser. No. 834,263
2 Claims. (Cl. 340—227)



1. A fire detection system comprising a pair of fire detector cables each having a pair of spaced apart conductors separated by a temperature-responsive resistive material which is essentially an insulator at room temperature and a conductor at a predetermined elevated temperature indicative of fire, said cables having resistances which vary continuously as the temperature changes progressively from said room temperature to said predetermined elevated temperature, said cables being positioned alongside each other and exposed equally to overheat conditions in the space being monitored, an electrical bridge comprising two parallel-connected branches of which one branch comprises two fixed impedance arms serially connected and the other branch comprises a third fixed impedance arm serially connected with a fourth arm including said cables electrically serially connected via the center wire and sheath of one cable and the sheath and center wire of the other cable in the sequence here named, and a receiving device connected between said branches diagonally of said bridge for providing an indication when a source of voltage is applied across said branches and a portion of each of said cables is heated to said predetermined elevated temperature.

3,044,051
POWER FAILURE DETECTOR
William S. Block, Arlington Heights, Ill., assignor to Vapor Heating Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 789,179
5 Claims. (Cl. 340—248)



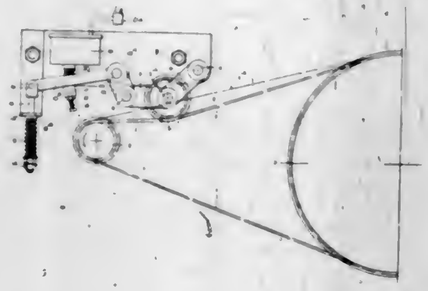
1. A power failure detector for monitoring the output of at least three separate electrical energy sources comprising, a first signal transmitter energizable by a first of the sources, a second signal transmitter, a first signal receiving means rendered operative by the signal from the first signal transmitter for connecting the second signal transmitter in energy coupling relation with the second source for energization thereby, an electrical control means, a second signal receiving means rendered operative by the signal from the second signal transmitter for connecting the electrical control means in energy coupling relation with the third source for energization thereby, and warning signal means controlled by the control means to provide a warning upon deenergization of the control means in response to failure of any one of the sources.

3,044,052

MEANS FOR INDICATING OR UTILIZING CHANGES IN TENSION OF WEBS AND THE LIKE

John Cleworth Marsh, 16 Pendragon Road, Birmingham, England

Filed Nov. 23, 1959, Ser. No. 854,982
5 Claims. (Cl. 340—259)



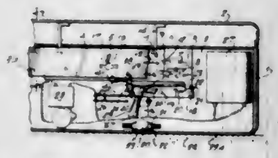
2. A device for signalling changes in the tension in a flexible web of material under tension as herein defined comprising a member engaging and deflecting said web from the substantially straight path that said web would, in the absence of said member, follow, toggle means comprising first and second toggle links, a fixed pivot locating one end of said first toggle link, a pivotal connection between the other end of said first toggle link and one end of said second toggle, said toggle links making an obtuse angle with one another, a connection between said web-engaging member and said pivotal connection such that movement of said web-engaging member in a direction such as to allow a reduction in the deflection of said web causes said obtuse angle to increase, guide means for the other end of said second toggle link, said guide means allowing said other end to move along a line in the general direction of said fixed pivot, resilient force-applying means acting on said other end of said second toggle link in a direction towards said fixed pivot such as to cause a tendency to reduction of said obtuse angle and thereby to an increase in the deflection of said web and alarm means responsive to the position of said other end of said second toggle link to actuate an alarm when the tension in said web exceeds a predetermined value.

3,044,053

BOXES, MONEY-BAGS, SMALL-CASES, CASKETS AND SIMILAR ARTICLES PROVIDED WITH AN ALARM DEVICE

Frédéric Pierre Larsen, 24 Bis Rue de l'Assomption, Paris, France

Filed Feb. 1, 1960, Ser. No. 5,755
Claims priority, application France Feb. 12, 1959
5 Claims. (Cl. 340—280)



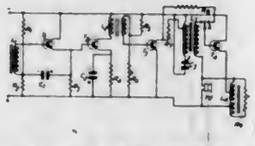
1. An alarm device for a portable object such as a suitcase comprising a mounting plate for attachment to said object, an alarm circuit including spaced normally opened contacts mounted on said mounting plate, a control member pivotally mounted on said mounting plate and having an end movable through a path to engage and close said contacts, a blocking member slidably mounted on said mounting plate including means thereon for engagement by a key to shift said blocking member, said blocking member including a portion overlying said control member and preventing said control member from moving to close said contacts, said portion being displaceable with said blocking member to a position freeing said control member, a member rotatably mounted for rotation at an exposed opening in the wall upon which the article is to be supported when said article is moved by the relative movement of the wall with respect to the supporting surface, a resilient member on said control member extending outwardly in the direction of movement of said control member toward said open contacts, said resilient member disposed to contact said rotatable member and prevent complete closing movement of said control member when the latter is released but being deflectable upon rotation of said rotatable member out of the path of said control member to permit closing of said contacts whereby when said article is moved from its supporting position and relative movement takes place between the supporting wall and the wall of the article upon which it is supported, the rotatable member is rotated to deflect the resilient member to permit closing of the alarm circuit.

3,044,054

RECEIVER FOR ELECTROMAGNETIC SIGNALS

Oswald Barber Sneath, London, England, assignor to Multitone Electric Company Limited, London, England

Filed May 9, 1957, Ser. No. 658,148
Claims priority, application Great Britain May 16, 1956
4 Claims. (Cl. 340—311)



1. A selective receiver for electromagnetic signals comprising a magnetic pick-up coil, an amplifier arranged to amplify signals picked up by said pick-up coil, said amplifier terminating in a limiter stage, a frequency selective filter immediately coupled to the amplifier, an oscillatory circuit capable of self-oscillation at a frequency substantially independent of the signal frequency when triggered by a signal from said frequency selective filter, means directly connecting said filter in triggering relation to said oscillatory circuit, and a signal device arranged to be operated by the output of said oscillatory circuit.

3,044,055

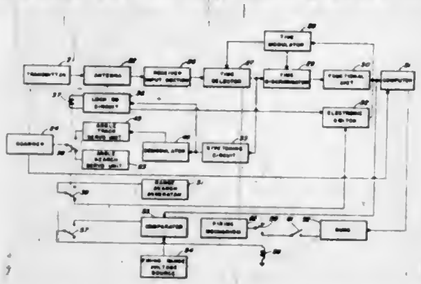
AUTOMATIC ACQUISITION GUN TURRET SYSTEM

Charles C. Ryan, Jr., Glen Burnie, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed June 29, 1956, Ser. No. 595,017
2 Claims. (Cl. 343—7)

1. An automatic acquisition system operable with the radar system of an aircraft for controlling the aiming and firing of the aircraft guns, said automatic acquisition system comprising: an antenna, a transmitter for energizing said antenna, a receiver input section connected to said antenna for receiving and processing a target echo video signal, a range tracking loop connected to said receiver input section having first and second output terminals, said range tracking loop operable to produce a target

range voltage at said first output terminal, a range search generator for producing a varying voltage, first means included in said range tracking loop responsive to said varying voltage for producing a sweeping gate signal, second means included in said range tracking loop responsive to said sweeping gate signal for passing said video signal into said range tracking loop to said second output terminal, a scanner for controlling the movement of said antenna, an angle search servo unit for energizing said scanner to move said antenna through a pre-selected search pattern, an angle track servo unit, switching means responsive to said video signal on said second output terminal for disconnecting said angle search servo unit from said scanner and said range search generator from said



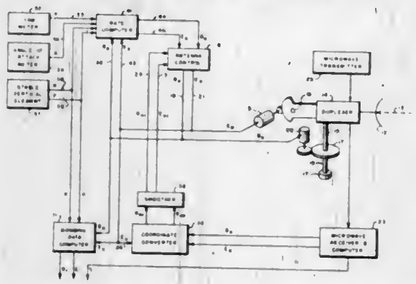
first means and simultaneously connecting said angle track servo unit to said scanner, said angle track servo uit operable in response to said video signal at said second terminal to lock said antenna on a target, a computer connected to said first output terminal of said range tracking loop responsive to said target range voltage and to said antenna position for controlling the aircraft guns to train on said target being tracked, comparison means responsive to said target range voltage and an internally generated range signal operable to fire on the target when in firing range, and diode means included in said range loop operable in conjunction with said first means to inhibit the passage of said video signal through said second means when said target lacks a closing velocity.

3,044,056

AIRBORNE ANTENNA POSITIONING SYSTEM

Alan Bloch, New York, N.Y., assignor to General Precision Inc., a corporation of Delaware

Filed Aug. 28, 1957, Ser. No. 681,875
3 Claims. (Cl. 343—7.4)



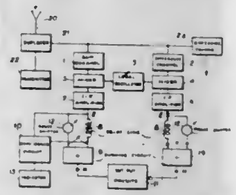
3. An angle control system for controlling the angular position of an aircraft microwave beam antenna in tracking a target comprising, means for transmitting signals from said antenna toward said target and deriving error signals from the target echo signals thereof representing tracking error displacement of the antenna as respects said target, means deriving bearing and elevation angle positional correction signals from said error signals, summing means receiving said positional correctional signals, means detecting vertical direction and emitting roll and pitch signals representative of the angular relations of said aircraft to said vertical direction, means detecting air velocity direction and emitting yaw and angle-of-attack signals representative of the angular relations of said aircraft to said air velocity direction, means deriving from said roll, pitch, yaw and angle-of-attack signals and from the bearing and elevation of said antenna relative to said aircraft bearing rate and elevation rate signals, means applying said bearing rate and elevation rate signals to said summing means, and means controlling the angular position of said antenna by the sum signals of said summing means.

3,044,057

IMPROVEMENTS IN MONOPULSE MOVING TARGET INDICATORS

Leo Thourel and Guy Le Parquier, Paris, France, assignors to Compagnie Generale de Telegraphie sans Fil, a corporation of France

Filed Dec. 24, 1958, Ser. No. 782,796
Claims priority, application France Dec. 27, 1957
5 Claims. (Cl. 343—7.7)



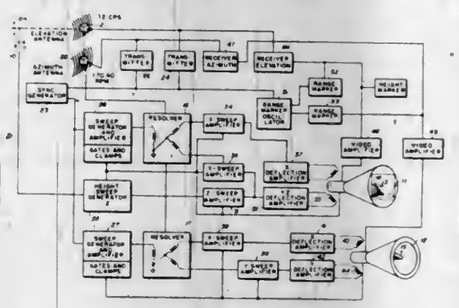
2. In a monopulse radar system having means for transmitting pulse signals, means for receiving echoes of said pulse signals, including a sum channel, at least one difference channel and angular error responsive means: means for transmitting said pulse signals by recurrently repeated pairs, the pulse signals of each pair being separated by a short time interval, two successive pairs of pulse signals being separated by a long time interval; and, connected between each of said channels and said angular error responsive means, means for summing up said echoes corresponding to two pulse signals of a pair of transmitted pulse signals.

3,044,058

THREE DIMENSIONAL ISOMETRIC DISPLAY SYSTEM

Luther G. Harris, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy

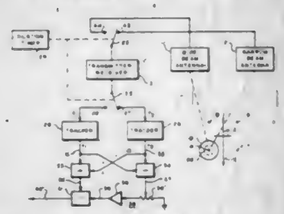
Filed Oct. 13, 1953, Ser. No. 385,900
5 Claims. (Cl. 343—7.9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. In a direction and ranging system having an antenna rotatable in azimuth and oscillatable in elevation and having a transmitter and a receiver, said transmitter being adapted to pulse the antenna periodically and said receiver

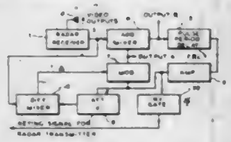
being adapted to receive target echoes, a cathode ray tube having a fluorescent screen, means for producing on said screen radial traces repetitively at the pulse repetition rate, means for rotating said radial traces in synchronism with the antenna azimuth rotation, means for simultaneously rotating said radial traces through an angle corresponding to the elevation angle of the antenna and successively elongating consecutive traces in an amount corresponding to the change in said elevation angle, said last mentioned rotation of the traces occurring at a greater rate than said azimuth synchronized rotation of the traces.

3,044,059
SYSTEM FOR ELIMINATING CALIBRATION ERRORS
Samuel Belchis, Hartsdale, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,195
7 Claims. (Cl. 343—8)



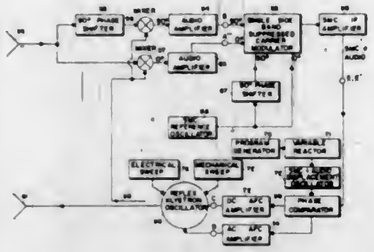
1. A system for eliminating calibration errors in a Doppler radio comprising, antenna means emitting and receiving a broad beam reflected from a selected target area, antenna means emitting and receiving a narrow beam reflected from the center portion of said selected target area, means deriving two signals representing the respective Doppler spectrum center frequencies of the reflected broad and narrow beams, and computing means having said two signals impressed thereon and producing therefrom a single computed signal representing the Doppler spectrum center frequency which would be found in the spectrum returned from a hypothetical antenna beam of zero thickness reflected from a point in said selected target area.

3,044,060
SYSTEM FOR INCREASING THE DEFINITION OF PULSE ECHO RADAR
Arthur Alexis Varela, Alexandria, Va., assignor, by mesne assignments, to Melpar, Inc., Falls Church, Va., a corporation of Delaware
Filed Aug. 31, 1954, Ser. No. 453,286
23 Claims. (Cl. 343—17.1)



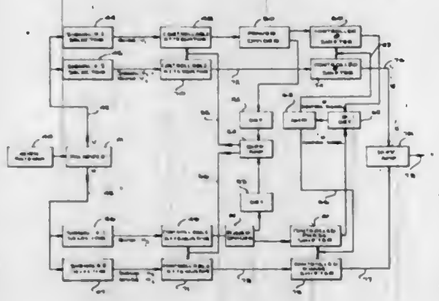
1. A radar receiver for pulsed radar signals, in which received periodic pulses are processed to improve radar definition, resolution, and contrast, including a source of direct pulses, means for integrating successive ones of said pulses including a pulse delay gain-controllable feed-back loop for delaying said direct pulses by an integral number of repetition periods of said pulses, including one repetition period, and means for adding direct and delayed pulses; means for measuring the difference in amplitude between simultaneous direct and delayed pulses, means responsive to said means for measuring for controlling the gain of said feed-back loop, and means for deriving processed output pulses from said means for integrating.

3,044,061
REPEATER FOR COUNTERMEASURE RADAR SYSTEM
Martin R. Richmond, Nashua, and Kenneth Dollinger, Derry, N.H., assignors to Sanders Associates, Incorporated, Nashua, N.H., a corporation of Delaware
Filed Aug. 4, 1955, Ser. No. 526,394
8 Claims. (Cl. 343—18)



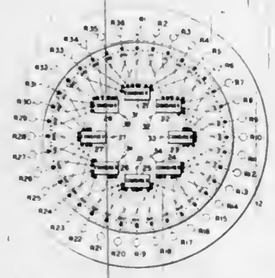
1. In a signaling system, the combination of means for transmitting a high frequency radio signal; means for receiving a remote high frequency radio signal; means for heterodyning the transmitted and received signals to produce a first beat frequency signal; means for producing a reference signal having a predetermined frequency; means for heterodyning said reference and said first beat frequency signals to produce a second beat frequency signal; means producing a displacement signal having a frequency characterized by the sum of the frequency of said reference signal and a predetermined differential displacement frequency, said reference frequency being substantially greater than said differential displacement frequency; means responsive to said displacement signal and said second beat frequency signal for producing a control voltage proportional to variations in phase of said second beat frequency signal relative to said displacement signal; and means for controlling said transmitter means in accordance with said control voltage to establish a separation between the frequencies of said transmitted and received signals equal to the frequency of said differential displacement frequency.

3,044,062
POLARIZATION DIVERSITY RECEIVER
Martin Katzin, 154 Fleetwood Terrace, Silver Spring, Md.
Filed Apr. 27, 1960, Ser. No. 24,963
12 Claims. (Cl. 343—100)



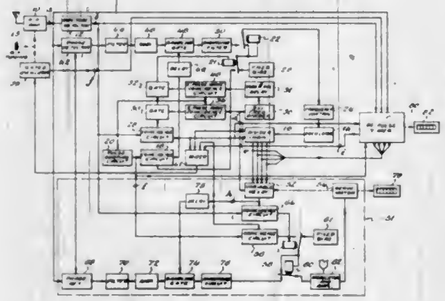
1. A signal receiver for receiving desired signals having a first polarization, wherein said first signals are degraded by undesired or noise signals having a second polarization, different than said first polarization, said signal receiver including means for receiving said noise signal alone in a first channel, means for receiving said desired signal plus said noise signal in a second channel, means responsive to signal received by said first channel to generate control signal representative of polarization of said noise signal, and means responsive to said control signal for controlling the response of said second channel as a function of polarization of signal received thereby so as to maximize signal to noise ratio at the output of said second channel.

3,044,063
DIRECTIONAL ANTENNA SYSTEM
Lindsay Russell, Cambridge, Mass., assignor, by mesne assignments, to Andrew Alford, Boston, Mass.
Filed Mar. 19, 1959, Ser. No. 800,597
15 Claims. (Cl. 343—100)



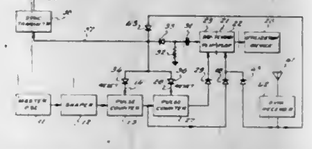
1. An antenna system comprising, a plurality of individual radiating elements disposed upon a curve spaced from a reflecting screen, combining means, a like plurality of coupling means connected between a respective one of said radiating elements and said combining means to electrically isolate each radiating element from the others, utilization apparatus, and means for selectively coupling said utilization apparatus through said combining means to a selected group of said radiating elements, the number in said selected group being less than said plurality.

3,044,064
HYPERBOLIC NAVIGATION RECEIVER
Edward Durbin, Valley Stream, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Aug. 20, 1956, Ser. No. 605,689
10 Claims. (Cl. 343—103)



5. An automatic loran receiver for indicating the time relation between master and slave pulses received in groups at a predetermined repetition rate, said receiver comprising means for generating local recurrent pulse groups including means for varying the repetition rate of said groups and means for varying the time interval between pulses within the groups, a gated oscillator tuned to the frequency of the carrier of the received master and slave pulses, the oscillator being gated on momentarily in response to each of the locally generated pulses for generating groups of pulsed radio frequency signals, phase comparator means responsive to the carrier of the received pulses and the pulsed radio frequency signals from the gated oscillator for producing first and second error signals indicative respectively of the difference in the phase of the oscillator output signals and that of the carrier of the received signals and of the difference in the respective phase shifts between corresponding pulsed signals within the received and locally generated groups of pulsed radio frequency signals, means for coupling said first error signal to said means for varying the repetition rate of the local recurrent pulse groups, and means for coupling said second error signal to said means for varying the time interval between pulses in a group.

3,044,065
ELECTRONIC PROGRAMMING MEANS FOR SYNCHRONIZING A PLURALITY OF REMOTELY LOCATED SIMILAR MEANS
Kay H. Barney, Roslyn Heights, N.Y., and Lawrence Greenspan, San Diego, Calif., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Aug. 5, 1957, Ser. No. 677,180
5 Claims. (Cl. 343—227)



1. An electronic programming system, comprising means for generating a series of timing pulses, first pulse counter means for response to a first number of said timing pulses for providing a first trigger pulse, second pulse counter means for response to a different number of said timing pulses for providing a second trigger pulse, bistable means for response to said first trigger pulse for operation in one of two stable operating states, said bistable means being further responsive to said second trigger pulse for operation in the other of said two stable operating states, transmitter means for response to a change in operation of said bistable means from said other to said one state for broadcasting a synchronizing pulse, means for response to the reception of a broadcast synchronizing pulse for recycling said counter means and for setting the bistable means in said one stable state if it is not already in that state.

3,044,066
THREE CONDUCTOR PLANAR ANTENNA
Jesse L. Butler, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Original application June 6, 1955, Ser. No. 513,223, now Patent No. 2,914,766, dated Nov. 24, 1959. Divided and this application Nov. 18, 1959, Ser. No. 853,839
3 Claims. (Cl. 343—771)



1. An antenna comprising the combination of a first elongated, outer conductor providing a ground plane; a second elongated, outer conductor providing a second ground plane, said conductors being less than one-half

of a wavelength wide at the operating frequency; a non-linear elongated inner conductor of lesser width than said outer conductors centrally disposed in insulated spaced relation between said outer conductors; side conductive means connecting the sides of said outer conductors together at their opposite edges to suppress extraneous modes of propagation; and elongated, resonant, radiating slots spaced effectively, along the length of the inner conductor, a wavelength apart at the operating frequency formed in said first outer conductor, a linear dimension of said slot forming an acute angle with respect to said inner conductor and being substantially effectively one-half wavelength long at the operating frequency, to provide radiation along an axis perpendicular to said first outer conductor.

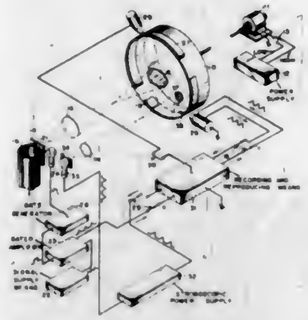
3,044,067
AERIAL SYSTEM HAVING VARIABLE DIRECTIONAL PROPERTIES
Peter Charlton Butson, Harrow, England, assignor to The General Electric Company Limited, London, England
Filed Nov. 30, 1959, Ser. No. 856,247
Claims priority, application Great Britain Dec. 3, 1958
6 Claims. (Cl. 343—781)



1. An aerial system comprising a primary aerial and a focussing device positioned in such a relationship to one another that, during operation, electromagnetic waves radiated by said primary aerial are concentrated by said focussing device in a highly directional radiation pattern including a main lobe which in two planes that are at right angles to one another and each of which contains the axis of the focussing device subtends a relatively small angle, a movable part of generally planar form separate from said primary aerial, and means to bring said movable part into an asymmetrical position to extend from said primary aerial toward but terminate short of said focussing device and to lie between said primary aerial and a portion only of said focussing device, the arrangement being such that movement of said part enables the directional properties of the system to be modified in one of said planes without any corresponding change in the directional properties of the system in the other of said planes.

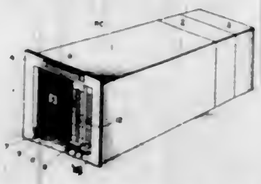
3,044,068
MEANS FOR AND METHOD OF RECORDING TIME MARKERS
Joseph A. Hull, Danvers, Mass., and Robert N. Hotchkiss, Hicksville, N.Y., assignors to Avco Corporation, a corporation of Delaware
Filed Apr. 27, 1959, Ser. No. 808,962
15 Claims. (Cl. 346—1)

1. A time marker generator for recording time markers on film adapted to move relative to an exposure medium comprising: means for moving the film at a high and a low speed, the high speed being used to expose the film to a subject; means for providing time marker signals; recording and reproducing means time synchronized with the film movement for storing time marker signals during the exposure of the film to the subject and for subsequently reproducing said time marker signals; and exposure means operative at the low speed and momentarily



triggered by the reproduced time marker signals for re-exposing the film whereby the time markers are recorded on the film.

3,044,069
EXHIBITING OR CONTROL MEANS
Harvey A. Klumb, Pittsford, and George E. Heller, Rochester, N.Y., assignors to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York
Filed July 21, 1958, Ser. No. 749,988
37 Claims. (Cl. 346—17)



36. In a controller and instrument casing combination, a controller of the type responsive to deviation of a process characteristic from a given relationship to a reference value of said process characteristic and having means to adjust the response of said controller to said deviation, said means to adjust the response of said controller to said deviation being located at the body proper of the controller, said casing being adapted to contain a plurality of instrumentalities generally lined up front to rear relative to a front portion of said casing, and the combined controller and casing being constructed to be put into service with the front of the casing easy of access, but with the back of the casing, and hence the controller, relatively difficult of access, said casing including a wall enclosing and generally closely adjacent to said instrumentalities, there being an opening in said wall closely surrounding the frontmost of said instrumentalities; and the said frontmost of said instrumentalities being an exhibiting device located in the front portion of said casing, and presenting thereat information visible through said opening from the environment immediately exterior to the said front portion of said casing, said information relating to said response of said controller; the improvement comprising adjustment transmitting means extending from said controller toward the said front portion of said casing and being connected to said means to adjust the response of said controller to said deviation, said transmitting means having actuating means positioned in said casing, and adjacent said opening, and between said exhibiting device and said wall; said opening providing access to said actuating means and to said exhibiting device, for effecting adjustment of said controller from the environment immediately exterior to said front portion of said casing.

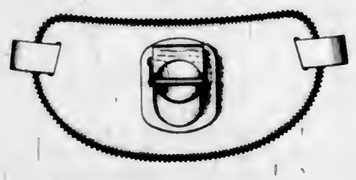
DESIGNS

JULY 10, 1962

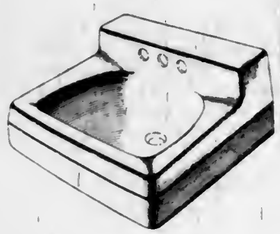
193,165
SIGN
Archie F. Parrish and Lucian Houze, Roanoke, and John W. Inge, Jr., Bedford County, Va., assignors to Farrows, Inc., Roanoke, Va., a corporation of Virginia
Filed Sept. 7, 1961, Ser. No. 66,634
Term of patent 14 years
(Cl. D1—12)



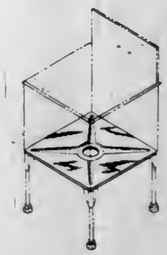
193,166
FISHERMAN'S BELT
Walter D. Hengst, 6507 Whitesett Ave., North Hollywood, Calif.
Filed Apr. 24, 1961, Ser. No. 64,869
Term of patent 7 years
(Cl. D3—10)



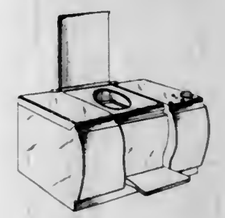
193,167
LAVATORY
Frederick David Chapman, Chicago, Ill., assignor to The Murray Corporation of America, Pittsburgh, Pa., a corporation of Delaware
Filed Jan. 15, 1960, Ser. No. 59,056
Term of patent 14 years
(Cl. D4—2)



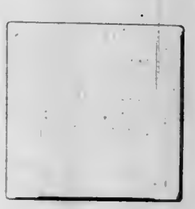
193,168
SINK OR THE LIKE
Bernard R. Kanoff, 1002 E. Phil-Ellena St., Philadelphia, Pa.
Filed May 4, 1961, Ser. No. 65,022
Term of patent 14 years
(Cl. D4—2)



193,169
INDIVIDUAL HUMAN WASTE DISPOSAL UNIT
William H. Wood, Chicago, Ill., assignor to Ken-Lab. Inc., Walworth, Wis., a corporation of Delaware
Filed June 30, 1960, Ser. No. 61,171
Term of patent 14 years
(Cl. D4—5)



193,170
EXTRUDED BAKERY PRODUCT
Francis E. Porambo, Scotch Plains, N.J., assignor to Franchett's Kruellers, Inc., Elizabeth, N.J.
Filed June 15, 1960, Ser. No. 60,968
Term of patent 14 years
(Cl. D8—1)



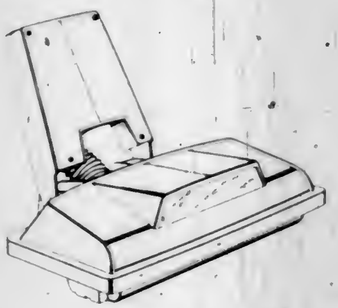
193,171
DISPENSING BRUSH FOR CLEANING UPHOLSTERY OR THE LIKE
Sheldon David Hulsh, 530 Park Ave., New York, N.Y.
Filed Sept. 29, 1960, Ser. No. 62,307
Term of patent 14 years
(Cl. D9—2)



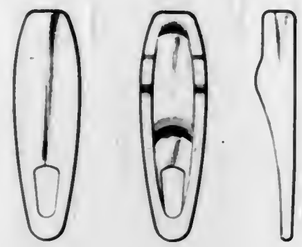
193,172
BLACKBOARD ERASER CLEANER
Elmer J. Kasper, Russell Township, Geauga County, Ohio, assignor to Royal Appliance Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed June 8, 1961, Ser. No. 65,523
Term of patent 7 years
(Cl. D9—2)



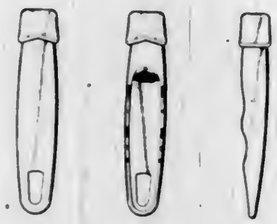
193,173
VACUUM CLEANER RUG TOOL
Theodore G. Daher, Stratford, Conn., assignor to General Electric Company, a corporation of New York
Filed June 12, 1961, Ser. No. 65,555
Term of patent 14 years
(Cl. D9—2)



193,174
HANDLE FOR A BRUSH OR THE LIKE
Leonard Garth Huxtable, New York, N.Y., assignor to Kellogg Brush Manufacturing Co., Westfield, Mass., a corporation
Filed Nov. 24, 1961, Ser. No. 67,678
Term of patent 14 years
(Cl. D9—2)



193,175
HANDLE FOR A BRUSH OR THE LIKE
Leonard Garth Huxtable, New York, N.Y., assignor to Kellogg Brush Manufacturing Co., Westfield, Mass., a corporation
Filed Nov. 24, 1961, Ser. No. 67,679
Term of patent 14 years
(Cl. D9—2)



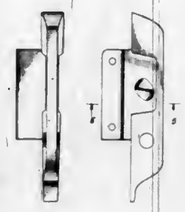
193,176
PULL OR THE LIKE
Vytant P. Aleks, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Feb. 3, 1961, Ser. No. 63,809
Term of patent 14 years
(Cl. D10—8)



193,177
PULL OR THE LIKE
Vytant P. Aleks, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Feb. 3, 1961, Ser. No. 63,810
Term of patent 14 years
(Cl. D10—8)



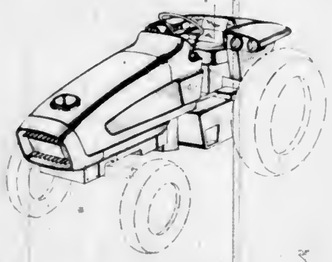
193,178
COMBINED LOCKER HANDLE AND LATCH ACTUATING UNIT
Elmer T. Meidell, Aurora, Ill., assignor to Lyon Metal Products, Incorporated, Aurora, Ill., a corporation of Illinois
Filed Apr. 19, 1961, Ser. No. 64,818
Term of patent 14 years
(Cl. D10—8)



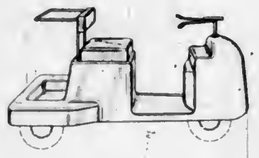
193,179
COMBINED BRACKET AND GRAB HANDLE
Ralph G. Rutman and Harry J. Warmkessel, both of Allentown, Pa., assignors to Mack Trucks, Inc., Plainfield, N.J., a corporation of New York
Filed Aug. 30, 1961, Ser. No. 66,550
Term of patent 14 years
(Cl. D10—8)



193,180
TRACTOR
George E. Bowman, Country Club Hills, Theodore H. Koeber, Barrington, and James R. McGirk, Medinah, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 4, 1961, Ser. No. 67,786
Term of patent 14 years
(Cl. D14—3)



193,181
CADDY CART OR THE LIKE
Arlo R. Jordan, 1909 6th Ave., NE., Austin, Minn.
Filed Jan. 2, 1962, Ser. No. 68,135
Term of patent 14 years
(Cl. D14—3)



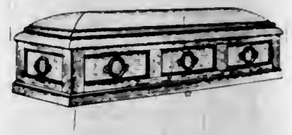
193,182
CHILD'S ROCKING CHAIR
Radcliffe W. Hunter, 533 E. 3rd Place, Chicago, Ill., and Stephen E. Konecnik, 1135 Broadway, Park Ridge, Ill.
Filed Aug. 22, 1961, Ser. No. 66,460
Term of patent 14 years
(Cl. D15—1)



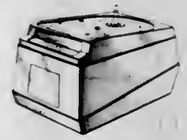
193,183
SHAMPOO CHAIR
Hyman Fidel, Great Neck, N.Y., assignor to Modecraft Company, Inc., New York, N.Y., a corporation of New York
Filed July 28, 1960, Ser. No. 61,552
Term of patent 14 years
(Cl. D15—3)



193,184
BURIAL CASKET
John D. Beinert, New York, N.Y., assignor to Boyertown Burial Casket Company, Boyertown, Pa., a corporation of Pennsylvania
Filed Jan. 31, 1962, Ser. No. 68,591
Term of patent 14 years
(Cl. D19—1)



193,185
PERFORATING MACHINE
Hans Elsner, Wilhelmshaven, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Oct. 12, 1960, Ser. No. 62,455
Term of patent 14 years
(Cl. D26—5)



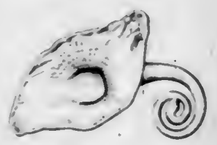
193,186
ELECTRICAL SWITCH OR SIMILAR ARTICLE
Leo Marcoux, Pawtucket, R.I., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 63,267
Term of patent 14 years
(Cl. D26—13)



193,187
SOUND TRANSDUCER
Horace L. Webb, 378 Lake Shore Drive, Massapequa Park, N.Y., and Harold M. Steinman, 19 Linden St., Garden City, N.Y.
Filed Jan. 19, 1961, Ser. No. 63,621
Term of patent 14 years
(Cl. D26—14)



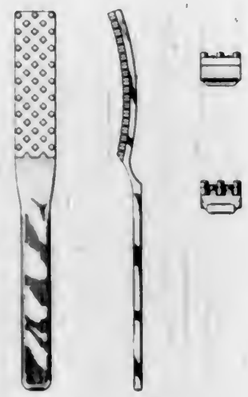
193,188
VASE
Orville C. Hamon, Cedars, Okla.
(% Scott Glass Co., P.O. Box 813, Fort Smith, Ark.)
Filed Nov. 24, 1961, Ser. No. 67,691
Term of patent 14 years
(Cl. D29—28)



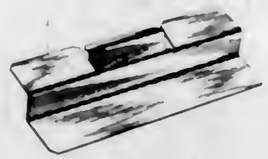
193,189
BIRD HOUSE
Olga O. Bewley, Rte. 1, Box 148, Ojai, Calif.
Filed June 15, 1961, Ser. No. 65,629
Term of patent 14 years
(Cl. D31—2)



193,190
FISH SCALER
George Radanovich, Jr., 902 E. Bowman, South Bend 14, Ind.
Filed Oct. 18, 1961, Ser. No. 67,149
Term of patent 14 years
(Cl. D31—4)



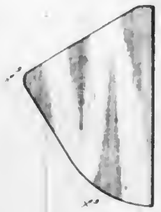
193,191
AUXILIARY SHELF
Harry S. Taub, 711 La Salle Ave., Buffalo 15, N.Y.
Filed Mar. 24, 1961, Ser. No. 64,471
Term of patent 14 years
(Cl. D33—3)



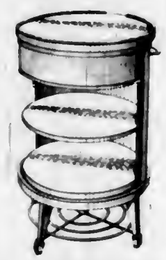
193,192
TABLE TOP OR SIMILAR ARTICLE
Kenneth A. Blevins, Missoula, Mont., assignor to Type-Write Desk Mfg. Co., Inc., Missoula, Mont., a corporation of Montana
Filed Mar. 2, 1959, Ser. No. 54,813
Term of patent 14 years
(Cl. D33—14)



193,193
TABLE OR THE LIKE
Richard G. Reineman, Covina, Calif., and George E. Schaefer, Muskegon Heights, Mich., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 60,123
Term of patent 14 years
(Cl. D33—14)



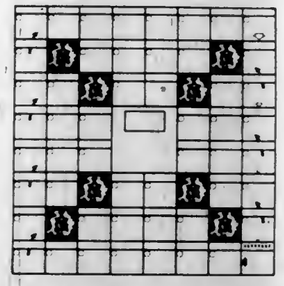
193,194
CABINET
Warren R. Black, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed Oct. 6, 1960, Ser. No. 62,393
Term of patent 14 years
(Cl. D33—19)



193,195
PLAYGROUND FERRIS WHEEL
Claude W. Ahrens, Grinnell, Iowa
Filed Jan. 13, 1961, Ser. No. 63,547
Term of patent 14 years
(Cl. D34—5)



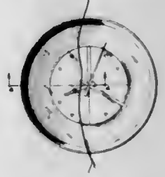
193,196
GAME BOARD
Clifford Q. Brodie, 3820 Cerrito Ave., Oakland, Calif.
Filed Nov. 1, 1961, Ser. No. 67,329
Term of patent 14 years
(Cl. D34—5)



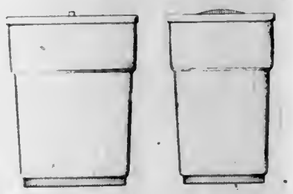
193,197
HOUSING FOR A POWER LAWN MOWER
Ralph A. Czerwonky, Barrington, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 23, 1960, Ser. No. 63,320
Term of patent 14 years
(Cl. D40—1)



193,198
CLOCK
Jerry Cumbus, Sausalito, Calif., assignor of one-half to Irene O. Kursh, Palo Alto, Calif.
Filed Aug. 8, 1960, Ser. No. 61,658
Term of patent 7 years
(Cl. D42—7)



193,199
COMBINED CANISTER AND COVER
John W. Ebstein, Roslyn Heights, N.Y., assignor, by mesne assignments, to Federal Enameling & Stamping Co., Pittsburgh, Pa., a corporation of Michigan
Filed Feb. 10, 1960, Ser. No. 59,345
Term of patent 14 years
(Cl. D44—6)



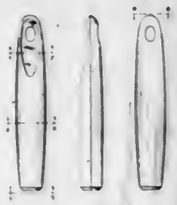
193,200
BAKING DISH OR SIMILAR ARTICLE
Victor J. Bergeron, Hillsborough, Calif. (20 Cosmo Place, San Francisco, Calif.)
Filed Nov. 21, 1961, Ser. No. 67,637
Term of patent 14 years
(Cl. D44—15)



193,201
BAKING DISH OR SIMILAR ARTICLE
Victor J. Bergeron, Hillsborough, Calif. (20 Cosmo Place, San Francisco, Calif.)
Filed Nov. 21, 1961, Ser. No. 67,639
Term of patent 14 years
(Cl. D44—15)



193,202
HANDLE FOR KITCHEN TOOLS AND SIMILAR ARTICLES
Robert A. Eckersberg, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed July 10, 1961, Ser. No. 65,871
Term of patent 14 years
(Cl. D44—29)



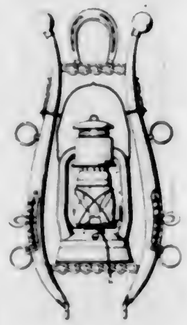
193,203
EXPANSIBLE LINK CHAIN FOR A BRACELET OR SIMILAR ARTICLE
Karl C. Augenstein, Cranston, R.I., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed June 22, 1961, Ser. No. 65,692
Term of patent 7 years
(Cl. D45—4)



193,204
LANTERN
Nicholas W. Keller and Bill B. Rosinski, Chicago, Ill., assignors to Justrite Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 13, 1960, Ser. No. 63,211
Term of patent 14 years
(Cl. D48—24)



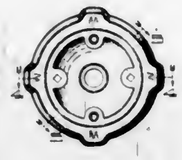
193,205
YARD LIGHT
Jimmie Marson, Rte. 2, Box 224, Wewoka, Okla.
Filed Jan. 29, 1962, Ser. No. 68,546
Term of patent 14 years
(Cl. D48—24)



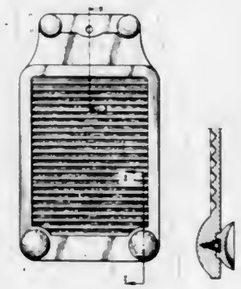
193,206
STREET LIGHTING LAMP OR THE LIKE
Kenneth F. Guggemos, Box 5, Winsted, Minn.
Filed May 2, 1960, Ser. No. 60,515
Term of patent 14 years
(Cl. D48—31)



193,207
LAMP BEZEL FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., Bloomfield Hills, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 31, 1961, Ser. No. 66,576
Term of patent 7 years
(Cl. D48—32)



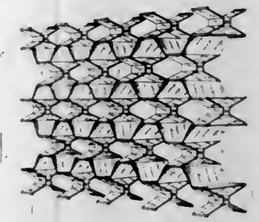
193,208
PORTABLE WASHBOARD
William J. Graham, 31 College NE., Grand Rapids, Mich.
Filed May 22, 1961, Ser. No. 65,260
Term of patent 14 years
(Cl. D49—1)



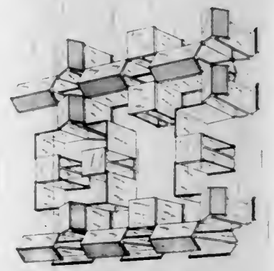
193,209
GASOLINE PUMP
George B. Kamp, Springfield, Pa., assignor to Bowser, Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Aug. 31, 1961, Ser. No. 66,564
Term of patent 14 years
(Cl. D52—2)



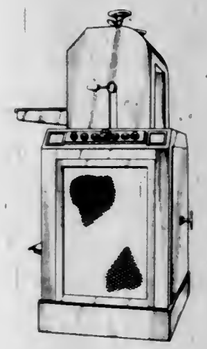
193,210
GRILLE
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Continuation of design applications Ser. No. 60,375, Ser. No. 60,378, and Ser. No. 60,377, Apr. 29, 1960, and Ser. No. 63,701 and Ser. No. 63,702, Jan. 25, 1961. This application Nov. 21, 1961, Ser. No. 67,629
Term of patent 14 years
(Cl. D54—2)



193,211
GRILLE
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Jan. 10, 1962, Ser. No. 68,246
Term of patent 14 years
(Cl. D54—2)



193,212
EXPANDED METAL STAMPING MACHINE
Eric O. Acker, 4002 NW. 10th St., Oklahoma City, Okla.
Filed Nov. 14, 1960, Ser. No. 62,827
Term of patent 14 years
(Cl. D54—14)



193,213
VIBRATORY SHAKER FOR UNLOADING RAILROAD CARS OR THE LIKE
Edwin F. Peterson, % Martin Engineering Company, Neponset, Ill.
Filed May 4, 1960, Ser. No. 60,447
Term of patent 14 years
(Cl. D55—1)



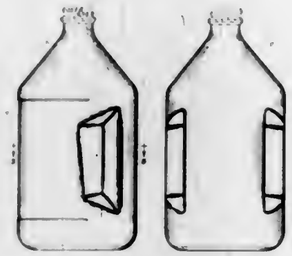
193,214
BINOCULAR MICROSCOPE OR SIMILAR ARTICLE
Harry Preble, Jr., Cross River, N.Y., assignor to The A. C. Gilbert Company, New Haven, Conn., a corpotion of Maryland
Filed June 14, 1961, Ser. No. 65,589
Term of patent 14 years
(Cl. D57—1)



193,215
FOOD TRANSPORTING BASKET
William H. Fredrick, Los Angeles, Calif., assignor of one-half to Nathan Gilbert, Burbank, Calif.
Filed Dec. 12, 1961, Ser. No. 67,887
Term of patent 14 years
(Cl. D58—4)



193,216
BOTTLE
Edwin C. Laudano, Matawan, N.J., assignor to Thatcher Glass Manufacturing Company, Inc., New York, N.Y., a corporation of New York
Filed Oct. 11, 1961, Ser. No. 67,049
Term of patent 14 years
(Cl. D58—5)



193,217
BOTTLE
Marvin Cassell, New York, N.Y., assignor to Foreign Vintages, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 30, 1961, Ser. No. 67,306
Term of patent 14 years
(Cl. D58—6)



193,218
BOTTLE OR SIMILAR ARTICLE
Victor Koenigsberg, 702 Hall St., Franklin Square, N.Y.
Filed Jan. 30, 1962, Ser. No. 68,572
Term of patent 14 years
(Cl. D58—6)



193,219
SHOE POLISH BOX
Ralph V. Burdick and Ralph V. Burdick, Jr., Loudonville, N.Y. (both of Drawer 29, Albany 1, N.Y.)
Filed Aug. 11, 1960, Ser. No. 61,694
Term of patent 14 years
(Cl. D58—11)



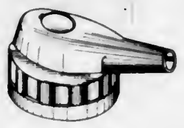
193,220
PACKAGING TRAY
Richard F. Reifers, New Canaan, and William J. Hrozenchik and Thomas B. Kennedy, Stamford, Conn., assignors to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 28, 1961, Ser. No. 64,939
Term of patent of 14 years
(Cl. D58—12)



193,221
DISPENSING CONTAINER
Alfred D. Sterges, Los Angeles, and Thomas E. Williams, Long Beach, Calif., assignors to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
Filed July 17, 1961, Ser. No. 65,944
Term of patent 14 years
(Cl. D58—17)



193,222
COMBINED CLOSURE CAP AND SPOUT
Lisle C. Van Nest, Lambertville, Mich., assignor to Multi-Meter Corporation, Toledo, Ohio, a corporation of Ohio
Filed Jan. 25, 1961, Ser. No. 63,696
Term of patent 14 years
(Cl. D58—26)



193,223
BOTTLE CLOSURE
Mary Anna Thompson, 206 McCauley St., Chapel Hill, N.C.
Filed Oct. 27, 1961, Ser. No. 67,293
Term of patent 14 years
(Cl. D58—26)



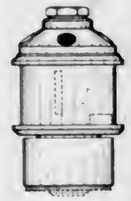
193,224
STRIP OF PRESSURE SENSITIVE LOOSELEAF REINFORCEMENTS
Benjamin E. Smolen, 10 Reed Court, Great Neck, N.Y., and George Lerner, 12 Prospect Court, Freeport, N.Y.
Filed Nov. 19, 1959, Ser. No. 58,405
Term of patent 14 years
(Cl. D59—2)



193,225
SORTING MACHINE OR SIMILAR ARTICLE
Bertil S. Fornell, 19633 Brady Ave., Redford, Mich., and Richard G. Lowe, 19200 Westbrook Ave., Detroit, Mich.
Filed Jan. 9, 1961, Ser. No. 63,482
Term of patent 14 years
(Cl. D64—11)



193,226
FUEL INJECTION PUMP
Hans Hogeman, Longmeadow, Mass., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Apr. 21, 1961, Ser. No. 64,886
Term of patent 14 years
(Cl. D65—1)



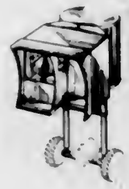
193,227
COMBINATION PASSENGER AND VEHICLE TRANSPORT RAILWAY CAR
John R. Cooney, Dyer, Ind., assignor to Pullman Incorporated, a corporation of Delaware
Filed Aug. 29, 1961, Ser. No. 66,539
Term of patent 14 years
(Cl. D66—1)



193,228
REFRIGERATOR CABINET OR SIMILAR ARTICLE
Robert E. Munz, Jeffersontown, and Lawrence R. Collins, Jefferson County, Ky., assignors to General Electric Company, a corporation of New York
Filed May 19, 1961, Ser. No. 65,244
Term of patent 14 years
(Cl. D67—3)



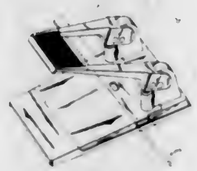
193,229
VESTIBULE UNIT FOR AIRCRAFT PASSENGER LOADING DEVICE OR SIMILAR ARTICLE
Francis B. Johnson, Los Altos, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed July 27, 1960, Ser. No. 61,543
Term of patent 14 years
(Cl. D71—1)



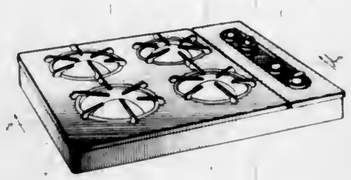
193,230
PUNCH
Peter M. Klein, Ogdensburg, N.Y., assignor to Natser Corporation, Ogdensburg, N.Y., a corporation of Nevada
Filed Dec. 15, 1961, Ser. No. 67,923
Term of patent 14 years
(Cl. D74—1)



193,231
PUNCH
Peter M. Klein, Ogdensburg, N.Y., assignor to Natser Corporation, Ogdensburg, N.Y., a corporation of Nevada
Filed Dec. 15, 1961, Ser. No. 67,925
Term of patent 14 years
(Cl. D74—1)



193,232
COUNTER TOP COOKING UNIT OR THE LIKE
Reeves Brown, Cleveland, Tenn., assignor to Hardwick Stove Company, Cleveland, Tenn., a corporation of Delaware
Filed Feb. 14, 1961, Ser. No. 63,938
Term of patent 14 years
(Cl. D81—25)



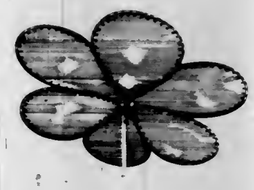
193,233
DOUBLE SHOE HORN
Felis T. Segul, % Caravan Restaurant, Gorman, Calif.
Filed July 13, 1961, Ser. No. 65,906
Term of patent 7 years
(Cl. D86—10)



193,234
COMBINED LUGGAGE HANDLE, HANDLE STUDS AND LOCKS
Charles S. Gehrie, Montclair, N.J., assignor to Sardis Luggage Company, Sardis, Miss., a corporation of Mississippi
Filed May 23, 1961, Ser. No. 65,289
Term of patent 14 years
(Cl. D87—2)



193,235
SUN SHIELD OR SIMILAR ARTICLE
Elizabeth A. McNew, 8425 Sepulveda, Sepulveda, Calif.
Filed Jan. 18, 1961, Ser. No. 63,601
Term of patent 14 years
(Cl. D88—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 10TH DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Hicks, Emery A. Record repeating attachment for phonograph. Re. 25,197, 7–10–62, Cl. 274—14.

LIST OF PLANT PATENTEES

Conard-Pyle Co., The: *See*—
Meilland, Alain. 2,155.

Meilland, Alain, to The Conard-Pyle Co. Rose plant. 2,155, 7–10–62, Cl. 47—61.

LIST OF DESIGN PATENTEES

Acker, Eric O. Expanded metal stamping machine. 193,212, 7–10–62, Cl. D54—14.
Ahrens, Claude W. Playground ferris wheel. 193,195, 7–10–62, Cl. D34—5.
Aleks, Vytant P., to National Lock Co. Pull or the like. 193,176, 7–10–62, Cl. D10—8.
Aleks, Vytant P., to National Lock Co. Pull or the like. 193,177, 7–10–62, Cl. D10—8.
American Bosch Arma Corp.: *See*—
Hogeman, Hans. 193,226.
American Seating Co.: *See*—
Black, Warren R. 193,194.
Augenstein, Karl C., to Speidel Corp. Expansible link chain for a bracelet or similar article. 193,203, 7–10–62, Cl. D45—4.
Beinert, John D., to Boyertown Burial Casket Co. Burial casket. 193,184, 7–10–62, Cl. D19—1.
Bergeron, Victor J. Baking dish or similar article. 193,200, 7–10–62, Cl. D44—15.
Bergeron, Victor J. Baking dish or similar article. 193,201, 7–10–62, Cl. D44—15.
Bewley, Olga O. Bird house. 193,189, 7–10–62, Cl. D31—2.
Black, Warren R., to American Seating Co. Cabinet. 193,194, 7–10–62, Cl. D33—19.
Blevins, Kenneth A., to Type-Write Desk Mfg. Co., Inc. Table top or similar article. 193,192, 7–10–62, Cl. D33—14.
Bordinat, Eugene, Jr., to Ford Motor Co. Lamp bezel for automobiles or the like. 193,207, 7–10–62, Cl. D48—32.
Bowman, George E., T. H. Koeber, and J. R. McGirk, to International Harvester Co. Tractor. 193,180, 7–10–62, Cl. D14—3.
Bowser, Inc.: *See*—
Kamp, George B. 193,209.
Boyertown Burial Casket Co.: *See*—
Beinert, John D. 193,184.
Brodie, Clifford Q. Game board. 193,196, 7–10–62, Cl. D34—5.
Brown, Reeves, to Hardwick Stove Co. Counter top cooking unit or the like. 193,232, 7–10–62, Cl. D81—25.
Brunswick Corp.: *See*—
Reineman, Richard G., and Schaefer. 193,193.
Burdick, Ralph V., and R. V. Burdick, Jr. Shoe polish box. 193,219, 7–10–62, Cl. D58—11.
Burdick, Ralph V., Jr.: *See*—
Burdick, Ralph V., and R. V. Burdick, Jr. 193,219.
Chapman, Frederick D., to The Murray Corp. of America. Lavatory. 193,167, 7–10–62, Cl. D4—2.
Collins, Lawrence R.: *See*—
Munz, Robert E., and Collins. 193,228.
Cooney, John R., to Pullman Inc. Combination passenger and vehicle transport railway car. 193,227, 7–10–62, Cl. D66—1.
Guggemos, Kenneth F. Street lighting lamp or the like. 193,206, 7–10–62, Cl. D48—31.
Cumbus, Jerry, ½ to I. O. Kursh. Clock. 193,198, 7–10–62, Cl. D42—7.
Czerwonky, Ralph A., to Sunbeam Corp. Housing for a power lawn mower. 193,197, 7–10–62, Cl. D40—1.
Daher, Theodore G., to General Electric Co. Vacuum cleaner rug tool. 193,173, 7–10–62, Cl. D9—2.
Diamond National Corp.: *See*—
Reifers, Richard F., Hrozenchik, and Kennedy. 193,220.
Ebstein, John W., to Federal Enameling & Stamping Co. Combined canister and cover. 193,199, 7–10–62, Cl. D44—6.
Eckersberg, Robert A., to Ekco Products Co. Handle for kitchen tools and similar articles. 193,202, 7–10–62, Cl. D44—29.
Ekco Products Co.: *See*—
Eckersberg, Robert A. 193,202.
Elsner, Hans, to Olympia Werke A.G. Perforating machine. 193,185, 7–10–62, Cl. D26—5.
Farrows, Inc.: *See*—
Parrish, Archie F., Houze, and Inge. 193,165.
Federal Enameling & Stamping Co.: *See*—
Ebstein, John W. 193,199.
Fidel, Hyman, to Modecraft Co., Inc. Shampoo chair. 193,183, 7–10–62, Cl. D15—3.
Ford Motor Co.: *See*—
Bordinat, Eugene, Jr. 193,207.
Fornell, Bertil S., and R. G. Lowe. Sorting machine or similar article. 193,225, 7–10–62, Cl. D64—11.
Franchett's Kruellers, Inc.: *See*—
Porambo, Francis E. 193,170.
Fredrick, William H., ½ to N. Gilbert. Food transporting basket. 193,215, 7–10–62, Cl. D58—4.
Gehrle, Charles S., to Sardis Luggage Co. Combined luggage handle, handle studs and locks. 193,234, 7–10–62, Cl. D87—2.
General Electric Co.: *See*—
Daher, Theodore G. 193,173.
Munz, Robert E., and Collins. 193,228.
Gilbert, A. C., Co., The: *See*—
Preble, Harry, Jr. 193,214.
Gilbert, Nathan: *See*—
Fredrick, William H. 193,215.
Graham, William J. Portable washboard. 193,208, 7–10–62, Cl. D49—1.
Hallock, Edward C. Grille. 193,210, 7–10–62, Cl. D54—2.
Hallock, Edward C. Grille. 193,211, 7–10–62, Cl. D54—2.
Hamon, Orville V. Vase. 193,188, 7–10–62, Cl. D29—28.
Hardwick Stove Co.: *See*—
Brown, Reeves. 193,232.
Hengst, Walter D. Fisherman's belt. 193,166, 7–10–62, Cl. D3—10.
Hogeman, Hans, to American Bosch Arma Corp. Fuel injection pump. 193,226, 7–10–62, Cl. D65—1.
Houze, Lucian: *See*—
Parrish, Archie F., Houze, and Inge. 193,165.
Hrozenchik, William J.: *See*—
Reifers, Richard F., Hrozenchik, and Kennedy. 193,220.
Hulsh, Sheldon D. Dispensing brush for cleaning upholstery or the like. 193,171, 7–10–62, Cl. D9—2.
Hunter, Radcliffe W., and S. E. Konecnik, Child's rocking chair. 193,182, 7–10–62, Cl. D15—1.
Huxtable, Leonard G., to Kellogg Brush Mfg. Co. Handle for a brush or the like. 193,174, 7–10–62, Cl. D9—2.
Huxtable, Leonard G., to Kellogg Brush Mfg. Co. Handle for a brush or the like. 193,175, 7–10–62, Cl. D9—2.
Inge, John W.: *See*—
Parrish, Archie F., Houze, and Inge. 193,165.
International Harvester Co.: *See*—
Bowman, George E., Koeber, and McGirk. 193,180.
Johnson, Francis B., to Lockheed Aircraft Corp. Vestibule unit for aircraft passenger loading device or similar article. 193,229, 7–10–62, Cl. D71—1.
Jordan, Arlo R. Caddy cart or the like. 193,181, 7–10–62, Cl. D14—3.
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Marson, Jiminie. Yard light. 193,205, 7–10–62, Cl. D48—24.
McGirk, James R.: *See*—
Bowman, George E., Koeber, and McGirk. 193,180.
McNew, Elizabeth A. Sun shield or similar article. 193,235, 7–10–62, Cl. D88—3.
Meidell, Elmer T., to Lyon Metal Products, Inc. Combined locker handle and latch actuating unit. 193,178, 7–10–62, Cl. D10—8.
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Parrish, Archie F., L. Houze, and J. W. Inge, Jr., to Farrows, Inc. Sign. 193,165, 7–10–62, Cl. D1—12.
Peterson, Edwin F. Vibratory shaker for unloading railroad cars or the like. 193,213, 7–10–62, Cl. D55—1.
Porumbo, Francis E., to Franchett's Kruellers, Inc. Extruded bakery product. 193,170, 7–10–62, Cl. D8—1.
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Sterges, Alfred D., and Williams. 193,221.
Radanovich, George, Jr. Fish scaler. 193,190, 7–10–62, Cl. D31—4.
Reifers, Richard F., W. J. Hrozenchik, and T. B. Kennedy, to Diamond National Corp. Packaging tray. 193,220, 7–10–62, Cl. D58—12.
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LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 10TH DAY OF JULY, 1962

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Abromaitis, Andre T., to McGraw-Edison Co. Fire detection system. 3,044,050, 7–10–62, Cl. 340—227.
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Adams, Joe T.: *See*—
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Adams, Lowell V., and L. Siniawsky, to Philco Corp. Laundry equipment. 3,043,478, 7–10–62, Cl. 222—70.
Adams, Thomas C., Jr. Continuous electrical connection. 3,044,035, 7–10–62, Cl. 339—21.
Addie, Albert N., and J. J. Kotlin, to General Motors Corp. Lubrication systems and protective controls for turbocharged engines. 3,043,092, 7–10–62, Cl. 60—13.
Addleburg, John W., G. R. Lappin, and B. P. Rouse, Jr., to Eastman Kodak Co. Stabilized poly-a-olefin compositions. 3,043,797, 7–10–62, Cl. 260—45.85.
Adie, George M., to The Dow Chemical Co. Foamed construction element. 3,043,730, 7–10–62, Cl. 154—45.9.
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Wilson, E Milton. 3,043,099.
Aerpat A.G.: *See*—
Gray, Eugene B., and De Pew. 3,043,563.
Aghnides, Elie P. Steering means for tandem wheel vehicle having tilted axles. 3,043,391, 7–10–62, Cl. 180—79.2.
Ahern, John E., to The Marquardt Corp. Apparatus and method of utilizing the conversion of parahydrogen to orthohydrogen to obtain a refrigerating effect. 3,043,110, 7–10–62, Cl. 62—4.
Aidn, Martin: *See*—
Bauder, Josef, Fischer, and Aidn. 3,043,500.
Aircraft Engineering and Maintenance Co.: *See*—
Madsen, Andrew. 3,043,908.
Airtex Corp.: *See*—
Bergh, Thomas R., King, Nierzwicki, and Thorne. 3,043,567.
Ajax Foundry Products, Inc.: *See*—
Barrett, Edmund. 3,043,611.
Akers, Robert C., to North American Aviation, Inc. Programmable power supply. 3,044,007, 7–10–62, Cl. 323—22.
Aladdin Industries, Inc.: *See*—
Mason, Francis G. 3,044,032.
Albinger, Harry, Jr., to General Electric Co. Light distributing lens system. 3,043,947, 7–10–62, Cl. 240—1.
Albinger, Harry, Jr., and C. B. Marble, to General Electric Co. Combination lens and lamp holder. 3,043,948, 7–10–62, Cl. 240—1.
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Eames, Charles, Albinson, and Pearce. 3,043,640.
Alco Products, Inc.: *See*—
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Aldrich, Paul E., to E. I. du Pont de Nemours and Co. Fluoroalkylmercury fluorocarboxylates and their preparation. 3,043,859, 7–10–62, Cl. 260—431.
Alfieri, Giuseppe, to Marelli S.p.A., Fabbrica Italiana Magneti. Distributor for braking plants with embodied stop-lamp switch, particularly for vehicles. 3,043,930, 7–10–62, Cl. 200—83.
Alford, Andrew: *See*—
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Alix, Arthur J., to Riley Stoker Corp. Feedwater system. 3,043,280, 7–10–62, Cl. 122—459.
Allard, Pierre J.-M. T. Excavating machine notably for digging trenches. 3,043,029, 7–10–62, Cl. 37—86.
Alles, Francis P., to E. I. du Pont de Nemours and Co. Photographic films. 3,043,695, 7–10–62, Cl. 96—83.
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Gilbert, Everett E., and Rumanowski. 3,043,674.
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Allis-Chalmers Mfg. Co.: *See*—
Herr, Charles H., Jr. 3,043,158.
Allison, William D.: *See*—
Dudley, Arthur R., Royder, and Allison. 3,043,431.
Altenschopfer, Theodor, E. Enk, F. Knorr, and H. Spes, to Wacker-Chemie G.m.b.H. Process for the production of enolacetates. 3,043,862, 7–10–62, Cl. 260—488.
Aluminium-Industrie-Aktien-Gesellschaft: *See*—
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Amadon, Paul M., to Telemecanique Electrique, La. Insulator for a set of electrical distribution bars. 3,043,904, 7–10–62, Cl. 174—158.
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American Motors Corp.: *See*—
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Hicks, John W., Jr. 3,043,910.
American Telephone and Telegraph Co.: *See*—
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American Tobacco Co., The: *See*—
Kelly, James G. 3,043,420.
Amos, Homer C.: *See*—
Strickland, Edward T., and Amos. 3,043,017.
Amsted Industries Inc.: *See*—
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Andersen Corp.: *See*—
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Anderson, Arthur W., G. K. Greminger, Jr., and G. H. Beaver, to The Dow Chemical Co. Cellulosic materials plasticized with hydroxypropylsucrose. 3,043,720, 7–10–62, Cl. 117—144.
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Anderson, Kay B. Package for liquids and other materials. 3,043,489, 7–10–62, Cl. 229—14.
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Anderson, Robert E., and W. A. Little, to Texas Instruments Inc. Photo transistor. 3,043,725, 7–10–62, Cl. 148—1.5.
Anderson, Robert E., to The Dow Chemical Co. Method for the purification of aminocarboxylic acids. 3,043,867, 7–10–62, Cl. 260—5.8.
Anderson, Russell H. Power driven winding apparatus. 3,043,457, 7–10–62, Cl. 214—131.
Anderson, Sidney T., to The General Electric Co. Ltd. Supply arrangements for synchronous electric motors. 3,043,999, 7–10–62, Cl. 318—165.
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Appenzeller, Valentin, to E. Küsters. Roller assemblies for the pressure treatment of materials. 3,043,211, 7–10–62, Cl. 100—170.
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Aston, William S. Cutter arrangement. 3,043,079, 7–10–62, Cl. 56—290.

Åström, Karl R. Removable hoisting attachment for tractors. 3,043,375, 7–10–62, Cl. 172—273.

Atchley, Oscar J. Pen for feeding calves liquid and solid feed. 3,043,265, 7–10–62, Cl. 119—20.

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Bahra, Nassouh H., to General Electric Co. Control circuits for home appliances or the like. 3,044,000, 7–10–62, Cl. 318—203.

Bala, Philip. Splice tapes. 3,043,188, 7–10–62, Cl. 88—19.5.

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Barnard, William H., to The Bendix Corp. Transistorized voltage regulator. 3,044,006, 7–10–62, Cl. 322—28.

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Batley, George C., to Ford Motor Co. Windshield wiper mechanism. 3,042,953, 7–10–62, Cl. 15—250.2.

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Bauer, Eugen, G.m.b.H.: *See*—
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Beaber, Nathaniel J., and J. H. Obey, to J. R. Short Milling Co. Method for producing organoleptically bland protein. 3,043,826, 7–10–62, Cl. 260—123.5.

Beale, Evelyn S. L., to McCorquodale Colour Display Ltd. Method and apparatus for the deposition of viscous liquid materials. 3,043,711, 7–10–62, Cl. 117—38.

Beall, Richard W., Jr. Pressure equalizing container. 3,043,463, 7–10–62, Cl. 215—56.

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Becher, Elisabeth, K. Bernhauer, and G. Wilharm, to Hoffmann-La Roche Inc. Process for producing vitamins in the B$_{12}$ group by means of propionic acid bacteria. 3,043,750, 7–10–62, Cl. 195—96.

Beck, Edwin H., to Manufacturers Supplies Co. Skiving machine. 3,043,126, 7–10–62, Cl. 69—9.5.

Becke, Friedrich. Process of making chlorobenzenes. 3,043,887, 7–10–62, Cl. 260—650.

Beebe, Herbert R., to American Doll & Toy Corp. Eye for dolls. 3,043,051, 7–10–62, Cl. 46—166.

Beereboom, John J., H. H. Rennhard, and C. R. Stephens, Jr., to Chas. Pfizer & Co., Inc. Halogenated tetracycline derivatives and processes for their preparation. 3,043,875, 7–10–62, Cl. 260—559.

Beers, Joseph L., to Radio Corp. of America. Apparatus for orienting and inserting electrical devices. 3,043,446, 7–10–62, Cl. 214—1.

Belchis, Samuel, to General Precision, Inc. System for eliminating calibration errors. 3,044,059, 7–10–62, Cl. 343—8.

Beleggingsmaat-Schappy "Margarita": *See*—
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Bell, George A., and J. Lobb, to Commonwealth Scientific and Industrial Research Organization. Needle sharpening apparatus. 3,043,060, 7–10–62, Cl. 51—122.

Bell Telephone Laboratories, Inc.: *See*—
Courtney-Pratt, Jeofry S. 3,043,960.
Lewis, Willard D. 3,044,017.
Nielsen, James W. 3,043,671.
Poole, Kenneth M., Tien, and Weiss. 3,044,021.

Bendat, Julius S.: *See*—
Anderson, Neal S., Bendat, and Williams. 3,043,515.

Bendix Corp., The: *See*—
Barnard, William H. 3,044,006.
Bishop, Alfred F. 3,043,539.
Gardner, Paul J. 3,043,466.
Martin, Wesley L. 3,043,907.
Sobchak, John. 3,044,047.
Tracey, John E., and Wheeler. 3,043,165.
Zito, George V., and Chilton. 3,044,012.

Bennett, Norman J. H., to Vickers Ruwolt Proprietary Ltd. Apparatus for filling containers with liquid. 3,043,349, 7–10–62, Cl. 141—39.

Bennett, William D.: *See*—
Goy, Ronald S., and Bennett. 3,042,956.

Bennett, Worthy L., ¼ to K. Norton. Liquid pump. 3,043,228, 7–10–62, Cl. 103—38.

Benson, Harold R., to The Nuarc Co. Photographic printer. 3,043,204, 7–10–62, Cl. 95—76.

Bergh, Thomas R., D. E. King, R. C. Nierzwicki, and P. Thorne, to Airtex Corp. Radiant acoustical system. 3,043,567, 7–10–62, Cl. 257—124.

Bergman, Per G. Drawing-tables with vertically adjustable drawing-board. 3,043,048, 7–10–62, Cl. 45—131.

Berlin, Daniel. Folding rack. 3,043,440, 7–10–62, Cl. 211—178.

Berliner Maschinenbau A.G. vormals L. Schwartzkopff: *See*—
Diener, Richard. 3,043,576.

Bernhauer, Konrad: *See*—
Becher, Elisabeth, Bernhauer, and Wilharm. 3,043,750.

Berry, Walter V. Lance with conduits for mixing gases located interiorly. 3,043,577, 7–10–62, Cl. 266—34.

Bettoni, Eugene C., to Holley Carburetor Co. Ignition distributor. 3,043,285, 7–10–62, Cl. 123—117.

Bickmore, John T., to Xerox Corp. Xerographic color masking. 3,043,686, 7–10–62, Cl. 96—1.

Biedendieck, Karl, and K. Kaufmann, to J. M. Voith, G.m.b.H. Thrust bearing for drilling turbines. 3,043,637, 7–10–62, Cl 308—162.

Bingham, George H., Jr., and O. Y. Olsson, to Cambridge Rubber Co. Welt in shoes with molded soles. 3,042,975, 7–10–62, Cl. 18—59.

Binkley Co., The: *See*—
McKay, Harry M. 3,043,605.

Birkin, Bernard G., to BTR Industries Ltd. Rollers for pickling baths. 3,042,995, 7–10–62, Cl. 29—116.

Bishop, Alfred F., to The Bendix Corp. Control stick torque sensor to selectively effect autopilot and manual control of aircraft control surfaces. 3,043,539, 7–10–62, Cl. 244—76.

Black, Rodrick E.: *See*—
Poletika, Nicholas V., and Black, 3,042,977.

Blaser, Bruno, B. Raecke, and H. Schirp, to Henkel & Cie G.m.b.H. Process for the production of aromatic polycarboxylic acids. 3,043,846, 7–10–62, Cl. 260—295.

Bloch, Alan, to General Precision Inc. Airborne antenna positioning system. 3,044,056, 7–10–62, Cl. 343—7.4.

Bloch, Herman S., to Universal Oil Products Co. Process for the removal of sludge from a liquid stream. 3,043,771, 7–10–62, Cl. 208—299.

Block, William S., to Vapor Heating Corp. Power failure detector. 3,044,051, 7–10–62, Cl. 340—248.

Blomberg, Folke I., to Svenska Aeroplan Aktiebolaget. Method and means for the equalization of the idling operation of a multiple cylinder 2-stroke cycle internal combustion engine, preferably a carburetor engine. 3,043,286, 7–10–62, Cl. 123—124.

Blomquist, Uno O., to Svenska Maskinverken, Aktiebolaget. Steam boiler plant. 3,043,279, 7–10–62, Cl. 122—240.

Blonder, Howard. Tuck-in type box. 3,043,068, 7–10–62, Cl. 53—29.

Blonder-Tongue Electronics: *See*—
Tongue, Ben H. 3,044,022.

Blough, Ronald S., to Fairfield Engineering and Mfg. Co. Livestock drinking cup. 3,043,267, 7–10–62, Cl. 119—75.

Blume, Alan F.: *See*—
Blume, Frank J. and A. F. 3,043,400.

Blume, Frank J. and A. F. Multiple station conveyor circuit. 3,043,400, 7–10–62, Cl. 187—3.

Bock, Richard G.: *See*—
Boyd, Leo R., and Bock. 3,043,954.

Bodenschatz, August, to I-T-E Circuit Breaker Co. Bolted connection for current limiting fuses. 3,043,934, 7–10–62, Cl. 200—114.

Bodycomb, Alistair K. Vane type engine, pump, fluid compressor, flow meter and the like. 3,043,231, 7–10–62 Cl. 103—144.

Boeing Airplane Co.: *See*—
Abraham, Frank J. 3,043,367.
Pearson, Raymond E. 3,043,410.

Bohlin, Nils I., to Volvo, Aktiebolaget. Safety belt. 3,043,625, 7–10–62, Cl. 297—389.

Bolliefer, Dwight L., to Kodiak, Inc. Freezing mold for ice cube making machines. 3,043,117, 7–10–62, Cl. 62—344.

Bolser, Mary E. Applicator for fluids. 3,043,316, 7–10–62, Cl. 132—74.5.

Bolton, John W., & Sons, Inc.: *See*—
Cowles, Edwin. 3,043,526.

Boltz, Paul T.: *See*—
Clark, Austin B. J., and Boltz. 3,043,137.

Bond, Bethel, and J. A. South. Wet cell battery having depolarizing means. 3,043,897, 7–10–62, Cl. 136—83.

Bonvicini, Alberto, and L. Lucchetti, to Montecatini Societa Generale per l'Industria. Mineraria e Chimica. Printing ink composition containing polypropylene, and process for producing same. 3,043,787, 7–10–62, Cl. 260—4.

Boris, Sonia nee Jokelson, to Societe Technique de Pulverisation (par Abreviation Step). Metering sprayer device. 3,043,524, 7–10–62, Cl. 239—350.

Bornzin, James H., to International Harvester Co. Hay crushing roll construction. 3,043,073, 7–10–62, Cl. 56—1.

Bottenbruch, Ludwig: *See*—
Schnell, Hermann, and Bottenbruch. 3,043,800.

Boule, George F., to R. R. Donnelley & Sons Co. Apparatus to index and clamp electrotype plates for punching. 3,043,586, 7–10–62, Cl. 269—49.

Bowen, Eustace C. End lounge glider. 3,043,623, 7–10–62, Cl. 297—273.

Bowers, George H., III: *See*—
Busse, Warren F., Bowers, and Armitage. 3,043,716.

Boyd, Leo R., and R. G. Bock, to General Electric Co. Fission chamber and assembly. 3,043,954, 7–10–62, Cl. 250—83.1.

Boyer, Robert J., to E. I. du Pont de Nemours and Co. Process for coating non-fibrous organic sheet material. 3,043,713, 7–10–62, Cl. 117—62.

Boyer, William M., J. H. Shultz, and C. G. Zike, to The Richardson Co. Reactions of silicon-nitrogen containing compounds with hydroxy compounds. 3,043,798, 7–10–62, Cl. 260—46.5.

Boyle, Charles M. Reverse drilling rock bit. 3,043,385, 7–10–62, Cl. 175—401.

Bradley, Cortez J. Baseboard duster and applicator. 3,042,952, 7–10–62, Cl. 15—210.

Brame, Arthur A., and F. A. Wilkins, to The Brame Textile Machine Co. Yarn package protective adapter. 3,043,536, 7–10–62, Cl. 242—128.

Brame Textile Machine Co., The: *See*—
Brame, Arthur A., and Wilkins. 3,043,536.

Brandt, Hans A.: *See*—
Wick, Richard, and Brandt. 3,043,218.

Brannock, Kent C.: *See*—
Martin, James C., and Brannock. 3,043,791.

Breen, Alvin L., to E. I. du Pont de Nemours and Co. Process for making bulky yarn. 3,043,088, 7–10–62, Cl. 57—157.

Breen, Alvin L., and M. V. Sussman, to E. I. du Pont de Nemours and Co. Process for making alternating twist slub yarn using a fluid vortex. 3,043,087, 7–10–62, Cl. 57—157.

Breher, Rudolf, to Friedrich Stubbe. Gate valve having an upsettable sealing member of rubber elastic material. 3,043,555, 7–10–62, Cl. 251—187.

Bremer, Fred C., 30% to J. M. Shackleton, and 18% to L. M. Selden. Envelope construction. 3,043,506, 7–10–62, Cl. 235—61.12.

Bressler, Wilbur L., and W. E. Presley, to The Dow Chemical Co. Rapid drying epoxy-ester metal litho finishes. 3,043,788, 7–10–62, Cl. 260—18.

Brevets Aero-Mecaniques S.A.: *See*—
Kaspaul, Alfred. 3,043,222.

Brickman, Leo, and M. I. Edenbaum, to Johnson & Johnson. Plaster of Paris bandage containing hydroxy propyl methyl cellulose. 3,043,298, 7–10–62, Cl. 128—91.

Brill, Joseph, Jr., and R. W. McPeters. Infant's nursing bottle. 3,043,462, 7–10–62, Cl. 215—11.

Brinsmade, Daniel S., to The Connecticut Hard Rubber Co. Reinforced inflatable seal and method of making. 3,042,980, 7–10–62, Cl. 20—69.

Briscoe, Madison H., to Circular Bonding Co., Inc. Portable thermal bonding device. 3,043,210, 7–10–62, Cl. 100—93.

Bristol, David A., to Robertshaw-Fulton Controls Co. Pivotally mounted apparatus. 3,043,579, 7–10–62, Cl. 267—1.

Bristol Siddeley Engines Ltd.: *See*—
Pfummer, Henry J. 3,043,061.

British Iron and Steel Research Association, The: *See*—
Ravenscroft, Jack. 3,043,894.

British Titan Products Co., Ltd.: *See*—
Hughes, William, and Evans. 3,043,656.
Hughes, William, and Evans. 3,043,657.
Hughes, William, and Evans. 3,043,660.
Hughes, William, Evans, and Harris. 3,043,659.

Brizner, Lothar H., to E. I. du Pont de Nemours and Co. Transparent ferromagnetic material and method for producing the same. 3,043,654, 7–10–62, Cl. 23—50.

Brockhues, Frederick B., and W. Muhm. Process of manufacturing a shaped body of porous polystyrene foam of low density. 3,042 973, 7–10–62, Cl. 18—48.

Broderick, John J.: *See*—
Petersen, Maurice E., and Broderick. 3,043,969.

Broich, Franz: *See*—
Frese, Albert, Broich, and Kränzlein. 3,043,825.

Brömer, Heinz, and N. Meinert, to Ernst Leitz Gesellschaft mit beschrankter Haftung. Optical glass. 3,043,702, 7–10–62, Cl. 106—47.

Bronswerk, N.V.: *See*—
Olie, Jacob R., and van Winsen. 3,043,768.

Brower, David F.: *See*—
Harvey, George W., and Brower. 3,043,981.

Brown, Edgar A., to International Business Machines Corp. Data sensing circuit. 3,043,505, 7–10–62, Cl. 235—61.11.

Brown, Edward A., to G. D. Searle & Co. 11-oxygenated 17α-carboxyethyl-17β-hydroxyandrosta-1,4-dien-3-one lactones. 3,043,835, 7–10–62, Cl. 260—239.57.

Brown Grease Gun Co., Inc.: *See*—
Brown, William Y. 3,043,224.

Brown, Joseph L., E. C. Layden, J. M. Taylor, and D. H. Weiss, to International Business Machines Corp. Normalizing apparatus for floating point operations. 3,043,509, 7–10–62, Cl. 235—156.

Brown, Lowell N. Method and tools for repairing muffler assemblies. 3,043,002, 7–10–62, Cl. 29—401.

Brown, Morris E., and W. A. Martin, to Eastman Kodak Co. Telescopic finder for motion picture cameras. 3,043,181, 7–10–62, Cl. 88—1.5.

Brown, Norman C. J. E. N. Sloan, and P. A. Kingsbury, to William Cooper & Nephews, Inc. Anthelmintic compositions and method of use. 3,043,744, 7–10–62, Cl. 167—53.

Brown, Robert J. S.: *See*—
Jones, Stanley B., and Brown. 3,044,010.

Brown & Sharpe Mfg. Co.: *See*—
Twamley, William E., and Carroll. 3,043,173.

Brown, William Y., to Brown Grease Gun Co., Inc. Self-contained service pump assembly. 3,043,224, 7–10–62, Cl. 103—28.

Browning Mfg. Co.: *See*—
Keepers, Harry R. 3,043,151.

Brucken, Byron L., to General Motors Corp. Domestic appliance. 3,043,015, 7–10–62, Cl. 34—80.

Brunberg, Karl G.: *See*—
Treffner, Arvo, Liliaunde, and Brunberg. 3,043,915.

Brunswick Corp.: *See*—
Higgins, John L. 3,043,304.

Bryan, William T., and J. L. Arwine, to The Duriron Co., Inc. Anode for cathodic protection system. 3,043,765, 7–10–62, Cl. 204—196.

Bryant Chucking Grinder Co.: *See*—
Lillie, Gordon E. 3,043,062.

Büchner, Karl. O. Roelen, J. Mels, and H. Langwald, to Ruhrchemie Aktiengesellschaft. Production of heptadecane-dicarboxylic acid-1,17. 3,043,871, 7–10–62, Cl. 260—537.

Buckingham, Michael J., and W. M. Fairbank, said Buckingham assor. to Duke University, Inc. Superconductive persistatrons and computer systems formed thereby. 3,043,512, 7–10–62, Cl. 235—175.

Budde, Walter M., Jr., to Archer-Daniels-Midland Co. Hydrophobic sheet material and method of making the same. 3,043,717, 7–10–62, Cl. 117—138.8.

Buecheler, Paul, to Sandoz Ltd. Dyeing of artificial fibers. 3,043,646, 7–10–62, Cl. 8—40.

Buhrle, Karl A., to Alfred Gauthier G.m.b.H. Photographic camera with automatic speed regulator. 3,043,203, 7–10–62, Cl. 95—10.

Buley, Theodore L.: *See*—
Page, Ralph E., and Buley. 3,042,999.

Bunker Hill Co., The: *See*—
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Burdick, Glen A., to Sylvania Electric Products Inc. Image display device. 3,043,975, 7–10–62, Cl. 313—92.

Burg, Marion, to E. I. du Pont de Nemours and Co. Polymeric amides and their preparation. 3,043,805, 7–10–62, Cl. 260—72.

Bürklin, Gerlinde, and E. Kasten, to Siemens-Schuckertwerke Aktiengesellschaft. Method for producing bodies of preferably non-linear polyatomic synthetics. 3,043,760, 7–10–62, Cl. 204—162.

Burnett, Edward N., to Gerber Products Co. Cases for containers severable to form trays. 3,043,490, 7–10–62, Cl. 229—15.

Burns, Jerome G., to International Resistance Co. Apparatus and method for banding elongated cylindrical objects. 3,043,721, 7–10–62, Cl. 117—212.

Burr, Francis K., and J. S. Panto, to United Merchants and Manufacturers, Inc. Process for applying crease resistant finishes to cellulosic fabrics and products thereof. 3,043,719, 7–10–62, Cl. 117—139.4.

Burroughs Corp.: *See*—
Lee, Edwin S., III. 3,044,044.

Bushmeyer, Richard W., and F. J. Vaughn, to J. I. Case Co. Agricultural implements. 3,043,378, 7–10–62, Cl. 172—754.

Busse, Warren F., G. H. Bowers III, and J. B. Armitage, to E. I. du Pont de Nemours and Co. Process of bonding polyolefin resins to polar solid substrates, resultant coated article and polyolefin coating composition. 3,043,716, 7–10–62, Cl. 117—132.

Butler, Gordon O., and W. H. Calvert, to Houdaille Industries, Inc. Vehicle elevating mechanism. 3,043,454, 7–10–62, Cl. 214—75.

Butler, Jesse L., to Sanders Associates, Inc. Three conductor planar antenna. 2,044,066, 7–10–62, Cl. 343—771.

Butson, Peter C., to The General Electric Co. Ltd. Aerial system having variable directional properties. 3,044,067, 7–10–62, Cl. 343—781.

Byers, Donald W. Machine for automatically placing and securing film transparencies in film mounts. 3,043,363, 7–10–62, Cl. 156—443.

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Calcinator Corp.: *See*—
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Hebert, John W., and La Rue. 3,043,247.
Hebert, John W., and La Rue. 3,043,249.
Hebert, John W., Schubert, and Coles. 3,043,245.

Caldwell John R., to Eastman Kodak Co. Linear polyesters from dimethylmalonic acid. 3,043,806, 7–10–62, Cl. 260—75.

California Research Corp.: *See*—
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Calvert, William H.: *See*—
Butler, Gordon O., and Calvert. 3,043,454.

Cambridge Instrument Co., Inc.: *See*—
Fawcett, Howard N. 3,043,918.

Cambridge Rubber Co.: *See*—
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Cambridge Wire Cloth Co.: *See*—
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Cammack, Malcolm E., to Crescent Creamery Co. Apparatus for packaging frozen confections. 3,043,070, 7–10–62, Cl. 53—159.

Camp, Clement W., to Worthington Corp. Flow control means for a pumping station. 3,043,226, 7–10–62, Cl. 103—26.

Campbell, Ivor E., and J. H. Oxley, to Diamond Alkali Co. Method of producing chromium. 3,043,679, 7–10–62, Cl. 75—26.

Canada, Her Majesty the Queen in the right of, as represented by the Minister of National Defence: *See*—
Wilson, John O. 3,044,018.

Candellse, Alfred, to General Motors Corp. Air injection system for an internal combustion engine. 3,043,281, 7–10–62, Cl. 123—26.

Cannon Electric Co.: *See*—
Wilson, Robert E. 3,043,925.

Capitol Products Corp.: *See*—
Stram, George, McIntyre, and Geiselman. 3,043,434.

Caprin, Conrad, J. L. Wyckoff, and L. R. Coe, to Owens-Corning Fiberglas Corp. Expendable pallet. 3,043,450, 7–10–62, Cl. 214—10.5.

Carlson, Harold A.: *See*—
Ott, William F., Krein, and Carlson. 3,043,572.

Carlson, Martin. Hydraulic door operator system and control means therefor. 3,043,277, 7–10–62, Cl. 121—44.

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Carroll, James W.: *See*—
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Carter, Sidney T., to Geo. J. Meyer Mfg. Co. Label adjusting means for label magazines. 3,043,588, 7–10–62, Cl. 271—33.

Cartwright, Horace A. Hot spray bars. 3,043,518, 7–10–62, Cl. 239—124.

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Casius Corp. Ltd.: *See*—
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Cassano, James R.: *See*—
Laviana, Donald W., Fritz, and Cassano. 3,043,922.

Cassell, Joseph L., to The Reeve Electrical Co., Inc. Bipolar reciprocating alternating current bell motor. 3,043,995, 7–10–62, Cl. 317—172.

Castricone, John A., to American Motors Corp. Centering and stabilizing apparatus for a combined washing machine and extractor. 3,043,435, 7–10–62, Cl. 210—363.

Cavallini, Guido, and E. Massarani, to Francesco Vismara S.p.A. 2-(4-biphexylyl)Δ⁴-hexenoic acid and derivatives as anticholesterinemic agents. 3,043,746, 7–10–62, Cl. 167—65.

Cavallini, Guido, and E. Massarani, to Francesco Vismara S.p.A. Isonicotinoyl hydrazones. 3,043,838, 7–10–62, Cl. 260—240.

Cavasos, Ervan C.: *See*—
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Cedar Rapids Engineering Co.: *See*—
Humbert, Marvin H. 3,043,058.

Cella, John A., to G. D. Searle & Co. 3,11-dioxygenated-17α-carboxyethylandrost-4-en-17β-ol lactone, nor compounds corresponding, and manufacturing processes. 3,043,837, 7–10–62, Cl. 260—239.57.

Celotex Corp., The: *See*—
Loechl, Clarence J. 3,043,014.

Cerasari, Nicholas. Nursing bottle. 3,043,464, 7–10–62, Cl. 215—100.

Cérède, Jean: *See*—
Nominé, Gérard, and Cérède. 3,043,865.

Challenge-Cook Bros., Inc.: *See*—
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Chambers, Vaughan C., Jr., to E. I. du Pont de Nemours and Co. Photographic gelatin-silver halide emulsions containing β-hydroxy-alkyl ethers of polyvinyl alcohol. 3,043,698, 7–10–62, Cl. 96—114.

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Champion Papers Inc.: *See*—
Green, Robert P., and Judd. 3,043,655.

Chander, Kailash: *See*—
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Chandler, Delbert F.: *See*—
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Chandler, Edward F. Thermo-transpiration portable air conditioner unit. 3,043,573, 7–10–62, Cl. 261—24.

Chaplin, Merle P., to Diamond National Corp. Pulp tank structures for pulp molding machines and method. 3,043,742, 7–10–62, Cl. 162—228.

Chapman, Dennis R., and D. E. Felks, to Courtaulds Ltd. Apparatus for use in withdrawing twisted yarn from yarn packages. 3,043,537, 7–10–62, Cl. 242—128.

Charbonnages de France: *See*—
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Charles, Harold. Chemical testing means. 3,043,669, 7–10–62, Cl. 23—253.

Chemische Werke Huls Aktiengesellschaft: *See*—
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Chenault, Louis W. Hydraulic well jar. 3,043,373, 7–10–62, Cl. 166—178.

Chicago Dynamic Industries Inc.: *See*—
Koci, Jerry C. 3,043,593.

Chicopee Mfg. Corp.: *See*—
Harmon, Carlyle, Barnard, and Johnson. 3,043,733.

Childers, Spencer L., and L. C. Tober, to The Vendo Co. Favored flavor capacity reserving mechanism. 3,043,475, 7–10–62, Cl. 221—125.

Childress, James D.: *See*—
Lessoff, Howard, Laird, and Childress. 3,043,777.

Childs, William I., to The Dow Chemical Co. Removal of iron from aqueous concentrated alkali metal hydroxide solutions. 3,043,661, 7–10–62, Cl. 23—184.

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Zito, George V., and Chilton. 3,044,012.

Chin, David D., R. F. Lazzarini, and A. A. Goldfinger, to Eitel-McCullough, Inc. Radio frequency load. 3,044,027, 7–10–62, Cl. 333—22.

Chlonda, Andre. Automatic garage building. 3,043,451, 7–10–62, Cl. 214—16.1.

Chittenden, George E., to The Keelavite Co. Ltd. Hydraulic drive for winding machines. 3,043,535, 7–10–62, Cl. 242—75.53.

Chmielewski, Jerry H. Clothes pole. 3,043,438, 7–10–62, Cl. 211—105.6.

Christie, Reginald A., and W. R. Rowbotham, to International Harvester Co. Mower lift device. 3,043,074, 7–10–62, Cl. 56—25.

Christoff, Chris A., to Clary Corp. Inking device. 3,043,214, 7–10–62, Cl. 101—97.

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Ciba Corp.: *See*—
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Wegmann, Jacques, and Renggli. 3,043,650.

Ciba Limited: *See*
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Maeder, Arthur. 3,043,822.
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Clark, Austin B. J., and P. T. Boltz. High pressure device. 3,043,137, 7–10–62, Cl. 73—167.

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Clark, George C.: *See*—
Marion, Clyde E., Bartlett, and Clark. 3,043,386.

Clark, Wallace. Means for governing fluid pump in rotary well drilling rig. 3,043,380, 7–10–62, Cl. 175—26.

Clark, Wendall J., to Texaco Experiment Inc. Electric initiator. 3,043,223, 7–10–62, Cl. 102—70.2.

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Clayton & Lambert Mfg. Co.: *See*—
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Clearwaters, Walter L. Electrostrictive transducer. 3,043,967, 7–10–62, Cl. 310—8.7.

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Clegg, Frank G., to Curtis 1000, Inc. Banking envelope. 3,043,493, 7–10–62, Cl. 229—72.

Clejan, Deodat, to General American Transportation Corp. Combination road and railway vehicles. 3,043,242, 7–10–62, Cl. 105—215.

Clepatch, Henry: *See*—
Morris, Lynwood L. 3,043,005.

Cleverdon, Desmond, to General Cigar Co., Inc. Process and product utilizing tobacco stems. 3,043,723, 7–10–62, Cl. 131—17.

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Anderson, John R., and Clinehens. 3,042,997.

Clough, Philip J., to National Research Corp. Method and apparatus for vacuum coating metallic substrates. 3,043,715, 7–10–62, Cl. 117—107.

Cobel, George B., and P. R. Juckniess, to The Dow Chemical Co. Calcium metal production. 3,043,756, 7–10–62, Cl. 204—69.

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Caprin, Conrad, Wyckoff, and Coe. 3,043,450.

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Helweg, Claud E. 3,043,329.

Coffield, Thomas H., to Ethyl Corp. Organic compositions. 3,043,774, 7–10–62, Cl. 252—51.5.

Coffield, Thomas H., and A. H. Filbey. Organic material containing a 4,4'-methylenebis phenol. 3,043,775, 7–10–62, Cl. 252—52.

Cohen, Martin J., to Franklin Systems, Inc. Measuring systems using infra-red radiation. 3,043,956, 7–10–62, Cl. 250—83.3.

Cohn, Werner C., to United States Steel Corp. Assembly for insertion in a blast furnace wall. 3,043,578, 7–10–62, Cl. 266—41.

Colautti, Albert J., to General Motors Corp. Power transmitting mechanism for vehicle seats. 3,043,552, 7–10–62, Cl. 248—429.

Colebrook, James N., to The Lodge & Shipley Co. Machine tool control. 3,043,172, 7–10–62, Cl. 82—2.

Coleman, Joseph J., to Servel, Inc., Burgess Battery Co. Division. Magnesium battery. 3,043,899, 7–10–62, Cl. 136—108.

Coleman, Richard R., Jr. Gas turbine engine. 3,043,106, 7–10–62, Cl. 60—39.51.

Coles, Henry L.: *See*—
Hebert, John W., Schubert, and Coles. 3,043,245.

Coley, Samuel E. Bearings. 3,043,634, 7–10–62, Cl. 308—6.

Collins, Harold B., Jr., to Philco Corp. Single channel stereophonic system. 3,043,914, 7–10–62, Cl. 179—15.

Collins, Joseph M. Combined litter extension pillow support and back rest. 3,042,934, 7–10–62, Cl. 5—9.

Colpo, Albert D. Chalkboard and supporting means therefor. 3,043,023, 7–10–62, Cl. 35—63.

Combo-Craft, Inc.: *See*—
Howe, Wilson S. 3,042,942.

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Commonwealth Engineering Co. of Ohio, The: *See*—
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Commonwealth Scientific and Industrial Research Organization: *See*—
Bell, George A., and Lobb. 3,043,060.
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Connor, George R.: *See*—
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Conover, Lloyd H.: *See*—
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Cooley, Robert D., to The Superior Electric Co. Voltage regulator. 3,044,008, 7–10–62, Cl. 323—43.5.

Cooper, William, & Nephews, Inc.: *See*—
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Corlett, Ewan C. B., to Wm. Cory & Son Ltd. Marine tankers. 3,043,256, 7–10–62, Cl. 114—74.

Cornwall Corp.: *See*—
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Cortiss, Warren W., W. D. Gilson, and A. A. Manteuffel, to The Pure Oil Co. High phosphorus content extreme pressure lubricant additive and method of preparation thereof. 3,043,773, 7–10–62, Cl. 252—46.7.

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Cortlett, Ewan C. B. 3,043,256.

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Seshadri, Tiruvenkata R., and Chander. 3,043,856.

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Courtney-Pratt, Jeofry S., to Bell Telephone Laboratories, Inc. High speed shutter. 3,043,960, 7–10–62, Cl. 250—213.

Cowles, Edwin, to John W. Bolton & Sons, Inc. Apparatus for pulping paper stock. 3,043,526, 7–10–62, Cl. 241—46.

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Craig, James R., and G. W. Otto, Jr., to Profexray, Inc. X-ray apparatus. 3,043,953, 7–10–62, Cl. 250—57.

Craig, Paul N., to Smith Kline & French Laboratories. Substituted phenoselenazine compounds. 3,043,839, 7–10–62, Cl. 260—241.

Craig, Paul N., to Smith Kline & French Laboratories. Substituted acridans. 3,043,842, 7–10–62, Cl. 260—268.

Creamery Package Mfg. Co., The: *See*—
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Crews, Allen B., and D. Muskat, to Electronic Training Aids, Inc. Training panel for electronic technicians. 3,043,022, 7–10–62, Cl. 35—19.

Crompton & Knowles Packaging Corp.: *See*—
Zwarycz, Michael. 3,043,476.

Crowell Designs, Inc.: *See*—
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Cunningham, Patrick J., and M. B. Wolf, to The Task Corp. Force moment type strain gauge support. 3,043,136, 7–10–62, Cl. 73—133.

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Custom Metal Products Corp.: *See*—
Rehnberg, Glenn R. and P. E. 3,043,604.

Cutler-Hammer, Inc.: *See*—
Lilliquist, Arvid E. 3,043,990.

Cyba, Henry A., to Universal Oil Products Co. Condensation product of a monoalkanolamine with the reaction product of a terpene and an α,β-unsaturated polycarboxylic acid, anhydride or ester thereof. 3,043,789, 7–10–62, Cl. 260—24.

Daglish, Anthony F., R. Vonderwahl, and G. A. Tillotson, to J. R. Geigy, A.-G. Detergent compositions containing a 3,5-diaminopyrazone-2,6-dicarboxylic acid derivative. 3,043,780, 7–10–62, Cl. 252—117.

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Dalferes, Anthony W. Binder for office folder. 3,042,985, 7–10–62, Cl. 24—153.

Daline, Gordon. Easel type display container. 3,043,422, 7–10–62, Cl. 206—45.24.

Daly, Daniel F., to The Arrow-Hart & Hegeman Electric Co. Arc suppressing plates and hood for electric switches. 3,043,938, 7–10–62, Cl. 200—144.

Dana, Baron R., and W. H. Ray, to Societa Farmaceutici Italia Farmitalia. Protecting articles from animals with streptomyces distallicus extracts. 3,043,743, 7–10–62, Cl. 167—46.

Dannebaum, Rex P. Knot tying apparatus. 3,043,615, 7–10–62, Cl. 289—17.

Darsie, Burns, and M. Helfetz, to United States of America, Army. Saddle type magazine feed. 3,043,198, 7–10–62, Cl. 89—33.

Davey, Gerald F., to Riley Stoker Corp. Expansion joint. 3,043,055, 7–10–62, Cl. 50—194.

Davin, Joseph M., and H. A. Hug, to American Brake Shoe Co. Friction drive apparatus. 3,043,149, 7–10–62, Cl. 74—192.

Davis, Daniel O., and L. G. McGill, to Davis & McGill, Inc. Personal inflatable life preserver. 3,042,946, 7-10-62, Cl. 9—316.

Davis, Edmund P.: *See*—
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Davis, Horace R., Jr., and D. P. Sorensen, to The M. W. Kellogg Co. Process for preparing sulfones. 3,043,879, 7-10-62, Cl. 260—607.

Davis, Loyal H., H. Arkin, and O. L. Updike, Jr., to Philip Morris, Inc. Apparatus for measuring and recording values. 3,043,507, 7-10-62, Cl. 235—151.

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Davis, Daniel O., and McGill. 3,042,946.

Davis, Roy C., to The Guiberson Corp. Anchoring device. 3,043,372, 7-10-62, Cl. 166—140.

Davis, Walter B., to Portable Electric Tools, Inc. Edge guide for use with powered hand saws. 3,043,351, 7-10-62, Cl. 143—43.

Decker, Jacob, and A. D. C. Stuckey, to The Cincinnati Milling Machine Co. Machine tool construction to eliminate effect of expansion in members. 3,043,036, 7-10-62, Cl. 51—50.

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Hi, Louis. 3,043,318.

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Hubbard, Arthur L. 3,043,075.
Morrison, Charles S., and Forth. 3,043,418.
Northcote, John A., and Kulak. 3,043,082.

De Ford, Donald D., and B. O. Ayers, to Phillips Petroleum Co. Thermochromatography heater. 3,043,127, 7-10-62, Cl. 73—23.

Deichert, William G., and J. J. Pellon, to American Cyanamid Co. Linear polyamides from bis-(omega-aminoalkyl) phosphines and dicarboxylic acids. 3,043,810, 7-10-62, Cl. 260—78.

De la Garza, Jesus. Non-drip faucet valve. 3,043,554, 7-10-62, Cl. 251—175.

Delalande, Michel, and J. J. Balsse. Process for the extraction of thevetins A and B from total thevetin. 3,043,829, 7-10-62, Cl. 260—210.5.

De Laney, William J. Intercom for automobiles. 3,043,912, 7-10-62, Cl. 179—1.

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Delmonte, John, to Furane Plastics Inc. Curing promoter for furane resins. 3,043,804, 7-10-62, Cl. 260—67.

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De Net, Robert W.: *See*—
Zaugg, Harold E., and De Net. 3,043,845.

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Kremer, Hoyt E., and Denisty. 3,043,409.

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Dent, Eugene, and C. R. Moffett, to General Motors Corp. Liquid cooled wall. 3,043,103, 7-10-62, Cl. 60—35.6.

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De Ruggieri, Pietro, to Ormonoterapia Richter S.p.A. 17-cyanohydrin of 19-nor androstenedione and 3-derivatives thereof. 3,043,833, 7-10-62, Cl. 260—239.55.

Deserno, Peter, and M. Schnädelbach, to Siemens & Halske Aktiengesellschaft. Cooling thermally stressed parts of electron tubes. 3,043,973, 7-10-62, Cl. 313—40.

Destremps, Edward A., and E. J. Gornowski, to Esso Research and Engineering Co. Manufacture of dense coherent carbon masses. 3,043,753, 7-10-62, Cl. 202—26.

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Trumbull, Donald E., Devine, and Pyles. 3,043,477.

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Diemer, Gesinus, to North American Philips Co., Inc. Circuit element. 3,043,958, 7-10-62, Cl. 250—211.

Diemer, Gesinus, to North American Philips Co., Inc. Semiconductor device for purposes of amplification or switching. 3,043,959, 7-10-62, Cl. 250—211.

Diener, Richard, to Berliner Maschinenbau A.G. vormals L. Schwartzkopff. Pipe cutting machine for automatically dividing a rotating and at the same time axially moving pipe. 3,043,576, 7-10-62, Cl. 266—23.

Dietrich, Paul, to Maschinenfabrik Augsburg-Nurnberg, A.G. Printing press machinery. 3,043,219, 7-10-62, Cl. 101—378.

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Di Nunzio, James J., to The Goodyear Tire & Rubber Co. Outsole and method of manufacture. 3,042,948, 7-10-62, Cl. 12—146.

Discenza, Nelson. Back-filling blade for a power shovel. 3,043,032, 7-10-62, Cl. 37—117.5.

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Karig, Erhardt, Steuer, Schrodt, and Dittrich. 3,043,152.

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Donnelley, R. R., & Sons Co.: *See*—
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Doppstadt, Adolf: *See*—
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Dow Chemical Co., The: *See*—
Adie George M. 3,043,730.
Anderson, Arthur W., Greminger, and Beaver. 3,043,720.
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Jahn, Alex K., and Gillard. 3,043,817.
Mattano, Leonard A. 3,043,809.
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Downing, George V., Jr., to Merck & Co., Inc. Purification process for hydrochlorothiazide. 3,043,840, 7-10-62, Cl. 260—243.

Doyle, Britton H., to Nashua Corp. Manual selective plural length tape dispenser. 3,043,486, 7-10-62, Cl. 226—136.

Doyle, Frank P., and J. H. C. Nayler. Synthetic penicillins. 3,043,831, 7-10-62, Cl. 260—239.1.

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Erath, Louis W., Madeley, and Hefer. 3,044,042.
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Breen, Alvin L., and Sussman. 3,043,087.
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Busse, Warren F., Bowers, and Armitage. 3,043,716.
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Lewis, Cameron D., MacDonald, and Schweitzer. 3,043,803.
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Eames, Charles, D. Albinson, and P. J. Pearce, to Herman Miller, Inc. Wall mounted vertically adjustable desk. 3,043,640, 7-10-62, Cl. 311—20.

Eastman Kodak Co.: *See*—
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Barr, Charles R., Henn, and Salminen. 3,043,694.
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Caldwell, John R. 3,043,806.
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Smith, John W. 3,043,084.
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Weyerts, Walter J., and Barnes. 3,043,688.

Eberhart, Gerald W., to The Electric Storage Battery Co. Goggles. 3,042,928, 7-10-62, Cl. 2—14.

Ebetino, Frank F., to The Norwich Pharmacal Co. New 1-acyl-1-(2-cyano-ethyl)-2-(5-nitrofurfurylidene) hydrazines and the preparation thereof. 3,043,853, 7-10-62, Cl. 260—347.3.

Ecke, George G., and A. J. Kolka, to Ethyl Corp. Substituted catechol antioxidants. 3,043,672, 7-10-62, Cl. 44—69.

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Eckold, Walter. Bending press. 3,043,359, 7-10-62, Cl. 153—15.

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Eichmann, Albert C., to United States of America, Navy. Load releasing lock-on coupling. 3,043,614, 7-10-62, Cl. 287—119.

Eiland, Phillip F., Jr., and J. H. McGinley, to HRB-Singer, Inc. Device for measuring supersonic and subsonic speeds. 3,043,142, 7-10-62, Cl. 73—212.

Eisert, Lloyd L. Harvesting machine. 3,043,427, 7-10-62, Cl. 209—26.

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Electronic Training Aids, Inc.: *See*—
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Electro-Sonic Laboratories, Inc.: *See*—
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Elektro-Mechanik-G.m.b.H.: *See*—
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Elliott, Reed O., and K. A. Gschneidner, Jr., to United States of America, Atomic Energy Commission. Plutonium alloys containing controlled amounts of plutonium allotropes obtained by application of high pressures. 3,043,727, 7-10-62, Cl. 148—4.

Elpern, Bill, to Sterling Drug Inc. Lower-alkyl 1-[3-(monocarbocyclic-arly)-2-propenyl]-4-phenyl-4-piperidyl ketones and their preparation. 3,043,844, 7-10-62, Cl. 260—294.7.

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Engel, Wolfgang, to Anker-Phoenix Nahmaschinen AG. Zigzag sewing machine with fancy-stitch selector. 3,043,252, 7-10-62, Cl. 112—158.

Engels, Eugene O. Dough stretching apparatus. 3,043,244, 7-10-62, Cl. 107—9.

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Eppy, Marvin. Waistband structure for garments. 3,042,932, 7-10-62, Cl. 2—236.

Erath, Louis W., to Dresser Industries, Inc. Method and apparatus for compositing seismic records. 3,044,014, 7-10-62, Cl. 324—77.

Erath, Louis W., P. E. Madeley, and F. W. Hefer, to Dresser Industries, Inc. Apparatus for generating and employing time pulses. 3,044,042, 7-10-62, Cl. 340—15.5.

Erickson, John P. Portable dock. 3,043,109, 7-10-62, Cl. 61—48.

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Dudley, Arthur R., Royder, and Allison. 3,043,431.
Kant, Fred H., Baeder, Hinlicky, and Read. 3,043,770.
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Read, Chester L., and Lucchesi. 3,043,759.

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Thiebaut, Roger P. J. G., and Etienne. 3,043,799.

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Failla, Ignazio. Rigid-guide excavator particularly adapted for the digging of trenches with vertical walls. 3,043,031 7-10-62, Cl. 37—103.

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Wallenfels, Kurt A. W., and Draber. 3,043,884.

Farlee, Clarence C., to General Motors Corp. Safety device and table arrangement for vehicle bodies. 3,043,608, 7-10-62, Cl. 280—150.

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Felhofer, Robert W., and C. M. Fink. Collapsible pet house and carrying case. 3,042,264, 7-10-62, Cl. 119—19.

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Floyd, James K., to The Electric Storage Battery Co. Transistor inverter-battery charger. 3,044,023, 7–10–62, Cl. 331—59.
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Gabbioneta, Roberto. Rotary liquid ring pump with means for regulating the loading of liquid in the ring. 3,043,498, 7–10–62, Cl. 230—79.
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Gryctko, Carl, and Ball. 3,043,939.
Herrmann, John A. 3,044,036.
Jensen, Otto. 3,044,005.
Igarashi, Kikuo, to Shionogi & Co., Ltd. [3-oxo-20-hydroxy-1,4,17(20)-pregnatriene-16-yliden] acetic acid lactone, and intermediates therefor. 3,043,834, 7-10-62, Cl. 260—239.55.
Illinois Tool Works, Inc.: *See*—
Roeser, John O. 3,043,928.
Industrial Electronic Hardware Corp.: *See*—
Gluck, William. 3,043,001.
Ingram, Hubert O., and E. C. Cavasos. Utility scoop. 3,043,033, 7-10-62, Cl. 37—130.
Inman, Donald A.: *See*—
Inman, Ross H., D. A., and G. F. 3,043,097.
Inman, Gerald F.: *See*—
Inman, Ross H., D. A., and G. F. 3,043,097.
Inman, Ross H., D. A., and G. F. Exhaust pipe attachment. 3,043,097, 7-10-62, Cl. 60—30.
Isler, Otto, R. Rüegg, and U. Schwieter, to Hoffmann-La Roche Inc. Polyene alcohols and acyl derivatives thereof. 3,043,863, 7-10-62, Cl. 260—488.
Instruments for Industry, Inc.: *See*—
Gregson, Alvero C. 3,044,038.
Gregson Alvero C. 3,044,039.
International Basic Economy Corp.: *See*—
Hunt, Nathan C. 3,043,335.

International Business Machines Corp.: *See*—
Brown, Edgar A. 3,043,505.
Brown, Joseph L., Layden, Taylor, and Weiss. 3,043,509.
Page, Ralph E., and Buley. 3,042,999.
Folmar Arthur J. 3,043,589.
Rabenda, Edward J. 3,043,504.
International Harvester Co.: *See*—
Bornzin, James H. 3,043,073.
Christie, Reginald A., and Rowbotham. 3,043,074.
Jennings, Marvin D. 3,043,251.
Kolthoff, C Paul, Jr. 3,043,568.
McAfee, Robert E., and Goldsmith. 3,043,413.
Robbins, William W. 3,043,167.
Witt, Robert H., and Barows. 3,043,078.
International Latex Corp.: *See*—
Barth, Harry J. 3,043,311.
Dorsey, William J. 3,043,312.
Shepard, Leonard F. 3,042,926.
International Resistance Co.: *See*—
Burns, Jerome G. 3,043,721.
Pegram, William B. 3,044,029.
Irropa Inc.: *See*—
Page, Irving. 3,043,936.
Istel, Jacques A., and L. B. Sanborn, to Parachutes Inc. Parachutes. 3,043,543, 7–10–62, Cl. 244—152.
Jackson, Harold L., to E. I. du Pont de Nemours and Co. Process for preparing silane. 3,043,663, 7–10–62, Cl. 23—204.
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Waugh, Charles C., and Jackson. 3,043,139.
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Waugh, Charles C., and Jackson. 3,043,141.
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Jacob, Raymond: *See*—
Rabeux, Jean, and Jacob. 3,043,926.
Jahn, Alex K., and E. J. Gillard, to The Dow Chemical Co. Method of product control in aqueous suspension polymerizations of alkenyl aromatic compounds. 3,043,817, 7–10–62, Cl. 260—88.2.
Janicke, Hermann. Free-piston engine. 3,043,282, 7–10–62, Cl. 123—46.
Jansen, Gerhart. Mixing valve. 3,043,337, 7–10–62, Cl. 137—625.41.
Janus, Alexander G., to Consumers Merchandising Corp. Removable closure for wrapped bread. 3,043,207, 7–10–62, Cl. 99—234.
Jenkner, Herbert, to Kali-Chemie Aktiengesellschaft. Preparation of hydrides of the fourth and fifth group elements. 3,043,857, 7–10–62, Cl. 260—429.7.
Jennings, Marvin D., to International Harvester Co. Hill drop planting apparatus. 3,043,251, 7–10–62, Cl. 111—15.
Jensen, Erik H., to The Upjohn Co. Process for preparing a more impermeable coating by liquid-liquid phase separation. 3,043,782, 7–10–62, Cl. 252—316.
Jensen, Otto, to I-T-E Circuit Breaker Co. Protection of mercury arc rectifier. 3,044,005, 7–10–62, Cl. 321—12.
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Jochems, Pieter J. W., to North American Philips Co., Inc. Method of producing semi-conductor electrode systems. 3,043,726, 7–10–62, Cl. 148—1.5.
Johansen, Leif H. Dispensing containers for granular substances. 3,043,481, 7–10–62, Cl. 222—158.
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Goransson, Rolf E., and Johansson. 3,042,988.
Johns-Manville Corp.: *See*—
Barnett, Irvin. 3,042,976.
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Johnson, Gordon, Co.: *See*—
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Johnson & Johnson: *See*—
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Johnson, Le Roy E., and C. C. Sperry, to The Upjohn Co. Interrelated tool and work conveyer drives for a disc punch. 3,043,176, 7–10–62, Cl. 83—109.
Johnson, Raymond R.: *See*—
Ludwig, Mike, Jr., and Johnson. 3,042,950.
Johnson, Tomlinson F. Spring motor mechanism for fast automatic opening or closing of high tension electric switches. 3,043,924, 7–10–62, Cl. 200—48.
Jolly, Ross T. Shaving soap warmer. 3,043,484, 7–10–62, Cl. 222—335.
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Dixon, Reginald J., Jones, and Riley. 3,043,166.
Jones, Stanley B., and R. J. S. Brown, to California Research Corp. Formation liquid logging. 3,044,010, 7–10–62, Cl. 324—5.
Jonker, Gerard H., to North American Philips Co., Inc. Ferromagnetic oxidic material. 3,043,776, 7–10–62, Cl. 252—62.5.
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Lowry, John W., Peterson, and Foster. 3,043,678.
Swoboda, Leo F. 3,043,631.
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Flötgen, Rudolf, and Kalb, 3,043,735.
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Bartholomäus, Werner, Hessler, and Naumann. 3,043,412.
Kanski, Harry. Method of applying spectacles pads. 3,043,191, 7–10–62, Cl. 88—48.
Kant, Fred H., D. L. Baeder, J. A. Hinlicky, and C. L. Read, to Esso Research and Engineering Co. Hydrocracking of polynuclear aromatic containing hydrocarbon oils. 3,043,770, 7–10–62, Cl. 208—112.
Karig, Erhardt, H. Steuer, R. Schrodt, and O. Dittrich, to The Reimers Getriebe K.G. Hydraulic control mechanism for infinitely variable gears. 3,043,152, 7–10–62, Cl. 74—230.17.
Karig, Erhardt, H. Steuer, and O. Dittrich, to The Reimers Getriebe K.G. Rocker joint for link chain. 3,043,154, 7–10–62, Cl. 74—253.
Kaspaul, Alfred, to Brevets Aero-Mecaniques S.A. Electric devices for igniting the charge of a projectile, said devices being especially intended for use on anti-aircraft or anti-armour projectiles. 3,043,222, 7–10–62, Cl. 102—70.2.
Kasten, Erich: *See*—
Bürklin, Gerlinde, and Kasten. 3,043,760.
Katehis, George. Swimming flippers. 3,042,943, 7–10–62, Cl. 9—304.
Katz, Julius H. Paper cup dispenser. 3,043,473, 7–10–62, Cl. 221—63.
Katzin, Martin. Polarization diversity receiver. 3,044,062. 7–10–62, Cl. 343—100.
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Kay, John G.: *See*—
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Kazan, Benjamin, to Radio Corp. of America. Electroluminescent device and circuits therefor. 3,043,961, 7–10–62, Cl. 250—213.
Keane, John J., and H. Kitson, Jr., to General Electric Co. Hydrostatic lead seal and method of making same. 3,043,903, 7–10–62, Cl. 174—152.
Keaton, Lester H. Multipurpose inflatable seat cushion. 3,042,940, 7–10–62, Cl. 5—348.
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Kelly, Thomas J.: *See*—
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Kelly, William A., to Lever Brothers Co. Soap bar compositions. 3,043,778, 7–10–62, Cl. 252—107.
Kelso, Clarence L. Pipe wall supporting mechanism. 3,043,361, 7–10–62, Cl. 153—63.
Kemp, Robert F., to Space Technology Laboratories, Inc. Transducing method and system. 3,044,045, 7–10–62, Cl. 340—174.1.
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Kidd, Alexander C.: *See*—
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Kiefer, Harry J., Jr., to The Glidden Co. Coated metal articles and coating compositions therefor. 3,043,705, 7–10–62, Cl. 106—287.
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Kilsheimer, John R., B. Phillips, and P. S. Starcher, to Union Carbide Corp. Polymer of alkenyl epoxycyclopentyl ethers. 3,043,813, 7–10–62, Cl. 260—80.5.
King, Cecil V., to Beleggingsmaat-Schappy "Margarita". Leak detector. 3,043,129, 7–10–62, Cl. 73—40.
King, Dale E.: *See*—
Bergh, Thomas R., King, Nierzwicki, and Thorne. 3,043,567.
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Keane, John J., and Kitson. 3,043,903.
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Gustafson, Eric W. 3,043,365.
Klein, Harry J. Line-gripping and spacing device. 3,043,902, 7–10–62, Cl. 174—146.
Klein, William A., and J. G. Wirsig, to Minnesota Mining and Mfg Co. Fill-resistant flexible abrasive sheet. 3,043,673, 7–10–62, Cl. 51—298.
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Klopp, James W., and J. Smith, to United States of America, Navy. Release mechanism for ejecting sea survival equipment from ditched or crashed aircraft. 3,043,263, 7–10–62, Cl. 116—124.
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Klumb, Harvey A., G. E. Heller, to Taylor Instrument Companies. Exhibiting or control means. 3,044,069, 7–10–62. Cl. 346—17.
Knobloch, Erich, K. Adams, and B. Linnartz, to Badische Anilin- & Soda-Fabrik Aktiengesellaschaft. Process and apparatus for circulating hot gases, especially under high pressures. 3,043,499, 7–10–62, Cl. 230—188.
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Kohler, Horst, and Knutti. 3,043,194.
Kober, Karl. Leveler. 3,043,034, 7–10–62, Cl. 37—148.
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Kobos, Casimir, to Wilson Athletic Goods Mfg. Co., Inc. Baseball glove. 3,042,929, 7–10–62, Cl. 2—19.
Koch, Jacob, to Ciba Ltd. Dyestuffs of the perylene tetracarboxylic acid diimide series. 3,043,843, 7–10–62, Cl. 260—281.
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Lafferty, Gerald F. 3,042.972.
Kosinski, Felix W., Jr. Trailer hitch. 3,043,610, 7–10–62, Cl. 280—502.
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Kraszeski, Arthur. Apparatus for producing openwork plastic sheet material and the like. 3,042,968, 7–10–62, Cl. 18—15.
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Krieble, Robert H. Anaerobic curing sealant composition having extended shelf stability. 3,043,820, 7–10–62, Cl. 260—89.5.
Krimmel, Carl P., to G. D. Searle & Co. N-xenylalkanoylaminoalkanoic acids and esters thereof. 3,043,868, 7–10–62, Cl. 260—518.
Kritser, Shelby M. Navigation aid. 3,043,503, 7–10–62, Cl. 235—61.
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Hebert, John W., and La Rue. 3,043,249.
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Laughlin, Myron P. Chemical feeder. 3,043,482, 7–10–62, Cl. 222—161.
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Laviana, Donald W., W. E. Fritz, and J. R. Cassano, to General Motors Corp. Electric transmitter. 3,043,922, 7–10–62, Cl. 200—24.
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Lejon, Jean C., to Societe dite Controle Bailey. Manual to automatic transfer motor control system. 3,044,002. 7–10–62, Cl. 318—446.

Lemin, Alan J., to The Upjohn Co. N,N-dialkenyl-α,α-diphenyl acetamides as herbicides. 3,043,676, 7–10–62, Cl. 71—2.6.

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Lesser, Jack, and L. H. Halber, to Atlas Novelty Co., Inc. Belt and belt-buckle assembly. 3,043,037, 7–10–62, Cl. 40—21.

Lessoff, Howard, R. Laird, and J. D. Childress, to Radio Corp. of America. Methods for preparing improved magnetic bodies. 3,043,777, 7–10–62, Cl. 252—62.5.

Le Tourneau, Robert G. Propeller and rotating propeller control mechanism for marine propulsion. 3,043,374, 7–10–62, Cl. 170—160.3.

Lever Bros. Co.: *See*—
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Diemer, Gesinus. 3,043,959.
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Ostertag, Harry M., Jr., and H. M. Ostertag, deceased, by H. M. Ostertag, Jr., executor. Machinery and method for paper formation. 3,043,370, 7–10–62, Cl. 162—344.
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Maha, Otto J. 3,043,639.
Parry, Robert D. Fishing line attachment. 3,043,043, 7–10–62, Cl. 43—43.1.
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Patterson, Luther M. Lift construction. 3,042,936, 7–10–62, Cl. 5—83.
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Peterson, Ruben O., deceased, by M. G. Peterson, executrix, to The Osborn Mfg. Co. Rotary abrading tool. 3,043,064, 7–10–62, Cl. 51—193.
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Polaroid Corp.: *See*—
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Haas, Howard C., and Rogers. 3,043,692.
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Frostad, Lars, and De Man. 3,042,925.
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Post, Clarence. Portable bunk feeder. 3,043,455, 7–10–62, Cl. 214—83.36.
Post, Herman D. Tape splicer. 3,043,364, 7–10–62, Cl. 156—505.
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Poulin, Raymond J., ½ to E. H. Rose. Opposed rotor radial piston pumps. 3,043,232, 7–10–62, Cl. 103—161.
Poulin, Raymond J., ½ to E. H. Rose. Opposed-rotor radial piston motor, pump and power generator. 3,043,234, 7–10–62, Cl. 103—161.
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Purolator Products, Inc.: *See*—
Gruner, Frederick R. 3,043,262.
Puxkandl, Peter, to Vereinigte Osterreichische Eisen-und Stahlwerke Aktiengesellschaft. Refractory-lined vessel. 3,043,470, 7–10–62, Cl. 220—63.
Pyles, George S.: *See*—
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Pyles Industries, Inc.: *See*—
Trumbull, Donald E., Devine, and Pyles. 3,043,477.
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Rabeux, Jean, and R. Jacob, to Societe d'Applications Generales d'Electricite & de Mecanique. Centrifugal electric switching device for controlling the unwinding of yarn in textile machines and the like. 3,043,926, 7–10–62, Cl. 200—61.18.
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Ryerson, Creighton W., to Ryco Development Co., Inc. Sprinkler construction. 3,043,522, 7–10–62, Cl. 239—230.
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Sarukhanian, Georg, to Siemens-Electrogerate Aktiengesellschaft. Refrigerant circulation system. 3,043,119, 7–10–62, Cl. 62—513.

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Schaeffer, William D., and H. E. Rea, Jr., to Union Oil Co. of California. Separation of organic compounds with Werner complexes. 3,043,893, 7–10–62, Cl. 260—674.

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CLASSIFICATION OF PATENTS

ISSUED JULY 10, 1962

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 10, 1962 Volume 780 Number 2

TRADEMARKS

NOTICES

Annual Index of Patents

The 1961 edition of the Annual Index of Patents has been published. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price: Buckram bound, $6.00.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA-COLA), The Coca-Cola Company, Beverage; **Reg. No. 47,189**, same, Non-alcoholic maltless beverages; **Reg. No. 238,145**, same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146**, same; **Reg. No. 415,755** (COKE), same, Non-alcoholic maltless beverages and syrups for making such beverages, **filed** May 2, 1962, D.C., S.D. Ohio (Cincinnati), Doc. 5039, *The Coca-Cola Company* v. *Charles Ennis et al.*

Reg. No. 47,189(a) (COCA-COLA), The Coca-Cola Company, Non-alcoholic maltless beverages; **Reg. No. 238,145(a)**, same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146(a)**, same; **Reg. No. 415,755(a)**, (COKE), same, Non-alcoholic maltless beverages and syrups for making such beverages, **filed** May 21, 1962, D.C., N.D. Ala. (Birmingham), Doc. 3527, *The Coca-Cola Company* v. *George K. Sizemore, doing business as Travel Happy Truck Stop.*

Reg. No. 238,145. (See Reg. Nos. 22,406 and 47,189(a).)

Reg. No. 238,146. (See Reg. Nos. 22,406 and 47,189(a).)

Reg. No. 320,151 (LOCKHEED), Lockheed Aircraft Corporation, Aeroplanes and parts thereof, exclusive of hydraulic brakes or braking equipment not in other classes; **Reg. No. 373,314**, same, Airplanes and structural parts therefor, not in other classes; **Reg. No. 649,614** (LOCKHEED ELECTRA), same, Airplanes and components thereof, **filed** Apr. 5, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40/628, *Lockheed Aircraft Corporation* v. *Wagner Electric Corporation.* **Same, filed** Feb. 9, 1962, same, Doc. 40/518, *Lockheed AirCraft Corporation* v. *Lockheed Aircraft Corporation.* Consent judgment; defendants restrained Apr. 6, 1962.

Reg. No. 373,314. (See Reg. No. 320,151.)

Reg. No. 415,755. (See Reg. Nos. 22,406 and 47,189(a).)

Reg. No. 426,118 (RESTONIC), Wonder-Rest Corporation, Mattresses, **filed** May 18, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62–C–543, *Restonic Corporation* v. *Automatic Bedding Corporation.*

Reg. No. 525,823 (NORELCO), North American Philips Company, Inc., Electric razors, **filed** Jan. 3, 1961, D.C., S.D.N.Y., Doc. 61/9, *North American Philips Company, Inc.* v. *William S. Bruno, Inc. et al.* Stipulation and order of dismissal without prejudice May 22, 1962.

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 16,359
Date of oldest new application ..... Sept. 18, 1961
Date of oldest amended application ..... Sept. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	9-18-61	9-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-17-61	11-20-61
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Applications filed during the month of May 1962—2,420

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Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 557,037 (BLUE SHIELD), Blue Shield Medical Care Plans, Furnishing medical care on a pre-payment basis; **Reg. No. 557,040**, same, Underwriting the expense of medical care; **Reg. No. 562,430** (DESIGN OF A SHIELD), same, Underwriting the expense of furnishing medical care on a prepayment basis; **Reg. No. 561,778**, same, Underwriting, on a prepayment basis the expense to the patient of medical care and underwriting the doctor's expense in furnishing medical care; **Reg. No. 617,304**, same, filed Jan. 7, 1960, D.C., S.D.N.Y., Doc. 60/76, *Blue Shield Medical Care Plans* v. *White Shield Corporation et al.* Order enjoining defendants, etc. Defendants ordered to proceed promptly to effect cancellation of their Reg. No. 674,481 May 22, 1962.

Reg. No. 557,040. (See Reg. No. 557,037.)

Reg. No. 562,430. (See Reg. No. 557,037.)

Reg. No. 566,425 (RAMBLER), Nash-Kelvinator Corporation, Passenger automobiles and structural parts therefor, filed May 15, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40/748, *American Motors Corporation* v. *Ramble Camper Coach, Inc., et al.*

Reg. No. 561,778. (See Reg. No. 557,037.)

Reg. No. 567,721 (ROTO-ROOTER), Roto-Rooter Corporation, Municipal, industrial and domestic sewer, drain and pipe cleaning service, filed May 17, 1962, D.C., N.D. Okla (Tulsa), Doc. 5405, *Roto-Rooter Corporation* v. *James Rose et al.*

Reg. No. 606,428 (VARI-VUE), Pictorial Productions, Inc., Pictures containing at least two images which are separately visible, etc.; **2,790,928**, A. A. Mays, Electrically operated scissors or shears; **2,815,310**, V. G. Anderson, Process of assembling in the art of changeable picture display devices, filed Apr. 6, 1962, D.C., S.D.N.Y., Doc. 62/1409, *Pictorial Productions, Inc.* v. *Warren Dennie et al.* Consent decree; defendants enjoined May 9, 1962.

Reg. No. 617,304. (See Reg. No. 557,037.)

Reg. No. 618,969 (PARTY-FOR-ONE), American Merrilel Corporation, Package or bag of party favors; **Reg. No. 678,361** (JETTRON AND DESIGN), Johnsen Design Service, Sockets for microminiature ceramic tubes, test sockets, input connectors and HV cable assemblies for C–R tubes, filed May 7, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 63–C–491, *Merrimaker Corporation* v. *American Party Favor Company.*

Reg. No. 649,614. (See Reg. No. 320,151.)

Reg. No. 674,481. (See Reg. No. 557,037.)

Reg. No. 678,361. (See Reg. No. 618,969.)

Reg. No. 719,260 (SERVONIC), Servonic Instruments, Inc., Potentiometers, pressure gauges, strain gauges, pressure transducers and altimeters, filed May 10, 1962, D.C., E.D. Va. (Alexandria), Doc. 2640, *Servonic Instruments, Inc.* v. *Servonics Incorporated.*

Reg. No. 726,036 (NYLO SPORTS), Emile Bernat & Sons Company, Hand knitting yarn, filed May 18, 1962, D.C., S.D.N.Y., Doc. 62/1813, *Emile Bernat & Sons Company* v. *Fox Brand Yarn Company.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 123,042. Southern Latex Corporation, Dover, Del. Filed June 28, 1961.

CEL BAK

Owner of Reg. No. 712,669.
For Rubber Latex.
First use Apr. 6, 1960.

SN 123,509. United-Hagie Hybrids, Inc., Des Moines, Iowa. Filed July 6, 1961.

SCOTCH-LINE

For Single Cross Hybrid Seed Corn.
First use May 16, 1961.

SN 124,180. Herbert und Renate Eggert, Unterwohlsbach, near Coburg, Germany. Filed July 18, 1961.

GRUSS AN COBURG

The mark is translated as "greetings to Coburg." Priority claimed under Sec. 44(d) on German application filed Feb. 16, 1961; Reg. No. 749,317, dated May 30, 1961.
For Nursery Products—Namely, Chrysanthemums.

SN 124,690. Union Carbide Corporation, New York, N.Y. Filed July 25, 1961.

NATIONAL

For Graphite Fabric in Woven and Non-Woven Forms for Various Uses in the Industrial Arts.
First use on or about Jan. 20, 1959.

SN 125,764. Polythane Corporation, Rumford, R.I. Filed Aug. 10, 1961.

ELURA

For Elastic Synthetic Fibers.
First use December 1960.

SN 126,526. Lawter Chemicals, Inc., Chicago, Ill. Filed Aug. 23, 1961.

POLYMID

For Resins for Printing Inks and Vehicles.
First use June 26, 1961.

SN 127,931. The Johnson Rubber Company, Middlefield, Ohio. Filed Sept. 15, 1961.

NEOSOFT

For Synthetic Rubber.
First use February 1961.

SN 129,182. Wood Conversion Company, St. Paul, Minn. Filed Oct. 3, 1961.

PANEL-TEX

Owner of Reg. No. 637,343.
For Flexible Laminate of Bonded Fiber Mat and Woven Fabric Liner for General Use in the Industrial Arts.
First use June 13, 1961.

SN 130,580. Polymer Corporation Limited, Sarnia, Ontario, Canada. Filed Oct. 24, 1961.

SS 250

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 28, 1961; Reg. No. 125,157, dated Jan. 26, 1962.
For Synthetic Rubber.

SN 131,147. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Nov. 1, 1961.

SCOTCHPRINT

Owner of Reg. Nos. 558,787, 605,301, and others.
For Plastic Film Adapted To Receive Printing.
First use Sept. 11, 1961.

SN 131,423. Swift & Company, d.b.a. A. C. Lawrence Leather Co., Chicago, Ill. Filed Nov. 6, 1961.

DEVONAIRE

Owner of Reg. No. 594,024.
For Calfskin.
First use July 1, 1960.

SN 131,774. Synvar Corporation, Wilmington, Del. Filed Nov. 10, 1961.

SYNVAREX

Owner of Reg. Nos. 416,644 and 417,006.
For Synthetic Resins.
First use Sept. 25, 1961.

SN 132,875. Slab Fork Coal Company, Slab Fork, W. Va. Filed Nov. 27, 1961.

AUSTIN BLACK

Owner of Reg. No. 728,714.
For Pulverized Coal.
First use May 3, 1960.

SN 132,953. United States Rubber Company, New York, N.Y. Filed Nov. 28, 1961.

SEALZ

Owner of Reg. Nos. 392,039 and 628,474.
For Plastic Compositions of Rubber and Other Ingredients for Further Use in the Industrial Arts.
First use Dec. 11, 1939.

Class 2—Receptades

SN 133,043. American Associated Companies, Inc., Atlanta, Ga. Filed Nov. 30, 1961.

TARZAN

For Nylon, Cotton or Other Synthetic Fabric Net Bags.
First use Apr. 12, 1961.

Class 6—Chemicals and Chemical Compositions

SN 86,748. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Dec. 7, 1959.

ACRICID

Owner of German Reg. No. 270,711, dated Aug. 25, 1921.
For Products for the Destruction of Animals and Plants.

SN 100,861. Patterson Chemical Company, Inc., d.b.a. Patterson Chemical Company, Kansas City, Mo. Filed July 14, 1960.

PATTERSON'S

For Insecticides; Insect Repellents; Fungicides; Rodenticides; Weed Killers; Household Deodorants; Seed Disinfectants; Livestock Sprays; Wood Preservatives; Chemical Liquid Charcoal Starters; Spreader-Sticker for Use With Insecticide, Fungicide and Weed Killer Sprays; Compound for Burning Tree Stumps; Tree Wound Dressing; Shading Paint for Use on Greenhouse Glass; and Anthelmintics.
First use Jan. 1, 1949.

SN 108,151. Armour and Company, Chicago, Ill. Filed Nov. 10, 1960.

FRESH-FLUFF

For Fabric Softener.
First use Aug. 18, 1958.

SN 109,786. The Gamewell Company, Newton, Mass. Filed Dec. 7, 1960.

BLISS ROCKWOOD

The drawing is lined for red, but no claim is made for color. Owner of Reg. No. 624,264.
For Fire Fighting and Fire Extinguishing Chemicals.
First use on or about Sept. 15, 1960.

SN 109,957. Eastman Kodak Company, Rochester, N.Y. Filed Dec. 9, 1960.

EASTACRYL

Owner of Reg. No. 632,482.
For Dyes.
First use Oct. 18, 1960.

SN 114,759. Ralph Ettlinger, d.b.a. Ralph Ettlinger & Sons, Chicago, Ill. Filed Mar. 2, 1961.

ETTLINGER'S NO. 1010

For Sodium Caseinate.
First use August 1959.

SN 120,297. Crown Zellerbach Corporation, San Francisco, Calif. Filed May 18, 1961.

ZEECON

For Chemical Additive for Concrete.
First use Apr. 18, 1961.

SN 128,669. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Sept. 26, 1961.

OFNA-LAN

Owner of German Reg. No. 746,896, dated Mar. 18, 1961; and U.S. Reg. Nos. 565,556, 624,722, and 654,620.
For Dyestuffs, Dyes, Chemical Products for Industrial Purposes—Namely, Dyestuff Intermediates, Auxiliaries for the Dyeing and Textile Industry.

SN 129,825. Wallace & Tiernan Inc., Belleville, N.J. Filed Oct. 12, 1961.

DECANOX

For Decanoyl Peroxide.
First use May 21, 1961.

SN 130,605. Biotic Laboratories, Inc., Minneapolis, Minn. Filed Oct. 25, 1961.

MASTER-ZYME

For Enzymes for Liquefying Organic Waste for Plumbing and Sewage Disposal Systems.
First use July 23, 1959.

SN 132,503. Direct Oil Corporation, Nashville, Tenn. Filed Nov. 21, 1961.

Direct

For Anti-Freeze.
First use Nov. 10, 1937.

SN 132,605. Wood Treating Chemicals Company, St. Louis, Mo. Filed Nov. 22, 1961.

SUPER NOXTANE

Owner of Reg. No. 635,380.
For Wood Preservatives for the Control of Stain and Mold Organisms Which Degrade Lumber and Other Forest Products.
First use Nov. 4, 1960.

SN 132,606. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Nov. 22, 1961.

PICTAX

For Powdered Acid Product To Be Used in Metal Plating.
First use June 5, 1961.

SN 133,197. Armour and Company, Chicago, Ill. Filed Dec. 4, 1961.

PROPARMID

Owner of Reg. No. 429,344.
For Propoxylated Aliphatic Amides.
First use Oct. 26, 1961.

SN 133,198. Armour and Company, Chicago, Ill. Filed Dec. 4, 1961.

PROPARQUAD

Owner of Reg. No. 429,348.
For Propoxylated Quaternary Ammonium Salts.
First use Oct. 25, 1961.

SN 133,199. Armour and Company, Chicago, Ill. Filed Dec. 4, 1961.

PROPARMEEN

Owner of Reg. No. 429,343.
For Propoxylated Aliphatic Amides.
First use Oct. 25, 1961.

SN 133,763. Chemoceutics Corporation, North Miami, Fla. Filed Dec. 11, 1961.

COR

For Cream Used on the Skin To Create Good Electrical Contact for the Reception of Electrodes From a Cardiograph Machine.
First use Sept. 22, 1961.

Class 7—Cordage

SN 132,099. Tubbs Cordage Company, San Francisco, Calif. Filed Nov. 15, 1961.

PRODOK

For Synthetic Fiber Rope.
First use May 25, 1961.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 130,351. The High Standard Manufacturing Corporation, Hamden, Conn. Filed Oct. 20, 1961.

IMPERIAL

For Firearms—Namely, Revolvers and Parts Therefor.
First use on or about Aug. 17, 1961.

SN 131,189. Colt's Patent Fire Arms Manufacturing Company Inc., Phoenix, Ariz. Filed Nov. 2, 1961.



Owner of Reg. No. 52,903.
For Revolvers, Pistols, Shotguns, and Rifles.
First use in 1865 on pistols.

SN 131,226. Navy Arms Company Inc., Bogota, N.J. Filed Nov. 2, 1961.



For Replicas of Civil War Weapons.
First use on or about Jan. 15, 1959.

Class 10—Fertilizers

SN 99,282. The Best Fertilizers Co., Lathrop, Calif. Filed June 20, 1960.

BEST

For Fertilizers.
First use on or about Mar. 10, 1934.

SN 129,168. Organic Growth Products Company, Farmingdale, N.J. Filed Oct. 3, 1961.

MIRACLE ORGA-VITE

For Specialty Lawn and Garden Fertilizers.
First use Nov. 9, 1960.

SN 132,195. The Sherwin-Williams Company, Cleveland, Ohio. Filed Nov. 16, 1961.

NUZIDE

For Fertilizer in the Nature of a Nutritional Spray.
First use Oct. 31, 1961.

Class 12—Construction Materials

SN 34,097. Virginia Metal Products, Inc., Orange, Va., assignee of Ward Industries Corporation, Syracuse, N.Y. Filed July 19, 1957.

metlwal

For Wall Panels and Movable Partitions.
First use 1942.

SN 107,912. Cold Spring Granite Company, Cold Spring, Minn. Filed Nov. 7, 1960.

CARNELIAN

Owner of Reg. No. 383,525.
For Building Stone and Cut Granite.
First use Feb. 15, 1937.

SN 110,913. R. D. Werner Co., Inc., Greenville, Pa. Filed Dec. 27, 1960.

TASK-MASTER

For Aluminum Scaffolding Stages and Planks.
First use July 20, 1960.

SN 112,778. Harold Shoenfeld, d.b.a. S. and S. Sheet Metal Works, Brooklyn, N.Y. Filed Jan. 30, 1961.

PROTECTOPANEL

For X-Ray Partitions.
First use Sept. 8, 1960.

SN 115,876. American Can Company, New York, N.Y. Filed Mar. 17, 1961.



Owner of Reg. No. 715,634.
For Lumber.
First use Sept. 1, 1958.

SN 120,338. Reema Construction Limited, London, England. Filed May 18, 1961.

REEMA

Owner of British Reg. No. 651,403, dated Sept. 4, 1946.
For Prefabricated Constructional Units for Use in Assembling Buildings.

SN 120,845. All American Marble Company, Albuquerque, N. Mex. Filed May 26, 1961.



For Quarried Blocks and Slabs of Marble, Travertines and Onyx Travertines Having Delicate Color Markings in Natural Stone.
First use June 29, 1959.

SN 120,956. National Distillers and Chemical Corporation, New York, N.Y., by merger from Bridgeport Brass Company, Bridgeport, Conn. Filed May 29, 1961.



The lining on the drawing is for shading purposes only.
Owner of Reg. Nos. 546,377, 700,037, and others.
For Awnings Fabricated of Sheet Metal.
First use May 2, 1961.

SN 122,283. Custom Glass, Ltd., Vancouver, Canada. Filed June 19, 1961.

PAN O LITE

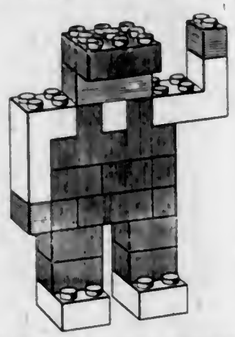
Priority claimed under Sec. 44(d) on Canadian application filed Dec. 17, 1960; Reg. No. 123,008, dated July 28, 1961. Applicant disclaims any exclusive rights in the word "Lite" apart from the mark as shown.
For Sealed Double Glazed Windows With Metal Separator.

SN 124,591. Saskatchewan Timber Board, Prince Albert, Saskatchewan, Canada. Filed July 24, 1961.

S T B

Priority claimed under Sec. 44(d) on Canadian application filed June 19, 1961; Reg. No. 124,981, dated Jan. 12, 1962.
For Lumber.

SN 124,656. Legetøjsfabriken Lego Billund A/S, Billund St., near Vejle, Jutland, Denmark. Filed July 25, 1961.



The drawing is lined for red and blue, but color is not claimed as a feature of the mark. Owner of Danish Reg. No. 431–1959, dated Mar. 7, 1959.
For Building Blocks.

SN 125,564. Texstar Construction Corporation, San Antonio, Tex. Filed Aug. 7, 1961.

TERRAZZITE

For Resinous Binders, Primers, Primer Hardeners, Fillers for Use in Surfacing Compositions for Making Floors, Walls, and Other Surfaces.
First use July 15, 1960.

SN 128,633. The Marvin Zisman Company, Pittsburgh, Pa. Filed Sept. 25, 1961.

LAUREL STONE

Applicant disclaims the word "Stone" apart from the mark as shown.
For Precast Stone Sold for Use in Building.
First use Nov. 16, 1960.

SN 129,281. Misceramic Tile, Cleveland, Miss. Filed Oct. 5, 1961.

Misceramic Tile

The word "Tile" is disclaimed apart from the mark shown.
For Ceramic Floor and Wall Tile.
First use February 1958.

SN 130,124. Southern Wire Mesh Company, Memphis, Tenn. Filed Oct. 17, 1961.

BET-R-WAL

For Metallic Tie Element for Masonry Wall Reinforcement.
First use Oct. 5, 1961.

SN 130,360. Johns-Manville Corporation, New York, N.Y. Filed Oct. 20, 1961.

STEELBORD

For Asbestos Millboard Sold for Use as a Heat Shield in Steel Mills.
First use June 26, 1961.

SN 130,708. Magic Iron Cement Co., Inc., Cleveland, Ohio. Filed Oct. 26, 1961.

WOODBLEND

For Putty Pencil for Filling Holes and Defects in Natural Wood Finishes.
First use 1959.

SN 130,803. Johns-Manville Corporation, New York, N.Y. Filed Oct. 27, 1961.

METAL-K

For Thermal Insulation.
First use Aug. 18, 1961.

SN 133,606. Windsor Service, Inc., Reading, Pa. Filed Dec. 7, 1961.

WINASCO

For Asphalt Roofing Materials; Mopping Asphalt; Undercoating Asphalt; Asphalt Joint Compounds; Asphalt Emulsions for Highway and Industry; Asphalt Battery Seal Compounds; Asphalt Pipe Coatings; and Waterproofing Asphalts.
First use Oct. 24, 1961, on asphalt roofing materials.

SN 133,616. Aluma Kraft Manufacturing Co., St. Louis, Mo. Filed Dec. 8, 1961.

ALUMA KRAFT

Owner of Reg. Nos. 536,570 and 597,517.
For Metal Siding for Buildings.
First use Mar. 15, 1961.

SN 133,690. T. W. Mills Lumber Co., Gardena, Calif. Filed Dec. 8, 1961.

DOLLAR SAVER

For Lumber and Related Building Products.
First use Nov. 20, 1961.

SN 133,709. Safway Steel Products, Inc., Milwaukee, Wis. Filed Dec. 8, 1961.

SAFLOAD

For Frame and Post Shores and Work Platforms.
First use June 1, 1961.

SN 133,901. Schacht Associates, Inc., New York, N.Y. Filed Dec. 12, 1961.

NUMOLD

For Window Molding for Holding Glass in Window Frames of Show Windows.
First use Nov. 20, 1961.

SN 134,060. Wheeling Corrugating Company, Wheeling, W. Va. Filed Dec. 14, 1961.

SUPER-RIB

For Metal Roofing.
First use Nov. 22, 1961.

SN 134,361. United States Plywood Corporation, New York, N.Y. Filed Dec. 19, 1961.

WELDTEX

Owner of Reg. Nos. 203,931, 609,397, and others.
For Plywood.
First use May 15, 1940.

SN 134,490. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Dec. 21, 1961.

METALPART

For Refractory Coatings Used To Coat Ingot Stools, Molds, Etc. To Prevent Molten Metal From Adhering to Metal.
First use July 30, 1959.

SN 134,841. The Ruberoid Co., New York, N.Y. Filed Dec. 28, 1961.

WINDJAMMER

For Asphalt Shingles.
First use Dec. 4, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 109,787. The Gamewell Company, Newton, Mass. Filed Dec. 7, 1960.



The drawing is lined for red, but no claim is made for color.
Owner of Reg. Nos. 512,680, 513,556, and 624,264.
For Valves and Parts Therefor, Valve Operators, Unions, and Couplings.
First use on or about Sept. 15, 1960.

SN 114,982. Midland-Ross Corporation, Columbus, Ohio. Filed Mar. 6, 1961.

DUBL-LOCK

For Clamps for Tubing.
First use June 11, 1956.

SN 115,928. Kirel, Inc., Kingston, N.Y. Filed Mar. 17, 1961.

WEJ-IT

For Expansion Bolts.
First use January 1957.

SN 119,523. Johnson Service Company, Milwaukee, Wis. Filed May 8, 1961.



For Pneumatic Temperature and Humidity Control Instruments for Central Heating, Ventilating and Air Conditioning Systems.
First use Apr. 14, 1961.

SN 119,797. Speakman Company, Wilmington, Del. Filed May 11, 1961.

EYESAVER

For Eye Washing Fountains.
First use Oct. 3, 1960.

SN 122,189. Joseph Gillott & Sons Limited, Dudley, England. Filed June 16, 1961.

ORBIT

Owner of British Reg. No. 809,403, dated Aug. 13, 1960.
For Furniture Castors and Letter-Boxes.

SN 128,385. Andis Clipper Company, Racine, Wis. Filed Sept. 22, 1961.

HELPING HANDS

For Carton Flap Holding Clips.
First use on or about July 15, 1955.

SN 129,555. The Gilbert & Bennett Manufacturing Company, Georgetown, Conn. Filed Oct. 9, 1961.

REDI-MARK

For Woven and Welded Wire Products, Such as Hardware Cloths, Wire Screening, Wire Netting, Welded and Woven Fencing, and Welded Fabric.
First use Sept. 6, 1961.

SN 135,296. Rival Manufacturing Company, Kansas City, Mo. Filed Jan. 5, 1962.

LAWN-O-MATIC

For Lawn Sprinklers.
First use Dec. 19, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 111,458. Air Reduction Company, Incorporated, New York, N.Y. Filed Jan. 9, 1961.

TUFFALOY

Owner of Reg. No. 507,359.
For Metal Alloys Used for Welding Purposes.
First use Aug. 8, 1938.

SN 121,804. Cerro Corporation, New York, N.Y. Filed June 12, 1961.



The portion of the mark which consists of "Hex" is disclaimed apart from the mark as shown. The lining on the drawing is for shading purposes only.
For Non-Ferrous Metal Rod.
First use Apr. 26, 1961.

Class 16—Protective and Decorative Coatings

SN 111,855. Byerlyte Corporation, Cleveland, Ohio. Filed Jan. 16, 1961.

GILBY

For Asphalt Base Paints.
First use May 7, 1946.

SN 123,067. Barrack's Industries, Inc., Springdale, Ark. Filed June 29, 1961.

BOND 'N FILL

For Primer-Surfacer.
First use May 15, 1961.

Class 17—Tobacco Products

SN 129,913. Camacho Cigars, Inc., Miami, Fla. Filed Oct. 16, 1961.

CAMACHO

For Cigars.
First use Feb. 6, 1961.

SN 135,157. Shop-Rite Supermarkets, Elizabeth, N.J. Filed Jan. 3, 1962.

SHOP-RITE

For Cigarettes.
First use Jan. 16, 1960.

SN 135,693. Manufactures Réunies de Cigares "Marec," Sint-Amandsberg, Belgium. Filed Jan. 12, 1962.

PRINCEPS

Owner of Belgian Reg. No. 9,867, dated June 26, 1933.
For Tobaccos, Cigars, Cigarillos and Cigarettes.

Class 18—Medicines and Pharmaceutical Preparations

SN 64,727. Theodore G. Mandrones, Molalla, Oreg. Filed Dec. 22, 1958.

MANDRONES ORGANIC M-21

The word "Organic" is disclaimed apart from the mark as shown.
For Mineral Supplement for Human Consumption.
First use at least as early as Oct. 1, 1958.

SN 96,646. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed May 6, 1960.

W|C

Owner of Reg. Nos. 619,351 and 619,352.
For Medicinal and Pharmaceutical Tablets—Namely, Nasal Decongestants, Analgesics for Headache, Prenatal Dietary Supplements, Antacids, Urinary Antiseptics and Analgesics, Hypotensive Agents, Antidepressants, Antiparkinsonism Agents, Metabolic Regulators, Thyroid Extract and Antiasthmatics.
First use Dec. 30, 1959.

SN 124,599. Stevenson, Turner and Boyce Limited, Guelph, Ontario, Canada. Filed July 24, 1961.

EQUI-PLUS

Priority claimed under Sec. 44(d) on Canadian application filed June 7, 1961; Reg. No. 125,072, dated Jan. 19, 1962.
For Dietary Feed Supplement Containing Vitamins, Minerals and Protein for Horses.

SN 124,987. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

THEOPHEDRINE

For Bronchial Antispasmodic.
First use July 12, 1939.

SN 124,989. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

VI-TRAL

For Hematopoietic for the Control of Pernicious Anemia.
First use Oct. 10, 1949.

SN 125,633. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Aug. 8, 1961.

MEDINOL

Owner of Reg. No. 269,753.
For Chemical Compound—Namely, 2,2'-Thiobis (4,6-Dichlorophenol) Incorporated as an Ingredient in an Antiseptic.
First use July 28, 1961.

SN 133,011. Phillips Laboratories, Inc., Nashville, Tenn. Filed Nov. 29, 1961.

SIGMOVAC

For Preparation for the Relief of Constipation.
First use Sept. 1, 1961.

SN 136,779. S. Klein Prescriptions, Inc., New York, N.Y. Filed Jan. 29, 1962.



For Antiseptic Mouth Wash.
First use on or about May 15, 1961.

SN 137,271. Plough Laboratories, Inc., Memphis, Tenn. Filed Feb. 5, 1962.

SIBEL

For Prescription Drug for Relief of Stomach Gas and Spasms.
First use Dec. 18, 1961.

SN 137,277. Richardson-Merrell Inc., New York, N.Y. Filed Feb. 5, 1962.

VAPOSTEAM

Owner of Reg. No. 632,128.
For Liquid Inhalant.
First use Oct. 16, 1959.

SN 137,316. Arnar-Stone Laboratories, Inc., Mount Prospect, Ill. Filed Feb. 6, 1962.

AZTEC

For Antiasthmatic Drugs.
First use July 18, 1961.

SN 137,320. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Feb. 6, 1962.

SPASMOBITAL

Owner of German Reg. No. 753,271, dated Sept. 28, 1961.
For Spasmolytic Agent.

SN 137,455. Personal Home Products, Inc., Hicksville, N.Y. Filed Feb. 7, 1962.

ANTI-RHEA

For Anti-Diarrheal Tablets.
First use Feb. 5, 1962.

SN 137,463. Right Weight Company, Inc., Fort Worth, Tex. Filed Feb. 7, 1962.

TOX-I-TON

Owner of Reg. No. 683,145.
For Livestock Drench for Treatment and Control of Internal Parasites.
First use Mar. 6, 1958.

SN 137,567. Schering Corporation, Bloomfield, N.J. Filed Feb. 8, 1962.

FULVICIN U/F

Owner of Reg. No. 694,146.
For Antifungal Preparation.
First use Dec. 26, 1961.

SN 137,568. Julius Schmid, Inc., New York, N.Y. Filed Feb. 8, 1962.

COLGEROL

For Therapeutic Vaginal Cream.
First use on or about Jan. 31, 1962.

SN 137,659. Professional Pharmacal Co., Inc., San Antonio, Tex. Filed Feb. 9, 1962.

SULFAPRED

For Ophthalmic Preparation.
First use Feb. 8, 1962.

SN 137,696. American Cyanamid Company, New York, N.Y. Filed Feb. 12, 1962.

RHULI-LOTION

Owner of Reg. Nos. 400,665, 699,299, and others.
For Cosmetic-Therapeutic Topical Preparation.
First use Dec. 13, 1961.

SN 137,697. American Cyanamid Company, New York, N.Y. Filed Feb. 12, 1962.

AQUAMOX

For Diuretic.
First use Jan. 26, 1962.

SN 137,843. Harry Eisenberg, d.b.a. Willen Drug Company, Baltimore, Md. Filed Feb. 13, 1962.

NEUTRA-PHOS

For Medicinal Phosphate Composition for Dietary Supplementation of Phosphorus.
First use Oct. 15, 1959.

SN 137,919. Barth Levitt Products, Valley Stream, N.Y. Filed Feb. 14, 1962.

ELEVITES

For Dietary Supplement.
First use January 1951.

SN 137,920. Barth Levitt Products, Valley Stream, N.Y. Filed Feb. 14, 1962.

FEROWEET

For Dietary Supplement.
First use January 1952.

SN 138,033. Lever Brothers Company, New York, N.Y. Filed Feb. 15, 1962.

STENDIN

For Oral Analgesic.
First use Sept. 13, 1961.

SN 138,128. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 16, 1962.

SIGTAB

For Vitamin Preparation.
First use Dec. 13, 1961.

SN 138,131. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 16, 1962.

ADEFLOR PRENATAL

Applicant makes no claim for the word "Prenatal" apart from the mark shown. Owner of Reg. No. 705,477.
For Prenatal Vitamin Preparation.
First use Jan. 8, 1962.

SN 138,278. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Feb. 20, 1962.

BEROCYCLIN

Owner of German Reg. No. 794,136, dated May 24, 1961; and U.S. Reg. No. 686,194.
For Antibiotics.

SN 139,236. Nopco Chemical Company, Newark, N.J. Filed Mar. 6, 1962.

CAPSTRESS

Owner of Reg. No. 717,436.
For Water Dispersible Vitamin Compositions Employed in Livestock Feeding.
First use Feb. 3, 1961.

SN 139,290. Foster-Milburn Company, Buffalo, N.Y. Filed Mar. 7, 1962.

PROSECA

For Therapeutic Preparation for the Treatment of Skin and Scalp Disorders.
First use Jan. 19, 1962.

SN 139,323. Physicians Products Co., Inc., Petersburg, Va. Filed Mar. 7, 1962.

BUTADOR

For Sedative-Analgesic.
First use Jan. 31, 1962.

SN 139,339. Sandoz, Inc., Hanover, N.J. Filed Mar. 7, 1962.

DELTOIN

For Pharmaceutical Preparation To Be Used in the Treatment of Epilepsy.
First use Feb. 21, 1962.

SN 139,525. Preston Drug, Inc., Dallas, Tex. Filed Mar. 9, 1962.

NACREL

For Decongestants in the Form of Cough Liquids, Nasal Sprays, Throat Lozenges and Tablets.
First use on or about Aug. 19, 1958.

Class 20 — Linoleum and Oiled Cloth

SN 134,097. Congoleum-Nairn Inc., Kearny, N.J. Filed Dec. 15, 1961.

CONTEMPORA

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs and Tiles.
First use Dec. 14, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 110,726. American Enka Corporation, Enka, N.C. Filed Dec. 23, 1960.

TURBOZIP

Owner of Reg. No. 585,128.
For Zipper Tubing (Plastic or Other Material) for Use as Electrical Insulation or as a Mechanical, Electrical or Thermal Barrier on a Cylindrical Object.
First use Aug. 15, 1960.

SN 118,788. Kar-Trol Signal Company, Inc., Houston, Tex. Filed Apr. 27, 1961.

KAR-TROL

For Electrical Equipment—Namely, Traffic Signal and Traffic Control Apparatus.
First use during June 1954.

SN 122,588. Amco Engineering Co., Chicago, Ill. Filed June 22, 1961.

AMCO

Owner of Reg. Nos. 668,975 and 681,248.
For Electronic Equipment Enclosures Which Provide Interference Shielding, Drawers for Electronic Equipment Operably Mounted Within Electronic Equipment Enclosures, Blower Systems Adapted for Mounting Within Electronic Equipment Enclosures, and Components and Parts Therefor.
First use Aug. 19, 1958.

SN 123,038. Sealectro Corporation, Mamaroneck, N.Y. Filed June 28, 1961.

PROTO-KIT

For Pin-Type Program Board.
First use Mar. 9, 1961.

SN 127,125. Master Mechanic Mfg. Co., Sarasota, Fla. Filed Sept. 1, 1961.

EVERLITE

For Electric Light Plants, Generators and Alternators.
First use Dec. 20, 1959.

SN 127,454. Channel Master Corporation, Ellenville, N.Y. Filed Sept. 8, 1961.

CROSSFIRE

For Television Antennas, Accessories Therefor and Parts Thereof.
First use August 1961.

SN 127,754. Collins Radio Company, Cedar Rapids, Iowa. Filed Sept. 13, 1961.

COLLINS

Owner of Reg. Nos. 356,544, 714,178 and others.
For Radio Transmitters, Electric, Both Power and Communications Type; Transformers; Speech Equipment Comprising Audio Frequency Amplifier Circuits; Mixing and Control Circuits; Electrical Connections for Microphones and Other Signal Sources Adapted To Be Used Therewith; Electronic Equipment—Namely, Transmitters and Receivers.
First use July 10, 1961; Mar. 15, 1932, as to "Collins."

SN 128,212. Radio Cores, Inc., Oak Lawn, Ill. Filed Sept. 19, 1961.

PERMACOR

For Powdered Iron Cores of the Type Used in the Electronic Industry, Particularly in Communication Equipment Such as Radios and Television Equipment.
First use June 28, 1961.

SN 129,758. Freez-Ette Corporation, Chamblee, Ga. Filed Oct. 12, 1961.

CURB/TEL

For Electronic Quick Ordering Systems for Drive-In Restaurants.
First use July 5, 1961.

SN 129,857. General Resistance, Inc., New York, N.Y. Filed Oct. 13, 1961.

DIAL-A-VIDER

For Voltage Dividers and Regulators.
First use Mar. 20, 1961.

SN 130,065. Genistron, Incorporated, Los Angeles, Calif. Filed Oct. 17, 1961.

GENISTRON

For Radio Interference Filter.
First use Aug. 28, 1961.

SN 130,199. Fox Products Company, Philadelphia, Pa. Filed Oct. 18, 1961.

HOT-BOX

For Storage Battery Carriers Equipped With a Battery Charging Device and Electrical Leads for Connection to the Electrical System of an Automobile or the Like.
First use at least as early as Oct. 15, 1960.

SN 130,270. Burroughs Corporation, Detroit, Mich. Filed Oct. 19, 1961.

BIPCO

For Electronic Circuit Modules and Subassemblies Which Include Built In Place Components.
First use on or about May 23, 1961.

SN 130,758. Cleveland Metal Specialties Company, Cleveland, Ohio. Filed Oct. 27, 1961.

MICRAM

For Miniaturized Electronic Circuit Assemblies Which Include Electronic Circuit Components Such as Resistors, Capacitors, Diodes, Transistors, or the Like.
First use Aug. 9, 1961.

SN 131,968. Kolled Kords, Incorporated, Hamden, Conn. Filed Nov. 14, 1961.

TELETAPE

For Electric Wire.
First use on or about Aug. 9, 1961.

SN 132,001. Sprague Electric Company, North Adams, Mass. Filed Nov. 14, 1961.

SEPT

For Transistors.
First use Aug. 17, 1961.

SN 132,135. Dal-Raj Enterprises, Inc., Joliet, Ill. Filed Nov. 16, 1961.

Glo-Nite

For Toggle Switch Extensions.
First use Dec. 6, 1960.

SN 132,433. Allegheny Ludlum Steel Corporation, Pittsburgh, Pa. Filed Nov. 21, 1961.

AL ARNOLD

Owner of Reg. Nos. 399,597 and 435,539.
For Permanent Magnets, Laminations, Powder Core Members, Wound Core Members, Stacked Core Members, Shields, End-Bells, and Half-Shells for Electrical Apparatus.
First use September 1955.

Class 22 — Games, Toys, and Sporting Goods

SN 109,915. Vogue Dolls, Inc., Medford, Mass. Filed Dec. 8, 1960.

BABY DEAR

No claim of exclusive right is made to "Baby" as applied to a doll.
For Doll.
First use Sept. 1, 1960.

SN 112,984. U.S. Tackle Corp., Boston, Mass. Filed Feb. 2, 1961.

BLUE EAGLE

For Fishing Rods, Reels, Line, Terminal Tackle, Tackle Boxes, Fishing Nets and Fishing Game Bags.
First use Oct. 1, 1960.

SN 114,654. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed Feb. 28, 1961.

BABY·TALKS

For Dolls.
First use Dec. 14, 1960.

SN 118,417. The Connecticut Leather Company, Hartford, Conn. Filed Apr. 24, 1961.

Tokco

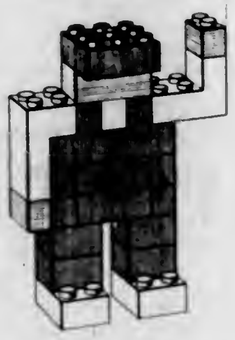
For Sporting Goods—Namely, Boats, Sleds, Snow Coasters, Swim Boards and Related Accessories; Toys—Namely, Plastic Pools, Sandboxes, Play Houses, Helmets, Firearms, Cosmetic Sets, Kitchen Sets and Military, Police and Cowboy Equipment Sets; and Equipment Sold as Units for Playing Board and Sidewalk Games.
First use on or before Apr. 30, 1957.

SN 118,483. Radio Steel & Mfg. Co., Chicago, Ill. Filed Apr. 24, 1961.

RADIO TOWN & COUNTRY

Owner of Reg. Nos. 561,829, 687,508, and others.
For Coaster Wagons.
First use March 1961.

SN 124,655. Legetøjsfabriken Lego Billund A/S, Billund St., near Vejle, Jutland, Denmark. Filed July 25, 1961.



The drawing is lined for red and blue, but color is not claimed as a feature of the mark. Owner of Danish Reg. No. 431–1959, dated Mar. 7, 1959.
For Toys in the Nature of Building Blocks.

SN 125,967. Donald F. Rohlfs, Rye, N.Y. Filed Aug. 14, 1961.

FOUR SEASONS

For Equipment Sold as Units for Playing a Board Game.
First use July 18, 1961.

SN 130,151. The Pengad Companies, Inc., Bayonne, N.J. Filed Oct. 16, 1961.

BIBLE QUOTTO

Applicant makes no claim of exclusive right to the word feature "Bible."
For Equipment for Playing a Board Game.
First use May 7, 1938.

SN 131,879. Mattel, Inc., Hawthorne, Calif., assignee, by mesne assignment, of Royal Doll Manufacturing Co., Inc., New York, N.Y. Filed Nov. 13, 1961.

CHATTERBOX

For Doll.
First use Mar. 15, 1958.
Subj. to Intf. with SN 116,182.

SN 132,029. Colorwhirls, Inc., Cartersville, Ga. Filed Nov. 15, 1961.



For Colored Panels for Attachment to Bicycle Wheels.
First use Sept. 14, 1961.

SN 132,491. Thomas Earl Shelton, Birmingham, Ala. Filed Nov. 21, 1961.

NUTRI-BANK

For Coin Type Savings Banks.
First use on or about Aug. 31, 1961.

SN 132,627. Berkley & Company, Inc., Spirit Lake, Iowa. Filed Nov. 24, 1961.

BEE LINE

For Monofilament Nylon Line.
First use November 1960.

SN 132,629. Berkley & Company, Inc., Spirit Lake, Iowa. Filed Nov. 24, 1961.

SCOTCH LASS

For Monofilament Nylon Line.
First use November 1960.

SN 132,630. Berkley & Company, Inc., Spirit Lake, Iowa. Filed Nov. 24, 1961.

BLACK STALLION

For Monofilament Nylon Line.
First use November 1960.

SN 132,662. Flag-A-Tag, Tucson, Ariz. Filed Nov. 24, 1961.

FLAG-A-TAG

For Game Apparatus Which Is Attached to the Body of the Players and Converts the Act of Tagging the Players to the Grabbing of a Flag.
First use on or before Oct. 1, 1956.

SN 132,746. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 24, 1961.

YOUTH CRAFT

For Golf Clubs.
First use on or about Oct. 12, 1960.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 110,048. FMC Corporation, San Jose, Calif., by change of name from Food Machinery and Chemical Corporation, San Jose, Calif. Filed Dec. 12, 1960.



For Automotive Servicing Equipment Including Frame Straighteners and Jacks.
First use July 8, 1960.

SN 115,699. Insley Manufacturing Corporation, Indianapolis, Ind. Filed Mar. 15, 1961.

BASKET RAKE

For Crane Operated Drag-Type Apparatus for Cleaning Irrigation and Drainage Ditches, Lake Fronts, Ponds, River and Creek Banks, Etc.
First use Feb. 3, 1961.

SN 117,228. Sigma Machinery Inc., New York, N.Y. Filed Apr. 5, 1961.

RIGID TORQUE

For Machine Tools—To Wit, Lathes, Drills, Milling Machines, Boring Machines, and Grinding Machines.
First use Mar. 22, 1961.

SN 117,478. Gardner-Denver Company, Quincy, Ill. Filed Apr. 10, 1961.

GARDNER-DENVER ROTA-SCREW

For Gas Compressor Apparatus.
First use Mar. 20, 1961.

SN 119,213. Lehmann, Archer & Lane Limited, Ilford, Essex, England. Filed May 3, 1961.

BLUE WIZARD

Owner of British Reg. No. 769,358, dated Sept. 18, 1957.
For Screw-Threaded Cutting Taps.

SN 122,055. Automatic Canteen Company of America, Chicago, Ill. Filed June 15, 1961.

COUNTERVEND

For Food Service Units Which Include Manual and Automatic Vending Apparatus.
First use Jan. 30, 1961.

SN 125,468. Automated Merchandising Capital Corporation, New York, N.Y., assignee of Cole Vending Industries, Inc., Chicago, Ill. Filed Aug. 7, 1961.

COLEDRINX

For Coin-Operated Beverage Dispensing Machines.
First use Oct. 1, 1939.

SN 128,331. Blaw-Knox Company, Pittsburgh, Pa. Filed Sept. 21, 1961.

ROTOCEL

For Solvent Extraction Apparatus.
First use on or about Apr. 15, 1952.

SN 128,878. ACF Industries, Incorporated, St. Louis, Mo. Filed Sept. 29, 1961.

ZIP

Owner of Reg. No. 715,388.
For Fuel Pumps.
First use Jan. 28, 1960.

SN 130,666. United Conveyor Corp., Chicago, Ill. Filed Oct. 25, 1961.

"NUVA-FLOW"

Owner of Reg. Nos. 408,161, 600,268, and others.
For Material Discharge Assist for Pulverulent Material Hoppers.
First use Aug. 14, 1958.

SN 131,488. Don C. Lortz, d.b.a. Idaho Steel Products Co., Idaho Falls, Idaho. Filed Nov. 7, 1961.

gem LINE

For Food Processing Equipment—viz., Vegetable Washers; Vegetable Blanchers; Vegetable Sorters and Sizers; Vegetable Peelers (of the Lye, Abrasive, and Steam Types); Vegetable Mashers, Dicers, Ricers, and Slicers; Vegetable Extruders; Vegetable Cookers (of the Batch and Continuous Types); Vegetable Coolers; Vegetable Driers; Vegetable Conveyers and Elevators (of the Pneumatic, Belt, Bucket, Screw, Vibratory, and Rotary Types); Liquid and Vegetable Holding Bins, Hoppers, and Tanks; Fixed, Rotating, Oscillating, and Vibratory Screens; Fixed and Vibratory Inspection and Trim Tables; Liquid and Gas Pumps (of the Rotary, Centrifugal, and Expansible Chamber Types); Dust Collectors; Dewatering Devices; Flake Sheet Breakers and Sizers; Vegetable and Additive Mixers; Fume and Vapor Hoods (All as Individual Units and in Combinations of Two or More Thereof Sold as Unitary Food Processing Installations); and Apparatus for Potting Plants, Seeds, and Seedlings.
First use Aug. 28, 1961, on vegetable cookers.

SN 132,025. C-B Tool Company, Lancaster, Pa. Filed Nov. 15, 1961.

GUPPY

For Outboard Marine Motors.
First use Oct. 2, 1961.

SN 132,040. Fort Wayne Tool & Die, Inc., Fort Wayne, Ind. Filed Nov. 15, 1961.

FORT WAYNE

For Machines for Winding Stator Core Members of Dynamo-electric Machines.
First use Feb. 27, 1953.

Class 26—Measuring and Scientific Appliances

SN 117,751. Yokogawa Electric Works, Limited, Musashino City, Tokyo, Japan. Filed Apr. 12, 1961.

YOKOGAWA

The word "Yokogawa" means "transverse river." Owner of Japanese Reg. No. 518,901, dated Apr. 21, 1958.
For Electrical Instruments for Measuring and Recording—Namely, Voltmeters, Ammeters, Frequency-Meters, Watt-Meters, Power Factory Meters, Cycle Counters, Three Phase Ground Detectors, Syncroscopes, Electro-Static Voltmeters, Instrument Transformers, Phonemeters, D.C. and A.C. Galvanometers, Bridges and Potentiometers, Circuit Testers, Earth Resistance Testers, Insulation Testers, Line Testers, Pulse Testers, Vacuum Tube Testers, Vacuum Tube Voltmeters, Q-Meters, C-Meters, Level Meters, Oscillographs and Power Oscillographs, Flux Meters, Oscillators, Amplifiers, Attenuators, A.C. Network Analyzers; Electric and Pneumatic Indicators, Recorders and Controllers for the Measurement and Control of Temperature, Flow, Liquid Level, pH, Gas Analysis, Solution Conductivity, Illumination, Humidity, Dew-Point, Viscosity; and Polarographs.

SN 118,390. National Precision Corporation, Buffalo, N.Y. Filed Apr. 14, 1961.

SILENT PARTNER

For Liquor Dispensing Control Apparatus Having an Automatic Measuring and Recording Feature.
First use November 1957.

SN 118,774. Drägerwerk, Heinr. & Bernh. Dräger, Lubeck, Germany. Filed Apr. 27, 1961.

ALCOTEST

Owner of German Reg. No. 659,331, dated June 28, 1954.
For Testing Tubes.

SN 132,769. Toledo Scale Corporation, Toledo, Ohio. Filed Nov. 24, 1961.

WEIGHVEYOR

For Weighing Scales, Attachments Therefor and Parts Thereof.
First use Oct. 20, 1961.

SN 134,767. Henry Troemner, Inc., Philadelphia, Pa. Filed Dec. 27, 1961.

LAB-ARM

For Stand for Mounting Laboratory Instruments.
First use Sept. 15, 1961.

Class 31—Filters and Refrigerators

SN 115,939. Nor-Lake, Incorporated, Hudson, Wis. Filed Mar. 17, 1961.

NOR-LAKE

For Commercial Refrigeration, Cooling and Freezing Apparatus, Refrigerated Bottle Dispensing Apparatus, Ice Cube Making Apparatus, Ice Bins, Ice Cream Freezers and Storage Cabinets, and Direct Draw Beer Coolers.
First use June 19, 1959; Sept. 8, 1947, as to "Nor-Lake."

Class 32—Furniture and Upholstery

SN 135,544. Tomlinson of High Point, High Point, N.C. Filed Jan. 10, 1962.

Coulisse

For Living Room, Dining Room, Bed Room and Den Furniture.
First use Nov. 2, 1961.

SN 135,985. Lullabye Furniture Corporation, Stevens Point, Wis. Filed Jan. 17, 1962.

Pixie

For Infants' and Juvenile Furniture.
First use Nov. 30, 1961.

SN 135,986. Lullabye Furniture Corporation, Stevens Point, Wis. Filed Jan. 17, 1962.

PIXIE

For Infants' and Juvenile Furniture.
First use Nov. 30, 1961.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 125,488. Grain Drying Equipment Co., Inc., Attica, Ind. Filed Aug. 7, 1961.

DRIALL

For Grain and Seed Driers and Parts Thereof.
First use Sept. 15, 1949.

SN 130,859. Acme Engineering and Manufacturing Corporation, Muskogee, Okla. Filed Oct. 30, 1961.

MASTERVENT

For Ventilators.
First use May 31, 1961.

Class 36—Musical Instruments and Supplies

SN 108,002. Earline La Velle Edler, d.b.a. Missile Song Co., Buffalo, N.Y. Filed Sept. 5, 1961.

MISSILE

For Phonograph Records.
First use June 26, 1961.

Class 37—Paper and Stationery

SN 115,336. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Mar. 10, 1961.

PLANS-A-PARTY

For Decorative Table Covers, Decorative Center Pieces, Decorative Napkins, Tally and Place Cards, Party Invitations, Coasters, Table Decorations, and Decorative Place Mats, All Made of Paper.
First use Feb. 10, 1961.

SN 120,624. Dri Mark Products, Inc., Mount Vernon, N.Y. Filed May 23, 1961.

DRI MARK

For Writing and Drawing Pencils, Both Black and Colored.
First use Sept. 20, 1960.

SN 131,245. West Virginia Pulp and Paper Company, New York, N.Y. Filed Nov. 2, 1961.

MAGNETRONIC

For Business Papers—Namely, White Bond Paper.
First use Sept. 16, 1961.

SN 137,695. American Can Company, New York, N.Y. Filed Feb. 12, 1962.



The portrait on the drawing is a fanciful representation of a boy.
For Paper Towels.
First use Sept. 19, 1960.

SN 137,835. American Can Company, New York, N.Y. Filed Feb. 13, 1962.



The portrait on the drawing is a fanciful representation of a boy.
For Paper Towels.
First use Sept. 19, 1960.

SN 137,882. American Can Company, New York, N.Y. Filed Feb. 14, 1962.



The portrait on the drawing is a fanciful representation of a boy.
For Paper Towels.
First use Sept. 19, 1960.

SN 138,799. National Press Company, Inc., North Chicago, Ill. Filed Feb. 28, 1962.

ECONO

For Blank Receipt Books.
First use 1954.

SN 138,807. Perry-Sherwood Corporation, New York, N.Y. Filed Feb. 28, 1962.

PERFECTYPE

Owner of Reg. No. 726,268.
For Correction Paper Used in Correcting Typewritten Matter.
First use in or about November 1960.

Class 38 — Prints and Publications

SN 83,599. Boating Digest Publishing Co., Inc., New York, N.Y. Filed Oct. 20, 1959.

BOATING DIGEST

For Magazine.
First use Apr. 16, 1958.

SN 113,249. Travel Magazine, Inc., New York, N.Y. Filed Feb. 7, 1961.

TRAVEL

Owner of Reg. No. 443,373.
For Magazine.
First use Oct. 22, 1907.

SN 118,583. Hitchcock Publishing Company, Wheaton, Ill. Filed Apr. 25, 1961.

HITCHCOCK'S WOOD WORKING DIRECTORY

Owner of Reg. No. 626,234.
For Trade Listing or Buyers' Guide Published Biennially.
First use June 1955.

SN 130,378. Orrington-Evanston Company and The ERS Corporation (joint enterprise), d.b.a. The Northern Virginia Sun, Arlington, Va. Filed Oct. 20, 1961.

NORTHERN VIRGINIA SUN SHOPPING NEWS

The words "Shopping News" are disclaimed.
For Newspaper Containing Shopping News.
First use Aug. 17, 1961.

SN 130,909. Institute of International Education, Inc., New York, N.Y. Filed Oct. 30, 1961.

Overseas

For Magazine.
First use Sept. 14, 1961.

Class 39 — Clothing

SN 102,537. Glazier Corporation, Chicago, Ill. Filed Aug. 12, 1960.

RHAPSODY

For Girls' and Ladies' Lounge Wear—Namely, Dusters, Robes, Brunch Coats, Pajama Sets, House Dresses, Smocks, Slacks and Blouses.
First use Sept. 1, 1953.

SN 106,985. City Stores Company, New York, N.Y. Filed Oct. 24, 1960.

City DELUXE

The word "Deluxe" is disclaimed apart from the mark as shown.
For Men's Dress Shirts, Sport Shirts, Pajamas and Underwear.
First use Apr. 28, 1960.

SN 107,797. Russell Stern Associates, Inc., Buffalo, N.Y. Filed Nov. 3, 1960.

WALDEN

For Ladies' Dresses and Sportswear—Namely, Two-Piece Dresses and Sweater and Dress Combinations.
First use Oct. 21, 1960.

SN 107,798. Russell Stern Associates, Inc., Buffalo, N.Y. Filed Nov. 3, 1960.

WALDEN CLASSICS

The word "Classics" is disclaimed apart from the mark as shown.
For Ladies' Dresses and Sportswear—Namely, Two-Piece Dresses and Sweater and Dress Combinations.
First use Oct. 21, 1960.

SN 109,053. Excelsior Underwear, Inc., New York, N.Y. Filed Nov. 25, 1960.

WUNDERSHORT

For Men's Undershorts.
First use on or about May 27, 1960.

SN 110,263. Du Barry of Hollywood, Inc., Los Angeles, Calif. Filed Dec. 15, 1960.

"QUEEN-SIZE"

For Hair Nets.
First use Nov. 29, 1958.

SN 112,740. Lehigh Safety Shoe Company, Emmaus, Pa. Filed Jan. 30, 1961.

VULCA-SEALED

For Men's Industrial or Safety Shoes.
First use Nov. 1, 1960.

SN 116,314. Jones Knitting Corporation, New York, N.Y. Filed Mar. 23, 1961.

JONES POCKET TEE

The wording "Pocket Tee" is disclaimed apart from the mark as shown, without prejudice. Owner of Reg. No. 506,220.
For Men's, Women's, Girls', and Boys' Underwear, Sleepwear, and T-Shirts, Pull-Overs, and Jackets.
First use Jan. 25, 1961.

SN 118,222. Canvas Products Corporation, d.b.a. National Sports Company, Fond du Lac, Wis. Filed Apr. 20, 1961.

WIS-TOGS

For Insulated Coats and Insulated Trousers Sold Both as Suits and Separately as Coats and Trousers.
First use Jan. 1, 1961.

SN 118,288. H. Rosenstock & Sons, Inc., Ellenville, N.Y. Filed Apr. 20, 1961.

JACKALETTE

For Children's Clothing—Namely, Jackets of All Types, Knitted and Woven Shorts, Slacks, Shorts, Combination Sets Composed of a Slack and/or a Short With Shirts, Suits, Sport Jacket Sets Comprising Jacket and Slacks, Shorts and/or Shirt, Vests, Cabana Sets Comprising a Jacket and Swim Suit, Sun Suits, Cardigan Sets Comprising a Slip-Over Sweater or Shirt and a Coat-Type Sweater, Coats, Snow Suits, Overalls, Dungarees and Crawlers in the Nature of Overalls or Dungarees.
First use Apr. 1, 1961.

SN 120,177. Caswell Shoes, Inc., Lynn, Mass. Filed May 17, 1961.

CONDOTTI

The mark "Condotti" does not identify any particular designer or other living individual to applicant's best belief and knowledge.
For Women's Shoes.
First use October 1959.

SN 120,207. Harry Irwin, Inc., New York, N.Y. Filed May 17, 1961.

CAPITOL HILL

For Men's Topcoats, Overcoats, and Sport Jackets.
First use Dec. 20, 1960.

SN 121,877. J. P. Stevens & Co. Inc., New York, N.Y. Filed June 12, 1961.

Stevens

Applicant does not claim exclusive right to use of the words "Fine Fabrics" or "Made in America" apart from the mark as shown. Owner of Reg. Nos. 84,763, 670,660, and others.
For Clothing—Namely, Diapers.
First use May 17, 1961.

SN 123,522. Clarise Sportswear Co. Inc., New York, N.Y. Filed July 7, 1961.

KOOKSVILLE

For Slacks, Shorts, Blouses, Matching Blouses and Skirts and Shorts.
First use June 15, 1961.

SN 124,083. Philip Gurian Sons Inc., New York, N.Y. Filed July 17, 1961.



The outline of the map of the United States is disclaimed apart from the mark as shown.
For Women's and Misses' Skirts.
First use Apr. 21, 1961.

SN 124,121. Petites by Sue Brett, Inc., New York, N.Y. Filed July 17, 1961.

TRACY PETITE

The word "Petite" is disclaimed apart from the mark as shown.
For Women's and Misses' Dresses.
First use June 1, 1961.

SN 124,489. Amboy Warehouse, Inc., Perth Amboy, N.J. Filed July 24, 1961.



The lining represents the color gold, but color is not claimed as a feature of the mark.
For Ladies' Shirts, Blouses, Skirts, Slacks, Pedal Pushers, and Jamaicas.
First use May 23, 1961.

SN 124,958. Gladys Wallace, Minneapolis, Minn. Filed July 28, 1961.

MARTINGALE

For Men's and Women's Shirts and Blouses.
First use July 25, 1961.

SN 125,224. Industrie-Gesellschaft für Schappe, Basel, Switzerland. Filed Aug. 2, 1961.

PRATICA

The translation of the Italian word "Pratica" is "practice."
For Men's Shirts.
First use April 1957; in commerce July 22, 1960.

SN 125,238. Oshkosh B'Gosh, Incorporated, Oshkosh, Wis. Filed Aug. 2, 1961.

OSHKOSH CASUALS

Applicant disclaims "Casuals" apart from the mark as shown. Owner of Reg. Nos. 511,479, 511,480 and 567,447.
For Men's and Boys' Jackets, Lined and Unlined, Pants and Shirts.
First use July 10, 1960; April 1911 as to "Oshkosh."

SN 125,318. Pendleton Woolen Mills, Portland, Oreg. Filed Aug. 3, 1961.

PENDLEMATE

Owner of Reg. Nos. 508,995, 514,710, 721,999, and others.
For Women's Shirts, Jackets and Slacks.
First use July 7, 1961.

SN 126,005. Biggs Laboratories (Canada) Limited, Toronto, Ontario, Canada. Filed Aug. 15, 1961.

SHAMMI

For Transparent Work and Utility Glove Made of Polyethylene.
First use July 26, 1961; in commerce July 26, 1961.

SN 126,242. Mamiye Brothers, New York, N.Y. Filed Aug. 18, 1961.

MAMBRO

For Clothing—Namely, Shirts, Pants, Blouses, Swim Trunks, Skirts, Hats, Sweaters, Polo Shirts, T-Shirts, Gloves.
First use July 16, 1955.

SN 129,078. Tie City Inc., New York, N.Y. Filed Sept. 26, 1961.

TIE CITY

The word "Tie" is disclaimed separate and apart from the mark.
For Men's Furnishings—Namely, Neckties.
First use Oct. 8, 1951.

SN 129,698. Stern-Lebach Corporation, Andover, Mass. Filed Oct. 11, 1961.

KING'S GRANT

For Hosiery.
First use Sept. 25, 1961.

SN 130,095. Nadler Sportswear Corp., New York, N.Y. Filed Oct. 17, 1961.

DURBAN CLASSICS

The word "Classics" is disclaimed apart from the mark as shown.
For Ladies' Sportswear, Blouses, and Garments.
First use Sept. 15, 1961.

SN 131,001. Anderson & Thompson Ski Co., Seattle, Wash. Filed Oct. 31, 1961.

A & T

Owner of Reg. No. 648,876.
For Wearing Apparel for Skiers—Namely, Ski Sweaters, Ski Pants, T-Shirts, Socks, Ski Boots, Ski Boot Laces, After Ski Boots, Ski Hats, Caps and Headbands, Ski Gloves and Mitts.
First use on or about Oct. 1, 1939.

SN 132,468. Kayser-Roth Corporation, New York, N.Y. Filed Nov. 21, 1961.

KOLOR-KODED

For Women's Hosiery.
First use May 9, 1961.

SN 132,840. Knit Products Corporation, Belmont, N.C. Filed Nov. 27, 1961.



For Women's Hosiery.
First use Nov. 10, 1961.

SN 132,974. Carmi-Ainsbrooke Corporation, New York, N.Y. Filed Nov. 29, 1961.

FLEX-SEAT

For Men's Shorts and Pajamas.
First use Nov. 10, 1961.

SN 132,990. Leslie Fay, Inc., New York, N.Y. Filed Nov. 29, 1961.

JOAN LESLIE

"Joan Leslie" is a fictitious, coined name, which is completely fanciful. Owner of Reg. No. 393,256.
For Ladies', Misses' and Junior Dresses.
First use October 1940.

SN 133,063. Juan Sanllehi Gell, Tarrasa, Barcelona, Spain. Filed Nov. 30, 1961.

JENNY

Owner of Spanish Reg. No. 97,343, dated July 4, 1934.
For Stockings, Socks, and Knitted Goods—Namely, Gloves, Mittens, Sweaters, Jackets, Coats, Scarves and Head Coverings; Women's and Girls' Suits, and Women's, Girls' and Infants' Dresses.

SN 133,247. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Dec. 4, 1961.

FARACHEX

Owner of Reg. Nos. 558,581, 558,776, and 627,029.
For Men's and Boys' Slacks and Shorts.
First use Oct. 25, 1961.

SN 133,249. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Dec. 4, 1961.

FARAFINA

Owner of Reg. Nos. 558,581, 558,776, and 627,029.
For Men's and Boys' Slacks and Shorts.
First use Oct. 25, 1961.

SN 133,295. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Dec. 4, 1961.

TEEN WORLD

For Parkas, Jackets, and Sweaters.
First use July 31, 1961.

SN 133,367. Crescendoe Gloves, Inc., Johnstown, N.Y. Filed S.R. Dec. 5, 1961; Am. P.R. May 14, 1962.



Owner of Reg. No. 550,334.
For Ladies' Gloves Made of Simulated Doeskin Fabric.
First use Oct. 3, 1949.

SN 133,376. Eatoughs Limited, Earl Shilton, England. Filed Dec. 5, 1961.

PLASTISHU

For Shoes and Sandals.
First use in the year 1957; in commerce in the year 1959.

SN 134,975. The Hallmark Shirt Co., Inc., New York, N.Y. Filed Jan. 2, 1962.

LINVILLE

For Men's and Boys' Shirts.
First use Feb. 2, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 121,878. J. P. Stevens & Co., Inc., New York, N.Y. Filed June 12, 1961.



Owner of Reg. Nos. 84,763, 670,660, and others.
For Wool, Cotton and Synthetic Textile Fabrics in the Piece.
First use Apr. 28, 1961.

SN 125,225. Industrie-Gesellschaft für Schappe, Basel, Switzerland. Filed Aug. 2, 1961.

PRATICA

The translation of the Italian word "Pratica" is "practice."
For Bed Sheets, Bedspreads, and Pillows.
First use October 1959; in commerce Oct. 28, 1960.

SN 129,418. Sears, Roebuck and Co., Chicago, Ill. Filed Oct. 6, 1961.

COTTON CLOUD

For Textile Rugs and Carpeting Made Wholly or in Substantial Part of Cotton.
First use Feb. 29, 1960.

SN 133,455. Dick & Goldschmidt, Inc., New York, N.Y. Filed Dec. 6, 1961.

DIGOL

For Piece Goods Made of Wool, Worsted, Cotton, Rayon and Other Synthetic Fibres.
First use April 1937.

SN 135,073. Weil & Durrse, Inc., New York, N.Y. Filed Jan. 2, 1962.

SETTING PRETTY

For Tablecloths, Napkins, Place Mats, Towels, Furniture Scarfs and Throws, Toweling, Table-Cover Fabrics and Cotton Piece Goods.
First use in 1944.

SN 135,255. Burlington Industries, Inc., New York, N.Y. Filed Jan. 5, 1962.

ONE-UP

For Textile Fabrics Suitable for Use in the Manufacture of Coats, Suits, Slacks, Shorts and Topcoats.
First use June 5, 1961.

Class 43 — Thread and Yarn

SN 121,876. J. P. Stevens & Co., Inc., New York, N.Y. Filed June 12, 1961.



Owner of Reg. Nos. 84,763, 511,773, and others.
For Yarn of Cotton, Wool and Synthetic Blends.
First use May 11, 1961.

SN 133,792. Imperial Chemical Industries Limited, London, England. Filed Dec. 11, 1961.

ULSTRENE

Owner of British Reg. No. 817,712, dated Mar. 2, 1961.
For Synthetic Yarns and Threads.

Class 44 — Dental, Medical, and Surgical Appliances

SN 105,248. General Scientific Equipment Company, Philadelphia, Pa. Filed Sept. 20, 1960.

NUMBER ONE SAFETY CENTER

For Occupational Safety Devices—Namely, Gas Masks, Dust Masks, Respirators, Welding Helmets, Acid Hoods, Safety Goggles, Devices for Removing Foreign Particles From the Eyes and First Aid Kits.
First use Jan. 4, 1960.

SN 119,209. Johnson & Johnson, New Brunswick, N.J. Filed May 3, 1961.

SLUMBERLAND

Owner of Reg. No. 721,432.
For Cotton Buds.
First use Apr. 18, 1960.

SN 130,084. Lemos Company, West Hollywood, Fla. Filed Oct. 17, 1961.

PERMAGON

For Electrolysis Epilator for the Removal of Hair.
First use on or about Jan. 15, 1959.

SN 135,064. Therm-O-Rite Products Corp., Buffalo, N.Y. Filed Jan. 2, 1962.

THERM-O-RITE

For Therapeutic Apparatus Consisting of Thermal Blankets Adapted To Be Heated and Cooled by Liquid Circulation and Apparatus for Supplying Heating and Cooling Liquids to Such Blankets.
First use Jan. 1, 1946.

SN 135,253. Abraham H. Baskin, Hartford, Conn. Filed Jan. 5, 1962.

SWEESTIX

For Tongue Depressor.
First use Nov. 16, 1961.

Class 46 — Foods and Ingredients of Foods

SN 83,970. H. & R. Supply, St. Joseph, Mo. Filed Oct. 26, 1959.

CHILLO

For Chili Seasoning.
First use during 1914.

SN 86,879. Marie's, Seattle, Wash. Filed Dec. 8, 1959.

MARIE'S

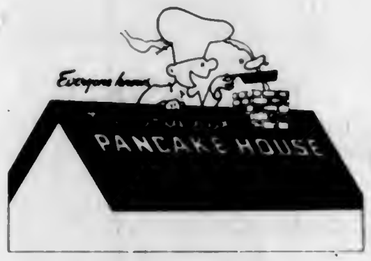
For Cheese-Flavored Salad Dressing.
First use on or about Aug. 1, 1958.

SN 90,799. Ph. Wunderle, Inc., d.b.a. Stark Brothers & Beyer, Philadelphia, Pa. Filed Feb. 11, 1960.

PARFAIT JELLIES

Applicant disclaims any exclusive rights in the word "Jellies" apart from the mark as shown.
For Candy.
First use 1934.

SN 91,046. The Original Pancake House, Portland, Oreg., by change of name from The Pancake House, Portland, Oreg. Filed Feb. 8, 1960.



Owner of Reg. No. 681,908.
For Fruit Preserves, Fresh Fruit Syrups, Jellies, Pancake Mixes, Waffle Mixes, Stabilizer Flour, and Coffee, All of Which Are Used for Food Purposes.
First use during March 1958.

SN 100,689. The Chun King Corporation, d.b.a. Chun King Frozen Foods Corp., Duluth, Minn. Filed July 12, 1960.

重 CHUN KING 慶

The hieroglyphics when translated read "Chun King."
Owner of Reg. Nos. 422,687, 680,533, and others.
For Frozen Food Products—Namely, Shrimp Chow Mein, Chicken Chow Mein, Beef Chop Suey, Fried Rice, Sweet and Sour Pork, Assorted Egg Rolls, Egg Foo Young, Cantonese Egg Rolls, Fruit Rolls, Shrimp Cantonese Style Dinner, Chicken Chop Suey Dinner, Beef Chop Suey Dinner, Brown Sauce, and Soya Sauce; and Canned Food Products—Namely, Mushroom Chow Mein, Beef Chop Suey, Chicken Chow Mein.
First use July 15, 1958.

SN 101,455. Sun-Maid Raisin Growers of California, Fresno, Calif. Filed July 25, 1960.



For Raisins.
First use June 8, 1960.

SN 113,601. Aktiebolaget Saltsjöqvarn, Stockholm, Sweden. Filed Feb. 14, 1961.



SWEDISH MAID

For Pancake and Waffle Mix.
First use Dec. 17, 1960; in commerce Dec. 17, 1960.
Subj. to Intf. with SN 125,567.

SN 113,928. Jacques S. La Belle, Reseda, Calif. Filed Feb. 17, 1961.



No claim of exclusive right is made to "Dressing for Salads," said words being merely the name of the goods.
For Salad Dressing.
First use Jan. 12, 1940.

SN 116,169. Sunshine Biscuits, Inc., d.b.a. The Mann Company, Long Island City, N.Y. Filed Mar. 21, 1961.

Party Chips

No claim is made to the word "Chips" apart from the mark shown.
For Potato Chips.
First use Feb. 16, 1961.

SN 117,080. Armour and Company, Chicago, Ill. Filed Apr. 4, 1961.

THE DEVIL'S KISS

For Frozen Cheese.
First use on or about Nov. 1, 1960.

SN 117,082. Armour and Company, Chicago, Ill. Filed Apr. 4, 1961.

THE NUTTY DANE

For the purposes of registration, no claim is made to the exclusive right to use "Nutty" but the applicant waives none of its common law rights therein.
For Frozen Cheese.
First use on or about Nov. 1, 1960.

SN 117,361. Hijos de Jose Sabater, Reus, Spain. Filed Apr. 7, 1961.

SABATER

For Edible Olive Oil.
First use 1910; in commerce 1915.

SN 119,541. National Biscuit Company, New York, N.Y. Filed May 8, 1961.

RAINBOW FLAKES

No claim is made to the word "Flakes" apart from the mark as shown.
For Cereal Breakfast Food.
First use Mar. 3, 1961.

SN 119,667. Besco Products Company (Georgia corporation), Zebulon, Ga., assignee of Besco Products Company (Florida corporation), Zebulon, Ga. Filed May 10, 1961.

GEORGIA BOY

For Canned Fruits and Canned Vegetables.
First use in the year 1940.

SN 120,068. James Allan & Sons, San Francisco, Calif. Filed May 16, 1961.



For Fresh Meats—Namely, Beef Cuts, Lamb Cuts, Meat Carcasses, Slab Bacon, and Hams.
First use Mar. 30, 1961.

SN 120,314. Ross Industries, Inc., Wichita, Kans., assignee of The Kansas Milling Company, Wichita Kans. Filed May 18, 1961.



Owner of Reg. Nos. 389,704 and 435,593.
For Flour; Poultry, Hog, Dairy, Cattle, Calf, Dog and Rabbit Feeds; and Bread.
First use March 1953; Apr. 14, 1940, as to words "Spark O' Life."

SN 122,809. Ray D. Keown, d.b.a. Southwestern Nut Company, Gordon, Tex. Filed June 26, 1961.

TOPPY'S

For Dried Pinto Beans, Unpopped Popcorn, and Shelled Nuts—Namely, Cashew, Peanuts, and Pecans.
First use Nov. 8, 1959, on pecans.

SN 124,326. Ballantine Produce Co., Inc., Sanger, Calif. Filed July 20, 1961.

BALLANTINE

For Fresh Deciduous Fruits and Grapes.
First use Aug. 1, 1942.

SN 125,261. The Welch Grape Juice Company, Inc., Westfield, N.Y. Filed Aug. 2, 1961.

WELCH'S

Owner of Reg. Nos. 109,790, 682,279, and others.
For Frozen Grape Juice Bars on a Stick.
First use July 12, 1961.

SN 125,401. J. B. Myers, d.b.a. Delicasa Foods, New Milford, N.J. Filed Aug. 4, 1961.



For Prepared Frozen Foods—Namely, Beef Stroganoff, Seafood Newberg, Shrimp New Orleans, and Cheddar Rarebit.
First use Mar. 15, 1961.

SN 125,428. J. R. Simplot Company, Boise, Idaho. Filed Aug. 4, 1961.

SPUD-QUEEN

For Frozen Potatoes.
First use May 15, 1961.

SN 125,567. Timothy P. Sheehan, d.b.a. Swedish Food Products, Chicago, Ill. Filed Aug. 7, 1961.



For Toast and Bread, Lingonberry Sauce, Packaged Spices Such as Nutmeg, Cloves, Etc., Pickles, Seafood Cocktail Sauce, Potato Flour Mix, Packaged Dried Figs, and Sugared and Fruit Flavored Syrups for Making Food Beverages.
First use at least as early as November 1924 on toast and bread.
Subj. to Intf. with SN 113,601.

SN 126,210. J. V. D'Albora Company, Inc., d.b.a. J. V. D'Albora Company, Cocoa, Fla. Filed Aug. 18, 1961.

golden groves

Owner of Reg. No. 242,215.
For Fresh Grapefruit.
First use Mar. 15, 1924.

SN 128,187. McCleary Industries, Inc., South Beloit, Ill. Filed Sept. 19, 1961.

RED ENGINE

For Snack Foods—Namely, Popped Popcorn, Caramel Corn, Puffed Cornmeal, and Corn Chips.
First use Jan. 19, 1961.

SN 129,185. American Chocolate and Cocoa Co., Inc., d.b.a. American Chocolate Company, Inc., St. Louis, Mo. Filed Oct. 4, 1961.

CORDIAL

For Fruit Base for Use in Making Ice Cream and Sherbet.
First use May 12, 1961.

SN 131,753. Germantown Manufacturing Company, Philadelphia, Pa. Filed Nov. 10, 1961.

STA-RITE

For Stabilizer for Cultured Dairy Products.
First use Mar. 12, 1940.

SN 135,178. Campbell Soup Company, Camden, N.J. Filed Jan. 4, 1962.

RED KETTLE

For Dehydrated Soup Mixes.
First use Nov. 6, 1961.

SN 136,018. The Grand Union Company, East Paterson, N.J. Filed Jan. 15, 1962.

GRAND-WAY

Owner of Reg. Nos. 46,832, 701,951, and others.
For Dietary Food Concentrate for Weight Control.
First use on or about Sept. 7, 1960.

SN 139,093. The Grand Union Company, East Paterson, N.J. Filed Mar. 5, 1962.

GRAND WAY

Owner of Reg. Nos. 46,832, 701,951, and others.
For Fruit Preserves and Jellies.
First use on or about Jan. 29, 1962.

SN 139,116. Medallion Dairy Association, St. Louis, Mo. Filed Mar. 5, 1962. COLLECTIVE MARK.



For Fresh Milk and Cottage Cheese.
First use Nov. 14, 1961.

SN 139,440. Sunnyland Packing Company, Thomasville, Ga. Filed Mar. 8, 1962.

WOODSMAN

For Sliced Bacon.
First use Jan. 23, 1962.

SN 139,441. Sunnyland Packing Company, Thomasville, Ga. Filed Mar. 8, 1962.

Break o'Dawn

For Sliced Bacon.
First use Nov. 22, 1961.

SN 139,442. Sunnyland Packing Company, Thomasville, Ga. Filed Mar. 8, 1962.



For Sliced Bacon.
First use Oct. 16, 1950.

Class 47—Wines

SN 112,468. Bernard G. Leverant, Hartford, Conn. Filed Jan. 25, 1961.

BRAND "X"

The word "Brand" is disclaimed apart from the mark as shown.
For Wines.
First use Nov. 24, 1959.

SN 121,807. C. da Silva, Ltd., Vila Nova de Gaia, Portugal. Filed June 12, 1961.

ISABEL

For Wines.
First use September 1958; in commerce on or about Apr. 13, 1959.

Class 48—Malt Beverages and Liquors

SN 121,584. New Zealand Breweries Limited, Wellington, New Zealand. Filed June 7, 1961.



No claim is made to the words "Lager Beer" appearing on the drawing.
For Beer.
First use Sept. 8, 1958; in commerce Oct. 19, 1959.

SN 134,989. Kingsbury Breweries Company, Sheboygan, Wis. Filed Jan. 2, 1962.

ZING

For Near Beer.
First use Dec. 1, 1961.

Class 49 — Distilled Alcoholic Liquors

SN 112,467. Bernard G. Leverant, Hartford, Conn. Filed Jan. 25, 1961.

BRAND "X"

The word "Brand" is disclaimed apart from the mark as shown.
For Whiskey, Gin, and Vodka.
First use Nov. 24, 1959.

SN 120,554. Mr. Boston Distiller Inc., Boston, Mass. Filed May 22, 1961.

MR. MARYLAND

Owner of Reg. Nos. 585,975, 595,649, and 637,534.
For Whiskey.
First use May 8, 1961.

SN 121,404. Mr. Boston Distiller Inc., Boston, Mass. Filed June 5, 1961.

MR. PENNSYLVANIA

Owner of Reg. Nos. 585,975, 595,649, and 637,534.
For Whiskey.
First use May 19, 1961.

SN 123,402. Blanchard Importing & Distributing Co., Inc., Boston, Mass. Filed July 5, 1961.

Blanchard's 874

For Blended Whiskey.
First use 1939.

SN 131,689. L. E. Jung & Wulff Co., Inc., New York, N.Y. Filed Nov. 9, 1961.

PIPE'S PERFECTION

Owner of Reg. No. 392,052.
For Scotch Whisky.
First use May 3, 1940.

SN 134,148. Old Stanley Distillery Co., Owensboro, Ky. Filed Dec. 15, 1961.

OLD STANLEY

For Whiskey.
First use Oct. 30, 1961.

SN 134,160. Schenley Industries, Inc., New York, N.Y. Filed Dec. 15, 1961.

BUCKMINSTER

For Whiskey.
First use Mar. 14, 1934.

SN 134,193. Continental Distilling Corporation, Philadelphia, Pa. Filed Dec. 18, 1961.

P D Q

For Gin.
First use Nov. 30, 1961.

SN 134,406. Joseph E. Seagram & Sons, Inc., New York, N.Y. Filed Dec. 20, 1961.

KENTUCKY STAR

For Whiskey.
First use Nov. 15, 1961.

Class 50 — Merchandise Not Otherwise Classified

SN 138,301. HMH Publishing Co. Inc., Chicago, Ill. Filed Feb. 20, 1962.

FEMLIN

For Figurines.
First use Dec. 15, 1961.

Class 51 — Cosmetics and Toilet Preparations

SN 71,092. Daggett & Ramsdell, Inc., New York, N.Y. Filed Apr. 8, 1959.

DEBUTANTE DE VERSAILLES

Owner of Reg. Nos. 297,827 and 506,568.
For Perfume and Toilet Water.
First use in or about July 1958.

SN 91,905. Elizabeth Arden Sales Corporation, New York, N.Y. Filed Mar. 1, 1960.

FLOWER EYES

For Eye Make-Up, Consisting of Eye Shadow, Mascara, Eye Pencil, Eyelash Make-Up and Eye Lotions.
First use Feb. 15, 1960.

SN 104,455. Estrellita Jones, d.b.a. Paul Jones Perfumes, Piedmont, Calif. Filed Sept. 14, 1960.

Cologne Centrate

The word "Cologne" is disclaimed apart from the mark as shown.
For Colognes.
First use 1938.

SN 111,482. Clairol Incorporated, New York, N.Y. Filed Jan. 9, 1961.

SPOTLESS

For Preparation for Removing Stains From the Skin.
First use Oct. 27, 1960.

SN 114,408. Avon Products, Inc., New York, N.Y. Filed Feb. 27, 1961.

SILICONE GLOVE

Applicant disclaims the word "Silicone" apart from the mark as shown.
For Hand Cream.
First use Feb. 7, 1961.

SN 118,613. L'Oreal, Paris, France, by change of name from Societe Monsavon-L'Oreal, Paris, France. Filed Apr. 25, 1961.

BIO DOP

Owner of French Reg. No. 487,383, dated Apr. 7, 1960 (Seine); Natl. Inst. No. 142,533.
For Perfume and Toilet Water, Essential Oils, Dyes, Coloring Agents, Rinses and Lotions for Hair and Beards, Products for Bleaching of Hair, Hair Conditioners, Products for Waving and Setting of Hair, and Other Toilet Requisites.

SN 119,334. The Wella Corporation, Englewood, N.J. Filed May 4, 1961.

Lift n' tint

For Hair Coloring Product in the Nature of a Dye or Tint.
First use Mar. 15, 1961.

SN 125,743. Ja-Tone, Inc., Livingston, N.J. Filed Aug. 10, 1961.

Twinkle Tone

For Finger Nail Lacquer.
First use Aug. 3, 1961.

SN 126,073. Associated Brands, Inc., Brooklyn, N.Y. Filed Aug. 16, 1961.

"OF THEE I SING"
"Grand Prix"

Owner of Reg. No. 349,333.
For Men's Cologne.
First use Apr. 3, 1961.

SN 127,836. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Sept. 14, 1961.

PARILADY

Owner of German Reg. No. 746,521, dated Mar. 9, 1961.
For Cosmetic Skin Creams and Lotions.

SN 128,122. Vinolia Company Limited, London, England. Filed Sept. 18, 1961.

VINOLIA

Owner of British Reg. No. 76,915, dated June 4, 1888; and U.S. Reg. No. 16,443.
For Hair Sprays, Hair Dressings, Hair Tints, Hair Lotions, Hair Rinses, Hair Pomade, Hair Colouring and Hair Conditioning Preparations; Hair-Waving Products—Namely, Waving and Neutralizing Lotions; Perfumes.

SN 129,525. Pro-Capa Products, Inc., Brooklyn, N.Y. Filed Oct. 9, 1961.

HAIR TAMER

The word "Hair" is disclaimed apart from the mark as shown.
For Hair Dressing.
First use Mar. 1, 1946.

SN 129,760. Myrtle Frickey, d.b.a. M & M Distributors, Chicago, Ill. Filed Oct. 12, 1961.

Laedi

For Astringent, Skin Freshener, Deodorant, Stick Deodorant, Bath Salts, Pine Bath Oil, Cologne, Nail Polish Remover, Nail Polish, Hair Conditioning Preparation, After Shave Lotion, Hand Lotion, Face Lotion, Sun Tan Lotion, Hair Tonic, Brushless Shaving Cream, Hand Cream, Moisture Cream, Cleansing Cream, Estrogenic Hormone Cream, Rouge, Pre-Shaving Preparation, Lipstick, Face Powder, Dusting Powder, Hair Spray, Eye Make-Up, Pencils and Mascara.
First use July 28, 1961.

SN 131,465. Amulet Cosmetics, Inc., Annandale, Va. Filed Nov. 7, 1961.

AMULET AMULET AMULET

For Face Cream.
First use Oct. 17, 1961.

SN 131,539. Alexander Manufacturing Co., Inc., New York, N.Y. Filed Nov. 8, 1961.

ALEX

For Hair Straightener.
First use Aug. 15, 1961.

SN 132,007. Cussons, Sons & Company, Limited, Kersal, Manchester, England. Filed Nov. 14, 1961.

Cussons

For Talcum Powder and Perfumed Bath Salts in Cube Form.
First use Dec. 31, 1899; in commerce Dec. 31, 1935.

SN 132,125. Chesebrough-Pond's Inc., New York, N.Y. Filed Nov. 16, 1961.

EMULAN

For Lanolin Derivative Used as an Ingredient in Eye Shadow.
First use Aug. 4, 1961.

SN 132,126. Jacqueline Cochran, Inc., New York, N.Y. Filed Nov. 16, 1961.

TANTALIZING TONES

For Lipsticks.
First use Nov. 10, 1961.

SN 132,303. Helene Curtis Industries, Inc., Chicago, Ill. Filed Nov. 20, 1961.

EVER-PERM

Owner of Reg. No. 702,698.
For Hair Spray.
First use on or about Oct. 3, 1961.

SN 132,582. Revlon, Inc., New York, N.Y. Filed Nov. 22, 1961.

CONTEMPERA

For Cosmetic Cream Make-Up for the Skin.
First use Mar. 3, 1961.

SN 132,634. John H. Breck, Inc., Springfield, Mass. Filed Nov. 24, 1961.

SURPASS

For Hair Waving Lotion.
First use Nov. 8, 1961.

SN 132,757. C. H. Stuart & Co., Inc., Newark, N.Y. Filed Nov. 24, 1961.

HANOVER

For Stick and Cream Perfumes; Cologne, After Shave Lotion, Hand Cream; Hand Lotion; Mint Stick Deodorant; Skin Freshener and Body Toner; Massage Cleanser; Cleansing Lotion, and Foundation Cream.
First use Aug. 11, 1961.

SN 132,762. Maryann Tackett, d.b.a. "B" Beautiful Beauty Products, Chicago, Ill. Filed Nov. 24, 1961.

"B" BEAUTIFUL

For Skin Cleansing, Freshening and Moisturizing Preparations.
First use Mar. 22, 1961.

SN 132,980. Helene Curtis Industries, Inc., d.b.a. Lentheric, Chicago, Ill. Filed Nov. 29, 1961.

AIR DE FRANCE

The preferred translation of the words "Air de France" is "air of France."
For Cologne, Perfume, and Toilet Water.
First use on or about Nov. 2, 1960.

SN 136,006. Irving Stacks, d.b.a. Beacon Pharmacal Co., Boston, Mass. Filed Jan. 17, 1962.

KULA-DERM

For Medicated Hot Weather Cooling Lotion.
First use Jan. 9, 1962.

Class 52 — Detergents and Soaps

SN 96,502. K & E Chemical Company, Cleveland, Ohio. Filed May 5, 1960.

KLENZTONE

For Chemical Compositions for Cleaning and Maintaining Natural and Artificial Stone Surfaces.
First use on or about July 28, 1959.

SN 100,700. General Water Conditioning Co., Chicago, Ill. Filed July 12, 1960.

MIRACLE WHITE

For Compound Used With a Detergent and as a Rust Remover.
First use on or about June 21, 1960.

SN 118,630. Briseis, S.A., Almeria, Spain. Filed Mar. 8, 1961.

TULIPAN NEGRO BRISEIS

The words "Tulipan Negro" in English mean "black tulip."
Owner of Spanish Reg. No. 364,023, dated July 26, 1960.
For Soaps, Detergents.

SN 120,894. Julius Kupfer Industries, Inc., Elmhurst, N.Y. Filed May 26, 1961.

Spray Care

The word "Spray" is disclaimed apart from the mark as shown.
For Glass and Tile Cleaner.
First use on or about Mar. 23, 1961.

SN 122,423. Britex Corporation, Boston, Mass. Filed June 20, 1961.

KLOR-O-SUDS

Owner of Reg. No. 700,756.
For Chlorinated Detergent for Cleaning Food Handling and Processing Equipment.
First use Jan. 25, 1960.

SN 127,985. Amanus Products Company, Inc., Denver, Colo. Filed Sept. 18, 1961.

Amanus

Owner of Reg. No. 707,283.
For Household Cleanser.
First use June 19, 1959.

SN 130,925. Martens Chemical Corp., College Point, N.Y. Filed Oct. 30, 1961.

KLEEN BREAK

For Detergent Compound for Commercial Laundry Use.
First use Jan. 30, 1958.

SN 132,685. Lanvin-Parfums, Inc., New York, N.Y. Filed Nov. 24, 1961.

SPANISH GERANIUM

Owner of Reg. Nos. 546,467, 655,379, and 109,882.
For Bath Soap and Toilet Soap.
First use Sept. 5, 1956.

SN 134,324. Janitorial Supplies Corporation, Albany, N.Y. Filed Dec. 19, 1961.

GREESAID

For Degreasing and Cleaning Composition.
First use Nov. 8, 1961.

SN 134,421. Roux Laboratories, Inc., New York, N.Y. Filed Dec. 13, 1961.

DOUCOLOR

For Liquid Creme Color Shampoo.
First use Dec. 1, 1961.

SN 136,017. The Grand Union Company, d.b.a. Grand-Way Discount Centers, East Paterson, N.J. Filed Jan. 15, 1962.

GRAND-WAY

Owner of Reg. Nos. 52,300, 721,710, and others.
For Shampoos for Use on the Hair.
First use on or about June 12, 1959.

SERVICE MARKS

Class 100 — Miscellaneous

SN 108,306. Fox Kartway Track, Inc., Janesville, Wis. Filed Nov. 14, 1960.

KARTWAY

For Operating Tracks for Use of Midget Automobile Drivers and the Rental of Midget Automobiles for Use Thereon.
First use Oct. 6, 1960.

SN 111,248. Tuboscope Company, Houston, Tex. Filed Jan. 3, 1961.

SONOSCOPE ISOLOG

Owner of Reg. No. 538,358.
For Measuring and Recording the Wall Thickness of Tubular Goods.
First use at least as early as Mar. 1, 1958.

SN 114,400. Antoine de Paris, Inc., New York, N.Y. Filed Feb. 27, 1961.

MAISON ANTOINE

No claim is made to the word "Maison" apart from the mark as shown. "Maison" is the French equivalent of "house."
Owner of Reg. Nos. 222,849, 301,503, and 369,057.
For Hairdressing and Beauty Salon Services.
First use Sept. 15, 1958.

SN 118,672. R. D. Erdle, d.b.a. Selway Rug Cleaners, Washington, Pa. Filed Apr. 26, 1961.

SELWAY

For Rug Cleaning and Mothproofing Services.
First use July 1946.

SN 122,600. The Chun King Corporation, Duluth, Minn. Filed June 22, 1961.

CHUN KING

Owner of Reg. Nos. 422,687, 716,567, and others.
For Operation and Servicing of Franchised Restaurants Specializing in American-Oriental Foods.
First use June 26, 1960.

SN 122,697. HMH Publishing Co., Inc., Chicago, Ill. Filed June 23, 1961.



For Operating Private Social Clubs Which Feature Food, Drinks and Entertainment.
First use during November 1959.

SN 122,698. HMH Publishing Co., Inc., Chicago, Ill. Filed June 23, 1961.



For Operating Private Social Clubs Which Feature Food, Drinks and Entertainment.
First use during August 1960.

SN 124,838. Jeno F. Paulucci, Duluth, Minn. Filed July 27, 1961.

RIKSHA INN

Applicant disclaims the term "Inn" when used apart from the mark as shown.
For Restaurant Services.
First use in June 1960.

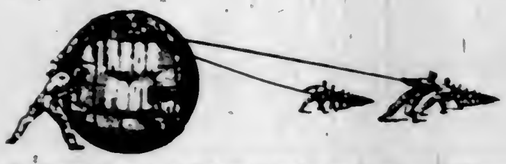
SN 127,142. Restaurant Systems of Oregon, Ltd., Salem, Oreg. Filed Sept. 1, 1961.

"SMORGASTYLE"

For Restaurant Services.
First use May 1959.

Class 101 — Advertising and Business

SN 102,772. Labor Pool, Inc., Berwyn, Ill. Filed Aug. 16, 1960.



No claim is made to the exclusive use of the name "Labor Pool, Inc." apart from the mark as shown.
For Furnishing of Employees to Others on a Temporary Basis.
First use Sept. 23, 1954.

SN 121,986. Andre Emmerich, d.b.a. Andre Emmerich Gallery, New York, N.Y. Filed June 14, 1961.



Applicant disclaims the term "New York," except as the term is used in the mark. The mark includes the letters "re" as shown.
For Selling the Art Work of Others on a Commission Basis.
First use Apr. 15, 1957.

SN 123,458. Earl H. Beling, d.b.a. Beling Engineering Consultants, Moline, Ill. Filed July 6, 1961.



Applicant hereby disclaims the words "Engineering Know How" apart from the mark as shown.
For Engineering Consulting and Supervision Services in the Planning and Design of Buildings; Heating, Air Conditioning, Plumbing, Refrigeration, and Electrical Systems for Buildings; Water and Sewer Systems and Plants; Land Surveying and Subdivision Design.
First use Jan. 30, 1954.

SN 128,970. Herman B. Director Associates, Inc., Washington, D.C. Filed Oct. 2, 1961.

MARKETRONICS

For Market Research, Commercial Research, Product-Development Research, and Sales Measurement Analysis.
First use Apr. 20, 1961.

SN 129,276. Lion Match Company, Inc., Long Island City, N.Y. Filed Oct. 5, 1961.

LION 3-STEP "MIRACLE" SALES PLAN

Applicant hereby makes disclaimer of the words "Sales Plan."
For Devising Advertising Programs for Others.
First use Sept. 1, 1961.

SN 129,503. S. S. Kresge Company, Detroit, Mich. Filed Oct. 9, 1961.

JUPITER

For Retail Variety Store Services.
First use May 11, 1961.

Class 102 — Insurance and Financial

SN 99,267. All-Coverage Agency, Inc., Great Neck, N.Y. Filed June 20, 1960.



For General Insurance Agency Services.
First use Oct. 1, 1957.

SN 118,984. Flightplan, Incorporated, New York, N.Y. Filed May 1, 1961.

flightplan

For Extension of Credit to Customers Who Patronize Establishments Who Subscribe to Applicant's Service, and Making Collections From Said Customers Through a Central Billing System.
First use Apr. 28, 1961.

SN 121,048. Western Motor Underwriters, Inc., Seattle, Wash. Filed May 29, 1961.

FAIRWAY

For Insurance Underwriting Services—Namely, Automotive and Casualty Insurance.
First use Feb. 10, 1961.

SN 127,774. Great West Savings and Loan Association, Boulder, Colo. Filed Sept. 13, 1961.



For Savings Account Services and Real Estate Loan Services.
First use Aug. 15, 1960.

SN 128,036. Harris Trust and Savings Bank, Chicago, Ill. Filed Sept. 18, 1961.

ON-THE-SPOT BANKING

For Banking Services.
First use Sept. 1, 1961.

SN 128,155. The Emer-Check Plan, Inc., Poplar Bluff, Mo. Filed Sept. 19, 1961.



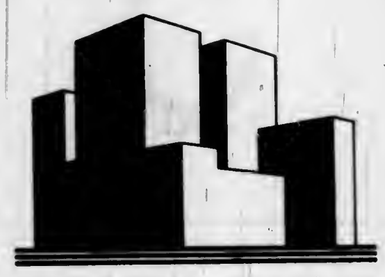
The term "Check Plan" is hereby disclaimed apart from the mark as shown.
For Personal Loan Services.
First use June 12, 1961.

SN 128,156. The Emer-Check Plan, Inc., Poplar Bluff, Mo. Filed Sept. 19, 1961.

EMER·CHECK PLAN

The term "Check Plan" is hereby disclaimed apart from the mark as shown.
For Personal Loan Services.
First use June 12, 1961.

SN 128,203. Norris, Beggs & Simpson, San Francisco, Calif. Filed Sept. 19, 1961.



For Real Estate Brokerage Services.
First use Apr. 1, 1932.

SN 129,328. American Fidelity Assurance Company, Oklahoma City, Okla. Filed Oct. 6, 1961.

American Fidelity
ASSURANCE COMPANY

The lining on the drawing is a part of the mark and does not symbolize color. Applicant disclaims any exclusive right to the map of the United States apart from the mark as shown.
For Underwriting of Life, Health and Accident Insurance.
First use Dec. 1, 1960.

SN 129,557. The Sanco Finance Company, Inc., Oklahoma City, Okla. Filed Oct. 9, 1961.

SANCO

For Money Loan Service.
First use Sept. 1, 1955.

SN 129,633. Presbyterian Ministers' Fund, Philadelphia, Pa. Filed Oct. 10, 1961.

JUST REMEMBER

For Underwriting Life Insurance.
First use 1938.

SN 135,315. American Pioneer Life Insurance Company, Orlando, Fla. Filed Jan. 8, 1962.



For Underwriting Life and Disability Insurance.
First use Dec. 1, 1961.

Class 103 — Construction and Repair

SN 117,522. National Clean Mart Corporation, Denver, Colo. Filed Apr. 10, 1961.

CLEANARAMA

For Coin-Operated Dry Cleaning and Laundering Services.
First use on or about Nov. 18, 1960.

SN 123,019. Lee Development & Construction Co., Inc., Mobile, Ala. Filed June 28, 1961.

LEE HOMES

No claim is made to the words "Quality Homes" apart from the mark.
For Building Houses for Others.
First use Jan. 17, 1961.

Class 105 — Transportation and Storage

SN 71,257. Augustea, the Key of Europe, Inc., New York, N.Y. Filed Apr. 10, 1959.



For Travel Agency Service.
First use Sept. 1, 1958; Mar. 24, 1958, as to the words in the mark.

SN 125,145. Leemark Tours Company, Chicago, Ill. Filed Aug. 1, 1961.

LEEMARK TOURS

Applicant disclaims the word "Tours."
For Travel Agency Services, Including Arranging Travel Transportation, Travel Accommodations, Vacation Tours, and Hotel Accommodations.
First use May 1956.

Class 106 — Material Treatment

SN 123,273. Byers Color Laboratory Inc., Portland, Oreg. Filed July 3, 1961.

VIVICHROME

Owner of Reg. No. 589,480.
For Making Color Prints, Reductions and Enlargements From Photograph Color Negatives.
First use Feb. 6, 1961.

SN 128,213. Radio Cores, Inc., Oak Lawn, Ill. Filed Sept. 19, 1961.

ELECTRO-VAC

For Vacuum Metalizing and Spray Painting of the Goods of Others.
First use July 5, 1961.

Class 107 — Education and Entertainment

SN 108,368. Parachutes, Incorporated, Orange, Mass. Filed Nov. 14, 1960.



The mark consists of a fanciful representation of a parachute canopy.
For Parachute Training and Parachute Jumping Exhibition.
First use on or about May 1, 1960.

SN 117,901. The National Lutheran Council, New York, N.Y. Filed Apr. 14, 1961.



For Title of a Television Series.
First use Sept. 4, 1960.

SN 121,850. National Square Dance Convention, Olivette, Mo. Filed June 12, 1961.

NATIONAL SQUARE DANCE CONVENTION

For Promoting, Creating and Perpetuating Interest in the Art of and Participation in Square and Folk Dancing by Means of an Annual Convention.
First use July 1951.

SN 122,876. George W. Wilken, d.b.a. Success Science Research Service, Saratoga, Calif. Filed June 26, 1961.



The drawing is lined for green; however, no claim is made to color as a feature of the mark. All of the wording circumscribing the mark is disclaimed apart from the mark as shown.
For Course of Study by Direct Mail in Self Improvement Consisting of a Series of Lessons, Consultations and Evaluation of Work Sent in by Correspondence.
First use May 29, 1961.

SN 137,791. Programs for Achievement in Reading, Inc., Providence, R.I. Filed Feb. 12, 1962.



For Conducting, Installing and Orienting Reading Improvement Programs.
First use on or about Oct. 6, 1961.

CERTIFICATION MARKS

Class A — Goods

SN 92,517. Corrugated Container Institute, Lakeland, Fla. Filed Feb. 18, 1960.



The mark certifies that containers manufactured by Institute members comply with the minimum specifications of the corrugated board as established by the Institute.
For Shipping Containers for Citrus Fruit.
First use Dec. 15, 1959.

SN 128,158. Farm Journal, Inc., Philadelphia, Pa. Filed Sept. 19, 1961.



The mark certifies that the products to which the mark is applied have been tested by members of Farm Journal's Family Test Group and by compliance with standards established by applicant have qualified to carry the Farm Journal Family Test Seal. Owner of Reg. No. 513,620.
For Goods.
First use May 24, 1958.

SN 133,431. Yacht Safety Bureau Inc., New York, N.Y. Filed Dec. 5, 1961.



The mark certifies that the item to which the mark is affixed meets or exceeds minimum safety standards for use on small boats.
For Small Boat Equipment Items.
First use Oct. 23, 1961.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

733,987. REPRESENTATION OF A FLOWER. Snia Viscosa Società Nazionale Industria Applicazioni Viscosa S.p.A. SN 95,647. Pub. 4–24–62. Filed 4–22–60.

733,988. SNIA. Snia Viscosa Società Nazionale Industria Applicazioni Viscosa S.p.A. SN 95,648. Pub. 4–24–62. Filed 4–22–60.

733,989. MICCRON. Michigan Chrome & Chemical Co. SN 96,718. Pub. 5–9–61. Filed 5–9–60.

733,990. SYLVAROS. The Glidden Company. SN 98,468. Pub. 4–24–62. Filed 6–6–60.

733,991. BLACK GOLD COAL A THOROUGHBRED FROM KENTUCKY AND DESIGN. High Splint Coal Company. SN 122,616. Pub. 4–24–62. Filed 6–22–61.

733,992. GRID. Ash Grove Lime & Portland Cement Co. SN 127,986. Pub. 4–24–62. Filed 9–18–61.

733,993. DESERTCARB. Desert Minerals, Inc. SN 128,016. Pub. 4–24–62. Filed 9–18–61.

733,994. INTEX. The International Synthetic Rubber Company Limited. SN 128,050. Pub. 4–24–62. Filed 9–18–61.

733,995. KARDEL. Union Carbide Corporation. SN 128,223. Pub. 4–24–62. Filed 9–19–61.

733,996. COURTELLE AND DESIGN. Courtaulds, Limited. SN 130,681. Pub. 4–24–62. Filed 10–26–61.

Class 2—Receptacles

733,997. FLO-RITE AND DESIGN. Chas. Pfizer & Co., Inc. SN 116,835. Pub. 4–24–62. Filed 3–30–61.

733,998. TUBOMATIC. Helene Kambersky, d.b.a. Helene Winterstein. SN 118,697. Pub. 4–24–62. Filed 4–26–61.

733,999. GLO-ICE. Gladwin Plastics, Inc. SN 119,368. Pub. 4–24–62. Filed 5–5–61.

734,000. SYSTEM B ETC. AND DESIGN. Aron Medovnik, d.b.a. Andre. SN 120,211. Pub. 4–24–62. Filed 5–17–61.

734,001. NYLOTOP. A. Rifkin & Co. SN 123,686. Pub. 4–24–62. Filed 7–10–61.

734,002. MEASURE-MATIC. Lever Brothers Company. SN 124,103. Pub. 4–24–62. Filed 7–17–61.

734,003. SOUTHERN MAID. Jacksonville Paper Company. SN 124,550. Pub. 4–24–62. Filed 7–24–61.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

734,004. 'PERMATONED. Morris White Fashions, Inc. SN 117,825. Pub. 4–24–62. Filed 4–13–61.

Class 4—Abrasives and Polishing Materials

734,005. U.S. RESEARCH CORPORATION AND DESIGN. U.S. Research Corporation. SN 122,574. Pub. 4–24–62. Filed 6–21–61.

734,006. LOCK AND KEY. Simonix Company. SN 124,131. Pub. 4–24–62. Filed 7–17–61.

Class 6—Chemicals and Chemical Compositions

734,007. SOLV-N-PHOS. Amchem Products, Inc., assignee, by mesne assignments, of H. Raymond Neilson (deceased), d.b.a. Neilson Chemical Company of California. SN 68,304. Pub. 4–24–62. Filed 2–24–59.

734,008. CUSTOM-CARE. R. R. Street & Co., Inc. SN 96,896. Pub. 4–24–62. Filed 5–11–60.

734,009. AMBIFLO. The Dow Chemical Company. SN 98,881. Pub. 4–24–62. Filed 6–13–60.

734,010. SILIPHOS. Gebruder Giulini G.m.b.H. SN 112,537. Pub. 4–24–62. Filed 1–26–61.

734,011. DRI-AD. Continental Oil Company. SN 125,197. Pub. 4–24–62. Filed 8–2–61.

Class 7—Cordage

734,012. HANDY TYE-CORD. Ashaway Line & Twine Mfg. Co. SN 106,578. Pub. 4–24–62. Filed 10–18–60.

Class 8—Smokers' Artides, Not Including Tobacco Products

734,013. FLORENTINE. Park Industries, Inc. SN 131,602. Pub. 4–24–62. Filed 11–8–61.

Class 10—Fertilizers

734,014. PLANT-TONE. The Espoma Company. SN 113,914. Pub. 4–24–62. Filed 2–17–61.

Class 12—Construction Materials

734,015. HOLORIB. Fenestra Incorporated. SN 78,013. Pub. 4–24–62. Filed 7–20–59.

734,016. DECATEX. Marble Face Blocks, Inc. SN 110,068. Pub. 4–24–62. Filed 12–12–60.

734,017. STURDY-BILT ETC. AND DESIGN. Amco Aluminum Corporation. SN 115,875. Pub. 4–24–62. Filed 3–17–61.

734,018. FOYERETTE. Ludwig Honold Mfg. Co. SN 124,561. Pub. 4–24–62. Filed 7–24–61.

734,019. TRIM-A-TRAK. The William L. Bonnell Company, Inc. SN 127,084. Pub. 4–24–62. Filed 9–1–61.

734,020. SEAL-A-DOR. The William L. Bonnell Company, Inc. SN 127,085. Pub. 4–24–62. Filed 9–1–61.

734,021. BLACK METAL. Atomized Materials Company, Inc. SN 127,996. Pub. 4–24–62. Filed 9–18–61.

734,022. BLACK VELVET. Atomized Materials Company, Inc. SN 127,997. Pub. 4–24–62. Filed 9–18–61.

734,023. BON-VUE. The William L. Bonnell Company, Inc. SN 128,393. Pub. 4–24–62. Filed 9–22–61.

734,024. VELO-RIPPLE. The William L. Bonnell Company, Inc. SN 128,394. Pub. 4–24–62. Filed 9–22–61.

734,025. GILT-A-RIPPLE. The William L. Bonnell Company, Inc. SN 128,395. Pub. 4–24–62. Filed 9–22–61.

734,026. PEBBLELITE. The William L. Bonnell Company, Inc. SN 128,396. Pub. 4–24–62. Filed 9–22–61.

734,027. BONNELUX. The William L. Bonnell Company, Inc. SN 128,397. Pub. 4–24–62. Filed 9–22–61.

734,028. BONNEBRITE. The William L. Bonnell Company, Inc. SN 128,398. Pub. 4–24–62. Filed 9–22–61.

734,029. BON-L-GOLD. The William L. Bonnell Company, Inc. SN 128,399. Pub. 4–24–62. Filed 9–22–61.

734,030. ALUMA-RIPPLE. The William L. Bonnell Company, Inc. SN 128,401. Pub. 4–24–62. Filed 9–22–61.

734,031. PERMA-GLAZE. Pomona Tile Manufacturing Company. SN 128,463. Pub. 4–24–62. Filed 9–22–61.

734,032. AMAZOUE. Chester B. Stem, Inc. SN 128,478. Pub. 4–24–62. Filed 9–22–61.

734,033. PERMABOND. Great Lakes Carbon Corporation. SN 128,671. Pub. 4–24–62. Filed 9–26–61.

734,034. BETTER-BOND. United States Ceramic Tile Company. SN 128,930. Pub. 4–24–62. Filed 9–29–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

734,035. PRETTYWARE PW AND DESIGN. Pretty Products, Inc. SN 114,155. Pub. 4–24–62. Filed 2–13–61.

734,036. FIBERSHEEN. Fibersheen, Inc., d.b.a. Fibersheen Sales Co. SN 115,794. Pub. 4–24–62. Filed 3–16–61.

734,037. FRANKLIN. Franklin Coffee Urn Corp., assignee of Franklin Coffee Urn Co. SN 121,378. Pub. 4–24–62. Filed 6–5–61.

734,038. URSUS. Trefileries Leon Bekaert, S.P.R.L. SN 122,488. Pub. 4–24–62. Filed 6–20–61.

Class 14—Metals and Metal Castings and Forgings

734,039. TUFKOTE. The Youngstown Sheet and Tube Company. SN 122,410. Pub. 4–24–62. Filed 6–19–61.

734,040. ECON-O-BRITE. Detroit Steel Corporation. SN 127,846. Pub. 4–24–62. Filed 9–14–61.

Class 15—Oils and Greases

734,041. KLEENLUBE. Topsail Lubricants, Inc. SN 95,213. Pub. 4–24–62. Filed 4–15–60.

734,042. HY-CE. Midland Cooperatives, Incorporated. SN 119,221. Pub. 4–24–62. Filed 5–3–61.

734,043. QUAKER MAID. Quaker Oil Corporation. SN 123,133. Pub. 4–24–62. Filed 6–29–61.

734,044. PETROSENE. Sonneborn Chemical and Refining Corporation. SN 124,952. Pub. 4–24–62. Filed 7–28–61.

734,045. PENNZFLEET. South Penn Oil Company. SN 125,429. Pub. 4–24–62. Filed 8–4–61.

734,046. FORM-O "21." John B. Custer, d.b.a. Midwest Petroleum Company. SN 126,509. Pub. 4–24–62. Filed 8–23–61.

734,047. FORTUFFIER. David M. Hildreth, d.b.a. Hildreth Research and Engineering Company. SN 126,655. Pub. 4–24–62. Filed 8–25–61.

734,048. SPRAYMATIC. Southwest Grease & Oil Co., Inc. SN 126,691. Pub. 4–24–62. Filed 8–25–61.

734,049. VANDYNE X-70. Windsor-Lloyd Products, Inc. SN 126,708. Pub. 4–24–62. Filed 8–25–61.

Class 16—Protective and Decorative Coatings

734,050. STANLEY AND DESIGN. The Stanley Works. SN 111,297. Pub. 4–24–62. Filed 1–4–61.

734,051. SMITH VALSPAR ETC. AND DESIGN. The Valspar Corporation. SN 120,834. Pub. 4–24–62. Filed 5–25–61.

734,052. R=E/I. Ohm Research Inc. SN 121,418. Pub. 4–24–62. Filed 6–5–61.

734,053. LEPAK. American Cyanamid Company. SN 122,500. Pub. 4–24–62. Filed 6–21–61.

734,054. DW ETC. AND DESIGN. Harker Paint & Varnish Company. SN 128,555. Pub. 4–24–62. Filed 9–25–61.

734,055. SILENT-GUARD. The Monroe Sander Corporation. SN 128,833. Pub. 4–24–62. Filed 9–28–61.

734,056. JET. Airosol Company, Inc. SN 128,940. Pub. 4–24–62. Filed 10–2–61.

Class 17—Tobacco Products

734,057. PRINCE RUPERT AND DESIGN. Prince Rupert Tobacco Company of Canada Limited. SN 124,674. Pub. 4–24–62. Filed 7–25–61.

734,058. ROI-TAN. The American Tobacco Company. SN 130,996. Pub. 4–24–62. Filed 10–31–61.

734,059. FM. Liggett & Myers Tobacco Company. SN 131,142. Pub. 4–24–62. Filed 11–1–61.

734,060. LONE STAR. Philip Morris Incorporated. SN 131,224. Pub. 4–24–62. Filed 11–2–61.

Class 18—Medicines and Pharmaceutical Preparations

734,061. RICH-TINT AND REPRESENTATION OF AN EYE. Rich-Tint Corporation. SN 93,363. Pub. 4–24–62. Filed 3–21–60.

734,062. OLD HICKORY AND DESIGN. O. E. Bacon, d.b.a. Old Hickory Medicine Company. SN 111,629. Pub. 4–24–62. Filed 12–19–60.

734,063. RLX-3. Grove Laboratories Incorporated. SN 121,561. Pub. 4–24–62. Filed 6–7–61.

734,064. GRAND-WAY. The Grand Union Company, d.b.a. Grand-Way Discount Centers. SN 122,803. Pub. 4–24–62. Filed 6–26–61.

734,065. AMERZENE. American Cyanamid Company. SN 127,308. Pub. 4–24–62. Filed 9–6–61.

734,066. ANACOL. The Warren-Teed Products Company. SN 129,251. Pub. 2–27–62. Filed 10–4–61.

Class 19—Vehicles

734,067. CUSTOMEERED. The Eagle-Picher Company. SN 71,357. Pub. 4–24–62. Filed 4–13–59.

Class 20—Linoleum and Oiled Cloth

734,068. TESSERA. Armstrong Cork Company. SN 119,170. Pub. 4–24–62. Filed 5–3–61.

734,069. ECON-O-VINYL. Mannington Mills Inc. SN 124,366. Pub. 4–24–62. Filed 7–20–61.

734,070. SANTA FE AND STAR DESIGN. Bonafide Mills, Inc. SN 127,082. Pub. 4–24–62. Filed 9–1–61.

Class 21—Electrical Apparatus, Machines, and Supplies

734,071. TEL-A-PIN. American Machine & Foundry Company. SN 105,127. Pub. 4–24–62. Filed 9–26–60.

734,072. ECO. Eberle & Kohler K.G. SN 109,779. Pub. 4–24–62. Filed 12–7–60.

734,073. TRI-GRIP. J. R. Richards Company. SN 110,469. Pub. 4–24–62. Filed 12–19–60.

734,074. RANDO. Randolph Metal Works, Inc. SN 113,363. Pub. 3–13–62. Filed 2–9–61.

734,075. H-ZONE. Cerro Corporation. SN 113,490. Pub. 4–24–62. Filed 2–13–61.

734,076. METOHM. Ward Leonard Electric Co. SN 114,732. Pub. 4–24–62. Filed 3–1–61.

734,077. DIALMASTER. General Dynamics Corporation. SN 116,226. Pub. 4–24–62. Filed 3–22–61.

734,078. SUN AND DESIGN. Sun Chemical Corporation. SN 116,443. Pub. 4–24–62. Filed 3–24–61.

734,079. ROCK WIPE. Cherry Electrical Products Corporation. SN 118,765. Pub. 4–24–62. Filed 4–27–61.

734,080. AUDIO EXPRESSOR. Rosa Radio Corporation. SN 118,906. Pub. 4–24–62. Filed 4–28–61.

734,081. LOGIC LITE. Eldema Corporation. SN 120,398. Pub. 4–24–62. Filed 5–19–61.

734,082. SUN-GLASS. Sun-Heat, Inc. SN 121,036. Pub. 4–24–62. Filed 5–29–61.

734,083. KARWANIZED. Circuit Materials Corporation. SN 121,635. Pub. 4–24–62. Filed 6–8–61.

734,084. GROTE. The Grote Manufacturing Company. SN 121,646. Pub. 4–24–62. Filed 6–8–61.

734,085. ADVAN-GUARD. Advance Transformer Co. SN 121,778. Pub. 4–24–62. Filed 6–12–61.

734,086. CARAVELLE. Bulova Watch Company, Inc. SN 123,171. Pub. 4–24–62. Filed 6–30–61.

734,087. CAMPING COMPANION. The H. J. Ashe Co., Inc. SN 124,500. Pub. 4–24–62. Filed 7–24–61.

734,088. TELTRAC. Canoga Electronics Corporation. SN 124,514. Pub. 4–24–62. Filed 7–24–61.

734,089. PERMABOND. Countess York, Ltd. SN 124,521. Pub. 4–24–62. Filed 7–24–61.

734,090. CLARICON. World Mark Electronics, Inc. SN 124,694. Pub. 4–24–62. Filed 7–25–61.

734,091. MITE-MARX. Anodyne, Inc. SN 124,703. Pub. 4–24–62. Filed 7–26–61.

734,092. SEWNAR. Ultrasonic Industries, Inc. SN 124,859. Pub. 4–24–62. Filed 7–27–61.

734,093. DUALFLEC. R.M.S. Associates, Inc. SN 125,246. Pub. 4–24–62. Filed 8–2–61.

734,094. ELECTROL DIAL AND DESIGN. Raymond W. Davidson. SN 125,895. Pub. 4–24–62. Filed 8–14–61.

734,095. HI-LUX. Slater Electric Inc. SN 126,192. Pub. 4–24–62. Filed 8–17–61.

734,096. MINIVECTOR. Spartan Electric Radiator Corp. (New Jersey corporation), assignee of Spartan Electric Radiator Corp. (New York corporation). SN 126,194. Pub. 4–24–62. Filed 8–17–61.

734,097. FILTERCON. Erie Resistor Corporation. SN 126,213. Pub. 4–24–62. Filed 8–18–61.

734,098. TRIMACON. Erie Resistor Corporation. SN 126,214. Pub. 4–24–62. Filed 8–18–61.

Class 22 — Games, Toys, and Sporting Goods

734,099. PICTURE OF HEAD OF CLOWN. The Pioneer Rubber Company. SN 98,925. Pub. 4–24–62. Filed 6–13–60.

734,100. HATCH-A-PET. Frank W. Roach and Irwin Randolph, d.b.a. Hatch-A-Pet. SN 111,308. Pub. 4–24–62. Filed 1–3–61.

734,101. BUDA HEAD SPECIAL EBISU AND DESIGN. Lorms, Inc. SN 111,923. Pub. 4–24–62. Filed 1–16–61.

734,102. "RODDYMASTER." Lorms, Inc. SN 111,924. Pub. 4–24–62. Filed 1–16–61.

734,103. "EXCEPTIONALE." Lorms, Inc. SN 111,925. Pub. 4–24–62. Filed 1–16–61.

734,104. RODDYMATIC AND DESIGN. Lorms, Inc. SN 112,567. Pub. 4–24–62. Filed 1–26–61.

734,105. TORPEDERO. The Seamless Rubber Company. SN 121,604. Pub. 4–24–62. Filed 6–7–61.

734,106. BUTTONS. Louis Marx & Company, Inc. SN 122,013. Pub. 4–24–62. Filed 6–14–61.

734,107. STRAWBERRY WOBBLER. Earl Andrew Miller. SN 122,210. Pub. 4–24–62. Filed 6–16–61.

734,108. POR CAMINOS BIBLICOS. The Pengad Companies, Inc. SN 122,554. Pub. 4–24–62. Filed 6–21–61.

734,109. PENGAD. The Pengad Companies, Inc. SN 122,715. Pub. 4–24–62. Filed 6–23–61.

734,110. AMF. American Machine & Foundry Company. SN 123,162. Pub. 4–24–62. Filed 6–30–61.

734,111. SCRIBBLEBUG. Eberhard Faber Inc. SN 123,628. Pub. 4–24–62. Filed 7–10–61.

734,112. CHIVALRY AND DESIGN. Michael Tynio. SN 124,238. Pub. 4–24–62. Filed 7–18–61.

734,113. TUMBLHOOP. Paleo Products, Inc., assignee of Paul Ed Mfg. Co. SN 124,288. Pub. 4–24–62. Filed 7–19–61.

734,114. 100X. Sbampaine Industries, Inc. SN 124,379. Pub. 4–24–62. Filed 7–20–61.

734,115. WATER JET. Argo Industries Corporation. SN 124,791. Pub. 4–24–62. Filed 7–27–61.

734,116. BOBO. Doughboy Industries, Inc. SN 124,804. Pub. 4–24–62. Filed 7–27–61.

734,117. VIP. Duley Press, Inc. SN 125,290. Pub. 4–24–62. Filed 8–3–61.

734,118. THINK-A-TRON. Hassenfeld Bros., Inc. SN 127,596. Pub. 4–24–62. Filed 9–11–61.

734,119. REDIGRIP. Charles Robert Redmond, d.b.a. Redmond Supply Co. SN 127,725. Pub. 4–24–62. Filed 9–12–61.

734,120. REMINGTON. Remington Arms Company, Inc. SN 127,874. Pub. 4–24–62. Filed 9–14–61.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

734,121. KAM-ACTION. Decatur Pump Company. SN 87,934. Pub. 4–24–62. Filed 12–24–59.

734,122. "THE BEAR CAT" ETC. AND DESIGN. Western Land Roller Company. SN 102,714. Pub. 4–24–62. Filed 8–15–60.

734,123. ASHDEE. Atlee Corporation. SN 106,465. Pub. 4–24–62. Filed 10–17–60.

734,124. FISHOLOW. Fisher & Ludlow Limited. SN 115,327. Pub. 4–24–62. Filed 3–10–61.

734,125. PRO-STATION. National Sanitary Laboratories, Inc. SN 115,837. Pub. 4–24–62. Filed 3–16–61.

734,126. EZ SHARP. Easysharp Corporation. SN 115,904. Pub. 4–24–62. Filed 3–17–61.

734,127. EZ SHARP AND DESIGN. Easysharp Corporation. SN 115,905. Pub. 4–24–62. Filed 3–17–61.

734,128. USA AND DESIGN. P & C Tool Company. SN 116,150. Pub. 4–24–62. Filed 3–21–61.

734,129. ROLLA-TRAK. North American Equipment Corporation. SN 116,250. Pub. 4–24–62. Filed 3–22–61.

734,130. PRESSTO-BURGER. Pressto-Burger Co. SN 117,133. Pub. 4–24–62. Filed 4–4–61.

734,131. MAGNUS M AND DESIGN. Magnus Chemical Company, Inc. SN 119,984. Pub. 4–24–62. Filed 5–15–61.

734,132. PRO-MAT. D.E.P. Enterprises. SN 120,393. Pub. 4–24–62. Filed 5–19–61.

734,133. SQUIRREL. The Woldert Company, Inc., d.b.a. The Woldert Co. SN 123,852. Pub. 4–24–62. Filed 7–12–61.

734,134. CORK-SCROOGE. Tarrymont, Inc. SN 124,237. Pub. 4–24–62. Filed 7–18–61.

734,135. DALEMARK. Dale Marking Equipment Co., Inc. SN 127,207. Pub. 4–24–62. Filed 9–5–61.

734,136. EXPAND-O-VEYOR. Conveyor Systems, Inc. SN 127,323. Pub. 4–24–62. Filed 9–6–61.

734,137. PIG-TROL. Magnetrol, Inc. SN 127,779. Pub. 4–24–62. Filed 9–13–61.

734,138. TRIM-R. The Sharples Corporation. SN 127,800. Pub. 4–24–62. Filed 9–13–61.

734,139. STATIFUGE. The Sharples Corporation. SN 127,801. Pub. 4–24–62. Filed 9–13–61.

734,140. SNO-AWAY. Simplicity Manufacturing Company. SN 127,804. Pub. 4–24–62. Filed 9–13–61.

734,141. BAL-TENIC. Essex Wire Corporation. SN 127,850. Pub. 4–24–62. Filed 9–14–61.

734,142. TSV. The Tool Steel Gear and Pinion Co. SN 128,117. Pub. 4–24–62. Filed 9–18–61.

Class 25 — Locks and Safes

734,143. BELLOCK. Eagle Lock Corporation. SN 116,009. Pub. 4–24–62. Filed 3–20–61.

734,144. WEISER. Weiser Company. SN 119,905. Pub. 4–24–62. Filed 5–12–61.

Class 26 — Measuring and Scientific Appliances

734,145. THERMOCOAX. Société Anonyme d'Études et Réalisations Nucléaires-Sodern. SN 78,733. Pub. 4–24–62. Filed 7–30–59.

734,146. SONARETTE. Electro-Solid Controls, Inc., assignee of General Electronic Control, Inc. SN 112,712. Pub. 4–24–62. Filed 1–30–61.

734,147. TEVICAN. Ernst Leitz (Canada) Limited. SN 114,458. Pub. 4–24–62. Filed 2–27–61.

734,148. VISIFLUX. Reactor Experiments Inc. SN 119,151. Pub. 4–24–62. Filed 5–2–61.

734,149. SS. Scientific Specialties Inc. SN 121,130. Pub. 4–24–62. Filed 5–31–61.

734,150. SAMIS. Simmonds Precision Products, Inc. SN 121,329. Pub. 4–24–62. Filed 6–2–61.

734,151. UNITECH. Unitech Corporation. SN 122,490. Pub. 4–24–62. Filed 6–20–61.

734,152. PICO-BIT. Di-An Controls, Inc. SN 123,808. Pub. 4–24–62. Filed 7–12–61.

734,153. ALCODIAL. The Alco-Dial Company. SN 124,075. Pub. 4–24–62. Filed 7–17–61.

734,154. POCO SINCE 1886 AND DESIGN. Pennsylvania Optical Company, d.b.a. Pennsylvania Optical Co. SN 124,223. Pub. 4–24–62. Filed 7–18–61.

734,155. OXWELD. Union Carbide Corporation. SN 124,774. Pub. 4–24–62. Filed 7–26–61.

734,156. SCANALOG. General Precision, Inc. SN 125,213. Pub. 4–24–62. Filed 8–2–61.

734,157. PYROTEL. Mason Instrument Company, Inc. SN 126,243. Pub. 4–24–62. Filed 8–18–61.

734,158. RSCO AND DESIGN. Research Specialties Co. SN 126,388. Pub. 4–24–62. Filed 8–21–61.

734,159. POWERLINE. Chemco Photoproducts Company, Inc. SN 128,146. Pub. 4–24–62. Filed 9–19–61.

Class 28 — Jewelry and Precious-Metal Ware

734,160. RING KING. Medicated Products Company. SN 116,245. Pub. 4–24–62. Filed 3–22–61.

Class 29 — Brooms, Brushes, and Dusters

734,161. COMPASS-ACTION AND DESIGN. Milton Arnold Zelinkoff, d.b.a. The House of Zelinkoff and as The Zelinkoff Company. SN 123,057. Pub. 4–24–62. Filed 6–28–61.

734,162. SUNNY DAY AND DESIGN. Puritan Cordage Mills. SN 123,683. Pub. 4–24–62. Filed 7–10–61.

Class 30 — Crockery, Earthenware, and Porcelain

734,163. SYRACUSE CHINA AND DESIGN. Onondaga Pottery Company. SN 115,854. Pub. 4–24–62. Filed 3–16–61.

Class 31 — Filters and Refrigerators

734,164. ARNO. Royal Filtered Air Products, Inc. SN 122,840. Pub. 4–24–62. Filed 6–26–61.

734,165. POLARSTREAM. Union Carbide Corporation. SN 124,150. Pub. 4–24–62. Filed 7–17–61.

Class 32 — Furniture and Upholstery

734,166. PANELDRAPE. Ralph M. Poe, d.b.a. Paneldrape Vertical Blind Company. SN 101,427. Pub. 4–24–62. Filed 7–25–60.

734,167. PLASTEX. Slick Airways, Inc., d.b.a. Illinois Shade Cloth Company. SN 106,100. Pub. 4–24–62. Filed 10–10–60.

734,168. SPICEWOOD. The I-XL Furniture Co., Inc. SN 110,057. Pub. 4–24–62. Filed 12–12–60.

734,169. SCULPTURED SPICEWOOD. The I-XL Furniture Co., Inc. SN 110,059. Pub. 4–24–62. Filed 12–12–60.

734,170. CATAWBA COLLECTION. Western Carolina Furniture Company. SN 112,927. Pub. 4–24–62. Filed 2–1–61.

734,171. STOR-EASY. Poloron Products, Inc. SN 114,341. Pub. 4–24–62. Filed 2–24–61.

734,172. SLIDE-A-WAY. Dennis Mitchell Industries, Inc., d.b.a. Dennis Mitchell Industries. SN 117,118. Pub. 4–24–62. Filed 4–4–61.

734,173. ASKO AND DESIGN. Askon Tehtaat O.Y. SN 119,097. Pub. 4–24–62. Filed 5–2–61.

734,174. ASKO. Askon Tehtaat O.Y. SN 119,098. Pub. 4–24–62. Filed 5–2–61.

734,175. BONNEFLEX. Slumberland Products Co. SN 123,692. Pub. 4–24–62. Filed 7–10–61.

734,176. VAL A BED. Aluminum Roll-Away Corp. SN 124,789. Pub. 4–24–62. Filed 7–27–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

734,177. REDI-SET. Air Products, Inc. SN 41,427. Pub. 7–8–58. Filed 11–27–57.

734,178. PORTA-KART. The Majestic Company, Inc. SN 105,992. Pub. 4–24–62. Filed 10–7–60.

734,179. POSITIVE FLOW. Orr & Sembower, Inc. SN 108,362. Pub. 4–24–62. Filed 11–14–60.

734,180. BURN-O-MATIC. Industrial Blow Pipe Company. SN 108,784. Pub. 4–24–62. Filed 11–21–60.

734,181. BURN-O-MATIC. Geo. A. Clark & Son, Incorporated. SN 112,219. Pub. 4–24–62. Filed 1–23–61.

734,182. SKYLINER. Midland-Ross Corporation. SN 114,983. Pub. 4–24–62. Filed 3–6–61.

734,183. CON-VOL. Thermotank Inc. SN 115,091. Pub. 4–24–62. Filed 3–7–61.

734,184. CHOW HI-LO WAGON. Union Steel Products Company. SN 115,274. Pub. 4–24–62. Filed 3–9–61.

734,185. REGENCY. The Majestic Company, Inc. SN 117,029. Pub. 4–24–62. Filed 4–3–61.

734,186. ALUMI-LOUVER AND DESIGN. Mansfield Metal Fabricating, Inc. SN 121,838. Pub. 4–24–62. Filed 6–12–61.

734,187. CONSTANT COMFORT. Suburban Appliance Co. SN 123,046. Pub. 4–24–62. Filed 6–28–61.

734,188. THERMOTANK. Thermotank Limited. SN 124,011. Pub. 4–24–62. Filed 7–14–61.

734,189. ELECTROGLAS. Electroglas, Inc. SN 124,635. Pub. 4–24–62. Filed 7–25–61.

734,190. NICK-O-LINE. Commercial Heater Co. SN 127,382. Pub. 4–24–62. Filed 9–7–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

734,191. NAFLEX. North American Aviation, Inc. SN 127,032. Pub. 4–24–62. Filed 8–31–61.

Class 36 — Musical Instruments and Supplies

734,192. AUDIOTRONIC. Norwood Music Corporation. SN 122,634. Pub. 4–24–62. Filed 6–22–61.

734,193. CARAVELLE. Bulova Watch Company, Inc. SN 123,172. Pub. 4–24–62. Filed 6–30–61.

Class 37 — Paper and Stationery

734,194. IDL AND DESIGN. IDL Manufacturing & Sales Corp. SN 70,896. Pub. 4–24–62. Filed 4–6–59.

734,195. LESSPACE. Oxford Filing Supply Co., Inc. SN 96,352. Pub. 4–24–62. Filed 5–3–60.

734,196. MONADNOCK AND DESIGN. Monadnock Paper Mills, Inc. SN 124,211. Pub. 4–24–62. Filed 7–18–61.

734,197. CRESTWOOD. Eberhard Faber Inc. SN 127,465. Pub. 4–24–62. Filed 9–8–61.

Class 38 — Prints and Publications

734,198. AMUSEMENT BUSINESS. The Billboard Publishing Company. SN 112,022. Pub. 4–24–62. Filed 1–18–61.

734,199. MINI MENU. Mini-Menus, Inc. SN 124,927. Pub. 4–24–62. Filed 7–28–61.

734,200. ATOMIC ENERGY CLEARING HOUSE. Congressional Information Bureau, Inc. SN 127,756. Pub. 4–24–62. Filed 9–13–61.

734,201. PAULIST FATHERS NEWS. The Missionary Society of St. Paul the Apostle in the State of New York. SN 129,278. Pub. 4–24–62. Filed 10–5–61.

734,202. THE OKLAHOMA FARMER-STOCKMAN. The Oklahoma Publishing Company. SN 129,284. Pub. 4–24–62. Filed 10–5–61.

734,203. THE TEXAS FARMER-STOCKMAN. The Oklahoma Publishing Company. SN 129,285. Pub. 4–24–62. Filed 10–5–61.

734,204. DISCOVERY. Allstate Enterprises, Inc., SN 129,325. Pub. 4–24–62. Filed 10–6–61.

Class 39 — Clothing

734,205. STAR SKINS AND DESIGN. M. I. Kohan Inc. SN 22,367. Pub. 8–25–59. Filed 1–10–57.

734,206. DYNAPEDIC. Edward W. Chrencik, d.b.a. Dynapedic Company. SN 96,193. Pub. 4–24–62. Filed 5–2–60.

734,207. J3 AND DESIGN. Aleramo Spada. SN 98,746. Pub. 4–24–62. Filed 6–9–60.

734,208. FOWNES SLIPPER-SHU ETC. AND DESIGN. Fownes Brothers & Co., Incorporated. SN 100,359. Pub. 4–24–62. Filed 7–6–60.

734,209. FOWNES SLIPPER-SHU. Fownes Brothers & Co., Incorporated. SN 102,225. Pub. 4–24–62. Filed 8–8–60.

734,210. BRAND X. M. Hoffman & Co., Inc. SN 108,979. Pub. 8–22–61. Filed 11–23–60.

734,211. CONVERTIBELLE. Riegel Textile Corporation. SN 113,367. Pub. 4–24–62. Filed 2–9–61.

734,212. THERE IS A MAN ON YOUR MIND BERNARD WORKMAN AND DESIGN. Bernard Workman. SN 114,153. Pub. 4–24–62. Filed 2–21–61.

734,213. . . . . THEY QUIET YOUR BARKING DOGS! Wolverine Shoe and Tanning Corporation. SN 116,856. Pub. 4–24–62. Filed S.R. 3–30–61; Am. P.R. 2–5–62.

734,214. GLAMOR-TEX. Glamorise Foundations, Inc. SN 116,884. Pub. 4–24–62. Filed 3–31–61.

734,215. PRIM 'N PROPER. Levy Bros. SN 117,114. Pub. 4–24–62. Filed 4–4–61.

734,216. BULLOCK'S. Bullock's, Inc. SN 118,133. Pub. 4–24–62. Filed 4–19–61.

734,217. WELD-LOCK. Francis-Louise Full Fashion Mills, Inc. SN 118,430. Pub. 4–24–62. Filed 4–24–61.

734,218. LOEHMANN'S. Charles C. Loehmann Corporation. SN 119,394. Pub. 4–24–62. Filed 5–5–61.

734,219. MINICHECK AND DESIGN. Baitch & Castaldi, Inc. SN 120,370. Pub. 4–24–62. Filed 5–19–61.

734,220. DREAMETTES. Maidenform, Inc. SN 122,009. Pub. 4–24–62. Filed 6–14–61.

734,221. HOT DOGS! The Grove Company. SN 125,038. Pub. 4–24–62. Filed 7–31–61.

734,222. CLYDELLA. William Hollins & Company Limited. SN 125,041. Pub. 4–24–62. Filed 7–31–61.

734,223. ZEROLITE. Lebow Bros., Inc. SN 126,240. Pub. 4–24–62. Filed 8–18–61.

734,224. SLAM SAM. Gator of Florida, Inc. SN 126,588. Pub. 4–24–62. Filed 8–24–61.

734,225. ELTON AND DESIGN. Wallach's, Inc. SN 126,630. Pub. 4–24–62. Filed 8–24–61.

734,226. CHIRO-CRAFT. Anthony L. Vance. SN 126,823. Pub. 4–24–62. Filed 8–28–61.

734,227. COURTELLE AND DESIGN. Courtaulds, Limited. SN 130,682. Pub. 4–24–62. Filed 10–26–61.

Class 40 — Fancy Goods, Furnishings, and Notions

734,228. SWAG-ER. Ruth M. Van Doren, assignee of E. L. Mansure Company. SN 80,332. Pub. 4–24–62. Filed 8–27–59.

734,229. CRESTHILL CAPRIPEARL AND DESIGN. Cresthill Industries, Inc. SN 126,578. Pub. 4–24–62. Filed 8–24–61.

734,230. CURL-O-MATIC. Tip-Top Products Company. SN 126,622. Pub. 4–24–62. Filed 8–24–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

734,231. SUPRALON. Bell Textile Co., Inc. SN 114,594. Pub. 4–24–62. Filed 2–28–61.

734,232. GOLDEN AIRE. General Felt Products Co. SN 116,119. Pub. 4–24–62. Filed 3–21–61.

734,233. GANNEX. Kagan Textiles Limited. SN 116,132. Pub. 4–24–62. Filed 3–21–61.

734,234. COTTON DE ORO. John Wolf Textiles, Inc. SN 116,946. Pub. 4–24–62. Filed 3–31–61.

734,235. DANCREST. Dan River Mills, Incorporated. SN 117,169. Pub. 4–3–62. Filed 4–5–61.

734,236. DANBURY BY LADY CAROLYN. Carolyn Chenilles, Inc. SN 117,450. Pub. 4–24–62. Filed 4–10–61.

734,237. CAPEL'S. A. Leon Capel & Sons, Incorporated. SN 121,801. Pub. 4–24–62. Filed 6–12–61.

734,238. ELF MODE. Thomas Textile Co., Inc. SN 123,379. Pub. 4–24–62. Filed 7–3–61.

734,239. ACOUSTI-FLEX. Mohasco Industries, Inc. SN 125,069. Pub. 4–24–62. Filed 7–31–61.

734,240. BEL MODO. James Lees and Sons Company. SN 125,387. Pub. 4–24–62. Filed 8–4–61.

734,241. TIEMPO COLONIALE. Fieldcrest Mills, Inc. SN 126,517. Pub. 4–24–62. Filed 8–23–61.

734,242. MURBECK. Murbeck Knitted Fabrics Co. Inc. SN 126,604. Pub. 4–24–62. Filed 8–24–61.

734,243. STYLIZED AM. ETC. AND DESIGN. Arfa Mills, Inc. SN 129,103. Pub. 4–24–62. Filed 10–3–61.

734,244. MELLO-VIN. The General Tire & Rubber Company. SN 129,359. Pub. 4–24–62. Filed 10–6–61.

734,245. -A-OKAY. M. Lowenstein & Sons, Inc. SN 129,508. Pub. 4–24–62. Filed 10–9–61.

734,246. EARLY SETTLER. James Lees and Sons Company. SN 129,870. Pub. 4–24–62. Filed 10–13–61.

734,247. END-O-CARE. The Georgia Company, Inc. SN 130,449. Pub. 4–24–62. Filed 10–23–61.

734,248. COURTELLE AND DESIGN. Courtaulds, Limited. SN 130,679. Pub. 4–24–62. Filed 10–26–61.

734,249. JET STRIPE. Plymouth Rubber Company, Inc. SN 130,826. Pub. 4–24–62. Filed 10–27–61.

734,250. IT IRONS IN THE WASH! AND DESIGN. Deering Milliken Research Corporation. SN 130,886. Pub. 4–24–62. Filed 10–30–61.

Class 43 — Thread and Yarn

734,251. REPRESENTATION OF A HOUSE IN A CIRCLE ON A SQUARE BACKGROUND. Owens-Corning Fiberglas Corporation. SN 89,369. Pub. 4–24–62. Filed 1–20–60.

734,252. REPRESENTATION OF A FLOWER. Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A. SN 95,646. Pub. 4–24–62. Filed 4–22–60.

734,253. MASUREL MILLS ETC. AND DESIGN. Masurel Mills, Inc. SN 116,824. Pub. 4–24–62. Filed 3–30–61.

734,254. COURTELLE AND DESIGN. Courtaulds, Limited. SN 130,680. Pub. 4–24–62. Filed 10–26–61.

Class 44 — Dental, Medical, and Surgical Appliances

734,255. SANI-PAC. Sturm & Scheinberg, Inc. SN 108,093. Pub. 4–24–62. Filed 11–8–60.

734,256. MSCO AND CIRCLE DESIGN. Medical Supply Company. SN 114,981. Pub. 4–24–62. Filed 3–6–61.

734,257. FIRMATRON BY NORRUTH. Norruth Industries, Inc. SN 116,414. Pub. 4–24–62. Filed 3–24–61.

734,258. STOLLENWERK. Hans Stollenwerk, d.b.a. Stollenwerk Fabrik fur Sanitatsausrustungen. SN 116,592. Pub. 4–24–62. Filed 3–27–61.

734,259. SONOTONE WISP. Sonotone Corporation. SN 125,331. Pub. 4–24–62. Filed 8–3–61.

734,260. JILL ROBINS. Jill Robins, Inc. SN 126,770. Pub. 4–24–62. Filed 8–28–61.

734,261. DUAL-CIRCLE DESIGN. Securitone Corporation of America. SN 127,148. Pub. 4–24–62. Filed 9–1–61.

Class 45 — Soft Drinks and Carbonated Waters

734,262. MR. MIXER. George A. Calevas, d.b.a. Calevas Laboratories. SN 88,520. Pub. 5–2–61. Filed 1–6–60.

734,263. ORBIT. Kenneth G. Sunderland, d.b.a. Sunderland Supply Company. SN 97,424. Pub. 4–24–62. Filed 5–18–60.

734,264. SUNMIXT. Kenneth G. Sunderland, d.b.a. Sunderland Supply Company. SN 97,425. Pub. 4–24–62. Filed 5–18–60.

734,265. GREEN GLACIER. Kenneth G. Sunderland, d.b.a. Sunderland Supply Company. SN 97,427. Pub. 4–24–62. Filed 5–18–60.

734,266. LITTLE SKIPPER. John Bowyer, d.b.a. Little Skipper Root Beer Co. SN 121,535. Pub. 4–24–62. Filed 6–7–61.

734,267. VOLPA. Francisco Javier Osborne Domecq. SN 123,622. Pub. 4–24–62. Filed 7–10–61.

734,268. TIZER. Tizer Limited. SN 123,705. Pub. 4–24–62. Filed 7–10–61.

734,269. NEPTUNE. Hinckley & Schmitt. SN 124,089. Pub. 4–24–62. Filed 7–17–61.

Class 46 — Foods and Ingredients of Foods

734,270. MONTE CRISTO. Johs. Esmarch's Eftf. A/S, assignee of N. J. Flindt, d.b.a. Johs. Esmarch's Eftf. v/N. J. Flindt. SN 82,312. Pub. 4–24–62. Filed 8–27–59.

734,271. CALESERO AND DESIGN. La Union Comercial e Industrial, S.A. (Lucl, S.A.). SN 88,862. Pub. 4–24–62. Filed 1–12–60.

734,272. ANDES CANDIES ETC. AND DESIGN. Andes Candies Inc. SN 91,324. Pub. 4–24–62. Filed 2–23–60.

734,273. GIRARD'S AND DESIGN. Rufus Rhoades and Jane Rhoades (joint owners), assignee of Girard's Inc. SN 94,290. Pub. 4–24–62. Filed 4–4–60.

734,274. LICK STIX. Hallberg Canning Corporation. SN 100,598. Pub. 4–24–62. Filed 7–11–60.

734,275. LITTLE ARTIE'S BEEBLEBERRY FUN DRINK. Paw Paw Grape Juice Company. SN 111,995. Pub. 4–24–62. Filed 1–17–61.

734,276. SEXTON S AND DESIGN. John Sexton & Co. SN 112,172. Pub. 4–24–62. Filed 1–19–61.

734,277. ZENITH. Lovell & Christmas Limited. SN 112,277. Pub. 4–24–62. Filed 1–23–61.

734,278. WELL DRESSED BEEF AND DESIGN. Sioux City Dressed Beef, Inc. SN 112,787. Pub. 4–24–62. Filed 1–30–61.

734,279. REPRESENTATION OF A LIME BRANCH. L. Rose & Company, Limited. SN 112,862. Pub. 4–24–62. Filed 1–31–61.

734,280. ESTORIL. Veiga Limitada. SN 112,983. Pub. 4–24–62. Filed 2–2–61.

734,281. HI WITHIN CREST DESIGN. Hilton Products, Inc. SN 113,831. Pub. 4–24–62. Filed 2–16–61.

734,282. CHELAN BUTTE. Chelan Falls Cold Storage Co. SN 114,083. Pub. 4–24–62. Filed 2–21–61.

734,283. ROASTLING. Donald S. Maffry, d.b.a. The Maffry Company. SN 114,117. Pub. 4–24–62. Filed 2–21–61.

734,284. CHUN KING WITH CHINESE WRITING AND BACKGROUND. The Chun King Corporation. SN 114,184. Pub. 4–24–62. Filed 2–23–61.

734,285. NESTLE'S. The Nestlé Company, Inc. SN 114,248. Pub. 4–24–62. Filed 2–23–61.

734,286. TOLL HOUSE. The Nestlé Company, Inc. SN 114,249. Pub. 4–24–62. Filed 2–23–61.

734,287. ANCHOVETTE. Harry Peck and Company Limited. SN 121,855. Pub. 4–24–62. Filed 6–12–61.

734,288. MARGO AND DESIGN. Patterson Canning Company. SN 122,355. Pub. 4–24–62. Filed 6–19–61.

734,289. FLAVORABLY YOURS. Florasynth Laboratories, Incorporated. SN 122,611. Pub. 4–24–62. Filed 6–22–61.

734,290. LAZY DAZYS. White Lotus Food Company, Inc., d.b.a. The White Lotus Co. SN 122,875. Pub. 4–24–62. Filed 6–26–61.

734,291. CROWN TAVERN. Crown Nut Company, Inc. SN 123,733. Pub. 4–24–62. Filed 7–11–61.

734,292. GLOW. General Mills, Inc. SN 123,886. Pub. 4–24–62. Filed 7–13–61.

734,293. LA TOSCA. J & J Limeri Co., Inc., d.b.a. La Tosca Food Products Company and La Tosca Products Company. SN 124,206. Pub. 4–24–62. Filed 7–18–61.

734,294. DURA-BOND. Cargill, Incorporated. SN 124,713. Pub. 4–24–62. Filed 7–26–61.

734,295. LIPARCO. Litchfield Park Corporation. SN 124,821. Pub. 4–24–62. Filed 7–27–61.

734,296. FLASH FRESH. Lever Brothers Company. SN 124,914. Pub. 4–24–62. Filed 7–28–61.

734,297. MI-DIET. Mama Cookie Bakeries, Inc. SN 125,063. Pub. 4–24–62. Filed 7–31–61.

734,298. MILKY WAY JUNIOR. Mars, Incorporated. SN 125,151. Pub. 4–24–62. Filed 8–1–61.

734,299. SNICKERS JUNIOR. Mars, Incorporated. SN 125,153. Pub. 4–24–62. Filed 8–1–61.

734,300. VALLEY CHEF AND DESIGN. Southern States Cooperative, Incorporated. SN 127,506. Pub. 4–24–62. Filed 9–8–61.

734,301. KARIOKA KOKOS. Manor Baking Company. SN 127,615. Pub. 4–24–62. Filed 9–11–61.

734,302. DFL AND DESIGN. Dairyland Food Laboratories, Inc. SN 128,529. Pub. 4–24–62. Filed 9–25–61.

734,303. HAWKEYE. Salinas Valley Vegetable Exchange. SN 128,596. Pub. 4–24–62. Filed 9–25–61.

734,304. BLOOMLAND. Hans H. Schumacher, d.b.a. The John Schumacher Company. SN 128,598. Pub. 4–24–62. Filed 9–25–61.

734,305. BIG S. Security Mills, Inc. SN 128,687. Pub. 4–24–62. Filed 9–26–61.

734,306. SESA-BUN. Sesa-Kraft, Inc. SN 128,765. Pub. 4–24–62. Filed 9–27–61.

734,307. SESA-OIL. Sesa-Kraft, Inc. SN 128,766. Pub. 4–24–62. Filed 9–27–61.

Class 48 — Malt Beverages and Liquors

734,308. LB LTD AND DESIGN. Leopard Brewery Limited. SN 128,742. Pub. 4–24–62. Filed 9–27–61.

Class 49 — Distilled Alcoholic Liquors

734,309. BLANCHARD'S 777. Blanchard Importing & Distributing Co., Inc. SN 123,403. Pub. 4–24–62. Filed 7–5–61.

734,310. SCOTTISH MAJESTY AND DESIGN. Schenley Distillers, Inc. SN 124,227. Pub. 4–24–62. Filed 7–18–61.

734,311. STUMP HOLE. Continental Distilling Corporation, d.b.a. Cornwell Distillers Company. SN 125,011. Pub. 4–24–62. Filed 7–31–61.

Class 50 — Merchandise Not Otherwise Classified

734,312. THE WINTHROP. Winthrop Tape Corp. SN 109,453. Pub. 4–24–62. Filed 12–1–60.

734,313. PARKWAY. Minnesota Mining and Manufacturing Company. SN 123,341. Pub. 4–24–62. Filed 7–3–61.

Class 51 — Cosmetics and Toilet Preparations

734,314. BAIN D'OR. Helene Curtis Industries, Inc., d.b.a. Lentheric. SN 88,219. Pub. 4–24–62. Filed 12–30–59.

734,315. TONALITY. Nicholas Freres S.A. SN 125,086. Pub. 4–24–62. Filed 7–31–61.

Class 52 — Detergents and Soaps

734,316. DEADY AND DESIGN. Deady Chemical Company. SN 98,343. Pub. 4–24–62. Filed 6–3–60.

734,317. AMAZON. Swift & Company. SN 111,443. Pub. 4–24–62. Filed 1–6–61.

734,318. LOCK AND KEY. Simonis Company. SN 124,132. Pub. 4–24–62. Filed 7–17–61.

734,319. FORMULA 22. A & L Laboratories, Inc. SN 124,700. Pub. 4–24–62. Filed 7–26–61.

Service Marks

Class 100 — Miscellaneous

734,320. BESTMART. Bestmart, Inc. SN 121,350. Pub. 4–24–62. Filed 6–5–61.

Class 101 — Advertising and Business

734,321. TIKE'S. Federated Department Stores, Inc., assignee of The Rike-Kumler Company. SN 78,069. Pub. 4–24–62. Filed 7–20–59.

734,322. MOORE'S. Moore's Wholesale Builders Supply of Richmond, Incorporated. SN 89,934. Pub. 4–24–62. Filed 1–29–60.

734,323. G-E-M. GEM International, Inc., assignee of M. R. Emrich, C. M. Borwick, and Ben Antonoff (joint owners). SN 94,056. Pub. 4–24–62. Filed 3–31–60.

734,324. MIRROR SHOPS AND DESIGN. Walker-Leavitt Co. SN 110,911. Pub. 4–24–62. Filed 12–27–60.

734,325. MICK-OR-MACK. Mick-or-Mack Stores Co., Incorporated. SN 123,121. Pub. 4–24–62. Filed 6–29–61.

Class 102 — Insurance and Financial

734,326. FOREVER YOURS. Insurance Company of North America. SN 121,524. Pub. 4–24–62. Filed 5–17–61.

Class 103 — Construction and Repair

734,327. AUTHORIZED MYCO DUST-MOP RENTAL SERVICE. Masury-Young Company. SN 85,600. Pub. 4–24–62. Filed 11–18–59.

734,328. CADILLAC GLASS COMPANY AND DESIGN OF A MAN HOLDING PLATE GLASS. Cadillac Glass Company. SN 97,453. Pub. 4–24–62. Filed 5–19–60.

734,329. ARMOUR-GLAS. George J. Goldey, d.b.a. J & G Roofing Co. SN 112,144. Pub. 4–24–62. Filed 1–19–61.

734,330. AIRPOWER SUPPORT AND GLOBE AND CLOCK DESIGN. General Electric Company. SN 112,711. Pub. 4–24–62. Filed 1–30–61.

Class 105 — Transportation and Storage

734,331. AMERICAN RENT-A-CAR SYSTEM AND DESIGN. Leonard Swenson. SN 113,668. Pub. 4–24–62. Filed 2–14–61.

734,332. ALITALIA. Alitalia-Linee Aeree Italiane-Societa per Azioni. SN 129,089. Pub. 4–24–62. Filed 9–28–61.

Collective Membership Mark

Class 200

734,333. PHI BETA KAPPA. United Chapters of Phi Beta Kappa. SN 93,883. Pub. 3–27–62. Filed 3–28–60.

Certification Marks

Class B — Services

734,334. HOWARD W. SAMS ETC. AND DESIGN. Howard W. Sams & Co., Inc. SN 96,146. Pub. 4–24–62. Filed 4–29–60.

734,335. HOWARD W. SAMS AND GROTESQUE REPRESENTATION OF MAN. Howard W. Sams & Co., Inc. SN 96,147. Pub. 4–24–62. Filed 4–29–60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

734,336. Samuel J. Milazzo, d.b.a. Milazzo Charcoal & Fertilizer Company, Pittston, Pa. SN 99,442. Filed P.R. 6–21–60; Am. S.R. 5–17–62.

MILAZZO
INSTANT

For Charcoal Briquets.
First use Mar. 15, 1959.

Class 2 — Receptacles

734,337. Neely Manufacturing Co. Inc., Corydon, Iowa. SN 130,096. Filed 10–17–61.



For Garment Bags.
First use at least by 1949.

Class 12 — Construction Materials

734,338. Markee Corporation of America, Miami, Fla. SN 117,199. Filed P.R. 4–6–61; Am. S.R. 5–18–62.

MARKEE

For Metal Carports and Patio Ports.
First use Oct. 29, 1953.

Class 18 — Medicines and Pharmaceutical Preparations

734,339. Asa A. McBride, Vallejo, Calif. SN 126,466. Filed P.R. 8–22–61; Am. S.R. 5–4–62.

MCBRIDE'S

For Liniment.
First use Apr. 24, 1961.

Class 19 — Vehicles

734,340. Glass Specialty Co., Inc., Bloomington, Ill. SN 116,505. Filed P.R. 3–27–61; Am. S.R. 4–4–62.

AUTO GLASS "ON THE SPOT" INSTALLATION
GLASS SPECIALTY CO., INC.

For Windshields and Windows for Automobiles.
First use Mar. 15, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

734,341. Electro Scientific Industries, Inc., Portland, Oreg. SN 107,421. Filed P.R. 10–31–60; Am. S.R. 5–18–62.

KELVIN KLAMPS

For Multiple Connector for Making Two Separate Connections to Each Junction of a Two Junction Impedance Element.
First use Aug. 22, 1960.

734,342. Electro Scientific Industries, Inc., Portland, Oreg. SN 107,422. Filed P.R. 10–31–60; Am. S.R. 5–18–62.

KELVIN KLIPS

For Multiple Connector for Making Two Separate Connections to Each Junction of a Two Junction Impedance Element.
First use Aug. 17, 1960.

Class 22 — Games, Toys, and Sporting Goods

734,343. Warren Paper Products Co., Lafayette, Ind. SN 89,621. Filed P.R. 1–25–60; Am. S.R. 5–17–62.

PASTE WITHOUT PASTE

For Child's Toy Cutout Kit for the Construction of Composite Pictures by Cutting, Folding, and Mounting Procedures.
First use Jan. 5, 1953.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

734,344. Novelart Manufacturing Company, Amberley, Ohio. SN 105,300. Filed P.R. 9–27–60; Am. S.R. 5–16–62.

ELECTRO-SHRED

For Machine for Mutilating Private Papers.
First use Sept. 8, 1960.

734,345. Nestaway Incorporated, Cleveland, Ohio. SN 121,414. Filed P.R. 6-5-61; Am. S.R. 5-9-62.

SWIVELIFT

For Truck-Mounted Load Lifters.
First use on or about May 3, 1961.

Class 33 — Glassware

734,346. Libbey-Owens-Ford Glass Company, Toledo, Ohio. SN 125,389. Filed P.R. 8-4-61; Am. S.R. 5-10-62.

WAFFLE

For Glass for Glazing Windows, Doors, Partitions and the Like.
First use Sept. 30, 1960.

734,347. Libbey-Owens-Ford Glass Company, Toledo, Ohio. SN 125,391. Filed P.R. 8-4-61; Am. S.R. 5-10-62.

STIPPLED

For Glass for Glazing Windows, Doors, Partitions and the Like.
First use Oct. 28, 1960.

Class 37 — Paper and Stationery

734,348. Hamilton Paper Company, Miquon, Pa. SN 138,957. Filed 3-2-62.

PLAINWELL

For Manifold, Bond and Offset Papers.
First use Aug. 20, 1959.

Class 38 — Prints and Publications

734,349. Kalmbach Publishing Co., Milwaukee, Wis. SN 118,352. Filed P.R. 4-21-61; Am. S.R. 5-10-62.

BETTER CAMPING THE MAGAZINE OF THE OPEN ROAD

No claim is made to the phrase "The Magazine of the Open Road" apart from the mark as shown.
For Magazine.
First use Jan. 25, 1960.

734,350. United Newspapers Magazine Corporation, New York, N.Y. SN 122,657. Filed P.R. 6-22-61; Am. S.R. 5-23-62.

All-America

Travel Guide

For Travel Guide.
First use Jan. 8, 1961.

734,351. United Newspapers Magazine Corporation, New York, N.Y. SN 122,658. Filed P.R. 6-22-61; Am. S.R. 5-23-62.

All-America Vacation Map

For Vacation Map.
First use Jan. 8, 1961.

734,352. McGraw-Hill Publishing Company, Inc., New York, N.Y. SN 132,479. Filed P.R. 11-21-61; Am. S.R. 5-17-62.

ENGINEERING DIGEST

For Trade Magazine.
First use Nov. 9, 1960.

Class 39 — Clothing

734,353. Simplex Shoe Manufacturing Company, Milwaukee, Wis. SN 102,876. Filed P.R. 8-17-60; Am. S.R. 4-16-62.

pre-Teens by SIMPLEX

For Shoes for Girls.
First use Aug. 4, 1960.

734,354. Bayard Shirt Corp., New York, N.Y. SN 117,163. Filed P.R. 4-5-61; Am. S.R. 4-16-62.

Lady Bayard

"Lady Bayard" is a fanciful mark and does not identify a particular individual.
For Ladies' and Girls' Shirts.
First use Mar. 27, 1961.

734,355. Principle Plastics, Inc., Gardena, Calif. SN 119,148. Filed P.R. 5-2-61; Am. S.R. 5-10-62.

THE HEEL WITH STEEL

For Plastic Overshoes.
First use Nov. 16, 1960.

Class 46 — Foods and Ingredients of Foods

734,356. Food Enterprises, Inc. (N.Y.), Rye, N.Y., by merger and change of name from Dorann Foods, Inc., Rye, N.Y. SN 63,929. Filed P.R. 12-9-58; Am. S.R. 1-17-61.

REDI-SERVE

For Frozen Ravioli.
First use on or about Dec. 1, 1958.

734,357. Briardale Co., San Francisco, Calif. SN 113,482. Filed P.R. 2-13-61; Am. S.R. 5-2-62.

HOLSUM

For Dog and Cat Food.
First use Aug. 19, 1932.

734,358. Ed Walton, Jr., d.b.a. Walton Tea Company, Lafayette, Tenn. SN 119,657. Filed P.R. 5-8-61; Am. S.R. 5-3-62.

WALTON'S TEA COMPANY
NATURE'S OWN SPRING TONIC
LAFAYETTE, TENNESSEE
INDIAN BRAND RED
INDIAN BRAND
RED
SASSAFRAS TEA
DIRECTIONS—One Cup Tea To Four Cups Water
(BOIL FOR 15 MINUTES)
Sodium Benzoate Added To Retard Spoilage
Net Weight 2 Ounces

For Sassafras Tea.
First use Jan. 10, 1956.

Class 47 — Wines

734,359. The Taylor Wine Company, Inc., Hammondsport, N.Y. SN 119,589. Filed P.R. 5-8-61; Am. S.R. 5-23-62.

TAYLOR
Specially Selected American
MUSCATEL
The Taylor Wine Company
HAMMONDSPORT, N.Y., U.S.A. ESTABLISHED 1880
ALCOHOL 19% BY VOLUME

For Muscatel Wine.
First use Apr. 21, 1961.

734,360. The Taylor Wine Company, Inc., Hammondsport, N.Y. SN 119,593. Filed P.R. 5-8-61; Am. S.R. 5-23-62.

TAYLOR
NEW YORK STATE
WHITE TOKAY
wine
Produced & bottled by The Taylor Wine Company, Inc.
Hammondsport, New York, U.S.A. Established 1880

For Tokay Wine.
First use Apr. 18, 1961.

734,361. The Taylor Wine Company, Inc., Hammondsport, N.Y. SN 119,594. Filed P.R. 5-8-61; Am. S.R. 5-23-62.

TAYLOR
NEW YORK STATE
SAUTERNE
WINE

For Sauterne Wine.
First use Apr. 18, 1961.

734,362. The Taylor Wine Company, Inc., Hammondsport, N.Y. SN 120,585. Filed P.R. 5-22-61; Am. S.R. 5-23-62.

TAYLOR
NEW YORK STATE
Rhine Wine

For Rhine Wine.
First use May 15, 1961.

734,363. The Taylor Wine Company, Inc., Hammondsport, N.Y. SN 120,586. Filed P.R. 5-22-61; Am. S.R. 5-23-62.

TAYLOR
NEW YORK STATE
CLARET
A DELICATELY DRY TABLE WINE

For Claret Wine.
First use May 15, 1961.

Class 51 — Cosmetics and Toilet Preparations

734,364. The Mennen Company, Morristown, N.J. SN 125,520. Filed 8–7–61.



The mark consists of the conformation of the applicator package in which the goods are sold, including the elliptical configuration at the top of the package.

For Deodorant.

First use May 1, 1960.

Service Marks

Class 100 — Miscellaneous

734,365. American Relocation Service, Philadelphia, Pa. SN 110,650. Filed P.R. 12–22–60; Am. S.R. 2–26–62.

AMERICAN RELOCATION

For Informational and Advisory Services to Families About To Move to Another Area, Said Services Consisting of an Overall Appraisal of Living Conditions in the New Area, Furnishing Photographs of Homes Available Therein and Selecting a Reliable Real Estate Broker in the New Area for Those Moving to Said Location.

First use Nov. 29, 1960.

Class 103 — Construction and Repair

734,366. John O. Brost Company, Minneapolis, Minn. SN 110,026. Filed P.R. 12–12–60; Am. S.R. 3–29–62.

BROST BRICK

For Surfacing New Masonry and Resurfacing Old Masonry.

First use at least as early as April 1958.

TRADEMARK REGISTRATIONS RENEWED

21,856. I WILL AND DESIGN. Cl. 46. 10–11–1892.
151,875. MAN-O-WAR. Cl. 46. 2–14–22.
151,931. S.L. & G.H.R. CO. Cl. 28. 2–14–22.
152,350. TRIBOULINE. Cl. 42. 2–28–22.
153,407. STUARDE. Cl. 42. 3–21–22.
155,044. DUOFOLD. Cl. 37. 5–16–22.
155,096. MULTIVANE. Cl. 23. 5–16–22.
156,055. IT'S ALL IN THE WHEEL. Cl. 23. 6–13–22.
157,669. DRANO. Cl. 52. 8–15–22.
158,763. OKOMA AND DESIGN. Cl. 46. 9–12–22.
158,923. FLORIENT. Cl. 51. 9–19–22.
159,549. SWEET'S. Cl. 46. 9–26–22.
159,975. MELOWEST. Cl. 46. 10–10–22.
160,393. "CLAYOLA." Cl. 1. 10–24–22.
160,415. MASONS MYX. Cl. 12. 10–24–22.
160,701. ONE PIECE OUTLOOK. Cl. 37. 10–24–22.
160,833. BAYER CROSS SEAL. Cl. 18. 10–31–22.
160,960. PERALGA AND DESIGN. Cl. 18. 10–31–22.
160,998. GLOSTORA. Cl. 51. 10–31–22.
393,386. VITAFREZE. Cl. 46. 2–10–42.
393,632. COOLBAND. Cl. 39. 2–24–42.
393,972. MERSORB. Cl. 44. 3–10–42.
394,905. HYPEX. Cl. 21. 5–5–42.
394,906. SPEECH-MASTER. Cl. 21. 5–5–42.
394,958. CHINAROID. Cl. 18. 5–5–42.
394,978. FALLSCOAT. Cl. 37. 5–5–42.
395,000. BRUSH. Cl. 26. 5–5–42.
395,147. ADCO. Cl. 23. 5–12–42.
395,286. STRATHMORE AND DESIGN. Cl. 17. 5–19–42.
395,584. RED DEVIL. Cl. 23. 6–2–42.
395,654. PETROGALAR AND DESIGN. Cl. 18. 6–2–42.
395,655. PETROGALAR AND DESIGN. Cl. 18. 6–2–42.
395,656. PETROGALAR AND DESIGN. Cl. 18. 6–2–42.
395,657. PETROGALAR AND DESIGN. Cl. 18. 6–2–42.
395,658. PETROGALAR AND DESIGN. Cl. 18. 6–2–42.
395,659. PETROGALAR AND DESIGN. Cl. 18. 6–2–42.
395,660. AIRCO. Cl. 6. 6–2–42.
395,749. AIRCO AND DESIGN. Cl. 21. 6–9–42.
395,898. ACRYLOID. Cl. 6. 6–16–42.
395,922. B–1956. Cl. 6. 6–16–42.
396,302. RED DEVIL. Cl. 50. 7–7–42.
396,694. KODAK. Cl. 3. 7–28–42.
396,856. KENTUCKY OWL. Cl. 49. 8–4–42.
397,011. PHOSPHALJEL. Cl. 18. 8–11–42.
397,023. RIBRANEX. Cl. 18. 8–11–42.
397,059. NATIONAL AND GEAR DESIGN. Cl. 37. 8–18–42.
397,073. HAMPTON ARMS AND DESIGN. Cl. 17. 8–18–42.
397,357. AUNT PENNY'S. Cl. 46. 9–1–42.
397,473. ROBINS. Cl. 23. 9–8–42.
397,709. MANLEIGH. Cl. 28. 9–15–42.
398,069. SULPINE. Cl. 16. 10–6–42.
398,123. BRINY DEEP AND DESIGN. Cl. 46. 10–13–42.
398,205. ROYAL SCARLET. Cl. 45. 10–13–42.
398,288. KITTEN DESIGN. Cl. 43. 10–20–42.
398,297. TMS WITH BARS ABOVE AND BELOW LETTERS. Cl. 51. 10–20–42.
398,309. TRU-SITE. Cl. 33. 10–20–42.
398,319. VYCOR. Cl. 26. 10–20–42.
398,399. KELLOGGRAMS. Cl. 38. 10–27–42.
398,400. KELLOGG'S. Cl. 2. 10–27–42.
398,433. ROYAL SCARLET. Cl. 6. 10–27–42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

90,351. "LARRO" AND DESIGN. Cl. 46. 2–18–13.
90,899. REPRESENTATION OF BEET AND DESIGN. Cl. 46. 4–1–13.
128,522. SUREMILK. Cl. 46. 1–6–20.
128,523. SURELAY. Cl. 46. 1–6–20.
128,524. SUREGROW. Cl. 46. 1–6–20.
171,032. LARRO AND DESIGN. Cl. 46. 7–31–23.
171,135. LARRO AND DESIGN. Cl. 46. 7–31–23.
171,136. LARRO AND DESIGN. Cl. 46. 7–31–23.
181,550. SURELIVE. Cl. 46. 3–25–24.
187,246. NORTH STAR AND DESIGN. Cl. 46. 7–29–24.
219,867. SUREMILK AND DESIGN. Cl. 46. 10–26–26.
233,212. RED BAND. Cl. 46. 9–27–27.
234,802. "SPERRY" AND DESIGN. Cl. 46. 11–8–27.
269,585. FARM-TESTED. Cl. 46. 4–15–30.
275,833. SUREPOULT. Cl. 46. 9–30–30.
275,839. SUREGOBBLE. Cl. 46. 9–30–30.
275,841. SURETURK. Cl. 46. 9–30–30.
302,765. SURECALF. Cl. 46. 4–25–33.
331,029. SURERABBIT. Cl. 46. 12–24–35.
333,933. SURESHEEP. Cl. 46. 4–14–36.
333,962. SUREBROILER. Cl. 46. 4–14–36.
338,940. SURECATTLE. Cl. 46. 9–22–36.

345,364. NIBS. Cl. 46. 4–27–37.
351,256. CHICK BUILDER. Cl. 46. 10–26–37.
357,134. TURKEY BUILDER. Cl. 46. 5–24–38.
366,891. SURECHAMP. Cl. 46. 5–2–39.
369,441. LARRO. Cl. 46. 7–25–39.
373,287. EVENTUALLY GOLD MEDAL. Cl. 46. 12–5–39.
376,138. SUREMINK. Cl. 46. 3–12–40.
381,328. SUREHATCH. Cl. 46. 9–17–40.
396,285. SUREFOX. Cl. 46. 7–7–42.
400,683. BUILDER. Cl. 46. 3–23–43.
402,060. SURE. Cl. 46. 6–29–43.
512,237. LARROMETER. Cl. 26. 7–12–49.
518,559. FLOCK CHECK. Cl. 37. 12–6–49.
544,834. EGGOMETER. Cl. 26. 7–10–51.
560,229. SUREMIX. Cl. 46. 6–17–52.
564,737. LARROMIN. Cl. 18. 9–30–52.
594,323. SURECHICK. Cl. 46. 8–24–54.
594,324. SURELIFT. Cl. 46. 8–24–54.
594,325. SUREPIG. Cl. 46. 8–24–54.
596,055. SUREPORK. Cl. 46. 9–28–54.
613,988. SUREBALANCE. Cl. 46. 10–11–55.
622,797. SURE. Cl. 46. 3–6–56.

Section 8

217,569. NEW PROCESS. Cl. 46. 9–7–26.
331,040. RACEAWAY. Cl. 19. 12–24–35.
608,921. BIG-'N-THICK ETC. AND DESIGN. Cl. 2. 7–19–55.
612,658. JAMESBROOKE. Cl. 39. 9–20–55.
617,658. PLAYTIME COOLER. Cl. 2. 12–20–55.
617,798. DUMPLIN. Cl. 22. 12–20–55.
620,080. TROPICRAFT (FANCIFUL). Cl. 50. 1–24–56.

The following registrations issued May 22, 1956

627,168. MELOSO. Cl. 1.
627,169. CURTISS-WRIGHT CW CURIFOAM AND DESIGN. Cl. 1.
627,171. REVERETONE. Cl. 2.
627,173. VISIPAK. Cl. 2.
627,179. CUSHION SEAL. Cl. 2.
627,193. WURMSUP. Cl. 6.
627,198. MINT-SOL. Cl. 6.
627,208. WEST-CORD. Cl. 7.
627,212. SOHIOGEN IN OVAL DESIGN. Cl. 10.
627,213. SOHIOGEN (IN LEAF DESIGN). Cl. 10.
627,214. SOHIOGEN (IN OVAL TRACTOR DESIGN). Cl. 10.
627,216. ADD. Cl. 10.
627,218. AMMO-GRO. Cl. 10.
627,222. AWN-O-MATIC. Cl. 12.
627,224. "ATOMITE." Cl. 12.
627,226. SAFETYMIX. Cl. 13.
627,227. CENTURYWARE. Cl. 13.
627,230. DESIGN OF DIAGONAL STRIPES. Cl. 14.
627,232. STRONGTITE. Cl. 14.
627,243. BIG INJUN AND DESIGN. Cl. 17.
627,246. ACROAGONINE. Cl. 18.
627,249. VITO. Cl. 18.
627,251. SALSAR AND DESIGN. Cl. 18.
627,252. ENER-C. Cl. 18.
627,258. S-MEZ. Cl. 18.
627,268. MOUNTAIN BREEZE ETC. AND DESIGN. Cl. 19.
627,272. ASA ETC. AND DESIGN. Cl. 19.
627,276. LEADER. Cl. 21.
627,277. SPEECH Q. Cl. 21.
627,278. MISSIONARY AND DESIGN. Cl. 21.
627,285. EXPO. Cl. 21.
627,295. TRU-NOTE AND DESIGN. Cl. 22.
627,298. BRIC-BLOX. Cl. 22.
627,300. WHEEL-TOP. Cl. 22.
627,302. MARVELOUS MIKE. Cl. 22.
627,304. ASTRON. Cl. 22.
627,305. "POW." Cl. 22.
627,306. WUFFLE TREE. Cl. 22.
627,309. "BUZZ." Cl. 22.
627,314. LE GRIMPEUR. Cl. 23.
627,317. SHIMER AND DESIGN. Cl. 23.
627,319. JIFFY. Cl. 23.
627,322. ELK-CO. Cl. 23.
627,347. ROBERTSON "SEVENTEEN." Cl. 26.
627,352. ARTISOL. Cl. 26.
627,357. SPEED TALLY. Cl. 26.
627,358. GRADU TEMP. Cl. 26.
627,364. TWINR. Cl. 26.
627,367. CORMALITE. Cl. 26.
627,369. "EDPM." Cl. 26.
627,370. COMBAT. Cl. 27.
627,373. CHI-CHI. Cl. 28.
627,376. TODAY WE LOVE ETC. Cl. 30.
627,381. HARV-O-METIC. Cl. 31.
627,386. SEAT COAT. Cl. 32.
627,387. SPRED BAR. Cl. 32.
627,388. SYKO-ETTE. Cl. 32.
627,390. SINU-SPRINGS. Cl. 32.
627,395. CLEO-MATIC. Cl. 34.
627,396. ZAVODY V.I. LENINA PLZEN AND DESIGN. Cl. 34.
627,399. ALUMILUX. Cl. 34.
627,402. RAINAIRE B AND DESIGN. Cl. 34.
627,408. VORNADO. Cl. 34.
627,418. ZEPHYR WEIGHT AND DESIGN. Cl. 39.
627,419. BY GILBERT TOGS NEW YORK AND DESIGN. Cl. 39.
627,422. NIKKA AND DESIGN. Cl. 39.
627,425. LAMBELLA. Cl. 39.
627,426. BILTMORE ETC. Cl. 39.
627,428. "KILTY"-MOCS AND DESIGN. Cl. 39.
627,433. GOLDOR. Cl. 39.
627,443. ONELLA. Cl. 39.
627,451. NEKCONIT. Cl. 39.
627,452. U EMBROID CURTAINS AND NEEDLE DESIGN. Cl. 40.
627,453. DURO-PLANT. Cl. 40.
627,456. S SUSA (IN A PANEL). Cl. 42.
627,463. MOONSHINE. Cl. 45.
627,486. IN-JUNE. Cl. 46.
627,489. POP-OPEN AND DESIGN. Cl. 46.
627,490. SWEETLASSY AND DESIGN. Cl. 46.
627,491. SALAD MATE. Cl. 46.
627,494. STRATO. Cl. 46.
627,495. MOOSE. Cl. 46.
627,496. BISON. Cl. 46.
627,498. CERTS AND DESIGN. Cl. 46.
627,501. MYONE. Cl. 46.
627,507. THE ORIGINAL ANDREW H. BROWN. Cl. 46.
627,508. GUISEPPE'S. Cl. 46.
627,510. GUNTHER. Cl. 48.
627,512. SWING DINGS MOBILE AND DESIGN. Cl. 50.
627,516. GAYE CONTESSA. Cl. 51.
627,517. JAGUAR. Cl. 51.
627,518. MIRAMAR. Cl. 51.
627,521. SHERRY NAIL. Cl. 51.
627,526. TRAVEL-TANS. Cl. 51.
627,527. BARBER-CHIEF. Cl. 51.
627,533. SAY IT WITH CHEER. Cl. 101.
627,537. EYE OPENERS AND DESIGN. Cl. 101.
627,539. THE TRUE LEASE TERNAN, CLAUSON & CO., INC. AND DESIGN. Cl. 102.
627,542. RAINBOWCOLOR PROCESSED BY MOVIELAB AND DESIGN. Cl. 106.
627,543. DISC-A-TOONS. Cl. 107.
627,544. CORNY THE CLOWN. Cl. 107.
627,547. GLAS-CRAFT. Cl. 19.
627,548. TRAILER CRAFT. Cl. 19.
627,552. HI-LO. Cl. 28.
627,557. FIRMWAVE. Cl. 51.
627,560. SUEDE-BRITE. Cl. 52.

Section 18

397,742. ANDERSON'S FARM FRESH. Cl. 46. 9–22–42.
422,079. BALE. Cl. 28. 6–2–46.
432,678. RONDE. Cl. 27. 9–9–47.
434,335. GOSSIP OUT COMES THE DIRT. Cl. 4. 11–17–47.
694,408. LION AND DESIGN. Cl. 4. 3–15–60.
702,332. COLLEGIAN. Cl. 39. 8–2–60.

INDEX OF REGISTRANTS

JULY 10, 1962

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

A & L Laboratories, Inc., Minneapolis, Minn. 734,319, pub. 4–24–62. Cl. 52.
Advance Transformer Co., Chicago, Ill. 734,085, pub. 4–24–62. Cl. 21.
Air Products, Inc., Emmaus, Pa. 734,177, pub. 7–8–58. Cl. 34.
Air Reduction Co., Inc. : *See*—
Air Reduction Sales Co.
Air Reduction Sales Co., to Air Reduction Co., Inc., New York, N.Y. 395,660, ren. 7–10–62. Cl. 6.
Air Reduction Sales Co., to Air Reduction Co., Inc., New York, N.Y. 395,749, ren. 7–10–62. Cl. 21.
Airosol Co., Inc., Neodesha, Kans. 734,056, pub. 4–24–62. Cl. 16.
Alamont Laboratories, Inc., Montgomery, Ala. 627,198, canc. Cl. 6.
Alco of Texas, d.b.a. Alco of Texas, Inc., San Angelo, Tex. 627,428, canc. Cl. 39.
Alco of Texas, Inc. : *See*—
Alco of Texas.
Alco-Dial Co., The, Willowdale, Ontario, Canada. 734,153, pub. 4–24–62. Cl. 26.
Alexander Doll Co., Inc., d.b.a. Madame Alexander, New York, N.Y. 617,798, canc. Cl. 22.
Alitalia-Linee Aeree Italiane-Societa per Azioni, Rome, Italy. 734,332, pub. 4–24–62. Cl. 105.
Allemann & Gisiger, New York, N.Y. 432,678, canc. Cl. 27.
Allison-Bedford Co., to Benson Fish Co., Chicago, Ill. 398,123, ren. 7–10–62. Cl. 46.
Allstate Enterprises, Inc., Skokie, Ill. 734,204, pub. 4–24–62. Cl. 38.
Aluminum Roll-Away Corp., Miami, Fla. 734,176, pub. 4–24–62. Cl. 32.
Amchem Products, Inc., Ambler, Pa., from H. Raymond Neilson (deceased), d.b.a. Neilson Chemical Co. of California, Los Angeles, Calif. 734,007, pub. 4–24–62. Cl. 6.
Amco Aluminum Corp., Philadelphia, Pa. 734,017, pub. 4–24–62. Cl. 12.
American Brake Shoe Co., New York, N.Y. 627,276, canc. Cl. 21.
American Chicle Co., Long Island City, N.Y. 627,498, canc. Cl. 46.
American Cyanamid Co., New York, N.Y. 734,053, pub. 4–24–62. Cl. 16.
American Cyanamid Co., New York, N.Y. 734,065, pub. 4–24–62. Cl. 18.
American Dross Disposal Corp., Oklahoma City, Okla. 627,216, canc. Cl. 10.
American Hide and Leather Co., Boston, Mass. 627,168, canc. Cl. 1.
American Home Products Corp. : *See*—
Petrogalar Laboratories, Inc.
S.M.A. Corp.
Wyeth, John, & Brother, Inc.
American Machine & Foundry Co. : *See*—
Dalkin, A., Co.
American Machine & Foundry Co., New York, N.Y. 734,071, pub. 4–24–62. Cl. 21.
American Machine & Foundry Co., New York, N.Y. 734,110, pub. 4–24–62. Cl. 22.
American Relocation Service, Philadelphia, Pa. 734,365. Cl. 100.
American Tobacco Co., The, New York, N.Y. 734,058, pub. 4–24–62. Cl. 17.
Anderson, W. O., Commission Co., The, Topeka, Kans. 397,742, canc. Cl. 46.
Andes Candies Inc., Chicago, Ill. 734,272, pub. 4–24–62. Cl. 46.
Andre : *See*—
Medovnik, Aron.
Anodyne, Inc., North Miami Beach, Fla. 734,091, pub. 4–24–62. Cl. 21.
Antonoff, Ben : *See*—
Gem International, Inc.
Arfa Mills, Inc., New York, N.Y. 734,243, pub. 4–24–62. Cl. 42.
Argo Industries Corp., Jackson Heights, N.Y. 734,115, pub. 4–24–62. Cl. 22.
Armstrong Cork Co., Lancaster, Pa. 734,068, pub. 4–24–62. Cl. 20.
Ash Grove Lime & Portland Cement Co., Kansas City, Mo. 733,992, pub. 4–24–62. Cl. 1.
Ashaway Line & Twine Mfg. Co., Ashaway, R.I. 734,012, pub. 4–24–62. Cl. 7.
Ashe, H. J., Co., Inc., The, Glenbrook, Conn. 734,087, pub. 4–24–62. Cl. 21.
Askon Tehtaat O.Y., Lahti, Finland. 734,173–4, pub. 4–24–62. Cl. 32.
Assembly Products, Inc., Chesterland, Ohio. 627,358, canc. Cl. 26.
Ateliers & Chantiers de la Manche, Dieppe (Seine Maritime), France. 627,314, canc. Cl. 23.
Atlee Corp., Waltham, Mass. 734,123, pub. 4–24–62. Cl. 23.
Atomized Materials Co., Inc., Pittsburgh, Pa. 734,021–2, pub. 4–24–62. Cl. 12.
Audio-Video Corp., Westfield, N.J. 627,278, canc. Cl. 21.
Automotive Safety Associates, Los Angeles, Calif. 627,272, canc. Cl. 19.
Bacon, O. E., d.b.a. Old Hickory Medicine Co., Chattanooga, Tenn. 734,062, pub. 4–24–62. Cl. 18.
Baitch & Castaldi, Inc., New York, N.Y. 734,219, pub. 4–24–62. Cl. 39.
Ballcer, Morris, New York, N.Y. 422,079, canc. Cl. 28.
Barton, Earl E., d.b.a. Western Cordage Co., Loveland, Colo. 627,208, canc. Cl. 7.
Bayard Shirt Corp., New York, N.Y. 734,354. Cl. 39.
Bayer Co., Inc., The, to Sterling Drug Inc., New York, N.Y. 160,833, ren. 7–10–62. Cl. 18.
Belding Heminway Co., to Belding Heminway Co., Inc., New York, N.Y. 398,288, ren. 7–10–62. Cl. 43.
Belding Heminway Co., Inc. : *See*—
Belding Heminway Co.
Bell Textile Co., Inc., New York, N.Y. 734,231, pub. 4–24–62. Cl. 42.
Benson, Christian L., to Benson Fish Co., Chicago, Ill. 21,856, ren. 7–10–62. Cl. 46.
Benson Fish Co. : *See*—
Allison-Bedford Co.
Benson, Christian L.
Bestmart, Inc., Cleveland, Ohio. 734,320, pub. 4–24–62. Cl. 100.
Bianchini, Ferier, Lyon, France, to Ferier Bianchini, Inc., New York, N.Y. 152,350, ren. 7–10–62. Cl. 42.
Bianchini, Ferier, Lyon, France, to Ferier Bianchini, Inc., New York, N.Y. 153,407, ren. 7–10–62. Cl. 42.
Bianchini, Ferier, Inc. : *See*—
Bianchini, Ferier.
Billboard Publishing Co., The, Cincinnati, Ohio. 734,198, pub. 4–24–62. Cl. 38.
Biltmore Hats Ltd., Guelph, Ontario, Canada. 627,426, canc. Cl. 39.
Binney & Smith Co., East Orange, N.J., and New York, N.Y., to Binney & Smith Inc., New York, N.Y. 160,393, ren. 7–10–62. Cl. 1.
Binney & Smith Inc. : *See*—
Binney & Smith Co.
Blanchard Importing & Distributing Co., Inc., Boston, Mass. 734,309, pub. 4–24–62. Cl. 49.
Bodnarchuk, Steve, Rockville, Md. 627,543, canc. Cl. 107.
Bonafide Mills, Inc., New York, N.Y. 734,070, pub. 4–26–62. Cl. 20.
Bond Wedding Cups : *See*—
Holder, Lily F. B.
Bonnell, William L., Co., Inc., The, Newnan, Ga. 734,019–20, pub. 4–24–62. Cl. 12.
Bonnell, William L., Co., Inc., The, Newnan, Ga. 734,023–30, pub. 4–24–62. Cl. 12.
Borden Co., The, New York, N.Y. 627,489, canc. Cl. 46.
Borwick, C. M. : *See*—
Gem International, Inc.
Bourns Laboratories, Inc., Riverside, Calif. 627,364, canc. Cl. 26.
Bowyer, John, d.b.a. Little Skipper Root Beer Co., Taylor, Mich. 734,266, pub. 4–24–62. Cl. 45.
Briardale Co., San Francisco, Calif. 734,357. Cl. 46.
Bric-Blox Co., Baltimore, Md. 627,298, canc. Cl. 22.
Brost, John O., Co., Minneapolis, Minn. 734,366. Cl. 103.
Browar Products, Inc., Elwell, Mich. 627,249, canc. Cl. 18.
Brown, Albert W., Burbank, Calif. 627,463, canc. Cl. 45.
Brown, Andrew H., d.b.a. Smokehouse Food Processing Plant, Lakeland, Fla. 627,507, canc. Cl. 46.
Brown & Williamson Tobacco Corp., Louisville, Ky. 627,243, canc. Cl. 17.
Brush Development Co., The, to Clevite Corp., Cleveland, Ohio. 395,000, ren. 7–10–62. Cl. 26.
Bullock's, Inc., Los Angeles, Calif. 734,216, pub. 4–24–62. Cl. 39.
Bulova Watch Co., Inc., Flushing, N.Y. 734,086, pub. 4–24–62. Cl. 21.
Bulova Watch Co., Inc., New York, N.Y. 734,193, pub. 4–24–62. Cl. 36.
Cadillac Glass Co., Cleveland, Ohio. 734,328, pub. 4–24–62. Cl. 103.
Calevas, George A., d.b.a. Calevas Laboratories, Washington, D.C. 734,262, pub. 5–2–61. Cl. 45.
Calevas Laboratories : *See*—
Calevas, George A.
Canoga Electronics Corp., Van Nuys, Calif. 734,088, pub. 4–24–62. Cl. 21.
Capel, A. Leon, & Sons, Inc., Troy, N.C. 734,237, pub. 4–24–62. Cl. 42.
Cargill, Inc., Minneapolis, Minn. 734,294, pub. 4–24–62. Cl. 46.
Carolyn Chenilles, Inc., New York, N.Y. 734,236, pub. 4–24–62. Cl. 42.
Carr & Day & Martin Ltd., London, England. 694,408, canc. Cl. 4.
Century Tool & Mfg. Co., Rockford, Ill. 627,227, canc. Cl. 13.
Cerletti, Ugo, Rome, Italy. 627,246, canc. Cl. 18.
Cerro Corp., New York, N.Y. 734,075, pub. 4–24–62. Cl. 21.
Chamberlin, Joseph F., d.b.a. Chamberlin Metal Products, Chicago, Ill. 627,300, canc. Cl. 22.
Chamberlin Metal Products : *See*—
Chamberlin, Joseph F.

Chelan Falls Cold Storage Co., Chelan Falls, Wash. 734,282, pub. 4–24–62. Cl. 46.
Chemco Photoproducts Co., Inc., Glen Cove, N.Y. 734,159, pub. 4–24–62. Cl. 26.
Cherry Electrical Products Corp., Highland Park, Ill. 734,079, pub. 4–24–62. Cl. 21.
Chrencik, Edward W., d.b.a. Dynapedic Co., Hopkins, Minn. 734,206, pub. 4–24–62. Cl. 39.
Chun King Corp., The, Duluth, Minn. 734,284, pub. 4–24–62. Cl. 46.
Circuit Materials Corp., New Brunswick, N.J. 734,083, pub. 4–24–62. Cl. 21.
Clark, Geo. A., & Son, Inc., Minneapolis, Minn. 734,181, pub. 4–24–62. Cl. 34.
Clayton & Lambert Mfg. Co., Louisville, Ky. 627,399, canc. Cl. 34.
Cleveland Builders Supply & Brick Co., The, to The Cleveland Builders Supply Co., Cleveland, Ohio. 160,415, ren. 7–10–62. Cl. 12.
Cleveland Builders Supply Co., The: *See*—
Cleveland Builders Supply & Brick Co., The.
Clevite Corp.: *See*—
Brush Development Co., The.
Colgate & Co., Jersey City, N.J., and New York, N.Y., to Colgate-Palmolive Co., New York, N.Y. 158,923, ren. 7–10–62. Cl. 51.
Colgate-Palmolive Co.: *See*—
Colgate & Co.
Commercial Heater Co., Fort Worth, Tex. 734,190, pub. 4–24–62. Cl. 34.
Congressional Information Bureau, Inc., Washington, D.C. 734,200, pub. 4–24–62. Cl. 38.
Contessa, Ltd., New York, N.Y. 627,516–8, canc. Cl. 51.
Continental Can Co. Inc., New York, N.Y. 627,179, canc. Cl. 2.
Continental Distilling Corp., d.b.a. Cornwell Distillers Co., Philadelphia, Pa. 734,311, 4–24–62. Cl. 49.
Continental Oil Co., Ponca City, Okla. 734,011, pub. 4–24–62. Cl. 6.
Conveyor Systems, Inc., Morton Grove, Ill. 734,136, pub. 4–24–62. Cl. 23.
Coos Bay Mutual Creamery Co.: *See*—
Oregon Dairymen's Cooperative League, The.
Cormac Industries, Inc., New York, N.Y. 627,367, canc. Cl. 26.
Corning Glass Works, Corning, N.Y. 398,319, ren. 7–10–62. Cl. 26.
Cornwell Distillers Co.: *See*—
Continental Distilling Corp.
Cotonificio Valle di Susa, Milan, Italy. 627,456, canc. Cl. 42.
Countess York, Ltd., Springfield, Mass. 734,089, pub. 4–24–62. Cl. 21.
Courtaulds, Ltd., London, England. 733,996, pub. 4–24–62. Cl. 1.
Courtaulds, Ltd., London, England. 734,227, pub. 4–24–62. Cl. 39.
Courtaulds, Ltd., London, England. 734,248, pub. 4–24–62. Cl. 42.
Courtaulds, Ltd., London, England. 734,254, pub. 4–24–62. Cl. 43.
Cresthill Industries, Inc., Yonkers, N.Y. 734,229, pub. 4–24–62. Cl. 40.
Crown Nut Co., Inc., Kingston, Pa. 734,291, pub. 4–24–62. Cl. 46.
Cucamonga Mesa Growers, Upland, Calif. 627,495–6, canc. Cl. 46.
Cudahy Packing Co., The: *See*—
Miller-McConnel Grain Co.
Curtis, Helene, Industries, Inc., d.b.a. Lentheric, Chicago, Ill. 734,314, pub. 4–24–62. Cl. 51.
Curtiss-Wright Corp., Carlstadt, N.J. 627,169, canc. Cl. 1.
Custer, John B., d.b.a. Midwest Petroleum Co., Dayton, Ohio. 734,046, pub. 4–24–62. Cl. 15.
D.E.P. Enterprises, Chicago, Ill. 734,132, pub. 4–24–62. Cl. 23.
Dairyland Food Laboratories, Inc., Waukesha, Wis. 734,302, pub. 4–24–62. Cl. 46.
Dale Marking Equipment Co., Inc., Brooklyn, N.Y. 734,135, pub. 4–24–62. Cl. 23.
Dalkin, A., Co., Chicago, Ill., to American Machine & Foundry Co., New York, N.Y. 395,147, ren. 7–10–62. Cl. 23.
Dan River Mills, Inc., Danville, Va. 734,235, pub. 4–3–62. Cl. 42.
Davette Products, Inc., Clayton, Mo. 627,373, canc. Cl. 28.
Davidson, Raymond W., Portland, Oreg. 734,094, pub. 4–24–62. Cl. 21.
Davis, Pearl L., d.b.a. Myone Seed Co., Grants Pass, Oreg. 627,501, canc. Cl. 46.
Deady Chemical Co., Kansas City, Kans. 734,316, pub. 4–24–62. Cl. 52.
Dearborn Glass Co., Bedford Park, Ill. 398,309, ren. 7–10–62. Cl. 33.
Decatur Pump Co., Decatur, Ill. 734,121, pub. 4–24–62. Cl. 23.
Deering Milliken Research Corp., Spartanburg, S.C. 734,250, pub. 4–24–62. Cl. 42.
Desert Chemical Co.: *See*—
Jorgensen, Carl S.
Desert Minerals, Inc., Los Angeles, Calif. 733,993, pub. 4–24–62. Cl. 1.
Detroit Steel Corp., Detroit, Mich. 734,040, pub. 4–24–62. Cl. 14.
De Vita, John A., Lima, Ohio. 627,491, canc. Cl. 46.
Di-An Controls, Inc., Boston, Mass. 734,152, pub. 4–24–62. Cl. 26.
Doetsch & Bauer Co., Chicago, Ill. 627,387, canc. Cl. 32.
Domecq, Francisco J. O., Cadiz, Spain. 734,267, pub. 4–24–62. Cl. 45.
Dorann Foods, Inc.: *See*—
Food Enterprises, Inc.
Doughboy Industries, Inc., New Richmond, Wis. 734,116, pub. 4–24–62. Cl. 22.
Dow Chemical Co., The, Midland, Mich. 734,009, pub. 4–24–62. Cl. 6.
Drackett Chemical Co., The: *See*—
Drackett, P. W., & Sons Co., The.
Drackett Co., The: *See*—
Drackett, P. W., & Sons Co., The.
Drackett, P. W., & Sons Co., The, (now by change of name The Drackett Chemical Co.), to The Drackett Co., Cincinnati, Ohio. 157,669, ren. 7–10–62. Cl. 52.
Duley Press, Inc., Mishawaka, Ind. 734,117, pub. 4–24–62. Cl. 22.
Dulle, Cecil A., Fort Worth, Tex. 627,268, canc. Cl. 19.
Durant, Clarence N., Bass River, Mass. 627,533, canc. Cl. 101.
Dynapedic Co.: *See*—
Chrencik, Edward W.
Eagle Lock Corp., Terryville, Conn. 734,143, pub. 4–24–62. Cl. 25.
Eagle-Picher Co., The, Cincinnati, Ohio. 734,067, pub. 4–24–62. Cl. 19.
Eastman Kodak Co., Rochester, N.Y. 396,694, ren. 7–10–62. Cl. 3.
Easysharp Corp., Grand Rapids, Mich. 734,126–7, pub. 4–24–62. Cl. 23.
Eberhard Faber Inc., Wilkes-Barre, Pa. 734,197, pub. 4–24–62. Cl. 37.
Eberle & Kohler K.G., Nurnberg, Germany. 734,072, pub. 4–24–62. Cl. 21.
Ed, Paul, Mfg. Co.: *See*—
Paleo Products, Inc.
Eldema Corp., El Monte, Calif. 734,081, pub. 4–24–62. Cl. 21.
Electro Scientific Industries, Inc., Portland, Oreg. 734,341–2. Cl. 21.
Electroglas, Inc., Redwood City, Calif. 734,189, pub. 4–24–62. Cl. 34.
Electro-Solid Controls, Inc., from General Electronic Control, Inc., Minneapolis, Minn. 734,146, pub. 4–24–62. Cl. 26.
Emrich, M. R.: *See*—
Gem International, Inc.
Ener-C Co., The, Hartford, Conn. 627,252, canc. Cl. 18.
Engineering Development Service: *See*—
Ryerson, Joseph L.
Erie Resistor Corp., Erie, Pa. 734,097–8, pub. 4–24–62. Cl. 21.
Esmarch's Eftf., Johs., from N. J. Flindt, d.b.a. Johs. Esmarch's Eftf. v/N. J. Flindt, Copenhagen K, Denmark. 734,270, pub. 4–24–62. Cl. 46.
Espoma Co., The, Millville, N.J. 734,014, pub. 4–24–62. Cl. 10.
Essex Wire Corp., Ft. Wayne, Ind. 734,141, pub. 4–24–62. Cl. 23.
Faber, Eberhard, Inc., Wilkes-Barre, Pa. 734,111, pub. 4–24–62. Cl. 22.
Federated Department Stores, Inc., from The Rike-Kumler Co., Dayton, Ohio. 734,321, pub. 4–24–62. Cl. 101.
Fenestra Inc., Detroit, Mich. 734,015, pub. 4–24–62. Cl. 12.
Fibersheen, Inc., d.b.a. Fibersheen Sales Co., Denver, Colo. 734,036, pub. 4–24–62. Cl. 13.
Fibersheen Sales Co.: *See*—
Fibersheen, Inc.
Fieldcrest Mills, Inc., Spray, N.C. 734,241, pub. 4–24–62. Cl. 42.
Fisher & Ludlow Ltd., Birmingham, England. 734,124, pub. 4–24–62. Cl. 23.
Flindt, N. J.: *See*—
Johs. Esmarch's Eftf. v/N. J. Flindt.
Florasynth Laboratories, Inc., New York, N.Y. 734,289, pub. 4–24–62. Cl. 46.
Food Enterprises, Inc., from Dorann Foods, Inc., Rye, N.Y. 734,356. Cl. 46.
Fownes' Brothers & Co., Inc., New York, N.Y. 734,208–9, pub. 4–24–62. Cl. 39.
Francis-Louise Full Fashion Mills, Inc., Valdese, N.C. 734,217, pub. 4–24–62. Cl. 39.
Franke, August L., d.b.a. Q-W Laboratories, Plainfield, N.J. 627,526, canc. Cl. 51.
Franklin Coffee Urn Co.: *See*—
Franklin Coffee Urn Corp.
Franklin Coffee Urn Corp., from Franklin Coffee Urn Co., Buffalo, N.Y. 734,037, pub. 4–24–62. Cl. 13.
GEM International, Inc., from M. R. Emrich, C. M. Borwick, and Ben Antonoff, Denver, Colo. 734,323, pub. 4–24–62. Cl. 101.
Gate City Sash & Door Co., Fort Lauderdale, Fla. 627,222, canc. Cl. 12.
Gator of Florida, Inc., Tampa, Fla. 734,224, pub. 4–24–62. Cl. 39.
General Dynamics Corp., Rochester, N.Y. 734,077, pub. 4–24–62. Cl. 21.
General Electric Co., New York, N.Y. 734,330, pub. 4–24–62. Cl. 103.
General Electronic Control, Inc.: *See*—
Electro-Solid Controls, Inc.
General Felt Products Co., Chicago, Ill. 734,232, pub. 4–24–62. Cl. 42.
General Mills, Inc.: *See*—
Oklahoma City Mill & Elevator Co.
General Mills, Inc., Minneapolis, Minn. 269,585, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 302,765, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 351,256, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 357,134, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 366,891, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 369,441, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 373,287, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 376,138, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 381,328, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 396,285, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 400,683, canc. Cl. 46.

General Mills, Inc., Minneapolis, Minn. 402,060, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 622,797, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 734,292, pub. 4–24–62. Cl. 46.
General Mills, Inc., Wilmington, Del. 594,324–5, canc. Cl. 46.
General Mills, Inc., Wilmington, Del. 596,055, canc. Cl. 46.
General Mills, Inc., Wilmington, Del. 613,988, canc. Cl. 46.
General Mills, Inc., Wilmington, Del., and Minneapolis, Minn. 512,237, canc. Cl. 26.
General Mills, Inc., Wilmington, Del., and Minneapolis, Minn. 518,559, canc. Cl. 37.
General Mills, Inc., Wilmington, Del., and Minneapolis, Minn. 544,834, canc. Cl. 26.
General Mills, Inc., Wilmington, Del., and Minneapolis, Minn. 560,229, canc. Cl. 46.
General Mills, Inc., Wilmington, Del., and Minneapolis, Minn. 564,737, canc. Cl. 18.
General Mills, Inc., Wilmington, Del., and Minneapolis, Minn. 594,323, canc. Cl. 46.
General Precision, Inc., Little Falls, N.J. 734,156, pub. 4–24–62. Cl. 26.
General Tire & Rubber Co., The, Akron, Ohio. 734,244, pub. 4–24–62. Cl. 42.
Georgia Co., Inc., The, New York, N.Y. 734,247, pub. 4–24–62. Cl. 42.
Gilbert Togs: *See*—
Rosen, Ben.
Girard's Inc.: *See*—
Rhoades, Rufus, and Jane Rhoades.
Giulini, Gebruder, G.m.b.H., Ludwigshafen (Rhine), Germany. 734,010, pub. 4–24–62. Cl. 6.
Gladwin Plastics, Inc., Atlanta, Ga. 733,999, pub. 4–24–62. Cl. 2.
Glamorise Foundations, Inc., New York, N.Y. 734,214, pub. 4–24–62. Cl. 39.
Glas-Craft, Inc., Fort Worth, Tex. 627,547, canc. Cl. 19.
Glass Specialty Co., Inc., Bloomington, Ill. 734,340. Cl. 19.
Glidden Co., The, Cleveland, Ohio. 733,990, pub. 4–24–62. Cl. 1.
Goldey, George J., d.b.a. J & G Roofing Co., Philadelphia, Pa. 734,329, pub. 4–24–62. Cl. 103.
Grand Union Co., The, d.b.a. Grand-Way Discount Centers, East Paterson, N.J. 734,064, pub. 4–24–62. Cl. 18.
Grand-Way Discount Centers: *See*—
Grand Union Co., The.
Granite City Steel Co., Granite City, Ill. 627,232, canc. Cl. 14.
Great Lakes Carbon Corp., New York, N.Y. 734,033, pub. 4–24–62. Cl. 12.
Grote Mfg. Co., The, Madison, Ind. 734,084, pub. 4–24–62. Cl. 21.
Grove Co., The, St. Louis, Mo. 734,221, pub. 4–24–62. Cl. 39.
Grove Laboratories Inc., St. Louis, Mo. 734,063, pub. 4–24–62. Cl. 18.
Guignon & Green, Inc., New York, N.Y. 398,069, ren. 7–10–62. Cl. 16.
Gunther Brewing Co., Baltimore, Md. 627,510, canc. Cl. 48.
Hallberg Canning Corp., Sebastopol, Calif. 734,274, pub. 4–24–62. Cl. 46.
Hamilton Paper Co., Miquon, Pa. 734,348. Cl. 37.
Harker Paint & Varnish Co., Springfield, Mo. 734,054, pub. 4–24–62. Cl. 16.
Harvill Corp., Los Angeles, Calif. 627,381, canc. Cl. 31.
Hassenfeld Bros., Inc., Central Falls, R.I. 734,118, pub. 4–24–62. Cl. 22.
Hatch-A-Pet: *See*—
Roach, Frank W., and Irwin Randolph.
High Splint Coal Co., Williamsburg, Ky. 733,991, pub. 4–24–62. Cl. 1.
Hildreth, David M., d.b.a. Hildreth Research and Engineering Co., Rancocas, N.J. 734,047, pub. 4–24–62. Cl. 15.
Hildreth Research and Engineering Co.: *See*—
Hildreth, David M.
Hilton Products, Inc., Beverly Hills, Calif. 734,281, pub. 4–24–62. Cl. 46.
Hinckley & Schmitt, Chicago, Ill. 734,269, pub. 4–24–62. Cl. 45.
Hit Products Corp., The, South Norwalk, Conn. 627,295, canc. Cl. 22.
Hoffman, M., & Co., Inc., Boston, Mass. 734,210, pub. 8–22–61. Cl. 39.
Holder, Lily Frona B., d.b.a. Bond Wedding Cups, Temple City, Calif. 627,376, canc. Cl. 30.
Hollins, William, & Co. Ltd., Nottingham, England. 734,222, pub. 4–24–62. Cl. 39.
Holloway Electronics Corp., Fort Lauderdale, Fla. 627,285, canc. Cl. 21.
Honold, Ludwig, Mfg. Co., Folcroft, Pa. 734,018, pub. 4–24–62. Cl. 12.
Hopfenberg, Irving J., to Manleigh, Inc., Providence, R.I. 397,709, ren. 7–10–62. Cl. 28.
House of Zelinkoff, The: *See*—
Zelinkoff, Milton A.
IDL Mfg. & Sales Corp., New York, N.Y. 734,194, pub. 4–24–62. Cl. 37.
I-XL Furniture Co., Inc., The, Goshen, Ind. 734,168–9, pub. 4–24–62. Cl. 32.
Ice Cream Merchandising Institute, Inc., Washington, D.C. 608,921, canc. Cl. 2.
Illinois Shade Cloth Co.: *See*—
Slick Airways, Inc.
Imperial Chemical (Pharmaceuticals) Ltd., Millbank, London, England. 627,258, canc. Cl. 18.
Industrial Blow Pipe Co., Memphis, Tenn. 734,180, pub. 4–24–62. Cl. 34.
Insurance Co. of North America, Philadelphia, Pa. 734,326, pub. 4–24–62. Cl. 102.
International Business Machines Corp., New York, N.Y. 627,369, canc. Cl. 26.
International Flouncing Co., Inc., New York, N.Y. 627,452, canc. Cl. 40.
International Synthetic Rubber Co., Ltd., The, Hythe, Southampton, England. 733,994, pub. 4–24–62. Cl. 1.
J & G Roofing Co.: *See*—
Goldey, George J.
Jacksonville Paper Co., Jacksonville, Fla. 734,003, pub. 4–24–62. Cl. 2.
Jensen Radio Mfg. Co., to The Muter Co., Chicago, Ill. 394,905–6, ren. 7–10–62. Cl. 21.
Jorgensen, Carl S., d.b.a. Desert Chemical Co., to Salsar Laboratories, Long Beach, Calif. 627,251, canc. Cl. 18.
Kagan Textiles Ltd., Elland, England. 734,233, pub. 4–24–62. Cl. 42.
Kalmbach Publishing Co., Milwaukee, Wis. 734,349. Cl. 38.
Kambersky, Helene, d.b.a. Helene Winterstein, Vienna I., Austria. 733,998, pub. 4–24–62. Cl. 2.
Kay Mfg. Corp., Brooklyn, N.Y. 627,390, canc. Cl. 32.
Keeshan, Robert J., West Islip, N.Y. 627,544, canc. Cl. 107.
Kellogg Co., Battle Creek, Mich. 398,399–400, ren. 7–10–62. Cl. 38.
Key Brands Co., Los Angeles, Calif. 627,494, canc. Cl. 46.
Kimberly-Clark Corp., Neenah, Wis. 394,978, ren. 7–10–62. Cl. 37.
Kirk Milling Co., The, Findlay, Ohio. 217,569, canc. Cl. 46.
Knox Co., The, to The Knox Co., Los Angeles, Calif. 394,958, ren. 7–10–62. Cl. 18.
Kohan, M. I., Inc., New York, N.Y. 734,205, pub. 8–25–59. Cl. 39.
Larrowe Milling Co., The, Cohocton, N.Y. 90,351, canc. Cl. 46.
Larrowe Milling Co., The, Cohocton, N.Y., and Detroit, Mich. 90,899, canc. Cl. 46.
Larrowe Milling Co., The, Detroit, Mich. 171,032, canc. Cl. 46.
Larrowe Milling Co., The, Detroit, Mich. 171,135–6, canc. Cl. 46.
Lasar, Jesse, Co.: *See*—
Lasar, Jesse.
Lasar, Jesse, d.b.a. Jesse Lasar Co., New York, N.Y. 627,418, canc. Cl. 39.
Lass, Ben, Clayton, Mo. 627,537, canc. Cl. 101.
La Tosca Products Co.: *See*—
Limeri, J & J, Co., Inc.
La Union Comercial e Industrial, S.A. (Luci, S.A.), Cordoba, Spain. 734,271, pub. 4–24–62. Cl. 46.
Lebow Bros., Inc., Boltimore, Md. 734,223, pub. 4–24–62. Cl. 39.
Lees, James, and Sons Co., Bridgeport, Pa. 734,240, pub. 4–24–62. Cl. 42.
Lees, James, and Sons Co., Bridgeport, Pa. 734,246, pub. 4–24–62. Cl. 42.
Leitz, Ernst, (Canada), Ltd., Midland, Ontario, Canada. 734,147, pub. 4–24–62. Cl. 26.
Lentheric: *See*—
Curtis, Helene, Industries, Inc.
Leopard Brewery Ltd., New Zealand Co., Hastings, New Zealand. 734,308, pub. 4–24–62. Cl. 48.
Lever Brothers Co., New York, N.Y. 734,002, pub. 4–24–62. Cl. 2.
Lever Brothers Co., New York, N.Y. 734,296, pub. 4–24–62. Cl. 46.
Levy Bros., New York, N.Y. 734,215, pub. 4–24–62. Cl. 39.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. 734,346–7. Cl. 33.
Liggett & Myers Tobacco Co., New York, N.Y. 734,059, pub. 4–24–62. Cl. 17.
Limeri, J & J, Co., Inc., d.b.a. La Tosca Food Products Co., and La Tosca Products Co., Buffalo, N.Y. 734,293, pub. 4–24–62. Cl. 46.
Lingle Refrigerator Co., Inc., Kansas City, Mo. 627,395, canc. Cl. 34.
Lipschultz Brothers, St. Paul, Minn. 627,386, canc. Cl. 32.
Litchfield Park Corp., New York, N.Y. 734,295, pub. 4–24–62. Cl. 46.
Little Empress Coats, Inc., New York, N.Y. 627,425, canc. Cl. 39.
Little Skipper Root Beer Co.: *See*—
Bowyer, John.
Loehmann, Charles C., Corp., New York, N.Y. 734,218, pub. 4–24–62. Cl. 39.
Lorma, Inc., Gardena, Calif. 734,101–4, pub. 4–24–62. Cl. 22.
Lovell & Christmas Ltd., London, England. 734,277, pub. 4–24–62. Cl. 46.
Lowenstein, M., & Sons, Inc., New York, N.Y. 734,245, pub. 4–24–62. Cl. 42.
M & N Cigar Manufacturers, Inc., Tampa, Fla. 395,286, ren. 7–10–62. Cl. 17.
M & N Cigar Manufacturers, Inc., Tampa, Fla. 397,073, ren. 7–10–62. Cl. 17.
Madame Alexander: *See*—
Alexander Doll Co., Inc.
Maffry Co., The: *See*—
Maffry, Donald S.
Maffry, Donald S., d.b.a. The Maffry Co., Kansas City, Kans. 734,283, pub. 4–24–62. Cl. 46.
Magnetrol, Inc., Downers Grove, Ill. 734,137, pub. 4–24–62. Cl. 23.
Magnus Chemical Co., Inc., Garwood, N.J. 734,131, pub. 4–24–62. Cl. 23.
Maidenform, Inc., New York, N.Y. 734,220, pub. 4–24–62. Cl. 39.
Majestic Co., Inc., The, Huntington, Ind. 734,178, pub. 4–24–62. Cl. 34.
Majestic Co., Inc., The, Huntington, Ind. 734,185, pub. 4–24–62. Cl. 34.
Mama Cookie Bakeries, Inc., Chicago, Ill. 734,297, pub. 4–24–62. Cl. 46.
Manleigh, Inc.: *See*—
Hopfenberg, Irving J.

Mannington Mills Inc., Salem, N.J. 734,069, pub. 4–24–62. Cl. 20.
Manor Baking Co., Dallas, Tex. 734,301, pub. 4–24–62. Cl. 46.
Mansfield Metal Fabricating, Inc., Mansfield, Ohio. 734,186, pub. 4–24–62. Cl. 34.
Mansure, E. L., Co.: *See*— Van Doren, Ruth M.
Marble Face Blocks, Inc., Kenilworth, N.J. 734,016, pub. 4–24–62. Cl. 12.
Markee Corp. of America, Miami, Fla. 734,338. Cl. 12.
Mars, Inc., Chicago, Ill. 734,298–9, pub. 4–24–62. Cl. 46.
Marx, Louis, & Co., Inc., New York, N.Y. 734,106, pub. 4–24–62. Cl. 22.
Mason Instrument Co., Inc., Mamaroneck, N.Y. 734,157, pub. 4–24–62. Cl. 26.
Masurel Mills, Inc., Woonsocket, R.I. 734,253, pub. 4–24–62. Cl. 43.
Masury-Young Co., Charlestown (Boston), Mass. 734,327, pub. 4–24–62. Cl. 103.
McBride, Asa A., Vallejo, Calif. 734,339. Cl. 18.
McGraw-Hill Publishing Co., Inc., New York, N.Y. 734,352. Cl. 38.
Medical Supply Co., Rockford, Ill. 734,256, pub. 4–24–62. Cl. 44.
Medicated Products Co., Chicago, Ill. 734,160, pub. 4–24–62. Cl. 28.
Medovnik, Aron, d.b.a. Andre, Paris, France. 734,000, pub. 4–24–2. Cl. 2.
Mennen Co., The, Morristown, N.J. 734,364. Cl. 51.
Michigan Chrome & Chemical Co., Detroit, Mich. 733,989, pub. 5–9–61. Cl. 1.
Mick-Or-Mack Stores Co., Inc., Salem, Va. 734,325, pub. 4–24–62. Cl. 101.
Midland Cooperatives, Inc., Minneapolis, Minn. 734,042, pub. 4–24–62. Cl. 15.
Midland-Ross Corp., Columbus, Ohio. 734,182, pub. 4–24–62. Cl. 34.
Midwest Petroleum Co.: *See*— Custer, John B.
Milazzo Charcoal & Fertilizer Co.: *See*— Milazzo, Samuel J.
Milazzo, Samuel J., d.b.a. Milazzo Charcoal & Fertilizer Co., Pittston, Pa. 734,336. Cl. 1.
Miller, Earl A., Orem, Utah. 734,107, pub. 4–24–62. Cl. 22.
Miller-McConnel Grain Co., Kansas City, Kans., to The Cudahy Packing Co., Omaha, Nebr. 151,875, ren. 7–10–62. Cl. 46.
Mimson Co., The, Moncks Corner, S.C. 627,527, canc. Cl. 51.
Mine Safety Appliances Co., Pittsburgh, Pa. 393,632, ren. 7–10–62. Cl. 39.
Mine Safety Appliances Co., Pittsburgh, Pa. 393,972, ren. 7–10–62. Cl. 44.
Mineral Cleansers Co., New York, N.Y. 434,335, canc. Cl. 4.
Mini-Menus, Inc., St. Joseph, Mich. 734,199, pub. 4–24–62. Cl. 38.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 734,313, pub. 4–24–62. Cl. 50.
Missionary Society of St. Paul The Apostle in the State of New York, N.Y., The, New York, N.Y. 734,201, pub. 4–24–62. Cl. 38.
Mitchell, Dennis, Industries: *See*— Mitchell, Dennis, Industries, Inc.
Mitchell, Dennis, Industries, Inc., d.b.a. Dennis Mitchell Industries, Philadelphia, Pa. 734,172, pub. 4–24–62. Cl. 32.
Model Mill Co., Inc., Johnson City, Tenn. 233,212, canc. Cl. 46.
Modern Toy Co., Chicago, Ill. 627,512, canc. Cl. 50.
Mohasco Industries, Inc., Amsterdam, N.Y. 734,239, pub. 4–24–62. Cl. 42.
Monadnock Paper Mills, Inc., Bennington, N.H. 734,196, pub. 4–24–62. Cl. 37.
Monroe Sander Corp., The, Long Island City, N.Y. 734,055, pub. 4–24–62. Cl. 16.
Moody Farms Co., Bakersfield, Calif. 627,486, canc. Cl. 46.
Moore's Wholesale Builders Supply of Richmond, Inc., Richmond, Va. 734,322, pub. 4–24–62. Cl. 101.
Morris, J. G., Omaha, Nebr. 398,297, ren. 7–10–62. Cl. 51.
Morris, Philip, Inc., New York, N.Y. 734,060, pub. 4–24–62. Cl. 17.
Movielab Film Laboratories, Inc., to Rainbowlab, Inc., New York, N.Y. 627,542, canc. Cl. 106.
Murbeck Knitted Fabrics Co. Inc., New York, N.Y. 734,242, pub. 4–24–62. Cl. 42.
Muter Co., The: *See*— Jensen Radio Mfg. Co.
Myone Seed Co.: *See*— Davis, Pearl L.
N.Y.-Penn Grocers, Inc.: *See*— Williams, R. C., & Co., Inc.
National Cash Register Co., The, Dayton, Ohio. 397,059, ren. 7–10–62. Cl. 37.
National Sanitary Laboratories, Inc., Chicago, Ill. 734,125, pub. 4–24–62. Cl. 23.
Neely Mfg. Co. Inc., Corydon, Iowa. 734,337. Cl. 2.
Neilson Chemical Co. of California: *See*— Amchem Products, Inc.
Neilson, H. Raymond: *See*— Amchem Products, Inc.
Nestaway Inc., Cleveland, Ohio. 734,345. Cl. 23.
Nestle Co., Inc., The, White Plains, N.Y. 734,285–6, pub. 4–24–62. Cl. 46.
New England Knitting Co., The, to Winsted Hosiery Co., Winsted, Conn. 627,451, canc. Cl. 39.
Nicholas Freres S.A., Chaton, Seine et Oise, France. 734,315, pub. 4–24–62. Cl. 51.
Nikka Rubber Co., Ltd., Kurume, Japan. 627,422, canc. Cl. 39.
Norruth Industries, Inc., Dallas, Tex. 734,257, pub. 4–24–62. Cl. 44.
North American Aviation, Inc., Los Angeles, Calif. 734,191, pub. 4–24–62. Cl. 35.
North American Equipment Corp., Paterson, N.J. 734,129, pub. 4–24–62. Cl. 23.
Norwood Music Corp., Washington, D.C. 734,192, pub. 4–24–62. Cl. 36.
Novelart Mfg. Co., Amberley, Ohio. 734,344. Cl. 23.
Ohm Research Inc., Tucson, Ariz. 734,052, pub. 4–24–62. Cl. 16.
Oklahoma City Mill & Elevator Co., Oklahoma City, Okla., to General Mills, Inc., Minneapolis, Minn. 158,763, ren. 7–10–62. Cl. 46.
Oklahoma Publishing Co., The, Oklahoma City, Okla. 734,202-3, pub. 4–24–62. Cl. 38.
Old Hickory Medicine Co.: *See*— Bacon, O. E.
Oneida Ltd.: *See*— Rogers, Simeon L. & George H., Co.
Onondaga Pottery Co., Syracuse, N.Y. 734,163, pub. 4–24–62. Cl. 30.
Oregon Dairymen's Cooperative League, The, Portland, Oreg., to Coos Bay Mutual Creamery Co., Coos Bay, Oreg. 159,975, ren. 7–10–62. Cl. 46.
Orr & Sembower, Inc., Reading, Pa. 734,179, pub. 4–24–62. Cl. 34.
Owens-Corning Fiberglas Corp., Toledo, Ohio. 734,251, pub. 4–24–62. Cl. 43.
Oxford Filing Supply Co., Inc., Garden City, N.Y. 734,195, pub. 4–24–62. Cl. 37.
P & C Tool Co., Milwaukie, Oreg. 734,128, pub. 4–24–62. Cl. 23.
Paleo Products, Inc., Beverly Hills, Calif., from Paul Ed Mfg. Co., Van Nuys, Calif. 734,113, pub. 4–24–62. Cl. 22.
Paneldrape Vertical Blind Co.: *See*— Poe, Ralph M.
Park Industries, Inc., Murfreesboro, Tenn. 734,013, pub. 4–24–62. Cl. 8.
Parker Brothers, Inc., Salem, Mass. 627,304, canc. Cl. 22.
Parker Pen Co., The, Janesville, Wis. 155,044, ren. 7–10–62. Cl. 37.
Patterson Canning Co., Patterson, Calif. 734,288, pub. 4–24–62. Cl. 46.
Paw Paw Grape Juice Co., Paw Paw, Mich. 734,275, pub. 4–24–62. Cl. 46.
Peck, Harry, and Co. Ltd., London, England. 734,287, pub. 4–24–62. Cl. 46.
Pengad Companies, Inc., The, Bayonne, N.J. 734,108–9, pub. 4–24–62. Cl. 22.
Pennsylvania Optical Co., d.b.a. Pennsylvania Optical Co., Reading Pa. 734,154, pub. 4–24–62. Cl. 26.
Petrogalar Laboratories, Inc., Chicago, Ill., to American Home Products Corp., New York, N.Y. 395,654–9, ren. 7–10–62. Cl. 18.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 733,997, pub. 4–24–62. Cl. 2.
Pioneer Rubber Co., The, Willard, Ohio. 734,099, pub. 4–24–62. Cl. 22.
Plymouth Rubber Co., Inc., Canton, Mass. 734,249, pub. 4–24–62. Cl. 42.
Poe, Ralph M., d.b.a. Paneldrape Vertical Blind Co., Grand Rapids, Mich. 734,166, pub. 4–24–62. Cl. 32.
Poloron Products, Inc., New Rochelle, N.Y. 617,658, canc. Cl. 2.
Poloron Products, Inc., New Rochelle, N.Y. 627,224, canc. Cl. 12.
Poloron Products, Inc., New Rochelle, N.Y. 734,171, pub. 4–24–62. Cl. 32.
Pomona Tile Mfg. Co., Los Angeles, Calif. 734,031, pub. 4–24–62. Cl. 12.
Pressto-Burger Co., San Diego, Calif. 734,130, pub. 4–24–62. Cl. 23.
Pretty Products, Inc., Coshocton, Ohio. 734,035, pub. 4–24–62. Cl. 13.
Prince Rupert Tobacco Co. of Canada Ltd., Toronto, Ontario, Canada. 734,057, pub. 4–24–62. Cl. 17.
Principle Plastics, Inc., Gardena, Calif. 734,355. Cl. 39.
Puritan Cordage Mills, Louisville, Ky. 734,162, pub. 4–24–62. Cl. 29.
Q-W Laboratories: *See*— Franke, August L.
Quaker Oil Corp., St. Louis, Mo. 734,043, pub. 4–24–62. Cl. 15.
R.M.S. Associates, Inc., Mamaroneck, N.Y 734,093, pub. 4–24–62. Cl. 21.
Rainbowlab, Inc.: *See*— Movielab Film Laboratories, Inc.
Randolph, Irwin: *See*— Roach, Frank W., and Irwin Randolph.
Randolph Metal Works, Inc., Philadelphia, Pa. 734,074, pub. 3–13–62. Cl. 21.
Rasmusson, Marlin B.: *See*— Vitafreze Corp.
Reactor Experiments Inc., San Francisco, Calif. 734,148, pub. 4–24–62. Cl. 26.
Red Devil Tools: *See*— Smith & Hemenway Co., Inc. Smith, Landon P., Inc.
Redmond, Charles R., d.b.a. Redmond Supply Co., Northumberland, Pa. 734,119, pub. 4–24–62. Cl. 22.
Redmond Supply Co.: *See*— Redmond, Charles R.
Remington Arms Co., Inc., Bridgeport, Conn. 734,120, pub. 4–24–62. Cl. 22.
Research Specialties Co., Richmond, Calif. 734,158, pub. 4–24–62. Cl. 26.
Rest-Rite Bedding Co., The, Mansfield, Ohio. 627,388, canc. Cl. 32.
Rhoades, Jane: *See*— Rhoades, Rufus, and Jane Rhoades.
Rhoades, Rufus, and Jane Rhoades, from Girard's Inc., San Rafael, Calif. 734,273, pub. 4–24–62. Cl. 46.

Richards, J. R., Co., Carnegie, Pa. 734,073, pub. 4–24–62. Cl. 21.
Rich-Tint Corp., Portland, Oreg. 734,061, pub. 4–24–62. Cl. 18.
Riegel Textile Corp., New York, N.Y. 734,211, pub. 4–24–62. Cl. 39.
Rifkin, A., & Co., Wilkes-Barre, Pa. 734,001, pub. 4–24–62. Cl. 2.
Rike-Kumler Co., The: *See*— Federated Department Stores, Inc.
Roach, Frank W., and Irwin Randolph, d.b.a. Hatch-A-Pet, San Leandro, Calif. 734,100, pub. 4–24–62. Cl. 22.
Robertson Photo-Mechanix, Inc., Chicago, Ill. 627,347, canc. Cl. 26.
Robins, A. K., & Co., Inc., Baltimore, Md. 397,473, ren. 7–10–62. Cl. 23.
Robins, Jill, Inc., Little Falls, N.J. 734,260, pub. 4–24–62. Cl. 44.
Rockford Textile Mills, Inc., McMinnville, Tenn. 702,332, canc. Cl. 39.
Rogers, Simeon L. & George H., Co., Hartford, Conn., to Oneida Ltd., Oneida, N.Y. 151,931, ren. 7–10–62. Cl. 28.
Rohm & Haas Co., Philadelphia, Pa. 395,898, ren. 7–10–62. Cl. 6.
Rohm & Haas Co., Philadelphia, Pa. 395,922, ren. 7–10–62. Cl. 6.
Rose, L., & Co., Ltd., St. Albans, England. 734,279, pub. 4–24–62. Cl. 46.
Rosen, Ben, d.b.a. Gilbert Togs, New York, N.Y. 627,419, canc. Cl. 39.
Rosenberg Bros. & Co., Inc., San Francisco, Calif. 627,173, canc. Cl. 2.
Ross Radio Corp., Los Altos Hills, Calif. 734,080, pub. 4–24–62. Cl. 21.
Royal Filtered Air Products, Inc., New York, N.Y. 734,164, pub. 4–24–62. Cl. 31.
Ryerson, Joseph L., d.b.a. Engineering Development Service, Holland Patent, N.Y. 627,193, canc. Cl. 6.
S.M.A. Corp., Chicago, Ill., to American Home Products Corp New York, N.Y. 397,023, ren. 7–10–62. Cl. 18.
Saginaw Stamping & Tool Co., Saginaw, Mich. 331,040, canc. Cl. 19.
Sales Affiliates, Inc., New York, N.Y. 627,557, canc. Cl. 51.
Salinas Valley Vegetable Exchange, Salinas, Calif. 734,303, pub. 4–24–62. Cl. 46.
Salsar Laboratories: *See*— Jorgensen, Carl S.
Sams, Howard W., & Co., Inc., Indianapolis, Ind. 734,334–5, pub. 4–24–62. Cl. B.
Saunders Tool & Die Co., Aurora, Ill. 627,302, canc. Cl. 22.
Schecter Brothers Co., Philadelphia, Pa. 627,402, canc. Cl. 34.
Schenley Distilleries, Inc., to Schenley Industries, Inc., New York, N.Y., 396,856, ren. 7–10–62. Cl. 49.
Schenley Distillers, Inc., New York, N.Y. 734,310, pub. 4–24–62. Cl. 49.
Schenley Industries, Inc.: *See*— Schenley Distilleries, Inc.
Schering & Glatz, Inc., New York, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.Y. 160,960, ren. 7–10–62. Cl. 18.
Schreiber Mills, Inc., St. Joseph, Mo. 627,490, canc. Cl. 46.
Schuckl & Co., Inc., Sunnyvale, Calif. 397,357, ren. 7–10–62. Cl. 46.
Schumacher, Hans H., d.b.a. The John Schumacher Co., Alhambra, Calif. 734,304, pub. 4–24–62. Cl. 46.
Schumacher, John, Co., The: *See*— Schumacher, Hans H.
Scientific Specialties Inc., Framingham, Mass. 734,149, pub. 4–24–62. Cl. 26.
Scovill Mfg. Co., Waterbury, Conn. 627,230, canc. Cl. 14.
Seamless Rubber Co., The, New Haven, Conn. 734,105, pub. 4–24–62. Cl. 22.
Securitone Corp. of America, New York, N.Y. 734,261, pub. 4–24–62. Cl. 44.
Security Mills, Inc., Knoxville, Tenn. 734,305, pub. 4–24–62. Cl. 46.
Selchow & Righter Co., New York, N.Y. 627,305–6, canc. Cl. 22.
Selchow & Righter Co., New York, N.Y. 627,309, canc. Cl. 22.
Sesa-Kraft, Inc., Paris, Tex. 734,306–7, pub. 4–24–62. Cl. 46.
Sexton, John, & Co., Chicago, Ill. 734,276, pub. 4–24–62. Cl. 46.
Shalansky, Philip, & Sons, Inc., New York, N.Y. 627,443, canc. Cl. 39.
Shampaine Industries, Inc., St. Louis, Mo. 734,114, pub. 4–24–62. Cl. 22.
Sharples Corp., The, Philadelphia, Pa. 734,138–9, pub. 4–24–62. Cl. 23.
Sherry Lynn Products Co., Inc., Pittsburgh, Pa. 627,521, canc. Cl. 51.
Simmonds Precision Products, Inc., Tarrytown, N.Y. 734,150, pub. 4–24–62. Cl. 26.
Simoniz Co., Chicago, Ill. 734,006, pub. 4–24–62. Cl. 4.
Simoniz Co., Chicago, Ill. 734,318, pub. 4–24–62. Cl. 52.
Simplex Shoe Mfg. Co., Milwaukee, Wis. 734,353. Cl. 39.
Simplicity Mfg. Co., Port Washington, Wis. 734,140, pub. 4–24–62. Cl. 23.
Sioux City Dressed Beef, Inc., Sioux City, Iowa. 734,278, pub. 4–24–62. Cl. 46.
Slater Electric Inc., Glen Cove, N.Y. 734,095, pub. 4–24–62. Cl. 21.
Slick Airways, Inc., d.b.a. Illinois Shade Cloth Co., Chicago Heights, Ill. 734,167, pub. 4–24–62. Cl. 32.
Slumberland Products Co., Woburn, Mass. 734,175, pub. 4–24–62. Cl. 32.
Smith & Hemenway Co., Inc., New York, N.Y., and Irvington, N.J., to Red Devil Tools, Union, N.J. 156,055, ren. 7–10–62. Cl. 23.
Smith, Landon P., Inc., Irvington, N.J., to Red Devil Tools, Union, N.J. 395,584, ren. 7–10–62. Cl. 23.
Smith, Landon P., Inc., Irvington, N.J., to Red Devil Tools, Union, N.J. 396,302, ren. 7–10–62. Cl. 50.
Smokehouse Food Processing Plant: *See*— Brown, Andrew H.
Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy. 733,987–8, pub. 4–24–62. Cl. 1.
Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy. 734,252, pub. 4–24–62. Cl. 43.
Societe Anonyme d'Etudes et Realisations Nucleaires-Sodern, Paris, France. 734,145, pub. 4–24–62. Cl. 26.
Sohio Chemical Co.: *See*— Standard Oil Co., The.
Sonneborn Chemical and Refining Corp., New York, N.Y. 734,044, pub. 4–24–62. Cl. 15.
Sonotone Corp., Elmsford, N.Y. 734,259, pub. 4–24–62. Cl. 44.
South Penn Oil Co., Oil City, Pa. 734,045, pub. 4–24–62. Cl. 15.
Southern States Cooperative, Inc., Richmond, Va. 734,300, pub. 4–24–62. Cl. 46.
Southwest Grease & Oil Co., Inc., Wichita, Kans. 734,048, pub. 4–24–62. Cl. 15.
Spada, Aleramo, Montevideo, Uruguay. 734,207, pub. 4–24–62. Cl. 39.
Spartan Electric Radiator Corp., Linden, N.J., from Spartan Electric Radiator Corp., Maspeth, N.Y. 734,096, pub. 4–24–62. Cl. 21.
Specialty Oil Products, San Francisco, Calif. 627,218, canc. Cl. 10.
Sperry Flour Co., San Francisco, Calif. 128,522–4, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 181,550, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 219,867, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 234,802, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 275,833, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 275,839, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 275,841, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 331,029, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 333,933, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 333,962, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 338,940, canc. Cl. 46.
Sperry Flour Co., San Francisco, Calif. 345,364, canc. Cl. 46.
Sperry Rand Corp., New York, N.Y. 627,357, canc. Cl. 26.
Spiegel, Louis, Cincinnati, Ohio. 627,560, canc. Cl. 52.
Spignese, Cosmo, Oceanside, Calif. 627,370, canc. Cl. 27.
Standard Oil Co., The, Cleveland, to Sohio Chemical Co., Lima, Ohio. 627,212–14, canc. Cl. 10.
Standard Packaging Corp., Chicago, Ill. 627,171, canc. Cl. 2.
Stanley Works, The, New Britain, Conn. 734,050, pub. 4–24–62. Cl. 16.
Steelbilt Boats, Inc., West Memphis, Ark. 627,548, canc. Cl. 19.
Stem, Chester B., Inc., New Albany, Ind. 734,032, pub. 4–24–62. Cl. 12.
Sterling Drug Inc.: *See*— Bayer Co., Inc., The. Watkins, R. L., Co., The.
Stollenwerk Fabrik fur Sanitatsausrustungen: *See*— Stollenwerk, Hans.
Stollenwerk, Hans, d.b.a. Stollenwerk Fabrik fur Sanitatsausrustungen, Cologne, Germany. 734,258, pub. 4–24–62. Cl. 44.
Strauss, Ruth, Woodmere, N.Y. 627,552, canc. Cl. 28.
Street, R. R., & Co., Inc., Chicago, Ill. 734,008, pub. 4–24–62. Cl. 6.
Sturm & Scheinberg, Inc., New York, N.Y. 734,255, pub. 4–24–62. Cl. 44.
Sturtevant, B. F., Co., Boston, Mass., to Westinghouse Electric Corp., Pittsburgh, Pa. 155,096, ren. 7–10–62. Cl. 23.
Suburban Appliance Co., Dayton, Tenn. 734,187, pub. 4–24–62. Cl. 34.
Sun Chemical Corp., New York, N.Y. 734,078, pub. 4–24–62. Cl. 21.
Sunderland, Kenneth G., d.b.a. Sunderland Supply Co., St. Paul, Minn. 734,263–5, pub. 4–24–62. Cl. 45.
Sunderland Supply Co.: *See*— Sunderland, Kenneth G.
Sun-Heat, Inc., Detroit, Mich. 734,082, pub. 4–24–62. Cl. 21.
Sutton, O. A., Corp., Inc., The, Wichita, Kans. 627,408, canc. Cl. 34.
Sweet Candy Co., Salt Lake City, Utah. 159,549, ren. 7–10–62. Cl. 46.
Swenson, Leonard, Los Angeles, Calif. 734,331, pub. 4–24–62. Cl. 105.
Swift & Co., Chicago, Ill. 734,317, pub. 4–24–62. Cl. 52.
Symmons Engineering Co., Boston, Mass. 627,226, canc. Cl. 13.
Tailorbrooke Clothes, Inc., Jersey City, N.J. 612,658, canc. Cl. 39.
Tarrymont, Inc., Cornwall Bridge, Conn. 734,134, pub. 4–24–62. Cl. 23.
Tarshish, A.: *See*— Tarshish, Tania.
Tarshish, Tania, d.b.a. A. Tarshish, Cape Town, Union of South Africa. 627,433, canc. Cl. 39.
Taylor Wine Co., Inc., The, Hammondsport, N.Y. 734,359–63. Cl. 47.
Tele Q Corp., New York, N.Y. 627,277, canc. Cl. 21.
Ternan, Clauson & Co., Inc., Los Angeles, Calif. 627,539, canc. Cl. 102.
Thermotank Inc., Detroit, Mich. 734,183, pub. 4–24–62. Cl. 34.
Thermotank Ltd., Glasgow, Scotland. 734,188, pub. 4–24–62. Cl. 34.
Thomas Textile Co., Inc., New York, N.Y. 734,238, pub. 4–24–62. Cl. 42.
Tip-Top Products Co., Omaha, Nebr. 734,230, pub. 4–24–62. Cl. 40.

Tizer Ltd., New Moston, England. 734,268, pub. 4–24–62. Cl. 45.
Tool Steel Gear and Pinion Co., The, Cincinnati, Ohio. 734,142, pub. 4–24–62. Cl. 23.
Topsall Lubricants, Inc., Kenmore, N.Y. 734,041, pub. 4–24–62. Cl. 15.
Tortolini, J. D., Carpinteria, Calif. 627,508, canc. Cl. 46.
Trefileries Leon Bekaert, S.P.R.L., Zwevegem, Belgium. 734,038, pub. 4–24–62. Cl. 13.
Tropicraft, Inc., San Francisco, Calif. 620,080, canc. Cl. 50.
Tynio, Michael, Harrisburg, Pa. 734,112, pub. 4–24–62. Cl. 22.
Ultrasonic Industries, Inc., Plainview, N.Y. 734,092, pub. 4–24–62. Cl. 21.
Union Carbide Corp., New York, N.Y. 733,995, pub. 4–24–62. Cl. 1.
Union Carbide Corp., New York, N.Y. 734,155, pub. 4–24–62. Cl. 26.
Union Carbide Corp., New York, N.Y. 734,165, pub. 4–24–62. Cl. 31.
Union Steel Products Co., Albion, Mich. 734,184, pub. 4–24–62. Cl. 34.
Unitech Corp., Clifton, N.J. 734,151, pub. 4–24–62. Cl. 26.
United Chapters of Phi Beta Kappa Association, Washington, D.C. 734,333, pub. 3–27–62. Cl. 200.
United Newspapers Magazine Corp., New York, N.Y. 734,350–1. Cl. 38.
United States Ceramic Tile Co., Canton, Ohio. 734,034, pub. 4–24–62. Cl. 12.
United States Envelope Co., Springfield, Mass. 160,701, ren. 7–10–62. Cl. 37.
U.S. Research Corp., Dallas, Tex. 734,005, pub. 4–24–62. Cl. 4.
V-B Products Co., Port Huron, Mich. 627,319, canc. Cl. 23.
Valspar Corp., The, Rockford, Ill. 734,051, pub. 4–24–62. Cl. 16.
Van Doren, Ruth M., Elmhurst, Ill., from E. L. Mansure Co., Chicago, Ill., 734,228, pub. 4–24–62. Cl. 40.
Vance, Anthony L., Rochester, N.Y. 734,226, pub. 4–24–62. Cl. 39.
Velga Limitada, Setubal, Portugal. 734,280, pub. 4–24–62. Cl. 46.
Vitafreze Corp., to Marlin B. Rasmusson, Sacramento, Calif. 393,386, ren. 7–10–62. Cl. 46.
Walker-Leavitt Co., Chicago, Ill. 734,324, pub. 4–24–62. Cl. 101.
Wallach's Inc., New York, N.Y. 734,225, pub. 4–24–62. Cl. 39.
Walton, Ed, Jr., d.b.a. Walton Tea Co., Lafayette, Tenn. 734,358. Cl. 46.
Walton Tea Co.: *See*—
Walton, Ed, Jr.
Ward Leonard Electric Co., Mount Vernon, N.Y. 734,076, pub. 4–24–62. Cl. 21.
Warner-Lambert Pharmaceutical Co.: *See*—
Schering & Glatz, Inc.
Warren Paper Products Co., Lafayette, Ind. 734,343. Cl. 22.
Warren-Teed Products Co., The, Columbus, Ohio. 734,066, pub. 2–27–62. Cl. 18.
Washburn Crosby Co., Minneapolis, Minn. 187,246, canc. Cl. 46.
Watkins, R. L., Co., The, Cleveland, Ohio, to Sterling Drug Inc., New York, N.Y. 160,998, ren. 7–10–62. Cl. 51.
Weiser Co., South Gate, Calif. 734,144, pub. 4–24–62. Cl. 25.
Western Carolina Furniture Co., Hickory, N.C. 734,170, pub. 4–24–62. Cl. 32.
Western Cordage Co.: *See*—
Barton, Earl E.
Western Land Roller Co., Hastings, Nebr. 734,122, pub. 4–24–62. Cl. 23.
Westinghouse Electric Corp.: *See*—
Sturtevant, B. F., Co.
White Lotus Co., The: *See*—
White Lotus Food Co., Inc.
White Lotus Food Co., Inc., d.b.a. The White Lotus Co., Elk City, Okla. 734,290, pub. 4–24–62. Cl. 46.
White, Morris, Fashions, Inc., New York, N.Y. 734,004, pub. 4–24–62. Cl. 3.
Whitehead, Merl G., Goshen, Ind. 627,322, canc. Cl. 23.
Williams, R. C., & Co., Inc., New York, N.Y., to N.Y.-Penn Grocers, Inc., Pelham Manor, N.Y. 398,205, ren. 7–10–62. Cl. 45.
Williams, R. C., & Co., Inc., New York, N.Y., to N.Y.-Penn Grocers, Inc., Pelham Manor, N.Y. 398,433, ren. 7–10–62. Cl. 6.
Windsor-Lloyd Products, Inc., Philadelphia, Pa. 734,049, pub. 4–24–62. Cl. 15.
Winsted Hosiery Co.: *See*—
New England Knitting Co., The.
Winterstein, Helene: *See*—
Kambersky, Helene.
Winthrop Tape Corp., Winthrop, Mass. 734,312, pub. 4–24–62. Cl. 50.
Wisconsin Knife Works, Beloit, Wis. 627,317, canc. Cl. 23.
Woldert Co., Inc., The, d.b.a. Woldert Co., Tyler, Tex. 734,133, pub. 4–24–62. Cl. 23.
Wolf, John, Textiles, Inc., New York, N.Y. 734,234, pub. 4–24–62. Cl. 42.
Wolverine Shoe & Tanning Corp., Rockford, Mich. 734,213, pub. 4–24–62. Cl. 39.
Workman, Bernard, New York, N.Y. 734,212, pub. 4–24–62. Cl. 39.
World Mark Electronics, Inc., Pittsburgh, Pa. 724,090, pub. 4–24–62. Cl. 21.
Wyeth, John, & Brother, Inc., Philadelphia, Pa., to American Home Products Corp., New York, N.Y. 397,011, ren. 7–10–62. Cl. 18.
Youngstown Sheet and Tube Co., The Boardman, Ohio. 734,039, pub. 4–24–62. Cl. 14.
Zavody V.I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. 627,396, canc. Cl. 34.
Zeiss Ikon A.G., Stuttgart, Germany. 627,352, canc. Cl. 26.
Zelinkoff Co., The: *See*—
Zelinkoff, Milton A.
Zelinkoff, Milton A., d.b.a. The House of Zelinkoff and The Zelinkoff Co., Wichita, Kans. 734,161, pub. 4–24–62. Cl. 29.
Zunino-Altman, Inc., New York, N.Y. 627,453, canc. Cl. 40.

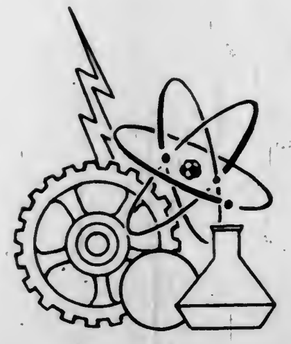
U.S. GOVERNMENT PRINTING OFFICE:O—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

July 17, 1962 • Volume 780 • Number 3



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 17, 1962 Volume 780 Number 3

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1962

Examiner affirmed	389
Examiner affirmed in part	37
Examiner reversed	93
Total	519

Disclaimer

2,948,555.—*Robert D. Wright*, Des Peres, Mo. CONTROLLED GAP SEAL. Patent dated Aug. 9, 1960. Disclaimer filed June 7, 1962, by the assignee, *Chicago Rawhide Manufacturing Company*.

Hereby enters this disclaimer to claims 1 and 2 of said patent.

Patents Available for Licensing or Sale

2,686,620. Garment Hanger. Rose Waldman, 1657 N. Hobart Blvd., Los Angeles 27, Calif.

3,020,071. Sand Trap for Vehicles. Thomas Makinson, 326 N. Buchanan, Pocatello, Idaho.

3,026,551. Combination Lawn Sweeper and Incinerator. Lillian Vivian Smith, 608 S. East St., Lebanon, Ind.

3,031,688. Convertible Amusement and Recreation Device. Dewey R. Southwood, 3012 10th Ave., Rock Island, Ill.

3,033,190. Rotary Grill for a Cooking Device. James R. Atkinson, 4005 Memorial Parkway, N.W., Huntsville, Ala.

3,034,385. Plier-Type Arrow or Shaft Portable Straightener. Woodrow Hester, 436 S. Fulton Ave., Bradley, Ill.

3,034,751. Kite Line Space Carrier. Emerson K. Droullard, 5900 Dudley St., Arvada, Colo.

3,034,755. Fixture Hanger. J. B. Pazoureck, 1612 N.E. 19th St., Oklahoma City 11, Okla.

3,035,349. Dental Drilling Apparatus. Todd W Company, 329 Grove Park Ave., Winston-Salem, N.C.

General Electric Company is prepared to grant non-exclusive licenses under the following 19 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 10 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,934,925. Control Arrangement for Clothes Washing Machine.

2,934,926. Control Arrangement for Clothes Washing Machine.

2,959,044. Laundry Machine.

2,962,046. Flow Control Device.

2,990,835. Multiple Cycle Dishwashing Machine.

3,018,560. Clothes Drying Machine.

3,021,873. Method of Making Wire Racks.

3,026,699. Washing Machine.

3,029,525. Clothes Drying Machine.

3,029,838. Water Storage and Reuse System for Clothes Washing Machines.

Applications for license under the following 6 patents may be addressed to: General Electric Company, Ordnance Dept., 100 Plastics Ave., Pittsfield, Mass., Attn. T. E. Kristofferson, Patent Counsel.

2,861,116. Primary Cell.

2,890,259. Thermocell.

2,933,546. Galvanic Battery.

2,933,547. Solid State Electric Cell.

3,012,087. Sea Water Batteries.

3,019,711. Control Systems for Positioning Objects Having High Inertia.

Applications for license under the following 3 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

3,021,292. Hydrocarbon Rubber-Vinyl Containing Organopolysiloxane Composition and Method of Making Same.

3,021,297. Polysiloxane Resins.

3,028,773. Drill.

New Applications Received During May 1962

Patents	7,782
Designs	453
Plant Patents	12
Reissues	29
Total	8,276

Issue

Patents	1172	No. 3,044,070 to No. 3,045,241, incl.
Designs	25	No. 193,236 to No. 193,260, incl.
Plant Patents	1	No. 2,156
Reissues	5	No. 25,198 to No. 25,202, incl.
Total	1203	

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1962

Total number of pending applications (excluding Designs)		191,242
Total number of pending Design applications		5,865
Total number of applications awaiting action (excluding Designs)		100,882
Total number of Design applications awaiting action		2,096
Date of oldest new application	Jan.	26, 1961
Date of oldest amended application	Nov.	3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 66.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) Manian, J. A. (acting), AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	7-21-61	8-30-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	10-31-61	9-21-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	4-4-61	4-5-61
4. (VI) FALLER, E. A., Material or Article Handling	6-29-61	6-19-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	6-29-61	7-3-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	4-4-61	4-13-61
7. (IV) ANDERSON, E. G., Optics	5-1-61	5-15-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-9-61	7-18-61
9. (VI) BRANSON, J. H., Pumps; Fans	7-31-61	6-13-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	6-26-61	6-29-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	6-23-61	7-3-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	5-19-61	5-3-61
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	4-12-61	3-31-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	3-6-61	2-24-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	6-6-61	7-6-61
16. (II) ROSE, R. H. (acting), Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	5-11-61	5-19-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	6-27-61	6-19-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	6-5-61	5-29-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	4-28-61	4-28-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	7-14-61	6-19-61
21. (III) MADER, R. C., Textiles	5-2-61	5-12-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	5-16-61	5-15-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	6-23-61	6-19-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	6-28-61	6-1-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	4-12-61	4-21-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5-1-61	5-4-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6-12-61	6-14-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	5-15-61	6-1-61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	5-29-61	5-1-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6-27-61	7-6-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	5-1-61	4-20-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	4-17-61	5-1-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	5-8-61	5-22-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-4-61	3-7-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	6-29-61	7-5-61
36. (V) EVANS, R. L., Measuring and Testing (part)	4-10-61	5-4-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-21-61	3-17-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-1-61	6-2-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	4-17-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-5-61	5-1-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-14-61	4-3-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-1-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-16-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	1-26-61	2-6-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	10-12-61	6-6-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-2-61	3-30-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	6-20-61	6-9-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-13-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	4-14-61	4-14-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-5-61	4-17-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	4-25-61	4-19-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	9-13-61	9-26-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	5-22-61	6-12-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-3-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	3-30-61	3-16-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-2-61	6-12-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	6-21-61	5-2-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	7-24-61	6-19-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	5-22-61	5-3-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-27-61	11-3-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	9-7-61	9-13-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-1-61	6-1-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-1-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	3-16-61	3-13-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	2-28-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	3-13-61	4-11-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	5-4-61	5-5-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	7-26-61	8-15-61
81. (III) HANNAH, A. E., Industrial Arts	2-5-62	2-16-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	2-2-62	2-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	3-30-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-20-61	5-9-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	12-5-61
95. ANGEL, C. D., Metallic Building Structures	7-7-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	4-18-61	5-17-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....Numbers 2,379,404 to 2,380,912 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE SIDNEY DILNOT

No. 6774. Decided April 13, 1962

[49 CCPA—; 300 F.2d 945; 133 USPQ 289]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—APPLICATION—DISCLOSURE—SPECIFICATION AMENDED WITHOUT OBJECTION.

"• • •, we first turn our attention to the Solicitor's contention that the word 'spherical,' used to describe the voids, is not properly in the appealed claims because such word is not disclosed in the specification as filed. Although it is true that 'spherical' is disclosed only in an amendment to the original specification, this amendment was entered by the Examiner without objection and the Board considered this matter only to the extent of commenting that 'appellant is not, therefore, in a favorable position to urge patentability on the basis of said term.' Under these circumstances, we must accept the specification as amended, and consider the term 'spherical' in the claims as being properly disclosed in the specification."

2. SAME—SAME—BASIS FOR REJECTION NOT ASSERTED BY PATENT OFFICE TRIBUNALS.

"We cannot affirm the Board's rejection of the appealed claims on a basis which both the Examiner and the Board failed to assert as a reason for rejecting the claims when those claims were under consideration by them."

3. PATENTABILITY—INVENTION—OBVIOUSNESS—LACK OF TESTS TO REFUTE OBVIOUSNESS.

"We find nothing in the record either in the nature of a qualitative or quantitative test which would establish the superior properties of appellant's product in comparison with Fraser's and thereby refute the obviousness which is apparent here."

4. SAME—PRODUCT—METHOD STEP IN PRODUCT CLAIM.

"The addition of a method step in a product claim, which product is not patentably distinguishable from the prior art, cannot impart patentability to the old product."

5. SAME—PARTICULAR SUBJECT MATTER—"LIGHT WEIGHT AERATED CONCRETE."

The decision of the Board of Appeals, refusing certain claims in an application entitled "Light Weight Aerated Concrete" as unpatentable over the prior art, is affirmed.

APPEAL from the Patent Office. Serial No. 636,632.

AFFIRMED.

Lewis D. Konigsford (*Max Wall*, of counsel) for appellant.

Clarence W. Moore (*Jack E. Armore*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Board of Appeals of the United States Patent Office regarding appellant's application for a patent on "Light Weight Aerated Concrete." Six claims reciting a method of making this material were allowed by the Examiner. The sole issue is the patentability of article claims 10–13 and 20 in view of the Fraser patent, Re. 23,228, issued May 9, 1950.

Claim 10 is representative and reads as follows:

10. An article of manufacture comprising a form retaining self sustaining body of indurated, dense calcium silicate hydrate matrix, said body having in the dry state an apparent density of about 15 to 40 pounds per cubic foot and comprising substantially from about 16 to about 70 percent of its volume as small spherical macroscopic voids, and containing from about one-fourth pound to five pounds substantially non-reactive fiber per cubic foot contributing to the transverse strength of the body, the fiber ranging in length between about three-tenths to about two and one-half centimeters, said body having a transverse strength in excess of one hundred pounds per square inch.

The application, much amended, relates to certain calcium silicate hydrate materials said to be useful as insulating or structural materials.[1]

It appears to be well known that calcareous materials such as lime will react with siliceous materials such as silica or sand when mixtures of these are heated in the presence of moisture. For example, common "sand-lime bricks" are made by such a process. Apparently, such bricks have an undesirably high density for some purposes.

Appellant discloses that calcium silicate hydrate materials with desirable physical characteristics, particularly, low density, high transverse strength, and resistance to passage of both heat and water, can be prepared by incorporating 0.25 to 5 pounds of a non-reactive fiber per cubic foot of final dry product plus a quantity of a stable preformed aqueous foam into the usual calcareous-siliceous-aqueous reaction mass, and heating this mixture in molds in the usual manner.

The specification as filed contained the following description of appellant's claimed article:

Therefore, the product to which this invention relates is an aerated calcium silicate hydrate product containing a small amount of asbestos and/or cellulose fibers and characterized by a high percentage of non-communicating gas-filled cells, and having an apparent density on a dry basis of between about 15 pounds per cubic foot and about 40 pounds per cubic foot, • • •

By an amendment, entered without objection by the Examiner, appellant cancelled the above description and substituted for it the following statement:

The products of this invention are self-sustaining bodies of a dense calcium silicate hydrate matrix having distributed therein macroscopic spherical voids, and fibers at a distribution density of about .25 to 5 pounds per cubic foot of the body, the bodies having an apparent density on a dry basis of between about 15 to 40 pounds per cubic foot.

It is said by appellant that the added fibers increase the transverse strength of the final product by distributing local stresses and strains over a larger volume of product. The suggested asbestos or cellulose fibers should range in length from 0.3 to 2.5 centimeters and should have a diameter not exceeding one millimeter.

The "non-communicating gas-filled cells" or "macroscopic spherical voids" in the final product account for its relatively low density. Apparently each individual gas bubble in the stable preformed foam becomes a "cell" or "void" in the final product. Suitable foams are prepared by incorporating a gas, usually air, into a dilute aqueous solution of a foaming agent such as a "hydrolyzed protein."

The Fraser patent discloses production of a strong, form-retaining, moisture-resistant, low-density heat insulating material by heating a mixture of finely divided lime and silica in the presence of a "very large volume of water" and a quantity of "fine spiculated fibers" of asbestos or cellulose. The resulting hydrated calcium silicate is said by Fraser to be "characterized by a loose, open, fibrous structure, in which the fibers are randomly arranged and separated or spaced

[1] At oral argument, appellant stated that the claimed products are widely used as roof decking materials.

apart by a system of fine, continuous, capillary air spaces." Apparently the hydrated calcium silicate is capable of forming needle-like or fibrous crystals, and, in being formed from lime and silica, is encouraged to assume this crystal form by the presence of the spiculated dispersed fibers of asbestos or cellulose which should range in length from 0.001 to 0.2 centimeter and which are said to "present free, freshly fractured surfaces" which are "active as incipient centers for the crystallization of the fibrous crystal-forming reagents," i.e., lime and silica.

Example II of Fraser appears to be representative and describes production of a final product with an apparent density of 11 pounds per cubic foot, 2.2 pounds of which is asbestos fiber.

The Examiner rejected all of the appealed claims as "being unpatentable over Fraser." The Examiner stated, without apparent dispute by appellant, that the product of Fraser's Example II falls "within the range of 16–70 percent of voids" as set forth in the appealed claims. With regard to the differences in fiber lengths and void shapes in the articles disclosed by Fraser and those claimed by appellant, the significance of which appears to be the main point at issue, the Examiner stated:

> • • • Applicant has failed to show anything critical to result from his range of fiber lengths (which includes 0.3 centimeter) when the fibers of Fraser may have a length of 0.2 centimeter. Nor is anything critical seen in applicant's spherical voids compared to the elongated voids of the reference.

The Board sustained the Examiner's rejection. Noting that appellant urges the significance of the spherical character of the voids in his claimed product, the Board stated:[2]

> We find no use of the term "spherical" in describing the voids, in this application as filed. Rather, we find them described only as "independent non-communicating air or gas-filled cells" • • •, as opposed to acknowledged prior art voids "in the form of interconnecting capillaries," • • •. Appellant is not, therefore, in a favorable position to urge patentability on the basis of the said term. Moreover, Fraser, in describing his product, distinguishes his voids from ones that are "completely surrounded or occluded" (column 13), as we have noted above, and as having certain advantages with respect to them (column 4, lines 21–26), and thus has a clear teaching of the noncommunicating type of voids, and of the results they will give in the fibered products he discloses.

The Board also stated:

> We do not believe that the claimed fiber length of three-tenths of a centimeter patentably distinguishes from the reference length of two-tenths of a centimeter.

[1] In resolving the issues before us, we first turn our attention to the Solicitor's contention that the word "spherical," used to describe the voids, is not properly in the appealed claims because such word is not disclosed in the specification as filed. Although it is true that "spherical" is disclosed only in an amendment to the original specification, this amendment was entered by the Examiner without objection and the Board considered this matter only to the extent of commenting that "appellant is not, therefore, in a favorable position to urge patentability on the basis of said term." Under these circumstances, we must accept the specification as amended, and consider the term "spherical" in the claims as being properly disclosed in the specification. [2] We cannot affirm the Board's rejection of the appealed claims on a basis which both the Examiner and the Board

[2] See footnotes 3 and 4 for the portions of columns 4 and 13 of the Fraser patent relied on here by the Board.

failed to assert as a reason for rejecting the claims when those claims were under consideration by them.

For the purpose of this discussion, we will accept as a fact that appellant's insulating material not only contains macroscopic spherical voids but also includes fibers which were introduced into the calcium silicate hydrate matrix primarily for the purpose of strengthening the structure, and we will assume all advantages claimed by appellant for his product are present. We must remember, however, that under consideration here is appellant's *product* and not the method of producing it. We note this at the outset of our discussion because obviously the method of making appellant's product is greatly different from that which Fraser employs in producing his product.

With these factors in mind, we shall discuss the teachings in the Fraser reference. First, there is no question that Fraser discloses insulating material constructed of calcium silicate hydrate. However, it is true Fraser's matrix contains microscopic intercommunicating capillary voids, whereas the voids in appellant's structure are occluded macroscopic spheres. Although these structures are quite different, Fraser teaches more concerning this structural feature. In this connection, Fraser, in contrasting his product with the prior art, states:[3]

> • • • Upon completion of the crystallization and growth of the crystals and subsequent removal of the residual water from between them, and from any water-bearing gels between them (which is in fact observed to be the case) the mass will present innumerable voids or air spaces, between the fibers, (and through the gel films) which are continuous and capillary in character and intercommunicating, rather than completely surrounded or occluded, by a solid, such as the continuous bond or wall structures which are characteristic of and inherent in the structures of insulating materials of the prior art.

Although there is no indication that these prior art products are constructed of calcium silicate hydrate, the suggestion that the voids are "completely surrounded or occluded" is unaviodable. Further suggestions of constructing insulating materials with occluded voids are revealed in Fraser, such as:[4]

> • • • Though the air spaces are small, they are nonetheless occluded or surrounded by solids and, hence, conducive to transmission of heat by convection of the gases within them, radiation across them, and conductivity around and through their marginal surfaces. • • •

Thus far we have a teaching of insulating material made of calcium silicate hydrate with voids and a further teaching that the voids of insulating material might be noncommunicating and completely occluded. Whether the prior art's occluded voids were spherical or some other shape, we do not deem significant.

Next to consider is the question of the other element of appellant's combination, the fibers. Undoubtedly his fibers "contribute to the transverse strength of the body" as he contends. It is equally clear that the function of Fraser's fibers is primarily as a construction aid in the formation of the needle-like crystals of hydrated calcium silicate. However, Fraser's teaching does not stop at this point. He goes on to say that these fibers will also add to the strength of the material, stating:

> • • • The strength of the resulting integrated filamentary system is the cumulative inherent tensile strength of the crystals themselves, and of the organic or inorganic fibers which served as nuclei in the fibrous crystalline formation.

[3] Column 13, lines 9–22 of the Fraser patent.
[4] Column 4, lines 21–26 of the Fraser patent.

Further, in describing another aspect of his invention, Fraser states:

> On the other hand, it is found that by incorporating certain mineral substances, which are both fibrous and capable of undergoing gel formation and retaining their needle-like or fibrous form, such as chrysotile asbestos, a dispersed intra-knit structure of fibrous hydrated calcium silicate crystals and fibrous asbestos crystals may be developed, constituting a fine continuous fibrous structure, throughout the mass, having an inter-knit integral relationship between both kinds of fibers and the gel structure which is strong, of small specific volume and mass, resistant to high temperatures and of random arrangement, consonant with the preservation of the fine, loose, open characteristics of the fibrous structure of the mass as a whole, *and also of the aggregate compressive and tensile strengths of both ultimate individual fiber components, per se.* [Emphasis ours.]

Appellant contends that Fraser's fibers, because of their short length, would not add to the transverse strength of the product as appellant's longer fibers do. This contention is not persuasive in view of the fact that there is only a one-tenth centimeter difference between appellant's and Fraser's range of fiber lengths. Even though it is true, as appellant argues, that this very small difference occurs at the top of Fraser's range and at the bottom of appellant's, it does not seem to us that it would be beyond the ordinary skill of one skilled in this art, with the teachings of Fraser, to ascertain the proper diameter and length of fibers so that they will be most effective in contributing to the strength of the insulating material.

Further, appellant argues that Fraser's fibers cannot impart strength to the mass because, during the process, the fibers are beaten and thereby lose their fiber consistency. However, Fraser clearly states that this treatment is accorded the fibers so as to disengage them from their bundle formation, but they are not destroyed as fibers. The specification in this connection states:

> * * * The net result of such treatments is to disintegrate the bundles of spicules or fiber content of the commercial grades of asbestos into substantially their ultimate spicules, but without destroying their fibrous characteristics of length relative to their cross-sectional dimensions.

Since appellant does not claim that any difference in density exists between his product and that of Fraser, no consideration of that element per se is warranted. Appellant does contend, however, that although he and Fraser achieve low density, he maintains this characteristic along with other advantageous properties which we have already noted. However, Fraser claims these same advantages for his product. He states:

> It is, therefore, an object of the present invention to provide an improved type of insulating materials which may be applied to high temperature surfaces, which shall be form-retaining, and which shall also be of low heat conductivity and low apparent density, and of which the entire insulation may be composed. It is also an object to provide an insulating material which shall be strong when dry and also resistant to moisture, with minimum loss or reduction of its other desirable properties. Other objects will appear from the following disclosure.

[3] We find nothing in the record either in the nature of a qualitative or quantitative test which would establish the superior properties of appellant's product in comparison with Fraser's and thereby refute the obviousness which is apparent here.

The specific limitations of claim 10 either read upon the Fraser specification, some of which we have already noted, or are not critical, or find no support in appellant's application, such as the volume limitation reading: "and comprising substantially from about 16 to about 70 percent of its volume as small spherical macroscopic voids."

Even if this limitation was supported in the specification, it is completely without significance since we fail to comprehend how a mass having 16 percent of its volume in voids could also be classed as what is herein referred to as a "low" density product.

[4][5] For the above reasons we affirm the rejection of claim 10 and, since we find nothing that is patentably distinguishable from Fraser in claims 11, 12 and 13, we affirm their rejection also. The rejection of claim 20, which is by and large a product claim, also is affirmed for the same reasons as claim 10, even though a method step is included in this claim. The addition of a method step in a product claim, which product is not patentably distinguishable from the prior art, cannot impart patentability to the old product. *In re Moeller*, 28 CCPA 932, 117 F. 2d 565, 48 USPQ 542; *In re Lifton*, 38 CCPA 1119, 189 F. 2d 261, 89 USPQ 641; *In re Shortell*, 36 CCPA 1013, 173 F. 2d 993, 81 USPQ 359.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE JOHN P. LAMBOOY

No. 6712. Decided April 13, 1962.

[49 CCPA—; 300 F.2d 950; 133 USPQ 270]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE THE COURT—ISSUES DECIDED FROM THE RECORD.

"The Journal of Nutrition article appears to be the only source of evidence considered by the Board in deciding that the anti-riboflavin activity of the claimed compound 'would be expected and not surprising.' It is noted that the appealed application was filed October 20, 1955 as a continuation-in-part of a then pending application, Serial No. 253,000, filed October 24, 1951. Although the Examiner was informed of the facts that the article discloses the claimed compound and had been published more than one year before the filing date of the appealed application, he did not consider the article a bar to the claim. Accordingly, appellant must have been given the benefit of the filing date of his parent application. For this reason and in the absence of any other reasons to the contrary *suggested by the record*, we believe the article should not be considered further by us. * * * the article itself is not a part of the record in this case. As far as we can tell, it was appellant's own knowledge that the Board relied upon for its position and there is nothing in the record to indicate that appellant was merely reciting the state of the art. As in all causes brought before us, we must decide the issues from the record as presented to us."

2. PATENTABILITY—OBVIOUSNESS—COMPOSITION OF MATTER.

"It appears that riboflavin is an essential part of the diet of normal healthy rats. Appellant has found that rats fed his compound develop riboflavin-deficiency symptoms even though their diet also includes riboflavin. There is no evidence *in the record* which would lead one skilled in this art to expect that the differences in molecular structure between riboflavin and appellant's compound would cause this difference in properties. The former compound is a vitamin, the latter an antivitamin; the former is a metabolite, the latter an antimetabolite; the former acts to promote the well-being of the animal, the latter acts to its detriment. We find it difficult to conceive of a better example of a difference *in kind* than is presented in this case and we also find *in view of this record* that this difference was unexpected and unobvious."

3. SAME—SAME—SAME.

"It is true that appellant's compound is encompassed by the broad classes of compounds disclosed by * * * reference patents but so are many many other compounds. We do not think that progress in the useful arts would be promoted by permitting broad theoretical disclosures as these to preclude appellant from obtaining a patent for his invention."

4. SAME—SAME—SAME.

"It is also true that appellant has invented a compound with close structural similarity to another known member of these broad classes, namely riboflavin. • • • At the most, we think one skilled in this art would be taught by the reference patents that other groups than those present in the riboflavin structure can be attached to the parent isoalloxazine structure. We doubt that this fact is a noteworthy addition to the knowledge of an organic chemist of ordinary skill because he knows this is true of all such parent chemical structures. Though this would be obvious to him, it does not follow that all new compounds so produced would be obvious in the sense of the patent law."

5. SAME—PARTICULAR SUBJECT MATTER—ISOALLOXAZINE COMPOUND.

The decision of the Board of Appeals affirming the rejection of the sole claim in appellant's application entitled "Isoalloxazine Compound" as unpatentable over the prior art is reversed.

APPEAL from the Patent Office. Serial No. 541,850.

REVERSED.

George Thomas Johannesen (*Eugene O. Retter*, of counsel) for appellant.

Clarence W. Moore (*Jack E. Armore*, of counsel) for the Commissioner of Patents.

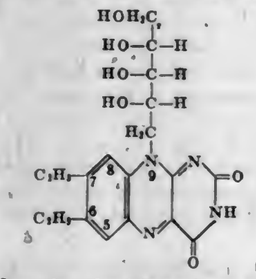
Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Board of Appeals of the United States Patent Office which affirmed the Examiner's rejection of the only claim of appellant's application for a patent on "Isoalloxazine Compound."

The claim is as follows: [1]

1. 6,7-diethyl-9-(D-1'-ribityl)-isoalloxazine, having the structural formula:



The references relied on by the Examiner and the Board are:

Tishler et al., 2,350,376, June 6, 1944.
Flexser et al., 2,456,395, Dec. 14, 1948.
British patent, 628,410, Aug. 29, 1949.

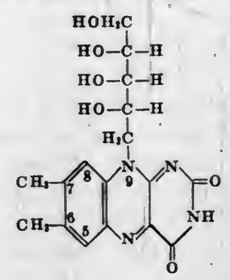
As the appealed claim indicates, this application relates to a single organic compound. The issue is whether this compound would have been obvious in view of this prior art at the time the invention was made.

The application has been amended so that the sole portion thereof relating to utility now reads:

6,7-diethyl-9-(D-1'-ribityl)-isoalloxazine is a potent riboflavin inhibitor or antagonist and is useful for producing riboflavin deficient laboratory experimental animals such as rats and mice. As compared with the prior art procedure of maintaining experimental laboratory animals on a riboflavin deficient diet to induce riboflavin deficiency, it has been found that by placing these animals on a diet containing 6,7-diethyl-9-(D-1'-ribityl)isoalloxazine, riboflavin deficiency can be more rapidly induced thereby significantly shortening the preparatory time to secure animals in this condition. These riboflavin deficient animals are used experimentally for nutrition studies.

[1] The position numbers 5–9 within the rings of the structural formula in this claim are not in the original claim and have been added here to facilitate discussion..

According to the record, riboflavin [2] has the following structure:

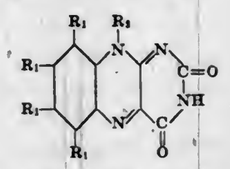


It is evident that the claimed compound differs from riboflavin only in having ethyl groups, C_2H_5— or CH_3CH_2—, at the positions where riboflavin has methyl groups, CH_3—. Apparently these compounds are both "isoalloxazines."

Of the claimed compound, appellant also states in his brief:

• • • It differs from riboflavin also in being an antimetabolite rather than a metabolite. In other words, it competes for riboflavin in the metabolic processes and thus interferes with metabolism. Thus, the compound is capable, among other things, of producing avitaminosis, a condition characterized by a deficiency of vitamins.

The Tishler et al. patent discloses a process for the preparation of isoalloxazines with the generic formula:



wherein R_1 is selected from the group consisting of hydrogen, alkyl and aryl; R_2 is selected from the class consisting of hydrogen, alkyl, polyhydroxylalkyl, and polyacyloxyalkyl; • • •.

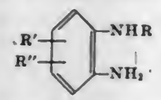
The Tishler et al. process is not the same as appellant's process. In each of the four specific compounds disclosed, the top and bottom R_1 groups are hydrogen and the two side R_1 groups, corresponding to the 6- and 7-positions in riboflavin, are methyl. R_2 in each of these four examples is different, being variously hydrogen, methyl (a specific alkyl), ribityl (a specific polyhydroxyalkyl), and tetraacetylribityl (a specific polyacyloxyalkyl). Tishler et al. express no other specific preference for R_1 and R_2 and disclose no utility for isoalloxazines prepared by their process.

The Flexser et al. patent has been considered by the Examiner and the Board as "corresponding to" the British patent.[3] Both patents disclose a process for the manufacture of isoalloxazines which is similar to though not identical with appellant's process. No generic

[2] According to Dorland, "The American Illustrated Medical Dictionary," 22d Ed., p. 1304 (1951), riboflavin has also been known as lactoflavin, vitamin B_2 and vitamin G, and is known to promote the growth of rats and prevent the occurrence of a nutritional cataract in rats and a specific dermatitis in turkeys.

[3] The assignee of the Flexser et al. patent appears to have a corporate relationship to the Swiss applicant of the British patent.

formula for isoalloxazines is disclosed in either patent although both disclose as a starting product a compound expressed generically as:[1]



wherein R is a member of the group consisting of alkyl, polyhydroxyalkyl, and polyacyloxyalkyl, and wherein R′ and R″ are members, not necessarily identical, selected from the group consisting of hydrogen and lower alkyl groups which contain not more than 8 carbon atoms.

It appears that isoalloxazines, including riboflavin, are produced according to these two patents by "condensation" of this starting material with another compound, alloxan, and that the hexagonal ring shown above becomes the lefthand ring of the isoalloxazine structure as exemplified by riboflavin, supra. The N in —NHR of the starting material becomes the 9-position in the final isoalloxazine, R remaining attached to the N. It is noted that in the generic starting material structure, R′ and R″ are not attached to any particular angles of the hexagonal ring. Appellant refers to R′ and R″ as "floating" radicals. By that we understand R′ and R″ may be variously disposed on the ring of the starting material so that any two of positions 5, 6, 7 and 8 of the final isoalloxazine structure may be occupied by R′ and R″. Riboflavin and tetraacetylriboflavin are the only specific isoalloxazines disclosed and no other preference for specific R, R′, and R″ groups or specific positions for the R′ and R″ groups is expressed in either patent. There is no utility disclosure in the British patent. The only statement in Flexser et al. relevant to utility is:

• • • This class of compounds has recently assumed technical and therapeutic importance, riboflavin or vitamin B_2 being an outstanding example thereof.

Although the Examiner "deemed that applicant's compound is anticipated by the British patent" and is "generically taught by the Flexser et al. and Tishler et al. patents," the Board agreed with appellant that his claimed compound is not specifically disclosed in the patents and assumed that "the Examiner intended the rejection to be based upon the British patent on the ground of lack of patentable invention, since he [the Examiner] admits that the claimed compound is not specifically disclosed in the British patent but falls within the purview of the teaching therein." After noting the Examiner's further rejection in view of the Flexser et al. and Tishler et al. patents, the Board decided it would "consider the rejections as based solely on the ground of lack of patentable invention [i.e. obviousness] over any one of these patents." Thereupon the Board sustained this rejection.

The Board stated:

• • • Appellant's principal contention is based upon the ground that the compound which is claimed exhibits an unexpected result, namely as a riboflavin antagonist or antimetabolite.

The Board then referred to "an article in the Journal of Nutrition, vol. 47, No. 4, August 1952, pages 539–560." Although this article has not been made part of the record in this court, it appears that it was written by appellant and another, that it discloses the claimed compound, and that it was first cited by appellant in a letter to the Examiner, after the latter's final rejection, for the reason that the

[1] The language which follows the formula is from the British patent. In Flexser et al., there is no express limitation as to the number of carbon atoms in "lower alkyl."

article "confirms emphatically the position previously set forth [by appellant] that the claimed compound has startlingly new and unexpected properties."

The Board then stated:

• • • The article which is referred to by appellant in the Journal of Nutrition clearly indicates on page 540 that two analogs of riboflavin, including as one the 5-6-dimethyl-9-(D-1′-ribityl) isoalloxazine, also displayed the inhibiting action in rats and that some of these compounds contain the riboflavin activity in the nutrition of L-casei and B. lactis acidi while other [sic] did not. These analogs all fall within the purview of the disclosures of the patents relied upon the Examiner. The property of inhibition of riboflavin activity is, therefore, not a property which is solely possessed by the compound which is specifically claimed herein, but is also a characteristic of certain other members of the class. It would be expected and not surprising, therefore, that other analogs, not specifically spelled out in the patent [patents?], would possess either of the two properties. It is our conclusion, therefore, that the reliance upon one of the characteristics which is known to be possessed among the members of this class does not lend patentability to a compound which is impliedly conceded as suggested by and is clearly within the purview of the prior art references. • • •

[1] The Journal of Nutrition article appears to be the only source of evidence considered by the Board in deciding that the anti-riboflavin activity of the claimed compound "would be expected and not surprising." It is noted that the appealed application was filed October 20, 1955 as a continuation-in-part of a then pending application, Serial No. 253,000, filed October 24, 1951. Although the Examiner was informed of the facts that the article discloses the claimed compound and had been published more than one year before the filing date of the appealed application, he did not consider the article a bar to the claim. Accordingly, appellant must have been given the benefit of the filing date of his parent application. For this reason and in the absence of any other reasons to the contrary *suggested by the record*, we believe the article should not be considered further by us. Again we point out that the article itself is not a part of the record of this case. As far as we can tell, it was appellant's own knowledge that the Board relied upon for its position and there is nothing in the record to indicate that appellant was merely reciting the state of the art. As in all causes brought before us, we must decide the issues from the record as presented to us.

Furthermore, we do not find in the record any other factual basis in support of the Board's contention that the anti-riboflavin activity of the claimed compound "would be expected and not surprising," or that it was known before the filing date of appellant's parent application (which date was before the date of the article) that this property is a characteristic of other members of the class to which the claimed compound belongs, insofar as this record reveals.

Turning next to the question of obviousness in view of the three patents of record, we believe that appellant's compound would not have been obvious at the time the invention was made to a person having ordinary skill in this art. We reach this result in two steps, first treating the patents as a disclosure of riboflavin, and second, treating them as an additional disclosure of certain classes of compounds encompassing both appellant's compound and riboflavin along with a very large number of other compounds.

The Board considered the claimed compound to be "the next higher homologue of riboflavin (vitamin B_2)." There has been much discussion in the record and briefs relating to "homology." A com-

parison of the structural formulas of these two compounds shows clearly that there is substantial *structural* similarity. But more appears from the facts of this case than structural similarity, facts which raise genuine questions as to the real significance of such bare *structural* similarity, whatever label may be attached to it.

[2] It appears that riboflavin is an essential part of the diet of normal healthy rats. Appellant has found that rats fed his compound develop riboflavin-deficiency symptoms even though their diet also includes riboflavin. There is no evidence *in the record* which would lead one skilled in this art to expect that the differences in molecular structure between riboflavin and appellant's compound would cause this difference in properties. The former compound is a vitamin, the latter an antivitamin; the former is a metabolite, the latter an antimetabolite; the former acts to promote the well-being of the animal, the latter acts to its detriment. We find it difficult to conceive of a better example of a difference *in kind* than is presented in this case and we also find *in view of this record* that this difference was unexpected and unobvious.

The Solicitor urges that "there is no specific evidence in the record of differences in chemical and physical properties of the prior art compound [riboflavin] and the claimed compound." In view of the biochemical differences which we have just discussed, we can only assume the Solicitor is urging that while differences in chemical properties might be persuasive of patentability of the claimed compound, differences in *biochemical* properties are not to be considered. We see no reason to distinguish between chemical and biochemical properties and no reason or authority for this position has been presented to us.

The second step in our reasoning involves the additional disclosures of the reference patents. The Board stated with regard to the properties of the claimed compound:

> • • • We are not persuaded, however, that a showing of unobvious or unexpected property must necessarily lead to the conclusion that the claimed compounds are patentable. As held by the Court of Customs and Patent Appeals in the decision *In re Finley*, 36 CCPA 999; 1949 C.D. 284; 624 O.G. 363; 174 Fed. 2d 130; 81 USPQ 383, the showing of unforeseen properties is not conclusive of patentability and may require the consideration of other factors. • • •

The "other factors" considered by the Board were the teachings of the Journal of Nutrition article which are not before us, and the Board's opinion that the claimed compound is "suggested by and is clearly within the purview of the prior art references." The Solicitor interprets the latter "factor" to be based on the following:

> (1) that the reference patents disclose a class of compounds, the di-lower alkyl 9-(D-1'-ribityl) isoalloxazines, having the alkyl groups in any two of the 5, 6, 7, and 8 positions; (2) that the class is merely exemplified in the prior art by the 6,7 dimethyl compound (riboflavin); and (3) that the claimed compound is clearly a member of that class.

The Solicitor has also restated his position as follows:

> • • • the prior art applied against the appealed claim discloses generically a limited class of compounds which clearly includes and suggests the compound defined in the claim on appeal • • • and in addition specifically discloses a compound which is a close lower homologue of that compound. • • •

We do not agree that the "limited class" suggested by the Solicitor is disclosed in any of the reference patents. Moreover, we do not believe that *any* class of compounds disclosed in these patents is sufficiently limited to "suggest" appellant's compound.

Referring to our discussion of Tishler et al., supra, we note that "lower," as in the Solicitor's "limited class," is not disclosed as a limitation on "alkyl." Although one of the specific examples of Tishler et al. recites a d-ribityl group at the 9-position as in the Solicitor's "class," this one example is not enough to constitute a class. Further, although the four specific examples of Tishler et al. all include methyl groups at the 6- and 7-positions and hydrogen at the 5- and 8-positions, the 9-position is occupied by a different group in each example. Any limited class to which these four examples belong clearly would not be the "limited class" suggested by the Solicitor. The only class expressly disclosed by Tishler et al. is that whose generic formula is given supra. Although we agree that this broad class includes appellant's compound, we do not agree that this compound is obvious.

Referring next to our discussion of the British patent and Flexser et al., supra, we agree that isoalloxazines produced from compounds within the scope of the generic starting material, presented supra, will have lower alkyl groups (containing 1 to 8 carbon atoms) in any two of positions 5, 6, 7 and 8, thus satisfying that requirement of the solicitor's "limited class." However, R in the generic starting material, appearing at the 9-position in the final isoalloxazine, may be alkyl, polyhydroxyalkyl and polyacyloxyalkyl. We believe that the class of compounds disclosed by Flexser et al. and the British patent is much broader than the "limited class" suggested by the Solicitor since the variation in R of the patentees' starting material and hence the group at the 9-position in the final product is essentially limitless. Although the broad class suggested by these two patents includes appellant's compound, we do not believe that this compound is obvious.

The Solicitor cites *In re Rosicky*, 47 CCPA 859, 276 F.2d 656, 125 USPQ 341, in support of his contention that the concept of appellant's compound would be obvious from the disclosures of the prior art. In that case, Rosicky was claiming xanthene compounds with a particular "side chain," $—CH_2—CH_2—Z$, where Z could be a piperidine or pyrrolidine ring. We held these compounds to be unpatentable in view of a reference patent which disclosed xanthene compounds with a similar "side chain" expressed generically and attached in the same position. It was disclosed specifically in the patent that the ethylene radical could be one part of that side chain as in Rosicky's compounds, and that piperidine could be the other part of the side chain also as in the compounds claimed by Rosicky. We held that the claimed compounds were within the scope of the limited generic disclosure of the patent and that it was of no moment that Rosicky's specific compounds were not named in that patent. Further, we pointed out that the compounds of the patent were disclosed therein to have one of the two properties alleged by Rosicky for his compounds.

Clearly *In re Rosicky* is distinguishable from the situation now before us where no specific preference for ethyl is expressed in the patents, where no specific pair of positions for the two ethyl groups is expressed, and where the properties of the claimed compound differ from those of riboflavin in an unexpected manner.

[3] It is true that appellant's compound is encompassed by the broad classes of compounds disclosed by these reference patents but so are many many other compounds. We do not think that progress

in the useful arts would be promoted by permitting broad theoretical disclosures as these to preclude appellant from obtaining a patent for his invention.

[4] It is also true that appellant has invented a compound with close structural similarity to another known member of these broad classes, namely riboflavin. But consideration of this matter returns us to the first step in our reasoning, i.e. consideration of the dissimilar properties of the compounds being compared. At the most, we think one skilled in this art would be taught by the reference patents that other groups than those present in the riboflavin structure can be attached to the parent isoalloxazine structure. We doubt that this fact is a noteworthy addition to the knowledge of an organic chemist of ordinary skill because he knows this is true of all such parent chemical structures. Though this would be obvious to him, it does not follow that all new compounds so produced would be obvious in the sense of the patent law.

[5] The decision of the Board is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE HAROLD G. PETERING AND HARRY H. FALL

No. 6750. Decided April 13, 1962.

[49 CCPA—; 301 F.2d 676; 133 USPQ 275]

1. PATENTABILITY—REFERENCE—CONSTRUCTION OF REFERENCE—UTILITY.

"• • • we will consider the statements of Karrer relating to the properties of the compounds disclosed in his patent. • • • It is our opinion that *no* portion of that patent teachers *any* relevant property for *any* of those compounds, specific or generic, other than, in the words of the Examiner, a 'positive vitamin like activity.' *In view of this record*, we do not believe Karrer teaches one skilled in this art that any compound encompassed by his disclosure has or might have a *negative* influence on growth. It may be that the phrase in Karrer, 'the new compounds very decidedly influence the growth,' when taken out of context, includes both a positive and a negative influence on growth, but this phrase occurs in the same sentence, • • •, with a reference to 'any vitamin action.' We are unable to accept the suggestion that 'any vitamin action' includes an antivitamin action. In our opinion, Karrer contemplated and was discussing only a *positive* 'vitamin action' and indeed only a positive vitamin B_2 action when he stated that his 'new compounds very decidedly influence the growth.'"

2. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE THE COURT—EVIDENCE—JUDICIAL NOTICE—PUBLICATION IN A HIGHLY TECHNICAL AREA.

"At oral argument, the Solicitor • • • urged that we take judicial notice of a reference entitled 'A Study of Antimetabolites' by D. W. Woolley, and attempted to qualify this author as 'one of the recognized authorities if not the foremost authority in the country on the subject.' This reference is not in the record and we are reluctant to take notice of it since apparently it is a monograph in a highly technical area of biochemistry. It may be that D. W. Woolley does have the qualifications assigned him by the Solicitor but, for all we know, others of equal reputation may have divergent viewpoints in this same area. Such a reference should have been the subject of a discussion between appellants and the experts in the Patent Office and we do not consider it appropriate for us to attempt to evaluate this reference without the benefit of such discussion."

3. PATENTABILITY—ANTICIPATION—PROPERTIES UNDISCLOSED IN REFERENCE.

"The compound of claim 10 is one of the 20 compounds in the limited class of compounds we find in Karrer. In the light of our previous discussion of this particular limited class, therefore, the compound recited in claim 10 has been *described* in a prior art printed publication and hence is unpatentable. Generic claims 1, 2, 4 and 7 include the compound of claim 10 and are therefore unpatentable for the same reason. Even though appellants' claimed compounds may exhibit antivitamin activity, a property not disclosed by Karrer, this fact is not significant here because appellants' invention *as defined in these claims* is *described* in the Karrer patent."

4. SAME—SAME—INVENTION—OBVIOUSNESS—35 U.S.C. 103.

"We do not agree with the Board that the unexpected properties of the compounds defined in claims 5, 11 and 12 should not be conisdered in determining the patentability of these claims. The compounds are not *described* in Karrer within the meaning of 35 U.S.C. 102(b). In determining whether the claimed compounds are *obvious* within the meaning of 35 U.S.C. 103, we think their properties may and should be considered, and having considered the properties, we are convinced the compounds defined in claims 5, 11 and 12 are patentable over Karrer."

5. SAME—PARTICULAR SUBJECT MATTER—"ISOALLOXAZINES."

The decision of the Board of Appeals in an application entitled "Isoalloxazines" refusing specified claims as unpatentable over the prior art is affirmed as to certain claims and reversed as to certain other claims.

APPEAL from the Patent Office. Serial No. 454,627.

MODIFIED.

George T. Johannesen (*Eugene O. Retter*, of counsel) for appellants.

Clarence W. Moore (*Raymond E. Martin*, of counsel) for the Commissioner of Patents.

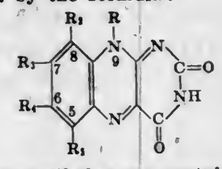
Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Board of Appeals of the United States Patent Office which affirmed the Examiner's rejection of claims 1, 2, 4, 5, 7, and 10–12 of appellants' application for a patent on "Isoalloxazines." Eighteen claims stand allowed by the Examiner. The application was filed September 7, 1954.

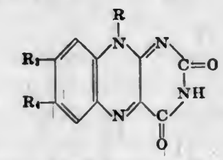
The following appealed claims are representative:[1]

1. Compounds represented by the formula:



wherein R is an ω-monohydroxyalkyl group containing from two to six carbon atoms inclusive, R_6 and R_4 are members selected from the group consisting of lower-alkyl, lower-alkoxy, amino and a polymethylene group linked to the aromatic ring to form a carbocyclic ring having six carbon atoms, R_2 and R_3 are members selected from the group consisting of hydrogen, lower-alkyl, lower-alkoxy and amino, and wherein R_2, R_3, R_4 and R_6 when taken together include not more than one amino group.

2. Compounds represented by the formula:



wherein R is an ω-monohydroxyalkyl group containing from two to six carbon atoms inclusive and R_6 and R_4 are lower-alkyl.

10. 6,7-Dimethyl-9-[β-monohydroxyethyl]isoalloxazine.

11. 6,7-Diethyl-9-[β-monohydroxyethyl]isoalloxazine.

12. 6-Ethyl-7-methyl-9-[β-monohydroxyethyl]isoalloxazine.

[1] The position numbers 5–9 within the rings of the structural formula in claim 1 are not in the original claim and have been added here to facilitate discussion.

Claims 4, 5 and 7 are subgeneric to claim 2. In claim 4, R_3 and R_4 are methyl, CH_3. In claim 5, R_3 and R_4 are ethyl, C_2H_5. In claim 7, R is $—CH_2CH_2OH$. Otherwise, claims 4, 5 and 7 are identical with claim 2.[2]

The allowed product claims are subgeneric to claim 1 in that R_2 and R_5 are hydrogen while at least one of the R_3 and R_4 groups is amino or alkoxy. Certain claims to a process of producing the claimed compounds have also been allowed.

The reference relied on by the Examiner and the Board is:

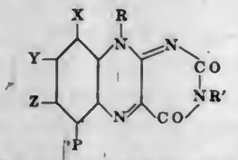
Karrer, 2,155,555, April 25, 1939.

As the claims indicate, this application relates to a group of iso-alloxazines and to a method of preparing them. The issue is whether the subject matter of the appealed claims is patentable in view of the Karrer patent.

The only relevant part of the application concerning utility of the claimed compounds is as follows:[3]

These new and novel compounds possess atimetabolite activity; for example, they are competitively active riboflavin antagonists.

The Karrer patent is entitled "Iso-Alloxazine Derivatives and Process for the Manufacture of Same." The Karrer process is not the same as appellants' process. Karrer's isoalloxazines are expressed by the following generic formula:



wherein X, Y, Z, P and R' represent either hydrogen or alkyl radicals, R a side chain containing an OH group • • •

Karrer discloses that R may be "for instance

$—CH_2OH$, $—CH_2CH_2OH$, $—CH_2CH(OH)CH_2OH$,

$—CH_2CH(OH)—CH(OH)—CH(OH)CH_2OH$,

or $—CH_2(CHOH)_4—CH_2OH$." Also disclosed are eight specific iso-alloxazines all encompassed by the generic formula. We tabulate these as follows:

U	Y	Z	P	R'	R
H	H	H	H	H	$—CH_2CH(OH)CH_2OH$
H	CH_3	CH_3	H	H	$—CH_2CH(OH)CH_2OH$
H	H	H	H	H	$—CH_2CH_2OH$
H	H	H	H	H	$—CH_2(CHOH)_2CH_2OH$
H	CH_3	CH_3	H	H	$—CH_2(CHOH)_3CH_2OH$
H	CH_3	H	H	H	$—CH_2(CHOH)_4CH_2OH$ [4]
H	CH_3	CH_3	H	H	—d,l'-ribityl [5]
H	CH_3	H	H	H	—d,l'-ribityl

[4] This group appears to be designated "d-sorbityl" by Karrer.
[5] According to Karrer, "Organic Chemistry," 3rd English Ed., p. 331 and pp. 713–714 (1947), this group appears to have the formula $—CH_2(CHOH)_3CH_2OH$, is derived from d-ribose, and is isomeric with the other two R groups of this formula in our table, the latter apparently having been derived from d-arabinose.

There are three portions of the Karrer patent which relate to utility. First, shortly after setting forth his generic formula, supra, Karrer states:

[2] In Webster's New International Dictionary, 2d Ed. (1949), it is stated: "omega • • • 4. • • • b. *Chem.* As a prefix, to denote that an atom or group is united with the end carbon atom in a chain, as in ω-chloro-styrene, $C_6H_5CH=CHCl$." Accordingly, it appears that the —OH or hydroxy grouping in an "ω-monohydroxyalkyl group" is attached to the carbon atom of the group furthest from the point of ring attachment as in claim 7. Also, "β-monohydroxyethyl" appears to be a species of "ω-monohydroxyalkyl," and is descriptive of the $—CH_2CH_2OH$ group in claim 7.

[3] The utility of the compounds claimed herein appears to be the same as that of the compound claimed in *In re Lambooy*, 49 CCPA—, —F.2d—, —USPQ—, No. 6712, decided concurrently herewith.

• • • Neither alloxazine and its derivatives substituted in the benzene ring, nor N-methyl-iso-alloxazine possess any vitamin action, whereas the new compounds very decidedly influence the growth.

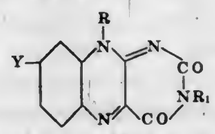
Second, regarding the last compound in our table, supra, Karrer states:

• • • In the biological test it has the same influence on the growth as vitamin B_2 (lactoflavine).

Finally, the two claims of Karrer are pertinent with regard to utility and are as follows:

1. The 7-methyl-9-[d,l'-ribityl]-iso-alloxazine, the new compound crystallizing in yellow needles melting at 275° C., dissolving in water with yellow colouring and having an influence on the weight increase of test animals characteristic for vitamin B_2.

2. The compounds of the formula



wherein Y is an alkyl radical, R_1 is selected from the group consisting of hydrogen and alkyl radicals, and R is a hydroxylated side chain, the compounds dissolving in water with yellow coloring, being very sensitive to light and having an influence upon the weight increase of test animals characteristic of vitamin B_2.

The Examiner rejected the appealed claims "as lacking invention over Karrer who discloses generically the claimed compounds and sets forth specifically a homolog."[6] The examiner considered the third compound in our table supra, to be a "homolog of the claims," and stated:

• • • Applicants have failed to submit a verified affidavit as required by the Examiner showing unusual or unforeseen properties to overcome prior art homologs. • • •

As authority for this requirement, *In re Hass et al.*, 31 CCPA 895, 141 F.2d 122, 60 USPQ 544, and *In re Henze* 37 CCPA 1009, 181 F.2d 196, 85 USPQ 261, were cited. In response to appellants' alleged argument that "the patent teaches that the compounds claimed have utility directly opposite to the compounds instantly claimed and that no showing over the prior art homologs is necessary,"[7] the Examiner expressed the opinion that the first statement from Karrer that his "new compounds very decidedly influence the growth" was broad enough to include retarding growth as well as promoting growth, and that the other pertinent statements in Karrer relate only to specific compounds and not to all of the compounds encompassed by the Karrer disclosure. The Examiner stated:[8]

• • • The choosing of certain compounds falling within the sphere taught by Karrer and determining that these compounds have antimetabolite activity i.e. prevent growth is not invention. It represents that which is taught by Karrer when he disclosed that his compounds influence the growth.

The Board affirmed the Examiner's rejection generally. In response to appellants' argument that the Karrer general formula is broad and that many choices must be made to arrive at appellants' compounds, the Board related Karrer's specific examples to his generic formula, supra, and came to the conclusion that the "formula is not as broad and the range of selection not as great as appellants would make it appear." Relative to the issue between appellants and

[6] Examiner's answer.
[7] *Ibid.*
[8] *Ibid.*

the Examiner as to the differences in properties between Karrer's compounds and appellants' compounds, the Board stated:

> * * * It is not clear that Karrer intends the possession of vitamin activity to refer to all compounds of the class or all those disclosed since the statement is explicity made only with respect to some of them but we are not convinced that the ascertainment of the property referred to could make such obvious compounds unobvious as compounds.

Appellants urge that the Patent Office has "clearly erred in holding the claimed compounds to be obvious and unpatentable" and asks that we reverse "their action in so doing."

[1] First we will consider the statements of Karrer relating to the properties of the compounds disclosed in his patent. It is noted that the Board expressed doubt on this issue. It is our opinion that *no* portion of that patent teaches *any* relevant property for *any* of those compounds, specific or generic, other than, in the words of the Examiner, a "positive vitamin like activity." *In view of this record*, we do not believe Karrer teaches one skilled in this art that any compound encompassed by his disclosure has or might have a *negative* influence on growth. It may be that the phrase in Karrer, "the new compounds very decidedly influence the growth," when taken out of context, includes both a positive and a negative influence on growth, but this phrase occurs in the same sentence, as set forth supra, with a reference to "any vitamin action." We are unable to accept the suggestion that "any vitamin action" includes an antivitamin action. In our opinion, Karrer contemplated and was discussing only a *positive* "vitamin action" and indeed only a positive vitamin B_2 action when he stated that his "new compounds very decidedly influence the growth."

The Solicitor urges us to consider the following dictionary definition of "antimetabolite":[9]

> "Antimetabolite: A substance having a molecular structure similar to but a pharmacologic effect antagonistic to a metabolite (i.e. a vitamin or a hormone). The mechanism of antagonism is considered to be a competition between antimetabolite for a specific protein in an organism."

The Solicitor states:

> This definition would suggest to skilled workers in the art that one or more compounds coming within the general formula of Karrer, such as one of the compounds produced in his specific examples, or one differing slightly therefrom, would act as antimetabolites.

First, we again point out that we believe Karrer intended to include and did include *all* of his compounds, specific and generic, when he stated, "the new compounds very decidedly influence the growth." Second, there is no evidence whatever in the record other than in appellants' own specification that any compound "coming within the general formula of Karrer" is known to act or would obviously act as an antimetabolite. Finally, it is our opinion that any suggestion which this definition might make to one skilled in this art is not sufficiently definite to be of significance in this case. The definition is broad and general, is not expressly applicable to all vitamins, and particularly does not point out what type or degree of structural similarity must exist between compounds with riboflavin activity and those with antiriboflavin activity. There are many ways in which compounds may differ "slightly" in structure. For example, a chemist could vary the size of one or more rings in Karrer's

[9] The definition is copied from the Solicitor's brief and is said by him to be found in Blakiston's Pocket Medical Dictionary, Ed 1, 1952, Blakiston Company, New York.

compounds and still have a "molecular structure similar to" that of Karrer's compounds. Would this change produce a riboflavin antagonist? The record does not tell us. Further, a chemist could replace alkyl groups with halogen, replace oxygen with sulfur, replace carbon with nitrogen, or make any of a myriad of other slight changes and still have a compound with a "molecular structure similar to" the structures disclosed by Karrer.

[2] At oral argument, the Solicitor also urged that we take judicial notice of a reference entitled "A Study of Antimetabolites" by D. W. Woolley, and attempted to qualify this author as "one of the recognized authorities if not the foremost authority in the country on the subject." This reference is not in the record and we are reluctant to take notice of it since apparently it is a monograph in a highly technical area of biochemistry. It may be that D. W. Woolley does have the qualifications assigned him by the Solicitor but, for all we know, others of equal reputation may have divergent viewpoints in this same area. Such a reference should have been the subject of a discussion between appellants and the experts in the Patent Office and we do not consider it appropriate for us to attempt to evaluate this reference without the benefit of such discussion.

Next we consider the legal effect of the generic and specific descriptions of isoalloxazine structures in the Karrer patent. The generic formula of Karrer, "wherein X, Y, Z, P and R′ represent either hydrogen or alkyl radicals, R a side chain containing an OH group," encompasses a vast number and perhaps even an infinite number of compounds since there is no express limit on the size of the alkyl group or the structure and size of R. Even though appellants' claimed compounds are encompassed by this broad generic disclosure, we do not think this disclosure by itself *describes* appellants' invention, as defined by them in any of the appealed claims, within the meaning of 35 U.S.C. 102(b). However, there is more than this broad generic disclosure in Karrer. As set forth supra, Karrer discloses certain specific preferences for X, Y, Z, P, R and R′ through his series of preferred R groups and his eight specific isoalloxazines. Keeping in mind that the Karrer patent is a publication addressed to those of ordinary skill in this art, it is our opinion that the pattern of Karrer's specific preferences in connection with his generic formula constitutes a description of a definite and limited class of the compounds which may be defined with reference to the Karrer generic formula as follows: where X, P and R′ are hydrogen, where Y and Z may be hydrogen or methyl, and where R is a member selected from the group consisting of

$$-CH_2OH,^{10} \quad -CH_2CH(OH)CH_2OH, \quad -CH_2CH_2OH$$
$$-CH_2(CHOH)_3CH_2OH \quad \text{and} \quad -CH_2(CHOH)_4CH_2OH$$

We think the Karrer patent, as a printed publication, *describes* to one skilled in this art not only the broad class but also this much more limited class within that broad class, and we think it is immaterial that Karrer did not expressly spell out the limited class as we have done here. It is our opinion that one skilled in this art would, on reading the Karrer patent, at once envisage *each member* of this limited class, even though this skilled person might not at once define in his mind the formal boundaries of the class as we have done here.

[10] Karrer does not disclose a specific compound with this group at the 9-position but does recite it as a specific example of R.

A simple calculation will show that, excluding isomerism within certain of the R groups,[11] the limited class we find in Karrer contains only 20 compounds. However, we wish to point out that it is not the mere number of compounds in this limited class which is significant here but, rather, the total circumstances involved, including such factors as the limited number of variations for R, only two alternatives for Y and Z, no alternatives for the other ring positions, and a large unchanging parent structural nucleus. *With these circumstances in mind*, it is our opinion that Karrer has described to those with ordinary skill in this art each of the various permutations here involved as fully as if he had drawn each structural formula or had written each name. Although isomerism within certain of the R groups will increase the total number of compounds in this limited class, in our opinion, this fact is immaterial *in this case* because we think that one with ordinary skill in this art, with the 20 Karrer compounds before him, would also have before him those subspecies which involve standard well known isomerism within an R group. For these reasons, we hold that each compound within the limited class in Karrer, as defined supra, has been *described* in a printed publication within the meaning of 35 U.S.C. 102(b), and that it is of no moment that each compound is not specifically named or shown by structural formula in that publication.

It appears that appellants also recognize this limited class in Karrer but attempt to avoid it, for example, by urging that "Karrer chose hydrogen in these three positions [X, P and R'] for the avowed purpose of producing compounds having vitamin activity."[12] We agree that this probably was Karrer's *intent* but the fact remains that Karrer did disclose this limited class and we consider it immaterial for the purposes of this case why he chose to disclose it.

Turning now to the appealed claims, we note that the 6-, 7- and 9-position groups according to appellants' nomenclature correspond respectively to Karrer's Z, Y and R groups. [3] The compound of claim 10 is one of the 20 compounds in the limited class of compounds we find in Karrer. In the light of our previous discussion of this particular limited class, therefore, the compound recited in claim 10 has been *described* in a prior art printed publication and hence is unpatentable. Generic claims 1, 2, 4 and 7 include the compound of claim 10 and are therefore unpatentable for the same reason. Even though appellants' claimed compounds may exhibit antivitamin activity, a property not disclosed by Karrer, this fact is not significant here because appellants' invention *as defined in these claims* is *described* in the Karrer patent.

In affirming the Examiner, the Board first stated:

> It is our view that they [the claimed compounds] are obvious in view of Karrer.

However, later in their opinion, the Board stated:

> • • • we are not convinced that the ascertainment of the property referred to [antivitamin activity] could make such obvious compounds unobvious as compounds.

Both appellants and the Solicitor have argued this appeal on the basis of 35 U.S.C. 103. It is our opinion, however, that Congress did not contemplate various *degrees* of obviousness in section 103. We agree with the Board that the antivitamin properties of the compounds defined in claims 1, 2, 4, 7 and 10 cannot make these compounds "unobvious" in view of Karrer, not because these claimed compounds are, in the words of the Board, "such obvious compounds," but rather, as we have discussed supra, because Karrer *describes* the compound recited in claim 10, a compound also encompassed by claims 1, 2, 4 and 7. Therefore, the decision of the Board, so interpreted, is *affirmed* as to claims 1, 2, 4, 7 and 10.

Next we consider claims 5, 11 and 12. The compounds encompassed by these claims, reciting as all of them do an ethyl group, C_2H_5, at the 6-position or ethyl groups at the 6- and 7-positions, are not included in the limited class which we find in Karrer. Therefore, it is our opinion that these compounds have not been *described* by Karrer within the meaning of 35 U.S.C. 102(b) and we turn to the question of their obviousness under 35 U.S.C. 103. It is true that the compounds included in these claims are encompassed by Karrer's broad generic class of isoalloxazines but so are many, many other compounds. We do not think that the Karrer patent would lead one of ordinary skill in this art to select and prepare the particular compounds defined in these claims. Although it is also true that some of the specific compounds of Karrer, particularly the third compound in our table, supra, are structurally rather similar to the compounds defined in claims 5, 11 and 12, we have found as discussed supra, that there is a significant difference in properties between appellants' compounds and Karrer's compounds. It is this same difference which we found between the claimed compound and the prior art compound in *In re Lambooy*[13] and the following statement from that opinion is also applicable here:

> There is no evidence *in the record* which would lead one skilled in this art to expect that the differences in molecular structure between riboflavin and appellant's compound would cause this difference in properties. The former compound is a vitamin, the latter an antivitamin; the former is a metabolite, the latter an antimetabolite; the former acts to promote the well-being of the animal, the latter acts to its detriment. We find it difficult to conceive of a better example of a difference *in kind* than is presented in this case and we also find *in view of this record* that this difference was unexpected and unobvious.

As in *Lambooy*, there is no evidence in the record of the instant case which would teach one of ordinary skill in this art that the differences in molecular structure between Karrer's specific compounds and the compounds of claims 5, 11 and 12 would cause this difference in properties. Indeed, the *similarities* in molecular structure between the claimed compounds and the prior art compounds here would lead one skilled in this art to assume or predict that *both* groups of compounds would have the *same* properties, i.e., riboflavin activity, rather than antithetical properties. *In re Henze*, supra. For this reason, we think Karrer leads one away rather than toward compounds with antimetabolite properties.

[4] We do not agree with the Board that the unexpected properties of the compounds defined in claims 5, 11 and 12 should not be considered in determining the patentability of these claims. The compounds are not *described* in Karrer within the meaning of 35 U.S.C. 102(b). In determining whether the claimed compounds are *obvious* within the meaning of 35 U.S.C. 103, we think their properties may and should be considered, and having considered the properties, we are convinced the compounds defined in claims 5, 11 and 12 are patentable over Karrer. For these reasons, we reverse

[11] See footnote 5.
[12] Appellants' brief.
[13] See footnote 3.

the decision of the Board as to claims 5, 11 and 12. [5] In summary the decision of the Board is affirmed as to claims 1, 2, 4, 7 and 10 and reversed as to claims 5, 11 and 12.

MODIFIED.

U.S. Court of Customs and Patent Appeals

IN RE ANDREW ALFORD

No. 6757. Decided April 13, 1962. Petition for rehearing denied June 8, 1962

[49 CCPA—; 300 F.2d 929; 133 USPQ 281]

1. PATENTABILITY—35 U.S.C. 103—OBVIOUSNESS—EVIDENCE—IMPROVED RESULT—*Loom Company* v. *Higgins* AND *In re Ratti* CONSTRUED.

"Relying on *Loom Company* v. *Higgins*, 105 U.S. 580 and *In re Ratti*, 46 CCPA 976, 270 F.2d 810, 123 USPQ 349, appellant appears to take the position that the production of a new or improved result, rather than unobviousness, is the criterion to be applied to a rejection on a combination of references. However, these decisions, rendered more than seventy-five years apart, actually demonstrate, consistently with 35 U.S.C. 103 that unobviousness is a requirement for patentability and that the results attained amount only to evidence which may be pertinent to the determination of whether that requirement is met."

2. SAME—INVENTION—OBVIOUSNESS—TESTS OF EFFECTIVENESS.

"In 1950, the Espley, Salisbury and Garfitt patents has all recently become available to the public. A person or ordinary skill in the art, with the objective of providing a coaxial coupler for use in the range of frequencies here involved, would have found in Garfitt a suggestion that a disc type joint, as well as a sleeve type joint, could be used to reduce energy leakage or radiation from the separated outer conductor, such as the outer conductor of the Espley or Salisbury coupler. There being no disclosure in Garfitt that either one of these joints is more effective than the other in reducing leakage, it is our opinion that it would have been obvious to construct a coupler using each of the outer joints disclosed by that reference and make comparative tests of leakage to determine which construction was most effective for the purpose at hand. Upon the tests showing, as appellant's report indicates they would, that the coupler with the disc joint permits less leakage, it would be obvious for the worker to choose that construction. As a matter of fact, the tests that appellant did make had that effect."

3. SAME—SAME—SAME—INHERENT RESULTS.

"It is not disputed that the substitution of the quarter wavelength disc joint of Garfitt for the quarter wavelength sleeve joints in the outer conductors of the couplers of the basic references results in a coupler of the construction defined in the claims on appeal. The structure which is obvious from the prior art thus would * * * inherently provide the same results and properties as the device claimed by appellant."

4. SAME—SAME—SAME—COMPARATIVE TESTS.

"Although the affidavit and exhibit, by which appellant states the 'new and unexpected results of the claimed invention are established,' report measurements of the standing wave ratio of a coupler having a flange type joint, they do not provide a comparison with any other structure. Such measurements obviously fail to establish superiority as to that characteristic."

5. SAME—SAME—SAME—MATTER NOT DISCLOSED IN APPLICATION.

"Appellant also argues that a disc joint permits the use of a wider gap. That argument is not significant since the application does not disclose a particular gap width or that this width should be greater than in a sleeve type joint."

6. PATENTABILITY—PARTICULAR SUBJECT MATTER—"COAXIAL CHOKE COUPLER."

The refusal of certain claims in an application entitled "Coaxial Choke Coupler" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 596,930.

AFFIRMED.

Charles Hieken and *Ezekiel Wolf*, *Wolf & Greenfield* for appellant.

Clarence W. Moore (*D. Kreider* and *George C. Roeming*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the action of the Primary Examiner in refusing to allow claims 19, 20 and 22 of application Serial No. 596,930, filed July 10, 1956, entitled "Coaxial Choke Coupler." Claim 21, the only other claim in the application, was allowed by the Examiner.

Claim 19 is representative of the appealed claims and reads as follows:

19. A coaxial choke coupler for transmitting high frequency energy over a band in the range from 100 megacycles to 5000 megacycles about a mean frequency, said coupler comprising, coaxial inner and outer conductors, inner and outer insulating sections in said inner and outer conductors respectively, said sections dividing each conductor into first and second portions, said inner conductor insulating section being coextensive with the first and second portions of said inner conductor along the axis common to said conductors for a distance substantially equal to a quarter wavelength for energy in said center conductor insulating section of said mean frequency, said outer conductor having a pair of opposed spaced flanges at adjacent ends of said first and second portions thereof extending radially outward from an orthogonal to said common axis, said outer conductor insulating section being a thin annular disk orthogonal to said common axis with opposite sides in contact with both opposed faces of said spaced flanges for a radial distance substantially equal to a quarter wavelength for energy in said outer conductor insulating section at said mean frequency.

Appellant's application discloses a coaxial choke coupler for connecting two coaxial cable sections to transmit electrical energy therebetween at high frequencies of an order of 100 megacycles to 5000 megacycles. In connection with high frequencies, it is disclosed that the coupler operates with slight leakage and a minimum of impedance between the line sections. The application states:

The device of the present invention may have many uses, as for instance in mounting a high, ultra high, or super high frequency transmitter on top of a low frequency insulated radio tower. In this case the problem is to transmit these very high frequencies through the tower which is insulated and maintained at potential above the ground without disturbing the existing electric system.

The coupler includes an inner conductor spaced concentrically within a hollow outer conductor with the conductors adapted for connection at each end to the corresponding conductors of one of the coaxial cable portions to be interconnected. A longitudinal or sleeve type insulating joint having a length corresponding to a quarter wavelength at the mean or average frequency to be transmitted is interposed midway in the inner conductor of the coupler. Interposed in the outer conductor is a radial or disc type insulating joint comprising two opposed disc members which extend orthogonally outward in spaced insulated relationship. The radial distance that the discs extend from the outer conductor portions is made equal to approximately a quarter wavelength at the mean frequency of the energy to be transmitted.

The application also discloses a modified construction referred to as a three stage coupler. That structure does not require description here since the additional features it involves are not recited in the claims on appeal.

The references relied on are:

Espley, 2,401,344, June 4, 1946.
Salisbury, 2,451,876, October 19, 1948.
Garfitt (British), 598,375, February 17, 1948.

The Espley patent discloses a coaxial coupler for transmitting high frequency energy between two coaxial cable portions. Joint sections are interposed in both the inner and outer conductors of the coupler. The joint in the inner conductor is of the longitudinal type and is described as being a quarter wavelength in length. The joint in the outer conductor comprises a longitudinal sleeve section formed by an end portion of increased diameter coaxially surrounding the other end portion over a length corresponding to a quarter of a wavelength.

The Salisbury patent discloses a high frequency coaxial line coupler which, like that of Espley, utilizes sleeve type joints of a quarter wavelength in both the inner and outer conductors.

The British patent to Garfitt relates to a coupler for connecting two wave guide portions which are relatively offset or are arranged for relative angular movement. The coupler comprises a continuous central conductor having an end extending into the interior of each of the wave guide portions and an outer conductor which is separated into two sections and disposed concentrically about the central conductor between the surfaces of the wave guide portions. It is stated in the patent that the central conductor, "instead of being supported inside the outer conductor by spacers of solid dielectric material as is usual in the coaxial cable type of feeder," is supported by a rectangular metal plate or septum secured to the inside of the outer conductor.

The construction of the outer conductor of Garfitt is described as follows:

> The outer conductor of the feeder arrangement 3 is split transversely into two coaxial parts 3' and 3'' at a point clear of the septum 7, the parts 3' and 3'' being fixed respectively to the waveguide portions 1 and 2. A capacity joint 8 is provided between the adjacent ends of the parts 3' and 3'' *to reduce energy leakage*. This may be of either of the forms illustrated in section in FIGURES 2 and 3. The spacing of the overlapping parts may be about 1 mm. and the length of the passage between them equal to about one quarter of a wavelength (of the transmitted energy in air). [Emphasis ours.]

FIGURE 2, referred to in the quotation, shows a longitudinal or sleeve type joint in the outer conductor. FIGURE 3 shows a radial or disc type joint such as is employed in appellant's coupler.

The Examiner rejected the claims on the ground that use of a disc type coupling or joint in place of the sleeve type joint in the outer conductor of the coaxial couplers of Espley and Salisbury would be obvious to one skilled in the art in view of Garfitt's showing of sleeve and disc type joints as alternatives for use in the outer conductor of his coupling device. In connection with that holding, the Examiner stated:

> Applicant's device and the references of record are all concerned with the passage of energy without substantial radiation. The inner conductor by its use of the quarter wavelength sleeve joint will appear as a solid conductor for the band of frequencies to be passed. Although the inner conductor of Garfitt is solid, its teaching of the alternative use of sleeve or disc coupling for the outer conductor is not impaired since the inner conductors of the primary references can also be considered as a solid conductor for the band of frequencies involved. Although Garfitt will not provide D.C. or low frequency isolization [isolation] both Espley and Salisbury will, and the rejection has been made on the combination of these references. It will be noted * * * that the couplings of Garfitt are used to reduce "energy leakage" or radiation.

It was further stated by the Examiner that:

> The contention that the combination produces a new and unexpected result is not considered persuasive since the result set forth by applicant is inherent in the obvious combination of the references and hence does not confer patentability on the claimed combination. * * *

In affirming the Examiner's rejection, the Board stated:

> In our opinion the substitution of a radial type joint such as shown in FIG. 3 of Garfitt for the joints of the basic references would [be] obvious to one skilled in the art, since Garfitt teaches the interchangeable use of the longitudinal and radial choke joints for preventing radiation losses in a coaxial choke coupler.

Appellant concedes that "the change made * * * in modifying a prior art coaxial choke coupler having sleeve joints in the inner and outer conductors to include a disc line joint instead of the sleeve joint in only the outer conductor is but a slight change mechanically." He contends, however, that his coupler is not obvious under 35 U.S.C. 103, urging in support of the contention that the coupler provides new and unexpected results.

[1] Relying on *Loom Company* v. *Higgins*, 105 U.S. 580 and *In re Ratti*, 46 CCPA 976, 270 F.2d 810, 123 USPQ 349, appellant appears to take the position that the production of a new or improved result, rather than unobviousness, is the criterion to be applied to a rejection on a combination of references. However, these decisions, rendered more than seventy-five years apart, actually demonstrate, consistently with 35 U.S.C. 103, that unobviousness is a requirement for patentability and that the results attained amount only to evidence which may be pertinent to the determination of whether that requirement is met.

Referring to the present case, appellant states:

> The new and unexpected results of the claimed invention are established by the affidavit * * * and accompanying Exhibit 1 * * *.

That exhibit, which reports tests said to have been made in 1950 under appellant's guidance, includes a graph comparing leakage losses of a coaxial choke coupler having a disc joint in its outer conductor and a sleeve joint in its inner conductor with the losses of a coupler having sleeve joints in both its inner and outer conductors. Although the Examiner and the Board have questioned the significance of a comparative test between these two devices, they do not dispute appellant's contention that the graph indicates that the tested device having a disc joint in its outer conductor had less leakage loss than the tested device using a sleeve joint in the outer conductor.

In referring to that exhibit, appellant's attorney asks:

> Would a man of his stature have an engineering report prepared back in 1950 describing the differences in results between his invention and a comparable prior art device involving tedious careful measurements unless his sincere expert opinion was that the differences in results were unpredictable and at that time unexplainable?

[2] Although appellant's reason for having the report prepared is not itself material, we think that his attorney's query leads to consideration of the factors which are determinative of the controlling issue here. In 1950, the Espley, Salisbury and Garfitt patents had all recently become available to the public. A person of ordinary skill in the art, with the objective of providing a coaxial coupler for use in the range of frequencies here involved, would have found in Garfitt a suggestion that a disc type joint, as well as a sleeve type joint, could be used to reduce energy leakage or radiation from the separated outer conductor, such as the outer conductor of the Espley

or Salisbury coupler. There being no disclosure in Garfitt that either one of these joints is more effective than the other in reducing leakage, it is our opinion that it would have been obvious to construct a coupler using each of the outer joints disclosed by that reference and make comparative tests of leakage to determine which construction was most effective for the purpose at hand. Upon the tests showing, as appellant's report indicates they would, that the coupler with the disc joint permits less leakage, it would be obvious for the worker to choose that construction. As a matter of fact, the tests that appellant did make had that effect.

Appellant argues that the matter of maintaining low leakage is not the only problem associated with coaxial choke couplers. He states in his brief:

> In its decision affirming the Examiner, the Board of Appeals discussed only one of the problems associated with coaxial choke couplers, the problem of maintaining low leakage radiation from the exposed gap in the outer conductor * * *. The Board did not discuss the problem of maintaining a low VSWR[1] over a wide bandwidth in the high frequency range while intercoupling both the inner conductors and the outer conductors by a low effective series capacity (low capacity presents high impedance at low frequencies) to effectively isolate the two coaxial transmission lines, intercoupled by the invention, at low frequencies * * *.
>
> * * * * * * *
>
> We recognize and have always conceded that a disc line quarter wavelength choke joint is old. Its property of presenting a low impedance between conductors that it intercouples has long been recognized as the equivalent of the same property of a quarter wavelength sleeve joint. But the properties of a disc line joint different from those of a sleeve joint *not* recognized in the prior art are that it will radiate less leakage power with a wider gap while still coacting with an inner conductor sleeve joint to provide a coaxial choke coupler with a low VSWR over a wide bandwidth.

We do not find appellant's contentions to indicate error in the Board's decision. [3] It is not disputed that the substitution of the quarter wavelength disc joint of Garfitt for the quarter wavelength sleeve joints in the outer conductors of the couplers of the basic references results in a coupler of the construction defined in the claims on appeal. The structure which is obvious from the prior art thus would, as indicated by the Examiner, inherently provide the same results and properties as the device claimed by appellant.

Appellant's arguments concerning maintenance of a low standing wave ratio are not persuasive for another reason also. [4] Although the affidavit and exhibit, by which appellant states the "new and unexpected results of the claimed invention are established," report measurements of the standing wave ratio of a coupler having a flange type joint, they do not provide a comparison with any other structure. Such measurements obviously fail to establish superiority as to that characteristic.

[5] Appellant also argues that a disc joint permits the use of a wider gap. That argument is not significant since the application does not disclose a particular gap width or that this width should be greater than in a sleeve type joint.

[6] The decision of the Board is affirmed.

AFFIRMED.

[1] VSWR, not defined in the application, apparently is an abbreviation of voltage standing-wave ratio. See Radio Engineering, Terman, Third Edition, McGraw-Hill (1947), page 79, footnote 1 which reads:

> Standing-wave ratio as used here is expressed in terms of voltage (or current) and is sometimes referred to as voltage-standing wave ratio (abbreviated VSWR), to distinguish from the ratio expressed in terms of power (proportional to the square of the voltage).

Standing-wave ratio is described in Terman as a measure of the relationship of reflected and incident waves in a transmission line.

RICH, *J.* (dissenting):

Upon review of the record and the views of the Examiner and the Board of Appeals I observe what, to me, are certain fatal defects in the reasoning by which they reached the conclusion that the invention defined by the claims on appeal is unpatentable. Appellant has more than adequately pointed out these defects in his brief and, in my judgment, the brief of the Patent Office Solicitor, thereafter filed, either failed to answer them or avoided discussion of them.

The situation as it appears to me is this:

Alford, a man of great skill and experience and a recognized expert in the radio field, by making what appears through hindsight to be a relatively simple mechanical change, combined certain features old in this art to obtain improved electrical results and advantages.

The principal alleged advantage, constantly reiterated in the application, is reduction in leakage of radiation from already known coaxial choke couplers used in coaxial lines for transmitting high to very high radio frequencies. As Alford's brief points out, coaxial choke couplers were "conventional," they couple high frequency energy from one coaxial line to another while insulation separates both the inner and outer conductors of one line from those of the other. Such couplers had insulated *sleeve* joints in the inner *and outer* conductors and it was also known to make the sleeves of a length corresponding to a quarter wavelength, for the mean wavelength of the frequency band to be conducted, for reasons well known to the art. This is no part of the invention.

As Alford's brief frankly states, it was also known at the time he made his invention, and as shown by the Garfitt British patent, to use annular disc or flange capacity (i.e. separated and insulated) joints of quarter wavelength dimension in coupling hollow tubes used as wave guides to conduct oscillatory electromagnetic energy at ultra-high frequencies. Garfitt shows such a disc joint *and he also shows a sleeve joint* and that their dimension is a quarter wave length; and he says that the reason one uses such a joint (either sleeve or disc) is "to reduce energy leakage." The important thing to notice about the Garfitt disclosure is, however, that his teaching is that *so far as minimizing leakage is concerned, it doesn't make any difference which kind of joint you use.*

Now Alford was not just inventing joints. What he was trying to do and in fact did was to design a coaxial choke coupler with reduced radiation leakage—*less* leakage than is present in the conventional coaxial choke couplers with two sleeve joints.

The invention which he made and is claiming in the claims on appeal is a *new combination*, not a flange joint. The combination is a coupler with all the known features of coaxial choke couplers such as inner and outer conductors and spacing filled with insulation and joints of quarter wave length dimensions *but* wherein the inner conductor joint or coupling is a sleeve joint and the *outer* tubular conductor *joint is a disc or flange joint.* This *combination* was unknown to the art. It is the combination which produces the improved results.[1] The two coaxial coupler references show sleeve joints in both

[1] In truth this would appear to be something of an oversimplification since a full explanation of *why* there is an improvement in the radiation leakage situation requires going into much greater detail such as that set forth in the 5 printed pages of the Alford affidavit exhibit and its accompanying illustrations and graphs. It appears to me that it was Alford's contribution to the art, as appears from that exhibit, that "Disc line couplers have lower radiation for a given value of low-frequency capacitance." I find no suggestion of this phenomenon in the prior art of record, but rather a contrary indication.

conductors. Garfitt shows a joint in the outer tubular wave guide which can be either sleeve or disc—with no reason for preferring either—and no joint whatever in his inner conductor, since he does not have the kind of a coaxial *choke* coupler with which Alford is concerned.

Viewed by hindsight, and as a mere mechanical construction, the new combination may appear to be a slight change and one which would perhaps be of no significance to the art *but for the fact that it produces advantageous results which the prior art does not suggest could be achieved by the change made.*

Alford invented a coaxial choke coupling that reduced radiation leakage loss by combining old elements *in a new way* which the art did not suggest doing. At least in my view of the matter the art did not suggest doing it. The majority would perhaps say, with the Patent Office, that Garfitt suggests doing it but I challenge such a view. The art was already using outer conductor sleeve joints in choke couplings. Garfitt shows both sleeve and disc couplings and says, in effect, that if they are quarter wave length *they both reduce leakage equally well.* So clearly this patent contains no suggestion to use a disc coupling in place of a sleeve joint in the outer conductor of a choke coupling to reduce leakage further than it has already been reduced (or, more accurately, minimized) by the use of the supposedly equally good sleeve joint.

Challenged with the proposition that the substitution was obvious, Alford countered with the time-honored answer that even if it appeared so on its face it nevertheless resulted in a *patentable* invention since the advantages produced were substantial and unpredictable, establishing them by affidavit evidence. I have no doubt that under a long line of cases in this court, as well as in other courts, such proof with respect to an admittedly new combination would have been found acceptable to establish patentability prior to 1952, when the requirement of "invention" was put into the statute, 35 U.S.C. 103, in terms of what would be unobvious to one of ordinary skill in the art at the time the invention was made. *In re Holt*, 34 CCPA 1129, 162 F.2d 472, 74 USPQ 155. Since section 103 clearly was not included in the statute for the purpose of making it more difficult for the inventors of new combinations to obtain patents on their inventions which produce new, unexpected, and advantageous *results* which would (by virtue of unexpectedness) not have been obvious, I can see no reason for ignoring established case law. A casual perusal of the legislative history of section 103 will show that the intent was that it should have exactly the opposite effect it is being given in this case.

The majority appears to accept the adequacy of Alford's evidence of advantages, saying:

> Although the Examiner and the Board have questioned the *significance* of a comparative test between these two devices [the prior art coupler with inner and outer sleeve joints and applicant's coupler], *they do not dispute appellant's contention * * * that the tested device having a disc joint in its outer conductor had less leakage loss* than the tested device using a sleeve joint in the outer conductor. [My emphasis.]

The majority proceeds from an examination and apparent acceptance of appellant's contention to the following conclusion, which I regard as wholly unjustified on the record before us:

> A person of ordinary skill in the art, with the objective of providing a coaxial coupler for use in the range of frequencies here involved, would have found in Garfitt a suggestion that a disc type joint, as well as a sleeve type joint, could be used to *reduce* energy leakage or radiation from the separated outer conductor, *such as the outer conductor of the Espley or Salisbury coupler.* There being no disclosure in Garfitt that either one of these joints [sleeve or disc] is more effective than the other in reducing leakage, it is our opinion that *it would have been obvious to construct* a coupler using *each* of the outer joints disclosed by that reference *and make comparative tests* of leakage *to determine* which construction was the most effective for the purpose at hand. Upon tests showing, as appellant's report [the affidavit evidence] indicates they would, that the coupler with the disc joint permits less leakage, *it would be obvious* for the worker *to choose* that construction. As a matter of fact, the tests that appellant did make had that effect. [My emphasis.]

The point I want first to emphasize in this rather cart-before-the-horse analysis of the situation is that, by the majority's own reasoning, the point at which it became *obvious* what the construction of the coupler *should* be was at the very end of a considerable piece of research consisting of deciding to build *two* different couplers, building them, testing them, and determining which was best. It is usually thought that it is the purpose of the patent system to encourage such research, not to deprive people of patents because they have carried it on successfully.

The next point is, that by the majority's own admission, the Garfitt patent does *not* suggest that a disc joint is any more effective in minimizing leakage of radiation than a sleeve joint. Since the art already had sleeve joints in coaxial choke couplers, inside and out, there is absolutely no suggestion in Garfitt to change that construction, and *it is on the basis that such a suggestion exists* that the Patent Office rejected the claims on a combination of either Espley or Salisbury with Garfitt.

In any case, the majority approach to the problem nullifies the rule of law which has long been followed that the seeming obviousness of a combination, or a product, can be overcome by proof of unexpected advantageous results and the majority never denies the existence of such results in this case. Bypassing case law, the majority rests its decision on section 103, which was intended to aid the discoveries of such new and unexpected results. First it finds the *structure* obvious and then ignores the advantageous unexpected properties, as of any legal significance whatever, by saying that the structure would "inherently provide the * * * results and properties." The codification of the former requirement of "invention" in section 103 was not intended to effect a substitution for one of the oldest positive indicators of the presence of patentable subject matter, namely, proven unexpected technical advantages, of the a priori judgment of non-technical courts as to the seeming obviousness to them of highly refined scientific instruments and devices.

In voicing this theory of obvious structure with "inherent" advantages—advantages which are to be ignored in deciding the issue of patentability—the majority is uncritically accepting the theory first propounded by the Examiner who said:

> The contention that the combination produces a new and unexpected result is not considered persuasive since the result set forth by applicant is *inherent in the obvious combination of the references* and hence does not confer patentability on the claimed combination. [My emphasis.]

What he meant, of course, was that the advantages, the existence of which he did not deny, were inherent *in applicant's claimed invention* which, in his view, would have been obvious over the references as he combined them in making the rejection. In other words, he too

ignored the advantages. In fact he said in his answer that "this improvement * * * has no bearing on the rejection of the instant case which is on a combination of references," which is something of a non sequitur.

As to this combination-of-references rejection and the significance of the affidavit proof, the Board had a different idea. It said, "assuming *arguendo* that the affidavit establishes that the instant joint in the external cylindrical conductor is less lossy than the joint in the outer conductors of either Salisbury or Espley," the comparative test should have been made "between the instant device and the device of Garfitt; or Salisbury or Espley modified in the light of Garfitt." In the absence of such data, the Board expressed its intention to ignore the tests.

As to making a comparative test with Garfitt on radiation loss, I can see no possibility of this because Garfitt does not have a coaxial choke coupler at all, nor a coaxial transmission line.

As to the suggested comparison between the claimed coupler and the coupler of either *Salisbury of Espley modified in the light of Garfitt*, this is foolishness. As appellant's brief points out in Point III, it "is nothing more than a requirement to compare the results of the invention with the results of the invention."

Whatever the rationalizations behind the various refusals in this case to take into consideration the unexpected advantageous results and give them legal effect, such refusal is contrary to long and well established law.

This is, in my opinion, a clear case for reversal.

SMITH, *J.* (dissenting):

I am unable to agree with the conclusion reached by the majority, that since appellant's invention appears to be a *structurally* simple device, it is no more than an obvious combination of old elements. We should judge such a combination by the purpose which dictated its creation. *Traitel Marble Co.* v. *U. T. Hungerford Brass & Copper Co.*, 18 F.2d 66 (CCA 2d), cert. denied, 274 U.S. 753.

Appellant's purpose in making the new combination embodying his invention was to meet the need for a coaxial choke coupler with less radiation leakage than couplers previously known while maintaining a low VSWR [1] in the coupler. Appellant succeeded in doing this by creating a new combination of individually old elements. What we are here concerned with is not these elements per se but rather with the new *combination* of those elements which, as shown by appellant's affidavit and the exhibit thereto, produces results of a magnitude which was unexpected from the prior art teachings.[2]

The majority, in finding appellant's invention structurally obvious over the prior art, seems to me to have ignored the unexpected results achieved by appellant's new combination of elements. It is only *after* appellant's concept becomes known that his solution to the problems he encountered may appear to have been obvious. Only when viewed *after* appellant's concept had been embodied in the claimed structural combination, is it possible to see it as an obvious combination of the old elements shown in the references.

[1] I am here using this term in the sense and with the meaning ascribed to it in the majority opinion, i.e., "voltage standing-wave ratio."

[2] I refer here to the teachings that sleeve and radial disc joints have equal effect in minimizing radiation leakage.

In *Loom Company* v. *Higgins*, 105 U.S. 580, 591, the Supreme Court in commenting on a comparable situation said:

> * * * At this point we are constarined to say that we cannot yield our assent to the argument, that the combination of the different parts or elements for attaining the object in view was so obvious as to merit no title to invention. Now that it has succeeded, it may seem very plain to anyone that he could have done it as well. This is often the case with inventions of the greatest merit. It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produce a new and beneficial result, never attained before, it is evidence of invention. It was certainly a new and useful result to make a loom produce fifty yards a day when it never before had produced more than forty; and we think that the combination of elements by which this was effected, even if those elements were separately known before, was invention sufficient to form the basis of a patent.

35 U.S.C. 103 recognizes the doctrine of the *Loom Company* case, and to forestall the use of hindsight in testing the obviousness of the invention requires that patentability must be decided as of *the time the invention was made.* When thus considered, appellant's combination would not, it seems to me, have been obvious to one of ordinary skill in the art. I have been unable to find any teaching in the cited prior art from which I am willing to conclude that appellant's invention was obvious to one of ordinary skill in the art, or which would suggest to such a person that he should take the course taken by appellant in producing his novel combination.

The Examiner and the Board would avoid the effect of appellant's affidavit and exhibit which show the surprisingly superior results achieved by appellant's coaxial coupler, for the reason that they do not show comparative radiation loss tests with the Garfitt device. Garfitt, it seems to me, discloses nothing but a coupling for hollow tubes used as wave guides. It is not a coaxial coupler of the type disclosed by appellant.

The Espley and Salisbury references, like the claimed invention, require insulating sections in series with *both* inner and outer conductors in order to function as a *coaxial transmission line.* The Garfitt reference, while it discloses a conducting septum, uses this septum to *short circuit* the inner conductor to the outer conductor, and thus functions as a *rectangular waveguide.*

While the low impedance of a disc line quarter wave length choke joint between two conductors was recognized in the art, its coaction with an inner conductor sleeve joint to provide a coaxial choke coupler with low VSWR over a wide band width cannot be shown by comparative test with Garfitt unless Garfitt is first modified, in the manner taught by appellant, so that it can function as such a coaxial choke coupler. I agree, therefore, with appellant's view set forth in the dissenting opinion of Judge Rich that this requirement "is nothing more than a requirement to compare the results of the invention with the results of the invention."

I also am unwilling to approve, as of the time appellant's invention was made, the suggestion made by the Board that the couplers shown in Salisbury and Espley could be modified by the Garfitt device. This modification, it seems ot me, was first suggested in this art by appellant.

I agree with Judge Rich that the majority's conclusion is inconsistent with the long established law in this court and elsewhere regarding the patentability of new combinations of old elements which produce results as unexpected as those which are reported in the

record here. I am unable to reconcile the holding of the majority here with the principles I find in a long line of cases including *Loom Company* v. *Higgins*, supra, *The Barbed Wire Patent*, 143 U.S. 275, 283; *Expanded Metal Co.* v. *Bradford*, 214 U.S. 366, 381; *In re Mc Kenna et al.*, 40 CCPA 937, 203 F.2d 717, 97 USPQ 348, and *In re Holt*, 34 CCPA 1129, 162 F.2d 472, 74 USPQ 155.

I would, therefore, reverse the decision of the Board.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,177,568, J. M. Johnson, Paving compositions; **2,317,959**, J. M. Johnson et al., Bituminous composition; **2,386,867**, J. M. Johnson, Bitumen treating agent; **2,419,404**, same, Method for higher fatty acid polyamine soaps; **2,426,220**, same, Bituminous composition having increased adhesion to mineral aggregate; **2,438,318**, same; **2,514,954**, J. M. Johnson et al., Surface active composition and method of making, **filed** June 5, 1956, D.C., S.D.N.Y., Doc. 110/153, *Carlisle Chemical Works, Inc.* v. *Maguire Industries, Inc. et al.* Stipulation and order of dismissal Feb. 3, 1960.

2,317,959. (See 2,177,568.)

2,386,867. (See 2,177,568.)

2,410,793, Winnek and Roblin, Jr., Sulfonamido pyrimidines, **filed** Aug. 22, 1961, D.C.N.J. (Newark), Doc. 698/61, *American Cyanamid Company* v. *Lit Sales Company et al.* Consent judgment; injunction granted May 18, 1962. **Same, filed** June 1, 1962, D.C., S.D.N.Y., Doc. 62/1982, *American Cyanamid Company* v. *American Roland Corporation*.

2,419,404. (See 2,177,568.)

2,426,220. (See 2,177,568.)

2,438,318. (See 2,177,568.)

2,498,333, W. Faulkner, Phonograph record holding spindle; **2,801,109**, J. E. Vistain, Jr., Phonograph record player; **2,983,515**, same, Automatic record player; **3,027,497**, R. C. Carlson et al., Electro-mechanical remote control system, **filed** Apr. 30, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40/694, *Admiral Corporation* v. *Sears, Roebuck & Co.*

2,514,954. (See 2,177,568.)

2,563,794, Rickes and Wood, Vitamin B_{12}; **2,703,302**, same, Vitamin B_{12}-active composition and process of preparing same, **filed** May 18, 1962, D.C., E.D. Pa. (Philadelphia), Doc. 31467, *Merck & Co., Inc.* v. *Richlyn Laboratories, Inc.* **Same, filed** May 2, 1962, same, Doc. 31382, *Merck & Co., Inc.* v. *Vitamix Pharmaceuticals, Inc.*

2,563,794(a), Rickes and Wood, Vitamin B_{12}, **filed** May 7, 1962, D.C.P.R. (San Juan), Doc. 201/62, *Merck & Co., Inc.* v. *Dianovin Pharmaceutical, Inc.*

2,587,040, E. H. Green, Spray nozzles; **2,913,154**, C. O. Kuffer, Aerosol valve assembly; **2,777,735**, E. H. Green, Aerosol dispenser (included by counterclaim Mar. 6, 1961), **filed** Jan. 6, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c44, *Aerosol Research Company* v. *Newman-Green, Inc. et al.* Consent judgment; patents held valid; complaint and counterclaim dismissed with prejudice May 7, 1962.

2,589,242, Glaser and Hornung, Elevator dispatching and control system, **filed** May 13, 1958, D.C., S.D. Tex. (Houston), Doc. 11/830, *Otis Elevator Company* v. *State Elevator Company, Inc.* Order of dismissal without prejudice May 17, 1962.

2,609,653, T. F. Peterson, Helically-preformed elements on stranded line; **2,761,273**, same, Dead end for cables, **filed** Oct. 29, 1956, D.C., N.D. Ohio (Cleveland), Doc. 33196, *Preformed Line Products Co.* v. *The Fanner Manufacturing Co.* Order holding both claims of Patent 2,609,653 invalid and plaintiff's claim of infringement thereof dismissed; Patent 2,761,273 held valid and claims 1, 3, 5, 6 and 8 through 15 held infringed; defendants enjoined; defendants counterclaim dismissed May 17, 1962.

2,621,101, B. Cooper, Toll collection transaction printer; **2,622,138**, same, Toll checking systems; **2,672,393**, same, Treadle controlled toll checking system; **2,736,630**, same, Toll checking system, **filed** May 13, 1960, D.C., S.D.N.Y., Doc. 60/1964, *American Electronics, Inc.* v. *Neptune Meter Company et al.* Stipulation and order of dismissal including complaint and counterclaim May 1, 1962.

2,622,138. (See 2,621,101.)

2,656,508, W. H. Coulter, Means for counting particles suspended in a fluid; **2,869,078**, W. H. Coulter et al., Fluid metering apparatus, **filed** Feb. 9, 1960, D.C., S.D.N.Y., Doc. 60/540, *Coulter Electronics Inc.* v. *Schueler & Co. et al.* Consent judgment; defendants enjoined July 28, 1961.

2,672,393. (See 2,621,101.)

2,682,839, I. J. Filler, Corn dough processing machine; **2,938,474**, same, Dough-processing machine, **filed** Mar. 12, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c16, *Filler Products, Inc.* v. *E. J. McCleary et al.*

2,687,994, Russell and Headland, Method of forming an oxide coating on tin; **2,724,526**, J. J. Russell et al., Tin plate baking pan; **2,738,897**, same; **2,771,410**, same, Method of forming an oxide coating on tin; **2,773,817**, same, Composite metal and articles thereof; **2,801,604**, same, Processed drawn implement, **filed** May 13, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c849, *The Ekco Products Co., Inc.* v. *Chicago Metallic Manufacturing Company*. Claims 1 and 5 of Patent No. 2,687,994, claims 1 and 2 of Patent No. 2,724,526, claims 1–5 and 8–9 inclusive of Patent No. 2,773,817 and claims 1–4 inclusive of Patent No. 2,801,604 held invalid; even if valid claims as stated held not infringed by defendant; action dismissed for want of equity Mar. 28, 1962.

2,689,131, D. E. Priest, Tool with shank and removable blade, **filed** May 15, 1962, D.C.R.I. (Providence), Doc. 2945, *Parker Manufacturing Company* v. *Coats Field Shoppers' World.*

2,703,302. (See 2,563,794.)

2,705,553, J. E. Thomson, Typewriter construction, **filed** May 21, 1962, D.C., S.D.N.Y., Doc. 62/1824, *Louis Marx & Co., Inc.* v. *Henry Katz, Inc.*

2,724,526. (See 2,687,994.)

2,736,630. (See 2,621,101.)

2,738,897. (See 2,687,994.)

2,761,273. (See 2,609,653.)

2,771,410. (See 2,687,994.)

2,773,817. (See 2,687,994.)

2,777,735. (See 2,587,040.)

2,784,394, G. L. Borell, Compensated relay and control system, **filed** May 10, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c969, *Economics Laboratory, Inc.* v. *Counsel Laboratories.*

2,790,098, E. Nyyssonen, Polyphase synchronous machine; **2,790,131**, same, Polyphase transformer system, **filed** May 2, 1962, D.C. Mass. (Boston), Doc. 62/318–W, *Einard Nyyssonen* v. *Bendix Corporation et al.*

2,790,131. (See 2,790,098.)

2,793,286, T. A. Stiffel, Lighting fixtures; **Des. 180,251**, same, **filed** June 16, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1067, *The Stiffel Company* v. *Sears, Roebuck & Co.* Claims of both patents held invalid; defendant enjoined; complaint dismissed; defendant's counterclaim re. invalidity granted Jan. 22, 1962. Notice of appeal filed Feb. 9, 1962.

2,801,109. (See 2,498,333.)

2,802,495, T. W. Nicholson, Swiveled-scraper-plate rotary-ring log barkers; **2,802,496**, same, Barking scraper blades and mountings therefor, **filed** Apr. 14, 1962, C.C.A., 4th Cir., Doc. 8639, *Thomas W. Nicholson* v. *Carl W. Mullis Engineering & Manufacturing Co., Inc.*

2,802,496. (See 2,802,495.)

2,842,140, C. L. Otto et al., Hair curlers, **filed** June 1, 1961, D.C., W.D. Va. (Charlottesville), Doc. C.A. 74, *Taylor-Bell Co., Inc.* v. *F. W. Woolworth Company*. Order dismissing action Feb. 26, 1962.

2,869,078. (See 2,656,508.)

2,892,393, Hixon and White, Photographic print basket; **2,892,394**, same, Print basket, **filed** Dec. 19, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1940, *Rolor Manufacturing Corporation* v. *Photographic Instruments Company*. On stipulation, order dismissing cause without prejudice Dec. 15, 1961.

2,892,394. (See 2,892,393.)

2,913,154. (See 2,587,040.)

2,917,580, W. O. Stanton, Magnetic phonograph pickup, **filed** Dec. 19, 1961, D.C.N.J. (Trenton), Doc. 1085/61, *Pickering Company, Inc. et al.* v. *C. A. Clinton et al.* Consent judgment; injunction granted May 17, 1962.

2,917,904, W. W. Davis, Control for a room air conditioner, **filed** May 15, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1005, *William W. Davis* v. *Montgomery Ward & Co.*

2,931,535, W. H. Lockwood, Tierable and nestable receptacle, **filed** Apr. 25, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39091, *Warren W. Lockwood et al.* v. *Langendorf United Bakeries, Inc. et al.* Plaintiffs enjoined (notice May 10, 1962).

2,938,474. (See 2,682,839.)

2,956,708, S. R. Nusbaum, Dispensing containers for refrigerants, **filed** May 14, 1962, D.C., E.D. Va. (Richmond), Doc. 3474, *Pennco Engineering Company* v. *Allied Chemical Corporation.*

2,983,515. (See 2,498,333.)

2,025,895, A. T. Girard, Machine for producing wood particles, **filed** May 11, 1962, D.C., N.D.N.Y. (Utica), Doc. 8993, *Carthage Machine Company* v. *Arnold T. Girard.*

3,027,497. (See 2,498,333.)

Des. 180,251. (See 2,793,286.)

Des. 192,464, J. Selby, Parking canopy, **filed** May 15, 1962, D.C., E.D.S.C. (Columbia), Doc. AC–913, *John Selby* v. *Piggy Park Enterprises, Inc. et al.*

REISSUES

JULY 17, 1962

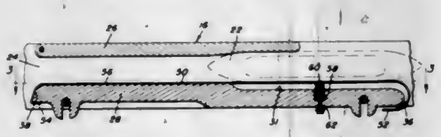
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,198
SPRING GUIDE BOX FRONT FOR LOOM SHUTTLE BOX

William B. Cathey, Centerville School Section, Anderson, S.C.

Original No. 2,948,303, dated Aug. 9, 1960, Ser. No. 663,978, June 6, 1957. Application for reissue Feb. 7, 1962, Ser. No. 173,087

7 Claims. (Cl. 139—185)



1. The combination of a loom shuttle box including an elongated back wall and an elongated front wall spaced from said back wall, said front wall having an outer end and an inner end portion projecting longitudinally beyond the corresponding inner end of the back wall, and means for guiding a shuttle into said box and resiliently urging the same against the back wall of the box, said means comprising a flat shuttle engaging leaf spring disposed at the rear surface of said front wall, said spring having a forwardly and inwardly turned outer end embracing and anchored to the outer end portion of the front wall, the inner end portion of said spring being resiliently urged away from the front wall toward the back wall, said spring having a forwardly and outwardly turned inner end loosely embracing the inner end of the front wall to permit movement of the spring toward the back wall, and said turned inner end of the spring being engageable with the front surface of the front wall to limit the movement of the spring toward the back wall.

25,199
METHOD OF CONSTRUCTING SWIMMING POOLS

Carl A. Brownell, Jr., 3123 South U.S. 23, Greenbush, Mich.

Original No. 2,887,759, dated May 26, 1959, Ser. No. 518,599, June 28, 1955. Application for reissue May 23, 1961, Ser. No. 115,853

5 Claims. (Cl. 25—155)



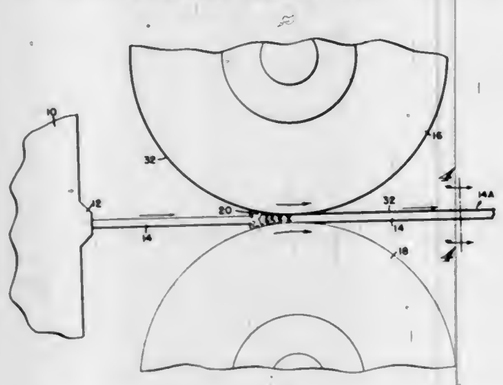
1. The process of constructing a swimming pool which comprises the steps of excavating an upwardly opening and relatively shallow, dish-shaped cavity, placing a plurality of support members within such cavity, positioning a generally dish-shaped, imperforate liner within the cavity and upon the support members with substantially equidistant spacing between the liner and the walls of the cavity, pouring a cementitious mix into the space between the liner and cavity while simultaneously introducing water into the liner, and maintaining the flow of cementitious mix and water at rates such that the volume of water in the liner is always of a weight greater than the buoyant force of the cementitious mix on the liner.

25,200
METHOD OF MAKING A COMPOSITE SHEET

Frederick A. Robinson and Glenn L. Huss, Coleman, Mich., assignors to Robinson Manufacturing Incorporated, Coleman, Mich., a corporation of Michigan

Original No. 2,815,308, dated Dec. 3, 1957, Ser. No. 452,302, Aug. 26, 1954. Application for reissue Feb. 17, 1958, Ser. No. 717,293

4 Claims. (Cl. 156—244)



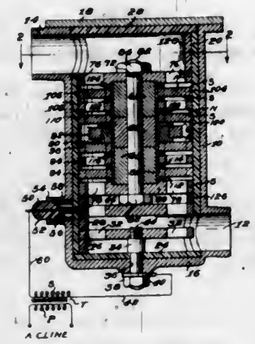
1. The process of making a composite sheet from a sheet of high impact polystyrene and a film of straight polystyrene, comprising continuously extruding a sheet of high impact polystyrene, continuously compressing a portion of said sheet throughout its width while at substantially its extrusion temperature, collecting from both sides of the sheet some of the material thereof across the width of the sheet immediately in advance of the compression area to form an inventory at substantially extrusion temperature, continuing the compression while moving the sheet and effecting a smoothing out of the inventory into the opposite faces of the sheet substantially throughout its width, and while said sheet is under compression at substantially extrusion temperature and movement thereof continued, feeding thereto and applying a preformed, deoriented, thin, highly flexible, straight polystyrene film onto the inventory on at least one face of the sheet, and compressing the film into the inventory thus forming a composite sheet of substantially the thickness of the extruded sheet, and simultaneously with such compression and movement of the sheet effecting a homogeneous weld of the film to the sheet and thus provide a hard, smooth, abrasion-resistant surface for the composite sheet.

25,201
APPARATUS FOR THE IONIZATION OF ELECTRONS OF FLOWABLE MATERIALS

Saburo Miyata Moriya and Yukichi Asakawa, both of Tokyo, Japan, assignors to International Patent Co-operation, Hong Kong

Original No. 2,926,276, dated Feb. 23, 1960, Ser. No. 817,535, June 2, 1959. Application for reissue Sept. 20, 1960, Ser. No. 57,874

10 Claims. (Cl. 313—153)



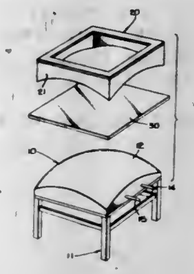
1. In a device for increasing the ionization of fluids comprising a substantially cylindrical casing having an inlet at one end and an outlet at the other end, a pair of spaced electrodes adjacent the inlet for applying an [A.C.] ionizing potential, means in said casing spaced from said electrodes, for producing an area of strong magnetic flux; said means comprising a magnet assembly including a magnetic core and a pair of spaced pole pieces and shielding means for said core; means in said flux area for producing a tortuous path for fluids passing from the inlet to the outlet.

25,202
PROCESS FOR FORMING OF STRETCHED SHEET MATERIAL

Robert J. Clapp, Downey, Calif., Morton E. Latham, Youngstown, Ohio, and John G. Stansbury, La Canada, Calif., assignors to Swedlow Inc., a corporation of California

Original No. 2,897,546, dated Aug. 4, 1959, Ser. No. 543,499, Oct. 28, 1955. Application for reissue July 22, 1960, Ser. No. 73,469

10 Claims. (Cl. 18—56)



8. A process for forming flat stretched thermoplastic sheet material of tough laminar structure into curved contours without substantial decrease in toughness and resistance to crazing and fracturing of such material, comprising the steps of mechanically forming the sheet into contact with a die at a temperature below the thermoplastic temperature of said material to a curved contour while imparting stresses therein, holding the sheet to said contour and shrinking the sheet in contact with the die by heating the sheet to a temperature sufficiently high and for a sufficient length of time to produce said shrinkage, and cooling said sheet while continuing to hold the sheet to said contour.

PLANT PATENTS

GRANTED JULY 17, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,156
PECAN PLANT

William R. Tucker, Dawsonville, Ga.

Filed Oct. 21, 1960, Ser. No. 64,231

1 Claim. (Cl. 47—62)

A new and distinct variety of pecan tree, substantially as herein shown and described, the same being a hybrid whose pollen parent was a Schley and whose seed parent was a Stuart; characterized as to novelty that the tree is scab resistant, vigorous and fast growing, with an abundance of relatively large foliage; and the nuts of which outwardly resemble Stuart but inwardly are more like Schley, and which nuts are particularly distinguished as to novelty by their unusual weight, their complete maturing and filling properties, their excellent shelling qualities, the lateness of their harvesting season; the texture, plumpness and smoothness of their kernels; their high oil content and their excellent taste.

PATENTS

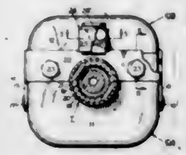
GRANTED JULY 17, 1962

GENERAL AND MECHANICAL

3,044,070
SAFETY SHIELD FOR EXPLOSIVELY-ACTUATED STUD-DRIVING TOOL

Virginius Robert Erickson, Portland, Oreg., assignor to Ammo Products, Inc., Portland, Oreg., a corporation of Oregon

Filed Jan. 30, 1961, Ser. No. 85,594
2 Claims. (Cl. 1—44.5)

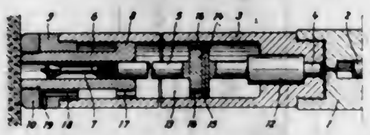


1. An adjustable shield for the muzzle end of an explosively-actuated stud-driving tool including a main part and a separate complemental part, each of said parts having a rear wall, said rear walls being contiguous and extending in the same plane when said shield is in normal arrangement, said rear walls together constituting a substantially square area when said shield is in normal arrangement with said rear walls contiguous, a peripheral wall extending forwardly entirely around the periphery of said shield, said peripheral wall divided into two complementary sections with said sections attached to said rear walls of said parts respectively and extending perpendicular to the respective rear walls, a supplemental wall on said main part extending forwardly substantially perpendicular to said rear wall of said main part and extending along that edge of said rear wall of said main part which is continuous to said complemental part when said shield is in normal arrangement, the height of said supplemental wall corresponding to the height of said peripheral wall sections, said rear wall of said main part having an aperture for receiving the muzzle of the explosively-actuated tool and for enabling said rear wall of said main part to be secured on said tool, said aperture positioned close to said supplemental wall on said main part and so located that said aperture is centrally positioned on said shield when said shield is in normal arrangement with said parts contiguous, a pair of arms extending from the ends of said peripheral wall section of said complemental part respectively, said arms overlying the end portions of said peripheral wall section of said main part respectively and pivotally connected at their outer ends with said peripheral wall section of said main part, said complemental part and said arms so mounted and arranged with respect to said main part as to enable said complemental part to be swung forwardly from its normal position adjacent said main part and then rearwardly over the end of said main part opposite said supplemental wall, releasable locking means for preventing said complemental part from swinging forwardly from its normal position with respect to said main part, and means secured on said rear wall of said main part overlying a portion of said rear wall of said complemental part when said complemental part is in normal position and thereby preventing said complemental part from being moved rearwardly from its normal position with respect to said main part.

3,044,071
EXPLOSIVE ACTUATED TOOL

Herbert Behrend, Kehler Strasse 6, Dusseldorf-Unterrath, Germany

Filed Mar. 31, 1961, Ser. No. 99,896
Claims priority, application Germany Apr. 6, 1960
6 Claims. (Cl. 1—44.5)

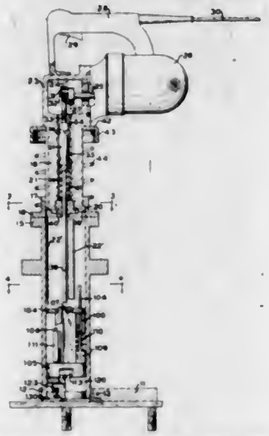


1. An explosively actuated driving tool comprising a barrel having a cartridge receiving chamber at one end, a guide bearing fixed to said barrel at the other end, a piston member slidably mounted in said barrel, said piston member having a diametrically reduced front portion, a diametrically reduced rear portion and an intermediate piston head, a combustion bore disposed forwardly of said cartridge receiving chamber and communicating therewith, said combustion bore being adapted to receive the inner end of said diametrically reduced rear portion, a guide sleeve received in said other end of said barrel and slidable axially of said piston member, the outer end of said guide sleeve being received in said guide bearing and projecting from said barrel, buffer means fixed to said outer end of said guide sleeve and adapted to engage the front of said barrel, said front portion of said piston member engaging the inner end of said guide sleeve, said guide sleeve and its buffer means being at least as long as said front portion of said piston member.

3,044,072
NAILING MACHINE

Luther J. Haynes, 183 Meadow Brook Drive, Auburn, Ala.

Filed Mar. 17, 1958, Ser. No. 721,854
8 Claims. (Cl. 1—46)



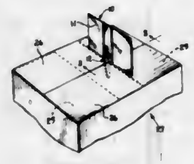
1. In a nailing machine having a chamber for receiving successive nails and a power driven hammer mechanism

for driving said nails, the combination therewith of a nail feed mechanism, said nail feed mechanism comprising a rocker pivotally mounted adjacent said chamber for pivotal movement toward and away from said chamber, a nail retaining plate carried by said rocker, said nail retaining plate having a pair of opposed fingers extending toward said chamber between which successive nails are retained, and means having a chute adjacent said plate to deliver said nails one after the other successively to said plate, said rocker being adapted when pivoted toward said chamber to position said plate at the mouth of said chute and when pivoted away from said chamber to position said fingers beneath said chute.

3,044,073
DEVICE FOR CLOSING CONTAINERS

Foster C. Law, Jr., Atlanta, Ga., assignor to Peerless Corporation, Indianapolis, Ind., a corporation of Indiana

Filed Jan. 16, 1961, Ser. No. 82,786
7 Claims. (Cl. 1—260)

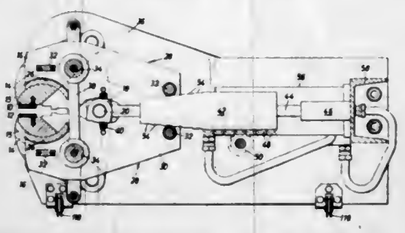


1. A flap lifter comprising a plate, an elongated tongue secured to said plate and projecting past one edge thereof, said plate having downturned pointed corners at the ends of said one edge.

3,044,074
BELT LACING MACHINES

Bernard Tebb, Swanland, and Clarence Herbert Perry, Hull, England, assignors to Mastabar Mining Equipment Company Limited, Hull, England, a British company

Filed July 1, 1960, Ser. No. 40,324
Claims priority, application Great Britain July 8, 1959
5 Claims. (Cl. 1—342)



1. A belt lacing machine comprising a frame, a pair of spaced, opposed lever means pivotally secured intermediate their ends to said frame, bearing means at the forward end of each lever means, a jaw carried by said bearing means at said forward end of each lever means, at least one generally wedge-shaped member between said opposed lever means at the rear ends thereof, said wedge member constituting a support for said rear ends, means for displacing said wedge member to vary the spacing of said rear ends and thereby vary the minimum spacing of said jaws consequent upon alteration of the spacing between the bearing means at the forward ends of said lever means, jaw-operating means for displacing said jaws in said bearing means to selectively open and close said jaws, a hydraulic cylinder, passage means at each end of said cylinder for admitting hydraulic medium thereto, a hydraulic ram slidable in said cylinder responsive to the admission of hydraulic medium thereto, means connecting said ram to said jaw-operating means for actuating said jaw-operating means responsive to displacement of said ram by said hydraulic medium, and hydraulic by-pass means operable to open a free flow path to hydraulic medium from one side of said ram to the other side thereof responsive to movement of said ram into a position in said cylinder approaching a jaw-closed condition.

3,044,075
PROTECTIVE DEVICE

John H. Rawlings, Duncanville, Tex., assignor to City Linen, Inc., Dallas, Tex., a corporation of Texas

Filed Mar. 28, 1960, Ser. No. 18,090
5 Claims. (Cl. 2—22)

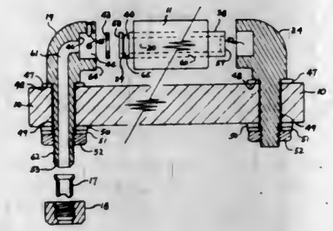


1. A protective device of the class described comprising, a stiffening core; a layer of closed cell foam plastic material secured to one side of the stiffening core; a layer of open cellular plastic material secured to the other side of the stiffening core; a layer of closed cell foam plastic material secured to the other side of the open cellular plastic material; a plastic coating about the foregoing recited assembly; and a passage through the last named closed cellular material and the plastic coating, causing communication between the outside atmosphere and the open cellular material.

3,044,076
HYGIENIC SPRAY TOILET SEAT

Arthur H. Martini, 372 Elm St., West Hempstead, N.Y.

Filed June 13, 1960, Ser. No. 35,782
3 Claims. (Cl. 4—7)



1. In a personal hygiene device associated with a toilet bowl and a toilet seat,

(*a*) a tubular pintle mounted at the rear of said seat and having portions which extend from the opposite sides of said seat, one of said extending portions having in its outer periphery an annular groove which is beveled, on the side thereof nearest the end of said one portion, toward the seat,

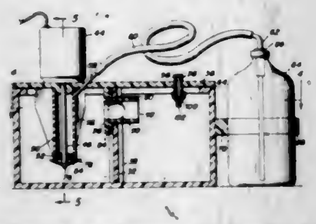
(*b*) a pair of pintle supports adapted to be mounted in fixed relation to said bowl for engaging said extending portions to pivotally support the pintle and seat for movement with respect to said bowl, the one of said supports which engages said one extending portion being hollow for conducting liquid to said pintle,

(*c*) a split contractable ring beveled complementary to said groove and mounted in said groove,

(*d*) a resilient ring gasket positioned between said one extending portion and said one of said supports to form a liquid seal therebetween, and

(*e*) means for urging said one end of said pintle into liquid sealing engagement with said gasket and said one support to provide a liquid seal during pivotal movement of the seat relative to the bowl, said urging means being carried by said one support and being disposed in non-sliding engagement with said ring for changing the diameter thereof in said groove, whereby the pintle is moved relative to said one support in response to the relative sliding movement between the beveled side of said groove and the complementary bevel of said ring.

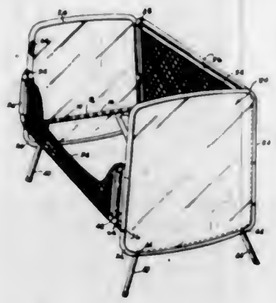
3,044,077
CHLORINATOR FOR MARINE TOILETS WITH COMBINED BEATER AND SYPHON
Perry Belden, 13A Arlene Village, Millville, N.J.
Filed July 13, 1960, Ser. No. 42,695
9 Claims. (Cl. 4—10)



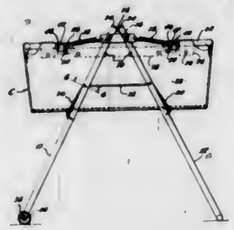
1. A chlorinating attachment for marine toilets comprising a receptacle, a partition dividing the receptacle into two compartments, an inlet for the first compartment and an outlet for the second compartment, said inlet adapted to receive sewage from a marine toilet, said outlet adapted to discharge treated sewage to an overboard discharge, a combined pump and grinding means disposed in the first compartment for thoroughly cutting and chopping the sewage into fine components and pumping chlorinating agent into the compartment and thoroughly intermingling the chlorinating agent and the sewage, and means in the partition for permitting discharge of treated sewage from the first compartment to the second compartment.

3,044,078
INFANT'S CRIB
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed Jan. 14, 1960, Ser. No. 2,425
9 Claims. (Cl. 5—100)

1. In an infant's crib, a spring-supporting frame mounted on a plurality of ground-engageable legs, a pair of end boards mounted on the opposed ends of said frame and extending substantially thereabove, a pair of collapsible sidewalls mounted on said end boards and extending along the sides of the crib, each of said sidewalls comprising a pair of opposed frames supporting a sheet of fabric netting and pivotally connected at the opposed ends of said sidewalls on a horizontal pivotal axis for moving each of the sidewalls between an erected position in which its upper horizontally extending end is disposed well above the plane of said spring-supporting frame and the netting is taut and a collapsed position in which said upper horizontally extending end is disposed adjacent the plane of said spring-supporting frame and the netting intermediate the pivotally connected ends of said sidewall frames sags downwardly substantially below the plane of said pivotal axis whereby the upwardly presented face of a mattress which may be supported on said spring-supporting frame will be disposed above the plane of a substantial portion of the downwardly sagging netting, and means for releasably locking said sidewalls in erected position.

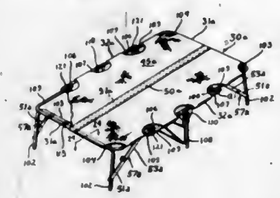


3,044,079
OSCILLATORY BABY CRIB
Albert D. Neal, Los Angeles, Calif., assignor to Strollee of California, Inc., Los Angeles, Calif., a corporation of California
Filed May 23, 1960, Ser. No. 31,057
10 Claims. (Cl. 5—102)



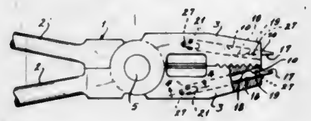
1. An article of baby furniture, comprising: an elongated crib; a first pair of legs and a second pair of legs straddling the two longitudinal halves respectively of the crib, the legs of each of said pairs being rigidly interconnected below the crib and extending upward above the crib on opposite sides of the crib, said two pairs of legs converging at their upper ends and being pivotally connected together at their upper ends to form a foldable support frame for the crib; rigid means on the opposite sides respectively of the support frame interconnecting the two pairs of legs below their pivotal connection to lend rigidity to the support frame; two coil springs on each side of the crib resiliently connecting the corresponding rigid means with the longitudinal sides of the crib for yielding suspension of the crib from the support frame with freedom for the crib to oscillate longitudinally on the springs, said two coil springs being inclined downward in opposite longitudinal directions from the rigid means to points of connection with the crib, said rigid means being releasable from the support frame for separation of the crib therefrom and to free the support frame for folding; and means to releasably connect the crib to the support frame to substantially immobilize the suspended crib relative to the support frame.

3,044,080
COT CONSTRUCTIONS
Deward Hartwig, 628 N. Clemens, Lansing 12, Mich.
Filed Sept. 24, 1958, Ser. No. 763,123
11 Claims. (Cl. 5—111)



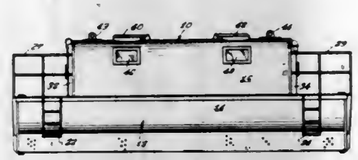
1. A collapsible cot comprising U-shaped tubular head-and-foot members, tubular side sections, means pivotally connecting said tubular sections and members to form a generally rectangular frame, said U-shaped members having the ends thereof disposed alongside the adjacent ends of said side sections to be in overlapped relation therewith when said cot is extended, said U-shaped members and sections being proportioned to lie one within the other during collapsing of said cot, means forming a part of said pivotally connecting means for securing said sections against pivotal movement when said frame is in extended position to rigidify said frame, a U-shaped vertical support member at the head and foot of said frame, means pivotally joining the cross portions, of said support members to the cross portions of said U-shaped members for downwardly swing movement to provide legs for holding said cot and also to provide mutual reinforcement of said cross portions at the ends of said rectangular frame, support legs at the center of said side sections having pivot connections with said frame sections, and a foldable fabric secured at the edges thereof to said frame and spread by extendible movement of said frame.

3,044,081
PLIERS
Jewell Robinson, Jr., 528 Division St., Alton, Ill.
Filed Oct. 26, 1959, Ser. No. 848,700
1 Claim. (Cl. 7—5.5)



In wire cutting electrician's pliers having heavy, blunt-nosed jaws, the improvement comprising wire turners slidably, extensibly, and retractably mounted in said jaws, and guide means connected to said wire turners and projecting from said jaws for manipulation of said wire turns to extended and retracted positions, and detent means cooperably positioned on said jaws and said guide means for releasably retaining said guide means at positions at which the wire turners are at their extended and retracted positions, each of the said wire turners being mounted in a passage in a jaw, said passage communicating, through a part of its length with the surface of the jaw through a slot, each of the guide means comprising a slide button spanning and extending beyond the margins of said slot, a guide rib on the underside of said slide button and seated slidably within the slot, and a pin connected to the guide rib and to the wire turner, and each of the detent means comprising keyhole channels on the undersurface of said slide button and spring loaded ball type detents, aligned to said keyhole channels, mounted in said jaw at both ends of said slot.

3,044,082
SURVIVAL VESSEL
Frank D. Gordon, Hermansville, Mich., assignor to Brothers, Inc., Hermansville, Mich., a corporation of Michigan
Filed May 23, 1960, Ser. No. 30,815
3 Claims. (Cl. 9—4)



1. A survival vessel comprising a hull having a lower portion and an upper portion, transverse, longitudinally spaced walls cooperating with said hull to form an enclosure, access means for said enclosure, a cradle structure in said enclosure having end walls adjacent said transverse walls, pipe means extending through said adjacent walls, ballast tank means formed by said hull beyond said transverse walls and pump means for said pipe means to pump bilge and the like from said cradle structure to said ballast tank means, said pipe means journalling said cradle structure in said hull and having an elongated pipe extension approaching the floor of the cradle structure for removing the bilge therefrom.

3,044,083
METHOD OF MANUFACTURING PLANING HULLS
Richard C. Cale, Sacramento, Calif.
(3010 Duluth St., West Sacramento, Calif.)
Filed May 27, 1959, Ser. No. 816,262
9 Claims. (Cl. 9—6)

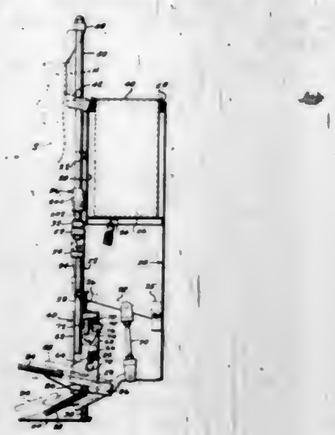


1. A method of building a planing hull in an inverted position which comprises constructing a jig having an upper member which is a mirror-image of the outer deck of said hull, forming and clamping the outer deck plank on said upper member, placing permanent and removable athwartship prefabricated bulkheads along said outer deck planking; forming a framing structure about said bulkheads, fabricating the sides and bottom of said hull on said framing structure and coating the exterior of said hull with a water-proof material.

3,044,084
HEEL STRIPPING DEVICE
John G. Wright, Atlanta, Ga.
Continuation of application Ser. No. 57,701, Sept. 22, 1960. This application June 22, 1961, Ser. No. 120,885
10 Claims. (Cl. 12—50.5)

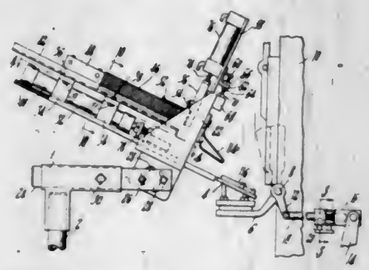
1. Means of the character described comprising an anvil, stripping means reciprocable in relation to said anvil, brake means biased for holding said reciprocable stripping means stationary, and lever means for forcing

said reciprocable stripping means toward said anvil against the holding force of said brake means and incorporating



a ratchet mechanism allowing said forcing to be done in successive increments.

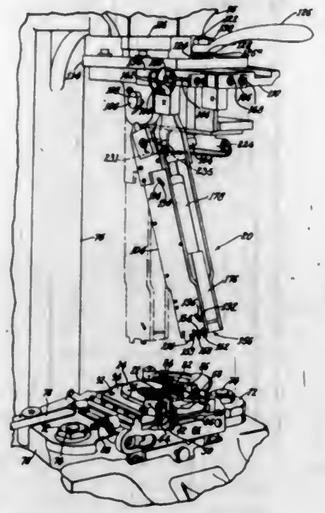
3,044,085
AUTOMATIC FEEDER FOR SHOE COUNTER MOULDING PRESSES
Clarence E. Johnson, Rochester, N.H., and Henry W. Detert, Norway, Maine, assignors to Spaulding Fibre Company, Inc., North Rochester, N.H., a corporation of New Hampshire
Filed Nov. 1, 1960, Ser. No. 66,613
9 Claims. (Cl. 12—66)



1. An automatic feeding device for feeding shoe counter blanks into a shoe counter forming press, which comprises a magazine for holding a supply of counter blanks and advancing them to a feed position, a feed slide for removing the counter blanks one at a time from the magazine feed position and feeding them one by one to a bending station, and a reciprocable ram having a pair of fingers disposed in fixed spaced relation for engaging the end portions of the blank at the bending station, bending the blank to U-shape about a portion of the feed slide and transferring the bent counter blank into a counter forming press.

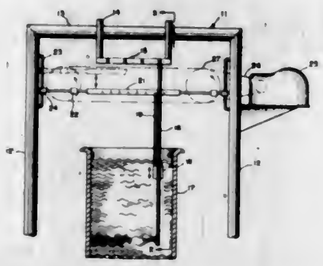
3,044,086
HEEL ATTACHING MACHINES
Adolph S. Dorosz, Beverly, and Leo F. Stanton, Newburyport, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Dec. 21, 1960, Ser. No. 77,368
20 Claims. (Cl. 12—126)

1. In a machine for operating upon shoes, a jack post having a face and comprising a last pin mounted for translatory movement on said post between a retracted position in which the pin is masked by said face and a projected position in which the pin projects beyond said face, means for moving the last pin between its retracted



and projected positions, means for orienting a last upon said projected last pin, and means for tilting the projected last pin to cause the last oriented on said pin to be clamped securely against said face of the jack post.

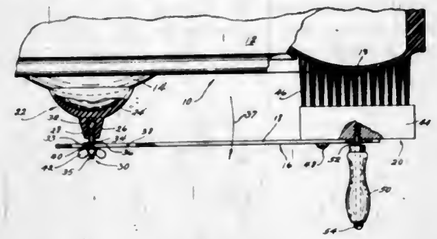
3,044,087
APPARATUS FOR ELIMINATING CERAMIC CORES
Alex Powers, 9498 York Road, North Royalton 33, Ohio
Filed Nov. 17, 1959, Ser. No. 853,665
3 Claims. (Cl. 15—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



3. A device for removing ceramic cores from an investment casting comprising; a container for a caustic bath, a plurality of spaced apart wires, said wires and said casting adapted to be immersed in said caustic bath in said container, means for mounting said casting adjacent said wires whereby each wire is coaxially threaded within a core and extends therethrough and means for reciprocating said casting relative to said wires whereby fresh caustic solution is brought into contact with said cores.

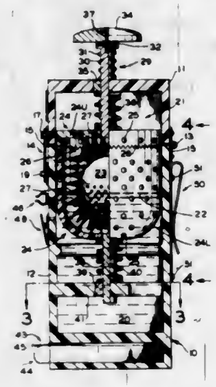
3,044,088
ROTATING TIRE CLEANER
Clifford C. Anderson, 315 11th St., Racine, Wis.
Filed July 13, 1960, Ser. No. 42,701
5 Claims. (Cl. 15—21)

1. A tire cleaning means for a wheel having a hub cap and a tire having an annular side wall, in combination an anchor means adapted to be attached centrally to said hub cap, a pivot means on said anchor means, a radial arm radially-adjustable on said pivot means and



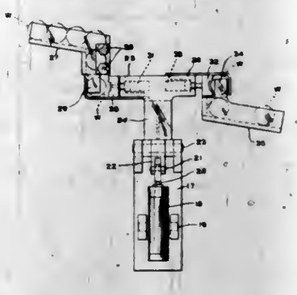
a scrubbing means on said arm in position to contact said side wall and travel annularly as said arm is swung about said pivot means.

3,044,089
GOLF BALL WASHER
Bob C. Boynton, Chula Vista, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Feb. 27, 1961, Ser. No. 92,099
7 Claims. (Cl. 15—21)



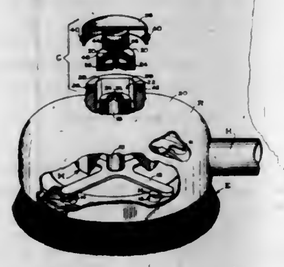
1. A golf ball washer, comprising: a hollow housing including a lower housing portion provided with a hinged top closure portion adapted to sealingly engage said lower housing portion when closed; hollow perforated washing drum means positioned within the hollow housing and provided with means longitudinally movably and rotatably mounting same with respect to the housing, said drum means including an upper element retained within said top closure portion of the housing and a lower element retained within the lower housing portion whereby said drum means will be effectively opened when said housing means is effectively opened for reception of a dirty golf ball within the drum means and for subsequent enclosure within the upper and lower elements of the drum means upon closing engagement of the closure portion with respect to the lower housing portion, said drum means being interiorly provided with scrubbing brush means adapted to peripherally engage a received dirty golf ball which is to be washed; said housing defining a chamber adapted to carry a ball cleaning solution for communication with the washing drum means; and manually operable means for relatively longitudinally moving and rotating said washing drum means with respect to said housing for cleaning a ball received within said washing drum means by reason of the relative movement thereof with respect to the cleaning solution and with respect to the interior scrubbing brush means.

3,044,090
WORK LOAD AND UNLOAD DEVICE
Edwin H. Brauer, Jr., Cleveland, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 6, 1959, Ser. No. 832,063
9 Claims. (Cl. 15—21)



1. Work loading and unloading mechanism adapted simultaneously to load a work-piece upon work-piece indexing means while unloading another work-piece from an adjacent portion of said indexing means comprising a fixed base, an arm mounted thereon for rocking movement from a horizontal position upwardly slightly past a vertical position, a horizontal cross-arm on said rocking arm having an upwardly open clamp adjacent one of its ends and a downwardly open clamp adjacent the other end thereof when in elevated position, a loading chute above said upwardly open clamp and a discharge chute beneath said downwardly open clamp in such elevated position of said rocking arm slightly past vertical, said chutes being similarly tilted, a depending tongue at the lower end of said loading chute adapted to assist in supporting a work-piece reclining thereagainst during deposition into said upwardly open clamp, an upstanding tongue at the upper end of said discharge chute adapted to serve as a backstop supporting a work-piece reclining thereagainst during discharge from said downwardly open clamp into said discharge chute, means operative to actuate said clamps to grip and release such work-piece, and power means operative to rock said rocking arm back and forth between such horizontal position and such position slightly past vertical.

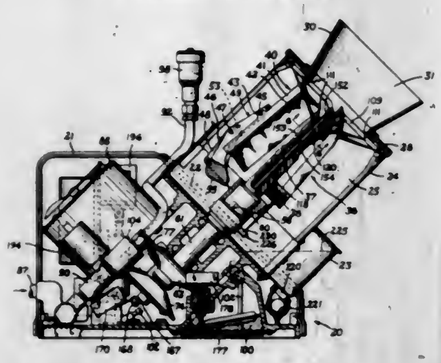
3,044,091
TOOL ATTACHING MEANS FOR CIRCULAR RUBBING MACHINES
Archie Akira Nishihama, 67 Rose Ave., Toronto, Ontario, Canada
Filed Apr. 22, 1960, Ser. No. 23,992
4 Claims. (Cl. 15—49)



1. A rubbing machine including a driver relatively freely rotatable when out of operation; a housing at least partially containing said driver; a rubbing element for operation by said driver; co-operating interlock facilities carried by said driver and said rubbing element for rotatably connecting them and disconnecting them from each

other; a hollow guide on said housing providing access to said driver; a bit movable within said guide member for releasably engaging said driver and restraining it against rotation, and means manipulable externally of said housing for selectively moving said bit between and for maintaining it in driver engaging and driver releasing positions.

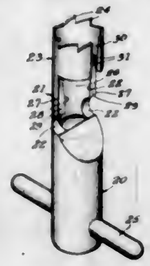
3,044,092
GLASSWARE CLEANSING MACHINE
Gerald B. Fox and Donald E. Vandeveer, Troy, Ohio, and Henry E. Welch, Minneapolis, Minn., assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Nov. 6, 1958, Ser. No. 772,254
9 Claims. (Cl. 15—75)



1. A cleansing machine adapted for effective operation with unheated water to cleanse and sterilize individual pieces of glassware and the like, comprising counter-rotatable brush means concentrically arranged to receive a piece of glassware therebetween and to provide simultaneous scrubbing actions in opposite directions at the interior and exterior surface of said glassware, motor means to rotate said brush means, conduit and spray means connected to transmit unheated water from a supply line onto the glassware while it is being scrubbed, starter switch means, means responsive to movement of a piece of glassware into scrubbing relation with said brushes to close said switch means and initiate operation of said machine, electrically operated valve means controlling water flow through said conduit means to provide a washing and rinsing cycle, a timer mechanism controlling the duration of operation of said motor means and operation of said valve means to provide a continuous flow of water through said conduit means during said washing and rinsing cycle in response to actuation of said switch means, a storage chamber for liquid germicidal agent, and a positive displacement pump also controlled by said timer mechanism and connected for metering quantities of germicidal agent from said chamber into the flow of water conducted onto the glassware during the washing portion of each operating cycle.

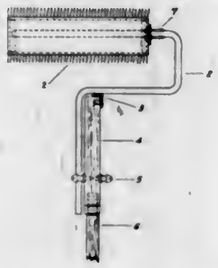
3,044,093
SPARK PLUG CLEANER
Emil W. Malchow, 4207 Cortland Ave., Lynwood, Calif.
Filed Nov. 9, 1959, Ser. No. 851,608
3 Claims. (Cl. 15—104.01)

1. A spark plug cleaner comprising a handle part, a semi-cylindrical extension of said handle part provided with longitudinal faces defined between inner and outer scraping edges, recesses formed in said faces and constituting abutments to limit oscillatory movement of the cleaner when said extension is entered into the annular space between the tapered insulator of the central electrode and the metal mounting shell of a spark plug and said recesses are engaged, alternately, with opposite sides of the bent ground electrode of said plug, each recess having an edge portion that overlaps the electrode in the bend thereof when the recesses are so alternately engaged, a tubular cleaner part on the end of said extension having a longitudinal slot large enough to allow the



ground electrode to pass during entry of the cleaner into the mentioned annular space, crown teeth on the end of said cleaner part, said semi-cylindrical extension and the tubular cleaner on the end thereof having a common tapered bore so that the inner scraper edges of the extension bear on the surface of the mentioned insulators.

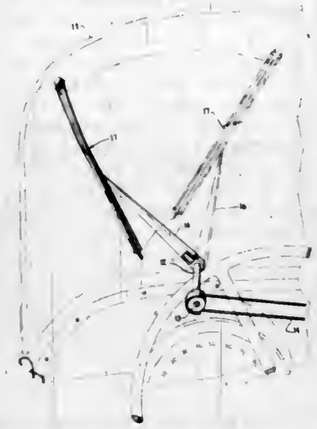
3,044,094
ADJUSTABLE PAINT ROLLER
Merrill A. Ecker, 7005 NW. 42nd St., Bethany, Okla.
Filed Apr. 3, 1961, Ser. No. 100,158
4 Claims. (Cl. 15—230)



1. A paint roller comprising: a handle, a bracket hingedly affixed at a point adjacent one end of said handle, an elongated axle frame member attached to and extending in both directions from said bracket and one end thereof having an axle portion thereon, a paint applying roller rotatably disposed on said axle portion, means consisting of a first pair of locking devices mounted on said handle and so spaced apart that said axle frame member fits tightly between said first pair of locking devices and is releasably held therein by friction for rigidly holding said roller perpendicularly with respect to said handle and means consisting of a second pair of locking devices mounted on said handle and so spaced apart that said axle frame member fits tightly between said second pair of locking devices and is releasably held therein by friction for rigidly holding said roller in a parallel position with respect to said handle.

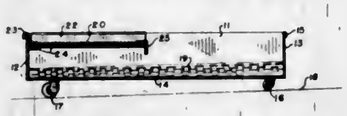
3,044,095
WINDSHIELD WIPER
Raymond A. Deibel, Cheektowaga, and Anthony C. Scinta, Hamburg, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.,
Filed Sept. 10, 1956, Ser. No. 608,950
19 Claims. (Cl. 15—250.42)

17. A wiper for curved windshields, comprising a flexible, resilient, elongated wiper blade, and an elongated resiliently flexible surface conforming support for the blade extending longitudinally thereof and having a centrally arranged arm-attaching part, and twist imparting means



operable to impose a blade normalizing twist to an outer end portion of the blade to maintain the wiper blade substantially normal to the surface being wiped.

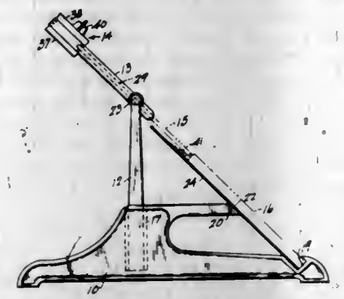
3,044,096
PORTABLE FLOOR WAX CART
Paul G. Englehart, Rte. 3, Box 400, Golden, Colo.
Filed Aug. 29, 1960, Ser. No. 52,624
1 Claim. (Cl. 15—257.05)



A portable floor wax cart consisting of an elongated, rectangular, open topped, flat bottomed, fluid tight pan having upstanding side walls and end walls, all of uniform height; a screen having a length substantially equal to the width of said pan and a width substantially equal to one-half the length of said pan positioned below the upper edges of the side and end walls of the pan; elongated metallic strips having inwardly turned lower edges upon which said screen is positioned and hooked upper edges detachably hooked over the upper edges of the side walls and one end wall of said pan; a caster wheel mounted beneath said pan adjacent each corner thereof, the two caster wheels adjacent the extremity of the pan containing said screen being larger than the caster wheels adjacent the other extremity thereof so that the pan bottom, the side walls, and the screen all incline uniformly downward toward said other extremity.

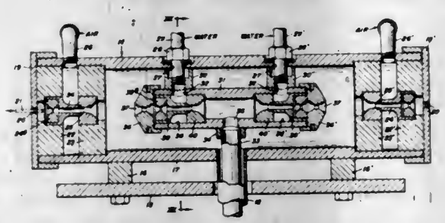
3,044,097
MEANS FOR CLEANING AND PACKAGING PHONOGRAPH DISC RECORDS
Mervyn D. Proschold, P.O. Box 93, Cazadero, Calif.
Filed Feb. 6, 1961, Ser. No. 87,324
6 Claims. (Cl. 15—268)

1. Phonographic disc record cleaning and packaging apparatus comprising a frame, a record holder internally semicircularly formed and having an annular recess formed and having an annular recess formed therein to receive one-half of the peripheral edge of the record and including manually operable clamping means engageable over an intermediate portion of said one-half of the peripheral edge for releasably securing the record therein, with the record holder pivotally mounted in said frame



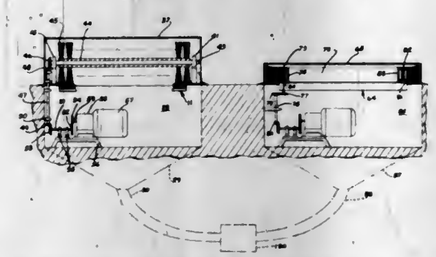
and swingable to reverse positions for enabling cleaning of the respective faces of the record, and supporting means for said frame.

3,044,098
APPARATUS FOR CLEANING WIRE ROD
Stanley L. Stalson, West Richfield, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Original application June 2, 1959, Ser. No. 817,520. Divided and this application Dec. 17, 1959, Ser. No. 860,123
4 Claims. (Cl. 15—302)



1. Apparatus for cleaning wire rod comprising a tube having a guide plug in each end thereof, said plugs having rod-admitting passages therethrough, a barrel within said tube alined with said passages, a converging-jet nozzle in each end of said barrel, each nozzle having a rod-admitting passage therethrough alined with the passages of said plugs, nipples extending radially into said tube and connected one to each of said nozzles, and an outlet pipe extending downwardly from said barrel through said tube.

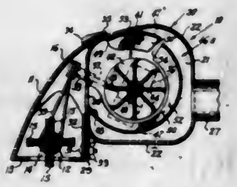
3,044,099
SHOE CLEANER
John H. Scott and Charles E. Bailey, Holland, Mich., assignors to Progressive Engineering Co., Holland, Mich., a corporation of Michigan
Filed Jan. 21, 1960, Ser. No. 3,820
9 Claims. (Cl. 15—311)



1. A shoe cleaning machine comprising in combination: a pit; an elongated pathway having a first and second

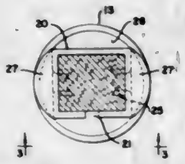
portion each extending longitudinally along said pathway and arranged one behind the other over said pit; first brush means in said pathway exercising a brushing action in the plane of the sole of the shoe to be cleaned, second brush means in said first portion of said pathway exercising a brushing action on the uppers of said shoe in a direction generally transverse to the longitudinal axis of said shoe, third brush means in said second portion of said pathway exercising a brushing action on said uppers of said shoe in a direction generally parallel to said longitudinal axis of said shoe and power means for operating said brushes.

3,044,100
ROTARY BRUSH ATTACHMENT FOR TANK TYPE VACUUM CLEANERS
Joseph P. Zaidan, 1234 S. Broad St., Philadelphia, Pa.
Filed Sept. 12, 1958, Ser. No. 760,748
1 Claim. (Cl. 15—387)



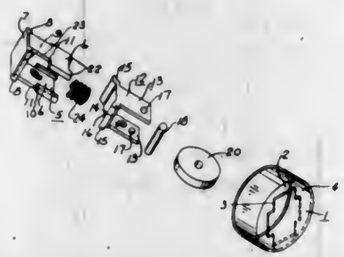
An attachment for vacuum cleaning devices comprising, in combination, a first elongated housing including a lower wall member and a pair of convergent side wall members, an opening in the lower wall member, a rotatable brush in said housing adjacent said opening, an opening in one of said convergent side walls, a second housing removably secured to said first housing and in communication therewith through the opening in said side wall, a rotor in said second housing, a gear drive means secured exteriorly of said second housing and driven by said rotor, a drive shaft from said gear drive drivingly connected to said rotatable brush, a pair of arcuate channel members in said second housing around said rotor, one of said pair of arcuate channel members being radially offset from the other, and a suction outlet leading from said second housing.

3,044,101
NIB BUSHINGS
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed Jan. 5, 1961, Ser. No. 80,799
1 Claim. (Cl. 15—563)



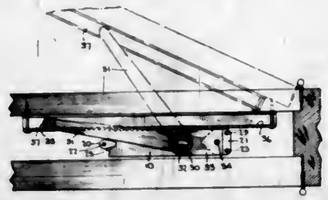
A felt nib and bushing unit removably supported within a circular in cross-section tubular shaped open end of a writing implement, comprising a square cross-section felt nib and a square in cross-section tube formed of a single flat sheet of metal bent into a tubular shape; the external diagonal dimensions of the bushing being the same as the diameter of the tubular end of the writing implement for snugly fitting the bushing-nib unit within said tubular end and with its four corners each in line contact with the interior wall of the tubular end for frictional securement within said tubular end; one wall of the bushing being split along its full length, with the wall edges defining the split being spaced apart a short distance; the two opposite walls which are connected to such split wall each having struck-in sharp spikes formed at their center portions and extending inwardly of the tube normal to their respective walls upon which they are formed; and a flange formed on one end of each of said opposite walls and extending normal to their respective walls and outwardly of the tube, the flanges being formed to rest upon and in contact with the free edge of the writing implement open tubular end when the nib and bushing unit is inserted in said tubular end; whereby an elongated square felt nib may be inserted in the square bushing with its opposite ends extending out of the opposite ends of the bushing, and with the spikes biting into the felt nib without compressing it, for supporting the felt nib in the bushing and the bushing-nib unit in the writing implement, stopped by the flanges, and said opposite walls and extending normal to their respective bushing-nib unit being removable as a unit from the tubular end.

3,044,102
ROLLERS IN HOLLOW LEGGED FURNITURE
Frank P. Lackinger, 529 Allen Ave., McKees Rocks, Pa.
Filed Nov. 30, 1959, Ser. No. 856,071
2 Claims. (Cl. 16—44)



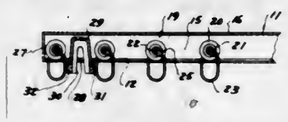
1. A chair roller compirsing a cup having an upstanding annular wall and a bottom with a transverse roller slot therein, an inverted U-shaped guide frame having a connected frame end at the top with a spring socket therein, spaced parallel frame legs extending from said connected frame end, the other ends of said frame legs secured to the bottom of said cup on opposite sides of said roller slot, opposed inturned coextensive flanges on the adjacent edges of said frame legs and extending upwardly from said cup bottom and stopping in spaced relation from said connected frame end to provide a stop on the ends of said flanges, means defining a window on opposite sides of said frame between said flange stops and said connected frame end, a slide having a top with oppositely projecting shoulders and a socket opposed to said frame socket, spaced depending legs from said top and having slidable contact between said guide frame legs and retained therein by said flanges, a shaft supported in aligned holes in said slide legs and retained by said frame legs, a roller mounted on said shaft between said slide legs to extend through said slot, said shoulders on said slide top engaging said stops on said flanges to limit the projection of said roller through said slot, said windows permitting said slide and roller to be inserted therethrough to its operating position between said frame leg flanges, and a spring mounted through said widnow and having its ends engaging in said opposed sockets under partial compression to project said roller through said slot.

3,044,103
DOOR CLOSER
Mathias M. Check, Stratford, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Jan. 14, 1959, Ser. No. 786,725
6 Claims. (Cl. 16—49)



1. In a door closer of the class described, a casing, a shaft rotating in said casing and having an upper end extending upwardly out of said casing, an arm fitted on the upper end of the shaft for rotation therewith, energy storing means adapted to be energized for returning a door to closed position, means interconnecting said shaft and said energy storing means for energizing said energy storing means upon rotation of said shaft and arm in either of opposed directions from a predetermined position relatively to said casing whereby said closer may be used on both left and right hand doors, a spring holding said arm on said upper end of the shaft, limit means on said casing extending upwardly into the path of rotation of said arm with said shaft for holding said arm at one side or the other of said predetermined position relatively to said casing, whereby to determine the hand of said closer, and said spring yielding to permit movement of said arm above said limit means, whereupon said arm may be moved to one side or the other of said limit means to change the hand of the closer.

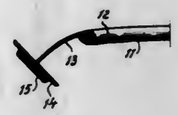
3,044,104
TRAVERSE DRAPERY HANGER
Bruno Walz, 35141 Division Ave., Richmond, Mich.
Filed Dec. 1, 1959, Ser. No. 856,468
1 Claim. (Cl. 16—87.6)



In a traverse curtain or drapery hanger, an elongated formed tubular channel including sidewalls, a horizontal topwall, and bottom wall members terminating respectively in a pair of elongated transversely concave tracks, each spaced inwardly from a corresponding sidewall and centrally spaced apart defining an elongated slot, an upright endwall on said channel, there being a transverse aperture through said bottom wall members inwardly of said endwall adapted for introducing a wheel and hook assembly thereinto, and a flexible plug projected up into said opening and retainingly engaging said bottom wall members for closing said opening and adapted for anchoring one of said wheel and hook assemblies adjacent said end wall.

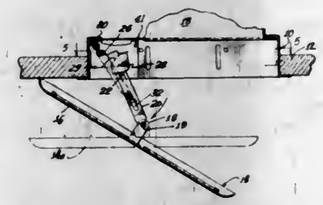
3,044,105
CARRYING HANDLE FOR CARDBOARD BOXES OR THE LIKE
Bertil Vidar Wigemark, Ormgatan 7, Goteborg S, Sweden
Filed Oct. 7, 1959, Ser. No. 844,902
3 Claims. (Cl. 16—125)

1. A device for carrying a cardboard box, a suitcase, or a similar container wherein said container is provided with spaced parallel slots through at least a part of the upper walls of the container, said device comprising a substantially longitudinal handle of plastic material having a middle grip portion of U shape cross section; two resilient strip portions integrally joined to extend from the ends of said grip portion; and elongated locking plates on the outer extremities of the strip portions of substantially the same width as said strip portions, said strip



portions each being integrally joined transversely to the mid portion of a locking plate, said strip portions being at least one half as long as said plates so that said plates may be folded substantially parallel to said strip portions and inserted through the parallel slots in said container after which said plates extend transversely from said strip portions to engage the inner surface of a wall of said container and secure said handle to said container.

3,044,106
COVER ATTACHING ASSEMBLY
Robert A. Papsdorf, Claremont, Calif., assignor to Emerson-Pryne Company, Pomona, Calif., a corporation of Delaware
Filed Apr. 19, 1960, Ser. No. 23,171
11 Claims. (Cl. 16—179)

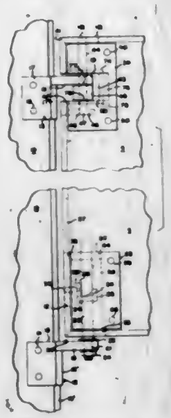


1. Means for attaching to a housing or the like a cover closing an opening in the housing, comprising:
an arm pivotally connected near one end to the cover;
arm mounting means on the housing slidably receiving the other end of the arm, the arm being free to move both longitudinally and swingingly between a first position in which the cover closes the opening and a second position in which the cover is spaced from the opening;
a cam follower on the arm engaging a cam on the mounting means, said cam having two cam surfaces disposed at an angle to each other and connected by an arcuate junction;
and spring means acting to press the cam follower against the cam, the spring means being adapted to produce a component of force acting to move the cam follower along one of said cam surfaces and away from said junction when the cam follower is displaced in either direction from said junction.

3,044,107
HINGE AND PARTITION COMBINATION
John P. Tansey, 622 Beverly Drive, Erie, Pa.
Filed Oct. 8, 1959, Ser. No. 845,128
4 Claims. (Cl. 16—186)

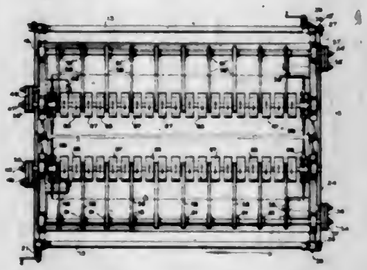
1. In combination, a partition and a door swingably supported on said partition by means of an upper and

a lower hinge, said lower hinge having an upwardly disposed surface, said upper hinge having a downwardly disposed surface, a column member attached to said upwardly disposed surface and extending upwardly therefrom, means on said door receiving said column member, a cam on said column member, a follower on said door,



said follower being forced upwardly moving said door upwardly when said door is moved from a closed to an open position, and a resilient member between said downwardly disposed surface and an upwardly disposed surface on said door, said resilient member being made of a rubber like material having a durometer of approximately seventy.

3,044,108
ROTARY DRUM TYPE CHICKEN PICKING MACHINE
Horace J. De Long, Gainesville, Ga., assignor to Gainesville Machine Co., Inc., Gainesville, Ga., a corporation of Georgia
Filed Nov. 5, 1959, Ser. No. 851,037
10 Claims. (Cl. 17—11.1)



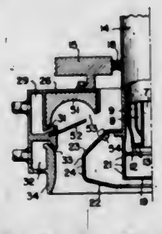
1. In a poultry picking machine having a main frame, a carriage including end members vertically adjustable independently on said frame, a pair of picking frames slidably mounted on said members for adjustment of the distance between said picking frames, a plurality of axially aligned drums rotatably mounted on one of said frames, drive means operably connected for rotating certain of said drums in clockwise direction and the alternate drums in counterclockwise direction, the arrangement being such that the drums to be rotated in counterclockwise direction are interspersed with the drums to be rotated in clockwise direction, similarly aligned and oppositely driven drums on the other of said picking frames, resilient means on the drums on both of said picking frames for striking and picking feathers from fowl conveyed along a predetermined path between said picking frames.

3,044,109
POULTRY SHACKLES
Edward T. Wayne, Port Crane, N.Y., assignor to E. H. Titchener & Co., Binghamton, N.Y., a corporation of New York
Filed Aug. 24, 1959, Ser. No. 835,681
6 Claims. (Cl. 17—44.1)



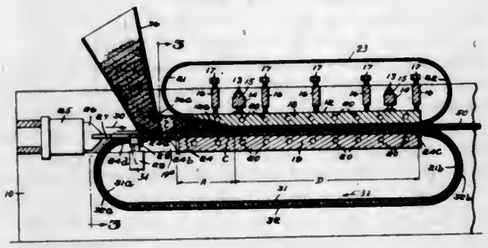
1. A shackle having an outer frame provided with spaced legs and a looped shank, an inner frame slidably movable relatively to the outer frame, the inner frame being provided with notches to receive parts of a fowl, a cross member extending between the legs of the outer frame, said cross member including spaced elements providing a passage between them and through which the parts of the inner frame having the notches are slidably movable in a manner to cause the parts of the fowl to be forced out of the notches by contact with the cross member, and spring means normally operative on the inner frame to maintain the inner frame nested within the outer frame and with its notches positioned free of the cross member.

3,044,110
FIBER BLOWING APPARATUS
Frederic O. Hess, Philadelphia, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1957, Ser. No. 704,793
4 Claims. (Cl. 18—2.5)



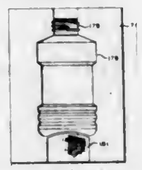
1. In apparatus for forming fibers, a hollow circular element having a wall provided with a multiplicity of radially extending openings, means to rotate said element around a vertical axis to discharge material through said openings, a shield extending above and around said element to leave an annular space between the two thereby to protect said space from air currents, burner means on said shield, said burner means including an annular refractory plate having a surface facing said annular space and a portion of said element adjacent to said wall, means to direct a fuel gas mixture across said surface to burn thereon to heat said surface to incandescence thereby to direct radiant heat against said element and material discharged from said openings, means in said shield radially outward of said surface to direct a fluid under pressure across material being discharged from said openings and means forming air scoops on said element operative, upon rotation thereof, to draw products of combustion from said surface into said element.

3,044,111
MACHINE FOR THE CONTINUOUS MANUFACTURE OF FIBROUS BOARD
Robert A. Caughey, Antrim, N.H., assignor to Antrim Moulding Company, Inc., Antrim, N.H., a corporation of New Hampshire
Filed Jan. 15, 1959, Ser. No. 786,950
15 Claims. (Cl. 18—4)



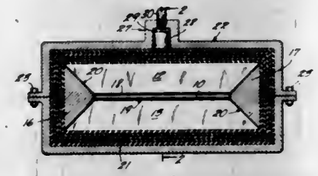
1. A machine, for manufacturing fibrous board from a mat of fibrous material, comprising a movable bed having a portion which is flat and rigid both transversely and longitudinally, a flat, rigid platen disposed above said bed and having an undersurface spaced from said flat, rigid portion of the bed, means for depositing on said bed a mat of particulate fibrous material the particles of which have been coated with a bonding agent, means for moving said bed to advance said mat between said bed and said platen to bond the particles in the form of a rigid board, and an endless belt movable along said undersurface and adapted to engage and be driven by the material disposed between said platen and said bed.

3,044,112
EXTRUSION BLOWING APPARATUS
Daniel E. Perry, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 6,050
7 Claims. (Cl. 18—5)



1. Apparatus for use with a continuous plastics extruder for forming articles from thermoplastic material by blow molding comprising, in combination, two tubing die heads positioned for downward extrusion, said die heads each being equipped with a mandrel containing a central bore, the orifice of each die being formed by the tip of said mandrel and an outer adjustable bushing which can be positioned either concentric or eccentric to said mandrel, valved conduit means for alternately supplying molten thermoplastic in a substantially continuous stream from said extruder to each of said die heads, a pair of opposing mold halves positionable immediately below each of said die heads, the members of each said pair being horizontally movable in opposition to and from a position in registry with the orifice of the associated die head, means for introducing gas under pressure to the bore of each of said mandrels, two power actuated knife blades which are elongated and flexible and each is incased in an arcuate sheath in which the blade turns a right angle, each of said blades being positioned adjacent one of said die heads with the path of travel of each blade lying along the face of the associated die head and intercepting the path of the extrudate, and automatic timing means for cyclic operation of said valved conduit means, said mold halves, said means for introducing gas and said knife blades.

3,044,113
SUPER-HIGH PRESSURE APPARATUS
George Gerard, Yonkers, and Jacob Brayman, Staten Island, N.Y., assignors to Engineering Supervision Company, New York, N.Y., a corporation of New York
Filed Jan. 8, 1959, Ser. No. 785,690
13 Claims. (Cl. 18—5)



1. Apparatus for applying extreme pressure to a body of material comprising, means forming and bounding a pressure-containing enclosure, pressure-multiplying means within the enclosure in separated relation from said enclosure bounding means and comprising a plurality of pressure multiplying units movable relative to and towards each other and having inner surfaces of relatively small area cooperative to form a cavity to receive said body and outer surfaces of relatively large area, pressure-transmitting means confined by said bounding means within said enclosure so as to be circumjacent the pressure-multiplying means and so as to be in pressure communicating relation both with said bounding means and with the unit surfaces of relatively large area, and means for applying pressure to said pressure-transmitting means to develop therein a pressure communicated therefrom to said last named surfaces to produce a movement of said units relative to and towards each other.

3,044,114
APPARATUS FOR PRODUCTION OF TUBULAR BLOWN FOILS OF POLYVINYL CHLORIDE INTERPOLYMERS
Ernst Pirot, Wuppertal-Barmen, Germany, assignor to J. P. Bemberg Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Original application Feb. 21, 1958, Ser. No. 716,634, now Patent No. 3,009,208, dated Nov. 21, 1961. Divided and this application Dec. 22, 1958, Ser. No. 782,132
Claims priority, application Germany Mar. 2, 1957
4 Claims. (Cl. 18—14)



4. In apparatus for production of a tubular foil, a first chamber with a forwardly directed annular orifice, a

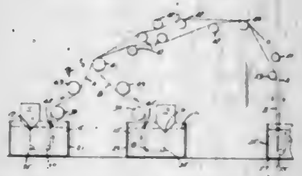
blasting head positioned centrally within and smaller than said annular orifice, means for forcing a plastic mass through said orifice and about said blasting head in the form of a tube, gas egress passage means extending longitudinally through said blasting head, gas ingress passage means extending longitudinally through said blasting head, a second enlarged chamber extending forwardly from said first chamber, a gas supply conduit projecting forwardly from said blasting head concentrically within said tube, said conduit serving as an extension of said ingress passage means, means for circulating gas through said enlarged chamber and about the outside of said tube, a mantle with an internal cylindrical wall projecting forwardly from said enlarged chamber opposite said annular orifice, and means to maintain said wall at a controlled, predetermined temperature.

3,044,115

METHOD AND APPARATUS FOR PRODUCING FILMS

Augustus E. Craver, Fredericksburg, Va., and William H. Lamason, Wallingford, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Nov. 21, 1958, Ser. No. 775,467
12 Claims. (Cl. 18—15)



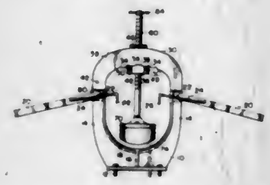
1. A method of forming a plurality of films including the steps of extruding film-forming material through a plurality of nozzles into coagulating liquid, advancing the at least partially coagulated films through and above the level of the coagulating liquid and thereafter positioning the same together with their adjacent surfaces in contact relation, separating from each other only those portions of the films which are above the level of the coagulating liquid, positioning the films together after separation thereof, and passing the films into and through after-treating liquid with their adjacent surfaces maintained in contact relation.

3,044,116

TUBELESS TIRE REPAIR APPARATUS

Leo X. Spitzmiller, 409 W. 1st St., and John L. Vogler, Box 174, Rte. 2, both of Medicine Lodge, Kans.

Filed July 25, 1960, Ser. No. 45,114
3 Claims. (Cl. 18—18)



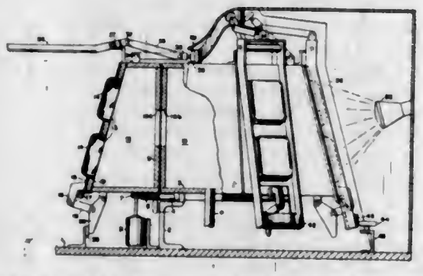
1. A tubeless tire repair apparatus comprising, in combination, a U-shaped cradle member, each end of said cradle having an integral yoke, said cradle member and said yoke being internally shaped to conform generally to the exterior shape of a tire each of said yokes having forked handles pivotally mounted thereon, and each of said handles having a U-shaped spreader arm pivotally mounted thereon, each of said spreader arms having the center portion thereof bent downwardly to provide a tire bead engaging flange, one of said yokes on said cradle having a closure member pivotally mounted thereon, said closure member consisting of generally arcuate spaced side portions secured together at the ends, a plurality of spaced arcuate recesses in the bottom face of each of said spaced side portions, said recesses being spaced alike on both of said side portions and aligned, a first mounting member extending between said side portions of said closure member and mountable on the lower side thereof, said mounting member having an arcuate projection thereon to be matingly engaged in said recesses to position said mounting member thereon, a second mounting member extending across the top of said side portions, each of said mounting members having apertures in opposite outer edges thereof between said spaced side members, two helical springs extending between said side members, the end of each of said springs being received in said apertures in said mounting members to removably and resiliently mount said mounting members on said side portions, each of said mounting members having a centrally located opening therein, said openings being aligned, said opening in said first mounting member being threaded, an arm member threadedly received in said opening of said first mounting member and slidably passing through said opening in said second mounting member, one end of said arm having a ball on the end thereof and being received in said cradle, a handle on the other end of said arm to move said ball end of said arm into or out of said cradle, a vulcanizing member, the top of said vulcanizing member having a spherical socket formed therein to receive said ball end of said arm to mount said vulcanizing member on said arm, the bottom surface of said vulcanizing member being arcuate in cross section, heater means in said vulcanizing member to apply heat to a tubeless tire within said cradle, and latch means pivotally mounted on said closure member at the end of said member opposite from said pivotal mounting of said closure member on said cradle, said latch means having a notch therein engageable with a portion of said yoke to secure said closure member and said yoke, said device being constructed and adapted to receive a tubeless tire in said cradle with said spreader arms in engagement with the beads of said tire so that said vulcanizing member can engage the carcass of said tire during repair of said tire.

3,044,117

APPARATUS FOR MAKING FIBER-RESIN PARTS

Hardin S. Alspach, Akron, Norman L. Gamble, Tallmadge, William J. Hampshire, Cuyahoga Falls, Jerry E. Mellinger, Kent, and Henry Musch, Akron, Ohio, assignors to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware

Filed Sept. 21, 1959, Ser. No. 841,091
6 Claims. (Cl. 18—20)



1. Apparatus for automatically making fiber and plastic parts including a fixed drum, an endless chamber surrounding the drum and rotatably mounted thereon, a plurality of circumferentially-spaced perforate molds mounted around the periphery of the chamber, radial

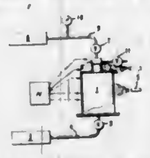
directed partitions in the drum and conduit means dividing the surface of the drum into circumferentially-spaced arcuate areas of low vacuum, high vacuum, low vacuum and internal pressure, the outer surface of the drum having openings therethrough into the areas and the inner surface of the endless chamber having openings therethrough adjacent each mold connecting in turn to the openings in the drum, means for periodically rotating the endless chamber a stepped arcuate distance equal to the distance between molds, means fixed in relation to the drum for loading a substantially flat body of fibers and plastic on each mold when it is in radial alignment with the low vacuum area of the drum, stationary means for preheating the body after the mold has been arcuately stepped from the loading means but is still in the low vacuum area of the drum, a plurality of complementary frame-type molds mounted on the endless chamber and each adapted for movement to and from its associated mold, means for moving each complementary mold against the body of fibers and plastic upon stepped rotary movement of the mold from the preheating means, said means for moving the complementary molds being in the high vacuum area of the drum, a stationary low temperature oven about the molds in the high vacuum area of the drum, a stationary high temperature oven to effect curing of the body and adapted to receive each set of molds as its stepped arcuate movement causes it to leave the low temperature oven, said high temperature oven being in the second area of low vacuum of the drum, a cooling chamber for receiving each set of molds as it leaves the high temperature oven, means for moving the complementary mold away from its associated mold at the cooling chamber, and means positioned in the internal pressure area of the drum for discharging each molded body from the associated mold after the complementary mold has been moved away.

3,044,118

MOLDING METHOD AND APPARATUS

Ernest Carl Bernhardt and Francis Harry Skewis, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed June 23, 1958, Ser. No. 743,645
9 Claims. (Cl. 18—26)



1. A process for molding thermoplastic materials which comprises injecting into a cavity, comprising a mold-cavity and a reservoir space, through a port at the base of the mold cavity-reservoir assembly, a melt of said thermoplastic material, while displacing gas from said mold cavity, continuing the injection of melt until the mold cavity is filled and the reservoir is at least partly filled with said melt, cooling the melt in the mold cavity to produce solidification of said melt, applying gas pressure directly to the surface of the melt in the reservoir whereby the melt flows back into the mold cavity from the reservoir in sufficient quantity to compensate for the volume change attending the solidification and cooling of the thermoplastic material in the mold cavity, thereafter cooling the remaining molten thermoplastic material in the reservoir to produce solidification thereof, and removing the solidified material from the mold cavity-reservoir assembly.

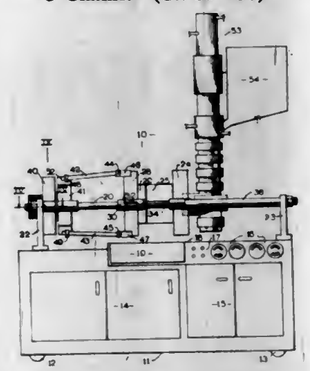
7. Apparatus for molding a thermoplastic material comprising a mold having a valved inlet at the base thereof for injection of thermoplastic material, and at least one reservoir communicating with said mold, said mold and reservoir being provided with a means for heating same to above the melting temperature of the thermoplastic material, and means for cooling the mold progressively from the end thereof opposite said reservoir, means for cooling the reservoir subsequent to the cooling of the mold, a valved port for admitting gas into and withdrawing gas from said reservoir, and means for supplying gas at controlled pressure through the said valved port to the reservoir space.

3,044,119

AUTOMATIC INJECTION MOLDING MACHINES

Raymond J. Poulin, Box 808, Topanga, Calif.

Filed Mar. 12, 1958, Ser. No. 720,980
3 Claims. (Cl. 18—30)



3. In an injection molding machine, clamping means for holding a pair of molds in tight mated engagement during the injection phase of the injection molding cycle, comprising: a stationary platen having a female mold form affixed to the mounting face thereof; a pressure panel having a pair of upper and lower lifting arms and having a main surface disposed toward and parallel to said face of said stationary platen; a movable platen between said panel and said stationary platen having a main surface disposed toward and parallel to said face of said stationary platen and having a male mold form affixed to said main surface; means for applying pressure effective to move said movable platen adjacent said stationary platen and engage said male mold within said female mold; a pair of rigid spacing plates being generally rectangular in conformation and hingedly attached along one edge to the top and bottom of said movable platen, and being supported edgewise and slidable in grooves in said lifting arms above and below said pressure panel; said spacing plates being adapted to move inwardly of said main surface of said pressure panel when said movable platen is positioned so as to engage said mold forms; means for applying pressure to the side of said pressure panel opposite from said main surface, said pressure being transmitted lineally through said spacing plates to said movable platen and being thereby effective to hold said mold forms in tight engagement during the injection phase of the molding cycle; means for applying pressure effective to extend said lifting arms to move the ends of said spacing plates outwardly of said main surface of said pressure plate whereby said plates are slidable through said grooves in said arms when said mold forms are separated.

3,044,120

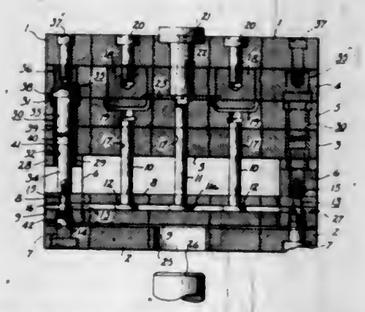
MOLD BASE

Arthur E. Wiskoff, 9501 Park Heights Ave., Garfield Heights, Ohio, and Julius P. Szorady, 4419 Greenway Ave., South Euclid, Ohio

Filed Aug. 6, 1959, Ser. No. 832,060
2 Claims. (Cl. 18—42)

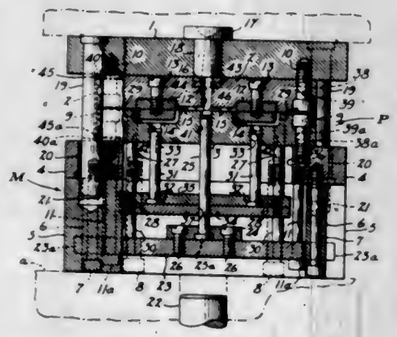
1. A mold base comprising a flat anchor plate, an ejector plate parallel to said anchor plate, a pair of par-

allel side members spaced from said anchor plate and disposed generally perpendicular thereto on opposite sides of said ejector plate, a back-up plate between said anchor plate and said ejector plate and parallel thereto, first and second mold plates between said back-up plate and said anchor plate and parallel thereto, a plurality of ejector pins rigidly mounted on said ejector plate perpendicular to said plates and projecting through said back-up plate, means rigidly connecting said second mold plate and said back up plate to said side members comprising a series of annular bushings having enlarged flanges that fit in said second mold plate and having threaded ends projecting through said back-up plate, means rigidly connecting said first mold plate to said anchor plate comprising a



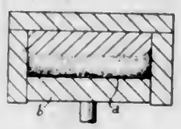
series of internally threaded guide members mounted in said first mold plate and screws extending through said anchor plate into said guide members, said guide members being axially aligned with said bushings and having cylindrical guide portions that slidably fit in said bushings to maintain the mold plates in accurate alignment, a series of cylindrical return pins that slidably fit in said bushings between said ejector plate and said guide portions, said return pins being parallel to said ejector pins and being engageable with said guide members and said ejector plate to limit the movement of the ejector plate toward said first mold plate, and means mounting said ejector plate on said return pins for reciprocation in a direction perpendicular to said plates.

3,044,121
MOLDING ASSEMBLY
Arthur E. Wiskoff, 9501 Park Heights Ave., Garfield Heights, Ohio, and Julius P. Szorady, 4419 Greenway Ave., South Euclid, Ohio
Filed Jan. 12, 1960, Ser. No. 1,913
9 Claims. (Cl. 18—42)



1. In combination, a mold base having an anchor plate, a series of leader pins mounted on the anchor plate and perpendicular thereto, a back-up plate parallel to said anchor plate and having bushings slidably receiving said leader pins, said anchor plate and said back-up plate being mounted for relative opening and closing movement toward and away from each other, first and second removable mold plates mounted in parallel aligned positions between said anchor plate and said back-up plate, removable means for rigidly connecting said first mold plate to said anchor plate, removable means for rigidly connecting said second mold plate to said back-up plate, detachable means for accurately locating said first mold plate relative to said anchor plate, detachable means for accurately locating said second mold plate relative to said back-up plate in alignment with said first mold plate, means forming a central opening in said back-up plate, an ejector plate parallel to said second mold plate and adapted to move relative to said back-up plate through said opening to an ejecting position adjacent said second mold plate, an ejector pin carried by said ejector plate and slideably mounted in said second mold plate, a plurality of return pins carried by said ejector plate and slidably mounted in said second mold plate, said return pins projecting a substantial distance above said second mold plate when the ejector plate is in said ejecting position, said first mold plate engaging the return pins to retract the ejector plate when the mold is closed, said second mold plate, said ejector plate, said ejector pin and said return pins comprising a removable assembly, said leader pins being spaced apart and located around said mold plates to permit removal of said removable assembly and said first mold plate when the mold is open.

3,044,122
METHOD OF MOLDING ARTICLES OF MICROCELLULAR MATERIAL
Charles E. Webb, Glastonbury, and Wallace G. Hawkins, Ashcott, near Bridgwater, England, assignors to C.I.C. Engineering Limited, Somerset, England, a British company
Filed Dec. 4, 1958, Ser. No. 778,257
5 Claims. (Cl. 18—48)



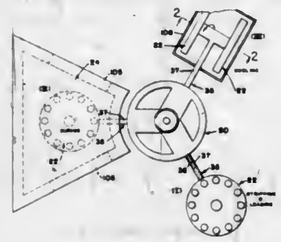
1. The method of molding a mass of thermoplastic material which comprises subjecting a mixture of such thermoplastic material and a gassing agent to heat and pressure in a mold cavity for a given continuous period and in such manner as to produce a stabilized microcellular structure of such treated material, in the cells of which is confined gas under pressures not substantially effecting the dimensional stability of such structure, said mixture in the initial portion of such given period being subjected to constant pressure for a given time while maintaining the mold cavity at a constant volumetric capacity and while subjecting such mixture to an effective gassing temperature applied unidirectionally thereto to cause a differential temperature to travel through such mixture from the side thereof to which such effective heating has been applied, and immediately following the termination of said initial portion of said given period, slightly and very slowly and with positive control increasing the volumetric capacity of the molding cavity at a rate correlated to the size of the cells to be formed in the plastic mass by the formed gas and to the pressure at which the gas is to be retained in such cells in the completed product, and continuing such increase in the molding cavity throughout the duration of a given, at least major portion of the entire length of time of said given period until such volumetric capacity has been increased to substantially

the desired final dimensions of the microcellular mass, and at the end of said given period releasing the stabilized completed product from the mold.

3,044,123
PRESSED SOLID PROPELLANT PELLETS
Richard F. Grubaugh, Seymour, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Mar. 31, 1959, Ser. No. 803,324
2 Claims. (Cl. 18—55)

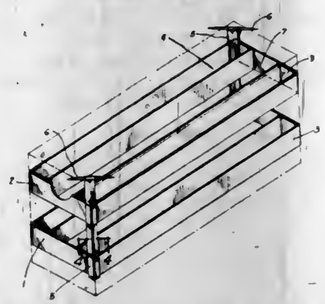
1. A process for producing a propellant pellet which process comprises introducing into a mold cavity a predetermined amount of a propellent composition consisting essentially of between about 0.5 and 15 weight percent of a combustion catalyst, and between about 10 and 40 weight percent of oxidizable organic binder material wherein said binder material consists of a polymeric base selected from the class consisting of cellulose esters of alkanoic acids containing from 2 to 4 carbon atoms, polyvinylchloride, polyvinyl acetate, acrylonitrile and styrene-acrylonitrile, and an oxygenated hydrocarbon plasticizer therefor said plasticer containing said oxygen in chemical combination, and the remainder essentially only ammonium nitrate, applying to said composition in said mold cavity a pressure between about 3000 p.s.i. and 8000 p.s.i. for a time between about 0.05 and 0.25 second to form said composition into a pellet of the desired shape, removing said pellet from said mold, heat treating said pellet at a temperature from about 70° C. to 85° C. for a time between about 1 hour and 2 hours and cooling said hot pellet to ambient temperature to obtain a strong compressed propellant pellet.

3,044,124
ROTATIONAL CASTING
Vaughn E. Valentine, South Hadley, Mass., assignor to The Sun Rubber Company, Barberton, Ohio, a corporation of Ohio
Original application Sept. 5, 1957, Ser. No. 682,099, now Patent No. 2,957,202, dated Oct. 25, 1960. Divided and this application Aug. 19, 1960, Ser. No. 54,333
8 Claims. (Cl. 18—58.3)



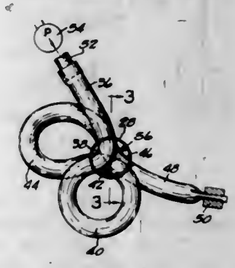
1. In a process for casting intricate hollow articles from a vinyl resin plastisol, said process requiring a heating zone at the curing temperature of said plastisol, the steps of, locating a series of molds radially of a first axis and transversely to a second axis, charging said molds when at a temperature below 130° F. with a predetermined amount of plastisol, closing said molds, introducing said closed molds into said heating zone while rotating the molds at from 2–30 r.p.m. on said first axis, rotating said molds at from 50–150 r.p.m. on said first axis as the temperature of the molds rises to the gelling temperature of said plastisol, and, before the plastisol has gelled beyond a thin outer layer, simultaneously rotating the molds at rates of from 2–30 r.p.m. on both axes as the temperature of the molds rises to the fusing temperature of the plastisol.

3,044,125
METHOD OF CO-MOULDING BRICK
Louis H. Hosbein, Glencoe, Ill., assignor to M. H. Detrick Company, Chicago, Ill., a corporation of Delaware
Original application Feb. 4, 1957, Ser. No. 638,148. Divided and this application Aug. 31, 1960, Ser. No. 53,235
4 Claims. (Cl. 18—59)



1. The method of co-moulding basic refractory material with a plurality of ribbon-like metal members to produce a basic brick having said metal members running lengthwise of the completed brick in spaced relation to a pair of side faces of said brick and in spaced parallel relation to each other which comprises holding said metal members in spaced parallel relation to each other and supporting the same in an empty mould cavity of a size larger than the completed brick in a position in spaced relation to the bottom of the mould cavity by disruptable means and with the width of said ribbon-like members extending perpendicularly to the bottom of said mould, filling said mould cavity with the refractory material required for said brick while supporting said metal members by said means in said position with said members held in said parallel spaced relation and moving compressing means into said cavity toward the longitudinal side edges of said ribbon-like members to rupture said supporting means and compress said refractory material into final brick size.

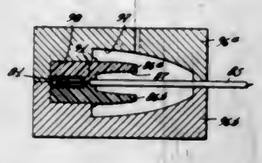
3,044,126
FINGER KEY VALVE FOR WIND MUSICAL INSTRUMENTS AND METHOD OF MAKING THE SAME
John S. Fisher, 1202 Baldwin St., Elkhart, Ind.
Filed Dec. 8, 1958, Ser. No. 778,659
3 Claims. (Cl. 18—59)



1. The method of making a finger key valve for wind musical instruments, consisting of the steps of forming a pair of spaced apertures in the walls of a metal tube in predetermined positions circumferentially and longitudinally thereof, sealing one end of said tube spaced from said apertures, threading a flexible expansible tubular member of uniform cross-section through said apertures, wrapping reticulated reinforcing material around the portion of said flexible member within said metal tube, expanding said flexible tubular member by fluid

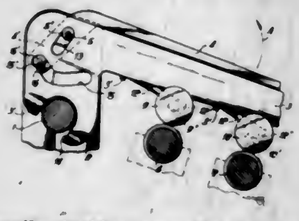
pressure into sealing engagement with said apertures, pouring synthetic resin in fluent state into said metal tube to a level to immerse said expanded flexible member to imbed and penetrate said reinforcing material, releasing fluid pressure from said flexible member after said resin has set, and then withdrawing said flexible member.

3,044,127
ELECTRICAL ELEMENT AND METHOD OF INSULATING SAME
John M. Alden, 380 Grove St., Needham, Mass.
Filed Jan. 21, 1959, Ser. No. 788,100
1 Claim. (Cl. 18—54)



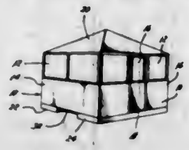
The method of encasing in insulation an electrical element of relatively large width having a lead of relatively smaller width connected thereto which comprises locating the element in an insulating support having two parts forming a chamber of a size to receive said element and a wall at one end of said chamber having a smaller opening therefrom for said lead, said wall facing toward said element and away from said lead so as to engage the element against movement axially of the lead, placing the insulating support, element and lead in a mold so that the support is engaged by the mold thereby positively to locate the element in the mold, simultaneously clamping in the mold a portion of the lead spaced from the element so that the element and said lead portion are mechanically engaged without further preparation such that the intermediate portion of the lead is positively held against dislocation by pressure of insulation injected in the mold, and injecting an insulating coating over said support.

3,044,128
TEXTILE DRAFTING ASSEMBLY
Fritz Gerber, Kirchheim, Teck, Germany, assignor to SKF Kugellagerfabriken G.m.b.H., Stuttgart - Bad Connstatt, Germany
Filed Oct. 22, 1959, Ser. No. 848,062
Claims priority, application Germany Oct. 25, 1958
13 Claims. (Cl. 19—295)



1. In a textile drafting assembly, in combination, a stationary supporting bracket; a top-rolls-carrying arm extending forwardly from said bracket and having a pair of rear side wall portions guided by said bracket, said side wall portions each being formed with a pair of elongated aligned cutouts each of which has elongated parallel side edges extending substantially perpendicularly to the drawing field when said arm is in a lower operating position thereof; and a pair of horizontal members carried by said supporting bracket and extending into said cutouts and cooperating with said side edges thereof to guide said arm for movement away from and toward the drafting field when said arm is in the vicinity of its lower operating position, whereby said arm will be guided in the vicinity of its lower operating position toward and away from the drafting field while remaining substantially parallel thereto.

3,044,129
PORTABLE BUILDING
Floyd E. Bigelow, 3331 Robertson St., Houston, Tex.
Filed Nov. 12, 1957, Ser. No. 695,626
5 Claims. (Cl. 20—2)



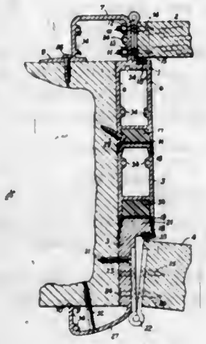
1. In a portable building, rectangular, tray-like elements adapted to be placed in inverted parallel relation with the bottoms of the elements positioned to form portions of an elevated floor and to be assembled to form a box-like container, demountable walls formed in rectangular sections hingedly connected together to be folded into superposed relation to permit the walls to be formed into a rectangular stack for insertion in the container and adapted to be positioned on said floor with the side edges of the walls in upright, parallel relation when the walls are unfolded, corner posts having spaced parallel, longitudinally extending grooves shaped to fit the adjacent upright edge portions of the walls when assembled therewith to form the corners of the building, corner elements movably supported on the posts for movement toward and away from the posts and positioned for engagement with the inner faces of said adjacent edge portions when said edge portions are in said grooves to hold the walls in assembled relation, and yieldable means positioned for coaction with said elements and posts to yieldingly hold the elements in inwardly spaced relation to the posts to permit said edge portions to be inserted between said elements and posts.

2. In a portable building, rectangular, tray-like elements adapted to be placed in inverted, parallel, horizontally spaced relation with their bottoms positioned to form portions of an elevated floor and to be assembled to form a box-like container, a floor panel shaped to be removably positioned between said elements to complete the floor, demountable walls formed in sections hingedly connected together to be folded into superposed relation to permit the walls to be formed into a rectangular stack for insertion in the container and adapted to be positioned with the lower edges of the walls resting on the floor and the side edges of the walls in upright, parallel relation when the walls are unfolded.

3,044,130
ADJUSTABLE DOOR JAMB
Joseph C. Mehaffy, 201 Smith Ave., Kirkwood, Mo.
Filed July 18, 1960, Ser. No. 43,373
2 Claims. (Cl. 20—11)

1. In an adjustable door jamb for a house doorway having an inner wall surface and an outer wall surface, an outer extrusion having a U-shaped section adapted to lie against the outer wall surface and a box-like section adapted to lie perpendicular to said outer wall surface, an outer door hinge portion on said outer extrusion between said U-shaped section and said box-like section, an open end provided with tapered sides on said box-like section, an inner extrusion having an ornamental guard section adapted to lie against the inner wall surface, a body portion on said inner extrusion adapted to lie perpendicular to said inner wall surface and said outer wall surface, said body portion adapted to carry

hinges for an inner door, a tapered end on said inner extrusion on the end opposite the ornamental guard section, and an extender extrusion having a box-like shape, an open end provided with tapered sides on the latter box-like shape, the opposite end of said latter box-like



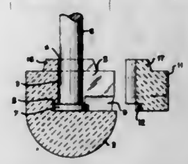
shape being tapered and telescopingly engaged with the open end of the box-like section on said outer extrusion, the said open end of said extender extrusion being telescoped over and cooperating with the tapered end of said inner extrusion.

3,044,131
OPERATING AND LOCKING MECHANISM FOR AWNING TYPE WINDOWS
Samuel C. Reynaud, 845 Lake Shore Drive, Grosse Pointe Shores, Mich.
Filed July 27, 1960, Ser. No. 45,576
2 Claims. (Cl. 20—42)



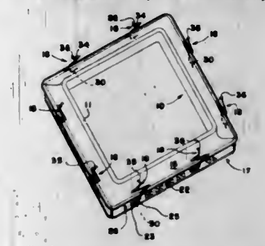
2. In an awning type window comprising a frame, a sash mounted for swinging travel into and out of said frame about a moving horizontal axis, said sash being supported upon a balance arm pivotally attached at one end to said frame, an actuating bar mounted on said frame for up and down movement and pivotally connected to a beam secured to said sash for moving said beam so as to swing said sash into and out of said frame, a latch member pivotally mounted on said frame for up and down swinging movement, spring means extending between said frame and said latch member urging the latch member upwardly, a latch pin mounted on said sash for movement into latching engagement with said latch member on downward swinging thereof, and means on said balance arm engaged with said latch member during a final upward movement of said actuating member to swing said sash into said opening for swinging said latch member downwardly toward said latch pin.

3,044,132
STOPPER FOR A LADLE OR SIMILAR RECEPTACLE
Crawford B. Murton, Churchill Borough, Pa., assignor to Vesuvius Crucible Company, Swissvale, Pa., a corporation of Pennsylvania
Filed July 5, 1960, Ser. No. 40,606
1 Claim. (Cl. 22—85)



A stopper for a ladle or similar receptacle comprising a refractory head and a stopper rod, the refractory head having therein an upwardly open well and a lateral opening through the side of the refractory head communicating with the well and extending to the top of the head of such size as to permit the lower portion of the rod to be inserted laterally therethrough from the outside into the well, the rod being disposed with its lower portion in the well of the head and projecting upwardly therefrom and with a portion of its lateral projection underlying a portion of the head, a holding member insertable laterally into the head to close the lateral opening communicating with the well and maintain said portion of the lateral projection of the rod underlying said portion of the head, the holding member interfitting with the head so that the holding member is restrained by the head against upward movement relatively to the head, and means maintaining the holding member against laterally outward movement.

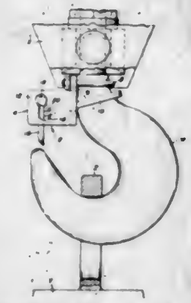
3,044,133
HOT TOP WITH REFRACTORY BOTTOM RING AND WIPER
Ervin A. Marcec, 20701 Oak Lane Drive, Olympia Fields, Ill.
Filed Nov. 25, 1959, Ser. No. 855,358
6 Claims. (Cl. 22—147)



4. A composite bottom ring for a hot top comprising a refractory member having a plurality of side walls, a band of metal adapted to circumscribe said side walls in flush contact therewith, said band having an integral wiper strip portion extending outwardly from said band and at a slight angle thereto, a plurality of extensible wire hanger clips, one end of each of which is provided with a kink for interconnection with said continuous band of metal, the other end with a hook to engage a suitable aperture in said hot top casing, said continuous band being provided with a plurality of punched out clips immediately adjacent the side walls of the refractory member under which the kinked ends of said extensible wire hanger clips are secured, and means securing said band

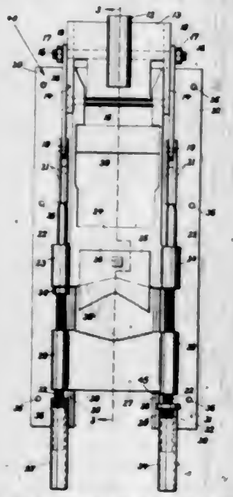
to said side walls of the refractory member independent of said wire hanger clips.

3,044,134
SAFETY LATCH FOR CRANE LIFT HOOK
John M. Zitney, Jr., Jefferson, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 28, 1959, Ser. No. 816,599
3 Claims. (Cl. 24—238)



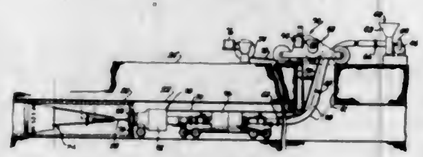
1. A safety latch for a lift hook which includes a shank and a curved body portion terminating in a tip spaced from said shank, said latch comprising a bracket secured to said hook at the juncture of said shank and said curved body portion and extending therefrom over said tip, and a latch plate pivoted in said bracket and normally depending toward said tip, the pivotal connection between the plate and bracket including generally vertical slots in the bracket enlarged at their ends and of reduced width in the intermediate portions thereof, and lugs on said plate and passing through said slots, each said lug having a transverse dimension greater than the width of the intermediate portion of each slot and another transverse dimension at an angle to said first mentioned transverse dimension and of a width less than that of the intermediate portion of each slot, whereby said lugs will pass through said intermediate portions only when said plate is tilted from its normal depending position.

3,044,135
LOCKING PIPE HOLDER
Roy F. Wilcox, R.F.D. 4, McCook, Nebr.
Filed Nov. 3, 1960, Ser. No. 67,067
4 Claims. (Cl. 24—263)



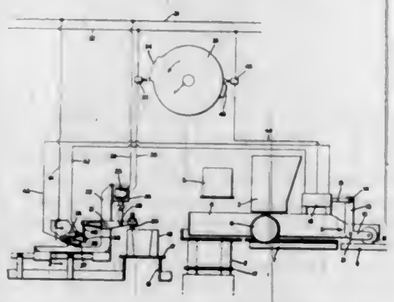
1. A gripping device comprising a frame, a pair of opposing gripping members mounted on the frame for relative movement towards and away from one another, spaced parallel tension rods connected to each side of one of said members, operating means connected to said tension rods for applying a pulling force thereto and moving one gripping member towards the other for gripping an object, said operating means movable to an over-center position for locking said members in gripping position, adjustable abutments on said tension rods drivingly engaging said one gripping member, said operating means comprising a single handle pivoted at one end to said frame, a pair of links pivoted at one end to said handle and at their other ends to said tension rods.

3,044,136
PIPE LINING APPARATUS
Warren E. Perkins, Grand Island, N.Y., assignor to Perkins Pipe Linings, Inc., Grand Island, N.Y., a corporation of New York
Filed Nov. 12, 1959, Ser. No. 852,565
5 Claims. (Cl. 25—38)



1. In apparatus for lining a pipe line with mortar, a mortar applying machine adapted to move lengthwise through the pipe line and including motor driven means for centrifugally applying variable quantities of mortar against the inside of the pipe line, a trowel adapted to move through said pipe in trailing relation to said lining machine and having portions in pressure contact with opposite portions of said lining whereby increasing thickness of the lining applied by said mortar applying machine results in increased resistance to movement of said trowel through said pipe, and means responsive to the degree of said resistance and controlling said motor driven means to increase the rate of application of mortar when said resistance drops below a value and to decrease the rate of application of mortar when said resistance increases above a value.

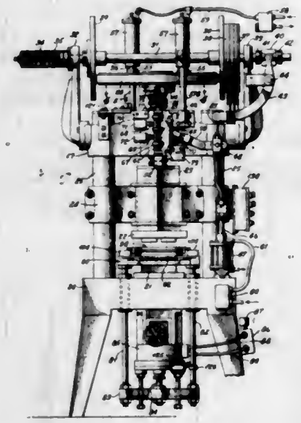
3,044,137
DEVICE FOR CONTROLLING THE HEIGHT AND DENSITY OF BUILDING BLOCKS
George E. Kanta, Three Forks, Gallatin County, Mont.
Filed Feb. 29, 1960, Ser. No. 11,842
7 Claims. (Cl. 25—41)



1. In a block machine including a mold box, a material supply hopper, a feed box movable between the hopper and the mold box, a stripper head movable vertically toward and from the mold box, and a main shaft, a device for controlling the height and density of blocks

formed in the machine, said device comprising a support spaced from the mold box for supporting a block in upright position after it is removed from the mold box, a pivoted height transfer arm located adjacent to said support, means upon said arm for contacting a block positioned upon said support, a solenoid normally holding said arm out of contact with the block on said support, an electric circuit in which said solenoid is located, a normally closed switch in said circuit, cam means on the main shaft for momentarily opening said switch at a predetermined time and for deenergizing the solenoid and causing said arm to move into contact with the block, a bell crank for adjusting the feed box vertically relative to the mold box for controlling the amount of material left over the mold box for forming the next succeeding block in the machine, a linear actuator controlling said bell crank, a normally open electric circuit connected to the linear actuator, two normally open mercury switches in said normally open circuit, means operatively connecting said height transfer arm to said mercury switches for tilting one of said mercury switches to closed position when the block on said support is too high and for tilting the other mercury switch to closed position when said block is too low for actuating said linear actuator to operate said bell crank to vertically adjust the feed box inversely to the height of said block, a normally open switch in said normally open circuit, and a cam on the main shaft for closing said normally open switch at a predetermined time after said height transfer arm has contacted said block.

3,044,138
AUTOMATIC TILE PRESS
Frederick A. Lesnett, Jr., and David A. Wenger, Lakeland, Fla., assignors to Florida Tile Industries, Inc., Lakeland, Fla., a corporation of Florida
Filed Jan. 29, 1960, Ser. No. 5,418
11 Claims. (Cl. 25—42)



1. In a friction drive tile press of the type including a base, a pair of power driven horizontally shiftable friction disks journalled with respect to said base, a horizontally arranged friction wheel mounted on said base between the opposed faces of said disks and carrying a screw threadedly mounted for rotary and vertical reciprocatory movement with respect to said base, a ram mechanically connected to said screw for vertical reciprocatory movement therewith, a movable die member fixed to said ram, die members on said base in the path of movement of said movable die member and cooperable therewith to form tiles from clay dust supplied to said second-mentioned die members, means connected to said friction disks for alternately shifting the disks in opposite directions to cause one and the other of said disks to engage said friction wheel to alternately drive the wheel in such directions as to move said ram alternately up and down, said means including a fluid pressure cylinder mounted on said base and having therein a piston operable when moved in one direction to move said friction disks in such direction as to cause the ram to be driven downwardly, and a source of fluid under pressure for operation of said cylinder;

an automatic control system for said press operable to move the ram downwardly a plurality of times during each cycle of its operations, said automatic control system including:

a solenoid valve connected to said fluid source and operable when the solenoid thereof is energized to deliver fluid under pressure to said cylinder to move the piston thereof in said one direction,

means connected to and operable to alternately energize and de-energize said solenoid a plurality of times during each cycle including means for first establishing an energizing circuit for the solenoid and then interrupting that circuit at the beginning of each cycle to begin and then stop downward movement of the ram,

said energizing means further including:

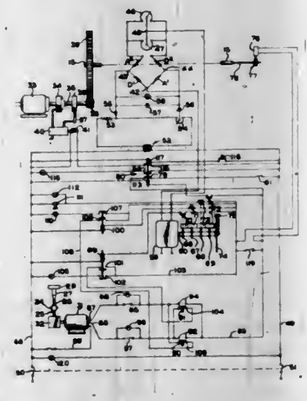
a switch actuator connected to said friction wheel to rotate and reciprocate therewith,

and a plurality of switches each having an operating element respectively arcuately spaced apart in the path of movement of said actuator to be successively operated during each downward and rotary movement of said friction wheel,

one of said plurality of switches being operable subsequent to interruption of said energizing circuit to establish an energizing circuit for the solenoid to cause a second downward drive of the ram,

another one of said plurality of switches being operable subsequent to operation of said one switch to interrupt said energizing circuit established by said one switch to stop downward drive of the ram.

3,044,139
CONTROL SYSTEM FOR MOLDING PRESSES
Eugene A. Morton and David G. Brant, Tiffin, Ohio, assignors to Basic Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 17, 1959, Ser. No. 853,571
2 Claims. (Cl. 25—45)



1. In combination with a mold having an adjustable bottom closure and driven pressure applying means including a reciprocable plunger which enters the mold to compress molding material therein, with adjustment of

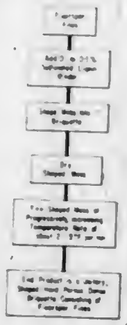
the bottom closure varying the volume of the mold cavity and hence the charge of molding material in the same; a control system comprising means for generating an electrical signal which varies in accordance with and in proportion to changes in the pressure applied to the material in the mold throughout the full period of compression thereof by the plunger, controller means, means for continuously applying said electrical signal to said controller means for operating the latter, the controller means having an output shaft which turns in response to and in accordance with the direction and magnitude of changes in the electrical signal thus applied to the controller means, mold volume determining means for adjusting the bottom closure of the mold, first circuit means including first switch means actuated by turning of said control shaft for operating said mold volume determining means in response to deviations of said electrical signal from a preset control value and the direction thereof, the bottom closure being thus operated by the mold volume determining means to increase the mold depth when the pressure is below the pre-set control value and to decrease the mold depth when the pressure is above said value, said first circuit means including second switch means actuated in response to predetermined advance of the plunger in the mold, with said second switch means effective to limit operation of the mold volume determining means by the first circuit means to a predetermined portion of the total pressure stroke in which the application of peak pressure to the molding material would normally be expected to occur, cut-off means for disabling the drive of the pressure applying means, and second circuit means including third switch means actuated by turning of said control shaft for operating said cut-off means to disable said drive in response to a predetermined excessive pressure in the mold, said second circuit means being independent of said first circuit means, and hence the second switch means, and operable throughout the total pressure stroke to disable the drive whenever the pressure becomes excessive.

3,044,140

PROCESS FOR MAKING FLUORSPAR BRIQUETTES

James R. Coxey, Reading, Pa., assignor to Glen Gery Shale Brick Corporation, Reading, Pa., a corporation of Pennsylvania

Filed Oct. 6, 1959, Ser. No. 844,618
10 Claims. (Cl. 25—157)



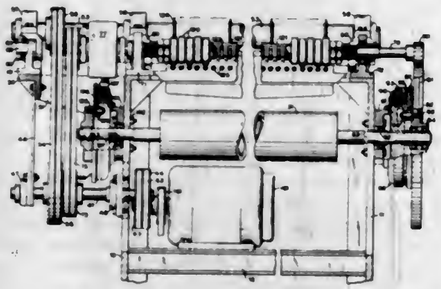
1. The process for forming a unitary, shaped, fluorspar briquette comprising shaping a mixture consisting essentially of acid grade fluorspar fines and from about 0.1 to about 0.3% by weight of a sulfonated lignin binder therefor, the total moisture content of said mixture being from about 7 to 12% by weight, drying the shaped mass, and firing the dried mass at a rate of about 2 to 8° F. per minute to a temperature sufficient to remove said binder from said shaped mass and consolidate said fines into a unitary, porous, hard, dense mass.

3,044,141

PILE FABRIC CUTTING MACHINE

Jack C. Gaskins, Lanett, Ala., assignor to Batson-Cook Company, West Point, Ga., a corporation of Georgia

Filed Nov. 17, 1958, Ser. No. 774,283
6 Claims. (Cl. 26—10)



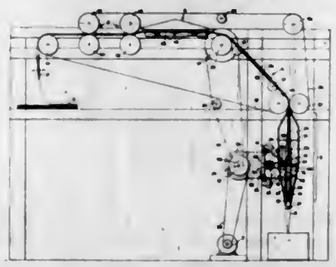
1. In a pile fabric cutting machine, a cam shaft, a plurality of guides, means responsive to rotation of said cam shaft for driving said guides into the piles of a fabric passing through the machine, a cutter shaft, a plurality of cutters on said cutter shaft each associated with one of said guides, a motor driving said cam shaft and said cutter shaft, means for detecting faults in the operation of said guides, a drive roller for moving fabric through the machine, means coupling rotary motion of said cam shaft to said drive roller including a selectively operable electromagnetic clutch, a selectively operable electromagnetic brake secured to said drive roller, and circuit means responsive to operation of said fault detecting means for actuating said clutch so as to mechanically disconnect said fabric drive roller from said cam shaft, said circuit means also operable to simultaneously actuate said brake in response to said fault detecting means so as to stop rotation of said drive roller.

3,044,142

PROCESS FOR PROVIDING A FINISHED KNITTED FABRIC WITH PREDETERMINED DIMENSIONS IN THE DIRECTION OF ITS LENGTH AND ITS WIDTH

Robert Brunner, 165 Dachslernstrasse, Zurich 9, Switzerland

Filed Jan. 22, 1958, Ser. No. 710,549
Claims priority, application Switzerland Jan. 24, 1957
4 Claims. (Cl. 26—18.5)



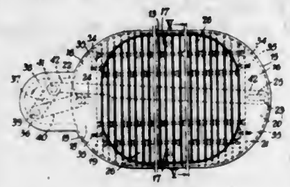
1. A process for providing a finished knitted tubular fabric with loops of a predetermined size which will not change during subsequent washing of the fabric so that the fabric is shrink-proof, comprising the steps of transversely expanding an elongated tube of knitted unfinished fabric whose loops are longer than the length of said loops of predetermined size until the length of the loops of the unfinished fabric is reduced to the length of the loops of predetermined size; then, while maintaining the length of the loops at the length of the loops of predetermined size, releasing the fabric from the transverse tension applied thereto so that it contracts in a transverse direction and limiting the contraction until the loops have a width equal to the width of the loops of predetermined size; and then finishing the fabric while maintaining its loops at the length and width equal to the length and width of the loops of predetermined size.

3,044,143

APPARATUS FOR THE SHRINKING OR STRETCHING OF FLEXIBLE SHEET MATERIAL

Sven Fritiof James, London, England

Filed Oct. 16, 1959, Ser. No. 846,929
Claims priority, application Great Britain June 30, 1959
9 Claims. (Cl. 26—18.6)



1. A cloth pressing apparatus of the type comprising a first member with a surface to receive and support the cloth, and a second member with a surface adapted in one position to contact the cloth and retain it in pressed relation with the first member, together with means whereby the second member can be moved into position in relation to the first member to hold the cloth pressed between the two said surfaces, in which the construction includes a plurality of similar narrow cloth-engaging members supported to move on said first member, each such narrow cloth-engaging member having an outer surface which is co-planar with the outer surfaces of the other cloth-engaging members, and each such outer surface having a serrated formation to frictionally engage with and hold the adjacent surface of the cloth when it is pressed thereto, slidable connecting means interconnecting adjacent cloth engaging members to permit said members to move laterally with respect to one another such that in one position the cloth-engaging members are all held assembled together but slightly separated by narrow gaps of uniform spacing between adjacent cloth-engaging members and from which position they can all be relatively moved to another position in which adjacent cloth-engaging members are brought into contact with one another throughout their entire lengths to eliminate the gaps, the other said surface having a smooth polished finish to allow the cloth pressed between the two said surfaces of the first and second members and held in engagement with the serrations on the outer surfaces of the cloth-engaging members, to move with the cloth-engaging members when these latter are moved, and means for moving the cloth-engaging members to and from the positions having the gaps or where the gaps are eliminated.

3,044,144

EMBALMER'S HAND HOLDER

Howard Randolph Holt, North Smithfield, R.I. (56 Smithfield Road, R.F.D. 2, Woonsocket, R.I.)

Filed Feb. 1, 1960, Ser. No. 6,015
3 Claims. (Cl. 27—21)

1. An embalmer's hand holder device to support the hands of a corpse in clasped position across the front of the body comprising a resilient band member for encirclement of the thumb and forefinger of one hand of the corpse, and a resilient projecting tab portion integral therewith and extending well beyond and to one side of said band member, said tab portion having a central opening therein which is of a size such as to accommodate therethrough, encircle, and hold firmly the extended thumb of the superposed hand following its projection from between the thumb and forefinger to be resiliently held by said band member.

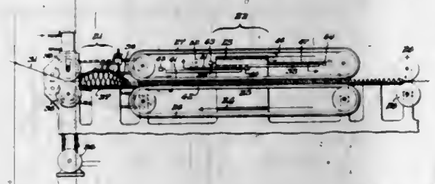


3,044,145

APPARATUS AND METHOD FOR SETTING YARN AND FOR CRIMPING AND SETTING YARN

Milton E. Tager, Godfrey H. Browne, and John A. McCoig, Sr., Gastonia, N.C., assignors to Cocker Machine & Foundry Company, Gastonia, N.C., a corporation of North Carolina

Filed Oct. 31, 1958, Ser. No. 771,005
6 Claims. (Cl. 28—1)



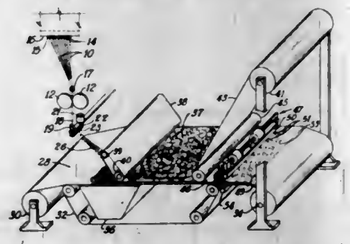
4. In an apparatus for crimping and heat-setting yarn, including crimper means for crimping the yarn and heat-setting means for subjecting the crimped yarn to heat of a predetermined temperature, the improvement which comprises, means for transporting the yarn at a substantially constant rate through said setting means, and shielding means connected to said setting means and disposed adjacent thereto for shielding said yarn from heat, said shielding means being arranged to respond to a stoppage of said yarn to move between said yarns and the source of said heat so that said yarn receives a uniform application of heat throughout the length thereof passing through said setting means.

3,044,146

COMPOSITE FIBROUS GLASS BODIES

John H. Thomas, Darien, Conn., and Alfred Marzocchi, Manville, R.I., assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

Filed Oct. 27, 1958, Ser. No. 769,847
5 Claims. (Cl. 28—78)



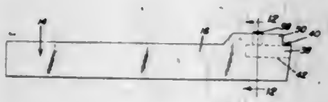
1. An air permeable fibrous glass body for inclusion as reinforcement in molded or laminated plastic products having unwoven webs of bonded glass fibers on opposite surfaces, an intermediate, unbonded layer of continuous glass fiber strands, and spaced stitching of continuous glass fiber strands between the unwoven webs and through the intermediate, unbonded layer to hold the webs and layer in assembled relation.

3,044,147
SEMICONDUCTOR TECHNOLOGY METHOD OF CONTACTING A BODY
Harold L. Armstrong, Kingston, Ontario, Canada, assignor to Pacific Semiconductors, Inc., Lawndale, Calif., a corporation of Delaware
Filed Apr. 21, 1959, Ser. No. 807,857
15 Claims. (Cl. 29—25.3)



1. The method of providing closely spaced contacts upon at least one surface of a body, said method comprising the steps of: applying a contact to one surface of a body; providing a layer of insulative material upon said contact; applying a layer of electrically conductive material upon said one surface and over said insulative layer; removing a predetermined portion of said layer of electrically conductive material and of said insulative layer to expose a surface of said contact; and, ohmically bonding an electrical lead to said exposed surface of said contact.

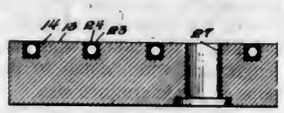
3,044,148
ROLL DRESSING TOOL AND HOLDER
Harry C. Allendorfer, 80 Bucknell Ave., Johnstown, Pa.
Filed June 11, 1959, Ser. No. 819,620
3 Claims. (Cl. 29—96)



1. A cutting tool comprising a tool holder having a shank portion having an outer part defining a general feed cutting plane and a cross-sectionally enlarged head connected thereto, said head having a pocket extending inwardly from a front cutting side of the head parallel to said feed cutting plane, a cutting tip insert fitted within said pocket in contact with all wall surfaces thereof and having a cutting face forwardly spaced from the head in a plane intersecting said cutting plane at a rake angle to form an upper cutting edge therewith, said pocket being formed between a rigid reaction wall portion of said head having a wall surface in said cutting plane for continuous smooth pressure contact with said insert and a parallel spaced supporting wall portion of said head having a continuous, smooth wall surface for friction contact with said insert, said supporting wall portion projecting forwardly beyond the reaction wall portion and having a front face on said front side of the head in a plane parallel to said cutting face of the insert.

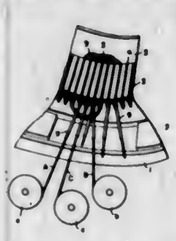
3,044,149
METHOD OF MAKING A WORK SUPPORTING STRUCTURE
John W. Conlon, Farmington, Conn., assignor to Farmington Manufacturing Company, a corporation of Connecticut
Original application May 20, 1955, Ser. No. 509,765. Divided and this application Nov. 8, 1956, Ser. No. 621,100
3 Claims. (Cl. 29—149.5)

1. The method of forming a plate for a fluid bearing structure comprising forming in a face of a plate a plurality of spaced channels embracing substantially the entire face of the plate, forming tubes to substantially the shape of said channels, positioning said tubes in said channels and forming fluid escape holes in said tubes in



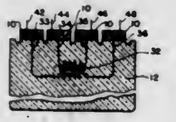
an arrangement to afford substantially uniform lift to a member covering the holes.

3,044,150
WINDING OF STATOR COILS
Robert E. Higley, Clarence, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 10, 1958, Ser. No. 708,175
2 Claims. (Cl. 29—155.5)



1. The method of winding a continuous, sequentially wound three phase stator including plurality of series connected, continuous coil groups for each phase which comprises winding from first, second and third reels sequentially, a coil group for each phase so as to complete one complete coil grouping, thence winding successively from each of said first, second and third reels the next adjacent coil group for each phase in sequence and continuing to wind said coil groups in sequence until the entire stator is wound with coil groupings, each phase being wound from a continuous, uninterrupted length of wire.

3,044,151
METHOD OF MAKING ELECTRICALLY CONDUCTIVE TERMINALS
Myron A. Coler, New York, N.Y.
(56 Secor Road, Scarsdale, N.Y.)
Filed Sept. 3, 1954, Ser. No. 454,127
8 Claims. (Cl. 29—155.55)



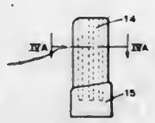
1. The process of making an electrical terminal assembly comprising the steps of forming a composite all-plastic member including an electrically conductive plastic layer having an exposed first face and a second face bonded to an electrically non-conductive plastic layer, forming a plurality of intersecting slots through said exposed face of said conductive plastic layer and extending completely through said conductive plastic layer, so as to produce isolated conductive plastic elements supported by said insulator plastic and partially embedding at least one two-ended electric circuit connecting means into each of a selected number of said resulting isolated conductive plastic elements so that one end of said electric circuit connecting means extends outwardly of said selected plastic element and the other said end of said means extends only partially into said conductive plastic element.

3,044,152
HOLLOW BLADES FOR COMPRESSORS
Edward A. Stalker, Bay City, Mich., assignor to The Stalker Corporation, a corporation of Michigan
Filed June 8, 1955, Ser. No. 513,960
2 Claims. (Cl. 29—156.8)



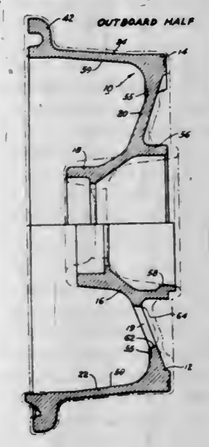
1. The process of fabricating a hollow blade of selected contours from the nose to the trailing edge thereof comprising the steps of upsetting along the length thereof a sheet metal blade blank of uniform thickness forming an intermediate spanwise thickened blade nose portion having contours corresponding to the nose portions of said selected contours and of thickness greater than the thickness of said blank adjacent to said nose portion, stretch forming portions of said blank on each side of said nose portion to define upper and lower blade walls in a condition of controlled internal stress having contours corresponding to portions of said selected contours rearward from said nose portion to the trailing edge with said walls spaced apart at their free edges while simultaneously locating said nose portion in relation to said preformed contours, bending said walls in a narrow zone adjacent said thickened nose portion by a die and mandrel acting at said zone to bring said free edges into close proximity while retaining the same selected contours over the major extent of said walls to provide said selected blade section contours from leading to trailing edges of said blade, and fixing said free edges together to define the trailing edge of said blade.

3,044,153
MANUFACTURE BY EXTRUSION OF TURBINE ENGINE BLADES
Nelson Hector Kent, Allestree, and George O. Eccles, Barrowford, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Oct. 10, 1957, Ser. No. 689,440
Claims priority, application Great Britain Oct. 12, 1956
3 Claims. (Cl. 29—156.8)



1. The method of forming a blade unit for an internal combustion turbine engine from a metal which is resistant to high temperature, the blade being of the type which has a blade portion twisted or off-set from the root fixing portion and cooling passageways running lengthwise of the blade having open ends at the blade root and blade tip, which method includes the following steps:
(*a*) producing a billet having two parallel sides,
(*b*) drilling a plurality of blind holes axially of the billet in only the portion to become the blade section,
(*c*) inserting filler material into all of the drilled holes,
(*d*) partially extruding the billet in a die by pressure exerted substantially wholly normal to said two sides and thus along one diameter only of each of the said drilled holes thereby to produce a blade section of approximate aerodynamic form leaving an integral undrilled portion of the billet remaining to form the root-fixing portion, said holes thereby being deformed in the profile portion to be of elongated or lenticular cross-section, said extrusion causing the required twisting of the profile portion of the blade to give the required angle of incidence,
(*e*) machining the blade profile portion to final shape and machining the root-fixing portion from the remaining non-extruded imperforate portion of the billet,
(*f*) removing said filler at a stage in the manufacturing process subsequent to extrusion, and
(*g*) drilling holes longitudinally through the root-fixing portion to register with the inner ends of the blind holes.

3,044,154
PROCESS OF MAKING FORGED WHEEL CONSTRUCTIONS
Edward L. Moyer, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Original application Nov. 23, 1956, Ser. No. 624,161, now Patent No. 2,998,282, dated Aug. 29, 1961. Divided and this application Feb. 2, 1960, Ser. No. 6,224
3 Claims. (Cl. 29—159.01)

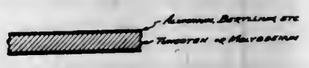


1. A process for making a forged wheel half for aircraft landing gear assemblies comprising the steps; forging a billet to approximate a wheel half configuration, forming a series of separated offsets in the disc wheel around the circumference thereof, and machining the profile of the wheel half and removing the offset portions of said disc wheel to simultaneously provide finished wheel half dimension and create ventilating openings in the disc wheel.

3,044,155
SPINNERETTE
Harold W. Robinson, Union, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed Aug. 2, 1957, Ser. No. 675,826
6 Claims. (Cl. 29—183.5)

1. A spinnerette made from an alloy comprising about 70 percent by weight gold and 30 percent by weight platinum and coated by electroplating with a metal selected from the group consisting of rhodium and ruthenium.

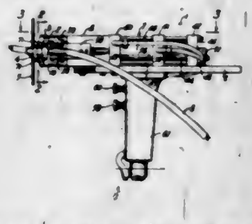
3,044,156
TEMPERATURE RESISTANT BODY
Marshall G. Whitfield, 2 Harvard St., Garden City, N.Y., and Victor Sheshunoff, P.O. Box 702, Magnolia, Ark.
Filed June 23, 1954, Ser. No. 438,652
7 Claims. (Cl. 29—194)



1. A body formed from metal chosen from a class consisting of tungsten, molybdenum, mixtures of the two,

and ferrous alloys containing at least 15% of any of the foregoing, hot coated with a bonded layer of aluminum containing substantially 5% to 50% beryllium.

3,044,157
APPARATUS FOR INSTALLING BUSHINGS
Richard R. Fink, Milwaukee, Wis., assignor to D. J. Campbell Co. Inc., Waukesha, Wis., a corporation of Wisconsin
Filed June 30, 1960, Ser. No. 40,003
9 Claims. (Cl. 29—235)



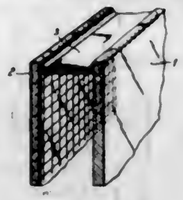
1. An apparatus for installing a bushing within an opening in an article, comprising a frame, a pair of cooperating jaws pivotally connected to the frame and pivotable from an open position to a closed position in which the jaws are adapted to be in engagement with the peripheral surface of the bushing to compress said bushing in a radial direction, cam means carried by the frame and operably connected to at least one of said jaws for moving said jaws from the open position to the closed position, a ram slidably connected to the frame and disposed in a plane between the jaws and adapted to engage the rear end of the bushing and move the bushing into the opening in the article after the jaws are moved to the open position, and drive means connected to both said cam means and said ram for actuating said cam means and moving said ram to thereby open said jaws and move said ram between the opened jaws to push the bushing into the opening.

3,044,158
SAFETY SOCKET METER GRIPPER
Raymond O. Bushnell, 2543 SW. 12th St., Miami, Fla.
Filed Aug. 16, 1957, Ser. No. 678,501
5 Claims. (Cl. 29—278)



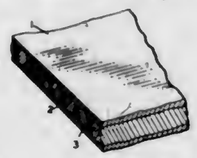
1. A meter gripper comprising an elongated tubular member adapted to fit over a meter casing, open at one end, and closed at the opposite end and having a plurality of longitudinally extending slots extending from such open end, a band concentric with the open end of said member and rotatably mounted on said member to provide rotation between the member and band, said band having a portion extending beyond the open end of the member, a fastener unit having two parts, one part attached to the outer surface of the band at one end thereof and a second part attached to the outer surface of the band at the opposite end thereof and a gripping device on said portion of the band adapted to grip a circular flanged member on a meter casing.

3,044,159
DOUBLE PANE WIRE-REINFORCED GLASS AND METHOD OF PRODUCING THE SAME
Walter Lerch, Gelsenkirchen-Schalke, Germany, assignor to Glas- und Spiegel-Manufactur Aktiengesellschaft, Gelsenkirchen-Schalke, Germany
Filed July 22, 1958, Ser. No. 750,207
Claims priority, application Germany Mar. 29, 1958
2 Claims. (Cl. 29—419)



1. A method of fabricating double-pane insulating glass units at least one of the panes of which consists of wire-reinforced glass, which includes the steps of providing a pair of glass panes at least one of which is a wire-reinforced glass pane having cut edges, mechanically grinding the edge portions of the cut edges of said wire-reinforced glass pane, smoothing and polishing said ground edge portions whereby said wire-reinforced glass pane acquires a border and becomes crack-resistant, spraying copper alloy in liquid form on to the edges of said crack-resistant pane, applying thereover soldering tin, firmly positioning a metallic spacer strip between two of said panes while maintaining the said panes in juxtaposed parallel position, and sealing the same to form a unitary structure.

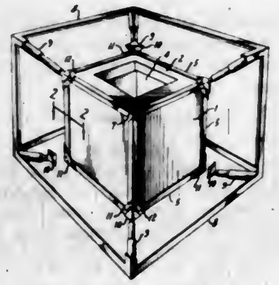
3,044,160
METHOD OF PRODUCING RIBBED METAL SANDWICH STRUCTURES
Robert I. Jaffee, Columbus, Ohio, assignor, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,875
8 Claims. (Cl. 29—423)



1. A method of producing hollow, ribbed titanium sheets of controlled dimensions and with a uniform, continuous bond between the titanium ribs and the top and bottom titanium sheets which comprises the steps of: assemblying alternate layers of titanium ribs and copper spacers in a rectangularly shaped titanium yoke; welding top and bottom titanium cover plates on the yoke; hot-rolling the titanium-copper sandwich at approximately 1400° F., in a direction parallel to the direction of the ribs, to a predetermined thickness; and selectively removing the copper spacers.

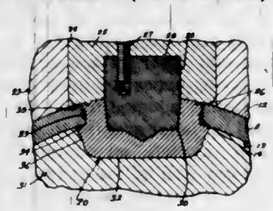
3,044,161
METHOD OF ASSEMBLING AN INSULATED SHIPPER CONTAINER
Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York
Filed Aug. 15, 1960, Ser. No. 49,731
3 Claims. (Cl. 29—445)

1. The process of building an insulated shipper container which consists in assembling a plurality of insulating panels in edge to edge contact to define a rectangular box having top, bottom and side walls, placing an angle bar along the abutting edges of each pair of panels to enclose each edge and engage both abutting panels, the length of the bar being slightly less than the uncompressed length of the abutting edge, placing at each of the eight corners of the box overlying each of the three adjacent angle bar ends, a three sided corner cover member, applying equal pressure simultaneously to the ends of the angle bars at each corner only, the pressure being applied to said corner cover members the lines of pressure inter-



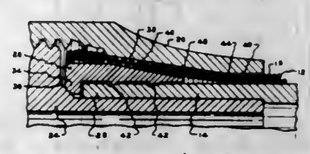
secting generally at the center of the box, the pressure being sufficient to compress the panels and bring the ends of the angle bars into immediate juxtaposition, then securing the adjacent ends of each of the three angle bars together at each corner by means of the corner cover to thereby form the angle bars and corner cover members into a unitary frame structure about said compressed insulated panels to thereby form a unitary angle bar frame structure about said compressed insulating panels and then relieving the pressure form each of the corner cover members.

3,044,162
METHOD OF ATTACHING A BOMB HANGER SOCKET
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Feb. 21, 1957, Ser. No. 641,550
4 Claims. (Cl. 29—470.5)



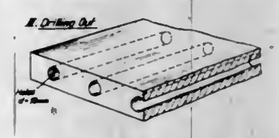
3. In a method of providing a bomb hanger stud on a curved tubular casing wall of a bomb, the steps of punching a circular opening through the curved wall leaving radially inner and outer spaced casing shoulders, placing a stud having a peripheral lateral flange of a shape complementary to the shape of said outer casing shoulder in the opening with the flange resting on the outer shoulder, punching centrally the outer end of the stud while supporting an opposite inner end of the stud displacing and flowing the material thereof into underlapping marginal relation to said inner shoulder about said opening and laterally outwardly into overlapping gripping relation with said outer shoulder while contemporaneously forming a central socket cavity in the stud and while contemporaneously dishing inner and outer surfaces of the stud adjacent the inner and outer casing shoulders thereby further upsetting the lapped material of the stud into snug nested engagement with the spaced casing shoulders, and internally threading the stud socket.

3,044,163
METHOD OF SECURING A FITTING TO A REINFORCED HOSE
Hans E. Bacher, Stuttgart Degerloch, Germany, and Roger R. La Marre, Jackson, Mich., assignors to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Original application Oct. 11, 1955, Ser. No. 539,831, now Patent No. 2,833,567, dated May 6, 1958. Divided and this application Apr. 28, 1958, Ser. No. 731,220
2 Claims. (Cl. 29—506)



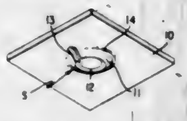
1. The method of assembling a flexible hose having an inner tube and an outer reinforcing layer to a detachable, reuseable end fitting having a body portion, a sleeve and a socket, said inner tube being of a predetermined plastic material, said method comprising the steps of inserting said sleeve between said outer reinforcing layer and an annular lip seal portion of said inner tube, providing a nipple on said body portion having a larger outer diameter than the inner diameter of said lip seal portion by an amount so as to control the degree of expansion of said lip seal into contiguous relationship with said sleeve, inserting said nipple into said lip seal portion of said inner tube to thereby form a joint that is incapable of sustaining forces of compression of fluid sealing magnitude under pressures for which the assembly is designed under conditions of use and ageing experienced in service, whereby said lip seal portion is relatively free from compressive forces along the outer surface of said nipple to permit fluid pressure to actuate said lip seal portion radially outward toward the inner surface of said sleeve and into fluid pressure sealing relation therewith, and securing said socket and outer reinforcing layer of said hose to said body portion without applying any compressive forces to said lip seal portion.

3,044,164
PROCESS FOR MAKING METAL PLATES PROVIDED WITH DRILLINGS
Heinrich Bauer, Hannover, Germany, assignor to Vereinigte Leichtmetall-Werke, Gesellschaft mit beschränkter Haftung, Bonn, Germany
Filed Mar. 11, 1958, Ser. No. 720,584
6 Claims. (Cl. 29—528)



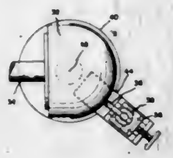
1. A process for making a metal article having passageways therethrough which extend in the lengthwise plane in which the article extends, comprising the steps of (*a*) casting the body of the article about at least one core of a material of a resistance to drilling of less than that of the metal forming the article so as to embody the core in said body with at least one end of each core accessible from the outside, and, said core having one diameter substantially half as long as to as long as the other diameter in the direction normal to said one diameter, (*b*) drilling passageways through said body following the path of said core, thereby simultaneously removing the material of said core and removing by said drilling also metal from the walls of said passageways, thereby forming passageways being circular in cross-section with a diameter larger than the largest diameter of said core.

3,044,165
METHOD OF MAKING SCREW-RECEIVING FASTENERS OR THE LIKE
Robert A. Munse, Perrysburg, Ohio, assignor to Prestole Corporation, Toledo, Ohio, a corporation of Michigan
Filed May 16, 1960, Ser. No. 29,190
1 Claim. (Cl. 29—532)



The method of forming a screw-receiving impression in sheet metal which consists in pressing a generally frusto-conical protuberance from a sheet metal piece having a flaring side wall and a flat imperforate end wall to provide a generally concavo-convex form, punching out of the imperforate end wall at substantially right angles thereto a round hole and out of the flaring side wall a radial slot, the punching operation taking place from the outer or convex side to the inner side or concave side of the impression so that burrs or roughened edges of the hole edge therefrom are disposed at the inner side thereof, and finally pressing the impression in a reverse direction so that substantially the same form is obtained but with the edges of the hole disposed at an angle of less than 90° to the horizontal and such edge is in helical form, the burr-containing edge being on the inside edge of the hole and away from penetration into the threads of an applied screw.

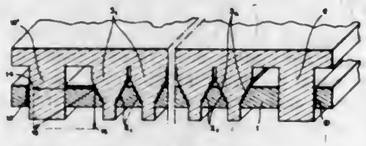
3,044,166
METHOD FOR MAKING THIN SPHERICAL SHELLS
James S. Kirkpatrick and Fred E. Krause, Detroit, Mich., assignors to Brooks and Perkins, Inc., Detroit, Mich., a corporation of Delaware
Filed Mar. 26, 1958, Ser. No. 724,194
4 Claims. (Cl. 29—538)



1. The method of forming a thin hemispherically formed metal shell of substantially uniform thickness of only a few thousandths of an inch, which comprises drawing flat stock to form a substantially hemispherical shell, thereafter spinning the drawn shell onto a master mandrel having accurately formed hemispherical exterior surfaces, and finally, machining the shell in a turning operation while supported on a rotating master mandrel having accurate hemispherically formed external surfaces engaging and supporting the internal surfaces of the shell.

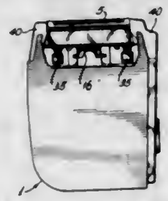
3,044,167
GANG CUTTING AND FORMING PUNCH FOR THE MANUFACTURE OF FILTERING ELEMENTS
Francois Joseph Henri Hubert Mathieu, Saint-Cloud, France, assignor to Societe les Constructions Guinard, Courbevoie, France, a body corporate of France
Filed Feb. 12, 1960, Ser. No. 8,274
Claims priority, application France Feb. 13, 1959
1 Claim. (Cl. 29—567)

A gang cutting and forming punch comprising a series of aligned punches on a gang body, each of said aligned punches having a parallelepipedic front cutting portion, an intermediate forming portion and a body connecting portion, the said intermediate portion having two side faces which flare away from said front portion into said connecting portion, the said side faces being aligned with the said series, and a terminal punch of parallelepipedic



form at each terminal end of the said aligned series having a dimension in the direction of alignment that is at least as great as the body connecting portion of said aligned series of punches.

3,044,168
SPRING HOLDING MEANS FOR ELECTRIC SHAVER SHEARING HEAD
Harold S. Kachline, Lancaster, and Armand R. Van Baelen, Quarryville, Pa., assignors to Schick Incorporated, Lancaster, Pa., a corporation of Delaware
Filed Jan. 5, 1960, Ser. No. 574
5 Claims. (Cl. 30—43)



1. In an electric shaver of the kind including a shearing head unit having a headed locking member protruding from its under side, a case of which one end incorporates a channel to receive the shearing head unit and an opening in the bottom wall of the channel to receive the headed locking member, the improvement which comprises an upwardly opening spring clip disposed in said opening to receive and snap-engage the locking member, the upper surface of the bottom wall of the channel having recesses therein adjacent said opening and the walls of the opening, below the said upper surface, also having recesses therein, said clip having upper and lower laterally projecting portions, the former adapted to seat in the first mentioned recesses and the latter adapted to seat in the second mentioned recesses, a plate seated on the said upper surface of the bottom wall of the channel and overlying the upper, laterally projecting portions of the clip and means securing the plate to the case.

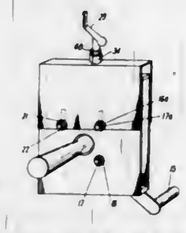
3,044,169
TOOL FOR REPAIRING MUFFLER ASSEMBLIES
Lowell N. Brown, Overland, Mo.
(9422 Trenton Ave., St. Louis 14, Mo.)
Filed Feb. 13, 1961, Ser. No. 88,787
1 Claim. (Cl. 30—91)



In a pneumatic hammer operated tool for effecting severing and slitting operations of the character described in repairing muffler assemblies of automotive vehicles: a cylindrical main body portion merging at one end into a chisel portion; said chisel portion comprising:
a thin blade section;

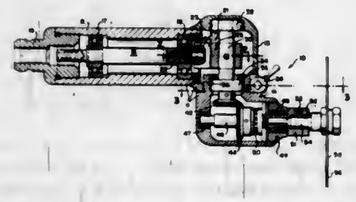
a sharp point constituting the forward extremity of the blade section;
a first sharp cutting edge extending from said point angularly rearwardly in the blade section;
a fin segment projecting angularly upwardly from one side of the blade section, the forward extremity of the fin segment being disposed rearwardly of the aforesaid extremity of the blade section;
and a second sharp cutting edge extending rearwardly downwardly from said forward extremity of the fin segment, the convergence of said first and second cutting edges forming a V-shaped cutter formation extending from the sharp point extremity of the blade section to the forward extremity of said fin segment.

3,044,170
CABLE SHEATH SLITTING DEVICE
Edward D. Agombar, 1331 Crawford Ave., and Arthur B. Agombar, 918 Mary St., both of Fort William, Ontario, Canada
Filed Feb. 27, 1961, Ser. No. 92,075
Claims priority, application Canada Jan. 25, 1961
7 Claims. (Cl. 30—91)



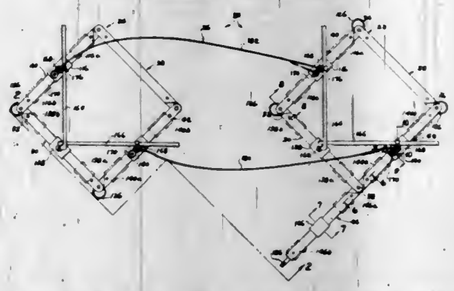
1. A cable slitter comprising a main body, a pair of cutting assemblies, a cutting disk on each of said assemblies, means for adjusting the distance between the cutting disks of said cutting assemblies, said assemblies being housed within and rotatably mounted upon said body, said assemblies being positioned and dimensioned to receive a cable between and in contact with said cutting disks, means for driving the cable between said disks thereby simultaneously forming a pair of slots along the length of said cable, said driving means comprising a cable-receiving spool rotatably mounted on and within said body, a driving handle attached to the shaft of said driving spool on the outside of said body, and a guiding spool, both said spools being rotatably housed within and upon said body behind said cutting assemblies, said spools being positioned and dimensioned to receive a cable and urge it forward between said cutting assemblies by the application of said driving means.

3,044,171
SURGICAL SAW
Emil Cecere, Wayne, N.J., assignor to Howe Sound Company, a corporation of Delaware
Filed July 17, 1961, Ser. No. 124,583
3 Claims. (Cl. 30—166)



1. A high-speed short-stroke saw for cutting plaster casts, bone, and the like comprising a casing, a swivel head attached to and pivotal on said casing, a saw blade mounted in and extending from said swivel head, and means within the casing and the swivel head for oscillating said saw blade in a plane substantially perpendicular to the plane in which the swivel head turns in every position of the swivel head.

3,044,172
TRANSFER PANTOGRAPH APPARATUS
Alex Serna, 1843 Salina, Dearborn, Mich.
Filed Apr. 10, 1959, Ser. No. 805,406
17 Claims. (Cl. 33—25)

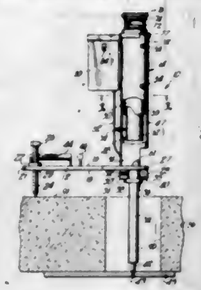


4. A transfer pantograph apparatus comprising a design tracing pantograph and a design reproducing pantograph disposed in spaced relationships; each of said pantographs having a separate base and a separate rotatable vertical support means extending upwardly from said base; each of said pantographs having a parallel-linkage assembly including four elongated link members pivotally interconnected in parallel formation to flex into varying angular relationships; each of said vertical means being pivotally connected to its base about a horizontal axis, providing a tilting movement of said pantographs; a flexible motion transmitting means interconnecting said vertical support means whereby when said design tracing pantograph is tilted on its base, said design reproducing pantograph will be tilted a corresponding amount; a first means including a rigid, longitudinally adjustable link on said design tracing pantograph connecting two adjacent pivotally connected link members for converting a flexing movement of said design tracing pantograph into a motion transmitting force; a second means including a rigid longitudinally adjustable link on said design reproducing pantograph connecting two adjacent pivotally connected link members for converting a motion transmitting force into a flexing movement of said pantograph; and a flexible means connecting said first and second means for transmitting said motion transmitting force from said first to said second means; means operatively connecting said vertical support means whereby a rotary movement of said design tracing pantograph causes a corresponding rotary movement of said design reproducing pantograph; a tracer element on said design tracing pantograph, and a reproducing element on said design reproducing pantograph.

3,044,173
PLUMBING DEVICE
Bert W. O'Neal, 5608 E. 27th St. Terrace; Dale G. O'Neal, 1700 E. 67th St. Terrace North; and John P. Gorman, 6607 N. Forest, all of Kansas City, Mo.
Filed June 20, 1960, Ser. No. 37,280
3 Claims. (Cl. 33—46)

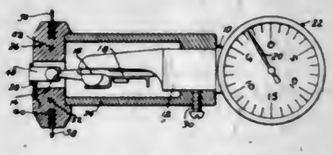
1. A device for determining the location of a point on one surface with respect to a point on another surface spaced vertically from said one surface, said device comprising a support adapted to be disposed between the surfaces and having a plurality of legs thereon for supporting the same above said other surface, one of the legs being adapted to engage said other surface at said point thereon, at least a pair of said legs adjacent said one leg

being shiftable relative to the support to render the latter shiftable relative to said other surface and thereby shift said one leg until the longitudinal axis thereof is vertically disposed; and elongated optical projection means provided with a reference index and secured to said support in outwardly extending relationship thereto, said



projection means having an optical axis collinear with the longitudinal axis of said one leg and disposed to project the image of said index away from said plate and onto said one surface, whereby said image on said one surface defines the point thereon and said points are thereby in substantially vertical alignment relative to said reference when said one leg is vertically disposed.

3,044,174
ADAPTER FOR DIAL INDICATOR GAUGE
Walter Coulson, Detroit, Mich.
(336 8th Ave. NE., St. Petersburg 1, Fla.)
Filed Dec. 23, 1957, Ser. No. 704,569
4 Claims. (Cl. 33—178)



1. An adapter for a dial indicator wherein the dial indicator is provided with a shank portion supporting a movement transmitting arm which moves at right angles to the axis of the shank portion on the dial indicator comprising, a head portion having an axial opening therein for receiving a portion of the transmitting arm, a sleeve having its axis parallel to the axial opening in said head portion for securing said head portion to said shank portion of said dial indicator, said shank portion being adjustable with respect to the axis of said sleeve, whereby the axis of the shank portion may be moved relative to the axis of said sleeve, diametrically opposed sizing pins carried by said head and projecting at right angles to the axis of the opening in said head portion and beyond the outer surface of said head portion, one of said sizing pins being slidable with respect to said head portion and arranged for imparting movement to said transmitting arm of the dial indicator, the other of said sizing pins being longitudinally adjustable with respect to said head portion.

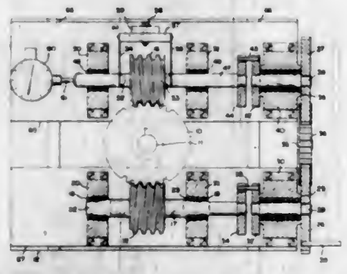
3,044,175
RESPONDER AND TELEMETERING TRANSMITTER FOR BOREHOLE CALIPER
Marshall B. Broome, Tulsa, Okla., and Robert L. Tucker, Dallas, Tex., assignors to Well Surveys, Incorporated, a corporation of Delaware
Filed Aug. 14, 1959, Ser. No. 833,758
4 Claims. (Cl. 33—178)

4. A well surveying instrument comprising a well tool; a caliper arm movably supported on said well tool; a double cathode coupled phantastron oscillator including two pentode electron tubes, each of said tubes having an anode, a cathode, a control grid, a screen grid, and a suppressor grid, means connecting the cathode of each of said tubes to the suppressor grid of the other of said tubes, a pair of capacitors, means connecting said anode of each of said tubes through a distinct one of said capacitors to said control grid of the same tube, a high voltage lead, means connecting each of the anodes and the screen grids to said high voltage lead, and a pair of unilateral conducting devices each having an anode and a cathode; an electric cable; means for applying a high voltage to



said cable; a first resistor connected between said cable and a reference potential; a variable tap on said first resistor; means connecting the cathodes of said devices to said variable tap; means connecting said caliper arm to said variable tap for movement of the latter by the former; a differentiating and clipper circuit connected to one of said screen grids to produce short voltage pulses at the frequency of oscillation of said oscillator; an amplifier for amplifying said pulses and applying them to said cable; and means for interconnecting said high voltage lead and said cable for direct voltage and for isolating them for alternating voltages.

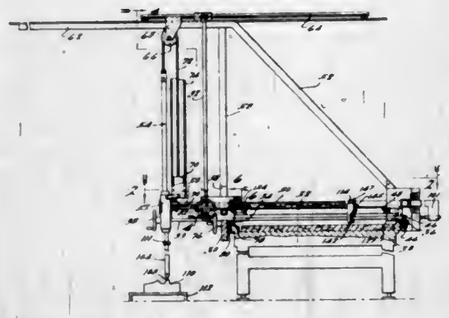
3,044,176
APPARATUS FOR TESTING GEARS
Allan H. Candee, 404 Hillside Ave., Rochester 10, N.Y., and George O. Richmond, 4 Upper Crescent, East Rochester, N.Y.
Filed Mar. 23, 1959, Ser. No. 801,100
4 Claims. (Cl. 33—179.5)



1. Apparatus for testing cylindrical gears comprising means for rotatably supporting a gear to be tested, a threaded member engaged with the teeth of the gear on one side of the axis of said gear, a threaded member disposed at the opposite side of the gear axis, each of said members being rotatable, the second-named threaded

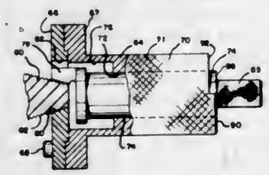
member being also displaceable in the direction of its axis of rotation, means for rotating the first-named threaded member to rotate the gear by engagement of the first-named threaded member therewith, means for rotating said second-named threaded member in unison with said first-named threaded member upon rotation of said first-named threaded member, said second-named member being operatively engaged with the gear, means for holding said first-named threaded member against axial movement, and means for indicating any axial displacement of said second-named threaded member.

3,044,177
METHOD OF AND APPARATUS FOR MAKING ORTHOGRAPHIC PROJECTIONS
Adolph T. Spalek, 17128 Chandler Park Drive, Detroit 21, Mich.
Filed Jan. 27, 1958, Ser. No. 711,406
10 Claims. (Cl. 33—189)



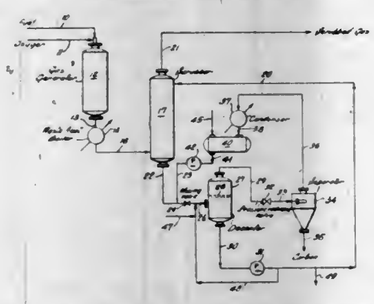
1. Apparatus for making orthographic projection drawings comprising a drawing surface, a pair of parallel rails arranged along opposite sides of said surface and parallel thereto, a rigid frame mounted for smoothly guided travel along said rails, a slide member mounted on said frame for smoothly guided travel thereon transversely with respect to said rails and in a plane parallel to said surface, a pointer mounted at one end of said slide member for smoothly guided travel perpendicularly to said surface, a marking device carried by said frame between said rails and movable in the direction of said surface, and coupling means for coupling said marking device to said pointer for travel synchronously with the travel of said pointer in directions perpendicular to said surface.

3,044,178
THREAD TAPER GAGE
Frederick M. Kasten, Pontiac, Russell S. Cooke, Birmingham, and Robert Kasten, Detroit, Mich., assignors to Alameda Gage Company, Royal Oak, Mich., a corporation of Michigan
Filed Nov. 13, 1959, Ser. No. 852,678
8 Claims. (Cl. 33—199)



8. A tool for measuring the eccentricity of external tapered threads comprising a work-gripping element formed as a two part assembly, one of said parts including an annular plate having work-engaging threads formed on its inner periphery and axially extending slots formed in its inner periphery at spaced points therearound, the other part comprising a sleeve portion having a recess and a flange portion surrounding the recess, the two parts being secured together with the flange portion abutting again the plate; and a measuring element including a stem portion slidably and rotatably fitting within the aforementioned sleeve portion, and an arm projecting from said stem portion within the recess for selective entry through any of the aforementioned slots, said arm having a tapering surface adapted to abut against the work thread crest portions when it is located within any of the slots to thereby measure the major diameter-pitch diameter relation at spaced points around the work thread circumference.

3,044,179
CARBON RECOVERY
Ronald W. Chapman, Whittier, John C. Ahlborn, Monterey Park, and Roger M. Dille, Whittier, Calif., assignors to Texaco Inc., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,816
2 Claims. (Cl. 34—9)

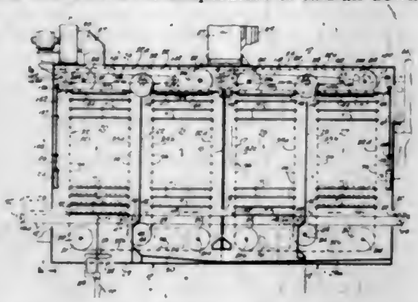


1. In a method of recovering carbonaceous solid from a dispersion of carbonaceous solid in water wherein said dispersion is contacted with a volatile liquid hydrocarbon effecting transfer of said carbonaceous solid from water to said hydrocarbon liquid, the improvement which comprises contacting said dispersion with volatile liquid hydrocarbon in liquid phase in an amount within the range of 5 to 30 parts by weight per part carbonaceous solid in a mixing zone at an elevated pressure above about 100 p.s.i.g. and at a temperature above the temperature required for substantially complete vaporization of said volatile hydrocarbon at a subsequently reduced pressure, separating aqueous and oil phases comprising water and a slurry of solid particles in volatile hydrocarbon liquid respectively at said elevated pressure, passing said slurry to a vaporization zone maintained at a pressure lower than the pressure of said mixing and separating steps, effecting substantially complete vaporization of volatile liquid hydrocarbon from said slurry by flash vaporization at said reduced pressure forming a dispersion of carbon in hydrocarbon vapors, and separating carbonaceous solid substantially free from water and liquid hydrocarbon from said hydrocarbon vapors.

3,044,180
METHOD OF TREATING COMESTIBLES
Zenas Block, Larchmont, N.Y., and Herbert T. Hunter and William S. Hodges, Catonsville, Md., assignors to DCA Food Industries Inc., New York, N.Y., a corporation of New York
Original application Sept. 24, 1957, Ser. No. 685,983. Divided and this application July 24, 1958, Ser. No. 750,752
7 Claims. (Cl. 34—20)

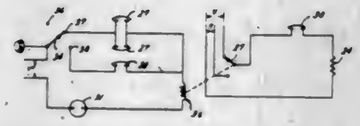
1. The improved method of treating warm freshly cooked cakes comprising transporting said cakes along a predetermined path through a treating zone from a feed end to a discharge end of said path, introducing a stream

of conditioned high velocity air relatively upstream into said treating zone at a point trailing said path discharge end, exhausting said air relatively downstream at a point in advance of said trailing point whereby to expose said cakes to said stream of conditioned high velocity air, and regulating the temperaturre and humidity of said air upstream to maintain the temperature of said air downstream



at within 5° F. of ambient room temperature and the relative humidity thereof between 50% and 85% by injecting a water mist into said upstream air when said downstream air exceeds a predetermined dry bulb temperature and injecting steam into said upstream air when said downstream air falls below a predetermined wet bulb temperature.

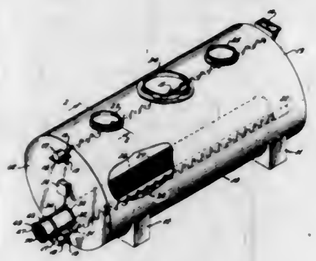
3,044,181
HEATER CONTROL IN LAUNDRY APPARATUS
Arthur Berenbaum, Philadelphia, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,101
4 Claims. (Cl. 34—45)



4. In apparatus for drying fabrics, a source of relatively high energy and a source of relatively low energy, a heater element energizable, selectively, by said higher or lower energy sources to supply heat for drying either at a higher or at a lower rate, switching means operative, selectively, to provide for operation of said heater element either by said higher or said lower energy source, and a pair of thermostatic elements operatively connected with said switching means to operate the latter to effect heating at said higher and said lower rates, sequentially, in response to upper and lower temperatures within said apparatus, the upper and lower temperatures to which one said element is responsive being intermediate the upper and lower limits to which the other element is responsive, the said other thermostatic element being operative initially to provide for energization of said heater element by said higher energy source to effect its higher heat supply rate, the said one thermostatic element thereafter being operative, cyclically, to provide for energization of said heater element by said lower and said higher energy sources.

3,044,182
APPARATUS FOR THE STORAGE AND DRYING OF GRAIN
Vincent B. Steffen, Box 268, New Hampton, Iowa
Filed Feb. 18, 1960, Ser. No. 9,549
6 Claims. (Cl. 34—50)

1. The combination of a generally horizontally disposed cylindrical chamber having vent openings spaced along its top, means forming an inlet passage in the upper portion of said chamber and a discharge passage in the lower portion of said chamber, for grain to be stored and dried, a leveling auger along the upper portion of said chamber in operative association with said inlet passage means and a discharge auger along the lower portion of said chamber in operative association with said



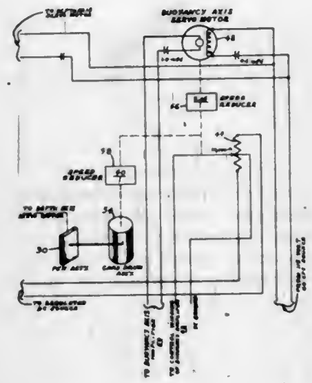
discharge passage means for moving material within said chamber outwardly through said discharge passage, air circulating means including an open-work tube disposed lengthwise along the lower portion of said chamber for the passage of air relative to said chamber, temperature modifying means operatively associated with said tube, and means for creating movement of air through said tube and the vents of said chamber.

3,044,183
HAIR DRIER AND METHOD OF MANUFACTURE
Hans A. Mauch, 4418 Airway Road, Dayton, Ohio, and Arnold S. Moore, 1205 Mill Plain Road, Fairfield, Conn.
Filed July 28, 1958, Ser. No. 751,426
16 Claims. (Cl. 34—99)



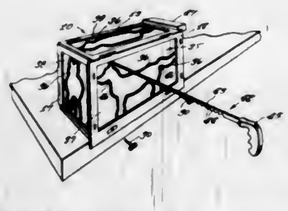
1. A hair drying hood in the form of a cap having a lower marginal edge portion for fitting about the user's head below the hair line comprising, outer and inner substantially co-extensive superimposed layers of flexible material joined along their edges to provide an enclosure, said outer and inner layers each consisting of matching half sections foldable upon each other along a central fold line, said layers having a lower edge extending from opposite sides of one end of the fold line and a top and forward edge extending from opposite sides of the other end of the fold line to the outer ends of the lower edge in arcuate fashion, the superimposed top and forward edges of the half sections of the inner and outer layers being folded and sealed together throughout their length to provide a central seam in said hood, said layers being joined at selectively spaced areas, means defining an air inlet in one of said layers for admitting air between the layers whereby billowing takes place intermediate said joined areas, vent means in said joined areas and means defining air jet openings in said enclosure selectively arranged with respect to each of said vent means within the hood for jetting air to the inner side of the hood in localized relation to said joined areas.

3,044,184
BATHYTHERMOGRAPH SIMULATOR
William Freeman Leuze, Waterford, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 1, 1960, Ser. No. 6,082
8 Claims. (Cl. 35—19)



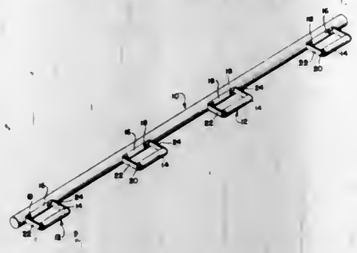
1. In a training device, an apparatus for simulating the buoyancy of an underwater craft comprising in combination, a first servomechanism loop, depth signal means operatively connected to the input of said first loop, a second servomechanism loop, said second servomechanism loop comprising a servo amplifier, a servo motor, and feedback means, said servo amplifier being connected to said servo motor, said servo motor being connected to said feedback means and said feedback means being operatively connected to the input of said servo amplifier, and function generating means operated by said first servomechanism loop, means for operatively connecting said generating means to said servo amplifier to provide an input signal thereto, said first servo loop comprising motor means being operatively connected to drive said function generating means, whereby said second loop produces an output signal which is analogous to the buoyancy of said underwater craft, said buoyancy output being dependent upon both the characteristics of said function generating means and the input to said first loop.

3,044,185
SCULPTURING KIT
Gunther F. Daniel, 18603 E. River Road, Columbia Station, Ohio
Filed Aug. 1, 1961, Ser. No. 128,514
3 Claims. (Cl. 35—26)



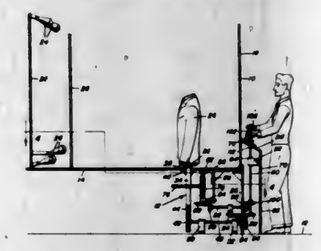
1. A sculpturing kit comprising in combination a frame having means to receive and hold a block of sculpturing raw material, and having means to receive interchangeably a set of guide plates and holding said guide plates in three planes relative to the said block of material, and said guide plates having means to guide the sawing path of a saw.

3,044,186
DEVICE FOR ASSISTING IN SWIMMING INSTRUCTION
Harold S. Berger, 1408 14th Ave., Seattle, Wash., assignor of one-half to George J. Hibbard, Seattle, Wash.
Filed July 20, 1959, Ser. No. 828,128
2 Claims. (Cl. 35—29)



1. A device for assisting an instructor in giving swimming instruction, comprising: an elongated, stiff shaft, having a diameter permitting comfortable gripping of the same by the hands of the instructor and a plurality of pairs of spaced apart hand positioning means disposed throughout the length of said shaft and adapted to be employed in pairs, one pair for each student to be accommodated; said hand positioning means comprising hand grip devices disposed in alignment on one side of said shaft and spaced away from the same, said hand grip devices provided with substantially cylindrical revolvable hand grip portions.

3,044,187
DISPLAY DEVICE
Thomas C. Nicholls, Jr., 640 Saratoga Bldg., New Orleans 12, La.
Filed Mar. 13, 1959, Ser. No. 799,149
5 Claims. (Cl. 35—56)

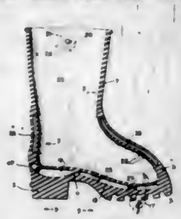


1. A display device for a display organization which includes an upright mirror, a prospective customer station and an article of apparel located between said mirror and said station, said display device comprising an apparel support, means for moving said apparel support in one direction, means for moving said apparel support in another direction while the person in said station views a composite image of the apparel and a part of his body in the mirror, the first mentioned moving means having a control at said station, the second mentioned moving means having a control at said station, and a window intervening between said controls and said apparel support in alignment therewith and with the mirror, the composite image in said mirror being observable through the window by said person in said station at said controls.

3,044,188
VENTILATED FOOTWEAR
Henry Evangelista, 1812 2nd Ave., Altoona, Pa.
Filed June 18, 1959, Ser. No. 821,301
5 Claims. (Cl. 36—3)

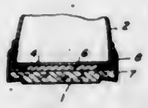
1. An article of footwear having a heel and a toe and a sole, an insole normally spaced from the sole to estab-

lish air space beneath the insole, means dividing said air space into one chamber at the heel and another chamber forward of the heel, one-way valve and duct means permitting flow of air into said one chamber only from



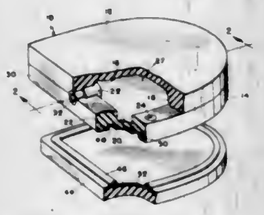
the interior and out of said one chamber only to the exterior of the article of footwear, and one-way valve and duct means permitting flow of air into said another chamber only from the exterior and out of said another chamber only to the interior of the article of footwear.

3,044,189
SHOE WITH GROOVED OUTSOLE TO RECEIVE A FOXING STRIP
Atsuro Noda, Ukiha-gun, Fukuoka-ken, Japan, assignor to Nikka Rubber Co., Ltd., Kurume, Japan
Filed June 8, 1959, Ser. No. 818,834
2 Claims. (Cl. 36—14)



1. A boot or shoe construction including, in combination, a sole provided with a groove along the edge of its bottom surface, said groove sloping upwardly and inwardly from the outer edge of the sole, an insole, an upper having an inwardly extending lower margin secured on the under side of said insole, a filler positioned between said insole and said sole, a first foxing attached on the lower part of the upper and on the upper edge surface of said sole, and a second foxing attached on said first foxing and on said groove.

3,044,190
INFLATABLE SOLE AND HEEL STRUCTURE WITH REPLACEABLE TREAD PORTIONS
Urban Urbany, Pine Valley, Calif.
(Paradise Ranch Trailer Park, Aguanga, Calif.)
Filed Dec. 18, 1959, Ser. No. 860,418
1 Claim. (Cl. 36—29)



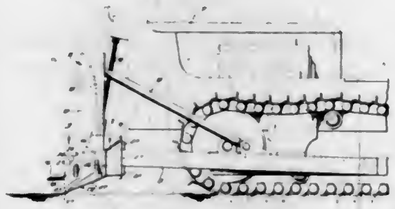
The combination in a shoe having a sole portion and a heel portion: each said portion having a base element; at least one of said base elements having an air chamber defined on the lower side thereof by a bottom wall; said bottom wall being impregnated with magnetic material; and a wear surface having the upper part thereof impregnated with magnetic material and thereby removably secured to said bottom wall.

3,044,191
SPRINGABLE SHOE HEEL AND ATTACHING MEANS
Alven A. Cayo, 241 W. May St., Benton Harbor, Mich.
Filed Apr. 2, 1959, Ser. No. 803,659
5 Claims. (Cl. 36—34)



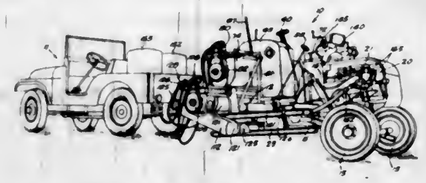
1. A heel unit for shoes comprising integral heel plate and heel members formed of sheet metal stock of uniform thickness, the heel member being forwardly curved and of curved cross section and terminating at its lower end in a rearwardly projecting tab adapted to have a nonmetallic lift attached thereto, the heel plate member comprising a flat central portion and curved side and rear portions of substantial depth curvedly merging into the central portion, the heel plate member having laterally spaced slits extending rearwardly from its front edge, the portion of the heel plate member between the slits projecting downwardly and forwardly and curvedly merging into the heel member and constituting a springable connection therefor to the heel plate member, the heel member being nonspringable under normal use load, and an attaching member of forwardly facing U-shape disposed on the upper side of said heel plate member with the forward ends of its arms at the outer sides of said slit therein, said attaching member being fittingly conformed to said heel plate member and fixedly secured thereto to constitute an assembled unit therewith with its outer side and rear edges in inwardly spaced relation to the side and rear edges of said heel plate member and having pointed upwardly projecting bendable shoe attaching prongs of flat section on its outer edges.

3,044,192
ROOT CUTTING ATTACHMENT FOR BULLDOZERS
David W. Moore, Box 295, Hedrick, Iowa
Filed May 12, 1961, Ser. No. 109,654
4 Claims. (Cl. 37—2)



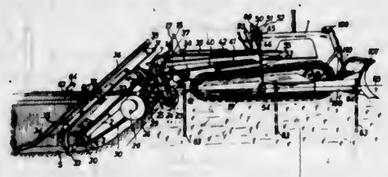
1. In combination, a bulldozer provided with a laterally projecting blade having a substantially vertical side edge and a longitudinally extending supporting beam secured to said blade and extending rearwardly thereof, a root cutter comprising a vertically channeled main supporting body receiving and secured to said side edge of the bulldozer blade, means on the rear portion of said body receiving and clampingly engaging said bulldozer supporting beam, and a plow blade of substantial length projecting from said main supporting body and being inclined downwardly and laterally therefrom and being inclined downwardly and laterally from the bulldozer blade.

3,044,193
ICE RESURFACING MACHINE
Frank J. Zamboni, Paramount, Calif., assignor to Frank J. Zamboni & Co., Paramount, Calif., a copartnership
Filed May 4, 1960, Ser. No. 26,788
5 Claims. (Cl. 37—13)



1. An ice resurfacing machine comprising a frame supported on runners resting directly on the ice, means for propelling said machine over the ice, a blade mounted on said frame transverse to the direction of forward travel, said blade being adjustable with respect to said frame for depth of cut and for leveling the blade with respect to the surface of the ice, and conveyor means for gathering the shaved ice from in front of said blade and removing the same, said conveyor means including means for depositing at least a portion of the shaved ice onto the surface of the ice in the form of a narrow, well-defined ridge to serve as a marker line.

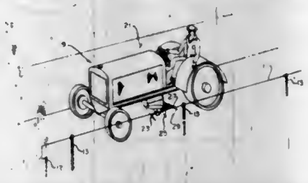
3,044,194
TRUCK-MOUNTED TRENCH EXCAVATING MACHINE
Richard Eugen Balkheimer, Neu Ulm-Offenhausen, Germany, assignor to Gebruder Eberhardt, Ulm (Danube), Germany, a German firm
Filed Feb. 13, 1959, Ser. No. 793,118
Claims priority, application Germany Feb. 19, 1958
19 Claims. (Cl. 37—86)



1. A truck-mounted trench excavating machine comprising a chassis adapted to move along the ground, a boom pivotably mounted on said chassis at one end thereof, an endless trenching chain mounted on said boom for continuous movement along the same, driving means for pivoting said boom to a given position independently of the vertical and horizontal positions of said chassis about an axis extending longitudinally of said chassis and also about an axis extending transversely thereto, said driving means capable of retaining the boom in said position during position changes of said chassis, and driving means for driving said chain along said boom.

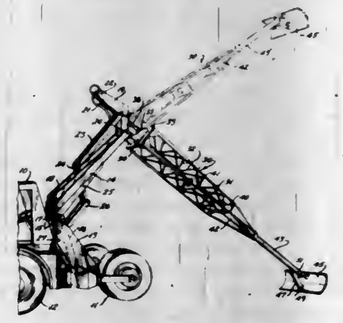
3,044,195
GRADING SYSTEM WITH ELECTRICAL CONTACT
Duane E. Atkinson, 102 Fey Drive, Burlingame, Calif.
Filed June 20, 1960, Ser. No. 37,369
9 Claims. (Cl. 37—143)

1. A vehicle control system for controlling grading apparatus of the type which is adapted to establish a graded surface comprising a lead line disposed a predetermined elevation above the surface to be graded, said lead line being electrically conductive and grounded to earth, circuit loop means including said lead line and earth, means on said vehicle and coupled to said circuit loop for energizing said circuit loop means with electrical energy, the means for energizing the circuit loop being grounded to earth, means in said circuit loop cooperating with said lead line and serving to derive a control signal, and means re-



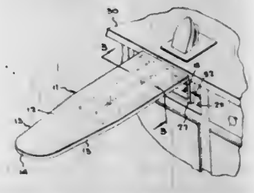
sponsive to said control signal serving to control the grading apparatus whereby it establishes a grade which is a predetermined level below the lead line.

3,044,196
CULVERT CLEANER
Edward J. Kinney, P.O. Box 82, Prescott, Ariz.
Filed Sept. 14, 1959, Ser. No. 839,663
5 Claims. (Cl. 37—143)



1. The combination of an earth working vehicle having a support attached thereto, a boom pivoted on said support, a bracket pivotally mounted on the free end of said boom, means connected to said fixed support for maintaining said bracket in substantially fixed relation to said support, a second boom pivoted on the free end of the first boom, means for independently swinging said booms to align the longitudinally axis of the first boom with the longitudinal axis of the second boom or to locate the free end of the second boom above or below the longitudinal axis of the first boom whereby said second boom can be located parallel with and in proximity to the earth.

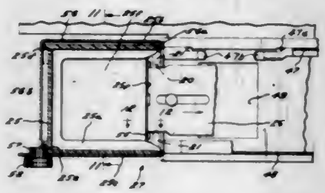
3,044,197
PORTABLE IRONING BOARD
Fred S. Cook, 216 E. 2nd St., Winnemucca, Nev.
Filed July 29, 1960, Ser. No. 46,272
3 Claims. (Cl. 38—115)



1. In combination, an elongated ironing board, a plate member disposed beneath said board, means slidably securing said plate member to the underside of the board so that the plate member is extensible from one end of the board, a generally rectangular, horizontally elongated rigid vertical frame secured transversely to the underside of said plate member at the intermediate por-

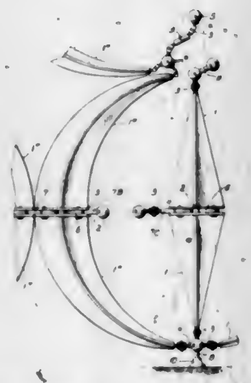
tion of the plate member and being engageable together with said plate member in a drawer opening, outwardly extensible horizontal abutment screws threadedly engaged in the sides of said frame, a vertical upwardly projecting abutment screw threadedly engaged through the rear end portion of said plate member rearwardly of said frame, and a depending vertical abutment member adjustably mounted in said frame and extending through the bottom thereof.

3,044,198
PROJECTION OF SLIDES
Frank C. Badalich, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 12, 1959, Ser. No. 786,199
6 Claims. (Cl. 40—79)



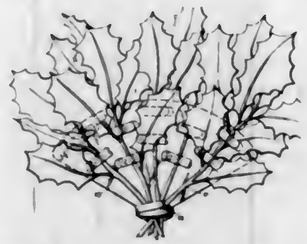
5. In a slide projecting apparatus, a guideway having an apertured plate slidable therein at the rear thereof and said guideway also having a top channel and a bottom channel, a pushing and pulling member slidable along the guideway and guided by the channels and having a T-shaped end portion movable in the guideway, a slide holder having a T-shaped slot in a side edge portion thereof adapted to interlock with said T-shaped end portion and fitting slidably in a guideway in guided relationship with the guideway, and a tray having a septum for holding the slide holder in alignment with the guideway.

3,044,199
ORNAMENTAL ASSEMBLY
Hippolyte Paul Delimal, 10805 Millen St., Montreal, Quebec, Canada
Filed June 29, 1960, Ser. No. 39,474
7 Claims. (Cl. 41—10)



1. A decorative assembly comprising a series of pairs of ornamental flanged frame members of elongated shape and having a curved axis, each frame member having a base and a top with its flanges tapering from said base to said top, a disc secured to the base of each frame member, spacer blocks, the discs of the frame members of each pair being interconnected with the interposition of said spacer blocks, means for securing said discs and spacer blocks in angularly adjustable position of one frame member with respect to the other of each pair, link keys inserted between said assembled discs and said spacer blocks for interconnection of one pair with another pair of frame members, universal joints interconnecting the tops of adjacent frame members, and a pedestal adapted to be secured to the ground and to which one of said universal joints is connected for supporting the decorating assembly.

3,044,200
FLORAL BASE
George Teufel, 7307 SW. Barnes Road, Portland, Oreg.
Filed May 22, 1959, Ser. No. 815,091
1 Claim. (Cl. 41—12)



A floral base comprising a flat, sheet metal body member assuming a flared configuration and having a point of origin, tab members struck in said body member in spaced relation from the point of origin and having one unsevered end forming a hinge whereby the tabs are adapted to be bent over portions of floral pieces to clamp the latter on the body member, said tab members being arranged in sets with at least two tab members in a set and with said two tab members in a set being disposed on a straight line leading from said point of origin and at right angles to the straight line, the alternate tab members in a set being hinged at opposite ends from each other, and an elongated finger struck in said body member and having one unsevered end adjacent the point of origin forming a hinge whereby said finger is adapted to be wrapped around the floral pieces for anchoring the latter at said point of origin.

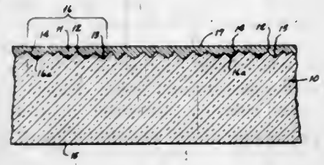
3,044,201
ARTIFICIAL TREE BRANCH
Michael J. Lalick, 3711 W. 97th St., Evergreen Park, Ill.
Filed Mar. 28, 1960, Ser. No. 17,928
2 Claims. (Cl. 41—15)



1. In a branch for an artificial tree, a stem formed of a metal rod having a slit formed at one end coincident with the axis of said rod, a first group of claw members

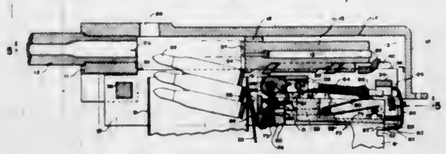
formed integral with the rod and extending about the periphery of the rod in a circle and in the region of said slit, a second group of claw members formed integral with the rod and extending about the periphery of the rod in a circle and in spaced relation to said first group of claw members, and a plurality of claw members formed integral with the rod and arranged in spaced relation between said two groups of claw members.

3,044,202
HALF-TONE COLOR PRINTS
Johan Gunnar Lindmark, Grevgatan 14, Stockholm, Sweden
Filed Feb. 16, 1960, Ser. No. 9,134
8 Claims. (Cl. 41—21)



1. A half-tone multi-color print including a transparent base having a back surface in which a dense and substantially uniform grain is formed by depressions having relatively sharply cornered peaks and valley bottoms with substantially flat surfaces therebetween, said base having a front surface which is transparent for viewing of said back surface through said base, and a half-tone color print printed on said back surface and reversed in subject position and color imposition as compared to the same print for direct viewing, said print comprising half-tone ink dots and said grain having a grain size substantially smaller than at least the largest of said dots but not less than $\frac{1}{200}$ of the size of said largest dots.

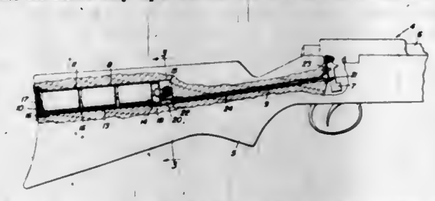
3,044,203
FIREARM WITH RECIPROCABLE BOLT HAVING TRANSVERSE MOVEMENT
Gary Wilhelm, Hamden, Conn. (Apt. 54, 470 Prospect St., New Haven, Conn.), and Henry Schorn, R.F.D. 1, Sandy Hook, Conn.
Filed Aug. 6, 1958, Ser. No. 753,562
9 Claims. (Cl. 42—22)



1. In a gun, a receiver; a barrel fixed to said receiver; a reciprocable unitary bolt within said receiver and having a firing pin axially disposed therein; an action slide for supporting said bolt; a reciprocable carriage connected to said slide; and cam means between said slide and bolt for moving said bolt and firing pin transversely of said barrel while maintaining them in parallel relation thereto during each reciprocation of said bolt.

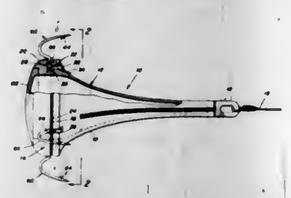
3,044,204
WARNING SIGNAL LIGHT FOR FIREARMS
Clarence Robert Zimmerman, Box 6, Almira, Wash.
Filed Aug. 5, 1960, Ser. No. 47,783
2 Claims. (Cl. 42—84)

1. A firearm including a pivoted metallic safety and a stock having a cylindrical chamber extending longitudinally thereinto from the rear end thereof, a stationary electric contact mounted longitudinally in the forward end portion of the chamber on the peripheral wall thereof, a self-contained electric light unit removably mounted in the chamber and including a cylindrical metallic shell slidably engageable with the stationary contact upon insertion of the unit in the chamber, said unit including batteries in said shell, a removable closure on the stock for the rear end of the chamber said unit still further including a cap of insulating material in the forward end portion of the shell, an electric lamp in the forward portion of the shell including a base mounted in and extending through the cap and electrically connected to the batteries, said base having an exposed portion forwardly of the cap, a second electric contact mounted on the forward end wall of the chamber and projecting rearwardly therefrom in inwardly spaced relation to said peripheral wall



of said chamber and engageable with the exposed portion of the lamp base upon insertion of the unit in the chamber, and means for electrically connecting the contacts to the safety for energizing the lamp, said stock further having windows therein communicating with the chamber on opposite sides of the lamp, said stock still further having a bore extending longitudinally therein from the chamber to the safety, said means including a conductor wire extending through the bore and electrically connecting the stationary contact to the safety at the pivotal axis thereof. a third contact in the firearm in the path of the safety and engageable thereby when said safety is in the "off" position, and a conductor wire extending through the bore and electrically connecting the second contact to said third contact.

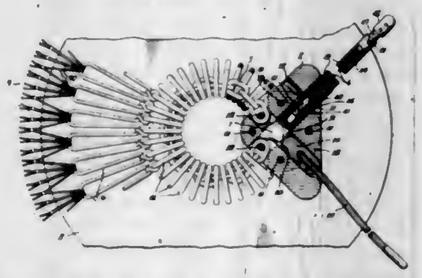
3,044,205
BIRD-RETRIEVING GRAPPLE
Percy G. Bradley, 308 Glen Road, Toronto, Ontario, Canada
Filed May 24, 1961, Ser. No. 112,428
2 Claims. (Cl. 43—1)



1. A bird retrieving grapple comprising an elongated floatable body, said body including connecting means at one end for connection to a casting line, said body portion including an annular mounting portion at the other end, said body portion diverging from said connecting portion toward said mounting portion, said mounting portion including a continuous, radially-opening, annular groove portion, a plurality of circumferentially spaced, notch portions opening radially through said annular groove portion and toward said connecting means, each of said notch portions including a pair of intersecting abutment walls spaced from said groove portion, one of said abutment walls being disposed substantially normal to the longitudinal axis of the body member and the other abutment wall being substantially parallel to said longitudinal axis, a lock ring removably received in said annular groove and including intermediate portions extending transversely of said notch portions, a grapple

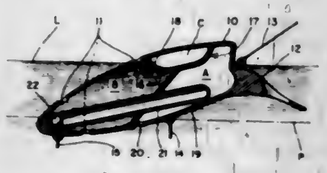
hook mounted on each of said intermediate lock ring portions, said hooks having a C-shaped portion terminating in a terminal barb at one end, said C-shaped portion terminating at its other end in a U-shaped mounting portion opening toward said terminal barb, said U-shaped mounting portion including a plurality of angularly related abutment surfaces, and a leaf spring anchored in said notches and engageable with at least two of the angularly related abutment surfaces of said U-shaped mounting portions, one abutment surface of said U-shaped portion of said hooks orienting said hooks into an operative position outwardly from said notches with the terminal barb radially spaced from and extending toward said connecting means, and another of said abutment surfaces on said U-shaped mounting portion orienting said terminal barb into a stored position in substantial engagement adjacent the diverging portion of said floatable body and directed toward the longitudinal axis thereof.

3,044,206
TRAWL NET CODEND RELEASE AND LOCK
Frank J. Luketa, 5567 Greenwood, Seattle, Wash.
Filed May 31, 1960, Ser. No. 32,960
14 Claims. (Cl. 43—9)



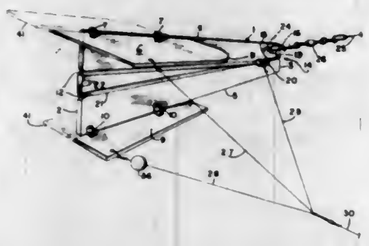
1. In combination with a codend encircling purse line or the like, to be drawn tight or alternatively to be relaxed, a terminal member attached to a first end of said purse line and formed with a passage disposed transversely to the direction of pull of such first end, through which the second end of the purse line extends when the purse line is not relaxed, a shouldered slide incorporated in the purse line in position to extend within said passage when the purse line is drawn tight, and a bolt guided in the terminal member for movement towards and from the slide, and by its movement in a locking sense towards the slide engaging the shoulder of the latter to lock the purse line in its tight condition.

3,044,207
ARTIFICIAL FISHING LURE
Edgar A. Dorsett, 150 Hill St., Santa Monica, Calif.
Continuation of application Ser. No. 677,929, Aug. 13, 1957. This application Dec. 8, 1959, Ser. No. 858,192
4 Claims. (Cl. 43—42.31)



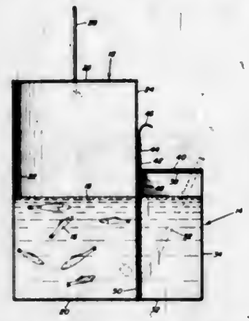
4. A fishing lure comprising: an elongated body having a hollow interior; wall means defining an air tight chamber in the upper portion of said interior and including a wall section running transversely of the longitudinal axis of said body to divide the remaining portion of said interior into a front chamber and a rear chamber, said front chamber having a single opening to the exterior of said body in its bottom portion adjacent the point said wall section meets the lower portion of said interior, said rear chamber having a plurality of openings to the exterior of said body; means for securing hooks to the underside of said body; means for securing a fishing line to the front portion of said body, said body floating in water with its front end higher than its rear end when said rear chamber is filled with water, successive pulls on said line causing water to flow past said single opening to establish a reduced pressure area adjacent said opening whereby portions of water enter said front chamber through said single opening each time said flow is reduced, said air tight chamber buoying up the top portion of said body to hold said lure in an upright position with respect to roll about said longitudinal axis; a diving vane secured to the front of said body and angled downwardly whereby the body is initially caused to pitch forwardly in response to initial pulling on said fishing line to result in a pitching movement when the pull on said line is relaxed, additional portions of water entering said front chamber through said single opening each time said pitching causes said front chamber to assume a position lower than said rear chamber; an elongated closed tube running longitudinally within said interior from said rear chamber, through said wall section to said front chamber; and a movable weight in said tube whereby said weight moves back and forth along said tube by gravity during said pitching to augment said pitching.

3,044,208
FISHING KITE
Salvador A. Minera, 1500 Judah St. # 10, San Francisco, Calif.
Filed Jan. 14, 1960, Ser. No. 2,455
7 Claims. (Cl. 43—43.13)



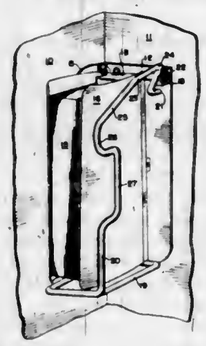
1. A fishing kite comprising: a main, vertically disposed, horizontally extending sheet of relatively rigid material providing a body having upper and lower edges and having a forward end and a rear end; a pair of wings of sheet material; means hingedly securing said wings to said body adjacent to said upper and lower edges for swinging of said wings from a generally collapsed position respectively depending from said hinge means to a generally opposed, horizontally disposed, vertically spaced relation at one side of said body, and vice versa, an element releasably held against said rear end and yieldable means releasably secured to said body yieldably holding said element against said rear end, said element including a part thereof extending angularly outwardly from said body adapted to rock said element off said rear end upon pulling said part rearwardly away from said rear end, and means on said part for securing a hook and line thereto; a flexible bridle including flexible cords respectively directly connected with said wings at their edges that are remote from said body and with said element, said bridle being adapted to be connected with a fishing line to be held by an operator.

3,044,209
MINNOW BOX
Justus Lorenze Roach, Hampton, Ark. (P.O. Box 22, Taylor, Ark.)
Filed Apr. 5, 1960, Ser. No. 20,153
4 Claims. (Cl. 43—56)



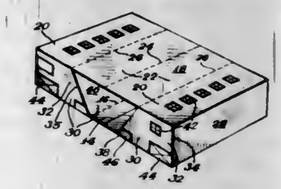
4. A minnow container comprising first and second receptacles and a partition therebetween, said first receptacle for receiving water and oxygen and including a closed top, said second receptacle for the reception of water and having an open top, said partition having an opening in its lower portion communicating the receptacles, a horizontal guide in the second receptacle adjacent the top thereof and adjacent to and in spaced parallelism with the partition, a foraminous closure for the opening slidable vertically on the partition in the guide, said second receptacle having means for guiding and receiving a slidable closure in the upper portion of wall portions thereof and said horizontal guide having an upper edge portion located at substantially the same height as said guiding and receiving means, and a removable closure for the second receptacle slidable in the guiding and receiving means and engageable on the upper edge of said horizontal guide.

3,044,210
TELEPHONE BOOK STANDS
Thomas F. Upton, Forest Hills, N.Y., assignor to American Loose Leaf Corporation, Clifton, N.J., a corporation of Delaware
Filed July 12, 1961, Ser. No. 123,559
5 Claims. (Cl. 45—85)



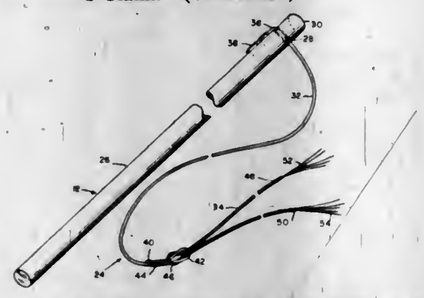
1. The combination with a telephone booth vertical wall of a book supporting structure connected thereto and side-by-side therewith, said book supporting structure comprising means for swingably suspending at least one book therefrom in a normal downward position, and a frame member disposed parallel to said wall and spaced therefrom so as to define therewith a chamber in which said book is normally disposed and out of which said book may be swung upwardly in a vertical plane for consulation purposes, and a top rod section on said frame member, said top rod section being adapted to support said book when the book is swung upwardly out of said chamber and away from said wall, said top rod section having a forwardly disposed downwardly directed portion whereby a book resting thereon will be urged downwardly to its said normal downward position.

3,044,211
TOY OBJECTS
Felix Palm, 2241 W. Greenleaf Ave., Chicago 45, Ill.
Filed July 17, 1959, Ser. No. 827,878
4 Claims. (Cl. 46—11)



1. A cardboard container comprising a front, wide rectangular face printed to identify the contents of said container, a rear, wide rectangular face the same size and shape as said front face printed on both sides of its transverse centerline with the printing on either side of the transverse centerline similarly directionally oriented with respect to said centerline, rectangular side panels connecting the corresponding long edges of said front and back panels, rectangular end panels connecting the corresponding short edges of said front and back faces, said end and said panels cooperatively positioned wtih said front and rear faces to form a closed container, lines indicating where to cut said front face and said side panels with said lines across said side panels non-divergent away from said rear face, to produce an opening across said front face and across said side panels symmetrical about the centerline of said front face, a plurality of scored lines across said rear panel which are parallel to each other and to the transverse centerline across said rear panel with said scored lines positioned with respect to said cutting lines whereby when severance is effected along said cutting lines, the rear face is adapted to be folded along said scored lines to bring the uncut portions of said front face on opposite sides of said transverse centerline into contact with each other to form a toy with the front face hidden from view.

3,044,212
WHIPPING TOP
John T. Lancaster, 20231 Damman Ave., Harper Woods 36, Mich.
Filed Nov. 24, 1958, Ser. No. 775,940
1 Claim. (Cl. 46—67)



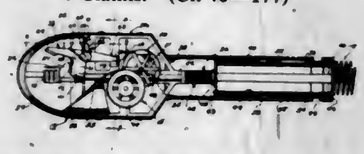
A whipping top toy comprising a top adapted to spin about a vertical axis therethrough, said top having a sub-

stantially entirely concave top surface and side and bottom surfaces substantially entirely convex whereby said top has a center of gravity substantially below the mid-height thereof, axially spaced apart annular grooves on said top over substantially the entire side and bottom exterior surfaces thereof, and a whip for imparting a force to said top while it is spinning to cause said top to continue to spin including a rigid handle and a lash secured to one end of said handle, said lash having a fixed end section one end of which is secured to the handle at one end of the handle and a free end section the center of which is removably secured to the other end of the fixed end section, the fixed end section of the lash being more flexible than the rigid handle and less flexible than the free end section whereby on swinging the whip in an arc the fixed end section of the ash offers substantial air resistance and closely follows the movement of the handle while the free end section offers little air resistance and does not follow the movement of the handle closely but wraps readily around the top on contact therewith to provide a substantial area of contact between the top and the free end section of the lash over which force may be transferred from the whip to the top, said free end section of the lash having a pair of frayed free ends to provide a wiping action on the side surfaces of the top during force transfer from the whip to the top to increase the efficiency of the force transferred therebetween.

3,044,213
TOY

Gunars Licitis, Chicago, Ill., assignor to Marvin I. Glass, Chicago, Ill.

Filed Nov. 4, 1959, Ser. No. 850,918
7 Claims. (Cl. 46—177)



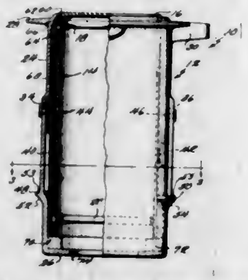
4. A projectile toy comprising, in combination, a delayed-action projectile and a launcher for launching said projectile, said projectile comprising a frame having thereon means for producing a build-up sound, and other means for producing a climactic sound, drive means placed in operation by the launching of said projectile to actuate said means producing the build-up sound, and to actuate the means producing said climactic sound after a period of operation of said means producing the build-up sound, and time delaying means controlling said drive means to retard its operation to prolong the production of said build-up sound and to delay the occurrence of said climactic sound.

3,044,214
FLUSH TYPE FLOWER VASE ASSEMBLY

Otto S. Gill, 18 Clark St., West Haven, Conn.

Filed Mar. 14, 1960, Ser. No. 14,923
1 Claim. (Cl. 47—41)

A flower vase assembly of the type having all portions thereof substantially below ground level comprising in combination, a cylindrical outer vase having a body section, an upper end and a lower end, a first outwardly extending flange about said upper end, said outwardly extending flange having a plurality of finger depressions along the upper surface thereof, a second inwardly extending flange defining an opening at said lower end, a plurality of bosses extending upwardly from said second flange, a cylindrical inner vase having an outer diameter substantially less than the inner diameter of said body section of said outer vase and supported on said bosses in spaced relationship to said lower flange, said body section having radially spaced recesses about the interior thereof, a leaf spring in each of said recesses each having their upper ends fixedly secured in said recesses and their lower ends extending into the interior of said outer vase and against said inner vase thereby spacing said inner vase from said outer vase, and said outer vase having an inwardly and upwardly directed annular taper at its upper end defining an opening only slightly larger than the circumference of said inner vase such that foreign matter will be impeded from entering the space between said inner and outer vases, said inner vase having an inward

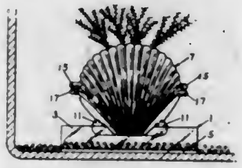


bead around said open top in communication with said finger depressions whereby the inner vase may be readily gripped for removal, and said inner vase having a second bead around the closed end thereof such that when said inner vase is inverted and said open end is resting on said bosses said second bead is in communication with said finger depressions, and said inner vase having a length such that when one end thereof is resting on said bosses, the other end thereof is substantially in the plane defined by the outermost surface of said annular taper.

3,044,215
HOLDER FOR PLANT CUTTINGS

Richard R. Crousore, 818½ 14th St., Santa Monica, Calif.

Filed Dec. 18, 1959, Ser. No. 860,487
9 Claims. (Cl. 47—41)



1. A holder for decorative plant cuttings and the like, comprising a pair of similar jaws each having a fulcrum at one end and a clamping lip at the other, a clamp for holding said jaws with the respective fulcrums and clamping lips in opposed, aligned, contacting relation, said clamp including a base disposed substantially parallel to said fulcrums, said base having resilient arms disposed to extend, on opposite sides, past said fulcrums and into engagement with said jaws intermediate said fulcrums and said clamping lips, the engagement portion of said arms being spaced apart a distance no greater than the distance between the outer surfaces of the jaws where the arms engage the jaws when the latter are in said contacting relation, so as to apply force to move said jaws from a noncontacting toward the contacting relation.

3,044,216
METHOD AND APPARATUS FOR CUTTING GLASS SHEETS

William F. Billinger, Beaver St., Zelienople, Pa.

Filed Feb. 10, 1958, Ser. No. 714,211
7 Claims. (Cl. 49—48)

1. Apparatus for running pairs of scored cuts in glass sheets moving in a direction longitudinally of the scored

cuts, comprising a moving flat flexible glass sheet supporting belt, a rotatable roller disposed transversely beneath said belt and having a rubber covering of substantial thickness thereon engaging the under side of the belt in the horizontal plane thereof and beneath each scored cut of the glass supported sheet to be run, said roller rubber covering being of a width substantially greater than the scored cut, a second rotatable roller disposed transversely of and above said belt with the axes of rotation of both rollers in vertical alignment, said second roller being vertically adjustable relative to said belt, and a rubber covering of substantial thickness on said second roller in pressure engagement with the top surface of the glass sheet moving thereunder, said second roller covering being of a width substantially that of said belt and having a degree of deflection greater than the covering on the first-named roller.

4. In a glass cutting tool, in combination,

a housing,



a spring-loaded piston movably mounted within the housing and having a portion depending from the housing,

a yoke pivotally mounted upon said depending piston portion,

a selectively rotatable cutting wheel holder mounted upon said yoke and depending therefrom,

glass cutting wheels pivotally mounted in spaced relation about the periphery of the holder and extending outwardly therefrom,

a guide surface on said holder adjacent each cutting wheel for engagement by the leading edge of a glass sheet moving towards the cutting wheel and causing displacement of the holder relative to the sheet,

a guide lever pivotally connected with said holder and yoke translating said holder displacement into vertical displacement relative to said sheet and lifting the cutting wheel into a position for scoring a cut in the glass sheet beginning with the leading edge of the sheet moving beneath the cutting wheel.

3,044,217
SPACER MEMBERS FOR THE REINFORCEMENT OF REINFORCED CONCRETE STRUCTURES

Ferdinand William Berry, "Latchetts," 108 Woodland Drive, Hove 4, England

Filed Aug. 25, 1958, Ser. No. 756,983
1 Claim. (Cl. 50—514)

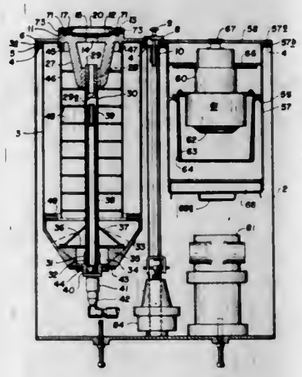


A spacer for use in spacing the reinforcements of reinforced concrete with respect to the forms therefor, comprising a relatively thick disc having a slot, for receiving a reinforcement, extending from its periphery to a point in the region of the center thereof and also having an aperture through the disc at one side of the slot and substantially parallel to the axis of the disc, a catch formation in the wall of said slot remote from said aperture, and a resiliently deformable catch element made from springy wire substantially in the shape of an ellipse, one of the longer sides of the ellipse extending through and being pivotally engaged within said aperture while the other longer side of the ellipse is so spaced from said one longer side that it resiliently engages said catch formation when the catch element is pivoted in the aperture to move said other longer side into said slot to hold the catch element in a closed position with the shorter sides thereof spaced diametrically from the inner end of the reinforcement-receiving slot by a distance less than the width of the slot.

3,044,218
ABRASIVE GRIT MARKING MACHINE

John E. Munn, Edgewood, Pa., assignor to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 17, 1959, Ser. No. 827,781
20 Claims. (Cl. 51—8)



1. An abrasive grit marking machine comprising a work piece-supporting stencil having a stencil opening therethrough, means spaced below the stencil for projecting a blast of air and abrasive marking grit through the stencil against a work piece placed on the stencil, means surrounding said blast-projecting means for collecting the grit after it strikes the work piece and falls back through the stencil, an enclosure surrounding the stencil of a diameter and depth to receive the work piece and which has an opening in the top thereof through which the work piece may be placed in the enclosure on the stencil and removed from the enclosure, the enclosure having an annular dust-removing channel extending around it and opening into the space within the enclosure, and a suction pipe opening into the channel whereby dust-laden air may be withdrawn from the area within the enclosure.

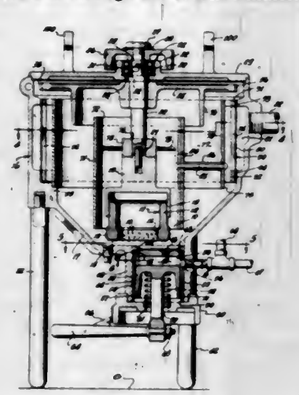
3,044,219
APPARATUS FOR RESHARPENING DIAMOND DRILL BITS

Charles R. Cutler, Salt Lake City, Utah, assignor to Christensen Diamond Products Company, Salt Lake City, Utah, a corporation of Utah

Filed Feb. 9, 1959, Ser. No. 792,115
20 Claims. (Cl. 51—15)

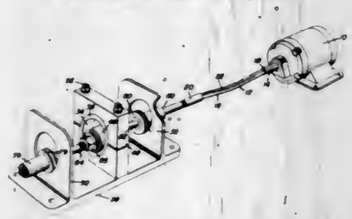
1. In abrasive blasting apparatus for drill bits: means for mounting a drill bit; means for rotating said mounting means and drill bit; means adapted to contain a quantity of abrasive material; said mounting means supporting the drill bit adjacent to the quantity of abrasive material in

said containing means; and nozzle means positioned to direct a fluid into and through the abrasive material in said



containing means to blast said material directly against the drill bit.

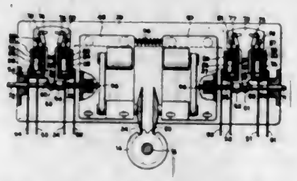
3,044,220
GRINDER
Eber S. Emerson, Daly City, Calif.
(120 El Camino Real, Burlingame, Calif.)
Filed Jan. 22, 1960, Ser. No. 4,137
9 Claims. (Cl. 51—100)



1. A grinder assembly comprising a base, a pair of templates having template openings of the same size and shape and secured in spaced relationship on said base, a holding device located between said templates and connected with said base, said holding device adapted to support a workpiece between said templates, a rotatable spindle having circular guide means concentric therewith on its outer surface, said guide means directly contacting said templates within the openings and guiding said spindle as it rotates, said spindle adapted to support a grinding element, unobstructed handles connected with said spindle at the ends thereof in order to manually move or control the spindle while it is being rotated.

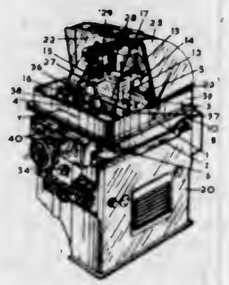
3,044,221
GEAR GRINDING MACHINE
Willi Graf, Zurich, Switzerland, assignor to Maag Gear-Wheel & Machine Company Limited, Zurich, Switzerland
Filed Dec. 4, 1958, Ser. No. 778,223
Claims priority, application Switzerland Dec. 6, 1957
6 Claims. (Cl. 51—123)

1. A gear grinding machine comprising a bed, a first slide movable longitudinally of said bed, a second slide movable transversely on said first slide, means for moving said slides, a shaft for supporting a gear workpiece mounted on said second slide, a pair of grinding discs, supports for said discs slidable transversely of said bed for movement toward and from a tooth flank, means for operating said grinding discs, means for generating a normal involute movement to said workpiece relative to said grinding discs, a first template controlling the profile correction upon the right hand tooth flank of said gear workpiece movable synchronously with the generating movement of said second slide, a second template controlling the crowning correction upon said right hand tooth flank movable synchronously with the longitudinal movement of said first slide, a third template controlling the profile correction upon the left hand tooth flank of said workpiece movable synchronously with the generating movement of said second slide, a fourth template controlling the crowning correction upon the left hand tooth flank



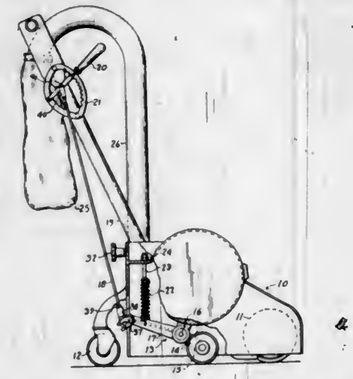
movable synchronously with the longitudinal movement of said first slide, a first common means controlled by said first and second templates for moving one of said discs to accomplish the profile and crowning corrections on the right flank of a tooth of said workpiece and a second common means controlled by said third and fourth templates for accomplishing the same corrections on the left flank of a tooth, hydraulic transmissions extending from said first and second templates to said first common means and hydraulic transmissions extending from said third and fourth templates to said second common means.

3,044,222
MACHINE FOR POLISHING OR GRINDING ELONGATED WORKPIECES
Bernard V. Davis, Coventry, England, assignor, by mesne assignments, to Bristol Siddeley Engines Limited, Bristol, England, a company of Great Britain
Filed Dec. 8, 1958, Ser. No. 778,793
Claims priority, application Great Britain Dec. 14, 1957
2 Claims. (Cl. 51—142)



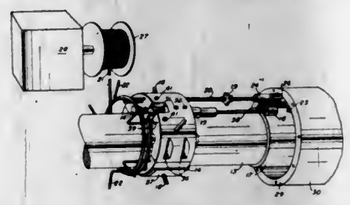
1. A machine, for polishing or grinding an elongate work-piece having a curved surface, comprising a table, arranged to carry a former and a work-piece positioned substantially parallel with each other, slideways on said machine and supporting said table for reciprocatable movement in directions longitudinally of the former and the work-piece, at least one of said slideways forming a guide for the table, means for reciprocating the table, a vertically-slidable member, two arms extending from said member above said table, a follower carried on one of said arms and engageable with the former, a rotatably-driven grinding head carried on the other of said arms and engageable with the work-piece, an upright guideway for said member for guiding said member for movement upwardly and downwardly in accordance with the contour of the former, said upright guideway passing through a central aperture in said table, a cross-slide carrying said upright guideway, further guideways on said machine engageable with said cross-slide and extending at right angles to said table slideways in a plane parallel with the plane of the table, means for feeding said cross-slide, said upright guideway and said member bodily in a direction, transversely of the former and the work-piece, and means for driving said grinding head.

3,044,223
PORTABLE SANDER WITH DETACHABLE HANDLE AND CONTROLS
John P. Bruck, Toledo, Ohio, assignor to The American-Lincoln Corporation, Toledo, Ohio, a corporation of Ohio
Filed May 27, 1960, Ser. No. 32,233
3 Claims. (Cl. 51—176)



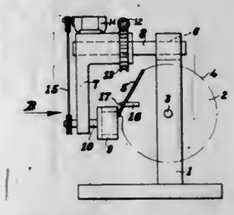
1. In a portable sander of the type having a horizontally-extending sanding drum normally in contact with a surface to be sanded and exerting pressure thereagainst, a rear wheel in contact with the surface to be sanded, intermediate wheels positioned between said drum and said rear wheel in contact with the surface, the weight of said sander being carried by said drum, said rear wheel, and said intermediate wheels, a pivotally-mounted truck for mounting said intermediate wheels for movement toward and away from the surface, resilient means for applying force on said truck to move said intermediate wheels in the direction of said surface, an elongated tubular member for mounting a dust bag, a handle, a force-transmitting member carried by said handle and said truck to rotate said truck to move said intermediate wheels toward and away from the surface, and shifting means on said handle adjacent one end of said force-transmitting member for moving said force-transmitting member in a first direction toward the surface and in a second direction away from the surface, the improvement comprising means for selectively securing said force-transmitting member to said truck comprising a pin carried by said force-transmitting member at the opposite end thereof from said shifting means and extending outwardly from said force-transmitting member, a pin-engaging member mounted on said truck and having yoke means secured thereto for selectively engaging and disengaging said pin when said opposite end of said force-transmitting member is moved in a direction substantially normal to the first and second directions, a wall of said recess adapted to contact a side of said pin when said force-transmitting member is moved in the first direction and an oppositely-disposed wall of said recess adapted to contact an oppositely-disposed side of said pin when said force-transmitting member is moved in the second direction, and means for selectively locking said pin in said recess.

3,044,224
FREE ROTATING MAIN PROPULSION SHAFT PACKING AREA RESURFACING MACHINE
David C. Finkes, 1579 Tarrytown St., San Mateo, Calif.
Filed May 15, 1961, Ser. No. 110,278
11 Claims. (Cl. 51—241)
(Granted under Title 35, U.S. Code (1952), sec. 266)



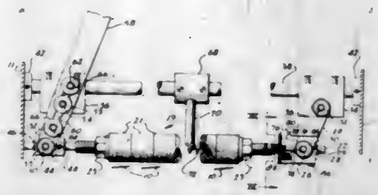
1. In a portable grinding machine for grinding a circular shaft journal without rotating said shaft comprising a circular shaft nonrotatively supported and including a journal section to be ground, a split mounting base assembled on said shaft and rotatively supported on the peripheral surface of said shaft and adapted to move axially toward and away from said journal section on said surface, an independent power driven circular grinding head mounted on said base and positioned for operably contacting said journal section, manual means for rotating said assembled mounting base on said shaft and feeding said base axially along said shaft in relation to said journal, and a feed rate control for regulating the rate of axial advance of said base toward said journal.

3,044,225
CUTTING MACHINES FOR FIBROUS MATERIALS
Arthur Ritscher and Bernhard Schubert, Hamburg-Bergedorf, Germany, assignors to Hauni-Werke Korber & Co., K.G., Hamburg-Bergedorf, Germany
Filed Dec. 12, 1958, Ser. No. 779,962
Claims priority, application Germany Feb. 27, 1958
10 Claims. (Cl. 51—247)



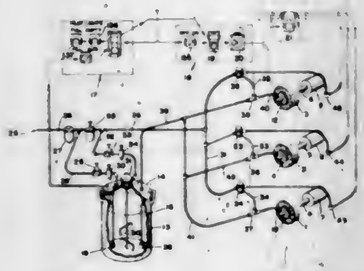
1. An automatically adjustable grinding device for the cutter blades of a tobacco cutter drum rotatably mounted in a machine frame, comprising a pivot holder supported by said machine frame movable about a horizontal axis during the grinding operation, means including an electric motor mounted on said machine frame for moving said holder about said horizontal axis, a rotary shaft on said holder offset and parallel to the axis of said holder, a rotary grinding wheel secured to one end of said shaft at the free end of said holder having a radial grinding face and mounted on said shaft for movement with its radial grinding surface in a plane tangential to the rotary cutting surface of the cutter blades, the diameter of the grinding wheel being at least equal to the chord height of the arc described by the grinding wheel in the region of the tangent with the cutting surface, and automatic step by step means for intermittently and progressively advancing said grinding wheel toward said cutter blades during the grinding operation, the shaft and holder axis being arranged to extend transversely of the cutter drum axis.

3,044,226
SHARPENING OF ENDLESS KNIFE BANDS
William Hoppe, Longmeadow, and Lawrence W. Schoppee, Springfield, Mass., assignors to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts
Filed Nov. 5, 1958, Ser. No. 772,081
6 Claims. (Cl. 51—250)



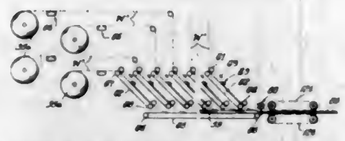
2. Apparatus for sharpening a plurality of moving knife bands trained around a pair of spaced rotating drums and twisted into parallel relationship to provide a slicing zone intermediate said drums, said apparatus comprising an elongated cylindrical honing member spanning one run of the bands adjacent one of said drums and means for moving said honing member into and out of simultaneous engagement with all of said moving bands along a line disposed at susbtantially the same angle to all of the bands and spaced from the line of tangency of the run of bands with the adjacent drum a distance such that the bands are disposed relative to said line at approximately the desired bevel angle for the cutting edges of the bands, the means for moving said honing member comprising a parallel linkage arrangement having pivotal connections with the ends of the honing member whereby the honing member is brought into and out of engagement with the bands and in a direction having components both transversely and longitudinally of the axis of the adjacent drum.

3,044,227
MATERIAL APPLICATOR SYSTEM
Vernon K. Charvat, Bay Village, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed July 15, 1959, Ser. No. 827,245
25 Claims. (Cl. 51—263)



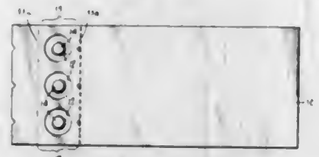
1. An elongated hub for rotary finishing tools and the like comprising a generally cylindrical body having a cylindrical workface adapted to be mounted on a rotatable arbor, a recess in one end face of said body having a restricted opening, a plurality of fluid passageways leading from the interior of such recess to the work face of said body at axially spaced regions thereof, the diameter of said passageways varying inversely as their slope with respect to such workface to distribute such fluid evenly along such workface.

3,044,228
CELLULOSIC PRODUCT AND METHOD FOR MAKING SAME
Le Roy L. Peterson, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Apr. 22, 1960, Ser. No. 19,982
4 Claims. (Cl. 53—24)
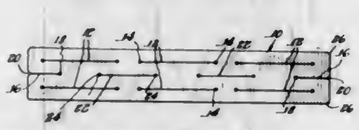


1. In a method of making paper tissue, the steps which comprise, removing paper tissue from the drier drum of a papermaking machine with the paper tissue having a relatively low moisture content of about four percent or less, calendering the tissue and winding it into a roll at this relatively low moisture content, unwinding the tissue from the roll and folding it into a stack and thereafter compressing the tissue stack, and adding moisture to the tissue subsequent to its unwinding and prior to its compression.

3,044,229
STRIP PACKAGING SAMPLER BOOKLET
John H. Stroop, New York, N.Y., assignor to Vol-Pak, Inc., New York, N.Y., a corporation of New York
Filed Feb. 26, 1959, Ser. No. 795,697
5 Claims. (Cl. 53—28)



1. A continuous process for making and filling a plurality of identical sampler dispenser booklets in a single operation, which comprises feeding relatively wide webs of opaque cover material and narrow transparent webs of sealable material between the cover strips but only near the binding end, through rotary sealing dies, producing spaced window holes in the cover strip and feeding articles to be dispensed, between the webs of sealable material in spaced relation corresponding to the spacing of the window holes as the cover webs and the transparent webs enter the rotary sealing dies, and heat sealing both the inner webs and the cover webs of the booklets, but only near the binding end.

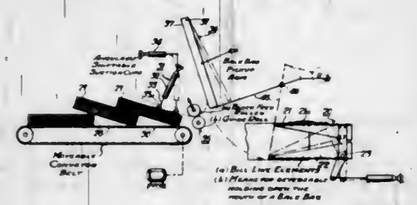
3,044,230
CONTAINER CARRIER AND PACKAGE
Julian V. Fisher, Carpentersville, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Filed Jan. 16, 1959, Ser. No. 787,247
6 Claims. (Cl. 53—35)



1. A carrier blank adapted to be distorted for carrying a plurality of containers or the like having peripheral enlargements at one end and in side by side substantially abutting and parallel relation, comprising a substantially

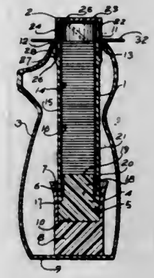
unsupported sheet of plastic material, said sheet of plastic material being resilient, deformable, and elastic and having a plurality of pairs of slits therein identical in size and longitudinal spaced and aligned, the slits of each pair being spaced and aligned transversely, said sheet having a plurality of intermediate slit means disposed in said sheet between the individual slits of a pair and of such longitudinal disposition and dimension to be in overlapping relation with more than one pair of slits, all of said slits being openable upon transverse stretching thereof whereby the margins of each slit of the pairs of slits form an aperture having a peripheral measurement less than the periphery of an individual container, the resiliency and elasticity of said material tending to reclose said slits when opened up, the material at the margin of each slit which forms a container carrying aperture being circumferentially continuous and uninterrupted, the margins of the slits forming container carrying apertures intended for association with the containers whereby such containers can be inserted through said apertures from a given direction when the material adjacent said apertures is further stretched and deformed from the plane of said carrier to form circumferentially continuous bands embracing said containers below the peripheral enlargements and resiliently gripping said containers.

3,044,231
APPARATUS FOR APPLYING BALE BAGS TO A BALE BAG HOLDER
Maurice E. Blais, Pawtucket, Walter Ruf, Barrington, and Joseph E. DiMeglio, Providence, R.I., assignors to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed Jan. 30, 1961, Ser. No. 85,639
13 Claims. (Cl. 53—55)



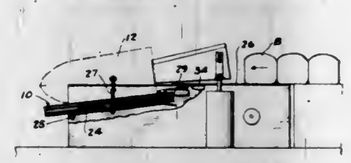
3. In apparatus of the class described, a pair of channel-like elements mounted for relative opening and closing movement, said channel-like elements being formed for having slipped thereover the mouth of a bale bag, the latter being thus adapted to be filled by a charge of material inserted therein via such channel-like elements, a bale bag rack formed for holding a bale bag in readiness to be so applied to said channel-like elements; means for grasping a bale bag from said bale bag rack, holding the mouth thereof open and applying it over said channel-like elements, said means including bale bag applicator arm means mounted for movement for the aforementioned purpose between a position wherein it can receive and grasp a bale bag from said rack and another position wherein it can so apply the open mouth of the bale bag; means for moving said arm means between said positions; said arm mounting bale bag mouth holding means for grasping the mouth of a bale bag theretofore positioned in said bale bag rack; means for opening the mouth of the bale bag prior to its application to said channel-like elements; means for inserting bale bags consecutively in said bale bag rack; means for sensing the presence of a defective or torn bale bag mouth as applied over said channel-like elements, and comprising means for sensing a change of pressure responsive to a loose fit of the mouth of a bale bag fitted over said channel-like elements when said elements are in relatively open condition; control means for controlling the sequence of operation of the several parts of the apparatus above mentioned, said control means being operatively connected to said sensing means for temporarily rendering inoperative the apparatus in response to the sensing of such loose fit of a bale mouth applied to said channel-like elements.

3,044,232
COIN PACKAGING BANK
Lewis W. Robichaud, 1163 E. 77th Terrace, Kansas City 31, Mo.
Filed Oct. 20, 1960, Ser. No. 63,882
3 Claims. (Cl. 53—254)



1. A coin packaging bank comprising, a holder having a bore for removably receiving a tubular coin wrapper adapted to contain a quantity of coins of a given denomination, means extending into one end of a wrapper positioned in the bore of the holder to define an end of a coin-receiving space therein spaced from the adjacent end of the wrapper a distance substantially equalling that portion of the wrapper for crimping at the end of a given quantity of coins therein, and closure means at the other end of the holder for covering said other end of the wrapper, said closure means having a slot communicating with the interior of the wrapper for insertion of coins therein, said closure means and the slot therein being positioned in spaced relation to the means extending into said one end of the wrapper whereby next to the last coin of a given quantity to be accumulated in the wrapper will enter therein and the last coin of said given quantity will engage said next to the last coin and the closure member block the slot and to indicate that said given quantity has been accumulated, said last coin entering the wrapper upon removal of said closure, said other end of the holder terminating in spaced relation to the other end of the wrapper and the closure member being removable whereby said other end of the wrapper may be crimped and the holder inverted for removal of the wrapper with the coins therein for crimping of the other end of the wrapper.

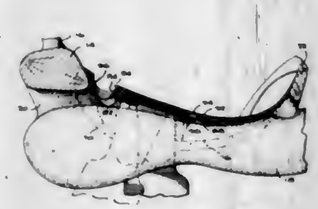
3,044,233
HANDLING OF FLEXIBLE PLASTIC BAGS
Frank Altman, Jr., Dearborn, Mich., assignor to Fabricon Products, Division of The Eagle-Picher Company, River Rouge, Mich., a corporation of Ohio.
Filed Oct. 9, 1961, Ser. No. 143,952
16 Claims. (Cl. 53—385)



1. In a bagging and filling machine wherein air is supplied to the uppermost of a pile of flexible plastic bags,

the combination comprising a package of flexible organic plastic bags, each said bag comprising two contiguous walls when the bag is in folded condition, one of said walls extending beyond the other to form a lip, said lip having a pair of spaced openings therethrough, said bags being positioned with said openings in alignment, pin means extending through said openings and slidable relative thereto, said pin means having enlarged upper and lower ends, a support on said machine yieldingly urging said plurality of bags upwardly, and means on said machine adapted to engage the upper ends of said pin means and locate said pin means, said support also engaging said bags and yieldingly urging said bags upwardly against said enlarged upper ends of said pin means whereby the topmost bag of said package is adapted to be opened so that it can be filled and pulled from said package, said lip being torn by said pin means when the bag is pulled from said package.

3,044,234
SADDLE
Albert W. Baldwin, Box 334, Meeteetse, Wyo.
Filed Feb. 26, 1960, Ser. No. 11,321
7 Claims. (Cl. 54—44)

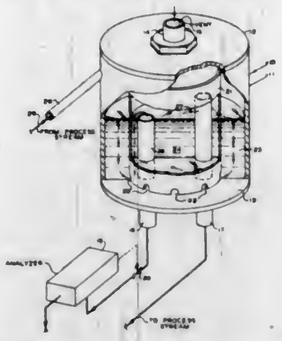


1. A stirrup leather hanger device for a riding saddle having a yoke including a pair of arms comprising saddle tree bars, said stirrup leather hanger device including a pair of concave-convex chevron-shaped angle members each having a normally upright flange extending longitudinally of an edge thereof, said angle members extending transversely of said bars and secured thereto in longitudinally spaced relation, a pair of longitudinally extending laterally spaced stirrup leather hanger rods extending between and fixedly secured to said flanges of said angle members, said rods diverging away from each other in a direction away from said yoke, said rods each being adapted to be loosely engaged, respectively, within the looped end of a pair of stirrup leathers, and a cover member spanning said flanges at the upper ends thereof and extending over said rods.

3,044,235
DUST COLLECTION
Frank L. Schneider, Round Hill Lane, Port Washington, N.Y.
No Drawing. Filed Nov. 27, 1959, Ser. No. 855,538
3 Claims. (Cl. 55—84)

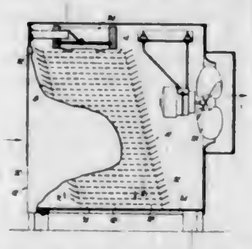
1. A process for separating solid particles from a gas stream containing them which comprises mixing the particle laden gas stream, the diameter of said particles being from about 0.1 micon to about 0.5 micron, with steam, vapors of a water miscible, hygroscopic compound having a boiling point at atmospheric pressure of from 100° C. to about 250°. C., and vapors of a surface-active agent, said mixing being carried out at a temperature of from about 95° C. to about 110° C. and condensing the resulting mixture to separate said solid particles.

3,044,236
SYSTEM FOR REMOVAL OF GASES FROM LIQUIDS
Robert G. Bearden, Idaho Falls, Idaho, and Leander G. Schwieger, Citrus Heights, Calif., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed July 21, 1960, Ser. No. 44,302
4 Claims. (Cl. 55—204)



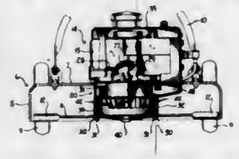
1. A gas disengager comprising an outer casing closed at the upper and lower ends thereof, the said upper end being provided with the first outlet means for the venting of gas, the said lower end being provided with a second outlet means for the draining of liquid from said disengager, an inner casing centrally disposed within said outer casing and open at the upper end, a plurality of peripheral perforations in the lower portion of said inner casing, a weir within said inner casing adjacent to the upper end of said second outlet means, said weir permitting a uniform liquid level to be maintained within and intermediate the ends of said outer casing, and conduit means for horizontally and tangentially introducing a sample stream to the inside surface of said outer casing.

3,044,237
ONE PIECE SPLASH UNIT FOR THE FILL SECTION OF LIQUID COOLING TOWERS
Leon T. Mart, Mission Township, Johnson County, Kans., assignor to The Marley Company, Kansas City, Mo., a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 731,548
1 Claim. (Cl. 55—257)



In a water cooling tower having a fill assembly through which water to be cooled is adapted to gravitate and air is adapted to flow to cool the water, a drift eliminator at the air outlet side of the assembly, and a louvered air inlet face in opposed relationship to said drift eliminator, said fill assembly including a stack of separate, flat, vertically spaced, superimposed, parallel panels having water flow passages therethrough, and each provided with a pair of opposed, parallel end edges and a pair of side edges, each panel having an elongated blade transversely inclined upwardly and outwardly, integral with each and edge, and spanning the distance between said side edges, the blades at one end of the panels being parallel and forming the drift eliminator and the blades at the opposite end of the panels being parallel and forming said louvered air inlet face; and elongated bars, perpendicular to and integral with the lower face of each panel respectively and resting on the upper face of the proximal panel therebelow, thereby serving as supports for the panels, said bars having opposed, vertical surfaces for collecting films of water substantially spanning the distance between said end edges in approximately parallel relationship to said side edges and to the path of travel of air through the assembly, the lower margins of said bars in engagement with the panel next therebelow being relieved to permit water to flow over the entire surfaces of the panels and thereby assuring even distribution of such water.

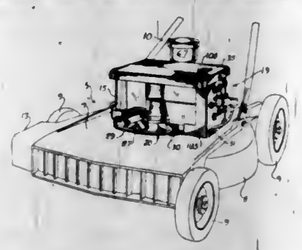
3,044,238
ENGINE POWERED ROTARY LAWN MOWER WITH IMPROVED ENGINE STARTER
Joseph R. Harkness, Milwaukee, Wis., assignor to Briggs & Stratton Corporation, Milwaukee, Wis., a corporation of Delaware
Continuation of application Ser. No. 109,209, May 10, 1961, which is a division of application Ser. No. 725,130, Mar. 31, 1958. This application Oct. 9, 1961, Ser. No. 144,286
10 Claims. (Cl. 56—25.4)



1. In a rotary power lawn mower, the combination of: a wheeled chassis having a substantially horizontal deck with a hole therethrough; an internal combustion engine mounted on the deck with its crankshaft vertical and the lower end portion thereof projecting down through said hole in the deck; a cutter blade driven from the lower end portion of the crankshaft and mounted to rotate in a horizontal plane spaced beneath the deck; and means including a unidirectional clutch for imparting engine-starting torque to the crankshaft without imposing objectionable tilting forces upon the mower chassis, comprising a rotary driving element coaxial with the crankshaft and located in the space between the underside of the mower deck and the cutter blade, and which driving element must be rotated in one direction in order to effect application of engine-starting torque to the crankshaft; and a motion-transmitting element connected to said rotary driving element and through which rotation may be imparted to the same in said direction from a remote point.

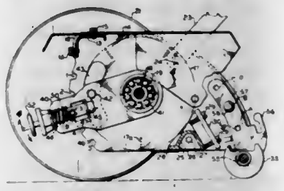
3,044,239
ROTARY POWER LAWN MOWER WITH IMPROVED ENGINE
Joseph R. Harkness, Milwaukee, Wis., assignor to Briggs & Stratton Corporation, Milwaukee, Wis., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 55,010
10 Claims. (Cl. 56—25.4)

1. A rotary power lawn mower comprising the combination of: a wheeled chassis having a substantially horizontal deck; an engine mounted on the deck with its crankshaft vertical and the lower end portion therof thereof projecting down through a hole in the deck; a cutter blade fixed to the lower end portion of the crankshaft; structure fixed with respect to the deck defining an air duct and passing through the deck at a distance out from the engine crankshaft, the deck having a hole to accommodate the duct and the duct having a generally vertical upper section above the deck and a generally horizontal lower section below the deck, the lower section extending from its junction with the upper deck toward and around the downwardly projecting end portion of the crankshaft and having a round discharge mouth at its bottom concentric to the engine crankshaft and through which said downwardly projecting end portion of the crankshaft passes; the upper duct section encompassing the engine



cylinder and having an inlet so located that all air moving through the duct must flow over the cylinder; and a centrifugal type air impeller fixed to the downwardly projecting end portion of the engine crankshaft between the cutter blade and the bottom of the duct with the inlet of the impeller contiguous to the discharge mouth of the duct, so that all air entering the impeller must reach the same through the duct.

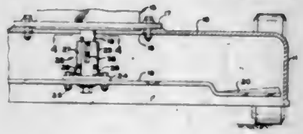
3,044,240
REEL TYPE LAWN MOWER WITH HEIGHT OF CUT ADJUSTMENT
Ben T. Grobowski, Newark, Ohio, assignor to The E. T. Rugg Company, Newark, Ohio, a corporation of Ohio
Filed Oct. 26, 1960, Ser. No. 65,045
2 Claims. (Cl. 56—254)



1. A lawn mower comprising a pair of upright side plates rigidly secured in vertical planes which are in laterally spaced relationship, a cutter reel having a shaft mounted in said side plates for rotation about an axis transversely thereof at right angles thereto, a cutter blade carried by the side plates and extending transversely thereof at right angles thereto in parallel radially spaced relationship to the transverse axis of the reel for cooperation with said cutter reel, a pair of axles, a pair of upright wheels disposed laterally outwardly of the respective side plates in planes in substantially parallel relationship thereto for vertical movement relative thereto, means for mounting each wheel for independent vertical adjustment in its plane relative to its respective side plate, each of said wheels being carried by an axle for rotation about its axis, said axle extending inwardly from said wheel through an arcuate slot in the said respective side plate which has its center of curvature at the axis of the reel, a radially extending adjusting arm supporting said axle, said arm being disposed laterally inwardly of said respective side plate in a vertical plane parallel to the side plate and having an inner end supported on said reel shaft for vertical swinging movement about the axis thereof in said plane parallel to the plane of the respective wheel, said wheel axle being supported on said arm at a point spaced radially from the axis of the reel shaft to permit swinging of the axle in said arcuate slot, said wheel having an internal ring gear and the adjacent end of said reel

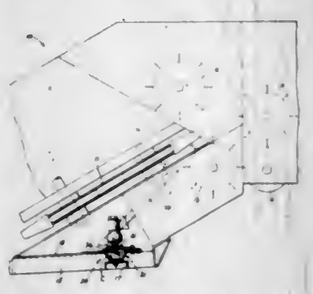
shaft carrying a pinion meshing with said gear, means for retaining said arm in selectively adjusted positions about the axis of the reel shaft, said means comprising a spring-pressed plunger carried by said arm and having a latching plunger directed radially inwardly of the arm, said respective side plate having an arcuate edge adjacent said arm and spaced radially outwardly relative to said arcuate slot with notches spaced along said arcuate edge for receiving the said latching plunger, said arcuate edge having its center of curvature at the axis of said reel shaft so that it is parallel to said slot.

3,044,241
ROTARY MOWER
William R. Snider, Rock Creek, Ohio, assignor to The Great Lakes Tractor Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 28, 1959, Ser. No. 842,749
4 Claims. (Cl. 56—295)



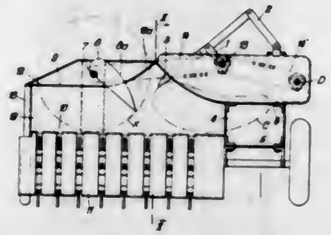
1. In a rotary mower having a drive shaft and a cutting blade adapted for connection thereto, a hub secured to said blade at the region of connection thereof to the shaft, said hub being formed with an extension which fits on the end of the drive shaft, means interengageable between the shaft and such extension of the hub rotatively to lock the two for drive of the hub by the shaft, and means connecting the blade with the hub attached and thus drivingly engaged to the shaft, the extension of said hub having a longitudinally extending wall section of such reduced thickness that the hub will shear therealong in response to predetermined torsional stressing of the same, thereby to protect the drive shaft from excessive torque in the event that the blade strikes a relatively unyielding object in operation of the mower.

3,044,242
RECIPROCATING CUTTER MOUNTING
Edward C. Procter, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed May 11, 1960, Ser. No. 28,315
11 Claims. (Cl. 56—304)



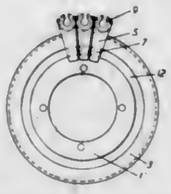
1. A mounting assembly for a reciprocable cutter comprising a base member having first and second upwardly inclined planar bearing surfaces, an elongate bar mounted on said base member and having first and second downwardly inclined planar bearing surfaces slidably bearing, respectively, on said first and second base member bearing surfaces, a knife carried by said bar, means connecting said bar to said base member and resilient means carried by said connecting means and urging the bearing surfaces of said bar downwardly into engagement with the bearing surfaces of said base member.

3,044,243
CROSS CONVEYER FOR PICK-UP BALER
Alfred Wenzel, Wolfenbuttel, Germany, assignor to Gebrüder Welger, Wolfenbuttel, Germany, a firm
Filed Oct. 13, 1958, Ser. No. 766,800
Claims priority, application Germany Oct. 16, 1957
7 Claims. (Cl. 56—341)



1. In a baler having housing means, a generally horizontal receiving table disposed in said housing means, crop pick-up means along a forward edge of said table for depositing thereon crop material picked up from the ground, and a baling chamber having an inlet opening adjacent said table, in combination, packing means for delivering crop material into said chamber through said opening, said packing means comprising a crankshaft journaled in said housing above said table, a crank secured to said crankshaft, and at least one packing finger pivotally connected to said crank for displacement in a closed, generally kidney-shaped path along the surface of said receiving table and through said inlet opening; cross-conveying means for delivering crop material deposited on said table to said packing means, said cross-conveying means comprising a driven shaft spaced from said crankshaft and journaled in said housing substantially parallel thereto, and at least one conveying finger rigidly secured to said driven shaft and extending radially therefrom for displacement in a circular path offset from said kidney-shaped path; and drive means for rotating said crankshaft and said driven shaft, said housing means including a wall portion above said table and below said shafts forming with said table a receiving compartment having an enlarged intermediate portion between said packing means and said cross-conveyor means.

3,044,244
LAY PLATE FOR ELECTRIC CABLE
Trevor Merritt, London, England, assignor to International Standard Electric Corporation, New York, N.Y.
Filed Oct. 4, 1960, Ser. No. 60,436
5 Claims. (Cl. 57—13)



2. A lay-plate assembly comprising an annular inner rotatable member, an annular outer rotatable member and a plurality of strand carriers each of which has a guide lug extending from one side thereof, a strand guide supported by each strand carrier, the said inner rotatable member being maintained in fixed and concentric

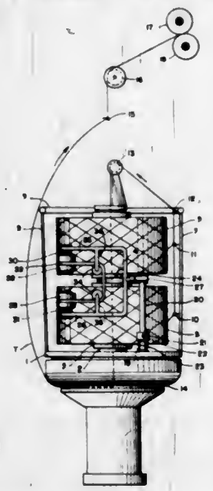
relationship with said outer rotatable member by said strand carriers disposed on one side of said rotatable members and by fixing means extending from the other side into the guide lugs which are disposed within an annular space between said rotatable members.

3,044,245
CREEL FOR THE FEEDING OF SPINNING MACHINES WITH CANS OF DRAWING FRAME SLIVER
José María Sanglas Casanovas, Avenida José Antonio 655, Barcelona, Spain
Filed Mar. 28, 1960, Ser. No. 18,107
Claims priority, application Spain Apr. 1, 1959
8 Claims. (Cl. 57—36)



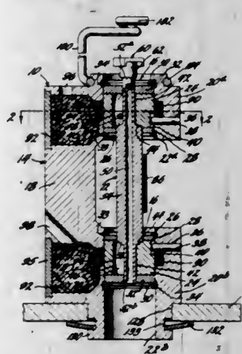
1. A creel for the feeding of the drawing mechanism of spinning machines from cans of drawing-frame sliver, comprising a series of cans, a series of supports for said cans, each support comprising a plate, means for securing a can to said plate, and means for pivotally mounting said plate upon the creel to permit the rocking of said can in a vertical plane through a suitable angle for facilitating access to its interior.

3,044,246
COMPENSATING DEVICE FOR THREAD FEED SPOOLS
Heinz Schippers, Remscheld-Lennep, Germany, assignor to Barmer Maschinenfabrik AG., Wuppertal-Elberfeld, Germany
Filed Nov. 15, 1960, Ser. No. 69,391
Claims priority, application Germany Nov. 17, 1959
12 Claims. (Cl. 57—58.52)



10. In a double twist twisting machine having a hollow spindle, means to receive two bobbins in a position adjacent to each other for normally independent rotation around the axis of said spindle, a stationary framework including means to support said spindle and said bobbins, guide means to lead a thread outwardly from each bobbin as said thread unwinds therefrom and to further lead each thread in a path around one end of said bobbins, through said hollow spindle and then outwardly in a rotating balloon around the other end of said bobbins whereby a twist is imparted to said threads, said guide means including a common guide member where said threads are joined prior to twisting, the improvement which comprises: a substantially cylindrical friction roller for each of said bobbins, each of said friction rollers being connected to said framework and being separately mounted on an axle for normally independent rotation; means to resiliently urge each of said friction rollers inwardly in approximately tangential position against an outer circumferential surface of its respective bobbin; means on the outer circumferential surface of each of said rollers for frictional rolling engagement with said outer circumferential surface of its respective bobbin; and torque transmitting means including a belt drive extending between and operatively coupling said normally independently rotating friction rollers.

3,044,247
HIGH SPEED FALSE TWISTER SPINDLE AND MACHINE
Richard G. Hilbert, Smithfield, R.I., assignor to Universal Winding Company, Cranston, R.I., a corporation of Massachusetts
Filed June 16, 1958, Ser. No. 742,234
10 Claims. (Cl. 57—77.45)



1. A high speed false twist spindle for inserting and removing twist in a moving strand of yarn comprising a spindle blade having at least one portion whose external surface is a surface of revolution and a whorl portion in axial alignment with, adjacent to, and of greater external diameter than said one portion whereby a shoulder portion is formed therebetween, said spindle blade having an axial passageway therethrough for the passage of said moving strand of yarn axially in the direction of said one portion from said whorl portion; means carried by said blade for engaging said moving strand to rotate the same, the axial movement of said strand exerting an axial thrust on said blade in the direction of the strand movement; a bearing for said spindle blade including at least two bearing surfaces formed of hard, wear-resistant material in tangential contact with the external surface of said one portion and at least one other bearing surface formed of hard wear-resistant material in tangential contact with said shoulder portion to take the thrust imposed on said blade by a moving strand of yarn; and means for supporting said bearing surfaces against rotation and axial displacement in the direction of strand movement.

3,044,248
SPINDLE BRAKE
Clarence R. Hall, Bradford, N.H.
Filed Nov. 1, 1960, Ser. No. 66,524
3 Claims. (Cl. 57—88)

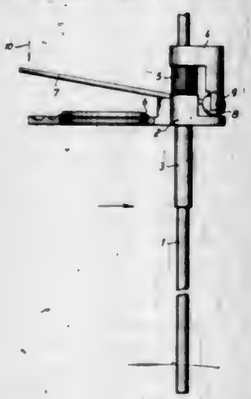
2. A spindle brake comprising a support member, a block mounted on said support member, and said block

including spaced parallel vertically disposed depending flanges engaging side portions of said support member. a body member mounted above said block and said body member including a rounded end portion provided with a vertically disposed bore that includes upper and lower sections of different diameters, a shoulder pin including a head seated in the upper section of said bore, said shoulder pin further including a cylindrical portion seated in the second section of said bore, said shoulder pin further including a reduced diameter lower threaded end portion threadly engaging said block, said body member further including an enlarged portion contiguous to said rounded end portion, a shank adjacent said enlarged portion and said shank terminating in a pair of arcuate arms, linings fastened to the inner surfaces of said arms, there



being a slot in said shank and enlarged portion, a portion of said slot being of increased size in the center of said enlarged portion, a pair of pins extending upwardly from the enlarged portion on opposite sides of said slot, an actuator comprising a handle portion and a circular plate portion, there being a central aperture in said plate portion, said plate portion being provided with a pair of spaced apart arcuate grooves for the projection therethrough of said last named pins, and a pivot pin member having a head on its upper end contiguous to the upper surface of said actuator, said pivot pin member further including a cylindrical section extending through the aperture in said plate portion and through a registering aperture in said block, and said pivot pin member including a depending threaded portion threadedly engaging said support member.

3,044,249
DEVICE FOR LOCKING RING HOLDERS OF RING RAILS OF RING SPINNING AND TWISTING MACHINES
Giorgio Ancarani, Milan, Italy, assignor to Zinser Textilmaschinen G.m.b.H., Ebersbach, Fils, Germany
Filed Apr. 4, 1960, Ser. No. 19,715
Claims priority, application Italy Apr. 6, 1959
6 Claims. (Cl. 57—122)



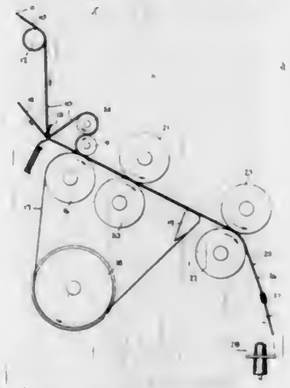
1. In a ring spinning and twisting machine having a movable ring rail: a ring holder for movement with said ring rail, and magnetic means interposed between said ring rail and said ring holder operable for operatively but releasably coupling said ring holder and said ring rail together when the ring holder is positioned adjacent said ring rail.

3,044,250
TEXTILE PRODUCT
Harold H. Hebeler, Seaford, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 28, 1957, Ser. No. 668,718
2 Claims. (Cl. 57—140)



1. An improved textile yarn consisting of blended staple cotton fibers and staple fibers of a high strength synthetic linear condensation polymer having both a high degree of crystallinity and crystalline orientation selected from the group consisting of polycaprolactam, polyhexamethylene adipamide and polyethylene terephthalate, the synthetic staple fibers in the yarn being characterized by being stable against slack-aging and having a load-bearing capacity at least equal to that of the cotton fibers at the break-elongation characteristic of the cotton fibers.

3,044,251
METHOD OF PRODUCING SLUB YARN WITH AN INTERMITTENT CORE
William E. Stamps, Allen R. Merrill, and Malcolm R. Livingston, Charlotte, N.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,374
7 Claims. (Cl. 57—157)



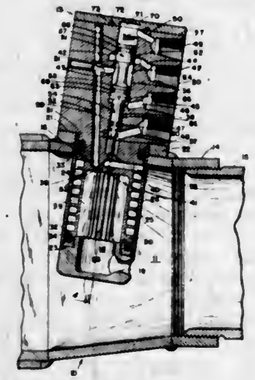
1. A method of producing a slub-containing spun yarn comprising passing a pre-formed yarn together with at least one roving between the forward rolls of a drafting device, supplying said roving to said forward rolls at a rate less than the feed velocity of said forward rolls so that said roving is drafted, supplying said pre-formed yarn at a rate less than the feed velocity of said forward rolls so that said pre-formed yarn is under tension, said forward rolls to which said yarn and roving are supplied being weighted sufficiently to draft said roving but insufficiently to break said pre-formed yarn before reaching said forward rolls whereby said pre-formed yarn is fed through said forward rolls at a slower velocity than said roving, and twisting the composite of said pre-formed yarn and said roving emerging from said forward rolls at a rate sufficient to cause the twist in said pre-formed yarn to build up until said pre-formed yarn breaks whereby said roving will be wrapped around said pre-formed yarn to form a slub and whereby, following breakage of said pre-formed yarn, said roving will be twisted to produce a spun yarn segment secured to said slub.

3,044,252
INVERTED HYDROPULSE
Fritz Zwicky, Pasadena, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 11, 1950, Ser. No. 178,840
13 Claims. (Cl. 60—35.5)



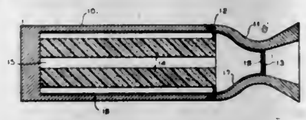
1. A jet propulsion device comprising a duct having an inlet opening at one end and an exhaust opening at the other end, a combustion chamber within the duct and arranged so that water can flow past it, said combustion chamber having an opening leading into the chamber, a directional barrier placed across the open end of said combustion chamber, said barrier affording less resistance to fluid flow in one direction than in the other, the direction of greatest resistance being from the outside to the inside of the chamber, means for injecting a hydrofuel into the chamber at a timed rate, and an automatically operative water inlet valve located across the duct upstream from the chamber opening.

3,044,253
METHOD AND APPARATUS FOR JET PROPULSION THROUGH WATER
Fritz Zwicky, Pasadena, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 4, 1947, Ser. No. 726,334
20 Claims. (Cl. 60—35.5)



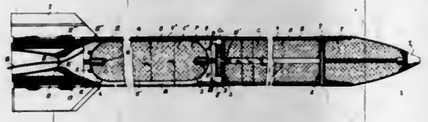
1. In the operation through water of a reaction propelled device of the type having a duct provided with an inlet opening through which water is admitted, an exhaust nozzle through which water is ejected, a valve located in the duct and a reaction chamber between the valve and exhaust nozzle, the improvement which comprises heating a metallic water reactive propellant to cause it to melt, adding sufficient heat to heat the molten mass at least to the critical temperature above the melting point, injecting the molten material at a temperature at least as great as the critical temperature into the reaction chamber, and contacting the hot propellant liquid with the water within the reaction chamber thereby creating a violent reaction which creates pressure which closes said valve and creates an exhaust jet through the exhaust nozzle.

3,044,254
ROCKET MOTOR
Barnet R. Adelman, Waco, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 14, 1955, Ser. No. 494,057
8 Claims. (Cl. 60—35.6)



1. In a rocket motor comprising a combustion chamber; and an exhaust nozzle; the improvement comprising a liner consisting essentially of a substantially neutral solid desiccant covering the inner surfaces of said combustion chamber and nozzle.

3,044,255
POWDER PROPULSIVE FOR ROCKETS OR OTHER SELF-PROPELLED PROJECTILES
Michel Precoul, Paris, France, assignor to Societe Technique de Recherches Industrielles et Mecaniques S.T.R.I.M., Paris, France, a society of France
Filed May 9, 1955, Ser. No. 506,766
Claims priority, application France May 14, 1954
4 Claims. (Cl. 60—35.6)

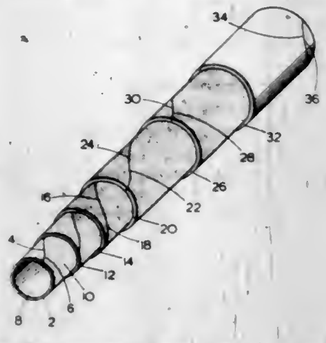


1. A rocket or similar self-propelled projectile comprising a cylindrical casing having a front chamber, an intermediate chamber and a rear chamber, a cylindrical block of powder forming the front charge located in said front chamber having an axially extending channel therein, means for limiting combustion of said front charge to the surface of said axial channel, a solid cylindrical block of powder located in said rear chamber and being spaced from the internal surface of said rear chamber and igniting means for said front and rear charges located in said intermediate chamber so that combustion of said front charge takes place through said axial channel exclusively and combustion of said rear charge takes place along its periphery.

3,044,256
ROCKET MOTOR CASINGS
Charles Bayly, Cleobury Mortimer, near Kidderminster, and Bernard Owen Walkley, Kidderminster, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Dec. 16, 1955, Ser. No. 553,459
Claims priority, application Great Britain Dec. 22, 1954
4 Claims. (Cl. 60—35.6)

1. A rocket motor casing for receiving a propellant charge comprising a plurality of layers of helically wound strip metal, adjacent windings of strip in each layer abut-

ting at their edges, the abutting edges of the metal in at least one layer being so displaced with reference to the abutting edges of the metal in the preceding layer as to ensure no right line path from the inside to the outside of the tube between the said abutting edges, and the whole being bonded together by an epoxy resin separating each



layer from the next, and layer means on the inner surface of the innermost layer of the said plurality for hydraulically sealing and heat-insulating the same, an end closure secured to the outermost layer of said plurality of layers, said end closure comprising an end ring bonded to the outermost layer of strip metal and an end cap secured to said end ring.

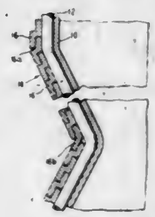
3,044,257

COMBUSTION CHAMBER OUTER JACKET

John Shesta, Highlands, N.J., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Filed June 2, 1958, Ser. No. 739,409

1 Claim. (Cl. 60—35.6)



An outer wall structure for a rocket combustion chamber having a walled inner chamber, comprising a continuous band of substantially Z-shaped cross section wrapped in spiral and overlapping relation about said inner chamber whereby the resultant wrapping will produce parallel inner and outer surfaces in said outer wall structure, and means for spacing the outer wall from the wall of the inner chamber to provide a coolant passageway therebetween.

3,044,258

ADJUSTABLE CONVERGING-DIVERGING NOZZLE

William Wallace Carlton, Topsfield, and Hartley Morton Burnham, Reading, Mass., assignors to General Electric Company, a corporation of New York

Filed Nov. 25, 1958, Ser. No. 776,387

8 Claims. (Cl. 60—35.6)

1. An exhaust nozzle for a reaction engine, comprising: a primary nozzle section for receiving working fluid from said engine and formed successively, in the direction of working fluid flow therethrough, with a convergent portion, a throat portion, and a divergent portion; a secondary divergent nozzle section; means supporting said primary nozzle section for movement to a first position in which said working fluid is exhausted to atmosphere directly from said primary nozzle section, and to a second position in which said working fluid is exhausted to atmosphere through said secondary nozzle section from said



primary nozzle section; whereby said secondary nozzle section forms a divergent extension of said divergent portion of said primary nozzle section in said second position.

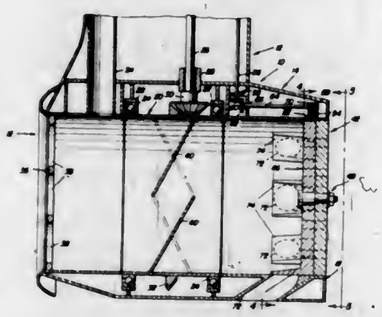
3,044,259

WATER JET PROPELLING DEVICE

Seth Tuttle, P.O. Box 75, Galena, Mo., assignor of fifty percent to Stanley H. Gates, Brookline Station, Mo.

Filed Aug. 16, 1960, Ser. No. 49,937

6 Claims. (Cl. 60—35.54)



1. A water jet propelling device comprising a support housing sleeve, a drive sleeve, means journaling said drive sleeve within said support housing sleeve, a plurality of blades secured in said drive sleeve for rotation therewith, drive means operatively connected to said drive sleeve and adapted for connection to a power source for actuation thereby, a water jet exhaust disk carried by and extending across the rear end of said housing sleeve, a plurality of exhaust openings formed in said exhaust disk, and closure means mounted for selective movement into and out of registry with said exhaust openings for controlling the water jet of said propelling device independently of the drive means, outwardly and forwardly directed circumferentially spaced exhaust ports formed in said support housing having their inlet ends positioned rearwardly of said drive sleeve, disposed in a plane extending transversely of said housing and forwardly of said exhaust disk, said closure means including a closure disk mounted for rotation forwardly of, relative to and in surface to surface contacting relation with the forward face of said exhaust disk, said closure disk having a plurality of openings formed therein movable into and out of registry with the openings of said exhaust disk upon rotation of said closure disk and including means operable to close a given area of said exhaust openings while opening an approximate proportional amount of area of said exhaust ports thereby at all times providing an outlet for the water stream effected by said driving sleeve and reducing the possibility of the latter producing cavitation, said closure means including a plurality of forwardly projecting and circumferentially spaced closure doors carried by the outer marginal portions of said closure plate movable into and out of registry with the inlet ends of said exhaust ports.

3,044,260

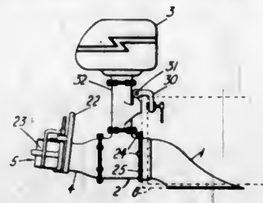
HYDRAULIC JET PROPULSION APPARATUS FOR WATER-BORNE CRAFT

Charles W. F. Hamilton, Irishman Creek, Private Bag, Timaru, Canterbury, New Zealand

Filed Jan. 17, 1961, Ser. No. 83,253

Claims priority, application New Zealand Jan. 21, 1960

9 Claims. (Cl. 60—35.54)



1. In a hydraulic jet propulsion apparatus for water craft, means defining a water conveying duct having an inlet end beneath the water craft and an outlet end leading to the exterior of the water craft, means fixed mounting the duct within the water craft, a unit assembly including hydraulic pump means, a discharge section communicating with the pump means from which water can be discharged as a propulsive jet, motor means operably coupled to said pump means to drive the same and control means operably associated with the discharge section for controlling the direction of the water jet discharged therefrom, means removably mounting said unit assembly outboard of the water craft, and means providing a fluid tight connection between said unit assembly and the outlet end of said duct so that when said pump means is driven by the motor means water is drawn by the pump means through the inlet end of the duct and discharged through said discharge section as a propulsive jet.

3,044,261

WITHDRAWN

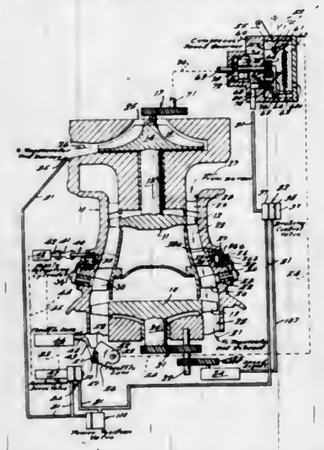
3,044,262

CONTROL MECHANISM FOR ADJUSTABLE GAS TURBINE NOZZLE

Alexander Chadwick, Farmington, and Thomas Golec, Jr., Royal Oak, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Filed May 9, 1960, Ser. No. 27,645

24 Claims. (Cl. 60—39.25)



1. In a multiple stage gas turbine engine having a compressor driving rotor in one stage and a power rotor in a subsequent stage, an air compressor driven by said compressor driving rotor for supplying combustion air to said engine, operable throttle means for supplying fuel to said engine, means for conducting motive gases to said rotors to rotate the same, adjustable nozzle means interposed in the path of said gases and shiftable to adjust the angle of contact therewith to vary the power imparted to said rotors by said gases, one of the positions of adjustment of said nozzle means comprising an accelerating position for imparting comparatively low power to said power rotor and comparatively high power to said compressor driving rotor, control means for adjusting said nozzle means including throttle responsive means for adjusting said nozzle means in accordance with the setting of said throttle means and also including means responsive to the pressure of the air supplied by said compressor for adjusting said nozzle means to said accelerating position during predetermined operating conditions of said engine regardless of the setting of said throttle means.

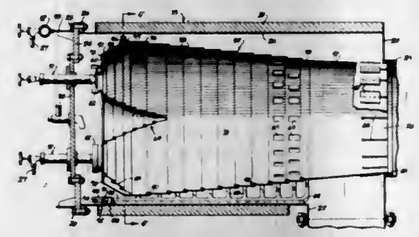
3,044,263

COMBUSTOR WITH UNITARY LINER

Fritz O. Hennig, Olean, N.Y., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed May 21, 1959, Ser. No. 814,881

5 Claims. (Cl. 60—39.65)



1. In a combustor, the combination comprising an outer shell having an access opening, a liner assembly including a plurality of spaced rings, and means for supporting said liner assembly within and on said shell in spaced relation thereto and including a slide bar juxtaposed to said shell, guide means juxtaposed to and fast to said shell for radially and circumferentially guiding said bar during relative movement of said bar and means for supporting said rings on said bar including a single strut extending between each of said rings and said bar, whereby overall axial dimensional growth of said liner assembly due to temperature expansion is minimized and said liner assembly as a unitary structure can be slid into and out of said shell through said access opening by said bar sliding on said guide means.

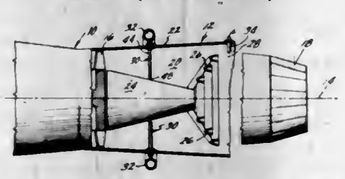
3,044,264

FUEL SPRAY NOZZLE

Edward T. Seaward, Glastonbury, and Robert E. Rosati, East Hartford, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed May 11, 1960, Ser. No. 28,422

1 Claim. (Cl. 60—39.74)



A fuel spray bar for use in imparting fuel into a combustion chamber comprising a bar having a single longi-

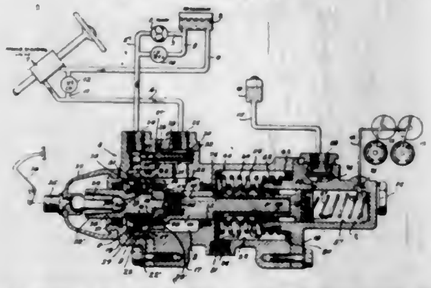
tudinal passage extending from one end thereof while terminating short of the other end thereof, means to support said bar from a combustion chamber defining structure, means to supply fuel into said longitudinal passage, and a plurality of longitudinally spaced spray nozzle units completely embedded within said bar and each including a transverse passage communicating with said longitudinal passage and the exterior of said bar and each further including a spray nozzle insert having a necked down shank section extending across said longitudinal passage and a head section connected to said shank section and extending into said transverse passage, said insert being shaped to cooperate with said longitudinal and transverse passages to define conduits to pass fuel from said longitudinal passage and through said transverse passage to an area external of said bar, and said shank section of said insert being sized to permit flow thereby for continuance through said longitudinal passage.

3,044,265
POWER HYDRAULIC BRAKE DEVICE AND SYSTEM

Robert E. Schwartz, Clayton, Mo., Roy P. Stahl, South Bend, Ind., and Edward J. Falk, St. Louis, Mo., assignors to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware

Continuation of abandoned application Ser. No. 497,272, Mar. 28, 1955. This application Mar. 15, 1960, Ser. No. 15,221

10 Claims. (Cl. 60—52)



1. A power hydraulic servo motor comprising a housing having a bore with a piston assembly slidable therein, a variable orifice in said piston assembly through which a first pressure fluid is continuously circulated, an outlet chamber containing a second pressuer fluid, an extension for said piston assembly extending into said outlet chamber, said bore and outlet chamber being spaced apart by a separation chamber through which extends said piston assembly extension, means for restricting said variable orifice to throttle the continuous flow of said first pressure fluid to move said extension in said separation and outlet chambers, sealing means for preventing leakage of first and second pressure fluids into said separation chamber, and means in said separation chamber to prevent commingling of the first and second pressure fluids along said extension.

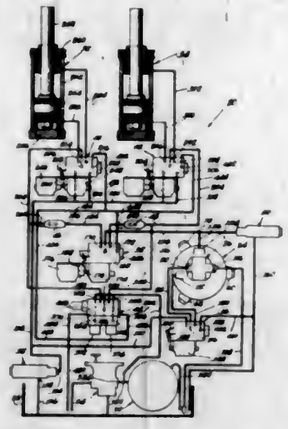
3,044,266
HYDRAULIC ACTUATING METHOD

Ernest J. Svenson, Rockford, Ill., assignor to Odin Corporation, Rockford, Ill., a corporation of Illinois

Original application Dec. 20, 1954, Ser. No. 476,281, now Patent No. 2,924,939, dated Feb. 16, 1960. Divided and this application Apr. 17, 1959, Ser. No. 807,135

3 Claims. (Cl. 60—52)

1. A method of actuating a fluid motor comprising positively delivering compressed hydraulic actuating fluid to the motor, providing a predetermined back pressure in the fluid motor sufficient to permit actuation of the motor while continuously maintaining said actuating hydraulic fluid in a compressed state, and stopping delivery of the actuating hydraulic fluid to the motor while constantly maintaining a back pressure at least as great as said predetermined back pressure and while positively preventing reverse flow of hydraulic fluid previously delivered to the



fluid motor and maintaining the actuating hydraulic fluid previously delivered to the fluid motor under pressure and in a compressed state to eliminate substantially any further actuation of the motor.

3,044,267
THROTTLE CONTROL

James M. Hicks, 3030 Bridgeway, Sausalito, Calif.

Filed Jan. 7, 1960, Ser. No. 1,007

2 Claims. (Cl. 60—54.5)



1. In a system where a single master hydraulic cylinder drives more than a single similarly sized slave cylinder by means of fluid presure applied through connecting hydraulic lines, the improvements comprising: resilient means secured at one end thereof to the exterior of each of said slave cylinders, said means being so secured by means of supports threaded to the exterior of each of said slave cylinders, each of said resilient means being secured at the opposite end thereof to an exposed end of the piston rod of a slave cylinder and tending to maintain said exposed end of said slave piston rod in a telescoped position relative to said slave cylinder; and means on the exposed end of each of said slave piston rods for securing said exposed end to an element to be moved.

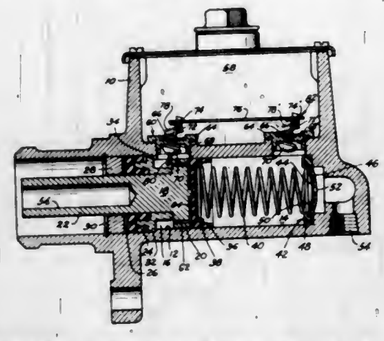
3,044,268
HIGH PUMPING EFFICIENCY MASTER CYLINDER

Myron L. Harrison, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed Nov. 17, 1960, Ser. No. 70,070

3 Claims. (Cl. 60—54.6)

1. In a fluid pressurizing device: a housing having a fluid chamber therein, a movable wall dividing said chamber into a pressurizing chamber and a follow-up chamber, said movable wall having a normal retracted position from which it is moved to force fluid out of said pressurizing chamber, check valve means for passing fluid from said follow-up chamber to said pressurizing chamber, a reservoir of low pressure fluid overlying said chambers, a first compensating port communicating said follow-up chamber to said reservoir and having a valve seat facing said follow-up chamber, a second compensating port communicating said pressurizing chamber to said reservoir and having a valve seat facing said pressurizing chamber, first and second valve closure members for abutment with said valve seats of respective first and second compensating ports, said first and second compensating ports being arranged to prevent flow from said chambers to said



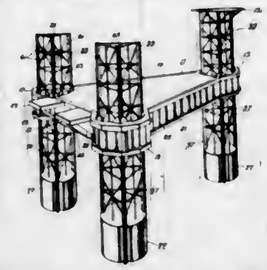
reservoir when their valve closure members abut their valve seats, means normally biasing said valve closure members closed, first and second valve opening structures respectively projecting into said reservoir, connecting means in said reservoir between said valve opening structures for transmitting valve opening movement from said first valve to said second valve, and means biasing said first valve open when said movable wall is in its retracted position.

3,044,269
MOBILE SEA PLATFORM

Robert G. LeTourneau, P.O. Box 2307, Longview, Tex.

Filed July 22, 1957, Ser. No. 673,491

5 Claims. (Cl. 61—46.5)



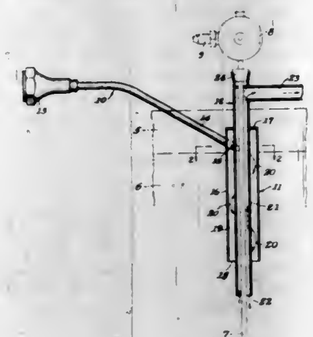
1. In combination, a spud well, and a spud in said spud well, said spud comprising a tower structure including a plurality of vertical tower columns forming corners for said structure and a plurality of members forming an open lattice network holding said columns in rigid spaced relationship; each said tower column comprising a vertically disposed flat steel slab of horizontal width several times its thickness, the members of said lattice network being secured to one major vertical face of each said slab inwardly of the vertical edges of said face; a vertical rack bar disposed outwardly of the opposite major face of each slab in a vertical plane bisecting said slab, and vertically disposed horizontally diverging rack support strips connecting opposite side faces of said rack bar to said opposite major face of said slab along vertical lines spaced inwardly from the vertical edges of said face; whereby the vertical longitudinal edges of said slab form extended guide formations free of interference from said lattice network members and said rack supporting strips; and supporting and guiding elements on said spud well in cooperating engagement with said formations.

3,044,270
ANTI-SPLASH LIQUID GAS FILLER

Robert E. Biever, 3646 N. Vacino Drive, Covina, Calif.

Filed Jan. 18, 1960, Ser. No. 2,881

7 Claims. (Cl. 62—55)



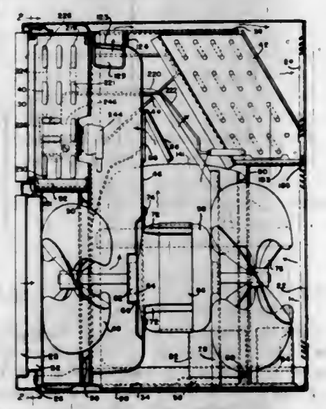
1. A filler device for liquid gas comprising an elongated expansion chamber closed at the top and open at the bottom, a liquid gas inlet connected adjacent the closed end of said chamber and opening thereinto and directed to discharge a helical flow of liquid gas into the chamber to cause said gas to swirl downwardly and outwardly from said open end, and a vapor vent independent of the mentioned inlet and extending longitudially upwardly through said chamber from a point substantially below the lower end of the chamber through said closed end of the chamber to exhaust vapors released from the liquid gas that discharges from the open end of the expansion chamber.

3,044,271
REFRIGERATING APPARATUS INCLUDING MEANS TO PREVENT EXCESSIVE FROSTING

Frank W. Gerard, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 19, 1959, Ser. No. 847,304

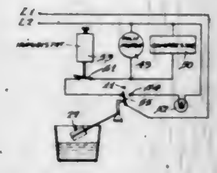
2 Claims. (Cl. 62—150)



1. An air conditioner associated with a room to be cooled including a refrigerant evaporator having air passages and a refrigerant condenser and an electrically operated compressor connected together in an operative refrigerant circuit, fan means for circulating air from the room through said air passages into heat exchange relation with said evaporator and back into the room, an electrical circuit for supplying said compressor includ-

ing a first adjustable thermostat switch responsive to the temperature of the air in said room for controlling said compressor to keep the room at comforatable temperatures, a second normally closed thermostat switch connected in said circuit in series with said compressor and said first thermostat switch and responsive to the temperature of said evaporator and the circulating air for preventing said evaporator from going below freezing temperatures and accumulating frost in said air passages, said second thermostat switch being located in the circulating air adjacent said evaporator and being set to open at an above freezing temperature and to reclose at higher temperatures.

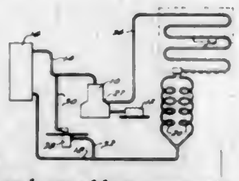
3,044,272
DEHUMIDIFIER CONTROL HAVING COLLECTED-CONDENSATE RESPONSIVE MEANS
David C. Eisendrath, Chicago, Ill., assignor to Cory Corporation, a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 857,000
10 Claims. (Cl. 62—176)



8. An electrical dehumidifying device, comprising: a dehumidifier having an electric motor for driving the same and a bucket for holding condensate delivered by the dehumidifier; a humidistat electrically associated in series with said motor being exposed to the atmosphere to be dehumidified and operable under varying conditions of relative humidity to start or to stop said motor by respectively closing and opening the electrical line connected to an electrical power source leading to said motor; an electrical indicating means having an electrical line connected to an electrical power source independent of said motor and humidistat; a single-pole, double-throw switch interposed between the electrical line of said motor and humidistat and the electrical line of said indicating means, said switch having the pole connected to an electrical power source to complete a circuit through said motor and humidistat or through said indicating means depending on the position of said pole; a first means responsive to the level of condensate within said bucket; and a second means actuated by said first means to operate said switch to remove the motor and humidistat from circuit when the bucket is full regardless of the status of said humidistat and put the indicating means into circuit to inform an observer that the level of condensate in said bucket rather than a lack of humidity in the atmosphere has caused said dehumidifier to cease operation.

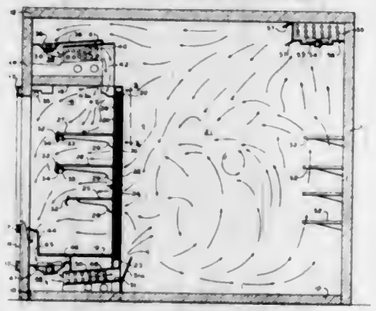
3,044,273
REFRIGERATION SYSTEM WITH MEANS TO PREVENT OVERLOADING
Ralph C. Lower, Xenia, Ohio, and Anthony J. Perez, Raytown, Mo., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Feb. 9, 1961, Ser. No. 88,213
1 Claim. (Cl. 62—196)

In a refrigeration system, an evaporator, a compressor and a condenser, arranged in series fluid flow relationship, capillary tube means connected to and controlling the flow of fluid to said evaporator, conduit means forming a liquid line interconnecting said condenser and said capillary tube means, and a by-pass for restricting the flow of liquid refrigerant through said capillary tube means under abnormal operating conditions, said by-pass including a normally closed valve in fluid flow communication with the discharge of said compressor and in fluid flow communication with said liquid line interconnecting said condenser and capillary tube means, the sole control of said valve comprising spring opposed pressure responsive means in communication with the discharge of



said compressor and operable to open said valve when the compressor discharge pressure exceeds a predetermined value thereby feeding discharge from said compressor directly into said liquid line to reduce the capacity of said capillary tube means to handle refrigerant flowing from said condenser.

3,044,274
REFRIGERATED DISPLAY CASE
Glenn W. Mathis and Ralph J. Burger, Kendallville, Ind., assignors to McCray Refrigerator Company, Inc., Kendallville, Ind., a corporation of Indiana
Filed June 27, 1960, Ser. No. 39,147
7 Claims. (Cl. 62—256)

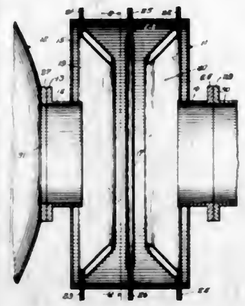


3. In a refrigerated display case, an open-front display compartment, a storage compartment located substantially rearwardly of said display compartment, said display compartment having a rear wall perforate over at least a portion of its area, said rear wall including means effective to provide access between said storage and display compartments, means including inlet and distributing means for enabling cold air from said storage compartment to flow downwardly into the top of said display compartment to provide an air curtain across the front of said display compartment, means in the lower portion of said display compartment for cooling and returning said air to said storage compartment, and means effective to create and maintain a positive pressure in said storage compartment whereby cold air is caused to flow from said storage compartment through said perforated rear wall and thence into said display compartment, directly over goods in said display compartment.

3,044,275
EVACUATING COUPLING
Menke Drewes, Jr., Highland Park, Ill., assignor, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland
Filed June 16, 1961, Ser. No. 117,558
6 Claims. (Cl. 62—268)

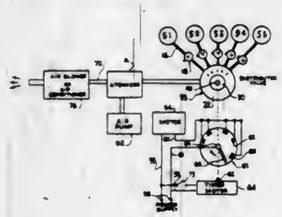
5. A coupling for use in evacuating the interior of a space-simulating hollow body to a pressure corresponding to that existing in outer space, said coupling comprising:

a housing having inlet means for connection to the interior of said body and outlet means for connection to an evacuating pump;
cryogen-cooled baffle means within said housing between said inlet means and said outlet means;



an annular opening around the periphery of said baffle means;
and hollow, doughnut-shaped, cryogen-cooled condensing means on each side of said annular opening and adjacent thereto.

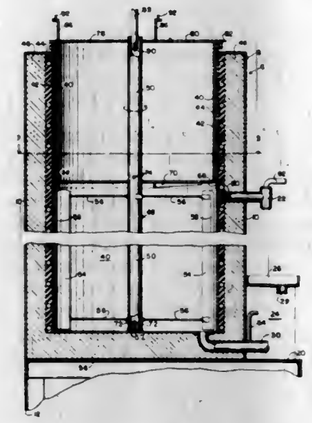
3,044,276
SCENT SPRAY FOR AIR CONDITIONERS
Frank Kauten, 520 W. 110th St., New York, N.Y.
Filed Aug. 24, 1961, Ser. No. 133,661
7 Claims. (Cl. 62—311)



1. In an air treatment system, a distribution apparatus for atomized liquids, comprising a plurality of containers of said liquids, a distribution valve having a stationary casing, a rotatable rotor in the casing, conduits connecting said containers to bores in the casing, said rotor having a bore intermittently communicating with the bores in the casing as the rotor is rotated, a source of compressed air, an atomizer connected to the bore in the rotor, another conduit connecting said source to said atomizer to discharge compressed air therein for atomizing liquid discharged into the atomizer from the rotor, an air conditioner unit including a refrigeration unit and a fan adjacent thereto for drawing cooled air past the refrigeration unit, and a further conduit connected from said atomizer to said air conditioner unit and terminating adjacent said fan, so that atomized liquid discharged by said further conduit is distributed by said fan with the cooled air.

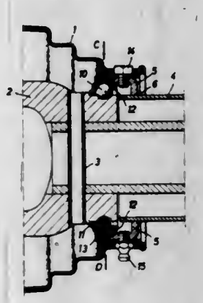
3,044,277
MEANS FOR MAKING FRUIT FLAVORED SLUSHY FOOD DRINK
Caleb W. Barnum, Wichita, Kans., assignor to Lyman D. Dunn
Filed Jan. 20, 1958, Ser. No. 710,129
6 Claims. (Cl. 62—342)

6. Apparatus for partially freezing fruit flavored water to a slushy condition, comprising, in combination, a tank, removable partition means dividing said tank into a feed material portion and a freezing portion thereunder, means mountable and operatable to remove heat passed through the walls of said tank in said freezing portion, paddle means mounted in said freezing portion to turn in operation in said tank, means extending through the partition means adapted to turn said paddle means in operation, a slush outlet in said tank, means



located substantially centrally with respect to said partition means and associated with said turning means to feed water to said freezing portion of said tank from said feed material portion, and said apparatus constructed and operable to freeze a portion of said water to a slush condition and pass resulting slush out said slush outlet.

3,044,278
PROTECTION DEVICE FOR SHAFTS
Hubert Geisthoff, Lohmar, Rhineland, Germany, assignor to Jean Walterscheid Kommanditgesellschaft, Lohmar, Rhineland, Germany
Filed July 5, 1961, Ser. No. 122,036
Claims priority, application Germany July 4, 1960
5 Claims. (Cl. 64—3)



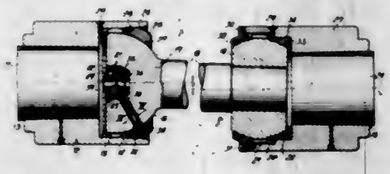
1. In a protective arrangement, a drive shaft, a connection on one end of said drive shaft, a protective tube enclosing said drive shaft, a second protective tube extending from said first protective tube over said connection, a ball bearing cage of a resilient non-metallic material between said connection and said second protective tube, said cage having a plurality of recesses and ball bearings being retained in said recesses, and a bearing casing enclosing said bearing cage so that a clearance is formed between said bearing casing and said connection, there being an axial flange on said cage extending into the clearance between said bearing casing and said connection.

3,044,279
BEARING ASSEMBLIES AND MACHINERY GUARDS INCORPORATING THEM
Richard Leslie Atkinson, Bolton-by-Bowland, near Clitheroe, England, assignor to Atkinson's Agricultural Appliances Limited, Clitheroe, England, a company of Great Britain
Filed Nov. 12, 1959, Ser. No. 852,457
Claims priority, application Great Britain Dec. 8, 1958
6 Claims. (Cl. 64—4)



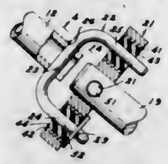
1. For use with use with shaft couplings comprising a telescopic shaft provided at each of its ends with a universal joint for connection to driving and driven machinery respectively, a machinery guard comprising two straight tubes telescoping one with the other and each of uniform internal diameter greater than the maximum diameter of the telescopic shaft, a flared frustro-conical end portion at the outer end of each of said tubes, each said end portion being adapted to fit with clearance over one said universal joint, and two bearing assemblies mounted one internally of each said end portion, each said bearing assembly comprising an inner ring which is a sliding fit about the telescopic shaft adjacent one said universal joint, an outer ring co-axial with said inner ring, means securing said outer ring internally of the said end portion in the vicinity of the smaller end of the latter, anti-friction means disposed between said rings and enabling relative rotation therebetween, an annular member co-axial with said rings and located in axial continuity therewith, means rendering said annular member and said inner race integral with one another, said annular member being inwardly movable at least at circumferentially spaced portions thereof thus effectively to constrict same in diameter, said annular member having a circumferential groove, a circumferentially adjustable collar seated in said groove and adapted on circumferential adjustment to affect the effective diameter of said annular member, and means for reducing the circumferential length of said collar thus effectively to constrict the diameter of said annular member for the purpose of clamping same to said telescopic shaft when the machinery guard is mounted about the shaft coupling.

3,044,280
ARTICULATED-JOINT TOOTHED COUPLING
Karl Haneklaus, Rheine, Westphalia, Germany, assignor to F. Tacke KG., Rheine, Westphalia, Germany, a firm
Filed Jan. 25, 1961, Ser. No. 84,863
Claims priority, application Germany Jan. 30, 1960
13 Claims. (Cl. 64—8)



1. An articulated-joint toothed coupling, in combination a coupling sleeve, fastened to a shaft end and having an internal toothing, a coupling spindle with a spherical coupling head, a spherically arcuate external toothing on said coupling head, gearing with the internal toothing of said coupling sleeve, a sealing ring of concave spherical internal side, moveably mounted on said coupling hub, and with its cylindrical external side, slideably guided in said coupling sleeve, and means supporting said sealing ring on the coupling head of said coupling spindle, said means being adapted to allow displacement of the coupling head in the sealing ring.

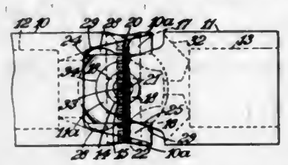
3,044,281
STEERING COLUMN COUPLING
Alfred R. Smith, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 10, 1960, Ser. No. 14,065
1 Claim. (Cl. 64—11)



A flexible coupling for connecting a pair of shafts that permits axial movement of the two shafts relative to one another and that substantially prevents vibrations from being transferred from one shaft to the other comprising, a plate member having three aligned bores positioned therein and a bore extending susbtantially perpendicular to a line connecting said three aligned bores and intersecting the central bore, the central of said bores receiving one of said shafts, said one shaft having a diametrically extending bore positioned therein aligned with the bore in said plate that extends substantially perpendicular to a line connecting said three aligned bores and that intersects the central bore, a pin extending through said diametrically extending bore in said one shaft and said bore in said plate that extends substantially perpendicular to the line connecting said three aligned bores and that intersects the central bore, the two remaining bores in said plate member each having a resilient bushing positioned therein, each of said resilient bushings comprising an outer metallic sleeve positioned in engagement with said plate member and having affixed thereto an elastomeric body formed of synthetic rubber, each of said resilient bushings having a central aperture positioned therein, the other of said shafts being positioned in substantial axial alignment with said first mentioned shaft and having one end thereof spaced from one end of said first mentioned shaft, the other of said shafts having a diametral slot positioned in the end thereof adjacent the end of the said first mentioned shaft, a U-shaped member having a body portion and a pair of end portions, said body portion of said U-shaped member being positioned within the diametral slot in the end of said other shaft and being affixed thereto, said end portions extending in a direction substantially parallel to both of said shafts, one end of said U-shaped member being positioned in a sliding fit relationship in the central aperture in one of said resilient bushings, the other end of said U-shaped member being positioned in a sliding fit relationship in the central aperture in the other one of said resilient bushings whereby relative axial movement is permitted between said shafts, and means affixed to one of the legs of said U-shaped member and adapted to engage said plate member for limiting the axial movement of said two shafts in a direction away from each other.

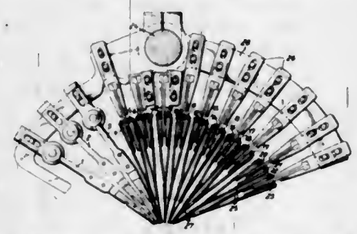
3,044,282
UNIVERSAL JOINTS
Clifford Grundy, Chadwell Heath, England, assignor to Motor Gear & Engineering Company Limited, Chadwell Heath, England, a British company
Filed Apr. 12, 1960, Ser. No. 21,655
Claims priority, application Great Britain Apr. 20, 1959
3 Claims. (Cl. 64—17)

1. A universal joint of the kind comprising two forks each having two arms connected by a cross-member, said forks being pivoted to a coupling block about axes which intersect at right angles, in which the cross member of each fork has, between the arms, the form, substantially, of a portion of a hollow cone which is coaxial



with the axis of the fork and of which the sides are tangential to a sphere centered on the aforesaid intersection of the axes and has a radius at least as great as that of the free ends of the opposite fork arms from that intersection.

3,044,283
WARP KNITTING MACHINES
Waldemar Liebchen, Aschaffenburg, Germany, assignor to Wirkmaschinen-Fabrik Wilhelm Barfuss G.m.b.H., Wilhelmshaven, Germany, a firm
Filed Jan. 12, 1960, Ser. No. 2,053
Claims priority, application Germany Jan. 17, 1959
2 Claims. (Cl. 66—86)



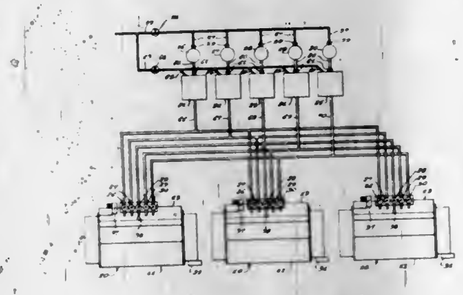
1. In a flat bed warp knitting machine for producing patterned warp knitted fabrics and having a plurality of pattern guide bars arranged in a bank in side-by-side relation, the improvement which comprises, a plurality of guides, shanks connected to the guides, each of the pattern bars having an elongated side provided with an included face exposed outwardly of the bank, each of the shanks extending along said side of a respective one of the bars and having an end bent to overlie the exposed face of that pattern bar, and means passing through the bent ends of the shanks into the underlying bars normal to the exposed faces of the bars to fix the shanks to the bars.

3,044,284
CATALYTIC TABLE LIGHTERS
Karl Kratzenberger, Wandersmannstr. 56, Wiesbaden, Germany
Filed July 28, 1958, Ser. No. 751,418
4 Claims. (Cl. 67—7)



4. A catalytic lighter comprising a tubular housing having an opening at one end and closed at the other end, absorbing material soaked with inflammable liquid filling the closed end of the housing, a plug closure device for said housing including a tubular casing fitting within the housing, the outer end of said casing being closed and having a rim adapted to seat on the edge of the opening in the end of the housing, a lining of absorbing sheet material on the inner surface of said casing and contacting the absorbing material in the housing and being capable of attracting liquid from said absorbing material, a filler of absorbing material in the closed end of the casing spaced from the absorbing material in the housing and with the lining providing an ignition chamber in the end of the casing, said casing having an opening in one side wall thereof communicating with the ignition chamber, a catalyst and a frame therefor removably mounted in the ignition chamber and normally being in constant contact with the vapors emanating from the absorbing material and lining whereby upon removal of the casing and exposure to atmosphere the vapors issuing from the absorbing material and lining will ignite upon contacting with the catalyst.

3,044,285
LAUNDRY SYSTEM
Harry Koplin, 547 Greenleaf, Glencoe, Ill.
Filed Aug. 5, 1958, Ser. No. 753,351
6 Claims. (Cl. 68—12)

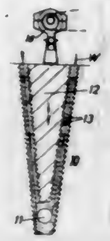


1. In a laundry machine of the character described, an elongated casing having a clothes container rotatably mounted therein, means for supplying washing solution to said casing and clothes container comprising a sealed drum for a concentrated washing chemical, an air pressure connection to said drum for supplying air under pressure thereto, a supply tank for concentrated washing chemical, a fluid connection from said drum to said tank, an air pressure connection to said tank supplying air under pressure to said supply tank at a lower pressure than the pressure of air supplied to said drum, an elongated pre-mixing tank for mixing concentrated chemical with water, means for supplying water to said pre-mixing tank, a dump valve extending substantially the length of said pre-mixing tank above said casing and having communication therewith for dumping the mixed washing solution to said casing, a chemical measuring device connecting said supply tank with said pre-mixing tank for supplying a predetermined quantity of chemical thereto in a preselected cycle of washing, and a dump valve extending for the length of said casing for dumping spent wash water therefrom in predetermined sequences in the cycle of a washing operation.

3,044,286
OPEN-WIDTH WASHING MACHINERY
John Wilde, Leyland, and David Edward Pepler Norton, Macclesfield, England, assignors to Bleachers' Association Limited, Manchester, England
Filed July 13, 1959, Ser. No. 826,822
Claims priority, application Great Britain July 19, 1958
5 Claims. (Cl. 68—184)

1. A machine for treating web material comprising a V-shaped liquid container of relatively narrow and deep

construction adapted to receive a travelling web, a roller located near the bottom of said container for guiding web materials travelling therethrough, a V-shaped solid agitator member located within said container and defining with said container a narrow passage through which



a travelling web may move whilst submerged in liquid, and actuating means for continually reciprocating said agitator member vertically within said container, said agitator member being provided with a plurality of transverse projections.

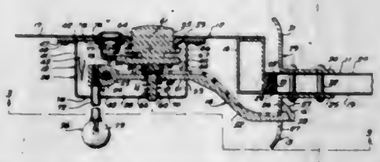
3,044,287

DOOR CONTROL MECHANISM

Albert L. Pelcin, Maple Heights, Ohio, assignor to The Eastern Malleable Iron Company, Cleveland, Ohio, a corporation of Connecticut

Filed Mar. 8, 1960, Ser. No. 13,531

6 Claims. (Cl. 70—99)



1. In door-latch mechanism: a hollow support member comprising a housing containing a recess and having walls including a pair of opposed first and second walls provided with first and second guide openings disposed on a common guide axis; a latch member comprising an arm extending transverse to said axis including an inner end portion located in said recess and pivoted on said support member, and an outer end portion projecting from said housing and swingable to latching and unlatching positions by pivotal movement of said arm; said arm having an opening located on said axis; a first actuator means comprising a push button portion slidably movable in said first guide opening between an initial outer position and an inner position, and a stem portion projecting from the push button portion and slidably received in said second guide opening by extending through the opening of said arm; a first spring surrounding said stem portion and effective between said second wall and said arm for urging said outer end portion toward said latching position; a second actuator means connected with said arm for swinging the same in opposition to said first spring for moving said outer end portion to said unlatching position; thrust means on said stem portion and engageable with said arm for swinging the same in the unlatching direction in opposition to said first spring in response to actuation of said push button portion to said inner position in said first guide opening; and a second spring surrounding said stem portion between said arm and said push button portion for urging the latter toward said initial outer position in said first guide opening.

3,044,288

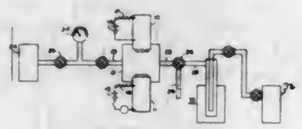
HUMIDIOMETER HYDROGEN TUBE ANALYZER

Dwight L. Randall, 312 N. Edison St., Arlington, Va.; Thure E. Hanley, Temple Hills, Md. (5245 Joan Lane, Washington 22, D.C.); and Oliver Kugler Larison, Oxon Hill, Md. (6327 Elkins Ave., Washington 21, D.C.)

Filed Nov. 29, 1960, Ser. No. 72,536

10 Claims. (Cl. 73—1)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for calibrating a humidiometer comprising a hydrogen tube source and a nitric oxide detector which comprises a flush chamber adapted to secure said hydrogen tube and said nitric oxide tube in opposing sides thereof with their windows opposing each other, inlet and outlet lines secured to said flush chamber, valve means connected in said outlet line, a flush chamber pressure indicator means secured to said outlet line between said valve means in said outlet line and said flush chamber, a valve selector means in said inlet line adapted to admit dry air when in one position and wet air when in another position, and an exhaust pump means secured to said outlet line.

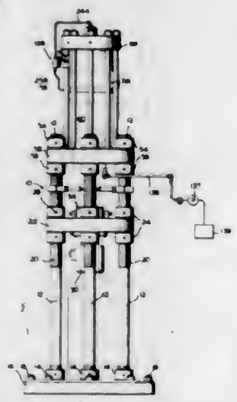
3,044,289

PRESSURE FLUID RAM

Eugene T. Fleischhauer, Richmond, Va., assignor to Texaco Experiment Incorporated, a corporation of Virginia

Filed Sept. 29, 1959, Ser. No. 843,175

10 Claims. (Cl. 73—12)



1. A pressure fluid ram device comprising a cylinder, heads at each end of said cylinder, a transverse partition having an opening therethrough concentric with the bore of the cylinder and dividing said cylinder into first and second chambers, a piston movable in the first chamber and having a piston rod extending therefrom through an opening in the cylinder head adjacent said first chamber, a valve spool carried by the piston and adapted to project through the opening in the partition, said valve spool having a flow control surface and a pressure fluid reaction surface thereon, valve seat means in the second chamber engaging and seating the pressure fluid reaction surface on said valve spool when the piston is in contact with the partition, the flow control surface presenting balance pressure fluid reaction surfaces to pressure fluid maintainable in said second chamber whereby there is substantially no unbalance of forces due to pressure fluid maintainable in said second chamber tending to urge the piston away from the partition, means for moving the piston toward said partition to seat the pressure fluid reaction surface in said valve seat means against elastic pressure fluid in said second chamber and means for moving the piston away from the partition to unseat said pressure fluid reaction surface from said valve seat means whereby the pressure fluid in said second chamber passes through the opening in the partition and moves said piston through the first chamber.

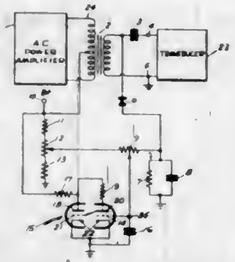
3,044,290

MECHANICAL RESONANCE INDICATORS

Burton R. Rawding, Walpole, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Aug. 28, 1957, Ser. No. 680,750

6 Claims. (Cl. 73—67.2)



2. A mechanical resonance indicator comprising, in combination, an excitation source for producing an alternating voltage the frequency of which can be varied over a particular range, a transducer coupled to said excitation source for producing a reciprocating mechanical motion in response to said alternating voltage, the frequency range of said source including the mechanical resonance frequency of said transducer, condenser means connected to said transducer to provide a tuned circuit having its electrical resonance at the same frequency as the mechanical resonance of said transducer, a rectifier coupled to said tuned circuit for generating a first direct voltage which is a sample of said tuned circuit voltage, a reference source for supplying a second direct voltage, comparison means connected to said rectifier and to said reference source for producing a direct current the value of which is dependent on the difference between the values of said first and said second direct voltages, and visual means for indicating the value of said direct current.

3,044,291

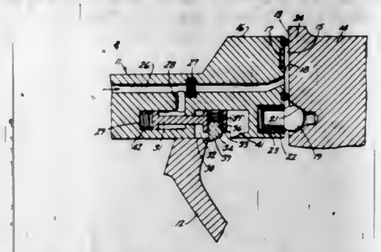
NONDESTRUCTIVE TESTING APPARATUS

George A. Kiatchko, Levittown, Pa., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Dec. 8, 1960, Ser. No. 74,697

7 Claims. (Cl. 73—67.8)

1. Ultrasonic apparatus for nondestructively testing a railroad car journal housed in a journal box comprising an ultrasonic test probe including transducer means mounted therein, spacing and sealing means on said test probe for forming a sealed gap between said transducer means and said journal when said spacing and sealing means engage said journal, holding means mounted on said test probe for locking said test probe in said journal box whereby said spacing and sealing means engage said journal forming said sealed gap, hydraulic means for



actuating said holding means and for admitting hydraulic fluid into said gap, and means actuated by said hydraulic means for admitting said hydraulic fluid into said gap after said hydraulic means actuates said holding means.

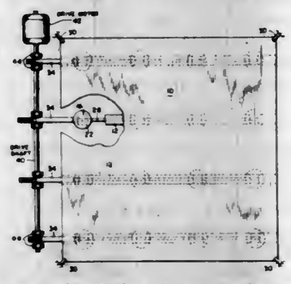
3,044,292

VIBRATION TABLE

Lyle E. Matthews, Oxnard, Calif., assignor to the United States of America as represented by the Secretary of the Navy

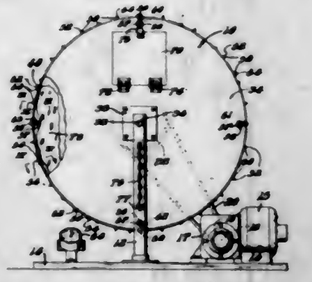
Original application Dec. 17, 1958, Ser. No. 781,172. Divided and this application July 23, 1959, Ser. No. 829,165

1 Claim. (Cl. 73—71.6)



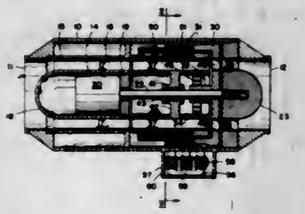
Apparatus for simulating a particular vibratory environment to determine the response of an object thereto, said apparatus comprising a horizontally-positioned table adapted to have said object securely mounted thereon, a stationary base member, means for supporting said table in spaced relationship to said base member so as to permit a cyclic vertical displacement therebetween, a driving mechanism connected to said supporting means, means for imparting a horizontal oscillatory movement to said driving mechanism to bring about the cyclic vertical displacement of said table with respect to said base member, said means for supporting said table in spaced relationship to said base member including a plurality of toggle joints, one end of each toggle joint being pivotally connected to said table, the other end of each toggle joint being pivotally connected to said base member, and the knee of each toggle joint being pivotally connected to said driving mechanism, said plurality of toggle joints being arranged in parallel rows, said driving mechanism including a plurality of horizontally-positioned drive rods equal in number to the number of rows of toggle joints, one drive rod being pivotally connected to the knees of each of the toggle joints making up one of said rows, said means for imparting a horizontal oscillatory movement to said driving mechanism to bring about the cyclic vertical displacement of said table with respect to said base member including means for reversing the direction of motion of the toggle joints in alternate rows to reduce horizontal forces imparted to said table from said driving mechanism as a result of the horizontal oscillatory movement of said drive rods.

3,044,293
KNITTED FABRIC PICK TESTING DEVICE
Rosny B. Thomas and Harvey N. Young, Winston-Salem, N.C., assignors to Hanes Hosiery Mills Company, Winston-Salem, N.C., a corporation of North Carolina
Filed Jan. 7, 1960, Ser. No. 980
4 Claims. (Cl. 73—159)



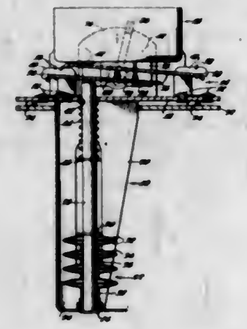
1. A device for determining the propensity to picking of women's knitted hosiery, said device comprising; a cylindrical drum for containing a fabric to be tested, said drum having solid side walls and a perforated circumferential wall; a plurality of baffle bars mounted at regular intervals adjacent the inside surface of said circumferential wall for causing random movement of said fabric during rotation of said drum; a plurality of frusto-conical plugs inserted from inside said drum through selected holes of said perforated circumferential walls at spaced-apart irregular locations, the inner end surface of said plugs being substantially flush with the inside surface of said circumferential wall; pins protruding from the inner end surface of said plugs; means mounting said drum for rotation about its axis in horizontal position; and means for driving said drum rotationally about its axis to tumble the fabric contents of said drum against said pins.

3,044,294
MASS FLOW SENSING MEANS
Francis A. Wilhelm, Birmingham, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 17, 1958, Ser. No. 761,513
3 Claims. (Cl. 73—194)



1. Mass rate of fluid flow sensing means for representing the mass rate of fluid flow as a time interval, comprising means to confine the flow to be measured to velocity in one direction, rotary impeller means in the path of said flow for imparting rotational acceleration to said fluid in another direction, means for rotating said impeller means comprising a rotational driver and a spring connected to the driver at one end and to the impeller means at the other end, said impeller means being mounted for angular displacement relative to said driver upon distortion of said spring, first and second magnetic elements carried by said impeller means and driver respectively in concentric relation for rotation about a common axis, a magnetic pickup fixed proximately to the rotational path of said magnetic elements and sensitive to magnetic influence resulting from proximity to either of them, said elements being formed as arcuate segments relatively angularly displaced to provide jointly a magnetic influence discontinuous throughout an angle variable in accordance with variations in the relative angular displacement of said impeller means and said driver.

3,044,295
CONTROL DEVICE
Paul Franklin Shivers, Minneapolis, Minn., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 710,047
7 Claims. (Cl. 73—339)



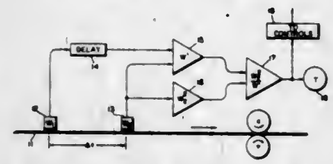
1. In a control device, the combination comprising a pair of lever members, control means movable between control positions and operably engaged by one of said lever members, thermal means engaging another of said lever members for moving the same in a direction toward and away from the one of said lever members in response to temperature variations, a rotatable and translatable means disposed between said one and said other lever members in operative engagement therewith, supporting same in a spaced relationship, and for causing said one lever member to move said control means between control positions in response to movement of said other lever member, manual means operatively connected to said rotatable and translatable means for rotating the same to vary the spaced relationship of said pair of lever members to thereby vary the temperature at which said control means will be moved to said one control position, and pivotal means operatively connected to said rotatable and translatable means for causing translation thereof to vary the temperature differential of said control means between said one control position and said other control position.

3,044,296
TEMPERATURE INDICATING SYSTEM
Leonard Boddy, Ann Arbor, Mich., assignor to King-Seeley Thermos Co., a corporation of Michigan
Application Dec. 20, 1954, Ser. No. 476,505, which is a division of application Ser. No. 108,773, Aug. 5, 1949, now Patent No. 2,835,885, dated May 20, 1958. Divided and this application May 28, 1959, Ser. No. 817,021
13 Claims. (Cl. 73—342)



9. In a temperature measuring system for association with an internal combustion engine having dual cylinder blocks each of which is cooled by circulating coolant and in which the temperature of the coolant adjacent the two blocks tends to be substantially equal under normal conditions but can be dangerously high only adjacent one block under abnormal conditions, the combination of a gauge for indicating coolant temperature, a first temperature sensing element disposed in heat transfer relation with the coolant adjacent one of the blocks, means including said first element and said gauge for producing a continuous indication of the temperature of the coolant adjacent said one block over a range of temperatures including a dangerous temperature, a second temperature sensing element disposed in heat transfer relation with the coolant adjacent the other one of the blocks having two discrete conditions and changing abruptly from one to the other of said conditions when the temperature of the coolant adjacent said other block reaches said dangerous temperature, means including said second element and said gauge effective only when the temperature of the coolant adjacent said other block reaches said dangerous temperature and only after said second element changes to said other condition for producing an indication of said dangerous temperature independently of the instant temperature of the coolant adjacent said one block, and means effective after said second element has changed to said other condition for maintaining said second element in said second condition until the temperature of the coolant adjacent said second block falls and remains below said dangerous temperature by more than a preselected amount.

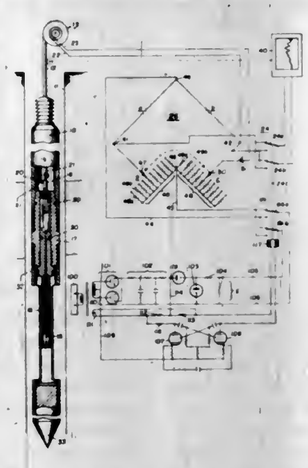
3,044,297
MEASURING SYSTEM
Albert F. G. Hanken, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Sept. 15, 1960, Ser. No. 56,220
4 Claims. (Cl. 73—355)



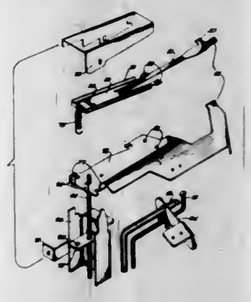
1. A system for obtaining the temperature of a moving material comprising means for sensing a first quantity proportional to the radiation rate from said material, means for obtaining a second quantity proportional to the time derivative of said radiation rate, and combining means for obtaining the ratio of the square of said first quantity to said second quantity to obtain a computed quantity proportional to the temperature and independent of emissivity.

3,044,298
UNBALANCED BRIDGE MEASUREMENTS OF BOREHOLE TEMPERATURE
Hayden D. Hodges and James T. Dean, Dallas, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed Dec. 16, 1957, Ser. No. 702,929
4 Claims. (Cl. 73—362)

2. A well bore temperature logging system which comprises a Wheatstone bridge, a circuit in one arm of said bridge which includes a borehole cable, a temperature sensitive element connected to the extremities of said cable and adapted to be lowered with said cable into said well bore to be exposed to temperatures over a plurality of ranges therein to produce non-linear variations in the resistance thereof in accordance with temperature changes, measuring means connected across a first diagonal of said bridge to measure bridge unbalance current over a predetermined range, a current source connected across a second diagonal of said bridge for producing current flow in said first diagonal in response to variations in the resistance of said temperature sensitive element over said plurality of temperature ranges, impedance means in said one arm and in an adjacent arm of said bridge for restricting said bridge unbalance current to said predetermined range over said plurality of temperature ranges and for matching the non-linear current-resistance characteristics of said bridge within said predetermined range with said non-linear resistance-temperature characteristics of said element to obtain a linear relationship between said unbalance current and said borehole temperature over each said temperature range.

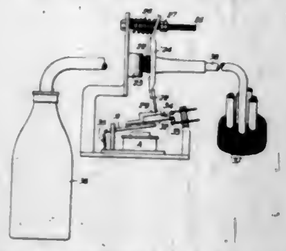


3,044,299
AUTOMATIC CONTROL DEVICE
Victor Weber, Charles D. Branson, and James F. Beal, Greensburg, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Feb. 5, 1958, Ser. No. 713,401
4 Claims. (Cl. 73—363)



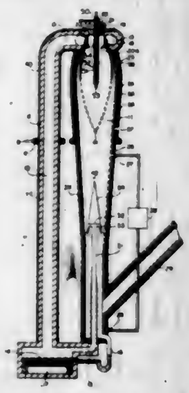
1. In a temperature responsive control device actuator comprising a substantially rectangular lever portion and an integrally formed temperature responsive ribbon portion, said lever portion including a floor portion and a plurality of upwardly directed edge portions formed perpendicular to said floor portion for rendering said lever substantially rigid, said temperature responsive ribbon portion having one end integrally formed with said lever portion and extending longitudinally of said lever portion terminating in a free end, said temperature responsive portion also including a pair of flame impinging areas intermediate its ends, said flame impinging areas including a widened portion extending longitudinally of said ribbon portion intermediate the ends thereof, and a tab portion extending perpendicular to said ribbon portion adjacent the free end thereof.

3,044,300
LIQUID SAMPLING APPARATUS
George E. Eden and Kenneth V. Melbourne, Stevenage, Herts, England, assignors to National Research Development Corporation, London, England
Filed Feb. 16, 1959, Ser. No. 793,514
Claims priority, application Great Britain Feb. 20, 1958
14 Claims. (Cl. 73—422)



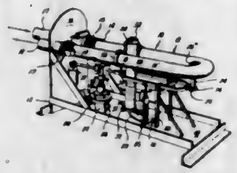
1. Apparatus for collecting samples automatically from a body of liquid at intervals of time, comprising a plurality of independent fluid conduits each having one end adapted to be immersed in said body of liquid in at least one region from which said samples are to be collected and the other end to be connected to a respective evacuated vessel to receive a respective sample, a separate valve for each said conduit, means urging each said valve to its open position, a respective latch holding each valve closed, and automatic time-controlled mechanism for releasing said latches in sequence at predetermined time intervals, so that each said valve opens and remains open when its respective latch is released.

3,044,301
SPACE SIMULATING DEVICE AND METHOD
Willard H. Bennett, 174 Chesapeake St. SW., Washington, D.C.
Filed July 28, 1960, Ser. No. 46,040
12 Claims. (Cl. 73—432)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of simulating space conditions for investigating gaseous devices under space conditions which comprises inserting and sealing said gassy device to be investigated into a chamber, evacuating said chamber about said gassy device, heating a fluid to form a gaseous medium and directing said gaseous medium to a header about said gassy device, pumping said gaseous medium at a high velocity along and surrounding said gassy device between the walls of said chamber and a mechanical element positioned about said gassy device, continuously vacuum pumping said chamber and pumping said gaseous medium between said chamber wall and the gassy device being investigated.

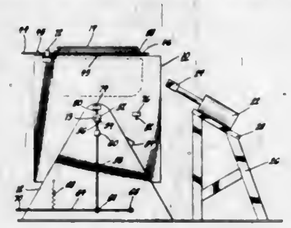
3,044,302
MEANS FOR MEASURING AND RECORDING LIQUID DENSITY
Walter T. Knauth, 1334 W. Gray, Houston, Tex.
Filed Mar. 24, 1958, Ser. No. 723,444
12 Claims. (Cl. 73—434)



1. An apparatus for measuring and recording density of fluids including a return bend conduit with ends pivotally mounted about a transverse axis in the horizontal plane and flexibly connected to a respective inlet and outlet to said conduit, a beam pivotally mounted about an axis parallel to said first axis, a linkage pivotally connecting one end of said beam to said conduit at the center of said bend while said beam on the opposite side of the beam pivot has a mechanical dashpot on the end thereof to dampen movement and a balancing weight on said beam to cooperate therewith in balancing out the weight of said conduit when filled with fluid flowing therethrough of a predetermined reference minimum density, a buoyancy tube assembly comprising an upwardly discharging gas inlet tube, a buoyancy tube of predetermined constant effective cross-sectional area concentrically surrounding said inlet tube and having opening means in the bottom thereof, a yoke connected across said conduit between its pivot and said linkage means closing the upper end of said buoyancy tube and connecting it upwardly to said yoke, and a fixedly mounted cylindrical mercury tube concentrically surrounding said buoyancy tube and open upwardly to atmospheric pressure and having a closure base from which said inlet tube extends upwardly, said mercury tube containing mercury therein and said mercury extending into said buoyancy tube, an escape valve connected to said beam and moved toward closed position upon downward movement of said conduit responsive to increase of density of fluid flowing therein, a source of compressed gas, a gas line leading from said source and branching to communicate with said inlet tube and with said escape valve, a pressure gauge connected to said gas line to measure the pressure of gas flowing therein and of the gas entering said inlet tube to build up equivalent pressure therein to bear downwardly on the mercury in said buoyancy tube and thereby raise the mercury level in said mercury tube to increase the buoyancy of said buoyancy tube whereby it acts as a restorative means to lift said conduit toward original position of initial equilibrium, said gauge being calibrated to indicate and record the buoyancy tube gas pressure measured in terms of density of the fluid flowing in said conduit.

3,044,303
APPARATUS FOR BALANCING SPIN TUBS
Chester F. Louthan, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 18, 1957, Ser. No. 691,044
3 Claims. (Cl. 73—460)

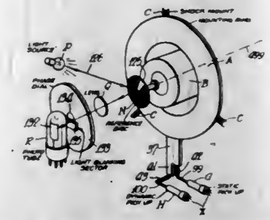
3. Balancing apparatus for a spin tub having a ballast ring comprising a box-like manually tiltable cabinet for supporting said tub and having a ported top wall and a side wall, a shaft segment on said side wall having a cam affixed thereto, a stand having an upstanding support portion for journaling said shaft segment to pivotally support said cabinet between an upright position and a tilted position, a lock rod movable between a first position wherein said lock rod locks said cabinet in said upright position and a second position for permitting said cabinet to be manually pivoted to said tilted position, a support panel fixed in said cabinet, a spindle laterally yieldingly and rotatably carried by said support panel and movable therewith, a spindle motor for rotating said spindle, said spindle at the upper end thereof having means for securing said spin tub for rotation therewith, a manually operable brake arm laterally pivotally mounted on said cabinet and having a resilient brake roller in coplanar relationship with a portion of said tub, an air hammer adjacent said cabinet for correcting tub unbalance and having an air hammer motor and a striker in juxtaposition to said ballast ring when said cabinet is in said tilted position, a power supply, and a control arrangement for said apparatus including a spindle motor switch on said cabinet having a motor actuator in coplanar relationship to said brake arm and actuatable to a closed position when said brake arm is pivoted away from said tub, a cabinet interlock switch having an interlock actuator in engagement with said cam and actuatable to a closed position when said cabinet is in its upright position and to an open position when said cabinet is in its tilted



position, an air hammer switch on said cabinet having an air hammer switch actuator in coplanar relationship with said support portion and actuatable to an open position when said cabinet is in its upright position and to a closed position when said cabinet is in its tilted position, first circuit means connecting said spindle motor switch, said cabinet interlock switch, said spindle motor and said power supply in series flow relationship, and second circuit means connecting said air hammer switch, said air hammer motor and said power supply in series flow relationship, said spindle being adapted to spin said tub when said cabinet is in said upright position and said brake arm is manually pivoted away from said tub portion and said striker being adapted to strike said ballast ring when said cabinet is manually tilted to said tilted position, whereby any unbalance in said tub may be sensed by the tub wobble and noted manually when said cabinet is in said upright position and corrected when said cabinet is manually tilted to and retained in said tilted position with the noted radial position of tub unbalance away from said striker until said ballast is sufficiently redistributed to balance said tub.

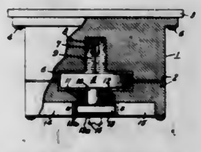
3,044,304
ROTOR BALANCER
Maurits Ten Bosch, White Plains, and Herbert C. Bredemeier, Ossining, N.Y., assignors to M. Ten Bosch, Inc., Pleasantville, N.Y., a corporation of New York
Filed June 24, 1953, Ser. No. 363,866
22 Claims. (Cl. 73—462)

19. Apparatus to determine the correction to be made in two different correction planes to correct for the static and dynamic unbalance in a spinning rotor which comprises a mounting ring receiving and encircling the rotor stator combination, a single transmission extending transversely to the axis of the rotor outwardly from the edge of said ring to carry displacements due to static and dynamic unbalance, a resilient mounting for said ring so that it may vibrate freely in response to such unbalance, the rotational speed of the rotor being many times the natural resonant frequency of the resilient mounting, and means to measure both said static and dynamic unbalance in one operation and transducers positioned to one side of said rotor to measure the static and dynamic unbalance simultaneously, said ring at one side thereof having said single transmission and then in turn a pair



of connections from said single transmission at right angles to each other, one connection transmitting only displacements due to dynamic unbalance and the other transmitting displacements arising only from static unbalance, independent of the rotary speed, to said measuring means, and a computer circuit actuated by said pair of connections to give the corrections at points located in two correction planes to correct balance.

3,044,305
INTEGRATING AND DIFFERENTIATING ACCELEROMETER
Eugene B. Canfield, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 15, 1958, Ser. No. 780,366
9 Claims. (Cl. 73—503)

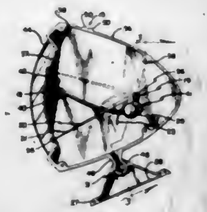


1. In an integrating-differentiating accelerometer which includes casing means, rotatable means including the movable element of a potential generating means of accurately predetermined moment of inertia positioned within said casing means, biasing means connected to oppose rotation of said rotatable means with respect to said casing means and resiliently disposed therebetween, and damping means disposed within said casing to attenuate rotational excursions of said rotatable means, said damping and biasing means having values such that said accelerometer has an output proportional to the derivative of acceleration below the accelerometer resonant frequency and to the integral of acceleration above the accelerometer resonant frequency.

3,044,306
POWER METER
Robert L. Propst, Englewood, Colo. (2347 Londonderry, Ann Arbor, Mich.)
Filed Apr. 22, 1960, Ser. No. 24,094
2 Claims. (Cl. 73—514)

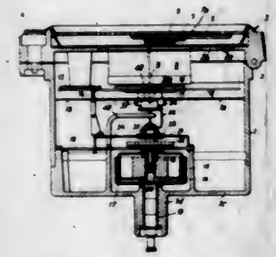
2. A test meter instrument adapted for use in a motor vehicle to measure acceleration or deceleration characteristics under operating conditions, comprising a base, an instrument housing connected in pivotal relation to the base including an exterior graduated scale with a vertical slot extending therealong, said housing being in the form of two interconnected halves and the interior surface of each half including aligned bosses to form a bearing and correspondingly upwardly inclining tracks

located beneath said bearing tapering inwardly from the housing surface to define a spaced guideway, a ball dimensioned for free rolling movement along the guideway with said tracks contacting opposed points on the lower half of said ball, an indicator including a pivot pin for connection in journaled relation in said bearing, a pointer



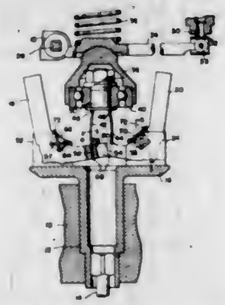
projecting forwardly from said pivot pin for extension through the vertical slot in the housing and a lever curving downwardly from said pivot pin across the path of movement of said ball being freely responsive to movement of said ball to initiate movement of said pointer across the face of said scale.

3,044,307
SELF-CENTERING CLUTCH ASSEMBLY FOR PRECISION INSTRUMENTS AND THE LIKE
Karl Vögtlin, Villingen, Black Forest, and Norbert Helmschrott, Schwenningen (Neckar), Germany, assignors to Kienzle Apparate G.m.b.H., Villingen, Black Forest, Germany
Filed Feb. 13, 1961, Ser. No. 88,821
Claims priority, application Germany Feb. 18, 1960
4 Claims. (Cl. 73—519)



3. In a measuring instrument, in combination, a fixed housing; a cover hinged to and movable with respect to said housing between a closing and an opening position; a rotary motion producing first component mounted in said housing; a rotary motion receiving second component mounted in said cover; and a releasable self-centering clutch assembly for transmitting rotary movements of said first component to said second component, said clutch assembly comprising a first clutch element drivingly connected with said second component, a second clutch element mounted for limited tilting movements in said housing, means provided on said elements for drivingly connecting the second clutch element with the first clutch element when said cover is in closing position, self-centering means provided on said elements for aligning said second clutch element with said first clutch element when said cover is in closing position, and a universal joint for transmitting rotary movements of said first component to said second clutch element, said joint comprising a stirrup shaped connecting member rigid with said second clutch element, a coupling member comprising a first pair of spaced projections extending into recesses formed in said connecting member to articulately connect said coupling member with said connecting member for pivotal movements about an axis enclosing right angles with the rotational axis of said first component and a second pair of spaced projections extending into recesses formed in said first component to articulately connect said coupling member with said first component for pivotal movements about an axis enclosing right angles with said first mentioned axes, a frame member rigid with said housing, a bearing mounted in said frame member and comprising a centering pin loosely received in a coaxial bore of said second clutch element, and a second centering pin rigid with said first component and received in a bore formed in said bearing.

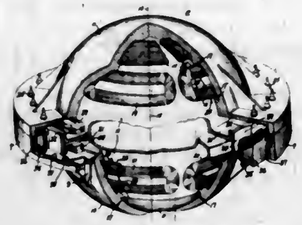
3,044,308
TORSION PIVOT MEANS
Raymond L. Ensinger, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Feb. 29, 1960, Ser. No. 11,583
1 Claim. (Cl. 73—546)



A speed responsive centrifugal flyweight device comprising a shaft, means for rotating said shaft, a pair of longitudinally spaced support members carried by and rotatable with said shaft, means for pivotally mounting a flyweight member with respect to said support members in a manner providing for pivotal movement of said flyweight member with respect to said shaft, longitudinally aligned rectangularly shaped channels of a predetermined depth in said support and flyweight members, said means including an integral, combined pivot and torsion bar of uniform cruciform cross section throughout its entire length and which has a depth greater than the depth of each channel, said bar including four substantially flat leaves which occupy divergent planes, said bar providing longitudinally spaced portions which are received in said channels so as to seat the outer edges of two of said leaves in the corner portions of said channels, the outer edges of the two remaining leaves extending outwardly from said channels a predetermined distance, a clamp of rectangular configuration on each of said flyweight and support members, each clamp having portions thereon abutting the outer edges of said two remaining leaves of the pivot and torsion bar, and threaded fasteners connecting each clamp to its respective member to provide the requisite clamping pressure on said pivot and torsion bar to retain said longitudinally spaced portions in said channels against rotation, the portions of said bar intermediate the adjacent ends of said channels being subjected to torsion whenever said flyweight member is moved with respect to said support members upon the rotation of said shaft.

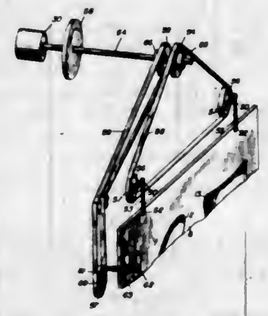
3,044,309
GYROSCOPE
Theodor A. Buchhold, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Feb. 9, 1959, Ser. No. 792,195
18 Claims. (Cl. 74—5)

1. A superconductive gyroscope comprised of a housing, a superconductive rotor formed of superconducting material within the housing and rotatable about a spin axis, superconductive magnetic pressure bearings formed of superconducting material for suspending the rotor completely out of mechanical contact with the housing, superconductive magnetic driving means formed of superconducting material for rotating the rotor about its spin axis,



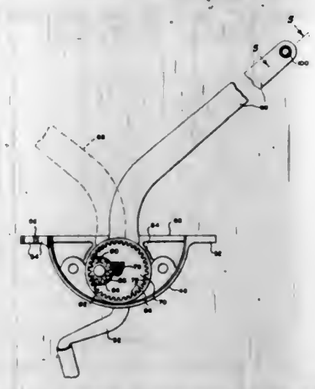
pickoff means supported by the housing for detecting variation of the rotor spin axis, torque generating means for varying the rotor spin axis, and cooling means for lowering the temperature of the mechanism to enable such superconductive rotor, bearings, and driving means to achieve superconductive condition.

3,044,310
TRANSMISSION FOR SHEARING PLATES
Eugen Weber, Zurich, Switzerland, assignor to Hydro-Chemie, Aktiengesellschaft, Zurich, Switzerland
Filed July 23, 1956, Ser. No. 599,574
4 Claims. (Cl. 74—86)



1. Means for operating shearing plates in a shearing apparatus in which only one of said shearing plates is movable comprising a first and a second mechanism for reciprocating said movable shearing plate to both sides of its basic position in a first direction parallel to a fixed plane and a third mechanism for reciprocating said movable shearing plate to both sides of its basic position in a second direction parallel to said fixed plane, each of said mechanisms comprising a crank rotatable about an axis perpendicular to said fixed plane, a link pivoted to said crank at a point spaced from said axis, and a pivot connecting said link to the movable shearing plate, the said pivot and crank axis of said first and second mechanisms being aligned in parallel directions and the said pivot and crank axis of said third mechanism being aligned in a direction substantially perpendicular to said parallel directions when said movable shearing plate is in its basic position, first driving means for rotating said cranks of said first and second mechanisms at the same speed with said cranks thereof parallel to each other, and second driving means couplable with said first driving means for rotating said crank of said third mechanism at the same speed as said cranks of said first and second mechanisms.

3,044,311
WINDOW ACTUATOR
George W. Gagnon, Rte. 2, Box 198D, Fallbrook, Calif.
Filed Aug. 1, 1960, Ser. No. 46,639
2 Claims. (Cl. 74—89)



1. A window actuator comprising a casing including a section forming a horizontally disposed support surface and having an internal shoulder forming an arcuately shaped vertical guide about said surface, said guide having a single axis; a bowed, horizontally disposed window actuating arm extending outwardly of the casing and including a portion within the casing and having surfaces on opposite sides thereof, each complementing the supporting surface of the casing and having a guided surface on the periphery of said arm complementing said guide, said portion having a circular opening axially aligned with said guide and having axially arranged gear teeth extending into said opening, said casing forming a bearing surface disposed at right angles to the axis of the gear teeth; a pinion guided by said bearing surface and having teeth meshing with the teeth of said arm portion; a worm gear fixed to and axially aligned with said pinion for rotating said pinion, said casing forming a second bearing; a shaft journaled in the second mentioned bearing including a worm meshing with the worm gear; and a crank fixed to said shaft.

3,044,312
MECHANISM FOR CONVERTING ROTARY TO LINEAR MOVEMENT
John L. Hall, Hanover, Charles R. Schreiber, West Caldwell, and Maurice E. Cushman, Verona, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed May 20, 1960, Ser. No. 30,603
11 Claims. (Cl. 74—95)

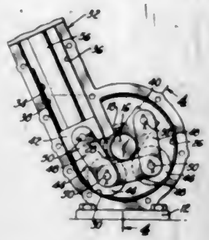


1. A mechanism for converting rotary to linear motion comprising a pair of telescoping members one of which is an elongated structure having a sheave journalled at each end and the other of which is a carriage movable relative thereto having sheaves journalled thereon, lines secured to said carriage, each extending to and reeved over respective structure sheaves and then extending back toward said carriage and reeved over respective carriage sheaves and then extending transversely out from said carriage, a rotatable drum journalled on said structure extending longitudinally thereof, and the transversely extending line portions being wound around said drum in opposite directions and secured thereto.

3,044,313
APPARATUS FOR CONVERTING RECIPROCATORY MOTION TO OSCILLATORY MOTION

Loyd E. Heckathorn, Garden Grove, Calif., assignor to Towner Manufacturing Company, Santa Ana, Calif., a corporation of California

Filed Nov. 14, 1960, Ser. No. 69,075
2 Claims. (Cl. 74—108)

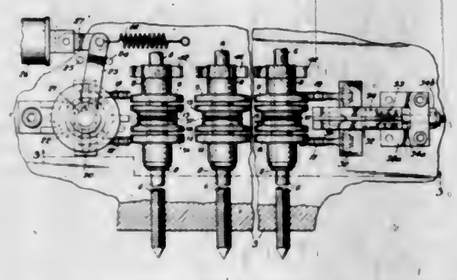


1. In an apparatus for converting between reciprocatory motion and oscillatory motion, the combination of:
(*a*) a shaft;
(*b*) means mounting said shaft for oscillatory motion about its axis;
(*c*) a crank on said shaft;
(*d*) arcuate guide means including concentric, inner and outer arcuate tracks spaced radially outwardly from said axis of said shaft;
(*e*) said inner arcuate track being formed by a cylindrical portion of said shaft;
(*f*) linear guide means including spaced, parallel, inner and outer linear tracks respectively tangent to and forming continuations of said inner and outer arcuate tracks;
(*g*) a linearly movable member engaging and movable along said linear tracks;
(*h*) flexible connecting means interconnecting said crank and said member and engageable with and movable along said arcuate tracks and said linear tracks;
(*i*) said flexible connecting means including a series of rollers engageable with and rollable along said arcuate tracks and said linear tracks; and
(*j*) said flexible connecting means including a series of links pivotally interconnecting said rollers of said series and pivotally connecting said series of rollers to said member and said crank.

3,044,314
CONTROL MECHANISM

Karl A. Klingler, 111 S. Wright St., Naperville, Ill.

Filed Feb. 8, 1957, Ser. No. 638,966
5 Claims. (Cl. 74—131)

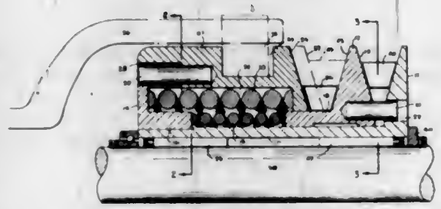


1. In combination, a shaft mounted for rotation, opposed ratchet toothed driving clutch members free to rotate on and held against longitudinal movement with respect to the shaft, a ratchet toothed driven clutch member in opposition to each of the driving members free to move longitudinally along the shaft but held against rotary movement with respect thereto, the driven members being adjacent to and back to back, an actuating lever terminating in a contact element between and in simultaneous contact with both the driven members, the actuating lever comprising spring plate biased in clutching direction with respect to one of the driven members.

3,044,315
V-BELT TENSIONING AND CLUTCH STRUCTURE

Francis R. J. Duhamel, Syracuse, N.Y., assignor, by mesne assignments, to Moto-Mower, Inc., Richmond, Ind., a corporation of Delaware

Filed Feb. 12, 1960, Ser. No. 8,412
4 Claims. (Cl. 74—230.17)

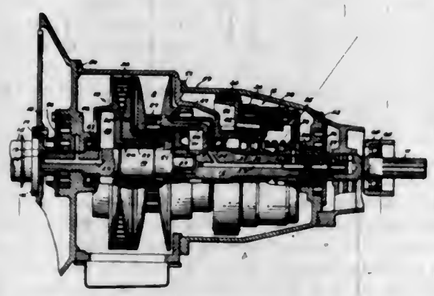


1. A V-belt tensioning and clutch structure comprising a sleeve having a belt flange at one end, a second belt flange slidably mounted on said sleeve in confronting relation to said first flange for axial movement toward and from the same, spring means urging said second flange toward said first flange, whereby said flanges form a variable pitch V-belt pulley, a third flange mounted for axial movement toward and from said second flange, other spring means urging said third flange toward said second flange for driving engagement with a V-belt positioned between said second and third flanges, said third flange having a hub portion encircling both of said springs, said third flange being shiftable against the action of said other spring in a direction away from said second flange and out of engagement with said belt.

3,044,316
CONTINUOUSLY VARIABLE TRANSMISSION AND AUTOMATIC CONTROL

Lloyd M. Forster, 19400 Thirteen Mile Road, Birmingham, Mich.

Filed Jan. 7, 1955, Ser. No. 480,444
41 Claims. (Cl. 74—472)

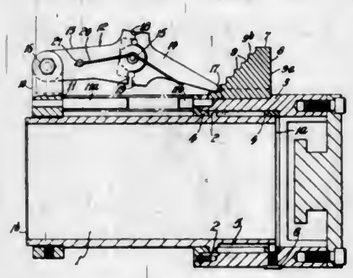


14. A fluid pressure actuated continuously variable transmission for a throttle modulated variable power engine driven vehicle comprising, an engine driven input shaft, an output shaft, fluid pressure actuated variable V pulley sets on said input and output shafts, V belt means for transmitting drive between said input and output V pulley sets, a source of actuating fluid pressure, fluid passages leading from said source of actuating fluid pressure to said fluid pressure actuated pulley sets, actuating pressure admitted to certain of said passages being adapted to produce an increase in output speed ratio and actuating fluid pressure admitted to other of said passages being adapted to produce a decrease in output speed ratio, means for establishing a control pressure increasing with engine speed, means for establishing a control pressure increasing with power demand, differential valve means oppositely responsive to said respective control pressures for controlling fluid flow from said source of actuating fluid pressure to said passages, said differential valve means opening actuating flow to produce an increase in output speed ratio when said engine speed control pressure overbalances said power power demand control pressure or to produce a decrease in output speed ratio when said power demand control pressure overbalances said engine speed control pressure, and means responsive to said operator control for providing an optimum throttle opening for every power demand and engine speed corresponding to a balanced condition of said differential valve means.

3,044,317
DEVICE FOR CONTROLLING STEP-BY-STEP RELATIVE MOVEMENT OF TWO OBJECTS

Henry William Trevaskis, Point Pleasant, Blackdown, near Leamington Spa, England, assignor, by mesne assignments, to Dunlop Tire and Rubber Corporation, Buffalo, N.Y., a corporation of New York

Filed Dec. 9, 1959, Ser. No. 858,399
Claims priority, application Great Britain Dec. 11, 1958
4 Claims. (Cl. 74—526)

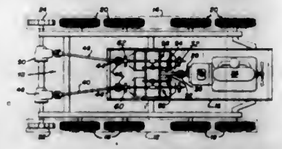


1. A device for controlling step-by-step relative movement between two objects in a selected direction which comprises a pair of relatively movable members, a fixed means supporting one of the members and a movable means supporting the other member, the movable member being mounted on the fixed means a compound cantilever assembly of two levers pivotally connected at adjacent ends in a knuckle joint and having abutment surfaces at said joint to limit the relative tilting of said levers about said joint between a larger and a smaller angle of deflection from alignment of their longitudinal axes, a spring on said assembly biasing said levers to the smaller of said angles of deflection, the first of said levers being frictionally mounted at its end distant from said knuckle joint on one of said members, the free end of the second of said levers being directed toward the second of said members, said second member having a stop surface which extends in a general direction which is inclined to the direction of relative movement of said members and positioned to engage and hold the free end of said second lever in fixed position thereon upon relative movement in the selected direction of said members thereby to tilt said levers toward the larger angle from alignment and rotate said first of said levers on its support and upon reverse movement to release said second lever to assume its smaller angle from alignment by the action of said spring.

3,044,318
DRIVE MECHANISM FOR TRACK LAYING VEHICLES

James A. Hardman, Logan, Utah, assignor to Utah Scientific Research Foundation, Logan, Utah, a corporation of Utah

Filed Dec. 31, 1958, Ser. No. 784,240
6 Claims. (Cl. 74—665)

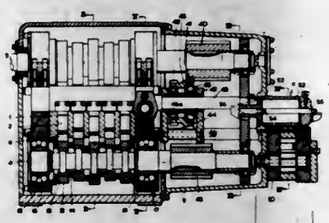


1. A speed change drive mechanism including, in combination, a power input shaft, a power output shaft, plural driving members of different speed ratios fixedly mounted upon said power input shaft, plural driven members of similarly different speed ratios journalled upon said power output shaft and freely rotatable thereabout, said driven members being in respective engagement with corresponding ones of said driving members for the different speed ratios; plural clutches each comprising a clutch housing fixedly keyed to said power output shaft for revolvement therewith, at least one driven clutch disc keyed to and within said clutch housing for axial translation with respect thereto, at least one driving clutch disc keyed to a respective one of said driven members for axial translation with respect thereto and proximate with said driven clutch disc, reaction means affixed to a respective one of said driven members for revolvement therewith and disposed in proximity with respect to said clutch discs on one side thereof, and means disposed on the remaining side of said clutch discs for thrustedly engaging said driven clutch disc to compress the clutch discs against said reaction means so as to effect clutch engagement; and clutch control means for selectively advancing a selected one of said thrustedly engaging means toward its respective clutch discs to effect clutch engagement.

3,044,319
IMPROVEMENTS IN OR RELATING TO GEARBOXES

Ronald F. Worlidge, Parkstone, Poole, Dorset, England, assignor of one-half to Scott Engineering (Bournemouth) Limited, Parkstone, Poole, Dorset, England, a British company

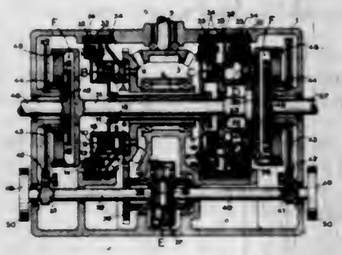
Filed May 15, 1959, Ser. No. 813,383
Claims priority, application Great Britain May 19, 1958
7 Claims. (Cl. 74—665)



1. A gear box for a variable delivery high pressure hydraulic pump, said gear box comprising, in combination, a rotatable driving helical gear and a rotatable driven helical gear, a plurality of intermediate helical gears transmitting rotational movement between said driving and driven gears, said intermediate gears being supported for axial movement and being rotatable about a plurality of axes of rotation, all of said gears having teeth, the teeth of said intermediate gears meshing with said teeth of said driving and driven gears, said intermediate gears including three gears, the ratio of said driving gear to a first

and a second one of said intermediate gears being fractional, the third one of said intermediate gears comprising an idler, and the overall ratio of said driving and driven gears being unity, and displacement means axially adjusting the position of said intermediate gears relative to said driving and driven gears, whereby axial movement of said intermediate gears effects angular relative movement between said driving and driven gears.

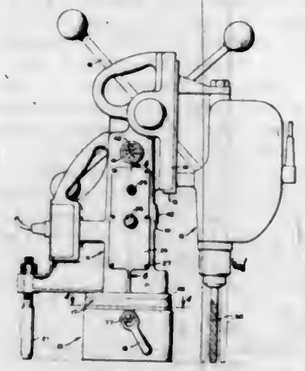
3,044,320
COMBINED GEARBOX AND STEERING BOX FOR TRACKED VEHICLES
Paul Jean François Oudry, Sarcelle, France, assignor to Batignolles-Chatillon (Mecanique Generale), Paris, France, a French company
Filed May 13, 1959, Ser. No. 812,947
3 Claims. (Cl. 74—710.5)



1. A combined gearbox and steering box for tracked vehicles comprising a drive shaft, a primary shaft, a pair of bevel gears drive connecting said shafts, a secondary shaft, a plurality of planetary reduction gears each having an annulus gear, a sun-wheel, and a planet carrier drivingly connected to said annulus gear and said sun-wheel, said reduction gears being coupled in series between said primary shaft and said secondary shaft, two output shafts drive connected to said secondary shaft, said output shafts being coaxial with said primary shaft, selectively operable braking means for each annulus gear of said planetary reduction gears, selectively operable means coupling the annulus gear and sun-wheel of each of said planetary reduction gears and locking the first of said plurality of said planetary reduction gears to said secondary shaft, each of said planet carriers constituting drive means for the succeeding one of said reduction gears, a planetary step-up gear drivingly connected between said first planetary reduction gear and said primary shaft, an annulus gear and a sun-wheel for said step-up gear, a planet carrier for said step-up gear fixed on said primary shaft and brake means for said annulus gear of said step-up gear which in released condition disengages said primary shaft from said secondary shaft.

3,044,321
ADJUSTABLE MAGNETIC DRILL MOUNT
Eugene W. Buck, Campbell, Calif., assignor to Buck Manufacturing Company, San Jose, Calif., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 695,178
13 Claims. (Cl. 77—7)

1. In an electromagnetic drill mount, a frame structure having means for supporting a drill and including a magnetic base structure for said frame structure, an electromagnet winding in said base structure having electrical connections extending therefrom, means providing for relative movement between said base structure and said frame structure including a first member connected to said base structure and a second member connected to said frame structure, one of said members including a slot and the other of said members having an element engaged with and movable in said slot, said element comprising a connection between said members, said element having an opening for receiving said electrical connections whereby such connections may be extended into the upper part of said frame structure,



and means for releasably clamping said members together in a selected adjusted position thereof, said connection between said members providing for adjustable positioning of said drill with respect to said base structure.

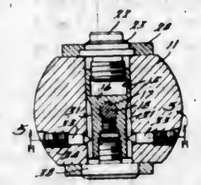
3,044,322
TOOL HEAD WITH MICROMETER ADJUSTMENT AND DIAL INDICATOR
Peter D. George, Quincy, Mass., assignor to Bokum Tool Company, Inc., Detroit, Mich., a corporation of Michigan
Filed Mar. 27, 1958, Ser. No. 724,331
8 Claims. (Cl. 77—58)



8. A tool mounting head comprising a housing having a cylindrical opening and channel communicating therewith having one hardened side, a ram including a cylindrical portion slidably fitted in said bore and a hardened fin portion slidably fitted in said channel, means for accurately adjusting said ram longitudinally of said opening, a pressure screw turned into a threaded bore in said housing in contact with the side of said fin opposite the hardened side of said channel, a visual indicator having a movable indicator element, and means interconnecting said ram and said indicator element such that a relatively small movement of said ram produces a relatively large movement of said indicator element.

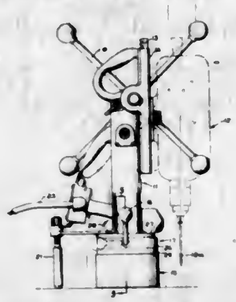
3,044,323
ADJUSTABLE BORING HEAD
Allen N. Sweeny, Grosse Pointe, Mich., assignor to De Vlieg Machine Company, Royal Oak, Mich., a corporation of Michigan
Filed Sept. 21, 1959, Ser. No. 841,287
7 Claims. (Cl. 77—58)

1. In an adjustable boring head, a body member having a transverse opening, a slide supported in said opening for angular adjustment about a given axis and for rectilinear adjustment along said axis, means on said slide for supporting a cutting tool, a pair of wall portions on said slide extending parallel to said axis, a pair of adjustable members carried by said body member, said adjustable members being individually adjustable toward and away from said wall portions for fixing the angular



position of said slide, and means for holding said adjustable members in a selected position while permitting rectilinear adjustment of said slide along said axis.

3,044,324
ADJUSTABLE MAGNETIC DRILL MOUNT
Eugene W. Buck, Campbell, Calif., assignor to Buck Manufacturing Company, San Jose, Calif., a corporation of Delaware
Filed Dec. 5, 1956, Ser. No. 626,341
2 Claims. (Cl. 77—59)



1. In an electromagnetic drill mount, a frame structure comprising an upright post having means for supporting a drill bit for vertical adjusting movement with respect thereto, a base structure forming a supporting foot for said frame structure and including an electromagnet, a plate-like member secured to the upper surface of said electromagnet, a base member for said post secured thereto and engaging at its bottom surface the upper surface of said plate-like member, said plate-like member having an opening therein, said base member also having an opening therein, a clamping member extending through said openings and having means for clamping said base member and said plate-like member together, said clamping member having an aperture extending transversely therethrough, clamping means supported in said base member and having an eccentric secured thereon in said transversely extending aperture, and an opening handle for said clamping means, said clamping means serving to secure said post and said electromagnet in a selected relatively adjusted position, one of said members including means forming an elongated slot therein for passage of electrical wiring to said electromagnet.

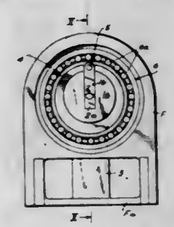
3,044,325
APPARATUS FOR DEBURRING AND CHAMFERING IN COMBINATION WITH DRILL OR REAMER OR THE LIKE
William Halpern, Haviland Road, Harrison, N.Y.
Filed Feb. 16, 1961, Ser. No. 89,719
7 Claims. (Cl. 77—66)

1. In apparatus of the character described, a combined tool comprising, a rotary cutting tool which has flutes and adjacent margins and is adapted to remove material in forming a hole, a unit mounted upon said tool and presenting a pair of radial cutting edges which extend through a zone at the radius of the hole and are moved by the movement of the tool toward the work piece, said unit including guide means which contacts the tool surfaces



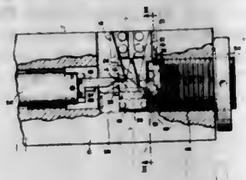
of the tool so as to guide the unit along the margins, and supporting means resiliently positioning said unit in a predetermined axial position along said flutes.

3,044,326
APPARATUS FOR COLD-REDUCING ELONGATED METALLIC SHOCK
Erich Ribback, Kellereistrasse I, Grevenmacher, Luxembourg
Filed Sept. 30, 1960, Ser. No. 59,605
Claims priority, application Luxembourg Oct. 16, 1959
9 Claims. (Cl. 78—21)



1. An apparatus for cold-reducing elongated stock, said apparatus comprising, in combination, a frame; a die holder rotatably received in said frame, said die holder formed with a passage for a workpiece and having at least one substantially radial slot communicating with said passage; a die reciprocably received in said slot; an annular member rotatably mounted in said frame and connected with said die, said annular member eccentrically surrounding and spaced from said die holder; and means for rotating said annular member and said die holder at the same rate of speed and in the same direction whereby the die is caused to reciprocate in said slot toward and away from said passage.

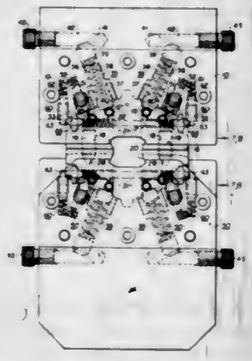
3,044,327
LEAD-WIRE FORMING APPARATUS
William Pechy, Manasquan, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 27, 1960, Ser. No. 4,913
6 Claims. (Cl. 78—60)



1. Apparatus for simultaneously flattening a pair of spaced lead wires for an electric lamp, comprising a fixed

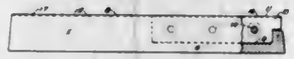
anvil disposed adjacent a first lead wire, a floating anvil reciprocably mounted in registry with said fixed anvil and disposed between said pair of lead wires so that said first lead wire is located between said floating anvil and said fixed anvil, a ram disposed in registry with said floating anvil and said fixed anvil and normally in spaced relation with respect to said floating anvil so that said second lead wire is disposed between said ram and said floating anvil, and drive means connected to said ram for moving said ram toward said floating anvil to compress said second lead wire against said floating anvil, said drive means being further operable to move said ram and said floating anvil, and said second lead wire compressed therebetween toward said fixed anvil so that said first lead wire is compressed against said fixed anvil, said drive means being then operable to simultaneously cause said ram to flatten said second lead wire against said floating anvil and to cause said floating anvil to flatten said first lead wire against said fixed anvil.

3,044,328
PLURAL STEP PRESSURE WELDING APPARATUS
Stanley A. Zysk, Little Falls, N.Y., assignor to Kelsey-Hayes Company
Filed Jan. 28, 1959, Ser. No. 789,670
1 Claim. (Cl. 78—82)



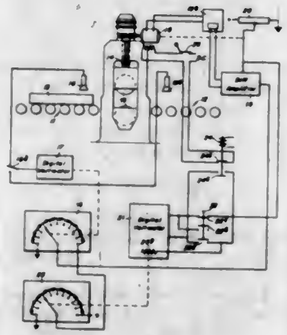
A cold pressure welding device particularly adapted for multiple upset welding, comprising, first and second support members relatively reciprocable along a path of travel, each said member having first and second cam surfaces, the first member cam surfaces forming a V symmetrically disposed about said member path of travel, the second member cam surfaces also forming a V symmetrical about said members path of travel, said first and second member V's being inverted with respect to one another, first, second, third, and fourth die sections, each of said die sections having a cam surface coacting with one of the support member cam surfaces, said first and second sections being carried by the first member, said third and fourth sections being carried by the second member, said first and third sections being a first split die, said second and fourth sections being a second split die, said support members being driven toward one another to thereby cause the split dies to grip first and second workpieces and thereafter cause the split dies and associated workpieces to move towards one another in welding movement to form a cold pressure weld, a first detent system associated with one said support member and said first split die, a second detent system associated with one support member and said second split die, each said detent system comprising a first bore opening from a support member cam surface, said bore having a longitudinal axis substantially normal to said cam surface, a second bore opening from another surface of said support member and intersecting said first bore, a ball detent residing in said first bore and projectable therefrom through the bore opening at the cam surface, a spring in said bore, said spring having a first end means contacting said ball detent and a second end cam follower means, a wedge cam reciprocable in said second bore, said spring cam follower means projecting into said second bore in contact with said wedge cam, longitudinal movement of said wedge cam thereby providing an adjustable compression of the spring, means in said second bore accessible from the exterior of said support member to adjustably position said wedge cam, and detent shoulder means on the mating cam surface of the die associated with the cam surface in registration with said ball detent, a positioning detent bore with a positioning detent residing therein associated with each said split workpiece die, a metal detent receiving recess in the surface of the associated die section, said mated recess having an abutment wall, said abutment wall of the said mated recess and said positioning detent related to mesh at a die position spaced a distance greater than the detent position of the first and second detent.

3,044,329
APPARATUS FOR MULTI-DIAMETER THREAD ROLLING
Howard F. Seibert, Lebanon, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Apr. 11, 1958, Ser. No. 727,946
6 Claims. (Cl. 80—9)



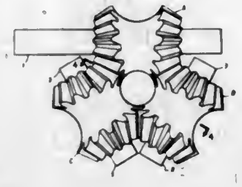
1. A thread rolling device including a die having thread rolling grooves across the face thereof, said die having at least one longitudinal slot on said face, a die insert in said slot having on its face thread rolling grooves of the same pitch and form as the grooves on the die face and continuous with the grooves on the die face, and means for laterally offsetting the face of the die insert in substantially fixed relation to the die face.

3,044,330
SCREWDOWN CONTROL SYSTEM FOR REVERSING MILL
William L. Roberts, Murrysville, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Aug. 11, 1959, Ser. No. 833,014
4 Claims. (Cl. 80—56)



2. A control system as defined in claim 1, characterized by a temperature-sensing means on each side of the mill and means actuated in accord with the direction in which the mill is driven for selectively connecting one of said temperature-sensing means in a control circuit.

3,044,331
DEVICE FOR DRAWING OR ROLLING, ESPECIALLY FOR THE PRODUCTION OF FRUSTO-CONICALLY SHAPED BODIES AND THE LIKE
Diego Groppini, Dalmine, Italy, assignor to Dalmine S.p.A., Dalmine (Bergamo), Italy, a firm
Filed Jan. 5, 1959, Ser. No. 785,074
4 Claims. (Cl. 80—59)



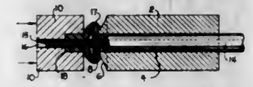
1. In a rolling mill for rolling tubular bodies, comprising: at least three rotating elements, each of which have toothed gearing on the end portions thereof and integral therewith, said rotating elements having their axes in the same plane and being disposed relative to each other so that said rotating elements provide a desired cross section of the article to be rolled, said toothed gearing on each of said rotating elements engaging said toothed gearing on said rotating elements adjacent thereto, said toothed gearing also engaging the article to be rolled prior to and at the gauge whereby the article to be rolled is given its desired configuration along its entire periphery prior to and at the gauge of said mill.

3,044,332
METHOD OF MAKING RIVET PINS
George Siebol, Anaheim, Calif., assignor to Olympic Screw & Rivet Corporation, Downey, Calif., a corporation of California
Filed Feb. 17, 1959, Ser. No. 793,798
1 Claim. (Cl. 80—60)



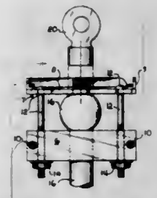
A method of making a pin for a blind rivet assembly or the like, using a blank having a shank and a stem of lesser diameter than the shank, wherein the pin is formed in a single pass of the blank between a pair of die plates, comprising the steps of, sequentially, rolling a circumferential groove in the pin between the shank and stem while displacing material to one side thereof to form a circumferential flange between the groove and shank, confining said flange to having a substantially flat surface adjacent the groove and a conical surface remote from the groove tapering inwardly to said shank, with the groove of lesser diameter than the stem and the flange of greater diameter than the shank, rolling material displaced to the other side of said groove to substantially the same diameter as the remainder of the stem, and then rolling the flange over to a frustoconical shape having the base diameter of the shank and converging from the shank toward the stem to overlay the stem and substantially close the groove.

3,044,333
INSULATION PUSH BACK STRIPPER
William F. Broske, Camp Hill, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Dec. 31, 1958, Ser. No. 784,177
2 Claims. (Cl. 81—9.5)



1. Apparatus for stripping an insulating sheath from the end of a wire comprising, a support for supporting said wire adjacent its end while leaving said end unsupported, sheath engaging means normally disposed spaced from said support, said sheath engaging means having portions thereof engageable with the cut face of said sheath and having an opening therein to permit passage of the insulating core of said wire, and severing means disposed between said sheath engaging means and said support, said severing means having severing edges movable to sever along a locus surrounding a wire extending between said support and said sheath engaging means, means for moving said sheath engaging means and said severing means relatively towards each other thereby to gather and bunch said insulating sheath and to form a radially extending collar thereof, whereby upon relative movement of said severing edges into said gathered insulation, said insulation is severed along said locus.

3,044,334
WIRE TOOL
William F. Broske, Camp Hill, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Dec. 31, 1958, Ser. No. 784,249
3 Claims. (Cl. 81—9.51)

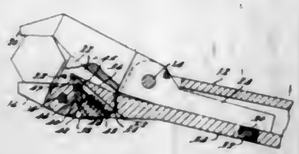


1. Means for exposing the metallic core of an insulated conductor comprising a plate having an aperture therein of a diameter greater than the diameter of said core and less than the diameter of the insulation on said conductor, a clamp for firmly clamping said insulated conductor in a manner such as to prevent relative movement between said core and said insulation, and means connecting said plate and said clamp for moving said plate and clamp relatively towards each other and for retaining said clamp and plate in their moved positions thereby to displace the portion of said insulation between said plate and said clamp relatively towards said clamp and to bulge said insulation portion and to expose said conductor core.

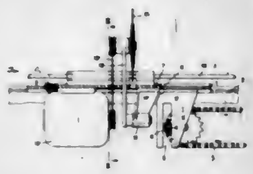
3,044,335
MOVABLE JAW WRENCH
Alfred A. Keranen, Detroit, Mich. (Box 453, Atlantic Mine, Mich.)
Filed May 1, 1958, Ser. No. 732,274
6 Claims. (Cl. 81—91)

1. A wrench comprising a fixed jaw, a handle pivoted on said fixed jaw, a movable jaw pivoted on said fixed jaw, said movable jaw and said handle having curved locking surfaces whose center of curvature is at the pivot point of said handle, said movable jaw and handle also having

curved end surfaces whose center of curvature is at the pivot point of said movable jaw, a segment disposed between said movable jaw and handle and having its opposite faces conforming to said two curved surfaces, whereby said movable jaw and segment are rotatable in a jaw opening direction when said handle is in one position thereof, said segment being rotatable with said handle to a second position of said handle in which the first-mentioned surfaces on said movable jaw and handle are engaged to lock said movable jaw against opening, the pivot points of said handle and movable jaw and said locking surfaces being arranged so that a force applied to said movable jaw in a jaw opening direction, when said locking surfaces are engaged, reacts through said surfaces in a direction tending to pivot said handle to said second position.

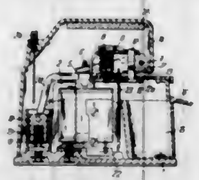


3,044,336
CUTTING DEVICES FOR MOVING OBLONG WORKS
Erwin Bock, Aachen, Germany, assignor to Schumag Schumacher Metallwerke Gesellschaft mit beschränkter Haftung, Aachen, Germany
Filed June 2, 1958, Ser. No. 739,113
4 Claims. (Cl. 83—319)



1. An apparatus for cutting a continuously fed elongate workpiece, comprising a frame, a main carriage mounted on the frame for movement in the direction of the workpiece axis, means for moving said main carriage in synchronism with the work feed, an auxiliary carriage mounted on said main carriage for reciprocating movements parallel to the workpiece axis, spring means resiliently mounting said auxiliary carriage in said main carriage and urging the auxiliary carriage in one direction parallel to the work piece axis while permitting compensating movement therein in the opposite direction, a clamping mechanism on said auxiliary carriage including a jaw fixed to the auxiliary carriage on one side of the workpiece, a counterwedge adjustably fixed to the auxiliary carriage, a second jaw in the form of a wedge on the other side of the workpiece and movable longitudinally along the counterwedge with the inclined surfaces of the wedges abutting, a linkage connected to said movable wedge and projecting toward the frame, a cam on said frame in the path of the linkage for actuating the latter, a cutting tool tiltably supported on said auxiliary carriage for movement toward the workpiece in a direction transverse to the direction of the work feed, means for driving said cutting tool to cut the workpiece mounted on said main carriage, and means for tilting the cutting tool into engagement with the work during the time in which said cam has actuated the linkage to clamp the workpiece to the auxiliary carriage.

3,044,337
ALTERNATING CURRENT PUNCH
Karl Schröder, 116 Hauptstrasse 13, Weinheim, Germany, and Leonhard Kochendörfer, 10 Werderstrasse, Heidelberg, Germany
Filed June 11, 1959, Ser. No. 819,625
1 Claim. (Cl. 83—372)



An alternating current punch for punching paper, cardboard, pasteboard and the like, in combination with conventional axially shiftable punching dies, an electromagnetic drive with direct connection to the main current supply and comprising an electromagnet and an associated plunger armature with the armature operating said punching dies, a feeler lever extending into the path of insertion of material to be punched and actuated thereby, a microswitch cooperating with said feeler lever to feed current to said electromagnet on the insertion of the material to be punched, a second microswitch cooperating with said plunger only after the punch has been moved to such an extent to cause punching of the work material and causing deenergization of the electric circuit during such time as it is operated, a time retarding device controlling said second microswitch to interrupt the current for a predetermined time to allow the removal of the punched material, the retarding device including a lever which is coordinated with the plunger armature and adapted to act, when the plunger armature descends, on a spring-supported piston in an air cylinder to expel the air from said cylinder and interrupt the current through the intermediary of the second microswitch connected with said piston only after such time as the punch has completed its punching stroke and while the feeler lever is still in operative position, a rocker lever pivoted on an axle and the plunger armature and the rocker lever together with the punching dies being arranged to quickly return into their initial positions by return means, whereas the piston in retracting on the completion of the punching operation positively sucks air into the cylinder and moves more slowly due to the delaying action of the retarding device through a nozzle and on reaching its initial position releases the second microswitch after the punching dies have returned to their normal positions whereby time is provided for the removal of the material being punched.

3,044,338
STERILE GAUZE DISPENSER WITH CUTTING MEANS THEREON
Charles E. Horton, 505 Brackenridge Ave., Norfolk, Va., and Amos L. Lewis, 428 Clyndon St. NE., Vienna, Va.
Filed Apr. 21, 1958, Ser. No. 729,824
6 Claims. (Cl. 83—649)



1. A portable dispenser for dispensing selected lengths of sterile material in strip form comprising a container

for said material, a first cover detachably mounted on said container, said first cover having an opening for the passage of said material from said container, a second cover detachably mounted on said container and extending over said first cover and said opening, cutting means mounted on one of said covers and having blades and an operator, at least the operative portion of said blades being enclosed by said second cover and said operator being positioned externally of said second cover, means to support a portion of said sterile material between said first and second covers in position to be grasped and drawn between said blades without contaminating said container and a door movably mounted on one of said covers normally closing the space between said first and second covers and being movable to permit the withdrawal of a selected length of said material.

3,044,339
PISTON GUIDE KEY ARRANGEMENT FOR BRASS INSTRUMENT
Leland B. Greenleaf, Elkhart, Ind., assignor to C. G. Conn, Ltd., Elkhart, Ind., a corporation of Indiana
Filed Mar. 14, 1960, Ser. No. 14,771
5 Claims. (Cl. 84—392)



1. In a brass-wind instrument, a cylindrical valve casing having an internal keyway, a bottom valve cap closing the bottom of said valve casing, a top valve cap having a central opening and closing the top of said valve casing, a slide piston casing positioned inside said valve casing for smooth movement along the inner wall thereof, said slide piston casing including a top plate closing the top end of said piston casing and having a central opening and an offset opening, a guide key having a central opening, a boss projecting parallel thereto, and a projection for engagement in said valve casing keyway, said guide key boss being adapted to be positioned in said top plate offset opening and said central opening thereof being aligned with said central opening of said top plate, a valve stem secured in said central opening in said top plate and extending upwardly through said central opening in said guide key and through said central opening in said top valve cap, said valve stem being operable to move said slide piston casing within said valve casing, and spring means positioned in the lower portion of said valve casing engaging said bottom valve cap and cooperable with said slide piston casing to maintain said slide piston and said valve stem in an upward position, actuation of said valve stem and said slide piston causing axial movement in a predetermined rotary position determined by said piston guide key projection moving along the keyway of said valve casing.

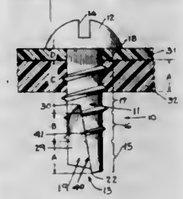
3,044,340
DRIVE PIN RIVET
Ralph R. Luhm, Anaheim, Calif., assignor to Olympic Screw & Rivet Corporation, Downey, Calif., a corporation of California
Filed Jan. 14, 1960, Ser. No. 2,522
2 Claims. (Cl. 85—40)

1. In a drive pin rivet for fastening plates or the like having total thicknesses varying throughout a predetermined range, the combination of: a rivet body having a head and a sleeve, with said sleeve adapted to pass through aligned openings in the plates being fastened, said body having an axial bore extending from the head end thereof, with a major diameter at said head end and a minor diameter remote from said head end with the junction between the major and minor diameters defining a shoulder spaced from said head a distance less than the minimum value of said predetermined range, said sleeve being axially slit into a plurality of prongs having internal projections thereon at the bottom of said minor diameter portion of said bore, said projections having surfaces converging axially toward the outer end thereof; and a pin for driving into said body and having a head portion of a major diameter and a sleeve portion of a minor diameter, the junction between the major and minor diameters defining a shoulder for engaging the



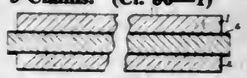
shoulder of said body, at least one of said shoulders tapering axially toward said minor diameter portion with said head and sleeve portions of said pin being of substantially the same diameters as and being slidably positioned in said major and minor diameters of said bore, respectively, and with said sleeve portion of greater length than said minor diameter bore of said body and said head portion of greater length than said major diameter bore whereby on being driven into said body, said pin engages said internal projections at the bottom of said bore and spreads said prongs and then engages the shoulder between said major and minor diameter bores and expands said sleeve in said openings.

3,044,341
DRILLING, REAMING AND TAPPING SCREW
William Stern, Park Ridge, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,451
7 Claims. (Cl. 85—47)



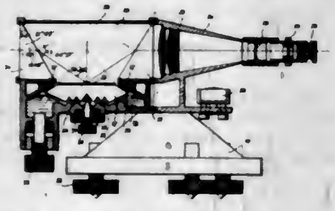
1. A trepanning and thread-cutting screw for application by power driver means fixedly holding said screw on its axis for rotative movement normal to a workpiece comprising an elongated shank having a head portion and an oppositely disposed entering end portion, said shank being formed with a first axial unthreaded portion adjacent said entering end portion, a thread-cutting second axial portion adjacent said first portion and a threaded third axial portion adjacent said second portion, said shank being characterized by a slot formed in said entering end extending from a radial periphery thereof to a depth including a center axis of said shank to expose a cutting and a trailing edge at said entering end, the side walls of said slot extending in a substantially axial direction to include said first and second portions and a portion of said third axial portion, said cutting edge on the entering end being further characterized by a configuration such that said cutting edge extends generally radially inwardly a dimension greater than a radius of said shank and the furthest axial extent thereof from said head portion is disposed on the outer periphery of said first axial portion, said entire cutting edge extending axially from said head portion a greater distance than said trailing edge.

3,044,342
MILITARY DETONATORS
Delbert R. Jones, Indianapolis, Ind., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed May 7, 1958, Ser. No. 735,085
5 Claims. (Cl. 86—1)



1. In a process for the manufacture of bridge assemblies for electric detonators, the steps comprising coating a length of metal rod with a liquid solidifiable plastic insulating material, curing the insulating material, coating the rod with an uncured liquid thermosetting adhesive, inserting the rod into a length of metal tube, the plastic insulating material and the adhesive being the only means for positioning the rod within the tube, uniformly swaging the tube about the rod, heating the rod and tube above the setting point of the adhesive, cutting the rod with the tube swaged about it into segments and machining each segment into the shape of a detonator bridge plug.

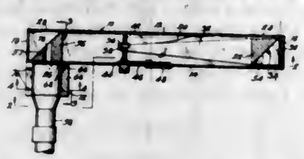
3,044,343
OPTICAL INSTRUMENT OF THE REFLECTION TYPE
Marie Pierre Poitevin de Fontguyon, 159 Rue de l'Universite, Paris, France
Filed Apr. 16, 1959, Ser. No. 806,858
Claims priority, application France Apr. 17, 1958
15 Claims. (Cl. 88—2.3)



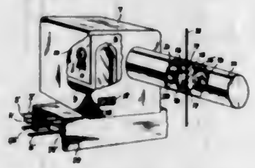
1. An optical device for modifying the direction of a beam of light having a single reflecting surface and a plurality of refracting surfaces fixed together and constituting a symmetrical unit with respect to a transverse plane thereof, said unit being associated with said single reflecting surface which is located in the center, movable and placed in position independently of said refracting surfaces by an external force such as gravity, the transverse plane of symmetry of said refracting surfaces being in the vicinity of the plane perpendicular to said single reflecting surface, said single reflecting surface including a prism coextensive therewith and being symmetrical about said transverse plane, said refracting surfaces in combination with said prism defining a deformable transparent medium constituting a prismatic medium of variable angles and being substantially symmetrical, said refracting surfaces and reflecting surface receiving the whole of the sighting beam at incidences in the vicinity of the angles determined in correspondence with their respective positions and with the refractive indices of the indeformable and deformable media, said device restoring the whole of the beam of light with variations in direction in a determined ratio with rotations of the device with respect to said single reflecting surface.

3,044,344
RANGE FINDING DEVICE
Joel T. Hartmeister, 1544 Lowell Blvd., Denver 4, Colo.
Filed Apr. 15, 1960, Ser. No. 22,449
2 Claims. (Cl. 88—2.4)

1. A range finding device for use with a magnifying optical system comprising an elongated housing closed at both ends, having sides, a top and a bottom; openings in one side adjacent each end of the housing; a viewing aperture in the other side in line with one of said openings in said one side; a fixed reflector mounted at an angle within the housing and positioned between the viewing aperture and the opening in line therewith; a movable reflector mounted for pivotal movement within the housing in line with the other opening in said one side and means operatively engaging said movable reflector for the selective angular positioning of same with respect to the fixed reflector, said fixed reflector having a centrally located transparent area therein, wherein the fixed reflector comprises a triangular prism having a reflecting surface on the surface of the prism containing the hypotenuse, the center of the centrally located transparent area is positioned on a line parallel to one side of the prism and a projection of the transparent area along said line onto a plane normal to said one side of the prism is substantially circular, wherein the prism is provided with a centrally located bottomed bore through the reflecting surface terminating within the prism and parallel with one of its sides.

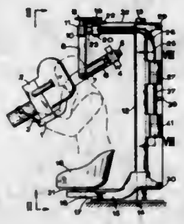


3,044,345
ELECTRONIC INSPECTION APPARATUS FOR TEXTILE THREADS
Helmut Schöttler, Neumunster, Germany, assignor to Phrix-Werke Aktiengesellschaft, Hamburg, Germany
Filed Aug. 15, 1957, Ser. No. 678,353
Claims priority, application Germany Aug. 16, 1956
5 Claims. (Cl. 88—14)



1. Electronic inspection apparatus for indicating and counting loose fiber ends projecting from a textile thread which is passed through the apparatus, comprising, in combination, a source of light emitting rays of light; light stop means closely spaced from said source and extending across said rays of light, said light stop means having a single aperture determining a beam of light passing therethrough, the area of said aperture being dimensioned not to exceed ten times that fraction thereof which would be obstructed by one loose fiber end of predetermined thickness extending across said aperture; means for guiding a thread across said rays of light in close proximity to, but beside said aperture of said stop means so that the passage of said beam of light through said aperture is always unobstructed by said thread, while, on the other hand, loose fiber ends projecting from said thread are caused to pass over said aperture and temporarily obstruct said fraction of said area; control circuit means connected to a source of substantially constant electric potential and including a first and a second variable resistance means in series-connection, said first variable resistance means being a barrier-type photocell arranged across the path of said beam of light beyond said aperture for being exposed thereto and changing its resistance value in proportion to a variation of the illumination thereof produced by said beam of light, the sensitive area of said photocell illuminated by said beam of light not exceeding ten times said area of said aperture, a junction point between said two variable resistance means carrying a potential which varies with the variations of the voltage drop across said photocell depending on variations of its resistance value, the lower limit of said voltage drop being adjustable by said second variable resistance means; relay circuit means coupled with said junction point between said resistance means and capable of transmitting pulses in response to pulses derived from said variations of said potential at said junction point; counting means operable by said electrical pulses transmitted by said relay circuit means when the latter is actuated by pulses derived from said potential variations at said junction point caused by the passage of loose fiber ends across said aperture, every pulse counted representing the passage of one such loose fiber end; and power supply means including circuit means for energizing said relay circuit means and said counting means.

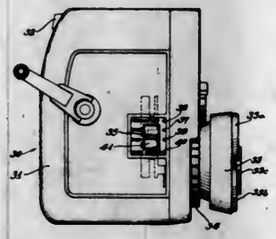
3,044,346
UNIVERSALLY ADJUSTABLE CAMERA SUPPORT FOR A VEHICLE
Jean Fieux, Paris, France, assignor of one-half interest to Societe des Forges et Ateliers du Creusot, Paris, France, a company of France
Filed July 31, 1959, Ser. No. 830,758
Claims priority, application France Aug. 6, 1958
6 Claims. (Cl. 88—16)



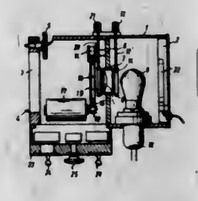
6. In a holder for an appliance for sighting from a vehicle subject to vibration, such as a helicopter, a camera, an arm secured to said camera, a substantially vertical pedestal mounted on the vehicle and a joint between said pedestal and said arm having three separate axes of free rotation, a first axis for rotation in elevation, a second axis for rotation in azimuth spaced from and parallel to said pedestal and the third axis for rotation parallel to the optical axis of said camera, said joint including a first fork mounted for rotation in said pedestal in said second axis, a second fork pivoted at its opposed extremities to the opposed extremities of said first fork for rotation in said first axis, a pivoted connection between said second fork and said arm in said third axis, said arm and said camera being balanced about the center of said joint and at least one aiming handle symmetrical with said third axis for moving said camera, the point of intersection of the three axes of rotation of said joint being situated substantially in the region of the user's cervical vertebrae, said third axis substantially coinciding with the optical axis of said camera.

3,044,347
CONTROL FOR MULTI-SPEED CAMERA
David M. MacMillin, Wilmette, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 5, 1959, Ser. No. 844,548
6 Claims. (Cl. 88—16)

1. In a motion picture camera including a camera drive, an automatic exposure control device and a housing, a multi-speed governor mechanism for controlling the speed of the camera drive, a drive control member for starting and stopping the drive, a manual control member for operating the drive control member, means operable by the drive control member for setting the governor mechanism at a selected speed, and means for adjusting said exposure control device and mounted in the housing in a position adapted to be actuated by the manual control member in synchronism with the setting of the governor, whereby the exposure will be automatically corrected in accordance with changes in camera speed effected by movement of the manual control member.



3,044,348
HAIDINGER'S BRUSH ATTACHMENT FOR SYNOPTOPHORE APPARATUS
Curt Cueppers, 31 Wartweg, Giessen, Germany, and Kurt Kirchhuebel, Dutenhofen, near Wetzlar, Germany
Filed Sept. 26, 1958, Ser. No. 763,515
Claims priority, application Germany Oct. 2, 1957
2 Claims. (Cl. 88—20)

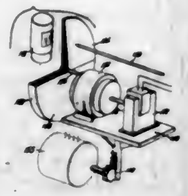


1. An auxiliary device to be attached to a synoptophore comprising a casing having a closed rear side and a front side in the form of an annular plate with centering studs and an attaching screw, a partition in the casing having a condenser lens carried thereby, an incandescent lamp mounted in the rear part of the casing, a piece of opal glass mounted and supported from a rod and located between the said condenser lens and the lamp, a knob on the outer end of the rod to draw the opal glass upwardly, a plurality of rollers mounted on the partition on a front wall thereof, a toothed rim guided by and on the rollers, a polarizing filter mounted in the toothed rim, a motor in the casing connected to drive the rim by means of a pinion, a blue filter mounted by means of a rod in the casing and operable by a knob, and an electronic flash device mounted in the back of the casing.

3,044,349
OPTICAL PYROMETER APPARATUS
Donald L. Watrous, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Original application Feb. 26, 1957, Ser. No. 642,473, now Patent No. 2,927,502, dated Mar. 8, 1960. Divided and this application Dec. 28, 1959, Ser. No. 862,141
4 Claims. (Cl. 88—22.5)

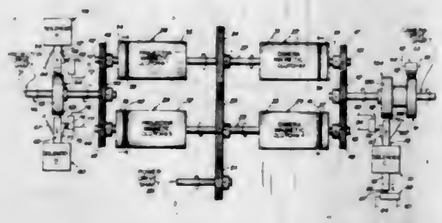
1. A continuous null balancing remote indicating pyrometer comprising, a radiation sensitive device, a flex-

ible quartz rod for transmitting the radiation spectrum from a heated source to said sensitive device, a filter means positioned between said rod and said device comprising a first semi-circular band pass filter having a constant transmission characteristic, a second semi-circular different band pass filter having a radially varying transmission characteristic, drive means for producing relative rotation between said filter means and said rod so that



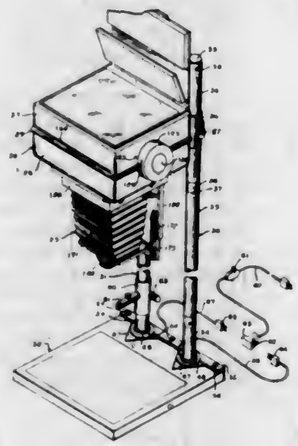
a circular path is described and said radiation spectrum is transmitted to said sensitive device alternately through said first and second filters to produce an electrical output proportional to the energy passed in each band, and means responsive to said electrical output for radially positioning said rod relative to said filter means until equal amounts of energy are passed.

3,044,350
OPTICAL PRINTER DRIVE AND CONTROL MECHANISM
John J. Hartnett, Broux, N.Y., assignor to The Animation Equipment Corporation, New Rochelle, N.Y., a corporation of New York
Filed Apr. 6, 1961, Ser. No. 101,210
9 Claims. (Cl. 88—24)



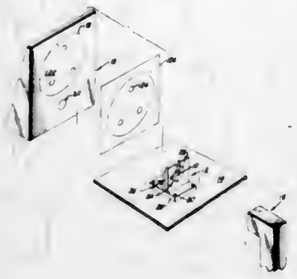
1. In optical printer drive and control mechanism for synchronous operation of a projector and camera thereof the combination with power driving means, a first projector mechanism driving means, a second camera mechanism driving means, projector drive clutch means having engageable and disengageable rotary driving and driven members with the driving member connected to the power driving means and the driven member comprising a portion of the first projector mechanism driving means for coupling the power driving means to and uncoupling it from the projector mechanism driving means, camera drive clutch means having engageable and disengageable rotary driving and driven members with the driving member connected to the power driving means and the driven member comprising a portion of the second camera mechanism driving means for coupling the power driving means to and uncoupling it from the camera mechanism driving means, projector stop motion electromagnetic means having magnetically-operated latch means engageable of the first projector mechanism driving means temporarily to stop and hold the latter in a predetermined stop and start position and alternately to release it, camera stop motion electromagnetic means having magnetically-operated latch means engageable of the second camera mechanism driving means temporarily to stop and hold the latter in a predetermined stop and start position and alternately to release it, first power supply control means in the form of electrical circuitry connecting said projector and camera stop motion electromagnetic means in parallel including common master control switch means for simultaneous energization and deenergization thereof, and other power supply control means for said pair of projector and camera drive clutch means including a pair of individual operating means separately to engage and disengage their driven members with their driving members and with each of said individual clutch operating means being operable only by one of said stop motion electromagnetic means associated therewith for alternately coupling and uncoupling its driving and driven clutch members, non-skip and non-repeat film frame control means associated with one of said stop motion electromagnetic means comprising a by-pass holding circuit connecting said first power supply circuitry around said common control switch means to both of said stop motion electromagnetic means, a pair of circuit opening and closing means connected in series in said by-pass holding circuit with a first one of these series circuit opening and closing means being closed upon energization of the stop motion electromagnetic means with which it is associated and open upon de-energization of the latter, and timing means connected to for operation by the mechanism driving means which is stopped and released by said latter stop motion electromagnetic means effecting closure of the remaining second of said by-pass holding circuit opening and closing means when said master control switch is opened the instant this mechanism driving means reaches its stop and start radial position and holding it closed thereafter for only a predetermined portion of each cycle of rotation of the latter.

3,044,351
PHOTOGRAPHIC APPARATUS
Lionel C. Patterson, 4 Sharia Silahder, Heliopolis, Egypt
Filed Jan. 26, 1956, Ser. No. 561,697
13 Claims. (Cl. 88—24)



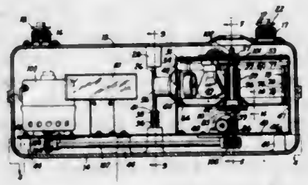
1. In photographic apparatus, a camera, first and second units each constituting a reflector and including a light source, said units being detachably joined to provide a light-tight housing, said camera being detachably joined to the second unit with its interior exposed, to be illuminated by the light source of either unit, said camera including film receiving means, and said first unit including copy board receiving means and film receiving means located on opposite sides of its light source with the copy board receiving means being proximate to said second unit.

3,044,352
STAGING DEVICES
Leonard A. Engeman, Lock Haven, and Kenneth C. Rupert, Mill Hall, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,750
2 Claims. (Cl. 88—24)



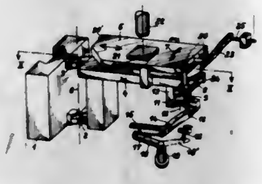
1. In an article positioning fixture for use with an optical type comparator the combination comprising an article holder substantially in the form of an annulus, said annulus having a portion of the outer periphery thereof formed as gear teeth; a gear meshing with the formed periphery of said annulus; first driving means selectively connectable to said gear for rotating said annulus, said first driving means including a sleeve member adapted to directly engage said gear, and means to selectively engage said sleeve and said gear; and second driving means alternatively connectable to said gear for rotating said annulus, said second driving means including a worm drive, means to engage said gear and said worm drive and means to operate said worm drive.

3,044,353
DEVICE FOR PROJECTING MOVING MESSAGE
Ferdinand C. Forney, % Roto-See Co., 3067 Kleeman Road, Cincinnati 11, Ohio
Filed May 13, 1959, Ser. No. 812,927
2 Claims. (Cl. 88—27)



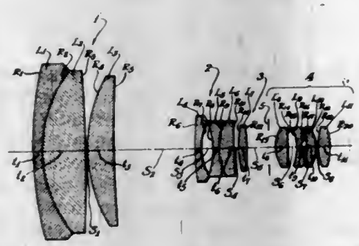
2. A device for projecting a moving message on a screen which comprises a drum, an upright shaft, means for mounting said drum for rotation with and for axial movement along said shaft, means for mounting a film strip on said drum coaxially therewith, there being a plurality of lines of message on said film strip, means for rotating said shaft to rotate said drum, a bearing member supporting said drum, a cam follower mounted on said bearing member, a cam shaft connected to said upright shaft to be driven in timed relation therewith, a cam on said cam shaft underlying the cam follower, the cam being adapted to engage and raise the cam follower and the drum in timed relation to the drum rotating means, the cam lowering the cam follower when the drum reaches a predetermined height, whereby the drum falls to a predetermined initial height, means inside the drum for projecting light through a selected portion of the film strip, and a screen on which the light is projected as a moving message.

3,044,354
CROSS-SLIDE TABLE FOR MICROSCOPES
Paul Brösicke, Heidenheim (Brenz), Germany, assignor to Carl Zeiss, Oberkochen, Wurttemberg, Germany
Filed Aug. 10, 1959, Ser. No. 832,844
Claims priority, application Germany Aug. 23, 1958
4 Claims. (Cl. 88—40)



4. In a cross-slide table for microscopes, particularly for microspectrophotometers, a stationary microscope base, a horizontally positioned table structure mounted beneath said microscope and extending normal thereto, at least one spring hinge joint forming means for connecting said base with said table structure to permit adjustment of said table in a horizontal plane about the axis of said spring hinged joint forming means, said spring joint forming means including crossed flat spring members having one of their ends connected to said base and their opposite ends connected to said table and forming a hinge axis extending vertically and parallel to the optical axis of the microscope, said table structure comprising a carrier member connected by means of said spring joint with said base and a table plate arranged in parallel spaced relation above said carrier member, leaf springs forming a spring parallelogram connecting said carrier member and said table plate, the springs of said parallelogram being pivotally adjustable about axes which extend at right angles to said optical axis, and manually adjustable means including a pivotally mounted lever for adjusting said table plate relatively to said carrier member by flexing said leaf springs which connect said carrier member with said table plate.

3,044,355
ZOOM LENSES
Arthur Cox, Park Ridge, and Walter J. Johnson, Mundelein, Ill., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed May 25, 1961, Ser. No. 112,721
2 Claims. (Cl. 88—57)



1. A zoom lens constructed substantially in accordance with the following table in which dimensions are

in terms of inches, and proceeding from front to rear L_1 to L_{11} designate the lenses, R_1 to R_{20} the radii of curvature of the surfaces, t_1 to t_{11} the axial thicknesses, s_1 to s_8 the axial separations, n_d the indices of refraction for the sodium D line and V the Abbe dispersion numbers:

L_1	$R_1=+3.650$	$t_1=.100$		$n_d=1.751$	$V=27.7$
	$R_2=+1.310$	$s_1=.425$			
L_2	$R_3=-15.400$	$t_2=.005$		$n_d=1.620$	$V=60.3$
	$R_4=+1.465$	$s_2=.270$			
L_3	$R_5=+16.700$	$s_3=$ .810 Telephoto, .552 Median, .050 Wide Angle			
L_4	$R_6=+5.0484$	$t_3=.060$		$n_d=1.617$	$V=55.0$
	$R_7=+.506$	$s_4=.120$			
L_5	$R_8=-.674$	$t_4=.055$		$n_d=1.620$	$V=60.3$
L_6	$R_9=+.568$	$t_5=.150$		$n_d=1.751$	$V=27.7$
	$R_{10}=+10.761$	$s_5=$ .0603 Telephoto, .5547 Median, .8089 Wide Angle			
L_7	$R_{11}=+1.800$	$t_6=.085$		$n_d=1.620$	$V=60.3$
	$R_{12}=-2.825$	$s_6=.280$			
L_8	$R_{13}=+.390$	$t_7=.126$		$n_d=1.697$	$V=56.2$
	$R_{14}=$ Plano	$s_7=.080$			
L_9	$R_{15}=-.460$	$t_8=.050$		$n_d=1.751$	$V=27.7$
	$R_{16}=+.460$	$s_8=.042$			
L_{10}	$R_{17}=-.929$	$t_9=.105$		$n_d=1.651$	$V=55.8$
	$R_{18}=-.372$	$s_9=.007$			
L_{11}	$R_{19}=+.7019$	$t_{11}=.120$		$n_d=1.620$	$V=60.3$
	$R_{20}=-.7019$				

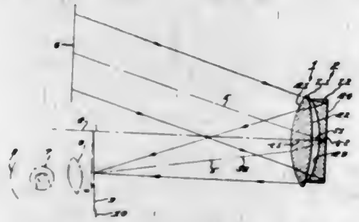
3,044,356
ZOOM LENS
Arthur Cox, Park Ridge, and Walter J. Johnson, Mundelein, Ill., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed May 26, 1961, Ser. No. 112,840
1 Claim. (Cl. 88—57)



A zoom lens, proceeding from front to rear, a positive biconvex doublet front component, a negative zooming member, a positive meniscus doublet third component concave to the front, and a prime lens, and being further characterized in that the zoom lens conforms substantially to the following table in which dimensions are in terms of inches, and, proceeding from front to rear, L_1 to L_{11} designate the lenses, R_1 to R_{19} the radii of curvature of the surfaces, t_1 to t_{11} the axial thicknesses, s_1 to s_8 the axial separations, n_d the indices of refraction for the sodium D line and V the Abbe dispersion numbers:

L_1	$R_1=+2.004$	$t_1=.090$		$n_d=1.689$	$V=30.9$
	$R_2=+1.000$	$t_2=.250$		$n_d=1.617$	$V=55.0$
L_2	$R_3=-12.853$	$s_1=$ .890 (Fig. 1) Telephoto, .550 (Fig. 2) Median, .094 (Fig. 3) Wide Angle			
	$R_4=+2.737$	$t_3=.070$		$n_d=1.611$	$V=58.8$
L_3	$R_5=+.891$	$s_2=.110$			
	$R_6=-1.379$	$t_4=.070$		$n_d=1.611$	$V=58.8$
L_4	$R_7=+1.000$	$t_5=.120$		$n_d=1.720$	$V=29.3$
L_5	$R_8=+12.231$	$s_3=$ .1245 (Fig. 1) Telephoto, .622 (Fig. 2) Median, .9565 (Fig. 3) Wide Angle			
	$R_9=+31.920$	$t_6=.060$		$n_d=1.689$	$V=30.9$
L_6	$R_{10}=+1.818$	$t_7=.060$		$n_d=1.611$	$V=58.8$
L_7	$R_{11}=-1.818$	$s_4=.005$			
	$R_{12}=+.360$	$t_8=.116$		$n_d=1.700$	$V=47.8$
L_8	$R_{13}=$ Plano	$s_5=.036$			
	$R_{14}=-.414$	$t_9=.042$		$n_d=1.7506$	$V=27.7$
L_9	$R_{15}=+.470$	$s_6=.036$			
	$R_{16}=-1.059$	$t_{10}=.097$		$n_d=1.651$	$V=55.8$
L_{10}	$R_{17}=-.344$	$s_7=.007$			
	$R_{18}=+.7135$	$t_{11}=.111$		$n_d=1.651$	$V=55.8$
L_{11}	$R_{19}=-.787$				

3,044,357
CATADIOPTRIC OBJECTIVE
Walter R. Linke, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 2, 1959, Ser. No. 796,494
2 Claims. (Cl. 88—57)

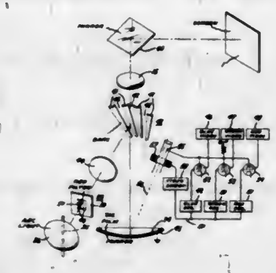


1. In a catadioptric objective, a biconvex front lens component, and a rear combined lens and mirror rear component having a front negative refractive surface and a plano rear mirror surface, said components being aligned with one another along a longitudinal axis, said objective having a film plane located in front of the front component and completely on one side of said longitudinal axis and being tilted relative to the normal of an optical axis extending from the film plane angularly relative to the longitudinal axis toward the juncture of the longitudinal axis and the mirror surface to correct curvature of field and keystoning.

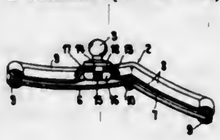
3,044,358
COLOR PROJECTION SYSTEM
William E. Glenn, Jr., Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 24, 1958, Ser. No. 782,956
10 Claims. (Cl. 88—61)

1. In a system for projection on a light receiving surface a plurality of primary colors corresponding to a plurality of diffraction gratings in a light modulating medium, wherein each diffraction grating has parameters corresponding to a different primary color, an optical system comprising a light receiving surface, a light source

for projecting polychrome light on the grating elements of said modulating medium, means for producing a wider beam on the grating elements for one color in the direction of diffraction by the diffraction grating corresponding to said one color than the width of one other of said primary colors in the direction of diffraction by the diffraction grating corresponding to said one other primary color, and masking means for passing the light diffracted by said diffraction gratings including larger portions of diffracted light corresponding to said one color.



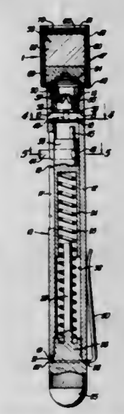
3,044,359
REARVIEW MIRROR FOR VEHICLES
Giuseppe Zanetti-Streccia, Mittelstrasse 12, Bern, Switzerland
Filed Sept. 8, 1959, Ser. No. 838,748
Claims priority, application Switzerland Sept. 8, 1958
2 Claims. (Cl. 88—86)



1. The combination of a motor vehicle and a rearview mirror device, said device comprising at least two slightly convex mirrors for increase of field of view and reduction of glare disposed in substantially horizontal alignment and held in a single frame, the first mirror being at least as large in horizontal dimension as the second mirror, said mirrors being positioned in inclined relation to each other so that the first mirror enables the driver to see in a backward direction substantially parallel to the axis of the vehicle and the second mirror enables the driver to see in a backward direction at an angle with the said axis, said first and second mirrors forming between each other an obtuse angle less than 180°, and said device being mounted on the exterior of the vehicle at such a point that the first mirror occupies the normal position, outside of the vehicle, of a conventional single rearview mirror and the second mirror is disposed inwardly of the first mirror and wholly within the overall dimensions of the vehicle in the direction of the width thereof.

3,044,360
FLARE GUN
Russell O. Stefan, 10950 Vulcan St., Downey, Calif., and Anton G. Lang, 5219 Lunsford Drive, Los Angeles, Calif.
Filed Dec. 1, 1960, Ser. No. 72,901
1 Claim. (Cl. 89—1)

A pyrotechnic signal launching gun adapted to be held upright for firing an expendable signal cartridge having a percussion cap and mounted axially on the upper end of said gun, the gun comprising: a cylindrical tube having an outside diameter within the order of approximately one-half inch; a cylindrical firing pin slidable within said tube; a striker on the upper end of said firing pin; means provided on the upper end of said tube for inter-engaging with a cartridge to secure said cartridge temporarily on said end of said tube in coaxial relation therewith and with said percussion cap exposed to detonation by said striker; a plug closing the lower end of said tube; a coiled expansion spring compressed in said tube between said plug and said striker, there being a firing slot formed longitudinally in a portion of said tube, said slot having a safety notch formed laterally therefrom adjacent to but spaced a short distance from the upper end of said slot,

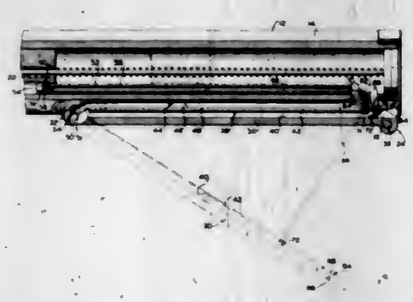


said slot also having a cocking notch formed laterally therefrom at its lower end; a cocking piece extending radially from an upper end portion of said firing pin and outwardly through said slot, said cocking piece being manipulable into said safety notch where it holds said striker out of contact with the percussion cap of a cartridge applied to said gun, said cocking piece also being manipulable along said slot to increase the compression of said spring and then into said cocking notch to restrain said spring under a high degree of compression, the upper end of said slot allowing said cocking piece to travel freely along said slot under the impulse of said spring, after said cocking piece has been dislodged manually from said cocking notch, until said striker engages and detonates said percussion cap.

3,044,361
CHARGER FOR FIREARMS
Albert J. Lizza, Willimansett, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 10, 1959, Ser. No. 852,153
8 Claims. (Cl. 89—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

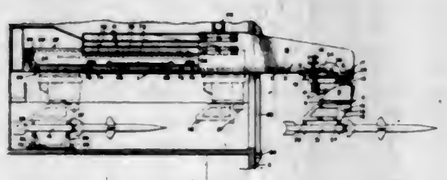
1. A charger for a firearm including a receiver with a bolt slidingly disposed therein, said bolt being biased from a recoil to a battery position by spring means which apply an increasing load to the bolt during displacement thereof to the recoil position, the charger including a lever pivotally disposed relative to the receiver and mounted thereto at the forward end for displacement between a closed position parallel to the outside of the receiver and an open position disposed at right angles thereto, the length of said lever being at least equal to the distance between the recoil and battery positions of the bolt and said lever being disposed so that the forward end thereof is adjacent

the battery position of the bolt and the rear end is adjacent the recoil position thereof, a cable connected at one end to means engageable with the bolt for actuating the bolt to the recoil position, a ball attached to the opposite end of said cable, a bore disposed along said lever to slidingly receive said ball, an aperture disposed through the wall of the receiver for passage of said cable therethrough, a pulley for rollingly guiding said cable through said aperture, said pulley being disposed adjacent the rear end of said bore when said lever is in the battery position for



positioning said ball adjacent the rear end of said bore when said lever is in the closed position, a mouth portion extending outwardly from said bore along the length thereof to permit movement of said ball along said bore to gradually increase the leverage applied to the bolt by said lever as said lever is actuated to the open position, and means for disconnecting the bolt from said cable when said lever is in the open position.

3,044,362
BELOW DECK SHIPBOARD MISSILE LAUNCHING SYSTEM
Robert E. Carlberg, McLean, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 29, 1958, Ser. No. 783,624
8 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In an aircraft carrier type of vessel, a shipboard missile launching system comprising means for storing a plurality of missiles to be launched in a stowage area below the flight deck of said aircraft carrier vessel and wholly enclosed within the hull of said vessel, launcher supporting means, means for maintaining said launcher supporting means permanently and entirely below said flight deck of said aircraft carrier vessel, said launcher supporting means having a movable portion which is extendable outwardly through the hull of said vessel for the firing position and retractable to a position within the hull of said vessel for storage purposes, missile launcher means for moving a missile from the missile stowage area along said launcher supporting means to a position at the outer end of said launcher supporting means, and means carried by said missile launcher means providing a zero length launching rail from which a missile may be launched.

3,044,363
PROPULSION MEANS FOR PROJECTILES
C Walton Musser, Beverly, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 28, 1960, Ser. No. 25,491
2 Claims. (Cl. 89—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a gun, the combination of an explosive cartridge, a projectile, a barrel having a breech,

means forming a plurality of annular cavities of rectangular cross section forwardly of said breech and spaced apart along said barrel, each of said cavities opening into the bore of said barrel thru a plurality of ports,

a plurality of cylinders each containing a liquid propellant,

a plurality of substantially cylindrical passageways in said bore connecting each of said cylinders with a different one of said cavities, said passageways being transverse to the bore and generally tangentially oriented with respect to said cavities,

a plurality of pistons each movable in a different one of said cylinders,

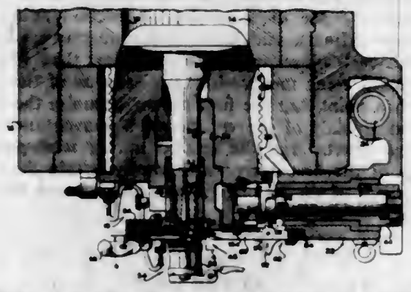
a bar adjacent said pistons,

means for imparting to said bar a thrust urging said pistons into said cylinder whereby said propellant is simultaneously propelled into each of said cavities and caused to circulate therearound at a velocity which maintains said propellant therein until passed by said projectile,

a pin movable by the action of said bar at the completion of said thrust,

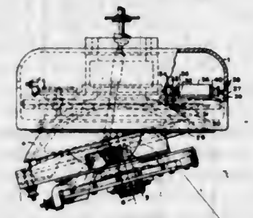
and actuating means including a locking rod and a switch for firing said explosive cartridge actuated by movement of said pin.

3,044,364
SAFETY INTERLOCK FOR THE FIRING MECHANISM OF A CANNON
Herman J. Reepmeyer, Coboes, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 21, 1960, Ser. No. 57,589
5 Claims. (Cl. 89—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a cannon having a tube, a breech ring mounted thereon, and a breechblock mounted for rotation on a spindle of a carrier mounted on the breech ring for pivotal displacement between an open and a closed position, a crankshaft rotatingly mounted in the carrier, a crank disposed on one end of said crankshaft for operational cooperation with the breechblock for converting eccentric displacement of said crank by rotation of said crankshaft to rotation of said breechblock for alternate displacement between a lock and an unlock position, a firing mechanism including a receiver disposed in the spindle for chambering a primer and a percussion device mounted on said receiver for pivotal movement between a closed position in back of the primer chambered in said receiver and an open position, a spring operationally disposed between said receiver and said percussion device for biasing said percussion device to the open position, a slide disposed in said percussion device for releasably securing said percussion device to the carrier in the closed position, and a plunger operationally disposed between said crankshaft and said slide for transferring rotation of said crankshaft to displacement of said slide for actuation thereof to release said percussion device from the closed position.

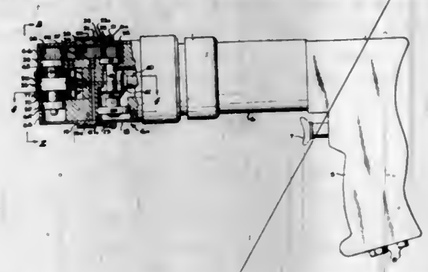
3,044,365
MACHINES FOR CUTTING BEVEL, HYPOID AND SIMILAR GEARS
Jaime Picanol, Casa Pairal Catalunya Zandberg, Zillebeke-lez-Ypres, Belgium
Filed Aug. 11, 1958, Ser. No. 754,357
Claims priority, application Belgium Mar. 8, 1958
5 Claims. (Cl. 90—5)



1. In a machine for cutting by generation bevel, hypoid and similar gears, in combination with a swingable headstock, a cradle, a tool-holder of the machine and means for localizing and orienting said tool-holder; an additional support mounted on said cradle and positioned between said cradle and said tool-holder and means for angularly displacing and regulating said support about an axis perpendicular to the axis of the cradle and extending through the point of intersection of the axis of the cradle with the axis about which the headstock swings, wherein said support has at least one shaped slot, said machine further comprising a number of bolts with shaped heads reaching into aforesaid slot; gearnuts on aforesaid bolts; a crown wheel engaging simultaneously all said gearnuts; a bevel gear fixed to one of aforesaid gearnuts and engaging this bevel gear, and a bevel pinion the axis of which has a square end, said bevel pinion being movable in front of a sighting window of the frame.

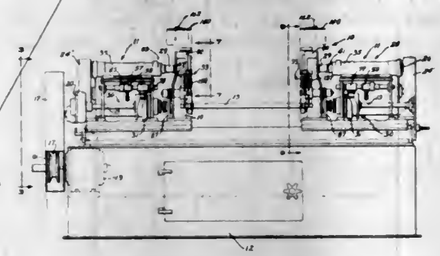
3,044,366
MILLING TOOL
Arnaud P. Bidart, Los Angeles, Calif., assignor to Zephyr Manufacturing Co., Inglewood, Calif., a copartnership
Filed May 11, 1959, Ser. No. 812,464
6 Claims. (Cl. 90—12)

1. A milling tool for shaving a protuberance from a work surface, comprising a body having a handle portion at its inner end, a power actuated drive shaft in said body, a cutter wheel shaft journaled in the outer end portion of said body for rotation about a fixed axis perpendicular to the principal axis of said body, a cutter wheel secured on said shaft, means operatively connecting said cutter wheel shaft to said drive shaft, a single guide roller carrier resiliently telescopically mounted in the outer end portion of said body, a pair of guide rollers rotatably carried by said carrier for rotation about a common axis, said guide rollers being disposed respectively at opposite sides of said cutter wheel and each having an axial bore of larger diameter than and through which said cutter wheel shaft extends, and cooperative means carried by said body and guide roller carrier for adjustably moving said carrier to a preset position relative to said body and in a direction



normal to the axis of rotation of said cutter wheel shaft; said guide roller carrier being further movable from its said preset position relative to said body to the extent of the difference between the diameters of said cutter wheel shaft and said guide roller bores in response to pressural engagement of said guide rollers with said work surface.

3,044,367
DOUBLE END TUBE DEBURRING MACHINE
Otto Thiel, Detroit, Mich., assignor to Midwest Supply and Manufacturing Company, Ferndale, Mich., a corporation of Michigan
Filed Apr. 14, 1958, Ser. No. 728,252
15 Claims. (Cl. 90—14)

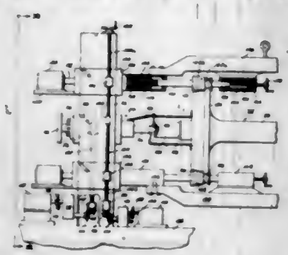


1. A machine for performing turning or like rotative operations on opposite ends of elongated work pieces, comprising a pair of like opposed machine units each provided with a rotative and axially shiftable tool carrying spindle, means on each of said units for advancing and retracting said spindles relative to the ends of a work piece, relatively movable clamp means engageable with a work piece to hold the same for said operations, means for presenting work pieces for the operation of said units thereon, means for actuating said work presenting means and said movable clamp means, including oscillatory means for moving said work presenting means in a nonrectilinear and relatively irregular path in a plane transverse of the length of said work pieces into position for clamping engagement by said clamp means, and a common drive shaft for said machine units drivingly connected to said respective advancing and retracting means and to said actuating means.

3,044,368
WHEEL TRUING APPARATUS FOR RAILROAD VEHICLES
Albert G. Bloss, 322 8th Ave., Huntington, W. Va.
Filed Apr. 28, 1958, Ser. No. 731,478
6 Claims. (Cl. 90—16)

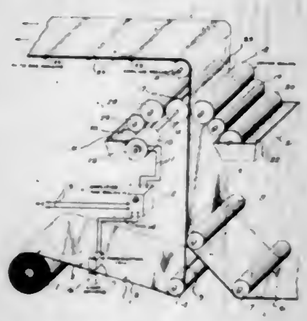
1. Apparatus for simultaneously truing the treads and flanges of the wheels of a railway truck having pairs of

spaced flanged wheels rigidly connected by spaced axles comprising a pair of fixed spaced standards, a second pair of standards movable horizontally with respect to said first pair of standards, each of said standards having a vertically movable centering means including a tailstock, said tailstocks being adapted to maintain said wheels in a predetermined position, each of said standards including a pair of vertically spaced cutter assemblies, means



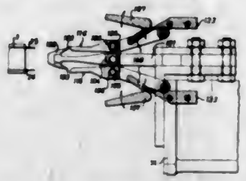
for moving said cutter assemblies in unison towards and away from said tailstocks, each of said cutter assemblies having a full contour milling head rotatably mounted thereon, means including an electric motor for rotating each of said milling heads at milling speed, means for rotating said wheels at milling feed speed, whereby said milling heads may be brought into engagement with said wheels for truing the same upon one-half revolution thereof.

3,044,369
METHOD FOR MAKING BAGS
Travis Y. Ross, Burlingame, Calif., assignor to Dixie Wax Paper Company, Dallas, Tex.
Original application Aug. 1, 1957, Ser. No. 675,747. Divided and this application Jan. 21, 1958, Ser. No. 710,311
1 Claim. (Cl. 93—35)



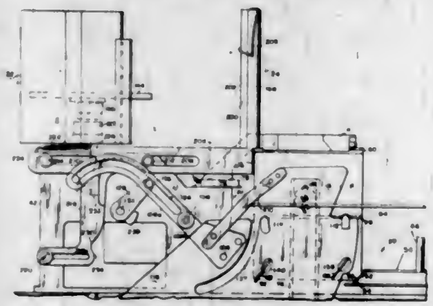
A method of producing duplex bags which consists in advancing and guiding a pair of similar continuous webs of wax-coated sheet material into line and with their opposing faces in contact, forming a series of spaced apart lateral bands of a heat sealable material over said wax coating along the length of one of said webs on the face thereof contacting said second web, simultaneously pressing and heating said contacting webs at each portion containing a band of heat sealable material adhering said webs together at each of said bands while forming a further series of bands of heat-sealable material coinciding with said first series of bands and spaced along the length of the free side of said second web, cutting said adhering webs into a plurality of bag blanks at said bands of sealable material, folding said blanks with opposite sides overlapping forming tubes and heating alternate bands of said second web free side closing the bottom of the bags and leaving the remaining bands for being heated to seal the tops of said bags after filling.

3,044,370
APPARATUS FOR PACKING CIGARETTES
Ludwig Rode, Neu-Bornsen, Kreis Herzogtum Lauenburg, Germany, assignor to Hauni-Werke Korber & Co., K.G., Hamburg-Bergedorf, Germany
Filed Jan. 20, 1960, Ser. No. 3,550
Claims priority, application Germany Jan. 21, 1959
6 Claims. (Cl. 93—49)



1. In an apparatus for reinforcing the top edges of open-ended containers for cigarettes and the like, in which marginal flaps at the open end of the container are folded inwardly against the inner faces of the container walls, a plunger provided with a head, means for reciprocating said plunger toward and away from said container, folding elements adapted to fold said marginal flaps inwardly after said plunger has been inserted into the inside of the container, said folding elements being mounted for pivotal movement rearwardly of said plunger head, two opposed wing-shaped parts arranged on said plunger head and having outwardly and rearwardly positioned edges which in one position of the plunger extend along opposed walls of the container to permit initial folding of said marginal flaps of the container by said folding elements against the rearwardly and outwardly positioned edges of said plunger, and means causing said folding elements to complete the folding of said marginal flaps against said inner faces of the container walls, the outwardly and rearwardly positioned edges of said plunger head being arranged to align with the fold area between the container and marginal flaps when said plunger head is in its operative position.

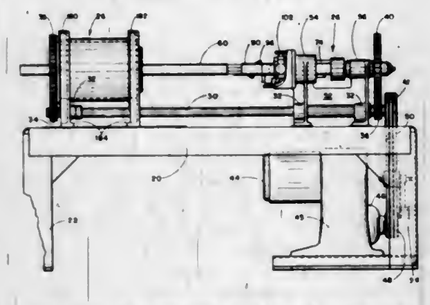
3,044,371
BOX ERECTING AND VENDING MACHINE
Frank A. Gastright, Cincinnati, Ohio, assignor to Vend-A-Box, Inc., Cincinnati, Ohio, a corporation of Ohio
Original application Feb. 2, 1960, Ser. No. 6,197, now Patent No. 3,024,583, dated Mar. 13, 1962. Divided and this application July 6, 1961, Ser. No. 128,925
6 Claims. (Cl. 93—53)



1. In an erecting mechanism for normally rectangular collapsible boxes of the type having self-locking bottoms and which, in collapsed condition, are essentially flat double panels joined by opposite edge folds adapted to be forced towards one another to open the box so as to constitute one pair of diagonally opposed corners of the erected box, and crease lines across mid portions of the panels which constitute the other pair of diagonally opposed corners of the erected box, said mechanism com-

prising a support, a magazine on said support for storing a stack of said collapsed boxes, an erecting form having a generally rectangularly cornered recess, feed means for wiping the endmost one of said boxes off said stack, carrying the same along a feed path towards the form, and ramming one edge fold thereof into a corner of said recess, said feed means comprising a lever, a blade on one end of said lever, means on said blade for engaging one panel of said endmost box on said magazine, a pivot mounting said lever intermediate its ends on said support for oscillatory movement about a horizontal axis wherein during one complete feed cycle said blade sweeps along a path across the row-end of boxes on the magazine and thence towards said recess and then back to a position in which it lies across said row-end, means mounting said form on said support adjacent the end of said feed path for rotation about a vertical axis, the other end of said lever having an elongate cam slot, a drive assembly including a shaft rotatably mounted on said support in spaced parallel relation to said pivot, electric motor means and an electric supply circuit therefor for powering said drive assembly, a crank arm on said shaft, a crank pin on said arm, said crank pin engaging in said cam slot whereby upon one complete rotation of said shaft, said blade partakes of said sweeping movements, a pusher having an open angular surface adapted to engage the other edge fold of the box, a pusher chassis movably supporting said pusher on said support adjacent the blade path for sliding reciprocatory movement towards and away from said form along a line of movement substantially laterally adjacent and parallel to the feed path whereby the pusher forces the opposite edge folds towards one another until the bottom locks, cam surface means on said pusher chassis, and pin means on said crank arm drivingly engaging said cam surface means for driving the pusher towards the form, said drive assembly including means coordinated with the movements of said crank arm for rotating said form about said vertical axis from one position in which said recess faces toward said feed path for receiving the collapsed box and another position angularly displaced from the first position for holding the box in erected condition at a place remote from the feed path.

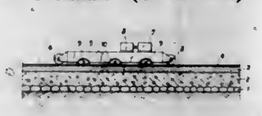
3,044,372
MACHINE AND METHOD FOR MAKING HELICALLY WOUND TUBING
Lisle G. Humphreys, Rochester, N.Y., assignor to M. D. Knowlton Company, Rochester, N.Y., a corporation of New York
Filed Jan. 28, 1959, Ser. No. 793,658
3 Claims. (Cl. 93—80)



1. A machine for making tubing of polygonal cross-section from strips of web material tending to bow when creased, said machine comprising, in combination, a rotatable spindle having a portion of its length of polygonal cross-section corresponding to the tubing to be made, means for winding a strip of web material around said spindle in a generally helical configuration to form a polyg-

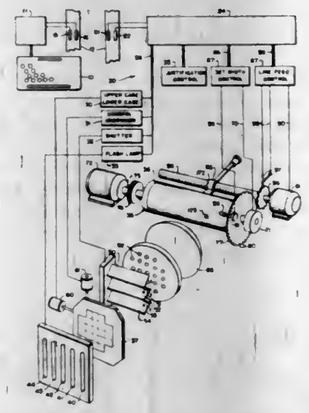
onal tube, means for moving said tube longitudinally on said spindle as it is made, a portion of said spindle being formed with inwardly recessed sides, pressure members having substantially convex bearing surfaces adapted for forcing the walls of said tube inwardly into said recesses for concaving said faces of the tubes between the intersections of the tube faces to cause the tube to assume a more nearly perfect permanent polygonal form after being discharged from said spindle and actuating means reciprocating said pressure members along said spindle in sequence.

3,044,373
BITUMINOUS SURFACES
Albert Sommer, Montagnolla, Switzerland, assignor to "Straba" Handels-Aktiengesellschaft, Zurich, Switzerland
Filed Feb. 20, 1958, Ser. No. 716,370
1 Claim. (Cl. 94—23)



In a process for making bituminous surfaces from a composition in which solid mineral particles are coated with an asphaltic bitumen binder, wherein said mineral particles are whirled up and are sprayed with liquified bituminous binder while suspended in air, for coating each individual solid particle with a thin film of binder not exceeding a thickness of 0.01 millimeter, the steps of spreading said mixture to form the top layer of a pavement of a thickness of ⅜ to 1 inch, compacting said layer to such a degree that a void content of 10 to 25% will remain in the compacted mass with air in the voids, and then hardening the bituminous component of the layer by heating the compacted bituminous layer to a temperature of about 200° C. to cause the heated air to harden said film.

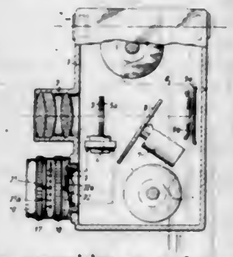
3,044,374
METHODS OF AND APPARATUS FOR PHOTOCOMPOSING TEXT MATERIAL
Allan Friedman, Chicago, Ill.
(209 Pine Point Drive, Highland Park, Ill.)
Filed Nov. 1, 1957, Ser. No. 694,019
9 Claims. (Cl. 95—4.5)



1. A method of photocomposing text material, which comprises arranging an array of typographical characters in two crossing sets of rows spaced in directions transversely of each other with adjacent pairs of rows in one direction being related as to character case and adjacent pairs of rows in the second direction being distinguished by the

characters in one of the rows occurring in the composition of the text material more often than the characters in the other row, normally positioning each of the lower case, common characters in alignment with an associated optical path, projecting the optical paths to a predetermined point on a photo-sensitive material, passing a beam of light through a predetermined one of the optical paths in accordance with each selected character to project an image of such character onto the photo-sensitive material, selectively moving the array in one of said directions a distance equal to the width of one row upon the selection of an upper case character to place such character in alignment with the optical path, selectively moving the array in the second of said directions a distance equal to the width of one row upon the selection of a less-common character to place such character in alignment with the optical path, and advancing the photo-sensitive material a predetermined distance for each character selection and in accordance with the set width of the selected character.

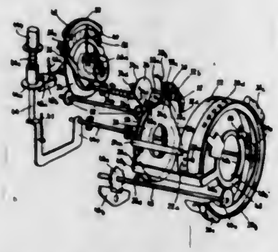
3,044,375
CAMERA WITH BUILT-IN EXPOSURE METER
Wilhelm Schäfer, Wetzlar (Lahn), Germany, assignor to Ernst Leitz Gesellschaft mit beschränkter Haftung, Wetzlar (Lahn), Germany
Filed Mar. 13, 1961, Ser. No. 95,433
Claims priority, application Germany Apr. 1, 1960
3 Claims. (Cl. 95—10)



1. A camera comprising a socket mounted on the camera casing, an exposure meter within the camera casing and having a photoelectric cell within said socket, a variable diaphragm in said socket in front of said photoelectric cell, a first adjusting ring rotatably mounted on said socket and connected to said variable diaphragm for adjustment thereof, there being an index pointer on said first adjusting ring, a first resilient detent for positioning said first adjusting ring with respect to said socket, a second adjusting ring rotatably mounted on said socket and having a film-sensitivity scale thereon cooperating with said first adjusting ring index pointer, there being an index pointer on said second adjusting ring, a light-dark area scale on said socket cooperating with said second adjusting ring pointer, and a second resilient detent connecting said second adjusting ring with respect to said first adjusting ring and having a greater strength than said first resilient detent so that adjustment of said second adjusting ring will also drive said first adjusting ring to readjust said variable diaphragm.

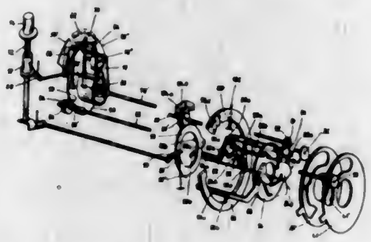
3,044,376
PHOTOGRAPHIC CAMERA
Kurt Gebele, Munich, Germany, assignor to Compur-Werk Friedrich Deckel oHG, Munich, Germany, a firm of Germany
Filed Mar. 31, 1959, Ser. No. 803,204
Claims priority, application Germany Apr. 3, 1958
13 Claims. (Cl. 95—10)

1. A photographic camera comprising a camera body including an exposure meter having a pointer, an objective unit attached to said camera body, a shutter speed control member and a diaphragm aperture control member rotatably mounted on said objective unit, means providing oppositely radially rising cams operatively connected to said control members to turn therewith, one of said control members being freely movable to a preselected position, means for moving the other of said control members to a limit position, means for biasing said other control member for return movement from said limit position, and a stop member for stopping said return movement, said stop member comprising a differen-



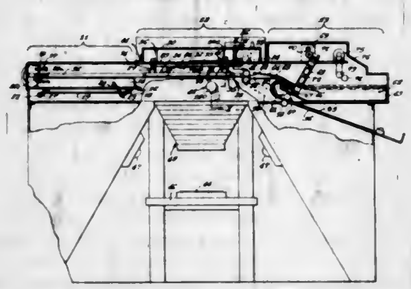
tial rocker having two adjustable points and a stop end to be adjusted by the location of said two points for abutment with an appropriate portion of the radially rising cam on said other control member, the first of said two points being in engagement with the radially rising cam on said one control member, and means releasably coupling the second of said two points with said meter pointer for assuming a position dependent on the light value indicated by said meter.

3,044,377
PHOTOGRAPHIC CAMERA
Kurt Gebele, Munich, Germany, assignor to Compur-Werk Friedrich Deckel oHG, Munich, Germany, a firm of Germany
Filed Sept. 24, 1959, Ser. No. 842,145
Claims priority, application Germany Sept. 26, 1958
9 Claims. (Cl. 95—10)



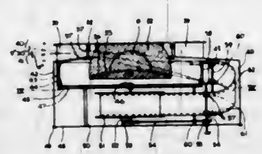
1. A photographic camera including a diaphragm having an adjustable aperture and a diaphragm aperture adjusting member movable through a range to various positions for adjusting the diaphragm to various different aperture sizes, spring means tending to move said adjusting member to a rest position at one end of its range, means for moving said adjusting member to a tensioned position at the opposite end of its range, an exposure meter, and blocking mechanism controlled by said exposure meter for blocking return movement of said aperture adjusting member from its tensioned position toward its rest position at a variable point depending upon the position of said exposure meter, characterized by the fact that said blocking mechanism includes two parts resiliently held in coupling engagement with each other by spring force, the first part being adjustable in accordance with the position of said exposure meter, the second part being an abutment for engaging said aperture adjusting member during its said return movement.

3,044,378
ADJUSTABLE STOP AND RELEASE MECHANISM FOR PHOTOGRAPHIC APPARATUS
Walter Wanielista, Westchester, and Charles Peter Sippel, Jr., Villa Park, Ill., assignors to Robertson Photo-Mechanix, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 14, 1959, Ser. No. 846,344
7 Claims. (Cl. 95—13)



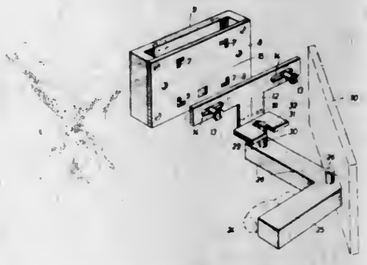
6. A mechanism for a photographic assembly comprising a photographically tight light excluding housing defining an exposure station therein, a carrier for conveying a photographically sensitized sheet to the exposure station in aligned image receiving relation to a camera assembly, a stop positioned to stop said carrier at said exposure station, adjustment means connected to said stop and accessible from outside of said housing, and release means for releasing said carrier from said stop so that the carrier may be moved past said exposure station.

3,044,379
PANORAMIC CAMERA
Albert Bouwers, The Hague, Netherlands, assignor to N.V. Optische Industrie de Oude Delft, Delft, Netherlands
Original application Nov. 13, 1956, Ser. No. 621,794, now Patent No. 2,923,220, dated Feb. 2, 1960. Divided and this application Dec. 7, 1959, Ser. No. 857,752
Claims priority, application Netherlands June 4, 1956
10 Claims. (Cl. 95—16)



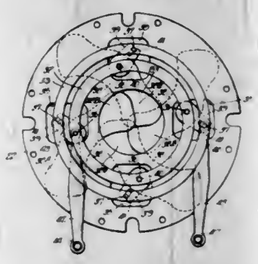
1. A panoramic camera having a horizontal field larger than 180°, comprising, a housing having an exposure aperture therein, an optical system in said housing substantially in the shape of a portion of a transparent sphere and having at least one internal refracting surface which is spherical and substantially concentric with the external surface of said optical system, a horizontal partition in said housing which divides the interior thereof into an upper compartment and a lower compartment and fits around said optical system, to thereby define a first area of said external surface which is above said partition and serves as an entrance surface of said optical system for light rays incident through said exposure aperture and a second area of said external surface which is below said partition and serves as an exit surface of said optical system for light rays having traversed said optical system, a transparent film carrier in said lower compartment spaced from said exit surface for carrying a strip of film on its outer surface, said outer surface being substantially cylindrical and having a vertical axis passing through the common center of curvature of said external and internal surfaces, and stop means in the path of the light rays before said entrance surface for preventing such incident light rays from entering said optical system whose angle with a vertical plane radial to said optical system exceeds a given value.

3,044,380
PHOTOGRAPHIC CAMERA
Carl Baur, Baldham, near Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen, Bayerwerk, Germany, a corporation of Germany
Filed July 18, 1960, Ser. No. 43,641
Claims priority, application Germany July 28, 1959
6 Claims. (Cl. 95—44)



1. A photographic camera comprising: a housing; an adjustable objective mounted in said housing; a view finder in said housing; a window in said housing; a carrier for image-field-defining mark means disposed in said housing adjacent said window and in the path of light entering said housing through said window; a transparent plate provided with a visible distance scale and being disposed in the immediate vicinity of said defining mark means and in the path of light entering said housing through said window; adjusting means for displacing said transparent distance scale plate depending on adjustment of said objective perpendicular to the path of the light from said window; and means for reflecting the light coming from said window and passing through said image field defining mark means of said carrier and said plate, into the path of rays of said view finder.

3,044,381
CAMERA SHUTTER ARRANGEMENT AND MEANS FOR OPERATING THE SAME
Eugene W. Elliott, Oak Park, Ill., assignor, by mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware
Filed Aug. 21, 1957, Ser. No. 679,431
12 Claims. (Cl. 95—63)



11. In a camera arrangement provided with a shutter housing having a central aperture therein, a first slide ring and a second slide ring mounted for rotation in said housing concentric with said aperture; a plurality of shutter blades each having a first shutter lobe and a second shutter lobe and being connected to said slide rings for movement therewith between a first position obstructing said aperture and a second position obstructing said aperture through a non-obstructing position; the combination comprising a first reversibly rotatable drive for said first

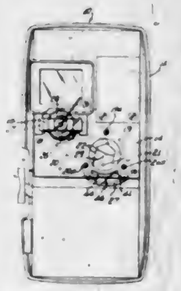
slide ring and a second reversibly rotatable drive for said second slide ring, locking means for said first and second drives being selectively operative for actuation of said drives, motor means for energizing said first and second drives for reverse rotation, and a control means responsive to rotation of said first and second drives for operating said motor means to energize said first and second drives for reverse rotation and for thereafter operating said locking means to actuate said first and second drives, whereby said shutter blades are operated from one to the other of said first and second obstructing positions.

3,044,382
PHOTOGRAPHIC SHUTTER
Kurt Gebele, Munich, and Ewald Spiessl, Deisenhofen, near Munich, Germany, assignors to Compur-Werk Friedrich Deckel, o.H.G., Munich, Germany, a German firm
Filed Dec. 8, 1958, Ser. No. 778,663
Claims priority, application Germany Dec. 14, 1957
9 Claims. (Cl. 95—63)



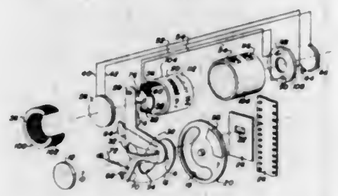
1. A photographic shutter including a plurality of shutter blades, a shutter blade drive ring operatively connected to said shutter blades and having a drive pin, a master member for operating said blade ring to open and close said shutter blades to take an exposure, a tensioning shaft for mounting said master member, a tensioning member carried by said tensioning shaft for tensioning said master member, and an auxiliary shutter blade opening and closing device, characterized by the fact that said device comprises a drive member secured to said tensioning shaft, and a push member mounted on said tensioning shaft and resiliently coupled to said drive member for limited lost motion relative thereto, said push member having at least one projection arranged to engage said drive pin and open said shutter blades as said tensioning shaft is being rotated to move said master member to a tensioned position.

3,044,383
EXPOSURE CONTROL
Niro Akahane, Suwa-gun, Nagano-ken, Japan, assignor to Yashica Co., Ltd. (Japanese name Kabushiki Kaisha Yashica), Tokyo, Japan, a corporation of Japan
Filed Feb. 2, 1960, Ser. No. 6,157
Claims priority, application Japan Feb. 5, 1959
2 Claims. (Cl. 95—64)



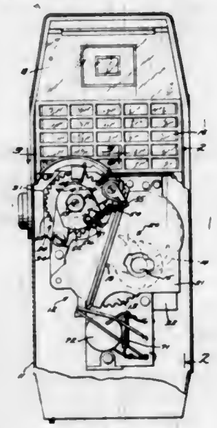
2. An improved camera of the character described comprising a diaphragm continuously movable between a fully open and a relatively closed position, a photoelectric cell, an electrically actuated motor device having an armature movable between a retracted and an advanced position and normally urged to a retracted position, said diaphragm being defined by a plurality of pivoted iris plates having inner edges delineating the diaphragm opening and means coupling and concurrently moving said iris plates, means connecting said armature to at least one of said iris plates to urge said diaphragm toward its closed position upon advance of said armature, means including a normally closed switch connecting said photoelectric cell to said electrically actuated motor device, a manually actuated member movable between a retracted and advanced position, one of said iris plates being provided with an outer edge defining a cam surface, said manually actuated member being provided with a cam follower element adapted to engage said cam surface and movable along a path which is eccentric relative to said pivot point of said one iris plate, said cam follower element being adapted to engage said cam surface to urge said diaphragm toward its closed position upon advance of said manually actuated member, and means responsive to the movement of said manually actuated member from its retracted position for opening said switch.

3,044,384
AUTOMATIC EXPOSURE CONTROLS FOR PHOTOGRAPHIC CAMERAS
Morris E. Brown, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Jan. 7, 1959, Ser. No. 785,353
14 Claims. (Cl. 95—64)



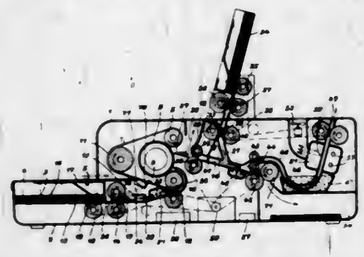
1. In a camera having a lens system for focusing an image of a viewed scene onto a photosensitive surface, and having a photoelectric-to-mechanical transducer positioned for exposure to light from said scene and energized as a function of the intensity of said light; the combination comprising: a cam coupled to said transducer and positioned thereby as a function of the energization of said transducer; a first diaphragm vane having a first elongated, tapered aperture, said first vane being mounted for pivoting movement about a first center to move said first aperture in a first path intersecting a lens axis extending through said lens system and said photosensitive surface, said first vane also having a surface adapted to contact said cam; a second diaphragm vane having a second elongated, tapered aperture, said second vane being mounted for pivoting movement about a second center, removed from said first center, to move said second aperture in a second path intersecting said first path substantially on said lens axis; a first tendency drive member adapted for cyclic movement; a second tendency drive member integral with said second vane and disposed in cooperative relation with said first tendency drive member to yieldably pivot said second vane in a first angular direction in response to each cycle of movement of said first tendency drive member; means interrelating said first and second vanes and operable, in response to pivoting said second vane in said first angular direction, for pivoting said first vane in a direction to engage said surface with said cam; and means urging said first vane in a direction to disengage said surface from said cam and urging said second vane in a second angular direction opposite to said first angular direction.

3,044,385
CAMERA
Henry J. Koeber, Deerfield, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 5, 1959, Ser. No. 844,546
6 Claims. (Cl. 95—64)



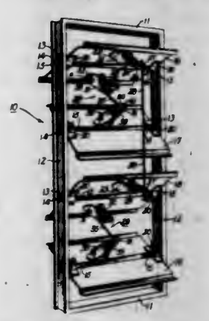
3. In a camera, a housing, a diaphragm, light sensitive means, a galvanometer including spiral spring means, a rotor member biased by the spring means and actuated by the light sensitive means to close the diaphragm against the action of the spring means, a manual control member mounted movably on the housing, and coupling means operable by the control member in one position thereof to provide a predetermined bias of the spring means and operable in a second position thereof to hold the rotor member against the bias of the spring in a position holding the diaphragm in a predetermined position.

3,044,386
APPARATUS FOR MAKING COPIES
Walter Limberger, Hamburg, Germany, assignor to Lumoprint Zindler KG., Hamburg, Germany
Filed July 13, 1959, Ser. No. 826,831
Claims priority, application Germany July 23, 1958
6 Claims. (Cl. 95—77.5)



1. A device for the production of copies using sheet material layer carriers, by exposing an original with a first layer carrier and guiding said first layer carrier into engagement with a second layer carrier for transmitting the original image to said second layer carrier, said device comprising a housing, first introducing means for the introduction of an original into the housing, second introducing means for introducing a positive layer carrier into the housing, first issuing means for guiding the original out of the housing, second issuing means for guiding the positive layer carrier and a negative layer carrier out of the housing, a lighttight chamber located adjacent said first introducing means containing a pile of negative layer carriers, an exposure device within said housing comprising an exposure cylinder and a transport belt at least partially surrounding said cylinder for guiding the original and the negative layer carrier around the exposure cylinder, a working table provided at the first introducing means having a surface having a portion parallel and in engagement with the transport belt, the lighttight chamber for the pile of negative layer carriers being provided beneath said working table, first guide means between the pile for the negative layer carriers in the lighttight chamber and the exposing device for feeding the negative layer carrier including a feed roller which is driven in a direction to transport the negative layer carrier towards the exposure device, first control means within the feed path for the original within that surface portion of the working table which engages the transport belt and within said first guide means and being adapted to be moved interdependently out of the feed path and the first guide means, respectively, a developing device within said housing, second guide means between the exposure device and the developing device, said second guide means including a separating device in which the original is lifted from the negative layer carrier sheet and guided through said first issuing means, third guide means between the second guide means and the second introducing means for feeding a positive layer carrier through said housing, second control means having stops extending into the second and third guide means and being movable out of these guide means in order to effect an alignment of a negative layer carrier sheet and a positive layer carrier sheet prior to transferring the image from said negative to said positive layer carrier, means guiding said positive layer carrier through said developing device and a pile holder to receive a pile of positive layer carrier sheets and located adjacent said second introducing means.

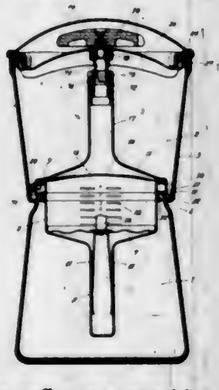
3,044,387
DAMPER AND LINKAGE THEREFOR
Milton Hinden, 701 Blackstone Ave., East Meadow, N.Y.
Filed Apr. 15, 1959, Ser. No. 806,493
1 Claim. (Cl. 98—110)



An opposed damper assembly comprising a frame, a pair of blade members pivotally mounted on said frame in a manner permitting the blades to be rotated in opposed directions to a mutually, substantially parallel open position and an aligned closed position, first and second bracket members, respectively, secured to said blades, said bracket members each having at least one bearing aperture, trunnion means supported in said bearing apertures, said bearing aperture of said first bracket member lying in substantially close adjacency to the plane of one said blade, and said bearing aperture of said second bracket

member lying in spaced relation from the plane of said other blade, a connector rod of relatively soft material secured in said trunnion means of said first bracket member, a reach arm having one end secured to said trunnion of said second bracket member and having its other end radially spaced from said trunnion, said spaced end including adjustable connector rod clamp means comprising an aperture defined by the walls of said reach rod, the dimensions of said aperture being greater than the cross-sectional dimensions of said connector rod, thereby permitting a range of angular movement of said reach rod to said connector rod when said connector rod is inserted through said aperture, said clamp means including a set screw member of relatively hard material as compared with said connector rod threaded into the end of said reach rod and arranged, upon rotation, to be projected into said aperture, said set screw member being effective, upon tightening, to secure said connector rod within said aperture in an angularly oriented relationship to said reach rod.

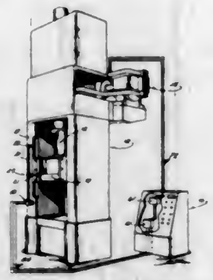
3,044,388
PRESSURE COFFEE POTS
Henri Lescure, Selongey, France
Filed Oct. 26, 1959, Ser. No. 848,827
Claims priority, application France Nov. 21, 1958
8 Claims. (Cl. 99—285)



1. In a pressure coffee pot comprising a body having a lower vessel and an upper vessel with inner lugs at the upper periphery thereof, said body being provided with a constriction at the juncture of the upper and lower vessels forming an internal seat, said coffeepot further having a removable internal assembly comprising a basin for ground coffee having a flue extending downwardly into and opening in the lower vessel, a cover for the basin having a flue extending upwardly into and opening in the upper vessel and detachably connected to the basin, an elastic washer surrounding the basin and projecting outwardly therefrom resiliently engaging the said seat, axially resilient securing means adjustably mounted on said upper flue for removable engagement with said inner lugs of said upper vessel, and adjustment means rotatably fitted on said upper flue in engagement with said securing means for imparting an axial displacement thereto up to the engagement thereof with said inner lugs.

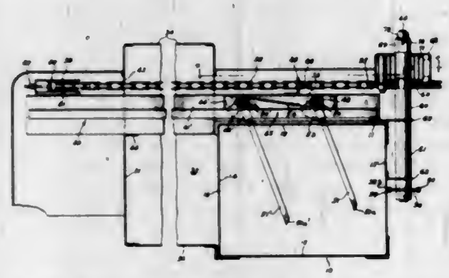
3,044,389
PRESS CONTROL MECHANISM
Kenneth B. Rexford, Mount Gilead, Ohio, assignor to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 14, 1960, Ser. No. 35,966
3 Claims. (Cl. 100—48)

3. In a press having a frame member, a relatively movable platen member actuated by a ram and controls for actuating said ram, a control mechanism comprising; a rotatable screw affixed in an axial position to said frame member; means including a guide arm and ball bearing nut affixed to said platen member for rotating said screw;



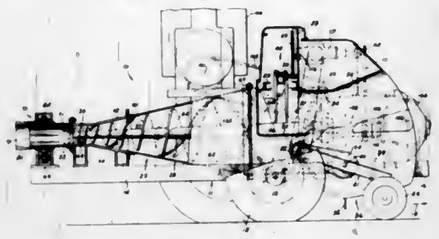
a linear potentiometer emitting a variable voltage signal geared to said screw; and preset potentiometers actuated by said voltage signal for emitting signals to operate said controls for actuating said ram at predetermined positions of said platen member.

3,044,390
HAY BALER
James W. McDuffie and Edwin B. Nolt, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed May 9, 1958, Ser. No. 734,333
5 Claims. (Cl. 100—142)



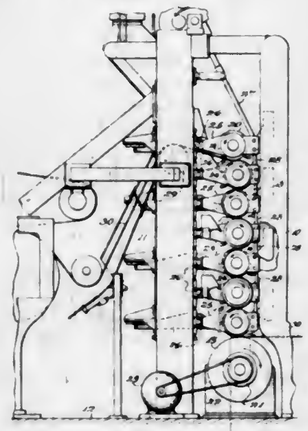
1. A hay baler comprising a generally horizontally extending bale chamber having a feed opening in a side wall thereof, a plunger reciprocable in said bale chamber and past said opening, a platform extending laterally from said one side wall and feed opening, and means operable rectilinearly above said platform and in a generally horizontal plane for conveying hay across the platform, through said opening and into said bale chamber, said conveying means comprising a track extending transverse relative to said bale chamber and having one end mounted upon and extending over the top of the bale chamber and an opposite end supported remote from the bale chamber, a carriage mounted on said track, means for reciprocating said carriage toward and away from said bale chamber, said track comprising a pair of laterally spaced, parallel track members, said carriage comprising a rectangular framework having a pair of shafts extending parallel to each other and to the extension of said bale chamber, one of said shafts being located at the end of the carriage toward said bale chamber and the other shaft being located at the end of the carriage remote from the bale chamber, said shafts having ends projecting beyond the carriage framework and each shaft end having mounted thereon a bearing member engaging said track, there being four bearing members in all, one at each corner of the framework, and feed fingers depending from said shafts and engageable with hay on said platform.

3,044,391
HARVESTER
Allwin W. Pellett, Honeybrook, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed May 15, 1959, Ser. No. 813,517
2 Claims. (Cl. 100—148)



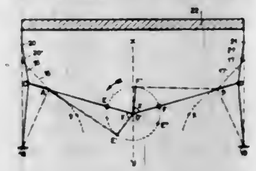
1. A machine for forming non-comminuted hay into pellets comprising an elongate compression chamber having an inlet opening at a forward end and an outlet opening at a rear end, said chamber having a conical portion extending from an end of larger diameter adjacent said inlet opening to an end of smaller diameter spaced from said outlet opening, the portion of said chamber from said end of smaller diameter to said outlet opening being generally of uniform diameter, a continuous flight rotatable compression auger extending through said chamber, said auger having a first section within said conical portion having flights which are of decreasing pitch and diameter and a shaft of progressively decreasing diameter, and a second section within said cylindrical portion having flights of generally uniform pitch and diameter, means for rotating said auger whereby hay deposited in said inlet is conveyed rearwardly and toward said outlet, the flights of both auger sections being in such proximity to said chamber that as material is conveyed rearwardly, forward movement of material between the flights and chamber is resisted, and a helical rib on the inside of said chamber wound oppositely to the flights on said auger to retard rotatable movement of the hay as it is conveyed by the auger.

3,044,392
PAPERMAKING MACHINE
Rudolf G. Minarik, Menasha, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed July 10, 1959, Ser. No. 826,301
6 Claims. (Cl. 100—162)



1. In a calender for a paper web, a first calender roll, means for mounting said roll to hold it axially fixed and permit it to rotate, means for driving said roll in rotation, a plurality of other calender rolls, a fixed frame, and mounting means connected to said frame for each of said other rolls permitting vertical movement and roll rotation of each of said other rolls and holding said other rolls disposed in a generally vertical stack with said first roll so that the paper web may pass through the nips between said rolls and over and in contact with opposite sides of alternate ones of the intermediate rolls in the stack with said first roll supporting the weight of said other rolls and said first roll driving said other rolls due to the friction between the adjacent ones of the rolls and the web, said mounting means disposing said rolls so that alternate ones have their centers on one side of a vertical axis and the others have their centers on the other side of said axis with the sides of the rolls over which the web passes being remote from said axis and with the center of each said lower other roll being closer to said axis than the center of said other roll immediately thereabove in said stack.

3,044,393
DRIVING MECHANISMS OF THE MOVABLE PLATEN OF A PLATEN-PRESS
Josef Kury, Pully, Switzerland, assignor to J. Bobst and Son SA, Prilly, near Lausanne, Switzerland, a corporation of Switzerland
Filed Apr. 11, 1960, Ser. No. 21,191
Claims priority, application Switzerland May 5, 1959
6 Claims. (Cl. 100—286)

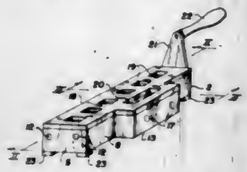


1. Apparatus for displacing a platen while retaining the attitude of the same substantially constant, said apparatus comprising spaced toggle systems each including a fixed pivot, a displaceable pivot, levers connected respectively to said pivots, and an intermediate pivot connecting said levers; means to guide the displaceable pivots in linear parallel paths extending perpendicular to the platen, a drive shaft having an axis of rotation, rods connected to the intermediate pivots; and means connecting said rods to said shaft and having connection with the rods at pivot axes spaced substantially equal distances from said axis of rotation; said toggle systems each having positions of full extension and maximum displacement and further having intermediate positions; the positions of the said intermediate pivots with the systems in full extension and in one of the intermediate positions defining straight lines which intersect at said axis of rotation.

3,044,394
MAGNETIC HOLDER FOR MARKING DIES
John E. Munn, Edgewood Borough, Pa., assignor to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 2, 1959, Ser. No. 856,801
7 Claims. (Cl. 101—28)

6. A marking tool holder comprising a body of non-magnetic material having a series of die-receiving openings therethrough with separating partitions therebetween, the body having a recess therein along two opposite sides of the openings, a series of horseshoe magnets in the two recesses with their poles positioned one above the other transverse to the axes of the openings and with poles of the magnets on one side confronting unlike poles of the magnets on the other side, said magnets being mounted

in the body for limited relative movement toward and away from each other so that their poles may engage the shank of a die slidably fitted into one of the openings,



a rod extending lengthwise of each recess, the rod extending between the poles of the magnets in the recess through which it extends positioned to limit the relative movement of the magnets toward each other.

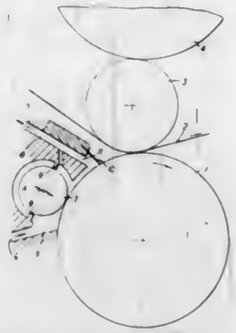
3,044,395
PRINTING MACHINES
Joseph J. Ackell, Amityville, and Herbert L. Paulding, Port Washington, N.Y., assignors to Dow Jones & Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 18, 1960, Ser. No. 63,435
26 Claims. (Cl. 101—65)



1. In a machine for making printed impressions from a series of printing devices on a continuous web of material, in combination, first feeding means for intermittently moving said web of material along a first path, second feeding means for advancing successive printing devices from a supply thereof along a second path, said paths crossing at a printing location, impression means disposed adjacent said printing location, means including a power source for operating said first and second feeding means, to advance said web and said successive printing devices along their respective paths to said printing location in timed relationship with each other, and for operatting said impression means, to thereby form a printed impression of matter appearing on the printing device at said location on the adjacent portion of said web, and means operatively associated with said first and second feeding means for shutting off said power source in response to a change in said timed relationship.

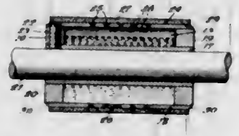
3,044,396
INKING MECHANISM FOR INTAGLIO PRINTING MACHINES
Claes B. Aller, Copenhagen, Denmark, assignor to Carl Allers Etablissement A/S, Copenhagen, Denmark, a Danish joint-stock company
Filed Jan. 4, 1960, Ser. No. 135
Claims priority, application Great Britain Jan. 2, 1959
10 Claims. (Cl. 101—157)

1. A rotary intaglio printing machine comprising a rotary printing cylinder having an etched printing surface formed with cells extending into the cylinder below the cylinder surface, an impression cylinder with which the printing cylinder cooperates to effect a printing impression at an impression zone, means to apply ink to the surface of the printing cylinder as it moves toward the impression zone, a doctor blade disposed to operate on the printing cylinder as it passes from the ink-applying means to the impression zone to remove the ink from the outer walls of the cells but leave the cells charged with ink; and, in combination therewith, a roller disposed adjacent the printing cylinder between the ink-applying means and the doctor blade, the roller operating



on the inked surface of the printing cylinder to force the ink into the etched printing surface cells and to remove surplus ink from said printing cylinder prior to the etched surface passing to the doctor blade.

3,044,397
INKING MECHANISM FOR IMPRINTERS
Robert M. Pine, Chicago, Ill., assignor to Uarco, Incorporated, a corporation of Illinois
Filed May 11, 1959, Ser. No. 812,285
1 Claim. (Cl. 101—367)

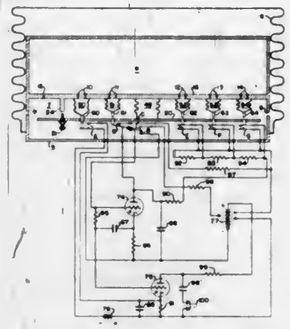


An ink supply and applicator for an imprinting unit used with a business machine, comprising: a hollow drum having inner and outer generally concentric cylindrical sleeve members and doughnut shaped head members press fitted between said sleeves in liquid-tight fashion at the respective ends of the sleeves providing an annular ink receiving space between said sleeves and intermediate said heads, means for securing the drum upon a generally horizontally disposed shaft, said means including a screw extending radially through said outer sleeve, a head member and said inner sleeve to bear against the shaft; said outer sleeve having a relatively smooth outer surface interrupted by a plurality of circumferentially extending grooves therein having a depth less than the thickness of said sleeve and a plurality of openings through the outer sleeve communicating with the interior with each of said grooves, said outer sleeve further having a closable ink filling port extending radially therethrough spaced intermediate said head members, and a fibrous material sleeve tightly embracing and covering substantially the entire width of said outer sleeve and bridging over said grooves.

3,044,398
PRESSURE-TIME RESPONSIVE ELECTRONIC FIRING DEVICE
Joseph F. Keithley, 920 Keystone Drive, Cleveland Heights, Ohio, and Matthew L. Sands, 11 Westgate, Cambridge, Mass.
Filed Dec. 30, 1949, Ser. No. 136,132
14 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)

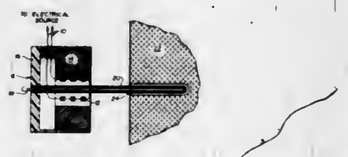
1. A pressure-time responsive device operable in response to a predetermined code of pressures comprising means responsive to a first predetermined pressure for

initially preparing said device for operation, means for causing the operation of said device in response to a second predetermined pressure existing for a predeter-



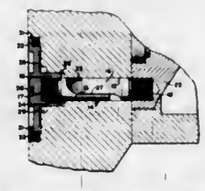
mined minimum time interval, and means for reducing said predetermined minimum time interval when said second pressure is of relatively large magnitude.

3,044,399
IGNITER FOR SOLID PROPELLANTS
Edward A. Easton, La Puente, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Aug. 4, 1958, Ser. No. 752,982
6 Claims. (Cl. 102—70)



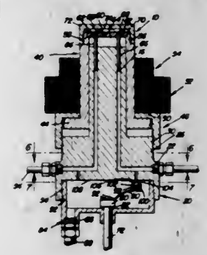
3. An igniter for solid propellants comprising: a heat generating electrical resistance element, a plurality of pellets of a first ignitable material strung upon said resistance element, a second ignitable material having a central cavity therethrough, a member coated with a pyrotechnic mixture, said second ignitable material central cavity being of sufficient volume to internally receive said resistance element and said coated member, said coated member being centrally positioned within said cavity, and said resistance element being positioned within said cavity between said coated member and the inner surface wall of said cavity.

3,044,400
SABOT
Robert L. Detwiler, Riverdale, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 21, 1953, Ser. No. 381,525
5 Claims. (Cl. 102—93)
(Granted under Title 35, U.S. Code (1952), sec. 266)



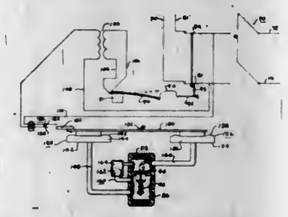
1. Apparatus for releasably securing a sabot to a gun-propelled missile comprising, in combination, a plurality of separable bolts extending through and securing the sabot to the missile, said bolts each including a pair of separable portions, each of said portions having at least one flat surface running along the axis thereof, said flat surface of each of said portions being in face adjacency with the flat surface of the other of said portions of each bolt, a metallic bonding medium interposed between said adjacent flat surfaces and fuzed thereto for securing said portions together, diaphragm means sealed to said sabot and threaded on one end portion of each bolt for applying tension thereto sufficient to secure the sabot to the missile, said diaphragm means being deformable by gas pressure when the gun is fired to move one of said portions with respect to the other of said portions thereby to break the metallic bond therebetween and to disconnect the sabot from the missile.

3,044,401
ELECTRIC INJECTION PUMP
Philip L. Sawyer, 282 Owasco Road, Auburn, N.Y.
Filed Nov. 3, 1960, Ser. No. 66,956
9 Claims. (Cl. 103—2)



1. A fluid injection pump for injecting fluid under pressure to a plurality of points of use in timed sequence, said injection pump comprising cylinder means having a plurality of bores formed therein, a piston for each of said bores, actuator means for said pistons for effecting reciprocating movement of said pistons in said bores, a source of fluid supply, individual means communicating each of said bores with a point of use and including passage means for communicating each of said bores with said source of fluid supply, and valve means for sequentially blocking said passage means and including valve actuating means for actuating said valve means in timed sequence with said actuating means, said actuating means including means for effecting simultaneous reciprocation of said pistons.

3,044,402
CONTROL FOR FLUID SYSTEM
Kenneth G. Kreuter, Goshen, Ind., assignor, by mesne assignments, to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed July 2, 1959, Ser. No. 824,734
6 Claims. (Cl. 103—25)



6. An electrical control mechanism for a fluid system having a pump, a motor for said pump, and a pipe connected to said pump for carrying the output fluid of said pump, comprising a check valve in said pipe for preventing back flow therein, an electric line to said motor, a

switch in said line, a second switch in said line between said first mentioned switch and said motor, an electric means movable in response to temperature changes, a linkage connecting said means with said second mentioned switch for opening said second switch when said means becomes warm, an electrical circuit connected to said line for heating said means, a switch in said circuit, and a means responsive to the pressures in said pipe on opposite sides of said valve for controlling said last mentioned switch so that said last mentioned switch is open when the pressure on the pump side of said valve exceeds the pressure on the other side of said valve by a predetermined amount.

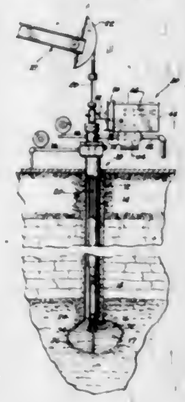
3,044,403

DEEP WELL PUMP AND VALVE

George T. Ronk, 1200–34 12th St. SW., Cedar Rapids, Iowa

Filed Oct. 13, 1958, Ser. No. 766,905

6 Claims. (Cl. 103—40)



1. A device for pumping volatile liquids comprising in combination a tube, one end of said tube inserted in a pool of liquid, a plunger having a fluid passage extending therethrough movably mounted in said tube adjacent said pool of liquid, a power operated means, an operative connection between said power operated means and said plunger to cause the plunger to oscillate in said tube, a valve mounted in said plunger for opening and closing the fluid passage therein, said valve connected to said plunger so it opens when the plunger moves in one direction in the tube and closes when the plunger moves in the opposite direction whereby the liquid in said pool is gradually pumped through said plunger and through said tube, and a quick acting discharge valve connected to said tube at a point remote from said plunger and said pool of liquid, control means connected to said discharge valve and operatively connected to said means for causing said plunger to oscillate and constructed and arranged to operate in timed relation to said means for causing said plunger to oscillate for closing the discharge valve and interrupting the outward flow of liquid for any predetermined number of strokes of the plunger whereby a hydraulic column is formed in said tube which bears against the said valve in said plunger and positively forces it closed when the plunger moves in said opposite direction through the tube, said control means being constructed and arranged to then open said discharge valve after said predetermined number of strokes to dissipate said hydraulic column and permit the liquid in said tube to resume its outward flow.

3,044,404

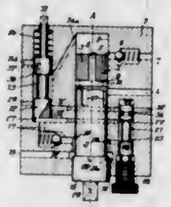
SELF-REGULATING RECIPROCATING PUMPS, IN PARTICULAR FOR THE INJECTION OF FUEL INTO INTERNAL COMBUSTION ENGINES

Pierre Etienne Bessière, 55 Blvd. Commandant Charcot, Neuilly-sur-Seine, France

Filed Nov. 28, 1960, Ser. No. 72,206

Claims priority, application France Dec. 1, 1959

7 Claims. (Cl. 103—41)



1. A self-regulating reciprocating action liquid pump which comprises, in combination, a main cylinder, a main piston reciprocable in said cylinder so as to limit therewith a working chamber of variable volume, a discharge conduit leading out from said working chamber to the outside, a shuttle slide valve mounted to control liquid flow through said discharge conduit, means forming a cylindrical housing arranged to accommodate said shuttle slide valve slidable therein, an auxiliary cylinder, an auxiliary piston slidable in said auxiliary cylinder so as to limit therewith an auxiliary working chamber of variable volume, said auxiliary piston being operatively connected with said main piston to move in synchronism therewith, liquid feed conduit means opening into said auxiliary chamber side wall, whereby the communication between said auxiliary working chamber and said liquid feed conduit means is controlled by the movement of one edge of said auxiliary piston along said side wall, conduit means connecting said auxiliary working chamber with one end of said shuttle valve housing to move said shuttle valve in one direction to produce the outward strokes thereof during the delivery strokes of said pistons, for which the respective volumes of said working chambers are reduced, spring means operatively connected with said shuttle valve for urging it in the opposed direction with respect to said housing for the return strokes of said shuttle valve, conduit means in communication with said end of said housing during said return strokes for the outflow of liquid from said end of said housing, means forming a throttled portion in said last mentioned conduit means, said auxiliary piston being provided with a passage of restricted cross-section extending from the end face of said auxiliary piston that comprises said edge thereof to a portion of the side wall of said auxiliary piston that is in communication, during the beginning of every delivery stroke of said auxiliary piston, with the opening of said liquid feed conduit means into said auxiliary cylinder, whereby, at low speeds of movement of said pistons, said auxiliary piston starts delivering liquid to said end of said housing only when said auxiliary piston has moved, on its delivery stroke, to the position where said portion of its side wall is no longer in communication with said liquid feed conduit means opening so that said passage no longer places said auxiliary working chamber in communication with said liquid feed conduit means.

3,044,405

FLUID PRESSURE GENERATOR AND ACCUMULATOR ASSEMBLY

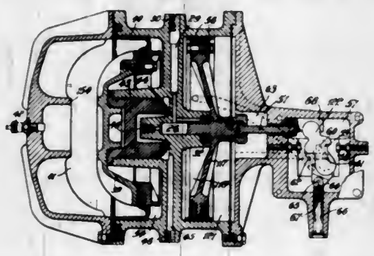
William Harold Bent, Leicester, England, assignor to Dunlop Rubber Company Limited, London, England, a British company

Filed Nov. 24, 1958, Ser. No. 775,773

Claims priority, application Great Britain Dec. 3, 1957

6 Claims. (Cl. 103—50)

1. A self-contained pressure generator and accumulator combination which comprises a housing having a partition wall separating said housing into a motor chamber and an accumulator chamber, a source of sub-atmospheric pressure, a motor element in said motor chamber dividing said motor chamber into a forward compartment and a rear compartment and having an area on one side exposed to fluid pressure in one of said compartments and an area on the opposite side having an area exposed to fluid pressure in the other compartment, said motor element being movable in a forward, force delivering, direction and reversely, means for connecting said compartments to said source of sub-atmospheric pressure, valve means connected to said motor member for connecting said rear compartment to atmosphere and closing it from said source of sub-atmospheric pressure at the end of the reverse movement of said motor member to drive said motor member forwardly under the difference in pressure in said compartments and to said source of sub-atmospheric pressure at the end of its forward movement to equalize said pressures, resilient means to return said motor member to rear position upon equalization of said pressures, a movable accumulator member in said accumulator chamber dividing said accumulator chamber into a pressurized compartment and an accumulator compartment and a pump delivering into said accumulator compartment, said pump comprising a cylinder and a plunger connected to, and reciprocable in said cylinder by, said motor member, said plunger being of less cross-sectional area than the area of said motor member subjected to the fluid pressure in said rear motor compartment.



3,044,406

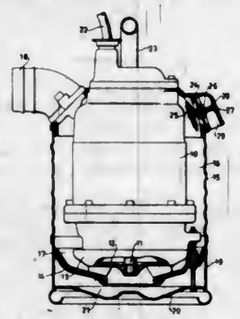
ELECTROMOTOR-DRIVEN CENTRIFUGAL PUMP

Nils Henry Börje Kristenson, Stockholm, Sweden, assignor to Scandinavian Agencies Corp. Ltd., Tangier, Morocco

Filed June 6, 1960, Ser. No. 33,967

Claims priority, application Sweden July 22, 1959

4 Claims. (Cl. 103—87)



1. A pump unit comprising, in combination, a centrifugal pump, an electric driving motor for said pump, a cooling duct system in heat exchange relationship with said electric motor, said cooling duct system having an inlet and an outlet, the inlet of said cooling duct system being connected to the delivering end of said centrifugal pump and the outlet thereof being connectible to a discharge conduit, one or more passageways leading to the ambient atmosphere provided adjacent the outlet end of said cooling duct system, a valve located in each passageway, each valve having means to maintain its associated passageway closed as long as liquid is being pumped through the cooling duct and to open the passageway automatically whenever the liquid flow ceases.

3,044,407

BOOSTER PUMP FOR PIPE LINING APPARATUS

Alfred J. Perkins, Lakeland, Fla., and Robert J. Szpakowski, North Tonawanda, N.Y., assignors to Perkins Pipe Linings, Inc., Grand Island, N.Y., a corporation of New York

Filed Aug. 16, 1960, Ser. No. 49,870

14 Claims. (Cl. 103—87)



1. A booster pump of the character described, comprising an elongated casing, means providing a longitudinal conduit extending centrally through said casing in spaced relation to the side walls thereof and having inlet and outlet openings at its opposite ends, an electric motor having a ring-shaped rotor and stator in said casing around said conduit, speed reducing gearing driven by said rotor and housed within said casing around said conduit, a bladed impeller arranged in said conduit to rotate about an axis concentric therewith and having its blade pitched to propel the material handled by the pump from said inlet to said outlet opening, and means operatively connecting said speed reducing gearing and impeller.

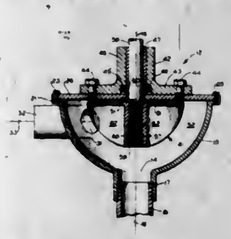
3,044,408

ROTARY PUMP

Frank M. Mellott, Penryn, Calif., assignor of one-half to James A. Dingus, Sacramento, Calif.

Filed Jan. 6, 1961, Ser. No. 81,055

1 Claim. (Cl. 103—103)



A rotary pump comprising:

(*a*) a hemispherical body symmetrical about an axis; said body including an intake port on said axis adjacent the apex of said body and a discharge port transversely disposed with respect to said axis and located adjacent the base of said body;

(*b*) a circular cover plate mounted on the base of said body and disposed at right angles with respect to said axis to form with said body a hemispherical chamber;

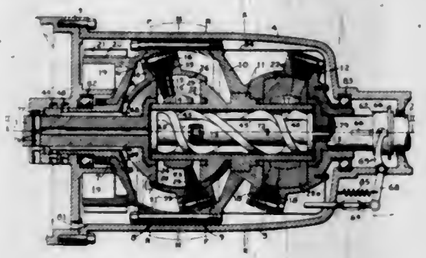
(*c*) a shaft supporting member mounted concentrically on said cover plate;

(*d*) a shaft journalled in said supporting member and extending through said cover plate into said hemispherical chamber; and

(*e*) an impeller mounted on said shaft, said impeller

including a plurality of convex blades having a center of curvature located approximately at the center of curvature of said hemispherical body, each of said blades extending radially a distance equal approximately to one-half the distance between said shaft and the periphery of said cover plate.

3,044,409
VARIABLE DISPLACEMENT HYDRAULIC ASSEMBLY
Lee T. Harris, 511 William St., Rome, N.Y.
Filed July 9, 1957, Ser. No. 670,814
9 Claims. (Cl. 103—120)



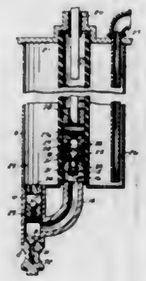
1. A variable displacement pump comprising in combination an outer housing having formed therein by non-rotating end plates an inner pumping chamber and an outer control chamber; a work input shaft rotatably mounted in said housing and extending into said pumping chamber; a rotor member operatively connected to said shaft and positioned within said pumping chamber; a plurality of vanes mounted on said rotor; a divider disk member having a corresponding plurality of slots therein; a non-rotating disk support assembly mounted in said outer housing for pivotal motion about an axis disposed at right angles to the axis of said rotor; said disk support assembly having thereon a pair of flanges positioned to form the dividing wall between said inner pumping chamber and said outer control chamber and an annular groove therein disposed outwardly of said pumping chamber adapted to receive said divider disk; said divider disk and disk support serving to divide said inner and outer chambers into two areas of complementary variable capacity compartments; said disk being operatively driven from said rotor by co-operative interaction between disc slots and rotor vanes; a plurality of slots formed in said rotor; fluid ducting means interconnecting said slots for controlling the flow of fluid in said inner compartments; secondary fluid ducting means interconnecting said outer compartments to control the pivotal position of said disk and support.

3,044,410
COMBINATION TELESCOPIC OAR AND PUMP
Warren F. Edmundson, Van Nuys, Calif., assignor, by mesne assignments, to John W. Sandberg, Encino, Calif.
Filed Apr. 8, 1957, Ser. No. 651,466
1 Claim. (Cl. 103—153)



A combination telescopic oar and air and water pump, wherein the oar includes a paddle section and a plurality of connected handle sections slidable relatively to each other, one of the handle sections comprising an operating portion of the pump, a releasable locking means on each handle section, a pump piston attached to the releasable locking means of the innermost of the handle sections, an apertured plug in one end of the device, a removable valve element for the apertured plug, said removable element forming part of the air and water pump and including spring pressed balls and a hose attachment, the locking means in the last of the handle sections acting with the pump piston when in released position.

3,044,411
PUMP PLUNGER
Vincent Santarelli, 6509 Heintz Ave., Detroit, Mich.
Filed June 20, 1958, Ser. No. 743,288
2 Claims. (Cl. 103—153)

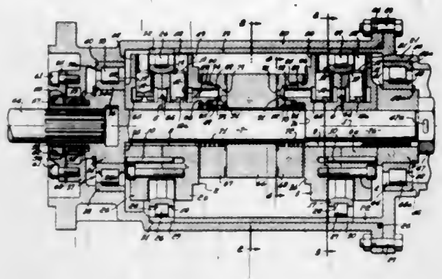


1. In a pumping mechanism embodying a liquid receiving tank having an outlet conduit extending outwardly therefrom adjacent the top thereof and terminating at its inner end adjacent the bottom of said tank; a pumping mechanism mounted in said tank and comprising a plunger receiving cylinder; a plunger slideably mounted in said cylinder, said plunger having a hollow end, spaced apart peripheral grooves on the hollow end of said plunger, sealing rings mounted in said grooves, each of said grooves being in communication with the hollow end of said cylinder through an opening, said sealing rings being radially outwardly movable into sealing engagement with the inner surface of said cylinder in response to liquid pressure delivered to said grooves through said opening; an inlet conduit communicating with said cylinder below said plunger and also communicating with a source of liquid; a check valve in said inlet conduit between said source of liquid and the lower end of said cylinder for permitting flow of liquid into the lower end of said cylinder from the source of liquid and preventing return flow of liquid from said cylinder to the source of liquid; a fitting communicating with said inlet conduit and with the interior of said tank; and a check valve in said fitting for permitting flow of liquid therethrough into said tank and preventing flow of liquid therethrough into said tank; a rod for reciprocating said plunger; a means for pivotally connecting one end of said rod to said plunger.

3,044,412
HIGH PRESSURE HYDRAULIC PUMP OR MOTOR
Elias Orshansky, Jr., New York, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed May 13, 1958, Ser. No. 734,869
6 Claims. (Cl. 103—161)

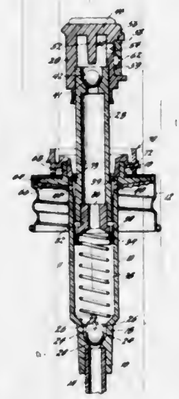
1. In hydraulic apparatus of the character described: a pair of cylinder blocks rotatable about a common axis and axially spaced from each other; a shaft means supporting the blocks for rotation in unison about said axis; said blocks having cylinder bores with radial axes intersecting the said axis; pistons in said bores; means for reciprocating the pistons in the bores; each of said bores having a port extending toward the opposite blocks; and a non-rotary valve plate interposed between the blocks, and having a pair of ports equiangularly spaced about the axis, for cooperating with said ports of both blocks;

the ports of said center valve plate being provided with openings adapted to be respectively an inlet and an outlet



port, each port communicating with ports of both cylinder blocks.

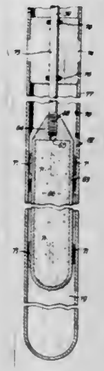
3,044,413
PUMP PISTONS
Douglas F. Corsette, Los Angeles, Calif., assignor to The Drackett Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 21, 1959, Ser. No. 841,294
3 Claims. (Cl. 103—178)



1. A piston for a fluid dispensing reciprocating pump having a barrel formed to provide an internal cylinder wall within which the piston reciprocates, said piston being integrally molded of flexible plastic material and comprising a central hub portion having a fluid passage extending therethrough, a first skirt portion constituting a thin annular wall projecting axially from said hub portion to provide an open ended cup, and a second skirt portion constituting a second thin annular wall projecting axially from the free end of said first skirt portion and in the opposite direction to provide a reversely facing open ended cup, whereby on movement of said piston in one direction, one of said skirt portions is expanded radially by the pressure of fluid within the same into sealing engagement with the cylinder wall, and on movement of said piston in the other direction, the other of said skirt portions is expanded radially by the pressure of fluid within the same into sealing engagement with the cylinder wall.

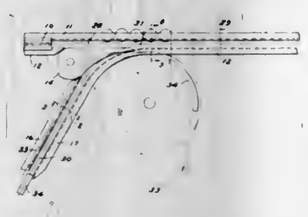
3,044,414
DEEP WELL PUMPING SYSTEM
Forrest E. Chancellor and Robert O. Chancellor, both of 2917 Pierce Road, Bakersfield, Calif.
Filed May 15, 1961, Ser. No. 110,194
10 Claims. (Cl. 103—206)

1. In a well pumping system the combination of: a string of production tubing reaching down from the top of the well; a pump barrel secured to the lower end of said tubing string; a plunger reciprocable in said barrel; a string of sucker rods connected at its lower end to said plunger and extending upwardly through said tubing string; a reciprocator at the top of the well on which reciprocator said rod string is suspended and by which said



plunger is reciprocated in said barrel; a head connected to and closing the lower end of said barrel; standing valve means in said head, there being an axial bore in said head; a shaft suspended from said plunger and slidable in said bore with a fluid-tight fit; and a heavy weight suspended on the lower end of said shaft to accelerate the downward stroke of said plunger.

3,044,415
MECHANISM FOR PROPELLING A LOAD CARRYING VEHICLE BETWEEN MAIN AND BRANCH LINES OF A MATERIAL HANDLING SYSTEM
Clarence A. Dehne, Garden City, Mich., assignor to Jervis B. Webb Company, Detroit, Mich., a corporation of Michigan
Filed July 27, 1960, Ser. No. 45,736
6 Claims. (Cl. 104—172)



1. A material handling system of the type wherein a load carrying vehicle is adapted to be propelled along a main line path of travel by engagement of a driven member on such vehicle by one of a series of spaced pusher members carried by an endless main propelling member travelling parallel to said main line path of travel, said system further including means which define a branch line path of travel intersecting said main path of travel at a switch zone; characterized by means for propelling said load carrying vehicle between main and branch lines through said switch zone comprising an auxiliary endless propelling member, means mounting said auxiliary propelling member adjacent said branch line for travel in a path which includes a portion extending parallel to and laterally spaced from the path of travel of said main propelling member through said switch zone, a second series of pusher members mounted on said auxiliary propelling member in spaced relation corresponding to the spacing between said main pusher members, means for driving said auxiliary propelling member in synchronism with

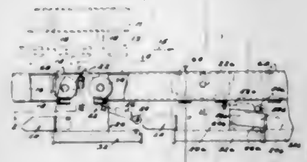
said main propelling member so that the pusher members carried by each of said propelling members travel abreast in laterally spaced side-by-side relation along the portions of the paths of travel of said main and auxiliary propelling members which are parallel, the pusher members of each of said series each having a driving face, a pusher member of one of said series being adapted to receive a load carrying vehicle driven member from a delivering pusher member of the other of said series at said switch zone, the said driving face of said receiving pusher member being located not in advance of the driving face of said delivering pusher member when moving along the said parallel portions of said main and auxiliary propelling members, and said driven member having a width transversely of the direction of travel which exceeds the said lateral spacing between said pusher members whereby said driven member is transferred from a delivering pusher member to a receiving pusher member travelling abreast thereto.

3,044,416
CONVEYOR TROLLEY WITH RELEASABLE DRIVING DOG

Sidney Reibel, Farmington, Robert Lynn Purdon, Detroit, and Martin Pachuta, Allen Park, Mich., assignors to Jarvis B. Webb Company, Detroit, Mich., a corporation of Michigan

Continuation of abandoned application Ser. No. 768,176, Oct. 20, 1958. This application Dec. 12, 1961, Ser. No. 165,981

19 Claims. (Cl. 104—172)



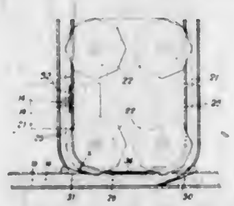
1. In a conveyor installation of the type wherein a trolley equipped with a driving dog is propelled along a supporting track by driving engagement with a pusher member of a drive line, means for moving the driving dog of said trolley to a non-driving position and holding it therein when said trolley overtakes a preceding leading trolley comprising means mounting said driving dog on said first named trolley for movement between driving and non-driving positions, actuating means connected to said driving dog, said actuating means including a member movably carried by said first-named trolley and projecting forwardly therefrom in the direction of travel, operating means carried by said leading trolley and projecting rearwardly therefrom for engagement by said actuating means whereby said driving dog will be moved to and held in non-driving position in response to such engagement, and bumper means carried by at least one of said trolleys for engagement by the other, said bumper means extending parallel to the direction of travel and being arranged to prevent contact between said actuating means and the body of said leading trolley.

3,044,417
CONVEYOR SYSTEMS

Arthur Thomas Charles Burrows, Stevenage, England, assignor to Geo. W. King Limited, Stevenage, England, a company of Great Britain

Filed Oct. 26, 1959, Ser. No. 848,669
Claims priority, application Great Britain Oct. 27, 1958
5 Claims. (Cl. 104—172)

1. A conveyor system comprising main and secondary conveyor chains including parallel juxtaposed portions having the same normal forward direction of movement, said secondary chain diverging from said main chain at a first determinable position and converging toward the main chain at a second determinable position, at least one truck adapted for being driven by said main chain, wheels on said truck whereby the latter can be driven over a supporting surface, an upright mast on said truck, a pusher dog on said main chain to engage said mast and drive said truck, a cup-like dog on said secondary chain and opening forwardly relative to said direction, said chains including links respectively adapted for engagement whereby said main chain is adapted to drive



said secondary chain, means guiding said chains into said engagement along said parallel juxtaposed portions, said cup-like dog being rearwardly of and laterally displaced relative to said pusher dog with said chains engaged, and means operatively disposed with respect to said chains at said parallel juxtaposed portions to laterally displace said mast relative to said pusher dog and independently of the divergence and convergence of the secondary chain with respect to the main chain into a position for engagement by said cup-like dog whereby the latter assumes the function of driving said truck.

3,044,418
ANTI-COLLISION SYSTEM

Rollo O. Beers, Belleville, Ill., assignor to Continental Boiler and Sheet Iron Works, St. Louis, Mo., a corporation of Missouri

Filed Dec. 2, 1960, Ser. No. 73,312
6 Claims. (Cl. 105—163)

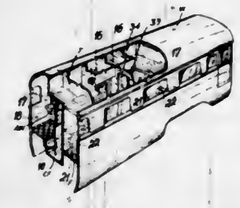


1. An anti-collision system for a crane wherein the crane includes track means, an article lifting frame for transporting articles, wheels on the frame and supported by the track means, drive means for rotating at least one of the wheels, and brake means for locking the wheels against rotation, first switch means for operating the drive means to move the crane in a first direction, and for rendering the brake means inoperative, second switch means for operating the drive means to move the crane in a second direction and for rendering the brake means inoperative, the system comprising: third and fourth normally closed switches carried by the crane, the third switch being connected to open the circuit including the first switch means, the fourth switch being connected to open the circuit of the second switch, a switch arm for opening the third switch and a switch arm for opening the fourth switch, an actuator for each switch, each actuator being supported by an obstruction against which the anti-collision system is to prevent collision by the crane, one of the obstructions being in the path of movement of the crane in the first direction and the other obstruction being in the path of movement of the crane in the second direction the actuator supported by the one obstruction having a substantially horizontal surface for moving and holding moved the third switch arm when the crane is moved in the first direction too near the one obstruction, the actuator supported by the other obstruction having a substantially horizontal surface for moving and holding moved the fourth switch arm when the crane is moved in the second direction too near the other obstruction, the horizontal surfaces of the actuators extending from the obstructions a predetermined distance according to the stopping distance of the crane after the brakes have been energized.

3,044,419
SLEEPING CAR

Massimo Majnoni, 26 Via Alberto de Giussano, Milan, Italy

Filed Jan. 31, 1958, Ser. No. 712,347
Claims priority, application Italy Feb. 7, 1957
4 Claims. (Cl. 105—315)



1. A sleeping car including opposite outer side walls, a roof defining wall connected to the side walls, a pair of spaced apart aisle defining walls located inwardly of the outer side walls and extending a substantial length of the car in parallelism to the side walls for providing therebetween an aisle for the car occupants, spaced apart transverse partition walls extending between each of said aisle defining walls and its associated outer side wall for providing a plurality of adjoining compartments on each side of the aisle, the compartments on one side of the aisle being directly opposite the compartments on the other side of the aisle, a floor for the adjoining compartments on each side of the aisle, a floor for the aisle, a ceiling wall for each compartment spaced below said roof wall, said ceiling wall having a length dimension equal to the distance between its associated outer side wall and the aisle wall on the opposite side of the aisle and a width dimension approximately one-half the length of the compartment, the part of each ceiling wall spanning the space between said aisle walls defining an aisle ceiling wall, a bed structure being adapted to be disposed in that portion of the space between the ceiling wall and the roof wall and extend into that portion of the space between the ceiling wall and the roof wall which is above the aisle ceiling wall, said transverse partition walls being of a height to extend between the floor of the compartment and the roof wall, the area of each compartment between its ceiling wall and compartment floor being suffiicent to receive seat means within the width dimension of said ceiling means, the compartment area between the compartment floor, roof wall, aisle wall, partition wall and side wall being sufficient to allow an occupant to a stand upright therein, and the aisle wall of each compartment having a portion of sufficient height to extend from the aisle floor to the ceiling wall, and a portion extending between the aisle floor and the roof wall.

3,044,420
LOAD RESTRAINING DEVICE

Durward I. Packard, Kenilworth, Ill., assignor to Brandon Equipment Company, Inc., Chicago, Ill., a corporation of Illinois

Filed May 9, 1958, Ser. No. 734,271
4 Claims. (Cl. 105—369)

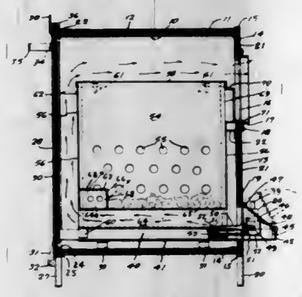


1. A load restraining device for use in a railroad freight car or the like, comprising a pair of parallel, spaced and oppositely disposed bulkheads for engaging opposite ends of a load supporting pallet on the floor of a freight car, a pair of vertically spaced linkage elements extending at least partially in back of said bulkheads from each side thereof, an equalizer plate pivotally connected to each of said linkage elements, the connections of said linkage elements to said plates therefor being near the ends of said plates, shock absorber means connected to each of said equalizer plates and to said bulkheads intermediately of the connections between the linkage elements and the equalizer plate, said equalizer plates preventing disproportionate stress from being exerted on any of said linkage elements and said shock absorber means absorbing sudden tension stresses on said linkage elements, and a means on each side of said bulkheads intermediate the bulkheads secured to said linkage elements extending from said side and to said freight car for securing said linkage elements to the freight car.

3,044,421
COMBINATION GAS FIRED INCINERATOR AND CHARCOAL BROILER

George W. Franzheim, Box 1, Valencia, Pa.

Filed May 25, 1960, Ser. No. 31,719
5 Claims. (Cl. 110—8)

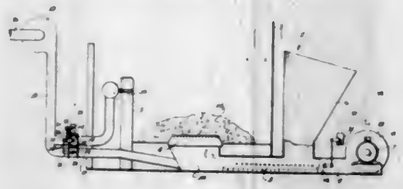


1. An incinerator comprising a cylindrical double side wall with heat insulating material therein, an end wall with heat insulating material thereon closing one end of the incinerator and having an exit opening at its top for the gaseous products of combustion, a door also with heat insulating material thereon closing the other end of the incinerator, a burner positioned in the bottom of the incinerator, rails extending lengthwise of the incinerator between the end wall and the door, a right angle parallelepiped retort in said incinerator having holes in its side walls, and a channel longitudinally of its bottom extending from the burner to the door, pivoted complementary closures on said retort, and lugs on the bottom of said retort engaging the rails for slidably positioning the retort within the incinerator.

3,044,422
SMOKE REDUCING METHOD AND APPARATUS FOR STOKERS

Earland R. Mitchell and Frank D. Friedrich, Ottawa, Ontario, Canada, assignors to Her Majesty the Queen in right of Canada as represented by the Minister of Mines and Technical Surveys

Filed July 11, 1960, Ser. No. 42,094
2 Claims. (Cl. 110—72)

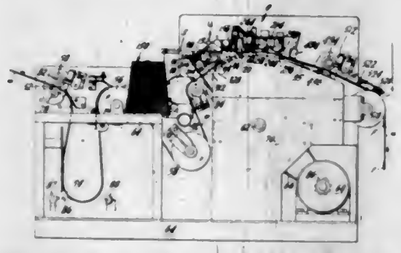


1. A method of operating a stoker having a fuel receiving bed, a windbox, a stoker fan having a duct for supply of air to said windbox, a motor operable to drive said stoker fan and having an on-off cycle and an overfire fan having a first duct leading to the space above said bed and a second duct leading to said windbox, which comprises the steps of, continuously supplying air under pressure from said overfire fan to said overfire fan ducts and during the off portion of said cycle, directing a supply of air under pressure from said overfire fan to said windbox through said overfire fan second duct while closing said stoker fan duct and overfire fan first duct and, during the on portion of said cycle, interrupting said supply of air from said overfire fan second duct to said windbox while opening said first duct and stoker fan duct, and directing a supply of air under pressure from said stoker fan through said stoker fan duct to said windbox, said windbox thereby constantly receiving a supply of air under pressure.

3,044,423
MACHINE FOR MANUFACTURING FIBROUS CONTAINER BODIES

Ralph Kennicott Pottle, Georgetown, Conn., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Apr. 14, 1960, Ser. No. 22,182
20 Claims. (Cl. 112—2)

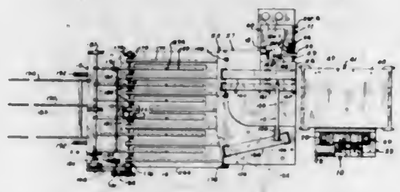


1. A machine for forming pull strings in a web of material, comprising means for guiding said web along a path of travel, means for guiding a supply string into proximity to one side of said web, loop forming means for passing a portion of said supply string through said web and forming it into a loop extending from the opposite side of said web, carrying means for reciprocating said loop forming means through a forward stroke and a return stroke substantially along a portion of said path of the web, means for operating said loop forming means through a completed loop forming cycle during only said forward stroke of the carrying means, and means for securing said web during said forward stroke to said carrying means whereby said web is advanced at the same speed as said loop forming means during said loop forming cycle.

3,044,424
WORKPIECE ACTUATED SEWING AND HANDLING MACHINE

Charles F. Kehrer, 10126 Traverse Ave., Detroit 13, Mich.

Filed June 18, 1959, Ser. No. 821,215
6 Claims. (Cl. 112—10)

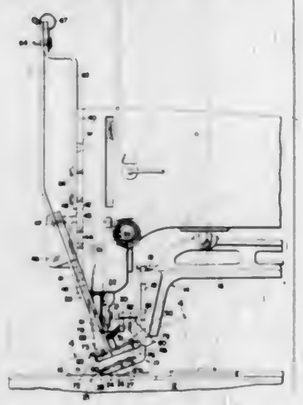


1. An automatic machine for seaming workpieces comprising a support, a seaming machine carried by said support, an arm pivotally carried by said support and positioned in one position to engage with one edge of said workpiece only after said workpiece has been moved over said arm and a seam has been made in said workpiece by said seaming machine, means pivoting said arm to turn said workpiece, whereby seams made before and after turning said workpiece will be angularly disposed relative to each other, said arm including an engaging mechanism operable to engage said workpiece and secure same to said arm only during arcuate movement of said arm, said engaging mechanism comprising a U-shaped member carried by said arm to receive an edge of said workpiece, a finger element pivotally carried by said arm on an axis disposed substantially parallel with the longitudinal axis of said arm, a disk element rotatably carried by said finger element on an axis substantially normal to said longitudinal axis of said arm, and said disk element being operable to roll onto the edge of said workpieces received in said U-shaped member, whereby on arcuate movement of said arm said disk will engage with said workpieces and prevent same from disengaging.

3,044,425
WORK CLAMP LOADING DEVICE FOR SEWING MACHINES

Roger Joseph Ross, Rockaway, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Sept. 23, 1960, Ser. No. 58,110
5 Claims. (Cl. 112—113)



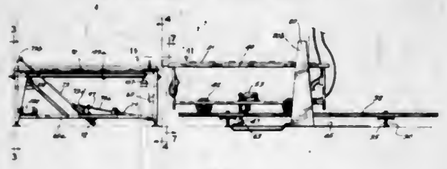
1. In a sewing machine having a casing, stitch forming instrumentalities and a work clamp carried on said

casing, means for actuating said stitch forming instrumentalities, and means for shifting said work clamp and said stitch forming instrumentalities relatively to each other to produce a pattern of stitches, said work clamp including a lower jaw and an upper jaw, article gripping means on said upper jaw, and means for raising said upper jaw for removal and replacement of work fabrics between said jaws, means for automatically loading articles into said article gripping means on said upper jaw comprising a block formed with an article accommodating track, means supporting said block with said track aligned with said article gripping means on said upper work clamp jaw in the raised position of said upper jaw, means for introducing articles in seriatim in said track, stop means carried on said block and engageable with an article in said track to prevent movement of articles in said track toward said work clamp, an article advancing member shiftably supported on said block for reciprocation lengthwise of said track, means on said article advancing member for engaging an article in said track during movement of said article advancing member toward said work clamp, spring means biasing said article advancing member toward said work clamp, means effected by raising of said upper jaw for shifting said stop means out of engagement with an article in said track, and means effected by said means for shifting said work clamp and said stitch forming instrumentalities relatively to each other for retracting said article advancing member a distance greater than that occupied by a single article in said track.

3,044,426
WORK-HANDLING APPARATUS FOR QUILTING MACHINES

Arthur Schwarzberger, % A.B.M. Mfg. Co., Inc., 1306 S. Pulaski Road, Chicago 23, Ill.

Filed Mar. 23, 1960, Ser. No. 17,133
4 Claims. (Cl. 112—117)



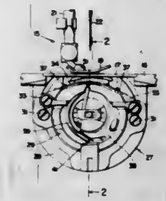
1. The combination with an overhead frame containing a stitching facility; of a carrier adapted for travel in said frame under the stitching facility, a work-containing frame mountable on the carrier for transportation by the same toward the stitching facility for the work to be engaged by the latter, a table on the side of the carrier remote from the stitching facility and having a second work-containing frame with work receivable therein for a stitching operation, means carried by the table and engageable with the first-mentioned work-containing frame when the carrier is in a position near the table to draw such work-containing frame off the carrier and mount such frame over the table, and supports carried by the table causing the work-containing frame being drawn to ride at an elevation from the second work-containing frame.

3,044,427
SEWING MACHINES WITH IMPROVED LOOP DEFLECTOR

August M. Gardner, Elizabeth, and Anthony C. Zbylut, Bayonne, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Apr. 26, 1960, Ser. No. 24,783
1 Claim. (Cl. 112—187)

A sewing machine having in combination an eye-pointed needle arranged to manipulate a needle thread, a lower stitch forming mechanism arranged to manipulate a lower thread and to cooperate with said eye-pointed needle in the formation of stitches, a shuttle carried as a part of said lower stitch forming mechanism,

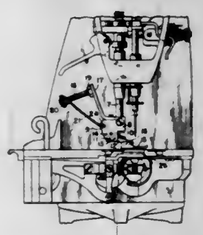


a shuttle body arranged to turnably mount said shuttle, a shuttle body cap secured to said shuttle body, a loop deflecting lug depending from said shuttle body cap, said loop deflecting lug having one substantially straight side, one slightly curved side and a curved bottom.

3,044,428
LOW MASS PRESSER MECHANISM FOR SEWING MACHINES

Arthur N. Hale, Park Ridge, John N. Covert, Lombard, and Robert W. Volkmann, Morton Grove, Ill., assignors to Union Special Machine Company, Chicago, Ill., a corporation of Illinois

Filed Dec. 28, 1959, Ser. No. 862,209
8 Claims. (Cl. 112—235)

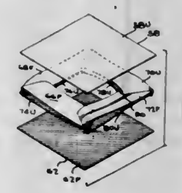


1. A presser mechanism for sewing machines comprising a presser bar, a presser foot attached thereto, a forked bracket on the presser foot, a link pivoted to the bracket, a foot bottom pivoted to the outer end of the link, and resilient means hinged on the presser foot and having a free end pressing downwardly on the link in front of its pivot with the bracket.

3,044,429
REVERSIBLE FURNITURE COVER OR RECEPTACLE AND METHOD FOR MAKING SAME

Daisy O. Levi, 6580 Santona St., Coral Gables, Fla., assignor to Daisy O. Levi and Renato Levi, jointly

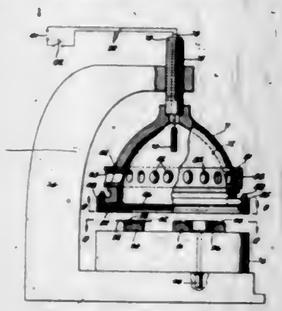
Filed Mar. 1, 1960, Ser. No. 12,059
2 Claims. (Cl. 112—262)



1. A method for forming a substantially hollow reversible receptacle or cover member having opposed pairs of fabric end panels and a peripheral side wall disposed

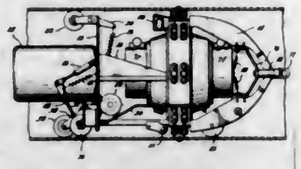
therebetween and formed of a plurality of connected opposed pairs of fabric panels, said method comprising the steps of connecting together a plurality of first panels in end-to-end relation to form a first continuous band, connecting together a plurality of second panels in end-to-end relation to form a second continuous band, flattening both of said bands so as to dispose opposite edges of the band in the same plane and superimposing one of said bands against the other with the outer peripheral edges of said bands being coincident, superimposing a fabric panel against each remotely disposed side, respectively, of said superimposed bands with the peripheral edges of said superimposed panels coincident with each other and with the peripheral edges of said bands, sewing together the marginal edges of said bands and said superimposed panels, said sewing being discontinuous to leave an unsewn portion between the ends thereof, turning said bands and said superimposed panels inside out through said unsewn portion, sewing together said bands and said superimposed panels along said unsewn portion, superimposing third and fourth panels against the now exposed sides of said superimposed panels and bands with the edges of said third and fourth panels disposed coincident with the unsewn edges of said bands, sewing together the marginal edges of said bands and said third and fourth panels in a discontinuous seam to leave an unsewn portion between the ends thereof, turning said bands, said superimposed panels and said third and fourth panels inside out through said last mentioned unsewn portion, sewing said last mentioned unsewn portions of said bands and said third and fourth panels, and forming a slot in the now juxtaposed said first and third or in said second and fourth pairs of panels, said slots confronting one another.

3,044,430
SHOCK WAVE METAL FORMING METHOD AND APPARATUS
Frank E. Zeigler, 18771 Wells Drive, Tarzana, Calif.
Filed Oct. 28, 1957, Ser. No. 692,884
6 Claims. (Cl. 113—44)



2. The method of rapidly forming a piece of material into a predetermined shape comprising positioning said piece over the forming surface of a die having said predetermined shape, positioning an explosive charge in a wave reflecting cavity directed toward said piece of material, and detonating said explosive charge to produce shock waves of certain intensity, the intensity of said shock waves impinging on said material being predetermined in accordance with the pressure required to form said material, the predetermined intensity being effected by adjusting the area of communication between said cavity and the free atmosphere prior to detonating the charge so that portions of the waves produced upon detonation are released to the atmosphere, said shock waves from said charge forcing said piece of material into said die.

3,044,431
INTERNAL PIPE CLAMP
Ernest E. Cummings, San Marcos, Tex., assignor to Crutcher-Rolfs-Cummings, Inc., Houston, Tex., a corporation of Texas
Filed May 16, 1960, Ser. No. 29,467
9 Claims. (Cl. 113—102)



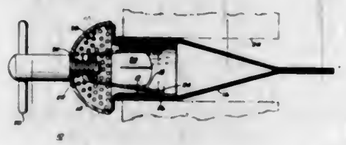
1. In a clamp to engage internally with and align adjoining ends of a pair of pipes, a housing having a chamber enclosing wall, a chamber pressure vent in said wall, two sets of separate outwardly expansible pipe engaging devices projecting through the housing wall for engagement respectively with adjacent pipe ends, a pair of pneumatic motors mounted on the housing, motion transmitting connections within the housing chamber joining one motor with one set of pipe engaging devices and joining each of said unidirectionally conducting circuit means for selective actuation, means supplying motor operating pressure fluid containing oil particles, flow connections joining the supply means with both motors and joining both motors for exhaust therefrom to the interior of the housing chamber and flow control valving in said connections selectively operable in controlling pressure fluid supply individually to the respective motors and the individual exhaust therefrom.

3,044,432
METHOD OF OPERATING AND APPARATUS FOR WATERCRAFT
Glenford J. Wennagel, Huntington, N.Y., and Robert R. Gilruth, Yorktown, Va., assignors, by mesne assignments, to Grumman Aircraft Engineering Corporation, a corporation of New York
Filed Dec. 2, 1959, Ser. No. 856,726
10 Claims. (Cl. 114—66.5)



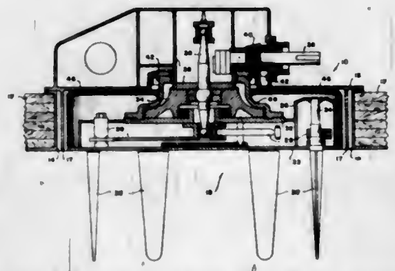
1. A hydrofoil comprising a main body having a concave bottom surface and a sharp leading edge, and a leading edge flap pivoted to the upper surface thereof and adapted to be extended to induce cavity flow around the hydrofoil.

3,044,433
DRAIN CHECK VALVES
Leon Guta, 21 Harrison Place, Clifton, N.J.
Filed Oct. 28, 1960, Ser. No. 65,745
2 Claims. (Cl. 114—197)



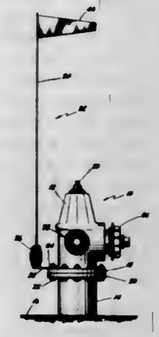
1. A drain check valve comprising a filter housing having a plurality of apertures, an expanding split sleeve connected to said housing, an expander cone coaxially mounted within said sleeve to coact therewith, handle means supported on said housing and threadedly engaging said cone, so that suitable rotation of said handle axially slides said cone relative to said sleeve to expand it, and a dilatable member mounted on said sleeve to permit the gravity flow of water therethrough.

3,044,434
CANNED ROTOR SYSTEM
Theodore H. Sarchin, 2739 N. Yucatan St., Arlington 13, Va.
Filed Sept. 23, 1959, Ser. No. 841,906
1 Claim. (Cl. 115—52)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a ship propulsion system for deep submergence applications in submarines and surface ships having a large draft, said system located at least partially within an open ended cavity formed in the hull of said ship, said cavity being defined as a body of revolution and having one end thereof closed and the opposite end open to ambient water, an annular circular flange, said annular circular flange being fixedly mounted in said cavity, a rotary plate mounted adjacent the open end of said cavity within said annular circular flange, drive means for rotating said plate relative to said ship, said drive means including a drive shaft, a bevel gear, said bevel gear being attached to said drive shaft, a bevel ring gear, a bell shaped flange, said bevel ring gear being fixedly connected to said bell shaped flange, said bevel ring gear being operatively driven by said bevel gear, means interconnecting said bell shaped flange with said rotary plate, a plurality of circumferentially spaced propeller blades rotatably mounted on said rotary plate for rotation therewith, a shaft for each blade, each said shaft having one end fixedly attached to one of said propeller blades, an enclosure for housing each said propeller shaft, each said propeller shaft being enclosed by said enclosure housing and having its other end journaled in said enclosure housing, propeller rotating means located within said cavity and connected to said respective propeller blades for rotating said blades relative to said rotary plate, a cup-shaped enclosure formed as a body of revolution concentric with said cavity and enclosing said propeller blade rotating means, said cup-shaped enclosure member being completely smooth, the peripheral edge of said enclosure being fixedly attached in a water tight relation to said rotary plate for rotation therewith and having an outer surface with substantially the same shape as the surface of said cavity with spaced immediately adjacent thereto within said annular circular flange providing only sufficient clearance to allow rotation of said rotary plate, said cavity within said annular circular flange being completely smooth continuous surface, said plate and enclosure fixedly attached thereto, rotating relative to the wall of said cavity, thereby allowing entry of water into said cavity only within the space between the outer surface of said enclosure and the surface of said cavity, whereby hydraulic losses due to rotation of the propeller blade actuating mechanism in a water medium is prevented.

3,044,435
FIRE HYDRANT MARKING DEVICE
Floyd L. Reardon, 506 6th St., Devils Lake, N. Dak.
Filed Dec. 9, 1960, Ser. No. 74,796
1 Claim. (Cl. 116—114)



In combination:

(*a*) a fire hydrant having
(*b*) a steamer connection projecting therefrom in one lateral direction,
(*c*) a pair of additional hose connections projecting in opposite directions at right angles to said steamer connection, and
(*d*) a circular flange underlying said connections with
(*e*) a plurality of vertical flange bolts contained therein;
(*f*) a single rod element including
(*g*) a straight upright mast portion,
(*h*) an integral coil spring portion near the lower end of said mast portion, and
(*i*) an integral U-shaped portion extending laterally in one direction from the lower end of said spring portion and secured to the flange bolt opposite said steamer connection; and
(*j*) a flag member of sheet material at the upper end extending in a direction generally parallel to said U-shaped rod portion, whereby said flag member indicates the direction in which said steamer connection faces.

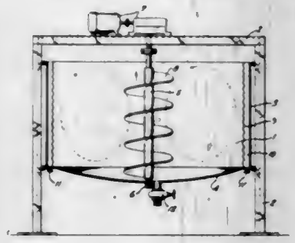
3,044,436
INDICATORS AND INDICATING SYSTEMS
William Gray Horton, 36 Gloucester Square, London W. 2, England
Filed Dec. 28, 1959, Ser. No. 862,365
Claims priority, application Great Britain June 24, 1959
2 Claims. (Cl. 116—135)



1. An indicating device comprising a rectangular metal plate having an outer surface which forms the display surface of the indicating device, a grid marking on said outer surface consisting of uniformly spaced lines parallel with the sides of the rectangular plate, a rearwardly extending integral flange along each bounding edge of said plate, said flange being provided with a plurality of uniformly spaced narrow parallel slots corresponding

to the spacing of said grid lines, the slots extending from the rear edge of each of said flanges in a direction toward the plate and being formed to extend alternately short and long distances toward said plate, the slots of greater length terminating at their inner ends in rectangular apertures extending at right angles to and at the central position of one of the longer sides of such rectangular apertures, the other longer sides of the rectangular apertures in their central position having a narrow notch constituting the end of the narrow slots, the whole forming a single constructional member, each of said rectangular apertures having a width slightly greater than the width of a stretchable narrow band-like indicating member to be stretched around and encircle the flanged plate and be received in said slots a depth greater than the thickness of said encircling member, and each of said narrow slots having a width slightly greater than the width of an endless stretchable indicating member to be stretched around and encircle the flanged plate and at a depth much greater than the thickness of such encircling member.

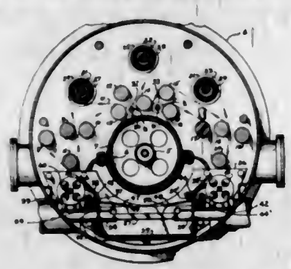
3,044,437
APPARATUS FOR CANDYING FRUIT AND THE LIKE
Adolf J. Mainzer, 34—29 80th St., Jackson Heights, N.Y.
Filed Mar. 24, 1959, Ser. No. 801,613
5 Claims. (Cl. 118—26)



1. In an apparatus for candying particles of vegetable origin, in combination, a container for the particles to be candied, said container having a bottom wall and an outer endless side wall fixed to and extending upwardly from said bottom wall, and said container also having an inner endless foraminous side wall fixed to and extending upwardly from said bottom wall and surrounded by and spaced from said outer wall so that said inner and outer side walls form between themselves an annular space; an elongated screw extending substantially throughout the entire depth of said container along a central axis thereof and having a diameter substantially smaller than that of said inner wall, so that when said screw is rotated a solution in the container will be circulated throughout the depth thereof and so that said foraminous wall will provide a turbulence in the solution at the part of the solution which is most distant from the screw; and means carried by said bottom wall and communicating with said annular space for discharging liquid out of the container through said space so as to retain the particles in the container while the liquid is discharged therefrom.

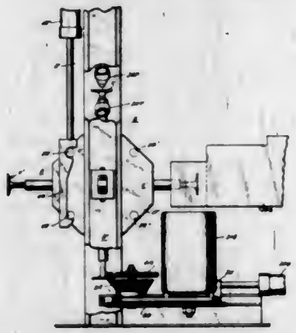
3,044,438
MEANS AND METHODS FOR METALIZING FILMS AND SHEET MATERIALS
Hannes E. Osswald and Otto A. B. Osswald, Highland, Ill., assignors to Highland Supply Corp., Highland, Ill., a corporation of Illinois
Filed Nov. 6, 1959, Ser. No. 851,299
9 Claims. (Cl. 118—49.1)

1. Vacuum-metalizing apparatus comprising an evacuated chamber, a dielectric catch pan, a dielectric trough mounted within said catch pan, means for supplying metal to said trough, vaporizing means consisting of a plurality of electrodes mounted within said catch pan and adapted to conduct an electric current for vaporizing said metal within said trough, a drum rotatably mounted within said chamber above said trough, hydraulic cooling means for cooling said drum, a first spindle means operatively mounted within said chamber for supporting a roll of sheet-stock, a second spindle means operatively mounted



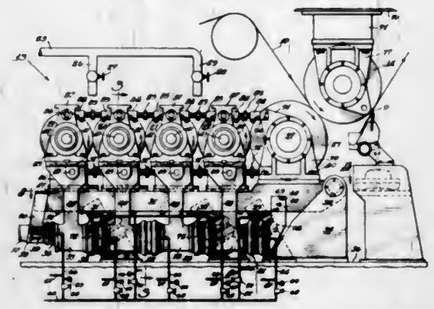
within said chamber for supporting a roll of sheet-stock, means for reeling the sheet-stock from one spindle means to the other and passing it over the drum during the course thereof, a pair of tubes mounted on opposite sides of said drum and extending longitudinally along said drum parallel to each other and to the axis of said drum, a masking element removably mounted upon said tubes and extending around the lower periphery of said drum in spaced relationship thereto, and means for cooling said tubes.

3,044,439
METAL COATING APPARATUS
Edward P. Schreyer, Ridgefield, Conn., and Marshall G. Whitfield, Garden City, N.Y., assignors to Whitfield Laboratories, Inc., Ridgefield, Conn., a corporation of Connecticut
Filed July 30, 1957, Ser. No. 675,085
19 Claims. (Cl. 118—107)



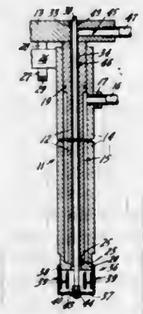
1. Equipment for coating articles comprising a plurality of holders for such articles, a movable support for said holders, the latter being mounted on said support to hold the articles in spaced relation to move in unison with the movement of said support, an article coating station having means to effect coating of the article when at such station, an article brushing station comprising a brush, means to rotate said brush and a movable mount for said brush, means to effect step by step movement of said support to advance the articles in the holders thereon from said coating station to said brushing station, means to effect movement of said brush mount to move the brush thereon into engagement with the article when the latter is at the brushing station and means to retain said brush in engagement with the article for a predetermined period of time.

3,044,440
PAPER COATING APPARATUS
Mahlon V. Molsberry, Walter G. Wefel, and Donald E. Walker, Wisconsin Rapids, Wis., assignors to Consolidated Water Power & Paper Company, Wisconsin Rapids, Wis., a corporation of Wisconsin
Filed Aug. 22, 1960, Ser. No. 51,131
8 Claims. (Cl. 118—249)



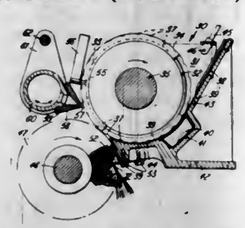
1. Apparatus for coating a moving web of paper carried by a backup roll, comprising a train of coating rolls including an applicator roll for transferring a film of coating composition to said web, a pair of gate rolls for metering coating composition disposed between them and a pair of intermediate transfer rolls, a base, a frame comprising an opposed parallel pair of side beams fixedly supporting said applicator roll adjacent one end and means pivotally and slidably supporting said gate and transfer rolls thereon, pivot means engaging said beams to said base adjacent said applicator roll supporting end, means for rocking said frame to move said applicator roll toward and away from said backup roll, means for applying and regulating pressure at the nip formed between said pivoted rolls, and separate means associated with said slidable supports for independently regulating and maintaining the proximity at the nip formed between each adjacent roll in said coating train.

3,044,441
SPRAY COATING APPARATUS
Harry Nelson Blakeslee, Barrington, Ill., and Roy Winslow Weed, Greenhills, Ohio, assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed May 6, 1960, Ser. No. 27,341
11 Claims. (Cl. 118—317)



1. A spin sprayer for coating the interior of hollow articles comprising a tubular outer member, a tubular inner member having a circular bore extending therethrough, said inner member being disposed within said outer member and forming a passage therebetween, an inlet port communicating with said passage adjacent one end thereof for admitting a fluid material under pressure into said passage, valve means integral with said inner and outer members at the end of said passage remote from said inlet port, means for reciprocating said inner and outer members relative to one another to open and close said valve means, a circular drive shaft extending through said circular bore and forming an elongated annular bearing space therebetween, said drive shaft being adapted to rotate within said bore but having substantially no axial movement relative thereto, an inlet conduit communicating with said bearing space for introducing a pressurized liquid therein, a spray head attached to said drive shaft adjacent said valve means, and means for rotating said drive shaft and attached spray head, the bearing surface for said rotating drive shaft consisting of the contiguous surface of said circular bore, said valve means in the open position permitting said fluid material to flow into said rotating spray head to be centrifugally dispensed thereby, said pressurized liquid flowing through said bearing space and emerging adjacent said valve means whereby said rotating shaft is lubricated and cooled by said pressurized liquid and the entry of said fluid material into said bearing space is prevented.

3,044,442
APPARATUS FOR APPLYING COATINGS TO SURFACES OF ARTICLES
Cyrus Dennis Pott, Halfway Green, Walton-on-Thames, England
Filed Feb. 26, 1959, Ser. No. 795,651
Claims priority, application Great Britain Mar. 3, 1958
10 Claims. (Cl. 118—602)

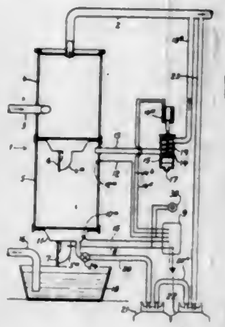


1. An apparatus for applying a continuous coating of flowable adherent substance to a surface of an article comprising a support for the article, a metering feed roller having a number of isolated closed bottom pockets of predetermined capacity uniformly distributed over its surface which roller is arranged with its axis of rotation parallel to the surface of said support, means for rotating said roller, means for effecting relative movement between the roller and support in the direction of the length of the support substantially at right angles to the fixed axis of rotation of the roller, a horizontal feed hopper extending along the length of the roller so that the roller forms a wall of the hopper which hopper has an extension on the underside thereof and in contact with a part of the surface of the roller confining the flowable substance to said pockets and leaving the surface between the pockets substantially free of said substance, and means beyond said extension for removing the substance from said pocket and projecting it on to the articles on the support, said extension of said hopper comprising a flexible apron which is arranged to extend from the hopper so as partly to encircle the roller and wherein resilient means are arranged to bear on the apron pressing it evenly on to the surface of the roller.

3,044,443
RELEASER FOR MILKING MACHINE PLANTS
Engelbert Baum, Vienna, Austria, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed June 21, 1960, Ser. No. 37,699
Claims priority, application Austria June 25, 1959
8 Claims. (Cl. 119—14.06)

1. In a milking system having a milk pipe line and a vacuum pipe line, a combined milking and washing re-

leaser comprising container means forming an upper chamber connected to both of said pipe lines, whereby liquid can be drawn from the milk line into the chamber by partial evacuation thereof through the vacuum line, the container means also forming a lower chamber having a liquid inlet from the upper chamber and having a liquid outlet, valve means for said inlet and outlet operable to open said inlet and close said outlet upon creation of a partial vacuum in the lower chamber, said valve means



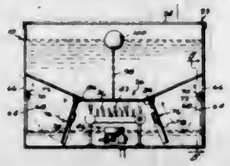
being operable to close the inlet and open the outlet upon breaking of said vacuum in the lower chamber, means for sensing high and low liquid levels in said lower chamber, and control means operatively connected to said sensing means and including a device responsive to a predetermined low liquid level in the lower chamber for connecting it to the vacuum line, and a device responsive to a predetermined high liquid level in the lower chamber for venting it to atmosphere.

3,044,444
WOODEN HENS' NESTS
David Rosenthal, 38 Maple Ave., Ellenville, N.Y.
Filed Mar. 23, 1961, Ser. No. 97,810
8 Claims. (Cl. 119—45)



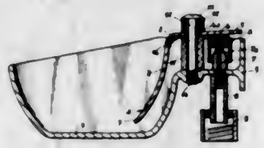
1. A wooden hen's nest formed with permanently connected tight joints between four vertical walls and a horizontal floor panel to preclude loss of powdery bedding material through cracks or crevices, comprising a long wooden continuous vertical front wall, a long wooden continuous vertical rear wall of the same length as said front wall, vertical side walls extending between the opposite ends of said front and rear walls and provided with vertical stepped rabbet grooves along the inwardly facing opposed ends thereof, the inner faces at the ends of said first-mentioned front and rear walls having vertical rabbet grooves to accommodate the respective stepped ends of the side walls, and thereby to form rabbet-joints between the front, rear and side walls, said front, rear and side walls having grooves on a common level in their inner faces adjacent to the bottom edges thereof, a floor panel seated within said last-mentioned grooves, said front and rear walls having a plurality of aligned vertical guide slots in the inner faces thereof, and removable vertical partitions slidable within said vertical slots to subdivide the nest into individual compartments.

3,044,445
HEATED DRINKING TROUGH
Edwin C. Terry and Robert C. Terry, both % Terry Bros. Repair & Supply, Urna, Ill.
Filed Mar. 18, 1960, Ser. No. 15,893
14 Claims. (Cl. 119—73)



1. A heated drinking trough comprising a relatively large water reservoir tank, a relatively small drinking water chamber within said reservoir tank, said chamber having a wall which is one wall of the tank and having a top wall spaced downwardly from the top of the water tank, a float valve within said chamber and providing a water level line spaced below the chamber top wall and controlled communication between the reservoir tank and the chamber, and a burner mounted within said chamber above the water line therein, and animal access means on said one tank wall affording access to the interior of the chamber.

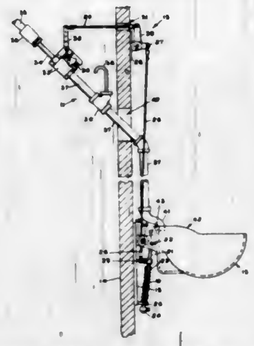
3,044,446
DRINKING TROUGHS FOR ANIMALS
Jean Vanderhoven, 53 Blvd. Ernest Solvay, Herstal, Belgium
Filed Mar. 16, 1960, Ser. No. 15,454
Claims priority, application Belgium Mar. 23, 1959
4 Claims. (Cl. 119—75)



1. An automatic drinking trough for animals comprising a trough basin having a head portion with a threaded opening therein, an inlet nozzle for connection to an external liquid supply, said inlet nozzle being disposed in said head portion of said basin, an inlet valve capping said inlet nozzle, said valve being self-openable under pressure of the supply liquid, a tiltable valve controlling element, one end thereof being in engagement with the top of said valve and the other end thereof extending into said basin and constituting an animal operating portion to be actuated by the mouth of a drinking animal, and compressible resilient mounting means in contact with said valve controlling element, said mounting means comprising a screw fitting into said threaded opening and sleeve means surrounding the shank of said screw and supporting under compression said valve controlling element so as to return it to its normal position after its actuation causing pressure on said valve and therewith a flow of water into said basin, said screw further being adjustable relative to said resilient mounting means whereby the degree of compression of said sleeve means and the force exerted on the valve controlling element can be varied.

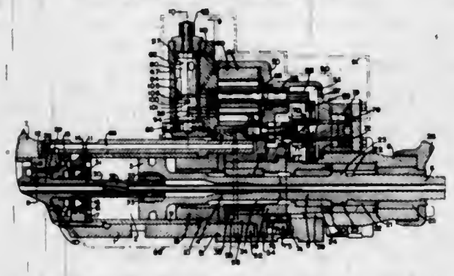
3,044,447
ANIMAL WATERING DEVICE
John H. Lenz, Winneshiek, Iowa (R.R. 1, Mabel, Minn.)
Filed Sept. 23, 1959, Ser. No. 841,876
2 Claims. (Cl. 119—75)

1. An animal watering device operable under freezing conditions, comprising a water container, a filling system for directing water to said container connected to a main pipe which is protected from freezing, said filling system including a self-draining second pipe of larger dimension than said main pipe, said second pipe extending downwardly to bring water to said container and terminating



above the maximum water containing level of said container, a valve connected to said main pipe for controlling the flow of water to said second pipe, and means operable by an animal when in drinking position at said container connected to said valve to open the latter and cause water to flow into said container.

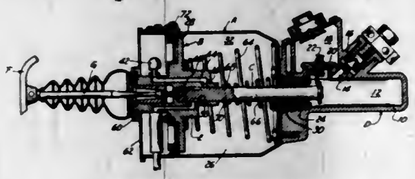
3,044,448
DUAL ROTATION FOR ROCK DRILLS
John C. Curtis, Newport, and Toimi Antero Parssinen, Warner, N.H., assignors to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 6, 1959, Ser. No. 804,366
38 Claims. (Cl. 121—7)



1. In a hammer rock drill a motor for percussively actuating a drill steel including a hammer piston and ratchet and pawl rotation mechanism operatively connected to said hammer piston whereby said rotation mechanism is operable to intermittently rotate the drill steel as it is percussively actuated, means for rendering said ratchet and pawl rotation mechanism inactive, an independent rotation motor for rotating the drill steel for supplementing or supplanting said ratchet and pawl rotation mechanism, said independent rotation motor being reversible, and means for operating said means for rendering said ratchet and pawl rotation mechanism inactive whenever said independent rotation motor is reversed.

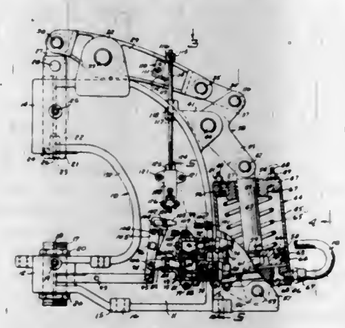
3,044,449
PRESSURE MOTOR CONSTRUCTION
Earl R. Price, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Continuation of abandoned application Ser. No. 729,853, Apr. 21, 1958. This application May 12, 1960, Ser. No. 28,740
12 Claims. (Cl. 121—38)

1. In a fluid pressure servomotor: a body member having a fluid pressure chamber therein extending generally lengthwise thereof; a movable wall member in said fluid pressure chamber, said movable wall member having a slide valve chamber therein; a force transmitting member one portion of which is slidably positioned in said slide valve chamber; abutment surfaces on said force transmitting member and said movable wall member which surfaces face each other; a body of deformable material confined between said abutment surfaces, said deformable material having the property of developing internal pressure forces therein which act in substantially all directions when compressive force is applied thereto; cooperating slide valve porting in the concentric portions of said force transmitting member and sidewalls of said slide valve chamber for producing a pressure differential across said movable wall member said porting being ar-



ranged so that when said abutment surfaces are spaced apart a normal generally predetermined distnce substantially no change in pressure differential across said movable wall member will be produced, so that when said abutment surfaces are moved further apart than said normal predetermined distance a pressure differential will be produced across said movable wall member tending to force said abutment surfaces together, and so that when said abutment surfaces are spaced closer than said generally predetermined distance a reduction in pressure differential across said movable wall member is produced; and control means projecting through an opening in one of said members into engagement with said body of deformable material for pressurizing said deformable material to force said abutment surfaces apart and thereby actuate said slide valve porting.

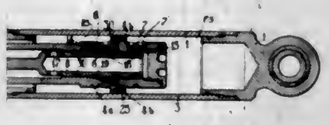
3,044,450
AIR-POWERED PRESS WITH AUTOMATIC PRESSURE RELEASE
Herbert M. Robinson, 3591 W. Outer Drive, Detroit 21, Mich.; Fay Robinson, administratrix of said Herbert M. Robinson, deceased
Filed Dec. 22, 1958, Ser. No. 782,048
6 Claims. (Cl. 121—38)



1. In an air-powered press, the combination of, a press body; a push rod movably mounted on said press body for carrying a work tool; a rocker arm pivotally mounted on said press body for moving said push rod; an air cylinder mounted on said press body and including a piston and a piston rod connected to said piston and extending through the upper end cover of the cylinder; means con-

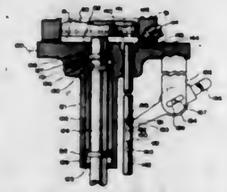
necting said piston rod to said rocker arm for rocking the same when the piston rod is moved outwardly of the cylinder; a spring in said cylinder for normally maintaining said piston in an inoperative position at the lower end of the cylinder; an air flow control valve mounted on said press body adjacent the air cylinder and being connected to the lower end of the cylinder for admitting air under pressure to the cylinder for moving the piston against the pressure of the spring in the cylinder and for exhausting the air from the cylinder; said air flow control valve including a chamber and exhaust valve for exhausting the chamber to the atmosphere and an alternately operable intake valve for admitting air under pressure into said chamber from a source of pressurized air; a tube connecting said chamber and said cylinder for conducting air under pressure from said chamber to said cylinder for moving said piston and for exhausting said cylinder to the atmosphere through said chamber and exhaust valve; lever means for manually opening said intake valve and closing said exhaust valve, whereby, air under pressure will be admitted into the cylinder to operate the press and rock said rocker arm; and, means for automatically operating said lever means to close said intake valve and open said exhaust valve after a predetermined rocking movement of said rocker arm.

3,044,451
HYDRAULIC RAM AND SELECTOR MECHANISM
William McKenzie Morrison, Wolverhampton, England, assignor to Turner Manufacturing Co. Limited, Wolverhampton, England
Filed Sept. 21, 1959, Ser. No. 841,362
Claims priority, application Great Britain Sept. 24, 1958
4 Claims. (Cl. 121—38)



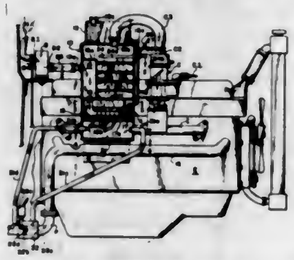
1. A hydraulic ram and selector mechanism comprising a cylinder having a closed end and on open end, a hydraulic fluid inlet adjacent the open end of the cylinder, a hollow piston in the cylinder, said piston having front and rear surfaces and including means dividing the interior of the cylinder into front and rear chambers, said piston being provided with passage means connecting the front and rear chambers, a hollow piston rod extending axially from the rear surface of said piston and protruding from the open end of the cylinder, a hydraulic fluid outlet adjacent the end of said hollow piston rod remote from said piston, a selector plunger slidably mounted in at least said hollow piston, said plunger having a bore therein and an open end, the piston on each side of the means on the piston dividing the cylinder into front and rear chambers being provided with a port between the interior of the piston and the front and rear spaces, respectively, a removable valve assembly located in each port, one of said valve assemblies controlling said passage means, cam means on said selector plunger co-operable with each of said valve assemblies, and said plunger having port means communicating with the bore of the plunger and the interior of the hollow piston rod, the arrangement being such that upon movement of the plunger means in a direction away from the closed end of the cylinder the cam means actuates the valve assembly cooperable with the passage means to open such valve means to permit the hydraulic fluid in the rear chamber to flow through the passage means into the front chamber with the other valve assembly remaining closed while upon movement of the plunger in a direction towards the closed end of the cylinder, the cam means co-operable with the other valve assembly opens said other valve assembly to permit fluid in the front chamber to flow into the bore of the plunger, the interior of the piston rod through the port means and be discharged through said fluid outlet with the first-named valve means remaining closed.

3,044,452
STARTING DEVICE
Rollin J. McCrory, Worthington, and Robert W. King, Columbus, Ohio, assignors, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware
Original application May 16, 1958, Ser. No. 735,795, now Patent No. 2,959,159, dated Nov. 8, 1960. Divided and this application Mar. 16, 1960, Ser. No. 15,464
2 Claims. (Cl. 123—7)



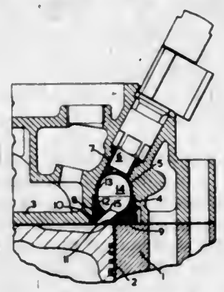
1. In a free-piston engine having a free piston reciprocable in a frame, a starting mechanism comprising: a support member fastened to said frame; a starting rod having two longitudinal slots in the side thereof, reciprocably and rotatably mounted in said frame, said rod connecting with said piston on rotation to a first position and disconnecting from said piston on rotation to a second position; a lever member pivotally supported in said support member and having a handle at one end and a tip at the opposite end, the movement of said tip in rotation about said pivot intersecting the path of reciprocation of one of said slots at said first position, said tip operable by said handle in rotation engaging said one slot and reciprocating said piston, the movement of said tip in rotation about said pivot intersecting the path of reciprocation of the other of said slots at said second position, said tip operable by said handle in rotation engaging said other slot and moving said piston in one direction.

3,044,453
METHOD AND APPARATUS FOR FUEL COMBUSTION
Edward A. Hoffmann, 3318 Carlisle Ave., St. Petersburg, Fla.
Filed Nov. 29, 1961, Ser. No. 155,679
5 Claims. (Cl. 123—25)



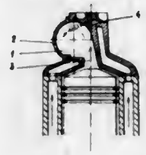
1. In a fuel burning apparatus, means to mix fuel and air including:
(*a*) means having a fixed fuel flow opening,
(*b*) means forming a flow path for air past said fuel flow opening,
(*c*) means upstream from said fuel flow opening maintaining a body of water,
(*d*) means to discharge air in said body of water, and
(*e*) means to maintain the temperature of air passing toward said fuel flow opening at a predetermined degree.

3,044,454
COMBUSTION CHAMBERS OF COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES
Douglas Leslie Sutton, Solihull, England, assignor to The Rover Company, Limited, Solihull, England, a British company
Filed Apr. 4, 1960, Ser. No. 19,674
Claims priority, application Great Britain Apr. 7, 1959
7 Claims. (Cl. 123—32)



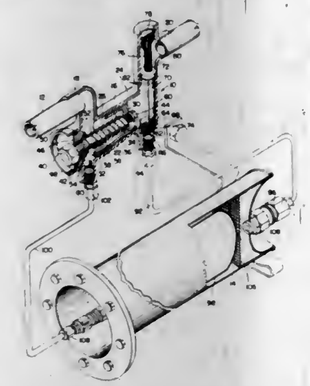
1. In an internal combustion engine of the compression ignition liquid fuel injection type, a piston and cylinder structure comprising a cylinder, a piston working in said cylinder, a combustion chamber, said chamber communicating with said cylinder through an opening through which a substantial proportion of the air charge is force during each compression stroke of said piston, and said chamber being of substantially spheroidal shape, first and second liners, each of said liners being of substantially hemispherical shape and being in the form of pressings made from heat-resisting metal sheet, said liners being disposed in said chamber and so shaped as to follow the contours of the wall of said chamber but to be spaced from that wall to leave a clearance space of substantially uniform thickness over substantially the whole of the interior surface of said chamber, said space being in communication with the interior of said liners, whereby it is exposed to the gases of compression and combustion.

3,044,455
HOT BULB INTERNAL COMBUSTION ENGINE AND A METHOD OF OPERATING THE SAME
Alfréd Pápa, Géza Szilvay, and János Zombory, Budapest, Hungary, assignors to Licencia Lalalmanyokat Ertekesito Vallalat, Budapest, Hungary, a corporation of Hungary
Filed June 26, 1958, Ser. No. 744,853
1 Claim. (Cl. 123—32)



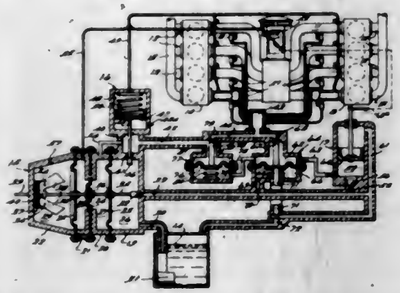
In a hot bulb internal combustion engine including a working cylinder and a combustion chamber for the air-fuel mixture: said chamber having a substantially hemispherical cooled half, and a substantially hemispherical uncooled half, the uncooled half forming the hot bulb; a substantially rectilinear air injection channel opening into said cooled half and having an outer flow-directing surface tangent to said cooled half at a point substantially in advance of the leading edge of said uncooled half, whereby the air is directed tangentially into said cooled half for circular and smooth flow over the surface thereof in advance of the leading edge of said uncooled half, the injected air, being in constant contact with smoothly merging guiding surfaces due to such tangential injection, having a smooth streamline flow avoiding the formation of eddies; and a fuel injection nozzle opening into said cooled half of the chamber and oriented to direct the entire quantity of the injected fuel into said cooled half and into the air already flowing circularly and smoothly over the surface of said cooled half, in the same direction as that of the air flow past the opening of the nozzle into said cooled half; said fuel nozzle opening being located immediately in advance of the leading edge of said uncooled half of said chamber, so that the jet of fuel is directed along the shortest possible arcuate path to the portion of the hot bulb first touched by the flowing air; said fuel jet entering the smoothing circularly flowing air stream from the radially outer surface thereof, whereby to prevent air entering between the fuel jet and the surface of the chamber to form eddies; said air injection channel having a cross section of 4% to 6% of the internal surface of the combustion chamber; whereby the temperature of the uncooled surface of the combustion chamber is maintained below 600° C.

3,044,456
PROPORTIONING VALVE
Joseph E. Tripp, Bolton, and Walter H. Witzel, Sudbury, Mass., assignors to Proval Corp., Worcester, Mass., a corporation of Massachusetts
Filed May 4, 1961, Ser. No. 107,714
10 Claims. (Cl. 123—41.42)



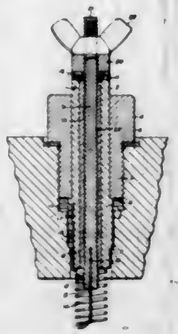
6. Apparatus for directing a corrosion resistant material into the liquid cooling system of a marine engine comprising a tank, corrosion resisting material stored in the tank, a bleed adapted to connect the cooling system and the tank for applying pressure to the tank, a proportioning valve having a housing, a second bleed connecting the cooling system to the housing for directing liquid from the system to the housing, means including an orifice formed in the wall of the housing interconnecting the tank and the housing for conveying the material to said housing, a restrictor disposed in the housing creating a low pressure region at the orifice for inducing flow of the corrosion resistant material into the housing from the tank, means for directing the contents of the housing to the cooling system, a valve disposed in the housing and movable in response to a preselected maximum flow rate through the housing for stopping flow through the housing, and a needle disposed in the housing and carried by the valve and biased to a position wherein the needle is disposed in and cleans the orifice, said valve removing the needle from the orifice in response to flow of the cooling liquid through the housing exceeding a preselected minimum rate.

3,044,457
FUEL INJECTION SYSTEM
Thomas M. Ball, Bloomfield Hills, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,508
20 Claims. (Cl. 123—119)



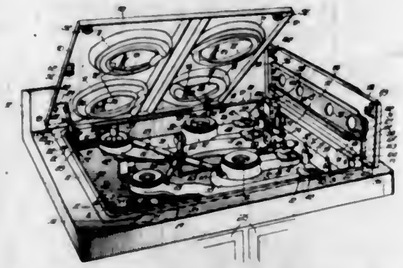
1. In a fuel injection system for an internal combustion engine, a fuel supply, a fuel feed conduit connecting said engine with said fuel supply, a return flow conduit communicating with said fuel feed conduit and said fuel supply, accelerator means in said system adapted to receive fuel therefrom, said accelerator means communicating with said fuel feed conduit and being operative to supply accelerating fuel thereto, and pressure increasing means communicating with said return flow conduit and said accelerator means and responsive to pressure developed by said accelerator means to restrict the flow of fuel through said return flow conduit to said fuel supply.

3,044,458
ELECTRONIC STARTER PLUG FOR DIESEL ENGINES
Hjalmar Finvik, 1127 Rahway Ave., Avenel, N.J.
Filed Jan. 13, 1961, Ser. No. 82,533
2 Claims. (Cl. 123—145)



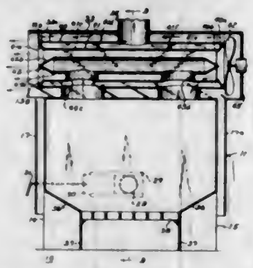
1. A glow plug designed to be situated in the block of internal combustion engines comprising a cylindrical electrode having a threaded surface, a solid tubular electrical insulator having a threaded interior bore, the threads of the interior bore frictionally engaging the threads of the exterior surface, and another tubular member constructed of electrically conducting material, said another member having an interior bore secured to the exterior surface of said insulator, igniting means electrically connected to said electrode, wherein said igniting means comprises an electrical helical heating coil having one end connected to the end of said electrode designed to protrude within the the block, the other end of said coil being connected to said another member, the individual turns of said coil being spaced for permitting cooling thereof, and a set screw for securing said other end of said coil to said another member.

3,044,459
COOKING UNIT
Reeves Brown, Cleveland, Tenn., assignor to Hardwick Stove Company, Cleveland, Tenn., a corporation of Delaware
Filed Feb. 15, 1961, Ser. No. 89,523
6 Claims. (Cl. 126—39)



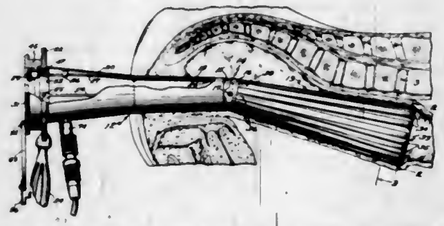
1. A cooking unit for installation in a supporting structure comprising a box open at the top and providing a chamber for cooking top burners and control valves for said burners, cooking top burners disposed in said chamber, control valves disposed in said chamber and having upwardly extending valve stems, said cooking top burners and said control valves being disposed within the area of the open top of said chamber, a first cover part hinged to the top of said box and provided with openings located to register with said cooking top burners when said first cover part is in closed position disposed horizontally over the cooking top burner area of said chamber, said first cover part being of an area to cover the cooking top burner area of said chamber when in closed position and adapted to be swung upwardly to open position for access to the cooking top burner area of said chamber, and a second cover part hinged to the top of said box and provided with openings which are positioned over said valve stems when said second cover part is in closed position disposed horizontally over the control valve area of the open top of said chamber, said second cover part being of an area to cover the control valve area of the open top of said chamber when in closed position and adapted to be swung upwardly to open position for access to the control valve area of said chamber, said first and second cover parts having margins disposed in adjacent relation when said cover parts are closed and the entire open top of said chamber being open and unobstructed over the cooking top burner area and the control valve area when said cover parts are swung to open positions.

3,044,460
HEATER CONSTRUCTION
Gordon H. Hoskinson, 22101 Jamaica Ave., Queens Village, Long Island, N.Y.
Filed Dec. 5, 1957, Ser. No. 700,809
13 Claims. (Cl. 126—110)



2. A heating apparatus comprising a casing including a top, a front, a back, and sides defining a fire burning area, means forming an opening in the front of said casing to provide access thereto, spaced external side cover means secured in spaced relation to either side of said casing and terminating substantially at the top of said casing thereof, spaced back external cover means secured in spaced relation to the back of said casing for passage of air upwardly therebetween, outlet means provided at the top of said casing and extending in vertical relationship thereto; elongated heat exchanger means secured to said outlet means in transverse relationship thereto, each end of said heat exchanger means being open, said heat exchanger means being above the top edge of each of said side cover means, said heat exchanger means including an outer casing and an inner casing spaced from one another, said inner and outer casings being sealed to one another at each end thereof thereby defining an enclosed area, said inner casing being in laterally detachable relationship with respect to said outer casing, the smoke from the fire burning area passing into said enclosed area, inclined baffle means secured to the outside surface of said inner casing to provide a tortuous path for the smoke, exhaust means secured to the top of said heat exchanger means in transverse relationship thereto for carrying off smoke, heat, and the like, draft inducing means connected to said exhaust means, blower means positioned at one end of said heat exchanger means to blow air therethrough in substantially transverse relationship to the passage of heat, and the like coming from said casing.

3,044,461
PROCTO-SIGMOIDOSCOPE
Charles L. Murdock, West Redding, Conn.; Barbara Murdock, executrix of said Charles L. Murdock, deceased
Filed Jan. 21, 1960, Ser. No. 3,935
20 Claims. (Cl. 128—4)



1. A surgical instrument of the procto-sigmoidoscope type adapted for smooth insertion through the sigmoid flexure and affording enlargeable access to the interior of the colon therebeyond, comprising two individually elongate straight tubular units joined with their axes end to end, a proximal one of said units being rigid and of sufficient length to house an entrance passageway reaching through the sigmoid flexure of an adult and having a terminal opening for admitting surgical instruments to said passageway, and a distal one of said units having a circumferentially continuous tubular wall of stretch inhibiting material forming and completely encompassing a continuation of said passageway, said tubular wall having relatively movable components operative to permit without gaps an enlargement of the girth of said distal unit, and actuating means occupying said passageway operatively related to the components of said tubular wall and extending therefrom to said terminal opening for manipulation thereat in a manner to cause and control said enlargement of girth of said distal unit.

3,044,462
MASSAGING APPARATUS
Karl J. Leufvenius, 6404 Indian Hills Road, Minneapolis 24, Minn.
Filed Sept. 8, 1960, Ser. No. 54,708
5 Claims. (Cl. 128—33)

4. In a massaging apparatus, an elongated horizontal base, a drive motor mounted at one end of the base, a circular massaging element mounted at the other end of the base and having driven connection with the motor to wobble in a circular path about a generally upright axis to have a massaging action upon body tissues disposed



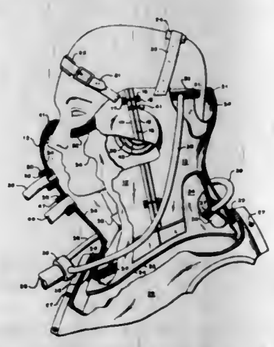
thereon, a hood over the motor, an elongated bag of flexible waterproof material extending over and around to completely enclose said other end of the base and said massaging element and having its open end peripherally secured between the base and said hood.

3,044,463
CAST SHOE
Delbert A. Cool, Box 24, Ferdig, Mont.
Filed May 25, 1959, Ser. No. 815,478
2 Claims. (Cl. 128—80)



1. A cast shoe comprising, in combination, an inner sole, an outer sole, spacer means supporting said inner sole in spaced apart parallel relationship with said outer sole, rocker means integral with said outer sole, said outer sole being of slightly larger size and substantially identical shape as said inner sole, and said spacer means comprising a plurality of longitudinally spaced apart and transversely extending ribs integral with said inner sole, said rocker means comprising a downwardly extending projection, said projection having a simple curvature intermediate the opposite ends of said outer sole.

3,044,464
LOWER FACE, HIGH PRESSURE MASK
Reuben F. Gray, Levittown, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 29, 1959, Ser. No. 823,787
10 Claims. (Cl. 128—142)
(Granted under Title 35, U.S. Code (1952), sec. 266)



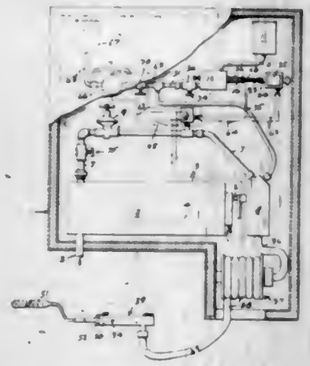
9. In combination, a mask having an upper and a lower periphery dimensioned and contoured to fit over the nose, ears, and encircling the back of the head of the wearer at the upper periphery exposing the eyes and the top of the head of the wearer and extending to the neck-shoulder junction at the lower periphery, inflatable means secured to the entire upper and lower peripheries of said mask, and respiratory means coupled to said mask.

3,044,465

MIXING AND DISPENSING APPARATUS

Edith T. Anderson and Jack E. McLaughlin, Yuba City, Calif., assignors to Andermac, Yuba City, Calif., a corporation

Filed May 8, 1958, Ser. No. 733,901
6 Claims. (Cl. 128—230)



1. Apparatus for mixing liquids, including water, and for discharging the resultant mixture into body cavities, wounds and the like of persons for cleansing, sanitizing, and treating the tissues thereof comprising: a closed tank for water, a receptacle for a different liquid, a mixing chamber, a first pipe and a second pipe respectively connecting said tank and said receptacle with said mixing chamber, a continuous source of water under substantially constant predetermined pressure higher than the pressure at which the mixture of water and said different liquid is to be discharged from said mixing chamber connected with said tank for maintaining said tank filled with water under said predetermined pressure and for moving said water from said tank and through said first pipe to said mixing chamber, first control means in said second pipe for positively moving a predetermined amount per minute of said different liquid from said receptacle through said second pipe into said mixing chamber, separate control means in said first pipe for controlling the pressure of the water moved through said first pipe into said mixing chamber and for controlling the volume of flow per minute of said water through said first pipe into said mixing chamber, a relatively long flexible tube for conducting the mixture from said mixing chamber to a discharge nozzle, means connecting one end of said tube with said mixing chamber, a discharge nozzle at the opposite end of said tube adapted to be inserted into a body opening and body cavity in a person and a manually actuatable valve in said tube for controlling the discharge of said mixture from said discharge nozzle.

3,044,466

VALVE AND PUMP ASSEMBLY FOR CLOSING AND IRRIGATING FLUID DRAINAGE TUBE IN SUCTION APPARATUS

Stanford A. Henderson, Snyder, N.Y., assignor to Gomco Surgical Manufacturing Corp., Buffalo, N.Y., a corporation of New York

Filed Dec. 23, 1960, Ser. No. 77,908
16 Claims. (Cl. 128—276)

1. In suction apparatus including a closed receptacle and a fluid drainage tube communicating with the interior of said receptacle, the combination therewith of a valve and pump assembly for closing a portion of said tube and irrigating said tube upstream of said tube portion, said assembly comprising hollow pump body means containing irrigating fluid and having its interior connected with the interior of said tube upstream of said tube portion, valve body means associated with said pump body means and receiving said tube portion, valve closure means movable relative to said valve body means for closing and opening said tube portion, and pump actuating means movable in said pump body means for moving said valve closure means to close said tube portion and for forcing irrigating fluid from said pump body means into said tube upstream of said tube portion.

16. In suction apparatus including a closed receptacle, separate suction and fluid drainage tubes communicating with the interior of said receptacle, and a suction pump connected with said suction tube, the combination therewith of a self-opening valve and pump assembly for closing a portion of said drainage tube and irrigating said drainage tube upstream of said tube portion, and for automatically opening said tube portion following irrigation of said drainage tube, said assembly comprising an elongated and generally cylindrical tubular pump body containing irrigating fluid and having interconnected pump and valve chambers, a head closing said pump chamber at one end of said pump body, a valve body closing said valve chamber at the other end of said pump body and having a transverse through bore receiving said tube portion, a longitudinal valve bore connecting said transverse bore with said valve chamber, an inlet and outlet passage connecting said valve chamber with a source of irrigating fluid and the interior of said drainage tube upstream of said tube portion respectively, and a normally closed check valve arranged in each passage, a valve piston reciprocable in said valve chamber and having a port communicating with said pump and valve chambers, a poppet valve reciprocable in said port, and a plunger reciprocable in said valve bore, said valve piston and plunger being movable toward said valve body for closing said tube portion and opening said outlet check valve and poppet valve, and being movable toward said head for opening said tube portion and inlet check valve and closing said poppet valve to draw irrigating fluid into said valve chamber, a pump piston reciprocable in said pump chamber and having a manually operated actuating plunger reciprocable through said head, said pump piston and plunger being movable toward said valve body for moving said valve piston and plunger under fluid pressure toward said valve body and for forcing irrigating fluid from said pump chamber through said port, valve chamber and outlet passage into said drainage tube upstream of said tube portion, and being movable toward said head for opening said inlet check valve and poppet valve and drawing irrigating fluid from said source through said inlet passage, valve chamber and port into said pump chamber prior to irrigation of said drainage tube, and a compression spring surrounding said valve plunger and engageable with said valve piston and valve body for automatically moving said valve piston and plunger away from said valve body following irrigation of said drainage tube.

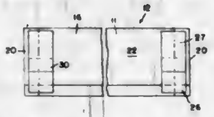


3,044,467

PANTY PAD

Loyola E. Campau, 323 Ridgemont Road, Grosse Pointe Farms, Mich.

Filed Feb. 29, 1960, Ser. No. 11,566
1 Claim. (Cl. 128—290)



A garment shield adapted to be worn in the crotch of the garment as a protective covering liner therefor, said device comprising an elongated, imperforate rectangular sheet-like member composed of superimposed extremely thin layers of a readily disposable soft, pliant, absorbent paper-like material and the entire upper surface of which is uninterrupted and exposed, the end portions of said member being folded back flat against the under surface of the intermediate portion of said member between the end portions thereof in surface-to-surface relation therewith, and elongated, flexible narrow strips having adhesive on opposite surfaces thereof, said strips extending transversely of said member along the marginal edges of said end portions and overlying and adhering to the under surface of said intermediate portion thereof and to said folded back end portions by the adhesive on one of the surfaces of said strips to secure said end portions in place, the adhesive on the opposite surfaces of said strips being adapted to secure said member to the inner side of the crotch of the garment in a position extending from front to back, and a protective cover applied over and adhered to the adhesive on the said opposite surfaces of said strips adapted to be removed prior to use, said member being extremely thin in comparison with its length and width so as to be capable of readily bending in a sharp, abrupt fold as required to conform to the body of the wearer, and said adhesive strips being located in inwardly spaced relation to the margin of said member to protect the body of the wearer from contact with the adhesive, said adhesive on said opposite surfaces of said strips constituting the sole means of attachment of said device to the garment so that the portions of said device between said strips can flex freely and readily conform to the body of the wearer.

3,044,468

CATHETER HAVING BUILT-IN INFLATION MEANS

William Clifford Birtwell, North Scituate, R.I., assignor to Davol Rubber Company, Providence, R.I., a corporation of Rhode Island

Filed Dec. 1, 1958, Ser. No. 777,276
9 Claims. (Cl. 128—349)



8. A catheter comprising an elongated flexible shaft having a proximal end and a distal end, a main lumen extending longitudinally through said shaft, an inflatable balloon on said shaft adjacent the distal end thereof, an inflating lumen extending longitudinally of said shaft and communicating with said balloon, a funnel portion at the proximal end of said shaft for receiving a connecting tube, and a depressible, fluid-containing reservoir located adjacent said funnel portion and communicating with said inflating lumen, said reservoir and lumen being defined by an integral one-piece construction wherein the fluid contained in said reservoir is permanently sealed and constitutes a permanent part of said catheter, whereby depressing said reservoir forces the fluid contained therein through said inflating lumen to said balloon to inflate the latter.

3,044,469

BATH APPARATUS FOR TREATING AND STIMULATING HUMAN BODY

John Vigh, 498 Hart St., Brooklyn, N.Y.

Filed May 22, 1961, Ser. No. 111,649
3 Claims. (Cl. 128—365)



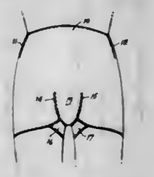
1. Apparatus of the character described comprising an elongated pipe formed into three superposed elongated loops adapted to extend the length of a bathtub, on the inside thereof, with the long reaches of the loops spaced laterally from each other providing a space for the user of the bathtub to sit therebetween, U-shaped brackets for holding the loops in superposed relation, heat radiating fins on the curved ends of the loops, an extension on the topmost loop extending perpendicularly of the plane of the loop, means for attaching one end of the pipe to a source of water supply, and means for attaching the other end of the pipe to the drain of a bathtub.

3,044,470

GARMENT

Dorine A. Gourdon, 91 Central Park West, New York, N.Y.

Filed Mar. 30, 1959, Ser. No. 802,890
7 Claims. (Cl. 128—528)



1. A garment comprising a single, generally rectangular piece of elastic fabric having a long dimension and a short dimension, said long dimension having a length sufficient to extend around the lower section of the torso of the wearer, the ends of said long dimension being formed along symmetrically curved lines corresponding generally to the lower spinal region of the wearer; a seam substantially parallel to the curved ends and joining said ends together; a plurality of darts symmetrically spaced with respect to the vertical center line of said piece of cloth and extending downward from the upper edge of said garment to shape the upper portion thereof; a plurality of darts symmetrically spaced with respect to said center line and extending upward from the lower

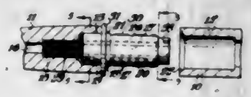
edge of said garment to shape the lower portion thereof; and a pair of curved darts extending generally horizontally and symmetrically along the lower back portion of said garment to determine the curvature of the back of said garment whereby the buttocks are molded to a desired curvature.

3,044,471
FOUNDATION GARMENT
Patricia A. Morehouse, Des Plaines, Ill., assignor to The H. W. Gossard Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 30, 1960, Ser. No. 79,649
6 Claims. (Cl. 128—548)



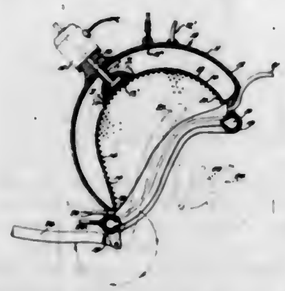
1. A form-fitting figure molding foundation garment for women comprising front and back sections connected at the sides and composed of elastic fabric adapted to encircle the body of the wearer from the waist downwardly below the hips, and a plurality of one-way longitudinally stretchable V-shaped elastic bands secured to said front section with their apexes nested adjacent and in contact with one another and forming a unitary reinforcing panel disposed in the central portion of said front section, the arms of said V-shaped elastic bands diverging progressively outwardly from said reinforcing panel, at least one of said V-shaped elastic bands having the outer ends of its arms secured to the respective sides of said garment, and at least one other V-shaped band having the outer ends of its arms secured to the top central portion of said front section.

3,044,472
SMOKERS' PIPES
Peter E. Keyser, 2 Norfolk Terrace, Brighton, England
Filed Oct. 17, 1958, Ser. No. 767,893
Claims priority, application Great Britain Oct. 29, 1957
2 Claims. (Cl. 131—225)



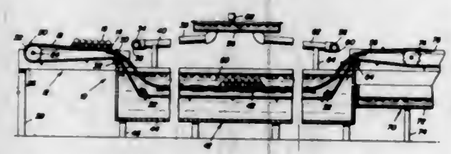
1. A smoker's pipe comprising in combination: a mouthpiece part; a bowl stem part, each of said parts having a joint end; and a device for joining said parts, one of said parts having a socket in the joint end thereof and the other of said parts having a cylindrical bore in the joint end thereof, said one part also having a threaded bore adjacent to said socket and coaxial therewith, said device comprising a resilient tubular member having one end insertable into said socket and the other end into said cylindrical bore, a hollow pin extending through said tubular member, said hollow pin having a head at one end, being threaded at its other end and receivable in said threaded bore whereby rotation and corresponding axial adjustment of said pin and the head thereon operates to vary the diametrical size of said other end of said resilient tubular member, and said resilient member being formed with an axial hole of circular cross-section in said one end, said hole being smaller than the threaded end of said pin to produce radial expansion of said one end on threading said pin through the hole and into said threaded bore for securing said one end of said tubular member against rotation in said socket.

3,044,473
HAIR TREATING DEVICE
Neville E. Cover, Cumberland, Md., assignor to Beautronics, Inc., Cumberland, Md.
Filed Nov. 14, 1958, Ser. No. 773,884
2 Claims. (Cl. 132—9)



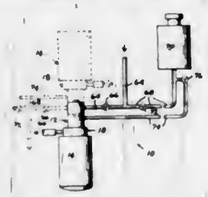
1. In a hair treating device, an arcuate support member, a hollow flexible air inflatable casing positioned in said support member and said casing embodying an outer portion and an inner portion, said inner portion having an enlarged section in which is embedded a cam, said enlarged section being integrally joined with said outer portion, said inner portion having a plurality of spaced apart projections, a tube for supplying air to inflate said casing, a motor supported by said support member, a shaft driven by said motor, said shaft being arranged for sliding movement through said motor, said cam secured to said shaft and connected to said casing so that when the motor is actuated, the shaft will rotate and this will cause the cam to vibrate the casing so that the projections will effectively act on or work on the hair or scalp being treated, a bracket arranged contiguous to said support member, a hollow flexible tube mounted in said bracket, fluid inlet and outlet tubes connected to said support member whereby suitable rinsing or shampooing or treating fluids can be introduced into the interior of the device so as to properly treat the hair of the person being worked on, and a conduit connected to said hollow flexible tube for the passage therethrough of air whereby an effective seal will be provided around the person's head so that leakage of fluid or the like will be prevented.

3,044,474
EGG WASHER
David C. Veeder, 130 Indian Head Road, Toms River, N.J.
Filed June 10, 1959, Ser. No. 819,280
8 Claims. (Cl. 134—73)



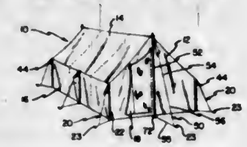
1. An egg washer comprising a longitudinally extending conveying means, a loading area for eggs at one end of said conveying means, a first spray pipe adjacent the loading area of the conveying means and extending transversely of the conveying means, a fluid reservoir above said first spray pipe, means for conducting fluid by gravitational forces from the reservoir to said first spray pipe, an elongated bath tank in longitudinally aligned relation to the loading area with the conveying means extending longitudinally under the top level of a liquid cleaning solution therein for immersing the eggs carried by the conveying means while passing through the bath tank, a second spray pipe disposed in overlying relation to and transversely to the conveying means at the discharge end of the bath tank, means connecting said reservoir to said second spray pipe for subjecting the eggs to a gravity flow spray rinse, high pressure spray means located in longitudinal alignment with and beyond the bath tank for subjecting the eggs passing therethrough to a higher pressure spray, said higher pressure spray means located both above and below the eggs, and a take-off means for the conveying means in longitudinal alignment with the high pressure spray means whereby the eggs are automatically removed from the conveying means onto the take-off means.

3,044,475
OIL FILTER CLEANER
Robert S. Thompson, Rte. 1, Comanche, Okla.
Filed May 4, 1961, Ser. No. 107,737
3 Claims. (Cl. 134—102)



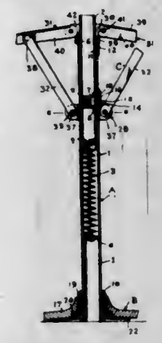
1. A cleaning apparatus for a filter element having an end wall provided with an inlet opening through which liquid to be filtered is received and an outlet opening through which the filtered liquid is discharged therefrom, comprising: an elongated hollow mandrel threadedly engaged, intermediate its ends, by the end wall forming the outlet opening in said filter; a centrally bored head threadedly connected to the end of said mandrel projecting outwardly of said filter, said head having a pair of lateral ports communicating with its bore; a nozzle threadedly engaged by one end portion with the wall forming the bore of said head between the lateral ports in the latter, said nozzle having one end portion projecting into the adjacent end portion of said mandrel; a cleaning fluid reservoir; an adapter interposed between said head and the adjacent end of said filter, said adapter having a lateral discharge port; and tubing connected with said port in said head for admitting air under pressure into said filter.

3,044,476
TENT INSTALLATION
Ralph W. Avery, 1408 W. Colfax Ave., Denver, Colo.
Filed Aug. 24, 1959, Ser. No. 835,494
6 Claims. (Cl. 135—1)



1. A wall suspension unit for a tent and the like having at least one sidewall portion, said unit comprising an upright wall support member extending the substantial length of the sidewall, anchor means disposed in outward spaced relation to said wall support member, means connected to said anchor means including a generally horizontal extension and an angular extension, and fastening means disposed at the bottom and top of said wall support member serving to fasten the respective horizontal and angular extensions to the tent.

3,044,477
COLLAPSIBLE TENT FRAMES
James R. Higgins, Pottsville, Pa.
(8 Foxcroft Road, Alexandria, Va.)
Filed May 31, 1960, Ser. No. 32,686
8 Claims. (Cl. 135—2)



1. A collapsible tent frame of the character described comprising a central support embodying a pair of telescopically nested tubular members, a foldable base structure slidably mounted on the outer member of said nested pair of tubular members, adapted to support said members in stable vertical erected position, a collapsible, truss-like supporting structure, comprising a plurality of ribs pivotally connected to a collar secured to the upper end portion of the inner tubular member, a plurality of struts pivotally connected to a spider member fixedly secured to the outer tubular member, the opposite ends of the struts being severally pivotally connected to the ribs at points intermediate the ends thereof, and spring means within the central support and interconnected to the tubular members, said spring means being constructed and arranged to normally urge the inner tubular member into retracted position with respect to the outer tubular member, and thereby pivot the ribs about the collar into canopy-supporting position.

3,044,478
TILTABLE UMBRELLA
Ray A. Russell, Santa Ana, Calif., assignor to California Umbrella Company, Santa Ana, Calif., a partnership
Filed Apr. 25, 1961, Ser. No. 105,374
4 Claims. (Cl. 135—20)



1. An articulate staff having substantially constant lateral dimensions longitudinally thereof and including:
(*a*) two staff members having adjacent ends and having lateral dimensions which are substantially the same and which are substantially constant longitudinally thereof;
(*b*) pivot means entirely within the lateral confines of said staff members pivotally interconnecting said ad-

jacent ends of said staff members for relative pivotal movement between aligned and misaligned positions about a pivot axis provided by said pivot means;

(*c*) a driven gear segment carried by one of said staff members entirely within the lateral confines thereof and having its axis on said pivot axis;

(*d*) a driving gear carried by the other of said staff members entirely within the lateral confines thereof and meshed with said driven gear segment, rotation of said driving gear causing said driven gear segment to pivot said staff members between their aligned and misaligned positions;

(*e*) a crank for rotating said driving gear pivotally connected directly to said driving gear and pivotable relative thereto between extended and retracted positions;

(*f*) said other staff member being provided with a recess of a size to completely receive said crank therein when it is in its retracted position; and

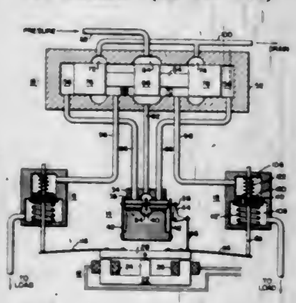
(*g*) whereby said staff has substantially constant lateral dimensions longitudinally thereof when said staff members are in their aligned positions and when said crank is in its retracted position within said recess.

3,044,479
CONTAMINATE FREE CONDUIT MEANS AND METHOD OF ASSEMBLY THEREOF
Robert E. Meyer, Jupiter, and Seymour Bellak, North Palm Beach, Fla., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Feb. 26, 1960, Ser. No. 11,325
6 Claims. (Cl. 137—68)



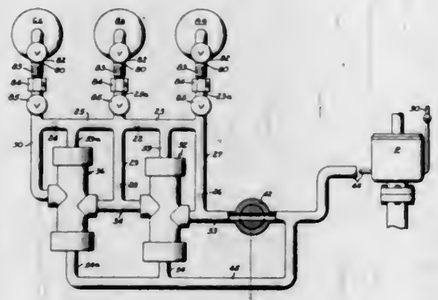
4. Contaminate free apparatus for conveying liquid including at least two contaminate free liquid conveying parts each having an inlet and an outlet end flange around inlet and outlet apertures, contaminate free frangible gaskets extending across both said inlet and said outlet apertures and sealably engaging said end flanges of said parts thereby completely sealing said inlet and outlet apertures of said parts, and means to join said parts end to end in sealed relation while contaminate free so that two of said frangible gaskets are compressed between said inlet and said outlet end flanges of adjacent parts.

3,044,480
FLUID FLOW CONTROLLER
Shih-Ying Lee, Watertown, Mass.
(Huckleberry Hill, South Lincoln, Mass.)
Filed Nov. 16, 1956, Ser. No. 622,638
17 Claims. (Cl. 137—85)



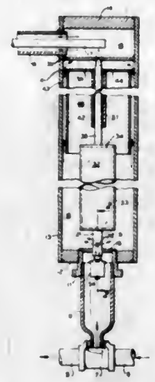
1. A fluid flow controller comprising a power valve having a valve spool, a fluid inlet and a pair of fluid outlets for reversibly controlling the flow of fluid to a load, the power valve having chambers at the ends of the spool, a pilot valve, conduits between pilot valve and the chambers in the power valve for positioning the power valve spool by the relative fluid volumes in said chambers, signal input means coupled to the pilot valve, a pair of flow rate responsive means intermediate the power valve and the load, there being one flow rate responsive means in flow communication with each fluid outlet from the power valve to the load, and connections between the flow rate responsive means and the pilot valve for modifying the pilot valve response to the signal input means as a substantially linear function of flow rate from the power valve.

3,044,481
AUTOMATIC PRESSURE FLUID ACCUMULATOR SYSTEM
Joseph E. Regan, San Pedro, Calif., assignor to Regan Forge and Engineering Company, San Pedro, Calif., a corporation of California
Filed June 2, 1958, Ser. No. 739,205
10 Claims. (Cl. 137—114)



1. In combination in automatic pressurizing mechanism: a plurality of fluid pressure units arranged to carry fluids under different pressures and including a first unit and a second unit; means to supply fluid pressure to the first unit; manifold line means connecting said units and supply means; check valve means in said manifold line means to prevent return of higher pressure from said second unit to said first unit and supply means when said first unit and said supply means are under lower pressure than said second unit; a pressure-transfer assembly having an inlet and an outlet connected between said units; means connecting the second unit with the inlet of said transfer assembly; transfer valve means in said assembly for passing higher pressure from said second unit to the outlet of said assembly; valved branch line means connecting said first unit with said pressure-transfer assembly via said manifold line means and said outlet and having a check valve; valved pressure-feeding conduit means connected on one side of its valve with said outlet and said valved branch line means and connected on the other side of its valve to a conduit to supply pressure to a device to be pressure controlled; by-pass conduit means connecting the last named conduit with said assembly at one side of said transfer valve means; branch line means connecting said manifold line means with said assembly at the other side of said transfer valve means; and pressure responsive means comprising differential pistons in said assembly at opposite sides of and connected to said transfer valve means and under the influence of pressures in said by-pass conduit means and in said manifold line means for opening said transfer valve means upon pressure equalization in said by-pass conduit means and said manifold line means.

3,044,482
LIQUID GAS VAPORIZER WITH FLOAT CONTROL
Carl E. Golden, 2415 Hale Drive, Burlingame, Calif.
Filed Nov. 9, 1959, Ser. No. 851,656
2 Claims. (Cl. 137—202)



1. For use with liquid gas vaporizer, a float control comprising an upright casing adapted to be heated, a top head plate on the top of said casing, a bottom head plate on the bottom of said casing, a support plate mounted transversely within said casing, said support plate having an opening therein, a shell joined to and depending from said support plate and disposed concentrically within said casing to leave a narrow annular passage between said casing and said shell to conduct gas close to said casing, a float located between said support plate and said bottom head plate and disposed within said casing, said float being movable between an upper position and a lower position in response to varying liquid levels in said casing, a stem extending upwardly from said float through said opening and engageable with said support plate for guiding said float, an upright tube open at its upper end supported on and affording communication through said bottom head plate, means for supplying liquid to said vaporizer casing through said tube, a duct opening into said casing near the top thereof for releasing gas therefrom, a stem depending from said float and passing through said tube, means on the bottom of said float adapted in said lower position of said float to abut said tube and rest against said open end thereof, means forming a valve seat on the depending end of said tube, a valve disk surrounding said stem below said valve seat, and means forming a lost motion connection between said valve disk and said stem whereby said valve disk is movable by said float into and out of abutment with said valve seat.

3,044,483
TAP BEER CLEANING INSTALLATION
Sampson Wilburn, Box 85, Berthond, Colo.
Filed Aug. 10, 1959, Ser. No. 832,722
3 Claims. (Cl. 137—239)

1. A closed-circuit venting and flushing apparatus including a tap beer system of the type having a pressurized beer keg, a tap rod having its base end extended into the keg, a tap line extending from the rod and a dispensing faucet at the end of the tap line, and including, in combination therewith:

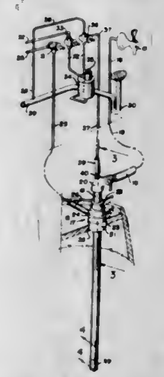
(*a*) a check valve at the base of the tap rod adapted to open to permit flow from the keg and into the rod and to close to prevent flow from the rod and into the keg,

(*b*) a three-way valve having a central connection, a first and a second side connection and a shiftable control between the connections adapted to selectively shift from a closed position where the connections are closed off from each other, to a first open position where the central connection communicates with the first side connection with the second side connection being closed off and to a second open position where the central connection communicates with the second side connection with the first side connection being closed off,

(*c*) a circulating line having one end extending into the tap rod and terminating at a point near the base thereof and the other end connected to the central connection of the three-way valve,

(*d*) a venting line having one end connected to the said first side connection of the three-way valve and the other end extending to a point remote from the tap beer system at a distance and at a location sufficient to prevent the accumulation of vent fumes in the vicinity of the tap beer system, and

(*e*) a cleaning-water line having one end connected

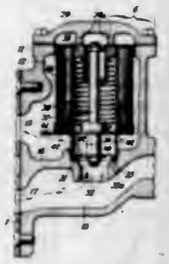


with a pressurized water supply and the other end connected with the said second side connection of the three-way valve, whereby, in normal use of the system with the keg being drained of its contents the three-way valve is in its closed position and flow is from the keg, past the check valve and through the tap rod, tap line, and from the dispensing faucet; however, when the keg is emptied, the three-way valve is first shifted to said first open position to permit the pressurized gas and fumes within the keg to flow past the check valve, into the tap rod and through the circulating line and venting line to be vented therefrom, and then the three-way valve is shifted to said second open position to permit a backflow of cleaning water through the circulating line and into the tap rod to close the check valve and permit the tap rod and tap line to be flushed out by a subsequent opening of the dispensing faucet.

3,044,484
BY-PASS VALVES
Leighton Dunning, Philadelphia, Pa., assignor to William M. Wilson's Sons, Inc., Lansdale, Pa., a corporation of Pennsylvania
Filed June 8, 1959, Ser. No. 818,726
2 Claims. (Cl. 137—469)

1. A by-pass valve comprising: a casing having an upper end with a fluid inlet passage therethrough, a first outlet passage disposed below said upper end communicating with said inlet passage and a second outlet passage, said first and second outlet passages being separated by a partition, said partition having a port therein with a portion of large area and a portion of small area; an inverted cup-like element stationarily disposed within the casing having a closed upper end spaced from said inlet passage and an open lower end bearing down upon said partition, said element being provided immediately above said par-

tition with at least one lateral aperture; a cup-like filter screen fitting into the casing and surrounding said inverted cup-like element with circumferential clearance thereabout, above the lateral aperture, through which screen the fluid is obliged to pass; a closure element constrained to axial movement by the cup-like element, said



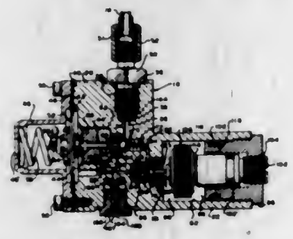
closure element having a disc normally seated over the large area portion of said port and a piston portion normally engaged within the smaller area portion of said port; and spring means influential upon said closure element for maintaining it with its disc and its piston portion normally positioned as aforesaid for capacity to yield upon development of back pressure in the outlet passage.

3,044,485
REVERSIBLE FLOW CONTROL VALVE
Cecil E. Adams and Joseph P. Creek, Columbus, Ohio, assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 821,231, June 18, 1959. This application Aug. 2, 1960, Ser. No. 47,347
2 Claims. (Cl. 137—493.7)



1. A surge damping valve for damping surges in the flow of a fluid in one direction therethrough and for permitting the relatively unrestricted flow of fluid therethrough in a reverse direction, said valve including means forming a body; a bore in said body; a valve seat at one end of said bore and an exhaust passageway communicating with said bore through said valve seat; an inlet port in said bore, a first valve means disposed for axial movement in said bore, said valve means including means forming a cylindrical surface; a second valve means slidably disposed for movement relative to said cylindrical surface and said seat, port means between said first and second valve means cooperating to form a first valve; yieldable means normally positioning said first valve means to close the port means between said first and second valve means thereby preventing the flow of fluid from said inlet port to said exhaust passageway, said first valve means having a stepped through bore which forms an orifice, yieldable valve means disposed for axial movement in said bore, said yieldable valve means including means forming a hollow piston with an orifice at one end and a valve element at the opposite end thereof, said valve element cooperating with said first mentioned orifice and functioning to control the opening of said first valve at a rate inversely proportional to an increase in pressure at said inlet port, resilient means urging said second valve means into abutting relation with said valve seat to form a second valve, said cylindrical surface and said second valve means being in slidable engagement and functioning to control the flow of fluid which enters said inlet port and flows through said exhaust passageway; and said second valve means being movable by pressure at said exhaust passageway to open the latter thereby to permit fluid to flow in a reverse direction from said exhaust passageway to said inlet port.

3,044,486
GAS STORAGE AND DELIVERY SYSTEM
Henry A. Miller, Jr., Scotch Plains, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 10, 1959, Ser. No. 819,413
2 Claims. (Cl. 137—505.42)

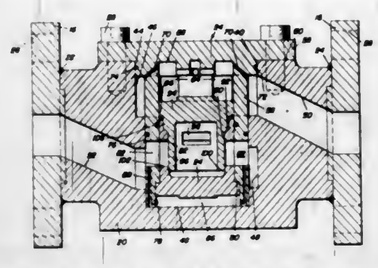


1. A pressure regulator device adapted for delivering gases from a source of relatively high pressure at a substantially lower pretise desired delivery pressure comprising a gas inlet, valve passage means including a regulator valve element connecting with said gas inlet and opening into a delivery pressure chamber and discharge passage means connecting said delivery pressure chamber with a discharge outlet, said delivery pressure chamber comprising a cylindrical bore receiving said valve passage means substantially concentrically at the inner end thereof and receiving at its outer open end a removable closure cap threadedly engageable therein and having an O-ring forming a gas seal with said delivery pressure chamber, said removable end closure having an elongated axially disposed bore in the inner end thereof terminating in a threaded opening, a valve stem having a threaded portion extending through said threaded opening in said end closure and a smooth cylindrical portion extending through said axially disposed bore and carrying O-ring sealing means to effect a gas-tight seal between said valve stem and said bore, an evacuated bellows element having a threaded portion tightly threaded into an axially disposed socket-opening in the inner end of said valve stem so as to mount said bellows substantially rigidly at the inner end of said valve stem in substantially confronting relation to the terminal end of said valve passage in operative relation to said valve element projecting therethrough, said assembly of said valve stem, bellows and end closure being removable as a unit from said delivery pressure chamber and said bellows being independently adjustable longitudinally of the bore of said delivery pressure chamber by a threaded adjustment of the external portion of said valve stem to permit selective adjustment of the desired delivery pressure of said regulator.

3,044,487
CUSHIONED HYDRAULIC CHECK VALVE
John Henry Dotter, 3303 Shannon Drive, Baltimore, Md.
Filed Aug. 2, 1960, Ser. No. 47,018
8 Claims. (Cl. 137—514)

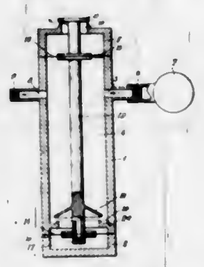
1. A cushioned hydraulic check valve assembly comprising a valve casing with an opening therein and a valve

cage removably seated in said opening, said valve cage having a chamber therein and having spaced fluid inlet and outlet ports extending through the wall of said cage and communicating with said chamber, a valve seat member having a closed bottom wall forming a piston slidably received in said chamber and having a bore therein with a valve seat communicating said bore with said chamber, means in said valve seat member communicating said inlet



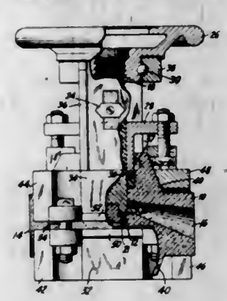
port with said bore, a valve member in said cage cooperating with said valve seat and controlling flow from said inlet to said outlet port, a supply means in said cage establishing communication between said inlet port and said chamber below said seat member for applying fluid pressure to yieldingly urge the latter for sliding movement in said chamber and abutment means on said seat member and cage for limiting movement of said seat member.

3,044,488
PRESSURE-REGULATORS FOR FLUIDS
Robert Maurice Mennesson, Neuilly-sur-Seine, France, assignor to Societe d'Applications et de Constructions pour Materiel Automobile (S.A.C.M.A.), Neuilly-sur-Seine, France, a corporation of France
Filed Oct. 19, 1959, Ser. No. 847,285
Claims priority, application France Nov. 3, 1958
9 Claims. (Cl. 137—514)



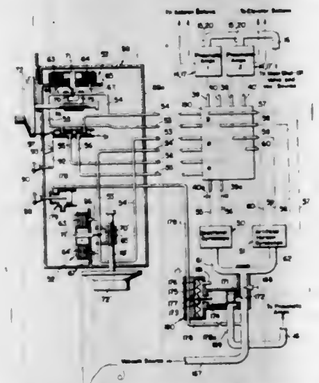
1. An apparatus for maintaining a constant gaseous fluid pressure different from atmospheric pressure in a chamber provided with two orifices, an inlet one and an outlet one, respectively, one of said orifices communicating with the outside of said chamber for transmitting said constant pressure thereto, which apparatus comprises, in combination, a space containing a gaseous fluid at a pressure such that said constant pressure to be maintained in said chamber is always intermediate between the pressure in said space and atmospheric pressure, conduit means of restricted cross section area for connecting said space with the other of said orifices, a passage leading from said chamber toward the atmosphere, valve means arranged to maintain said passage closed, said valve means tending to be opened by the difference between the fluid pressure in said chamber and atmospheric pressure, at least one deformable diaphragm for supporting said valve means without friction with respect to said chamber and means for equalizing pressures on both sides of said diaphragm.

3,044,489
ARMORED VALVES
Samuel H. S. Raub, Bay Village, William J. Alton and Starling F. Joachim, Cleveland, and William W. Palmquist, Lakewood, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed Nov. 10, 1959, Ser. No. 852,139
8 Claims. (Cl. 137—556.3)



1. In a valve comprising an impervious graphite body portion having a pair of armoring members in contact with the outer surfaces thereof; the improved construction wherein said body portion has at least one taper extending outwardly therefrom which supports said armoring members and wherein at least one of said armoring members has a taper corresponding thereto which aligns such with said body portion whereby to relieve said body portion of substantially all flexural and tensile stresses acting thereon, said armoring members being co-extensive with said body portion to an extent sufficient to be joined to inlet and exhaust pipes leading to and from said valve and including means exterior to said body portion for mounting said armoring members and said body portion together.

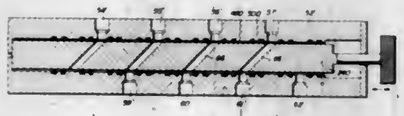
3,044,490
AUTOMATIC PILOT
Walter M. Templin, Wayne, Pa., assignor to Aircraft Products Co., Bridgeport, Pa., a corporation of Pennsylvania
Filed Apr. 14, 1958, Ser. No. 728,151
7 Claims. (Cl. 137—622)



1. In a pneumatic control for automatic pilots or the like; pneumatic conduit means to carry variable pneumatic pressures representative of a control function; deformable means responsive to pressure variations in the conduit means; a pneumatic orifice connected to said conduit means, a valve flapper movably connected to said deformable means to move toward and away from the pneumatic orifice control adjusting means for the pneumatic orifice, a lead screw to shift the support, and a first manual control member to turn the lead screw, thereby to move the orifice means in translation to change the spacing be-

tween the orifice means and the flapper; and a second manual control member to turn the moveable support about the lead screw in small amounts to introduce corrections into the system.

3,044,491
MULTIPORT SWITCHING VALVE
Raymond C. Sangster, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed July 29, 1958, Ser. No. 751,792
2 Claims. (Cl. 137—625.18)



1. A valve for switching a plurality of fluid streams comprising:

(*a*) an elongated hollow valve body having a first set of ports and a second set of ports axially staggered therewith,

(*b*) an elongated fluid switching member axially slidable within said body to at least two fluid switching positions,

(*c*) a plurality of pairs of spaced O-rings mounted on said body between said body and said member, one of said pairs being positioned between each pair of adjacent ports,

(*d*) a plurality of passages defined within said member to interconnect a plurality of axially spaced points along said member with corresponding points spaced therefrom by distances substantially equal to the spacing between adjacent ports on said body,

(*e*) said member and said passages permitting fluid communication between the first set of ports and corresponding ports of the second set displaced in one axial direction in a first of said switching positions and corresponding ports of the second set displaced in the opposite axial direction in a second of said switching positions.

2. A valve for switching a plurality of fluid streams comprising:

(*a*) a hollow cylindrical valve body having a first set of ports and a second set of ports axially staggered therewith,

(*b*) a cylindrical fluid switching member axially slidable within said body to at least two fluid switching positions,

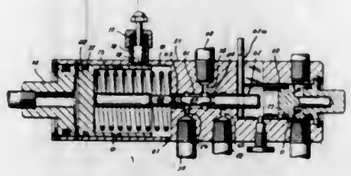
(*c*) a plurality of pairs of spaced O-rings mounted on said body between said body and said member, one of said pairs being positioned between each pair of adjacent ports,

(*d*) a plurality of passages defined within said member obliquely oriented with respect to the axis thereof, said passages interconnecting a plurality of axially spaced points along said member with corresponding points spaced therefrom by distances substantially equal to the spacing between adjacent ports on said body,

(*e*) said member and said passages permitting fluid communication between the first set of ports and corresponding ports of the second set displaced in one axial direction in a first of said switching positions and corresponding ports of the second set displaced in the opposite axial direction in a second of said switching positions,

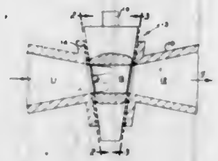
(*f*) said passages being sealed off by said pairs of O-rings when said member is in an axial position intermediate said first and second switching positions.

3,044,492
VALVES
Clifford M. Peters and Vernon B. Scott, Longview, Tex., assignors to U.S. Industries, Inc., New York, N.Y.
Original application July 26, 1955, Ser. No. 524,357, now Patent No. 2,800,138, dated July 23, 1957. Divided and this application Mar. 14, 1957, Ser. No. 646,018
5 Claims. (Cl. 137—625.25)



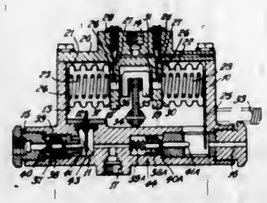
1. A selector pilot valve comprising a valve body having first, second and third ports, passage means connecting said ports, a valve member movable in said passage means between a first position to restrict flow to be between said first and second ports and a second position to restrict flow to be between said first and third ports, first pressure responsive means for urging the valve member toward its first position, second pressure responsive means movable in one direction to move the valve member to its second position and then being free to move in an opposite direction without causing movement of the valve member to its first position, detent means operable and effective to engage said second pressure responsive means upon its movement of the valve member to its second position and there to hold the second pressure responsive means until released, and resilient means urging said second pressure responsive means in said opposite direction.

3,044,493
VALVE MEANS
Richard O. Welty and Elton E. Rush, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 2, 1960, Ser. No. 73,255
1 Claim. (Cl. 137—625.32)



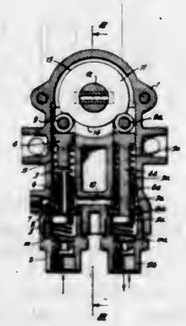
A valve structure comprising, in combination, a valve housing defining a valve chamber, inlet means and outlet means communicating with said chamber, a lining means in intimate contact with said valve chamber, a valve element rotatably mounted in said valve chamber in engagement with said lining means, said valve element having a passage therethrough defined by an inlet port and an outlet port in communicating respectively with said inlet means and said outlet means, said inlet port having a greater width than said outlet port, said inlet port comprising a plurality of openings with at least two of said openings lying in the plane of the axis of said valve element, thereby providing a mechanical support for said lining means and the area of the openings of said inlet port being greater than the area of the opening of said inlet means.

3,044,494
LEVELLING VALVE MECHANISMS
Henry William Trevaskis, Point Pleasant, Blackdown, near Leamington Spa, England, assignor to Dunlop Rubber Company Limited, London County, England, a company of Great Britain
Filed Feb. 2, 1960, Ser. No. 6,132
Claims priority, application Great Britain Feb. 7, 1959
10 Claims. (Cl. 137—627.5)



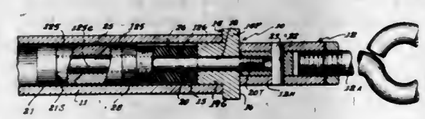
1. A levelling valve mechanism for pneumatic springs comprising a casing having an outlet port for communication with a fluid spring, an inlet port for connection to a source of fluid pressure and an exhaust port, inlet and exhaust valves in the casing spring pressed to closed position and operable to connect the outlet port to the inlet port and to the exhaust port respectively, a pair of enclosures in said casing each having a valve actuating element movable to open one of said valves, one side of each element being exposed to atmospheric pressure, each said enclosure having a passage for the unobstructed entrance of air under atmospheric pressure, an actuating member movable from a mid position alternatively to close each of said passages, said casing having a restricted duct from each enclosure to a source of subatmospheric pressure to reduce the pressure below atmospheric pressure upon closure of said passage, each said valve actuating element being positioned to open said inlet valve and said exhaust valve upon movement to a distance from inactive position.

3,044,495
LOAD LEVELLING DEVICE FOR A PNEUMATIC SUSPENSION, PARTICULARLY FOR A MOTOR VEHICLE
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed May 14, 1959, Ser. No. 813,086
1 Claim. (Cl. 137—636.1)



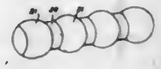
A valve for use in a control mechanism for a motor vehicle pressure fluid suspension system having a source of fluid pressure and a fluid pressure actuated load and adapted to be mounted between the pressure source and the spring, said valve device comprising a housing having first and second spaced substantially parallel chambers, said first chamber adapted to communicate with the source of pressure fluid, said second chamber adapted to communicate with the fluid pressure actuated load, passage means interconnecting said first and second chambers, normally closed spring urged flow control means at the lower end of each of said chambers, said flow control means in said first chamber normally blocking pressure fluid from the source, said flow control means in said second chamber normally blocking communication between the load and said passage means, a push rod reciprocatively mounted in each of said chambers with the lower end of said rods engaging its respective spring urged flow control means, the first chamber having port means for effecting communication between said passage and the atmosphere, separate means for normally maintaining said push rods in a predetermined position, a cam follower at the upper end of each of said push rods, and a rotatable plate means having a pair of radial cam lobes for selectively causing said push rods to urge their respective spring urged flow control means to an open position, whereby pressure fluid from the source may be directed to the fluid pressure actuated load upon a downward movement of said push rod in said first chamber and pressure fluid may be directed from the fluid pressure actuated load upon a downward movement of said push rod in said second chamber.

3,044,496
INTERNAL TUBE SEAL
Oliver Maisch, Chicago, Ill., assignor to Tuthill Pump Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 19, 1960, Ser. No. 9,773
3 Claims. (Cl. 138—89)



1. In an internal tube sealer, a body adapted to be inserted slidably into an end of a tube to be sealed with an inner end face of the body disposed within the tube and disposed in perpendicular relation to the axis of the tube and with an outer end face disposed beyond the end of the tube, said body having an axial opening therethrough substantially smaller in diameter than the tube to be sealed, a stem extended slidably through said axial opening with its inner and outer ends projecting inwardly and outwardly beyond the respective inner and outer faces of the body, a head fixed on the inner end of said stem adapted to slide into such a tube end, said inner face of said body and the adjacent face of said head providing opposed annular clamping shoulders, a compressible resilient sealing sleeve surrounding said stem and having one of its ends abutting one of said shoulders, a rigid washer slidably surrounding the stem and abutting the other end of said sealing sleeve, anchoring means comprising a pair of rigid anchoring sleeves surrounding said stem in end to end relation between said washer and the other of said shoulders with their remote ends in flat surface engagement respectively with said washer and said other shoulder, said anchoring sleeves having an internal diameter greater than the diameter of the stem, and the adjacent ends of said anchoring sleeves being formed as opposed engaged planar surfaces disposed at an angle substantially less than 90° with respect to the axes of such anchoring sleeves to cam the respective anchoring sleeves radially outwardly in opposite directions into an anchoring relation in the tube when said anchoring sleeves are forced axially toward each other, and means acting between said body and outer end of the stem for withdrawing the stem relative to the body.

3,044,497
TUBULAR MEMBERS PROVIDED WITH CORRUGATED WALLS
Paul Rebut, Tarare (Rhone), France, assignor to Societe Bodin, Girin & Cie, Tissus Industriels, Tarare (Rhone), France, a corporation of France
Filed June 8, 1959, Ser. No. 818,954
Claims priority, application France June 12, 1958
2 Claims. (Cl. 138—121)



1. A flexible tube having a permanent circular wall crimp obtained by heating, comprising a woven tubular member having a first series and a second series of annular areas, said second series containing pre-shrunk weft threads, each area in said first series being disposed between two areas in said second series, said annular areas comprising weft threads made of the same thermo-shrinking material, the weft threads of the annular areas in said first series having natural shrinking properties thereby containing higher shrinking ability under the action of heat than the weft threads in said second series which have undergone previous shrinking, whereby the crimp in the wall of said tube is obtained by the application of heat only to said tubular member.

3,044,498
FOIL TUBING
James F. Barnes, Van Nuys, and Herman I. Silversher, Tujunga, Calif., assignors to Foil Process Corporation, Van Nuys, Calif., a corporation of California
Filed Mar. 25, 1957, Ser. No. 648,334
1 Claim. (Cl. 138—143)



Foil tubing, comprising a laminated assembly of superimposed metal foil layers having layers therebetween of a metal bonding adhesive, one of said adhesive layers being interrupted along a pair of spaced-apart, parallel lines to provide a channel within said assembly, at least the part of said assembly on one side of said interrupted adhesive layer being deformed away from said layer between said spaced-apart parallel lines, the edge portions of one of the parts of said assembly on one side of said adhesive layer being folded on themselves to overlap the corresponding edge portions of the part of the assembly on the other side of said adhesive layer, and a plurality of holes extending through said assembly transverse to said metal foil strip layers, said holes being located outside of the said pair of spaced-apart parallel lines, said folded portions also being equipped with holes aligned with said first-mentioned holes, whereby securing means can be extended through said holes for anchoring said tubing to a supporting surface.

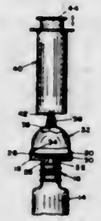
3,044,499
REFRACTORY CERAMIC PIPE FOR FUSIBLE MATERIAL
Rudolf Frerich, Dusseldorf-Meererbusch, Germany, assignor to Stoecker & Kunz G.m.b.H., Krefeld-Linn-Rheinhafen, Germany
Filed Dec. 17, 1959, Ser. No. 860,226
1 Claim. (Cl. 138—143)

A refractory ceramic pipe for molten metals, molten rocks and the like comprising an interior sintered refractory ceramic pipe, a second sintered refractory ceramic pipe concentrically arranged around said first named pipe



and spaced therefrom, a metal casing located between said two pipes and spaced therefrom and said spacings being filled with a refractory material.

3,044,500
DISPOSABLE DEVICE FOR STERILIZING SOLUTIONS
Robert C. Crisafi, Swampscott, Mass.
(455 Massachusetts Ave., Arlington Center, Mass.)
Filed Feb. 12, 1959, Ser. No. 792,862
1 Claim. (Cl. 141—85)

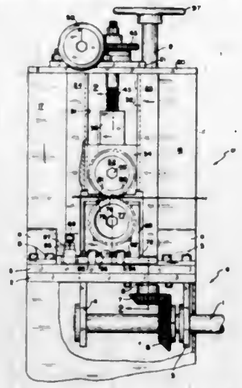


A disposable pre-sterilized filtering device comprising a filter paper holder, a filter paper therein, means on said holder at one side of the filter paper for attaching the holder to a separate sterile container and for venting the container to atmosphere, a separate closure member for the holder at the opposite side of the filter paper, said separate closure holding the paper to the filter paper holder, said closure having an opening for the reception of a separate syringe having a tip tightly fitting the opening, said syringe forcing liquid to be filtered into the closure member and through the filter paper into the separate container, said filter paper and the holder therefor then being manually and simultaneously removable from the container and being disposable.

3,044,501
WIRE CRIMPING APPARATUS
Joseph R. Govea, Oakland, Calif., assignor to The Colorado Fuel and Iron Corporation, Denver, Colo., a corporation of Colorado
Filed Nov. 13, 1959, Ser. No. 852,843
4 Claims. (Cl. 140—105)

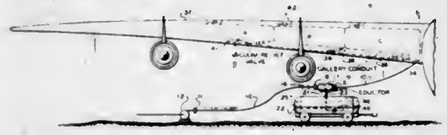
3. Apparatus for crimping wire which comprises two crimp wheels having coacting ribs and grooves between which the wire is crimped, each crimp wheel being mounted on its own shaft, a drive shaft disposed laterally with respect to said shafts, gears connecting the drive shaft and the wheel shafts, means for moving one wheel shaft towards and away from the other wheel shaft, means for angularly adjusting said movable shaft to

maintain uniform coaction between the wheels as the shaft is moved, and means for pivoting the other wheel



shaft to a skew position with respect to the said movable wheel shaft.

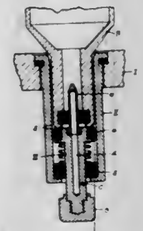
3,044,502
LIQUID DISPENSING APPARATUS
Henry E. Alquist, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 773,056
8 Claims. (Cl. 141—119)



6. In liquid dispensing apparatus, the combination comprising: a main flow conduit adapted to be connected at one end to a source of liquid supply and at the other end to a dispensing conduit; a first valve disposed in said main flow conduit; an eductor disposed in said main flow conduit downstream from said first valve; a vacuum tank; an eduction conduit connected at one end to the throat of said eductor, the other end of said eduction conduit extending into said tank to a point near the bottom thereof; a second valve disposed in said eduction conduit between said eductor and said tank; a level control valve means within said tank for closing said eduction conduit to thereby prevent further eduction of liquid from said tank when the liquid level therein has reached a predetermined minimum; at least one dispensing lateral connected to said dispensing conduit; a dispensing valve in said dispensing lateral; and a vacuum relief valve connected to said dispensing conduit adjacent the downstream end thereof and downstream from said dispensing lateral and adapted to open only when the pressure in said dispensing conduit is less than atmospheric.

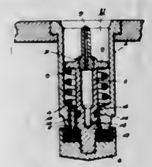
3,044,503
FUEL CHARGE VALVE ASSEMBLY IN GAS-FUELED CIGARETTE LIGHTER
Taisho Iketani, Nogata-cho, Nakano-ku, Tokyo, Japan
Filed Sept. 29, 1960, Ser. No. 59,377
Claims priority, application Japan Apr. 25, 1960
1 Claim. (Cl. 141—293)

In a gas fuel lighter construction,
a container having a bore, for receiving compressed gas,
a substantially cylindrical skirt member removably secured in said bore and extending into said container,
said cylindrical skirt member having a discharge opening,
a stem axially movable in and extending through said skirt member and having an axial feeding passage leading into a radial passage for injecting fuel into said container,
said stem having a flange at its outer end,
a first packing means received by said flange and engaging the inner face of said skirt member during the axial movement of said stem, thereby controlling said discharge opening of said skirt member,
said discharge opening in said cylindrical skirt member being disposed at a point thereof below said first packing means in its inoperative position,
a second packing means fitted tightly against the inner



wall of said skirt member substantially at the bottom thereof and closing the outer end of said radial feeding passage in the inoperative position of said stem,
said first packing means being moved axially with said stem into said skirt member during an injection stroke of said movable stem to expose said discharge opening to the ambient atmosphere and in a direction out of said skirt member during a closing stroke of said stem, so that the outward movement of said stem causes closing of said discharge opening to the atmosphere upon passing said stem beyond said discharge opening, and
spring means urging said stem into its outermost position.

3,044,504
INJECTION VALVE IN A LIQUEFIED GAS LIGHTER
Taisho Iketani, 589 Nogata-cho 1-chome, Nakano-ku, Tokyo, Japan
Filed Aug. 7, 1961, Ser. No. 129,729
Claims priority, application Japan June 1, 1961
1 Claim. (Cl. 141—293)



An injection valve for a lighter for liquefied gas fuel comprising
a cylindrical skirt immovably secured to a casing constituting a fuel reservoir,
a longitudinal member movable axially in said cylindrical skirt between closed and open positions of said injection valve,
said longitudinal member having a fuel charging passage extending therethrough from an outer portion to an inner portion thereof and a radial passage extending from said inner portion to the periphery of said member,
said outer portion including a part adapted to engage a filling container to permit the feeding of fuel from said filling container to said fuel charging passage,
said longitudinal member having at its inner end a head of a diameter larger than that of the greater portion

of said longitudinal member and defining an annular recess at its outermost face,

a packing ring received in said annular recess and moving with said longitudinal member,

said cylindrical skirt being open at both ends and including an inwardly extending annular shoulder at its inner end portion, said annular shoulder having an inner diameter substantially equal with the outer diameter of the greater portion of said longitudinal member, in order to permit an axial movement of said longitudinal member in said cylindrical skirt,

said cylindrical skirt including also at its inner end an annular seat engaging the outer face of said packing ring in the closed position of said injection valve and being spaced apart from said outer face of said packing ring in the open position of said injection valve,

said cylindrical skirt further having a discharge passage at its inner portion and extending from said annular seat into said skirt member and communicating with the space outwardly of said annular shoulder, so that said discharge passage is closed upon engagement of said annular seat on said packing ring,

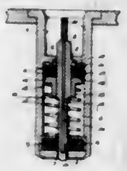
a sealing ring disposed between the outer periphery of said longitudinal member and the inner face of said inner end portion of said cylindrical skirt and outwardly of said valve relative to said radial passage,

said longitudinal member having a flange at its outer portion, and

a spring engaging the inner face of said flange and said annular shoulder of said cylindrical skirt, respectively, and urging said longitudinal member into its outermost, valve closing position,

so that in the closing position of said valve said fuel charging passage, as well as said discharging passage are closed from the atmosphere, while in the open position of said valve, upon inward movement of said longitudinal member, communication through said fuel charging passage and discharge through said discharge passage are possible.

3,044,505
INJECTION VALVE IN A LIQUEFIED GAS LIGHTER
Taisho Iketani, 589 Nogata-cho 1-chome, Nakano-ku, Tokyo, Japan
Filed Aug. 7, 1961, Ser. No. 129,730
Claims priority, application Japan June 19, 1961
1 Claim. (Cl. 141—294)



An injection valve for a gas-fueled lighter comprising

a cylinder adapted to be secured to a container of said lighter,

a stem member axially movable in said cylinder and having an axial injection passage communicating with a radial injection passage terminating at the periphery of said stem member in order to inject fuel through said axial and radial passages, said axial passage being closed at its inner end except to said radial passage,

said cylinder having a discharge opening through its outer side wall portion, and having an inner flange outwardly spaced apart from said discharge opening,

said flange having an opening slightly larger than the outer diameter of said stem member to form a passage therebetween,

a first packing ring surrounding the outer portion of said stem member in slidable sealing engagement therewith and engaging with its outer face said flange of said cylinder, so that said discharge opening is closed from the ambient atmosphere in the outermost inoperative position of said packing ring and of said stem member,

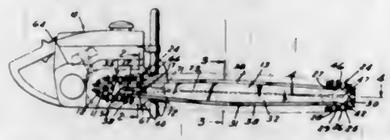
a second packing ring in sealing engagement with the innermost portion of said cylinder and said stem and closing said radial injection passage of said stem member in the inoperative position of the latter, and

a first spring disposed between a shoulder portion of said stem member and said second packing ring and urging said stem member into its outermost position,

said stem having a flange disposed outwardly of said first packing ring between said flange of said cylinder and said first packing ring and spaced from said packing ring when the stem is in an outermost position,

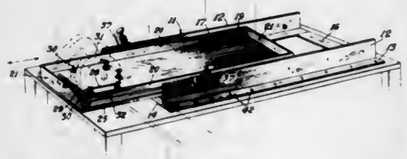
a second spring between the first and second packing ring biasing said first packing ring into engagement with said inner flange of said cylinder, so that upon performance of an inward stroke by said stem member said discharge opening is connected with the ambient atmosphere and said radial injection passage of said stem member feeds fuel into said container.

3,044,506
LUBRICATING SYSTEM FOR CHAIN SAWS
John W. Oehrll, Pacific Palisades, Calif., assignor to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed May 2, 1960, Ser. No. 25,931
3 Claims. (Cl. 143—32)



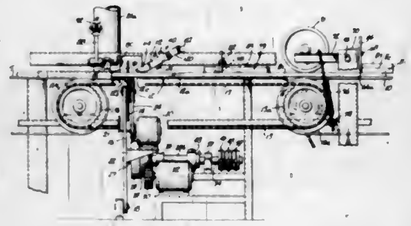
1. For use in a chain saw blade on which a saw chain is carried and guided as it is driven by an engine having lubricating oil supply means, said blade comprising a central elongated flat plate having on each of its two flat opposite sides an outer flat plate, said blade having an inner end portion securable to a saw driving engine and having an opposite end portion to extend longitudinally outwardly from said engine, said central plate having opposite transverse portions extending transversely outwardly of said outer plates at both transverse edges to form a chain track, said outer plates extending longitudinally outwardly from said central plate at said opposite end; a flat-sided rotatable wheel of substantially the same thickness as said central plate mounted longitudinally outwardly of said central plate on bearings and supported on an axle fitted in said outer plates adjacent said opposite end of said blade; a gap extending transversely between said wheel and said opposite end of said central plate, said chain being adapted to be carried and guided on said chain track on said central plate and on said wheel outwardly of said central plates; a lubricating system comprising lubricating passage means extending longitudinally within said blade, said passage means being adapted to be connected with lubricating oil supply means in said engine at said inner end portion to supply lubricating oil to said bearings and said chain extending around said wheel, said passage means comprising a conduit extending longitudinally in said central plate, said passage means being laterally bifurcated adjacent the opposite end portion of said central plate to extend into an outer duct in each of said outer plates, said ducts bridging said gap and having open outer ends adjacent said bearings outwardly of said central plate; and the inner end of said passage means being bifurcated transversely to join two transversely spaced inlets, said inlets extending laterally through said blade, each of said inlets having a filter therein extending from the outer side of one outer plate to the outer side of the other outer plate.

3,044,507
JIG FOR A POWER SAW
Angelo Esposito, 69 Centre St., Belleville, N.J.
Filed Sept. 15, 1960, Ser. No. 56,279
5 Claims. (Cl. 143—47)



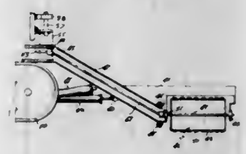
1. A jig for a power saw comprising a generally rectangular frame, a tray slidably mounted on the frame, a power saw mounted on top of the tray at one end thereof, the tray being slidably extensible on the frame to permit positioning of the blade of the saw both within the confines of the frame and beyond one end thereof, the tray also having a longitudinal slot and a latitudinal slot, and means for mounting a power saw on the tray with the cutting blade projecting downwardly through either of the said slots.

3,044,508
MARK SENSING LUMBER DEFECT CUTTER
Charles A. Sherman, Tacoma, Wash., assignor to Weyerhauser Company, Tacoma, Wash., a corporation of Washington
Filed Mar. 2, 1959, Ser. No. 796,657
11 Claims. (Cl. 144—2)



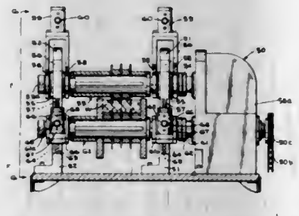
2. Mark sensing lumber defect cutter apparatus comprising conveyor means to support and advance boards endwise in successive order, said conveyor means having a gap therein, a cut-off saw mounted for operation in a plane transverse to the extent of and situated in said gap, clamp means mounted independently of the saw mount, located in the vicinity of the saw plane and operable to grip and hold a board stationary for cutting by the saw, electrically responsive mark-sensing means including elements situated adjacent the line of conveyance ahead of said saw plane, said mark-sensing means being operable to sense an electrically conductive mark applied to a board designating a defect cutting location thereon, said mark-sensing means being operatively connected to said clamp means to operate the same in response to sensing of the applied mark, whereby the board is arrested in a position of substantial registry of the defect cutting location with the saw plane, saw-actuating means operable to move the saw for severing the clamped board, means connected to said saw-actuating means and connected to be controlled to operate said saw-actuating means in response to said clamping means being placed in operative position for gripping and holding a board, and means connected to said clamp means and connected to be controlled by operation of the saw-actuating means to release the board by substantial completion of such saw movement.

3,044,509
TREE STUMP CUTTER ATTACHMENT
Jacob Kehler, 1557 Colonization Road W., Fort Francis, Ontario, Canada
Filed July 30, 1959, Ser. No. 830,575
1 Claim. (Cl. 144—2)



A device for cutting tree stumps and the like adapted to be mounted on a source of power such as a tractor and the like and to be driven thereby; comprising in combination a supporting component pivoted for movement in the vertical plane to the said source of power and extending therefrom, a cylindrical stump cutting component journalled for substantially horizontal rotation upon the end of said supporting component remote from said source of power, drive means extending between said cutting component and said source of power, means extending between said source of power and said supporting component to control said movement in the vertical plane, said supporting component being pivoted for movement in the horizontal plane, as well as in the vertical plane, and further means also extending between said source of power and said supporting component to control said movement in the horizontal plane, said supporting component including a tube pivotally secured by one end thereof within a clevis, for said vertical pivoting movement, said clevis being journalled for rotation in a horizontal plane to said source of power, a drive shaft extending through said tube and being connected by one end thereof to the power take off of said source of power and by the other end thereof, axially, to said cylindrical cutting component.

3,044,510
VIBRATORY SLICING APPARATUS
Gilbert D. Schneider and Lynn A. Schneider, Lexington, Ohio, assignors to Schneider Machine Company, Lexington, Ohio, a corporation of Ohio
Filed Apr. 9, 1959, Ser. No. 805,239
10 Claims. (Cl. 144—162)

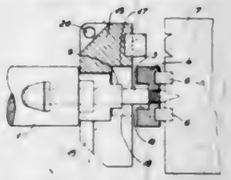


1. A slicing machine comprising supporting structure: opposed side pieces on the supporting structure; rotatable shafting extending between the side pieces transversely of the longitudinal axis of the machine as a whole; circular knives carried by the shafting in the space between the side pieces; means for rotating the shafting and the knives carried by the shafting; and means for vibrating the shafting while the shafting is rotating.

3,044,511
CHUCK ASSEMBLIES FOR MOUNTING ON THE SPINDLE OF A VENEER CUTTING LATHE

Frederic Wieckman and Alfred Felix Plato, Sonderborg, Denmark, assignors to Kristian Staerk A/S, Copenhagen, Denmark

Filed Oct. 12, 1960, Ser. No. 62,177
Claims priority, application Denmark Oct. 13, 1959
4 Claims. (Cl. 144—209)

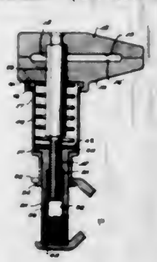


3. In a chuck assembly for veneer cutting lathes having rotating spindle, said chuck assembly comprising an outer face plate provided with an opening through one side permitting its application to and removal from said lathe spindle in a radial direction with respect to the spindle, and means for locking said outer face plate against radial movement on said spindle.

3,044,512
CLAMP

Sterling B. Jones, West Covina, Calif., assignor to Monogram Precision Industries, Inc., Culver City, Calif., a corporation of California

Filed May 31, 1960, Ser. No. 32,733
3 Claims. (Cl. 269—254)

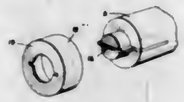


1. A side-grip sheet clamp comprising: an elongated tubular housing having a central opening which at one end is reduced, thereby to provide a lateral internal shoulder adjacent said one end; a first jaw element having a noncircular opening therethrough secured to the opposite end of said housing; a rod matingly slidable in said opening; a second jaw element fixed to the end of said rod adjacent said first jaw element; a compression spring in said housing surrounding said rod for forcing said rod inwardly to urge said second jaw element toward said first jaw element, whereby said jaw elements have a clamping action, and whereby said rod must be forced against the bias of the spring to separate said jaw elements sufficiently to be placed over the edges of a stack of sheets to be clamped together; means to effect the same movement of said rod and the same clamping force by said jaw elements for different thicknesses of sheet stacks to be clamped including a threaded extension on the inner end of said rod; and an elongated member having a central opening therethrough which at one end is an internally threaded reduced diameter portion, said elongated member being slidable and rotatable in said one end of said housing, said elongated member at its inner end having a flange engaged by the adjacent end of said spring, said flange being located inwardly of said shoulder so as normally to be kept in abutment with said shoulder by said spring, whereby selective rotation of said elongated member causes said rod to move longitudinally to effect a desired separation of said jaw elements, thereby to permit a subsequent sliding movement of said elongated member in said housing to compress said spring a predetermined amount to additionally separate said jaw elements for placing them in clamping engagement with a stack of sheets to be clamped.

3,044,513
SCREWDRIVER

Robert Barany, 183 Delmar Drive, Hamilton, Ontario, Canada, assignor of one-half to Barbara Goldblatt, Hamilton, Ontario, Canada

Filed May 12, 1960, Ser. No. 28,731
7 Claims. (Cl. 145—50)

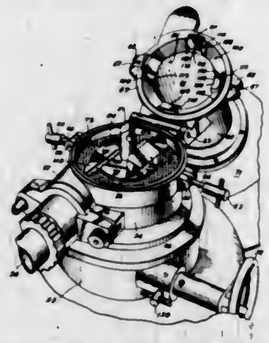


1. A screwdriver adapted to drive a screw having a stem with a head, at least one slot bisecting the head and a central hole in the head of greater diameter than the width of the slot, said screwdriver comprising a shank, a pin of lesser diameter than the shank secured to the shank and having a portion including an end projecting beyond the shank, the projecting portion of the pin being adapted to fit snugly into the hole in the head of the screw, a diametric slot in said pin, the diametric slot having an open end at said end of said pin, a second diametric slot in at least the outermost portion of the shank, a blade member comprising a substantially flat plate of rigid material, said blade member being of sufficient thickness to fit into the slot in the head of the screw, and fitting tightly in the shank slot and relatively more freely in the portion of the pin slot projecting beyond the shank, said plate having an outermost extremity substantially coinciding with the outermost projection of the pin, and extending laterally beyond the circumference of the pin, and means for retaining the shank and blade member together in assembled and operative relationship.

3,044,514
COMMINUTING MACHINE

Carl Schnell, Winterbach, near Schorndorf-Wurttemberg, Germany, assignor of one-half to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois

Filed Jan. 6, 1960, Ser. No. 859
Claims priority, application Germany Oct. 18, 1958
18 Claims. (Cl. 146—192)

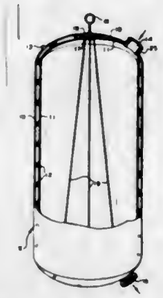


1. An apparatus for comminuting food material to produce a comestible emulsion comprising wall means defining in advancing and communicating sequence a reservoir portion with feeding inlet means, a comminuting portion, and a discharge portion with outlet means, said wall means being constructed and arranged to provide during operation of the apparatus a continuous and moving hydraulic column of material substantially free from ingress of air and extending from at least the entrance of the comminuting portion to said outlet means, a perforate plate separating said comminuting and discharge portions and having a multiplicity of small tubular passageways therein, the total area of said passageways being markedly less than the area of said plate and markedly less than the area of the column immediately behind the plate so that the plate creates back pressure in the comminuting portion, high speed knife means rotatably positioned in the comminuting portion, said knife means including a rotating propelling face that coacts with the plate and directs material toward said plate, said knife means defining in rotation at least two cutting zones, one of said zones being contiguous to said plate whereas another of said zones is positioned more remote from the plate, said wall means having a restricted portion rearward of said plate and in coacting relation with said knife means and plate, said wall means including recirculating means for directing inwardly substantially to the cutting zones material that is directed centrifugally outwardly by the knife means and rearwardly by the back pressure created by said perforate plate thereby providing an air-sealing head of material, and ejection means associated with said discharge portion.

3,044,515
SELF-ERECTING COLLAPSIBLE CONTAINERS

Lawrence R. Eades, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,169
4 Claims. (Cl. 150—1)



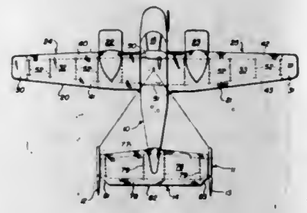
1. A self-erecting, collapsible container for storing and transporting particulate material comprising a double-walled, closed, cylindrical bag of gas-impervious, pliable material wherein the inner wall is completely sealed from the interior of the bag; a gas-impervious pliable cord spacer means positioned in the space between the outer wall and inner wall of the double-walled container and secured to the outer wall and the inner wall so as to maintain the space between the walls substantially the same as the diameter of the cord and to form therein a continuous chamber; a particulate material inlet in the upper portion of said bag; a particulate material outlet in the lower portion of said bag; and a valve means secured directly to the outer wall of said double-walled bag and communicating directly with the exterior of the bag and the space between the walls of the bag for introducing gas to said space to provide sufficient rigidity to said cylindrical walls to cause the bag to stand erect.

3,044,516
PROTECTIVE DEVICE FOR AIRCRAFT CONTROL SURFACES

Frank M. Stoll, 3870 Garrison St., Wheatridge, Colo.

Filed Mar. 17, 1960, Ser. No. 15,698
6 Claims. (Cl. 150—52)

1. A protective device for aircraft control surfaces comprising an elongated member having a receptacle portion at one end for receiving an extended portion of an aircraft member having leading and trailing edges, said elongated member having another portion of substantial length extending from said receptacle portion, and having depending portions adapted to encompass the leading and trailing edges of said aircraft member when mounted thereon, and the total length of the elongated member and the portions depending therefrom being sufficient to extend from the said receptacle to the fuselage, and said portions depending from said elongated member being of a configuration adapted to assure protection where the aircraft member joins the fuselage, and quick connect and disconnect devices adapted to interconnect the leading and trailing depending portions and assure a snug fit of the device when in place.



3,044,517
REVERSIBLE FURNITURE COVER OR RECEPTACLE AND METHOD FOR MAKING SAME

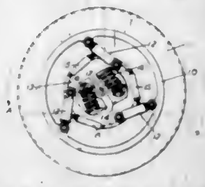
Daisy O. Levi, 6850 Santona St., Coral Gables, Fla., assignor to Daisy O. Levi and Renato Levi

Filed Nov. 3, 1959, Ser. No. 850,655
4 Claims. (Cl. 150—52)



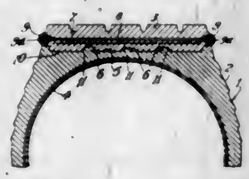
1. A method for constructing a reversible cover member for an article of furniture formed of two pairs of panels of fabric materials, each pair of said panels having the same dimensions and configurations as the other of said pairs of panels, said method comprising the steps of superimposing one panel of a first pair of panels against the second panel of said first pair of panels with the edges thereof coiniciding, stitching together a pair of adjacent ends of said first pair of panels in a two-ply seam, folding said panels of said first pair of panels about said stitching to superimpose the formerly remote surfaces thereof against one another with the marginal edges of said ends disposed therebetween and falling on one side of said stitching, superimposing the panels of the second pair of panels, respectively, against the exposed surfaces of said first pair of panels with the ends and sides of said second pair of panels coincident with the unstitched ends and sides of said first pair of panels except for those ends of said second pair of panels which project beyond the stitched ends of said first pair of panels, stitching together the ends and sides of said first and second pairs of panels adjacent the coincident marginal edges thereof except for said projecting ends of said second pair of panels to leave access openings at the unstitched ends of said second pair of panels extending between, respectively, each immediate adjacent pair of said first and second panels, and the final step of turning all of said panels inside out through a selected one of said openings.

3,044,518
ROAD WHEEL ATTACHMENTS
John Dudley Wells Gregg, "Tobarcooran," Carnmoney, Belfast, Northern Ireland
Filed Feb. 17, 1960, Ser. No. 9,220
Claims priority, application Great Britain Feb. 19, 1959
5 Claims. (Cl. 152—89)



1. A road wheel for a vehicle comprising a hub structure including a hub proper and a brake drum, a rim, and shock-absorbing means maintaining the lateral rigidity of the wheel and comprising a first series of angularly-spaced inclined telescopic links interconnecting the rim and hub proper, and a second series of angularly-spaced, inclined telescopic links, each interconnecting the brake drum and one of the first series of telescopic links intermediate its ends, the two series of telescopic links permitting the rim to move resiliently relative to the hub structure in the plane of the wheel so that shock on the rim is absorbed substantially in the direction of the angle of shock by virtue of the rim moving in that direction relative to the hub structure.

3,044,519
PNEUMATIC TYRES
Joseph Wright, Meriden, near Coventry, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed Mar. 31, 1961, Ser. No. 99,821
Claims priority, application Great Britain Apr. 13, 1960
4 Claims. (Cl. 152—187)



1. A pneumatic tyre comprising a tread reinforcement having a layer of substantially inextensible metallic reinforcing cords extending across the tread from one side thereof to the other, the lateral edges of the layer projecting beyond the rubber of the tread at each side thereof, and the said edges being embedded in and surrounded by rubber of substantially softer composition than the tread rubber composition moulded integrally with the tread rubber.

3,044,520
TIRE CHAINS
Albert Vogelin, 561 Hudson St., New York, N.Y.
Filed May 29, 1961, Ser. No. 113,227
6 Claims. (Cl. 152—237)



1. In combination with a wheel rim having a tire mounted thereon, a tire chain assembly comprising an anchor element and a tire chain element;
said anchor element comprising a front section and a rear section;
said sections being joined by connecting means; the radially outer end of said front section and the radially outer end of said rear section terminating in axially inwardly extending flanges normal to the direction of the anchor element and engaging the wheel rim;
said front and rear sections conforming to the general contour of the wheel rim and forming a clamp engaging the edges of the wheel rim with said end flanges; and
said anchor element having coupling means at the ends thereof engaging said tire chain element;
said tire chain element comprising a tire chain connected to terminal plate links,
said plate links having a flange along each edge parallel to the direction of the chain, each of said flanges having notches engaging the edge of said wheel rim; and
said plate links having cooperating coupling means engaging said anchor element.

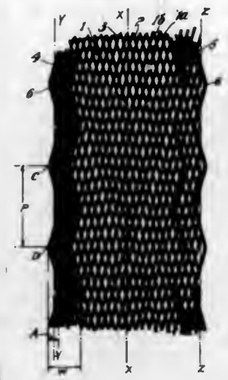
3,044,521
SWIVEL HOOK AND CHAIN FOR TIRE CHAINS
Henry St. Pierre, 50 Frank St., Worcester, Mass.
Filed Dec. 22, 1960, Ser. No. 77,581
7 Claims. (Cl. 152—241)



1. The combination with a tire chain having side chains and cross chains, of a hook comprising a bight portion terminating in an end, a shank adapted to extend through a link of the side chain, a raised ridge on the shank and a restricted portion on an end link of the cross chains the raised ridge extending along the shank directly under the end of the hook bight portion end, the restricted portion being complementary to the distance between the raised ridge on the shank and the end of the hook, the hook end approaching the shank, so that the side chains and cross chains may be assembled by sliding the restricted portion of the end link of the cross chain complementary to the raised ridge portion into the bight of the hook.

3,044,522
PNEUMATIC TYRE COVERS
George Edward Drakeford, Walmley, Sutton Coldfield, and Francis Edmund Smith, Sutton Coldfield, England, assignors to Dunlop Rubber Company Limited, London, England, a British company
Filed June 30, 1958, Ser. No. 745,736
Claims priority, application Great Britain July 10, 1957
7 Claims. (Cl. 152—355)

1. A filler for a tyre carcass comprising an annular rubber fillet having faces tapering radially outwardly to an edge and having on each radial face concentric, sinuous, convolutions side-by-side in a common plane adjacent to each side of said fillet, each convolution being of filamentary material and having sinuations spaced uniformly throughout its circumference from adjacent convolutions, the diameter of each convolution being greater than the diameter of the adjacent convolution nearer the common center of the convolutions, the phase of the sinuations on one side of the fillet being the reverse to the phase of the sinuations on the other side of the fillet,



said convolutions extending outwardly beyond the outer periphery of the fillet.

3,044,523
PNEUMATIC TIRES
George Edward Drakeford, Walmley, Sutton Coldfield, and Francis Edmund Smith, Sutton Coldfield, England, assignors to Dunlop Rubber Company Limited, London, England, a company of Great Britain
Filed Sept. 1, 1959, Ser. No. 837,482
Claims priority, application Great Britain Sept. 5, 1958
9 Claims. (Cl. 152—362)



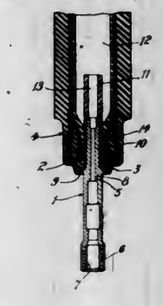
1. A pneumatic tire comprising a carcass incorporating at least one carcass ply and having a composite bead wire and a bead reinforcement of unwoven construction, said bead reinforcement extending radially outwardly of the bead wire in the region of the chafer and filler, said bead reinforcement comprising at least one layer consisting of filamentary material in the form of an annulus, the filamentary material being arranged in the form of a plurality of spiral convolutions of successively increasing diameter lying parallel to one another in side-by-side relationship.

3,044,524
REPAIR PATCH
Hans Werner, Hannover, Germany, and Georg Schmidt-Hertzberg, Astoria, N.Y., assignors to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany
Filed Sept. 11, 1959, Ser. No. 839,500
2 Claims. (Cl. 152—367)



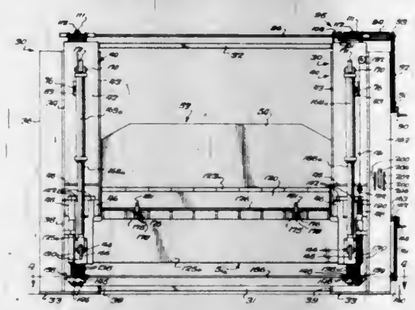
1. A repair patch for vehicle inner tubes and other rubber parts, which includes: a patch body, and at least one cover foil mounted on said patch body on the side that is to engage the rubber part to be repaired and having an area greater than the surface area of said patch body and having its marginal portions protruding beyond all of the marginal portions of said patch body, the outermost areas of the marginal portions of said cover foil on the side toward the patch body being provided with pressure transferable color material adapted to be transferred to the rubber part to be repaired when said cover foil is pressed against the rubber part to be repaired.

3,044,525
INFLATABLE ARTICLES AND INFLATION VALVES THEREFOR
Henry Raymond Fletcher, Birmingham, England, assignor to Dunlop Rubber Company Limited, a British company
Filed May 25, 1960, Ser. No. 31,685
Claims priority, application Great Britain May 27, 1959
5 Claims. (Cl. 152—429)



4. A pneumatic tyre of elastomeric material having a pair of closely spaced beads and side walls extending radially outwardly from said beads in closely spaced position, said tyre being closed between said beads, a rigid, open ended inlet tube extending into the tyre between said beads and terminating at the inner periphery of the space between said side walls and a flexible tube fluid tightly enclosing the portion of said rigid tube in said tyre and extending beyond the end of said rigid tube into the space between said side walls, said flexible tube being vulcanized to the elastomer of said tyre between said beads.

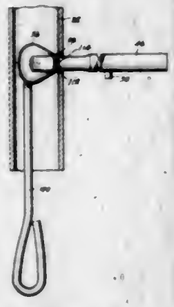
3,044,526
BRAKE FOR FORMING METAL PLATE AND SHEET
Percy L. Cady, Jr., Darien Center, N.Y.
Filed Feb. 15, 1960, Ser. No. 8,603
17 Claims. (Cl. 153—16)



1. In a brake for forming metal plate and sheet workpieces having a frame, a pair of forming aprons arranged in face-to-face relation on opposite sides of a plane which includes the forming axis about which the workpiece is to be deformed and said aprons including working surfaces parallel and adjacent said forming axis, a clamping ram movable on said frame along said plane toward and from said working surfaces in opposed relation thereto, a mandrel carried by said clamping ram and having an exterior forming portion arranged to be brought into concentric

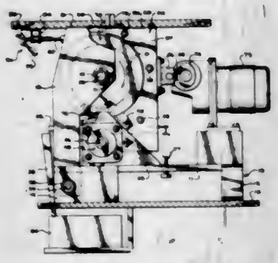
relation with said forming axis by the movement of said clamping ram, and supporting pivot means on said frame concentric with said forming axis at opposite ends of said aprons, the combination therewith of an adjustable mounting for said aprons, comprising means pivotally supporting each apron on said supporting pivot means for independent adjustment of each of said working surfaces relative to said forming axis and relative to each other whereby a workpiece can be produced having surfaces contacted by said working surfaces at different distances from said forming axis.

3,044,527
METHOD AND APPARATUS FOR MAKING CONNECTIONS TO LEAD WASTE PIPING
Harry L. Fulton, 805 E. 11th St., Pueblo, Colo.
Filed Oct. 27, 1958, Ser. No. 769,777
8 Claims. (Cl. 153—21)



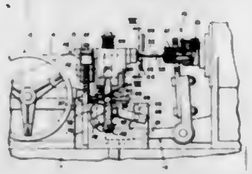
1. A tool for use in forming a tubular cuff on the wall of a hollow lead plumbing fitting or the like which comprises, a generally pear-shaped metal member having a pyramidal-shaped portion with two pairs of oppositely inclined flattened faces separated by converging rounded edges.

3,044,528
MACHINE FOR STRAIGHTENING COMPONENT LEADS
Robert W. Wullenwaber, Rolling Hills, and Ralph Othon, Los Angeles, Calif., assignors to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,608
7 Claims. (Cl. 153—32)



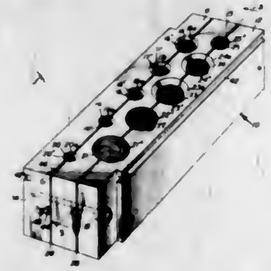
1. A machine for straightening elongated wire leads extending axially from opposite ends of component bodies comprising, in combination: a rotary lead-engaging wheel having a central circumferential channel therein to freely accommodate component bodies while only the leads thereof are engaged by the remaining portions of the circumferential surface of the wheel, said remaining portions of the circumferential surface of said wheel being smooth; a pressure member disposed for co-operation with said lead-engaging wheel and adapted to present a longitudinally sectioned lead-engaging face for co-operation with the circumferential surface of said lead-engaging wheel; and means for vibrating said pressure member at a frequency greater than the speed of rotation of said lead-engaging wheel and in a plane perpendicular to the axis of rotation of said wheel, each longitudinal section of the lead-engaging face of said pressure member being of such longitudinally concave curvature to facilitate, in operational co-operation with the circumferential surface of said lead-engaging wheel, free accommodation of the bodies of the components fed into said machine and cyclical intermittent rotation of the component leads while simultaneously gradually forcing the leads into alignment along the axis of rotation of said leads.

3,044,529
OVERWIND DEVICE
Alvin O. Wollentin, Bloomfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 14, 1959, Ser. No. 786,824
5 Claims. (Cl. 153—67)



1. An overwind device for a coil-winding machine having a coiling head rotatable to form a coil provided with a coil body, a first uncoiled end-leg portion and a second uncoiled end-log portion, said overwind device comprising a coiling die, means connected to the coiling die for rotating it through a predetermined angle in one direction during the rotation of the coiling head to form the coil body thereby varying by a fraction of a turn the total number of turns in the coil body to insure the disposition of the uncoiled end-leg portions of the coil in the same plane, and means also connected to the coiling die for returning the coiling die to its starting position after the formation of the coil body, for rotating the second uncoiled end-leg portion and the coil body in the other direction during the formation of the second uncoiled end-leg portion thus providing a straight second uncoiled end-leg portion and for allowing the coil body to spring back thus aligning the first and second uncoiled end-leg portions in the same plane.

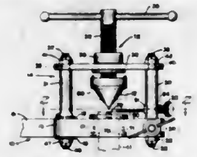
3,044,530
COMBINATION STUD VICE AND TUBE FLARING APPARATUS
James Jones, 222 1st St., Olyphant, Pa.
Filed Oct. 6, 1958, Ser. No. 765,595
3 Claims. (Cl. 153—80.5)



1. A stud or tube-gripping vice or the like comprising a sectional body comprising at least three substantially

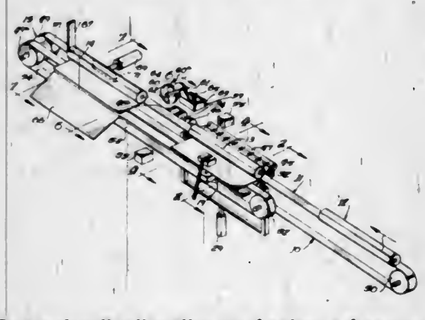
longitudinally coextensive sections of substantially uniform depth and providing opposed faces whereby to provide outer and intermediate sections, said opposed faces having similar registering recesses extending through said body in a depthwise direction, each pair of opposed hole-providing recesses being curved in the arc of a different circle and comprising not more than one hundred eighty degrees of the latter, whereby to provide two laterally spaced series of work-receiving holes extending through said body, means drawing said sections toward one another to thereby clamp work in said holes, said holes being differently threaded for a predetermined distance inwardly from opposite ends thereof whereby to take, respectively, differently threaded stud ends or the like of the same diameter, and there being an annular unthreaded stud stop-providing space separating the differently threaded portions of the respective holes so that studs can project predetermined distances from opposite hole ends.

3,044,531
TUBE FLARING TOOL
Frank R. Wilson, Memphis, Tenn., assignor to Quinn Esther Wilson
Filed Feb. 16, 1955, Ser. No. 488,458
7 Claims. (Cl. 153—81)



1. A tube flaring tool comprising a pair of clamping members having recesses therein to form a tube clamping aperture, a two-legged yoke fastened to said members, one leg of said yoke being fastened to one of said members only and the other leg of said yoke being fastened to the other of said members only, and means for hingedly connecting said members at one side of said aperture to permit separation thereof to free the tube within the aperture, said means including a link pivotally connected at one end to one of said members and at the other end to the other of said members to provide a swinging link connection between said members, one of the legs of said yoke forming the pivot for one end of said link.

3,044,532
TAIL SEALING MACHINE
Pietro D. Ghisoni, Cairate, Italy, assignor to Vita Mayer & Co., Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 30, 1960, Ser. No. 18,639
14 Claims. (Cl. 156—361)



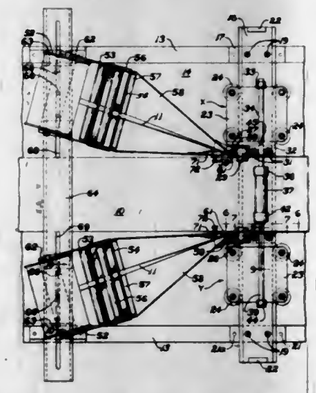
1. In a web roll tail sealing mechanism, a frame, means on said frame for supporting a web roll for rotation about its own axis, means for rotating said web roll about its own axis, means on said frame for angularly advancing the tail portion of said web roll faster than the rotation of said roll, and means sensitive to the faster angular advance of said tail portion for halting the rotation of said roll, whereby said roll is provided in a partially unwound condition suitable for application of an adhesive thereto for sealing said tail portion.

3,044,533
APPARATUS FOR THE MANUFACTURE OF PNEUMATIC TYRES
Jack Milner Lowe, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed Apr. 28, 1958, Ser. No. 731,419
Claims priority, application Great Britain May 1, 1957
12 Claims. (Cl. 156—401)



1. Tyre building apparatus comprising a collapsible building drum, an assembly of supporting members arranged in a cylinder located coaxially with said drum, one at each end of the drum, an annular air bag carried on said supporting members at each end of the drum to support the ends of tyre building fabric projecting beyond the ends of the drum, said bag when not inflated comprising a radially inner cylindrical wall on said supporting members and a radially outer wall on said inner wall, said radially outer wall comprising a nose portion adjacent to said drum of low tensile modulus compared with the remainder of the bag to expand over the end of said drum when said bag is inflated, each said assembly of supporting members being expansible at the axially outer end thereof to a greater diameter than the portion at the inner end thereof and to a diameter greater than the diameter of the building surface of the building drum, to urge the outer wall of the air bag, when the air bag is inflated, axially towards the building drum to roll the projecting end of the fabric around a bead wire located on the fabric adjacent the end of the drum.

3,044,534
APPARATUS FOR APPLYING FLEXIBLE STRIPS TO THE EDGES OF A FLAT CONVEYOR BELT
John R. Yoho, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Oct. 27, 1958, Ser. No. 769,869
5 Claims. (Cl. 156—467)



1. Apparatus for continuously applying flexible strip material to the edges of a longitudinally moving flat con-

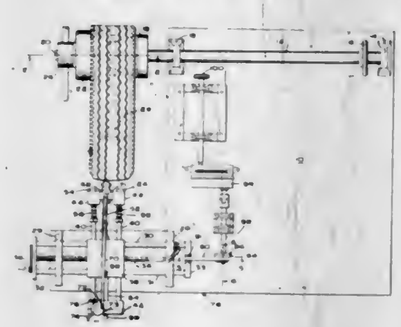
veyor belt, said apparatus comprising a support upon which the conveyor belt is supported as it is advanced longitudinally, a carriage positioned at each side of the conveyor belt, the carriages being mounted to move as a unit laterally of the longitudinal movement of the conveyor belt to accommodate lateral shifting of the conveyor belt on the said support while the conveyor belt is being advanced, means for supplying a length of flexible edge strip material to each edge of the conveyor belt, and means included in each of said carriages for pressing the lengths of edge strip material against the conveyor belt edges.

3,044,535
LABEL DISPENSER
Alfred P. Krueger, Southbury, Conn., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Mar. 10, 1960, Ser. No. 14,133
7 Claims. (Cl. 156—584)



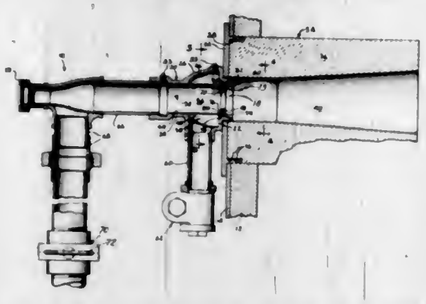
4. A label-dispensing machine for dispensing labels mounted on and adhering to a backing strip, said machine comprising a frame, means thereon for supporting a supply roll of labels adhering to a backing strip, a member having a projecting edge over which the strip may be bent to strip the labels therefrom, a roller positioned adjacent said member and spaced inwardly from the edge thereof to hold the strip against said member, a coiled spring upon the other side of said member to hold the strip adjacent that side of the member and effect the bending of the strip about said edge as it is drawn from the roll, and said spring being swingably supported from the frame and movable over the edge of said member to a position adjacent said roller to facilitate threading the strip through the machine.

3,044,536
TIRE GROOVING MACHINE
William E. Brown, 1401 Belle St., Parkersburg, W. Va.
Filed Feb. 18, 1960, Ser. No. 9,631
4 Claims. (Cl. 157—13)



1. A tire grooving machine comprising a frame, tool supporting means carried by said frame adjustable along perpendicular paths lying in a plane, tire mounting means carried by said frame rotatable about an axis parallel to one of said paths and lying in a plane parallel to the plane of said paths, said tire mounting means being adapted to receive a tire having an axis coincident with said axis of rotation, a tool carried by said tool supporting means and slidable relative thereto towards and from said axis, biasing means urging said tool towards said axis relative to said tool supporting means, stop means limiting movement of said tool towards said axis, means for retracting said tool relative to said tool supporting means, and means including reciprocating means having a stroke of adjustable magnitude for driving said tool supporting means parallel to said axis and said tire mounting means in synchronism, said reciprocating means comprising a rotary shaft pivotally carrying an adjustable eccentric, said eccentric carrying a bearing, and a connecting rod having opposite ends connecting said bearing and said tool supporting means.

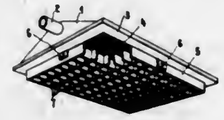
3,044,537
GAS BURNER CONSTRUCTION
James P. Keating and John A. Saunders, Rockford, Ill., assignors to Eclipse Fuel Engineering Co., Rockford, Ill., a corporation of Illinois
Filed Dec. 11, 1958, Ser. No. 779,658
3 Claims. (Cl. 158—109)



1. In a burner construction of the character described, in combination, a tubular casing including a substantially cylindrical rear section of relatively large internal diameter the forward end of which merges with a forwardly and outwardly flared front section in the form of a bell housing, the forward rim of said bell housing being turned inwardly to provide an annular radial front wall having a central circular opening therein of a diameter slightly less than the internal diameter of the cylindrical rear section, an open-ended cylindrical wall within said tubular casing, extending through the bell housing in concentric relationship, and having its forward open rim joined to said radial front wall at a region spaced slightly outwardly from the rim of said central opening so as to provide, in effect, a continuous marginal inwardly and radially directed annular lip of small radial thickness at the forward end of the cylindrical wall, said cylindrical wall providing a central air passage therethrough in communication with said central opening, said cylindrical wall, in combination with the forward flared wall of the bell housing and the radial front wall, establishing an annular gas chamber surrounding said central air passage, the forward face of said front wall being formed with a series of shallow circumferentially spaced semispherical forwardly opening surface depressions surrounding the central opening, there being a series of circumferentially spaced small bore air passages, one for each depression, extending through said annular lip and establishing communication between said air passage and the respective depressions for bleeding small quantities of air from the air passage to the depressions, there being a series of circumferentially spaced small bore gas passages, one for each depression, extending through said front wall and establishing communication between said gas chamber and the respective depressions for bleeding small quantities of gas from the gas chamber to the depressions for mixture with the gas issuing from said small

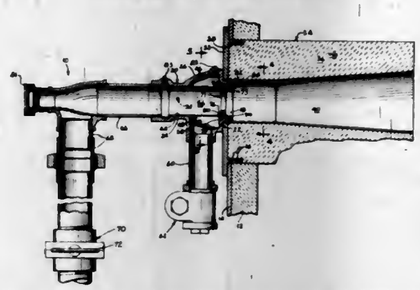
bore gas passages to produce localized flame jets in said surface depressions, means for supplying air under pressure to said central air passage to create a relatively large air jet forwardly of said central opening, means for supplying gas under pressure to said annular gas chamber, and a central valve for varying the rate of supply of gas to said annular gas chamber between such minimum fuel application that the localized flame jets in said surface depressions are generated under stoichiometric fuel-air ratio so that substantially all of the fuel entering said depressions through the small bore gas passages will be consumed in the depressions, and maximum fuel application wherein only a portion of the fuel entering said depressions will be consumed therein and the excess fuel will be drawn into the large air jet by an injector action for admixture therewith in an amount sufficient that the continued excess fuel from all of the depressions will effect stoichiometric fuel-air ratio under the piloting influence of the localized flame jets in the surface depressions.

3,044,538
RADIATING OR INCANDESCENT GAS BURNER
Guido Hönger, Zuchwil, Solothurn, Switzerland, assignor to Swiss Gas Stove Co. Solothurn, Solothurn, Switzerland
Filed Sept. 4, 1957, Ser. No. 681,983
Claims priority, application Switzerland Oct. 1, 1956
4 Claims. (Cl. 158—116)



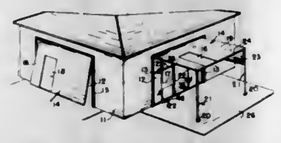
1. A radiant heater comprising a hollow body having a mixing chamber portion within which a combustible gaseous fuel-air mixture is formed, said chamber having a large discharge opening, a burner diaphragm comprising at least two thin wire gauzes substantially in contact with each other and forming a burner surface covering said opening and presenting means for controlling and localizing the burning fuel-air mixture such that combustion takes place in the region of such diaphragm with at least the outer of such gauzes being heated to incandescence, a metallic grate associated with said diaphragm for protecting the same from physical damage and from the influence of draughts and for enhancing the radiant heat characteristics of the burner, said grate including a series of strip-shaped elements extending in intersecting planes substantially perpendicular to the surface of the burner diaphragm to form honeycombed openings having axes substantially perpendicular to the burner surface, the strip shaped elements having a thickness much smaller than the width of the openings formed between said elements and most of the heat radiation emitted from the burner surface being thereby allowed to pass freely through such openings and the heat radiation being substantially reflected into the openings and emerging therefrom substantially perpendicular to the burner surface, said grate overlying the entire burner diaphragm area and being generally parallel therewith, said elements cooperating to form draught deflecting means to substantially isolate that region of the burner between the outer surfaces of said elements inwardly thereof toward and to said diaphragm from ambient air currents, said grate being disposed exteriorly of said diaphragm immediately adjacent thereto so that the inner portions of the strip-shaped elements substantially contact the diaphragm and are thereby heated to incandescence to enhance the radiant heating characteristics of the burner.

3,044,539
PROCESS OF COMBUSTION
James P. Keating and John A. Saunders, Rockford, Ill., assignors to Eclipse Fuel Engineering Co., Rockford, Ill., a corporation of Illinois
Original application Dec. 11, 1958, Ser. No. 779,658. Divided and this application Sept. 8, 1959, Ser. No. 838,527
1 Claim. (Cl. 158—117.5)



That process of combustion which comprises creating a relatively large air jet and a multiplicity of relative small air jets at spaced localized peripheral regions in the vicinity of and surrounding said relatively large jet of air by forcing limited portions of the air from the large jet through restricted air passages leading to the respective localized regions, feeding each of the small jets of air at the respective localized regions with gaseous fuel by creating a companion fuel jet for each of the small air jets at the small region of the latter while simultaneously maintaining a combustion flame in said localized region, and simultaneously varying the quantity of fuel fed to each of the small jets of air by the respective companion fuel jet between such minimum fuel application that said combustion flame is generated under substantially stoichiometric fuel-air ratio so that substantially all of the fuel fed to the small air jets will be consumed in the localized regions and maximum fuel application in an amount sufficient that only a portion of the fuel fed to the small jets of air will be consumed in the localized regions and the excess fuel will be drawn into the large air jet due to its velocity and by an injector action for admixture therewith and that the excess fuel from all of said localized regions drawn into the large stream of air will effect a stoichiometric fuel-air ratio and will burn under the piloting influence of said combustion flame.

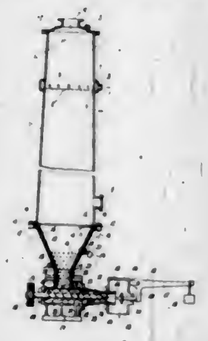
3,044,540
CANOPY-DOOR UNIT
Lowell V. Hammersley, Denver, Colo., assignor, by decree of distribution, to Eradna B. Hammersley
Filed Apr. 25, 1960, Ser. No. 24,271
8 Claims. (Cl. 160—20)



1. A multiple use door unit adapted for use in doorways as defined by door jambs and a threshold or supporting floor comprising a frame, a facing of solid translucent to opaque material on said frame for closing off the defined passageway through said doorway when said frame and facing structure are in a first closed position, a pivot support at the top of said frame, and the upright door jambs for selectively holding said frame and facing structure in alternate positions at said doorway, said alternate positions being inclusive of a vertically dis-

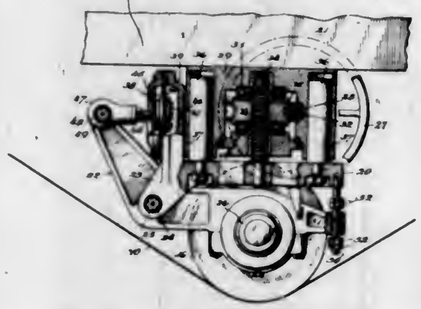
posed closed position and of a substantially horizontally disposed position extending outwardly from said door jamb wherein the frame and facing structure are useful as a weather and sun protecting canopy, a screen closure structure of size adapted to substantially close off said passageway, a pivot pin on said door unit frame for pivotally holding said screen closure to said frame, and lock means on said door unit frame for selectively holding said screen closure in compact position integral with said frame and facing structure for movement therewith and for releasing said screen closure for independent movement, said pivot support and pivot pin being cooperatively positioned each to each whereby said pivot pin and screen closure move downwardly as the frame and facing structure are raised to the canopy position to hold said screen closure in position against said threshold and across said doorway for preventing unwanted intrusions through said doorway when the door unit frame and facing are in such raised canopy position.

3,044,541
CONTINUOUS DIGESTING AND EXTRACTING APPARATUS
Masao Sugasawa, 46 4-chome Okusawa-machi, Otaru, Japan
Filed Feb. 29, 1960, Ser. No. 11,513
Claims priority, application Japan Sept. 26, 1959
5 Claims. (Cl. 162—237)



1. A continuous digesting and extracting apparatus which comprises a vertically disposed digesting and extracting column having a top and base, a feed opening defined in the top wall of said column for supplying the material to be treated, a discharge opening defined in the top of said column and adapted to be opened and closed; an aperture for discharging the treating solution defined in the upper portion of said column, a funnel-shaped vibratory section composed of an outer wall attached to the base of said column, the wide end of which is concentrically connected with the base of the column and an inner funnel-shaped porous wall forming a false bottom vibrating wall within said section, a funnel-shaped annular space being defined between said outer wall and the inner vibrating wall inside the vibratory section, an electromagnetic vibrator attached to the vibratory section and having a vibration transmitting rod affixed to said inner wall, an inlet port for the treating solution, defined in the outer wall of said funnel-shaped vibratory section communicating with said annular space, a horizontal tubular screw press housing having helical grooves around the inner periphery and arranged to communicate through an inlet with the bottom of the vibratory section, a screw shaft rotatably mounted in said housing extending longitudinally thereof and a feed screw secured to the outer periphery of said screw shaft feeding in an opposite direction than said helical grooves, said screw press housing having a forward portion comprising a forwardly convergent subportion and a forwardly divergent delivery port, said feed screw feeding toward said port and said helical grooves feeding toward said press housing inlet.

3,044,542
PAPERMAKING MACHINE
James Loynd, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed June 11, 1959, Ser. No. 819,587
4 Claims. (Cl. 162—273)

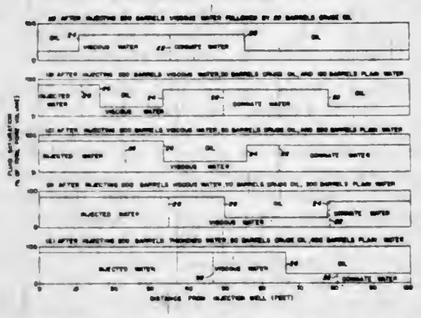


4. In a papermaking machine, an endless Fourdrinier wire, a machine frame, a plurality of rolls including a breast roll and a couch roll and a wire tensioning roll, means for rotatably attaching said rolls to said frame so that they hold said wire in the form of a loop, means for driving one of said rolls so as to drivingly move said wire, said attaching means including a pair of platforms suspended from said frame and a pair of bell cranks pivotally attached to said platforms and having said wire tensioning roll mounted between arms thereof so that the roll rests on the wire due to the weight of the roll and is supported by the wire, means for adjusting said platforms vertically so as to position said wire tensioning roll on said wire, air pressure operated power units mounted on said platforms so as to act on the other arms of said bell cranks in such a direction tending to counter-balance the weight of said wire tensioning roll, a source of air under pressure in continuous connection with said power units while said wire is being driven, and regulator valves for maintaining at selected values the air pressure supplied from said source to said power units, said pressure being at such predetermined values and said power units having such a purchase on said bell cranks whereby the power units apply a certain continuous lifting force on the said tensioning roll sufficient to counter-balance only a part of the weight of the tensioning roll on said wire and absorb and permit small movements of the tensioning roll with movement of the wire.

3,044,543
SUBTERRANEAN RECOVERY PROCESS BY COMBUSTION
Henry J. Ramey, Jr., Fullerton, Calif., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Oct. 25, 1956, Ser. No. 618,176
12 Claims. (Cl. 166—4)

10. In the process for the recovery of hydrocarbon material from a subterranean formation containing hydrocarbons and having an input well leading thereto and at least one output well leading therefrom wherein combustion of hydrocarbon material within said subterranean formation is initiated, combustion supporting gas containing a combustion supporting medium is passed through said subterranean formation through said input well in the direction of an output well and as a result thereof a flame front preceded by combustion gas and hydrocarbon products recoverable from an output well migrate through said subterranean formation from said input well in the direction of said output well and gas issues from said subterranean formation through said output well, the steps comprising determining the time required for said combustion supporting gas to pass through said subterranean formation from said input well to an output well, passing into said subterranean formation through said input well in addition to said combustion supporting gas in known amount with respect to said combustion supporting gas a gaseous, oxidizable material having as a constituent element thereof a heavy isotope of hydrogen in which gaseous, oxidizable material the ratio of said heavy isotope of hydrogen to protium is greater than in hydrogen not treated to increase this ratio whereby said gaseous, oxidizable material in admixture in known amount with said combustion supporting gas advances through said subterranean formation from said input well in the direction of said output well, analyzing at a time subsequent to passing said gaseous, oxidizable material into said subterranean formation and equal to said time required for gas to pass through said subterranean formation from said input well to said output well gas issuing from said output well for the amount with respect to said gas of said heavy isotope of hydrogen whereby information concerning the presence of said flame front in the path of gas flow between said input well and said output well is obtained, and thereafter changing the rate of flow of combustion supporting medium through said subterranean formation between said input well and said output well whereby change of migration of said flame front in said subterranean formation is effected.

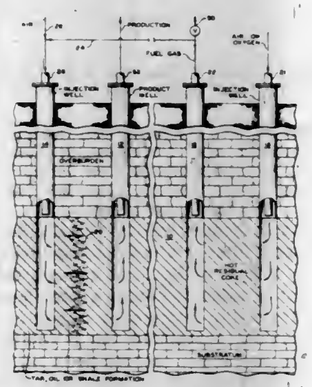
3,044,544
INCREASING OIL RECOVERY DURING WATER-FLOODING
Orrin C. Holbrook and George G. Bernard, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 29, 1958, Ser. No. 783,435
6 Claims. (Cl. 166—9)



1. A method for recovering petroleum from a natural underground reservoir, comprising injecting into the reservoir an aqueous fluid having a viscosity substantially greater than that of water but not so great as to prevent injection, in an amount in the range of about 0.1 to 1.0 reservoir pore volume, injecting a slug of oil behind said fluid in an amount in the range of about 0.0002 to 0.05 reservoir pore volume, injecting floodwater behind said oil slug, and producing petroleum from said reservoir.

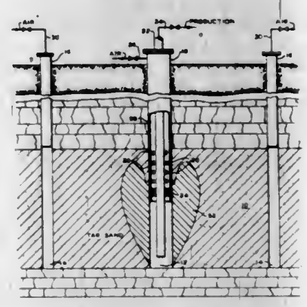
3,044,545
IN SITU COMBUSTION PROCESS
James W. Tooke, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 2, 1958, Ser. No. 764,994
8 Claims. (Cl. 166—11)

1. A process for producing hydrocarbons from a permeable carbonaceous stratum which comprises injecting a first gas selected from the group consisting of O_2-containing gas and a mixture of same with steam into a first section of said stratum thru which an inversely burning combustion zone has been passed, leaving hot coke in same at combustion supporting temperature, while said first section is at said temperature to produce fuel gas by reaction of said first gas with said coke, said gas being injected thru a first injection well in said first section and said fuel gas being produced thru a production



well therein; simultaneously maintaining a combustion zone in an unburned second section of said stratum intermediate a second production well and a second injection well therein and moving said zone thru same by feeding a mixture of combustion-supporting gas and said fuel gas in which the concentration of fuel gas is in the range of 0.5 to 7.0 volume percent to said combustion zone thru said second injection well and recovering produced hydrocarbons thru said second production well.

3,044,546
PRODUCTION OF UNCONSOLIDATED SANDS BY IN SITU COMBUSTION
Henry O. Dixon, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,704
7 Claims. (Cl. 166—11)



7. A process for producing hydrocarbons from a unconsolidated sand containing producible hydrocarbons which comprises establishing a combustion zone in said sand around a production well at one of the uppermost and lowermost levels therein by heating said sand to ignition temperature at the selected level and contacting same with combustion-supporting gas; injecting combustion-supporting gas by way of said production well thru said sand along said well from the other level so as to feed said combustion zone and cause same to move thru an annulus of sand to said other level and venting combustion products thru said production well, there-

by leaving a carbonized residue in said sand traversed by said combustion zone so as to consolidate the sand in the wall of said well; thereafter, while said residue is at ignition temperature, injecting combustion-supporting gas thru at least one offset well into said sand so as to force said gas thru said sand to the hot residue so as to reestablish combustion and move the resulting combustion zone thru said sand toward said offset well; and recovering produced hydrocarbons thru said production well.

3,044,547

PERMEABLE WELL CEMENT AND METHOD OF PROVIDING PERMEABLE CEMENT FILTERS IN WELLS

Ralph R. Jarboe, Jr., Tulsa, Okla., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 23, 1958, Ser. No. 769,102
16 Claims. (Cl. 166—12)

1. A pumpable cement slurry for use in forming a permeable cement filter in a well and comprising from 70 to 95 parts by weight of Portland cement, from 1 to 10 parts by weight of asbestos having a fiber length of from ⅛ to ½ in., from 4 to 20 parts by weight of a water insoluble solid organic compound that is soluble in hydrocarbon solvents and has a melting point higher than the bottom hole well temperature and sufficient water to make the slurry pumpable.

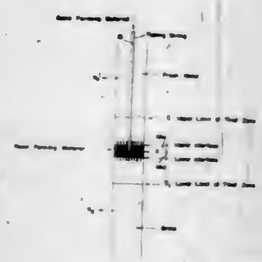
9. A method of providing a permeable cement filter in oil and gas wells which comprises introducing into the producing region of a well a cement slurry comprising from 70 to 95 parts by weight of Portland cement, 1 to 10 parts by weight of asbestos having a fiber length of from ⅛ to ½ in., from 4 to 20 parts by weight of a water insoluble solid organic compound, soluble in hydrocarbon solvents, having a melting point higher than the bottom hole temperature of the well, and sufficient water to make a pumpable slurry, permitting the slurry to set adjacent to the producing region of the well, drilling out a portion of the set cement below the end of the well casing and washing the set cement with a hydrocarbon solvent to thereby extract the solid organic compound from the set cement.

3,044,548

METHOD FOR SELECTIVELY PLUGGING A SUBTERRANEAN LOCATION IN A WELL WITH LIQUID ORGANIC RESIN-FORMING MATERIAL

Robert O. Perry, Don R. Holbert, and George A. Zeito, Tulsa, Okla., assignors to Sinclair Oil & Gas Company, Tulsa, Okla., a corporation of Maine

Filed Feb. 27, 1957, Ser. No. 642,867
15 Claims. (Cl. 166—33)



1. In a method for selectively decreasing the permeability of a permeable portion of a well area by plugging the permeable portion with a liquid organic resin-forming material, the steps comprising conducting an injectivity profile in the well by vertically traversing the well area with a primary interface formed between two dissimilar aqueous liquids, each of which can be distinguished by detection means, to locate the permeable portion to be plugged, said permeable portion being spaced upwardly from the bottom of the well, forming a secondary interface between a salt water layer in the lower portion of the well and an overlying fresh water layer, adjusting the amounts of the respective liquids in the layers to position said secondary interface within said located permeable portion of the well, charging into said secondary interface an aqueous, liquid, organic resin-forming material having a specific gravity from about 1.07 to 1.18 and a viscosity of about 1 to 5 centipoises, said secondary interface being located within said permeable portion at a position determined from the injectivity profile such that the upper and lower levels of the material arrive at approximately the same time at the upper and lower levels of the permeable portion of the well to be plugged, displacing the resin-forming material into the adjacent permeable area, and allowing the resin-forming material to set and plug said permeable portion of the well.

3,044,549

WELL TREATING PROCESSES

Julius E. Jones, 207 Leggett Bldg., Midland, Tex.

No Drawing. Filed Mar. 27, 1957, Ser. No. 648,772
7 Claims. (Cl. 166—42)

1. In a method of producing oil from a well in earth formations, the steps of pumping simultaneously into the well oil and an acid, joining the oil and acid in the well under high pressure so that the oil and acid are mixed but not emulsified, and continuing to maintain a high pressure which is sufficient to fracture the formation and which will carry rapidly the non-emulsified mixture of oil and acid to points remote from the borehole.

3,044,550

METHOD OF TREATING EARTH FORMATIONS WHICH ARE PENETRATED BY A WELL BORE

Louis H. Eilers, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 26, 1957, Ser. No. 705,137
11 Claims. (Cl. 166—42)

1. A method of treating an earth formation penetrated by a well bore, comprising injecting a pumpable treating agent into said earth formation to fracture said formation and make fluid receiving passages therein, then injecting into said fluid receiving passages an aqueous hydraulic cement slurry to form a cement filter cake against the wall surfaces of the passages touched by said slurry, and then pumping a stream of treating agent in excess of the amount capable of filtering through said filter cake through said filter cake before said filter cake hardens across the entire cross-sectional configuration of said passages to displace unfiltered slurry further along said passages.

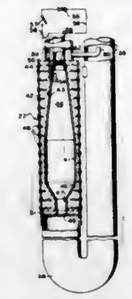
3,044,551

HEATER

Robert C. Pryor, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 29, 1958, Ser. No. 783,500
9 Claims. (Cl. 166—59)

7. A burner for downhole heating comprising an elongated tubular refractory liner of diminishing transverse cross sectional area each direction along its axis from an intermediate section to a combustible gas inlet at one end and to an exhaust gas outlet at the opposite end; a flame arrester in said inlet whereby the upstream section of said liner forms the initial section of the combustion zone of said burner; igniter means for said burner; and an elongated exhaust conduit of substantially



larger diameter than said exhaust outlet connected with said outlet and coaxial with said tubular liner.

3,044,552

PARAFFIN SCRAPER

Marshall L. Claiborne, 200 W. Alto, Hobbs, N. Mex.

Filed Aug. 25, 1959, Ser. No. 835,976
3 Claims. (Cl. 166—170)



1. In a paraffin scraper for an oil well tube including a free member which moves up and down within the tube, the improvement comprising: said member having two portions, an upper tubular portion and a lower tubular portion, each portion having helical vanes on the outside thereof, the outside diameter of said vanes being only slightly less than the inside diameter of said tube, the vanes on the top portion rotating in a first direction and the vanes on the bottom portion rotating in a second direction, a pintle attached to one of said portions, a washer attached to the other of said portions, said pintle extending through said washer and having a stop at the end of the pintle which is beyond said washer, so that the two members are connected together for relative rotation but with only slight axial movement.

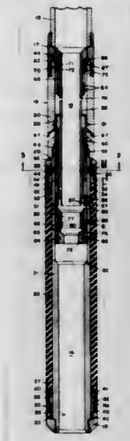
3,044,553

WELL PACKER

Billie Jack Bradley, Duncan, Okla., assignor to Halliburton Company, a corporation of Delaware

Filed May 5, 1958, Ser. No. 733,155
7 Claims. (Cl. 166—187)

1. A well packer comprising a tubular body, an elongated packing sleeve encircling said body, two shoes each disposed in close but slidable relation to said body and each secured to one of the opposite end portions of said sleeve, means including a lateral port in said body for supplying fluid under pressure to the space between said body and sleeve to inflate said sleeve, releasable latch means on the body preventing movement of one of said shoes along said body toward the other shoe, and a control member mounted within the body for movement



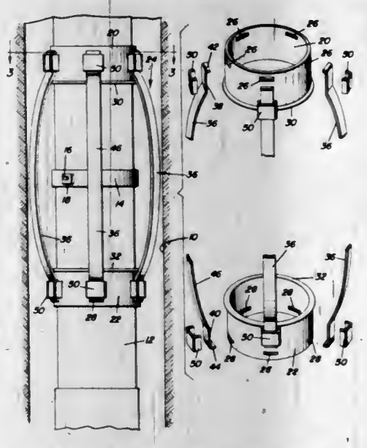
between a first position permitting flow of fluid through said lateral port to a second position shutting off such flow, said control member having means operable in said first position to maintain said latch means against release and operable in said second position to release said latch means.

3,044,554

CASING CENTRALIZER

Louis Kluck, Box 1421, Odessa, Tex.

Filed Feb. 13, 1959, Ser. No. 793,022
1 Claim. (Cl. 166—241)



A centralizer for a drill casing, said centralizer comprising an upper ring and a lower ring, said rings each adapted to be slidably disposed over a casing section, a plurality of leaf springs attached at their upper and lower ends to said upper and lower rings respectively, each leaf spring having a bow intermediate its ends and projecting outwardly from the drill casing, spring clips secured rigidly in a selected position along the length of said springs and to said upper and lower rings respectively, said spring clips constituting nests within which the ends of said springs are disposed and constituting means by which to select and fix the selective resilience of the springs, abutments on said upper and lower rings respectively and protruding laterally outwardly from said

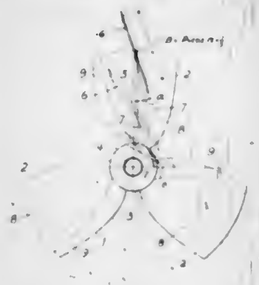
rings, said abutments contacted by portions of said springs when said springs are deflected inwardly of said rings to thereby alter the effective length of the springs as they are deflected inwardly toward said rings and the well casing, each spring having essentially flat portions at the ends of the bow which are nested within said spring clips, and the inner surfaces of said portions and the outer surfaces of said rings having a clearance therebetween, inwardly directed extremities on said springs, and said upper and lower rings having apertures within which said extremities of said springs are disposed and held fixed with respect to said rings.

3,044,555
FUSIBLE LINK
Harry C. Allen, North Scituate, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Dec. 28, 1959, Ser. No. 862,344
6 Claims. (Cl. 169—42)



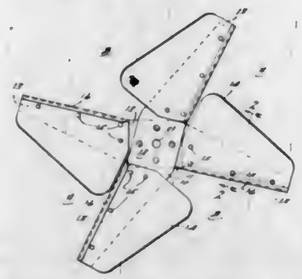
1. A fusible link comprising a pair of plate elements, one of said elements having an opening with depressed sides therein, the depressed sides tapering inwardly toward each other, the other of said elements having a hole therethrough in register with said opening, a separate locking member extending through said hole into said opening and maintaining said elements in overlapping relation, said locking member having tapering sides substantially conforming in shape to the depressed sides of said opening, means fusible at a predetermined temperature for retaining said member in said depression, said means upon fusion at said predetermined temperature thereby permitting said member to be ejected through said hole and the elements to separate when said link is subjected to a desired load.

3,044,556
SCREW PROPELLERS
Donald M. Jefferson, Virginia Beach, Va., assignor to Clipper Propeller, Inc., Sykesville, Md., a corporation of Maryland
Filed May 9, 1958, Ser. No. 734,370
2 Claims. (Cl. 170—159)



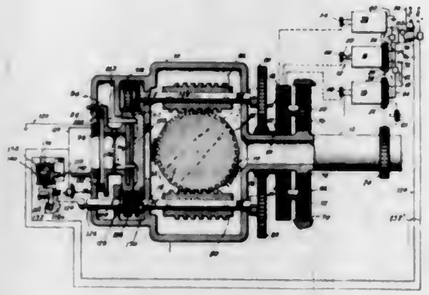
1. A propeller having its blades composed of substantially rhomboid cylindrical sections, the apparent pitch of the back and the face surfaces of the blades being constant for the entire blade length, and the apparent pitch of the leading and trailing edges constant for the entire blade length and substantially equal to half that of the back and face surface of the propeller blades.

3,044,557
VARIABLE PITCH FAN BLADE
Raymond C. Posh, Garden City, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 8, 1959, Ser. No. 785,714
13 Claims. (Cl. 170—160.5)



1. A screw type multiblade fan having a body portion comprising a central hub from which rigid arms of substantial width extend in a plane disposed substantially normal to the axis of rotation of the fan, and flexible blades secured at the leading edges of the arms, each blade being curved forwardly away from the surface of the portion of the respective arm extending from the leading edge thereof and each blade engaging said surface when flattened thereagainst.

3,044,558
PROPELLER PITCH CONTROL SYSTEM
Robert K. Tiedeman, Packanack Lake, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 5, 1960, Ser. No. 582
6 Claims. (Cl. 170—160.18)



2. A pitch control system for a propeller blade comprising drive means for moving said propeller blade to change pitch; means for disconnecting the said drive means from the propeller blade at some predetermined blade angle; means mechanically connected with the propeller blade and moved thereby during pitch changes; holding means actuable at a blade angle differing slightly from said predetermined blade angle into a position of engagement with the mechanically connected means to positively limit blade pitch changes in a particular direction in the event the disconnecting means becomes ineffective.

3,044,559
PROPELLER
Joseph Chajmik, 1946 Lincoln Ave., Whiting, Ind.
Filed July 14, 1959, Ser. No. 827,116
1 Claim. (Cl. 170—172)

A reversible propeller comprising a hub having a plurality of blades extending therefrom in radially spaced

relation, each of said blades having a pair of spaced passages extending transversely therethrough, said passages opening in opposed sides of said blade with one of said openings of one passage being disposed on the pressure side adjacent the leading edge of said blade and its



other opening being disposed adjacent the trailing edge of said blade, the other of said passages having one of its openings disposed on the pressure side adjacent the trailing edge of said blade and its other associated opening disposed adjacent the leading edge of said blade.

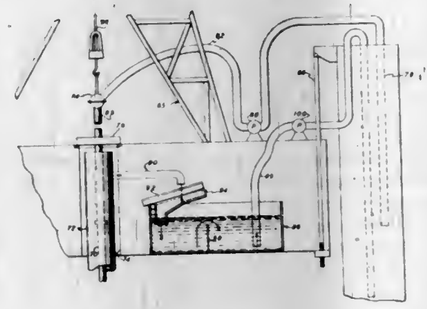
3,044,560
CULTIVATING TOOL
Echo T. Loomis, 604 Maryland Ave., Erie, Pa.
Filed Nov. 28, 1958, Ser. No. 776,838
1 Claim. (Cl. 172—375)



A tool of the class described comprising a generally U-shaped blade made of flat material, a handle, the ends of said blade being turned up and attached at their distal ends to said handle, the edge of the intermediate portion of said blade remote from said handle having spaced notches with members therebetween, said members being sharpened on their leading edges, said blade having spaced teeth on the trailing edge thereof, and a T-shaped member on the upper side of said blade, said T-shaped member having a member thereof defining the bar of said T-shaped member attached to an intermediate part of said blade and extending upwardly perpendicular thereto, the bar of said T being generally parallel to the horizontal part of said blade, the bar of said T-shaped member being in the form of a plate disposed generally parallel to said up turned ends of said blade, and spaced, downwardly extending blades attached to the lower side of said blade, said spaced blades being disposed in planes parallel to the planes of said upturned ends.

3,044,561
SUPPORT STRUCTURE
William F. Swiger, Scituate, Mass., assignor to Shell Oil Company and Continental Oil Company, both corporations of Delaware, and the Superior Oil Company and Union Oil Company of California, both corporations of California, all of Los Angeles, Calif.
Filed June 10, 1957, Ser. No. 664,574
3 Claims. (Cl. 175—8)

1. An offshore apparatus for drilling holes in geological formations underlying a body of water, the apparatus comprising a unitary structure floatable horizontally to a drilling site and sinkable in a vertical orientation to the bottom of the body of water at the site, the structure having a set of laterally spaced-apart elongated rigid legs which in vertical orientation extend from the bottom to above the surface of the body of water, rigid braces between the legs, one of the legs having a plurality of compartments along its length, the compartments being in internal fluid communication, a platform supported by the structure above the surface of the water, a drilling rig on the platform comprising a casing extending downwardly to the formation and a drill pipe and a drill in the casing



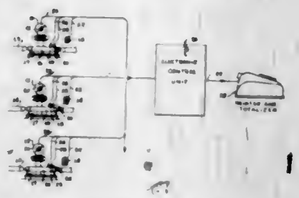
operated from the platform, drilling fluid in the communicating leg compartments, and means including a drilling fluid delivery line extending from the uppermost compartment to the rig and a drilling fluid recovery line extending from the rig to the lowermost compartment for circulating the fluid from the uppermost compartment, into and out of the hole by counterflow circulation through the drill pipe and casing, and into the lowermost compartment.

3,044,562
SELF-CONTAINED POWER DRIVEN AUGER
Carl T. Crampton, Sioux Falls, S. Dak., assignor to Du-Al Manufacturing Company, a corporation
Filed Jan. 20, 1959, Ser. No. 787,852
1 Claim. (Cl. 175—201)



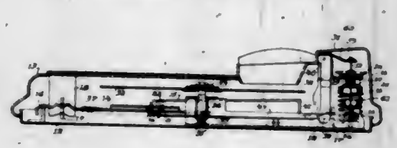
A direct drive type of power driven auger attachment for suspension from a conventional type hydraulic boom structure on a farm tractor, the auger attachment including a frame structure comprising a U-shaped channel having a base channel leg and a pair of spaced vertical channel legs joined therewith, a fluid driven motor supported on said frame structure above the auger and having a fluid motor drive shaft projecting therefrom, a bearing carried below the drive shaft on the U-shaped channel between the spaced vertical channel legs in coaxial alignment with the drive shaft, an auger suspended from the U-shaped channel and journaled in said bearing and with a vertical axis of the auger being disposed vertically between the spaced vertical channel legs, coupling means carried on the drive shaft joining the drive shaft and the auger in coaxial alignment to provide a direct drive from the drive shaft to the auger, and a U-shaped suspension frame including spaced vertical legs having free ends pivotally joined with opposite ends of said base channel legs.

3,044,563
ELECTRONIC CONTROL SYSTEM
Donald G. Gumpertz, 11953 Hartsook St., North Hollywood, Calif., and Stuart T. Schy, Van Nuys, Calif.; said Schy assignor to said Gumpertz
Filed Apr. 5, 1954, Ser. No. 421,086
13 Claims. (Cl. 177—3)



1. In an electronic control system for registering at one station measurements made at a plurality of remote locations, the combination of: a measuring device at each of said locations to measure said articles; a transducer means coupled to each of said measuring devices for producing an electrical signal representative of the measurements made by said measuring means; sensing means at each of said remote locations of said measuring means and operably responsive to the presence of an article to be measured for actuating said transducer means; a registering mechanism actuatable to record said measurements; a converter coupled to said registering mechanism for translating said signals and actuating said registering mechanism; a selector system interposed between said converter and each of said transducers and operable to couple any one of said transducers to said converter; and actuating means responsive to operation of each of said sensing means for operating said selector system to couple said converter to the transducer associated with said sensing means.

3,044,564
BATHROOM SCALE
Harry L. Mattson, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois
Filed Apr. 14, 1960, Ser. No. 22,276
7 Claims. (Cl. 177—230)



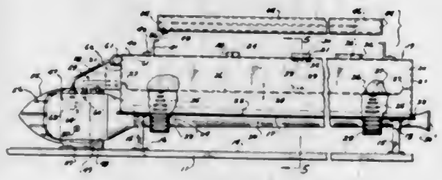
1. A weighing scale comprising a base, weighing levers fulcrumed thereon, a platform movably supported above said base on said levers, a coiled tension spring serving as the weighing spring suspended on said base and connected with said weighing levers to resist downward deflection thereof under weight applied to the platform, weight indicating means, means for operating said weight indicating means movable in response to downward deflection of said weighing levers, said operating means including a vertical follower pin fulcrumed at its lower end on one of said weighing levers to which the lower end of the spring is connected, said pin extending through said spring and disposed on the center line thereof and arranged to move endwise the same distance as the spring is extended in each weighing operation to operate the weight indicating means accordingly and give an accurate weight reading, and a cylindrical guide member carried on said pin intermediate the ends thereof and disposed intermediate the ends of said spring in concentric relationship to said pin and maintained approximately in concentric relationship to the spring by a loose telescoping fit therein and movable vertically with the pin in the spring's extension in weighing so as to keep the pin approximately on the center line of the spring for more uniformly accurate weighing.

3,044,565
BATHROOM SCALE
Richard C. King, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois
Filed Apr. 14, 1960, Ser. No. 22,277
12 Claims. (Cl. 177—230)



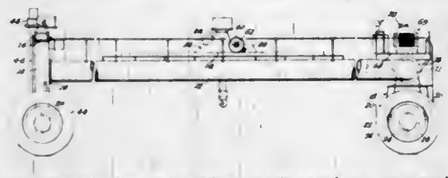
1. A weighing scale comprising a base, weighing levers fulcrumed thereon, a platform movably supported above said base on said levers, a coiled tension spring serving as the weighing spring suspended on said base and connected with said weighing levers to resist downward deflection thereof under weight applied to the platform, weight indicating means, means for operating said weight indicating means movable in response to downward deflection of said weighing levers, said operating means including a vertical follower pin extending through said spring and disposed on the center line thereof and arranged to move endwise the same distance as the spring is extended in each weighing operation to operate the weight indicating means accordingly and give an accurate weight reading, and cylindrical guide means for said pin in concentric relationship thereto and maintained in concentric relationship to the spring by a loose telescoping relationship thereto and movable vertically with the pin in the spring's extension in weighing so as to keep the pin on the center line of the spring for more uniformly accurate weighing.

3,044,566
JET-PROPELLED SKI
Gottfried Mayr, P.O. Box 21, St. Clair Shores, Mich.
Filed May 5, 1960, Ser. No. 27,113
5 Claims. (Cl. 180—3)



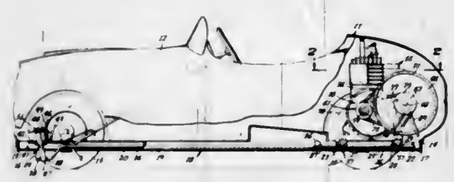
5. In combination, a ski and a jet engine mounted on the rear top surface thereof, an exhaust tube connected with said jet engine in longitudinal registry with the ski and extending rearwardly thereof, a pair of longitudinally spaced brackets mounted on the ski adjacent the rear thereof, an elongated fuel tank secured upon said brackets rearwardly of said engine and spaced above said exhaust tube, a fuel regulator control on said tank communicating therewith, means for delivering fuel from said regulator into the combustion chamber of said engine, and means within said tank for applying a continuous pressure upon the fuel therein, said tank including a bottom wall, said wall having a longitudinal groove curved upwardly spaced about and loosely receiving said exhaust tube.

3,044,567
RETRIEVER
Charles A. Reed, New York, N.Y., and Richard E. Rudd, Providence, R.I.; said Reed assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 16, 1959, Ser. No. 797,556
4 Claims. (Cl. 180—45)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A chassis for a landing craft retriever comprising a front member extending in the transverse direction and a side member attached to each end thereof extending in the longitudinal direction toward the rear, said front member and said side members being of tubular construction and said side members being joined to said front member by bolted flange couplings, a vertically disposed rear leg connected adjacent the rear end of each side member by a bolted flange coupling, a rear beam extending in the transverse direction from one rear leg to the other and attached atop each rear leg by a bolted coupling, a front leg attached to said front member and pivotally connected to a transversely extending front horizontal axle to pivot about a horizontal, longitudinal axis, a wheel unit pivotally attached to each end of said front horizontal axle, and an additional wheel unit adjacent the bottom of each rear leg and attached thereto to pivot about a vertical axis, electrically actuated means for steering each wheel, each of the aforesaid wheel units including a wheel, electrical driving means for driving each wheel, and means for generating electrical current for operating said electric means.

3,044,568
REVERSIBLE DRIVE MECHANISM FOR MOTOR VEHICLE
Harry Bookman, 2726 Forrester Drive, Los Angeles 36, Calif.
Filed Oct. 2, 1959, Ser. No. 844,122
2 Claims. (Cl. 180—70)

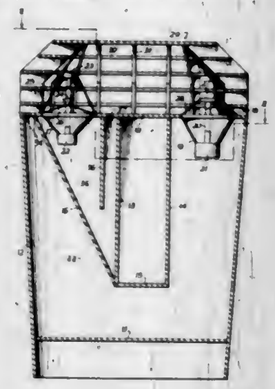


1. In combination with a child-sized wheeled motor vehicle a reversible drive comprising: a base, a frame slidably supported on said base for reciprocatable linear movement relative to said base, power drive means secured on said frame for reciprocable linear movement therewith, said power drive means having a drive shaft extending therefrom and transversely to the direction of reciprocatable movement thereof; a driven wheel rotatably mounted on said base for rotation upon an axis parallel to the axis of rotation of said drive shaft; a first power transmission means frictionally connecting said drive shaft and said driven wheel in response to linear movement of said frame in one direction for transmitting rotation of said drive shaft into rotation of said driven wheel in one direction; a second power transmission means frictionally connecting said drive shaft and said driven wheel in response to linear movement of said frame in an opposite direction for transmitting rotation of said drive shaft into an opposite rotation of said driven wheel, each of said power transmission means being disconnected when the other is connected, manually operable means mounted on said base and connected to said frame for imparting linear movement of said frame relative to said base in selective directions, said first power transmission means including a pulley secured to said drive shaft for rotation therewith, an annular groove on said wheel, and an endless friction belt in said annular groove connecting said pulley and said driven wheel, said belt being tightened in response to linear movement of said frame in said one direction for transmitting rotation of said drive shaft to said driven wheel and loosened in response to movement of said frame in said opposite direction for disconnecting transmission of power by said belt, said second power transmission means including an enlarged rim portion on said driven wheel adjacent said annular groove, said rim portion having a friction surface on the periphery thereof, and said pulley on said drive shaft having an annular groove engageable by said rim portion, in response to movement of said frame in said opposite direction, for transmitting rotation of said drive shaft to said driven wheel in reverse direction, and disengageable from said rim portion in response to said movement of said frame in said one direction for disconnecting transmission of power in said reverse direction.

3,044,569
POWER-ASSISTED STEERING MECHANISMS FOR ROAD VEHICLES
George K. Farmery, Scothurn, Lincoln, and Leonard John Newman, London, England, assignors to Clayton Dewandre Company Limited, Lincoln, England
Filed May 14, 1957, Ser. No. 658,998
Claims priority, application Great Britain May 16, 1956
12 Claims. (Cl. 180—79.2)

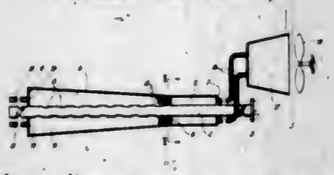
1. Power-assisted steering mechanism for road vehicles having road wheels and a steering wheel connected thereto, comprising a power motor containing a chamber having a differential pressure operable member and means for connecting said motor to the road wheels of the vehicle, means defining a passage for establishing fluid pressure transmitting communication between the motor chamber ends at opposite sides of said piston, control mechanism including a pair of movable control members for said passage, a source of fluid pressure, a pair of fluid pressure inlet valve members communicating with the source of fluid pressure and cooperative with and positioned relatively to the respective control members for opening thereby to admit fluid pressure to the respective ends of the power motor cylinder in response to actuation of the respective control valve members, means actuated by predetermined valve opening movement of a control member associated with one of said inlet valves for closing said communicating passage, means actuated by further valve opening movement of said control member for connecting to exhaust the end of said chamber opposite to that being supplied with fluid under pressure through said one inlet valve, and means operable by movement of the steering wheel in one or another direction for actuating the control members.

3,044,570
LOUDSPEAKERS
Cecil Ernest Watts, Sunbury-on-Thames, England, assignor to Cecil E. Watts Limited, Surrey, England, a British company
Filed Apr. 2, 1958, Ser. No. 725,823
Claims priority, application Great Britain Apr. 8, 1957
3 Claims. (Cl. 181—31)



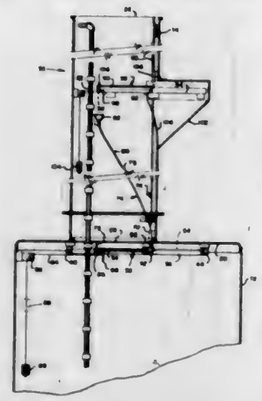
1. A loudspeaker having three frusto-conical diaphragms for reproducing low, medium, and high frequencies respectively and of large, medium and small diameter respectively, loading means for said large diameter diaphragm comprising a chamber and partitions in said chamber defining a nearly closed passage of cross-section decreasing in a direction away from said large diameter diaphragm, said chamber having boundaries including an apertured end wall and flexible side walls for radiating said low frequencies, said large and medium-diameter diaphragms being mounted in apertures in said end wall, means supporting said small diameter diaphragm from said end wall substantailly coaxial with and spaced from said medium diameter diaphragm with the concave sides of said small and medium diameter diaphragms facing one another, and three independently energizable electromagnetic driving means coupled to said three diaphragms respectively.

3,044,571
INTERNAL COMBUSTION ENGINE EXHAUST SILENCERS
Peter Spiegel, Denny St., Hopetoun, Victoria, Australia
Filed Nov. 30, 1960, Ser. No. 72,628
8 Claims. (Cl. 181—51)



1. An exhaust silencer for an internal combustion engine, comprising an open ended exhaust pipe defining a through passage adapted at one end for detachable connection to the exhaust outlet of an engine, a tubular casing surrounding said pipe and which is provided with opposite end walls sealingly secured to said pipe and forming a gas expansion chamber, said pipe having in its walls a series of longitudinally spaced apertures opening into said gas expansion chamber, a plurality of open ended jet tubes entering said chamber at that end remote from the discharge end of said pipe, that end wall of the casing adjacent to the discharge end of said pipe having at least one discharge port therein, and means in communication with said jet tubes for delivering air under pressure thereto whereby air under pressure flowing lengthwise through the gas expansion chamber from said jet tubes induces some of the gases passing through said exhaust pipe to enter said gas expansion chamber.

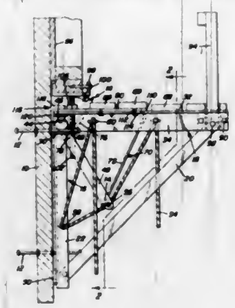
3,044,572
RETRACTABLE SAFETY LANDING FOR AN ACCESS TUBE
Harry W. Thomas, Orchard Lake, and William W. Da Lee, Birmingham, Mich., assignors to William A. Da Lee Incorporated, Detroit, Mich., a corporation of Michigan
Filed Sept. 25, 1959, Ser. No. 842,263
3 Claims. (Cl. 182—83)



1. In combination, a downwardly extending access tube having an entrance opening at the upper end and an exit opening at the lower end for passage of a person therethrough; said access tube leading into a room at the lower end thereof; a ladder extending from the entrance opening into the room; and a retractable safety landing positioned on the ceiling of the room and normally extending across the lower end of the tube to obstruct passage thereby; said landing including a trackway which is secured to the ceiling of the room; said trackway extending across the tube and having a portion extending outside the periphery of the tube; a platform having antifriction means which ride in said trackway; said platform being movable from the normal obstructing position to a non-obstructing position on the portion of the trackway outside the tube; latch means to hold the platform in said non-obstructing position; and closure means constantly urging the platform to its obstructing position.

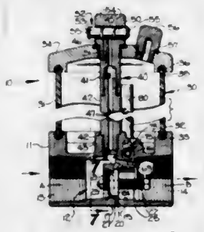
3,044,573
SCAFFOLD BRACKET
James H. Jackson, 3408 Billups Road, South Norfolk, Va.
Filed Mar. 28, 1960, Ser. No. 18,177
13 Claims. (Cl. 182—87)

7. For use in combination with wall ties extending from and retained by concrete walls, a scaffold bracket adapted to be locked to a wall tie for supporting a scaffold thereon comprising a pair of perpendicular legs including a first horizontal leg and a second vertical leg and means carried by said bracket lockingly engageable with said wall ties, said last named means including a horizontally disposed jaw member carried by said bracket proximate the vertex defined by said first and second legs, and an eccentric disk rotatably supported by said bracket opposed to said jaw member, said wall tie receivable between said jaw member and said eccentric whereby said eccentric is rotatable into engagement with said wall tie for locking said wall tie between said eccentric and said jaw member, and a handle joined to said eccentric and extending therefrom for effecting rotation thereof, said second vertical leg extending substantially parallel to and in engagement with said wall, said first horizontal leg extending perpendicularly from said wall, a safety rod secured to said handle, said safety rod defining a straight intermediate portion, said intermediate rod portion carried above said horizontal leg when said handle is rotated to an unlocking position and immediately below and parallel to said horizontal leg when said handle is rotated to a locking



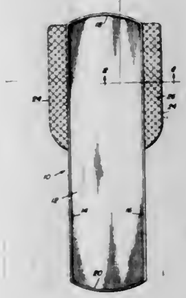
position, scaffold boards supported on said horizontal leg above said intermediate rod portion when said handle is in said locking position whereby said safety rod and said handle are prevented by said boards from moving out of said locking position, and flexible cable means connected to said handle extending to a location remote from said handle for causing selective rotation of said handle from said remote location, and a hand rail frame terminally secured to said horizontal leg remote from said wall, a hand rail post detachably received in said hand rail frame.

3,044,574
AIR LINE LUBRICATOR WITH MEASURED LUBRICATION
George R. Ferguson, Clover, S.C., assignor to Perfecting Service Company, Charlotte, N.C., a corporation of North Carolina
Filed Sept. 1, 1961, Ser. No. 135,556
6 Claims. (Cl. 184—55)



1. In a device for dispensing a liquid into a flowing fluid medium,
(*a*) a reservoir for containing a supply of liquid,
(*b*) a housing associated with said reservoir and provided with a passage therethrough for connection in a line through which a fluid medium is to flow,
(*c*) the interior of said reservoir communicating with said passage through a connecting passageway for exposing the surface of the liquid in said reservoir to the pressure of the fluid medium,
(*d*) said reservoir having a liquid discharge line communicating with said passage at a point beyond the connecting passageway between the interior of said reservoir and said passage,
(*e*) a vertically extending tube mounted within said reservoir in covering relation to the liquid discharge line,
(*f*) said tube having a transverse orifice extending through its wall adjacent the liquid discharge line to provide communication between the interior of said reservoir, the interior of said tube, and the liquid discharge line through the orifice in said tube, and
(*g*) liquid from said reservoir being dispensed through said tube and said discharge line into said passage in response to the flow of fluid through said passage and past the point at which the liquid discharge line communicates therewith,
(*h*) whereby the dispensing of liquid creates a differential liquid level between a higher level of liquid in the reservoir and a lower level of liquid in the tube to indicate the rate at which liquid from the reservoir is being introduced into the flowing fluid medium.

3,044,575
GARAGE DRIP PAN
Gaetano Minutillo, 116 Linden St., Rockville Centre, N.Y.
Filed July 5, 1961, Ser. No. 122,009
1 Claim. (Cl. 184—106)

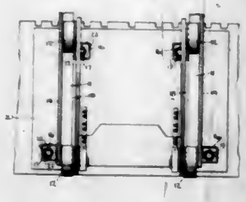


A garage drip pan for a vehicle comprising a bottom of homogeneous plastic material of suitable length and having two parallel sides spaced apart a width not greater than the tread of a garaged vehicle beneath which it is to be used, an upwardly extending marginal border flange completely surrounding said bottom and integral therewith, tread receiving wings integrally extending from said opposite parallel sides of said flanged bottom to beyond the vehicle tread, and reinforcing criss-cross thread embedded in the said tread receiving wings providing a raised, knurled surface therein, the surface of said bottom between said surrounding border flange having a smooth finish, the surface of said border flange being rounded in cross section, the opposite ends of said pan bottom being convexly rounded, said tread receiving wings extending only from that portion of the pan bottom which is to be located under the motor portion of the garaged vehicle.

3,044,576
CARRIAGE MOUNTING FOR LIFT TRUCK
George F. Quayle, Philadelphia, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed May 24, 1961, Ser. No. 112,249
6 Claims. (Cl. 187—9)

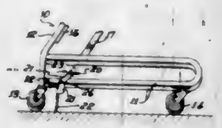
1. A lift truck having a mast, a load supporting member mounted for vertical movement on said mast, a slide bearing having a polygonal outer periphery providing a plurality of bearing surfaces engageable one at a time with a guiding surface of said mast, cooperating means on said slide bearing and on said load supporting member for supporting said slide bearing in a variety of rotated positions about an axis which is fixed relatively to said load supporting member and is off-center relatively to the

outer periphery of said slide bearing whereby each of said bearing surfaces is at a different distance from said axis and said slide bearing may be selectively positioned to



present any one of said bearing surfaces for sliding engagement with said guiding surface of said mast to provide adjustment between the load supporting member and the mast.

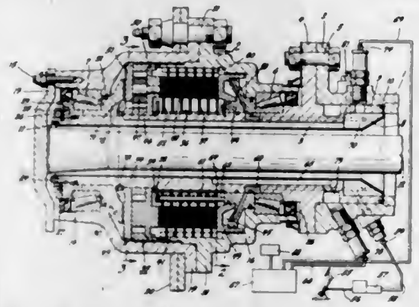
3,044,577
SHOPPING CART BRAKE
Martin A. Lotz, Culver City, Calif., assignor to The Concepts Co., Beverly Hills, Calif., a partnership
Filed May 24, 1961, Ser. No. 112,440
7 Claims. (Cl. 188—5)



1. In a shopping cart having a generally horizontal support member proximate the cart wheels, a brake stand comprising a rocker arm pivotally mounted to said support member for rotation in a vertical plane, said rocker arm defining first and second elongate sections with the pivot point of said rocker arm being in said first section and with said second section extending longitudinally away from one end of said first elongate section, the length of said second elongate section being greater than the perpendicular distance from a plane tangent to the lowermost surfaces of said cart wheels to the lower surface of said support member adjacent said pivot point, said second section being laterally displaced from said first section so that said second section is substantially beneath said support member to thereby limit the rotation of said arm between a rest position in which said second elongate section is substantially horizontally oriented and a braking position in which said second elongate section is generally vertically oriented with one end extending below said plane tangent to the lowermost surfaces of said cart wheels and with the other end sustaining a portion of said support member in a slightly elevated position, said rocker arm being adapted for selective retention in said rest position.

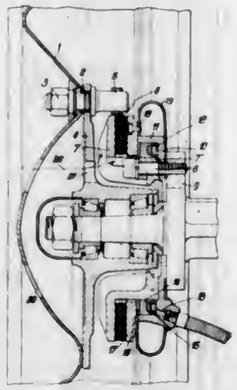
3,044,578
DISK BRAKE
Clifford C. Wrigley, Grosse Pointe Woods, and John D. Malloy, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,271
3 Claims. (Cl. 188—72)

1. A vehicle disk brake comprising in combination, a support member, a demountable braking unit having actuating fluid passage means therein and including, a stationary member engaging said support member, at least one stationary brake disk connected to said stationary member, a rotating member rotatably mounted on said stationary member, at least one rotating brake disk connected to said rotating member for frictionally engaging said stationary brake disk when said vehicle brakes are actuated, hydraulic means for actuating said vehicle brakes, an inlet port in said support member connecting with said hydraulic actuating means, cooling fluid passage means in said vehicle brake, external inlet and outlet vents in said support member and in communication with said cooling fluid passage means, external fluid means comprising hydraulic fluid pressurizing means, external hydraulic actuating fluid conduit means connected to said inlet port in said support member and communicating



with said pressurizing means and said actuating fluid passage means in said demountable braking unit, valve means in said actuating fluid conduit means, cooling fluid conduit means for circulating a cooling fluid in communication with said inlet and said outlet vents in said demountable braking unit, valve means in said external cooling fluid conduit means, and fastening means connecting said support member with said stationary member and permitting removal of said demountable braking unit from said support member.

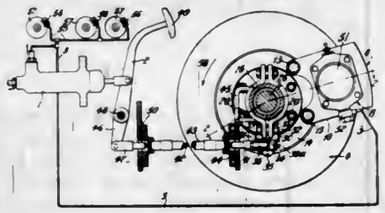
3,044,579
DISC BRAKES, MORE PARTICULARLY FOR MOTOR VEHICLES
Hermann Klaue, Christophstr. 19, Uberlingen (Bodensee), Germany
Filed Oct. 26, 1959, Ser. No. 848,662
Claims priority, application Germany Oct. 29, 1958
5 Claims. (Cl. 188—72)



1. A disc brake comprising a stationary brake housing, at least one brake disc provided with a brake lining and mounted for free axial movement and for rotation with the wheel axle assembly, brake actuating means for urging said disc against the brake housing, a pressure plate, and an annular U-section spring for restoring the pressure plate to its neutral position, said spring being secured to said pressure plate and being curved and

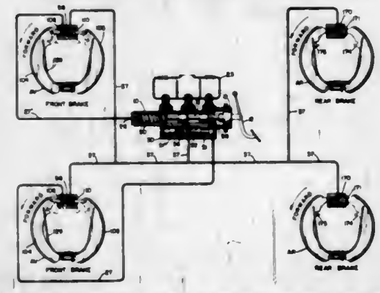
gripped between the brake housing and the axle body to seal off the brake actuating means from the outside and transfer at least some of the brake heat and all the torque from the pressure plate to the axle body, said brake actuating means including a hydraulically actuated device comprising an annular cylinder with an annular piston therein, said cylinder being formed by a cylindrical extension of a brake ring and by a flange portion of the brake housing, a heat insulating ring being arranged between said annular piston and the pressure plate.

3,044,580
BRAKING SYSTEM
Henry James Butler, Beechcroft, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed Apr. 16, 1958, Ser. No. 728,962
Claims priority, application Great Britain Apr. 17, 1957
10 Claims. (Cl. 188—140)



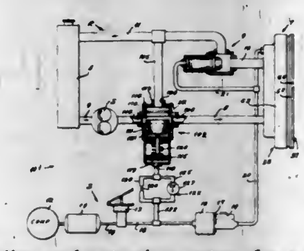
1. A brake system comprising a rotatable element to be braked, a non-rotatable member, a lever pivoted on said non-rotatable member, a friction pad movable to engage said rotatable element, actuating means to move said friction pad into frictional engagement with said rotatable element, means supporting said actuating means and rotatably supported on said non-rotatable member to be rotated on the axis of rotation of said rotatable element through a limited arc by the frictional engagement of said friction pad with said rotatable element during rotation, said supporting means comprising means to engage and pivot said lever upon rotation, manually operable means to transmit actuating force to said actuating means, and means actuated by said lever to add the force transmitted from said rotatable element to the force transmitted by said manually operable means to said actuating means.

3,044,581
VEHICLE BRAKE-CONTROL SYSTEM
Pierre André Lepelletier, Chatou, France, assignor to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France
Filed Oct. 7, 1958, Ser. No. 765,808
Claims priority, application France Oct. 8, 1957
7 Claims. (Cl. 188—152)



1. A master-cylinder for a brake-control hydraulic system having at least two primary circuits and one secondary circuit comprising a stationary body, a control unit slidingly engaged in said body and presenting piston means defining with said body two primary spaces and a secondary space, connecting means for connecting said primary spaces with said primary circuits respectively, connecting means for connecting said secondary space with said secondary circuit, said connecting means having residual pressure valves, container means for filling said spaces, feeding means for feeding said spaces from said container means having non-return valves, and a comparing pressure device having a cylinder means, two plungers slidingly engaged in said cylinder means and defining therein a front chamber, an intermediate chamber and a rear chamber, said front chamber being connected with one of said primary spaces, said intermediate chamber being connected with said secondary space, said rear chamber being connected with another of said primary spaces, opposite inwardly interengaging faces on said plungers, and stationary abutments for said plungers defining outward abutted positions of said plungers.

3,044,582
BRAKE SYSTEM
Robert L. Gold, Pine Lawn, and Robert E. Schwartz, University City, Mo., assignors to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Filed June 16, 1958, Ser. No. 742,278
10 Claims. (Cl. 188—264)

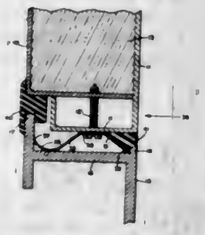


1. A cooling and actuating system for a fluid cooled friction device including relatively rotatable members, a housing secured to one of said members and having a metallic friction element movable into frictional engagement with the other of said members, said system comprising an actuating branch having pressure generating means operably connected with said housing for moving said friction element into frictional engagement, operator controlled means to energize said pressure generating means, and a cooling branch separate from said actuating branch and including a circulation chamber for cooling fluid in said friction member, means for continuously circulating cooling fluid in said cooling branch, valve means independent of said pressure generating means and being interposed in said cooling branch and having an open connection with said circulation means and said chamber, said valve means also having a connection therefrom to said circulating means in by-pass relation with said chamber and normally circulating substantially the entire flow of cooling fluid in by-pass relation with said chamber, said valve means being actuated to close off said by-pass connection in response to said operator controlled means thereby establishing cooling fluid circulation through said chamber, and other means for opposing distortion of said friction element inwardly of said chamber when said rotatable members are frictionally engaged.

3,044,583
SPRING CLIP FOR MOUNTING BUILDING PANELS
Charles Robert Klotz, 4241 W. 50th St., Cleveland 9, Ohio
Filed Feb. 26, 1960, Ser. No. 11,280
2 Claims. (Cl. 189—34)

1. A spring clip for mounting a building panel within a U-shaped mounting frame which has a bottom section and two spaced-apart upstanding walls, comprising, a

length of spring sheet metal extending substantially the length of a side of the panel to be mounted within the U-shaped frame, said spring sheet metal in transverse cross section having a flat planar central portion which abuts against the edge of the panel and is adapted to be connected thereto, and having a first and a second corner portion at each end of the central portion, said first corner portion comprising a first straight leg section connected to the central portion and extending away therefrom at an angle thereto and terminating in a curved portion which curves back toward the plane of the central portion, said second corner portion comprising a second



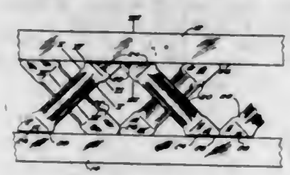
straight leg section connected to the central portion and extending away therefrom at an angle thereto, said first corner portion sliding horizontally into said U-shaped frame with a spring action as said curved portion is deflected by one wall of said U-shaped mounting frame, and said second straight leg snapping down behind the one wall of said U-shaped frame to complete the assembly of the panel within the frame, said curved portion of the spring clip engaging the bottom of the U-shaped channel and its end engaging and digging into the one wall of the U-shaped channel at the instant the second leg snaps into place behind and engages the other wall of the U-shaped channel member.

3,044,584
HOLLOW CAP SCREW ASSEMBLY WITH DISPLACEABLE PLUG
Wallace M. Thompson, Cordele, Ga., assignor to Harris Foundry & Machine Co., Cordele, Ga., a corporation of Georgia
Filed May 27, 1959, Ser. No. 816,102
3 Claims. (Cl. 189—36)



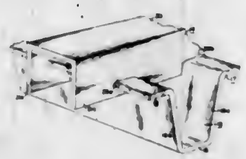
2. An attachment comprising: an element having a flat outer surface portion and a counterbored aperture in said surface; a backing member having a tapped aperture aligned with said counterbored aperture; a screw extending through said counterbored aperture, threaded into said tapped aperture, and securing said element and member together, said screw having a shank and an enlarged flat head countersunk into said counterbored aperture flush with said outer surface portion, and further having a non-circular turning-tool-receivable coaxial opening of uniform cross-section throughout its length extending through said head and shank, the inner end of said shank being substantially inaccessible; and a plug complementary to and frictionally engaged with a drive fit within said opening and thereby retained in position in said opening against ordinary loads imposed thereon, said plug having a flat outer end disposed flush with the flat outer surface of said screw head, said outer end of said plug can be driven into said opening to exposed an outer portion thereof for engagement by a turning tool to unscrew said screw.

3,044,585
STRUCTURAL BEAMS AND COLUMNS
Harold E. Handley, Jackson, Mich., assignor, by mesne assignments, to McGraw-Edison Company, a corporation of Delaware
Filed Nov. 18, 1957, Ser. No. 697,168
1 Claim. (Cl. 189—37)



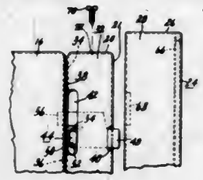
A built-up structural member of aluminum components comprising elongated corner members of angular section, adjacent members having exterior coplanar faces and longitudinal planar edges, diagonal lacing members interposed between said corner members maintaining said corner members in spaced relation to form a structural member of closed cross-section, said diagonal lacing members having planar end portions terminating in a planar end edge and formed with a channel section intermediate said end portions, the entire end edges of said lacing members abuttingly engaging the planar longitudinal edge of said corner members, said lacing members being formed of sheet aluminum of a lesser wall thickness than the wall thickness of said corner members and engaging said longitudinal edges at a location to define a step between the external surface of the lacing planar end portions and the adjacent external corner member surface, a fillet weld located within said step joining said lacing and corner members, said weld and lacing members lying within the boundaries of the structural member defined by the planes of the exterior faces of said corner members, a planar abutment edge formed on said lacing member planar end portions perpendicularly disposed to said planar end edge, said abutment edges of adjacent lacing members affixed to a common corner member longitudinal edge being in abutting relation.

3,044,586
FLOOR-LIKE STRUCTURE CONSTRUCTION
Charles Wellman Cassels, 3284 Lakeland Crescent, Burlington, Ontario, Canada
Filed May 27, 1960, Ser. No. 32,420
2 Claims. (Cl. 189—82)



1. A floor-like structure comprising:
(*a*) first and second sets of mutually parallel interlocking structural members, which sets extend transversely to one another;
(*b*) said first set of structural members each including a flat base with upwardly diverging side walls extending therefrom, and terminating at their upper ends with an outwardly protruding flange;
(*c*) said second set of interlocking structural members including a flat base portion with opposed generally parallel depending side walls, said side walls having aligned slots communicating with the bottom ends thereof corresponding to the configuration of said protruding flanges and the adjacent upper ends of the diverging side walls of said first set of structural members;
(*d*) and deformations in the protruding flanges of said first set of structural members maintaining the sets in locked engagement.

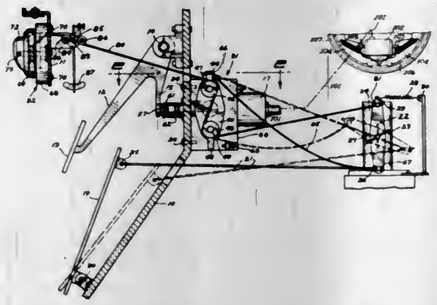
3,044,587
TRIM STRIP ASSEMBLY
Ronal H. Whyte, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 23,823
3 Claims. (Cl. 189—88)



1. In combination with a panel having a front wall, a side wall and a portéd flange, said panel having a relatively long aperture at the juncture of said side wall with said flange and a relatively short aperture at the juncture of said front wall with said side wall, a trim strip in juxtaposition to said side wall and having a relatively long retaining flange adjacent said relatively short aperture and a relatively short retaining flange adjacent said relatively long aperture, and a unitary trim strip fastener having a base portion and a fastener attachment portion, said attachment portion having a loop for grippingly engaging said panel flange and a lanced out tab cooperating with said flange port to lock said fastener to said panel flange, and said base portion having a first trim strip retaining leg extending through said relatively short aperture into retaining engagement with said relatively long retaining flange and a second trim strip retaining leg extending through said relatively long aperture into retaining engagement with said relatively short retaining flange.

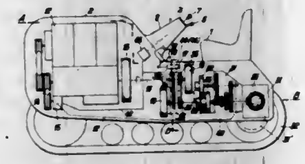
3,044,588
SPEED CONTROL FOR AUTOMOTIVE VEHICLES
Stanley E. Keagle, 2626 Nassau St., Sarasota, Fla.
Filed Dec. 7, 1959, Ser. No. 857,947
15 Claims. (Cl. 192—3)

1. A speed control for an automotive vehicle including a cross pin, an intake valve supported on said cross pin to be progressively rotatably movable between idling and wide open positions, an actuator lever rigid with said intake valve including first and second end portions disposed at opposite sides, respectively, of said cross pin and resilient means for normally retaining said intake valve in said idling position secured to said first end portion of said actuator lever, comprising first and second devices cooperatively operable against force of said resilient means to actuate the intake valve to and maintain it in any partially open position, between said idling and wide open position, which may be predeterminately selected, said first device including a rotatably mounted hub, an elongated plate rigid with and including first and second end portions at opposite sides, respectively, of said hub, a first cable having opposite end portions thereof secured to said second end portion of said actuator lever and said first end portion of said elongated plate, respectively, means for rotating said hub with elongated plate as a unit from a normal to an abnormal position and means for retaining the elongated plate in said abnormal position, there being spaced pulleys on the opposite end portions, respectively, of said elongated plate in parallel relation thereto, said second device including a rotatably mounted spool, a second cable having a first end portion thereof wound on said spool, a second end portion thereof secured to the first end portion of said actuator lever and an intermediate portion thereof ridable on said spaced pulleys, means for frictionally



retaining said rotatably mounted spool in fixed position against force of said resilient means and a manipulating handle for manually turning the rotatably mounted spool in either direction against frictional force exerted by said last mentioned means, rotation of the elongated plate from normal to abnormal position being adapted to cause the overall length of the portion of the second cable between said spool and said actuator lever to be decreased and rotation of said elongated plate from abnormal to normal position being adapted to permit the overall length of said portion to be increased, and means manipulatable to release the elongated plate from abnormal position thus to render said resilient means capable of rotating said elongated plate to normal position.

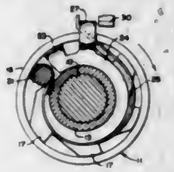
3,044,589
TRACK-LAYING VEHICLE HAVING A HYDRAULICALLY OPERATED CLUTCH-SHIFTED AND REVERSING TRANSMISSION
Hermann Klaue, Christophstr. 19, Uberlingen (Bodensee), Germany
Filed Mar. 13, 1959, Ser. No. 802,591
Claims priority, application Germany Mar. 14, 1958
3 Claims. (Cl. 192—3.5)



1. In a track-laying vehicle, a forward and reverse drive mechanism comprising transmission gears, hydraulically operated clutches for said gears including a first main clutch for advancing, a second main clutch for reversing, and a series of transmission clutches connected to said gears, hydraulic control means for said clutches comprising hydraulic pressure conduits including a first main valve connected to said first main clutch, a second main valve connected to said second main clutch, a distribution valve connected to said transmission clutches,

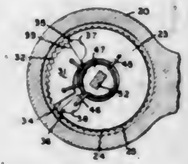
and a hand lever actuatable to operate said hydraulic control means and being in driving connection with said main valves and movable in opposite directions forwardly and rearwardly in one plane thereby energizing either main valve, for vehicle advancing and reversing, respectively, and being in driving connection with said distribution valve and movable in a second plane at an angle to said one plane thereby selectively energizing a transmission clutch.

3,044,590
FRICTION TYPE CLUTCH
Berthel F. Madsen, Arlington Heights, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 30, 1959, Ser. No. 843,401
8 Claims. (Cl. 192—26)



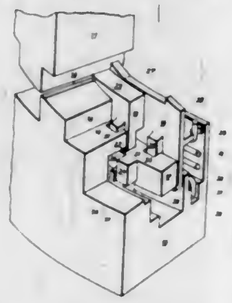
2. A clutch consisting of a driving member, a member arranged to be driven by said driving member, a plurality of tapered wedging members carried by said driven member for connecting said driving member to said driven member, resilient means for urging said wedging members to a position for connecting said driving and driven members, a lever rotatable with said driven member for compressing said resilient means to disengage the wedging members from the driving member, and means interposable in the path of said lever for actuating it to compress said resilient means.

3,044,591
RATCHET MECHANISM
Luther E. Kilness, Denver, Colo.
(211 E. Philadelphia St., Rapid City, S. Dak.)
Filed Aug. 31, 1959, Ser. No. 837,259
24 Claims. (Cl. 192—43.1)



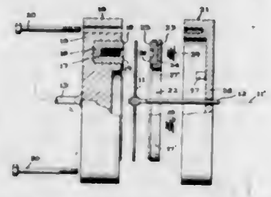
1. In a ratchet mechanism, the combination of a driving member and a work-turning member, one of said members having an opening therein with inwardly extending teeth and the other having a head portion rotatably mounted in said opening, pawl means carried by said head portion, said pawl means having a plurality of teeth adapted to cooperate with the teeth of said opening for holding the pawl means in locking engagement with said one member during the forward stroke of the driving member, said pawl means and head portion each having a thrust-bearing surface adapted to transmit the thrust of the pawl means to the head portion during the forward stroke of the driving member, a bearing interposed between the pawl means and head portion, said bearing having two bearing surfaces, one bearing surface being formed to mate with the thrust-bearing surface of said pawl means and the other bearing surface being formed to mate with the thrust-bearing surface of said head portion, the two bearing surfaces of said bearing being formed from two different centers of curvature to provide at least two degrees of freedom between said pawl means and said head portion and for alignment of the teeth of the pawl means with the teeth of said opening, and means for bringing the pawl means into releasable engagement with the teeth of said opening.

3,044,592
BLOCKING MECHANISM FOR CLAW CLUTCHES
Hans Noll, Tettnang, Germany, assignor to Maybach-Motorenbau G.m.b.H., Friedrichshafen, Germany, a firm of Germany
Filed Aug. 10, 1959, Ser. No. 832,689
Claims priority, application Germany Aug. 13, 1958
10 Claims. (Cl. 192—67)



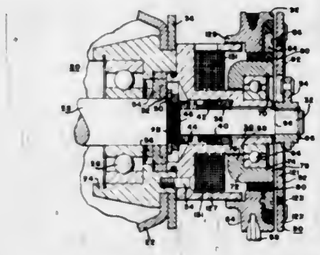
1. In a claw clutch of the overrunning type comprising two coaxial clutch halves, each clutch half having a member provided with axial claws whose end faces are inclined in the same direction relative to the circumference of the respective member, each claw having two radial faces rendering the clutch active in both directions of relative rotation of the clutch halves, at least one of said members being axially movable toward and from the other member for engaging and disengaging the clutch, blocking means axially movably connected to one of said members and adapted to abuttingly engage the second clutch member, actuating means operatively connected to said first member and to said blocking means, and means connected to said first member and to said actuating means for urging said actuating means to move said blocking means into a blocking position for preventing axial movement of said members towards each other when said second member overruns said first member and for permitting movement of said blocking means into unblocking position upon reversal of the relative rotation of said members for allowing said second member to engage said first member and to insert the claws of said second member into the gaps between the claws of said first member.

3,044,593
FRICTIONAL COUPLING DEVICES
Gordon George Scarrott, Manchester, and Brian Guy Welby, Sale, England, assignors to Ferranti, Limited, Hollinwood, England, a company of Great Britain and Northern Ireland
Filed Sept. 4, 1958, Ser. No. 758,933
Claims priority, application Great Britain Sept. 7, 1957
7 Claims. (Cl. 192—84)



1. A frictional coupling device including a rotatable shaft, a thin planar disc mounted on said shaft for rotation therewith about an axis passing through the centre of the disc normal to the plane thereof, the disc being flexible only in directions parallel to its axis, a member to which said shaft is adapted to be frictionally coupled having hub portions mounted on opposite sides of said disc and normally fixed to one another, an electromagnet carried by one of said hub portions and positioned at one side of said disc, said magnet comprising a circular assembly of U-shaped laminations each of which is coplanar with the disc axis, the respective ends of the laminations combining to form two annular magnet pole surfaces parallel to and facing said one side of the disc, said pole surfaces being concentric with and radially spaced relative to the disc axis, a co-operating armature carried by the other hub portion and positioned at the other side of the disc having annular surfaces parallel to and facing said other side of the disc in registration with said magnet pole surfaces, means for so connecting the armature to said other hub portion that the armature is movable relative to the magnet and to said other hub portion along the disc axis but incapable of angular movement relative to the magnet and to said other hub portion about said axis, means for energising the magnet to cause said pole surfaces and said armature surfaces to be attracted towards one another and to grip the disc firmly therebetween, and means for maintaining said pole surfaces and said armature surfaces in direct light engagement with the opposite sides of the disc when the magnet is unenergised.

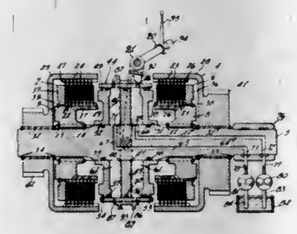
3,044,594
REFRIGERATING APPARATUS
James A. Bernard, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 5, 1958, Ser. No. 772,122
7 Claims. (Cl. 192—84)



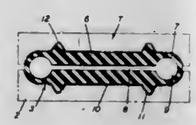
1. In combination, a device provided with a housing and a rotatable shaft protruding from the housing and rotatable relative to the housing, a cantilever bearing support surrounding the shaft connected and fixed to and supported by said housing, a bearing surrounding and supported upon said bearing support, a rotatable means rotatably mounted on said bearing and provided with a clutch element of magnetic material, a cooperating clutch element of magnetic material operably connected to said shaft, one of said clutch elements being provided with a mounting arrangement providing a limited axial movement, and electromagnetic means associated with one of said clutch elements for attracting the other clutch element.

3,044,595
FLUID OPERATED CLUTCH
Charles H. Herr, Jr., Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 18, 1960, Ser. No. 9,517
10 Claims. (Cl. 192—87)

1. In a fluid operated clutch mechanism, a pair of friction clutch means, an axially slidable cylinder, a piston means carried within and disposed at opposite ends of said cylinder and being movable therewith, said piston means being operative respectively to engage said pair of clutch means, reaction means in said cylinder defining a pressure chamber with said piston means and cylinder, an inlet port for said pressure chambers adapted to be connected to a source of fluid pressure, an outlet port in the periphery of said cylinder for exhausting fluid from each of said pair of pressure chambers, and manually operated flow control means including an annular valve member axially slidably carried on the outer circumferential surface of said cylinder for selectively restricting the flow of fluid from said outlet ports, said annular valve member having a first position allowing substantially equal fluid flow from said outlet ports, and said annular valve member being movable out of said first position in one axial direction into flow restricting relation to one of said outlet ports causing expansion of the corresponding pressure chamber and moving said cylinder and piston means in said one axial direction with respect to said valve member and forcing one of said piston means into engagement with one of said clutch means.

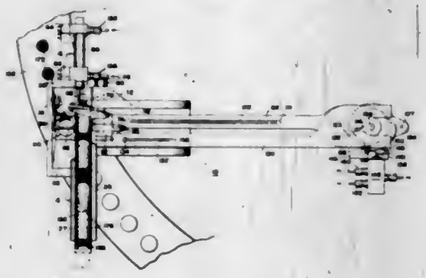


3,044,596
LONG STROKE HIGH SPEED CLUTCH TUBE
Hulie E. Bowerman, 904 Meadow Oaks, Arlington, Tex.
Filed Jan. 13, 1958, Ser. No. 708,613
6 Claims. (Cl. 192—88)



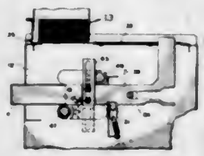
1. A long stroke clutch actuating device comprising an inflatable flattened toroidal resilient bladder including radially disposed substantially flat mutually parallel side walls joined by arcuate inner and outer end walls and the external contour of said bladder including annularly extending enlargements projecting beyond the radial side walls in the direction of the toroidal axis and located in the vicinity of the intersections of the side walls and the end walls; a radial annular face plate engaging each radial side wall and concentric with the axis of rotation of said toroidal bladder, the space between the side walls within the bladder when deflated being narrow in the axial direction and enlarging to form larger cross-section similar toroidal bulbs in the vicinity of the end walls to provide for long stroking of the side walls in the axial direction, and the face plates having recesses near their inner and outer peripheries extending away from the side walls and receiving in said recesses in complementary engagement said enlargements of the external contour of the bladder to prevent radial movement of the bladder with respect to the face plate.

3,044,597
APPARATUS FOR ORIENTING CYLINDERS
Alten E. Whitecar, Westville, N.J., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 6, 1959, Ser. No. 844,702
3 Claims. (Cl. 193—43)



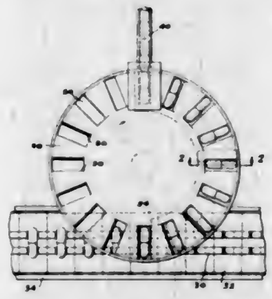
1. In apparatus for manipulating the cylinders in a line thereof in which each cylinder has a closed end and an open end and in which the cylinders are arranged with some of the closed ends leading and others following, means providing a way for said line of cylinders, a member providing a horizontal edge extending laterally from said way providing means, stationary means for terminating advance of a lead cylinder leading with the open end thereof after the center of gravity of the cylinder advances beyond said edge, a cylinder and piston type pneumatic motor the piston of which is extensible for terminating advance of a lead cylinder leading with the closed end thereof before the center of gravity of the cylinder advances as far as said edge and the closed end as far as said stationary means, said piston when extended being adapted for projection freely into the open end of a lead cylinder leading with the open end thereof, means operable for shifting each successive lead cylinder laterally out of said line of cylinders onto said edge, means for actuating said shifting means and piston in predetermined timed relation for extension of said piston upon each non-working stroke of said shifting means and retraction of said piston upon each working stroke of said shifting means, and means for receiving said cylinders as they tumble one by one from said edge with the open ends thereof leading.

3,044,598
SELECTIVE VENDING MACHINE
James J. Hill, Miami, Fla., assignor to American Sumatra Tobacco Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,710
6 Claims. (Cl. 194—17)



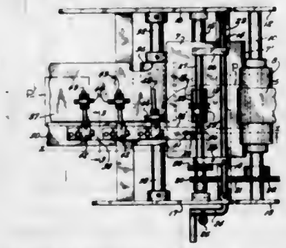
1. A selective vending machine comprising a means forming a frame, a plurality of vertical magazines positioned in a row on said frame for retaining articles of three different values respectively, each said magazine adapted to retain a plurality of articles of like size in vertical stacked relation and of like predetermined value, a slide means positioned in the lower end of each said magazine positioned and adapted to engage and dispense the lowermost one of said articles from said magazine when reciprocated, a push bar means including a push button on the front end thereof corresponding to each of said magazines journalled for reciprocation in said frame and positioned under and engaged with each said slide means for reciprocating the latter when manually operated, a plurality of blocking bodies movably retained on a fixed member in said frame and positioned for limited linear displacement in a path normal to the path of movement of all of said bar means, said blocking bodies constructed and adapted for a predetermined linear clearance therebetween for permitting only one of said bar means at a time to laterally displace said bodies and move between a pair thereof when a selected one of said bar means is operated, first and second selecting shafts in parallel spaced relation retained in said frame for independent reciprocation lateral to the axes thereof from a rest position to a dispense position, a pair of gears coaxially secured to each opposite end of each said shaft including an independent rack gear meshed with each of said gears fixed to said frame positioned and adapted to independently rotate each of said shafts from both ends thereof when independently moved from said rest to said dispense position, a selector member secured on each said push bar means for pre-adjustment to each of three positions and adapted to selectively abut each or both of said shafts and move same from said rest to said dispense position when adjusted and said bar means are operated, spring means biasing said shafts and said frame for independently urging each of said shafts into said rest position, a locking means on said frame and independently connected to each of said first and second shafts normally preventing the movement of each of said shafts from said rest to said dispense positions, a first portion of said locking means adapted and responsive to the deposit therein of a predetermined coin of small diameter to release said first shaft for reciprocation and to discharge said coin therefrom when said shaft is moved to its said dispense position, a second portion of said locking means adapted and responsive to the deposit therein of a coin of larger diameter to release said second shaft for reciprocation and to discharge therefrom said coin when said shaft is moved to its said dispense position whereby the selective deposit of either a coin of said small diameter or said large diameter or both in said locking means will permit the selective operation of said push buttons for dispensing from said corresponding magazines an article of each of three different predetermined values.

3,044,599
FEEDING MECHANISM
Leo P. Gajda and Walter S. Kazmierczak, Detroit, Mich., assignors to Arthur Colton Company, Detroit, Mich., a corporation of Michigan
Filed Aug. 17, 1959, Ser. No. 834,020
1 Claim. (Cl. 198—25)



A device for transferring fragile elongate telescoping capsules from a storage container to a rapid-operating, horizontal conveyor leading to a banding station which comprises a vertical feed chute for receiving a continuous supply of capsules in end-to-end relation to be fed by gravity to the lower outlet end of the tube which is curved to a horizontal outlet, a transfer mechanism to carry capsules from said horizontal outlet to said rapidly moving continuous conveyor comprising a horizontal rotating disc having a plurality of elongate annularly-disposed, radial recesses adjacent but terminating inside the periphery thereof in a vertical wall, said recesses extending axially through said disc, the apertured annular portion of said disc passing under the horizontal outlet of said chute and overlying said conveyor in tangential relation thereto each of said radial recesses having a curved edge along the top radial leading side to blend with the curve of said telescoped capsules, said outlet being positioned relative to said recesses wherein a capsule in said recess will serve as a roller bearing for a capsule in said tube moving radially inward over the recessed portion of said disc, and a segmental confining plate underlying said disc from a position below said horizontal outlet to a radial terminating edge at said conveyor, the terminating edge being parallel with receiving recesses in said conveyor wherein capsules leaving said outlet of said chute and rolling into recesses of said disc will be carried over said plate in rolling relation thereto and dropped into the passing recesses of said conveyor.

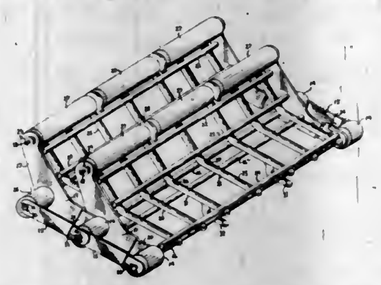
3,044,600
TURNING AND CONVEYING MECHANISM FOR FLAT LIGHTWEIGHT ITEMS
John S. Miller, Jr., Milwaukee, Wis., assignor to Pratt Manufacturing Corp., a corporation of Wisconsin
Filed Mar. 30, 1960, Ser. No. 18,529
7 Claims. (Cl. 198—33)



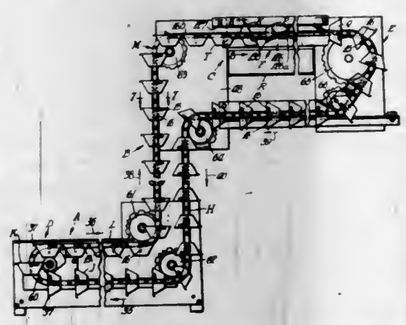
1. In a turning and conveying mechanism for flat lightweight items having a delivery conveyor for delivering the items in sequence, a fixed table positioned to receive said items from said delivery conveyor, said table having an opening and having a forward edge, means including rotatable turning means engageable with the item from above and below said opening to turn the item while it remains in the plane of the table, a take-away conveyor belt positioned close to said forward edge of the table so that the belt is overlapped by a portion of the item after the item has been turned and while it is still in the grip of said turning means, and means located over said take-away belt and positioned for engagement with the top of said overlapping portion of the turned item immediately after turning has been completed and immediately after the item has been released by said turning means for controlling the position of the item on the take-away conveyor.

3,044,601
CONVEYOR FOR DISH WASHERS
Sydney M. Ellis, Erie, Pa., assignor to Champion Dish Washing Machine Company, Erie, Pa., a corporation of Pennsylvania
Filed Dec. 4, 1958, Ser. No. 778,158
9 Claims. (Cl. 198—131)

5. A conveyor for a dish washer comprising spaced chain members adapted to be received on spaced sprockets, longitudinally spaced upper cross rods and lower cross rods disposed parallel to each other and on said chain members, dish supports, each said dish support comprising laterally spaced fingers, each said finger of each said dish support being bent at an intermediate part thereof and extending upwardly and rearwardly and extending downwardly and forwardly from said bent part, an upper cross rod fixed to an upper part of each said finger, a front cross rod fixed to a lower part of each said chain member, said cross rods extending laterally and parallel to each other, means on the upper ends of some of said fingers connecting said dish supports to said upper rods, and means supporting said dish supports on said lower cross rods.



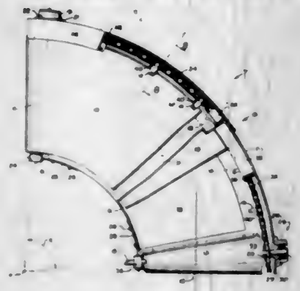
3,044,602
BUCKET CONVEYOR
John Amato, Brooklyn, N.Y.
Filed Apr. 22, 1957, Ser. No. 654,152
11 Claims. (Cl. 198—145)



1. A bucket conveyor of the type in which the laterally elongated buckets with downwardly converging oblique front and back side walls and vertical ends and having separately positioned elongated projections on the exterior vertical ends offset in respect to each other and with tracks cooperating with said projections continuously to position the buckets upright in horizontal position from filling position to receive and carry the material to be conveyed to dumping position wherein the buckets are turned to a substantially inverted position at an angle of about 180° away from said horizontal filling position, and thereafter the buckets are turned to a vertical position 90° away from filling position and are carried in this last mentioned position from dumping position to filling position comprising a frame structure having tracks and having a loading position, an intermediate connecting conveying arrangement and a dumping position, a plurality of spaced buckets, conveying members carrying said buckets and means to control the positions of said buckets at the loading, intermediate and dumping positions, said last mentioned means including follower projections on each end of the buckets at right angles to each other and tracks and cams to contact said projections to hold the buckets in position transverse to the convey-

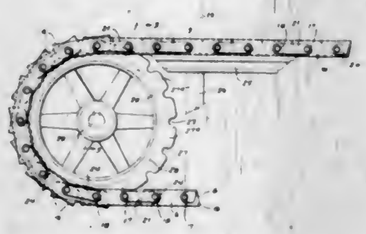
ing members except in dumping position and then to successively turn the buckets over at dumping position and then restore their normal transverse position.

3,044,603
CONVEYOR-BELT TURN
Charles L. Fry, Denver, Colo., assignor to Fry and Company, Inc., Canon City, Colo., a corporation of Colorado
Filed Aug. 25, 1958, Ser. No. 756,982
5 Claims. (Cl. 198—182)



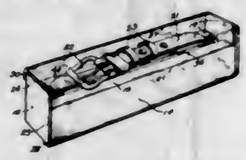
1. The combination with a conveyor-belt turn having a curved, endless belt adapted to form an arcuate sector when lying flatly, a pair of frustro-conical rolls adapted to be mounted within the belt at spaced angular end positions to stretch the belt about an arcuate sector with the top surface of the belt forming a curved conveyor path, and support means between the rolls adapted to support the surfaces of the belt, of a guide means disposed alongside and outwardly of the outer peripheral edge of the belt to define a fixed path paralleling the edge of the belt, a continuous drive means carried on the guide means and being adapted to move in unison with the belt movement along said fixed path, said guide means having a guide wall disposed intermediate said belt and said continuous drive means, and a plurality of regularly spaced, connectors affixed to the continuous drive means and extending over said wall inwardly to and being connected with the belt at corresponding regularly spaced points adjacent to the outer edge thereof, whereby said connectors resist lateral shifting movements of the belt towards the axis point of the turn as the belt moves about its sector shaped path, and pulls the continuous drive means against the side wall of the guide means.

3,044,604
CONVEYORS
Johann Hans Steigleder, 6 Maud St., Granville, near Sydney, New South Wales, Australia
Filed Oct. 21, 1958, Ser. No. 768,746
9 Claims. (Cl. 198—193)



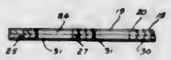
1. An endless belt conveyor presenting a continuous table-like conveying surface which comprises an assembly formed of a plurality of series of link members, the link members of each of said series being of rectangular open ended inverted channel form and being disposed in end to end relationship, and said series of said assembly being disposed in side by side parallel rows, the links in each of said rows being staggered in relation to the links in the next adjacent row, the sides of said link channels being formed with pivot openings therethrough, pivot axles for reception within said pivot openings and for the pivotal mounting of said links of one series with respect to said links of adjacent series, said pivot axles being of shorter extent than the width of the total number of rows in said series, said pivot axles being mounted in said pivot openings for the interlinking together of adjacent link members in said staggered relationship, each of said link members in each of said series of rows being pivotally interlinked to an adjacent link member in an adjacent row, said pivot axles in adjacent axial lines across said conveyor connecting together different numbers of said link members and means to secure said links on said pivot axles to maintain said series and rows together in said assembly, said assembly being formed for engagement by drive means to drive said conveyor.

3,044,605
DISPLAY BOX
George H. Clement, Ambler, Pa., assignor, by mesne assignments, to Hickok Manufacturing Co., Inc., a corporation of New York
Filed July 2, 1959, Ser. No. 824,601
6 Claims. (Cl. 206—45.14)



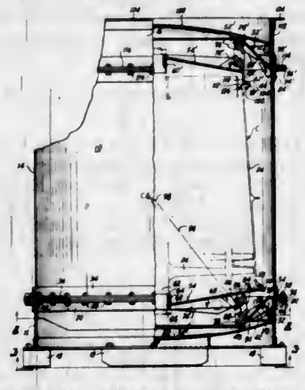
1. A paper-board container including a bottom-panel, a front-panel, a back-panel, the back-panel being substantially higher than the major portion of the front-panel, a return-panel extending downwardly from the top of the back-panel, a shelf-panel extending inwardly from the top of the major portion of the front-panel, a shelf-panel extending inwardly from said back-panel, a pair of well-panels extending downwardly from the inner edges of said shelf-panels and having their lower edges secured to said bottom panel, and an end-panel at each end of said container of a height generally the same as the height of the back-panel.

3,044,606
COIN COLLECTING HOLDER
Earl A. Frosh, 1102 Worden SE., Grand Rapids, Mich., assignor of one-third to Ruth A. Jay and one-third to Clara T. Ovlatt, Grand Rapids, Mich.
Filed May 29, 1961, Ser. No. 113,555
2 Claims. (Cl. 206—45.31)



1. A laminated coin holder comprising: at least one card layer having a plurality of through circular openings receiving coins; said openings having a diameter the size of the coins received therein and frictionally engaging the periphery of said coins and retaining the same; a backing layer secured to said card layer to close one side of each of said openings and forming circular pockets for said coins; said backing layer contacting said coins in said openings to support said coins; said backing layer having a plurality of peep-hole apertures one for each of said pockets; said peep-hole apertures being substantially smaller than said openings but sufficiently large to enable observation of any mint designation on the back side of said coins; said peep-hole apertures being eccentric with respect to said circular pockets and being located adjacent the periphery thereof at positions corresponding to the positions of the mint designations on the back side of the coins wherein said mint designations are visible through the peep-hole apertures and all pertinent data on both sides of the coin are visible without necessitating removal of coins from said holder and simultaneously firm support for the coins is provided without necessitating special removable cover means.

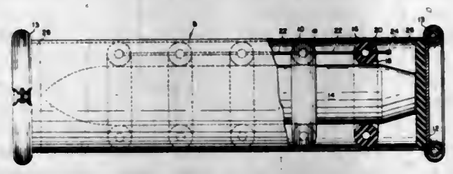
3,044,607
SHIPPING CONTAINER
Fred H. Hopper, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 23, 1960, Ser. No. 31,106
14 Claims. (Cl. 206—46)



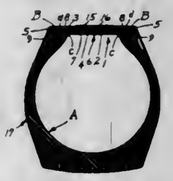
1. A container for shipping and handling delicate machine assemblies and the like, comprising: a tubular casing having a transverse cross section greater than that of the machine assembly to provide a clearance between the machine assembly and the casing; a first support plate, disposed generally transversely of the longitudinal axis of said casing, having a flat peripheral rim disposed in a plane normal to said longitudinal axis, said support plate carrying at least one supporting element having a supporting surface axially offset from the plane of the support plate and disposed at an acute angle relative to a plane normal to said longitudinal axis; a second support plate having means for connection with one end of a machine assembly, said second support plate, when connected with one end of a machine assembly, being disposed generally transversely of the longitudinal axis of said machine assembly, said second support plate carrying at least one supporting element having a supporting surface axially offset from and disposed at an acute angle relative to the plane of the second support plate, said supporting surfaces on the respective supporting elements being disposed in parallel, generally axially, spaced relation and facing opposing directions; and resilient mounting means interconnecting said supporting surfaces to support the machine assembly within said container free from contact with the walls of the casing, said support plates constituting the sole supporting means for the machine assembly.

3,044,608
SHOCK ABSORBING SHIPPING CONTAINER
Louis J. Bachleder, 931 Elm Court, Culver City, Calif., and George J. Brazeal, 11016 Westwood Blvd., Oxnard, Calif.
Filed Sept. 27, 1960, Ser. No. 58,860
3 Claims. (Cl. 206—46)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A container for transporting a fragile elongate article comprising a rigid outer casing having a longitudinal axis, a plurality of longitudinally spaced apart shock absorbers positioned in the casing each shock absorber having a bore opening for receiving said article and having an axis aligned with the longitudinal axis of the casing, said absorbers being of a size initially to fit loosely within the casing in alignment with the casing axis, each of said absorbers being made of an elastic material having a central air passage coextensive with said absorber, means for inflating the absorbers through said air passages, said absorbers capable of expanding radially inwardly and outwardly, the cross-sectional area of each air passage being a minor portion of the cross-sectional area of the respective absorber whereby each absorber retains its original configuration when deflated to cushion the article from shock to which the casing may be subjected.

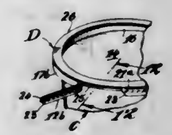


3,044,609
TIRE BEAD SPACING AND SUPPORTING ELEMENT
Charles E. Branick, % Branick Mfg. Co., Box 1937, Fargo, N. Dak.
Filed Oct. 4, 1961, Ser. No. 142,810
2 Claims. (Cl. 206—46)



1. A tire bead spacing and supporting element comprising a flexible resilient annular sleeve formed on its external periphery to define a circumferentially extended radially outwardly projecting central portion, opposite side edges of said portion defining endless radial shoulders for engagement with the opposed axially inner surfaces of the beads of a pneumatic tire casing, the outer peripheral surface of said sleeve axially outwardly from said shoulders providing cylindrical seats for reception of the radially inner surfaces of said beads, the radially inner face of said sleeve defining a smooth cylindrical work surface.

3,044,610
DISCARDABLE OR REUSABLE PLASTIC PACKAGE
Earl S. Tupper, Esmond, R.I., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware
Original application Nov. 10, 1954, Ser. No. 467,992. Divided and this application June 23, 1959, Ser. No. 822,325
4 Claims. (Cl. 206—46)



1. A self shape-retaining and pressure-sensitive hermetically sealed and deformable container with contents

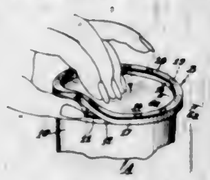
sealed therein and adapted for selective discarding or reusability as a frictionally sealable container and cover after severance for removal of enclosed contents comprising a container and cover both being of thin gauge, pressure-sensitive and deformable material, the container having a bottom and side wall terminating in a rigidfying outwardly disposed peripheral rim flange having horizontal and skirt portions, a cover having a central wall, an upwardly extending side wall and rigidfying outwardly disposed peripheral side wall rim flange having horizontal and skirt portions, the side wall portion of the container adjacent the flange thereof being operative for frictional, telescopic and hermetical engagement with the cover side wall, the cover flange and the container flange being in abutting engagement, fusion means between the opposing faces of opposite portions of said flange skirt portions and tearing means disposed above said fusion means and at the top of said flange skirt portions for severable disconnection of the full flange skirt portions whereby the package may also serve selectively as a container and separate frictionally engageable cover therefor for reuse or as a separated package to be discarded.

3,044,611
DISCARDABLE OR REUSABLE PLASTIC PACKAGE

Earl S. Tupper, Esmond, R.I., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware

Original application Nov. 10, 1954, Ser. No. 467,992. Divided and this application June 23, 1959, Ser. No. 822,326

14 Claims. (Cl. 206—46)



1. A self shape-retaining and pressure-sensitive hermetically sealed and deformable container with contents sealed therein and adapted for selective discarding or reusability as a frictionally sealable container and cover after severance for removal of enclosed contents, comprising a container and cover both being of plastic and of thin gauge, pressure-sensitive and deformable material, the container having a bottom and straight side wall terminating in a rigidifying outwardly disposed peripheral rim flange having horizontal and skirt portions, a cover having a central wall, an upwardly extending side wall and a rigidfying outwardly disposed peripheral side wall rim flange having horizontal and skirt portions, the side wall portion of the container adjacent the flange thereof being operative for frictional, telescopic and hermetical engagement with the cover side wall, the cover flange being supported on the container flange in abutting and resiliently live engagement, rupturable fusion means between and joining the opposing faces of opposite portions of said flange horizontal portions for interface separation whereby the package may also serve selectively as a container and separate frictionally engageable cover therefor for reuse or as a separated package to be discarded.

3,044,612
COSMETIC MASS HOLDER

Sol Levine, Bantam, Conn., assignor to Dorset-Rex, Inc., Thomaston, Conn., a corporation of Connecticut

Filed Jan. 13, 1960, Ser. No. 2,178

4 Claims. (Cl. 206—56)

1. A cosmetic mass holder for supporting a cosmetic mass in a rigid position comprising an integrally formed casing having an elongated outer wall and an end wall with an aperture therein defining a seat, a tubular mass container having a columnar portion with a closed end wall fastened in said seat and an expanded cosmetic mass receiving portion at the opposite end, a tubular sleeve slid-



able longitudinally between said casing outer wall and mass container and frictionally engaged with said tubular mass container for positioning outwardly of and relative to said casing, and a tubular cap frictional engaged on the outer wall of the casing.

3,044,613
HOLDERS FOR LIPSTICKS AND LIKE COSMETICS

Elizabeth Levy, Surbiton, England, assignor to Crystal Products Co., Limited, Surbiton, England

Filed Jan. 14, 1960, Ser. No. 2,500

Claims priority, application Great Britain Feb. 6, 1959

2 Claims. (Cl. 206—56)



1. A holder for cosmetic sticks, such as lipsticks, comprising a tubular member having an open end and an L-shaped slot formed at the said open end, a sleeve having a longitudinal slot extending from one end thereof to a point adjacent the other end thereof, said sleeve being slidably received within the tubular member with the said other end protruding therefrom, a cup-shaped holder and a cosmetic stick held in said holder, said holder having a tongue pressed out and projecting therefrom, passing through the longitudinal slot in the sleeve and co-operating with the L-shaped slot to engage therein and detachably retain the holder and cosmetic stick in substantially fixed relation to the tubular member while allowing the sleeve to be slid axially relative to the tubular member to cover or expose the cosmetic stick as required.

3,044,614
TAPE PACKAGE HAVING CONTROLLED UNWINDING

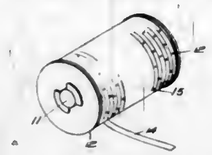
Harris F. Hanscom, Barrington, R.I., assignor to H. F. Hanscom & Company, Inc., a corporation of Rhode Island

Filed Mar. 7, 1961, Ser. No. 93,945

1 Claim. (Cl. 206—59)

A tape package comprising a core, a two-faced tape wound thereon in a plurality of layers with one layer superimposed on another radially outwardly of the core,

each layer having the tape thereof helically disposed at a substantially uniform pitch from one end of the package to the other, the tape of one layer being breakably



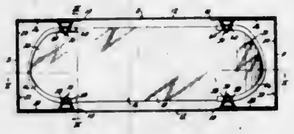
adhered to the tape of the next layer at a plurality of spaced spot locations throughout the length of the tape, whereby the layers of tape are breakably secured together and are retarded from sloughing off the package.

3,044,615
CARTON FOR WINDSHIELDS

William F. Richardson, Carthage, Mo., assignor to Flex-O-Lators, Inc., Carthage, Mo., a corporation of Missouri

Filed Feb. 19, 1959, Ser. No. 794,309

15 Claims. (Cl. 206—62)



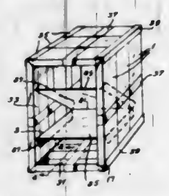
1. A carton for windshields comprising an elongated hollow rectilinear container having top, bottom, side and end walls, a pair of support beads disposed within said container and extending horizontally across said container in spaced apart relation from one end thereof respectively against the top and bottom walls of said container, a second pair of support beads similarly disposed adjacent the opposite end of said container, the edge of each of said support beads having a notch formed therein, means supporting each of said support beads against movement toward the adjacent end of said container and supporting it against the adjacent top or bottom wall of said container, and a pair of pliable slings, the ends of each of said slings being affixed respectively to the support beads adjacent one end of said container, said sling being of sufficiently short length that when depending freely from its ends toward the corresponding end wall of said container it is supported out of engagement with said end wall.

3,044,616
CONTAINER FOR GASKETS FOR REFRIGERATOR DOORS

William W. Woodward, Godfrey, Ill., assignor to Alton Box Board Company, Alton, Ill., a corporation of Delaware

Filed Nov. 30, 1959, Ser. No. 856,204

5 Claims. (Cl. 206—65)



1. A package for gasket-shaped articles comprising a plurality of hollow rectangular frames formed of paperboard, each frame being formed of paperboard sheet material to have inner and outer peripheral panels connected by front and back panels, the frames having closed corners, the frames being stacked together with their front and back panels in face-to-face relationship, means holding said several frames together, and a gasket-shaped article contained within each frame.

3,044,617
STOCKING PACKAGE

Bernard M. Verlin, Penn Wynne, Pa., assignor to Poplar Textiles, Inc., a corporation of Pennsylvania

Filed Dec. 8, 1955, Ser. No. 551,817

3 Claims. (Cl. 206—79)



3. In a stretch-sock package, a thin, stiff sock-supporting insert of sheet material having a leg portion of substantially uniform width, a top of reduced width, a foot portion with its opposite edges substantially aligned with those of the leg portion, and a rounded toe, the insert being foldable along a substantially medial transverse line to juxtapose the foot and leg portions with the toe and the top adjacent one another and being apertured on opposite sides of the fold line to provide an opening extending entirely through the juxtaposed portions of the insert in its folded position, whereby portions of a sock supported on the insert are out of contact therewith across the opening for ready manual determination of the "hand" of the sock fabric with the insert in the folded position.

3,044,618
DISPLAY PACKAGE FOR DISC-LIKE OBJECTS

Bernard Surloff, 9424 Carlyle Ave., Miami Beach 54, Fla.

Filed Oct. 27, 1960, Ser. No. 65,448

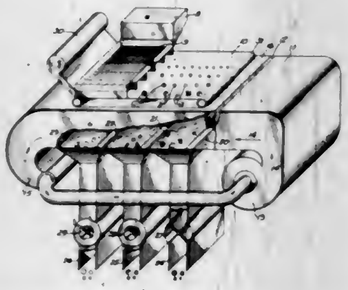
3 Claims. (Cl. 206—80)



1. In a display package for disc-like objects, the combination comprising a pair of flat, flexible card-like members, a circular opening in the first of said card-like members, a plurality of petal-like members extending radially outwardly of the peripheral margin of said opening at one side of said first card member in the direction away from said opening and integrally joined with said first card member, means securing one side of the second card-like member in face-to-face relation against the other side of said first card-like member, and means for sandwiching the object between said card-like members with a central portion of the object projecting through said opening, said petal-like members being formed by a first plurality of through cuts in said card-like member equally spaced in end-to-end relation about said peripheral margin, a second plurality of through cuts in said card-like member extending radially with respect to the center of said opening from within and terminating one each at a position between the ends of said first plurality of cuts,

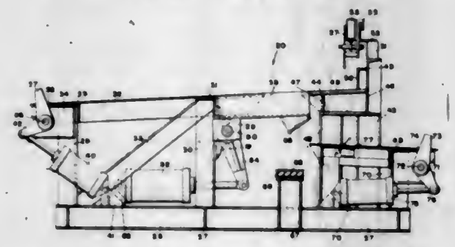
and a central, multi-pointed star cut out of said card-like member the apex of one each of said star points terminating at the inner end of one each of said radially extending cuts.

3,044,619
APPARATUS FOR SORTING SEED MATERIAL
Wilhelm Knolle, 7 Vigilienweg, Bad Durkheim, Germany
Filed Dec. 4, 1959, Ser. No. 857,440
Claims priority, application Germany Dec. 4, 1958
3 Claims. (Cl. 209—33)



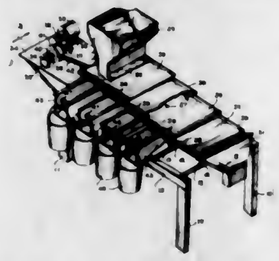
1. An apparatus for sorting seed grains of various sizes and densities according to size and density so as to obtain a high yield of highly fertile seed material of great germinating power, comprising, in combination, hopper means for holding said seed grains, a plurality of sieve means arranged below said hopper means in series for sorting grains according to size, said sieve means having openings of varying dimensions gradually increasing from the side where said hopper means are positioned toward the side opposite thereto, a conveyor belt positioned underneath said sieve means at right angles thereto, a wind tunnel arranged under the lower side of said conveyor belt, said wind tunnel having a slot in its upper wall extending across the tunnel top for the width of the conveyor belt so as to receive the grains as they travel in a trajectory from the conveyor to the slot, said conveyor belt transporting said grains horizontally and throwing them into stationary air so that said grains, all having the same horizontal speed, fall through said slot into the tunnel, a fan producing a flow of air of opposite direction to the movement of the upper side of the conveyor belt, and receiving means for collecting said grains after having been sorted as to density in said wind tunnel.

3,044,620
SORTING AND UNLOADING APPARATUS FOR DRAWBENCHES AND THE LIKE
Edwin B. James, Youngstown, Ohio, assignor to The McKay Machine Company, Youngstown, Ohio, a corporation of Ohio
Filed Dec. 1, 1958, Ser. No. 777,372
1 Claim. (Cl. 209—82)



Apparatus for receiving elongated metal rounds advancing longitudinally from a straightener or the like and for classifying said round as to length comprising in combination a longitudinally extending table sloping downwardly to one side of the longitudinal path of travel of the rounds onto said table, said table having a stop to limit the forward progression of the rounds on the table, said table having a retractable portion intermediate its side edges operative when retracted to divert a round rolling sideways down said table from the surface thereof, a longitudinally extending and vertically disposed side guide extending upwardly of the high edge of said table and being on the opposite side of said path of travel from said retractable portion of the table, a plurality of flag switches supported with respect to said table and positioned in longitudinally spaced relation along said path for actuation by the advancing rounds and thus to indicate the length of the rounds as the later approach said stop, and means operated by said flag switches to retract said retractable portion of said table.

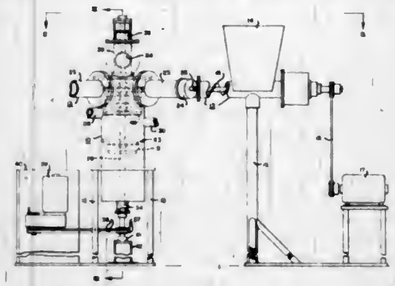
3,044,621
NUT MEAT CLEANER
Sidney F. Pearlman and William J. Pearlman, both of P.O. Box 97, Valdosta, Ga.
Filed Aug. 6, 1958, Ser. No. 753,478
3 Claims. (Cl. 209—112)



3. Apparatus for separating nut meats from foreign matter comprising frame structure, a series of trays mounted on said frame structure and inclined relative to its length, yieldable tray supporting means mounting said trays on said frame structure in generally parallel overlapping relation, the arrangement being such that means is provided whereby objects discharged from the upper portions of all of the trays except the last tray will be deposited on the lower portion of the next tray, and the discharge from the last tray will be from the apparatus, a hopper for nut meats or other matter to be separated located above the trays in a manner to discharge onto the first of the trays, means whereby said trays may be shaken, and transverse chutes beneath the lower edges of the trays.

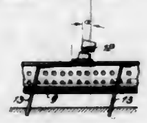
3,044,622
CLASSIFIER SYSTEM
George M. Croft, Fox Chapel Borough, Pa., assignor to Majac, Inc., Sharpsburg, Pa., a corporation of Pennsylvania
Filed June 17, 1959, Ser. No. 821,059
5 Claims. (Cl. 209—144)

2. In a gas suspension classifier system, apparatus comprising, in combination, a cylindrical vessel having a vertical axis and a fine material outlet opening, a shaft extending into said vessel along said axis, means below the bottom of said vessel for rotating said shaft in a selected direction at a selected speed, a selector having a plurality of horizontal tiers of radial arms connected to said shaft for rotation therewith, a plate closing the bottom of said tiers and rotatable therewith, a fixed annular shroud covering the top of said tiers and extending to a sealing position around said opening to put it into communication with the interior of said selector, a funnel in said vessel positioned below said selector, a disc distributor connected to said shaft for rotation therewith having an outer edge in spaced relation to the inside of said funnel, means for supplying air to said vessel at least below said funnel, means for tangentially supplying ma-



terial to be classified into said vessel, an outlet for oversize material below said funnel, and an outlet for fine material in gasborne suspension communicating with said opening.

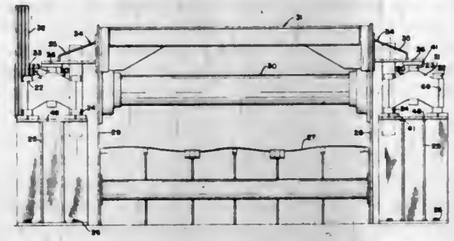
3,044,623
APPARATUS FOR MECHANICAL TREATMENT OF MATERIAL
Heinz Behrens, 20 Deiselkuhnerweg, Schwarzenfeld, Oberpfalz, Germany
Filed July 6, 1959, Ser. No. 825,014
Claims priority, application Germany Aug. 21, 1953
1 Claim. (Cl. 209—275)



Apparatus for mechanically treating finely divided material comprising a horizontally extending elongate conduit of arcuate trough-like cross-section formed of deformable perforated material, resilient support means for supporting said conduit and enabling movement in a direction parallel to the longitudinal axis thereof and in a plane substantially perpendicular to the longitudinal axis thereof, said support means having a resilient restoring force, and a vibration generator operatively connected to said conduit including an unbalanced mass mounted for rotation about an axis for imparting vibrations to said conduit having a component transverse to the longitudinal axis of said conduit and a component parallel to the longitudinal axis of said conduit, the rotational axis of said unbalanced mass forming an acute angle with the longitudinal axis of said conduit to cyclically vibrate and deform the cross-section thereof.

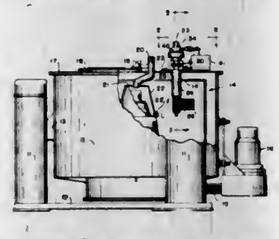
3,044,624
SCREENING MACHINE AND RUBBER MOUNTING UNIT THEREFOR
Walter J. Parks, Cleveland, Ohio, assignor to The W. S. Tyler Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 8, 1958, Ser. No. 707,777
6 Claims. (Cl. 209—412)

1. In a vibrating screening apparatus, a vibratory body, a supporting stationary frame, means for oscillating said vibratory body relative to the stationary frame, support means for the vibratory body comprising a resilient member adapted to support the vibratory body to permit a relatively resilient connection to the supporting frame, said resilient connection comprising a plurality of tubular members, one of said members being attached to the supporting frame and one to the vibratory screen body, each of said members being mounted vertically substantially in parallel in a mass of elastomeric material, said elastomeric material under compression surrounding the tubular members, said tubular members being secure-



ly bonded to the elastomer and providing for a substantial thickness of elastomeric material to support the load of the vibratory body in shear and substantial compression, whereby the resilient means provides a new and improved connection therebetween.

3,044,625
LOAD INDICATOR FOR CENTRIFUGAL SEPARATOR
William C. Smith, Moline, and Clyde K. Henninger, Geneseo, Ill., assignors to Ametek, Inc., a corporation of Delaware
Filed Nov. 4, 1957, Ser. No. 694,241
3 Claims. (Cl. 210—86)

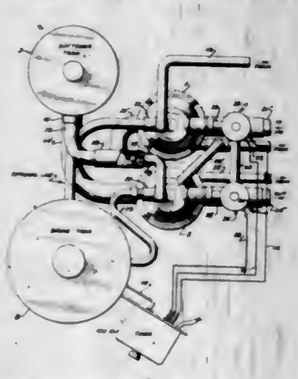


1. In a centrifugal separator having a rotatable basket, means for feeding material into said basket; means for rotating said basket as said material is fed thereinto, whereby said material is rotated and forms an annular shell on the inside of said basket; a load indicator extending into said basket, said indicator including a shaft; separately removable oscillatable thin blades keyed to said shaft; spacers between said blades for maintaining them in spaced planes normal to the inner peripheral surface of said shell of material; removable means at the one end of said shaft for maintaining said blades and spacers on said shaft, whereby the number of blades may be varied to provide a predetermined sensitivity of said indicator for materials having different densities; and means responsive to the engagement between said blades and said shell for oscillating said blades for stopping the feeding of material to said basket.

3,044,626
WATER SOFTENING APPARATUS AND SYSTEM
Donald Rose, Dayton, Ohio, assignor of one-half to Ronald D. Baker, Dayton, Ohio
Filed Jan. 6, 1958, Ser. No. 707,267
12 Claims. (Cl. 210—103)

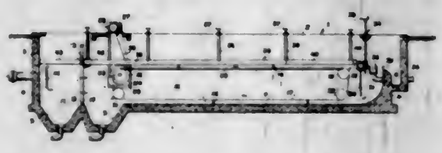
12. Automatic water softener apparatus comprising in combination; a softener tank having a mineral bed therein and a free board water space above said mineral bed, a hard water inlet above said free board space and a soft water outlet at the bottom of said tank; a brine tank having a common brine suction and water replacement conduit leading to adjacent the bottom thereof; a hard

water supply passageway, a service passageway, means connecting the hard water passageway with the top of said softener tank, means connecting the service passageway with the bottom of said softener tank, liquid flow control and operatiing means utilizing two valve elements, each having two valve means thereon, one of said valve elements having its two valve means operating with the hard water passageway, the other of said valve elements having its two valve means operating with the service passageway, an injector jet for drawing brine from the brine tank and connecting means from the discharge of said jet to above said mineral bed in the softener tank, a drain passageway connected with the hard water supply passageway and having a cut-off means therein, said first valve element positioning in one position one of said valve means to connect the drain passageway with a portion of the hard water passageway to connect the softener tank to the drain passageway, a by-pass line means connecting



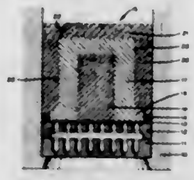
a portion of the supply passageway with a portion of the service passageway, said second valve element positioning in one position one of said valve means thereon in the service passageway to furnish backwash water to the bottom of said softener tank whereupon a backwashing is accomplished; a drain passageway connected with the service passageway; hard water pressure supply means for moving said second valve element and the second valve means thereon to connect said last mentioned drain passageway with the bottom of said softener tank and cause said first drain cut-off means to close and said brine suction jet to draw brine from said brine tank followed by providing a rinse to said mineral bed; said first valve element returning to another position of service whereby water pressure is applied at the hard water inlet of the softener tank and brine making water is replenished in said brine tank bottom followed by said second valve element moving to service or first position.

3,044,627
COVER FOR OIL SEPARATORS
Arthur C. Lind, Wauwatosa, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 10, 1958, Ser. No. 772,880
5 Claims. (Cl. 210—170)



4. An oil and water separator for installation below grade to the depth required for the gravity flow of the oil and water therethrough, comprising a tank having inlet and outlet ends, a bottom and side walls, a series of distribution baffles extending across the tank at the inlet end thereof, overflow trough means at the outlet end of the tank for withdrawal of the water and including weir means disposed to maintain a certain water level within the tank within given limits, a cylindrical, rotatable trough for periodic skimming the floating oil collected adjacent thereto, a solid baffle extending across the tank immediately beneath said trough in effective sealing relation therewith and spaced from the bottom and outlet end of the tank, said baffles and skimming trough defining the separation zone of the tank, beams having ends supported on said side walls and extending across said separation zone, and a cover substantially closing the top of said separation zone and comprising a number of rectangular air-tight sections individually suspended from said beams, said cover having vertical dimensions such that at all times the entire underside is below and the entire top side is above said water level of the tank, said cover being disposed thereby to effect the submergence of the oil separated from the water therebeneath and said cover being pitched upwardly for movement of the submerged oil toward said trough for collection and skimming.

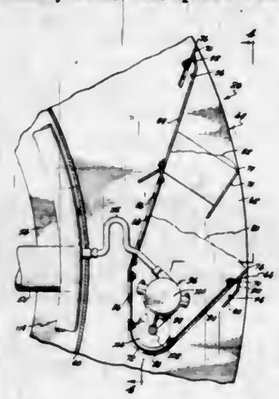
3,044,628
PURIFICATION METHOD
James Watt Ijsbrand Heijnis, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 857,198
Claims priority, application Netherlands Dec. 10, 1958
2 Claims. (Cl. 210—290)



1. A method of forming a filter bed in a melt spinning assembly comprising the steps of dividing an elongated cylindrical filtering compartment having an entrance and a discharge end into one central and at least two concentric annular sections by means of a plurality of coaxial hollow cylinders; filling the central section with coarse granular filter material in loose form; filling the inner annular section, a portion of an outer annular section at the discharge end of said compartment, and enclosing said central section at the entrance end of said compartment with fine granular filter material in loose form; filling the remaining portion of said outer annular section with coarse granular filter material in loose form; removing said coaxial hollow cylinders and thereby joining the interfaces of the sections so as to allow the adjacent coarse and fine loose granular materials to remain in a substantially separated condition; and covering both the central and annular sections with coarse granular filter material at the entrance end of said compartment.

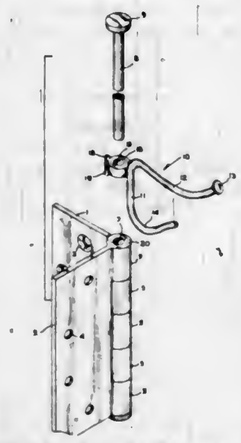
3,044,629
SAND WHEEL
Walter E. Saxe, Pasadena, Calif., assignor to The Conveyor Company, Los Angeles, Calif., a corporation of California
Filed Aug. 4, 1958, Ser. No. 752,903
7 Claims. (Cl. 210—384)

4. In combination: a tank; a wheel rotatable relative to said tank about a horizontal axis and extending downwardly into said tank so that successive circumferential portions of said wheel dip downwardly into said tank as said wheel rotates; and circumferentially spaced scoops carried by said wheel adjacent the periphery thereof and facing in the direction of rotation of said wheel, said scoops being water pervious and each having an inner wall, a main outer wall spaced radially outwardly from said inner wall thereof and spaced circumferentially rearward of said inner wall thereof in the direction of rotation of said wheel, and a rear wall interconnecting said inner wall and said main outer wall, each of said scoops also having an auxiliary outer wall spaced radially outwardly



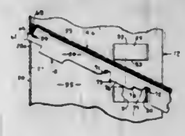
from said inner wall thereof and spaced circumferentially forward of said main outer wall thereof and circumferentially rearward of said inner wall thereof in the direction of rotation of said wheel, the space between said inner wall and said auxiliary outer wall communicating openly with the space between said auxiliary outer wall and said main outer wall, said main and auxiliary outer walls respectively having main and auxiliary digging edges which face forwardly in the direction of rotation of said wheel, said main and auxiliary digging edges of said scoops lying on a common circle.

3,044,630
HINGE PIN HOOK
Ferdinand W. Szabo, 17253 McCracken Road, Maple Heights, Ohio
Filed June 24, 1960, Ser. No. 38,563
2 Claims. (Cl. 211—86)



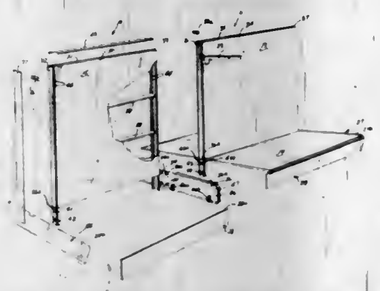
1. A hinge pin hook adapted to be mounted on a hinge assembly and the like comprising a vertically extending shank portion having a top elongated hook portion terminating in a knob and a lower shorter hook portion; a cylindrical seat having a central vertically extending opening therein secured to said vertically extending shank portion, said seat and opening being of a size adapted substantially to correspond to a hinge knuckle and hinge pin respectively of said hinge assembly and the like, and a stop member secured to said cylindrical seat substantially diametrically opposite said vertical shank portion and extending downwardly adapted to fit between the leaves of said hinge assembly to engage such leaves to move and pivot the hook to keep the hook pointed outwardly regardless of the position of such leaves.

3,044,631
STORE FIXTURE
Orval L. Greenman and Robert J. Stewart, Comstock Park, Mich., assignors to The Bulman Corporation, Grand Rapids, Mich., a corporation of Michigan
Filed Aug. 3, 1959, Ser. No. 831,227
6 Claims. (Cl. 211—136)



5. An adjustable shelving structure, comprising: two spaced apart standards, each having a series of vertically spaced slots near its rear edge; a series of vertically spaced support means on each of said standards spaced forwardly from said slots; a shelf extending between said standards and having a bracket at each end thereof which engages said support means so that the shelf is supported thereby, said bracket including means for alternately supporting said shelf in a horizontal position, an upwardly inclined position and a downwardly inclined position; a first projection at the rear edge of the bracket, said first projection being slidably receivable into the nearest one of said slots when the shelf is in a horizontal position, said first projection including wall means extending transversely through and engageable with the lower edge of said nearest slot when said shelf is in an upwardly inclined position to prevent downward movement of the rear end of said shelf; a second projection at the rear edge of said bracket extending in the same direction as and spaced downwardly from said first projection, said second projection being slidably receivable into the nearest one of said slots when said shelf is horizontal, said second projection including wall means extending transversely through and engageable with the upper edge of the slot next above when the shelf is in a downwardly inclined position to prevent upward movement of the rear end of said shelf.
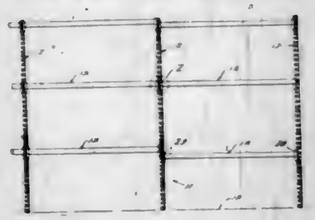
3,044,632
MULTIPLE SHELVING CONSTRUCTION
Edwin F. Schild, 1644 77th Court, Elmwood Park, Ill.
Filed Mar. 7, 1960, Ser. No. 12,985
4 Claims. (Cl. 211—147)



3. A shelving assembly comprising a vertical back member having end columns, said end columns, each

having a vertical center portion outwardly offset from the end of the member, with portions at the side of the offset center portion forming shoulders with flat surfaces facing outwardly, means defining evenly spaced slots in said end columns at the edges of said center offset portion, brackets having tabs for insertion into the slots with the brackets engaging said shoulders, shelves mounted on the brackets, base gussets for supporting the back member upright from a floor surface, and means for securing the base gussets to the end columns.

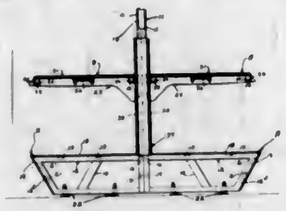
3,044,633
ADJUSTABLE STORAGE RACK
Edward A. Baker, Jr., Drayton Plains, Mich., assignor to Palmer-Shile Company, Detroit, Mich., a corporation of Michigan
Filed June 7, 1960, Ser. No. 34,505
2 Claims. (Cl. 211—147)



2. In an adjustable storage rack construction, a plurality of end units each comprising front and rear posts in spaced parallel relation and cross members connecting said posts to form a rigid unit, each post having a partially closed channel-shaped cross-section with an outwardly facing web, a pair of flanges extending inwardly from said web, a second pair of flanges extending toward each other from the first pair of flanges, a plurality of equidistantly spaced vertically arranged slotted portions on each post, each slotted portion being pressed outwardly from said web and comprising downwardly extending side walls symmetrically disposed with respect to the post centerline, a plurality of rail members each having a pair of connecting elements secured to the ends thereof, each connecting element having an angular cross-sectional shape fitted against the web and one flange of a post, a plurality of vertically spaced downwardly extending teeth formed on the portion of each connecting element fitted against the post web, said teeth having the same spacing as said post slotted portions, said slotted portions receiving said teeth so as to prevent substantial movement of said connecting elements away from the post web, said slotted portions being sufficiently wide to simultaneously receive a pair of connecting element teeth on opposite sides thereof, and inclined edges on said teeth adapted to engage said walls of the slotted portions on said posts, said interfitting teeth and slotted portions being responsive to weight exerted on said rail member to wedge said connecting element against the corresponding post flange.

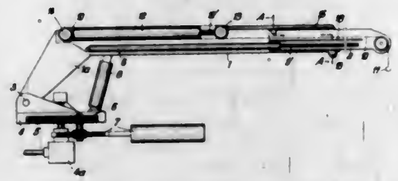
3,044,634
KNOCK-DOWN SHELF CONSTRUCTION
Muammer A. Oztekin, 3931 1st Ave. S., Birmingham, Ala.
Filed Apr. 29, 1960, Ser. No. 25,729
1 Claim. (Cl. 211—148)

In shelf construction, a pair of laterally spaced vertical posts, a base shelf unit extending between the posts and having a horizontal shelf panel with the rear edge substantially in contact with the front of each post, an upper shelf unit supported on each side of the posts with the back edges thereof spaced from the front of the posts, a pair of facing elongated back panel holding members secured to the posts and having elongated channel-shaped sockets located in the space between the rear edges of the upper shelf units, the lower ends of said holders terminating substantially adjacent the upper surface of the lower



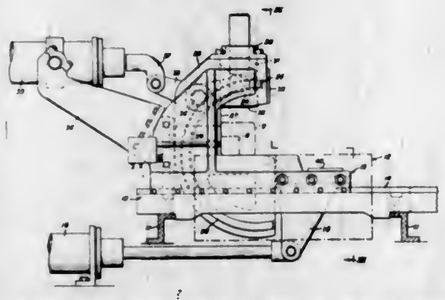
shelf panel, and vertically extending back panels extending between the posts and having their vertical side edges engaged slidably in the socket members of said holders.

3,044,635
HYDRAULICALLY ACTUATED CRANES
Erhard Kirsten, Kell, Kreis Trier, Germany
Filed July 17, 1959, Ser. No. 827,902
Claims priority, application Germany Sept. 25, 1958
4 Claims. (Cl. 212—55)



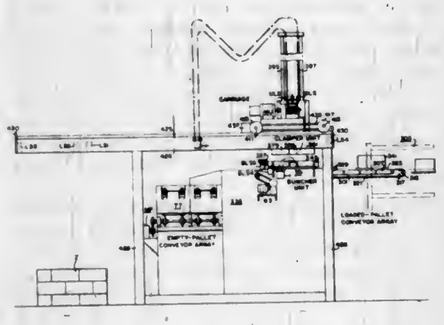
1. A hydraulically actuated crane comprising a jib member of U-shape in cross section and arranged with the open side upwardly, a second jib member of U-shape in cross section and arranged to slide within the first-mentioned jib member, a U-shaped channel member secured to each leg of the first mentioned U-shaped member at the upper edges of the legs and mounted on the inside of the U, a plurality of rollers rotatably mounted on an axle with means at each end to contact in the U-shaped channel members to thereby guide the rollers, said U-shaped channel members also strengthening the sides of the first-mentioned U-shaped jib member, a hydraulic cylinder and piston in the first-mentioned jib member and connected to the plurality of rollers, and a hydraulic cylinder and piston in the first-mentioned jib member and connected to the jib members to adjust the second-mentioned jib member relative to the first-mentioned jib member.

3,044,636
BILLET TURNER
Eugene E. Smith, 3298 Ripley Ave., Hobart, Ind.
Filed Feb. 5, 1959, Ser. No. 791,413
1 Claim. (Cl. 214—1)



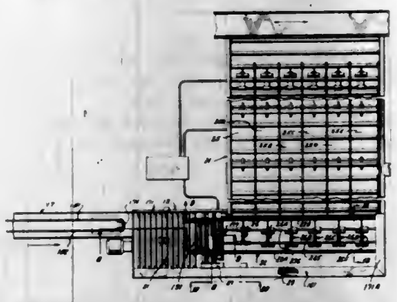
A billet turner comprising a base, a pair of housing spaced apart thereon, each housing including an upstanding post portion and a cantilever beam portion extending laterally therefrom, arcuate grooves in the adjacent faces of said housings, a generally C-shaped tumbler having a jaw formed therein open at one side, said tumbler being mounted on and between said housings and having arcuate ribs slidable in said grooves for rotation of the tumbler about an axis normal thereto, the top of said jaw having a slot therein, a block slidable in said slot cooperating with said jaw to clamp a billet therebetween, a lever pivoted between said housings, one end of said lever pivotally engaging said block and a fluid-pressure motor pivoted to the other end of said lever and mounted on said housings off center relative to the pivotal axis of said lever, whereby energization of said motor first causes angular movement of the lever and then rotation of said tumbler.

3,044,637
BLOCK HANDLING APPARATUS
George S. Repasky and Joseph F. Repasky, Greensburg, Pa., assignors to Greensburg Concrete Block Co., Greensburg, Pa., a corporation of Pennsylvania
Filed July 23, 1957, Ser. No. 673,753
17 Claims. (Cl. 214—6)



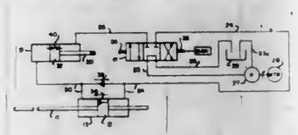
1. Block handling apparatus for transferring blocks on pallets on a rack to a stack, there being a plurality of block-loaded pallets substantially on each level of said rack, the said apparatus comprising in combination an array of conveyors corresponding in number to said plurality, said conveyors being adapted to engage said rack in pallet unloading relationship, motor means connected to said conveyors when energized for advancing said conveyors, normally open first circuit means connected to said motor means when closed for energizing said motor means, first switch means connected to said circuit means and actuable by engagement with a loaded pallet on a rack engaged with said conveyors in pallet unloading relationship for closing said circuit means to energize said motor means, said switch means being actuable only so long as said loaded pallet is in engagement therewith, stop means disposed with its stopping surface along a predetermined line in the path of said conveyors adapted to engage the blocks on loaded pallets for stopping the advance of said blocks, bunching means including means disposed adjacent said first stop means when energized movable transversely to said first stop means from a position adjacent the conveyor on one side of said array inwardly for moving the blocks inwardly thereby bunching said blocks on said conveyor, normally open second circuit means for energizing said transversely movable means, second switch means actuable by engagement with said loaded pallet to close said second circuit means, and means to be engaged with the blocks bunched by said bunching means for removing said blocks from said conveyors.

3,044,638
SELECTING AND TRANSFER APPARATUS FOR CONVEYING ARTICLES
John K. Bruce, 1982 10th St., La Verne, Calif.
Filed Nov. 9, 1959, Ser. No. 851,897
10 Claims. (Cl. 214—11)



1. Apparatus for conveying articles comprising a continuously moving input conveyor, indicator means movable in synchronism with the input conveyor, stop means for interrupting the movement of an article being carried on the conveyor at a predetermined position along the input conveyor, means responsive to movement of the indicator means past a predetermined position for releasing said stop means so that the article is released to again move on the conveyor but in correlation with an indicator means, a plurality of output stations each adapted to receive selected articles from the input conveyor, transfer means operable to move articles from the input conveyor to an output station, sensing means associated with each output station and responsive to the indicator means for actuating the transfer means, and selector means for setting an indicator means correlated with a particular article on the input conveyor so that the indicator means causes a response in only the sensing means associated with a particular output station.

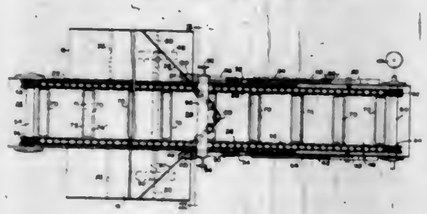
3,044,639
LOCK ROD MECHANISM
Robert J. Harry, Alliance, Ohio, assignor to The Alliance Machine Company, Alliance, Ohio, a corporation of Ohio
Filed Oct. 30, 1958, Ser. No. 770,746
9 Claims. (Cl. 214—31)



1. In a charging machine having a peel, a head adapted to engage a charging box and a lock rod movable lengthwise of the peel and movable from a position in the peel head to a locked position in an opening in the body of the charging box, a lock rod control mechanism comprising a control arm member, a reversible valve means pivotally connected to said control arm and responsive thereto, a source of fluid pressure delivering fluid to said valve means, at least two fluid pressure cylinder means, a reciprocating member in each such cylinder means receiving fluid from said valve means, fluid transmission means between said fluid pressure cylinder means whereby said reciprocating members are responsive to each other, said lock rod member engaged by one reciprocating member and responsive thereto, a control rod member engaged by another of said reciprocating members and responsive thereto, said control rod member being in engagement with the control arm member and acting

thereon to move it about its pivot on the reversible valve means whereby movement of said control arm member indicates the position of the lock rod member with respect to the peel head and the opening in the charging box, and fluid transmission means returning the fluid from the cylinder means to the source of fluid pressure.

3,044,640
MATERIAL HANDLING APPARATUS
Richard H. Jamison, Jr., 11 Woodland Ave., Greensburg, Pa.
Filed July 9, 1959, Ser. No. 826,078
8 Claims. (Cl. 214—83.36)



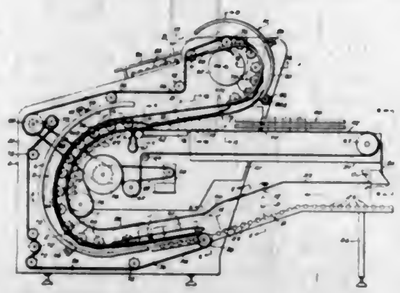
1. Material receiving, storing and delivery apparatus comprising upwardly extending side walls and a floor defining a material receiving and storing hopper having an open discharge end, an endless conveyor movable along said floor for discharging material through said open discharge end, and at least one flexible device having its opposite ends connected to the respective side walls for regulating the discharge of material through said open discharge end, said device extending across said open discharge end above the conveyor but below the maximum height of material stored in the hopper whereby material transported by said conveyor will be forced to travel under the flexible device at a substantially constant rate.

3,044,641
METHOD OF HANDLING RAILROAD CROSS TIES
Charles J. Code, 327 Highland Ave., Devon, Pa.
Filed Apr. 8, 1960, Ser. No. 20,985
4 Claims. (Cl. 214—152)



1. The method of handling railroad cross ties for transportation and unloading, comprising the steps of, stacking the ties crosswise of the car in tier-like fashion, the lowermost tie of each tier being supported above the car floor by a stringer running lengthwise of the car along each side thereof, the upper ties being supported by the ties therebeneath, thrusting the front end of an upwardly - inclined longitudinally - disposed endless-belt tractor-driven conveyor under the foremost tier until the frictional lateral pull of the moving endless belt causes the lowermost tie of said foremost tier to be displaced in the direction of the conveyor thus breaking down the foremost tier, conveying the ties of said foremost tier upwardly on the inclined conveyor belt, transferring the ties to a transverse conveyor belt for discharge over the side of the car, and repeating the action just described until the stack of ties has been unloaded from the car.

3,044,642
SHIPPING CASE UNLOADING MACHINE
Manuel M. Bycer, Upper Darby, John J. Hohenadel, Philadelphia, and Albert Soffa, Wynnewood, Pa., assignors, by mesne assignments, to The Lodge & Shipley Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 20, 1959, Ser. No. 814,477
5 Claims. (Cl. 214—311)



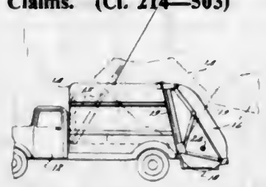
1. In a case unloading machine, the combination comprising:
endless flight bar means,
means to constrain said endless flight bar means to movement in a generally S-shaped path in which it travels through a lower inversion arc, through an intermediate incline, through an upper reinversion arc, and then through a return path exterior of said generally S-shaped path to said lower inversion arc,
case guide means paralleling said endless flight bar means through said lower inversion arc at the outside thereof,
additional case guide means paralleling said endless flight bar means through said upper reinversion arc at the outside thereof,
case lifting means disposed beneath said endless flight bar means and extending through said intermediate incline,
an endless conveyor belt,
means to constrain a section of said conveyor belt to movement in which it travels through an arcuate path extending through substantially 90 degrees at the inside of said endless flight bar means within said lower inversion arc with the upper terminus of said section approximately at that point in said generally S-shaped path in which the endless flight bar means moves from the lower inversion arc into said intermediate incline, and
additional means to constrain a second section of said endless conveyor belt for movement in a path in which it extends horizontally from said terminus and then through a return path to the first mentioned section thereof.

3,044,643
BOAT LOADING MEANS
Charles J. Shaw, 1315 Fruitdale Drive, Grants Pass, Oreg.
Filed Mar. 30, 1960, Ser. No. 18,733
15 Claims. (Cl. 214—450)



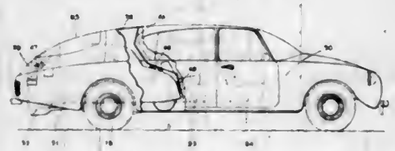
1. For use in combination with a vehicle, means for loading a boat onto said vehicle comprising a dolly having rotatable ground wheels, means for supporting said boat on said dolly, an upright standard carried by said vehicle, and means mounting said dolly on said standard for movement therealong and for rotation relative to said standard about its longitudinal axis whereby said boat and dolly may be elevated to a desired level and thereafter pivoted about said standard.

3,044,644
REFUSE TRUCK BODY AND LOADER
Gerald W. Coleman, Detroit, and Joseph M. Gwinn, Jr., Dearborn, Mich., assignors to Gar Wood Industries, Inc., a corporation of Michigan
Filed Apr. 7, 1959, Ser. No. 804,826
7 Claims. (Cl. 214—503)



7. In a refuse handling vehicle which includes a hollow dump body adapted to receive refuse for transport and having an open rear end, a tailgate assembly pivotally mounted on said rear end for up and down swinging movement about a horizontal axis, said tailgate assembly including a loading trough, a sweep panel mounted for rotation through said trough to a position supporting refuse for movement into said body through said open rear end, a ram panel mounted for movement of a portion thereof across said sweep panel for moving refuse thereon into said body, power means mounted on said body and connected to said ram panel for moving the ram panel, means for locking said ram panel in one position, said power means being operable to apply a force to said ram panel in said one position thereof so that said tailgate assembly is rotated about the pivotal mounting therefor in a direction away from said body rear end.

3,044,645
VEHICLES
Charles Aquila Vincent Smith, 50 Knights Bridge Court, Sloane St., London, England
Filed Oct. 7, 1958, Ser. No. 765,765
Claims priority, application Great Britain Oct. 7, 1957
1 Claim. (Cl. 214—505)



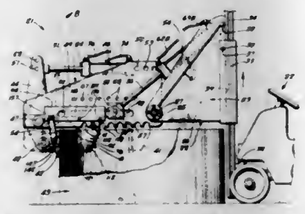
In a four wheel motor vehicle having a main body portion, a rear compartment adapted to accommodate a smaller vehicle, said compartment having a tiltable floor, means for tilting said floor to lower its rear edge, a cover for said compartment, said cover being hinged to the main body portion, means for raising the rear edge of said cover to a height sufficient to permit entry of the smaller vehicle into said compartment, said means for raising said cover and for tilting said floor being both operatively connected and driven by an electric motor, the said rear compartment being disposed within the motor vehicle to extend forward into the main body and forward of the rear wheels of said motor vehicle with the rear wheels disposed at either side of said rear compartment, and separate drive means for each rear wheel extending forward from said wheels along the side of said tiltable floor.

3,044,646
TRAILER FOR BOATS
Henry L. Sperow, 5160 W. 136th St., Hawthorne, Calif.
Filed Aug. 17, 1959, Ser. No. 834,302
11 Claims. (Cl. 214—505)



1. In a trailer having a frame to carry a heavy object and having a pair of ground wheels to support the frame, the combination therewith of: means carrying said wheels and pivotally mounted on said frame to swing relative thereto to shift the wheels in arcs between low positions relative to the frame to elevate the frame and high positions to lower the frame; actuating means on said frame operatively connected with said wheel-carrying means for actuation thereof to raise and lower the frame; a series of rollers spaced longitudinally of said frame, said rollers being movable between lower retracted positions and upper effective positions for lifting the heavy object relative to the frame for movement of the heavy object off the frame longitudinally thereof by roller action; and means to move said rollers from their lower retracted positions to their upper effective positions in response to upward movement of said wheel-carrying means and vice versa, said actuating means comprising a U-shaped yoke with two arms pivotally connected to said frame, said yoke having a normal lower position overhanging the rear of the frame to serve as a bumper for the trailer with the two arms of the yoke extending forward, said yoke being movable to an upright position to raise said wheels thereby to lower the frame.

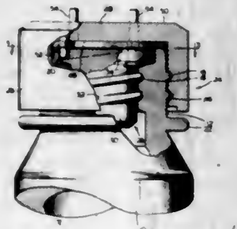
3,044,647
MANIPULATOR APPARATUS
Fred P. Hopfeld, Elmwood Park, Ill., assignor to Grand Specialties Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 14, 1960, Ser. No. 22,264
8 Claims. (Cl. 214—652)



1. A manipulator for moving an open-ended coil or the like between a first position, wherein the longitudinal axis of the coil is substantially vertically disposed, and a second position, wherein the longitudinal axis of the coil is substantially horizontally disposed, said manipulator comprising: a first frame for supporting said manipulator from a supporting structure; a second frame for supporting coil clamping structure thereon; mounting means for mounting said second frame on said first frame for pivotal movement only about a single horizontal axis, said second frame projecting outwardly of said first frame, from said axis, by a distance greater than the outside radius of the largest coil to be manipulated; first jaw means, mounted on said second frame and facing outwardly of said first frame, for engaging the inner surface of a coil to be manipulated; second jaw means, mounted on said second frame at a location diametrically displaced, relative to said coil, outwardly of said first frame, for

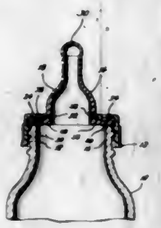
engaging the outer surface of a coil opposite said first jaw means; means for exerting a force on one of said jaw means to clamp a coil between said first and second jaw means to permit manipulation of the coil; and means, connected to said first and second frame means, for selectively rotating said second frame about said horizontal axis to move a coil between said first and second positions.

3,044,648
SAFETY CLOSURE FOR BOTTLES AND THE LIKE
Harold S. Cohn, 1539 Marco Place, Jacksonville, Fla.
Filed Jan. 11, 1962, Ser. No. 165,492
12 Claims. (Cl. 215—9)



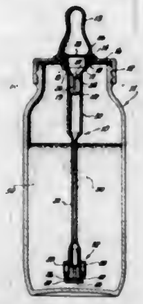
1. A safety closure for a bottle or the like having an orifice-topped neck provided with inner and outer screw-threads, some closure comprising a plug having an external screwthread for meshing with the inner thread of the neck, a generally cup-shaped cap having an internal screwthread for meshing with the outer thread of the neck, and elements formed on portions of the cap and plug for mutual engagement in clutching relation when the cap and plug are engaged with the respective threads of the neck and the cap is rotated into closing relation with the orifice.

3,044,649
VENTED NURSING UNIT
Frank E. Boston, Ravenna, Ohio, assignor to The Pyramid Rubber Company, Ravenna, Ohio, a corporation of Ohio
Filed Apr. 3, 1959, Ser. No. 803,863
6 Claims. (Cl. 215—11)



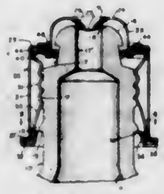
1. In combination with a container having a neck, a removable retaining cap adjustably secured to said neck, an inwardly extending flange on said cap defining a central aperture, a nipple having a tubular portion and a flexible nipple flange, said flexible nipple flange extending substantially coextensive with the neck of the container and clamped against the end of said neck by the lower face of the cap flange, an aperture extending transversely of said nipple flange and positioned substantially tangential to the inner wall of said neck, an annular channel in the lower face of said cap flange in communication with said nipple flange aperture, a radial channel in the lower face of said cap flange in communication with said annular channel and extending radially outwardly therefrom, and means allowing passage of air into said radial channel from outside said container.

3,044,650
NURSING NIPPLE STRAW
John Oltion, 1707 Santa Rosa St., and Glen Ladwig, 1619 Osos St., both of San Luis Obispo, Calif.
Filed Aug. 11, 1959, Ser. No. 833,032
11 Claims. (Cl. 215—11)



7. In combination: a nursing bottle having a nursing nipple mounted thereon; an adapter inserted upward in the base of said nipple when in use, said adapter making a substantially fluidtight fit with said nipple and having a central passage extending vertically therethrough; a flexible tube the upper end of which connects with said adapter so as to communicate with said passage and the lower end of which extends to a point near the bottom of said bottle; a float valve connected to the lower end of said tube so as to be located adjacent the bottom of said bottle when the latter is held upright, said float valve opening when submerged in liquid and thus causing the lower end of said tube to communicate through said valve with the lower portion of said bottle, said valve closing by gravity when no longer submerged in liquid so as to close the lower end of said tube to air in the lower end of said bottle; a gravity check valve provided in the passage of said adapter preventing a rapid downward flow of liquid through said passage; a check valve embodied with said float valve and preventing a rapid downward flow of liquid from the lower end of said tube; and an enlargement formed in said tube between said adapter and said float valve which is adapted to be compressed and released by the fingers successively to pump liquid upwardly through said tube and into said nipple to fill the latter with liquid before the cap is applied to said bottle for presentation of the latter to an infant for a feeding.

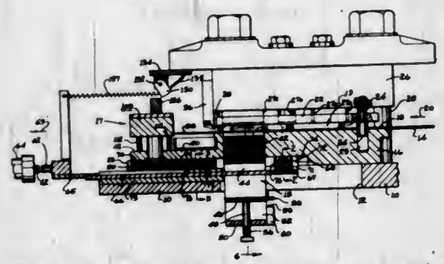
3,044,651
SEALABLE CONTAINER CLOSURE
Max Friedman, 122 S. Main St., High Point, N.C.
Filed Aug. 10, 1960, Ser. No. 48,674
5 Claims. (Cl. 215—31)



1. In a closure for a container, the combination comprising a container having a neck with screw threads, a flange projecting from the neck below the threads and tapering outwardly in a direction away from the threads, said neck having an end portion of reduced diameter and tapering inwardly toward the outer extremity and having an enlarged rounded extremity, said neck having a bore extending therethrough, and a cap for said neck,

said cap comprising an outer substantially cylindrical shell, an inner shell within said outer shell, said inner shell having threads for engaging the threads of the neck, an inwardly extending lip adjacent to the base of the shell, said lip having an inner diameter just sufficient to pass the neck flange, said lip having inwardly extending protuberances for engaging said flange and preventing removal of said cap, said protuberances riding over said flange when said cap is assembled on said container, said cap having, remote from its base, an inwardly extending flange and an outer dome-like extremity with its central portion depressed and having a raised annular cavity in the sides of such depressed portion, said depressed portion having a base of smaller diameter than said outer shell, said dome-like extremity being connected to said base by said inwardly extending flange, a first ring-like flexible diaphragm engaged between said inwardly extending flange and said inner shell and having an inside diameter slightly less than the smaller diameter portion of said tapering neck portion, a second ring-like flexible diaphragm mounted within said annular cavity of said depressed portion of said dome and adapted to be received within and to engage the outer end of the bore of said neck when said cap is screwed onto said neck, said dome having aperture means in its outer undepressed portion.

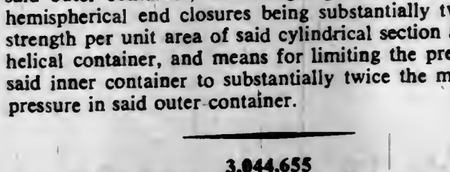
3,044,652
METHOD OF ASSEMBLING AND FASTENING LAMINATIONS
Arthur E. Chambers, 21370 Knudsen Drive, Grosse Ile, Mich.
Filed Nov. 5, 1958, Ser. No. 772,049
2 Claims. (Cl. 218—29)



1. In a method of making a laminated assembly from a plurality of rigid laminae cut from strip material by cooperative male and female dies and having registering apertures for receiving securing rivets, the steps of advancing successive laminae through the female die, forming said laminae into a stack generally beneath the female die, intermittenly separating from the end of the stack remote from the die that number of laminae required to form an assembly, positioning the separated laminae adjacent a rivet deforming surface with one terminal lamina being in contact with the surface, longitudinally aligning rivets with the registering apertures of the laminae, longitudinally displacing the rivets to enter the rivets in the aligned apertures of the plurality of laminae, forcing the rivets into contact with said deforming surface, thereby securing the separated laminae into a riveted assembly, and releasing the riveted assembly.

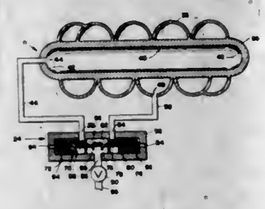
3,044,653
TARPAULIN ROOF CONSTRUCTION FOR OPEN TOP FREIGHT CONTAINERS
Keith W. Tantlinger, Grosse Pointe Shores, Mich., assignor to Sea-Land Service, Inc., a corporation of Delaware
Filed Dec. 1, 1958, Ser. No. 777,361
13 Claims. (Cl. 220—1.5)

1. A transportable container body comprising four corner posts, front and rear top rails and side and end walls cooperating with said corner posts to provide a generally open-topped oblong enclosure, a plurality of rigid flat bow members extending transversely of the container and having downturned terminal extensions removably connected to the tops of the side walls for detachably connecting the members to the side walls, a plurality of flexible strap elements overlying the bow members and supported thereon and being unconnected thereto and each having one end anchored to the front top rail and having its opposite end detachably connected to



the rear top rail to cooperate with the bow members to provide a skeletonized flat support, a tarpaulin cover mounted on said support and having its side margins lapping the side walls and at least one of its end margins lapping one of the end walls of the container body and having said margins secured to said respective lapped walls, and means surmounting each corner post and projecting above the level of the tarpaulin cover for effecting connection with the grappling element of a hoist for lifting the container body.

3,044,654
HIGH PRESSURE VESSEL
John H. Creighton, Davenport, Iowa, assignor to The Bendix Corporation, a corporation of Delaware
Filed July 1, 1958, Ser. No. 745,859
1 Claim. (Cl. 220—3)

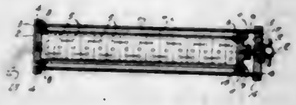


A pressure vessel comprising an inner container including a substantially cylindrical section and substantially hemispherical end closures and an outer helical container of substantially semi-circular cross-section embracing and covering the entire outer surface of the cylindrical section of said inner container, said cylindrical section forming a common wall for said inner container and said outer container, the strength per unit area of said hemispherical end closures being substantially twice the strength per unit area of said cylindrical section and said helical container, and means for limiting the pressure in said inner container to substantially twice the maximum pressure in said outer container.

3,044,655
SUBMARINE CASING ADAPTED TO BE OPENED SPEEDILY
Dimitri Issaiewitch Rebikoff, Cannes, France, assignor to Loral Electronics Corporation, New York, N.Y., a corporation of New York
Filed July 10, 1957, Ser. No. 671,031
11 Claims. (Cl. 220—4)

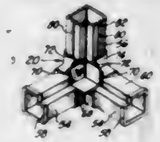
1. A fluidtight casing comprising a hollow body having an opening, a removable cover fluidtightly bearing against the outer borders of said opening, a rigid cargo element housed within said body and rigidly secured to said cover,

a rotatable member extending through the wall of the body opposite said opening therein, the inner end of said member and the part of said element confronting said member being provided with mating threaded portions,



said portions being threadedly engaged, and detent means carried by said member and bearing against said body to prevent inward displacement relative said body of said member along its axis of rotation.

3,044,656
PREFABRICATED SHIPPING CONTAINER
Theodore C. Combs, San Marino, and James M. Dobbie, Chapman Wood, Pasadena, Calif., assignors to Zero Manufacturing Company, Burbank, Calif., a corporation of California
Filed Aug. 24, 1959, Ser. No. 835,655
5 Claims. (Cl. 220—4)



1. A container corner construction for a rectilinear parallelepiped high-strength container providing minimum internal projections at such corner comprising: a corner member having three right-angularly related legs extending therefrom, each leg providing a right-angular longitudinal groove facing interiorly of the container; right-angularly related elongated tubular frame members having peripherally-continuous tubular ends respectively telescopically receiving said legs therein, each of said frame members having a longitudinally-extending notch therein extending to the end of the tubular member and fitting into the groove of the corresponding leg, said notches facing and defining the corners of the interior space of said container, there being a shallow adhesive space between the exterior walls of each leg and the interior walls of the corresponding tubular end, a portion of such adhesive space being between the groove walls and the notch walls; three right-angularly related structural panels; securing means integral with said frame members having panel grooves extending along the edges of said notches receiving the edge portions of said right-angularly related panels, said grooves being slightly wider than the thickness of said panels edge portions to provide a shallow adhesive space between the walls of the panel grooves and the panel surfaces; and a structural adhesive in all of said adhesive spaces holding said corner member, said frame members and said panels together.

3,044,657
FLANGE AND WALL STRUCTURE
Richard H. Horton, Cincinnati, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 14, 1957, Ser. No. 665,875
3 Claims. (Cl. 220—80)



2. In a structure having axially aligned tubular cylindrical wall sections joined at their end edges,

(*a*) a first annular ring circumferentially attached to one tubular wall section,

(*b*) a second annular ring circumferentially attached to an adjacent tubular wall section,

(*c*) each said annular ring having an annular wedging surface on its outer periphery flaring radially outwardly and axially away from the edge of the respective tubular wall section to which said ring is attached,

(*d*) each said annular ring having an annular wedging surface on its inner periphery tapering radially inwardly and axially away from the edge of the respective tubular wall section to which said ring is attached,

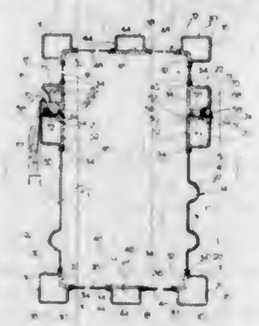
(*e*) a flange portion extending axially from each said annular ring in a direction away from the respective wall section to which the ring is attached, said flange portion on said first annular ring overlapping said flange portion on said second annular ring,

(*f*) a segmented cylindrical nut having inclined wedge surfaces corresponding to the inner annular wedging surfaces of said rings in contact with the inner annular wedging surfaces of said first and second annular rings,

(*g*) a segmented cylindrical wedge plate having inclined wedge surfaces corresponding to the outer annular wedging surfaces of said rings in contact with the outer annular wedging surfaces of said first and second annular rings, and

(*h*) threaded means drawing said nut and wedge plate together and clamping said first and second annular rings therebetween.

3,044,658
SHIPPING CONTAINER
Theodore C. Combs, San Marino, and James M. Dobbie, Pasadena, Calif., assignors to Zero Manufacturing Company, Burbank, Calif., a corporation of California
Filed May 12, 1958, Ser. No. 734,707
9 Claims. (Cl. 220—80)



1. A high-strength panel-sided shipping container providing maximum internal rectilinear cubage therefor, said container comprising panels secured to frame members providing external protection for the panels and reenforcement at the panel edges largely outside the container, certain of said frame members each comprising an extruded tubular member having a cross section defined by integral outer and inner wall means completely surrounding an internal space extending longitudinally of the frame member, said inner wall means including two inner walls joined at right angles to each other along adjacent inner edges each having a junction zone extending longitudinally of the frame member and spaced uniformly from said inner edges, each inner wall having an extension beyond its junction zone forming a part of said inner wall means and substantially aligned with the corresponding inner

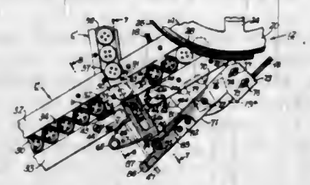
wall and integral therewith at said junction zone, each extension having a panel-receiving slot substantially aligned with the corresponding inner wall and terminating in a bottom wall closely adjacent the corresponding junction zone, said panel-receiving slot being laterally bounded by side surfaces parallel to the midplane of the corresponding inner wall and embracing a panel edge therebetween, said outer wall means being integral with said inner wall means at said two junction zones and looping right angularly outward therefrom in widely spaced relation to said adjacent inner edges, the direct distance from either junction zone to the outermost portion of said outer wall means being several times the thickness of the corresponding extension thereby exposing said outer wall means outwardly beyond said extensions to provide hand spaces for lifting the container and its contents.

3,044,659
VESSELS AND HANDLES THEREFOR
Earl S. Tupper, Esmond, R.I., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed July 30, 1959, Ser. No. 830,663
7 Claims. (Cl. 220—94)



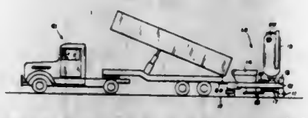
5. In an articulate and removable joint between a handle end and a container, the combination of a container ear having a notch opening with side walls tapering downwardly and inwardly, said notch opening having a restricted throat leading thereto, a handle end portion having a pair of spaced and enlarged stop heads of larger dimension than said notch opening and integrally secured to a neck part afforded by said handle end, said neck part being of larger dimension than said throat and at least of equal dimension with the base of the said side walls of the notch opening, said neck part being in penetrating and tight and articulable engagement with said notch walls, said handle end being forceably inserted and demountable in and from the notch walls at the said neck part through the notch throat, at least one of the handle end and notch wall parts being resilient.

3,044,660
BUTTON ORIENTER
William A. Troll, Brooklyn, and Charles Bonsignore, Woodside, N.Y., assignors to Emsig Manufacturing Company, New York, N.Y., a partnership
Filed Jan. 29, 1959, Ser. No. 789,826
16 Claims. (Cl. 221—10)



14. A face orienting device for non-symmetrical faced buttons or the like comprising, in combination, a frame, a chute supported by said frame and arranged to guide face unoriented buttons disposed within said chute in peripheral edge-to-edge contact, a selective trap portion interjacent said chute, said trap portion including stationary partial blocking means effective to pass buttons lying in selected face orientation and to tilt and block buttons not lying in selected orientation and ejector means adjacent said trap portion arranged to be cyclically actuated to clear said trap portion of block buttons.

3,044,661
GOVERNOR-CONTROLLED DISPENSING APPARATUS
Horace A. Cartwright, Lexington, Ky. (4106 S. Rockford St., Tulsa, Okla.)
Filed Feb. 29, 1960, Ser. No. 11,770
3 Claims. (Cl. 222—25)

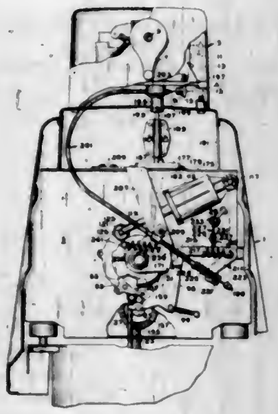


1. In an apparatus for dispensing material at a uniform per unit area quantity upon a surface, a towed vehicle having a supporting wheel engaging said surface, a supply of material upon said vehicle, means for distributing said material upon and transversely of said surface, a pump for drawing material from said supply and for moving said material to said distributing means at a rate proportional to the speed of said pump, a prime mover for driving said pump, rotatable means in selectively removable contact with said wheel and driven thereby at a rate proportional to the speed of linear advance of said wheel upon said surface, means for moving said wheel upon said surface, means for moving said rotatable means into and from contact with said wheel, a differential governor having an output control element extending to said prime mover for varying the speed of said prime mover in dependence upon the setting of said governor, an adjustable variable speed drive means actuated by said rotatable means and operable to establish the setting of said governor, means actuated by said pump and operable to establish the setting of said governor, said output control element of said governor including a signal operating means movable between a first position at which the speed of linear advance of said wheel corresponds to the speed of said pump necessary to dispense material at said uniform quantity and a second position at which the speed of linear advance of said wheel fails to correspond to the speed of said pump necessary to dispense material at said uniform quantity, and a signalling means mounted upon said towed vehicle and adapted to provide a signal for the driver of a companion towing vehicle, said signalling means being actuated by said signal operating means of said output control element whereby a signal may be effected depending upon the position occupied by said output control element.

3,044,662
PRINTER AND INTERLOCK STRUCTURE FOR MOTOR FUEL DISPENSER
George W. Wright, Yoder, and Robert A. Yenney, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed May 2, 1960, Ser. No. 26,091
16 Claims. (Cl. 222—30)

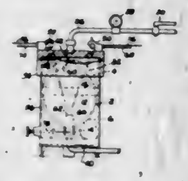
1. A liquid dispenser comprising a ticket printer including manually operable first means having an initial condition, said manually operable first means being operable through a printing cycle to a second condition and being subsequently operable through another printing cycle to its initial condition, manually actuable second means, movable from an initial position in which it prevents dispensing to a second position in which it permits dispensing and back to said initial position, latching means having an effective position in which it coacts with said second means, in the initial position thereof, to prevent movement of said second means toward said second position, means responsive to said first means, in the initial condition

thereof, for holding said latching means out of effective position, means responsive to the operation of said first means to its second condition and responsive to the actuation of said second means toward said second position,



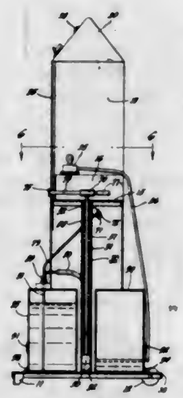
for moving said latching means to its effective position, said latching means coacting with said second means, after the return thereof to its initial position, for preventing a subsequent actuation of said second means toward its second position.

3,044,663
INFUSION APPARATUS FOR BLOOD PLASMA AND THE LIKE
Lois C. Norton and Russell R. Norton, Del Mar, Calif., assignors of ten percent to A. F. Graf von Soden, San Diego, Calif.
Filed Jan. 18, 1960, Ser. No. 3,060
1 Claim. (Cl. 222—39)



A parenteral fluid solution dispensing apparatus of the class described comprising a spherical container, said container consisting of transparent upper and a lower hemispherical section, a clamping member encompassing the juxtaposed open edges of said upper and lower hemispherical section for sealing and for holding same together, an annular ring internally positioned within said lower hemispherical section and having the bottom edge of said ring homogeneously secured with the wall of said lower hemispherical section and the upper edge of said ring extending upwardly and terminating in close proximity to said open edge thereof, a hemispherical envelope of resilient structure within said container and having an annular band end thereof held in sealed position by said internal annular ring of said lower hemispherical section, an air inlet passage in said upper hemispherical section for directing a volume of air against the outer surface section of said hemispherical envelope, a fluid outlet passage in said lower hemispherical section for directing the fluid flow outwardly from said container when forcibly depressing said hemispherical envelope, in combination with; a receptacle for holding said spherical container in housed position, a fluid outlet connecting in said receptacle for interconnecting said fluid outlet passage in said lower hemispherical section and for connecting same with a hypodermic needle, an air inlet connection in said receptacle connected to said air inlet passage of said upper hemispherical section to permit the supply of air or gas under pressure to act against the top of said hemispherical envelope and thereby replace air or gas in the exact quantity of parenteral fluid solution passing out of said spherical container, a mounting boss provided upon the central upper and outer surface section of said upwardly extendable hemispherical envelope and internally into said upper hemispherical section, a reflector member supported upon said mounting boss, an electro-luminous means mounted on said receptacle for focusing light rays upon said reflector member and thereby indicating one level within the container of the parenteral fluid solution passing from said container, electrical wiring connecting said receptacle and said electro-luminous means, and a sounding member connecting said electrical wiring for sounding off an alarm when energized by the beam of light rays passing from said electro-luminous means and focused upon said reflector member when said container becomes empty of said parenteral fluid solution deposited therein and drained through said hypodermic needle.

3,044,664
BRAKE SYSTEM TESTING AND FILLING APPARATUS
Francis J. Markey, Lewisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,715
3 Claims. (Cl. 222—47)



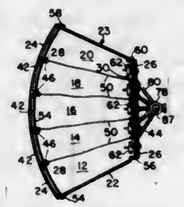
1. Apparatus for applying and maintaining hydraulic fluid under pressure to a brake system and portably movable by an operator from one automobile to another for pressure testing or filling the brake system thereof, including in combination, a support platform, vertically extending upright members secured to said platform and extending upwardly from the platform, said upright members being in horizontally spaced relationship, a hand operated reciprocating stroke cylinder type liquid pressure piston pump having an operating plunger rod extending from one end of the cylinder of the pump, spring means connected with said plunger rod providing a steady force effect on said piston applied as a steady force on hydraulic fluid drawn into the pump cylinder on stroke movement of the piston from one end of the cylinder to the other and release thereof, said pump being fixedly positioned between said upright members, a graduated measurement scale positioned between said uprights, said plunger rod having a pointer element movable with said rod and movable across said scale to traverse the same and indicate thereby discharge of liquid from said pump, flexible conduit means extending from said pump providing liquid inlet means to said pump from a source of liquid, and other flexible conduit means extending from said pump providing liquid discharge means from said pump to apparatus to which pressurized liquid is applied from said pump.

3,044,665
FREE BODY DISPENSER
Donald A. Ludwig, 118 Almond Ave., and Morris Nison, 4518 Chesepeake Ave., both of Dayton, Ohio
Filed Dec. 26, 1957, Ser. No. 705,271
13 Claims. (Cl. 222—129)



2. A dispenser including, a pair of spheres, means connecting said spheres establishing them in generally concentric relation to provide at least one chamber therebetween, said spheres forming a buoyant free body and having generally aligned apertures therein open to said chamber, valve means consisting of relatively separable portions normally sealing the inner sphere, means contained within said free body connected for separately controlling the relatively separable portions of said valve means and adapted to provide for a relative separation of said separable portions to effect a simultaneous seal of aligned apertures in said shells or a displacement of all the portions to jointly seal the outer of aligned apertures.

3,044,666
APPARATUS FOR DISPENSING MEASURED QUANTITIES OF LIQUIDS
Arthur M. Dyer, 523 N. Graves, El Cajon, Calif.
Filed Oct. 28, 1958, Ser. No. 770,146
2 Claims. (Cl. 222—145)



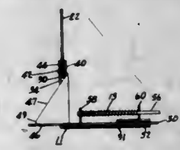
1. Apparatus for dispensing measured quantities of liquids, said apparatus comprising means forming a reservoir; a plurality of flexible walls disposed within said reservoir to divide the interior of said reservoir into a plurality of liquid storage compartments, said compartments each having an outlet; a plurality of rotatable bands mounted to said means and within said compartments, respectively, said bands each having a plurality of orifices which are selectively brought into register with said outlets, respectively, upon rotation of said bands; means coupled to said bands for rotation thereof; means for indicating the rotated positions of said bands; and a manifold having a plurality of conduits in communication with said outlets, respectively, said manifold having a valve for regulating the flow of liquid out of said manifold.

3,044,667
DETERGENT DISPENSER FOR AUTOMATIC CLOTHES WASHING MACHINES
Malcolm B. Lucas, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 6, 1959, Ser. No. 844,738
2 Claims. (Cl. 222—454)



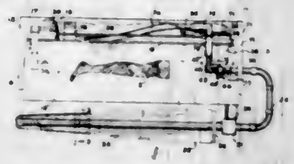
1. A detergent dispenser for a top loading automatic clothes washer comprising a receptacle mounted on the underside of an opening in the lid of said washer, a closure lid pivoted in said washer lid for covering the opening in said washer lid over said receptacle, a baffle for dividing the receptacle into a storage compartment and a metering compartment, said baffle being positioned so that the metering compartment is on the side of the receptacle nearest the pivotal axis of the washer lid, said storage compartment being adapted to be filled with granular detergent material so that the granular detergent can flow over said baffle and fill said metering compartment when said washer lid is pivoted to the open position, closure means located in the bottom of the metering compartment, means for opening said closure means in response to a signal form the timer of said automatic clothes washer, means for varying the volume of granular detergent material dispensed from said metering chamber on opening said closure means, said means for varying the voluume of dispensed detergent comprising a sliding flexible plate superposed over the closure means.

3,044,668
RETRACTABLE SPOUT FOR CONTAINERS
Vincent Lombardo, 170 Ave. T, Brooklyn, N.Y.
Filed Mar. 2, 1961, Ser. No. 92,920
3 Claims. (Cl. 222—518)



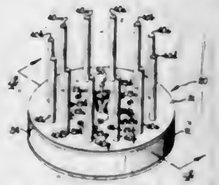
1. A retractable container spout assembly comprising; an L-shaped holder having a vertical flange and a horizontal flange, said vertical flange having a spout aperture formed therein and vertical side edge portions bent over forming spaced apart vertical door guides; a spout slidably mounted on said horizontal flange of said holder for projection through said spout aperture, said spout consisting of a funnel portion having a horizontally disposed bottom pouring flange and a pair of upwardly directed side wings formed integral therewith, said side wings each having a front substantially vertical edge extending upwardly a predetermined distance from said pouring flange and an upper edge inclined upwardly from the top of said front vertical edge in a direction away from said spout aperture; spring means biasing said spout toward extended position for projection through said spout aperture, and a vertically sliding door for opening and closing said spout aperture, said door being slidably mounted in said door guides with its bottom edge disposed to lie outside said front vertical edge of said spout side wings when the spout is in its fully retracted position and to engage said inclined upper edge of said spout side wings under conditions where said door is moved upwardly a distance greater than the height of said front vertical edge spout.

3,044,669
PNEUMATIC APPARATUS FOR TURNING AND STACKING HOSIERY
Joseph E. Kienel, Box 235, Acworth, Ga.
Filed Sept. 6, 1955, Ser. No. 532,579
38 Claims. (Cl. 223—43)



1. In a stocking turning machine, a nozzle having stocking inlet and outlet openings over which a stocking may be placed, a return bent tube communicating with the outlet opening of the nozzle for receiving the stocking from said nozzle engageable with the toe of a stocking at said outlet opening and means for discharging said stocking from said tube in a plane substantially parallel with said nozzle.

3,044,670
METHOD AND APPARATUS FOR MAKING ORNAMENTAL OBJECTS
Joe W. Barefoot, Charlotte, N.C., assignor to Volume Builders Corp., Charlotte, N.C.
Filed Mar. 27, 1961, Ser. No. 98,487
10 Claims. (Cl. 223—46)



1. Apparatus for making ornamental objects from a web of ribbon-like material comprising a circular base adapted to receive the web around the periphery thereof having a plurality of openings in one side thereof, a groove formed in the outer periphery thereof and adapted to receive the web therein when the same is wound around the periphery of said base, and a recess formed in the side opposite from said openings, a plurality of spaced apart upstanding pegs positioned in a predetermined number of said openings and in a predetermined pattern when in use, said pegs being adapted to receive thereabout loops of the ribbon-like material having a bight portion and running length portions, a fastening element comprising an elongate body portion, an annular flange integral with said body portion and disposed at one end thereof, and a barbed end portion integral with said body portion and disposed at the other end thereof, said fastening element being adapted to be disposed on said base in upstanding relation with the barbed end portion uppermost substantially centrally of said peg pattern for receipt of the running lengths of the loops by insertion of the barbed end portion therethrough to secure the loops together into the finished ornamental object, said recess being adapted to receive said pegs and fastening element for storage when not in use, and a cover member adapted to be mounted on said base over said recess to close the same and hold said pegs and fastening element therein.

3,044,671
GARMENT DISPLAY FORMS
Milton Strumpf, 295 Scranton Ave., Lynbrook, N.Y., and Milton Schulman, 23 Park Circle, Cedarhurst, N.Y.
Filed Feb. 19, 1960, Ser. No. 9,788
3 Claims. (Cl. 223—66)

1. A hollow dress form shaped frontally to closely simulate the external contour of a trunk portion of a human body, said form comprising a shell-like structure composed of a rigid plastic body reinforced with glass fibers, said structure having a cavity at the rear thereof, a bar vertically anchored in said structure across said cavity, and means adjustably supporting said structure, said means including a bracket slidable upon said



bar and adjustably positionable thereon by a threaded stud, said stud including a flange intermediate its ends, said stud having one end bent at an angle, a vertical support, a ball element on said support, a threaded sleeve engaged on the ball element, the bent end of said stud being engaged in said sleeve in abutment with said ball element.

3,044,672
GARMENT HANGERS
George A. Pinkham, 213 Coyle St., Portland, Maine
Filed Sept. 10, 1959, Ser. No. 839,231
1 Claim. (Cl. 223—91)



A garment hanger comprising a hook, arms extending downwardly and outwardly from the hook, a stretch extending inwardly from the lower end of each arm, the stretches being parallel to each other and each stretch having a free end, first and second stretch tensioning slidable sleeves joining said stretches, the distance from the free end of one stretch to the junction of the other stretch and its related arm being less than the length of the sleeve adjacent thereto, the distance from the free end of the other stretch to the junction of the one stretch and its related arm being greater than the length of the adjacent sleeve to enable said adjacent sleeve to be slid into a position freeing the end of said other stretch thereby to enable a garment to be introduced between said stretches.

3,044,673
KNIFE SHEATH
Richard L. Manning, Whittier, Calif. (679 Center St., Costa Mesa, Calif.)
Filed July 10, 1959, Ser. No. 826,204
4 Claims. (Cl. 224—2)

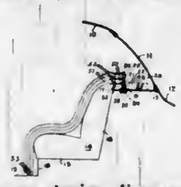
4. A sheath for a knife having a handle and a blade, said sheath comprising a blade pocket of substantially the length of a knife blade, said pocket comprising front and rear panels, a spring clip disposed within said pocket and extending in a transverse direction with respect to the longitudinal axis of the pocket and comprising a transversely-extending rear arm secured to said rear panel and a transversely-extending forward arm, said forward arm having a free end facing and spaced from a side of the pocket, said forward arm being forwardly curved between its ends, and a pad secured to the forward side

of the rear panel, the rear clip arm being disposed between the pad and the rear panel with the free end of



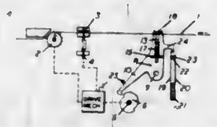
the forward clip arm bearing against the forward side of the pad.

3,044,674
COMBINATION GARMENT HANGER MEANS SUPPORT AND REAR WINDOW LEDGE SAFETY BARRIER FOR AN AUTOMOBILE OR THE LIKE
Hester T. Levy, 125 E. 8th St., Port Angeles, Wash.
Filed Aug. 21, 1956, Ser. No. 605,292
2 Claims. (Cl. 224—42.34)



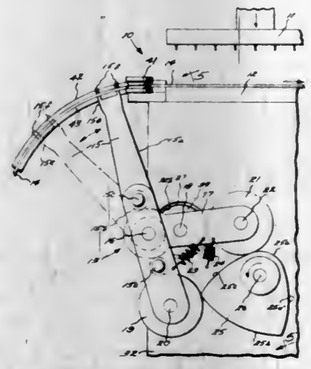
2. A garment hanger device disposed in a passenger automobile comprising an automobile rear window shelf; an upholstered back of an automobile rear seat with its crown rising above said shelf leaving the window with an area open to view above the level of said crown; a base member secured to said shelf back of, below and in spaced relation to said crown; an arm pivotally mounted on said base member adapted to taking a prone position resting upon said shelf below, behind and in spaced relation to said crown; and cooperating locking means carried by said base member and said arm which selectively maintain said arm in a locked, substantially erect and a locked, substantially oblique position.

3,044,675
TAPE FEED APPARATUS
Frederick James Leslie Turner and Brian Stanley Mason, Croydon, England, assignors to Creed & Company Limited, Croydon, England, a company of Great Britain
Filed Nov. 5, 1959, Ser. No. 851,135
6 Claims. (Cl. 226—11)



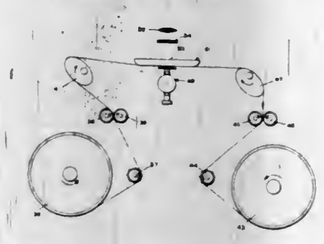
1. Tape feed apparatus comprising means for advancing a tape in a step-by-step manner, clamping means normally engaging said tape for movement therewith from an original position to an advanced position, control means for disengaging said clamping means from said advanced tape, for returning said clamping means to said original position, and for controlling said clamping means to reengage the tape, and means controlled by the failure of the tape to advance and move the said clamping means to said advanced position for indicating said failure.

3,044,676
INTERMITTENT FILM FEEDING DEVICE
Malcolm G. Townsley, Park Ridge, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 14, 1959, Ser. No. 859,301
6 Claims. (Cl. 226—71)



1. In an intermittent film feeding device, a cam having a single peripheral cam surface, the cam surface having a low dwell of ninety degrees and also having a high dwell of ninety degrees spaced oppositely from the low dwell, a claw lever having a claw at one end and a follower at the other end engaging the cam surface and being pivoted in feed and return strokes when engaged by the portions of the cam surface between the dwells, and a second lever mounted pivotally and mounting the claw lever pivotally thereon, the second lever having a follower engaging the cam surface at a point about ninety degrees from the point of engagement of the follower of the claw lever and the cam surface and serving to move the claw lever into and out of engagement with film to be advanced.

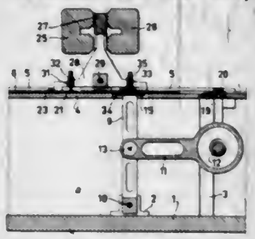
3,044,677
INTERMITTENT FILM TRANSPORT MECHANISM
Carl David Miller, Columbus, Ohio (4546 Rhode Island St., San Diego 16, Calif.)
Filed June 13, 1958, Ser. No. 741,964
7 Claims. (Cl. 226—117)



7. For a high speed camera comprising a lens, a shutter, an exposure gate, a film having indentations along its edges, and means for feeding film to and from said exposure gate, the improvement in the means for feeding film which comprises a supply roll for supplying film; a take up roll for receiving said film after it has been exposed; means for guiding a first loop of film from said supply roll to said exposure gate; means for guiding a second loop of film from said exposure gate to said take up roll; means for feeding said film at a constant rate from said supply roll; means for feeding said film at the same constant rate to said take up roll; means comprising an elliptical eccentric having a major axis and a minor axis positioned at ninety degrees to each other and having its axis of rotation positioned at a point along a line approximately bisecting the angle between the major axis

and the minor axis and the eccentric itself being positioned to contact said film at a position between said supply roll and said exposure gate for cyclically increasing and decreasing the length of the first loop; means comprising a similar size elliptical eccentric having a major axis and a minor axis positioned at ninety degrees to each other and having its axis of rotation positioned along a line approximately bisecting the angle between the major axis and the minor axis and the eccentric itself being positioned to contact said second loop between said exposure gate and said take up roll for cyclically decreasing the length of the second loop as the length of the first loop is increased and for increasing the length of the second loop as the length of the first loop is decreased; and means comprising a clamp positioned at the exposure gate for holding the film stationary during the exposure interval.

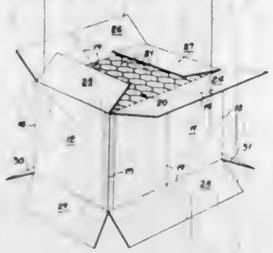
3,044,678
MECHANISM FOR STEP-BY-STEP FEEDING OF BAND-LIKE MEMBERS
Nils Gustaf Erik Stemme, Nasbypark, Sweden, assignor to Aktiebolaget Atvidabergs Industrier, Atvidaberg, Sweden, a joint-stock company of Sweden
Filed May 18, 1959, Ser. No. 813,975
Claims priority, application Sweden May 21, 1958
2 Claims. (Cl. 226—150)



1. A step-by-step feeding mechanism for tapes and the like comprising, in combination, a reciprocating feeding member, feeding clamping means comprising normally released friction means on said feeding member for clamping the tape for drive by said member, retaining means for frictionally clamping the tape between strokes of the feeding member, a unitary lever having at least three arms and two positions, said lever being mounted on an axis substantially perpendicular to the feeding direction of the tape, means on a first arm of said lever for rendering said retaining means operative in one position of the lever, means on a second arm of said lever for rendering said feeding clamping means operative in the second position of said lever, and electromagnetic means acting on the third arm of said lever for alternately placing said lever in said positions to thereby alternately retain and feed the tape, said reciprocating feeding member being continuously operable independently of the position of said lever.

3,044,679
COMPOSITE PACK WITH EXPANDABLE HONEYCOMB PARTITION
Donald B. Wheeler and Walter B. Kennedy, Hudson Falls, N.Y., assignors to Union Bag-Camp Paper Corporation, New York, N.Y., a corporation of Virginia
Filed Jan. 6, 1961, Ser. No. 81,115
9 Claims. (Cl. 229—15)

1. A collapsible cellular pack for shipping articles inserted into the cells comprising a tube defined by four side walls hingedly connected, median fold lines in two opposite side walls extending from the top to the bottom of the tube, and an expandable preformed honeycomb filler consisting of a plurality of open ended cells formed of superimposed sheets of flexible material joined at parallel striped adhesive lines and cut at right angles to these lines, said filler extending between and secured only to the other two opposite side walls, whereby said tube and filler can be collapsed into flat form and expanded into a pack with open cells to receive articles there being thus provided opposite sidewalls of filler defining closed



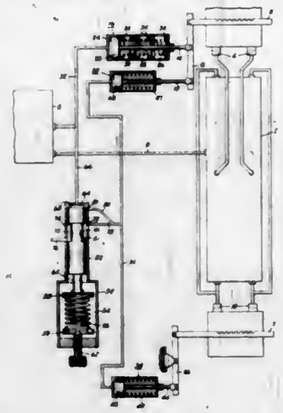
edge cells which are adhesively secured to corresponding inner walls of said tube and the remaining opposite side walls of said filler being formed of partial cells which are open so that the edges of said cells will each touch and meet the other side walls of said tube.

3,044,680
CARTON
Robert Zeidman, Mamaroneck, N.Y., assignor to Q-Tips Inc., a corporation of New York
Filed Dec. 3, 1959, Ser. No. 857,024
1 Claim. (Cl. 229—17)



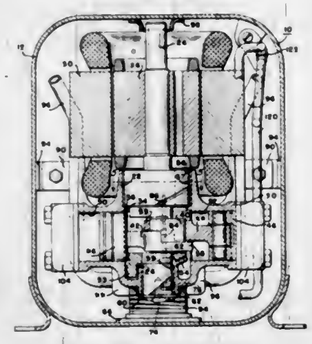
A carton including front, rear and side walls and having a closure construction comprising an end access panel hinged to said rear wall and having at each side a quadrant-shaped integral dust flap having an arcuate front edge, said arcuate edge extending from the front edge of said access panel and terminating in a straight portion at its lower end, said front wall having a narrow flap guide portion with free end edges adjacent the carton side walls, said flap guide being connected to said front wall by a hinge score parallel with the upper edge of said flap guide and having a slot disposed substantially in the line of said hinge score, said access panel having a depending front panel slightly less in width than said flap guide portion, said depending front panel having a tab extension located to be received within said slot when said access panel is in closed position, said depending front panel overlying said flap guide, and the outer surface of said depending panel being in substantially the same plane with the outer surface of the front panel of the carton, said flap guide portion being tilted inwardly and the free end edges thereof frictionally engaging the inner surfaces of the respective quadrant-shaped dust flaps when said tab is in said slot, said flap guide retaining such angular position when the access panel is opened so that said dust flaps are squeezed between said end edges and the carton sides thereby to maintain the access panel in any angular position to which it may be manually opened, and said straight edges at the lower ends of said arcuate front edges of the dust flap serving to limit the opening movement of said access panel by engaging the inner surface of the front panel.

3,044,681
CONTROL CIRCUIT
Erich A. Wachsmuth, Michigan City, Ind., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 27, 1959, Ser. No. 836,499
13 Claims. (Cl. 230—5)



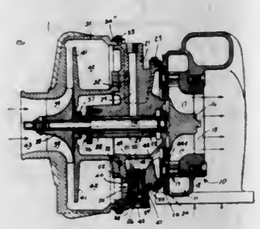
1. A control system for fuel consuming apparatus having an output existing at variable energy levels comprising, a fuel pumping means including adjustable means for varying the quantity of fuel delivered thereby, means connected to said adjustable means and adapted to be responsive to energy levels below an output determinable energy level to actuate said adjustable means to increase the quantity of fuel delivered by said fuel pumping means to a given maximum, an amplifying means having an output is operatively connected to other means which said other means is connected to said adjustable means for decreasing the quantity of fuel delivered by said fuel pumping means, and said amplifying means being responsive only to energy levels above said output determinable energy level to actuate said other means to vary the quantity of fuel delivered by said fuel pumping means wherein said other means is operative upon said first mentioned means reaching said output determinable energy level.

3,044,682
REFRIGERATING APPARATUS
John Weibel, Jr., and Raymond N. Mantey, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 21, 1958, Ser. No. 775,640
4 Claims. (Cl. 230—58)



1. In a motor-compressor unit, a casing, a motor-compressor supporting frame disposed within said casing, a helical spring disposed between the bottom of said frame and the bottom wall of said casing for supporting said frame, torque snubbing spring means disposed between portions of said frame and the side walls of said casing, said frame having a pair of vertically aligned bearing apertures formed therein, a main drive shaft journalled in said bearing apertures, a motor rotor secured to one portion of said shaft, a motor stator carried by said frame and surrounding said motor rotor, said shaft having an eccentric portion disposed between said bearing apertures, the radius of one of said bearing apertures being at least as great as the maximum radius of said eccentric portion whereby said eccentric portion may be passed through said one bearing aperture, said frame having formed therein a pair of aligned compression chambers on opposite sides of said shaft, pistons in said chambers, and connecting rods drivingly connecting said pistons to the eccentric portion of said shaft, each of said connecting rods being offset intermediate its ends whereby each of said connecting rods engages a different portion of said eccentric.

3,044,683
PRESSURE CONTROL FOR TURBOCHARGERS
William E. Woollenweber, Jr., Columbus, Ind., assignor to Schwitzer Corporation, Indianapolis, Ind., a corporation
Filed Jan. 18, 1960, Ser. No. 3,040
1 Claim. (Cl. 230—116)

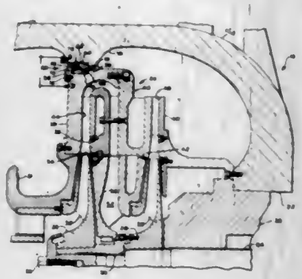


In a turbocharger for an internal combustion engine, said turbocharger including a housing mounting a centrifugal-type compressor and a turbine for driving said compressor, said compressor including a high-pressure collector chamber and said turbine including an intake gas passage upstream from the turbine wheel, said housing being formed to provide a gas passage between said collector area and said turbine intake passage, a control valve assembly removably inserted into said housing and extending into said gas passage, said assembly including an annular valve seat bounding an intermediate portion of said gas passage, a valve closure for said seat and having a stem extending coaxially therefrom, a compression spring acting on said stem for biasing said closure against said seat, one face of said closure being exposed to the pressure in said compressor collector chamber, whereby when the pressure in said collector chamber reaches a predetermined value, said closure will be moved from said seat against the force exerted by said compression spring to permit gases to flow from said collector chamber into said turbine intake passage.

3,044,684
CENTRIFUGAL COMPRESSOR CONSTRUCTION
John Fullemann, Mount Vernon, Ohio, assignor to The Cooper-Bessemer Corporation, Mount Vernon, Ohio, a corporation of Ohio
Filed Feb. 24, 1961, Ser. No. 91,389
8 Claims. (Cl. 230—130)

1. In an assembly of a centrifugal compressor or the like having a rotor and casing wall means forming a cy-

lindrical chamber in which said rotor is concentrically located, a stationary element removably mounted in said casing and separating the inlet and discharge ends of said rotor, means on said casing forming an annular groove, a shoulder on said stationary element axially opposite a wall of said groove, a locking ring in said groove and in abutting relationship with said shoulder, a clamping ring



adjacent said locking ring on the side thereof opposite said shoulder, means for fastening said clamping ring to prevent inward displacement of said locking ring, a plurality of elongated notches in said casing wall intersecting said groove, and at least one pin held in said clamping ring and extending into said notches to prevent rotational displacement of said stationary element.

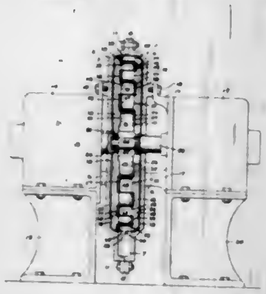
3,044,685

AIR COMPRESSOR

Nicholas P. Lapiken, 207 Benson Ave., Vallejo, Calif.

Filed Feb. 13, 1959, Ser. No. 793,072

4 Claims. (Cl. 230—131



1. An air compressor comprising a housing and an impeller therein; said housing having an impeller chamber and a volute passage at the periphery thereof terminating with an outlet opening; said impeller consisting of two rotors arranged in said housing for rotation in opposite directions; each rotor comprising a disk, both of said disks being coaxial and parallel; each of said disks carrying a plurality of series of blades arranged in spaced concentric rings on the side of the disk facing the other disk; the series of one disk being located in the spaces between the series of the other disk; each succeeding series of blades in said impeller being of progressively smaller radial width in direction to the periphery of the impeller than the radial width of the preceding series of blades; said air compressor having an intake at its lateral center for admitting air into the impeller wherein the air is progressively compressed by successive series of blades rotating alternately in opposite direction and ejected centrifugally into the volute passage; and means for rotating said rotors in opposite directions.

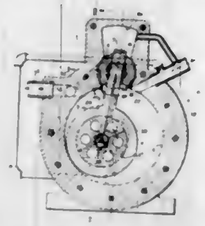
3,044,686

ROTARY COMPRESSOR

Vadim S. Makaroff, 1 E. 64th St., New York 21, N.Y., and Alexis E. Jackson, Norwalk, Conn. (% Mrs. Madelaine Lefebvre, 17 E. 64th St., New York 21, N.Y.)

Filed Feb. 25, 1958, Ser. No. 717,434

7 Claims. (Cl. 230—147)



1. In a rotary compressor wherein liquid is used as a sealing and lubricating medium, the combination of a casing having inside wall surfaces including a hollow cylinder and end plates defining a main cylindrical chamber, an eccentrically gyrating piston in said main chamber, a low pressure inlet port communicating with the interior of said chamber, a high pressure port extending through an end plate and communicating with the interior of said chamber, said outlet port having its mouth located radially inwardly from the peripheral wall of the chamber whereby the piston will overlap that part of the perimetral edge of the port mouth which is reached last by the piston in its travel, said high pressure outlet port having a counterbore and defining an outwardly facing valve seat located at the inner face of the end plate, a poppet valve head supported upon said casing in normally closed engagement with said valve seat, and said valve head being of segmental spherical configuration and the inner extremity of said valve head extending into proximity with the plane of said respective chamber-defining side wall and in said normally closed position substantially filling said outlet port between said seat and said inside wall of said chamber, said piston having an integral tail blade, the upper portion of the casing being provided with a socket that communicates with the cylinder, a segmental circular plate oscillatably received in said socket, said circular plate having a diametrical channel, the tail blade of said piston being reciprocably operable in said diametrical channel.

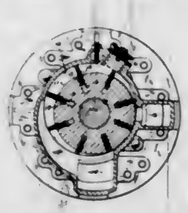
3,044,687

WEAR-RESISTANT VANE FOR ROTARY COMPRESSOR

Paul H. Davey, % Davey Compressor Company, Kent, Ohio

Filed Feb. 17, 1959, Ser. No. 793,879

1 Claim. (Cl. 230—152)



A vane for a rotary compressor and the like, having a stator and an eccentric rotor mounted therewithin, in which the vane is adapted to reciprocate in a slot of the rotor, while maintaining contact with the stator wall, the vane having flat parallel sides and comprising a main body portion of a light weight metal of the group consisting of magnesium, aluminum, an alloy consisting chiefly

of magnesium, and an alloy consisting chiefly of aluminum, and a thin surface layer portion covering at least the major portion of the parallel sides and consisting of a metal more abrasion resistant than said main body portion, said layer portion molecularly bonded to said body portion by the action of heat and high pressure in a high capacity metal press in which a strong bond is obtained by flow under the high pressure of the light metal between said layer and body portions.

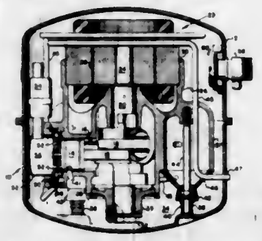
3,044,688

HERMETIC COMPRESSOR

Arne Frank and Jerome C. Roach, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

Filed Oct. 12, 1959, Ser. No. 845,993

2 Claims. (Cl. 230—232)



1. A hermetic compressor comprising: a sealed casing, a crankcase casting in said casing, means forming a cylinder in said crankcase casting, motor means supported in said crankcase casting, a discharge muffler housing integral with said crankcase casting, a cap member closing one end of said discharge muffler housing, resilient supporting means compressed between said sealed casing and said cap member to isolate said crankcase casting from said sealed casing, support means secured to said discharge muffler housing and to said cap member securing said cap member on said one end of said muffler housing and retaining said resilient supporting means in position, crankshaft means rotatably supported in said crankcase casting and being driven by said motor means, piston means slidably supported in said cylinder, and means connecting said piston means to said crankshaft means whereby rotation of said crankshaft means will reciprocate said piston means in said cylinder.

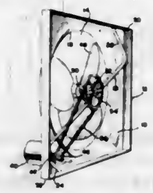
3,044,689

VENTILATING FAN ASSEMBLY

Lawrence L. Alldritt and Della May Alldritt, both of 59 NW. 14th St., Miami, Fla.

Filed May 8, 1958, Ser. No. 733,886

3 Claims. (Cl. 230—273)



1. A ventilating fan assembly for installation in buildings, comprising a substantially rectangular flat plate having a circular central opening with a venturi ring extending outwardly on one side of the plane of the plate and a marginal flange extending outwardly on the other side of the plane of the plate, an integral uniplanar Z-shaped torsion bar having a straight mid-portion terminating at its ends in a pair of legs oppositely angularly related to the mid-portion, each leg being secured adjacent each of its ends to the flange side of the plate on opposite sides of a line joining diagonally opposite corners of the plate, the mid-portion extending across the opening, a fan mounted on the mid-portion for rotation coaxially of the opening, an electric motor mounted on the same side of the plate as the venturi ring and having a drive shaft extending through a hole in the plate, and means disposed on the flange side of the plate and drivingly connecting the fan with the drive shaft.

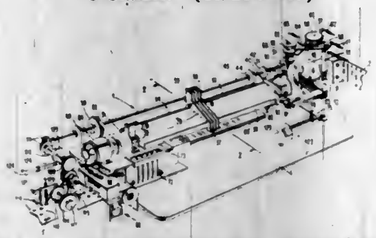
3,044,690

CODE CONVERTING MECHANISM

John E. Hickerson, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Jan. 22, 1960, Ser. No. 4,045

5 Claims. (Cl. 234—69)



1. A code converting mechanism comprising, in combination, a first group of elongated slides, means for moving said slides longitudinally in code combinations representative of characters, sensing members arranged along said slides at index points corresponding to said characters, openings in said slides for receiving said sensing members, said openings being normally out of alignment with each other at each of said index points but moving into alignment at any one of said points on movement of said slides in a code combination corresponding to the character at such point, a second group of slides arranged parallel to said first group and movable longitudinally between inoperative and operative positions, openings in said second group of slides in alignment with each other at said index points when said second group of slides are in their inoperative positions, said last mentioned openings adapted to receive said sensing members and being of such length that each of said second group of slides is either held by a sensing member against movement or is permitted to move to its operative position, means yieldingly urging said slides of said second group toward their operative positions, means releasably holding said second group of slides in their inoperative positions, means for engaging said sensing members with said first group of slides after the latter have been moved in a code combination representative of a character, the sensing member at the index point corresponding to such character then passing through aligned openings in said groups of slides, means for releasing said holding means after one of said sensing members has moved through openings in said second group of slides, the slides of said second group then moving to their operative positions in code combinations determined by the lengths of openings formed therein, and means operated by said second group of slides when moved to operative positions for producing a function corresponding to the combination of slides moved.

3,044,691

COMPUTING SCALE

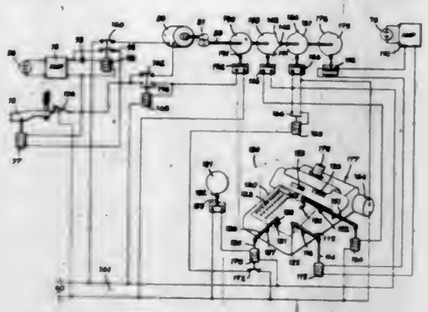
Kenneth C. Allen, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio

Continuation of application Ser. No. 300,445, July 23, 1952. This application June 24, 1960, Ser. No. 38,656

20 Claims. (Cl. 235—58)

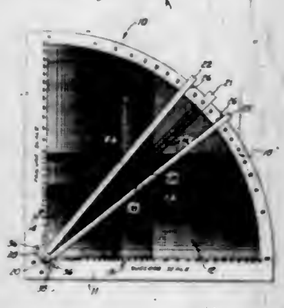
1. A computing scale mechanism for producing an indication of the computed value of an article being

weighed comprising a chart movable in accordance with the weight of the article, means on said chart forming a pattern of lines of different length corresponding in number and decade arrangement to the weight of the article when scanned transversely, means for scanning transversely across the chart to produce a count corresponding to the number of lines in each such decade position, a computing device, means for operating said



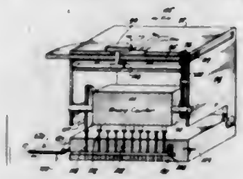
computing device a number of times corresponding to the count of the number of lines scanned in each of said decade positions as the factor indicative of the weight, means for setting into said computing device as a second factor the price per pound, and means controlled by said computing device for producing an indication of the product of said unit price and the weight of the article representing the computed value thereof.

3,044,692
BINOMIAL PROBABILITY CALCULATOR
Melvin L. Buus, 8832 Sorrento Drive, Arlington, Calif., and Harold Nerhus, 2215 Westport Drive, Anaheim, Calif.
Filed Oct. 4, 1960, Ser. No. 60,470
14 Claims. (Cl. 235—61)



7. A binomial probability calculator comprising a plate having a square root grid provided thereon, with graduations along the horizontal and vertical axes representing the number of successes and failures respectively, of a given sample, a pivot center located at the origin of said square root grid, a quadrant scale on said plate having its center at said pivot center, said quadrant scale being graduated in percentages corresponding to the proportions of the coordinates on the square root grid lying under a straight line drawn through the origin thereof, an arm pivoted on said pivot center for swinging movement across the face of said plate, said arm having a straight line extending radially from said pivot center and being divided into square root scale graduations representing the number of units in the sample, a circular disc slidable lengthwise along said arm to a position thereon corresponding to the number of units in said sample, a pair of pointers pivoted on said pivot center and lying on opposite sides of said arm, each of said pointers having a straight edge extending radially from said pivot center and tangent to said disc on opposite sides thereof, said straight edges intersecting said quadrant scale, said disc being of a radius such that the intersection of said straight edges on said pointers with said quadrant scale gives the percentage values for the upper and lower confidence limits at a specified confidence level, the range between said confidence limits being the confidence interval.

3,044,693
MATCH POINT DUPLICATE BRIDGE SCORER
Frederick H. Flam, Sherman Oaks, Calif. (4510 Callada Place, Tarzana, Calif.)
Filed Oct. 21, 1957, Ser. No. 691,414
13 Claims. (Cl. 235—61.6)



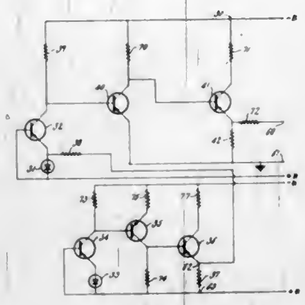
4. In a match point duplicate bridge scoring machine: a card for each board in play; each card having applied thereto indicia corresponding to a binary number opposite the team number playing the board, the number corresponding to rank in the scale of possible match point results; a sensing device having a series of rows of sensing means, each row being registrable with the possible positions of indicia; each of the sensing means including two elements in circuit-establishing relationship when corresponding indicia are present; means serially connecting the sensing elements of each row so that a circuit is established across the connected sensing means when all indicia of the row are present; and a binary counting switch mechanism for each row of sensing means and simultaneously operative for all rows to bridge the sensing means in binary sequence so that circuits are established for the rows of sensing means in the order corresponding to the numbers denoted by said indicia.

3,044,694
SYSTEM FOR SENSING
John T. Davidson and Robert D. Georgen, Dayton, and Raymond L. Fortune, Trotwood, Ohio, assignors to The Standard Register Company, Dayton, Ohio, a corporation of Ohio
Filed Apr. 13, 1956, Ser. No. 578,062
8 Claims. (Cl. 235—61.11)



1. Sensing apparatus for a web having coded portions comprising a capacity sensing device, a radio frequency oscillator, a radio frequency amplifier having a grid, tuned means for transferring to the grid of said amplifier a radio frequency potential from said oscillator, a connection between said tuned means and said sensing device such that the potential so applied to the tuned means varies with the capacity of said sensing device, and means for generating in said tuned means a radio frequency potential opposed to said grid potential, and means for adjusting the last mentioned means to compensate for the capacity of said sensing device as determined by the dielectric effect of said web alone.

3,044,695
ELECTRO-OPTICAL SYSTEM
Robert P. Burr, Lloyd Harbor, Huntington, and Raymond J. Keogh, Huntington, N.Y., assignors to Circuit Research Company, Cold Springs Harbor, N.Y., a partnership
Filed Mar. 2, 1960, Ser. No. 12,411
7 Claims. (Cl. 235—61.11)



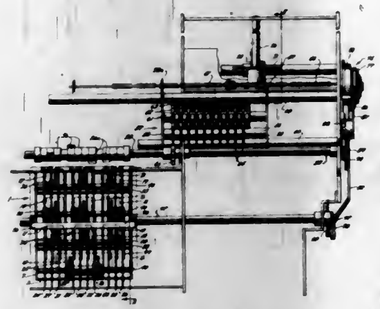
1. In apparatus for developing pulses as determined by a tape having in its light-transmission characteristic discrete discontinuities which represent pulses, an electro-optical system comprising: means responsive to changes in light transmitted through said tape for developing electrical pulses representative of the light-transmission discontinuities of said tape, said pulses having an electrical reference level determined by the reference level of the light-transmission characteristic of said tape; means responsive to light transmitted through said tape as determined by said reference level of said light-transmission characteristic for developing an electrical signal representative of said reference level of said light-transmission characteristic; and means for combining said electrical pulses and said electrical signal for developing resultant pulses having an electrical reference level which is substantially independent of said reference level of said light-transmission characteristic of said tape.

3,044,696
PROCESS FOR DATA RECORDING
Henri Gérard Feissel, Paris, France, assignor to Compagnie des Machines Bull (Societe Anonyme), Paris, France
Filed Oct. 9, 1959, Ser. No. 845,569
Claims priority, application France May 26, 1959
12 Claims. (Cl. 235—61.12)



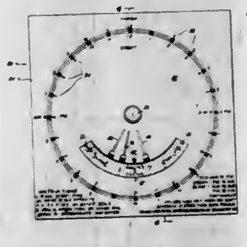
1. A process for representing information in the form of at least one of a group of characters each having an identifiable appearance, said process comprising marking a medium capable of bearing visible information with a succession of spaced and parallel bars arranged in an array corresponding to the visible appearance of at least one of said characters and adapted to simulate a substantially continuous line representation of said character, said bars having a thickness and a spacing which constitute respective characteristics of said marking, and coding at least one of said characteristics to identify the associated character to thus supplement the identifying of the same by the appearance thereof.

3,044,697
VALUE SELECTION AND ENTERING MEANS FOR CALCULATING MACHINES
Herman Gang, Morris Plains, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Nov. 7, 1958, Ser. No. 772,499
7 Claims. (Cl. 235—63)



1. In a calculating machine; a shiftable carriage, an ordinal series of digital value storage gears in said carriage, a rotatably mounted shaft, an actuator gear on said shaft, shift means for ordinally shifting said carriage to bring said storage gears successively into position to be driven by said actuator gear, a plurality of stop lugs differentially positioned in angular relationship along said shaft, a plurality of slides each having a stop end, said slides being settable to bring their stop ends respectively into the path of rotation of said stop lugs, a ten-key keyboard, and means operable in response to depression of each of said keys to set a respective one of said slides, to effect rotation of said shaft and to effect one ordinal shift operation of said shift means.

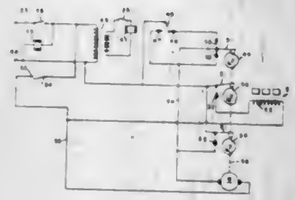
3,044,698
ELAPSED TIME COMPUTER
Taufik Gabriel Maluf, 798 Juniper Drive, Logan, Utah
Filed Apr. 28, 1955, Ser. No. 504,619
19 Claims. (Cl. 235—83)



1. A computer comprising: first and second members with first and second time scales of like units and like total time span calibrated on each of said members, respectively, and in juxaposed relationship to each other; said members being movable with respect to one another to effect a relative displacement of said first and second time scales; an elapsed time base scale calibrated on one of said members with predetermined sub-divisions of said total time span on said first and second time scales; indicator means on the other of said members for directly indicating elapsed time on said elapsed time base scale for continuous uninterrupted periods according to the relative displacement of said first and second time scales on said first and second members; first adjustable auxiliary indicator means on said other of said members to compensate for a time difference between the net work shift schedule and the elapsed time base scale calibrated on

said other member; second adjustable auxiliary indicator means on the other of said members for compensating for a time difference between the total work shift and the elapsed time base scale calibrated on said one member; and third adjustable auxiliary indicator means to compensate for a scheduled interruption during the work period to give an elapsed time reading on the elapsed time base scale for a time period beginning prior to and ending after such interruption; each of said first, second and third adjustable indicator means cooperating with said elapsed time base scale.

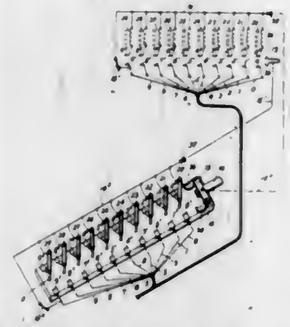
3,044,699
CONDITION RESPONSIVE APPARATUS AND METHOD
Philip N. Smith, Clemson, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware
Filed July 22, 1955, Ser. No. 523,767
18 Claims. (Cl. 235—92)



1. Apparatus for preventing certain actions from being registered on a counter and to permit other actions to be registered, comprising an accumulative counter having an energizing circuit and being of a type wherein deenergization thereof must occur between any two effective count registrations, an actuator for said counter operatively connected to said counter through said energizing circuit, and a time controlling device independent of said counter and operatively connected in controlling relation with said energizing circuit, said time controlling device being operatively connected to said actuator and being initially actuatable in response to actuation of said actuator, said time controlling device including a switch having a pair of contacts in said energizing circuit and means for closing and opening said contacts, said time controlling device and energizing circuit being independent of said actuator during a substantially predetermined period of time after initial actuation by said actuator.

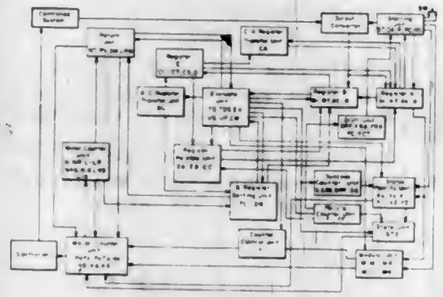
3,044,700
APPARATUS FOR THE REMOTE CONTROL OF CALCULATING MACHINES
Erwin Spingies, Hamburg-Farmsen, and Herbert Rose, Wohltorf, Lauenburg, Germany, assignors to Olympia Werke Aktiengesellschaft, Wilhelmshaven, Germany, a firm
Filed Apr. 16, 1959, Ser. No. 806,870
Claims priority, application Germany May 6, 1958
4 Claims. (Cl. 235—146)

1. Apparatus for controlling the operation of one calculating machine by another, each of said calculating machines being of the type comprising an actuator which indicates values by the extent of its movement along a prescribed path, and a key board having a plurality of keys representing numerical information the extent of the movement of said actuator being controlled by the selection and depression of individual keys of the keyboard associated with the individual machine, said machines each further comprising a series of pairs of electrical contacts arranged in the prescribed path through which said actuator moves, means for connecting to one contact of each pair of contacts a source of electrical potential representative of the value represented by said pair of contacts, a member carried by said actuator for establishing electrical connections between a selected pair of contacts of said series of pairs of contacts, said selection being determined by the extent of movement of said actuator, and an electrically actuated stop interposed in the path of movement of said actuator for each value to be represented by said actuator, the other contact of each of



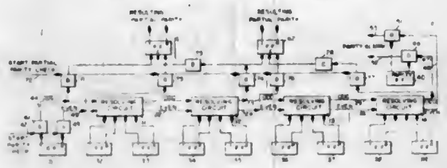
said pairs of contacts being connected to one side of its corresponding stop, the other sides of said stops being connected together and to the member of said other machine for establishing electrical connections whereby electrical potentials are applied to the respective stops of one machine by the movement of the actuator of the other machine.

3,044,701
METHOD AND APPARATUS FOR OPTIMALIZING THE OPERATION OF A SYSTEM
Albert Kerstukos, Robert Hooke, and Richard C. Bollinger, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 24, 1958, Ser. No. 730,590
25 Claims. (Cl. 235—151)



2. An automatic experimenter for optimalizing the operation of a system comprising a first register on which is to be recorded a magnitude quantitatively evaluating said operation in a first setting of said system, a second register, means connected to said second register and to be connected to said system for recording on said second register, a second magnitude quantitatively evaluating said operation in a second setting of said system, a third register means comparing said first and second magnitudes, and means connected to said second and third registers and to said comparison means and responsive to said comparison means for transferring said second magnitude from said second register to said third register only when said second magnitude indicates improvement in said operation over said first magnitude.

3,044,702
PARITY CHECKING APPARATUS FOR DIGITAL COMPUTER
Theodore C. Cox, Rhinebeck, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 823,931
6 Claims. (Cl. 235—153)



1. In an electronic digital computer including a series of circuit devices for determining the parity of a corresponding series of binary digit groups and for transmitting by way of succeeding devices in the series pulses representing the parity of the digits in the preceding groups, the output of each device providing an indication of the parity of the digits in the corresponding binary group and all preceding binary groups, whereby an indication of the parity of the digits in all the groups is ultimately obtained, the combination with said devices of apparatus to determine the parity of selected digits in a part only of the series of binary digit groups, said apparatus comprising a bistable device having input circuits to control its state in response to pulses, means to apply to said input circuits the parity indicating output from the circuit device corresponding to the last digit group in said part of the series and the parity indicating output from the circuit device corresponding to the digit group immediately preceding said part, and means to delay the pulses from one of said circuit devices with respect to the other.

3,044,703
LUMPED STRUCTURES METHOD AND APPARATUS AND APPROXIMATION OF UNIFORM MEDIA BY LUMPED STRUCTURES
Henry M. Paynter, 132 West St., Reading, Mass.
Filed June 24, 1954, Ser. No. 439,170
24 Claims. (Cl. 235—184)



1. A "lumped" operational structure having a first end and a second end, a first plurality of impedance elements interconnected in serial relationship between said first end and said second end, and a second plurality of admittance elements, said admittance elements respectively being connected to respective ones of said impedance elements, one of said pluralities including n elements and the other plurality including $n+1$ elements, where n is a whole number, the successive relative values of respective alternate elements of said first and second pluralities being in accordance with the successive values of θ_k^n, where k goes from 1 to $2n+1$, and where θ_k^n is defined by the following formula:

$$\theta_k^n=\left[1+\alpha_n\left(\frac{2n+1-k}{2n+1}\right)^2\right]\lambda_{(2n+1-k)}\cdot\phi_n(n)$$

where n equals the number of elements of the said one plurality, the factor $\lambda_{(2n+1)-k)}$ is the sequence of products obtained by multiplying together the first $[(2n+1)-k]$ roots of the numeric $2/\pi$, and where

$$\alpha_n=\frac{1}{\lambda_{2n+1}}\left(\frac{\phi_0(n)}{\phi_n(n)}\right)-1$$

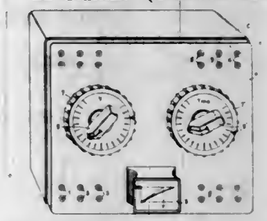
in which $\phi_0(n)$ is the relative value of the first element of the other plurality and is equal to

$$\frac{0.3183}{n}\left[1-\frac{0.2146}{n}\right]$$

and in which $\phi_n(n)$ is the relative value of the last element of the other plurality and is equal to

$$\frac{0.7979}{\sqrt{n}}\left[1-\frac{0.0603}{n}\right]$$

3,044,704
ANALOG COMPUTER FOR EXPERIMENTAL INVESTIGATION OF CONTROL AND REGULATING SYSTEMS
Klaus Anke, Claus Kessler, and Dieter Ströle, Erlangen, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Oct. 17, 1958, Ser. No. 767,982
Claims priority, application Germany Oct. 19, 1957
22 Claims. (Cl. 235—184)

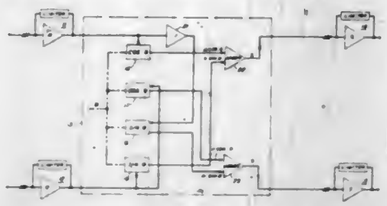


1. An analog computer for experimental investigation of control and regulating systems, comprising a model unit having a mounting structure and having electric circuit components for forming an analog model of one of the functional elements respectively of the system to be investigated, said circuit components comprising an amplifier and adjustable impedance devices mounted on said structure, input and output terminals and a multiple-contact plug-in-socket field all accessibly mounted on said structure, said output terminals being electrically connected with the output side of said amplifier, the contacts of said plug-in-socket field being electrically connected respectively with said input and output terminals of said model unit and with the input and output sides of said amplifier and with said adjustable impedance devices, a number of exchangeable function plugs for simulating respectively different performance characteristics of said system element, said plugs being selectively insertable, one at a time, in said socket field for interconnecting said components in accordance with the performance characteristic to be simulated, each of said plugs containing conductor means and fixed impedance means interconnecting selected contacts of said function plug and, when said plug is inserted, forming together with said adjustable impedance devices a network connected with the input and output sides of said amplifier, said conductor means and said fixed impedance means of said function plug determining the layout of said network and hence the qualitative behavior of said model unit, and said adjustable impedance devices determining the quantitative behavior of said model unit in accordance with the performance characteristic of the particular system element to be simulated.

3,044,705
LIMITER SYSTEMS
Charles C. Willhite, Convent Station, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 8, 1958, Ser. No. 779,020
10 Claims. (Cl. 235—189)

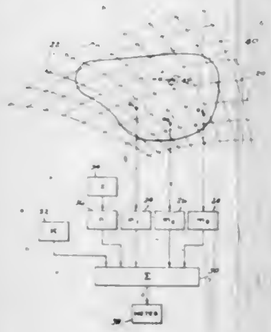
1. In a system for selectively limiting a total vector quantity which is comprised of component vector quanti-

ties, means for limiting each of said component vector quantities between selected limits, means for transforming the limited component vector quantities into second



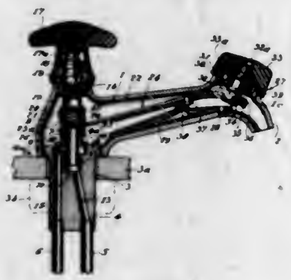
vector quantities which are angularly disposed with respect to said limited vector quantities, and means coupled to the output of the transforming means for limiting each of said second vector quantities between selected limits.

3,044,706
APPARATUS FOR EVALUATING ALGEBRAIC FUNCTIONS
Merle L. Morgan, Portland, Oreg., assignor to Electro-Measurements, Inc., Portland, Oreg., a corporation of Oregon
Filed Apr. 25, 1955, Ser. No. 503,528
40 Claims. (Cl. 235—193)



1. Apparatus for evaluating quantatively a selected component of an algebraic function which includes the complex parameter z and a plurality of complex parameters a and corresponding coefficients m, and which function is an algebraic sum including terms each of which is in the form of a product of a coefficient m and a form function containing the complex parameter z and a complex parameter a, all of which terms contain the same form function and each term includes the same parameter z to the same power and a different parameter a and a corresponding coefficient m and wherein a is a parameter other than an exponent on z, said apparatus comprising first means establishing measurable physical quantities continuously representing the values of a pair of components for the complex parameter z, a plurality of second means one for each term and each establishing separate measurable physical quantities continuously representing the values of the pair of components for a corresponding complex parameter a, third means operatively associated with the first and second means for establishing for each term a measurable physical quantity continuously representing the value of the said selected component of the said form function, a plurality of fourth means one for each term and each establishing a separate measurable physical quantity representing the value of a corresponding coefficient m and each operatively associated with the corresponding second means to form a pair of second and fourth means for that term for establishing a measurable physical quantity representing the product of the coefficient m and said selected component of said form function for that term, and combining means operatively associated simultaneously with said pairs of second and fourth means for establishing a measurable physical quantity representing the value of said selected component of the algebraic sum of said terms.

3,044,707
THERMOSTATIC MIXING VALVE
Friedrich Bayer, Deilinghofen, Kreis Iserlohn, Germany, assignor to Friedrich Grohe Armaturenfabrik, Hemer, Westphalia, Germany
Filed Dec. 28, 1960, Ser. No. 78,994
11 Claims. (Cl. 236—12)



1. A valve for proportionally mixing a warmer and a cooler fluid so that the resulting fluid mixture is maintained at a substantially constant temperature, said valve comprising, in combination, housing means defining a mixing chamber; a first and a second valve member in said housing means; a tubular intermediate member disposed between said valve members, said intermediate member located in the path of and separating the cooler and warmer fluids so that one of the fluids may flow through and that the other fluid may flow about said intermediate member, one of said valve members and said intermediate member defining between themselves a first outlet for introducing the one fluid into said chamber, and the other valve member and said intermediate member defining between themselves a second outlet for introducing the other fluid into said chamber, first biasing means for permanently urging said intermediate member away from said one valve member and for thereby exposing said first outlet; and second biasing means for permanently urging said intermediate member away from the other valve member and for thereby exposing said second outlet, at least one of said biasing means comprising thermostat means extending into said chamber so that its bias is varied in response to changes in temperature of the fluid mixture in said chamber whereby the extent to which said outlets are exposed is adjusted by movement of said intermediate member with respect to said valve members.

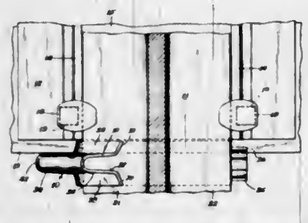
3,044,708
RAIL ANCHOR
Arthur I. Appleton, 1713 Wellington Ave., Northbrook, Ill.
Filed Sept. 8, 1961, Ser. No. 140,969
2 Claims. (Cl. 238—317)



1. In a rail anchor for preventing longitudinal creepage of a railroad rail mounted on a tie with a tie plate having

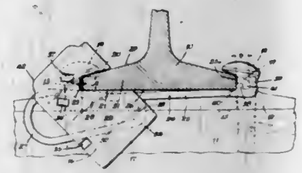
spike holes therein interposed between the rail base and the tie and spiked to the latter, the combination, with an anchor member having a substantially straight horizontal leg extending under the rail parallel to the tie and terminating at one end in an upwardly extending end lug engaging the rail base at a point remote from the tie, a generally horizontal U-shaped portion connected to said straight leg at the end opposite from said lug by a vertical reverse bend portion and overlying the rail base and the tie plate, and a vertical portion extending downwardly from said U-shaped portion into an open spike hole in the tie plate, said U-shaped portion having a plurality of spaced lugs depending therefrom defining a channel extending generally perpendicular to said straight horizontal leg and having a downwardly extending rib in said channel, of a wedge member driven between the rail base and the overlying U-shaped portion within said channel, said wedge member having an enlarged driving head provided with a depending sharp angular edge thereon biting into the upper surface of the rail base, and said wedge member having an upper surface formed with a plurality of transverse notches therein, one of which is engaged with said rib when said wedge member is driven between said U-shaped portion and the rail base to clamp said anchor member securely thereto and in engagement with the tie plate, said vertical reverse bend portion and said horizontal portion being constructed and arranged so that said horizontal leg does not contact the rail base near the end joined to said reverse bend portion, said rail base being tightly gripped between said reverse bend portion and said end lug upon the wedge member being driven between the U-shaped portion and the rail base so that the rail is restrained against longitudinal creepage.

3,044,709
RAIL ANCHOR MADE OF PLATE STEEL
John H. Liebenthal, Homewood, Ill., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 2, 1960, Ser. No. 53,822
5 Claims. (Cl. 238—327)



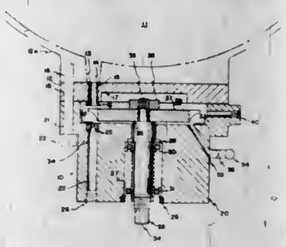
1. A rail anchor comprising a horizontal body portion for extending across beneath the base portion of a railway rail in a position to abut against a stationary part of the roadbed of a railway track and formed at one end with a hook adapted to be driven transversely of the rail into expanded gripping engagement with diverging top and bottom surfaces of a rail base flange at one side of the rail, and locking means at the other end of said body for engaging an edge of the base flange at the other side of the rail; the said body portion and said hook being of channel configuration in cross-section with the open side of the channel facing the rail and with its side walls diverging laterally outwardly relative to the longitudinal central plane bisecting the channel and defining upper and lower jaw portions for engaging said diverging top and bottom surfaces of said rail base flange, each of said walls comprising a portion which merges into the bottom of the channel and inclines outwardly at a sharp acute angle relative to said longitudinal central plane to a junction with a rail gripping marginal portion which inclines to its outer edge at an obtuse angle relative to said longitudinal central plane, whereby the acute and obtuse portions of both side walls are readily flexed laterally outward to relieve the hook portion from excessive radial expansive stresses as the hook is forced upon said diverging surfaces of said rail base flange and are adapted by inward flexure of the acutely inclined side wall portions relative to each other, during lateral pressure thereon, to increase the grip of said jaws on the rail base.

3,044,710
TWO-PIECE RAIL ANCHOR
Philbert S. Margraf, Elkhart, Ind., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,560
3 Claims. (Cl. 238—327)



1. A two-piece rail anchor adapted for installation on railway rails having base flanges of different size classifications, comprising a U-shaped rail gripping member including a bottom web and spaced apart arms the latter of which are formed in corresponding edges with recesses defining upper and lower jaws adapted to be driven transversely of a rail into flat wedging contact with the top and bottom surface of a rail base flange at one side of the rail, and a separately formed retaining arm interlocked at one end with the U-shaped member but with capacity for limited movement relative thereto lengthwise of the arm and adapted to press resiliently against a rail base in the regions of its opposite edges and formed to press resiliently against the bottom of the rail base in the regions of its opposite edges and being formed at its outer end with a pair of lugs spaced apart lengthwise of the arm and adapted, respectively, to engage vertical edge faces of railway rail base portions of different width classifications.

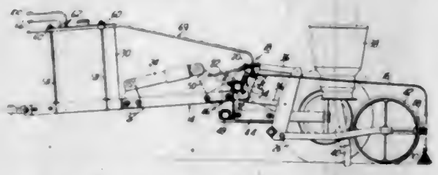
3,044,711
FLUID FLOW MODULATOR
William A. Douglas, South Pasadena, and Paul P. Datner, West Covina, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed July 22, 1957, Ser. No. 673,531
11 Claims. (Cl. 239—99)



4. A variable fluid flow system comprising: a pressurized fluid source, a body having a cavity therein, a fluid supply conduit leading through said body from said source to said cavity, a nozzle interconnecting said fluid supply conduit and said cavity, a fluid reception chamber, said body also having a passage therethrough disposed opposite said nozzle in said cavity so as to receive a fluid stream therefrom and leading from said cavity to said fluid reception chamber, means for maintaining the pressure within said cavity at a value higher than that within said fluid reception chamber, means for

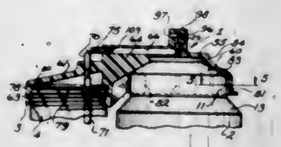
maintaining the pressure within said fluid source at a value higher than that within said cavity, a modulation disc rotatably mounted in said cavity in the fluid stream path between said nozzle and said passage, and variable speed means independent of the fluid stream for rotating said disc arranged in operative relation therewith.

3,044,712
LIQUID DISTRIBUTOR FOR AGRICULTURAL IMPLEMENTS
Willard H. Tanke, La Crosse, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 4, 1960, Ser. No. 19,757
8 Claims. (Cl. 239—127)



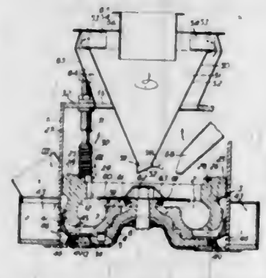
1. In an agricultural apparatus for applying fluid to the soil, the combination comprising: a reservoir containing fluid; a tubular manifold containing a main entrance port and a plurality of exit ports in the side of said manifold; means for supplying fluid from said reservoir to said main entrance port; a plurality of nozzles; conduit means connecting said nozzles to said exit ports; said manifold including an elongated tubular member having ends and means closing said ends, said tubular member being rotatably supported within said tubular manifold, said tubular member containing a plurality of passages in the side of said tubular member, said tubular member being rotatable to simultaneously align said passages with said ports and permit passage of fluid through said manifold or rotatable to block said entrance port and simultaneously block said exit ports to close all of said ports in said manifold and cut off the flow of fluid into said manifold and from said manifold to said conduit means; and, control means to rotate said tubular member.

3,044,713
LIQUID SPRAYING DEVICE
John G. Ellis, Shaker Heights, Ohio, assignor to Sprayon Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 29, 1959, Ser. No. 816,865
11 Claims. (Cl. 239—346)



1. A spray head adapted for use with a container of liquid to be sprayed and a can of liquefied gaseous propellent, said can including a body having a cylindrical wall portion, a cover having a central boss with a top and an aperture therein, a conduit extending through said aperture for discharging propellent from said can and valve means for controlling the discharge of propellent through said conduit, said spray head comprising a unitary body member having a first portion having a cavity for the reception of said container, a second portion having a cavity for the reception of said can, and a third portion structurally interconnecting said first and second portions and having a transversely extending bore therein, said cavity in said section portion being defined in part by a cylindrical wall for frictionally engaging said cylindrical wall portion of said can, a horizontal wall portion defining a seat and adapted to engage upon said boss top to position said spray head vertically relative to said can and a cylindrical wall portion adapted to have sealing engagement with said conduit, means having an orifice opening above said first portion of said spray head body member for conducting the fluid to be sprayed from said container through said first portion, said bore in said third portion of said body leading from said cavity in said second portion and being adapted to be in communication with said discharge conduit and having nozzle means at its opposite end opening above said first portion of said spray head body member and directing a stream of propellent across said orifice, said spray head also including means for actuating said valve means.

3,044,714
BALL RACE PULVERIZER
John M. Ballantine, Glasgow, Scotland, assignor to Babcock & Wilcox Limited, London, England, a company of Great Britain
Filed Nov. 26, 1958, Ser. No. 776,559
4 Claims. (Cl. 241—58)



1. A pulverizer comprising a housing enclosing a rotary grinding ring having an arcuate outwardly and upwardly facing grinding race, means for rotating said grinding ring, a circular row of grinding balls engaging said arcuate grinding race, a stationary grinding ring having an arcuate inwardly and downwardly facing grinding race, means for pressing said balls between said grinding races, means for directing an annular stream of an elastic fluid upwardly past the outer circumference of said rotary grinding ring to entrain pulverized material passing through said row of grinding balls, and rotating means for the distribution of material to be pulverized to the grinding surfaces between each of said grinding rings and said row of grinding balls, the periphery of said rotating means being positioned at a level upwardly adjacent the row of balls and inwardly of the face of said stationary grinding ring.

3,044,715
WASTE DISPOSAL DEVICE WITH SOUND INSULATION
Thomas T. Woodson, La Canada, George A. Martinek, Pasadena, and Julian F. Macias, La Mirada, Calif., assignors to Waste King Corporation, Los Angeles, Calif., a corporation of California
Filed Apr. 6, 1959, Ser. No. 804,257
2 Claims. (Cl. 241—100.5)

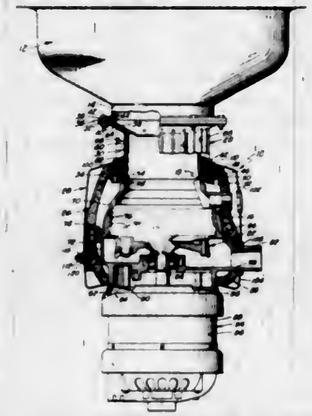
1. In a kitchen waste disposal device, the combination of:

(*a*) a vertically oriented structure including a housing having an open upper end for the introduction of waste and carrying adjacent its lower end rotatable comminuting means for comminuting such waste, and including motor means below and connected to said comminuting means for rotating same;

(*b*) means for resiliently and pendulously suspending said structure from a sink having a drain opening therein with said open upper end of said housing below and in communication with the drain opening, comprising a vertically oriented elastomeric sleeve connected at its lower end to said housing around said open upper end thereof and adapted to be connected at its upper end to the sink around the drain opening therein;

(*c*) vibration absorbing material encircling at least said housing;

(*d*) a vertically oriented, horizontally split shell enclosing said vibration absorbing material, the upper part of said shell being spaced from said structure throughout its entire area;

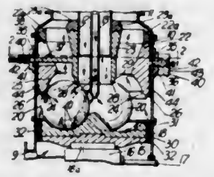


(*e*) means connecting the upper end of the upper part of said shell to said sleeve;

(*f*) means connecting the lower end of the lower part of said shell to said structure; and

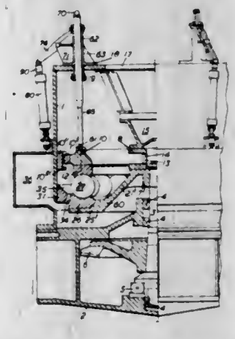
(*g*) an elastomeric ring provided therein with two spaced annular grooves one having therein the lower end of the upper part of said shell and the other having therein the upper end of the lower part of said shell, said grooves being separated by the elastomeric material of said ring, whereby said ring elastomerically separates said upper and lower parts of said shell from each other to minimize vibration transmission from one to the other.

3,044,716
PULVERISING MILLS
Meyer Schlioma Frenkel and Paul Meyer, London, England, assignors to Frenkel C-D, Aktiengesellschaft, Vaduz, Liechtenstein, a Liechtenstein company
Filed June 2, 1960, Ser. No. 33,424
Claims priority, application Great Britain June 5, 1959
20 Claims. (Cl. 241—103)



20. A pulverising mill comprising a table providing an upwardly facing annular track of concave cross-section, a set of balls supported on said track for movement around the track, means for guiding and loading the balls against the track comprising at least two rings substantially co-axial with the said track and contacting the said balls on their upper parts, at least one of the rings engaging said balls at positions only outside their pitch circle, and the rings being separate from one another and each being movable independently of the other ring towards and away from the track, guide means constraining the rings for independent movement towards and away from the track and holding the rings against relative rotation about the axis of the rings, means for loading at least one of the said rings against the balls and means for adjusting the said loading on at least one ring; means for effecting relative rotation between the said track, the balls and the rings whereby the balls may be caused to run around the track and to pulverize material therein, means for delivering material to be pulverized into the said track and means for removing pulverized material.

3,044,717
PULVERISING MILLS
Frederick S. Tollow, London, England, assignor to Babcock & Wilcox Limited, London, England, a British company
Filed Dec. 2, 1958, Ser. No. 777,659
Claims priority, application Great Britain Dec. 6, 1957
9 Claims. (Cl. 241—121)

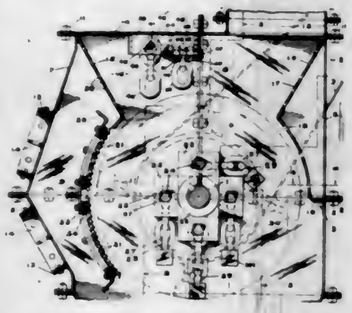


1. A pulverizer comprising a housing, a plurality of rolling grinding elements arranged for rotational movement in a horizontal circular path between the grinding surfaces of opposed grinding rings, means for rotating one of said rings about the axis of said circular path, and means for resiliently urging said other ring toward said rotating ring to exert a selected and adjustable grinding pressure on said grinding surfaces including a plurality of circumferentially equally spaced thrust rods positioned in and slidably axially movable with respect to said housing, the axis of each of said rods being normal to said other ring, hydraulic cylinders externally attached to said housing a piston operable within each of said cylinders, means connecting each of said pistons with one end of one of said rods and with the opposite end of each of said rods engaging said ring.

3,044,718
CHAIN HAMMER MILL
Walter J. Sackett, Baltimore, Md., assignor to The A. J. Sackett & Sons Company, Baltimore, Md., a corporation of Maryland
Filed Aug. 21, 1958, Ser. No. 756,444
6 Claims. (Cl. 241—189)

1. In a breaking mill having a rotor on a transversely extending shaft and carrying swinging hammer elements in a casing with an arcuate grid substantially concentric with and in proximity to the peripheral swing of the hammers on the forward downward side of their swing and the casing having an upper inlet to the side adjacent the upper swing of the hammers and a layer unobstructed discharge opening spaced laterally from the grid, comprising in combination a plurality of substantially rectangular plates having openings centrally thereof threaded on the rotor shaft normal thereto and each alternate plate having

its ends projecting normal from the side of the adjacent plate, spacers on the rotor shaft between each plate of an outer diameter substantially the width of the plates, the plate projecting ends having openings therethrough and rods therein, parallel to the rotor shaft, each rod having a chain thereover of a plurality of links each of right angles to its adjacent link between pairs of the projecting ends of alternate plates, the total width of two spacers and the thickness of an intermediate plate exceeding the width of the chain links with small clearance to receive between the plates the rod connected and directly adjacent links, means bearing on the rods and receiving



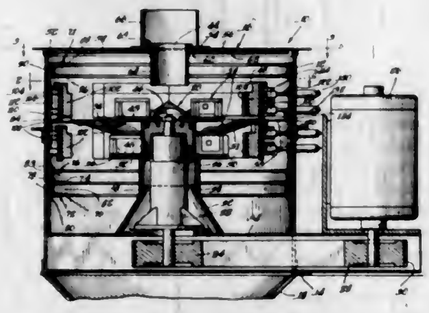
thereover the inner link of the chain to space the chain links on the rods substantially centrally between adjacent plates and a hammer at the outer end of each chain, said hammers being flat of face and violently throwing the incoming material against the grid, the hammers on each rod being slightly spaced from each other and the hammers on adjacent rods parallel with the rotor shaft longitudinally alternating, to cover the entire grid surface, the plural linked chains collapsing upon the encounter by the hammers with excessively large particles of material and being separately guided by the projecting ends of the plates between which they are mounted.

3,044,719
HAMMER CRUSHER
Wilhelm May, Rheinhausen, Germany, assignor, by mesne assignments, to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany
Filed July 14, 1958, Ser. No. 748,536
Claims priority, application Germany July 20, 1957
12 Claims. (Cl. 241—194)



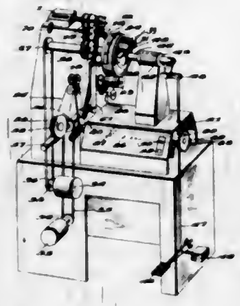
1. In combination in a hammer crusher: a rotatable shaft, a plurality of disc-shaped members having substantially uniform radius and being supported by and connected to said shaft for rotation therewith, said disc-shaped members being in lateral engagement with each other by surfaces of contact extending to circles of substantially the same radius as said disc-shaped members, each one of said disc-shaped members being provided with a cut-away portion forming with the respective two adjacent disc-shaped members on opposite sides thereof a hammer chamber, said hammer chambers being subdivided into a plurality of groups of axially aligned chambers, said groups of hammer chambers being circularly spaced from each other, each two adjacent disc-shaped members which with one of said cut-away portions therebetween confine one of said hammer chambers respectively being provided with axially aligned apertures, and a plurality of groups of hammers respectively rotatable in said groups of hammer chambers, said hammers having lateral extensions in form of studs pivotally journalled in said apertures of the respective adjacent disc-shaped members, the axes of said studs of all hammers being substantially evenly spaced from the axis of said shaft, each of said chambers being so dimensioned as to allow the respective hammers therein to rotate by 360°, the hammers of each group being substantially in alignment with each other in a direction substantially parallel to the axis of rotation of said shaft while being offset with regards to the hammers of an adjacent group of hammers in the paths of movement thereof, the outer radius of said disc-shaped members being greater than the distance between the axes of the studs and the axis of the shaft to at least such an extent that said hammers when occupying their inward position do not protrude beyond the circumference of said disc-shaped members.

3,044,720
IMPACT CRUSHING APPARATUS
Thomas E. Bridgewater, Elmhurst, Ill. (% Adams Engineering Co., 2151 E. 83rd St., Chicago 17, Ill.)
Filed Sept. 30, 1960, Ser. No. 59,631
12 Claims. (Cl. 241—275)



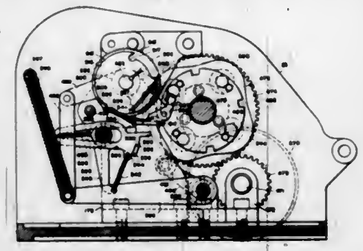
4. An impact type crushing apparatus comprising an upstanding rotatable impeller for projecting material to be crushed laterally outwardly therefrom, upstanding housing means encircling said impeller and having upper and lower end portions extending substantially above and below said impeller, a cover structure extending across the upper end of said housing means and substantially above an upper end of said impeller, guide means extending through said cover structure and into close proximity with the upper end of said impeller for directing material to be crushed to the upper end of the impeller, breaker plate means mounted around the interior of said housing means and adjacent the periphery of said impeller for receiving the material thrown from said impeller, means for angularly adjusting and yieldably supporting said breaker plate means for presenting surface means thereof at a predetermined angle with respect to the direction of movement of the material to be crushed thrown from the impeller and for minimizing any danger of injury to the apparatus in the event an article becomes wedged between the impeller and said surface means, and sets of a plurality of ring members respectively disposed around the interior of said housing means above and below said breaker plate means and providing annular pockets into which a portion of the material being crushed is adapted to pack for protecting the housing means from contact with subsequently processed material.

3,044,721
AUTOMATIC MACHINE FOR HIGH SPEED WINDING OF SMALL MOTOR ARMATURES
Otto Wirth, Zurich, Switzerland, assignor to Micafil A.-G., Zurich, Switzerland, a joint-stock company
Filed Jan. 19, 1959, Ser. No. 787,725
Claims priority, application Switzerland Jan. 25, 1958
6 Claims. (Cl. 242—13)



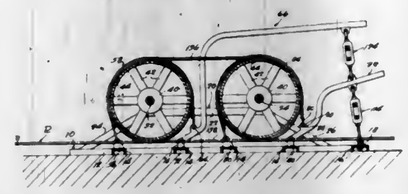
1. In combination with an armature winding apparatus having an armature-holding face plate, driving means for revolving said face plate normally at a relatively high slot winding speed, a counter mechanism driven by said face plate driving means for counting the number of revolutions of said face plate, said means under control of said counter mechanism for imparting step by step rotation to said armature about its axis after the completion of each winding operation to present an unwound set of slots to be wound; the improvement which consists of means operable by said counter mechanism after a predetermined number of face plate revolutions for reversing the direction of rotation of said counter mechanism and means also operable by said counter mechanism for temporarily reducing the speed of rotation of said face plate at the end of each slot winding operation and prior to the next step movement of said armature.

3,044,722
WINDING MACHINE
William V. Goodhue, North Kingstown, R.I., and Frank W. Higgins, Wareham, Mass., assignors to Leesona Corporation, a corporation of Massachusetts
Original applications Apr. 26, 1951, Ser. No. 223,022, now Patent No. 2,764,362, dated Sept. 25, 1956, and Apr. 27, 1956, Ser. No. 581,145, now Patent No. 2,930,543, dated Mar. 29, 1960. Divided and this application Nov. 13, 1959, Ser. No. 859,083
5 Claims. (Cl. 242—39)



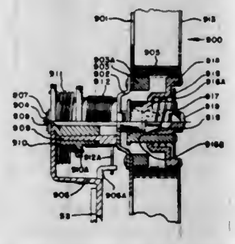
1. In a winding machine having means for rotatably supporting a package, a drive-roll for rotating the package to wind yarn thereon, means for lifting the package to release it from the drive-roll, a gear for operating the lifting means, a ratchet-disk for rotating said gear, a continuously-oscillated member, a pawl carried by said member normally free from engagement with the teeth on the ratchet-disk, detent-means normally engaged during the operation of the machine, means to release the detent-means when the package reaches a predetermined size, and means operative upon release of the detent-means to engage the pawl with the teeth on the ratchet-disk to cause said disk to be rotated by the continuously-oscillated member whereby to turn the gear and lift the package off from the drive-roll.

3,044,723
WIRE ROPE TENSIONER
Lloyd C. Blue, 7403 Jay St., Houston, Tex.
Filed Sept. 30, 1960, Ser. No. 59,677
6 Claims. (Cl. 242—47.09)



1. A wire rope tensioner comprising a base frame having forward and rear ends, longitudinally spaced rotary forward and rear rope drums mounted upon and extending across the frame, said drums having annuli, brake drum means on ends of the annuli having peripheral friction surfaces, forward tensioning lever means and rear tensioning lever means, said lever means being pivoted on the base frame, brake bands engaged around said surfaces and having first ends secured to the frame and second ends pivoted to the related tensioning lever means, and lever adjusting means connected to the lever means and to the base frame, said annuli having spiral rope receiving grooves thereon, the grooves of the forward and rear drums being aligned with each other, said forward lever means being pivoted to the base frame at a location between the forward and rear rope drums, and said rear lever means being pivoted on the base frame behind the rear rope drum, said lever means having rearwardly extending portions, said portions being vertically spaced from each other, said adjusting means comprising lower contractile means extending between and connected to the base frame and the portion of the rear lever means, and upper contractile means extending between and connected to the said portion of the rear lever means and the said portion of the forward lever means.

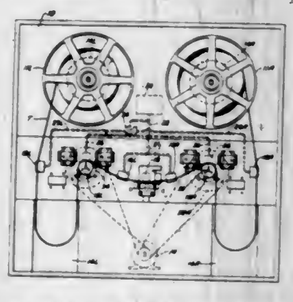
3,044,724
RECORD SUPPLY MECHANISM
Mack C. Goodwin, Detroit, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 5, 1959, Ser. No. 831,858
7 Claims. (Cl. 242—55)



1. A storage mechanism for a roll of material comprising: first and second shafts supported for independent rotation; roll support means secured to said first shaft; means urging said second shaft to rotate toward a first position; and means engaged with each of said shafts per-

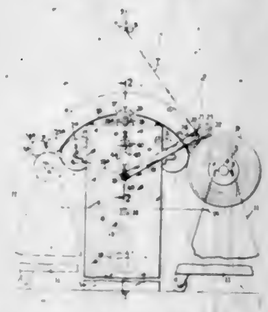
mitting rotation of said first shaft with respect to said second shaft in a first direction only when said second shaft is in a predetermined second position.

3,044,725
TAPE FEEDING MEANS
Theodore C. Gams, Monsey, N.Y., and Paul J. Kiefer, Jr., Clifton, N.J., assignors, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Original application Apr. 26, 1952, Ser. No. 284,597, now Patent No. 2,778,634, dated Jan. 22, 1957. Divided and this application Apr. 17, 1956, Ser. No. 582,901
13 Claims. (Cl. 242—55.12)



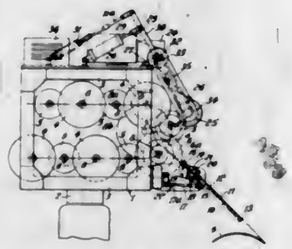
10. A high speed tape feeding mechanism comprising a reel, a tape moving means, a length of tape wound on said reel and coupled to said tape moving means, the tape forming a dependent loop between the reel and said tape moving means, rotatable means coupled to said reel to feed the tape from said tape moving means to the reel, sensing means responsive to the length of the tape loop, pulsing means activated by said sensing means and operative to urge said rotatable means in a reverse direction for a limited time interval, and dynamic braking means activated by said pulsing means and coupled to said rotatable means to further inhibit the rotation of said rotatable means.

3,044,726
FABRIC-WINDING MACHINE
Henri Schellenberg, Mulhouse, France, assignor, by mesne assignments, to Societe Alsacienne de Constructions Mecaniques, Mulhouse, France, a French body corporate
Filed Mar. 18, 1960, Ser. No. 15,979
Claims priority, application France Mar. 19, 1959
5 Claims. (Cl. 242—56)



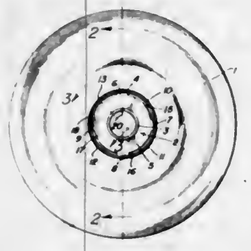
1. Winding machine for winding a continuous fabric band into rolls on two mandrels, each of which is supported by support means movable towards and away from the machine, comprising in combination: a frame, a first drive roller and a second drive roller mounted on said frame and spaced from each other, an arcuate wall provided on the frame and extending between the rollers, each of said support means adapted to support a mandrel in a position to cause said band to be engaged and driven, in a tensioned condition over said wall, either between the first roller and one of said mandrels or between the second roller and another mandrel, said support means permitting the mandrels to move away from said rollers as the winding of the band proceeds, band guide means capable of travelling relative to said frame through an arcuate path above said wall between a first extreme position adjacent the first roller and a second extreme position adjacent the second roller for causing said band to be wound selectively on one of said two mandrels; a central aperture in said arcuate wall extending substantially over the length of said frame; means for cutting off the portion of said fabric band which has been wound on one of said mandrels, said means comprising: a cylindrical blade-carrier pivotable around a horizontal axle carried by said frame by the moving fabric band; two cutting blades, having cutting edges, attached to and protruding from said carrier at an angle smaller than 180°, said cutting edges being adapted to protrude through said aperture beyond said arcuate wall to engage and sever said band; means for maintaining said blade-carrier in an inoperative, non-pivotable position and for releasing said blade-carrier from said inoperative position into a pivotable, operative position, said last named means comprising: a recess formed in said blade-carrier, intermediate said blades and substantially equidistant from said blades; movable locking means for engagement within said recess to maintain said carrier in said inoperative position and for disengagement from said recess to permit oscillation of said carrier and said blades in their operative position; two oscillatable twin beams, each of said beams being disposed over a face of said frame; said guide means being loosely connected to one end of said beams; a trunnion supporting the other end of said beams pivotably relative to said frame; movable connecting means between said trunnion and said movable locking means, said connecting means being rotated by the pivoting of said trunnion to disengage said locking means from said recess when said beams and guide means pass over a part of their arcuate travel path situated close to one of said extreme positions, whereby said cutting means are released into their operative position for cutting the fabric band.

3,044,727
APPARATUS FOR SUPPLYING SHEET MATERIAL TO A TIRE BUILDING MACHINE
Eric Holroyd, Sutton Coldfield, and Felix Walter Waldron, Streetly, England, assignors to Dunlop Rubber Company Limited, London, England, a British company
Filed Apr. 28, 1959, Ser. No. 809,509
Claims priority, application Great Britain May 7, 1958
4 Claims. (Cl. 242—67.3)



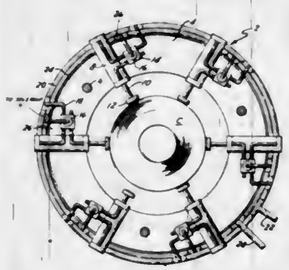
2. Apparatus for supplying sheet material under slight tension to a tire building machine which apparatus comprises a roll for carrying sheet material positioned to deliver said material through a space to said tire building machine, a variable speed electric driving motor for rotating said roll, said motor having a speed control unit, a transducer to control said speed control unit, a roller positioned to rest on and deflect from a straight line material passing through said space from said roll to said tire building machine, a lever having an arm connected to said roller to tilt as said roller rises and falls and having an arm connected to said transducer to speed said motor when said sheet material in said space straightens and to slacken said motor when said sheet material in said space deflects from a straight line.

3,044,728
PLASTIC INSERT FOR CARBON RIBBON
Walter D. Landgraf, 4808 96th Place, Oak Lawn, Ill., and Richard P. Landgraf, 9948 S. Hoyne Ave., Chicago, Ill.
Filed Aug. 12, 1959, Ser. No. 833,210
4 Claims. (Cl. 242—68.5)



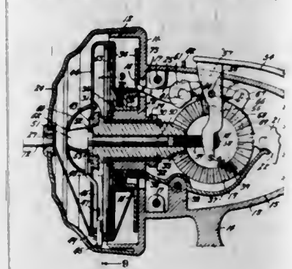
1. A totally plastic insert for a carbon ribbon, including a hub, an outer flange surrounding said hub, said outer flange having a larger width than said hub, a thin radial web extending between said hub and said flange, said web being joined to said flange only at discrete juncture points thereof, and said web being spaced from said flange intermediate said juncture points, relatively thin protuberances secured on the outer diameter of said flange at points intermediate said juncture points, said protuberances each extending axially well within the edges of said flange, said hub, web, flange and protuberances being a unitary and integral plastic structure.

3,044,729
METHOD AND APPARATUS FOR TIGHTENING COILS OF ELONGATED MATERIAL
Samuel B. Prellwitz, Fallsington, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 26, 1960, Ser. No. 11,229
7 Claims. (Cl. 242—78.1)



1. Apparatus for tightening the convolutions of a coil of elongated product comprising a common support having an opening therein adapted to receive a coil, a plurality of power-operated thrusters mounted on said support in spaced relation and disposed radially of the coil, and control means effective to actuate said thrusters successively into engagement with the coil.

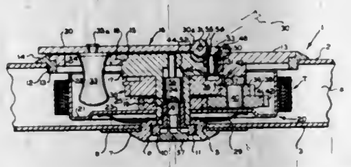
3,044,730
SPIN CASTING REEL WITH POSITIVE AND FRICTION BRAKE MEANS
Victor Yeada, Denver, Colo., assignor to Wright & McGill Co., Aurora, Colo., a corporation of Colorado
Filed Dec. 21, 1959, Ser. No. 861,147
4 Claims. (Cl. 242—84.2)



1. In a spin casting fishing reel of the type having a drive gear rotatable in either a forward or a reverse direction and arranged to rotate a flyer provided with a winding pin positioned to wind a fishing line on a rotatable line spool, means for selectively retaining said spool against rotation comprising:

(*a*) an annular series of openings in one side of said spool,
(*b*) a longitudinally movable latch member positioned in said reel,
(*c*) spring means urging said latch member longitudinally forward into one of said openings,
(*d*) ratchet means on said drive gear, and
(*e*) pawl means connected with said latch member positioned to be engaged by the ratchet means on said drive gear to withdraw latch member from an opening in said spool when said gear is rotated in a reverse direction.

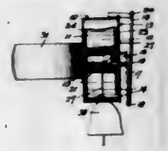
3,044,731
TAPE MEASURE CONSTRUCTION
Charles Zelnick, Saginaw, Mich., assignor to The Lufkin Rule Company, Saginaw, Mich., a corporation of Michigan
Filed Sept. 2, 1959, Ser. No. 837,700
3 Claims. (Cl. 242—84.8)



1. A tape measure construction comprising a casing; a generally disc-shaped winding drum member journaled in said casing for rotation relative thereto, said drum member having a side with an opening therein; a line operatively connected with said drum member and extensible and retractable relatively to said drum member upon rotation thereof; a crank member journaled in said casing adjacent the said side of said drum member for rotation relative to said casing, said crank member including an arm pivoted for swinging movements between first and second position; speed differential transmission means interposed between said members and contained within said drum member for driving said drum member in response to rotation of said crank member but at a different speed; and mechanism extending through the opening in said drum member, and including a drive part coaxial with said drum connected with said transmission means and a part engageable and disengageable with said drive part,

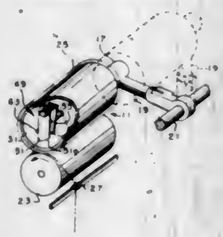
interposed between said transmission means and crank member and operable in response to swinging movements of said arm to and from said positions for engaging and disengaging said transmission means with and from said members.

3,044,732
WRIST REEL
Patrick W. Simonds, 11805 Oak Haven Road, Austin, Tex.
Filed Aug. 13, 1959, Ser. No. 833,522
1 Claim. (Cl. 242—96)



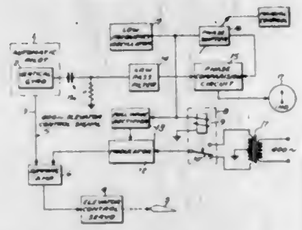
In a winding reel, a cylindrical casing, parallel bottom and cover plates secured to the ends of said casing and concentric therewith, said cover plate being of greater diameter than said casing and having teeth in its periphery, a hollow shaft of uniform diameter throughout its length affixed at one end centrally of said bottom plate and extending axially thereof toward said cover plate, a reel in said casing comprising a hub portion and spaced apart circular plates one of which has bearing upon said shaft, a sleeve extending slidably through said cover plate and slidably enclosing said shaft, said other reel plate having an opening therein having bearing upon said sleeve, teeth in said bearing opening, an expansion spring in said hollow shaft engaged at one end with said bottom plate and at its opposite end with the interior of said sleeve, teeth on the exterior of said sleeve between the ends thereof normally engaging the teeth of said reel plate and engaging at one end with said cover plate to limit the outward movement of said sleeve, said sleeve teeth when moved inwardly against tension of said spring being disengaged from the teeth of said reel plate to free the reel for rotation, a lever connected at one end to the outer end of said sleeve with its opposite end disposed slightly beyond the periphery of said cover plate, a handle portion of greater length than the diameter of said cover plate hinged at one end to the said opposite end of said lever, and a hand grip at the other end of said handle portion disposed at right angles thereto to slidably engage with the peripheral teeth of said cover plate when folded upon said lever and to lock said handle and lever against rotation.

3,044,733
BRAKE ARRANGEMENT
Robert M. Ingham, Jr., Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware
Filed May 2, 1958, Ser. No. 732,472
5 Claims. (Cl. 242—129.8)



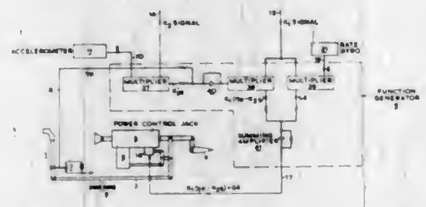
1. In a bobbin winder arrangement having a transverse swing arm pivotally movable through an arc about a pivot axis, a bobbin-holding drum rotatably mounted on a shaft substantially parallel to said pivot axis and fixedly secured at one end on the outer end of said arm, said drum having a hollow cylindrical opening in its outer end remote from said swing arm and said shaft extending into said hollow opening, the improvement comprising a brake arm pivotally carried in eccentric relation by said shaft adjacent its outer free end and within said hollow cylindrical opening.

3,044,734
CONTROL REVERSAL SENSOR
Robert J. Heppe, North Caldwell, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 10, 1958, Ser. No. 773,099
4 Claims. (Cl. 244—77)



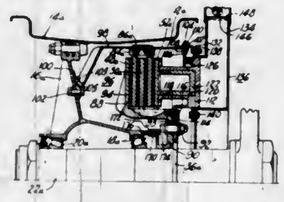
3. A control reversal sensing system for an aircraft having means for driving an elevator control surface of said aircraft including a signal for energizing said driving means, comprising a low frequency oscillator, a source producing another signal having a frequency equal to the frequency of said energy signal, means to modulate said other signal with the output of said low frequency oscillator, means to add said modulated signal and said energizing signal, means to couple said added signals to said driving means so that the output of said driving means produces low frequency oscillations in the motion of said aircraft during the application of said energizing signal to said driving means, means to detect said low frequency oscillations in said aircraft and means for comparing the outputs of said detecting means and said low frequency oscillator to produce a signal indicative of any reversal in the motion of said elevator control surface.

3,044,735
AIRCRAFT MANOEUVRE BOOST CONTROL SYSTEMS
Arthur George Barnes, Wigan, and Ian Albert Moore Hall, Lytham St. Annes, England, and Richard Keith Thomasson, Thurso, Caithness, Scotland, assignors to The English Electric Company Limited, London, England, a British company
Filed Nov. 16, 1959, Ser. No. 853,321
Claims priority, application Great Britain Nov. 28, 1958
5 Claims. (Cl. 244—83)



1. An aircraft manoeuvre boost control system for improving the rate of response in pitch of the aircraft to movement of the pilot's control comprising, in combination with tailplane control means including a pilot's control stick, a tailplane power actuator, and a mechanical linkage connecting the control stick and the actuator, an accelerometer positioned in the aircraft to measure acceleration of the aircraft in pitch and to provide an acceleration-responsive electrical signal, electrical transducer means connected to said tailplane control means and operative to provide a signal which is a measure of the displacement of the pilot's control stick, electrical computer means connected to respond to the acceleration-responsive signal and to said signal which is a measure of the stick displacement and operative to produce a boost signal which increases with increase of said stick displacement signal and decreases with increase of the acceleration-responsive signal, and a connection between said electrical computer means and said power actuator to supply the boost signal to the actuator to supplement the pilot control transmitted along said mechanical control linkage.

3,044,736
LIQUID COOLED FRICTION BRAKES
Warren D. Chambers, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 844,523
8 Claims. (Cl. 244—111)



8. A liquid cooled aircraft disk brake for use with an aircraft wheel rotatably mounted on a fixed axle carried by a retractible landing gear strut comprising a plurality of interleaved annular rotatable and nonrotatable friction disks operatively connected to said wheel and fixed axle, respectively; actuating means operatively connected to said friction disks for actuating the same into frictional engagement; means defining a sealed annular brake cavity enclosing said rotatable and nonrotatable friction disks, said last named means including first and second annular axially extending concentrically arranged members fixedly secured to said wheel and rotatable therewith, said first and second annular members forming the inner and outer peripheries, respectively, of said annular brake cavity, an annular housing fixedly secured to said fixed axle and extending radially outwardly therefrom to form one side of said brake cavity, and first and second sliding fluid seals operatively connected to adjacent cooperating surfaces of said annular housing and said first and second axially extending annular members, means fixedly secured to said annular housing through which said brake cavity is vented to the atmosphere and through which said brake cavity is filled with liquid coolant, valve means operatively connected to said last named means for opening and closing the same, and control means operatively connected to said valve means and said retractible strut for actuating said valve means in response to retractile and protractile movement of said retractible strut, said brake cavity being filled with liquid coolant which surrounds said rotatable and nonrotatable friction members and absorbs the heat generated by frictional engagement thereof, said valve means being operative to vent the vaporized portion of said coolant to the atmosphere.

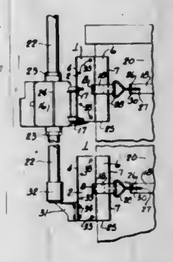
3,044,737
DROPPABLE MISSILE NOSE-CONE TOY
Marvin J. Vavra, 2749 San Ramon Road, Miraleste, Calif.
Filed Oct. 31, 1960, Ser. No. 65,990
3 Claims. (Cl. 244—155)

2. A toy cone-carrying and dropping accessory for use on the string of a flying kite, comprising a hanger means including movable means attached to and articulating on said hanger, for receiving and holding a cone-shaped lightweight paper cup, and engaging means forming a part of said hanger for slidable engagement thereof with the kite string; and a release guide means having a preshaped guide track thereon to receive said movable means as said



cone and hanger are pushed up the string toward the kite by wind currents, whereby said movable means is engaged upon said track, and articulating on said hanger, releases said cone-shaped paper cup to simulate the dropping of a missile nose-cone, and said hanger slides back to the ground on said engaging means, where another cone may be attached to repeat the simulated drop.

3,044,738
ANTENNA ROTOR BRACKET
Joseph A. Kuchera, 411 Walnut St., Monongahela, Pa., and Louis J. Stiehm, 95 Castner Ave., Donora, Pa.
Filed June 6, 1960, Ser. No. 34,207
12 Claims. (Cl. 248—43)

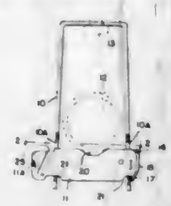


3. An antenna supporting bracket comprising a pair of duplicate plates, each plate having a web portion with a marginal flange along each side thereof, both of said flanges of each plate extending outwardly on one side of its web, means securing together the web portions of a pair of duplicate plates to form a bracket, one set of said marginal plate flanges on said bracket extending in opposite directions providing a mounting face transverse to said web portions, the other set of said marginal plate flanges on said bracket forming an included angle of approximately 90°, means defining window means in the web of each plate adjacent said other set of marginal plate flanges to mate and form a common hole through said bracket, an antenna mounting member embracing said transverse mounting face, and means for securing said member to each of said one set of marginal plate flanges of said bracket to aid in securing said plates together.

3,044,739
PIPE SUPPORTS
James W. Attwood, 4118 S. Wayne Road, Wayne, Mich.
Filed Nov. 27, 1959, Ser. No. 855,591
7 Claims. (Cl. 248—58)

7. A hanger assembly comprising a support having a pair of spaced depending arms each having a slot, and a substantially flat supporting blade extending between said arms and through said slots, one end of said blade being formed to prevent its passage through said slots, the other end of said blade having an upper and lower edge and a slot extending from one edge to closely adjacent the other edge to substantially separate an end portion from

the rest of the blade, and a readily distortable strip portion adjacent an end of said blade slot whereby said end



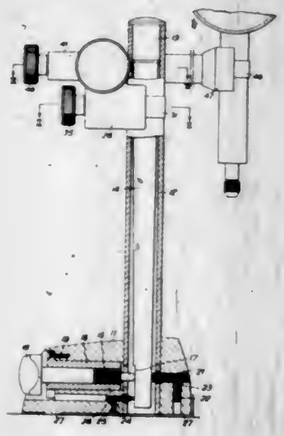
portion is readily twisted out of the plane of the rest of said blade.

3,044,740

SUPPORTS FOR HIGH SENSITIVITY DEVICES

Derek Charles Kilminster Pearce, Shepperton, and Francis Richard Tolmon, Effingham, England, assignors to National Research Development Corporation, London, England, a corporation of Great Britain

Filed July 14, 1960, Ser. No. 42,922
Claims priority, application Great Britain Oct. 20, 1959
13 Claims. (Cl. 248—124)



1. A support for a high sensitivity device comprising a base, a hollow vertical column firmly anchored to the base, a cantilever having an axis and having one end fixed to the upper end of the column, said cantilever extending substantially within the column and clear of the inner wall of said column, and means for applying a load to the cantilever transverse to said axis, thereby imposing a bending moment on the column.

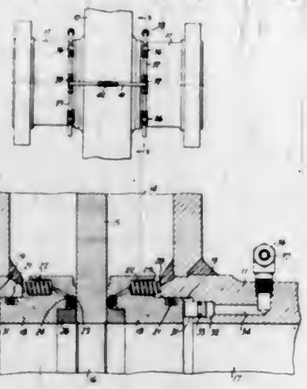
3,044,741

VALVE CONSTRUCTION

Marvin H. Grove, Piedmont, Calif., assignor to Grove Valve and Regulator Company, Oakland, Calif., a corporation of California

Filed July 30, 1958, Ser. No. 752,110
3 Claims. (Cl. 251—54)

2. In a fluid flow control valve, a body having hubs for making connection with associated piping, the hubs serving to define aligned flow passages, a valve gate disposed within the body and movable between open and closed positions relative to the passages, seat rings interposed between each side of the gate and the adjacent inner end of the corresponding hub, means forming fluid seals between each of said seat rings and the inner end portions of the hubs, said seat rings being capable of limited movement relative to the body whereby said gate is capable of limited movement in opposite directions together with said seat rings, a plurality of angularly spaced and cylindrical bores located in the inner end portions of the hubs and aligned with the axis of said passages, pistons fitted within said bores and disposed to apply thrust to the seat rings to urge the seat rings against the gate, first



hydraulic piping means connecting the bores located in one of said inner end portions, second hydraulic piping means connecting the bores located in the other of said inner end portions, throttling means interconnecting said first and second piping means and means for applying hydraulic fluid under pressure to said bores.

3,044,742

GATE VALVE WITH FRONTALLY ENGAGING SEALING MEANS

Bruno Vitta Zelmann, % Continental Patents Company, Via Meravigli 16, Milan, Italy

Filed Apr. 16, 1959, Ser. No. 806,844
Claims priority, application Italy Apr. 29, 1958
3 Claims. (Cl. 251—197)



1. A gate valve comprising a casing having coaxially arranged an inlet opening and an outlet opening with valve seats surrounding said inlet opening and said outlet opening, a spindle member extending within said casing and rotatable about its center line extending transversally to the axis of said coaxially arranged inlet and outlet openings, said spindle member having a threaded stem coaxial therewith and providing a first screw thread and a threaded hollow cylindrical part coaxial therewith and providing a second screw thread, said threaded hollow cylindrical part spacingly surrounding a length of said stem to leave a free annular space between said stem and said hollow cylindrical part, said first screw thread and said second screw thread having different pitches, a threaded tubular gate member having a free end and matingly and slidably engaging with its threads said second screw threads of said hollow cylindrical part, sealing discs removably hinged on the free end of said gate member and

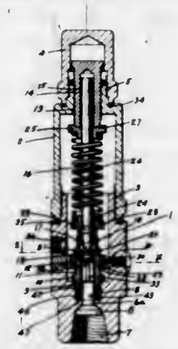
movable therewith, an expander member having a threaded bore mating and slidably engaging with its threads said first screw-threads of said threaded stem and inclined wedge-like surfaces on said expander member to spread apart said sealing discs against said valve seats when said expander member and said sealing discs are in a predetermined position with respect to said valve seats, and means incorporated in said casing to prevent rotation of said gate member and said expander member during rotation of said spindle member to allow a relative rotation of said second screw-thread with respect to said gate member and of said first screw thread with respect to said expander member, said expander member and said gate member are so related and said different pitches of the screw threads are so related in such a manner that when the spindle is rotated from the full open position of the gate member the gate member will move toward the seats at a slower speed then the expander member and when the sealing discs are in a predetermined position adjacent said seats the expander member will press the sealing discs against the valve seats.

3,044,743

VALVE CONSTRUCTION

Martin J. Siegel, Los Angeles, Calif., assignor to W. R. Ladewig Company, Los Angeles, Calif., a copartnership

Filed Oct. 2, 1958, Ser. No. 764,835
4 Claims. (Cl. 251—332)



1. In valve construction, a bushing provided with a conical seat portion, an insert within said bushing and formed with a conical seat portion the conical seat portions of the insert and of the bushing having the same degree of slope to perpendicular, a valve having a conical surface for engagement with the seat of the insert and of the bushing, when moved in one direction, the conical surface of the seat of the bushing and of the insert having a greater degree of slope to perpendicular than that of the conical surface of the valve, whereby the conical surface of the valve compresses the insert to form a seal in advance of engagement with the seat of the bushing, said insert being formed of yieldable plastic material and comprising two cylindrical portions having a uniform diameter bore, the larger diameter portion of which is of greater length when unconfined than the space in the bushing in which it is secured.

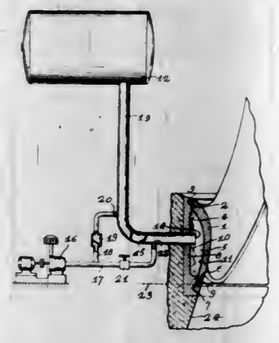
3,044,744

DRAG REDUCING METHOD AND ARRANGEMENT FOR HYDRAULIC TURBINE RUNNERS

Martin John Berlyn, Montreal, Quebec, Canada, assignor to Dominion Engineering Works Limited, Lachine, Quebec, Canada

Filed Aug. 17, 1959, Ser. No. 834,357
Claims priority, application Canada May 22, 1959
2 Claims. (Cl. 253—26)

1. A hydraulic turbine, comprising, a runner and a stationary throat ring forming therebetween an annular space normally filled with water, said runner having an upper portion spaced from an upper portion of the throat ring by a relatively narrow gap constituting a band seal, and a lower portion spaced from a lower portion of the throat ring by a larger gap constituting an outlet to said space, an air port communicating with said annular space between the band seal and the outlet, an air compressor, a vessel for storing air under pressure, communication between said compressor and said vessel,



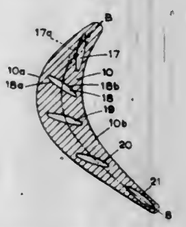
communication between said vessel and said air port, and communication between the air compressor and said air port, and means for controlling said communications whereby said vessel may be charged with compressed air from said compressor, a charge of compressed air may be supplied suddenly from said vessel to said port to purge the annular space of water, and the compressor may be connected with said port to bleed air into the annular space at a pressure effective to maintain the water substantially at the level of the outlet.

3,044,745

TURBINE AND COMPRESSOR BLADES

Frank Henry Stark, Chellaston, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed Nov. 19, 1957, Ser. No. 697,494
Claims priority, application Great Britain Nov. 20, 1956
3 Claims. (Cl. 253—39.15)



1. A blade of one piece of solid material for an internal combustion turbine engine comprising a blade portion profiled to airfoil cross-section having a concave surface and a convex surface, each of said surfaces being of decreasing curvature from root to tip and meeting in a leading edge and a trailing edge, a tip shroud on one end of the blade portion, a root fixing portion on the other end of said blade portion, a plurality of heat exchange passageways each of flattened elliptical cross-section extending axially through only said blade portion and tip shroud, said root fixing portion being solid, said blade portion having a median camber line the length of which increases progressively from blade tip toward the root, each of said passageways having its major axis of cross-section disposed at a substantial angle to the median camber line at any cross-section of the blade portion and of a length greater than the thickness of the profiled por-

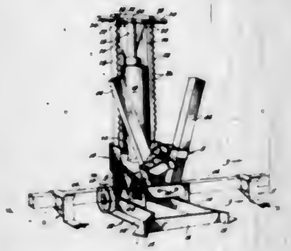
tion of the blade throughout a substantial part of the blade length, and said passageways being splayed with respect to each other to maintain substantially uniform distribution thereof along said camber line at all cross-sections of the blade.

3,044,746
FLUID-FLOW MACHINERY BLADING
Hans Stargardter, Deer Park, Ohio, assignor to General Electric Company, a corporation of New York
Filed May 18, 1960, Ser. No. 29,949
6 Claims. (Cl. 253—77)



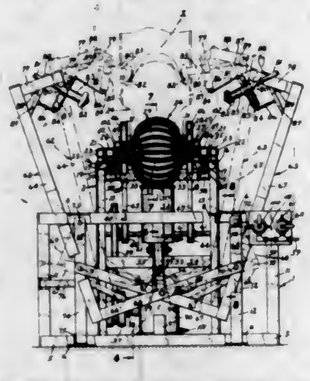
1. An axial flow compressor or turbine blade adapted to be mounted on a rotor located in a casing having an inlet at one end and an outlet at the other end, said blade comprising a solid airfoil section including root, tip and intermediate portions, said airfoil section having an improved stiffness distribution wherein the thickness distribution in the airfoil section, proceeding from the end of the root portion remote to the tip portion, initially decreases at a decreasing rate and thereafter decreases at an increasing rate, the blade having a relatively high fundamental torsional frequency without a correspondingly high fundamental flexural frequency.

3,044,747
FLUID-OPERATED JACK
John L. Nolden, 630 Resolano Drive, Pacific Palisades, Calif.
Filed June 29, 1959, Ser. No. 823,693
7 Claims. (Cl. 254—2)



1. In a fluid-operated jack having a carriage and a power cylinder to raise the carriage, means on said carriage to engage vehicles for lifting operations, said engaging means comprising: a pair of lifting arms of non-circular cross section extending in opposite lateral directions from the carriage; and a pair of saddles, one slidable along each of said arms, each of said saddles being apertured to receive the corresponding arm for mounting of the saddle on the arm at two different orientations relative to the arm selectively, each of said saddles having a vehicle-engaging portion for positioning above the level of the arm at one of said two orientations, said vehicle-engaging portion having a relatively long flange and a relatively short flange on opposite sides thereof, said relatively long flange being positioned to extend from the arm forwardly of the carriage at a level lower than the arm at the other of said two orientations.

3,044,748
DEVICE FOR INVERTING PNEUMATIC TIRE CASINGS
Charles E. Branick, % Branick Manufacturing Co., P.O. Box 1937, Fargo, N. Dak.
Filed June 13, 1960, Ser. No. 35,497
6 Claims. (Cl. 254—50.3)



6. In a device for inverting pneumatic tire casings; a frame structure; a rotary member journalled in said frame structure for rotation on a horizontal axis and having an arcuate crown portion adapted to engage the bottom road-engaging tread surface portion of a tire casing with the axis of the tire casing parallel to the axis of rotation of said rotary member; means for imparting rotary movement to said rotary member to rotate the tire on its own axis; a pair of opposed spreader arms; generally opposed tire bead-engaging rollers; roller supporting members mounted on said spreader arms for pivotal movements on generally horizontal axes normal to the direction of the axis of said bead-engaging rollers and to the direction of the axes of rotation of said rotary member, stop means limiting pivotal movements of said roller supporting members in opposite directions, yielding means biasing said roller supporting members in one direction of pivotal movement thereof; means mounting said spreader arms on said frame for movements in vertical planes parallel to the axis of rotation of said rotary member and in angularly outward and downward directions from first positions, wherein said bead-engaging elements overlie the central portion of said rotary member, to second positions laterally outwardly and downwardly spaced from said first positions, whereby to spread the tire bead portions engaged by said elements; and means for raising said rotary member relative to said bead-engaging rollers to invert the portion of the tire engaged thereby when the adjacent bead portions thereof are in a spread apart condition.

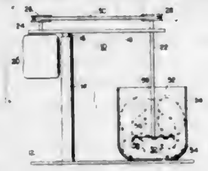
3,044,749
SELF-PROPELLED ADJUSTABLE TRACTOR MOLE
Sidney A. Dilday, 3820 Arnold Ave., San Diego, Calif.
Filed Nov. 3, 1959, Ser. No. 850,555
5 Claims. (Cl. 254—134.5)



1. A tractor mole, comprising: a pair of substantially resilient, elongated arms interconnected at one end and diverging from the connection; said arms each having an inwardly curving ski nose portion at the other end thereof; one of said arms being substantially longer than the other; a pair of frictional drive wheels mounted on each of said arms; said drive wheels being disposed adjacent said ski nose portions and rotatable on generally parallel

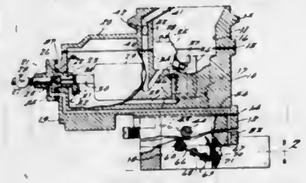
axes normal to the longitudinal axis of said arms; the edges of said drive wheels projecting outwardly of said arms; driving means operatively connected to turn said drive wheels; a resilient stabilizing bar fixed to said arms at the interconnection thereof and extending outwardly therefrom on both sides; freely rotatable stabilizing wheels mounted on opposite ends of said stabilizing bar on axes normal to the axes of said drive wheels.

3,044,750
IMPELLER
Lawrence A. Schmitt, Jr., Fort Wayne, Ind., assignor to Shar Dispersion Equipment Co., Inc., Fort Wayne, Ind.
Filed Apr. 8, 1960, Ser. No. 21,019
12 Claims. (Cl. 259—134)



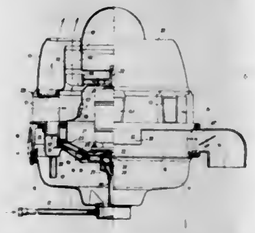
11. An impeller for agitating a liquid mixture in a container at high speed comprising a relatively thin disc having means for concentrically attaching the same to a rotatable shaft for rotation in a predetermined direction, and a plurality of evenly spaced elongated impelling vanes integrally formed from said disc at its periphery and alternately projecting upwardly and downwardly therefrom, each of said vanes having at least one hole extending therethrough for relieving the vortex which tends to be formed in said mixture due to rotation of said impeller therein, each of said holes having its wall tapering inwardly toward the radially outer surface of the respective vane and defining a sharp edge therewith thereby to shear solid particles in said mixture, the leading edge of each of said vanes tapering outwardly and rearwardly and having a generally semi-circular cut-out portion formed therein with its wall tapering inwardly toward the outer surface of the vane and defining a sharp edge therewith thereby forming a sharp hook-shaped portion for shearing solid particles in said mixture, each of said vanes having its leading edge coincident with a circle concentric with the center of said disc and defining an outwardly inclined angle with respect to a cord of said circle equal in length to the length of the same.

3,044,751
CHOKELESS CARBURETOR
Jorma O. Sarto, Orchard Lake, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,230
18 Claims. (Cl. 261—23)



1. In an internal combustion engine, a chokeless carburetor having an air inlet induction conduit, a throttle valve in said induction conduit, means for supplying engine operating fuel to said induction conduit, means for supplying enrichment fuel to said induction conduit during cold engine conditions including an enrichment port in communication with said induction conduit, fuel enrichment valve means for said port and being adjustable to control the enrichment fuel flow therethrough to said conduit, said valve means including a stem projecting through said port in the direction toward the induction conduit side of said port and being movable in said direction to cause said valve means to restrict said port, said stem being movable in the opposite direction to cause said valve means to decrease the restriction at said port, actuating means having a portion engageable with said stem at the induction conduit side of said port to adjust said valve means, temperature sensing means responsive to engine temperature and cooperable with said actuating means to adjust said valve means to decrease the flow of said enrichment fuel through said port with increasing temperature.

3,044,752
LIQUID ATOMIZER
Karl Flury, Adliswil, Zurich, Switzerland, assignor to Defensor AG., Zurich, Switzerland
Filed Apr. 1, 1959, Ser. No. 803,395
Claims priority, application Switzerland Apr. 12, 1958
2 Claims. (Cl. 261—29)

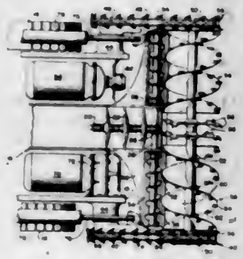


1. Apparatus for atomizing liquids and discharging the same in the form of an aerosol mist, comprising an outer casing divided into a lower part having at least one air inlet opening and an upper part having a discharge opening, a housing disposed within said upper part of the casing and spaced therefrom, said housing having at its top an air escape opening, the space between said housing and said upper part of the casing being divided by means of an annular jacket into completely separate annular ducts coaxially disposed one in the other, passages provided between said lower part of the casing and the outer one of said annular ducts, a plurality of air intake ducts provided radially through the outer one to the inner one of said annular ducts and to said housing, a motor disposed within said housing and having driving means for moving a primary air stream through said passages and the outer one of said annular ducts from said air inlet opening to said discharge opening, driving means for moving a secondary air stream through the inner one of said annular ducts from said radial intake ducts to said discharge opening, driving means for moving a tertiary air stream through said housing from said radial intake ducts to said air escape opening, said secondary air stream having a quantity per time unit at least as large as said primary air stream, and atomizer means for introducing fluid particles to said primary air stream to form a mist therein, all of said means for moving said primary, said secondary and said tertiary air streams being disposed so that the air to be moved is dry to the exclusion of mist.

3,044,753
CONTINUOUS MINING MACHINE
Arnold G. Wilcox, Jr., Raleigh, W. Va., assignor to Wilcox Manufacturing Company, Raleigh, W. Va., a corporation of West Virginia
Filed Oct. 13, 1960, Ser. No. 62,405
6 Claims. (Cl. 262—9)

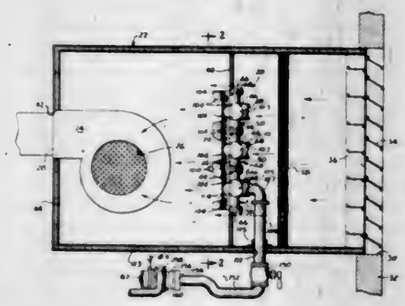
4. In a continuous mining machine, a cutting head mounted for up and down swinging movement about a

horizontal axis, said head including a pair of horizontally spaced arms, a first sprocket wheel mounted adjacent one end of each of said arms for rotation about said horizontal axis, a second sprocket wheel mounted on the other end of each of said arms in substantial alignment with the associated first sprocket wheel, a toothed endless chain trained about each associated pair of first and second sprocket wheels, a shaft extending between said arms and fixed to said second sprocket wheels for rotation therewith about a horizontal axis, an auger section carried by said shaft adjacent each of said second sprocket wheels, each of said auger sections including a pair of



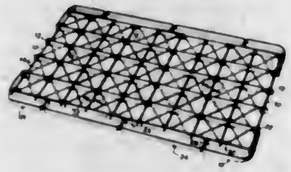
helical blades fixed to said shaft in spaced relation, each of said blades having a series of teeth fixed adjacent the outer periphery thereof and extending outwardly thereof, the teeth of said blades being disposed in planes perpendicular to the axis of said shaft spaced equally from each other, the teeth in successive planes being disposed on alternate blades, the helical blades of each section being of the same pitch with respect to each other and of opposite pitch with respect to the blades of the other section, and rotary cutting means separate from said auger sections carried by the central portion of said shaft intermediate said auger sections.

3,044,754
BURNER CONSTRUCTION
Eugene J. Skerkoske, Rockford, and Lyle S. Spielman, Dixon, Ill., assignors to Eclipse Fuel Engineering Co., Rockford, Ill., a corporation of Illinois
Filed Oct. 18, 1960, Ser. No. 63,424
9 Claims. (Cl. 263—19)



1. Combustion apparatus comprising, in combination, a burner assembly adapted to be positioned bodily within a high velocity air stream and to apply heat to the air issuing from the upstream side of the burner assembly for discharge of the heated air downstream, said burner assembly comprising a burner proper and a burner shroud, the burner proper being in the form of a tubular casting having a forward burner face directed downstream and provided with a multiplicity of spaced relatively small burner ports therein in communication with the interior of the casting for producing a corresponding number of forwardly directed flame jets, said burner shroud comprising a sheet metal structure including a flame holder plate positioned forwardly of the burner face and spaced therefrom, said flame holder plate and burner face defining therebetween an initial combustion space, said flame holder plate being formed with a series of relatively large spaced apart holes therethrough, and an air-collecting wing structure extending rearwardly from the marginal regions of the flame holder plate and presenting converging air-deflecting surfaces which are adapted to extend at an incline to the longitudinal axis of the air stream and which straddle the burner face on opposite sides thereof and are adapted for channeling a portion of the air of said air stream into said initial combustion space, and a flame-containing wing structure extending forwardly from the marginal regions of the flame holder plate and presenting diverging flame-confining surfaces which, in combination with the plate, establish a secondary combustion space, means for supplying a mixture of gas and air to the interior of the burner casting for discharge through the burner ports into said initial combustion space, and means for regulating the quantity of such mixture supplied to the burner casting whereby when a relatively small quantity of the mixture is fed to the burner casting under low fire conditions combustion will be confined mainly to said initial combustion space and whereby when a relatively large quantity of fuel is fed to the burner casting under high fire conditions, combustion will take place additionally in the region of the air stream forwardly of the flame holder plate and within said secondary combustion space.

3,044,755
HEAT TREATING GRID
Leon C. Bixby, Wellington, Ohio, assignor to Bix Company, Wellington, Ohio, a partnership
Filed Sept. 6, 1960, Ser. No. 54,118
10 Claims. (Cl. 263—47)

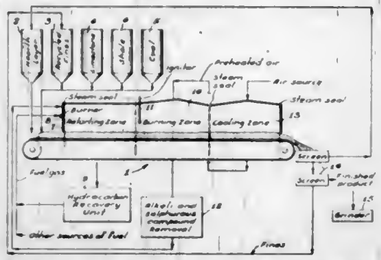


7. A metallic heat treating tray including a plurality of wire networks mounted on parallel, generally coplanar rods, each of said networks comprising a pair of wire elements extending sinuously and out of phase with each other in a direction generally transverse to said rods, one of said wire elements being disposed below the plane of said rods and being looped upwardly about successive rods, the other of said wire elements being disposed above the plane of said rods and being looped downwardly about successive rods, each of said wire elements having crests located at alternate rods and valleys located at the intermediate rods, said networks being disposed side by side along the length of rods.

3,044,756
PRODUCTION OF CEMENT
John J. Grebe and John F. Miller, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Feb. 10, 1960, Ser. No. 7,786
2 Claims. (Cl. 263—53)

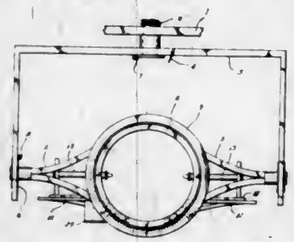
1. The process for preparing cement clinker which comprises: (1) placing upon a continuous traveling grate cement producing constituents consisting of carbonaceous, calcareous and argillaceous materials containing volatile water-soluble alkali chlorides and sulfurous compounds; (2) moving into a retoring zone and subjecting therein said cement producing constituents to initial heating from

about 700° F. to about 1200° F. in the presence of a non-oxidizing gas flow, thereby effecting removal of volatile hydrocarbons therefrom; (3) then, moving into a burning zone and finally heating therein said cement producing constituents from about 2500° F. to 3500° F. in the



presence of an oxidizing gas flow, thereby effecting removal of volatilizable water-soluble alkali chlorides and sulfurous compounds therefrom; and, thereafter (4) moving into a cooling zone and cooling therein said cement producing constituents.

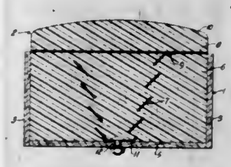
3,044,757
CUTTING MEANS FOR TUBULAR MATERIAL
Richard J. Steele, 2202 Harwell Lane, Houston, Tex.
Filed Aug. 18, 1958, Ser. No. 755,735
1 Claim. (Cl. 266—23)



In a cutting means for tubular material for selectively forming cuts of various patterns in the material being cut, a framework, a vertically and horizontally adjustable yoke on said framework, the free ends of said yoke depending from said framework, guide ring supports extending laterally and inwardly from the free ends of said yoke and being rotatably adjustable with relation to said yoke, an annular guide mounted on said supports and through which the material to be cut extends, an adjustable inner guide ring mounted in said annular guide, calibrated indicia on said inner ring and said annular guide for selective adjustment of said inner ring with relation to said annular guide, longitudinally adjustable tables mounted on said inner ring, a pair of upstanding plates on each of said tables, a laterally adjustable cutting torch mounted in each of said pairs of plates, a manually rotatable sleeve on each of said torches between said plates, gears on each end of said sleeves, rotatable discs in each of said plates in which said torches are axially mounted, horizontal racks in each of said discs in mesh with the gears on said sleeves for lateral adjustment of the torches with relation to the discs and means for the rotation of said inner rings.

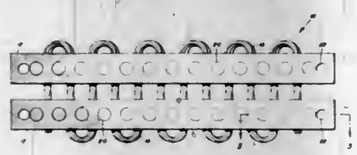
3,044,758
SEAT CONSTRUCTION
David E. Lawson, 2021 Middleton Beach Road, Middleton, Wis.
Filed May 18, 1960, Ser. 30,031
11 Claims. (Cl. 267—1)

1. A seat construction, comprising a frame having a base support member, a seat cushion mounted on the frame and supported by the support member, said seat cushion including a body of substantially resilient foam plastic material and a spiral reinforcement embedded within said body and bonded thereto, said spiral reinforcement being formed of a strip of material having a substantially greater width than thickness and being substantially free of resiliency, said spiral including a series of convolutions of progressively increasing diameter with the convolution of smallest diameter disposed down-



wardly, each of the convolutions being spaced from adjacent convolutions and vertically overlapping a portion of the next lower convolution, the portion of said foam plastic body disposed between said overlapping portions being subjected to stretching and tension stress when a load is applied to said seat cushion and the resistance of said foam plastic providing resiliency for said seat cushion, and means connecting the lowermost of said convolutions to said support member to thereby transfer the load to said support member.

3,044,759
CABLE TYPE VIBRATION ISOLATOR WITH CAPTIVATING ELEMENTS
James J. Kerley, Jr., Cheverly, Md., assignor to Kerley Engineering, Inc., Cheverly, Md., a corporation of Maryland
Filed Nov. 27, 1959, Ser. No. 855,818
2 Claims. (Cl. 267—1)



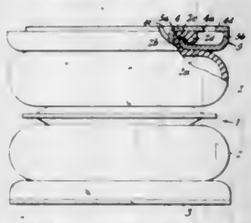
1. A cable type mount for supporting an object under isolation from shock and vibration forces comprising first and second pairs of metallic strips, the strips each having two parallel faces, and one such face in abutment with one such face of another strip, said first pair being parallel to and laterally spaced from the second pair, the strips of each pair having a plurality of parallel spaced lateral grooves extending across their abutting faces in registration to form bores, each bore in the first pair being aligned with a bore in the second pair, means for supporting the first pair of strips from the second pair of strips consisting of resilient multistrand cable reeved through the aligned bores back and forth between the pairs, the cable portions between the pairs of strips each being free of interconnecting material, and cable portions remote of both pairs connecting cable portions in adjacent bores in either pair in a curved cable loop, and countersunk cylindrical connecting elements connecting the strips of each pair together between each pair of adjacent bores whereby the cable portion in each bore is engaged by both strips with each cable loop and its connected cable portions positioned about a cylindrical element and the non-abutting parallel faces of the strips of each pair constitute mounting surfaces free of projections.

3,044,760
SPRING ASSEMBLY
Raymond John Davies, Coventry, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed Mar. 2, 1959, Ser. No. 796,596
Claims priority, application Great Britain Mar. 15, 1958
6 Claims. (Cl. 267—31)



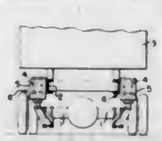
1. A spring assembly for a vehicle which comprises a rigid channel-shaped casing having a pair of parallel, spaced, flanges and a web connecting said flanges and having means for attachment to the sprung part of the vehicle, an inflatable pneumatic container in said channel fitting against said web and flanges of said channel to fill said channel when inflated and extending substantially to the end of said channel, said container having flexible walls, and a leaf spring extending the length of said channel at its open side in contact with said pneumatic container and having means at its ends for connection to the sprung part of the vehicle, said spring being of less width than the space between said flanges to form the wall of said pneumatic container into rolling lobes between said spring and said flanges when said spring is deflected into said channel between its ends.

3,044,761
FLUID SPRING ASSEMBLY
Raymond John Davies, Coventry, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed Mar. 2, 1959, Ser. No. 796,352
Claims priority, application Great Britain Mar. 6, 1958
12 Claims. (Cl. 267—65)



1. A fluid spring assembly which comprises a pair of spaced end members movable toward and from each other, a resilient, flexible enclosing wall between and joined fluid-tightly to said end members to form a fluid-tight enclosure, at least one of said end members having a radially extending wall portion and an annular wall portion having an outer surface tapering radially inwardly from said radially extending wall portion, said enclosing wall having a portion extending radially inwardly to the smaller diameter end of the tapering surface of said end member, thence in contact with said tapered surface and thence radially outwardly adjacent the radially extending wall portion of said end member and spaced from the inwardly extending portion of said enclosing wall, and an annular pressure member between said inwardly and outwardly extending portions of said enclosing wall in wedging contact with said tapering surface through said enclosing wall and movable by said inward extension of said enclosing wall toward the larger diameter portion of said tapering surface.

3,044,762
PNEUMATIC SPRING SYSTEM
Adolf Stengelin, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed July 13, 1959, Ser. No. 826,532
Claims priority, application Germany July 16, 1958
14 Claims. (Cl. 267—65)



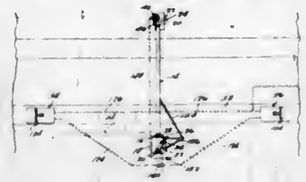
1. In a motor vehicle having a first vehicle part participating in the spring movements thereof and a second vehicle part non-participating in said spring movements, said vehicle including a pneumatic spring system provided with pneumatic spring means for supporting said vehicle, a pneumatically actuated damping arrangement coordinated to a respective pneumatic spring means for dampening the action of said pneumatic spring means comprising pneumatic bellows means having two ends and an intermediate bellows portion disposed between said two ends, and valve means operatively connected with said bellows means, said valve means being so constructed and arranged that during spring movements in one direction air is drawn in through said valve means into said bellows means from the atmosphere while air is discharged with a predetermined throttling into the atmosphere during spring movements in the opposite direction, the two ends of said bellows means being secured to said first vehicle part and said intermediate bellows portion being secured to said second vehicle part.

3,044,763
DEAD-ENDING DEVICE FOR CONTACT LINES AND OVERHEAD WIRES
Erich Jorzenink, Essen, Germany, assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Filed Aug. 18, 1960, Ser. No. 50,407
2 Claims. (Cl. 267—69)



1. Dead-ending service for contact lines and overhead wires, comprising: a tubular housing; a pressure spring arranged in the tubular housing and pretightened therein to the compressive force necessary for dead-ending; means for connecting one end of the housing with a rigid support; means for arresting said spring against movement at opposite ends in the housing; movable abutting means at one end of the housing for compressing the spring therein; lever means mounted intermediate two opposite parts of the lever at said one end of the housing to provide a short arm in position to directly abut the movable abutting means to counteract the direction of pressure of the pressure spring and also to provide a longer arm in position to transmit tractive force to the short arm; and lever means for connecting the longer arm to a tractive line to be brought to the same tractive force as the pressure spring; said pressure spring being a coiled spring having a pressure head as the movable abutting means for engaging the short arm of the lever means, and a removable bolt being disposed axially through the coil spring and removably operable between the pressure head and the opposite end of the spring for the pretightening of the pressure spring.

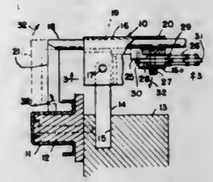
3,044,764
FLUID PRESSURE ACTUATOR
Renzo V. Bonner, P.O. Box 149, Carlsbad, N. Mex.
Filed Apr. 15, 1960, Ser. No. 22,502
5 Claims. (Cl. 268—34)



1. In combination, a roadway, first and second posts at opposite sides of the roadway, a gate vertically hinged on said first post and adapted to bear against the second post in the closed position of the gate, means biasing the gate toward its closed position, a fluid pressure gate opening cylinder having a piston rod, the cylinder and the piston rod being severally articulated to said first post and to the gate for opening the gate when the piston rod is extended from the cylinder, first and second ram assemblies embedded in the roadway at and spaced from opposite sides of the posts, said ram assemblies each comprising a vehicle-operated treadle in the assembly and movable from a normal position above the surface of the roadway to a depressed position below the surface and a fixed ram cylinder having a piston therein normally at one end thereof and having a piston rod extending out of the cylinder, a rock shaft adjacent said treadle, a lever fixed on said rock shaft and having one end pivoted to the extending end of said piston rod and having the other end pivoted to the treadle, means preventing pivoting of the treadle in the direction toward the gate, said treadle being free to pivot in the opposite direction, said treadle when moved to said depressed position moving the piston in the cylinder from one end of the ram cylinder toward the other end thereof for compressing the fluid in the ram cylinder, means for returning the piston toward said one end of the ram cylinder and elevating the treadle above the roadway, an outlet pipe connected to each of the ram cylinders at said other end thereof, an inlet pipe connected to each of the ram cylinders at said one end thereof, a shunt pipe extending between and connected to the outlet and inlet pipes and having a first check valve thereon opening only to the outlet pipe, a second check valve in the outlet pipe at a point beyond a shunt pipe and opening only in a direction away from the ram cylinder, a third check valve in the inlet pipe at a point beyond the shunt pipe and adapted to open only in the direction of the ram cylinder, a shuttle valve having an endwise movable valve element, said outlet pipes being connected to opposite ends of the shuttle valve whose valve element is responsive to pressures and absence of pressures in the outlet pipes, a fluid pressure pipe extending between and connected to the shuttle valve and to the gate-opening cylinder, a pressure relief valve in said pressure pipe and a fluid source to which the inlet pipes are connected.

3,044,765
CLAMPING MECHANISM
James C. Sweeney, 5493 Middlebelt Road, West Bloomfield, Mich.
Filed Apr. 6, 1959, Ser. No. 804,388
8 Claims. (Cl. 269—228)

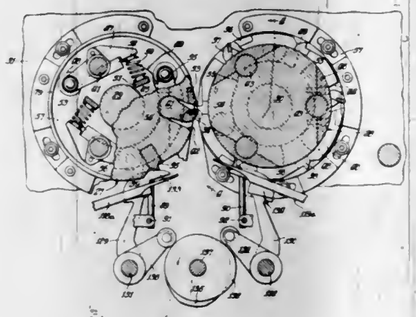
1. A clamping mechanism comprising a support, a clamp assembly, and hinge means connecting said assembly to said support, said clamp assembly having a movable clamp element and means actuating same, said actuating means being pivotally operable on an axis disposed normal with respect to the axis of said hinge means, whereby motions actuating said clamp element are in planes normal to the axis of said hinge means and motions pivoting said clamp assembly on the axis of said hinge means are in planes normal to the axis of said clamp element actuating means.



ERRATUM

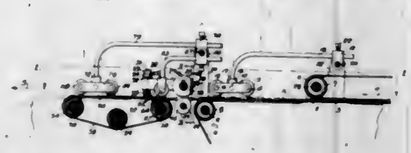
For Class 269—254 see:
Patent No. 3,044,512

3,044,766
PAPERMAKING MACHINE
Charles T. Banks, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Dec. 20, 1960, Ser. No. 77,048
3 Claims. (Cl. 270—73)



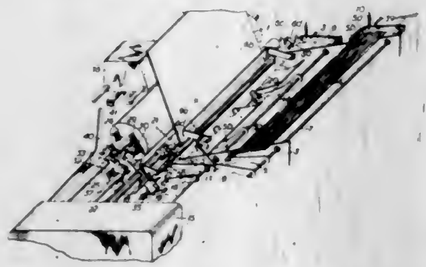
1. In a rotary folding machine, the combination of a pair of folding rolls mounted for rotation in opposite directions, means for feeding a web to be folded to said folding rolls, a pair of jaws and a tucker carried by each of said rolls, means for driving said rolls in such timed rotation that the tucker of each roll enters between the jaws of the other roll and is withdrawn therefrom as an incident to the rotation of the rolls, cam mechanism for causing the opening of the jaws of each of said rolls prior to movement of the tucker of the other roll between said jaws, and cam mechanism for causing the closing of the jaws of each of said rolls as the tucker of the other roll is withdrawn from between the jaws, one of said cam mechanisms for each of said jaw pairs including a cam and a cam follower in constant contact with the cam and first and second thrust transmitting parts connected respectively to said follower and to a movable one of the jaws of the jaw pair, said first and second thrust transmitting parts being so arranged that said first part after a predetermined movement under the action of said cam contacts said second part to apply thrust on the second part to move the jaw connected therewith.

3,044,767
MECHANISM FOR SEPARATING, ALIGNING AND TIMING MOVEMENT OF ENVELOPE BLANKS
Richard Winkler, Rengsdorf, near Neuwied, Rhineland, and Kurt Dunnebier, Wollendorf, near Neuwied, Rhineland, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Filed Apr. 18, 1960, Ser. No. 22,768
Claims priority, application Germany May 21, 1959
11 Claims. (Cl. 271—2)



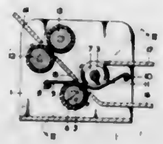
1. An apparatus of the character described, including means for conveying blanks in lapped relation thereon with a leading edge of one blank in advance of the leading edge of the next immediate blank, a conveyor for receiving the blanks from the conveying means, means for operating the conveyor at a higher speed than the conveying means, free wheeling counter rolls between the conveyor and the conveying means and having cylindrical faces for engaging one face side of the foremost blank on the conveying means, segment rolls having arcuate faces for contacting the cylindrical faces of the counter rolls to engage the leading edge and opposite face of the foremost blank, and means for actuating the segment rolls to move arcuate faces in a direction in opposition to advancement of the blanks for engaging the leading edge of the foremost blank to stop advancement of said blank and to move arcuate faces thereof in the direction of advancement of the blanks at the speed of said conveyor to cooperate with the free wheeling counter rolls for drawing said aligned blank from the conveying means and to pass said blank onto the said conveyor at the speed of the conveyor.

3,044,768
FACSIMILE APPARATUS
Kenneth George Hoer, Croydon, England, assignor to Creed & Company Limited, Croydon, England, a British company
Filed June 4, 1956, Ser. No. 589,267
Claims priority, application Great Britain June 3, 1955
10 Claims. (Cl. 271—4)



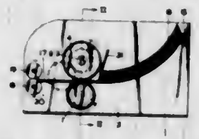
1. Facsimile apparatus including a magazine for storing a plurality of message sheets preparatory to transfer into scanning position, said magazine comprising a plurality of separating members, for insertion between said plurality of message sheets in such a manner that the individual message sheets are separated from each other in said magazine by one of said separating members, storage rack means supporting said separating members to urge the said sheets into scanning position and mechanism for successively advancing said message sheets from said magazine into said scanning position.

3,044,769
DEVICE FOR SEPARATING TWO SHEETS OF LAMINAR MATERIAL
Theo Pierre Chrétien Breuers, Venlo, Netherlands, assignor to Chemische Fabriek L. Van der Grinten N.V., Venlo, Netherlands, a Dutch corporation
Filed Mar. 14, 1961, Ser. No. 95,659
Claims priority, application Netherlands Mar. 28, 1960
5 Claims. (Cl. 271—18)



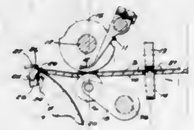
1. Device for separating two moving superimposed sheets of paper or similar laminar material, comprising means for feeding the sheets, a number of spaced power-driven conveyor members, mounted in line, which may come into frictional contact with the outside of one sheet, and a number of spaced juxtaposed separating members, which are staggered in relation to the conveyor members and which are driven in a direction opposite to the direction of movement of the sheets and which may come into frictional contact with the outside of the other sheet, while every line on the working surface of a conveyor member or a separating member which extends transverse to the direction of movement of the member describes the same closed path, there being mounted in the spaces between the conveyor members a number of supporting members which cooperate under pressure with the separating members, and there being mounted in the spaces between the separating members supporting members which cooperate under pressure with the conveyor members, the pressure zones between the conveyor members and the supporting members cooperating with them lying in the same plane as the pressure zones between the separating members and the supporting members cooperating with them.

3,044,770
SHEET FEEDING DEVICE
Theo Pierre Chrétien Breuers, Venlo, Netherlands, assignor to Chemische Fabriek L. van der Grinten N.V., Venlo, Netherlands, a Dutch corporation
Filed Jan. 27, 1961, Ser. No. 85,230
Claims priority, application Netherlands Feb. 2, 1960
3 Claims. (Cl. 271—36)



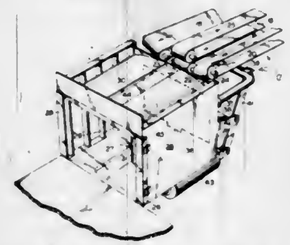
1. Device for feeding out, one by one, sheets of laminar material, which together form a stack, said device comprising a positively driven conveyor member and a movable friction member cooperating under pressure with the conveyor member, the cooperating parts of which members move along closed tracks and between which members the sheets are fed out, the direction of movement of the friction member being dependent on the possible presence between the friction member and the conveyor member of at least two superimposed sheets of laminar material, while the friction between the friction member and one of the sheets as well as the friction between the conveyor member and one of the sheets is greater than the friction between two of the sheets, continuously operating driving means for the friction member, including driving members and a slip clutch between the driving members and the friction member, continuously tending to drive the friction member via the slip clutch, with a force which is always sufficient to overcome the friction between two of the sheets of laminar material, in a direction opposite to the direction in which the friction member is influenced by the conveyor member.

3,044,771
SHEET HANDLING CYLINDER
Robert K. Norton, Twinsburg, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 22,760
9 Claims. (Cl. 271—53)



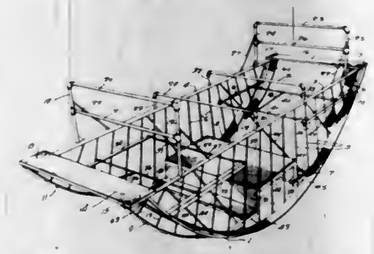
1. In a sheet handling device, a generally horizontal feed table along which sheets are fed, means for temporarily arresting and registering each sheet in turn at a forward end of the table, a rotatable cylinder adjacent the forward end of the table and occupying a position in which the forward end of the table closely approaches the cylinder at an acute angle, said cylinder having an operative peripheral surface with a gap therein, a gripper post bar secured to the cylinder in the gap at a trailing end thereof, said bar having its gripping surface generally coinciding with the cylinder's surface, a plurality of gauge pins mounted on the gripper bar, means conveying registered sheets one at a time against the gauge pins at a speed greater than cylinder speed at the time each sheet arrives at the gauge pins, gripper fingers mounted in the gap and adapted to cooperate with the gripping surface of the gripper post bar to grip sheets when registered against the gauge pins, said cylinder surface being provided with an inwardly extending longitudinal slit between the gripper post bar and the portion of the cylinder to which it is attached, said slit being adapted to receive a thin, flexible sheet member for covering the periphery of said cylinder with one end thereof inserted into said slit, and means securing both ends of the sheet member to the cylinder, the securing means for that end of the sheet member extending into said slit being supported in the gap independently of the gripper post bar on that side of the bar remote from the slit and passing through relieved portions of the bar.

3,044,772
METHOD OF AND MEANS FOR HANDLING AND STACKING FOLDED SHEETS
Leslie Trenner, 2833 SE. 2nd Ave., Camas, Wash.
Filed Mar. 11, 1960, Ser. No. 14,223
2 Claims. (Cl. 271—68)



1. The improved method of forming a succession of identical sheets, which have been folded over on themselves with a single fold, into a compact stack of desired size, the improved method consisting in delivering the folded sheets successively onto a conveyor in such position that the folded edges of alternate sheets and the edges opposite the folded edges of the other sheets will be on the same side of said conveyor, bringing said folded edges and said opposite edges of said sheets to a predetermined line on said conveyor parallel to the direction of travel of said sheets on said conveyor, passing said sheets consecutively through press rolls at the end of said conveyor to flatten out the fold crease in each sheet, passing said sheets from said press rolls onto a second conveyor moving in the same direction as said first mentioned conveyor, gradually causing each folded sheet to become upwardly bowed on said second conveyor prior to its discharge from said second conveyor, discharging said sheets from said second conveyor onto a stacker having a vertically movable bottom platen with a downwardly bowed top surface in order that the previous bowing given to said sheets will be temporarily reversed while said sheets are stacked on said platen, and moving the sheets off of said platen as soon as a stack of desired height has been produced, whereby the successive opposite bowing of the sheets subsequent to the pressing of the fold creases will contribute to causing the sheets in the stack to assume flat compact arrangement upon removal of the stack from said platen.

3,044,773
SEESAW ROCKER
Thorald H. Cox, Odgen, Utah (Hooper, Utah)
Filed Sept. 18, 1959, Ser. No. 840,872
3 Claims. (Cl. 272—56)

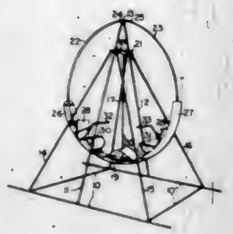


1. A seesaw rocker comprising a pair of arcuate ground rockers, means spacing said rockers apart and maintaining said rockers parallel to one another, a pair of straight rods each extending longitudinally of one of said rockers with the ends of the rocker connected thereto, the end portions of each of said rods extending beyond their respective rocker, rider supporting members mounted on the extended end portions of said rods, handholds adjacent said members connecting said rods spacing the same apart in substantially parallel relationship, and curved runners each connected at one end to an end portion of one of said rockers and extending longitudinally thereof, but spaced therefrom and at its other end to an extended end of the rod connected to its respective rocker.

3,044,774
SWING
Carl L. Hannas, St. Paul, Alberta, Canada
Filed Feb. 17, 1959, Ser. No. 793,778
1 Claim. (Cl. 272—85)

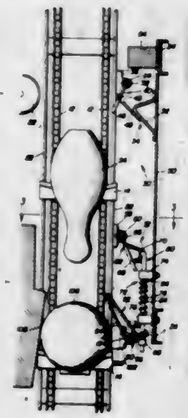
A swing comprising a frame, a foot rest suspended from a pivot on said frame, a pair of arms each suspended on said frame from a pivot above said foot rest pivot, and a pair of seat members each hinged at its upper end to an arm and at its lower end to said foot rest, the distance from said arm pivot to any point on said foot rest rest or on said seat members being substantially less than the distance from said arm pivot to the base of said frame, whereby no moving parts of the swing can strike a supporting surface beneath said frame, said foot rest

and said seat members each being provided with a curved shield, whereby the lower portion of said swing forms a substantially smooth curved surface of such curvature



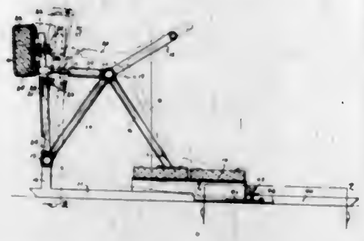
that on each downward movement of the swing the leading portion of the swing always presents an arcuate surface.

3,044,775
DEVICE FOR EJECTION OF BOWLING BALLS
Philip J. Russo, 1401 Boulevard, New Haven, Conn.
Filed Sept. 11, 1958, Ser. No. 760,432
28 Claims. (Cl. 273—43)



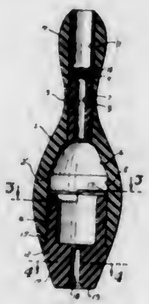
1. In a bowling ball and pin elevator, a support frame, vertically moving elevating means mounted on said support frame, vertically spaced pairs of horizontally spaced supports on said elevating means for supporting thereon and therebetween bowling balls or bowling pins, vertically spaced ball and pin stations at which balls and pins are to be respectively ejected from said elevating means, a bowling ball ejector including a ball ejecting member, mounting means secured to said support frame and mounting said ball ejecting member in proximity to the path of vertical travel of said supports for movement towards and from said supports and a bowling ball carried thereby for engaging and ejecting said ball from said supports and to said ball receiving station, actuating means engageable and operable by said pairs of supports for ball ejecting movement of said member as said supports move past said member, said ejecting member actuating means being disposed for normal positioning in the path of movement of said supports for actuation thereby, retaining means normally retaining said actuating means out of said path of movement, release means operable in response to the passage of a bowling ball by said ejecting member but not operable by the passage of a bowling pin for rendering said retaining means ineffective to retain said actuating means out of the path of movement of said supports.

3,044,776
FOOTBALL TRAINING DEVICE
Vernon C. Weidmaier, 4305 Hickman, and Samuel J. Nicolino, 335 Dunham, both of Des Moines, Iowa
Filed Nov. 12, 1959, Ser. No. 852,456
10 Claims. (Cl. 273—55)



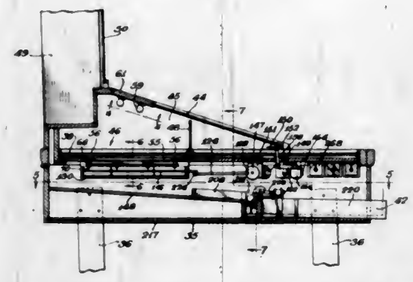
1. In a football training device, a base portion, a first horizontal shaft operatively secured to said base portion, a second horizontal shaft operatively secured to said base portion and positioned above and to the rear of said first shaft, an arm pivoted at its lower end to said first shaft, a cylinder operatively embracing said second shaft, a coil spring in said cylinder, a piston shaft extending rearwardly into said cylinder and operatively engaging the forward end of said spring; said piston having its forward end operatively secured to said arm, a plate operatively secured to said arm, a pad member on said plate, a ground engaging member, means for hinging said ground engaging member to the rear of said base portion, and an adjustable means for limiting the movement of said base portion relative to said ground engaging member.

3,044,777
BOWLING PIN
Mark M. Friedman, Inglewood, Calif., assignor to Fibermold Corporation, Torrance, Calif., a corporation of California
Filed Oct. 19, 1959, Ser. No. 847,196
13 Claims. (Cl. 273—82)



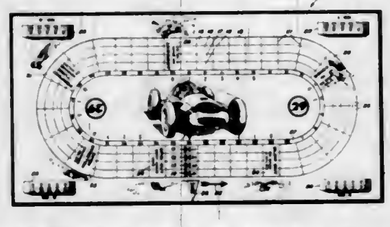
1. A bowling pin formed of molded plastic material, comprising: a unitary molded body member defining externally the belly, neck, and head of a bowling pin, and having a generally cylindrical cavity extending upwardly therein from its under end; and a unitary molded bottom member including a flat base and side walls completing the external contour of the bowling pin, and having a generally cylindrical tubular shell extending snugly into said cavity with the generally cylindrical surfaces of said shell and cavity bonded together to define a joint extending longitudinally of said bowling pin.

3,044,778
COIN-OPERATED GAME
Joseph E. Beck, % Mitchell Novelty Co., 3506 W. National Ave., Milwaukee 4, Wis., and Melvin Binks, 3859 N. Elston Ave., Chicago, Ill.
Filed Apr. 9, 1958, Ser. No. 727,407
16 Claims. (Cl. 273—125)



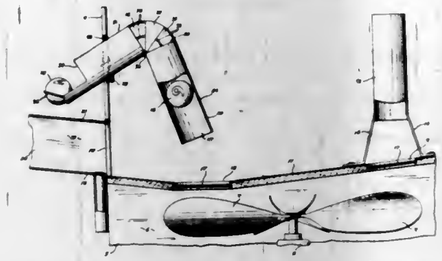
1. A free delivery coin-operated game including a playing table having an area from which balls are played and a covered area having a pocket array therein, means responsive to the deposit of a coin to ready said pocket array for the reception of balls and to deliver a predetermined number of purchased balls to the player, second means responsive to the deposit of a second coin to deliver a ball in addition to said predetermined number of purchased balls, means responsive to the play of said balls toward said pocket array to interpose temporarily a barrier between said playing area and said covered area, means responsive to the establishment of balls in a particular relation in said pockets to determine a winning combination, means responsive to said determination to count the balls in said pocket array, to count the number of balls sold, and to compare the latter number with the number of balls in said array, and means responsive to said comparing means finding the number of balls sold and the number in said array to be equal to declare a winning combination.

3,044,779
GAME
Joseph L. Hvizdash, N. Main St., North Uxbridge, Mass.
Filed Mar. 18, 1960, Ser. No. 16,014
2 Claims. (Cl. 273—134)



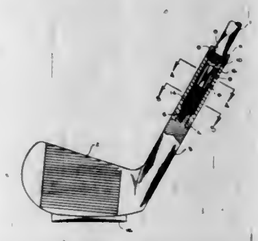
1. A game, comprising a rectangular board carrying indicia simulating an oval-shaped automobile race track divided into a plurality of parallel lanes, the track being divided into mileage segments by lines which extend across the lanes, a marker for each lane in the form of a racing automobile, certain of the segments containing indicia of value affecting the progress of the markers around the track, a set of cards associated with each marker, the cards being adapted to be turned up in turn by players associated with the markers and carrying on their faces indicia designating value determining the progress of the markers from segment to segment around the track, and a block at each corner of the board provided with holes and pegs to serve as a lap register.

3,044,780
BALL PICK-UP DEVICES FOR MIXING MACHINES
Solly Silverman, 24 Baycrest Ave., Toronto, Ontario, Canada
Filed Feb. 9, 1960, Ser. No. 7,692
5 Claims. (Cl. 273—144)



1. In a ball mixing machine having a cage provided with an apertured floor through which a blast of air enters for tossing balls, a delivery device comprising a pick-up element providing an imperforated generally upright passage for balls, said pick-up element having a lower end and an upper end, said pick-up element spaced above said floor with its lower end at a height sufficient to freely admit a ball and disposed in alignment with the aperture in said floor, a delivery chute of effectively tubular cross section, sloped downwardly from the upper end of said pick-up element and having a junction with said upper end of said pick-up element in which there is an opening to allow escape of air for pressure reduction, and a ball-catching device at the lower end of said delivery chute, effectively in the longitudinal axis of said delivery tube, the lower end of said delivery tube being disposed exteriorly of said cage.

3,044,781
PRACTICE GOLF CLUB CONSTRUCTION
Thomas M. Murphy, 4209 Vera St., Saginaw, Mich.
Filed Jan. 22, 1958, Ser. No. 710,568
2 Claims. (Cl. 273—193)



1. A practice golf club construction comprising a club head part; a club shaft part; rigid, hollow, tubular means secured to one of said parts and slideably receiving a terminal end portion of the other of said parts; interengaging means formed on said tubular means and on the terminal end portion of the other part that is received within said tubular means and cooperating with one another to prevent relative rotation of said parts while permitting limited relative reciprocating movements thereof; ground engaging means extending below the lowermost surface of said club head part to protect said club head part and to provide appreciable resistance to swinging movement of said club head part across the ground; spring means received in said tubular means and interposed between said parts and constantly exerting a force on said parts tending to elongate the overall length of the club construction, said spring means being yieldable to permit relative movement of said parts in a direction

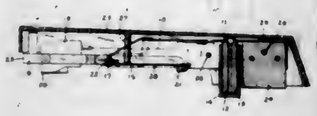
to shorten the overall length of said club construction upon ground engagement of said ground engaging means; and limit means reacting between said tubular means and said terminal end portion of said other of said parts for limiting relative movement of said parts in a direction to elongate the overall length of said club construction.

3,044,782
SPINDLE WITH FEEDER POSITION RECORD CHANGING PHONOGRAPHS
Hans Christian Hansen, Copenhagen, Denmark
Filed May 28, 1958, Ser. No. 738,478
Claims priority, application Great Britain May 31, 1957
15 Claims. (Cl. 274—10)



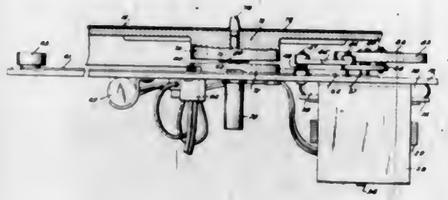
1. A phonograph having a centre spindle for supporting a stack of records to be supplied one by one to the turntable and having means for supporting the remaining part of the stack, if any, while the lowest record is supplied to the turntable, means operable to clamp the lowest record in its centre hole means operable to positively pull said record down to a position isolated from the remaining records of the stack, and means thereafter operable to release said clamping means and allow said record to drop to the turntable.

3,044,783
PHONOGRAPH PICKUP
Daniel P. Doncaster, Rye, N.Y., assignor to Columbia Broadcasting System, Inc., New York, N.Y., a corporation of New York
Filed Feb. 16, 1961, Ser. No. 89,846
Claims priority, application Germany Feb. 17, 1960
4 Claims. (Cl. 274—23)



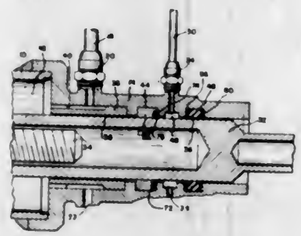
1. A phonograph pickup comprising an arm fixed to a shaft, rocker-arm means pivotally mounted intermediate the ends thereof on said arm in spaced-apart relation to said shaft, stylus-actuated cartridge means secured to said rocker-arm means on one side of the pivot therefor, said arm, said rocker-arm means and said cartridge means being covered by a shell member which is mounted for pivoting movement about a pivot means carried by said arm at a location near said shaft, said shell member including means engageable with said rocker-arm means on the other side of the pivot therefor to lift said cartridge means away from a record.

3,044,784
TURNTABLE ASSEMBLY FOR PHONOGRAPH RECORDS
Paul J. Vitale, West Babylon, N.Y., assignor to Pickering Associates, Inc., Plainview, N.Y., a corporation of New York
Filed Nov. 3, 1958, Ser. No. 771,370
12 Claims. (Cl. 274—39)



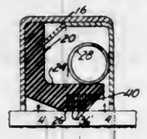
1. A phonograph turntable assembly comprising a supporting structure, a turntable having a flat upper surface for supporting a phonograph record disc, and means for supporting said turntable on said supporting structure for rotary motion including a first ring-shaped magnet mounted on the undersurface of the turntable concentric with the center thereof, and a second ring-shaped magnet mounted on the supporting structure beneath the turntable with the poles of the two magnets arranged in superimposed vertically spaced repelling relationship, the said magnets presenting vertically opposing magnetic fields of sufficient strength to support the weight of said turntable against the force of gravity and the repelling force of said magnets relative to the weight of said turntable being such that the natural period of vibration of the system is at a lower frequency than the audio sound band whereby the supporting means for the turntable serves as a mechanical filter for external vibrations in the audio range.

3,044,785
ACTUATOR SEAL ASSEMBLY
Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 20, 1959, Ser. No. 807,396
2 Claims. (Cl. 277—59)



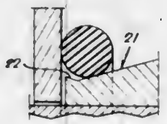
1. A seal assembly for a hydraulic actuator having a cylinder with a reciprocable rod extending therefrom including, a tubular member attached to the rod end of said cylinder, said tubular member having a pair of spaced internal annular grooves, a rod ring orifice assembly disposed within the inner of said grooves comprising an annular retainer formed by a plurality of arcuate sections, a unitary split pressure ring within said retainer and an orifice ring within said pressure ring, said orifice ring resiliently engaging said rod and forming a self-cleaning orifice between the rod and the ring, an O-ring seal assembly disposed within the outer groove of said tubular member, and a drain passage between said rod ring orifice assembly and said O-ring seal assembly whereby hydraulic fluid flowing through said orifice due to a pressure differential across said orifice ring will lubricate said O-ring seal assembly and flow through said drain passage.

3,044,786
SHAFT SEAL
Charles W. Chillson, Packanack Lake, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed May 2, 1957, Ser. No. 656,707
2 Claims. (Cl. 277—70)



1. A fluid seal comprising an elastomeric ring of fluid-impervious material, a retainer for the ring, said ring having an annular sealing face for sliding engagement with a relatively rotatable part and having a portion for securement to another part, said ring having an annular slit therein intersecting said bearing face, and a duct in the ring communicating with the slit, and fluid-carrying means extending from the duct to outside of the retainer.

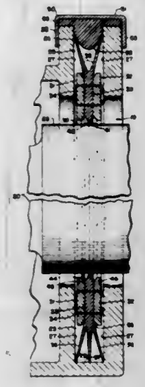
3,044,787
SEALING ARRANGEMENT
Karl Gustav Einar Derman, Savedalen, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Goteborg, Sweden, a corporation of Sweden
Filed Sept. 26, 1958, Ser. No. 763,517
Claims priority, application Sweden Sept. 30, 1957
2 Claims. (Cl. 277—83)



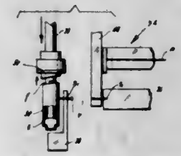
1. In a sealing arrangement for providing a seal between relatively rotatable members comprising a tapered surface of rotation on one of said members concentrically with the axis of rotation, a surface on the other of said members confronting said tapered surface and disposed transversely to the axis of rotation, said tapered surface converging toward said transverse surface and having an angle of taper of less than 30 degrees, and an O-ring concentric with the axis of rotation mounted under radial tension on said tapered surface, whereby said O-ring tends to roll on said surface rather than slide thereon against the face of said transverse surface to provide a seal between said tapered and transverse surfaces.

3,044,788
DUST GUARD WELL CAP
Waldemar H. Korn, 729 Western Ave., Davenport, Iowa
Filed Aug. 30, 1960, Ser. No. 52,980
8 Claims. (Cl. 277—131)

1. In combination, a dust guard for mounting in the dust guard receiving well of a car journal box, said dust guard comprising a pliable sealing lip of elastomeric material projecting upwardly from the upper portion of said dust guard, and a cap separate from said dust guard adapted to fit down over the top of the well for closing the top of said well after said dust guard has been inserted therein, said cap including means adapted to hold said pliable sealing lip pressed against the adjacent wall of said well.

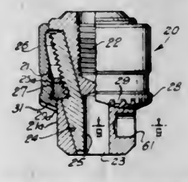


3,044,789
WORK SUPPORT HEAD AND MANDREL FOR THE MANUFACTURE OF STUDDED ELECTRODES
George B. Erskine and Stanley J. Gartner, Emporium, Pa., assignors to Emporium Specialties Co., Inc., Emporium, Pa., a corporation of Pennsylvania
Original application Oct. 3, 1957, Ser. No. 687,913, now Patent No. 2,951,933, dated Sept. 6, 1960. Divided and this application Jan. 22, 1960, Ser. No. 4,120
9 Claims. (Cl. 279—2)



1. In a machine for the manufacture of studded electrodes, a mandrel adapted to receive an electrode body and including a hollow cylindrical mandrel body having a series of gripping jaws adapted to be expanded into locking engagement with said electrode body, an expanding member disposed within said mandrel body and arranged to expand said gripping jaws in response to axial displacement of said expanding member relative to said mandrel body, and means operatively connected to said expanding member to axially displace said expanding member for locking said gripping jaws in engagement with said electrode body.

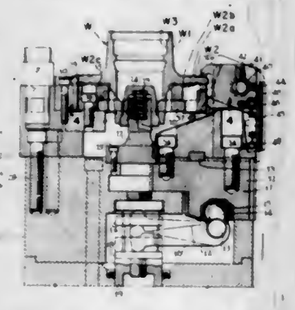
3,044,790
CHUCK AND OPERATING KEY WITH ENLARGED PILOT
Arthur M. Stoner, Madison, Conn., assignor to The Jacobs Manufacturing Company, West Hartford, Conn., a corporation of New Jersey
Filed Feb. 24, 1959, Ser. No. 795,225
18 Claims. (Cl. 279—61)



1. A key operated chuck comprising a body composed of relatively low carbon steel, a sleeve mounted for ro-

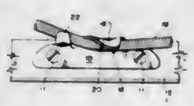
tation on said body but held against axial movement, said sleeve being composed of relatively tough steel as compared with the body, jaw means supported in said body and movable to open and closed positions in response to rotary movement of the sleeve, a bevel gear on the lower end of the sleeve, said bevel gear being hardened by heat treatment, and a radial bore in the chuck body lying closely adjacent to the bevel gear, said bore being adapted to provide a bearing for a hardened key meshing with the bevel gear, the portion of the body surrounding said bearing being relatively soft and therefore having relatively less resistance to wear as compared with the bevel gear and hardened key, the bevel gear having straight teeth separated by radial grooves, the edges of the teeth extending downwardly and inwardly to form the elements of a frustum of a cone, the radial bore having a diameter of sufficient size and depth to extend beyond the path of the lines formed by projecting the elements of the cone frustum.

3,044,791
CLAMP CHUCK FOR WORKPIECES
Joseph P. Nicosia and Richard Newhouser, Detroit, Mich., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 16, 1961, Ser. No. 110,504
4 Claims. (Cl. 279—106)



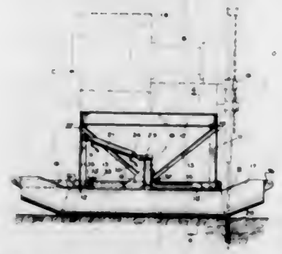
1. Clamp chuck mechanism for a workpiece having a hub and a flange, comprising in combination, a rotary head, a plurality of radially movable clamp jaw slides mounted on said head, a gripper jaw pivoted on said slide, said gripper jaw having an upper projection adapted to grip the flange of a workpiece and a lower projection adapted to engage an element which causes the jaw to swing inward at the upper projection when the slide is moved inward, a support for the flange of the workpiece between said jaw projections, and a floating ring disposed between the lower projections of said jaws for producing equalized gripping action by the upper projections of said jaws.

3,044,792
HOLD-DOWN SADDLE FOR TENSION CABLES
Scott G. Osborn, 3453 74th Place SE., Mercer Island, Wash., and Donald H. Amick, 2727 6th Ave. S., Seattle, Wash.
Filed Jan. 18, 1960, Ser. No. 3,130
5 Claims. (Cl. 280—11.35)



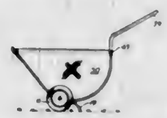
1. In combination, a ski having boot binding means including a boot heel encircling tension cable which normally lies alongside an edge of the ski; and a hold-down saddle carried by the ski to overlie the tension cable to restrain the same from upward or outward movement when stressed, said saddle having an angular camming surface at its rear edge, said surface being shaped to course at an angle acute to the longitudinal axis of the tension cable outward and forward from a point normally contiguous with the inside surface of said cable, said acute angle being such that upon upward and forward flexing of the cable, said cable is forced outwardly of and dislodged from beneath said saddle.

3,044,793
BASE FOR CORE DRILLS
Haakon Bottner, 11544 NE. Glisan, Portland, Oreg.
Filed Oct. 7, 1958, Ser. No. 765,787
4 Claims. (Cl. 280—12)



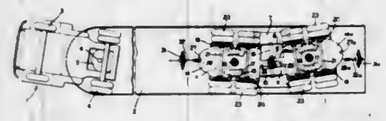
1. Means for supporting core drills for horizontal adjustment comprising a pair of elongated tubular skid members, each of said skid members being of a diameter to provide a relatively large ground engaging surface and having upwardly inclined ends terminating in hook engageable portions, said skid members being arranged in spaced parallel relation, means rigidly interconnecting and bracing said skid members, a channel member defining a trackway secured to the upper surface portion of each of said skid members and extending lengthwise thereof, a horizontal supporting frame for a vertical core drill, a plurality of legs rigidly secured to and supporting said frame, and a pair of runners secured to the lower ends of said legs and slidably disposed in said trackways.

3,044,794
COLLAPSIBLE UTILITY CART
Burton P. Franklin, Bachelor Hall, and Clemouth E. Pollard, Danville, Va., assignors to H. K. Porter Company, Danville, Va., a corporation of Delaware
Filed Oct. 3, 1961, Ser. No. 142,601
5 Claims. (Cl. 280—36)



5. A collapsible household utility cart comprising an axle adapted to receive at each projecting end a ground engaging wheel; an elongated base plate resting on said axle and extending lengthwise between said wheels; a vertically positioned plate wheel guard located at each end of said base plate adjacent said wheel, said wheel guard being connected to said base plate through a pair of laterally spaced brackets including bent portions attached to and beneath said plate and extending on either side of said axle; a U-shaped rod normally substantially vertically positioned at each end of and in a plane substantially perpendicular to said axle, said rod having one end in front of and one end behind said axle and having a vertex portion extending beneath said axle and pivotally supported in said bracket bent portions, said vertex portion being bent inwardly with respect to the principal plane occupied by said rod whereby to furnish a positive stop to the outward swing of said rod; a curved tubular handle having open ends adapted to receive the respective rear ends of said rods; clip means slidably mounted in each end of said handle and including integral pin members adapted to positively locate said handle end with respect to said rod end, to lock said handle to said respective rear ends and to provide an integral hook extending therefrom; a flexible service bag including a substantially rectangular opening having supporting eyelets at the respective front and rear corners thereof, said front eyelets being adapted for connection to the front ends of said rods and said rear eyelets being adapted for connection to said hooks thereby enabling said bag to be freely supported by said rods; a foot stand connected to said plate enabling said cart to be parked in upright position; said cart being collapsible through disengagement of said clip means, removal of said handle and inwardly folding of said rods.

3,044,795
TRAILER WITH STEERABLE WHEELS
Charles A. Standing, 1079 W. Ely St., Alliance, Ohio, and Harold H. Bailey, 3364 Porter Road, New Milford, Ohio
Filed June 30, 1961, Ser. No. 121,031
7 Claims. (Cl. 280—81)



1. In a trailer having a chassis for pivotal attachment to a towing vehicle, an elongated fifth wheel disposed longitudinally beneath said chassis, a vertical pivot connecting the central portion of said elongated fifth wheel to the chassis, a pair of fifth wheels centrally pivotally connected to the forward and rear end portions respectively of said elongated fifth wheel, a wheel-carrying axle upon each of said pair of fifth wheels, bars rigidly mounted upon the opposed ends of said pair of fifth wheels, means slidably and pivotally connecting said bars to each other, and means for selectively alternately pivotally connecting the forward end of the foremost fifth wheel only of said pair or the rear end of the rearmost fifth wheel only of said pair to the chassis, for causing said elongated fifth wheel to pivot upon said chassis and said pair of fifth wheels to pivot upon said elongated fifth wheel so as to cause the wheels of the respective axles to traverse substantially the same path when the trailer is moving forward or backward respectively.

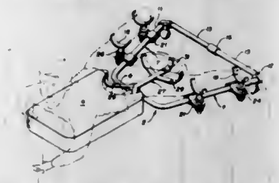
3,044,796
ADJUSTABLE SLIDE ASSEMBLY FOR VEHICLE WHEEL LOAD BALANCE
Paul C. Andrews, 3959 Roland Blvd., Normandy, Mo.
Filed Dec. 16, 1959, Ser. No. 860,046
4 Claims. (Cl. 280—81)

4. In a vehicle wheel load adjusting assembly the combination of: a wheel carriage having spaced beams, each beam having a box-like section to enclose an interior space; a body having spaced slides engaged upon said beams and slidably movable therealong; locking pins mounted on said beams and movable through said interior space, each locking pin having an end portion projectable from a beam into engagement with an adjacent body slide; and means in the vehicle normally exposed to road dirt and the like to control said locking pins to lock and release said body slides relative to said spaced beams, said means including an elongated hollow guide member having an elongated slot opening in a direction such that foreign matter from the road will not become caught in said hol-



low guide, a non-rotatave slide member relatively freely movable in said elongated slot, and securing means on one of said members adapted to engage with the other member to hold said slide member in adjusted position.

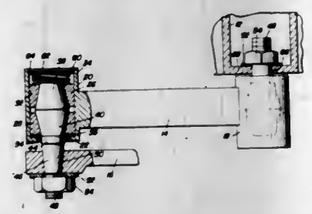
3,044,797
PERAMBULATOR FOR INVALIDS
Loren R. Borland, San Raphael, Calif. (2255 Van Ness Ave., San Francisco, Calif.)
Filed Apr. 1, 1960, Ser. No. 19,217
7 Claims. (Cl. 280—87.02)



1. A perambulator for an invalid having immobilized legs comprising a generally Y-shaped frame structure including a pair of spaced apart angularly related independent rear frame members diverging with respect to each other from adjacent their front ends for supporting the legs of the individual in spread apart position, means mounting said rear frame members for adjustment relative to each other in said diverging relationship and in substantially the same horizontal plane to vary the angle therebetween for accommodating the individual's legs in a selected comfortable position; a front frame part for supporting the individual's trunk, the space between said rear frame member adjacent said front frame part being open; and roller supporting means on said front frame part and on said rear frame members,

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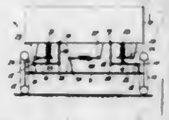
3,044,798
REPLACEMENT UNIT FOR IDLER ARM BRACKET
Theodore C. Gerner, P.O. Box 4305, Oklahoma City, Okla.
Filed Mar. 6, 1959, Ser. No. 797,645
7 Claims. (Cl. 280—95)



1. A replacement assembly for idler arms of an automobile steering linkage comprising an idler arm having a

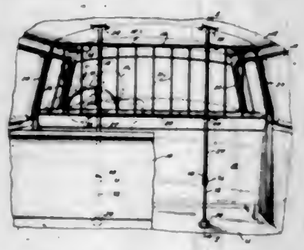
pivotal connection at one end for journaling the same upon the chassis of an automobile and having a pivotal connection at its other end for engagement with a portion of a steering linkage, at least one of said pivotal connections including a female member having a bore therein and a male member received therein, said male member including diametrically enlarged reversely varying surfaces, upper and lower wedge means each slidably received in and engaging the wall of the bore in said female member and having wedging surfaces complementary to and engaging those of the male member, resilient means yieldingly and continuously urging said wedge means into wedging contact with said male member and the female member whereby to automatically take up wear therebetween, said diametrically enlarged reversely varying surfaces being conical.

3,044,799
VEHICLE PROVIDED WITH MEANS FOR CONTROLLING ITS TRANSVERSE INCLINATION IN CURVES
Ernst J. H. Fiala, Sindelfingen, Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Jan. 9, 1959, Ser. No. 785,927
Claims priority, application Germany Jan. 11, 1958
19 Claims. (Cl. 280—112)



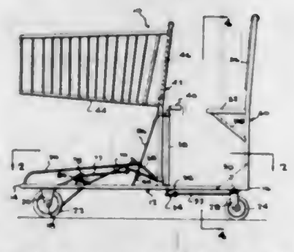
17. In a motor vehicle, the combination comprising a body, at least one pair of oppositely-disposed wheels and axles for carrying said wheels, means for supporting said body on said wheels including a lever associated with each of said pair of oppositely-disposed wheels extending transversely of the longitudinal axis of said vehicle each of said levers having one end connected with the axle adjacent said associated wheel, a substantially upright link connecting the other end of each said lever with said body, a member inserted between said body and each of said levers and movable lengthwise of said lever for adjustment of the point of engagement between said body and said lever, said member being a spring movable in unison with said body lengthwise of said lever, and means for moving each of said members associated with said wheels simultantously in the same direction during the traversing of a turn.

3,044,800
AUTOMOTIVE VEHICLE SAFETY BARRIER
Clarice B. Wicker, Burns Drive, Rte. 4, Sanford, N.C.
Filed Apr. 21, 1961, Ser. No. 104,734
3 Claims. (Cl. 280—150)



1. A device for use in a vehicle as a barrier for limiting the movement of objects and comprising multiple posts of adjustable length for disposition in the vehicle in upright position, said post having cushioning members at their upper and lower ends for engagement with the roof and floor of the vehicle for anchoring the posts in place, a barrier for mounting on said posts, said barrier comprising a central section and extensible end sections, means for mounting said barrier on said posts in an elevated out of the way position when not in use, in an upright operative position of use, and in at least one generally horizontal position for supporting objects thereon, said means comprising cooperating fasteners on said barrier and posts including right angular staples attached to the sides of said barrier substantially at right angles to the plane of the latter, and said posts having inclined slots therein in which said staples are adapted to be received and the barrier supported, and additional means remote from said angular staples for fastening portions of said barrier when in upright position to said posts.

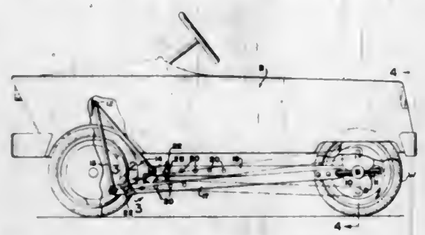
3,044,801
OCCUPANT PROPELLED SHOPPING CART
John Vicany, Muscoda, Wis.
Filed Oct. 21, 1960, Ser. No. 64,082
4 Claims. (Cl. 280—202)



1. A shopping cart comprising a horizontally disposed frame having a forward end and a rearward end, a first pair of laterally spaced ground-engaging driving wheels supporting the forward end of said frame, a second pair of laterally spaced ground-engaging wheels supporting the rearward end of said frame, an upright rising from said frame intermediate the forward and rearward ends, a basket positioned above and spaced from said frame between said upright and the forward end of said frame and supported from said upright, a seat for an occupant of said cart positioned between said upright and the rearward end of said frame and carried by said frame, one of said second pair of wheels being mounted on said frame so as to constitute a steerable wheel and the other of said second pair of wheels being supported on said frame for castering movement, drive means on said frame, means drivingly connecting said drive means to said driving wheels, and steering means embodying a vertically-disposed shaft carried by said frame, an arm on the lower end of said shaft, and a pitman arm operatively connected to said steerable wheel and operable by an occupant of said seat, said drive means being operable by an occupant of said seat to propel said cart over a ground surface.

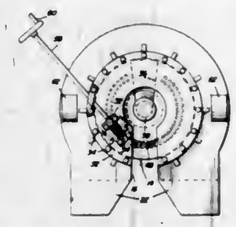
3,044,802
ADJUSTABLE PULL STRAP MECHANISM FOR JUVENILE VEHICLES AND THE LIKE
Alvin P. Douglas and Gilbert B. Hahn, Nashville, Tenn., assignors to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio
Filed Feb. 9, 1959, Ser. No. 791,941
2 Claims. (Cl. 280—256)

1. In a pedal driven juvenile vehicle or the like, having a drive mechanism for vehicle propulsion including a drive wheel, a crank type drive axle for said wheel rotatably mounted to the vehicle, a hanger member longitudinally spaced from the axle having one end pivotally mounted to the vehicle about an axis transverse of the vehicle, a flat pull strap connecting the other end of said hanger member to a crank portion of said axle, opposite ends of said pull strap being rotatably mounted respectively on said hanger and said crank portion of said axle, that improvement comprising: said pull strap having a series of apertures spaced longitudinally from the hanger connected strap end, a pedal having a supporting bolt secured in one of said apertures, a journal tube extending through an opening formed in and rigidly fixed to the hanger-connected end of the pull strap, said hanger member having a lateral projection extending parallel



to the axis of pivotal mounting of the hanger and through said tube to be journaled in the tube, said tube serving as a pull-strap stabilizing sleeve beam acting on said hanger projection whereby the pull strap is prevented from twisting relative to said projection when said pedal mounted on the pull strap intermediate the pivotally connected ends of the pull strap is subjected to vehicle propelling foot pressure; said journal tube having end-flanged and circumferential bulge formations on respective sides of and embracing the pull strap to firmly secure the tube therein.

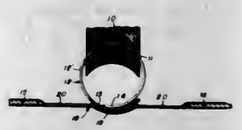
3,044,803
FIFTH WHEEL ASSEMBLY
Lloyd B. Wright, 8762 Acacia Ave., Garden Grove, Calif.
Filed Nov. 4, 1960, Ser. No. 67,421
9 Claims. (Cl. 280—433)



1. A fifth wheel assembly comprising a generally horizontal saddle plate, a kingpin slot in said plate terminating at one end in a semi-cylindrical end wall adapted to conform to and seatingly receive a kingpin, a lock plate, a radial slot in said lock plate terminating at its inner end in a semi-cylindrical camming wall adapted to conform to and seatingly receive a kingpin, means rotatably mounting said lock plate beneath said saddle plate for rotation about an axis coinciding with the longitudinal axis of said camming wall, said axis of rotation alined with said kingpin slot and generally paralleling and spaced slightly inwardly of the longitudinal axis of said end wall, and means for effecting rotation of said lock plate relative to said saddle plate.

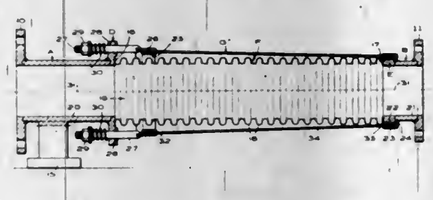
3,044,804
FLAT OPENING BOOK
Robert I. Thiel, Epping Forest, Annapolis, Md.
Filed Oct. 8, 1958, Ser. No. 766,078
2 Claims. (Cl. 281—29)

1. A book comprising a stack of sheets having a multiplicity of registering apertures along one border, a binding member having curved flexible fingers for cooperative engagement with the apertures in said sheets, said fingers being of larger diameter than the thickness of said stack and thereby having spaced portions extending outwardly of the stack, covering means for said sheets and binding member, said covering means comprising front and back cover members having a combined thickness approximately equal to the difference between the outer diameter of the rings and the thickness of the stack, said cover members positioned with their back edges lying forwardly



of the spaced portions of said fingers and the thickness of which extends outwardly of the stack, thin sheet means connecting the back edges of said cover members and extending around the exposed portions of said fingers when said book is closed, adhesive means on said sheet means firmly adhered to said binding member and to said covers whereby when the book is closed the front and back covers will be substantially parallel and in substantially the same plane as the spaced portions of the binding member so that a plurality of books may be stacked without tilting.

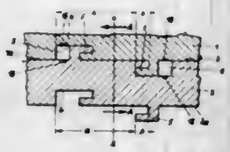
3,044,805
BELLOWS-TYPE EXPANSION COMPENSATOR WITH SPRING-CONTROLLED TUBULAR BRAIDED SHROUD
Frank A. McDonald, 63 Main St., San Francisco, Calif.
Filed June 22, 1959, Ser. No. 822,001
6 Claims. (Cl. 285—45)



1. In a bellows-type expansion compensator with spring-controlled tubular braided shroud: a pair of spaced pipe sections adapted to be disposed in substantial axial alignment with one another; a tubular metallic bellows interposed between the pipe sections and having opposite ends, one end of the bellows being secured to each of the pipe sections; the pipe sections having bores communicating with an interior passageway of the bellows, whereby a fluid under various pressures and temperatures may be conveyed through the pipe sections and bellows; the bellows defining convolutions that will be compressed, when the pipe sections are moved toward one another in an axial direction, while the convolutions will be expanded as these pipe sections are moved away from one another; a tubular braided shroud telescoped over the bellows and having opposite ends; means anchoring one end of the shroud to one of the pipe sections; the other end of the shroud being free and movable toward and away from the other pipe section, when the bellows is compressed and expanded, respectively, the braided shroud permitting slight angular movement in the bellows during its expansion or contraction; and spring means connected to the free end of the shroud and being operable to maintain the shroud taut, as the bellows is contracted and expanded; the shroud being disposed adjacent to the bellows to pro-

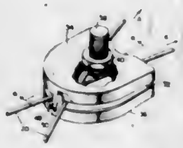
vide an exterior support for the bellows; and the tension placed on the shroud being sufficient to prevent the bellows from bulging to one side or the other of its centerline to any appreciable extent when the bellows is compressed.

3,044,806
COMPOUND ELECTRICAL SWITCH
Karl Preissler and Gottfried Alsch, Vienna, Austria, assignors to Hubert Laurenz Naimer, Vienna, Austria
Filed June 28, 1960, Ser. No. 39,350
Claims priority, application Austria July 10, 1959
3 Claims. (Cl. 287—20)



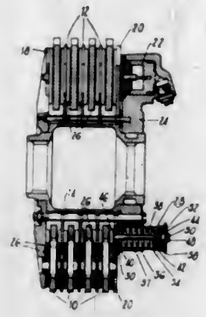
1. A compound electrical switch comprising at least two component units having confronting end surfaces, each of said surfaces being provided with a pair of spaced-apart connecting elements forming a bayonet coupling with a pair of spaced-apart complementary connecting elements on the respectively opposite surface, thereby securing said units in a predetermined aligned position; one of said units being provided with a recess open at its end surface and at its periphery, said one unit also having a projection partly overlying said recess and constituting one of said connecting elements, the other of said units being provided with a lug projecting from its end surface and constituting another of said connecting elements complementarily therewith, said lug being insertable into said recess and engageable with said projection upon a relative displacement of said confronting end surfaces, said lug forming with the walls of said recess a channel opening at the periphery of said one of said units; and a resilient locking member inserted into said channel and bearing upon said lug and a wall of said recess opposite said lug for preventing a reverse displacement of said units, said locking member having a wedge portion with tapered flanks engaging said end surfaces and bearing upon said units in a sense urging them away from one another in a direction transverse to said end surfaces against the retaining force between said projection and said lug.

3,044,807
GUY CLAMP
William C. Brisse, Laconia, N.H., assignor to Laconia Malleable Iron Company, Inc., Laconia, N.H., a corporation of New Hampshire
Filed Jan. 3, 1961, Ser. No. 80,363
9 Claims. (Cl. 287—49)



1. A clamp for a guy having a first and a second portion crossed within said clamp, comprising, a first and a second crowned clamping jaw and positioning means loosely supporting said first and said second crowned clamping jaw in operative relationship one to the other on either side of said first and said second portion.

3,044,808
ADJUSTOR LOCKING MEANS
Albert H. Osborne, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Feb. 3, 1958, Ser. No. 712,896
2 Claims. (Cl. 287—53)



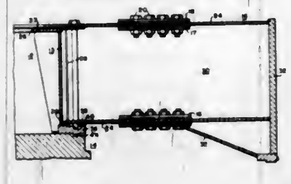
1. A brake adjustor comprising: an internally threaded sleeve, an externally threaded tubular member threadedly received in said sleeve, said threaded sleeve and tubular members being relatively movable to effect brake adjustment, a plurality of longitudinal grooves in the threaded portion of said sleeve and said tubular member respectively which can be aligned by turning said tubular member within said sleeve, a collar formed at the end of said tubular member, a wire which is passed through an opening in the collar and the aligned grooves in the threaded portion of said sleeve and said tubular member to lock them against relative rotation, and a bent over end of said wire which is passed through a second opening in the collar of said tubular member to keep the wire from being dislodged in its locking position.

3,044,809
FASTENER
Eric Birger Fernberg, Northwood, England, assignor to F.T. Products Limited, London, England, a British company
Filed May 18, 1959, Ser. No. 813,889
Claims priority, application Great Britain Dec. 12, 1956
1 Claim. (Cl. 287—53)



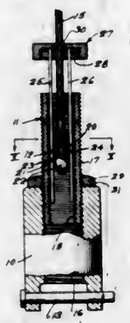
A fastener comprising a flat strip of spring material bent so as to have at least a portion of its length in horseshoe shape with a web and two limbs, there being formed intermediate the ends of one limb at least one prong having its end bent out of the general plane of the material adjacent the prong so as to be directed outwardly with respect to the horseshoe and an elongate major portion of the prong between the root and the said end of the prong which said major portion lies in the general plane of the material adjacent the prong, the maximum width of the pronged limb being less than the maximum width of the other limb and the length of the prong from its root to its end being at least one quarter the length of the major axis of the horseshoe.

3,044,810
COUPLING
Albert W. Latham, Murrysville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 25, 1959, Ser. No. 842,421
3 Claims. (Cl. 287—53)



3. In a dynamoelectric machine, the combination comprising a spider for a rotor, said spider comprising a pair of semicylindrical sections secured together and having a central opening, a solid cylindrical hub received in said central opening for securing said spider sections together and a shaft secured to said hub, coupling means for securing said shaft, said hub and said spider together, said coupling means including interengaging axially extending annular grooves and projections on the opposing faces of said hub, said spider and said shaft, circumferentially spaced openings through said grooves and said projections, said openings in said spider and said hub being in alignment with the openings in said shaft, and a dowel received in said aligned openings.

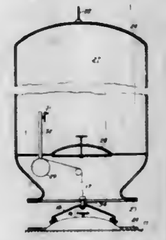
3,044,811
TURNBUCKLE WITH FORKED ADJUSTER
Shale J. Niskin, 2870 Grand Ave., Miami, Fla., assignor of one-half to Stevenson P. Clark, Coconut Grove, Fla.
Filed Apr. 17, 1961, Ser. No. 103,420
8 Claims. (Cl. 287—62)



1. An adjustable turnbuckle comprising a first connector means having an internally threaded bore, a threaded ball seat having an axially inwardly facing fragmentary spherical surface and a central bore for receiving an axially outwardly extending line with a sphere attached to the line and seated in said surface, said ball seat being of a length substantially shorter than said bore to turn completely into said bore, and an adjustment member having a portion extending into said bore for engaging the ball seat and having a portion outside of said bore so that the ball seat can be adjustably rotated from outside of said bore.

3,044,812
CABLE ANCHOR CLEVIS
Anthony Giovinazzo, 4555 Landis St., San Diego, Calif.
Filed Aug. 30, 1960, Ser. No. 53,013
2 Claims. (Cl. 287—91)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a cable anchor suitable for underwater assembly and positive attachment to a submarine escape hatch swinging bail bar having a downhaul cable attached to said cable anchor, a cylindrical plug attached to the outboard end of said cable, the improvement comprising an anchor clevis provided with pintle arms adapted to slide on said bail bar and adapted for positive attachment to said bail bar by a pintle bolt and nut so that said clevis will be automatically centered on said bail bar during downhaul operation regardless of ocean currents and deflection of an object attached to said bail bar said clevis comprising a body portion and pintle arms extending downward from opposite sides of said body portion,



a longitudinal axial slot in said body portion running parallel with a plane located midway between said pintle arms, said slot extending radially inward from the surface of said body portion through the axis thereof, said slot having a width greater than said cable, said pintle arms being spaced apart a distance to permit said plug to pass therebetween, and an opening in the bottom of said body portion connected to said slot to receive said plug and cable so that the cable and plug may be readily assembled underwater in said clevis body and positively attached thereto.

3,044,813
COUPLING
Walter A. Affeldt, La Crosse, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Oct. 6, 1958, Ser. No. 765,437
4 Claims. (Cl. 287—114)

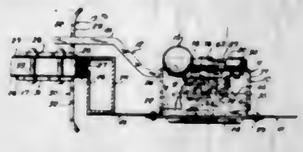


1. In a releasable coupling for gripping a member having a recessed portion and an abutment portion, the combination comprising: a support; a first cam carried by said support; a second cam carried by said support; a plurality of follower segments positioned between and engaged by said cams, each of said follower segments having a gripping surface; each of said segments having a part of their gripping surface engaging the surface of said recessed portion prior to release of said member, and a larger part of their gripping surface engaging the surface of said abutment portion during release of said member providing a greater area of contact between said segments and said abutment portion thereby increasing the ability of said segments to carry the force that said abutment portion exerts on said segments; and, resilient means carried by said support cooperating with said cams to urge said follower segments into gripping engagement with said member.

3,044,814
DOOR CONTROL MECHANISM
Albert L. Pelcin, Maple Heights, Ohio, assignor to The Eastern Company, a corporation of Connecticut
Filed Jan. 29, 1960, Ser. No. 5,419
13 Claims. (Cl. 292—126)

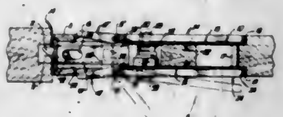
1. Latch mechanism for a door comprising, a mounting structure including channel-shaped means containing

a guideway, a body movable along said guideway to different operative positions, a spring in said guide way and effective against said body for urging the same in one direction along the guideway, said mounting structure having front and rear sides, a first handle means adjacent said front side and swingably connected with said mounting structure and engageable with said body for moving the latter along the guideway in the opposite direction in opposition to said spring, a latch member having an inner portion extending in a transverse crossing relation



to said guideway and connected with said body and a latching portion projecting from said mounting structure, first pivot means connecting said inner portion with said mounting structure for swinging of said latching portion to latching and unlatching positions in response to movement imparted to said inner portion by said body, a second handle comprising lever means adjacent said rear side and connected with said inner portion, and second pivot means swingably connecting said lever means with said mounting structure for swinging relative thereto to actuate said latch member.

3,044,815
LATCH MECHANISM
Charles J. Soss, 805 N. Alta Drive, Beverly Hills, Calif.
Filed Aug. 9, 1960, Ser. No. 48,405
5 Claims. (Cl. 292—173)



1. A latch mechanism comprising, a frame carrying a retractable bolt, said frame being adapted for mounting in a door with a surface thereof substantially flush with the door, an operating lever for the bolt, said frame having a recess to receive the said operating lever in a substantially flush position within the confines of the frame, and means comprising a push pad member mounted to have a normal position substantially flush with an exterior surface of the said frame, said operating lever and said push pad member having means providing interengagement there between whereby a push on the push pad member to move it toward but not into the interior of the said frame causes the operating lever to move outwardly in a position to be grasped, the means providing interengagement between the push pad member and the said operating lever having a construction whereby the operating lever may be pulled out substantially from the said frame freely of the push pad member without imparting further movement to the push pad member, and said operating lever having means for actuating the said bolt.

3,044,816
DOOR LATCH AND LOCK
Alex Nazurian, 21831 E. Nine Mile Road, St. Clair Shores, Mich.
Filed Dec. 18, 1959, Ser. No. 860,490
4 Claims. (Cl. 292—221)

1. A door latch comprising a casing adapted to be mounted on one side of a door, a latch bolt pivoted in said casing and movable between latched and unlatched positions, a handle pivoted in said casing and engageable with said bolt for moving the same to its unlatched position, spring means urging said bolt to latched position, a bracket adapted to be mounted on the other side of the door, a plunger slidably mounted in said bracket and having an inner end adapted to project through an opening in the door into engagement with said pivoted handle to cause



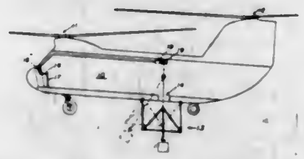
the latter to move said bolt to unlatched position, a movable locking member supported on a horizontally disposed rotatable shaft in said casing and movable into the path of movement of said bolt to lock said bolt in latched position, said bolt being provided with a slot on the lower side thereof, and said movable locking member being movable into engagement with said slot when the bolt is in the unlatched position to retain the same in said unlatched position.

3,044,817
DOOR FURNITURE
Antonio Marcante, Via S. Rosa 3, Thiene, Vicenza, Italy
Filed May 22, 1959, Ser. No. 815,190
Claims priority, application Italy May 23, 1958
6 Claims. (Cl. 292—336.3)



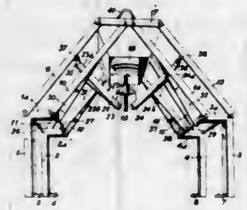
1. Door furniture associated with a lock structure comprising a plate having a projecting rose, a handle having a projecting shank for telescopically interfitting with said rose, said shank being provided with a tongue for interlocking with a groove in said rose for providing relative guided telescopic movement and restricted angular movement between said shank and said rose, locking means comprising a part of said lock structure, means forming a part of said shank for interlocking with said locking means of said lock structure at one of a plurality of axial positions of said shank depending on the thickness of a door, and means slidably mounted on said shank for actuating a lock upon axial movement thereof.

3,044,818
EXTERNAL CARGO SWING FOR AIRCRAFT
Harry Tobey, Havertown, Pa., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed May 2, 1961, Ser. No. 107,169
20 Claims. (Cl. 294—81)



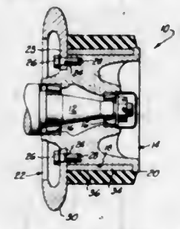
1. Means for handling external loads by a single aircraft comprising a relatively oscillatable load-supporting structure having upwardly extending truss members interconnected at an apex located in the direction of their upward extensions, a load-supporting member pivotally suspended from said apex, means attached to said member for connection to a load, and means for suspending said load-supporting structure from the lower part of said aircraft.

3,044,819
SHEET-METAL HANDLING APPARATUS
Simon Pierre, 17 Ave. des Violettes, Montfermeil, France
Filed May 19, 1961, Ser. No. 111,233
Claims priority, application France May 21, 1960
7 Claims. (Cl. 294—88)



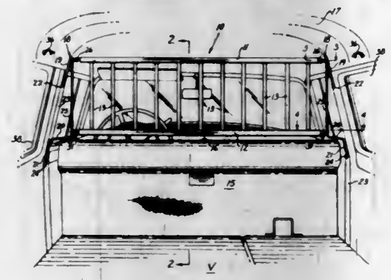
1. A gripping apparatus comprising pivoted arms for conveying and hoisting different loads, notably sheet metal stacks, which comprises a frame, hook-carrying arms supported by said frame and grouped in face to face relationship into two assemblies, each assembly comprising at least one pair of arms, deformable parallel-link systems pivoted on the one hand on said frame and on the other hand on each one of said arms, a motor carried by said frame, means operated from said motor for moving said two arm assemblies toward and away from each other in order to grip and release the load respectively, and a coupling device disposed between said motor and said means for moving said arm assemblies toward and away from each other, said coupling device comprising a driving member actuated from said motor and a driven member operating said means, said driving and driven members being such that they permit a free relative rotation through an angle sufficient to cause said motor, when the coupling takes place, to attain under no-load conditions a speed sufficient to release the arms previously clamped on the load transported by the apparatus.

3,044,820
WHEEL UNITS
Willis T. Cox, 1021 Fruit St., Santa Ana, Calif.
Filed May 12, 1961, Ser. No. 109,687
2 Claims. (Cl. 295—7)



1. A wheel unit for use on railroad rails which comprises: hub means for securing said wheel unit for rotation about an axle, said hub means being rigid and having an external cylindrical surface and a flange located at one end of said surface so as to extend outwardly from said surface; rigid flange means for engaging the side of a railroad rail attached to said hub means so as to extend outwardly from said external cylindrical surface at the end of said surface remote from said flange; and wheel means for engaging a railroad rail located on said external cylindrical surface between said flange and said flange means, said wheel means including an elastomeric cylinder located on the exterior thereof, said cylinder being held under compression by engagement with said flange and said flange means.

3,044,821
AUTOMOBILE SAFETY BARRIER
Clarice B. Wicker, Burns Hill Drive, Sanford, N.C.
Filed Oct. 27, 1959, Ser. No. 849,040
1 Claim. (Cl. 296—24)

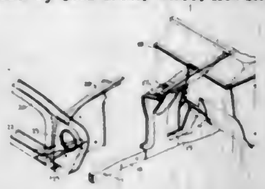


A safety barrier device for use in vehicles to prevent undesired movement of persons from one section of the vehicle to another section, said barrier device comprising a pair of bracket members, each bracket member having an upper end portion for securing to the upper portion of a vehicle, and a lower end portion for securing to the lower portion of a vehicle, said upper and lower end portions of said brackets having laterally offset portions so formed as to support said brackets on the vehicle with the intermediate portions of the brackets in substantially parallel relation on opposite sides of the vehicle, means for securing said offset portions of said brackets to the vehicle, a barrier including upper and lower horizontally extending rails with vertically extending bars therebetween of a height to obstruct the passage of children between the sections of the vehicle, one end of each rail being adjacent one bracket and the other end of each rail being adjacent the other bracket, eye bolts threaded into each end of said upper rail with the eyes thereof embracing said intermediate portions of said brackets and slidable thereon, a sleeve and cooperating nut on each of said eye bolts whereby said eye bolts may clamp against their cooperating brackets, hook bolts threaded into the ends of said lower rail, a sleeve and cooperating nut on each hook bolt whereby said hook bolts can be selectively clamped or released from said intermediate portions of said brackets, so the bottom rail of the barrier can be disconnected from the brackets by release of the hook bolts, and keepers for mounting in the upper portion of the vehicle and the lower portion of the vehicle for cooperation with said hook bolts, and the hook bolts can be secured to the keepers at the upper portion of the vehicle or to the keepers at the relatively lower portion of the vehicle, respectively.

3,044,822
AUTOMOBILE BODY FRONT END CONSTRUCTION
Walter B. Dean, Narberth, and Henry W. Wessells III, Ardmore, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 8, 1960, Ser. No. 68,084
4 Claims. (Cl. 296—28)

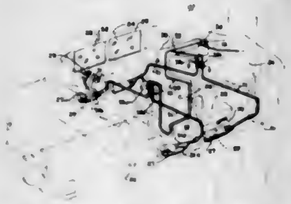
1. An automobile body construction of the unit body type, comprising in combination, a main body assembly including stub front rails for carrying motor and accessories, and front wheel mounts, said main body assembly

also including rear components of front wheel housings secured to said stub rails; a front end assembly including a rigid transverse stamping providing mountings thereon for radiator, grill and headlamps and space for mounting a bumper, said front end assembly having on each side a front component of a front wheel housing and supporting means carried by said front wheel housing component



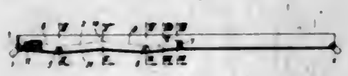
overlapping said stub front rail, and means for securing said supporting means to said stub front rails, said supporting means comprising Z-shaped gussets secured by a top web flange to said front wheel housing component, secured by a lower web and web flanges to said transverse stamping, and having a plate secured to its top web and to said transverse stamping.

3,044,823
VEHICLE WINDOW CONTROL SYSTEM
John R. Oishei, Buffalo, and Hobart V. Roberts, Jr., Elma, N.Y.; said Roberts assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Apr. 11, 1956, Ser. No. 577,478
3 Claims. (Cl. 296—44)



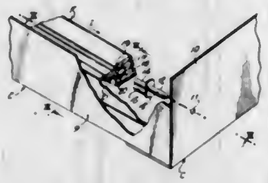
1. A power actuated window mechanism for a vehicle having front and rear cross seats with two front and two rear windows associated therewith, comprising a system of controls, one control for each window and all four of said controls being positioned within normal arm's reach of the driver when seated at one side of the front seat, the two rear window controls likewise being positioned within normal arm's reach of at least two passengers in sitting posture when one such passenger is seated at the other side of the front seat and the other such passenger is seated at one side of the rear seat, whereby either such passenger can conveniently adjust the position of at least two out of the four windows without leaving a normal seated posture.

3,044,824
SLIDING ROOF FRAME STRUCTURE FOR MOTOR VEHICLES
Johannes Werner, Offenbach, Germany, assignor to H. T. Golde G.m.b.H. & Co. K.G., Frankfurt am Main, Germany
Filed Apr. 6, 1960, Ser. No. 20,377
Claims priority, application Germany Apr. 27, 1959
5 Claims. (Cl. 296—137)



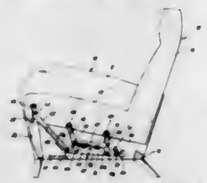
1. A vehicle roof frame construction comprising wall means on each side of said frame defining longitudinally extending side drainage channels and guide rail portions protruding inwardly from each of said side drainage channels, said wall means comprising a substantially horizontal ledge portion and a longitudinally extending guide rail member including an outstanding flange portion disposed flush with the upper wall of said guide rail portions on said ledge portion, a longitudinally reciprocable roof panel slidable in said guide rail portions, a portion of said wall means defining a cross channel at the front of said frame connecting said side drainage channels, and a plurality of drainage pipes connected to said side drainage channels at spaced locations along the length thereof.

3,044,825
CONNECTING MEANS FOR A GUIDE RAIL FOR SLIDABLE ROOFS OF VEHICLES
Hans Golde, Frankfurt am Main, Germany, assignor to H. T. Golde G.m.b.H. & Co., K.G., Frankfurt am Main, Germany
Filed Apr. 18, 1960, Ser. No. 22,882
Claims priority, application Germany May 2, 1959
7 Claims. (Cl. 296—137)



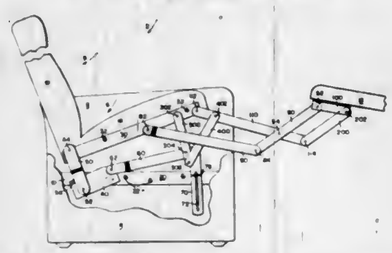
1. A vehicle roof comprising a fixed roof part, portions of said fixed roof part defining an aperture therein having four sides, a pair of guide rails adapted for slidable insertion through said aperture beneath and along said fixed roof part and for disposal along two opposite ones of said sides so as to extend from a third side beyond a fourth side of said aperture, said two opposite sides being substantially parallel to the longitudinal extension of said vehicle roof, a sliding roof part supported by and displaceable along said rails between a closed position in the proximity of said third side and an open position in the proximity of said fourth side and at least partly beneath said fixed roof part, a frame part attached to said fixed roof part adjacent the end faces of said rails remotest from said third side, portions of said frame part defining holes wherein facing said end faces, and coupling means adapted to be attached to, projecting from said end faces and fitting snugly into respective ones of said holes of the frame part.

3,044,826
MULTIPLE-POSITION RECLINING CHAIR
Fridtjof F. Schliephacke, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz
Filed Aug. 11, 1959, Ser. No. 833,093
12 Claims. (Cl. 297—88)



1. A multiple position reclining chair comprising a support frame, a body-supporting unit including a seat and backrest formed rigidly with each other, and means mounting the body-supporting unit on the support frame for movement through a first phase of motion from an upright sitting position to an intermediate tilted position and then through a second motion phase to a fully-tilted position, said mounting means including a main carrier member, means on the frame supporting said main carrier member in a stationary position during the first motion phase, front and rear guide means pivotally connected at spaced points to the body-supporting unit and pivotally mounted at spaced points on said main carrier member for movement relative thereto during said first motion phase in which the front and rear guide means turn rearwardly relative to the main carrier member, an auxiliary carrier member connected between said front and rear guide means and carried thereby, a lost motion connection between said auxiliary carrier member and the support frame, said auxiliary carrier member being freely movable with said front and rear guide means relative to the support frame during said first motion phase, and means blocking the movement of said guide means relative to said main carrier member at the end of said first motion phase whereby said main carrier member, guide means and body-supporting unit are joined as a rigid unit, said lost motion connection being operative at the end of said first motion phase for coupling said auxiliary carrier member with the support frame and providing a fixed pivotal mount for said rigid unit during said second motion phase.

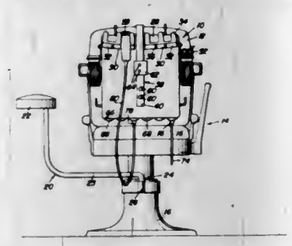
3,044,827
RECLINING ARTICLE OF FURNITURE HAVING MOVABLE LEG REST
Adelard J. Belisle, 11 Dartmouth St., South Hadley Falls, Mass.
Filed Apr. 25, 1960, Ser. No. 24,367
11 Claims. (Cl. 297—89)



6. A multiple position reclining chair comprising: a frame; a body-supporting unit including a rigid seat and back rest; means operatively connected to and mounting said body-supporting unit on said frame for pivotal movement between an upright and a plurality of tilted positions and a reclined position; primary lifter means movably mounted on said frame; a leg-rest; a leg-rest control linkage operatively connected to said primary lifter means and to said body-supporting unit and to said leg-rest for elevating said leg-rest as said body-supporting unit is tilted; means slidably connected to said frame and pivotally connected to said primary lifter means for permitting movement of said body-supporting unit from a tilted to a reclined position; said leg-rest control linkage permitting free movement of said leg-rest while said body-supporting unit remains away from the upright position.

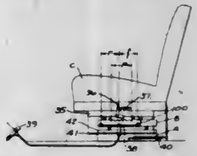
3,044,828
BARBER CHAIR ATTACHMENT
Reid Jay Fowler, 3003 Brinker Ave., Ogden, Utah
Filed Oct. 4, 1960, Ser. No. 60,418
3 Claims. (Cl. 297—191)

2. For use on a barber chair including a back having a headrest bar socket in its top portion, an article rack comprising, in combination, a vertical panel, a vertical bar mounted centrally on the back of said panel and extending upwardly therefrom, said bar including a forwardly and then reversely bent upper end portion terminating adjacent the front of the panel and engageable in the socket for removably hanging the panel on the back in opposed relation to the rear thereof, a series of electrical receptacles recessed into the lower end of the panel, a conductor cord electrically connected to said receptacles for connecting same to a source of electric current, and means for removably mounting a plurality



of power hair clippers, to be electrically connected to the receptacles, on the upper portion of the panel, the last-named means including brackets affixed to the upper portion of the panel on opposite sides of the bar, said brackets comprising a plurality of spaced, parallel, upwardly and rearwardly inclined arms for receiving and retaining the clippers by gravity therebetween.

3,044,829
MOTOR VEHICLE SEAT CONSTRUCTION
Gregory S. Dolgorukov, Ferndale, Mich. (407 Fisher Bldg., Detroit 2, Mich.)
Filed July 11, 1955, Ser. No. 521,181
5 Claims. (Cl. 297—344)

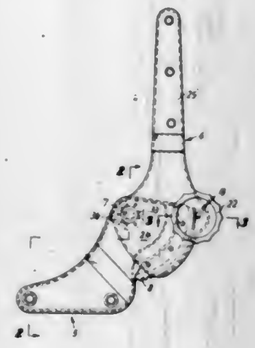


1. In a front seat construction for a motor vehicle, a seat adapted to support at least one occupant, means supporting said seat and providing for adjusting the same with respect to the vehicle for convenience of driving through a predetermined range of positions; guiding means supporting said seat-supporting means and providing for moving the same forward from any adjusted for convenience of driving position for the purpose of facilitating passage of passengers behind the front seat when leaving and entering the motor vehicle; locking means automatically and positively locking said seat-supporting means to said guiding means when said seat-supporting means are in their predetermined original position and maintaining them locked together in said position and operable manually for unlocking the same; said seat-supporting means being movable in said guiding means selectively forwardly and rearwardly from said original position without disturbing the adjustment between the seat and the seat-supporting means made for convenience of driving; and means moving said seat forwardly without exertion of manual effort by the driver when said locking means are unlocked.

3,044,830
BACK REST ADJUSTING DEVICE
Erwin Kölle, Sindelfingen, Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Aug. 22, 1960, Ser. No. 51,079
Claims priority, application Germany Sept. 3, 1959
13 Claims. (Cl. 297—361)

1. A device for adjusting the angular position of the back rest of a seat, especially of a motor vehicle, com-

prising two pairs of hinge members adapted to be secured to a seat and back rest at the opposite sides thereof, means for pivotably connecting the two hinge members of each pair to each other, a gear segment secured to one of said hinge members of each pair, a shaft connecting the other hinge member of one pair with the corresponding hinge member of the other pair, and a plurality of driving pins mounted on and extending within the periphery of said



shaft, said driving pins being disposed concentrically about the axis of said shaft and parallel to the axis of said shaft near each end thereof, at least one of said driving pins being alternately in meshing engagement with the teeth of said gear segment, said two hinge members of each pair being automatically locked when at least two of said driving pins are in meshing engagement with said gear teeth.

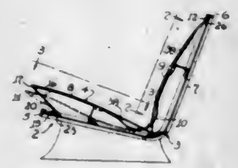
3,044,831

WIRE SPRING STRUCTURE

William H. Neely, Cleveland, Ohio, assignor, by mesne assignments, to Hoover Ball & Bearing Co., Saline, Mich., a corporation of Michigan

Filed Oct. 29, 1959, Ser. No. 849,688

4 Claims. (Cl. 297—454)



1. A wire spring element for seat spring constructions comprising elongated resilient wire means formed to provide a resiliently bendable seat portion, a downwardly, rearwardly and upwardly extended curved sweep and a resiliently bendable wire back rest portion extending upwardly from the curved sweep of the seat portion in forwardly extended relation with respect thereto, said back rest portion including, immediately above the curved sweep, a forwardly bowed portion arranged to approach the hollow portion of the small of an occupant's back when the spring element is loaded, and attaching means at the free ends of the wire means for suspending said element deformably throughout its length between said ends, the said back rest portion including near its upper end immediately below the attached portion a rearwardly extended loop portion.

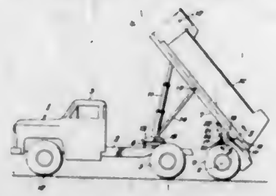
3,044,832

FLUID STABILIZING MEANS FOR SEMI-TRAILER TILTING BODIES

Frank C. McManus, Streator, Ill., assignor to Anthony Company, Streator, Ill., a corporation of Illinois

Filed Mar. 13, 1958, Ser. No. 721,243

4 Claims. (Cl. 298—17)



1. In combination in a vehicle, a load-carrying member, ground-contacting wheels supporting said load-carrying member including an axle, means on said vehicle for tipping said load-carrying member about said wheels, stabilizing means including rotary stabilizing members mounted on said load-carrying member and positioned above said wheels when said load-carrying member is in normal running position, and means on said load-carrying member for moving said stabilizing members into contact with said wheels and for maintaining said contact through at least a major portion of the tipping of said load-carrying member, said rotary stabilizing members rolling about and in contact with said wheels as the load-carrying member tips.

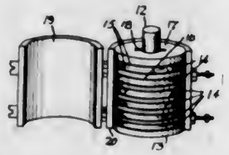
3,044,833

METHOD AND APPARATUS FOR MAKING A COMPOSITE BRUSHING TOOL

Vernon K. Charvat, Bay Village, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed Sept. 26, 1957, Ser. No. 686,500

11 Claims. (Cl. 300—21)



8. The method of manufacturing a composite brushing tool which comprises applying a layer of uncured elastomeric material to a layer of bristles extending radially outwardly from a central region, applying a cylindrical shell to such assembly in a direction generally radially inwardly of such assembly to avoid disturbing such bristles, closing the ends of such shell and heating to soften and intrude such elastomeric material between such bristles and to cure such material.

3,044,834

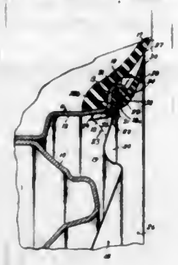
WHEEL COVER

John V. Shoemaker, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Filed June 19, 1958, Ser. No. 743,043

11 Claims. (Cl. 301—37)

1. In a wheel structure including a tire rim having a terminal rim flange and a pneumatic tire mounted on the tire rim, a non-metallic tire side wall ring simulating member spaced from and bridged over the terminal rim flange for concealing the terminal rim flange and with the ring member having an outer ring margin adapted for engagement against the tire radially outwardly of the terminal rim flange and with the ring member having an inner annular margin adapted for abutment against the tire rim, a recessed area disposed in the inner ring margin for receipt of a wheel balancing weight therein, and a wheel balancing weight retainingly lodged and sustained in as-



sembly with the recessed area of the inner ring margin, said inner ring margin having a flap area overlapping the recessed area for concealing the weight and assisting in maintaining the wheel balancing weight in assembly with the ring member.

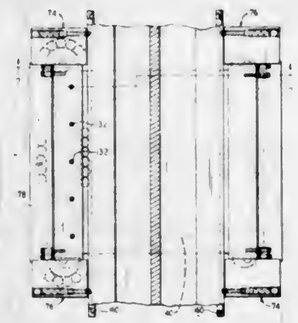
3,044,835

LINEAL ANTI-FRICTION BEARING

Fraser A. Hurd, 103 5th St., Liverpool, N.Y.

Filed July 11, 1958, Ser. No. 747,895

12 Claims. (Cl. 308—6)



1. In a lineal anti-friction bearing, a support member, a carriage member mounted for movement therealong, spaced track way rods mounted on said support member, spaced track way rods mounted on said carriage member, anti-friction balls disposed along and in contact with said track way rods; a return loop for said balls mounted on said carriage member comprising semi-circular track forming end members, said members being cut away on the side facing said support member track way rods, to clear said rods, and said members, and a connecting track laterally disposed from said carriage member track way rods, and means for aligning the end of the end member semi-circular track way of each of said end members tangentially in respect to said carriage member track way rods.

3,044,836

STRUCTURE USING FLUID FOR SUPPORTING A PART THEREOF

John W. Conlon, Farmington, Conn., assignor to Farmington Manufacturing Company, a corporation of Connecticut

Filed May 20, 1955, Ser. No. 509,765

3 Claims. (Cl. 308—9)

1. In a structure of the character described, a base member having a top face, a carriage member having a bottom face resting by gravity on said top face, said faces being flat and fitting close together, a frame structure comprising a plurality of separate interconnected tubes embedded in one of said members with openings at a plurality of points from said tubes to the face of said one member, one of said tubes being provided with a



supply connection for the reception of fluid supply to said tubes, whereby when fluid under pressure is supplied to said tubes, the weight of said carriage member will be at least partially supported by the fluid, thereby permitting easy movement of said members relative to each other.

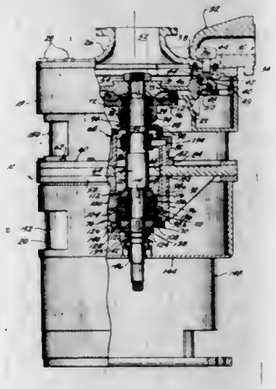
3,044,837

TURBINE CONSTRUCTION

Walter E. Beaney, New London, Conn., assignor to The Whiton Machine Company, New London, Conn., a corporation of Connecticut

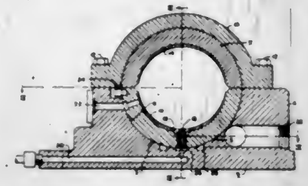
Filed Sept. 3, 1959, Ser. No. 837,816

1 Claim. (Cl. 308—36.4)



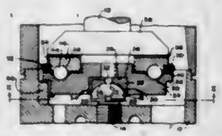
For use in a steam turbine having a vertical turbine shaft and turbine and bearing chambers in top to bottom order; a steam immune bearing assembly adapted for use in the bearing chamber and comprising a generally cylindrical and substantially flat transverse bearing support plate having a central portion provided with an opening for receiving the turbine shaft, an upper generally cylindrical bearing support member fixedly connected with and supported by and above said support plate about the shaft, an upper sleeve bearing carried by said upper support member engaging the shaft and rotatably supporting the same, a cover element fixedly secured to said upper support member and carrying a ring seal engaging said turbine shaft, a steam condensate slinger element secured to the turbine shaft above said cover element, a lower generally cylindrical bearing support member rigidly connected with and supported by and below said support plate about the shaft, a lower sleeve bearing carried by said lower support member engaging and rotatably supporting said shaft, thrust bearing means carried by said lower support member, upper and lower thrust rings fixedly connected with said shaft respectively above and below said thrust bearing means and rotatable with the shaft in engagement with the said bearing means to prevent axial shaft movement, and sealing means between said lower bearing support member and the shaft below said thrust bearing means.

3,044,838
BEARING MOUNTING ASSEMBLY
Bernard B. Winer, Pittsburgh, and Victor G. Sorokin, Trafford, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 30, 1958, Ser. No. 783,955
4 Claims. (Cl. 308—122)



1. A self-aligning bearing assembly comprising a non-rotating self-aligning bearing member having a substantially spherical outer surface and having a cylindrical inner bearing surface for supporting a rotatable shaft, a bearing support member having a spherical surface engaging the outer surface of the bearing member, first oil supply means for supplying lubricating oil to said bearing surface, a recess in one of said engaging surfaces of the bearing member and the support member, and second oil supply means for supplying oil to said recess under sufficient pressure to cause the oil to flow from the recess between the engaging surfaces.

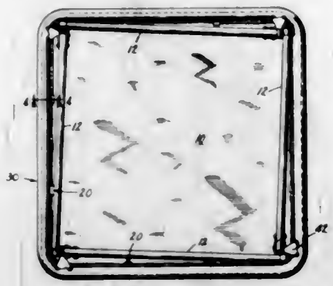
3,044,839
THRUST BEARINGS
Nickolas Andres, Campbell, Calif., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1959, Ser. No. 849,643
9 Claims. (Cl. 308—160)



1. A thrust bearing assembly comprising a thrust plate having pivotally mounted thrust shoes thereon, said thrust shoes forming a bearing surface, means for rotatably supporting said thrust plate, a rotatable shaft having a thrust collar mounted thereon for rotation therewith, said thrust collar having a bearing face adjacent said bearing surface, the friction moment between said bearing face and said bearing surface being greater than the friction moment between said thrust plate and said supporting means, and means for arresting rotation of said thrust plate relative to said supporting means after an amount of rotational movement sufficient to produce an impact on the arresting means which produces a force necessary to tilt the thrust shoes.

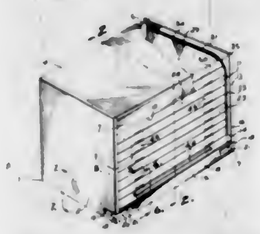
3,044,840
ARTICLE OF FURNITURE
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed Aug. 8, 1960, Ser. No. 48,105
6 Claims. (Cl. 311—108)

1. In an article of furniture, a panel, a plurality of metal clips mounted in spaced relation to each other adjacent the marginal edges of the lower panel face, each of said clips having a pair of angulated stretches, one of the stretches in each pair of stretches being abutting in the lower face of the panel and the other of said pair of stretches angling obliquely downwardly and inwardly, means fixedly mounting said one of said stretches on said panel, and a tubular metal frame abutting said lower panel face and having a plurality of openings formed therein for the reception of said other of said pair of clip stretches, the lateral extent of a geometric contour formed by a line joining the inwardly presented ends of



said other of said clip stretches being less than the lateral extent of a geometric contour formed by a line joining said frame openings whereby said frame is spring-stressed to dispose said other of said clip stretches in the frame openings in a locked position for mounting the frame on the panel.

3,044,841
DISPLAY AND DISPENSING CABINET
Lester William Hein, 1526 E. Alton, Independence, Mo.
Filed July 20, 1960, Ser. No. 44,122
1 Claim. (Cl. 312—138)

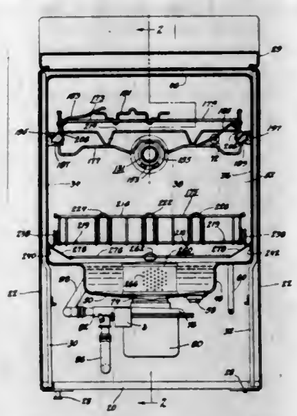


A display cabinet construction for food items and the like comprising, a casing having connected bottom, side, rear and top walls defining a compartment having an open front, guide means on said side walls having opposed inwardly facing channels adjacent the open front and top wall, said channels having straight portions at the front and top and connected by curved portions adjacent the upper portion of the open front said guide means having spaced apart opposed front and rear surfaces of said channels, said guide means terminating in open channel ends adjacent said bottom, a front closure member having a plurality of transparent panels hingedly connected along their opposite longitudinal edges, said panels having flat inner surfaces extending from opposite ends thereof, said panels having extensions at their upper and lower edges adapted to overlap corresponding extensions of adjacent panels and having sealing engagement therewith when said panels are in coplanar relation, tongues extending from opposite ends of the panels and being of substantially lesser width than said panels, said tongues being slidably engaged in said opposed channels for sliding movement of said closure member to and from closing relationship to said front opening, means extending from said guide means and having surfaces continuous with said rear surfaces of said guide channels and in overlapping relation with end portions of the panels to engage said flat inner surfaces thereof when said closure member is in closed position, a front member removably mounted on the side walls and engaging the bottom wall

to close the lower ends of the channels of the guide means and form an abutment for engagement with the closure members when in closed position, clamp means carried by said side walls and releasably engaged with said front member to clamp same against said bottom whereby release of said clamp means and removal of the front member permits the closure member to be slid from the lower ends of the guide means, said front member having an upward extending flange along the length thereof for overlapping engagement with a lower margin of the lowermost panel when the closure member is in closed position, and an upper front member secured to said top and side walls and extending downwardly from the top wall in overlying relation and in close proximity to the upper portion of the closure member.

3,044,842
DISHWASHER
Carel F. Abresch, Lake Bluff, Ill., and Robert Lewis Mercer, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Dec. 30, 1955, Ser. No. 556,613, now Patent No. 2,973,907, dated Mar. 7, 1961. Divided and this application Sept. 30, 1959, Ser. No. 843,595
1 Claim. (Cl. 312—348)

A dishwasher including walls enclosing a dishwashing chamber, a dish rack within the chamber having fencing comprising a resilient member extending longitudinally along one side thereof, said dish rack being provided with guides, said walls being provided with guideways for movably supporting the guides of the rack, a releasable latch member mounted in an upright position upon said fencing and connected to and movable relative to said rack downwardly with the deflection of said resilient member and extending downwardly therefrom and having a portion extending laterally beneath one of said guideways, and a catch located upon the lower portion of said guideways in the path of movement of said laterally extending portion when said guides move within said guideways.



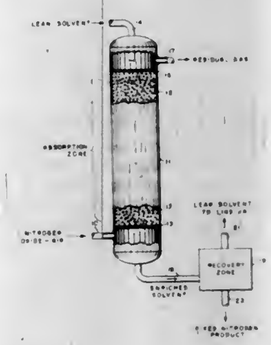
CHEMICAL

3,044,843
FIBER DYEING PROCESS
Victor Tullio, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 13, 1959, Ser. No. 812,811
3 Claims. (Cl. 8—17)

1. A process for dyeing fibers, said fibers containing a functional group taken from the group consisting of hydroxy, primary amino, and secondary amino groups, which process comprises the steps of impregnating said fiber with an aqueous system containing a polyepoxy compound and a water soluble dye, said dye containing in the dye molecule an amino group taken from the group consisting of basic primary amino and secondary amino groups, followed by heating the impregnated fiber at a temperature within the range of 100° to 200° C. for from about 0.5 to about 10 minutes, in the presence of a catalyst, to chemically link said dye to said fiber.

3,044,844
METHOD OF REMOVING NITROGEN OXIDES FROM FLUIDS AND NITROUS ACID
Lucien G. Maury, Newark, and George F. Nahill, Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,717
17 Claims. (Cl. 23—2)

1. A process for the removal of nitrogen-containing compounds from a gas containing a mixture of same selected from the group consisting of nitrous acid, nitric oxide, nitrogen dioxide, nitrogen trioxide, nitrogen tetroxide and nitrogen pentoxide, which comprises contacting said gas in countercurrent flow relation with a partially water-miscible liquid electron donor compound, containing from 2 to 25 weight percent water, at a temperature within the limits of about 0 to 200° F. and at an average oxidation state of total fixed nitrogen in the said mixture within the range of from 3.0 to 4.7, maintaining the rate of flow of each of said countercurrently flowing streams so as to enable said electron donor to absorb up to one mole of fixed nitrogen of said mixture of nitrogen compunds from said gas per mole of total electron donor present, maintaining said concentration of water in said donor compound by incorporating a liquid diluent therein which is miscible with said donor compound but substantially immiscible with water, said electron donor (1) being



chemically reactive with each said nitrogen compound in said mixture only by sharing electrons therewith, (2) exhibiting selective solvent action for acetylene by sharing electrons therewith and (3) being selected from the group consisting of glycol ethers, alkyl phosphates, aryl phosphates, dialkyl amides, alkyl sulfoxides and alkyl phosphoramides, and recovering residual gas product substantially free from nitrogen-containing compounds of said mixture initially contained therein.

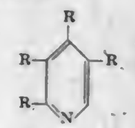
3,044,845

PROCESS FOR PRODUCING DICHLOROSILANE

Victor B. Jex, Clarence, John E. McMahon, Buffalo, and William G. Whitehead, Kenmore, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 30, 1958, Ser. No. 764,229
9 Claims. (Cl. 23—14)

1. A process for producing dichlorosilane comprising forming a mixture of trichlorosilane, a compound in which trichlorosilane is soluble, said compound being a halohydrocarbon containing at least one hydrogen atom attached to carbon and at least one halogen atom attached to carbon, and a catalyst selected from the group consisting of hexamethyltriaminotriazine and catalysts represented by the formula:



wherein R is a member selected from the group consisting of the hydrogen atom and the monovalent hydrocarbon groups, and heating the mixture to a temperature below about 100° C. to cause the trichlorosilane to disproportionate to produce dichlorosilane, said halohydrocarbon being present in the mixture in an amount from 10 parts to 1000 parts by volume per 100 parts by volume of the trichlorosilane.

3,044,846

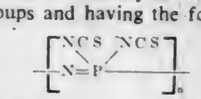
PHOSPHONITRILIC ISOTHIOCYANATE PRODUCTS AND METHODS OF PREPARING THEM

Ludwig F. Audrieth, Urbana, Ill., and Rigobert J. A. Otto, Leverkusen-Koeln, Germany, assignors to University of Illinois Foundation, a corporation of Illinois

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,736
15 Claims. (Cl. 23—14)

1. The method of producing phosphonitrilic isothiocyanates comprising reacting phosphonitrilic chloride with a salt of thiocyanic acid to replace chlorine atoms of the phosphonitrilic chloride with —N=C=S groups.

11. Phosphonitrilic isothiocyanate having repeating $[NP(NCS)_2]$ groups and having the formula



wherein n is at least 3.

3,044,847

SELF-MODERATING FERTILE COMPOUNDS

David T. Peterson and Joachim Rexer, Ames, Iowa, assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 11, 1960, Ser. No. 21,569
8 Claims. (Cl. 23—14.5)



1. A thorium carbide-x-(thorium hydride), where x is an integer from 1 to 2.

3,044,848

METHOD OF URANIUM RECOVERY

Augustin Driessen and Henri de Saint-Chamant, Paris, France, assignors, by mesne assignments, to Centre d'Etudes et de Recherches des Phosphates Mineraux Cerphos, Paris, France, a corporation of France

No Drawing. Filed July 8, 1958, Ser. No. 747,128
Claims priority, application France July 12, 1957
2 Claims. (Cl. 23—14.5)

1. A method of recovering uranium from by-product slag resulting from thermal reduction of phosphate ore with carbon in the presence of silica, said ore containing silica, calcium, phosphorus and at least traces of uranium, comprising adding a strong acid reagent, chosen from the group consisting of hydrochloric acid, nitric acid, perchloric acid, phosphoric acid, and mixtures thereof to a pulp or very finely ground slag mixed with water, said reagent containing at least enough phosphoric acid to bring the phosphorus content of the mixture to a value equivalent to 1% P_2O_5 based on the weight of the original slag, the total quantity of reagent being not more than the stoichiometric equivalent of the calcium content of the slag and said acid reagent being added to the pulp at a rate sufficiently slow to avoid local excess of acidity in the pulp, and in such a way that the resultant pH value is in the range pH 2 to pH 3, heating the acidified pulp at a temperature from 70° C. to 80° C. for a period of the order of approximately one hour, thereby providing a liquor containing about 90% of the calcium originally in the slag dissolved therein and a residual solid containing more than 70% of the uranium originally present in the slag and separating said residual solid from said liquor.

3,044,849

PREVENTION OF SETTLING OF URANIUM PULP BY POLYVINYL ALCOHOL

Frederick W. Matthews and Max Morf, St. Hilaire, Quebec, Canada, assignors to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,562
Claims priority, application Canada Oct. 11, 1958
2 Claims. (Cl. 23—14.5)

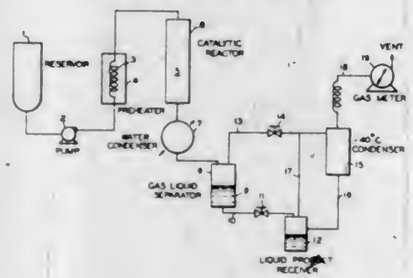
1. In a process wherein finely ground uranium ore is slurried with dilute sulphuric acid and leached under oxidizing conditions, the improvement which comprises incorporating with the slurry at least 0.01 lb. of polyvinyl alcohol per ton of ore.

3,044,850

PREPARATION OF LITHIUM PHOSPHATE

William I. Denton, Cheshire, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

Filed June 29, 1960, Ser. No. 39,694
4 Claims. (Cl. 23—107)



1. In the preparation of a lithium phosphate catalyst, the process comprising forming a first aqueous solution containing lithium ions by dissolving in water a lithium compound chosen from the group consisting of lithium

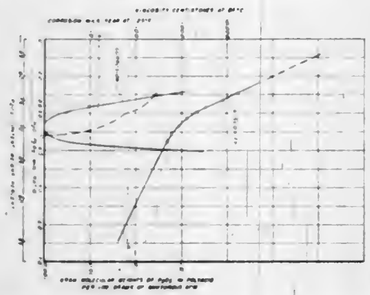
hydroxide, lithium nitrate, lithium acetate, lithium formate, and lithium borate, forming a second aqueous solution containing phosphate ions by dissolving in water a phosphate compound chosen from the group consisting of sodium phosphate, potassium phosphate and phosphoric acid, adding to at least one of said solutions an amount of alkali metal hydroxide adjusted to provide on mixing of said solutions 0.2 to 2 moles of alkali metal hydroxide per mole of lithium orthophosphate, then mixing the said solutions at a temperature of about 30° to 90° C. to form a precipitate of basic lithium phosphate in a reaction mixture having the aforesaid alkalinity, isolating the said precipitate, leaching the said precipitate by forming a dilute suspension thereof in water at about 20° C. to 95° C. and isolating said precipitate at a reduced content of alkali metal hydroxide, at least twice repeating the said leaching step, drying the said precipitate, and recovering leached basic lithium phosphate having a content of residual alkali metal hydroxide equivalent to 0.05% to about 1% by weight thereof of said alkali metal.

3,044,851

PRODUCTION OF AMMONIUM PHOSPHATES AND PRODUCT THEREOF

Donald C. Young, Fullerton, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California

Original application Aug. 22, 1960, Ser. No. 51,047. Divided and this application June 9, 1961, Ser. No. 116,161
10 Claims. (Cl. 23—107)



7. In the manufacture of ammonium phosphate from wet-process phosphoric acid containing between about 1 and about 10 weight percent of metallic and other incidental impurities, said impurities comprising iron and aluminum and causing the formation of precipitates and gelatinous bodies in said ammonium phosphate, the improved method of avoiding the formation of said precipitates and gelatinous bodies which comprises heating said acid and removing the volatilized impurities and sufficient water from at least a portion thereof to obtain at least two atomic weights of phosphorus present as acyclic polyphosphoric acid for each atomic weight of aluminum and iron in said acid, neutralizing said heat-treated acid with ammonia and adding sufficient water to obtain an aqueous ammonium phosphate of the desired concentration.

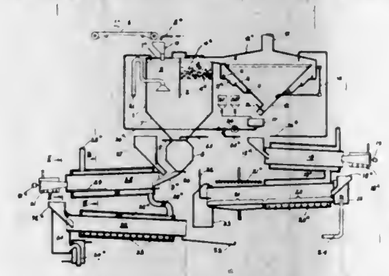
3,044,852

TREATMENT OF PICKLE LIQUOR SLUDGE

Charles B. Francis, Pittsburgh, Pa., assignor to Puriron and Chemicals, Inc., a corporation of Pennsylvania

Filed Apr. 27, 1959, Ser. No. 809,100
3 Claims. (Cl. 23—110)

1. In the harmless disposal of spent sulfuric acid produced in steel pickling, the method which comprises neutralizing the spent acid with lime and thereby forming a substantially neutral liquid effluent for disposal and a quantity of sludge comprised of calcium sulfate and iron hydroxides, treating the sludge wtih an aqueous solution of hydrochloric acid sufficient in quantity and concentration to convert the major portion of the iron hydroxides in the sludge into a substantially saturated aqueous solution of iron chloride while leaving a residue of calcium sulfate including a relatively small portion of ferrous hydroxide, separating said residue from the iron chloride solution, effecting the precipitation and separation of particulate ferrous chloride from said solution, driving the contained water from the particulate ferrous chloride, and, by heating the dehydrated ferrous chloride particles



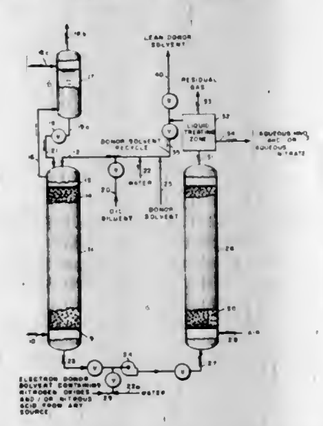
in the presence of hydrogen, producing metallic iron with an accompanying release of hydrochloric acid in substantially the amount to provide the hydrochloric acid for treating the quantity of sludge first mentioned, mixing silica sand with the calcium sulfate and residue, drying the mixture in the presence of heat and an oxygen-containing gas and converting the ferrous hydroxide to ferric oxide, and under the influence of heat and the catalytic effect of the ferric oxide recovering the sulfur oxides from the calcium sulfate and converting the residual mixture to calcium silicate.

3,044,853

SEPARATION OF SOLVATED FIXED NITROGEN FROM COMPOUNDS CONTAINING SAME

Lucien G. Maury, Newark, and George F. Nahill, Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

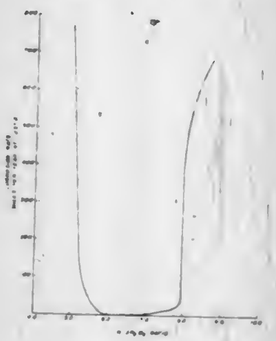
Filed May 29, 1958, Ser. No. 738,813
14 Claims. (Cl. 23—157)



1. In a process for the separation of an electron donor compound from a nitrogen compound solvated therewith and selected from the group consisting of nitric oxide, nitrogen dioxide, nitrogen trioxide, nitrogen tetroxide, nitrogen pentoxide and nitrous acid, said electron donor compound being chemically reactive with said nitrogen compound only by sharing electrons therewith and also exhibiting selective absorption action for acetylene by sharing electrons with said acetylene, and said donor com-

pound being selected from the group consisting of glycol ethers, alkyl phosphates, aryl phosphates, dialkyl amides, alkyl sulfoxides and alkyl phosphoramides, the improvement which comprises contacting the electron donor compound-nitrogen compound solvate with a free oxygen-containing gas in the presence of an acid material characterized by a Hammett Ho function less than +3 under temperature conditions for effecting oxidation of the said solvated nitrogen compound by said free oxygen-containing gas to nitric acid, and when said solvated nitrogen compound is a nitrogen oxide, maintaining a sufficient amount of water in the zone of said contacting to react the said oxide together with oxidation of same by said free oxygen-containing gas to cause the said oxidation to nitric acid, and then removing nitric acid so produced from the resulting electron donor compound-nitric acid mixture.

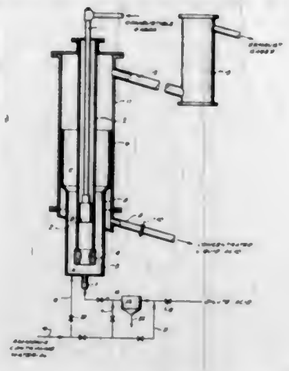
3,044,854
PHOSPHORIC ACID
Donald C. Young, Fullerton, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California
Filed Jan. 11, 1960, Ser. No. 1,793
5 Claims. (Cl. 23—165)



1. A phosphoric acid composition characterized by a low freezing point and viscosity and being substantially noncorrosive to mild steel which comprises; phosphoric acid having a concentration corresponding to at least about 62 weight percent P_2O_5 and between about 10 and about 20 weight percent of sulfuric acid calculated as 100 percent strength acid, and having a H/P_2O_5 ratio between about 5.4 and about 7.9.

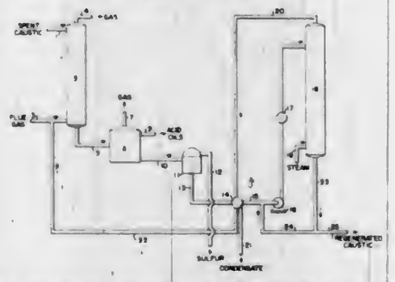
3,044,855
CONCENTRATION OF WET-PROCESS PHOSPHORIC ACID
Donald C. Young, Fullerton, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California
Filed Dec. 14, 1959, Ser. No. 859,320
5 Claims. (Cl. 23—165)

1. The method of concentrating a dilute phosphoric acid containing dissolved metal impurities comprising iron, aluminum and magnesium and organic impurities which tend to cause foaming of said acid upon heating which comprises: adding to said acid a material selected from the group consisting of ammonia, ammonium sulfate, ammonium nitrate, monoammonium phosphate, diammonium phosphate, ammonium carbonate, ammonium chloride, ammonium bromide, ammonium silicate and mixtures thereof in an amount sufficient to provide a nitrogen content between about 0.25 and about 5.0 weight percent in said acid and insufficient to precipitate said dissolved metal impurities, concentrating said acid by heating to remove water therefrom and recovering a concentrated phosphoric acid having at least 67 weight percent



phosphorus calculated as P_2O_5 and containing said dissolved metal impurities.

3,044,856
CAUSTIC REGENERATION PROCESS
Marcus Bernard Shirley, Southbourne, England, and Arthur M. Thomas, Jr., Rahway, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,859
7 Claims. (Cl. 23—184)

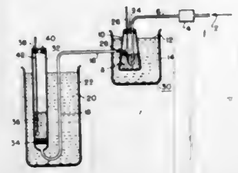


3. An improved process for the regeneration of a spent caustic soda solution containing dissolved contaminants obtained from the treatment of a hydrocarbon oil which comprises contacting said solution with carbon dioxide-containing gas to convert the caustic soda solution into bicarbonate having a pH of about 8 and to form insoluble materials from said contaminants, withdrawing said insoluble materials from the carbonated solution, contacting said carbonated solution with steam at a temperature of from about 400° F. to about 700° F. and at a pressure of from about 250 p.s.i.g. to about 1500 p.s.i.g., and recovering the regenerated caustic solution.

3,044,857
PROCESS OF HYDRATING GRANULATED ALKALINE EARTH METAL OXIDES
Andre Sable, Marseille, France, assignor to Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France
Filed May 29, 1961, Ser. No. 116,647
Claims priority, application France June 27, 1958
2 Claims. (Cl. 23—188)

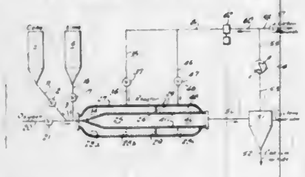
1. A process of hydrating calcined dolomite in granular form in a manner to avoid substantial bursting of the granular oxides and the resulting formation of pulverulent hydroxides, which process comprises maintaining a mass of said granules in the state of a fluidized bed by flowing through the mass a current of heated gas containing water

vapor but being free from water in the liquid state, and maintaining said fluidized bed at a temperature sufficient to hydrate said oxides, the temperature of said fluidized bed being maintained higher than the dew point of the heated gas in order to prevent condensation of water vapor in the fluidized bed, employing heated gas in which the



water vapor pressure is equivalent to about 60 mm. of mercury during the first part of the process while CaO is being partially hydrated, and thereafter progressively increasing the water vapor pressure up to a pressure equivalent to about 600 mm. of mercury to complete the hydration of CaO and to hydrate the MgO.

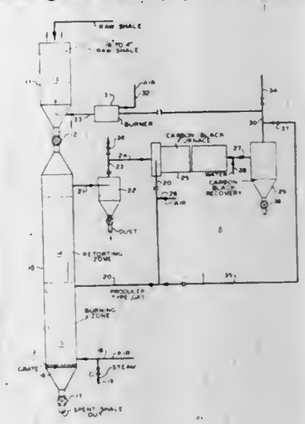
3,044,858
CALCIUM CARBIDE PROCESS
Bruce H. Sage, Altadena, Calif., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 705,080
3 Claims. (Cl. 23—208)



1. In a process for the manufacture of calcium carbide by reaction of lime and carbonaceous solid at elevated temperature maintained by partial combustion of carbonaceous solid, the improvement which comprises passing coke and lime in admixture with oxygen into an unpacked reaction zone laterally confined by a gas permeable surface comprising a porous refractory; reacting said coke, lime and oxygen at an autogenous temperature within the range of about 3000 to 5000° F. wherein said solid particles are suspended and entrained in dispersed form in oxygen and resulting gaseous reaction products and reacted while in suspension to form calcium carbide and carbon monoxide; passing carbon monoxide cooling gas recovered as a product of said reaction through said gas permeable surface inwardly into said reaction zone effective to increase the thickness of the gas boundary layer on said surface and to maintain the temperature of said surface below about 1500° F.; discharging reaction products comprising calcium carbide and carbon monoxide from said reaction zone; separating calcium carbide and carbon monoxide from one another from said reaction products; cooling said separated carbon monoxide; and passing resulting cooled carbon monoxide to the outside of said gas permeable surface of the reaction zone as said cooling gas.

3,044,859
CONVERSION OF OIL SHALE TO CARBON BLACK
Harry W. Parker, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 16, 1960, Ser. No. 36,512
8 Claims. (Cl. 23—209.4)

1. A method for producing carbon black from the carbonaceous matter of an oil shale comprising heating an oil shale feed to a carbonaceous matter vaporizing temperature and thereby vaporizing carbonaceous matter from said oil shale feed, charging the vaporous carbonaceous matter as reactant feed to a furnace carbon black production zone and therein heating the charged carbonaceous matter under carbon black producing conditions, withdrawing gaseous effluent containing carbon black in suspension from said zone, separating carbon black from the gases of the withdrawn effluent, burning a portion of the separated gases thereby producing hot combustion



gas, contacting in heat exchange said hot combustion gas with raw charge oil shale thereby preheating same and producing the aforementioned oil shale feed, introducing a stripping medium into the oil shale feed heating and vaporizing step and therein stripping vaporized carbonaceous matter from nonvaporous material, removing this stripping medium and the vaporized carbonaceous matter from the vaporizing step, and withdrawing the separated carbon black as a product of the operation.

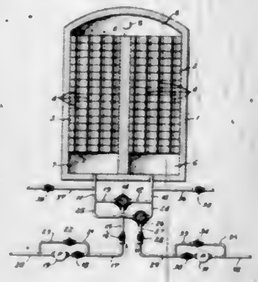
3,044,860
LUBRICATING OIL DETERGENCY TESTING
Guy M. Verley, Harvey, Ill., assignor to Sinclair Research, Inc., a corporation of Delaware
No Drawing. Filed May 18, 1959, Ser. No. 813,649
14 Claims. (Cl. 23—230)

1. In a method for testing the low temperature detergency of a mineral lubricating oil, the step which comprises subjecting to nitrogen dioxide gas at a temperature of about 50° to 400° F. a mixture of the lubricating oil and about 5 to 50% by weight of an oil-soluble cracked gasoline fraction which has been partially oxidized under non-combustive conditions.

3,044,861
REGENERATIVE APPARATUS
Rudolph L. Hasche, Johnson City, Tenn.; Blanche K. Hasche, executrix of said Rudolph L. Hasche, deceased, assignor to Carbonic Development Corporation, Johnson City, Tenn., a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 717,990
7 Claims. (Cl. 23—277)

1. A furnace comprising a heat insulated outer shell, two regenerative masses having uninterrupted flues therethrough, said regenerative masses being positioned in side-by-side relationship, a partition dividing said regenerative masses, each of said regenerative masses being provided with a free space in communication with one extremity of said flue, a combustion zone communicating between the extremities of the flues of each of said regenerative masses opposite said free spaces, heating means in association with said combustion zone, means associated with each of said free spaces for the admission and discharge of a gas therefrom, means associated with said admission

and discharge means for forcing a gas into and through the flues of one regenerative mass, through the combustion zone, and then through the gas passageways of the other regenerative mass, and means for reversing the direction of the flow of gas, said regenerative masses being from about four to about fifteen feet in length, the maximum cross-sectional dimension of said flues being from

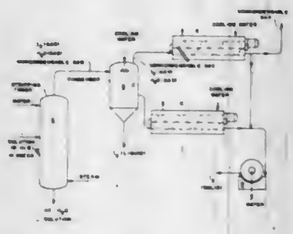


about 0.25 to about 0.75 inch, the ratio of the total volume of the flues in each of said regenerative masses to the total volume of the regenerative masses in which said flues are located being from about 1:20 to about 1:3, and the volume of said combustion zone being from about 20% to about 60% of the combined total volume of the flues in both of the regenerative masses.

3,044,862
PROCESS FOR RECOVERING IODINE FROM MIXTURES OF IODINE, HYDROGEN IODIDE AND WATER

Albert P. Paul, New Brunswick, N.J., assignor to Shell Oil Company, a corporation of Delaware

Filed Apr. 6, 1959, Ser. No. 804,544
8 Claims. (Cl. 23—294)



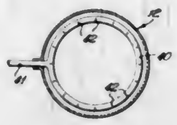
6. A process for the recovery of elemental iodine from a homogeneous liquid-phase mixture comprising essentially the components: elemental iodine, hydrogen iodide and water, the weight ratio of water to hydrogen iodide in the mixture, calculated on an elemental iodine-free basis, lying within the range of from 1:1 to 50:1, said process comprising passing an iodine-inert gas through said mixture, and recovering elemental iodine from the gaseous effluent.

3,044,863
METHOD AND APPARATUS FOR WASHING AND COOLING CHEESE CURD

Robert E. Osborne, Los Angeles, and Milton E. Powell, Glendale, Calif., assignors to Knudsen Creamery Co. of California, Los Angeles, Calif., a corporation of California

Filed Dec. 22, 1959, Ser. No. 861,280
5 Claims. (Cl. 31—89)

1. In a method of making cheese curd the steps of confining a body of relatively cold water in the shape of a curd cooling and washing column of water, generating an upward current in said water, said current starting at a level above the bottom of said column, delivering a previously formed cheese curd into said upward current of cold water at a point a substantial distance above said starting level, the velocity of said current being less



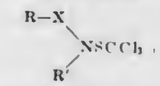
than the rate at which said curd sinks in said water column whereby said curd sinks below said level and accumulates in the bottom of said column, and withdrawing said curd from the bottom of said column.

3,044,864
DISTILLATE FUELS INHIBITED AGAINST BACTERIAL GROWTH

James W. Ryder, Berkeley Heights, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

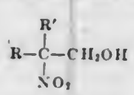
No Drawing. Filed Apr. 6, 1959, Ser. No. 804,132
20 Claims. (Cl. 44—63)

1. A method for preventing the growth of bacteria at the water-fuel interface between a petroleum distillate fuel boiling in the range between about 75° F. and about 750° F. and water, which comprises providing in said fuel from about 1 to about 50 parts per million, based upon the weight of the fuel, of a compound selected from the group consisting of a N-thiotrichloromethyl amide (*a*)



and a N-thiotrichloromethyl imide (*b*)

wherein X is an acyl group, R′ is selected from the class consisting of alkyl radicals from 2 to 12 carbon atoms, aryl radicals and hydrogen, and R is a carbocyclic radical, and providing in said water from about 50 to about 1000 parts per million, based upon the weight of the water, of a low molecular weight nitro-alcohol having the formula



wherein R and R′ are selected from the class consisting of aryl radicals, alkyl radicals, hydroxymethyl radicals, and hydrogen.

3,044,865
METHOD OF CONTROLLING PLANT GROWTH BY THE APPLICATION OF 3-HALO-2,3-DIHYDROTHIOPHENE-1,1-DIOXIDE

Irving Rosen, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Feb. 13, 1959, Ser. No. 792,947
6 Claims. (Cl. 71—2.5)

1. The method of controlling plant growth which comprises applying to said plant a herbicidally effective amount of a composition of matter containing as an essential active ingredient a 3-halo-2,3-dihydrothiophene-1,1-dioxide.

3,044,866
N-(2,3,6-TRICHLOROBENZOYL-L-LEUCINE AND HERBICIDAL USE THEREOF

Charles F. Krewson, Abington, Pa., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Aug. 9, 1960, Ser. No. 48,508
5 Claims. (Cl. 71—2.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process of killing a broadleaf weed comprising contacting said weed with a phytotoxic concentration of N-(2,3,6-trichlorobenzoyl)-L-leucine.

5. N-(2,3,6-trichlorobenzoyl)-L-leucine.

3,044,867
METHOD FOR THE PRODUCTION OF METALLIC-CERAMIC MATERIALS

John Olof Edström, Enskede, Sweden, assignor to Messrs. Aktiebolaget Svenska Metallverken, Vasteras, Sweden

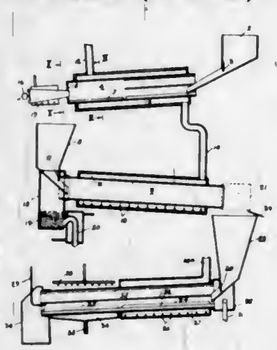
No Drawing. Filed June 4, 1957, Ser. No. 663,366
Claims priority, application Sweden May 15, 1957
2 Claims. (Cl. 75—.5)

1. A method for the production of metallic-ceramic materials which comprises the steps of subjecting to a heat-treatment in air a mixture comprising two oxide components adapted to form each other a solid oxide solution, one of said oxide components being selected from the group consisting of oxides of the metallic elements iron, nickel, cobalt, molybdenum, tungsten, gold, silver, copper, lead and tin, and the other oxide component being selected from the group consisting of oxides of the metallic elements zinc, chromium, manganese, silicon, vanadium, titanium, barium, aluminum, zirconium, magnesium and calcium, said other oxide component being more difficult to reduce than said one oxide component, effecting the heat-treatment at a temperature of at least 1150° C. and during a period of time sufficient to form said solid oxide solution, and then subjecting the thus-formed solid oxide solution to a reduction in solid state so that only said one oxide is at least partly reduced to a metallic matrix and said other oxide remains in a highly dispersed state in said metallic matrix.

3,044,868
RECOVERY OF BY-PRODUCTS OF WASTE PICKLE LIQUOR

Charles B. Francis, Pittsburgh, Pa., assignor to Puriron and Chemicals, Inc., a corporation of Pennsylvania

Filed Sept. 14, 1959, Ser. No. 839,838
10 Claims. (Cl. 75—29)



2. The method herein described which comprises treating spent sulfuric pickling acid with lime and forming a mixture composed principally of calcium sulfate and iron oxide, drying the mixture and subjecting it to a dissociation temperature and thereby driving the oxides of sulfur from the calcium sulfate of the mixture, reducing the iron oxide in the mixture in the presence of heat and a reducing agent and charging the mixture into a melting furnace and forming from the said mixture a pool of molten iron beneath a blanket of molten calcium oxide for further treatment.

3,044,869
REMOVAL OF ALKALI METALS FROM INACCESSIBLE LOCATIONS

Louis Silverman, Los Angeles, Calif., and Robert A. Sallach, Ames, Iowa, assignors to North American Aviation, Inc.

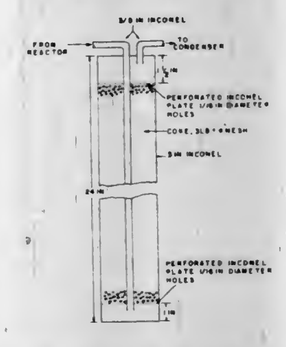
No Drawing. Filed Feb. 19, 1960, Ser. No. 9,673
7 Claims. (Cl. 75—66)

1. A process for removing at least one alkali metal selected from the group consisting of lithium, sodium, NaK, and potassium from a first zone to a second zone remote from said first zone, comprising contacting said metal with a partially hydrogenated polyphenyl containing 2 to 4 phenyl rings, which polyphenyl is at a temperature between the melting point of said metal and 250° C., floating said metal on said polyphenyl, and removing said metal and said polyphenyl from said first zone to said second zone.

3,044,870
PRODUCTION OF SODIUM

Stuart G. McGriff, Pittsburgh, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 16, 1958, Ser. No. 767,544
8 Claims. (Cl. 75—66)



1. In a process for producing sodium by contacting molten sodium carbonate with a carbonaceous reductant and condensing the resultant sodium from the product gases, the improvement which comprises intimately contacting said product gases with a carbonaceous material at a temperature of at least about 900° C. and reacting carbon dioxide contained in said product gases with said carbonaceous material to produce carbon monoxide therefrom, prior to condensation of the sodium.

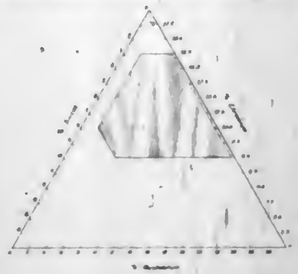
3,044,871
HARDENABLE CORROSION RESISTANT STAINLESS STEEL

Norman S. Mott, Westfield, N.J., assignor to Cooper Alloy Corporation, Hillside, N.J., a corporation of New Jersey

Filed Apr. 13, 1960, Ser. No. 21,956
7 Claims. (Cl. 75—125)

1. A highly hardenable corrosion-resistant stainless steel alloy, said alloy comprising nickel in a range of from 25% to 35%, manganese in a range from 0.2% to 4%, copper in a range of from 1% to 5%, chromium in a range of from 15% to 30%, silicon in a range of from 0.2% to 7% and molybdenum in a range of from 2% to 20%, but with chromium, silicon, and molybdenum in amounts at or greater than the amounts which have a

common intersection within and which if greater also come within the shaded area of the ternary diagram on



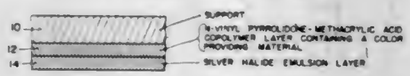
the accompanying drawing; and with a carbon content not exceeding 0.07%, the remainder being essentially iron.

3,044,872
STEEL ALLOY COMPOSITION
Walter C. Hayes, Northridge, and Robert W. Dickinson, Van Nuys, Calif., assignors to North American Aviation, Inc.
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,117
3 Claims. (Cl. 75—126)

1. An alloy having improved high temperature properties consisting essentially of—

from about 0.4% to about 7.5% chromium
from about 0.4% to about 4.0% molybdenum
from about 0.05% to about 0.4% carbon
from about 0.1% to about 1.5% manganese
from about 0.1% to about 1.0% niobium
from about 0.1% to about 1.4% titanium
and the remainder essentially iron.

3,044,873
PHOTOGRAPHIC PRODUCTS AND PROCESSES
Howard C. Haas, Arlington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 17, 1958, Ser. No. 781,007
18 Claims. (Cl. 96—29)



10. In a process of forming a photographic image in color wherein a latent image contained in an exposed silver halide emulsion layer of a photosensitive element is developed to provide an imagewise distribution of color-providing materials selected from the group consisting of dyes and dye intermediates in said emulsion, and said imagewise distribution of color-providing materials is transferred by an aqueous alkaline processing solution to a superposed image-receiving layer to impart to said image-receiving layer a colored image, the improvement of having the color-providing materials in a polymeric layer which is contiguous with and behind the silver halide emulsion layer and, during processing, permeating said photosensitive element with said aqueous alkaline processing solution and solubilizing said color-providing materials from said polymeric layer, said polymeric layer comprising a polymer selected from the group consisting of copolymers and terpolymers of N-vinyl pyrrolidone, said copolymers being of N-vinyl pyrrolidone and an α,β-unsaturated aliphatic monocarboxylic acid containing less than six carbon atoms, said terpolymers being of N-vinyl pyrrolidone, an α,β-unsaturated aliphatic monocarboxylic acid containing less than six carbon atoms and a lower alkyl ester of an α,β-unsaturated aliphatic monocarboxylic acid containing less than six carbon atoms.

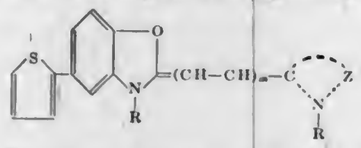
3,044,874
PHOTOGRAPHIC MATERIALS
Stanley P. Popeck and Fritz Dersch, Binghamton, and William A. Wurth, Jr., Johnson City, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 19, 1959, Ser. No. 794,252
4 Claims. (Cl. 96—67)

4. A photographic material comprising a base and a layer of a light-sensitive organic colloid silver halide emulsion on said base, said layer being overcoated with another layer comprising a water-soluble polyoxyethoxylated glycerol ricinoleate having an average molecular weight of at least 1372.

3,044,875
CYANINE DYES DERIVED FROM THIENYLBENZOXAZOLES AND SILVER HALIDE EMULSIONS SENSITIZED THEREWITH
Johannes Götze, Koln-Stammheim, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed July 29, 1958, Ser. No. 751,621
Claim priority, application Germany Aug. 16, 1957
10 Claims. (Cl. 96—105)

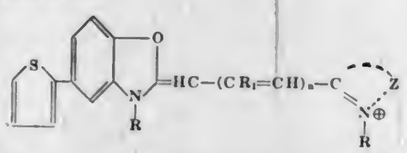
1. A photographic silver halide emulsion optically sensitized with an effective amount of a cyanine dye containing a thienyl-substituted benzoxazole ring and being selected from these having the following formula:

(1)



wherein R represents a member selected from the group consisting of lower alkyl and lower alkyl-substituted by sulfo groups; and

(2)



wherein the associated anion is a monovalent acid anion when R is lower alkyl, and wherein a betaine structure is formed when R is a sulfo-substituted lower alkyl; R_1 stands for a lower alkyl radical, Z represents the atoms necessary to complete a heterocyclic ring selected from the group consisting of benzthiazolyl, naphthiazolyl, thiazolyl, 2-sulfo-4-keto-thiazolidinyl, benzselenazolyl, selenazolyl, benzoxozolyl, 5-α-thienyl-benzoxazolyl, naphthoxazolyl, oxazolyl, quinolyl, 5-methoxy-quinolyl and methyltetrahydrobenzthiazolyl, and *m* and *n* are whole numbers from 0 to 2 inclusive.

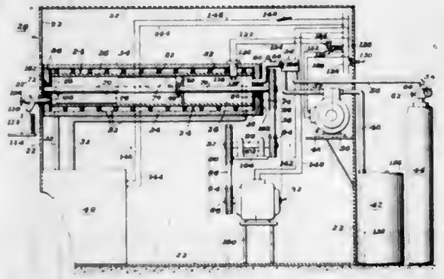
3,044,876
TREATMENT OF MUSTARD SEED
Kenneth J. Goering, Bozeman, Mont., assignor to Oil Seed Products, Inc., Lethbridge, Alberta, Canada, a corporation of Montana
No Drawing. Filed Apr. 19, 1960, Ser. No. 23,128
4 Claims. (Cl. 99—2)

1. A process for separately recovering sinigrin and sinigrin-free mustard seed meal from mustard seed which comprises: crushing the mustard seed; separating the mustard oil from the crushed seed; extracting the resulting seed with water at a temperature between 80° C. and 85° C. for about one half hour; separating the liquid and solid phases present after said extraction; drying the separated solids to produce an animal feed and recovering from the separated liquid, at least one compound selected from the group consisting of sinigrin and decomposition products of sinigrin.

3,044,877
PELLETED ANIMAL FEED AND PROCESS
Albert Lent, Tucson, Ariz., assignor to Erly-Fat Livestock Feed Co., Tucson, Ariz., a corporation of Arizona
No Drawing. Filed Feb. 17, 1960, Ser. No. 9,168
13 Claims. (Cl. 99—8)

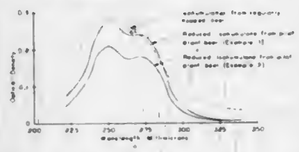
1. A pelleted animal feed consisting essentially of: young green forage; and dry feed material, and having a moisture content of less than about 14%.

3,044,878
PROCESS FOR THE PREPARATION OF A BEVERAGE
Omar S. Knedlik, 1505 W. 8th St., Coffeyville, Kans.
Filed July 18, 1958, Ser. No. 749,392
6 Claims. (Cl. 99—28)



1. A method of producing a drink, comprising a liquid-phase and a solid-phase mixture wherein the solid phase is made up of a mass of tiny frozen particles distributed in the liquid to make the drink have the form of a slush, including the steps of: providing a liquid to constitute the drink in a closed container; charging the same with a gas to raise the pressure in the container above atmospheric pressure and to cause it to emit from the container as hereafter defined; chilling the mass in the container to a few degrees below the freezing point of water at atmospheric pressure, and to approximately the freezing point of the mass under the conditions within the container; and discharging the mass from the container into a receptacle at atmospheric pressure, thereby expanding the gas therein and causing freezing of some of the liquid emitting from the container into tiny solid particles within the remaining liquid phase, to form the slushy drink aforesaid as a consequence of the release of the mass to atmospheric pressure.

3,044,879
ANACTINIC MALT PRODUCT AND HOP EXTRACT THEREFOR
Gilbert H. Koch and William C. Herwig, Milwaukee, and Thomas L. Kissel, Hartford, Wis., assignors to Miller Brewing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 11, 1959, Ser. No. 792,521
20 Claims. (Cl. 99—50.5)

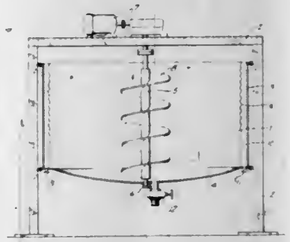


1. A bittering agent for a fermented malt beverage, said bittering agent being derived from hops and including metal borohydride treated isomerized humulone hop constituents.

3,044,880
METHOD OF MAKING A COOKED POTATO PRODUCT
Stephen W. Bogyo, Tarrytown, N.Y., and John A. Rikert, Alpine, and Gerald J. Winter, West Norwood, N.J., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 9, 1959, Ser. No. 785,790
3 Claims. (Cl. 99—100)

1. The method of producing a fat-containing potato product capable of offering a desirable crisp, friable texture and fried potato flavor and color which comprises immersing raw potato slices in a warm liquid fatty composition under a vacuum of at least 100 millimeters absolute pressure, the temperature differential between the boiling point of water contained in the potato slices and that of said liquid fatty composition being about 150°–180° F., and maintaining said absolute pressure and temperature conditions to effect rapid eruptive removal of water from the potato slices until a product of friable texture having a moisture content of at least about 3%, and less than 12% by weight is obtained.

3,044,881
METHOD FOR CANDYING VEGETABLE MATERIAL
Adolf J. Mainzer, 34—29 80th St., Jackson Heights, N.Y.
Original application Mar. 24, 1959, Ser. No. 801,613. Divided and this application Oct. 8, 1959, Ser. No. 845,208
4 Claims. (Cl. 99—102)



1. In a method of candying particulate liquid-containing and liquid-permeable vegetable material, the steps of introducing the particulate material and an aqueous sugar containing solution into a container to form a horizontal layer of the particulate material in the solution; moving a vertical column of said layer and solution in vertical direction so as to effect movement of the particulate material and of the solution and to move substantially all particles of said particulate vegetable material along annular paths located in vertical planes substantially without causing damage to the individual particles of said vegetable material whereby continuous treatment of superposed horizontal strata of said layer by differently concentrated horizontal strata of the solution is prevented and the concentration of sugar in the solution is uniformly reduced while the concentration of sugar in the particulate material is uniformly increased; and withdrawing the solution when the material has a selected concentration of sugar.

3,044,882
PROCESS FOR PROTECTION OF CHLOROPHYLL DURING COOKING OF GREEN VEGETABLES
James P. Sweeney and Margaret E. Martin, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed July 21, 1961, Ser. No. 125,878
1 Claim. (Cl. 99—103)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A process comprising soaking a green vegetable containing chlorophyll *a* in a solution of water and a

sufficient quantity of a citrate-phosphate buffer for about 10 minutes to produce and maintain a pH of 6.8 to 7.0 in the vegetable, draining the buffered solution from the vegetable, and subsequently cooking the vegetable in water containing about 5%, by volume, of the drained buffer solution, to obtain a cooked green vegetable in which a high percentage of the original chlorophyll *a* in the vegetable has been retained.

3,044,883

SHAPE-RETAINING PEANUT SPREAD

Edgar A. Ferguson, Jr., Brooklyn, N.Y., assignor, by mesne assignments, to Fine Brands Corporation

No Drawing. Filed July 26, 1960, Ser. No. 45,289
18 Claims. (Cl. 99—128)

1. A shape-retaining peanut spread, comprising between about 20–60% by weight of an oil composition containing as oil component only edible oils and having a melting point in the range of about 90–120° F., said oil composition including between about 0.5–10% by weight of cotton stearine and between about 2.5–20% by weight of higher fatty acid monoglycerides; and between about 48–80% by weight of peanut butter.

3,044,884

PRESERVATION OF FOODS

William E. Rader and Marvin Legator, Modesto, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 7, 1960, Ser. No. 67,480
5 Claims. (Cl. 99—150)

1. A method for preserving food products which comprises bringing a food product subject to attack by and deterioration caused by microorganisms into intimate contact with a microbiocidally effective amount of from 5 parts per million to one percent by weight of at least one lower alkyl ester of 2-haloacetoacetic acid.

3,044,885

IMPREGNATED SHEETS FOR PRESERVING PERISHABLE FOODSTUFFS

Barbara F. Loehr, Camas, Wash., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

No Drawing. Filed Sept. 15, 1958, Ser. No. 760,859
13 Claims. (Cl. 99—154)

1. As a new article of manufacture, a preservative product for inhibiting the development of fungi comprising a base sheet carrier treated with an active chlorine-releasing compound selected from the group consisting of dichloroisocyanurates and trichloroisocyanuric acid, said compound being present in said carrier in an amount sufficient to gradually release chlorine-containing gas in the presence of moisture over a period of at least a few days.

3,044,886

SLICED SAUSAGE PACKAGE

Gottfried O. Mayer and Oscar E. Seiferth, Madison, Wis., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois

Filed July 15, 1959, Ser. No. 827,280
2 Claims. (Cl. 99—174)



1. A package of a food product of the liver sausage type which is characterized by being relatively soft and having a tendency to dry out when divided into slices and the surfaces of the slices tending to adhere when stacked, said package being in the form of a plurality of relatively thin slices of the product arranged in superimposed stacked relation with the slices being approximately the same size and shape, a divider strip between each two adjacent slices, said divider strip being formed of relatively thin flexible non-toxic sheet material, said divider strip having a width substantially less than the corresponding dimension of the slices and a length sufficient for one end thereof to extend beyond the periphery of the slices when the strip is positioned with the other end thereof interposed between said adjacent slices so that only the middle portions of said adjacent slices are covered by the strip and uncovered portions thereof on either side of the strip are in releasable cohering engagement so as to prevent air from reaching substantial portions of the contiguous surfaces of adjacent slices and to reduce the tendency of the slices to dry out, the extended end of each strip being folded upwardly against the periphery of the uppermost slice so that it may be grasped to separate said slice from the adjacent slice beneath the same when the package is opened, the extended ends of said strips being aligned on one side of the package so as to have the appearance of a continuous strip on the side of the stack, and a wrapper formed from a transparent film material enclosing the stack as though it were a solid chunk of the product.

3,044,887

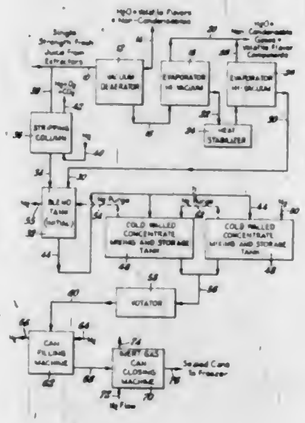
METHOD OF CONCENTRATING FRUIT JUICE

Paul L. Smith, Winter Park, Fla., and Alfred L. Bayes, Riverside, Conn.; said Smith assignor to Union Carbide Corporation, a corporation of New York

Filed Mar. 30, 1959, Ser. No. 802,919

The terminal portion of the term of the patent subsequent to Nov. 3, 1976, has been disclaimed

5 Claims. (Cl. 99—205)



1. A process for the preparation of a concentrated fruit juice which comprises separating juice from fruit, concentrating a first portion of said juice by removing water therefrom, concentrating a second portion of said juice by removing water therefrom while retaining the volatile fraction of said juice, subjecting said second portion of said juice to a stripping operation wherein an inert gas is passed through said juice so as to preferentially displace at least a portion of oxygen present in said juice, protecting said first portion of juice from contamination with oxygen by maintaining said first portion in a non-oxidizing atmosphere, protecting said second portion of juice which has been subjected to said stripping operation from contamination by maintaining said second portion in a non-oxidizing atmosphere, combining said first and second portions of said juice, and storing said combined portions under non-oxidizing conditions.

3,044,888

GLASS FIBER

Jason D. Provance, Morgantown, W. Va., assignor to Houze Glass Corporation, Point Marion, Pa., a corporation of Pennsylvania

No Drawing. Filed July 5, 1960, Ser. No. 40,557
7 Claims. (Cl. 106—50)

1. A high tensile long staple glass fiber of improved heat resistance having a minimum fiber softening temperature from about 1600° F. to about 2400° F. consisting essentially of about 30% to 40% aluminum oxide, about 40% to 50% silica, about 0.5% to 8% zirconium oxide, about 3% to 24% magnesium oxide, less than about 6.0% sodium oxide, with usual impurities in ordinary amounts.

3,044,889

TAR-BONDED MAGNESIA BRICK AND METHOD

John C. Ekedahl and John H. Veale, Joliet, Ill., assignors to Illinois Clay Products Company, Joliet, Ill., a corporation of Illinois

No Drawing. Filed May 11, 1960, Ser. No. 28,214
16 Claims. (Cl. 106—58)

2. A refractory brick consisting essentially of granulated magnesia-bearing minerals of the group consisting of dolomite, magnesite and periclase, bonded by 4–6% of the group consisting of tar and pitch and .5% to 5% P_2O_5, both percentages being of the weight of the minerals.

3,044,890

PAPER SIZING AGENTS

George Joseph Boughton, Sandford-on-Thames, near Oxford, Ian Alexander Graham Dalrymple, Holyport, near Maidenhead, and Harry Pelham Taylor, Aston Rowant, England, assignors to Becker & Co. Limited, London, England, a British company

Filed Mar. 24, 1959, Ser. No. 801,538
Claims priority, application Great Britain Mar. 31, 1958
14 Claims. (Cl. 106—238)

1. A method of manufacturing a paper sizing agent, which consists essentially of the steps of melting a rosin, admixing therewith a material selected from the group consisting of α,β-unsaturated acids and their anhydrides in a weight ratio of 2 parts of rosin to at least 1 part of a material of the said group, maintaining the thus-formed mixture at a temperature of the order of 140° to 150° C. and for a time sufficient to complete the formation of a chemical reaction product constituted by a rosin adduct, adding an alcohol selected from the group consisting of glycerol and ethylene glycol to the reaction product and maintaining the mixture thus formed at a temperature of the order of 140° to 150° C. to effect complete esterification of the reaction product, thereby to convert the rosin adduct into a rosin ester product, and cooling the resultant rosin ester product, melting a quantity of rosin, agitating the molten rosin, adding a quantity of the aforesaid rosin ester product to the molten rosin while continuing agitation thereof, the rosin ester product constituting from 5 to 25% by weight of the molten rosin, agitating the resultant mixture of molten rosin and rosin ester product, adding an aqueous dispersing medium thereto and recovering the thus-formed aqueous, rosin-ester-product-containing rosin dispersion.

3,044,891

TEXTILE SHEET MATERIAL AND PROCESS FOR PRODUCING SAME

Alfred Lauchenauer and Martin Schwemmer, Horn, Thurgau, Switzerland, assignors to Raduner & Co. A.-G., Horn, Thurgau, Switzerland

No Drawing. Filed Sept. 8, 1958, Ser. No. 759,427
Claims priority, application Switzerland Sept. 16, 1957
17 Claims. (Cl. 117—7)

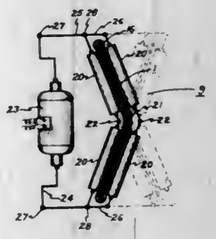
1. A process for producing textile sheet material having high dimensional stability and high resistance to mechanical wear and capable of being printed by lithographic methods comprising treating a textile sheet material formed predominantly of organic fibers having a water take-up of less than about 1.5%, by weight, at 20° C. and 65% relative humidity to remove impurities adhering to said fibers, applying to said textile sheet material a coating composition consisting essentially of (1) from about 20 to about 34%, by weight, of a pre-condensate of a thermosetting resin consisting of the reaction product of an amide with an aldehyde, (2) from about 10 to about 45%, by weight, of a cross-linking agent capable of reacting with at least two hydroxyl groups selected from the group consisting of aldehydes containing not more than three carbon atoms, polyisocyanates, and polyepoxides, (3) from about 20 to about 60%, by weight, of a polymeric compound capable of being rendered substantially water-insoluble by reaction with said cross-linking agent selected from the group consisting of starch, starch derivatives, polyesters having hydroxyl end groups, and vinyl compounds carrying a plurality of hydroxyl groups and (4) an acidic catalyst capable of catalyzing the curing of said thermosetting resin pre-condensate and the cross-linking action of said cross-linking agent, and heating said textile material to cure said thermosetting resin pre-condensate and to effect cross-linking of said polymeric compound by means of said cross-linking agent, said textile material being subjected to tension in both a longitudinal and transverse direction during said process and prior to said heat treatment.

3,044,892

EDGE COATING METHOD

Willard F. M. Gray, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York

Filed Oct. 1, 1959, Ser. No. 843,680
9 Claims. (Cl. 117—10)



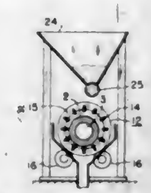
9. A method of coating continuous foil, said method comprising passing said foil through a body of coating material which is in liquid form to deposit a liquid coating thereon, and rapidly transversely flexing opposite sides of said foil in alternately opposite directions about its lengthwise axis while said coating is in a liquid condition and while said liquid coating is being cured, whereby some of said liquid coating will be caused to migrate to and surround the edges of said foil in generally tear-shaped cross-sectional form and be cured on said edges in said form.

3,044,893

METHOD AND APPARATUS FOR FORMING COATINGS OF VITREOUS MATERIAL ON A HEATED METAL BILLET

René Heintz, Berlaimont, Nord, and Jean-Marc Jour, Aulnoye, Nord, France, assignors to Compagnie du Filage des Metaux et des Joints Curty, Paris, France, a corporation of France

Filed Mar. 21, 1960, Ser. No. 16,580
Claims priority, application France Mar. 26, 1959
2 Claims. (Cl. 117—18)



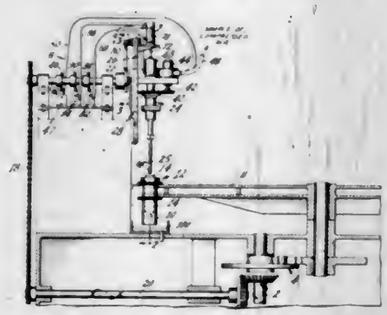
1. The method of simultaneously coating the wall of a bore of a metal billet and the external surface of the billet with layers of vitreous material, which comprises placing powdered vitreous material in the bore of a metal billet heated to a temperature sufficient to melt the vitreous material, introducing the billet into a latticed drum, rotating the drum to rotate the billet and distributing powdered vitreous material through the latticed drum onto the external surface of the billet while it is rotating.

3,044,894

SPRAY COATING ARTICLES

Alexander George Makowski, Fayville, and Charles Hill Hartford, Maynard, Mass., assignors to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 31, 1959, Ser. No. 803,249
8 Claims. (Cl. 117—37)



1. A mechanism for spray coating elongate tubular open end articles to leave a well-defined marginal portion at one end uncoated, comprising a support for holding an article with the marginal portion to remain uncoated uppermost, a spray nozzle having a predetermined spray pattern insertable into said article for the spraying operation, means for effecting relative axial movement between said nozzle and said article support so as to position said nozzle within the article and withdraw the same therefrom in each case traversing said marginal portion, and also so as to spread the coating along the length of the article wall, means for feeding coating material to said nozzle, means for controlling the flow of coating material to said nozzle, and means for so coordinating said movement effecting means and said flow controlling means as to cause flow of coating material from said nozzle during the spreading movements thereof but only while the nozzle and article are at relative positions such that the spray pattern of the nozzle is entirely below the marginal portion of the article, said coordinating means also including means for starting and stopping the flow of coating material only at times when the spray pattern is remote from said marginal portion.

3,044,895

PROCESS FOR TREATING PAPER

Larry Z. Isaacson, Cincinnati, Ohio, assignor to Formica Corporation, Cincinnati, Ohio, a corporation of Delaware

No Drawing. Filed Dec. 9, 1957, Ser. No. 701,319
20 Claims. (Cl. 117—60)

1. A process for treating paper webs comprising wetting a cellulosic paper web containing not more than about 5% of water with water in an amount ranging from about 1% to 40% by weight, based on the weight of said web, impregnating the wetted web with a mixture of from about 5% to 22%, by weight, based on total resin solids, of a water-soluble phenol-formaldehyde resin and correspondingly from about 95% to 78% by weight, based on total resin solids, of a water-insoluble phenol-formaldehyde resin, dispersed in a mutual, inert solvent, and drying the impregnated cellulosic paper web.

3,044,896

METHOD OF MAKING CAST COATED PAPER

Edgar Warner, Middletown, Ohio, assignor to Champion Papers, Inc., Hamilton, Ohio, a corporation of Ohio

Filed Mar. 4, 1959, Ser. No. 797,123
4 Claims. (Cl. 117—64)



1. A method of manufacturing cast coated paper having controlled surface absorbency characteristics comprising the steps of applying a coating comprised of an aqueous suspension of a mineral pigment and a water dispersible, hydrophilic adhesive to a paper substrate, thereafter doctoring said applied coating to remove excess coating from said substrate, while leaving the base coating on said substrate in a water saturated condition and thereafter immediately applying a second coating application of similar constituent composition of said saturated base coating and finally drying said applied coating while immobile against a metal casting surface.

3,044,897

METHOD OF ANCHORING NITROCELLULOSE SURFACE COATINGS AND ANCHORING COMPOSITION THEREFOR

Vincent Dominic Celentano, Hamden, and Lamont Hagan, Guilford, Conn., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,033
10 Claims. (Cl. 117—73)

10. The method of anchoring nitrocellulose surface coatings to regenerated cellulose base sheet which comprises softening the base sheet with an aqueous composition containing about 15% softener and a fractional percentage of a partially polymerized anionic melamine formaldehyde resin modified with benzoguanaminesulfonic acid, drying this base sheet to a water content of about 7%, thereafter coating said sheet with a lacquer composition containing dissolved nitrocellulose and from 1.5 to 7% of an acid selected from the group consisting of itaconic, acetic, aconitic, hydroxyacetic, and maleic acid, heating the coated sheet to a temperature of about 115° C. for a period up to 90 seconds.

3,044,898

TEXTILE SIZING COMPOSITION, APPLICATING METHOD AND RESULTING PRODUCT

Emile E. Habib, Spartanburg, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,974
27 Claims. (Cl. 117—76)

23. A method of sizing textile yarns comprising passing a yarn end into an aqueous, substantially fat, wax and oil free dispersion consisting essentially of (*a*) about 0.5% to 15.0% of a water soluble, film forming polymer which is a solid at room temperature and thin films of which tend to become tacky and lose cohesive strength in humid atmospheres, and (*b*) at least 7%, calculated on the polymer, of an aliphatic carboxylic acid having lubricating properties, which is insoluble in said polymer and in water, which is a solid at room temperature and melts below 110° C., and which, as an alkali metal salt, disperses in water, in a manner so as to provide a pickup of at least 0.5% of the polymer solids when the yarn is filament and at least 2% when the yarn is spun, the concentration of said acid in said dispersion being sufficient to provide a pickup thereof of at least a 0.25% under the selected conditions, all calculated on the weight of the dry yarn, and then drying said yarn and heating said yarn at a temperature above the melting point of said acid.

3,044,899

METHOD OF COATING METALS WITH THERMOPLASTIC MATERIALS

Peter J. Canterino, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Feb. 16, 1959, Ser. No. 793,291
15 Claims. (Cl. 117—132)

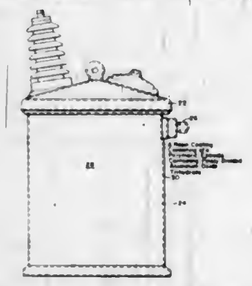
1. A method for preparing a coated metal surface which comprises applying to said surface a coating of a dispersion of finely sub-divided solid olefin polymer in a solution of polymer compatible therewith, said dissolved polymer containing polar groups, drying said coating at a temperature below the boiling point of the solvent and without substantial dissolution of the olefin polymer and thereafter heating said coating at a temperature above the melting point of the polymers for a period of time sufficient to form an impervious coating adherent to said metal surface.

3,044,900

ELECTRICAL APPARATUS HAVING A COATING CONSISTING OF RESINOUS POLYMERIC EPOXIDE CONTAINING FINELY DIVIDED ALUMINUM OXIDE TRIHYDRATE AND RESINOUS POLYAMIDE

James G. Ford, Sharon, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 11, 1959, Ser. No. 798,763
5 Claims. (Cl. 117—132)



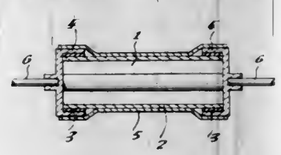
1. A process for applying a uniform 10 to 30 mils thick resin coating on electrical apparatus which comprises establishing a resin blend consisting of (A) from 3 to 8 parts by volume of a mixture consisting of from 20% to 40% of at least one normally liquid resinous polymeric epoxide which is a glycidyl polyether of a dihydric phenol having a 1,2-epoxy equivalency greater than 1.0, from 25% to 50% of a finely divided inorganic filler, and the balance solvent, and (B) from 0.5 to 3 parts by volume of a solvent solution of a normally liquid resinous polyamide derived by reacting at least one polyamine with at least one dimerized fatty acid containing from 8 to 24 carbon atoms per molecule, applying said resin blend to said electrical apparatus and heating the deposited coating at 125° C. to 175° C. to convert it to a hardened, thermoset state.

3,044,901

PROCESS FOR THE PRODUCTION OF ELECTRICAL RESISTORS AND RESULTING ARTICLE

Courtney Garnsworthy, Newcastle-on-Tyne, England, assignor of one-half to Welwyn Electric Limited, Northumberland, England, a company of Great Britain and Northern Ireland

Filed Oct. 23, 1959, Ser. No. 848,185
Claims priority, application Great Britain Oct. 27, 1958
16 Claims. (Cl. 117—212)



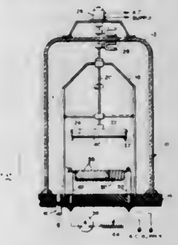
1. A process for the production of an electrical resistor comprising a body composed of a vitrified or sintered inorganic material and an electrically conductive fired on layer consisting of oxides, which includes applying a suspension of a flux and a powdered oxide mixture in a liquid to said resistor body to form a coating thereon wherein the powdered oxide mixture is prepared separately and is mixed with the flux suspension to form a slip, said powdered oxide mixture comprising tin oxide and at least one of the oxides selected from the group consisting of boron oxide and antimony oxide, and said liquid being inert to the flux and to the powdered oxide mixture, then drying the resultant coated body and thereafter firing it under non-reducing conditions to produce a resistive film on said resistor body which resistive film is in the form of a fired on layer, the proportions and amounts of said powdered oxide and flux and the thickness of the coating applied to said resistor body before firing being such as to produce a film after firing having a surface resistivity greater than 1,000 ohms per square.

3,044,902

METHOD OF FORMING FILMS OF ELECTROLUMINESCENT PHOSPHOR

William A. Thornton, Jr., Cranford, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 3, 1959, Ser. No. 837,988
12 Claims. (Cl. 117—215)



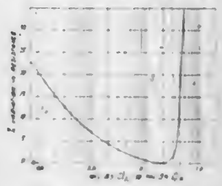
1. The method of forming on a light-transmitting, electrically-conducting layer carried on a glass substrate, a

thin, continuous, light-transmitting film of preselected electroluminescent material, which method comprises: vacuum evaporating a thin film of substance at least principally comprising the matrix component of said preselected electroluminescent material onto a light-transmitting, electrically-conducting layer carried on a glass substrate; placing about and in contact with the formed thin film, finely-divided material principally comprising the matrix component of said preselected electroluminescent material and also including activator impurity substance in about the proportions in which such impurity substance is normally added as activator impurity to the raw mix in preparing said preselected electroluminescent material in finely-divided form; firing for a predetermined time the formed thin film, supporting substrate and contacting finely-divided material at a predetermined temperature at least approaching the firing temperature normally used in making said preselected electroluminescent material in finely-divided form and less then the temperature at which said substrate will soften, to render said formed film electroluminescent; and thereafter separating the fired electroluminescent thin film and supporting substrate from residual finely-divided contacting material.

3,044,903
THIN FILM RESISTORS

Douglas A. Skoog, Stanford, Calif., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Aug. 25, 1958, Ser. No. 756,884
1 Claim. (Cl. 117—229)



A method of producing electric resistors of a predetermined temperature coefficient adjacent zero and of a resistivity which is highly stable in the presence of post-manufacturing contamination, said method comprising the steps of: providing a solution consisting of liquid anhydrous stannic chloride and liquid anhydrous arsenic trichloride, the ratio of arsenic trichloride to stannic chloride in said solution ranging from approximately .2% to approximately .4% by volume, and maintaining said solution at a temperature of approximately 55° C. to produce a filming vapor containing tin and arsenic whereby said filming vapor has an arsenic content predetermined by the arsenic vapor pressure which corresponds with said temperature; evolving water vapor; and simultaneously applying said filming and water vapors to exposed surfaces of a refractory body heated to several hundred degrees C. to produce on said body an electrically conductive film of tin, doped with arsenic in proportion with said arsenic content of the filming vapor.

3,044,904
SEPARATION OF DEXTROSE AND LEVULOSE

Gonzalo R. Serbia, Aguirre, P.R., assignor to Central Aguirre Sugar Company, Boston, Mass., a Massachusetts trust

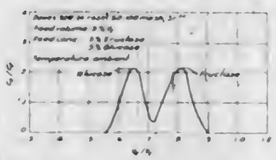
No Drawing. Filed Feb. 15, 1960, Ser. No. 8,511
6 Claims. (Cl. 127—46)

1. A method for separating from one another dextrose and levulose, which comprises feeding to a water immersed bed of the calcium salt of a nuclearly sulfonated styrene cation exchange resin containing a cross-linking agent; an aqueous solution of dextrose and levulose, thus displacing water from the resin, thereafter feeding water to the bed to displace a further amount of liquid from the bed, and collecting successive fractions of the displaced effluent liquid, whereby there is obtained a fraction of the effluent liquid which contains dextrose as its major sugar constituent and a subsequent fraction of the effluent liquid which contains levulose as its major sugar constituent.

3,044,905
SEPARATION OF FRUCTOSE FROM GLUCOSE USING CATION EXCHANGE RESIN SALTS

Leonard J. Lefevre, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Feb. 15, 1960, Ser. No. 8,605
6 Claims. (Cl. 127—46)

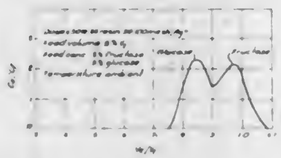


1. A method for separating fructose from an aqueous solution of fructose and glucose which comprises contacting said aqueous solution with a member of the group consisting of the barium and strontium salts of a nuclearly-sulfonated styrene cation exchange resin crosslinked in molecular structure to an extent rendering the sulfonated resin insoluble in aqueous solutions of acids, bases and salts whereby fructose and glcose are absorbed by said cation exchange resin salt, separating the loaded resin from the remaining aqueous solution and eluting said loaded resin with water to remove the glucose and fructose in successive fractions of eluate.

3,044,906
SEPARATION OF FRUCTOSE FROM GLUCOSE USING A CATION EXCHANGE RESIN SALT

Leonard J. Lefevre, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich.

Filed Feb. 15, 1960, Ser. No. 8,606
6 Claims. (Cl. 127—46)



1. A method for separating fructose from an aqueous solution of fructose and glucose which comprises contacting said aqueous solution with a silver salt of a nuclearly-sulfonated styrene cation exchange resin crosslinked in molecular structure to an extent rendering the sulfonated resin insoluble in aqueous solutions of acids, bases and salts whereby fructose and glucose are absorbed by said cation exchange resin salt, separating the loaded resin from the remaining aqueous solution and eluting said loaded resin with water to remove the glucose and fructose in successive fractions of eluate.

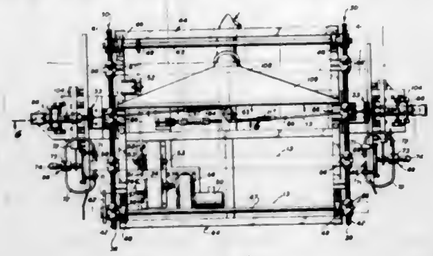
3,044,907
PIPE THREAD WIPING METHOD AND APPARATUS

Otto Bernhardt, Gardena, Calif., assignor, by mesne assignments, to Rome Cable Corporation, Rome, N.Y., a corporation of Delaware

Filed Nov. 24, 1958, Ser. No. 775,930
15 Claims. (Cl. 134—5)

1. Apparatus for wiping excess coating material from the ends of a conduit section comprising: a frame; heat

means on said frame for simultaneously subjecting each of said ends of the conduit section to heat so that the coating thereon is reduced to a molten state; rotatable holding means on said frame and adjacent said heat means for internally supporting opposite ends of the conduit section and for rotating said conduit section; and rotatable brush means adjacent said holding means and externally engageable with said ends for wiping excess coating from the exterior of said ends of said conduit section.

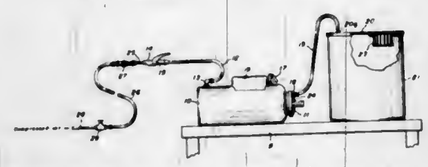


11. A method of wiping excess coating material from the exterior of the threaded ends of a conduit section comprising the steps of: heating said ends so as to reduce the coating thereon to a molten state; rotating said conduit section; and holding a brush against each of said ends while said conduit is rotating so as to remove a quantity of molten coating therefrom.

3,044,908
METHOD OF UNCLOGGING POWDER DISPENSER

Dewey J. Baldi, Eveleth, Minn., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Mar. 15, 1961, Ser. No. 95,897
2 Claims. (Cl. 134—10)

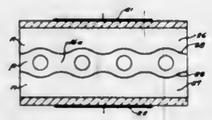


1. A method of unclogging a powder-dispensing container provided with a filling opening and cover therefor at one end and a discharge hose and nozzle at the other, which comprises connecting a source of compressed gas to said nozzle, backflowing gas from the nozzle through the hose and container and exhausting it through an opening in said cover and separating from the exhaust gas the powder borne thereby.

3,044,909
SEMICONDUCTIVE WAFER AND METHOD OF MAKING THE SAME

William Shockley, 23466 Corta Via, Los Altos, Calif.

Filed Oct. 23, 1958, Ser. No. 769,227
7 Claims. (Cl. 148—1.5)

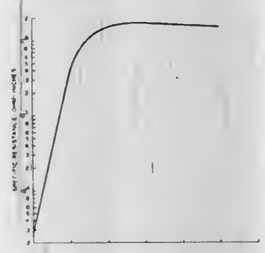


1. A method of making a junction semiconductive device which comprises the steps of forming a wafer of semiconductive material of one conductivity type having first and second spaced surfaces with a plurality of holes extending through the wafer from one surface to the other, each of said holes being surrounded by a Burgers circuit having a non-vanishing Burgers vector, diffusing, semiconductive material of opposite conductivity type into the wafer along the inside surface of said holes to form a layer of opposite conductivity type defining each of said holes, and making ohmic contact to said wafer on opposite sides of said holes and making ohmic contact to said layers.

3,044,910
HIGH BURNING RATE SOLID PROPELLANT

Eugene D. Guth, Idaho Falls, Idaho, and Claude G. Long, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed June 16, 1958, Ser. No. 742,432
13 Claims. (Cl. 149—19)



1. A process for increasing the burning rate of a solid rocket propellant composition comprising a solid inorganic oxidizing salt, a rubber binder, a plasticizer, and about 20 to about 150 parts by weight per 100 parts of rubber of carbon black, which comprises milling the composition between closely spaced surfaces wherein at least part of the milling is effected between two surfaces having a clearance of about 0.009 inch until the Shore D hardness is greater than about 50 and has increased to at least 90 percent of the maximum value obtainable by milling and the value of electrical resistivity has increased to at least 40 percent of the maximum value obtainable by milling.

3,044,911
PROPELLANT SYSTEM

Thomas L. Fritzlen, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

No Drawing. Filed Mar. 4, 1958, Ser. No. 719,116
7 Claims. (Cl. 149—37)

2. In a composite solid propellant characterized by an admixture of fuel particles and an oxidant therefor, the improvement which comprises a fuel consisting essentially of centrifugally cast particles of a metal selected from the group consisting of aluminum and alloys of aluminum having an aluminum content of at least 65 percent by weight, said particles having an average size between about 20 and 100 mesh.

3,044,912
AMMONIUM NITRATE-CYANIDE EXPLOSIVE

Wayne A. Proell, Chicago, Ill., and William G. Stanley, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed May 13, 1952, Ser. No. 287,623
5 Claims. (Cl. 149—60)

1. An explosive composition consisting essentially of a binder, a combustion catalyst and ammonium nitrate, wherein the binder is a viscous hydrocarbon and is present in an amount between about 5 and 25 weight percent, the combustion catalyst is selected from the class consisting of alkali-metal ferricyanides and ammonium-ferricyanides and is present in an amount between about 0.5 and 25 weight percent and the remainder is essentially all ammonium nitrate.

3,044,913
UNSATURATED POLYESTER LAMINATE AND PROCESS FOR MAKING SAME

Lennart A. Lundberg, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

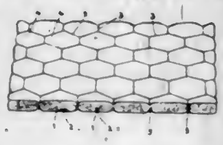
No Drawing. Filed May 27, 1958, Ser. No. 737,998
17 Claims. (Cl. 154—43)

12. A heat-resistant laminated article which comprises a consolidated, post-cured assembly of a plurality of super-imposed thermoset polyester resin-impregnated fibrous sheets, said thermoset polyester resin being, in an uncured state, a thermosetting polyester resinous composition comprising (1) an ethylenically unsaturated polyester resin, obtained by esterifying a saturated dihydric alcohol with an α,β-ethylenically unsaturated dicarboxylic acid, (2) a monomeric cross-linking agent for said (1) selected from the group consisting of triallyl cyanurate and triallyl isocyanurate, (3) from about 1% to 5% by weight, based on the weight of said (1) and said (2), of an amide compound selected from the group consisting of urea, alkyl ureas, aryl ureas, N,N-diallyl urea, N,N'-diallyl urea, ammelide, ammeline, melamine, N,N-diallyl melamine, triaryl melamines, alkyl guanamines, aryl guanamines, β-acetoxy propionamide, β-alloxy-N-tert-butyl propionamide, lactamide, succinamide, adipamide, phthalamide and salicylamide, wherein said alkyl and aryl substituents are unsubstituted alkyl and aryl groups, and (4) a catalytic amount of an addition polymerization catalyst, said assembly having been consolidated at a temperature of from about 10° C. to about 150° C. for from about 10 to 90 minutes and thereupon post-cured at a temperature above about 400° F. for at least about 2 hours while being substantially shielded from contact with air

3,044,914
HEAT-INSULATING MATERIALS

Angus Smith Bell, Pinner, John Smithies, Thornham, Rochdale, and James Anthony Briggs, Croesycellog, Cwmbran, England, assignors to British Celanese Limited, London, England, a British company

Filed Oct. 28, 1958, Ser. No. 770,116
Claims priority, application Great Britain Oct. 29, 1957
4 Claims. (Cl. 154—44)



1. Heat-insulating material comprising a batting of staple fibers of which at least a substantial proportion are thermoplastic fibers, substantially all the fibers throughout the batting being bonded together by coalescence, the batting being embossed in a pattern of intersecting lines and compressed only at said embossed lines to a depth and only to a depth such that the batting is resilient at the lines; the batting remaining uncompressed except at said lines.

3,044,915
METHOD AND APPLIANCE FOR HEAT INSULATION

Wilbur C. Jacobsen, Millinocket, Maine
(611 Central Road, Rye Beach, N.H.)

Filed Dec. 12, 1958, Ser. No. 780,057
1 Claim. (Cl. 154—44)

A prefabricated insulator for a fluid valve of the type having a body with pipe connections coaxially situated in a first axis and a valve stem extending from the body in a second axis at right angles to the first axis, said insulator comprising a hollow body of uniform cross section along an axis to coincide with the second axis, said body being self-supporting and being comprised essentially of a heat insulating material of uniform wall thickness, said body further having an open end to receive said stem, a closed end to be situated on the side of said body opposite to the stem, and a pair of wall openings to be situated in the first axis to receive said pipe connections, said body further having a removable wall

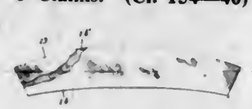


portion defined by a line of severance passing through said wall thickness and extending from said open end to one of said wall openings, thence to the other of said wall openings and thence back to said open end, said line of severance being located to permit attachment of the insulator when separated from the removable wall portion to a valve having its pipe connectors then attached to pipes.

3,044,916
COLLAR STIFFENER AND METHOD OF MAKING

Eric Britton, Macclesfield, England, assignor to Eric Britton & Company Limited, Macclesfield, England, a British company

Filed Dec. 29, 1959, Ser. No. 862,505
Claims priority, application Great Britain Dec. 30, 1958
3 Claims. (Cl. 154—46)



1. A composite textile material for stiffening the collars of garments comprising, an under-collar layer and a stiffening layer bonded thereto, each of said layers being bias-cut wherefore the warp and weft threads thereof are angularly disposed relative to the longitudinal axis of the material, the direction of twist in the warp threads in at least one of the two said layers being opposite to the direction of twist in the weft threads thereof wherefore longitudinal tension imparted to a length of the composite material produces a curvature transversely of the said length with the under-collar layer at the concave side.

3,044,917
WAX COMPOSITION

William J. Stout, Wilmington, Del., and Seymour W. Ferris, Chester, and John D. Tench, Prospect Park, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Jan. 19, 1960, Ser. No. 3,236
8 Claims. (Cl. 154—50)

7. Fibrous sheets of cellulosic material adhered together by a laminating wax film, said film consisting essentially of from 50 to 98 percent by weight of a hydrocarbon microcrystalline wax derived from petroleum and having an adhesion value from 30 to 120 grams pull per two inch width, and of from 50 to 2 percent by weight of a hydrocarbon paraffin wax derived from petroleum and having a melting point of from 118° F. to 130° F., a refractive index @ 212° F. of from 1.4250 to 1.4300, a penetration @ 77° F. of from 25 to 50, a viscosity @ 210° F. of from 40 to 44, and a boiling range of the 5 percent through 95 percent volume fraction of from 400° F. to 600° F. @ 2 mm. Hg.

3,044,918
FLEXIBLE CELLULAR PRODUCT AND METHOD OF FORMING SAME

William T, Wagner, Dayton, Ohio, assignor to Dayco Corporation, a corporation of Ohio

Filed June 20, 1957, Ser. No. 666,894
1 Claim. (Cl. 154—54)

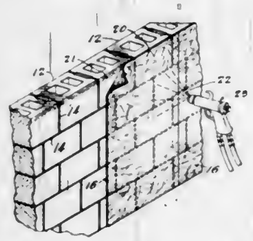


A composite cushioning member comprising top and bottom layers of a flexible, resilient cellular material and at least one intermediate layer of similar material bonded therebetween having a plurality of diamond-shaped apertures passing through the narrowest dimension of said layer, the spacing and size of said apertures predetermined in accordance with slits previously formed in said material, said openings consisting of said slits in expanded form, said intermediate layer being maintained and bonded to said outer layers under sufficient tension to maintain the shape of said apertures.

3,044,919
METHOD OF APPLYING FACING MATERIAL TO A WALL SURFACE

Chalmer S. Stoneburner, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed May 16, 1957, Ser. No. 659,601
11 Claims. (Cl. 156—71)



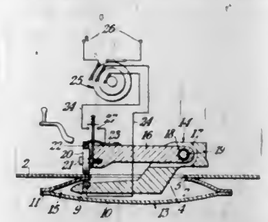
1. A method of applying facing material to a wall surface including the steps of suspending a pervious mat of prebonded mineral fibers in contiguous relation with the wall surface by joining the upper edge region of the mat to the wall surface, and applying an adhesive to the obverse face of the mat whereby the adhesive is moved through the interstices in the mat to adhesively join the mat to the surface and form a coating of the adhesive on the obverse face of the mat.

3,044,920
REPAIR OF THERMOPLASTIC MATERIALS

Douglas Dewar, Wolston, near Coventry, England, assignor to Dunlop Rubber Company Limited, London, England, a British company

Filed Jan. 6, 1958, Ser. No. 707,313
Claims priority, application Great Britain Jan. 15, 1957
3 Claims. (Cl. 156—97)

1. A method of repairing a tear, puncture, or the like in thermoplastic material, comprising the steps of cutting said material around the damaged portion thereof to form an aperture, applying to said material about said aperture an annular margin of a patch of thermoplastic material having an imperforate sheet sealed to the outer periphery of said annular margin with the inner tperiphery of said annular margin lying adjacent the periphery of said aperture, heating said annular margin and the area

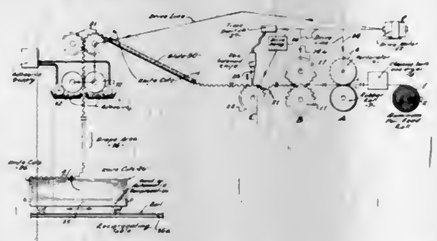


of said plastic material in contact therewith to the softening temperature and pressing them together.

3,044,921
METHOD FOR MAKING CELLULAR CORES

Clinton H. Wentworth, Los Angeles, and Lloyd H. Wallner, Temple City, Calif., assignors, by mesne assignments, to Hexcel Products, Inc., Berkeley, Calif., a corporation of California

Filed Jan. 10, 1956, Ser. No. 558,294
10 Claims. (Cl. 156—205)

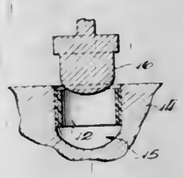


1. In the method of forming a cellular core wherein transversely corrugated strips having longitudinally spaced apexes are stacked with the apexes in register and in contact to form a cellular core, the improvement which comprises forming perforated deformations in the apexes of said corrugations and thereafter stacking said strips to interengage said perforated deformations to align the apexes of said strips.

3,044,922
METHOD OF MAKING MOLDED BEARINGS

Henry C. Kappel, Elmhurst, Ill., assignor to The Richardson Company, Melrose Park, Ill., a corporation of Ohio

Filed Oct. 12, 1959, Ser. No. 845,938
2 Claims. (Cl. 156—225)



1. A method of making a molded bearing which comprises impregnating a woven cellulosic fiber web with a thermosetting resin, convolutely winding said web around a heated mandrel to partially advance the cure of said resin and to form a self-sustaining cylinder composed of a plurality of adhesively united laminae, said cylinder having a circumference approximating the maximum lateral dimensions of said bearing, severing said cylinder into smaller cylindrical sections of a size sufficient to fill the cavity of the bearing mold and subjecting such a section to a molding operation under heat and pressure whereby at least a portion of the sides of said smaller

cylindrical section are deformed radially inward of its longitudinal axis forming a circular concave configuration and said thermosetting resin is simultaneously cured to a hard, infusible state.

3,044,923

HANDLING OF SELF-ADHERING LABELS AND THE LIKE

Burton D. Morgan, 210 Meriden Road, Painesville, Ohio

Filed Jan. 2, 1959, Ser. No. 784,622
1 Claim. (Cl. 156—248)



In the handling of a self-adhering label, comprising a sheet of material having an adhesive coating and a temporary backing thereon, the method of removing such backing which comprises by partially cutting the composite article with a hand tool to the extent that the sheet is severed and the backing therebeneath gripped by the tool in the same operation, such cutting and gripping occurring on a line which extends from one edge of the article to another, relatively manipulating such tool, with the backing gripped thereby, to free a portion of the sheet adjacent such line, grasping such freed portion of the sheet, and peeling the backing completely from the sheet by further relative movement of the tool, the latter throughout being the agency whereby the backing is manipulated.

3,044,924

PROCESS FOR MAKING CIGARETTE PAPER AND RESULTING PAPER

Milton O. Schur, Asheville, N.C., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Dec. 30, 1954, Ser. No. 478,925
10 Claims. (Cl. 162—139)

5. Sheet paper suitable for wrapping tobacco and forming cigarettes consisting essentially of cellulose, calcium carbonate, and a compound of an element selected from the group consisting of manganese, iron, cobalt and nickel, said compound being present in minor proportion and substantially uniformly incorporated throughout said paper.

3,044,925

METHOD AND APPARATUS FOR THE MANUFACTURE OF PAPER

Martin J. Berlyn, Montreal, Quebec, Canada, assignor to Dominion Engineering Works Limited, Montreal, Quebec, Canada

Filed Nov. 20, 1958, Ser. No. 775,236
13 Claims. (Cl. 162—202)

1. A method of forming a high consistency aqueous suspension of fibres in the order of five percent consistency into a sheet which comprises effecting pressure impregnation of the stock with a water-soluble gas, forcing the gas-impregnated stock through a orifice at high velocity into an expansion zone in which dissolved gas comes out of solution in the form of bubbles which serve to deflocculate the stock by forcing adjacent fibres apart and which also breaks up flocs and creates turbulence, delivering the deflocculated stock from the expansion zone in a downwardly flowing stream, and subjecting the downwardly flowing deflocculated stream of stock to compacting pressure applied thereto at different points along the length of the downward path of travel of said stream to thereby force water and gas from the down-



wardly flowing stream of stock and compact the fibrous components of the stream into a sheet.

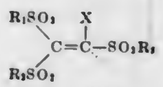
3,044,926

SULFONYL ETHYLENE FUNGICIDES

James P. Flavin, Mission, and Joseph R. Riden, Jr., Overland Park, Kans., assignors to Chemagro Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed May 29, 1958, Ser. No. 738,659
Claims priority, application France May 21, 1958
19 Claims. (Cl. 167—22)

13. A process for killing fungi comprising applying to the fungi habitat an effective amount of a compound having the formula



wherein R_1, R_2 and R_3 are each alkyl groups and X is selected from the group consisting of a halogen of atomic weight not over 80 and hydrogen.

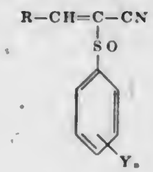
3,044,927

TOXIC ARYLSULFINYL ALKENENITRILES PESTICIDES

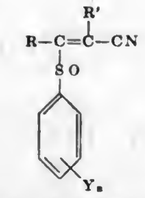
Samuel Allen Heininger, Warson Woods, Mo., and Gail H. Birum, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Dec. 31, 1957, Ser. No. 706,239. Divided and this application Dec. 22, 1960, Ser. No. 77,527
8 Claims. (Cl. 167—30)

1. The method of inhibiting the growth of undesired microorganisms which comprises exposing said microorganisms to at least a growth-inhibiting amount of an arylsulfinyl alkenenitrile selected from the class consisting of compounds of the formula



and the formula



wherein R and R' are selected from the class consisting of hydrogen and hydrocarbon radicals free of aliphatic unsaturation and containing from 1 to 6 carbon atoms, Y is selected from the class consisting of chlorine, bromine, iodine, fluorine, hydrogen and alkyl radicals having from 1 to 6 carbon atoms, and *n* is an integer from 1 to 5.

3,044,928

WITHDRAWN

3,044,929

FUMIGANT COMPOSITIONS COMPRISING HEXAMETHYLENE TETRAMINE DINITRATE

Gerhard Bodo, Vienna, Alfred Diskus and Walther Beck, Linz, Austria, assignors to Osterreichische Stickstoffwerke Aktiengesellschaft, Linz, Austria

No Drawing. Filed Apr. 10, 1961, Ser. No. 101,670
Claims priority, application Austria Apr. 13, 1960
3 Claims. (Cl. 167—39)

1. A fumigant composition comprising hexamethylene tetramine dinitrate as a fumigating agent and a pesticidal agent which is thermally vaporisable at temperatures below 320° C.

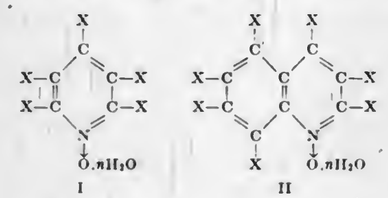
3,044,930

N-OXIDES OF HETEROCYCLIC NITROGEN COMPOUNDS AS BIRD AND RODENT REPELLENTS

Lyle D. Goodhue, Bartlesville, and Kenneth E. Cantrel, Dewey, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

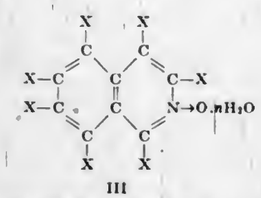
No Drawing. Filed Dec. 8, 1960, Ser. No. 74,447
18 Claims. (Cl. 167—46)

1. A method for protecting growing plants and other materials normally consumed as food by birds and rodents which comprises treating said plants and other materials with an N-oxide of a heterocyclic nitrogen-containing compound having a structural formula selected from



I II

and



III

wherein X is selected from the group consisting of hydrogen, chlorine, bromine, alkyl and alkoxy radicals containing from 1 to 4 carbon atoms and aralkoxy radicals containing from 7 to 10 carbon atoms, inclusive, and nitro radicals, and wherein *n* is selected from the group consisting of 0, 1, and 2.

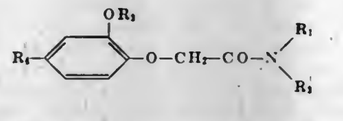
3,044,931

ARYLOXY ACETIC ACID AMIDES: PROCESS FOR PARENTERAL APPLICATION

Elvin A. Holstius, White Plains, N.Y., assignor to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 12, 1960, Ser. No. 8,221
Claims priority, application Switzerland Jan. 27, 1960
12 Claims. (Cl. 167—52)

1. An anesthetic aqueous emulsion for intravenous application characterised by a content of 2–10% by weight of compound of the general formula



wherein R_1, R_2 and R_3 are low molecular alkyl radicals and R_4 is a member selected from the group consisting of a low molecular alkyl, alkenyl, α-hydroxyalkyl and an α-oxo-alkyl radical, and 2–10% by weight of a soya-lecithin preparation consisting essentially of chemical lecithin as a predominating ingredient, and a low content of inositol phosphatides and oil.

3,044,932

APPETITE SUPPRESSANT DRUGS

Adrian P. Tazelaar and William Veldkamp, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Feb. 24, 1960, Ser. No. 10,569
4 Claims. (Cl. 167—55)

3. The process for body weight control in animal and human subjects which comprises orally administering to overweight animal and human subjects per kilo of body weight of said subjects from about 0.1 to about 2 milligrams of a member selected from the group consisting of d-N-benzyl-β-phenylisopropylamine, d-N-methyl-N-benzyl-β-phenylisopropylamine and acid addition salts thereof dispersed in an oral pharmaceutical carrier.

3,044,933

MAGNESIUM HYDROXIDE SUSPENSIONS

Donald E. Cadwallader, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 21, 1960, Ser. No. 37,579
3 Claims. (Cl. 167—55)

1. An aqueous pharmaceutical suspension comprising magnesium hydroxide and an hydroxyethylated cellulose ether polymer having 1 to 2.5 hydroxyethyl groups for each anhydroglucose unit making up the cellulose.

3,044,934

PARENTERAL ADMINISTRATION OF METHANESULPHONATE OF POLYMYXIN A, B OR E

Samuel Wilkinson, London, England, assignor to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed May 24, 1960, Ser. No. 31,270
Claims priority, application Great Britain May 19, 1960
3 Claims. (Cl. 167—65)

1. A method for the treatment of bacterial infections which comprises the parenteral administration of an N-methanesulphonate derivative of a polymyxin selected from the class consisting of polymyxins A, B and E containing a therapeutically acceptable cation.

3,044,935
PURIFICATION OF CRUDE CARZINOPHILIN

Hideo Kamada, Hofu-shi, Shigetoshi Wakaki, Tokyo, Keitaro Tomioka, Nagaizumimura, Sunto-gun, Shizuoka-ken, Satoshi Ueyama, Hofu-shi, and Keizo Uzu and Hirofuto Marumo, Nagaizumimura, Sunto-gun, Shizuoka-ken, Japan, and Yasuo Fujimoto, Stanford, Calif., assignors to Kyowa Hakko Kogyo Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

No Drawing. Filed July 31, 1958, Ser. No. 752,208

10 Claims. (Cl. 167—65)

1. A method for purifying carzinophilin which comprises (*a*) adding a lower alkanol having one to five carbon atoms to a crude free carzinophilin solution in a water-immiscible organic solvent selected from the group consisting of chloroform, dichloroethylene, benzol, toluol, xylol, ethyl acetate, butyl acetate, amyl acetate and ether until a precipitate is formed, (*b*) standing the resulting mixture with cooling to complete crystallization of carzinophilin and (*c*) recovering the crystalline carzinophilin, the said crude free carzinophilin solution in a water-immiscible organic solvent being a member selected from the group consisting of (1) crude free carzinophilin solution dissolved out from weakly acidic aqueous solution into the said water-immiscible organic solvent and (2) crude free carzinophilin solution of the residue obtained by evaporation of the solvent from the afore-said solution, said last-mentioned carzinophilin solution being in a water-immiscible organic solvent different from that present in step (*a*).

3,044,936
PROCESS OF PRODUCING SOLUTIONS OF CHLORAMPHENICOL IN AQUEOUS LIQUIDS, AND COMPOSITION

Johann Daniel Achelis, Heidelberg, Rudi Gall, Mannheim-Kaefertal, Erich Haack, Heidelberg, and Wolfgang Voemel, Mannheim, Germany, assignors to C. F. Boehringer & Soehne G.m.b.H., Mannheim-Waldhof, Germany, a corporation of Germany

No Drawing. Filed Dec. 2, 1958, Ser. No. 777,602

Claims priority, application Germany Dec. 7, 1957

5 Claims. (Cl. 167—65)

1. The stable solution of chloramphenicol in an aqueous liquid containing dissolved therein choramphenicol and, as solubilizing agent, the sodium salt of chloramphenicol-3-succinate, the molar ratio of chloramphenicol to sodium salt being between about 1:1 and about 2:1.

3,044,937
PROCESS AND COMPOSITION FOR EXAMINING EYES WITH FLUORESCENT VITAMIN B_2

Joseph Z. Krezanoski, Sunnyvale, Calif., assignor to Barnes-Hind Laboratories, Inc., a corporation of California

No Drawing. Filed May 16, 1960, Ser. No. 29,166

6 Claims. (Cl. 167—81)

1. The process of examining eyes comprising: instilling in the eye an aqueous solution of a member selected from the group consisting of vitamin B_2 and water-soluble salts of vitamin B_2 and examining the eye under an incandescent source employing a suitable filter in the absence of sufficient visual light to obscure the fluorescent effect.

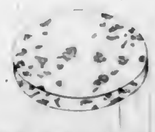
4. A solution for the examination of eyes comprising an isotonic aqueous solution of a member selected from the group consisting of vitamin B_2 and water-soluble salts of vitamin B_2 wherein said solution contains at least 0.01% of said member.

3,044,938
SUSTAINED ACTION PHARMACEUTICAL TABLETS

Stanley G. Halley, Rockaway, N.J., assignor to Sandoz Chemical Works, Inc., New York, N.Y., a corporation of New York

Filed July 1, 1955, Ser. No. 519,560

1 Claim. (Cl. 167—82)



A sustained action pharmaceutical tablet containing an active pharmaceutical ingredient and being constituted by a tabletted intimate and substantially uniform admixture of groups of granules, each granule of each group of granules comprising said active ingredient, the active ingredient in each granule of at least one group of granules being uniformly impregnated throughout with a disintegration retardant-binder selected from the group consisting of vinyl acetate resin and refined shellac, and the active ingredient in each granule of at least one group of granules being uncoated with, unimpregnated with and free from disintegration retardant additament, whereby each granule of the last mentioned group of granules may, upon coming into contact with body fluid, exert its function in normal manner and at normal rate, and the surface of said tablet comprising portions of differential disintegrability when in contact with said fluid.

3,044,939
COPPER GLUCONATE ORAL DEODORANT COMPOSITION

James J. Scanlan, Hillsdale, N.J., and Joseph W. E. Harrisson, Lansdowne, Pa., assignors to American Chicle Company, Long Island City, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 26, 1959, Ser. No. 795,612

4 Claims. (Cl. 167—93)

1. A deodorant for the oral cavity comprising copper gluconate and a non-reactive fluid carrier therefor, the amount of the copper gluconate by weight being from about 0.075 mg. to 0.45 mg. relative to a dosage unit of said deodorant of about 20.0 cc.

3,044,940
PROCESS FOR ENZYMATIC SYNTHESIS OF DEXTRAN

Ulrich Behrens and Manfred Ringpfeil, Leipzig, Germany, assignors to VEB Serum-Werk Bernburg, Bernburg, Germany

No Drawing. Filed May 5, 1961, Ser. No. 107,945

Claims priority, application Germany Apr. 30, 1957

2 Claims. (Cl. 195—31)

1. A process for enzymatic synthesis of dextran of controlled molecular weight range by the action of microorganisms selected from the group consisting of active strains of *Leuconostoc mesenteroides* and *Leuconostoc dextranicum* on an aqueous sucrose solution, said process comprising transferring an inoculum of a culture of said microorganisms to a nutrient propagating solution including a source of carbon for the propagation of said microorganisms, said source of carbon consisting of lower molecular aliphatic acids and lower molecular aliphatic alcohols, said solution being substantially devoid of primer substances and primer-generating substances, consisting of sugars selected from the group consisting of polymers of glucose having α-1,6 bonds, isomaltose, panose, homologs of the same, α-methyl glucose, and sucrose, fermenting said nutrient propagating solution, and transferring an inoculum from said nutrient propagating solution to said aqueous sucrose solution, which contains primer substances, for further fermentation therein, and recovering dextran from the nutrient solution by fractional precipitation with a lower aliphatic alcohol.

3,044,941
PROCESS FOR PRODUCING ITACONIC ACID

Robert C. Nubel, Wantagh, and Edwin J. Ratajak, Roslyn, N.Y., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 26, 1960, Ser. No. 24,662

8 Claims. (Cl. 195—36)

1. In the process of producing a substance selected from the group consisting of itaconic acid and its salts by submerged aerobic fermentation of an itaconic-acid-producing Aspergillus in a carbohydrate solution, the improvement which comprises conducting the fermentation in the presence of beet molasses as the source of from about 10 to about 30% of said carbohydrate.

3,044,942
PROCESS FOR PREPARING POLY-β-HYDROXYBUTYRIC ACID

James Noel Baptist, Laurel, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Sept. 27, 1960, Ser. No. 58,614

21 Claims. (Cl. 195—47)

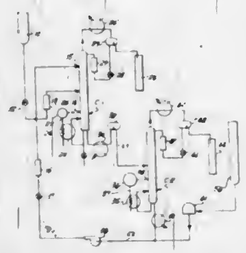
13. The process of preparing poly-β-hydroxybutyric acid which comprises growing appropriate bacteria in a culture medium under conditions conductive to the formation of poly-β-hydroxybutyric acid, adding the bacterial cell mass to methylene chloride/ethanol solution to extract the poly-β-hydroxybutyric acid, separating the methylene chloride/ethanol/polyester from the cell residue, and recovering the polyester product from solution.

3,044,943
SEPARATION OF METHYL BORATE-METHANOL AZEOTROPE

Allen L. McCloskey, Orange, Donald S. Taylor, Whittier, and Howard Steinberg, Fullerton, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

Filed Feb. 12, 1958, Ser. No. 714,850

3 Claims. (Cl. 202—39.5)



1. The method of separating a mixture of trimethyl borate and methanol which comprises distilling said mixture in a still equipped with a reflux column, introducing into the reflux column during said distillation an organic solvent having a boiling point between about 100° C. and 275° C. said solvent selected from the group consisting of mono- and di-alkyl N-substituted formamides, acetamides and propionamides in which said alkyl groups contain from one to two carbon atoms, dimethylsulfoxide, phenol and short-chain alkyl derivatives of phenol and recovering substantially pure trimethyl borate from said distillation.

3,044,944
METHODS OF PREPARATION OF ELEMENT 95

Glenn T. Seaborg, Chicago, Ill., and Ralph A. James, Berkeley, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Aug. 23, 1946, Ser. No. 692,731

17 Claims. (Cl. 204—154.2)

1. In a process for the synthesis of element 95, the steps which comprise bombarding uranium with subatomic particles having an atomic mass greater than one for a period of time sufficient to produce a transuranic fraction comprising predominantly plutonium which contains at least about 0.01% of the isotope 94^{241} and aging said plutonium for a further period of time such that said isotope present therein decays into a detectable quantity of element 95.

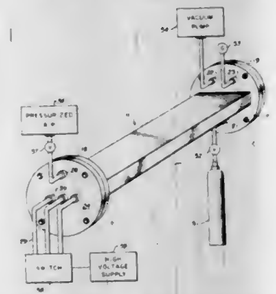
13. In a process for the synthesis of element 95, the steps which comprise bombarding uranium with subatomic particles having an atomic mass greater than one for a period of time sufficient to produce a transuranic fraction comprising predominantly plutonium which contains at least about 0.01% of the isotope 94^{241}, aging said plutonium for a further period of time such that said isotope present therein decays into a detectable quantity of element 95, thereafter dissolving the aged product in an aqueous acidic solution, oxidizing the plutonium contained in the resulting solution to a valent state greater than +4, contacting said solution with a carrier precipitate comprising a water-insoluble salt of a rare earth whereby element 95 values become associated therewith, and removing said carrier together with associated element 95 values from the solution.

3,044,945
SHEET PLASMA DEVICE

Oscar A. Anderson, Oakland, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 5, 1960, Ser. No. 47,883

4 Claims. (Cl. 204—193.2)



1. In a plasma device, the combination comprising spaced apart conducting planar walls forming a long chamber having a thickness substantially less than the width thereof, an insulative liner disposed along the inside surface of said walls, a first and a second electrode each disposed at an opposite end of said chamber, a power supply coupled to said electrodes, and a gas supply communicating with the interior of said chamber.

3,044,946
HIGH DENSITY NUCLEAR FUEL COMPOSITION

Felix B. Litton, Killingworth, Conn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 17, 1961, Ser. No. 96,625

1 Claim. (Cl. 204—193.2)

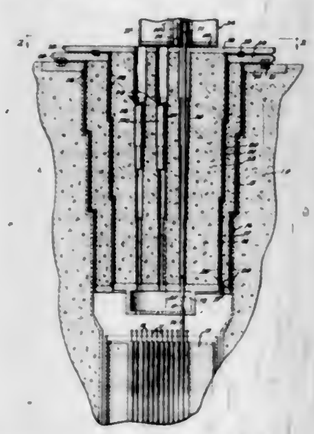
A nuclear fuel consisting essentially of uranium monocarbide and containing 2.2 to 4.6 weight percent car-

bon, 0.1 to 2.3 weight percent oxygen, 0.05 to 2.5 weight percent nitrogen, and the balance uranium, wherein the maximum oxygen content is less than one half the carbon content by weight and wherein said carbon, oxygen and nitrogen are present as a single phase substituted solid solution of UC, C, O, and N.

3,044,947
APPARATUS FOR LOADING AND UNLOADING A MACHINE

John H. Payne, Jr., Ballston Spa, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 24, 1956, Ser. No. 618,161
2 Claims. (Cl. 204—193.2)



1. Apparatus for replacing spaced parallel elements in a machine, said apparatus comprising an outer annular shielding plug having a circular exterior fitting a circular opening in a shield for the machine and a circular interior eccentric to said circular exterior, an inner shielding plug having a circular exterior fitting the circular interior of the outer plug and a plurality of openings parallel to the axis of the inner plug and to the said elements in the machine and being spaced different amounts from said axis, rotation of the inner plug and the outer plug about the axis of the outer plug and rotation of the inner plug about its own axis with respect to the outer plug enabling one or more of the openings in the inner plug to be brought into alignment with each of the elements in the machine, a rotatable magazine having a plurality of openings spaced equal amounts from the axis of rotation of the magazine, two concentric annular shielding masses surrounding said magazine openings with the annular space between said masses filled with oil, and means mounting the magazine for rotation on the side of the inner plug opposite to that where the fuel elements to be replaced are located to enable the openings of the magazine to be brought successively into alignment with the openings of the inner plug.

3,044,948
RECOVERY OF OIL FROM TAR SANDS

Du Bois Eastman, Whittier, and Warren G. Schlinger, Pasadena, Calif., assignors to Texaco Inc., a corporation of Delaware

Filed July 3, 1958, Ser. No. 746,531
3 Claims. (Cl. 208—11)

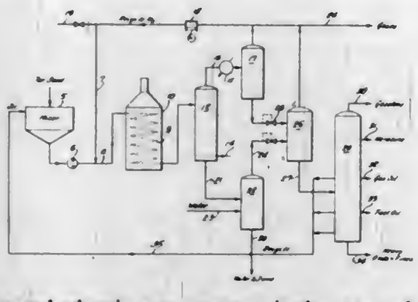
1. A method of recovering oil of improved physical properties from tar sand which comprises forming a flowable mixture of tar sand in hydrocarbon oil, passing said mixture together with from 1,000 to 100,000 standard cubic feet of hydrogen per barrel of oil contained in said mixture through a tubular reaction zone of relatively small diameter under highly turbulent flow conditions wherein a turbulence level above 100 as expressed by the ratio

$$\frac{\bar{\epsilon}m}{\nu}$$

is maintained, wherein

$$\bar{\epsilon}m$$

is the average eddy viscosity and ν is the kinematic viscosity and wherein a temperature in the range of 700 to 1200° F. and a hydrogen pressure of 1,000 to 10,000 pounds per square inch gauge are maintained, and subjecting the mixture in said tubular reaction zone to noncatalytic reaction for a period of time within the range of 1 to 300 seconds effecting liberation of oil contained in said tar sand and simultaneous hydrogenation of said oil to yield a hydrocarbon product of improved physical properties, carrying out said reaction substantially completely within said tubular reaction zone, and separating hydrocarbon product from resulting treated tar sand at substantially said reaction zone temperature and pressure.



3,044,949
PROCESS FOR LOWERING THE POUR POINT OF HIGH BOILING POINT HYDROCARBON MIXTURES, ESPECIALLY LUBRICATING OILS

Wilhelm Schlenk, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

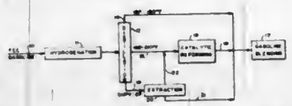
No Drawing. Filed Apr. 14, 1959, Ser. No. 806,217
Claims priority, application Germany Apr. 17, 1958
1 Claim. (Cl. 208—25)

A process for lowering the pour point of lubricating oils, diesel oils, and oils boiling above about 200° C. which comprises contacting said oils with urea in the presence of from about 10% to about 60% by weight based on the weight of the oil of an added substance having an adduct-forming speed greater than the mean adduct-forming speed of the paraffin hydrocarbons in said oil, said substance being selected from the group consisting of substantially linear aliphatic hydrocarbons having from 12 to 45 carbon atoms, soft paraffin waxes with substantially linear constituents having from about 18 to 26 carbon atoms and having melting points between about 28° C. and 40° C., hard paraffin waxes with substantially linear constituents having from about 24 to 45 carbon atoms and having melting points between about 50° C. and 90° C., linear alcohols having from 10 to 20 carbon atoms, linear carboxylic acid esters having from 10 to 20 carbon atoms, linear carboxylic acid esters derived from monocarboxylic acids and dihydric alcohols, said esters having from 10 to 20 carbon atoms, linear carboxylic acid esters derived from dicarboxylic acids and monohydric alcohols, such esters having 10 to 20 carbon atoms, linear ketones with 9 to 20 carbon atoms, linear ethers with 12 to 20 carbon atoms, and thereafter separating the urea paraffin addition compounds from said lubricating oil.

3,044,950
PROCESS FOR UPGRADING CATALYTICALLY CRACKED GASOLINE

George B. Swartz, Jr., Penn Hills, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Dec. 15, 1958, Ser. No. 780,576
4 Claims. (Cl. 208—57)

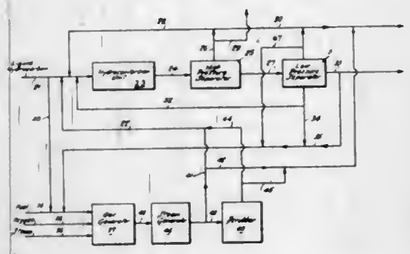


1. The process for upgrading a gasoline consisting essentially of a full range, catalytically cracked, olefinic gasoline boiling in the range 100 to 430° F. which comprises catalytically hydrogenating said full range gasoline at a temperature of 500 to 800° F., a pressure of 200 to 800 p.s.i.g. and with a hydrogen concentration of 1,000 to 10,000 s.c.f./bbl., fractionally distilling the hydrogenated gasoline to produce a light fraction boiling from the initial boiling point of the hydrogenated gasoline to an end point of 175 to 195° F., an intermediate fraction boiling from about the end point of the light fraction to an end point of 290 to 320° F. and a residual fraction boiling from about the end point of the intermediate fraction to the end point of the hydrogenated gasoline, subjecting said intermediate fraction to catalytic reforming in the presence of hydrogen, subjecting said residual fraction to solvent extraction, recovering from said solvent extraction a raffinate fraction enriched in nonaromatics and an extract fraction enriched in aromatics and having essentially the same boiling range as said raffinate fraction, subjecting said raffinate fraction to catalytic reforming in the presence of hydrogen and blending the hydrogenated light fraction, the reformed intermediate hydrogenated fraction, the reformed raffinate fraction of the hydrogenated residual fraction and the extract fraction of the hydrogenated residual fraction to produce a gasoline of high octane rating.

3,044,951
HYDROCARBON CONVERSION PROCESS

Warren G. Schlinger, Pasadena, and Du Bois Eastman, Whittier, Calif., assignors to Texaco Inc., a corporation of Delaware

Filed June 5, 1958, Ser. No. 740,060
3 Claims. (Cl. 208—58)

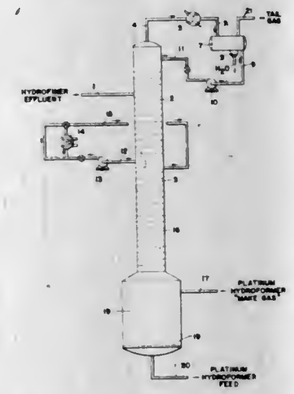


1. In a process for the apolymeric hydroconversion of a hydrocarbon liquid in which process hydrogen for the hydroconversion is supplied by the partial combustion of a metal-containing hydrocarbon liquid in a refractory-lined gas generation zone, the improved combination of steps comprising passing an intimate mixture of a hydrocarbon liquid and synthesis gas as a confined stream through an elongated reaction zone at a turbulence level of at least 25, a temperature between about 800 and 1400° F. and a pressure between about 500 and 20,000 p.s.i.g., separating the reaction product into a normally gaseous hydrocarbon portion, a liquid portion boiling in the motor fuel range and a portion boiling above the motor fuel range, subjecting said portion boiling above the motor fuel range to partial combustion with a gas containing free oxygen, converting not less than about 90% and not more than about 99.5% of the carbon present in said portion boiling above the motor fuel range to oxides of carbon to produce a synthesis gas comprising carbon monoxide and hydrogen and introducing the synthesis gas so produced into the hydroconversion zone.

3,044,952
ABSORBER STRIPPER AND PROCESS

George P. Baumann, Metuchen, and Charles R. Lipuma, Newark, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 29, 1958, Ser. No. 783,434
19 Claims. (Cl. 208—82)



1. In a platinum hydroforming operation wherein the naphtha feed to the hydroformer is first hydrofined and the hydrofinate stream is passed down through an absorer stripper column to strip water vapor and H_2S from the hydrofinate stream prior to its introduction into the hydroformer and at the same time absorb light ends from the hydroformer make gas in said hydrofinate stream, the improvement which comprises operating the stripper or upper section of the column at a temperature between about 150° F. and 350° F. for the top or feed tray, and cooling the liquid hydrofinate passing down the column so as to operate the lower, absorber section of the column at a temperature at least 50° F. cooler than the upper, stripper section of the column and in the range of 80–175° F. for the bottom tray of the absorber section and withdrawing substantially water-free naphtha feed from the lower portion of said column.

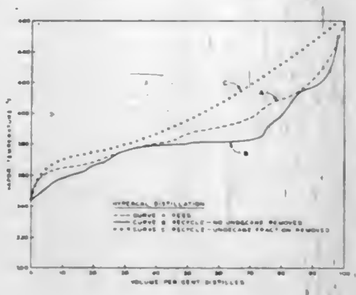
3,044,953
REMOVAL OF AN UNDECANE-RICH FRACTION FROM A HYDROCARBON CONVERSION PROCESS RECYCLE

Robert H. Kozlowski, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Mar. 30, 1959, Ser. No. 802,847
2 Claims. (Cl. 208—109)

1. In a hydrocarbon conversion process wherein an undecane-containing petroleum distillate feed having an initial boiling point from about 325° F. to 370° F. and an end point above about 395° F. and hydrogen are contacted in a conversion zone at temperatures from 350° F. to 800° F. and pressures above 400 p.s.i.g. with a catalyst comprising a hydrogenating component disposed on an active cracking support, and wherein a recycle stream having a boiling range extending above and below the 384.5° F. boiling point of undecane is obtained from the

effluent from said conversion zone and is returned as feed to said conversion zone, the improvement which comprises removing undecane from said recycle stream prior to



returning said stream to said conversion zone, whereby undecane is prevented from building up in the system and reducing the capacity of said conversion zone to convert fresh feed.

3,044,954

SILICEOUS CRACKING CATALYST WITH A DISCONTINUOUS SURFACE GLAZE

Alfred E. Hirschler, Springfield, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Apr. 11, 1958, Ser. No. 727,775
9 Claims. (Cl. 208—114)

8. In a process for cracking hydrocarbons wherein hydrocarbons boiling above the gasoline range are contacted with a siliceous cracking catalyst under cracking conditions, thereby to convert at least a portion of said hydrocarbons to hydrocarbons boiling in the gasoline range, and thereafter regenerating said catalyst by burning carbonaceous deposits therefrom and reusing the regenerated catalyst in the cracking step, the improvement which comprises introducing with the hydrocarbon feed material from about 0.1 to 1 pound of a mixture of a glaze-forming group II metal compound and aluminum phosphate per ton of catalyst per day, thereby to form a discontinuous glaze on from about 10% to 60% of the exterior surface of the catalyst particles.

3,044,955

ELECTRICAL INSULATING OILS

Wilhelmus C. de Groot and Hubertus N. H. de Haan, both of Amsterdam, Netherlands, and Ralph W. van den Bosch, Sevenoaks, England, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 27, 1959, Ser. No. 816,073
Claims priority, application Great Britain June 3, 1958
1 Claim. (Cl. 208—212)

A process for the production of an oxidation stable non-gassing insulating oil from a sulfur-containing mineral lubricating oil mixture which also contains aromatics and boils within the range from about 300 to about 500° C. consisting essentially of the steps of (1) selectively hydrodesulfurizing said mixture without appreciable conversion of hydrocarbons therein to reduce the sulfur content by at least 70% but by not more than about 90% by weight, (2) separating from the hydrodesulfurized mixture by means of fractional distillation a light lubricating oil fraction boiling from about 300 to about 500° C. having a viscosity at 20° C. of from about 1 to about 9 degrees Engler and having a Pensky-Martens closed cup flash point of at least 120° C., (3) separating from the light lubricating oil fraction a portion comprising at least 10% but not more than 60% by volume thereof, (4) extracting the separated portion of light lubricating oil fraction by means of an aromatics selective solvent to a depth such that the aromatics-containing extract does not exceed 20% by volume of the total light lubricating oil fraction, (5) blending the raffinate from the extraction step with the unextracted portion of the separated light lubricating oil fraction, and (6) treating the blended mixture of extracted and unextracted light lubricating oil fraction with between 0.5 and 30% by weight, based on the blended mixture, of a solid adsorbent.

3,044,956

PROCESS FOR TREATING PETROLEUM RESIDUALS TO REMOVE METAL CONTAMINANTS

Emmett H. Burk, Jr., Hazel Crest, and Byron W. Turnquest, Chicago, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 7, 1959, Ser. No. 832,130
5 Claims. (Cl. 208—252)

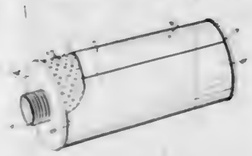
1. A process for treating petroleum residuals boiling primarily above 950° F. and containing metal contaminants consisting essentially of contacting under essentially anhydrous conditions said residual in a zone under hydrocracking conversion conditions so that there is a conversion of at least about 20 percent of said residual to liquid products boiling below about 950° F., at a temperature from about 750° F. to 950° F. and at a hydrogen partial pressure of at least about 100 p.s.i.g. with a catalytic amount of halogen hydride of a halogen having an atomic number from 35 to 53 and with a hydroaromatic material in an amount of at least about 20% based on the residual, and separating from the hydrocracked product a gas oil fraction and a material boiling primarily above about 950° F.

3,044,957

POROUS SEPARATOR MEDIA

Leslie A. Dow, Seekonk, Mass., Arthur R. Fredrickson, West Warwick, R.I., and Robert D. Parsons, Westwood, Mass., assignors of one-half to Fram Corporation, East Providence, R.I., and one-half to Hollingsworth & Vose Company, East Walpole, Mass., a company of Massachusetts

Filed June 1, 1959, Ser. No. 817,224
3 Claims. (Cl. 210—508)



1. A filter media for rapidly freeing a hydrocarbon liquid from water mechanically contained therein, comprising a porous water repellent sheet formed of interfelted randomly oriented esparto fibers from 8 to 12 microns in diameter so that these fibers as they lay in the sheet are substantially uniform as to length and diameter and carrying a water repellent chemical so that the sheet will pass the hydrocarbon liquid but block the water at the upstream surface of the sheet, and having a maximum pore size such that its bubble pressure rating is P and its Frazier air permeability is F, wherein P is the bubble pressure of the sheet measured in inches or water and is 7 or more and F is the c.f.m. flow of air per square foot per 0.5 inch of water differential pressure, and $P \times F$ gives a separation velocity number of 240 or more; and wherein said sheet is capable of removing all of the water from a mixture containing 1% of water in a high flash-point kerosene type of fuel having a surface tension of the order of 26.0 dynes per centimeter, a specific gravity of the order of .788 at 60° F. and a viscosity of the order of 2 centistokes at 80° F., and at a flow rate in excess of 20 g.p.m. per square foot.

3,044,958

CORROSION INHIBITION

Raymond A. Newsom, Cedar Rapids, Iowa, assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 18, 1958, Ser. No. 729,243
4 Claims. (Cl. 252—8.55)

3. An aqueous non-oxidizing acid solution containing, as the corrosion inhibitor therefor, from 0.5 to 1.2% by volume of the reaction product of 1,3-dichloropropene and from 0.5 to 2.0 molar equivalents of a salt of hydrosulfuric acid selected from the group consisting of alkali metal and ammonium salts, contacted at a temperature of from 60° to 140° C.

3,044,959

WELL FRACTURING

Robert C. Martin, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 15, 1959, Ser. No. 786,905
10 Claims. (Cl. 252—8.55)

5. A fluid for hydraulic fracturing of subterranean formations consisting of (1) a minor proportion of a fluid-loss preventive prepared by admixing water containing from 0 up to the point of saturation of a water-soluble inorganic salt dissolved therein with a hydrocarbon oil in relative amounts sufficient to form a water-in-oil emulsion. a carboxylic acid containing between 8 and 18 carbon atoms per molecule, at least about 35 percent by weight thereof being fatty acids, an hydroxide of a polyvalent metal in excess of the stoichiometric quantity required to react with the carboxylic groups of said acid, said acid and hydroxide being present in sufficient amounts to effect emulsification of the water and hydrocarbon oil, and a mono-alcohol containing between 4 and 12 carbon atoms per molecule in sufficient amount to impart fluidity to said fluid-loss preventive and (2) a major proportion of a carrier fracturing liquid selected from the class consisting of liquid hydrocarbons having a viscosity of between 5 and 500 cps. at 80° F.

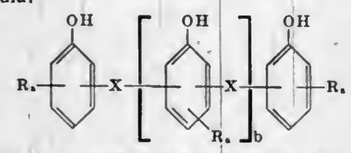
3,044,960

LUBRICATING OIL CONTAINING METAL SALTS DERIVED FROM HYDROGENATED BRIDGED PHENOLS AND LOW MOLECULAR WEIGHT ACIDS

Arnold J. Morway, Clark, Jeffrey H. Bartlett, New Providence, and Clifford W. Muessig, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 26, 1959, Ser. No. 815,803
10 Claims. (Cl. 252—35)

1. A lubricant comprising a major proportion of a lubricating oil having a viscosity in the range of 60 to 3000 SSU at 100° F. and 0.2 to 40 percent by weight of polyvalent metal salts of a hydrogenated bridged phenol and a low molecular weight monocarboxylic acid having about 2 carbon atoms per molecule, wherein said hydrogenated bridged phenol comprises the fully hydrogenated product of a bridged phenol having the following formula:



wherein R is a monovalent substituent selected from the group consisting of halogen atoms and hydrocarbyl groups having from 1 to 30 carbon atoms, *a* is a digit from 0 to 2, *b* is an integer from 0 to 10, and X is a divalent bridging group selected from the group consisting of divalent alkylidene groups containing 1 to 16 carbon atoms and sulfur, and wherein the molar ratio of said acid to said fully hydrogenated bridged phenol is in the range of 0.02 to 50.

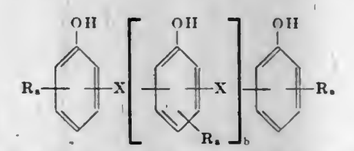
3,044,961

METAL SALTS OF BRIDGED PHENOLS AND LOW MOLECULAR WEIGHT ACIDS

Arnold J. Morway, Clark, John C. Munday, Cranford, Jeffrey H. Bartlett, New Providence, and Clifford W. Muessig, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 1, 1959, Ser. No. 803,363
12 Claims. (Cl. 252—37.2)

1. Polyvalent metal salts of a bridged phenol and acetic acid, wherein said bridged phenol has the formula:



where R is a monovalent substituent selected from the group consisting of halogen atoms and hydrocarbon groups having from 1 to 30 carbon atoms, *a* is a digit from 0 to 2, *b* is an integer from 0 to 10, and X is a divalent bridging group selected from the group consisting of alkylidene groups having 1 to 16 carbon atoms and sulfur, wherein the molar ratio of said acetic acid to said bridged phenol is in the range of 0.02 to 50, wherein said salts are formed by reacting said bridged phenol with a member selected from the group consisting of (1) metal base and acetic acid and (2) metal salt of acetic acid; and then dehydrating.

3,044,962

PREPARATION OF DETERGENT COMPOSITIONS

Kenneth Arthur Brunt, Croesyceiliog, Cwmbran, and David Williams, New Inn, Pontypool, England, assignors to British Nylon Spinners Limited, Pontypool, England

No Drawing. Filed Oct. 21, 1958, Ser. No. 768,549
Claims priority, application Great Britain Oct. 31, 1957
7 Claims. (Cl. 252—110)

1. A process for the manufacture of a detergent composition comprising mixing an alcoholic solution of a cationic surface active agent, selected from the group consisting of quaternary ammonium, phosphonium and morpholinium salt, with a sufficient quantity of a powdered sodium salt selected from the group consisting of anhydrous sodium carbonate, sodium carbonate decahydrate, sodium bicarbonate, sodium borate, sodium sulphate, trisodium orthophosphate, sodium metaphosphate, sodium pyrophosphate, disodium hydrogen phosphate, sodium tripolyphosphate and sodium perborate, so that the weight of said salt remaining undissolved is not less than the weight of the cationic surface active agent, drying if necessary to remove any visible liquid, and then intimately mixing with a quantity of a synthetic organic anionic surface active agent weighing from 2 to 1000 times the weight of the cationic surface active agent employed.

3,044,963

PROCESS FOR THE REGENERATION OF AROMATIZATION CATALYSTS

Russell G. Hay, Gibsonia, and Charles W. Montgomery, Oakmont, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Oct. 19, 1959, Ser. No. 847,099
7 Claims. (Cl. 252—412)

1. In the regeneration of a catalyst comprising a compound selected from the group consisting of chromates

and dichromates supported upon alumina, the method comprising burning substantially all carbon deposits from said catalyst, contacting said catalyst with a solution of the hydroxide of a metal from the group consisting of sodium and potassium in which is dissolved a compound selected from the group consisting of chromates and dichromates, the quantity of hydroxide of a metal from the group consisting of sodium and potassium being such that the quantity of metal selected from the group consisting of sodium and potassium upon the catalyst is increased, the quantity of compound selected from the group consisting of chromates and dichromates in said solution being such that the chromium content of the catalyst is substantially unchanged, continuing contacting said catalyst and said solution until there is an increased quantity in the catalyst of metal from the group consisting of sodium and potassium, removing said solution containing a substantially unchanged quantity of compound selected from the group consisting of chromates and dichromates from said catalyst and drying said catalyst.

3,044,964
CATALYST AND PROCESS OF MAKING THE SAME

Jacque C. Morrell, 8 Oxford St., Chevy Chase, Md.

No Drawing. Filed Dec. 15, 1958, Ser. No. 780,272
10 Claims. (Cl. 252—435)

1. A polymerization catalyst comprising a dired mixture of a phosphoric acid and an inorganic support, said support consisting of a natural porous silica material selected from the group consisting of infusorial earth, diatomaceous earth and kieselguhr and added kaolin, the said phosphoric acid comprising about 60% to 85% of the said mixture, said support comprising not less than about 60% of the said porous silica material and less than about 40% and more than 1% of said kaolin, said support being further characterized in that the said porous silica material together with the kaolin comprises not more than about 40% of the mixture.

3,044,965
PROCESS FOR THE MANUFACTURE OF BISMUTH CATALYSTS

James L. Callahan, Bedford, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,781
6 Claims. (Cl. 252—437)

1. A process for the manufacture of a catalyst suitable for use in a fluidized bed reactor selected from the group consisting of bismuth silico-molybdate and bismuth silico-phospho-molybdate, comprising the steps of (1) preparing a slurry comprising bismuth nitrate; a molybdenum compound selected from the group consisting of a hepta-molybdate, a dimolybdate and phosphomolybdic acid; silica; and at least 1% by weight of ammonium nitrate, (2) subjecting said slurry to a spray drying operation whereby spherically shaped particles of relatively uniform small size are produced, and finally (3) collecting said particles from said spray drying operation and subjecting them to an elevated temperature whereby the calcination of the catalyst is effected.

3,044,966
ATTRITION RESISTANT OXIDATION CATALYSTS

James L. Callahan, Bedford, Robert W. Foreman, Cleveland, and Franklin Veatch, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,919
Claims priority, application Canada Aug. 5, 1959
5 Claims. (Cl. 252—437)

1. A catalyst composition consisting essentially of oxides of bismuth and molybdenum as the essential catalytic ingredients and also including silica, the catalyst having a composition corresponding to the empirical chemical formula:

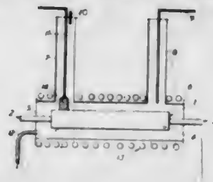
$$Bi_aP_bMo_{12}O_c\cdot(SiO_2)_{1to600}$$

wherein a is a number within the range from more than 8 to 12, b is a number within the range from 0 to 2, and c is $\frac{1}{2}n\cdot a+\frac{1}{2}m\cdot b+\frac{1}{2}p\cdot 12$ wherein n, m, and p are the average valences of bismuth, phosphorus and molybdenum, respectively, in their average oxidation states, the Bi:Mo atomic ratio being above 2:3.

3,044,967
PRODUCTION OF PURE SEMI-CONDUCTOR MATERIAL

Henley Frank Sterling and Frederick John Raymond, London, England, assignors to International Standard Electric Corporation, New York, N.Y.

Filed Dec. 31, 1958, Ser. No. 784,166
Claims priority, application Great Britain Jan. 6, 1958
6 Claims. (Cl. 252—500)

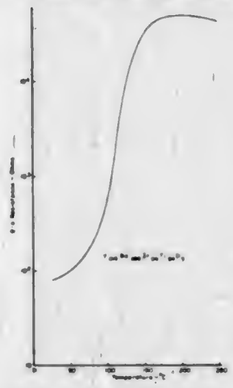


2. A process for producing semiconductor material using a metal crucible of high thermal conductivity, said material containing controlled amounts of significant impurities comprising placing a charge of semiconductor material in a crucible, cooling said crucible, flowing a mixture of hydrides over the surface of the material in said crucible, said mixture consisting of a hydride of the semiconductor material together with at least one hydride of a significant impurity material, and heating said material to the temperature of decomposition of the hydrides in said mixture while maintaining said crucible cooled, whereby the resulting semiconductor material and significant impurity material are deposited on the surface of the material contained in said crucible and no contamination of said material by said crucible results.

3,044,968
POSITIVE TEMPERATURE COEFFICIENT THERMISTOR MATERIALS

Yoshio Ichikawa, Swissvale, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 13, 1958, Ser. No. 735,045
5 Claims. (Cl. 252—520)



1. A ceramic member having a marked positive temerature coefficient of electrical resistance over a selected

range of temperatures, the member comprising the fired product having the general formula

$$M_xBa_{(1-x)}Zr_yTi_{(1-y)}O_3$$

where M represents at least one rare earth metal from the group consisting of yttrium and cerium, x has a value of from 0.003 to 0.03, and y has a value of from 0.01 to 0.25, the fired product being derived by a final heat treatment of compacts of the composition first in an inert, non-oxidizing atmosphere at from 1300° C. to 1550° C. to sinter it and then at a temperature of from 1000° C. to 1300° C. in an oxidizing atmosphere comprising oxygen.

3,044,969
ION EXCHANGERS CONTAINING THIOPHENOL GROUPS

Hans Seifert, Bergisch-Neukirchen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 24, 1959, Ser. No. 801,452
Claims priority, application Germany Apr. 3, 1958
4 Claims. (Cl. 260—2.2)

1. A process of producing a water-insoluble ion-exchange resin by reduction of the sulfochloride groups of a benzene-insoluble cross-linked organic polymer containing aromatic nuclei, cross-linking being effected by means of a polyethylenically unsaturated organic compound, the carbon atoms of said aromatic nuclei constituting the major proportion of the total number of the carbon atoms of the polymer which comprises treating the said polymer in an aqueous medium at temperatures between 50 to 250° C. with an inorganic polysulfide to reduce the sulfochloride groups of said copolymers to sulfhydryl groups, said polysulfides being applied in a molar excess as calculated on the sulfochloride groups present in the copolymer, and thereafter recovering the reaction product from the reaction medium.

3,044,970
PROCESS OF EXPANDING POLYMERS OF UNSATURATED ESTERS OF TERTIARY BUTYL ALCOHOL AND FOAMABLE PRODUCT OBTAINED THEREFROM

Wilhelm Baumeister, Heidelberg, and Rudolf Gaeth, Erich Haarer, and Adolf Schwarz, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed June 3, 1960, Ser. No. 33,648
Claims priority, application Germany July 30, 1957
9 Claims. (Cl. 260—2.5)

1. A process for the production of porous plastics which comprises: heating a polymer of a compound having the general formula $CH_2=CR—CO_2C(CH_3)_3$, in which R is a member selected from the group consisting of hydrogen and a methyl group, to a temperature of from about 125° C. to about 190° C. under a pressure sufficient to prevent said polymer expanding, whereby said polymer is decomposed and isobutylene is split off, and whereby said isobutylene is homogeneously distributed throughout said polymer; cooling said polymer to a temperature below its softening point while maintaining a pressure sufficient to prevent said polymer from expanding, and thereby obtaining an expandable polymer containing isobutylene; and thereafter heating said polymer to a temperature from its softening point up to about 50° above its softening point at a pressure of from 1 to 4 atmospheres, whereby the isobutylene is released and a porous product is obtained.

3,044,971
POLYURETHANE CATALYST COMPOSITION AND METHOD FOR PREPARING CELLULAR POLYURETHANE USING SAME

Samuel Polis, Pittsburgh, Pa., assignor to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Mar. 18, 1959, Ser. No. 800,096
10 Claims. (Cl. 260—2.5)

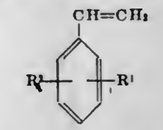
4. A method for making a cellular polyurethane plastic which comprises reacting an organic polyisocyanate, a polyalkylene ether alcohol having from 2 to 4 hydroxyl groups and a molecular weight of at least about 500 and an hydroxyl number of not more than about 225 and water in a reaction mixture containing from about 0.01 part to about 0.1 part of a member selected from the group consisting of a trialkyl tin oxide in which the alkyl groups contain from 1 to 8 carbon atoms, a dialkyl tin chloride in which the alkyl groups contain from 1 to 8 carbon atoms, a dialkyl tin oxide in which the alkyl groups contain from 1 to 8 carbon atoms, and a dialkyl tin salt of a carboxylic acid having from 1 to 18 carbon atoms in which the alkyl groups contain from 1 to 8 carbon atoms, from about 0.2 part to about 1.5 part of an N-alkyl morpholine selected from the group consisting of N-ethyl morpholine and N-methyl morpholine and from about 0.1 part to about 0.3 part triethylene diamine per 100 parts by weight polyalkylene ether alcohol.

3,044,972
THERMOPLASTIC COMPOSITION COMPRISING A STYRENE POLYMER AND A GRAFT COPOLYMER

Nicholas R. Segro, Glenbrook, and William Hodes, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 11, 1959, Ser. No. 798,605
10 Claims. (Cl. 260—17)

1. A thermoplastic composition possessing increased impact strength comprising a homogeneous blend of from about 50 to 90 parts by weight of (1) a compound selected from the group consisting of (*a*) a homopolymer of a compound represented by the general formula



wherein R^1 and R^2 are selected from the group consisting of hydrogen, lower alkyl radicals of 1 to 4 carbon atoms and chlorine and (*b*) copolymers thereof with not more than 40% of acrylonitrile, blended with (2) from 50 to 10 parts by weight of a graft copolymer of a monomer selected from the group consisting of ethyl acrylate, n-butyl acrylate, and mixtures thereof with acrylonitrile and a polymer selected from the group consisting of polyvinyl alcohols and polysaccharides.

3,044,973
MOLDING COMPOSITION COMPRISING MELAMINE FORMALDEHYDE RESIN AND MONOMETHYLOL MELAMINE, AND CURED PRODUCT THEREOF

Nicholas R. Segro, Glenbrook, Conn., and Yun Jen, Anaheim, Calif., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 25, 1959, Ser. No. 855,278
9 Claims. (Cl. 260—17.3)

5. A thermosetting molding composition comprising a fibrous filler and as the resinous component a mixture of from about 40 to 80 parts of a heat-curable resinous condensate prepared from resin-forming reactants consisting essentially of melamine and formaldehyde wherein the

molar ratio of melamine to formaldehyde is from about 1:1.5 to 1:3, respectively, and correspondingly from about 60 to 20 parts of separately prepared monomethylol melamine.

3,044,974

METHOD OF PREPARING POLYVINYL ALCOHOL FILAMENTS CONTAINING STARCH OR DERIVATIVES THEREOF

Kenichi Tanabe, Teruo Suda, Sadamaru Miyazaki, and Tetsuro Osugi, all of Kurashiki, Japan, assignors of three-fourths to Kurashiki Rayon Co., Ltd., Okayama, Japan, a corporation of Japan, and one-fourth to Air Reduction Company Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed May 20, 1959, Ser. No. 814,368
Claims priority, application Japan May 26, 1958
5 Claims. (Cl. 260—17.4)

1. The method of preparing polyvinyl alcohol filaments having improved dyeing properties which comprises forming an aqueous spinning solution containing polyvinyl alcohol, said polyvinyl alcohol consisting of at least about 98 mol percent vinyl alcohol, and from 5 to 70 percent based on the weight of polyvinyl alcohol of a material selected from the group consisting of starch and water-soluble materials derived from starch, and wet spinning said solution into a coagulating liquid to form filaments.

3,044,975

PROCESS FOR THE PRODUCTION OF SPINNING SOLUTIONS OF POLYACRYLONITRILE

Hanns Gerber, Buderich, near Dusseldorf, and Rüdolf Stroh, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 23, 1957, Ser. No. 692,009
Claims priority, application Germany Jan. 17, 1957
4 Claims. (Cl. 260—32.6)

1. In a process for the spinning of shaped articles from an acrylonitrile polymer, the improvement which consists of combining the polymerization and the spinning operation into a continuous process without the necessity of separating the polymer between these two steps, said process comprising the steps of polymerizing in a low boiling chlorinated hydrocarbon solvent a member selected from the group consisting of acrylonitrile and an acrylonitrile-methyl acrylate mixture, the latter containing about 4–8% of methyl acrylate and about 92–98% acrylonitrile, the resulting polymer being insoluble in said low boiling chlorinated hydrocarbon, adding dimethyl formamide to the mixture of polymer and chlorinated hydrocarbon so as to completely dissolve the polymer therein, distilling the chlorinated hydrocarbon from the resulting mixture, and then spinning the resulting solution directly into a shaped article.

3,044,976

PROCESS FOR MAKING RUBBER-BASE ADHESIVE CONTAINING PREFORMED PHENOLIC RESIN-ALKALINE EARTH METAL SALT

John G. Brooks, East Petersburg, and George W. Koehn, Columbia, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 15, 1954, Ser. No. 469,020
12 Claims. (Cl. 260—32.8)

1. The process of making a solvent type plastic adhesive composition having a solids content of from about 15% to about 45% by weight, which process comprises reacting a butyl phenol-formaldehyde resin reactable with an alkaline earth metal oxide with sufficient alkaline earth metal oxide to form a resin-alkaline earth metal salt, said salt being characterized by having temperature properties falling within the range of a melting point of about 25° F. above the melting point of said resin to the decomposition point of said resin salt, blending said salt with a compatible rubber selected from the group consisting of natural rubbers, butadiene-acrylonitrile copolymer rubbers, butadiene-styrene copolymer rubbers, polychloroprene rubbers, and mixtures thereof, and adjusting the solids content of the composition to form about 15% to about 45% by weight.

3,044,977

ADHESIVE FOR ATTACHING COPPER FOILS TO OTHER OBJECTS COMPRISING A BUTADIENE-ACRYLONITRILE COPOLYMER, A PHENOL-ALDEHYDE RESIN AND A MONOCARBOXYLIC ACID

Thomas Coe, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 23, 1958, Ser. No. 737,210
Claims priority, application Netherlands May 27, 1957
2 Claims. (Cl. 260—43)

1. A thermo-setting adhesive composition, particularly adapted to attach copper foil to another object, comprising a butadiene-acrylonitrile copolymer, a thermo-hardenable phenol-aldehyde resin and from 5 to 60% by weight of the dry adhesive composition of a compound selected from the group consisting of the saturated aliphatic monocarboxylic, mono-hydroxy saturated aliphatic monocarboxylic and mono-chloro saturated aliphatic monocarboxylic acids having 1 to 4 carbon atoms in their molecules.

3,044,978

NEW ADDITION POLYMERS FROM MONOMERIC VINYL COMPOUNDS AND UNSATURATED CROSS-LINKED POLYESTER RESINS AND A PROCESS FOR PREPARING THE SAME

Gustav Hägele, Wilhelm Meyer, and Friedrich Johannsen, all of Wuppertal-Elberfeld, Germany, assignors to Dr. Kurt Herberts & Co. vorm. Otto Louis Herberts, Wuppertal-Barmen, Germany

No Drawing. Filed May 4, 1959, Ser. No. 810,539
Claims priority, application Germany May 21, 1958
8 Claims. (Cl. 260—45.4)

1. Addition polymers of a member selected from the group consisting of styrene and vinyltoluene with an unsaturated polyester resin substantially soluble in styrene and its homologues comprising the reaction product of

(A) a member selected from the group consisting of α,β-unsaturated dicarboxylic acids, their anhydrides and mixtures thereof with a substance selected from the group consisting of polycarboxylic acids and their anhydrides,

(B) a polycyclic monohydric alcohol of the formula

Y—R

wherein R represents a member selected from the groups consisting of the endomethylene tetrahydrophenyl radical, the endomethylene hexahydrophenyl radical, the 1.4-methano-bicyclo-[4.3.0]-nonenyl radical, and the 1.4-methano-bicyclo-[4.3.0]-nonyl radical and Y is a member selected from the group consisting of the hydroxyl and the hydroxy alkylene groups having 1 to 4 carbon atoms,

(C) at least one polyhydric alcohol having at least 3 hydroxyl groups.

3,044,979

SILICONE-POLYESTER COMPOSITIONS AND PROCESS FOR PREPARING SAME

John E. Saville, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed June 18, 1959, Ser. No. 821,121
17 Claims. (Cl. 260—45.4)

1. The process of making a homogeneous silicone-polyester copolymer composition which comprises heating at a temperature in the range of from 150° C. to 250° C.

under atmospheric conditions, a reaction mixture of (1) an aliphatic ester and alcohol-containing solution of the hydrolysis product of a mixture of organochlorosilanes having from about 1 to 1.75 organic groups per silicon atom selected from the class consisting of lower alkyl groups, aryl groups, halogenated aryl groups and mixtures thereof, and (2) a polyester material comprising the reaction product of (*a*) from 25 to 60 equivalent percent of a lower dialkyl ester of a member selected from the group consisting of isophthalic acid, terephthalic acid and mixtures thereof, (*b*) from 10 to 50 equivalent percent of ethylene glycol and (*c*) from 20 to 60 equivalent percent of a saturated aliphatic polyhydric alcohol having at least three hydroxyl groups, where said polyester of (2) has a viscosity of greater than about 58,000 centipoises at 25° C., and wherein said reaction mixture, said hydrolysis product of (1) is present at about 70 to 95 percent by weight and said polyester of (2) is present at about 30 to 5 percent by weight, based on the weight of said hydrolysis product of (1) and said polyester of (2).

3,044,980

SILICONE-POLYESTER COPOLYMER AND PROCESS FOR PREPARING SAME

Frank J. Modic and John E. Saville, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Oct. 2, 1959, Ser. No. 843,924
2 Claims. (Cl. 260—45.4)

1. The process of making a homogeneous silicone-polyester copolymer composition which comprises (A) stripping a reaction mixture of (1) an aliphatic ester and alcohol-containing solution of 70 to 95% by weight, based on the weight of said copolymer, of the hydrolysis product of a mixture of organochlorosilanes having an average of from about 1.0 to 1.75 organic groups per silicon atom and (2) from 30 to 5% by weight, based on the weight of said copolymer, of a polyester material having a viscosity of between about 38,000 centipoises to 42,000 centipoises at 25° C. and (B) thereafter heating the resulting stripped product at a pressure below about 100 millimeters at a temperature from about 175° C. to about 200° C., the organo groups of said organochlorosilanes being attached to silicon through carbon-silicon linkages and being selected from the class consisting of lower alkyl groups, aryl groups, halogenated aryl groups and mixtures thereof, said polyester material comprising the reaction product of (*a*) from 25 to 60 equivalent percent of a lower dialkyl ester of a member selected from the class consisting of isophthalic acid, terephthalic acid and mixtures thereof, (*b*) from 10 to 50 equivalent percent of ethylene glycol, and (*c*) from 20 to 60 equivalent percent of a saturated aliphatic polyhydric alcohol having at least 3 hydroxyl groups.

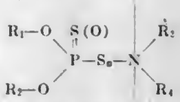
3,044,981

PROCESS FOR STABILIZING POLYOLEFINES

Hugo Malz, Leverkusen, Friedrich Lober and Otto Bayer, Leverkusen-Bayerwerk, and Hans Scheurlen, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 29, 1959, Ser. No. 862,460
Claims priority, application Germany Jan. 9, 1959
10 Claims. (Cl. 260—45.9)

1. In the process for stabilizing a member selected from the group consisting of polyethylene, polypropylene and polybutylene the improvement which comprises using as stabilizer 0.01–10% by weight, based on the weight of said monoolefinic polymer of compounds of the general formula:



in which R_1, R_2 and R_3 represent a member selected from the group consisting of substituted and unsubstituted hydrocarbon radicals, and wherein R_3 represents furthermore the groups



and

$$-SO_2Y$$

in which X stands for a member selected from the group consisting of hydrogen, substituted and unsubstituted hydrocarbon radicals, alkoxy radicals, aralkoxy radicals, and aroxy radicals and Y stands for substituted and unsubstituted hydrocarbon radicals, R_4 represents a member selected from the group consisting of hydrogen, substituted and unsubstituted hydrocarbon radicals and in those cases in which R_3 does not stand for the nitrile group, represents R_4 the groups



and $-SO_2Y$, in which X and Y have the meaning indicated above, R_3 and R_4 represent furthermore if they are directly connected together with the amide nitrogen members of a ring system and *n* represents 1 and 2; the aforesaid substituted and unsubstituted hydrocarbon radicals containing up to 12 carbon atoms, the substituents on the substituted hydrocarbon radicals being selected from the group consisting of halogen, amino, and nitro groups.

3,044,982

ORGANOPOLYSILOXANES AND PROCESS FOR PRODUCING SAME

Victor B. Jex, Kenmore, and Donald L. Bailey, Snyder, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 12, 1957, Ser. No. 695,489
14 Claims. (Cl. 260—46.5)

1. A process for preparing aminoalkylpolysiloxanes consisting essentially of units having the average formula:

$$\left[H_2NC_aH_{2a}SiO_{\frac{3-c}{2}}X_c\right]_n$$

wherein C_aH_{2a} is an alkylene group, *a* is a number having a value of at least 3, X is a member taken from the group consisting of hydroxy and alkoxy, *c* is a number from 0.3 to 2, *n* is a number having a value of at least 2, and the nitrogen atom is interconnected to the silicon atom through at least 3 carbon atoms, which comprises adding an aminoalkyltrialkoxysilane having the formula:

$$[H_2NC_aH_{2a}Si(OR)_3]_{3-x}$$

wherein R represents an alkyl group, C_aH_{2a} is an alkylene group, *a* is a number having a value of at least 3, the nitrogen atom is interconnected to the silicon atom through at least three carbon atoms and *x* is a number having a value of form 0 to 2, to water in a ratio of at least one mole of water per mole of the aminoalkyltrialkoxysilane.

3,044,983

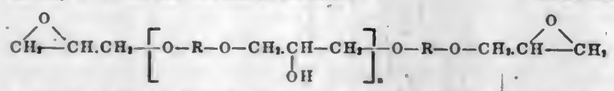
CURED RESINS FROM GLYCIDYL ETHER OF DIHYDROXYDIPHENYLSULFONES

John E. Singley, Atlanta, and Arvid Christiansen, East Point, Ga., assignors to Tennessee Corporation, New York, N.Y., a corporation of New York

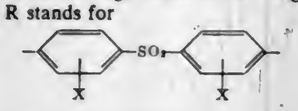
Filed July 22, 1958, Ser. No. 750,227
6 Claims. (Cl. 260—49)

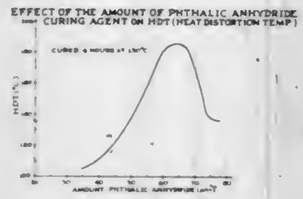
1. A resin composition obtained by mixing together (A) a molten mixture of the reaction product of epichlo-

rohydrin with a dihydroxy-diaryl sulfone having approximately 80% of the structural formula

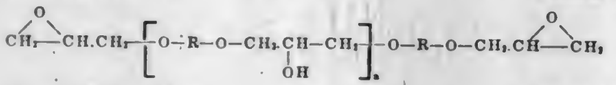


wherein n has an average value in the range from 0.05 to 0.50 and R stands for

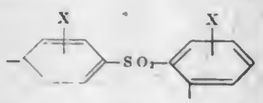




x being a member of the group consisting of hydrogen and methyl groups and having approximately 20% of the structural formula



wherein R stands for



and n and x having the same definition as above and (B) molten phthalic anhydride the amount of which is in the range of 50 to 75 parts by weight per hundred parts by weight of said epoxy containing mixture.

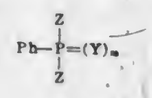
3,044,984

PHOSPHORUS CONTAINING COMPOUNDS

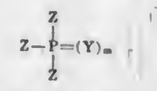
Peter Richard Bloomfield, London, England, assignor to Microcell Limited, London, England, a company of Great Britain

No Drawing. Filed Dec. 14, 1959, Ser. No. 859,151
Claims priority, application Great Britain Dec. 15, 1958
6 Claims. (Cl. 260—61)

1. A process for the preparation of phosphorus-containing polymers which process comprises mixing at least one difunctional organo-metallic compound having the formula M—R—M where M is selected from the group consisting of Na, K and Li atoms and MgCl, MgBr and MgI radicals, and R is an organic radical containing up to about 12 carbon atoms and selected from the group consisting of an aliphatic hydrocarbon radical and an aromatic radical containing only carbon, hydrogen and inert oxygen atoms; with at least one equivalent of at least one organo-phosphorus compound having the formula selected from the group consisting of



and



where Ph is a phenyl radical, Y is selected from the group consisting of sulphur and oxygen, Z is selected from the group consisting of chlorine, bromine and iodine, and m is an integer from 0 to 1, in an inert solvent; maintaining the mixture at a temperature of from about −40° C. to 150° C. so as to effect reaction; hydrolyzing the reaction mixture with water; and recovering the resultant polymer from the liquid phase.

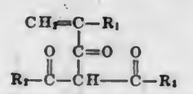
3,044,985

ACRYLYL DERIVATIVES OF β-DIKETONES AND THEIR POLYMERS

Lorraine G. Donaruma, Media, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

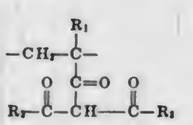
No Drawing. Filed July 26, 1960, Ser. No. 45,304
16 Claims. (Cl. 260—63)

1. A composition of matter represented by the general formula



wherein R_1 is a radical selected from the group consisting of hydrogen, methyl and ethyl, and wherein R_2 and R_3 are each hydrocarbon radicals selected from the group consisting of alkyl and aryl.

8. A homopolymer represented by the repeating unit of the structural formula



wherein R_1 is a radical selected from the group consisting of hydrogen, methyl and ethyl and each of R_2 and R_3 is a hydrocarbon radical selected from the group consisting of alkyl and aryl.

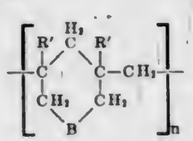
3,044,986

LINEAR ORGANIC SATURATED NON-IONIC HOMOPOLYMERS OF SYMMETRICAL 1,6-DIOLEFINIC MONOMERS

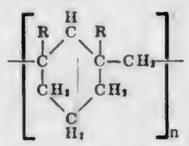
George B. Butler, Gainesville, Fla., assignor to Peninsular Chem Research, Inc., Gainesville, Fla., a corporation of Florida

No Drawing. Filed Mar. 10, 1958, Ser. No. 720,040
11 Claims. (Cl. 260—63)

1. A linear film- and fiber-forming homopolymer having repeating units, selected from the group consisting of one of the structures:

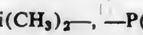


and



wherein

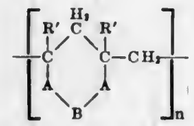
B is selected from the class consisting of



—$Si(CH_3)_2$—, —$P(CH_3)$—, —$C(CO_2Et)_2$— and —$C(COCH_3)(CO_2Et)$—;

R′ is selected from the class consisting of hydrogen, chlorine cyano, phenyl and methyl; and,
R is methyl,
n is a positive integer.

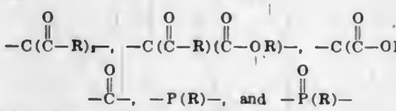
7. A process for the preparation of a linear fiber- and film-forming homopolymer having a repeating unit of the structure:



wherein A is a grouping selected from the class consisting of —CH_2— and



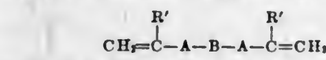
B is a member selected from the group consisting of —CH_2—, —CH(R)—, —$C(R)_2$—,



provided that only one of A and B stand for



at the same time; R represents a lower alkyl substituent; and R′ is a radical selected from the group consisting of hydrogen, lower alkyl, monocyclic aryl, halogen, and cyano, and n is an integer representing the number of units in the polymeric chain; which comprises homopolymerizing a 1,6-diolefinic compound having the formula:



wherein A, B, and R′ have the meanings indicated above, in the presence of a catalyst selected from the group consisting of (1) free radical yielding catalysts and (2) a mixture of a salt of a metal selected from the group consisting of groups IV*a*, V*a*, and VI*a* of the periodic table and an organometallic compound selected from the group consisting of alkyl and aryl compounds of beryllium, aluminum, magnesium and zinc.

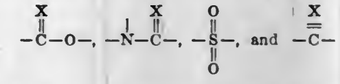
3,044,987

SEGMENTED COPOLYMERS AND PROCESS FOR PREPARING SAME

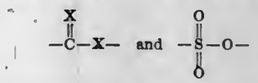
John Raymond Schaefgen, Wilmington, Del., and Joseph Clois Shivers, Jr., West Chester, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 5, 1958, Ser. No. 753,195
15 Claims. (Cl. 260—75)

1. A substantially linear segmented copolymer consisting of a multiplicity of intralinear segments of two classes connected by ester linkages, the segments of the first class being the residues remaining after removal of the terminal ester-forming functional groups selected from the group consisting of hydroxyl, thiol, carboxyl, and acid halide from a difunctional polymer having a melting point below about 50° C. and a molecular weight above about 600, and the segments of the second class containing at least one repeating unit of a fiber-forming polymer, said repeating unit being of the formula —B—Q—A—Q—, wherein —A— and —B— are bivalent organic radicals, the radical —A— containing terminal nitrogen atoms to each of which is attached one of the indicated free valences of the said radical —A—, and Q is a bivalent radical selected from the group consisting of



the said fiber-forming polymer having a melting point above about 200° C. in the fiber-forming molecular weight range, said segments of the second class being connected by ester linkages selected from the group consisting of



wherein X is selected from the group consisting of oxygen and sulfur, to terminal carbon atoms of the segments of the first class, with the proviso that said copolymer be free of nitrogen-to-nitrogen bonds in the polymer chain, said segments of the first class constituting from about 60% to about 90% by weight of said segmented copolymer.

3,044,988

POLYESTERS FROM FLUORINATED GLYCOLS AND PROCESS OF MAKING SAME

Gerhard F. Ottmann, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Dec. 19, 1960, Ser. No. 76,514
10 Claims. (Cl. 260—75)

1. Resinous polymerization comprising the polymeric polycondensation products of a polyfluorinated glycol of the formula:

$$HOCH_2(CF_2)_nCH_2OH$$

wherein n is an integer of from 1 to 4, with a lower alkyl ester of 2,5-dihydroxy-hexahydro-terephthalic acid, wherein the alkyl group contains from 1 to 4 carbon atoms.

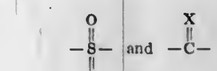
3,044,989

SEGMENTED COPOLYMERS

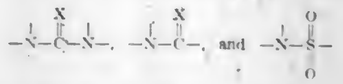
Joseph Clois Shivers, Jr., West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 5, 1958, Ser. No. 753,180
16 Claims. (Cl. 260—77.5)

1. A substantially linear segmented copolymer consisting essentially of a multiplicity of segments of two classes connected by chemical linkages, the segments of the first class being polymeric residues remaining after removal of the terminal amine groups of a difunctional polymer selected from the group consisting of primary and secondary amine-terminated polymers having a melting point below about 50° C. and a molecular weight above 600, said polymeric residues constituting at least about 48% by weight of said segmented copolymer, the segments of the second class containing at least one repeating unit of a fiber-forming polymer, said repeating unit being of the formula —B—Q—A—Q—, wherein —A— and —B— are bivalent organic radicals, the said radical —A— containing terminal nitrogen atoms to each of which is attached one of the indicated free valences of the said radical —A—, and Q is a bivalent radical selected from the group consisting of



the said fiber-forming polymer having a melting point above about 200° C. in the fiber-forming molecular weight range, said segments of the second class being connected by chemical linkages selected from the group consisting of



wherein X is selected from the group consisting of oxygen and sulfur, through an



of said linkages to a terminal carbon atom of the segments of the first class, with the proviso that said segmented copolymer be free of nitrogen-to-nitrogen bonds in the polymer chain.

3,044,990
SEGMENTED POLYMER CONTAINING N-ALKYLATED URETHANE GROUPS

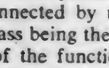
Walter Steuber, Springfield, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 18, 1958, Ser. No. 774,583
14 Claims. (Cl. 260—77.5)

1. A substantially linear segmented polymer consisting essentially of a plurality of intralinear segments of two classes connected by urethane linkages, the segments of the first class being the polymeric residues remaining after removal of the functional end groups of a difunctional N-alkylated urethane polymer having a melting point below about 60° C. and a molecular weight above about 600, the segments of the second class containing at least one repeating unit of a fiber-forming synthetic linear polymer having a melting point above about 200° C. in the fiber-forming molecular weight range, said fiber-forming polymer being selected from the group consisting of polyamide, polyurea, and polyurethane, said segmented polymer being represented by the formula

$$\{L—U—L—A_q\}_p$$

wherein q is a number not less than 1, p is a large whole number, U represents a segment of said first class, A_q represents a segment of said second class, and L represents a urethane linkage having the formula



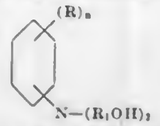
wherein X is selected from the group consisting of hydrogen and alkyl and alkylene radicals wherein said alkylene radical is a bridging radical between the nitrogens of a heterocyclic diamino radical, with the proviso that any intralinear nitrogen atoms in said segment of the second class be connected to each of two intralinear atoms selected from the group consisting of (1) carbon and sulfur and (2) carbon and carbon.

3,044,991
POLYURETHANE PLASTICS

Erwin Müller and Otto Bayer, Leverkusen, and Julius Peter, Odenthal, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,977
Claims priority, application Germany Aug. 21, 1958
8 Claims. (Cl. 260—77.5)

1. A method for making a polyurethane elastomer which comprises reacting an organic dissocyanate with an organic compound containing at least two reactive hydrogen atoms and having a molecular weight of more than about 1000, said organic compound being reactive with said organic diisocyanate to form a polyurethane, and a compound having the formula



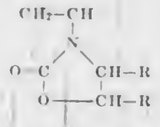
wherein R is an alkyl radical having from 1 to 5 carbon atoms, R_1 is an alkylene radical having from 1 to 5 carbon atoms and n is an integer of from 1 to 2, the number of hydroxyl groups of the said reactants being at least equivalent to the number of —NCO groups of the organic diisocyanate and vulcanizing the resulting adduct with sulfur to form a vulcanized, substantially nonporous polyurethane elastomer.

3,044,992
COPOLYMERS OF MALEIC ANHYDRIDE WITH N-VINYL-CYCLIC CARBAMATES

Billy B. Hibbard, Midland, and Darrell D. Weage, Coleman, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,506
9 Claims. (Cl. 260—77.5)

1. Copolymers of maleic anhydride with an N-vinyl cyclic carbamate selected from the group consisting of N-vinyl-2-oxazinidinone and substituted N-vinyl-2-oxazolidinones having the structure:

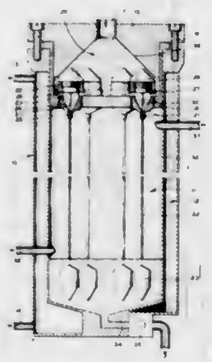


wherein one R is selected from the group consisting of methyl, ethyl and phenyl radicals and the other R is selected from hydrogen and a methyl radical, and the free acids and water-soluble salts thereof obtained by hydrolysis of the acid anhydride rings, said copolymers being characterized by Fikentscher K values of at least about 10.

3,044,993
MANUFACTURE OF LINEAR POLYCONDENSATION PRODUCTS

Heine Gerke Nicolai Tiemersma, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed Sept. 22, 1958, Ser. No. 762,295
Claims priority, application Netherlands Sept. 28, 1957
1 Claim. (Cl. 260—78)



A process for increasing viscosity of linear condensation products comprising the steps of continuously flowing a condensate of hexamethylene diamine and adipic acid in

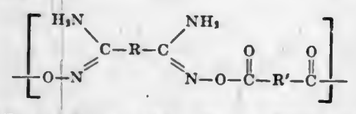
the form of an annular film vertically through a reaction chamber maintained at about 275° C. and at about atmospheric pressure, the initial specific viscosity of said condensate at the chamber temperature being approximately 1.6 and the ratio of the outer film diameter to the inner film diameter being between 40 and 60 with the inner diameter measuring between 0.1 and 1.3 mm., and passing nitrogen over the flowing solution in a direction countercurrent to the flow thereof to remove water vapor and thereby permit a rapid increase in viscosity of the condensate whereby polycondensation of said condensate occurs to the extent necessary for increasing the specific viscosity from 1.6 to 2.15 when determined with the aid of a solution of 1% by weight of said polycondensate in 90% by weight of formic acid.

3,044,994
POLYMERS CONTAINING RECURRING 1,2,4-OXADIAZOLE RINGS

Dale Clifton Blomstrom, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 19, 1959, Ser. No. 800,383
13 Claims. (Cl. 260—78)

1. Polymers consisting essentially of recurring units of the formula



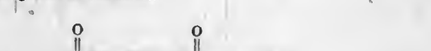
wherein R and R′ represent inert divalent hydrocarbon radicals having up to and including 10 carbon atoms.

3,044,995
SULFONE SALTS AND POLYAMIDES

Donald M. Young, Geneva, Switzerland, and Christian F. Horn, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed June 24, 1959, Ser. No. 822,428
29 Claims. (Cl. 260—78)

1. A polyamide having a recurring molecular structure of the general formula



wherein the R's are divalent, unsubstituted polymethylene chains containing from three to six carbon atoms, the R′'s are divalent, saturated straight or branched chain alkylene groups containing from three to twelve carbon atoms, at least three carbon atoms being in the chain separating adjacent sulfonyl groups, and R″ stands for a member selected from the group consisting of divalent saturated alkylene, alkylene ether and aralkylene groups, said polyamide having a reduced viscosity, measured at 30° C. with a concentration of 0.2 gram polyamide dissolved in 100 cc. of a 3:2 mixture of phenol and tetrachloroethane, between about 0.4 and 2.5.

3,044,996
PROCESS FOR POLYMERIZING UNSATURATED ALDEHYDES

Edward C. Shokal, Walnut Creek, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Apr. 14, 1958, Ser. No. 728,029
7 Claims. (Cl. 260—80)

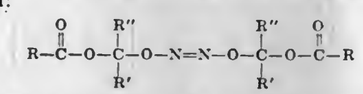
1. A process for preparing oil-soluble polymers from acrolein which comprise contacting the acrolein with a .1% to 10% by weight of a member of the group consisting of phosphines of the formula $P(R)_3$ wherein R is a monovalent hydrocarbon radical, arsines of the formula $As(R)_3$ wherein R is a monovalent hydrocarbon radical and phosphites substituted only with monovalent hydrocarbon radicals at a temperature between 0° C. and 100° C.

3,044,997
ESTERS OF HYPONITROUS ACID AND THEIR USE AS POLYMERIZATION CATALYSTS

Leslie Seed, Northwich, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

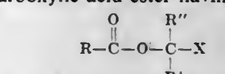
No Drawing. Filed Jan. 17, 1958, Ser. No. 709,454
Claims priority, application Great Britain Jan. 30, 1957
11 Claims. (Cl. 260—89.1)

1. An ester of hyponitrous acid having the general formula:



wherein R is selected from the group consisting of alkyl containing up to nine carbon atoms, allyl, phenyl, chlorophenyl, lower alkyl phenyl, lower alkoxy phenyl and lower alkylaminophenyl radicals; R′ is selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, lower alkoxy-lower alkyl, lower chlorophenyl, phenyl and chlorophenyl radicals and radicals which, together with the R″ substituent, represent the atoms necessary to complete a saturated hydrocarbon ring containing from four to six carbon atoms; and R″ is selected from the group consisting of hydrogen, lower alkyl and radicals which, together with the R′ substituent, represent the atoms necessary to complete a saturated hydrocarbon ring containing from four to six carbon atoms.

2. Process for the manufacture of esters of hyponitrous acid which comprises reacting one mole of a metal hyponitrite selected from the group consisting of silver, lead, copper, barium and lithium hyponitrites with 2 moles of an organic carboxylic acid ester having the formula:



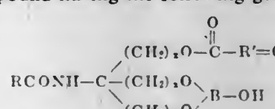
wherein X stands for halogen, R is selected from the group consisting of alkyl containing up to nine carbon atoms, allyl, phenyl, chlorophenyl, lower alkyl phenyl, lower alkoxy phenyl and lower alkylaminophenyl radicals; R′ is selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, lower alkoxy-lower alkyl, lower chloroalkyl, phenyl and chlorophenyl radicals and radicals which, together with the R″ substituent, represent the atoms necessary to complete a saturated hydrocarbon ring containing from four to six carbon atoms; and R″ is selected from the group consisting of hydrogen, lower alkyl and radicals which, together with the R′ substituent, represent the atoms necessary to complete a saturated hydrocarbon ring containing from four to six carbon atoms, said reaction being carried out in an inert non-aqueous solvent for the said organic carboxylic acid ester at a temperature not above 0° C.

3,044,998
BORATED MONOMERS AND POLYMERS

Donald D. Emrick, Shaker Heights, and Samuel M. Darling, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 13, 1958, Ser. No. 773,559
4 Claims. (Cl. 260—89.5)

1. A compound having the following general formula:



where R is a radical selected from the group consisting of unsubstituted alkyl and alkenyl radicals of from 1 to

21 carbon atoms, x is a small whole number of from 1 to 3 and R′ is selected from the group consisting of



and



3,044,999

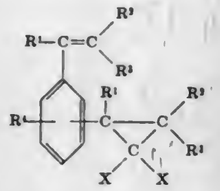
(2,2-DIHALOCYCLOPROPYL) STYRENES

William F. Tousignant, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 29, 1960, Ser. No. 59,173

19 Claims. (Cl. 260—91.5)

1. (2,2-dihalocyclopropyl) styrenes of the general formula:



wherein X is halogen; R^1, R^2, and R^3 are individually selected from the group consisting of hydrogen, lower alkyl groups containing 1–4 carbon atoms, and cyclohexyl; and R^4 is selected from the group consisting of hydrogen, lower alkyl groups containing 1–4 carbon atoms, cyclohexyl, phenyl, and halogen.

3,045,000

STABILIZATION OF POLYCHLOROTRIFLUOROETHYLENE WITH CHLORINE GAS

Roy R. Divis, 1650 Mayfair, Westchester, Ill.

No Drawing. Filed May 20, 1959, Ser. No. 814,392

5 Claims. (Cl. 260—92.1)

1. A process for stabilizing solid polychlorotrifluoroethylene reaction product, as formed, against color development and molecular weight degradation at fabrication temperatures which comprises exposing said product, prior to subjecting it to fabrication temperature, to chlorine gas at a chlorine pressure in excess of 100 mm. of mercury until substantially all unstable specie content has been thereby eliminated, and then heating the treated product to remove excess absorbed chlorine content.

3,045,001

POLYMERIZATION PROCESS

Richard S. Berger, Richmond, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Mar. 24, 1958, Ser. No. 723,097

10 Claims. (Cl. 260—93.5)

1. A process for polymerizing alpha, beta-ethylenically unsaturated hydrocarbons containing up to 8 carbon atoms which comprises contacting the compound with (1) .1% to 5% by weight of a preformed solid addition product of a titanium halide and a hydrocarbon substitute with at least one nitro group, and (2) an aluminum alkyl wherein the alkyl radical contains up to 8 carbon atoms, the aluminum in the aluminum alkyl and the metal in the transition metal halide portion of the addition product being present in a ratio of about 1:1 to 10:1, and maintaining the mixture in an inert atmosphere and anhydrous conditions and at a temperature between 0° C. and 100° C. and a pressure up to 1000 p.s.i. until the unsaturated hydrocarbon has been polymerized.

3,045,002

PROCESS FOR OBTAINING A PURIFIED POLYOLEFIN FROM A POLYOLEFIN DISPERSION

Siegfried Sommer, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,122

Claims priority, application Germany Jan. 2, 1958

6 Claims. (Cl. 260—93.7)

1. In a process for obtaining a purified Ziegler polyolefin from a Ziegler polyolefin dispersion containing a hydrocarbon as dispersing medium which dispersion is obtained by polymerizing a monoolefin in the presence of a catalyst of an alkyl aluminum compound and a chloride of a heavy metal subgroups IV–VIII of the periodic table, the improvement which comprises treating said dispersion at a temperature in the range from 30–100° C. with an ether selected from the group consisting of a monoether of a monohydric alcohol of 1–8 carbon atoms with a glycol containing up to 8 carbon atoms and a diether of a monohydric alcohol of 1–8 carbon atoms with glycerol, in an amount of 0.2–5%, calculated on the dispersing medium, and then adding water thereto, filtering the polymer dispersion, and steam-distilling the wet polymer.

3,045,003

1:2 CHROMIUM AND COBALT COMPLEXES OF MONOAZO DYES CONTAINING A 1-AZA-4-THIACYCLOHEXANE-4,4-DIOXIDE SUBSTITUENT

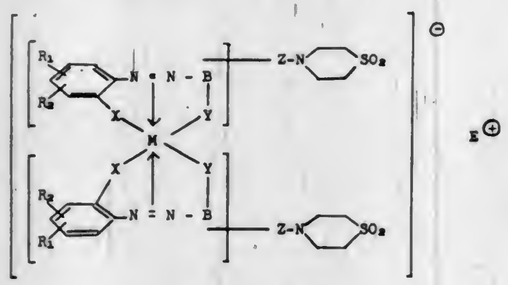
Johannes Dehnert and Robert Gehm, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Jan. 5, 1960, Ser. No. 505

Claims priority, application Germany Jan. 9, 1959

8 Claims. (Cl. 260—147)

1. A metal complex dyestuff which has one metal atom selected from the group consisting of chromium and cobalt attached to two identical azo dyestuff radicals and which has the formula

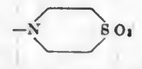


in which: M represents said metal atom; $E^{\oplus}$ represents a cation; R_1 represents a substituent selected from the group consisting of hydrogen, chlorine, methyl, methoxy, ethoxy, nitro and acetylamino; R_2 represents a substituent selected from the group consisting of hydrogen, chlorine, methyl and nitro; X is a divalent radical selected from the group consisting of oxygen and



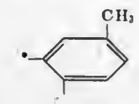
Y is a divalent radical selected from the group consisting of oxygen and —NH—; Z is a divalent radical attached to an aromatic nucleus of each azo dyestuff radical and is selected from the group consisting of $—SO_2—$, —CO—, $—CH_2—$, $—SO_2—NH—$, —CO—NH—, —NH—CO—$CH_2—$ and $—SO_2—NH—(CH_2)_m—$

wherein m is one of the numbers of the series 2, 3, 4, 5 and 6 and wherein the substituent

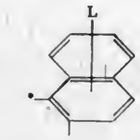


is attached to the right side of the formulae of said radicals; and B is a divalent radical selected from the group consisting of the azo coupled components:

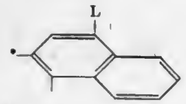
(a)



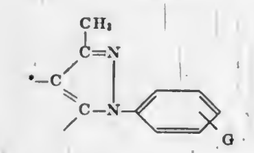
(b)



(c)

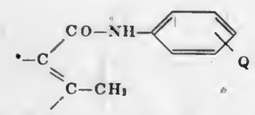


(d)



and

(e)



wherein the asterisk (*) marks the position at which the coupling component is connected to the azo group, L is a substituent selected from the group consisting of hydrogen, acetylamino and methoxycarbamino, G is a substituent selected from the group consisting of hydrogen, methyl and chlorine, and Q is a substituent selected from the group consisting of hydrogen and chlorine.

3,045,004

DISAZO DYES

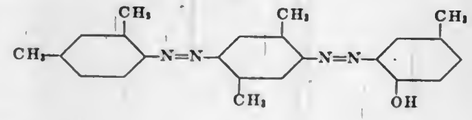
Ermanno Gaetani, Milan, Italy, assignor to Aziende Colori Nazionali Affini ACNA S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,118

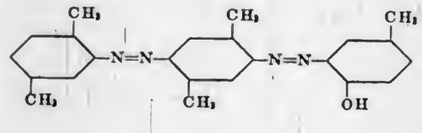
Claims priority, application Italy Apr. 16, 1959

3 Claims. (Cl. 260—186)

1. A disazo dye, insoluble in water, having a formula selected from the group consisting of



and



3,045,005

MONOAZO DYESTUFFS

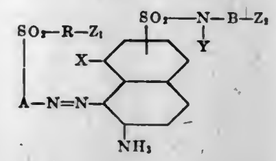
Jean-Pierre Jung, Riehen, near Basel, and Guido Schetty, Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,548

Claims priority, application Switzerland Jan. 6, 1958

7 Claims. (Cl. 260—198)

1. The monoazo dyestuff of the formula



wherein

A represents a mononuclear carbocyclic aryl radical containing the sulphonyl group in o-position to the azo group and which is free from carboxylic acid and sulphonic acid groups,

B represents a member selected from the group consisting of phenyl, benzyl and naphthyl radicals free from carboxylic acid groups, and if Z_2 is hydrogen also alkyl and cyclohexyl radicals,

R represents a member selected from the group consisting of mononuclear carbocyclic aryl, at most binuclear carbocyclic aryloxy and secondary amino radicals, free from carboxylic acid groups,

X represents a member selected from the group consisting of H and OH, and

Y represents a member selected from the group consisting of hydrogen, lower alkyl and benzyl radicals, and if Z_2 is hydrogen also cyclohexyl radicals,

and of Z_1 and Z_2, one Z represents the sulphonic acid group and the other Z represents hydrogen.

3,045,006

PREPARATION OF CELLULOSE DERIVATIVES

René Camille Gerbaux, Edegem-Antwerp, José Thérèse Lemmerling, Wilrijk-Antwerp, and Frans Alfons Claes, Heultje, Westerlo, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel-Antwerp, Belgium, a Belgian company

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,454

Claims priority, application Belgium Aug. 19, 1959

3 Claims. (Cl. 260—224)

1. Process for the manufacture of mixed fibrous cellulose esters of sulfuric acid and of lower fatty acids comprising the steps of treating fibrous cellulose sulfate with an acylating mixture composed of a lower fatty acid anhydride, a lower fatty acid and a solvent for the reaction mixture wherein the cellulose acylate sulfate remains insoluble, washing and drying the cellulose acylate sulfate obtained.

3,045,007

PROCESS AND APPARATUS FOR PRODUCING HYDROXYETHYLCELLULOSE

Reid Logan Mitchell, Morristown, and Arthur R. Albohn, Whippany, N.J., and Stig G. Palmgren, Greenwich, Conn., assignors to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

Filed Apr. 7, 1959, Ser. No. 804,789

4 Claims. (Cl. 260—231)

1. The process for producing hydroxyethylcellulose which comprises substantially continuously passing a bed

of fibrous particles of alkali cellulose fibers through a chamber containing ethylene oxide gas, subjecting the bed of fibrous particles to a progressive forward movement, and simultaneously with said progressive forward movement repeatedly causing portions of the bed to rise and fall in rapid succession with resulting entrapment of the ethylene oxide gas in the bed as said portions rise, and expulsion of the entrapped ethylene oxide gas as said portions fall, thereby causing a pumping action with respect to the ethylene oxide gas which causes said gas to deeply penetrate the bed and react uniformly with the fibrous particles thereof.

3,045,008

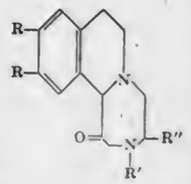
NOVEL 1,4-DIAZEPINES

Joseph G. Lombardino, New London, William M. McLamore, Groton, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 16, 1960, Ser. No. 8,916

9 Claims. (Cl. 260—239.3)

1. A compound selected from 1,4-diazepines of the formula:



wherein each R represents a member of the group consisting of hydrogen, hydroxy, lower alkoxy and alkyl, and when both R groups are taken together they form methylenedioxy, R′ represents a member of the group consisting of hydrogen, lower alkenyl, alkyl, hydroxyalkyl, acyloxyalkyl, lower alkoxyalkyl, lower dialkylaminoalkyl, benzyl, chlorobenzyl, xylyl and β-phenylethyl, and R″ represents a member of the group consisting of hydrogen, lower alkenyl, alkyl, hydroxyalkyl, acyloxyalkyl, lower alkoxyalkyl, lower dialkylaminoalkyl, β-phenylethyl, benzyl, xylyl, p-chlorobenzohydryl, thenyl, furfuryl, phenyl, chlorophenyl, tolyl, anisyl, thienyl and furyl, each alkyl moiety in R, R′ and R″ having from one to five carbon atoms and said acyl moiety being the acyl moiety of from a hydrocarbon monocarboxylic acid having from two to eight carbon atoms; and the pharmaceutically acceptable acid addition salts thereof and the pharmaceutically acceptable quaternary ammonium salts thereof.

4. Naphth-[1,2-a]-2-oxo-4-ethyl-9,10-dimethoxy - 1,2,3,4,5,6,7-heptahydro-11b-H-[3,5a]diazepine.

3,045,009

METHOD FOR CONVERTING N-CHLORO-ε-CAPROLACTAM TO α-CHLORO-ε-CAPROLACTAM

Arthur O. Rogers, Lewiston, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 26, 1958, Ser. No. 737,481

5 Claims. (Cl. 260—239.3)

1. The method comprising heating N-chloro-ε-caprolactam at a temperature above 115° C. but not higher than 150° C. whereby said N-chloro-ε-caprolactam is thermally rearranged to α-chloro-ε-caprolactam.

3,045,010

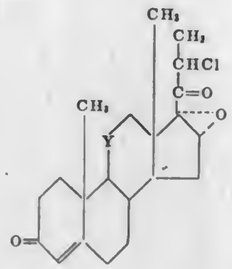
21-METHYL STEROIDS AND INTERMEDIATES

Sanford K. Figdor, Gales Ferry, Ellis Rex Pinson, Jr., Waterford, Barry M. Bloom, Lyme, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

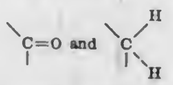
No Drawing. Filed Jan. 22, 1960, Ser. No. 3,995

1 Claim. (Cl. 260—239.55)

A compound selected from the group consisting of those having the formula



and the Δ^1-, Δ^6- and $\Delta^{1,6}$-dehydro analogs thereof wherein Y is selected from the group consisting of



3,045,011

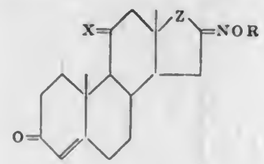
OXIMINO STEROIDAL DERIVATIVES AND PROCESSES FOR THEIR MANUFACTURE

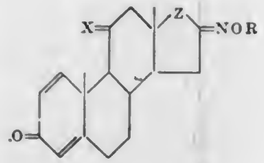
Alexander L. Nussbaum, Palo Alto, Calif., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 20, 1961, Ser. No. 160,931

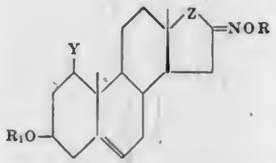
20 Claims. (Cl. 260—239.55)

1. A 16-oximino steroid selected from the group consisting of pregnanes having the following structural formulae, and the 6-methyl analogs thereof:



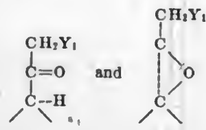


and



wherein X is a member selected from the group consisting of hydrogen and oxygen; Y is a member selected from the group consisting of H and OR_2; R, R_1, and R_2 being members selected from the group consisting of hydrogen and an acyl radical of a hydrocarbon carboxylic acid

having up to 8 carbon atoms; and Z is a member selected from the group consisting of the following:



wherein Y_1 is a member selected from the group consisting of hydrogen and $—OR_3$, R_3 being a member of the group consisting of hydrogen and an acyl radical of a hydrocarbon carboxylic acid having up to eight carbon atoms.

3,045,012

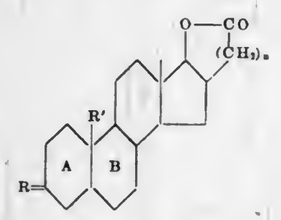
STEROIDS CONTAINING A 16/17-LACTONE RING

Paul Kurath, Waukegan, and John Wayne Cole, Deerfield, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed June 2, 1960, Ser. No. 33,385

18 Claims. (Cl. 260—239.57)

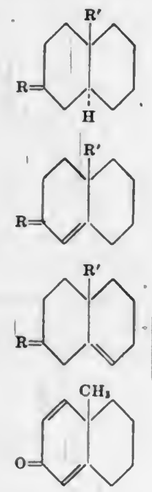
1. Steroid lactones of the formula



wherein *n* is an integer from 1 to 3 inclusive, R is selected from the group consisting of oxygen and



R′ is selected from the group consisting of hydrogen and methyl, and wherein the A—B rings have a partial structure selected from the partial structures of the group consisting of



3,045,013

NEW OPTICAL BLEACHING AGENTS OF THE DIAMINO STILBENE SERIES

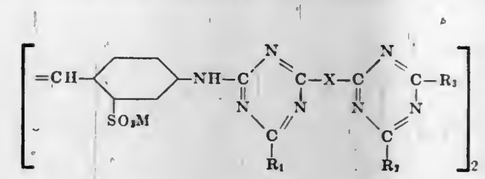
Raymond Frey, Creil, France, assignor to Compagnie Francaise des Matieres Colorantes, Paris, France, a French company

No Drawing. Filed June 9, 1959, Ser. No. 819,021

Claims priority, application France, June 11, 1958

6 Claims. (Cl. 260—240)

1. Optical bleaching agents of the formula



in which M represents a monovalent cation selected from the group consisting of hydrogen and alkali metal atoms, X represents a member selected from the group consisting of the sulphur atom, the imino and ethylenediimino groups and R_1, R_2 and R_3 represent a member selected from the group consisting of chlorine, bromine, hydroxy, amino, mono-alkylamino, dialkylamino, hydroxyalkylamino, bis-(hydroxyalkyl)-amino, methoxyalkylamino, bis-(methoxyalkyl) - amino, morpholino, phenylamino, halogenophenylamino, sulphophenylamino, N-alkyl N-phenylamino, phenoxy and halogenophenoxy groups, said alkyl radicals having 1 to 6 carbon atoms.

3,045,014

PRODUCTION OF 1-ARYL-4,5-DIHALOGEN-PYRIDAZONES-(6)

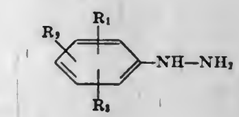
Hans Ruprecht Hensel, Heidelberg, and Hans Baumann, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed June 20, 1960, Ser. No. 37,069

Claims priority, application Germany June 23, 1959

1 Claim. (Cl. 260—250)

The process for the production of 1-aryl-4,5-dihalogenpyridazone-(6) which comprises heating a mucohalic acid selected from the class consisting of mucochloric acid and mucobromic acid in an aqueous mineral acid solution selected from the group consisting of dilute sulfuric acid solution and dilute hydrochloric acid solution, wherein the acid concentration in said dilute acid solutions ranges from 5% to 20% by weight, at 70° to 100° C. with an aryl hydrazine selected from the class consisting of alpha-naphthyl hydrazine, beta-naphthyl hydrazine and phenyl hydrazines of the formula



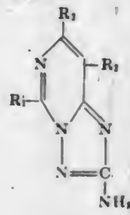
in which R_1 represents a substituent from the class consisting of a hydrogen atom, a carboxy group and a sulfonic acid group, R_2 represents a substituent from the class consisting of a hydrogen atom, a nitro group, a formylamino group, an acetylamino group, an oxalylamino group and a benzoylamino group and R_3 represents a substituent from the class consisting of a hydrogen atom, a methyl group and a methoxy group to produce the 1-aryl-4,5-dihalogenpyridazone-(6).

3,045,015
TRIAZOLO-[2,3-c]-PYRIMIDINES

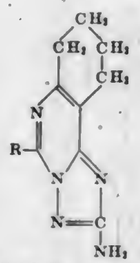
George William Miller and Francis Leslie Rose, Macclesfield, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Sept. 8, 1959, Ser. No. 838,413
Claims priority, application Great Britain Oct. 3, 1958
8 Claims. (Cl. 260—256.4)

1. A pyrimidine derivative having a formula selected from the group consisting of:



and



wherein R_1 is selected from the group consisting of hydrogen, alkyl of up to 7 carbon atoms, hydroxyalkyl of up to 7 carbon atoms, alkoxyalkyl of up to 9 carbon atoms, halogenoalkyl of up to 7 carbon atoms, allyl, cyclohexyl, amino, monoalkylamino of up to 3 carbon atoms, dimethylamino, phenyl, methylthio and ethylthio; R_2 is selected from the group consisting of hydrogen, alkyl of up to 7 carbon atoms, hydroxyalkyl of up to 7 carbon atoms, alkoxyalkyl of up to 9 carbon atoms, halogenoalkyl of up to 7 carbon atoms, allyl, cyclohexyl, amino, monoalkylamino of up to 3 carbon atoms, dimethylamino, methoxy and halogen; R_3 is selected from the group consisting of hydrogen, alkyl of up to 7 carbon atoms, hydroxyalkyl of up to 7 carbon atoms, alkoxyalkyl of up to 9 carbon atoms, halogenoalkyl of up to 7 carbon atoms, allyl, cyclohexyl and halogen, and the non-toxic acid-addition salts thereof.

3,045,016
6-HYDRAZINOPYRIMIDINE DERIVATIVES

George William Miller and Francis Leslie Rose, Macclesfield, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Sept. 8, 1959, Ser. No. 838,414
Claims priority, application Great Britain Oct. 3, 1958
7 Claims. (Cl. 260—256.4)

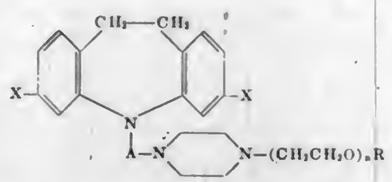
1. 2-phenyl-4-lower alkyl-6-hydrazinopyrimidine.

3,045,017
IMINODIBENZYL DERIVATIVES

Paul Gailliot, Paris, and Jacques Gaudechon, Thiais, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Filed June 19, 1959, Ser. No. 821,386
Claims priority, application France June 27, 1958
6 Claims. (Cl. 260—268)

1. A member of the class consisting of iminodibenzyl derivatives of the formula:



wherein A represents a saturated aliphatic hydrocarbon group containing 2 to 4 carbon atoms with at least two carbon atoms between the nitrogen atom of the iminodibenzyl nucleus and that of the piperazine nucleus, the symbols X are the same and represent a member of the class consisting of hydrogen and halogen atoms, *n* is an integer selected from 1 and 2, R represents a member of the class consisting of hydrogen, lower alkanoyl, carbamoyl, N-(lower alkyl) carbamoyl, and N-di(lower alkyl) carbamoyl groups, and their non-toxic acid addition salts.

2. 5-(3-4'-β-hydroxyethyl - 1'-piperazinylpropyl)iminodibenzyl.

3,045,018
PROCESS FOR THE RECOVERY OF TRIETHYLENEDIAMINE

Rocco L. Mascioli, Media, Pa., assignor to Air Products and Chemicals, Inc., a corporation of Delaware

No Drawing. Filed Dec. 8, 1959, Ser. No. 858,053
2 Claims. (Cl. 260—268)

1. In the recovery of useful products from a nitrogenous mixture consisting essentially of compounds resulting from a synthesis of triethylenediamine at an elevated temperature, said mixture containing at least 2 but not more than 40% 1,4-diazabicyclo-(2.2.2)-octane, at least 2% but not more than 40% alkyl pyrazine of the formula $C_4R_nH_{(4-n)}N_2$ in which each R is selected from the group consisting of methyl and ethyl, the method which consists essentially of the steps of:

(*a*) adding at least 8% but less than 20% by weight of formaldehyde to said mixture together with an amount of water constituting a small fraction of the aldehyde;

(*b*) heating the mixture of formaldehyde, water and nitrogenous mixture to a temperature of at least 54° C. to convert substantially all primary amines and secondary amines to high boiling condensation products and to bring about the formation of a hydrate of 1,4-diazabicyclo-(2.2.2)-octane;

(*c*) cooling the reaction product to precipitate the hydrate of 1,4-diazabicyclo-(2.2.2)-octane;

(*d*) and separating a solid hydrate of 1,4-diazabicyclo-(2.2.2)-octane from the reaction product.

3,045,019
PERIDICARBOXYLIC ACID IMIDE DYESTUFFS CONTAINING AT LEAST ONE ISOTHIOCYANATE GROUP

Hans Heinrich Bosshard and Heinrich Zollinger, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Original application May 4, 1959, Ser. No. 812,574. Divided and this application June 21, 1960, Ser. No. 43,972
Claims priority, application Switzerland May 6, 1958
2 Claims. (Cl. 260—281)

1. A peridicarboxylic acid diimide dyestuff of the formula

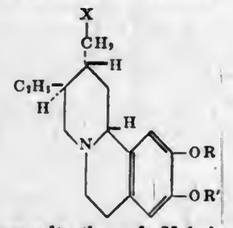


3,045,020
NEW CHEMICAL COMPOUNDS USEFUL IN THE SYNTHESIS OF EMETINE

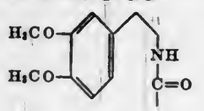
Alan Rushton Battersby, Westbury-on-Trym, Bristol, England, assignor to Whiffen and Sons Limited, London, England

No Drawing. Filed Aug. 20, 1958, Ser. No. 756,747
Claims priority, application Great Britain May 27, 1957
21 Claims. (Cl. 260—287)

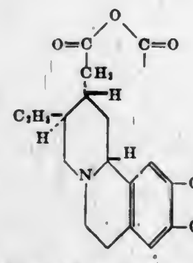
1. A synthetic stereoisomer selected from the group consisting of compounds of the formula



and acid addition salts thereof; X being a member selected from the group consisting of —COOH, —COOA, —CN, —COCl, —CON_3, —$COONH_4$, —$COOCH_3$, —$COOC_2H_5$, —$COOH{\cdot}N(C_2H_5)_3$,



and



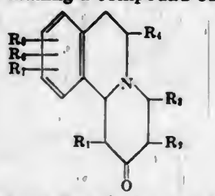
A being an alkali metal; and each of R and R' being a member selected from the group consisting of hydrogen and lower alkyl.

3,045,021
PREPARATION OF SUBSTITUTED 2-OXOBENZOQUINOLIZINES

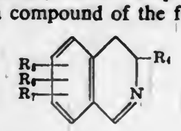
Arnold Brossi, Riehen, Switzerland, assignor to Hoffmann-La Roche Inc., Roche Park, Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 13, 1960, Ser. No. 55,718
Claims priority, application Switzerland Sept. 24, 1959
7 Claims. (Cl. 260—289)

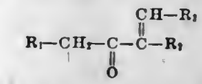
1. A process for making a compound of the formula



wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen and lower alkyl, and R_5, R_6 and R_7 are selected from the group consisting of hydrogen and lower alkoxy and lower alkylenedioxy represented by R_5 and R_6 taken together, which comprises condensing in alkaline medium a compound of the formula



wherein R_4, R_5, R_6 and R_7 have the same meaning indicated above, with a compound of the formula



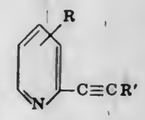
wherein R_1, R_2 and R_3 have the same meaning indicated above.

3,045,022
PROCESS OF PREPARING ETHYNYLPYRIDINES

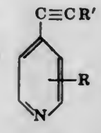
Charles K. McGill, Indianapolis, Ind., assignor to Reilly Tar & Chemical Corporation, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Apr. 7, 1960, Ser. No. 20,528
7 Claims. (Cl. 260—290)

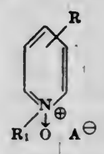
1. The process of preparing ethynylpyridines of the class consisting of 2-ethynylpyridines and 4-ethynylpyridines which compounds have the formulae:



and



wherein R is selected from the class consisting of hydrogen and lower alkyl, R' is a member selected from the group consisting of hydrogen, alkyl, and hydrocarbon aryl, which comprises adding an alkali metal acetylide selected from the class consisting of alkali metal acetylide, alkali metal alkyl acetylides, and alkali metal hydrocarbon aryl acetylides to a non-polar solvent solution of a quaternary pyridinium salt of a pyridine-N-oxide having the formula:



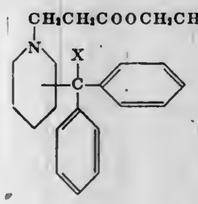
wherein R is a member of the group consisting of hydrogen and lower alkyl, R_1 is selected from the class consisting of alkyl, hydrocarbon aryl, and pyridyl alkyl, and $A^{\ominus}$ is an anion.

3,045,023
DIALKYLAMINOETHYL DIPHENYLMETHYL-PIPERIDINEPROPIONATES

Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 6, 1960, Ser. No. 20,238
7 Claims. (Cl. 260—294.3)

1. A compound of the formula



wherein X represents a member of the group consisting of

H and OH

and R represents an alkyl radical, the formula thereof being

$$-C_nH_{2n+1}$$

wherein *n* represents a positive integer amounting to less than 9.

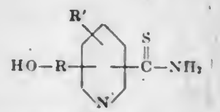
3,045,024

HYDROXYALKYLPYRIDINETHIONAMIDES

Francis E. Cislak, Indianapolis, Ind., assignor to Reilly Tar & Chemical Corporation, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Feb. 3, 1961, Ser. No. 86,857
6 Claims. (Cl. 260—294.8)

1. Hydroxyalkylpyridinethionamides having the formula:



wherein R is lower alkyl and R′ is selected from the group consisting of hydrogen and lower alkyl.

3,045,025

BIS QUATERNARY OXIMES

Brennie E. Hackley, Jr., and Edward J. Poziomek, Edgewood, and George M. Steinberg, Baltimore, Md., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Original application Apr. 28, 1959, Ser. No. 809,578. Divided and this application Oct. 11, 1961, Ser. No. 151,121
1 Claim. (Cl. 260—296)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A 1,1′-(2-butenylene) bis (4-formylpyridinium) halide dioxime.

3,045,026

SEPARATION OF AMINO ACIDS BY ION EXCLUSION

Allan Alfred Eisenbraun, Montreal, Quebec, Canada, assignor to Ogilvie Flour Mills Company, Limited, Montreal, Quebec, Canada, a corporation of Canada

Filed May 6, 1959, Ser. No. 811,473
4 Claims. (Cl. 260—326.3)

1. A method for separating glutamic acid and a mixture of monoaminomonocarboxylic acids comprising proline, serine, glycine, threonine, alanine, leucine, isoleucine, methionine, tyrosine, and cystine, from protein hydrolysate liquors and fractions thereof from which humin, tyrosine and leucine have been removed which comprises adjusting the pH of said amino acid-containing solution to about neutrality and to a concentration between about 1% and about 35% by weight of solids; feeding the adjusted solution to a water-immersed bed of the sodium form of a 4 to 8% cross linked sulfonated polystyrene resin, the volume of said solution being less than the volume of water initially adsorbed in the resin, and thereby displacing water from the resin bed; thereafter feeding water to the bed in volume about four times the volume of said amino acid solution; and collecting a plurality of fractions containing glutamic acid followed by a plurality of subsequent fractions containing a mixture of said monoaminomonocarboxylic acids.

2. A method for recovering a glutamic acid fraction and a proline fraction from wheat gluten hydrolysate, fractions thereof and recycle liquors derived therefrom, which comprises feeding neutral hydrolysate solution from which precipitates of humin and of tyrosine-leucine have been separated to a bed of water-covered sulfonated polystyrene resin in its sodium form and of between about 4% and 8% cross linkage, thereby displacing water from said resin; feeding sufficient water to said bed to wash the hydrolysate from said bed; collecting at least one fraction containing glutamic acid followed by subsequent fractions containing other amino acids, evaporating said subsequent fractions to about 40% solids by weight, and separating insoluble material from the liquid product which comprises proline along with minor amounts of serine, glycine, threonine, alanine, leucine, and isoleucine.

3,045,027

PREPARATION OF ETHYLENE SULFATE

George E. Ham, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 3, 1959, Ser. No. 830,990
13 Claims. (Cl. 260—327)

1. A method for preparing alkylene sulfates which comprises reacting sulfur trioxide with a lower vicinal alkylene oxide having from 2 to 5 carbon atoms, inclusive, at a temperature between 10° and about 25° C. said reaction being carried out in the presence of a solvent selected from the group consisting of 1,4-dioxane and para-oxathiane.

2. A method for preparing alkylene sulfates which comprises the steps of reacting sulfur trioxide with 1,4-dioxane at a temperature from about 10° to about 25° C. to produce a dioxane-sulfur trioxide addition complex; subsequently reacting the so formed complex with a lower vicinal alkylene oxide having from 2 to 5 carbon atoms, inclusive at a temperature between about 10° C. and about 25° C.

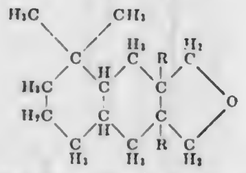
3,045,028

TRIMETHYL-DODECAHYDRONAPHTHOFURANS

Robert Enninga, Bussum, and Muus G. J. Beets, Hilversum, Netherlands, assignors, by mesne assignments, to International Flavors & Fragrances Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,717
Claims priority, application Great Britain Jan. 22, 1959
1 Claim. (Cl. 260—346.2)

New saturated tricyclic ethers with amber odor having the structure



in which R is selected from the group consisting of hydrogen and methyl and at least one R is methyl.

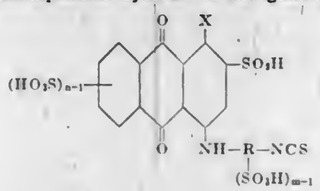
3,045,029

ANTHRAQUINONE DYESTUFFS CONTAINING AT LEAST ONE ISOTHIOCYANATE GROUP

Hans Heinrich Bosshard and Heinrich Zollinger, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Original application May 4, 1959, Ser. No. 812,574. Divided and this application June 21, 1960, Ser. No. 43,973
Claims priority, application Switzerland May 6, 1958
2 Claims. (Cl. 260—374)

1. An anthraquinone dyestuff of the general formula



in which R represents a member selected from the group consisting of a phenylene radical bearing the —NCS group in the m-position and a phenylene radical bearing the —NCS group in the p-position, relative to the —NH-bridge in the above formula, and *m* and *n* each represent a whole number ranging from 1 to 2.

3,045,030

FLUORINATED ANDROSTANES AND INTERMEDIATES RELATING THERETO

Cecil H. Robinson, Cedar Grove, and Eugene P. Oliveto, Glen Ridge, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,878
1 Claim. (Cl. 260—397.1)

16-(1′-hydroxy-1′-carbethoxy)methyleneandrosterone.

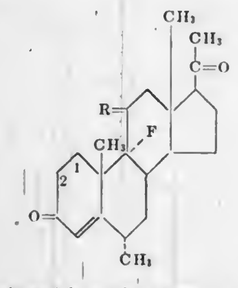
3,045,031

6α-METHYL-9α-FLUORO-11-OXYGENATED PROGESTERONES

George B. Spero, Portage Township, Kalamazoo County, and John L. Thompson, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Oct. 31, 1960, Ser. No. 65,904
5 Claims. (Cl. 260—397.3)

1. A 6α-methyl-9α-fluoro-11-oxygenated-progesterone of the formula



wherein R is selected from the group consisting of ketonic oxygen and



and wherein the linkage between carbon atoms 1 and 2 is selected from linkages consisting of single and double bonds.

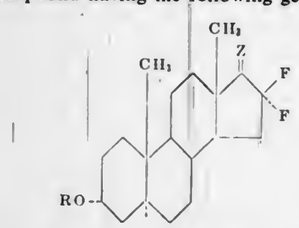
3,045,032

FLUORINATED ANDROSTANES

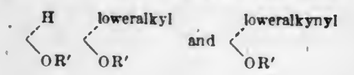
Cecil H. Robinson, Cedar Grove, and Eugene P. Oliveto, Glen Ridge, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,116
6 Claims. (Cl. 260—397.4)

1. A compound having the following general formula:



wherein Z is a member of the group consisting of O,



wherein R and R′ are members of the group consisting of H and an acyl radical of a hydrocarbon carboxylic acid containing up to eight carbon atoms.

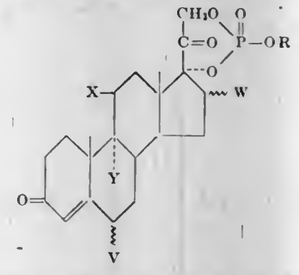
3,045,033

WATER SOLUBLE CYCLOPHOSPHATE ESTERS OF STEROIDS AND PROCESS FOR PREPARING SAME

David H. Gould, Leonia, and Elliot Shapiro, Cedar Grove, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed May 10, 1961, Ser. No. 109,003
22 Claims. (Cl. 260—397.45)

1. A compound of the group consisting of:



and the 1-dehydro analogues thereof wherein X is a member selected from the group consisting of O and (H, βOH); Y is a member selected from the group consisting of hydrogen and fluorine; V is a member selected from the group consisting of hydrogen, halogen and lower alkyl; W is a member of the group consisting of hydrogen, hydroxyl and lower alkyl; and R is a member of the group consisting of hydrogen and o-hydroxyphenyl.

3,045,034

PROCESS FOR PREPARING A FATTY OIL-POLYHYDRIC ALCOHOL DIISOCYANATE REACTION PRODUCT

Erich Zankl and Reinhard Hebermehl, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,123
Claims priority, application Germany Feb. 2, 1957
5 Claims. (Cl. 260—404.5)

1. A method for preparing a thixotropic oil comprising re-esterifying a fatty oil with from about 0.5 mol to about 2.5 mols of a polyhydric alcohol per mol of oil in the presence of a metal salt of naphthenic acid and reacting the product thus obtained with an organic diisocyanate having —NCO groups as its only groups reactive with said product in an amount at least substantially equivalent to the existing hydroxyl groups, at least one of the said reactants other than the fatty oil having a symmetrical molecular structure.

3,045,035

PROCESS FOR THE PRODUCTION OF TETRAETHYL LEAD

Alberto Malatesta, Brooklyn, N.Y., assignor to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

No Drawing. Filed Oct. 15, 1957, Ser. No. 690,206
Claims priority, application Italy Oct. 15, 1956
14 Claims. (Cl. 260—437)

1. A process of making tetraethyl lead according to the following general reaction scheme:

$$Pb+C_2H_4+H_2 \rightarrow Pb(C_2H_5)_4$$

comprising reacting a suspension of elemental, unalloyed lead in an organic liquid, that is substantially in-

ert in the reaction and is a solvent for tetraethyl lead, with molecular ethylene gas, and hydrogen gas, the partial pressure of the hydrogen gas being at least a plurality of atmospheres, the temperature being above room temperature but no higher than about 130° C.

3,045,036
END-BLOCKED AMINOALKYLPOLYSILOXANES AND PROCESS FOR CYCLIC AMINOALKYLSILOXANES

Victor B. Jex, Kenmore, and Donald L. Bailey, Snyder, N.Y., assignors to Union Carbide Corporation, a corporation of New York

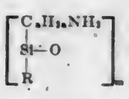
No Drawing. Filed Nov. 18, 1957, Ser. No. 696,931
5 Claims. (Cl. 260—448.2)

1. An alkoxy end-blocked aminoalkylpolysiloxane consisting essentially of the repeating unit:



wherein R is a member selected from the group consisting of alkyl and aryl groups, *a* has a value of at least 3, and wherein the amino group is removed from silicon by at least 3 carbon atoms.

3. A process for preparing a cyclic aminoalkylpolysiloxane having the formula:



wherein R is a member selected from the group consisting of alkyl and aryl groups, *m* has a value of from 3 to 7, *a* has a value of at least 3, and wherein the amino group is removed from silicon by at least 3 carbon atoms, which comprises heating a hydrolyzate of an aminoalkyldialkoxysilane comprising a mixture of alkoxy and hydroxy end-blocked aminoalkylpolysiloxanes containing the repeating unit:



wherein *a* and R have the same values defined above and wherein the amino group is removed from silicon by at least 3 carbon atoms, to a temperature sufficiently elevated to cause rearrangement of the aminoalkylsiloxane units present in said hydrolyzate and recovering said cyclic aminoalkylsiloxane as a distillate.

3,045,037
PROCESS FOR MAKING PHOSPHORUS ESTER LUBE OIL ADDITIVE

Luigi Benedetti, Corso Sempione 33, Milan, Italy

No Drawing. Filed Oct. 28, 1960, Ser. No. 65,598
Claims priority, application Italy Nov. 7, 1959
1 Claim. (Cl. 260—461)

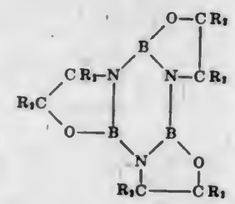
A process of preparing an alkyl alkyl-aryl dithiophosphoric acid suitable for use in the production of additives for lubricating oils belonging to mixed neutral esters of dithiophosphoric acid, comprising the steps of heating four molecules of a saturated monohydric aliphatic alcohol with phosphorus pentasulfide to form the corresponding dialkyl-dithiophosphoric acid, and subsequently transesterifying by addition of two molecules of alkylphenol, heating and removal by distillation of the alcohol corresponding to the substituted radical.

3,045,038
TRIS(1,3,2-OXAZABOROLIDINO)BORAZOLES, TRIS-(BENZO-1,3,2-OXAZABOROLO)BORAZOLES, AND A METHOD FOR THEIR PREPARATION

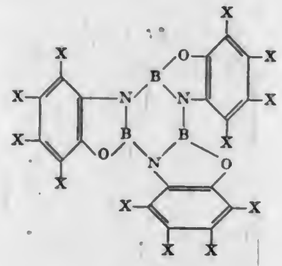
Robert J. Brotherton, Fullerton, George W. Willcockson, Anaheim, and Howard Steinberg, Fullerton, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed July 22, 1959, Ser. No. 828,703
6 Claims. (Cl. 260—462)

1. A new composition of matter selected from the group consisting of

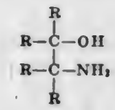


and

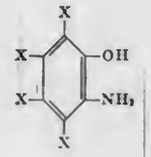


where R is selected from the group consisting of hydrogen, alkyl radicals having from 1–5 carbon atoms and phenyl, and X is selected from the group consisting of hydrogen, alkyl radicals having from 1–5 carbon atoms, alkoxy radicals having from 1–5 carbon atoms, and halogen radicals.

4. The method of producing a compound selected from the group consisting of substituted and unsubstituted tris-(1,3,2-oxaazaborolidino)borazole and substituted and unsubstituted tris(benzo-1,3,2-oxaazaborolo)borazole which comprises heating under reflux a trialkyl boric acid ester the alkyl group having from 1–5 carbon atoms with a material selected from the class consisting of ethanolamines having the formula



and o-aminophenols having the formula



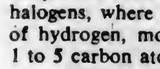
where R is selected from the group consisting of hydrogen, alkyl radicals having from 1–5 carbon atoms and phenyl, and X is selected from the group consisting of hydrogen, alkyl radicals having from 1–5 carbon atoms, alkoxy radicals having from 1–5 carbon atoms, and halogen radicals.

3,045,039
ORGANOBORON COMPOUNDS AND METHODS OF MAKING SAME

George W. Willcockson and Joseph K. Sandie, Anaheim, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,575
1 Claim. (Cl. 260—462)

The method for preparing vinylboron compounds having a terminal methylene group which comprises the reaction, in a non-aqueous system, of a complex salt having the formula



with a material selected from the group consisting of anhydrous acids and anhydrous materials having active halogens, where R is selected from the group consisting of hydrogen, monovalent hydrocarbon radicals of from 1 to 5 carbon atoms and phenyl, R' is an alkyl radical of from 1–4 carbon atoms and M is selected from the group consisting of MgCl, MgBr, Li, K and Na.

3,045,040
PRODUCTION OF 2,5-DIARYLAMINO-3,6-DIHYDROTEREPHTHALIC ACID ESTERS

Werner Deuschel, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Sept. 8, 1959, Ser. No. 838,430
Claims priority, application Germany Sept. 10, 1958
11 Claims. (Cl. 260—471)

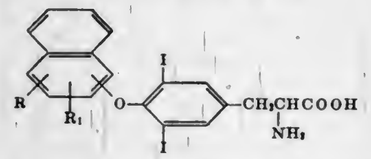
1. In a process for the production of a 2,5-diarylamino-3,6-dihydroterephthalic acid ester wherein a succinic acid ester is condensed with the aid of an alkali metal alcoholate in an organic solvent to the dialkali metal salt of the corresponding succinylosuccinic acid ester, and the succinylosuccinic acid ester is condensed in the presence of an acid-reacting substance with an arylamino compound to form the corresponding 2,5-diarylamino-3,6-dihydroterephthalic acid ester, the improvement which comprises: carrying out said condensation of the succinic acid ester in a carboxylic acid dialkylamide selected from the group consisting of dimethylformamide, dimethylacetamide, diethylformamide, diethylacetamide, N-methyl-2-pyrrolidone, N-ethyl-2-pyrrolidone and N-methylpiperidone as the organic solvent.

3,045,041
NAPHTHOXY SUBSTITUTED PHENYLALANINE DERIVATIVES

Eugene C. Jorgensen, South San Francisco, Calif., assignor to Regents of the University of California, Berkeley, Calif., a corporation of California

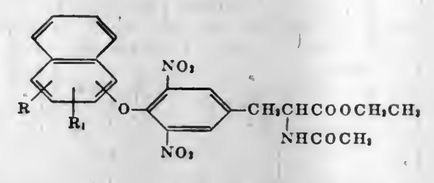
No Drawing. Filed July 18, 1960, Ser. No. 43,322
10 Claims. (Cl. 260—471)

1. A chemical compound of the formula:



in which R is a member selected from the group consisting of hydrogen, methoxy and hydroxy; R_1 is a member selected from the group consisting of hydrogen, lower alkyl of from 1 to 3 carbon atoms and bromine; and R_2 is a member selected from the group consisting of hydrogen and acetyl.

8. A chemical compound of the formula:



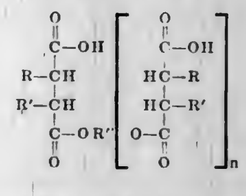
in which R is a member selected from the group consisting of hydrogen and methoxy; and R_1 is a member selected from the group consisting of hydrogen and lower alkyl of from 1 to 3 carbon atoms.

3,045,042
ACID POLYESTER SUCCINATES

Donald D. Staker, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 16, 1957, Ser. No. 678,525
13 Claims. (Cl. 260—485)

1. A composition of matter soluble in petroleum oil fractions having the general formula



wherein of R and R' one is hydrogen, and the other an alkenyl radical which contains 8 to 18 carbon atoms, R'' is a residue of a polyhydric alcohol remaining from removal of $n+1$ hydroxy groups from an alcohol containing two to four hydroxy groups attached to aliphatic carbon and n is an integer at least one but less than four.

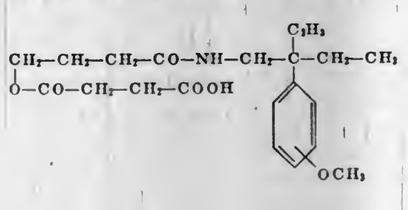
6. The process which comprises heating one mole proportion of an organic polyhydroxy compound containing from 2 to 4 hydroxy radicals linked to aliphatic carbon with alkenylsuccinic anhydride the number of carbon atoms in the side chain being 8–18, the mole proportion of said anhydride being at least two, and continuing heating without formation of water until the neutralization number is essentially constant and a reaction product soluble in petroleum ether forms.

3,045,043
NEW γ-HYDROXY-CARBOXYLIC ACID AMIDES AND PROCESS FOR THEIR MANUFACTURE

Karl Schmitt, Frankfurt am Main, Ingeborg Hennig, Kelkheim (Taunus), Ernst Lindner, Frankfurt am Main, and Heinrich Ott, Eppstein (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Aug. 25, 1959, Ser. No. 835,831
Claims priority, application Germany Aug. 30, 1958
1 Claim. (Cl. 260—485)

The compound of the formula



3,045,044
CHLORO(2-CHLOROVINYL)ALKYLBORANES AND THEIR PREPARATION

Perry R. Kippur, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Jan. 28, 1959, Ser. No. 789,741
6 Claims. (Cl. 260—543)

1. Chloro(2-chlorovinyl) alkylboranes of the formula

$$(ClCH{=}CH)RBCl$$

wherein R is an alkyl group containing from 1 to 5 carbon atoms.

3,045,045
PREPARATION OF NAPHTHALENE CARBOXYLIC ACID ANHYDRIDES

John J. Melchiore, Wallingford, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Dec. 2, 1959, Ser. No. 856,676
9 Claims. (Cl. 260—546)

1. A one-step process for preparation of naphthalene carboxylic acid anhydrides which comprises: contacting an alkyl naphthalene wherein said alkyl group contains from 1 to 3 carbon atoms, dissolved in an anhydride of an alkanoic acid having from 2 to 4 carbon atoms, with oxygen in the presence of a heavy metal oxidation catalyst, thereby to convert the alkyl naphthalene to the corresponding naphthalene carboxylic acid anhydride.

3,045,046
PREPARATION OF SUBSTITUTED DITHIOBIURETS

Joseph Patrick Brown, Bryn Castell, Geufron, Llangollen, and Ernest Bryson McCall, Llangollen, Wales, assignors to Monsanto Chemicals Limited, London, England, a British company

No Drawing. Filed June 10, 1957, Ser. No. 664,464
3 Claims. (Cl. 260—552)

1. A method of preparing N,N,N'',N''-tetraalkyl N' aryl dithiobiuret which comprises mixing an aryl amine having the molecular structure:

$$R_n{-}R'{-}NH_2$$

wherein R is a radical selected from the group consisting of nitro, ethoxy, methoxy and chlorine; wherein *n* is an integer from zero to two, and wherein R' is an aromatic hydrocarbon radical; with approximately two molecular proportions of a dialkylthiocarbamyl chloride wherein the alkyl radical has up to two carbon atoms, said mixture being effected in the presence of a tertiary amine inert with respect to the mixed reagents but capable of forming salts with hydrogen chloride.

3,045,047
6-ACETYL-1,1,2,4,4,7-HEXAMETHYL-1,2,3,4, TETRAHYDRONAPHTHALENE

David Davidson, New York, N.Y., and Robert M. Lusskin, Haworth, N.J., assignors, by mesne assignments, to The Trubek Laboratories, Inc., East Rutherford, N.J., a corporation of Delaware

No Drawing. Filed Aug. 31, 1954, Ser. No. 453,428
1 Claim. (Cl. 260—592)

6-acetyl-1,1,2,4,4,7-hexamethyl - 1,2,3,4 - tetrahydronaphthalene.

3,045,048
PROCESS FOR THE PRODUCTION OF HYDROACETYL ACETONE

Daniel S. Maisel, Union, John F. Ryan, Westfield, and Joseph Hamilton Cox, Spotswood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 12, 1959, Ser. No. 833,325
4 Claims. (Cl. 260—594)

1. A process for the production of hydracetyl acetone as a coproduct in a production of diacetone alcohol which comprises condensing acetone with itself and with acetaldehyde under substantially anhydrous conditions in a reaction zone at temperatures in the range of —20 to 50° C. and in the presence of a base selected from the group consisting of alkali metal hydroxides and barium hydroxide, the amount of acetaldehyde being 0.5–5 mol percent of the amount of acetone in the reaction mixture and the amount of the base being about .005 to 0.08 weight percent of the total reaction mixture, recovering acetone, hydracetyl acetone and diacetone alcohol from the condensation reaction mixture and recycling the acetone to the reaction zone.

3,045,049
HALOGEN CONTAINING ORGANIC DERIVATIVES OF DECABORANE

Sheldon L. Clark, Eggertsville, and Delmer A. Fidler, Niagara Falls, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Jan. 27, 1959, Ser. No. 789,443
12 Claims. (Cl. 260—606.5)

1. The compounds selected from the class consisting of $B_{10}H_{13}$—CHBr—$B_{10}H_{13}$, $B_{10}H_{13}$—CH_2CH_2X and $B_{10}H_{13}$—CH(R)—X wherein R is selected from the group consisting of hydrogen and methyl and X is selected from the group consisting of bromine and chlorine.

7. A method for the preparation of a compound selected from the class consisting of $B_{10}H_{13}$—CH_2CH_2X and $B_{10}H_{13}$—CH(R)—X which comprises reacting decaborane and a compound selected from the group consisting of ethylene dibromide, ethylene dichloride and a compound of the class $RCHX_2$ at a temperature within the range from about 50° C. to 200° C. while the reaction mixture contains a catalytic amount of a material selected from the group consisting of aluminum bromide, aluminum chloride, ferric bromide, and ferric chloride, providing that where an ethylene halide is employed, the catalyst is aluminum bromide or aluminum chloride, R being selected from the group consisting of hydrogen and methyl and X being selected from the group consisting of bromine and chlorine.

3,045,050
METHOD OF PRODUCING AROMATIC SULPHONES

Cornelis Johannes Schoot, Klaas Hinderikus Klaassens, and Johannes Jacobus Ponjee, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 30, 1958, Ser. No. 751,885
Claims priority, application Netherlands Aug. 14, 1957
10 Claims. (Cl. 260—607)

1. A method of producing aromatic sulfones of the formula RSO_2R wherein R is a member of the group consisting of benzene and naphthalene rings substituted only with from 1–3 radicals selected from the class consisting of alkyl of 1–18 carbon atoms, alkoxy of 1–5 carbon atoms, phenyl, benzyl and chlorine comprising the steps of heating, at a temperature between about 80° C. and 180° C. from 1 to 2 compounds corresponding to the formula RH together with a salt of sulfuric acid and a metal of groups IV, V, VI and VIII of the periodic table and manganese, at least one oxyphosphorus halide selected from the group consisting of the halides of ortho-, meta, and pyrophosphoric acids in the presence of a trace of water and separating out the resultant aromatic sulfone.

3,045,051
PRODUCTION OF DIALKYL SULFOXIDES

James G. Coma and Virgil G. Gerttula, Vancouver, Wash., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

No Drawing. Filed Dec. 21, 1959, Ser. No. 860,741
13 Claims. (Cl. 260—607)

1. In a process of producing a dialkyl sulfoxide from a corresponding sulfide by oxidation thereof in liquid phase which comprises reacting in a reaction zone a dialkyl sulfide with oxygen in the presence of a catalyst selected from the group consisting of nitrogen oxides and concentrated nitric acid and then withdrawing the resulting sulfoxide from the reaction zone, the improvement which comprises introducing at the initial point of said reaction zone a portion of the stoichiometric amount of oxygen necessary for conversion of the sulfide to the sulfoxide and introducing the remaining portion of the stoichiometric amount of oxygen into at least one other point of said reaction zone to effect a substantially complete conversion of the sulfide to the sulfoxide.

3,045,052
TRINITROMETHYL 2,4-DINITROPHENYL SULFIDE

Howard A. Hageman, Englewood, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 26, 1951, Ser. No. 233,681
1 Claim. (Cl. 260—609)

Trinitromethyl 2,4-dinitrophenyl sulfide.

3,045,053
PREPARATION OF MERCAPTANS AND SULFIDES

Fred A. Ford, Texas City, Tex., assignor, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Mar. 30, 1959, Ser. No. 802,649
15 Claims. (Cl. 260—609)

1. In a process for reacting an olefinically unsaturated compound with hydrogen sulfide, the improvement which comprises carrying out said reaction in the conjoint presence of an organic peroxide and at least one finely divided elemental metal in Group VIII of the Fourth Period of the Mendelyeev Period Table.

3,045,054
NICKEL OXIDE CATALYSTS AND THEIR USE IN POLYMERIZING OLEFINS

Vernon C. F. Holm, Grant C. Bailey, and Alfred Clark, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

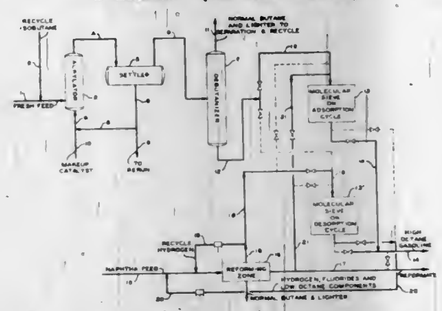
No Drawing. Original application Apr. 6, 1956, Ser. No. 576,516, now Patent No. 2,949,429, dated Aug. 16, 1960. Divided and this application Jan. 20, 1960, Ser. No. 3,492
11 Claims. (Cl. 260—683.15)

1. A process for polymerizing a normally gaseous olefin which comprises contacting such an olefin under polymerizing conditions with a supported nickel oxide catalyst, said catalyst having been made by contacting a porous particulate support with an aqueous solution of a nickel compound readily convertible to the oxide by heating in a non-reducing ambient so as to adsorb on said support between 0.1 and 10 weight percent of nickel in the form of said compound, maintaining said solution at a temperature in the range of 70° C. to the boiling point thereof during the contacting step, drying the resulting impregnated support, thereafter converting the adsorbed nickel compound to the oxide, and thereafter repeating, at least once, the contacting, drying and conversion steps, so as to form liquid polymer.

3,045,055
ALKYLATION-REFORMING WITH MUTUAL BENEFICIATION

Joe Van Pool and Paul D. Hann, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 1, 1960, Ser. No. 5,886
3 Claims. (Cl. 260—683.48)

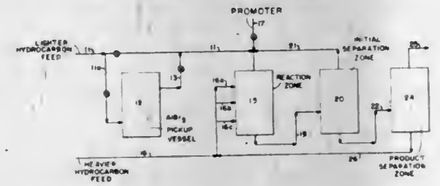


1. A method of preparing a hydrocarbon fuel which comprises alkylating in an alkylating zone an isoparaffin and an olefin in the presence of a hydrogen fluoride catalyst, obtaining an alkylation effluent comprising an alkylate product, organic fluorides and normal paraffin, subjecting said alkylate product to contact with a molecular sieve adapted to remove therefrom organic fluorides and normal paraffin, thus obtaining an improved alkylate product, reforming in a reforming zone a naphtha under conditions adapted to upgrade the same for use as a fuel, obtaining a reformed product which comprises upgraded naphtha and hydrogen, separating at least a portion of the upgraded naphtha as a product of the method, recovering a hydrogen stream, passing at least a portion of said hydrogen stream into desorptive contact with said sieve thus obtaining a stream of hydrogen containing normal paraffin and organic fluorides, and passing the last-obtained stream to the reforming zone.

3,045,056
SUPPORTED CATALYST PARAFFIN ALKYLATION PROCESS

Alan Schriesheim, Fords, and George R. Gilbert, Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 3, 1958, Ser. No. 771,319
6 Claims. (Cl. 260—683.53)



1. A liquid phase process for the preparation of high octane naphtha components consisting largely of branched chain paraffin hydrocarbons of 5 to 7 carbon atoms which comprises reacting a minor proportion of a straight chain paraffin hydrocarbon of from 6 to 18 carbon atoms with a major proportion of a lighter hydrocarbon selected from the group consisting of butanes and pentanes, at temperatures no higher than about 140° F., in a reaction zone in the presence of a catalyst comprising aluminum bromide and calcined bauxite, supplying to the reaction zone sufficient aluminum bromide to furnish at least 0.05 weight percent of aluminum bromide in solution in the reacting hydrocarbons over and above the quantity required to satisfy the total adsorption capacity of the calcined bauxite.

ELECTRICAL

3,045,057
THERMOELECTRIC MATERIAL

Albert J. Cornish, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 26, 1960, Ser. No. 11,330
3 Claims. (Cl. 136—5)

1. A thermoelectric device comprising at least one p-type thermoelectric element comprised of a composition having the formula $SnTe_{1-y}Se_y$ wherein y is greater than zero and less than 1.

3,045,058
SEPARATORS FOR ELECTRIC ACCUMULATORS, ESPECIALLY LEAD ACCUMULATORS, AND PROCESS OF MANUFACTURE THEREOF

Norbert Martinak, Carinthia, Austria, assignor to Akkumulatorenfabrik Dr. Leopold Jungfer, Carinthia, Austria

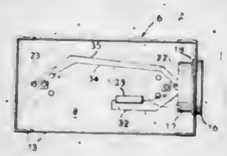
No Drawing. Filed Dec. 17, 1957, Ser. No. 703,295
Claims priority, application Austria Dec. 28, 1956
23 Claims. (Cl. 136—146)

1. A battery separator which comprises a self-supporting sheet formed of self-bonded particles having a diameter of less than about 0.02 inch of sintered low pressure polyethylene, said sheet being permeable to the passage of ions therethrough and having a low ohmic resistance.

3,045,059
BATTERY ADAPTER

Louis H. Roth, 114—67 223rd St., Cambria Heights, N.Y.

Filed Oct. 30, 1959, Ser. No. 849,925
2 Claims. (Cl. 136—173)

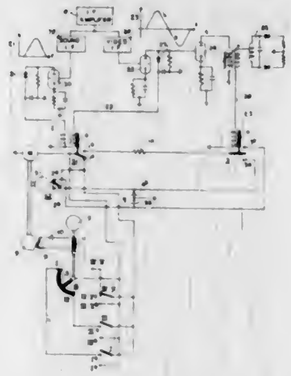


1. A unit of manufacture comprising a pair of separate batteries each having as an integral part thereof a female outlet socket having in triangular array a positive terminal hole, a negative terminal hole and a guide terminal hole; an open top container common to both batteries in which the batteries are slidably received and so disposed that the female outlet sockets thereof are in a predetermined spaced relation to each other; and a separable plug-in adapter comprising a housing, a pair of male plugs fixed to the underside of the housing, each plug having a positive prong, a negative prong, and a guide prong in triangular array corresponding to the array of the terminal holes of one of the female outlet sockets and slidably entered therein, a female output outlet fixed in a wall of the housing, and circuit wiring wholly confied within the housing connecting the positive and negative prongs of the plugs in series with the female output outlet to provide a voltage of a predetermined value available at the female output outlet, the latter being adapted for reception of a double pronged plug, wherein the position of the prongs of one male plug is in reverse relation to the position of the prongs of the other, and the arrangement of the batteries in the container is such that the female sockets of the batteries in the container have a terminal hole array relation corresponding to the array relation of the prongs of the respective male plugs, whereby the adapter is selectively pluggable in the batteries in a reverse direction.

3,045,060
SIGNAL-SEEKING TUNING DRIVE SYSTEM

Herbert Meyer, Worzeldorf, near Nurnberg, Germany, assignor to Nurnberger Schwachstrombauelemente Fabrik Gesellschaft mit beschränkter Haftung, Nurnberg, Germany

Filed Sept. 11, 1959, Ser. No. 839,349
9 Claims. (Cl. 178—5.8)

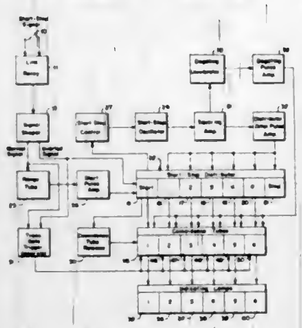


1. A signal-seeking automatic tuning drive system for use with receiving equipment having a continuous tuning element tunable, within a television band, to frequencies including a picture frequency and a sound frequency having a predetermined difference separation therebetween, said system comprising: a motor connected to drive said tuning element, said motor being reversible by reversal of source polarity; a source of power to energize said motor; switch means controlling the flow of power to said motor, said switch means in a first position connecting the power directly to the motor to search the band, and in a second position connecting the motor to a fine tuning terminal; search relay means connected to said switch means and to said receiving equipment and moving said switch means from the first to the second position when a signal of a channel within said band energizes the receiving equipment, said search relay means being connected to receive said signal and responsive thereto when the difference between the picture and sound frequencies thereof equals said predetermined difference separation; fine tuning relay means connected between the source of power and the fine tuning terminal and controlled by the strength of the signal energizing the receiving equipment to stop the motor when the strength of said signal is maximum, said fine tuning relay means comprising a polarized relay connected to said receiving equipment and sensitive to the direction of one of said frequencies from the optimum tuning strength, said polarized relay energizing the motor with the correct source polarity to obtain maximum tuning strength; limit-switch means connected between said source and said motor and having contacts by which the polarity of the power to the motor is reversed by throwing of the switch; and switch throwing means connected with the tuning element to throw the switch whenever the motor drives the tuning element to an extreme end of its range.

3,045,061
SIGNAL DISTORTION INDICATOR

Ransom D. Slayton, Glenview, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

Filed Dec. 23, 1958, Ser. No. 782,511
6 Claims. (Cl. 178—69)

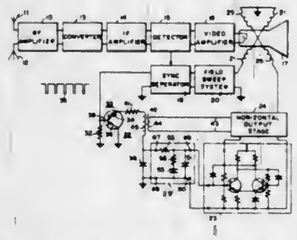


1. A distortion signal indicator which comprises a coincidence-sensing means associated with each element in the signal, means for conditioning each coincidence sensing means for operation at any time during an interval equal to that of a distortionless version of the signal element associated therewith, first pulse generating means responsive to the signal for providing a pulse at the time of each transition in the signal, second pulse generating means responsive to the signal for providing a pulse at the time for each transition of a distortionless version of the signal, means for applying the pulses from the two pulse generators to all coincidence-sensing means simultaneously, the pulse from the first generator operating the conditioned coincidence-sensing means upon the non-coincident occurrence of the pulses from the two generators and the pulse from the second generator preventing such operation of the conditioned coincidence-sensing means upon the coincident occurrence of the pulses from the two generators, and an indicating means connected to each coincidence-sensing means and energized by the operation thereof.

3,045,062
AUTOMATIC FREQUENCY CONTROL

Charles B. Heffron, Metuchen, N.J., and Olaf H. Fernald, Needham Heights, Mass., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 14, 1960, Ser. No. 35,918
7 Claims. (Cl. 178—69.5)

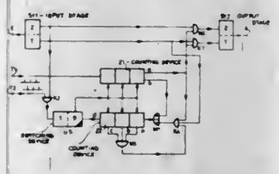


1. A system for synchronizing a periodic wave generator with a synchronizing pulse wave comprising a hyperconductive negative resistance semiconductor device having an emitter, a collector and a control electrode; means for applying said synchronizing pulse wave to said control electrode; pulse source means for providing, from the generator output, time spaced voltage pulses of predetermined magnitude, means for applying said voltage pulses to the collector of said semiconductor device with a polarity to induce current flow in the emitter-collector current path thereof during the portion of each of said voltage pulses which is time coincident with a synchronizing pulse; low pass filter means, having an output circuit connected to said periodic wave generator and having a pair of input terminals, for producing a unidirectional control current corresponding to the average direct current value of current pulses applied to said input terminals; means providing a direct current conductive series circuit including said input terminals and the emitter-collector current path of said transistor for applying current pulses from said collector to said filter means so that said filter means applies a control current to said generator which varies in accordance with the phase of the output of the generator relative to the phase of said synchronizing pulse wave and independently of synchronizing pulse amplitude variations.

3,045,063
TELEGRAPH SYSTEMS

Dieter von Sanden, Munich-Solln, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a German company

Filed May 31, 1960, Ser. No. 32,713
Claims priority, application Germany June 9, 1959
11 Claims. (Cl. 178—70)

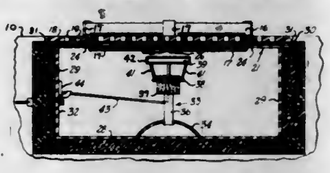


1. A telegraph pulse shaping circuit including means for receiving start-stop telegraph signals, means for scanning said received signals, bi-stable means controlled by said scanning means for transmitting correctly shaped pulses corresponding to said received signals, means for disabling said scanning means at the end of a predetermined number of pulse intervals after the receipt of a start pulse if the last pulse received before that time has stop polarity and for allowing said scanning means to operate for one further pulse interval if the last pulse received before said time has start polarity.

3,045,064
APPARATUS FOR TRANSMITTING SOUND FROM A BASEBALL FIELD

James S. Sellers, P.O. Box 502, Birmingham 3, Ala.; Margaret H. Sellers, administratrix of said James S. Sellers, deceased

Filed June 1, 1959, Ser. No. 817,326
1 Claim. (Cl. 179—1)



In combination, a base adapted to be positioned on a baseball playing field, a resilient support in contact with the underside of said base on which the base is resiliently supported, said resilient support being of a greater surface area than the surface area of the base and having perforations therethrough, a rigid support beneath the resilient support and having openings therein in communication with the perforations in said resilient support, said rigid support being of substantially the same surface
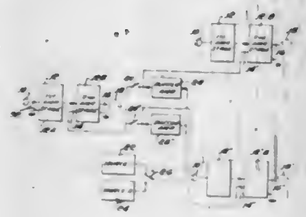
area as the surface area of said resilient support, straps on said base extending through openings in said resilient support and secured to said rigid support whereby the base, resilient support and rigid support are secured together, and means adjacent the underside of said rigid support to transmit sound passing through the perforations in said resilient support and openings in said rigid support.

3,045,065

INTERCOMMUNICATION SYSTEM

Robert G. Metzner, Hollywood, and Arthur J. Grolitzer, Los Angeles, Calif., assignors to Califone Corporation, Los Angeles, Calif., a corporation of California

Filed Oct. 23, 1959, Ser. No. 848,293
2 Claims. (Cl. 179—1)



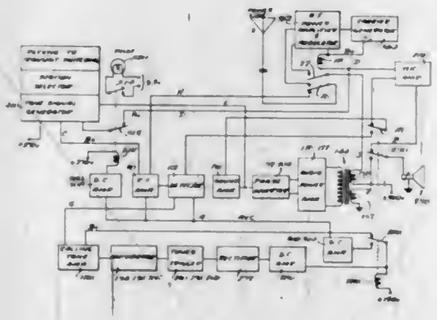
1. Intercommunication apparatus for supplying a lesson to a plurality of students from a single source and enabling each student to respond individually, and have the individual responses monitored, and to receive individual instruction from a teacher, comprising: a recorded lesson source; a teacher station and a plurality of student stations, each said station comprising a microphone, a reproducer, and a communication amplifier having an input terminal, an output terminal, and an input-output terminal, the microphone and reproducer being respectively connected to the input and output terminals, each output terminal being so connected as to receive signals applied at its respective inlet terminal and inlet-outlet terminal, whereby the reproducer is activated by signals derived from its respective microphone and from its respective input-output terminal, the input-output terminals all being so connected as to receive signals applied at their respective input terminal, whereby signals derived from each microphone are applied to the respective input-output terminal, a buffer amplifier included in each student station, each buffer amplifier having an input terminal and an output terminal, the output terminal of each buffer amplifier being connected to the input-output terminal of its respective communication amplifier, and the input terminal of all buffer amplifiers being connected to the lesson source to receive signals therefrom; a student-station selector switch for each student station located in proximity to the teacher station, each said switch having a first terminal and a second terminal, the first terminal of each switch being connected to the input-output terminal of the teacher station communication amplifier, and the second terminal of each said switch being connected to a respective student station input-output terminal, whereby with said switches open, the student is enabled to hear the lesson source through his reproducer and respond to it by speaking into his microphone, hearing his response in his activated earphones, and whereby closing one or more of said switches enables the teacher to speak into his microphone and have two-way communication with the respective students whose switches are closed, each buffer amplifier serving to prevent a signal from any student station from being applied to any other student station with the signal from the lesson source.

3,045,066

SELECTIVE CARRIER TYPE COMMUNICATION SYSTEM

Donald A. Beuscher, 1446 N. Clark St., Chicago 10, Ill.

Filed Mar. 14, 1957, Ser. No. 646,151
11 Claims. (Cl. 179—2.5)



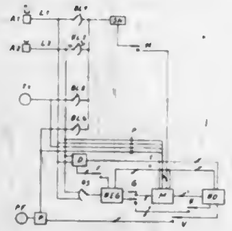
1. A communications unit having a common input-output circuit for sending and receiving operation, a receiving circuit adapted to receive and demodulate a carrier to separate an audio frequency signal therefrom, a sending circuit adapted to produce and modulate a carrier with an audio frequency signal, relay means for connecting either said sending circuit or said receiving circuit to said common circuit for sending or receivng operation respectively, said relay means normally connecting said receiving circuit to said common circuit so that said system stands by in receiving condition, a transducer system adapted for connection as a speaker or as a microphone, second relay means operative for connecting said transducer either to said receiving circuit as a speaker to receive and transduce an audio frequency signal or to said sending circuit as a microphone, said second relay normally connecting said transducer as a microphone, circuit means connected to said receiving circuit and responsive to a received audio frequency tone signal of predetermined frequency for operating said second relay to disconnect said transducer as a microphone and connect said transducer to the receiving circuit as a speaker, a carrier responsive holding circuit connected to said receiving circuit, said holding circuit having connections for holding said second relay in condition for connecting said transducer to said receiving circuit as a speaker for the duration of a received carrier after said second relay has been operated by said tone signal and to switch said transducer to microphone operation upon the termination of the carrier, transmitting control means for actuating said sending circuit to produce a carrier and for operating the first said relay to connect said sending circuit to said common input-output circuit to transmit the carrier, calling means adapted when actuated to produce any selected one of several fixed audio frequency tone signals connected to the sending circuit for modulating the carrier with the last said tone signal, operating means for said calling means and said transmitting control means to actuate said sending circuit and said calling means, timing means connected for automatically limiting the duration of operation of said calling means to a brief time span, and means responsive to actuation of said operating means for connecting said transducer system as a microphone to said sending circuit to modulate said carrier at the termination of operation of said calling means.

3,045,067

TELEPHONE SYSTEM WITH REGISTRATION FOR WAITING CALLS

Nils Emil Nilsson and Johan Carl Harold Björk, Stockholm, and Gustav Oscar Rodnert, Hagersten, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed May 5, 1958, Ser. No. 732,854
Claims priority, application Sweden May 9, 1957
5 Claims. (Cl. 179—5.5)



1. In a private automatic telephone exchange, in combination, subscriber's lines (L1, L2), selectors (BL1–BL4), registers (REG), a call identifier (D) and a marker (M) for setting up communications through said selectors under control of said registers and said identifier, means (G, RR8) connecting said registers one at a time to the marker, a first group of conductors (*u*) for connecting the registers and the marker to mark the called telephone number which is registered in the register connecter to the marker at a call, and a second group of conductors (*t*) for marking the number of the calling line which is identified at the call, a plurality of relay sets (RO) for registering waiting calls, each of said relay sets comprising a first registering device (K31–K40) arranged to be set by signals through said first group of conductors and a second registering device (K11–K20) arranged to be set by signals through said second group of conductors, said first and second registering device each including contacts (733, 753 and 714, 724), an idle one of said relay sets being selected by the marker in response to an introductory call initiated by calling a special directive number whereupon said registering devices are set through said groups of conductors to register the number of a called but not available subscriber's line and the number of the identified subscriber's line which has called said special directive number, a control device (RO7, RO8) included in each of said relay sets and actuated by said call identifier in response to signals through said second group of conductors (*t*) and said contacts (733, 753) of the first registering device (K31–K40) when a call is identified from the subscriber's line registered in the first registering device in the respective relay set, signalling means, each of said control devices closing an operating circuit (through conductors S3 and contacts 483 or 482) including means (RR10 or MR1) connecting the identified calling line to the signalling means (S*u*5 in FIG. 4 or the machine PF in FIG. 7), said signalling means indicating to the calling subscriber the registration made in the respective relay set.

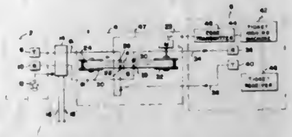
3,045,068

APPARATUS FOR THE RETENTION OF EVIDENCE OF TELEPHONE CONVERSATIONS

Richard I. N. Weingart, New York, N.Y. (% General Register Corporation, 43—01 22nd St., Long Island City, N.Y.)

Filed Mar. 25, 1957, Ser. No. 648,157
5 Claims. (Cl. 179—6)

4. Apparatus for the retention of evidence of a two-way telephone conversation comprising a pair of spaced zones interconnected by a two-way telephone communication system, said system including a transmitter and receiver in each zone for use by a person therein, and means for permanently recording simultaneously in individual channels moving in fixed relationship to each other signals transmitted in both directions by said communication system thereby to maintain the time sequence of the signals transmitted in the respective directions, said system including means for interrupting communication through said system in the event of failure of the last mentioned means to record said signals.

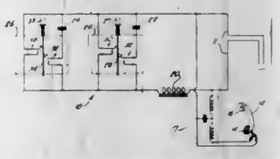


3,045,069

REMOTE CONTROL SYSTEM

Carl G. Sontheimer, South Norwalk, Conn., assignor to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York

Filed May 9, 1957, Ser. No. 658,078
4 Claims. (Cl. 179—6)



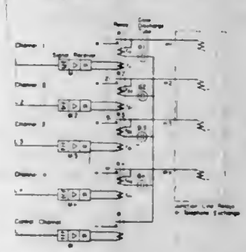
4. A remote control system suitable for operation over a single telephone line, said system including a two-conductor line having a direct voltage normally maintained thereon and suitable for the transmission of audio signals, a machine to be controlled and which is connected to the remote end of said line said machine having a control mechanism responsive to at least one discrete signal frequency sent over said line, and a signaling generator at the sending end of said line, said generator including an inductor and a capacitor resonant at said signal frequency, and energizing means to set said inductor and capacitor into oscillation using power derived solely from said line, said energizing means including a switch operated to first connect said inductor by itself across said line and then quickly to connect said inductor and capacitor in series across said line.

3,045,070

MULTIPLEX CARRIER FREQUENCY TRANSMISSION SYSTEM

Bengt Erik Lennart Källsson, Bandhagen, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

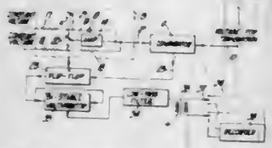
Filed Aug. 21, 1957, Ser. No. 679,441
Claims priority, application Sweden Aug. 23, 1956
3 Claims. (Cl. 179—15)



1. In a multiplex carrier frequency transmission system including a transmission part, a receiver part, a plurality

of channels arranged in sub-groups and main-groups, a pilot frequency being assigned to each of said main-groups and in which false intelligence signals may be transmitted to said receiver part of the system through said channels due to unintended temporary interruptions in the transmission part of a signal transmitting connection of the system, a control circuit provided for each main-group, each of said control circuits including a first relay means controlled by the pilot frequency assigned to the respective main-group, each of said channels in the sub-groups including a signal conductor and each of said first relay means being arranged and connected to maintain the potential of the respective signal conductor substantially constant when the respective pilot frequency is temporarily interrupted, second relay means for each channel, each of said second relay means having a main coil and an auxiliary coil, each main coil being connected to be energized during the transmission of intelligence signals, and said first relay means being arranged to connect auxiliary coils of said second relay means associated with operated channels in an energizing circuit in response to a temporary interruption of the pilot frequency in operated channels, said first relay means having a shorter reaction time than said second relay means at the beginning of an interruption and a delayed reaction time at the end of an interruption, whereby the state of the receiver is maintained unchanged during temporary interruptions.

3,045,071
ELECTRICAL TRANSMISSION AND STORAGE OF INFORMATION REPRESENTED BY DIRECT VOLTAGES
Robert Matthews and James Stewart Johnston, London, England, assignors to Decca Limited, a British company
Filed Nov. 12, 1957, Ser. No. 695,730
Claims priority, application Great Britain Nov. 13, 1956
14 Claims. (Cl. 179—15)



7. Apparatus for converting information represented by a direct voltage of varying magnitude into an alternating voltage having a frequency representative of the amplitude of the direct voltage comprising a linear saw-tooth generator arranged, on application of a control signal, to produce a saw-tooth signal the amplitude of which increases from a datum at a pre-determined rate, comparator means coupled to said saw-tooth generator to compare the voltage to be converted with the saw-tooth generator output voltage and to produce a control signal when the compared voltages are in a pre-determined relationship, means for applying said control signal to said saw-tooth generator to cut-off and re-start the saw-tooth generator when a control signal is produced, and means, including a low-pass filter, responsive to said control signal to produce a sinusoidal waveform of a frequency proportional to the repetition frequency of the sawtooth waveform.

3,045,072
RECORDING AND/OR REPRODUCING APPARATUS AND HEAD CARRIAGE THEREFOR
Dwight W. Brede, Mountain View, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Aug. 13, 1959, Ser. No. 833,464
6 Claims. (Cl. 179—100.2)

1. A head carriage comprising:
a base plate;
a pair of head carriage platse arranged in parallelism with and on either side of said base plate for conjoint reciprocal movement in a predetermined path lying in a plane parallel to the plane of said base plate, at least one of said carriage plates being adapted for mounting said head;
anti-friction bearing means mounted between said base plate and said carriage plates, said bearing means for at least one of said carriage plates being arranged to provide bearing action between said base plate and said one carriage plate at three triangularly spaced points lying in a plane parallel to the plane of said



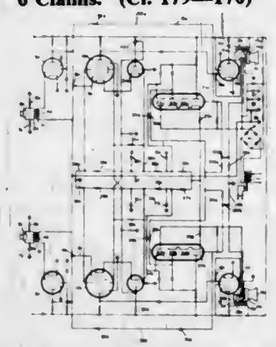
base palte, so as to maintain said plates in said parallelism throughout said reciprocal movement;
means coupling said carriage plates for said conjoint movement, said last-named means being arranged for clearing said base plate at all portions of said path of movement, and for urging said carriage plates toward one another and toward said base plate so as to maintain perpetual engagement between said plates and said bearing means; and
guide means mounted between said plates for guiding said carriage plates in said predetermined path.

3,045,073
BEHIND-EAR HEARING AID
Charles S. Vickerson, 26 O'Farrell St., San Francisco, Calif.
Filed May 11, 1960, Ser. No. 28,292
1 Claim. (Cl. 179—107)



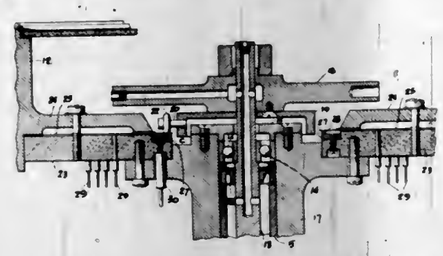
A self-contained hearing aid adapted to be supported by the ear of the user, said aid, when in use in a normal upright position comprising:
(*a*) an arcuate case fitting between the head of the wearer and the top and rear of the helix and fossa of the helix of the ear of the wearer and having a front portion extending only about as far forward as the forwardmost portion of the helix of the ear, said case having a bottom portion extending downwardly behind the helix and antihelix of the ear to a level not lower than the level of the tragus of the wearer;
(*b*) a plurality of compartments in the said case formed by a series of bulkheads therein;
(*c*) at least a single generally horizontal aperture at the front of said case immediately above the forwardmost portion of the helix to permit sound to pass into said case;
(*d*) a rigid hollow tube on the front of the said case. said tube passing downwardly in a generally vertical direction adjacent the forwardmost portion of the helix in the direction of the orifice of the external auditory meatus, said tube serving to carry sound toward the ear canal and to anchor said hearing aid in place;
(*e*) a microphone in the said case immediately behind the said horizontal opening in the front thereof;
(*f*) an amplifier in one of the said compartments formed within the said case;
(*g*) a volume control in another of the said compartments, said volume control having a control knob extending partially out of the said case for manual operation;
(*h*) a transducer in another of the said compartments rearwardly of the said first compartment, said transducer having a hollow sound conducting tube providing communication between the said transducer and the said rigid downwardly leading tube on the front of the said case whereby to convey sound from the said transducer to the said rigid downwardly leading tube, said hollow sound conducting tube from the said transducer passing immediately adjacent and beneath the said microphone;
(*i*) a hollow flexible tube extending from the said rigid downwardly leading tube in the front of the said case to about the level of the said tragus;
(*j*) an ear mold secured to the end of the said flexible tube adjacent the said tragus for insertion in the said orifice;
(*k*) and circuit connectors joining said microphone, amplifier, volume control and transducer.

3,045,074
AMPLIFIER FOR TRANSMISSION OF SPEECH IN TWO DIRECTIONS
Kurt Henry Mindermann, Stockholm, Sweden, assignor to Aktiebolaget Gylling & Co., Stockholm-Grondal, Sweden
Filed May 22, 1959, Ser. No. 815,003
Claims priority, application Sweden June 25, 1958
6 Claims. (Cl. 179—170)



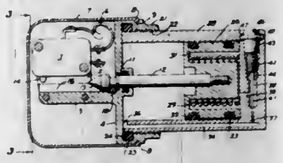
1. In an amplifier for transmission of speech in two directions, the combination comprising two identical amplifier channels, voice operated control means for keeping selectively one of said channels open and the other closed, said control means comprising one controlled amplifier stage in each channel, said controlled amplifier stage comprising a screen grid tube, a toggle circuit comprising two electronic valves each having an emitting electrode, a control electrode and an output electrode, means for connecting the output electrode of each electronic valve to the control electrode of the other, said means comprising a first resistance of high value, means for connecting the output electrode of each of said electronic valves to the screen grid of different ones of said screen grid tubes, means for generating control signal voltages in response to speech signal voltages derived from two differently located points of each channel, one of said points being located before and the other one after said controlled amplifier stage, and means for supplying said control signal voltages to the control electrodes of said electronic valves, each of said means comprising a second resistance of a considerably lower value than said first resistance.

3,045,075
HIGH SPEED COMMUTATOR SWITCH
William D. Van Dyke, Santa Monica, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed Mar. 20, 1959, Ser. No. 800,842
5 Claims. (Cl. 200—24)



2. A switch, comprising: a rotary driving shaft; rotor means revolved by said shaft; a circular dielectric pressural member carried by said rotor; a plurality of radially extending electrical contact members circularly disposed and circumferentially spaced apart in a plane adjacent the pressural member for successive displacement out of said plane by pressure of said pressural member against said radially extending contact members; a bus disposed coextensively adjacent the inner ends of said circumferentially spaced contact members for successive engagement thereby; said bus including a peripheral ridge confronting said contact members; said contact members each having a longitudinally extending ridge confronting the ridge of said bus whereby to enable the pressural action of said pressural member on said contact members to establish only tangential or substantially point-contact engagement between said contact members and said bus, thereby to minimize noise upon occurrence of said engagement and to obviate arcing upon cessation of said engagement; signal input means connected to each one of said plurality of contact members; and a signal lead out connected to said bus.

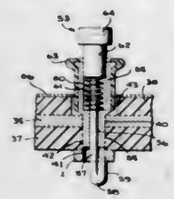
3,045,076
SWITCH ACTUATING DEVICE WITH PRE-ADJUSTED AIR RESISTANCE
John A. Gaylord, San Rafael, Calif., assignor to H. Koch & Sons, Corte Madera, Calif., a partnership
Filed Dec. 29, 1958, Ser. No. 783,382
7 Claims. (Cl. 200—34)



1. In a switch actuating mechanism, a cylinder, a piston working in said cylinder, a switch actuating finger extended from one side of said piston through an end of said cylinder, a spring between the other side of said piston and the other end of said cylinder normally to urge said piston in the direction toward which said finger extends, means outside said end of said cylinder adjacent said finger to hold a switch in operative relation in the path of movement of said finger, releasable means to lock said finger and said piston in cocked position with said spring under tension; a closed system of passages intercommunicating the end of said cylinder at said finger with the other end of the cylinder at said spring, a metering device, interconnected in said system of passages to predetermine the rate of flow in the system and

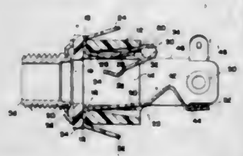
the resistance to the piston mvement when said locking means are released, and means accessible from the outside of said cylinder to adjust said metering device.

3,045,077
INSULATED SHORTING PLUG AND MATING ELECTRICAL SOCKETS
Sander L. Knanishu, 28 Andre Ave., Tappan, N.Y.
Filed Dec. 15, 1959, Ser. No. 859,784
7 Claims. (Cl. 200—46)



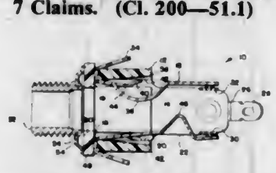
1. An improved electrical connecting system comprising a first contact element lying in a first plane, a second contact element arranged at an angle to and lying in a second plane spaced with respect to said first plane, insulating means located between said first and second contact elements, each of said contact elements and said insulating means being provided with at least one aligned hole extending therethrough at a location where said bars pass opposite to one another, a shorting plug for connecting said first contact element with said second contact element, said shorting plug comprising a cylindrical and electrically conductive sleeve adapted to fit into one of the holes of said first contact element and to extend at least partly into the corresponding aligned hole in said insulating means, said cylindrical sleeve having a central bore extending longitudinally therethrough, and electrically conductive rod slidably received in the central bore of said cylindrical sleeve, said rod having at its inner end an abutment projecting through the corresponding aligned hole in said contact elements and contacting said second contact element, said cylindrical sleeve having an outwardly extending insulating portion, the outer end of said slidable rod projecting outwardly beyond the insulated portion of said cylindrical sleeve and being provided with an insulated head portoin, said cylindrical sleeve forming a cavity around said slidable rod at a position inwardly of said insulated head and a spring action means surrounding said slidable rod and bearing against the inner portion of said cavity and against the inner end of said insulated head.

3,045,078
ELECTRICAL JACK
Nicholas Frantz, Skokie, and Stanley Gloviak, Westchester, Ill., assignors to Carter Parts Company, Skokie, Ill., a corporation of Illinois
Filed Oct. 2, 1958, Ser. No. 764,936
9 Claims. (Cl. 200—51.1)



1. A combination electrical jack and switch comprising an insulator having a central axial opening and an integral leg projecting from one end, the other end of said insulator having two spaced notches therein extending in a generally radial direction between the inner and outer surfaces of said insulator; a shunt terminal mounted on the free end of said leg and having a contact portion; a first spring contact element with an intermediate portion fitted into one of said notches, an outer end portion projecting from said insulator to form an electric terminal and an inner end portion extending in a generally axial direction toward said shunt terminal and having its free end normally engaging said contact portion, said inner end portion having near its free end a radially inwardly projecting segment adapted to be engaged by a plug inserted through said insulator and thereby to separate the inner end portion from said contact portion; a second spring contact element having an intermediate portion fitted into the other of said notches, an outer end portion projecting from said insulator to form an electric terminal and an inner end portion extending in a generally axial direction through the opening in the insulator and thereafter having a radially inwardly turned reverse bend with the free end being deflected radially outward to form inward thereof a segment adapted to be engaged by said plug, the segment on the second spring contact element being axially spaced from the segment on the first spring contact element; an apertured insulating element overlying said other end of the insulator with the aperture in registry with said opening; and a sleeve positioned on said insulating element in registry with said aperture and carrying a ground terminal clamp, the latter clamping said insulator and insulating element together.

3,045,079
ELECTRICAL JACK
Nicholas Frantz, Skokie, and Stanley Gloviak, Westchester, Ill., assignors to Carter Parts Company, Skokie, Ill., a corporation of Illinois
Filed Oct. 2, 1958, Ser. No. 764,937
7 Claims. (Cl. 200—51.1)

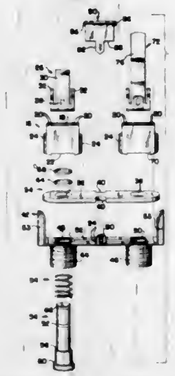


7. In an electrical jack, an insulator having a central axial opening and an extended portion at one end with a pair of laterally spaced contact portions mounted on said extended portion of said one end, a pair of spring contact elements overlying the other end of said insulator on opposite sides of said opening and in a common plane, said contact elements each having one of their respective ends projecting from said insulator to form terminals and the other of their respective ends extending through said opening into engagement respectively with said laterally spaced contact portions, an insulating element fitting against the overlying portions of said contact elements, and means clamping said insulating element against said insulator and contact elements to hold the latter in place.

3,045,080
TWIN ELECTRICAL DEVICES
Nicholas Frantz, Skokie, and Stanley Gloviak, Westchester, Ill., assignors to Carter Parts Company, Skokie, Ill., a corporation of Illinois
Filed Oct. 2, 1958, Ser. No. 764,935
1 Claim. (Cl. 200—51.02)

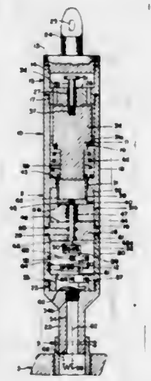
A twin electrical device, comprising an insulating element having a pair of spaced apertures, a pair of sleeves positioned on one side of said insulating element and a pair of hollow insulators with central openings positioned in side-by-side relation on the other side of said insulating element so that the openings in said sleeves and in said insulators are in registry with said apertures, each of said insulators having shoulder means on opposite sides thereof intermediate the ends of said insulators, a first

clamp member connected to said sleeves and overlying said one side of said insulating element and having tongues extending beyond said other side and clinched over the shoulder means on each of said insulators, said first clamp member having a pair of slots formed therein and positioned between said sleeves, a second substantially U-shaped clamp member positioned on the other side of said insulating member and having a base and legs, said base being positioned between said insulators in engage-



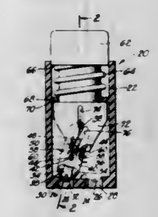
ment with said shoulder means on the insulators, said legs having tabs projecting from the ends thereof and extending through said pair of slots so as to clinch the insulating element and first clamp member together and so that said base in cooperation with said tongues holds said insulators in place, and a plurality of spring contact elements having portions thereof overlying the ends of said insulators adjacent said insulating element and being clamped therebetweeen and with the legs of the contact elements extending into said hollow insulators.

3,045,081
INITIATING DEVICE FOR OIL WELL TOOLS
Vaughan Dean Hanes, West Covina, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Apr. 21, 1959, Ser. No. 807,928
8 Claims. (Cl. 200—61.53)



1. A device for actuating a switch within a well comprising: a liquid-filled housing, means for displacing liquid in the housing, a resiliently biased means for containing liquid slidably disposed within said housing positioned adjacent to said liquid displacing means such that the liquid displacing means may displace liquid in the liquid containing means, a rod fixedly attached to said liquid containing means and extending externally through said liquid-filled housing, a switch means fixedly attached to said housing and in spaced relationship with said rod, and a means for operating said liquid displacing means whereby the liquid is displaced within the liquid containing means thereby tending to force the rod in contact with the said switch means.

3,045,082
PUSH BUTTON SWITCH
Howard F. Mason, Los Angeles, Calif., assignor to Mason Electric Corporation, Los Angeles, Calif., a corporation of California
Filed Dec. 14, 1959, Ser. No. 859,249
6 Claims. (Cl. 200—68)

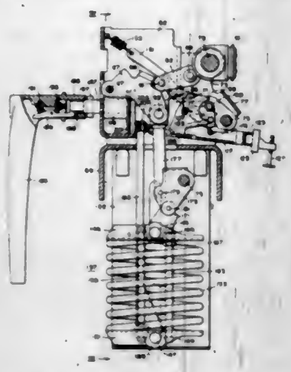


1. In a switch, the combination of: a structure providing a contact path having recesses spaced therealong and having thereon at least one stationary contact in which one of said recesses is formed; a contact carrier movable along a carrier path adjacent said contact path; a roller contact carried by said contact carrier and engaging and rollable along said contact path and receivable in each of said recesses; means biasing said roller contact into engagement with said contact path; pivotable means pivotable relative to said structure about a pivot axis spaced from said contact path for moving said contact carrier along said carrier path; means providing a resilient limited-lost-motion connection between said pivotable means and said contact carrier for resiliently displacing said contact carrier along said carrier path after a predetermined amount of pivotal movement of said pivotable means; reciprocable means reciprocable relative to said structure between two operating positions for pivoting said pivotable means about said pivot axis; and means on said reciprocable means and said pivotable means for releasably locking said reciprocable means in one of its operating positions.

3,045,083
SPRING CLOSING MECHANISM FOR CIRCUIT BREAKERS
Gayne D. Gamel, Murrysville, and Richard Hauser, Forest Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 25, 1959, Ser. No. 822,900
12 Claims. (Cl. 200—74)

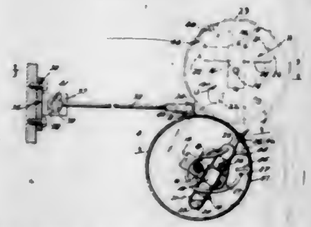
1. A circuit breaker having relatively stationary contact means and movable contact means cooperating with said relatively stationary contact means to open and close the circuit breaker, a closing spring, means for compressing

the closing spring, means for releasing the compressed closing spring to rapidly close the circuit breaker, and



means for slowly closing the circuit breaker contact means without utilizing the expanding force of the closing spring.

3,045,084
FLOAT SWITCH
Seymour Sperowitz, 1450 37th St. S., St. Petersburg, Fla.
Filed Sept. 22, 1959, Ser. No. 841,582
7 Claims. (Cl. 200—84)



1. A float switch comprising a hollow ball, a lug extending outwardly from said ball pivotally to mount the latter, a tubular switch element in said ball, means pivotally mounting said switch element on an axis extending parallel to the pivotal mount of said hollow ball, contact means at one end of said switch element, means movable along the length of the switch element to effect closure of said contact means when at the associated end of the switch, and abutment means in the ball to limit the pivotal movement of said switch element about its axis.

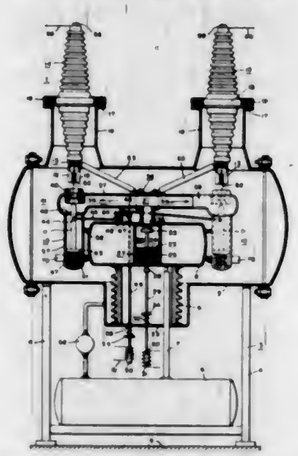
3,045,085
PROBE TYPE THERMOSTAT
Joseph Reingruber, Cairo, N.Y., assignor to American Thermostat Corporation, South Cairo, N.Y., a corporation of New York
Filed Aug. 28, 1958, Ser. No. 757,780
4 Claims. (Cl. 200—137)

1. A probe thermostat comprising, in combination: a hollow metallic tubular probe member closed at one end and exteriorly threaded at the other end, said probe member being open at said other end; a metallic frame member including an integrally formed interiorly threaded sleeve portion in which said other end of said probe member is threadedly engaged, said probe member being formed of material having a high thermal coefficient of expansion, said sleeve portion having external indentations formed therein which deform the threads of said probe member positively and permanently preventing relative rotational movement between said probe member and said sleeve portion, whereby said sleeve portion and said probe member are permanently locked together notwithstanding repeated changes in the temperature of said probe member relative to said sleeve portion; a rod member extending longitudinally of said probe member coaxially therewith, said rod member being formed of a material having a temperature coefficient of expansion which is materially lower than that of said probe member, one end portion of said rod member extending be-



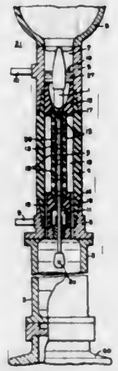
yond said open end of said probe member, and adjustable electric switch mechanism fixedly mounted on said frame member, said switch mechanism engaging said one end of said rod member for actuation by displacement thereof, said contact mechanism including means yieldingly pressing on said one end of said rod member for holding the other end of said rod member in engagement with the closed end of said probe member.

3,045,086
CIRCUIT INTERRUPTERS
Winthrop M. Leeds, Forest Hills, and Harry J. Lingal, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 10, 1959, Ser. No. 852,033
10 Claims. (Cl. 200—148)



1. A compressed-gas circuit interrupter including a grounded metallic exhaust tank filled with gas at a relatively low pressure, a pair of terminal bushings extending into said grounded metallic tank and carrying relatively stationary contacts at their interior ends, a conducting high-pressure storage tank disposed within said grounded exhaust tank, insulating means for supporting said conducting high-pressure storage tank in insulating relationship with respect to said grounded exhaust tank, a pair of arc-extinguishing units disposed adjacent the ends of the high-pressure storage tank and at least partially supported thereby, each arc-extinguishing unit having a movable contact cooperable with one of the aforesaid relatively stationary contacts to establish an arc, and blast-valve means associated with the high-pressure storage tank to release a blast of gas from the high-pressure storage tank and toward the drawn arcs to effect their extinction.

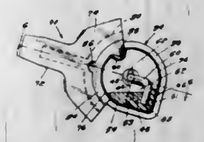
3,045,087
LIQUID-BREAK CIRCUIT INTERRUPTERS
Paul Duffing, Siemensstadt, Berlin, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed May 7, 1958, Ser. No. 733,512
Claims priority, application Germany May 10, 1957
12 Claims. (Cl. 200—150)



1. The method of extinguishing an alternating current arc in an insulating liquid-type circuit interrupter with a relatively low dissipation of arc energy comprising the steps of: drawing a relatively long arc substantially vertically in liquid in the absence of externally applied pressure within a substantially vertically disposed elongated closely confining apertured tubularly-shaped insulating guide member having a plurality of apertures disposed axially along its length, providing an upper exhaust vent for the generated gas adjacent the point of initial establishment of the arc, maintaining said arc against lateral movement by the confining effect of said apertured closely confining tubularly-shaped insulating guide member, restricting substantial lateral movement of the insulating liquid at a plurality of points along the axial length of the arc column through said apertures during the peak of the alternating current wave by an enclosed tubularly-shaped outer insulating elastic arcing chamber containing only insulating liquid, and providing an inward radial flow of liquid during decreasing instantaneous values of arcing current from said elastic arcing chamber at spaced points axially along the arc stream.

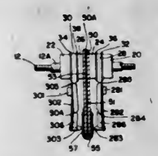
3,045,088
MERCURY SWITCH
Charles A. Ellis, Marion, Mass., assignor to Glass-Tite Industries, Inc., Providence, R.I., a corporation of Rhode Island
Filed Sept. 21, 1959, Ser. No. 841,381
4 Claims. (Cl. 200—152)

1. In an electric switch, a liquid contact circuit controller rotatably mounted within a body, said circuit controller comprising a hermetically sealed capsule of conductive material, a well formed of non-conductive material located within said capsule, a first body of mercury located within the conductive capsule outside of but adjacent said well, a second body of mercury within said well, an electrode extending through said capsule from the exterior thereof into contact with the interior bottom of said well and said second body of mercury, said electrode being electrically insulated from said capsule as it passes therethrough and engaging said well so as to hold the latter firmly in place within said capsule, and a pair of spaced contact members, one of said contact members making engagement with the outer surface of said capsule and the other of said members making engagement with



the outer end of said electrode, whereby when said controller is rotated to a first position, said first and second bodies of mercury are caused to merge with each other to complete a circuit from said one contact, through the electrode, through the merged bodies of mercury, and then through the capsule to said other contact, whereas when said controller is rotated to a second position, the said bodies of mercury are separated from each other to interrupt the circuit.

3,045,089
ELECTRICALLY ACTUATED CONTACTING DEVICE
John L. Russell, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a corporation of Connecticut
Original application Nov. 22, 1957, Ser. No. 698,208, now Patent No. 2,960,585, dated Nov. 15, 1960. Divided and this application July 7, 1960, Ser. No. 41,354
2 Claims. (Cl. 200—166)

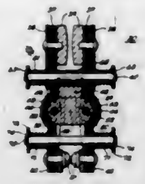


1. An adjustable contact assembly, comprising a substantially rigid elongated one-piece, unitary support member having a free end, means rigidly anchoring the opposite end portion of said support member, said support member having a pair of transverse grooves formed therein spaced from each other and said free end, each of said grooves forming a narrow sharply defined transversely extending area of reduced thickness, the one of said grooves remote from said free end of said support member being positioned in close substantially contiguous relation with the anchored portion of said support member, an elongated resilient member connected adjacent to one end thereof to said support member intermediate said grooves, the other end portion of said resilient member being free and juxtaposed to said free end of said support member and having a contact surface projecting beyond said support member.

3,045,090
TAP CHANGER MOVABLE CONTACT
Gordon A. Wilson, Jr., Washington, and Joseph W. Yatchum, Canonsburg, Pa., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed May 8, 1959, Ser. No. 811,829
10 Claims. (Cl. 200—166)

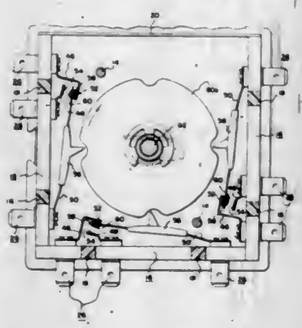
3. A tap changer contact adapted to sequentially engage a plurality of coplanar stationary contacts arranged in a

circle and to electrically connect said stationary contacts to a collector ring concentric with said circle and radially inward from said stationary contacts, said tap changer contact including at least one elongated flexible member of high electrical conductivity, a support member disposed adjacent said flexible member intermediate the ends thereof and carrying said flexible member and adapted to be moved in an arcuate path concentric with said circle, an arcing contact button secured to the radially outward end of said flexible member and a contact button secured to



the radially inward end of said flexible member, a plate abutting against one end of said flexible member on the side thereof opposite said arcing contact button, means for hingedly mounting said plate on said support member for movement transverse to the plane of said stationary contacts, first means engaging said plate for resiliently urging said arcing contact button into high pressure engagement with said stationary contacts, and second means for resiliently urging said contact button into high pressure engagement with said collector ring.

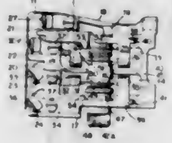
3,045,091
TIMER AND TERMINAL BLOCK ASSEMBLY
Donald W. Laviana, Pittsford, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 15, 1959, Ser. No. 786,986
2 Claims. (Cl. 200—168)



1. A timer assembly including, a plurality of rectangular terminal block assemblies, at least two of which are located in planes normal to each other, front and back plates, each of said terminal block assemblies having a plurality of tongues mechanically interlocked with said front and back plates, and means interconnecting the front and back plates so as to retain the terminal blocks in assembled relation therebetween.

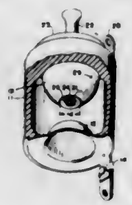
3,045,092
ELECTRIC SWITCH
Oswald M. Bundy, Cleveland, Ohio, assignor to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 31, 1959, Ser. No. 803,244
5 Claims. (Cl. 200—168)

1. In an electric switch having an insulation housing, side walls and a mid-wall formed on said housing defining a first and second recess therein open towards one side of said housing; a groove in said housing extending through the bottom side wall, the mid-wall, the first and second recesses, and into the top side wall; an externally operated contact carrier disposed in and slidably guided by said groove, a first and second bridging contact spacedly mounted along the length of said contact carrier to be disposed in said first and second recess respectively; a first pair of grooves formed in said housing connecting the first recess with the front exterior of said housing, a conducting strap disposed in each of the first pair of grooves and each having a stationary contact at its inner end positioned in the first recess at either side of said contact carrier to cooperate with the first bridging contact while its



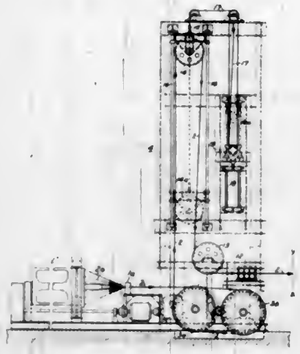
outer terminal end extends external of said housing; one of said conducting straps in one of said first pair of grooves traverses over said contact carrier and then into the first recess; a second pair of grooves formed in said housing connecting the second recess with the front exterior of said housing, a conducting strap disposed in each of the second pair of grooves and each having a stationary contact at its inner end positioned in the second recess at either side of said contact carrier to cooperate with the second bridging contact while its outer terminal end extends external of said housing; one of said conducting straps in one of said second pair of grooves traverses over said contact carrier and then into the second recess; whereby said contact carrier is held in its groove by the two conducting straps traversing over it.

3,045,093
METHOD FOR CONSTRUCTING ARC DISCHARGE DEVICES
John M. Morgan, Scranton, and Joseph B. Kubeck, Taylor, Pa., assignors to General Electric Company, a corporation of New York
Filed Jan. 24, 1961, Ser. No. 84,660
7 Claims. (Cl. 219—9.5)



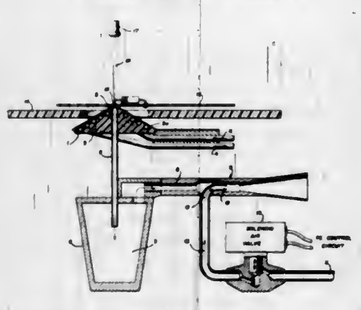
1. The method of constructing a spark gap tube having a given number of metallic and ceramic parts forming a plurality of joints to be brazed comprising the steps of: assembling a plurality, but less then all, of said given number of parts to form at least one of said joints; placing said given number of parts in an induction heating oven and forming a vacuum in said oven; brazing said one joint with a first brazing metal having a given melting point; assembling the remainder of said given number of parts upon the previously brazed parts to form at least a second joint spaced from said first joint by a distance of approximately an inch or less; and brazing said second joint with a second brazing metal having a lower melting point than that of said first brazing metal.

3,045,094
HEAT TREATMENT OF CONTINUOUS STRAND
Lewis G. Coscia, Lochearn, and Howard Russell Grander, Jr., Hillendale, Md., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Jan. 30, 1959, Ser. No. 790,283
9 Claims. (Cl. 219—10.41)



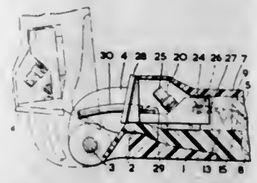
4. In a method for treating long lengths of strand material in which said material is passed through a treating means and the material is intermittently stopped and started, the improvement which comprises shutting off said treating means when the speed of the material falls below a certain rate during deceleration, thereafter retracting through the treating means untreated material which has passed beyond the treating means during deceleration together with previously treated material, thereafter restarting the treatment means when the speed of the material reaches a predetermined rate and repassing through the treatment means the material previously retracted therethrough.

3,045,095
PRINTED WIRING BOARD REPAIR APPARATUS
Ralph E. Usher, Ilion, John J. Conway, Clinton, and Francis E. Goodness, Utica, N.Y., assignors to General Electric Company, a corporation of New York
Filed May 18, 1960, Ser. No. 29,978
3 Claims. (Cl. 219—10.79)



1. Apparatus for de-soldering a soldered terminal mounted on a terminal board comprising, an oscillator for generating radio frequency energy, a conical heating coil connected to said oscillator for focusing said energy into an area the size of the soldered terminal at the apex of said coil, a tube formed of an insulating material positioned concentrically with said conical heating coil and having one end terminating at the apex thereof, said coil and said tube being embedded in a cast insulating material to position and secure the same in fixed relationship with respect to each other, and means connected to said tube for establishing a vacuum therein for removing melted solder through said tube.

3,045,096
TOILET PAN SEAT UNITS
Cyril Reginald Clayton, White Oak, Branksome Road, St. Leonards-on-Sea, England
Filed Jan. 4, 1960, Ser. No. 349
Claims priority, application Great Britain Jan. 5, 1959
2 Claims. (Cl. 219—19)



1. A toilet-pan seat unit incorporating a seat and a seat-warming raisable rigid seat cover hingedly carried by a mounting associated with said seat, an electric heating element incorporated with said seat cover, said heating element being embedded in a hard-setting mouldable substance, an electrical connector detachably fitting into said seat cover, said connector establishing electrical connection to said heating element, and a mercury switch incorporated with said electrical connector, said switch being arranged to switch on said heating element by lowering said seat cover.

3,045,097
ELECTRIC HEATER
William W. Sellers, Rosemont, Pa.
(% The Sellers Co., 815 Loraine Ave., Ardmore, Pa.)
Filed June 1, 1959, Ser. No. 817,297
14 Claims. (Cl. 219—19)

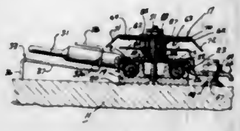


10. In an electric heater, the combination comprising a core assembly including at elast one elongated flexible flat strap member, an assembly of insulator disc members having said strap member projected freely therethrough and thereby secured against turning about the axis of said strap member, and means for securing said disc members in axially substantially spaced relation to one another and against shifting axially upon said strap member, and a heater element assembly including at least one flexible elongated heater element projected freely through corresponding marginal areas of certain of said disc members, said heater element thereby being disposed substantially parallel to said elongated member, and elongated flexible connecting members respectively connected to the ends of said heater element and extending in longitudinal continuation thereof, each of said connecting members being projected freely through corresponding marginal areas of others of said disc members and extending beyond an end one of said disc members for connection to a source of electric power and being fixed against shifting movement axially of said heater.

3,045,098
ELECTRIC HEATER
William H. Norton, Mundelein, Ill., assignor to Thermel Incorporated, Franklin Park, Ill., a corporation of Delaware
Filed Nov. 19, 1959, Ser. No. 854,084
13 Claims. (Cl. 219—19)

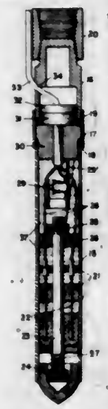
1. A heater for conditioning metal plates for welding comprising a heater shoe formed of a heat conducting material and having a bottom heating surface, an elec-

trical heating element attached to said shoe and in heat transfer relation therewith, an electrical connector positioned at one side of said shoe extending angularly away from the plane of the bottom of the shoe and connected to said heating element, a connector support member having a first angular portion beneath the connector and



having a leg extending downwardly to substantially the plane of the bottom of the shoe for supporting the connector against forces directed toward the shoe, and a plurality of spaced reflector plates above said shoe with air gaps between the shoe and plates and between each of the plates.

3,045,099
OIL WELL HEATER
Virgil R. Bowman, 7970 Chastine, Reseda, Calif., and Ray J. Keefe, 1317½ 3rd St., Santa Monica, Calif.
Filed Sept. 26, 1960, Ser. No. 58,253
3 Claims. (Cl. 219—33)



1. An oil well heater comprising, in combination: upper and lower pipe sections; a sleeve keyed to one end of one of said sections and threaded to the adjacent end of the other of said sections for enabling separation of said sections; means in said lower section defining a sealed chamber; electrical heating means in said chamber; oil in said sealed chamber to distribute heat generated by said heating means uniformly to the surfaces of said lower section; electrical conductors for energizing said heating means passing from said heating means to terminate at the upper end of said lower section in a plug; and cable means adapted for connection at one end to a source of electrical energy and having its other end passing through a lateral slot opening in said upper section to terminate in a mating plug whereby said plug and mating plug may be readily connected and said sleeve then threaded to secure said sections in axial alignment.

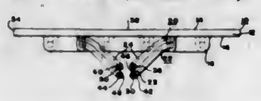
3,045,100
ULTRA-LONG INFRA-RED HEAT RAY EMITTER
Clarence A. Mills, Cincinnati, Ohio, assignor to Reflectotherm, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed June 6, 1958, Ser. No. 740,374
1 Claim. (Cl. 219—34)

An infrared ray heater having a metal housing having a backwall and an open front, a thin metal plate having a carbon black coating on one side thereof, means mounting the metal plate in the open front of the housing in spaced relation to the back wall and with the carbon black coated surface exposed, a plurality of electrical resistance heating elements disposed in spaced relation to each other on the uncoated side of the plate, said heating elements arranged to heat the plate to a temperature of from 200° to 500° F. whereby the carbon black coating emits infrared radiation in the wave length range of 100 to 400 microns, a wiring system for the heating elements, a thermostat arranged in the wiring system and responsive to the temperature of the metal plate for controlling the



heating elements, a cellophane filter panel opaque to infrared rays having a wavelength below 100 microns but transparent to infrared rays above 100 microns in wavelength mounted forwardly of and in spaced relation to the exposed carbon black coated surface of the plate so as to intercept and filter infrared rays emitted therefrom, apertures in the housing in communication with the space between the plate and the panel for permitting the ventilating flow of cooling air between the plate and the panel and an insulating partition in the housing disposed between the backwall of the housing and the heating elements mounted on the uncoated side of the metal plate.

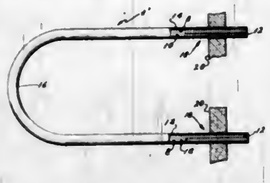
3,045,101
ELECTRIC PLATE HEATER
Robert D. Bremer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 17, 1959, Ser. No. 840,716
4 Claims. (Cl. 219—37)



4. A solid plate heater comprising, a cast plate member having a top and bottom surface, said bottom surface having a depending integral cast protuberance thereon, a first tubular heating element cast integrally with said protuberance and having terminal end portions extending outwardly from said protuberance, and a second tubular heating element cast integrally with said protuberance in vertically stacked relationship with said first heating element and having terminal end portions extending outwardly from said protuberance.

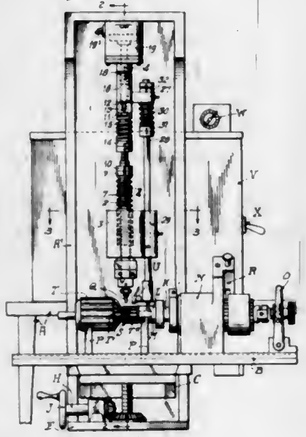
3,045,102
COLD TERMINAL RESISTANCE WIRE
Peter J. Fessenden, Springfield, Mass., assignor to Springfield Wire & Tinsel Company, Springfield, Mass., a corporation of Massachusetts
Filed Jan. 11, 1960, Ser. No. 1,621
6 Claims. (Cl. 219—46)

1. Electrical resistance heating cable for providing heat within a chamber from a source of electricity outside said chamber, said cable comprising a continuous flexible core of electrical insulating material, a resistance wire wound helically around said core and coterminous therewith, at least two lengths of electrical conductive material disposed longitudinally along said cable and electrically interconnecting the turns of said resistance wire at the terminal end portions thereof, said lengths of conductive material being of sufficient extent to provide unheated



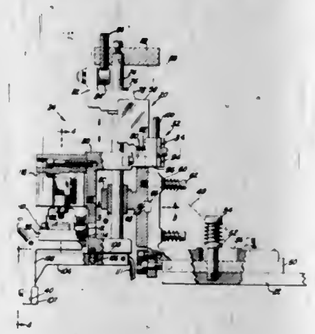
terminal sections for said cable to extend from within to without said chamber and a continuous covering of electrical insulation disposed around said cable throughout its length, including said terminal sections.

3,045,103
COMMUTATOR FUSING MACHINE
Samuel Warner, 1439 Highland Ave., Hillside, N.J.
Filed Oct. 10, 1960, Ser. No. 61,542
4 Claims. (Cl. 219—78)



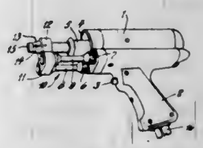
1. In a fusing or welding apparatus, the combination with a frame, a fusing electrode and a grounding electrode, and a work support, of means mounting said electrodes on said frame and for actuating them toward and from work in said work support, said means comprising an electrode supporting rod having means for mounting the fusing electrode thereon, a support bearing mounting said rod on said frame for reciprocation toward and from work in said work support, a motor mounted on said frame and having a reciprocable driving element in alignment with said rod, means providing for movement of said grounding electrode by said driving element into contact with the work upon movement of said driving element in one direction, a connection between said driving element and said rod providing for movement of said rod by and with said element in one direction to press said electrode into contact with the work and for maintaining yielding pressure of the electrode on the work upon further movement of said driving element in said direction, means for positively limiting movement of said driving element in said direction, and spring means for actuating said rod and fusing electrode in the opposite direction away from the work, said connection including at least one part movable with said driving element and slidable axially relatively to said rod, and a compression spring interposed between said part and said rod, and said means for positively limiting movement of said driving element including a stop rod connected to said part and having means to abuttingly engage a portion of said frame.

3,045,104
WELDING APPARATUS
Alton L. Crosby, Austin, and Paul J. Lecker, St. Marys, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,828
8 Claims. (Cl. 219—86)



1. In a welding apparatus the combination comprising support; a shaft mounted in said support for reciprocating movement along the longitudinal axis of said shaft and for rotation about said axis; a welder frame secured to one end of said shaft for movement therewith; a stop affixed to the other end of said shaft; a roller mounted on said support for cooperation with said stop to limit axial movement of said shaft; means for reciprocating said shaft; a key secured to said frame; a key lock mounted on said support operable to restrict the movement of said key; a first welding electrode fixedly mounted on said frame; a pivot arm mounted on said frame and movable with respect to said first electrode; a second welding electrode mounted on said pivot arm; first means mounted on said frame for causing said electrodes to approach each other and for applying welding pressure thereto; second means mounted on said frame for overcoming said first means and separating said electrodes; means for operating said second means and said key lock; and means for controlling the sequence in which said key lock and said second means operate whereby said key is released before said electrodes are closed together.

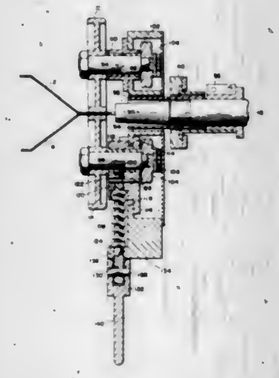
3,045,105
STUD GUN ADAPTER
Reginald C. Atwood, Pond Road, South Berwick, Maine
Filed July 14, 1961, Ser. No. 124,235
13 Claims. (Cl. 219—98)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An attachment for a stud welded gun of the type having a handle with an activating trigger, an actuating rod carried by and extending from said handle, and a detachable frame having a pair of legs detachably received in chucks in the handle and extending from the handle along the actuating rod, to enable one to weld studs to an object

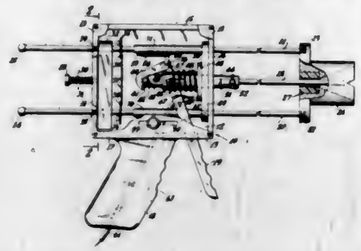
in places where access for the welding operation with the usual welding gun is difficult or impossible, which comprises a substitute frame having legs at one end formed to be received in and detachably held by said handle chucks, the other end of said frame having an angle end extending at approximately a right angle to its said legs at said one end, a foot secured to said angle end of said substitute frame and having a passage from face to face thereof in a direction crosswise of said substitute frame legs, a ferrule grip secured in said passage at the end furthest from said substitute frame legs and projecting therefrom in the direction in which said angle end extends from said substitute frame legs, a bell crank lever pivoted, at the junction between its arms, to said substitute frame near said foot, an actuating rod extension attachable to the free end of the actuating rod of said handle and pivoted at its free end to the arm of said bell crank lever which extends along the angle end of said substitute frame, a chuck holder secured to the free end of the other arm of said bell crank lever and depending toward said foot in a position approximately centrally of said passage in said foot, a flexible conductor attached to said extension and to said chuck holder, and a stud holder coupled to said chuck holder, extending into said ferrule for detachably holding a stud to be welded with its free end extending through and guided by a ferrule in said ferrule holder.

3,045,106
MOBILE WELDING APPARATUS AND METHOD
Louie W. Ballard, Santa Monica, and Martin E. O'Dor, Downey, Calif., assignors to North American Aviation, Inc.
Filed Dec. 19, 1960, Ser. No. 76,869
11 Claims. (Cl. 219—125)



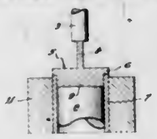
1. A mobile device for welding progressively and automatically along a distal edge of flange-like structure, including in combination; welding means for applying heat to said edge for welding the material therein, frame means for supporting said welding means in operative relationship with said edge, wheel mounting means for rotatably mounting a plurality of wheels on said frame, a plurality of wheels rotatably mounted by said wheel mounting means on said frame means so that compressive force is applied on either side of said flange-like structure, said wheels supporting said mobile device entirely on said flange-like structure, drive means connected to at least one of said wheels to rotate the same and thereby cause movement of said mobile device along said edge, and guide means for guiding said mobile device along a path of travel corresponding to the shape of said edge during movement of said device therealong.

3,045,107
ELECTRIC ARC WELDING APPARATUS
Edward T. Espenlaub, 186 Watervliet Ave., and Charles H. Menges, 12 Van Rensselaer Road, both of West Albany, N.Y.
Filed June 27, 1960, Ser. No. 38,888
8 Claims. (Cl. 219—127)



1. An apparatus for spot welding comprising a housing, a handle for an operator attached to said housing, slidable holding means for securing an electrode and for withdrawing and extending said electrode relative to said housing, means including a trigger for extending said slidable holding means a predetermined distance upon squeezing said trigger and including means for effecting the rapid withdrawal of said slidable holding means when said trigger is fully squeezed a predetermined amount, and support rod means extending from said housing parallel with said electrode a distance greater than said electrode extends when in its withdrawn position.

3,045,108
FUEL CONTAINER CLOSURE
Cecil C. Stone, Downers Grove, and Robert A. Noland, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 24, 1961, Ser. No. 84,740
4 Claims. (Cl. 219—137)



1. A method for closing an end of a tube by welding, comprising placing the tube in a fixed vertical position, inserting in the upper end of the tube a tightly fitting end cap of the same outer diameter as the tube and having a narrow central projection extending upwardly of and away from the tube, the length of the projection being no greater than the diameter of the tube, applying through the tube, end cap and projection a direct electrical current of sufficient magnitude and duration to strike an arc vaporizing a portion of the projection and melt the balance thereof and a part of the end cap and the end of the tube, and simultaneously externally chilling a portion of the tube directly adjacent but slightly spaced from the end of the tube to enable the end cap to be welded to the end of the tube in substantially the shape of a hemisphere of the same diameter as the tube, while preventing the tube from becoming misshapen from welding heat.

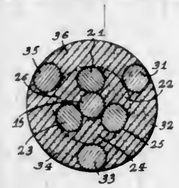
3,045,109
WELDING ELECTRODE HOLDER
James E. Heggy, P.O. Box 65, Divernon, Ill.
Filed Sept. 22, 1960, Ser. No. 57,761
7 Claims. (Cl. 219—143)

1. An electrode holder comprising in combination a bar, a fixed jaw secured at one end to said bar and at an obtuse angle thereto, said bar having an elongated guide slot formed therein adjacent said fixed jaw, a movable jaw member facing said fixed jaw, means extending through said guide slot and into engagement with said movable jaw member for holding said movable jaw member on said bar and limiting its movement away from said fixed jaw, a lug mounted on said bar, said lug having an opening extending therethrough, a rod extending through said opening and connected to said movable jaw member,



a coil spring mounted on said rod and bearing against said lug and said movable jaw member to bias said movable jaw member against said fixed jaw, a shaft rotatably mounted on said bar, an operating lever secured at one end to said shaft and an arm secured to the opposite end of said shaft, a member on the end of said rod having a surface in the path of said arm whereby when said operating lever is moved in one direction said arm pushes against said surface to move said movable jaw member away from said fixed jaw.

3,045,110
MULTI-FLUX CONTINUOUS ELECTRODE
Frederick Schneider, Beaconsfield, Quebec, and Lucien Girouard, Montreal, Quebec, Canada, assignors to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude, Paris, France
Filed May 2, 1960, Ser. No. 26,047
Claims priority, application France May 4, 1959
9 Claims. (Cl. 219—146)



1. A continuous flexible arc welding electrode, comprising, a first winding of a plurality of wires wound helically with a substantially constant spacing, a second winding of a plurality of wires wound helically with a substantially constant spacing around said first winding in the opposite direction, all said wires being of mild steel and of a diameter within from about .035 to about .078 inch, a first coating of welding flux of a first kind in the interstices of said first winding, and a second coating of welding flux of a second kind in the interstices of said second winding, a portion of at least the outer edges of the wires of said second winding being bare for electrical contact, said first coating being of a volatile-type flux giving off gases on decomposition in the arc, and said second coating being of a mineral-type flux.

3,045,111
BALL-POINT PEN-LIGHT
Sidney J. Hoenig, 9389 Dorrington Place, Pacoima, Calif.
Filed Mar. 13, 1958, Ser. No. 721,213
5 Claims. (Cl. 240—6.46)

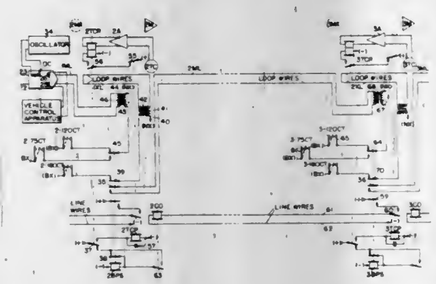
1. A combination flashlight and ball-point pen comprising a barrel having a pen and ink cartridge, an electric lamp and a dry cell battery positioned in tandem therein, said cartridge having a ball-point terminating one end thereof, the lower portion of the barrel having light transmitting properties and an end opening in which said ball-point is retractably mounted, a first compression spring

acting between a lower portion of said barrel and said cartridge to urge the latter into a normal ball-point retracted position, a second compression spring acting between said electric lamp and dry cell battery to maintain a normally open circuit, said first and second springs



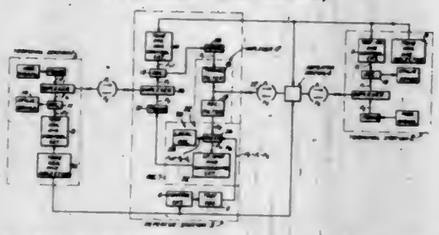
maintaining said cartridge and electric lamp in engagement in said tandem relation for axial movement in unison within said barrel, and means within an upper portion of said barrel for moving said battery, electric lamp and cartridge downwardly toward said open end to eject said ball-point to a writing position and to close said circuit.

3,045,112
VEHICLE CONTROL SYSTEM
William D. Hailes, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed June 15, 1959, Ser. No. 820,386
14 Claims. (Cl. 246—63)



1. A vehicle control system for governing the passage of a vehicle along a right of way without track circuits divided into successive blocks comprising, tuned coils at the ends of the blocks, loop circuit means for the several blocks extending along the right of way substantially throughout the entire length of the associated blocks for transmitting selected codes to vehicles within the associated blocks, circuit means responsive to the passage of a vehicle past one of said tuned coils for energizing said loop circuit means for the block in advance of the vehicle with a character of energization selected in accordance with traffic conditions in advance of the vehicle, and vehicle carried means distinctively responsible to the character of energization of the loops as the vehicle progresses for registering the condition of occupancy of the right of way in advance of the vehicle.

3,045,113
FAULT LOCATION SYSTEM
Robert C. Ferrar, Glen Ridge, and Ross B. Hoffman, Highlands, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 16, 1959, Ser. No. 3,703
20 Claims. (Cl. 325—2)



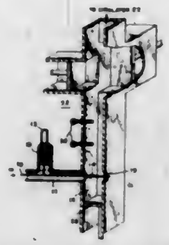
1. A fault locating system for communication systems comprising a receiver for receiving a signal having a given carrier frequency from a distant transmitter, said receiver including a means to convert the signal having said given carrier frequency to a signal having a predetermined frequency to provide an output signal from said receiver when said receiver is operating and a source of signals having a given frequency coupled to said converting means in the absence of said output signal to simulate at the output of said converting means a signal having said predetermined frequency to determine the operating condition of said receiver.

3,045,114
DIVERSITY COMBINING SYSTEM
Barry M. Mindes, New York, N.Y., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Jan. 27, 1959, Ser. No. 789,287
8 Claims. (Cl. 325—433)

1. A diversity signal combiner comprising a first source of diversity signals including a carrier having a first frequency modulated by intelligence, a second source of diversity signals including a carrier having a second frequency spaced from said first frequency modulated by said intelligence, common means coupled to the output of said first and second sources to amplify said first and second diversity signals, and means coupled to the output of said common means to linearly add signals of said first and second sources.

3,045,115
SUPERREGENERATIVE REACTANCE AMPLIFIER
Bernard B. Bossard, Livington, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed June 2, 1960, Ser. No. 35,861
9 Claims. (Cl. 325—429)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A parametric amplifier comprising an input tank circuit, a pump frequency generator, an idler tank circuit and a non-linear element; a source of input signals connected to said input circuit, said idler tank circuit coupled to said input tank circuit, and said pump frequency generator coupled to said input tank and idler tank circuit; said



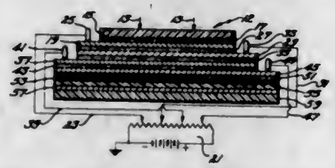
non-linear element coupled to said idler tank, a condenser connected in series with said non-linear element, said condenser causing said parametric amplifier to function in a manner similar to a superregenerative amplifier.

3,045,116
DETECTION AND LOCATION OF PIPELINE LEAKS
Preston L. Gant, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,317
4 Claims. (Cl. 250—43.5)



3. A method for detecting and locating leaks in a gas-carrying pipeline which comprises introducing into said pipeline a liquid containing small amounts of radioactive material and forming therein a radioactive liquid slug in contact with the entire inner circumference of the pipeline, moving the radioactive slug through said pipeline by means of gas flowing under pressure in the line, causing portions of the radioactive liquid slug to leak into the ground adjacent the pipeline by passage through leak holes in the pipeline and thereby forming zones of radioactivity exterior of the pipeline and adjacent the leaks therein, introducing and passing by means of gas flowing under pressure within the pipeline a radioactivity detection and recording means along the same path traveled by the radioactive liquid slug, and detecting and recording in a manner relatable to distance along the pipeline radioactivity exterior of the pipeline caused by the leaked radioactive liquid slug.

3,045,117
IMAGE INTENSIFYING PHOTOSENSITIVE FILM
John William Beatty, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the United States Air Force
Filed Nov. 20, 1957, Ser. No. 697,755
1 Claim. (Cl. 250—49.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



An apparatus for photographically recording the image of a dimly illuminated distant object radiating light energy to be photographically reproduced, said apparatus

comprising an enclosure having a slit for receiving said light energy, an intensifier moveable to pass beneath said slit to receive and amplify said light energy, said intensifier including a plurality of laminae, at least one of said laminae operating to convert light energy to electrical energy, another of said laminae being electrically conductive, a series of roller contacts on said enclosure and connected to said electrically conductive laminae and a source of positive potential to accelerate the flow of electrons through said electrically conductive laminae, and another of said laminae operating to reconvert the electrical energy in the form of accelerated electrons back to light energy, magnetic means surrounding said slit for producing a magnetic field having lines of force extending in the direction normal to the plane of said intensifier, and film means in contact with the side of said intensifier opposite said slit and moveable with said intensifier for recording said light energy amplified by said intensifier.

3,045,118
PANORAMIC X-RAY MACHINES
Henry Hollman, Sea Cliff, and Louis Weisglass, New York, N.Y., assignors to X-Ray Mfg. Corporation of America, New Hyde Park, N.Y., a corporation of New York
Filed July 29, 1959, Ser. No. 830,329
7 Claims. (Cl. 250—61.5)

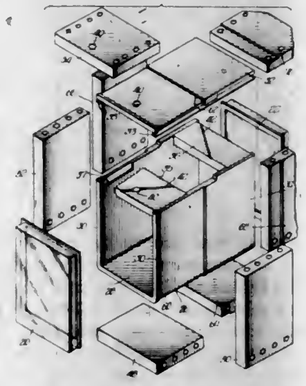


1. In an X-ray apparatus including a film holder and an X-ray source arranged in a line of sight for simultaneous rotation about a patient to radiograph a denture of the patient in said line of sight, in combination: a drive means for said film holder and X-ray source, a base, a platform laterally movable on said base and adapted to support said patient in a stationary position during the radiographing of said denture, means supporting said drive means for arcuate movement of the film holder and X-ray source with respect to the patient supported on said platform, a motor operatively connected to said platform for moving the same, switch means in circuit with said motor, whereby the motor is actuated when the switch means is closed at a predetermined point in the rotation of said film holder and X-ray source to move the platform laterally a predetermined distance to relocate the patient so that his spinal column is out of the line of sight between the film holder and X-ray source for completion of the radiographing of said denture, a disk driven by said motor through a gear train, and a bar connected at one end eccentrically to said disk and at the other end to said platform, whereby said platform is moved laterally during rotation of said motor, said disk having a cam face disposed to close said switch means at said predetermined point in the rotation of the film holder and X-ray source.

3,045,119
RADIOACTIVE TRACER
Roy E. D. Haney, Westfield, and John V. Clarke, Jr., Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Jan. 16, 1956, Ser. No. 559,106
1 Claim. (Cl. 250—106)

In a process wherein a liquid hydrocarbon is converted and the process is monitored by dissolving a radio-tracer in said liquid hydrocarbon, the improvement wherein said radio-tracer is bis-cyclopentadienyl iron-59.

3,045,120
RADIATION SHIELDING WINDOW
Carl H. Ohrn, Glen Ellyn, Ill., assignor to Research Equipment Company, Wheaton, Ill., a corporation of Illinois
Filed July 25, 1958, Ser. No. 750,911
8 Claims. (Cl. 250—108)



1. A radiation shielding window comprising two spaced sheets of glass adapted to be substantially parallel with the walls in which the window is mounted, a copper liner having two side sections and a bottom section arranged in a U-shaped configuration, said copper liner conforming to at least part of the periphery of said spaced sheets and in sealing engagement therewith so as to form an enclosure, and a copper plate supported by said side sections of said U-shaped copper liner forming the top of said enclosure, said enclosure being at least partially filled with a radiation absorbing media.

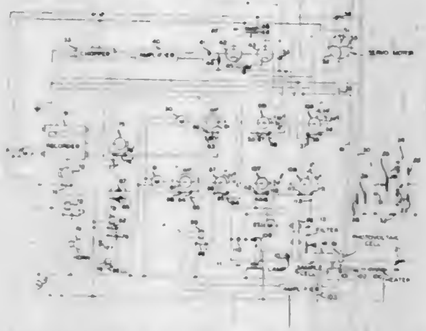
3,045,121
X-RAY PROTECTIVE SHIELDS
Charles W. Leguillon, 211 Overwood Road, Akron, Ohio
Filed Apr. 7, 1959, Ser. No. 804,839
7 Claims. (Cl. 250—108)



6. In an X-ray shield, an X-ray barrier comprising a relatively thick plastic sheet having uniformly dispersed therethrough finely divided metallic lead particles, each of the finely divided metallic lead particles being coated with a protective waxy film to exclude air from the surfaces of the metallic lead particles to prevent oxidation of the

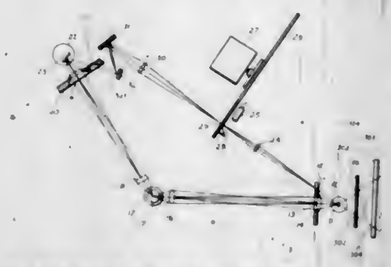
metallic lead, whereby the uniform dispersion in the plastic sheet of the protectively coated finely divided metallic lead particles provides a highly effective shielding against the penetration of X-rays through the barrier.

3,045,122
PROCESS MONITORING ANALYZER
Robert G. Bearden, Idaho Falls, Idaho, Robert B. Kimball, Canoga Park, Calif., and Harry Schneider and Leander G. Schwieger, Idaho Falls, Idaho, assignors to Phillips Petroleum Company, a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,903
8 Claims. (Cl. 250—218)



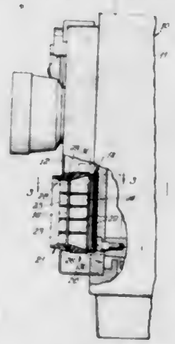
1. Analysis apparatus comprising a radiation detector to establish a signal representative of radiation impinging thereon, a cell adapted to hold a sample to be analyzed, means to direct a beam of radiation through said cell to impinge on said detector, signal storage means, signal indicating means, first filter means to absorb radiation of wavelengths characteristic of radiation absorbed by the sample to be analyzed, second filter means to transmit an amount of radiation substantially equal to the amount of radiation transmitted by said first filter means but at wavelengths not absorbed by the sample to be analyzed, means to position said second filter means in said beam and to transmit the signal from said detector to said storage means when said second filter means is in said beam, and means to position said first filter means in said beam and to combine signals from said detector and said storage means and transmit the combined signal to said indicating means when said first filter means is in said beam.

3,045,123
CALIBRATING SYSTEM FOR PARTICLE SENSING MACHINE
Joseph C. Frommer, 1525 Teakwood Ave., Cincinnati 24, Ohio
Filed Oct. 14, 1960, Ser. No. 62,605
17 Claims. (Cl. 250—218)



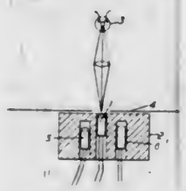
1. A device for keeping constant the sensitivity of a particle sensing device which senses particles by their influence on the transfer of signalling energy toward a transducing system which comprises means for transmitting a calibrating signal to the transducing system, automatic gain control means connected to said transducing system, a capacitor connected to an input of the automatic gain control means, and monitoring means admitting signals from the transducing system to said capacitor during the time of the calibrating signal and intercepting such signals at other times, the automatic gain control means being constructed and arranged to adjust the sensitivity of the particle sensing device as a function of the voltage on said capacitor.

3,045,124
LIGHT RESPONSIVE MEANS
Harry de L. McKinlay, Jr., Glenview, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 21, 1958, Ser. No. 716,695
3 Claims. (Cl. 250—226)



1. In a camera including variable exposure control means, galvanometer means for controlling the variable exposure control means, and photocell means sensitive to substantially the entire daylight spectrum for regulating the galvanometer means, the improvement for regulating the photocell means to adapt the photocell means automatically to both outdoor film having a first predetermined film speed and indoor film having a second predetermined film speed higher than said first predetermined film speed and comprising a filter adapted to transmit to the photocell means all portions of the visible spectrum below about five-hundred-sixty milli-microns so that the lower portions of daylight spectrum are absorbed and substantially all portions of tungsten spectrum are transmitted to the photocell means.

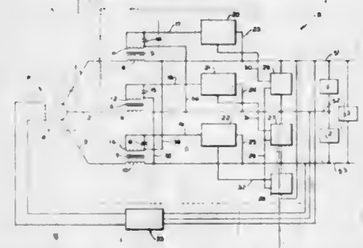
3,045,125
APPARATUS FOR READING DATA FROM A STORAGE MEDIUM
Frederick Percival Mason, Croydon, England, assignor to Creed & Company Limited, Croydon, England, a British company
Filed Aug. 11, 1960, Ser. No. 49,051
Claims priority, application Great Britain Sept. 1, 1959
10 Claims. (Cl. 250—238)



1. Apparatus for reading data from a storage medium comprising a light source, a photosensitive device for generating electric current signals in response to light received from said source by way of said storage medium,

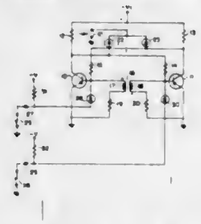
signal responsive means electrically connected to said photosensitive device for receiving outputs from said photosensitive device in accordance with said electric current signals generated thereby, and temperature sensitive means thermally coupled by a metallic block of high thermal conductivity to said photosensitive device and electrically connected to said signal responsive means in such a manner that the effect of variations in the temperature of said photosensitive means on the said outputs therefrom to said signal responsive means is compensated for, said temperature sensitive means and said photosensitive means being located within said block in close physical contact therewith.

3,045,126
PHASE-BALANCING CONTROL SYSTEMS FOR THREE-PHASE GENERATORS
Julius S. Morgan, Highland, Ill., and Robert H. Lee, Appleton, Wis., assignors to Basler Electric Company, Highland, Ill., a corporation of Illinois
Filed Dec. 4, 1961, Ser. No. 156,863
15 Claims. (Cl. 307—19)



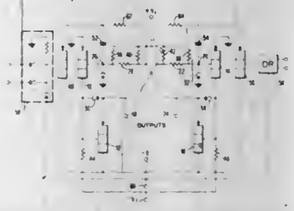
8. A control system for a polyphase generator having a field coil and a plurality of output lines; said control system comprising a transformer in each phase, the primary thereof being in series with the output line of such phase, each of said transformers also including secondary means across which is connected a capacitor, said secondary means also being connected with the generator through a controllable impedance, control means in each phase responsive to changes in voltage within such phase, and voltage regulator means applied simultaneously to all output lines for sensing the average of the voltages of all of the several phases and imposing a corrective voltage upon the field coil for maintaining constant the average voltage across all phases, said control means being adapted for introducing corrective voltages of proper magnitude and phase angle into each output line to compensate for phase and voltage deviations in the separate phases due to unbalanced loads.

3,045,127
ELECTRICAL COUNTER CIRCUITRY
William M. Carey, Jr., South Lincoln, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 28, 1958, Ser. No. 724,541
9 Claims. (Cl. 307—88.5)



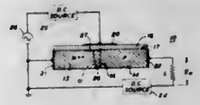
1. A binary counter circuit comprising a pair of transistor circuits, each having an input and an output circuit, a pair of coupling circuits, one coupling circuit connecting the output of one of said transistor circuits to the input of the other of said transistor circuits, the other coupling circuit connecting the output of the other of said transistor circuits to the input of said one transistor circuit, a single transformer means coupled between the inputs of said transistor circuits, said transformer means comprising a pair of windings each of which is directly coupled to one each of the inputs of said pair of transistor circuits, and a single trigger input circuit connected to said pair of coupling circuits to switch the conducting state between said pair of transistor circuits each time an input trigger signal is applied.

3,045,128
BISTABLE MULTIVIBRATOR
John W. Skerritt, Kingston, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 1, 1958, Ser. No. 745,886
7 Claims. (Cl. 307—88.5)



1. In a bistable multivibrator having two cross-coupled circuits, each circuit having an input and an output and including a high speed switching transistor and a coupling element adapted to apply drive-on and drive-off signals to said transistor, one of said transistors being in conducting state and the other transistor being in non-conducting state except during transitions, an input control circuit associated with each cross-coupled circuit comprising an impedance transforming device arranged to present a high input impedance and a low output impedance, and adapted to apply a drive-on signal to said coupling element in response to an input signal, means responsive to an output of said multivibrator adapted selectively to inhibit application of said drive-on signals to said transistors, and means to apply a multivibrator complementing signal to both input control circuits simultaneously, said inhibiting means being operative to prevent said complementing signal from causing the application of a drive-on signal to the transistor that is in conducting state.

3,045,129
SEMICONDUCTOR TUNNEL DEVICE
Martin M. Atalla, Mountainside, Ian M. Ross, Summit, and Friedolf M. Smits, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 8, 1960, Ser. No. 74,662
6 Claims. (Cl. 307—88.5)



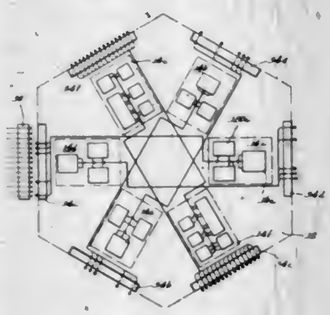
1. In combination, a semiconductor wafer including first and second regions of opposite conductivity type defining a PN junction extending inwardly from a major surface of said wafer, in the absence of applied electric fields said first region being degenerate and said second region being nondegenerate, a dielectric film overlying said major surface, an electrode overlying said dielectric

film, a separate low resistance connection to each of said two regions, an output circuit including a voltage source connected between said electrode and one of said low resistance connections for inducing in a surface portion of the wafer underlying said electrode charge carriers for forming thereof a degenerate region of conductivity type opposite that of said first region for forming a PN junction which exhibits quantum-mechanical tunneling, and an output circuit including a voltage source and a load connected between said two connections.

3,045,130
HEAVY DUTY ELECTRICAL SWITCHING MEANS

Nelson P. Bashor and Werner Raap, Rockford, Ill., assignors to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois

Filed Feb. 18, 1959, Ser. No. 794,191
5 Claims. (Cl. 307—115)



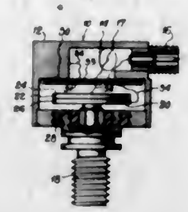
1. Apparatus for making electrical connections at a multiple-operation machining station comprising: a stationary contact assembly connected to a source of power; a plurality of rotatable contact assemblies individually alignable with respect to said stationary contact assembly, each of said rotatable assemblies being electrically connected to and arcuately spaced apart from a correspondingly movable, electric machine; a retractable contact bridge adapted to provide selected electric contact between said stationary assembly and said rotatable assembly aligned therewith; bridge operate means for urging said bridge into and out of contact with said stationary assembly and said rotatable assembly aligned therewith; first sensor means responsive to the alignment of said stationary assembly and said rotatable assemblies; second sensor means responsive to the condition of electrical contact between said stationary assembly and said rotatable assemblies; and power applying means disposed between said stationary assembly and said source of power for selectively applying power to said stationary assembly in accordance with signals received from said first and said second sensor means.

3,045,131
ACCELEROMETER

Anthony W. Orlacchio, Fords, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey

Filed Nov. 16, 1959, Ser. No. 853,145
5 Claims. (Cl. 310—8.4)

1. An accelerometer comprising a housing, a first electrical connector and a second electrical connector affixed to said housing and each comprising an outer conductive shell and an inner contact insulated from the associated shell, a mass-loaded piezoelectric ceramic transducer mounted within said housing, said transducer having a pair of electrodes affixed thereto, a capacitor mounted within said housing, the shells of said electrical connectors being electrically grounded to said housing, one electrode of said transducer being electrically connected to one side of said capacitor and to an ungrounded contact of said second electrical connector, the other electrode of

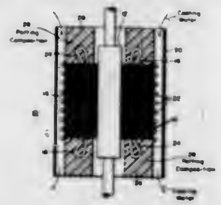


said transducer being electrically connected to an ungrounded contact of said first electrical connector, the other side of said capacitor being electrically connected to said housing.

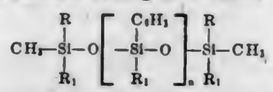
3,045,132
THERMALLY CONDUCTIVE POTTING COMPOSITIONS

Frederick A. Yeoman, Murrysville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 31, 1958, Ser. No. 752,217
3 Claims. (Cl. 310—43)



1. In an electrical machine including a rotor, a stator comprising a plurality of coils having end turns which tend to develop heat when the machine is operated, and a coil-enclosing metallic jacket adapted for the passage therethrough of a coolant, the improvement which comprises embedding at least said coil end turns, within said metallic jacket, in solid insulation comprising a heat-hardened resinous composition adapted to conduct therethrough heat developed by said coil end turns, during operation of said machine, to said metallic jacket, said resinous composition being an admixture comprising (A) from 20% to 40% by weight of a mixture comprised of (*a*) from 40% to 15% by weight, based on the weight of the resin, of a siloxane having the formula

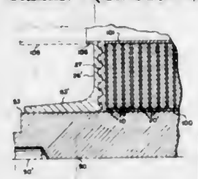


wherein R represents a monovalent organic radical selected from the group consisting of alkyl radicals having not more than 4 carbon atoms and phenyl, tolyl, and xylyl radicals, R_1 represents a monovalent organic radical selected from the group consisting of methyl and vinyl groups, and *n* is at least two and has an average value of from 2 to 10, there being at least 2 methyl groups per molecule, said siloxane having a viscosity not exceeding 1 poise at 25° C, and (*b*) from 60% to 85% by weight, based on the weight of resin, of a hydrocarbon substituted siloxane having a viscosity of substantially more than 1 poise and having about two hydrocarbon groups per silicon atom attached to silicon by C to Si bonds, the said (*b*) siloxane having at least one ethylenic group per molecule attached directly to silicon by a C to Si bond, said ethylenic group being selected from the group consisting of vinyl, allyl, and methallyl radicals and at least 50% of the radicals directly attached to silicon, other than oxygen and residual hydroxyl groups directly attached to silicon, consisting of at least one radical selected from the group consisting of methyl and phenyl radicals, and (B) from 80% to 60% by weight of alumina having an average particle size in the range of from 3 to 85 microns, said admixture of organo polysiloxanes (*a*) and (*b*) and said alumina (B) having been polymerized by heating the same in the presence of from 0.5% to 2.5% by weight, based on the weight of the resinous composition, of dicumyl peroxide.

3,045,133
LAMINATED MAGNETIC APPARATUS AND METHOD FOR MAKING SAME

Leonard E. Aske, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Aug. 22, 1958, Ser. No. 756,725
13 Claims. (Cl. 310—43)

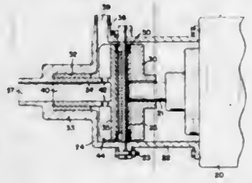


1. A laminated magnetic core comprising a plurality of magnetic laminations each having a plurality of winding openings, said laminations being arranged in a stack with said winding openings being in substantial alignment; and means bonding said laminations together into a unitary structure including a relatively thin coating of thermoresponsive insulating material between said laminations and lining substantially all of said winding openings of said stack of laminations, said thermoresponsive material being characterized by having the property of cohesion, said thin coating of said thermoresponsive insulating material in said winding openings serving as a winding opening insulation so as to eliminate the need in combination with winding means of a separate winding opening insulation means, and said thin coating of thermoresponsive material between said laminations being integrally connected to said thin coating of thermoresponsive material lining said winding openings.

3,045,134
MAGNETIC COUPLING

Harry W. Mould, Jr., Kenmore, N.Y., assignor to Hobam, Inc., Buffalo, N.Y., a corporation of New York

Filed Dec. 18, 1958, Ser. No. 781,361
7 Claims. (Cl. 310—106)

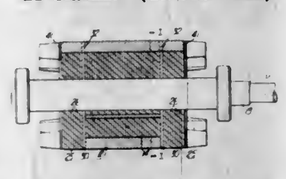


1. A magnetic coupling comprising a first member having a plurality of permanent, horseshoe-shaped magnets mounted thereon in angularly spaced relation about a common axis, a second member comprising a ring of paramagnetic material having a plurality of teeth integral therewith and arranged in angularly spaced relation about a common axis and constituting a pole piece, and a carrier for said pole piece of non-magnetic material of relatively high electrical conductivity in which said ring and its teeth are embedded to the full depth of its teeth, said carrier covering the whole of said ring except for the tops of the teeth of said ring, one of said members, at least, being rotatable, and said members being adapted to be mounted with the poles of said magnets projecting toward said teeth and in operative relation therewith.

3,045,135
SYNCHRONOUS INDUCTION MOTOR

Vernon B. Honsinger, Cincinnati, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Dec. 31, 1959, Ser. No. 863,199
11 Claims. (Cl. 310—212)

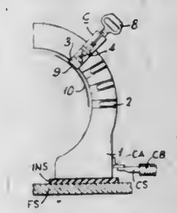


1. A rotor for a synchronous induction motor comprising: a magnetic core having a plurality of circumferentially spaced salient poles separated by axially extending grooves, a set of magnetic material at either end of said core and axially spaced therefrom, said sets of magnetic material having arcuately spaced winding slots next to the periphery, nonmagnetic material interpositioned between said core and said sets to magnetically isolate said core from said sets, said nonmagnetic material having winding slots connecting the slots in said sets with the grooves in said core, said slots and grooves being filled with a nonmagnetic electrically conducting material and interconnected with each other at the outward ends of said sets to form a rotor having a squirrel cage winding.

3,045,136
ELECTRICAL BRUSH GEAR

Edward Whiteley Consterdine, Radcliffe, England, assignor to Electrical Industries (Manchester) Limited, a British company

Filed Oct. 27, 1958, Ser. No. 769,738
Claims priority, application Great Britain Nov. 8, 1957
11 Claims. (Cl. 310—238)



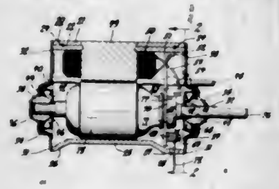
1. An electric brush gear comprising a support, a plurality of brush carriers made of electrically conducting material mounted on said support, a plurality of brush holders mounted on each of said carriers, a brush on each holder disposed for engagement with a rotating cylindrical contact surface, each said carrier having a brush holder mount projecting from one side of the carrier in a direction parallel to the axis of said contact surface and having means for holding at least two brushes in a row which is parallel to said axis, cooperating means on each brush holder and mount for adjusting each said brush holder in a direction radially with respect to said contact surface to vary the engagement of the brush thereon with respect to said contact surface, means on each brush holder for retracting the brush on the holder away from the contact surface and for holding it when retracted, locking means provided between each carrier and said support to ensure positive positioning of said

carrier in relation to the support when said brushes are operating in engagement with the cylindrical contact surface, and coacting guiding means for guiding said carrier along said support radially in relation to said contact surface for removal or replacement of the carrier when the locking means is released.

3,045,137
FRAME AND CORE ASSEMBLY FOR A DYNAMO ELECTRIC MACHINE

Milton E. Simmons, Carl J. Finsterwalder, and Frank J. Terkoski, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 26, 1957, Ser. No. 680,238
4 Claims. (Cl. 310—258)

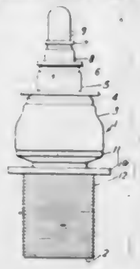


1. In a dynamo electric machine, a sheet metal frame of substantially rectangular configuration, one side of said frame having an intermediate portion of arcuate configuration constituting a pole and outwardly bulged end portions, a pole piece secured to the opposite side of said frame, a field coil encompassing a portion of said pole piece and having one end connected to said frame, a pair of end caps secured to opposite ends of said frame, a wound armature rotatably supported by said end caps and having a commutator, a brush holder assembly disposed within said frame in alignment with one of said outwardly bulged end portions including a pair of brushes engageable with said commutator, said brush holder assembly being retained in assembled relation with said frame by the securement of one of said end caps to one end of said frame, and means electrically connecting one of said brushes and one end of said field coil whereby energization of said field coil will result in magnetization of said pole piece and said frame.

3,045,138
ELECTRIC DISCHARGE TUBES

Walter John Pohl, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 10, 1958, Ser. No. 708,134
Claims priority, application Great Britain Feb. 13, 1957
3 Claims. (Cl. 313—21)

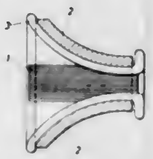


1. An anode structure for an electron discharge tube adapted to be immersed in a liquid coolant and to be cooled by the latent heat of evaporation thereof, said structure comprising a cylindrically shaped anode having a series of annular grooves extending around the outside circumference of said anode, each of said grooves being defined by a lower surface which is substantially normal to the vertical axis of the tube when in its operating position, and an upper surface inclined at an acute angle to said lower surface.

3,045,139
MAGNETIC DEFLECTING YOKE FOR CATHODE-RAY TUBES

Helmut Lutz, Esslingen-Oberesslingen, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 3, 1958, Ser. No. 758,852
Claims priority, application Germany Sept. 10, 1957
3 Claims. (Cl. 313—76)

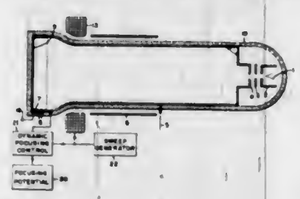


1. A magnetic deflection system for a cathode ray tube having a hollow frustro-magnetic yoke made of ferro-magnetic material, deflection coils disposed in diametrically opposed positions around the wall of said yoke in an axial direction each having windings on the inner and outer surfaces thereof, and a second pair of diametrically positioned deflection coils saddle wound on the inner surface of said yoke and displaced 90° around said yoke with respect to said first named deflection coils.

3,045,140
HIGH RESOLUTION ELECTRON DISCHARGE DEVICE

Paul H. Gleichauf, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed Dec. 31, 1959, Ser. No. 863,282
18 Claims. (Cl. 313—85)



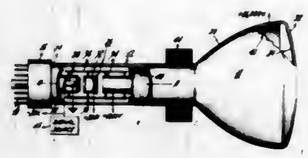
1. An electron discharge device comprising: an evacuated tube; emission means for providing a divergent beam of electrons at one end of said tube; a target surface upon which said beam impinges at the other end thereof and spaced from said emission means; deflection means close to said target providing a deflection field for causing said beam to regularly scan over said target; and lens means interposed between said deflection means and said target for creating a substantially uniform, demagnifying field in the deflection region adjacent the surface of the target for focusing said beam thereon.

3,045,141
ELECTRON BEAM TUBE

David W. Epstein, James W. Schwartz, and Franz Edelman, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Apr. 15, 1957, Ser. No. 652,731
10 Claims. (Cl. 313—87)

1. A cathode ray tube comprising a source of electrons, a control electrode adjacent to said source and provided with an aperture, the boundary of said aperture including at least one projecting portion extending inwardly towards the center of said aperture, and means



adjoining said control electrode for forming a converging electron lens for the electrons passing through said aperture.

3,045,142
ELECTRON TUBE

Gysbert Jacob Ekkers, Wettingen, Switzerland, assignor to Patelhold Patentverwertungs- & Elektro-Holding A.G., Glarus, Switzerland

Filed Sept. 5, 1958, Ser. No. 759,271
Claims priority, application Switzerland Sept. 7, 1957
5 Claims. (Cl. 313—251)



1. A device for supporting electrode members of an electron tube comprising a first tubular member fixed in position within said tube and extending upwardly along the tube axis, a rod member mounted within said first tubular member for longitudinal displacement, a first electrode support member supported by said rod member, a first electrode member extending longitudinally of said tube axis, the lower end of said first electrode member being fixed in position and the upper end thereof being connected to said first electrode support member, and a first spring under compression within said first tubular member, the lower end of said first spring being fixed as to position and the upper end thereof pushing upwardly against the lower end of said rod member to thus apply tensile stress to said first electrode member; a second tubular member surrounding said first tubular member and mounted thereon for longitudinal displacement, a second electrode support member connected to the upper end of said second tubular member, a second electrode member extending longitudinally of said tube axis, the lower end of said second electrode member being fixed in position and the upper end thereof being connected to said second electrode support member, and a second spring under compression and surrounding said first tubular member, the lower end of said second spring being fixed as to position and the upper end thereof pushing upwardly against the lower end of said second tubular member to thus apply tensile stress to said second electrode member.

3,045,143
SPARK GAP PROTECTOR

James B. Shickel, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed July 3, 1959, Ser. No. 824,830
3 Claims. (Cl. 313—325)

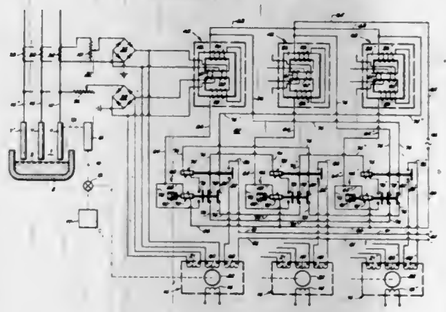
1. A spark gap protector for limiting an electric potential by arcing when an electric potential applied thereto exceeds a predetermined level comprising, a body of fireproof material having a high resistance to electrical currents, a plurality of openings in said body of fireproof material including a central opening in which a spark gap is formed, a pair of lead-in conductors interlaced in said body of fireproof material through said plurality of openings to form a predetermined air gap between said conductors in said central opening in accordance with the size of said central opening and the spacing between said conductors, the interlacing of said conductors through said openings preventing a change in said air gap even though the external portion of said conductors are moved.



3,045,144
ARC FURNACE ELECTRODE CONTROL MEANS

Hans Ernst, Duisburg, Germany, assignor to DEMAG-Elektrometallurgie G.m.b.H., Duisburg, Germany, a corporation of Germany

Filed Feb. 3, 1959, Ser. No. 790,847
Claims priority, application Germany Feb. 15, 1958
7 Claims. (Cl. 314—31)



5. In an electric arc furnace having a plurality of electrodes connected to a source of electrical energy for effecting a voltage drop and current flow in said electrodes, the combination of positioning means for raising and lowering each of said electrodes in accordance with their respective electrode voltage and current conditions, auxiliary control means for said positioning means including voltage responsive means coupled to each of said electrodes, relay means energized by said voltage responsive means and operable upon a predetermined voltage drop in one of said electrodes when the same engages said melt for actuating a portion of said positioning means to raise said one electrode, said relay means also being operable by said voltage responsive means in response to a loss in voltage in one of said other electrodes when it also engages said melt for actuating said portion of the positioning means so that said positioning means may again move said electrodes without interference from said auxiliary control means, and current responsive means also coupled to each of said electrodes and to said relay means for energizing the latter when electrode current flows, so that said relay means will be continuously energized after a plurality of electrodes have contacted said melt.

3,045,145
TRAVELING WAVE TUBE

David O. Melroy, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 4, 1960, Ser. No. 228
7 Claims. (Cl. 315—3.5)

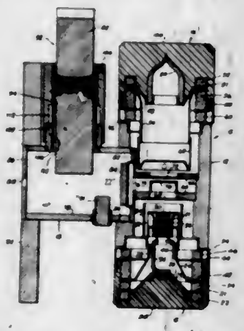
1. A traveling wave tube for generating short pulses of wave energy at high repetition rates comprising an evacu-

ated envelope, an electron gun for projecting an electron beam, a collector electrode, a wave interaction circuit between said electron gun and said collector and traversed by said beam, first wave guide means coupled to one end of said wave interaction circuit for introducing short-length input pulses of signal wave energy at a first repetition rate to said wave interaction circuit, second wave guide means coupled to the other end of said inter-



action circuit for abstracting amplified pulse wave energy propagating therealong and first and second wave reflecting means spaced apart along the wave propagating path, at least the first of which is contiguous to said wave interaction circuit, the two reflecting means being reflective at the frequency of said input signal wave energy and producing "echo" pulses synchronized with respect to said input pulses such that the repetition rate of said input pulses is multiplied in passing through said traveling wave tube.

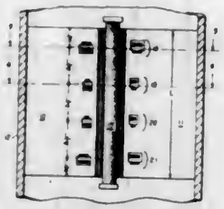
3,045,146
TUNABLE RESONANT CAVITY
Rowland W. Haegele, Salt Lake City, Utah (Menlo Park, Calif.), and John W. McLaughlin, Salt Lake City, Utah (San Jose, Calif.), assignors to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Filed Mar. 18, 1959, Ser. No. 800,326
10 Claims. (Cl. 315—5.21)



1. An electron tube comprising a vacuum envelope, a plurality of electrodes within said envelope, a tunable resonant cavity comprising a conductive wall means forming said cavity, and an interaction gap for producing electromagnetic oscillation therein, said wall means having a bore therethrough communicating with said cavity, a tuning means for said cavity comprising a conductive tuning plunger extending through said bore in spaced relation to the wall thereof, means including said wall means and said plunger forming a shorted half-wavelength coaxial transmission line electrically terminating in said cavity, friction means for retaining said plunger in fixed relation with said cavity and electrically connected to said wall means making sliding conductive contact with said plunger near the quarter-wave point of said coaxial line.

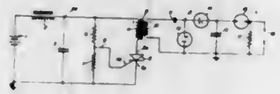
3,045,147
MAGNETRON ELECTRODE STRUCTURES
John R. Butler, Lexington, Mass., assignor to Raytheon Company, Waltham, Mass., a corporation of Delaware
Filed Nov. 16, 1959, Ser. No. 853,160
9 Claims. (Cl. 315—39.69)

1. In an electron discharge device, an electrode structure comprising an anode cylinder; a plurality of anode vanes attached to said anode cylinder and radially spaced about a cathode; a plurality of conducting strap groups, a first quantity of each of said strap groups being connected to alternating ones of said anode vanes and a sec-



ond quantity of each of said strap groups being connected to intermediate ones of said anode vanes, a first number of said strap groups having D.-C. capacitances different from the D.-C. capacitances of the remaining strap groups.

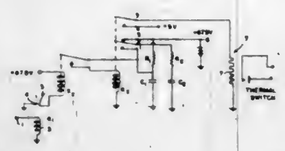
3,045,148
IGNITION SYSTEM WITH TRANSISTOR CONTROL
John V. McNulty and David J. Wright, Norwich, N.Y., assignors to General Laboratory Associates, Inc., Norwich, N.Y., a corporation of New York
Filed Dec. 18, 1959, Ser. No. 860,486
19 Claims. (Cl. 315—183)



1. Capacitor charging apparatus comprising a source of unidirectional electrical energy, an inductance element and a capacitance element connected in series across the source, a transformer having a primary winding and a secondary winding, a thyratron semiconductor device having an anode, a cathode, and a gate electrode, means connecting the primary winding and the anode-cathode path of the thyratron semiconductor device in series across the capacitance element, a capacitor to be charged, an asymmetrically conductive device, means connecting the capacitor and the asymmetrically condutcive device in series across the secondary winding, means for deriving a control potential varying concurrently with the potential across the capacitance element, and means connecting the control potential deriving means to the gate electrode to trigger a pulse discharge through the thyratron semiconductor device whenever the capacitance element is charged to a predetermined potential, whereby the capacitor is charged by repeated pulses of substantially equal energy; an electric circuit branch connected in parallel with the electric path through the anode and cathode of the thyratron semiconductor device, and a diode connected in said branch and having its anode and cathode respectively connected to the cathode and anode of the thyratron semiconductor device, said circuit branch being effective after each discharge of the capacitance element through the thyratron semiconductor device to pass an oscillatory current of the opposite polarity.

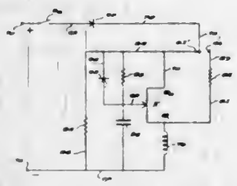
3,045,149
COMMAND CIRCUIT
David S. Willard, P.O. Box 5, High Rolls-Mountain Park, N. Mex.
Filed July 15, 1960, Ser. No. 43,254
2 Claims. (Cl. 317—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A command circuit comprising: frequency sensitive means, having a set of normally open contacts, for receiving a command signal and closing said contacts when said signal has a predetermined frequency; a relay having two sets of normally open contacts, a set of normally closed contacts and an actuating coil therefor; first and second capacitors; a source of direct current; means including a resistor for connecting said first capacitor across said source; means including the contacts of said frequency sensitive means for connecting the first capacitor across the coil of said relay; means including the normally



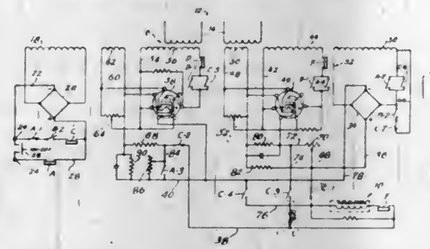
closed contacts of said relay for connecting the second capacitor across said source; means including one set of normally open contacts of said relay and the contacts of said frequency sensitive means in series for connecting the second capacitor across the coil of said relay; a current actuated switch responsive only to an energizing current having an average value in excess of a predetermined amount; and means for applying an energizing current to said switch through the other set of normally open contacts of said relay.

3,045,150
TIME DELAY CIRCUIT
John E. Mann, Pasadena, Calif., assignor, by mesne assignments, to Leach Corp., Compton, Calif., a corporation of California
Filed Oct. 13, 1958, Ser. No. 766,878
3 Claims. (Cl. 317—148.5)



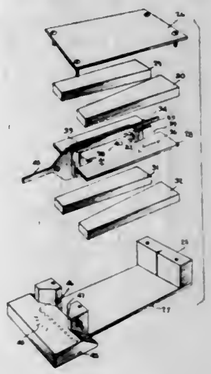
1. A time delay circuit including in combination: first and second input terminals for connection to a source of direct current potential; a relay coil, one end of said relay coil being connected to said second input terminal; multiple contact switching means associated with said relay coil, said switching means including first and second stationary contacts and a movable arm adapted to transfer from said first to said second stationary contact upon energization of said relay coil, said movable arm being coupled to said first input terminal, said second stationary contact being coupled to the other end of said relay coil; and a unijunction transistor including an emitter connection and first and second base connections, said first base connection being coupled to said second stationary contact and to said other end of said relay coil, said second base connection being coupled to said first stationary contact, said emitter connection being coupled to said first stationary contact by resistance means and to said second input terminal by capacitance means, whereby when a direct current potential is applied across said first and second input terminals, said movable arm will change contact position after a predetermined time delay determined by the time constant of the series R-C circuit formed by said resistance and capacitance means.

3,045,151
APPARATUS FOR AND METHOD OF DEMAGNETIZING
Arthur K. Littwin, Lincolnwood, Ill., assignor to Robert L. Littwin, Arthur K. Littwin, and Horace A. Young, Chicago, Ill., as trustees known as Littwin Family Trust No. 1
Filed Oct. 17, 1958, Ser. No. 767,820
16 Claims. (Cl. 317—157.5)



16. Apparatus for demagnetizing an electromagnet comprising a source of alternating current including a transformer, an A.C. circuit including a plurality of tappings from the secondary of said transformer at successively lesser voltage value points, a D.C. circuit including the electromagnet and means for converting the alternating current to direct current and delivering it to the electromagnet, a resistor in said D.C. circuit in series with the electromagnet, a plurality of electronic tubes, a control circuit including said electronic tubes, means for normally maintaining a positive bias on said electronic tubes, means for reversing the polarity of the direct current, and manually activated relay means controlled by said electronic tubes for successively interrupting the A.C. circuit and connecting it at successively lesser value points, and actuating the reversing means during interruptions of the A.C. circuit, said relay means also including means for imposing negative bias on the electronic tubes seriatim, controlled by the voltage drop across said resistor in proportion to the saturation level of the electromagnet for rendering each nonconducting and enabling the successive one to effect connection with the respective tapping for energizing the electromagnet at successively lesser saturation levels.

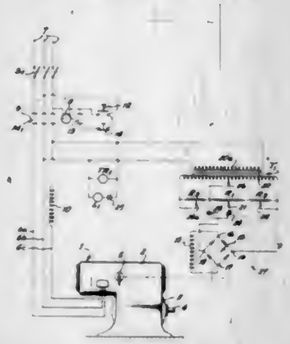
3,045,152
ELECTROMAGNETIC DEVICE HAVING A MOVABLE ELEMENT
Ariel R. Davis, 3687 S. State St., Salt Lake City, Utah
Filed Feb. 6, 1959, Ser. No. 791,696
7 Claims. (Cl. 317—166)



1. An electromagnetic device comprising outer ferromagnetic plates and an intermediate ferromagnetic plate

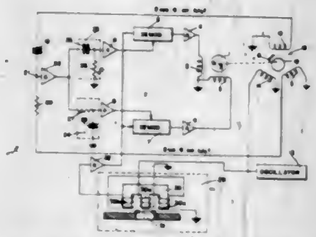
positioned between said outer plates and spaced therefrom to form spaces on each side of said intermediate plate, flux-producing means positioned between said plates forming said intermediate plate solely of one polarity and said outer plates solely of the opposite polarity for creating flux passing through said spaces between said outer members and said intermediate member with the flux in one space extending in the opposite direction to the flux in the other space to form an isolated magnetic pole, electromagnetic means for passing an electric current positioned between said intermediate plate and said outer plates in the spaces formed thereby to intersect all the lines of flux between said plates at the sector of location of the electromagnetic means and on passing electric current creating flux to relatively move said plates and said electromagntic means in response to the electric current passing through said electromagnetic means.

3,045,153
SYSTEM FOR CONTROLLING THE STARTING TORQUE OF INDUCTION MOTOR DRIVES
Robert J. Carlson, Orange, Calif., assignor to U. S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 4, 1960, Ser. No. 235
10 Claims. (Cl. 318—11)



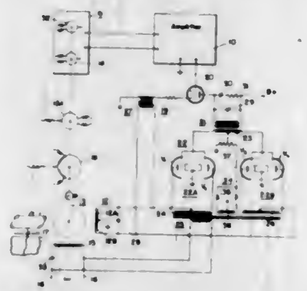
1. In combination: a multi-phase induction motor; an adjustable impedance in series in one of the phases; an adjustable ratio transmission mechanism operated by the motor; and means responsive to adjustment of the transmission for correspondingly adjusting the impedance in such manner that as the ratio of speed reduction increases, the impedance also increases.

3,045,154
SELF-SYNCHRONOUS MOTOR SYSTEM
Eugene E. Pentecost, Orange, Calif., assignor to North American Aviation, Inc.
Filed Nov. 28, 1958, Ser. No. 776,786
16 Claims. (Cl. 318—23)



2. In a self-synchronous motor system, said motor having a rotor, a first means providing a carrier frequency signal of constant amplitude but with phase varying in accordance with the angular position of the rotor of said motor, phase shifting means connected to receive the output of said first means and provide two output signals varying in accordance with the angular position of said rotor, said output signals being substantially in quadrature relationship with respect to each other, demodulating means responsive to said two output signals as reference signals, said demodulating means adapted to receive modulated carrier frequency signals and connected to control said motor.

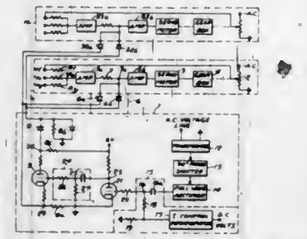
3,045,155
SERVOSYSTEM WITH PUSH-PULL FED SERVOMOTOR AND D.-C. COMPONENT SUPPRESSION
Will McAdam, Blue Bell, and John H. Moore, Havertown, Pa., assignors to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 9, 1957, Ser. No. 682,971
8 Claims. (Cl. 318—28)



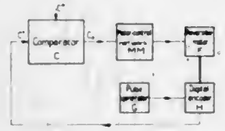
1. A high-speed self-balancing system comprising means including a balanceable network for producing an alternating-current error signal of phase and magnitude corresponding with the sense and extent of unbalance of said network, said balanceable network including means adjustable to rebalance it, a two-phase motor for actuating said adjustable rebalancing means, said motor having a power winding for energization from a source of alternating current having the same frequency as said error signal and having a two-section control winding, two full-wave rectifier systems powered from said alternating-current source and respectively including the sections of said control winding in their output circuits, said rectifier systems each having a pair of negative output-electrodes and a pair of positive output-electrodes and with the electrodes of one of its said pairs directly connected to each other and to the corresponding pair of electrodes of the other rectifier system to be all of the same potential, and means for applying said error signal in push-pull to the input circuits of said full-wave rectifier systems for alternate supply thereby to the respective sections of said control winding of unidirectional current impulses which jointly produce an alternating flux of the same frequency as said source, whose phase is dependent upon the phase of the applied error signal and which has no substantial unidirectional component.

3,045,156
SERVOSYSTEM INCLUDING QUADRATURE SIGNAL GATE
Morton Losher, Bergenfield, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 3, 1958, Ser. No. 747,557
4 Claims. (Cl. 318—28)

1. An alternating current servo system including means for rejecting signal components of improper phase, comprising a source of reference periodic signals having a reference period and reference phase; sources of first and second periodic signals having said reference period and having relatively variable amplitudes, said first signal being at said reference phase and said second signal being in phase opposition to said reference phase; servo means including means for producing feedback signals of variable amplitude and having said reference period; means for linearly combining said first, second, and feedback signals to produce an error signal; normally disabled gating means for directly and selectively transferring said error signal to said servo means; means coupled to said reference signal source for deriving control pulses in coincidence with the peak excursions of said reference signals, said pulses having a duration which is small in relation to one-fourth of said period; and means responsive to said control pulses for enabling said gating means for the duration of each said control pulse whereby said error signal is transferred to said servo means only during the duration of said control pulse.

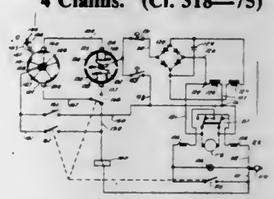


3,045,157
DIRECT COMPARISON DIGITAL SERVOSYSTEM
Jacques N. Jacquet, Paris, and Guy A. E. Henry, Bourg-la-Reine, France, assignors to Societe Nouvelle d'Electronique, a corporation of France
Filed July 14, 1959, Ser. No. 826,937
Claims priority, application France July 30, 1958
7 Claims. (Cl. 318—28)



1. An electrical servo system responsive to the digits of two *n*-digit binary numbers of which one identifies the present position of a controlled element having 2^n possible positions located along a given path whereas the other identifies a command position to which the controlled element is to be displaced, comprising reversible drive means for displacing said element along said path in either of two opposite directions, a plurality of comparison circuits, a pair of leads common to all of said circuits, coding means for applying to said circuits first input signals representative of respective digits of a binary number identifying said present position, control means for concurrently applying to said circuits second input signals representative of corresponding digits of a binary number identifying said command position, each of said comparison circuits including means for deriving from the applied input signals, in the absence of identity between the two digits represented thereby, either of two types of control signals respectively indicating a value of unity for the present-position digit and for the command-position digit, output means connected to said circuits for sequentially applying said two types of control signals to said leads, respectively, in the order of decreasing rank of the digits associated with the respective comparison circuits, and energizing means for said drive means connected to said leads for advancing said controlled element in response to the first control signal of a succession of such signals and in a sense determined by the identity of the lead over which said first control signal is received, said energizing means comprising a pair of pulse generators respectively connected to said leads for actuation by said control signals, switch means responsive to a pulse from either of said generators for momentarily energizing said drive means in either of said directions according to which generator is operative, and blocking means connected to said generators for disabling each of said generators upon the actuation of the other generator.

3,045,158
SYNCHRONIZING ARRANGEMENT
Herbert Reinsch, Stuttgart, Germany, assignor to Eugen Bauer G.m.b.H., Stuttgart-Unterturkheim, Germany
Filed Nov. 5, 1956, Ser. No. 620,545
Claims priority, application Germany Apr. 23, 1955
4 Claims. (Cl. 318—75)



1. Apparatus for maintaining a predetermined relationship between the rotary speeds of rotary members driven by independent motors, respectively, comprising, in combination, first motor means for driving a first rotary member; second variable speed motor means for driving a second rotary member at a speed depending upon an adjustable characteristic of the current supplied to said second motor means; regulating means for varying said adjustable characteristic of said current and comprising a saturable choke coil means connected in parallel with said second motor means, and inductive means for reducing the reactance of said choke coil means; and control circuit means for controlling said regulating means and including a series-combination formed by interconnected first and second switching means independently operable between circuit-closing and circuit-opening positions by said first and second motor means, respectively, in such a manner as to vary, during each rotational period of said second motor means, the period of conductivity across said series-combination of switching means between zero duration and the duration of said rotational period of said second motor means, depending upon the prevailing speed relationship between said first and second motor means, said inductive means being coupled with said control circuit means for being energized thereby and for reducing the reactance of said choke coil means in proportion to the duration of said period of conductivity across said series-combination of switching means, and for thereby increasing and decreasing, respectively, the speed of said second motor means whenever the actual speed relationship of said first and second motor means differs in one or the other sense from said predetermined speed relationship.

3,045,159
ELECTRIC MOTOR STARTING CIRCUITS
Irving M. Levy and Robert W. Leland, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Aug. 27, 1956, Ser. No. 606,279. Divided and this application Apr. 22, 1959, Ser. No. 808,353
4 Claims. (Cl. 318—103)

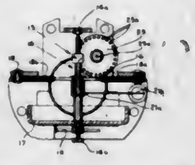
1. A circuit wherein first and second motors are so interconnected that a portion of capacitance used in start-

ing and running is common to independently operable motors during part of the operating cycle, comprising, in combination, a power supply source, a first capacitor motor operable from said source and having main and phase windings, a second capacitor motor also operable from said source and having main and phase windings, a capacitance portion series-connected to provide phase shift of operating current flow through said first motor



phase windings, and switching means for temporarily connecting said capacitance portion in parallel with a capacitance in the circuit of the second motor and additional starting capacitance for starting said second motor, said switching means returning said capacitance portion into series connection with said first motor as running capacitance and opening the circuit of the additional starting capacitance after being used in common with said second motor during part of the operating cycle.

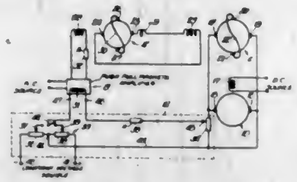
3,045,160
ELECTROMAGNETIC TIMING DEVICES
Norman C. Pickering, Sag Harbor, N.Y., assignor to Charles Denning Limited, Sag Harbor, N.Y., a corporation of New York
Filed May 4, 1959, Ser. No. 810,922
4 Claims. (Cl. 318—128)



1. An electromagnetically-driven timing device having a mechanically resonant member and electromagnetic means to drive the member including winding means adapted to be connected periodically to a source of electrical energy to generate a magnetic flux field, complementary magnetic means movable with the member and adapted to be driven by the magnetic flux, amplifier means including input and output circuits and adapted to be energized by said source and having said winding connected in its output circuit, electrical contact means connected to be operated by oscillation of said member to actuate the amplifier to energize the winding means, said winding means including a magnetic field structure, a transformer having primary and secondary windings wound on the structure, means to connect the secondary winding in series with said contacts and the input circuit of the amplifier, and means to connect the primary winding in the output circuit of the amplifier.

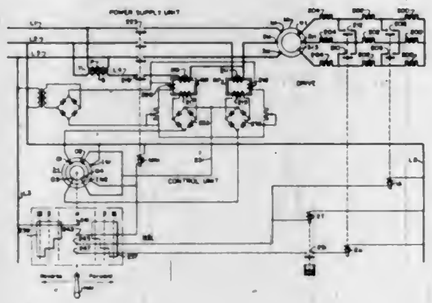
3,045,161
MOTOR SPEED REGULATOR ARRANGEMENT
Hans R. A. Hansen, Milwaukee, and Horace M. Norman, West Allis, Wis., assignors to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Filed May 28, 1957, Ser. No. 662,213
4 Claims. (Cl. 318—143)

1. A speed regulator system for an armature controlled D.C. motor comprising a non-saturated metadyne generator providing current from its armature to the armature of said motor wherein said armature current provides a negative feedback component to the excitation field of said generator so that the armature current is maintained substantially proportional to the generator field current, a reference voltage source, a voltage source responsive to motor speed, a highgain generator controller including a magnetic amplifier input stage and a metadyne amplifier output stage for providing field current to said generator, and differential connections between said reference voltage source and said motor speed-voltage source through the



control winding of said magnetic amplifier for energizing said controller with the potential difference therebetween, whereby the field current to said generator controlling the armature energization of said motor is determined initially by said reference voltage source and the saturation of said magnetic amplifier and is regulated thereafter in accordance with the voltage of said motor speed-voltage source.

3,045,162
CRANE CONTROL
William R. Wickerham, Buffalo, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 10, 1956, Ser. No. 627,486
17 Claims. (Cl. 318—202)

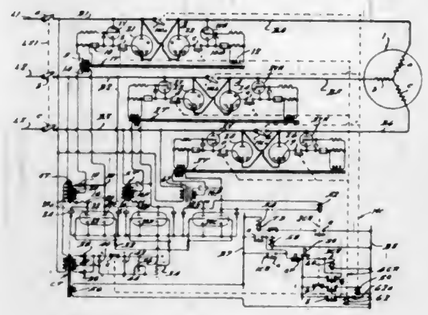


1. Apparatus for controlling the direction of rotation, speed and torque of a motor comprising control means connected to said motor for controlling said motor in accordance with the setting of said control means, means connected to said control means for setting said control means at discrete control points to cause said motor to operate along predetermined speed-torque characteristics, and means connected to and actuable by said setting means for setting said control means over a continuum of control points between at least a first and a second of said discrete points to vary the speed-torque characteristics of the operation of said motor continuously between the characteristic corresponding to said first point and the characteristic corresponding to said second point.

3,045,163
MOTOR CONTROLLING APPARATUS
Donald J. Collom, Bloomfield Township, Oakland County, Mich., assignor to Weltronic Company, a corporation of Michigan
Filed Sept. 9, 1957, Ser. No. 682,761
19 Claims. (Cl. 318—227)

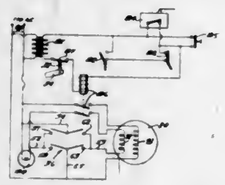
1. In a control circuit for supplying power to a load device from a three-phase power line, said load device

having a plurality of input terminals, the combination which comprises two banks of electronic tubes connected between said line and said input terminals to provide going and return current paths for load current, each said tube having a control electrode, firing means connected in circuit with the control electrodes of the tubes in both of said banks for initiating the conduction periods of such tubes, the firing means for at least one of said



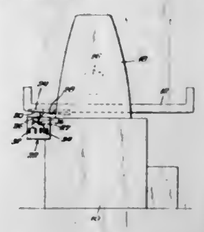
banks being adjustable so as to effect the firing of the corresponding tubes in predetermined adjustable phase relation to the power-line voltage, a contactor connected in shunt with the tubes of a first of said banks, and terminating means for opening said contactor to remove the shunt around said tubes of said first bank and for thereafter rendering said firing means ineffective to fire said tubes.

3,045,164
SAFETY SWITCH FOR AUTOMATIC DOOR OPENERS
Harold J. Russell, 14252 Bewly St., Santa Ana, Calif.
Filed May 12, 1958, Ser. No. 734,584
3 Claims. (Cl. 318—266)



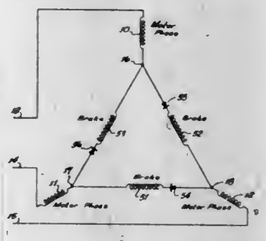
1. In apparatus for moving a door, including a reversible electric motor having a starting winding and a running winding, and reciprocating means connecting said motor and said door for opening and closing said door in response to action of said motor in its reversible directions: a centrifugally actuated switch, connected with said starting winding and adapted to be closed in either of two positions, in one of which positions said switch actuates said starting winding to turn said motor in one direction and in the other of said positions said switch actuates said starting winding to turn said motor in the opposite direction; centrifugal means rotatable reversibly by said reciprocating means, and responsive to movement of said door for moving said switch to one of two open positions, from which one position said switch may be moved to that closed position actuating said starting winding in the opposite direction from which said motor is then running, said centrifugal means being responsive to deceleration of said door for thereafter closing said switch to reverse said motor; and limit switches over-riding the reversing action of said centrifugally actuated switch when said door is fully open or fully closed.

3,045,165
ELECTRICAL CONTROL MEANS
Arthur K. Littwin, Lincolnwood, Ill., assignor, by mesne assignments, to Robert L. Littwin, Arthur K. Littwin, and Horace A. Young, Chicago, Ill., as trustees
Filed Jan. 30, 1957, Ser. No. 637,140
20 Claims. (Cl. 318—286)



1. In apparatus of the character disclosed, a reciprocable table, reversible drive means for driving the table, means for controlling the drive means including switch means associated with the table at each end of the range of movement of the table, tube means for controlling each switch means, means controlled by the movement of the table varying the bias on the tube means and rendering them conducting, and manually adjustable electrical means for independently varying the bias imposed on the tube means and thereby varying the points at which the tube means become conducting relative to the positions of the table and thereby varying the effective spacing between the tube means and switch means at the ends of the range of movement of the table.

3,045,166
MOTOR-BRAKE UNIT
Horace M. Robinson, 3927 Collis Ave., Los Angeles, Calif.
Filed Oct. 2, 1959, Ser. No. 844,613
9 Claims. (Cl. 318—367)

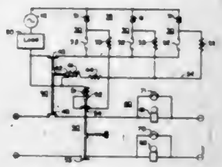


1. In combination: a motor having polyphase armature windings; an electromagnetic brake operatively associated with the motor and having an operating winding which, when energized, releases the brake; terminals for connection to a source of alternating current; undirectionally conductive means connecting the armature windings and the brake winding across the terminals to establish a serial relationship therebetween with respect to said terminals.

3,045,167
DETECTION CIRCUIT
August P. Colaiaco, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 10, 1958, Ser. No. 766,534
4 Claims. (Cl. 321—14)

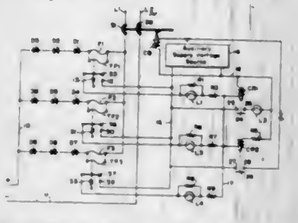
1. In a rectifier system comprising a plurality of rectifier units connected in parallel forming a rectifier bank; an individual fuse in series with each rectifier unit; a common alarm bus connected to the same side of said rectifier bank to which said fuses are connected; a circuit

responsive to the voltage across said individual fuses; said circuit comprising a plurality of current limiting resistors, each of said current limiting resistors being connected at one side to a point intermediate of one of said rectifier units and its corresponding fuse and at its other side to said common alarm bus; and means re-



sponsive to current flow in said alarm bus comprising first and second switching means; said first switching means being operable to activate alarm means in response to the failure of one of said rectifier units; said second switching means being operable to disconnect said rectifier bank from a power source in response to the failure of a predetermined number of said rectifier units.

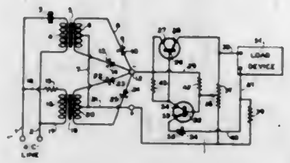
3,045,168
ELECTRICAL CIRCUIT FOR INDICATING THE FAILURE OF DIODES
Frederick G. Fellendorf, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 25, 1959, Ser. No. 842,487
6 Claims. (Cl. 321—14)



4. A failure indicating circuit for a plurality of diodes connected in parallel circuit relationship between a supply bus and a load bus, said circuit comprising a circuit breaker and main fuses in series with said diodes, trigger fuses shunting said main fuses, said trigger fuses having switches which close when said trigger fuses blow, said circuit breaker having an operating coil, an auxiliary voltage source, a local failure indicator lamp for each of said trigger fuses, parallel-connected first and second control relays, said second relay requiring a greater current flow through it to energize it than said first relay requires to operate, means including each of said switches and said parallel-connected relays for connecting a corresponding one of said lamps to said auxiliary voltage source when a corresponding one of said trigger fuses blow, a remote failure indicator, means including a switch of said first relay for connecting said indicator to said auxiliary voltage source when said first relay is energized, and means including a switch of said second relay for connecting said operating coil of said circuit breaker to said source for energizing said coil to open said circuit breaker when said second relay is energized.

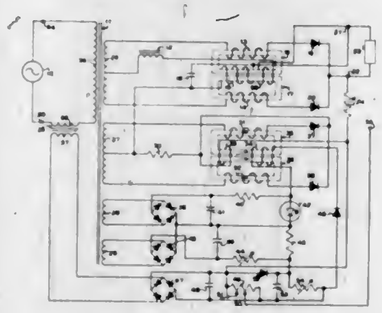
3,045,169
REGULATED POWER SUPPLIES
Alfred W. Barber, South Easton, Mass.
(32—44 Francis Lewis Blvd., Flushing 58, N.Y.)
Filed Nov. 29, 1957, Ser. No. 699,843
1 Claim. (Cl. 321—18)

In a power supply for converting single phase alternating current to substantially unvarying regulated direct current without employment of substantial direct current storage capacitors, the combination of, two alternating current transformers each including at least a primary and a center-tapped secondary, a pair of terminals for connection to source of single phase alternating current, a reactor connected between one of said terminals and one side of one of said primaries, a resistor connected between one of said terminals and one side of the other of said primaries to supply substantially equal amplitude and 90 degree phase shifted alternating currents to said primaries, a pair of rectified current terminals, connections be-



tween said center-taps and one of said rectified current terminals, rectifiers connected between said secondaries and the other of said rectified current terminals to provide full wave rectified current to last said rectified current terminal, a non-reactive smoothing circuit connected between said rectified current terminals and a pair of load terminals including a transistor series connected between one of said rectified current terminals and one of said load terminals, a Zener diode connected to the other of said load terminals, and coupling means connected between said Zener diode and said transistor wherein the voltage across said load terminals is maintained substantially constant and ripple-free by the non-reactive circuit.

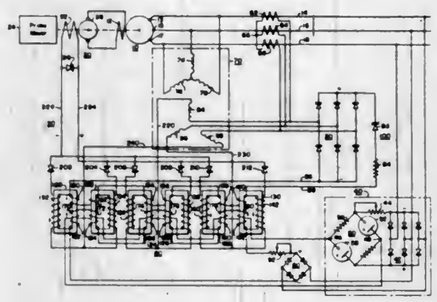
3,045,170
REGULATED RECTIFIER
Brian W. Howald, Amherst, Ohio, assignor to Lorain Products Corporation, a corporation of Ohio
Filed Jan. 15, 1959, Ser. No. 786,966
11 Claims. (Cl. 321—19)



5. A regulating arrangement having an alternating current input and direct current output comprising, in combination, first rectifying means, first magnetic core means having first impedance winding means and first saturating means thereon, series transformer means, a first circuit extending from the input to the output and including said series transformer means, said first rectifying means and said first impedance winding means in series, second rectifying means, second magnetic core means having second impedance winding means and a second saturating winding means, a first resistance element, a second circuit extending from said input to said resistance element and including said second rectifying means in series with said second impedance winding means, a third circuit extending from said first resistance element to said

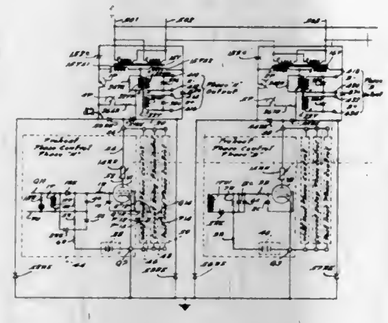
load and including at least a portion of each of said first and second saturating winding means, means for supplying a substantially constant direct current to said second saturating winding means, said means comprising a constant voltage device, second, third, fourth, and fifth resistance elements, and third, fourth, fifth, sixth, and seventh rectifying means, said constant voltage device being connected in series with said second resistance element and energized through said third rectifying means from said alternating current input, said constant voltage device being serially connected with a portion of said second saturating winding means, said third and fourth resistance elements and said fourth rectifying means, said fourth resistance element being connected in parallel with said fifth rectifying means energized from said alternating current input, means for energizing said sixth rectifying means from said series transformer means, and means for connecting said sixth rectifying means in series with said third resistance element and said seventh rectifying means and means for connecting said fifth resistance element in parallel with said sixth rectifying means.

3,045,171
ELECTRICAL CONTROL APPARATUS
James F. Heins and Robert L. Gasperetti, Lima, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 2, 1959, Ser. No. 796,573
8 Claims. (Cl. 322—25)



8. In an excitation system for a synchronous generator having an excitation field winding and output terminals, the combination comprising, first transformer means connected in circuit relation with said output terminals for supplying excitation current to said field winding in response to the output voltage of said generator, second transformer means connected in circuit relation with said output terminals for supplying excitation current to said field winding in response to the output current of said generator, a regulator system connected between said first and second transformer means and said field winding for controlling the excitation current supplied to the field winding of said generator by said transformer means, and limiting means connected in circuit relation with said regulator system and said second transformer means for limiting the excitation current supplied to said field winding by second transformer means when the output current of said generator reaches a predetermined value, said limiting means comprising full wave rectifier means having input terminals connected in circuit relation with said transformer means and output terminals and a semiconductor diode having a predetermined reverse breakdown characteristic connected between the output terminals of said full wave rectifier means and said regulator system.

3,045,172
PHASE-SHIFTING AND CONTROL APPARATUS
Wilbert A. Chiasson, Commerce Township, Oakland County, Mich., assignor to Weltronic Company, Detroit, Mich., a corporation of Michigan
Filed Nov. 28, 1958, Ser. No. 776,996
16 Claims. (Cl. 323—37)

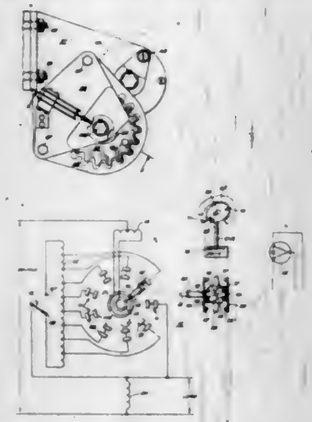


16. A phase-shifting circuit comprising a reactive branch and a resistive branch and energizable from a source of energizing alternating voltage for applying a phase-shifted voltage to a device responsive to the phase-shifted voltage for controlling the magnitude of a current in which the relationship between the value of the resistance in the resistive branch and the magnitude of the current is curvilinear; said resistive branch comprising first and second variable resistance means; said first variable resistance means comprising electron valve means including an output circuit energizable from the source of alternating voltage and an input circuit, and means for applying a direct voltage to said input circuit for controlling said electron valve means comprising a source of controlling alternating voltage related in phase to the energizing alternating voltage, rectifying and filtering means individual to said valve means and responsive to said controlling alternating voltage for applying a controlling direct voltage to said input circuit, and means for applying an additional biasing direct voltage to said input circuit in series with said controlling direct voltage; said second variable resistance means comprising first resistance means, second resistance means, plural position switch means for concurrently changing the value of both of said first and second resistance means in increments and for interconnecting said first and second resistance means for changing the combined value of said first and second resistance means in different increments to change the value of the current in preselected equal increments, single variable resistance vernier means connected to both of said resistance means for varying the combined value of said first and second resistance means in subincrements, and means for adjusting the resistance of said vernier means at each position of said switch means to a value which varies in accordance with the size of the increment of resistance added at the next position of said switch means comprising means including said switch means for connecting a resistance equal in value to the next increment of said first resistance means in circuit with said vernier means.

3,045,173
TRANSFORMER PROTECTIVE DEVICE
Gordon A. Wilson, Jr., Washington, Pa., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,334
10 Claims. (Cl. 323—43.5)

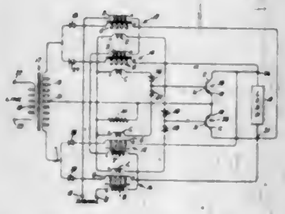
1. The combination with a transformer tap changer having a preventive autotransformer and a pair of mov-

able contacts each of which is electrically connected to one end of said preventive autotransformer and adapted to rotate from an initial position in one direction into sequential engagement with a plurality of stationary contacts connected to taps on a transformer winding and arranged in a circle to a maximum position at one limit of the operating range of said tap changer and also to rotate from said initial position in the opposite direction into sequential engagement with said stationary contacts to a minimum position at the other limit of the operating range of said tap changer; of means including



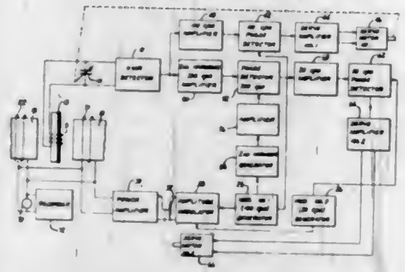
a reversible prime mover for alternately actuating said movable contacts, means including a simple internal-gear epicyclic gear train driven by said prime mover for preventing rotation of said movable contacts beyond said maximum and minimum positions and thus prevent damage to said autotransformer, said epicyclic gear train having an internally toothed gear and a spur gear disposed within and meshing with said internal gear, one of said gears being fixed and the other carrying a stop member disposed radially away from the axis thereof, said means also including a fixed stop in the path of said stop member.

3,045,174
PUSH-PULL MAGNETIC AMPLIFIER HAVING TRANSISTOR SWITCHES
David L. Lafuze, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Mar. 27, 1958, Ser. No. 724,369
9 Claims. (Cl. 323—89)



1. In a high efficiency push-pull magnetic amplifier, the combination comprising a plurality of saturable core reactors having at least alternating current gate windings, control windings and signal windings, said gate windings connected in series with unidirectional conducting devices between a source of operating voltage and a load, said signal windings being adapted for energization by applied signals to control saturation periods of said reactors, and at least two low impedance switch means connected between said load and said source of operating voltage with control elements connected to and controlled by said control windings for operation to provide load current only in response to said signals.

3,045,175
SECOND-HARMONIC MOISTURE METER FOR CONTINUOUS FLOW
William L. Rollwitz, San Antonio, Tex., assignor to Corn Industries Research Foundation, Inc., Washington, D.C., a corporation of Indiana
Filed Dec. 16, 1958, Ser. No. 780,889
7 Claims. (Cl. 324—.5)

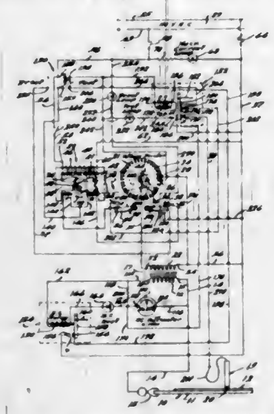


1. An apparatus for quantitative analysis comprising a nuclear magnetic resonance detector having means for establishing a unidirectional magnetic field in a sample to be analyzed, controllable means for assuming a resonance-producing condition for causing a component of said sample to exhibit nuclear magnetic resonance and means for producing an output signal when said component of said sample exhibits nuclear magnetic resonance, means coupled to said controllable means for automatically maintaining said controllable means at said resonance producing condition, magnetic field modulating means for providing a cyclically varying modulating signal modulating said unidirectional magnetic field to cause said sample to exhibit nuclear magnetic resonance in successive cycles of said modulating signal, means for controlling the amplitude of said modulating signal to maintain the peak amplitude of a second harmonic component of the output signal at a maximum while the controllable means is maintained at resonance producing condition, and means for measuring the amplitude of the modulating signal to determine the concentration of said component in said sample.

3,045,176
METHOD AND APPARATUS FOR MEASURING THE THICKNESS OF DIELECTRIC COATINGS
Robert Voltmann, Pontiac, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 6, 1957, Ser. No. 663,933
20 Claims. (Cl. 324—54)

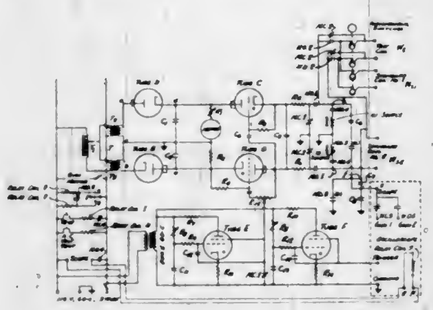
20. A device for determining the thickness of anodic and other coating films and operable from an alternating current source comprising electrode means for applying an alternating current potential from said source to a film, step-up transformer means for stepping up the current potential from said source delivered to said transformer means, potential divider means for controlling the current potential delivered by said transformer means, operating means for selectively operating said divider means between a first position effecting a predetermined minimum current potential delivery by said transformer means and a second position effecting a predetermined maximum current potential delivery by said transformer means, motor means for operating said operating means whereby said divider means is caused to effect a gradual change in the current potential delivered by said trans-

former means, manually operable switch means for controlling operation of said motor means between positions corresponding to said first and second positions of said divider and vice versa, limit switch means for stopping said motor means at positions corresponding to said first and second positions of said potential divider, control means for stopping said motor means at break-



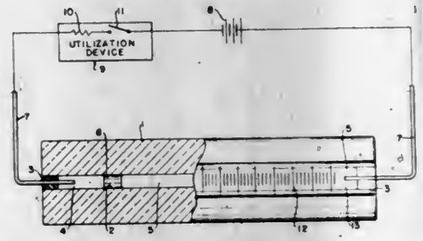
down of said film, means for registering a value corresponding to film thickness at breakdown thereof, control means for opening the circuit through said electrode means and film upon breakdown of the latter, means for visually indicating breakdown of the film, means for visually indicating when said potential divider means is in said first position, and means for operating said last-named indicating means.

3,045,177
TESTING DEVICE FOR ELECTRICAL WINDINGS AND THE LIKE
Herman R. Weed, Columbus, Ohio, assignor to Robbins & Myers, Inc., Springfield, Ohio, a corporation of Ohio
Filed Aug. 19, 1959, Ser. No. 834,731
5 Claims. (Cl. 324—54)



1. A testing device for electrical windings comprising a pair of substantially identical discharge capacitors and a rectifier in series with each of said capacitors, a transformer for supplying each of said rectifiers and capacitor pairs, a ground connection between said capacitors, a means for metering the voltage of one of said capacitors, means for charging said capacitors through their respective rectifiers, a discharge path for each of said capacitors, coupled across said capacitor, each of said paths comprising at least one electron device having a control terminal, the anodes and cathodes of the electron devices in the respective discharge paths being reversely connected, a trigger circuit including two electron devices and associated passive components producing two steep wave front voltage pulses, one of which is resistance-capacitance coupled through a balancing potentiometer to the said control terminals to synchronize the firing of said electron devices in said paths, the other of which is made available for detector synchronization, a synchronizing capacitor connected between the two discharge electron devices to make their firing more nearly simultaneous, terminals for two standard coils and terminals for the connection of a coil to be tested, means connected to the discharge path for applying the simultaneous surge voltages resulting from the discharge of said capacitors alternatively one to the terminals for the test winding and one to the terminals for a standard winding, or, one each to the terminals for two standard windings, or, one to the terminals for a standard winding and the other alternately to the terminals for the test winding and to the terminals for a second standard winding, means for replacing the two simultaneous surge voltages with two alternating voltages in the same alternative combinations, an oscilloscope having one input terminal grounded and means for applying signals proportional to the said surge or alternating voltages or their differences to another of the input terminals of said oscilloscope and means for applying to said oscilloscope the steep wave front voltage pulse from said trigger circuit which is made available for detector synchronization.

3,045,178
OPERATING TIME INDICATOR
Lester Corrsin, Hartsdale, N.Y., assignor to United Nuclear Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 760,897
17 Claims. (Cl. 324—68)



1. An operating time indicator comprising a body of non-conductive material having a bore of substantially uniform cross-section through the body, said bore having therein two columns of liquid metal, each of which extends from an end of the bore toward the other column such that a space not occupied by column metal exists between the adjacent ends of said columns, a liquid electrolyte in said bore and in contact with the inmost ends of the columns and filling said space between the adjacent ends of said columns, said electrolyte comprising principally a solution of at least one soluble salt of said metal, and conductive means for connecting said columns to an external source of potential, whereby, upon impressing a potential between said columns, metal is removed from one of said columns and transported through said electrolyte and deposited on the other of said columns, the change of length of said columns being directly indicative of the quantity of electric charge flowing through said indicator.

3,045,179
SOLID STATE ELAPSED TIME INDICATOR
Henry B. Maier, New York, N.Y.
(6 Sealey Ave., Hempstead, N.Y.)
Filed Sept. 8, 1959, Ser. No. 838,805
12 Claims. (Cl. 324—68)

1. In an electrical unit for measuring and indicating the elapsed time during which a fixed current has been ap-

plied to said unit, a flexible polyvinyl plastic tubing and two alloy wire electrodes of stainless steel, each wire inserted into and axially protruding slightly through a plastic plug in each end of the tubing, a mixture of aluminum sulfate and sodium chloride ground together and slightly moistened with saturated sodium chloride solution to form a conductive, semi dry paste, said paste being packed into and contained within said tubing, the ends of the tubing together with the junctions with the wire conductors be-

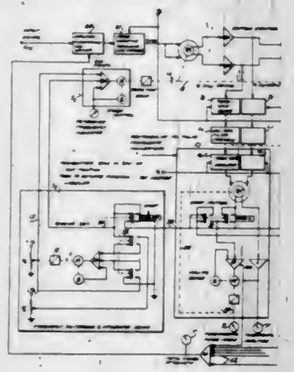


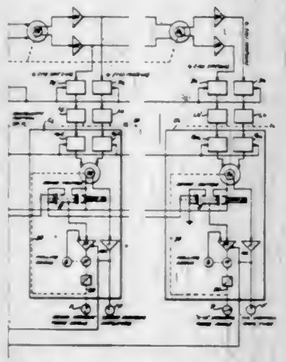
ing cemented with epoxy sealant cement, said electrical unit operating by a color change resulting when the current flow causes a negligible and not readily visible amount of metallic ions to form at the anode and migrate into said paste where a colored precipitate appears, said precipitate being a different color than the original paste, and said precipitate color extending increasingly further outward towards the cathode during increasing time of current flow, said length of this color change being the measure of elapsed time.

3,045,180
LOW FREQUENCY COMPLEX WAVE ANALYZER

Morton Losher, 700 Fort Washington Ave., Bergenfield, N.J.

Filed Feb. 9, 1959, Ser. No. 791,991
12 Claims. (Cl. 324—77)



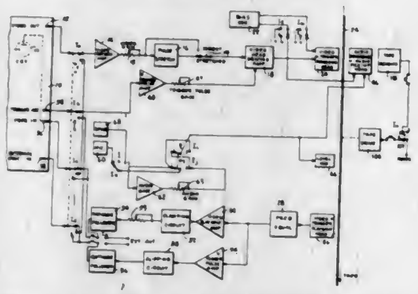


2. A method of analyzing low frequency repetitive complex wave signals of the form $f(t)$, comprising the steps of generating a number of reference frequencies constituting a harmonic series $\omega \ldots \omega n$ and impressing these reference frequencies individually on a constant carrier frequency v_c for modulating the latter; resolving each of the resulting modulated forms of said carrier frequency into the respective sine and cosine terms of the particular reference frequency; simultaneously multiplying individually said sine and cosine terms by said complex wave signal for obtaining a corresponding number of pairs of correlation signals of the form $v_c f(t) \sin (n\omega t)$ and $v_c f(t) \cos (n\omega t)$, respectively, wherein n is an integer varying between 1 and n; demodulating individually said correlation signals; low-pass filtering said individual demodulated correlation signals; varying the fundamental frequency of said harmonic series of reference frequencies until zero beat condition between at least one repetitive frequency contained in said complex wave signal $f(t)$ and at least one of said pairs of correlation signals is established in which case every one of said reference frequencies contained in said harmonic series thereof which has been adjusted to said zero beat condition indicates the existence of an identical frequency in said complex wave signal $f(t)$; and synchronizing said fundamental frequency of said harmonic series of reference frequencies by means of one of said correlation signals when a substantially zero beat condition is established so that this condition is automatically maintained further on.

3,045,181
SPECTRUM TAPE RECORDER

David Lawrence Jaffe, Great Neck, and Alan Ross, Bayside, N.Y., assignors to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York

Filed Sept. 21, 1959, Ser. No. 841,347
14 Claims. (Cl. 324—77)



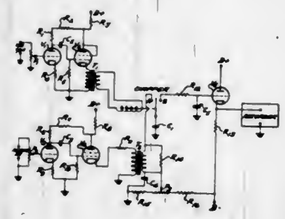
4. The combination including a spectrum analyzer, said spectrum analyzer having a sweep generator for producing sawtooth waveforms and a trigger signal at the termination of each of said sawtooth waveforms, said sweep generator being triggered to produce a sawtooth waveform in response to a trigger signal, said spectrum analyzer also including means for resolving an incoming signal into video signals which are representative of the amplitude-frequency spectrum of said incoming signal during the periods that said sawtooth waveforms are produced, a storage medium, means for recording on said storage medium said video signals and said trigger signals produced by said sweep generator, and means for recording audio monitoring signals on said storage medium simultaneously with the recording of said video signals.

3,045,182
PRECISE DOPPLER MEASUREMENT

Leonard F. Shodin, 17 Melody Lane, Waltham, Mass.

Filed June 16, 1959, Ser. No. 820,832
12 Claims. (Cl. 324—79)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of utilizing the "Doppler" behavior of cyclically occurring electrical signals for the purpose of tracking an earth-orbiting satellite comprising the steps of receiving a signal to be measured, applying said signal to a first contact of a switching means, simultaneously operating said switching means at a fixed frequency which is low in frequency as compared with the frequency of said signal, storing the signal potential present at the instant of contact departure from said first contact, and presenting said signal to a second contact of said switch for recording such that when the voltages presented to said second contact are the same at each cycle of said switching means, the frequency of the received signal is an integral multiple of the frequency of operation of said switching means.

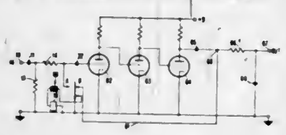


3. A method of tracking an earth-orbiting satellite emitting a cyclically occurring electrical signal comprising the steps of beterodyning said signal to a substantially audio frequency, presenting said signal to a first contact of a switching means, simultaneously cycling said switching means at a fixed, predetermined frequency which is low in frequency as compared with the frequency of said signal, storing the signal potential which appears at said contact at the instant of contact departure of said switching means, and presenting said voltage to a second contact of said switch for presentation to an indicator means such that when the stored voltages on subsequent cycles of said switch are equal and in phase, a zero beat indication occurs on said indicator means thereby determining said Doppler signal to be an integral harmonic of the frequency of switch operation.

3,045,183
SIGNAL RATE OF CHANGE DETECTOR AND INDICATOR

Laszlo Laczko, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Apr. 27, 1959, Ser. No. 809,152
2 Claims. (Cl. 324—118)

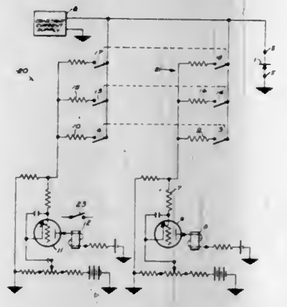


2. A signal rate of change analyzer comprising, in combination, a signal source generating a variable signal of either positive or negative polarity comprising in combination, a three armed network having a capacitor in a first arm, a resistor in a second arm and a resistor in a third arm, said signal source being connected to said capacitor, with said second arm being grounded, an A.C. amplifier having an input and an output, an impedance circuit connecting said third arm to said A.C. amplifier input, signal chopper means also linked to said third arm and operable to periodically connect said third arm to ground wherein any D.C. potential level existing on said arm is translated into an A.C. waveform for driving said amplifier, synchronous rectifier means connected to said amplifier output for rectifying the A.C. signal output therefrom into a D.C. output of a positive polarity D.C. signal level if said signal input was positive, and a negative polarity D.C. signal level if said original input was negative, the magnitude of said negative or positive D.C. signal level representing the rate of change of the original input signal, and indicating means responsive to both the polarity and magnitude of said rectified output to indicate both the polarity and the magnitude of said rectified output.

3,045,184
COMPONENT SORTING CIRCUIT

Grant F. Stetzler, Temple, Pa., assignor to Western Electric Company, Incorporated, a corporation of New York

Filed Aug. 17, 1959, Ser. No. 834,173
2 Claims. (Cl. 324—158)



1. Apparatus for testing the reverse breakdown voltage of diodes comprising a pair of terminals between which a diode to be tested is inserted, a voltage source coupled to said terminals, a high limit testing circuit including a first plurality of impedances of preselected magnitudes for testing the upper voltage breakdown limit in a series of voltage ranges and equal in number to the number of said ranges, and a low limit testing circuit connected in parallel with the high limit testing circuit, said low limit testing circuit including a second plurality of impedances of preselected magnitudes for testing the lower voltage breakdown limit in said series of voltage ranges and equal in number to the number of said ranges, there being an upper limit impedance and a corresponding lower limit impedance defining a pair of impedances for each range, indicating means common to all of the pairs of corresponding impedances, switching means for simultaneously selecting a pair of corresponding upper and lower limit impedances for operation by connecting them in a circuit path between one of said terminals and the common indicating means for determining whether the diode under test is within the breakdown range represented by the selected corresponding impedances, and sequencing means for operating the switching means whereby the corresponding high and low limit impedances may be sequentially switched over a plurality of test ranges.

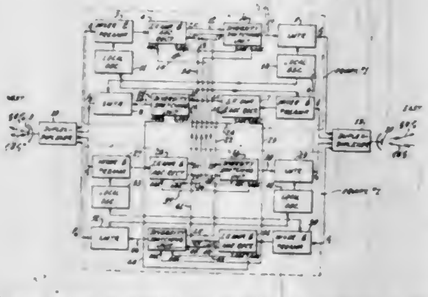
3,045,185
REPEATER STATION HAVING DIVERSITY RECEPTION AND FULL HOT STANDBY MEANS

Howard R. Mathwich, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed May 19, 1958, Ser. No. 736,245
1 Claim. (Cl. 325—5)

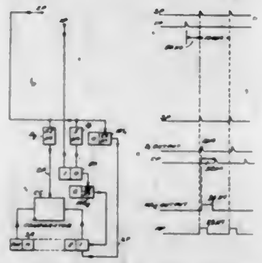
In a repeater station for a communication system, a first equipment for two-way communication including a first receiver arranged to receive intelligence transmitted from a remote transmitting station spaced from said repeater station in one direction, a second receiver arranged to receive intelligence transmitted from a remote transmitting station spaced from said repeater station in a

different direction, each of said receivers being arranged to produce a control signal indicative of the strength of the intelligence signal received thereby, a first transmitter arranged to transmit intelligence in said one direction and a second transmitter arranged to transmit intelligence in said different direction, a first switching unit responsive to the control signal produced by said first receiver for applying the output of said first receiver to the input of said second transmitter, a second switching unit responsive to the control signal produced by said second receiver for applying the output of said second receiver to the input of said first transmitter; a second equipment for two-way communication electrically separate from and capable of operation independent of the operation of said first equipment, said second equipment including a third receiver arranged to receive intelligence transmitted from a remote transmitting station spaced from said repeater station in said one direction, a fourth receiver arranged to receive intelligence transmitted from a remote transmitting station spaced from said repeater station in said different direction, a third transmitter arranged to transmit intelligence in said one direction and a fourth transmitter arranged to transmit intelligence in said different direction, the operation of said first and second receivers being entirely independent of the operation of said third and fourth receivers and the operation of said first and second transmitters being entirely independent of the operation of said third and fourth transmitters, each of said third and fourth



receivers being arranged to produce a control signal indicative of the strength of the intelligence signal received thereby, a third switching unit responsive to the control signal produced by said third receiver for applying the output of said third receiver to the input of said fourth transmitter and a fourth switching unit responsive to the control signal produced by said fourth receiver for applying the output of said fourth receiver to the input of said third transmitter; means to apply the output signal of said third receiver along with the control signal produced thereby to said first switching unit, said first switching unit being responsive to the control signals produced by said first and third receivers to compare the strength of the intelligence signals in said first and third receivers and to apply only the stronger of the intelligence signals to said second transmitter, means to apply the output signal of said fourth receiver along with the control signal produced thereby to said second switching unit, said second switching unit being responsive to the control signals produced by said second and fourth receivers to compare the strength of the intelligence signals in said second and fourth receivers and to apply only the stronger of the intelligence signals to said first transmitter, means to apply the output signal of said first receiver along with the control signal produced thereby to said third switching unit, said third switching unit being responsive to the control signals produced by said first and third receivers to compare the strength of the intelligence signals in said first and third receivers and to apply only the stronger of the intelligence signals to said fourth transmitter, and means to apply the output signal of said second receiver along with the control signal produced thereby to said fourth switching unit, said fourth switching unit being responsive to the control signals produced by said second and fourth receivers to compare the strength of the intelligence signals in said second and fourth receivers and to apply the stronger of the intelligence signals to said third transmitter.

3,045,186
ASSOCIATED CIRCUIT FOR ELECTRICAL COMPARATOR
Guillaume Van Mechelen, Antwerp, Belgium, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 14, 1959, Ser. No. 806,363
3 Claims. (Cl. 328—55)

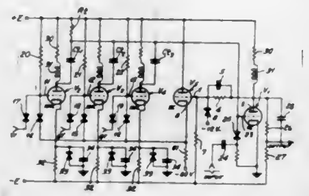


1. An electronic circuit arrangement for providing input means to an $N+1$ stage pattern shift register; to be used in conjunction with a binary digit comparator fed from the first and the last stages of said register for successively comparing the digits of a first number recorded on the first n stages of said register with like digits of a second number serially inserted, digit by digit, on said register as the first number is turned out of said register; comprising a source of information pulses and a source of synchronizing pulses, means coupled to said synchronizing pulse source for deriving advancing pulses, a shift register coupled to said advancing pulse deriving means, a two-condition device coupled to said information and synchronizing pulse sources, said device having at least one stable condition and a monostable device coupled to said two-condition device, said two-condition device triggering from a first stable condition to a second condition in response to said information pulses and from the second to the first stable condition in response to said synchronizing pulses, said monostable device assuming an unstable condition in response to each triggering of said two-condition device from said first to said second condition creating an activating pulse of predetermined length, and means for applying said activating pulse to said first stage of said shift register, said monostable device being so timed in relation to said advancing pulse deriving means that the duration of said activating pulse overlaps and outlasts the duration of said advancing pulse derived from said corresponding synchronizing pulse, thus insuring the conditioning of said first stage of said register by said activating pulse after said advancing pulse has caused the number stored in said register to advance by one step, but preventing the said conditioning of said first stage prior to the occurrence of said associated advancing pulse.

3,045,187
MULTI-TIMING SINGLE SHOT USING ELECTRONICALLY SELECTED CONSTANT CIRCUITS
Louis E. Belcastro, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 18, 1959, Ser. No. 821,292
5 Claims. (Cl. 328—207)

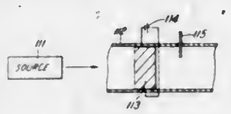
1. In an apparatus of the class described, an electron device having at least an output electrode and a control

electrode, output circuit means coupled to said output electrode, biasing means including a source of voltage and circuit means for connecting said source of voltage to said electron device electrodes, said biasing circuit means being adapted normally to maintain a voltage on the control electrode of said electron device in one of two conductivity states, means to apply a voltage pulse to the control electrode of said



electron device to switch it to a second conductivity state, timing means adapted to restore said electron device to said first conductivity state after a predetermined duration, said timing means including said biasing circuit means, and a plurality of different value timing elements, and voltage controlled electronic switching means for electronically coupling selected ones of said timing elements to said biasing circuit means.

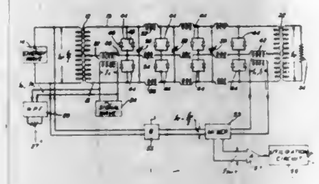
3,045,188
MICROWAVE APPARATUS
Ronald Thomas Albert Howell and Leo Young, London, England, assignors to Decca Limited, London, England, a British company
Filed May 8, 1956, Ser. No. 583,481
3 Claims. (Cl. 329—161)



1. A microwave detector comprising a wave guide having an input and an output, means coupling said input to a source of modulated microwave signals of which the modulation is to be detected, dielectric material of the kind in which the dielectric constant depends on an applied electric potential arranged in said wave guide so that the dielectric constant is varied by the applied signals from said source, means for applying a biasing electric potential to said material, and means coupled to said output for selectively extracting a signal of the required modulation frequency.

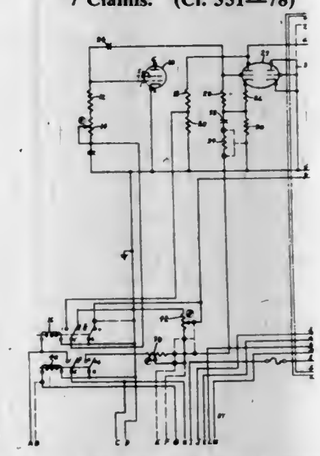
3,045,189
TRAVELING WAVE PARAMETRIC AMPLIFIER
Rudolf S. Engelbrecht, Basking Ridge, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 16, 1959, Ser. No. 787,305
17 Claims. (Cl. 330—7)

1. Traveling wave apparatus for amplifying a signal wave comprising first, second, and third conducting members forming first and second wave propagation paths, means for applying a signal wave to be amplified to said first path with even symmetry relative to one of said conducting members and means for applying an energy wave to said second path with odd symmetry relative to said one of said conducting members, whereby said waves propagate along said paths in balanced relationship, and a plurality of means spaced along said paths for non-



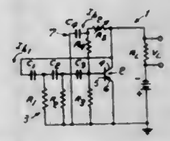
linearly intercoupling the waves propagating on said paths at spaced points therealong.

3,045,190
SOUND SIMULATOR UTILIZING NOISE SOURCE
John R. Hilding, Groton, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 21, 1960, Ser. No. 16,619
7 Claims. (Cl. 331—78)



1. In a device for simulating specific sounds in combination, a source of noise operatively connected to a filtering device for filtering out the desired sounds, and amplifying means for amplifying desired sounds and relay control means operatively connected to said noise and said amplifying means for controlling the occurrence of said desired sounds, whereby actuation of said relay turns said noise source on and deactuation of said relay turns said noise source off.
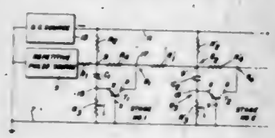
3,045,191
TRANSISTOR PHASE SHIFT OSCILLATORS
Robert W. Blanchard, East Orange, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Sept. 2, 1958, Ser. No. 758,292
6 Claims. (Cl. 331—108)



1. A transistor phase-shift oscillator comprising a transistor having emitter, base and collector electrodes,

a load resistance connected between said collector and emitter electrodes, means for connecting a source of direct-current bias in series with said load resistance, a leading phase-shift network coupled between the collector-to-emitter output and base-to-emitter input of said transistor, a feedback path including a feedback resistor connecting said base electrode to a point of said load resistance which provides favorable stability and amplification, means for coupling useful output signals from a circuit between said collector and emitter electrodes, and a lagging phase shift network connected between said collector and emitter electrode.

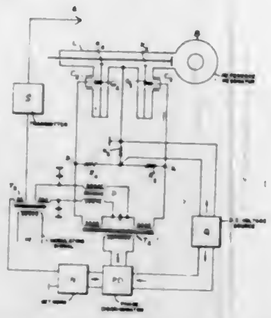
3,045,192
TRANSISTOR OSCILLATORS
Edward M. Jones, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 31, 1956, Ser. No. 631,681
1 Claim. (Cl. 331—111)



A pulse-repetition-frequency dividing circuit comprising the combination of a semi-conductive device having first, second and third terminals, said device being capable of providing current gain from a circuit through said first and third terminals to a circuit through said second and third terminals, a pulse input network including two input points with a first resistor, a capacitor and a second resistor in series in that order therebetween, the free end of the second resistor being connected to said third terminal, said first terminal being connected to the common juncture between said second resistor and said capacitor, a third resistor connected between said second terminal and a second common juncture between said first resistor and said capacitor, a D.C. potential source having two terminals, and a fourth resistor having an end connected between said second common juncture and one terminal of said D.C. potential source, the other terminal of said D.C. potential source being directly connected to said third terminal, whereby a sub-multiple saw-tooth repetition frequency appears across said second resistor, and a submultiple frequency of the same frequency as the sawtooth repetition frequency and having sharp pulses of short time duration relative to the sawtooth duration appear on said second terminal of said semiconductive device.

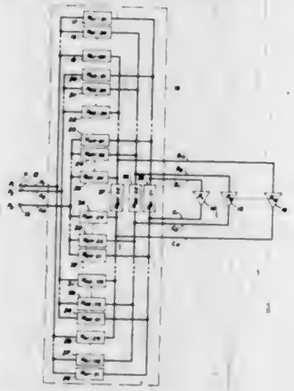
3,045,193
SWITCHING ARRANGEMENT FOR FREQUENCY STABILIZATION OF FREQUENCY MODULATED SELF-EXCITED TRANSMITTER
Alfred Käch, Nussbaumen, Aarg, Switzerland, assignor to Patelhold Patentverwertungs- & Elektro-Holding A.-G., Glarus, Switzerland
Filed Nov. 3, 1959, Ser. No. 850,621
Claims priority, application Switzerland Nov. 15, 1958
2 Claims. (Cl. 332—19)

1. In a circuit arrangement for stabilizing the frequency of a frequency-modulated self-excited transmitter, the combination comprising a modulating voltage source connected to said transmitter, a line at one end of which is fed the oscillations from said transmitter to be stabilized, a reference resonator closing the other end of said line, a pair of rectifiers connected to said line such that high frequency voltages proportional to the sum and difference respectively of the wave voltages running back and forth on said line are applied to said rectifiers, a pair of resistances connected at one end each to said rectifiers, the other ends of said resistances being connected to each other and to a third resistance connected to a source of an additional alternating voltage, a transformer having a pair of primary windings which are connected on the one hand to said rectifiers and on the other hand to said modulating voltage source and having a secondary wind-



ing which is connected as one input to a phase discriminator, said additional alternating voltage source being connected to said phase discriminator as a second input thereto, the output of said phase discriminator providing a regulating signal which influences the frequency of said transmitter.

3,045,194
ACTIVE MULTIPORT NETWORKS
Irwin W. Sandberg, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 2, 1960, Ser. No. 66,755
16 Claims. (Cl. 333—80)

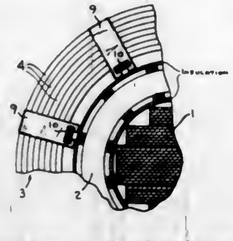


1. A wave transmission network having n ports and comprising at least n active elements and a $3n$-port passive network including only resistors and capacitors, where n is greater than one, a first n of said $3n$ ports comprising the ports of said wave transmission network, means for connecting another n of said $3n$ ports to the individual inputs of said n active elements, and means for connecting the remaining n of said $3n$ ports to the individual outputs of said n active elements.

3,045,195
INDUCTION APPARATUS
John R. Smith, Venetia, Pa., assignor to McGraw-Edison Company, a corporation of Delaware
Filed Apr. 16, 1956, Ser. No. 578,450
1 Claim. (Cl. 336—60)

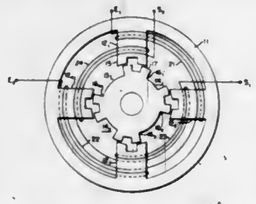
An induction apparatus for use as a transformer having a magnetic core structure and a conducting winding

surrounding said core structure, said winding consisting of conductor means having a rectangular cross section wound spirally in spaced layers with the successive conductors of each layer in substantial contact with each other and with successive convolutions in the several layers arranged in partially overlapping relation to adjacent convolutions and having a portion of each of said



successive convolutions projecting beyond the adjacent convolution measured axially of the winding, said winding forming a substantially rigid structure, and a cooling medium in which the winding is immersed, said cooling medium contacting the end faces and the side faces of said projecting portions and flowing from one face to a successive face of the convolutions of each layer to thereby enhance the cooling effect of the cooling medium.

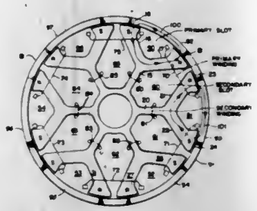
3,045,196
DIFFERENTIAL TRANSFORMERS
Henry Packard, Norwood, Mass., assignor, by mesne assignments, to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Feb. 13, 1959, Ser. No. 793,061
10 Claims. (Cl. 336—135)



1. A differential transformer comprising a stator having $2n$ stator teeth each divided into a plurality of sub-teeth, an armature having n armature teeth, each armature tooth comprising a pair of projecting portions, each of said projecting portions corresponding to a stator tooth and being divided into a like plurality of sub-teeth, the spacing between successive stator teeth exceeding the corresponding spacing between projecting armature portions by the width of one sub-tooth.

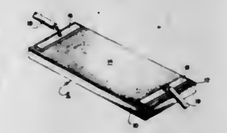
3,045,197
ROTARY ELECTROMAGNETIC PICKOFF DEVICE
Robert A. Vanslette, Medfield, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 15, 1959, Ser. No. 820,338
10 Claims. (Cl. 336—135)

1. In an electromagnetic device comprising in combination: a stator element having a central circular stator yoke portion; a plurality of equiangularly spaced poles radially extending from said yoke portion; two spaced apart pole extensions for each of said spaced poles, said pole extensions each terminating in a pole face, said pole faces collectively defining a circular periphery, the two pole extensions for each pole defining therebetween a primary slot; and each two adjacent poles and adjacent extensions thereof defining therebetween a secondary slot; first winding means adapted to be energized by an alternating voltage and positioned in said primary slots so as to encompass pairs of said pole extensions, a pair of said pole extensions being a pole extension associated with one pole and the nearest adjacent pole extension of another pole; secondary winding means positioned in said second-



ary slots so as to encompass said poles; and an armature element having pole bridging elements connected by an armature yoke portion; said armature element being adapted to be positioned relative to said stator element for relative rotation therewith and with each of said bridging elements normally bridging equal areas of the pole faces of the pole extensions of a pole.

3,045,198
DETECTION DEVICE
James P. Dolan and William M. Jordan, both of 8214 42nd Ave. NE., Seattle, Wash.
Filed Dec. 11, 1959, Ser. No. 859,005
13 Claims. (Cl. 338—13)



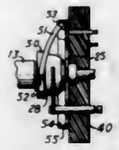
1. An electrical element sensitive to exposure to liquids, vapors or gases, comprising: a base having an electrically non-conductive, non-absorbent, relatively resilient surface, a stratum of exposed, electrically conductive, discrete, adsorbent particles independently anchored on said resilient surface with conductive contact normally existing between adjacent particles substantially fully throughout said stratum, and electrical leads contacting said stratum at separated points; the density of said particles in said stratum being substantially uniform throughout said stratum.

3,045,199
ENGINE IGNITION SYSTEM CABLE
Erle I. Shobert II, St. Marys, Pa., assignor to Stackpole Carbon Company, St. Marys, Pa., a corporation of Pennsylvania
Filed Dec. 12, 1960, Ser. No. 75,324
4 Claims. (Cl. 338—66)



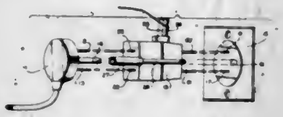
4. The method of making electric resistance cables for an engine ignition system, comprising embedding the opposite ends of a plurality of wire leads in the opposite ends of a series of longitudinally spaced resistors to form a string of resistors, enclosing said string in the center of an insulating sheath, and severing said sheath and wires substantially midway between adjacent resistors at intervals along said string to form short length ignition cables.

3,045,200
ELECTRICAL RESISTANCE DEVICES
Paul J. Hines, Waltham, Mass., and Earl M. Worth, North Windham, Maine, assignors to Raytheon Company, a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,646
3 Claims. (Cl. 338—174)



1. A variable resistance device comprising a conductive plastic resistance element; a rotor having a cylindrically shaped portion; contact means attached to said rotor; a shaft for rotating said rotor to move said contact means along the surface of and in electrical contact with said resistance element; a commutator ring mounted over said cylindrical portion of said rotor, said commutator ring having substantially rounded edges for providing an inclined surface; a third terminal; a V-shaped wiper slidable over said inclined surface being connected to said third terminal and straddling said commutator ring for providing a continuous connection between said rotor and said third terminal; and a fluorocarbon insulating element mounted on said shaft for electrically insulating said rotor from said shaft.

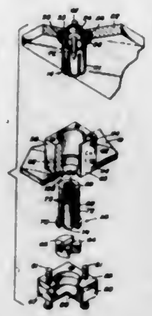
3,045,201
PLUG AND GROUNDING MEANS
William D. Hall, 5112 Westpath Court, Montgomery County, Md.
Filed Oct. 8, 1959, Ser. No. 845,119
4 Claims. (Cl. 339—14)



1. In combination, a plug with a generally rectangular cross-section extending from its front to its rear end with two parallel blades which are parallel to the short sides of the rectangle and which project out of the front end of the plug, said blades being adapted to be inserted into the two live socket elements of a wall socket and the rectangle being so narrow as not to cover the ground socket of the wall socket, a three prong plug having two current carrying blades and a grounding prong, the first-named plug having a rear end that has two socket elements for receiving the two current-carrying blades of the three prong plug, and a member having a socket on its rear end for receiving the grounding prong of said three prong plug and having a prong on its front end for insertion into the grounding socket element of the wall socket.

3,045,202
HIGH FREQUENCY COAXIAL COUPLING
Gustave Shapiro, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Original application Aug. 12, 1954, Ser. No. 449,534, now Patent No. 2,879,491, dated Mar. 24, 1959. Divided and this application Dec. 31, 1958, Ser. No. 784,409
3 Claims. (Cl. 339—64)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A coaxial coupling assembly for coupling an electronic device, said coaxial coupling comprising a plate, a center contact pin rigidly mounted on said plate and insulated therefrom, a coaxial plug shell movably mounted in said plate in substantially concentric relationship with said center pin; said plug shell being capable of horizontal movement within said plate mounting a socket assembly including a body portion, said body portion being adapted to make electrical contact with said plug shell, a female contact movably mounted within said



body portion and being insulated therefrom and adapted to make electrical contact with said center pin whereby any misalignment of said plug shell and said pin with said body portion and said female contact, respectively, can be compensated for by said movable elements and the electrical grounding connection between said body portion and said plate is completed as is the connection of said contact pin with said female contact.

3,045,203
ELECTRICAL SUSPENSION DEVICE
Andrew M. David, 1340 New York Ave. NW., Washington, D.C.
Filed June 22, 1960, Ser. No. 38,006
3 Claims. (Cl. 339—197)



1. Apparatus for suspending and electrically connecting fixtures from an overhead structure including a receptacle and a plug releasably mating with said receptacle, said receptacle having a hole formed therein to accommodate said plug, a receptacle end contact member at the end of said hole, said receptacle having a slot formed on the side of said hole, a resilient side receptacle contact member positioned in said slot, said side receptacle contact member extending around said hole and being inclined to the axis of said hole, said slot being dimensioned to permit said receptacle side contact member to flex therein; said plug being formed of disassemblable portions, a pair of conductor bars received between said plug portions, a side plug contact member extending out from the side of said plug at a position to be received in said receptacle slot in engagement with said resilient side receptacle contact member and supported on a portion of said receptacle forming said slot when said plug is inserted in said receptacle hole, said side plug contact member being connected to one conductor bar, an end plug contact member extending outwardly from the end of said plug to engage said receptacle end contact member, when said plug is inserted in said receptacle hole, said end plug contact member being connected to the other conductor bar, said plug having an opening formed in its end remote from said end plug contact member, said opening

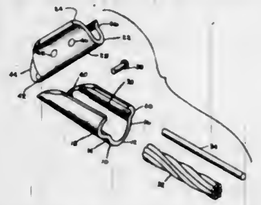
being adapted to receive electrical leads for attachment to said conductor bars, and suspension means received in said plug at said opening for suspending fixtures from said plug.

3,045,204
JUNCTION BOX BLOCK AND CARD
Joseph Cassella, 35 Crosby St., New York 13, N.Y.
Filed Sept. 16, 1959, Ser. No. 840,285
1 Claim. (Cl. 339—198)



An annular assembly of junction block boxes, each of the boxes comprising a dielectric segmental annular block having a plurality of radially inwardly open alternately long and short keyhole slots that are open at the top, a terminal in each of the slots formed of a threaded end stud mounted on the block with a plurality of nuts for connecting at least one electrical lead thereto, and an indicia card fixed to the top of the block and having a plurality of imprinted radial lines dividing the card into spaces corresponding to the adjacent slots and a series of numerals each imprinted in one of the spaces to identify the adjacent terminal and such numerals being disposed adjacent the slot with the identified terminal.

3,045,205
CLAMP CONNECTOR
William G. Osborn, Stamford, Conn., assignor to Burndy Corporation, a corporation of New York
Filed June 26, 1959, Ser. No. 823,029
6 Claims. (Cl. 339—247)



4. A knife type electrical connector for a plurality of side by side conductors comprising a longitudinally extending housing member having an opening at both ends; a slot extending between said openings laterally through the wall of said housing member; a knife member having a leading edge for transverse movement through said housing member slot; a conductor receiving seat provided on each side of said knife member, and a mating conductor receiving seat provided in said housing member on each side of said slot; means to fix one end of said knife member with respect to one end of said housing member for transverse insertion of said knife member into said housing member by the pivoting of the other end of said knife about said means; at least one of said members being made of a resilient material that is stressed when conductors are secured therebetween.

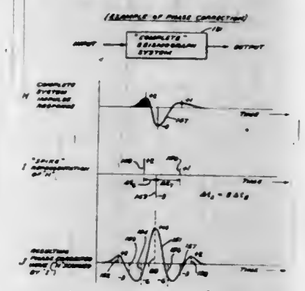
3,045,206
SUBMARINE SONIC DEVICE
Erhard Ahrens, Kiel, Johannes Schultes, Kitzeberg, near Kiel, and Arno Mies and Walter Kriebel, Kiel, Germany, assignors to Electroacustic G.m.b.H., Kiel, Germany, a corporation of Germany
Filed Dec. 23, 1958, Ser. No. 782,418
Claims priority, application Germany Mar. 11, 1958
14 Claims. (Cl. 340—3)

1. A submarine sonic device for use by divers, comprising a portable water-tight and pressure-sealed housing, a complete and self-sufficiently operative echo sounding apparatus mounted within said housing and comprising an optical indicator and a current source, said sound-



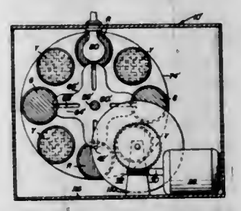
ing apparatus having manually adjustable mechanical control members, and water-tight seals through which said control members pass from within to the outside of said housing to permit manual adjustment under water.

3,045,207
WAVE TRANSMISSION SYSTEM
Raymond A. Peterson, Altadena, Calif., assignor to United Geophysical Corporation, Pasadena, Calif., a corporation of California
Filed July 15, 1955, Ser. No. 522,234
2 Claims. (Cl. 340—15)



1. The method of removing phase distortion from waves passing through a network which comprises impressing a pulse on the input of the network and recording the impulse response, then establishing a pattern of separate playback devices having individual outputs with time positions, relative amplifications and polarities situated at the positions of the centroids of successive lobes of the impulse response, then sending a signal through the network and making a reproducible record thereof, then playing back said reproducible record through said pattern of devices, combining the outputs of said devices and making a record of said combined outputs.

3,045,208
ROTATABLE STOP LIGHT
Mario Q. Tiberio, 722 Chambers Ave., Jeannette, Pa., assignor of one-half to Amalia Tiberio, Jeannette, Pa.
Filed Apr. 5, 1961, Ser. No. 100,944
3 Claims. (Cl. 340—107)



1. A traffic signal device comprising an enclosed housing having face, back and side portions, a signal wheel rotatably secured juxtaposed the inner surface of the face portion about a horizontal axis secured to the face portion and adjacent the back portion of the housing, a plurality of equal size colored translucent signal members spaced about the periphery of the wheel, a single aperture

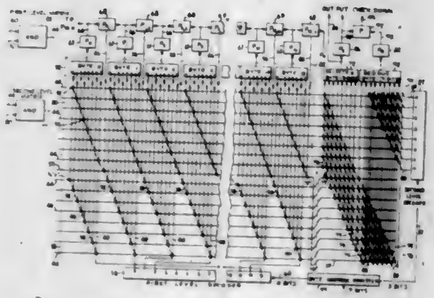
in the face portion of the housing of equal size with a single signal member and positioned for selectively exposing one of said signal members at a time upon rotation of the signal wheel, an artificial light source secured to the housing and located directly behind the signal wheel in alignment with the aperture in the face portion, the translucent signal members comprising two red members, two green members and four yellow members, each red member being spaced 180° apart, each green member spaced 180° apart on a line perpendicular to the red signal members, and each yellow member located directly between a red member and a green member, motor means mounted in the housing, a drive shaft on said motor means, a worm gear at its outer end meshing with a gear mounted on an axis parallel to the signal wheel axis and secured to the housing, a holding wheel mounted on the gear axis in driving contact with a trip wheel mounted on the signal wheel axis, thereby forming a Geneva mechanism for automatic intermittent movement of the signal wheel, a three-way switch means connecting the artificial light source and motor means to a source of electricity, and a blinker switch connected to the three-way switch means whereby said three-way switch means can alternatively be operated to provide a steady light source and rotating signal wheel or a blinking light source and a stationary signal wheel.

3,045,209

CHECKING SYSTEM FOR DATA SELECTION NETWORK

James H. Pomerene, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Apr. 15, 1959, Ser. No. 806,523
8 Claims. (Cl. 340—147)



4. Apparatus for checking data transfer comprising a storage register, said storage register having a plurality of storage elements which are arranged in a plurality of adjacent byte size groups of $N/2$ storage elements, each of said storage elements storing a bit of information which is represented by a first or a second signal, means for generating a parity bit which is representative of the number of first bit representing signals in two adjacent bytes of $N/2$ bits, first selecting means, said first selecting means arranged in a number of column lines which are connected to said storage elements and said parity bit generating means, $N+1$ row lines, and a number of control lines which intersect said column lines, each control line intersecting all of said $N+1$ row lines and the column lines which are connected to the plurality of storage elements of two adjacent byte size groups of $N/2$ bits of information and their associated parity bit generating means, said control line being separated from each other by

$$\frac{N}{2}+1$$

column lines, a plurality of switching elements each associated with a different intersection of said row, column and control lines, means for selecting and energizing one of said control lines to read out the bit representing signal applied to the group of $N+1$ switching elements which are located along it and applying them to the row lines which are associated with said switching elements, a second selecting means, said second selecting means arranged in $N+1$ column lines, $N+1$ row lines and N control lines, each of said row and control lines intersecting all of said second selecting means column lines and said control lines being separated from each other by one column line, a switching element associated with a different intersection of said row, column and control lines of said second selecting means, said row lines of said second selecting means being continuations of said row lines of said first selecting means, a second storage register having $N/2$ storage elements, means for connecting the $N/2$ column lines of said second selecting means to the storage elements of said second register which are not associated with the switching elements to which the parity bit representing signal is applied, a third register having

$$\frac{N}{2}+1$$

storage elements, means for connecting the remaining

$$\frac{N}{2}+1$$

column lines to the storage elements of said third register, means for selecting and energizing a control line of said second selecting means to read out the bit representing signals applied to the $N+1$ switching elements located along it onto associated column lines of said second selecting means, $N/2$ bit representing signals being read out into said second register and $N/2$ bit representing signals plus the parity bit representing signal being read out into said third register, means connected to said second register for checking the parity of $N/2$ bit representing signals stored in it and producing a first parity signal which is indicative thereof, means connected to said third register for checking the parity of the

$$\frac{N}{2}+1$$

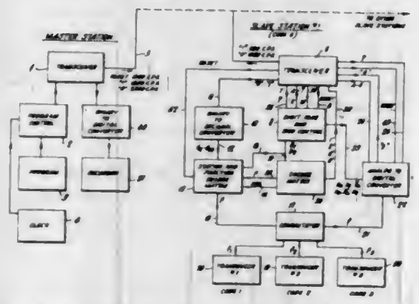
bit representing signals stored in said third register and producing a second parity signal which is indicative thereof, and means connected to said means for producing said first and second parity signals for comparing said first and said second parity signals to produce a signal indicative of the correctness of the data transfer between the first register and the second register.

3,045,210

DIGITAL TELEMETERING APPARATUS

Lawrence W. Langley, Waynesboro, Va., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed Oct. 22, 1959, Ser. No. 848,088
6 Claims. (Cl. 340—150)



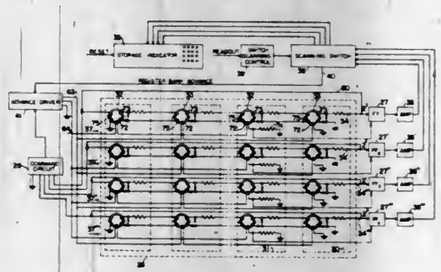
1. A digital telemetering system operable to cyclically transmit from each of a plurality of slave stations to a master station the instantaneous indication of the outputs of each of a plurality of transducers at each such slave station upon interrogation by the master station, comprising first means at the master station for alternately transmitting binary-coded decimal messages each of at least two digits each including at least four bits to all said slave stations requesting an indication of the output of one of said transducers at one of said slave stations and for receiving messages from each of said slave stations and recording the indications of said transducers contained in such messages, program means for controlling said first means to cyclically code the transmission thereof to request the outputs of sequential ones of said transducers at sequential ones of said slave stations, the first and second transmitted ones of said digits indicating by their respective decimal values the selected slave station and the selected transducer whose indication is to be thereafter reported to the master station; at each slave station: second means for alternately receiving messages from said master station and for transmitting binary-coded decimal messages each of at least three digits each including at least four bits to said master station, a signal comparator having a pair of signal inputs and operable when one of two input signals is the larger to furnish one output and to furnish a different output when the other signal is the larger, a commutator having the outputs of said plurality of transducers at that station connected thereto and operable to connect the output of a selected one of such transducers to one input of the comparator, third means connected between the output of said comparator and said second means operable to cause the second means to transmit one binary indication when the signal comparator furnishes said one output and to transmit the other binary indication when the signal comparator furnishes said different output, a timer for furnishing cyclic voltage pulses, fourth means including a bit ring generator operable when supplied with sequential voltage pulses to sequentially and cyclically supply a first set of four independent actuating pulses, said second means being operable to develop a voltage pulse for each bit received from said master station, fifth means connecting the voltage pulse output of said second means to said bit ring generator to cycle it while a message is being received from said master station, a digit ring generator operable when supplied with sequential voltage pulses to sequentially supply at least three independent voltage gate pulses, sixth means connecting one of said independent actuating pulses from said fourth means to said digit ring generator to cycle it while the bit ring generator cycles, a first one of said voltage gate pulses being coincident with the digit first received from the master station, seventh means for decoding the successive digits received from the master station, first coincidence means responsive to coincidence of said first voltage gate pulse and the decimal code of the particular station to furnish an output, a second one of said voltage gate pulses being coincident with a second-received digit from the master station, second coincidence means responsive to coincidence of the output of said first coincidence means, said second voltage gate pulse and the decimal code of a particular transducer to select the transducer connected through said commutator to said one input of the comparator, the next one of said voltage gate pulses being subsequent to the digit last received from the master station and being operable to reset the digit ring generator and to connect the output of said timer to said bit ring generator to cycle it, eighth means supplied with the outputs of said first and second coincidence means and operable at the selected slave station during the succeeding first and second digit voltage gate pulses to cause said second means to transmit to the master station binary-coded decimal indications of the selected slave station and the selected transducer replying, at least one set of four sources of progressively lower amplitude signals in the 8, 4, 2, 1 progression, a corresponding plurality of switch means each operable when actuated to connect a different one of said sources to the other input of said comparator, each one of said actuating voltage pulses from said fourth means being supplied to a different one of said switch means to actuate them progressively in order during a third-generated one of said voltage gate pulses, each of said switch means normally remaining actuated after being actuated by said fourth means to connect a progressively higher amplitude signal to said other input of the comparator, ninth means connected between the output of said comparator and each of said switch means operable immediately after each switch means has been actuated to de-actuate it in the event said comparator provides said different output, indicating that said other signal is larger than said one signal, and tenth means responsive to the beginning of receipt of a message from the master station to de-actuate each of said switch means and to reset said bit and digit ring generators.

3,045,211

BISTABLE CIRCUITS

Isaac L. Auerbach, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

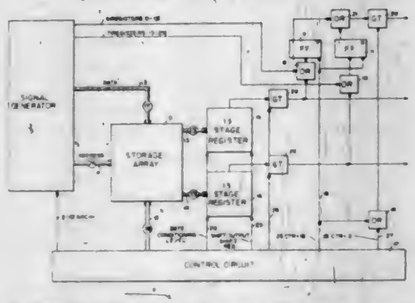
Filed Aug. 1, 1952, Ser. No. 302,217
22 Claims. (Cl. 340—172.5)



9. An electronic system comprising a register having a plurality of information storage banks and adapted to advance information stored therein in a step-by-step manner, a scanning means having a plurality of banks of contacts, a visual indication means comprising a plurality of banks of gaseous discharge circuits, buffer means associating said scanning means with said register and adapted to prevent electrical signals from said scanning means entering said register, synchronizing means adapted to synchronize the advance of information in said register with said scanning means so that as the information stored in each bank of said registers is advanced the scanning means is caused to electrically associate successive banks of contacts to the register through said buffer means, individual banks of contacts being connected to individual banks of said gaseous discharge circuits so that the information presented to said scanning means by said storage banks is transmitted to corresponding banks of said gaseous discharge circuits, each of said gaseous discharge circuits comprising a pair of gaseous discharge devices each having two electrodes and each of said gaseous discharge devices requiring a firing potential in excess of that required to maintain a discharge, means connecting said devices in parallel, supply means connected for providing a constant potential in excess of said firing potential to said devices, an impedance connected between the supply means and said devices of such value that glow discharge current from one device drops the potential to said parallel connected devices below the firing potential and above the maintaining threshold potential; means in said electronic system for momentarily interrupting the discharge path of one device in response to only one predetermined register condition to initiate

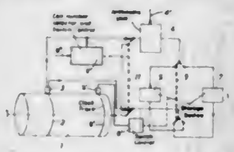
one stable state, reset means, and means providing an external extinguishing potential to the other device in response to a signal from said reset means to initiate the other stable state.

3,045,212
CHECKING CIRCUIT
Ellsworth L. Johnson, Billerica, Mass., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 26, 1956, Ser. No. 614,775
8 Claims. (Cl. 340—172.5)



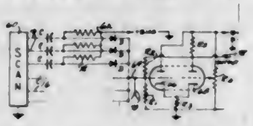
1. A digital signalling system comprising a signal storage array having a plurality of magnetic cores arranged coordinately in rows and columns, means to selectively store data signals in said rows of cores by coincident energization of data signal carrying conductors and address signal carrying conductors and to store a busy signal in one core of each row when that row has received an address signal on its address signal carrying conductor, and means to combine the number of said data signals stored in said storage array and the number of said busy signals stored in said array.

3,045,213
MAGNETIC STORAGE SYSTEM
Hans Zschekel, Stuttgart, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 3, 1956, Ser. No. 625,700
Claims priority, application Germany Dec. 6, 1955
1 Claim. (Cl. 340—172.5)



A magnetic storage system comprising a rotatable storage device having a plurality of sequential storage cells thereon, a combined reading and writing head having a reading output and a writing input arranged in operative relation with said device for reading information from and writing information into said cells, an arithmetic unit arranged for performing selected arithmetical operations on information fed thereto, means for feeding information from the reading output of said head to said arithmetic unit, an intermediate storage system comprising two intermediate storage devices, switching means for alternatively connecting the output of said arithmetic unit to the input of the first of said intermediate storage devices and the output of the second of said intermediate storage devices to the writing input of said head or the output of said arithmetic unit to the input of the second of said intermediate storage devices and the output of said first of said storage devices to said writing input of said head, means controlled by signals from said reading output for operating said switching means at each rotation of said storage device, and means responsive to the seizure of the same cell in two successive rotations of said storage device for preventing the reading of the cell during the second rotation and connecting the output of the intermediate storage device whose input was connected to the output of the arithmetic unit during the first rotation to the input of said arithmetic unit, whereby information stored in said last-mentioned intermediate storing device is fed to said arithmetic unit for the purpose of effecting a new correction, said means comprising a comparator, first means for feeding a selected identifying signal to said comparator, second means including a delay device arranged to produce a delay equal to the time of one rotation for feeding said selected signal to said comparator, said comparator adapted to produce a signal when the same signals are fed simultaneously to said comparator over said first and second feeding means, switching means for disconnecting the reading and writing head from the input of the arithmetic unit and connecting the outputs of the intermediate storage devices to said arithmetic unit when said switching means is in a first condition and alternatively connecting said head to said arithmetic unit and the outputs of said intermediate storage devices to said head when said switching means is in a second condition, means for normally maintaining said switching means in said second condition, and means responsive to the signal from said comparator for causing said switching means to assume said first condition.

3,045,214
REGENERATED REGISTERS
Robert B. Hammett, 428 Whitney Bank Bldg., New Orleans 12, La.
Filed Jan. 14, 1960, Ser. No. 2,431
18 Claims. (Cl. 340—173)

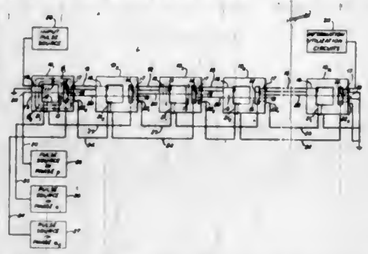


1. A regenerative circuit comprising means for repeatedly generating scan signals in at least one input channel, variable impedance means in the channel responsive to said signals in one of at least two manners dependent upon which of at least two conditions a scan signal finds said means to occupy, and regenerative means coupled to said channel and operative with said variable impedance means to provide an effective negative resistance region for maintaining the variable impedance means in any one of its said conditions in response to said scan signals.

3,045,215
ELECTRICAL CONTROL CIRCUITS
Umberto F. Gianola, Florham Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 25, 1959, Ser. No. 822,907
13 Claims. (Cl. 340—174)

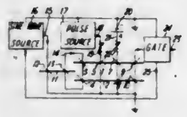
1. An electrical control circuit comprising a plurality of multi-apertured magnetic core structures, each of said structures having substantially rectangular hysteresis characteristics and each having an input leg, an output leg, an intermediate leg, and means for completing a first flux path through said input and intermediate legs and a second flux path through said input and output legs; a plurality of coupling circuits for coupling only said output leg of each of said core structures with said input legs of respective succeeding core structures, a priming winding and a first and second advance winding for each

of said core structures, said priming winding and said first advance winding being coupled to said output leg and said second advance winding being coupled to said input leg of a core structure, a first shift circuit means including a first pulse source for connecting each of said priming windings in series, a second shift circuit means including a second pulse source for connecting the first



advance windings of first alternate core structures and the second advance windings of second alternate core structures in series, and a third shift circuit means including a third pulse source for connecting the first advance windings of said second alternate core structures and the second advance windings of said first alternate core structures in series.

3,045,216
MAGNETIC INFORMATION STORAGE DEVICES
Arthur Edward Brewster, London, England, assignor to International Standard Electric Corporation, New York, N.Y.
Filed Sept. 17, 1959, Ser. No. 840,771
Claims priority, application Great Britain Nov. 14, 1958
7 Claims. (Cl. 340—174)

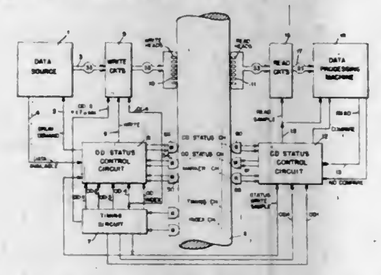


1. A threshold limiting arrangement for determining whether or not an input pulse of amplitude exceeding a given threshold is present at a given instant comprising: first and second similar cores of square-loop ferromagnetic material; means for supplying at the given instant a trigger pulse to a trigger winding on each of said cores, said trigger pulse having a defined volt-time product whereby not more than one core can be switched by said trigger pulse at said instant; means for supplying input pulses and a bias current to respective windings on at least one of each of said cores whereby one of the cores is switched by the trigger pulse if an input pulse of amplitude exceeding the given threshold is present at the said instant while the other core is switched by the trigger pulse if no such input pulse is present at the said instant; and an output winding on each core for deriving from the cores an output pulse which indicates which core has been switched by the trigger pulse.

3,045,217
SIGNAL STORAGE SYSTEM
Bennett Housman, Poughkeepsie, N.Y., Richard C. Jeffrey, Princeton, N.J., Rollin P. Mayer, Concord, Mass., and Donald B. Thompson, Poughkeepsie, N.Y., assignors, by direct and mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Filed Sept. 26, 1956, Ser. No. 612,268
4 Claims. (Cl. 340—174.1)

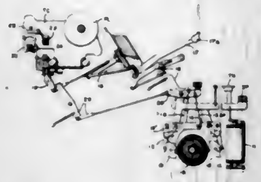
3. A magnetic drum system for storing data words in the form of coded signal combinations,

comprising a magnetic drum,
said drum having a multiplicity of axially extending signal storage registers,
each said signal storage register being adapted to store a data word of said coded signal combinations,
said signal storage registers being arranged around the periphery of said drum in successive relation for data translation,
an index channel extending around the periphery of said drum including an element corresponding to each said signal storage register,
said index channel having a signal of one value recorded in one element and signals of another value recorded in all the other elements,
a timing channel extending around the periphery of said drum including an element corresponding to each said signal storage register,
said timing channel having a signal of the same value recorded in each element,
a marker channel extending around the periphery of said drum including a marker element corresponding to each said signal storage register,
each said marker element having a message translation control signal recorded therein,
the message translation control signals in successive marker elements being arranged in a plurality of series of signals for controlling the translation of multi-word messages to the corresponding plurality of groups of said signal storage registers,



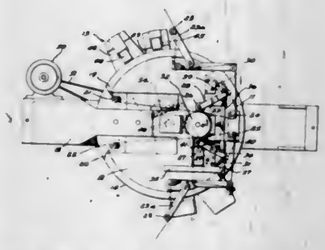
each said series of message translation control signals including a first signal of one value followed by second signals of a different value so that each said series is effective to identify the corresponding group of signal storage registers,
two data storage status control channels extending around the periphery of said drum,
each said data storage status control channel including a status control element corresponding to each said signal storage register,
means to record in each data storage status control element of one data storage status control channel a signal indicating the availability of the corresponding signal storage register to receive a data word,
means to record in each data storage status control element of the second data storage status control channel a signal indicating that a data word is stored in the corresponding signal storage register,
means to read the signals recorded in said marker channel elements and said data storage status control channel elements,
and means for translating a multi-word message relative to a group of said signal storage registers in response to the sensing by said reading means of a said first signal in a marker channel element whereby the first signal storage register of the group is identified and a signal from the data storage status control channel element corresponding to that first register of that group of signal storage registers indicating the availability of that group of signal storage registers for translation of the multi-word message.

3,045,218
MAGNETIC DATA RECORDING MEANS
Samuel Brand, 48 Crary Ave., Binghamton, N.Y.
Filed Nov. 23, 1956, Ser. No. 624,152
8 Claims. (Cl. 340—174.1)



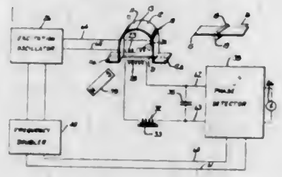
1. A typewriter structure having a platen supporting a record sheet for intraline steps of feed to present character spaces of a line successively to a typing position and item fields of a parallel line successively to a magnetic recording position offset from the typing position, type bars respectively mounting type heads of magnetic material, each integrally provided in fixed offset relation to a character type with a corresponding character coding combination of bi-polar permanent magnet heads for magnetic recording impact with an item field at the magnetic recording position concurrently with printing engagement of the type with a character space at the offset typing position.

3,045,219
MAGNETIC TRANSDUCING APPARATUS
Bernard E. Beckner, deceased, late of El Segundo, Calif., by Security First National Bank of Los Angeles, California, Westwood Village Branch, executor, Los Angeles, and Donald L. Drukey, Manhattan Beach, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 4, 1957, Ser. No. 681,973
9 Claims. (Cl. 340—174.1)



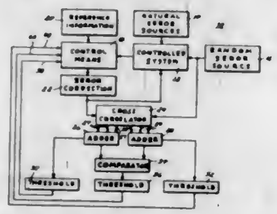
4. A magnetic playback system comprising: means positioned to support an elongated magnetic tape for movement in an arcuate path; a playback assembly mounted for continuous movement in a second path having path portions adjacent to said arcuate path and having other path portions remote from said arcuate path, said assembly including a pair of arms each including a magnetic playback head movable with respect to the other in directions along said arcuate path; each of said arms being mounted for pivotal movement about a common center for making a plurality of passes adjacent to said arcuate path during the time required for a single passage of said tape through said arcuate path; and positioning means connected between said arms for periodically changing the angular distance between said heads in said directions; said positioning means comprising a cam follower fixed to one of said arms at a position radially spaced from said common center, a cam mounted on the other of said arms for rotation in power transfer relation with said cam follower for determining a relative angular displacement of said heads with respect to each other, and cam energizing means connected to said cam for rotation of said cam by equal angular increments only during positions of said playback assembly remote from said arcuate path; said energizing means comprising a ratchet wheel fixed to said cam, a pawl positioned in driving relationship with said wheel for effecting rotation thereof, and pawl actuation means responsive to the angular position of said assembly.

3,045,220
MAGNETIC MODULATOR SYSTEM
Marvin E. Anderson, Chicago, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
Filed Dec. 11, 1957, Ser. No. 702,097
2 Claims. (Cl. 340—174.1)



1. In combination, a magnetic head having a signal flux path and having means for coupling the signal flux path to a magnetic record medium to introduce a signal flux into said path, exciting means coupled to said signal flux path for applying oppositely directed high frequency magnetomotive forces to said signal flux path for cyclically varying the reluctance thereof, output winding means coupled to said flux path for providing a cyclically varying output signal in accordance with the variation of magnetic flux in said path, a ferroresonant circuit connected with said output winding means and comprising inductance means having a saturable core and capacitance means of value tuning said circuit to a first frequency f_1 when said saturable core is outside the saturation range and tuning said circuit to a higher frequency f_r when said saturable core is in the saturation range, means connected to said exciting means for maintaining said saturable core in the saturation range in operation of said head, said frequency f_r at which said ferroresonant circuit is resonant with said core in said saturation range being equal to a harmonic of the frequency of said exciting means to provide bistable operation of said head.

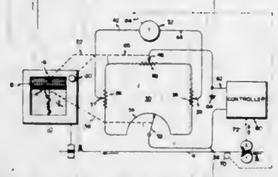
3,045,221
MONITORING DEVICE
Robert W. Roop, Sewell, N.J., assignor to General Atronics Corporation, Bala-Cynwyd, Pa., a corporation of Pennsylvania
Filed Jan. 22, 1958, Ser. No. 710,427
8 Claims. (Cl. 340—213)



1. Apparatus for monitoring a servo whose normal operation is subject to fortuitous disturbances, said apparatus comprising: means coupled to said servo and substantially continuously injecting into said servo random disturbances unrelated to said fortuitous disturbances and

having an average value of zero over a period which is long compared with the duration of any one of said random disturbances; means included in said servo and responsive to said disturbances to produce departures from said normal servo operation; means included in said servo and applying to said disturbance responsive means corrections opposing said departures; means coupled to said servo and extracting said corrections from said servo; and means coupled to both said injecting and extracting means and measuring the correlation between said injected disturbances and said extracted corrections.

3,045,222
TRANSPORTATION LAG COMPENSATOR
Philip Spergel, Saxonville, Mass., assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Nov. 3, 1958, Ser. No. 771,272
8 Claims. (Cl. 340—213)



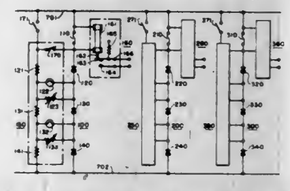
2. A control system for a continuous material processing apparatus having a variable process speed comprising: means for indicating an error proportional to the deviation of said material from predetermined conditions, means for generating a voltage which varies proportionally with said process speed, means combining said indicated error and said generated voltage for producing a signal which exhibits a variable error voltage sensitivity increasing with said process speed, and means for utilizing said signal to control said processing apparatus; said voltage generating means comprising a tachometer generator mechanically coupled to the speed of the process.

3,045,223
DEVICE FOR DETECTING THE PRESENCE OF FOREIGN MATERIAL
Narinder S. Kapany and Donald A. Pontarelli, Chicago, and Phillip J. Joseph, Franklin Park, Ill., assignors, by direct and mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware
Filed July 8, 1959, Ser. No. 825,712
10 Claims. (Cl. 340—234)



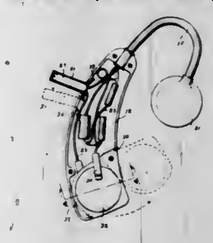
1. A device for detecting the presence of a light conducting medium other than the medium normally ambient to the device, comprising a pair of elongate light conveying bodies each provided with a flat light refracting surface extending for a portion of its length, means for supporting said pair of elongate light conveying bodies to maintain at least those portions of their lengths containing said flat light refracting surfaces in a closely spaced parallel relationship exposed to said normally ambient medium, a source of light positioned at one end of a first of said light conveying bodies, light sensing means positioned at one end of the second of said light conveying bodies, means positioned between said first and said second light conveying bodies for at least partially isolating from each other that portion of their lengths containing said flat light refracting surfaces, whereby said light conducting medium when placed in bridging and touching relationship between said light refracting surfaces increases the amount of light transmitted from the first of said light conveying bodies to the second of said light conveying bodies with the increased amount of light being sensed by said light sensing means.

3,045,224
DETECTION CIRCUIT FOR BLOWN FUSES
August P. Colaiaco, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 15, 1958, Ser. No. 767,419
6 Claims. (Cl. 340—250)



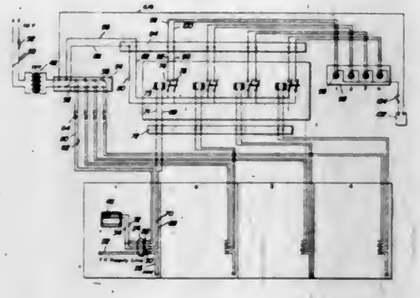
1. A detection circuit comprising; a plurality of paralleled series strings of electrical components, each said series string including a plurality of said electrical components connected in series with a protective fuse; a series failure indicating circuit comprising voltage dividing resistors, one for each of said electrical components, connected in series; each junction of said series connected resistors being connected through a visual indicating means to a like junction of said series connected electrical components; said visual indicating means indicating when a single one of said electrical components has failed; a parallel failure indicating circuit for each of said plurality of paralleled series strings including a trigger fuse connected across said protective fuse; each said trigger fuse operating to close an associated pair of contacts in response to the blowing of said trigger fuse; said pairs of contacts being connected in circuit relationship with an alarm energization circuit.

3,045,225
SLEEP PREVENTING DEVICE
Carroll F. Baldwin, 4504 Fleur Drive, Des Moines, Iowa
Filed July 28, 1958, Ser. No. 751,483
7 Claims. (Cl. 340—279)



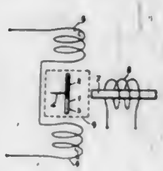
1. In a sleep alarm device, a housing, a cable secured at one end to said housing, an electrical noise producing means on the other end of said cable; said housing having a vertically curved side and a vertical slot in said curved side, a cylinder housing having one end portion extending into said slot and laterally vertically slidable in said slot, electric circuit means for generating an electrical noise producing signal, said electric circuit means having said electrical noise producing means connected therein by said cable and including a gravity actuated switch supported by said housing, and a source of electrical energy.

3,045,226
THEFT DETECTION SYSTEM FOR TELEVISION RECEIVERS OR THE LIKE
Willard B. Trayner, 1133 Winchester Road, Lexington, Ky., assignor of fifty percent to Russell Lutes, Lexington, Ky.
Filed Aug. 10, 1959, Ser. No. 832,658
11 Claims. (Cl. 340—280)



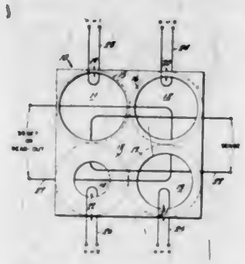
7. A theft detection system for an electrical device, comprising, a single line cord, disconnectible means operatively connecting the line cord to a source of current, enclosed means operatively mounted in the electrical device through which the line cord is operatively connected to the electrical device, and alarm circuit means operatively connected to the disconnectible means and operative to issue an alarm signal in response to either disconnection of the disconnectible means or disturbance of the enclosed means.

3,045,227
ELECTROMAGNETIC DEVICES FOR CONVERTING A MOVEMENT OF AN ELECTRIC VALUE
Giorgio Minas, Viale Causa 4/3, Genoa, Italy
Filed Dec. 2, 1958, Ser. No. 777,779
Claims priority, application Italy Jan. 27, 1958
2 Claims. (Cl. 340—345)



1. A transducer comprising, a rotor rotatably driven in operation about an axis through 360° in response to a physical phenomenon and driven variably in response to variations of the physical phenomenon, a stator having at least a pair of electrically connected angular spaced coils disposed radially of said rotor forming a primary winding having an axis normal to said rotor axis and energizable in operation for producing a revolving flux field in which said rotor revolves, stationary pick-off means spaced from said rotor for developing a sinusoidal signal comprising a secondary winding disposed perpendicular to the axis of said primary winding in which said sinusoidal signal is developed and having a permeable elongated core disposed coaxial with the rotor and axially spaced therefrom, said rotor having means for modulating the flux lines in said revolving field and inducing said sinusoidal signal in said secondary winding through said permeable core comprising a magnetic sector pole piece disposed for rotation coaxially with said secondary winding and said core and having a configuration assymetrical with the axis of said secondary winding for applying modulated flux to said permeable core thereby to induce in said secondary winding said sinusoidal signal at a constant amplitude.

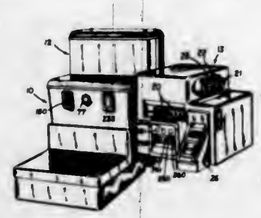
3,045,228
MAGNETIC CORE STORAGE DEVICE
Andrew J. Bullock, Jr., Ithaca, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 10, 1956, Ser. No. 627,246
11 Claims. (Cl. 340—347)



1. A magnetic core storage device comprising a plurality of magnetic cores capable of assuming opposite stable remanence states, a like plurality of input windings of which each is carried by a respective one of said cores and of which each is selectively adapted indendently of the others to receive a pulse to switch the corresponding core from a first to the second one of said opposite remanence states, said input windings being thereby adapted to switch to said second state any combination of cores selectable from said plurality thereof, reset winding means inductively linking all of said cores and adapted to receive pulses to switch simultaneously all the cores then in said second state to said first state, and sensing winding means inductively linked to all of said cores by a corresponding plurality of flux linkages of which each is made between a respective one of said cores and said sensing winding means, said flux linkages being each different from the others in flux-turn value but all providing the same sense of turning of flux around said sensing winding means relative to a given current direction therein, whereby each flux linkage is adapted to induce voltage in the same current direction in said sensing winding means in response to a change from said second to said first state of the core associated with such flux linkage, and said sensing winding means being thereby rendered responsive to said simultaneously switching by said reset winding means of any combination of said cores to produce an output voltage representative of the arithmetic sum of the flux-turn values associated with the cores so switched by said reset winding means.

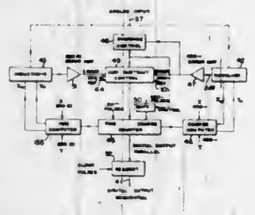
3,045,229
WEIGHING SCALES
Kenneth C. Allen, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Feb. 1, 1957, Ser. No. 637,725
8 Claims. (Cl. 340—347)

1. An analogue to digital converter for reading out the position of a movable member in the form of a multi-digit number including a lower and a higher order digit respectively, comprising an output circuit including a plurality of contacts arranged in a sequence and corresponding to said higher order digits, a pair of wipers movable relative to said contacts with said movable member in spaced leading and trailing relation and adapted alternately to engage the same and then adjacent ones of said contacts in succession, adjacent said contacts being spaced by a distance greater than the width of each said wiper to prevent bridging thereof by the same said wiper, read out means associated with said movable member for reading out the position thereof over a range of positions in said lower order digits, said lower order read out means including a plurality of relays one of which is always



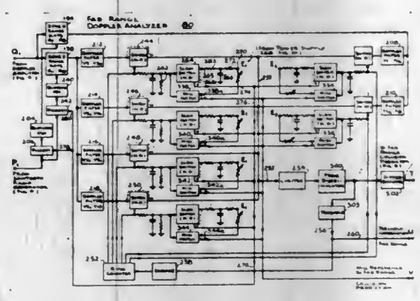
unoperated when the reading of said read out means is in one half of its range and is always operated when said reading is in the other half of said range, and said one relay having back and front contacts respectively in circuit with said wipers and arranged to connect said leading wiper in said output circuit when said reading is in the lower half of said range and to connect said trailing wiper in said output circuit when said reading is in the upper half of said range.

3,045,230
ANALOG-DIGITAL CONVERTER
Robert W. Tripp, Bronxville, and James L. Winget, Harrison, N.Y., assignors to Inductosyn Corporation, Carson City, Nev., a corporation of Nevada
Filed Mar. 12, 1958, Ser. No. 720,949
7 Claims. (Cl. 340—347)



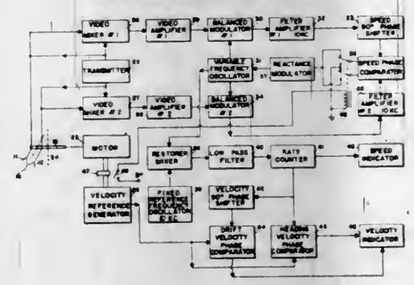
1. An analog-to-digital converter system comprising a closed-loop servo system including a counter supplying digital information signals, a computer having an input of said signals from said counter, said computer constituting a digital-to-analog converter supplying analog information signals in the form of sine and cosine voltages corresponding to the electrical angle represented by the digital count, a device having an input of said analog information signals, said device having a relatively rotatable winding and relatively stationary windings in space phase receiving said analog information signals, said device having an independent analog shaft position input for said relatively rotatable winding, said device having an analog error signal depending on the relation between the position of said shaft and said relatively rotatable winding and the analog signal input to its said space phase windings, an add-subtract control having an input of said analog error signal, and means comprising said add-subtract control for driving said counter in the proper direction to reduce said analog error signal substantially to zero when the digital count corresponds to the shaft position of the said relatively rotatable winding.

3,045,231
SIGNAL ANALYZING METHOD AND SYSTEM
Emory Lakatos, Santa Monica, and Everett M. Goodell, Palos Verdes Estates, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Apr. 17, 1958, Ser. No. 729,118
14 Claims. (Cl. 343—5)



3. In an echo type range response system of the type including radiation transmitting and receiving means connected to provide radiation return signals in the presence of an object in a region of space spaced from said system, a return signal analyzing arrangement comprising: a plurality of distance range gating circuits each adapted to be connected to said receiving means to pass only signals indicative of the presence of an object within a different respective predetermined distance range relative to said system; a plurality of velocity range gating circuits, with at least one velocity range gating circuit associated with each of said distance range gating circuits; a signal utilization circuit connectable to receive an output signal from a velocity range gating circuit; and means connected to sample each of said velocity range gating circuits for the presence of object-representing-signals and to connect a velocity gating circuit to provide an output in said utilization circuit only in the presence of a signal representative of a detected object having distance and velocity parameters to which said last-named velocity circuits and the distance gating circuit with which it is associated is sensitive.

3,045,232
ELECTRONIC VELOCITY INDICATOR APPARATUS
William R. Mercer, Belmont, Mass., and Kenneth Dollinger, Derry, N.H., assignors, by mesne assignments, to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Mar. 30, 1956, Ser. No. 575,697
12 Claims. (Cl. 343—8)



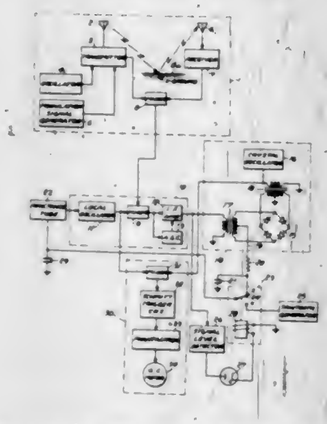
1. A Doppler system comprising a pair of antennas, a source of high frequency electrical energy, means connecting energy from said source to said antennas to cause said antennas to radiate signals in two beams which

intersect, said two intersecting beams being characterized by a null axis such that echo signals of equal frequency reflected along said null axis maintain a constant relative phase difference, a local oscillator, modulator means associated with each of said antennas for heterodyning the output of said local oscillator with a signal derived from the associated antenna, a comparator for comparing the phases of the outputs of said modulator means, and means responsive to the output of said comparator to cause the frequency of said local oscillator to change in a direction causing the phases of the compared signals to attain a predetermined and constant phase relation with respect to one another.

3,045,233
FREQUENCY MODULATION RADIO ALTIMETER

Arthur J. Katz, Wayne, and Robert T. Adams, Short Hills, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Jan. 21, 1958, Ser. No. 710,206
8 Claims. (Cl. 343—14)



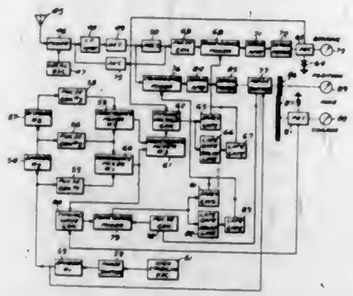
1. A distance measuring system comprising means to transmit a frequency modulated signal and means to detect its echo, a mixer coupled to said transmitting means and said detecting means to beat the transmitted and detected signals producing a beat frequency signal indicative of distance, a variable frequency generator, means coupled to said mixer to compare said beat frequency signal with the output from said variable frequency generator to produce a frequency difference signal, means responsive to both the frequency and the phase of said frequency difference signal and to a fixed reference signal to control said variable frequency generator to maintain said frequency difference signal constant and means responsive to the output of said variable frequency generator and said fixed reference signal to indicate distance.

3,045,234
NAVIGATION SYSTEM

Peter C. Sandretto, East Orange, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed July 2, 1959, Ser. No. 824,553
7 Claims. (Cl. 343—106)

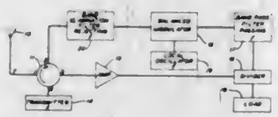
1. A navigation system for determining the bearing and range of a vehicle relative to a transmitting station comprising, at said station, means to generate pulsed electromagnet signals, means to radiate said pulsed electromagnetic signals in a rotating directional beam pattern and a timer to control the generation of said pulsed electromagnet signals, the rotation of said directional beam pattern and the time of transmission of said pulsed signals; and at said vehicle, a signal receiver, timing means in time synchronism with said timer at said station, means responsive to said timing means to measure the time difference between the known time of occurrence of a predetermined position of said beam pattern and the time when the transmitted signal is received by said aircraft which is indicative of the bearing of said vehicle relative said transmitting station, and means to measure the time difference between the known transmission of a pulse at said station and the reception of said pulse by said receiver which is indicative of the range of said vehicle relative said transmitting station.



3,045,235
DUPLEX STATION EMPLOYING A REFLEX TRAVELING WAVE AMPLIFIER AND FREQUENCY CONVERSION

Dietrich A. Alsberg, Berkeley Heights, and Eugene C. Denton, Morris Plains, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 1, 1959, Ser. No. 810,505
6 Claims. (Cl. 343—180)

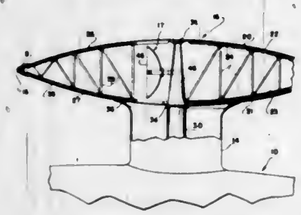


1. In combination:
a circulator having first, second, third and fourth ports;
signal frequency receiving means connected to said first port;
an amplifier connected to said third port;
a signal frequency band elimination filter connected to said second port;
said band elimination filter comprising means for reflecting signal frequency energy, whereby signal frequency energy from said receiving means is transmitted to said amplifier via said first, second and third ports;
a power divider connected to said amplifier;
a load connected to one output of said power divider and a signal frequency bandpass filter connected to another output of said power divider;
said power divider comprising means for channeling part of the output of said amplifier to said load regardless of frequency and for channeling the remaining amplifier output to said signal frequency bandpass filter;
a balanced modulator having an input end connected to said bandpass filter and an output end connected to band elimination filter;
and a source of local oscillator frequency energy connected to said balanced modulator;
said balanced modulator comprising means for establishing an upper sideband frequency which is equal to the sum of said signal and local oscillator frequencies and a lower sideband frequency which is equal to the difference of said signal and local oscillator frequencies;
said band elimination filter further comprising means for conducting both said upper and lower sideband frequencies to the second port of said circulator.

3,045,236
ROTATABLE RADOMES FOR AIRCRAFT

Philip A. Colman, Beverly Hills, and Eugene C. Frost, Burbank, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Sept. 28, 1954, Ser. No. 458,874
9 Claims. (Cl. 343—705)

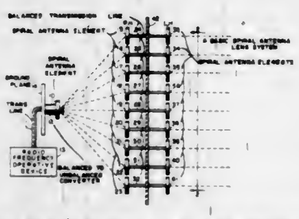


1. In an aircraft having a body comprising a fuselage, wings and empennage the combination of, a disc shaped radome arranged at the exterior of the body to have its maximum diameter generally parallel to the direction of flight, the radome including an electromagnetic energy reflective metal major wall portion having a high strength to weight ratio and a second portion constructed of material substantially transparent to high frequency electromagnetic energy having a low strength to weight ratio as compared with that of the major wall portion, an antenna fixed within the radome and arranged to "look" through said second portion, means supporting the radome and antenna on the body for rotation as a unit about the central axis of the radome generally normal to the plane defined by the peripheral edge thereof, and means in the body for rotating the radome and antenna as a unit at a substantially constant rate to scan a full 360 degree sector of space.

3,045,237
ANTENNA SYSTEM HAVING BEAM CONTROL MEMBERS CONSISTING OF ARRAY OF SPIRAL ELEMENTS

Arthur E. Marston, 718 Putnam Place, Alexandria, Va.

Filed Dec. 17, 1958, Ser. No. 781,171
17 Claims. (Cl. 343—754)
(Granted under Title 35, U.S. Code (1952), sec. 266)

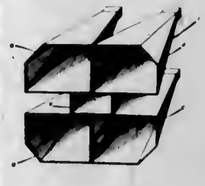


10. A directional antenna for a radio frequency device, comprising, a primary antenna connected to the radio frequency device, a ground plane disposed on one side of said primary antenna in proximity thereto, a group of secondary antenna elements disposed in a broadside array interposed between said ground plane and said primary antenna, said secondary antenna elements being space coupled to said primary antenna, reradiation control means connected to each secondary antenna element for producing reradiation by each secondary antenna element with selected time delay after energy is incident thereon.

3,045,238
FIVE APERTURE DIRECTION FINDING ANTENNA

Theodore C. Cheston, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed June 2, 1960, Ser. No. 33,601
7 Claims. (Cl. 343—776)

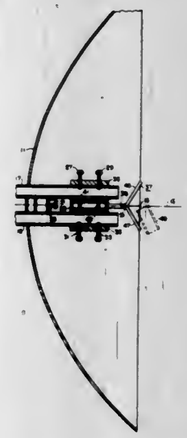


1. A multi-lobe microwave antenna, comprising four separate antenna means arranged generally in the form of a rectangle, one of said antenna means being positioned at each corner of said rectangle, and a fifth antenna means disposed centrally of said four antenna means, said four antenna means being arranged to form an upper pair and a lower pair of antenna means, the two antenna means comprising each such pair being disposed immediately adjacent one another, and the two pairs of antenna means being spaced from one another vertically, said fifth antenna being disposed centrally within said space between said two pairs.

3,045,239
PARABOLIC FEED SYSTEM

Cyril E. McClellan, Glen Burnie, and Leon W. Rustad, Linthicum, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

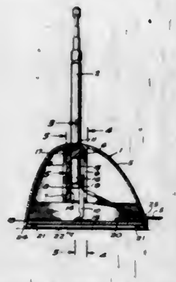
Filed Dec. 14, 1949, Ser. No. 132,918
9 Claims. (Cl. 343—776)



1. In a system for transmission and reception of high frequency wave energy, the combination of a symmetrical main wave reflector, a pair of wave energy conducting elements having their translating portions symmetrically disposed about and spaced from the axis of symmetry of said main wave reflector, and a symmetrical auxiliary wave reflector having a pair of non-coplanar

plane reflecting surfaces located with respect to said conducting elements so that their line of intersection lies inside the focal point of said main wave reflector.

3,045,240
RABBIT EAR ANTENNA
Robert D. Raynor, Reseda, Calif., assignor to Clear Beam Antenna Corporation, Los Angeles, Calif., a corporation of California
Filed Nov. 12, 1959, Ser. No. 852,440
11 Claims. (Cl. 343—805)



1. In an indoor antenna assembly having two dipoles extending upwardly therefrom and frame means within a shell forming the exterior of the assembly, said dipoles being pivotally secured to said shell, the improvement comprising: said shell being of one piece having two slots therethrough, each of said slots extending from a position adjacent the top of said shell to a lower lateral position in said shell; said slots being in the same vertical planes and being horizontally aligned; one of said pivotally mounted dipoles extending outwardly of said shell through one of said slots; the other of said dipoles extending outwardly of said shell through the other of said slots; said shell having an open bottom; said frame being fitted in said shell between ribs extending inwardly from the inner surface of said shell; said frame having downward directed legs extending therefrom; each of said legs having a transverse resilient portion extending from the lower end thereof; a base plate fitted within said open bottom, detents extending inwardly from the edges adjacent said open bottom; said edges adjacent said bottom being resilient so as to permit portions of said base plate which are of greater width than the distance between said detents to be snapped into said open bottom and above the surface of said detents so as to be supported thereby, said transverse members on said legs being biased against said plate so as to hold said plate against said detents and so as to hold said frame member in contact with the upper interior surface of said shell.

3,045,241
OSCILLOGRAPHIC CAMERA
Carl H. Savit, Van Nuys, Calif., assignor to Western Geophysical Company of America, Los Angeles, Calif., a corporation of Delaware
Filed Mar. 18, 1957, Ser. No. 646,731
5 Claims. (Cl. 346—109)

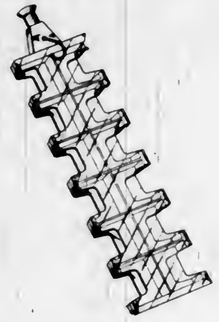


1. In a channelized oscillographic camera of the type wherein a plurality of light beams are transmitted for recordation to a recording film moving at a constant rate from a plurality of mirrors which oscillate to vary the position of the light beam in the respective channel perpendicular to the direction of motion of the recording film to provide a time-scale record of the oscillations of the mirrors, means for varying the time-scale position at which the light beam strikes the moving recording film in each of said channels, comprising: a plurality of light-inflecting elements each interposed in the path of said light beam in a respective one of said channels, said light beam inflected by said element, each of said light-inflecting elements being independently movable to shift the time-scale position at which said respective light beam strikes said record, said shift being in the direction parallel to the direction of movement of said record, means for independently moving each of said light-inflecting elements to a pre-programmed rate-of-movement to shift the time-scale position of the light beam relative to the moving recording film in accordance with a predetermined function of time $F_n(t)$, said moving means varying said time-scale position continuously with respect to said constant rate-of-movement of said recording film during recording of said record.

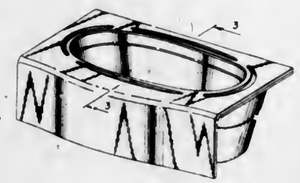
DESIGNS

JULY 17, 1962

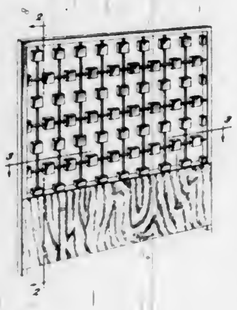
193,236
COMBINED HOLDER AND DISPENSER FOR PRICE TAGS
Philip Hopp, New York, and Robert H. Ensign, Bronxville, N.Y., and Danforth Cardozo, Jr., Weston, Conn., assignors to The Hopp Press, Inc., New York, N.Y., a corporation of New York
Filed July 28, 1961, Ser. No. 66,104
Term of patent 14 years
(Cl. D1—3)



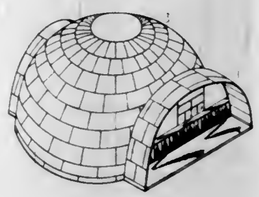
193,237
BATHTUB
Irvine E. Parker, R.D. 1, Sharpsville, Pa.
Filed Apr. 25, 1961, Ser. No. 64,891
Term of patent 14 years
(Cl. D4—4)



193,238
ROOM PARTITIONING SCREEN
George R. Chavatel, Newport News, Va., assignor to Newport News Shipbuilding and Dry Dock Company, Newport News, Va., a corporation of Virginia
Filed Nov. 25, 1960, Ser. No. 62,955
Term of patent 14 years
(Cl. D13—1)



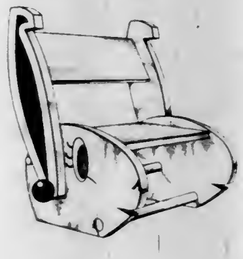
193,239
ROADSIDE BUILDING
Fred G. Owles, Jr., Orlando, Fla., assignor to George H. Rackensperger, Winter Park, Fla.
Filed Jan. 22, 1962, Ser. No. 68,409
Term of patent 14 years
(Cl. D13—1)



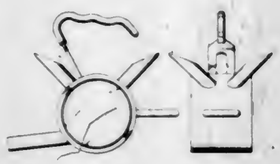
193,240
COMBINED GOLF CART AND TRAILER
William J. Whatley, 2705 NW. 16th St., Oklahoma City, Okla.
Filed Feb. 20, 1961, Ser. No. 63,988
Term of patent 14 years
(Cl. D14—3)



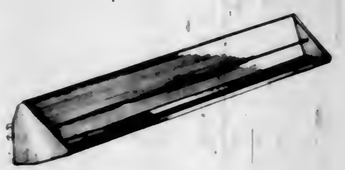
193,241
CONVERTIBLE STEP STOOL
Robert Goldman and Lillian Goldman, Louisville, Ky., assignors to Lili, Inc., Salem, Ind., a corporation of Indiana
Filed Aug. 28, 1961, Ser. No. 66,516
Term of patent 3½ years
(Cl. D15—1)



193,242
MILKING MACHINE COLLECTOR VESSEL OR THE LIKE
Lawrence Bouma, 12375 S. Euclid Ave., Ontario, Calif.
Filed Mar. 20, 1961, Ser. No. 64,377
Term of patent 14 years
(Cl. D23—1)



193,243
MAGAZINE RACK OR THE LIKE
Dave Chapman, Chicago, and Kim Yamasaki, Lombard, Ill., assignors to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 28, 1960, Ser. No. 62,655
Term of patent 14 years
(Cl. D33—2)



193,244
TRAY TABLE
Beatrice Bliss, P.O. Box 47607, Los Angeles, Calif.
Filed Apr. 22, 1960, Ser. No. 60,281
Term of patent 14 years
(Cl. D33—14)



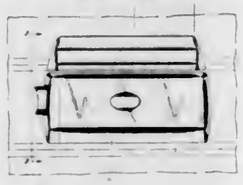
193,245
AERIAL TOY
William Clifford Knox, Jr., Seattle, Wash., assignor to Knox Instruments, Inc., Seattle, Wash., a corporation of Washington
Filed Oct. 2, 1961, Ser. No. 66,951
Term of patent 14 years
(Cl. D34—15)



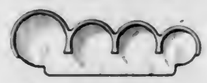
193,246
FLOWER POT
Dirk Laan, Spoorsingel 38, Bovenkarspel, Netherlands
Filed Sept. 5, 1961, Ser. No. 66,599
Term of patent 14 years
(Cl. D35—3)



193,247
LUGGAGE LOCK OR SIMILAR ARTICLE
Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Filed June 22, 1961, Ser. No. 65,679
Term of patent 14 years
(Cl. D50—7)



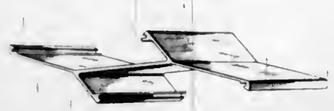
193,248
COMBINED COIN HOLDER AND DISPENSER
Joseph M. Chaban, 109 W. Main St., Bensenville, Ill.
Filed Nov. 22, 1961, Ser. No. 67,651
Term of patent 14 years
(Cl. D52—4)



193,249
RAILING PANEL
James J. O'Donaughy, 5295 Boundry Road, and James Stewart, 5075 Boundry Road, both of Vancouver, British Columbia, Canada
Filed Oct. 24, 1960, Ser. No. 62,601
Term of patent 3½ years
(Cl. D54—2)



193,250
SPACING UNIT FOR A GRILLE
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Jan. 12, 1961, Ser. No. 63,516
Term of patent 14 years
(Cl. D54—2)



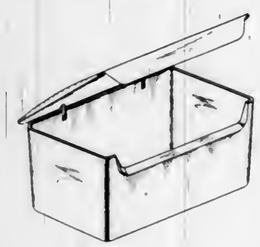
193,251
SUNGLASS FRAME FRONT OR THE LIKE
Albert C. Petitto, Hudson, Mass., assignor to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Filed Aug. 15, 1960, Ser. No. 61,748
Term of patent 14 years
(Cl. D57—1)



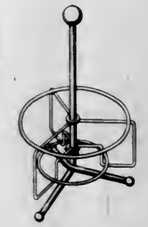
193,252
PAIR OF SPECTACLES FOR EYE MAKE-UP
Charles Baratelli, Reading, Pa., assignor to Gladys W. Holloway, Los Angeles, Calif.
Filed Aug. 9, 1961, Ser. No. 66,266
Term of patent 14 years
(Cl. D57—1)



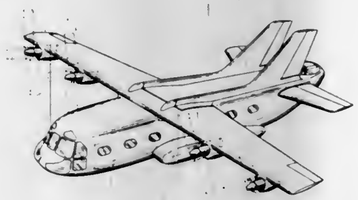
193,253
BOX
George R. Stehl, New York, N.Y., and Francis E. Blod, New Canaan, Conn., assignors to Domus Products Inc., New York, N.Y., a corporation of New York
Filed Sept. 28, 1960, Ser. No. 62,300
Term of patent 14 years
(Cl. D58—12.6)



193,254
BOTTLE RACK
Paul S. Klein, Los Angeles, Calif., assignor to "42" Products Ltd., Inc., Santa Monica, Calif., a corporation of California
Filed Jan. 29, 1962, Ser. No. 68,554
Term of patent 14 years
(Cl. D58—26)



193,255
VERTICAL TAKE-OFF AIRPLANE
Kenneth B. Gillmore, Havertown, and Robert B. Shannon, Secane, Pa., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 9, 1961, Ser. No. 63,595
Term of patent 14 years
(Cl. D71—1)



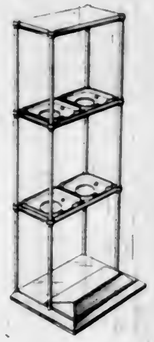
193,256
COMBINATION HOSIERY RIDER AND HANGER
Donald J. Silver, High Point, N.C., assignor to Silver Knit Hosiery Mills, Inc., High Point, N.C., a corporation of North Carolina
Filed May 1, 1961, Ser. No. 64,989
Term of patent 3½ years
(Cl. D80—8)



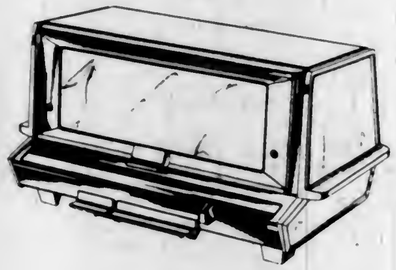
193,257
GARMENT HANGER
Jack M. Zuckerman, Elmhurst, N.Y., assignor to Yankee Plastics, Inc., New York, N.Y., a corporation of New York
Filed Jan. 17, 1962, Ser. No. 68,350
Term of patent 14 years
(Cl. D80—8)



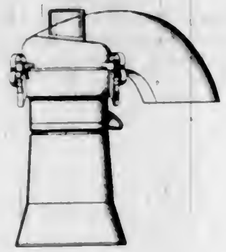
193,258
VENDING MACHINE STAND
Kenneth J. McPhail, 2500 Bathurst St., Apt. 408, Toronto, Ontario, Canada
Filed Dec. 14, 1961, Ser. No. 67,909
Term of patent 14 years
(Cl. D80—9)



193,259
COMBINATION TOASTER AND OVEN OR SIMILAR ARTICLE
Paul O. Rawson, Jr., Trumbull, Conn., and Roger L. Funk, Liverpool, N.Y., assignors to General Electric Company, a corporation of New York
Filed June 29, 1961, Ser. No. 65,852
Term of patent 14 years
(Cl. D81—10)



193,260
VEGETABLE JUICER
Henry A. Dewenter, 1477 Old Mill Road, San Marino, Calif.
Filed Aug. 25, 1961, Ser. No. 66,495
Term of patent 14 years
(Cl. D89—1)



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NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Asakawa, Yukichi: *See*—
Moriya, Saburo M., and Asakawa. Re. 25,201.
Brownell, Carl A., Jr. Method of constructing swimming pools. Re. 25,199, 7–17–62, Cl. 25—155.
Cathey, William B. Spring guide box front for loom shuttle box. Re. 25,198, 7–17–62, Cl. 139—185.
Clapp, Robert J., N. E. Latham, and J. G. Stansbury, to Swedlow Inc. Process for forming of stretched sheet material. Re. 25,202, 7–17–62, Cl. 18—56.
Huss, Glenn L.: *See*—
Robinson, Frederick A., and Huss. Re. 25,200.
International Patent Cooperation: *See*—
Moriya, Saburo M., and Asakawa. Re. 25,201.
Latham, Norton E.: *See*—
Clapp, Robert J., Latham, and Stansbury. Re. 25,202.
Moriya, Saburo M., and Y. Asakawa, to International Patent Cooperation. Apparatus for the ionization of electrons of flowable materials. Re. 25,201, 7–17–62, Cl. 313—153.
Robinson, Frederick A., G. L. Huss, to Robinson Mfg. Inc. Method of making a composite sheet. Re. 25,200, 7–17–62, Cl. 156—244.
Robinson Mfg. Inc.: *See*—
Robinson, Frederick A., and Huss. Re. 25,200.
Stansbury, John G.: *See*—
Clapp, Robert J., Latham, and Stansbury. Re. 25,202.
Swedlow Inc.: *See*—
Clapp, Robert J., Latham, and Stansbury. Re. 25,202.

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Tucker, William R. Pecan plant. 2,156, 7–17–62, Cl. 47—62.

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Baratelli, Charles, to G. W. Holloway. Pair of spectacles for eye make-up. 193,252, 7–17–62, Cl. D57—1.
Bliss, Beatrice. Tray table. 193,244, 7–17–62, Cl. D33—14.
Blod, Francis E.: *See*—
Stehl, George R., and Blod. 193,253.
Boeing Airplane Co.: *See*—
Gillmore, Kenneth B., and Shannon. 193,255.
Bouma, Lawrence. Milking machine collector vessel or the like. 193,242, 7–17–62, Cl. D23—1.
Brunswick Corp.: *See*—
Chapman, Dave, and Yamasaki. 193,243.
Cardozo, Danforth, Jr.: *See*—
Hopp, Philip, Ensign, and Cardozo. 193,236.
Chaban, Joseph M. Combined coin holder and dispenser. 193,248, 7–17–62, Cl. D52—4.
Chapman, Dave, and K. Yamasaki, to Brunswick Corp. Magazine rack or the like. 193,243, 7–17–62, Cl. D33—2.
Chavatel, George R., to Newport News Shipbuilding and Dry Dock Co. Room partitioning screen. 193,238, 7–17–62, Cl. D13—1.
Dewenter, Henry A. Vegetable juicer. 193,260, 7–17–62, Cl. D89—1.
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Stehl, George R., and Blod. 193,253.
Ensign, Robert H.: *See*—
Hopp, Philip, Ensign, and Cardozo. 193,236.
"42" Products Ltd., Inc.: *See*—
Klein, Paul S. 193,254.
Foster Grant Co., Inc.: *See*—
Petitto, Albert C. 193,251.
Funk, Roger L.: *See*—
Rawson, Paul O., Jr., and Funk. 193,259.
Gehrle, Charles S., to Presto Lock Co. Luggage lock or similar article. 193,247, 7–17–62, Cl. D50—7.
General Electric Co.: *See*—
Rawson, Paul O. Jr., and Funk. 193,259.
Gillmore, Kenneth B., and R. B. Shannon, to Boeing Airplane Co. Vertical take-off airplane. 193,255, 7–17–62, Cl. D71—1.
Goldman, Lillian: *See*—
Goldman, Robert and L. 193,241.
Goldman, Robert and L., to Lill, Inc. Convertible step stool. 193,241, 7–17–62, Cl. D15—1.
Hallock, Edward C. Spacing unit for a grille. 193,250, 7–17–62, Cl. D54—2.
Holloway, Gladys W.: *See*—
Baratelli, Charles. 193,252.
Hopp, Philip, R. H. Ensign, and D. Cardozo, Jr., to The Hopp Press, Inc. Combined holder and dispenser for price tags. 193,236, 7–17–62, Cl. D1—3.
Hopp Press, Inc., The: *See*—
Hopp, Philip, Ensign, and Cardozo. 193,236.
Klein, Paul S., to "42" Products Ltd., Inc. Bottle rack. 193,254, 7–17–62, Cl. D58—26.
Knox Instruments, Inc.: *See*—
Knox, William C., Jr. 193,245.
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Laan, Dirk. Flower pot. 193,246, 7–17–62, Cl. D35—3.
Lill, Inc.: *See*—
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McPhail, Kenneth J. Vending machine stand. 193,258, 7–17–62, Cl. D80—9.
Newport News Shipbuilding and Dry Dock Co.: *See*—
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O'Donaughy, James J., and J. Stewart. Railing panel. 193,249, 7–17–62, Cl. D54—2.
Owles, Fred G., Jr., to G. H. Rackensperger. Roadside building. 193,239, 7–17–62, Cl. D13—1.
Parker, Irvine E. Bathtub. 193,237, 7–17–62, Cl. D4—4.
Petitto, Albert C., to Foster Grant Co., Inc. Sunglass frame front or the like. 193,251, 7–17–62, Cl. D57—1.
Presto Lock Co.: *See*—
Gehrle, Charles S. 193,247.
Rackensperger, George H.: *See*—
Owles, Fred G., Jr. 193,239.
Rawson, Paul O., Jr., and R. L. Funk, to General Electric Co. Combination toaster and oven or similar article. 193,259, 7–17–62, Cl. D81—10.
Shannon, Robert B.: *See*—
Gillmore, Kenneth B., and Shannon. 193,255.
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O'Donaughy, James J., and Stewart. 193,249.
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Yamasaki, Kim: *See*—
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Zuckerman, Jack M. 193,257.
Zuckerman, Jack M., to Yankee Plastics, Inc. Garment hanger. 193,257, 7–17–62, Cl. D80—8.

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TO WHOM

PATENTS WERE ISSUED ON THE 17TH DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Broske, William F. 3,044,333.
Broske, William F. 3,044,334.

Abbott Laboratories: *See*—
Kurath, Paul, and Cole. 3,045,012.

Abresch, Carel F., and R. L. Mercer, to General Motors Corp. Dishwasher. 3,044,842, 7-17-62, Cl. 312—348.

Achelis, Johann D., R. Gall, E. Haack, and W. Voemel, to C. F. Boehringer & Soehne G.m.b.H. Process of producing solutions of chloramphenical in aqueous liquids, and composition. 3,044,936, 7-17-62, Cl. 167—65.

Ackell, Joseph J., and H. L. Paulding, to Dow Jones & Co., Inc. Printing machines. 3,044,395, 7-17-62, Cl. 101—65.

Adam, Robert L.: *See*—
Katz, Arthur J., and Adam. 3,045,233.

Adams, Cecil E., and J. P. Creek, to American Brake Shoe Co. Reversible flow control valve. 3,044,485, 7-17-62, Cl. 137—493.7.

Adelman, Barnet R., to Phillips Petroleum Co. Rocket motor. 3,044,254, 7-17-62, Cl. 60—35.6.

Aerojet-General Corp.: *See*—
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Easton, Edward A. 3,044,399.
Hanes, Vaughan D. 3,045,081.
Zwicky, Fritz. 3,044,252.
Zwicky, Fritz. 3,044,253.

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Bacher, Hans E., and La Marre. 3,044,163.

Affeldt, Walter A., to Allis-Chalmers Mfg. Co. Coupling. 3,044,813, 7-17-62, Cl. 287—114.

Agfa Aktiengesellschaft: *See*—
Baur, Carl. 3,044,380.
Gotze, Johannes. 3,044,875.

Agombar, Arthur B.: *See*—
Agombar, Edward D. and A. B. 3,044,170.

Agombar, Edward D. and A. B. Cable sheath slitting device. 3,044,170, 7-17-62, Cl. 30—91.

Ahlborn, John C.: *See*—
Chapman, Ronald W., Ahlborn, and Dille. 3,044,179.

Ahrens, Erhard, J. Schultes, A. Mies, and W. Kriebel, to Electroacustic G.m.b.H. Submarine sonic device. 3,045,206, 7-17-62, Cl. 340—3.

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Air Products and Chemicals, Inc.: *See*—
Mascioli, Rocco L. 3,045,018.

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Tanabe, Kenichi, Suda, Miyazaki, and Osugi. 3,044,974.
Miller, Henry A., Jr. 3,044,486.

Akabane, Niro, to Yashica Co., Ltd. (Japanese name Kabushiki Kaisha Yashica). Exposure control. 3,044,383, 7-17-62, Cl. 95—64.

Aktiebolaget Atvidabergs Industrier: *See*—
Stemme, Nils G. 3,044,678.

Alameda Gage Co.: *See*—
Kasten, Frederick M., Cooke, and R. Kasten. 3,044,178.

Albohn, Arthur R.: *See*—
Mitchell, Reid L., Albohn, and Palmgren. 3,045,007.

Alden, John M. Electrical element and method of insulating same. 3,044,127, 7-17-62, Cl. 18—59.

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Alldritt, Della M.: *See*—
Alldritt, Lawrence L. and D. M. 3,044,689.

Alldritt, Lawrence L. and D. M. Ventilating fan assembly. 3,044,689, 7-17-62, Cl. 230—273.

Allen, Harry C., to Grinnell Corp. Fusible link. 3,044,555, 7-17-62, Cl. 169—42.

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Allendorfer, Harry C. Roll dressing tool and holder. 3,044,148, 7-17-62, Cl. 29—96.

Allers, Carl, Etablissement A/S: *See*—
Aller, Claes B. 3,044,396.

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Alliance Machine Co., The: *See*—
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Honsinger, Verno. B. 3,045,135.
Tanke, Willard H. 3,044,712.

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Hansen, Hans R. A., and Norman. 3,045,161.

Alquist, Henry E., to Phillips Petroleum Co. Liquid dispensing apparatus. 3,044,502, 7-17-62, Cl. 141—119.

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Alsch, Gottfried: *See*—
Preissler, Karl, and Alsch. 3,044,806.

Alspach, Hardin S., N. L. Gamble, W. J. Hampshire, J. E. Mellinger, and H. Musch, to Goodyear Aircraft Corp. Apparatus for making fiber-resin parts. 3,044,117, 7-17-62, Cl. 18—20.

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Alton Box Board Co.: *See*—
Woodward, William W. 3,044,616.

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Raub, Samuel H. S., Alton, Joachim, and Palmquist. 3,044,489.

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American Sumatra Tobacco Corp.: *See*—
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American Thermostat Corp.: *See*—
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American Viscose Corp.: *See*—
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Hartnett, John J. 3,044,350.

Anke, Klaus, C. Kessler, and D. Ströle, to Siemens-Schuckertwerke Aktiengesellschaft. Analog computer for experimental investigation of control and regulating systems. 3,044,704, 7-17-62, Cl. 235—184.

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McManus, Frank C. 3,044,832.

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Atwood, Reginald C. Stud gun adapter. 3,045,105, 7-17-62, Cl. 219—98.

Audrieth, Ludwig F., and R. J. A. Otto, to University of Illinois Foundation. Phosphonitrilic isothiocyanate products and methods of preparing them. 3,044,846, 7-17-62, Cl. 23—14.

Auerbach, Isaac L., to Burroughs Corp. Bistable circuits. 3,045,211, 7-17-62, Cl. 340—172.5.

Avery, Ralph W. Tent installation. 3,044,476, 7-17-62, Cl. 135—1.

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Gaetani, Ermanno. 3,045,004.

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Bacher, Hans E., and R. R. La Marre, to Aeroquip Corp. Method of securing a fitting to a reinforced hose. 3,044,163, 7-17-62, Cl. 29—506.

Bachleder, Louis J., and G. J. Brazeal. Shock absorbing shipping container. 3,044,608, 7-17-62, Cl. 206—46.

Badalich, Frank C., to Bell & Howell Co. Projection of slides. 3,044,198, 7-17-62, Cl. 40—79.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Baumeister, Wilhelm, Gaeth, Haarer, and Schwarz. 3,044,970.
Dehnert, Johannes, and Gehm. 3,045,003.
Deuschel, Werner. 3,045,040.
Hensel, Hans R., and Baumann. 3,045,014.
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Bailey, Donald L.: *See*—
Jex, Victor B., and Bailey. 3,044,982.
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Bailey, Grant C.: *See*—
Holm, Vernon C. F., Bailey, and Clark. 3,045,054.

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Standing, Charles A., and Bailey. 3,044,795.

Baker, Edward A., Jr., to Palmer-Shile Co. Adjustable storage rack. 3,044,633, 7-17-62, Cl. 211—147.

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Baldi, Dewey J., to United States Steel Corp. Method of unclogging powder dispenser. 3,044,908, 7-17-62, Cl. 134—10.

Baldwin, Albert W. Saddle. 3,044,234, 7-17-62, Cl. 54—44.

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Ball, Thomas M., to Chrysler Corp. Fuel injection system. 3,044,457, 7-17-62, Cl. 123—119.

Ballantine, John M., to Babcock & Wilcox Ltd. Ball race pulverizer. 3,044,714, 7-17-62, Cl. 241—58.

Ballard, Louie W., and M. E. O'Dor, to North American Aviation, Inc. Mobile welding apparatus and method. 3,045,106, 7-17-62, Cl. 219—125.

Banks, Charles T., to Kimberly-Clark Corp. Papermaking machine. 3,044,766, 7-17-62, Cl. 270—73.

Baptist, James N., to W. R. Grace & Co. Process for preparing poly-β-hydroxybutyric acid. 3,044,942, 7-17-62, Cl. 195—47.

Barany, Robert, ¼ to Barbara Goldblatt. Screwdriver. 3,044,513, 7-17-62, Cl. 145—50.

Barber, Alfred W. Regulated power supplies. 3,045,169, 7-17-62, Cl. 321—18.

Barefoot, Joe W., to Volume Builders Corp. Method and apparatus for making ornamental objects. 3,044,670, 7-17-62, Cl. 223—46.

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Morway, Arnold J., Munday, Bartlett, and Muessig. 3,044,961.

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Baum, Engelbert, to Aktiebolaget Separator. Releaser for milking machine plants. 3,044,443, 7-17-62, Cl. 119—14.6.

Baumann, George P., and C. R. Lipuma, to Esso Research and Engineering Co. Absorber stripper and process. 3,044,952, 7-17-62, Cl. 208—82.

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Baur, Carl, to Agfa Aktiengesellschaft. Photographic camera. 3,044,380. 7-17-62, Cl. 95—44.

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Selfert, Hans. 3,044,969.
Zanki, Erich, and Hebermehl. 3,045,034.

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Bayly, Charles, and B. O. Walkley, to Imperial Chemical Industries Ltd. Rocket motor casings. 3,044,256. 7-17-62, Cl. 60—35.6.

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Bearden, Robert G., and L. G. Schwieger, to Phillips Petroleum Co. System for removal of gases from liquids. 3,044,236, 7-17-62, Cl. 55—204.

Bearden, Robert G., R. B. Kimball, H. Schneider, and L. G. Schwieger, to Phillips Petroleum Co. Process monitoring analyzer. 3,045 122, 7-17-62, Cl. 250—218.

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Beck, Joseph E., and M. Binks. Coin-operated game. 3,044,778, 7-17-62, Cl. 273—125.

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Bodo, Gerhard, Diskus, and Beck. 3,044,929.

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Boughton, George J., Dalrymple, and Taylor. 3,044,890.

Beckner, Bernard E., deceased (by Security First National Bank of Los Angeles, executor), and D. L. Druckey, to Thompson Ramo Wooldridge Inc. Magnetic transducing apparatus. 3 045,219, 7-17-62; Cl. 340—174.1.

Beers, Rollo O., to Continental Boiler and Sheet Iron Works. Anti-collision system. 3,044,418, 7-17-62, Cl. 105—163.

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Behrens, Heinz. Apparatus for mechanical treatment of material. 3,044,623, 7-17-62, Cl. 209—275.

Behrens, Ulrich, and M. Ringpfeil, to Serum-Werke Bernburg, VEB. Process for enzymatic synthesis of dextran. 3,044,940, 7-17-62, Cl. 195—31.

Belcastro, Louis E., to International Business Machines Corp. Multi-timing single shot using electronically selected constant circuits. 3,045,187, 7-17-62, Cl. 328—207.

Belden, Perry. Chlorinator for marine toilets with combined beater and syphon. 3,044,077, 7-17-62, Cl. 4—10.

Belisle, Adelard J. Reclining article of furniture having movable leg rest. 3,044,827, 7-17-62, Cl. 297—89.

Bell, Angus S., J. Smithlee, and J. A. Briggs, to British Celanese Ltd. Heat-insulating materials. 3,044,914, 7-17-62, Cl. 154—44.

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Bennett, Willard H. Space simulating device and method. 3,044,301, 7–17–62, Cl. 73—432.
Bent, William H., to Dunlop Rubber Co. Ltd. Fluid pressure generator and accumulator assembly. 3,044,405, 7–17–62, Cl. 103—50.
Berenbaum, Arthur, to Philco Corp. Heater control in laundry apparatus. 3,044,181, 7–17–62, Cl. 34—45.
Berger, Harold S., ½ to G. J. Hibbard. Device for assisting in swimming instruction. 3,044,186, 7–17–62, Cl. 35—29.
Berger, Richard S., to Shell Oil Co. Polymerization process. 3,045,001, 7–17–62, Cl. 260—93.5.
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Bernhardt, Otto, to Rome Cable Corp. Pipe thread wiping method and apparatus. 3,044,907, 7–17–62, Cl. 134—5.
Berry, Ferdinand W. Spacer members for the reinforcement of reinforced concrete structures. 3,044,217, 7–17–62, Cl. 50—512.
Bessiere, Pierre E. Self-regulating reciprocating pumps, in particular for the injection of fuel into internal combustion engines. 3,044,404, 7–17–62, Cl. 103—41.
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Bixby, Leon C., to Bix Co. Heat treating grid. 3,044,755, 7–17–62, Cl. 263—47.
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Blanchard, Robert W., to International Telephone and Telegraph Corp. Transistor phase shift oscillators. 3,045,191, 7–17–62, Cl. 331—108.
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Blue, Lloyd C. Wire rope tensioner. 3,044,723, 7–17–62, Cl. 242—47.09.
Bock, Erwin, to Schumag Schumacher Metallwerke Gesellschaft mit beschrankter Haftung. Cutting devices for moving oblong works. 3,044,336, 7–17–62, Cl. 83—319.
Boddy, Leonard, to King-Seeley Thermos Co. Temperature indicating system. 3,044,296, 7–17–62, Cl. 73—342.
Bodo, Gerhard, A. Diskus, and W. Beck, to Osterreichische Stickstoffwerke Aktiengesellschaft. Fumigant compositions comprising hexamethylene tetramine dinitrate. 3,044,929, 7–17–62, Cl. 167—39.
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Bonner, Renzo V. Fluid pressure actuator. 3,044,764, 7–17–62, Cl. 268—34.
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Troll, William A., and Bonsignore. 3,044,660.
Bookman, Harry. Reversible drive mechanism for motor vehicle. 3,044,568, 7–17–62, Cl. 180—70.
Borland, Loren R. Perambulator for invalids. 3,044,797, 7–17–62, Cl. 280—87.02.
Bossard, Bernard B., to United States of America, Army. Superregenerative reactance amplifier. 3,045,115, 7–17–62, Cl. 250—20.
Bosshard, Hans H., and H. Zollinger, to Ciba Ltd. Peridicarboxylic acid imide dyestuffs containing at least one isothiocyanate group. 3,045,019, 7–17–62, Cl. 260—281.
Bosshard, Hans H., and H. Zollinger, to Ciba Ltd. Anthraquinone dyestuffs containing at least one isothiocyanate group. 3,045,029, 7–17–62, Cl. 260—374.
Boston, Frank E., to The Pyramid Rubber Co. Vented nursing unit. 3,044,649, 7–17–62, Cl. 215—11.
Bottner, Haakon. Base for core drills. 3,044,793, 7–17–62, Cl. 280—12.
Boughton, George J., I. A. G. Dalrymple, and H. P. Taylor, to Becker & Co. Ltd. Paper sizing agents. 3,044,890, 7–17–62, Cl. 106—238.
Bouwers, Albert, to Optische Industrie de Oude Delft, N.V. Panoramic camera. 3,044,379, 7–17–62, Cl. 95—16.
Bowerman, Hulle E. Long stroke high speed clutch tube. 3,044,596, 7–17–62, Cl. 192—88.
Bowman, Virgil R., and R. J. Keefe. Oil well heater. 3,045,099, Cl. 219—33.
Boynton, Bob C., ½ to Gadget-of-The-Month Club, Inc. Golf ball washer. 3,044,089, 7–17–62, Cl. 15—21.
Bradley, Billie J., to Halliburton Co. Well packer. 3,044,553, 7–17–62, Cl. 166—187.
Bradley, Percy G. Bird-retrieving grapple. 3,044,205, 7–17–62, Cl. 43—1.
Brand, Samuel. Magnetic data recording means. 3,045,218, 7–17–62, Cl. 340—174.1.
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Branick, Charles E. Tire bead spacing and supporting element. 3,044,609, 7–17–62, Cl. 206—46.
Branick, Charles E. Device for inverting pneumatic tire casings. 3,044,748, 7–17–62, Cl. 254—50.3.
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Breuers, Theo P. C., to Chemische Fabriek L. Van der Grinten, N.V. Device for separating two sheets of laminar material. 3,044,769, 7–17–62, Cl. 271—18.
Breuers, Theo P. C., to Chemische Fabriek L. van der Grinten, N.V. Sheet feeding device. 3,044,770, 7–17–62, Cl. 271—36.
Brewster, Arthur E., to International Standard Electric Corp. Magnetic information storage devices. 3,045,216, 7–17–62, Cl. 340—174.
Bridgewater, Thomas E. Impact crushing apparatus. 3,044,720, 7–17–62, Cl. 241—275.
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Britton, Eric, to Eric Britton & Co. Ltd. Collar stiffener and method of making. 3,044,916, 7–17–62, Cl. 154—46.
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Kirkpatrick, James S., and Krause. 3,044,166.
Broome, Marshall B., and R. L. Tucker, to Well Surveys, Inc. Responder and telemetering transmitter for borehole caliper. 3,044,175, 7–17–62, Cl. 33—178.
Brösicke, Paul to Carl Zeiss. Cross-slide table for microscopes. 3,044,354, 7–17–62, Cl. 88—40.
Broske, William F., to AMP Inc. Insulation push back stripper. 3,044,333, 7–17–62, Cl. 81—9.5.
Broske, William F., to AMP Inc. Wire tool. 3,044,334, 7–17–62, Cl. 81—9.51.
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Brotherton, Robert J., G. W. Willcockson, and H. Steinberg, to United States Borax & Chemical Corp. Tris(1,3,2-oxazaborolidino)borazoles, tris (benzo-1,3,2-oxazaborolo)borazoles and a method for their preparation. 3,045,038, 7–17–62, Cl. 260—462.
Brown, Joseph P., and E. B. McCall, to Monsanto Chemicals Ltd. Preparation of substituted dithiobiurets. 3,045,046, 7–17–62, Cl. 260—552.
Brown, Lowell N. Tool for repairing muffler assemblies. 3,044,169, 7–17–62, Cl. 30—91.
Brown, Morris E., to Eastman Kodak Co. Automatic exposure controls for photographic cameras. 3,044,384, 7–17–62, Cl. 95—64.
Brown, Reeves, to Hardwick Stove Co. Cooking unit. 3,044,459, 7–17–62, Cl. 126—39.
Brown, William E. Tire grooving machine. 3,044,536, 7–17–62, Cl. 157—13.
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Tager, Milton E., Browne, and McCoig. 3,044,145.
Bruce, John K. Selecting and transfer apparatus for conveying articles. 3,044,638, 7–17–62, Cl. 214—11.
Bruck, John P., to The American-Lincoln Corp. Portable sander with detachable handle and controls. 3,044,223, 7–17–62, Cl. 51—176.
Brunner, Robert. Process for providing a finished knitted fabric with predetermined dimensions in the direction of its length and its width. 3,044,142, 7–17–62, Cl. 26—18.5.
Brunt, Kenneth A., and D. Williams, to British Nylon Spinners Ltd. Preparation of detergent compositions. 3,044,962, 7–17–62, Cl. 252—110.
Buchhold, Theodor A., to General Electric Co. Gyroscope. 3,044,309, 7–17–62, Cl. 74—5.
Buck, Eugene W., to Buck Mfg. Co. Adjustable magnetic drill mount. 3,044,321, 7–17–62, Cl. 77—7.
Buck, Eugene W., to Buck Mfg. Co. Adjustable magnetic drill mount. 3,044,324, 7–17–62, Cl. 77—59.
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Buck, Eugene W. 3,044,324.
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Dean, Walter B., and Wessells. 3,044,822.
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Bulman Corp., The: *See*—
Greenman, Orval L., and Stewart. 3,044,631.
Bundy, Oswald M., to The Clark Controller Co. Electric switch. 3,045,092, 7–17–62, Cl. 200—168.
Burger, Ralph J.: *See*—
Mathis, Glenn W., and Burger. 3,044,274.
Burk, Emmett H., Jr., and B. W. Turnquest, to Sinclair Research, Inc. Process for treating petroleum residuals to remove metal contaminants. 3,044,956, 7–17–62, Cl. 208—252.
Burndy Corp.: *See*—
Osborn, William G. 3,045,205.
Burnham, Hartley M.: *See*—
Carlton, William W., and Burnham. 3,044,258.
Burr, Robert P., and R. J. Keogh, to Circuit Research Co. Electro-optical system. 3,044,695, 7–17–62, Cl. 235—61.11.
Burroughs Corp.: *See*—
Auerbach, Isaac L. 3,045,211.
Goodwin, Mack C. 3,044,724.
Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Wilkinson, Samuel. 3,044,934.
Burrows, Arthur T. C., to Geo. W. King, Ltd. Conveyor systems. 3,044,417, 7–17–62, Cl. 104—172.
Bushnell, Raymond O. Safety socket meter gripper. 3,044,158, 7–17–62, Cl. 29—278.
Butler, George B., to Peninsular Chem Research, Inc. Linear organic saturated non-ionic homopolymers of symmetrical 1,6-diolefinic monomers. 3,044,986, 7–17–62, Cl. 260—63.
Butler, Henry J., to Dunlop Rubber Co. Ltd. Braking system. 3,044,580, 7–17–62, Cl. 188—140.
Butler, John R., to Raytheon Co. Magnetron electrode structures. 3,045,147, 7–17–62, Cl. 315—39.69.
Buus, Melvin L., and H. Nerhus. Binomial probability calculator. 3,044,692, 7–17–62, Cl. 235—61.
Bycer, Manuel M., J. J. Hohenadel, and A. Soffa, to The Lodge & Shipley Co. Shipping case unloading machine. 3,044,642, 7–17–62, Cl. 214—311.
C.I.C. Engineering Ltd.: *See*—
Webb, Charles E., and Hawkins. 3,044,122.
Cadwallader, Donald E., to Sterling Drug Inc. Magnesium hydroxide suspensions. 3,044,933, 7–17–62, Cl. 167—55.
Cady, Percy L., Jr. Brake for forming metal plate and sheet. 3,044,526, 7–17–62, Cl. 153—16.
Cale, Richard C. Method of manufacturing planning hulls. 3,044,083, 7–17–62, Cl. 9—6.
Califone Corp.: *See*—
Metzner, Robert G., and Grolitzer. 3,045,065.
California Research Corp.: *See*—
Kozlowski, Robert H. 3,044,953.
California Umbrella Co.: *See*—
Russell, Ray A. 3,044,478.
Callahan, James L., to The Standard Oil Co. Process for the manufacture of bismuth catalysts. 3,044,965, 7–17–62, Cl. 252—437.
Callahan, James L., R. W. Foreman, and F. Veatch, to The Standard Oil Co. Attrition resistant oxidation catalyst. 3,044,966, 7–17–62, Cl. 252—437.
Callery Chemical Co.: *See*—
McGriff, Stuart G. 3,044,870.
Campau, Loyola E. Panty pad. 3,044,467, 7–17–62, Cl. 128—290.
Campbell, D. J., Co., Inc.: *See*—
Fink, Richard R. 3,044,157.
Canada, Her Majesty the Queen in right of, as represented by the Minister of Mines and Technical Surveys: *See*—
Mitchell, Earland R., and Friedrich. 3,044,422.
Canadian Industries Ltd.: *See*—
Matthews, Frederick W., and Morf. 3,044,849.
Candee, Allan H., and G. O. Richmond. Apparatus for testing gears. 3,044,176, 7–17–62, Cl. 33—179.5.
Canfield, Eugene B., to General Electric Co. Integrating and differentiating accelerometer. 3,044,305, 7–17–62, Cl. 73—503.
Canterino, Peter J., to Phillips Petroleum Co. Method of coating metals with thermoplastic materials. 3,044,899, 7–17–62, Cl. 117—132.
Cantrel, Kenneth E.: *See*—
Goodbue, Lyle D., and Cantrel. 3,044,930.
Carbonic Development Corp.: *See*—
Hasche, Rudolph L. 3,044,861.
Carey, William M., Jr., to Minneapolis-Honeywell Regulator Co. Electrical counter circuitry. 3,045,127, 7–17–62, Cl. 307—88.5.
Carlberg, Robert E., to United States of America, Navy. Below deck shipboard missile launching system. 3,044,362, 7–17–62, Cl. 89—1.7.
Carlson, Robert J., to U.S. Electrical Motors, Inc. System for controlling the starting torque of induction motor drives. 3,045,153, 7–17–62, Cl. 318—11.
Carlton, William W., and H. M. Burnham, to General Electric Co. Adjustable converging-diverging nozzle. 3,044,258, 7–17–62, Cl. 60—35.6.
Carter Parts Co.: *See*—
Frantz, Nicholas, and Gloviak. 3,045,078.
Frantz, Nicholas, and Gloviak. 3,045,079.
Frantz, Nicholas, and Gloviak. 3,045,080.
Cartwright, Horace A. Governor-controlled dispensing apparatus. 3,044,661, 7–17–62, Cl. 222—25.
Casselle, Joseph. Junction box block and card. 3.045,204, 7–17–62, Cl. 339—198.
Cassels, Charles W. Floor-like structure construction. 3,044,586, 7–17–62, Cl. 189—82.
Caughey, Robert A., to Antrim Moulding Co., Inc. Machine for the continuous manufacture of fibrous board. 3,044,111, 7–17–62, Cl. 18—4.
Cayo, Alven A. Springable shoe heel and attaching means. 3,044,191, 7–17–62, Cl. 36—34.
Cecere, Emil, to Howe Sound Co. Surgical saw. 3,044,171, 7–17–62, Cl. 30—166.
Celanese Corp. of America: *See*—
Stamps, William E., Merrill, and Livingston. 3,044,251.
Celentano, Vincent D., and L. Hagan, to Olin Mathieson Chemical Corp. Method of anchoring nitrocellulose surface coatings and anchoring composition therefor. 3,044,897, 7–17–62, Cl. 117—73.
Central Aquirre Sugar Co.: *See*—
Serbia, Gonzalo R. 3,044,904.
Centre d'Etudes et de Recherches des Phosphates Mineraux Cerphos: *See*—
Driessen, Augustin, and de Saint Chamant. 3,044,848.
Chadwick, Alexander, and T. Golec, Jr., to Chrysler Corp. Control mechanism for adjustable gas turbine nozzle. 3,044,262, 7–17–62, Cl. 60—39.25.
Chain Belt Co.: *See*—
Lind, Arthur C. 3,044,627.
Chajmik, Joseph. Propeller. 3,044,559, 7–17–62, Cl. 170—172.
Chambers, Arthur E. Method of assembling and fastening laminations. 3,044,652, 7–17–62, Cl. 218—29.
Chambers, Warren D., to The Bendix Corp. Liquid cooled friction brakes. 3,044,736, 7–17–62, Cl. 244—111.
Champion Dish Washing Machine Co.: *See*—
Ellis, Sydney M. 3,044,601.
Champion Papers, Inc.: *See*—
Warner, Edgar. 3,044,896.
Chancellor, Forrest E. and R. O. Deep well pumping system. 3,044,414, 7–17–62, Cl. 103—206.
Chancellor, Robert O.: *See*—
Chancellor, Forrest E. and R. O. 3,044,414.
Chapman, Ronald W., J. C. Ahlborn, and R. M. Dille, to Texaco Inc. Carbon recovery. 3,044,179, 7–17–62, Cl. 34—9.
Charvat, Vernon K., to The Osborn Mfg. Co. Material applicator system. 3,044,227, 7–17–62, Cl. 51—263.
Charvat, Vernon K., to The Osborn Mfg. Co. Method and apparatus for making a composite brushing tool. 3,044,833, 7–17–62, Cl. 300—2.
Check, Mathias M., to The Yale and Towne Mfg. Co. Door closer. 3,044,103, 7–17–62, Cl. 16—49.
Chemagro Corp.: *See*—
Flavin, James P., and Riden. 3,044,926.
Chemische Fabriek L. Van der Grinten N.V.: *See*—
Breuers, Theo P. C. 3,044,769.
Breuers, Theo P. C. 3,044,770.

Cheston, Theodore C., to United States of America, Navy. Five aperture direction finding antenna. 3,045,238, 7–17–62, Cl. 343—776.

Chiasson, Wilbert A., to Weltronic Co. Phase-shifting and control apparatus. 3,045,172, 7–17–62, Cl. 323—37.

Chicago Aerial Industries, Inc.: *See*—
Elliott, Eugene W. 3,044,381.
Kapany, Narinder S., Pontarelli, and Joseph. 3,045,223.

Chillson, Charles W., to Curtiss-Wright Corp. Shaft seal. 3,044,786, 7–17–62, Cl. 277—70.

Christensen Diamond Products Co.: *See*—
Cutler, Charles R. 3,044,219.

Christiansen, Arvid: *See*—
Singley, John E., and Christiansen. 3,044,983.

Chrysler Corp.: *See*—
Ball, Thomas M. 3,044,457.
Chadwick, Alexander, and Golec. 3,044,262.
Lower, Ralph C., and Perez. 3,044,273.
Sarto, Jorma O. 3,044,751.
Voltmann, Robert. 3,045,176.

Ciba Ltd.: *See*—
Bosshard, Hans H., and Zollinger. 3,045,019.
Bosshard, Hans H., and Zollinger. 3,045,029.

Circuit Research Co.: *See*—
Burr, Robert P., and Keogh. 3,044,695.

Cislak, Francis E., to Reilly Tar & Chemical Corp. Hydroxyalkylpyrridinethionamides. 3,045,024, 7–17–62, Cl. 260—294.8.

Cities Service Research and Development Co.: *See*—
Jarboe, Ralph R., Jr. 3,044,547.

City Linen, Inc.: *See*—
Rawlings, John H. 3,044,075.

Claes, Frans A.: *See*—
Gerbaux, Rene C., Lemmerling, and Claes. 3,045,006.

Claiborne, Marshall L. Paraffin scraper. 3,044,552, 7–17–62, Cl. 166—170.

Clark, Alfred: *See*—
Holm, Vernon C. F., Bailey, and Clark. 3,045,054.

Clark Controller Co., The: *See*—
Bundy, Oswald M. 3,045,092.

Clark, Sheldon L., and D. A. Fidler, to Olin Mathieson Chemical Corp. Halogen containing organic derivatives of decaborane. 3,045,049, 7–17–62, Cl. 260—606.5.

Clark, Stevenson P.: *See*—
Niskin, Shale J. 3,044,811.

Clarke, John V., Jr.: *See*—
Haney, Roy E. D., and Clarke. 3,045,119.

Clayton, Cyril R. Toilet pan seat units. 3,045,096, 7–17–62, Cl. 219—19.

Clayton Dewandre Co. Ltd.: *See*—
Farmery, George K., and Newman. 3,044,569.

Clear Beam Antenna Corp.: *See*—
Raynor, Robert D. 3,045,240.

Clement, George H., to Hickok Mfg. Co., Inc. Display box. 3,044,605, 7–17–62, Cl. 206—45.14.

Clipper Propeller, Inc.: *See*—
Jefferson, Donald M. 3,044,556.

Cocker Machine & Foundry Co.: *See*—
Tager, Milton E., Browne, and McCoig. 3,044,145.

Code, Charles J. Method of handling railroad cross tires. 3,044,641, 7–17–62, Cl. 214—152.

Coe, Thomas, to North American Philips Co., Inc. Adhesive for attaching copper foils to other objects comprising a butadiene-acrylonitrile copolymer, a phenol-aldehyde resin and a monocarboxylic acid. 3,044,977, 7–17–62, Cl. 260—43.

Cohn, Harold S. Safety closure for bottles and the like. 3,044,648, 7–17–62, Cl. 215—9.

Colalaco, August P., to Westinghouse Electric Corp. Detection circuit. 3,045,167, 7–17–62, Cl. 321—14.

Colalaco, August P., to Westinghouse Electric Corp. Detection circuit for blown fuses. 3,045,224, 7–17–62, Cl. 340—250.

Cole, John W.: *See*—
Kurath, Paul, and Cole. 3,045,012.

Coleman, Gerald W., and J. M. Gwinn, Jr., to Gar Wood Industries, Inc. Refuse truck body and loader. 3,044,644, 7–17–62, Cl. 214—503.

Coler, Myron A. Method of making electrically conductive terminals. 3,044,151, 7–17–62, Cl. 29—155.55.

Collier Carbon and Chemical Corp.: *See*—
Young, Donald C. 3,044,851.
Young, Donald C. 3,044,854.
Young, Donald C. 3,044,855.

Collom, Donald J., to Weltronic Co. Motor controlling apparatus. 3,045,163, 7–17–62, Cl. 318—227.

Colman, Philip A., and E. C. Frost, to Lockheed Aircraft Corp. Rotatable radomes for aircraft. 3,045,236, 7–17–62, Cl. 343—705.

Colorado Fuel and Iron Corp., The: *See*—
Govea, Joseph R. 3,044,501.

Colton, Arthur, Co.: *See*—
Gajda, Leo P., and Kazmierczak. 3,044,599.

Columbia Broadcasting System, Inc.: *See*—
Doncaster, Daniel P. 3,044,783.

Coma, James G., and V. G. Gerttula, to Crown Zellerbach Corp. Production of dialkyl sulfoxides. 3,045,051, 7–17–62, Cl. 260—607.

Combs, Theodore C., and J. M. Dobbie, to Zero Mfg. Co. Prefabricated shipping container. 3,044,656, 7–17–62, Cl. 220—4.

Combs, Theodore C., and J. M. Dobbie, to Zero Mfg. Co. Shipping container. 3,044,658, 7–17–62, Cl. 220—80.

Compagnie des Machines Bull (Societe Anonyme): *See*—
Feissel, Henri G. 3,044,696.

Compagnie du Filage des Metaux et des Joints Curty: *See*—
Heintz, Rene, and Jour. 3,044,893.

Compagnie Francaise des Matieres Colorantes: *See*—
Frey, Raymond. 3,045,013.

Compur-Werk Friedrich Deckel oHG: *See*—
Gebele, Kurt. 3,044,376.
Gebele, Kurt. 3,044,377.
Gebele, Kurt, and Spiessl. 3,044,382.

Concepts Co., The: *See*—
Lotz, Martin A. 3,044,577.

Conlon, John W., to Farmington Mfg. Co. Method of making a work supporting structure. 3,044,149, 7–17–62, Cl. 29—149.5.

Conlon, John W., to Farmington Mfg. Co. Structure using fluid for supporting a part thereof. 3,044,836, 7–17–62, Cl. 308—9.

Conn, C. G., Ltd.: *See*—
Greenleaf, Leland B. 3,044,339.

Consolidated Water Power & Paper Co.: *See*—
Moisberry, Mahlon V., Wefel, and Walker. 3,044,440.

Consterdine, Edward W., to Associated Electrical Industries (Manchester) Ltd. Electrical brush gear. 3,045,136, 7–17–62, Cl. 310—238.

Continental Boiler and Sheet Iron Works: *See*—
Beers, Rollo O. 3,044,418.

Continental Gummi-Werke Aktiengesellschaft: *See*—
Werner, Hans, and Schmidt-Hertzberg. 3,044,524.

Continental Oil Co.: *See*—
Gant, Preston L. 3,045,116.
Swiger, William F. 3,044,561.

Conveyor Co., The: *See*—
Saxe, Walter E. 3,044,629.

Conway, John J.: *See*—
Usher, Ralph E., Conway, and Goodness. 3,045,095.

Cook, Fred S. Portable ironing board. 3,044,197, 7–17–62, Cl. 38—115.

Cooke, Russell S.: *See*—
Kasten, Frederick M., Cooke, and Kasten. 3,044,178.

Cool, Delbert A. Cast shoe. 3,044,463, 7–17–62, Cl. 128—80.

Cooper Alloy Corp.: *See*—
Mott, Norman S. 3,044,871.

Cooper-Bessemer Corp., The: *See*—
Fullemann, John. 3,044,684.

Corn Industries Research Foundation, Inc.: *See*—
Rollwitz, William L. 3,045,175.

Cornish, Albert J., to Westinghouse Electric Corp. Thermoelectric material. 3,045,057, 7–17–62, Cl. 136—5.

Corrsin, Lester, to United Nuclear Corp. Operating time indicator. 3,045,178, 7–17–62, Cl. 324—68.

Corsette, Douglas F., to The Drackett Co. Pump pistons. 3,044,413, 7–17–62, Cl. 103—178.

Cory Corp.: *See*—
Eisendrath, David C. 3,044,272.

Coscia, Lewis G., and H. R. Grander, Jr., to Bethlehem Steel Co. Heat treatment of continuous strand. 3,045,094, 7–17–62, Cl. 219—10.41.

Coulson, Walter. Adapter for dial indicator gauge. 3,044,174, Cl. 33—178.

Cover, Neville E., to Beautronics, Inc. Hair treating device. 3,044,473, 7–17–62, Cl. 132—9.

Covert, John N.: *See*—
Hale, Arthur N., Covert, and Volkmann. 3,044,428.

Cox, Arthur, and W. J. Johnson, to Bell & Howell Co. Zoom lenses. 3,044,355, 7–17–62, Cl. 88—57.

Cox, Arthur, and W. J. Johnson, to Bell & Howell Co. Zoom lens. 3,044,356, 7–17–62, Cl. 88—57.

Cox, Joseph H.: *See*—
Maisel, Daniel S., Ryan, and Cox. 3,045,048.

Cox, Theodore C., to International Business Machines Corp. Parity checking apparatus for digital computer. 3,044,702, 7–17–62, Cl. 235—153.

Cox, Thorald H. Seesaw rocker. 3,044,773, 7–17–62, Cl. 272—56.

Cox, Willis T. Wheel units. 3,044,820, 7–17–62, Cl. 295—7.

Coxey, James R., to Glen Gery Shale Brick Corp. Process for making fluorspar briquettes. 3,044,140, 7–17–62, Cl. 25—157.

Crampton, Carl T., to Du-Al Mfg Co. Self-contained power driven auger. 3,044,562, 7–17–62, Cl. 175—201.

Craver, Augustus E., and W. H. Lamason, to American Viscose Corp. Method and apparatus for producing films. 3,044,115, 7–17–62, Cl. 18—15.

Creed & Co. Ltd.: *See*—
Hoer, Kenneth G. 3,044,768.
Mason, Frederick P. 3,045,125.
Turner, Frederick J. L., and Mason. 3,044,675.

Creek, Joseph P.: *See*—
Adams, Cecil E., and Creek. 3,044,485.

Creighton, John H., to The Bendix Corp. High pressure vessel. 3,044,654, 7–17–62, Cl. 220—3.

Crisafi, Robert C. Disposable device for sterilizing solutions. 3,044,500, 7–17–62, Cl. 141—85.

Croft, George M., to Majac, Inc. Classifier system. 3,044,622, 7–17–62, Cl. 209—144.

Crosby, Alton L., and P. J. Lecker. Welding apparatus. 3,045,104, 7–17–62, Cl. 219—86.

Crousore, Richard R. Holder for plant cuttings. 3,044,215. 7–17–62, Cl. 47—41.

Crown Zellerbach Corp.: *See*—
Coma, James G., and Gerttula. 3,045,051.
Loehr, Barbara F. 3,044,885.

Crutcher-Rolfs-Cummings, Inc.: *See*—
Cummings, Ernest E. 3,044,431.

Crystal Products Co., Ltd.: *See*—
Levy, Elizabeth. 3,044,613.

Cueppers, Curt, and K. Kirchhuebel. Haidinger's brush attachment for synoptophore apparatus. 3,044,348, 7–17–62, Cl. 88—20.

Cummings, Ernest E., to Crutcher-Rolfs-Cummings, Inc. Internal pipe clamp. 3,044,431, 7–17–62, Cl. 113—102.

Curtis, John C., and T. A. Parssinen, to Joy Mfg. Co. Dual rotation for rock drills. 3,044,448, 7–17–62, Cl. 121—7.

Curtiss-Wright Corp.: *See*—
Chillson, Charles W. 3,044,786.
Gama, Theodore C., and Kiefer. 3,044,725.
Hall, John L., Schreiber, and Cushman. 3,044,312.
Klatchko, George A. 3,044,291.
Tiedeman, Robert K. 3,044,558.

Cushman, Maurice E.: *See*—
Hall, John L., Schreiber, and Cushman. 3,044,312.

Cutler, Charles R., to Christensen Diamond Products Co. Apparatus for resharpening diamond drill bits. 3,044,219, 7–17–62, Cl. 51—15.

DCA Food Industries Inc.: *See*—
Block, Zenas, Hunter, and Hodges. 3,044,180.

Daimler-Benz Aktiengesellschaft: *See*—
Fiala, Ernst J. H. 3,044,799.
Kölle, Erwin. 3,044,830.
Stengelin, Adolf. 3,044,762.

Da Lee, William A., Inc.: *See*—
Thomas, Harry W., and Da Lee. 3,044,572.

Da Lee, William W.: *See*—
Thomas, Harry W., and Da Lee. 3,044,572.

Dalmine S.p.A.: *See*—
Groppini, Diego. 3,044,331.

Dalrymple, Ian A. G.: *See*—
Boughton, George J., Dalrymple, and Taylor. 3,044,890.

Daniel, Gunther F. Sculpturing kit. 3,044,185, 7–17–62, Cl. 35—26.

Darling, Samuel M.: *See*—
Emrick, Donald D., and Darling. 3,044,998.

Datner, Paul P.: *See*—
Douglas, William A., and Datner. 3,044,711.

Davey, Paul H. Wear-resistant vane for rotary compressor. 3,044,687, 7–17–62, Cl. 230—152.

David, Andrew M. Electrical suspension device. 3,045,203, 7–17–62, Cl. 339—197.

Davidson, David, and R. M. Lusskin, to The Trubek Laboratories, Inc. 6-acetyl-1,1,2,4,4,7-hexamethyl-1,2,3,4, tetrahydronaphthalene. 3,045,047, 7–17–62, Cl. 260—592.

Davidson, John T., R. D. Georgen, and R. L. Fortune, to The Standard Register Co. System for sensing. 3,044,694, 7–17–62, Cl. 235—61.11.

Davies, Raymond J., to Dunlop Rubber Co. Ltd. Spring assembly. 3,044,760, 7–17–62, Cl. 267—31.

Davies, Raymond J., to Dunlop Rubber Co. Ltd. Fluid spring assembly. 3,044,761, 7–17–62, Cl. 267—65.

Davis, Ariel R. Electromagnetic device having a movable element. 3,045,152, 7–17–62, Cl. 317—166.

Davis, Bernard V., to Bristol Siddeley Engines Ltd. Machine for polishing or grinding elongated workpieces. 3,044,222, 7–17–62, Cl. 51—142.

Davol Rubber Co.: *See*—
Birtwell, William C. 3,044,468.

Dayco Corp.: *See*—
Wagner, William T. 3,044,918.

Dean, James T.: *See*—
Hodges, Hayden D., and Dean. 3,044,298.

Dean, Walter B., and H. W. Wessells, III, to The Budd Co. Automobile body front end construction. 3,044,822, 7–17–62, Cl. 296—28.

Decca Ltd.: *See*—
Howell, Ronald T. A., and Young. 3,045,188.
Matthews, Robert, and Johnston. 3,045,071.

Deering Milliken Research Corp.: *See*—
Habib, Emile E. 3,044,898.
Ingham, Robert M., Jr. 3,044,733.
Smith, Philip N. 3,044,699.

Defensor AG.: *See*—
Flury, Karl. 3,044,752.

De Groot, Wilhelmus C., H. N. H. De Haan, and R. W. Van den Bosch, to Shell Oil Co. Electrical insulating oils. 3,044,955, 7–17–62, Cl. 208—212.

De Haan, Hubertus N. H.: *See*—
De Groot, Wilhelmus C., De Haan, and Van den Bosch. 3,044,955.

Dehne, Clarence A., to Jervis B. Webb Co. Mechanism for propelling a load carrying vehicle between main and branch lines of a material handling system. 3,044,415, 7–17–62, Cl. 104—172.

Dehnert, Johannes, and R. Gehm, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. 1 : 2 chromium and cobalt complexes of monoazo dyes containing a 1-aza-4-thiacyclohexane-4,4-dioxide substituents. 3,045,003, 7–17–62, Cl. 260—147.

Delbel, Raymond A., and A. C. Scinta, to Trico Products Corp. Windshield wiper. 3,044,095, 7–17–62, Cl. 15—250.42.

Delimal, Hippolyte P. Ornamental assembly. 3,044,199, 7–17–62, Cl. 41—10.

De Long, Horace J., to Gainesville Machine Co., Inc. Rotary drum type chicken picking machine. 3,044,108, 7–17–62, Cl. 17—11.1.

Demag-Elektrometallurgie G.m.b.H.: *See*—
Ernst, Hans. 3,045,144.

Denning, Charles, Ltd.: *See*—
Pickering, Norman C. 3,045,160.

Denton, Eugene C.: *See*—
Alsberg, Dietrich A., and Denton. 3,045,235.

Denton, William I., to Olin Mathieson Chemical Corp. Preparation of lithium phosphate. 3,044,850, 7–17–62, Cl. 23—107.

Derman, Karl G. E., to Svenska Kullagerfabriken, Aktiebolaget. Sealing arrangement. 3,044,787, 7–17–62, Cl. 277—83.

Dersch, Fritz: *See*—
Popeck, Stanley P., Dersch, and Wurth. 3,044,874.

De Saint Chamant, Henri: *See*—
Driessen, Augustin, and De Saint Chamant. 3,044,848.

Detert, Henry W.: *See*—
Johnson, Clarence E., and Detert. 3,044,085.

Detrick, M. H., Co.: *See*—
Hosbein, Louis H. 3,044,125.

Detwiler, Robert L., to United States of America, Navy. Sabot. 3,044,400, 7–17–62, Cl. 102—93.

Deuschel, Werner, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of 2,5-diarylamino-3,6-dihydroterephthalic acid esters. 3,045,040, 7–17–62, Cl. 260—471.

De Vlieg Machine Co.: *See*—
Sweeny, Allen N. 3,044,323.

Dewar, Douglas, to Dunlop Rubber Co. Ltd. Repair of thermoplastic materials. 3,044,920, 7–17–62, Cl. 156—97.

Diamond Alkali Co.: *See*—
Rosen, Irving. 3,044,865.

Dickinson, Robert W.: *See*—
Hayes, Walter C., and Dickinson. 3,044,872.

Dilday, Sidney A. Self-propelled adjustable tractor mole. 3,044,749, 7–17–62, Cl. 254—134.5.

Dille, Roger M.: *See*—
Chapman, Ronald W., Ahlborn, and Dille. 3,044,179.

Di Meglio, Joseph E.: *See*—
Blais, Maurice E., Ruf, and Di Meglio. 3,044,231.

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Mellott, Frank M. 3,044,408.

Diskus, Alfred: *See*—
Bodo, Gerhard, Diskus, and Beck. 3,044,929.

Divis, Roy R. Stabilization of polychlorotrifluoroethylene with chlorine gas. 3,045,000, 7–17–62, Cl. 260—92.1.

Dixie Wax Paper Co.: *See*—
Ross, Travis Y. 3,044,369.

Dixon, Henry O., to Phillips Petroleum Co. Production of unconsolidated sands by in situ combustion. 3,044,546, 7–17–62, Cl. 166—11.

Dobbie, James M.: *See*—
Combs, Theodore C., and Dobbie. 3,044,656.
Combs, Theodore C., and Dobbie. 3,044,658.

Dolan, James P., and W. M. Jordan. Detection device. 3,045,198, 7–17–62, Cl. 338—13.

Dolgorukov, Gregory S. Motor vehicle seat construction. 3,044,829, 7–17–62, Cl. 297—344.

Dollinger, Kenneth: *See*—
Mercer, William R., and Dollinger. 3,045,232.

Dominion Engineering Works Ltd.: *See*—
Berlyn, Martin J. 3,044,744.
Berlyn, Martin J. 3,044,925.

Donaruma, Lorraine G., to E. I. du Pont de Nemours and Co. Acrylyl derivatives of β-diketones and their polymers. 3,044,985, 7–17–62, Cl. 260—63.

Doncaster, Daniel P., to Columbia Broadcasting System, Inc. Phonograph pickup. 3,044,783, 7–17–62, Cl. 274—23.

Dorosz, Adolph S., and L. F. Stanton, to United Shoe Machinery Corp. Heel attaching machines. 3,044,086, 7–17–62, Cl. 12—126.

Dorset-Rex, Inc.: *See*—
Levine, Sol. 3,044,612.

Dorsett, Edgar A. Artificial fishing lure. 3,044,207, 7–17–62, Cl. 43—42.31.

Dotter, John H. Cushioned hydraulic check valve. 3,044,487, 7–17–62, Cl. 137—514.

Douglas, Alvin P., and G. B. Hahn, to The Murray Ohio Mfg. Co. Adjustable pull strap mechanism for juvenile vehicles and the like. 3,044,802, 7–17–62, Cl. 280—256.

Douglas, William A., and P. P. Datner, to Aerojet-General Corp. Fluid flow modulator. 3,044,711, 7–17–62, Cl. 239—99.

Dow Chemical Co., The: *See*—
Ellers, Louis H. 3,044,550.
Grebe, John J., and Miller. 3,044,756.
Ham, George E. 3,045,027.
Hibbard, Billy B., and Weage. 3,044,992.
Lefevre, Leonard J. 3,044,905.
Lefevre, Leonard J. 3,044,906.
Martin, Robert C. 3,044,959.
Newsom, Raymond A. 3,044,958.
Tousignant, William F. 3,044,999.

Dow Jones & Co., Inc.: *See*—
Ackell, Joseph J., and Paulding. 3,044,395.

Dow, Leslie A., A. R. Fredrickson, and R. D. Parsons, ½ to Fram Corp., and ½ to Hollingsworth & Vose Co. Porous separator media. 3,044,957, 7–17–62, Cl. 210—508.

Drackett Co., The: *See*—
Corsette, Douglas F. 3,044,413.

Drakeford, George E., and F. E. Smith, to Dunlop Rubber Co. Ltd. Pneumatic tyre covers. 3,044,522, 7–17–62, Cl. 152—355.

Drakeford, George E., and F. E. Smith, to Dunlop Rubber Co. Ltd. Pneumatic tires. 3,044,523, 7–17–62, Cl. 152—362.

Dresser Industries, Inc.: *See*—
Hennig, Fritz O. 3,044,263.
Langley, Lawrence W. 3,045,210.

Drewes, Menke, Jr., to Martin-Marietta Corp. Evacuating coupling. 3,044,275, 7–17–62, Cl. 62—268.

Driessen, Augustin, and H. de Saint Chamant, to Centre d'Etudes et de Recherches des Phosphates Mineraux Cerphos. Method of uranium recovery. 3,044,848, 7–17–62, Cl. 23—14.5.

Druckey, Donald L.: *See*—
Beckner, Bernard E. 3,045,219.

Du-Al Mfg. Co.: *See*—
Crumpton, Carl T. 3,044,562.

Duffing, Paul, to Siemens-Schuckertwerke Aktiengesellschaft. Liquid-break circuit interrupters. 3,045,087, 7–17–62, Cl. 200—150.

Duhamel, Francis R. J., to Moto-Mower, Inc. V-belt tensioning and clutch structure. 3,044,315, 7–17–62, Cl. 74—230.17.

Dunlop Rubber Co. Ltd.: *See*—
Bent, William H. 3,044,405.
Butler, Henry J. 3,044,580.
Davies, Raymond J. 3,044,760.
Davies, Raymond J. 3,044,761.
Dewar, Douglas. 3,044,920.
Drakeford, George E., and Smith. 3,044,522.
Drakeford, George E., and Smith. 3,044,523.
Fletcher, Henry R. 3,044,525.
Holroyd, Eric, and Waldron. 3,044,727.
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Barnum, Caleb W. 3,044,277.

Dunnebier, Kurt: *See*—
Winkler, Richard, and Dunnebier. 3,044,767.

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Donaruma, Lorraine G. 3,044,985.
Hebeler, Harold H. 3,044,250.
Rogers, Arthur O. 3,045,009.
Schaefgen, John R., and Shivers. 3,044,987.
Shivers, Joseph Cloia, Jr. 3,044,989.
Steuber, Walter. 3,044,990.
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Dyer, Arthur M. Apparatus for dispensing measured quantities of liquids. 3,044,666, 7–17–62, Cl. 222—145.

Eades, Lawrence R., to Phillips Petroleum Co. Self-erecting collapsible containers. 3,044,515, 7–17–62, Cl. 150—1.

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Eastern Malleable Iron Co., The: *See*—
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Eastman, Du Bois: *See*—
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Eastman, Du Bois, and W. G. Schlinger, to Texaco Inc. Recovery of oil from tar sands. 3,044,948, 7–17–62, Cl. 208—11.

Eastman Kodak Co.: *See*—
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Easton, Edward A., to Aerojet-General Corp. Igniter for solid propellants. 3,044,399, 7–17–62, Cl. 102—70.

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Keating, James P., and Saunders. 3,044,539.
Skerkoske Eugene J., and Spielman. 3,044,754.

Edelman, Franz: *See*—
Epstein David W., Schwartz, and Edelman. 3,045,141.

Eden, George E., and K. V. Melbourne, to National Research Development Corp. Liquid sampling apparatus. 3,044,300, 7–17–62, Cl. 73—422.

Edmundson, Warren F., to J. W. Sandberg. Combination telescopic oar and pump. 3,044,410, 7–17–62, Cl. 103—153.

Edström, John O., to Svenska Metallverken, Messrs. Aktiebolaget. Method for the production of metallic-ceramic materials. 3,044,867, 7–17–62, Cl. 75—.5.

Ellers, Louis H., to The Dow Chemical Co. Method of treating earth formations which are penetrated by a well bore. 3,044,550, 7–17–62, Cl. 166—42.

Eisenbraun, Allan A., to Ogilvie Flour Mills Co., Ltd. Separation of amino acids by ion exclusion. 3,045,026, 7–17–62, Cl. 260—326.3.

Eisendrath, David C., to Cory Corp. Dehumidifier control having collected-condensate responsive means. 3,044,272, 7–17–62, Cl. 62—176.

Eitel-McCullough, Inc.: *See*—
Haegele, Rowland W., and McLaughlin. 3,045,146.

Ekedahl, John C., and J. H. Veale, to Illinois Clay Products Co. Tar-bonded magnesia brick and method. 3,044,889, 7–17–62, Cl. 106—58.

Ekkers, Gysbert J., to Patelhold Patentverwertungs- & Elektro-Holding A.-G. Electron tube. 3,045,142, 7–17–62, Cl. 313—251.

Electroacustic G.m.b.H.: *See*—
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Electro-Measurements, Inc.: *See*—
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Elliott, Eugene W., to Chicago Aerial Industries, Inc. Camera shutter arrangement and means for operating the same. 3,044,381, 7–17–62, Cl. 95—63.

Ellis, Charles A., to Glass-Tite Industries, Inc. Mercury switch. 3,045,088, 7–17–62, Cl. 200—152.

Ellis, John G., to Sprayon Products, Inc. Liquid spraying device. 3,044,713, 7–17–62, Cl. 239—346.

Ellis, Sydney M., to Champion Dish Washing Machine Co. Conveyor for dish washers. 3,044,601, 7–17–62, Cl. 198—131.

Emerson, Eber S. Grinder. 3,044,220, 7–17–62, Cl. 51—100.

Emerson-Pryne Co.: *See*—
Papsdorf, Robert A. 3,044,106.

Emporium Specialties Co., Inc.: *See*—
Erskine, George B., and Gartner. 3,044,789.

Emrick, Donald D., and S. M. Darling, to The Standard Oil Co. Borated monomers and polymers. 3,044,998, 7–17–62, Cl. 260—80.5.

Emsig Mfg. Co.: *See*—
Troll, William A., and Bonsignore. 3,044,660.

Engelbrecht, Rudolf S., to Bell Telephone Laboratories, Inc. Traveling wave parametric amplifier. 3,045,189, 7–17–62, Cl. 330—7.

Engelhard Industries, Inc.: *See*—
Robinson, Harold W. 3,044,155.

Engeman, Leonard A., and K. C. Rupert, to Sylvania Electric Products Inc. Staging devices. 3,044,352, 7–17–62, Cl. 88—24.

Engineering Supervision Co.: *See*—
Gerard, George, and Brayman. 3,044,113.

Englehart, Paul G. Portable floor wax cart. 3,044,096, 7–17–62, Cl. 15—257.05.

English Electric Co. Ltd., The: *See*—
Barnes, Arthur G., Hall, and Thomasson. 3,044,735.

Enninga, Robert, and M. G. J. Beets, to International Flavors & Fragrances Inc. Trimethyl-dodecahydronaphthofurans. 3,045,028, 7–17–62, Cl. 260—346.2.

Ensinger, Raymond L., to Holley Carburetor Co. Torsion pivot means. 3,044,308, 7–17–62, Cl. 73—54.6.

Epstein, David W., J. W. Schwartz, and F. Edelman, to Radio Corp. of America. Electron beam tube. 3,045,141, 7–17–62, Cl. 313—87.

Erickson, Virginius R., to Ammo Products, Inc. Safety shield for explosively-actuated stud-driving tool. 3,044,070, 7–17–62, Cl. 1—44.5.

Erly-Fat Livestock Feed Co.: *See*—
Lent, Albert. 3,044,877.

Ernst, Hans, to Demag-Elektrometallurgie G.m.b.H. Arc furnace electrode control means. 3,045,144, 7–17–62, Cl. 314—31.

Erskine, George B., and S. J. Gartner, to Emporium Specialties Co., Inc. Work support head and mandrel for the manufacture of studded electrodes. 3,044,789, 7–17–62, Cl. 279—2.

Espenlaub, Edward T., and C. H. Menges. Electric arc welding apparatus. 3,045,107, 7–17–62, Cl. 219—127.

Esposito, Angelo. Jig for a power saw. 3,044,507, 7–17–62, Cl. 143—47.

Esso Research and Engineering Co.: *See*—
Baumann, George P., and Lipuma. 3,044,952.
Haney, Roy E. D., and Clarke. 3,045,119.
Maisel, Daniel S., Ryan, and Cox. 3,045,048.
Morway, Arnold J., Bartlett, and Muessig. 3,044,960.
Morway, Arnold J., Munday, Bartlett, and Muessig. 3,044,961.
Ryder, James W. 3,044,864.
Schriesheim, Alan, and Gilbert. 3,045,056.
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Evangelista, Henry. Ventilated footwear. 3,044,188, 7–17–62, Cl. 36—3.

F.T. Products Ltd.: *See*—
Fernberg, Eric B. 3,044,809.

Fabricon Products, Division of The Eagle-Picher Co.: *See*—
Altman, Frank, Jr. 3,044,233.

Falk, Edward J.: *See*—
Schwartz, Robert E., Stahl, and Falk. 3,044,265.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Schmitt, Karl, Hennig, Lindner, and Ott. 3,045,043.
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Farmery, George K., and L. J. Newman, to Clayton Dewandre Co. Ltd. Power-assisted steering mechanisms for road vehicles. 3,044,569, 7–17–62, Cl. 180—79.2.

Farmington Mfg. Co.: *See*—
Conlon, John W. 3,044,149.
Conlon, John W. 3,044,836.

Feissel, Henri G., to Compagnie des Machines Bull (Societe Anonyme). Process for data recording. 3,044,696, 7–17–62, Cl. 235—61.12.

Fellendorf, Frederick G., to Westinghouse Electric Corp. Electrical circuit for indicating the failure of diodes. 3,045,168, 7–17–62, Cl. 321—14.

Ferguson, Edgar A., Jr., to Fine Brands Corp. Shape-retaining peanut spread. 3,044,883, 7–17–62, Cl. 99—128.

Ferguson, George R., to Perfecting Service Co. Air line lubricator with measured lubrication. 3,044,574, 7–17–62, Cl. 184—55.

Fernald, Olaf H.: *See*—
Heffron, Charles B., and Fernald. 3,045,062.

Fernberg, Eric B., to F.T. Products Ltd. Fastener. 3,044,809, 7–17–62, Cl. 287—53.

Ferodo, Societe Anonyme Francaise du: *See*—
Lepelletier, Pierre A. 3,044,581.

Ferranti, Ltd.: *See*—
Scarrott, Gordon G., and Welby. 3,044,593.

Ferrar, Robert C., and R. B. Hoffman, to International Telephone and Telegraph Corp. Fault location system. 3,045,113, 7–17–62, Cl. 250—15.

Ferris, Seymour W.: *See*—
Stout, William J., Ferris, and Tench. 3,044,917.

Fessenden, Peter J., to Springfield Wire & Tinsel Co. Cold terminal resistance wire. 3,045,102, 7–17–62, Cl. 219—46.

Fiala, Ernst J. H., to Daimler-Benz Aktiengesellschaft. Vehicle provided with means for controlling its transverse inclination in curves. 3,044,799, 7–17–62, Cl. 280—112.

Fibermold Corp.: *See*—
Friedman, Mark M. 3,044,777.

Fidler, Delmer A.: *See*—
Clark, Sheldon L., and Fidler. 3,045,049.

Fieux, Jean, ½ interest to Societe des Forges et Ateliers du Creusot. Universally adjustable support for a vehicle. 3,044,346, 7–17–62, Cl. 88—16.

Figdor, Sanford K., E. R. Pinson, Jr., B. M. Bloom, and G. D. Laubach, to Chas. Pfizer & Co., Inc. 21-methyl steroids and intermediates. 3,045,010, 7–17–62, Cl. 260—239.55.

Fine Brands Corp.: *See*—
Ferguson, Edgar A., Jr. 3,044,883.

Fink, Richard R., to D. J. Campbell Co., Inc. Apparatus for installing bushings. 3,044,157, 7–17–62, Cl. 29—235.

Finkes, David C. Free rotating main propulsion shaft packing area resurfacing machine. 3,044,224, 7–17–62, Cl. 51—241.

Finsterwalder, Carl J.: *See*—
Simmons, Milton E., Finsterwalder, and Terkoski. 3,045,137.

Finvik, Hjalmar. Electronic starter plug for diesel engines. 3,044,458, 7–17–62, Cl. 123—145.

Fisher, John S. Finger key valve for wind musical instruments and method of making the same. 3,044,126, 7–17–62, Cl. 18—59.

Fisher, Julian V., to Illinois Tool Works Inc. Container carrier and package. 3,044,230, 7–17–62, Cl. 53—35.

Flam, Frederick H. Match point duplicate bridge scorer. 3,044,693, 7–17–62, Cl. 235—61.6.

Flavin, James P., and J. R. Riden, Jr., to Chemagro Corp. Sulfonyl ethylene fungicides. 3,044,926, 7–17–62, Cl. 167—22.

Fleischhauer, Eugene T., to Texaco Experiment Inc. Pressure fluid ram. 3,044,289, 7–17–62, Cl. 73—12.

Fletcher, Henry R., to Dunlop Rubber Co. Ltd. Inflatable articles and inflation valves therefor. 3,044,525, 7–17–62, Cl. 152—429.

Flex-O-Lators, Inc.: *See*—
Richardson, William F. 3,044,615.

Florida Tile Industries, Inc.: *See*—
Lesnett, Frederick A., Jr., and Wenger. 3,044,138.

Flury, Karl, to Defensor AG. Liquid atomizer. 3,044,752, 7–17–62, Cl. 261—29.

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Barnes, James F., and Silversher. 3,044,498.

Ford, Fred A., to Standard Oil Co. Preparation of mercaptans and sulfides. 3,045,053, 7–17–62, Cl. 260—609.

Ford, James G., to Westinghouse Electric Corp. Electrical apparatus having a coating consisting of resinous polymeric epoxide containing finely divided aluminum oxide trihydrate and resinous polyamide. 3,044,900, 7–17–62, Cl. 117—132.

Ford Motor Co.: *See*—
Smith, Alfred R. 3,044,281.

Foreman, Robert W.: *See*—
Callahan, James L., Foreman, and Veatch. 3,044,966.

Formica Corp.: *See*—
Isaacson, Larry Z. 3,044,895.

Forney, Ferdinand C. Device for projecting moving message. 3,044,353, 7–17–62, Cl. 88—27.

Forster, Lloyd M. Continuously variable transmission and automatic control. 3,044,316, 7–17–62, Cl. 74—472.

Fortune, Raymond L.: *See*—
Davidson, John T., Georgen, and Fortune. 3,044,694.

Fowler, Reid J. Barber chair attachment. 3,044,828, 7–17–62, Cl. 297—191.

Fox, Gerald B., D. E. Vandeveer, and H. E. Welch, to The Hobart Mfg. Co. Glassware cleansing machine. 3,044,092, 7–17–62, Cl. 15—75.

Fram Corp.: *See*—
Dow, Leslie A., Fredrickson, and Parsons. 3,044,957.

Francis, Charles B., to Puriron and Chemicals, Inc. Treatment of pickle liquor sludge. 3,044,852, 7–17–62, Cl. 23—110.

Francis, Charles B., to Puriron and Chemicals, Inc. Recovery of by-products of waste pickle liquor. 3,044,868, 7–17–62, Cl. 75—29.

Frank, Arne, and J. C. Roach, to The Trane Co. Hermetic compressor. 3,044,688, 7–17–62, Cl. 230—232.

Franklin, Burton P., and C. E. Pollard, to H. K. Porter Co. Collapsible utility cart. 3,044,794, 7–17–62, Cl. 280—36.

Frantz, Nicholas, and S. Gloviak, to Carter Parts Co. Electrical jack. 3,045,078, 7–17–62, Cl. 200—51.1.

Frantz, Nicholas, and S. Gloviak, to Carter Parts Co. Electrical jack. 3,045,079, 7–17–62, Cl. 200—51.1.

Frantz, Nicholas, and S. Gloviak, to Carter Parts Co. Twin electrical devices. 3,045,080, 7–17–62, Cl. 200—51.02.

Franzheim, George W. Combination gas fired incinerator and charcoal broiler. 3,044,421, 7–17–62, Cl. 110—8.

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Dow, Leslie A., Fredricksop, and Parsons. 3,044,957.

Frenkel C-D, Aktiengesellschaft: *See*—
Frenkel, Meyer S., and Meyer. 3,044,716.

Frenkel, Meyer S., and P. Meyer, to Frenkel C-D, Aktiengesellschaft. Pulverising mills. 3,044,716, 7–17–62, Cl. 241—103.

Frerich, Rudolf, to Stoecker & Kunz G.m.b.H. Refractory ceramic pipe for fusible material. 3,044,499, 7–17–62, Cl. 138—143.

Frey, Raymond, to Compagnie Francaise des Matieres Colorantes. New optical bleaching agents of the diamino stilbene series. 3,045,013, 7–17–62, Cl. 260—240.

Frico Products Corp.: *See*—
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Friedman, Allan. Methods of and apparatus for photocomposing text material. 3,044,374, 7–17–62, Cl. 95—4.5.

Friedman, Mark M., to Fibermold Corp. Bowling pin. 3,044,777, 7–17–62, Cl. 273—82.

Friedman, Max. Sealable container closure. 3,044,651, 7–17–62, Cl. 215—31.

Friedrich, Frank D.: *See*—
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Fritzlen, Thomas L., to Reynolds Metals Co. Propellant system. 3,044,911, 7–17–62, Cl. 149—37.

Frommer, Joseph C. Calibrating system for particle sensing machine. 3,045,123, 7–17–62, Cl. 250—218.

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Colman, Philip A., and Frost. 3,045,236.

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Fry, Charles L. 3,044,603.

Fujimoto, Yasuo: *See*—
Kamada, Hideo, Wakaki, Shigetoshi, Tomioka, Ueyama, Uzu, Marumo, and Fujimoto. 3,044,935.

Fullemann, John, to The Cooper-Bessemer Corp. Centrifugal compressor construction. 3,044,684, 7–17–62, Cl. 230—130.

Fulton, Harry L. Method and apparatus for making connections to lead waste piping. 3,044,527, 7–17–62, Cl. 153—21.

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Gaetani, Ermanno, to Ayiende Colori Nayionali Affini ACNA S.p.A. Disazo dyes. 3,045,004, 7–17–62, Cl. 260—186.

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Baumeister, Wilhelm, Gaeth, Haarer, and Schwarz. 3,044,970.

Gagnon, George W. Window actuator. 3,044,311, 7–17–62, Cl. 74—89.

Gailliot, Paul, and J. Gaudechon, to Societe des Usines Chimiques Rhone-Poulenc. Iminodibenzyl derivatives. 3,045,017, 7–17–62, Cl. 260—268.

Gainesville Machine Co., Inc.: *See*—
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Gajda, Leo P., and W. S. Kazmierczak, to Arthur Colton Co. Feeding mechanism. 3,044,599, 7–17–62, Cl. 198—25.

Gall, Rudi: *See*—
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Gamble, Norman L.: *See*—
Alspach, Hardin S., Gamble, Hampshire, Mellinger, and Musch. 3,044,117.

Gamel, Gayne D., and R. Hauser, to Westinghouse Electric Corp. Spring closing mechanism for circuit breakers. 3,045,083, 7–17–62, Cl. 200—74.

Gains, Theodore C., and P. J. Kiefer, Jr., to Curtiss-Wright Corp. Tape feeding means. 3,044,725, 7–17–62, Cl. 242—55.12.

Gang, Herman, to Monroe Calculating Machine Co. Value selection and entering means for calculating machines. 3,044,697, 7–17–62, Cl. 235—63.

Gant, Preston L., to Continental Oil Co. Detection and location of pipeline leaks. 3,045,116, 7–17–62 Cl. 250—43.5.

Gardner, August M., and A. C. Zbylut, to The Singer Mfg. Co. Sewing machines with improved loop deflector. 3,044,427, 7–17–62 Cl. 112—187.

Garnsworthy, Courtney, ½, to Welwyn Electric Ltd. Process for the production of electrical resistors and resulting article. 3,044,901, 7–17–62, Cl. 117—212.

Gartner, Stanley J.: *See*—
Erskine, George B., and Gartner. 3,044,789.

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Gasperetti, Robert L.: *See*—
Heins James F., and Gasperetti. 3,045,171.

Gastright, Frank A., to Vend-A-Box, Inc. Box erecting and vending machine. 3,044,371, 7–17–62, Cl. 93—53.

Gates, Stanley H.: *See*—
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Gaudechon, Jacques: *See*—
Gailliot, Paul, and Gaudechon. 3,045,017.

Gaylord, John A., to H. Koch & Sons. Switch actuating device with preadjusted air resistance. 3,045,076, 7–17–62, Cl. 200—34.

Gebele, Kürt, to Compur-Werk Friedrich Deckel oHG. Photographic camera. 3,044,376, 7–17–62, Cl. 95—10.

Gebele, Kürt, to Compur-Werk Friedrich Deckel oHG. Photographic camera. 3,044,377, 7–17–62, Cl. 95—10.

Gebele, Kürt, and E. Spiessl, to Compur-Werk Friedrich Deckel oHG. Photographic shutter. 3,044,382, 7–17–62, Cl. 95—63.

Gehm Robert: *See*—
Dehnert, Johannes, and Gehm. 3,045,003.

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Holstius, Elvin A. 3,044,931.

Geigy, J. R., A.-G.: *See*—
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Geistahoff, Hubert, to Jean Walterscheid Kommanditgesellschaft. Protection device for shafts. 3,044,278, 7–17–62, Cl. 64—3.

General Aniline & Film Corp.: *See*—
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General Atronics Corp.: *See*—
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General Electric Co.: *See*—
Buchhold, Theodor A. 3,044,309.
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Usher, Ralph E., Conway, and Goodness. 3,045,095.
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McNulty, John V., and Wright. 3,045,148.

General Motors Corp.: *See*—
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Bremer, Robert D. 3,045,101.
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Gerard, George, and J. Brayman, to Engineering Supervision Co. Super-high pressure apparatus. 3,044,113, 7–17–62, Cl. 18—5.

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Gerber, Fritz, to SKF Kugellagerfabriken G.m.b.H. Textile drafting assembly. 3,044,128, 7–17–62, Cl. 19—295.

Gerber, Hanns, and R. Stroh, to Bayer Aktiengesellschaft, Farbenfabriken. Process for the production of spinning solutions of polyacrylonitrile. 3,044,975, 7–17–62, Cl. 18—54.

Gerner, Theodore C. Replacement unit for idler arm bracket. 3,044,798, 7–17–62, Cl. 280—95.

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Gerbaux, Rene C., Lemmerling, and Claes. 3,045,006.

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Ghisoni, Pietro D., to Vita Mayer & Co., Inc. Tail sealing machine. 3,044,532, 7–17–62, Cl. 156—361.

Gianoli, Umberto F., to Bell Telephone Laboratories, Inc. Electrical control circuits. 3,045,215, 7–17–62, Cl. 340—174.

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Frantz, Nicholas, and Gloviak. 3,045,079.
Frantz, Nicholas, and Gloviak. 3,045,080.

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Golde, Hans, to H. T. Golde, G.m.b.H. & Co., K.G. Connecting means for a guide rail for slidable roofs of vehicles. 3,044,825, 7–17–62, Cl. 296—137.

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Goodhue, William V., and F. W. Higgins, to Leesona Corp. Winding machine. 3,044,722, 7–17–62, Cl. 242—39.

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Gotze, Johannes, to Agfa Aktiengesellschaft. Cyanine dyes derived from thienylbenzoxnazoles and silver halide emulsions sensitized therewith. 3,044,875, 7–17–62, Cl. 96—105.

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Gourdon, Dorine A. Garment. 3,044,470, 7–17–62, Cl. 128—528.

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Coscia, Lewis G., and Grander. 3,045,094.

Gray, Reuben F., to United States of America, Navy. Lower face, high pressure mask. 3,044,464, 7–17–62, Cl. 128—142.

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Grebe, John J., and J. F. Miller, to The Dow Chemical Co. Production of cement. 3,044,756, 7–17–62, Cl. 263—53.

Greenleaf, Leland R., to C. G. Conn, Ltd. Piston guide key arrangement for brass instrument. 3,044,339, 7–17–62, Cl. 84—392.

Greenman, Orval L., and R. J. Stewart, to The Bulman Corp. Store fixture. 3,044,631, 7–17–62, Cl. 211—136.

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Grobowski, Ben T., to The E. T. Rugg Co. Reel type lawn mower with height of cut adjustment. 3,044,240, 7–17–62, Cl. 56—254.

Grohe, Friedrich, Armaturenfabrik: *See*—
Bayer, Friedrich. 3,044,707.

Grolitzer, Arthur J.: *See*—
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Grove, Marvin H., to Grove Valve and Regulator Co. Valve construction. 3,044,741, 7–17–62, Cl. 251—54.

Grove Valve and Regulator Co.: *See*—
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Grumman Aircraft Engineering Corp.: *See*—
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Gulf Research & Development Co.: *See*—
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Gulton Industries, Inc.: *See*—
Orlacchio, Anthony W. 3,045,131.

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Guta, Leon. Drain check valves. 3,044,433, 7–17–62, Cl. 114—197.

Guth, Eugene D., and C. G. Long, to Phillips Petroleum Co. High burning rate solid propellant. 3,044,910, 7–17–62, Cl. 149—19.

Gwinn, Joseph M., Jr.: *See*—
Coleman, Gerald W., and Gwinn. 3,044,644.

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Mindermann, Kurt H. 3,045,074.

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Achelis, Johann D., Gall, Haack, and Voemel. 3,044,936.

Haarer, Erich: *See*—
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Haas, Howard C., to Polaroid Corp. Photographic products and processes. 3,044,873, 7–17–62, Cl. 96—29.

Habib, Emile E., to Deering Milliken Research Corp. Textile sizing composition applicating method and resulting product. 3,044,898, 7–17–62, Cl. 117—76.

Hackley, Brennie E., Jr., E. J. Poziomek, and G. M. Steinberg, to United States of America, Army. His quaternary oximes. 3,045,025, 7–17–62, Cl. 260—296.

Haegele, Rowland W., and J. W. McLaughlin, to Eitel-McCullough, Inc. Tunable resonant cavity. 3,045,146, 7–17–62, Cl. 315—5.21.

Hagan, Lamont: *See*—
Celentano, Vincent D., and Hagan. 3,044,897.

Hägele, Gustav, W. Meyer, and F. Johannsen, to Dr. Kurt Herberts & Co. vorm Otto Louis Herberts. New additional polymers from monomeric vinyl compounds and unsaturated cross-linked polyester resins and a process for preparing the same. 3,044,978, 7–17–62, Cl. 260—45.4.

Hageman, Howard A., to United States Rubber Co. Trinitromethyl-2,4-dinitrophenyl sulfide. 3,045,052, 7–17–62, Cl. 260—609.

Hahn, Gilbert B.: *See*—
Douglas, Aivin P., and Hahn. 3,044,802.

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Hale, Arthur N., J. N. Covert, and R. W. Volkmann, to Union Special Machine Co. Low mass presser mechanism for sewing machines. 3,044,428, 7–17–62, Cl. 112—235.

Hall, Clarence R. Spindle brake. 3,044,248, 7–17–62, Cl. 57—88.

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Hall, John L., C. R. Schreiber, and M. E. Cushman, to Curtiss-Wright Corp. Mechanism for converting rotary to linear movement. 3,044,312, 7–17–62, Cl. 74—95.

Hall, William D. Plug and grounding means. 3,045,201, 7–17–62, Cl. 339—14.

Halley, Stanley G., to Sandoz Chemical Works, Inc. Sustained action pharmaceutical tablets. 3,044,938, 7–17–62, Cl. 167—82.

Halliburton Co.: *See*—
Bradley, Billie J. 3,044,553.

Halpern, William. Apparatus for deburring and chamfering in combination with drill or reamer or the like. 3,044,325, 7–17–62, Cl. 77—66.

Ham, George E., to The Dow Chemical Co. Preparation of ethylene sulfate. 3,045,027, 7–17–62, Cl. 260—327.

Hamilton, Charles W. F. Hydraulic jet propulsion apparatus for waterborne craft. 3,044,260, 7–17–62, Cl. 60—35.54.

Hamilton Cosco, Inc.: *See*—
Hamilton, Earl F. 3,044,078.
Hamilton, Earl F. 3,044,840.

Hamilton, Earl F., to Hamilton Cosco, Inc. Infant's crib. 3,044,078, 7–17–62, Cl. 5—100.

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Hammersley, Lowell V., to E. B. Hammersley, by decree of distribution. Canopy-door unit. 3,044,540, 7–17–62, Cl. 160—20.

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Haneklaus, Karl, to F. Tacke, KG. Articulated-joint toothed coupling. 3,044,280, 7–17–62, Cl. 64—8.

Hanes Hosiery Mills Co.: *See*—
Thomas, Ronny B., and Young. 3,044,293.

Hanes, Vaughan D., to Aerojet-General Corp. Initiating device for oil well tools. 3,045,081, 7–17–62, Cl. 200—61.53.

Haney, Roy E. D., and J. V. Clarke, Jr., to Esso Research and Engineering Co. Radioactive tracer. 3,045,119, 7–17–62, Cl. 250—106.

Hanken, Albert F. G., to Industrial Nucleonics Corp. Measuring system. 3,044,297, 7–17–62, Cl. 73—355.

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Randall, Dwight L., Hanley, and Larison. 3,044,288.

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Hanscom, H. F., & Co., Inc.: *See*—
Hanscom Harris F. 3,044,614.

Hanscom, Harris F., to H. F. Hanscom & Co., Inc. Tape package having controlled unwinding. 3,044,614, 7–17–62, Cl. 206—59.

Hansen, Hans C. Spindle with feeder position record changing phonographs. 3,044,782, 7–17–62, Cl. 274—10.

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Hardman, James A., to Utah Scientific Research Foundation. Drive mechanism for track laying vehicles. 3,044,318, 7–17–62 Cl. 74—665.

Hardwick Stove Co.: *See*—
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Harkness, Joseph R., to Briggs & Stratton Corp. Engine powered rotary lawn mower with improved engine starter. 3,044,238, 7–17–62, Cl. 56—25.4.

Harkness, Joseph R., to Briggs & Stratton Corp. Rotary power lawn mower with improved engine. 3,044,239, 7–17–62, Cl. 56—25.4.

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Harris, Lee T. Variable displacement hydraulic assembly. 3,044,409 7–17–62, Cl. 103—120.

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Makowski, Alexander G., and Hartford. 3,044,894.

Hartmeister, Joel T. Range finding device. 3,044,344, 7–17–62, Cl. 88—2.4.

Hartnett, John J., to The Animation Equipment Corp. Optical printer drive and control mechanism. 3,044,350, 7–17–62, Cl. 88—24.

Hartwig, Deward. Cot constructions. 3,044,080, 7–17–62, Cl. 5—111.

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Hasche, Rudolph L., deceased (B. K. Hasche, executrix of said R. L. Hasche), to Carbonic Development Corp. Regenerative apparatus. 3,044,861, 7–17–62, Cl. 23—277.

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Rode, Ludwig. 3,044,370.

Hauser, Richard: *See*—
Gamel, Gayne D., and Hauser. 3,045,083.

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Hayes, Walter C., and R. W. Dickinson, to North American Aviation, Inc. Steel alloy composition. 3,044,872, 7–17–62, Cl. 75—126.

Haynes, Luther J. Nailing machine. 3,044,072, 7–17–62, Cl. 1—46.

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Heckathorn, Loyd E., to Towner Mfg Co. Apparatus for converting reciprocatory motion to oscillatory motion. 3,044,313, 7–17–62, Cl. 74—108.

Heffron, Charles B., and O. H. Fernald, to Westinghouse Electric Corp. Automatic frequency control. 3,045,062, 7–17–62, Cl. 178—69.5.

Heggy, James E. Welding electrode holder. 3,045,109, 7–17–62, Cl. 219—143.

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Hein, Lester W. Display and dispensing cabinet. 3,044,841, 7–17–62, Cl. 312—138.

Helninger, Samuel A. and G. H. Birum, to Monsanto Chemical Co. Toxic arylsulfinyl alkenenitriles pesticides. 3,044,927, 7–17–62, Cl. 167—30.

Heins, James F., and R. L. Gasperetti, to Westinghouse Electric Corp. Electrical control apparatus. 3,045,171, 7–17–62, Cl. 322—25.

Heintz, Rene, and J.-M. Jour., to Compagnie du Filage des Metaux et des Joints Curty. Method and apparatus for forming coatings of vitreous material on a heated metal billet. 3,044,893, 7–17–62, Cl. 117—18.

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Henderson, Stanford A., to Gomco Surgical Mfg. Corp. Valve and pump assembly for closing and irrigating fluid drainage tube in suction apparatus. 3,044,466, 7–17–62, Cl. 128—276.

Hennig, Fritz O., to Dresser Industries, Inc. Combustor with unitary liner. 3,044,263, 7–17–62, Cl. 60—39.32.

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Heppe, Robert J., to International Telephone and Telegraph Corp. Control reversal sensor. 3,044,734, 7–17–62, Cl. 244—77.

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Maury, Lucien G., and Nahill. 3,044,844.
Maury, Lucien G., and Nahill. 3,044,853.

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Hicks, James M. Throttle control. 3,044,267, 7–17–62, Cl. 60—54.5.

Higgins, Frank W.: *See*—
Goodhue, William V., and Higgins. 3,044,722.

Higgins, James R. Collapsible tent frames. 3,044,477, 7–17–62, Cl. 135—2.

Highland Supply Corp.: *See*—
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Higley, Robert E., to Westinghouse Electric Corp. Winding of stator coils. 3,044,150, 7–17–62, Cl. 29—155.5.

Hilbert, Richard G., to Universal Winding Co. High speed false twister spindle and machine. 3,044,247, 7–17–62, Cl. 57—77.45.

Hilding, John R., to United States of America, Navy. Sound simulator utilizing noise source. 3,045,190, 7–17–62, Cl. 331—78.

Hill, James J., to American Sumatra Tobacco Corp. Selective vending machine. 3,044,598, 7–17–62, Cl. 194—17.

Hinden, Milton. Damper and linkage therefor. 3,044,387, 7–17–62, Cl. 98—110.

Hines, Paul J., and E. M. Worth, to Raytheon Co. Electrical resistance devices. 3,045,200, 7–17–62, Cl. 338—174.

Hirschler, Alfred E., to Sun Oil Co. Siliceous cracking catalyst with a discontinuous surface glaze. 3,044,954, 7-17-62, Cl. 208—114.

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Hodges, Hayden D., and J. T. Dean, to Socony Mobil Oil Co., Inc. Unbalanced bridge measurements of borehole temperature. 3,044,298, 7-17-62, Cl. 73—362.

Hoenig, Sidney J. Ball-point pen-light. 3,045,111, 7-17-62, Cl. 240—6.46.

Hoer, Kenneth G., to Creed & Co. Ltd. Facsimile apparatus. 3,044,768, 7-17-62, Cl. 271—4.

Hoffman, Edward A. Method and apparatus for fuel combustion. 3,044,453, 7-17-62, Cl. 123—25.

Hoffman, Ross B.: *See*—
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Hoffmann-La Roche Inc.: *See*—
Brossi, Arnold. 3,045,021.

Hohenadel, John J.: *See*—
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Holbert, Don R.: *See*—
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Holbrook, Orrin C., and G. G. Bernard, to The Pure Oil Co. Increasing oil recovery during water-flooding. 3,044,544, 7-17-62, Cl. 166—9.

Holley Carburetor Co.: *See*—
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Holman, Henry, and L. Weisglass, to X-Ray Mfg. Corp. of America. Panoramic X-ray machines. 3,045,118, 7-17-62, Cl. 250—61.5.

Holm, Vernon C. F., G. C. Bailey, and A. Clark, to Phillips Petroleum Co. Nickel oxide catalyst and their use in polymerizing olefins. 3,045,054, 7-17-62, Cl. 260—683.15.

Holroyd, Eric, and F. W. Waldron, to Dunlop Rubber Co. Ltd. Apparatus for supplying sheet material to a tire building machine. 3,044,727, 7-17-62, Cl. 242—67.3.

Holstius, Elvin A., to Geigy Chemical Corp. Aryloxy acetic acid amides: process for parenteral application. 3,044,931, 7-17-62, Cl. 167—52.

Holt, Howard R. Embalmer's hand holder. 3,044,144, 7-17-62, Cl. 27—21.

Hönger, Guido, to Swiss Gas Stove Co. Radiating or incandescent gas burner. 3,044,538, 7-17-62, Cl. 158—116.

Honsinger, Vernon B., to Allis-Chalmers Mfg. Co. Synchronous induction motor. 3,045,135, 7-17-62, Cl. 310—212.

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Kerstukos, Albert, Hooke, and Bollinger. 3,044,701.

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Hoppe, William, and L. W. Schoppee, to Package Machinery Co. Sharpening of endless knife bands. 3,044,226, 7-17-62, Cl. 51—250.

Hopper, Fred H., to United Aircraft Corp. Shipping container. 3,044,607, 7-17-62, Cl. 206—46.

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Horton, Charles E., and A. L. Lewis. Sterile gauze dispenser with cutting means thereon. 3,044,338, 7-17-62, Cl. 83—649.

Horton, Richard H., to United States of America, Navy. Flange and wall structure. 3,044,657, 7-17-62, Cl. 220—80.

Horton, William G. Indicators and indicating systems. 3,044,436, 7-17-62, Cl. 116—135.

Hosbein, Louis H., to M. H. Detrick Co. Method of co-moulding brick. 3,044,125, 7-17-62, Cl. 18—59.

Hoskinson, Gordon H. Heater construction. 3,044,460, 7-17-62, Cl. 126—110.

Housman, Bennett, R. C. Jeffrey, R. P. Mayer, and D. B. Thompson, to Research Corp. Signal storage system. 3,043,217, 7-17-62, Cl. 340—174.1.

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Howell, Ronald T. A., and L. Young, to Decca Ltd. Microwave apparatus. 3,045,188, 7-17-62, Cl. 329—161.

Humphreys, Lisle G., to M. D. Knowlton Co. Machine and method for making helically wound tubing. 3,044,372, 7-17-62, Cl. 93—80.

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Iketani, Taisho. Fuel charge valve assembly in gas-fueled cigarette lighter. 3,044,503, 7-17-62, Cl. 141—293.

Iketani, Taisho. Injection valve in a liquefied gas lighter. 3,044,504, 7-17-62, Cl. 141—293.

Iketani, Taisho. Injection valve in a liquefied gas lighter. 3,044,505, 7-17-62, Cl. 141—294.

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Jaffe, David L., and A. Ross, to Polarad Electronics Corp. Spectrum tape recorder. 3,045,181, 7-17-62, Cl. 324—77.

Jaffee, Robert I., to The Battelle Development Corp. Method of producing ribbed metal sandwich structures. 3,044,160, 7-17-62, Cl. 29—423.

James, Edwin B., to The McKay Machine Co. Sorting and unloading apparatus for drawbenches and the like. 3,044,620, 7-17-62, Cl. 209—82.

James, Ralph A.: *See*—
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James, Sven F. Apparatus for the shrinking or stretching of flexible sheet material. 3,044,143, 7-17-62, Cl. 26—18.6.

Jamison, Richard H., Jr. Material handling apparatus. 3,044,640, 7-17-62, Cl. 214—83.36.

Jarboe, Ralph R., Jr., to Cities Service Research and Development Co. Permeable well cement and method of providing permeable cement filters in wells. 3,044,547, 7-17-62, Cl. 166—12.

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Jex, Victor B., and D. L. Bailey, to Union Carbide Corp. Organopolysiloxanes and process for producing same. 3,044,982, 7-17-62, Cl. 260—46.5.

Jex, Victor B., and D. L. Bailey, to Union Carbide Corp. End-blocked aminoalkylpolysiloxanes and process for cyclic aminoalkylsiloxanes. 3,045,036, 7-17-62, Cl. 260—448.2.

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Cox, Arthur, and Johnson. 3,044,356.

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Jones, Edward M., to The Baldwin Piano Co. Transistor oscillators. 3,045,192, 7-17-62, Cl. 331—111.

Jones, James. Combination stud vice and tube flaring apparatus. 3,044,530, 7-17-62, Cl. 153—80.5.

Jones, Julius E. Well treating processes. 3,044,549, 7-17-62, Cl. 166—42.

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Jung, Jean-Pierre, and G. Schetty, to J. R. Geigy, A.-G. Monoazo dyestuffs. 3,045,005, 7-17-62, Cl. 260—198.

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Keating, James P., and J. A. Saunders, to Eclipse Fuel Engineering Co. Process of combustion. 3,044,539, 7-17-62, Cl. 157—117.5.

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Kerley, James J., Jr., to Kerley Engineering, Inc. Cable type vibration isolator with captivating elements. 3,044,759, 7-17-62, Cl. 267—1.

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Kirsten, Erhard. Hydraulically actuated cranes. 3,044,635, 7-17-62, Cl. 212—55.

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Klatchko, George A., to Curtis-Wright Corp. Nondestructive testing apparatus. 3,044,291, 7-17-62, Cl. 73—67.8.

Klaue, Hermann. Disc brakes, more particularly for motor vehicles. 3,044,579, 7-17-62, Cl. 188—72.

Klaue, Hermann. Track-laying vehicle having a hydraulically operated clutch-shifted and reversing transmission. 3,044,589, 7-17-62, Cl. 192—3.5.

Klingler, Karl A. Control mechanism. 3,044,314, 7-17-62, Cl. 74—131.

Klotz, Charles R. Spring clip for mounting building panels. 3,044,583, 7-17-62, Cl. 189—34.

Kluck, Louis. Casing centralizer. 3,044,554, 7-17-62, Cl. 166—241.

Knanishu, Sander L. Insulated shorting plug and mating electrical sockets. 3,045,077, 7-17-62, Cl. 200—46.

Knauth, Walter T. Means for measuring and recording liquid density. 3,044,302, 7-17-62, Cl. 73—434.

Knedlik, Omar S. Process for the preparation of a beverage. 3,044,878, 7-17-62, Cl. 99—28.

Knolle, Wilhelm. Apparatus for sorting seed material. 3,044,619, 7-17-62, Cl. 209—33.

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Kölle, Erwin, to Dahmler-Benz Aktiengesellschaft. Back rest adjusting device. 3,044,830, 7-17-62, Cl. 297—361.

Koplin, Harry. Laundry system. 3,044,285, 7-17-62, Cl. 68—12.

Koppers Co., Inc.: *See*—
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Korn, Waldemar H. Dust guard well cap. 3,044,788, 7-17-62, Cl. 277—131.

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Krewson, Charles F., to United States of America, Agriculture. N-(2,3,6-trichlorobenzoyl)-L-leucine and herbicidol use thereof. 3,044,866, 7-17-62, Cl. 71—2.6.

Krezanoski, Joseph Z., to Barnes-Hind Laboratories, Inc. Process and composition for examining eyes with fluoroescent vitamin B_2. 3,044,937, 7-17-62, Cl. 167—81.

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Lepelletier, Pierre A., to Societe Anonyme Francaise du Ferodo. Vehicle brake-control system. 3,044,581, 7–17–62, Cl. 188—152.
Lerch, Walter, to Glas-und Spiegel-Manufactur Aktiengesellschaft. Double pane wire-reinforced glass and method of producing the same. 3,044,159. 7–17–62, Cl. 29—419.
Lescure, Henri. Pressure coffee-pots. 3,044,388, 7–17–62, Cl. 99—285.
Lesnett, Frederick A., Jr., and D. A. Wenger, to Florida Tile Industries Inc. Automatic tile press. 3,044,138, 7–17–62, Cl. 25—42.
LeTourneau, Robert G. Mobile sea platform. 3,044,269, 7–17–62, Cl. 61—46.5.
Leufvenius, Karl J. Massaging apparatus. 3,044,462, 7–17–62, Cl. 128—33.
Leuze, William F., to United States of America, Navy. Bathythermograph simulator. 3,044,184, 7–17–62, Cl. 35—19.
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Levi, Daisy O., to D. O. and R. Levi. Reversible furniture cover or receptacle and method for making same. 3,044,517, 7–17–62, Cl. 150—52.
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Levy, Elizabeth, to Crystal Products Co., Ltd. Holders for lipsticks and like cosmetics. 3,044,613, 7–17–62, Cl. 206—56.
Levy, Hester T. Combination garment hanger means support and rear window ledge safety barrier for an automobile or the like. 3,044,674, 7–17–62, Cl. 224—42.34.
Levy, Irving M., and R. W. Leland, to General Motors Corp. Electric motor starting circuits. 3,045,159, 7–17–62, Cl. 318—103.
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Littwin, Arthur K., to R. L. and A. K. Littwin, and H. A. Young, trustees. Electrical control means. 3,045,165, 7–17–62, Cl. 318—286.
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Lyon Inc.: *See*—
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Mainzer, Adolf J. Method for candying vegetable material. 3,044,881, 7–17–62, Cl. 99—102.
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Makaroff, Vadim S., and A. E. Jackson. Rotary compressor. 3,044,686, 7–17–62, Cl. 230—147.
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Malatesta, Alberto, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Process for the production of tetraethyl lead. 3,045,035, 7–17–62, Cl. 260—436.
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Mann, John E., to Leach Corp. Time delay circuit. 3,045,150, 7–17–62, Cl. 317—148.5.
Manning, Richard L. Knife sheath. 3,044,673, 7–17–62, Cl. 224—2.
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Mathieu, Francois J. H. H., to Societe Les Constructions Guinard. Gang cutting and forming punch for the manufacture of filtering elements. 3,044,167, 7–17–62, Cl. 29—567.
Mathis, Glenn W., and R. J. Burger, to McCray Refrigerator Co., Inc. Refrigerated display case. 3,044,274, 7–17–62, Cl. 62—256.
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Maury, Lucien G., and G. F. Nahill, to Hercules Powder Co. Method of removing nitrogen oxides from fluids and nitrous acid. 3,044,844, 7–17–62, Cl. 23—2.
Maury, Lucien G., and G. F. Nahill, to Hercules Powder Co. Separation of solvated fixed nitrogen from compounds containing same. 3,044,853, 7–17–62, Cl. 23—157.
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Mayer, Gottfried O., and Seiferth. 3,044,886.
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Mayr, Gottfried. Jet propelled ski. 3,044,566, 7–17–62, Cl. 180—3.
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McDonald, Frank A. Bellows-type expansion compensator with spring-controlled tubular braided shroud. 3,044,805, 7–17–62, Cl. 285—45.
McDuffie, James W., and E. B. Nolt, to Sperry Rand Corp. Hay baler. 3,044,390, 7–17–62, Cl. 100—142.
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Mellott, Frank M., ½ to J. A. Dingus. Rotary pump. 3,044,408, 7-17-62, Cl. 103—103.
Melroy, David Q., to Bell Telephone Laboratories, Inc. Traveling wave tube. 3,045,145, 7-17-62, Cl. 315—3.5.
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Meyer, Herbert, to Nurnberger Schwachstrombauelemente Fabrik Gesellschaft mit beschrankter Haftung. Signal-seeking tuning drive system. 3,045,060, 7-17-62, Cl. 178—5.8.
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Midwest Supply and Mfg. Co.: *See*—
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Ahrens, Erhard, Schultes, Mies, and Kriebel. 3,045,206.
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Koch, Gilbert H., Herwig, and Kissel. 3,044,879.
Miller, Carl D. Intermittent film transport mechanism. 3,044,677, 7-17-62, Cl. 226—117.
Miller, George W., and F. L. Rose, to Imperial Chemical Industries Ltd. Triazolo-[2,3-c]-pyrimidines. 3,045,015, 7-17-62, Cl. 260—256.4.
Miller, George W., and F. L. Rose, to Imperial Chemical Industries Ltd. 6-hydrazinopyrimidine derivatives. 3,045,016, 7-17-62, Cl. 260—256.4.
Miller, Henry A., Jr., to Air Reduction Co., Inc. Gas storage and delivery system. 3,044,486, 7-17-62, Cl. 137—505.42.
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Miller, John S., Jr., to Pratt Mfg. Corp. Turning and conveying mechanism for flat lightweight items. 3,044,600, 7-17-62, Cl. 198—33.
Mills, Clarence A., to Reflectotherm, Inc. Ultra-long infrared heat ray emitter. 3,045,100, 7-17-62, Cl. 219—34.
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Minarik, Rudolf G., to Kimberly-Clark Corp. Papermaking machine. 3,044,392, 7-17-62, Cl. 100—162.
Minas, Giorgio. Electromagnetic devices for converting a movement of an electric value. 3,045,227, 7-17-62, Cl. 340—345.
Mindermann, Kurt H., to Gylling & Co., Aktiebolaget. Amplifier for transmission of speech in two directions. 3,045,074, 7-17-62, Cl. 179—170.
Mindes, Barry M., to International Telephone and Telegraph Corp. Diversity combining system. 3,045,114, 7-17-62, Cl. 250—20.
Minera, Salvador A. Fishing kite. 3,044,208, 7-17-62, Cl. 43—43.13.
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Carey, William M., Jr. 3,045,127.
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Minnesota Mining and Mfg. Co.: *See*—
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Minutillo, Gaetano. Garage drip pan. 3,044,575, 7-17-62, Cl. 184—106.
Mitchell, Earland R., and F. D. Friedrich, to Her Majesty the Queen in right of Canada as represented by the Minister of Mines and Technical Surveys. Smoke reducing method and apparatus for stokers. 3,044,422, 7-17-62, Cl. 110—72.
Mitchell, Reid L., A. R. Albohn, and S. G. Palmgren, to Rayonier Inc. Process and apparatus for producing hydroxyethylcellulose. 3,045,007, 7-17-62, Cl. 260—231.
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Polis, Samuel. 3,044,971.
Modic, Frank J., and J. E. Saville, to General Electric Co. Silicone-polyester copolymer and process for preparing same. 3,044,980, 7-17-62, Cl. 260—45.4.
Moisberry, Mahlon V., W. G. Wefel, and D. E. Walker, to Consolidated Water Power & Paper Co. Paper coating apparatus. 3,044,440, 7-17-62, Cl. 118—249.
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Propst, Robert L. Power meter. 3,044,306, 7-17-62, Cl. 73—514.

Proschold, Mervyn D. Means for cleaning and packaging phonograph disc records. 3,044,097, 7-17-62, Cl. 15—268.

Proval Corp.: *See*—
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Pure Oil Co., The: *See*—
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Purifron and Chemicals, Inc.: *See*—
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Pyramid Rubber Co., The: *See*—
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Q-Tips Inc.: *See*—
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Quayle, George F., to The Yale and Towne Mfg. Co. Carriage mounting for lift truck. 3,044,576, 7-17-62, Cl. 187—9.

Rader, William E., and M. Legator, to Shell Oil Co. Preservation of foods. 3,044,884, 7-17-62, Cl. 99—150.

Radio Corp. of America: *See*—
Epstein, David W., Schwartz, and Edelman. 3,045,141.
Mathwich, Howard R. 3,045,185.

Raduner & Co. A.-G.: *See*—
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Rainey, Henry J., Jr., to Socony Mobil Oil Co., Inc. Subterranean recovery process by combustion. 3,044,543, 7-17-62, Cl. 166—4.

Randall, Dwight L., T. E. Hanley, and O. K. Larison. Humidiometer hydrogen tube analyzer. 3,044,288, 7-17-62, Cl. 73—1.

Ratajak, Edwin J.: *See*—
Nubel, Robert C., and Ratajak. 3,044,941.

Raub, Samuel H. S., W. J. Alton, S. F. Joachim, and W. W. Palmquist, to Union Carbide Corp. Armored valves. 3,044,489, 7-17-62, Cl. 137—556.3.

Rawding, Burton R., to Raytheon Co. Mechanical resonance indicators. 3,044,290, 7-17-62, Cl. 73—67.2.

Rawlings, John H., to City Linen, Inc. Protective device. 3,044,075, 7-17-62, Cl. 2—22.

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Raytheon Corp.: *See*—
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Hines, Paul J., and Worth. 3,045,200.
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Reardon, Floyd L. Fire hydrant marking device. 3,044,435, 7-17-62, Cl. 116—114.

Rebut, Paul, to Societe Bodin, Girin & Cie, Tissus Industriels. Tubular members provided with corrugated walls. 3,044,497, 7-17-62, Cl. 138—121.

Reed, Charles A., and R. E. Rudd; said Reed assor. to United States of America, Army. Retriever. 3,044,567, 7-17-62, Cl. 180—45.

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Regan, Joseph E. 3,044,481.

Regan, Joseph E., to Regan Forge and Engineering Co. Automatic pressure fluid accumulator system. 3,044,481, 7-17-62, Cl. 137—114.

Reibel, Sidney R. L. Purdon, and M. Pachuta, to Jervis B. Webb Co. Conveyor trolley with releasable driving dog. 3,044,416, 7-17-62, Cl. 104—172.

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McGill, Charles K. 3,045,022.

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Peterson, David T., and Rexer. 3,044,847.

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Ringpfeil, Manfred: *See*—
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Robinson, Cecil H., and E. P. Oliveto, to Schering Corp. Fluorinated androstanes. 3,045,032, 7-17-62, Cl. 260—397.4.

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Robinson, Herbert M., deceased (by F. Robinson, administratrix). Air-powered press with automatic pressure release. 3,044,450, 7-17-62, Cl. 121—38.

Robinson, Horace M. Motor-brake unit. 3,045,166, 7-17-62, Cl. 318—367.

Robinson, Jewell, Jr. Pliers. 3,044,081, 7-17-62, Cl. 7—5.5.

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Miller, George Wm., and Rose. 3,045,015.
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Rosenthal, David. Wooden hens' nests. 3,044,444, 7-17-62, Cl. 119—45.

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Atalla, Martin M., Ross, and Smits. 3,045,129.

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Sangster, Raymond C., to Texas Instruments Inc. Multiport switching valve. 3,044,491, 7-17-62, Cl. 137—625.18.
Santarelli, Vincent. Pump plunger. 3,044,411, 7-17-62, Cl. 103—153.
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Schaefgen, John R., and J. C. Shivers, Jr., to E. I. du Pont de Nemours and Co. Segmented copolymers and process for preparing same. 3,044,987, 7-17-62, Cl. 260—75.
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Schellenberg, Henri, to Societe Alsacienne de Constructions Mecaniques. Fabric-winding machine. 3,044,726, 7-17-62, Cl. 242—56.
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Schneider, Frank L. Dust collection. 3,044,235, 7-17-62, Cl. 55—84.
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Delbel, Raymond A., and Scinta. 3,044,095.
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Scott, John H., and C. E. Bailey, to Progressive Engineering Co. Shoe cleaner. 3,044,099, 7-17-62, Cl. 15—311.
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Seaward, Edward T., and R. E. Rosati, to United Aircraft Corp. Fuel spray nozzle. 3,044,264, 7-17-62, Cl. 60—39.74.
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Mayer, Gottfried O., and Seiferth. 3,044,886.
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Sellers, William W. Electric heater. 3,045,097, 7-17-62, Cl. 219—19.
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Shapiro, Gustave, to United States of America, Navy. High frequency coaxial coupling. 3,045,202, 7-17-62, Cl. 339—64.
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Shaw, Charles J. Boat loading means. 3,044,643, 7-17-62, Cl. 214—450.
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Tupper, Earl S. 3,044,611.
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Tupper, Earl S., to Rexall Drug and Chemical Co. Vessels and handles therefor. 3,044,659, 7–17–62, Cl. 220—94.
Turner, Frederick J. L., and R. S. Mason, to Creed & Co. Ltd. Tape feed apparatus. 3,044,675, 7–17–62, Cl. 226—11.
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Burk, Emmett H., Jr., and Turnquest. 3,044,956.
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Tuttle, Seth, 50% to S. H. Gates. Water jet propelling device. 3,044,259, 7–17–62, Cl. 60—35.54.
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Jex, Victor B., and Bailey. 3,045,036.
Jex, Victor B., McMahon, and Whitehead. 3,044,845.
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Vickerson, Charles S. Behind-ear hearing aid. 3,045,073, 7-17-62, Cl. 179—107.

Vigh, John. Bath apparatus for treating and stimulating human body. 3,044,469, 7-17-62, Cl. 128—365.

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Warner, Samuel. Commutator fusing machine. 3,045,103, 7-17-62, Cl. 219—78.

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Wentworth, Clinton H., and L. H. Wallner, to Hexcel Products, Inc. Method for making cellular cores. 3,044,921, 7-17-62, Cl. 156—205.

Wenzel, Alfred, to Welger, Gebruder. Cross conveyer for pick-up baler. 3,044,243, 7-17-62, Cl. 56—341.

Werner, Hans, and G. Schmidt-Hertzberg, to Continental Gummi-Werke Aktiengesellschaft. Repair patch. 3,044,524, 7-17-62, Cl. 152—367.

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Wigemark, Bertil V. Carrying handle for cardboard boxes or the like. 3,044,105, 7-17-62, Cl. 16—125.

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Wilhelm, Francis A., to The Bendix Corp. Mass flow sensing means. 3,044,294, 7-17-62, Cl. 73—194.

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Wiskoff, Arthur E., and J. P. Szorady. Molding assembly. 3,044,121, 7-17-62, Cl. 18—42.

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Young, Donald C., to Collier Carbon and Chemical Corp. Phosphoric acid. 3,044,854, 7-17-62, Cl. 23—165.

Young, Donald C. to Collier Carbon and Chemical Corp. Concentration of wet-process phosphoric acid. 3,044,855, 7-17-62, Cl. 23—165.

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ISSUED JULY 17, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 17, 1962 Volume 780 Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 128,072 (GLEN=Tex), Glensder Textile Co., Republished by Glensder Textile Corp., Veiling, netting, chiffons, georgettes and laces; **Reg. No. 378,100** (GLENTEX), same, Ladies' scarfs and handkerchiefs; **Reg. No. 328,558**, same, Brows & Jacobson, Inc., Republished by Glensder Textile Corp.; Women's and children's coats, **filed** Apr. 9, 1956, D.C., S.D.N.Y., Doc. 108/301, *Glensder Textile Corp.* v. *Glen-Tex Mills Inc.* Stipulation and order of discontinuance Dec. 3, 1959.

Reg. No. 328,558. (See Reg. No. 128,072.)

Reg. No. 338,733 (DONNATAL), A. H. Robins Company, Inc., Medicinal preparation used in the treatment of gastro-intestinal disturbances, **filed** Feb. 5, 1962, D.C., E.D. Mo. (St. Louis), Doc. 62–C–47(1), *A. H. Robins Company, Inc.* v. *Klein-Ellis Drug Company.* Consent judgment; injunction granted May 11, 1962. **Same, filed** same, Doc. 62–C–48(3), *A. H. Robins Company, Inc.* v. *Clordel Drug Company, Inc.* Decree as above. **Same, filed** May 29, 1962, D.C., W.D. Okla. (Oklahoma City), Doc. 9708, *A. H. Robins Company, Inc.* v. *Westwood Drug, Inc.* **Same, filed** same, Doc. 9709, *A. H. Robins Company, Inc.* v. *Del City Drug, Inc.* **Same, filed** same, Doc. 9710, *A. H. Robins Company, Inc.* v. *Jackson Drug Store.* **Same, filed** same, Doc. 9711, *A. H. Robins Company, Inc.* v. *Britton Drug Store.* **Same, filed** same, Doc. 9712, *A. H. Robins Company, Inc.* v. *Ingraham Drug Store.*

Reg. No. 372,500 (LIFE), Time, Incorporated, Weekly magazine and pamphlets containing material taken from such magazine, **filed** June 27, 1960, D.C., S.D.N.Y., Doc. 60/2528, *Time, Incorporated* v. *Crawford Manufacturing Company, Inc.* Notice of voluntary dismissal under Rule 41(a) Aug. 29, 1960.

Reg. No. 378,100. (See Reg. No. 128,072.)

Reg. No. 402,388 (A AND DESIGN), Aeroquip Corporation, Hose fittings and pipe couplings for fluids; **Reg. No. 549,556** (AEROQUIP), same, Group (a) hose fittings and pipe fittings for fluid, hose, pipe and conduit fluid couplings, etc.; **Reg. No. 549,559** (AEROQUIP AND DESIGN), same; **Reg. No. 698,833** (A AND DESIGN), same, Fittings, couplings and accessories for fluid conduits, **filed** Dec. 11, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1567/61–HW, *Aeroquip Corporation* v. *Western Coupling Corporation et al.* Consent judgment; defendants enjoined from use of plaintiff's "FLYING A" trademark or from producing plaintiff's Patent Nos. 2,731,279 and 2,797,472 (notice May 24, 1962).

Reg. No. 408,796 (PETALDOWN), Everfast Fabrics, Inc., Textile fabrics in the piece of cotton, spun rayon, and protein fibres, **filed** Apr. 11, 1961, D.C., S.D.N.Y., Doc. 61/1284, *Everfast Fabrics, Inc.* v. *Queen Knitting Mills, Inc.* Stipulation and order of discontinuance Dec. 5, 1961.

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,359
Date of oldest new application	Sept. 18, 1961
Date of oldest amended application	Sept. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	9-18-61	9-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-17-61	11-20-61
Renewals (All Classes)	4-30-62	5-11-62
Sec. 12 (c) Publications (All Classes)	5-8-62	

Applications filed during the month of May 1962—2,420

Registrations Issued	364—No. 734,367 to No. 734,730
Renewals Issued	60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 412,579 (RC AND DESIGN), Nehi Corporation, Non-alcoholic, maltless, non-fruit-juice beverage sold as a soft drink, viz, a cola, and syrup, extract or concentrate for making the same; **Reg. No. 515,876** (RC), same; **Reg. No. 656,882**, same, Nonalcoholic maltless beverages sold as soft drinks and syrups and extracts for making same, **filed** Aug. 26, 1959, D.C. Colo. (Denver), Doc. 6522, *Royal Crown Cola Company* v. *IC Inc. et al.* Order of dismissal without prejudice Apr. 13, 1962.

Reg. No. 515,876. (See Reg. No. 412,579.)

Reg. No. 521,777 (SPINNAKER), The New England Knitting Company, Woven and knitted outerwear consisting of sweaters, pullovers, shirts, jackets, coats, vests, windbreakers and sports suits for men, women and children, **filed** Jan. 12, 1961, D.C., S.D.N.Y., Doc. 61/134, *Valentine & Company, Inc. et al.* v. *Winsted Hosiery Company et al.* Stipulation and order of dismissal Mar. 13, 1961.

Reg. No. 523,426 (HYDROTHERM), American Hydrotherm Corporation, Valves, particularly water valves, etc.; **Reg. No. 549,488**, same, Centrifugal pumps for liquids; **Reg. No. 556,424**, same, Mechanical and thermal engineering services, **filed** Dec. 1, 1959, D.C.N.J. (Newark), Doc. 1059/59, *American Hydrotherm Corporation* v. *Hydrotherm, Inc.* Consent judgment of dismissal (notice May 23, 1962).

Reg. No. 549,488. (See Reg. No. 523,426.)

Reg. No. 549,536. (See Reg. No. 402,388.)

Reg. No. 549,550. (See Reg. No. 402,388.)

Reg. No. 556,424. (See Reg. No. 523,426.)

Reg. No. 598,913 (TYNEX), E. I. du Pont de Nemours and Company, Resinous plastic materials in various forms; including filaments for general use in the industrial arts, **filed** Mar. 17, 1961, D.C., S.D.N.Y., Doc. 61/1002, *E. I. du Pont de Nemours and Company* v. *Manhattan Brush Co., Inc.* Consent judgment; injunction granted Mar. 22, 1961.

Reg. No. 613,947 (ETTORE AND DESIGN), E. Steccone, doing business as Steccone Products Co., Squeegees, **filed** Oct. 10, 1960, D.C., S.D.N.Y., Doc. 60/3926, *Steccone Products Co.* v. *Florida Sponge & Chamois Co., Inc. et al.* Consent decree; defendants enjoined Mar. 13, 1961.

Reg. No. 615,443 (WASH 'N DRI), Williams, Inc., Solution saturated hand and face cloth treated with astringent emollient and essential oil for freshening purposes, **filed** Aug. 18, 1960, D.C., S.D.N.Y., Doc. 60/3262, *Unexcelled Chemical Corporation* v. *Lensclean, Inc.* Stipulation and order of dismissal Jan. 31, 1961.

Reg. No. 636,263 (SEA AND SKI), Rolley, Inc., Suntan cream; **Reg. No. 671,416**, same, Lotion for use as a relief from, and preventative for, chapping, skin irritations and diaper resh; **Reg. No. 675,076**, same, Suntan lotion, after shave lotion, make-up base and hair dressing; **Reg. No. 674,720** (BABY SEA AND SKI), Botany Mills, Inc., doing business as Rolley Co., Suntan lotion for babies; **Reg. No. 692,304**, same, Medicated preparation for babies used as a preventative for sunburn; also for the relief of diaper rash and mosquito bites, **filed** May 7, 1962, D.C., S.D.N.Y., Doc. 62/1709, *Botany Industries, Inc., doing business as Rolley Co.* v. *A. A. Sutain, Ltd.*

Reg. No. 656,882. (See Reg. No. 412,599.)

Reg. No. 664,875 (SNO-MIT), Templeton Glove Company, Inc., Gloves and mittens, **filed** Dec. 23, 1958, D.C., S.D.N.Y., Doc. 141/131, *Air Baby, Inc.* v. *Franklin Tru-Fit Glove Co.* Order of dismissal for lack of prosecution Dec. 8, 1960.

Reg. No. 671,416. (See Reg. No. 636,263.)

Reg. No. 674,720. (See Reg. No. 636,263.)

Reg. No. 675,076. (See Reg. No. 636,263.)

Reg. No. 692,304. (See Reg. No. 636,263.)

Reg. No. 695,890 (BLACK FLAG AND DESIGN), American Home Products Corporation, Insecticides, miticides, fungicides, rodenticides, disinfectants and insect repellent, **filed** May 7, 1962, D.C., S.D.N.Y., Doc. 62/1703, *American Home Products Corporation et al.* v. *R. Spinell et al.*

Reg. No. 696,146 (NESTLE'S KEEN), The Nestle Company, Inc., Powdered lemonade mix; **Reg. No. 701,660** (TEEM), Pepsi-Cola Company, Carbonated soft drink and syrups used in preparing same, and extracts and salts used in preparing soft drink syrups; **Reg. No. 712,225** (NESTLE'S KEEN), The Nestle Company, Inc., Powdered lemonade mix, **filed** Apr. 12, 1962, D.C., S.D.N.Y., Doc. 62/1460, *Pepsi-Cola Company* v. *The Nestle Company, Inc.*

Reg. No. 696,833. (See Reg. No. 402,388.)

Reg. No. 701,660. (See Reg. No. 696,146.)

Reg. No. 712,225. (See Reg. No. 696,146.)

Reg. No. 717,856 (VIENNALINE), Spectacles and spectacle frames, especially those made of plastic, **filed** Nov. 3, 1961, D.C., S.D.N.Y., Doc. 61/3931, *Anger International Inc. et al.* v. *Viennaline, Inc. et al.* Stipulation and order of dismissal without prejudice Mar. 28, 1962.

Reg. No. 721,716 (SAFEWAY), Safeway Stores, Incorporated, Retail grocery services, **filed** May 4, 1962, D.C. Md. (Baltimore), Doc. 13776, *Safeway Stores, Incorporated* v. *Safeway Auto Sales, Incorporated.* **Same, filed** June 6, 1962, D.C., E.D. Va. (Richmond), Doc. 2662, *Safeway Stores, Incorporated* v. *Safeway Brakes of Arlington, Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 119,926. J. Brooksbank Limited, Skipton, England. Filed May 15, 1961.

BROOKSBANK

Owner of U.S. Reg. No. 672,661.
For Leather in the Form of Pieces, Strips or Components in General Use in the Industrial Arts.
First use 1921; in commerce 1921.

SN 125,739. The Hubbard-Hall Chemical Company, Waterbury, Conn. Filed Aug. 10, 1961.

Hubbard Hall

For Lawn Seed.
First use in or before May 1957.

SN 133,116. The Dow Chemical Company, Midland, Mich. Filed Nov. 28, 1961.

ZIP TAPE

The word "Tape" is disclaimed apart from the mark. Owner of Reg. Nos. 373,377, 712,331, and others.
For Tapes for Opening Sealed Packages, Such as Wraps, Overwraps, Bags, Pouches, Envelopes, Packets, Cartons, and Cases, Said Sealed Packages Being Made at Least in Part of Rupturable Packaging Material, Such as Film, Foil, Paper, Paperboard and Textile Fabric.
First use Jan. 23, 1940.

Class 6—Chemicals and Chemical Compositions

SN 109,413. S. C. Johnson & Son, Inc., Racine, Wis. Filed Dec. 1, 1960.

MINIDRUM

For Insecticides Packaged in Drums.
First use during August 1960.

SN 124,409. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 21, 1961.

QUESTRATE

For Calcium Disodium Salt of Ethylenediamine Tetraacetic Acid for Brewing Use.
First use July 13, 1961.

SN 128,912. Miranol Chemical Company, Inc., Irvington, N.J. Filed Sept. 29, 1961.

MIRANOL

Owner of Reg. Nos. 419,639 and 419,640.
For Synthetic Surface Active Agents.
First use in June 1941.

SN 130,863. Agricultural Specialties, Dallas, Tex. Filed Oct. 30, 1961.

TRAX

For Rat and Mouse Bait.
First use Sept. 22, 1961.

SN 131,005. A. Z. Bogert Company, Inc., West Point, Pa. Filed Oct. 31, 1961.

4 THE BIRDS

For Transparent, Sticky, Non-Poisonous Compound Used as a Bird Repellent.
First use May 18, 1961.

SN 132,282. Admiralty Manufacturing Company, San Francisco, Calif. Filed Nov. 20, 1961.

Admiralty

For Wood Preservatives Containing Pentachlorophenol.
First use Feb. 13, 1945.

SN 133,504. Swish Chemical Co., Inc., Camden, N.J. Filed Dec. 6, 1961.

SWISH

For Starch.
First use May 5, 1960.

SN 133,602. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Dec. 7, 1961.

RODO

Owner of Reg. No. 283,790.
For Deodorants and Perfumes Used in the Manufacture of Rubber Products, Cleaners, Polishes, Waxes, Plastics, and Petroleum Products.
First use Dec. 10, 1930.

SN 133,869. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Dec. 12, 1961.

TIGUVON

Owner of German Reg. No. 296,784, dated Jan. 13, 1923; and U.S. Reg. No. 681,723.
For Parasiticidal Compositions.

SN 133,965. Macfarlan Smith Limited, Edinburgh, Scotland. Filed Dec. 13, 1961.

BITREX

Owner of British Reg. No. 792,103, dated June 13, 1959.
For Chemical Substance for Use as a Denaturant for Alcohol.

Class 7 — Cordage

SN 120,618. Brownell & Company Incorporated, Moodus, Conn. Filed May 23, 1961.

T SPUN

For Ropes and Twines.
First use Aug. 23, 1960.

SN 122,037. Sun Chemical Corporation, New York, N.Y. Filed June 14, 1961.

SATIN GLO

Owner of Reg. Nos. 519,382 and 654,648.
For Ribbon Made of Rayon Yarn and Acetate Film, and Used for Gift Tying and Tying Packages.
First use Apr. 7, 1947.

SN 122,394. Toyo Rayon Kabushiki Kaisha, d.b.a. Toyo Rayon Company, Limited, Chuo-ku, Tokyo-to, Japan. Filed June 19, 1961.

PYLEN

Owner of Japanese Reg. No. 554,392, dated Aug. 16, 1960.
For Twines and Ropes.

SN 132,100. Tubbs Cordage Company, San Francisco, Calif. Filed Nov. 15, 1961.

SUPERLENE

For Synthetic Fiber Rope.
First use Sept. 9, 1960.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 116,423. Lewis F. Phillips, d.b.a. C. P. Plastic Engineering Company, Chicago, Ill. Filed Mar. 24, 1961.

TOWN 'N COUNTRY

For Ash Trays.
First use Feb. 1, 1957.

SN 134,953. William Richard Potter Delano, Setauket, N.Y. Filed Jan. 2, 1962.

"TOP-A-CAN"

For Ashtrays.
First use Dec. 21, 1961.

Class 10 — Fertilizers

SN 129,933. The Espoma Company, Millville, N.J. Filed Oct. 16, 1961.

GARDEN-TONE

Owner of Reg. Nos. 618,063, 690,752, and 690,753.
For Plant Food.
First use July 10, 1961.

Class 11 — Inks and Inking Materials

SN 121,742. Lawter Chemicals, Inc., Chicago, Ill. Filed June 9, 1961.

THERMEX

For Printing Ink Vehicles.
First use May 16, 1961.

SN 129,009. Interchemical Corporation, New York, N.Y. Filed Oct. 2, 1961.

CHEMRITE

For Carbon Paper.
First use Dec. 3, 1959.

SN 129,216. Markem Machine Company, Keene, N.H. Filed Oct. 4, 1961.

WIZARD

For Ink Compounds.
First use in December 1912.

SN 130,979. Weber Addressing Machine Co. Inc., Mount Prospect, Ill. Filed Oct. 30, 1961.

ALL-MARK

For Ink.
First use on or about Mar. 6, 1961.

SN 131,368. J. M. Huber Corporation, Borger, Tex. Filed Nov. 6, 1961.

KRAFTSET

For Printing Ink.
First use Oct. 13, 1961.

SN 132,756. Sten-C-Labl, Inc., St. Paul, Minn. Filed Nov. 24, 1961.

STEN-C-LABL

Owner of Reg. No. 444,680.
For Inks.
First use in 1948.

Class 12 — Construction Materials

SN 120,027. Sotefin S.A. Soc. d'Etudes Techniques et Financieres, Zurich, Switzerland. Filed May 15, 1961.

SILOPARK

Owner of Swiss Reg. No. 169,839, dated Dec. 17, 1957.
For Buildings—Namely, Warehouses and Garages, Being Fitted With Devices for Mechanically Conveying Thereinto Vehicles and Stackable Goods.

SN 121,765. Sotefin S.A. Soc. d'Etudes Techniques et Financieres, Zurich, Switzerland. Filed June 9, 1961.

SILOPARK

Owner of Swiss Reg. No. 169,813, dated Dec. 17, 1957.
For Buildings—Namely, Warehouses and Garages, Being Fitted With Devices for Mechanically Conveying Thereinto Vehicles and Stackable Goods.

SN 122,356. Penn Plastering Corporation, Philadelphia, Pa. Filed June 19, 1961.

SPRAY-TEX

For Plaster for Plastering Directly to Concrete Ceilings.
First use June 1960.

SN 125,044. Humble Oil & Refining Company, Houston, Tex. Filed July 31, 1961.

MIRADON

For Paving Materials—Namely, Binders, Pigments, and Plasticizing Agents.
First use at least since May 1, 1961.

SN 133,587. Joseph T. Ryerson & Son, Inc., Chicago, Ill. Filed Dec. 7, 1961.

RY-WEDG

Owner of Reg. No. 578,884.
For Steel Grating.
First use September 1961.

SN 133,674. Robert J. Hutchinson, d.b.a. Hutch Co., Minneapolis, Minn. Filed Dec. 8, 1961.

HUTCH STEEL-X

For Crosa Bracing and Bridging for Structural Use.
First use in or about April 1958.

SN 134,101. Douglas Fir Plywood Association, Tacoma, Wash. Filed Dec. 15, 1961. COLLECTIVE MARK.

303

For Plywood.
First use Oct. 19, 1961.

SN 134,685. Simpson Timber Company, Seattle, Wash. Filed Dec. 26, 1961.

SKID GUARD

For Plywood.
First use Nov. 28, 1961.

SN 134,770. Weyerhaeuser Company, Tacoma, Wash. Filed Dec. 27, 1961.

DURASTAIN

For Factory Finished Softwood Plywood.
First use Nov. 30, 1961.

SN 134,852. Tile Council of America, Inc., New York, N.Y. Filed Dec. 28, 1961.

TESSERAMIC

For Ceramic and Glass Tile Panels Which May Be Used for Surface Coverings, Space Dividers and Fenestrations.
First use Nov. 22, 1961.

SN 134,853. Tile Council of America, Inc., New York, N.Y. Filed Dec. 28, 1961.

TESSELTILE

For Ceramic and Glass Tile Panels Which May Be Used for Surface Coverings, Space Dividers and Fenestrations.
First use Nov. 22, 1961.

SN 134,904. Southeastern Aluminum Products, Inc., Jacksonville, Fla. Filed Dec. 29, 1961.

SEALPRO

For Screen Doors and Windows, and Storm Windows and Parts Thereof.
First use Oct. 18, 1961, on parts of storm windows.

SN 134,943. Chicago Fire Brick Company, Chicago, Ill. Filed Jan. 2, 1962.

FU-FU

For General Purpose Mortar or Cement of Ready-to-Use Consistency.
First use May 12, 1954.

SN 135,231. The Ruberoid Co., New York, N.Y. Filed Jan. 4, 1962.

SOVEREIGN

For Asphalt Shingles.
First use Dec. 4, 1961.

SN 135,284. Mauna Mining Corporation, Dillsburg, Pa. Filed Jan. 5, 1962.

MAUNASITE

For Metallic and Non-Metallic Fillers and Extenders.
First use Sept. 25, 1961.

SN 136,037. Formica Corporation, Cincinnati, Ohio. Filed Jan. 18, 1962.

LIFESEAL

For Doors.
First use June 19, 1961.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 115,187. The Siegler Corporation, Los Angeles, Calif. Filed Mar. 8, 1961.

TRIGGER LOCK

For Metal Couplings for Connecting Conduits.
First use Nov. 10, 1960.

SN 118,749. Wilson Plastics, Inc., Sandusky, Ohio. Filed Apr. 26, 1961.

SPIKIE

For Lawn and Garden Sprinklers.
First use Jan. 15, 1957.

SN 120,190. Dakota Plastics, Inc., Madison, S. Dak. Filed May 17, 1961.

QUIK-CHEK

For Tire Valve Caps.
First use Feb. 2, 1961.

SN 120,567. Prestige Hardware Corporation, City of Industry, Calif. Filed May 22, 1961.

true ware

For Salt and Pepper Shakers, Napkin Holders, Ash Trays, Butter Dishes, Bowls and Tumblers.
First use Apr. 13, 1961.

SN 121,755. Parker-Hannifin Corporation, Cleveland, Ohio. Filed June 9, 1961.

PH

For Couplings for Metal Tubes and Pipes, Couplings for Flexible Hose, and Valves.
First use in December 1957.

SN 125,203. The Delron Company, Inc., South Gate, Calif. Filed Aug. 2, 1961.

DC

Owner of Reg. No. 553,207.
For Lock Nuts and Bolts.
First use Nov. 8, 1950.

SN 126,932. Hydralink Corporation, Warren, Mich. Filed Aug. 30, 1961.

HYDRALINK

Owner of Reg. No. 607,826.
For Hose Couplings.
First use June 16, 1961.

Class 14 — Metals and Metal Castings and Forgings

SN 101,562. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 27, 1960.

DYKO

For Metallic Coating of Zinc.
First use July 21, 1960.

SN 121,803. Cerro Corporation, New York, N.Y. Filed June 12, 1961.

RC HEX

The portion of the mark which consists of "Hex" is disclaimed, apart from the mark as shown.
For Non-Ferrous Metal Rod.
First use May 2, 1961.

SN 127,900. Thomas Bolton & Sons Limited, Widnes, England. Filed Sept. 15, 1961.

BOLTOMET

Owner of British Reg. No. 803,121, dated Mar. 15, 1960.
For Unwrought and Partly Wrought Base Metals and Their Alloys and Articles Made Therefrom—Namely, High Conductivity Copper and Copper Alloys, in the Form of Bar, Strip, Commutator Bar and Sections; Phosphor Bronze Strip and Wire; and Brass Wire.

SN 132,432. Allegheny Ludlum Steel Corporation, Pittsburgh, Pa. Filed Nov. 21, 1961.

AL ARNOLD

Owner of Reg. Nos. 399,597, and 435,539.
For Metal and Alloy in the Form of Hot Rolled Strip, Cold Rolled Strip, Castings, Forgings, and Tubing.
First use July 1957.

Class 15 — Oils and Greases

SN 109,131. Wheel Trueing Tool Company, Detroit, Mich. Filed Nov. 25, 1960.

DRILLO

For Flushing, Wetting and Detergent Composition for Use as an Additive to Coolant Water in Masonry Drilling and Cutting.
First use July 1959.

SN 109,416. S. C. Johnson & Son, Inc., Racine, Wis. Filed Dec. 1, 1960.

MINIDRUM

For Preparations, Packaged in Drums, for Lubricating and Cooling Metal Working Equipment.
First use during September 1960.

SN 130,047. Compagnie d'Equipement Sanitaire Limitee, Montreal, Quebec, Canada. Filed S.R. Oct. 17, 1961; Am. P.R. May 16, 1962.

JIG-A-LOO

Owner of Canadian Reg. No. 115,652, dated Oct. 16, 1959.
For Lubricant for Sliding Surfaces of Furniture, Doors, Windows, and Household Articles.

SN 131,816. The Diversey Corporation, Chicago, Ill. Filed Nov. 13, 1961.

CHAIN-EZE

For Chain Lubricant.
First use Aug. 23, 1961.

SN 132,292. Beltraction Co., Chicago, Ill. Filed Nov. 20, 1961.

TREMOR

For Penetrating Oil and Rust Solvent.
First use Oct. 26, 1961.

SN 132,622. The American Oil Company, Chicago, Ill. Filed Nov. 24, 1961.

AMOLUBE

Owner of Reg. Nos. 167,769, 704,187, and others.
For Lubricating Oils and Greases.
First use Jan. 25, 1961.

Class 16 — Protective and Decorative Coatings

SN 127,395. Grand Rapids Varnish Corporation, Grand Rapids, Mich. Filed Sept. 7, 1961.

ORSILON

For Enamels, Primers, and Ground Coats for Decorating and Protecting Metal Surfaces.
First use April 1961.

SN 132,643. Corrosion Prevention Limited, Harrogate, England. Filed Nov. 24, 1961.

ANOGAL

Owner of British Reg. No. 806,890, dated June 9, 1960.
For Rust Proofing Primer Paint.
First use March 1957; in commerce June 1961.

Class 17 — Tobacco Products

SN 129,342. Compania Insular Tabacalera, S.A., Las Palmas de Gran Canaria, Spain. Filed Oct. 6, 1961.

DON MIGUEL

Priority claimed under Sec. 44(d) on Spanish application filed Apr. 22, 1961; Reg. No. 381,518, dated Nov. 4, 1961.
For Cigars, Cigarettes, and Cut Tobacco.

Class 18 — Medicines and Pharmaceutical Preparations

SN 102,210. De-Nol Laboratories (S.A.) (Proprietary) Limited, Johannesburg, Union of South Africa. Filed Aug. 8, 1960.

DE-NOL

Owner of Union of South Africa Reg. No. 368/43, dated Apr. 27, 1943.
For Medicated Preparations for Human Use for Treatment of Lesions of the Alimentary Tract.

SN 131,083. Societe d'Applications Chimiques d'Etudes et de Recherches "Sacer," Monte Carlo, Monaco. Filed Oct. 31, 1961.

PROCTANAL

Owner of Monacan Reg. No. 1,867, dated Sept. 13, 1960.
For Pharmaceutical Product in the Shape of a Suppository To Treat Hemorrhoids.

SN 131,330. American Druggists Syndicate, Inc., New York, N.Y. Filed Nov. 6, 1961.

A.D.S.

For Line of Household Pharmaceutical Preparations.
First use Nov. 15, 1905.

Class 20 — Linoleum and Oiled Cloth

SN 108,574. Robbins Floor Products, Inc., Tuscumbia, Ala. Filed Nov. 16, 1960.

FLEXON

For Solid Vinyl Floor Tile and Plastic Fortified Rubber Floor Tile.
First use Sept. 19, 1960.

SN 134,523. Congoleum-Nairn Inc., Kearny, N.J. Filed Dec. 22, 1961.

CASUALAIRE

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs and Tiles.
First use Dec. 14, 1961.

SN 136,625. Armstrong Cork Company, Lancaster, Pa. Filed Jan. 26, 1962.

MONTINA

For Resilient Hard Surface Type Covering for Floors, Walls, and Other Surfaces.
First use Dec. 19, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 105,398. Warner Electric Brake & Clutch Company, South Beloit, Ill. Filed Sept. 28, 1960.

ELECTRO FLUID

Applicant disclaims the exclusive right to the word "Fluid" apart from the mark shown.
For Liquids Whose Viscosity Increases When Exposed to an Electric Field and Adapted To Form a Force Couple in Devices Such as Electrostatic Nonmagnetic Chucks, Sound Transducers, High-Speed Relays, Shock Absorbers, Flow Control Valves, High-Speed Electric Clutches and Brakes.
First use Oct. 31, 1958.

SN 108,122. Wesix Electric Heater Co., San Francisco, Calif., assignee of Ionaire, Inc., San Francisco, Calif. Filed Nov. 9, 1960.

IONAIRE

Owner of Reg. Nos. 582,196, 582,197, and 582,235.
For Air Ionizing Devices, Ion Collectors, and Target Collectors.
First use July 15, 1949.

SN 109,044. Dewenter Industries, South Pasadena, Calif. Filed Nov. 25, 1960.

BLENDER QUEEN

The word "Blender" is disclaimed apart from the mark as shown.

For Electrical Apparatus Used in Mixing, Liquifying and Blending All Types of Edible Materials and Liquids.

First use Apr. 3, 1954.

SN 118,466. Micro-Electronics, Inc., Cranston, R.I. Filed Apr. 24, 1961.

M/E

For Transistors, Diodes, and Micro Circuits.

First use on or about Apr. 19, 1961.

SN 122,464. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

HSH

For Amplifiers, Including Direct-Current Differential, Multichannel, Audio, Video, Audio-High-Fidelity, Stereophonic, Radio-Frequency and Broad-Band Amplifiers, Pre-Amplifiers and Power Amplifiers, and Parts Thereof, and Consoles and Housings Therefor; Radio-Wave Receiving Apparatus Including Amplitude-Modulation, Phase- and Frequency-Modulation Tuners and Parts Thereof, Single and Multi-Channel and Multiplex Circuits, Radio-Amplifying Circuits Adapted for Receiving Radio Broadcast and Television-Band Transmissions, Converters, Antennas and Transmission Lines; Radio-Wave Broadcasting, Rebroadcasting and Relay Equipment, Including Radio-Frequency Generating Apparatus and Oscillators and Parts Thereof; Recording and Reproducing Amplifier Equipment and Parts Thereof Including Phonograph Record and Magnetic Tape Recording and Reproducing Equipment; Phonograph Disc Records; Loudspeakers and Cabinets Therefor; Turntable Apparatus Including Phonograph Record Players, Pickups and Arms; Noise Suppressors; Electric Filters, Networks, Attenuators, Equalizers; and Electromechanical and Electroacoustical Transducers.

First use in or about August 1947.

SN 123,936. Tavaro S.A., Geneva, Switzerland. Filed July 13, 1961.

ELNA

Priority claimed under Sec. 44(d) on Swiss Reg. No. 184,947, dated Jan. 13, 1961.

For Vacuum Cleaners, Household Radiators, Machines for Waxing and Polishing Floors, Dishwashing Machines, Food Mixing Machines, and Sandpapering Machines, All Electrically Operated.

SN 124,412. Branson Instruments, Incorporated, Stamford, Conn. Filed July 21, 1961.

SONOMATIC

For Sonic and Ultrasonic Cleaning Equipment.

First use Apr. 17, 1961.

Subj. to Intf. with SN 140,316.

SN 130,374. Nam Jam Factory Limited, Shumshuipo, Kowloon, Hong Kong. Filed Oct. 20, 1961.



For Flashlights and Flashlight Bulbs.

First use in 1928; in commerce Jan. 8, 1957.

SN 130,496. Protect-O-Seal Corporation, North Kansas City, Mo. Filed Oct. 23, 1961.

UNI-FLOAT

For Electric Lanterns.

First use Feb. 23, 1961.

SN 130,609. The Bryant Electric Company, Bridgeport, Conn. Filed Oct. 25, 1961.

BRYANT

Owner of Reg. Nos. 45,880 and 121,586.

For A.C. Switches, A.C.-D.C. Switches, Mercury Switches, Motor Control Switches, Convenience Outlets, Grounding Outlets, Clock Hanging Receptacles, Fan Hanging Receptacles, Floor Outlets, Plastic Wall Plates, Stainless Steel Wall Plates, Brass Wall Plates, Incandescent and Fluorescent Lamp Holders, Blocking Devices for Electric Switches, Interchangeable Switches and Receptacles, Connecting Devices, Cartridge and Plug Cutouts, Wiring Device Accessories, Circuit Breakers, Load Center Enclosures, Kitchen Appliance Centers and Accessories, General Purpose and Finned-Type Strip Heaters, Lamp Holders for Commercial and Recreational Flood Lighting and Accessories Therefor.

First use on or about Nov. 26, 1958; October 1888 as to "Bryant."

SN 130,711. Mallory Electric Corporation, Detroit, Mich. Filed Oct. 26, 1961.

REV-POLT

For Ignition System Components for Internal Combustion Engines—Namely, Distributors, Transformers, and Parts Thereof.

First use June 29, 1961.

SN 130,837. Standard Elektrik Lorenz Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany. Filed Oct. 27, 1961.

ILLUSTRA

Owner of German Reg. No. 681,720, dated Sept. 17, 1955.

For Electrotechnical Apparatus, in Particular Radio Receivers, Portable Radio Receivers, Loudspeakers, Talking Machines, and Television Receivers.

SN 132,438. American Permalite Corporation, Bedford, Va. Filed Nov. 21, 1961.

PERMALITE

For Electric Light Bulbs.

First use 1957.

SN 132,524. C & W Lektra Bat Company, Warren, Mich. Filed Nov. 22, 1961.

C & W LEKTRA BAT

For Batteries.

First use on or about Jan. 15, 1961.

SN 132,558. Lafayette Radio Electronics Corporation, Jamaica, N.Y. Filed Nov. 22, 1961.

TeleSpan

For Transceivers (Sending and Receiving Units).

First use Oct. 27, 1961.

SN 132,745. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 24, 1961.

CHANGE-O-MATIC

For Vacuum Cleaner Automatic Bag Changer and Disposable Bags for Same.

First use on or about Sept. 9, 1960.

SN 132,773. Valco, Inc., Chicago, Ill. Filed Nov. 24, 1961.

Valco

For Electric Knife and Scissors Sharpeners and Electric Pencil Sharpeners.

First use June 14, 1960.

SN 132,794. Ampex Corporation, Redwood City, Calif. Filed Nov. 27, 1961.

SEL-SYNC

For Electronic Equipment for Synchronizing Sound Recorders.

First use in November 1956.

SN 136,550. Raymond C. Grimsinger, d.b.a. RG Circuits Company, Lawndale, Calif. Filed Jan. 25, 1962.

ANGLETRON

For Printed Circuit Boards.

First use Nov. 29, 1961.

SN 138,450. AMP Incorporated, Harrisburg, Pa. Filed Feb. 23, 1962.

AMP

No claim is made herein to the representation of the goods, appearing in the mark, alone and apart from the mark. Owner of Reg. Nos. 405,714, 717,870, and others.

For Electrical Connectors.

First use Feb. 7, 1962.

Class 22 — Games, Toys, and Sporting Goods

SN 114,698. Victor Paul Griley, Miami, Fla. Filed Mar. 1, 1961.

CARIBE CI-SKI

For Board-Type Multi-Purpose Water Craft That May Be Used as an Aquaplane, Surfboard, Water Ski, and for Similar Water Sport Uses.

First use Feb. 14, 1961.

SN 116,449. Western New York Toy Company, Inc., Rochester, N.Y. Filed Mar. 24, 1961.

TOY FAIR

No claim of exclusive right is made to "Toy" as applied to a general line of packaged toys.

For General Line of Inexpensively Priced Polyethylene Bagged, Carded, or Blister Packed Toys.

First use Feb. 27, 1961.

SN 117,767. Blazon, Inc., Cuyahoga Falls, Ohio. Filed Apr. 13, 1961.

TEETER-ROCK

For Backyard Seesaw-Type Rocker Toy.

First use Sept. 16, 1959.

SN 119,864. Eberhard Faber Inc., Wilkes-Barre, Pa. Filed May 12, 1961.

Rainbow

Owner of Reg. Nos. 202,106 and 269,854.

For Color by Number Sets.

First use Jan. 20, 1959.

SN 120,300. T. J. Ely Manufacturing Company, Girard, Pa. Filed May 18, 1961.

ELY

Owner of Reg. No. 701,288.
For Wooden Toy Pianos, Chalkboards, and Toy Musical Hurdy-Gurdies.
First use on or about Jan. 1, 1950, as to wooden toy pianos.

SN 120,516. Francis H. Gates, Costa Mesa, Calif. Filed May 22, 1961.

BUMPO

For Cue Sticks, Rubber Pucks, and a Numbered Playing Board for Playing a Shuffleboard-Type Game.
First use Nov. 25, 1960.

SN 122,395. Toyo Rayon Kabushiki Kaisha, d.b.a. Toyo Rayon Co., Ltd., Chuo-ku, Tokyo-to, Japan. Filed June 19, 1961.

PYLEN

Owner of Japanese Reg. Nos. 554,392, dated Aug. 16, 1960, and 554,796, dated Aug. 25, 1960.
For Fishing Lines and Nets.

SN 122,685. Donald F. Duncan, Incorporated, Evanston, Ill. Filed June 23, 1961.

IF IT ISN'T A DUNCAN
IT ISN'T A YO-YO

Owner of Reg. Nos. 298,697, 300,504, and 700,880.
For Tops of the Bandalore Return Type.
First use Jan. 1, 1936.

SN 123,742. Edwin S. Giza, Chicopee, Mass. Filed July 11, 1961.

GYRO

For Golfing Equipment—Namely, Golf Clubs and Golf Putters.
First use Apr. 24, 1961.

SN 123,948. Joseph M. Ziabicki, d.b.a. The Ziabicki Company, Division of Ziabicki Import Company, Racine, Wis. Filed July 13, 1961.

TENNISOLO

For Equipment and/or Apparatus Sold as a Unit for Playing a Tethered Ball Game.
First use June 30, 1961.

SN 128,843. Palmer-Pann Corporation, Toledo, Ohio. Filed Sept. 28, 1961.

CRAFT MASTER

Owner of Reg. Nos. 593,680 and 714,925.
For Hobby Craft Kits Each Consisting of Small Quantities of Basic Materials Relating to the Particular Field of the Hobby for Assembling Into a Completed Hobby Craft Project.
First use Sept. 6, 1961.

SN 130,630. Jolly Toys, Inc., New York, N.Y. Filed Oct. 25, 1961.

BABY ANGEL

No claim of exclusive right is made to the word "Baby" as applied to dolls, apart from the mark as shown.
For Dolls.
First use July 19, 1961.

SN 131,622. The Safegard Corporation, d.b.a. Lifo Products, Cincinnati, Ohio. Filed Nov. 8, 1961.

LIFO

For Life Preservers, Swim Vests and Buoyant Cushions.
First use Dec. 8, 1954, on buoyant cushions.

SN 133,285. The Lionel Corporation, Hillside, N.J. Filed Dec. 4, 1961.

Owner of Reg. Nos. 681,428 and 676,678.
For Educational and Science Sets or Outfits Comprising Chemicals, Apparatus, Scientific Equipment, Instruction Charts and Manuals and Other Materials for Use by Beginners and Students in Conducting Chemical and Other Scientific Experiments.
First use Oct. 27, 1961.

SN 133,330. Josef Fischer Sportartikelerzeugung, Ried im Innkreis, Austria. Filed Dec. 4, 1961.

FISCHER

Priority claimed under Sec. 44(d) on Austrian application filed Aug. 31, 1961; Reg. No. 46,549, dated Oct. 5, 1961.
For Skis.

SN 133,597. J. A. Thompson, Incorporated, Brooklyn, N.Y. Filed Dec. 7, 1961.

TEE-PEE

For Model Airplane Motors.
First use Sept. 2, 1961.

SN 133,599. J. A. Thompson, Incorporated, Brooklyn, N.Y. Filed Dec. 7, 1961.

Apache

For Model Airplane Motors.
First use Oct. 5, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 103,487. Sheldon Metal Products Co. Inc., Fall River, Mass. Filed Aug. 26, 1960.

METAL-MAID

For Bottle, Jar, and Can Opener.
First use Mar. 22, 1960.

SN 115,391. Spraymation, Inc., Little Falls, N.J. Filed Mar. 10, 1961.

MINI-MIX

For Agitators.
First use in or about April 1959.

SN 115,626. Rampe Manufacturing Co., Cleveland, Ohio. Filed Mar. 14, 1961.

VI-BRADER

For Controlled Orbital Abrasive Finishing Machines.
First use Feb. 20, 1961.

SN 117,646. Power Equipment, Inc., Cicero, Ind. Filed Apr. 11, 1961.

POWER ROTARY LAWN MOWERS -O- MATIC

For Lawn Mowers and Snow Blowers.
First use Nov. 8, 1953.

SN 118,655. Chatham International Corporation, New York, N.Y. Filed Apr. 26, 1961.

Chatham

For Mist Sprayers, Oilers, Lubricators and Fire Extinguishers.
First use Mar. 6, 1961.

SN 120,387. The Cleveland Crane & Engineering Company, Wickliffe, Ohio. Filed May 19, 1961.

For Overhead Cranes, Overhead Conveyor Type Material Handling Systems, and Parts Thereof.
First use Mar. 20, 1961.

SN 120,442. Portable Drill & Dredge Company, Pomona, Calif. Filed May 19, 1961.

Port-A-dredge

For Drill and Dredge Equipment.
First use Oct. 9, 1960.

SN 121,053. Whitin Machine Works, Whitinsville, Mass. Filed May 29, 1961.

HYDROWARP

For Builders.
First use Dec. 19, 1960.

SN 122,384. The Spiegel Brothers Corporation, Long Island City, N.Y. Filed June 19, 1961.

"FIX-N-SAVE" HAND TOOLS STEELCRAFT

Owner of Reg. Nos. 598,146 and 657,386.
For Hand Tools and Machine Tools—Namely, Pliers, Tool Kits, Wrenches, Socket Sets, Screwdrivers, Drill Sets, Braces, Levels, Hammers, Saws, Files, and Garden Tools.
First use Feb. 5, 1961.

SN 126,502. Bonham Corporation, Provo, Utah. Filed Aug. 23, 1961.

CLIMB-AWAY

For Scooter-Type Transmissions for Motor-Driven Vehicles.
First use Sept. 15, 1960.

SN 128,133. Motec Industries, Inc., Hopkins, Minn. Filed Sept. 18, 1961.

MOTEC

Owner of Reg. No. 721,873.
For Agricultural and Industrial Machinery, Implements and Accessories—Namely, Internal Combustion Engines and Power Units, Agricultural and Industrial Tractors, Combines, Balers, Corn Shellers, Lift Trucks, Chain Saws, Harrows, Plows, Hay Rakes, Rotary Hoes, Planters, Manure Spreaders, Forage Harvesters, Corn Huskers, Grain Drills, Backhoes, and Loaders.
First use Mar. 7, 1961.

SN 130,339. The G. A. Gray Company, Cincinnati, Ohio. Filed Oct. 20, 1961.

FLYING SCOT

For Planers, Milling Planers and Planer Type Milling Machines.
First use Oct. 13, 1961.

SN 130,505. Security Products Company, Inc., Lincoln, Nebr. Filed Oct. 23, 1961.

AeroJet

For Portable, Hand-Operated Fire Extinguishers of the Aerosol Type.
First use Oct. 1, 1957.

SN 131,728. Frank J. Taylor, Los Altos, Calif. Filed Nov. 9, 1961.

GARDEN BAZZOOKA

No claim is made by applicant to the word "Garden."
For Liquid Fertilizer and Pesticide Wand.
First use Aug. 31, 1961.

SN 131,729. Tecumseh Products Company, Tecumseh, Mich. Filed Nov. 9, 1961.

EZEE-START

For Internal Combustion Engines and Parts Therefor.
First use on or about Aug. 1, 1961.

SN 131,754. The Gillette Company, Boston, Mass. Filed Nov. 10, 1961.

LADY FAIR

For Safety Razors.
First use Sept. 18, 1961.

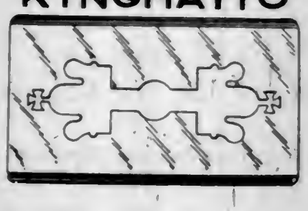
SN 131,763. The Oversewing Machine Company of America, Medford, Mass. Filed Nov. 10, 1961.

VERSAMATIC

For Book Pasting Machines.
First use May 1, 1961.

SN 131,847. John J. King, Chicago, Ill. Filed Nov. 13, 1961.

KINGMATIC



For Razor Blades.
Applicant disclaims the razor blade outline apart from the mark as shown. Owner of Reg. No. 672,183.
First use Nov. 1, 1961; Mar. 24, 1958, as to "Kingmatic."

SN 132,348. Magna American Corporation, Cincinnati, Ohio. Filed Nov. 20, 1961.

MAGNA

For Home Workshop Power Tools Including Combination Power Tools and Accessories Such as Jointers, Jig Saws, Band Saws, Compressors, Sanders, and Accessories, Radial Arm Saws, Garden Tillers, Floor Polishers and Lawn Trimmers and Edgers.
First use on or about Jan. 1, 1954.

SN 132,747. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 24, 1961.

CARETAKER

For Automatic Washing Device for Milk Line Systems.
First use on or about Mar. 28, 1960.

SN 132,896. Chicago Saws, Inc., Chicago, Ill. Filed Nov. 28, 1961.

MARKETTE

For Saw Blades.
First use Oct. 11, 1961.

SN 133,342. The Vendo Company, Kansas City, Mo. Filed Dec. 4, 1961.

VISI-MART

For Vending Machines and Parts Thereof.
First use Oct. 21, 1961.

SN 134,556. The Newall Engineering Company Limited, Old Fletton, Peterborough, England. Filed Dec. 22, 1961.

NEWALL

Owner of British Reg. No. B674,560, dated Nov. 17, 1948.
For Machine Tools and Parts Thereof.

SN 138,449. AMP Incorporated, Harrisburg, Pa. Filed Feb. 23, 1962.

AMP

Owner of Reg. Nos. 559,403, 717,870, and others.
For Hand Tools for Pressure Application of Electrical Connectors to Conductors.
First use Feb. 7, 1962.

Class 24 — Laundry Appliances and Machines

SN 111,256. The Westward Company, Detroit, Mich. Filed Jan. 3, 1961.

W

Owner of Reg. No. 696,739.
For Component Mechanical Parts for Home Laundry Machines.
First use Apr. 15, 1958; as early as 1938 as to the letter "W."

SN 123,937. Tavaro S.A., Geneva, Switzerland. Filed July 13, 1961.

ELNA

Priority claimed under Sec. 44(d) on Swiss Reg. No. 184,947, dated Jan. 13, 1961.
For Washing Machines and Ironing Machines.

Class 25 — Locks and Safes

SN 128,143. Arrow Lock Corporation, Brooklyn, N.Y. Filed Sept. 19, 1961.

COMET

For Lock and Latch Sets.
First use Apr. 17, 1961.

Class 26 — Measuring and Scientific Appliances

SN 96,008. Anders Börre Holter, Gullaug, near Drammen, Norway. Filed Apr. 28, 1960.

LO-CODE

Owner of Norwegian Reg. No. 53,075, dated Jan. 5, 1959.
For Flow Indicator Tapes.

SN 96,628. Rol-Ruler Company, Riegelsville, Pa. Filed May 6, 1960.

ROL-RULER

For Plastic Ruler, With Built In Rollers for Line Drawing.
First use Apr. 28, 1959.

SN 100,475. Talboys Instrument Corporation, Emerson, N.J. Filed July 7, 1960.

T

For Laboratory Equipment—Namely, Electric Stirrers, Milk Testing Units, Vacuum Dryers and Coating Units for Coating Wax on Paper.
First use Sept. 5, 1954.

SN 108,685. Wallson Associates, Inc., Elizabeth, N.J. Filed Nov. 17, 1960.

WA

For Electrical Test and Measuring Equipment—Namely, Component Dynamic Test Equipment for Electrical Circuit Components, Dynamic Analyzers for Semiconductor Devices, Thermal Resistance Test Instruments, Surge Test Apparatus for Semiconductor Rectifiers To Apply a Controllable Amplitude Surge of Electrical Power of Known Wave Form Through the Rectifier Under Test, and Modular Life Test Supplies To Provide a Source of Electrical Power for Simulator Testing of Directional Conducting Devices.
First use Jan. 18, 1960.

SN 110,180. Standard-Thomson Corporation, Waltham, Mass. Filed Dec. 13, 1960.

WALTHAM

For Automotive Thermostats.
First use June 1960.

SN 110,314. "Constructiewerkhuizen Emile d'Hooge," Personenvennootschap met Beperkte Aansprakelijkheid, in French: "Ateliers de Construction Emile d'Hooge," Société de Personnes à Responsabilité Limitée, Ledeberg, near Ghent, Belgium. Filed Dec. 16, 1960.

HYGROMATIC

Priority claimed under Sec. 44(d) on Belgian Reg. No. 4184 (Ghent), dated June 17, 1960.
For Apparatus for Determining Relative Humidity in a Solvent for Use in Equipment for Dry Cleaning Textile Goods.

SN 121,073. Collins Radio Company, Cedar Rapids, Iowa. Filed May 31, 1961.

COLLINS

Owner of Reg. Nos. 356,554, 714,178, and others.
For Navigation Equipment—Namely, Doppler Navigation Systems, Radio Transmitters and Receivers, Distance Measuring Systems, Terminal Visual Omni-Range Systems, Visual Omni-Range Systems, Radio Approach Systems, Navigational Computers; Flight Control Systems—Namely, Autopilots, Approach Horizon Instruments, Gyros, Course Indicator Instruments, Altitude Controls, Throttle Controls, and Pitch Controls.
First use Mar. 15, 1932.

SN 121,159. Anderson & Sons, Incorporated, Westfield, Mass. Filed June 1, 1961.

PHILATEK

For Stamp Collection Sets, Including Implements for Inspection, Handling and Mounting Stamps, Such as Scales, Stamp Tongs, Magnifying Glasses, and Stamp-Retaining Vessels.
First use May 11, 1961.

SN 122,465. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

HSH

For Audio-Frequency, Video-Frequency, Carrier-Frequency, Noise and Radio-Frequency Signal Generators; Sound-Level Meters; Sound Analyzers; Meters Including Voltmeters, Ammeters, Wattmeters and Differential Voltmeters; Electron-Beam or Cathode-Ray Devices and Indicators; Electro-Optical Indicators; Electrical Signal-Level Indicators; Sound and Radio Detecting Apparatus; and Stroboscopic Devices.
First use in or about August 1947.

SN 122,750. Beckman Instruments, Inc., Fullerton, Calif. Filed June 26, 1961.

D K

For Spectrophotometric Apparatus and Component Parts Thereof Sold Separately Therefrom.
First use June 1953.

SN 123,008. Espino Barros e Hijos, S.A., Monterrey, Nuevo Leon, Mexico. Filed June 28, 1961.

NOBA

Owner of Mexican Reg. No. 97,131, dated July 8, 1959.
For Photographic Cameras.

SN 124,074. Epsco, Incorporated, Cambridge, Mass. Filed July 17, 1961.

IONALYZER

For Apparatus for Electrochemical Analysis of Ions and Dissolved Gases, Including Components Therefor.
First use June 30, 1961.

SN 125,251. Societe d'Optique et de Mecanique de Haute Precision, Paris, France. Filed Aug. 2, 1961.

TELESTRIA

Owner of French Reg. No. 493,241, dated Jan. 12, 1961 (Paris): Natl. Inst. No. 156,906.
For Telemetric Apparatus Used With Photographic and Cinematographic Apparatus, Especially in Combination With the Sights of Such Apparatus.

SN 126,594. Hilger & Watts Limited, London, England. Filed Aug. 24, 1961.

MICROPTIC

For Surveying Instruments—Namely, Theodolites, Transits, Levels, Alidades; Engineers' Measuring Equipment—Namely, Clinometers, Optical Levels, Optical Protractors, Length Measuring Machines, Scale Readers, Autocollimators, Autocollimating and Alignment Telescopes; Microscopes; and Laboratory Equipment—Namely, Polarimeters and Colorimeters.
First use Dec. 31, 1934; in commerce Dec. 31, 1949.

SN 127,438. Tru-Center Products Company, Decatur, Ill. Filed Sept. 7, 1961.

TRU

For Tool Setting Gauges for Machine Tools.
First use Dec. 1, 1960.

SN 127,444. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Sept. 7, 1961.

CONSTELLATION

For Compasses.
First use Jan. 7, 1948.

SN 127,445. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Sept. 7, 1961.

EXPRESS

For Compasses.
First use in September 1946.

SN 127,515. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Sept. 8, 1961.

COMMANDER

For Compasses.
First use in July 1960.

SN 127,516. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Sept. 8, 1961.

CORVETTE

For Compasses.
First use in April 1956.

SN 127,517. Wilfrid O. White & Sons, Inc., Boston, Mass. Filed Sept. 8, 1961.

WHITE

The drawing is lined for blue.
For Nautical Instruments Including Compasses, Binnacles, Peloruses, Azimuth Circles, Bearing Circles, Azimuth Mirrors, Hand-Operated Sounding Machines, Motor Driven Sounding Machines, Electronic Depth Sounders, Protractors, Navigation Triangles, Marine Automatic Pilots, Radio Direction Finders, Anemometers, Wind Direction Indicators, Barometers, Hand Bearing Compasses, and Compass Corrector Boxes.
First use in or about spring of 1950; about 1919 as to name "White."

SN 130,282. The Gerber Scientific Instrument Company, Hartford, Conn. Filed Oct. 19, 1961.

GERBER VARIABLE SCALE

For Devices for Measuring and Plotting Distances to Any Arbitrary Scale.
First use on or about Dec. 10, 1948.

SN 130,841. Tech Serv, Inc., College Park, Md. Filed Oct. 27, 1961.

DIGILAB

For Transistorized Digital Consoles.
First use June 30, 1961.

SN 131,243. U.S. Photo Supply Co., Inc., Washington, D.C. Filed Nov. 2, 1961.

TEACHALL

For Educational Machines.
First use on or about Oct. 23, 1961.

SN 131,789. Amchem Products, Inc., Ambler, Pa. Filed Nov. 13, 1961.

LINEGUARD

For Automatic Measuring and Control Apparatus for Metal Treating Solutions.
First use Sept. 22, 1961.

SN 131,900. TA Mfg. Corp., Los Angeles, Calif. Filed Nov. 13, 1961.

THOMAS 16

The number "16" is disclaimed apart from the mark as shown.
For Tripod Heads for Cameras and Other Instruments.
First use Sept. 20, 1961.

SN 132,074. Robert H. Ray Company, Inc., Houston, Tex. Filed Nov. 15, 1961.

THUMPER

Owner of Reg. No. 640,159.
For Geophysical Exploration Equipment.
First use May 1955.

SN 132,279. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Nov. 20, 1961.

AGECOP

Owner of German Reg. No. 750,176, dated June 20, 1961; and U.S. Reg. Nos. 650,487 and 650,488.
For Unexposed Photographic Papers.

SN 132,280. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Nov. 20, 1961.

AMBIMATOR

Owner of German Reg. No. 750,403, dated June 28, 1961; and U.S. Reg. No. 656,125.
For Photographic and Cinematographic Exposure and Reproduction Apparatus and Devices as Well as Parts Thereof, and Projectors.

SN 132,281. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Nov. 20, 1961.

RADIOLIX

Owner of German Reg. No. 748,229, dated May 2, 1961.
For Sensitized Photographic Film.

SN 133,854. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Dec. 12, 1961.

AGESTAT

Owner of German Reg. No. 750,521, dated July 3, 1961; and U.S. Reg. No. 650,488.
For Unexposed Photographic Papers.

SN 134,054. Tech Serv, Inc., College Park, Md. Filed Dec. 14, 1961.

TECH SERV

Owner of Reg. No. 718,499.
For Measuring and Scientific Appliances—Namely, Transistorized Digital Logic Packages, Radar Camera Systems, Digital Display Decoders, Battery Test Sets, Audio-Visual Display Consoles, Automatic Slide-Synchronized Sound Equipment, and Depth Gage Indicators.
First use Feb. 24, 1960.

SN 134,367. Lawrence D. Boden, d.b.a. Speedometer Service Company, Atlanta, Ga. Filed Dec. 20, 1961.

DISCOMETER

For Speedometer Testing Equipment.
First use on or before June 1961.

SN 134,557. The Newall Engineering Company Limited, Old Fletton, Peterborough, England. Filed Dec. 22, 1961.

NEWALL

Owner of British Reg. No. B693,765, dated Nov. 13, 1950.
For Roller Thread Caliper Gauges, Screw Plug Gauges, External Limit Gauges, Internal Limit Gauges, Cylinder Plug Ring Gauges, and Micrometer Gauges.

SN 134,590. Zeiss-Aerotopograph G.m.b.H., Munich, Bavaria, Germany. Filed Dec. 22, 1961.

SUPRAGRAPH

Owner of German Reg. No. 747,467, dated Apr. 12, 1961.
For Apparatus, Instruments and Devices for Taking, Plotting and Evaluating of Photographs as Well as Their Objectives and Parts.
First use in October 1960; in commerce in October 1960.

SN 134,591. Zeiss-Aerotopograph G.m.b.H., Munich, Bavaria, Germany. Filed Dec. 22, 1961.

COORDIMAT

For Photogrammetric and Cartographic Apparatus and Devices.
First use in September 1960; in commerce in September 1960.

SN 134,593. Zeiss-Aerotopograph G.m.b.H., Munich, Bavaria, Germany. Filed Dec. 22, 1961.

TERRAGRAPH

Owner of German Reg. No. 747,267, dated Apr. 4, 1961.
For Apparatus, Instruments and Devices for Taking, Plotting and Evaluating of Photographs as Well as Their Objectives and Parts.

SN 134,594. Zeiss-Aerotopograph G.m.b.H., Munich, Bavaria, Germany. Filed Dec. 22, 1961.

ELECTROTOP

Owner of German Reg. No. 746,970, dated Mar. 22, 1961.
For Plotting Instruments for Photogrammetric and Cartographic Purposes and Parts Thereof.

SN 134,700. Vapor Corporation, Chicago, Ill. Filed Dec. 26, 1961.

Skytemp

For Automatic Cabin Temperature Control.
First use Sept. 11, 1961.

SN 134,854. Trans-Lux Corporation, New York, N.Y. Filed Dec. 28, 1961.

LUXCHROME

For Projection Screens.
First use on or about June 11, 1957.

SN 135,249. Ameresco, Inc., Little Falls, N.J. Filed Jan. 5, 1962.

AMERESCO

Owner of Reg. No. 710,593.
For Machine Hours Meters, Stroboscopes, and Perspiration Measuring Instruments.
First use on or about Mar. 6, 1961.

SN 135,465. Staples-Hoppmann, Inc., Alexandria, Va. Filed Jan. 9, 1962.

HUCKSTER

For Rear View Projection Cabinet With Built-In Screen Housing a Projector or Projectors To Show Motion and/or Still Picture With or Without Sound.
First use Dec. 14, 1960.

SN 135,466. Staples-Hoppmann, Inc., Alexandria, Va. Filed Jan. 9, 1962.

TELESHOW

For Rear View Projection Cabinet With Built-In Screen Housing a Projector or Projectors To Show Motion and/or Still Picture With or Without Sound.
First use Nov. 3, 1959.

SN 135,513. A. Kimball Company, Brooklyn, N.Y. Filed Jan. 10, 1962.

KARD PACK

For Automatic Data Processing Systems, Including Equipment for Sensing One Type of Punched Record and Converting It to Another Type of Punched Record.
First use not later than Nov. 13, 1961.

SN 135,559. Arne Bergset, Milwaukee, Wis. Filed Jan. 11, 1962.

DOT-A-LINE

For Perforated Drafting Templates for Use in Drawing Broken Lines.
First use on or about May 25, 1961.

SN 135,578. Direct Image Corporation, Montebello, Calif. Filed Jan. 11, 1962.

dichron

For Photographic Screen Plates for Lithography.
First use on or about Feb. 1, 1961.

SN 135,617. Sierra Engineering Co., Sierra Madre, Calif. Filed Jan. 11, 1962.

HI-Q

For Helmets for Aviators.
First use Dec. 15, 1961.

SN 135,689. Longines-Wittnauer Watch Co., Inc., New York, N.Y. Filed Jan. 12, 1962.

CINE-TWIN

For Cameras and Camera Accessories.
First use May 27, 1958.

SN 135,769. Container Corporation of America, Chicago, Ill. Filed Jan. 15, 1962.

CONCORA

Owner of Reg. Nos. 320,966, 587,612, and others.
For Apparatus for Measuring and Testing Physical Properties and Characteristics of Paperboard.
First use Oct. 11, 1953.

SN 135,814. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Jan. 15, 1962.

THE MAJOR

For Electrically Operated Machines Employing Infra-Red Light Source for Producing Copies of Printed or Pictorial Matter by Means of Heat.
First use Oct. 27, 1961.

SN 135,815. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Jan. 15, 1962.

ENCORE

For Electrically Operated Machines Employing Infra-Red Light Source for Producing Copies of Printed or Pictorial Matter by Means of Heat.
First use Oct. 31, 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 122,820. Jere D. McWethy, d.b.a. California Plastics, Arcadia, Calif. Filed June 26, 1961.

POOL MATES

For Leaf Skimmers and Brushes for Swimming Pools.
First use July 1, 1959.

Class 30 — Crockery, Earthenware, and Porcelain

SN 83,914. Shenango China, Inc., New Castle, Pa. Filed Oct. 23, 1959.

RIMROL

For Food-Serving Table Chinaware.
First use on or about Feb. 13, 1939.

Class 31 — Filters and Refrigerators

SN 94,732. Cambridge Filter Products Corp., Syracuse, N.Y. Filed Apr. 11, 1960.

SMOKESTOP

For Air Filters.
First use Mar. 31, 1960.

SN 111,105. Indiana General Corporation, Valparaiso, Ind. Filed Dec. 30, 1960.

For Magnetic Screen Filters.
First use Aug. 22, 1960.

SN 116,087. Springer Industries, Inc., Long Island City, N.Y. Filed Mar. 20, 1961.

PENGUIN PLAYBAR

For Refrigerators.
First use on or about Feb. 1, 1959.

SN 119,047. The J. E. Porter Corporation, Chicago, Ill. Filed May 1, 1961.

DOLLY MADISON

"Dolly Madison" is not the name of any particular living individual.
For Hand Operated and Electrically Operated Home Ice Cream Freezers.
First use Mar. 1, 1933.

SN 129,443. ACF Industries, Incorporated, St. Louis, Mo. Filed Oct. 9, 1961.

ZIP-DISC

Owner of Reg. No. 715,388.
For Liquid Fuel Filters.
First use Jan. 5, 1960.

SN 130,258. Walton Laboratories, Incorporated, Irvington, N.J. Filed Oct. 18, 1961.

MINERAL-LOK

For Water Filter.
First use in or about October 1960.

SN 131,114. Donaldson Company, Inc., St. Paul, Minn. Filed Nov. 1, 1961.

STRATA

For Air Cleaners for Internal Combustion Engines.
First use Apr. 7, 1961.

Class 32 — Furniture and Upholstery

SN 122,316. Jackes-Evans Manufacturing Company, d.b.a. Medart Products, Inc., St. Louis, Mo. Filed June 19, 1961.

Medart PRODUCTS, INC.

Owner of Reg. No. 280,326.
For Metal Lockers, Shelving, and Cabinets.
First use June 21, 1960.

SN 123,442. Shwayder Brothers, Inc., Denver, Colo. Filed July 5, 1961.

SCANDA

For Folding Card Tables and Chairs.
First use Apr. 12, 1961.

SN 124,120. Paramount Bedding Corp., d.b.a. Quilt-O'-Dreams Sleep Products, Norfolk, Va. Filed July 17, 1961.

LURON

For Mattresses and Box Springs.
First use Apr. 14, 1961.

SN 127,808. "Strolee" of California, Los Angeles, Calif. Filed Sept. 13, 1961.

SIT N EAT

For Portable Baby Seat.
First use June 28, 1961.

SN 128,245. Breneman-Hartshorn Inc., Cincinnati, Ohio. Filed Sept. 20, 1961.

bar-Lite

Owner of Reg. No. 564,816.
For Window Shades.
First use June 5, 1961.

SN 131,461. Akro-Mils, Inc., Akron, Ohio. Filed Nov. 7, 1961.

MISS NEAT

For Movable Cabinets With Drawers for Small Items Such as Jewelry, Bobby Pins, Clips, Sewing Supplies, Medicine, Etc.
First use Oct. 30, 1961.

SN 136,176. Acoustics Development Corporation, Park Ridge, Ill. Filed Jan. 22, 1962.

ADCO

For Acoustical Telephone Booths and Acoustical Panels for Use in Telephone Booths.
First use Dec. 8, 1961.

SN 136,177. Acoustics Development Corporation, Park Ridge, Ill. Filed Jan. 22, 1962.

ACOUSTI-CALL

For Acoustical Telephone Booths and Acoustical Panels for Use in Telephone Booths.
First use Dec. 8, 1961.

SN 136,195. Breneman-Hartshorn Inc., Cincinnati, Ohio. Filed Jan. 22, 1962.

EAGLE

For Window Shades.
First use in the year of 1932.

SN 136,198. Breneman-Hartshorn Inc., Cincinnati, Ohio. Filed Jan. 22, 1962.

TEXTONE

For Window Shades.
First use in the year of 1951.

SN 136,199. Breneman-Hartshorn Inc., Cincinnati, Ohio. Filed Jan. 22, 1962.

VOGUE

For Clips for Attachment to Window Shades To Protect the Surface Thereof During Operation.
First use in the year of 1953.

Class 33 — Glassware

SN 125,390. Libbey-Owens-Ford Glass Company, Toledo, Ohio. Filed Aug. 4, 1961.

EASILITE GRAINED

The term "Grained" is disclaimed apart from the mark as shown.
For Glass for Glazing Windows, Doors, Partitions and the Like.
First use Oct. 25, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 95,436. Holophane Company, Inc., New York, N.Y. Filed Apr. 20, 1960.

PRISMATIC T-BAR

Applicant disclaims the word "Prismatic" apart from the mark as shown.
For Illumination Equipment—Namely, Plastic Lamps, Plastic Refractors, and Plastic Screens.
First use Oct. 28, 1958.

SN 103,944. McGraw-Edison Company, Elgin, Ill. Filed Sept. 6, 1960.

ARCTIC CIRCLE

Owner of Reg. No. 645,742.
For Evaporative Coolers.
First use Feb. 16, 1960.

SN 115,740. Thermodynamics Corporation, Needham, Mass. Filed Mar. 15, 1961.

THERMODYNAMICS CORPORATION TDC

For Pipe Heating Systems for Preheating or Maintaining the Fuidity of Liquids, Such as Fuel Oil, Chemical Liquors and the Like, Flowing Therein and Parts Therefor.
First use Aug. 26, 1960.

SN 119,546. National Industrial Equipment Company, San Francisco, Calif. Filed May 8, 1961.

NIECO

For Air Curtains, Being a Device Which Includes a Blower Passing an Air Stream Across an Orifice or Entranceway To Exclude Insects.
First use December 1960.

SN 120,073. C. J. Bates & Son Incorporated, Chester, Conn. Filed May 16, 1961.

HANDI-PAK

For Out of Doors Cooking Equipment.
First use April 1961.

SN 124,079. Frick Company, Waynesboro, Pa. Filed July 17, 1961.

BRADFORD

For Water Heaters.
First use in January 1945.

SN 126,862. Floaire, Inc., Philadelphia, Pa. Filed Aug. 29, 1961.

FLOAIRE

For Ventilator Fans.
First use June 9, 1961.

SN 127,499. Samuel Stamping & Enameling Company, Chattanooga, Tenn. Filed Sept. 8, 1961.

SUBURBAN VENTURA

Owner of Reg. No. 669,915.
For Wall Heaters for Houses.
First use Jan. 23, 1961.

SN 128,420. George P. Deacon, d.b.a. The Rayboard Company, Martins Ferry, Ohio. Filed Sept. 22, 1961.

WIND O WARM

For Electric Heating Panels.
First use Apr. 3, 1961.

Class 36 — Musical Instruments and Supplies

SN 82,214. Messrs. Fujiya Denki Sangyo Kabushiki Kaisha, Chuo-ku, Tokyo, Japan. Filed Sept. 28, 1959.

FUJIYA

For Stereophonic Radio-Phonographs.
First use Oct. 12, 1957; in commerce May 28, 1958.

SN 112,921. Revere Camera Company, Chicago, Ill. Filed Feb. 1, 1961.

WOLLENSAK

Owner of Reg. No. 620,840.
For Magnetic Tape Sound Recorders and Reproducers.
First use Feb. 12, 1957.

SN 115,208. American Concertone, Inc., Culver City, Calif. Filed Mar. 9, 1961.

REVERSE-O-MATIC

For Tape Recording and Playback Equipment.
First use Oct. 23, 1960.

SN 122,403. Universal Electronics Laboratories Corporation, Hackensack, N.J. Filed June 19, 1961.

LANG-LAB

For Pre-Worded Electronic Tapes and Tape Recorders for Teaching Languages and Other Subjects.
First use in June 1958.

SN 127,460. Robert A. Cupani, d.b.a. Bob Cupani, Benton Harbor, Mich. Filed Sept. 8, 1961.

BECE

For Phonograph Records.
First use Feb. 18, 1961.

SN 129,895. Synthetic Plastics Record Corp., New York, N.Y. Filed Oct. 13, 1961.

DIPLOMAT

For Grooved Phonograph Records.
First use Sept. 15, 1961.

SN 130,364. Stephens La Fever, d.b.a. Ultimate Records Co., Beverly Hills, Calif. Filed Oct. 20, 1961.

ULTIMATE

For Phonograph Records and Prerecorded Tapes.
First use July 9, 1961.

SN 130,831. St. Louis Music Supply Company, St. Louis, Mo. Filed Oct. 27, 1961.

Lindell

For Organs.
First use Sept. 15, 1961.

SN 130,847. Warner Bros. Pictures, Inc., New York, N.Y. Filed Oct. 27, 1961.

PLUS 2 OLDIES

For Phonograph Records.
First use Sept. 1, 1961.

SN 131,087. Paul E. King, New York, N.Y., assignee of Viktor Stuzzi, d.b.a. Radiotechnische Fabrik, Vienna, Austria. Filed Oct. 31, 1961.

MEMOCORD

For Miniature Transistorized Tape Recorders.
First use Apr. 15, 1961; in commerce Aug. 1, 1961.
Subj. to Intf. with SN 134,004.

SN 134,004. Amerex Trading Corporation, New York, N.Y. Filed Dec. 14, 1961.

"MEMOCORDER"

For Tape Recorders.
First use Dec. 28, 1960.
Subj. to Intf. with SN 131,087.

Class 37 — Paper and Stationery

SN 109,016. The Parker Pen Company, Janesville, Wis. Filed Oct. 31, 1960.

WRITEFINE

For Mechanical Pencils and Pencil Leads.
First use May 10, 1939.

SN 116,044. Longlife Pen Company, Monrovia, Calif. Filed Mar. 20, 1961.

DE VILLE

The French words "De Ville" mean "of the city or town."
For Ball Point Writing Pens.
First use Jan. 30, 1961.

SN 119,275. The Executive Desk Diary, Ltd., New York, N.Y. Filed May 4, 1961.

WEEK IN VIEW

For Desk Calendar, Appointment Diary.
First use Oct. 15, 1959.

SN 119,460. H. Reeve Angel & Co., Inc., Clifton, N.J. Filed May 8, 1961.

reeve angel

ra

For Filter Paper, Technical Paper, Drawing Paper, Drawing Boards, Writing Paper and Envelopes.
First use on or about Feb. 1, 1961.

SN 131,141. Charles Leonard, Inc., Glendale, N.Y. Filed Nov. 1, 1961.

MULTI-PRONG

For Paper Fasteners.
First use Feb. 1, 1961.

Class 38 — Prints and Publications

SN 108,643. The Kiplinger Washington Editors, Inc., Washington, D.C. Filed Nov. 17, 1960.

KIPLINGER

BOOK CLUB

The drawing is lined for brown. Owner of Reg. Nos. 506,031, 659,844, and others.
For Book Club Newsletter.
First use Mar. 1, 1960.

SN 116,172. Twentieth Century-Fox Film Corporation, New York, N.Y. Filed Mar. 21, 1961.

GRANDEUR 70

For Motion Picture Films Synchronized With Sound.
First use Feb. 22, 1961.

Class 39 — Clothing

SN 54,983. Adolf Dassler, d.b.a. Adidas Sportschuhfabrik Adi Dassler, Herzogenaurach, Bavaria, Germany. Filed July 9, 1958.



The mark consists of three parallel bands on each side of the shoe in contrasting color to that of the body of the shoe.
Owner of U.S. Reg. Nos. 631,812 and 641,906.
For Athletic Shoes.
First use in commerce Dec. 3, 1952.

SN 107,753. Ruby Goldenberg, d.b.a. Goldenberg & Zitter, New York, N.Y. Filed Nov. 3, 1960.

RUBYIAT

"Rubyiat" is neither the name or the pseudonym for, as used by applicant, any living individual.
For Fur Stoles, Fur Jackets, and Fur Coats.
First use Sept. 7, 1960.

SN 113,515. Given Brothers, Incorporated, El Paso, Tex. Filed Feb. 13, 1961.

DE SALLE

For Shoes for the Use of Women.
First use in or about July 1956.

SN 117,387. Nunn-Bush Shoe Company, Milwaukee, Wis. Filed Apr. 7, 1961.

FLEXIBLE FETHERWATE

For Men's and Boys' Shoes.
First use 1937.

SN 118,883. G. W. Hannes, Inc., Philadelphia, Pa. Filed Apr. 28, 1961.

La Mee

For Girdles and Brassieres.
First use Oct. 24, 1960, on girdles.

SN 123,007. The Enro Shirt Company, Inc., Louisville, Ky. Filed June 28, 1961.

Even Llamas Wear Pajamas



The words "Styled by" and the representation of the pajamas are disclaimed apart from the mark as shown.
Owner of Reg. No. 162,068.
For Pajamas.
First use Jan. 3, 1961.

SN 123,768. Rosenfeld-Berman Corporation, Los Angeles, Calif. Filed July 11, 1961.

Sa'bett of California

No claim is made to the words "of California" apart from the other features of the mark.
For Women's and Misses' Dresses.
First use Jan. 10, 1960.

SN 124,908. The Hoburt Company, Inc., New York, N.Y. Filed July 28, 1961.

PetiTogs

For Infants' Wear—Namely, Dresses, ties, Rompers, Shirts and Bathrobes.
First use March 1960.

SN 126,083. C. & A. Brenninkmeyer, Inc., Brooklyn, N.Y. Filed Aug. 16, 1961.

Toka

The drawing is lined for red.
For Women's Hosiery and Lingerie.
First use July 1, 1959.

SN 126,454. Kayser-Roth Corporation, New York, N.Y. Filed Aug. 22, 1961.

MAGIC MOTION

For Women's Gloves.
First use July 18, 1961.

SN 127,421. Peter Pan Swimwear International, Inc., New York, N.Y. Filed Sept. 7, 1961.

PATRICIA DENNIS

The name "Patricia Dennis" is fanciful.
For Swimwear.
First use Nov. 4, 1960.

SN 128,163. Fountain Hill Mills, Bethlehem, Pa. Filed Sept. 19, 1961.

KNIT VILLE

Applicant disclaims the word "Knit" apart from the mark as shown.
For Ladies', Misses', and Girls' Blouses, Shirts, Cardigans, Jackets, Slacks, Shorts, Skirts, and Dresses.
First use June 15, 1961.

SN 129,859. Halo Import Corp., New York, N.Y. Filed Oct. 13, 1961.

pari rosa

The translation of the words "Pari Rosa" is "like a rose."
For Men's, Women's, Boys', and Girls' Shoes.
First use in September 1961.

SN 129,953. Maidenform, Inc., New York, N.Y. Filed Oct. 16, 1961.

TARANTELLA

For Foundation Garments.
First use Sept. 15, 1961.

SN 130,053. Dutchess Underwear Corporation, New York, N.Y. Filed Oct. 17, 1961.

TOAST-EZE

For Underwear.
First use Aug. 6, 1961.

SN 130,692. William F. Fretz & Son, Inc., Doylestown, Pa. Filed Oct. 26, 1961.

DICENZA

For Trousers.
First use Oct. 20, 1961.

SN. 131,188. Clearfield Furs, Inc., Clearfield, Pa. Filed Nov. 2, 1961.

CLEARFIELD FURS

The word "Furs" is disclaimed apart from the mark as shown. Owner of Reg. No. 391,196.
For Fur Apparel of All Types and Description.
First use Apr. 15, 1929.

SN 133,191. Weinberg Corporation, Chicago, Ill. Filed Dec. 1, 1961.

SUMMER GRAIN

For Men's and Boys' Suits, Jackets, Slacks, and Outercoats.
First use Nov. 20, 1961.

SN 133,244. F & M Shoe Corp., New York, N.Y. Filed Dec. 4, 1961.

SEATON
SHOES for MEN

The words "Shoes for Men" are disclaimed apart from the mark.
For Men's Shoes.
First use Sept. 26, 1961.

SN 133,245. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Dec. 4, 1961.

FARATONE

Owner of Reg. Nos. 558,581, 558,776, and 627,029.
For Boys' Jeans.
First use Oct. 25, 1961.

SN 133,252. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Dec. 4, 1961.

FARATHINS

Owner of Reg. Nos. 558,581, 558,776, and 627,029.
For Men's Slacks.
First use July 10, 1961.

SN 133,369. H. H. Cutler Company, Grand Rapids, Mich. Filed Dec. 5, 1961.

CUTLER'S

Owner of Reg. Nos. 562,677, 577,443, and 690,576.
For Infants' and Children's Clothing—Namely, Bibs, Pants, Dresses, Suits, Shirts, Jackets, Booties, Sleepers, and Plastic and Plastic Lined Baby Pants.
First use June 1, 1952.

SN 133,425. The Stetson Shoe Company, Incorporated, South Weymouth, Mass. Filed Dec. 5, 1961.

OLD MASTERS

For Men's Shoes.
First use 1929.

SN 133,567. Kiddie Kapers, Inc., New York, N.Y. Filed Dec. 7, 1961.

KAPER-LON

Owner of Reg. No. 598,236.
For Men's, Women's, and Children's Raincoats.
First use Aug. 31, 1961.

SN 133,672. Hickey-Freeman Company, Rochester, N.Y. Filed Dec. 8, 1961.

LAUDER DALE

For Men's Suits and Coats.
First use on or about Oct. 20, 1961.

SN 133,677. Kayser-Roth Corporation, New York, N.Y. Filed Dec. 8, 1961.

GOVERNOR

For Men's Hosiery.
First use Jan. 1, 1954.

SN 133,699. Polaroid Corporation, Cambridge, Mass. Filed Dec. 8, 1961.

POLAROID

For Safety Helmets.
First use Oct. 18, 1961.

SN 133,777. Endicott Johnson Corporation, Endicott, N.Y. Filed Dec. 11, 1961.

THE MAN

For Footwear—Namely, Men's and Boys' Shoes Made of Leather, Rubber and Canvas, and Combinations Thereof.
First use May 25, 1961.

SN 133,803. Lebow Bros., Inc., Baltimore, Md. Filed Dec. 11, 1961.

GALAHAD

For Men's Suits, Topcoats, and Overcoats.
First use July 28, 1939.

SN 134,033. Melville Shoe Corporation, New York, N.Y. Filed Dec. 14, 1961.

DYNASOLE

For Shoes for Men, Women, and Children.
First use Nov. 15, 1961.

SN 134,087. Bachman Shoes, Inc., Middletown, Pa. Filed Dec. 15, 1961.

BUSY-TOES

For Infants', Misses', and Children's Shoes Made of Leather, Fabric, Rubber and Combinations Thereof.
First use Feb. 1, 1932.

SN 134,276. W. Seltchik & Sons, Inc., Philadelphia, Pa. Filed Dec. 18, 1961.

HARMONAIRE

Owner of Reg. No. 720,033.
For Men's and Boys' Suits.
First use on or about Sept. 18, 1961.

SN 134,303. C. & A. Brenninkmeyer, Inc., Brooklyn, N.Y. Filed Dec. 19, 1961.

Mr. Cee

"Mr. Cee" is the name of a fictitious person.
For Women's Hosiery and Lingerie.
First use Dec. 1, 1961.

SN 134,304. C. & A. Brenninkmeyer, Inc., Brooklyn, N.Y. Filed Dec. 19, 1961.

CANDY AMES

"Candy Ames" is a fictitious name.
For Women's Hosiery and Lingerie.
First use Dec. 1, 1961.

SN 134,393. Liberty Hosiery Mills, Inc., Gibsonville, N.C. Filed Dec. 20, 1961.

DOOZIES

For Hosiery, Tights and Leotards for Ladies and Children.
First use Dec. 18, 1961.

SN 134,549. Martin and Sheaffer, Menlo Park, Calif. Filed Dec. 22, 1961.

Kidlets

For Babies' Bootees and Shoes Made of Leather.
First use Apr. 2, 1954.

SN 134,634. Genesco Inc., Nashville, Tenn. Filed Dec. 26, 1961.

SEERKENT

For Men's Clothing—Namely, Two and Three Piece Suits, Coats, Vests, Trousers and Overcoats.
First use Jan. 6, 1939.

SN 134,635. Genesco Inc., Nashville, Tenn. Filed Dec. 26, 1961.

KENTROPIC

For Men's Clothing—Namely, Two and Three Piece Suits, Coats, Vests, Trousers, and Overcoats.
First use Nov. 2, 1939.

SN 134,720. Carmi-Ainsbrooke Corporation, New York, N.Y. Filed Dec. 27, 1961.

PIMA-GLO

For Men's Shorts and Pajamas.
First use Dec. 14, 1961.
Subj. to Intf. with SN 135,468.

SN 134,812. Glamorise Foundations, Inc., New York, N.Y. Filed Dec. 28, 1961.

LADY LYCRON

The name "Lady Lycron" is that of a fictitious person.
For Girdles, Brassieres, Corsets and Corselets.
First use Dec. 11, 1961.

SN 135,134. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 3, 1962.

VINABOND

For Shoe Soles.
First use Sept. 26, 1961.

SN 135,136. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 3, 1962.

UNI-VINYL

For Shoe Soles.
First use July 21, 1961.

SN 135,484. Catawba Hosiery Mills, Inc., Catawba, N.C. Filed Jan. 10, 1962.

CATAWBA

Owner of Reg. No. 549,016.
For Men's Hosiery.
First use Oct. 4, 1954.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 50,331. Wellington Sears Company, New York, N.Y. Filed Apr. 24, 1958.

LUXOR

For Bath Towels, Hand Towels, and Wash Cloths Made of Terry Cloth and Made All of Cotton or All of Cotton With Synthetic Yarn Decoration.
First use in 1949.

SN 123,116. Graniteville Company, Graniteville, S.C., assignee of McCampbell & Company, Inc., New York, N.Y. Filed June 29, 1961.

ASTROCHINO

For All-Cotton Twill Used for Work Clothing and Sportswear.
First use Apr. 24, 1961.

SN 126,879. Morgenstern Fabrics Development Corporation, New York, N.Y. Filed Aug. 29, 1961.

INNER-WINNER

For Woven and Non-Woven Fabric for Use as Interfacings and Interlinings for Men's and Women's Garments, Such as Coats, Suits, for Home Furnishings Such as Drapes and Bedspreads, for the Backing of Leather, and for Accessories Such as Handbags and Belts.
First use Aug. 4, 1961.

SN 134,050. Stein-Tex, Inc., New York, N.Y. Filed Dec. 14, 1961.

LOREENA

For Cotton Fabrics.
First use Sept. 22, 1961.

SN 134,521. Compax Corp., Woodside, N.Y. Filed Dec. 22, 1961.

Pak-nit

Owner of Reg. Nos. 724,857 and 725,070.
For Finished Knitted Textile Fabrics, Particularly for Use in the Manufacture of T-Shirts, Athletic Shirts, Polo Shirts, Briefs, Shorts, Pajamas, Sleepers, and Similar Garments.
First use Nov. 27, 1961.

SN 135,468. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 9, 1962.

PIMAGLOW

Owner of Reg. Nos. 668,107 and 634,902.
For Piece Goods of Cotton and Synthetic Fibers.
First use Sept. 22, 1961.
Subj. to Intf. with SN 134,720.

SN 135,582. Dyersburg Cotton Products, Inc., Dyersburg, Tenn. Filed Jan. 11, 1962.

Acri-fluff

For Knitted Pile Fabric.
First use December 1960.

Class 43 — Thread and Yarn

SN 122,398. Toyo Rayon Kabushiki Kaisha, d.b.a. Toyo Rayon Co. Ltd., Chuo-ku, Tokyo-to, Japan. Filed June 19, 1961.

PYLEN

Owner of Japanese Reg. No. 554,796, dated Aug. 25, 1960.
For Threads and Yarns of Cotton, Wool, Rayon and Synthetic Fibers and Combinations and Mixtures of Such Fibers.

SN 123,076. The Chemstrand Corporation, Decatur, Ala. Filed June 29, 1961.

TWISLOCK

For Yarns and Threads Made in Whole or in Substantial Part of Tangled and Entrapped Filaments and Fibers.
First use May 31, 1961.

Class 44 — Dental, Medical, and Surgical Appliances

SN 117,801. E-Donolite Corporation, Beverly Hills, Calif., assignee of Nu-Dent Porcelain Studio, Inc., New York, N.Y. Filed Apr. 13, 1961.

"EPOX-E-DON"

For Dental Products and Supplies Comprising Bridgework, Jackets, Crowns, Veneer Facings, Dentures, Artificial Teeth, and Base Materials for Dentures and Denture Fillings.
First use Mar. 14, 1961.

SN 123,901. Samuel D. Kron, Philadelphia, Pa. Filed July 13, 1961.

PROCTO-REST

For Table Accessory in the Nature of Two Padded Members Hinged Together at the Proper Angle To Support a Person for Proctological Examination.
First use May 13, 1961.

SN 130,688. Eastern Medical Plastics, Inc., Hingham, Mass. Filed Oct. 26, 1961.

PERI BOTTLE

The word "Bottle" is disclaimed apart from the mark as shown.
For Plastic Squeeze Bottles, Sold Empty, for Use Primarily in Hospitals.
First use Feb. 23, 1960.

SN 131,564. The William Getz Corporation, Chicago, Ill. Filed Nov. 8, 1961.

ORYL-GARD

For Protective Mouthpieces for Athletes.
First use during May 1961.

SN 132,633. Samuel Bonat & Bro. Inc., West Paterson, N.J. Filed Nov. 24, 1961.

TRIUMPH

For Electrically Operated, Heated Air Hair Dryer for Professional Use.
First use Oct. 3, 1961.

SN 134,581. Turner Hall Corporation, New York, N.Y. Filed Dec. 22, 1961.

ESKA

Owner of Reg. No. 442,127.
For Hair Waving Equipment—Namely, Neutralizing Dispensers, Testing Devices Comprising Test Tubes and Small Curlers, End Papers, Curlers, Neck Capes, Hoods, Paper Caps, and Curler Trays.
First use Apr. 5, 1943, on hair waving lotions, neutralizers, testing devices, end papers, curlers, hoods and paper caps.

SN 135,348. D. Y. Gorman, d.b.a. CACo Manufacturing Co., Houston, Tex. Filed Jan. 8, 1962.

SOL-O-MATIC

For Chair With Hair Dryer Attached.
First use Nov. 18, 1960.

SN 135,389. The Realistic Company, Cincinnati, Ohio. Filed Jan. 8, 1962.

REALISTIC

Owner of Reg. Nos. 293,386, 294,060, and 653,536.
For Matted Fibre Sheets for Wrapping Hair in Permanent Waving.
First use on or about Jan. 1, 1946.

SN 135,826. R & W Medical Equipment, Inc., North Hollywood, Calif. Filed Jan. 15, 1962.

THE VASCULATOR

For Devices for Treatment of Peripheral Vascular Diseases.
First use Apr. 21, 1961.

SN 135,830. Jacob A. Saffir, Los Angeles, Calif. Filed Jan. 15, 1962.

DENTRU

For Dental Marking Paper.
First use Nov. 17, 1961.

SN 135,880. Dairy Association Company, Inc., Lyndonville, Vt. Filed Jan. 16, 1962.

BAG BALM

Owner of Reg. No. 516,402.
For Dilators Used To Promote the Correct Healing of Injured Teats on Dairy Cows.
First use Dec. 15, 1933.

SN 136,034. The Dentist Toothpick Company, Inc., Tyler, Tex. Filed Jan. 18, 1962.

ORA-PIC

For Toothpicks.
First use Nov. 28, 1961.

SN 136,097. American Sterilizer Company, Erie, Pa. Filed Jan. 19, 1962.

LECTRAPOISE

For Operating Tables.
First use Dec. 16, 1960.

SN 136,231. Guardian Products Company, Inc., North Hollywood, Calif. Filed Jan. 22, 1962.

INVALID-EZE

For Male Urinals and Female Urinals.
First use Sept. 29, 1961.

SN 136,281. Parke, Davis & Company, Detroit, Mich. Filed Jan. 22, 1962.

PARKEDALE

For Absorbent Cotton and Gauze.
First use on or before Dec. 6, 1937.

SN 136,424. Auros Electronic Corporation, Milwaukee, Wis. Filed Jan. 24, 1962.

AUROS

For Hearing Aids.
First use about February 1957.

SN 136,472. Medic-Made, Inc., Minneapolis, Minn. Filed Jan. 24, 1962.

STRIBS

For Deformable Metal Strips for Use as a Surgical Correction Device for Chest Deformities.
First use June 29, 1961.

SN 136,582. Pedigo Products, Inc., Huntington Beach, Calif. Filed Jan. 25, 1962.

STERIL-GARD

For Surgical Furniture—Namely, Surgical Tables, Stands, Footstools, Kick Buckets, Instrument Tables, Wheeled Surgical and Medical Equipment and the Like.
First use Oct. 19, 1961.

Class 45 — Soft Drinks and Carbonated Waters

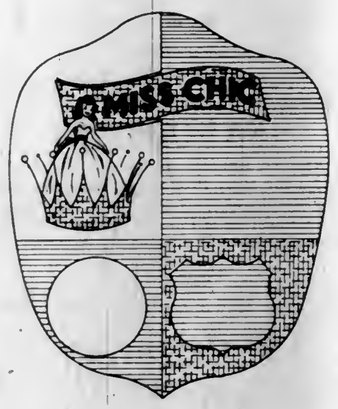
SN 132,149. Frostie Bottling Company, Alexandria, Va. Filed Nov. 16, 1961.

CONFEDERATE

For Soft Drinks.
First use Aug. 28, 1961.

Class 46 — Foods and Ingredients of Foods

SN 109,126. Valley Poultry Co., Russellville, Ark. Filed Nov. 25, 1960.



The drawing is lined for blue and yellow.
For Chickens Dressed and Prepared for Cooking.
First use July 31, 1959.

SN 109,591. L. A. Hooge Company, San Antonio, Tex. Filed Dec. 5, 1960.

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3 D'S

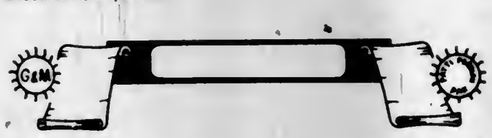
For Fresh Vegetables.
First use Nov. 1, 1960.

SN 109,851. Day & Young, Inc., d.b.a. Day and Young, Santa Clara, Calif. Filed Dec. 8, 1960.

Day and Young

For Candied Spiced Nuts; Fruit Preserves; Marinated Artichoke Hearts; Mixed Dried Fruits; Dates; Chocolate Coated Plums; Cheese.
First use Nov. 20, 1959.

SN 110,754. G. & M. Packing Co., Inc., New York, N.Y. Filed Dec. 23, 1960.



No claim of exclusive right is made to the descriptive wording "Patti Portion Pak" apart from the mark shown.
For Meat Products—Namely, Frozen Steaks.
First use Jan. 6, 1958.

SN 112,970. Maigu Company, Inc., d.b.a. Maigu, Tehran, Iran. Filed Feb. 2, 1961.

PERSIAN PRINCESS

The word "Persian" is disclaimed apart from the mark as shown.
For Frozen Shrimp.
First use Sept. 17, 1958; in commerce Sept. 17, 1958.

SN 115,647. Western Dairy Products, Inc., San Francisco, Calif. Filed Mar. 14, 1961.

SAVORTEX

Owner of Reg. No. 706,100.
For Additive for Meat Products, Such as Sausages, Salami and the Like, Employed During the Formulation and Production Thereof, Consisting of Calcium Reduced Dried Skim Milk.
First use Feb. 17, 1961.

SN 115,793. Fant Milling Company, d.b.a. Gladiola Biscuit Company, Sherman, Tex. Filed Mar. 16, 1961.

RIVERBOAT

For Packaged, Ready to Bake Biscuits.
First use Dec. 30, 1960.

SN 118,777. Freezer Laboratories, Inc., Chicago, Ill. Filed Apr. 27, 1961.

CHEF PIERRE

The mark does not represent or identify any particular living individual.
For Meat Tenderizers and Seasonings.
First use Feb. 9, 1961.

SN 118,799. Minnesota Pharmaceutical Laboratories, Inc., St. Paul, Minn. Filed Apr. 27, 1961.

HI-LO

For Cookies Having a High Protein, Low Calorie Content.
First use Dec. 27, 1960.

SN 118,947. Bruce Church, Inc., Salinas, Calif. Filed May 1, 1961.

YUMA CRISP

Owner of Reg. No. 611,193.
For Fresh Vegetables.
First use in the year 1942.

SN 119,504. The R. T. French Company, Rochester, N.Y. Filed May 8, 1961.

LUNCHEON RINGS

No claim is made to the exclusive use of the word "Rings" apart from the mark as shown.
For Pickles.
First use in or before 1950.

SN 120,385. Central Soya Company, Inc., Fort Wayne, Ind. Filed May 19, 1961.

HQ

For Livestock and Poultry Feed.
First use Apr. 17, 1961.

SN 120,386. Central Soya Company, Inc., Fort Wayne, Ind. Filed May 19, 1961.

HI-V

For Livestock and Poultry Feed.
First use Apr. 17, 1961.

SN 121,919. Gol-Pak Corporation, d.b.a. Eat-N-Joy, Union City, N.J. Filed June 13, 1961.

EAT-N'-JOY

For Meat and Meat Products—Namely, Veal Steaks and Breaded Veal Steaks in an Uncooked Condition.
First use May 23, 1961.

SN 122,733. Thornton Canning Company, Lodi, Calif. Filed June 23, 1961.

LIGHTNING MAID

Owner of Reg. Nos. 588,867 and 670,695.
For Ground Dried Tomato Paste.
First use Apr. 6, 1961.

SN 124,068. Crystal Pure Candy Company, Chicago, Ill. Filed July 17, 1961.

POP POPS

No claim of exclusive right is made to the word "Pops."
Owner of Reg. No. 658,875.
For Candy Confection on a Stick.
First use May 6, 1960.

SN 124,629. The City Baking Company, d.b.a. Rice's Bakery, Baltimore, Md. Filed July 25, 1961.

RICE'S

Owner of Reg. No. 523,686.
For Bakery Products—Namely, Bread, Rolls, Buns, Doughnuts, Pies, Cakes, and Sweet Pastries.
First use Sept. 19, 1960.

SN 128,505. The Borden Company, New York, N.Y. Filed Sept. 25, 1961.

LITEMILK

For Low Fat Dry Milk Product.
First use Aug. 31, 1961.

SN 128,556. Hayden Flour Mills, Tempe, Ariz. Filed Sept. 25, 1961.

Family Kitchen

Owner of Reg. Nos. 384,075 and 718,619.
For Self-Rising Flour and All Purpose Flour.
First use Sept. 18, 1961.

SN 128,616. Samuel J. Temperato, d.b.a. The Big A System, St. Louis, Mo. Filed Sept. 25, 1961.

SWISS A BURGER

For Swiss Cheeseburger Sandwiches.
First use Aug. 30, 1961.

SN 128,617. Samuel J. Temperato, d.b.a. The Big A System, St. Louis, Mo. Filed Sept. 25, 1961.

The BIG A

For Prepared Sandwiches.
First use Aug. 30, 1961.

SN 129,136. Fulham Brothers, Inc., Boston, Mass. Filed Oct. 3, 1961.

4fishermen

Owner of Reg. Nos. 544,234, 617,259, and 621,410.
For Prepared and Packaged Frozen and Non-Frozen Fish and Shellfish.
First use on or about Aug. 3, 1961.

SN 129,352. Fant Milling Company, d.b.a. Gladiola Biscuit Company, Sherman, Tex. Filed Oct. 6, 1961.

OLE MISS

For Packaged, Ready to Bake Biscuits.
First use Aug. 4, 1961.

SN 130,296. Nebraska Consolidated Mills Company, d.b.a. Alabama Flour Mills, Omaha, Nebr. Filed Oct. 19, 1961.

CORRAL

For Animal Feeds—Namely, Hog Ration and Poultry Feed.
First use Aug. 31, 1959.

SN 130,937. National Dairy Products Corporation, Chicago, Ill. Filed Oct. 30, 1961.

FLAVOR FRY

For Vegetable Shortening.
First use Oct. 4, 1961.

SN 131,514. C. H. Guenther & Son, Inc., d.b.a. Pioneer Flour Mills, San Antonio, Tex. Filed Nov. 7, 1961.

GOLDEN HARVEST

For Wheat Flour.
First use on or about Sept. 1, 1899.

SN 131,822. Eastern Poultry Co., Inc., Stamford, Conn. Filed Nov. 13, 1961.

HONEY CHICK

No claim of exclusive right is made to "Chick."
For Dressed Poultry and Parts Thereof.
First use Oct. 30, 1961.

SN 131,939. Dairy Products Southeast, Inc., d.b.a. Dairy Products S.E., Inc., Jacksonville, Fla. Filed Nov. 14, 1961.

JUMBO WHIP

No claim is made to the exclusive use of the word "Whip" apart from the mark as shown.
For Whipped Cream, Which Is Refrigerated When Sold.
First use Oct. 17, 1961.

SN 132,174. McCormick & Company, Incorporated, Baltimore, Md. Filed Nov. 16, 1961.

GOLDEN WEST

Owner of Reg. Nos. 65,822, 79,422, and 645,184.
For Dehydrated Onion, Dehydrated Granulated Garlic, and Garlic Powder.
First use October 1961.

SN 132,285. The Alton Products Corp., Glenview, Ill. Filed Nov. 20, 1961.

POPPER'S CHOICE

For Unpopped Popcorn.
First use Mar. 7, 1961.

SN 133,227. Denkavit N.V., Voorthuizen, Netherlands. Filed Dec. 4, 1961.

DENKAVIT

Owner of Dutch Reg. No. 129,698, dated Dec. 16, 1957.
For Foods for Animals.

SN 133,812. Piggly Wiggly Corporation, Jacksonville, Fla. Filed Dec. 11, 1961.

Lady Alice

Owner of Reg. No. 241,875.
For Ice Milk.
First use July 19, 1961.

SN 133,978. National Frozen Meat Products, Inc., Philadelphia, Pa. Filed Dec. 13, 1961.

Philadelphia Treat

For Frozen Meat Products—Namely, Beef Liver, Beef Steaks, Hamburger Patties, Stewing Beef, Minute Steaks, Steaks Prepared With Mushrooms, or Onions, or Peppers and Other Ingredients, Pizza Burgers Consisting of Hamburger Patties With Cheese, Tomato Puree and Other Ingredients, Pork Chops, Breaded and Unbreaded Pork Steaks and Veal Steaks, and Stewing Veal.
First use on or about Nov. 21, 1961.

SN 134,261. National Frozen Meat Products, Inc., Philadelphia, Pa. Filed Dec. 18, 1961.

Philadelphia Treat

For Frozen Meat Products—Namely, Beef Liver, Beef Steaks, Hamburger Patties, Stewing Beef, Minute Steaks, Steaks Prepared With Mushrooms, or Onions, or Peppers and Other Ingredients, Pizza Burgers Consisting of Hamburger Patties With Cheese, Tomato Puree and Other Ingredients, Pork Chops, Breaded and Unbreaded Pork Steaks and Veal Steaks, and Stewing Veal.
First use on or about Nov. 21, 1961.

Class 50 — Merchandise Not Otherwise Classified

SN 125,422. Polystructures, Inc., Stoneham, Mass. Filed Aug. 4, 1961.

PSI

For Kits for Making Foamed Plastics, Comprising a Mixing Container, the Chemical Ingredients for Making Foamed Plastics and a Stirring Rod.
First use Mar. 17, 1961.

SN 126,882. Mary Patrick, North Little Rock, Ark. Filed Aug. 29, 1961.

PATRICK'S MYSTERY FLOWER

Applicant disclaims the term "Flower" apart from the mark as shown.
For Preserved Flower Arrangements and Pots.
First use May 3, 1961.

SN 128,214. Radio Cores, Inc., Oak Lawn, Ill. Filed Sept. 19, 1961.

WINPAR

For Plastic and Metal Trophies and Trophy Components.
First use July 5, 1961.

SN 138,302. HMH Publishing Co. Inc., Chicago, Ill. Filed Feb. 20, 1962.



For Figurines.
First use Dec. 15, 1961.

Class 51 — Cosmetics and Toilet Preparations

SN 132,925. Kaz Heating Products, Inc., New York, N.Y. Filed Nov. 28, 1961.

ThermaCreme

For Hair Conditioning Cosmetic.
First use Jan. 15, 1961.

Class 52 — Detergents and Soaps

SN 120,486. Lever Brothers Company, New York, N.Y., assignee of Bourjois, Inc., New York, N.Y. Filed May 22, 1961.

Karess

Owner of Reg. Nos. 299,190 and 311,318.
For Color Shampoo.
First use June 29, 1959.

SN 121,223. Pal-Pen Chemical Co., Carmichael, Calif. Filed June 1, 1961.

PER-FI-DRY

For Paint, Oil and Grease Remover.
First use Dec. 3, 1960.

SN 121,224. Pal-Pen Chemical Co., Carmichael, Calif. Filed June 1, 1961.

PRE-TI-CLEAN

For Fabric Shampoo.
First use Oct. 6, 1960.

SN 122,687. Foodtown Super Markets, Inc., Pittsburg, Kans. Filed June 23, 1961.

FOODTOWN

For Detergents.
First use Dec. 15, 1940.

SN 124,452. Oakite Products, Inc., New York, N.Y. Filed July 21, 1961.

SPEEDET

For Preparation for Cleaning Equipment Used in the Railroad Industry.
First use Feb. 28, 1961.

SN 132,123. The Chemical Cleaning Products Company, Brentwood, Md. Filed Nov. 16, 1961.

KEM-KLEEN

For Cleaning, De-Scaling and Rust-Removing Compound for Use in Water and Steam Handling Equipment.
First use August 1961.

SN 134,132. Keystone Laboratories, Inc., d.b.a. Long Aid Company, Memphis, Tenn. Filed Dec. 15, 1961.

LONG AID

Owner of Reg. No. 565,528.
For Soap and Shampoo.
First use March 1949 on shampoo.

SERVICE MARKS

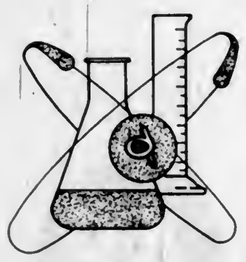
Class 100 — Miscellaneous

SN 108,642. The Kiplinger Washington Editors, Inc., Washington, D.C. Filed Nov. 17, 1960.



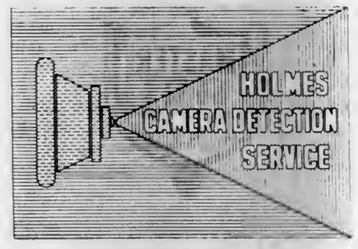
The drawing is lined for brown. Owner of Reg. Nos. 506,031, 659,844, and others.
For Service Which Consists of Providing the Public With Periodic Résumés and Descriptions of Books and Other Literature of Current Interest.
First use Mar. 1, 1960.

SN 116,955. Alpha Research & Development, Inc., Blue Island, Ill. Filed Apr. 3, 1961.



For Research and Development Involving Chemistry, Physics, Mathematics, Dynamics, Electronics, Printed Circuitry, and Specialized Testing Including Reliability Studies and Toxicological Determinations.
First use Dec. 29, 1960.

SN 117,634. Holmes Electric Protective Company, New York, N.Y. Filed Apr. 11, 1961.



The drawing is lined for red, blue and gray. Applicant disclaims the term "Camera Detection Service" apart from the mark as shown.
For Photographic Surveillance Service for Banks.
First use May 15, 1959.

SN 120,737. Memorial Shield, Inc., Kansas City, Mo. Filed May 24, 1961.

MEMORIAL SHIELD

For Operating a Funeral Prepayment Plan.
First use June 28, 1960.

SN 122,158. Chicago Aerial Industries, Inc., Barrington, Ill. Filed June 16, 1961.



For Aerial Photography and Photogeometric Services Related Thereto.
First use Nov. 4, 1958.

SN 122,621. Kartparks, Inc., Rockford, Ill. Filed June 22, 1961.

KART PARKS, inc.

For Rendering Technical Assistance to Operators of Kart Parks in All Phases of Their Operations.
First use Nov. 10, 1960.

SN 124,101. Lake-States Conservation Co., Inc., Appleton, Wis. Filed July 17, 1961.

"CITY-SIDE"

For Supplying Technical Assistance and Advice to Growers of Christmas Trees in All Phases of Their Business.
First use Aug. 15, 1960.

SN 134,248. Master Hosts, Incorporated, Fort Worth, Tex. Filed Dec. 18, 1961.

MASTER HOSTS

Owner of Reg. Nos. 620,551, 620,554, and others.
For Complete Motor Hotel Service to the Traveling Public.
First use Feb. 1, 1957; August 1953 in another display.

SN 134,249. Master Hosts, Incorporated, Fort Worth, Tex. Filed Dec. 18, 1961.

MASTER HOSTS

Owner of Reg. Nos. 620,551, 620,554, and others.
For Complete Motor Hotel Service to the Traveling Public.
First use Feb. 1, 1957; August 1953 in another display.

Class 101 — Advertising and Business

SN 110,747. Drake Personnel Limited, Toronto, Ontario, Canada. Filed Dec. 23, 1960.

CAREER HOUSE

For Employment Agency Services.
First use June 1960; in commerce Aug. 17, 1960.

SN 116,306. Heinold Hog Market, Inc., Kouts, Ind. Filed Mar. 23, 1961.

HEINOLD HOG MARKETS

For Advertising and Business Services Connected With Selling the Hogs of Others on a Commission Basis.
First use on or about Jan. 1, 1956.

SN 117,044. Personal Gift Service, Inc., Waterloo, Iowa. Filed Apr. 3, 1961.

PGS

The lining on the drawing is for shading purposes only.
For Gift Merchandise Selection Service.
First use Jan. 1, 1959.

SN 117,717. Rene D. Lyon Co., Inc., New York, N.Y. Filed Apr. 12, 1961.



For Importing Goods for the Account of Others.
First use June 1958.

SN 120,667. The Quarto Editorial Service, New York, N.Y. Filed May 23, 1961.



For Rendering Editorial Services Such as Indexing, Copying, Polish Editing, Proofreading, Translation and Other Editorial Services, and Designing and Creating Promotional Material for Non-Profit as Well as Profit Making Organizations and the Operation of Promotional Programs for Such Organizations and Individuals and Design and Creation of Direct Mail Material and the Conduct of Such Mailing.
First use Jan. 10, 1961.

SN 132,542. The Great Atlantic & Pacific Tea Company, Inc., New York, N.Y. Filed Nov. 22, 1961.

A&P

Owner of Reg. Nos. 62,778, 686,314, and others.
For Retail Grocery Store Services.
First use 1919; 1869 as to "A & P."

SN 134,173. American Express Company, New York, N.Y. Filed Dec. 18, 1961.

AMERICAN EXPRESS CARDS

The word "Cards," apart from the mark, is disclaimed.
Owner of Reg. Nos. 526,407, 688,103 and 688,863.
For the Business of Issuing Credit Cards Which Enable the Cardholder To Purchase Services and Merchandise From Participating Establishments and To Pay Applicant for Such Purchases Periodically Upon Receipt of a Statement From Applicant.
First use Aug. 29, 1961; Sept. 23, 1958, as to a gladiator on a shield.

Class 102 — Insurance and Financial

SN 117,057. Stone & Schulte, Inc., San Jose, Calif. Filed Apr. 3, 1961.

EXCHANGE-A-PLAN
A NEW HOME FOR YOU

"A New Home for You" is disclaimed apart from the mark as shown.
For Real Estate Brokerage Services.
First use June 12, 1960.

SN 117,058. Stone & Schulte, Inc., San Jose, Calif. Filed Apr. 3, 1961.

EXCHANGE-A-PLAN

For Real Estate Brokerage Services.
First use Mar. 6, 1960.

SN 119,663. Armed Forces Relief and Benefit Association, Washington, D.C. Filed May 10, 1961.

ARMED FORCES RELIEF AND BENEFIT ASSOCIATION

For Non-Profit Services to Members—Namely, Furnishing Group Life Insurance, Self-Aid Scholarship Grants for Education at Colleges and Universities, Emergency Loans, and Educational Loans for Higher Education.
First use Dec. 1, 1950; Apr. 19, 1949, in a different form.

SN 133,456. Drug & Food Capital Corporation, Chicago, Ill. Filed Dec. 6, 1961.



For Provision of Equity Capital and Management Skills.
First use Aug. 9, 1961.

Class 103 — Construction and Repair

SN 121,375. Alex Fox, d.b.a. Complete Electric Motor Repair Co., Chicago, Ill. Filed June 5, 1961.

C.E.M.R.CO.

For Construction and Repair of Electric Motors, Generators and the Like.
First use May 1, 1961.

SN 130,602. Zane Construction Company, Baltimore, Md. Filed Oct. 24, 1961.



Without relinquishing any common law rights, applicant disclaims the exclusive right to use the words "The Home Modernizer," apart from the mark as shown. Owner of Reg. No. 660,445.
For Building Construction, Remodeling, and Repair Services.
First use Sept. 10, 1961.

Class 105 — Transportation and Storage

SN 121,525. Admiral Transit, Inc., St. Paul, Minn. Filed June 7, 1961.

V.I.C.

For Motor Freight Services.
First use Feb. 22, 1961.

SN 122,757. Bridge Bros., Lamar, Colo. Filed June 26, 1961. The drawing is lined for the color red.



For Transportation of Liquid Products in Bulk in Tank Vehicles.
First use during January 1952.

SN 129,890. Sofia Bros. Inc., New York, N.Y. Filed Oct. 13, 1961.

SOFIA

For Packing, Moving and Storing of Domestic, Commercial and Industrial Equipment.
First use July 10, 1961.

Class 106 — Material Treatment

SN 123,863. Biochemex Laboratories, Inc., d.b.a. Biochemex Laboratories, Richmond Hill, N.Y. Filed July 13, 1961.

BIOCHEMEX

For Medical Laboratory Services.
First use on or about May 3, 1960.

Class 107 — Education and Entertainment

SN 110,110. Austyn O. Swenson, d.b.a. Swenson Thrillcade, Springfield, Mo. Filed Dec. 12, 1960.

BLITZ BALL

For Entertainment in the Form of a Polo-Like Game Between Two Teams, Each Member of Which Drives a Motor Cart.
First use Sept. 14, 1960.

SN 128,373. The United States Junior Chamber of Commerce, Tulsa, Okla. Filed Sept. 21, 1961.



For Safety Education Services and the Promotion of Safety Programs, Including Advisement as to Safety Programs, the Conducting of Safety Programs, the Programing of Safety Projects, and Dissemination of Safety Education Media.
First use in or about November 1958.

SN 129,308. T.V. Comic Strips, Inc., Los Angeles, Calif. Filed Oct. 5, 1961.

SPACE ANGEL

For Title for a Television Cartoon Series Devoted to Entertainment.
First use June 27, 1961.

SN 129,699. System Development Corporation, Santa Monica, Calif. Filed Oct. 11, 1961.



Owner of Reg. Nos. 727,346 and 727,347.
For Scientific Research, Training and Education Relating to Establishment, Operation and Maintenance of Man and Machine Systems and Programming for Electronic Computers and Computer Systems.
First use on or about Dec. 20, 1957.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

734,367. FOUR WINDS AND DESIGN. Four Winds Growers. SN 112,245. Pub. 5–1–62. Filed 1–23–61.

734,368. VISCONTROL. J. M. Huber Corporation. SN 118,249. Pub. 5–1–62. Filed 4–20–61.

734,369. EUROPRENE CIS. Anic S.p.A. SN 120,937. Pub. 5–1–62. Filed 5–29–61.

734,370. EUROPRENE LATICE VP. Anic S.p.A. SN 120,938. Pub. 5–1–62. Filed 5–29–61.

734,371. EUROPRENE SS. Anic S.p.A. SN 120,940. Pub. 5–1–62. Filed 5–29–61.

734,372. SANTA ANITA. Union Nursery Inc. SN 135,071. Pub. 5–8–62. Filed 1–2–62.

734,373. FRP. Filtered Rosin Products Company. SN 123,293. Pub. 5–1–62. Filed 7–3–61.

734,374. PAK-RAT. Essex Wire Corporation. SN 124,347. Pub. 5–1–62. Filed 7–20–61.

734,375. ULTRASTRAND. Gustin-Bacon Manufacturing Company. SN 124,437. Pub. 5–1–62. Filed 7–21–61.

734,376. YULE KING AND DESIGN. Nicholas Lentini, d.b.a. Sno-Kist Tree Co. SN 125,608. Pub. 5–1–62. Filed 8–8–61.

734,377. MICO. Mutual Ice Company. SN 125,681. Pub. 5–1–62. Filed 8–9–61.

734,378. JET ELKHORN ETC. AND DESIGN. Hawley Fuel Corporation, Inc. SN 128,432. Pub. 5–1–62. Filed 9–22–61.

734,379. MIN-U-SIL. Pennsylvania Glass Sand Corporation. SN 128,751. Pub. 5–1–62. Filed 9–27–61.

734,380. MOORE MALES—MORE PROFITS "CHESTY" AND DESIGN. Moore Farms, Inc. SN 128,834. Pub. 5–1–62. Filed 9–28–61.

734,381. LAPIS LUSTRE. Pacific Cement & Aggregates, Inc. SN 128,841. Pub. 5–1–62. Filed 9–28–61.

734,382. BIG HORN AND DESIGN. Wyo-Ben Products Company. SN 128,936. Pub. 5–1–62. Filed 9–29–61.

734,383. ANILPAT. Armour and Company. SN 129,718. Pub. 5–1–62. Filed 10–12–61.

Class 2 — Receptacles

734,384. M.P.S. Raymond Bag Corporation. SN 119,892. Pub. 5–1–62. Filed 5–12–61.

734,385. THE MULTIWALL MAN ETC. AND DESIGN. Raymond Bag Corporation. SN 119,893. Pub. 5–1–62. Filed 5–12–61.

Class 6 — Chemicals and Chemical Compositions

734,386. HY-KIL. Hysan Products Company. SN 93,806. Pub. 1–23–62. Filed 3–28–60.

734,387. CASORON 133. N.V. Philips-Duphar. SN 104,846. Pub. 3–13–62. Filed 9–20–60.

734,388. FOAM TONE. The H. Talbot Co. SN 105,031. Pub. 5–1–62. Filed 9–22–60.

734,389. AIRKEM AND DESIGN. Airkem, Inc. SN 105,709. Pub. 5–1–62. Filed 10–4–60.

734,390. FLUF-SOFT. Scientific Packaging Corp. SN 108,917. Pub. 5–1–62. Filed 11–22–60.

734,391. LIFE GUARD. Chemical & Electronic Research Corporation. SN 111,476. Pub. 3–13–62. Filed 1–9–61.

734,392. AQUALIN. Textron Inc., assignee of Spencer Kellogg and Sons, Inc. SN 111,744. Pub. 3–20–62. Filed 1–12–61.

734,393. D. Dearborn Chemical Company. SN 113,404. Pub. 3–13–62. Filed 2–10–61.

734,394. ULTRAFAST. Standard Ultramarine & Color Co. SN 115,957. Pub. 5–1–62. Filed 3–17–61.

734,395. W AND REPRESENTATION OF AN INDIAN WITH DRAWN BOW ON OVAL DESIGN. Wyandotte Chemicals Corporation. SN 116,178. Pub. 5–1–62. Filed 3–21–61.

734,396. BI-ZYME. Jacks Manufacturing Company. SN 116,232. Pub. 5–1–62. Filed 3–22–61.

734,397. GREENBACK. Olin Mathieson Chemical Corporation. SN 116,656. Pub. 5–1–62. Filed 3–28–61.

734,398. BLOCK A DESIGN. Abbott Laboratories. SN 116,691. Pub. 5–1–62. Filed 3–29–61.

734,399. MCS. Monsanto Chemical Company. SN 117,034. Pub. 5–1–62. Filed 4–3–61.

734,400. BRITE-EYES AND DESIGN. National Allied Products. SN 118,275. Pub. 5–1–62. Filed 4–20–61.

734,401. EZ DOZ-IT. Waldo B. Berryman, d.b.a. Berryman Chemtool Products. SN 118,322. Pub. 5–1–62. Filed 4–21–61.

734,402. 9–11. The Baker Castor Oil Company. SN 122,152. Pub. 5–1–62. Filed 6–16–61.

734,403. CALFONEX. The Falcon Corporation. SN 122,296. Pub. 5–1–62. Filed 6–19–61.

734,404. TEMPIL®. Tempil Corporation. SN 123,702. Pub. 5–1–62. Filed 7–10–61.

734,405. TERRACAP. Olin Mathieson Chemical Corporation. SN 124,220. Pub. 5–1–62. Filed 7–18–61.

734,406. GATHERETTE. Leon J. Wirth, d.b.a. Wirth & Co. SN 125,784. Pub. 5–1–62. Filed 8–10–61.

734,407. LAWN HOUSE. The Newcomer Corporation. SN 126,040. Pub. 5–1–62. Filed 8–15–61.

734,408. BORATEEM. United States Borax & Chemical Corporation. SN 126,282. Pub. 5–1–62. Filed 8–18–61.

734,409. SERGENE. E. I. du Pont de Nemours and Company. SN 126,321. Pub. 5–1–62. Filed 8–21–61.

734,410. CEROFLEX. Cornelius Wax Refining Corporation. SN 126,852. Pub. 5–1–62. Filed 8–29–61.

734,411. HURRI-GREEN. Re-Mark Chemical Co., Inc., d.b.a. Hurri-Green Chemicals. SN 126,886. Pub. 5–1–62. Filed 8–29–61.

Class 10 — Fertilizers

734,412. POLYMIN. Polymin Corporation. SN 116,066. Pub. 5–1–62. Filed 3–20–61.

734,413. HEPTAMIN. Polymin Corporation. SN 116,067. Pub. 5–1–62. Filed 3–20–61.

734,414. MR. GREEN. Spencer Chemical Company. SN 123,446. Pub. 5–1–62. Filed 7–5–61.

Class 11 — Inks and Inking Materials

734,415. TRIANGULAR SYMBOL ENCLOSING CURVED DESIGN. Laketine Corporation. SN 129,154. Pub. 5–1–62. Filed 10–3–61.

734,416. SHIVA. Laketine Corporation. SN 129,156. Pub. 5–1–62. Filed 10–3–61.

Class 12—Construction Materials

734,417. EL DORADO AND DESIGN. Modern Products, Inc. SN 114,126. Pub. 5–1–62. Filed 2–21–61.

734,418. CAPITOL AND REPRESENTATION OF THE CAPITOL. Midwest Insulations, Inc. SN 114,333. Pub. 5–1–62. Filed 2–24–61.

734,419. SPINDRIFT. Formica Corporation. SN 114,469. Pub. 5–1–62. Filed 2–27–61.

734,420. FLOWFORGE. Fisher & Ludlow Limited. SN 115,324. Pub. 5–1–62. Filed 3–10–61.

734,421. FISHOLOW. Fisher & Ludlow Limited. SN 115,325. Pub. 5–1–62. Filed 3–10–61.

734,422. PERMA-K. Spartan Industries, Inc. SN 115,956. Pub. 5–1–62. Filed 3–17–61.

734,423. GOLDEN TRAIL. Minnesota and Ontario Paper Company. SN 118,361. Pub. 5–1–62. Filed 4–21–61.

734,424. FLIP FLOP. The Duraflex Co. SN 120,397. Pub. 5–1–62. Filed 5–19–61.

734,425. IMAGINEERED. United Steel Fabricators, Inc. SN 121,447. Pub. 5–1–62. Filed 6–5–61.

734,426. DULITE. Duwe Precast Concrete Products Inc. SN 125,480. Pub. 5–1–62. Filed 8–7–61.

734,427. THURANE. The Dow Chemical Company. SN 128,972. Pub. 5–1–62. Filed 10–2–61.

734,428. ABSONIC. The B. F. Goodrich Company. SN 128,998. Pub. 5–1–62. Filed 10–2–61.

734,429. FLEXIBILD. Lewis Manufacturing Company. SN 129,017. Pub. 5–1–62. Filed 10–2–61.

734,430. W AND DESIGN. Welsh Panel Company. SN 129,067. Pub. 5–1–62. Filed 10–2–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

734,431. MONO-RAIL. Ajax Hardware Corporation. SN 99,697. Pub. 5–1–62. Filed 6–27–60.

734,432. RINSE-QUIK. Modern Faucet Mfg. Co. SN 128,074. Pub. 5–1–62. Filed 9–18–61.

Class 15—Oils and Greases

734,433. SP 8. M.F.A. Oil Company. SN 106,333. Pub. 2–20–62. Filed 10–13–60.

734,434. MOON GLOW. Gerald W. Epstein, d.b.a. John M. Shawvan Company. SN 128,661. Pub. 5–1–62. Filed 9–26–61.

734,435. UNICALOR. Universal Oil Products Company. SN 129,066. Pub. 5–1–62. Filed 10–2–61.

734,436. ROLZ-ON. Rolz-On, Inc. SN 129,294. Pub. 5–1–62. Filed 10–5–61.

734,437. EXTRUDILUBE. Detrex Chemical Industries, Inc. SN 129,347. Pub. 5–1–62. Filed 10–6–61.

Class 16—Protective and Decorative Coatings

734,438. ULTRAFAST. Standard Ultramarine & Color Co. SN 115,958. Pub. 5–1–62. Filed 3–17–61.

734,439. LECTRA-SHIELD. Corrosion Reaction Consultants, Inc. SN 122,515. Pub. 5–1–62. Filed 6–21–61.

Class 17—Tobacco Products

734,440. WILLIAMSBURG. Philip Morris Incorporated. SN 106,629. Pub. 5–1–62. Filed 10–18–60.

734,441. LINCOLN CAVENDISH. Brinkmann Gesellschaft mit beschränkter Haftung. SN 110,024. Pub. 3–20–62. Filed 12–12–60.

734,442. LINCOLN CAVENDISH AND DESIGN. Brinkmann Gesellschaft mit beschränkter Haftung. SN 110,025. Pub. 3–20–62. Filed 12–12–60.

734,443. SPUTNIK (IN RUSSIAN LANGUAGE) AND DESIGN. Vsesojuznoje Exportno-Importnoje Objedinenije "Raznoexport." SN 125,700. Pub. 5–1–62. Filed 8–8–61.

734,444. BOGATYR (IN RUSSIAN LANGUAGE) AND DESIGN. Vsesojuznoje Exportno-Importnoje Objedinenije "Raznoexport." SN 125,701. Pub. 5–1–62. Filed 8–8–61.

734,445. LAIKA (IN RUSSIAN LANGUAGE) AND DESIGN. Vsesojuznoje Exportno-Importnoje Objedinenije "Raznoexport." SN 125,702. Pub. 5–1–62. Filed 8–8–61.

734,446. LENINGRAD (IN RUSSIAN LANGUAGE) AND DESIGN. Vsesojuznoje Exportno-Importnoje Objedinenije "Raznoexport." SN 125,703. Pub. 5–1–62. Filed 8–8–61.

Class 18—Medicines and Pharmaceutical Preparations

734,447. RING-GO. Will T. Dunn, d.b.a. Old Line Drug Co. SN 72,422. Pub. 1–5–60. Filed 4–28–59.

734,448. BABY CROON. The Mennen Company. SN 107,473. Pub. 5–1–62. Filed 10–31–60.

734,449. HEAR HEAR. Biggs Laboratories (Canada) Limited, assignee of Wilburt H. Biggs, d.b.a. Biggs Laboratories, Canada. SN 109,831. Pub. 5–1–62. Filed 12–7–60.

734,450. STUART AND DESIGN. Atlas Chemical Industries, Inc., by merger and change of name from The Stuart Company. SN 111,933. Pub. 5–1–62. Filed 1–16–61.

734,451. RELAXATAL. Great Southern Drug Co. SN 116,023. Pub. 5–1–62. Filed 3–20–61.

734,452. HVP AND DESIGN. Hudson Vitamin Products, Inc. SN 119,384. Pub. 5–1–62. Filed 5–5–61.

734,453. DIMOCILLIN. Olin Mathieson Chemical Corporation. SN 120,220. Pub. 5–1–62. Filed 5–17–61.

734,454. FERRAQUAR-B. Laquar Pharmaceuticals, Inc. SN 121,206. Pub. 5–1–62. Filed 6–1–61.

734,455. UNIQUAR-AM. Laquar Pharmaceuticals, Inc. SN 121,207. Pub. 5–1–62. Filed 6–1–61.

734,456. JACK LA LANNE'S AND DESIGN. La Lanne Incorporated. SN 121,739. Pub. 5–1–62. Filed 6–9–61.

734,457. SOMNALERT. The Warren-Teed Products Company. SN 121,884. Pub. 5–1–62. Filed 6–12–61.

734,458. HEPTOPAQUE. Sterling Drug Inc. SN 122,855. Pub. 5–1–62. Filed 6–26–61.

734,459. REMEFLIN. Recordati Laboratorio Farmacologico S.p.A. SN 123,764. Pub. 5–1–62. Filed 7–11–61.

734,460. BRON-BLEN. L & M Laboratories, Inc. SN 125,507. Pub. 5–1–62. Filed 8–7–61.

734,461. NT-BLEN. L & M Laboratories, Inc. SN 125,509. Pub. 5–1–62. Filed 8–7–61.

734,462. LAXAPLEX. The Purdue Frederick Company. SN 126,475. Pub. 5–1–62. Filed 8–22–61.

734,463. VERNOPASTE. Paul V. Cummiskey. SN 126,579. Pub. 5–1–62. Filed 8–24–61.

734,464. PBR/12. Scott-Allison Company, Inc. SN 127,045. Pub. 5–1–62. Filed 8–31–61.

734,465. RELEVITE. Scott-Allison Company, Inc. SN 127,046. Pub. 5–1–62. Filed 8–31–61.

734,466. RELESERP. Scott-Allison Company, Inc. SN 127,049. Pub. 5–1–62. Filed 8–31–61.

734,467. VERACILLIN. Beecham Research Laboratories Limited. SN 127,184. Pub. 5–1–62. Filed 9–5–61.

734,468. TOTACILLIN. Beecham Research Laboratories Limited. SN 127,185. Pub. 5–1–62. Filed 9–5–61.

734,469. PREDNAMEEN. Harold Kopp, d.b.a. Harilian Pharmaceutical. SN 127,232. Pub. 3–13–62. Filed 9–5–61.

734,470. BUTISERPAZIDE. McNeil Laboratories, Inc. SN 127,783. Pub. 5–1–62. Filed 9–13–61.

734,471. BUTURETIC. McNeil Laboratories, Inc. SN 127,784. Pub. 5–1–62. Filed 9–13–61.

734,472. DIGIPERSANTIN. Dr. Karl Thomae GmbH. SN 127,848. Pub. 5–1–62. Filed 9–14–61.

734,473. WARNER-CHILCOTT AND DESIGN. Warner-Lambert Pharmaceutical Company. SN 128,771. Pub. 5–1–62. Filed 9–27–61.

734,474. ETNAPA. U.S. Ethicals Inc., by change of name from Ethica Standard Co., Inc. SN 129,264. Pub. 5–1–62. Filed 10–5–61.

734,475. TAOMYXIN. Chas. Pfizer & Co., Inc. SN 130,491. Pub. 5–1–62. Filed 10–23–61.

734,476. HEPTUSS. Merck & Co. Inc. SN 131,757. Pub. 5–1–62. Filed 11–10–61.

734,477. PED-A-COFF. Sterling Drug Inc., assignee of Rx Pharmaceuticals, Inc. SN 132,191. Pub. 5–1–62. Filed 11–16–61.

734,478. LOCYBIN. Sandoz, Inc. SN 132,734. Pub. 5–1–62. Filed 11–24–61.

734,479. UTIP. Farbenfabriken Bayer Aktiengesellschaft. SN 133,650. Pub. 5–1–62. Filed 12–8–61.

734,480. RUHEXATAL. Lemmon Pharmacal Company. SN 134,137. Pub. 5–1–62. Filed 12–15–61.

734,481. ATRALOSE. Warner-Lambert Pharmaceutical Company. SN 134,416. Pub. 5–1–62. Filed 12–20–61.

Class 21—Electrical Apparatus, Machines, and Supplies

734,482. COMET. Northern Electric Company. SN 119,788. Pub. 2–6–62. Filed 5–11–61.

734,483. COKERAY. Republic Steel Corporation. SN 121,028. Pub. 5–1–62. Filed 5–29–61.

734,484. RADIO GUIDE. Multitone Electronics Limited. SN 122,018. Pub. 5–1–62. Filed 6–14–61.

734,485. AMP-INCERT. AMP Incorporated. SN 123,587. Pub. 5–1–62. Filed 7–10–61.

734,486. TERMASPLICE. AMP Incorporated. SN 123,588. Pub. 5–1–62. Filed 7–10–61.

734,487. MICRO-CON. General Telemetry, Inc. SN 124,735. Pub. 5–1–62. Filed 7–26–61.

734,488. ULTAMAG. Military and Computer Electronics, Inc., d.b.a. Mace Corp. SN 126,246. Pub. 5–1–62. Filed 8–18–61.

734,489. SENTINEL. General Magnetics, Inc. SN 126,334. Pub. 5–1–62. Filed 8–21–61.

734,490. TELEC-CON. Southwestern Plastic Pipe Company. SN 126,394. Pub. 5–1–62. Filed 8–21–61.

Class 22—Games, Toys, and Sporting Goods

734,491. RAINBOW. Sifo Company. SN 67,713. Pub. 1–17–61. Filed 2–13–59.

734,492. EDGE-U-CATED. A. G. Spalding & Bros., Inc. SN 108,225. Pub. 5–1–62. Filed 11–10–60.

734,493. FUN KIT. Warren Paper Products Co. SN 110,012. Pub. 5–1–62. Filed 12–5–60.

734,494. REPRESENTATION OF A TENNIS PLAYER. MacGregor Sport Products Inc. SN 115,355. Pub. 5–1–62. Filed 3–10–61.

734,495. MASTER GRIP. M.T. & D. Company. SN 115,932. Pub. 5–1–62. Filed 3–17–61.

734,496. HONEYCOMB PUPPET AND DESIGN. Hallmark Cards, Incorporated. SN 120,057. Pub. 5–1–62. Filed 5–12–61.

734,497. "KOWEEKA." The Governor and Company of Adventurers of England Trading Into Hudson's Bay, d.b.a. Hudson's Bay Company. SN 120,879. Pub. 5–1–62. Filed 5–26–61.

734,498. LEVEL HEAD. Level Head Putter Company. SN 123,212. Pub. 5–1–62. Filed 6–30–61.

734,499. YANKEE DOODLE DANDI. Saks & Company. SN 123,769. Pub. 5–1–62. Filed 7–11–61.

734,500. WILD TURKEY AND DESIGN. Haltwelen Co. SN 124,828. Pub. 5–1–62. Filed 7–27–61.

734,501. PAN-KAI. Phillips Publishers, Inc. SN 125,244. Pub. 5–1–62. Filed 8–2–61.

734,502. TRAVEL-TOYS. Travel-Toys, Inc. SN 125,335. Pub. 5–1–62. Filed 8–3–61.

734,503. GUSHER. Shampaine Industries, Inc. SN 125,545. Pub. 5–1–62. Filed 8–7–61.

734,504. AQUA-DIVER. Nissen Corporation, by change of name from Nissen Trampoline Company. SN 125,686. Pub. 5–1–62. Filed 8–9–61.

734,505. STYLINE. AMT Corporation. SN 125,706. Pub. 5–1–62. Filed 8–10–61.

734,506. SMITHWICK. Jack Kenneth Smithwick, d.b.a. Jack K. Smithwick & Son. SN 126,540. Pub. 5–1–62. Filed 8–23–61.

734,507. TROKE. Production and Marketing Company. SN 127,951. Pub. 5–1–62. Filed 9–15–61.

734,508. THE THING. Edward B. Freeman, d.b.a. Freeman Company and Columbia Company. SN 128,031. Pub. 5–1–62. Filed 9–18–61.

734,509. HERITAGE. James Heddon's Sons. SN 128,037. Pub. 5–1–62. Filed 9–18–61.

734,510. ACE SKYLARK. Amerace Corporation. SN 128,135. Pub. 5–1–62. Filed 9–19–61.

734,511. ACE LANER. Amerace Corporation. SN 128,136. Pub. 5–1–62. Filed 9–19–61.

734,512. ACE SHAMROCK. Amerace Corporation. SN 128,137. Pub. 5–1–62. Filed 9–19–61.

734,513. PERRINE AND DESIGN. Aladdin Laboratories, Incorporated. SN 128,238. Pub. 5–1–62. Filed 9–20–61.

734,514. PRO POWER. Hillerich & Bradsby Co. SN 128,273. Pub. 5–1–62. Filed 9–20–61.

734,515. POLY-POWERED. A. G. Spalding & Bros., Inc. SN 128,608. Pub. 5–1–62. Filed 9–25–61.

734,516. ACE REDWING. Amerace Corporation. SN 128,776. Pub. 5–1–62. Filed 9–28–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

734,517. HIDE-A-LIFT. H. S. Watson Company. SN 124,481. Pub. 5–1–62. Filed 7–21–61.

734,518. AMPAC. Martin-Marietta Corporation, assignee of American-Marietta Company. SN 124,491. Pub. 3–20–62. Filed 7–24–61.

734,519. SAFE D MOUNT. Par Sales Company, Inc. SN 124,578. Pub. 5–1–62. Filed 7–24–61.

734,520. OCTOPUS LIFTER. Vacuum Concrete Corporation of America. SN 125,783. Pub. 3–20–62. Filed 8–10–61.

734,521. HERCULES FIGURE. Hercules Powder Company. SN 128,041. Pub. 5–1–62. Filed 9–18–61.

734,522. HERCULES. Hercules Powder Company. SN 128,042. Pub. 5–1–62. Filed 9–18–61.

734,523. BEARCAT. Bear Manufacturing Company. SN 128,144. Pub. 5–1–62. Filed 9–19–61.

734,524. MAGICUT. Nicholson File Company. SN 128,201. Pub. 5–1–62. Filed 9–19–61.

734,525. THRO-MATIC. H. K. Porter Company, Inc. SN 128,209. Pub. 5–1–62. Filed 9–19–61.

734,526. DOORCRAFT. Clary Corporation. SN 128,251. Pub. 5–1–62. Filed 9–20–61.

734,527. CAN'T BREAK 'EM AND DESIGN. O. P. Link Handle Company, Inc. SN 128,278. Pub. 5–1–62. Filed 9–20–61.

734,528. VELVICUT. The Council Tool Company, Inc. SN 128,339. Pub. 5–1–62. Filed 9–21–61.

Class 24—Laundry Appliances and Machines

734,529. TRU-STAK. McGraw-Edison Company. SN 127,866. Pub. 5–1–62. Filed 9–14–61.

Class 26 — Measuring and Scientific Appliances

734,530. ETU. General Electric Company. SN 116,633. Pub. 5–1–62. Filed 3–28–61.

734,531. PHOTOSTAT. Photostat Corporation. SN 128,753. Pub. 5–1–62. Filed 9–27–61.

Class 29 — Brooms, Brushes, and Dusters

734,532. RAWHIDE. Lactona Incorporated. SN 122,327. Pub. 2–6–62. Filed 6–19–61.

Class 32 — Furniture and Upholstery

734,533. SLYDE A DRAPE. Fine-Glo, Inc. SN 106,320. Pub. 5–1–62. Filed 10–13–60.

734,534. SUPREME REST. Best-Rest Mattress Inc. SN 118,549. Pub. 5–1–62. Filed 4–25–61.

734,535. CI DESIGNS AND DESIGN. Contract Interiors, Inc. SN 125,361. Pub. 5–1–62. Filed 8–4–61.

734,536. LOUNGE-A-MATIC. Bunny Bear, Inc. SN 128,956. Pub. 5–1–62. Filed 10–2–61.

734,537. LADY DE. All Debeb. SN 128,968. Pub. 5–1–62. Filed 10–2–61.

Class 37 — Paper and Stationery

734,538. CRP CO. AND DESIGN. Columbia River Paper Co. SN 106,247. Pub. 5–1–62. Filed 10–12–60.

734,539. K 45. KVP Sutherland Paper Company. SN 109,967. Pub. 5–1–62. Filed 12–9–60.

734,540. AP AND BOOK AND TREE DESIGN. Arborfield Products (Export) Limited. SN 114,162. Pub. 5–1–62. Filed 2–23–61.

734,541. BIG E. The Parker Pen Company. SN 116,420. Pub. 5–1–62. Filed 3–24–61.

734,542. SUBURBAN/RYTEX. The Rytex Company. SN 117,396. Pub. 5–1–62. Filed 4–7–61.

734,543. RYTEX ANTIQUE VELLUM AND DESIGN. The Rytex Company. SN 117,397. Pub. 5–1–62. Filed 4–7–61.

734,544. ACETOGRAPH. L. & C. Hardtmuth, Inc. SN 120,411. Pub. 5–1–62. Filed 5–19–61.

734,545. PHONETTE. International Designers Group, Inc. SN 129,498. Pub. 5–1–62. Filed 10–9–61.

734,546. TAB-FLEX. The Hamilton Tool Company. SN 130,069. Pub. 5–1–62. Filed 10–17–61.

734,547. POLLOCOTE. St. Regis Paper Company. SN 130,125. Pub. 3–6–62. Filed 10–17–61.

734,548. DUCKRAFT. Dierks Forests, Inc. SN 130,188. Pub. 5–1–62. Filed 10–18–61.

734,549. MONACLOTH. Monadnock Paper Mills, Inc. SN 133,161. Pub. 5–1–62. Filed 12–1–61.

734,550. PARAFLEX. American Can Company. SN 134,600. Pub. 5–1–62. Filed 12–26–61.

734,551. MED-KAL. Medical Paper Specialties, Inc. SN 134,825. Pub. 5–1–62. Filed 12–28–61.

734,552. PARCHMAT. KVP Sutherland Paper Company. SN 135,363. Pub. 5–1–62. Filed 1–8–62.

734,553. SKUFTEX. The Narrow Fabric Company, d.b.a. Wyomissing Paper Products. SN 136,067. Pub. 5–1–62. Filed 1–18–62.

Class 38 — Prints and Publications

734,554. MENTALGRAMS. Roy E. Shook, Sr. SN 93,099. Pub. 5–1–62. Filed 3–17–60.

734,555. TEEN TIME. Romance Publishing Corp., assignee of Ideal Publishing Corporation. SN 94,769. Pub. 9–19–61. Filed 4–11–60.

734,556. TCI WITHIN RECTANGLE DESIGN. Technical Communications, Inc. SN 100,550. Pub. 5–1–62. Filed 7–8–60.

734,557. INTERNATIONAL SHOE COMPANY AND DESIGN. International Shoe Company. SN 110,338. Pub. 5–1–62. Filed 12–16–60.

734,558. REPRESENTATION OF A HAND RINGING A BELL. The Copley Press, Inc. SN 110,824. Pub. 5–1–62. Filed 12–27–60.

734,559. PLAYGRAM. The Wilmore Playgram, Inc. SN 112,664. Pub. 5–1–62. Filed 1–27–61.

734,560. DRYCLEANERS NEWS. Colfin Publishing Corporation, d.b.a. The Drycleaners News. SN 114,573. Pub. 5–1–62. Filed 2–27–61.

734,561. FORAGE GROWER'S DIGEST. Deere & Company. SN 114,939. Pub. 5–1–62. Filed 3–6–61.

734,562. ANS-R-FAX. Irwin, Neisler & Co. SN 116,727. Pub. 5–1–62. Filed 3–29–61.

734,563. OSCAR. United Feature Syndicate, Inc. SN 117,236. Pub. 5–1–62. Filed 4–5–61.

734,564. THE TRIANGLE POINTER AND DESIGN. The Citizen Publishing Company. SN 118,658. Pub. 5–1–62. Filed 4–26–61.

734,565. MONTH IN VUE. Samuel Ward Manufacturing Company. SN 121,152. Pub. 5–1–62. Filed 5–31–61.

734,566. TOM THUMB. Michael Shir, d.b.a. Tom Thumb World Children's Magazine. SN 122,726. Pub. 5–1–62. Filed 6–23–61.

734,567. IMAGICATION. Janet Wolff. SN 123,947. Pub. 5–1–62. Filed 7–13–61.

734,568. ALL ABOUT ART. Galerie Felix Vercel, Inc. SN 125,212. Pub. 5–1–62. Filed 8–2–61.

734,569. ISI. Institute for Scientific Information. SN 125,492. Pub. 5–1–62. Filed 8–7–61.

734,570. TRAJECTORY. Lockheed Aircraft Corporation. SN 125,928. Pub. 5–1–62. Filed 8–14–61.

734,571. THE TECHNICAL STOCK REVIEW. E.L.H. Associates, Inc. SN 126,016. Pub. 5–1–62. Filed 8–15–61.

734,572. UNDERWATER. Underwater Publishing Company. SN 126,543. Pub. 5–1–62. Filed 8–23–61.

734,573. EATERS DIGEST. Modern Manifold Specialties and Printing, Inc. SN 128,285. Pub. 5–1–62. Filed 9–20–61.

734,574. GIVE LIGHT AND THE PEOPLE WILL FIND THEIR OWN WAY. The E. W. Scripps Company. SN 128,303. Pub. 5–1–62. Filed 9–20–61.

734,575. GRINDING AND FINISHING. Hitchcock Publishing Company. SN 128,440. Pub. 5–1–62. Filed 9–22–61.

734,576. HITCHCOCK'S MACHINE AND TOOL DIRECTORY. Hitchcock Publishing Company. SN 128,441. Pub. 5–1–62. Filed 9–22–61.

734,577. NEWS RANGER. Scholastic Magazines, Inc. SN 128,471. Pub. 5–1–62. Filed 9–22–61.

734,578. PRACTICAL HOME ECONOMICS. Scholastic Magazines, Inc. SN 128,472. Pub. 5–1–62. Filed 9–22–61.

734,579. VACATION FUN. Scholastic Magazines, Inc. SN 128,474. Pub. 5–1–62. Filed 9–22–61.

734,580. A & SP AND DESIGN. Advertising Publications, Inc. SN 128,496. Pub. 5–1–62. Filed 9–25–61.

734,581. IM AND DESIGN. Advertising Publications, Inc. SN 128,497. Pub. 5–1–62. Filed 9–25–61.

734,582. EDUCATIONAL EXECUTIVES OVERVIEW. Buttenheim Publishing Corporation. SN 129,665. Pub. 5–1–62. Filed 10–11–61.

734,583. KCL AND DESIGN. Kern County Land Company. SN 130,219. Pub. 5–1–62. Filed 10–18–61.

734,584. THE NEVADAN. Southwestern Publishing Co., Inc. SN 130,389. Pub. 5–1–62. Filed 10–20–61.

734,585. TAKE IT FROM KATHY. Newspaper Enterprise Association, Inc. SN 130,939. Pub. 5–1–62. Filed 10–30–61.

734,586. SPRINGFIELD LEADER AND PRESS. Springfield Newspapers, Inc. SN 131,086. Pub. 5–1–62. Filed 10–31–61.

Class 39 — Clothing

734,587. MITEY-WARM. Rutgers Coat Company, Inc. SN 76,731. Pub. 5–1–62. Filed 6–29–59.

734,588. CLUB CREST. Carlyle Shirt Company, Inc. SN 103,540. Pub. 5–1–62. Filed 8–29–60.

734,589. TNT MARK VII AND DESIGN. Dunloggin Sportswear, Inc. SN 107,186. Pub. 5–1–62. Filed 10–26–60.

734,590. MOH-LUSTRA. The Joseph & Feiss Company. SN 112,271. Pub. 5–1–62. Filed 1–23–61.

734,591. BRADSHIRE. Blue Bird Knitwear Co., Inc. SN 118,045. Pub. 3–13–62. Filed 4–18–61.

734,592. THE SHOW PLACE OF MONTGOMERY. Al Levy's, Inc. SN 120,732. Pub. 5–1–62. Filed 5–24–61.

734,593. BRAEDON. Clover Knitting Mills, Inc. SN 121,361. Pub. 1–16–62. Filed 6–5–61.

734,594. BOL-SLAX. Martin's Uniforms. SN 127,240. Pub. 5–1–62. Filed 9–5–61.

734,595. COMBATER. Eric O'Toole. SN 127,351. Pub. 5–1–62. Filed 9–6–61.

734,596. CALPAC. Glasgo Limited, Inc. SN 127,473. Pub. 5–1–62. Filed 9–8–61.

Class 40 — Fancy Goods, Furnishings, and Notions

734,597. SLEEP EASY. Solo Products Corporation. SN 112,641. Pub. 5–1–62. Filed 1–27–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

734,598. THRONE KING AND DESIGN. Oscar L. Fry, d.b.a. Throne King. SN 127,226. Pub. 5–1–62. Filed 9–5–61.

734,599. BELAIR. Allied Stores Corporation, assignee of Sears, Roebuck and Co. SN 129,419. Pub. 4–24–62. Filed 10–6–61.

Class 43 — Thread and Yarn

734,600. CLEAR-STITCH. J. Gross & Son, Inc. SN 130,344. Pub. 5–1–62. Filed 10–20–61.

Class 44 — Dental, Medical, and Surgical Appliances

734,601. STERIL-PEEL. C. R. Bard, Inc. SN 112,109. Pub. 5–1–62. Filed 1–19–61.

Class 45 — Soft Drinks and Carbonated Waters

734,602. BLUE ANCHOR. Frank's Beverages. SN 117,477. Pub. 1–2–62. Filed 4–10–61.

734,603. JUSODA. Tizer Limited. SN 123,704. Pub. 2–13–62. Filed 7–10–61.

Class 46 — Foods and Ingredients of Foods

734,604. LAURA SCUDDER'S ETC. AND DESIGN. Laura Scudder's, by change of name from Scudder Food Products, Inc., d.b.a. Laura Scudder's. SN 93,012. Pub. 5–1–62. Filed 3–16–60.

734,605. VALUE PLUS. Aaron Weiser, d.b.a. Aaron Coffee Co. SN 102,358. Pub. 5–1–62. Filed 8–9–60.

734,606. FANCIFUL FIGURE OF BOY. Bensons Confectionery Limited. SN 106,179. Pub. 5–1–62. Filed 10–11–60.

734,607. PREMIATA ETC. AND DESIGN. Aiello Quality Products Inc. SN 106,455. Pub. 5–1–62. Filed 10–17–60.

734,608. SALUD. F. Capizzi and Sons, Inc. SN 106,688. Pub. 5–1–62. Filed 10–19–60.

734,609. WILKINS FINE GRIND AND DESIGN. John H. Wilkins Company, d.b.a. Wilkins Coffee Company. SN 109,450. Pub. 5–1–62. Filed 12–1–60.

734,610. WILKINS REGULAR GRIND AND DESIGN. John H. Wilkins Company, d.b.a. Wilkins Coffee Company. SN 109,451. Pub. 5–1–62. Filed 12–1–60.

734,611. WILKINS DRIP GRIND AND DESIGN. John H. Wilkins Company, d.b.a. Wilkins Coffee Company. SN 109,452. Pub. 5–1–62. Filed 12–1–60.

734,612. BAKORN. Filler Products, Inc. SN 109,483. Pub. 5–1–62. Filed 12–2–60.

734,613. SWEET BISCUIT. Dixie-Portland Flour Mills, Inc. SN 109,676. Pub. 5–1–62. Filed 12–6–60.

734,614. BAKER BRAND. Baker Brands, d.b.a. H. Rubinoff and Company. SN 110,103. Pub. 5–1–62. Filed 12–12–60.

734,615. SMILES AND DESIGN. Harold Michelson, d.b.a. Michelson. SN 110,279. Pub. 5–1–62. Filed 12–15–60.

734,616. ALLIGATOR AND DESIGN. George W. Dickinson, d.b.a. Dickinson's of Fort Lauderdale. SN 110,582. Pub. 5–1–62. Filed 12–19–60.

734,617. CRYSTAL-TYPE DESIGN. Diamond Crystal Salt Company. SN 112,698. Pub. 5–1–62. Filed 1–30–61.

734,618. RUGARD. Rugard Kemperdick & Co. SN 114,348. Pub. 5–1–62. Filed 2–24–61.

734,619. VALLEY GOLD AND DESIGN. The Coca-Cola Company, d.b.a. Golden Citrus. SN 114,714. Pub. 5–1–62. Filed 3–1–61.

734,620. LUZIANNE. Wm. B. Reily & Company, Inc. SN 116,074. Pub. 5–1–62. Filed 3–20–61.

734,621. ACCLAIM. The Procter & Gamble Company. SN 116,154. Pub. 5–1–62. Filed 3–21–61.

734,622. YOGI BREAD. Thomas J. Adams, d.b.a. Adams Bakeries. SN 116,281. Pub. 5–1–62. Filed 3–23–61.

734,623. MERIT-PAK. Food Brokers, Inc., of California, d.b.a. Par-Pak Foods Company. SN 116,398. Pub. 2–6–62. Filed 3–24–61.

734,624. FRANK STEAK BRAND. Frank Steak Co. Inc. SN 117,476. Pub. 5–1–62. Filed 4–10–61.

734,625. KOO. Langeberg Co-Operative Ltd. SN 117,974. Pub. 5–1–62. Filed 4–17–61.

734,626. ROYAL ESTATES. Royal Estates Tea Co. SN 118,001. Pub. 5–1–62. Filed 4–17–61.

734,627. MICHELLE. John E. Michopoulos, d.b.a. Michelle's. SN 118,272. Pub. 5–1–62. Filed 4–20–61.

734,628. REPRESENTATION OF A YOUNG GIRL SURROUNDED BY FLORAL BORDER. Big Bear Stores Company. SN 118,551. Pub. 5–1–62. Filed 4–25–61.

734,629. BETTY BROWN. Big Bear Stores Company. SN 118,552. Pub. 5–1–62. Filed 4–25–61.

734,630. WAGGIN' MASTER. Key Milling Company, Inc., d.b.a. Key Milling Company. SN 119,009. Pub. 5–1–62. Filed 5–1–61.

734,631. FUL VALU. A. J. Pietrus & Sons Co. SN 119,146. Pub. 5–1–62. Filed 5–2–61.

734,632. KINGS HOUSE. A. J. Pietrus & Sons Co. SN 119,147. Pub. 5–1–62. Filed 5–2–61.

734,633. ROMA-IMPERO BRAND. Roma Packing Co. SN 119,426. Pub. 5–1–62. Filed 5–5–61.

734,634. FRESH-DRI. Florasynth Laboratories, Incorporated. SN 119,500. Pub. 5–1–62. Filed 5–8–61.

734,635. VAN DE KAMP'S. General Baking Company. SN 119,509. Pub. 5–1–62. Filed 5–8–61.

734,636. DANUTS. DCA Food Industries Inc. SN 119,752. Pub. 5–1–62. Filed 5–11–61.

734,637. FOSTERS GOLD AWARD FREEZE AND DESIGN. Meyenberg-Old Fashion Products Company. SN 120,816. Pub. 5–1–62. Filed 5–25–61.

734,638. BESSEY'S. Bessey Foods. SN 120,840. Pub. 5–1–62. Filed 5–29–61.

734,639. WEST JERSEY. Francis H. Leggett & Company, d.b.a. West Jersey Farms Products Co. SN 120,927. Pub. 5–1–62. Filed 5–26–61.

734,640. TREASURE CHEST. Anderson, Clayton & Co. SN 121,059. Pub. 5–1–62. Filed 5–31–61.

734,641. GOODMAN'S PARTY-10S AND DESIGN. A. Goodman & Sons, Inc. SN 121,384. Pub. 5–1–62. Filed 6–5–61.

734,642. CONREDO. Uncle Ben's, Inc. SN 121,515. Pub. 5–1–62. Filed 6–6–61.

734,643. PENTASETS. N.V. Maatschappij Antradex, d.b.a. Antradex Company Ltd. SN 122,739. Pub. 5–1–62. Filed 5–9–61.

734,644. SPACE AGE. Fries & Fries, Inc. SN 123,093. Pub. 5–1–62. Filed 6–29–61.

734,645. CROWN. Crown Nut Company, Inc. SN 123,732. Pub. 5–1–62. Filed 7–11–61.

734,646. SUGUS. Suchard Holding Societe Anonyme. SN 124,487. Pub. 5–1–62. Filed 7–3–61.

734,647. CARIBBEAN PUNCH. Goya Foods, Inc. SN 125,220. Pub. 5–1–62. Filed 8–2–61.

734,648. MIL-KIT. Associated Products, Inc., d.b.a. Rival Packing Company. SN 125,536. Pub. 5–1–62. Filed 8–7–61.

734,649. SALAD KING. Sol Marks, d.b.a. Salad King Company. SN 125,841. Pub. 5–1–62. Filed 8–11–61.

734,650. FARMER GRAY BRAND AND DESIGN. Food Fair Stores, Inc. SN 125,905. Pub. 5–1–62. Filed 8–14–61.

734,651. FLAVO-FLAKE. American Chicle Company. SN 126,141. Pub. 5–1–62. Filed 8–17–61.

734,652. HER MAJESTY. Mavar Shrimp & Oyster Company, Ltd. SN 126,405. Pub. 5–1–62. Filed 8–22–61.

734,653. LITTLE KING. King Kullen Grocery Co., Inc. SN 126,771. Pub. 5–1–62. Filed 8–28–61.

734,654. LORALS. American Chicle Company. SN 129,184. Pub. 5–1–62. Filed 10–4–61.

734,655. FAULDS RED E MADE. Vaka Brothers Corporation, d.b.a. T. A. Faulds Company. SN 129,313. Pub. 5–1–62. Filed 10–5–61.

734,656. SPARKLE. Wm. Wrigley Jr. Company. SN 129,442. Pub. 5–1–62. Filed 10–6–61.

734,657. CHEX-MATES. Ralston Purina Company. SN 129,805. Pub. 5–1–62. Filed 10–12–61.

734,658. LABENA. Ralston Purina Company. SN 131,074. Pub. 5–1–62. Filed 10–31–61.

734,659. PRAIRIE SCHOONER. Glade Candy Co. SN 132,414. Pub. 5–1–62. Filed 11–20–61.

734,660. POL-ETS. Pollen Products Company. SN 132,718. Pub. 5–1–62. Filed 11–24–61.

734,661. DUKE'S AND OVAL BACKGROUND PANEL DESIGN. The C. F. Sauer Company. SN 132,735. Pub. 5–1–62. Filed 11–24–61.

734,662. POLO. E. J. Brach & Sons. SN 132,893. Pub. 5–1–62. Filed 11–28–61.

734,663. TREASURE GROVE. Brownsville Shrimp Exchange & Cold Storage Corp. SN 132,894. Pub. 5–1–62. Filed 11–28–61.

734,664. BLAST. Foremost Dairies, Inc. SN 132,911. Pub. 5–1–62. Filed 11–28–61.

734,665. NAN. The Nestlé Company, Inc. SN 133,079. Pub. 5–1–62. Filed 11–30–61.

734,666. ROYAL HIGHNESS. Royal Packing Co., Inc. SN 133,088. Pub. 5–1–62. Filed 11–30–61.

734,667. KLEENRAW. California and Hawaiian Sugar Refining Corporation, Limited. SN 133,209. Pub. 5–1–62. Filed 12–4–61.

Class 47 — Wines

734,668. GRAHAM'S PORT WINE PORTUGAL. William & John Graham & Co. SN 118,685. Pub. 5–1–62. Filed 4–26–61.

Class 48 — Malt Beverages and Liquors

734,669. BERGHOFF 1887 AND DESIGN. Glazer's Wholesale Drug Company, Inc. SN 79,986. Pub. 1–2–62. Filed 8–21–59.

Class 49 — Distilled Alcoholic Liquors

734,670. CREST DESIGN. Royal Hawaiian Liqueurs, Ltd. SN 101,705. Pub. 5–1–62. Filed 7–29–60.

734,671. KENTSHIRE. Liquor Corporation of America. SN 109,191. Pub. 5–1–62. Filed 11–28–60.

734,672. ANGOSTURA. Angostura Bitters (Dr. J. G. B. Siegert & Sons) Limited. SN 115,878. Pub. 5–1–62. Filed 3–17–61.

734,673. AKDOV. Golan Import Company. SN 129,676. Pub. 5–1–62. Filed 10–11–61.

734,674. VOILA. Golan Import Company. SN 129,677. Pub. 5–1–62. Filed 10–11–61.

Class 50 — Merchandise Not Otherwise Classified

734,675. SAFE-GARD. Kimble Glass Company. SN 109,073. Pub. 5–1–62. Filed 11–25–60.

Class 51 — Cosmetics and Toilet Preparations

734,676. ILONA AND DESIGN. Ilona de Leboczky, d.b.a. Ilona Scientific Facial Clinic. SN 68,239. Pub. 5–1–62. Filed 2–24–59.

734,677. MISS BRONZE. Amole, Incorporated. SN 94,721. Pub. 5–1–62. Filed 4–11–60.

734,678. CHEVET AND DESIGN. Margo and Larry's Health Foods. SN 109,090. Pub. 5–1–62. Filed 11–25–60.

734,679. RUGARD. Rugard Kemperdick & Co. SN 114,347. Pub. 5–1–62. Filed 2–24–61.

734,680. BABY CLEAR. The Mennen Company. SN 115,367. Pub. 5–1–62. Filed 3–10–61.

734,681. BABY PUFF. The Mennen Company. SN 115,368. Pub. 5–1–62. Filed 3–10–61.

734,682. FRENDLI. Philip A. Schwartz. SN 115,383. Pub. 5–1–62. Filed 3–10–61.

734,683. MADAME ROCHAS. Parfums Marcel Rochas, Inc., assignee of Societe Anonyme Parfums Marcel Rochas. SN 119,241. Pub. 5–1–62. Filed 5–3–61.

734,684. COLOR MOD. Nicholas Freres S.A. SN 125,082. Pub. 5–1–62. Filed 7–31–61.

734,685. PER BIOL. Nicholas Freres S.A. SN 125,084. Pub. 5–1–62. Filed 7–31–61.

734,686. VOSS. Conner & Walters Company. SN 126,987. Pub. 5–1–62. Filed 8–31–61.

734,687. CHIK T'SUN. Clara Alford, d.b.a. Clara Alford & Co. SN 127,070. Pub. 5–1–62. Filed 9–1–61.

734,688. ORAL-PLUS. Foods Plus, Inc. (Delaware corporation), assignee of Foods Plus, Inc. (New York corporation). SN 127,103. Pub. 5–1–62. Filed 9–1–61.

734,689. ROUXTEEN AND DESIGN. Roux Laboratories, Inc. SN 127,147. Pub. 5–1–62. Filed 9–1–61.

734,690. LADY SHARON. Lucky Tiger Manufacturing Company. SN 127,238. Pub. 5–1–62. Filed 9–5–61.

Class 52 — Detergents and Soaps

734,691. OPCOTERGE. Nalco Chemical Company. SN 116,901. Pub. 5–1–62. Filed 3–31–61.

734,692. O-LAN SQUARES. William Radoff. SN 118,532. Pub. 5–1–62. Filed 4–24–61.

734,693. SPOT-ALL ETC. AND DESIGN. Ralph Milholland, d.b.a. Spot-All Manufacturing Co. SN 118,597. Pub. 5–1–62. Filed 4–25–61.

734,694. TWINK. Lever Brothers Company. SN 121,003. Pub. 2–6–62. Filed 5–29–61.

734,695. CALFONEX. The Falcon Corporation. SN 122,297. Pub. 5–1–62. Filed 6–19–61.

734,696. SURGI-SCRUB. The Gerson Stewart Corporation. SN 123,097. Pub. 5–1–62. Filed 6–29–61.

734,697. APPLE VALLEY. Amway Sales Corporation, d.b.a. Apple Valley Products Co. SN 124,619. Pub. 5–1–62. Filed 7–25–61.

734,698. S-K AND DESIGN. Spar-Kleen Products, Inc. SN 127,959. Pub. 5–1–62. Filed 9–15–61.

734,699. JATO. Aerosol Corporation of America (New Jersey corporation), assignee, by mesne assignment, of Aerosol Corporation of America (Massachusetts corporation). SN 128,939. Pub. 5–1–62. Filed 10–2–61.

Service Marks

Class 101 — Advertising and Business

734,700. M-M-M "MAKE ME A MEMBER." Frederick E. Gymer. SN 103,149. Pub. 5–1–62. Filed 8–22–60.

734,701. MCL AND DESIGN. Mid-Continent Leasing Corporation (Delaware corporation), assignee of Mid-Continent Leasing Corporation (Illinois corporation). SN 117,032. Pub. 5–1–62. Filed 4–3–61.

734,702. STOP AND SAVE STAMPS. Stop and Save Trading Stamp Corporation. SN 127,668. Pub. 5–1–62. Filed 9–11–61.

Class 102 — Insurance and Financial

734,703. GREEN SHIELD. Jack W. Londen. SN 7,607. Pub. 3–21–61. Filed 5–3–56.

734,704. NMA IN REPRESENTATION OF A BOX. National Mercantile Agency, Inc. SN 105,662. Pub. 5–1–62. Filed 10–3–60.

734,705. REPRESENTATION OF A SCOTSMAN. Thrift Plan, Inc. SN 109,012. Pub. 5–1–62. Filed 11–23–60.

734,706. THRIFT. Thrift Plan, Inc. SN 110,116. Pub. 5–1–62. Filed 12–12–60.

734,707. CIT. C.I.T. Financial Corporation. SN 128,957. Pub. 5–1–62. Filed 10–2–61.

734,708. FUTURA. The Lumbermens Mutual Insurance Company. SN 129,019. Pub. 5–1–62. Filed 10–2–61.

734,709. SIR. Mutual Fire Underwriters Association of New England. SN 129,028. Pub. 5–1–62. Filed 1–4–62.

734,710. REPRESENTATION OF A PILOT AND STEERING WHEEL. Pilot Life Insurance Company. SN 129,292. Pub. 5–1–62. Filed 10–5–61.

734,711. THE PILOT AND REPRESENTATION OF A PILOT AND STEERING WHEEL. Pilot Life Insurance Company. SN 130,240. Pub. 5–1–62. Filed 10–18–61.

Class 103 — Construction and Repair

734,712. SOS. Airkem, Inc. SN 115,564. Pub. 5–1–62. Filed 3–14–61.

Class 105 — Transportation and Storage

734,713. TW AND DESIGN. Transwestern Pipeline Company. SN 112,506. Pub. 5–1–62. Filed 1–25–61.

734,714. FANCIFUL DESIGN OF RABBIT HEAD. HMH Publishing Co., Inc., d.b.a. Playboy Tours. SN 117,102. Pub. 5–1–62. Filed 4–4–61.

Class 107 — Education and Entertainment

734,715. TAPEOGRAPHY. Videotape Productions of New York, Inc. SN 84,823. Pub. 5–1–62. Filed 11–6–59.

734,716. GARFIELD GOOSE. WGN, Inc. SN 128,874. Pub. 5–1–62. Filed 9–28–61.

734,717. THE HATFIELDS ARE COMING. The Hatfields. SN 131,246. Pub. 5–1–62. Filed 6–14–61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 7 — Cordage

734,718. Poland Brothers, Inc., Baltimore, Md. SN 100,638. Filed P.R. 7–11–60; Am. S.R. 4–9–62.

Stretch-Ty

For Elastic Ribbons for Retaining Covers in Boxes. First use Apr. 1, 1960.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

734,719. Compagnie Generale des Gaz Liquefies Cogegal, Paris, France. SN 128,800. Filed 9–28–61.

JET-GAZ

Priority claimed under Sec. 44(d) on French Reg. No. 495,267, dated Mar. 30, 1961 (Seine); Natl. Inst. No. 161,793.

For Pipes of Metal, Rubber or Synthetics, Pipe Connectors and Valves, Especially for Liquefied Gases.

Class 17—Tobacco Products

734,720. R. J. Reynolds Tobacco Company, Winston-Salem, N.C. SN 90,858. Filed P.R. 2-12-60; Am. S.R. 5-12-62.

Forsyth

For Cigarettes.
First use Jan. 25, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

734,721. Whaledent, Inc., Brooklyn, N.Y. SN 83,338. Filed P.R. 10-15-59; Am. S.R. 5-7-62.

KLEEN-E-Z

For Ultrasonic Cleaning Unit, Comprising an Electronic Ultrasonic Generator and Transducer Coupled to a Tank Unit Within Which Objects To Be Cleaned Are Immersed.
First use Oct. 9, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

734,722. Bath Iron Works Corporation, Bath, Maine. SN 101,593. Filed P.R. 7-28-60; Am. S.R. 6-5-61.

FROZEN COAL CRACKER

For Roll-Type Crushers for Installation Under Coal Delivery Hoppers for Crushing Frozen Masses of Coal.
First use May 28, 1960.

734,723. Morse Sewing Machine and Supply Corp., New York, N.Y. SN 122,016. Filed P.R. 6-14-61; Am. S.R. 5-4-62.

MORSE

For Typewriters.
First use Apr. 28, 1961.

734,724. Gustav Gruen, Lissberg, Oberhessen, Germany. SN 126,866. Filed P.R. 8-29-61; Am. S.R. 5-17-62.

AIRMIX

Owner of German Reg. No. 743,164, dated Dec. 1, 1960.
For Mixing Machines for the Chemical, Pharmaceutical, and Food Industries, Especially for Mixing Pulverant and Granulated Materials.

734,725. W. M. Ziegler Tool Co., Detroit, Mich. SN 131,446. Filed P.R. 11-6-61; Am. S.R. 5-28-62.

ZIEGLER

For Floating Tool Holder.
First use Sept. 15, 1938.

Class 26—Measuring and Scientific Appliances

734,726. Whitney Optical Co., Inc., Woodside, N.Y. SN 132,958. Filed 11-28-61.

WHITNEY

For Spectacle Frames and Parts Thereof.
First use during 1956.

Class 29—Brooms, Brushes, and Dusters

734,727. Simoniz Company, Chicago, Ill. SN 116,583. Filed P.R. 3-27-61; Am. S.R. 4-2-62.

STA-SOFT

For Synthetic Sponges.
First use Mar. 1, 1961.

Class 33—Glassware

734,728. Libbey-Owens-Ford Glass Company, Toledo, Ohio. SN 125,392. Filed P.R. 8-4-61; Am. S.R. 5-11-62.

MOTTLED

For Glass for Glazing Windows, Doors, Partitions and the Like.
First use Nov. 23, 1960.

Class 34—Heating, Lighting, and Ventilating Apparatus

734,729. Dearborn Stove Company, d.b.a. National Appliance Manufacturing Company, Dallas, Tex. SN 95,698. Filed P.R. 4-25-60; Am. S.R. 5-22-62.

MADISON

For Gas Fired Room Heaters.
First use on or about Jan. 14, 1960.

Class 39—Clothing

734,730. André Fantasies, Inc., Baltimore, Md. SN 111,468. Filed P.R. 1-9-61; Am. S.R. 5-18-62.

Scarf-n-Hood

For Ladies' Hair Coverings.
First use Dec. 1, 1960.

TRADEMARK REGISTRATIONS RENEWED

21,085. "LYPSYL." Cl. 51. 5-10-1892.
153,696. Y YBARRA AND DESIGN. Cl. 46. 3-28-22.
154,696. BRAMLEY. Cl. 39. 4-18-22.
154,942. SYLVAN. Cl. 42. 5-16-22.
155,566. REPRESENTATION OF A LAZY W. Cl. 28. 5-30-22.
155,916. BRONZALUN. Cl. 13. 6-13-22.
155,961. GUARDIAN. Cl. 39. 6-13-22.
156,884. WINTER GOLD. Cl. 46. 7-18-22.
156,902. FERMENTONE. Cl. 46. 7-18-22.
157,907. COLONIAL DAMES. Cl. 51. 8-22-22.
158,686. "SIR RAEBURN." Cl. 29. 9-12-22.
158,687. LEONARDO DA VINCI. Cl. 29. 9-12-22.
158,688. MURILLO. Cl. 29. 9-12-22.
158,689. DIXIE. Cl. 29. 9-12-22.
158,690. YANKEE. Cl. 29. 9-12-22.
158,691. ROMNEY. Cl. 29. 9-12-22.
158,692. CARDCRAFT. Cl. 29. 9-12-22.
158,693. GAINSBOROUGH. Cl. 29. 9-12-22.
158,694. REMBRANDT. Cl. 29. 9-12-22.
159,250. ALUMALUN. Cl. 13. 9-26-22.
159,363. MUSSINI. Cl. 29. 9-26-22.
159,717. LFG. Cl. 42. 10-3-22.
159,947. DURO. Cl. 35. 10-10-22.
160,279. BELCANO AND DESIGN. Cl. 51. 10-17-22.
160,360. FERROX. Cl. 14. 10-24-22.
160,361. AMBRAC. Cl. 14. 10-24-22.
160,513. EVERY BIT A DELIGHT. Cl. 46. 10-24-22.
160,910. FORT SUTTER AND DESIGN. Cl. 46. 10-31-22.
393,050. MIRACLE MINERALS AND DESIGN. Cl. 46. 1-27-42.
394,149. RECORDIO. Cl. 36. 3-24-42.
394,535. COSMETIC TREND. Cl. 51. 4-14-42.
394,872. "OBSERVATORY MOVEMENT." Cl. 27. 5-5-42.
394,972. K & T. Cl. 23. 5-5-42.
394,979. TELEFAX. Cl. 21. 5-5-42.
395,088. HIGATON AND LABEL DESIGN. Cl. 18. 5-12-42.
395,123. HARDSTEEL AND DESIGN. Cl. 23. 5-12-42.
395,278. RAIN DROPS AND DESIGN. Cl. 6. 5-19-42.
395,305. METL-FLEX. Cl. 33. 5-19-42.
395,446. "FIBREX." Cl. 29. 5-26-42.
395,565. BAYBERRY MIST. Cl. 51. 6-2-42.
395,622. FUL DEFENSE AND DESIGN. Cl. 6. 6-2-42.
395,838. CORONOL. Cl. 6. 6-16-42.
395,913. LUASMIN. Cl. 18. 6-16-42.
396,026. UNIPRESS. Cl. 38. 6-23-42.
396,126. MILKA. Cl. 23. 6-30-42.
396,177. JUST CALL ME SQUIRT. Cl. 45. 6-30-42.
396,204. DOUBLER. Cl. 39. 6-30-42.
396,223. JIFF-ON. Cl. 51. 6-30-42.
397,237. LILAC IMPERIAL. Cl. 51. 8-25-42.
397,443. JACQMAR. Cl. 42. 9-8-42.
397,576. JAN. Cl. 51. 9-8-42.
397,846. BANNER. Cl. 5. 9-22-42.
397,847. RED TOP AND DESIGN. Cl. 5. 9-22-42.
397,848. VELVET. Cl. 5. 9-22-42.
398,282. TAILORED BY DAROFF AND DESIGN. Cl. 39. 10-20-42.
398,382. REPEL-O-TEX. Cl. 6. 10-27-42.
398,442. OPTAR. Cl. 26. 10-27-42.
398,443. GRAPHEX. Cl. 26. 10-27-42.
398,498. TWINTACTS. Cl. 21. 11-3-42.
398,545. AUTOCHEMIC. Cl. 6. 11-3-42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

399,899. E-KONO-MIZE. Cl. 26. 2-2-43.
406,248. SMALLFRY. Cl. 26. 3-21-44.
410,920. KONOFLEX. Cl. 26. 12-26-44.
411,530. ACE-HI. Cl. 26. 1-23-45.
608,236. KIDDIE SPRAY. Cl. 16. 7-5-55.

The following registrations issued May 29, 1956

627,567. JOTTIES AND DESIGN. Cl. 2.
627,583. GERM-D-PHONE. Cl. 6.
627,584. 66. Cl. 6.
627,587. QUAT-SAN. Cl. 6.
627,588. HI PV. Cl. 6.
627,590. TIE-RITE. Cl. 7.
627,591. ROCKY BRIAR. Cl. 8.
627,594. PYRAMIDEX. Cl. 10.
627,597. SPEEDINX. Cl. 11.
627,601. AH AND DESIGN. Cl. 12.
627,603. SHOK-ABSORB AND DESIGN. Cl. 12.
627,606. SATIN-WHITE. Cl. 12.
627,609. MET-L-GLIDE AND DESIGN. Cl. 12.
627,616. EVEN-UP. Cl. 12.
627,618. GREASE MASTER. Cl. 13.
627,620. K KELLER TOOL AND DESIGN. Cl. 13.
627,624. ARNED. Cl. 13.
627,627. TRANSONIC. Cl. 14.
627,629. INCOLOY "901." Cl. 14.
627,631. CRAIRMO. Cl. 14.
627,634. ISONOL. Cl. 15.
627,636. CARSLEY AND DESIGN. Cl. 16.
627,637. ALKROME. Cl. 16.
627,639. REE-STORE. Cl. 16.
627,642. LIMBER KOTE. Cl. 16.
627,646. VETTERIN AND DESIGN. Cl. 18.
627,648. GLENVIEW LES-I-THIN. Cl. 18.
627,650. ES. Cl. 18.
627,651. ROYAGEL. Cl. 18.
627,652. PROSTATORIES. Cl. 18.
627,657. S-ALGIN. Cl. 18.
627,660. A-P-N. Cl. 18.
627,664. MAGNEURAL. Cl. 18.
627,668. HERITAGE. Cl. 19.
627,671. STROMBERG-CARLSON. Cl. 21.
627,686. SAFE-T-ALARM. Cl. 21.
627,689. SHETLAND FOODSMITH. Cl. 21.
627,694. KLIP KARD. Cl. 22.
627,697. SPIN WHEEL AND DESIGN. Cl. 22.
627,698. SINKER. Cl. 22.
627,702. HOBBILURE. Cl. 22.
627,704. GOOF'T. Cl. 22.
627,705. GOLDEE BEARS. Cl. 22.
627,708. "WASH OUT." Cl. 22.
627,710. SUPER-CENTACTOR. Cl. 23.
627,714. HE IN CIRCLE. Cl. 23.
627,716. MOTREX. Cl. 23.
627,717. SOHN SUPER SLICER. Cl. 23.
627,719. TWINLIGHT BRAND. Cl. 23.
627,722. HYDROPUMP. Cl. 23.
627,724. BAITAIR AND DESIGN. Cl. 23.
627,725. ROTO-WEDGE-LOCK. Cl. 23.
627,727. STROMBOLISATION. Cl. 23.
627,728. SILEX-HANDYHOT. Cl. 23.
627,729. HI-TONS. Cl. 23.
627,730. TRACE-A-MATIC AND DESIGN. Cl. 23.
627,731. ALMA. Cl. 23.
627,732. ALMA AND DESIGN. Cl. 23.
627,733. JOLSON ALMA AND DESIGN. Cl. 23.
627,736. STREET MASTER. Cl. 23.
627,737. VACFORM AND DESIGN. Cl. 23.
627,745. WORM-O-MAT BAIT-O-MAT. Cl. 23.
627,753. FROST TWINS AND DESIGN. Cl. 23.
627,755. BOROPTIC. Cl. 23.
627,775. LIDO AND DESIGN. Cl. 23.
627,777. RESUDSER. Cl. 24.
627,780. MONOSTROB. Cl. 26.
627,781. W AND DESIGN. Cl. 26.
627,786. VITAMETER. Cl. 26.
627,787. CERTO. Cl. 26.
627,793. ANATOMICAL. Cl. 26.
627,806. 4TH DIMENSIONAL. Cl. 26.

627,808. COUNT-O-LARM. Cl. 26.
627,809. PRINCE. Cl. 26.
627,811. DUREX. Cl. 27.
627,817. COLORART. Cl. 28.
627,820. ROBIN HOOD. Cl. 29.
627,822. CARRARA MODERN BY IROQUOIS. Cl. 30.
627,824. KING FROST FROSTER KING. Cl. 31.
627,826. CRUIS-PAK. Cl. 31.
627,827. FROSTY-PAK. Cl. 31.
627,831. SAMAS. Cl. 32.
627,832. SAMAS PUNCHED CARD ACCOUNTING AND DESIGN. Cl. 32.
627,834. DOR-BAK AND DESIGN. Cl. 32.
627,836. CARTERLOK. Cl. 32.
627,837. DRISCOTOP. Cl. 32.
627,839. COUNTRY FLAIR. Cl. 32.
627,840. COUNTRY BAROQUE. Cl. 32.
627,843. TRANS-EAST. Cl. 32.
627,845. LUTERMA AND DESIGN. Cl. 32.
627,853. JETLESS SELFVAPO BRAND. Cl. 34.
627,854. GLASS GUARD DEARBORN AND DESIGN. Cl. 34.
627,863. HOL-DEX. Cl. 37.
627,867. BONANZAGRAM. Cl. 38.
627,868. NOZZLE NEWS AND DESIGN. Cl. 38.
627,870. GREAT MOMENTS IN SPORTS. Cl. 38.
627,880. WALLIS & WILLIS. Cl. 38.
627,883. SPRIGHTLY STYLES. Cl. 39.
627,884. G.T. DOWLING MATE-UP. Cl. 39.
627,885. SIMON SIMPLE ETC. AND DESIGN. Cl. 39.
627,887. ROSSINI. Cl. 39.
627,895. RULL. Cl. 39.
627,896. CHA-CHA-CHA. Cl. 39.
627,898. ROBERT OF HOLLYWOOD AND DESIGN. Cl. 39
627,900. NITEY NITE BUNKEROOS ETC. Cl. 39.
627,902. "SLIMTITE." Cl. 39.
627,907. "PELOUSE." Cl. 40.
627,910. LAMP LIGHTER. Cl. 42.
627,911. "MALIBU." Cl. 42.
627,912. BUPPO. Cl. 42.
627,918. CHINABEE. Cl. 42.
627,919. PEAUTIQUE. Cl. 42.
627,923. GLUVSUEDE. Cl. 42.
627,922. SILK PLUS. Cl. 42.
627,924. SNUGSTER. Cl. 42.
627,927. CLUE. Cl. 44.
627,939. TORO. Cl. 48.
627,942. ALL WEST. Cl. 46.
627,946. MALLOWDEES. Cl. 46.
627,947. KELLKO. Cl. 46.
627,951. TI BETE AND DESIGN. Cl. 46.
627,952. MORNING GLORY. Cl. 46.
627,955. M.M.G. Cl. 46.
627,956. CALL-4. Cl. 46.
627,959. LIBERTY STREAMERS. Cl. 46.
627,960. 808. Cl. 46.
627,969. YOSEMITE. Cl. 47.
627,971. CROWN AND DESIGN. Cl. 50.
627,974. SKWEEG-IT. Cl. 50.
627,979. DOUBLE BARREL. Cl. 51.
627,980. REPEATER. Cl. 51.
627,981. REPRESENTATION OF TWO CROSSED RIFLES. Cl. 51.
627,988. CREME FOAM. Cl. 52.
627,989. BRITE TOP AND DESIGN. Cl. 52.
627,992. AMERICAN TESTING LABORATORIES INC. AND DESIGN. Cl. 100.
627,997. HOLLANDER SNOWFLAKE. Cl. 106.
627,999. THE NAVIGATORS AND DESIGN. Cl. 107.
628,000. DALMATIAN. Cl. A.
628,002. SQUAREHED. Cl. 13.
628,005. "ROLLIT" TERRY COVERALL. Cl. 19.
628,006. COFFEE-QUIK. Cl. 21.
628,007. SPEAKING PICTURE. Cl. 21.
628,008. KENTWORTH CORPORATION AND DESIGN. Cl. 22.
628,009. ALONE BARNES CLOSED CIRCUIT AND DESIGN. Cl. 23.
628,011. E-Z DRI-PRESS. Cl. 24.
628,014. AUTOWIND. Cl. 26.
628,020. RIGID-LITE. Cl. 37.
628,021. WESTCHESTER ENTERTAINMENT ETC. Cl. 38.
628,022. WESTERN APPLIANCES & TELEVISION. Cl. 38.
628,024. MEAT AND FOOD MERCHANDISING. Cl. 38.
628,032. CHRISTY COLLAR RITE. Cl. 40.
628,035. AGEN ETC. AND DESIGN. Cl. 46.
628,038. TRIP-CHARGE. Cl. 102.

Erratum

In the OFFICIAL GAZETTE, issue of June 19, 1962, at page TM 133, under the heading "Trademark Registrations Canceled, Section 8," "626,038" should read *626,039*.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

688,316. MERCURY. Cl. 36. 11–17–59. Mercury Record Corporation, Chicago, Ill. Corrected: In the statement, column 2, line 1, "pre-recorder" should be deleted and *pre-recorded* should be inserted.

725,786. FUL-TRIM. Cl. 12. 1–2–62. W. P. Fuller & Co., San Francisco, Calif. Corrected: In the statement, column 1, line 1, before "Fuller" *W. P.* should be inserted.

727,601. ALCAN. Cl. 1. 2–20–62. Aluminum Company of Canada, Limited, Montreal, Quebec, Canada. Corrected: In the statement, column 2, line 4 should be deleted and *Owner of Canadian Reg. No. 106 Folio N.S. 27361, dated Apr. 3, 1948; and U.S. Reg. No. 707,988. First use September 1945; in commerce in or about December 1945 on brucite.* should be inserted.

728,088. ISOLOG. Cl. 100. 2–27–62. Tuboscope Company, Houston, Tex. Corrected: In the statement, column 1, line 1, "Texas" should be deleted and *Delaware* should be inserted.

728,507. ONE TEST IS WORTH A THOUSAND EXPERT OPINIONS. Cl. 26. 3–13–62. American Machine and Metals, Inc., East Moline, Ill. Corrected: In the statement, column 2, line 5, "665,535" should be deleted and *660,535* should be inserted.

730,159. UNI-PAD. Cl. 42. 4–17–62. Rhoads & Company, Philadelphia, Pa. Corrected: In the statement, column 1, line 1, "Pennsylvania corporation" should be deleted and *firm* should be inserted.

731,669. MULTI-V DESIGN. Cl. 46. 5–15–62. Koninklijke Verkade Fabrieken N.V., Zaandam, Netherlands. Corrected:



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HMH Publishing Co., Inc., Chicago, Ill. 734,714, pub. 5–1–62. Cl. 105.
H. & S. Product, Camden, N.J. 627,583, canc. Cl. 6.
Haessler, George H., Detroit, Mich. 627,880, canc. Cl. 38.
Hales & Hunter Co., Chicago, Ill. 627,952, canc. Cl. 46.
Hallmark Cards, Inc., Kansas City, Mo. 734,496, pub. 5–1–62. Cl. 22.
Haltwelen Co., Monrovia, Calif. 734,500, pub. 5–1–62. Cl. 22.
Hamilton Tool Co., The, Hamilton, Ohio. 734,546, pub. 5–1–62. Cl. 37.
Handl-Bag Co., Inc., New York, N.Y. 627,923, canc. Cl. 42.
Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 734,544, pub. 5–1–62. Cl. 37.
Harillan Pharmaceutical: *See*— Kopp, Harold.
Harris Products, Lynwood, Calif. 627,725, canc. Cl. 23.
Hatfields, The, Kalamazoo, Mich. 734,717, pub. 5–1–62. Cl. 107.
Hawley Fuel Corp., Inc., New York, N.Y. 734,378, pub. 5–1–62. Cl. 1.
Heberlein, George J., d.b.a. Heberlein Mfg. Co., Ault, Colo. 627,853, canc. Cl. 34.
Heberlein Mfg. Co.: *See*— Heberlein, George J.
Heddon's, James, Sons, Dowagiac, Mich. 734,509, pub. 5–1–62. Cl. 22.
Hercules Powder Co., Wilmington, Del. 734,521–2, pub. 5–1–62. Cl. 23.
Hijos de Ybarra, to Hijos de Ybarra S.A., Seville, Spain. 153,696, ren. 7–17–62. Cl. 46.
Hijos de Ybarra S.A.: *See*— Hijos de Ybarra.
Hillerich & Bradsby Co., Louisville, Ky. 734,514, pub. 5–1–62. Cl. 22.
Hitchcock Publishing Co., Wheaton, Ill. 734,575–6, pub. 5–1–62. Cl. 38.
Hollander, A., & Son, Inc., Newark, N.J. 627,997, canc. Cl. 106.
Huber, J. M., Corp., Borger, Tex. 734,368, pub. 5–1–62. Cl. 1.
Hudson's Bay Co.: *See*— Governor and Co. of Adventurers of England Trading Into Hudson's Bay.
Hudson Vitamin Products, Inc., New York, N.Y. 734,452, pub. 5–1–62. Cl. 18.
Hurri-Green Chemicals: *See*— Re-Mark Chemical Co., Inc.
Hydraxtor Co., The: *See*— Zephyr Laundry Machinery Co.
Hysan Products Co., Chicago, Ill. 734,386, pub. 1–23–62. Cl. 6.
Ideal Publishing Corp.: *See*— Romance Publishing Corp.
Ilona de Lehoczky, d.b.a. Ilona Scientific Facial Clinic, Chicago, Ill. 734,676, pub. 5–1–62. Cl. 51.
Ilona Scientific Facial Clinic: *See*— Ilona de Lehoczky.
Import Auto Service and Sales, Long Beach, Calif. 627,989, canc. Cl. 52.
Independent Nail and Packing Co., Inc., The, Bridgewater, Mass. 628,002, canc. Cl. 13.
Institute For Scientific Information, Philadelphia, Pa. 734,569, pub. 5–1–62. Cl. 38.
International Designers Group, Inc., New York, N.Y. 734,545, pub. 5–1–62. Cl. 37.
International Foodcraft Corp., Brooklyn, N.Y. 627,956, canc. Cl. 46.
International Nickel Co., Inc., The, New York, N.Y. 627,629, canc. Cl. 14.
International Shoe Co., St. Louis, Mo. 734,557, pub. 5–1–62. Cl. 38.
Iroquois China Co., Solvay, N.Y. 627,822, canc. Cl. 30.
Irwin, Neisler & Co., Decatur, Ill. 734,562, pub. 5–1–62. Cl. 38.
Jacks Mfg. Co., St. Paul, Minn. 734,396, pub. 5–1–62. Cl. 6.
Jacqmar Ltd., London, England. 397,443, ren. 7–17–62. Cl. 42.
Jantzen, Inc.: *See*— Jantzen Knitting Mills.
Jantzen Knitting Mills to Jantzen, Inc., Portland, Oreg. 397,576, ren. 7–17–62. Cl. 51.
Jaunty Juniors, Inc., New York, N.Y. 627,883, canc. Cl. 39.
Jepson, Percy, Oakland, Calif. 627,618. Cl. 13.
Johns-Manville Corp.: *See*— Manville, Johns, Inc.
Johnson Fruit & Cold Storage Co., Selah, Wash. 627,942, canc. Cl. 46.
Johnson & Johnson, New Brunswick, N.J. 627,820, canc. Cl. 29.
Johnson-Layne Coffee Co., The, to Manhattan Coffee Co., St. Louis, Mo. 156,884, ren. 7–17–62. Cl. 46.
Joseph & Feiss Co., The, Cleveland, Ohio. 734,590, pub. 5–1–62. Cl. 39.
Juilliard, A. D., & Co. Inc., New York, N.Y. 627,919, canc. Cl. 42.
KVP Sutherland Paper Co., Kalamazoo, Mich. 734,539, pub. 5–1–62. Cl. 37.
KVP Sutherland Paper Co., Kalamazoo, Mich. 734,552, pub. 5–1–62. Cl. 37.
Kearney & Trecker Corp., West Allis, Wis. 394,972, ren. 7–17–62. Cl. 23.
Keller Tool Co., Grand Haven, Mich., to Gardner-Denver Co., Quincy, Ill. 627,620, canc. Cl. 13.
Kellogg, Spencer, and Sons, Inc., Buffalo, N.Y. 627,947, canc. Cl. 46.
Kellogg, Spencer, and Sons, Inc.: *See*— Textron Inc.
Kemperdick, Rugard, & Co., Porz, near Koln, Germany. 734,618, pub. 5–1–62. Cl. 46.
Kemperdick, Rugard, & Co., Porz, near Koln, Germany. 734,679, pub. 5–1–62. Cl. 51.
Kentworth Corp., Redwood City, Calif. 628,008, canc. Cl. 22.
Kern County Land Co., Bakersfield, Calif. 734,583, pub. 5–1–62. Cl. 38.
Key Milling Co.: *See*— Key Milling Co., Inc.
Key Milling Co., Inc., d.b.a. Key Milling Co., Clay Center, Kans. 734,630, pub. 5–1–62. Cl. 46.
Kimble Glass Co., Toledo, Ohio. 734,675, pub. 5–1–62. Cl. 50.
King, Edward J., Wheaton, Ill. 627,824, canc. Cl. 31.
King Kullen Grocery Co., Inc., Westbury, N.Y. 734,653, pub. 5–1–62. Cl. 46.
Knox Co., The, to The Knox Co., Los Angeles, Calif. 395,088, ren. 7–17–62. Cl. 18.
Koninklijke Verkade Fabrieken N.V., Zaandam, Netherlands. 731,669. Am. 7(d). Cl. 46.
Kono, Alexander, d.b.a. The Kono Mfg. Co., Woodside, N.Y. 399,899, canc. Cl. 26.
Kono, Alexander, d.b.a. Kono Mfg. Co., Woodside, N.Y. 406,248. canc. Cl. 26.
Kono, Alexander, d.b.a. Kono Mfg. Co., to The Kono Mfg. Co., Woodside, N.Y. 411,530, canc. Cl. 26.
Kono Mfg. Co., The: *See*— Kono, Alexander.
Kono Mfg. Co., The, Woodside, N.Y. 410,920, canc. Cl. 26.
Kono Mfg. Co., The, to Kono Mfg. Co. Inc., Woodside, N.Y. 627,793, canc. Cl. 26.
Kono Mfg. Co. Inc., Woodside, N.Y. 627,806, canc. Cl. 26.
Kopp, Harold, d.b.a. Harillan Pharmaceutical, New York, N.Y. 734,469, pub. 3–13–62. Cl. 18.
L & M Laboratories, Inc., Berlin, Md. 734,460–1, pub. 5–1–62. Cl. 18.
Lactona Inc., St. Paul, Minn. 734,532, pub. 2–6–62. Cl. 29.
Laketine Corp., Chicago, Ill. 734,415–6, pub. 5–1–62. Cl. 11.
La Lanne Inc., Hollywood, Calif. 734,456, pub. 5–1–62. Cl. 18.
Langeberg Co-operative Ltd., Cape Town, Union of South Africa. 734,625, pub. 5–1–62. Cl. 46.
Laguar Pharmaceuticals, Inc., Nutley, N.J. 734,454–5, pub. 5–1–62. Cl. 18.
Laros Textiles Co., Bethlehem, Pa. 627,922, canc. Cl. 42.
Laura Scudder's, from Scudder Food Products, Inc., d.b.a. Laura Scudder's, Anaheim, Calif. 734,604, pub. 5–1–62. Cl. 46.
Leggett, Francis H., & Co., d.b.a. West Jersey Farms Products Co., Seabrook, N.J. 734,639, pub. 5–1–62. Cl. 46.
Lemmon Pharmacal Co., Sellersville, Pa. 734,480, pub. 5–1–62. Cl. 18.
Lentini, Nicholas, d.b.a. Sno-Kist Tree Co., Cheboygan, Mich. 734,376, pub. 5–1–62. Cl. 1.
Level Head Putter Co., Milwaukee, Wis. 734,498, pub. 5–1–62. Cl. 22.

Lever Brothers Co.: *See*—
Blondeau et Cie.
Pepsodent Co., The.
Lever Brothers Co., New York, N.Y. 734,694, pub. 2–6–62. Cl. 52.
Levy's, Al, Inc., Montgomery, Ala. 734,592, pub. 5–1–62. Cl. 39.
Lewis Mfg. Co., Bay City, Mich. 734,429, pub. 5–1–62. Cl. 12.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. 395,305, ren. 7–17–62. Cl. 33.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. 734,728. Cl. 33.
Link, O. P., Handle Co., Inc., Salem, Ind. 734,527, pub. 5–1–62. Cl. 23.
Liquor Corp. of America, South Orange, N.J. 734,671, pub. 5–1–62. Cl. 49.
Lockheed Aircraft Corp., Sunnyvale, Calif. 734,570, pub. 5–1–62. Cl. 38.
Lock-Joint Window Co., Oklahoma City, Okla. 627,609, canc. Cl. 12.
Londen, Jack W., Boulder, Colo. 734,703, pub. 3–21–61. Cl. 102.
Longines-Wittnauer Watch Co., Inc., New York, N.Y. 394,872, ren. 7–17–62. Cl. 27.
Luce & Co., Inc., Jersey City, N.J. 627,959, canc. Cl. 46.
Lucky Tiger Mfg. Co., Kansas City, Mo. 734,690, pub. 5–1–62. Cl. 51.
Ludlow Corp.: *See*—
Ludlow Mfg. Associates.
Ludlow Mfg. Associates, Boston, Mass., to Ludlow Corp., Needham Heights, Mass. 159,717, ren. 7–17–62. Cl. 42.
Lumbermens Mutual Insurance Co., The, Mansfield, Ohio. 734,708, pub. 5–1–62. Cl. 102.
Lyons, James E., Sr., Portland, Oreg. 627,697, canc. Cl. 22.
M.F.A. Oil Co., Columbia, Mo. 734,433, pub. 2–20–62. Cl. 15.
M. T. & D. Co., Cleveland, Ohio. 734,495, pub. 5–1–62. Cl. 22.
Mace Corp.: *See*—
Military and Computer Electronics, Inc.
MacGregor Sport Products Inc., Cincinnati, Ohio. 734,494, pub. 5–1–62. Cl. 22.
Manhattan Coffee Co.: *See*—
Johnson-Layne Coffee Co., The.
Manley, Harold C., d.b.a. Gopher Game Co., Forest Lake, Minn. 627,704–5, canc. Cl. 22.
Manu-Mine Research & Development Co., Mohnton, Pa. 627,992, canc. Cl. 100.
Manville, Johns, Inc., to Johns-Manville Corp., New York, N.Y. 159,947, ren. 7–17–62. Cl. 35.
Margo and Larry's Health Foods, San Luis Obispo, Calif. 734,678, pub. 5–1–62. Cl. 51.
Marlen Metal Products Co., Hazel Park, Mich. 627,698, canc. Cl. 22.
Marken Co., The: *See*—
Marken, Florence L.
Marken, Florence L., d.b.a. The Marken Co., Kansas City, Mo., to Cosmetic Trend Inc., Springfield, Mo. 394,535, ren. 7–17–62. Cl. 51.
Marks, Sol, d.b.a. Salad King Co., Baltimore, Md. 734,649, pub. 5–1–62. Cl. 46.
Martin-Marietta Corp., Chicago, Ill., from American-Marietta Co., Milwaukee, Wis. 734,518, pub. 3–20–62. Cl. 23.
Martin's Uniforms, Tampa, Fla. 734,594, pub. 5–1–62. Cl. 39.
Mavar Shrimp & Oyster Co., Ltd., Biloxi, Miss. 734,652, pub. 5–1–62. Cl. 46.
McDowell, Bert, Co., The, Sacramento, Calif., to United Grocers, Ltd., Richmond, Calif. 160,910, ren. 7–17–62. Cl. 46.
McGraw-Edison Co., Elgin, Ill. 734,529, pub. 5–1–62. Cl. 24.
McNeil Laboratories, Inc., Fort Washington, Pa. 734,470–1, pub. 5–1–62. Cl. 18.
Meat Merchandising, Inc., St. Louis, Mo. 628,024, canc. Cl. 38.
Medical Paper Specialties, Inc., Wausau, Wis. 734,551, pub. 5–1–62. Cl. 37.
Mennen Co., The, Morristown, N.J. 734,448, pub. 5–1–62. Cl. 18.
Mennen Co., The, Morristown, N.J. 734,680–1, pub. 5–1–62. Cl. 51.
Merck & Co. Inc., Rahway, N.J. 734,476, pub. 5–1–62. Cl. 18.
Mercury Record Corp., Chicago, Ill. 688,316, cor. Cl. 36.
Meyenberg-Old Fashion Products Co., San Francisco, Calif. 734,637, pub. 5–1–62. Cl. 46.
Michelle's: *See*—
Michopoulos, John E.
Michelson: *See*—
Michelson, Harold.
Michelson, Harold, d.b.a. Michelson, New York, N.Y. 734,615, pub. 5–1–62. Cl. 46.
Michopoulos, John E., d.b.a. Michelle's, Colorado Springs, Colo. 734,627, pub. 5–1–62. Cl. 46.
Mid-Continent Leasing Corp., from Mid-Continent Leasing Corp., Chicago, Ill. 734,701, pub. 5–1–62. Cl. 101.
Midgley, Charles Wm., Sacramento, Calif. 627,960, canc. Cl. 46.
Midwest Insulations, Inc., Wabash, Ind. 734,418, pub. 5–1–62. Cl. 12.
Miles Laboratories, Inc., Elkhart, Ind. 627,660, canc. Cl. 18.
Milholland, Ralph, d.b.a. Spot-All Mfg. Co., Little Rock, Ark. 734,693, pub. 5–1–62. Cl. 52.
Military and Computer Electronics, Inc., d.b.a. Mace Corp., Fort Lauderdale, Fla. 734,488, pub. 5–1–62. Cl. 21.
Millers Falls Co., Greenfield, Mass. 627,753, canc. Cl. 23.
Minnesota and Ontario Paper Co., Minneapolis, Minn. 734,423, pub. 5–1–62. Cl. 12.
Mitchell, Joshua B., Long Beach, N.Y. 627,567, canc. Cl. 2.
Mitchell, C. G., Inc., Binghamton, N.Y. 627,974, canc. Cl. 50.
Mme. Leo Products Co.: *See*—
Rowden, Mary E.
Modern Faucet Mfg. Co., Los Angeles, Calif. 734,432, pub. 5–1–62. Cl. 13.
Modern Manifold Specialties and Printing Inc., West Columbia, Tex. 734,573, pub. 5–1–62. Cl. 38.
Modern Products, Inc., McPherson, Kans. 734,417, pub. 5–1–62. Cl. 12.
Monadnock Paper Mills, Inc., Inc., Bennington, N.H. 734,549, pub. 5–1–62. Cl. 37.
Monsanto Chemical Co., St. Louis, Mo. 734,399, pub. 5–1–62. Cl. 6.
Moore Farms, Inc., Lancaster, Pa. 734,380, pub. 5–1–62. Cl. 1.
Morris, Philip, Inc., New York, N.Y. 734,440, pub. 5–1–62. Cl. 17.
Morse Sewing Machine and Supply Corp., New York, N.Y. 734,723. Cl. 23.
Moser Paper Co.: *See*—
Undertakers Supply Co.
Motor Exchange: *See*—
Schwartz, Fred M.
Multitone Electronics Ltd., Toronto, Ontario, Canada. 734,484, pub. 5–1–62. Cl. 21.
Mushynsky, Anthony, d.b.a. Enge Co., New York, N.Y. 627,594, canc. Cl. 10.
Mutual Fire Underwriters Association of New England, Boston, Mass. 734,709, pub. 5–1–62. Cl. 102.
Mutual Ice Co., Alexandria, Va. 734,377, pub. 5–1–62. Cl. 1.
N.V. Maatschappij Antradex, d.b.a. Antradex Co. Ltd., Willemstad, Curacao, Netherlands Antilles. 734,643, pub. 5–1–62. Cl. 46.
N.V. Philips-Duphar, Amsterdam, Netherlands. 734,387, pub. 3–13–62. Cl. 6.
Nalco Chemical Co., Chicago, Ill. 734,691, pub. 5–1–62. Cl. 52.
Namey, Theodore E., Washington, D.C. 628,032, canc. Cl. 40.
Narrow Fabric Co., The, d.b.a. Wyomissing Paper Products, West Reading, Pa. 734,553, pub. 5–1–62. Cl. 37.
National Allied Products, Omaha, Nebr. 734,400, pub. 5–1–62. Cl. 6.
National Appliance Mfg. Co.: *See*—
Dearborn Stove Co.
National Mercantile Agency, Inc., New Haven, Conn. 734,704, pub. 5–1–62. Cl. 102.
Navigators, The, Los Angeles, Calif. 627,999, canc. Cl. 107.
Nestle Co., Inc., The, White Plains, N.Y. 734,665, pub. 5–1–62. Cl. 46.
Newcomer Corp., The, Columbia, Mo. 734,407, pub. 5–1–62. Cl. 6.
Newspaper Enterprise Association, Inc., Cleveland, Ohio. 734,585, pub. 5–1–62. Cl. 38.
Nicholas Freres S.A., Chatou, Seine et Oise, France. 734,684–5, pub. 5–1–62. Cl. 51.
Nicholson File Co., East Providence, R.I. 734,524, pub. 5–1–62. Cl. 23.
Nissen Corp., from Nissen Trampoline Co., Cedar Rapids, Iowa. 734,504, pub. 5–1–62. Cl. 22.
Nissen Trampoline Co.: *See*—
Nissen Corp.
Nordmark-Werke Gesellschaft mit beschraenkter Haftung, Hamburg, Germany. 627,664, canc. Cl. 18.
Norm-Mil Marine Paint Co., Paducah, Ky. 627,642, canc. Cl. 16.
Northern Electric Co., Chicago, Ill. 734,482, pub. 2–6–62. Cl. 21.
Old Line Drug Co.: *See*—
Dunn, Will T.
Olin Mathieson Chemical Corp., New York, N.Y. 627,979-81, canc. Cl. 51.
Olin Mathieson Chemical Corp., New York, N.Y. 734,397, pub. 5–1–62. Cl. 6.
Olin Mathieson Chemical Corp., New York, N.Y. 734,405, pub. 5–1–62. Cl. 6.
Olin Mathieson Chemical Corp., New York, N.Y. 734,453, pub. 5–1–62. Cl. 18.
Olson, Edward, Lynbrook, N.Y. 627,646, canc. Cl. 18.
Onyx Chemical Corp.: *See*—
Onyx Oil & Chemical Co.
Onyx Oil & Chemical Co., to Onyx Chemical Corp., Jersey City, N.J. 398,382, ren. 7–17–62. Cl. 6.
Osborne, Maria De'Aguiar Joost, New York, N.Y. 628,011, canc. Cl. 24.
O'Toole, Eric, Baltimore, Md. 734,505, pub. 5–1–62. Cl. 39.
Outboard, Marine & Mfg. Co., Waukegan, Ill. 627,826, canc. Cl. 31.
Pabst Brewing Co.: *See*—
Pabst Corp.
Pabst Corp., to Pabst Brewing Co., Milwaukee, Wis. 156,902, ren. 7–17–62. Cl. 46.
Pacific Cement & Aggregates, Inc., San Francisco, Calif. 734,381, pub. 5–1–62. Cl. 1.
Parfums Marcel Rochas, Inc., New York, N.Y., from Societe Anonyme Parfums Marcel Rochas, Paris, France. 734,683, 5–1–62, Cl. 51.
Parker Pen Co., The, Janesville, Wis. 734,541, pub. 5–1–62. Cl. 37.
Par Mfg. Co., Vallejo, Calif. 627,702, canc. Cl. 22.
Par-Pak Foods Co.: *See*—
Food Brokers, Inc., of California.
Par Sales Co., Inc., Hollywood, Calif. 734,519, pub. 5–1–62. Cl. 23.
Peerless Electric, Inc., New York, N.Y. 628,006, canc. Cl. 21.
Pennsylvania Glass Sand Corp., Hancock, W. Va. 734,379, pub. 5–1–62, Cl. 1.
Pepsodent Co., The, Chicago, Ill., to Lever Brothers Co., New York, N.Y. 395,446, ren. 7–17–62. Cl. 29.
Perry Knitting Co., The, Perry, N.Y. 627,900, canc. Cl. 39.
Personal Appearance, Inc., Provincetown, Mass., to Marion H. Blakeman, North Truro, Mass. 395,565, ren. 7–17–62. Cl. 51.
Pfizer, Chas., & Co., Inc., New York, N.Y. 734,475, pub. 5–1–62. Cl. 18.
Phillips Petroleum Co., Bartlesville, Okla. 627,584, canc. Cl. 6.

Phillips Publishers, Inc., Newton, Mass. 734,501, pub. 5–1–62. Cl. 22.
Photostat Corp., Rochester, N.Y. 734,531, pub. 5–1–62. Cl. 26.
Pietrus, A. J., & Sons Co., Sleepy Eye, Minn. 734,631–2, pub. 5–1–62. Cl. 46.
Pilot Life Insurance Co., Greensboro, N.C. 734,710–11, pub. 5–1–62. Cl. 102.
Poland Brothers, Inc., Baltimore, Md. 734,718. Cl. 7.
Pollen Products Co., Bakersfield, Calif. 734,660, pub. 5–1–62. Cl. 46.
Polymin Corp., Houston, Tex. 734,412–13, pub. 5–1–62. Cl. 10.
Porter, H. K., Co., Inc., Chicago, Ill. 734,525, pub. 5–1–62. Cl. 23.
Powers-Samas Accounting Machines Ltd., London, England. 627,831–2, canc. Cl. 32.
Proctor & Gamble Co., The, Cincinnati, Ohio. 734,621, pub. 5–1–62. Cl. 46.
Production and Marketing Co., Newtown, Conn. 734,507, pub. 5–1–62. Cl. 22.
Purdue Frederick Co., The, New York, N.Y. 734,462, pub. 5–1–62. Cl. 18.
Quick-Set, Inc., Skokie, Ill. 627,809, canc. Cl. 26.
Rx Pharmaceuticals, Inc.: *See*—
Sterling Drug Inc.
Radoff, William, New York, N.Y. 734,692, pub. 5–1–62. Cl. 52.
Ralston Purina Co., St. Louis, Mo. 734,657–8, pub. 5–1–62. Cl. 46.
Raymond Bag Corp., Middletown, Ohio. 734,384–5, pub. 5–1–62. Cl. 2.
Recherches et Propagande Scientifiques Societe a Responsabilite Limitee, Paris, Seine, France. 627,651, canc. Cl. 18.
Recordati Laboratorio Farmacologico S.p.A., Milan, Italy. 734,459, pub. 5–1–62. Cl. 18.
Ree-Store, Inc., Matawan, N.J. 627,639, canc. Cl. 16.
Reily, Wm. B. & Co., Inc., New Orleans, La. 734,620, pub. 5–1–62. Cl. 46.
Reiss-Premier Corp., to S. M. Frank and Co. Inc., West New York, N.J. 627,591, canc. Cl. 8.
Reliable Textile Co., Inc., New York, N.Y. 627,918, canc. Cl. 42.
Re-Mark Chemical Co., Inc., d.b.a. Hurri-Green Chemicals, Miami, Fla. 734,411, pub. 5–1–62. Cl. 6.
Republic Steel Corp., Cleveland, Ohio. 734,483, pub. 5–1–62. Cl. 21.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 734,720. Cl. 17.
Rhoads & Co., Philadelphia, Pa. 730,159, cor. Cl. 42.
Rival Packing Co.: *See*—
Associated Products, Inc.
Rolx-On, Inc., Milwaukee, Wis. 734,436, pub. 5–1–62. Cl. 15.
Romance Publishing Corp., from Ideal Publishing Corp., New York, N.Y. 734,555, pub. 9–19–61. Cl. 38.
Roma Packing Co., Chicago, Ill. 734,633, pub. 5–1–62. Cl. 46.
Roux Laboratories, Inc., New York, N.Y. 734,689, pub. 5–1–62. Cl. 51.
Rowden, Mary E., d.b.a. Mme. Leo Products Co., Seattle, Wash., to Belcano Co., North Hollywood, Calif. 160,279, ren. 7–17–62. Cl. 51.
Royal Estates Tea Co., Hoboken, N.J. 734,626, pub. 5–1–62. Cl. 46.
Royal Hawaiian Liqueurs, Ltd., Honolulu, Hawaii. 734,670, pub. 5–1–62. Cl. 49.
Royal Packing Co., Inc., Vienna, Md. 734,636, pub. 5–1–62. Cl. 46.
Rubinoff, H., and Co.: *See*—
Baker Brands.
Rutgers Coat Co., Inc., New Brunswick, N.J. 734,587, pub. 5–1–62. Cl. 39.
Rytex Co., The, Indianapolis, Ind. 734,542–3, pub. 5–1–62. Cl. 37.
Safe-T-Alarm, Inc., Chelsea, Mass. 627,686, canc. Cl. 21.
Sage Exporters' Centre, Dubrovnik, Yugoslavia. 628,000, canc. Cl. A.
St. Regis Paper Co., New York, N.Y. 734,547, pub. 3–6–62. Cl. 37.
Saks & Co., New York, N.Y. 734,499, pub. 5–1–62. Cl. 22.
Salad King Co.: *See*—
Marks, Sol.
Sandox, Inc., Hanover, N.J. 734,478, pub. 5–1–62. Cl. 18.
Sauer, C. F., Co., The, Richmond, Va. 734,661, pub. 5–1–62. Cl. 46.
Schlein, Samuel E., Inc., New York, N.Y. 627,898, canc. Cl. 39.
Scholastic Magazines, Inc., New York, N.Y. 734,577–9, pub. 5–1–62. Cl. 38.
Schwartz, Fred M., d.b.a. Motor Exchange, Philadelphia, Pa. 627,716, canc. Cl. 23.
Schwartz, Philip A., Longmeadow, Mass. 734,682, pub. 5–1–62. Cl. 51.
Scientific Packaging Corp., Newark, N.J. 734,390, pub. 5–1–62. Cl. 6.
Scott-Allison Co., Inc., Hempstead, N.Y. 734,464–6, pub. 5–1–62. Cl. 18.
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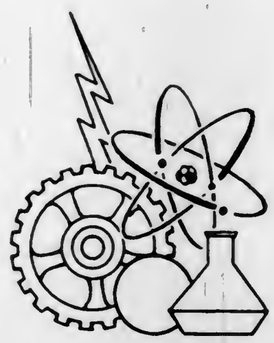
U.S. GOVERNMENT PRINTING OFFICE 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

July 24, 1962 • Volume 780 • Number 4



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 24, 1962 Volume 780 Number 4

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of June 1962

Examiner affirmed	367
Examiner affirmed in part	38
Examiner reversed	81
Total	486

Adjudicated Patents

(C.A. Ill.) Lees Patent No. 2,659,212 (62—71), for method of and means for forming flake ice. Claims 1 to 8 *Held* valid but not infringed. *North Star Ice Equipment Co.* v. *Akshun Mfg. Co.*, 301 F.2d 882; 133 USPQ 59.

(C.A. Ill.) Albright Patent No. 2,683,357 (62—354), for flake ice making machine, *Held* invalid. *Id.*

(C.A. Mass.) Hack Patent No. 2,710,461 (36—28), for resilient shoe soles. Claims 1 to 3 *Held* invalid. *Ripple Sole Corp.* v. *American Biltrite Rubber Co.*, 302 F.2d 2; 133 USPQ 355.

(D.C.N.Y.) Stiegele Patent No. 2,689,450 (59—79), for expansible bracelet, *Held* valid and infringed. *Stiegele* v. *J. M. Moore, Import Export Co.*, 204 F. Supp. 318; —USPQ—.

(D.C. Tenn.) Walker Patent No. 2,896,938 (267—8), for spring adapters for shock absorbers. Claims 2 and 3 *Held* invalid. *Monroe Auto Equipment Co.* v. *Heckethorn Mfg. & Supply Co.*, 204 F. Supp. 249; 133 USPQ 34.

(D.C. Tenn.) Walker Patent No. 2,912,235 (267—8), for automatic auxiliary support for a vehicle. Claim 14 *Held* invalid. *Id.*

(C.A. Nebr.) Scherr Reissue Patent No. 24,557 (195—103.5), for means for assessing the effect of various agents on the growth of microorganisms. Claims 1, 3, 4, 6 and 8 *Held* invalid. *Scherr* v. *National Bio-Test, Inc.*, 301 F.2d 901; 133 USPQ 356.

Disclaimers

2,889,121.—*Lawrence A. Heinle*, San Mateo, Calif. TOILET PAPER ROLL CORE. Patent dated June 2, 1959. Disclaimer filed June 12, 1962, by the inventor.

Hereby enters this disclaimer to the sole claim of said patent.

2,942,760.—*William S. Schneider*, Los Angeles, Calif. DISPENSING CONTAINER. Patent dated June 28, 1960. Disclaimer filed May 28, 1962, by the assignee, *Packaging Frontiers, Inc.*

Hereby enters this disclaimer to claims 1, 7 and 10 of said patent.

2,978,049.—*Sam C. Skidmore* and *Fred B. Crook*, Fort Worth, Tex. STABILIZER FOR DRILL BIT. Patent dated Apr. 4, 1961. Disclaimer filed June 12, 1962, by the inventors.

Hereby enter this disclaimer to claim 1 of said patent.

3,007,291.—*Harold K. Jordan* and *Joseph B. Rawls*, Winston-Salem, N.C. METHODS OF AND APPARATUS FOR PACKAGING COMPONENTS. Patent dated Nov. 7, 1961. Disclaimer filed June 15, 1962, by the assignee, *Western Electric Company, Incorporated.*

Hereby enters this disclaimer to claim 10 of said patent.

New Applications Received During May 1962

Patents	7,782
Designs	453
Plant Patents	12
Reissues	29
Total	8,276

Issue

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Designs	32—No.	193,261 to No. 193,292, incl.
Plant Patents	2—No.	2,157 to No. 2,158, incl.
Reissues	7—No.	25,203 to No. 25,209, incl.
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Total number of pending applications (excluding Designs)	191,242
Total number of pending Design applications	5,865
Total number of applications awaiting action (excluding Designs)	100,882
Total number of Design applications awaiting action	2,096
Date of oldest new application	Jan. 26, 1961
Date of oldest amended application	Nov. 3, 1960

M. C. ROSA, Director, Patent Examining Operation

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(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

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4. (VI) FALLER, E. A., Material or Article Handling	6-29-61	6-19-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	6-29-61	7-3-61
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25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	4-12-61	4-21-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5-1-61	5-4-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6-12-61	6-14-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	5-15-61	6-1-61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	5-29-61	5-1-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6-27-61	7-6-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	5-1-61	4-20-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	4-17-61	5-1-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	5-8-61	5-22-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-4-61	3-7-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	6-29-61	7-5-61
36. (V) EVANS, R. L., Measuring and Testing (part)	4-10-61	5-4-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-21-61	3-17-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-1-61	6-2-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	4-17-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-5-61	5-1-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-14-61	4-3-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-1-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-16-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	1-26-61	2-6-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	10-12-61	6-6-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-2-61	3-30-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles	6-20-61	6-9-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-13-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	4-14-61	4-14-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-5-61	4-17-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	4-25-61	4-19-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	9-13-61	9-26-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	5-22-61	6-12-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-3-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	3-30-61	3-16-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-2-61	6-12-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	6-21-61	5-2-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	7-24-61	6-19-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	5-22-61	5-3-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-27-61	11-3-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	9-7-61	9-13-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-1-61	6-1-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-1-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	3-16-61	3-13-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	2-28-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	3-13-61	4-11-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	5-4-61	5-5-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	7-26-61	8-15-61
81. (III) HANNAH, A. B., Industrial Arts	2-5-62	2-16-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	2-2-62	2-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	3-30-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-20-61	5-9-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	12-5-61
95. ANGEL, C. D., Metallic Building Structures	7-7-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	4-18-61	5-17-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents.....Numbers 2,379,404 to 2,380,912 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE WILLIAM H. SCHECHTER

No. 6770. Decided May 4, 1962.

[—CCPA—; 301 F.2d 684; 133 USPQ 386]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—PROCESS OF PRODUCING ALKALI METAL BOROHYDRIDES.

The decision of the Board of Appeals refusing certain claims to a process of producing alkali metal borohydrides as unpatentable over the prior art is affirmed.

APPPEAL from the Patent Office. Serial No. 342,994.

AFFIRMED.

Brown, Critchlow, Flick & Peckham (*Fulton B. Flick*, of counsel) for appellant.

Clarence W. Moore (*Jack E. Armore*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH and SMITH, *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

Claims 1 through 3, and 9 [1] in appellant's patent application for a process of producing alkali metal borohydrides were rejected by the Primary Examiner as unpatentable over certain prior art. The Board of Appeals affirmed the rejection. Appellant alleges reversible error in the Board's decision.

Claim 1 is representative and reads:

1. That method of making sodium borohydride comprising finely dispersing hydride of the alkali metal in an inert liquid of high boiling point, maintaining the dispersion at a substantially uniform temperature of about 250 to 350° C., and reacting said sodium hydride with a boron-containing reagent introduced into the dispersion and selected from the group consisting of boron halides and their organic addition agents, boric oxide, alkali metal borohalides, and alkyl borates, and recovering said sodium borohydride from the system.

References relied on by the Examiner are:

Schlesinger et al. (I), 2,534,533, December 19, 1950.
Schlesinger et al. (II), 2,494,968, January 17, 1950.
Muckenfuss, 1,958,012, May 8, 1934.

Appellant's invention relates to a process of producing alkali metal borohydrides characterized by the formula MBH_4 in which M represents an alkali metal. The process consists of the steps of (1) dispersing the metal hydride in an "inert liquid, most suitably one of high boiling point such as mineral oil," (2) heating the dispersion to between 250° and 350° C. and (3) introducing a dry boron-containing reagent while stirring the dispersion rapidly. The specification states:

Fine dispersion of the metal hydride is a sine qua non of all embodiments of the invention, otherwise the reactions do not proceed, at least at any acceptable rate.

The "boron-containing reagent" is defined as:

* * * boron halides, such as boron trifluoride (BF_3) or boron trichloride (BCl_3), and the organic addition products of boron halides of which a considerable

[1] Remaining claims 4 through 6 are withdrawn as not readable on the elected species and are not before us.

number are known, as well as alkyl borates, e.g., methyl and ethyl borates: [$B(OMe)_3$; $B(OEt)_3$]. Boron reagent as the term is here used also includes boric oxide (B_2O_3), or alkali metal borohalide such, for example, as sodium borofluoride ($NaBF_4$), so that such compounds too are boron-containing reagents for present purposes.

Schlesinger et al., Patent No. 2,534,533, hereinafter referred to as Schlesinger I, discloses the preparation of alkali metal borohydrides by the reaction of alkali metal hydrides and boron-containing reagents. The method utilized by Schlesinger I is stated as follows:

* * * The apparatus is flushed out with dry nitrogen, and sodium hydride in powdered form is introduced into the apparatus without contacting it with air and moisture. The sodium hydride is slowly heated to between 200° and 275° C., and the methyl borate is added at such a rate that the theoretical amount is introduced over a period of 40 to 60 minutes. During the adding of the methyl borate the reacting materials are vigorously stirred. After all the borate has been added the temperature is maintained and the stirring is continued until the reaction is complete. * * *

When boric oxide is used as the boron reagent, operating temperatures of 300–375° C. are required. Schlesinger I also discloses the reaction of the boron reagent with an alkali metal and hydrogen to produce the borohydride.

Schlesinger II, Patent No. 2,494,968, discloses the preparation of alkali metal alkoxyborohydrides by reacting, in different molecular proportions, the same materials used in Schlesinger I, viz, alklai metal hydrides and boron-containing reagents. The patentees state:

Generally speaking the reaction is exothermic and tends to occur vigorously. The vigor of the reaction may be at least partially controlled by the use of diluents which serve to prevent the temperature of reaction from reaching an unduly high value. * * *

The materials named as diluents are benzene, toluene and dioxane. Example IV of the patent teaches placing benzene, the hydride and the borate in the reaction vessel prior to heating.

Muckenfuss teaches the preparation of alkali metal hydrides from the respective alkali metal and hydrogen. Liquid distributing agents, such as commercial lubricating and paraffin oils, are used in the process.

The Examiner rejected claims 1 and 9 as unpatentable over Schlesinger I in view of Schlesinger II. Claims 2 and 3 were rejected on the same prior art further in view of Muckenfuss.

The Board, in sustaining the Examiner, stated:

The Examiner's answer sets forth the Examiner's position with commendable thoroughness and clarity. Since we agree with this position as stated, we adopt as a statement of our opinion the Examiner's answer, as amplified by the following comments.

Those comments included discussion of a journal article [2] cited by appellant. The Board further relied on *In re Migrdichian*, 29 CCPA 110, 129 F.2d 547, 54 USPQ 190, for the proposition that

* * * the indicated use of an inert diluent is a conventional expedient that requires no more than the ordinary skill of the art. * * *

The Examiner's position on claims 1 and 9 is that Schlesinger I teaches the claimed process "except for the limitation that the sodium hydride is dispersed in an inert liquid of high boiling point when it

[2] Schlesinger et al., J. Am. Chem. Soc., vol. 75, pages 186–190, and 205–209, January 5, 1953.

is contacted with the boron containing reagent." He stated that "In vew of the close similarity of the reactions taught by Schlesinger et al. (I) and (II), no invention can be seen to reside in merely controlling the temperature in the reaction taught by Schlesinger et al. (I) in the same manner as taught by Schlesinger et al. (II), i.e., by dispersing the sodium hydride in an inert liquid such as benzene or toluene." The limitation of claims 2 and 3 that the liquid be mineral oil was considered by the Examiner "to be within the skill of the art," especially in view of Muckenfuss.

Appellant in his brief states "*The precise point of novelty lies in* maintenance of fine dispersion of the sodium hydride in *mineral oil or similar inert high boiling liquid.*" He contends that the use of such a liquid in the instant process is unobvious, basing his argument on the allegation that the "position of the Patent Office utterly *overlooks the history of this field* and the relevant facts" as well as the affidavits of record, citing *In re McKenna et al.*, 40 CCPA 937, 203 F.2d 717, 97 USPQ 348. He further alleges that the rejection is based on hindsight arising from appellant's disclosure and that the references were improperly combined.

Appellant submitted for the Examiner's consideration the affidavit of one Dr. Millard which states that the operation of the process of Schlesinger I "frequently developes" hot spots allegedly caused by the "inadequate dissipation of heat throughout the reaction mixture." The affidavit further states that in appellant's process

> • • • There has been no occurrence of an uncontrolled violent reaction of the type described for the "dry" process. The reason for the more satisfactory control of this reaction when carried out in mineral oil suspension is believed to be due to the more even distribution of heat throughout the reaction mixture and the quick dissipation of heat which precludes the development of a "hot spot." Another reason for the better control which is obtained when this reaction is carried out in mineral oil suspension is due to the solubility of methlyl borate in mineral oil. • • •

We have thoroughly considered all of appellant's contentions but are unable to agree that the Board erred as alleged.

As pointed out by the Examiner, Schlesinger II clearly teaches the exothermic character of the reactants and the control of that reaction by the use of diluents. Since Schlesinger I teaches a process utilizing the identical reactants, it would be obvious, in our opinion, to also use diluents to control that reaction. It is true that Schlesinger II discloses diluents of relatively low boiling point, such as benzene or toluene.[3] However, it is noted that the reaction of Schlesinger II is carried out at about 90° C., as in "Example IV," while Schlesinger I specifically requires a temperature "between 200° and 275° C." for the preparation of the borohydride. If one were to control the Schlesinger I exothermic reaction in the manner taught by Schlesinger II, it is evident that an inert liquid of higher boiling point would be necessary. In our opinion, the use of a high boiling inert diluent in the process of Schlesinger I would be obvious to one skilled in this art in view of the teachings of Schlesinger II.

[1] The decision is affirmed.

AFFIRMED.

[3] The Examiner stated that the respective boiling points are 80.1° C. and 110.8° C.

U.S. Court of Customs and Patent Appeals

IN RE ROLLIN H. SPELMAN AND GEORGE W. ANDERSON

No. 6767. Decided May 4, 1962.

[49 CCPA—; 301 F.2d 945; 133 USPQ 384]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"PNEUMATIC TIRE TREAD."
The refusal of the claims in an application entitled "Pneumatic Tire Tread" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 593,414.

AFFIRMED.

Frank S. Greene (*McCoy, Greene & TeGrotenhuis, Frank J. Earnheart* and *Munson H. Lane*, of counsel) for appellants.

Clarence W. Moore (*S. Wm. Cochran*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the Examiner's rejection of all claims in appellant's application for a "Pneumatic Tire Tread" as unpatentable over the prior art.

Appellants' device is a pneumatic tire having a carcass of conventional construction, and a tread comprising "two ground engaging bands that are laterally spaced and on opposite sides of a central circumferentially continuous groove." Each ground engaging band has a slip resistant rib pattern while the groove "is of a depth such that its bottom is closely adjacent the outermost of the fabric reinforcing plies." Such a construction maintains a wide area of tread contact with the road surface while providing flexibility of the tread bands, thus enabling "the tire to more effectively resist side slip and thereby reduce noise and tread abrasion."

Claim 6 is representative and reads:

> 6. A pneumatic tire having an arcuate crown portion and superposed plies of reinforcing fabric embedded in rubber and conforming to the interior contour of the tire, and a rubber tread exteriorly of said plies that is of a width less than the maximum width of the tire, that has the greatest radial thickness at the side edges thereof and that decreases in thickness toward the mid-circumferential plane of the tire, said tread having a central circumferentially continuous, narrow groove and consisting of two equidimensional reversely disposed ground engaging bands whose inner side edges form the sides of said groove, said groove being of a depth to provide at its bottom a narrow flexible midcircumferential zone in said crown portion of the tire, each of said bands having a ground engaging face in the form of a surface of revolution that has convex transverse curvature that gradually increases in diameter outwardly from its inner edge and inwardly from its outer edge to a circumferential portion of maximum diameter, thereby providing two spaced ground engaging areas in the portion of the tread engaging the ground, said bands normally supporting equal portions of the load and said narrow flexible zone permitting flexing of said crown portion at said zone by internal air pressure to maintain both ground engaging faces in ground contact when the bands are subjected to unequal loads.

The references relied on are:

Banyai (Great Britain), 381,365, October 6, 1932.
Buddenhagen, 2,612,928, October 7, 1952.
Palko et al., 2,756,798, July 31, 1956.

The Banyai patent discloses a pneumatic tire having a tread comprising two ground engaging bands and a central circumferentially

continuous groove. Banyai points out (1) that previous tire treads with one point of contact with the ground were conducive to slipping and skidding and (2) that treads subdivided so as to provide numerous points of contact had their subdivisions "joined together by connecting or bridging portions of considerable thickness which in every case impart to the tyre the properties of a rigid system." The patentee states that his invention "provides an effective solution of the problems involved." In describing the main features of his tire, he states:

> The new tyre has a plurality of running surfaces or treads which are connected together by annular peripheral portions of the cover, the essential feature of the invention being that these portions of the cover are outwardly arched, are comparatively thin, are of sufficient width to permit of the independent resilient yielding of the individual portions of the tread, and are combined with thickened tread portions of cambered cross-section.
>
> A further essential feature of the invention is to be found in the fact that, when two tread portions are provided, the intervening cover portion is of such width that the bearing points of the tyre are brought substantially beneath the lateral portions of the reinforcement embedded in the cover, * * *.

The Buddenhagen and Palko patents disclose treads which have central grooves and slip-resistant tread patterns. Palko is directed to a tread said to be useful on snow and ice, while Buddenhagen is directed to a "substantially-noiseless tread" configuration.

The Examiner rejected the claims as unpatentable over Banyai in view of either Buddenhagen or Palko. The Board in sustaining the Examiner, held that the claims did not patentably differentiate over Banyai alone.

Appellants allege here, as below, that their tread has two distinguishing features said to be unobvious over the prior art and, therefore, patentable: (1) the tread width is less than the maximum width of the tire, and (2) the central circumferentially continuous groove is "narrow."

The Board disagreed that the first alleged feature patentably differentiated over Banyai since the "load imposed on the casing through each tread band * * * is applied along a line spaced a significant distance inward of the casing side wall." It also held that "a quite insubstantial narrowing of the Banyai tire tread would cause each edge thereof to lie just inwardly of the side face plane of the tire and so comply with the claimed requirement of a 'width less than the maximum width of the tire. * * * Such a change could well be within normal manufacturing tolerances." While we do not think the record expressly supports the first interpretation of the Board, we are in complete agreement with the second reason it advances.

The Board's position on the second feature is stated as follows:

> Also, we are not persuaded that the unbased comparative "narrow" as applied to the groove between the two tread bands in these claims serves to particularly and distinctly, and hence patentably, differentiate from the groove formed between the two tread bands in Banyai.

Appellants contend that the alleged distinguishing features are contrary to the express teachings of Banyai; that the Banyai tire is impractical for use on modern highways; and that the affidavits of record establish the practicality and commercial success of their tread. Associated with those contentions is reliance on the proposition that narrow improvements, as well as pioneer inventions, which advance the art, are entitled to patent protection, citing *Diamond Rubber Company of New York* v. *Consolidated Rubber Tire Company*, 220 U.S. 428. While we appreciate the tenor of that decision, we do not think the facts here will support its application.

In our opinion, as also observed by the Board, appellants have done no more than would be expected of one of ordinary skill in that art having the references before him.

Although the single drawing in Banyai shows a groove which appears to be relatively "wider" than appellants' "narrow" groove, the patent expressly advises that the groove be "of sufficient width to permit of the independent resilient yielding of the individual portions of the tread" and to bring "the bearing points * * * substantially beneath the lateral portions of the reinforcement embedded in the cover."

To remove any doubt as to the state of the art available to appellants, Buddenhagen and Palko specifically show that a tread width less than the maximum width of the tire and a "narrow" groove are well known features in that art.

With that understanding of the state of the art and viewing the subject matter as a whole, as we must, it seems to us that it would be obvious to one skilled in that art, desiring to take full advantage of the beneficial features taught by Banyai, to produce the claimed configuration.

We find no evidence in the record to support appellants' allegation that Banyai's tire is impractical, nor under the facts here are we persuaded by the allegations of commercial success.

[1] Since we find no error in the Board's decision, it is affirmed.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

U.S. Court of Customs and Patent Appeals

IN RE ELLEN LOUISE SHOOK

No. 6782. Decided May 4, 1962.

[49 CCPA—: 301 F.2d 955; 133 USPQ 391]

1. PATENTABILITY—PRINTED MATTER—VARIATIONS IN PRINTED MATTER ON PLAYING CARDS—IN RE STERLING FOLLOWED.

   Upon review of a rejection for unpatentability over the prior art of claims to a device for presenting a plurality of prearranged bridge hands as well as for teaching bridge comprising indicia on a deck of playing cards, *Held* that "* * * as was said by this court in *In re Sterling*, 21 CCPA 1134, 70 F.2d 910, 21 USPQ 519, 'The general physical structure of appellant is admittedly old and such modifications in the adjustment of printed matter thereto as he discloses are mere obvious arrangements of the printing'."

2. SAME—PARTICULAR SUBJECT MATTER—"BRIDGE PLAYING DEVICE."

   The refusal of certain claims in an application entitled "Bridge Playing Device" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 509,457.

AFFIRMED.

Watson, Cole, Grindle & Watson, Willis L. Vary for appellant.

Clarence W. Moore (*S. Wm. Cochran* and *Jere W. Sears*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

This is an appeal from the rejection by the Patent Office Board of Appeals of claims 2, 3, 5, 6, 7, 8 and 10 of appellant's U.S. application Serial Number 509,457, filed May 19, 1955 for a patent on a "Bridge Playing Device." The references relied upon by the Board are:

Wilks (British), 535,269, April 3, 1941.
Middlebrook, 2,296,113, September 15, 1942.

The preferred embodiment of appellant's invention as disclosed in said application comprises a deck of playing cards which is a conventional deck except for having certain indicia printed on the back of each card plus supplementary cards called "guide cards." The purpose of such a deck is to facilitate the dealing of prearranged bridge hands, as in duplicate bridge games as well as to facilitate teaching bridge. The deck permits the ready distribution or dealing of a number of prearranged bridge hands in the manner indicated by the indicia on the back of each playing card. After distribution, the cards are played in the normal manner of playing bridge. The guide cards are used to indicate the proper bid and order [1] in which each hand should be bid and played.

The faces of the playing cards are conventional. Printed on the backs are certain indicia consisting of numbers and letters which indicate to which player that particular card should be dealt. In one embodiment, the letter and number indicia are arranged in four vertical columns, each column heading indicating the status of vulnerability for the hands thereunder. Thus, in a first column under "NONE," the first pair of indicia is "D1." This would mean that for the first prearranged hand, as indicated by the number "1," neither side is vulnerable, and the card upon which these indicia are imprinted is to be dealt to the player designated as dealer, as indicated by the letter "D." Each of the fifty-two playing cards contains similar indicia, with each player designated as A, B, C, or D, proceeding counter-clockwise from the dealer's left. To further illustrate, the fourth column, headed "BOTH," contains the pair of indicia "B4" which indicates that for the fourth prearranged hand, both sides are vulnerable and the card is to be dealt to player B, who is the partner of dealer D.

For each prearranged hand, applicant provides four guide cards, one for each player. These cards are to be used as guides in the proper bidding and playing of the prearranged hands and are not playing cards themselves. Each guide card indicates to each player the proper bid and order of bidding and order of playing of his cards.

Another feature of applicant's invention is a "card aligning symbol" which appears *on the face* of each playing card. This symbol, a dot or other mark, appears in an upper corner of the card face when the card is properly orientated so that the indicia on the backs are orientated for reading. When the cards are played, face up, the player winning the trick aligns the four cards by means of the card aligning symbol, so that when the cards in all tricks are similarly aligned, the dealer merely aligns all the tricks and the cards will be properly aligned for the dealer to read the indicia on the backs without requiring further rearrangement of the cards.

[1] The proper order or sequence of bid or play means the order or sequence which would be used by an expert bridge player.

Claim 2, representative of the claims on appeal, is as follows:

A device for presenting a plurality of prearranged bridge hands comprising a deck of playing cards, the back of each individual card containing a series of paired indicia denoting the manner of dealing the cards, one of said indicia denoting a particular prearranged hand and the other of said indicia denoting the player to whom the card is to be dealt, and means for denoting the status of vulnerability of each prearranged hand whereby, upon dealing the cards into four groups according to the indicia a prearranged bridge hand is presented.

Claim 3 is narrower than claim 2, supra, in that it calls for four columns of paired indicia on the back of each card. Claim 5 claims the deck of playing cards with the paired indicia as recited in claims 2 and 3 and adds the card aligning symbol. Claim 6 recites the paired indicia, "means for denoting the status of vulnerability of each hand," and the card aligning symbol.

Claim 7 recites the playing cards with paired indicia and "a plurality of separate guide cards" which denote the playing cards to be held in each pre-arranged hand and also the order of bidding said hand. Claim 8 claims *in combination* the playing cards with paired indicia and the plurality of guide cards. Claim 10 claims the playing cards with paired indicia, the means for denoting the vulnerability status for each prearranged hand, and a numeral below each pair of indicia on the playing cards denoting the proper order of play for that card.

The Middlebrook patent, relied upon by the Board, discloses a deck of playing cards with printed indicia on the backs. The specification states:

This invention relates to playing cards and, more particularly, to playing cards to be used for playing contract bridge, duplicate contract bridge, whist or like games.

Middlebrook's indicia, in the embodiment shown in FIGURE 3, denote the status of vulnerability for each hand, which player is to be dealer and to which player each card is to be dealt for that particular hand. This is clear from the specification which states:

A still further object of this invention is to provide a playing card on which the vulnerability of the various players on each hand of a series of hands to be played is permanently indicated and on which each player may mark by a removable mark his position when a card is dealt to him so that the card on a subsequent deal may be dealt to that same position and played by another player after the players have changed positions, the mark being removable thereafter.

* * * * * * *

Each area is numbered at *r*. A letter is imprinted adjacent the number at *s* [2] the letter indicating one of the four positions, North, South, East or West, the position to which the card is to be dealt in the hand corresponding to the adjacent number. *These letters may be either permanently or removably imprinted on the card.* [Emphasis added.]

The Wilks reference discloses a series of guide or "deal cards" which are to be used with four decks of regular playing cards to deal prearranged bridge hands. The deal cards indicate the status of vulnerability for each hand, which player is to be dealer and which cards are to be held by each player.

In its affirmance of the Examiner's rejection the Board stated that "the Examiner was correct in refusing to allow the claims for the reasons he stated" and that:

The Examiner's position is fully and clearly set forth in his answer. After due consideration to the arguments presented in the brief and presented by

[2] It appears that this letter should be "F," to correspond with Middlebrook's FIGURE 3.

appellant at the oral hearing, we are of the opinion that the Examiner was correct in refusing to allow the claims for the reasons he stated.

The arrangement of printed matter or indicia as disclosed and claimed by appellant is advantageous in distributing cards for playing duplicate bridge or for instructing beginners. However, the fundamental concept as claimed by appellant is disclosed in the patents to Middlebrook and Wilks.

The Examiner's answer states that "claim 2 is under rejection as fully met by Middlebrook."

In arguing that this rejection on Middlebrook should be reversed, appellant asserts that the claim sets forth in substance a new and unobvious relationship between the indicia and the cards, not shown in Middlebrook. Her argument is based on the idea that Middlebrook's invention cannot be used for prearranged bridge hands, since his cards are not marked to indicate to which player they are to be dealt until after the first hand has been dealt. It is appellant's position that her cards are especially useful in teaching bridge, since the hands are prearranged and so marked by the manufacturer (under the guidance of a bridge expert) while Middlebrook's cards are useful only in playing duplicate bridge, since the hands are not prearranged by an expert but are prearranged only after the cards have been dealt at random and are marked by the players receiving them.

We do not agree that Middlebrook's invention is so limited. While Middlebrook states that his cards may be used in playing duplicate bridge wherein each player marks his cards after he receives them, the patentee also states that the marks "may be either *permanently* or removably imprinted on the cards." [Emphasis added.] Claim 2, quoted supra, broadly claims "a series of paired indicia" and "means for denoting the status of vulnerability." We think that the Examiner and Board were correct in rejecting this claim as "fully met" by Middlebrook, since the reference clearly discloses the "series of paired indicia" denoting the player and hand relationship and the "means for denoting the status of vulnerability." Since it is clear that Middlebrook also contemplated permanent imprinting of his indicia for hands prearranged prior to the first deal as stated above, the rejection of claim 2 is affirmed.

The Examiner's answer also rejects claims 3, 5, 6 and 10, as "unpatentable over Middlebrok." Claim 3 differs from the reference by defining the indicia denoting the vulnerability status of the player positions as a "heading" above the columns of paired indicia. Since the reference discloses such indicia, the arrangement thereof into columns below an appropriate heading is not patentable. We agree with the Examiner's statement that:

• • • In any case, it is believed that no unobvious result would be produced by applicant's particular arrangement of printed matter.

Claims 5 and 6 call for applicant's "card-aligning symbol" which we think is at best but an obvious addition to the cards of Middlebrook.

Claim 10 calls for a numeral below each pair of indicia denoting the order in which the card is to be played. The Examiner stated that this feature "is not considered patentably significant" with which we agree. Indicating the proper sequence of play for a bridge hand is such a commonly used expedient, that we think it would be obvious to one of ordinary skill in the art to imprint the proper sequence indicia on the cards themselves. We therefore affirm the rejection of claims 3, 5, 6 and 10.

The Board affirmed the Examiner's rejection of claims 7 and 8 as "unpatentable over Wilks." As noted, supra, Wilks discloses a set of "deal cards" to be used with regular playing cards. These "deal cards" contain all of the indicia indicating vulnerability status, which cards are to be held by each player in each prearranged hand, and which player is to be designated as dealer. The specification also discloses:

For beginners, deal cards may also state what bidding each player should make, the final declaration, and which card should be played at any trick.

The sole distinction of appellant's invention as defined in claims 7 and 8 over Wilks is that appellant has transferred from the guide or "deal cards" to the backs of the playing cards, the paired indicia indicating to which player the card shall be dealt in each prearranged hand. The Examiner and Board did not think this distinction was of "patentable significance." We think this conclusion is correct.

Although Wilks discloses that his "deal cards" can be used with four decks of ordinary playing cards, he does consider it desirable that the playing cards be marked to distinguish one player's cards from another's. It seems to us that it would be obvious to one of ordinary skill in the art to further mark the playing cards of Wilks to indicate to which player they shall be dealt in each hand if it was desired to distribute the cards by reference to these marks on each card, rather than by reference to the "deal cards" alone. Wilks, in combining his deal cards with ordinary playing cards, has every feature of appellant's claimed combination of marked playing cards and deal cards, except the marking on the playing cards. Marking the playing cards themselves to indicate to whom they belong or are to be dealt is a concept well-known at the time of appellant's invention, as shown by both Wilks and Middlebrook. Although the Board and Examiner did not base the rejection of claims 7 and 8 on the Middlebrook patent, it shows the state of the art at the time the invention was made. The allegedly novel features called for in claims 7 and 8, would in our opinion have been obvious to one of ordinary skill in the art at the time the invention was made.

The Board stated that the variations of appellant's invention over the prior art resided only in the arrangement of the printed indicia and that such variations of printed matter "are without patentable significance." Appellant asserts that the variations in printed matter present in her invention present new relations of printed matter to structure which is patentable.

[1] We think, however, that as was said by this court in *In re Sterling*, 21 CCPA 1134, 70 F.2d 910, 21 USPQ 519,

The general physical structure of appellant is admittedly old and such modifications in the adjustment of printed matter thereto as he discloses are mere obvious arrangements of the printing.

Appellant, to prevail, must show that her invention is both novel and unobvious. 35 U.S.C. 101, 103. The Board and Examiner correctly held that the subject matter of appellant's claim 2 was old and anticipated by Middlebrook and that of the other claims was obvious in view of the prior art references cited. [2] For the foregoing reasons, the decision of the Board is affirmed.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

U.S. Court of Customs and Patent Appeals

IN RE CHARLES E. HURLBURT

No. 6780. Decided May 4, 1962. Petition for rehearing denied June 15, 1962

[49 CCPA—; 301 F.2d 692; 133 USPQ 388]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"ATTITUDE INDICATING INSTRUMENT."

The decision of the Board of Appeals refusing a claim in an application entitled "Attitude Indicating Instrument" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 536,915.

AFFIRMED.

Herbert L. Davis (*Emory C. Naylor*, of counsel) for appellant.

Clarence W. Moore (*George C. Roeming*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN and SMITH, *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the rejection of claim 16 of appellant's application Ser. No. 536,915, filed September 27, 1955, for "Attitude Indicating Instrument." No claim is allowed.

The invention relates to an aircraft pitch and bank[1] indicating instrument which, in the totality of its mechanism, is of considerable mechanical complexity. The contribution to the art made by appellant, however, is a relatively simple improvement over the acknowledged prior art. We shall attempt briefly to relate these two matters.

A pitch and bank indicator is an instrument on the panel before an aircraft pilot in which he can see indicia which tell him at a glance whether he is climbing or diving and whether he is banking to right or left or flying level and shows any existing combination of these attitudes. In the instrument at bar what he sees when flying parallel to the earth's surface is a round glass window divided in the middle by a heavy horizontal line, which represents the horizon, above which is a blue area representing sky and below which is a black area representing the ground. These areas are ruled off horizontally in divisions. At either end of the horizon line are pointers which cooperate with marks around the frame of the window so that if the horizon tilts, as in a bank, the degree of bank is indicated. Fixed with relation to the window are horizontal marks representing the wings of the aircraft and the attitude of the aircraft is indicated by the relation of these marks to the movable indicia behind them, in the same manner as direction is indicated by a compass which has a movable member which is read against a fixed mark.[2]

Since the instrument and its casing, including the window, are fixed in the aircraft, the wing markings maintain a fixed relation to the aircraft. Behind the window and practically filling the area encompassed by it is one face of a rectangular box-like structure having rollers mounted at its four parallel edges. Around this structure and mounted for movement on the rollers is an endless tape. It is on this tape that the horizon, sky, and ground are indicated. When the plane climbs the tape moves in one direction and when it dives it moves in the opposite direction and, as viewed through the window, it appears to be moving up and down, since it is close behind the window and parallel to it. To indicate bank, the entire box-like element which carries the tape is mounted on a shaft which rotates on an axis which is parallel to the longitudinal axis of the aircraft. When that shaft rotates, the part of the tape visible through the window appears to the pilot to turn either clockwise (indicating left bank) or counterclockwise (indicating right bank). It will be understood that this apparent movement is relative. What is actually happening is that the tape is being held in a steady position by a gyroscope and the marks representing the wings of the plane are rotating in front of it as the aircraft banks.

Thus there are two apparent movements of the tape relative to the window, rotational movement, either counterclockwise or clockwise, and vertical movement as the tape runs around the rollers which support it, either up or down. These movements are under the control of a "conventional vertical gyro, not shown, remotely mounted in the aircraft" coupled to the instrument through a "synchro system" and "a conventional synchro bank signal transmitter, not shown, associated with the vertical gyro." In short, this is a gyroscopically controlled instrument, the gyro being outside the instrument and coupled to it through synchro systems and servo motors.

As will appear, this general type of instrument was old when appellant made his invention. The specification acknowledges this fact. It states:

> Methods heretofore used have consisted of the use of horizon bars and moving spheres. The horizon bar has a disadvantage in being only a moving line, and requires a certain amount of pilot interpretation. The moving sphere is more adaptable for glance reading, because it consists of area motion, so that in a climb a light area indication is seen, while in a dive a darker area indicating earth or sea may be seen. *The sphere, however, has an inherent parallax problem* presenting to the pilot an apparent displacement of the visible indication through the window front of the instrument.
>
> It is a purpose of this invention *to eliminate this problem of parallax* by providing an attitude indicating instrument in which *the entire area motion is accomplished in a plane parallel to the front window of the instrument and in close proximity thereto.* [Emphasis ours.]

The single claim on appeal reads (emphasis ours):

> 16. In an aircraft pitch and bank attitude indicator instrument of a type including a housing *having a window* at one end thereof, *an endless tape movable vertically in close parallel relation to the rear of the window*, indicia on said tape visible through said window to indicate the pitch attitude of the aircraft, an angularly adjustable means for supporting the tape in said *close parallel relation to the window*, a dial plate carried by the housing and positioned about the window, and indicia on said dial to cooperate with means to indicate the bank attitude of the aircraft; the improvement comprising said adjustable supporting means including a yoke member, a shaft to rotatably support the yoke member in the housing on a longitudinal axis extending perpendicular to the window, the yoke member including a pair of parallel longitudinally disposed spaced plates, first and second rollers supported respectively between upper and lower forward corners of the plates, *the endless tape being movable* over the rollers as the rollers are driven and the first and second rollers supporting a portion of the tape *in said close parallel relation to the rear of the window;* first motor means mounted between said spaced plates and responsive to a remotely located pitch signal transmitting device to drive the rollers; a frame member about the aforesaid portion of the tape and fixed to ends of the spaced plates in close proximity to the window, said frame member having

[1] Pitch is the nosing up or down of an aircraft about an axis transverse to the axis of the fuselage. Bank is lateral inclination of an aircraft, with reference to the craft's wings, e.g., to left bank would be to lower the left wing of the craft.

[2] These wing designations, while not disclosed in appellant's application, are present in a commercial embodiment of appellant's invention produced at the argument. Obviously some such reference is desirable, against which to read the movable indicia which the pilot sees through the window.

a yoke position indicator pointer cooperating with the indicia on the dial plate to indicate the bank attitude of the aircraft; and a second motor means mounted on said housing and responsive to a remotely located bank signal transmitting device to rotate the shaft and thereby the yoke member about said longitudinal axis so as to vary the position yoke indicator pointer relative to the indicia on the dial plate to indicate the bank attitude of the aircraft.

The rejection is based on the following references:

Crane et al., 2,053,182, September 1, 1936.
Kollsman, 2,080,490, May 18, 1937.
Kenyon, 2,218,929, October 22, 1940.
Handel, 2,492,992, January 3, 1950.

The specific rejection before us is unpatentability over Handel in view of either Crane et al. or Kenyon when further considered with Kollsman.

Handel discloses a pitch and bank indicating instrument generally similar to that disclosed by appellant having a rotatable shaft-yoke arrangement similar to that disclosed by appellant. Between the arms of the yoke, Handel disposes an air-driven gyroscope mounted on a rotor frame which, in turn, is mounted to the arms of the yoke by trunnions. Completely surrounding this gyro and located between the arms of the yoke there is disposed a globe or spherical member which, in function, corresponds to appellant's tape. On the forwardmost portion of the globe there are horizon, sky, and ground indicia similar to those in appellant's device. The Handel globe is made "responsive" to the gyro by means of planetary gear arrangements located at the points where each trunnion engages its respective supporting yoke arm, i.e., the visible face of the globe can appear to move up or down with respect to "wing designations" which Handel disposes on an arcuate window positioned immediately in front of the globe.[3] As in appellant's device, bank attitudes are indicated in the Handel device by the apparent relative rotational movement of the yoke assembly. Finally, Handel discloses an annular globe-encompassing dial plate and pointers attached to the yoke arms which cooperate with the dial plate indicia to indicate the angle of bank.

Crane et al. disclose a pitch, bank and turn indicator wherein an endless tape is disposed in close parallel relation to a window. The Crane et al. tape indicates aircraft yaw movements rather than pitch or bank, the pitch and bank movements in the Crane et al. device being indicated by devices separate from the tape. The Crane et al. specification states that while the yaw or turn indicating means disclosed is in the form of a tape, "*it may be in the form of any type of movable screen, cylinder, disc, cone or sphere.*" [Emphasis ours.]

Kollsman discloses a pitch, bank and "head" indicator incorporating therein a rotatable yoke assembly similar to that disclosed by Handel and appellant. Various species of the Kollsman device have their pitch, bank, and turn indicators controlled, for example, by a gyro mounted between the yoke arms, or by electrical repeater systems responsive to a remotely positioned vertical axis gyro. Kollsman also discloses that such electrical repeater systems can be replaced by motors responsive to the vertical axis gyro.

Kenyon's pertinent disclosure, in connection with aircraft attitude indicators, relates to pitch and turn indicating means consisting of vertically and horizontally moving belts having slat indicia thereon

[3] By comparing the position of such designations, which stand fixed on the window, with the position of the artificial horizon on the sphere, slight pitch movements which would otherwise be difficult to detect become immediately apparent.

mounted on gear-driven rollers and placed in close proximity to a flat window. The rollers supporting the vertical belt are journaled in a pair of side plates which also enclose a gyro driving motor means responsive to a gyro outside of the instrument housing.

It appears to us that appellant's claimed device distinguishes over Handel only by reciting structures which the prior art shows one skilled in the art would regard as equivalents capable of being substituted for those structures disclosed in the Handel device. In particular, while it is true that Handel does not disclose a "tape" movable vertically within his instrument, Crane et al. clearly disclose that tapes, spheres, cylinders, etc., can readily be substituted for each other in attitude indicating instruments.

The fact that problems of parallax[4] might be reduced by placing indicia on a tape running parallel to the window, rather than on a sphere necessarily spaced from it except at the center, was not a discovery of appellant. Also, we note that claim 16 does not distinguish the positioning of the instant tape from the positioning of similar endless tape elements disclosed by Crane et al. and Kenyon wherein the problem of parallax would inherently be minimal. In this regard we also note that appellant has not only made what we consider to be an obvious substitution of a tape attitude indicator for a spherical one, but has done so in a manner well known in the art. We see nothing unobvious in appellant's particularly recited "roller" and "plate" limitations; it appears, in fact, from the record before us that rollers similar to those recited in claim 16 are invariably associated with tapes or belts in attitude indicating instruments. In addition, the parallel arms of Handel's yoke and the planetary, rotatable gears that serve as a drive and supporting means for the Handel globe are, in Handel's device, the functional equivalents of the claimed "rollers" and "plate." Also, the use of "plates" as means for supporting tape driving and supporting means is clearly shown to be old by Kenyon.

While Handel does not disclose "motor means" for controlling indicator movements of the nature recited in this claim, Kollsman clearly discloses that indicator control means similar to that disclosed by Handel and that set forth in this claim, may be used where desired. Under such circumstances, we find the obviousness of this particular aspect of appellant's invention manifest.

Finally, we see nothing unobvious in appellant's use of a "frame member * * * fixed to ends of the spaced plates" as a support for the recited bank "indicator pointer." Handel clearly shows a means for supporting bank indicator pointers which means is fixed to his yoke arms. We see nothing in the claim on appeal which distinguishes the recited "frame" in an unobvious manner from the indicator pointer support disclosed by Handel.

[1] The decision of the Board of Appeals is affirmed.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

[4] "Parallax" as used here refers particularly to the apparent displacement of indicia on one surface with respect to indicia on another surface when these indicia are viewed from different observation points. If two pencils, for example, are placed one behind the other in an upright position and alined when viewed only with the left eye, parallax would make it appear to the viewer when he closes his left eye and opens his right eye that the rear pencil has moved to the right with respect to the front pencil. If the two pencils are moved closer to each other, this apparent relative displacement is decreased.

U.S. Court of Customs and Patent Appeals

WINCHARGER CORPORATION
v.
WIANCKO ENGINEERING COMPANY

No. 6754. Decided May 4, 1962.

[49 CCPA—; 301 F.2d 927; 132 USPQ 378]

1. TRADEMARK—CONFUSING SIMILARITY—"WIANCKO" ON A TWISTED TUBE DESIGN AND "WINCO."

In oppositions by appellant to appellee's two applications for registration of "WIANCKO" on a twisted tube design for certain goods including electrical equipment, based on appellant's prior use and registrations of "WINCO" for electrical equipment, where appellant pointed to similarities in sound and spelling of the competing marks, *Held* that "While we appreciate those similarities, we are of the opinion they are sufficiently outweighed by the dissimilarities as to allow registration of the mark applied for."

APPEAL from the Patent Office. Opposition Nos. 38,517 and 38,526.

AFFIRMED.

Hugh H. Drake (*Homer R. Montague*, of counsel) for appellant.

Liddy, Sullivan, Hart, Daniels & Stemple, Francis J. Sullivan (*Joe E. Daniels*, of counsel) for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

WORLEY, *Chief Judge*, delivered the opinion of the court.

Appellee seeks registration, through two applications, of the mark "WIANCKO" on a twisted tube design for certain goods including electrical equipment.[1] In both cases appellant opposed registration on its prior use and registrations of "WINCO" for electrical equipment.[2] The Trademark Trial and Appeal Board dismissed both oppositions, 126 USPQ 211, holding that the differences between the marks are "sufficient to obviate any likelihood of confusion, mistake or deception of purchasers."

The sole issue here, as below, is whether appellee's mark so resembles appellant's mark "WINCO" as to be likely, when applied to appellee's goods to cause confusion or mistake or deceive purchasers within the meaning of section 2(d) of the Lanham Act (Trademark Act of 1946).

Evidence on behalf of appellant shows continuous use of the mark "WINCO" on various items including electrical power supply equipment since 1941. It shows sales in excess of thirty million dollars from 1951 through 1958, and advertising expenditures of over five hundred thousand dollars on "WINCO" products since 1951.

Appellee, Wiancko Engineering Company, and its predecessors, have been marketing products falling within the designation of goods in their applications for registration since 1947. The products were identified by the mark "WIANCKO" alone until 1953, but since then by "WIANCKO" in association with a twisted tube design. Sales of the products have been substantial and supported by appreciable advertising.

The record shows "WINCO" was derived from appellant's corporate name, Wincharger Corporation, and "WIANCKO" is the surname of appellee's predecessor, who is now its president. The Board found certain distinctions between various products of the parties, but also found that appellee's broad designation of goods as power supplies "comprehends static and transistorized power equipment of the character sold by opposer."

[1] Appellant argues here that the Board committed reversible error in dismissing the opposition, specifically pointing out the similarities in sound and spelling of the competing marks. While we appreciate those similarities, we are of the opinion they are sufficiently outweighed by the dissimilarities as to allow registration of the mark applied for.

Finding no error in the decision of the Board, we affirm the decision.

AFFIRMED.

KIRKPATRICK, *J.* (dissenting):

I am unable to agree with the majority in its conclusion that the marks are not confusingly similar. The Board found that "'WINCO' and 'WIANCKO' are substantially different in appearance, and while they contain some similarity in sound, they are readily distinguishable in that respect"—a finding adopted by the majority of this court though not in exactly the same terms. Judging by eye and ear, which is necessarily the basic consideration in trademark cases of this kind, I am unable to reach any conclusion other than that the marks are *not* substantially different in appearance and are *not* readily distinguishable in sound. In fact, it seems to me that anyone would be hard put to it to devise a word any closer to the opposer's mark than the applicant's, without making a letter for letter copy. The difference between "co" and "cko" is practically nil, and the whole case for the applicant hangs upon the insertion of an intermediate "a" which in pronouncing the word may be, and probably frequently is, slurred over.[1]

The goods of the parties are closely related products. The Board found that the goods of both "may be classified as electronic and electrical equipment and are to some extent sold to the same classes of purchasers or advertised in the same publications"—a finding not questioned by the majority. Both the Board and the majority agree that the applicant's broad designation of the goods as power supplies "comprehends static and transistorized power equipment of the character sold by opposer." In other words, regardless of the precise types of equipment now being sold, if registration is allowed, the trademarks may be used in connection with identical goods.

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[1] In application Serial No. 24,890, involved in Opposition No. 38,517, registration of the mark is sought for oscillator units, automatic frequency standardizing units, electronic range and balance control units, electrical filter units, attenuator units, amplifiers, demodulator units, combined amplifier and demodulator units, instrument cabinets and tables, especially adapted for use in data measuring systems; electronic commutators and electro-mechanical commutators especially adapted for use in telemetering systems; force gauges, pressure sensing devices, accelerometers and pressure calibration units; digital computers, analog computers, counter registers and other data measuring systems; frequency multiplier units; peak voltage indicators, bridge circuit units; and oscillograph patch panels, in Class 26.

In application Serial No. 24,889, involved in Opposition No. 38,526, registration is sought for power supplies, in Class 21.

[2] The registrations relied on by appellant are:

(1) No. 397,887, issued September 29, 1942, for electrical dynamotors, generators, converters and motors;

(2) No. 541,377, issued April 24, 1951, for wind-driven power apparatus and parts thereof, particularly wind-driven electric current generator apparatus and parts thereof;

(3) No. 586,217, issued March 2, 1954, for engine-driven power apparatus and parts thereof, particularly engine-driven electric current generator apparatus and parts thereof; and

(4) No. 671,116, issued December 16, 1958, for dynamo-electric machines, particularly motors, generators, dynamotors, inverters, and converters; prime-mover-driven electric generators particularly engine-generator combinations and starter-control units therefor; prime-mover controls including engine idling-control units; electric power supplies; wind-electric equipment, particularly wind-driven generator apparatus and components thereof, and parts of any of the foregoing.

[1] "There is no such thing as a correct pronounciation for a trademark. It is pronounced in different ways by different people." *Barton Mfg. Co. v. Hercules Powder Co.*, 24 CCPA 982, 88 F.2d 708, 710, 33 USPQ 105.

We are not here concerned with the law of unfair competition nor with the right of the applicant to the use of its corporate name, nor with its good faith in adopting it as a trademark. The issue is confusing similarity of the marks and nothing else. It is true that precedents are not very helpful in determining that issue. Even so, I do not see how the court can be applying consistent standards as to likelihood of confusion when it decides that "Dyanshine" and "Dishine" (*Barton Mfg. Co.* v. *Hercules Powder Co.*, supra) are confusingly similar and also that "WINCO" and "WIANCKO" are not.

This court, in a recent case in which it was held that "Huvilon" so resembled "Uvinul" as to be confusingly similar, pointed out that "The fact that neither name has any meaning apart from the goods on which they are used makes it difficult for a purchaser to keep the names clear of possible confusion based on * * * similarities." *General Aniline & Film Corp.* v. *Hukill Chemical Corp.*, 287 F.2d 926, 927. In the present case we have two perfectly meaningless words, both of them unusual and neither remotely suggestive of any English word. In the case of ordinary well known English words, most literate people know how the word should be spelled and, therefore, quickly notice a very slight variance. Not so with words like those before us or like "Huvilon" and "Uvinul." It seems to me that the soundness of the court's observation in the "Huvilon" case quoted above is demonstrated by the fact that in a period of seven months the letters received by the applicant showed over 100 different variations or misspellings of its name although the writers had the correct address and thus appeared to be acquainted with the applicant.

I would reverse the decision of the Board.

REISSUES

JULY 24, 1962

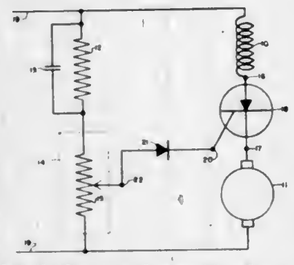
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,203
MOTOR CONTROL SYSTEM

James W. Momberg, Somerville, and Edward W. Taylor, Martinsville, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Original No. 2,939,064, dated May 31, 1960, Ser. No. 814,626, May 20, 1959. Application for reissue Apr. 4, 1961, Ser. No. 101,041

7 Claims. (Cl. 318—246)



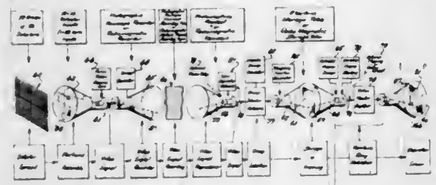
1. In an electrical control system, the combination with an electric motor having series-connected armature and field windings, of a solid state controlled rectifier having anode, cathode and gate terminals for controlling the flow of current to said motor, a fixed resistance, a potentiometer resistance having a sliding tap, said resistances forming with said armature and field windings a bridge circuit with the anode-cathode terminals of the controlled rectifier inserted in series between said armature and field windings, a diode connected in series between the sliding tap and the gate terminals of the controlled rectifier, and [a source of alternating-current voltage connected between] the junction of the fixed resistance and the field winding and the junction of the potentiometer resistance and the armature winding *being adapted to be connected to a source of alternating-current voltage.*

25,204
METHOD OF GEOPHYSICAL EXPLORATION

Carl H. Becker, Chevy Chase, Md., assignor to Western Geophysical Company of America, Los Angeles, Calif.

Original No. 2,925,138, dated Feb. 16, 1960, Ser. No. 570,554, Mar. 9, 1956. Application for reissue May 1, 1961, Ser. No. 107,290

32 Claims. (Cl. 181—.5)



1. The method of seismic surveying that includes ground spacing a plurality of seismic wave detectors in a substantially two-dimensional array, producing a seismic wave which is thereafter reflected from subterranean formations in the form of reflected seismic waves traveling toward said detectors, detecting said seismic waves, generating a first set of signals at the detectors in response to said detection, recording said signals, producing a second set of signals from said recorded signals, processing said second set of signals to select certain signals corresponding to a detected seismic wave reflected from one of said formations, and utilizing said certain signals to control light transmission from different zones of a substantially two-dimensional plan-view display corresponding to said detector array whereby the display visibly reproduces the detection by said detectors of said seismic wave, said utilization being carried out so that the certain signal derived from any one selected detector controls light transmission from one and only one zone of the display, said zone being located in a position homologous within the display to the location of the said selected detector within the array.

25,205
SILICONE COMPOSITION FOR THE RELIEF OF GASTRO-INTESTINAL DISTRESS AND METHOD OF USING SAME

Wolffe Harry Feinstone, Memphis, Tenn., assignor, by mesne assignments, to Plough Laboratories, Inc., Memphis, Tenn., a corporation of Tennessee

No Drawing. Original No. 2,951,011, dated Aug. 30, 1960, Ser. No. 628,576, Dec. 17, 1956. Application for reissue June 12, 1961, Ser. No. 116,926

6 Claims. (Cl. 167—55)

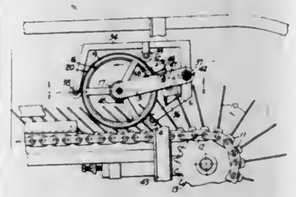
5. A method of treating gastro-intestinal distress, which consists of administering orally to a human patient a composition comprising a particulate carrier supporting a non-toxic organopolysiloxane, said organopolysiloxane being present in the amount of 1% to 100% by weight of said carrier, said composition containing 10 to 200 milligrams of said organopolysiloxane per dosage unit.

25,206
MOISTENING ASSEMBLY FOR COTTON PICKING SPINDLE

Mack D. Rust, P.O. Box 777, Coalinga, Calif.

Original No. 2,971,315, dated Feb. 14, 1961, Ser. No. 790,229, Jan. 30, 1959. Application for reissue July 10, 1961, Ser. No. 126,796

19 Claims. (Cl. 56—42)



1. In a cotton picking machine of the type having a frame and spindles movably mounted thereon for movement along a fixed path; means for applying moisture to the spindles comprising an assembly mounted on said frame adjacent said path and including a plurality of vertically spaced wheels rotatable about means defining a common vertical axis, the periphery of each wheel having resilient material thereon providing deformable spindle-engaging side faces, the side faces of adjacent wheels being vertically spaced to permit spindles mov-

ing along said path to be drawn between the same, said spacing being normally less than the diameter of the spindles whereby the spindles frictionally engage and deform said side faces and rotate said wheels, said assembly being mounted on said frame for swinging movement about a fixed axis spaced from said common axis whereby said assembly is mounted on said frame for movement from a normal position in which the peripheries of said wheels are adjacent said path to a displaced position outwardly of said path.

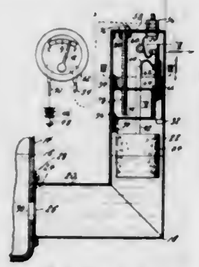
25,207
BUCKET OPERATING MEANS FOR TRACTOR LOADERS
Keith W. Kampert, Libertyville, and Richard F. Zimmerman, Waukegan, Ill., assignors to The Frank G. Hough Co., a corporation of Illinois
Original No. 2,986,292, dated May 30, 1961, Ser. No. 6,919, Feb. 5, 1960. Application for reissue Oct. 2, 1961, Ser. No. 142,754
8 Claims. (Cl. 214—140)



6. In a tractor loader having a pair of boom arms pivotally carried on each side of the tractor and extending forwardly thereof and having a bucket pivotally connected at the rear side portions thereof to the forward end of said boom arms, a linkage arrangement comprising a hydraulic ram pivotally carried at one end thereof on said tractor substantially at the transverse center thereof, a leverage arrangement comprising a central member extending transversely of and being connected with said boom arms intermediate the ends thereof for pivotal movement with respect thereto, a center lever rigidly secured at one end thereof to said central member intermediate the ends thereof and extending radially outwardly therefrom in a certain direction, means pivotally connecting the outer end of said center lever to the other end of said hydraulic ram, a pair of levers, one end of each of said pair of levers secured to said central member on each side of said center lever and substantially at the outer end portions of said central member, a pair of links, each of said links pivotally connected at one end thereof to the outer end of one of said pair of levers, means pivotally connecting the other end of each of said links to said bucket substantially to the rearward side portions thereof, said pair of levers extending radially outwardly from said central member substantially in the opposite direction from said certain direction of said center lever.

25,208
OIL GAUGE
Luther Fred Perkins, 538 Camp St., Sandusky, Ohio
Original No. 2,926,526, dated Mar. 1, 1960, Ser. No. 674,123, July 25, 1957. Application for reissue Feb. 19, 1962, Ser. No. 174,327
4 Claims. (Cl. 73—313)

4. An oil gauge for indicating the level of oil in an oil pan [of an internal combustion engine], said oil pan including a bottom with sides upwardly extending therefrom and provided with an opening through one of said sides of a size to allow free flow of oil therethrough, an L-shaped tube of substantially constant diameter throughout its length greater than the diameter of said opening and including a minor horizontally disposed portion in communication with said opening and a major vertical portion as a continuation thereof whereby oil from the pan will maintain a body of oil in said major tube portion with a surface co-planar with the surface of oil in said pan, said major vertical portion having its upper end closed by a fixed cap, a split ring frictionally mounted by the *major vertical tube* portion intermediate its length, a bracket mounted by said ring, [a resistance] *electrical contacting means* fixed on said bracket vertically extending therefrom, a contact slidable along said [resistance] *means*, a float on the oil in said major tube portion having an extension slidably mounted in said bracket and mounting said contact for controlling its position relative to the [resistance] *electrical contacting means*, and means for shifting said ring axially [with] *of* the tube including a screw mounted by said cap having its head exposed and a shank depending therefrom through the cap and into said tube to threadedly engage said bracket.



25,209
REMOTE TELEMETERING AND RECORDING SYSTEM
Robert H. Kolb, Houston, Tex., assignor to Shell Oil Company, a corporation of Delaware
Original No. 3,007,134, dated Oct. 31, 1961, Ser. No. 715,893, Feb. 18, 1958. Application for reissue Mar. 5, 1962, Ser. No. 179,280
6 Claims. (Cl. 340—18)



1. A system for measuring at a convenient location the value of a variable physical condition at a remote location comprising a remote instrument having a rotatable indicator contact, a reference contact fixed with respect to said indicator contact, means responsive to the value of the condition for angularly displacing the indicator contact with respect to the reference contact, a rotatable sweep contact, means for rotating the sweep contact whereby said contact cyclically closes with the reference and indicator contacts once for each revolution of the sweep contact, a convenient instrument having pulse generating means producing pulses having substantially the same periodic recurrence frequency for each revolution of the sweep means said remote and convenient instruments being coupled together by a cable, pulse counting means, a control circuit including said cable, said cable being

short circuited when said sweep contact closes with one of the other contacts to produce a first unbalanced condition in said control circuit and [open circuited] *electrically loaded* when the sweep contact closes with the second of the other contacts to produce a second unbalanced condition in said control circuit, gating means connected between said pulse counting means and the pulse generating means and adapted to open only in response to one of the unbalanced conditions and adapted to close only in response to the other of the unbalanced conditions, and means connecting the output of said control circuit to said gating means.

PLANT PATENTS

GRANTED JULY 24, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,157
INDIGO PLANT
Mae B. Nettleship and Anderson Nettleship, Fayetteville, Ark., assignors to Antaeus Lineal 1948, ANL Medical Laboratory Division, Inc., a corporation of Arkansas
Filed Apr. 10, 1961, Ser. No. 102,079
1 Claim. (Cl. 47—60)

A new and distinct variety of domestic indigo plant of a hardly decorative type substantially as herein shown and described, characterized particularly by its regular, graceful plant growth, healthy dark green foliage, which remains on the plant throughout the season; its erect, strong and large number of recemes with showy sprays of abundant blossoms on each raceme; and its excellent productivity of long-lasting highly decorative flowers of general cream-colored yellow tonality.

2,158
GLADIOLUS PLANT
Carl H. Fischer, St. Charles, Minn., assignor to Selected Glads, Inc., New Albany, Ind., a corporation of Tennessee
Filed Sept. 1, 1961, Ser. No. 135,685
1 Claim. (Cl. 47—60)

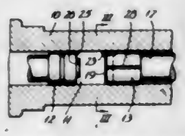
The new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized by its delicate color, smooth, round petals, broad inflorescence, plant vigor and ease of culture.

PATENTS

GRANTED JULY 24, 1962

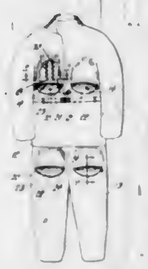
GENERAL AND MECHANICAL

3,045,242
EXPLOSIVE POWER ACTIVATED MECHANISMS
John Lester Adolph, 30 Donald St., Mount Waverley, Victoria, Australia
Filed Dec. 9, 1960, Ser. No. 74,914
Claims priority, application Australia Dec. 17, 1959
6 Claims. (Cl. 1—44.5)



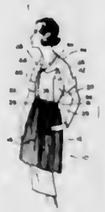
1. An explosive power actuated mechanism having a first member and a second member movable relative to each other, said first member having an open-sided hole therein for holding a cartridge with a side portion of the cartridge body and a portion of the rim of the cartridge protruding through the open side of the hole, and the second member having a projection thereon opposed to the part of the open side of the hole through which the side portion of the cartridge body projects and adapted to contact the protruding body portion of the cartridge before the rim portion of the cartridge contacts the second member, whereby upon the two members being percussively brought together the body of the cartridge is partially crushed by the said projection before the rim of the cartridge is detonated by contact with the second member, whereafter the cartridge explodes sidewardly of its body through the open-side of the hole to perform work upon the second member.

3,045,243
VENTILATOR FOR PROTECTIVE GARMENT
Seymour Lash, 40 Fox Place, Hicksville, N.Y., and Caesar J. Zemme, 2135 Crotona Ave., New York 57, N.Y.
Filed Nov. 16, 1959, Ser. No. 853,428
2 Claims. (Cl. 2—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a protective garment of the type having an air-impermeable outer layer and an air-permeable inner layer, said outer layer formed with a slit having upper and lower edges, ventilation means comprising the upper and lower edges of said slit in said outer layer, a curved member of substantial rigidity located between said inner and outer layers adjacent to said slit, the convex side of said curved member being placed in contact with, and bowing out, the upper edge of said slit so that it stands away from the plane of said lower edge to form a permanent opening, and spacer means between said outer and inner layers extending over a small area adjacent to said slit.

3,045,244
CLIP ON APRON
Sandor Schwartz, 755 Eastern Parkway, Brooklyn 13, N.Y.
Filed June 28, 1960, Ser. No. 39,279
1 Claim. (Cl. 2—52)

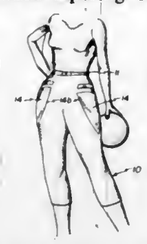


An apron comprising a skirt encircling portion and a chest encircling portion, said portions being joined together at marginal portions thereof, a waistband at the junction of the marginal portions, a spring wire inserted between the waistband and one of the marginal portions and extending substantially the full length of the waistband, said wire being shaped to cling to the wearer's body, and form fitting stays carried by the chest portion for supporting the chest portion in juxtaposition to and in encircling engagement with the wearer's chest, said skirt portion being pleated, said waistband holding the skirt portion in pleated condition, said skirt and chest portions and said waistband being formed of plastic, heat fusible, sheet material, said waistband being formed from plastic tape terminating in at least one loop extending beyond the joined skirt and chest portions, said chest portions being formed of a double layer of said sheet material, pockets secured inside the chest portion, said stays having opposite ends thereof inserted in the pockets secured inside the chest portion, said chest portion being formed with a pair of spaced peaked portions, a pair of said pockets being disposed at the rear of said peaked portions, and another pair of said pockets being disposed at the rear of and near the junction of the chest and skirt portions, said stays being shaped to conform to the shape of the chest of the wearer.

3,045,245
WEARING APPAREL
Julius Kohen, 335 S. Forest St., Denver, Colo.
Filed May 31, 1960, Ser. No. 32,735
2 Claims. (Cl. 2—243)

1. In sporting apparel of the trousers or skirt type which are normally supported from the waist of the user, the improvement which comprises integrally securing at least one generally triangularly shaped swath of washable, moisture absorbant material, said swath being secured completely around its periphery to the hip covering portion of the apparel adapted to be in position at the side of the wearer covering a portion of the wearer's hip, the base of the triangular swath being spaced from and below the

waist of the apparel at about hip level of the user with the sides of the swath tapering downwardly along the



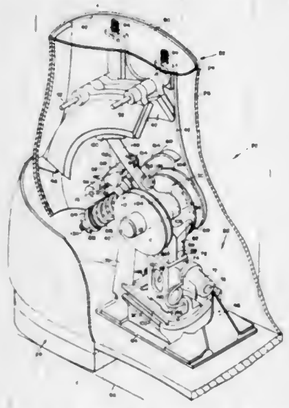
apparel sides to its apex above the knee portion of the apparel and at the side thereof when the apparel is worn.

3,045,246
SLEEVELENGTH ADJUSTMENT DEVICE
Herbert Hoff, 190 Underhill Road, South Orange, N.J.
Filed May 1, 1957, Ser. No. 656,428
2 Claims. (Cl. 2—269)



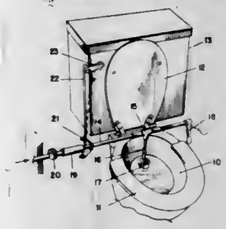
1. A shirt sleeve adjustment device of the character described, said sleeve being connected to said shirt at an armhole portion thereof by an armhole seam, said sleeve having an inseam extending outwardly from the lowermost portion of said armhole seam, said adjustment device comprising a button disposed within the sleeve and secured to said sleeve at a point located along said inseam, and a tape having its ends connected to said armhole seam symmetrically with respect to said inseam, adjacent edge portions of said tape intermediate its ends being connected together by stitching to form a length of tape of double width, the end reaches of said tape extending divergently toward said armhole seam, said stitching being arranged to define a series of buttonholes along said adjacent edges of said tape.

3,045,247
ARTIFICIAL ANKLE
Milford M. Bair, Bonita Springs, Fla.
Filed Mar. 4, 1959, Ser. No. 797,092
18 Claims. (Cl. 3—32)



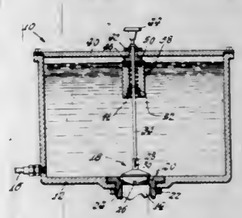
1. In an artificial ankle, a pivot, a simulated leg including engaging means fixed for movement therewith, means connecting said leg with said pivot for forward and aft relative pivoting movement and relative displacement, a probe pivotally mounted on said pivot and having means releasably engageable with said leg engaging means during predetermined relative displacement of said leg and pivot, and means connected with said pivot biasing the same against said relative displacement.

3,045,248
SANITARY RECTAL FOUNTAIN
Merle O. Gentry, Rte. 1, Box 890, Ventura, Calif.
Filed Oct. 3, 1961, Ser. No. 142,628
5 Claims. (Cl. 4—7)



1. In a toilet structure including a toilet bowl, flush tank, and flush tank operating handle, a sanitary rectal fountain comprising, in combination: a fountain structure swingably mounted to the upper rear portion of said toilet bowl for movement from a first position adjacent the rear wall of said bowl to a second position substantially parallel to the plane of the upper peripheral edges of said bowl; and actuating means coupling said fountain structure to said flush tank operating handle, whereby swinging movement of said fountain structure from said first position to said second position operates said handle to flush said toilet bowl.

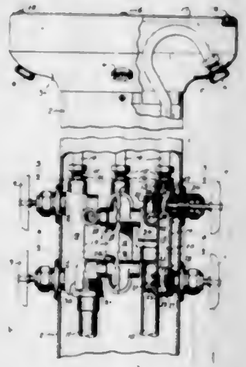
3,045,249
FLUSH VALVE
James A. Stuart, Jr., Danbury, Conn. (Rte. 2, Brookfield, Conn.)
Filed Aug. 31, 1959, Ser. No. 837,234
1 Claim. (Cl. 4—56)



A flushing device comprising a tank having a top wall, a bottom wall having a drain opening, means to direct liquid under pressure into said tank, a valve seat sleeve member having an internal valve seat detachably connected to said tank at said drain opening, a hollow sealing and guiding member connected to and depending from said top wall, a control rod vertically reciprocable slidable in said sealing and guiding member, said sealing and guiding member extending downwardly from said top a substantial distance and formed with a plurality of spaced-apart centering guides to prevent lateral swinging of said control rod, said sealing and guiding member being substantially cylindrical and including an upper portion which extends through and is detachably connected to said top, and a downwardly depending portion having at least two vertically spaced portions in bearing and sealing contact with said control rod, and a ball float valve connected to the lower end of said control rod and en-

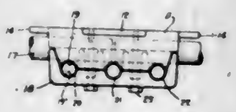
gageable with said valve seat to close said drain and being movable off said seat to open said valve and drain said tank upon upward movement of said control rod.

3,045,250
SHOWER MANIFOLD
Robert J. Booker and Howard G. Mullett, Milwaukee, Wis., assignors to Bradley Washfountain Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 19, 1960, Ser. No. 57,037
2 Claims. (Cl. 4—145)



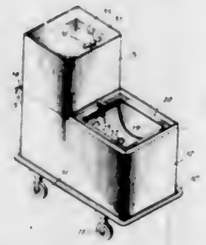
1. In a mixing chamber assembly for a multi-person shower, the combination comprising: a plurality of individual elongated, vertically disposed manifold units arranged to form a polygon, each of said units having a mixing chamber running legthwise of the unit with a shower supply conduit extending from the top thereof and a pair of vertically spaced supply chambers along the side of the unit that faces the center of the polygon, each of said supply chambers having a valve opening therein in communication with the mixing chamber and a pair of integrally formed supply ports extending transversely to opposite sides of the unit, a first conduit means, including a water supply pipe and elbow connections, connected to the supply ports of the lower supply chambers of each of said units, whereby water may flow therethrough; plug means closing the facing supply ports of two adjacent lower supply chambers; a second conduit means, including elbow connections and a water supply pipe that extends upwardly between the plugged supply ports, connected to the supply ports of the upper supply chamber of each of said units whereby water may flow therethrough; and a pair of vertically spaced valve means mounted on each of said units on the side opposite the supply chambers, said valve means having projecting operating stem means engageable with the corresponding valve openings of said supply chambers to control the flow of water between the supply chamber and the main chamber.

3,045,251
SHOWER HEAD AND CURTAIN ROD ASSEMBLY
Charles A. Weingart, 5629 42nd Ave. S., Minneapolis, Minn.
Filed June 4, 1959, Ser. No. 818,185
4 Claims. (Cl. 4—154)



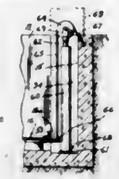
1. A shower assembly support comprising: a bracket member having means for supporting rigidly at right angles to each other a shower head and shower curtain rod, a wall mounting flange formed on said bracket, said shower curtain rod supporting means being nearer said wall mounting flange than said shower head supporting means, said wall mounting flange constructed and adapted to engage a flat wall surface and support the portions of said shower head and shower curtain rod extending through said bracket substantially parallel to a flat wall surface, said bracket consisting of two parts that can be clamped together, said means for supporting a shower curtain rod comprising a channel formed in both parts of said bracket that grips said shower curtain rod frictionally when said bracket is clamped, said means for supporting said shower head comprising at least two shower head pipe channels formed in both parts of said bracket transverse to said channel for said shower curtain rod and with the centers of said shower head pipe channels spaced from the center of said shower curtain rod channel less than the sum of the radii of a shower curtain rod and a shower head pipe with which said bracket is to be used.

3,045,252
COMBINATION MOP CART AND MOP SINK
Weldon B. Sorrells, 511 Monroe St. N., Arlington, Va.
Filed Aug. 8, 1960, Ser. No. 48,203
1 Claim. (Cl. 4—167)



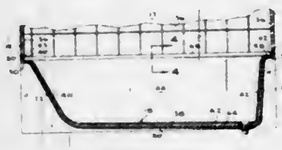
A device of the character described comprising a wheeled base, a lower tank mounted on said base, a transversely extending divider substantially centrally mounted in the upper portion only of said lower tank, flanges inwardly directed from the rearward portion of said lower tank and from said divider adjacent the upper edges thereof, a supply tank removably mounted upon the aforesaid flanges of said rearward portion of said lower tank and of said divider, flanges inwardly directed from the forward portion of said lower tank and from said divider adjacent the upper edges thereof a marginally and horizontally flanged sink removably mounted by its marginal flanges on the last mentioned flanges of said lower tank and said divider, a discharge valve mounted on the lower portion of said supply tank, an operating shaft for said discharge valve extending upwardly to a point adjacent the top of said tank, a handle affixed to the upper end of said operating shaft, an inlet pipe extending from said discharge valve into said supply tank, a discharge pipe extending from said discharge valve into said sink, a drain valve in the lower end of said sink, a drain valve operating shaft extending through the flange of the sink, a horizontal link operatively interconnecting the lower end of said drain valve operating shaft and said drain valve, a handle affixed to the upper end of said drain valve operating shaft, a flexible discharge pipe connected to the lower portion of said lower tank, and a clip-type clamp for said flexible pipe affixed to said lower tank above its connection with said flexible pipe.

3,045,253
SAFETY SWIMMING POOL
Hollas K. Price, Box 701, Oak Hill, W. Va.
Filed Feb. 27, 1959, Ser. No. 796,100
5 Claims. (Cl. 4—172)



1. The combination of a swimming pool having an open top, a perimetric wall and a bottom, and safety apparatus comprising a net substantially coextensive with the area of said pool, said net being movably positioned in the pool for raising and lowering movement between a lowered position on the bottom of the pool and a raised position at the top of the pool, the perimetric wall of the pool being provided at perimetrically spaced points with vertically elongated recesses, fluid motors positioned in said recesses, each of said fluid motors including a stationary member and a vertically reciprocable member, means operatively connecting the vertically reciprocable members of said fluid motors to said net whereby the latter may be raised and lowered concurrently with reciprocation of said reciprocable members, and means for energizing said fluid motors.

3,045,254
BATHTUB WITH LINER
Robert G. Cook, Rte. 2, and Evan B. Cook, Rte. 3, both of Urbana, Ohio
Filed May 5, 1961, Ser. No. 108,075
5 Claims. (Cl. 4—173)



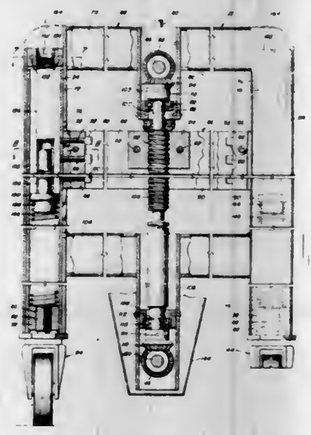
1. In combination, a bathroom alcove having a longitudinal wall and transverse walls, a bath tub positioned in said alcove along said longitudinal wall and between the transverse walls, said bath tub having a bottom wall, an inner side wall engaged with said longitudinal wall, and head and foot end walls positioned along related ones of said transverse walls and an outer access side wall, said alcove walls having coverings thereon having lower edges on a level adjacent to the upper edges of the tub walls, and tub liner disposed conformably within said tub and having walls having lateral flanges overlying the top of the walls of the tub, lateral flanges of the liner being upwardly and securably inserted between the tops of the tub walls and the lower edges of the coverings and between the covering and related walls of the alcove and means, securing a liner flange to the top of the access sidewall.

3,045,255
DEVICE AND MECHANISM FOR RAISING AND LOWERING INVALIDS
Ira Pirtle, 2208 N. 16th St., Phoenix, Ariz., and William S. Yarbrough, 1880 W. Grant Road, Tucson, Ariz.; Edna L. Pirtle, executrix of said Ira Pirtle, deceased
Filed July 24, 1961, Ser. No. 126,181
1 Claim. (Cl. 4—185)

A machine for raising and lowering invalids from and into a bathtub comprising a frame having a head end and a foot end, and adapted to rest on the top edge of a bathtub, including two parallel longitudinal rotating side rails, held in spaced relation by transverse end members, a transverse shaft at the head end of said frame operatively geared to said side rails, a basket platform centrally disposed within said frame, having straight side members and rounded ends, centrally disposed within said frame, cords attached to and suspending the end portions of the side members of said platform and extending to and wound around the side rails of said frame so that rotation of said side rails will raise and lower said platform, mechanism on said transverse frame shaft for rotating said shaft and said side rails to wind up and raise said cords suspending said basket platform and to unwind said cords and lower said platform, comprising a case supported on said shaft and the transverse head frame member, gearing within said case including an oscillating escapement mechanism, and a gear on said transverse shaft meshing with a train of gears, arranged in increased speed relation, driving said escapement mechanism, and a ratchet shaft journalled on said transverse shaft, a ratchet case enclosing said ratchet shaft having a radially extending ratchet lever adapted to oscillate said case, pawl mechanism within said case to rotate said ratchet mechanism so as to turn said transverse shaft and said side rails to wind up the cords suspending said platform and raise said platform, a holding pawl in said gear case operative on said ratchet shaft to hold said shaft against reverse rotation when said ratchet and pawl mechanism are operated to lift said basket platform, and means operated by said ratchet lever for operatively disconnecting said ratchet mechanism from said transverse shaft to permit said shaft to lower while the rotation of said shaft and side rails is restrained by said escapement mechanism.



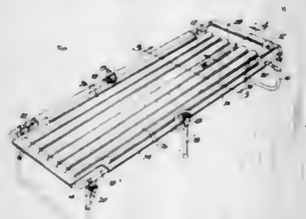
3,045,256
VERTICALLY ADJUSTABLE HOSPITAL BED
Stanford S. Scher, Baltimore, Md., assignor to National Store Fixture Company, Inc., Odenton, Md., a corporation of Maryland
Filed Nov. 3, 1960, Ser. No. 67,026
5 Claims. (Cl. 5—63)



1. An end assembly for use in a vertically adjustable bed comprising vertical support means for engaging a support surface, a head assembly reciprocally supported on said support means for vertical adjustment thereon,

force transmitting means on said head assembly and including a portion movable therewith for progressively adjusting said head assembly with respect to said support means, and counterbalance means interposed between said support means and head assembly and normally applying force through and beyond the entire range of vertical adjustment of said head assembly with respect to said support means, said support means comprising a pair of spaced parallel vertical support legs, said head assembly comprising a pair of tubular spaced parallel vertical sleeves respectively telescoped and guidingly engaged on said vertical legs, a horizontal head element extending between upper end portions of said sleeves, said sleeves including opposed, vertically extending slots determining the range of vertical adjustment of said head assembly, a head member disposed substantially parallel to said vertical legs and fixedly secured at opposite ends to said vertical support legs, said head member including a central reaction portion including an internally threaded, vertical bore portion, a support member disposed parallel to said head element and fixedly secured at opposite ends to said vertical sleeves, said force transmitting means comprising a vertically extending shaft depending from said head element and including an externally threaded portion engaged in said threaded bore to react against said reaction portion and head member during rotation, said support member including transmission means mounted thereon and operatively connected to said shaft whereby rotation of said shaft causes simultaneous vertical movement of said head element, support member, vertically extending shaft and vertical sleeves in guided relation on said support legs due to reaction forces centrally of said head member and equally distributed on said support legs.

3,045,257
FOLDING COT
Andrew S. Knapp, St. Louis, Mo., assignor to Knapp Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,178
5 Claims. (Cl. 5—111)



1. A folding cot comprising a foldable frame and a relatively hard but flexible backing spanning said frame and foldable therewith, said backing having integral therewith and on the top thereof an inflatable mattress portion comprising material that is light and flexible relative to the material of said backing, said backing forming a planar wall for said mattress portion, and means for inflating said mattress portion.

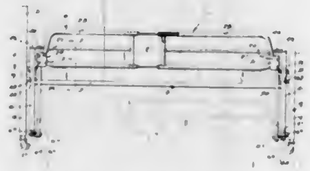
3,045,258
SAFETY DEVICE FOR SUPPORTING AN INFANT
Kenneth L. Waische, Barkhamsted, Conn. (Star Rte. 6120, New Hartford, Conn.)
Filed Nov. 16, 1960, Ser. No. 69,696
3 Claims. (Cl. 5—317)

1. A safety device for supporting and retaining an infant in a substantially supine position with the upper portion of such infant's body being restrained against movement while enabling the lower portion and extremities of such infant's body to have freedom of movement, said safety device including an elongated relatively rigid board having a marginal extent that is shorter than the length of and wider than the width of such infant's body, said board further having a plurality of apertures disposed in longitudinally spaced relationship relative to each other with at least one of said apertures being to each side of the transversally extending center line of the board and a pair of open-ended slots disposed in spaced relationship relative to each other along one edge portion of the board with at least one of the slots being to each side of the



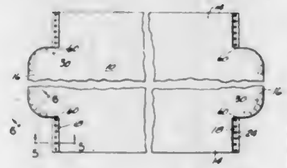
transversally extending center line of the board, and elongated bodily flexible strand means passing through a pair of said apertures one on each side of the transversally extending center line of the board, said strand means having enlarged end portions for securing the end portions of the strand means to a respective one of the slots to enable the upper portion of such infant's body to be supported and retained on one side of the board with the strand means passing over the upper portion of such infant's body from the apertures to the slots.

3,045,259
SAFETY SIDE
Edwin H. Mayer, Racine, Wis., assignor to Simmons Company, New York, N.Y., a corporation of Delaware
Filed Apr. 6, 1960, Ser. No. 20,386
5 Claims. (Cl. 5—331)



5. A safety side for a bed having spaced head and foot end frames, comprising a vertical guide rod adapted to be secured to one of said frames at one corner of the bed, a saddle mounted on said guide rod for vertical movement thereon and having a pair of horizontally spaced vertical wings extending therefrom, a side panel having one end pivoted on said saddle on a horizontal axis and having at said end a part embraced between said wings with a comfortable fit, the other end of said panel being adapted to be supported by the other end frame.

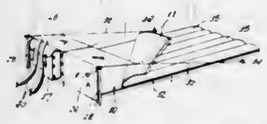
3,045,260
FITTED BED SHEET
Magdoline E. Richter, 512 Webster Ave., Plymouth, Ind.
Filed June 20, 1960, Ser. No. 37,481
7 Claims. (Cl. 5—334)



1. A fitted bed sheet comprising a central portion and side and end flaps shorter than said central portion, the adjacent edges of said flaps extending perpendicularly

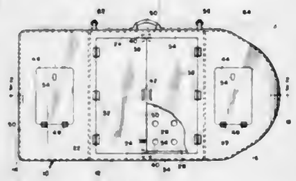
when said flaps lie in the same plane, said end flaps being narrower than said side flaps and having rounded free corner portions, and separable fastener means carried by the ends of said flaps and the rounded portions of said end flaps for anchoring the adjacent ends of said flaps in lapping relation with the flaps extending perpendicular to said central portion and to each other and with the free longitudinal margins of said side flaps folded inwardly.

3,045,261
COMBINATION SLEEPING BAG AND KNAPSACK
Morris Z. Hocherman, Forest Hills, N.Y., assignor to Jehiel Hocherman, New York, N.Y.
Filed Nov. 23, 1959, Ser. No. 854,929
9 Claims. (Cl. 5—343)



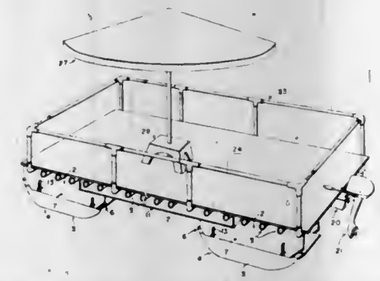
1. A combined knapsack and sleeping bag unit comprising, in combination, a sleeping bag having a bottom waterproof sheet like part and an overlying top cover part, at least one of said parts having padding to provide a cushion effect, said parts being connected together and foldable as a unit in the direction of the width of the bag and along a longitudinal line, thereby to effect a folded assemblage which is a submultiple of the bag width, said assemblage being further foldable a number of times along transverse lines into a compact substantially flat roll; a wrapper sheet secured to one end of the said bottom part, said wrapper sheet when the bag is folded having a width substantially the same as the said folded assemblage and having a length such that it may extend substantially around the said rolled assemblage to form a pack for carrying the assemblage; a knapsack complete in and of itself, having a broad exterior side secured broadside to the outside of said wrapper sheet, said knapsack being thereby disposed on one outer side of the said pack; and cooperable fastening means on said wrapper sheet, for securing end portions thereof to each other when the sheet extends around the rolled assemblage, with the knapsack disposed at the exterior of said assemblage and readily accessible for use.

3,045,262
SKIN DIVER'S COMBINED FLOAT AND EQUIPMENT CARRIER
Robert P. Mitchell, 4335 Poplar St., San Diego 5, Calif.
Filed July 11, 1960, Ser. No. 41,812
2 Claims. (Cl. 9—1)



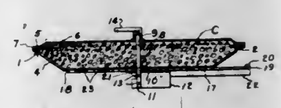
1. A combined float and equipment carrier, comprising: a hollow body of substantially rectangular cross section having imperforate sides, imperforate ends, a perforated bottom panel, and a top panel; a buoyancy chamber at each end of said body, one end of each buoyancy chamber being integral with one end of said body, said body forming a catch compartment between said buoyancy chambers, the perforated bottom panel of said catch compartment causing circulation of water therein; a pair of doors positioned in said top panel of said catch compartment and hinged to open upwardly and outwardly in opposite directions; detent means engageable to hold said doors in closed position; a hinged access door positioned in the top portion of each of said buoyancy chambers; sealing means surrounding and sealing said access doors of said buoyancy chambers in their closed position; the lower portion of one of said buoyancy chambers having an upwardly curved, substantially arcuate end portion.

3,045,263
RAFT STRUCTURE
Paul H. Blachly, Fort Worth, Tex. (3250 SW. Underwood Drive, Portland 25, Oreg.)
Filed June 26, 1961, Ser. No. 119,442
4 Claims. (Cl. 9—1)



1. A raft structure comprising a floating platform having a plurality of longitudinal frame members having side flanges connected in spaced apart relation to each other by a plurality of transverse frame members, and having a plurality of elongated float units arranged to support the platform in vertically adjustable position relative thereto, the float units each being arranged in vertical alignment with one of the longitudinal frame members, the longitudinal frame members each comprising an elongated float unit holder, channel shaped in transverse section, straddling a float unit and having means connecting it in vertically adjustable relation thereto, and at least one of the longitudinal frame members having an elongated connecting element, channel shaped in transverse section, connected to the float unit holder thereof, the elongated connecting element forming a longitudinal extension of the float unit holder and being adjustable telescopically relative thereto, the transverse frame members each comprising at least one tubular section and having portions thereof passed thru longitudinally spaced openings therefor in the side flanges of at least one of the longitudinal frame members, and the longitudinal frame members being adjustably positioned relative to the transverse frame members.

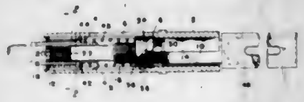
3,045,264
WATER SLEDS
Ronald F. Smith, 1250 Oxford, Birmingham, Mich.
Filed Sept. 26, 1960, Ser. No. 58,351
6 Claims. (Cl. 9—310)



1. A water sled, including a body having a flat bottom wall and a deck upwardly spaced from said bottom wall, a tow connection means associated with said body to afford towed travel of the sled, a water-planing platform predeterminedly proportioned to support the body during such travel, said platform being so disposed beneath the body as to provide such support, pivot means mounting

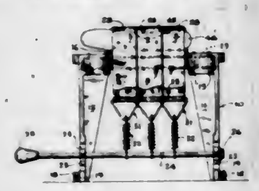
said platform on and beneath the bottom wall, and one or more vanes carried by said platform and responsive to fluid resistance induced by any deviation of the sled from a rectilinear path of travel to swing said platform about the axis of said pivot means and thus dispose the platform to afford maximum resistance to tipping of the sled responsive to said deviations.

3,045,265
TAPPING SPINDLE WITH YIELDABLE NUT RETAINING MEANS
Otto R. Seibert and Warren F. Seibert, Chenoa, Ill.
Filed Nov. 5, 1959, Ser. No. 851,040
4 Claims. (Cl. 10—135)



1. A tapping machine spindle assembly comprising: an outer sleeve having an annular groove in its inner surface, a lead screw spindle in the sleeve and rotatable with respect thereto, a lead screw nut between the outer sleeve and the screw spindle and axially movable relative thereto, annular means engaging the groove and the nut in one axial position of the nut relative to the sleeve and yieldably expansible into the groove to permit axial displacement of the nut relative to the sleeve, and means resiliently biasing the nut into said one axial position.

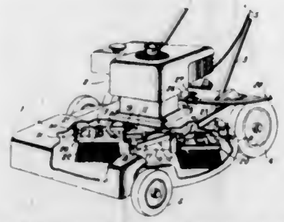
3,045,266
ARCH SUPPORT FORMING FIXTURE
Clifford E. Mensing, 102 N. Hubbard, Algonquin, Ill.
Filed Nov. 10, 1959, Ser. No. 852,132
8 Claims. (Cl. 12—1)



1. An arch support forming fixture for use in molding leather or the like to the shape of a mold, said fixture comprising: a frame; a member on said frame to support said mold; a plurality of elongated webs passing over the top of the mold on the said member and having portions extending down about both sides thereof, said webs being in juxtaposition along at least a portion of the length of the mold; and an individual tensioning means for each of said webs, each tensioning means including means to engage the downwardly extending portions at a level below that of the mold with the portions closer together at that level than is the part of the web about the mold, said tensioning means being adapted to releasably tension each web longitudinally thereof.

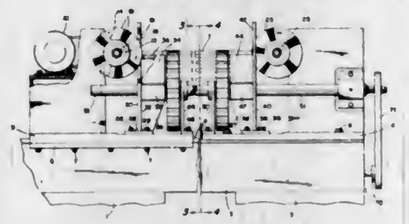
3,045,267
SELF-ADJUSTABLE ROTATABLE SURFACE CONDITIONING DEVICE
Richard Valentin Wagner, 4006 Falls Drive, Dallas, Tex.
Filed Feb. 7, 1961, Ser. No. 87,682
6 Claims. (Cl. 15—50)

1. In a device of the class described, a chassis; power means attached to the chassis; a vertical drive shaft rotatable by the power means; a frame member attached to the drive shaft; a pair of arms pivotally attached on opposite sides of the drive shaft to said frame and extending laterally in opposite directions; a surface conditioning head pivotally attached to the outer end of each arm; each said arm having an angularly disposed outer end



which is on a horizontal plane above the pivotal attachment of said arms, whereby centrifugal force of the arms causes vertical pressure on the surface conditioning heads attached to the outer ends thereof.

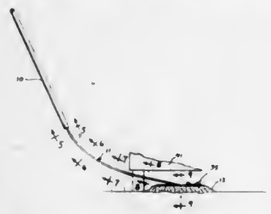
3,045,268
MACHINE FOR DEBURRING THE ENDS OF TUBES AND THE LIKE
Richard L. Coan, Maple Heights, Ohio, assignor, by mesne assignments, to Cerro Corporation, New York, N.Y., a corporation of New York
Filed Mar. 28, 1961, Ser. No. 98,573
7 Claims. (Cl. 15—88)



1. In a machine of the character described, a pair of circular brushes disposed in substantially a common plane, means for rotating said brushes at a relatively high speed, surfaces adjacent said brushes along which tubes to be deburred are moved with the axes of the tubes substantially perpendicular to the axes of rotation of said brushes, and means for causing said tubes to traverse said surfaces, whereby said brushes engage the ends of said tubes and deburr such ends, said last-named means comprising spaced feed wheels disposed adjacent said surfaces and rotatable about an axis which is parallel with the axes of said tubes, said feed wheels having uniformly and circumferentially-spaced recesses in their peripheries, said recesses adapted to receive said tubes for feeding movement past said brushes, said recesses having wall portions adapted to engage said tubes as they traverse said surfaces, whereby to cause the tubes to roll on said surfaces, as the ends of the tubes are being deburred.

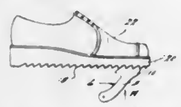
3,045,269
FLEXIBLE HANDLED MOP HOLDER
Marcella Marie Coffman, 100 Harlem Road, Rockford, Ill., and Ward M. Vanderpool, Rockford, Ill.
Filed Feb. 1, 1960, Ser. No. 6,038
1 Claim. (Cl. 15—147)

A flexible handled mop holder comprising a handle having a rigid upper handle section and a flexible lower handle section, said lower section including a cluster of generally straight resilient rods rigidly joined at opposite ends, a flexible sheath surrounding said rods to confine the same during bending of the flexible lower section, a crosshead rigidly attached to the lower end of the flexible lower section and extending transverse to the lower section from opposite sides thereof, said crosshead comprising a metal plate having an opening therein for receiving said rods for locating the same, said plate and the lower ends of said rods being welded together, said plate having lateral ears at opposite ends and openings in said ears defining sockets, a mop head support mounted on said crosshead, said support including a generally U-shaped wire frame having spaced side pieces; a cross-piece shorter than said side pieces connecting said side pieces at one end thereof to define a plane with said side



pieces; and re-entrant portions connected to the other ends of said side pieces and extending inwardly of the U-shaped frame in lateral spaced relation to said side pieces and terminating at their inner ends intermediate the ends of said side pieces, said re-entrant portions extending above the plane defined by said frame and having lateral trunnions on the inner ends pivotally mounted in said sockets on said crosshead to pivotally mount the mop head support on the handle for movement about an axis transverse to said re-entrant portions.

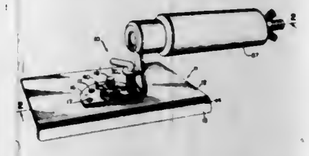
3,045,270
SCRAPING TOOL
David Blumlo, 13321 Woodvale, Oak Park 37, Mich.
Filed Apr. 10, 1959, Ser. No. 805,421
2 Claims. (Cl. 15—216)



1. A scraping tool for cleaning the corrugated sole of a shoe having parallel rows of ribs comprising a substantially flat body having a handle with a scraping head on one end thereof, said head having at least three teeth projecting therefrom in the plane of said body, said teeth having substantially the same profile as the spaces between said ribs and the spaces between said teeth having substantially the same profile as said ribs, said teeth projecting from said scraping head at an acute angle relative thereto and said handle projecting in the opposite direction from said head at an acute angle thereto and in a direction substantially parallel to the direction in which said teeth project whereby said teeth are adapted to extend between and mesh with the ribs and scrape the ribs clean when the tool is moved in a direction parallel to the direction in which the ribs extend.

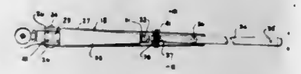
3,045,271
UNIVERSAL CONCRETE EDGER
Julius A. Cinotti, 78 Erb St., Buffalo, N.Y.
Filed Sept. 21, 1960, Ser. No. 57,458
12 Claims. (Cl. 15—235.8)

12. A concrete edger comprising a blade having a generally planar first portion and a second portion at right angles to said first portion and joined thereto by an arcuate third portion, a threaded post extending upwardly from said first portion, a plurality of indentations in said edger in an arc about said post with two of said indentations lying on a line through said post and parallel to said blade second portion, a handle support member comprising a first leg over and in a plane parallel to said first portion and a second leg extending upwardly therefrom, said legs having apertures adjacent the free ends thereof, said post extending through the aperture of said first leg, said first leg having a second aperture overlying a said



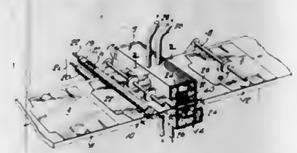
indentation, releasable means securing said handle support member on said post, detent means comprising a pin extending through the second aperture in said first leg and into a said indentation, a hollow handle, and bolt means extending through said aperture in the second leg of said handle support member and said handle.

3,045,272
WINDSHIELD WIPER
John R. Oishei, Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Sept. 1, 1959, Ser. No. 837,486
16 Claims. (Cl. 15—250.13)



1. A windshield wiper arm comprising a mounting section, a wiper carrying section, an intermediate section interposed between said mounting section and said wiper carrying section, means for pivotally mounting said wiper carrying section on said intermediate section, and unitary means for both causing said wiper carrying section to pivot relative to said intermediate section to effect an adjustment of said wiper carrying section and for automatically maintaining said wiper carrying section in fixed relationship on said intermediate section as soon as said wiper carrying section reaches its adjusted position without the requirement for additional manipulation of said unitary means thereafter.

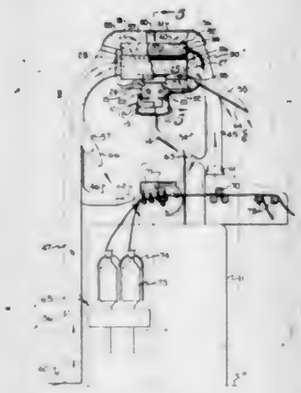
3,045,273
CLEANING AND TENSION CONTROL SYSTEMS FOR PAPER AND OTHER PRODUCTS
Frederic J. Bruno, Chicago, Ill., assignor to Oxy-Dry Sprayer Corporation, Chicago, Ill., a corporation of New York
Filed Dec. 27, 1956, Ser. No. 630,977
12 Claims. (Cl. 15—306)



1. Sheet material cleaning and control apparatus comprising means for loosely supporting said material, means having an outer surface with a convex curvature in close proximity to said sheet material for directing a plurality of streams of compressed gas obliquely onto said material, the last said means producing a turbulent gas flow impinging on said material, vacuum means in closely spaced relationship to said stream producing means and substantially coextensive therewith, said streams and vacuum means influencing the position of

the material relative thereto as the material is moved past said streams and vacuum means and means maintaining said material in spaced relationship to said stream-producing means and vacuum means.

3,045,274
TRAVELING SUCTION CLEANER FOR TEXTILE MILLS
Hubert Sohler, Maschinenfabrik, Wangen, Allgau, Germany
Filed July 12, 1960, Ser. No. 42,381
Claims priority, application Germany July 15, 1959
13 Claims. (Cl. 15—312)



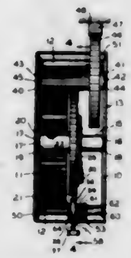
1. In an overhead, rail mounted, traveling suction cleaner for textile mills, said cleaner having a fan, at least one suction inlet communicating with said fan, and a suction conduit communicating with said inlet and extending to a area to be cleaned; the combination therewith of a filter interposed between said conduit and said fan for entrapping thereagainst dust, lint and other light material drawn into said conduit, a wiper element engageable with said filter, means moving said wiper element for wiping the material from said filter, a chamber for receiving the material wiped from the filter, and means for opening said chamber to remove collected material therefrom.

3,045,275
DEVICE FOR CLEANING SLATTED STRUCTURES SUCH AS VENETIAN BLINDS AND THE LIKE
Jean C. Delacretaz, 26 N. Roosevelt St., North Coburg, near Melbourne, Victoria, Australia
Filed Sept. 5, 1961, Ser. No. 135,882
10 Claims. (Cl. 15—369)



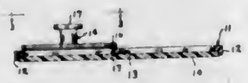
1. A device for cleaning slatted structures such as Venetian blinds comprising a hollow body part adapted to be connected to a source of suction; two or more hollow arcuate members extending in line and in parallel planes from said body part and in communication therewith; and a pad of resilient material located in each hollow member so as to extend through openings on opposite sides of each member, with the adjacent edges of the pads spaced apart a distance sufficient to allow insertion of the pads between the slats, and each pad being of sufficient size and resiliency to effectively seal the said openings through which it extends, yet capable of distortion when engaged with the slats to break the seal and allow suction between it and an edge of an opening.

3,045,276
SPRING OPERATED DOOR CLOSER
Charles A. Schwarz, 1237 N. 35th St., Phoenix, Ariz.
Filed Sept. 12, 1960, Ser. No. 55,313
9 Claims. (Cl. 16—79)



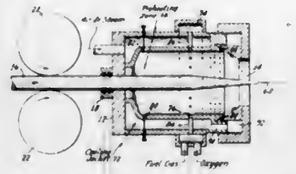
3. A device for application to a door movable slidably in a door frame for closing the door, said device comprising a spring unit including a frame, a spring attached to said frame, a shaft within said frame attached to said spring and adapted to be rotated by said spring, a power member on said shaft, an over-riding clutch for driving said power member from said shaft, and an operating connection including a part parallel to the direction of sliding movement of the door and between said power member and said door, and means for rendering said door closer inoperative to close the door whereby said power member will be operated to tension said spring when the door is opened and thereafter when the door is released said spring will operate to close said door.

3,045,277
GROUND MEAT MOLD
James D. Carpenter, P.O. Box 126, Anniston, Ala.
Filed Nov. 20, 1959, Ser. No. 854,303
1 Claim. (Cl. 17—32)



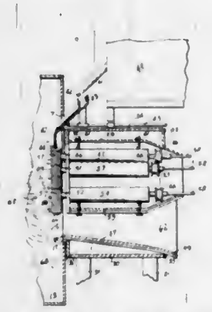
A ground meat mold comprising a relatively flat plate-like member having a flat upper surface, a second relatively flat member having flat, smooth upper and lower surfaces and disposed flat against the adjacent flat surface of said first plate-like member, said second relatively flat member having depending peripheral flanges formed integrally with the edges thereof and disposed in telescoping engagement with the edges of said first plate-like member whereby the edges of said first plate-like member are wholly concealed, there being a plurality of spaced apart openings in said second relatively flat member inwardly of the edges thereof of a size to define with the subjacent surface of said first plate-like member within the confines of said openings receptacles for receiving predetermined amounts of ground meat, and a pressing member having a relatively flat contact surface of a width greater than the width of each receptacle for pressing the ground meat into said receptacles.

3,045,278
FIBER FORMING TORCH
Charles Potter, South Orange, N.J., assignor to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Apr. 3, 1959, Ser. No. 803,928
11 Claims. (Cl. 18—2.5)



5. In combination, a combustion chamber having a first open end and a second end having an aperture, said open end being constricted with respect to the cross section of said combustion chamber to provide a nozzle, said nozzle being an extension of the combustion chamber, means for directing a rod of fused quartz through said aperture along an axis toward the open end of said combustion chamber, means for directing flame generally perpendicularly to said axis to heat said rod to its melting point, and means including a peripheral outlet near the open end of the chamber for providing a forceful gas jet directed toward said axis and outwardly from the combustion chamber through the nozzle.

3,045,279
HIGH CROSS VELOCITY FIBERIZATION SYSTEM
Walter K. Hesse, Martinsville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Nov. 4, 1957, Ser. No. 694,414
7 Claims. (Cl. 18—2.6)



1. In apparatus for converting molten raw material into fibers comprising means for distributing a stream of molten raw material to the peripheral surface of a fiberizing rotor to form an incandescent ring thereon and means for rotating said fiberizing rotor about an axis to eject fiber bearing particles from said incandescent ring so as to produce in a zone of fiberization a plurality of fibers and unfiberized particles, the improvement comprising:

(*a*) means defining a passageway comprising a plurality of cooperating stationary walls,

(*b*) said passageway extending longitudinally in a direction generally parallel to the axis of rotation of said rotor,

(*c*) said walls having surfaces which, in said longitudinal direction, are continuous and smooth,

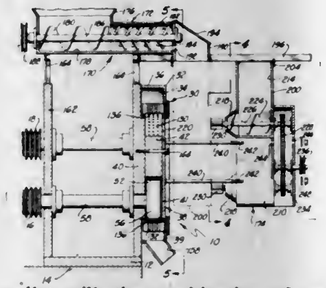
(*d*) said passageway terminating in an exist portion adjacent to but spaced exteriorly from the peripheral surface of said rotor,

(*e*) means for moving fluid through said passageway at a velocity between about 1000 and 5000 feet per minute,

(*f*) said means defining said passageway acting on said fluid as it passes therethrough to remove substantially all eddies and turbulence therefrom,

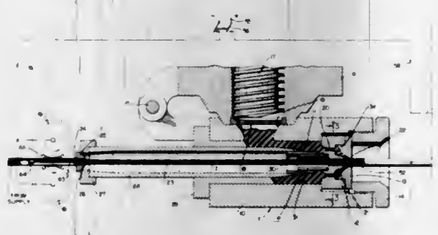
(*g*) said fluid moving out of said exit and through said zone of fiberization to separate said fibers from said unfiberized particles.

3,045,280
PELLET MILL AND FEEDER THEREFOR
Paul Bonnafoux, 44409 Stanridge Ave., Lancaster, Calif., assignor of twenty percent to Thomas P. Mahoney, Los Angeles, Calif., twenty-six percent to Marie B. Bonnafoux, Lancaster, Calif., and twenty-six percent to Yvonne Bonnafoux
Filed July 10, 1959, Ser. No. 826,227
5 Claims. (Cl. 18—12)



1. In a pellet mill, the combination of: a housing; a foraminous, pelletizing die rotatable in said housing; rollers located in said housing in contact with said die for extruding pellets therethrough; a supporting frame connected to said housing; track means connected to said frame; and material feeding means mounted in overlying relationship with said housing and having a portion mounted on and depending from said track means and movable into juxtaposition to and away from said housing thereupon.

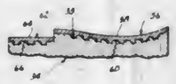
3,045,281
PROCESS AND APPARATUS FOR MAKING SUPPORTED SLEEVING
Max Skobel, 233 Pinewood Ave., Elberon, N.J.
Filed Nov. 25, 1958, Ser. No. 776,379
2 Claims. (Cl. 18—13)



1. Apparatus for applying to a supple tube a covering of plastic material, the length of the coated tubing being unlimited by the apparatus which comprises an extruding die having a die aperture, means for drawing said tube through said aperture means for feeding plastic material in a plastic condition to said extruding die to be extruded on said tube as it is drawn through said die aperture, an inner die member supporting said tube internally inside said aperture, said tube passing between said inner die member and said die, said inner die member having a stem extending forwardly inside said tube in a direction opposite the direction of travel of said tube

and a head, over which said tubing is expanded on said stem in advance of said die, an inner electrode disposed inside said tube between said die and said drawing means, connecting means electrically and mechanically connecting said inner electrode and inner die member, an outer electrode surrounding and in contrast with the outer surface of said tube, a voltage supply having terminals, circuit means electrically connecting one terminal with said inner die member and inner electrode and another terminal with said outer electrode to apply a voltage across the wall of said coated tube and means detecting the flow of current between said electrodes and a curing chamber interposed between said die and said electrodes, said coated tube passing through said chamber and said plastic material being thereby at least partially cured in advance of said electrodes.

3,045,282
DEVICE FOR CHANGING QUICKLY THE SOLE AND HEEL PATTERN IN A VULCANIZING MACHINE
Leslie R. Heideman, St. Louis, Mo., assignor to International Shoe Company, St. Louis, Mo., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 25,023
5 Claims. (Cl. 18—17)



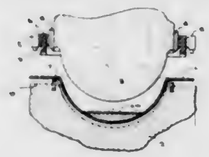
1. In combination with a machine for vulcanizing a sole and heel to an upper having a mold cavity including a vertically movable pattern defining the bottom of said mold cavity and normally forming the design in the bottom of the sole and heel, of a removable freely riding sole plate and a removable freely riding heel plate on and completely covering said pattern, said sole and heel plates comprising and defining a temporary bottom for said mold cavity, said sole and heel plates having predetermined designs on the upper face thereof for forming the design in the bottom of a sole and a heel being vulcanized.

3,045,283
INJECTION MOLDING MACHINE
Neil Keiser, Oxford, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 7, 1959, Ser. No. 804,715
2 Claims. (Cl. 18—30)



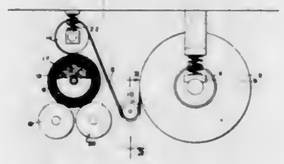
1. In an injection molding machine comprising a barrel equipped with a means of feeding a thermoplastic resin into the upstream portion of said barrel and a means of discharging said resin at the downstream end of said barrel, a ram axially aligned with said barrel for advancing said resin from the upstream to the downstream portion of said barrel and a suitable means for actuating said ram, the improvement which comprises a spreader substantially axially aligned and rotatable within said barrel and longitudinally stationary therein during operation thereof; said spreader being equipped with a plurality of flights and at least one helically disposed channel extending over the outer surface thereof and being exclusively supported and rotated by a shaft substantially axially aligned with said barrel and fixedly attached to said spreader, said flights arranged in combination to wipe the entire inner surface of said barrel lying adjacent to said spreader, said shaft extending upstream through said barrel and said ram and thereafter connected to a means of rotating the shaft independent of the movement of said ram.

3,045,284
CLOSED MOULDS FOR INITIALLY FLUID MATERIALS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed July 30, 1959, Ser. No. 830,602
Claims priority, application France August 14, 1958
5 Claims. (Cl. 18—34)



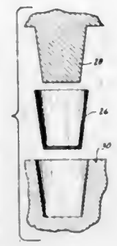
1. A mould for moulding fluid materials such as resins and the like which are initially fluid and are shaped and hardened in the mould, comprising a die member and a punch member, said punch member fitting within said die member to form a cavity, means for limiting the relative motion of said punch member into said die member in the moulding stroke, and a resilient gasket surrounding said mould cavity and adapted to be pressed between said punch and die members at the end of the moulding stroke, said resilient sealing gasket being provided with vents therein for venting air entrapped within said mould during said moulding stroke, the cross-sectional area of said vents and their distribution about the gasket being adapted to control the escape of air from said cavity at a rate such that the material in the mould will reach all of said vents substantially simultaneously irrespective of the shape of the article being moulded, whereby the material being moulded completely fills the mould cavity.

3,045,285
METHOD FOR MAKING MULTILAYER SHEETS OF PLASTIC
William G. Baird, Jr., 28 Onelda Road, and John W. Harrison, 47 Yale St., both of Winchester, Mass.
Filed May 21, 1959, Ser. No. 814,848
12 Claims. (Cl. 18—48)



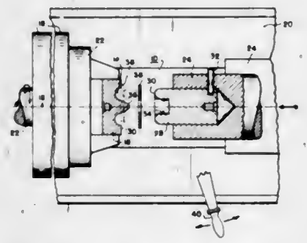
1. A method for converting thin film of a heat shrinkable plastic into thicker film of uniform thickness of said plastic comprising the steps of winding a plurality of layers of the thin film around a mandrel while maintaining sufficient tension on the film during the winding to exclude air from between the layers, then applying sufficient heat to said layers of film to cause the layers to shrink into closer contact with one another and with the mandrel, and removing the thus formed thicker film from said mandrel.

3,045,286
METHOD OF MAKING DISPENSABLE CUPS
James M. Harrison, Fort Worth, Tex., assignor to Crown Machine & Tool Company, Fort Worth, Tex., a corporation of Texas
Filed Aug. 26, 1959, Ser. No. 836,124
6 Claims. (Cl. 18—48)



1. A method of making a relatively rigid foamed plastic cup capable of being dispensed, from a foamed plastic that is rigid in character and is capable of taking a permanent set when compressed, including the steps of providing a cup shaped molding cavity and supplying beads to the cavity of such a foamable plastic having a diameter substantially less than the thickness of the cavity, heating the beads in the cavity to their foaming temperature, while maintaining the size and thickness of the cavity constant, thereby expanding the beads and causing them to completely fill the cavity and to fuse to one another and form a foamed dimensionally stable plastic cup having a wall thickness generally equal to the thickness of the cup cavity, and thereafter applying uniform pressure, without heat, to substantially the entire portion of the cup side walls to reduce the thickness of the cup side walls to a thickness no greater than the diameter of the beads placed in the cavity.

3,045,287
METHOD FOR MOLDING THIN SECTIONS OF TETRAFLUOROETHYLENE
James M. Yost, Sewickley, and William E. Moritz, Irwin, Pa., assignors to Allegheny Plastics, Inc., Coraopolis, Pa., a corporation of Pennsylvania
Filed Feb. 23, 1960, Ser. No. 10,450
6 Claims. (Cl. 18—55)

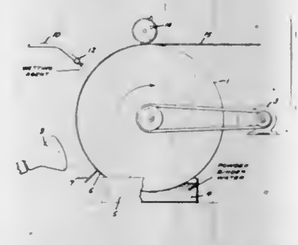


1. Method for the production of thin articles from cold tetrafluoroethylene by a remolding operation between a coaxial pair of relatively cold male and female dies presenting complementary surfaces to one another, said method comprising centering a cold blank of the tetrafluoroethylene, forcibly bringing the dies together thus clamping a portion of the blank therebetween under axial pressure, simultaneously therewith while relatively rotating said dies developing heat of friction in said blank incidental to subjecting said portion thereof to a remolding pressure by means of said axial force on the dies, maintaining said pressure and rotation until a manifest yielding point of said blank portion is reached and the molding pressure dishes the article into complete conformity inside the cavity in said female die and then removing said pressure, and thereafter while the dished portion is cooling, removing the article from said dies.

3,045,288
PROCESS FOR DIMENSIONALLY STABILIZING ARTICLES FABRICATED FROM POLYTETRAFLUOROETHYLENE
George E. Sykora, Tulsa, Okla., assignor to Well Surveys Incorporated, a corporation of Delaware
No Drawing. Filed Oct. 14, 1957, Ser. No. 689,783
4 Claims. (Cl. 18—55)

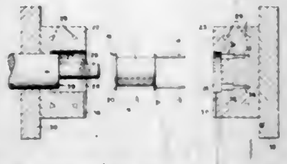
1. A process for fabricating articles substantially composed of polytetrafluoroethylene and having substantially stable dimensions and shape, said process comprising the steps of subjecting finely divided granules of fibrous or crystalline polytetrafluoroethylene to pressure to form a body substantially having a preselected shape and preselected dimensions, baking said body under said pressure during a preselected time interval substantially at a temperature sufficient to convert said fibrous body to an amorphous gel, thereafter reducing the baking temperature the minimum amount necessary to convert said amorphous gel to a fibrous polytetrafluoroethylene body having a shape and dimensions more precisely approaching the preselected shape and dimensions desired, removing said forming pressure from said more precisely shaped and dimensioned fibrous body, continuing said baking at said reduced temperature during a time interval of at least 20 hours but insufficient to cause said more precisely shaped and dimensioned fibrous body to lose any significant amount of weight while being sufficient to substantially relieve all internal stresses which might otherwise cause said more precisely shaped and dimensioned fibrous body to substantially deviate in shape and dimension after all baking is stopped.

3,045,289
METHODS FOR PREPARING THIN SHEETS FROM POWDER MATERIAL
August J. Kling, 35 Glen Ave., Scotia, N.Y.
Filed Oct. 2, 1957, Ser. No. 687,820
10 Claims. (Cl. 18—57)



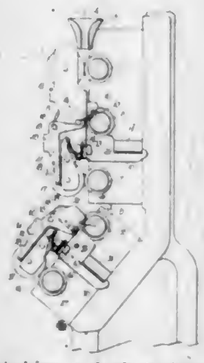
1. A method for preparing thin sheets from powdered refractory material, said method comprising the steps of: coating a casting surface with a film of a mixture of the powder, a binder for the powder, and a liquid vehicle for the binder and powder; drying this film to remove the liquid vehicle; rewetting this film with a solution of binder softener and a vehicle inert to the binder wherein the portion of softener in said solution is less than that effective to destroy the solidity of the film by saturation with said solution so that the force of adhesion between the film and casting surface is reduced to less than the strength of the film; and removing the film from the casting surface.

3,045,290
METHOD OF ENCAPSULATING COILS
Elroy H. Anderson, Arlington Heights, and Carlton F. Heidorn, Palatine, Ill., assignors to Anderson Controls, Inc., Franklin Park, Ill., a corporation of Illinois
Original application Oct. 11, 1957, Ser. No. 689,651. Divided and this application Dec. 14, 1959, Ser. No. 859,314
4 Claims. (Cl. 18—59)



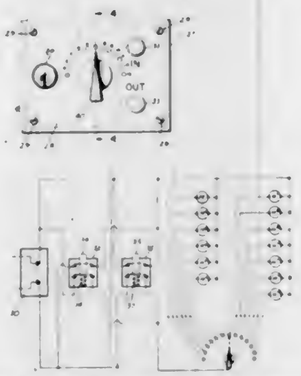
1. A method of producing an encapsulated wire coil which comprises
A. winding a coil of wire on a bobbin of thermoplastic material having end flanges
B. placing said bobbin in a mold cavity
C. introducing thermoplastic encapsulating material of the same material of which said bobbin is made into said mold cavity, the thermoplastic encapsulating material being introduced at a temperature high enough to
(1) be in a fluid state,
(2) soften said flanges sufficiently to coalesce with said encapsulating material,
D. maintaining the temperature of said encapsulating material higher than the temperature required to soften the material of said bobbin for a period of time sufficient to cause coalescing of said encapsulating material with a portion of said flanges, but not long enough to destroy the identity of said bobbin, and
E. cooling said mold to a temperature lower than the solidification temperature of said thermoplastic encapsulating material.

3,045,291
DEVICE FOR CHANGING THE COURSE OF A SLIVER IN A DRAFT APPARATUS
Naoji Arakawa, 49 Sakurazukamoto-machi 5-chome, Toyonaka, Japan
Filed May 6, 1955, Ser. No. 506,641
1 Claim. (Cl. 19—250)



In a spinning machine, a draft device comprising a vertical group of a plurality of pairs of opposed draft rollers and an oblique group of pairs of opposed draft rollers below said vertical group, the opposed rollers in each pair forming a nip point therebetween, the nip point of the pair of opposed rollers in said oblique group closest to said vertical group being adjacent a vertical line from the nip point of the lowermost pair of opposed rollers in said vertical group, the line between the centers of the pair of opposed rollers in said oblique group which is closest to said vertical group being perpendicular to the line between the nip points of the said pair of opposed rollers and the lowermost pair of rollers in said vertical group, and each roller in said pair of rollers in said oblique group having an apron therearound, and means for tensioning said aprons so that the apron on the bottom roller of said pair of rollers contacts the apron on the top roller of said pair of rollers from the nip point of said pair of rollers to the point where the aprons leave said top roller.

3,045,292
CONTROL SYSTEMS FOR POWER-ACTUATED EXTENSIBLE SEAT STRUCTURES
Raymond J. Murphy, Bonne Terre, Mo., assignor, by mesne assignments, to Medart Lockers, Inc., a corporation
Filed Sept. 16, 1957, Ser. No. 683,996
9 Claims. (Cl. 20—1.126)

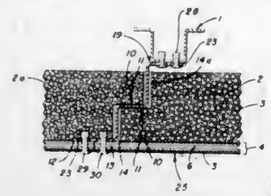


1. A control system for use with a plurality of independent electrical motors each provided with a pair of terminals for operative connection to a pair of power lines and each adapted to operate in reverse directions when the connections between the power lines and said terminals are reversed, said system comprising conducting means for connecting one terminal of each of said motors in common, directing means for connecting the other terminal of any of said motors to a connecting point, and actuating means for operatively connecting said power lines to said conducting means and connecting point and adapted for selectable actuation whereby the connections of the power lines to the conducting means and the connecting point may be selectably interchanged thereby causing any pre-determined motor to operate in a preselected direction, said directing means and actuating means being contained within one switch box for remote control operation of said motors.

3,045,293
SUPPORT AND SEALING FOR LIGHT-WEIGHT PANELS
Joseph A. Potchen, Marne, Mich., assignor, by mesne assignments, to Evans Products Company, Plymouth Township, Mich., a corporation of Delaware
Filed Oct. 15, 1956, Ser. No. 615,960
4 Claims. (Cl. 20—4)

1. In a support and joint for adjacent panels each having a facing sheet and a core, the combination comprising a member characterized by lateral resiliency, said member in cross section having a pair of parallel riser portions separated by a central step portion substantially normal to said riser portions, a terminal flange on the free end of each of said riser portions, said terminal flanges being substantially parallel to said step portion and extending

in opposite directions, one edge of each of said adjacent panels being shaped to fit opposite sides of the riser and step portions of said member, the core adjacent to the facing sheet of one of said panels being undercut to form a pocket in the core of said panel and receiving one of said terminal flanges, the edges of the facing sheets of



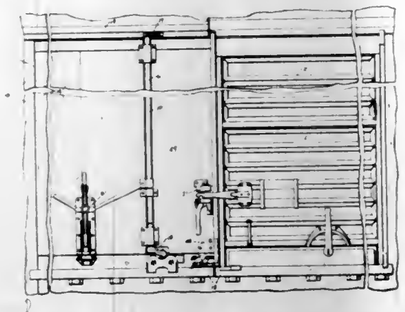
said adjacent panel is abutting intermediate the ends of said pocket and the edges of said one terminal flange and secured thereto, the riser portion of said member adjacent the other of said terminal flanges being spaced from the edges of said cores, said step portion of said member bearing tightly against the cores of adjacent panels.

3,045,294
METHOD AND APPARATUS FOR LAYING FLOORS
William F. Livezey, Jr., 3431 W. Penn St., Philadelphia, Pa.
Filed Mar. 22, 1956, Ser. No. 573,138
5 Claims. (Cl. 20—8)

1. A floor construction comprising a sub-floor, a plurality of sleepers, each consisting of a base portion of resilient material secured to said sub-floor and an upper portion united to said base portion and having a face plate with an upstanding web terminating in outturned flange portions parallel to said face plate, and a plurality of floor boards each having a flat undersurface supported at its ends on the face plate of the upper portion of said sleepers and having means defining grooves in its end walls receiving said outturned flange portions, said grooves affording sliding movement of said boards on the upper portions of said sleepers, and spring means of less thickness than said resilient material and underlying said floor boards and overlying said sub-floor intermediate said sleepers, said spring means being secured to said sub-floor at a point underlying said floor boards and engaging at the other end an outer floor board to bias the same inwardly longitudinally of the sleepers.

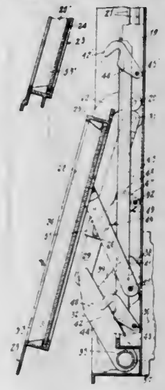
3,045,295
LATERALLY MOVABLE DOORS
Wilfred A. Beauchamp, Chicago, Ill., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 10, 1959, Ser. No. 839,236
5 Claims. (Cl. 20—23)

4. In a railway car having a side wall provided with a door opening, a door, means on said door mounting said door on said car, said means being operable to impart lateral movement to said door into and out of the door opening, a member secured to said car below the door opening, and a member carried by said door, said latter member extending downwardly below the lower edge of said door, said downwardly extending portion of said latter member moving into vertical interlocking relationship with said first member as said door is moved laterally



into the door opening and cooperating therewith to prevent upward movement of said door.

3,045,296
AWNING TYPE WINDOW STRUCTURE WITH LOCKING MEANS
Arthur Silverman, 55 Dorrison Drive, Short Hills, N.J.
Filed Dec. 9, 1959, Ser. No. 858,518
4 Claims. (Cl. 20—42)



1. A window structure of the awning type comprising a window frame, means mounted in said frame for up and down movement with respect thereto, a window sash pivotally connected to said means, a stud outstanding from a side edge portion of said sash, a link pivotally connected at one end to said frame and at its other end to said sash, operating means for said first-mentioned means, means for locking said window sash in closed position comprising a bell crank lever pivotally connected to said frame and having a long arm and a short arm, a sleeve pivoted to said long arm and slidably mounted with respect to said operating means, an actuating bar adapted to move up and down, a hook lever with one end pivoted to the frame and the other end adapted to hook over said stud when the sash is in closed position, means pivotally connecting said bar and hook lever, and means pivoting the short arm of said bell crank lever to an intermediate portion of said bar.

3,045,297
MULTIPLE PANE WINDOW UNIT
Erland Samuel Ljungdahl, Fafnerstigen 9, Djursholm, Sweden
Filed July 25, 1957, Ser. No. 674,158
Claims priority, application Sweden July 31, 1956
7 Claims. (Cl. 20—56.5)

1. A multiple pane window unit, comprising, in combination, at least two sheet glass elements having par-

allel surfaces, a metallic spacer strip having laterally spaced-apart edges, the longitudinal edges of said spacer strip being corrugated to form wave shaped lines, said



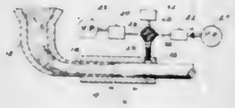
metallic spacer strip being disposed intermediate said glass elements and directly fused along said corrugated edges only to the adjacent surfaces of said glass elements by a glass-to-metal seal.

3,045,298
METHOD AND APPARATUS FOR SHELL MOLDING
Alfred C. Christensen, Sr., 9205 S. Marshfield Ave., Chicago 20, Ill., and Alfred C. Christensen, Jr., 5 Oak Lane, Park Forest, Ill.
Filed Sept. 28, 1959, Ser. No. 842,763
7 Claims. (Cl. 22—36)



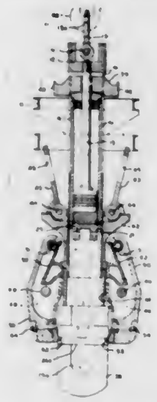
1. Shell molding apparatus comprising means for supporting the two halves of a mold box in face-to-face relation, radiant heating means for the back of each mold box half, an investment chamber continuously below said mold box and movable upwardly into sealed relation thereto, said investment chamber having means adjacent the bottom periphery thereof to admit a small quantity of compressed gas thereto sufficient only to fluidize investment in said investment chamber to permit it to be mechanically displaced therefrom and into the mold cavity of said mold box without agitation in the mold box, and diaphragm means movable upwardly into said investment chamber for effecting such displacement of such investment without agitating the same.

3,045,299
RECIPROCATING MOLD USING A VACUUM AND PRESSURE ASSIST
Karl Heinz Steigerwald, Sauerbruch-Strasse 10, Heidenheim (Brenz), Germany
Filed Nov. 17, 1959, Ser. No. 853,573
3 Claims. (Cl. 22—57.2)



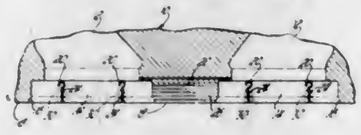
1. In a continuous casting apparatus having a reciprocated mold, a chamber coupled to the exit end of the mold, said chamber peripherally surrounding the casting, a vacuum chamber, a pressure chamber, and means responsive to the movement of the mold for coupling said first named chamber to said vacuum chamber during the portion of the mold reciprocating cycle in which the mold and the casting move together and for coupling said first named chamber to said pressure chamber during the portion of the mold reciprocating cycle in which the mold and the casting move in opposite directions.

3,045,300
PORTABLE INGOT STRIPPERS
Richard L. Stuckey, Alliance, Ohio, assignor to The Alliance Machine Company, Alliance, Ohio, a corporation of Ohio
Filed June 26, 1959, Ser. No. 823,105
8 Claims. (Cl. 22—95)



1. A portable ingot stripper comprising a housing, a hydraulic cylinder and piston, one fixed to the housing and the other vertically movable in said housing, means on the housing supplying fluid to opposite ends of said cylinder whereby to relatively move said cylinder and piston, a removable bull nose on the movable member of said cylinder and piston, mold engaging arms pivoted on said housing and movable in a vertical arc from a position out of engagement with a mold to a position in engagement with a mold, hydraulic means on the housing acting on said mold engaging arms to cause them to move, said arms having mold lug engaging openings and spaced mold top bearing stops, a cross-arm movable with the movable member of said cylinder and piston, cam means slidably mounted on the housing, attaching means on the cam means connectable to said cross-arms and selectively movable with said cross-arms axially with respect to the housing, tong means pivoted on the housing, and cam follower means on the tong means adapted to ride on the cam means to close and open the tongs, said bull nose and said cam means being selectively interchangeably used in conjunction with the movable member of said cylinder and piston.

3,045,301
COATED METALLIC INSERT IN MOLD
Fred J. Webbere, Orchard Lake, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,370
5 Claims. (Cl. 22—174)



3. In a mold, a chill having a surface defining part of a mold cavity, a coating on said surface of a mixture which comprises, by weight, approximately about 20% to 40% of a powdered metal from the group consisting of aluminum and aluminum basealloys, about 5% to 20% levigated alumina and about 40% to 75% of a binder.

3,045,302
CASTING OF METALS AND ALLOYS
Alexander Martin Patton, London, England, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 13, 1959, Ser. No. 846,072
Claims priority, application Great Britain Oct. 20, 1958
3 Claims. (Cl. 22—216)

2. A new and improved method for effecting grain refinement in metal castings and for producing castings characterized by equiaxed crystals substantially throughout the cast structures which comprises, pouring a molten body of metal into a mold, subjecting only the volume of metal undergoing incipient solidification to vibratory action induced in a probe in the body of molten metal, the vibration being initiated at the onset of incipient solidification and before the molten alloy adjacent the mold walls freezes, maintaining the distance of effective vibrational energy at a substantially constant distance from the initial-solidification-front while continually retracting said probe from each successive volume of metal undergoing incipient solidification into another volume of metal undergoing incipient solidification until solidification is complete.

3,045,303
PLASTIC LINED SEALS FOR STRAPPING
Worth Wade, Rosemont, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 22, 1959, Ser. No. 861,251
2 Claims. (Cl. 24—18)



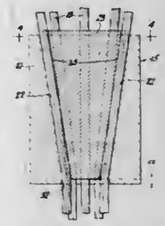
1. A package tie comprising a flexible tape formed of a plurality of parallel cords lying in a common plane, said tape having ends positioned in overlapping relation in parallel planes, a metal sleeve embracing the overlapping ends of said tape, said sleeve having parallel wall sections facing opposite faces of the overlapping ends of the tape, said sleeve being lined with a pressure-flowable plastic, said plastic being intimately conformed about portions of the cords of said tape and penetrating the individual cords of the tape and completely filling the space between the tape and the metal sleeve.

3,045,304
BUCKLE ASSEMBLY
Stuart T. Shears, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 30, 1959, Ser. No. 843,576
3 Claims. (Cl. 24—77)



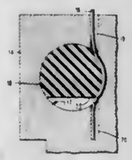
3. A buckle assembly of the class described including a garment and the like, a strap having one end secured to said garment and the other end being free, a fastening buckle slidably attached to said strap, a fastening means attached to said garment and adapted to engage a cooperating fastening means on said buckle, and buckle engaging means at the free end of the strap arranged along one edge of said strap laterally of the fastening means of the buckle to keep the buckle attached to the strap while being free of interference when engaging and disengaging of the fastening means.

3,045,305
CONCRETE PRESTRESSING CABLE GRIP
Arthur R. Anderson, Tacoma, Wash., assignor, by mesne assignments, to Concrete Technology Corporation, Tacoma, Wash., a corporation of Washington
Filed Jan. 28, 1954, Ser. No. 406,671
1 Claim. (Cl. 24—122.6)



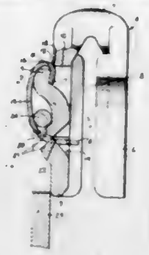
A grip for anchoring a group of wires under tension in stressed concrete work without requiring the use of auxiliary clamping devices or procedures to effect clamping, comprising a metal socket having tapered inner wall portions and a metal plug received within said socket having tapered wall portions complementary to the tapered inner wall portions of the socket, said tapered wall portions of the plug having longitudinal grooves to receive the wires to be tensioned, the metal of said plug in the region of said grooves being of a hardness substantially less than that of the surface of the wires and the tapered inner wall portions of the socket being smooth and free of grooving at points opposite the longitudinal grooves of the plug and being of a hardness at least equal to that of the surface of the wires.

3,045,306
LOCKING DEVICE
Charles M. Taylor, Johnson City, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 24, 1959, Ser. No. 861,804
2 Claims. (Cl. 24—134)



1. In combination, a body portion having a cylnidrical recess therein, said body portion having a channel for receiving a wire element or the like to be removably connected to said body portion, said channel having openings in the exterior of said body portion and the side wall of said recess, and a cylindrical locking member within said recess and having an elastically compressible locking surface frictionally engaging said side wall, said locking member having a segment removed so as to form a receptacle with said side wall, said locking member being rotatable within said recess to a first position to permit insertion of a wire element or the like through said channel into said recess and to a second position to effect an elastic compression of said locking member to compressively lock said wire element between said side wall and said locking surface.

3,045,307
AUTOMATIC LOCK SLIDER FOR SLIDE FASTENERS
Roland J. Poux, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed Mar. 4, 1959, Ser. No. 797,160
3 Claims. (Cl. 24—205.14)



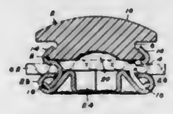
1. In a lock slider for slide fasteners, a slider body comprising a pair of spaced-apart wing portions connected at one end by a neck portion so as to provide a channel therebetween, a yieldable arcuated plate-like locking member mounted on one of said wing portions, said locking member made of a relatively thin resilient material, a lip-like lug portion struck up from the body of one of said wing portions so as to provide a transversely extending slotted opening in said wing portion in under the upper edge of said lug portion, said locking member being arranged in superimposed relation on said lug portion, a hook-like attaching portion on one end of said locking member which is disposed over and around said lug with the end thereof extending into the slotted opening thereunder between said lug portion and the opposed edge of the slotted opening, the lower inner edge of said lip-like lug portion in cooperation with the opposed upper edge of the slotted opening clampingly engaging said hook-like attaching portion against the said opposed upper edge so as to grip firmly and hold securely the locking member in position on said wing, a locking projection arranged on the opposite free end of said locking member which projects normally through an opening in said wing into said slider channel, and a pull member having a transversely extending trunnion portion on one end thereof which is disposed between the locking member and the adjacent wing portion forwardly of said lip-like portion.

3,045,308
FASTENER FOR PANELS AND COVERS
Silas B. Tobey, Westfield, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 25, 1960, Ser. No. 24,445
4 Claims. (Cl. 24—211)



1. A fastener for securing a first member, having an aperture therein, to a second member, having an inner surface, comprising a non-rotatable hollow cylindrical element having a slot extending longitudinally thereof from an inner end and terminating short of an outer end of the element, a head fixed to the outer end of the hollow element to engage the first member when the hollow element is disposed in the aperture, a rotatable element disposed in the hollow element, having a head fixed to an outer end thereof to engage the head of the hollow element, and having a spiral groove formed in the rotatable element from an inner end thereof, an elongated resilient element having spiral turns formed in one portion thereof to ride in convolutions of the spiral groove and be moved longitudinally of the rotatable element by rotation of the rotatable element, and an arm portion extending through the slot and movable therein until a leading end thereof engages the inner surface of the second member.

3,045,309
FASTENING DEVICE
Frank E. Johnson, Sr., Wilmington, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 862,976
1 Claim. (Cl. 24—216)



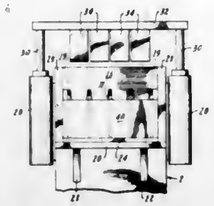
A decorative snap fastener attaching device comprising, in combination, an attaching member having a cup-shaped portion and attaching means for attaching the device to a snap fastener member and a decorative insert, said cup-shaped portion having a wall, said wall being formed of gripping tangs in spaced relation with each other, said decorative insert having a cap portion and an annular holding portion having an edge profile in the form of a reverse curve thoughout its circumferential surface providing a concave neck portion and a convex base portion, said engaging tangs being disposed in superposed abutting relationship with the convex base portion, said cap portion being of larger diameter than said holding portion and said cup-shaped portion so that it overlies them and conceals them when viewed from the top and when said device is in attached position.

3,045,310
FABRIC FASTENER
Stanislav J. Velinsky, Shorter Apts., Rome, Ga.
Filed July 27, 1960, Ser. No. 45,684
5 Claims. (Cl. 24—263)



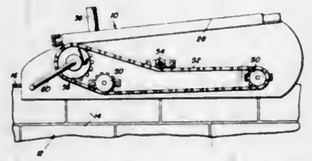
5. A fastener for holding fabric together comprising, rigid internally profiled casing means, inner core means completely insertable within said casing means and externally profiled for clamping layers of fabric thereagainst within the casing means in response to non-displaceable positioning of the core means within the casing means, and releasable clamp means slidably disposed within said casing means to engage fabric layers of varying thickness sufficient to prevent displacement of the core means relative to the casing means, said clamp means including releasable lock means having a releasing portion exposed within a recess opening externally in the casing means, and spring means operatively connected between the clamp means and the casing means for automatically releasing the clamp means from contact with the fabric in the casing means upon release of the lock means.

3,045,311
MOLDING MACHINE
George L. Oswalt, 2012 N. 77th Ave., Elmwood Park, Ill.
Filed May 3, 1961, Ser. No. 107,556
11 Claims. (Cl. 25—103)



1. A molding mechanism including a mold having front, back and side walls defining an open top mold cavity, a shuttle movable back and forth over said open top mold cavity in a direction generally parallel to said side walls to deposit molding material in said cavity, said shuttle having an opening in the lower part of the leading edge, and means for agitating the mold material in the shuttle to provide a generally even deposit of molding material, from back to front, as said shuttle moves across said cavity including an upwardly inclined extension above said side wall, aligned with the opening in the leading edge of the shuttle, and projecting into the bottom of the shuttle, said extension rising above the level of the top of the side wall and being gradually upwardly inclined in the direction of movement of the shuttle.

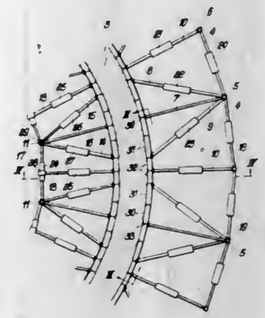
3,045,312
MACHINE FOR SPREADING MORTAR
Eugene Tolbert, Rte. 1, Crossville Road, and Maxwell Madison Thomas, 327 Charles Place, both of Roswell, Ga.
Filed Oct. 26, 1961, Ser. No. 147,835
8 Claims. (Cl. 25—118)



1. A mortar applicator comprising a hopper having, vertical guide plates on the sides of said hopper and projecting downwardly therebeneath for slidably embracing a course of masonry during movement of said hopper therealong, support and drive rollers journaled in said guide plates and extending therebetween transversely beneath said hopper for movably supporting the latter upon the top of a masonry course, mortar discharge means for said hopper for delivering from said hopper a layer of mortar of uniform thickness, manually operated means connected to said rollers for actuating the latter to propel said hopper along said masonry course.

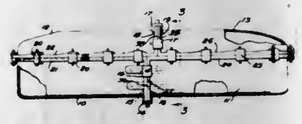
3,045,313
SCAFFOLD FOR SUPPORTING FORMWORK, PARTICULARLY SLIDING OR CLIMBING MOLDS
Hans Dorn, Dusseldorf, Germany, assignor to Firma Acrow-Wolff Gesellschaft mit beschrankter Haftung, Dusseldorf, Germany
Filed Sept. 24, 1959, Ser. No. 842,163
Claims priority, application Germany Sept. 30, 1958
10 Claims. (Cl. 25—131)

1. A framework for supporting a mold form wall, comprising, in combination, two polygonal structures spaced from each other, each polygonal structure including a plurality of elongated elements disposed in end to end relation and having ends articulated to the ends of adjacent elements, a plurality of said elements including adjusting means for varying the length thereof; a plurality of connecting rod means connecting said two polygonal structures; a plurality of mold panels forming a continuous



mold wall within said polygonal structures; and a plurality of strut means secured to each of said polygonal structures engaging said mold wall and supporting the same when the peripheral dimensions of said polygonal structures are adjusted by said adjusting means in accordance with the shape of said mold wall to produce tension in said polygonal structures.

3,045,314
COLLAPSIBLE CASKET
Arthur Le Roy Miller, 92 Cone Road, Huntington, N.Y.
Filed Dec. 12, 1958, Ser. No. 780,128
1 Claim. (Cl. 27—2)

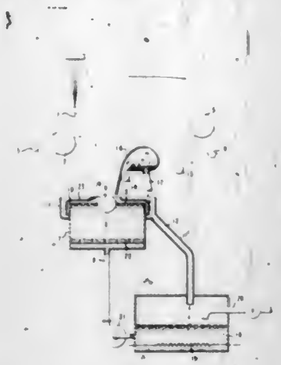


In a casket, the combination which comprises a base including a plurality of sections, a cover including a plurality of sections, said base and cover including side walls which have an offset relationship that permits nesting, said base and cover sections having meeting edges, aligning pins mounted in the base sections, the meeting edges of the base and cover sections being provided with flanges and the meeting surfaces of the flanges being provided with tongues and grooves, the outer surfaces of the flanges being provided with tapered enlarged portions at spaced points therein, clamps extended over the flanges and positioned on said enlarged portions for urging the flanges of the sections of the casket together, and an adhesive positioned between the flanges on said sections to effect a permanent seal between said flanges.

3,045,315
APPARATUS FOR ORIENTING CONTINUOUS FILAMENT YARNS
Charles E. Dusenbury, Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 2, 1960, Ser. No. 66,813
7 Claims. (Cl. 28—59.5)

1. An apparatus for drawing synthetic linear condensation polymer yarns which comprises a vessel having an inlet for liquid in the lower part of the vessel, said vessel having an upper rim lying entirely within a horizontal plane; means at the rim of the vessel for collecting liquid flowing over the said rim and means connecting therewith for carrying the overflowing liquid away; means for pass-

ing liquid into said vessel through the said inlet; means for maintaining the incoming liquid at a constant temperature; a substantially horizontal draw pin at least partly disposed beneath the surface of the liquid in the upper



part of the said vessel; means for passing the yarn to be drawn in contact with the under surface of the draw pin; a spray collection container located above the vessel for collecting liquid thrown from the yarn, and means for draining the liquid from the said spray collection container.

3,045,316
MINERAL WOOL BLANKET HAVING IMPRINTED SURFACE AND METHOD OF MAKING THE SAME
Jack S. Gilhart, Butler Township, Columbiana County, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed July 19, 1957, Ser. No. 673,026
7 Claims. (Cl. 28—72.3)

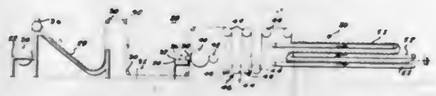


1. The method of forming a flexible pad from a conglomerate mass of brash blown mineral wool fibers, comprising the steps of lubricating the individual fibers; collecting and mechanically compacting the lubricated fibers in a conglomerate mass of random orientated fibers to form a pad; impressing on at least one outer surface of the pad of lubricated fibers a series of spaced substantially parallel and rectilinear indentations; and, while the fibers are compacted, drying and heating the same to remove the lubricant.

3,045,317
PROCESS FOR PRODUCING SIZED GLASS YARNS AND CLEANING FABRICS WOVEN THEREFROM
Gary M. Shipman, Greensboro, N.C., assignor to J. P. Stevens & Co., Inc., a corporation of Delaware
No Drawing. Filed June 4, 1957, Ser. No. 663,343
9 Claims. (Cl. 28—75)

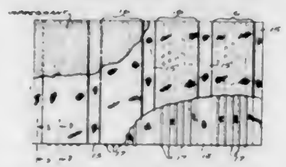
1. A process of warp sizing glass yarns and cleaning glass fabrics woven therefrom, comprising applying a size consisting of polyvinyl alcohol and water to said yarns while maintaining said size at a temperature of 105° to 115° F. and while constantly circulating said size, drying said yarns, weaving said yarns into a fabric, and thereafter igniting said size and substantially completely burning the size off the fabric by passing the woven fabric through an atmosphere heated to a temperature of approximately 1200° to 1500° F.

3,045,318
PROCESS FOR THE PRODUCTION OF PUFFED SURFACES ON TEXTILE FABRICS
Dale W. Kern, Ware Shoals, S.C., assignor to Riegel Textile Corporation, a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,411
6 Claims. (Cl. 28—76)



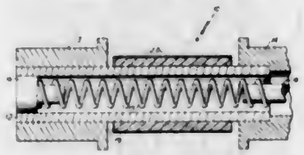
1. A process for the production of a textile fabric having a puffed surface, said process comprising forming a fabric structure with a top face and a back face, with portions of cotton yarn arranged on the back face of the fabric structure and with other portions of yarn arranged on the top face, applying a solution of caustic soda to the back face of said fabric structure to concentrate the caustic soda on the portions of cotton yarn on the back face, relaxing said fabric structure to allow shrinkage of said portions of cotton yarn to which the caustic soda solution has been applied, thereby causing the other portions of yarn in the area of the portions of cotton yarn to which the caustic soda solution has been applied to puff out on the top face of the fabric structure.

3,045,319
RESIN MOLDED FABRIC
Henry A. Scheel, Mystic, Conn., assignor to A. Wimpfheimer & Bro. Inc., Stonington, Conn., a corporation of New York
Filed Jan. 25, 1961, Ser. No. 84,914
4 Claims. (Cl. 28—80)



1. A two-ply fabric comprising a pair of plies of woven fabric, each of said plies having interwoven filler yarns and warp yarns, said plies in certain areas being spaced apart and having tie yarns woven into and extending between the plies and in other areas being in substantial contact and having binder yarns extending between the plies to bind the same together, said tie yarns being disposed to leave a straight open channel extending entirely through the tie yarn areas and stuffer material having wicking characteristics, disposed in and extending along said channels, said stuffer material being free from said tie yarns.

3,045,320
IMPREGNATED CATHODES
Joseph H. Apelbaum, Waban, Mass., and William J. O'Brien, West Los Angeles, Calif., assignors to Raytheon Company, a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,027
7 Claims. (Cl. 29—25.18)



1. A method of manufacture which comprises forming a porous member of tungsten of sufficient mechanical

strength, applying thorium to the surface of said member, impregnating said porous member with thorium, and machining said impregnated member to the desired size and shape.

3,045,321
ABRADING DEVICES AND METHOD OF MAKING THEM
Hugh L. McDermott, St. Louis Park, Minn., assignor to Buckbee-Mears Company, St. Paul, Minn., a corporation of Minnesota
Filed Apr. 15, 1955, Ser. No. 501,666
7 Claims. (Cl. 29—78)



1. An abrading device comprising, a metal body having on at least one face a multiplicity of fine widely spaced sharp abrasive points of substantially cone or pyramid shape and of substantially identical and symmetrical shape in cross section rising from a common base plane, the axis of symmetry of each of said points being normal to said plane, said points being of equal height and having sharp tops adapted to penetrate the work to be abraded, extending to a common elevation above said base plane, opposite sides of each of said points being defined by concavely arcuate surfaces of substantially equal radius, said base plane being tangentially disposed to said arcuate surfaces, and substantially the entire area of said body for contact with the work to be abraded being composed of exposed natural metal crystals having sharp projecting corners and edges of the character produced by etching.

3,045,322
CUTTING TOOL WITH REMOVABLE BIT
Karl Hertel, Oedenbergerstrasse 29, Nurnberg, Germany
Filed Dec. 8, 1958, Ser. No. 778,958
Claims priority, application Germany Dec. 10, 1957
10 Claims. (Cl. 29—96)



1. A cutting tool comprising, in combination: a body portion and a head portion, a polyhedral-shaped cutting bit of hard cutting material defining a pair of oppositely directed truncated equilateral pyramids, the respective larger bases of which are contiguous to one another in a common plane to form a finite number of substantially flat lateral surfaces adjoining said common plane and elongated cutting edges in said common plane, said head portion being provided with means for receiving said cutting bit, said receiving means defining a recess open at one side and substantially corresponding in form to said cutting bit, said cutting bit being inserted into said open recess thereby abutting at least three surfaces of said recess.

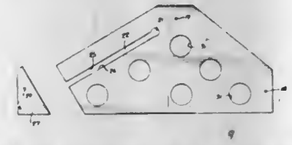
3,045,323
COMBINATION ROLL AND ATTACHING DEVICE FOR IRONER ROLLS
John D. Willingham, Jr., 220 W. Paces Ferry Road, Atlanta, Ga.
Filed Feb. 8, 1960, Ser. No. 7,226
5 Claims. (Cl. 29—118)

1. In a flat work ironing system of the class wherein a cloth is attached to the periphery of the roll, the combination with said roll of an attaching device, there being provided along the periphery of said roll a plurality of aligned, evenly spaced holes, said attaching device comprising a thin metal plate having a length about equal to the width of said roll and a relatively narrow width, said plate being arcuate to provide a concaved lower surface corresponding to the curvature of the periphery of said roll and convexed upper surface, said plate being provided with parallel front and back edges, a plurality of evenly spaced, cylindrical, pointed, tines projecting from



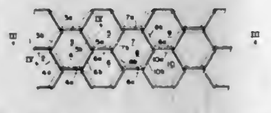
the inner surface of said plate inwardly through said holes respectively, said tines being so constructed and arranged as to be freely movable axially into and out of said holes, and means for removably securing said plate to said roll, whereby said tines project through the fabric of said cloth to retain said cloth on said roll, said holes being oversized with respect to said tines so as to receive said tines loosely.

3,045,324
METHOD OF MAKING A MACHINE FRAME ELEMENT
Erich Rahlson, 803 Keosauqua Way, Des Moines 14, Iowa
Filed Mar. 14, 1960, Ser. No. 14,941
8 Claims. (Cl. 29—150)



1. A method of making machine frame elements comprising providing at least a pair of sheet steel stock having substantially identical exterior configurations, clamping even numbers of said sheets together, locating and drilling bearing openings and said steel pieces while they are clamped together, laying out a slot location on each group of plates, cutting a hole in said sheets adjacent one end of the laid out slot; said hole being larger in diameter than the width of laid out slot, severing one end of each of said sheets adjacent to the other end of said layed out slot, shearing said laid out slot by passing a shear blade end through said hole at a point where it is larger than the width of said laid out slot, reassembling said severed ends to said sheets the same position they were before being severed.

3,045,325
SUPPORT AND REINFORCEMENT STRUCTURE AND METHOD OF FABRICATION
Henry C. Mabie, Plainfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Aug. 16, 1957, Ser. No. 678,624
1 Claim. (Cl. 29—155)



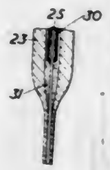
A method of making a support and reinforcement structure essentially consisting of a plurality of initially

flat grating strip elements each having obverse and reverse surface portions and substantially parallel edge portions longitudinally thereof, said method comprising the steps of angularly deforming each of said strip elements uniformly along lines of deformation arranged in spaced relation longitudinally of said strip elements to extend substantially laterally thereof in pairs originating alternately from opposite edge portions, with the lines of each pair of lines in equiangular divergent relation and with adjacent lines from pair to pair in parallel relation to each other, to provide a series of pockets wherein one wall portion is defined between a divergent pair of said lines and is connected to and spaced from a similarly defined wall portion by a wall portion defined between said lines in parallel relation; arranging said strip elements in substantially parallel, juxtaposed disposition to bring only every second one of said wall surface portions defined between a divergent pair of said lines on any first given strip element into substantially coincident contacting relation with a similar wall surface portion of a second given strip element immediately adjacent said first given strip element to define a multiplicity of hexagonal grating cells intermediate said first and second strip elements, and joining said strip elements along said contactingly related wall surface portions, said joining being effected essentially by welding.

3,045,326
TEMPERATURE DETECTORS

Rupert Griffiths, London, England, assignor of one-half to Graviner Manufacturing Company Limited and one-half to Wilkinson Sword Limited, both of London, England, and both British companies

Original application Apr. 28, 1955, Ser. No. 504,630, now Patent No. 2,836,692, dated May 27, 1958. Divided and this application Mar. 21, 1958, Ser. No. 722,914
Claims priority, application Great Britain May 7, 1954
3 Claims. (Cl. 29—155.5)

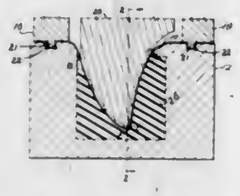


1. The method of producing an elongated temperature change detector having an inner electrical conductor surrounded by glass composition material enclosed within another electrical conductor, temperature changes being indicated by associated changes in the electrical conductivity of said glass material, comprising the steps of threading one end of an elongated electrical conductor having a cylindrical outer surface through a tube of glass composition material having a bore greater than the maximum cross-sectional dimension of the conductor, heating that end of the glass tube adjacent said one end of the electrical conductor to soften said glass until it contacts said electrical conductor, moving said one end of the electrical conductor away from the softened end of the glass tube whereby softened glass is drawn away from the tube to form a coating on the electrical conductor, progressively extending the heating of said tube away from the initially heated end to maintain a supply of softened glass, feeding finely divided particles of a refractory material having a softening temperature appreciably in excess of the softening temperature of the glass composition material into the region in the interior of the glass tube where said glass is softened, whereby particles of the refractory material are embedded in the glass coating formed on the conductor, said refractory material having an electrical conductivity which is negligible by comparison with that of the glass within the range of temperature changes to be detected, and applying a second elongated electrical conductor to the outside of the glass coating on the first mentioned elongated conductor.

3,045,327
FABRICATION OF BLADES FOR COMPRESSORS, TURBINES AND THE LIKE

Daniel J. Clarke and Edward A. Stalker, Bay City, Mich., assignors to The Stalker Corporation, a corporation of Michigan

Filed Mar. 4, 1957, Ser. No. 643,765
8 Claims. (Cl. 29—156.8)



4. A process for fabricating blades for compressors, turbines and the like comprising placing a sheet metal blade blank over a recess in a female die of laterally confined deformable elastomeric material, having the approximate shape of the desired surface contours of said blade, advancing an accurately shaped male die having the shape of the finished surface contours of the blade over substantially the entire extent thereof against said blank to force said blank into said recess, and holding the edges of said blank to cause stretching of the metal thereof beyond its elastic limit while leaving the ends of said blank free, the elastomeric material causing the stretched blank to lie against and conform closely to said male die during said stretching operation.

3,045,328
MANUFACTURE OF HOLLOW TURBINE BLADES

Philip G. Turner, Inkberrow, England, and Campbell C. Horne, Giffnock, Scotland, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed May 7, 1957, Ser. No. 657,553
Claims priority, application Great Britain May 8, 1956
9 Claims. (Cl. 29—156.8)



1. A process for the production of a turbine blade blank containing a plurality of passages of substantially elliptical cross section having substantially identical ellipse ratios across the section of said blade blank which comprises axially extruding a circular billet having a plurality of filled axial holes of circular cross section lying substantially along a diameter, through a square section die so that said diameter along which said holes are located becomes substantially the center line of the square section and thereafter mechanically working said extruded product to elongate said product and to reduce the cross section thereof without substantially changing the dimension along said center line and without changing the total volume of metal.

3,045,329
METHOD FOR ASSEMBLING TONGUE-AND-GROOVE MEMBERS WITH LOCKING KEYS

Vincent John Carli, Wakefield, and Mark Hallinan, Beverly, Mass., assignors to General Electric Company, a corporation of New York

Filed July 30, 1959, Ser. No. 830,560
4 Claims. (Cl. 29—156.8)

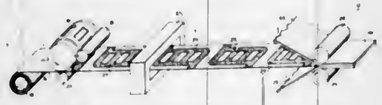


1. The method of assembling a tongue member with a locking key in a grooved member adapted to receive said tongue member in axially slidable relation therein, said key having locking tab portions at the ends thereof and a flat strip portion intermediate said tab portions, a first one of said tab portions being bent transversely to said strip portion, which comprises the steps of: forming the second one of said locking tabs with a reverse bend forming a protrusion offset from the plane of said strip portion in a direction opposite the direction of bend of said first tab portion and spaced from the end of said second tab portion intermediate said second tab portion end and said flat strip portion; inserting said locking key in the groove of said grooved member so that said first tab portion abuts a first face of said grooved member adjacent said groove; inserting the tongue of said tongue member in said groove with a first face of said tongue in abutment upon said first tab portion; bending said second tab portion transversely to said strip portion so that said end of said second tab portion abuts second faces of said tongue and grooved members opposite said first faces, respectively, and said protrusion of said second tab portion is spaced apart from said tongue and grooved members; and further bending said protrusion into abutment upon said second faces of said tongue and grooved members; such that said protrusion when released springs-back to urge said end of said second tab portion into resilient engagement with said second faces of said tongue and grooved members.

3,045,330
FABRICATION OF HOLLOW ARTICLES

Wallace C. Johnson, Hamden, Conn., and Sheldon H. Butt, Brighton, Ill., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed July 30, 1958, Ser. No. 752,035
12 Claims. (Cl. 29—157.3)



1. A method of making hollow articles by pressure welding sheets of metal at a pressure welding temperature comprising, applying a pattern of separation material to a foil of metal capable of alloying under pressure with said sheets of metal at said temperature with said foil having a thickness not in excess of about 0.0005 of an inch, forming an assembly having said foil interposed in contacting relationship between said sheets of metal, pressure welding said assembly by applying sufficient pressure to said assembly of sheets and foil at said temperature to completely alloy said foil by diffusion with said sheets of metal wherein said sheets of metal are joined into a unitary panel, and expanding the area defined by said separation material.

3,045,331
ELECTRICAL CONTACTS OF HIGH ARC EROSION RESISTANCE AND METHOD OF MAKING THE SAME

Choh-Yi Ang, Indianapolis, and Eugene W. Burkhammer, Zionsville, Ind., assignors to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware

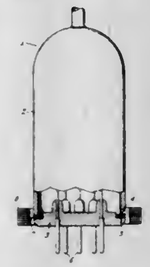
No Drawing. Filed June 26, 1959, Ser. No. 824,761
5 Claims. (Cl. 29—182)

1. A pressed and sintered electrical contact having a density at least 95% of the theoretical density composed of at least 48 atomic percent of copper, between 0.5 and 5 atomic percent of silver, and at least one metal selected from the group consisting of molybdenum and tungsten constituting the remainder, said contact being free from infiltrated constituents and from the fragility and brittleness characteristic of contacts having similar composition but containing no silver.

3,045,332
BONDING MEMBER

James W. Denison, Jr., Owensboro, Ky., assignor to General Electric Company, a corporation of New York

Filed Jan. 28, 1955, Ser. No. 484,780
5 Claims. (Cl. 29—182.5)



1. A bonding member adapted for being positioned between elements to be bonded and for being heated inductively to a bonding temperature comprising an annular sintered metallic matrix wholly formed of only a substantially uniform admixture of approximately 80 percent metal particles and 20 percent powdered glass by weight of the composition of the member.

3,045,333
TITANIUM COATED ARTICLE

Walter L. Finlay, Beaver, Pa., assignor to Rem-Cru Titanium, Inc., Midland, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 18, 1951, Ser. No. 251,979
4 Claims. (Cl. 29—194)

1. An article of titanium surface-coated with aluminum, the surface coating being bonded to the titanium base by an interfacial layer of the reaction product secured by immersing the clean titanium article in molten aluminum.

3,045,334
ALLOY AND COMPOSITE METAL PLATE

Talivaldis Berzins, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

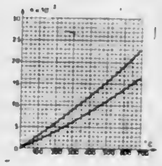
Filed Oct. 1, 1958, Ser. No. 766,170
13 Claims. (Cl. 29—194)



2. A nickel-boron alloy plate, said plate being an amorphous matrix of nickel containing about 3–7% by weight

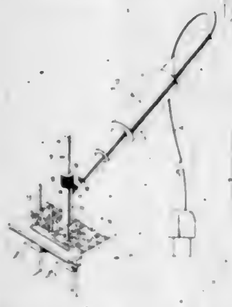
of boron and about 93–97% nickel, about 5–10% by weight of said nickel being in crystalline form, said amorphous matrix of nickel being in structurally disorganized form and containing said boron and said crystalline nickel as uniform dispersions.

3,045,335
RUSTLESSS AND REFRACTORY BIMETALLIC STRIP FOR HIGH TEMPERATURES
André Gaston Cherreau, Imphy, André René Michel Girard, Nevers, and Guy Lucien Robert Maingault, Imphy, France, assignors to Societe Metallurgique d'Imphy, Paris, France, a company of France
Filed Nov. 30, 1959, Ser. No. 856,111
Claims priority, application France Dec. 4, 1958
6 Claims. (Cl. 29—195.5)



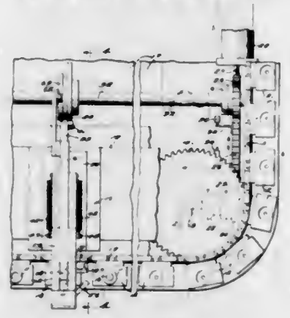
1. Rustless, high temperature bimetallic strip with proportional deflection utilizable up to 650° C., formed by a slightly dilatable element combined with a highly dilatable element, both of a ferrous alloy, characterised by the fact that the slightly dilatable element consists essentially of 18 to 25% of chromium and 0.3 to 2.5% of copper and balance Fe, and that the highly dilatable element consists essentially of 40 to 50% of nickel and 17 to 28% of chromium and balance Fe.

3,045,336
REMOVAL TOOL
Arthur W. Northrop, Johnson City, and Stephen J. Yevchak, Binghamton, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 15, 1960, Ser. No. 8,792
4 Claims. (Cl. 29—203)



1. A tool for removing electrical contact elements held relative to a receptacle by an interference fit and solder connections comprising a head member adapted to be heated by conduction to a temperature for melting the solder connections, said head member having a longitudinal slot of such dimension to permit said head to freely embrace said contact element and a longitudinal bore in line to communicate with and larger in dimension than said longitudinal slot whereby a shoulder is formed within said head at a point where said slot and bore communicate; a cap member having a bore smaller than said bore in said head member, said cap member being fixed to said head member so that the axis of the bore in the cap is in alignment with the bore in the head member; and a plunger having first, second and third sections, said first section having a cross-section substantially equal to the cross-section of the contact element and adapted to engage the end of the contact element to be removed and, upon removal of said contact element, to enter the passageway of said receptacle which had been occupied by said contact element to prevent molten solder from entering therein, said second section being larger than and connecting to the end of said first section to be slidably disposed within said bore whereby said second section is unable to enter said slot and the bore in said cap member so as to retain the plunger captive relative to the head member, said third section being smaller than and attached to said second section to extend away therefrom through the bore in said cap member.

3,045,337
ARTICLE ASSEMBLING APPARATUS
Earl C. Martin, Dayton, Ohio, assignor, by mesne assignments, to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 14, 1959, Ser. No. 827,096
4 Claims. (Cl. 29—211)



1. Assembling apparatus comprising a first jaw member slidable horizontally for advancing an article from a feed position to an assembly position, supporting means arranged immediately below said first jaw member for supporting said article in said feed position and terminating short of said assembling position, a second jaw member movable in alignment with and resiliently biased toward said first jaw member, said second jaw member being engageable by an article being advanced by said first jaw member and serving in cooperation with said first jaw member to support said article in said assembling position, plunger means for removing an article from said jaw members in said assembling position, means removably positioned in the path of a portion of said second jaw member for limiting the movement of said second jaw member toward said first jaw member thereby to prevent said second jaw member from engaging said plunger means when said plunger means removes an article from said jaw members, and releasing means for moving said limiting means out of the path of said second jaw member after said plunger means have been withdrawn from between said jaw members to permit movement of said second jaw member such that it may be engaged by a succeeding article while said article is supported by said supporting means.

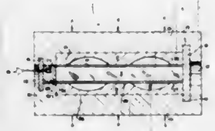
3,045,338
APPARATUS FOR ADVANCING INTERNAL LINE-UP CLAMPS THROUGH END-TO-END PIPE SECTIONS
Bernard V. Elliott, Anderson, Mo., assignor to G. C. Price Co., Price Tower, Okla., a corporation of California
Filed Aug. 15, 1960, Ser. No. 49,683
7 Claims. (Cl. 29—272)

1. Apparatus for advancing normally internally disposed structure through pipe sections disposed in end-to-end relationship, said apparatus including an alignment clamp substantially shorter than individual pipe sections; a prime mover adapted to be positioned adjacent the open end of a terminal pipe section; elongated means extending through said terminal pipe section and terminating adjacent said open end of the latter and including an elongated bar secured to said clamp and a chain coupled at its ends with respective ends of said bar; and drive means operably connected to said prime mover and adapted to be removably coupled to the chain of said elongated means for shifting said elongated means and



thereby the clamp toward said open end of said terminal pipe section during operation of said prime mover whereby upon advancement of the clamp to a position adjacent said open end of said one pipe section, the prime mover and drive means may be disconnected from said elongated means, another pipe placed in end-to-end relationship to said terminal pipe with said elongated means extending therethrough, the prime mover and drive means shifted to disposition adjacent the open end of said other pipe section and said drive means operably recoupled to said elongated means.

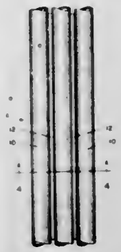
3,045,339
METAL FORMING BY EXPLOSIVE FORCE THROUGH A SOLID GEL
Fred T. Callahan, Jennings, Mo., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed June 2, 1958, Ser. No. 739,195
16 Claims. (Cl. 29—421)



1. In the process of working metal vessels with explosives, the improvement comprising the steps of positioning an explosive charge within a vessel, and transmitting the force of said explosive charge to said vessel through an intervening gel, said gel being at least initially solid during transmission and sealed in said vessel by a resilient cup-shaped obturator, and said gel having said explosive charge embedded therein.

3,045,340
METHOD OF MAKING A GAS-TIGHT INTEGRAL TUBE PANEL
Johann Kolling, Oberhausen, Rhineland, Germany, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed July 30, 1957, Ser. No. 675,089
Claims priority, application Germany Aug. 1, 1956
6 Claims. (Cl. 29—471.1)

1. The method of making a gas-tight integral tube panel composed of a plurality of substantially parallel tubes, said method comprising the steps of uniting said tubes into a panel by a series of fusion strength welds spaced longitudinally of the tubes and formed at a heat input sufficient to obtain fusion with and penetration into the base metal of the tubes; and thereafter forming seal welds along the tubes sealing the intertube spaces gastight with the seal welds being formed at a heat input



substantially less than that involved in forming the strength welds.

3,045,341
SOLDER FOR JOINING THERMOCOUPLES WITH COPPER
Evgeny Andreevich Kolenko and Anatoly Grigorjevich Czerbina, both of Leningrad, Union of Soviet Socialist Republics
No Drawing. Filed Apr. 15, 1960, Ser. No. 23,880
1 Claim. (Cl. 29—501)

In the process of joining thermocouples of bismuth-tellurium-antimony and bismuth-tellurium-selenium ternary alloys with copper plates, the improvement comprising applying a solder containing from 98.8 to 99.2 percent bismuth and from 0.8 to 1.2 percent tin between the thermocouple and the plate to be joined to improve the quality of the junction and the solubility of the films formed during the process of soldering.

3,045,342
RAZOR WITH SHIFTABLE HANDLE MEANS THEREON
Walter A. Diehl, 631 Sandusky, Kansas City, Kans.
Filed July 13, 1960, Ser. No. 42,580
2 Claims. (Cl. 30—32)



1. A razor comprising a shaft; means on one end of said shaft for mounting a razor blade thereon; and tubular finger-receiving means carried by said shaft proximal to the other end thereof for rotation about an axis substantially normal to the longitudinal axis of said shaft and providing a handle for said razor, whereby said finger-receiving means may be shifted relative to said blade-mounting means.

3,045,343
COMBINATION SAFETY RAZOR AND SHAVING CREAM DISPENSER
Baruch Shalev, 10 Hameasfim St., Tel-Aviv, Israel
Filed Dec. 17, 1959, Ser. No. 860,217
2 Claims. (Cl. 30—41)



1. A safety razor comprising an elongated handle adapted to receive shaving cream, said handle being pro-

vided with a lid at one end with its opposite end being partly closed with a transverse slot in a wall thereof, a roller journalled in and projecting into said slot with part of the circumferential surface of the roller slightly protruding from said slot, a guard, a blade and a cover removable as a unit affixed by spring means to said handle with one edge of the guard being positioned parallel with and a short distance from said roller, said handle having a deep groove between the guard and the roller for the accumulation of cream from the blade.

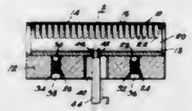
3,045,344
ELECTRIC RAZOR HAVING ROTATABLE CUTTER OF TRIANGULAR SHAPE
Bertram Cholet, 252 Harrison Ave., Hasbrouck Heights, N.J.
Filed May 27, 1960, Ser. No. 32,439
3 Claims. (Cl. 30—43)



1. In a razor, a handle, a head, means mounting said head to said handle at one end thereof, said head including a casing formed with a longitudinally extending slot opening through the outer end thereof, a fixed cutter member of arcuate formation in cross section slidably secured in said slot and having narrowly spaced openings throughout the extent thereof providing fixed cutting edges at the inner edges of said perforations, a rotatable cutter member including a helical coil of triangular shape in cross section having two continuous helical faces forming a cutting edge extending continuously throughout the helical formation of said coil, a hollow frame including end members and a plurality of circumferentially spaced longitudinally extending bars affixed to said end members and a central shaft journaled to said head for rotation and mounting said frame in concentric relation with the arcuate face of said fixed cutter member, said helical coil peripherally surrounding said frame with the endmost convolutions thereof affixed to said bars and with the cutting edge of said helical coil disposed in engagement with the inner face of said fixed cutter member and with the convolution of said helical coil crossing said fixed cutting edges at an angle thereto.

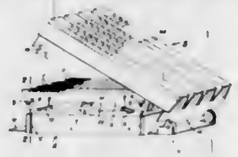
3,045,345
ELECTRICAL CHARGE GENERATING AND RETAINING ELECTRIC SHAVER HEAD
Raymond J. Bermingham, Denver, Colo. (832 Wellington Blvd., Columbus 19, Ohio)
Filed Feb. 12, 1959, Ser. No. 792,851
1 Claim. (Cl. 30—43)

An electric shaver head comprising in combination, a cutter member adapted to be driven and a shear member, at least one of which being of a heat treated glass ceramic which when in frictional contact with human epidermis generates and retains a static electrical charge thereon, said generating member being electrical conducting, having a hard and wear resistant surface, the combination



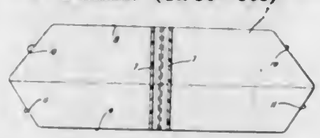
further including electrical insulating means, positioned and arranged to insulate the generating member from the driving mechanism of an electric shaver to which it is attached to prevent the generated charge from leaking off.

3,045,346
HEAD FOR DRY ELECTRIC RAZOR
Eskiel Akerib, Casablanca, Morocco, assignor to Bureau de Recherches et d'Exploitation de Procedes et Brevets, Casablanca, Morocco, a company of Morocco
Filed Sept. 9, 1959, Ser. No. 838,952
Claims priority, application Morocco May 26, 1959
3 Claims. (Cl. 30—43)



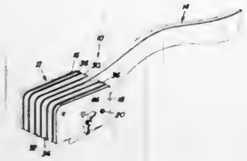
1. Dry electric razor head, having a comb-grid and a unit underneath said comb-grid, said unit being driven in an alternating rectilinear movement comprising a bar on its upper face, U-shaped blades maintained at their ends by brackets having vertical extensions, said blades straddling said bar, and spring-leaves having enlarged ends placed under each one of said blades tending to press said blades upwardly against said comb-grid moved over the user's face.

3,045,347
PIE CUTTER
Fred Elias, John Elias, and Louis Elias, all of Detroit, Mich. (all of 1623 E. 8 Mile Road, Hazel Park, Mich.)
Filed June 22, 1960, Ser. No. 38,050
1 Claim. (Cl. 30—303)



A pie cutter of the character described, comprising a plurality of vertically disposed, planar blades radiating outwardly from a common center and having top and bottom cutting edges and end edges, said top edges being of uniform length, said bottom edges also being of uniform length and being longer than said top edges, each of said end edges on each blade comprising two beveled cutting edge portions angled relatively to said top and bottom edges, respectively, and extending radially outwardly from the top and bottom edges respectively and intersecting in the plane of said blade to define an apex, each of said blades throughout its length being free from projecting obstructions and capable of dividing a pie according to the position of the cutter into substantially perfect, wedge shaped pieces, the same cutter being usable on pies in two different types of pie pans by inversion of the cutter.

3,045,348
MEAT TENDERIZER
Arthur Dungan, P.O. Box 234, Mamoth, Ariz.
Filed Oct. 5, 1960, Ser. No. 60,704
6 Claims. (Cl. 30—304)



1. An adjustable and retractible scoring knife device employing double edge type of flexible safety razor blades comprising mounting means, pivot means mounted on said mounting means, limit means mounted on said mounting means, a plurality of spacer means assembled in spaced relation on said pivot means and limit means in fixed alignment with said mounting means, the safety razor blades being pivotally mounted on said pivot means between said mounting means and adjacent spacer means, adjustable clamp means extending through said mounting means and spacer means for adjustable movement relative to said mounting means and spacer means with said blades thereon for pivotal movement of said blades about said pivot means to a limit position of the blades abutting but free from positive mechanical connection with said limit means in which position the blades are retracted and wholly confined between said spacer means and mounting means, and balanced elongated handle means aligned and rigidly connected to one end of a central one of said spacer means, said mounting means comprising a pair of spaced end plates carrying said pivot means and limit means therebetween and having aligned arcuate slots through which said adjustable clamp means extends for pivotal movement relative to said pivot means, said pivot means and limit means comprising spacer assembling and aligning pins disposed parallel to each other and extending through aligned apertures in said end plates.

3,045,349
MEANS FOR TAKING DENTAL IMPRESSIONS
Oreste Louis Mars, 1 Rue Marceau, Cannes, France
Filed Nov. 20, 1958, Ser. No. 775,323
5 Claims. (Cl. 32—19)



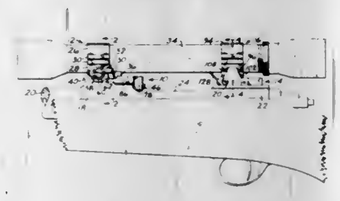
1. Means for use in taking dental impressions, comprising a screen clamp including two arcuate plates shaped to correspond respectively to the curvature of the upper and lower rows of teeth and coupled together at each end by pivots, a separation plate disposed between the adjacent edges of the arcuate plates and extending fully across the area embraced by the arcuate plates, clamping means engaged on remote edges of the arcuate plates and serving to urge said plates into gripping engagement on the separation plate, and an expansible bag disposed on the upper face of the separation plate for forcing impression material, placed on said plate, into firm engagement with the roof of the mouth.

3,045,350
METHOD AND APPARATUS FOR DESCRIBING CIRCULAR ARCS
Attilio R. Spicacci, Germantown Manor, Greene and Hortter Sts., Philadelphia 19, Pa.
Filed Mar. 28, 1960, Ser. No. 18,112
2 Claims. (Cl. 33—27)



1. A drawing instrument comprising a generally flat unitary body having a pair of fixed straight edges defining therebetween an angle of less than 180° and adapted to rest on a supporting surface with said edges in a plane parallel to said supporting surface, an extension on said body at the juncture of said straight edges for locating a tracing point on the bisector of said angle at a predetermined distance from said straight edges, and a pair of abutment members each having its radius equal to said predetermined distance and adapted to be selectively positioned on a supporting surface, whereby said tracer point is adapted to describe an arc between the centers of said discs upon sliding movement of said straight edges along said discs, said body being provided at opposite edges thereof with a pair of fixed tangent markings in alignment with each other through the location of said tracer point for locating a tangent to said arc, and said body having an additional edge provided with a fixed normal marking coincident with the bisector of said angle extended externally of said angle.

3,045,351
MOUNT FOR TELESCOPE SIGHTS
Theodore S. Dayton, 5030 SW. Oleson Road, Portland 19, Oreg.
Filed July 21, 1959, Ser. No. 828,608
9 Claims. (Cl. 33—50)



1. A mount for telescope sights comprising spaced front and rear base means adapted to be fixed to a support, front and rear clamp means associated with the corresponding base means and adapted to engage and support a telescope sight at longitudinally spaced positions along the length of the latter, connecting means on each base means and associated clamp means arranged for slidable interengagement by relative movement in a plane substantially parallel to the longitudinal axis of the base means for removably securing each clamp means to its associated base means independent of a telescope sight, and locking finger means mounted pivotally on one of the base means for movement between a locking position confining the connecting means on the associated clamp means in engagement with the connecting means on the base means and a retracted position permitting relative sliding movement of said connecting means.

3,045,352
APPARATUS FOR MEASURING THE PERPENDICULARITY OF A MORTISE OR GAIN TO A BOLT HOLE
Edward L. Kimerer, 326 E. 17th St., Marysville, Calif.
Filed Oct. 20, 1958, Ser. No. 768,244
2 Claims. (Cl. 33—112)



1. Apparatus for measuring the perpendicularity and flatness of a mortise transversely formed in a right circular cylindrical wooden pole, said mortise being gained on a chord of said pole and extending across the adjacent end of a diametrical cylindrical hole drilled in said pole, said apparatus comprising: an elongated member having a planar upper surface and a planar lower surface in spaced parallel relation, said member having a width narrower than the width between the walls defining the opposite sides of said mortise; a sighting member mounted on said planar upper surface intermediate the ends of said elongated member and extending perpendicularly upwardly from said planar upper surface; and a cylindrical hole-insert member mounted on said planar lower surface and extending perpendicularly downwardly therefrom and in alignment with said sighting member, said hole-insert member including radially expandable means for engaging the wooden walls defining said drilled hole in wood fiber deforming relation.

3,045,353
DIRECT READING COMPUTER
Alex Barbosa, 1656 Ridge Drive, Redding, Calif.
Filed Nov. 16, 1959, Ser. No. 853,333
5 Claims. (Cl. 33—149)



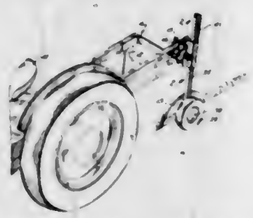
1. A direct reading navigational computer for manual one-hand operation in connection with a conventional air navigational chart comprising as components a main body, a chart body, a movable arm and an indicator blade, said main body and said chart body comprising circular plates having cooperating indicia thereon, a first pivot means connecting the axes of said main and chart bodies in spaced parallel relation for relative rotation, said main body having a sectorial view slot extending radially inward from the main body periphery for viewing indicia on said chart body, a stationary arm projecting peripherally from said main body, a second pivot means connecting said movable arm to said main body in spaced relation thereto and upon the opposite side thereof from said chart body, said indicator blade being pivotally secured to said main body and upon the same side thereof as said movable arm, gearing connecting said indicator blade and said movable arm for simultaneously movement, said fixed and movable arms constituting compass legs, locking means on said second pivot means for securing said arms in pivotally adjusted positions.

3,045,354
SPARK PLUG GAP TOOL
John E. Frauenholtz, 8406 Dersam St., Pittsburgh 21, Pa.
Filed Jan. 30, 1959, Ser. No. 790,276
5 Claims. (Cl. 33—168)



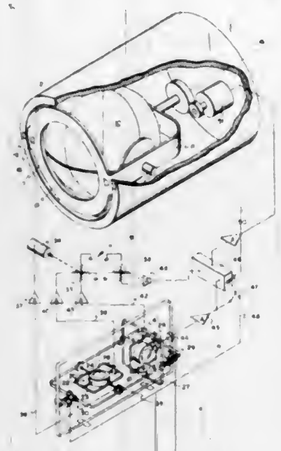
3. A spark gap gauging tool which comprises, an elongated scale portion of substantially uniform section having measurement indicia along a face thereof, an elongated thickness-gauging portion along a side of and integral with said scale portion and having a progressively increasing thickness from one longitudinal end towards the opposite longitudinal end of said scale portion, a handle portion at the opposite end of said scale portion, the thickness of said gauging portion being indicated by the measurement indicia of said scale portion, and said gauging portion being constructed for movement between the electrodes of a spark plug and therealong to determine and adjust the width of the gap therebetween.

3,045,355
PLOW DEPTH INDICATOR
John W. Woods, R.D. 2, Gettysburg, Pa.
Filed Oct. 26, 1959, Ser. No. 848,717
4 Claims. (Cl. 33—185)



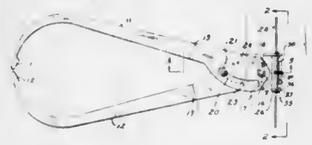
4. A plow depth indicator comprising a fastener for attaching the indicator to a plow, shaft means carried by said fastener, fixed and movable members having cooperating surfaces mounted on said shaft means, one fixed to the said shaft means and the other movable relative thereto, said members having a lateral bearing forming portion, means urging said members toward each other so that said cooperating surfaces will engage, a first part carried by said movable member, a second part movable relative to the first, a ground-engaging wheel carried by said second part, means urging said ground-engaging wheel into contact with the ground, said first and second parts being adapted to move about said shaft means when an obstruction is encountered, and equally spaced indications on one side of said second part for ready observation by the operator to determine the depth of the plow.

3,045,356
ROLL-YAW PRESENTATION DEVICE
Norman C. Uecker, Grand Rapids, Mich., assignor to Lear, Incorporated
Filed Dec. 24, 1958, Ser. No. 782,777
5 Claims. (Cl. 33—204)



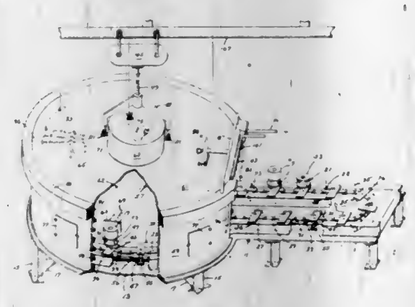
1. An aircraft indicating instrument comprising: a first means for providing a first signal when said aircraft moves about a first roll axis, a second means for providing a second signal when said aircraft moves about said roll axis, a third means for providing an electrical signal when said aircraft moves about a yaw axis and fourth means for providing an electrical signal when said aircraft moves about a pitch axis; a resolver electrically connected to said second, third and fourth means for providing electrical signals whereby said resolver is capable of combining said second and third signals as a function of said fourth signal; a switch having one side thereof connected to said first means for providing an electrical signal and the other side of said switch being connected to the output of said resolver; and an indicator electrically connected to said switch and responsive to either said first signal or the output of said resolver depending upon the position of said switch.

3,045,357
PELVIC INCLINOMETER
Joseph A. Berg, Arcadia, Calif.
(619 N. Glendale Ave., Glendale 6, Calif.)
Filed June 2, 1958, Ser. No. 739,055
2 Claims. (Cl. 33—207)



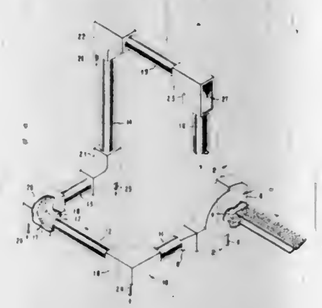
1. A pelvic inclinometer instrument, comprising a bracket, a pair of pivotally connected arms mounted on said bracket, a scale plate mounted on said bracket for limited pivotal movement about an axis normal to the pivotal axis of said arms and normal to a line bisecting the area between said arms, a pointer pivotally mounted on said plate designed to hang vertically under the influence of gravity, said scale plate having indicia positioned for use in conjunction with the pointer, and cooperating guide means on said arms and said bracket for maintaining said bracket oriented in a given angular position with reference to said arms irrespective of pivotal movement of the arms.

3,045,358
DRYING APPARATUS
James H. Breakell, Philadelphia, and John E. Phillips, Chester, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Apr. 30, 1958, Ser. No. 732,038
11 Claims. (Cl. 34—1)



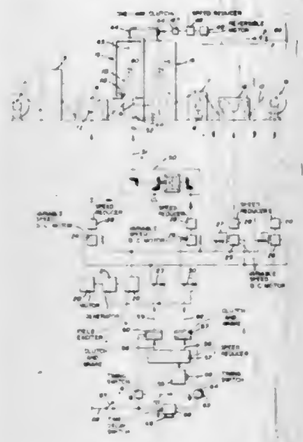
1. Apparatus for removing moisture from packages including a drying chamber, an opening in said chamber, means extending through said opening for carrying packages into. through and outwardly from said chamber, means within said chamber for vaporizing moisture from the packages as they travel through said chamber, and means providing a screen of heated air across said opening to prevent the flow of cold air into said chamber.

3,045,359
CENTRIFUGAL DRYING
John George Selby Billingsley, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 19, 1959, Ser. No. 794,329
3 Claims. (Cl. 34—8)



1. In a process for continuously separating liquid from a wet particulate material of organic polymeric composition, comprising the steps of accelerating the material in a moving pressurized fluid stream in a closed conduit in a substantially rectilinear path, abruptly changing the direction of said moving material in a given zone to separate at least some of the liquid therefrom, the improvement comprising collecting and draining said separated liquid away from said zone while preventing loss of the pressurized fluid so that the pressure of the moving fluid is maintained substantially unchanged throughout the conduit.

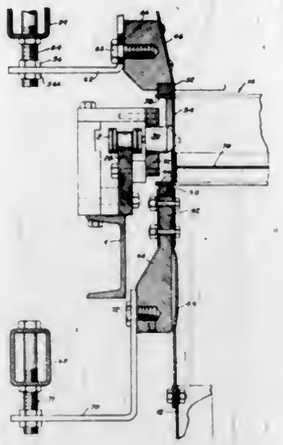
3,045,360
EXPANSIBLE OVEN STRIP PROCESSING MEANS
Alexander V. Alexeff, Cleveland, and Howard R. Richards, Lakewood, Ohio, assignors to Industrial Ovens, Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed July 21, 1959, Ser. No. 828,647
8 Claims. (Cl. 34—52)



5. In continuous and semi-continuous strip treating apparatus, a treating chamber having port means to receive and discharge strip material to be treated within the chamber for a desired exposure time, variable speed drive means for said strip, first roll means mounted for translation within the chamber, roll means outside the chamber to guide strip material into an incoming reach leading to said first roll means and away from an outgoing reach leading away from said first roll means, said first roll means being translatable in a path to vary the length of strip material within the treating chamber, speed reference means normally referable to strip velocity, controlled means for responsively varying translation velocity of said first roll means in said path with reference to the amount and sign of departure of strip velocity from reference velocities indicated by said speed reference means and a direct proportion of such departure, means for delaying variation of indicated reference velocity of said speed reference means following initiation of line velocity changes, such delay being for an interval equal to said strip exposure time, and for then varying reference velocity as a time-function reversely profiled with respect to that of said departure of strip velocity.

3,045,361
AIR CONTROL SYSTEM
George V. Bardet, Berkeley, Calif., assignor to M.J.B. Co., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 268
2 Claims. (Cl. 34—87)

1. In a machine for treating a particulate solid wherein the solid is placed on a tray, passed between upper and lower air ducts wherein air is blown through the tray, and the trays then removed from the ducts, the improvement comprising an upper sealing ring on the upper duct and a lower sealing ring on the lower duct, a plurality of substantially airtight flexible members, one of said members connecting each of said sealing rings to its respective duct and means whereby said upper sealing ring and said lower sealing ring may be moved towards each other to grasp a tray therebetween and establish substantially airtight communication with said tray, and means whereby said upper sealing ring and said lower sealing



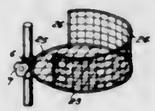
ring can be moved in opposite directions to release said tray.

3,045,362
APPARATUS FOR SIMULATING ATOMIC AND PLANETARY MOTION
John P. Capps, 4 Carolyn Drive, Newport News, Va.
Filed Feb. 12, 1960, Ser. No. 8,319
11 Claims. (Cl. 35—19)



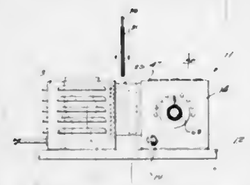
1. An apparatus for demonstrating orbital motion of solar and atomic bodies comprising at least two floatable bodies each carrying with it a field of force, means for floating said bodies in a fluid medium, the field of force of one of said bodies being greater than that of the other of said bodies, and means for providing an operating field of force, said fields of force of said bodies and said operating field of force being so proportioned and adjusted as to interact with each other to cause said one body to assume a substantially fixed position relative to the operating field and to cause said other body to orbit around said one body.

3,045,363
DEVICE FOR TEACHING, PARTICULARLY FOR THE TEACHING OF DRAWING
Charles Emile Kaestlé, Bloc 9(c) Ave. du General Mangin, Nancy, Meurthe-et-Moselle, France
Filed June 8, 1960, Ser. No. 34,709
Claims priority, application France June 9, 1959
5 Claims. (Cl. 35—26)



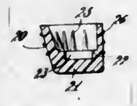
1. In a grid device for supporting an object and for aiding in the drawing of said object, the combination, with a substantially vertical column, of a substantially horizontal frame, a sleeve slidably mounted on said column and rigidly attached to the edge portion of said frame whereby said frame can be moved only vertically, said frame being provided with two series of wires, the wires of each series being substantially parallel with respect to each other and perpendicular to the wires of the other series to define a first open grid, a second frame substantially perpendicular to said horizontal frame and rigidly connected to the edge portion of said horizontal frame, said second frame being also provided with two series of wires, the wires of one of said series being substantially parallel with respect to each other and perpendicular with respect to the wires of the other series to define a second open grid, whereby an object supported upon the first grid can be viewed through said first and second grids at the time time.

3,045,364
CURRENCY IDENTIFICATION DEVICE FOR THE BLIND
Curtis M. Surber, Wichita Falls, Tex., assignor, by mesne assignments, to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed Jan. 22, 1960, Ser. No. 4,114
7 Claims. (Cl. 35—35)



1. In a currency identification device, a light source, respective light-sensitive members corresponding to different denominations of paper currency bills, means mounting said light-sensitive members opposite said light source at locations corresponding to relatively translucent areas of a predetermined portion of the different denominations, a masking plate mounted between said light source and said light-sensitive members and being spaced from said light-sensitive members sufficiently to allow a currency bill to be received between the masking plate and the light-sensitive members, an apertured supporting plate adapted to be received in a folded bill and to be inserted with the folded bill in the space between the masking plate and the light-sensitive members, said masking plate and supporting plate being formed with respective light-transmitting apertures registering with said light-sensitive members, respective electrical indicating devices connected to the light-sensitive members, and means to energize said indicating devices in response to the reception of light passing through said apertures by said light-sensitive members.

3,045,365
OVERSHOE HEEL PROTECTOR
George H. Bingham, Jr., Westminster, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland
Filed Sept. 12, 1960, Ser. No. 55,443
2 Claims. (Cl. 36—7.3)



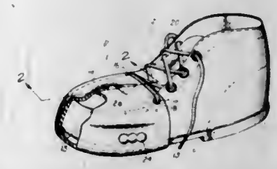
1. A protector for use in an overshoe worn with a shoe whose heel has a top lift of such size and material that it tends to damage the heel portion of an overshoe, said protector comprising a hollow shell whose outer surface is of a shape and size to conform closely with at least the lower portion of the rear and sides of the heel portion of the overshoe when installed therein, and which includes a tread portion of wear-resistant material designed to rest upon the bottom of the heel of the overshoe, the interior of the shell having a shoulder of material projecting upwardly around at least the side and rear edges of said tread portion, said shoulder having a substantially vertical inner surface and a flat top adapted to support the heel of a second shoe having a heel base of greater area.

3,045,366
HEEL STRUCTURE
Benjamin L. Slosberg, St. Louis, Mo., assignor to Missouri Wood Heel Company, St. Louis, Mo., a corporation of Missouri
Filed May 23, 1960, Ser. No. 31,162
2 Claims. (Cl. 36—24.5)



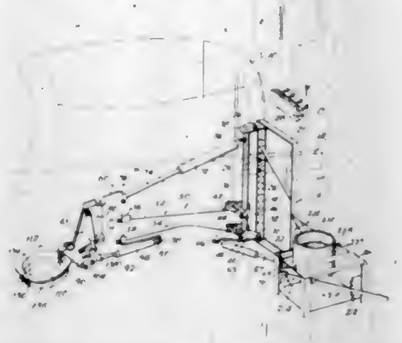
1. A shoe having a lower surface, an outsole attached to the forward part of the lower surface and a heel attached to the rearward part of the lower surface, the heel having a generally concave, upper surface defining a cup for snugly fitting against the lower surface of the shoe with a heel seat rim about the edge of the cup, the outsole being terminated at a rearward edge that is rearward of the forward edge of the cup of the heel, the maximum depth of the forward edge of the cup being greater than the thickness of the outsole, the heel having a pair of notches at opposite side of the cup, each notch having a rearward surface for abutment against the rearward edge of the outsole and a bottom surface for bearing against the lower surface of the outsole, the bottom surfaces of the notches extending forwardly to the forward surface of the heel and inwardly to the points where the cup is lower than the bottom surfaces of the notches, the part of the cup inward of the notches bearing against the lower surface of the outsole.

3,045,367
INFANT'S SHOE PROTECTOR
Jeanne B. McKeon, Wepawaug Road, Woodbridge, Conn.
Filed Jan. 9, 1961, Ser. No. 81,306
2 Claims. (Cl. 36—72)



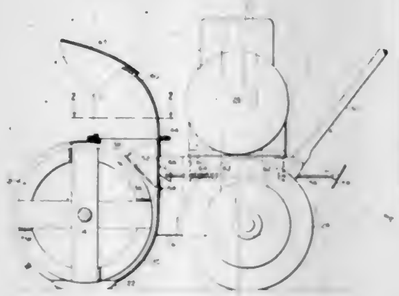
1. A protector for an infant's shoe having a stiff outer sole, said protector including a rigid sole portion and a flexible vamp portion defining a hollow open-ended body complementary to the toe portion of an infant's shoe, the area adjacent the junction of the sole portion and the vamp portion having a groove formed therein to accommodate and frictionally engage the outer edge of the stiff outer sole, the inner surface of said vamp portion having a stippled surface, said protector being elastic with its inside dimensions being smaller than the toe portion of the infant's shoe, whereby said hollow open-ended body may be fitted into close frictional engagement with said toe portion.

3,045,368
APPARATUS FOR DIGGING AND BALLING TREES OR BUSHES
Lee Whitcomb, 719 Illinois St., Plainfield, Ill., assignor to Robert Whitley, Joliet, Ill., and himself
Filed Apr. 14, 1960, Ser. No. 22,279
14 Claims. (Cl. 37—2)



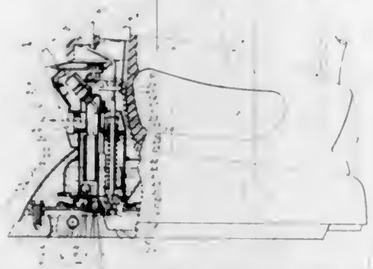
12. A cutter head comprising a plate member, an auxiliary plate pivotally mounted on said plate member, an arcuately shaped knife holder connected to each of said plates, an arcuate knife member pivotally connected at both ends of the same in bearings in each of said knife holders and means associated with said plates for swinging said knife holders and knives apart or together to form a circle when closed, and other means associated with said plates for rotating both of said knife members downwardly through an arc of approximately 90°.

3,045,369
SNOW THROWER
William S. Howe, Jr., % Granite State Mowing Machine Co., Hinsdale, N.H.
Filed Oct. 21, 1960, Ser. No. 64,151
2 Claims. (Cl. 37—43)



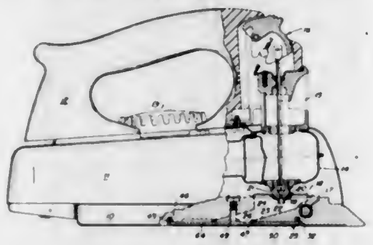
1. In a snow-thrower having a bladed rotor, a housing partially enclosing the rotor, a frame extending rearwardly of the rotor, the rotor housing having a generally rectangular upwardly directed passage for the discharge of snow from the rotor, a discharge hood rotatably mounted on the rotor housing and having a passage aligned with the discharge passage in said housing, snow-dislodging means within the discharge passage in the rotor housing comprising a generally rectangular plate having a width approximating the width of the housing passage, means pivotally supporting the plate adjacent the passage in the discharge hood for swinging movement about its bottom edge from a generally vertical position forming one wall of the housing passage and aligned with the discharge hood passage into a position adjacent the rotor for the dislodging of snow from the plate by contact with the rotor, and actuating connections outwardly of the passage for swinging the plate within the passage, said connections including resilient means for returning the plate to retracted position following operation of the actuating connections to swing the plate within the passage.

3,045,370
STEAM IRON WITH POSITION CONTROLLED VALVE
Harold S. Foster, Ontario, Calif., assignor to General Electric Company, a corporation of New York
Filed Apr. 15, 1959, Ser. No. 806,650
15 Claims. (Cl. 38—77)



1. In a steam iron having a normal ironing position, a liquid reservoir, means defining steam escape ports, means for generating steam from liquid in said liquid reservoir, pressure regulating means connected between said steam generator and said steam escape ports, and position responsive automatic means for venting said liquid reservoir to the atmosphere upon movement of the iron angularly from the plane of the normal ironing position to the fill or empty position.

3,045,371
STEAM IRON
Dale T. Kurlinski, Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed Nov. 18, 1959, Ser. No. 853,906
9 Claims. (Cl. 38—77)



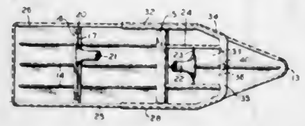
1. A steam iron comprising, a sole plate, a flash boiler formed in the upper surface of said sole plate, a downwardly facing cavity formed in the lower surface of said sole plate, a through opening formed in said sole plate and extending therethrough from said flash boiler to said cavity, a removable closure plate for said cavity, the outer peripheral edge of said closure plate being spaced from the inner peripheral edge of said cavity to form a peripheral steam passage between the outer periphery of said closure plate and the inner periphery of said cavity and communicating with the face of said sole plate, and a plurality of tortuous steam passages in the form of recesses formed in said sole plate above said closure plate, said tortuous passages being in communication with said peripheral passage at one of their ends and with said through opening at the other of their ends whereby steam formed in said flash boiler may flow through said tortuous passages and become superheated and flow through said peripheral passage into contact with the material being ironed while in a dry state.

3,045,372
IRONING BOARD CONSTRUCTION
Tony Ribaudo, 5727 W. Park Ave., St. Louis, Mo.
Filed June 12, 1959, Ser. No. 820,026
2 Claims. (Cl. 38—121)



1. In combination, a pivotal mount for the leg of an ironing board, comprising a structural member having opposed channels, a mounting pin disposed in said opposed channels abutting the bottoms of said channels, transverse slits in said channel bottoms at each side of said mounting pin, portions of the bottoms of said opposed channels adjacent both sides of said pin being disposed inwardly providing stop edges preventing movement of said pin along said channels yet permitting rotation thereof, and an ironing board leg secured at its upper end to said pin for pivotal movement therewith.

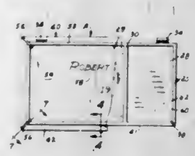
3,045,373
IRONING TABLE WITH VARIABLE CONTOUR
Ralph R. Olswang, Scarsdale, N.Y., assignor to Kamkap, Inc., New York, N.Y., a corporation of New York
Filed July 14, 1959, Ser. No. 827,072
3 Claims. (Cl. 38—137)



1. An elongated ironing table top of variable contour and provided with a rectangular section whose opposed longitudinal edges are substantially parallel and a tapered section of not more than one-half the length of the rectangular section, and a panel slidably mounted thereon with opposed longitudinal edges also parallel and of a width substantially the same as the rectangular section and arranged to move into the tapered section to overlie the same and increase its effective width and give the board a generally rectangular outline, the panel being provided with a section connected therewith and underlying the table top and provided with a leading edge positioned in advance of the leading edge of the panel, and means for guiding the panel during its travel and for retaining it in a longitudinal alignment with the table top, a handle on said underlying section, a padded covering for the table top and enclosing the margins of the top and panel, the leading edge of the underlying section spreading the covering as the panel is moved outwardly, and an elastic element connecting opposed edges of the covering in the tapered section and extending around the side of the handle opposite said leading edge to cause the handle to reduce the effective length of the elastic element as the panel is retracted and draws the covering into contact with the edges of the tapered section.

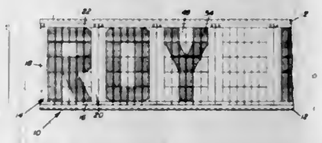
3,045,374
COMBINED GRAVE MARKER AND RECEPTACLE
John M. Lucken and Richard R. Clemmer, Minneapolis, Minn., assignors to Remembrance Memorials, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 27, 1960, Ser. No. 65,489
1 Claim. (Cl. 40—124.5)

A combination grave marker and memorial record receptacle including a flat base member provided at its lower surface with an upstanding peripheral flange, the upper surface of the said base member having at least one recessed compartment therein, said compartment adapted to receive records, and a cover member mounted on and parallel to said base by a hinge, the upper surface of said cover member having an upstanding peripheral flange, said upper surface adapted to receive indicia and said peripheral flange adapted to protect any indicia on said upper surface, the said peripheral flange on said cover



member being discontinuous, the discontinuities thereof communicating with notches in the said cover member, the said discontinuities and notches constituting drainage means to drain the upper surface of the cover member, said base member being provided, at spaced portions thereof, with a plurality of upstanding guide pins which mate with complementary recesses in the said cover to thereby form guide means to maintain the cover and base members in proper alignment.

3,045,375
ADVERTISING DEVICE
James R. Tipton, 11 Norris Ave., Maryville, Tenn.
Filed June 23, 1960, Ser. No. 38,173
11 Claims. (Cl. 40—125)



1. A composite letter and complemental frame unit for use in an advertising device comprising a rectangular assembling lock-up frame having one portion thereof openable, a plurality of slots formed in the frame with the slots opening through the openable portion of the frame, a plurality of insertable, removable, interchangeable character-delineating and representing blocks slidable into the slots and for filling up the area bordered and defined by the frame, each of said blocks having blank surface areas for forming a continuous plain surface, certain of said blocks having the surface area for a portion thereof colored distinguishably from the remainder for forming indicia when the blocks are arranged in vertical columns and horizontal rows to present a predetermined pattern.

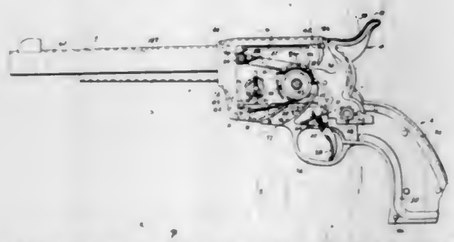
3,045,376
DECORATIVE BOWS AND METHODS OF MAKING THE SAME
Robert Levinsohn, 11 Bon Hills, Olivette, Mo.
Filed Apr. 5, 1962, Ser. No. 183,842
12 Claims. (Cl. 41—10)



7. An ornamental bow comprising a plural-ply bow-forming member including an upper ply of leather, a lower ply of a vinyl resin sheet, and an intermediate thin film of acrylic resin, said plies being edge-united by a

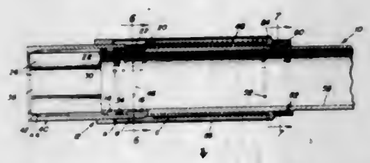
narrow peripheral heat-sealed seam, said plies furthermore being otherwise substantially free of each other and slightly separated by a thin film of entrapped air.

3,045,377
TOY CAP GUN
Mahlon E. Hirsch, Fairview, and Raymond J. Lohr, Erie, Pa., assignors to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed July 22, 1960, Ser. No. 44,757
12 Claims. (Cl. 42—57)



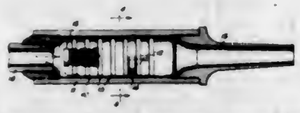
1. A toy gun comprising a support pin for a cap roll, a cylindrical anvil rotatable on a horizontal axis extending transversely of the gun and having sprocket pins and ratchet teeth, a hammer and hammer spring, a feed pawl extending from the hammer to the ratchet teeth in order to advance the anvil when the hammer is cocked, a trigger engaging the hammer for holding or releasing the hammer, and a cap flash guard pivoted at one end and having at its other end an arcuate shoe bearing downwardly on the anvil, said shoe being grooved to pass the sprocket pins.

3,045,378
SHOTGUN CHOKE
Louis M. Denaux, Cosgrove Ave., P.O. Box 3258, Charleston, S.C.
Filed July 27, 1960, Ser. No. 45,687
4 Claims. (Cl. 42—79)



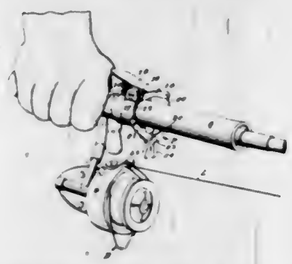
1. In combination, a gun barrel, a choke assembly, said choke assembly including an actuator, means mounting said actuator on said barrel for oscillating movement relative thereto, said choke assembly including movable means defining a bore aligned with said barrel, said actuator engaging said movable bore defining means for effecting movement of the latter to constrict said bore upon movement of said actuator in one direction, means resiliently urging said actuator in said one direction and releasable latch means connected between said actuator and said barrel retaining said actuator in position against movement in said one direction, said latch means including pressure responsive means for releasing said latch means, and means communicating said pressure responsive means with the interior of said barrel, said latch means including a plurality of successively engageable stops formed in said gun barrel, said stops comprising a plurality of notches formed in said barrel and extending in the direction of travel of said actuator and having an inwardly inclined approach end wall and a substantially radially extending departure wall, a resilient leaf spring having one end secured to said actuator and the other end projecting in the direction of movement of said actuator and provided with a normally inwardly angled latch end portion successively engageable with said departure walls, said actuator comprising a sleeve rotatably mounted on said barrel, said notches being disposed circumferentially about said barrel and said leaf spring being arcuate and extending circumferentially about said barrel, said sleeve including means for moving said bore defining means to constrict said bore upon displacement of said sleeve longitudinally of said barrel, said barrel and said sleeve including coacting means effecting displacement of said sleeve longitudinally of said barrel upon rotation of said sleeve relative to said barrel, said coacting displacement effecting means including a radially and outwardly projecting guide block carried by said barrel, and a helical slot formed in said sleeve slidably receiving said guide block.

3,045,379
CHOKE ATTACHMENT FOR SHOTGUNS
Richard M. Cutts, The Plains, Va.
Filed May 25, 1959, Ser. No. 815,662
2 Claims. (Cl. 42—79)



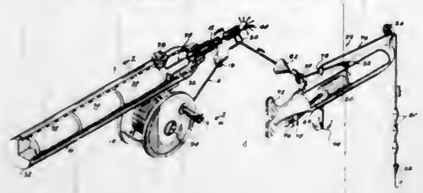
1. An attachment for shotguns comprising a cylindrical expansion tube open at both ends, a choke member at one end of said tube, an arcuate abutment member having outer and inner edges concentric with said tube disposed transversely within said tube inwardly from the ends thereof and with its outer edge affixed to the inner periphery of said tube, the distance between the outer and inner edges of said abutment member being less than one-half the distance from the axis of the tube to the inner periphery thereof.

3,045,380
FISHING LINE BRAKE FOR SPINNING REELS
Pat Meredith, Rowena, Ky.
Filed Nov. 14, 1960, Ser. No. 68,710
1 Claim. (Cl. 43—25)



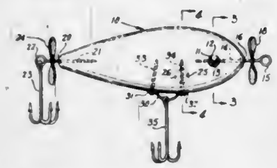
A thumb operated line holding fishing rod attachment for use in conjunction with an open-face spinning reel comprising a thumb release having two downwardly projecting ears with openings therethrough, a pair of line pincers comprising two elongated pivotally interconnected crossed members having opposed handle portions and line gripping jaw portions, a clamp for supporting said thumb release and said line pincers on a fishing rod, a pintle engaging said clamp and said ears for pivotally supporting the thumb release, a bridge extending transversely across one end of said thumb release, wire hangers operationally connecting the ends of said bridge with the handles of said line pincers so that pivotal movement of said thumb release toward said fishing rod will draw said handles toward each other to cause said jaws to approach each other to grip a line therebetween.

3,045,381
FISHING FLOAT OR LURE
Howard F. Martin, 5791 W. 3rd St., Dayton, Ohio, assignor of one-fourth to Robert G. Gump and one-fourth to Richard E. Gump, both of Trotwood, Ohio
Filed May 12, 1960, Ser. No. 28,629
8 Claims. (Cl. 43—26.2)



1. In combination; a fishing lure, an electric motor in the lure, a propeller connected to said lure and being driven by the motor thereby driving the lure in water, and a fine flexible twisted wire couple forming a fishing line leading from the lure and connected to said motor to supply energy thereto, there being a source of electrical energy and switch means connected to said line at the end opposite the lure, a first eye means on the lure adjecent one end thereof through which the line passes to the motor, a second eye means on the lure adjacent the other end thereof, a running eye on the line, and a leader conected to said running eye and passing through said second eye means for connection with a hook means.

3,045,382
FISHING PLUG
Lonnie L. Watkins, P.O. Box 1, Garden Valley, Calif.
Filed May 11, 1961, Ser. No. 109,390
1 Claim. (Cl. 43—42.17)



A fishing plug comprising a generally elongated body portion of water-proof wood having opposite ends defining a nose and tail, a first transversely extending lead weight positioned in said body intermediate the ends thereof and extending through the longitudinal axis of the body, a screw extending through the nose portion into the wood of the body and through said first transversely extending lead weight, a propeller rotatably mounted on said screw and rotatable upon passage of said plug through a body of water, rotation of said propeller imparting a vibration to said screw to produce an audible sound, a second transversely extending lead weight positioned in said body intermediate the ends thereof, said second lead weight disposed below the longitudinal axis of said body and rearwardly of said first lead weight, a hook supporting bracket on the underside of said body having portions defining a pair of spaced openings therethrough, a screw extending through one of the openings in said bracket into the body of said plug, a screw extending through the other opening in said bracket into the body of said plug and through said second lead weight, a screw extending through the tail and into the body of said plug, a spinner mounted for rotation on the screw extending through the tail of said plug, the end portions of said first lead weight extending outwardly from opposite sides of said body and being rounded to simulate eyes, and a hook secured to the end of the screw extending through the tail of said plug.

3,045,383
CATCH-ALL FISH NET
Philip Pugliese, 330 S. Regent St., Port Chester, N.Y.
Filed Mar. 20, 1961, Ser. No. 96,948
4 Claims. (Cl. 43—55)



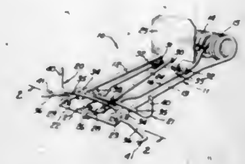
1. A top and bottom opening fish net comprising a rigid top frame in the form of a closed loop, a reinforcing strip extending across said top frame, said reinforcing strip formed with an eye, two doors each connected to a side of said top frame with the inner edges of said doors being in abutting relation and overlying said strip with the doors in closed position, a cord connected to the free edge of each door passing through said eye to close said doors, netting connected to the periphery of said frame and depending therefrom to define a net having an open mouth, a second lower frame in loop form substantially smaller in size than said top frame connected to the lower end of said netting and bottom closure means for opening and closing said lower frame, said last named closure means including retaining means for releasably securing the bottom closure in closed position against said lower frame.

3,045,384
DISPOSABLE MOUSE TRAP
Allan C. Gruschow, 21680 Strafford Court, Oak Park, Mich., and Harry C. Veryser, 27759 Greenwich, Mount Clemens, Mich.
Filed Nov. 5, 1958, Ser. No. 772,129
11 Claims. (Cl. 43—81.5)



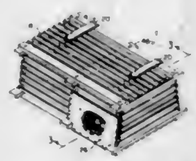
1. A rodent trap comprising an enclosure having an opening at its forward end adapted to admit entry therein of a rodent and having a closed rear end, a pair of upper and lower trapping jaw members in said enclosure and secured thereto adjacent said closed end, said jaw members at all times extending forwardly in the direction of said opening in overlying relation, spring means, means for pivotally connecting the upper jaw member to the rear end of the lower jaw member thereby enabling the upper jaw member to swing under action of said spring means in a downward direction toward the lower jaw member, a bait holder provided with connecting means releasably connected to the lower jaw member, said bait holder together with said connecting means upon release of the latter being conjointly fully and bodily displaced relative to said lower jaw member, a retainer member connected to the bait holder and also connected to the upper jaw member in all positions thereof and effective to hold the same in spaced relation to the lower jaw member in rodent receiving relation, said bait holder upon predetermined action of the rodent being releasable thereby releasing the retainer member for bodily displacement therewith and permitting the upper jaw member to swing downwardly into rodent trapping relation to the lower jaw member.

3,045,385
GOPHER TRAP
Anthony Pfennighausen, 322 La Jolla, Morro Bay, Calif.
Filed Mar. 24, 1960, Ser. No. 17,416
1 Claim. (Cl. 43—90)



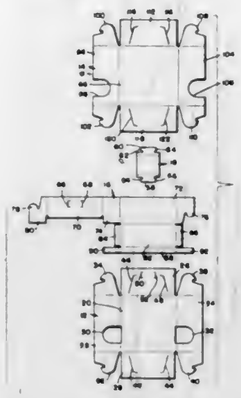
An animal trap comprising a base adapted to lie substantially flat against the ground, a pair of opposed trap jaws adjacent one end of said base pivoted on said base for swinging movement transversely of said base between open and closed positions, spring means adjacent the other end of said base operable to close said jaws, means on said spring means to hold the trap jaws thereon, trigger means releasably engaging said spring means and operable to hold said jaws open against the pressure of said spring means until tripped by an animal, and extension legs on said trap jaws, said extension legs bearing against the ground when said jaws are in said open position, and said legs swinging downwardly as said jaws swing to said closed position, thereby causing said trap to spring upwardly into the air to catch the animal at a height above the normal height of the closed jaws, each of said extension legs having a foot at the outer extremity thereof, one of said feet being bent toward said one end of said base and the other foot being bent toward said other end thereof, whereby one of said feet will dig into the ground and anchor said trap against movement in the direction in which said foot is bent.

3,045,386
HEAD FOR SHELLFISH TRAPS
John W. Coyne, 262 Webster St., Manchester, N.H., assignor of one-third to Joseph P. Noonan, Manchester, N.H., and one-third to David Strater, York, Maine
Filed July 9, 1959, Ser. No. 825,902
9 Claims. (Cl. 43—100)



1. A head for a shellfish trap comprising a sheet of flexible material having an opening therethrough for the passage of a shellfish, the sheet being provided with a plurality of series of incisions with each of said series including a plurality of incisions arranged generally end to end and extending at least partially about said opening in radially outwardly spaced relation thereto, each series of incisions being spaced radially of said opening from the next adjacent series and the incisions in each series being staggered about said opening relative to the incisions of the next adjacent series, said incisions being arranged and spaced relative to each other so that when the bordering edge portion of said opening is displaced out of the general plane of said sheet the incised portion of the sheet will be expanded to provide a net like configuration.

3,045,387
BAIT STATION FOR RATS AND THE LIKE
Theodore S. Simpson, Jr., West Palm Beach, Fla., assignor to ABC Chemical Corp.
Filed Feb. 17, 1960, Ser. No. 9,279
5 Claims. (Cl. 43—131)



1. A bait station comprising a base including a horizontally disposed panel having side and end walls extended upwardly therefrom, a trough, and a cover also including a horizontally disposed panel and having side and end walls depending therefrom, the trough having bait feed and storage sections therein, and the walls of the base and cover having openings therein, the openings of the walls of the cover being offset in relation to the openings of the walls of the base with the cover in one position, and in registering relation with the openings of the walls of the base with the cover in another position providing a passage through the station, the feed section of the trough being open to said passage, and an anchor clip for retaining the trough in position in the base.

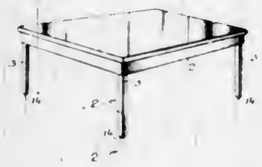
3,045,388
COMBINATION PUMP AND DUST RECEPTACLE
Philip L. Hauser, Glenview, Ill., assignor to Root-Lowell Manufacturing Co., Lowell, Mich., a corporation of Ohio
Filed June 15, 1960, Ser. No. 36,438
2 Claims. (Cl. 43—147)



1. A combined air pump and dust receptacle for the dissemination of pesticidal dust, comprising a disposable dust receptacle initially filled and sealed with a predetermined measured quantity of said dust and having means for ready attachment to and detachment from the discharge end of an air pump, said dust receptacle provided with a top and a base, a threaded neck projecting from its top, said base having a discharge opening offset from its center, a discharge tube longitudinally and eccentrically mounted within said receptacle and of a length less than that of the depth of said receptacle, said tube having one end communicating with said discharge opening in the base and the other end of the tube spaced from the interior of the top to provide an inlet opening into the dust receptacle for the entrance and passage to discharge of air-borne dust, said air pump including a pump barrel having an enlarged discharge end and internally threaded end cap assembly mounted within said enlarged end and including a part providing an inner partition having a forwardly projecting internally threaded neck portion affixed at its outer end to the enlarged end of the barrel,

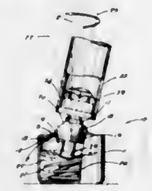
and a convex end plate spaced forwardly of said partition to provide an air chamber therebetween, said partition having one or more small apertures and a check valve controlling air flow through said apertures, said convex end plate provided with a central port through which air under pressure is directed for discharge from said pump into the dust receptacle in spaced relation from the inlet end of said discharge tube, the threaded neck of said dust receptacle being detachably mounted in the internally threaded end cap assembly of the air pump.

3,045,389
LEVELING DEVICE FOR STANDARDS
Fred H. Arnit, Prospect Heights, Ill., assignor to Garey Corporation, a corporation of Illinois
Filed Mar. 2, 1960, Ser. No. 12,308
5 Claims. (Cl. 45—139)



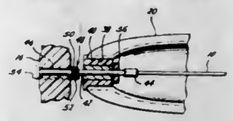
1. A leveling device for tubular standards comprising a U-shaped member having a web and two side walls depending from said web, said side walls being adapted to fit tightly against oppositely disposed interior surfaces of a tubular standard, a flange extending laterally from the outer end of each of said side walls to engage the lower end of said standard to limit the extent of insertion of said U-shaped member in said standard, a threaded collar projecting upwardly above said web, said web having a hole aligned with said threaded collar, and an adjusting screw comprising a base portion and a threaded stem projecting upwardly from the upper end of said base portion and engageable with said threaded collar, said threaded stem having a length slightly less than the length of said side walls, whereby it is completely concealed within the standard when it is engaged with said threaded collar, and a portion of said base portion is exposed below the bottom of said standard when the leveling device is secured in operative position relative to said standard.

3,045,390
LEVELING DEVICE
Deh C. Tao, Easton, Conn., assignor to The Bassick Company, Bridgeport, Conn., a corporation of Connecticut
Filed Apr. 13, 1959, Ser. No. 806,073
4 Claims. (Cl. 45—139)



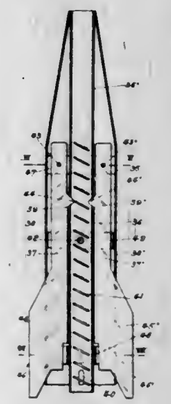
1. A leveling device comprising a casing defining a chamber, a cover for the casing provided with a ball-retaining socket, a ball having a bore therethrough and mounted in the socket for limited angular movement, an actuator rod fitted closely and slidably in the bore and having one end terminating within said casing, a spring positioned within the chamber, a disc loosely seated and riding upon the upper portion of the spring, said spring forcing the disc in abutting engagement with said one end of the rod, and a viscous medium in the chamber at least partially surrounding the spring.

3,045,391
MODEL AIRCRAFT
Victor Stanzel, P.O. Box 171, Schulenburg, Tex.
Filed Jan. 19, 1959, Ser. No. 787,594
4 Claims. (Cl. 46—78)



1. In a model aircraft having a rotatably mounted propeller shaft and a propeller having a central opening through which the shaft may be extended, means for holding the propeller on and causing the same to rotate with the shaft, comprising a coil formed of wire surrounding and in gripping contact with the shaft for rotation with the shaft and means on said coil positioned for engagement with said propeller to cause the propeller to rotate with the coil.

3,045,392
MULTI-STAGE TOY MISSILE
Lucien Jean Augustin Martin, 205 Rue La Fayette, Paris, France
Filed May 25, 1960, Ser. No. 31,631
Claims priority, application France June 17, 1959
8 Claims. (Cl. 46—228)

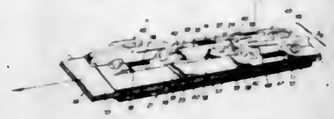


1. A multi-stage toy missile comprising: a launching base; a missile having at least two stages, the first of said stages having elastic means permanently mounted thereon, the second stage including means slidable with respect to said first stage and engageable with said elastic means whereby said elastic means when in a deformed condition is adapted to eject said second stage from said first stage; selectively operable means for propelling said first stage away from said launching base; and lever means pivotally mounted on said first stage, said lever means having catch means engageable with said second stage for holding said second stage on said first stage, said elastic means when deformed urging pivotal movement of said lever means to move said catch means out of engagement with said second stage; and guide means on said base engageable with said lever means for preventing pivotal movement thereof in response to the urging of said elastic means until said first stage has moved a predetermined distance away from said launching base.

3,045,393
ANIMATED DEVICES FEATURING MAGNETICALLY MOVED PIECES

Philip H. Knott, 31 W. 88th St., New York, N.Y.

Filed Mar. 24, 1961, Ser. No. 98,275
20 Claims. (Cl. 46—240)



1. An animated device comprising, in combination, means providing a lateral field area having a top surface on which is defined a path of forward motion of a movable piece, a movable piece having a base resting upon and slidable over the top surface along the path, magnetic means carried by said base relatively close to said top surface, cooperative piece motion restricting means on said top surface and said base permitting step-by-step forward motion of the latter over the former through predetermined successive step distances along the path while preventing appreciable reverse motion between periods of forward step-by-step motion, a reciprocative lateral control slide located beneath said top surface carrying fixed thereon a plurality of successively-arranged separated and localized magnetic areas each having a localized attraction affinity for the magnetic means carri d by said movable piece base with said magnetic areas located beneath and spaced in the general direction of the movable piece motion path at distances which are at least equal to each of the predetermined successive step distances, means to guide said control slide in reciprocative motion with said localized magnetic areas thereon being alternately moved back and forth along the movable piece motion path, and means to reciprocate said slide back and forth by alternate forward thrust and return through a distance at least equal to each of the predetermined successive step distances with said cooperative piece motion restricting means allowing forward advance of said base freely over said top surface through the distance of one of the successive steps upon each forward thrust of said control slide while preventing backward motion of said base through this step distance upon reciprocative return of said control slide for maintenance of said base in its advanced position there to be picked up for a successive step of advance by a succeeding one of said magnetic areas on the next thrust forward of said slide.

3,045,394
PROTECTION OF PLANT LIFE FROM FROST DAMAGE

Thomas H. Coulter, Jackson, Miss., assignor to Dumas Milner Corporation, Jackson, Miss., a corporation of Mississippi

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,875
12 Claims. (Cl. 47—2)

1. The method of protecting living plants from frost damage which comprises applying to the plant a liquid film of a polymer of N-vinyl-2-pyrrolidone in a non-phytotoxic carrier.

3,045,395
SQUARE BUTT STRIP SHINGLES

George Arthur Fasold, Mount Healthy, and Walton V. Leibrook, Wyoming, Ohio, assignors to The Philip Carey Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio

Filed July 17, 1959, Ser. No. 827,857
2 Claims. (Cl. 50—226)

1. An interlocking square butt strip shingle adapted to be laid in courses with like strip shingles with the lower end portions of each strip shingle exposed while the upper portions are covered by exposed portions of overlying courses to provide a double coverage roof covering in which the butts of the strip shingles of successive courses are staggered, said shingle comprising a substantially rectangular strip of flexible, waterproof material having at least one intermediate recess extending substantially perpendicularly from the bottom edge through the lower portion to divide the strip shingle into laterally spaced depending butt units and having a recess of the same length and width as said intermediate recess along one side edge of the shingle so that when the shingles are applied to the roof adjacent butt units in each course will be separated by a recess, each butt unit having a locking tab depending medially from the bottom edge of the respective butt unit, said tab having the shape of a hook devoid of any angular parts forming weakened

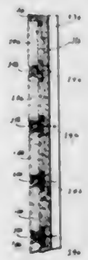


lines of tear cleavage and said tab having a semi-circular cut-out interrupting the bottom edge of the shingle butt, said semi-circular cut-out merging into a reversely curved path extending back toward the bottom edge of the shingle and then continuing around in a curved path in the opposite direction until it meets the bottom edge of the shingle butt at a point removed from said semi-circular cut-out and each shingle having a first cut-out opening at the top of the intermediate recess which with said intermediate recess forms an inverted J and a second cut-out opening at the other side edge of the shingle similar to said first cut-out opening and positioned relative to the bottom edge to form an inverted J in cooperation with an adjacent shingle, said cut-out openings cooperating with the semi-circular cut-outs of the hook shaped locking tabs in interlocking hooked engagement when the shingles are assembled on a roof.

3,045,396
WALL FACING MATERIAL

Andrew M. Matyas, 1642 North Road SE., Warren, Ohio

Filed Mar. 19, 1958, Ser. No. 722,827
1 Claim. (Cl. 50—342)



A wall facing assembly comprising a flat, rigid panel, a plurality of flat, decorative members of rectangular shape each having its rear face cemented flatwise to the front surface of said panel and said members being arranged in vertically spaced, horizontally extending rows with adjoining rows being horizontally offset from each other and with alternate rows in vertical alignment, the marginal edge surfaces of each member being normal to its front face and adjoining members being spaced both vertically and horizontally to provide constant width spaces between adjoining members for the reception of mortar, said panel having a plurality of recesses in its front surface arranged in vertically and horizontally aligned

rows, the vertical spacing between adjoining recesses coinciding with the vertical spacing between corresponding portions of the members of adjoining, vertically spaced rows of members and each recess falling within a mortar space between adjoining, vertically spaced members, the horizontal spacing between adjoining recesses being such that at least two recesses are spaced along the horizontally extending margin of each full length member and each recess being so proportioned that its vertical dimension is greater than the vertical width of the mortar space between adjoining, vertically spaced members and each recess spanning a respective such mortar space, and mortar substantially filling said mortar spaces and displaced into said panel recesses, said mortar when set forming a head within each recess engaged behind respective decorative members to key said mortar in position.

3,045,397
TREATING APPARATUS

Werner Hesslenberg, Wuppertal-Elberfeld, Germany, assignor to Walther Technik Carl Kurt Walther, Wuppertal-Vohwinkel, Germany

Filed Dec. 2, 1959, Ser. No. 856,742
Claims priority, application Germany Dec. 5, 1958
16 Claims. (Cl. 51—7)



1. An apparatus for treating the surface of work pieces, comprising, in combination: a vibratably mounted carrier; vibrating means for vibrating said carrier; a plurality of vats carried by said carrier, each of said vats being open at the top and having an end wall in the form of a slidably arranged closure member which is displaceable in vertical direction for opening and closing each respective vat; and a discharge gutter also carried by said carrier and being arranged below said end walls of said vats so that the contents of said vats may pass into said discharge gutter, whereby each of said vats may be filled, emptied or have its contents inspected while said vibrating means vibrate said carrier, thereby rendering unnecessary the interruption of the surface treatment of work pieces in all of said vats for the purpose of allowing filling, emptying or inspection of the contents of any one of said plurality of vats.

3,045,398
LAWN MOWER SHARPENER

James McEwan, 138 Stockton Ave., San Jose 11, Calif.

Filed Jan. 2, 1959, Ser. No. 784,782
Claims. (Cl. 51—48)

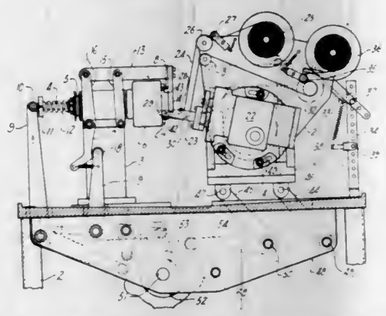


1. In a lawn mower sharpener, a frame including at least three transverse parallel rails, one of said rails being rectangular in cross section, respective head and tail stocks slidably mounted on said rectangular rail and having respective eccentric ends for pivotal engagement with the reel of a mower, a carriage mounted for sliding movement on two of the other rails, a slide plate mounted for back and forth movement on said carriage in a direction at right angles to the travel of said carriage, a grinding head including a grinding wheel and a drive motor therefor, said grinding head having a support member for supporting said grinding head as a unit, means for pivotally supporting the rear end of said support member on said slide plate, means for adjustably supporting the forward end of said support member on said slide plate, means for adjusting the vertical position of the forward end of said support member whereby said grinding wheel may be raised or lowered with respect to said slide plate and means for clamping said support member against rotation whereby said grinding wheel may be fixed in a horizontal position or in a vertical position after the grinding head is rotated to prevent the grinding wheel in the selected one of these positions.

3,045,399
METHOD FOR HONING BEARING SURFACES

Theodore H. Sloan, P.O. Box 58, Charleroi, Pa., assignor of twenty-five percent to William B. Jaspert, Pittsburgh, Pa.

Filed May 18, 1959, Ser. No. 813,951
3 Claims. (Cl. 51—291)

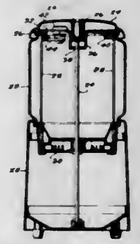


1. In the method of honing a previously ground metal surface moving at relatively high linear speed by applying an abrasive material submerged in a flushing fluid to said moving surface while subjected to reciprocatory movement transversely of the direction of travel of said surface, the step of lifting said abrasive material away from said moving surface to cause the fluid to flush out the accumulation of cuttings from the working surface of said abrasive material.

3,045,400
METHOD AND MEANS FOR HANDLING ARTICLES TO BE DISPENSED FROM A BULK SUPPLY

Martin L. Grose, 2315 Hickory Lane, Charlotte, N.C.

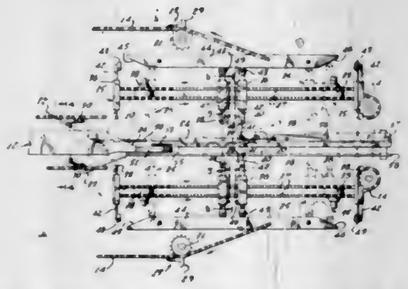
Filed July 17, 1961, Ser. No. 124,639
3 Claims. (Cl. 53—37)



1. The method of handling articles dispensable from a bulk supply in coin controlled vending machines of the

type that incorporate a separable receptacle having a top filling opening through which the bulk supply of said articles is loaded for subsequent dispensing, and that provide for the locking of said receptacle in place as a component of the machine, and by which method a centralized accounting for undispensed articles may be made so that the coin receipts that should be realized from said machines may be accurately determined: said method comprising filling such receptacles while separate from said machines with articles in bulk through said filling opening, covering each such filling opening upon such filling, separately locking the covering at the filling opening of each filled receptacle, and subsequently attaching and additionally locking the filled receptacles in place as a component of said machines without disturbing the separately locked condition of said receptacles.

3,045,401
MACHINE FOR PACKAGING ARTICLES
Henry Ganz, Teaneck, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Sept. 21, 1960, Ser. No. 57,493
3 Claims. (Cl. 53—48)



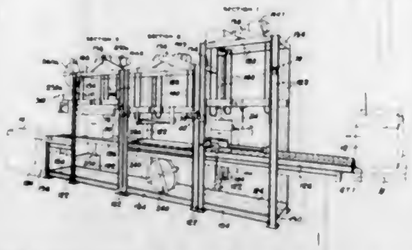
1. In a machine for applying a wrap-around carton blank to containers and the like arranged in rows, said carton blank having a top panel, side panels, and interlocking bottom closure panels, means for conveying the containers through the machine, means for wrapping the carton blank about the containers, including means for folding the side panels downwardly along the outer sides of the containers and means for folding first one bottom closure panel and then the other bottom closure panel upwardly for tight interlocking engagement under the bottoms of the containers, and means for tightening the carton blank against the containers,

(*a*) said tightening means including a plurality of pairs of tightening members and means for moving first the members of one pair and then the members of another pair successively against portions of the side panels, and

(*b*) the means for folding said other bottom panel upwardly into interlocking engagement with said first panel being timed to effect the interlock when said tightening members are in tightening position against said portions of the side panels.

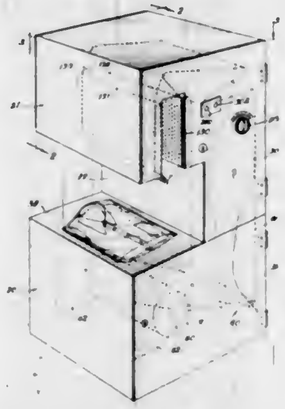
3,045,402
MACHINE FOR AUTOMATICALLY MEASURING AND TAPING CARTONS
Clifford D. Keely, West Englewood, N.J., and Raymond J. Baisley, Hempstead, N.Y., assignors to General Corrugated Machinery Company, Inc., Palisades Park, N.J., a corporation of New Jersey
Filed Nov. 14, 1960, Ser. No. 69,130
27 Claims. (Cl. 53—66)

1. In a taping machine for automatically measuring the heights of cartons which may vary in height from carton to carton, and for adjusting automatically to the measured height of a carton, in combination, a carton conveyor, an elevator, overhead mechanism carried by the elevator for operating upon the upper ends of conveyor carried cartons, means operable to raise and lower the elevator, means automatically responsive to the carton



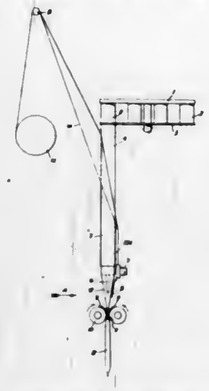
at a predetermined point in its travel on the conveyor to initiate adjustment of the elevator downward into predetermined relation with the carton top, and means automatically effective to disable the elevator operating means when the prescribed relationship of elevator to carton top has been attained.

3,045,403
PACKAGING MACHINE AND METHOD OF FORMING PACKAGES
Wallace F. Mitchell, Arlington Heights, Ill., assignor to E-Z Packaging Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 12, 1959, Ser. No. 852,307
6 Claims. (Cl. 53—74)



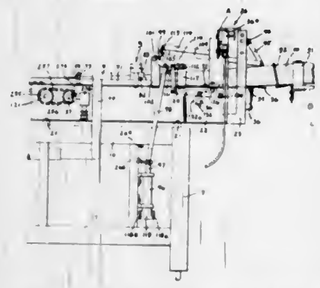
2. A packaging machine including the combination of a supporting frame; means operatively related to the frame to feed a web of longitudinally folded, flexible, heat-sealing, thermoplastic film stock, the folds of which are welded together along a line transversely of the web to provide a closed end; means operatively related to the frame to suspend a portion of the web in a vertical plane with said closed end downward; means operatively related to the frame to spread the open longitudinal edges of said web immediately above said closed end; said edges being spread to permit transverse insertion of an article to be packaged between the folds; means operatively related to said frame to permit a downward movement of the web due to the weight of said article after said article has been inserted in said folds; means operatively related to said frame to weld said folds together transversely of said web and immediately above said article after said downward movement of the web, and means operatively related to said frame to sever said web immediately above the last mentioned weld.

3,045,404
WRAPPING MACHINES
Peter G. Wilson, Leeds, England, assignor to The Forgrove Machinery Company Limited, Yorkshire, England, a company of Great Britain
Filed Nov. 20, 1961, Ser. No. 153,597
Claims priority, application Great Britain Jan. 26, 1961
4 Claims. (Cl. 53—180)



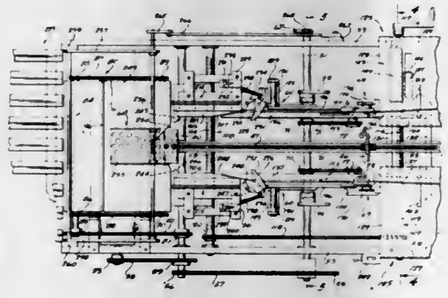
1. A wrapping machine comprising an upright tube former, means for feeding a web of heat sealable wrapping material downwardly in relation to said tube former to form said wrapping material into a tube travelling downwardly from said tube former, rotary heat sealing dies, situated below the tube former and on opposite sides of said tube arranged to engage said tube intermittently to form transverse seals therein and thereby to form said tube into a series of packets, shafts supporting said sealing dies, means for delivering a charge of loose articles downwardly through said tube former into each of said packets, and resilient members on said shafts which form continuations of said sealing dies and engage the sides of said tube above each transverse seal, immediately after formation thereof by the sealing dies, to flatten the tube and thereby protect said seal from damage by the falling articles.

3,045,405
WRAPPING MACHINE
Swan F. Anderson, 312 N. Highland Ave., Rockford, Ill., and Leo Strombeck, Rockford, Ill., assignors, by direct and mesne assignments, of one-half to Swan F. Anderson and one-half to Ralph F. Anderson, both of Rockford, Ill.
Filed Dec. 14, 1959, Ser. No. 859,303
22 Claims. (Cl. 53—182)



1. In a machine for wrapping elongated articles, the combination of an upwardly extending article chute having a rear wall and an opening at the front side, means including a conveyer extending from the front side of said chute for advancing a strip of wrapping material across the lower end of the chute, a wall swingably mounted adjacent its upper end on said chute for movement between a closed position inclined downwardly toward said rear wall to support an article in an upwardly and forwardly inclined position and an open position inclined away from said rear wall to permit the article to pivot about its lower end onto the strip of wrapping material, and means operable to sequentially open said wall and thereafter advance said conveyer.

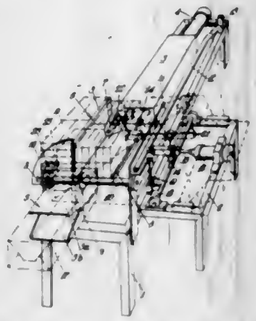
3,045,406
SEMI-AUTOMATIC WRAPPING MACHINE
William F. Stremke, Greenfield, Wis. (8031 W. Holmes Ave., Milwaukee 19, Wis.); William F. Stremke, Jr., 3329 S. Springfield Ave., Milwaukee 7, Wis.; and Roman R. Pazderski, 3844 S. 15th Place, Milwaukee 15, Wis.
Filed Jan. 27, 1958, Ser. No. 711,308
23 Claims. (Cl. 53—209)



1. In an apparatus for wrapping an article in a sheet of heat sensitive wrapping material; a reception table for receiving the article to be wrapped with a sheet of wrapping material secured about the article, the wrapping material having two ends extending from two respective sides of the article; a source of power; a frame; a pair of brackets movably carried by said frame; actuating means operably connected to effect simultaneous movement of said brackets toward and away from each other for accommodating packages of different sizes; a conveyor supported by said frame centrally between said brackets and connected to be actuated by said source of power, said conveyor operating to engage the article on said reception table and move it through the machine for the completion of the wrapping operation; a pair of rear tuckers, each rotatably supported by one of said brackets and connected to be continuously rotated in a single direction by said source of power for tucking the trailing sides of the extending ends of the wrapping material inwardly to draw the wrapping material about the trailing corners of the package as the latter is being moved by said conveyor; a pair of down folders, each of said down folders being pivotally carried by one of said brackets and connected to be actuated in its pivotal movement by said source of power for moving the extending ends of the wrapping material downwardly; a pair of front tuckers, each of said front tuckers being pivotally supported by one of said brackets; a spring connected to each of said front tuckers to yieldably urge it in the path of travel of the package as the latter is being moved by the conveyor so that said front tuckers engage the two leading corners of the package to force the wrapping material against the two leading corners of the package; a pair of under folders, each of said under folders being carried by one of said brackets in position to receive the package as it is being moved by said conveyor so that the package is supported by said under folders with its underside in engagement therewith and as the package moves onto the under folders the latter function to move the downwardly extending ends of the wrapping material to the underside of the package; and a hot plate supported by said

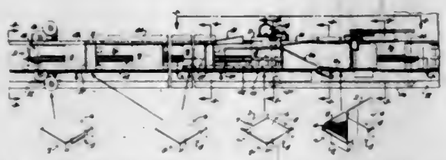
frame in position to receive the package as it is moved off of said under folders by the conveyor to complete the folding of the wrapping material at the underside of the package and apply heat thereto for fusing the folds of wrapping material together and seal the package.

3,045,407
BALING OR PACKING MACHINES
George Alfred Stevens, Northfleet, England, assignor to Paper Sacks Limited, Northfleet, England
Filed May 16, 1960, Ser. No. 29,438
Claims priority, application Great Britain May 22, 1959
4 Claims. (Cl. 53—258)



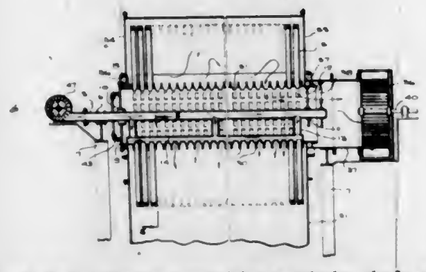
1. Apparatus for packing a plurality of articles into a bag, which includes a frame, a rotary assembly wheel on the frame having at least four partitions extending radially at right angles to one another from central shaft means, an end shield fixed on the frame adjacent one end of said wheel perpendicularly to said shaft means, a pair of said partitions, when extending from the shaft means respectively vertically and horizontally, cooperating with said shield to define an assembly station for the arrangement of a plurality of articles in an orderly group, means to rotate the assembly wheel through 90° about said shaft means to a loading position, a side lay for urging said group of articles into contact with the said horizontal partition now extending upwards from said shaft means, a bag holder for supporting a bag in open-mouthed condition adjacent the loading position, a loading ram acting in the axial direction of the said shaft means for displacing the group of articles at the loading position into the bag supported on the bag holder, and means for locking the assembly wheel against rotation relative to the frame during operation of said side lay and loading ram.

3,045,408
PACKAGING MACHINE
Marlin B. Rasmusson, 6601 Elvas Ave., Sacramento, Calif.
Filed Jan. 11, 1960, Ser. No. 1,627
3 Claims. (Cl. 53—376)



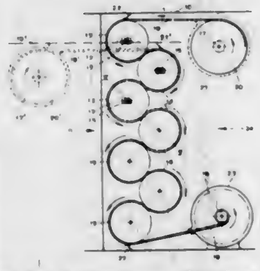
3. A packaging machine comprising a frame, a horizontal carton support extending along said frame, a conveyor on said frame for moving a carton along said support, a horizontal plate on said frame positioned closely to overlie a moving carton on said support and having a leading edge engageable by a leading flap on said carton, means on said frame for tucking a trailing flap on said moving carton under said plate, means on said frame for folding a front flap on said moving carton over said plate, means on said frame for folding the top of said moving carton over said plate and into contact with said folded front flap, and means on said frame for then folding a top flap on said folded top of said moving carton against the front face of said carton.

3,045,409
AIR FILTER FOR DUST COLLECTOR
Haavard Kronstad, 1479 Mount Jackson Road, New Castle, Pa.
Filed Aug. 31, 1959, Ser. No. 837,028
2 Claims. (Cl. 55—285)



1. A dust collector comprising a tubular shaft, a drum rotatably mounted on said shaft having circumferential and longitudinal rows of slots through its periphery throughout its length, a fixed manifold extending longitudinally of the inner wall of said drum in communication with at least one longitudinal row of slots formed in the drum, pipes connecting said manifold to said tubular shaft at spaced intervals throughout its length, a blower connected to said shaft for producing a current of air through said shaft, pipes and manifold, a casing surrounding said drum having an air inlet, a series of annular hollow filter members mounted on said drum over the rows of slots, each member being divided radially into a series of segments with each segment composed of an inner and outer frame of rectangular shape in cross section, said frames having their marginal edges interfitting together, a filter cloth covering said inner frame and secured thereon by said outer frame, means between said segments removably connecting said segments together and to said drum, means for creating a suction of air through said drum and filter members, and means for rotating said drum.

3,045,410
FILTERS
Frederick Floyd, Strood, England, assignor to Azonair Engineering Company Limited, Azonair Works, The Esplanade, Rochester, England
Filed Nov. 16, 1959, Ser. No. 853,298
Claims priority, application Great Britain Nov. 14, 1958
7 Claims. (Cl. 55—352)



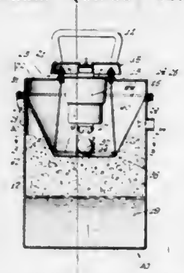
1. Apparatus for a continuous filtering of a fluid such as air comprising a casing in which fluid will flow along a path from a high pressure side to a low pressure side in said casing and a filter mounted transversely in said casing separating the high pressure side from the low pressure side, said filter comprising a plurality of fluid permeable support rollers rotatably mounted across the fluid path in said casing on parallel axes, each support roller being in contact with at least one other support roller along tangential lines all lying substantially in one plane normal to the general direction of fluid flow in the casing, a strip of filter material fed from a supply roll and taken up by a receiving roll and threaded between the nips of said rollers and supported on said rollers over an extended path across said casing between said high pressure side and said low pressure side.

3,045,411
LIQUID AND GAS SEPARATORS
William P. Dalrymple, Royal Oak, Mich., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Original application Aug. 7, 1953, Ser. No. 372,825, now Patent No. 2,893,362, dated July 7, 1959. Divided and this application June 26, 1959, Ser. No. 823,130
3 Claims. (Cl. 55—400)



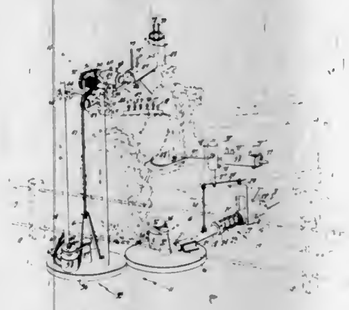
1. A liquid and gas separator unit insertable in a flow path of a gaseous fluid for intercepting all such gaseous fluid flow and comprising, a carrier member including a circular imperforate plate and an annular flange projecting from the periphery of one face of the plate, said flange having perforations extending radially therethrough, means for directing the flow of gaseous fluid radially inwardly of said flange perforations, an annular foraminous barrier constructed of multiple concentric rings of metal mesh mounted within the carrier member flange for intercepting fluid flowing radially inwardly through the perforations in the flange, and means for rotating the carrier member to develop a centrifugal force in any entrained liquid flowing through the foraminous barrier to cause such liquid to move radially outwardly of the barrier member against the normal direction of fluid flow.

3,045,412
FLOAT SEAL FOR VACUUM CLEANERS
Gordon L. Bowman, St. Paul, Minn., assignor to Premier Company, St. Paul, Minn., a corporation of Minnesota
Filed Sept. 3, 1959, Ser. No. 837,815
1 Claim. (Cl. 55—417)



In a wet-dry tank type vacuum cleaner, a tank having two separable parts of circular formation, said parts having cooperable peripheral mating edges in the form of out-turned flanges, an air impeller and motor unit connected with one of said tank parts and operable normally to create suction within the tank, said air impeller and motor unit having an intake means at its bottom which also constitutes a valve seat for a float valve device, and an outlet through an aperture formed in said one tank part, an intake means connected with the other tank part, a filter element disposed within the tank surrounding said float valve device, said filter element being in the shape of an inverted truncated cone with the large diameter being interposed between the mating flanges of the tank parts, and the smaller diameter peripheral portion of the filter element being supported at a lower point in the tank by a depending supporting means mounted on the said one-tank part, said supporting means having a detachable abutting engagement with said filter element so that it is separable therefrom when said tank parts are separated from each other, said filter element comprising a unitary structure formed with a sealing part that is interposed between the peripheral mating edges of the tank parts, draft type fasteners carried by the other of said tank parts, said fasteners being adapted to engage the out-turned flange of the one tank part for the purpose of securing the tank parts together, said large diameter peripheral portion of the filter element being provided with a resilient gasket which is also interposed between the mating edges of the tank parts and the organization being such that when the filter element is in place within the tank the fasteners may securely pull the cover tightly against the tank so as to effect an air-tight seal between the tank parts, whereas in the event the filter element and gasket carried thereby are omitted from the tank the fasteners can only loosely hold said one tank part and leakage of air between the tank parts results so that no appreciable working vacuum may be developed within the tank to enable the vacuum cleaner to be used for cleaning purposes.

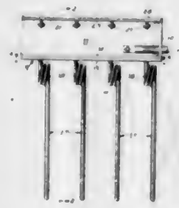
3,045,413
TANDEM MOWING MECHANISM
Leonard R. Sheffer, R.D. 2, Valley Falls, N.Y.
Filed Mar. 2, 1959, Ser. No. 796,587
8 Claims. (Cl. 56—25.4)



1. A mowing machine of the character described, adapted to be connected to a tractor, which comprises a tandem mowing mechanism adapted to mow along a single continuous path on both sides of an obstacle upwardly projecting from the ground line in the path thereof; said mechanism including a first device having a cutter means adapted to mow in a path along the near side of said obstacle; a first actuatable means mounted at one end on said tractor and laterally extending therefrom to mount said first device at its other end; a second device having a cutter means adapted to mow in a path along the far side of said obstacle; a second actuatable means mounted at one end on said tractor and laterally extending therefrom to mount said second device at its other end; and a primary power means mounted on said tractor and cooperatively connected with said cutter devices

to actuate the same, and to motivate said first and second actuatable means to shift said devices into and out of operating position with respect to both the near and far sides of said obstacle, both of said cutter means being mounted upon and operated from said tractor independently of each other, and adapted to be moved toward each other into contacting relation, as well as away from each other in spaced relation to pass said obstacles therebetween, and further characterized in that said first actuatable means comprises a boom pivotally and slidably mounted laterally of the side of the tractor, and means, cooperatively connected therewith and with said primary power means, to raise and lower said boom, and said first device slidably to actuate said boom, and wherein said boom is mounted to pivot vertically, and simultaneously to move toward said tractor and away from said obstacle under the weight of said first device when raised above its horizontal plane, and a spring on said boom automatically to urge the return of said device toward said obstacle and away from said tractor to normal operating position when said boom is lowered below its horizontal plane.

3,045,414
REEL FINGER
Earl L. Scheidenhelm, Mendota, Ill., assignor to Horace D. Hume, Mendota, Ill.
Filed Jan. 23, 1961, Ser. No. 84,081
5 Claims. (Cl. 56—221)



1. A bat assembly for harvester reels wherein the bats approach the crop being harvested in a forwardly directed motion, comprising:

transverse means having an integral rearwardly directed ledge including a plurality of transverse slots formed through said ledge;

a transverse tine shaft fixed to said transverse means adapted to mount said means on a reel frame;

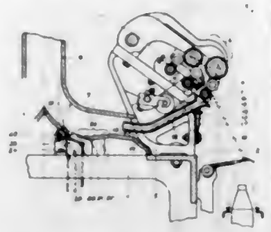
a plurality of individual tines extending through said apertures in individual spaced positions along said transverse means;

and mounting means fixed to said transverse means and operatively connected to said tines adapted to pivotally mount each tine about an axis perpendicular to said transverse means and spaced from said slotted ledge

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3,045,415
THREAD SUCTION DEVICE ON SPINNING AND TWISTING FRAMES
Hermann Bühler, Jr., Winterthur, Switzerland, assignor to Firma Hermann Bühler & Co., A.G., Winterthur, Switzerland
Filed July 7, 1959, Ser. No. 825,502
Claims priority, application Switzerland Aug. 7, 1958
10 Claims. (Cl. 57—56)

1. A thread suction means on a spinning and twisting frame comprising drawing means having feed drawing rollers, a centrally located suction casing, and a flat substantially rectangular suction duct having a suction opening extending uniformly over a plurality of spinning and twisting stations and over the entire width of said duct located adjacent said feed drawing rollers and having an outer opening in the rear end, substantially as large as



said suction opening and extending into said central suction casing.

3,045,416
FALSE TWISTING DEVICE
Leo Ubbelohde, 100 Lindemannstrasse, Dusseldorf, Germany
Filed Aug. 5, 1959, Ser. No. 831,850
Claims priority, application Germany Sept. 15, 1958
3 Claims. (Cl. 57—77.45)



1. A false twisting device comprising a pair of closely spaced opposed runs of a single belt, means for moving said runs in opposite directions at equal speeds, twisting tubes of relatively small diameter positioned between said belt runs and being rotatable by the movement thereof, spaced collar members on said tubes on opposite sides of said belt runs to restrict axial movement of said tubes, and at least one rotatable disc coacting with one of said collar members to take up the pull exerted by filaments drawn through said tube.

3,045,417
SPINNING RING WITH WICK IN HOLDER
Andrew J. Wayson, Needham, and Angelo G. Bucchianeri, Millis, Mass., assignors to Merriman Bros., Inc., Boston, Mass., a corporation of Massachusetts
Filed Oct. 19, 1960, Ser. No. 63,590
2 Claims. (Cl. 57—120)



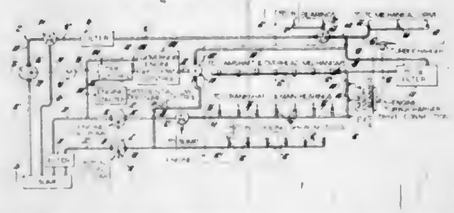
1. A spinning ring assembly comprising a one-piece annular split ring holder, means for contracting said holder, said holder comprising upper and lower spaced interior horizontal flanges which have their interior vertical faces lying in a common cylindrical surface, two vertical flanges also lying in the same common cylindrical surface and joining the ends of said upper and lower flanges at the split ends of said holder, said upper and lower flanges and said vertical flanges together forming a channel only slightly less in length than the circumference of said holder, a vertical type spinning ring, said ring having a continuous groove thereabout shaped to receive the said upper and lower flanges, the vertical side of said groove lying in the same common cylindrical surface whereby when the flanges of said holder are in said groove and the holder is contracted about said ring the vertical faces of said flanges will make oil-tight engagement with the vertical side of said groove, a wick in said channel, and means for supplying oil to said wick.

3,045,418
TIME METER
Hubert Bernard Heuer, Gottstatt, near Orpund, Switzerland, assignor to Ed. Heuer & Co. SA., a Swiss firm
Filed June 7, 1960, Ser. No. 34,436
3 Claims. (Cl. 58—74)



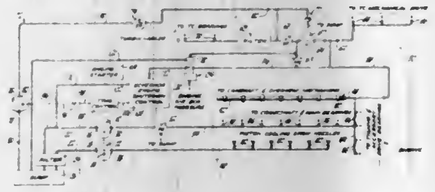
1. A time meter comprising an hour disc carrying an annular scale of hours, a gated dial under which said disc is adapted to revolve to show the figures of its scale in succession through the gate in the dial, an annular minute scale on the dial, a minute hand and a sweep seconds hand cooperating with the minute scale, an eccentric centre gear including a spindle, a toothed wheel fitted with slight friction over said spindle and controlling the minute hand, two return to zero cams rigid with said sweep seconds hand and with said toothed wheel respectively, a projection carried eccentrically by the toothed wheel, a star-shaped wheel coaxially rigid with the hour disc and driven by said projection engaging in intervals between its teeth, a train of gears operatively connecting the sweep seconds hand with the centre gear, a first knob, a balance wheel operatively connected with said train of gears, means engaging the train of gears and the balance wheel and controlled by said first knob to produce alternatively upon successive actuations of the first knob, the starting and the stopping of the operation of the time meter, a second knob controlling the return to zero of the two return to zero cams; a third knob and a mechanism through which actuation of said third knob shifts the star-shaped wheel and hour disc stepwise to zero.

3,045,419
LUBRICATION SYSTEMS AND PROTECTIVE CONTROLS FOR TURBOCHARGED ENGINES
Albert N. Addie, La Grange Park, and Max Ephraim, Jr., Chicago, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 18, 1961, Ser. No. 110,970
6 Claims. (Cl. 60—13)



1. In an internal combustion engine power plant including an exhaust gas driven turbocharger, a lubrication and protective control system comprising a first means normally operable to supply pressurized oil for lubrication of the several engine and turbocharger bearings at a predetermined maximum pressure, a second means normally operable to supply pressurized oil for cooling of the several pistons of the engine in accordance with engine speed, engine control means normally operable to initiate and maintain engine operation and including pressure responsive means operable to effect engine shutdown in response to oil pressure supplied thereto below a predetermined minimum pressure, differential pressure actuated valve means intermediate said first and second oil pressure supply means and operable to supply the lower of said pressures to said engine shutdown pressure responsive means, check valve means operable to prevent reverse fluid flow from said turbocharger bearings to said first oil pressure supply means, a third pressure supply means connectable to said turbocharger bearings through said check valve means and energizable to supply pressurized oil to said turbocharger bearings independently of engine operation, and time control means connected to said engine control means and selectively operable thereby to energize said third pressure supply means for limited periods for prelubrication of the turbocharger bearings prior to engine starting and for bearing cooling subsequent to engine shutdown.

3,045,420
LUBRICATION SYSTEMS AND PROTECTIVE CONTROLS FOR TURBOCHARGED ENGINES
Albert N. Addie, La Grange Park, and William G. Dilworth, La Grange, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 18, 1961, Ser. No. 110,971
6 Claims. (Cl. 60—13)

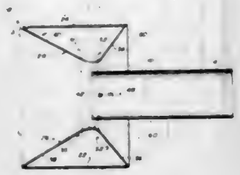


1. In a power plant including an internal combustion engine and an exhaust gas driven turbocharger operable to supply pressurized air for charging said engine, a first means operable to supply pressurized oil for engine lubrication, a second means operable to supply pressurized oil for lubrication and cooling of the turbocharger, engine control means operable to effect engine shutdown in response to oil pressure below a minimum pressure required for adequate engine lubrication, and valve means including a valve member having a small diameter end subjected to the oil pressure from said second supply means and a large diameter piston on the opposite end thereof subjected to the pressurized air from said turbocharger, said valve member being shiftable by the differential pressures applied to said opposite ends and cooperating with the remainder of said valve means to connect said first pressure supply means to said pressure responsive means whenever the turbocharger oil pressure is sufficient to insure adequate turbocharger lubrication for the engine and turbocharger load condition indicated by the turbocharger supplied air pressure, said valve member and means being alternately operable to vent said pressure responsive means to effect engine shutdown whenever said turbocharger oil pressure is below that required for adequate turbocharger lubrication as indicated by the turbocharger air pressure.

3,045,421
EXHAUST BACK PRESSURE REDUCER FOR INTERNAL COMBUSTION ENGINES
Basilio Pagliuca, 3198 W. 7th St., Los Angeles, Calif.
Filed Dec. 19, 1960, Ser. No. 76,857
3 Claims. (Cl. 60—30)

1. An exhaust pressure reducer for an internal combustion engine comprising a tubular member adapted to fit over the end of the exhaust conduit of said internal

combustion engine, a venturi mounted on said tubular member, said venturi having an elongated flat top and bottom plate, a pair of inwardly flaring arcuate side members located intermediate said top and bottom plates and being in spaced apart relation to form a venturi throat approximately equal in cross-sectional area to the cross-sectional area of the end of said tubular member, adjustable slotted means associated with said top member, said bottom member and said tubular member whereby the position of the end of said tubular member can be



longitudinally and accurately adjusted in respect to the throat of said venturi, said adjustable slotted means comprising a first elongated adjustable slotted means associated with said top plate and said tubular member and a second elongated adjustable slotted means associated with said bottom plate and said tubular member and positive clamping means associated with each of said slotted means for positively clamping said tubular member to said top and bottom plates after the desired adjustment is made.

3,045,422

TEMPERATURE CONTROL OF A CATALYTIC EXHAUST PURIFIER

Eugene J. Houdry, Ardmore, Pa.; assignor to Oxy-Catalyst, Inc., Wayne, Pa., a corporation of Pennsylvania

Continuation of application Ser. No. 649,848, Apr. 1, 1957. This application Sept. 18, 1959, Ser. No. 840,924

4 Claims. (Cl. 60—30)



1. In a combination of a catalytic exhaust purifier with a gasoline-powered internal combustion engine adapted to operate over a range of speeds including idling speed and a higher speed, a purifier including a housing containing oxidation catalyst, a conduit connecting the exhaust outlet from said engine with the exhaust purifier so that the exhaust gases pass over said oxidation catalyst, an air impeller to deliver air to said conduit between the engine and the purifier, means to control said air delivery to maintain said oxidation catalyst within the operating temperature range thereof and such that the amount of air admitted at idling speed of the engine when the flow of exhaust gases is at a minimum provides a maximum weight ratio of air to exhaust gases flowing to said purifier while the amount of air admitted at a higher speed of the engine is such that the weight ratio of air to exhaust gases flowing to the purifier is decreased.

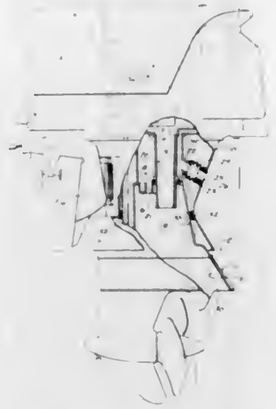
3,045,423

MUFFLED EXHAUST RELEASE FOR AN OUTBOARD MOTOR

Richard P. Hulsebus, Waukegan, Ill., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware

Filed Sept. 23, 1958, Ser. No. 762,744

6 Claims. (Cl. 60—32)



1. In an outboard propulsion device, the combination of,

a lower unit designed to operate partially submerged in water,

an engine mounted above said unit,

an exhaust gas conduit leading from said engine into said lower unit,

means in said lower unit defining a first expansion chamber connected with said conduit, having a materially larger cross section than said conduit in the direction of flow of exhaust gases through said conduit, and having an outlet which is under water when the propulsion device is in use and from which exhaust gas is aspirated when said unit is in motion,

means in said lower unit defining a second expansion chamber,

means affording direct communication between said first expansion chamber and said second expansion chamber and having a materially smaller cross section than said second expansion chamber in the direction of flow of said exhaust gases therethrough, said second chamber having communication with said conduit solely through said first expansion chamber and said last mentioned means, and

permanently open means for discharging exhaust gases from the second exhaust chamber at a point above the normal water level after the exhaust gas has passed successively through said conduit, said first chamber, and said second chamber.

3,045,424

METHOD FOR CONTINUOUS VARIATION OF PROPELLANT FLOW AND THRUST IN PROPULSIVE DEVICES

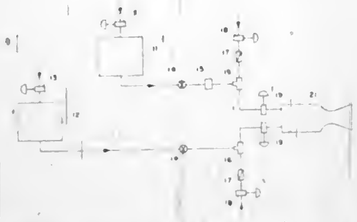
Gerald Morrell, Middleburg Heights, Ohio, assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Feb. 24, 1960, Ser. No. 10,812

3 Claims. (Cl. 60—35.3)

(Granted under Title 35, U.S. Code (1952), sec. 266)

3. A method for varying the thrust of a liquid propellant propulsive device which method comprises storing the fuel and oxidizer components under pressure of an inert gas, feeding said fuel and oxidizer to said propulsive device, injecting an inert gas into said fuel and oxidizer being fed thereby causing said fuel and oxidizer to foam prior to the fuel and oxidizer entering said



propulsive device, whereby the quantity of fuel and oxidizer entering said propulsive device decreases as the foaming action increases.

3,045,425

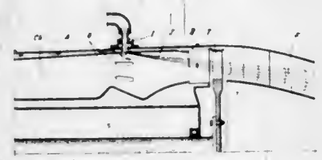
EXHAUST REHEAT EQUIPMENT FOR GAS-TURBINE ENGINES

Theo Seifferlein, Dammarie-les-Lys, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Filed Feb. 21, 1955, Ser. No. 489,446

Claims priority, application France Mar. 3, 1954

2 Claims. (Cl. 60—35.6)



1. In a turbojet engine having a combustion space, a gas turbine and an exhaust-reheat tail pipe in series flow arrangement, an exhaust-reheat ignition device comprising a fuel injection nozzle designed to form a concentrated, solid jet of fuel and positioned at a peripheral point of said combustion space, said nozzle pointing towards said turbine, and a cool air supply leading to said peripheral point, around said nozzle, whereby said concentrated jet induces a sheath of cool air substantially surrounding said jet.

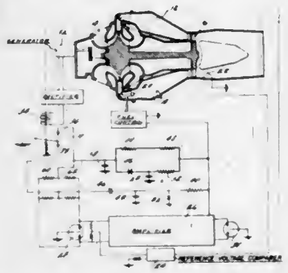
3,045,426

CONTROL SYSTEM HAVING AN AMPLIFIER WITH VARIABLE SENSITIVITY

Charles B. Brahm, Windsor Locks, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 21, 1955, Ser. No. 517,000

10 Claims. (Cl. 60—39.28)



8. In a fuel system for a turbine engine starting system, fuel limiting means having selected control characteristics, engine temperature responsive means providing engine temperature responsive signals, means producing electrical temperature error signals of positive and negative polarity from said temperature responsive signals as said engine temperature varies in one direction or the other from a selected engine temperature, an amplifier for said error signals converting said error signals into fuel control signals of negative and positive polarity, and a negative feedback for said amplifier, said negative feedback comprising a branched circuit having one branch including a resistance connecting the amplifier output with the amplifier input and a second branch including a rectifier in said feedback circuit.

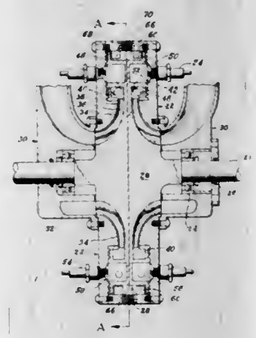
3,045,427

INTERNAL COMBUSTION POWER MEANS

James E. Baize, 6522 W. 14th St., and Robert A. Noel, 6154 Woodside Drive, both of Indianapolis, Ind.

Filed May 2, 1960, Ser. No. 26,307

8 Claims. (Cl. 60—39.34)



5. An engine rotor, said rotor provided with an intermediate chamber, and with an inlet for supplying air to said intermediate rotor chamber; the rotor provided with outlet passageway means communicating with said intermediate rotor chamber and opening to an outlet port provided on a face of the rotor; the rotor being provided with a combustion chamber opening to the rotor face adjacent the said intermediate rotor chamber outlet port to permit supplying the combustion chamber with air from said intermediate rotor chamber through associated communicating passageways; the rotor combustion chamber being provided with an exhaust outlet means leading rearwardly from said combustion chamber to direct exhaust gases to exhaust rearwardly from the rotor to effect a reaction force on the rotor and thereby effect a driving torque on the rotor.

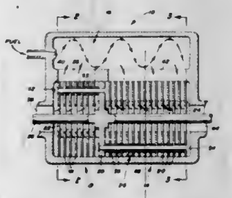
3,045,428

VORTEX GAS TURBINE

William B. McLean, 510 Lexington St., China Lake, Calif., assignor of fifty percent to Walter G. Finch, Baltimore, Md.

Filed July 6, 1960, Ser. No. 41,147

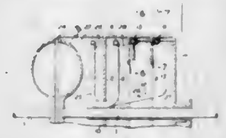
6 Claims. (Cl. 60—39.75)



1. A gas turbine, comprising, structure having a pair of laterally parallel spaced cylindrical shaped co-extensive chambers therein, one of said chambers having an inlet port for an oxidizer medium and an outlet port for exhaust gases arranged at opposite ends thereof, integra-

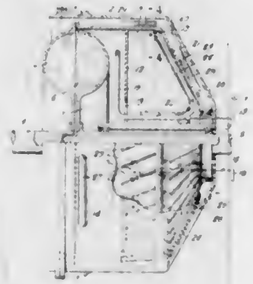
rotary means including a shaft extending through said inlet and outlet ports and having equally spaced equally sized disks positioned transversely along the longitudinal axis thereof and having central openings therein, together with a barrier element for dividing said one chamber into a pump section and a turbine section, with the number of said disks in said turbine section being greater than the number of said disks in said pump section, means for maintaining said disks in equally spaced relationship in said pump and turbine sections, said disks and barrier element being of circular shape and of slightly smaller diameter than said one chamber, said structure having a first passageway tangentially connecting said pump section to said second chamber and an other passageway tangentially connecting said turbine section to said other chamber and being arranged in a reversed direction from said first passageway and spaced along the longitudinal axis of said structure from said first mentioned passageway, and means for injecting fuel into said other chamber at the end thereof corresponding to said inlet port to said one chamber for mixing with said oxidizer medium to form a fuel mixture for burning thereof in said other chamber.

3,045,429
FLUID COUPLINGS
John E. Becker, Darlington, Ontario, Canada (R.R. 3, Bowmanville, Ontario, Canada)
Filed Mar. 1, 1960, Ser. No. 12,042
3 Claims. (Cl. 60—54)



1. A fluid coupling for transmission of power between a driving motor and a load, said coupling comprising a toroidal work chamber defined by a motor driven impeller and a load actuating runner actuated by circulating fluid in the work chamber, a fluid chamber axially disposed with the work chamber and having a radial dimension substantially the same as the work chamber and in fluid communication with the work chamber and rotating therewith and from which fluid is withdrawn by a fluid scoop in the fluid chamber under the influence of rotation of the fluid chamber, a cylindrical fluid reservoir having a cylindrical wall, the reservoir being axially disposed with the work chamber and rotating in unison with the impeller and receiving fluid withdrawn from the fluid chamber and from which fluid is constantly recirculated through the fluid chamber to the work chamber; self adjusting means for varying the volumetric fluid content of the work chamber and the reservoir in relation to varying speed of the driving motor whereby the power transmitting capacity of the coupling is analogous to the speed of the motor and comprising division of the reservoir into three annular compartments formed by two spaced radial partitions extending inwardly a substantial distance from the cylindrical wall of the reservoir, the scoop pipe in the fluid chamber continuously withdrawing fluid from said chamber and proportionally emptying it into two of the compartments, centrifugally responsive passage means transferring fluid from said two compartments, respectively, to the third compartment, each passage means being responsive to a different speed range, and a scoop pipe in the third compartment returning fluid to the fluid chamber at a greater rate than the fluid scoop in the fluid chamber removes fluid therefrom whereby the third compartment is kept substantially empty at all times and receiving fluid centrifugally withdrawn from fluid circulation through the work chamber and the reservoir, fluid conduits extending between the compartments and between one compartment and the work chamber and through which fluid flows from the reservoir to the work chamber, and centrifugally actuated means controlling the volume of fluid flow through the conduits in proportionate relationship relatively to varying speeds of the driving motor.

3,045,430
FLUID COUPLINGS
John E. Becker, Darlington Township, Durham County, Ontario, Canada (R.R. 3, Bowmanville, Ontario, Canada)
Filed Sept. 20, 1960, Ser. No. 57,220
6 Claims. (Cl. 60—54)



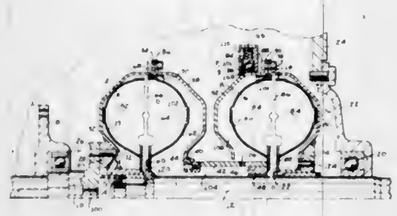
1. In a fluid coupling including a rotating fluid reservoir having a cylindrical wall concentric with the axis of the coupling and a substantially conical wall having exterior heat dissipating fins, the conical wall being remote from the coupling and inclined towards the coupling from the axial portion of the reservoir and through which reservoir fluid circulates in passage to and from the coupling; an arrangement for cooling fluid circulating through the reservoir and comprising a conduit returning fluid to the coupling from the reservoir, a second conduit contained within the reservoir and extending along and in proximity to the axial portion of the reservoir and having a fluid inlet end and a fluid outlet end and through which fluid circulates in passage from the coupling to enter the reservoir, the inlet end of the second conduit communicating with an element evacuating fluid from the coupling, the outlet end of the second conduit being directed to eject fluid into contact with the inner face of the apex portion of the conical end wall of the reservoir and against which face ejected fluid centrifugally flows from its apex portion to its peripheral portion, and fluid flow encompassing means spaced from the inner face of the wall.

3,045,431
HYDROKINETIC TORQUE CONVERTER
Alexander H. Galaniuk, Dormagen, Germany, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Jan. 16, 1961, Ser. No. 83,044
3 Claims. (Cl. 60—54)



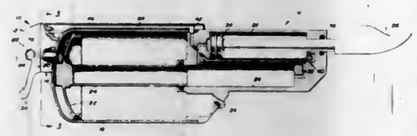
1. A hydrokinetic unit comprising a pump member and a turbine member situated in toroidal fluid flow relationship and defining therebetween a toroidal fluid flow circuit, said pump member and said turbine member each comprising an inner shroud and an outer shroud, said inner shrouds defining an annular cavity, a first cam element secured to said inner pump shroud on the interior of said cavity, a second cam element in the form of a wire cooperating with said first cam element in camming relationship, an annular ring carried by said inner pump shroud with the axis thereof coinciding with the axis of said unit, said annular ring being adapted to be adjusted in either axial direction into and out of said circuit, one end of said wire being connected pivotally to said annular ring, a centrifugal weight carried by said second cam element, and spring means for normally urging said weight in a radially inward direction and for normally uring said annular ring within said circuit, said annular ring being urged axially out of said circuit by said camming relationship when said centrifugal weight is moved radially outward under the influence of centrifugal force against the opposing force of said spring means.

3,045,432
FLUID COUPLING
Axel F. L. Anderson, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,569
6 Claims. (Cl. 60—54)



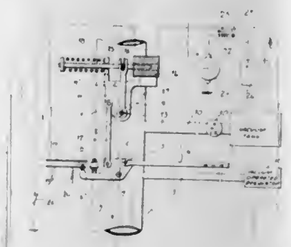
1. The combination comprising a housing having a pair of opposed end walls; an input shaft having a relatively short portion thereof extending within the housing; an output shaft axially aligned with the input shaft and having a relatively long portion thereof extending within the housing; first bearing means between adjacent end portions of said shafts; a first impeller carried by the input shaft; a first runner carried by the output shaft in opposing relation to the impeller for cooperating therewith in defining a first toroidal work chamber with a first radial gap between said impeller and runner defining said first work chamber; means for continuously supplying fluid to said first work chamber; a first casing element connected with said first impeller and surrounding the first runner to define a first chamber for receiving fluid from the first work chamber; open fluid communication between the outer portion of said first radial gap and said first chamber; a tubular conduit surrounding a portion of the output shaft and connected with said first casing element to receive fluid therefrom; second bearing means between said tubular conduit and said output shaft; a second impeller connected with said tubular conduit; a second runner connected with the output shaft in opposing relation to the second impeller for coperating therewith in defining a second toroidal work chamber with a second radial gap between said second impeller and said second runner defining said second work chamber; a second casing element connected with said output shaft and surrounding the second impeller to define a second chamber for conveying fluid from said tubular conduit around an outer surface of said second impeller into the second work chamber; open fluid communication between the outer portion of said second radial gap and said second chamber; fluid passage means between said tubular conduit and said second casing element; and an overflow exhaust passage from said second work chamber.

3,045,433
CONTROL VALVE SYSTEM FOR PNEUMATIC-HYDRAULIC TOOLS
Clarence E. Webber, York, Pa., and Willard G. Triest, Annapolis, Md., assignors to Triest Manufacturing Works, Inc., Annapolis, Md., a corporation of Maryland
Filed Apr. 15, 1960, Ser. No. 22,462
9 Claims. (Cl. 60—54.5)



1. In combination with a pneumatic-hydraulic actuator assembly for actuating a tool having a pneumatic cylinder arrangement, a master hydraulic cylinder arrangement, and a slave cylinder arrangement, each said cylinder arrangements being provided with a cylinder and a piston, a piston rod integrally connecting together the pistons of said pneumatic and master cylinder arrangements, said slave cylinder arrangement being provided with a piston rod connecting the piston of said slave cylinder arrangement with said tool to be extended and retracted, the chamber of the master cylinder on the piston rod side of said master cylinder arrangement having a hydraulic medium therein, the chamber of said master cylinder arrangement being arranged to communicate hydraulically with the chamber of the slave cylinder arrangement located on the opposite side of the piston rod of said slave cylinder arrangement, and a finger triggered, self-neutralizing pneumatically shifted directional control valve means connected to the chamber of said pneumatic cylinder arrangement and to the piston rod side of said slave cylinder arrangement for selectively introducing a pressurized medium into the chamber of said pneumatic cylinder arrangement as well as to the piston rod side of said slave cylinder arrangement to extend said tool as well as to retract said tool, respectively.

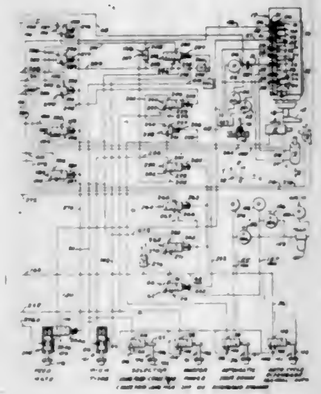
3,045,434
DEVICE FOR UTILIZING A DIESEL ENGINE AS A VACUUM GENERATOR
Lucien Péras, 8/10 Ave. Emile Zola, Billancourt, France
Filed Mar. 17, 1959, Ser. No. 799,919
Claims priority, application France Mar. 18, 1958
4 Claims. (Cl. 60—60)



1. In combination with a diesel engine having an air intake tube leading to an intake manifold and an accelerator control member; a device for obtaining and storing vacuum comprising a shutter operatively mounted in the air intake tube, a vacuum tank, conduit means connecting said tank with the intake tube downstream of said shutter, a non-return valve in said conduit means, means operatively connected to said shutter for actuating the shutter, control means for said actuating means, said control means including means responsive to the position of

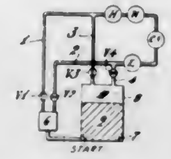
the accelerator control member and means responsive to the speed of the engine, said control means being provided to cause the shutter to be in a closed position when the accelerator control member is in a rest position and that, simultaneously, the engine turns at a speed at least equal to a given speed slightly higher than the idling speed.

3,045,435
MACHINE TOOL CONTROL
Paul J. Weaver, Downey, Calif., assignor, by mesne assignments, to Banstrom Industries, Inc., Los Angeles, Calif., a corporation of Connecticut
Filed Dec. 15, 1958, Ser. No. 780,434
13 Claims. (Cl. 60—97)



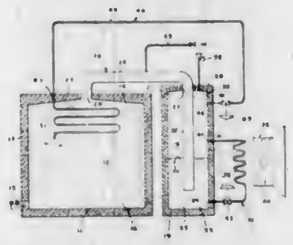
1. A control for controlling application of power from a power source for reciprocably moving a machine tool member in both directions along an axis by exerting control over power applied from said power source to a reversible motor engaged to the member, the control selecting the direction the member moves, said control comprising: an exhaust conduit; a first and a second valve each having a pair of ports, a first port of each of said first and second valves adapted to be connected to said power source, the second port of the first valve being connected to the motor for passing power to said motor to operate it in one direction, and the second port of the second valve adapted to be connected to the motor for passing power thereto to operate it in the other direction; a third and fourth off-on valve each having a pair of ports adapted to be connected to the motor, a first port of the third valve adapted to be connected to the motor to operate it in the same direction as the first valve and a first port of the fourth valve being adapted to be connected to the motor for passing power to said motor to operate it in the same direction as the second valve, the second ports of the third and fourth valves adapted to be connected to said exhaust conduit; and direction control means for simultaneously and selectively closing the first and fourth valves against flow between their ports while opening the second and third valves for flow between their ports, and for closing the second and third valves against flow between their ports while opening the first and fourth valves to permit flow between their ports in order to provide connections for power and exhaust for the motor to select its direction of operation, the said direction control means comprising an individual actuator for each of said off-on valves, each of said actuators being adapted to open and close the off-on valves in accordance with a signal supplied thereto; and a pair of signal sources, a first of which is connected to the actuators of the first and fourth valves and the other of which is connected to the actuators of the second and third valves.

3,045,436
PNEUMATIC EXPANSION METHOD AND APPARATUS
William E. Gifford and Howard O. McMahon, Lexington, Mass., assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 28, 1959, Ser. No. 862,199
32 Claims. (Cl. 62—6)



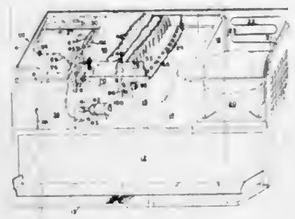
1. A fluid refrigeration method which comprises continuously compressing quantities of fluid, cooling and beginning supply of a first quantity of compressed fluid to an expansible chamber while applying a second quantity of compressed fluid externally of the chamber to hold the chamber under pressure and substantially exhausted of fluid to allow the chamber to expand and admit said first quantity of fluid without substantial change in pressure, and discontinuing the supply of the first quantity of fluid while continuing release of said second quantity of fluid, thereby to permit the chamber and fluid therein to expand and cool the fluid.

3,045,437
VESSEL FOR SUBCOOLED LIQUID
David Aronson, Upper Montclair, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed July 14, 1960, Ser. No. 42,942
10 Claims. (Cl. 62—54)



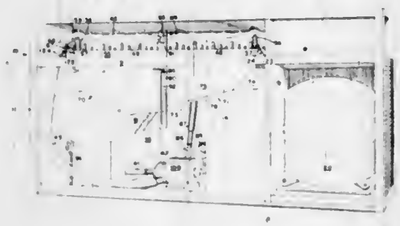
1. The means for transporting substances in their subcooled liquid state comprising:
(*a*) a closed vessel defining a reservoir for the liquid,
(*b*) an expansion tank having an upper portion and a lower portion,
(*c*) means connected to said reservoir for commmunicating the liquid in said reservoir with said lower portion of said expansion tank whereby liquid from said reservoir is deposited in said lower portion,
(*d*) gasifying means operatively associated between said lower portion of said expansion tank and said upper portion of said expansion tank to generate the gas phase from the liquid in said lower portion and discharge said gas phase in said upper portion whereby a gas phase cushion will be formed in said upper portion,
(*e*) return means communicating said upper portion of said expansion tank with said reservoir and adapted to return a portion of said gas phase to said reservoir on the pressure of said gas phase exceeding a predetermined value.

3,045,438
ICE MAKING
Theodore G. Foster, North Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,585
3 Claims. (Cl. 62—65)



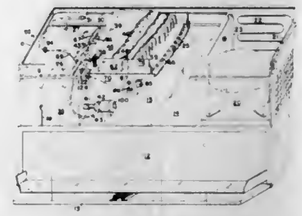
2. In a method of refrigerating an ice forming element having a supply sump for liquid to be frozen, the steps which consist in evaporating liquid refrigerant in heat exchange relation with the ice forming element, passing liquid refrigerant remaining after its passage through the ice forming element through a secondary evaporator in the sump in contact with liquid to be frozen in the sump thereby forming ice on the secondary evaporator and providing a uniform refrigerating effect throughout the ice forming element, discontinuing passage of liquid refrigerant to the ice forming element and the secondary evaporator, passing gaseous refrigerant through the ice forming element and the secondary evaporator to free ice therefrom, and employing the ice freed from the secondary means remaining in the sump to cool incoming warm liquid to be frozen.

3,045,439
GRID AND PLATEN ICE MAKING
Carl G. Alt, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,718
5 Claims. (Cl. 62—66)



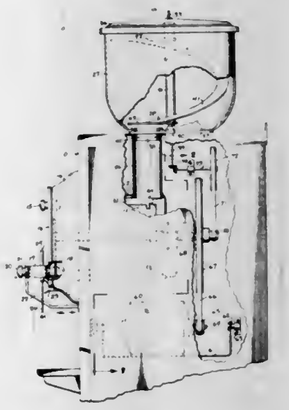
1. In an ice making machine having a grid containing a plurality of cells open on the bottom thereof within which liquid may be confined in a volumetric configuration of the shape of the ice to be formed, a movable platen beneath the grid adapted to close the bottoms of the cells of the grid to confine liquid within the cells, a sump containing liquid to be frozen, supply means directing liquid to be frozen to the cells from the sump, means for returning excess unfrozen liquid from the grid to the sump connected to said platen, said returning means comprising: means directing the excess liquid to a lowermost collection point; retaining means maintaining the excess liquid at the collection point; and discharge means leading the collected liquid from the collection point to the sump for returning the collected liquid to the sump regardless of the position of the movable platen.

3,045,440
ICE MAKING
William L. McGrath and Carl G. Alt, Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,720
6 Claims. (Cl. 62—68)



1. A method of freeing liquid to be frozen of impurities when said liquid is supplied to the cells of a grid of an ice making machine, said method comprising the steps of: closing the bottom of the cells; distributing liquid to be frozen into an opening in the tops of the cells; closing off a part of the opening of the grid cells with a heat insulating member; and distributing liquid to be frozen to the cells in excess of the volumetric capacity of the cells through the partly closed off opening with a backflow against the heat insulating member, whereby the liquid will be agitated.

3,045,441
PROCESS AND APPARATUS FOR MAKING AND DISPENSING PARTIALLY CONGEALED PRODUCTS
Robert S. Patch, Bainbridge Island, and Harvey F. Swenson, Seattle, Wash., assignors to Sweden Freezer Manufacturing Co., Seattle, Wash., a corporation of Washington
Filed Nov. 14, 1960, Ser. No. 68,936
21 Claims. (Cl. 62—68)



1. In a dispensing freezer, a freezing chamber having a gate-controlled outlet for discharging frozen product, a non-freezing liquid supply chamber above said freezing chamber and continuously communicating therewith through an interchange tube smaller in cross-section than said chambers, frozen product in said freezing cylinder being free to float upwardly into said supply chamber, and rotary means in said chambers for circulating frozen product back and forth between said chambers and toward said outlet.

3,045,442
ICE MAKING
Raymond F. Durham, Liverpool, and John M. Koepcke, North Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,619
7 Claims. (Cl. 62—71)



1. Ice forming means comprising: open-bottom confining means defining the volumetric configuration of that of the ice to be formed; closure means beneath and movably mounted with respect to said confining means serving to retain a liquid to be frozen in said confining means; heat exchanger means in said closure means through which a heat absorbing refrigerant may be circulated and through which a hot gaseous refrigerant may be circulated; supply means adjacent said confining means for directing a liquid to be frozen into said confining means; and liquid collection means arranged to receive any excess liquid from said confining means and return same to said supply means, said liquid collection means being secured to said closure means, whereby the liquid to be frozen may be confined and frozen into ice of desired configuration and then released from the confining means when hot gaseous refrigerant is circulated through the heat exchanger means.

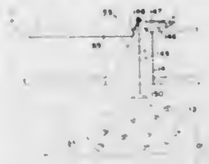
3,045,443
ICE MAKING
William L. McGrath and David E. MacLeod, Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,941
11 Claims. (Cl. 62—71)



1. In an ice making machine, the combination of a grid containing a plurality of cells enclosing a volume having a configuration like that of the ice to be formed, within which liquid to be frozen may be retained to form ice of desired shape and means for distributing liquid to be frozen to the cells of the grid, said distributing means comprising channel means along which the liquid to be frozen may be directed to a distribution point adjacent the cells of the grid and ejection means at the distribution points to which said channel means direct the liquid for ejecting the liquid from said channel means into the tops of the grid cells, said ejection means movable into the grid cells to eject formed ice therefrom.

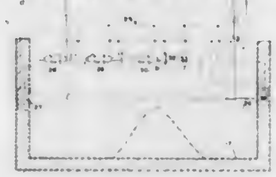
3,045,444
ICE MAKING
Richard F. Todd, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,690
7 Claims. (Cl. 62—137)

1. In an ice making apparatus, the combination of a grid containing cells within which liquid to be frozen is confined; a platen positioned adjacent the grid to retain the liquid to be frozen in the grid cells, said platen being movable from a liquid retaining position adjacent the grid to a position remote from the grid permitting harvesting of the formed ice; an ice storage bunker for maintaining a supply of the formed ice; and an apparatus control comprising: a switch member arranged in the electrical circuit energizing the apparatus; a switch arm normally biased to cause said switch to assume an apparatus de-energizing position; a flexible connector secured to said platen and engaging said arm; and a dependent probing weight secured to said flexible connector to bias same



along with said switch arm to cause said switch to assume an apparatus energizing position, said probing weight positioned in the storage bunker over the ice maintained therein, whereby upon movement of said platen away from said grid, the probing weight will be raised from the surface of the ice accumulated in the bunker and will exert a force on said flexible connector to maintain said switch in an apparatus energizing condition and upon movement of said probing weight by the ice beyond a given datum, said switch will assume its normal apparatus de-energizing position.

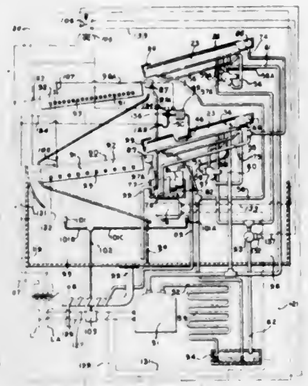
3,045,445
ICE MAKING
David E. MacLeod, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Dec. 19, 1960, Ser. No. 76,950
5 Claims. (Cl. 62—137)



1. In an ice making apparatus, the combination of means for forming ice, means for harvesting the formed ice, a storage bin placed below the ice forming means for collecting the harvested ice, and means responsive to the collection of a predetermined supply of ice in the storage bin for discontinuing operation of the apparatus, said discontinuing means comprising energy emitting means arranged in the storage bin to pass a beam of energy in a path above the point of maximum desired ice accumulation in said storage bin, energy sensitive means arranged in the storage bin, and time delay means coupled to said energy sensitive means to delay the response thereof to the interruption of the energy beam emitted by said energy emitting means, whereby upon interruption of the energy beam emitted by said energy emitting means by the harvested ice, said energy sensitive means will be actuated to discontinue operation of the apparatus.

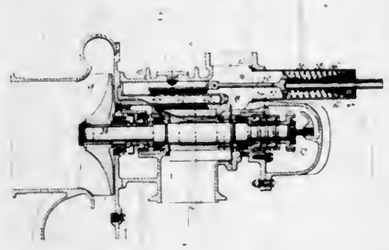
3,045,446
REFRIGERATING APPARATUS
Wendell M. Thomas, Clayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 54,957
3 Claims. (Cl. 62—138)

1. An ice making apparatus for cyclically freezing water into ice and releasing the ice comprising in combination, a freezing plate, means for circulating a film of water across said plate, means for refrigerating said plate to freeze water circulated thereacross into a layer of ice thereon, means for heating said plate to loosen the layer of ice therefrom whereby the ice gravitationally slides off the plate in the form of a slab, a thermal element associated with said freezing plate and adapted to be directly contacted by the thickness of a layer of



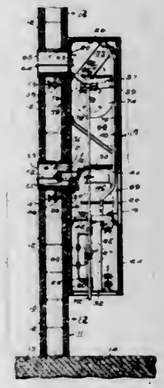
ice formed thereon, a switch operable by said element controlling said apparatus for initiating alternate ice freezing and ice releasing cycles thereof, and means actuated in response to a predetermined position of movement of a loosened ice slab with respect to said plate for overriding said switch for initiating ice freezing even though said switch momentarily remains in an ice releasing cycle position.

3,045,447
ROTARY DEVICE, SUCH AS REFRIGERATING MACHINE OR SIMILAR DEVICE
Hans Borje Wagenius, Stockholm, Sweden, assignor to Svenska Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed Feb. 25, 1959, Ser. No. 795,530
Claims priority, application Sweden Feb. 27, 1958
5 Claims. (Cl. 62—172)



1. In a rotary screw type pump having a casing structure providing intersecting cylindrical bores having parallel axes and high pressure and low pressure openings communicating with said bores and having a pair of helically ribbed rotors disposed in said bores to rotate in intermeshed relation in said bores and to co-operate with each other and with the walls of said bores in a manner to sealingly separate the high pressure and low pressure openings to form variable volume chambers defined by the walls of said bores and the surfaces of said rotors, said chambers being in communication alternately with the high pressure opening and with the low pressure opening as the rotors rotate, the improvement comprising a sliding member disposed in said casing, said sliding member forming a portion of the inner walls of said bores adjacent one of said openings and defining in part the size of said opening, means for adjusting said member in one direction to reduce the area of the bore walls in contact with the rotors to increase the size of said opening adjacent said member and for adjusting said member in the opposite direction to increase the area of the bore walls in contact with the rotors to reduce the size of said opening adjacent said member, said means for adjusting the sliding member includes means responsive to changes in pressure at the opening adjacent the sliding member.

3,045,448
AIR CONDITIONING UNITS
Rodney F. Lauer, Staunton, Va., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 25, 1960, Ser. No. 71,809
9 Claims. (Cl. 62—263)

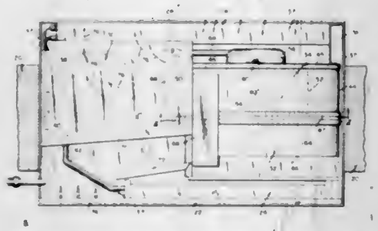


1. In combination with a building having an interior space and having an outer wall bounding one side of said space, said wall consisting of superimposed, hollow building blocks, two, spaced-apart, vertically-aligned ones of said blocks being omitted to leave upper and lower openings in said building wall, an air conditioning unit having a back wall at the outer surface of said building wall, said back wall having an air outlet opening aligned with said upper opening and having a recirculated air inlet opening aligned with said lower opening, means extending horizontally from said unit into said upper and lower openings and downwardly from said last mentioned means into the interiors of the adjacent ones of said blocks below said openings for supporting said unit from said last mentioned blocks, upper and lower ducts within said upper and lower openings respectively, above said horizontal extending means, connecting said space with said outlet and inlet openings respectively, and means within said unit for conditioning air and for supplying the conditioned air through said outlet opening and said upper duct into said space and for drawing air from said space through said lower duct and said inlet opening into said unit.

3,045,449
AIR CONDITIONER CONDENSATE DISPOSAL SYSTEM
Harold Durdle, Greenville, Mich., assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Mar. 24, 1961, Ser. No. 98,079
4 Claims. (Cl. 62—279)

4. An air conditioner assembly comprising a rectangular base pan, an evaporator extending along one edge of said base pan, a condenser extending along the opposite edge of said pan, first and second blowers having con-

volute housings mounted in side-by-side relation between said evaporator and said condenser, a blower motor mounted on one of said housings, blower wheels positioned in the respective blower housings, means drivingly connecting said motor with each of said blower wheels, said first blower being arranged to draw air over said evaporator and said second blower housing having a side air inlet opening positioned opposite a portion of said condenser whereby said second blower is arranged to draw air inwardly over said portion of said condenser and having an essentially horizontal air outlet opening, means for



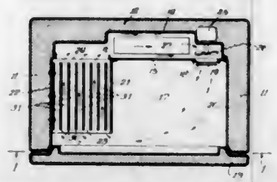
directing the air delivered by said second blower in an essentially horizontal path over another portion of said condenser, means defining an opening in the housing of said second blower to permit condensate accumulated in said base pan to flow into said housing, an upwardly open trough extending across the outlet of said second blower housing into which said condensate is moved by the air passing through said second blower housing, and conduit means conducting said condensate from said trough into the air stream issuing from said second blower housing in a region below the blower wheel therein for entrainment in said air stream.

3,045,450
AIR TREATING AND COOLING DEVICE
Edward F. Chandler, 148 Richmond St., Brooklyn 8, N.Y.
Filed Mar. 30, 1960, Ser. No. 18,577
8 Claims. (Cl. 62—311)



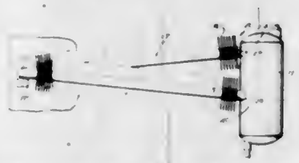
1. An air treating and cooling device comprising a main housing defining a chamber, with air inlet and outlet means communicating with said chamber, air impelling means for drawing air into said chamber and discharging the same therefrom through said air outlet means, air evaporator unit means disposed in said chamber with at least a portion of said air evaporator unit in the path of flow of said air through said chamber, said evaporator means comprising trough means for containing a quantity of water or the like, fibrous wick means partially immersed in said water and extending upwardly out of said water for providing a continuously moist surface over which said air passes, condensing plate means disposed adjacent said wick means and forming a plurality of lamination passages therebetween for the said air to flow therethrough, said condensing plate means extending beyond said wick means in a direction toward said air impelling means, whereby air is cooled in passing through said lamination passages in evaporation, and any moisture entraining in said air is condensed in droplets onto said plate means in said extended portion for return to said trough means, whereby said air is cooled and conditioned prior to discharge from said chamber.

3,045,451
REFRIGERATING APPARATUS
Ralph D. Barton, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Sept. 21, 1959, Ser. No. 841,103
3 Claims. (Cl. 62—407)



1. Refrigerating apparatus having a closed refrigerated air circuit, comprising: means forming an air passage having an entrance and an exit; means for cooling an air stream in said passage to a subfreezing temperature; means forming a chamber, having an entrance and an exit, for storage of frozen articles; means for directing said subfreezing air stream from said passage exit, through said chamber entrance, through said chamber and through said chamber exit into said passage entrance; a support member at said chamber exit and said passage entrance, said support member including a freezing section for supporting a freezable material; means forming a fluid passage in said support member in heat transfer relationship with said freezing section; means for directing substantially all said subfreezing air stream from said chamber and through said support member fluid passage means on the way to said air passage entrance to complete said refrigerated air circuit, said circuit thereby including said air passage, said chamber and said support member fluid passage; and means for circulating air through said circuit.

3,045,452
ABSORBER ASSEMBLY
Bolyn H. Conaway, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,828
4 Claims. (Cl. 62—491)

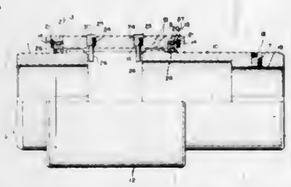


1. A conduit for use in a refrigeration system, comprising: a tube having an inner wall surface provided with first, capillary groove means extending substantially transversely to the axis of the tube over a major area of said wall surface, and a second, helical groove concentric of the tube axis and intersecting said capillary groove means, said second groove having a cross section substantially larger than that of the capillary groove means, said capillary groove means being helical and of substantially smaller pitch than said second groove.

3,045,453
GEAR COUPLING WITH COMBINATION LUBRICANT PLUG AND STOPS FOR LIMITING END MOVEMENT OF HUBS
Robert H. Shenk and Lee E. Shaw, Erie, Pa., assignors to Zurn Jndustries, Inc., Erie, Pa., a corporation of Pennsylvania
Filed May 2, 1960, Ser. No. 26,246
3 Claims. (Cl. 64—9)

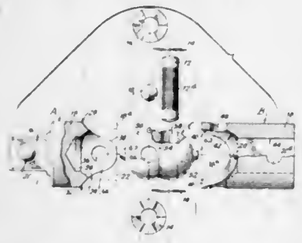
1. A flexible shaft coupling of the self-aligning gear type comprising a pair of complementary shaft end hubs each having a collar with gear teeth on the adjacent ends

of said hubs, a one piece cylindrical sleeve having internal gear teeth extending lengthwise over and in engagement with the gear teeth on both said hubs, said sleeve having sealing ring annular channels in the ends thereof of a greater diameter than the internal gear teeth therein and extending outwardly to the ends of said sleeve, permitting said sleeve to slide longitudinally onto or from the gear teeth on said hubs in either direction, a sealing packing ring in each of said sleeve channels, each said sealing packing ring comprising a rigid ring H-shaped in cross section engaging the corresponding hub



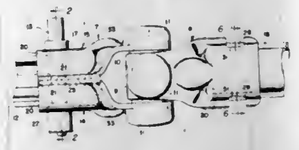
adjacent to the gear teeth on the hub, said H-shaped rings defining an inner and an outer groove, said inner and said outer grooves each having an O-shaped washer therein, said rings providing a fluid seal for the members of said coupling for maintaining a lubricant in said sleeve, said sleeve having a sealing ring groove in each of said channels beyond said packing rings, a spring retaining ring in each of said grooves engaging each said H-shaped ring for holding said packing rings in place and maintaining said coupling assembled, and stop means on said sleeve between said hubs limiting the movement of said hubs toward each other.

3,045,454
UNIVERSAL JOINT
Theodore Otto Rueb, Chicago, Ill., assignor to The Sherman Klove Company, Chicago, Ill., a corporation of Maryland
Filed Nov. 7, 1960, Ser. No. 67,646
4 Claims. (Cl. 64—17)



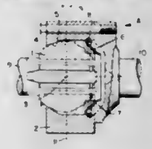
1. In a universal joint, a shank member having a ball receiving socket in one end thereof, a second shank member having a ball receiving socket in one end thereof and each member having opposite ears which are perforated for pivot pins, a connecting member having overlapping spherical portions received in said sockets, said spherical portions of said connecting member being provided with pivot bores at right angles to each other, pivot pins through said ears and said spherical portions, and corrugated spring washers between said ears and said spherical portions and surrounding said pivot pins, the outer ends of said connecting member having stop projections, and said shank and socket members having reduced bores at the bottoms of said ball receiving sockets for said stop projections to coact with before the ears of one of said members strikes the cutaway sides of the other member.

3,045,455
UNIVERSAL JOINT FOR SHAFTS
Fred M. Potgieter, Rockford, Ill., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 16, 1961, Ser. No. 82,842
6 Claims. (Cl. 64—17)



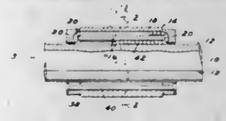
2. A universal joint for coupling the adjacent ends of two power shafts including a pair of yokes and a center cross having four pintles, each yoke having a hub for attachment to or securement over or within the corresponding end of one of said shafts and comprising two symmetrical stamped elements including: semi-cylindrical portions together forming the hub of the yoke, bearing cups fitting over opposite pintles, and parallel arms joining the respective cups and hub-portions, said hub portions having adjoining marginal flanges with welds joining the same and said hub portions and arms having centrally formed oppositely projecting embossments extending from the hub portions intermediate the marginal flanges thereof and to the cups of the respective arms whereby the arms are effectively reinforced against both the primary and secondary forces acting upon the joint at all operating angles.

3,045,456
HOMOKINETIC UNIVERSAL JOINT
Andrea Bellomo, Turin, Italy
Filed Mar. 30, 1960, Ser. No. 18,527
11 Claims. (Cl. 64—21)



1. A homokinetic universal joint, comprising an inner race, an outer race and a plurality of driving balls, each of which is engaged and guided, without the aid of cages or similar means, by two crossed grooves, one groove on the inner race and another groove on the outer race, characterized in that one end of the outer race comprises a contracted area of the inner surface in which there is provided a spherical rim to retain the inner race in an axial direction, and the other end of the outer race is provided with a spherical cup which reduces the opening of the outer race in order to retain the inner race in the opposite axial direction.

3,045,457
BALL SPLINE ASSEMBLY
Roy L. Blanchard, Birmingham, and Floyd E. Miller, Hazel Park, Mich., assignors to Beaver Precision Products, Inc., Clawson, Mich., a corporation of Michigan
Filed Jan. 20, 1960, Ser. No. 3,616
19 Claims. (Cl. 64—23.7)



1. A ball spline assembly comprising a shaft having a plurality of longitudinally extending spline grooves

thereon, a generally cylindrical inner sleeve surrounding said shaft and having a plurality of internal spline grooves registering with the spline grooves on the shaft, the registering grooves forming ball spline passageways, an outer sleeve surrounding the inner sleeve and having a plurality of channels extending longitudinally on the inner surface thereof and cooperating with the outer surface of the inner sleeve to form ball return passageways, means at opposite ends of said sleeves closing the opposite ends of said channels and providing a plurality of ball grooves connecting the ends of each channel with an adjacent end of said ball spline passageways, a plurality of balls in said spline grooves and channels, said inner sleeve having a plurality of axially extending external grooves and said outer sleeve having a plurality of internal grooves registering with the external grooves on the inner sleeve and means in said last mentioned registering grooves securing said inner and outer sleeves together.

3,045,458
DISTRIBUTOR
Edgar C. Campbell, Berkley, and Fred F. Timpner, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 25,076
13 Claims. (Cl. 64—25)



8. A distributor comprising, a base member, a shaft journalled for rotation with respect to said base member, a cam plate assembly rotatable with respect to said shaft and including a cam member encircling said shaft and a cam plate member, a pair of weight members pivotally supported by said cam plate member, an advance plate member secured to said shaft and rotatable therewith, said advance plate member and said weight members cooperating to angularly adjust said cam member relative to said shaft in accordance with the speed of rotation of said shaft, a spider member secured to said shaft and rotatable therewith, a plurality of depending pins carried by said spider member, a link member pivotally connected to each of the pins carried by said spider member, an inertia ring, and pin and slot connections connecting said cam plate member and said inertia ring with said links.

3,045,459
FIBER CONTROL FOR PILE FABRIC KNITTING MACHINES
John H. Hill, Wayne, Pa., assignor to Wildman Jacquard Co., Norristown, Pa., a corporation of Pennsylvania
Filed Dec. 20, 1960, Ser. No. 77,081
2 Claims. (Cl. 66—94)

1. In a knitting machine of the rotating cylinder type having in combination knitting instrumentalities for drawing yarn into loops to form a base fabric, fiber carding and doffer means for parallelizing and delivering to the hooks of the knitting instrumentalities tufts of fibers for forming a high pile fabric, the improvement which comprises a rotary fiber controlling disc, said disc being mounted in overlying relation with the hooks of said instrumentalities and in close relationship thereto, said disc further being adapted to be driven from said cylinder in



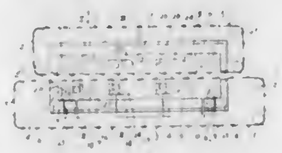
a manner so as to impart a greater peripheral speed to said disc than that of said cylinder.

3,045,460
PHOTOFLASH LAMP
David Y. Brouse and Eugene W. Desaulniers, Jr., Williamsport, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 25,055
6 Claims. (Cl. 67—31)



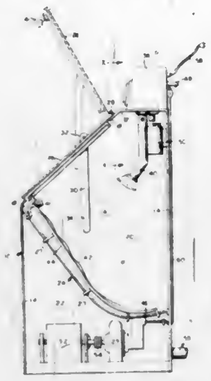
1. A photoflash lamp comprising: a sealed light-transmitting envelope; a quantity of filamentary zirconium in said envelope; ignition means disposed in said envelope in operative relationship with respect to said filamentary zirconium; and a gas filling in said envelope at a pressure above atmospheric, said gas filling comprising oxygen and about 1% to about 10% by volume of nitrogen.

3,045,461
APPARATUS FOR ACETYLATING CELLULOSE FIBERS IN GASEOUS PHASE
Shigeru Saito, Itano-gun, Tokushima Prefecture, Japan, assignor to Toho Rayon Kabushiki Kaisha, Tokyo, Japan
Filed July 1, 1960, Ser. No. 40,286
Claims priority, application Japan Feb. 24, 1960
4 Claims. (Cl. 68—5)



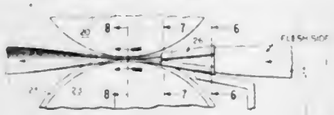
1. Apparatus for acetylating cellulose fibers in gaseous phase comprising a first wire screen endless belt and a second wire screen endless belt spaced below and adjacent said first endless belt, each endless belt being provided with a plurality of stays on the outer surface thereof, the upper belt stays being arranged alternately with the lower belt stays, said endless belts being adapted to carry cellulose fibers, means forming a reaction vessel having an inlet and an outlet through which the endless belts pass, said reaction vessel having a moisture preventing zone and a reaction chamber, dehumidified gas supply means operatively connected to said moisture preventing zone, acetic vapor supply means operatively connected to said reaction chamber whereby dehumidified gas supplied to said moisture preventing zone provides a seal preventing moisture laden atmospheric air from entering the reaction vessel and acetic vapor supplied to said reaction chamber effects acetylation of cellulose fibers held between the endless belts passing through the reaction vessel.

3,045,462
AUTOMATIC DIAPER WASHER
Ann M. Brown, Fort Huachuca, Ariz. (Star Rte. Box 23, Roanoke-Rapids, N.C.)
Filed Jan. 9, 1961, Ser. No. 81,446
14 Claims. (Cl. 68—12)



1. In an apparatus for treating fabric material including a spray chamber having an access opening and fabric supporting means within the chamber the combination of a closure for said access opening and means carried by said closure engageable with said supported fabric in closed closure position to prevent displacement thereof during treatment and providing in opened closure position a rack support upon which the fabric may be draped for drying.

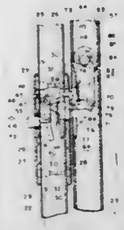
3,045,463
PROCESS OF IMPROVING AND PREFORMING BINDING
John D. Hopkins, Bridgewater, Mass., assignor to C. L. Alger & Co., Inc., Brockton, Mass., a corporation of Massachusetts
Filed Apr. 27, 1961, Ser. No. 106,043
5 Claims. (Cl. 69—21)



1. The process of preforming and improving leather binding strip, comprising the steps of folding the strip to present overlapping marginal portions, and subjecting the overlapped portions to progressive rolling pressure while confining the fold vertex of the strip within a passage of greater dimensions than the combined thickness of said overlapped portions.

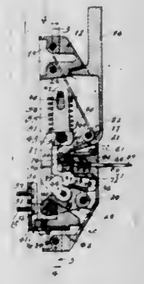
3,045,464
SWING DOOR LATCH-LOCK MECHANISM
Paul A. Braginetz, Camp Hill, Pa., assignor to Capitol Products Corporation, Mechanicsburg, Pa., a corporation of Pennsylvania
Filed Nov. 2, 1959, Ser. No. 850,280
4 Claims. (Cl. 70—144)

1. A latch mechanism for overlapping stiles of a swing panel member and a fixed member comprising, a latch member pivotally mounted in said swing member stile and projecting therefrom to said fixed member stile, a keeper member pivotally mounted in said fixed member stile and projecting therefrom to said swing member stile, each said latch and keeper members being pivotally movable into and out of latched position one with respect to the other, biasing means associated with said latch member and biasing means associated with said keeper member, each biasing means normally biasing its associated member in latched position, finger pressure responsive means on the inside and on the outside of said swing panel member, each operatively connected with said latch member for pivotally moving the same to unlatched position against the tension of said latch biasing means, means accessible only from the inside of said swing panel member operatively



associated with said latch member for rendering said outside finger pressure responsive means ineffective to move said latch member to unlatched position, and a key operated means carried by said fixed member stile operatively connected with said keeper member for pivotally moving the same to unlatched position against the tension of said keeper biasing means.

3,045,465
REFRIGERATOR LATCH
Robert S. Larson, Loves Park, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Aug. 10, 1960, Ser. No. 48,726
3 Claims. (Cl. 70—153)



1. A latch mechanism of the type disclosed having a keeper, comprising a latch housing, a pivoted latch bolt in said housing and adapted to engage said keeper, said latch bolt including spaced sides connected by an intermediate wall portion, keeper engaging means secured between said spaced sides adjacent one end of the bolt, means adjacent the opposite end of the bolt pivotally mounting said bolt in the latch housing, a vertically reciprocable plate in said housing and pivotally mounted at one end to the latch bolt intermediate the ends thereof, said plate having a recessed portion adjacent said pivotal mounting forming a shoulder, an elongated slot remote from said pivotal mounting and an opening intermediate its length, a pin projecting through said intermediate opening with each end carrying a roller, an operating handle having one end abutting said rollers for lifting and reciprocating said plate, a mounting pin projecting through said slot and secured to said housing, spring means biasing the plate and latch bolt into their latched position, and a rotatable tumbler lock having a cylindrical plug movable between a locked and an unlocked position, said plug having a part on its inner end projecting into the recessed portion of said plate and having a slot movable to a position aligned with and receiving said shoulder on the reciprocable plate to release the handle, plate and latch bolt for unlatching, and when

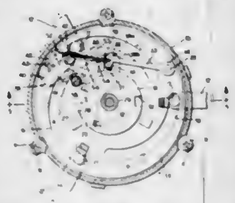
the slot in said part is moved out of alignment with said shoulder, said plug prevents unlatching movement of said plate.

3,045,466
MANIPULATION RESISTIVE COMBINATION LOCK
Robert P. Herlong, Canton, Ohio, assignor to Diebold, Incorporated, Canton, Ohio, a corporation of Ohio
Filed Feb. 8, 1960, Ser. No. 7,400
8 Claims. (Cl. 70—303)



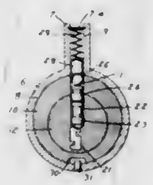
1. In a combination lock, a case, lock mechanism within the case comprising a reciprocable bolt, a fence, a series of rotatable tumblers having gates into which said fence enters upon alignment of said gates and said fence, a cam nub upon one of said tumblers, an operating lever pivoted at one end upon said bolt, said fence being fixed upon the other end of said operating lever, a trigger pivoted at one end to said case, a lever actuator pivoted at one end to said case, a bifurcation at the other end of said lever actuator, a stud upon said operating lever engaged by said bifurcation and providing a loose pivotal connection between said lever actuator and said operating lever, a spring connected to said other end of the lever actuator and to the other end of said trigger and normally located at one side of the pivotal center of the lever actuator for holding a portion of the trigger in the path of said cam nub and for normally swinging said lever actuator outward upon its pivot on the case and swinging said operating lever outward through said pivotal connection between the lever actuator and the operating lever for pressing said fence away from said tumblers, said cam nub being arranged to engage said trigger once during each revolution of said one tumbler for momentarily overcoming the spring means by further tensioning the spring and throwing it over the pivotal center of the lever actuator for momentarily swinging said lever actuator inward and thereby swinging the operating lever inward through said pivotal connection with the lever actuator for moving said fence toward said tumblers, said spring immediately swinging said lever actuator outward and swinging the operating lever outward through said pivotal connection for pressing said fence away from said tumblers when said trigger is released from said cam nub.

3,045,467
MANIPULATION RESISTIVE COMBINATION LOCK
Robert P. Herlong, Canton, Ohio, assignor to Diebold, Incorporated, Canton, Ohio, a corporation of Ohio
Filed Jan. 7, 1960, Ser. No. 1,027
12 Claims. (Cl. 70—322)



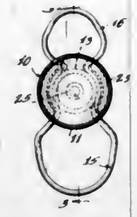
2. In a combination lock, a fence, a series of rotatable tumblers having gates into which said fence enters upon alignment of said gates and said fence, a projection upon one of said tumblers, an operating lever pivoted at one end, said fence being fixed upon the other end of said operating lever, there being a transverse slot in said other end of said operating lever, a lever actuator pivoted at one end, the other end of said lever actuator being pivoted in said slot in said other end of said operating lever, a trigger pivoted adjacent to said lever actuator and having a shoe thereon, a spring connected to said other end of the actuator lever and to said trigger for holding the shoe thereof in the path of said projection and for normally pressing said fence away from said tumblers, said projection being arranged to engage the shoe of said trigger once during each revolution of said one tumbler for momentarily moving said fence toward said tumblers, said spring immediately pressing said fence away from said tumblers when said trigger is released from said projection.

3,045,468
PICK RESISTANT LOCK CYLINDER
Nicholas A. Welch, West Hartford, Conn., and Charles Kenneth Roberts, East Canton, Ohio, assignors, by mesne assignments, to Charles K. Roberts, Baltimore, Md.
Filed Apr. 6, 1960, Ser. No. 20,443
3 Claims. (Cl. 70—421)



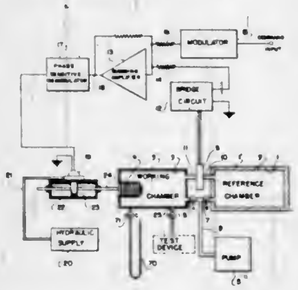
1. A pick resistant lock including a lock body having a bore, a tubular control sleeve rotatable in said bore, means limiting the rotation of said control sleeve in said bore, a key plug mounted to rotate in said control sleeve and having an axial keyway, said key plug, control sleeve and lock body having radial tumbler bores which are alignable and communicate with said keyway, a series of tumblers slidable in said tumbler bores including pin tumblers normally positioned to lock said key plug and said control sleeve together and being movable by a key inserted into said keyway to unlocking position to release said key plug for free rotation relatively to said control sleeve, tumbler control means normally occupying a position in the tumbler bore in said control sleeve radially outwardly of the pin tumblers in said series, said tumbler control means including at least one lens-shaped wafer having opposed spheroidal surfaces and in the normal locking position of said tumblers being disposed so that the upper segment of the upper spheroidal surface projects into the tumbler bore in said lock body in spaced relation to the edge portion thereof to permit rotation of said control sleeve when picking pressure is applied to said key plug in an attempt to pick said tumblers, the spheroidal surface of said tumbler control means being carried into engagement with said edge portion upon rotation of said control sleeve thereby preventing movement of said series of tumblers to unlocking position, said tumbler control means responsive to applied torque of said key plug producing a locking action and false indications removed from the operating shear line which serves to baffle and confound picking attempts.

3,045,469
KEY HOLDER
Roland R. Rentscher, 1661 Waukegan Road, Deerfield, Ill., and Robert C. M. Hume, 1920 Telegraph Road, Lake Forest, Ill.
Filed Aug. 18, 1958, Ser. No. 755,675
4 Claims. (Cl. 70—459)



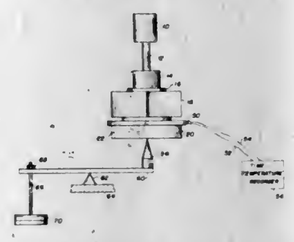
4. A key holder which includes a pair of key rings, a flat spool-like member, said pair of key rings being carried by said member, one of said rings including a resilient loop terminating in a pair of opposed concave jaws removably engaging the shank portion of said spool-like member and the other of said rings including a closed loop terminating in a pair of opposed concave jaws spreadable to engage the said shank.

3,045,470
PRESSURE CONTROLLER
Richard M. Crandell, Van Nuys, and Jess H. Hoffman, North Hollywood, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 8, 1957, Ser. No. 633,142
4 Claims. (Cl. 73—4)



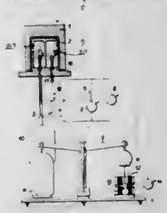
1. A pressure controller comprising, means forming a variable volume working chamber, said chamber having a compressible fluid stored therein, a secondary compressible fluid pressure source, a capacity type differential pressure transducer connecting with said working chamber and being responsive to the working chamber fluid pressure and to the secondary source of fluid pressure to establish a capacitance proportional to the difference between the fluid pressures, a bridge network including said transducer, a source of alternating current connecting with said bridge network to provide an alternating current output signal from said bridge network which is controlled by the capacitance of said transducer whereby the amplitude of the output signal represents the magnitude of the pressure difference, a command signal, a modulator responsive to said command signal and to said source of alternating current and providing an alternating current output signal the amplitude of which is proportional to the amplitude of the command signal and the phase of which is shifted substantially 180° with respect to the phase of the source of alternating current, a summing amplifier responsive to the output signals from both said bridge network and said modulator and providing an error signal representing the algebraic sum of the bridge network and modulator output signals, and servo-drive means engaging said working chamber and varying the volume thereof in response to said error signal for maintaining the ratio between the fluid pressure in the working chamber and the secondary source dependent upon the command signal.

3,045,471
METHOD AND APPARATUS FOR TESTING LUBRICANTS
Paul R. Chapman, John O. Schimmel, and Robert G. Moyer, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Aug. 28, 1958, Ser. No. 757,856
11 Claims. (Cl. 73—10)



1. The method of testing the extreme pressure characteristics of a lubricant which comprises bringing a measured quantity of a lubricant sample into contact with metal-to-metal rubbing surfaces under constant rubbing conditions, continuously increasing the load on said rubbing surfaces while measuring the temperature of the lubricant sample adjacent one of said rubbing surfaces as the lubricant sample is thrown therefrom by centrifugal force, continuously recording the load and temperature variations until a load limit of the rubbing surfaces is reached, the temperature reaches about 400° F. or the rubbing surfaces weld to each other.

3,045,472
APPARATUS FOR SIMULTANEOUSLY CARRYING OUT THERMOGRAVIMETRIC, DIFFERENTIAL-THERMAL AND DERIVATIVE-THERMO-GRAVIMETRIC ANALYSIS
Ferenc Paulik, 7 Liptak Lajos-utca, Budapest IV, Hungary; Jenő Paulik, 29 Deak Ferenc-utca, Budapest IV, Hungary; and László Erdey, 16 Toldi Ferenc-utca, Budapest I, Hungary
Filed Dec. 3, 1957, Ser. No. 700,442
2 Claims. (Cl. 73—15)



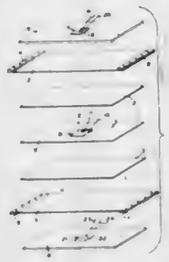
1. An apparatus for simultaneously carrying out thermogravimetric, differential-thermal and derivative-thermogravimetric analysis of substances comprising in combination a first crucible secured on one arm of a thermobalance by means of an electrically insulating carrier member to hold a sample of the test material for thermogravimetric and differential-thermal analysis, a stationary crucible independent of said first crucible to hold an inert comparison substance invariable during testing, both crucibles being accommodated in a heating furnace, two thermoelements having joints each in indirect heat-absorbing connection with the test material and the inert substance respectively, the joints of the thermoelements arranged in a recess of the crucible so that they measure the tem-

perature of the test material and the inert substance respectively through the wall of the crucibles, a temperature-measuring instrument connected to the thermoelement protruding into the test material, a second instrument to measure the difference between the temperatures of the test material and the inert substance, said second instrument connected to the thermoelements, and a device connected to the other arm of the thermobalance for derivative-thermogravimetric analysis comprising a magnet fixed to the other arm of the thermobalance, a winding arranged in the field of force of said magnet, and a meter for measuring the voltage induced in the winding.

3,045,473
APPARATUS FOR MEASURING THERMAL CONDUCTIVITY

Nathaniel E. Hager, Jr., Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Filed Mar. 26, 1959, Ser. No. 802,141
4 Claims. (Cl. 73—15)



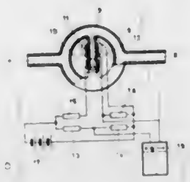
1. In an apparatus for measuring thermal conductivity utilizing the temperature drop across the thickness of a sample to be measured as a factor, the combination of electrical heater formed of a pair of superimposed stainless steel foils each having a maximum thickness of 3 mils, a maximum deviation from mean thickness of about 1%, and a maximum heat transmission in a direction parallel with the flat surfaces thereof from a central area thereof about 1" x 1" square of about 1% of the total heat generated in such area, pairs of superimposed conductor bars connected to opposite ends of said foils and electrically joining the same, a thermocouple element disposed between said foils in good thermal contact therewith adjacent to the center thereof, means electrically insulating said thermocouple element from said foils, and means for passing a constant electrical current through said heater at a measured rate to generate heat in said heater per unit area in said central area thereof which is essentially equal to the average heat per unit area generated in the heater as a whole.

3,045,474
GAS ANALYSER

Edgar Ebbinghaus, Marl, Kreis Recklinghausen, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany

Filed July 1, 1959, Ser. No. 824,435
3 Claims. (Cl. 73—27)

1. In a gas analysis cell, a line for carrying gas under test and provided with upper and lower branches for partial flow in each; a vertical tube in gaseous flow communication with the two branches; upper and lower heating coils on the tube and of temperature sensitive resistance wire; a bridge circuit including said coils as adjacent arms; means for feeding the bridge; and for measuring imbalance of the bridge; a magnet having opposed pole pieces with the upper portion of the tube between the latter for producing an inhomogeneous field in the tube, at least one of the pole pieces being provided with a bore axially substantially at right angles to the flux

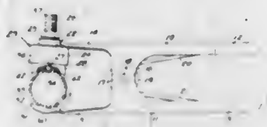


in the magnet; and a soft iron plug snugly fitting in the bore for reception in the bore at a variable depth to adjust the magnetic cross sectional area of the pole piece.

3,045,475
CHARGING AND PRESSURE TESTING CLAMP

George M. Pfundt, Bustleton Pike, Churchville, Pa.

Filed Feb. 26, 1959, Ser. No. 795,761
2 Claims. (Cl. 73—49.8)



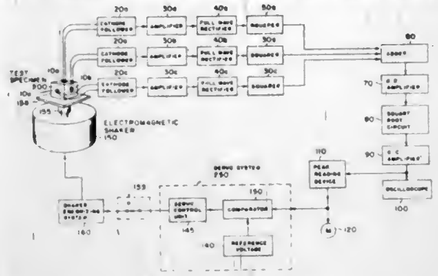
1. A spring clamp device of the character described comprising a pair of members having handle ends and jaw ends, means pivotally coupling said members intermediate said ends, said jaw ends adjacent and beyond the pivot means, in their entirety, being widely spaced, spring means for normally urging the jaw ends toward each other, one jaw end supporting on its inner surface an elongated saddle directly fixed to said jaw end, the other jaw end having an aperture, a gripper head comprising a cup-shaped casing and an integral internally threaded sleeve, said sleeve being arranged in the aperture of said jaw with said casing fixed to the inner surface thereof, a yieldable gasket mounted in said casing and projecting therefrom, the gasket having an aperture opening through upper and lower surfaces thereof, the lower surface of the gasket having downwardly flared sides, a valve coupled with said threaded sleeve and in communication with the aperture of said gasket, said head being adapted to support a tubular member in pressure engagement with the saddle of the opposed jaw with the aperture of said gasket in registering alinement with an aperture in the wall of said tubular member, and the elongated saddle extending well beyond side surfaces of said gripper head.

3,045,476
VIBRATION TESTING DEVICE

Raymond M. Bell, Sunnyvale, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Feb. 9, 1960, Ser. No. 7,970
6 Claims. (Cl. 73—71.6)

1. Vibration testing means comprising in combination: a shaker, means on said shaker to which a test specimen can be mounted for vibration, energizing means for said shaker, means operatively connected to said shaker for producing signals corresponding to the acceleration produced by said shaker in each of three mutually perpendicular directions, means to which said signals are fed for producing a resultant signal corresponding to the square root of the sum of the squares of each of said signals, and servo means to which said resultant signal is fed, said servo means adapted to cooperate with said energiza-



tion means to maintain said resultant signal at a predetermined value.

3,045,477
SOIL MOISTURE INDICATING GAGE

Randolph Matson, 1954 Camino Loma Verde, Vista, Calif.

Filed Mar. 2, 1961, Ser. No. 92,975
4 Claims. (Cl. 73—73)



1. In a soil moisture indicating gauge comprising a water supporting transparent open ended tube, a transparent indicating tube disposed co-axially of said water supporting tube, a flexible arcuate sheetlike scale disposed about the axis of said transparent indicating tube, and a bellows-like sack secured to and in communication with the lower end of said transparent indicating tube; the improvement, comprising a surplus water container having a lower open end engaging and secured to said outer tube adjacent to but below the upper end thereof, and a manually operable valve disposed within said surplus water container for discharge of water therefrom and into said outer tube, wherein said transparent indicating tube is disposed within said surplus water container, a threaded plug unitary with the upper end of said indicating tube and having threaded engagement with the inner wall of said surplus water container and the lower end of said indicating tube being provided with a valve cooperating with the water supporting transparent open ended tube.

3,045,478
HORSEPOWER MEASURING SYSTEM

Robert I. Dinlocker, Lansdale, Pa., assignor to Electro-Mechanical Instrument Co., Perkasie, Pa., a corporation of Pennsylvania

Filed Feb. 10, 1960, Ser. No. 7,840
3 Claims. (Cl. 73—136)

1. In a horsepower measuring system, a current generating transducer comprising a wheel coaxially mounted on the shaft of a prime mover for transmitting power to an apparatus or a machine to be driven, said wheel being connected to the shaft by a torsion spring means, a permanent disk magnet coaxially affixed to the shaft, a similar permanent disk magnet coaxially affixed to said wheel adjacent the first mentioned magnet with the poles thereof normally opposite corresponding poles of said first mentioned magnet, a pair of axially aligned serially connected stationary coils non-concentrically disposed in an

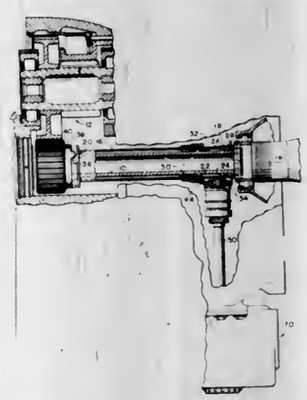


interval between the magnet, a core element in the form of a medially pivoted bar extending through the hollows of said coils means for adjusting said bar about its pivot, and an electrical measuring instrument in circuit with said coils operative, upon induction of current in the coils when the second mentioned magnet is turned relative to the first mentioned magnet by slight independent rotation of the wheel about the shaft against the force of the torsion spring means in response to load increase, to indicate such load in increments of horsepower.

3,045,479
TORQUE METER

Wolfgang J. Stein and Salvatore Straniti, Milford, Conn., assignors to Avco Manufacturing Corporation, Lycoming Division, Stratford, Conn., a corporation of Delaware

Filed Apr. 3, 1959, Ser. No. 803,929
3 Claims. (Cl. 73—136)



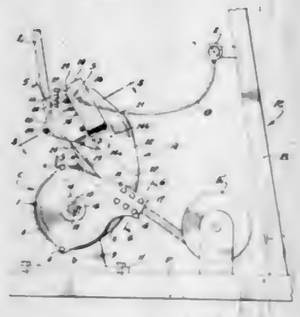
1. In a torque measuring mechanism of the character described employing torsional deflection of a torque transmitting member of a prime mover as a means of indicating torque, a reference member, a first section of said reference member secured to said torque transmitting member and rotating therewith, a second section of said reference member rotating with said first section but not connected to said torque transmitting member and thus not subject to torsional load of said torque transmitting member, said second section axially movable relative to said first section in a direction substantially parallel to the axis of rotation of said torque transmitting member, and resilient means for confining said movement, angular contacting means between said torque transmitting member and said second section of said reference member whereby the torsional deflection of said torque transmitting member is translated into axial movement of said

second section of said reference member, said angular contacting means responsive to and indicative of torsional deflection of said torque transmitting member but not carrying the torsion load of said member, and means to translate said axial movement from said second section of said rotating reference member to a position remote from said reference member.

3,045,480
LOAD-SENSING DEAD LINE ANCHOR

Elmer L. Decker and Robert C. McNeill, Long Beach, Calif., assignors to Martin-Decker Corporation, Long Beach, Calif., a corporation of Delaware

Filed Apr. 23, 1959, Ser. No. 808,463
14 Claims. (Cl. 73—144)

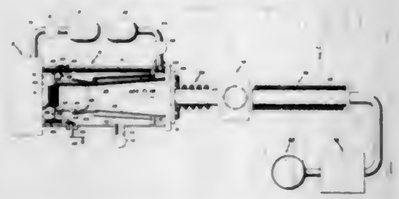


1. A load sensing line anchor comprising: a support; anchoring means for the line on said support; an arm projecting from said anchoring means; a line engaging member pivotally connected to said arm and having a portion opposed to a portion of said arm; and load sensing means interposed between said opposing portions of said member and said arm; said load sensing means comprising a hydraulic cell having a diaphragm and a pressure pad engaged with said diaphragm, said diaphragm and pressure pad being coengaged on a plane substantially radial to the pivotal connection of said line engaging member to said arm.

3,045,481
HYPERSONIC WIND TUNNEL

Edgar A. Bunt, Kensington, and Herman L. Olsen, Derwood, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed Jan. 18, 1961, Ser. No. 83,599
9 Claims. (Cl. 73—147)

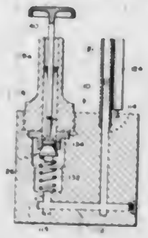


1. In a wind tunnel a plasma arc heat source, a wind tunnel nozzle section, an outer shroud extending between said heat source and said nozzle section, a mixing chamber disposed within said outer shroud, said chamber being in communication with said nozzle section and being spaced from said heat source, a tubular element disposed within said outer shroud between said heat source and said mixing chamber, said tubular element being movably connected at its inner end to said heat source and having its outer end portion normally spaced from said mixing chamber to thereby form an annular nozzle, said heat source being positioned to discharge plasma into said tubular element and thence into said mixing chamber, and means for supplying high pressure gas to said outer shroud, said gas flowing through said annular nozzle into said mixing chamber, in which it entrains and mixes with said plasma discharge and thence flows into said nozzle section.

3,045,482
RETRACTION VOLUME GAGE

Karl A. Domeisen, Marblehead, Mass., assignor to Avco Corporation, a corporation of Delaware

Filed Feb. 12, 1960, Ser. No. 8,353
1 Claim. (Cl. 73—149)



In an instrument for measuring retraction volume of a delivery valve assembly of the type having a movable valve member thereof carried for reciprocating movement in a longitudinally extending opening in said assembly and reciprocable in said opening from an open delivery position passing liquid therethrough and having means urging said valve from said open delivery position to a closed retracted position affording retraction volume determined by longitudinal movement of said valve member after closing of said movable valve member into said opening, comprising: a liquid containing U-tube manometer having two upstanding legs, a scale adjacent at least one of said legs for measurement of relative height of liquid in said legs, one of said legs having a lower portion thereof formed to receive said valve assembly, an upper section of said leg formed with a retaining portion to hold said assembly with said longitudinally extending opening forming a liquid carrying communication between said manometer leg portions, said lower manometer leg portion formed with means to hold said valve assembly with said movable valve member carried for reciprocation in said assembly in said longitudinally extending opening, said means comprising a spring below said valve member normally urging said valve member upwardly into said assembly from the open position toward its said closed retracted position thereby urging said movable valve member into said opening and actuating said valve member in its said retraction volume movement, a manually actuable member extending downwardly through the said upper portion of said manometer leg for moving said movable valve member into open position thereby to deliver liquid through said valve member to cause said liquid in said manometer legs to seek a common level and on manual release of said actuating member, said spring actuates said valve member in upward direction causing said movable valve member to move in said longitudinal opening to its retracted closed position and thereby indicating said retraction volume as a function of difference in height of liquid in the legs of said manometer.

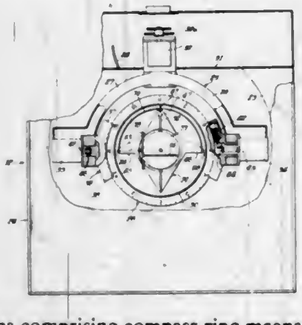
3,045,483
AIRCRAFT INSTRUMENTATION

Raoul Castro, Box 56, Brookfield, Ill., and Alexander M. Hasse, Fort Worth, Tex.; said Hasse assignor to said Castro

Filed Mar. 15, 1957, Ser. No. 646,380
18 Claims. (Cl. 73—178)

1. In an aircraft having gyroscopic attitude and azimuth sensing means; a flight instrument having means

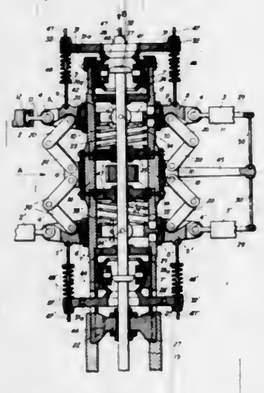
connected to said gyroscopic means for indicating the pitch, bank, and yaw of the aircraft; means defining a replica of said aircraft within said instrument and fixed on said aircraft for indicating the attitude and direction of the aircraft by relative movement between said replica and said first mentioned means, said replica having a longitudinal dimension as a facsimile of a fuselage and disposed substantially parallel to the main axis of the aircraft fuselage and a lateral dimension as a facsimile of a wing and disposed substantially parallel to the main axis of the aircraft wing; said replica being mounted in permanent alignment and relationship with said aircraft, said second mentioned means comprising compass ring means horizontally disposed and controlled to maintain parallel relationship with the horizon and orientation in azimuth and surrounding the replica but movable relative thereto so that the longitudinal and lateral dimensions of the replica each by their relationship with the surrounding compass ring means when viewed perspectively will assume a three-dimensional effect indicating the exact heading and the attitude that the aircraft has with the horizon; and means superimposed on said attitude indicating means and said replica and responsive to a signal received in said aircraft for indicating displacement of the aircraft from a predetermined navigational path.



3,045,484
AERODYNAMIC STABILIZER FOR AIRCRAFT

Raoul Henri Dumez, Montrouge, France, assignor to Soclete Nationale d'Etude et de Construction de Moteurs d'Aviation, a company of France

Filed Jan. 9, 1959, Ser. No. 785,974
Claims priority, application France Jan. 24, 1958
9 Claims. (Cl. 73—180)

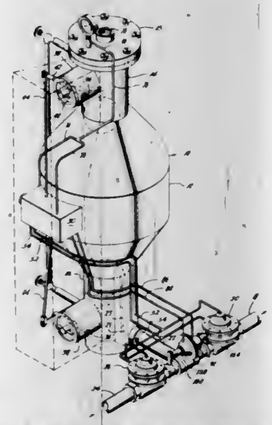


1. In a vertical take-off and landing aircraft, a sensing device sensitive to the displacements of said aircraft with respect to ambient air, and comprising a tubular element, at least one part spherical bearing rotatably fixed but slidable on said tubular element, a rotor rotatably and tiltably mounted on said bearing, a plurality of aerodynamically shaped blades pivoted on said rotor and of variable incidence, a rotatable member mounted on the tubular element for rotatable but non-axial motion and driven by a motor at a constant speed, articulated link means connected between said rotatable member and said rotor for driving said rotor in rotation, link connections between said rotatable member and said blades whereby areodynamic reactions of ambient air on said blades upon displacement of said aircraft cause said blades to slide said spherical bearing on said tubular element and to incline said rotor with respect to said tubular element, and first sensing means for sensing said displacement of said bearing and second sensing means for sensing said inclination of said rotor.

3,045,485
LIQUID METERING APPARATUS

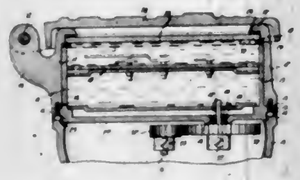
Horace V. Smith, Houston, Tex., assignor to Oil Metering and Processing Equipment Corp., Houston, Tex., a corporation of Texas

Filed Sept. 20, 1960, Ser. No. 57,221
16 Claims. (Cl. 73—224)



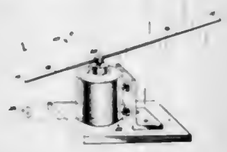
1. In a liquid metering apparatus including, a liquid container, an inlet and an outlet line in communication with the liquid container, inlet and outlet flow valves in the inlet and outlet lines respectively, and a float assembly in the liquid container, the improvement comprising a throttle valve in one of said lines movable between open and throttling positions, a throttle valve control assembly connected to said throttle valve, said throttle valve control assembly including a movable engageable member adapted in a first position to place the throttle valve in throttling position and in a second position to open the throttle valve, a flow valve control assembly connected to the flow valves, said flow valve control assembly including a movable engageable member adapted in a first position to close one of said flow valves and open the other flow valve, and in a second position to open said one flow valve and close said other flow valve, a movable engaging mechanism approximate said engageable members adapted upon movement in one direction to move the engageable member of the throttle valve control assembly and then the engageable member of the flow valve control assembly to their respective first positions and upon movement in the opposite direction to move the engageable member of the throttle valve control assembly and then move the engageable member of the flow valve control assembly to their respective second positions, and linkage connecting said engaging mechanism and the float assembly adapted to move the engaging mechanism in said one direction and in said opposite direction as the liquid container drains and fills of liquid.

3,045,486
METER REGISTER
Herbert G. Thomas, Harry J. Cornish, Courtney C. Shenkle, and Bernard Last, all of Uniontown, Pa., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 18, 1957, Ser. No. 646,761
5 Claims. (Cl. 73—273)



1. In a fluid meter, a meter casing, a registering and indicating housing removably mounted on said meter casing, a cup fitting in said housing, the cup having mounted therein a meter registering and indicating mechanism, a window in the upper end of said housing closing said cup, means forming a liquid tight compressible seal between the cup and the window, an inwardly extending lip on said registering and indicating housing, the lip overhanging said window, a flange extending outwardly from the lower end of said cup, said cup having a side wall within the housing and the upper end of the side wall engaging said seal means, means cooperating with said flange to rigidly attach the cup to said registering and indicating housing and urge said upper end of the cup against said seal means to compress the latter, a spindle aperture in the lower end of said cup, a rotary spindle in said aperture interconnecting the registering and indicating mechanism with the fluid meter, sealing means surrounding the spindle in said aperture, and a light, low viscosity, substantially transparent oil filing said cup to a desired level for protective coverage of said mechanism.

3,045,487
METHOD FOR THE MEASUREMENT OF EXTREME TEMPERATURES AND MEANS THEREFOR
Spencer D. Raezer, Montgomery County, Md. (13014 Turkey Branch Parkway, Rockville, Md.)
Filed Feb. 6, 1961, Ser. No. 87,377
19 Claims. (Cl. 73—339)



3. A method of determining the temperature of a hot gas comprising the steps of cycling a temperature sensing element between said hot gas and a cooler region in accordance with a first and a second cycling ratio until first and second equilibrium temperatures, respectively, are attained by said temperature sensing element, and calculating the temperature of said hot gas from the expression:

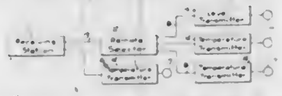
$$\bar{\theta}_B + \frac{\bar{\theta}_B' - \bar{\theta}_B}{1 - \frac{\bar{\theta}_B' R'}{\bar{\theta}_B R}}$$

where R and R′ are said first and second cycling ratios, respectively, and are equal to the ratio of the time that said sensing element spends in said cooler region to the time said sensing element spends in the hot gas according to said first and second cycling ratios, respectively, and

where $\bar{\theta}_B$ and $\bar{\theta}_B'$ are said first and second equilibrium temperatures, respectively.

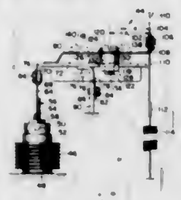
5. A device for determining the temperature of a hot gas, comprising, a temperature sensing element, means for periodically cycling said temperature sensing element between said hot gas and a cooler region according to a cycling ratio, and control means for varying the cycling ratio of said temperature sensing element.

3,045,488
TELEMETERING SYSTEM AND APPARATUS
Albert E. Jurs, Jr., and Theodore E. Veltfort, Jr., Berkeley, Calif., assignors to Shand and Jurs Co., Berkeley, Calif., a corporation of California
Filed Aug. 8, 1957, Ser. No. 677,066
15 Claims. (Cl. 73—342)



7. In a telemetering system of the character described, a reading station, a plurality of remotely located level transmitters, a plurality of remotely located temperature transmitters, a remote selector connected between said reading station and said transmitters, selecting means at the reading station for causing the generation of a plurality of selecting pulses to cause said remote selector to select the desired transmitter, means at the reading station for generating a start pulse after the selecting pulses have been generated to cause operation of the selected transmitter, each of said transmitters including means for generating confirming code pulses, means for transmitting information pulses in accordance with a variable being measured by the transmitter, means at the reading station for receiving said confirming code pulses, warning means at the reading station, means at the reading station for operating said warning means responsive to said code pulses where the incorrect transmitter has been selected by the remote selector, and means for receiving said information pulses from said selected transmitter, said last named means being selectively positioned by said first named selecting means.

3,045,489
COMPENSATING APPARATUS
Carl Raymond Brandt, Oreland, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,685
10 Claims. (Cl. 73—393)



1. An ambient pressure compensating means for a force balance system wherein said system has a force balanced beam provided with any selected one of a number of different size input members that is subjected to an ambient pressure of varying magnitude connected to apply a force in one direction or another to said force balance beam, said compensating means comprising an evacuated bellows that is subject to expansion upon a decrease in said ambient pressure and subject to contraction upon an increase in said ambient pressure, said compensating means being further comprised of a pivoted beam, a connection between one end of said pivoted beam and said bellows, a flexible spring plate fixedly connected at one end to said one end of said pivoted beam and extending in an unconnected spaced parallel relationship with the elongated axis of said pivoted beam, a second spring connected at one end to the other unconnected end of said flexible spring plate and being connected to said force balance beam at its other end to apply a force thereto in an opposite direction to said force being applied by said input member and a slideable screw and nut connection operably adjustable along said pivoted beam and said spring plate to any one of a plurality of fixed positions to decrease or increase the magnitude of the force that said bellows transmits through said pivoted beam, spring plate and spring to said force balance beam to a value that will exactly cancel out the force due to changes in ambient pressure being transmitted to said force balance beam by any one of said selected input members.

3,045,490
PRESSURE MEASURING INSTRUMENT
Roger E. Dumas, Snyder, N.Y., assignor to Taber Instrument Corporation, North Tonawanda, N.Y., a corporation of New York
Filed Dec. 31, 1956, Ser. No. 631,788
10 Claims. (Cl. 73—398)



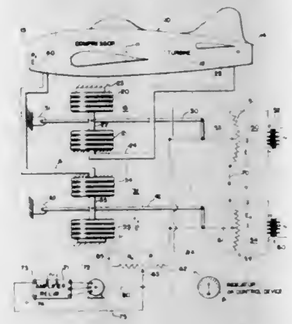
1. A pressure measuring instrument comprising a casing having a body, a base and a cap, said cap having communication with a fluid conduit, said cap being mounted on one end of said body, said body and cap being formed with a chamber having communication with said conduit, said body being formed with a passage opening into said chamber at one end and a compartment in said body and base at the other end of said casing, a force transmitting member in said passage, a sensing ring mounted in said compartment having one portion secured to said base and a diametrically opposite portion engaging one end of said member while the other end of said member is in communication with said fluid conduit for movement in response to variations in pressure therein for transmitting said variations to said sensing ring, and means in said body between the ends of said passage for engaging a shoulder on said member projecting outwardly beyond the side of said passage for limiting movement of said member to a predetermined amount within the elastic limit of said ring to prevent damage to said ring by excessive pressure in said fluid conduit.

3,045,491
DYNAMIC PRESSURE SENSITIVE DETECTOR
Robert W. Hart, 123 Dartmouth St., Lynn, Mass.
Filed Dec. 16, 1958, Ser. No. 780,912
9 Claims. (Cl. 73—398)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of detecting pressure variations which comprises the steps of exciting a solid bar so as to have it vibrating in a shear mode at a frequency that is high compared with the time rate of change of the pressure variations which are being detected, applying said pressure variations along the plane of equilibrium of said vibrating bar in a direction such as to cause a deformation in the latter's length and measuring the change in the wave pattern along the new length of said bar.

3,045,492
PRESSURE RATIO MEASUREMENT MEANS
Robert J. Kutzler, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 3, 1955, Ser. No. 526,189
2 Claims. (Cl. 73—407)

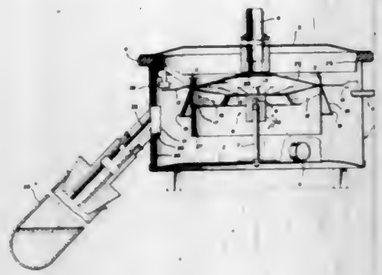


2. Apparatus for determining the ratio between two conditions comprising, in combination: a first source of voltage having a terminal connected to a point of reference potential and having an output of a first sense and of magnitude indicative of the first of the conditions; a second source of voltage having a terminal connected to the point of reference potential and having an output of a sense opposite the first sense and of magnitude indicative of the second of the conditions; impedance means having first and second end portions and a single output member movable between the first and second end portions; means connecting said first and second sources of voltage to said impedance means so that the sum of the voltages of said first and second sources of voltage appears between the first and second end terminals of said impedance means; voltage responsive means having a first and second input terminal and an output movable in accordance with the magnitude and sense of the voltage between the first and second input terminals; means connecting the first input terminal of said voltage responsive means to the movable member of said impedance means; means connecting the second input terminal of said voltage responsive means to the point of reference potential; and means connecting the output of said voltage responsive means in controlling relation to the movable member of said impedance means to reduce the voltage between the first and second input means to substantially zero, the position of said movable member then being indicative of the ratio between the first and second conditions.

3,045,493
MILK MEASURING AND SAMPLING DEVICE FOR MILKING MACHINES
Thomas Leslie Seaborne, Corner of Lygon St. and Brunswick Road, East Brunswick, Victoria, Australia
Filed July 21, 1959, Ser. No. 828,580
7 Claims. (Cl. 73—424)

1. A milk measuring and sampling device for milking machines comprising a cylindrical pot-like vessel having a bottom and side wall, distributing means in said vessel for distributing centrifugally onto said side wall a predeter-

mined fraction only of the total quantity of milk delivered thereto so as to form a descending curtain or film of milk of uniform thickness on said side wall, means for feeding



the total quantity of milk onto said distributing means, and means on the side wall for intercepting and collecting a representative sample of the distributed milk proportional to the total quantity of milk distributed.

3,045,494
METHOD OF PROVIDING FOR BLOOD COUNT AND PIPETTE AND ASSEMBLY FOR USE THEREIN
Horace William Gerarde, 508 Dorian Court, Westfield, N.J.
Filed Mar. 13, 1958, Ser. No. 721,139
13 Claims. (Cl. 73—425.6)



1. A pipette assembly including in combination a flexible reservoir containing a predetermined amount of diluent and having one open end, a capillary tube having a blood-receiving bore capacity precisely related to the amount of diluent, means for detachably connecting one end of said tube with the open reservoir end, said connecting means including a sleeve having one end permanently connected to said tube, said sleeve having a bore of greater diameter than the tube bore and in communication with the latter, the sleeve adjacent its opposite end providing a surface to sealingly and detachably engage with a surface of said reservoir, and means for initially sealing the bore of said sleeve against a flow of liquid from the reservoir into said sleeve.

3,045,495
LIQUID MEASURING CONTAINER
Leland H. Spencer, 2 Requa Place, Piedmont, Calif., and Ronald D. Asher, 317 Hanover St., Oakland, Calif., assignors of twenty-five percent to Sidney Davis, Oakland, Calif.
Filed Oct. 26, 1959, Ser. No. 848,602
2 Claims. (Cl. 73—427)

1. A liquid measuring container comprising an elongated clear transparent glass tube having a plurality of graduations marked thereon at different heights and extending laterally around said tube to accurately read the quantity of liquid contained in said tube by observing the top meniscus of the liquid, the lower end of said tube terminating in a radially outwardly extending portion forming an enlarged circular base, said base portion being formed integral with said tube, and at least the bottom portion of said tube inwardly of said radially



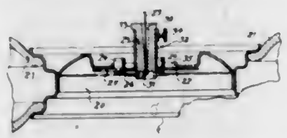
outwardly extending portion being of transparent colored glass for indicating a sharp meniscus line.

3,045,496
SPECIFIC GRAVITY MEASURING DEVICE
Harold Kraus, 716 Northumberland Road, Teaneck, N.J.
Filed June 19, 1959, Ser. No. 821,410
4 Claims. (Cl. 73—433)



1. A specific gravity measuring device for mineral specimens and for use with water comprising a normally buoyant body divided into lower and upper compartments formed by a sleeve and an air tight chamber so that the body is normally buoyant, removable closure means on the sleeve to provide access to the lower compartment, both of said compartments adapted to receive a mineral specimen, said upper compartment having side openings near the bottom thereof so that the water may be extended thereinto and being open at the top, the upper compartment being open at the top and adapted to receive weighing elements to cause its submersion into the water to thus indicate and determine the weight of the specimen by the number of elements utilized before and after the mineral specimen is placed in the lower compartment.

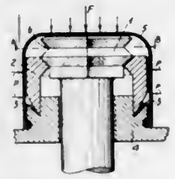
3,045,497
PENDANT WHEEL BALANCER
Arthur H. Lackie, Pacheco, Calif.
(434 19th Ave., San Francisco 21, Calif.)
Filed Apr. 25, 1960, Ser. No. 24,565
2 Claims. (Cl. 73—486)



1. In an automobile wheel balancing device, the combination of a wheel supporting spider having three arms with radially extending pin accommodating slots formed

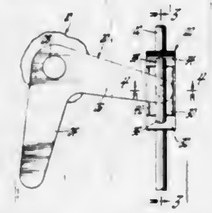
therein, said spider having an upstanding tubular hub at the center thereof, a suspension member upon which the upstanding tubular hub of said spider is rotatably mounted, said suspension member having a vertically extending central opening, a suspension cord extending downwardly through and secured centrally against removal at the lower end of said opening, a horizontally disposed supporting flange at the lower end of said suspension member, a wheel engaging pin mounted for radial movement in each of the slots formed in the arms of said spider, and a connecting link extending from each of said pins to an off-center point of connection with the supporting flange at the lower end of said suspension member, whereby said wheel engaging pins will move uniformly outward for engagement with the hub accommodating opening of the wheel to be balanced when said supporting member is rotated within the upstanding tubular hub of said spider.

3,045,498
SNAP DEVICE
Giorgio Viezzoli, Pavia, Italy, assignor to Societa Minelba s.r.l., Milan, Italy
Filed May 20, 1960, Ser. No. 30,491
Claims priority, application Italy May 20, 1959
8 Claims. (Cl. 74—17.8)



1. A snap action device for operation in a fluid comprising a member movable between two positions and having a part on which a force can be exerted in a first direction to produce such movement from inoperative to operative position, holding means including; at least one element normally engaging with said member for holding it in inoperative position and movable in a second direction transverse to said first direction to permit movement of the member, a base within which the member and element are movably mounted, and a cuplike cover of flexible material having its rim secured to the base and having its bottom overlying said part and its side wall surrounding said holding means and lying close enough to the holding means so as, when an increase in pressure in the fluid in which the device is enclosed occurs, to prevent sufficient movement of the element to allow movement of the member to operative position.

3,045,499
RETAINING MEANS
Walter Dale, Roseville, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 27, 1961, Ser. No. 155,140
4 Claims. (Cl. 74—102)



4. A lever member to rod member connection comprising:

a lever member having an aperture adjacent one end thereof;

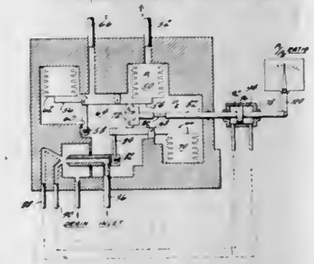
a rod member overlying said lever member at said aperture;

a spring member having a body portion and side members extending angularly therefrom;

means formed in said body portion received in said aperture in said lever member and permitting pivotal movement of said lever member relative to said body portion;

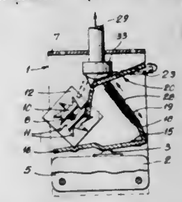
said side members having apertures therein and receiving said rod member transversely of said lever member, said apertures being located as to retain said lever member between said body portion and said rod member, said apertures being located so as to require deflection thereof towards each other to bring said apertures into rod receiving alignment to permit assembly and adjustment of said rod member relative to said lever member.

3,045,500
RATE DEVICE
Eugene R. Bruun, Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Aug. 25, 1960, Ser. No. 51,888
7 Claims. (Cl. 74—110)



5. In a servo device adapted to function in a range of force levels, means responsive to at least one variable for producing a signal, a servomotor, control means including a linkage member for receiving said signal, valve means operatively connected to said linkage member wherein a predetermined position of said linkage member will cause said servomotor to displace a predetermined amount, rate means cooperating with said linkage and adapted to maintain a substantially constant time responsiveness for a predetermined value of said signal so that said displacement will be obtained at a fixed time interval independently of said force level, said rate means comprising a bell crank pivotally secured to one end of said linkage, and a cam having an arcuate surface in sliding relation with one arm of said bell crank.

3,045,501
ALTERNATE ACTION SWITCH MECHANISM
Duane Wright, North Dorval, Quebec, Canada, assignor to Burgess Micro Switch Co. Limited, Toronto, Ontario, Canada
Filed Jan. 15, 1962, Ser. No. 166,019
4 Claims. (Cl. 74—142)



1. A ratchet mechanism comprising a frame, a toothed ratchet wheel rotatably mounted in said frame, a rigid

pawl member having a ratchet wheel engaging end laterally offset from the rotation axis of said ratchet wheel, said pawl member loosely pivotally supported on said frame at its other end for transverse movement relative to said frame and ratchet wheel between a normal position and a laterally displaced position, spring means exerting a yielding force on said pawl member along an inclined direction to urge said pawl member into a pivoted position out of engagement with said ratchet wheel and into said normal lateral position, and manually operated actuator means engageable with said pawl member between the two ends of the latter to cause the latter to engage said ratchet wheel against the action of said spring means and rotate said ratchet wheel the distance of one tooth, said spring means returning said pawl member to its pivoted position out of engagement with said ratchet wheel and into said normal position upon release of said actuator means, disengagement of said pawl member with the teeth of said ratchet wheel during return movement of said pawl member being permitted by the transverse movement of said pawl member to temporarily assume its laterally displaced position against the action of said spring means.

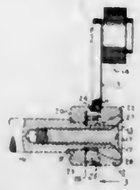
3,045,502
SAW CHAIN SPROCKET
Raymond R. Carlton, Portland, Oreg., assignor to Omark Industries, Inc., Portland, Oreg., a corporation of Oregon
Filed Aug. 3, 1959, Ser. No. 831,294
17 Claims. (Cl. 74—243)



1. A saw chain sprocket comprising a sheet metal toothed sprocket member having a radially extending portion providing surface portions positioned in a radial plane, said radially extending portion having radially extending sprocket tooth portions displaced axially of said member out of said radially extending portion a distance less than the thickness of said metal, said sprocket tooth portions being circumferentially spaced from each other and having parts of said radially extending portion positioned between and in overlapping contact with said tooth portions, said tooth portions being radially spaced outwardly from said hub member and extending to the periphery of said sprocket member and having their outer portions parallel to said plane, a second sheet metal sprocket member positioned concentrically with said toothed sprocket member and having a central aperture and radially extending portions in surface contact with said tooth portions and surface portions parallel to said plane positioned between said tooth portions, said members being secured together to form said sprocket and provide saw chain drive link receiving recesses between said tooth portions and between said surface portions, said members having similar outer peripheral edge surfaces and having notches in said surfaces for receiving the portions of the side link plates of a saw chain which first engage said sprocket when said chain is operated on said sprocket.

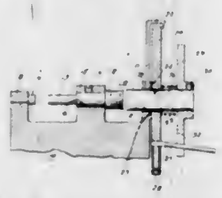
3,045,503
CONTROL MECHANISM
Rudolf H. Kiessling, Milwaukee, Wis., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed May 28, 1959, Ser. No. 816,570
6 Claims. (Cl. 74—395)

1. In a switch actuating arm and shaft device for operating an electrical switch upon rotation of the shaft by pivotal movement of the arm, the provision of said arm having an end portion provided with a plurality of internal gear teeth encircling said shaft, a first gear secured to and encircling said shaft and provided with a number of internal gear teeth different from and coaxially aligned with the gear teeth on said end portion, an adjusting hub



rotatable on said shaft having a portion for positioning the arm on the shaft, and an eccentric portion extending within the gear teeth on said first gear and said end portion, and a second gear surrounding said eccentric portion and revolvable about said shaft to cause movement of said arm relative to said first gear upon rotation of said hub.

3,045,504
DEVICE FOR OVERCOMING A FALSE INDICATION DUE TO AN ACTUAL LINEAR ERROR IN LEAD SCREW THREADS
Alfred H. Emery, 624 Dutchess Turnpike, Poughkeepsie, N.Y.
Filed May 9, 1961, Ser. No. 108,932
6 Claims. (Cl. 74—424.8)



1. In a mechanism including a threaded lead screw, a coacting threaded lead screw nut, and indicia means in operative connection with the lead screw for indicating the extent of axial movement of the lead screw relative to the lead screw nut, a device for eliminating the inclusion of linear error present in the lead screw threads by the indicia means which includes, in combination, a lead screw driving means fixedly secured to the lead screw and having a radial slot defined therein, an indicia means freely supported coaxially about the lead screw substantially adjacent to but spaced apart from the driving means, and a mechanical interconnection between the indicia means and the driving means, the interconnection comprising a pin adjustably secured to the indicia means with its central longitudinal axis not parallel to the central longitudinal axis of the lead screw, the pin extending from the indicia means to the said slot and being received therein with a sliding fit, the angle between the said longitudinal axes being determined relatively with respect to the actual linear error in total length of the lead screw thread and to the distance the adjacent faces of the driving means and the indicia means are spaced apart.

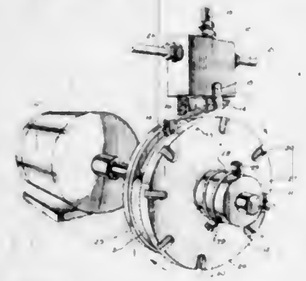
3,045,505
PUMP CONNECTOR ROD LINK
Robert W. Boehlow, Pagedale, Mo., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Nov. 28, 1958, Ser. No. 776,911
2 Claims. (Cl. 74—469)

1. A mechanical linkage comprising a support, a pair of spaced elements mounted on said support for movement in a common plane, means preventing lateral displacement of said movable elements, said movable elements having laterally spaced opposed faces, each of said elements being formed with a transverse bore penetrating said opposed faces with the bore of one element parallel to the bore of the other element, and a link connector between said elements, said link connector having op-



positely extending parallel end portions extending into the bores formed in said movable elements, lateral portions extending from said end portions for abutting said opposed faces to prevent displacement of said end portions, and a connection between the ends of said lateral portions, said connection being positioned generally intermediate said oppositely extending parallel end portions.

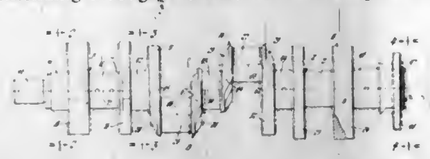
3,045,506
CAM
Clarence O. Glasgow, Tulsa, Okla., assignor to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Dec. 14, 1960, Ser. No. 75,714
2 Claims. (Cl. 74—568)



1. A cam including,
a first plate,
a base track ridge extending normal the plane of the first plate and a uniform distance from the plate center,
a first lip extending normal the plane of the first plate from the periphery of the first plate,
a second plate arranged manually rotatable about the center of the first plate but to turn with the first plate when the combination normally functions as a cam,
a second lip extending normal the plane of the second plate from the periphery of the second plate,
a spring arranged to urge the plates together as the plates turn together,
and a flexible element attached by one end to the second plate so as to be drawn from beneath the base track ridge through an aperture in the ridge and out upon the base track ridge by the manual rotation of the second plate where it is captured by the first and second lips in forming the cam profile for actuating a follower to alternate positions.

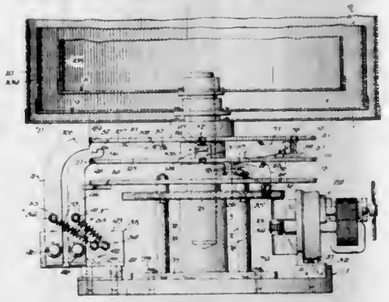
3,045,507
CRANKSHAFT
Joseph D. Turlay, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 1, 1952, Ser. No. 318,169
6 Claims. (Cl. 74—603)

1. A crankshaft for engines comprising crank arms extending in opposed relation to one another in one plane and crank arms extending in opposed relation to one another in another plane, said first mentioned crank arms being formed to provide draft clearance on opposite sides of said one plane, said second mentioned crank arms being formed to provide draft clearance on opposite sides of planes on opposite sides of and parallel to said one plane and extending through the axes of the crankpins of said



second mentioned crank arms and on opposite sides of planes converging obliquely away from said one plane and intersecting said one plane and said parallel planes at the ends of said crankpins of said second mentioned crank arms, said crankshaft also being formed to provide main bearing journal means formed to provide draft clearance on opposite sides of said one plane.

3,045,508
MULTIPLE TURNTABLE STRUCTURE
Hans Otto Schulz, 2227 W. Belmont Ave., Chicago, Ill.
Filed Feb. 3, 1960, Ser. No. 6,560
8 Claims. (Cl. 74—665)



1. In a multiple turntable structure, the combination of a base structure, a plurality of rotatable members operatively supported by said base structure and disposed on a common axis in axial spaced relation, the members being disposed adjacent one another, means operatively connected to one of said members for rotatably driving the same, retaining means operatively related to another member for normally retaining the same stationary, means associated with said driven member operative to selectively release said retaining means, and means associated with said driven member operatively related to said second mentioned member for applying a rotational torque thereto upon release of said retaining means.

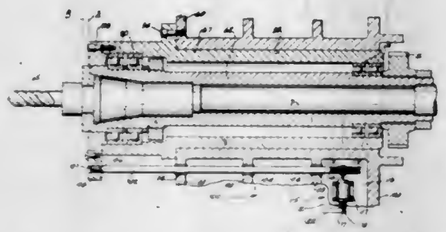
3,045,509
METHOD OF MANUFACTURE OF A FILE
Robert H. Severance and Walter Majeske, Saginaw, Mich., assignors to Severance Tool Industries, Inc., Saginaw, Mich., a corporation of Michigan
Filed Jan. 18, 1954, Ser. No. 404,664
1 Claim. (Cl. 76—24)



A method for manufacturing carbide files including: forming a metal back; grinding file faces in a plurality of rectangular tungsten carbide blocks of substantially equal thicknesses and widths; sintering said blocks; placing said blocks in end to end relationship with said ground file faces

upon a flat surface; spreading a thickness of mastic material upon the unground upturned sides of said blocks; lightly forcing said metal back into engagement with the said unground upturned sides of said blocks sandwiching said mastic between said blocks and said back, thereby compensating with mastic thickness for irregularities between said block and said back; curing said mastic material; and finish grinding said file faces while bonded to said back.

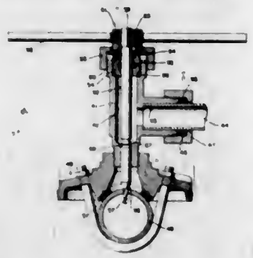
3,045,510
MACHINE SLIDE POSITION ERROR SENSING AND COMPENSATING MECHANISM
Wallace E. Brainard, Milwaukee, Wis., assignor to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Dec. 14, 1959, Ser. No. 859,331
15 Claims. (Cl. 77—5)



1. In a machine tool having an axially movable spindle head; a spindle carrying structure supported in the head; power means operably connected to actuate the head in its axial movement; a positioning control system operably connected to regulate the operation of the power means to effect accurate positioning of the spindle head; a bar member formed of a relatively temperature stable material carried by the spindle head for movement with it and for axial movement relative to it, said bar member having one end secured to the spindle carrying structure adjacent the nose portion of the spindle in a manner that displacement of the nose portion of the spindle from a reference position because of expansion and contraction of said spindle carrying structure as a result of temperature variations will effect an axial movement of said bar in an amount equal to the amount that the nose of the spindle is displaced; voltage producing means carried by the head and operably connected to the opposite end of said bar member to be actuated by the axial movement of said bar member; and voltage transmitting means operably connected to transmit the voltage from said voltage producing means to the positioning control system for modifying the control exercised by said positioning control system to thereby compensate for the displacement of the nose portion of the spindle; whereby a displacement in the nose of the spindle from a reference position will effect a movement of said bar member thereby causing said voltage producing means to produce a voltage which corresponds to the movement, and the voltage so produced will be transmitted to the positioning control system to impart a correction factor thereto so that the positioning control system will operate to effect a movement of the spindle carrying structure to a desired position.

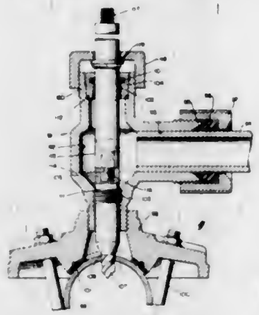
3,045,511
SERVICE T
Roger E. Risley, Bradford, Pa., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Mar. 18, 1959, Ser. No. 800,135
4 Claims. (Cl. 77—38)

1. A fitting for connecting a service line to an existing main, comprising a casing having a bore having cylindrical portions and extending through said casing and having upper and lower ends, said bore having an enlarged intermediate portion, said casing having a fluid passageway opening laterally off of said intermediate portion, means for making a fluid-tight connection between said passageway and said service line, said lower end of said casing having a surface corresponding generally to the curvature of the existing main, and flexible gasket means carried by said lower end for making a fluid-tight connection between the lower end of said casing and said main with said bore inetrsecting the main, said last-named means including holding means adapted to extend around said existing main and to engage with said lower end of said casing, a stem extending through said bore and having cylindrical portions rotatably and axially slidably bearing in said cylindrical portions of said bore to provide for rotational and axial movement of said stem in said bore without threaded engagement therewith, means limiting



axial movement of said stem to retain it in said bore, a closure member threadedly engaging with the upper end of said casing and having a threaded axial passageway, the upper end portion of said stem having threads for engagement in said passageway, said upper end portion of said stem projecting above the upper end of said casing, means comprising a flexible gasket element providing a fluid-tight seal between the upper portion of said casing and said stem, a rotary drill bit on the lower end of said stem in position to engage the wall of said main, means on the projecting upper end portion of said stem for rotating said stem and drill bit to drill a hole through said main wall, said stem being axially slidable to retract said cylindrical portion of said stem from the lower cylindrical portion of said bore to permit flow of fluid from said main through said hole, bore and passageway to said service line, and means for locking said stem in said retracted position.

3,045,512
SERVICE FITTING
Roger E. Risley and John P. Mann, Bradford, Pa., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed July 31, 1959, Ser. No. 830,865
10 Claims. (Cl. 77—38)



1. A fitting for connecting a service line to an existing main, comprising a hollow casing defining a bore, means

for securing said casing to a main with said bore intersecting said main and with a fluidtight seal between said main and said casing, a branch opening laterally off of said bore intermediate its ends, means for connecting a service line to said branch with a fluidtight connection, a stem rotatable and axially movable in said bore, a drill bit on the inner end of said stem and engageable with said main, means for rotating said stem and bit to drill a hole through the wall of said main, means providing a fluidtight seal between said stem and bore outwardly of said branch, valve means on said stem, said stem being movable axially between an inner position in which said valve means closes off said bore inwardly of said branch and an outer position in which said bore inwardly of said branch is open to permit flow of fluid from said main through said hole, an inner portion of said bore and said branch to said service line, threaded means on said stem, first interengaging threaded means on said casing to engage with said threaded means on said stem to hold said stem in said inner position and second interengaging threaded means on said casing to engage with said threaded means on said stem to hold said stem in said outer position, said stem remaining permanently in said casing and closing an outer end portion of said bore, said first interengaging threaded means and said second interengaging threaded means being axially spaced apart to leave an unthreaded intermediate portion in said casing adapted to receive said threaded means on said stem whereby said stem is rotatable in said casing without threaded engagement with said casing when said threaded means on said stem are disposed in said intermediate portion.

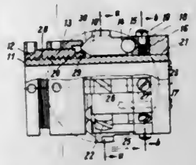
3,045,513
DRILL
Rudolf W. Andreasson, 780 W. Maple Road, P.O. Box 174, Birmingham, Mich.
Filed July 5, 1960, Ser. No. 40,853
5 Claims. (Cl. 77—68)



1. A combination drill shank and tip for rapid feed drilling of soft metal which comprises a shank portion having a widely spaced single flute, said flute forming a relatively wide rib having a single narrow land portion along one edge thereof raised above the remainder of the rib, the tip of said drill having a double flute formation, one flute of which merges with a flute of the shank and the other flute of which converges with the main flute of the shank, said drill having a pair of cutting edges extending to the circumference of the drill from the center point in substantially radial direction but off-set from the true radius of the drill, said cutting edges being relatively straight in plane parallel to the axis of the drill and having a smooth uninterrupted concave curvature transverse to the axis of the drill extending from the axis to the circumference, said curvature being approximately equal to the arc of a circle having a diameter equal to the diameter of the drill.

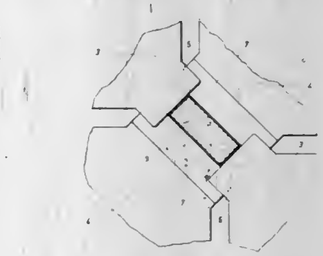
3,045,514
REAMING TOOL FOR CYLINDRICAL BORES
Georg Preis, Marburger Str. 12, Berlin W 30, Germany
Filed July 29, 1960, Ser. No. 46,294
11 Claims. (Cl. 77—75)

1. A reaming tool for cylindrical bores, comprising an elongated holder, a generally spherical cutter tiltably mounted on said holder and integrally provided with a radial array of teeth, said array consisting of a plurality of peripherally spaced pairs of diametrically opposite



teeth having arcuate cutting edges extending substantially along a spherical surface, and adjusting means on said holder bearing upon said cutter for selectively inclining the axis of said cutter with respect to that of said holder.

3,045,515
FORGING MACHINE
Bruno Kralowetz, St. Ulrich, near Steyr, Austria
Filed Jan. 26, 1960, Ser. No. 4,812
Claims priority, application Austria Feb. 4, 1959
3 Claims. (Cl. 78—20)



1. A forging machine for forging workpieces of rectangular cross-section, which comprises four hammer tools each of which is operable to strike one side of the workpiece, each of said hammer tools having a striking face arranged to confront said side of said workpiece and having a length which is larger than the width of said side, each of said striking faces having at least one impact ledge extending transversely to the axis of said workpiece, the impact ledges of immediately adjacent ones of said tools being staggered to clear each other in the direction of the axis of the workpiece, said tools being operable to strike the workpiece simultaneously to cause their impact ledges to enter into toothlike interengagement.

3,045,516
RING ROLLING MILLS
Norman Coupe Ashton, Huddersfield, and Cecil Vincent Wilson, Shepley, near Huddersfield, England, assignors to N. C. Ashton Developments Limited, Huddersfield, England, a British company
Filed Mar. 10, 1959, Ser. No. 798,409
Claims priority, application Great Britain Mar. 12, 1958
4 Claims. (Cl. 80—5)



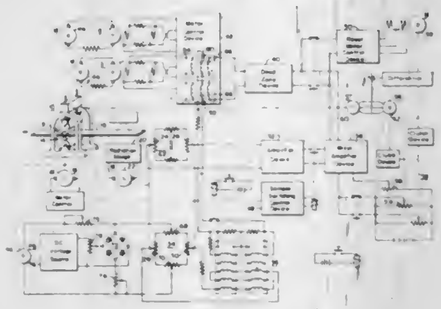
2. A method of forming a ring or cylinder from a blank, comprising rotating said ring while restraining it against expansion in an axial direction, applying a rolling pressure to said ring at a first fixed point on its inner

periphery, applying rolling pressure to the outer periphery of said ring at a second point radially opposed to said first fixed pressure point, moving said second pressure point relatively toward said first pressure point, applying a control pressure to the outer periphery of said ring at a position which is a selected distance from a plane through said first and second pressure points which contains the axis of rotation of said ring, said distance being given by the formula

$$\sqrt{\frac{A}{\pi}}$$

wherein A equals the cross-sectional area of the blank, and holding said position fixed relative to said first pressure point during the rolling process.

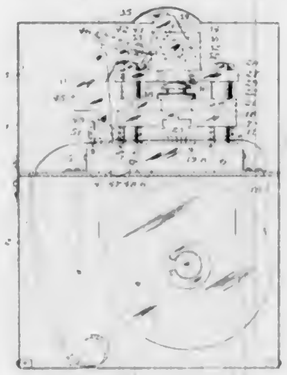
3,045,517
STRIP THICKNESS CONTROL APPARATUS
John W. Wallace, Orchard Park, and Robert E. Hull, Eggertsville, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 29, 1957, Ser. No. 662,425
7 Claims. (Cl. 86—56)



1. In control apparatus for a strip rolling mill including a pair of roller members operative with a moving strip for controlling the thickness of said strip, with said mill further including a motor operative with at least one of said roller members to control the spacing between said roller members, the combination with said rolling mill of a strip thickness sensing device operative to provide a first control signal that varies as a function of the thickness of said strip, a control device including signal value sensing means and being responsive to said first control signal and operative with said motor for controlling the spacing between said roller members in accordance with the variations of said first control signal, a strip speed sensing device operative to provide a second control signal that varies as a function of the movement speed of said strip, with said signal value sensing means of the control device being responsive to said second control signal for effecting a first gain characteristic for strip speeds below a predetermined value and a second gain characteristic for strip speeds above said predetermined value to cooperate with said first control signal for controlling the spacing between said roller members.

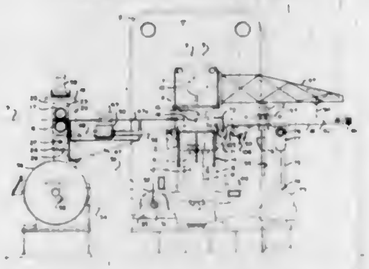
3,045,518
MACHINE FOR PUNCHING CODED TAPE
Bayard L. Kjelgaard, Odessa, N.Y., assignor to Endicott Johnson Corporation, Endicott, N.Y., a corporation of New York
Filed Sept. 15, 1958, Ser. No. 761,247
6 Claims. (Cl. 83—146)

1. In a device for punching coded information in a record tape or the like, means for holding a tape in operative position including a die plate and a stripper plate spaced to slidably receive the tape therebetween, said plates each having an identical pattern of precisely alined perforations, a code key member having a plurality of pins projecting from one side thereof corresponding in position with certain of the perforations in the die plate and stripper plate, means including a movable carrier having a horizontal slideway for releasably supporting said key member with its pins in alinement with the corresponding perforations in the stripper plate and die plate, means for moving the carrier toward said plates to cause said pins



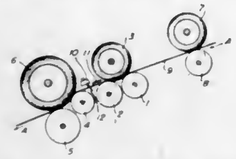
to perforate the tape in accordance with the arrangement of the pins in said key member; releasable means for preventing operation of the perforating means comprising a movable latch positioned at the end of, and adjacent to said horizontal slideway, while the carrier is in its raised position, and normally positioned in the path of movement of said carrier, and means on said code key member for moving the latch away from its normal position to thereby allow operation of the perforating means when said key member is seated in its operative position in the carrier.

3,045,519
STRIP CLAMPING AND FRONT STOP MEANS FOR CYCLICALLY OPERABLE SHEAR
Albert J. Sarka, Maple Heights, Ohio, assignor, by mesne assignments, to The Wean Engineering Company, Inc.
Filed Dec. 8, 1958, Ser. No. 778,722
30 Claims. (Cl. 83—157)



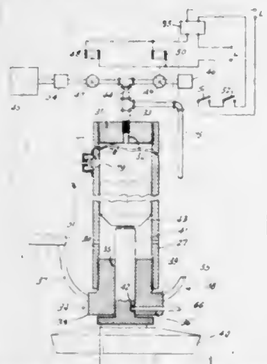
26. Apparatus for shearing continuously advancing strip comprising a cyclically operable shear which advances while it shears, the shear including continuously cyclically operating shearing means, a front stop connected with the shear and advanceable therewith, the front stop having an operative position in the pass line and an inoperative position below the pass line, means for advancing strip relatively to the shear to register the leading end of the strip to the advancing front stop when the front stop is in operative position in the pass line to position the strip for shearing, means retracting the front stop downwardly to its inoperative position below the pass line to permit advance of the sheared off portion of the strip and clamping means movable with the shear clamping both a portion of the strip beyond the shearing means and adjacent the leading end of the strip and a portion of the strip approaching but which has not yet reached the shearing means when the leading end of the strip is registered to the front stop.

3,045,520
APPARATUS FOR CUTTING CHEMICAL TOWS
Ichizo Haruyama, 10 Iwaicho Hodogaya-ku, Yokohama, Japan
Filed Oct. 2, 1961, Ser. No. 142,400
1 Claim. (Cl. 83—201)
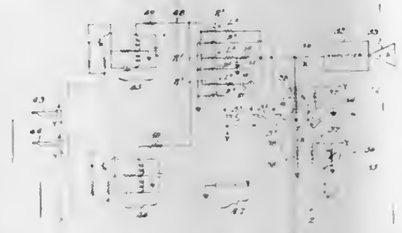


An apparatus for cutting chemical tows comprising a roller arrangement including a set of back rollers and a set of front rollers for advancing a chemical tow in one direction, an endless belt having thereon a multiplicity of spaced-apart needles extending outwardly obliquely with respect to the belt and arranged between the set of back rollers and the set of front rollers so as to travel slowly in a direction at right angles to the direction in which the tow is advanced, and a band edge disposed immediately behind said endless belt and adapted to run at high speed in a direction opposite to the direction in which said endless belt travels, whereby the tow as taken up by said needles on the endless belt is effectively cut by said band edge.

3,045,521
RELEASABLE TOOL FOR CLICKER DIE PRESS
Bernard C. Eisenberg, 120 13th St., Brooklyn, N.Y.
Filed July 9, 1958, Ser. No. 747,529
12 Claims. (Cl. 83—532)



1. A sheet material cutting machine comprising horizontally disposed fixed cutting surface means, a vertically positioned cylinder, means for mounting said cylinder for regulated movement towards and away from said cutting surface means, a cutting die having an upwardly extending shank portion, means for releasably mounting said die shank portion in the lower end of said cylinder, hammer means freely movable within said cylinder for free gravitational downward movement from an elevated position thereof to freely strike said die shank portion, pressure differential means connected to said cylinder selectively operable to accelerate the downward movement of said hammer means and to raise said hammer means to its elevated position within said cylinder, and means for releasing said die shank portion from the lower end of said cylinder upon downward movement of said hammer means to allow independent movement of said die when struck by said hammer means.

3,045,522
LIGHT RESPONSIVE VARIABLE RESISTANCE CONTROL DEVICES FOR ELECTRONIC MUSICAL INSTRUMENTS
Jerome Markowitz, Allentown, and Milton F. Nelson, Macungie, Pa., assignors to Allen Organ Company, Macungie, Pa., a corporation of Pennsylvania
Filed Mar. 17, 1960, Ser. No. 15,592
1 Claim. (Cl. 84—1.27)



A volume control for an electronic musical instrument comprising a source of light, a light responsive element spaced from said source, an opaque screen between said source and said element, said screen having an aperture therein of generally triangular shape and having two of its sides lying in opposed exponential curves, and a movable shuter covering said screen.

3,045,523
DRILL POINT SCREW HAVING INTERRUPTED LEADING END THREADS FORMED BY A FLAT CHORDAL SURFACE
Edgar Reed 2nd, 24 Butternut Hill Road, Worcester, Mass.
Filed Aug. 25, 1960, Ser. No. 51,915
3 Claims. (Cl. 85—47)



1. A wood screw comprising a shank having a head at one end and being pointed at the other end and having a raised helical thread thereon extending from the pointed end toward the head, the convolutions of which are spaced apart to define a flat root portion therebetween, the shank and thread having at least one flat surface adjacent to the pointed end thereof which extends entirely across the shank as a chord thereof and which interrupts the thread leaving thread remnants, the root diameter of the interrupted thread remnant next to the first full thread convolution adjacent the interrupted thread remnants in the direction of the head being enlarged radially of the shank and having a root diameter which is greater than that of said first full thread convolution and which is less than that of the thread adjacent the head, the line of intersection of each edge of the flat surface with the edge of the root portion of the enlarged interrupted thread remnant forming a cutting edge having a defined longitudinal extent.

3,045,524
BOOSTER CUP AND METHOD OF MAKING SAME

Richard H. F. Stresau, Lake Zurich, Ill., and John W. Derwin, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

Filed June 23, 1958, Ser. No. 744,025
4 Claims. (Cl. 86—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The method of making a booster cup having an explosive pellet therein which comprises the steps of extruding a cup-like member having a bottom portion from a flat piece of metal, forcing the bottom portion of the cup inwardly to a predetermined distance to form a conical configuration thereof, forcing said bottom portion in an outward direction sufficiently to form a conical configuration of less conical height than said predetermined distance, forming a continuous thread on the external cylindrical portion of said cup, placing an explosive pellet within the cup of slightly less diameter than the inside diameter of the cup and of greater axial length than the depth of the interior portion of the cup, placing a cup-like cap over the end portion of the pellet extending beyond the upper surface of the cup, said cap having a cylindrical portion formed integrally therewith for snug fitting with the inner cylindrical surface of the cup and the outer cylindrical surface of the pellet throughout a substantial portion of the axial length thereof, and pressing the cap into the cup sufficiently to bring the outer flat surface thereof into coplanar relation with the adjacent flat surface of the cup.

3,045,525
LOADING AND UNLOADING DEVICE FOR CARTRIDGE MAGAZINES

Rudolf Stadelmann, Zurich-Oerlikon, Switzerland, assignor to Machine Tool Works Oerlikon, Administration Company, Zurich-Oerlikon, Switzerland, a company of Switzerland

Filed Oct. 23, 1959, Ser. No. 848,366
Claims priority, application Switzerland Oct. 24, 1958
6 Claims. (Cl. 86—47)

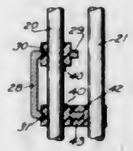


1. A loading and unloading device for a cartridge magazine comprising in combination a connecting piece, two spaced parallel legs extending from one side of said connecting piece to form with the latter a yoke wherein said legs form a passage for cartridges and said yoke embraces a row of cartridges lying side by side in a plane, a bridge on the projecting end of one of said legs and means to pivot said bridge in a plane normal to said legs from a first position in which said bridge lies substantially parallel to said cartridges to keep said passage for said cartridges open to a second position in which said bridge lies across said passage to keep said passage closed and said means for pivoting said bridge are mounted on the other side of said connecting piece from said legs.

3,045,526
BRAIDER CARRIER TENSION WEIGHT

Stephen C. Harris, 1330 Warwick Neck Ave., Warwick, R.I.

Filed June 20, 1960, Ser. No. 37,128
2 Claims. (Cl. 87—56)

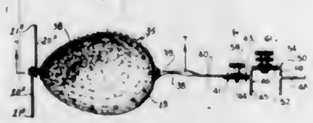


1. In a braider carrier having a first standard a second standard extending in parallelism therewith, a tension weight being slidably mounted on the first standard, a pair of fingers carried by said weight and embracing the second standard to guide the weight against rotary movement, said slidable mounting including bushings between the first standard and said weight, said bushings being composed of a polymer of tetrafluoroethylene to which there has been mixed particles of silicate, said bushings exhibiting the property of superior wear resistance and freedom of sliding movement without the necessity of lubrication.

3,045,527
EYE COVER ATTACHMENT FOR MONOCULAR OPTICAL INSTRUMENTS

Nadina Billi, 155 E. 31st St., New York, N.Y.

Filed Mar. 10, 1959, Ser. No. 798,486
3 Claims. (Cl. 88—1)



1. An eye cover for use with a monocular device, comprising an opaque concavo-convex member adapted to fit comfortably over one eye of a viewer of said device, an arm secured to said member and a bracket removably secured to said arm, said bracket being adapted to be clamped to said device so that said member covers said eye of the viewer, said arm being provided with means for adjustably positioning the arm on the bracket, said bracket being provided with means for adjustably clamping to said device, the last-named means including a pair of L-shaped plates having lateral plate extensions, said arm being attachable to either of said plate extensions by a thumb screw, said L-shaped plates being adjustably positionable with respect to each other by another thumb screw extending through a slot in one of the plates and into a threaded hole in the other of said plates.

3,045,528
DARK-FIELD ILLUMINATION SYSTEM

Duane U. Norgren, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 14, 1959, Ser. No. 806,409
10 Claims. (Cl. 88—1)

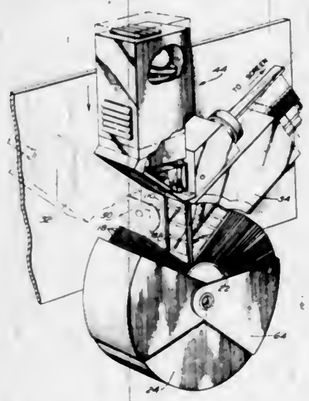


1. In a system providing dark-field illumination of light transmissive objects within a substantially light-tight enclosure, the combination comprising a light source emitting light in said enclosure which light is directed in a beam passing through the region of said objects, an extensive light redirecting element situated on the opposite side of said region from said source, said light redirecting element having at least one reflective surface for returning light from said source back in the approximate direction of said source along said beam and having at least one refractive surface for deflecting light incident on said element from directions other than the direction of said source to light absorbent surfaces within said enclosure, and means forming a viewing aperture in said enclosure which means is on the same side of said region as said source and in proximity thereto, said means being offset in a lateral direction from the center line of said beam, whereby said system acts to make said objects clearly visible from a viewing point close to the light source, said system being operative to achieve such result under conditions wherein the back scattering of light by said objects is minimal.

3,045,529
DATA PROCESSING

Manfred R. Kuehnle, Lexington, Mass., assignor, by mesne assignments, to Iter Corporation, a corporation of Delaware

Filed Sept. 14, 1959, Ser. No. 839,648
24 Claims. (Cl. 88—1)



1. Apparatus for selecting a predetermined data-bearing film chip from a plurality of film chips each of which has a coded edge surface, said apparatus comprising in combination: means for pivotally mounting each of said chips at an uncoded edge thereof whereby said coded edges are coplanar, sensing means disposed in operative relation with said coplanar edges for sensing said edge codes, means for producing relative motion between said chips and said sensing means, pneumatic means for causing each of said chips to sequentially pivot one at a time as each chip is adjacent said sensing means, means for stopping said relative motion when a chip having a predetermined code passes said sensing means, and means for sensing the data borne on said predetermined chip.

2. A generally rectangular film chip adapted to be supported by a holding rail, said chip having for identification purposes a code on a planar surface near an edge thereof, means on an uncoded edge arranged to allow hingeable and slideable mounting on said holding rail, and means for stiffening said chip over the length thereof, said last-mentioned means comprising a deformation of said chip lengthwise near opposed long edges thereof.

3,045,530
OPTICAL SYSTEM HAVING ABERRATION CORRECTING PLATE MEMBER WITH RING SHAPED PHASE RETARDING LAYERS

Jumpei Tsujiuchi, Tokyo-to, Japan, assignor to Agency of Industrial Science and Technology, Ministry of International Trade and Industry, Tokyo-to, Japan

Filed July 14, 1960, Ser. No. 42,949
6 Claims. (Cl. 88—14)



1. In an optical system, in combination, a lens and a transparent plate member disposed on the optical axis of said system in cooperation with said lens, said transparent plate member having ring-shaped light absorptive layers of at least one kind of material, said layers being thin film layers capable of producing phase retardation corresponding to half a wave length, the radius and thickness of each of said layers being such that they have an amplitude transmission function $t(r)$ represented by the equation,

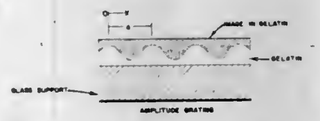
$$t(r)=\frac{1}{1+p}\{p+\cos(W(r)\}$$

in which r, $W(r)$, and p represent respectively, the radial coordinate on a pupil of the optical system, wave aberration of said system, and positive parameter, and an adjusting device for axially adjusting the position of said plate member along the optical axis of said system.

3,045,531
OPTICAL GRATING

Rochelle Prescott, 75 Hillsdale Road, Arlington, Mass., assignor of one-third to Walter G. Finch, Baltimore, Md.

Filed Apr. 5, 1956, Ser. No. 576,267
17 Claims. (Cl. 88—14)



1. An optical grating, comprising, an optical grating material for producing only zero and first order spectra, said grating material having a periodic variation of the

optical properties thereof, said grating material consisting of spaced areas of variable opacity varying in a continuous manner from a minimum to a maximum to a minimum, the opacity at the minimum being substantially zero and at the maximum being substantially opaque and repeating in a regularly recurring order, and in such a manner that the optical transmittance and pathlength characteristics vary sinusoidally for light transmitted by said grating material in two direction, both lying within said grating material.

3,045,532
DIFFRACTION GRATING HAVING A PLURALITY OF BLAZE ANGLES
John J. J. Staunton, Oak Park, Ill., assignor to Coleman Instruments, Inc., Maywood, Ill., a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,365
7 Claims. (Cl. 88—14)



1. A diffraction grating characterized by a wide usable range in wave length, having a multiplicity of identical equally-spaced parallel grooves, each groove having a shallow depressed working surface broken into a plurality of individual distinct planes inclined toward each other and parallel with the axes of the grooves to provide a plurality of predetermined blaze angles.

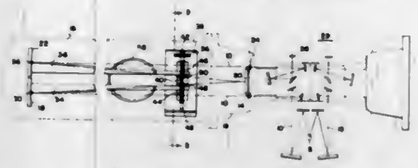
3,045,533
OPTICAL SYSTEM FOR SPECTROGRAPHIC SOURCE
Duane D. Harmon, Sewickley, Pa., assignor to Fisher Scientific Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 19, 1959, Ser. No. 800,516
7 Claims. (Cl. 88—14)



1. In a spectroscope for analyzing a spectrographic light source, an illumination system comprising: a slit; a collimating lens spaced from the slit and illuminated by light passing through the slit; and an additional lens positioned between the collimating lens and the slit; said source being positioned on the side of the slit opposite to and at about the principal focal point of said additional lens; a virtual image of said slit being formed by the additional lens; and the focal point of the collimating lens being located at about the plane of said virtual image.

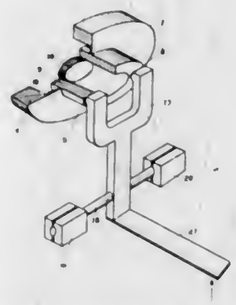
3,045,534
SPECTROSCOPY APPARATUS
Norman I. Adams III, Wilton, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed Mar. 24, 1959, Ser. No. 801,577
2 Claims. (Cl. 88—14)

1. Mirror adjusting apparatus for use in infrared spectrophotometers comprising in combination a first elongated arm means having a pivot at one end and adapted to retain a first mirror substantially at its pivoted end; a second elongated arm means having a pivot at one end and adapted to retain a second mirror substantially at its pivoted end, said first and second arm means being substantially parallel to one another and rotatable about their pivots in a common plane; first and second actuating means interposed between said first and second arm means and in respective contacting relationship with the unpivoted ends thereof to maintain the unpivoted ends of said first and second arm means in adjustable parted relationship with one another; right hand screw means in actuating relationship with said first actuating means; left hand screw means in actuating relationship with said



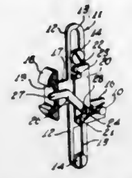
second actuating means; means for rotating said right and left hand screws to concurrently move said first and second actuating means in opposite directions along a common axis parallel to a line connecting the pivots of said first and second arm means; and spring loading means on each of said arm means to move the unpivoted ends of said arm means together as the spreading force of said actuating means is removed.

3,045,535
VARIABLE STEP INTERFEROMETERS
Pierre Jacquinot, Bellevue, and Robert Chabbal, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France
Filed Aug. 19, 1959, Ser. No. 834,798
Claims priority, application France Aug. 30, 1958
1 Claim. (Cl. 88—14)



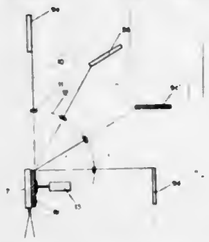
In a variable interferometer of the Fabry-Perot type having first and second glass plates with spaced opposed planar and parallel faces, a plate carrying assembly for each of said plates, a first part for each of said assemblies, a second part for each of said assemblies carrying its respective plate, an elastic member for each of said assemblies connecting the corresponding first and second parts thereof, means for adjustably spacing said assemblies and said plates extending between said first parts, means on one of said assemblies for deforming the corresponding elastic member and for positioning the corresponding first plate parallel to the second plate, means on said other assembly for deforming the corresponding elastic member and for moving the corresponding second plate with respect to the first plate while parallel therewith comprising a sensitive motion transmitting device acting on said second part including a torsion bar parallel to the adjacent second plate, clamp means securing the ends of said bar, a yoke secured to said bar and rotatable about the axis of said bar, a flexible rod connected to said torsion bar, means for displacing the end of said rod away from said torsion bar and resilient elements between said yoke and the adjacent second part.

3,045,536
CAMERA MOTOR CONTROL
Niro Akahane, Suwa-gun, Nagano-ken, Japan, assignor to Yashica Co. Ltd., Tokyo, Japan, a corporation of Japan
Filed Dec. 29, 1959, Ser. No. 862,635
Claims priority, application Japan Jan. 16, 1959
3 Claims. (Cl. 88—16)



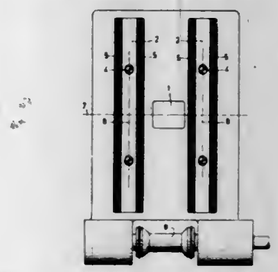
1. In a motion picture camera including a drive motor and a control element movable between a motor stop and a motor go position, a control member coupled to said control element and vertically movable between a stop and go position, a button having an axial aperture formed therein located exterior of said camera and connected to said control member and movable therewith along a vertical path, means releasably latching said control member in its stop position, and a second transversely movable manipulative member actuating said latching means and including a leg slidably registering with said axial aperture.

3,045,537
APPARATUS FOR THE AUTOMATIC PROJECTION OF SELECTED SOUND FILMS
Andre Lucien Felix Prat, 15 Ave. Dufau, Pau, Basses Pyrenees, France, assignor of one-third to Eric Benedic, Paris, France
Filed July 24, 1959, Ser. No. 829,415
Claims priority, application France July 31, 1958
5 Claims. (Cl. 88—16.2)



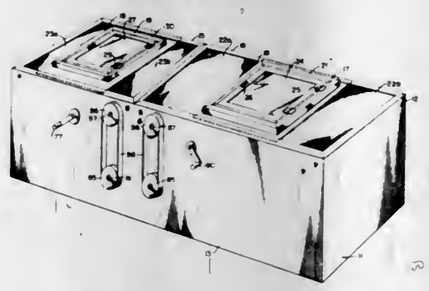
1. An apparatus for the automatic projection of selected sound films comprising selecting means for manual selection of one of the sound films, a plurality of separated and independent magazines each carrying one of the sound films and normally lying each in an inoperative position on an arcuate line having an axis, separate supporting means for each magazine, stationary reproducing means having an axis separate from, offset with respect to, and substantially orthogonal to, the axis of said arcuate line, said reproducing means including a projecting system, a system for acoustic reading and reproduction comprising film-driving means, control means carried by each magazine for operatively connecting the film with the film-driving means, projecting system and acoustic reading and reproduction system upon engagementt of the magazine with the stationary reproducing means and automatic control means controlled by the selecting means adapted to shift by a compound pivotal and translational movement the magazine carrying the selected film into its operative position engaging the stationary reproduction means for projection and acoustic reproduction, each of said magazines forming with its supporting means an angle such as to bring said magazine in operative registry with said reproducing means upon completion of said shifting, said control means being further adapted to return said magazine into its inoperative position after said projection and acoustic reproduction and to thereafter return the selecting means into their original condition, each film being provided at its beginning and at its end with reference marks each consisting of a transparent gate formed in an opaque strip, and cycle-control means comprising a rotating commutator and a photocell cooperating with said reference marks.

3,045,538
FILM GUIDE FOR FILM PROJECTOR
Jan Jacob Kotte, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,613
Claims priority, application Netherlands Aug. 14, 1958
3 Claims. (Cl. 88—17)



1. A film device comprising a pair of spaced guide plates for the film, a projection aperture located between said spaced guide plates, a film feed device, each guide plate having at least two spaced, elongated strips of friction material, said strips being parallel to the longitudinal axis of the guide plate, and in the mounted position the distance between the longitudinal axes of said guide plates being at least equal to the width of the film and said guide plates being movable to change the position of said strips.

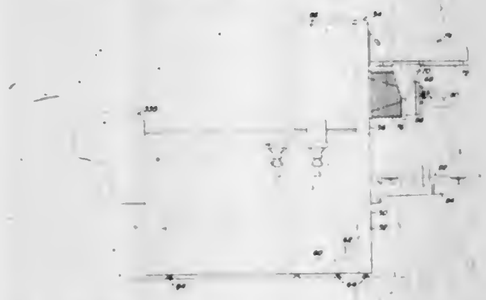
3,045,539
COPY CAMERA
Gilbert J. Dupre, 2007 Cedardale Ave., Baton Rouge, La.
Filed Jan. 10, 1961, Ser. No. 81,779
7 Claims. (Cl. 88—24)



1. A camera comprising an elongated horizontal housing, said housing having first and second end walls, side walls, a bottom wall and a vertical partition dividing said housing into a first compartment between said first end wall and said partition and a second compartment between said second end wall and said partition, a fixed lens system mounted in said partition to provide light communication between said compartments, a copy holder slidably mounted for longitudinal movement in the upper portion of said housing between said partition and said

first end wall, a take up means adjacent said first end wall, a flexible opaque web secured to said copy holder and operatively associated with said take up means to provide a light tight closure between said copy holder and said first end wall, a second take up means adjacent said partition, a second flexible opaque web secured to said copy holder and operatively associated with said second take up means to provide a light tight closure between said copy holder and said partition, a film holder slidably mounted for longitudinal movement in the upper portion of said housing between said partition and said second end wall, a third take up means adjacent said second end wall, a third flexible opaque web secured to said film holder and operatively associated with said third take up means to provide a light tight closure between said film holder and said second end wall, a fourth take up means adjacent said partition, a fourth flexible opaque web secured to said film holder and operatively associated with said fourth take up means to provide a light tight closure between said film holder and said partition, a light reflecting means slidably disposed in said first compartment below said copy holder for reflecting light rays from said copy holder to said lens, a second light reflecting means slidably disposed in said second compartment for reffecting light rays from said lens to said film holder, means for simultaneously moving said copy holder and said first light reflecting means toward or away from said partition, means for simultaneously moving said film holder and said second light reflecting means toward or away from said partition, a carriage slidably mounted in said first compartment between said copy holder and said first light reflecting means, variable speed means for moving said carriage from a position adjacent said partition to a position adjacent said first end wall and return, a light source housed in said carriage, said carriage having an elongated narrow slit so disposed as to project an elongated narrow beam of light to the lower surface of said copy holder in advance of said carriage as the carriage moves from said partition toward said first end wall to progressively scan copy in said copy holder, whereby a progressive image of the copy is reflected through said lens and progressively across a film carried by said film holder, the speed of movement of said carriage determining the duration of exposure of the film.

3,045,540
AUTOMATIC COPYING CAMERA
Arthur W. Caps, Rochester, and Adam N. Rittinger, Irondequoit, N.Y., assignors to Photostat Corporation, Providence, R.I., a corporation of Rhode Island
Continuation of application Ser. No. 504,850, Apr. 29, 1955. This application Aug. 29, 1958, Ser. No. 758,164
16 Claims. (Cl. 88—24)



1. An automatic copying camera comprising means for holding a web of photographically sensitized sheet material, means for exposing said material, means for feeding said material from said holding means to said exposing means, means for cutting off exposed material fed by said feeding means, a first shaft rotatable alternately in opposite directions, clutch means operating in one of said directions of rotation only for connecting said shaft with said feeding means for driving said feeding means in one direction only, a second shaft rotatable in the other of said directions only in coaxial alignment with said first shaft, means for connecting said second shaft with said cutting-off means to sever said exposed material, a reversible, electrical motor connected to said first shaft for rotating the same in said opposite directions, clutch means for connecting said shafts for rotating said second shaft in said other direction through one revolution only, and means for reversing the direction of rotation of said motor to feed a predetermined length of said material and thereafter rotate said second shaft to cut off said length of exposed material.

3,045,541
SLIDE PROJECTOR
Irvin Bregman, P.O. Box 1261, Plainfield, N.J.
Filed Sept. 8, 1958, Ser. No. 759,484
3 Claims. (Cl. 88—24)



1. In combination, a slide projector and first and second transparent slides positioned in spaced relationship in a single interchangeable holder for simultaneous projection, said slide projector having first and second lens systems, said lens systems each having a discernibly different focal length, means to simultaneously position said first and second slides in focal alignment with said first and second lens systems respectively, and means to simultaneously remove said slides in said single holder from focal alignment with said lens system, whereby a plurality of pairs of transparent slides may be shown in a preselected sequence.

3,045,542
PROJECTION SYSTEM CORRECTED FOR MARGINAL DISTORTION
Nisson A. Finkelstein, Penfield, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed Apr. 22, 1959, Ser. No. 808,135
8 Claims. (Cl. 88—24)



1. Means for projecting a substantially undistorted image of a motion picture film onto a curved screen from a level projector which is located higher than the center of said screen so that said image is substantially free from marginal distortion as seen by an observer located in the preferred seats of a theater, said screen being curved in at least a horizontal direction about a point which is located in a vertical plane medially of the viewing area, means for transilluminating said film, a projection objective aligned on a common horizontal axis with said transilluminating means and film to form an image of said film upon said screen, and prismatic means optically aligned for deviating the projected beam downwardly upon said screen in such a manner as to produce a non-linear correcting aberration for the marginal distortion in said

image, said aberration increasing from the midportion outwardly thereof and being opposed to and substantially equal to said marginal distortion, said prismatic means consisting of a plurality of spaced deviation prisms having their entrance faces located substantially radially with respect to the same point therebelow.

3,045,543
SPECTACLES HAVING ATTACHMENT MEANS FOR BROWPIECES
Martin J. O'Dea, Rochester, and Raymond F. E. Stegeman, Greece, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Sept. 1, 1960, Ser. No. 53,433
2 Claims. (Cl. 88—41)



1. In a spectacle frame having a lens rim and a demountable browpiece overlying and extending around at least the outer temporal portion of said rim and having a temple hinge plate fixed thereto having hinge elements thereon, said means having in combination a screw accommodating area formed contiguous to said elements on said plate in the proximity of the hinge axis, a circular wall defining an opening through said area and located closely adjacent to said elements in a position to be at least partly covered by a demountable part of said hinge, an anchor lug fixed to said temporal portion and extending outwardly across said opening through a recess in said browpiece wherein it is slidably fitted, and a retaining screw extending through said opening and having a threaded engagement with said lug whereby said browpiece is demountably held on said rim and said retaining screw is effectively locked in assembled position by the completion of the hinge assembly.

3,045,544
STEREOSCOPIC SPECTACLE LOUPE
Arno G. Schmidt, 238 E. 86th St., New York, N.Y.
Filed June 20, 1957, Ser. No. 666,865
1 Claim. (Cl. 88—41)



An optical device for spectacles comprising a frame having a bridge portion, two eye portions and a pair of arms extending from the eye portions and adapted to be disposed adjacent the temples of a pair of spectacles, said eye portions having lens openings therein, a pair of different lenses mounted at the lens opening of each eye portion of the frame and disposed one above the other at said lens opening, a pair of mounting brackets removably fastened to spectacle temples, means pivotally to secure said arms to said mounting brackets, said means having two predetermined arm holding positions, one position to dispose the lowermost lenses in eye alignment and the other position to dispose the uppermost lenses in eye alignment, said means including two spaced guide pins on said mounting brackets and said arms each having a slotted opening slidably to receive said guide pins with at least two recessed pin seating grooves for selectively seating one of the guide pins, to selectively position said arm in said predetermined positions and resilient members on the arms adjacent to and disposed in said slotted openings normally to bias the arm into one of the predetermined frame holding positions.

3,045,545
OPTICAL SYSTEM FOR SIGHTING INSTRUMENTS
Herbert D. Korones, Rochester, and Harold E. Rosenberger, Brighton, N.Y., assignors to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Nov. 10, 1960, Ser. No. 68,504
4 Claims. (Cl. 88—57)



1. A zoom type of pancratic optical system for sighting instruments and the like comprising an objective member, a focusing member, a field lens, a pair of movable erector lenses for varying the magnification of the image through a range of substantially 4:1 and an eyepiece for viewing the image formed by said erector lenses, all of these lens parts being optically aligned in the order named, said erector lenses being movable differentially with reference to a stationary image formed cooperatively by the objective member, focusing member and said field lens, said erector lenses being located between said image and a second substantially stationary image plane formed rearwardly of and by the aforesaid erector lenses, the focal length F_V of the rearmost erector lens being 80% to 84% of the focal length F_{IV} of the front erector lens and the axial distance between said image and said second image plane being between $2.9F_{IV}$ and $3.0F_{IV}$, whereby a magnification range of substantially 4:1 is provided for the instrument, the principal ray being so controlled by the lens members ahead of the erector lenses and by the erector lenses that said ray traverses said eyepiece along substantially the same path during all changes of magnification, the control function being effected by a calculated combination of focal lengths and spacings of objective I, focusing lens II, field lens III and erector lenses IV and V, as follows:

$$6.0F_{IV}<F_I<7.2F_{IV}$$
$$1.6F_{IV}<-F_{II}<2.0F_{IV}$$
$$1.2F_{IV}<F_{III}<1.5F_{IV}$$
$$3.90F_{IV}<S_2<4.76F_{IV}$$
$$1.33F_{IV}<S_4<1.61F_{IV}$$
$$.31F_{IV}<S_5<.38F_{IV}$$

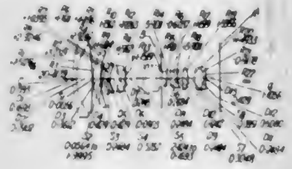
wherein,

F_I is the focal length of the objective lens
F_{II} is the focal length of the focusing lens
F_{III} is the focal length of the field lens
S_2 is the axial space between lens I and lens II
S_4 is the axial space between lens II and lens III
S_5 is the axial space between lens III and the first focal plane following lens III.

3,045,546
OPTICAL OBJECTIVES OF VARIABLE FOCAL LENGTH
Gordon Henry Cook, Leicester, England, assignor to Taylor, Taylor & Hobson Limited, Leicester, England, a British company
Filed Sept. 29, 1958, Ser. No. 764,006
Claims priority, application Great Britain Oct. 2, 1957
14 Claims. (Cl. 88—57)

1. An optical objective of variable focal length corrected for spherical and chromatic aberrations, coma, astigmatism, field curvature and distortion throughout

the range of variation, comprising a stationary convergent rear member including at least six air-exposed surfaces and a divergent combination constituted by an axially movable divergent member located in front of the stationary rear member and an axially movable convergent member located in front of such axially movable divergent member, the ratio of the equivalent focal length of the divergent combination of the front two members to the equivalent focal length of the complete objective remaining constant and the virtual image of a distant object formed by such divergent combination having a constant axial position relative to the stationary rear member throughout the range of variation, and the convergent front member comprising a plurality of convergent components including at least one simple component and at least one doublet component having a dispersive internal contact surface which is convex to the front, the difference between the refractive indices of the materials of the two elements of such doublet component of the front member lying between 0.05 and 0.15, while the divergent

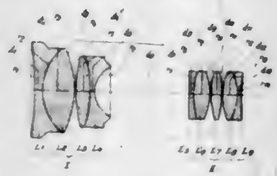


second member comprises a plurality of divergent components including a divergent doublet rear component having a collective internal contact surface which is convex to the front with radius of curvature lying between $0.66f_2$ and $1.5f_2$, where f_2 is the equivalent focal length of the second member, the mean refractive index of the material of the rear element of such doublet component of the second member exceeding that of the material of the front element of such component by between 0.15 and 0.3, and the plurality of divergent components of the divergent second member also including at least one divergent simple meniscus component which has a rear surface convex to the front with radium of curvature not less than $0.33f_2$ and not greater than the range of axial movement of such divergent second member, while the overall axial length of the divergent second member lies between $0.6f_2$ and $1.3f_2$, the ratio of the equivalent focal length of the divergent combination of the front two members to the equivalent focal length of the whole objective lying between 3 and 8 times the reciprocal of the f/number of the objective.

3,045,547
HIGH-SPEED PHOTOGRAPHIC OR CINEMATOGRAPHIC OBJECTIVE WITH WIDE IMAGE ANGLE

Wolfram Albrecht, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany

Filed Sept. 30, 1958, Ser. No. 764,368
Claims priority, application Germany Oct. 11, 1957
2 Claims. (Cl. 88—57)



1. An optical objective system comprising a first, positively refracting meniscus-shaped doublet composed of a negative first lens and a positive second lens, a second, negatively refracting meniscus-shaped doublet air-spaced from said first doublet and composed of a positive third lens and a negative fourth lens, a third, positively refracting, substantially plano-convex doublet separated from said second doublet by a diaphragm space and composed of a negative fifth lens and a positive sixth lens, a biconvex seventh lens air-spaced from said third doublet, and a meniscus-shaped fourth doublet air-spaced from said seventh lens and composed of a positive eighth lens and a negative ninth lens, said first and second doublets having convex sides facing each other and being provided with cemented surfaces turning their concave sides toward each other, the refractive indices of said first and third lenses respectively exceeding those of said second and fourth lenses whereby the refractivity of said cemented surfaces is negative in said first doublet and positive in said second doublet, said third and fourth doublets having convex sides facing said seventh lens and being provided with cemented surfaces turning their concave sides toward said seventh lens, said first and second doublets having cemented surfaces across which their refractive indices differ by a value greater than 0.22, said third and fourth doublets having cemented surfaces across which their refractive indices differ by a value less than 0.22.

3,045,548
TELEPHOTO OPTICAL DESIGN

James G. Baker, Winchester, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Apr. 10, 1959, Ser. No. 805,642
2 Claims. (Cl. 88—57)

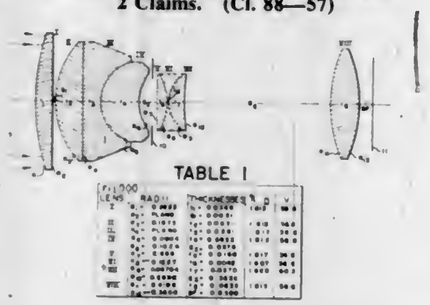


TABLE I

1. The telephoto lens system comprising a plurality of axially aligned components having numerical data substantially as follows:

[Focal length $f=1.000$]

Lens	n_D	V	Radii	Thicknesses
I	1.613	58.6	$R_1=0.4822$ $R_2=$plano	$t_1=0.0369$ $S_1=0.0031$
II	1.613	58.6	$R_3=0.1973$ $R_4=$plano	$t_2=0.0631$
III	1.617	36.6	$R_5=0.0904$	$t_3=0.0391$
IV	1.613	58.6	$R_6=0.1024$ $R_7=2.659$	$t_4=0.0833$ $S_2=0.0376$
V	1.617	36.6	$R_8=-0.1227$	$t_5=0.0198$
VI	1.607	59.5	$R_9=0.06704$	$t_6=0.0042$
VII	1.620	60.3	$R_{10}=0.2998$ $R_{11}=0.4188$	$t_7=0.0370$ $S_3=0.3532$
VIII	1.613	58.6	$R_{12}=-0.3300$	$t_8=0.0632$ $BF=0.0300$

in which n_D is the index of refraction for the D line of the spectrum, V is the Abbé number, R_1, R_2 . . . indicate the radii of the individual surfaces starting from the front, t_1, t_2 . . . indicate the actual thicknesses of the individual elements, and S_1, S_2 . . . indicate the axial lengths of the air spaces between the components, BF being the back focal distance.

3,045,549
TELEPHOTO OPTICAL DESIGN

James G. Baker, Winchester, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Apr. 10, 1959, Ser. No. 805,643
1 Claim. (Cl. 88—57)

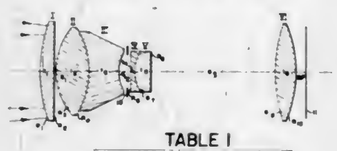


TABLE I



A telephoto lens system comprising a plurality of axially aligned components having numerical data substantially as follows:

[$f=1.000$]

Lens	n_D	V	Radii	Thicknesses
I	1.613	58.6	$R_1=0.488$ $R_2=$plano	$t_1=0.0374$ $S_1=0.0032$
II	1.613	58.6	$R_3=0.200$ $R_4=-0.254$	$t_2=0.0933$
III	1.617	36.6	$R_5=0.105$ $R_6=-0.936$	$t_3=0.0974$ $S_2=0.0304$
IV	1.613	58.6	$R_7=0.105$	$t_4=0.0122$
V	1.596	39.2	$R_8=0.936$ $R_9=0.468$	$t_5=0.0478$ $S_3=0.369$
VI	1.617	36.6	$R_{10}=-0.359$	$t_6=0.058$ $BF=0.0300$

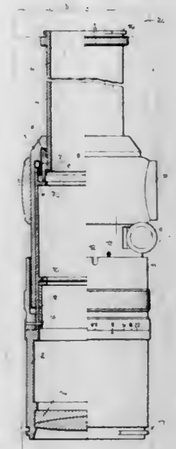
in which R_1, R_2 . . . indicate the radii of the individual surfaces starting from the front, t_1, t_2 . . . indicate the actual thicknesses of the individual elements, and S_1, S_2 . . . indicate the axial lengths of air spaces between the components, BF being the back focal distance.

3,045,550
TELESCOPING TELEPHOTO LENS

Ferdinand Kellner, Buxach, near Memmingen, Bavaria, Germany, assignor to Novoflex Fotogerätebau Karl Muller, Amendingen, near Memmingen, Germany

Filed Sept. 28, 1959, Ser. No. 842,640
Claims priority, application Germany Sept. 27, 1958
4 Claims. (Cl. 88—57)

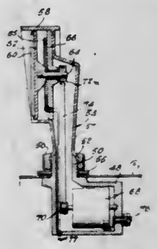
1. A telephoto lens arrangement comprising, in combination, a lens tube; a diaphragm arranged in said lens tube movable between a closed position and an open position in which latter position said diaphragm has a predetermined diaphragm opening; means for moving said diaphragm between said positions thereof; a rear tube having a cross sectional area smaller than said predetermined diaphragm opening so as to be adapted to move through said diaphragm opening when said diaphragm is in said open position, said rear tube being slidably arranged within said lens tube and movable between an extended position in which it is spaced from said diaphragm and a collapsed position in which it projects partly through said diaphragm opening; locking means operatively connected to said tubes and movable between a locking and a releasing position for preventing in said locking position movement of said rear tube from said extended to said collapsed position; and means interconnecting said means for moving said diaphragm with said locking means to permit movement of said locking means to said releasing position thereof only when said means for moving said diaphragm have moved said diaphragm to said open position thereof.



3,045,551
REAR-VIEW MIRROR

Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York

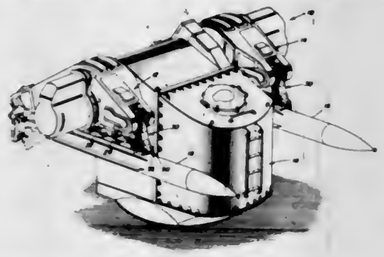
Filed Feb. 24, 1959, Ser. No. 795,175
2 Claims. (Cl. 88—98)



1. A rear view mirror adapted for pivotal mounting on a body panel of a vehicle comprising a hollow housing having an open end, elongated tubular support means connected to said housing forming a passageway in communication with said housing and with the inside of the mounting vehicle body panel, a mirror support shaft rotatably mounted in said hollow housing, a mirror affixed to said shaft and rotatable therewith in the open end of said housing for rotation of said mirror about an axis perpendicular to the surface thereof, heating means mounted within said hollow housing near the rear surface of the mirror to maintain the mirror in defrost condition, pivotal mounting means at one end of said tubular support means for permitting angular adjustment of said housing relative to the vehicle body panel, drive means mounted from within the vehicle inside the body panel for rotating the mirror at a speed sufficient to discharge by centrifugal force foreign substances which may become lodged on said

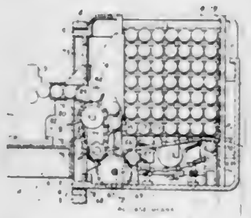
mirror, and having an output shaft, and torque transmitting means operatively extending from said drive means output shaft through said tubular support means to connect said drive means to said rotatable mirror support shaft.

3,045,552
MISSILE LAUNCHER FRONT GUIDE AND LATCHING MECHANISM THEREFOR
Arvid Grenstad, Ralph F. Hereth, and Lawrence R. Morris, Port Orchard, and George M. Sherman, Bremerton, Wash., assignors to the United States of America as represented by the Secretary of the Navy
Filed Aug. 11, 1960, Ser. No. 49,107
11 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



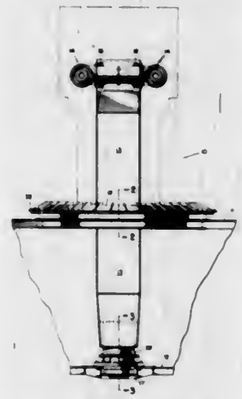
1. In a missile launcher having a pair of launcher arms for receiving on each a missile to be launched, a front guide mounted for pivotal movement between two positions on the forward portion of each of said arms, a rail member mounted on said front guide for reception of the front lug on said missile, spring means for biasing said front guide in one of said two positions, means for moving said front guide to the other of said two positions against the action of said spring means, locking means for releasably securing said front guide in the other of said two positions while said front lug on said missile is in contact with said rail, means responsive to the movement of the front lug into contact with the forward rail for engaging said locking means, and means for releasing said locking means when said front lug moves out of contact with said rail.

3,045,553
MAGAZINE CONTAINER FOR AUTOMATIC FIRE ARMS
Ernst Mösle, Zurich, Switzerland, assignor to Machine Tool Works Oerlikon, Administration Company, Zurich-Oerlikon, Switzerland, a company of Switzerland
Filed Feb. 11, 1960, Ser. No. 8,075
Claims priority, application Switzerland Feb. 13, 1959
12 Claims. (Cl. 89—33)



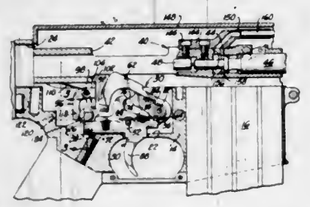
1. A magazine container for automatic firearms containing cartridges and loading clips, said cartridges being combined into sets of cartridges in said loading clips, said container having a bottom, said loading clips being inserted in said magazine container in a direction vertically to said bottom to perform a straight movement with a substantially constant velocity in said direction through said magazine container, said container comprising in combination a control means having movable supporting faces to control said movement of said loading clips, power operated conveyor means causing said movement by pushing said loading clips individually to said movable supporting faces, said control means releasing said loading clips after controlling said movement for expelling said loading clips out of said magazine container, driving means interconnecting said power operated conveyer means and said control means to coordinate said control means with said conveyer means and stripping means for stripping said cartridges off said loading clips during said movement of said loading clips.

3,045,554
ORDNANCE MOUNT AND SUPPORTING STRUCTURE THEREFOR
Ernest F. Campbell, Springfield, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 26, 1956, Ser. No. 580,969
4 Claims. (Cl. 89—37)
(Granted under Title 35, U.S. Code (1952), sec. 266)



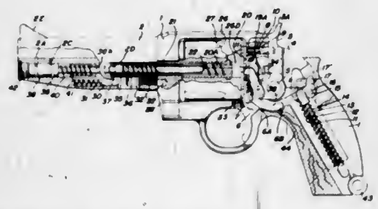
1. An ordnance mount comprising; a longitudinally disposed rotatable colum member adapted to support an ordnance device at one end thereof for rotation, a first deck saving an aperture therein, a second deck disposed beneath said first deck, a bearing support mounted on the column member and provided with a pair of radially disposed mutually spaced circular plates carried by said column member intermediate the ends thereof and in alignment with said aperture and in spaced relationship with said first deck, said support having a circular peripheral edge member secured to the peripheral edges of said plates, a spindle secured to the other end of said column member, a deck ring secured to said first deck adjacent said aperture and having a downwardly extending flange integrally formed therewith and disposed within said aperture and an upwardly extending flange integrally formed therewith in spaced relationship with said edge member, radial bearing means disposed between said edge member and said upwardly extending flange for rotatably supporting said column member on said first deck, a bearing housing secured to said second deck and enclosing said spindle, a pair of roller bearings disposed within said housing between the housing and the spindle for rotatably supporting the column member on said second deck, a training circle secured to said downwardly extending flange on said deck ring and disposed within said aperture, a training pinion rotatably supported on said circular plates in engagement with said training circle and rotated with respect thereto for rotating said column member, and power means carried by said column member and operatively connected to said training pinion for driving said pinion.

3,045,555
AUTOMATIC TRIGGER MECHANISM WITH THREE SEARS AND A ROTATABLE CONTROL MEMBER
Eugene M. Stoner, Newport Beach, Calif., assignor to Fairchild Engine and Airplane Corporation, Hagerstown, Md., a corporation of Maryland
Filed Dec. 22, 1959, Ser. No. 861,288
10 Claims. (Cl. 89—142)



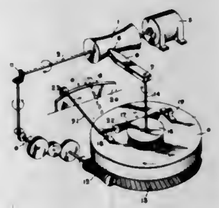
1. In a trigger mechanism, the combination of: a receiver; a bolt assembly mounted for longitudinal movement in said receiver between retracted and battery positions; a trigger pivotally mounted in said receiver having a fixed sear thereupon; a hammer on a pivot mounted in said receiver adapted to be urged into retracted position by said bolt assembly during its movement between battery and retracted positions, said hammer having a sear abutment thereupon engageable by said sear on said trigger to retain said hammer in cocked position; a torsion spring on said hammer pivot for actuating said hammer; an intermediate sear mounted in operative relationship with said trigger and engageable with said hammer to momentarily maintain said hammer in cocked position; an automatic sear pivotally mounted in said receiver adjacent said hammer and directly engageable with said hammer; and a common safety engageable with said trigger, said intermediate sear and said automatic sear to determine the effective relationship between said hammer, said trigger, said intermediate sear and said automatic sear.

3,045,556
GAS OPERATED AUTOMATIC REVOLVER
Edward I. Westmoreland, 30 Newfield St., Plymouth, Mass.
Filed Oct. 7, 1959, Ser. No. 844,989
8 Claims. (Cl. 89—191)



1. An automatic revolver comprising a frame carrying a barrel, a rotatable cylinder mounted in said frame and having a plurality of chambers successively aligned with said barrel as the cylinder is rotated, and a hollow handgrip portion rigidly fixed to said frame; a gas cylinder communicating with said barrel by a small port, a gas piston reciprocally mounted in said cylinder, a buffer and return spring means biasing said piston forwardly, a cocking drive means driven by said piston during its rearward motion, a first pivot means mounted on said frame, a thumb-actuable cocking lever pivotally mounted on said pivot means and spring means normally biasing said lever to a forward position, a cam surface on said lever engageable by said cocking drive means to pivot said cocking lever rearwardly against its normal bias, a forwardly spring-biased hammer engageable by said cocking lever during its rearward motion to move said hammer into cocking position; and trigger means having a sear portion for engaging said hammer in said cocking position to prevent return of the hammer until the trigger is pulled, and ratchet means on said cylinder, a hand spring-biased toward said ratchet means to move the cylinder chambers step by step into firing position, and pivot means on said cocking lever mounting said hand thereon for reciprocatory ratchet-engaging motion as said cocking lever is moved during hammer-cocking operation.

3,045,557
METHOD OF CUTTING COOPERATING WORMS AND WORM WHEELS
Akira Yamamoto, Tokyo, and Akira Toyama, Kawasaki, Japan
Filed Dec. 1, 1958, Ser. No. 777,347
4 Claims. (Cl. 90—4)



1. A method for making a worm wheel, comprising the steps: forming a hob having a generally hourglass shape wherein the root thereof is of circular cross-section and the diameter of said root varies from one end to the other so that those surface elements of said root which lie in a diametric plane through said worm comprise arcs of a circle, and providing a cutting thread arranged around said root in generally helical form wherein the lead of said thread varies in one direction from a norm in one portion of the axial length of said hob and varies in the other direction from said norm in another portion of the axial length of said hob; and rotating said hob against a gear blank for forming a worm wheel.

3. A method of making an hourglass-shaped object comprising the steps; rotating a blank; applying a metal removing device against said blank at one end thereof and progressively moving said device axially along said blank while said blank is rotating to form a thread thereon, said device as it moves between one end of said blank and a point near the center thereof being moved axially at a rate which progressively changes in one direction, said device as it moves between said point and the other end of said blank being moved axially at a rate which progressively changes in the opposite direction.

3,045,558
PACKAGING MACHINE
Harry E. Engleson, Chicago, and Elmer D. Sramek, Cicero, Ill., assignors to Crompton & Knowles Packaging Corporation, Holyoke, Mass., a corporation of Massachusetts
Filed Mar. 18, 1959, Ser. No. 800,132
5 Claims. (Cl. 93—1)

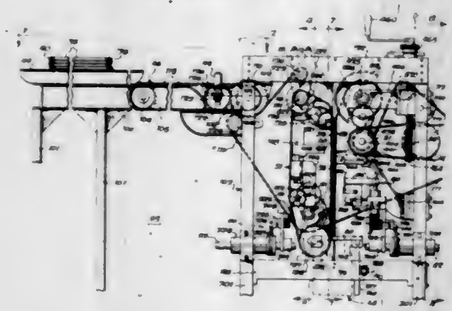
1. In a packaging machine for wrapping articles in a sheet of wrapping material having an opening element therefor, mechanism for continuously making sheets of wrapping material having opening threads secured thereto comprising, a joining roller having a relatively wide

main material receiving portion and a relatively thin thread receiving portion having a groove, said thread receiving portion being slightly spaced from said main material receiving portion, means for applying a thermoplastic substance to an endless thread, said thermoplastic substance coated thread being trained over said thread receiving portion of said joining roller and guidably received in said groove, means for heating said thread receiving portion to maintain the thermoplastic substance fluid, means for feeding sheets of wrapping material to said roller and in overlying relationship to said thread,
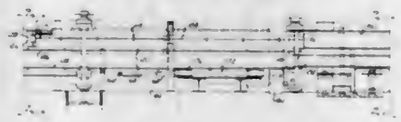


the speed of the feeding means being such relative to the speed of the roller that the sheets are spaced a predetermined distance apart on said roller, a chiller drum of open type construction and being substantially larger than said joining roller, means for guiding and feeding the sheet around the roller and said drum, means for guiding the sheets and threads from the roller and onto said drum whereby the sheets underly the thread, said chiller drum cooling said thermoplastic substance and securing the thread to the sheets, and means for severing said thread adjacent one edge of each sheet after the thread and sheets leave the drums.

3,045,559
INNER VALVE SLEEVE MACHINE
Clinton R. Hollis, Camden, Ark., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed Jan. 19, 1960, Ser. No. 3,377
32 Claims. (Cl. 93—8)



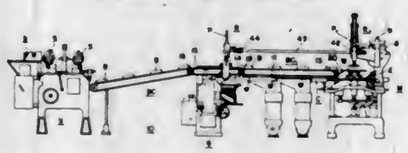
1. A machine for performing feeding, valving and sleeving operations on gusseted bags, comprising, in combination, a delivery mechanism for feeding successive bags from a supply thereof to a predetermined location, bag support means movable between a first position and a second position, said bag support means when in said first position defining a plane in which each successive bag is supported at said location, valve forming means disposed adjacent said location and adapted to form an opened valve by folding the walls of the bag at said location apart adjacent one corner thereof to effect infolding of the valve-forming portion at said one bag corner, the edge of the valve lip extending along a straight line, tucking support means movable toward and away from said valve forming means about a first axis transverse to said plane, tucking means for inserting a portion of a valve sleeve insert blank behind the lip of the opened valve of the bag at said location and into contact therewith, said tucking means including at least one tucker member supported on said tucking support means for movement relative thereto about a second axis parallel to said plane, creasing means for medially folding said blank as said valve-forming means becomes effective to close the formed and sleeved valve, discharge means disposed adjacent the second position of said bag support means, and means for moving said bag support means from said first position to said second position, to thereby move said valved and sleeved bag from said predetermined location into juxtaposition with said discharge means, said discharge means being effective to withdraw said valved and sleeved bag from said bag support means upon the movement thereof to said second position.

3,045,560
APPARATUS FOR AND METHOD OF MANUFACTURING FLEXIBLE CONTAINERS
Raymond M. Bell, St. Davids, Walter F. Gooding, Berwyn, and Fred C. Wellman, Bryn Mawr, Pa., and James A. McDevitt, Mount Vernon, Ohio, assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed June 11, 1958, Ser. No. 741,310
20 Claims. (Cl. 93—8)



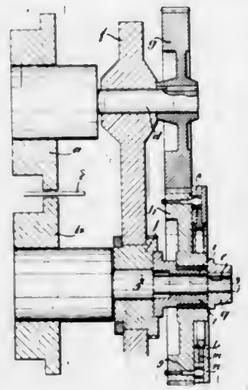
1. In a device for closing the ends of dust bags, means for moving the bags with open ends transversely along a path in spaced relation to each other, means for reducing the spacing of said bags, means for adhering approximately one-half the width of a continuous strip of sealing tape to the bags adjacent to their open ends as the bags move along said path in closely spaced relation, the other half of the width of said tape extending beyond the open ends of the bags, means for applying a stream of adhesive to said other half to cause adhesive to flow into said open ends, means for folding said other half over the open ends to thereby close the latter, means for applying pressure to the folded over strip to cause it to adhere to the bags, and means for thereafter severing said folded strip between each bag.

3,045,561
AUTOMATIC BOX-WRAPPING SYSTEM FOR LOOSE-WRAP AND TIGHT-WRAP WORK
Roy Schempp, Philadelphia, Pa., assignor to FMC Corporation, a corporation of Delaware
Filed May 20, 1960, Ser. No. 30,648
5 Claims. (Cl. 93—54)
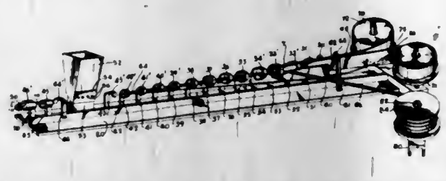


1. An automatic box-wrapping system for "loose-wrap" work comprising box conveyor means for cyclically moving set-up boxes along a path, stop means for interrupting the movement of the boxes at a predetermined location on said path above a transfer station, wrapper conveyor means for cyclically feeding wrappers in succession below and in a path parallel to that of said box conveyor means, said wrappers having unset adhesive along the edges of their upper surface, means extending over said wrapper conveyor means for interrupting the feeding movement of the wrappers at the transfer station, vertically reciprocating means movable between the predetermined location and the transfer station for moving said boxes in succession downwardly into register with corresponding wrappers, a wrapping station at one side of said transfer station, and transfer means movable transversely of both of said conveyor means at said transfer station for transferring each box and wrapper in registered relation from the transfer station to said wrapping station for application of the adhesive-coated wrapper to the box.

3,045,562
BOXMAKING AND LIKE MACHINES
Harold Bromley, Cheadle Hulme, England, assignor to Henry Simon Limited, Stockport, England, a British company
Filed Aug. 4, 1961, Ser. No. 129,436
Claims priority, application Great Britain Sept. 29, 1960
1 Claim. (Cl. 93—58.2)



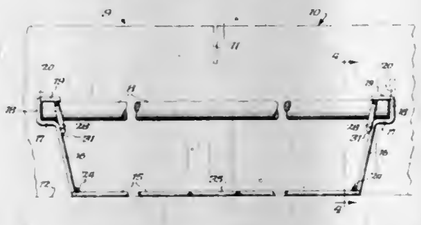
A slotting machine or slotter of the type referred to for making boxes and the like from corrugated cardboard, in which there are two intermeshing rotary cutter or die elements between which the board is passed, the shafts of said rotary cutter or die elements being positively driven the one by the other through gear wheels, the shaft of the rotary cutter or die element which is driven by the shaft of the other element being adjustable away from and towards the other shaft, and the drive between the driven gear wheel and its shaft incorporating a coupling which allows of the radial adjustment of the shaft whilst maintaining constant the angular velocity of the two shafts, characterized in this that the said coupling is adjustably arranged to eliminate back-lash between its relatively moving parts and incorporates a three element transmission unit, the centre element spigotally supporting and being sandwiched between two outer elements and having four radial slots adjacent its periphery at 90° to one another, two stub shafts in the driven gear wheel engaging two in-line radial slots in one outer and the centre element, and two stub shafts in radial arm extension of a hub secured on the end of the driven shaft engaging two in-line radial slots in the other outer element and the centre element, there being adjustable jack-screw linkages between the centre element and each of the outer elements of the transmission unit whereby the rotational alignment of the linked elements may be adjusted relative to one another so as to reduce the clearance between the working edges of the slots in the said linked elements and the engaging surfaces of the stub shafts.

3,045,563
TUBE FORMING DEVICE
Joseph P. Lo Russo, Canfield St., Stanhope, N.J.
Filed June 24, 1960, Ser. No. 38,498
1 Claim. (Cl. 93—82)



A device for forming a tube from strip sheet material on reels, comprising a support, a series of spaced upright posts on said support, said posts having curved ends of progressively greater circumferential extent for curling the strip material manually fed therethrough, another series of spaced posts, having portions defining rings of progressively smaller diameter in axial alignment on said support for shaping the curled strip material manually fed therethrough into a tube of predetermined diameter, an elongated tapered member U-shaped in cross section for guiding the material manually fed through said curved ends and rings mounted on said posts, still another post with curved end on the support beyond said rings for holding a free edge of the tube spaced from the exterior thereof, a glue pot on the support having nozzles disposed to apply glue to the exterior of the tube in a line adjacent to said free edge, and another post with curved end for pressing the free edge of the tube against the applied glue along said line, and a plurality of short tubes disposed in alignment for effecting compression of the tube to seal said free edge to the tube, one of the short tubes having an end formed with spring fingers disposed in a constricted ring to shape the glued tube to minimum diameter.

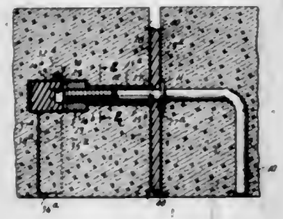
3,045,564
DOWEL SUPPORTING STRUCTURE FOR HIGHWAY JOINTS
Alfred F. Crone, Williamsville, N.Y., assignor to Acme Highway Products Corporation, Buffalo, N.Y.
Filed Jan. 31, 1958, Ser. No. 712,539
4 Claims. (Cl. 94—8)



3. A dowel supporting structure for use in a highway joint, including a plurality of dowel holders formed of wire rods, and arranged below said dowels, each dowel holder having a base and arms secured to and extending upwardly from the ends of said base, the upper ends of said arms extending beyond and in close proximity to the ends of said dowels to confine the same against movement in the direction of its length, and connecting members also made of wire rods secured to a plurality of said holders at said arms for spacing the same in desired rela-

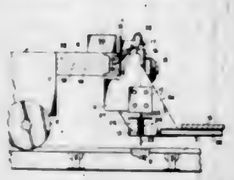
tion to each other, said connecting members having downwardly extending bent portions at said arms forming downwardly converging recesses into which end portions of said dowels lie, said arms substantially bisecting said recesses and means on said arms which are bent over the upper surfaces of said dowel to hold the same in said recesses.

3,045,565
EXPANSION JOINT KIT
Felix L. Nettleton, 51 W. O'Reilly St., Kingston, N.Y.
Filed June 25, 1957, Ser. No. 667,900
2 Claims. (Cl. 94—18)



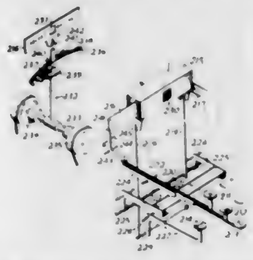
1. In an expansion joint of the type comprising two parallel elongated members provided with at least one pair of registering apertures and located between two adjacent concrete slabs, said elongated members being separated by a packing of yielding material, a rigid dowel having a first arm embedded in one of said slabs and lying in a plane parallel to said elongated members and a second arm extending transversely through said pair of registering apertures in said elongated members and said yielding material and terminating in a threaded portion, a nut having a non-circular cross-section mounted on said threaded portion, and a housing embedded in the other slab and comprising a broad portion axially longer than said nut but fitting snugly abouts its perimeter so as to permit relative axial sliding but prevent relative rotation between said nut and housing, and a relatively narrow elongated cylindrical portion fitting snugly around said dowel and extending from said broad portion to the adjacent elongated member, said housing being longitudinally divided into at least two parts provided with mating tabs and slots.

3,045,566
MACHINE FOR GROOVING ROAD PAVING TO RECEIVE EXPANSION STRIPS
Roy L. Houck, 1585 NE. 20th St., Salem, Oreg.
Filed Nov. 24, 1959, Ser. No. 855,152
1 Claim. (Cl. 94—39)



A device for use in surface paving operations wherein the paving comprises cementitious material temporarily in a plastic state and confined between side rails, said device comprising a framework including a horizontally disposed supporting beam, means rigidly mounting said supporting beam to a vehicle supported upon said rails and movable therealong, side plates secured to and extending downwardly and rearwardly from said supporting beam, angle irons coextensive in length with said supporting beam secured at their ends to said side plates in spaced relationship to each other, an incisory blade vertically slidable between said angle irons, a fluid pressure motor secured to said supporting beam at each end thereof and operatively connected to said incisory blade near each end thereof, a motor driven mechanical vibrator mounted upon said incisory blade at the center thereof, independent vertically adjustable and lockable limit stops carried by said incisory blade near the ends thereof for contacting one of said angle irons on the down stroke of said incisory blade to limit the downward thrust thereof into the paving material to thereby limit the depth of a transverse groove cut in said material by said blade and whereby simultaneous or selective operation of said motor cylinders will respectively thrust said incisory blade into said material parallel therewith or in angular relation thereto.

3,045,567
PHOTOGRAPHIC TYPE COMPOSING APPARATUS
Gerald Frankel, Wembley Park, England, assignor to Caps Limited, London, England
Filed July 20, 1959, Ser. No. 828,109
Claims priority, application Great Britain July 22, 1958
18 Claims. (Cl. 95—4.5)



1. In photographic type composing apparatus of the kind in which individual characters are selected from a character matrix and located in the required position in an optical projection system for the projection of images thereof onto a radiation sensitive surface on which composing takes place, a matrix magazine carrying a number of slides which are arranged one behind the other parallel to one another and each of which provides a row of characters, means for moving the matrix magazine towards and away from the radiation sensitive surface so as to bring a selected slide into, the focal plane for projection and means for moving the slide in the focal plane to align the selected character in the optical path of the projection system.

3,045,568
PHOTOGRAPHIC CAMERA WITH AUTOMATIC EXPOSURE CONTROL
Edgar Sauer, Stuttgart, Horst Wutzler, Stuttgart-Degerloch, and Johann Hahn, Stuttgart, Germany, assignors to Zeiss Ikon Aktiengesellschaft, Stuttgart, Germany
Filed Jan. 25, 1960, Ser. No. 4,324
Claims priority, application Germany Jan. 28, 1959
2 Claims. (Cl. 95—10)

1. A photographic camera with an automatic exposure control, comprising in combination:

(*a*) a shutter provided with a shutter speed adjusting member,

(*b*) an adjustable diaphragm provided with two relatively to each other movable diaphragm adjusting members,

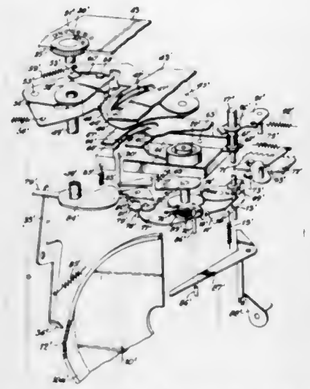
(*c*) coupling means for connecting one of said two diaphragm adjusting members with said shutter speed adjusting member so that upon movement of said two coupled members in one direction the shutter speed and the diaphragm aperture are reduced and that upon movement of said two coupled members in the opposite direction the shutter speed and the diaphragm aperture are increased.

(*d*) a photoelectric exposure meter,

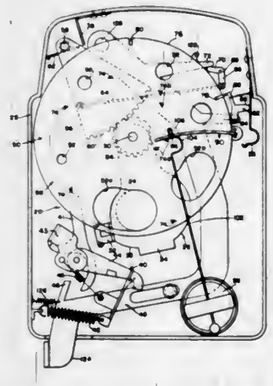
(*e*) a device for automatically adjusting the said two coupled members in response to the measureing position of said photoelectric exposure meter,

(*f*) means for disconnecting and connecting said last mentioned device, said means including,

(*g*) a manually operable member, coupling means for connecting said manually operable member with the other one of said two diaphragm members, and a member operated by said manually operable member and acted upon said device so that in one adjusted position of said manually operable member the said device is operative, while in another adjusted position of said manually operable member, the member actuated by the same effects a disconnection of said device while said coupling means with said other one of said two diaphragm adjusting means becomes effective for a manual introduction of exposure influencing factors into said other one of said two diaphragm adjusting members.

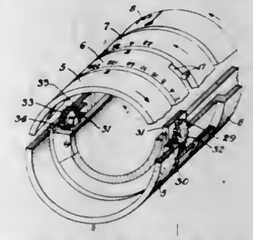


3,045,569
PHOTOGRAPHIC APPARATUS
Joseph H. Booth, Belmont, and Maxfield Parrish, Jr., Lexington, Mass., assignors to Polarold Corporation, Cambridge, Mass., a corporation of Delaware
Filed Nov. 21, 1958, Ser. No. 775,444
19 Claims. (Cl. 95—10)



1. In a shutter mechanism cooperating with a photoelectric means for producing electrical signals in accordance with the intensity of light incident thereon, in combination, a movable shutter blade for effecting exposures and being characterized in that the time interval of an exposure afforded thereby is a function of the total travel of said blade, means mounted for positioning in the path of travel of said blade for variably limiting said travel, movable diaphragm means for providing an effective exposure aperture of variable magnitude, means responsive to said signals both for variably limiting the movement of said diaphragm means and for controlling the positioning of said means for limiting said travel, and actuating means for initiating movement of said diaphragm means and for initiating movement of said shutter blade.

3,045,570
PHOTOGRAPHIC CAMERA WITH BUILT-IN COUPLED EXPOSURE METER
Edgar Sauer, Stuttgart, Willi Günther, Stuttgart-Mohringen, and Horst Wutzler, Stuttgart-Degerloch, Germany, assignors to Zeiss Ikon A.G. Stuttgart, Stuttgart, Germany
Filed Nov. 24, 1958, Ser. No. 775,933
Claims priority, application Germany Dec. 6, 1957
10 Claims. (Cl. 95—10)

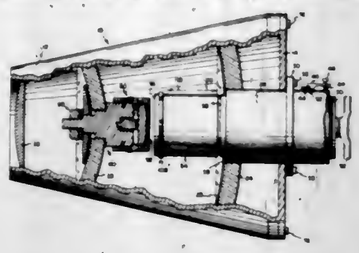


1. The combination of a photographic camera having a camera casing, a photographic objective, a movable light value adjusting ring, a movable diaphragm adjusting ring, a movable shutter speed adjusting ring and a fixed ring carrying a shutter speed scale and a diaphragm index, all of said rings being concentrically arranged about the optical axis of said photographic objective, and a plurality of gear segments, one for each of said rings and fixedly attached thereto, a photoelectric exposure meter built into said camera casing, said photoelectric exposure meter including an electrical measuring instrument having a pivotally mounted indicating pointer and a manually adjustable follow-up pointer a portion of which is adapted to be brought into coincidence with said indicating pointer, and an operative connection between said light value ring and said follow-up pointer, a transmission gearing between the gear segments of said movable diaphragm adjusting ring and said fixed ring carrying said shutter speed scale and said diaphragm index, and a differential gearing between the gear segments of said movable light value ring and said movable shutter speed ring, said gearings being arranged and constructed in such a manner that the intervals between the diaphragm scale, the shutter speed scale and the light value units are equal.

3,045,571
MAGNETIC SHEET FILM LOADER
Nelson F. Murcko, Stratford, Conn.
Filed June 17, 1960, Ser. No. 36,893
11 Claims. (Cl. 95—11)

1. A sheet-film loading assembly for a still camera comprising: an elongated loading member having a releasable film-holder support means at one end thereof; a film holder having, on one portion thereof, a first connection means adapted to interengage in a releasable manner with said releasable support means; said film holder having, on another portion, a second connection means adapted to connect releasably with a stationary second releasable support means located near the image plane of a camera; said loading member and film holder, when operatively connected together, forming a light-tight assembly so as

to protect the film which may be present in the film holder; said assembly being, however, readily separable so as to allow the film holder, when it is connected to said stationary second support means, to be released from said



loading member, so that the loading member may introduce the film holder adjacent to the image plane of the camera and then be disconnected from said film holder so as thereafter to be withdrawn from any interference with the optical path of the image of the camera objective.

3,045,572
STEREOSCOPIC CAMERA
Wolcott S. Kinnard, 4665 N. 56th St., Milwaukee, Wis.
Filed Apr. 23, 1956, Ser. No. 579,956
13 Claims. (Cl. 95—18)



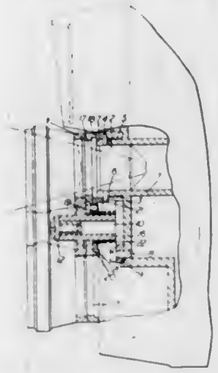
1. In a camera, the combination with a pair of spaced guides, of an endless belt operating over said guides and having spaced runs one of which is apertured and constitutes a focal plane shutter, means for supporting behind and in close proximity to the last mentioned run an image-receiving member having a photo-sensitized surface, trip-controlled means for actuating the shutter, a mirror disposed obliquely between said runs for reflecting toward said surface subject to control by said shutter light received laterally between the runs, and a case enclosing said runs and provided with a light focusing lens disposed on an axis which extends between said runs and is transverse respecting the movement of the run constituting the shutter.

3,045,573
CAMERA COUPLING MEANS
Bertil Wanner, N. Fogelbergsgatan 4, Gothenburg, Sweden
Filed Aug. 25, 1959, Ser. No. 835,949
Claims priority, application Sweden Aug. 29, 1958
9 Claims. (Cl. 95—18)



1. A device for pivotally combining two cameras for simultaneous use, each said camera including a shutter releaser, said device comprising an axle, arms pivotally mounted on the axle for connection to the cameras, synchronizing arms for the shutter releasers of the cameras movably mounted on the axle and adapted to extend to said shutter releasers, the synchronizing arms being carried by a part turnable around an axis perpendicular to the axle, said part being provided with means for an independent swinging movement of each arm around axes perpendicular to the axis of the part, the synchronizing arms being provided with means for their connection with the corresponding shutter releasers to follow the turning adjustments of the cameras.

3,045,574
CINEMATOGRAPHIC OR PHOTOGRAPHIC CAMERAS
Wolfgang Planert, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Apr. 27, 1960, Ser. No. 25,154
5 Claims. (Cl. 95—45)



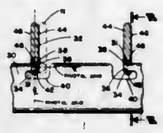
1. A photographic camera comprising a housing, a basic objective lens mounted in the housing so as to be axially adjustable, an objective head rotatably mounted on the housing, a plurality of objective lens front attachments mounted on the objective head, the axis of rotation of said head being such that the head can be rotated into selected positions in which any of said front attachments is in axial alignment with the basic objective lens, a distance setting ring rotatably mounted on the objective head so as to be rotatable over a limited angle relative to said head, a distance setting member mounted on the basic objective lens for effecting distance adjustment of said basic objective lens and a transmission means for transmitting adjustment movements of said distance setting ring to said distance setting member, said transmission means being mounted on the distance setting ring and co-acting with said distance setting member in all said selected positions.

3,045,575
AUTOMATIC CAMERA DIAPHRAGM
Niro Akahane, Shimosuwa-machi, Nagano-ken, Japan, assignor to Yashica Co., Ltd., Tokyo, Japan, a corporation of Japan
Filed Oct. 8, 1959, Ser. No. 845,163
Claims priority, application Japan Oct. 23, 1958
9 Claims. (Cl. 95—64)



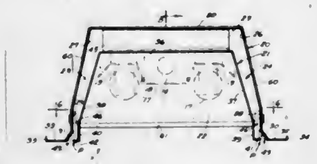
8. An improved automatic light responsive camera diaphragm mechanism comprising a current meter having a movable armature, a set of three pivoted iris plates having angulated inner edges delineating a variable diaphragm aperture of substantially regular polygonal configuration, means coupling a first and second of said iris plates to said armature, and a rigid link element coupling the third of said iris plates to said first iris plate whereby said iris plates move in substantial synchronism, the ends of said link element being pivotally connected to said respective iris plates to vary said diaphragm aperture while substantially maintaining said polygonal configuration.

3,045,576
AIR DIRECTING LOUVER DEVICE
Adam D. Goettl, Phoenix, Ariz., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed May 24, 1960, Ser. No. 31,306
4 Claims. (Cl. 98—40)



1. In a louver device the combination of: a plurality of first parallel slats each having opposite sides and opposite edges; a plurality of second parallel slats each having opposite sides and opposite edges angularly intersecting said first slats; projecting bearing portions fixed to said first slats and directed longitudinally thereof; socket portions in said second slats and engaged with said projecting bearing portions at the points of intersection of the first and second slats; each of said socket portions open at and facing one side of its respective slat and engaging a respective projecting bearing portion; adjacent socket portions in each of said second slat disposed at opposite sides thereof, said projecting bearing portions extending into said socket portions beyond the centers of said second slats, pivotal centers of said first and second slats disposed at their centers between opposite sides thereof, the axes of said pivotal centers extending through said projecting bearings; said socket portions of said second slats, which engage adjacent projecting bearing portions of any one of said first slats, being opposed to each other thereby balancing projecting bearing pressure of said sockets on said bearing portions of each of said first slats, adjacent projecting bearing portions spaced longitudinally of said first slats being oppositely directed longitudinally thereof, whereby each of said first and second slats is pivotal relative to all the other slats and whereby the first and second slats are connected together in a unitary louver assembly.

3,045,577
TROFFER CONSTRUCTION FOR COMBINATION VENTILATING AND ILLUMINATING UNITS
Herman M. Lazerson, Chicago, Ill., assignor to Solar Light Manufacturing Co., Chicago, Ill., a corporation of Illinois
Filed July 12, 1961, Ser. No. 123,511
3 Claims. (Cl. 98—40)



1. A troffer for a combination ventilating and illuminating unit, said troffer comprising:
a trough-shaped outer shell having open ends;
a trough-shaped inner shell having open ends and disposed in nesting relation to said outer shell to define air passages therebetween,
each shell having a substantially rectangular top wall, a pair of inclined portions each extending downwardly and outwardly from a first pair of respective opposite side edges of said rectangular top wall, and a pair of vertical portions each extending downwardly from the lower extremity of a respective inclined portion;
a pair of channel-shaped spacing members each located adjacent a second pair of respective opposite side edges of each of said rectangular top walls of each of said shells between the top walls of said inner and outer shells;
Z-shaped spacing members between said shells,
each Z-shaped spacing member having a first flange abutting a respective vertical portion of said inner shell, a second flange abutting a respective vertical portion of said outer shell, and a web extending between said first and second flanges;
a pair of end plates each located at a respective opposite end of said shells,
each end plate having a peripheral configuration conforming substantially to the cross-sectional configuration of said outer shell, and
each end plate having an inwardly extending peripheral flange overlapping the top wall, the inclined portions and the vertical portions of said outer shell to close the open ends of the inner and outer shells, whereby the end plates seal off the air passage defined between the nested inner and outer shells;
means on said inner shell for accommodating a lighting element;
and means on said outer shell for receiving an air supply such that air introduced into the air passage volume between the nested inner and outer shells is directed outwardly and downwardly to exit from the troffer.

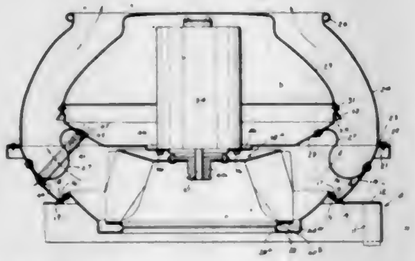
3,045,578
AIR DISTRIBUTION ASSEMBLY
William L. McGrath, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed June 30, 1959, Ser. No. 824,066
13 Claims. (Cl. 98—40)



1. An assembly for directing air alternately in a plurality of directions, one of which is perpendicular to the plane of said assembly, and another of which is at an angle to said plane comprising an air distribution grille having a plurality of spaced angularly disposed rigid vanes, each having a face thereof disposed at a predetermined inclination to the plane of said grille, said grille further having a plurality of apertures formed therein between adjacent pairs of spaced vanes, said apertures forming a corresponding plurality of air flow passages positioned between respective spaced vanes so that air may pass through said grille, said vanes being spaced apart a distance greater than the geometric projection thereof in the plane of said grille so that the upper edges of said vanes extend upwardly a distance less than the distance between the vanes, a baffle plate, means to slidably mount said baffle plate adjacent said grille in a plane substantially parallel to the plane of said grille for movement in the plane of said baffle, a plurality of spaced slats carried by said baffle, said baffle further having a plurality of apertures formed between adjacent pairs of

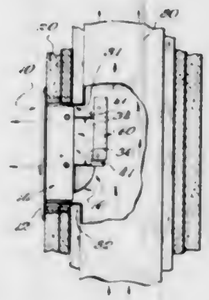
spaced slats, said apertures between said slats forming air passages through said baffle, said slats having a width less than that of the corresponding apertures between said vanes in said grille, each of said slats being disposed on said baffle so as to cover only a portion of said apertures in said grille extending from the respective adjacent vanes when said baffle is in one position with the slats opposite the acutely inclined faces of said vanes thereby directing air passing through said assembly in a perpendicular direction to the plane of said grille, and to cover only another portion of said apertrues in said grille extending from the other respective adjacent vanes when said baffle is in another portion thereby directing air passing through said assembly in an angular direction to the plane of said grille, and manipulating means coacting with said baffle to enable the selection of the desired position of said slats thereby to select the desired direction of air flow through said assembly.

3,045,579
VERTICAL DISCHARGE ROOF EXHAUSTER
Louis J. Jenn and John A. Payton, Indianapolis, Ind., assignors to Jenn Air Products Company, Inc., Indianapolis, Ind., a corporation
Filed Dec. 7, 1959, Ser. No. 857,782
9 Claims. (Cl. 98—43)



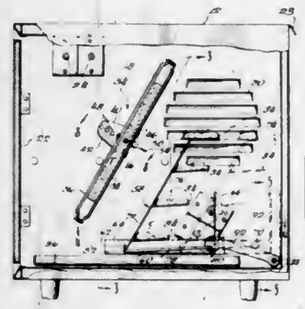
1. A vertical discharge exhauster assembly adapted to be mounted on a preconstructed curb provided on a building roof or the like, said assembly comprising a tubular base frame supported on said curb with its axis extending vertically therefrom, the upper end of said frame having an inturned portion extending normal to the axis of said frame, the inner margin of said inturned portion being formed to provide a generally upwardly extending circular flange, an outer cowl open at its upper and lower ends disposed with its axis coincident with the axis of said frame and having an outwardly convex configuration, the lower portion of said cowl having an upwardly inclined annular surface formed therein overlying said circular flange on said frame and rigidly secured thereto, the angle formed in said cowl at the junction of said inclined annular surface and the adjacent cowl surface proper forming a continuous circular gutter, drainage apertures in said cowl adjacent said gutter for draining thereof, spaced resilient elements mounted on the inner surface of said cowl, a motor enclosure supported by said resilient elements and spaced from said cowl to form a passageway between said enclosure and said cowl extending between the upper and lower ends thereof, said enclosure being circular in cross-section and having a configuration such that its cross-sectional diameters at its upper and lower ends are substantially smaller than its intermediate cross-sectional diameter, an annular ridge extending outwardly from the outer surface of said motor enclosure at its greatest diameter, the outer edge of said ridge being disposed outboard of said gutter, an impeller-driving motor mounted within said motor enclosure with its shaft extending vertically downward from the lower end of said enclosure, and a gas moving impeller carried by said shaft and disposed at least partially within said frame, whereby rotation of said impeller by said motor moves gases through said frame and between said cowl and motor enclosure to be discharged through the open, upper end of said cowl, condensate and rain entering said upper end of the cowl being directed by said ridge into said gutter.

3,045,580
ADJUSTABLE REGISTER FOR AIR FLOW
Stanford E. Johnson and Theodore Bydalek, Chicago, Ill., assignors to Practical Tool & Engineering Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 4, 1959, Ser. No. 831,570
2 Claims. (Cl. 98—107)



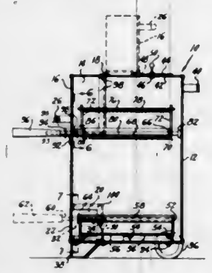
1. A register device for controlling air flow in an air circulatory system comprising a cover plate having a window therein and adapted for securement to a wall substantially flush with said wall and over a duct opening of said air circulatory system, a unitary housing fixedly secured to the rear surface of said cover plate member covering the opening therein, said housing adapted to be formed from a blank and having a series of louvres integral therewith, at least one pair of shutters disposed within said housing and adapted to be opened and closed, actuating means also disposed within said housing whereby said shutters may be opened or closed from the exterior of said cover plate, each of said shutters comprising a flat rectangular relatively thin member having an arcuate rib formed therein along the length thereof parallel to one edge and spaced a short distance from said edge, extended portions integral with said rib and at both ends thereof, said extended portions being journalled in openings provided in said end walls of the housing, a tab member integral with said shutter and disposed perpendicular to the surface thereof extending in a direction opposite from said rib, said tab member located at an end edge of said shutter adjacent the corner thereof, and said shutters arranged in the housing member with each of said tab members extending in the same plane, said tab members being provided with openings therein and there is linkage means engageable therewith whereby actuating of one shutter will simultaneously actuate the second shutter in like manner, said linkage means comprising a rectangular plate member, said member being provided with openings at each end thereof, and each opening having a cylindrical flange along its edge, said flange extending perpendicular to the flat surface of said plate member and adapted to be journalled for pivotal rotation in the openings formed in said tabs with their edges overlapping the inner surface of said tabs at said openings and stop means associated with said plate member to prevent said shutters from being moved further than their maximum open position, said stop means comprising an integral right angle narrow flange member extending from the elongate edge of said plate parallel to said front wall of said housing and facing inward from the edge thereof, said linkage plate member adapted to be moved in a direction whereby the edge flange thereof remains with its surface parallel to the undersurface of said cover plate member.

3,045,581
BROILER CHARCOAL HOLDER AND FOOD RACK
Samuel M. Bernstein, Winnetka, Ill., assignor to Berns Air King Corporation, Chicago, Ill., a corporation of Illinois
Filed May 15, 1959, Ser. No. 813,542
10 Claims. (Cl. 99—340)



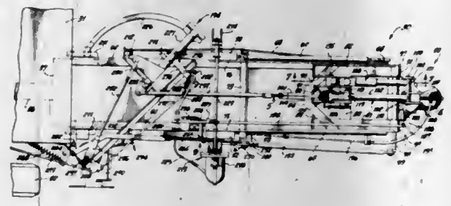
1. In a portable indoor cooking device including a housing having a cooking chamber therein, mounting means for removably mounting said housing in a building outer wall opening and exhaust means for exhausting the atmosphere of said cooking chamber to the outdoors through said building outer wall opening; food supporting means for supporting food in operational position, a charcoal holder movably mounted in said cooking chamber adjacent to and in horizontal spaced relationship with said food supporting means, and control means for varying the horizontal spaced relationship between said charcoal holder and said food supporting means, said charcoal holder comprising a tray having a rear wall and a frame removably supported in said tray, said rear wall being formed with a pair of spaced vertical slots, said control means comprising a rotatable actuating rod, a pair of lever arms secured to said actuating rod, and a pair of spaced apart bearing pins secured to the free end of each of said lever arms, said lever arms reciprocably positioned in said vertical slots with portions of said rear wall engaged between said pairs of bearing pins.

3,045,582
PORTABLE OUTDOOR-TYPE BARBECUE DEVICE
Alfred F. Wells, P.O. Box 28, Pineville, La.
Filed Nov. 28, 1960, Ser. No. 72,074
3 Claims. (Cl. 99—397)



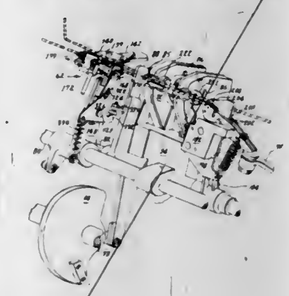
1. A barbecue device comprising a housing having a food insertion opening adjacent its top and a firebox insertion opening adjacent its bottom, a separate door for each said opening, a removable grid means comprising a pair of grids, and means for securing said grids in adjusted spaced relationship to each other to secure food therebetween, a rod fixedly secured to one said grid for supporting said grid means, bearing means for said rod in said housing at said food insertion opening and on the wall of said housing opposite said food insertion opening, said bearing means at said food insertion opening comprising an exterior ledge on the wall of said housing at said food insertion opening and a slot in said wall leading from said ledge to said food insertion opening, a grid means carrying handle fixed on said rod exteriorly of said housing for rotating said grid means within the housing on said bearing, mating apertures in said ledge and said rod, and a locking pin inserted in said mating apertures in said rod and ledge for holding said grid means locked against rotation.

3,045,583
MACHINE FOR BALING
Joseph F. Davin, Jr., Rte. 4, Box 585, Bakersfield, Calif.
Filed Feb. 12, 1959, Ser. No. 792,745
9 Claims. (Cl. 100—4)



1. In a baling machine, the combination of: means forming a baling chamber; means for pressing material to be baled into one end of said chamber to form a new bale in said chamber; a plate interposed in the path of said new bale and resisting longitudinal movement of said new bale in said chamber; means for wire binding said new bale; means responsive to the pressure imposed on said plate through said new bale, when said pressure exceeds a given value, to cause said wire binding means to bind said new bale; and means causing said plate to automatically yield from its position of resisting longitudinal movement of said bale, upon the binding of said bale being completed.

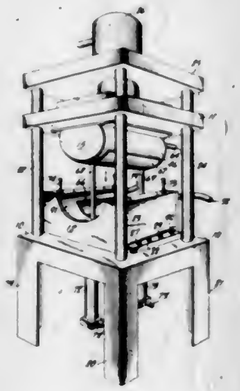
3,045,584
TWINE WRAPPING AND JOINTING MACHINES FOR TYING BUNDLES
Grant N. Willis and Lionel H. Seccombe, Jr., Bristol, Conn., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Feb. 17, 1959, Ser. No. 793,913
Claims priority, application Great Britain Feb. 20, 1958
8 Claims. (Cl. 100—27)



1. A machine for tying bundles by encircling a bundle with a length of twine the overlapped portions of which

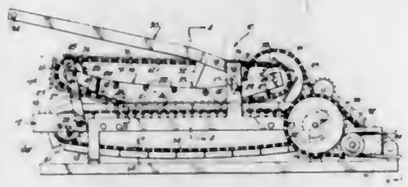
are then secured by applying a jointure while the length of twine is tensioned around the bundle, comprising: a twine carrying flyer member rotatable in one direction twice around the bundle during each tying operation; clamping means carried by said flyer for engaging an end of twine to pull the twine around the bundle during the twine wrapping operation; a first gripper for holding said end of twine during the at-rest condition of the machine and for delivering the twine end to said clamping means on the flyer to initiate the twine wrapping operation; means positioned in the rotative path of the flyer for releasing said clamping means and for transferring the twine end to the clamping action of a second gripper after the twine end has been carried once completely around the bundle; means, including said second gripper and a movable twine gripping head, for increasing the tension on the twine and for maintaining the twine under tension and in overrlapped relation; and means for forming a jointure at the overlapped portions of the twine.

3,045,585
LAMINATOR
Harry W. Faeber, Larchmont, N.Y., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 29, 1957, Ser. No. 699,547
9 Claims. (Cl. 100—93)



9. An apparatus for laminating a heat-activatable plastic printing plate to a metal backing comprising a lower support having a concave surface for engaging the printing side of the printing plate, an overhead convexly curved member for receiving the metal backing in contact with the convex surface thereof, means for cooling the lower support to prevent heat-activation of the printing surface of the printing plate, means for heating the overhead convexly curved member, means for relatively moving the lower support and the overhead member toward and away from each other, adjustable stops separating the lower support and overhead member in operative position to prevent crushing of the printing plate, vertically movable holding rods upstanding from and guided for vertical movement in the lower support, the upper ends of the holding rods being engageable with the metal backing in contact with the overhead member to hold the metal backing against the convexly curved surface thereof while the lower support and the overhead member are spaced apart, thereby permitting the pre-heating of the metal backing before it is brought into contact with the printing plate, said holding rods being yieldable downwardly to permit the support and the overhead member to come together while at the same time supporting the metal backing in contact with the convexly curved surface and the overhead member.

3,045,586
CONVEYOR PRESS
Lewis H. Blood, Leonardo, N.J., assignor to Expeller Press and Chemical Corporation, Leonardo, N.J., a corporation of New Jersey
Continuation of application Ser. No. 313,913, Oct. 9, 1952. This application Apr. 28, 1959, Ser. No. 809,575
2 Claims. (Cl. 100—154)

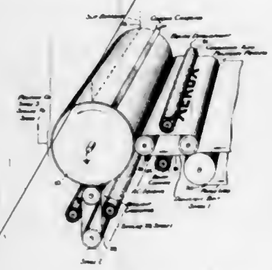


1. An endless conveyor press which includes a first and second conveyor one mounted above the other, each being supported by a separate frame, each conveyor being attached to a pair of endless chains, each endless chain being mounted on a pair of sprockets, one of said frames being mounted in a stationary position, the other of said frames being mounted above said first frame and being supported for pivotal movement adjacent one end thereof, said movement being limited by means of a pair of members upstanding from said first frame adjacent the free end of said pivotal frame, said upstanding member having a pair of slots which receive the end portions of shafts extending therethrough from said second frame, said members having aligned apertures at the upper ends thereof of pivotally mounting cantilever arms having means thereon for applying pressure on the upper portion of the upper conveyor, each frame supporting said sprockets at opposed ends to in turn support said chains, said first conveyor being comprised of a plurality of rectangular perforated metal plates positioned in continuous abutting relationship, said metal plates being provided with upturned sides, each plate being pivotally connected to two separate links one in each chain on each side of said plates to allow free individual movement of each plate, and a second conveyor comprised of a plurality of solid rectangular flat plates positioned in continuous abutting relationship that fit between the sides of said first conveyor plates and are also pivotally connected to two separate links one in each chain on each side of said plates to allow free individual movement of each plate, a plurality of parallel adjacently positioned rollers mounted in fixed positions to rotate in said stationary frame in a single horizontal plane, a plurality of parallel adjacently positioned rollers mounted in said pivotally supported frame, said rollers being positioned along said second conveyor to carry said second conveyor into and out of a horizontal plane to force said conveyor plates into or out of pressing relation with said first conveyor plates, said perforated plates of first conveyor bearing upon and rolling over said rollers in said stationary frame to provide an unyielding barrier to the pressing of the second conveyor plates, said solid plates of said second conveyor hanging from said pivotally supported frame with a pressing contact and means to move both conveyors at the same speed.

3,045,587
ELECTROSTATIC PRINTING APPARATUS FOR FORMING MULTIPLE COPIES
Frederick A. Schwertz, Pittsford, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed June 6, 1957, Ser. No. 664,135
6 Claims. (Cl. 101—1)

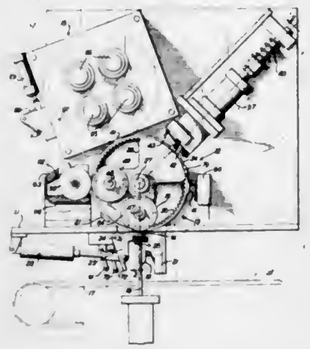
1. Electrostatic printing apparatus for producing multiple copies comprising a rotary cylinder having an insulating surface for sustaining electrostatic charges, means

electrostatically to form latent images on said surface of information to be printed repeatedly, and a plurality of printing stages disposed at spaced positions about said cylinder, each stage including an endless conductive belt having an insulating surface, the belts of said stages being selectively engageable with said cylinder surface to effect transfer of said latent image thereon and being retractable from said cylinder to effect printing operations, means to move a selected one of said belts into



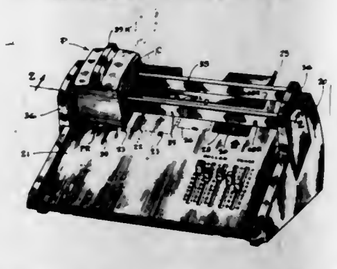
engagement with said cylinder to effect transfer of a latent image thereon and thereafter to retract said one belt, developer means associated with each belt to form powder images and a transfer mechanism associated with each belt including means to convey a paper strip into engagement with said belt and thereafter to separate said strip therefrom, and means at the region of separation to produce an electrostatic field below the level of breakdown to prevent distortion of said latent image whereby said belt may be used to form duplicate copies.

3,045,588
APPARATUS FOR MARKING ARTICLES
Harold K. Jordan and Carey W. McCachern, Jr., Winston-Salem, N.C., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 25, 1959, Ser. No. 801,822
11 Claims. (Cl. 101—38)



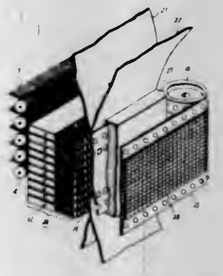
10. A marking mechanism comprising a source of marking material, mark impressing means, means for conveying marking material from the source to the mark impressing means, transfer means for receiving an impression from the mark impressing means for marking an article, a carrier for advancing the conveying and transfer means, planetary gear means for advancing said carrier and moving the conveying and transfer means on said carrier relative to said source and said article, and means for selectively locking said carrier to effect said relative movement of said conveying and transfer means.

3,045,589
PRINTING MACHINES
George H. Hill, Los Angeles, Kunio A. Sumida, Torrance, and Alfred G. Dobrowsky, Los Angeles, Calif., assignors to Dashew Business Machines, Inc., a corporation of Delaware
Filed June 10, 1959, Ser. No. 819,477
11 Claims. (Cl. 101—56)



1. In a printing machine having a bed upon which printing means may be supported in a predetermined printing area, means rigid with said bed and providing a rectilinear guideway extending across said printing area in an upwardly spaced relation thereto, a carriage mounted on said guideway for reciprocation back and forth across said printing area, a platen roller beneath said carriage with its axis parallel to said bed and transversely of the path of travel of the carriage, means including a bail rockable about the axis of the platen roller supporting said platen roller for movement between a lower printing relation and a raised ineffective relation, cam means located in part on the carriage and in part on the bail acting between upper end portions of said bail and the carriage for shifting the platen roller upwardly when the bail is rocked in one direction and for shifting the platen roller downwardly when the bail is rocked in the other direction, and stop means on said guideway for engagement by said bail to impart rocking movement to said bail in opposite directions when the carriage reaches the respective ends of its stroke.

3,045,590
HIGH SPEED PRINTER
Sanae Amada, 46 Jlyugaoka Meguro-ku, Michio Matsumoto, 687 Sekimachi 4-chome, Nerima-ku, and Kenichi Ukitsu, 45 Shimorenjaku, Mitaka-Shi, all of Tokyo, Japan
Filed Dec. 4, 1959, Ser. No. 857,289
Claims priority, application Japan Dec. 6, 1958
7 Claims. (Cl. 101—93)



1. High speed printing apparatus including a plurality of printing mechanisms, each mechanism comprising a housing having a chamber, a piston means in said chamber for reciprocal movement therein, a hammer on said piston and displaceable therewith, means operatively associated with the piston for selectively displacing the same to a printing position, means operatively associated with the piston for returning the same to a rest position, the first said means including a slender detent mechanism

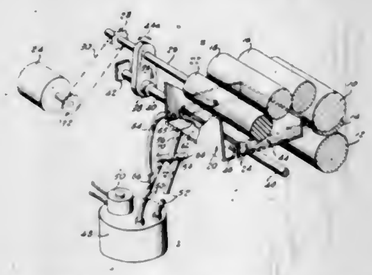
pivotally supported on the housing and selectively engageable with said piston to maintain the same stationary; activating means operatively associated with the detent mechanism for pivoting the same with respect to the housing thereby selectively disengaging the detent mechanism from the piston, said activating means including a control member independently of said housing and a thin flexible wire between the control member and the detent mechanism for transmitting movement therebetween.

3,045,591
PROCESS FOR THE PRODUCTION OF SHAPED INKING ROLLERS FOR STEEL ENGRAVING OR INTAGLIO PRINTING
Willy Säuberlich, Darmstadt-Eberstadt, Germany, assignor to Maschinenfabrik Goebel G.m.b.H., Darmstadt, Germany
Filed Nov. 10, 1959, Ser. No. 852,142
Claims priority, application Germany Nov. 13, 1958
5 Claims. (Cl. 101—211)



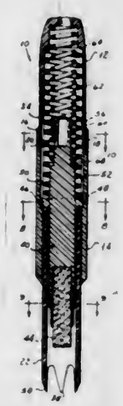
1. A process for shaping and profiling inking rollers for the application of several colors on limited partial surfaces of an intaglio or steel engraved grooved cylinder of a printing machine, comprising the steps of making a transfer roll from an original engraved plate, producing a further plate from said transfer roll by stamping so deep that the stamping will reveal the position of the limiting lines, engraving said limiting lines by hand, hardening said further plate and then transferring the limiting lines by stamping onto one transfer roll for each color in the form of raised lines, removing from the transfer rolls for the respective colors the limiting lines not corresponding to the certain color assigned to each of said transfer rolls while cutting deeper through reworking all surfaces inside and outside the remaining limiting lines on said transfer rolls, hardening said transfer rolls, and using said transfer rolls as cutters for shaping and profiling the inking rollers assigned to the respective colors.

3,045,592
LIQUID APPLICATOR
Robert Shearer, Park Ridge, and Harry Semple, Jr., Chicago, Ill., and George Nifontoff, Nyack, N.Y., assignors to F. L. Smithe Machine Company, Inc., New York, N.Y., a corporation of New York
Filed May 28, 1959, Ser. No. 816,519
11 Claims. (Cl. 101—350)



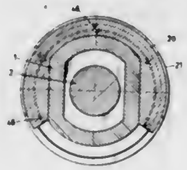
1. In a liquid applicator including a pick-up roller rotating in a liquid reservoir, the improvement comprising means for maintaining the liquid in said reservoir at a constant level including a weir partition over the top of which liquid in said reservoir flows, means to continuously direct liquid into said reservoir to maintain a continuous overflow over said weir, a trough adjacent said weir into which the overflow is directed and collected therein, a return conduit connecting said trough to said continuous directing means, and means to direct a portion of said liquid being continuously directed to said reservoir into an acute angular connection with said return conduit at a location to produce a vacuum therein and effect positive withdrawing of liquid from said trough.

3,045,593
BALLOT MARKER
Tor Petterson, Laguna Beach, Calif., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Nov. 21, 1960, Ser. No. 70,827
8 Claims. (Cl. 101—368)



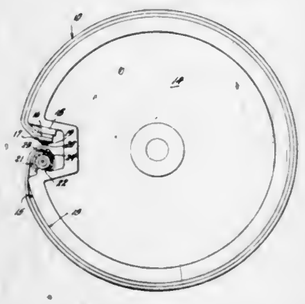
1. A device adapted to be brought into engagement with a surface to place a mark thereon including in combination housing means comprising a handle, a marking element, means mounting said marking element on said housing means for movement between a retracted position and a marking position, means adapted to urge said marking element to said marking position, means normally retaining said marking element in said retracted position, and means responsive to relative movement of said element and said handle after said device is brought into engagement with said surface for releasing said retaining means to permit said urging means to propel said marking element to said marking position to place a mark on said surface.

3,045,594
CURVED CYLINDER FOR RELIEF PRINTING MACHINES HAVING A REMOVABLE STEREOTYPE PLATE-CARRYING JACKET
Artur Büttner, Heidelberg, Germany, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany, a corporation of Germany
Filed Dec. 2, 1957, Ser. No. 700,076
Claims priority, application Germany July 25, 1957
5 Claims. (Cl. 101—375)



1. A curved cylinder for relief printing machines comprising, a rotatably driven elongated core portion provided with a plurality of longitudinally extending, peripheral, flat guide surfaces thereon disposed radially opposite each other, at least one bifurcated stereotype plate-carrying jacket portion removably mounted radially on said core portion extending longitudinally at least over a part of the core portion and extending circumferentially at least over a part of the core portion thereby forming a part of the circumference of the cylinder, said plate-carrying jacket portion having inner, longitudinal, flat surfaces for slidably engaging corresponding guide surfaces on said core portion, means for adjustably and removably mounting said jacket portion radially on the core portion in a selected fixed position, said last mentioned means comprising a fixed annlar abutment member provided with means engaging one end of the jacket portion to progressively apply increased pressure thereto in a direction toward the center of the core as a function of pressure applied longitudinally of the jacket portion and toward said abutment member, and means for selectively and adjustably applying pressure longitudinally of the jacket portion in a direction toward said abutment member and for simultaneously applying pressure to the opposite end of the jacket portion in a direction toward the center of the core portion, whereby the jacket portion is positioned and fixed in a selected axial position on the core portion.

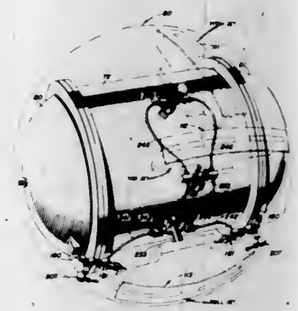
3,045,595
PRINTING MACHINE AND PRINTING BLANKET THEREFOR
Emanuel Gurin, P.O. Box 10142, Caparra Heights, San Juan, Puerto Rico
Filed Apr. 7, 1960, Ser. No. 20,629
2 Claims. (Cl. 101—415.1)



1. In an offset printing press having an offset cylinder for receiving an inked impression, blanket means for covering said cylinder including a packing blanket, an independent covering blanket consisting of a single ply of dimensionally stable flexible, hard surfaced paper having a thickness of .003 to .025 inch whereby the covering blanket has a relatively smooth surface and a Mullen bursting strength of between 50 and 200 pounds, and an ink-receiving coating consisting of vulcanized elastomer on said single ply of from .003 to .025 inch, the total thickness of said blanket means being that of a conventional multi-ply blanket and means to retain said blankets on said offset cylinder.

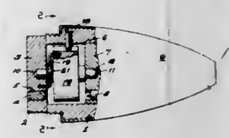
3,045,596
GUIDED MISSILE
Randolph S. Rae, Los Angeles, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 10, 1954, Ser. No. 409,549
7 Claims. (Cl. 102—50)

1. In a controlled missile having structure including a spherical body having three principal axes, said structure having a pair of, tangentially directed, spaced ports located in each plane containing one of the principal axes of revolution of said body, means for generating fluid under pressure in said body, means oh said body arranged to communicate with said source of pressurized fluid and to discharge a portion thereof as a radially directed jet in such a manner to lift and propel said missile, means for each pair of spaced ports for discharging other



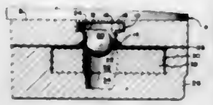
portions of said pressurized fluid as tangentially directed jets through either port of each of said pair of spaced ports alternately to cause said missile to rotate about at least one of its principal axes, and a corresponding number of automatic pilot systems, one each operatively associated with each of said last-mentioned discharging means for controlling the latter discharging means, whereby the orientation of said missile is stabilized and said missile is caused to maintain a constant heading.

3,045,597
CENTRIFUGAL TYPE SAFETY AND ARMING SPRING FOR FUZE APPLICATIONS
Sidney S. Linn, Garden City, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 21, 1960, Ser. No. 57,591
3 Claims. (Cl. 102—79)



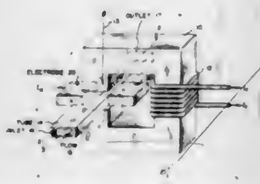
1. A fuze for attachment to a spin stabilized projectile comprising, a body having a central bore therein, a pyrotechnic element disposed at the rearward end of said bore, a firing pin at the other end of said bore and in alignment with said pyrotechnic element, a rotor mounted for limited rotation between unarmed and armed positions in said central bore, a pyrotechnic element in said rotor, a wire spring disposed between the rearward end of said central bore and the rearward end of said rotor, said spring having oppositely bent ends, one end being connected to said rotor, and a weight attached to said wire spring intermediate its ends, centrifugal force due to spin of said body causing said weight to move outwardly to distort said wire spring and apply a torque to said rotor, whereby said rotor will rotate from its unarmed position to its armed position, whereby the pyrotechnic element in said rotor is aligned with the pyrotechnic element and said firing pin.

3,045,598
BALL SET BACK DETENT
Calvin F. Brown, Paradise, and Roderick M. Jackson and Richard T. Campbell, Lancaster, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 12, 1959, Ser. No. 786,438
6 Claims. (Cl. 102—80)



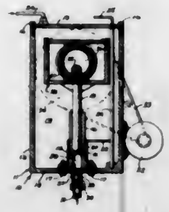
1. An arming delay mechanism for a spin type projectile of the type fired from a gun comprising a switch housing having a bottom plate, a disc shaped body attached to said plate and formed with an eccentric circular well and a radial slot extending into said well, an arming rotor formed with a transverse circular opening and, carried in said well for limited angular movement, means carried within the radial slot and actuated by spin force set up by firing the projectile normally holding the rotor in a safe position, means carried by the bottom plate and actuated by setback force, said disc being formed with a tapered hole partially receiving the means actuated by the setback force to hold the rotor in said safe position after the arming rotor has been released by the spin actuated means until zero linear acceleration is reached, whereby centrifugal force generated by spin of the projectile will move the setback actuated means from the tapered hole to a position permitting partial rotation of the rotor, and means for stopping the rotor in an armed position.

3,045,599
ELECTROMAGNETIC CONDUCTIVE FLUID PUMP
William L. Carlson, Jr., Bloomington, and Frank M. Exner, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 8, 1959, Ser. No. 818,764
7 Claims. (Cl. 103—1)



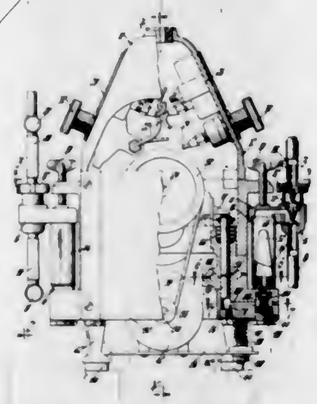
1. In an electromagnetic liquid metal pump: a passage filled with a liquid metal; electrical conductors and current generating means passing a current across said passage through said liquid metal at a location between said conductors; a magnetic core adjacent said passage and including flux exciting means passing a magnetic flux across said passage mutually perpendicular to said current and said passage; said flux exciting means being limited in capacity to a level of flux excitation below the saturation of the magnetic core; and said core further having poles which are different in magnetic reluctance than said core adjacent said location between said conductors along said passage and said poles being substantially magnetically saturated when said flux in the balance of said core is below saturation density; said saturated poles substantially eliminating the excitation of any magnetic flux in said passage and said liquid metal by the flow of said current in said electrical conductors and said liquid metal.

3,045,600
CONSTANT SPEED VARIABLE VOLUME HYDRAULIC PUMP
Loren R. Gajewski and Mervin Gajewski, Alexander, N. Dak.
Filed Jan. 5, 1960, Ser. No. 535
4 Claims. (Cl. 103—37)



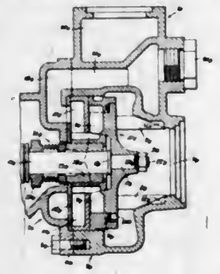
3. In a constant speed variable volume hydraulic pump, a hollow housing providing in its interior a hydraulic fluid reservoir, a barrel in said housing provided with an inlet port, a piston slidably mounted in said barrel, power operated cam means for reciprocating said piston in said barrel, a rotary sleeve mounted on said barrel and having a port mounted for movement into and out of registry with the port in said barrel, said sleeve providing a valve, and manually operated rod and link means for rotating said sleeve valve.

3,045,601
MECHANICAL HEART PUMP OR THE LIKE
Edward V. Rippingille, Farmington, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 28, 1953, Ser. No. 370,731
2 Claims. (Cl. 103—44)



1. Fluid pumping means comprising a casing having a plurality of individual pumping units removably secured thereto, a camshaft mounted within said casing, means for rotating said camshaft, positive and negative air pressure manifolds formed within said casing, a source of positive and negative air pressure connected to said positive and said negative manifolds respectively, a plurality of cams secured to said camshaft, a plurality of rocker arms pivotally mounted within said casing and each engaging one of said cams, valve guide passages formed within said casing between said manifolds, manifold outlet passages formed through said casing between each of said manifolds and each of said guide passages separately, sleeve valves disposed in each of said guide passages and in engagement with one of said rocker arms, interconnected passages formed through said casing between each of said guide passages and each of said fluid pumps, air filter chambers formed within said interconnected passages and having air filtering means disposed therein, a fluid chamber formed within each of said pumps, an air sac disposed within each of said fluid chambers and in communication through said interconnected passages with each of said pressure manifolds, passage means associated with each of said fluid pumps, fluid inlet and outlet check valves mounted within each of said fluid passages, valve seats formed within said fluid passage members and adapted to receive said check valves thereagainst, said valves being subjected to forces urging them into engagement with said valve seats, said valves and said valve seats having broad engaging surfaces cooperating with said forces for minimizing the unit area pressure therebetween.

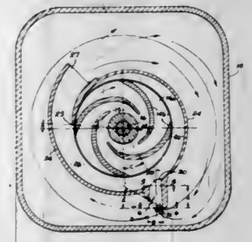
3,045,602
BOOSTER PUMPS
Harold E. Adams, Norwalk, Conn., assignor to Nash Engineering Company, South Norwalk, Conn., a corporation of Connecticut
Original application Nov. 15, 1951, Ser. No. 256,580, now Patent No. 2,956,504, dated Oct. 18, 1960. Divided and this application Oct. 9, 1958, Ser. No. 790,314
7 Claims. (Cl. 103—113)



1. A fuel pressure booster pump for pumping fuel at or near its boiling point to an aircraft engine, comprising, a centrifugal liquid pump portion having an impeller adapted to be driven by the engine, said liquid pump portion including means for centrifugally separating vapor from the liquid fuel, said means including an annular vapor collection passageway surrounding and adjacent an inner portion of said impeller, a compressor portion of the centrifugal liquid ring type having a rotor, rotatable shaft means connected to drive the liquid pump impeller and compressor rotor in unison, the rotor of the compressor portion being of at least as great a diameter as the impeller to develop a discharge pressure at least equal to that of the liquid pump, said compressor portion opearting to draw off, compress and recondense vapor separated from the liquid fuel supply to the liquid pump and collected in said annular passageway about the inlet to said impeller, an outlet passage for said liquid pump, and means for conveying the recondensed vapor from the compressor portion directly to said liquid pump outlet passage and for recombining it with said liquid pump discharge at substantially equal discharge pressures.

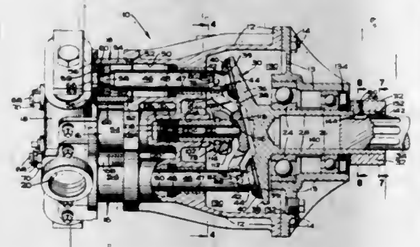
3,045,603
SELF-PRIMING CENTRIFUGAL PUMP
Richard E. Hunter, Ashland, Ohio, assignor to Barnes Manufacturing Co., Mansfield, Ohio, a corporation of Ohio
Filed Oct. 26, 1959, Ser. No. 848,804
2 Claims. (Cl. 103—113)

1. A self-priming centrifugal pump comprising a casing, means defining an impeller chamber in said casing, a bladed impeller rotatably mounted in said chamber and having an intake eye at its axis, a cutwater at one side of said chamber and having substantially a running fit with said impeller, said impeller chamber defining means having side walls closely associated with opposite faces of said impeller, said chamber defining means also having a partition wall joined to said side walls and said walls providing a volute passageway outside of the periphery of said impeller and extending more than 360 degrees from said cutwater, said volute passageway progressively increasing in cross sectional area from said cutwater in the direction of impeller rotation at an uninterrupted rate at every point along its length, the discharge end of said volute passageway located in the upper part of said casing and opening toward the top of said casing, there being a priming passageway communicating directly between the lower part of said casing and said volute passageway at a point in said volute passageway outside of the periphery of said impeller and more than 180 degrees from said cutwater in the direction of impeller rotation, said priming passageway being



of Venturi shape with its throat adjacent said volute passageway, said priming passageway having a flow area adjacent said volute passageway approximately equal to a circle whose diameter equals the width of said impeller blades between said side walls, means for liquid inlet to said impeller eye, and outlet means for discharging liquid from the upper part of said casing, whereby substantially gas-free liquid enters said priming passageway during priming periods and liquid is discharged at high efficiency from both said passageways during pumping periods, said priming passageway being delimited by walls approximately the shape of a truncated cone having a central axis substantially vertical, and said delimiting walls diverging outwardly into the lower part of said casing at an angle between approximately 6 to 8 degrees.

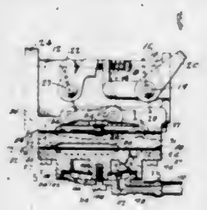
3,045,604
MULTI-CYLINDER PUMP
Herbert S. Hahn, Lansing, Mich., assignor to FMC Corporation, a corporation of Delaware
Filed May 4, 1960, Ser. No. 26,883
4 Claims. (Cl. 103—173)



1. A multi-cylinder pump comprising a housing, means on said housing defining four pumping cylinders disposed in a circular formation at spaced diametrically opposed points on the periphery of the circle, a reciprocable piston in each of said cylinders, a piston rod attached to each of said pistons, a first rocking lever having the ends thereof engaged with two diametrically opposed piston rods, a second rocking lever having the ends thereof engaged with the other two diametrically opposed piston rods, a first and a second bearing member for separately

rockably mounting said first and second levers respectively, a rotatable plate having a flat surface inclined with respect to the axis of plate rotation, said surface being disposed in engagement with the ends of each of said piston rods, and means for rotating said rotatable plate for reciprocating the piston rods and pistons successively in said pumping cylinders, retraction of one piston rod occurring in response to projection of the opposite piston rod under the control of the associated lever.

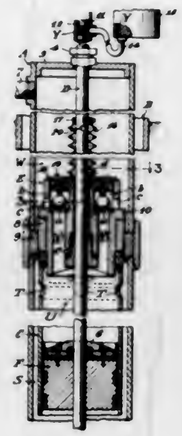
3,045,605
FUEL FEEDING MEANS
Warren D. Nutten, Erie, Mich., and Bernard C. Phillips, Toledo, Ohio, assignors to The Tillotson Manufacturing Company, Toledo, Ohio, a corporation of Ohio
Filed Sept. 15, 1958, Ser. No. 760,939
9 Claims. (Cl. 103—150)



1. In combination, pumping means for pumping liquid hydrocarbon fuels including a pair of members, a cavity formed in one of said members, a pumping diaphragm of flexible nonmetallic material extending across the cavity forming a fuel receiving chamber, said diaphragm being adapted to be flexed to establish pumping impulses in said fuel receiving chamber, a port for said fuel receiving chamber, valve means integrally formed on the diaphragm for said port, a flat valve seat formed on one of the members arranged for cooperation with the valve means for controlling the flow of fuel through the port, a recess formed in the other of said members adjacent the valve means to accommodate movement of said valve means to open position, means for securing the members and said diaphragm in fixed relation, a wall region of said recess adjacent the integral connection of the valve means with the diaphragm progressively receding from the plane of the diaphragm to relieve pressure of the member securing means on the valve means.

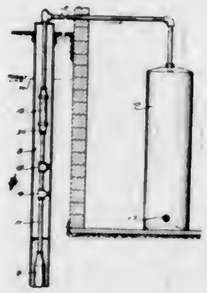
3,045,606
RECIPROCAL PISTON OIL WELL PUMP
Benjamin F. Schmidt, 450 Fairview Ave., Sierra Madre, Calif.
Filed Sept. 22, 1960, Ser. No. 57,676
7 Claims. (Cl. 103—155)

1. In an oil well pump; a length of tubing having an oil inlet at its lower end and an outlet at its upper end; a pump barrel in said pump tubing; a piston in said barrel; said pump barrel having a closed cap at its upper end; said closed cap having a sucker rod receiving opening therethrough; said tubing and said barrel defining therebetween an annular oil conducting space; a reciprocable sucker rod extending through said opening in said cap, connected to said piston and operable for reciprocating said piston to thereby effect an intake of crude oil through said inlet, the passage of crude oil through said space and the discharge of crude oil through said outlet; said barrel and said piston defining beneath said piston a variable capacity enclosed chamber; the variability of said chamber being caused by the reciprocation of said piston relative to said barrel; said sucker rod being tubular and extending through said piston with its lower end open at all times to said chamber; a tank adjacent the upper end of said pump tubing open at all times to the interior of said tubular sucker rod; and a body of lubricating oil



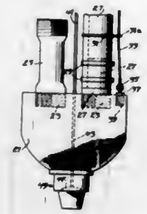
contained in said tank filling said sucker rod and said chamber.

3,045,607
WELL PUMPING SYSTEM
Jacob Lindner, 524 N. 90th St., Wauwatosa, Wis.
Filed Apr. 11, 1960, Ser. No. 21,432
6 Claims. (Cl. 103—221)



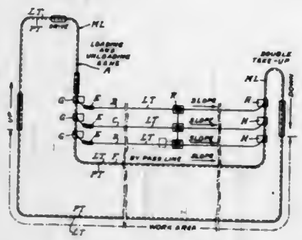
5. A well pumping system comprising, a pump submerged in the well water, a storage tank remote from said pump for receiving water displaced thereby and for maintaining this water under pressure when the pump is operating, a pipe line extending upwardly within the well and connecting the pump with the tank, means forming a chamber in axial alignment with said pipe line above said pump, said chamber having a valve seat at the lower end thereof, a float confined within but spaced from the wall of said chamber and having a valve carried by the lower end thereof, said float being adapted to move said valve away from said seat upon entrance of water into said chamber to provide a passage at least equal in area to that of the pipe line, a bleeder in said pipe line below said chamber for permitting said chamber to empty of water and permit said float and said valve to return to said seat whenever the chamber has been emptied and said pump is inactive, and a one-way check valve in said pipe line between said bleeder and said pump to prevent complete drainage of said pipe line adjacent to the pump.

3,045,608
REMOTELY OPERABLE MEANS FOR DRAINING SUBMERGED PUMP STRUCTURE
Walter Ratterman, Jr., 2819 Bransford Ave., Nashville, Tenn.
Filed Jan. 30, 1956, Ser. No. 562,231
1 Claim. (Cl. 103—221)



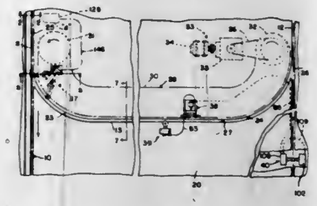
A submerged pump structure comprising a pump chamber having an intake opening at its bottom, a movable foot valve freely downwardly seated in said opening around the entire circumference of the valve so as to permit the entire circumference to be cleared of said opening upon raising of said foot valve, and said foot valve being responsive to variations in fluid pressures during pumping and fluid-column holding operation, yieldable means attached at one end to said pump structure bottom, extending through said opening and attached at its other end to a medial underside portion of said valve, said yieldable means normally urging said foot valve member towards closed position against said opening, and opening means extending from a topside medial portion of said foot valve member to above ground, said opening means being actuable from above ground to lift said valve free of said opening during draining of said pump structure, said opening means comprising a flexible pull member of a material highly resistant to ground-water borne chemicals.

3,045,609
TROLLEY TRANSFER MEANS
Willard D. Brown, Jr., Aurora, Ill., assignor to Richards-Wilcox Manufacturing Company, Aurora, Ill., a corporation of Illinois
Filed Mar. 31, 1961, Ser. No. 99,829
12 Claims. (Cl. 104—88)



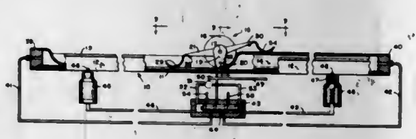
1. In means for transferring a trolley from a track of a conveyor system comprising a load track and a storage track with trolleys traveling along said load track and means for selectively releasing trolleys from one of said tracks, trolley guide means for directing a released trolley onto the other of said tracks, transfer member guide means adjacent said trolley guide means, a flexible transfer member operating in said transfer guide means engageable with a released trolley for propelling it along said trolley guide means, said transfer member guide means restraining said transfer member against distortion, and trolley controlled power operating means for said transfer member.

3,045,610
SUB-FLOOR CONVEYOR SYSTEM
Paul Klamp, St. Clair Shores, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed Sept. 9, 1957, Ser. No. 682,797
25 Claims. (Cl. 104—88)



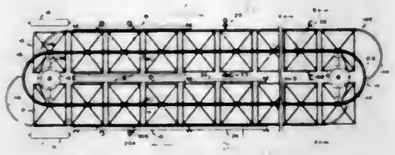
6. A conveyor system comprising means defining conveyor tracks communicating angularly with one another at a switching zone, endless conveyors traveling continuously in non-meeting but close side-by-side spaced and generally parallel adjacency to one another at said switching zone, said conveyors being generally parallel to said respective tracks, said conveyors following laterally angled paths adjacent said switching zone, mobile load bearing units each having a tow element projecting vertically in relation to said respective tracks and a control device adjustable thereon, said respective conveyors each being provided with a plurality of longitudinally spaced driving dogs traveling non-meeting paths and being engageable with said tow elements, and switching means to selectively disenage a tow element from a dog of one conveyor by shifting said low element across said dog and transversely relative to said conveyor paths out of the path of said one conveyor and into the path of the dogs of the other conveyor, for engagement of said element by a dog of said other conveyor traveling the path of the latter; thereby to laterally move a load bearing unit across said switching zone and from one of said communicating tracks to the other, said means comprising a member to effect said selective disengagement, a selective signal unit positioned adjacent said one track in advance of said zone and engageable and controllable by the adjustable control device of a load bearing unit, and means operatively connecting said signal unit with said member to effect said selective disengagement.

3,045,611
FLUID PRESSURE DEVICES
Jerome L. Murray, 401 E. 58th St., New York, N.Y.
Filed Jan. 16, 1958, Ser. No. 709,327
30 Claims. (Cl. 104—155)



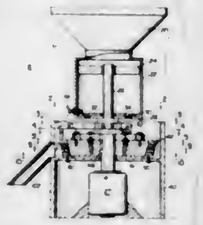
1. A fluid operated actuator comprising in combination, a track member; a flexible hose supported by said track member; a carriage having a roller journaled therein and having means for forcing said roller into intimate contact with said hose to compress said hose at the point of contact of said roller therewith, said means including roller means journaled on pendant means pivoted on the axis of said roller, said roller means coacting with said track; and means for alternately supplying pressure fluid to opposite ends of said hose.

3,045,612
ANIMAL HUSBANDRY
Dennis W. Byrnes, 4565 S. 6th St., Tucson, Ariz.
Filed Jan. 30, 1958, Ser. No. 712,118
6 Claims. (Cl. 104—178)



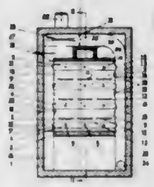
5. In an animal husbandry system including means for conveying animal cages in a continuous path past a plurality of servicing stations; the improvement in the means for conveying animal cages comprising: a pair of substantially horizontal rails extending substantially parallel to each other and spaced from each other; a curved rail connecting adjacent ends of said substantially parallel rails; a plurality of trolleys mounted on said rails for movement along said rails; a plurality of animal cages each freely pivotally suspended from a said trolley, each said cage having a substantially rectangular cross-section and a pair of guide posts extending upwardly from diagonally opposite corners of the upper surface of said cage; an endless drive cable having portions extending beneath each of said pair of substantially parallel rails, said cable having projections adjacent each animal cage for engaging each said cage; a drive wheel rotatably mounted between said adjacent ends of said pair of substantially parallel rails and within the curve of said curved rail, said drive wheel drivingly engaging said drive cable; a pair of drive arms rotatable integrally with each said drive wheel and extending on oppositely directed radii on a projected diameter of said drive wheel, each said drive arm extending beyond the perimeter of said drive wheel to a position to engage and move said animal cages around said curved rail at a linear speed greater than the linear speed of said drive cable; a pair of guide members each having portions extending parallel to and spaced from each of said pair of substantially parallel rails and adjacent said guide posts on said cages, said guide members having their ends curved inwardly toward said curved rail, said guide members engaging said guide posts on the upper surfaces of said animal cages to maintain the successive positions of the vertical surfaces of said animal cages substantially parallel to each other during the movement of said animal cages along said rails.

3,045,613
PELLETING MACHINE
Emerson S. Kennedy, Roseburg, Oreg., assignor to K.C.G. Corporation, a corporation of California
Filed Aug. 22, 1960, Ser. No. 51,143
1 Claim. (Cl. 107—14)



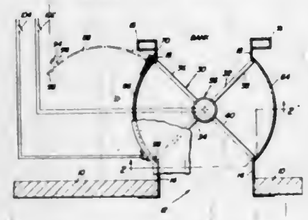
A pelleting machine comprising a horizontally disposed die ring having a plurality of material molding orifices extending through said ring from its inner face to its outer face, a shaft mounted concentrically of said ring, a hub fixed to said shaft, said hub having a plurality of radial slots therein, a plurality of impacting members for pressing material through said orifices, said members each comprising a shoe portion for engaging the said inner face of said ring, and a leg portion, said leg portions being received one in each of said slots, wedge means adjustably interposed between the terminal end of each of said leg portions and the inner end of the corresponding slot, each of said member leg portions having a wedge engaging face extending obliquely with respect to the axis of said shaft and diverging from said shaft in the upward direction, each of said wedges having a complementary face so that by movement of said wedges in a direction parallel to said axis the position of said shoe portion relative to said ring may be adjusted, a plurality of arms extending from said shaft one above each of said wedges and adjacent leg portions, a plurality of threaded adjustment means extending one through each of said arms and into the wedge beneath the same for adjusting the position of said wedge, means fixing said adjustment means against vertical movement relative to said arms, said adjustment means being threadedly received in said wedges whereby rotation of said adjustment means effects corresponding movement of said wedges parallel to said axis, releasable means for fixedly clamping said impacting members to said arms to secure the latter in a fixed position relative to said shaft, knife means supported on said shaft for engaging the outer face of said ring to cut off material extruded therethrough, and means for driving said shaft.

3,045,614
GAS-HEATED DISCONTINUOUS FURNACE PARTICULARLY ADAPTED TO THE BAKING OF BREAD
Adrianus van Dijk, The Hague, Netherlands, assignor to the State of the Netherlands, for the purposes of this application represented by The Board of Directors of the State Gas Concern, The Hague, Netherlands, a corporation of the Netherlands
Filed May 23, 1960, Ser. No. 31,076
Claims priority, application Netherlands May 23, 1959
3 Claims. (Cl. 107—55)



1. A bake oven particularly adapted to the baking of bread, comprising an outer mantle having at least one baking space therein, a lower radiator case underneath said baking space, said lower radiator case having an open grid-like separating wall between said space and said lower radiator case and defining the bottom of said baking space, an upper radiator case over said baking space and defining the top of said baking space, a plurality of gas burner pipes parallel to each other and extending into said radiator cases from the rear wall of said mantle to a point adjacent the front wall of said mantle, said mantle having a vertical common discharge channel therein on one side of said baking space and said radiator cases, and a vertical common supply channel therein on the other side of said baking space and said radiator cases, a duct within said outer mantle connecting said channels and having a blower therein, a passageway from one of said channels to a flue discharge stack, side walls defining the sides of said baking space, said side walls having horizontal rows of spaced passages extending therethrough near the top of said baking space, said spaced passages providing communication between the interior of the baking space and said vertical channels, regulating elements slidably supported on said baking space side walls and having openings therein matching the passages in said sidewalls, said radiator cases having sidewalls with horizontal rows of spaced passages extending therethrough and providing communication between the interior of said cases and said vertical channels, further regulating elements slidably supported on said radiator case side walls and having openings matching the passages in said radiator case side walls.

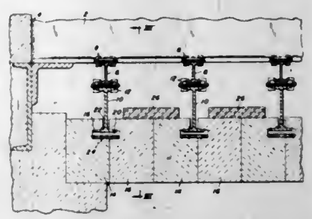
3,045,615
BURGLAR PREVENTION DEVICE
Charles T. Atchison, 868½ E. Kensington Road, Los Angeles 26, Calif.
Filed Sept. 22, 1959, Ser. No. 841,587
2 Claims. (Cl. 109—3)



1. Burglar protective means for banks or such comprising in combination with a building having walls defining an entrance way, a pair of opposed arcuate vertically extending walls disposed within said building defining a passageway therebetween in alignment with said entrance way, a door frame, said door frame including a plurality of radially extending door sections composed of bullet proof glass, said door sections secured to each other along a common axis, means for mounting said door frame for rotational movement about said axis within said passageway, and electrical brake means including a first switch remotely located from the entrance way for selectively preventing said rotational movement, a horizontal supporting surface, a floor portion, said mounting means including spindles journalled in bearing means for remotely connecting said door frame to said surface and floor portion and in alignment with said common axis, vertical members supported in said building spaced from said building walls, said arcuate walls extending between said members and said building walls, at least a portion of one of said arcuate walls comprising a door and being pivotally mounted on one of said members for pivotal movement thereabout and solenoid means connected to the door structure for locking said pivotally mounted arcuate wall portion to said building, electrical means including a second switch remote from said entrance way for energizing said solenoid for unlocking said pivotally mounted arcuate wall portion, both of said switches being in the same proximity whereby a bank employee can operate both switches at substantially the same time at a location remote from the entrance way, and means for urging said pivotally mounted door about said one member away from said building wall.

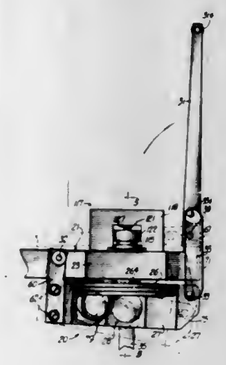
3,045,616
SUSPENDED REFRACTORY ROOF
Harold A. Reich, Chicago, Ill., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 30, 1959, Ser. No. 862,895
1 Claim. (Cl. 110—99)

A flat suspended refractory roof comprising a plurality of bricks supported in a single layer in abutting relationship, spaced parallel flanged beams extending in one direction across the roof with their flanges generally horizontal, a plurality of intermediate I-beams beneath said first named beams, means suspending said intermediate I-beams from said first named beams in spaced apart relationship transversely of said first named beams with their flanges substantially horizontal, a plurality of standard steel bottom I-beams, one beneath each intermediate beam, and an articulated connection between each of said intermediate beams and the bottom beam therebeneath, said bottom beam being supported entirely by said articulated connection, each of said plurality of bricks having



a generally horizontal recess adjacent the top thereof extending from one vertical side thereof, the opposite vertical side of each brick abutting a vertical side of an adjacent brick, said bricks being arranged in pairs with their recesses facing each other, the bottom flanges of said bottom beams being received in the recesses of each associated pairs of bricks with more than two pairs of bricks being supported by each bottom beam, and insulation in said recesses beneath said bottom flanges of said bottom beams.

3,045,617
CAN OPENER
William J. Dieter, John H. Schroeder, and Philip F. Flynn, Naperville, Ill., assignors to Du Page Precision Products Co., Naperville, Ill., a corporation of Illinois
Filed Mar. 10, 1958, Ser. No. 720,196
11 Claims. (Cl. 113—1)



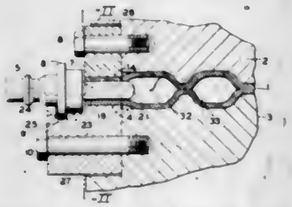
1. A can opener for a can having a cover joined to a can body by a lock seam forming a channel between the can body and lock steam and comprising a frame including a support means for rotatably supporting a can to be opened, a first roller having a beveled periphery for spreading out said seam away from the body of the can, means pivoted to said frame for moving said roller into said channel in engagement with the lock seam joining the cover with the body of said can, means for rotating said roller while in engagement with said can and cover to cause said can and cover to rotate whereby said first roller effectively rolls around said seam to spread out said seam, a second roller for engaging said seam immediately after it has been spread out by said first roller for uncurling the edge of said cover back of the adjoining edge of the body of the can to release it com-

pletely from said can without cutting either said cover or said can, and driving means for simultaneously rotating both of said rollers in the same direction.

3,045,618
METHOD FOR FORMING HOLLOW SHEET METAL PANELS

Richard Franklin Adams, Schenectady, N.Y., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Original application July 22, 1954, Ser. No. 445,108, now Patent No. 2,949,875, dated Aug. 23, 1960. Divided and this application Oct. 5, 1959, Ser. No. 844,587
5 Claims. (Cl. 113—51)



5. A method for forming passages in a distendable blank having a portion of its interior within the confines of the periphery of said blank adapted for inflation with fluid pressure into a system of fluid passages for containment of a fluid and having a portion thereof extending to an edge of said blank forming an opening into said interior comprising the steps of inserting a cannula into said opening between the labia thereof for admission of a fluid pressure into said interior, clamping the said labia of said opening about said cannula in form fitting relationship while simultaneously swaging the portions of said structure immediately adjacent the corners of said labia so as to compressively deform said structure at least in said portions of said structure whereby said cannula is hermetically sealed within said opening, and injecting through said cannula a fluid to distend said portion of its interior into fluid passages.

3,045,619
APPARATUS FOR HANDLING FUSIBLE MATERIALS

August B. Grillon, Mirada Hills, Blaine J. Holland, Inglewood, Stanley V. Pope, Malibu, and Charles J. Steigleder, San Pedro, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Apr. 1, 1959, Ser. No. 803,538
2 Claims. (Cl. 113—93)

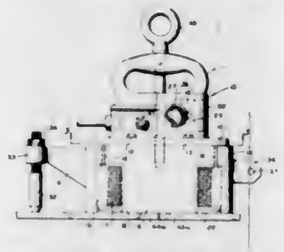


1. In an apparatus for dispensing fused electrical conducting material about a component lead disposed through an opening in a circuit board, said circuit board and said component lead being supported relative to said apparatus, the combination of: a fixed base structure; a horizontally disposed platform movably carried by said base structure; at least one vertically disposed, generally tubular fused material dispensing nozzle rotatably carried by said platform in a position axially aligned with said component lead; an electric heating element disposed about a dispensing end portion of said nozzle, said end portion being normally spaced from an end of said component lead; means for moving said platform and said nozzle carried thereby to a position for reception of said end of said component lead in said dispensing end portion of said nozzle and engagement of said end portion of said nozzle with a surface of elements carried by said circuit board, said moving means serving thereafter to move said platform and said nozzle away from said circuit board; a rotatable, internally threaded threading means for externally threadably engaging a solid portion of a strand of fusible electrical conducting material; means rotatably mounting said internally threaded means at the end of said nozzle opposite said dispensing end position; and an electric motor carried by said platform and connected to said internally threaded means to rotate said internally threaded means whereby to advance said fusible electrical conducting material through and in a molten state from said nozzle at least while said dispensing end portion of said nozzle end is in contact with said elements carried by said circuit board.

3,045,620
UNITARY PORTABLE ELECTROMAGNETIC CLAMP

Eugene W. Buck, Campbell, Calif., assignor to Buck Manufacturing Company, San Jose, Calif., a corporation of Delaware

Filed Dec. 10, 1956, Ser. No. 627,207
2 Claims. (Cl. 113—99)



1. A unitary portable electromagnetic device for use in holding or clamping articles such as metal plates while work is performed thereon, comprising an electromagnetic base having a centrally disposed core member and an annular cavity therein disposed around said core member, a coil positioned in said annular cavity and surrounding said core member, a housing having a generally flat configuration, said housing having a flange on one side thereof, means for attaching said flange to said electromagnetic base, a rectifier for rectifying alternating current to provide direct current to said coil, said housing having an elongated cavity therein for receiving said rectifier, a pair of blocks of insulation material, means for attaching said blocks to said rectifier, means for holding said blocks in the end portions of said elongated cavity, said elongated cavity having ventilating apertures near the ends of said rectifier through which air for cooling said rectifier is adapted to flow in and out of said elongated cavity, and an electric switch connected to control the energization of said rectifier.

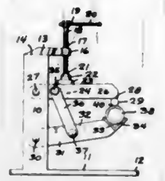
3,045,621
ALIGNMENT JIG FOR BUTT WELDING

John A. Hartgenbush, 1701 Jackson St., Sioux City, Iowa

Filed June 15, 1959, Ser. No. 820,174
3 Claims. (Cl. 113—102)

1. An alignment jig for butt welding pipes comprising a framework including a pair of vertically positioned laterally spaced posts, upper parallel bars pivoted to said posts and extending to one side of said posts, lower parallel arms pivoted to said posts and extending to the same side of said posts as said upper bars, pipe receiving members facing said upper bars attached to said lower arms, links pivotally connected to said upper bars and said lower

arms, the distance between the pivoting points of said links and said upper bars and the pivoting points of said upper bars and said posts being shorter than the distance

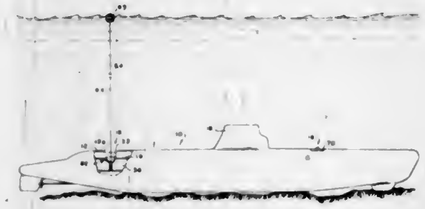


between the pivoting points of said links and said lower arms and the pivoting points of said lower arms and said posts, whereby movement of the said upper bars downwardly, will secure said pipe ends.

3,045,622
SUBMARINE ESCAPE DEVICE

George William Kittredge, Arlington, Va., and William E. Heronemus, United States Navy, assignors to the United States of America as represented by the Secretary of the Navy

Filed Mar. 26, 1959, Ser. No. 802,267
6 Claims. (Cl. 114—16.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



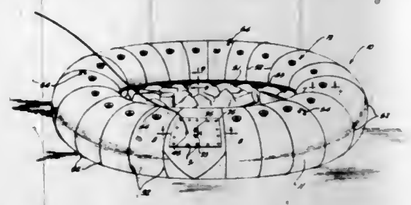
1. In combination, a submarine and an escape device therefor, the submarine having an outer deck portion, a casing having an open upper end and a hatch in the lower end, said casing being fixed in said submarine with its upper end spaced inwardly from said deck portion, a rescue buoy of hollow ball form having a lower portion releasably mounted in the upper end of said casing, said buoy having a minor exterior surface area thereof at an opening in said deck portion exposed to ambient sea water when the submarine is submerged, said upper end of said casing and said lower portion of said buoy having means thereof juxtaposed for holding the buoy in sealing engagement with the casing, ingress and egress hatches formed in the lower and upper portions respectively of the buoy, said buoy having a sectional area which is larger than said surface area and which lies inwardly of said deck portion when the buoy is mounted in said upper end of said casing, said opening in the deck portion being larger than said sectional area, ring means for air-tightly closing the space of said opening between the deck portion and said minor buoy surface, and means optionally operable from inside the submarine for tightening said ring, so that the ring is also a bar to movement of the buoy through said opening in said deck portion, and for releasing the ring so as to remove the bar.

3,045,623
UNDERWATER VEHICLE

Vernal M. Tyler, Rolling Hills, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Mar. 31, 1960, Ser. No. 18,907
3 Claims. (Cl. 114—16.8)

1. An underwater vehicle comprising: a toroidal body having a toroidal chamber therein; means for initially filling said chamber with water to permit sinking of said vehicle; plural differential check valve means carried by said body and communicating between said chamber and an exterior of said body; explosive water ejection means disposed within said chamber for forcing said water there-

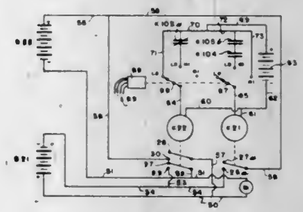


from and through said check valve means, whereby to buoy said vehicle; means for energizing said explosive water ejection means; and a container secured to and carried in the eye of said toroidal body.

3,045,624
SPEED CHANGE SYSTEM FOR TORPEDOES

Thomas A. Daly, Swarthmore, and Sherman B. Hall, Sharon, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Dec. 23, 1953, Ser. No. 400,148
4 Claims. (Cl. 114—20)



1. In a torpedo of the type having an electric propulsion motor and an electric storage battery comprising two sections of equal voltage, an electric circuit for selectively connecting the sections in parallel or series with the motor, whereby it may operate at low or high speed, respectively, the improvements in combination comprising: a normally open parallel circuit contactor and a normally open series circuit contactor carried within the torpedo, each having contacts forming a part of said circuit, each contactor having a solenoid for closing its contacts when energized, and a circuit within the torpedo having a three position switch therein for each solenoid; the first position for effecting parallel connection of the battery sections; the second position for effecting series connection of the battery sections, an electric circuit adapted to be energized at a remote station outside of the torpedo for conjointly moving the switches to either of said positions; and a third position in which the battery sections may be connected in either series or parallel under control of a torpedo guidance system carried by the torpedo.

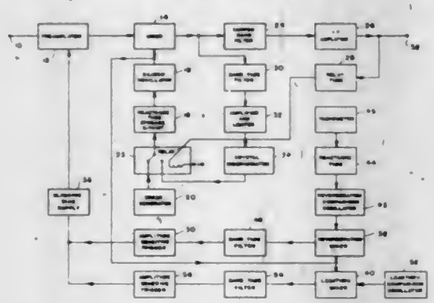
3,045,625
AUTOMATIC FREQUENCY SEARCH AND FOLLOWING RECEIVER

Charles H. Smith, Jr., McKeesport, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Mar. 31, 1954, Ser. No. 420,215
11 Claims. (Cl. 114—23)

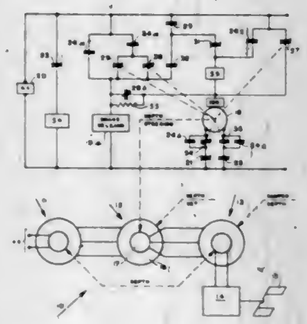
1. An automatic frequency search and following receiver adapted to have applied thereto an amplitude modulated input signal having a plurality of components, the carrier frequencies of the components being different, the carrier frequency of one of said components being

undetermined and variable, and the carrier frequencies of the remaining components being determined, comprising: a preamplifier to which the input signal is adapted to be applied; a mixer to which the output of said preamplifier is applied; a search oscillator, the output of said search oscillator being applied to said mixer; a first narrow band channel; a second broader band automatic frequency control channel; the output of said mixer being applied to said channels; means for periodically varying the frequency of the search oscillator over a predetermined band of frequencies; and circuit means for cutting off the preamplifier when the difference between the frequency of the search oscillator and the carrier frequencies of any of the components of said input signal whose carrier frequencies are determined is such as to lie within the pass



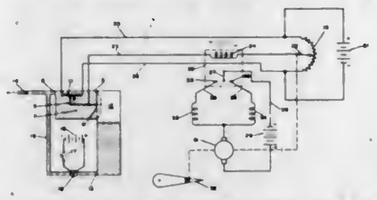
band of the narrow band channel; said narrow band channel means comprising means for producing an output signal of substantially constant carrier frequency and means for disconnecting said means for periodically varying the frequency of the search oscillator from said search oscillator and for connecting the output of the broader band automatic frequency control channel to the search oscillator when the difference between the frequency of the search oscillator and the frequency of the component of the input signal whose frequency is undetermined is such as to be within the pass band of the narrow band channel; said second channel comprising means for controlling the frequency of the search oscillator to keep the frequency of the output of said mixer centered within the pass band of said narrow band channel.

3,045,626
DEPTH STEERING SYNCHRO ASSEMBLY
Stephen Kowalyshyn, Sharon, Thomas A. Daly, Swarthmore, and David A. Cooke, Wallingford, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 6, 1954, Ser. No. 402,614
10 Claims. (Cl. 114—25)



4. In an acoustic torpedo depth steering system comprising an electrical synchro assembly, including a synchro differential generator, for providing a depth steering signal in accordance with the instantaneous angular position of the differential rotor relative to its stator, the improvements comprising a reversible steering motor, a speed reduction unit driven by said motor for driving the differential rotor at a reduced rate, said motor including a pair of field windings, an operating voltage source, switch means in each of said field windings controlled by the torpedo acoustic panel for placing one terminal of a selected one of said field windings in circuit with said voltage source whereby the direction of rotation of said motor will be determined by which of said switch means is actuated to its closed position; and plurality of circuits for connecting the other terminal of said field windings to the voltage source; a first one of said circuits including switch means driven by the motor for energizing the latter in a manner to cause the differential rotor to be driven to a given physical position; a second one of said electrical circuits including means actuated by the torpedo acoustic panel on target contact for causing intermittent energization of said motor so as to provide for stepped angular movement of the differential rotor for steering of the torpedo in increments of depth; and a third one of said electrical circuits including means controlled by the torpedo acoustic panel for causing continuous energization of the steering motor during target tracking periods whereby to cause continuous rotation of the synchro rotor in the proper direction and hence continuous steering of the torpedo; and means for rendering the first of said electrical circuits inoperative upon firing actuation of the torpedo, and manually operable means for selectively conditioning one of such second and third circuits to become operable upon firing actuation.

3,045,627
DEPTH CONTROL SYSTEM
Robert C. Eck, State College, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 24, 1956, Ser. No. 587,180
10 Claims. (Cl. 114—25)



1. In a control system for a submersible body having a rudder the combination comprising: first means responsive to the influence of hydrostatic pressure ambient of the body; a compartment associated with said first means and open to hydrostatic pressure ambient of the body; said compartment being so adapted that when the body is submerged a portion thereof will remain unfilled, said unfilled portion having a volume greater than the maximum volumetric displacement of said first means due to hydrostatic pressure; means operable to close off said compartment from hydrostatic pressure ambient of the body; and a second means responsive to actuation of said first means and the rudder to vary the position of the rudder.

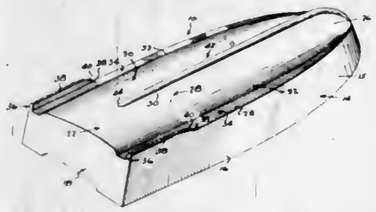
3,045,628
ICEBREAKER
Heinrich Waas, Am Stadtwald 50, Bad Godesberg, Germany; Johann Ehlers, Blumenstrasse 30, Lauenburg (Elbe), Germany; and Otto Grim, Heubergerstrasse 27, Hamburg-Rahlstedt 2, Germany
Filed Oct. 22, 1958, Ser. No. 769,029
Claims priority, application Germany May 23, 1958
3 Claims. (Cl. 114—40)

1. An ice breaker having means for inducing periodic pitching movements, said means comprising a plurality of unbalanced masses mounted for rotation in a vertical plane about a common axis disposed at right angles to the vertical longitudinal plane of the ice breaker, said means being associated with the bow of the ice breaker, and said



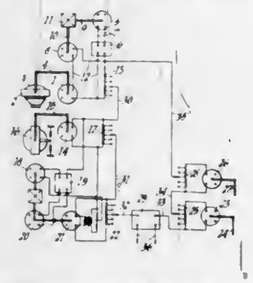
means for inducing periodic pitching movements being effective to produce an ice-breaking force which is large relative to the weight of the ship with which it is associated and being effective in a ship of 300 metric tons to break ice of a thickness of 1 meter and upwards.

3,045,629
BOAT HULL
Floyd W. Farrington, 1638 Wynne, San Angelo, Tex.
Filed Dec. 11, 1959, Ser. No. 858,971
3 Claims. (Cl. 114—56)



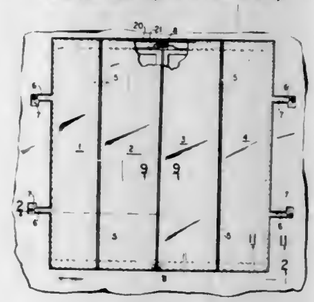
1. A boat hull comprising a bottom having a substantially flat longitudinal central portion, and upwardly and laterally outwardly curved portions at opposite sides of and extending along said central portion, said bottom having flat chines reaching laterally outwardly from and extending along said curved portions, upstanding hull sides at the outward edges of the chines and reaching rearwardly to the transom, longitudinal fins depending from and extending forwardly along the chines from the transom, said fins being narrower than the chines and being spaced laterally outwardly from said curved bottom portions, said fins being relatively short relative to the length of the hull and having terminal forward ends.

3,045,630
SHIP STABILIZATION
John Victor Foll and John Bell, Beckenham, England, assignors to Muirhead & Co. Limited, Beckenham, England
Filed Mar. 6, 1961, Ser. No. 93,676
Claims priority, application Great Britain Mar. 22, 1960
3 Claims. (Cl. 114—122)



1. A ship stabilizer control system comprising means for detecting the components of roll of a ship, means for generating for each component of roll a linearly proportional electrical signal, resistive loads across each of said generating means, means for tapping pre-selected levels of the electrical signals across each of said resistive loads, amplifying means, said pre-selected signal levels being connected in series so that the algebraic sum of said pre-selected signal levels is applied to the input of the amplifying means, the output of said amplifying means being applied to control the stabilizing means.

3,045,631
WATER-TIGHT FLUSH HATCH COVER CONSTRUCTIONS
Gustave Stransky, New York, N.Y.; Marianne Hecht, executrix of the estate of Gustave Stransky, deceased, assignor to MacGregor A.G., Basel, Switzerland, a corporation of Switzerland
Filed Dec. 14, 1959, Ser. No. 859,382
6 Claims. (Cl. 114—201)

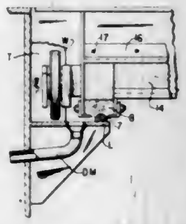


1. In a flush, water-tight hatch cover construction, vertical side and end wall means defining a hatch opening, a plurality of hatch cover sections for closing and exposing the opening, each cover section having top, side and end walls, the tops of the sections being flush with the top of the opening, hinge arms carried by the end walls of those sections that are adjacent the opposite ends of the opening, the end wall means of the opening having recesses for accommodating said hinge arms, said recesses having an open end adjacent the respective end cover sections, and pivot means for said hinge arms mounted outwards of said end wall means, transverse gasket stripping carried by the end walls of each section to provide a transverse seal between the respective sections and an end seal at each end of the opening, peripheral gasket stripping carried by the side walls of each section, cooperating sealing means carried by the side and end wall means that defines the opening, and the gasket stripping carried by the end walls of the end sections and the cooperating sealing means carried by the end walls of the opening including shaped portions outlining the open end of each recess and surrounding each hinge arm, and in which all of the gasket stripping and cooperating sealing means except such shaped portions lie at the same level at the upper end of the opening.

3,045,632
HATCH COVER ARRANGEMENTS
Gustave Stransky, New York, N.Y.; Marianne Hecht, executrix of the estate of Gustave Stransky, deceased, assignor to MacGregor A.G., Basel, Switzerland, a corporation of Switzerland
Filed Dec. 14, 1959, Ser. No. 859,177
5 Claims. (Cl. 114—202)

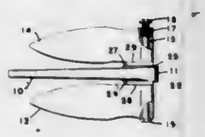
1. In a hatch cover arrangement including vertical wall means delimiting a hatch opening and at least two cover sections for closing the opening, means mounting the sections for folding movement relative to the opening for exposing and closing the same, a ledge means extending laterally inwards of said vertical wall means and completely around the interior of the opening, the ledge means extending along the sides of the opening having sufficient width to provide a rolling space between the

sections and the adjacent vertical wall means each cover section including vertical side and end walls and a top including a projecting portion extending laterally of the side walls of each section so as to overlie said rolling space, wheels by and on the exterior of at least one section for rolling on said ledge means, gasket stripping carried by the vertical side and end walls of the sections that overlie said ledge means for sealing engagement relative to said ledge means to provide a peripheral seal, inclined track means surmounting the ledge means out-



wardly of said gasket stripping and in said rolling space on which said wheels may roll, the level of said ledge means being so coordinated with the vertical extent of the side and end walls of the sections and the vertical extent of the gasket stripping that the tops of the sections are flush with the top of said vertical wall means, and a transverse seal between the sections including a compression bar and a cooperable gasket stripping carried by the respectively adjacent end walls of the respective sections at a level adjacent said ledge means.

3,045,633
RELEASABLE MARINE ANCHOR
William M. Sarns, Rte. 2, Morley, Mich.
Filed Mar. 1, 1961, Ser. No. 92,604
3 Claims. (Cl. 114—208)



1. An anchor comprising: a shank having a hub with a central bore; a pin traversing said bore; fluke means rotatably and slideably mounted on said pin on opposite sides of said shank, said fluke means having axially interengageable key means to maintain the relative angular position thereof about said pin; interengageable abutment means on said shank and fluke means, respectively, to define opposite extremes of normal freedom of angular movement between said shank and fluke means, said abutment means having configuration tending on engagement to induce axial separation between said shank and fluke means; and biasing means including a coiled compression spring surrounding said pin urging said shank and fluke means axially together.

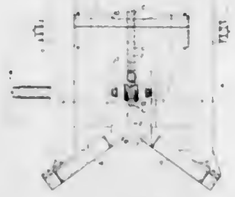
3,045,634
ANCHOR LINE RETAINERS
Clarence T. Dorsett, 1020 Holly Ave., Arcadia, Calif.
Filed Aug. 31, 1959, Ser. No. 837,204
10 Claims. (Cl. 114—210)

4. A boat anchor line retainer which comprises in combination: a boat hull having an opening formed therein; a flexible elastomeric disc secured to said hull so as to cover said opening; a hook, said hook including a shank carried by the center portion of said disc and a curved end located on the exterior of said hull; a retainer secured to the exterior of said hull adjacent to the extremity of said curved end of said hook; and actuating means attached to said shank within said hull, said disc being capable of temporary deformation upon movement of said



actuating means so as to cause said curved end to move away from said retainer, said disc being capable of moving said hook so that said curved end is located adjacent to said retainer when said actuating means is released.

3,045,635
AUTOMATIC HYDRAULIC SADDLE LOCK
Donald R. Smith and William A. Gibson, Dartmouth, Nova Scotia, Canada, assignors to Her Majesty the Queen in right of Canada as represented by the Minister of National Defence
Filed Apr. 3, 1961, Ser. No. 100,335
Claims priority, application Canada Aug. 31, 1960
4 Claims. (Cl. 114—235)



1. In a variable depth sonar apparatus wherein the sonar transducer is housed in a body towed astern a vessel, means for locking the body in a stowed position aboard the vessel comprising a tow arm fixed to said body, and having a towing cable affixed thereto, a throat block mounted on said vessel and adapted to receive said tow arm, a locking pin adapted to pass through an opening in said tow arm and in said throat block and to lock said tow arm in said throat block, and a switch positioned in said throat block and adapted to operate when said tow arm is fully seated in said throat block, said switch being connected to means for operating said locking pin, operation of said switch causing said locking pin to lock said tow arm to said throat block.

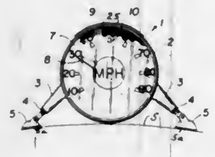
3,045,636
AQUATIC TOY
De Loss V. Thomas, 24 Clinton St., Redwood City, Calif., and Harold J. Roberts, San Francisco, Calif.; said Roberts assignor to said Thomas
Filed Mar. 6, 1961, Ser. No. 93,420
7 Claims. (Cl. 115—23)



1. An aquatic toy comprising a buoyant vessel having a relatively flat body including a prow and a stern with

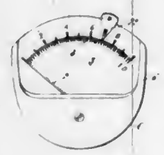
an intermediate opening for an occupant, side walls extending upwardly and downwardly from said body and having inwardly curved merging portions to form a seat beneath said opening, the forward portion of said seat being open to permit the legs of the occupant to extend into water in which the vessel floats, and manually actuated propelling means.

3,045,637
VEHICLE ROOF MOUNTED SPEEDOMETER
Peter A. La Fata, 16 Arlington St., Reading, Pa.
Filed Apr. 22, 1960, Ser. No. 24,162
1 Claim. (Cl. 116—57)



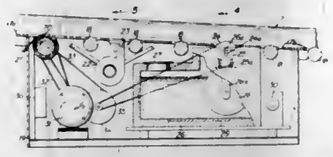
A large speedometer for mounting on the roof of a vehicle comprising a vertically mounted dial supported by legs mounted on the roof of the vehicle and having a plurality of substantially evenly spaced, separate arcuate slots disposed along an arc adjacent the periphery of the dial, a calibration marker assembly mounted on each slot including a marker slidably mounted on the outside face of the dial, a stud extending through the slot and a spring mounted on the stud and exerting frictional pressure on one surface of the dial to permit selective adjustment of the position of the marker within the limits of the length of the particular slot in which the marker assembly is mounted, and a pointer rotatably mounted for pivotal movement on the dial along said arc, and a flexible shaft extending from said speedometer and adapted to be connected to the drive of said vehicle so as to be driven thereby in direct proportion to the speed of said vehicle.

3,045,638
PANEL INSTRUMENT ATTACHMENT
Donald A. Davio, Manchester, N.H., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 5,807
3 Claims. (Cl. 116—129)



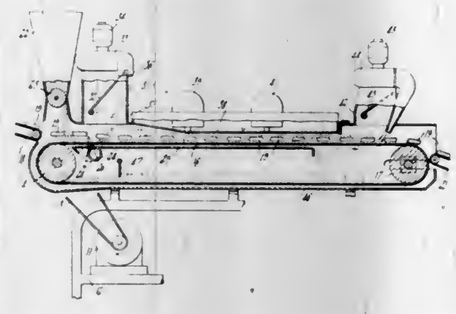
1. For use with a panel having an opening, an instrument having a housing extending through the opening and a flange overlapping the front of the panel with a space between the flange and panel, said flange having an edge facing away from said opening, and an attachment including a member, track, rider and pointer, said member fitting in said space, said track being mounted on said member and extending circumferentially of said housing, said rider being slidably mounted on said track and said pointer being fast to the rider and extending over said flange and thence in front of the flange, and means for clamping said member between said flange and panel so that said attachment is removable by unclamping said member.

3,045,639
SKI WAXING DEVICE
John Kurlander, Packanack Lake, and Harold Althen, West Caldwell, N.J., assignors, by mesne assignments, to Ski Waxer, Inc., Nutley, N.J., a corporation of New Jersey
Filed Oct. 6, 1959, Ser. No. 844,668
13 Claims. (Cl. 118—1)



2. A ski waxing device comprising a plurality of substantially vertically extending extensible support posts, roller frame supports adjustably mounted between said support posts, a roller frame mounted on said roller frame supports and having a plurality of idler rollers at intervals therealong, one end of said roller frame being at a level lower than the other end of said roller frame, hand rails adjustably mounted between said support posts above and parallel to said roller frame, an enclosure suspended from said roller frame, means for cleaning snow from the running surfaces of the skis, means for conditioning the running surfaces of skis for receiving wax, and means for applying a coating of wax, said means mounted in said enclosure in the recited sequence, said means for applying a coating of wax being adjacent the lower end of said roller frame, and a heated reservoir for wax in said enclosure connected to said wax applying means, whereby skis moving along said rollers on said roller frame under the effect of gravity with the running surfaces on the rollers have the snow removed therefrom, have the running surfaces conditioned for receiving a coating of wax, and have a coating of wax applied thereto.

3,045,640
BREADING APPARATUS
William Hill, Belmont, and Donald H. Lounsbury, Reading, Mass., assignors to J. W. Greer Company, Wilmington, Mass., a corporation of Massachusetts
Filed Aug. 9, 1960, Ser. No. 48,418
5 Claims. (Cl. 118—16)



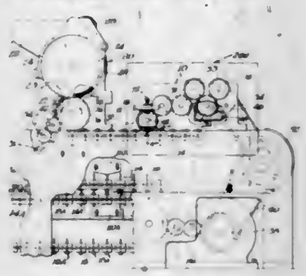
1. Apparatus for applying comminuted material to food products and the like, including an open mesh conveyor, means underlying a traverse of said conveyor for retaining thereon a continuous layer of comminuted material onto which the products are deposited, a discharge hopper above an initial portion of said traverse for discharging comminuted material onto said conveyor to form said layer, means to apply air upwardly beneath said layer to scatter said comminuted material, means overlying said conveyor to deflect the air-blown comminuted material causing it to fall back on said conveyor and the

products to be submerged therein, means to embed said comminuted material in the products, and means to separate from the products the excess comminuted material not embedded therein.

3,045,641
APPARATUS FOR COLOR-CODING TABLETS

Frank G. Oddo, Midland Park, N.J., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 13, 1959, Ser. No. 805,773
5 Claims. (Cl. 118—16)



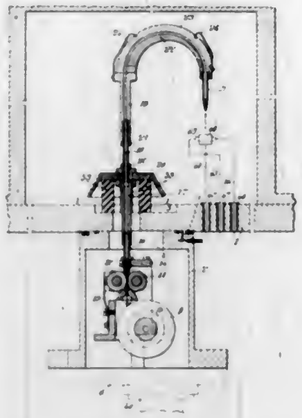
1. An apparatus for color-coding tablets comprising a cylindrical roller having a soft resilient surface, conveyor means, a stationary frame, said conveyor means including a plurality of carriers, said carriers including smoothly-surfaced gripping means for securely grasping said tablets, said conveyor means being mounted upon said frame, support means mounting said cylindrical roller upon said frame adjacent the path of movement of said carriers to cause tablets grasped by said carriers to contact said soft resilient surface of said cylindrical roller, tablet feeding means operatively associated with said conveyor means for inserting said tablets within said carriers before they carry said tablets into contact with said roller, drive means mounted upon said frame and connected to motivate said conveyor and said roller, means for dispensing a coloring liquid to said roller, actuating means operatively connected with said carriers for opening said gripping means prior to receiving said tablets and after said tablets have contacted said roller for securely grasping said tablets in said carriers before passing under said roller and subsequently discharging said tablets, and said support means being adjustable to cause said tablets to penetrate a predetermined distance within said soft resilient surface thereby coloring a corresponding predetermined area upon said tablets.

3,045,642
VACUUM PUMPS OF THE GETTER TYPE

Robert Auzolle, Gif-sur-Yvette, Paul Chaumette, Montrouge, Paul Garin, Clamart, and Pierre Prugne, Gif-sur-Yvette, France, assignors to Commissariat a l'Energie Atomique, Paris (Seine), France, a State administration

Filed July 9, 1958, Ser. No. 747,475
Claims priority, application France July 12, 1957
9 Claims. Cl. 118—49)

1. In an apparatus of the type described in which a metal capable of producing a getter effect is vaporized in a vacuum, the combination of means forming a vacuum chamber, a gastight casing located on the outside of said chamber, said chamber and said casing having adjoining respective walls in gastight contact with each other, said walls being provided with corresponding holes for placing the inside of said chamber in communication with the inside of said casing to extend the vacuum of said chamber into said casing, means extending from the inside of said casing to the inside of said chamber and passing through said holes for guiding a wire of said metal from said casing into said chamber, heating means located inside said chamber for vaporizing said metal wire in said chamber at the outlet of said guiding means, a protecting baffle in said chamber surrounding said guiding means above said connecting holes, said baffle preventing



condensation of metallic vapors in said casing, a feed spool mounted in said casing, said wire being wound on said spool, and driving means for unwinding said wire from said spool and propelling it through said guiding means from said casing into said chamber.

3,045,643
ADHESIVE APPLICATOR FOR A CAN LABELING MACHINE

John J. Mattingly, Rising Sun, Ind., and Ralph J. Mattingly, deceased, late of Rising Sun, Ind., by Richard R. Mattingly, executor, Aurora, Ind.

Filed June 22, 1959, Ser. No. 821,871
4 Claims. (Cl. 118—415)



1. An applicator for applying adhesive along an edge of a label in a labeling machine, said applicator comprising a body with an internal adhesive supply cavity, said body including a surface for contacting the label along an edge thereof, means defining a recess in said surface, means in said body providing communication between said cavity and said recess for filling said recess with adhesive from said cavity, whereby a band of adhesive is applied along the edge of the label when said surface is in contact with the label, and means formed in said body adjacent said recess for receiving excess adhesive flowing beyond the label.

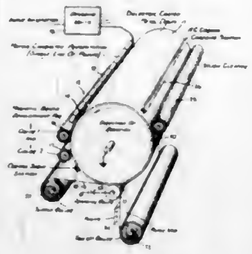
3,045,644
TWO-COLOR ELECTROSTATIC PRINTING APPARATUS

Frederick A. Schwertz, Pittsford, N.Y., assignor to Xerox Corporation, a corporation of New York

Filed June 6, 1957, Ser. No. 664,136
10 Claims. (Cl. 118—637)

1. A two-color electrostatic apparatus for recording and printing information and comprising a movable endless recording medium having an insulating surface for sustaining electrostatic charges, means to produce composite negatively and positively charged latent electrostatic images on said medium, the charges of said latent electrostatic images having a polarity depending on the desired color, means operatively disposed with respect to said medium beyond said station and including powdered

toners of contrasting color and opposing polarities to form powder images of said latent images with like charges being developed in the same color, means to im-

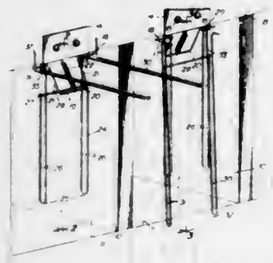


part a charge of one polarity to said powder images, and means operatively coupled to said medium to transfer said powder images onto a web by electrostatic attraction.

3,045,645
AUTOMATIC POULTRY NEST FRONT

Coburn B. Fisher, P.O. Box 421, Newcastle, Calif.

Filed Mar. 6, 1961, Ser. No. 93,460
4 Claims. (Cl. 119—49)



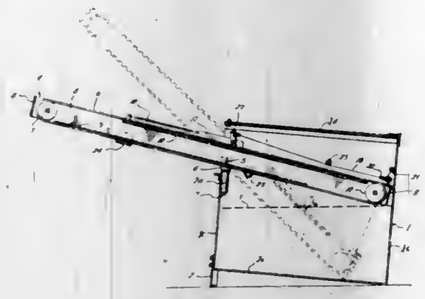
1. An automatic poultry nest gate attachment for nests comprising a bracket secured to the top of the nest entrance, tabs projecting downwardly from the bracket and pivotally supporting outwardly projecting axle portions of a downwardly extending radially offset rocker bar, a tension spring secured between the rocker bar and the bracket rotatably urging said bar upwardly of the downward position about said axle portions, a back swinging arm pivotally mounted to said axle portions, and extending downwardly over the entrance to the nest, a front arm structure secured to project radially from said axle portions and having lugs adapted to engage against the outer sides of the back swinging arm, said front arm structure extending downwardly below the bottom of the nest when in the closed position.

3,045,646
ANTIVERMIN TREATMENT FOR ANIMALS

James D. Cummings, Rio Vista, San Marcos, Tex.

Filed May 2, 1961, Ser. No. 107,126
12 Claims. (Cl. 119—157)

1. In an animal self treating machine, a treatment liquid containing tank, an elongated oscillatory beam, a fulcrumed mounting for the beam intermediate its ends and above the tank liquid level providing a horizontal axis about which the beam can oscillate with one arm of the beam projecting away from the tank and the other beam arm projecting over the tank for swinging into and out of the tank contained liquid and having a cable guide element near its free end, an endless belt of liquid absorbent material having upper and lower reaches extending longitudinally above and below said beam and having opposite return bends adjacent the beam ends, a tray interposed between the upper belt reach and the top of the beam and slidably guided by the beam for longitudinal reciprocation, a rockable clamp element above the top of the upper belt reach and pivotally connected with the tray on a transverse axis, a dependent crank arm portion carried by the clamp element for movement therewith toward the tray for clamping an adjacent portion of the belt between the tray and the crank arm portion, a pull

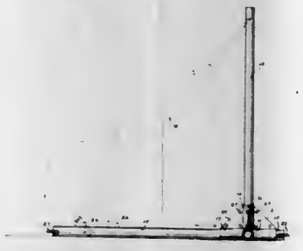


cable having one end secured to said clamp element and extending therefrom longitudinally of the beam to said cable guide element for engagement therewith by an intermediate portion of the cable, means fixedly anchoring the opposite end of the cable relative to the tank and spring means interposed between the slide tray and the beam for yieldably urging tray movement in the direction away from said guide element.

3,045,647
ASSEMBLABLE SUPPORT FOR ANIMAL OILERS

Samuel M. Bristle, Woodward, Iowa

Filed Feb. 4, 1959, Ser. No. 791,126
4 Claims. (Cl. 119—157)



1. In combination, a base unit, a first horizontal pipe, a means for detachably securing said first pipe to said base unit, a second horizontal pipe extending diametrically opposite of said first pipe and detachably secured to said base unit, a third horizontal pipe extending transversely of said first and second pipes and detachably slidably extending through said base unit, a fourth pipe extending vertically upwardly and detachably secured to said base unit, a hook on one end portion of said third pipe adapted to engage a member extending from said fourth pipe; said base unit consisting of four clamping shells bolted together to tightly engage said first, second, third and fourth pipes.

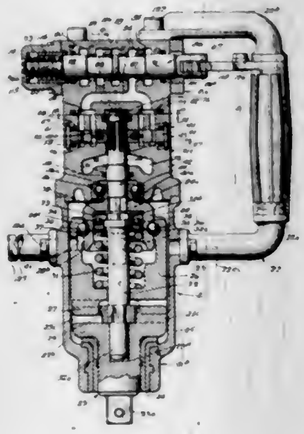
3,045,648
FLUID PRESSURE-ACTUATED TOOL

Roger E. Belau, Fairmont, and Nils S. Lind, Welcome, Minn., assignors to Fairmont Railway Motors, Inc., Fairmont, Minn., a corporation of Minnesota

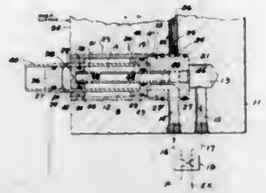
Filed Feb. 24, 1960, Ser. No. 10,733
7 Claims. (Cl. 121—34)

1. A fluid pressure-actuated tool comprising an elongated drive member mounted for rotary movement about

its longitudinal axis, a fluid pressure-responsive element mounted directly on said member for imparting rotary motion thereto, control means in fluid communication with said element for controlling the direction of rotation of said member and element, and handle means cooperating with said drive member, fluid pressure-responsive element, and control means for retaining same in assembled relation and facilitating manipulation of said tool, said control means including a housing provided with an elongated cavity having a plurality of longitudinally spaced, inwardly projecting annular collars, a high-pressure fluid inlet mounted on one side of said housing and terminating at substantially a midpoint along said cavity axis, a fluid outlet mounted on the opposite side of said housing and having a pair of branch sections terminating at said cavity at locations disposed on opposite sides of and spaced from said inlet terminus, a pair of conduits each having a corresponding end thereof terminating within said cavity at a location intermediate said inlet and a branch section terminus and the other corresponding end of each conduit being formed into multiple segments terminating at said pressure-responsive element, the multiple segments of each conduit being symmetrically arranged about the axis of rotation of said member and element, the multiple segments of said conduits being angularly spaced with respect to one another, fluid drain means interconnecting said fluid outlet with the rotary axis of said drive member, a longitudinally adjustable elongated shuttle slidably mounted within said cavity, said shuttle being provided with a plurality of longitudinally spaced, peripheral annularly-shaped valleys of greater axial dimension than said cavity collars, biasing means cooperating with said shuttle and causing the latter to normally assume a position whereby said inlet terminus and said outlet branch section termini are in communication with one another within said cavity and said member and element are in a nonrotating position, and manually actuatable means mounted on said handle means and operatively connected to said shuttle for effecting adjustment thereof from said normal position; said manually actuatable means, when actuated in one direction, effecting adjustment of said shuttle to a first position whereby one of said conduits communicates with said inlet and the second conduit communicates with said outlet and said member and element rotate in one direction; said manually actuatable means, when actuated in a second direction, effecting adjustment of said shuttle to a second position whereby the second conduit communicates with said inlet and the first conduit communicates with said outlet and said member and element rotate in a second direction.

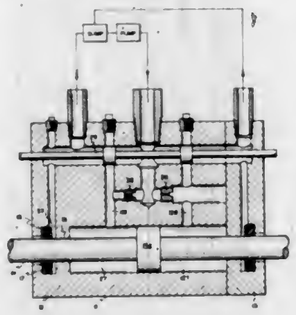


3,045,649
DOUBLE ACTING TOOL AND DIE CYLINDER
Leland F. Blatt, Grosse Pointe Woods, Mich. (22930 Sherwood Ave., Warren, Mich.)
Filed Nov. 29, 1960, Ser. No. 72,454
4 Claims. (Cl. 121—38)



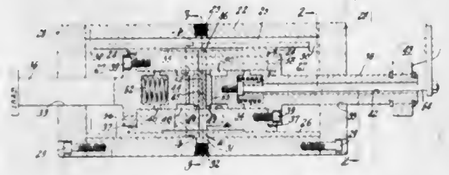
1. In combination with a machine tool having a bed including a work surface and a bore in said bed terminating in said work surface, a double acting cylinder including a bore and a blind end head at one end projected into said bore means on said bed retaining said cylinder within said bed bore, said head having an axial bore and an additional bore, at their one ends communicating with the cylinder bore and at their other ends respectively connected with fluid supply and exhaust bores in said bed, the outer end of said cylinder being in registry with said work surface, an apertured bushing within the outer end of said cylinder, a reciprocal piston in said cylinder bore, a stationary tube axially joined at one end to said blind end in communication with its axial bore and projecting through said piston, a fixed piston secured upon the outer end of said tube, a tubular piston rod at one end secured to said reciprocal piston arranged concentrically around said tube and in sliding engagement with said fixed piston and with said bushing and extending outwardly of said cylinder, said stationary tube having transverse apertures therein for communication with the chamber in said piston rod, said blind end bores adapted to alternately receive and exhaust respectively pressure fluid for effecting reciprocal movements of said piston rod, a closure for the outer open end of said tubular piston rod adjustably spaced from said fixed piston on movement of said tubular piston rod defining a cushion chamber therebetween, there being an air bleed orifice through the wall of the said tubular piston rod communicating with said cushion chamber.

3,045,650
FLUID ACTUATING DEVICE
Leonard R. Ambrosini, Grand Rapids, Mich., assignor to Lear, Incorporated
Filed Dec. 23, 1957, Ser. No. 704,727
4 Claims. (Cl. 121—38)



1. In combination, a fluid actuated device comprising a housing having a first chamber and a second chamber therein, a rigid partition between said first and second chambers, said second chamber having a wall member in spaced apart relationship to said rigid partition, a rod adapted for executing reciprocal motion passing through a first opening in said rigid partition and through a second opening in said wall member, wherein the outside diameter of said rod is slightly smaller than the inside diameter of said first opening, and a flexible sealing means contacting the peripheral surface of said rod and positioned adjacent said wall member so as to provide a fluid seal to retain fluid within said second chamber, a piston mounted on said rod in said first chamber, a sump, valve means for controlling the exhaust of fluid from said first chamber, a passage connecting said valve means to said sump, said second chamber being freely open to and connected to said sump by said last-mentioned passage.

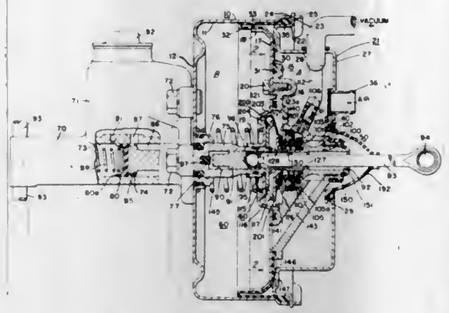
3,045,651
SERVO MOTOR
Thor H. Ljunggren, R.F.D. 1, Perkinsville, Vt., assignor of twenty-five percent to Sughrue, Rothwell, Mion & Zinn, Washington, D.C., a partnership
Filed June 3, 1960, Ser. No. 33,705
16 Claims. (Cl. 121—41)



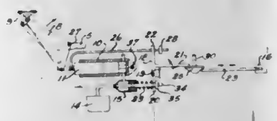
1. An expansible chamber servo motor of the linear movement type comprising in combination; a motor cylinder having closed ends, a fluid pressure inlet in the side wall of said cylinder, means establishing fluid communication between the fluid pressure inlet and the ends of said cylinder through said cylinder wall, a hollow reciprocating piston including an internal bore slidably mounted within said cylinder, piston rods rigidly attached to said piston and extending through the end walls of said cylinder, at least one of said piston rods being hollow, means establishing fluid communication through said piston from the opposite ends thereof to the internal bore therein, further means establishing fluid communication from the internal bore of said piston to exhaust, a three-way valve slide slidably mounted in the bore of said piston, said valve slide in one position adapted to block fluid communication between either end of said piston and exhaust and adapted when selectively moved to the other positions to allow a selected end of said piston fluid communication to said exhaust while blocking similar fluid communication from the other end of said piston whereby said piston will move in accordance with the position of said valve slide therein, a valve slide actuating rod rigidly secured to said valve slide and extending through said hollow piston rod to a position outside of said cylinder, a signal generator responsive to a signal for controlling said valve slide actuating rod, and cam means cooperating with said valve slide control rod during movement of said piston and said valve slide to override the signal generator and control the velocity of said piston.

3,045,652
BRAKE BOOSTER
Elton S. Moyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,237
4 Claims. (Cl. 121—41)

1. A pressure producing device in which physical force is supplemented by power assistance, comprising, a power cylinder, a pressure responsive movable wall in the power cylinder, an operator operated control member to control the operation of a movable wall, a reaction member arranged to exert a reaction force varying with variations in force exerted by the movable wall, lever means actuated by said reaction member and arranged to transmit a portion of the reaction effect applied to the lever means by the reaction member to said control member, resilient means between said lever means and said control member transmitting reaction effect from said lever means to said control member, and additional force applying means operatively effective concurrently on both said reaction member and said lever means continuously counteracting a portion of the reaction effect from the lever means to prevent the operator from feeling the total reaction effect from the lever means during an initial portion of the pressure providing stroke.



3,045,653
HYDRAULIC JACK ASSEMBLAGE
William L. Colgan, West Allis, Wis., assignor to Applied Power Industries, Inc., a corporation of Wisconsin
Filed Dec. 19, 1960, Ser. No. 76,595
5 Claims. (Cl. 121—46)



3. In a jack assemblage having a load lifting member and a hydraulic-pressure-actuated ram for moving said member, a valve for controlling escape of pressure liquid from within said ram to lower said member, an oscillatory handle for effecting operation of said ram to move said member into load engaging position, a rod carried by and movable longitudinally of said handle, means associated with the swinging end of said handle for moving said rod toward the opposite end of the handle, a rotary element mounted for movement laterally of the plane of oscillation of said handle and having a frustro-conical surface engageable by said rod to effect such movement of said element, and pivotally mounted means engaged by said element for operation upon lateral movement of said element for opening said valve to permit escape of liquid from said ram.

3,045,654
DOMESTIC HOT WATER TANKS
John Dell, 1034 Buchanan St., San Francisco, Calif.
Filed Oct. 12, 1959, Ser. No. 845,911
1 Claim. (Cl. 122—17)

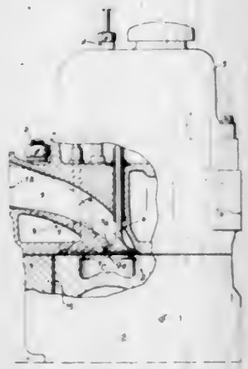
A domestic hot water tank, comprising an elongated, cylindrical tank having means for vertically supporting

the same and having a bottom with gas heating means for heating the same from below, the tank having a top with water inlet and outlet pipes mounted in said top and having a gas flue extending through the bottom and top thereof, the top having a circular opening sufficiently large to give access to the tank interior for inspection and brushing operations, the tank opening being drawn to a diameter in excess of one-half of the tank diameter and



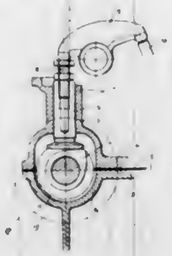
being off-set with respect to the center of the tank, and the flue being of a diameter in excess of the pipe diameters, with the flue centered on the diameter of the tank passing through the center of the opening to occupy the widest space available between the outer circumferences of the tank and the opening, and with the pipes mounted on opposite sides of the flue to occupy diminishing widths of the said space.

3,045,655
CYLINDER HEAD FOR INTERNAL COMBUSTION RECIPROCATING ENGINES
Antonio Formia, Turin, Italy, assignor to Fiat Societa per Azioni, Turin, Italy
Filed Mar. 22, 1961, Ser. No. 97,530
Claims priority, application Italy Apr. 30, 1960
4 Claims. (Cl. 123—30)



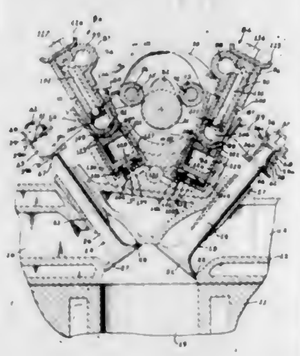
1. In an internal combustion engine a cylinder, a cylinder head having a pair of separate downwardly curved elbow-shaped intake passageways having substantially the same lengths, each passageway having an inlet and an outlet port, both inlet ports being situated on the same side of the cylinder head, both outlet ports beings situated substantially tangentially to the wall of the cylinder and on the same side of a plane corresponding to a cylinder diameter making an acute angle with the longitudinal axis of said engine, said cylinder head having for each outlet port a seat formed circumferentially of each outlet port and an intake valve for each outlet port operable to a seated position and an unseated position.

3,045,656
ENGINE VALVE OPERATION
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Aug. 1, 1960, Ser. No. 46,414
Claims priority, application France, Aug. 21, 1959
4 Claims. (Cl. 123—90)



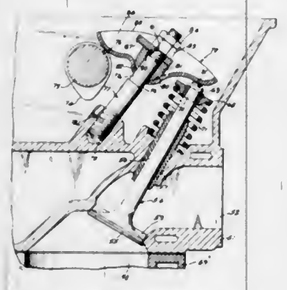
1. An internal combustion engine with rocker operated valves comprising a cylinder block, a cylinder head, a camshaft, a joint between the cylinder block and said cylinder head, a camshaft and rocker controlling tappets, bearings integrally cast with said cylinder block and in which said camshaft is rotatably mounted, said tappets being slidably mounted in said cylinder head and bearing upon the cams of said camshaft, each bearing consisting of an at most semi-circular seating situated in said cylinder block, said camshaft being located in the plane of said joint and held in said bearing under the action exerted on said camshaft by said tappets.

3,045,657
VALVE OPERATING MEANS
Achilles C. Sampietro, Birmingham, Mich., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 22, 1959, Ser. No. 828,895
15 Claims. (Cl. 123—90)



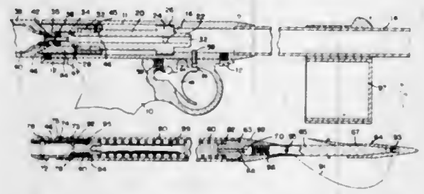
1. In a valve assembly for an internal combustion engine having a cylinder with a valve connected to the cylinder, the combination comprising a rocker arm for operating the valve, a connector at one end of the rocker arm for connecting to a valve, means for pivotally driving the rocker arm, a fulcrum member on the rocker arm having a downwardly facing convex bearing and an upwardly facing concave bearing, a valve closing unit having a piston member slidably received in a cylinder member, means for mounting one of said members on the engine, an upwardly facing socket on the other of said members receiving said convex bearing, a lash take-up unit having a piston member slidably received in a cylinder member, means for mounting one of said take-up members on the engine, means for the other of said take-up members pivotally received by said concave bearing, and means for connecting each of said units to the oil pressure system of the engine, so that the fulcrum member will be held therebetween.

3,045,658
VALVE OPERATING MECHANISM
Achilles C. Sampietro, Birmingham, Mich., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 8, 1959, Ser. No. 858,176
3 Claims. (Cl. 123—90)



1. A valve operating mechanism for an engine comprising a formed rocker arm having a fragmental spherical bearing portion intermediate the ends for pivotally supporting the arm and having upturned side portions with vertical planar inner side sliding surfaces parallel to the plane of pivotal movement of the rocker arm, a fixed support for the rocker arm, a bearing member on the support having a fragmental spherical bearing surface in supporting engagement with said bearing portion of the arm and having an axis in said plane of pivotal movement of the rocker arm, and a guide member non-rotatably mounted on said support in a fixed predetermined angular position relative to the support and to said axis and having side surfaces with at least one of said side surfaces being in continual sliding engagement with one of said planar side surfaces of the arm during normal operation.

3,045,659
GAS POWERED GUN
William R. Malcolm, Baldwin Park, Calif., assignor to Crosman Arms Company, Inc., Fairport, N.Y., a corporation of New York
Filed Mar. 19, 1959, Ser. No. 800,503
4 Claims. (Cl. 124—11)



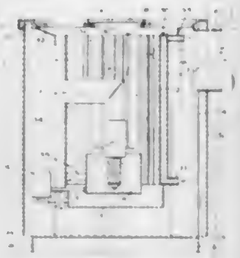
2. In combination, a gas-powered underwater gun and a projectile therefor, said projectile being hollow and having a chamber therein into which gas under pressure is adapted to be admitted, a member movable forwardly in said chamber upon admission of gas thereto, and a duct connecting said chamber with the exterior of said projectile and through which water may flow out of said chamber when said member is moved forwardly in said chamber by the pressure of gas, said member acting to shut off said duct when said member has been moved forwardly in said chamber a predetermined distance, said gun comprising a tubular barrel adapted to receive said projectile, a chamber for containing gas under pressure, a manually operable valve for closing the last-named chamber, said valve being operable to permit gas under pressure to flow from said last-named chamber into the first-named chamber against said member when said projectile is in said barrel, to force said member forwardly in said first-named chamber, projectile holding means movably mounted in said barrel, spring means urging said holding means into engagement with said projectile to hold said projectile in said barrel when gas is admitted to said first-named chamber, and a trigger means effective when operated to disengage said holding means from said projectile so that the gas admitted to said first-named chamber will drive the projectile from said barrel.

3,045,660
PICNIC GRILL
John P. Manley, P.O. Box 310, and Harry A. Norberg, Box 536, both of Marble Falls, Tex.
Filed Aug. 19, 1959, Ser. No. 834,877
1 Claim. (Cl. 126—30)



A portable, foldable grill comprising a rigid elongated post including handle means provided at one of its ends, a grill unit comprising two individual flat and coplanar grill members each having a straight adjacent inner side, the sides being disposed in spaced parallel relationship, a pair of substantially U-shaped brackets bridging the space between and secured at longitudinally spaced points to said sides so as to rigidly secure them together, journal means on said sides adjacent one of said brackets and embracing said post, a pivot pin extending through said post and journal means, said pivot pin being normal to the longitudinal axis of the post and coplanar with said grill unit, an edge of said one bracket being engageable with said post to support said grill in a horizontal position when said post is vertical, said grill unit being swingable toward said handle means on said pivot pin to a position wherein the post extends between said sides and is coplanar with said grill unit, arm means pivotally connected to said post between said grill unit and the other end of the post on an axis parallel to said pin, said arm means being pivotable on its pivot axis toward said grill unit from a position coplanar with said post to a position normal thereto, stop means on said arm means for engaging said post and positively stopping movement of said arm means towards said grill unit when said arm means is pivoted from a position coplanar with said post to a position normal to said longitudinal axis, the other end of the post adapted to be inserted in the earth with said arm means resting on the earth's surface below said grill unit when the grill is in operative position whereby the arm means prevents tilting of the grill relative to the earth.

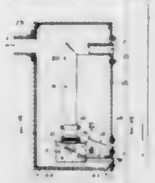
3,045,661
CENTRAL HEATING BOILER WITH COOKING PLATE
Benjamin Kohli, Lavey-Village, Vaud, Switzerland
Filed Jan. 24, 1961, Ser. No. 84,567
Claims priority, application Switzerland Jan. 27, 1960
3 Claims. (Cl. 126—34)



1. A central heating boiler comprising, in combination,
- a metal casing (15) of horizontally rectangular cross section and constituting the outer walls of the boiler,
- a cover (17) for the casing having at least one cooking plate (18),
- a flange on the cover, the upper edge portion of the walls of the casing (15) spaced inwardly of said flange and having recesses providing air outlets,
- an exhaust flue (21) for said casing (15),
- pedestals (16) supporting the casing (15) and located inwardly of said casing walls to provide space for air to travel upwardly toward the cover (17) and escape at said recesses (20),
- a heating body (1) in the casing (15) of generally cylindrical shape, said heating body (1) including spaced inner (2) and outer (3) walls for the circulation of water and at least one of said walls having corrugations to increase the area of its heating surface,
- two pair of spaced flat partitions (22, 23+22', 23') parallel with opposite walls of the casing (FIG. 2) and located between the outer wall (3) of the heating body (1) and the casing (15),
- arcuate partitions (24, 24') respectively connecting related pairs of intermediate partitions (22, 23+22', 23') to provide a heat generating combustion chamber around the outer wall (3) of the heating body (1) and which chamber communicates with the said exhaust flue (21),
- at least two detachable inclined baffles (26) interposed between the outer wall (3) of the heating body (1) and the said arcuate partitions located at the exhaust flue side of the casing,
- said baffles deflecting the combustion gases from the cover downwardly along said arcuate partitions before discharging through said flue to insure the heating of the inner and outer walls of the heating body (1).

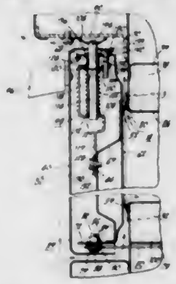
3,045,662
HEATING APPARATUS
Benjamin Kohli, Lavey-Village, Vaud, and Léon Richard, Bex, Vaud, Switzerland
Filed Jan. 29, 1960, Ser. No. 5,455
Claims priority, application Switzerland Feb. 2, 1959
2 Claims. (Cl. 126—94)

1. Heating apparatus comprising in combination a drum, a burner pot within said drum, a fuel inlet conduit connected to the lower portion of said burner pot, a baffle having a central opening secured inside said burner pot above the fuel inlet orifice, a cylindrical housing passing through the central opening of the baffle, a conical cap fixed to the lower end of the cylindrical housing, said housing and said cap provided with a plurality of holes disposed in superposed annular formation, a vented two-piece expansion chamber the lower end of which is secured to the upper end of the cylindrical housing at the level of the upper edge of said burner pot, said expansion chamber comprising a casing formed of two cone frustums the large bases of which are disposed opposite each other and interconnected by spaced welded joints, the spaces between said joints forming a plurality of slits, said slits directing the flames radially outwardly towards



the wall of said drum, a vertically disposed fresh air supply flue secured to the upper end of said expansion chamber, said drum provided with an opening in its side wall, a door plate covering said opening, said door plate having an opening therein, an inclined trough passing through the opening in said door plate and having its lower end secured thereto, said trough receiving an ignited pellet of solidified petrol, the upper end of said trough located at the level of the upper edge of the burner pot.

3,045,663
OVEN DOOR MOUNTING MEANS
Le Roy McDonnold, West Carrollton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,634
7 Claims. (Cl. 126—190)



1. In combination with a French door oven having an opening, a pair of French doors for closing said opening, each of said doors having an inner and an outer panel, a latch assembly between said panels for each of said doors, said assembly including a support bracket, a reciprocable pin carried by said bracket, a first spring affixed to and circumscribing said pin and abutting said bracket at one end thereof and connected to said pin at the other end thereof for biasing said pin outwardly from each door, a second spring between said bracket and each door, an adjusting screw relatively rotatable seated on each door and threadedly engaging said bracket to adjust said bracket in relationship to each door without altering the tension on said first spring, and a striker connected to said opening in alignment with said pin.

3,045,664
COOKING POTS
David Levin, 308 Lucerne Mansions, De Villiers St., Johannesburg, Transvaal, Union of South Africa
Filed Sept. 26, 1958, Ser. No. 763,513
Claims priority, application Union of South Africa Oct. 9, 1957
1 Claim. (Cl. 126—390)

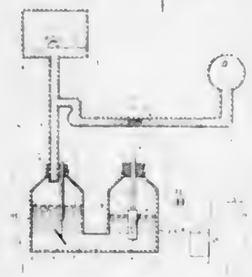
A cooking pot having a composite disc, resistant to warping at elevated temperatures covering the exterior

bottom surface of said pot, said composite disc consisting of a sheet of copper, insulating material covering the top of said copper sheet, and an aluminum sheet covering said insulating material and beaded over the edge of said copper sheet; a ring of insulating material covering the



top surface of said beaded edge; and an inwardly flanged ring secured to the side walls of said pot clamping said disc with said insulating ring in position, the periphery of said disc being spaced from the inner wall of said inwardly flanged ring.

3,045,665
INSTRUMENT FOR MAINTAINING CONSTANT OXYGEN PARTIAL PRESSURE AND MEASURING OXYGEN CONSUMPTION
Peter Moyat, Bergen-Enckheim, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Filed Sept. 11, 1957, Ser. No. 683,341
Claims priority, application Germany Sept. 22, 1956
3 Claims. (Cl. 128—2.07)



1. A device for measuring metabolic rates in a process wherein carbon dioxide is evolved, said device comprising a closed chamber wherein the process may take place, an electrolytic cell for producing oxygen and closed off from the atmosphere; a duct connecting the cell and chamber for passage of oxygen from the anode portion to the chamber; means for suppressing the formation of hydrogen by the cell; a source of current for the cell; a variable resistor interposed between the source and the cell and responsive to gas pressure changes in the cell and chamber for making the flow of current through the cell responsive to deviation in oxygen pressure from that oxygen pressure initially in the cell and irrespective of barometric pressure changes; an absorber for removing carbon dioxide from the chamber, and an ammeter for detecting flow of current through the cell.

3,045,666
SPIROGRAPH
Bořivoj Dubský, Oldřich Straka, Hubert Felkel, and Rudolf Feuereisl, all of Prague, Czechoslovakia, assignors to Vyzkumny a zkusebni letecky ustav, Letnany, near Prague, Czechoslovakia
Filed Nov. 23, 1959, Ser. No. 854,963
Claims priority, application Czechoslovakia Nov. 24, 1958
3 Claims. (Cl. 128—2.08)

1. A device for recording data corresponding to the quantities of air inhaled and exhaled by a subject; comprising
- (A) an open ended tube through which the subject can inhale and exhale, and a pipe disposed in said tube and opening at its ends in opposite axial directions;
- (B) means defining a chamber having a diaphragm therein dividing said chamber into two compartments;
- (C) conduit means connecting said compartments to the opposite ends of said pipe so that a differential pressure acts on said diaphragm which is proportional to the velocity of air flow through said tube;
- (D) a torsional feeler having a torsional body in which a magnetic field is established so as to be deformed in response to a torsional stressing of the latter and a coil in which a voltage is induced in response to deformation of the magnetic field;
- (E) a battery powered source of alternating current connected to said feeler for energizing said magnetic field of the latter;

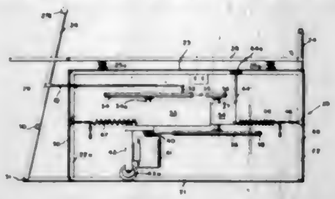


- (F) means connecting said diaphragm to said torsional body to torsionally stress the latter proportionately to the differential pressure acting on said diaphragm so that the magnitude of the voltage induced in said coil is proportional to the velocity of air flow through said tube; and
- (G) a magnetic recorder including
  - (1) a recording head,
  - (2) means connecting said head to said coil for excitation by said induced voltage,
  - (3) means energized by said battery for driving a magnetizable recording element past said head at a uniform speed so that a magnetic record is impressed on said element which is a function of the quantities of air inhaled and exhaled by the subject, and
  - (4) a pick-up head disposed adjacent the path of said element and adapted to be energized by said magnetic record during play-back of the latter to provide a corresponding output signal.

3,045,667
EXERCISING APPARATUS
John W. Sellner, 10246 Silverton Ave., Tujunga, Calif., and Don F. Welborn, 1640 Court Place, Denver 2, Colo.
Filed Sept. 8, 1958, Ser. No. 759,594
6 Claims. (Cl. 128—25)

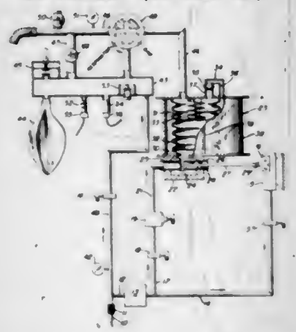
2. An exercising apparatus comprising a framework defining an enclosure, a table supported horizontally above said framework, a vertical member pivoted to the base of said framework and having its upper end free, means pivotally connected to said vertical member at an intermediate point adapted to be moved back and forth and to impart a corresponding movement to said vertical member, drive means mounted within said framework for driving said intermediate pivoted member, said drive means being mounted to permit limited relative movement between said frame work and said drive means in response

to stresses applied to said vertical member, and a second vertical member positioned adjacent the other end of said



table, whereby a user can engage both of said vertical members while reclining on said table.

3,045,668
INTERMITTENT POSITIVE PRESSURE RESPIRATOR
Arnold S. J. Lee, Shrewsbury, N.J., assignor to Invengineering, Inc., Belmar, N.J., a corporation of New Jersey
Filed Jan. 20, 1959, Ser. No. 787,862
12 Claims. (Cl. 128—29)



12. An intermittent positive pressure respirator comprising a gas inlet means for supplying an actuating gas; an enclosed gas chamber having an inlet means; a time-cycled actuating valve means connected to said inlet, said valve means alternatively and automatically connecting the interior of said chamber with said gas inlet means and directly with the exterior of said chamber in phase respectively with the inhalation and exhalation phases of a respiratory cycle; a flexible bellows pendently mounted within said chamber, said bellows being compressed by the flow of an actuating gas into said chamber during the inhalation phase of the respiratory cycle; means for urging said bellows into at least a partially expanded position to resist deflation of said bellows; means for supplying a breathing gas to the interior of said bellows; a passageway communicating with the interior of said bellows at one end thereof and terminating in an outlet for said breathing gas; and a check valve means positioned in said passageway connecting the interior of said passageway with the ambient atmosphere and permitting the one way flow of air from said atmosphere into said passageway, said urging means being adapted to urge said bellows into an expanded position and produce a subatmospheric pressure within said bellows to unseal said check valve means and permit the flow of air into said passageway.

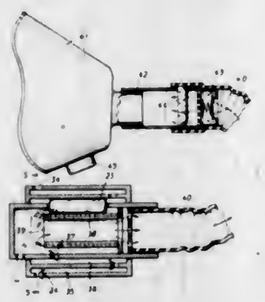
3,045,669
FACIAL SHOWERING DEVICE
Rudolf W. Altmann, Calle Wisconsin 62, Mexico City, Mexico
Filed June 24, 1959, Ser. No. 822,681
7 Claims. (Cl. 128—66)

1. In an apparatus for applying a facial bath: a tubular frame structure of a contour broadly following the contour of a human face and provided with a series of small apertures extending in upward direction only for passing water from the interior of said frame structure through said apertures in the form of thin water jets, said frame structure having two open ends adapted to be connect-



ed to water supply means and adjustable relative to each other to thereby vary the contour of said frame structure in conformity with the respective face contour of the person to take a facial bath, holding means connected to said tubular frame structure for holding the same over a wash sink.

3,045,670
INHALATOR
Hans Hirtz, Koln, and Hanns-Joachim Hirtz, Koln-Lindenthal, Germany; said Hans Hirtz assignor to Firma Hirtz & Co., Koln, Germany
Filed Nov. 10, 1958, Ser. No. 773,069
Claims priority, application Germany Nov. 12, 1957
6 Claims. (Cl. 128—192)



6. An inhalator for treatment of the respiratory duct of a patient, comprising, in combination, an elongated heating chamber; heater means in the form of a tubular body in said chamber for heating a gas passing through said chamber; a first elongated hollow member substantially enveloping said chamber and having a first wall spaced from the outside of the chamber and defining therewith a first insulating space; a second elongated hollow member substantially enveloping said first hollow member and having an outer wall spaced from said first wall and defining therewith a second insulating space; inlet means communicating with said second insulating space for connecting said space to a source of gas; first passage means spaced in longitudinal direction from said inlet means for providing communication between said second and said first insulating space; second passage means spaced in longitudinal direction from said first passage means for providing communication between said first insulating space and said heating chamber; and outlet means communicating with said chamber and spaced in longitudinal direction from said second passage means so that upon inhalation through said outlet means all of the gas entering through said inlet means is drawn in sequence and countercurrently through said second insulating space, said first insulating space and said heating chamber to be gradually heated while the temperature of said outer wall is held below the temperature of the outside of said chamber.

3,045,671
PORTABLE INHALER
William H. Updegraff, 62 5th Ave., Mineola, N.Y.
Filed Sept. 8, 1959, Ser. No. 838,569
6 Claims. (Cl. 128—203)



1. A portable and continuous gas supply device comprising cartridge means adapted to retain a supply of gas under high compression, a chamber providing combination pressure reducing and storage means, one way gas inlet means connecting said chamber and cartridge means in linear alignment to provide a direct passage for said gas from said cartridge means to said chamber, outlet means in said chamber to release said gas, and metering means connected with said outlet means for controlling the amount of gas being released.

3,045,672
FACE MASKS FOR USE IN THE ADMINISTRATION OF OXYGEN OR OTHER GASES
Frederick George Croasdaile, London, England, assignor to Oxygenaire (London) Limited, London, England
Filed Nov. 27, 1959, Ser. No. 855,878
Claims priority, application Great Britain July 6, 1959
2 Claims. (Cl. 128—205)



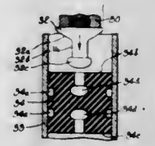
1. A face mask comprising a bag of thin flexible, substantially gas-proof sheet material, top and bottom walls, a sealed end, and an open end into which the nose and chin of the wearer may be inserted so that the open end engages the wearer's face, means for holding the bag in position on the wearer's face, at least one relatively large aperture in one wall of said bag connecting the interior of said bag to the atmosphere, a gas inlet in the other wall of the bag, means for closing said aperture when gas is flowing into said inlet, said closing means comprising, a thin, flexible, gas-proof membrane in said bag, said membrane being attached to said other wall and forming therewith a capsule, said gas inlet communicating with the inside of said capsule, an outlet opening in said capsule leading to the interior of the bag, said opening being of a smaller size than said gas inlet, whereby when gas is applied to said inlet, the flow at the outlet opening will be restricted more than at the inlet so that the capsule will be inflated by the incoming gas closing the aperture in said bag to the atmosphere.

3,045,673
SYRINGE ASSEMBLY AND ATTACHMENT
George N. Hein, San Carlos, Calif., assignor to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey
Filed Feb. 12, 1958, Ser. No. 714,814
8 Claims. (Cl. 128—218)



1. A mechanism to control the dosage dispensed by a syringe assembly which includes a barrel and a plunger reciprocal within said barrel, said mechanism comprising in combination a mounting to be applied to the barrel of the assembly, a support for association with the outer end of the plunger forming a part of that assembly, resilient means extending between and connected to said support and mounting to urge the same in opposite directions away from each other, a rod element, a fixed element having an opening through which the rod extends and with respect to which said rod is slidable, one of said elements being connected to said mounting, the other of said elements being connected to said support, said rod being formed with a groove having a stop-forming surface therein which decreases in depth towards one end of the rod and a stop member mounted by said rod and having a stop-forming surface projecting into said groove to engage the stop-forming surface therein, said stop member being cooperable to limit the opposite movement of said mounting and support relative to each other.

3,045,674
HYPODERMIC SYRINGE PISTON
Samuel D. Goldberg, West Hempstead, N.Y., assignor to Graham Chemical Corporation, Jamaica, N.Y.
Filed Nov. 24, 1958, Ser. No. 776,014
2 Claims. (Cl. 128—218)



1. In combination with a hypodermic syringe ampule comprising a tubular body portion, the improvements which comprise a piston of essentially cylindrical shape, formed of an intrinsically substantially resilient material, having opposed end faces and annular grooves on the side surfaces in zones intermediate said end faces, to facilitate liquid-tight engagement with the walls of the ampule and sealing thereof, said end faces being identical in configuration and each being provided with an opening extending over a minor, central area of the end face, and axially extending deep into the piston, said openings being adapted to receive and disengageably engage a piston-actuating means, a piston actuating means having a head, said head having a semi-globular configuration whereby to cause, in conjunction with the intrinsic resiliency of the piston material and the shape and dimensions of said openings, the bottom portion of the piston surrounding

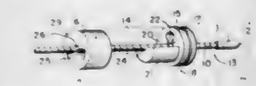
the central opening therein to expand, and the inner leading end face of said piston to be rendered convex when the piston descends under pressure; the bottom portion and the inner end face of the piston to be restored to normalcy whereby to exert an aspirating effect when the pressure on the piston ceases, and the bottom portion to be contracted and the inner end face of the piston to be rendered concave when the piston is retracted whereby to increase the aspirating effect.

3,045,675
REVERSIBLE DIAPER HAVING LENGTH ADJUSTING MEANS
Willa H. Brown, 414 Brady Lane, Austin, Tex., assignor of fifty percent to Robert L. Brown, Phoenix, Ariz.
Filed Jan. 2, 1959, Ser. No. 784,536
3 Claims. (Cl. 128—284)



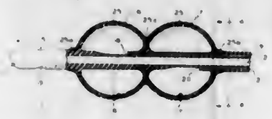
1. A diaper construction comprising a trapezoidal member of fabric material having generally parallel end edges with one end edge being longer than the other and converging side edges extending from the longer end edge to the shorter end edge, said side edges having a concave curvature, a trapezoidal panel of absorbent material attached to the inner surface of said trapezoidal member and extending intermediate the ends thereof with the ends of the panel being parallel to and spaced from the ends of the trapezoidal member, the side edges of the panel coinciding with the side edges of the trapezoidal member and being secured thereto only along such coinciding side edges of the trapezoidal member and panel thereby defining a pocket open at both ends, and an absorbent pad inserted longitudinally into said pocket and disposed only between the inner surface of the trapezoidal member and the inner surface of the panel.

3,045,676
VEIN STRIPPER
John M. Slaten, 531 W. Wisconsin Ave., Milwaukee, Wis.
Filed Sept. 18, 1959, Ser. No. 840,829
4 Claims. (Cl. 128—303)



1. A vein stripper comprising a flexible cable having an introducing tip on at least one end thereof, the inner end of said tip forming an annular shoulder about the cable, a stripping head detachably mounted on said cable and comprising a pair of complementary, axially separable, first and second head members, each head member having an opening extending longitudinally therethrough, the opening in each head member including a cable-receiving groove extending along the axial region of said head member and further including an enlarged portion laterally communicating with said groove to admit the tip-carrying end of the cable therethrough, the width of the groove in said first head member being smaller than the diameter of said tip, said head members being normally disposed in aligned axially abutting position on the cable and when in such position having their grooves in opposed confronting relation to form a cable passage receiving said cable, one of said head members having an axially extending part fitting in the opening of the other head member for positioning said members in coaxial relation against relative rotation, said first head member being normally disposed in centered position on the cable and abutting axially against the annular tip shoulder, and the second head member having a peripheral vein-stripping edge at the end thereof remote from said first head member.

3,045,677
INFLATABLE BALLOON CATHETER
Frederick J. Wallace, New York, N.Y., assignor to American Cystoscope Makers, Inc., Pelham Manor, N.Y., a corporation of New York
Filed May 3, 1960, Ser. No. 26,619
4 Claims. (Cl. 128—349)



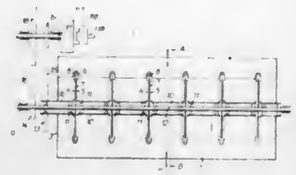
1. An inflatable balloon catheter, comprising a shaft, a first inflatable balloon member joined to said shaft, a second inflatable balloon member joined to said shaft spaced from said first balloon member, said first and second balloon members each having a wall thickness substantially less than that of said shaft and each forming with said shaft a chamber for receiving an inflating medium, a resilient expansible member frictionally engaging and enclosing said first and second balloon members and positioned with its opposite end portions extending along said shaft and beyond the opposite mutually remote ends of said balloon members, and means on said shaft communicating with said chambers for inflating said balloon members.

3,045,678
MATERNITY GARMENT
Cornelius J. Geimer, Burr Oak, Mich., assignor to Freeman Manufacturing Company, Sturgis, Mich., a corporation of Michigan
Filed Feb. 26, 1960, Ser. No. 11,180
8 Claims. (Cl. 128—554)



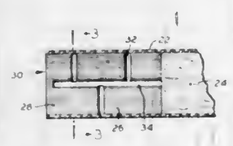
1. A maternity garment comprising a rear and side encircling panel unit of elastic fabric connected across the lower front portion of the garment by a lower abdomen supporting portion, and an upper front abdomen supporting panel unit seamed to said first named unit and to said lower abdomen supporting portion, said upper panel unit comprising three panels seamed to one another in side-by-side horizontal succession along a pair of generally upright margins, said margins diverging upwardly throughout substantially the entire height of said upper front panel unit, the panels of said upper unit being of two-way stretch material but having predetermined lines of major stretchability in one of the two directions of the stretch thereof, said panels being respectively arranged with said lines in acutely angled relationship to one another at said respective seamed margins.

3,045,679
HOP PICKER
Fritz Kibinger, 4 Alemannenstrasse, Munich 9, Germany, and Hans Eder, 54 Bergmannstrasse, Munich 12, Germany; said Hans Eder assignor to Fritz Kibinger
Filed Aug. 17, 1959, Ser. No. 834,026
Claims priority, application Germany Aug. 21, 1958
21 Claims. (Cl. 130—30)



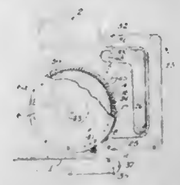
1. A device for the harvesting of hops, comprising in combination: rotatable cutting means and rotatable grating means mounted co-axially to the said cutting means and screening the same so as to deflect even the smallest strobiles of the hops from said cutting means, said rotatable grating means including two discs so constructed and arranged as to be rotatable together and yokes attached to each of said discs and connecting the same, said yokes forming a grating surrounding said cutting means so as to deflect said hops therefrom, said cutting means comprising a third disc intermediate said two discs having cutters attached to the periphery thereof.

3,045,680
SMOKE FILTERING DEVICE
Millard F. Smith, Westport, Conn. (% Neirad Industries, Inc., 1 Boston Post Road, Darien, Conn.)
Filed Sept. 30, 1958, Ser. No. 764,302
5 Claims. (Cl. 131—10)



2. As an article of manufacture, an improved cigarette, comprising in combination an elongated wrapper enclosing tobacco therein, a filter device adjacent one end of said cigarette, said filter device having longitudinally extending strands of substantially tobacco free filter material packed to form longitudinal interstitial capillary-like spaces between said strands, means forming radially extending channel-like traps through said filter material, said traps being substantially normal to the longitudinal interstitial capillary spaces between the strands of said filter material, said traps being greatly larger in cross section than the capillary-like spaces of said filter material and substantially less in cross-sectional area than the cross-sectional area of said filter device, each of said traps occupying in section only a portion of the cross-sectional area of said filter, said traps extending over a major portion of the distance from the outer surface of said filter device to the axis of said filter device, and a wrapper around said filter device closing said traps at their outward ends and forming a conduit for smoke through said filter device whereby tars and other impurities are collected in said traps, said traps inhibiting longitudinal movement by capillary action of said tars and impurities to the mouth of a smoker and preventing combustion of said tars and impurities thus collected.

3,045,681
DEVICE FOR PRODUCING A CONTINUOUS TOBACCO ROD
Willy Richter, Hamburg-Bergedorf, Germany, assignor to Hauni-Werke Körber & Co. K.G., Hamburg-Bergedorf, Germany
Filed Feb. 2, 1960, Ser. No. 6,240
Claims priority, application Germany Feb. 3, 1959
1 Claim. (Cl. 131—109)



In a device for producing a continuous tobacco rod, a feed wheel rotating in a vertical plane and provided with a circumferential groove for receiving tobacco, a tobacco distributor arranged above said feed wheel for supplying the groove in the latter with tobacco, a belt with a plurality of rows of tobacco engaging pointed members at the bottom of said annular groove, rotatable tobacco picking means adjacent the lower portion of said feed wheel for removing the tobacco from said groove, an endless conveyor for receiving the tobacco removed by said picking means and arranged below said feed wheel, means arranged adjacent the periphery of said feed wheel and between said tobacco distributor and said picking means for compacting and holding the tobacco in said groove, and means for trimming the tobacco which after compacting of said tobacco projects from said groove, said means for compacting the tobacco in said groove comprising a plurality of circular compacting discs and a common shaft on which said discs are mounted in axially spaced relation, while said means for holding the tobacco comprise pre-stressed spring wire elements engaging the top surface of the tobacco in said groove, and means for pivotally attaching one end of said spring wire elements to said common shaft.

3,045,682
CIGARETTE HOLDERS
Atsuko Sagara, 898 3-bancho, Muromachi, Ikeda City, Japan
Filed Aug. 17, 1959, Ser. No. 834,130
4 Claims. (Cl. 131—187)



1. A cigarette holder comprising a body portion having a bore axially thereof and a mouthpiece on one end thereof having a projection extending axially of said body and into said bore, said projection having a hole axially therethrough, an inner tubular member of substantially rigid waterproof material removably fitted into said bore and substantially the same length as said bore with one end over said projection and positioned thereby, a short tube mounted within said inner tubular member adjacent said mouthpiece and having a spice impregnated material therein, a mass of nicotine-absorbing vegetable fibers in said tubular member between the end thereof remote from said mouthpiece and said short tube, a retaining means projecting into the end of said tubular member remote from said mouthpiece and retaining said tubular member in position, and a cap having a cigarette holding recess therein on the end of said body portion remote from said mouthpiece.

3,045,683
HAIR CURLERS
Mildred Mitchell, 2325 E. Grand Blvd., Detroit, Mich.
Filed July 5, 1960, Ser. No. 40,848
7 Claims. (Cl. 132—34)



1. A device for curling hair comprising, in combination, a cap member adapted to fit upon a human head, said cap having cut-out portions therein and a plurality of openings, means in said cap member within each of said openings rotatably mounting a hair curler therein having a portion thereof extending into the cap member to perform a curling operation when the cap is applied to the head of a user and having a portion projecting radially outwardly from the cap so as to be accessible to the hands of the user, each said hair curler comprising a spindle member to fit snugly against the hair of the head and remain stationary thereagainst, a curling member within the cap member rotatably supported by said spindle member comprising a disc-portion having a plurality of elongated teeth members secured concentrically with the spindle member and a knob member built integrally with said disc-portion to rotate said curling member within said cap member and gather hair from said head within said teeth members to form curls therein.

3,045,684
LOCK PIN FOR CURLERS
Myrl R. Stoltz, 16758 Octavia Place, Encino, Calif.
Filed Sept. 2, 1958, Ser. No. 758,338
4 Claims. (Cl. 132—40)



2. The combination of a foraminous, hollow roller and a locking device inserted in the roller after hair is wound upon the roller, the locking device comprising two spring wire arms, one longer than the other, with at least one of them bowed between its ends, the ends of the arms being permanently joined by a continuously curved loop of wire that is inserted through the tress-wound roller, to facilitate such insertion and to permit the loop to contact the scalp and flex both arms to avoid hurting the scalp.

3,045,685
HAIR CURLER WITH RESILIENT HAIR FASTENER
Leo P. Cormier, 286 Brooklawn Road, Stratford, Conn.
Filed Sept. 10, 1958, Ser. No. 760,105
1 Claim. (Cl. 132—42)



A hair curler comprising an elongated spindle having a cylindrically shaped body provided with outwardly flaring end portions, one of said end portions having an axially outwardly extending boss thereon, said boss having an annular groove extending about the periphery thereof, said body having a bore extending axially throughout the length thereof and a radial slot extending longitudinally thereof in communication with said bore, an annular collar positioned on said boss, means for rotatably mounting said collar on said boss, said means comprising a fastener extending radially of said collar with the inner end thereof in alignment with and extending in said groove, said collar being rotatably mounted on said boss to facilitate a hair curling operation by permitting the spindle to rotate relative to said collar, said collar having an outer face provided with radially extending slots, an elastic cord having enlarged end portions of a diameter greater than the diameter of said bore whereby when said cord is inserted into said slot to be positioned in said bore, said cord will, by its larger diameter, be retained in said bore, said cord in its normally contracted position being substantially co-extensive with said bore and having enlarged end portions extending beyond the ends of said bore to form stops for maintaining said cord within said bore and free from interference with the hair when the spindle is rotated relative to the collar and with the hair curled on said spindle one end of said cord is adapted to be stretched over the curled hair and secured in a slot in said collar to hold the curl on said spindle.

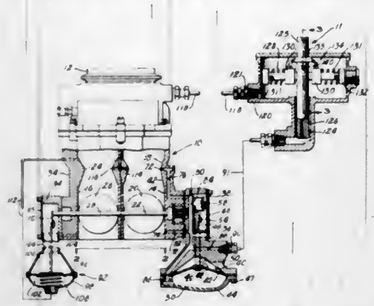
3,045,686
INERTIA OPERATED FUEL GOVERNORS
Michael John Broad, Enfield, England, assignor to The Plessey Company Limited, London, England, a British company
Filed Dec. 6, 1960, Ser. No. 75,074
Claims priority, application Great Britain Dec. 21, 1959
3 Claims. (Cl. 137—56)



1. A fuel governor of the kind comprising a unidirectionally rotatable governor shaft having an axial bore communicating with a volumetric fuel supply and a valve seat communicating with said bore, and a spring-loaded spill valve element co-operating with said valve seat and rotating with said shaft so as to be opened by inertia as the speed of the shaft rises wherein the direction of opening movement of said spill valve element is inclined at a predetermined angle to the radial direction of the governor shaft so that not only the centrifugal force but also tangential inertia forces tend to lift the valve off its seat, said direction of inclination being so chosen that positive acceleration, i.e. acceleration increasing the rate of rotation of the shaft, tends to open the valve, while on the contrary deceleration, tending to decrease the speed of the shaft tends to reduce the opening of the valve.

3,045,687
GOVERNOR VALVE
Thomas F. Cramer, Warren, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Jan. 19, 1959, Ser. No. 787,636
4 Claims. (Cl. 137—56)

1. A valve assembly for an automotive or like governor of the type characterized by a vacuum responsive device, said valve assembly comprising a hollow rotatable shaft adapted to be driven at variable speed, a centrifugal device including a weight movable radially of said shaft in response to increasing speed of rotation thereof, a member mounted for axial movement relative to said shaft and having means connecting the same to said weight for axial movement responsive to radial movement of the weight, said shaft having a radial opening therethrough in communication with the interior thereof, a valve member disposed internally of said shaft for axial sealing movement and having means extending through said radial opening and connecting the valve member to said axially movable member to be axially



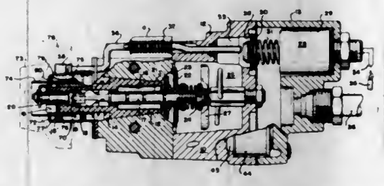
moved thereby, said shaft having an internal annular valve seat controlled by said valve member and being in communication with atmospheric pressure on one side of said seat, means biasing said valve member in a direction to open said seat, and means to connect the interior of said shaft on the opposite side of said seat with said vacuum device.

3,045,688
FIRST STAGE REGULATOR
James P. Fay, 18 France St., Norwalk, Conn.
Filed Apr. 10, 1961, Ser. No. 101,884
11 Claims. (Cl. 137—63)

1. In a regulator, a housing having an input chamber adapted to be connected to a source of breathable gas under pressure and an expansible chamber having an outlet adapted to be connected to an inhalation hose; normal and reserve passages connecting said input chamber and said expansible chamber, said normal passage having a pressure responsive check valve and each of said passages having a valve provided with an actuator exposed in said expansible chamber, said expansible chamber having a movable wall provided with a valve operator portion adapted to be positioned to selectively engage the actuators for the valves; means normally urging the operator portion into valve-engaging position when pressure in the expansible chamber falls below a predetermined value; and manually operable means for moving the valve operator portion into a selected position to engage the desired actuator for the proper value.

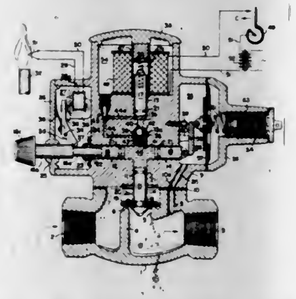
3,045,689
GAS OVEN CONTROL
John H. Cantlin, Short Hills, and August J. Hildenbrandt, Scotch Plains, N.J., assignors to The Wilcolator Company, Elizabeth, N.J., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,283
7 Claims. (Cl. 137—66)

1. In a gas burner control including a housing having a gas inlet, a main gas outlet, means forming communication between said inlet and outlet comprising a main gas flow port, a pilot gas outlet, means forming communication between said gas inlet and said pilot gas outlet comprising a pilot valve port, a valve member movable to and from said main gas flow port to close and open said port, means to move said valve member to and from said main valve port, a pilot valve member movable to and from said pilot valve port, means to move said pilot valve member including a pivoted lever interconnecting said valve members whereby movement of said main valve member to its port opening and clos-



ing positions control movement of said pilot valve member to its open and closed positions respectively, and spring means operatively connected with said lever and normally urging said lever about its pivot for urging said pilot valve member toward its port closing position, said spring means being located relative to said lever to reduce the rotative force thereof on said lever as said lever moves in a direction to control said pilot valve to move toward its port opening position and to substantially increase said force on said lever to urge said pilot valve member to close on its port when said lever moves to close said pilot valve member on its port.

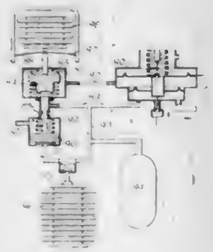
3,045,690
HYDRAULICALLY OPERATED MANIFOLD VALVE
Stanley W. Nickells, Wayzata, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 8, 1959, Ser. No. 838,734
4 Claims. (Cl. 137—66)



1. A manifold gas valve comprising a valve body having an inlet and an outlet and a valve seat therebetween, said valve body having an opening through a wall thereof, a control housing on said valve body sealing said opening, a plurality of communicating bores in said housing, liquid filling all of said bores, a plurality of movable walls sealing said bores, a valve cooperable with said valve seat and operably connected to one of said movable walls for movement thereby between "on" and "off" positions, and a plurality of condition responsive means in said housing operably connected to other of said movable walls, one of said condition responsive means being a pressure regulator, another of said condition responsive means including a manually reset and flame responsive latching mechanism, each of said condition responsive

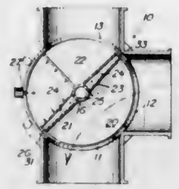
means being so arranged as to be capable of moving said valve toward its "off" position but requiring all of said condition responsive means to be in their "on" positions to enable said valve to be in its "on" position.

3,045,691
AIRCRAFT BREATHING SYSTEMS
David Herbert Young, Eastcote, England, assignor to The Walter Kidde Company Limited, Greenford, England, a company of Great Britain
Filed Feb. 15, 1960, Ser. No. 8,705
Claims priority, application Great Britain Feb. 18, 1959
1 Claim. (Cl. 137—81)



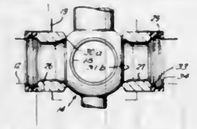
In an oxygen breathing system for aircraft, a gas pressure regulating system comprising, in combination, a gas pressure regulating valve comprising an enclosed body having gas inlet and gas outlet passages, a valve seating in said gas inlet passage, a valve member movable in relation to said valve seating, an inner diaphragm and an outer larger diaphragm secured in said body and extending transversely to the direction of movement of said valve, a common member to which the inner diaphragm and the outer larger diaphragm are secured in spaced relation and moving said valve member, said diaphragms being secured in spaced relation in said body, a compression coil spring axially located in said body acting on said common member in opposition to gas pressure on said diaphragms, the space between said diaphragms being enclosed and provided with an inlet, a master control valve having connections to the inlet to the space between the said diaphragms, to the outlet of said regulating valve and to atmosphere, said master control valve connecting said space to atmospheric pressure or to the regulating valve outlet pressure for controlling the outlet pressure from the regulating valve according to the setting of said master control valve, a barometric device connected to said master control valve to switch the master control valve to vent said space to atmosphere when the ambient atmospheric pressure is reduced to a predetermined minimum to increase the outlet pressure of the regulating valve when the ambient atmospheric pressure falls below a predetermined minimum, pressure-operated resetting means connected to the master control valve, a time delay means through which said resetting means is connected to the regulating valve outlet, said resetting means resetting the master control valve to bring the space between the diaphragms to outlet pressure, against the force of said barometric device when subjected to a predetermined gas pressure in excess of the lower regulated outlet pressure of the regulating valve, a vent valve in the connection to the resetting means, and a second barometric device controlling said vent valve to open said vent valve at a lower ambient atmosphere pressure than that at which the first barometric device operates the master control valve.

3,045,692
FLUID SEAL VALVE
Richard H. Reynolds and Andrew L. Askew, Jr., Aransas Pass, Tex., assignors to United Carbon Company, Inc. (Maryland), Houston, Tex., a corporation of Maryland
Filed Aug. 15, 1961, Ser. No. 131,541
1 Claim. (Cl. 137—240)



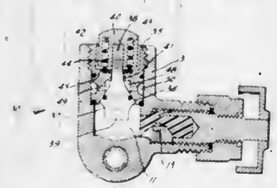
A three-way valve having:
(*a*) a valve chamber comprising a main body portion of generally circular cross section and first and second end plates secured to opposite ends of said main body portion.
(*b*) two bearings with seals, each of said bearings being axially mounted on opposite end plates,
(*c*) an inlet port and two outlet ports communicating with said chamber,
(*d*) rotor rotatably mounted within said valve chamber for selectively directing a material introduced into said inlet port to either of said outlet ports, said rotor comprising:
(*i*) a tubular rotor shaft journaled in said bearings, at least one end of said shaft protruding from the exterior of said valve;
(*ii*) a pair of opposed hollow vanes secured to said rotor shaft within the valve chamber and extending radially outward from said rotor,
(*iii*) said hollow vanes communicating with the interior of said shaft by means of apertures in the shaft wall,
(*iv*) one solid vane secured to said rotor shaft intermediate said hollow vanes, said solid vane extending radially outward from said shaft,
(*v*) a first disc secured to said rotor shaft inside of and in spaced apart parallel relationship with said first end plate, said first disc being disposed perpendicular to the axis of said shaft and being secured to each of the aforementioned vanes along all portions of said vanes which are contiguous to said disc,
(*vi*) a second disc secured to said rotor shaft inside of and in spaced apart parallel relationship with said second end plate, said second disc being disposed perpendicular to the axis of said shaft and being secured to each of the aforementioned vanes along all portions of said vanes which are contiguous to said disc,
(*vii*) the radii of said discs and the radial projections of said vanes being such that a small clearance is maintained between the interior of the valve chamber and all portions of said valves and discs which are adjacent thereto,
(*e*) a first sealing fluid connector communicating with the volume defined in part by said first end plate and said first disc,
(*f*) a second sealing fluid connector communicating with the volume defined in part by said second end plate and said second disc,
(*g*) a third sealing fluid connector for communication with the volume defined by the solid vane, portions of the first and second discs, by that portion of the valve body generally opposite the inlet port and by the hollow vane closest to said third connector,
(*h*) a fourth sealing fluid connector in that end of said shaft which protrudes from the exterior of said valve, whereby a fluid sealant may be supplied to the interior of said valve chamber through said shaft, apertures, connectors, hollow vanes and slots under sufficient pressure to constantly purge the interior of said valve of clogging elements.

3,045,693
VALVES
Herbert Allen, Houston, Tex., assignor to Cameron Iron Works, Inc.
Filed June 9, 1959, Ser. No. 819,109
1 Claim. (Cl. 137—315)



A ball-type rotary plug valve, comprising a body having a flowway therethrough and a chamber therein intersecting the flowway, a valve member having an opening therethrough and mounted within the chamber for rotation between positions opening and closing the flowway, recesses within the valve body extending outwardly of the chamber axially of the flowway, substantially rigid annular seats axially slidable within the recesses, an opening through the side of the valve body connecting the chamber therein with the exterior thereof for passing the valve member and the seats, said valve member having oppositely disposed journals thereon, a bonnet removably connected to the valve body to close the side opening and having a bearing therein to receive one journal, a bearing in the chamber of the valve body opposite said opening to receive the other journal, and a ring of deformable sealing material sealingly engaging between the body, the end of each recess, and the outer end of each seat received therein and urging the inner end of said seat into engagement with annular seating surfaces on the valve member in the opened and closed positions thereof, each of said seating surfaces having an outer diameter extending outwardly of its inner diameter in a direction axially away from its associated seat, and each ring being compressible axially outwardly a distance at least as great as the axial component of the seating surface engaged by the seat urged by said ring in the open position of the valve member, each opposite side of the valve member being flattened out about its intersection with the opening therethrough and along a plane transverse to the axis of said opening and coinciding with said inner diameter of the seating surfaces on said side of the valve member.

3,045,694
MANUAL VALVE FOR GAS TORCHES
George L. Hammon, 32 Ross Circle, Oakland, Calif.
Filed July 16, 1958, Ser. No. 749,000
2 Claims. (Cl. 137—328)



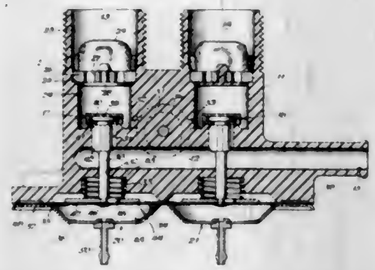
1. A gas valve including a cylinder having a gas inlet port, a gas outlet port, and an external opening for receiving a self contained valve assembly, said assembly comprising: a sleeve insertable through the external opening into the cylinder; a valve stem within said sleeve and having a head on the interior end of the valve stem, which head fits on a gas inlet valve seat in said sleeve; gas-tight packing between the valve stem and the sleeve; gas outlet ports in said sleeve; a recess in the external end of the sleeve to receive a nut which is secured to the external end of the valve stem, said recess in the sleeve being non-circular in section across the axis of said sleeve and said nut being non-circular in configuration matching said recess of the sleeve and a portion of said nut fitting within said recess to prevent rotation of the nut and the valve stem relative to the sleeve; a spring located on the valve stem between the gas-tight packing and the nut for holding the valve in closed condition to prevent the passage of gas from the inlet port to the outlet port; a stop shoulder on said nut which cooperates with a shoulder on the sleeve to limit the opening movement of the valve stem; and means for adjusting the distance between the valve head and the nut prior to insertion of the sleeve into said cylinder to thereby adjust the distance between said stop shoulder on the nut and said shoulder on the sleeve.

3,045,695
PISTON OPERATED RELIEF VALVE
James K. Douglas, Shorewood, Wis., assignor to The Oilgear Company, Milwaukee, Wis.
Filed Mar. 23, 1959, Ser. No. 801,374
5 Claims. (Cl. 137—509)



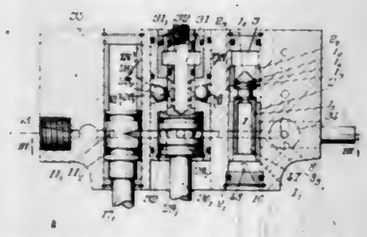
1. A hydraulic-pressure relief valve comprising a valve body having a longitudinally extending valve chamber with a movable member therein forming a poppet type valve therewith, inlet and outlet passages in said valve body communicating with said valve chamber intermediate the ends thereof, a valve seat provided in said chamber between said inlet and outlet passages, said movable member comprising spaced first and second pistons fitted in said valve chamber and defining a discharge chamber communicating with said outlet passage and having substantially equal and opposed areas subject to pressure therein, so that said movable member is operable independent of back pressure in said outlet passage, said first piston normally seated on said valve seat to close communication between said inlet and outlet passages and presenting only axially extending surfaces subject to the pressure of fluid supplied by said inlet port so that said first piston provides no effective area to open said valve, said second piston disposed in said valve chamber between a closed end thereof and said outlet passage, a longitudinally extending flow restriction slot in the periphery of said first piston with a portion of said slot covered by the wall of said valve chamber and a portion open to said inlet passage so that said movable member and body cooperate to provide self cleaning for said restriction slot, a passageway connected to said restricted slot remote from said inlet passage and extending through said movable member to communicate with a space between said second piston and the end of said valve chamber so that pressure at said inlet is applied to said second piston tending to open said valve, and means acting on said movable member to urge said first piston to closed position.

3,045,696
MIXING VALVE FOR HOME APPLIANCE
Clifton A. Cobb, Carrol A. Orr, and William F. Robandt, Jr., St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,238
3 Claims. (Cl. 137—607)



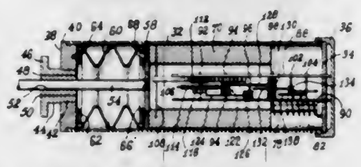
1. A mixing valve structure comprising: means forming a mixing chamber; means forming a first fluid inlet passage into said chamber; means forming a second fluid inlet passage into said chamber; means forming a relatively restricted flow by-pass passage interconnecting said inlet passages for flow in both directions therethrough; first valve means for opening and closing said first inlet passage into said chamber; second valve means for opening and closing said second inlet passage into said chamber; third valve means for opening and closing said by-pass passage; and means precluding fluid flow from said by-pass passage and outward through said inlet passages away from the mixing chamber.

3,045,697
VALVE DEVICES IN PARTICULAR FOR CONTROLLING THE PRESSURE OF A HYDRAULIC CIRCUIT
Gabriel Jean Seguenot, Paris, France, assignor to Sertec Societe d'Etudes et de Recherches Techniques, Paris (Seine), France, a society of France
Filed Jan. 25, 1960, Ser. No. 4,576
Claims priority, application France Jan. 27, 1959
3 Claims. (Cl. 137—609)



1. A device for controlling the pressure of a liquid in a space which comprises, in combination, a conduit leading from a pressure source to said space to feed liquid under pressure toward said space, a cylinder, a piston slidably mounted in said cylinder and forming two end chambers therein, direct communication means between one of said end chambers and a first point of said conduit, communication means between the other of said end chambers and a second point of said conduit upstream of said first point, said second mentioned communication means including a permanently open throttling device inserted therein, a cut-off valve inserted in said conduit between said first point thereof and said space, a discharge conduit in communication with a point of the side wall of said cylinder, said piston forming a slide valve to control the communication between said first mentioned end chamber and said discharge conduit, resilient means interposed between said piston and said cylinder to urge said piston toward a position of rest where it closes this communication between said first mentioned end chamber and said discharge conduit, a passage extending between said second mentioned end chamber and said discharge conduit, a permanently open throttling device inserted in said passage, a distributing valve mounted in said passage between said second mentioned end chamber and said second mentioned throttling device, a by-pass passage extending directly between said distributing valve and said discharge conduit, said cut-off valve being capable of performing either of two functions, to wit either to close or to open the portion of said conduit in which it is inserted, and in such manner that closing is effective only if the pressure in said space is higher than that existing in said conduit upstream of said cut-off valve, said distributing valve being capable of performing one of the three following functions, to cut off said second mentioned end chamber from both said second throttling device and said by-pass passage, to place said second end chamber in communication with said by-pass passage but not with said second throttling device, and to place said second end chamber in communication with said second throttling device but not with said by-pass passage, and common means for operating both of said valves so that said cut-off valve performs its first function when said distributing valve performs its first or second function and said cut-off valve performs its second function when said distributing valve performs its second or third function.

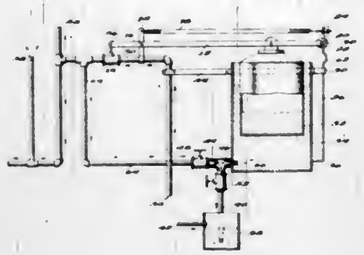
3,045,698
ACTUATING DEVICE
Glenn R. Whitney, 3335 Diversey Ave., Chicago, Ill.
Filed Dec. 8, 1958, Ser. No. 778,862
7 Claims. (Cl. 137—624.14)



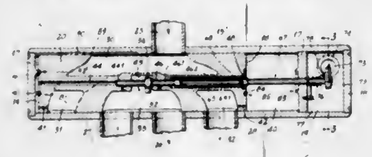
1. A valve assembly having an inlet, an outlet and a valve closure element actuator projecting into said outlet and serving to open said valve closure element when displaced from a predetermined position, said assembly comprising a collapsible bellows arranged to communicate with said outlet, means projecting into said outlet for displacing said actuator, a spring compressible by the opening of said bellows from collapsed condition, means actuated by said spring when compressed to collapse said bellows and to operate said actuator displacing means, and an escapement for regulating the rate of action of said spring.

3,045,699
INTERMITTENT MISTING CONTROL APPARATUS
Earl W. Childers, 2506 S. 29th St., Ashland, Ky.
Filed Oct. 9, 1959, Ser. No. 845,438
2 Claims. (Cl. 137—624.14)

1. An intermittent misting control apparatus attachable to a liquid supply conduit comprising a main valve mounted in said supply conduit; a control conduit leading from said supply conduit down stream of said valve; a reservoir attached at the end of said control conduit, a misting duration control valve mounted in said control conduit; a drainage conduit communicant with said control conduit adjacent said reservoir and having an open drainage reservoir at its end, said drainage conduit being further communicant with the lower end of said drainage reservoir; a misting interval control valve mounted in said drainage conduit; an eductor nozzle mounted in said control conduit adjacent said drainage conduit so as to apply a suction in said drainage conduit when flow takes place through said control conduit to said first named reservoir, and float means supported by liquid in said reservoir and operatively connected to said supply conduit main valve in such a manner that when said float is at one predetermined level the valve is closed and when the float is at a lower predetermined level the valve is open.

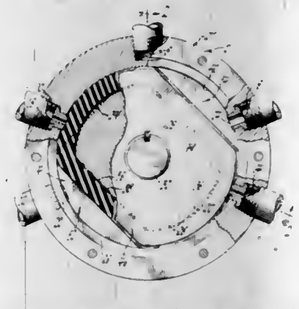


3,045,700
PISTON SLIDE VALVE
Irvin E. Wiegers, St. Louis, Mo., assignor to Alco Valve Company, St. Louis, Mo., a corporation of Missouri
Filed June 24, 1957, Ser. No. 667,638
10 Claims. (Cl. 137—625.29)



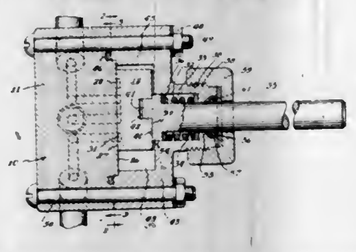
1. In a valve: a closed-ended cylinder; a slide movable therein back and forth along the axis thereof; a high pressure inlet entering the cylinder between its ends, a low-pressure outlet entering the cylinder between its ends and spaced from the inlet; a pair of working line connections entering the cylinder on opposite sides of the low-pressure outlet; the slide having a U-shaped high-pressure passage connected constantly to the high pressure inlet, and having each leg adapted for alternate connection and disconnection with the adjacent working line connection as the slide assumes its opposite positions; the slide also having a low-pressure passage constantly connected to the outlet and alternately connected to the two working lines as the slide assumes its opposite positions, the slide passages thus providing connection from the inlet to the first working line connection and from the second working line connection to the outlet, or alternately providing connection from the inlet to the second working line connection and from the first working line connection to the outlet; the cylinder and slide providing opposite pressure chambers at the ends of the cylinder; restrictive passages constantly open from the high pressure passage of the valve through the ends of the slide to the two pressure chambers; passages along the axis of the slide, extending through the ends thereof, the low pressure slide passage intersecting the axial passages; means to connect and disconnect the pressure chambers alternatively to the low pressure passage, including a pilot valve device extending into said axial passages, the pilot valve device having means to open and to close communication from at least one of the pressure chambers to the low pressure passage, sufficiently unrestricted to relieve the pressure therein despite the restricted inflow thereto; cut-off valves, one in each pressure chamber, each comprising a circular valve ring element and a circular valve seat element, one element on each cylinder head and the other element on the slide, so that movement of the slide to either end will close the corresponding valve elements together, the two axial passages in the piston opening through the slide inside the circular valve elements, whereas the restrictive passages are located outside the ring elements; and means including a solenoid device for effecting the operating movements of the pilot valve.

3,045,701
ROTARY VALVE
Robert W. Graham, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 760,588
6 Claims. (Cl. 137—625.42)



1. Fluid control apparatus comprising a valve body having a cavity including a continuous circular wall portion, a plurality of ports extending through said wall portion at circumferentially spaced intervals, a discontinuous circular rotor in said cavity concentric with said circular wall, a band of elastic material embracing said rotor and simultaneously compressively engaging substantially spaced apart angular segments of said wall portion, and means forming a layer of low friction material between said rotor and said elastic material, whereby the rotor may be angularly oriented to any desired position relative to said ports without inducing significant frictional drag between said elastic material and said circular wall portion.

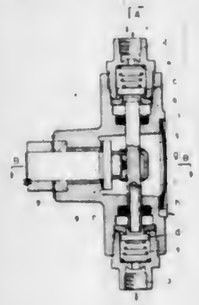
3,045,702
GAS SAMPLING VALVE
Arthur H. Nakata, Berkeley, Calif., assignor, by mesne assignments, to Cenco Instruments Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 22,738
1 Claim. (Cl. 137—625.48)



A metering valve and fluid sampling device comprising a shiftable block, a fixed body member, said fixed member having an internal guideway for said block and including a gas-tight housing containing said block, and means holding the block in slidable sealing engagement with the fixed body member to define a contact plane therebetween, the fixed member and shiftable block having cooperating fluid ports and flow channels and said valve including means for selectively positioning the shiftable block with respect to the fixed member for controlling and directing the flow path of a fluid stream, said

positioning means comprising a rotatable shaft projecting through said housing and having an eccentric pin at a portion thereof located within said housing, a channel in said shiftable block for receiving said pin such that upon rotation of said shaft, said pin engages said block to displace said shiftable block in a plane perpendicular to the axis of rotation of said shaft and along the guideway of the fixed member to position the cooperating fluid ports and flow channels for selection of a desired flow path, said gas-tight housing having gas-tight sealing engagement with the fixed member and with the rotatable shaft to provide a pressure equalization chamber for trapping fluid leakage at the contact plane of the fixed member and the block to develop counter-pressure on exposed surfaces of said shiftable block for neutralizing fluid pressure effects on said block.

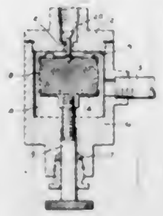
3,045,703
LEVELLER FOR TWO-VALVE PNEUMATIC SUSPENSION
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.a., Milan, Italy, a company of Italy
Filed Mar. 26, 1958, Ser. No. 724,038
Claims priority, application Italy Apr. 4, 1957
2 Claims. (Cl. 137—627.5)



1. A pneumatic suspension for controlling the flow of a fluid medium between a source thereof and a pneumatic device, said suspension comprising: a body defining inlet and outlet chambers, the inlet chamber being adapted for connection with said source, the outlet chamber being adapted for connection with said pneumatic device, the body being provided with a conduit interconnecting said chambers to define a flow path for the fluid medium therebetween, valve means in each said chamber for controllably isolating the associated chamber from the conduit, a control rod in said body having opposite ends adjacent the valve means, each of the ends being in spaced relation from the corresponding valve means, and means operatively associated with said rod to move the same to engage one of the valve means at a time to connect the associated chamber with the conduit, to enable said fluid medium to flow from the chamber to the conduit, said control rod being provided with an aperture in the end adjacent the inlet chamber for providing fluid communication between the atmosphere and the conduit with said end in spaced relation with the corresponding valve means.

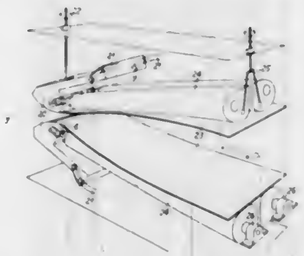
3,045,704
FLUID PRESSURE RESPONSIVE ACTUATING MEANS
Selden T. Williams, Middlebury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Nov. 23, 1960, Ser. No. 71,320
10 Claims. (Cl. 137—793)

1. Fluid pressure responsive actuating means comprising a support, an elastomeric body consisting of a multiplicity of integrally united elastically walled and hermetically closed gas-containing cells mounted on said support, an actuator connected to said elastomeric body in spaced



relation to said support, whereby changes in fluid pressure surrounding and in direct contact with said body will vary such spaced relation to move said actuator in response to such fluid pressure changes.

3,045,705
VARIABLE NOZZLES, IN PARTICULAR LAVAL NOZZLES FOR WIND TUNNELS
Werner Hausammann, Dufourstrasse 117, Zurich 8, Switzerland
Filed Sept. 11, 1956, Ser. No. 609,314
Claims priority, application Switzerland Sept. 12, 1955
12 Claims. (Cl. 138—45)

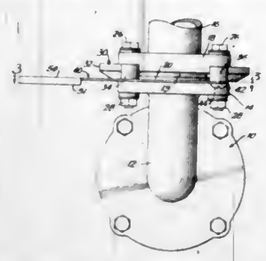


1. In an adjustable wind tunnel nozzle, in combination, at least one elongated flexible wall having an inner surface defining part of a wind tunnel nozzle and having an outer surface opposite from said inner surface, said wall extending longitudinally along the nozzle; and means extending longitudinally along said flexible wall and engaging said outer surface thereof for controlling the curvature of said wall, said means being turnable about at least one axis which extends longitudinally with respect to said wall and said means having an outer surface engaging said outer surface of said wall and provided with different longitudinal contours in different radial planes, respectively, which include said axis so that the curvature of said wall will change when the angular position of said means with respect to said axis changes.

3,045,706
VALVE DEVICE INSERTABLE BETWEEN FLANGE FITTINGS
Wendell M. Dillon, North Andover, Mass., assignor to Watts Regulator Company, Lawrence, Mass., a corporation of Massachusetts
Filed Jan. 9, 1961, Ser. No. 81,504
2 Claims. (Cl. 138—94.5)

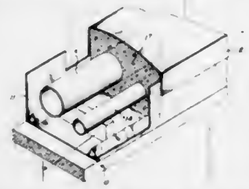
2. A valve device insertable between connecting flanges on a conduit to control fluid flow therethrough, said valve device comprising a plate insertable between said flanges to block said conduit, a chamfered leading edge on said plate with which to initiate insertion of the plate between said flanges, a generally C-shaped frame mount-

able to partly surround a flange, pivot means on said frame adjacent each extremity thereof, and means piv-



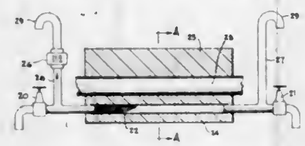
otally connecting said plate to said frame pivot means adjacent either extremity of said frame.

3,045,707
VENTED INSULATED PIPE STRUCTURES
Lincoln L. Loper, Jr., Bellevue, Wash., assignor to Concrete Thermal Casings, Inc., Seattle, Wash., a corporation of Washington
Filed Feb. 16, 1960, Ser. No. 9,036
4 Claims. (Cl. 138—106)



1. A fluid transportation system comprising an impervious pipe arranged to carry a heated fluid, a relatively vapor permeable, monolithic, lightweight thermal insulation surrounding the entire periphery of said pipe, said insulation during use being subject to accumulation of the free moisture therein, said insulation having at least one vent passage formed within the confines of said insulation and extending the full length of said insulation in parallel spaced relation to said pipe, and means for positively circulating air through said vent passage at a rate sufficient to carry away any moisture vapor which is forced into the vent passage from the vapor permeable insulation by the thermal gradient existing between the pipe and the outer periphery of said insulation.

3,045,708
HEAT DISTRIBUTION SYSTEM AND METHOD OF MAKING SAME
George E. Ziegler, Evanston, Ill., assignor, by mesne assignments, to Concrete Thermal Casings, Inc., Seattle, Wash., a corporation of Washington
Filed Jan. 12, 1959, Ser. No. 786,169
5 Claims. (Cl. 138—106)



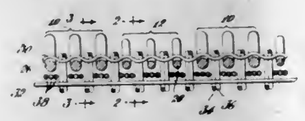
1. In a heat distribution system comprising an impervious pipe arranged to carry a heated fluid having a temperature in excess of the boiling point of water and a monolithic jacket of lightweight, moisture vapor permeable insulating material thermally insulating said pipe about its entire periphery from a colder surrounding environment having a temperature less than the boiling point of water at the prevailing atmospheric pressure, said insulating material having at least one longitudinally extending vent passage formed in said insulating material in spaced relation to said pipe, said vent being in communication with free air, the improvement comprising providing said vent passage in the region of insulation where the temperature of the insulation is intermediate the temperature of said environment and the temperature of boiling water.

3,045,709
PROTECTIVE CASING FOR PIPES AND THE LIKE
Harry E. Rapp, Bryn Mawr, Pa., assignor to Insul-Fil Co., Inc., Long Island, N.Y., a corporation of New Jersey
Filed Jan. 21, 1959, Ser. No. 788,061
10 Claims. (Cl. 138—145)



1. A protective casing for a metal conduit comprising hollow beads, all passing a one-quarter inch screen, bonded together and to the metal conduit by a solidified resin, the beads comprising from 60% to 85% by weight of the mixture and the asphalt resin from 40% to 15% by weight.

3,045,710
CARPET FABRIC AND METHOD OF MAKING THE SAME
Peter Ammerall, Framingham, Mass., assignor to Roxbury Carpet Company, Saxonville, Mass., a corporation of Massachusetts
Filed Aug. 2, 1956, Ser. No. 601,693
7 Claims. (Cl. 139—403)



1. A carpet fabric comprising a ground layer of upper and lower sets of weft yarns and interwoven warp yarns and a top layer of pile-forming warp yarns arranged warpwise of the fabric between the upper and lower sets of weft yarns with pile-forming loops projecting upwardly from the weft yarns in the upper set, characterized in that certain of the pile-forming yarns comprise regularly recurring like groups of loops, each such group consisting of four nodes, of which the first and third are high and the second and fourth are low, while other pile-forming yarns comprise regularly recurring like groups of loops, each such group consisting of two high nodes followed by two low nodes, said certain of the pile-forming yarns being arranged in groups alternating with groups of said other pile-forming yarns.

3,045,711
TWO-PLY OR MULTI-PLY NARROW WOVEN FABRICS
Edwin J. Gibbons, 149 Anthony St., East Providence 14, R.I.
Filed Sept. 5, 1958, Ser. No. 759,337
1 Claim. (Cl. 139—408)

A multi-ply narrow woven fabric, each ply comprising warp threads and a weft thread interwoven thereacross,

the weft thread of each ply being separate and independent from the weft thread of each other ply, each of said weft threads extending from one edge of the fabric to the opposite edge and then back to said one edge throughout the fabric so as to form alternate loops at opposite edges of the fabric, the weft threads of one ply being in



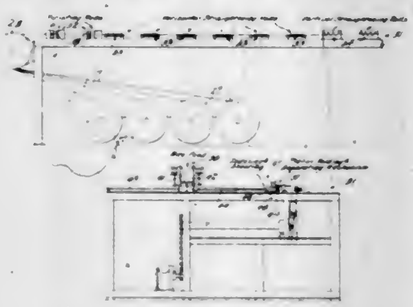
vertical alignment with the weft threads of each adjacent ply, except that the looped ends of a given weft thread are in registry with the intermediate open portion of the adjacent ply, and catch threads at opposite edges of the fabric interlacing the looped ends of the weft threads to form the outer edges of the fabric and to connect the plies to each other at said outer edges.

3,045,712

METHOD OF AND APPARATUS FOR FORMING CAGE-LIKE TERMINAL STRIP SUBASSEMBLIES

Lowell J. Moeller, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 7, 1958, Ser. No. 753,724
2 Claims. (Cl. 140—71)



1. The method of forming cage-like terminal strip subassemblies including a plurality of spaced, apertured, retaining plates having wire terminals in the apertures thereof, which comprises supplying a group of untwisted noncircular wires of indefinite lengths, holding a plurality of apertured retaining plates in close proximity to each other with the apertures therein in aligned relationship to facilitate longitudinal insertion of the group of noncircular wires into complementary apertures in the retaining plates, feeding a row of the supply wires simultaneously and intermittently longitudinally through successive rows of the apertures in the retaining plates to form successive groups of wire terminals while simultaneously twisting a number of the wires of the group individually about the longitudinal axes thereof in one direction and the other wires of the group individually in the opposite direction and straightening the twisted wires while maintaining the twist therein, indexing the ends of the row of supply wires transversely of the axes of the supply wires between successive feeding operations, guiding the noncircular supply wires having opposite-hand twists into successive rows of the apertures in the retaining plates all having the same angular orientation while angularly orienting the ends of the twisted supply wires with the apertures of the end plates, severing all wires of the row of supply wires simultaneously and rows successively to form successive rows of terminals in the retaining plates, successively feeding the retaining plates into positions to receive the supply wires and removing the retaining plates with the terminals therein, moving the retaining plates along the longitudinal axes of the groups of terminals from close proximity with each other to a predetermined spacing to lock the plates and terminals together by resultant torques set up as a result of the twisting of the wires in opposite directions to form a subassembly, and maintaining the terminals at predetermined longitudinal positions relative to one another during the separation of the retaining plates.

3,045,713

METHOD OF MAKING GRIDS FOR ELECTRON DISCHARGE TUBES AND A GRID MADE BY SAID METHOD

Antoon Johannes Cleven, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 8, 1958, Ser. No. 727,136
Claims priority, application Netherlands Apr. 18, 1957
1 Claim. (Cl. 140—71.5)



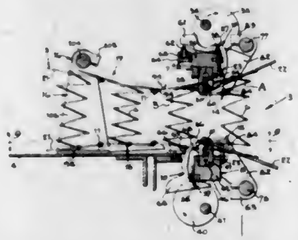
In the method of fabricating grids for electron emission tubes in which a plurality of grids without waste turns are formed on continuous grid backbones by notching the grid backbones at spaced intervals and to a given depth to accommodate grid wire, feeding the wire to said backbones, winding said wire in said notches to form the grid winding, peening the backbones to secure said wire to said backbone and breaking the wire after the last turn of said grid winding is wound in the appropriate notch of said backbones by suddenly halting the feed of grid wire to said backbones; the improvement comprising the step of deeply cutting the last notch of the backbone within which the grid winding wire terminates to a greater depth than said given depth thereby to form an enlarged outstanding burr thereon whereby said winding wire breaks immediately adjacent said burr when the grid wire feed is halted.

3,045,714

AUTOMATIC SPRING ASSEMBLY MACHINE

John R. Greeno, 219 Hill Top Lane, Wyoming, Ohio, and Thomas J. Dull, 1293 Prospect Place, Cincinnati 31, Ohio

Filed July 13, 1959, Ser. No. 826,666
14 Claims. (Cl. 140—92.94)



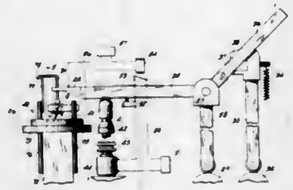
1. In a spring assembly machine, an apparatus for receiving rows of coil springs having upper and lower terminal coils, said apparatus positioning the springs in adjacent rows with portions of the terminal coils in mating relationship for threading an upper and lower helical wire thereon, said apparatus comprising, a machine frame having upper and lower spring guides mounted for reciprocation relative to one another, said spring guides normally residing in a loading position and having open throats facing one another adapted to receive the mating portions of adjacent upper and lower terminal coils, power means connected to said upper and lower spring guides for shifting the same toward one another to a locking position, said upper and lower guides thereby compressing the adjoining rows of coil springs, each of said spring guides having an opening in one side thereof extending along an axis transverse to said open throat and communicating therewith, respective locking elements pivotally mounted upon said upper and lower guides, said locking elements having end portions adapted to pass through the respective openings of the spring guides, said locking elements adapted to be shifted in unison with said upper and lower spring guides, said locking elements residing in a retracted position when the spring guides are in loading position, and stationary means engageable with said locking elements adapted to shift the same into pressure engagement with the mating portions of the terminal coils within said throats in response to the shifting motion of said upper and lower spring guides to said locking position, said throats adapted to receive an upper and lower rotating helical wire and to guide the same longitudinally upon said mating portions of the terminal coils while the same are locked in position therein by the locking elements.

3,045,715

APPARATUS FOR MOUNTING WIRES ON ARTICLES

Jack J. Monahan, Allentown, and Richard C. Shafer, Emmaus, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 12, 1958, Ser. No. 773,343
6 Claims. (Cl. 140—112)



1. In an apparatus for mounting a wire on a part of an article having a first portion and a second portion, grippers for the wire supported for movement between a loading position where, they receive the wire, and a support for the grippers where the wire will be closely adjacent but out of contact with the part, means operable to feed the wire to the grippers, means to move the support to move the grippers with the wire toward the part and until the leading end of the wire engages the first portion of the part, means energizable by the engagement of the wire with the first portion to cause relative movement of the wire and part until the wire engages the second portion, and means to secure the wire to the second portion.

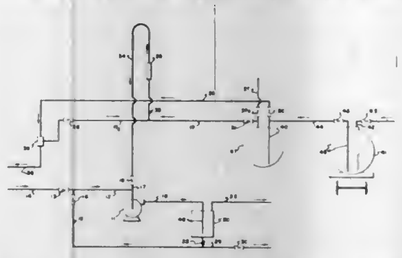
3,045,716

SIMULTANEOUS EVACUATION OF A VESSEL AND SEPARATION OF UNDESIRABLE MATERIALS FROM VAPORS

William Hewitt Morgan, Baton Rouge, La., Thomas Wesley Herbst, Jasper, Tex., and Douglas Richard King, Darien, Conn., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 30, 1959, Ser. No. 862,862
1 Claim. (Cl. 141—7)

In the vacuum induced transfer of a batch of an antiknock liquid, having a lead alkyl component, from a discharging vessel initially substantially full to a receiving vessel initially substantially filled with gas, wherein the vacuum required increases during transfer because of changes of liquid level, and the vacuum also causes vaporization of the lead alkyl component from the antiknock compound into the gas being removed from the receiving vessel, said gas to be ultimately vented, the improvement comprising generating vacuum by a mechanical, liquid sealed, vacuum pump, the liquid being a circulated batch of hydrocarbon liquid having initially a vapor pressure of



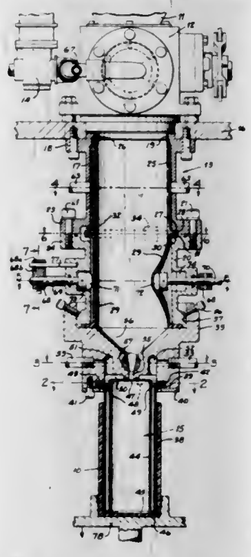
at least about 7 inches of mercury at 100° F., applying the vacuum generated to the receiving vessel and exhausting gas therefrom to induce the flow of antiknock liquid thereto, discharging the sealant liquid and the gas from the vacuum pump, separating and venting the gas, and recirculating the hydrocarbon liquid, the hydrocarbon sealant liquid being circulated until it has absorbed lead alkyl components to a concentration of up to about 0.1 weight percent lead, whereby the gas vented is essentially free of lead alkyl components.

3,045,717

METHOD AND APPARATUS FOR PREPARING MEASURED CHARGES OF MATERIAL AND DISPENSING THEM INTO CAVITIES

Clarence W. Vogt, Weston, Conn. (Rte. 4, Westport, Conn.)

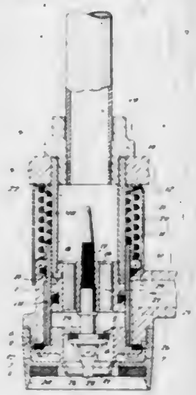
Filed Aug. 29, 1958, Ser. No. 758,068
17 Claims. (Cl. 141—12)



1. A method of preparing and filling measured charges of material into a cavity of a member comprising forcing flowable solid material by gas under superatmospheric pressure into a measuring chamber having a discharge outlet, closing the discharge outlet with a member containing a cavity having a side wall and a bottom to receive a charge of said material, venting gas from said

chamber to compact the charge of material therein, moving said members relative to said chamber to open said outlet and then ejecting the compacted charge of material from said chamber into said cavity in said member to fill said cavity at least partially.

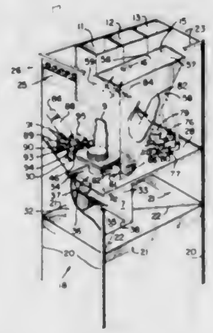
3,045,718
RACKING HEADS FOR FILLING PRESSURE CASKS
John Edwin Reeve, London, England, assignor to G. Hopkins & Sons Limited, London, England, a company of Great Britain
Filed May 5, 1960, Ser. No. 27,000
4 Claims. (Cl. 141—37)



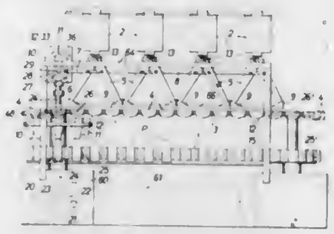
1. A racking head for use in filling metal pressure casks, with carbonated liquor and wherein an independent passage is provided for gas and for the liquor, comprising a cylindrical valve body, a head therefor adapted to make sealing engagement with the rim of a valve on a pressure cask, an internal peripheral seating on said valve body, a gas valve member adapted to engage said seating, an outer sleeve slidable in said valve body and having screw-threaded engagement at one end with said gas valve member, a spring to apply loading to said outer sleeve, an inner sleeve slidable in engagement with said outer sleeve, said inner sleeve having a shoulder against which the other end of said spring abuts, a seating on said gas valve member, a liquid valve member secured to said inner sleeve and adapted to engage said seating on said gas valve member, the passages between said seatings and said valve members being arranged concentrically, said passages being opened automatically to pass gas and liquid respectively upon application of the racking head to the valve on said pressure cask.

3,045,719
DISPENSER APPARATUS
Howard L. Burks, 1307 S. Fountain Ave., and Thomas E. Stewart, Jr., 2055 Kenton St., both of Springfield, Ohio
Filed Dec. 18, 1959, Ser. No. 860,561
7 Claims. (Cl. 141—104)

1. In a dispenser for an ice particle-flavored liquid combination, a frame, an ice particle storage compartment on said frame and having upper and lower open ends, means forming a gravity path for supplying ice particles toward said lower open end and including rectilineal side walls, a forward substantially vertical wall and an inclined rear wall of the storage compartment extending downwardly to the said lower open end, said inclined rear wall having a projection extending below and terminating rearwardly of the said forward wall, a roller within the compartment closing said lower open end having the roller axis extending transversely of the compartment and the roller being normally effective to inhibit the passage of ice particles through said lower open end, said roller including a measuring pocket which extends axially the width of the roller and has substantially a V-shape, means for effecting rotation of said roller to selectively present said measuring pocket to said lower opening and to the interior of said compartment, a wiper guard extending from the substantially vertical forward wall of the compartment downwardly into contact with the roller, said wiper guard extending substantially the width of the compartment to prevent the accumulation of ice particles between the substantially vertical forward wall and wiper guard, dual agitator means in the compartment between the wiper guard and inclined rear wall for urging ice particles to said roller and measuring pocket, a container on the frame adapted for retaining a source of a flavoring liquid, means for positioning a receiver for said ice particles and flavoring liquid below the said lower opening of said compartment, a feed line extending from the said container through said projection of said inclined wall and terminating in a nozzle below said lower opening of said compartment but above said last-mentioned means, valve means in said feed line for controlling the flow of said flavoring liquid, means effective upon rotation of said roller through one complete revolution to stop the rotation of said roller and the dispensing of ice particles through the said lower opening, and means synchronized with said roller rotation for opening and closing said valve means after the dispensing of the ice particles whereby a quantity of flavoring liquid may be dispensed to dispensed ice particles.

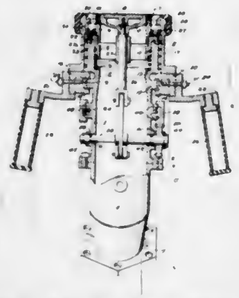


3,045,720
PACKAGING MACHINES
Theodor Jungmayr, Stuttgart, and Paul Lohse, Stuttgart-Bad Cannstatt, Germany, assignors to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Apr. 5, 1960, Ser. No. 20,166
Claims priority, application Germany Apr. 14, 1959
5 Claims. (Cl. 141—145)



1. A packaging machine having means for discharging pourable material into packaging containers, said packaging machine comprising in combination, a bucket chain, buckets on said chain and said buckets including discharge flaps, said chain having straight sections and curved bridging sections and being advanceable in a determinable direction, discharge weighers fixedly supported above said straight sections, transfer chutes pivotally supported between said weighers and said bucket chain, the transfer chutes being pivotable in the direction of advancement of said chain, each said transfer chute having a discharge end in correspondence with one of said buckets during the advancement of the same, conveyor means for packaging containers disposed beneath said bucket chain, means for driving said conveyor means and said bucket chain at the same speed, and means for operating the discharge flaps of said buckets over said curved bridging section to discharge the contents of said buckets to said conveyor means.

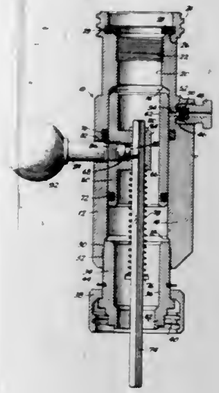
3,045,721
UNDER-WING FUELING NOZZLE
Raymond P. Shepherd, Loveland, and Wallace D. Boone, Cincinnati, Ohio, assignors to Dover Corporation, a corporation of Delaware
Filed Feb. 4, 1960, Ser. No. 6,683
13 Claims. (Cl. 141—346)



1. In a nozzle usable for the purposes described, a hollow body, means at the top of said body presenting a resilient sealing surface of multi-planar form, part of which surface may be brought into sealing contact with a fitting on a tank, a first sleeve means of lesser length than said body and rotatable on said body for locking said nozzle to the fitting, handle means thereon for rotating said first sleeve, a valve adapted to make sealing contact with another portion of the sealing surface of said first mentioned means, means mounted on said body for operating said valve so as to move it away from said sealing surface means, and a connection between said valve operating means and said first sleeve whereby movement of said sleeve during a portion of its rotation will move said valve.

3,045,722
LIQUID EVACUATING ADAPTER
Paul B. Wayman and Philip L. Johnson, Marshalltown, Iowa, assignors to Fisher Governor Company, a corporation of Iowa
Filed Dec. 31, 1959, Ser. No. 863,258
4 Claims. (Cl. 141—348)

1. A liquid evacuating adapter for storage containers of the type having a normally-closed valve adapted to be opened when engaged and moved, said adapter comprising a hollow open-ended body defining a straight-through flow passage and an internally enlarged slide bore, connector means at the container-outward end of said body for coupling attachment to a withdrawal hose, connector means at the container-inward end of said body for coupling attachment with the container valve, a hollow open-ended slide reciprocable within said slide bore, said slide defining a bore of relatively large flow area substantially equal in size to the flow area of said body straight-through flow passage thereby not to restrict passage, an elongated stem reciprocably carried by said slide, biasing means normally extending a free end of said stem outwardly through said container-inward end of said body to operate the container valve, and releasable lock means for adjustably fixing the extended position of said stem.



3,045,723
SANITARY CONTAINER CLOSURE WITH DISPENSER
Roselyn Gainor, 523 West End Ave., Haddonfield, N.J.
Filed Jan. 21, 1960, Ser. No. 3,871
7 Claims. (Cl. 141—381)

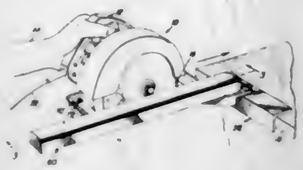


1. In a device having a closure with a sanitary dispenser, a container including a mouth with fastening means, a dispensing cover for said container including a cap with internal fastening means to mate with that of said container, the improvement comprising a dispensing spoon as the sanitary dispenser, the dispensing spoon having a shank portion attached to said cap and having a spoon portion extending outwardly therefrom when said cap is mounted on said container, and a transparent shield closed at one end and open at the other for receiving said dispensing spoon therein, said shield having a smooth surface at the other end thereof, said cap including means for engaging said smooth surface of said shield to provide a tight seal to ensure sanitary protection of said dispensing element, whereby the dispensing element is retained in protected condition with said container and without contamination of the contents thereof.

3,045,724
CIRCULAR SAW GUIDE AND SQUARE ATTACHMENT
Robert Irving Mitchell, Liberty, Tex.
(Box 1335, Freer, Tex.)
Filed Oct. 7, 1960, Ser. No. 61,254
4 Claims. (Cl. 143—6)

1. A circular saw guide and square attachment comprising an elongated angle member adapted to engage

and extend along two angularly related adjacent surfaces of a workpiece, an elongated carriage including means adapted to support a circular hand saw at, and fixed to one side of said carriage with the medial plane of its saw blade generally paralleling said carriage, said elongated carriage defining an elongated longitudinally extending lateral entranceway opening into a longitudinally extend-



ing enlarged inverted channel, a guide assembly comprising an elongated arm having a guide portion formed on one end snugly and slidably received in said channel, said arm intermediate its opposite ends extending through said entranceway and having on its other end means pivotally securing said arm to said angle member for movement about an axis disposed at right angles to the longitudinal axis of said carriage and said arm.

3,045,725
ANTI-SPLINTERING RESILIENTLY-RETAINED INSERT FOR SHOE OF JIG SAW
George W. McCarty, Towson, and Allen C. Stanley, Baltimore, Md., assignors to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Aug. 15, 1961, Ser. No. 131,623
1 Claim. (Cl. 143—68)



In a portable power-driven jig saw which is provided with a work-engaging shoe having a flat undersurface, wherein the shoe includes a pair of shoe members having respective inner edges parallel to each other and defining a rectangular blade opening therebetween, the blade opening having a given lateral width measured between said inner edges, an anti-splintering resiliently-retained molded plastic insert for the blade opening in the shoe, said insert comprising:

(*a*) a rear bridge portion;

(*b*) a pair of spaced parallel runners formed integrally with said bridge portion and extending forwardly therefrom;

(*c*) said runners having a central blade slot formed therebetween;

(*d*) said bridge portion having respective side edges each of which has a convex arcuately-shaped portion protruding laterally therefrom;

(*e*) means forming a pair of holes in said bridge portion, each of which holes is substantially concentric with a respective one of said convex portions;

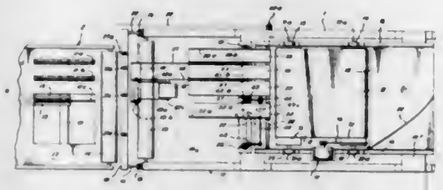
(*f*) each of said runners having an outer edge provided with a slotted guideway, all of said edges and said guideways being parallel to each other, whereby said insert may be slidably received within the blade opening such that the shoe members are received within said respective slotted guideways, thereby restraining said insert against movement vertically with respect to the shoe;

(*g*) said bridge portion and said runners having a common flat undersurface which is co-planar with the flat undersurface of the shoe;

(*h*) said bridge portion of said insert having a lateral width, measured across said convex portions, which is greater than the given lateral width of the blade opening, whereby, when said insert is slidably received within the blade opening, said convex portions will be partially depressed inwardly of said insert, thereby creating a slight interference fit between the shoe members and said bridge portion of said insert, and whereby said bridge portion will thereafter tend to restore its original shape, thereby creating a spring-effect to resiliently retain said insert within the blade opening in the shoe; and

(*i*) said runners of said insert having a lateral width, measured across said slotted guideways, which is less than the given lateral width of the blade opening, whereby said insert may have a limited pivoting movement within the plane of the blade opening in the shoe.

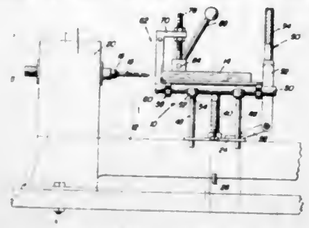
3,045,726
APPARATUS FOR SEPARATING BOARDS OR STRIPS
William David Grogan, 1514 Roberson St., Conroe, Tex.
Filed May 1, 1959, Ser. No. 810,425
4 Claims. (Cl. 143—157)



4. An apparatus for separating a plurality of strips which have been cut from a single board, comprising means for feeding a plurality of strips flatwise and edge to edge in a longitudinal direction, a plurality of laterally aligned gates each of which is adapted to receive one of said strips as said strips move longitudinally relative to said gates, means for mounting each of said gates for movement from a first position for receiving upon itself and passing on one of said strips to a second position wherein the strip passes longitudinally below said gate, and means for automatically moving each of said gates from said first position to said second position only when the strip directed thereto is substantially of a predetermined width, whereby said strips are separated in accordance with their widths as they move longitudinally.

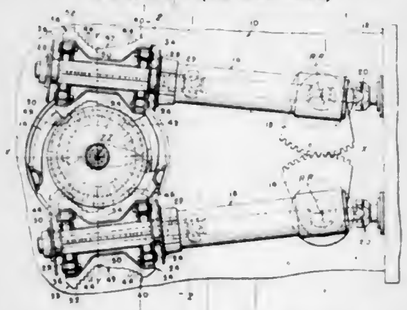
3,045,727
JIG FOR DRILLING DOWEL HOLES
Albert J. Clarke, 2318 Hermitage Ave., Silver Spring, Md.
Filed Feb. 11, 1960, Ser. No. 8,115
5 Claims. (Cl. 144—92)

1. A jig for holding work while drilling dowel holes therein comprising a mounting plate adapted to be attached securely to lathe ways, a supporting plate vertically adjustably carried by the mounting plate in spaced parallel relation thereto, a work carrying plate mounted on the supporting plate for longitudinal movement in relation thereto, means on the work carrying plate for securing a workpiece thereon, and means interconnecting the mounting plate and the work carrying plate for moving the work carrying plate longitudinally in relation to the supporting plate and mounting plate, said mounting plate including a pair of adjustable J-bolts adjustably



connected to the mounting plate for engagement with lathe ways.

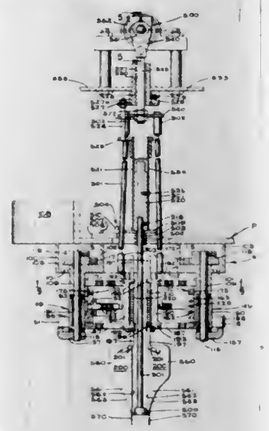
3,045,728
CONVEYING MECHANISM
Philip S. Hutchinson, Lachine, Quebec, and David L. Spanjer, Baie d'Urfee, Quebec, Canada, assignors, by mesne assignments, to Ibis Enterprises Limited, Hamilton, Bermuda, a body corporate of Bermuda
Filed Apr. 7, 1959, Ser. No. 804,656
8 Claims. (Cl. 144—208)



1. A conveying device for a log debarker having a debarker mechanism adapted to rotate about an axis, a pair of arms adapted to pivot about axes substantially parallel to each other and to the axis of rotation of said mechanism, each arm having a conveyor at the end thereof with the conveyors positioned relative to each other for receiving therebetween and guiding logs of different diameters to be debarked, log contacting surfaces on the conveyors movable in a direction parallel to the axis of said mechanism, said conveyors being movable toward and away from each other about the pivot axes of said arms, and means interconnecting said arms such that pivotal movement of one arm is transmitted to the other to maintain an equal distance between each of said conveyors and the axis of said mechanism, said contacting surfaces each having an irregularly stepped profile with first log contact points disposed on the side adjacent the arm pivot axes of a plane containing the axis of said mechanism and being parallel to a second plane through the arm pivot axes, and corresponding second log contact points disposed on the other side of the first said plane, the distance between the first contact points of the contacting surfaces of the conveyors being at least as large as the distance between the corresponding second contact points and the relative positions of said contact points to each other being such that a log received therebetween is maintained substantially coaxial with the axis of rotation of said mechanism.

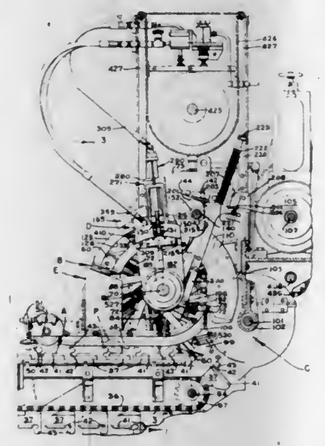
4. A jaw-like conveyor device adapted to receive substantially circular members of varying diameters and to feed them lengthwise, comprising arms having adjacent pivoted ends and ends adapted to move toward and away from each along paths of intersecting arcs in a common plane, and conveyors carried on the movable arm ends and having gripping surfaces of unsymmetrically arched concave cross section including outer and inner portions, with the outer portion of each such surface following a generally steeper curve than the inner portion.

3,045,729
APPARATUS FOR SECTIONIZING CITRUS FRUIT HAVING A VIBRATING BLADE
Wilber C. Belk, Lakeland, and Ralph Polk, Jr., Tampa, Fla.; said Belk assignor to FMC Corporation, a corporation of Delaware
Filed June 26, 1959, Ser. No. 823,176
19 Claims. (Cl. 146—3)



1. In a citrus fruit sectionizing machine, the combination of means for holding a fruit with its axis in fixed generally vertical position, a sectionizing blade having a flat body portion with a probe projecting therefrom, means for moving said blade along a predetermined path generally parallel to the axis of the fruit to bring the probe to a position a predetermined distance in the fruit and between adjacent radial membranes of the fruit, means for moving said blade laterally of said path to bring said probe against a radial membrane of the fruit, and means for vibrating said blade, in a generally vertical direction during said lateral movement.

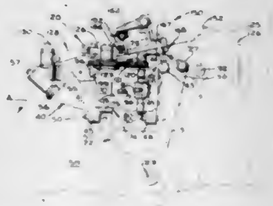
3,045,730
FRUIT PREPARATION MACHINE
Paul C. Wilbur, San Jose, Leslie Vadas, Los Gatos, and Sylvio Puccinelli, San Jose, Calif., assignors to FMC Corporation, a corporation of Delaware
Filed Jan. 7, 1958, Ser. No. 707,513
19 Claims. (Cl. 146—28)



1. In an apparatus for pitting fruit, a pair of pit-gripping jaws mounted for movement toward and away from each other in a common plane, means for position-

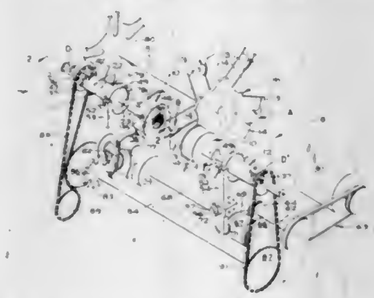
ing a peach half adjacent said jaws with the face of the pit side of the peach half disposed opposite the space between said jaws, means for moving the peach half toward said jaws and the jaws toward each other, means coordinating the movement of said jaws and said peach moving means so that said jaws cut into the flesh of the peach around the pit as they move toward each other in said common plane to contact the pit half, and means mounting said jaws for pivoting movement as a unit about an axis substantially in the plane of the face of the peach half.

3,045,731
PITTING HEAD
Leslie Vadas, Los Gatos, and Paul C. Wilbur, San Jose, Calif., assignors to FMC Corporation, a corporation of Delaware
Filed Feb. 17, 1958, Ser. No. 715,620
10 Claims. (Cl. 146—28)



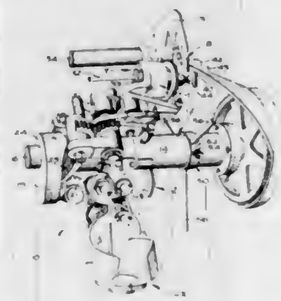
6. In a pitting head, an apertured fruit support plate having on one side a fruit support surface adapted to support a fruit half with the pit half adjacent the aperture in the plate, a pit support member disposed in said aperture and having a pit support surface substantially flush with said fruit support surface, a cutter mounted on the opposite side of said support plate from said fruit support surface for movement in an arcuate path through said aperture outward of said fruit support surface and into contact with a fruit half held against said support plate to cut around the pit half, means for moving said cutter bodily in a direction toward said support plate during arcuate movement of said cutter to bring said cutter into contact with the surface of the pit half being cut around, and spring means urging said pit support member in a direction to resiliently resist the pressure applied to the pit by said cutter during said arcuate cutting movement.

3,045,732
PEACH PITTER GRIPPING DEVICE
Leslie Vadas, Los Gatos, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed May 6, 1959, Ser. No. 811,410
6 Claims. (Cl. 146—28)



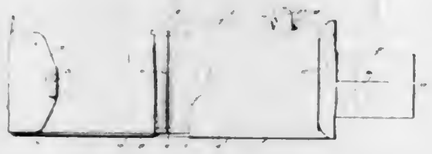
1. In an apparatus for pitting a peach having its pit held in fixed position, a gripper cup comprising a housing, a resilient insert secured in said housing and defining a substantially hemispherical fruit receiving cavity, a plurality of resilient V-shaped fruit gripping ribs integral with said insert and extending from the outer edges of the cavity toward the center thereof to engage a peach disposed in said cavity, and means for rotating said housing in a predetermined direction, each of said ribs having an end adjacent the outer edges of said cavity which leads the end disposed adjacent the center of the cavity during rotation of said housing in said predetermined direction.

3,045,733
FRUIT PREPARATION MACHINE
Hans G. Hoffmeister, San Jose, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed Sept. 30, 1959, Ser. No. 843,588
3 Claims. (Cl. 146—81)



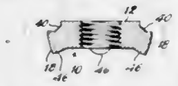
1. In a fruit preparation machine, a flat one-piece gaging plate mounted in fixed position and having an elongate aperture and including spaced apart top and bottom walls and spaced end walls completely enclosing said aperture, said aperture having an entrance portion, a transition region, a longitudinal gaging portion and a discharge region; means in said machine for swinging a pear along an arcuate path to move the stem of said pear into said entrance portion and along said aperture to said longitudinal gaging portion where said pear is aligned generally perpendicular to said gaging plate; means for moving the pear generally transversely of said path to move the stem end into firm engagement with said gaging plate; and means in said machine for severing the stem end from the body of the pear at a point spaced from said gaging plate.

3,045,734
PROTECTIVE DEVICE FOR POCKET WALLETS OR THE LIKE
George A. Moller, 3915 Maravic Place, Sarasota, Fla.
Filed May 5, 1961, Ser. No. 108,117
3 Claims. (Cl. 150—47)



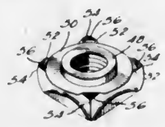
1. In a wallet of the type comprising a transversely foldable back member and respective pockets on opposite sides of the transverse fold of the back member, retaining means comprising a supporting member mounted on the back member inwardly adjacent one of said pockets, a plate-like rigid tongue member slidably connected to said supporting member, said back member having a transverse end fold adjacent the end of said supporting member, said transverse end fold being formed with a slot arranged to allow said tongue member to pass therethrough, spring means acting between said tongue member and said supporting member and biasing said tongue member outwardly through said slot, and pivoted latch means on a margin of said supporting member and being engageable with a portion of the tongue member to hold the tongue member retracted, said latch means projecting from a side edge of the wallet, whereby it may be manually rotated at times to release the tongue member.

3,045,735
METHOD OF MAKING FASTENING ELEMENT DESIGNED FOR WELDING
Henry W. Kern, East Detroit, Mich., assignor to Earl E. Howe, Chicago, Ill.
Filed July 12, 1954, Ser. No. 442,478
5 Claims. (Cl. 151—41.7)



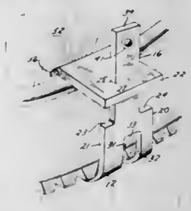
1. A method of making a weld element from a discrete polygonal sided blank having substantially parallel flat end surfaces and generally flat plane side surfaces intersecting each other to form corners and wherein said side surfaces are normal to said end surfaces, said method including the steps of supporting one end surface of the blank except at localized areas adjacent and under the corners of said one end surface, uniformly applying axial pressure against the other end surface only at the corners thereof to deform the corner material axially and at the same time that said axial pressure is being applied, applying lateral restraining pressure by surrounding the side surfaces with a confining wall to substantially preclude lateral flow of the blank material, increasing the areas of applied pressure at each corner inwardly in a uniform manner toward the center, and, at the same time maintaining the lateral restraining pressure on the blank at least at the corners to prevent substantial lateral deformation so as to displace said corners of said one end surface axially beyond such one end surface to form axially disposed welding projections at the periphery of the blank, and discontinuing the applied axial pressure when such axially disposed welding projections have been formed at each corner without substantial lateral deformation from the original dimensions of the blank, all while maintaining said side surfaces essentially normal to the original planes of said blank end surfaces and the end surfaces at the center of the weld element between such original planes.

3,045,736
PILOT WELD NUT AND METHOD OF MAKING THE SAME
Earl E. Howe, Chicago, Ill.
Continuation of application Ser. No. 89,190, Apr. 23, 1949. This application June 23, 1958, Ser. No. 743,674
15 Claims. (Cl. 151—41.7)



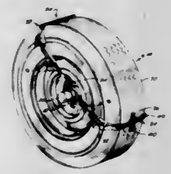
1. A discrete weld nut formed from flat square stock having corner portions partly sheared from the remainder of the stock downwardly from one side thereof, the sheared corner portions being spaced apart to provide portions of the original edges of the nut intact, the sheared corner portions being formed downwardly below the said one side of the nut, and each having the upper surface thereof inclined upwardly and outwardly to leave the original corners of the nut at a higher elevation than the remainder of the upper surface of the corner portions so as to form uniform welding projections at the outer corners of the nut.

3,045,737
SNOW CLEATS FOR AUTOMOBILE TIRES
Jerome Perlmutter, 4 Whaleneck Drive, Merrick, N.Y.
Filed Apr. 10, 1961, Ser. No. 101,697
4 Claims. (Cl. 152—221)



1. A snow cleat for use in conjunction with an automobile tire of the class described, comprising: a unitary elongated strip of flexible non-metallic planar material of predetermined thickness, and having a degree of resilience, including a main body member having first and second ends, there being a transverse slot in said first end of predetermined length and having a principal slot axis perpendicular to the plane of said strip, and of width substantially conforming to said predetermined thickness; and an integrally formed strap member on said second end having a width substantially conforming to that of said predetermined length of said slot, whereby upon the coaxial insertion of said strap member into said slot, and the distorting of said strap member under tension to other than coaxial relation with respect to said principal axis of said slot, said strap member is frictionally maintained in engaged condition therewith.

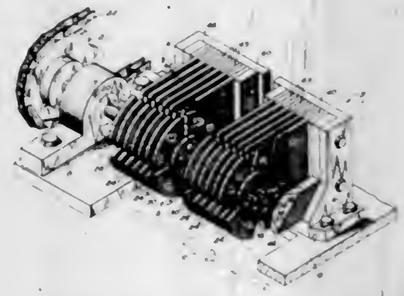
3,045,738
TRACTION DEVICE
Louis Lombardi, 54 Doremus St., Paterson, N.J.
Filed Jan. 10, 1961, Ser. No. 81,804
5 Claims. (Cl. 152—225)



1. A traction device for ready mounting on, and detachment from, a wheel having a tire with a tread portion and two side walls, said traction device comprising a generally hook-shaped traction element having a base portion adapted generally to conform, and transversely to extend across, the tread portion of the tire, said traction element having two side portions extending from the base portion and adapted generally to conform to the side walls of the tire; a lug plate for mounting on the wheel; at least one lug carried by said lug plate and extending from said lug plate; a traction element attaching member for releasably attaching said traction element in tight position on a tire; means on one end of the attaching member for releasably connecting said attaching member to said lug; means for releasably connecting the opposite end of said attaching member to one side portion of said traction element, said connecting means releasably engaging said side portion and pulling said traction element toward said attaching member so as to produce a firm engagement

of said traction element with the tread of the tire, said traction element and attaching member being separate parts so that each can be separately positioned on the wheel and tire without encumbrance by the other and subsequently the two can be connected together, and so that the two parts can be disconnected from each other and subsequently detached from the wheel and tire without encumbrance by the other.

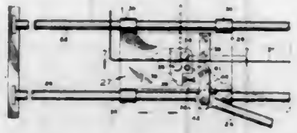
3,045,739
COMPONENT LEAD STRAIGHTENER
William A. Fyfe, North Reading, and Alfred W. Shore, Amesbury, Mass., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 6, 1960, Ser. No. 41,066
2 Claims. (Cl. 153—2)



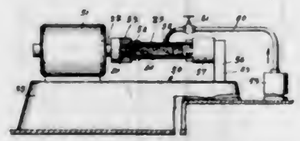
1. An apparatus for straightening component leads which extend from opposing ends of components comprising like units spaced to receive each component therebetween at a loading station, a stationary base mounted at the loading station, spaced bearing brackets mounted on the base, a rotatable spindle supported thereby, a group of elements for each unit mounted on the spindle and having aligned groups of like substantially V-shaped notches therein providing guide surfaces extending diagonally outwardly from aligned arcuate inner straightening surfaces, like annular spacers mounted on the spindle adjacent the elements to space the elements like distances apart and having peripheral straightening surfaces disposed adjacent the arcuate straightening surfaces, stationary brackets for the units mounted on the base, and groups of stationary members mounted on the brackets at spaced parallel positions so that like portions thereof will extend parallel with and adjacent to the elements of their units, the stationary members having like straightening surfaces extending from positions adjacent the peripheries of the elements to positions adjacent the peripheral surfaces of the spacers to force the leads toward the arcuate straightening surfaces along any of the guide surfaces during rotation of the spindle and the elements until the leads for portions of their lengths are confined in the arcuate straightening surfaces of the elements and between the straightening surfaces of the stationary members and the peripheries of the spacers to straighten the leads.

3,045,740
WIRE BENDING MACHINE
Jack C. Davis, 2064 NE. 9th Ave., Fort Lauderdale, Fla.
Filed Apr. 14, 1960, Ser. No. 22,353
8 Claims. (Cl. 153—64)

8. A wire bending machine of the character described having a pair of trackways, a carriage device shiftable along the trackways, means for moving the carriage back and forth upon the trackways, a wire bending head supported upon and movable with the carriage, a wire clamping device supported upon and movable with the carriage, means actuatable to simultaneously move the carriage in one direction and to release the clamping means whereby the clamping means on subsequent engagement with a wire is caused to engage a predetermined length of the wire from a wire roll, means actuatable to move the carriage in the opposite direction causing the clamping means to bite upon and feed the engaged section of wire forwardly, means embodied in the machine for intermittently actuating the bending head, the said bending head being actuatable when the carriage has reached its outer position of travel and the section of wire to be bent has been fed forward, the said means for actuating the bending head functioning to rotate the bending head in an arc somewhat greater than 90 degrees so that when the bending head is reversed, the wire will spring back and assume a true 90 degree angle.



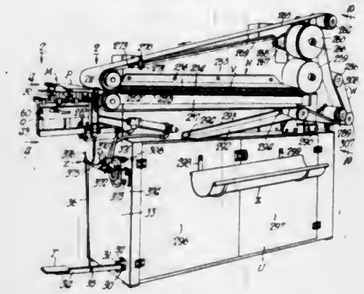
3,045,741
APPARATUS FOR SPINNING METAL TUBING TO PREVENT OXIDIZATION OF PARTS SUBJECTED TO HEAT OF FRICTION
Charles R. Straubing, Sodus Point, N.Y., assignor to Kenmore Machine Products, Inc., Lyons, N.Y.
Filed Dec. 24, 1959, Ser. No. 861,798
1 Claim. (Cl. 153—81)



In combination with a spinning machine for joining coaxially disposed metal tubes and having a base, a motor on said base, a standard on said base in spaced relation to the motor, a fixed work-holding jaw carried by said standard, a shaft for said motor, a rotatable jaw mounted on said shaft at that end of said shaft facing the fixed jaw, a die carried by said rotatable jaw, said rotatable die being adapted to embrace the ends of said tubes for joining them together by spinning and heat developed thereby, said fixed jaw being adapted to hold the other ends of said tubes stationary while said tubes are being joined at their die-embraced ends, and means for supplanting air in the space between said metal tubes by an inert gas, said means comprising a tank of inert gas under pressure mounted on said base adjacent said machine, and a flexible tubing extending from said tank whereby the free end of said tubing may be placed over an opening formed in the outermost of the metal tubes to introduce such inert gas into the space between the tubes while expelling air therefrom.

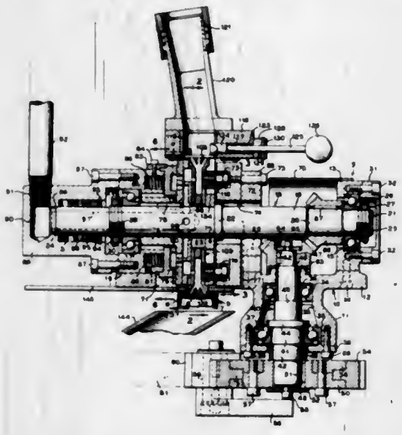
3,045,742
APPARATUS FOR MAKING FABRIC FACED BELTS WITH PLASTIC BACKINGS
Charles Brooks, Flushing, Thomas A. Sutton, Floral Park, and Charles Brownold, Valley Stream, N.Y., assignors to Cee Bee Mfg. Co. Inc., Brooklyn, N.Y., a corporation of New York
Filed Apr. 2, 1957, Ser. No. 650,206
1 Claim. (Cl. 156—463)

In a laminated backed fabric faced belt making machine, fabric feed guide means including side and successive corner folders for a strip of the fabric to guide the fabric, a backing feed guide means for a strip of plastic backing, said last mentioned guide means being positioned below the fabric feed guide means to guide the backing below the fabric feed guide means and in parallelism with the fabric, means to assemble the fabric and backing together, upper and lower belts to receive and hold together the assembled fabric and plastic backing, upper and lower platens to press said belts together while carrying the assembled fabric and plastic backing, heater means associated



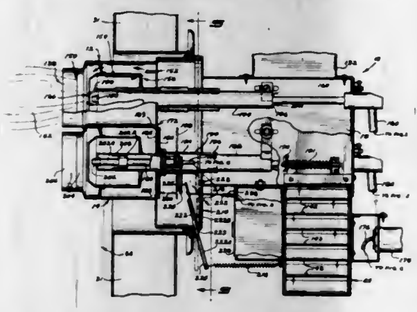
with said platens to heat the plastic backing while carried by the belts to cause its adherence to the fabric, and means to discharge the final heat adhered fabric and plastic backing belt from between the belts, said folders including a first folder means for the fabric to fold the side edges of the fabric under and below the fabric, spaced apart second and third folder means, means operating said second and third folder means for folding the forward corners of the fabric under and below the folded side edges to point the forward end of the fabric.

3,045,743
CROWN CAP DISK INSERTING APPARATUS
Julian M. Hillegas, Wilmington, Del., assignor to Continental Can Company, New York, N.Y., a corporation of New York
Filed Jan. 20, 1959, Ser. No. 788,018
12 Claims. (Cl. 156—567)



1. A machine for assembling bottle caps comprising a conveyor for conveying empty shells in upwardly opening positions, a cork disc reservoir, and a rotary distributor for distributing and applying cork discs from said reservoir into the shells, said rotary distributor including a base, a generally horizontal shaft, means carried by said base mounting said shaft for rotary movement, a generally vertically disposed rotor mounted on said shaft in overlying alignment with said conveyor, drive means connected to said shaft for rotating said rotor in timed relation to the movement of said conveyor, said rotor underlying said reservoir for receiving cork discs therefrom, said rotor having a plurality of radial circumferentially spaced sockets opening through the periphery thereof, a plunger positioned in each of said rotor sockets, cam means connected to said plungers for retracting and projecting said plungers as said rotor rotates, said rotor having cork disc pick-off means for removing individual cork discs from said reservoir and seating said cork discs in said sockets overlying outer ends of said plungers, cork disc retaining means connected to said plungers for retaining cork discs in engagement with said plungers as said rotor rotates and said plungers are projected from said rotor, and cork disc ejecting means cooperating with said plungers for forcibly removing cork discs from said plungers when projected from said rotor and positioning cork discs in shells.

3,045,744
BURNER ASSEMBLY
Emil J. Tjernlund, Falcon Heights, Minn. (% Tjernlund Manufacturing Co., 2140 Kasota Ave., St. Paul, Minn.)
Filed Oct. 29, 1958, Ser. No. 770,356
9 Claims. (Cl. 158—28)

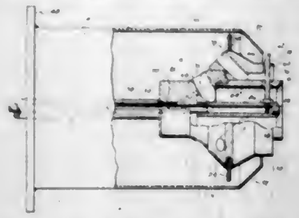


1. A fuel burning apparatus including first and second burner heads, each burner head having an axially elongated tubular fuel supply means including a fuel nozzle with an annular air passageway concentric therewith, an annular air obstruction valve member movably mounted on said tubular fuel supply means for axial movement between a first position adjacent its air passageway for blocking same and a second position in non-blocking relation to its passageway, fuel supply means having fuel valve means in fluid communication respectively with the tubular fuel supply means including a fuel nozzle, operating control means including a separate valve actuating means operatively associated with the valve member and each fuel valve means and having separate interlocking means respectively for deactivating the valve member actuating means when the first burner head fuel valve means is not actuated and for deactivating the second burner head fuel valve means when the valve member is in said first position, the annular air passageways being the only source of combustion air for the respective burner heads, and air control means responsively associated with the valve member for varying the air flow to the air passageways to keep a constant pressure thereat whereby a constant flow of combustion air is provided through each burner head when burning fuel.

3,045,745
LOW AIR PRESSURE BURNER
Alexander J. Turpin, Stewart Manor, N.Y., assignor to Hauck Manufacturing Co., Brooklyn, N.Y., a corporation of New York
Filed Nov. 20, 1959, Ser. No. 854,286
23 Claims. (Cl. 158—76)

1. An oil burner having a forward end and comprising an air pipe open at its forward end and from which

a high velocity air stream may flow, a main oil tube extending through the air pipe and having a forward end, an oil atomizing nozzle at the forward end of the oil tube and burner, said nozzle being non-rotatable, a pilot oil tube extending through the main oil tube and



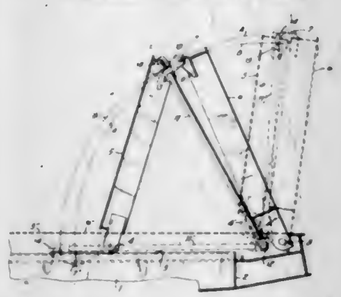
having a forward end, a plurality of radial pilot nozzle tubes at the forward end of the pilot oil tube, said pilot nozzle tubes having tips located near the periphery of the high velocity air stream from the air pipe and adjustable to a position outside the air stream, said pilot nozzle tubes being open at said tips for discharge of oil.

3,045,746

METHOD AND MEANS FOR MOUNTING AND OPERATING HINGEDLY INTERCONNECTED PANEL ELEMENTS FOR CLOSING HATCHWAYS, RAILWAY CARS AND LIKE OPEN SPACES

Henri Kummerman, Paris, France, assignor to MacGregor-Comarain, Paris, France, a French body corporate

Filed Mar. 3, 1959, Ser. No. 796,787
Claims priority, application France Mar. 25, 1958
5 Claims. (Cl. 160—206)



1. In a horizontal deck having an aperture, a closure assembly comprising first and second panels each having opposed edges, a stowage space for substantially vertically locating said panels when they are folded and occupy the aperture opening position, said first panel being hingedly secured at the first of its opposed edges to the edge of said stowage space adjacent said aperture, said second panel being hingedly secured at the first of its opposed edges to the said first panel at its second opposed edge and folding on the side of said first panel remote from said stowage space when in the vertical position, an elongated generally straight link bar positioned between said panels, means pivotally mounting one end of said link bar on said deck adjacent said first edge of said first panel, a lost motion connection consisting of interengaging slot and pin means pivotally connecting the opposite end of said link bar with said second panel in the vicinity of said first edge thereof, said second edge of said second panel being spaced above said deck to permit said panel to hang freely from said lost motion connecting means when the panels occupy the aperture opening position, said link means exerting a thrust upon said second panel in the direction away from said first panel during initial movement of said first panel from opening toward closing position thereof.

3,045,747

SUSPENSION AND MOVING DEVICE FOR DRAPES AND DOORS

Franklin B. Hill, 20 13th Place, Long Beach, Calif.

Filed May 16, 1960, Ser. No. 29,379
2 Claims. (Cl. 160—331)



1. Apparatus for opening and closing a pair of drapes, comprising: an overhead horizontally extending elongated carrier housing, said carrier housing being formed with a longitudinally extending bore, a continuous side opening extending from said bore to one side of said housing and a recess between said bore and said side opening; a left-hand and right-hand threaded screw in said bore, said screw being rotatably supported relative to said carrier housing; a pair of yokes engaging said screw and supported in said carrier housing so as to be horizontally movable relative to said carrier housing upon rotation of said screw, said yokes including a connection element that moves in said recess; a pair of driving drape support members slidably disposed in said recess for horizontal movement along said carrier housing, said driving drape support members being proximate relative to one another when said drapes are closed, with each of said driving drape support members being non-rigidly secured to the connection element of one of said yokes, and each of said driving drape support members extending out of said side opening; a plurality of driven drape support members slidably disposed in said recess between each of said driven drape support members and the opposite ends of said carrier housing for horizontal movement along said carrier housing, each of said driven drape support members extending out of said side opening; lazy tong levers drivingly connecting said drape support members whereby horizontal movement of said driving drape support members will effect concurrent horizontal movement of said driven drape support members; drape attachment means secured to each of said drape support members on the side thereof remote from said housing whereby drapes attached to said attachment means will hide said carrier and lazy tong levers from observation from the side of said housing remote from said drapes; and power-operated actuating means for rotating said screw whereby said yokes and drape support members are moved longitudinally relative to said housing in a synchronized manner in either direction to open or close said drapes.

3,045,748

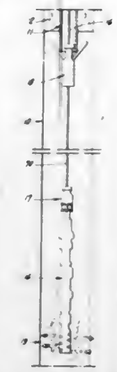
METHOD AND APPARATUS FOR PERFORATING WELLS

Harry B. Schramm, Dallas, Tex., assignor, by mesne assignments, to Otis Engineering Corporation, Dallas County, Tex., a corporation of Delaware

Filed Dec. 26, 1957, Ser. No. 705,362
12 Claims. (Cl. 166—35)

1. The method of perforating an oil well at a predetermined distance below the bottom of the tubing string therein which comprises: suspending a perforator in said tubing string adjacent the bottom thereof; connecting a locator member to said perforator at said predetermined

distance thereabove while said perforator is suspended in said tubing string; lowering said locator member and perforator as a unit to below the bottom of said tubing



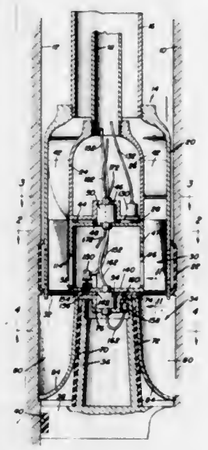
string; raising said locator member into proximity with the bottom of said tubing string; and firing said perforator when the locator member is proximate to the bottom of the tubing string.

3,045,749

PIVOTING MEANS AND METHOD FOR PRODUCING PULSATING WAVE BY AND ON FLUID PRESSURE DRIVES

Clarence W. Brandon, 1806 Meridian Ave., Tallahassee, Fla., assignor of twelve and one-half percent to Orpha B. Brandon, Birmingham, Ala., five percent to Harvey B. Jacobson, Washington, D.C., and fifty percent to N. A. Hardin, Catherine H. Newton, and Hazel H. Wright, all of Forsyth, Ga.

Filed June 2, 1954, Ser. No. 433,965
14 Claims. (Cl. 166—42)



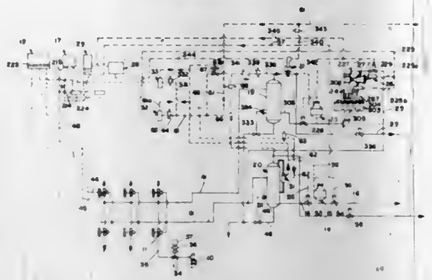
14. A process to facilitate the secondary recovery of petroleum from the interstices of an oil bearing formation, comprising; cyclically applying a fluid pressure medium to the face of an oil bearing formation under pressure and withdrawing it under a lower pressure while continuously moving the place of application of the fluid medium to the face of the formation upon said face and thereby apply alternate pressure variations to the individual interstices of the formation in sequence to cause removal of the petroleum from said interstices, including the step of intermittently abruptly interrupting the withdrawal of the medium thereby generating hammer blow shock waves therein for intermittently imparting a greatly increased amplitude to the pulsations in the medium.

3,045,750

CONTROL SYSTEMS

Clifford M. Peters, Robert W. Dinning, and Norman F. Brown, Longview, Tex., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 22, 1957, Ser. No. 635,345
14 Claims. (Cl. 166—52)



1. A test system for testing a well comprising, a test line, a first fluid operated motor valve means for a well selectively controlling flow into the test line, a sampler for collecting a sample of well fluid from the test line, second fluid motor operated valve means controlling operation of the sampler, time operated control means, a first conduit extending between the control means and the first valve means, a check valve in the first conduit preventing flow from the motor valve to the control means, a branch conduit extending between the second motor valve and the first conduit on the control means side of the check valve, a second conduit extending between the control means and the first conduit on the outlet side of the check valve, said control means introducing a pressure fluid into the first conduit while blocking flow from the second conduit to pressurize the first and second motor valves and place a well on test and prevent operation of the sampler, said control means venting the first conduit and pressurizing the second conduit after a predetermined time to maintain the signal on the first motor valve means and vent the second motor valve means to maintain said well on test and permit operation of the sampler.

3,045,751

FLOW CONTROL METHOD FOR WELLS AND APPARATUS THEREFOR

Elbert A. Rodgers, 4520 Spencer Drive, Wichita Falls, Tex.

Filed July 21, 1958, Ser. No. 749,862
3 Claims. (Cl. 166—54)



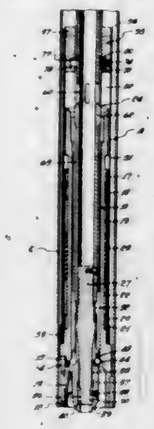
1. A flow control device for an oil well having a production string of tubing therein; which device comprises

an eduction tube connected to said production string of tubing in fluid communication therewith, an enlarged tubular shell having at least one aperture formed therein near the upper end thereof, which enlarged tubular shell surrounds said eduction tube and is in sliding relation thereon, said enlarged tubular shell having the lower end thereof closed, a tubular guide member having an upper face, which tubular guide member is fitted within the lower end of said enlarged tubular shell centrally thereof and in axial alignment with said eduction tube, a fitting on the lower end of said eduction tube which is in sliding relation with said tubular guide member, said fitting having an opening formed therein, which opening is above said tubular guide member when said tubular guide member is in the lower-most position, said opening in said fitting being closed by said tubular guide member when said tubular guide member is in the upper-most position, an out-turned flange on said fitting intermediate the length thereof, which flange is in complementary seating relation with the upper face of said tubular guide member when said tubular guide member is in the upper-most position, said fitting on said eduction tube having the lower end thereof closed, said tubular guide member having an opening formed thereinto, which opening is in communication with the hollow portion of said shell, and an abutment on said eduction tube to limit the downward movement of said shell.

3,045,752
MILLING APPARATUS FOR REMOVING OBJECTS FROM WELL BORES

Julian D. Kelthahn, Anaheim, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed Mar. 25, 1958, Ser. No. 723,734
9 Claims. (Cl. 166—55)

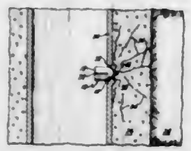


1. In apparatus for milling a well tool set in a well conduit disposed in a bore hole, the well tool having a passage therein; supporting means adapted to be run in the well conduit to the well tool on a running-in string; cutter means operatively connected to and rotatable with said supporting means and having a portion spaced outwardly therefrom to cut an outer portion of the well tool and to define an annular space with said supporting means for reception of the inner portion of the well tool; a pilot secured to said supporting means and adapted for insertion in the passage to center the cutter means with respect to the well tool; and means on said pilot adapted to be coupled to the well tool to enable the running-in string to elevate the well tool in the well conduit with the cutter means enclosing the inner portion of the well tool.

3,045,753
DEVICE FOR PERFORATING CASING OF A WELL AND CRACKING CEMENT SURROUNDING THE CASING

Robert J. Goodwin, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed June 26, 1958, Ser. No. 744,796
5 Claims. (Cl. 166—55)



4. A device for perforating the casing of a well and deforming the casing to crack the cement surrounding the casing for production of well fluids through the thus deformed cement comprising a cylindrical shank having a diameter at least twice the thickness of the casing to be perforated, a substantially hemispherical convex head at one end of the shank, a pyramidal tip permanently extending from the hemispherical head whereby on disengagement of the device from the well casing the pyramidal tip remains integral with the shank, the pyramidal tip terminating in a point in alignment with the central axis of the shank and having an apex angle between 30 degrees and 60 degrees, said tip having a maximum dimension across the base thereof less than about one-half the diameter of the hemispherical head, and a height approximately equal to the wall thickness of the casing.

3,045,754
PARALLEL TUBING STRING PACKER AND ANCHOR

William D. Myers, Norwalk, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed Apr. 29, 1958, Ser. No. 731,770
13 Claims. (Cl. 166—120)

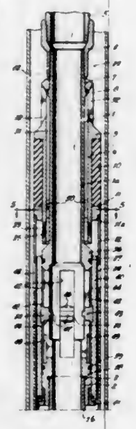


1. In a device of the character described: a well packer apparatus adapted to be anchored in packed-off condition in a well casing against movement in one longitudinal direction and having a plurality of longitudinal passages therethrough arranged in generally parallel side by side relation; said apparatus including fluid operated gripping means urged outwardly by fluid pressure into engagement with the well casing to prevent movement of said apparatus in the opposite longtiudinal direction; one of said passages having a sealing surface adapted to provide sealing engagement with a tubular string; means for conducting fluid under pressure from said one passage below said sealing surface to another passage; and means for conducting such fluid under pressure from said another passage to said fluid operated gripping means to actuate the same.

3,045,755
VALVED PRODUCTION PACKER

John S. Page and John S. Page, Jr., Long Beach, Calif., assignors to Page Oil Tools, Inc., Long Beach, Calif., a corporation of California

Filed Apr. 7, 1958, Ser. No. 726,901
15 Claims. (Cl. 166—129)



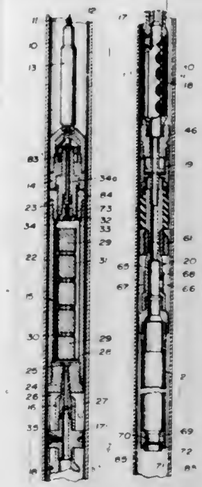
1. In a well packer of the type including a mandrel adapted to be connected to a running-in string of tubing and having an axially extended opening therethrough; an expansible packer element disposed about said mandrel; and means for effecting expansion of said packer element into engagement with the well wall for packing off the annulus between the running-in string and the well wall; that improvement comprising: means providing a by-pass passageway bridging said packer element and communicating with the annulus at opposite ends of the packer element; valve means for opening and closing said passageway; and means for operating said valve means including a member connected to said valve means and having a portion disposed in said mandrel opening; and an actuator tool movable in said mandrel opening and having means for releasably engaging said portion of said member to shift the same.

3,045,756
WIRELINE WELL TREATING APPARATUS

George E. Briggs, Jr., Houston, Tex., assignor to Halliburton Company, a corporation of Delaware

Filed Aug. 26, 1958, Ser. No. 757,338
10 Claims. (Cl. 166—162)

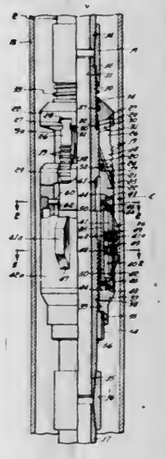
1. An apparatus for treating well formations while suspended from a wireline, the combination of means for controlling said apparatus, fluid pressure delivery means responsive to and associated with said control means, retractable anchor means connected in fluid communication with said delivery means for expanding into gripping contact with a well bore wall in response to pressure applied from said delivery means, retractable fluid motor means connected in fluid communication with said delivery means for actuating in response to pressure applied from said delivery means, retractable packer means in connection with said motor means for expanding into sealing contact with said well bore responsive to actuation of said motor means, walled container means connected in fluid communication with said delivery means for storing material for treating said well bore, and pressure responsive closure means in a wall portion of said container means for releasing the contents of said container means responsive to pressure applied from said delivery means, said control means being adapted to vent any pressure across said apparatus in response to predetermined tension exerted between said wireline and anchor means, thereby permitting retraction of said anchor means, motor means and packer means.



3,045,757
TUBING ANCHOR

Martin B. Conrad, Downey, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

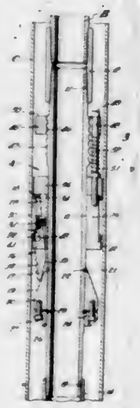
Continuation of application Ser. No. 635,307, Jan. 22, 1957. This application Oct. 17, 1960, Ser. No. 63,218
27 Claims. (Cl. 166—216)



1. In apparatus to be disposed within and anchored to a well conduit; a body; slip means carried by and movable longitudinally with respect to said body and adapted to engage the well conduit to anchor the body therewithin; expander means on said body adapted to coact with said slip means to expand and hold said slip means against the well conduit; drag means connected to said expander means and movable longitudinally therewith both before and after said slip means have been expanded against the well conduit and frictionally engageable with the well

conduit to resist movement of said expander means therewithin; said body being rotatable within said expander means; and means interconnecting said body and expander means whereby rotation of said body within said expander means moves said expander means longitudinally relative to said body and slip means to cause said expander means to shift said slip means laterally of said body.

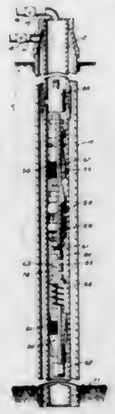
3,045,758
COMPENSATING TUBING ANCHOR
John F. Muse, Whittier, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed July 11, 1958, Ser. No. 747,919
15 Claims. (Cl. 166—216)



1. An apparatus to be disposed within and anchored to a well conduit: a body; slip means on said body adapted to engage the well conduit to anchor the body therewithin; expander means fixed to said body against longitudinal movement thereon in both directions and adapted to coact with said slip means while said expander means remains fixed to said body to expand and hold said slip means against the well conduit; drag means frictionally engageable with the conduit to resist movement of said slip means therewithin; and means yieldedly urging said slip means toward said expander means to maintain said slip means engaged with said expander means and conduit as said body moves said expander means in a direction away from said slip means.

3,045,759
WELL APPARATUS
Henry U. Garrett and Clifford M. Peters, Longview, and Robert W. Dinning, Kilgore, Tex., assignors, by mesne assignments, to Udell, Inc., Longview, Tex., a corporation of Texas
Filed Jan. 26, 1955, Ser. No. 484,164
16 Claims. (Cl. 166—224)

1. A system for regulating the flow of fluid from a producing formation of a well into a flow conduit in the well to maintain a selected back pressure on the formation which comprises, in combination, a flow conduit in said well having a passage disposed to provide fluid communication between said formation and a point interiorly of said conduit; and valve means carried by said conduit at a substantial depth in said well and including a first port and a valve member disposed to control flow through said passage, pressure responsive means connected to said valve member and having a part exposed to pressure of fluid flowing from said formation upstream of said first port and urged thereby to move said valve member toward port-opening position, the effective area of said pressure responsive means exposed to said upstream pressure being sufficiently large relative to any area of the valve means upon which pressure of fluid downstream of said first port acts to influence opening or closing of the valve means that movement of the valve member is controlled substantially only by said upstream pressure, said pressure responsive means including an enclosed charge chamber for a resilient fluid under pressure to urge said valve member toward port-closing position, a second port communicating between said chamber and the exterior



thereof, a valve part controlling flow through said second port, pressure responsive means connected to said valve part to move it to and from closed position and exposed on one side to pressure of fluid in said chamber to be urged thereby in one direction and also being exposed on its other side to pressure of fluid exterior of said chamber to be urged thereby in the other direction so that opening and closing of said second port is controlled by the difference between said charge pressure and said exterior pressure, and resilient means urging the valve part toward closed position.

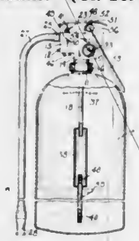
3,045,760
STORM CHOKE
Howard H. Moore, Jr., Houston, Tex., assignor to Camco, Incorporated, Houston, Tex., a corporation of Texas
Filed Nov. 17, 1958, Ser. No. 774,300
1 Claim. (Cl. 166—224)



In a well tool, an outer housing tube, an inner tube longitudinally slidably mounted in said housing tube and

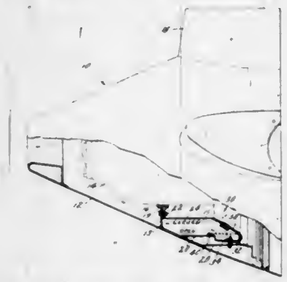
provided with a restricted pressure flow passage, spaced apart stop abutments on said tubes establishing upper and lower limits on slide tube travel, a normally open flap valve co-operating with the lower end of said slide tube, means pivotally mounting the flap valve on an axis above the lower end of the tube at its lower slide travel limit and in lateral engagement with the tube side wall above said lower end when the tube is at its lower limit and for inward and upward swing travel into valve seating closure engagement with said tube end when the tube is at its upper limit and means comprising a lost motion connection joining the pivot mounting means and said outer tube and accommodating their relative shift movement in the direction of longitudinal slide tube travel.

3,045,761
FIRE EXTINGUISHER
Eugene J. Ciarlo, 308 Front Ave., West Haven, Conn.
Filed Sept. 22, 1960, Ser. No. 57,817
5 Claims. (Cl. 169—31)



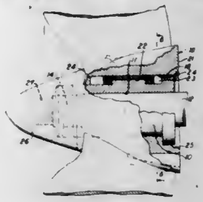
1. In a foam fire extinguisher of the stored-pressure type, a tank having means defining a discharge opening and forming a container for holding a foam-generating solution, consisting of water and a foaming agent, and a pressurizing gas above the level of the solution, an eductor tube extending downwardly in the tank below the solution level and approaching the bottom of the tank, and a valve head assembly supported from the tank over said means and having a first passage, controlled by a manually operable valve, communicating with the tube and extending to a foam-discharging orifice, said first passage having an expansion and mixing chamber within said assembly adjacent and behind said valve, the valve head assembly having a second passage communicating with the pressurizing gas space and said chamber, whereby the gas and the solution are intimately mixed to generate foam in the valve mechanism just prior to passing said valve.

3,045,762
PROPELLER SPINNER SHUTOFF VALVE
Leonard L. Gaubis, East Granby, and Donald G. Hall, Suffield, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 26, 1960, Ser. No. 65,184
7 Claims. (Cl. 170—135.743)



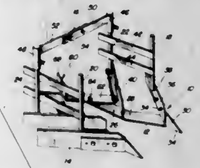
1. In a spinner assembly for a variable pitch propeller, a hub, a shell secured to and spaced from the hub for rotational movement therewith, both the hub and shell defining an annular air passage, an obstruction mounted in the shell having an opening, air shut off means cooperating with said opening for controlling the air flow through the spinner including a centrifugally actuated device.

3,045,763
SHOCK ABSORBING POSITIVE DRIVE MEANS FOR MARINE PROPELLERS
William Perrott, 7505 Palisade Ave., North Bergen, N.J.
Filed Oct. 26, 1959, Ser. No. 848,627
1 Claim. (Cl. 170—160.54)



A shock absorbing full floating resilient positive drive means for marine propellers, said drive means comprising an elongated sleeve having a bore extending therethrough for receiving a propeller shaft, a transverse aperture in said sleeve adjacent one end for receiving a shear pin projecting transversely of said propeller shaft, a plurality of radially projecting circumferentially spaced ribs on said sleeve, said ribs being of less length than said sleeve, a separate layer of yieldable material bonded to the entire side and entire outer surface of each rib, an annular flange on the end of said sleeve opposite said transverse aperture, a propeller having a hub, an axial bore in said hub, a plurality of axial grooves and a recess in the wall of said axial bore, said ribs being received in said grooves with said yieldable material tightly compressed and engaging the bottom and sidewalls of said grooves with said flange received in said recess, the portions of said hub between said grooves engaging said sleeve, whereby all torque and thrust is transmitted through said yieldable material as a compressive force and tilting of said propeller is limited by said flange and recess in the event of damage to said propeller and means for retaining said propeller and said sleeve on said propeller shaft.

3,045,764
CLOSE CUTTING CULTIVATOR
Warren B. Johnson, R.R. 6, Box 64, Lubbock, Tex.
Filed Oct. 3, 1958, Ser. No. 765,075
5 Claims. (Cl. 172—191)



1. A close cutting cultivator of the type having at least one pair of wing shovel sections adapted to straddle a row of cotton plants and be moved longitudinally therealong to either remove quantities of soil from around the plant stalks or to perform dirting operations; said wing shovel sections each comprising at least one pair of longitudinally spaced and approximately parallel, straight, horizontally disposed and upstanding shovel plates, means rigidly interconnecting the forward portions of said shovel plates, means carried by said shovel sections adapting said sections for securement to a support member in side-by-side relation and with said plates

projecting laterally to opposite sides of and rearwardly from the longitudinal center axis of said cultivator extending between said wing shovel sections and with the forward edges of said plates being spaced from said center axis, said securing means including bracing means which rigidly interconnects the rear portions of said sections and interchangeably supports said sections therefrom whereby soil may be moved differently in accordance with the positions of said sections.

3,045,765
REVERSIBLE DISK PLOW

Robert E. Cox, Rock Island, and James F. Sullivan, East Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Dec. 7, 1960, Ser. No. 74,273
16 Claims. (Cl. 172—212)



1. In a reversible disk plow, the improvement comprising a generally fore-and-aft extending frame having a transversely disposed supporting structure, a beam pivotally connected with said frame for lateral swinging about a generally vertical axis located at a point spaced from said transverse structure, a supporting member pivotally connected with said frame for lateral swinging about a generally vertical axis spaced from said first mentioned axis, and said member being supported by said transversely disposed supporting structure, and a part slidably mounted on said member and supportingly connected with said beam.

3,045,766
SUSPENSION TYPE ROTARY PIERCING PROCESS AND APPARATUS

David H. Fleming, Jr., Chatham, N.J., assignor to Union Carbide Corporation, a corporation of New York

Filed Aug. 22, 1958, Ser. No. 756,691
14 Claims. (Cl. 175—14)



1. In combination with a blowpipe having a casing with an open lower end and provided at its upper end with a hoisting cable connection whereby it is adapted to be suspended by a cable and lowered thereby into an elongated vertical passage thermally pierced into a mineral body as said passage increases in length, flexible hoses with hose connections at the upper end of said blowpipe forming supply conduits for oxidizing gas and fuel, a rotatable flame burner mounted in the lower end of said casing for rotation with respect to said casing, means for conducting oxidant and fuel from said hose connections to said rotatable flame burner, means for circulating fluid coolant through said blowpipe and discharging said coolant adjacent the forward end of said burner, means for directing jets of flame from said rotatable burner out of said open lower end and means located within the confines of said casing above said rotatable flame burner for rotating said flame burner with respect to said casing.

3,045,767
APPARATUS FOR DIRECTIONAL DRILLING OF WELLS

Willis G. Klassen, 7156 Hoover Way, Buena Park, Calif., assignor of one-half to Eugene Graham, Los Angeles, Calif.

Filed Nov. 28, 1958, Ser. No. 777,040
7 Claims. (Cl. 175—76)



1. A directional stabilizer for use in directional drilling in a well bore having a given radius comprising a tubular mandrel adapted to be connected in a drill string, a first annular sleeve member mounted on said mandrel for free relative rotation therewith and fixed against longitudinal movement thereon, a second annular sleeve member mounted on said drill member for longitudinal movement thereon and fixed against relative rotation therewith, spring means resiliently biasing said sleeve members into engagement with each other, interengageable clutch means on said sleeve members for preventing relative rotation therebetween when in engagement with each other, said mandrel having a lateral opening therethrough, means forming a variable capacity piston chamber between said second sleeve member and said mandrel and in communication with said mandrel opening so that introduction of fluid pressure from said mandrel into said chamber will move said second sleeve member out of engagement with said first sleeve member, an outwardly extending spacing member rigidly mounted on said first sleeve member, the distance from the axis of said first sleeve member to the outermost part of said spacing member being greater than said well bore radius, and a vertically elongated, outwardly extending and inwardly collapsible bow spring means mounted on said first sleeve on the side thereof opposite to said spacing member.

3,045,768
FLUID OPERATED PERCUSSION DRILL

Mervin C. Huffman, Denver, Colo., assignor to Gardner-Denver Company, a corporation of Delaware

Filed July 14, 1958, Ser. No. 748,416
9 Claims. (Cl. 175—100)



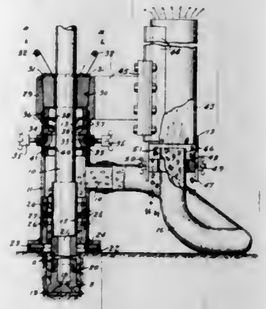
1. In a pressure fluid operated tool of the percussion type, an elongated hollow housing adapted for connection at its rearward end to a source of pressure fluid, valve means disposed adjacent to the rearward end of said housing, a tappet having an axial bore mounted at the forward end of said housing for limiting axial movement and adapted to receive a drill bit, a hammer having an axial bore therethrough reciprocable in said housing within a chamber defined by said valve means and said tappet to engage the rearward end of said tappet, means for exhausting pressure fluid from said chamber, a tube supported at its rearward end by said valve means and extending through said hammer bore into said tappet bore, said valve means being pressure fluid operated to direct pressure fluid alternatively to said chamber rearwardly of said hammer and through said tube, said tappet disposed to assume a rearwardmost position during drilling operation of said tool and a forwardmost position when said tool is removed from a work surface, and said tappet bore and the forward end of said tube having cooperating configurations which act to direct pressure fluid flowing through said tube to said chamber forwardly of said hammer when said tappet is in said rearwardmost position and which act to prevent flow of pressure fluid to said chamber forwardly of said hammer when said tappet is in said forwardmost position.

3,045,769
ROCK DRILL GUIDING AND CUTTINGS DISPOSAL

Jacob E. Feucht, Garfield Heights, and Raymond P. Dellner, North Olmsted, Ohio, assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Sept. 19, 1958, Ser. No. 762,056
13 Claims. (Cl. 175—211)

1. In a rock drilling unit wherein removal of cuttings is effected by compressed air, a drill rod guiding shell having one end sealingly cooperable with the ground and in communication with a drill hole in the ground and its opposite end sealingly cooperable with the drill rod, swirling means between said ends and including flexible annular elements having circumferentially staggered and segmental flanges for swirling the chip and dust-laden compressed air stream escaping through said hole end, said shell defining an enlarged initial flow decelerating chamber for the stream disposed contiguous with said swirling means, a conduit carried by said shell and communicating with said chamber for conducting the swirling stream laterally away from the chamber while further

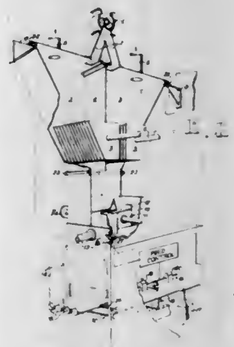


decelerating the velocity of said stream, and a gravity separator also carried by said shell and coacting with the delivery end of said conduit to effect gravity separation of the heavier chips from the advancing dust-laden stream.

3,045,770
PACKING MACHINE FOR GRANULAR AND POWDERED MATERIALS

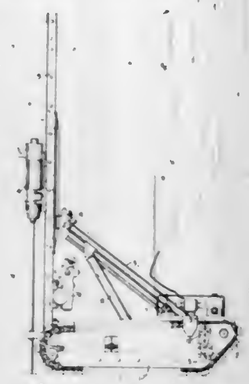
Fritz Haver, Oelde, Westphalia, Germany, assignor to Haver & Boecker, Oelde, Westphalia, Germany, a corporation of Germany

Filed Apr. 21, 1958, Ser. No. 729,630
1 Claim. (Cl. 177—69)



In an apparatus for filling bags: feeding mechanism including a spout and power-actuated means for filling a bag, a displaceable weighing device including means for supporting a bag in filling relation to said spout, said weighing device undergoing weighing displacement in response to a filling of the bag with a pre-selected weight of material, means responsive to weighing displacement of said device for arresting the filling of the bag, the improvement which comprises said weighing device being adapted to receive a number of bags simultaneously, said filling means being adapted for delivering material to said bags concurrently, and means for maintaining the rates of delivery of said delivering means at a constant proportion with respect to each other, said feeding mechanism being provided with a pre-compacting honeycomb cell for each of said bags to be filled for de-aerating the material to be filled into said bags, said honeycomb cells being arranged on a mutual shaft, and means for imparting vibrations to said honeycomb cells comprising at least one oscillator cooperating with said shaft.

3,045,771
CRAWLER WITH INDEPENDENTLY TILTABLE TREAD FRAMES
John C. Curtis, Newport, N.H., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1959, Ser. No. 805,297
3 Claims. (Cl. 180—9.5)



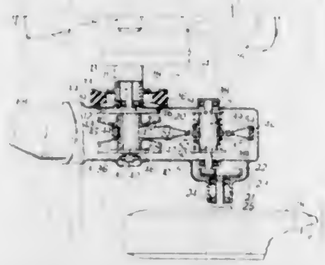
3. A crawler propelled support comprising, laterally spaced crawler frames having crawler treads mounted for circulation about the margins thereof, bearing means located on respective portions of and extending through said frames, an elongated laterally extending shaft extending through said bearings with the ends thereof terminating closely adjacent the outer lateral surface respectively of said crawler frames for permitting independent pivotal movement of said crawler frames about the axis of and relative to said shaft, lever means rigidly secured to said shaft and extending radially to the axis thereof, said lever means being secured to said shaft closely adjacent respective sides of said crawler frames, stop means rigidly secured to said crawler frames and located to be abuttingly engaged by said lever means for limiting pivotal movement of said crawler frames about said shaft, whereby movement of said support over an uneven surface causes independent limited pivotal movement of said crawler frames upon engagement of said lever means with said stop means.

3,045,772
DRIVE FOR MOTOR BIKES
Theodore R. Nicolai, 26958 Baseline, Highland, Calif.
Filed Feb. 17, 1959, Ser. No. 793,924
2 Claims. (Cl. 180—31)



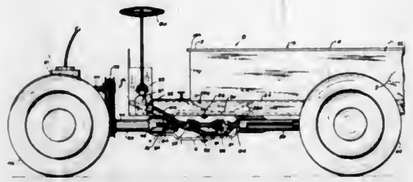
1. A front wheel drive for a motor bike having a front wheel, a rear wheel, a frame supported by the wheels, a power plant supported by the frame and a fork stem bearing sleeve rising from the frame in rearwardly inclined relation with respect to the axis of the front wheel and in the plane thereof, the drive comprising a pair of posts mounted on the frame on opposite sides of the fork stem bearing sleeve, a cross-member connecting the upper ends of the posts to the upper end of the bearing sleeve, a second cross-member connecting the lower ends of the posts to the lower end of the bearing sleeve and having a bearing member suspended from one end thereof, a steering stem revolvable in the bearing sleeve and having a third cross-member fixed thereon below and adjacent to the second cross-member, a second bearing member suspended from the third cross-member and adapted for lining up with the first bearing member, a fork leg projecting downwardly from the third cross-member outwardly of and spaced from the second bearing member and having a front wheel bearing mounted upon the lower end thereof, an input shaft revolvable in the first bearing member and having means connected to the power plant for rotating the same, an output shaft revolvable in the second bearing member and in the said leg, a driving connection between the output shaft and the front wheel, and a universal connection between the two shafts made to allow the output shaft to turn about the axis of the steering stem as the latter is turned in steering operations.

3,045,773
FRONT WHEEL SUSPENSION SYSTEMS FOR AUTOMOBILE VEHICLES
Achille C. Sampietro, 286 Puritan, Birmingham, Mich.
Filed Sept. 8, 1959, Ser. No. 838,488
5 Claims. (Cl. 180—43)



2. In an automobile vehicle, a front wheel suspension system comprising a hollow lower swing arm pivotally mounted to the vehicle about a substantially horizontal axis, power transmission means mounted within said lower swing arm, said power transmission means including a drive pulley drivably connected to the engine of the vehicle, a driven pulley, said driving and driven pulleys being of variable effective diameter and including means urging the driving and driven pulleys into their maximum diameter position during operation of the transmission means, a main belt drivably interconnecting the driving and driven pulleys, and an auxiliary belt assembly associated with the driving pulley, said assembly comprising two auxiliary pulleys freely rotatable about axes parallel to the rotational axis of the driving pulley, an auxiliary belt drivably interconnecting the two auxiliary pulleys and arranged to press the main belt against the driving pulley, and means for moving at least one of the auxiliary pulleys to regulate the loading between the auxiliary and main belts and hence regulate the effective diameter of the driving pulley, a final drive shaft drivably interconnected with said driven pulley and extending outwardly beyond the lower swing arm, an axle casing, an axle shaft rotatably mounted in said casing, said axle shaft extending through said casing and being secured to a road wheel, an upper swing arm pivotally mounted to the frame of the vehicle about an axis parallel to the pivot axis of the lower swing arm, said upper swing arm being connected to the axle casing by a swivel joint, and a universal joint drivably interconnecting the axle shaft and the outer end of the said final drive shaft, said universal joint being positioned below the swivel joint, whereby the assembly consisting of the axle casing, the axle shaft and the wheel is located by the swivel joint and the universal joint and is free to pivot about a substantially vertical axis.

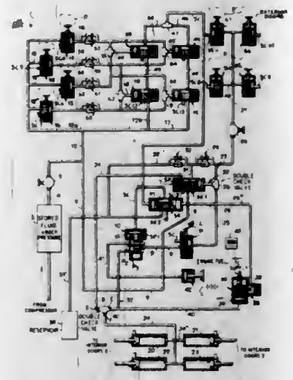
3,045,774
AUTOMOTIVE VEHICLE
Clarence S. Hadlock, Mesa, Ariz., assignor, by mesne assignments, to DynaCo Manufacturing, Inc., a corporation of Arizona
Filed Mar. 6, 1961, Ser. No. 93,542
1 Claim. (Cl. 180—51)



An automotive vehicle for operating over rugged terrain comprising a forward body part supported by wheels mounted on transverse aligned axles centrally joined by differential gearing and a central fore and aft drive shaft connected by gears to said forward differential, a differential gear housing and a housing for said axle parts and a housing for said drive shaft, an engine mounted on said axle housing having a clutch and belt means driving a gear change mechanism contained in a box, said gear change box being mounted on said axle housing and a chain mechanism connecting said gear change mechanism with said forward drive shaft, a rear body part including right and left axle parts connected by differential gearing, and a drive shaft connected by gears to said rear differential gearing, a tubular axle housing enclosing said rear axle parts and a differential housing connecting said axle housing tubing centrally of said housing, a tubular drive shaft housing connected to said differential housing, a pivot joint joining the front axle housing to said rear axle housing, including two mutually interfitting clevis parts pivotally joined by vertical bearing bolts, a tubular universal joint operatively joining the front drive shaft to the rear drive shaft, a platform on said rear drive shaft housing having a seat and a steering wheel including a steering arm driven through gearing by said steering wheel, said gearing being mounted on said platform, a steering link connecting said forward drive shaft housing to said steering arm at a point eccentric to said vertical pivot bearing bolts, and means for controlling operation of said engine from said seat and for operating said clutch and gear shift mechanism from said seat.

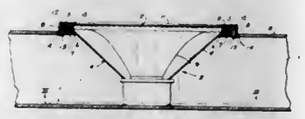
3,045,775
PROTECTION SYSTEM FOR VEHICLES CARRYING VALUABLES
Gisberto Pretini, S. Frediano a Settimo, Pisa, Italy, assignor of one-half to Compagnia Italiana Westinghouse Freni e Segnali, Turin, Italy, an Italian corporation
Filed Mar. 30, 1960, Ser. No. 18,576
Claims priority, application Italy Apr. 6, 1959
10 Claims. (Cl. 180—82)

1. A protection system for a vehicle having an interior storage compartment for valuables, an internal door in the vehicle closing said storage compartment, and an external door on the vehicle providing access to the internal door, said vehicle having an engine and fuel supply therefor, comprising a plurality of valves interconnected by pipes in a pneumatic circuit, a pneumatic actuator device operatively disposed to close and lock said internal door and connected to said circuit, one of said valves being disposed for actuation by opening of the external door, a pneumatic switch connected to said circuit, an alarm operatively connected to said switch for actuation thereby, means for controlling supply of fuel to the engine operatively connected to said circuit, and a source of fluid under pressure connected to said circuit, said one valve being operatively disposed in said circuit to control flow of said fluid to said device, switch, and the fuel supply control means, whereby opening of the external door while said fluid is supplied under pressure to said circuit actuates the one valve so that the pneumatic switch, the



fuel supply control means, and said pneumatic actuator device are actuated to activate the alarm, to cut off the supply of fuel from the engine, and to close and lock the internal door.

3,045,776
SPEAKER MOUNTING DEVICE
Tadashi Igarashi, Suginami-ku, Tokyo, Japan, assignor to Sony Kabushikihaisha (Sony Corporation), Tokyo, Japan, a corporation of Japan
Filed Mar. 25, 1959, Ser. No. 801,898
Claims priority, application Japan Apr. 16, 1958
1 Claim. (Cl. 181—31)



In an electro-acoustical device, a transducer including a frame and a generally conical diaphragm in said frame, a flange formed at the periphery of said frame and having a back face and a front face, a case including a panel having an opening therein receiving said transducer with said back face being engaged with the outer face of said panel about said opening, a cushion ring holding a peripheral portion of said diaphragm against said front face, an integral forwardly extending peripheral edge portion formed on said flange outside said cushion ring, a grill having a peripheral edge portion disposed against the outer face of said cushion ring, an outer ring projecting outwardly from said panel in surrounding relation to said integal forwardly extending peripheral edge portion on said flange, a cover ring engaging the peripheral edge portion of said grill to hold said grill and cushion ring in position, said panel having recesses therein outside said outer ring, and lugs extending inwardly from said cover ring through said recesses with the inner ends of said lugs being bent radially inwardly to hold said rings and said grill in position.

3,045,777
SAWHORSE
Edwin L. Dintelmann, 729 S. Pennsylvania, Belleville, Ill.
Filed Jan. 31, 1961, Ser. No. 86,157
7 Claims. (Cl. 182—153)

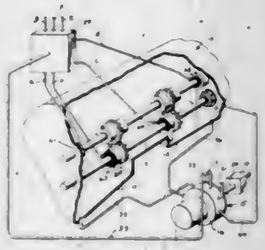
1. A support comprising spaced leg assemblies, each assembly comprising a plurality of upwardly extending legs, generally horizontally extending rod means connecting said leg assemblies, said leg assemblies being ro-

tatable about said means, support means above and parallel to said horizontally extending means extending between said assemblies and movably connected thereto whereby the weight of said support will automatically force the lower ends of said legs into contact with a



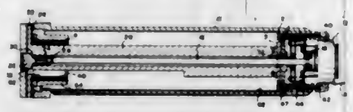
supporting surface below said support, each of said assemblies including a pair of legs pivotally connected at their upper ends to a saddle member which contains said support and has aperture means therein rotatably receiving one end of said rod means.

3,045,778
LUBE PUMPING SYSTEM
Bruce H. Mosbacher, Rockford, Ill., assignor to Roper Hydraulics, Inc., Commerce, Ga., a corporation of Georgia
Filed Mar. 10, 1960, Ser. No. 14,051
6 Claims. (Cl. 184—6)



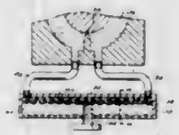
1. In combination with a mechanism having various parts requiring lubrication, a lubricant pumping system comprising, a plurality of lubricant sumps disposed at different locations relative to said parts to receive variable quantities of the lubricant which drains back from the parts under different operating conditions, a rotary positive-displacement type pump for withdrawing lubricant from a plurality of said sumps and for distributing the lubricant, said pump including a casing and a rotor in said casing defining a pump chamber therebetween, means extending between the rotor and the casing segregating the chamber into a plurality of compartments which rotate with the rotor, said compartments having inner and outer peripheries disposed in relatively eccentric paths whereby the compartments progressively increase in volume in a first sector of the chamber and progressively decrease in volume in a second sector of the chamber when the rotor is rotated in one direction relative to the casing, said casing having a plurality of inlet ports communicating with said first sector of the chamber at annularly spaced points and an outlet means communicating with said second sector of said chamber, distribution means connected to said outlet means for distributing lubricant to said various parts of the mechanism, and means connecting said inlet ports to different ones of said sumps whereby said pump withdraws liquid from a plurality of sumps and receives lubricant so long as lubricant remains in any one of the sumps.

3,045,779
ELECTROMECHANICAL LINEAR RECIPROCAL ACTUATOR
Sidney Rosenthal, West Newton, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 7, 1961, Ser. No. 94,088
8 Claims. (Cl. 185—37)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a linear reciprocal actuator, a container casing, an ejector probe, a solenoid for operating said probe for ejection of said probe from said casing, a solenoid shaft for receiving axial rotary motion from said solenoid, a cam system comprising a first cam element immovably attached to said solenoid shaft for rotation therewith, a second cam element comprising a ring having inwardly directed flanges thereon, a third cam element, shoulders on said third cam element for engaging the flanges of said second cam for releasably retaining said second and third cam elements in engagement, an ejector spring, an ejector spring housing comprising an outer sleeve element and an inner sleeve element, said inner sleeve element operating also as a solenoid housing, said ejector spring seating between and compressed by a flange on said outer sleeve and said second cam, releasable securing means for securing said first cam to said spring housing to maintain said spring in compressed condition, said means being releasable upon rotary movement of said first cam.

3,045,780
ROTARY VISCOUS DAMPER
Sidney Lees, 544 Walnut St., Newton, Mass.
Filed Oct. 18, 1957, Ser. No. 691,103
1 Claim. (Cl. 188—90)

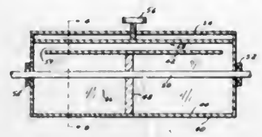


A rotary damper comprising means defining a closed continuous passage with a portion of the passage having a restricted cross sectional area, a liquid filling the passage, means mounted for rotation in an unrestricted portion of the passage and causing the liquid to circulate through the passage in response to its rotation, and means including a movable plate disposed in the restricted portion of the passage for varying its effective cross sectional area to vary the ratios of the cross sectional areas of the restricted and unrestricted portions of the passage, said plate and restricted portion of the passage being of substantial length and comprising a major portion of the length of said passage.

3,045,781
VISCOUS DAMPER
Sidney Lees, 544 Walnut St., Newton, Mass.
Filed May 17, 1957, Ser. No. 659,962
1 Claim. (Cl. 188—97)

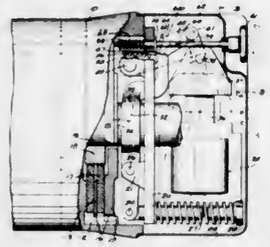
A damper comprising a case, a chamber formed in the case, a piston movable in the chamber, a shaft connected to the piston and extending out of the case, a passage interconnecting the ends of the chamber, said passage open only at the chamber ends and of substantially

smaller cross sectional area than the chamber, said passage being defined independently of the piston, means



disposed in the passage for simultaneously and uniformly varying its cross sectional area at all points throughout its length, and a liquid filling the chamber and passage.

3,045,782
DETENT FOR RELEASABLY HOLDING AN ELECTROMAGNETIC BRAKE DISENGAGED
Quinten A. Hansen, Franksville, Wis., assignor to R. H. Stearns and R. N. Stearns, both of Milwaukee, Wis.
Filed Feb. 24, 1961, Ser. No. 91,514
6 Claims. (Cl. 188—171)



1. In a magnetically releasable brake structure, the combination with a brake-releasing arm and means for mounting it for pivotal movement to and from a brake-releasing position, of eletcromagnetic means for oscillating said arm to said brake-releasing position, manually operable means for oscillating said arm toward said brake-releasing position, means mounting the manually operable means for reciprocation in a direction generally longitudinal respecting the arm, said manually operable means and said arm having complementary cam surfaces whereby the arm is oscillated toward brake-releasing position upon reciprocation of the manually operable means in one direction, biasing means for actuating the manually operable means in a longitudinal direction opposite to that last mentioned, the said arm and said operable means having complementary detent portions constituting means effective when engaged for holding said arm in said brake-releasing position, said detent portions being disengageable upon the actuation of said electromagnetic means for the return reciprocation of said manually operable means by said biasing means.

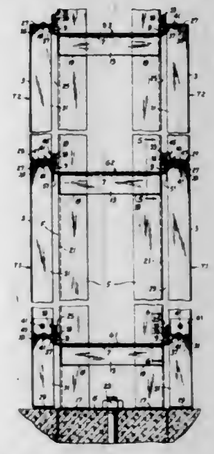
3,045,783
STANDARD FOR TRAFFIC SIGNALS, STREET LIGHTS AND THE LIKE
Gordon E. Daniels, Nashville, Tenn., assignor to Kerrigan Iron Works Company, Nashville, Tenn.
Filed June 18, 1959, Ser. No. 821,218
3 Claims. (Cl. 189—26)

1. In a lighting standard composed of a base member, a tubular mast of polygonal cross sectional configuration open at its top, and a tubular arm member extending from said tubular mast, the improvements comprising a leg portion on said tubular arm member at an angular position thereto and of a cross sectional configuration corresponding to that of the upper portion of said tubular mast but of slightly different diameter than said upper portion of said tubular mast and telescopically attached thereto, and cooperating abutment means on said leg portion and said upper portion of said tubular mast limiting telescoping engagement between said portions to a predetermined distance longitudinally thereof, said tubular



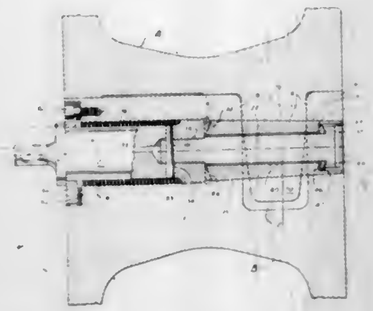
arm member and said leg portion providing a closure for the open top of said tubular mast so as to effectively prevent in cooperation with said telescopic attachment entry of fluid into said tubular mast.

3,045,784
METALLIC WALL CONSTRUCTION
Lester W. Hasekamp, St. Louis, Mo., assignor to The Porcel Engineering Company, St. Louis, Mo., a corporation of Missouri
Filed May 2, 1960, Ser. No. 26,071
3 Claims. (Cl. 189—34)



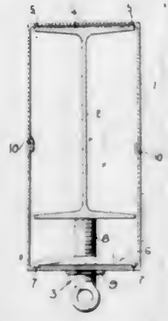
1. In a metallic building wall construction, framing and tiers of rectangular sheet metal panels secured to the framing at least on one side thereof, the framing including vertical studs, an upper horizontal girt and a lower horizontal girt for each tier of panels, the girts having horizontal web portions extending between the studs and secured thereto and supported thereby and acting as stress-carrying members in the framing, each girt also having an upwardly extending flange extending throughout its length and spaced outward from the studs on said one side of the framing, each panel in a tier being secured at the top thereof to the respective upper girt by means of tabs fastened to the top of the panel, each tab including a downwardly opening hook portion which is hooked over the upwardly extending flange of the respective upper girt, said hook portions being adapted in the assembly of the panel with the respective upper girt for lateral sliding on said girt into its final position without regard to the location of the studs, and means for securing the bottom of each panel in place on the framing.

3,045,785
DEVICE FOR CONNECTING PARTS TOGETHER
John E. Ferguson, Beaverton, Oreg., assignor to Guy F. Atkinson Company, South San Francisco, Calif., a corporation of Nevada
Filed Sept. 6, 1960, Ser. No. 54,052
3 Claims. (Cl. 189—36)



1. A taper pin comprising a bolt having a threaded portion and a smooth shank portion, a tapered sleeve mounted loosely on said shank for end float and lateral movement out of alignment with said bolt, and bushings on said bolt at opposite ends of said sleeve having spherical thrust bearing surfaces to limit said end float.

3,045,786
FORM SUPPORTING GIRDER FOR USE IN CONCRETE CONSTRUCTION
Henry A. de la Rambelje, Jersey City, N.J., assignor to Hico Corporation of America, New York, N.Y., a corporation of New York
Filed Mar. 23, 1960, Ser. No. 17,117
5 Claims. (Cl. 189—37)



1. An adjustable form-supporting girder for concrete construction comprising a box-like section and an I-beam section slidable lengthwise within the box-like section for adjustment of the length of the girder, locking means for holding an outer end surface of the flanges of the I-beam section pressed against an inner surface of the box-like section, at least one of said surfaces being relieved over a substantial central area so that engaging load transmitting areas of said surfaces are confined primarily to corner portions of the box-like section, thereby reducing bending stresses transversely of the box-like section, said locking means including a load-bearing clamping plate having a surface pressed against an inner surface of the box-like section to distribute stresses across said inner surface and said locking means further including a clamping bolt having a threaded engagement with said clamping plate.

3,045,787
STRIP MADE OF ELASTIC DEFORMABLE MATERIAL FOR CONNECTING TWO PARTS IN EDGE-TO-EDGE RELATION
William Spencer Attwood, St. Albans, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 8, 1959, Ser. No. 858,275
Claims priority, application Great Britain Feb. 14, 1959
2 Claims. (Cl. 189—78)



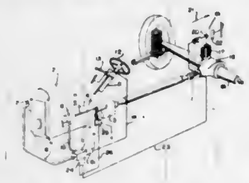
2. On a glazing strip means including a wedge-free body of longitudinally extending elastomeric material having one side undercut to form slits for reception of edges of a decorative molding and having dual pairs of lip portions each provided with laterally outwardly extending tapered free ends projecting integrally therefrom to define a pair of opposite longitudinally extending channels to receive adjoining edges of glass and sheet metal members, the improvement therewith which comprises a first assembly cord fitted specifically between one pair of lip portions defining one of the channels to receive one of the members subsequent to fitting of the body to the other of the members, said first cord being used specifically for spreading apart one of the dual pairs of lip portions to aid in insertion and fit of the one of the members into that one channel, a reinforcer lip means having a root end thereof integral directly with the body to form an extra groove in a location longitudinally adjacent to one lip portion defining that channel in which said first assembly cord is fitted, and an additional assembly cord longitudinally fitted into said extra groove and secondarily effective for simultaneous spreading of said lip means also in a direction coinciding with that of the spread of one of said lip portions by said first assembly cord, said lip portions in pairs directly engaging said members sealingly while said reinforcer lip means specifically engages only the outer tapered end of the lip portion spreadable by said first assembly cord, said reinforcer lip means being located specifically on a side of the wedge-free body opposite to the undercut for slits and pressing laterally against said one lip portion at the outer tapered end thereof to reinforce locking and sealing engagement of said one lip portion specifically against one of the members to fit in one of the channels of the wedge-free body.

3,045,788
BAYONET REEL
Carl Ingve Cederholm, P.O. Box 236, Bastrop, Tex.
Filed Feb. 10, 1959, Ser. No. 792,331
1 Claim. (Cl. 189—90)



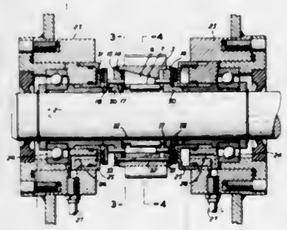
In a measuring tape reel having a body portion including spaced parallel side plates, ground support means comprising a downwardly opening sheath disposed on the outer surface of one of said side plates, said sheath including an outer wall portion disposed in spaced opposed relation to a surface portion of the plate on which it is disposed, a flat bayonet telescopically slidably carried within said sheath parallel to said plates, and means carried by said bayonet engageable with the opposed surface portion of said one side plate for releasably locking said bayonet in a position projecting outwardly of the periphery of said side plates and in a retracted position in which said bayonet is disposed within said sheath and the periphery of said side plates.

3,045,789
CLUTCH ACTUATING AND CONTROL ARRANGEMENT
Bruno E. A. H. Beeskow, Stuttgart-Bad Cannstatt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Feb. 24, 1958, Ser. No. 716,985
Claims priority, application Germany Feb. 28, 1957
12 Claims. (Cl. 192—3.5)



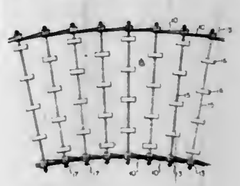
1. An arrangement for automatically controlling the re-engagement of a clutch in a motor vehicle having a transmission and shifting means therefor, comprising a pressure-responsive servo motor means operatively connected to said clutch for controlling the disengagement and engagement of said clutch, and control means operatively connected to said motor means to control energization thereof including first means so constructed and arranged as to control disengagement of said clutch by said motor means and to allow a relatively slow re-engagement of said clutch, means including the shifting means for said transmission of the vehicle for actuating said first means, second means so constructed and arranged as to provide a relatively rapid re-engagement of said clutch, and means responsive to a reaction moment on a part of the vehicle for actuating said second means when said part experiences a reaction moment.

3,045,790
MECHANICAL CLUTCHES
John E. Becker, R.R. 3, Darlington, Ontario, Canada
Filed Sept. 20, 1960, Ser. No. 57,352
5 Claims. (Cl. 192—38)



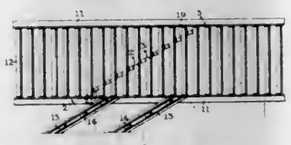
1. A mechanical clutch for transmission of power between a rotatable shaft and having a smooth cylindrical face and a rotatable element having a bore through which the shaft extends and comprising a plurality of wedges arranged in spaced apart relation and mounted for sliding movement within the bore and having their inclined faces extending lengthwise of the shaft, the wedges slidably bearing against the rotatable element and positioned in radial arrangement around the shaft, movement of the wedges in one direction bringing them closer to the shaft to engage the clutch and in the opposite direction away from the shaft to disengage the clutch, a plurality of cylindrical rollers having their axes parallel to the axis of the shaft and interposed between the shaft and the wedges and arranged to loosely roll upon the shaft when the clutch is disengaged and to be engaged by the wedges and jammed between the wedges and the shaft when the wedges are moved to engage the clutch, and means for moving the wedges in unison towards and away from the shafts, and wherein the means for moving the wedges in unison towards and away from the shaft is a pair of flanges freely carried upon the shaft in spaced apart relation and between which the wedges are slidably mounted, the flanges containing a plurality of orifices, each orifice being in alignment with the end of a wedge, a set of push pins slidably contained within the orifices in each flange and engaging the adjacent faces of the wedges and whereby pushing movement of one set of pins slides the wedges in one direction and pushing movement of the other set of pins slides the wedges in the opposite direction, and means for pushing either set of pins in unison.

3,045,791
FLEXIBLE ROLLER CONVEYOR
Henry S. Ayres, Franklin, La., assignor to Cabot Corporation, Boston, Mass., a corporation of Delaware
Filed July 20, 1959, Ser. No. 828,199
5 Claims. (Cl. 193—35)



1. A flexible conveyor of the roller type, comprising a series of identical side links each having a clip at one end and long and short slots spaced apart and located on the longitudinal axis of the link, and transverse roll-carrying rods connecting the side links in groups of three by passing simultaneously through the clip of one link, through the long slot of a second link and through the overlapping short slot of a third link.

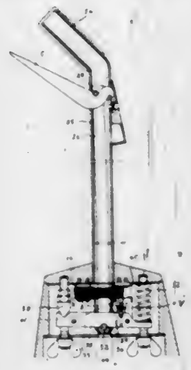
3,045,792
SWITCHING UNIT
Nelson P. Greller, 2800 Allendale Place NW., Washington, D.C.
Filed Aug. 12, 1958, Ser. No. 754,617
2 Claims. (Cl. 193—36)



1. Switching means, for use in conjunction with a conveyor of the type including a plurality of spaced, transverse, parallel, horizontal axis rollers, comprising in combination a support; a series of upright members projecting upward from said support, said series of members being elements of an imaginary upright surface extending diagonally of the conveyor, each member being aligned with an interval between successive rollers; and means to move said members between an upper position in which they project above the conveyor surface and a lower posi-

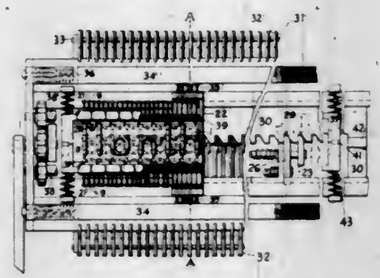
tion in which they are beneath said surface, said members in said upper position being effective to engage an edge surface of a conveyed article whereby said article is switched from said conveyor.

3,045,793
FORCE MEASURING DEVICE
Klaus Johannes Ylinen, Frejgatan 13, Stockholm, Sweden
Filed Apr. 11, 1960, Ser. No. 21,205
3 Claims. (Cl. 194—6)



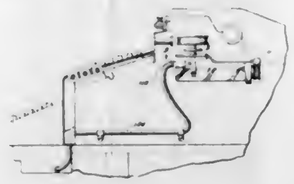
1. A force measuring device for measuring the hand-power of a person comprising an elongated housing, a movable handle at one end of said housing, parallel plates extending along said housing and connected to said handle for movement in response to said handle movement, a coin slot along said housing for receiving coins into the housing for travel between said plates toward the other end of said housing, cooperating holders at the other end of the housing for stopping the travel of an inserted coin and for providing an electrical connection through said coin for actuation of said device, one of said holders being movable in response to said plate movement whereby the movement of the connecting handle and plate in one direction will secure the coin in positive electrical connection and movement of the connecting handle and plate thereafter in the opposite direction will release the coin and return the holder to its initial cooperating stop position.

3,045,794
APPARATUS FOR ORGANIC TYPOGRAPHY
Merrill Lawrence Hawkins, Yorktown Heights, N.Y. (785 Locksley Road, R.D. 2, Peeksville, N.Y.)
Filed Jan. 22, 1960, Ser. No. 4,155
10 Claims. (Cl. 197—1)



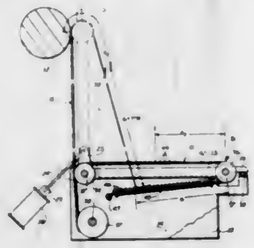
1. A font of types that reproduces the entire English alphabet with letters that occupy either single or double units of letter-spacing and no other, and with vowels treated as eye-focusers and consonants treated as eye-dispersers or directors or arresters.

3,045,795
TYPEWRITER INPUT COUPLER
Guy E. Morrison, Rolling Hills, and Charles R. Williams, Palos Verdes Estates, Calif., assignors, by mesne assignments, to General Instrument Corporation, Hawthorne, Calif., a corporation of New Jersey
Filed Oct. 28, 1958, Ser. No. 770,210
5 Claims. (Cl. 197—20)



1. In combination for operating the different keys in a typewriter in accordance with information recorded on a medium in a particular pattern wherein the different bits of information capable of being recorded in the medium have a first matrix coding relationship to one another, the first matrix coding relationship being in decimal-digital form, sensing means operative in accordance with the information recorded on the medium, relay means coupled to the sensing means to convert the operation of the sensing means into a corresponding operation of the relay means into partially a second matrix coding relationship different from the first matrix coding relationship and to obtain an operation of the relay means partially in the first coding relationship, said second matrix coding relationship being in binary-digital form, and control means individually coupled to the different typewriter keys and responsive to the operation of the relay means for converting the partial operation of the relay means in the first and second coding matrix relationships into activations of the control means in accordance with the operation of the relay means to obtain an activation of individual typewriter keys dependent upon the activation of the control means.

3,045,796
TYPEWRITING APPARATUS
Albert W. Scribner, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed July 14, 1961, Ser. No. 124,150
9 Claims. (Cl. 197—57)



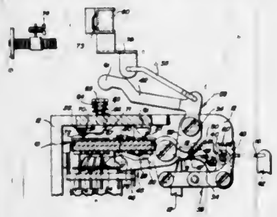
1. Typewriting apparatus comprising a flexible dimensionally stable belt having a plurality of type characters secured thereto along its long dimension, a first fixed support, yieldable means for securing one end of said belt to said first support, a second fixed support, said other end of said belt being secured to said second support, and means operative in response to the selection of a type character for selectively increasing the effective belt length between said supports whereby a selected type on said belt is positioned before a reference point.

3,045,797
TYPEWRITER IMPROVEMENT
Vance W. Weaver, New York, N.Y., assignor to Vance Weaver Composition, Inc., New York, N.Y., a corporation of New York
Filed Nov. 28, 1960, Ser. No. 72,159
15 Claims. (Cl. 197—81)



1. In a process for the production of bold-faced typing on a typewriter having a standard type face mounted in a conventional type basket, the improvement comprising typing a character, vertically displacing said type basket by approximately one hundredth of an inch in a regulated manner, and striking over said character with said type basket in said vertically displaced position.

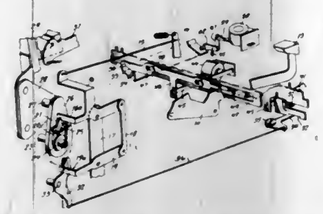
3,045,798
BANKING AND ESCAPEMENT APPARATUS FOR ELECTRIC TYPEWRITERS OR THE LIKE
Harry L. Lambert, West Hartford, and Paul F. Page, Newington, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed July 15, 1960, Ser. No. 43,176
16 Claims. (Cl. 197—84)



1. In a typewriter having a frame and a carriage movably mounted on said frame, an escapement mechanism for controlling the letter feed movements of said carriage, said escapement mechanism comprising a wheel rotatably mounted on said frame and interconnected with said carriage, a normally stationary abutment member mounted on said frame and adjacent said wheel, and a series of stops each movably mounted on said wheel and being movable to set and unset positions with respect to said abutment member, and means to move said stops between set and unset positions during a banking operation, one group of said stops in said series having an effective path of travel which is different than that for the remaining stops, said wheel and all of said stops effectively defining an escapement wheel having a large number of relatively finely spaced teeth and said wheel and said group of said stops effectively defining an escapement wheel having a small number of relatively coarsely spaced teeth that correspond to the banking and tabular positions possible for the said carriage.

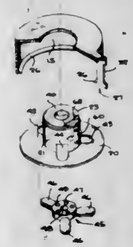
3,045,799
KEYBOARD INTERLOCK CONTROL MEANS
Raymond E. Seymour, Norwalk, and Edward T. Haraske, Easton, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 25, 1960, Ser. No. 51,980
9 Claims. (Cl. 197—107)

1. In a keyboard controlled data recording machine of the class described having separate groups of keys for recording data belonging in separate data categories, the keys of at least one of said groups being operable for recording data in more than one data category, means for selectively locking up said separate groups of keys, case shaft means operable for selecting one or the other category of data associated with said one group of keys, and



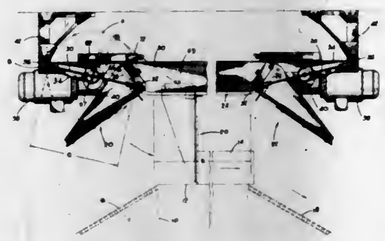
means operated by said case shift means for controlling the lockup means for said one group of keys to permit recording by said one group of keys of data in only one data category.

3,045,800
UNIVERSAL TYPEWRITER SPOOL
Walter David Landgraf, 4808 W. 96th Place, Oak Lawn, Ill.
Filed July 1, 1960, Ser. No. 40,249
13 Claims. (Cl. 197—151)



1. A ribbon cartridge, comprising a pair of cups, a bridge joining said cups, each of said cups including a base wall and a cylindrical wall extending from and integral with said base wall, said cylindrical walls of said cups including opposing axial slots for ingress and egress of a ribbon, a spool for each of said cups, each of said spools including a flange acting as a cover for said cup, and means for securing said spools and flanges rotationally with respect to said cups, said bridge including at least two walls between which said ribbon extends in passing between said axial slots, and adapters arranged to be secured to said flanges, said flanges including recesses mated with said adapters.

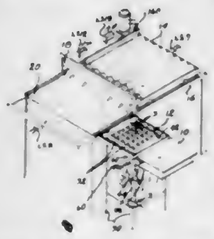
3,045,801
TRANSFER MECHANISM
Warren E. Graybeal, Villa Park, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Mar. 30, 1960, Ser. No. 18,614
18 Claims. (Cl. 198—24)



1. Apparatus for transferring an object to and from a moving conveyer member comprising; at least one paddle member for effecting said transfer, means for moving

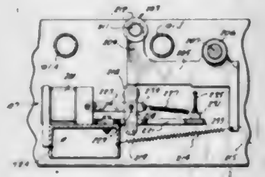
said paddle member transversely of said moving conveyer member to engage said object, said last mentioned means including drive means generating a unidirectional rotary motion, means for converting the motion of said drive means into reciprocating linear motion, means coupling said reciprocatory motion to said paddle member whereby said paddle member moves transversely of said conveyor member from a first position of zero velocity and maximum acceleration through a second position of zero acceleration and maximum velocity to a third position of zero velocity and maximum acceleration in the opposite direction, said paddle member being positioned and adapted to strike said object in the vicinity of said second position.

3,045,802
METHOD AND APPARATUS FOR PALLETIZING
Frank H. Miller, Jr., Louisville, Ky., assignor to Miller Engineering Corporation, Louisville, Ky.
Filed Feb. 4, 1959, Ser. No. 791,166
9 Claims. (Cl. 198—33)



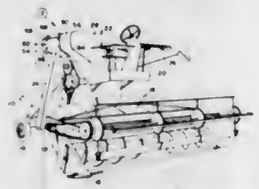
1. In a turning station for a palletizing apparatus, articles being delivered to one side of said turning station in a predetermined oriented position, a plurality of continuously driven segmented rolls in said turning station to advance articles from the said one side to the other side thereof, a grid nesting in said segmented rolls and normally located below the tops of said rolls, a shaft attached to the center of the grid and extending downwardly therefrom, a hydraulic motor connected to the bottom of said shaft energizable for lifting the grid to a position above the rolls, a pinion on said shaft, a rack positioned to mesh with the pinion when the grid is elevated and to be disengaged from the pinion when the grid is lowered, and a plurality of reciprocating hydraulic motors connected in tandem between said rack and a fixed point, said tandem arranged motors being energizable for rotating the pinion and shaft and, therefore, said grid 90° in either direction or 180° in one direction.

3,045,803
APPARATUS FOR SHORT TERM ACCUMULATION OF CONVEYED ARTICLES
John K. Bruce, La Verne, Calif.
(966 S. Fair Oaks, Pasadena, Calif.)
Filed Oct. 20, 1958, Ser. No. 768,171
9 Claims. (Cl. 198—40)



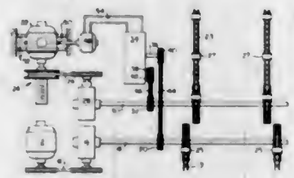
1. Apparatus for stopping the progress of articles on a conveyor comprising a stop bar, a journal mount, a stop bar support arm held by the journal mount so that the support arm extends horizontally on each side of the journal, the mass of the stop bar and the support arm being distributed with respect to the journal so that the stop bar swings freely into the path of articles on the conveyor, a check roller, a pivoted lever adapted to hold the check roller against the support arm so that the roller holds the support arm and the stop bar in the path of conveyed articles against the pressure thereof, and means for pivoting the lever to remove the check roller from holding position to enable the stopped article to swing the stop bar from the path of the article under the urging of the conveyor.

3,045,804
MATERIAL-HANDLING APPARATUS
Kenneth R. Peterson, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Aug. 10, 1959, Ser. No. 832,635
6 Claims. (Cl. 198—64)
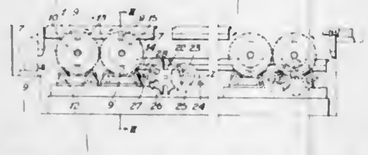


6. A grain tank for harvesters and the like, comprising: a bottom and opposite upright side walls rising from said bottom, one of said side walls being shaped to provide a laterally outwardly and downwardly opening pocket and including generally coplanar portions respectively ahead of and behind said pocket and a portion laterally inwardly offset from the plane of said coplanar portions and said bottom having a notch in vertical register with the pocket, said offset portion having an opening therethrough leading to the interior of the tank; a conveyor extending upwardly into the pocket via said notch and having an upper terminal end within the pocket and including discharge means for delivering to the interior of the tank through said opening, said conveyor end being so laterally dimensioned as to lie inwardly of said plane; and closure means exteriorly of said conveyor end and spanning the pocket and lying generally in said plane to cover said conveyor end.

3,045,805
TRANSFER SYNCHRONIZER
Stanley C. Shappell, West Boxford, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed July 22, 1958, Ser. No. 750,141
7 Claims. (Cl. 198—76)



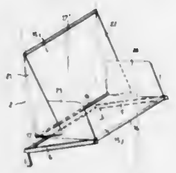
1. Apparatus for synchronizing the operation of two conveyors to permit the transfer of articles from cradles of the first of said two conveyors to the cradles of the second of said two conveyors, comprising means for driving said first conveyor at a substantially constant speed, means for driving said second conveyor, a control system operative on said driving means for said second conveyor to vary the speed of said second conveyor, said control system including a differential gear system having a first and a second input gear, rotational speed-changing means connecting said first conveyor driving means to said first input gear, rotational speed-changing means connecting said second conveyor driving means to said second input gear, said speed-changing means providing equal rotational speeds of said first and said second input gears, an electromechanical system responsive to differences in speed of rotation of said first and second input gears for alternately accelerating and decelerating said second conveyor in decreasing increments about the speed of said first conveyor until the speed of said second conveyor is matched to the speed of said first conveyor and a cradle of said second conveyor is aligned with a cradle of said first conveyor at the point of transfer of articles.

3,045,806
EQUIPMENT FOR MOVING FROM ONE LEVEL TO ANOTHER THE UNITS OF AUTOMATIC CONVEYOR TABLES
André Simon, Temploux, Belgium, assignor to Atelliers Heuze, Malevez et Simon Reunis, Societe Anonyme, Auvelais, Belgium, a Belgian company
Filed Oct. 16, 1959, Ser. No. 846,853
Claims priority, application Belgium Dec. 15, 1958
8 Claims. (Cl. 198—85)



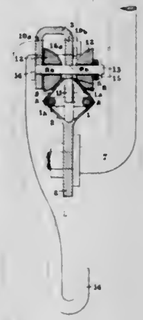
1. Equipment for moving feed table units of a substantially horizontal automatic conveyor from one level to another, comprising two opposed sets of cranks at each end of the conveyor, each set of cranks including two discs disposed at each side of the corresponding end of the conveyor, the discs of each set being coupled one to the other so as to rotate in opposite directions at the same speed in a substantially vertical plane parallel to the axis of the conveyor, the rotational movement of the discs being synchronized, each disc being equipped with a support crank pin mounted to slide axially between retracted and extended position in the disc parallel to the axis of rotation, a driving mechanism causing one crank pin on each disc to move axially into retracted position in the disc as it rotates so as to give free passage to a table unit supported by the other said crank pins, and to bring said first-mentioned crank pins into extended position after the passage of the table unit upon further rotation of said discs, and a driving mechanism transmitting to the crank sets working cycles of successive half turns.

3,045,807
CONVEYOR SYSTEM
Jean Fioravanti, 40 Ave. du Parc Montsouris, Paris, France
Filed July 5, 1960, Ser. No. 40,592
Claims priority, application France July 3, 1959
2 Claims. (Cl. 198—153)



1. Conveyor apparatus comprising endless drive means displaceable along a substantially vertical path of travel, a plurality of supporting means articulately mounted on and spaced along the drive means, a plurality of carrier members carried by the supporting means and each compising at least two rigid elements, means pivotally mounting a first of the rigid elements about one axis only on the drive means for swinging movement towards and from the path of travel thereof and a second rigid element on the supporting means, means pivotally connecting the first and second rigid elements, one of said mounting means being higher than the other, the supporting means including means movably supporting at least one element of each carrier member for movement between two positions in the first of which said rigid elements form a relatively smaller angle to hold the load and a second position in which the rigid elements form a substantially larger angle to dump said load, at least that rigid element of each said carrier member having the lower mounting means being provided with at least one side flange projecting from one side of such rigid element towards the other rigid element for assisting in retaining said load, and means adjacent said path operatively engageable by said supporting means to control movement thereof between said two positions in response to movement of the supporting means along the path.

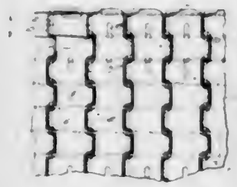
3,045,808
CHAIN CONVEYOR
Roger Blanc, 40 Rue des Prairies, Paris, France
Filed Feb. 25, 1957, Ser. No. 642,163
Claims priority, application France Feb. 27, 1956
7 Claims. (Cl. 198—177)



1. A chain conveyor comprising an endless calibrated chain of constant dimensions, consisting of two series of successive interengaged links of round wire which lie alternately in planes at right angles to each other; a fixed endless tubular sheath in which said chain is movable, said sheath forming an endless path along which said chain moves, said path being substantially horizontal, said sheath having in cross section a regular polygonal configuration with two inclined upper faces and with an even number of sides and corners and two diametral corners of said corners being located in a horizontal plane, and a third corner being located in a vertical plane of symmetry and below said first mentioned two corners to act respectively as guide means for one of said series of links in order to maintain them in horizontal position, and for the other series of chain links in order to maintain the same in vertical position, said sheath having a slot extending diametrically opposite said third corner in said plane of symmetry and along the entire length of said sheath; means for driving said chain in said sheath; at least one load supporting trolley adapted to roll straddle-wise on said two upper inclined faces of said sheath on either side of said slot; a depending lug rigid with said trolley and extending through said slot and engaging any one of said transverse links so as to be carried along by said chain without being attached there-

to, whereby said trolley may be either drivingly connected to said chain by placing said trolley on said sheath, or disconnected therefrom by lifting said trolley.

3,045,809
COVER PLATE FOR FLAT WIRE CONVEYOR BELT
Alfred R. Bechtel, Jr., Portsmouth, R.I., assignor to Ashworth Bros. Inc., a corporation of Massachusetts
Filed July 7, 1959, Ser. No. 825,495
1 Claim. (Cl. 198—195)



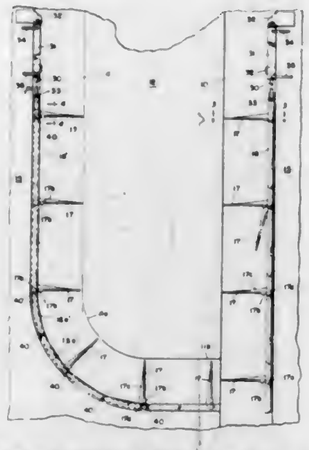
A conveyor belt comprising flat wire links, each of undulating form having leading and trailing edges with a plurality of crests at one edge and an equal plurality of recesses in the other edge and with the crests at one edge of the link extending into the recesses at the other edge of the next link, pintle rods connecting the leading edge of one link to the trailing end of the next link, each link having a plurality of apertures between its upper and lower edges intermediate said leading and trailing edges, a planar cover plate for each link comprising a substantially flat central portion extending widthwise of the belt from one edge to the opposite edge of each link and located substantially midway between its leading and trailing edge, flat tabs in the plane of the plate extending from the ends thereof at the locations of the crests of the link to cover said pintle rods and each of a shape to generally follow the shape of the crest and fingers on said plate passing through said apertures to hold each plate to its wire link.

3,045,810
VIBRATING CONVEYOR AND ASSEMBLY MEANS THEREFOR
Arthur D. Holt, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Galion Manufacturing Company, a corporation of Ohio
Filed July 19, 1960, Ser. No. 43,953
8 Claims. (Cl. 198—220)



1. A vibrating conveyor comprising a conveying deck adapted to convey materials by a vibratory movement of the conveying deck, a flexible member supporting the conveying deck for vibration thereof, a pair of ears disposed one at each side of the conveying deck and depending below the underside of the deck, a pad on the underside of the conveying deck disposed between the ears, said pad abutting one side of the flexible member, a clamp bar abutting the other side of the flexible member opposite the pad to secure the flexible member to the conveying deck between the pad and the clamp bar, and a locking pin secured to the clamp bar and extending through the ears to secure the clamp bar to the conveying deck and securing the clamp bar against the flexible member and the pad.

3,045,811
BARN GUTTER CLEANER
Harvey M. Wenger, Terre Hill, Pa., assignor to Terre Hill Machine Company, Denver, Pa., a corporation of Pennsylvania
Filed Aug. 12, 1959, Ser. No. 833,333
7 Claims. (Cl. 198—224)



1. A device for cleaning barn gutters or the like comprising a reciprocable elongated member adapted to extend lengthwise of a refuse-collecting gutter, a plurality of runner members secured to said elongated member at spaced locations, said runner members being adapted to engage the bottom of the gutter for supporting said elongated member at an elevation above the bottom of the gutter, a vertical pivot interconnecting each of said runner members and said elongated member, a pivoted paddle hingedly mounted on each said vertical pivot and adapted to engage the bottom of the gutter at a location intermediate the ends of said paddle, and structure on one of said members engageable with said paddles to maintain said paddles in a position substantially perpendicular to said elongated member during the forward stroke thereof to advance the refuse along the gutter and to permit said paddles to pivot to a predetermined folded position adjacent said elongated member during the reverse stroke thereof.

3,045,812
CONTAINERS FOR SAFETY RAZORS
Harry Beckham Randolph, 16 Pall Mall, London SW. 1, England
Filed June 25, 1959, Ser. No. 822,828
1 Claim. (Cl. 206—16)



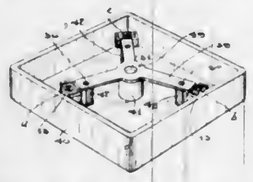
A container for a safety razor comprising a flat base, an upwardly extending plinth on said base for supporting the head of a razor and having therein a space for housing a razor blade dispenser, a pair of claws on said plinth defining a seating into which the head of a razor may be slid to support the razor with its handle extending perpendicular to said base, a stop at one end of said seating ensuring that the razor is inserted into and withdrawn from the plinth from only one side thereof, and a cover therefor, said cover enclosing said upwardly projecting plinth and said base having a rim of oval shape engaged by the rim of said cover, the oval shape of the cover rim having a major axis of greater length than the corresponding axis of the base rim, the minor axes of the base and the cover rims being of equal length, said base having opposite recesses and said cover having opposite tongues, both said tongues and recesses being located on the minor axes of the base and cover rims, said base and cover being formed of incompressible material, but the rim of said cover being flexible to permit the said tongues to engage or disengage said recesses by flexure of the cover rim whereby to lengthen or shorten the major axis of its oval shape.

3,045,813
ASH TRAY
Forest L. Middleton, Grand Rapids, Mich., assignor to Lescoa, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Mar. 30, 1960, Ser. No. 18,604
1 Claim. (Cl. 206—19.5)



An ash tray, including a removable ash box, for use in automobiles and the like, comprising: a metal panel member mounted within the automobile; flanges extending from said panel member in a direction opposite from the outer surface thereof and lying generally in parallel planes normal thereto; said flanges having elongated beads formed therein lying generally parallel to said surface and lying inwardly of said planes of their respective flanges; an ash box; said ash box having an inwardly indented elongated and downwardly opening channel formed on each side thereof, extending from the bottom thereof a substantial distance upwardly and slidably receiving said beads whereby said ash box may be slidably removed from said panel member; and means at the lower end of said metal panel for pivotally mounting said panel in an automobile.

3,045,814
PACKAGING OF A MAGNETIC HEAD ASSEMBLY
Yasushi Hoshino, 462 1-chome, Tamagawa-Okusawacho, Setagaya-ku, Tokyo, Japan
Filed Apr. 2, 1958, Ser. No. 725,837
Claims priority, application Japan Apr. 6, 1957
1 Claim. (Cl. 206—46)



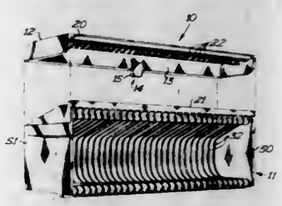
For a magnetic sound recording and reproducing apparatus comprising a turntable provided with a plurality of sound recording and reproducing heads arranged for the rotation and longitudinal movement below a magnetic sound sheet so that the magnetic sound record sheet can be scanned by the heads on the turntable: apparatus comprising an attachment member having the same diameter as that of the turntable and including a central boss and a plurality of arms extending radially from said central boss and arranged in equally spaced relation, each arm including a downwardly extending end part, a head case secured to the end part of each arm, head units contained and fixed tightly in the head cases, each head unit including a coil, core and heads, and further including a cover, and a storage box including a central post and a plurality of further posts positioned around the central post, said posts being located at positions corresponding to those of said central boss and the arms of said attachment member, said attachment member being accommodated in the storage box.

3,045,815
SURGEON'S GOWN AND GLOVE ASSEMBLY AND METHOD OF STERILIZING SAME
William H. Abildgaard, San Jose, Calif., assignor to Plastomeric Products Corporation, San Jose, Calif., a corporation of California
Filed Aug. 24, 1959, Ser. No. 835,496
3 Claims. (Cl. 206—63.2)



3. A sterilized surgeon's gown and glove package which can be donned by a surgeon without help, said package comprising a sterilized gown having respective sleeve portions, respective sterilized gloves at the ends of said sleeve portions, said gown being folded inside out as a bundle to place said gloves in the interior of the bundle, and a sterilized wrapping encompassing said bundle to complete the sterilized package.

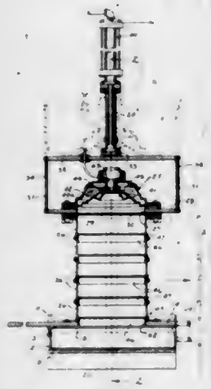
3,045,816
PHOTOGRAPHIC SLIDE TRAY
William R. King, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 3, 1961, Ser. No. 121,713
6 Claims. (Cl. 206—73)



1. A projector slide tray comprising; an elongated rectangular shaped box having an open face to facilitate movement of photographic slides in and out of the slide tray, a solid bottom wall member having a flat interior surface to support the bottom edge of the slides, a back wall member opposite said open face, an extending shoulder formed on the lower interior side of said back wall member to space the back edge of the slides from the interior surface of said back wall member, a substantially open top face, and a small top wall member located diagonally opposite the edge joining said bottom and said

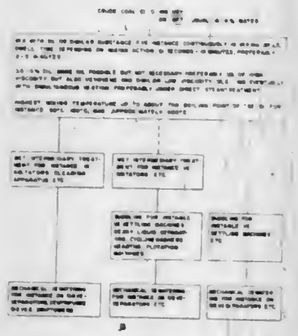
back wall members, the slide tray being constructed and arranged to facilitate editing of the slides such that the lifting of a slide until the bottom edge thereof clears said shoulder allows said slide to be moved toward said back wall member until the upper edge of said slide clears said top wall member and said slide may then be removed from said slide tray out of the open top face thereof.

3,045,817
METHOD AND APPARATUS FOR SIFTING
Charles W. Ward, 1014 S. 23rd St., Milwaukee, Wis.
Filed Nov. 4, 1959, Ser. No. 850,865
7 Claims. (Cl. 209—21)



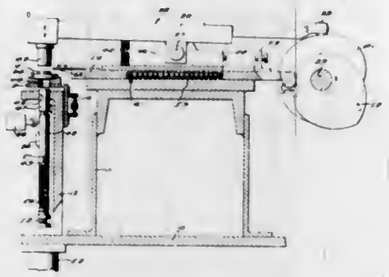
1. In a sifting apparatus the combination comprising a gas-containing chamber; a sifting screen placed across the chamber; an electrically responsive speaker providing a closure for one end of said chamber and including a vibratory diaphragm arranged to impart an oscillating motion to the gaseous column in said chamber; and an electrical oscillator connected to the speaker for imparting oscillations of desired frequency to said vibratory diaphragm.

3,045,818
PROCESS OF PREPARING SMALLS AND FINES OF COAL
Walter Müschenborn, 39 Elfriedestrasse, Essen, Germany, and Erich Nötzold, 29 Ehrenaue, Essen-Haarzopf, Germany
Filed Sept. 24, 1959, Ser. No. 842,027
4 Claims. (Cl. 209—49)



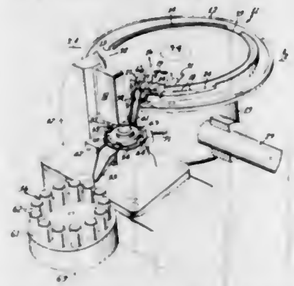
1. In the production of small coals and fines the method which comprises thoroughly mixing dry-to-moist fine grained raw coal having not more than about 14% of moisture content and having a grain size up to about 10 mm. with an amount of oil effective to render the coal particles hydrophobic and to agglomerate them, and thereafter subjecting the thus treated fine coal to mechanical washing.

3,045,819
ARTICLE ADVANCING AND EJECTING APPARATUS
Harry W. Heidergott, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 18, 1959, Ser. No. 821,150
14 Claims. (Cl. 209—74)



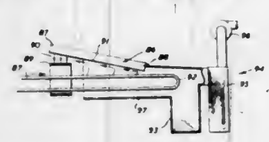
1. In a conveyor system, a frame, an endless chain having a plurality of carriers attached thereto for movement along said frame, each of said carriers having a nest and an opening extending from said nest through the carrier, a plunger mounted on said frame for movement through an aligned opening in a carrier, means for indexing said chain to advance the carriers to move each opening into alignment with said plunger, means for reciprocating the plunger to move through each opening to engage and lift an article from each nest, a slide mounted for movement along said frame to engage and remove an article from said plunger in the elevated position, cam means rendered effective upon said plunger moving through an opening in a carrier for operating said slide, and a rack and pinion means for alternately operating said indexing means and said cam means.

3,045,820
FEEDING AND GAGING APPARATUS
James P. Philbin, East Northport, and William B. Finnegan, Wantagh, N.Y., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,684
14 Claims. (Cl. 209—82)



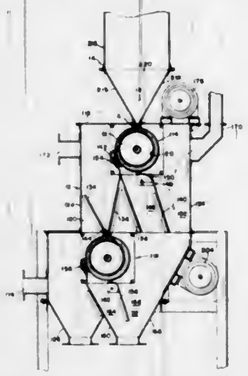
1. Apparatus for gaging small parts which comprises a vibrating feeder for receiving small parts, said feeder having a trough for feeding said parts in succession to a head section thereof, detection means for detecting a part at a predetermined point along said head section, apertures in said head section spaced along the feeding path to the detection point, suction means responsive to said detection means for producing suction at said apertures to hold parts thereat from further feed, means for feeding a detected part to a stationary platform, intermittent moving means for moving a part along said platform to a gaging point, gaging means positioned to gage a part at said gaging point, and timing means for controlling said suction means and intermittent moving means to remove said suction after the gaging of a part and move a succeeding detected part to said gaging point.

3,045,821
MAGNETIC CONCENTRATION METHOD
Daniel Alfred Cavanagh, 217 Carmichael Ave., Toronto, Ontario, Canada
Filed Jan. 5, 1953, Ser. No. 329,657
3 Claims. (Cl. 209—214)



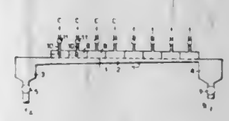
1. The method of separating magnetic material from non-magnetic material, comprising: preparing said material to substantially optimum size; moving a magnetic field along a predetermined path of travel; solely with said moving magnetic field, conveying the prepared magnetic material including non-magnetic particles clinging thereto in a direction determined by the movement of said field; moving a fluid past said particles while conveyed, in a different direction from the direction of conveyance of the magnetic particles for said field; feeding said prepared material along a path within and following the motion of said fluid and directed to intersect at least a portion of said travelling magnetic field but spaced from a region of maximum field intensity thereof a distance controlling the efficiency of pickup of magnetic material by said travelling field from said feeding path; and feeding non-magnetic material remaining on said feeding path to a point beyond the influence of said magnetic field.

3,045,822
MAGNETIC SEPARATOR
Patrick E. Cavanagh, Oakville, Ontario, Canada, assignor to Research-Cottrell, Inc., Bridgewater, N.J., a corporation of New Jersey
Filed Aug. 16, 1957, Ser. No. 678,714
3 Claims. (Cl. 209—219)



1. A magnetic separator comprising a first drum having a non-magnetic cylindrical deck portion, means axially mounting said drum for rotation in a generally horizontal plane, means for rotating said drum about the axial mounting, a second cylindrical drum having a diameter less than the diameter of the said first drum, a plurality of permanent magnets secured in an axial array to the outer surface of said second cylindrical drum and extending across the cylindrical surface thereof, each of said magnets having a generally U-shape in cross-section and said magnets being spaced one from the other a distance substantially equal to the spacing between the U-shaped legs, means for eccentrically mounting said second cylindrical drum for rotation within said first cylindrical drum, means for rotating said second cylindrical drum in a direction opposite to the direction of rotation of said first cylindrical drum, means for directing particulate material including magnetic susceptible particles to the outer surface of said first cylindrical drum at a point adjacent the zone of strongest magnetic field created by said permanent magnets, said particle directing means including a substantially V-shaped hopper adapted to receive particulate material, a quadrangular opening at the lower end of the hopper and means positioning said quadrangular opening vertically above the surface of said drum at a distance about three times the diameter of the largest particle fed to said hopper, means for collecting magnetic susceptible particles adjacent the zone where the attractive force of the magnetic field is overcome by centrifugal force and means adjacent said collection zone for directing a stream of pressure fluid in a direction opposite to the direction of rotation of said first cylindrical drum.

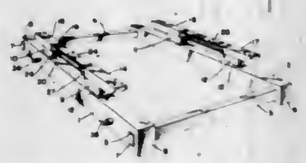
3,045,823
PROCESS AND APPARATUS FOR SEPARATING A MIXTURE OF PARTICLES ACCORDING TO SIZE
Freerk J. Fontein, Heerlen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Sept. 2, 1958, Ser. No. 758,400
Claims priority, application Netherlands Sept. 4, 1957
8 Claims. (Cl. 209—273)



1. A process of separating a mixture of particles according to size which comprises the steps of: establishing at a feeding position a layer formation flow of particles and a suspending liquid and supporting one surface thereof; interrupting the support of the one surface of said layer formation flow for a fixed distance measured in the direction of flow; blocking the flow of an incremental layer having a thickness substantially less than said fixed distance of support interruption from the one surface of the unsupported layer formation flow so that the particles in the blocked incremental layer of a size less than twice the thickness of the incremental layer together with a substantial portion of the suspending liquid in said incremental layer will be separated from the layer formation flow; supporting the one surface of the remainder of the layer formation flow a second fixed distance measured in the direction of flow; successively repeating the steps of interrupting the support, blocking the flow of an incremental layer, and supporting the remainder of said layer formation flow between said feeding position and a discharge position throughout a smooth path generally conforming to a surface generated by moving a line parallel to itself so that a given point on the line moves in a plane perpendicular to the moving line while maintaining a predetermined minimum velocity gradient in said layer formation flow between said feeding position and said discharge position confining the incremental layers and associated liquid separated from said layer formation flow at a plurality of positions throughout said path, maintaining pressures in the layer and in the sepa-

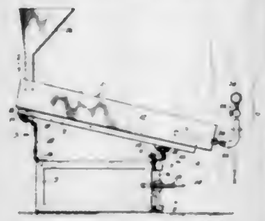
rated incremental layers and associated liquid differing from the atmospheric pressure and differing in the layer on the one side and the incremental layers and associated liquid at the other side and controlling in at least one position along said path said last differences by controlling at least one of the separated, emanating volumes of the said layer.

3,045,824
BASE FRAME FOR VIBRATING SCREENING APPARATUS
Walter J. Parks, Cleveland, Ohio, assignor to The W. S. Tyler Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 20, 1959, Ser. No. 854,420
7 Claims. (Cl. 209—412)



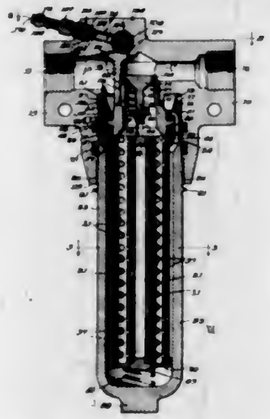
1. In a vibrating screening apparatus a base frame combining the characteristics of maximum strength and stiffness and minimum weight and including a pair of laterally spaced tubular side framing members rigidly interconnected by means of tubular cross-members, a pair of rigid upright pedestals rigidly mounted on each side framing member with a substantially unobstructed area being defined therebetween, each pedestal on one of the side framing members having a free end and being disposed in generally opposed relationship to the corresponding pedestal on the other, a platform provided on the free end of each pedestal in asymmetrical relationship to the longitudinal axis of the pedestal with each platform lying in substantially co-planar relationship with the others and being adapted to have supported thereon a mounting member for a vibrating screen body, and a relatively short rigid bearing support beam removably rigidly mounted between the pair of pedestals on each framing member.

3,045,825
DRY ORE SORTER
Alexander S. Watson, P.O. Box 34, Dunham, Quebec, Canada
Filed Oct. 21, 1960, Ser. No. 64,179
1 Claim. (Cl. 209—471)



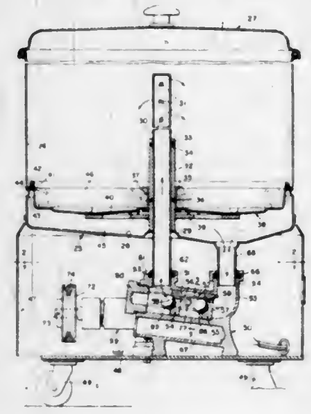
An ore sorter comprising an inclined trough having an upper feed end and a lower discharge end, a support assembly for said discharge end of said trough including a vertically arranged shaft, a crank on said shaft and having an eccentrically arranged socket, a crank pin on said trough and extending into said socket and means for driving said shaft to impart horizontal rotary movement to said discharge end of said trough, and a support assembly for said feed end of said trough comprising a supporting frame, an arm having one end hinged to said frame about a substantially horizontal axis, a pivot block hingedly carried by the other end of said arm about a substantially horizontal axis, a vertically disposed pivot pin connecting said trough and block and permitting limited oscillating movement of said feed end of said trough, and an air supply pipe extending into the lower end of said trough and having an outlet directed toward the upper end of said trough, said pipe being spaced above the floor of said trough.

3,045,826
FILTER DEVICE
Herbert H. Howard, Los Angeles, and Paul A. Smith, Tarzana, Calif., assignors to Permanent Filter Corporation, Los Angeles, Calif., a corporation of California
Filed July 28, 1958, Ser. No. 751,407
5 Claims. (Cl. 210—90)



1. In a filtering apparatus, the combination of a filter casing, an inlet port and chamber in the filter casing, an outlet port and chamber in the filter casing, a partition in the casing separating said inlet chamber from said outlet chamber so as to provide isolation therebetween, a cluster of hollow filter elements, means attaching said cluster to the casing and including an inlet passage communicating between the inlet chamber and the exterior of the filter elements in said cluster and an outlet passage communicating between the outlet chamber and the interior of the filter elements and a sealed enclosure surrounding said cluster, whereby a fluid path is formed between the inlet chamber and the outlet chamber through the filter elements, a valve disposed in the outlet passage, means for actuating the valve to close the outlet passage when the pressure differential between the inlet chamber and the outlet chamber is greater than a preselected magnitude which indicates clogging of the filter elements, a transverse passage formed in the casing, means forming a first communicating passage extending from the inlet chamber and opening into the transverse passage, means forming a second communicating passage extending from the outlet chamber and opening into the transverse passage at a point transversely displaced from said first communicating passage opening, a first piston member disposed in the transverse passage so as to be disposed intermediate between the first communicating passage opening and the second communicating passage opening, means for normally urging the first piston member in the direction of the first communicating passage opening, a second piston member disposed in the transverse passage so that the first communicating passage opening is intermediate between the first and second piston members, said second piston member having an indicator portion extending externally of the casing, locking means for normally holding the second piston member in a position adjacent the first communicating passage opening, release means operable upon a preselected magnitude of movement of the first piston member toward the second communicating passage opening in response to the pressure differential existing between the inlet chamber and outlet chamber resulting from clogging of the filter elements to release said locking means so as to cause the second piston member to move to a position remote from said first communicating passage opening in response to the inlet chamber pressure, and means sealing the first and second piston members in the transverse passage.

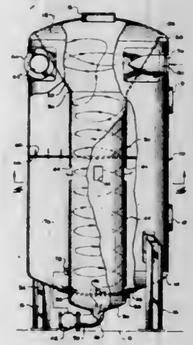
3,045,827
BATCH TYPE FILTER SYSTEM AND VALVE FOR USE THEREWITH
Lewis M. Hough, Gastonia, N.C., assignor to Wix Corporation, Gastonia, N.C., a corporation of North Carolina
Filed Oct. 6, 1958, Ser. No. 765,480
9 Claims. (Cl. 210—110)



3. A self-contained and portable filtering unit, comprising a movable base, a tank supported on said base, a filter assembly received in said tank in the lower portion thereof, a liquid pump and reversible drive means therefor mounted on said base below said tank, a valve unit mounted on said base below said tank, a liquid conveying line extending between said pump and said valve unit and a second liquid conveying line connected to said pump and extending exteriorly of the base, said valve unit including a pair of check valves disposed on opposite sides of the point of connection of the first liquid conveying line to the valve unit and having inlet and discharge ports beyond the respective check valves, said discharge port being connected to said tank for discharging liquid thereinto above said filter unit, and said discharge port being connected to the tank below said filter unit, said check valves being so oriented as to open alternately, dependent upon the direction of flow imparted to the circulating liquid by said pump and its associated drive means.

3,045,828
SAND EXTRACTOR
George W. Hume, 5674 Cherry Ave., Long Beach 5, Calif.
Filed Nov. 16, 1959, Ser. No. 853,115
3 Claims. (Cl. 210—112)

1. An improved apparatus for separating particles of solid material of various sizes and weights from a liquid, comprising: an outer vertical cylindrical shell that includes a bottom; a top closing the upper end of said shell; an inner shell longitudinally disposed in said outer shell, said inner shell including an upper frusto-conical portion that converges downwardly a substantial distance from the interior surface of said top, and a cylindrical portion that extends downwardly from said frusto-conical portion to pass through an opening in said bottom and terminate in a closed end having a discharge opening formed therein, said cylindrical portion having a transverse cross section that is substantially smaller than the transverse cross section of said upper frusto-conical portion, said cylindrical portion having a plurality of first ports formed therein intermediate said top and bottom, and a plurality of second ports that are partially defined by lower edges of no greater elevation than the top surface of said bottom; means for sealingly connecting said cylindrical portion to said bottom; a horizontal liquid inlet line extending through the upper portion of said outer shell to terminate in an opening in said frusto-conical portion tangential to one quadrant thereof, with said liquid containing said suspended particles when discharged through said pipe into said frusto-conical portion having a vortex motion imparted thereto by which said particles of greatest weight move outwardly by centrifugal force towards the interior surface of said frusto-conical shell, said liquid by gravity flowing downwardly in said cylindrical portion towards said closed end at a substantially greater downward velocity than that of said liquid when in said frusto-conical portion, with said vortex motion of said liquid decreasing in said cylindrical portion as said



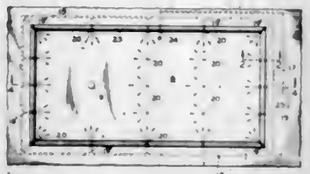
liquid flows downwardly therein due to frictional resistance offered by said cylindrical portion, said downwardly flowing liquid discharging from said first ports, but said particles due to the increased rate of downward flow of said liquid in said cylindrical portion and the decrease in vortex motion of said downwardly flowing liquid continuing to travel downwardly past said first ports to settle on the upper surface of said closed end, which liquid discharges through said first ports to enter an annulus-shaped chamber defined between said outer shell and inner shell; a horizontal ring-shaped baffle extending between said cylindrical portion and said outer shell above said first ports, said baffle having a plurality of openings formed therein; a normally closed valve in comunication with said discharge opening; and a liquid outlet line normal to said inlet line that is in communication with said chamber above said baffle and through which liquid discharges in a direction opposite that in which it tends to rotate in said chamber, said baffle by friction tending to remove any rotary motion said liquid may have as it flows upwardly through said openings, said second ports being of sufficiently small cross section that liquid at a substantial velocity flows therethrough to carry foreign material therewith deposited on said bottom cap into said cylindrical portion of said inner shell to discharge therefrom with the balance of said settled out particles when said valve is placed in an open position.

3,045,829

CLEANING AND AERATING CIRCULATORY SYSTEM FOR SWIMMING POOLS

Frank M. Rule, 5780 N. Federal Highway, and John L. Schmeller, 4515 Ravenswood Road, both of Fort Lauderdale, Fla.

Filed Mar. 17, 1961, Ser. No. 96,598
4 Claims. (Cl. 210—169)



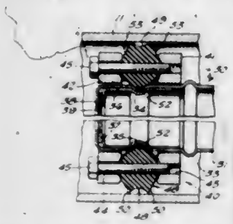
1. In a swimming pool for use with a water circulating system, said pool including flat side walls and a bottom wall, said bottom wall including an intermediate sump, said sump including a pool outlet in the floor thereof, portions of said bottom wall surrounding said sump progressively sloping toward said sump, said side walls merging into said bottom wall in a curved cove portion, a plurality of relatively flat nozzles spaced about the inner surface of said side walls for connection to the inlet of said water circulating system, said nozzles including peripherally disposed aperture means directed parallel to the inner surface of said side walls to discharge water in a fan shaped stream generally downwardly along the inner surface of said side walls in a continuous path along the inner surface of said side walls toward and over said cove and laterally along the upper surface of said bottom wall toward said sump, and a plurality of relatively flat nozzles disposed on said bottom wall in surrounding relation to said sump for connection to the inlet of the circulating system, said last named nozzles including peripherally disposed aperture means directed parallel to the upper surface of said bottom wall generally toward said sump to direct water in a fan shaped stream toward said sump for maintaining said side walls and bottom wall substantially free of foreign debris and insuring that the foreign debris is expeditiously urged toward and scavenged by said sump, all of said nozzles being imperforated on the sides thereof remote from said apertures producing said fan shaped streams.

3,045,830

LIQUID DISPERSION SEPARATING DEVICE

Mervin J. Fulton, P.O. Box 980, Tulare, Calif.; Leota Williamson Fulton executrix of said Mervin J. Fulton, deceased

Filed Apr. 29, 1958, Ser. No. 731,729
4 Claims. (Cl. 210—232)



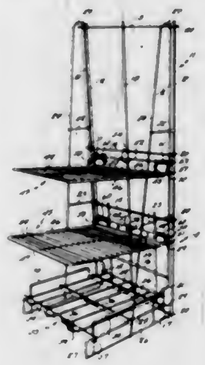
1. In a heavy duty fluid filter assembly of the type having an elongated tubular main housing with a smooth interior surface free of inwardly extending projections and normally fully connected to its operating environment, a disposable filter cartridge having a tubular main housing of appreciably smaller diameter than the inner diameter of said main housing and adapted to be mounted concentrically within the latter, one end of said outer housing having a removable closure through which said filter cartridge can be installed and withdrawn; that improvement which comprises a unitary anchorage ring and seal assembly adapted to be reused with successive filter cartridges to anchor the same against axial displacement lengthwise of said main housing despite the existence of substantial pressure differentials across the opposite ends of said filter cartridge, said anchorage and seal assembly being effective to seal off the annular space between said filter cartridge and said main housing and comprising a pair of similar rigid rings having an inner diameter slightly greater than the diameter of a filter cartridge and an outer diameter slightly less than the inner diameter of said cylindrical housing, a thick elastomeric gasket ring between said rings having an inner diameter approximately that of said cartridge and a relaxed outer diameter having a loose sliding fit with the interior of said housing, said gasket ring being provided with a plurality of sharp-edged annular ridges spaced apart axially of said gasket, a plurality of adjustable means extending through the bodies of said rigid rings and of said gasket ring for compressing said rigid rings against the opposite faces of said gasket ring to expand the same radially into wide area frictional and sealing contact with the exterior surface of said cylindrical housing thereby anchoring said cartridge against displacement axially of said housing.

3,045,831

COMMODITY RACK

John Brittain Pendergrast, Jr., Atlanta, and Wayne F. Browning, Jr., Avondale Estates, Ga.

Filed July 19, 1960, Ser. No. 43,936
5 Claims. (Cl. 211—49)



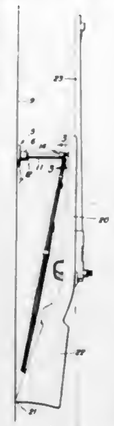
1. A display rack for commodities comprising in combination a base, spaced vertical support members connected to said base, a wire shelf assembly including first and second transverse, vertically offset, parallel wire rods, means connecting said wire rods, portions of each of said vertical support members being disposed between opposite ends of each of said first and second wire rods, the said opposite ends of said wire rods engageable with said vertical support members, a shelf pivotally mounted on said first transverse wire rod and movable from a horizontal to a substantially vertical position, spring means biasing said shelf about said first transverse rod and biasing said first and second wire rods into gripping contact with said portions of said vertical support members, whereby said shelf assembly is vertically slidable therealong, said shelf normally disposed in a vertical position, said shelf including side pieces having inclined portions adapted to engage said second transverse rod upon pivotal movement of said shelf from a vertical to a horizontal position to preclude pivotal movement of the same below the horizontal position.

3,045,832

GUN HANGER

Walter R. Hibbard, Box 1, Calcium, N.Y.

Filed July 14, 1960, Ser. No. 42,864
4 Claims. (Cl. 211—64)



1. The combination of a vertical supporting surface, a hanger mounted on said surface and projecting laterally outwardly therefrom to a predetermined extent, a gun suspended from said hanger in a substantially upright position with the gun stock abutting said vertical surface at a point spaced downwardly from the hanger and the gun barrel projecting above the hanger in spaced relation from said surface, said gun including a sling swivel with a pinion disposed intermediate the ends of said barrel, said hanger including a surface mounted base portion, an upwardly projecting arm, means separably connecting said arm to said base portion, and hook means provided at the outer end of said arm, said hook means extending into and supportably engaging said sling swivel, means for immobilizing said swivel relative to said gun in a position requiring a portion of the swivel to be swung outwardly from said surface for disengagement thereof from said hook means, and the distance of the hook means from said surface being such that outward swinging of the swivel on the hook means is prevented by contact of the barrel with said vertical surface, whereby the gun can be removed from the hanger only upon separation of said means connecting said arm to the base portion of the hanger.

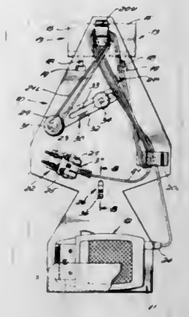
3,045,833

WALL-MOUNTABLE STORAGE UNIT FOR AN ELECTRIC RAZOR, CORD, AND SHAVING MIRROR DURING NON-USE PERIODS

Gyle D. Conrad, 822 N. 3rd Ave., Phoenix, Ariz.; Mary Elizabeth Muse, administratrix of said Gyle D. Conrad, deceased; by decree of distribution and assignment, of ninety percent to C. Dewey Conrad, as trustee, and ten percent to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California

Filed Aug. 29, 1960, Ser. No. 52,553
8 Claims. (Cl. 211—87)

1. A wall-mountable storage unit for an electric razor, cord, and shaving mirror during non-use periods, comprising: a vertical panel member of thin-sheet material carrying shelf means adapted to receive and support an electric razor, and provided with wall-engageable fastening means for mounting the entire device on a vertical auxiliary supporting wall in supported relationship with respect thereto and with said vertical panel member lying against and immediately in front of the supporting wall, the front of said panel member being provided with forwardly extending spaced cord-winding projections adapted to receive a looped and wound electric razor cord therearound during non-use periods and to support a shaving mirror forwardly thereof during non-use periods; and controllably positionally adjustable slack take-up means carried by the front of the panel member



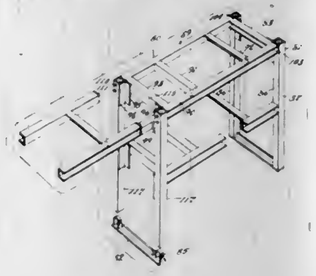
for cooperation with a portion of the looped wound electric razor cord during non-use periods whereby to take up the slack therein and to retain it in looped wound position with respect to said cord-winding projections.

3,045,834

RACK CONSTRUCTION

Edward A. Seiz, 136 E. 3rd St., Lansdale, Pa.

Original application July 25, 1957, Ser. No. 674,135, now Patent No. 2,999,570, dated Sept. 12, 1961. Divided and this application Aug. 18, 1960, Ser. No. 50,531
4 Claims. (Cl. 211—148)



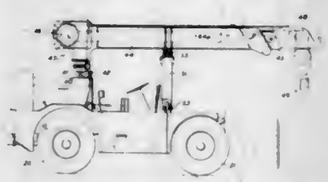
1. A rack structure intended to hold a load, comprising a series of elongated foot members parallel to each other in spaced position and each having inverted U locking members extending upward near each end thereof, a series of rectangular tubular vertical columns resting on individual foot members with faces parallel and perpendicular to the longitudinal axes of said foot members, each held in position by a different one of the locking members and each having a plurality of pairs of interlocking openings at different levels on corresponding faces of the columns parallel to the longitudinal axis of the foot members and on the inner of the faces of the columns perpendicular to said axis, the individual openings of said pairs being one above another with space between, which space is greater in the case of the pairs on said perpendicular faces than those on said parallel faces, horizontal bed members one above another between the pairs of columns that rise from adjacent foot members and having wedging lugs corresponding in position to the slots on said perpendicular faces at one end and said parallel faces at the other, the columns being canted from the vertical in the no-load position in the direction corresponding to the direction from the end of the bed with said lugs corresponding to slots in parallel faces to the end of the bed with said lugs corresponding to slots in perpendicular faces, and not canted in the full load position.

3,045,835
DISPLAY STAND
Kenneth B. Hawthorne, Princeton, and Frederick A. Maguire, Pompton Plains, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
Filed Feb. 1, 1960, Ser. No. 5,981
6 Claims. (Cl. 211—149)



1. A display stand adapted to stand upright on a substantially horizontal supporting surface comprising a bin-like body member defined by a pair of substantially similar aligned spaced side walls, the lower portion of the front edges of said side walls sloping upward and forwardly and the rear edges of said side walls extending substantially vertical, a front wall attached at its opposite edges to the forward edges of the opposite side walls respectively; and a rear wall attached at its opposite edges to the rear edges of the opposite side walls respectively, said front wall having an opening therein; a lower shelf unit having its rear portion resting on the lower edge of said opening; a prop frame member including a pair of spaced elongate upright elements and a pair of vertically spaced cross elements each having its opposite ends attached to the upright elements respectively; the uppermost of said cross elements being attached to said bin-like member at a point above the lower end of said bin-like body member, the lowermost of said cross elements being attached to and supporting the forward portion of said lower shelf unit, said upright elements being adapted to engage the supporting surface forward of the lower ends of the side walls, whereby said upright elements and the lower end of said bin-like body member are adapted to support said display stand.

3,045,836
CRANES AND THE LIKE
Percy Norman Evans, Pangbourne, England, assignor to British Hoist and Crane Company Limited, Compton, England
Filed Sept. 29, 1958, Ser. No. 764,113
Claims priority, application Great Britain Sept. 27, 1957
11 Claims. (Cl. 212—35)



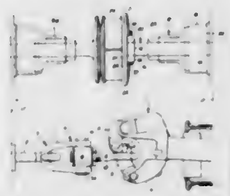
1. A crane structure comprising a support, a jib pivotally mounted on said support for slewing and luffing movement, and two independently operable hydraulic cylinder devices each of which is attached to said support and to said jib at a point between the ends of said jib, said hydraulic cylinder devices being attached to the same point on said jib, and effecting luffing and slewing thereof said hydraulic cylinder devices at minimum extension being substantially equally inclined to a plane which includes the axis about which said slewing movement occurs.

3,045,837
ROTARY TOWER CRANE
Hans Liebherr, Memminger Str. 78, and Elmar Reich, Schmelzweg 9, both of Biberach an der Riss, Germany
Filed Dec. 23, 1959, Ser. No. 861,616
3 Claims. (Cl. 212—46)



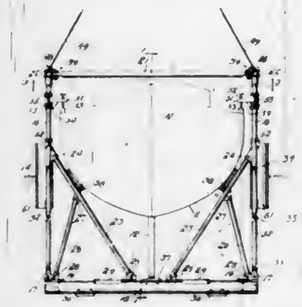
1. A portable crane comprising a wheeled undercarriage, a horizontally rotatable platform supported by said undercarriage, a collapsible tower supported at its base portion with said platform, a winch system and a housing associated with the base portion of said tower, said tower having a lower mast pivotally connected at its bottom corner to said platform and at least one upper mast coextensive therewith, pulley and cable means associated with said winch adapted to telescope said at least one upper mast within the mast below it, disconnectable means for rigidly connecting the lower mast in its vertical position to the housing of said winch system, a boom pivotally connected to the uppermost mast of said tower and adapted to be raised and lowered under load by swinging movement in a vertical plane via a pulley and cable system also operably associated with said winch system, said boom being formed of pivotally connected sections whereby one boom section is foldable alongside another, means associated with said undercarriage and said platform to effect rotation in a horizontal plane of said platform with respect to the undercarriage, means at the bottom of the undercarriage for receiving transit wheels and axle and connecting means at the free end of the tower for connecting the tower to a vehicle for transit.

3,045,838
TRANSITION BUFFER
Geoffrey W. Cope, Williamsville, N.Y., assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed July 28, 1960, Ser. No. 45,905
13 Claims. (Cl. 213—112)



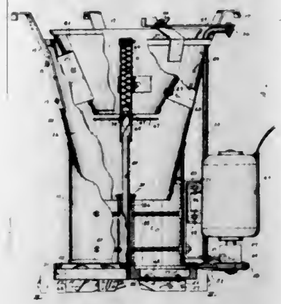
13. In a transition coupler assembly, a transition buffer having an open-ended housing fixed to an end of said car, a headed plunger having a hollow stem slidably received in an axial bore in said housing, a spring in said bore and projecting into and acting against an abutment in said stem for urging said plunger outwardly of said housing, a pin fixed to and projecting through a side wall of said housing and riding in a longitudinally elongated slot in said stem for limiting relative longitudinal movement of said plunger and housing, a keyway extending vertically through said stem outwardly of said spring, and a key slidable from above into and having a head of greater cross-section than said keyway, said key in seated position projecting from opposite ends of said keyway and engaging an outer end of said housing, said key and pin cooperating to lock said plunger and housing against relative longitudinal movement, means connecting said key against loss to said car end, and means on a head of said key and engageable with support means fixed to said car end for hanging said key on said support means on removal thereof from said keyway.

3,045,839
APPARATUS FOR HANDLING BOATS
Frederick H. Hibberd, 875 Forest Ave., Rye, N.Y.
Filed Dec. 9, 1957, Ser. No. 701,618
3 Claims. (Cl. 214—1)



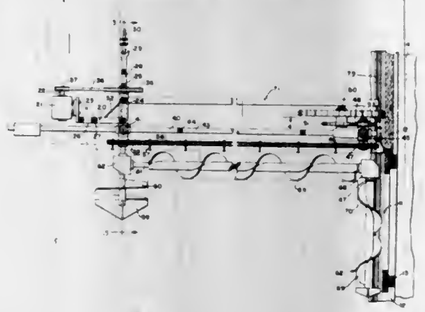
1. In combination with a vertically movable sling for setting a boat afloat and lifting it from a body of water, the boat having a hull and a center keel depending therefrom, a cradle of U-form having a bottom frame and spaced side frames forming a unitary structure which is adapted to be positioned about the bottom and sides of the boat at a place between the ends thereof, the bottom frame including spaced rigid members extending transversely of and across the bottom of the cradle and means including rigid members which extend lengthwise of the cradle and connect the transverse members to brace the bottom frame, each side frame including a pair of spaced upright rigid members which are connected at their lower ends to the bottom frame, and rigid members which extend lengthwise of the cradle and are connected to brace the upright members, means including rigid members which extend transversely of the cradle and are inclined to the vertical and connected to the bottom frame and to the upright members intermediate their ends to brace the side frames, the upright members and inclined members at opposing sides of the cradle being substantially opposite one another with the inclined members sloping downward toward one another, pads fixed to the inclined members intermediate their ends and against which the hull of the boat snugly fits when the keel rests on the bottom frame, a plurality of clamp arms, means for detachably fixing each of the clamp arms to a different one of the upright members at a region above the point the inclined member is connected thereto, each of the clamp arms being angularly movable on its upright member and vertically adjustable thereon, means on each clamp arm which is vertically adjustable thereon and movable to engage the upper part of the hull to firmly secure the boat in the cradle against the pads and the bottom frame, means at the upper part of the cradle for attaching the sling thereto, hollow parts, and mounting means for mounting the hollow parts on the upright members to develop buoyant force above the center of gravity of the cradle when the latter is afloat in the body of water.

3,045,840
MATERIAL SPREADING MECHANISM
Harlan J. Donelson, Jr., Marshalltown, Iowa
Filed June 30, 1961, Ser. No. 121,102
11 Claims. (Cl. 214—17)



1. In combination, a storage material building having an opening in its upper area, a vertical tubular housing secured to said building and associated with its opening, a vertical shaft rotatably mounted in said tubular housing, a spoked pulley wheel secured to the lower end of said shaft, material engaging bar fins on the spokes of said pulley wheel, a prime mover having a drive shaft, a pulley wheel on said drive shaft, an endless belt embracing said two pulley wheels, a hopper having an open bottom in the upper portion of said housing, an elongated member slidably embracing the upper end portion of said shaft and extending upwardly into said hopper, means for directly transmitting rotation of said shaft to said elongated member, said means allowing sliding movement of said elongated member upon said shaft, a spring means for yieldingly holding said elongated member in one direction of its slidable movement on said shaft, a control plate on said elongated member and below said hopper, and at least one material engaging arm on said elongated member and positioned in said hopper.

3,045,841
SILO UNLOADER
Arnold B. Skromme, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Jan. 6, 1961, Ser. No. 81,146
10 Claims. (Cl. 214—17)



1. A silo unloader for use in a silo having vertically aligned discharge openings on one side thereof, said openings being separated by horizontal wall structure, and removable closure members for said openings, said silo unloader comprising: a main frame supported in the silo above the silage; a power unit on the frame; a laterally disposed radial sweep conveyor mounted on the frame having one end adjacent the silo wall; drive means between the power unit and conveyor driving the conveyor to effect movement of silage radially inwardly and to move the conveyor over the surface of the silage; a

laterally disposed radial discharge conveyor beneath the sweep conveyor having an outer end adjacent the vertically aligned discharge openings in the side of the silo and effective upon operation to cut a trench beneath the surface of the silage; a vertically disposed silage digging mechanism depending from the end of the discharge conveyor and having a lower end adapted to dig silage and being of such length as to bridge the vertical expanse of a horizontal wall structure between the openings; and drive means between the power unit and the discharge conveyor and digging mechanism effecting movement of silage radially outwardly by the discharge conveyor and vertically by the digging mechanism.

3,045,842
HAND TRUCK
Victor F. Vinkavich, 1504 Park Ave., Racine, Wis.
Filed Feb. 28, 1961, Ser. No. 92,204
3 Claims. (Cl. 214—84)



1. A shop pan carrier comprising a set of front and rear wheels and two axles extending respectively between said front and rear wheels, a sleeve rotatably mounted on said axles and extending between respective pairs of said wheels for spacing the same apart and for rollably supporting a shop pan thereon when the latter is moved over said sleeves, side members pivotally attached between said axles for pivotally connecting the same together, a handle pivotally connected to one of said axles and extending thereabove, a pan-engaging member attached to said handle at a location thereon spaced above said axles and including two hooks thereon faced oriented to be oppositely directed and transverse to said axles for each engaging a shop pan upon opposite pivotal movement of said handle, and a stop movably mounted on one of said side members and extending to said handle for supporting the latter in an over-center position toward the other of said axles in one position of said stop.

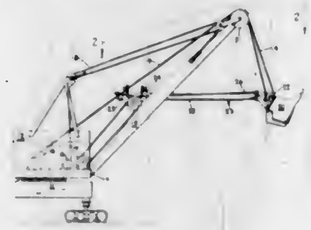
3,045,843
BUCKET LOADER STOPS
Ralph J. Bernotas, South Euclid, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 11, 1957, Ser. No. 639,409
4 Claims. (Cl. 214—140)

1. A material handling attachment for a vehicle comprising, a supporting boom pivotally connected at one end to said vehicle, a material handling bucket pivotally connected to the other end of said boom, means for vertically adjusting said boom about its pivotal connection to said vehicle, tilt linkage means operable to pivot said bucket forwardly and rearwardly about its pivotal connection to said boom between material loading, carrying and dumping positions, said linkage means including, a lever pivotally connected to said boom, a first link pivotally connected to said lever and vehicle, a second link pivotally connected to said lever and to said bucket at a point spaced from the pivotal connection of the latter with said boom, one of said links being extensible and retracta-



ble, a stop bolt movably mounted on said boom in the path of and engageable with said bucket as the latter is pivoted to a dumping position, and spring means urging said stop bolt into engagement with said bucket and being progressively adjusted to greater extents as said boom is elevated.

3,045,844
SADDLE BLOCK FOR POWER SHOVEL
Tom Learmont, Wauwatosa, and Robert E. Talley, Racine, Wis., assignors to Bucyrus-Erie Company, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 17, 1959, Ser. No. 799,987
8 Claims. (Cl. 214—135)

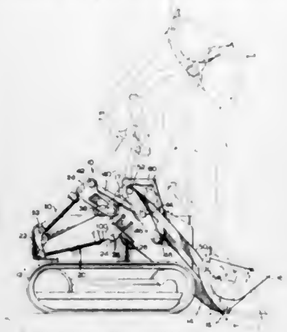


1. In a power shovel, the combination of: a base; a boom inclined forwardly therefrom; a shipper shaft transversely mounted on the boom; a saddle block supported by the shipper shaft for rocking movement; a forwardly extending dipped handle; means carried in said saddle block supporting said handle for rotative movement about the longitudinal axis of said handle as well as reciprocating movement along said axis; and energy-absorbing snubber means carried by said saddle block and operatively connected with said handle to restrain said rotative movement of said handle.

3,045,845
IMPLEMENT POSITION CONTROL AND INDICATOR MEANS
Theodore N. Hackett and Otto Puhlmann, Salt Lake City, Utah, assignors to The Elmco Corporation, Salt Lake City, Utah, a corporation of Delaware
Filed Aug. 20, 1958, Ser. No. 756,193
1 Claim. (Cl. 214—140)

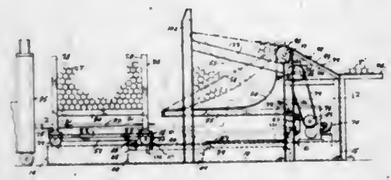
In a material handling machine including a material handling implement, members operatively interconnecting the implement and a power source for moving said implement about an axis transverse to the machine, a manual control lever having at least a power on and a

power off position for controlling the application of power from the power source to the material handling implement through said members, linkage means actuated by movement of said members, an indicator member adjacent the control lever continuously movable in response to movement of the linkage means to indicate rela-



tive radial movement of the material handling implement, latch means directly engageable with the control lever and when engaged therewith maintaining the control lever in a power on position, a latch release member adjustably mounted on said indicator member for releasing said latch means from engagement with the control lever.

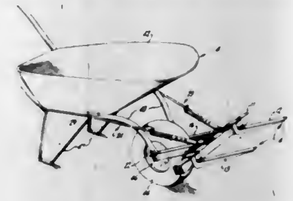
3,045,846
RACK UNLOADER
William B. Clark, Box 395, R.R. 1, Walbridge, Ohio
Filed Sept. 19, 1960, Ser. No. 56,912
13 Claims. (Cl. 214—310)



1. Apparatus for receiving a rack carrying elongated articles and successively unloading the articles therefrom, said rack being of the type having corner posts and a pair of parallel, opposed side bars across which the elongated articles are supported; said apparatus including a rack receiving station, a rack unloading station, a rack carriage, a track for the carriage between the receiving and unloading stations, means moving the carriage from the receiving to the unloading station, unloading means at the unloading station including pivotable arm means, a starting position for the pivotable arm means in a horizontal plane below elongated articles carried in a rack and between the rack side bars across which elongated articles are supported, a belt fastened to the outer end of the arm means and extending under articles in the rack, and means pulling the belt upwardly to raise the articles out of the rack, the arm means pivoting upwardly in following relation with the belt movement.

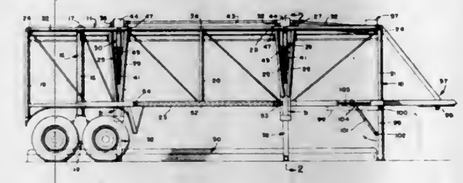
3,045,847
WHEELBARROW ATTACHMENT
Elmer Howard Fisher, 123 Camino Pablo, Orinda, Calif.
Filed Nov. 12, 1959, Ser. No. 852,285
7 Claims. (Cl. 214—370)

1. A fork lift attachment for wheelbarrows and the like comprising a fork having a transverse structural member with at least two tines extending therefrom in relatively movable relation on said member, a pair of thrust members affixed to said transverse member and extending from the opposite side thereof from said tines for slidably engaging a wheelbarrow frame in compression thereagainst, and at least one tension member secured to said transverse member and extending therefrom at a greater angle to horizontal than said thrust members, said tension



member having protruding portions for hooking onto a wheelbarrow structure above the engagement of thrust members and wheelbarrow, whereby said fork is removably engageable with the wheelbarrow in extension in front of same and is maintained in engagement therewith by the weight of said attachment.

3,045,848
STRADDLE TRAILER
James J. Christenson, Cowiche, and Frederick G. Maloney, Yakima, Wash., assignors, by direct and mesne assignments, to Towmotor Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 7, 1960, Ser. No. 13,009
11 Claims. (Cl. 214—392)



1. In a vehicle of the character described: a wheeled frame structure including a top wall and side walls defining a load carrying chamber; mast structures disposed adjacent said side walls, said mast structures at the respective side walls depending from said top wall and being pivotally supported at their uppermost ends on a movable carriage for accommodating the spacing between the upper ends of the mast structure to the load width and enabling swinging movement of their lowermost ends towards and away from the central plane of said chamber; load lifting means carried by each of said masts including a slide member guidingly supported thereon for raising and lowering movement and having a projecting ledge for engaging a load; means for moving said mast structures; and power actuated means operable to simultaneously raise and lower said slide members.

3,045,849
CAR TOP BOAT LOADER AND CARRYING MECHANISM
Ludvig Tweten, Portland, Oreg.
Filed Apr. 16, 1959, Ser. No. 806,828
1 Claim. (Cl. 214—450)

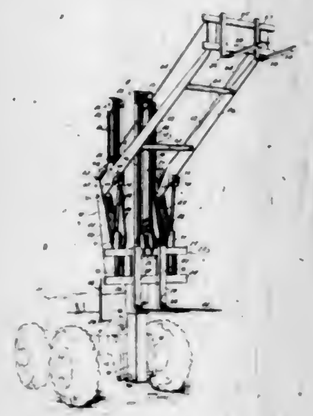
A car top boat loader and carrier mechanism comprising a generally rectangular frame having forward and rear ends and adapted to be removably mounted in horizontal relation on the top of a motor vehicle, said rectangular frame including elongated, longitudinal frame members, a roller positioned between said longitudinal frame members at the rear end of said frame, an inner arm member pivotally mounted at one end adjacent the rear

end of each of said frame members, an outer arm member pivotally connected at one end to the other end of each of said inner arm members, the transversely extending bar connecting the other ends of said outer arm members, said bar adapted to be removably connected to a boat being loaded or unloaded, a pair of struts pivotally connected at one end to said transversely extending bar in spaced relation to each other, the free ends of said struts adapted to removably engage a bumper on the motor vehicle during boat loading and unloading operation, an A-frame having its legs pivotally connected to said longitudinal frame members intermediate the ends thereof, a first idler pulley positioned between the legs of said A-frame and the apex thereof, a transversely ex-



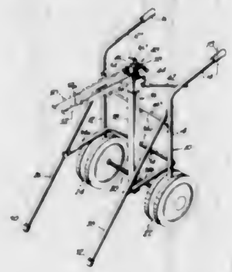
tending shaft journalled in said longitudinal frame members inwardly of the forward end of said frame, a pair of rollers mounted on said transversely extending shaft in spaced relation to each other, a winch mounted on said frame intermediate the ends thereof and between said longitudinal frame members, a second idler pulley mounted on said frame adjacent the forward end thereof and between said longitudinal frame members, a cable on said winch extending therefrom over said second idler pulley, said first idler pulley, and having its free end adapted to be removably secured to the bow of a boat to move the boat into position to be loaded onto said frame, and means secured to said rectangular frame and to said A-frame to limit pivotal movement thereof.

3,045,850
DUAL FORK LIFT ATTACHMENT
Louis E. Carr, Cedarburg, and Daniel C. Jones, Port Washington, Wis., assignors to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 17, 1960, Ser. No. 63,140
5 Claims. (Cl. 214—620)



1. A lift attachment for use on a vehicle having a source of pressure fluid comprising, in combination, an extensible mast having elongated, relatively slidable sections including a top section, said mast being adapted to be mounted on said vehicle in a substantially vertical position, a carriage, means for guiding said carriage for movement longitudinally of said top section, means for raising said carriage relative to said top section, a first lift fork mounted on and carried by said carriage and extending forwardly from said mast for movement with said carriage, a second lift fork positioned forwardly of said first lift fork, a boom having its outer end portion pivotally connected to said second load supporting means and having its inner end portion pivotally connected to said carriage at a point upwardly and rearwardly of said first lift fork thereby permitting simultaneous loading of said first and second lift fork, and hydraulic ram means positioned behind said first lift fork and connected at its ends to said carriage and said boom respectively for swinging said boom and second lift fork upwardly relative to said carriage to raise said second lift fork upwardly and forwardly of the top of said top mast section.

3,045,851
OUTBOARD MOTOR LIFT CART
Delbert C. Rupert, 6839 31st NE., Seattle, Wash.
Filed Dec. 28, 1956, Ser. No. 631,122
2 Claims. (Cl. 214—653)



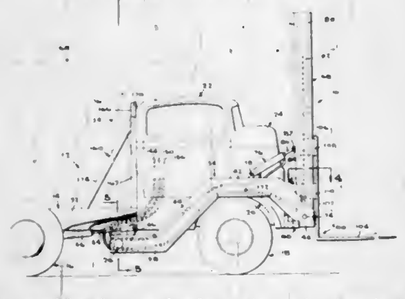
1. An outboard motor lift cart for lifting, moving and storing of outboard motors of the type comprising an upper portion including a power head, a propeller drive assembly housing depending therefrom, and forward clamp means by which the motor is mounted in upright position on a boat transom or other support, said cart comprising a generally upright frame including upright post members at the rear corners of the frame, ground-engaging wheels mounted on the frame generally at the rear lower side corners thereof, forwardly and downwardly extending opposite side members having upper portions connected to the respective post members and having lower portions comprising ground-engaging means to stabilize the cart in generally upright position, forwardly opening U-shaped brace means generally horizontally disposed and interconnecting said post members and side members at a relatively low position on said frame, and transverse brace means interconnecting said post members materially above said first brace means, jack means comprising a generally upright elongated body member rigidly connected to both of said brace means substantially transversely mid-way between said post members, and motor engaging means carried by the upper end of said jack means at a location generally intermediate the front and rear and respectively opposite sides of the cart, comprising a pair of transversely spaced cantilever arms projecting forwardly from said jack means and adapted by forward approach movement of said cart from the rear of the motor to engage the motor generally at the corner locations defined by the opposite sides of its propeller drive assembly and the bottom of its power head, thereby to permit lifting the motor from its support by operation of said jack means and to carry the motor stably in upright position, said cart further including handle means at an elevated position on the frame.

3,045,852
MODIFIED ELEVATOR FOR DRUM HANDLING
John M. Boyd, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Dec. 21, 1959, Ser. No. 860,840
4 Claims. (Cl. 214—653)



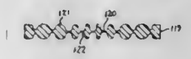
1. Apparatus for positioning cargo on elevated storage racks comprising: a vertically stationary cargo support having a supporting surface and being positioned a predetermined distance above the floor to receive cargo in a horizontal position; a vertically movable cargo support having a supporting surface and being positioned for movement relative to said stationary support; transfer means attached to and movable with said movable cargo support; hoist means for moving the supporting surface of said movable support through a vertical locus below the support surface of said stationary support; and engaging means included in and rotatable relative to said transfer means for engaging cargo positioned on said stationary cargo support with the movable cargo support in a position near to but vertically spaced from its lowermost position for lifting said cargo from the stationary cargo support responsive to the upward movement of said movable cargo support, the fixed vertical distance between the engaging means and the supporting surface of the movable cargo support being such that the cargo is disengaged from said stationary cargo support when lifted by the transfer means, and is suspended solely by said engaging means.

3,045,853
FORK-LIFT ATTACHMENT
William N. Card, Sr., 2020 Vallecito Drive, La Puente, Calif.
Filed Jan. 27, 1961, Ser. No. 85,234
2 Claims. (Cl. 214—672)



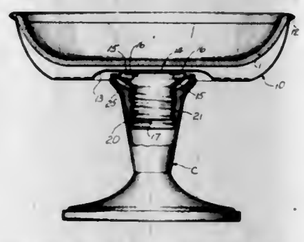
1. In combination, a horizontal truck chassis having an end and side members, longitudinal lift arms extending along said side members, said arms normally being horizontal with one end thereof at the forward end of the chassis, means mounting the other ends of the arms on the chassis, a U-shaped lift frame positioned between said one end of the lift arms and pivoted thereon, adjustable means extending between and connected to the arms and the lift frame, said lift frame having a cross member and upstanding legs, an inverted U-shaped slide frame located between the legs of the lift frame, said slide frame having a cross member and downwardly extending legs, the legs of the slide frame being slidably confined on the legs of the lift frame for vertical movement relative thereto, vertical hydraulic lift cylinder means extending between and connected to the cross members of the lift and slide frames, and lift fork means rigidly mounted on the slide frame, pivot means mounting the said other ends of the lift arms on the chassis, and hydraulic cylinder means connected to the chassis and to the lift arms for elevating and depressing the lift arms, upstanding rest means on the chassis adjacent to said pivot means upon which the arms are adapted to rest in an over-center elevated storage position of the lift arms.

3,045,854
VENTING SEAL FOR A CLOSURE
Franklin Seville Patton, Erie, Pa., assignor to Sterling Seal Co., Erie, Pa., a corporation of Pennsylvania
Filed Nov. 28, 1958, Ser. No. 776,837
7 Claims. (Cl. 215—56)



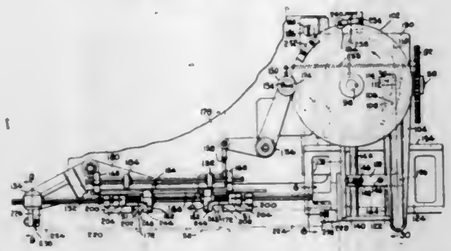
1. In combination, a closure for a container and a container, said closure comprising a cup shaped member, a sealing disk in said closure, said disk being made of relatively thin, flexible resilient material, laterally spaced parallel grooves formed in said disk on both sides thereof, said grooves completely traversing said disk, one side of said disk resting on said container around the opening therein, and means on said closure forcing said disk tightly against said container whereby said disk is compressed between said closure and said container, said disk being adapted to be distorted adjacent said grooves by gas adapted to be generated in said container whereby the material of said disk is forced away from said container, providing a path for said gas to escape.

3,045,855
CANDLESTICK, DISH AND COMPOTE
Bruin T. Lipman, 58 Cambridge St., Meriden, Conn.
Filed Feb. 21, 1962, Ser. No. 174,881
5 Claims. (Cl. 215—99.5)



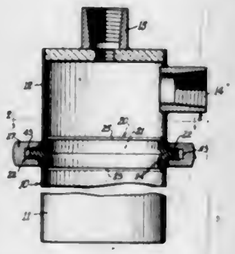
5. In a combination of the class described,
a candlestick holder having a candlestick socket formed with screw threads,
an adaptor adapted to be threaded into said socket,
a bayonet joint fastener element formed on said adaptor,
a dish,
a coacting bayonet joint fastener element on the bottom of said dish adapted to interlock with said fastener element on said adaptor to form a console of said candlestick and dish,
and portions of said bayonet joint elements coacting to screw said adaptor out of said socket when said dish is rotated in one direction relatively to said adaptor.

3,045,856
GAUGING AND ATTACHING APPARATUS
Allen D. Cornell, Bedford, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Mar. 26, 1959, Ser. No. 802,228
3 Claims. (Cl. 218—6)



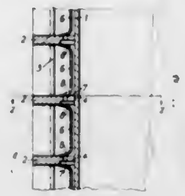
1. In a fastener attaching machine of the class described including at least one pair of opposed tools for setting fastener members, the combination of a work carrier adapted to shift the work intermittently between said opposed tools, said work carrier coupled to a guided slide block movable in a plane substantially perpendicular to the axis of said opposed tools, a crosshead positioned within said slide block having a pin free to travel within a slotted driving lever, said crosshead mounted to slide on a pair of spaced rods carried by the slide block and locking means securing said crosshead to said rods, said driving lever pivoted about a fulcrum and actuated by a positive acting face cam, whereby the amplitude of motion of said slide block is variable in relation to the distance of the pin on said crosshead from the fulcrum.

3,045,857
TANK AND HEAD CONNECTED BY A DETACHABLE SEALER
August D. Lineweber, 3813 Pinkney St., Omaha, Nebr.
Filed Feb. 18, 1958, Ser. No. 715,967
4 Claims. (Cl. 220—5)



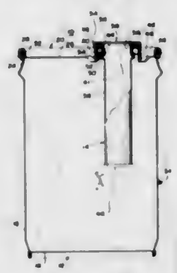
1. A tank comprising two separable cylindrical sections arranged in axial alignment with and in spaced relation to each other, the walls of said sections curving outwardly at opposite ends thereof and terminating in flanges that are frustums of cones the angles of which are about 170°, a resilient elastic sealing ring having a body portion within both sections and engaging said walls, the sealing ring also having a peripheral rib positioned between said flanges, said rib having opposite side faces defining frustums of cones, and a clamping ring surrounding the tank at and embracing said flanges, said clamping ring providing a channel receiving said flanges and said rib, said rib and flanges having radial dimensions substantially less than the radial dimensions of said channel to provide a space within said channel for accommodating the outer portion of said rib when the resilient rib is urged outwardly under the influence of fluid pressure acting upon said sealing ring within said tank.

3,045,858
WELDED CONSTRUCTIONS FOR ROTATIONALLY SYMMETRICAL CONTAINERS
Rudolf Söhngen, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed June 24, 1959, Ser. No. 822,551
Claims priority, application Germany July 3, 1958
3 Claims. (Cl. 220—10)



1. A construction for rotationally symmetrical vessels having movable parts moving close to the inside wall surface of the vessel comprising a rigid cylindrical skeleton frame of circular transverse cross section and a vessel wall covering of metal sheet of substantially uniform thickness providing inner and outer wall surfaces, said frame being formed of a multiple number of supporting rings held in spaced apart axial alignment by longitudinal ribs, said rings having inner annular surfaces precisely machined to the correct peripheral dimensions of the vessel outside wall surface, said wall covering being axially disposed within and firmly secured to said rings with said machined inner annular surfaces of the rings in precise continuous abutment with the outside wall surface of said wall covering along their entire common extent whereby the machined inner annular surfaces of said rings control the shape and size of the vessel interior, said rings being provided with openings extending therethrough in the axial direction, said openings being in the form of slots extending from the inner annular surfaces of the rings peripherally outwardly in a direction inclined in the plane of the ring to the direct radial direction.

3,045,859
COMPOSITE CONTAINER
George E. McMahon, Elmhurst, Ill., assignor to Vulcan Containers Inc., Bellwood, Ill., a corporation of Illinois
Filed Dec. 22, 1960, Ser. No. 77,758
3 Claims. (Cl. 220—23)



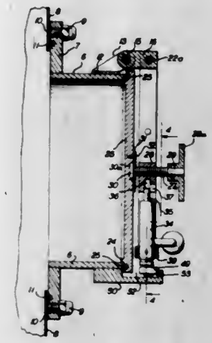
1. A composite container structure comprising a sheet metal drum formed with a generally cylindrical body closed at its lower end by a permanently attached bottom and constituting an outer receptacle, the upper edge of said body of said drum being rolled outwardly to form an annular bead, a removable cover for said drum having marginal edge portions rolled outwardly and downwardly to form an annular channel of semi-cylindrical cross section adapted to fit over said annular bead for closing the same and having a central portion defining one end wall of the drum provided with an inwardly depressed portion having an aperture, an outwardly extending externally threaded flange around said aperture formed integrally with said central portion and terminating in an inwardly extending annular bead, a substantially smaller independently closable can constituting an inner receptacle for insertion within said drum, said can having a side wall open at one end and an end wall permanently closing the other end of said can, said side wall being formed with an outwardly extending bead spaced slightly downwardly from the open end of said can and the top edge of said side wall being bent into an outwardly extending flange which cooperates with the last-mentioned bead to form a groove, said inwardly extending annular bead being locked in said groove to secure said can within said aperture, said can extending substantially within said drum, and a removable cap external of said drum threaded only on said threaded flange closing the end of said can.

3,045,860
CAP FOR COLLAPSIBLE TUBE
Edwige Desgagne, née Harvey, 826 Jacques Cartier E., Chicoutimi, Quebec, Canada
Filed Aug. 26, 1960, Ser. No. 52,293
2 Claims. (Cl. 220—31)



1. A closure for collapsible tubes having an outwardly threaded discharge nozzle, comprising: a unitary body of plastic material having a central section and two wings laterally extending therefrom; a frusto-conical opening through said central portion having a smooth inner surface adapted to be force threaded onto the threaded discharge nozzle of a collapsible tube; said body having a substantially flat top surface; a slot cut out of the outward end of one of the wings and opening onto said flat surface; said slot having opposed lateral surfaces provided with spherically concave grooves; a cylindrical perforation on the outward end of the other of said wings, also opening onto said flat surface; a unitary substantially flat closure member made of plastic material and adapted to lie over said flat surface of said body in the closed position thereof; a plastic hinge member integral with and projecting perpendicularly from said closure member at one end thereof and provided with integral spherical knobs engageable in the spherically concave grooves for pivotal movement of said closure member; a plastic lock member integral with and projecting perpendicularly from the other end of said closure member; said lock member being provided at the free end thereof, with a spherically rounded head of a diameter larger than the diameter of said perforation and frictionally engageable into said perforation in locking relationship with said body in closed position of the closure.

3,045,861
CLOSURE FOR EVACUATED AND/OR PRESSURIZED VESSEL
Wesley E. Dieter and Paul L. Golden, Pittsburgh, and Stanley Nazaruk, Clairton, Pa., assignors to the United States of America as represented by the Secretary of the Interior
Filed Dec. 1, 1959, Ser. No. 856,624
3 Claims. (Cl. 220—57)
(Granted under Title 35, U.S. Code (1952), sec. 266)

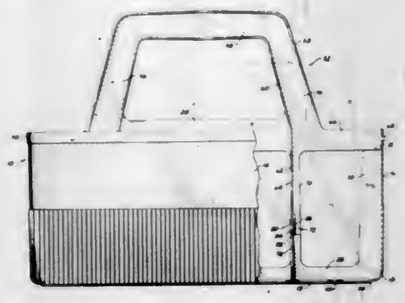


1. A cover structure of the character described comprising a wall having an opening therein, a seat member defining a surface including a seating rim surrounding said opening, cover means comprising a closure element adapted to contact the seating rim to cover said seat member, and a bearing structure extending across said cover element, means hingedly connecting said cover means to the seat member, latching means for said cover means, said latching means comprising a shaft member operatively mounted on the said bearing structure of the cover means wherein said shaft member is journalled for rotational movement and guided for longitudinal sliding movement with respect to said bearing structure, said shaft member having respective inner and outer ends in relation to a medial portion of the cover means, said outer end of the shaft capable of extending beyond the cover means, an eccentric element rotatably mounted on said outer end of said shaft member, a keeper member having a recessed portion rigidly mounted on the said surface of the seat member adjacent its rim, a section of said recessed portion adapted to receive the eccentric element, and a rear wall on said recessed portion adapted to engage the eccentric element, whereby when the shaft is moved in said bearing structure of the cover means, to slide away from the said medial portion of the cover means, and to rotate, the eccentric is caused to engage and bear against said rear wall and the closure element of the cover means is forced against the seat member.

3,045,862
PLASTIC CARRYING CASE FOR BOTTLES
William J. de Chelbor, Chicago, Ill., assignor to Novo Industrial Corporation, a corporation of New York
Filed Mar. 28, 1960, Ser. No. 17,916
18 Claims. (Cl. 220—102)

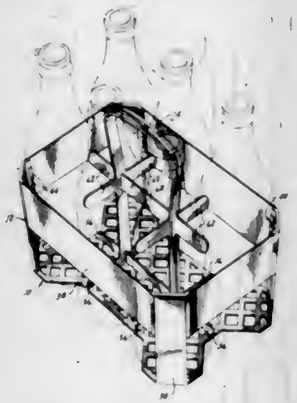
11. In a carrying case for pop bottles or the like, a base, a side structure around the base and upstanding from its outer edge defining an open top container for bottles and including two longitudinal sides interconnected by lateral ends, a handle upstanding from the general center of the base and rising above the upper edge of the sides and ends, button means on said handle extending longitudinally of said case, upstanding stubs on said base terminating below the upper edge of said sides and ends, said stubs having apertures therein, said button means being detachably insertable in said apertures, longitudinal straps extending from said handle, button means

on said straps, apertures in said ends, said last mentioned button means being disconnectably insertable in said last mentioned apertures, and dividers in the container divid-



ing it into a plurality of bottle pockets, the base in each pocket being formed upwardly somewhat into a convex crown concave on its lower surface.

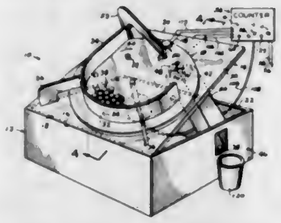
3,045,863
BOTTLE CARRYING CASE
William J. de Chelbor, Chicago, Ill., assignor to Novo Industrial Corporation, a corporation of New York
Filed Nov. 13, 1959, Ser. No. 852,766
11 Claims. (Cl. 220—102)



1. In a carrying case for pop bottles and the like, a base, a side structure around the base and upstanding from its outer edge defining an open top container for bottles, and a combination handle and divider structure connected to and upstanding from the general center of the base rising above the top of the side structure, spaced therefrom at all points and defining a plurality of bottle pockets with the side structure, the combination handle and divider structure including lower bottom ribs upstanding from and integral with the base and upper divider arms projecting outwardly from a centrally disposed handle but terminating in spaced relation to the side structure, the arms and ribs being aligned vertically.

3,045,864
ARTICLE COUNTING DEVICE
Kerney J. Hurst, Oklahoma City, Okla. (25 Rockledge Road, Hartsdale, N.Y.), and Walter G. Pearson, 1615 Military Highway, Pineville, La.
Filed June 25, 1959, Ser. No. 822,937
7 Claims. (Cl. 221—7)

1. An article counting device, comprising: a frame; a support of transparent material connected to said frame, said support having an inclined upper surface; a motor mounted within said frame, said motor having a shaft projecting upwardly through the central portion of said support; a transparent disk axially connected with said shaft in face to face contact with the upper surface of said support for rotation with said shaft; an upstanding barrier positioned on and encompassing an arc of the upper surface of said disk forming a hopper adapted to receive and hold a plurality of small articles, said disk having a single circumferential row of apertures spaced inwardly of its periphery, each said aperture being adapted to receive only one of the articles therein as the disk is rotated, said support having an opening disposed below the path of travel of the apertures; an elongated chute connected at one end with the lower surface of said support around the opening therein and connected at its other end with a wall of said frame for removing articles released from said apertures to a point outwardly of the



frame; a photocell carried by said support above said disk; a lamp positioned below said support so that articles carried by the apertures in said disk interrupt the light rays between said lamp and said photocell as the disk is rotated; and electrical counting means connected with a source of electrical energy for operating said motor and exciting said lamp and said photocell, said electrical counting means including, a multiple pole selector switch having a manually positioned indicator, a multiple pole ratchet relay having an indicator biased to starting position, wiring interconnecting the poles of said ratchet relay with the respective poles of said selector switch, a relay, make and break contacts associated with said relay, other wiring interconnecting said relay with said ratchet relay through said make and break contacts to stop the motor after a predetermined number of the articles interrupt the light rays between said lamp and said photocell.

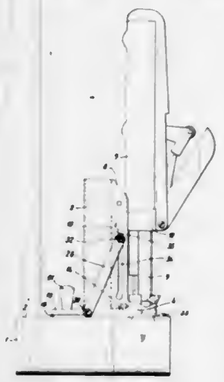
3,045,865
HOPPER AND FEEDER FOR SPIRAL ITEMS
Leonard J. Trotta, Southfield, Mich., assignor, by direct and mesne assignments, of one-half to Motor City Spring Company, Detroit, Mich., a corporation of Michigan, and one-half to The United States Bedding Company, St. Paul, Minn., a corporation of Minnesota
Filed Nov. 12, 1958, Ser. No. 773,274
15 Claims. (Cl. 221—13)



1. A feeding device particularly suitable for feeding items having a spiral surface such as helical wire lengths one at a time from a group of internested helical wire lengths to a machine such as a spring section fabricating machine making spring sections for mattresses and furniture comprising a hopper for holding a plurality of internested helical wire lengths; a trough at the bottom of said hopper of such width dimension to receive only a single helical wire length at the bottom thereof, an idler wheel on

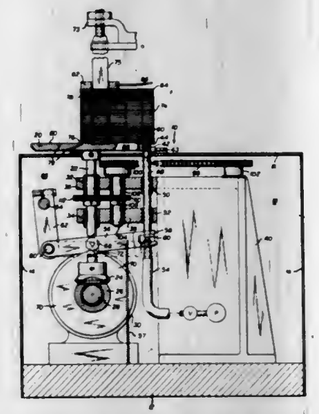
said hopper partially leading through said trough for rotatably engaging a helical wire length at the bottom of said trough with said idler wheel center being slightly above the center of said single helical wire length to engage the same on one side thereof, a jaw and jaw arm pivotally mounted on said hopper, a pair of drive wheels on said jaw partially leading through said trough with one drive bottom wheel being located at the bottom of said trough to engage the helical wire length at the bottom thereof and the other drive side wheel being located at the side of said trough opposite said idler wheel to engage the helical wire length on the other side thereof with said side drive wheel center being slightly above the center of the helical wire length at the bottom of said trough; means for powering said drive wheels; said side idler wheel and said side drive wheel trapping a helical wire length at the bottom of said trough with downwardly directed forces; means for pivoting said jaw for moving said drive wheels into and out of driving engagement with a helical wire length at the bottom of said trough; means for vibrating said trough to cause an internested helical wire length to drop to the bottom of said trough, said driving and idler wheels being adapted to angularly rotate a helical wire length at the bottom of said trough when said jaw pivots said drive wheels into engagement therewith, a rotation reaction key in the bottom of said trough for engaging the spiral of a rotating helical wire length to cause the same to move axially out of said trough, said pivoting means comprising said arm on said jaw and a solenoid on said arm for moving said jaw in the engaging direction; a circuit energizing said solenoid; and a normally open switch in said circuit having means associated with said trough for closing said switch when a helical wire length is located in the bottom of said trough.

3,045,866
SURGICAL THREAD DISPENSER
Karl Kammer, Moltkestrasse 23, Lahr, Germany
Filed Oct. 30, 1956, Ser. No. 619,282
Claims priority, application Germany Nov. 3, 1955
9 Claims. (Cl. 221—69)



1. Dispensing apparatus for dispensing to a surgical tying instrument thread-supporting members holding a piece of surgical thread in prelooped condition, the apparatus comprising, in combination, a magazine for storing superimposed thread-supporting members; a frame member transversely spaced from said magazine and adapted to receive said instrument; feeding means movable between a retracted position for receiving a thread-supporting member from said magazine and an advanced position for holding the respective thread-supporting member in said frame member for pick-up of said piece of thread by said instrument, said feeding means including a resiliently yieldable member movable in a direction transverse to the feeding direction and adapted to support a thread-supporting member so that said yieldable member yields with said thread-supporting member when a thread is picked up by the instrument moving in said transverse direction into said frame member; and actuating means for moving said feeding means between said positions and adapted to be engaged and operated by the instrument during movement of the same toward and away from said frame member; and separating means located adjacent said frame member and adapted to engage and hold a thread-supporting member held on said yieldable member when said yieldable member moves out of its normal position and away from said frame member under the action of the instrument in said advanced position of said feeding means so that upon movement of said feeding means to said retracted position said yieldable member returns to its normal position without the respective thread-supporting member which is retained by said separating means.

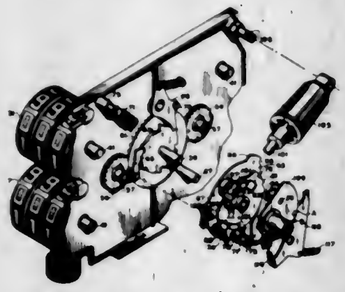
3,045,867
APPARATUS FOR SEPARATING A RESILIENT PLATE FROM A STACK THEREOF
Frank M. Flynn, Binghamton, N.Y., assignor to Seary Manufacturing Company, Endicott, N.Y., a partnership
Filed Dec. 6, 1957, Ser. No. 701,070
5 Claims. (Cl. 221—211)



4. A device for separating the bottommost resilient plate from a vertical stack of horizontal resilient plates, comprising a rotatable disc adapted to provide exclusive support for said stack by engagement with said bottommost plate, means for rotating said disc, said disc being substantially circular but being provided with a relatively shallow cut-out portion and a relatively deep cut-out portion in the periphery thereof, the thickness of said disc being tapered adjacent said relatively shallow cut-out portion, said deep cut-out portion defining a finger extending in the direction of rotation of said disc, a suction device having an end reciprocably movable in a vertical direction to and from a first position below said disc and to and from a second position above said disc, said end of said suction device being adapted to engage an end of the bottom surface of said bottommost plate in sealing relation when said end of said suction device is in said second position, means for moving said end of said suction device in timed relation with the rotation of said disc so that said end of said suction device occupies said second position only when said shallow cut-out portion of said periphery of said disc registers therewith, said end of said suction device moving to said first position prior to said shallow cut-out portion of said periphery of said disc moving out of registry with said end of said suction device whereby to adapt said suction device

to carry said end of said bottommost plate therewith to a plane below said disc, continued rotation of said disc being adapted to be effective to move said finger between said bottommost plate and the plate immediately thereabove, and further rotation of said disc being effective for removing said disc from supporting relation with said bottommost plate while remaining in supporting relation with the plate immediately thereabove, whereby to complete the separation of said bottommost plate from said stack.

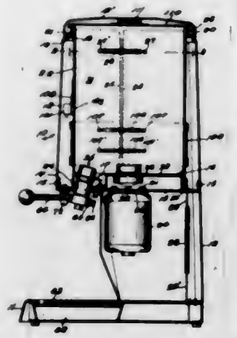
3,045,868
SINGLE LEVER DISPENSER CONTROL APPARATUS
Harold E. Carnagua and Christian W. Kruckeberg, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Sept. 9, 1959, Ser. No. 838,895
14 Claims. (Cl. 222—33)



1. A control mechanism for a liquid dispenser having a resettable register and dispensing control means, said control means having idle and dispensing positions, a resetting member movable between predetermined initial and reset positions, a spring connected to move said member to its reset position, a control element and a handle, both movable between initial and dispensing positions, means, including a lost motion device, connecting said handle with said control element, releasable means connecting said element with said resetting member to enable said handle to restore said element and member to their initial positions to load said spring upon return of the handle from its dispensing position to its initial position, a latch for holdng said element and thereby, said member, in their initial positions against the action of said spring, means operable by said handle, upon movement thereof from its initial position to a position, intermediate its initial and dispensing positions, determined by said lost motion device and said latched element, to release said releasable means, to free said member from said control element for resetting movement by said spring, means operable by said member, substantially at said reset position so as to free said element and handle for movement to their dispensing positions, for disabling said latch, power means, and means connected for operation by said power means, upon disabling of said latch, for moving said element, control means and handle to their respective dispensing positions.

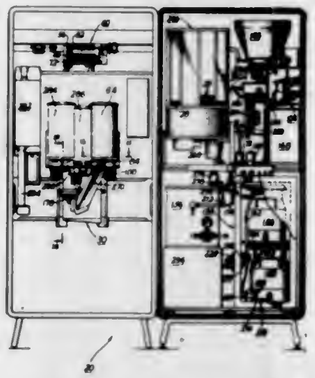
3,045,869
BEVERAGE DISPENSING APPARATUS AND METHOD
Joseph J. Rodth, Swansea, Frederick J. Price, Jr., Saugus, and Warren E. Dexter, Raynham, Mass., assignors to The Dane Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Dec. 17, 1958, Ser. No. 781,164
13 Claims. (Cl. 222—39)

1. A hot beverage dispenser comprising: a base, a removable pot for said beverage mounted on said base, agitator means for storing said beverage in said pot in a circular path, means for heating said pot and beverage including a heating coil of relatively low electrical resistance, alarm means associated with said coil, said alarm means having realtively high electrical resistance and being connected in series with said heating coil, switch means connected in parallel with said alarm means and, when closed,



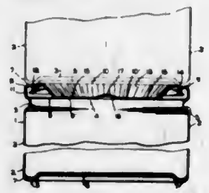
shunting said alarm means whereby said heater is operated effectively only when said switch is closed, and mechanism for opening said switch when said agitator is not so stirring said beverage or when the level of said beverage in said pot while being so stirred falls below a predetermined level.

3,045,870
HOT BEVERAGE VENDER
William Danziger, Franklin Square, Charles D. Rush, Valley Stream, and Joseph Gold, Brooklyn, N.Y., assignors to Continental Vending Machine Corp., Westbury, N.Y., a corporation of New York
Filed Dec. 2, 1957, Ser. No. 700,005
17 Claims. (Cl. 222—70)



1. In a beverage dispensing machine wherein a receptacle is automatically filled with a quantity of beverage including an amount of a mixing ingredient, apparatus for feeding a preset amount of said ingredient into said receptacle comprising, in combination, storage means for holding a supply of said ingredient, outlet means for carrying said ingredient from said storage means to the beverage receptacle, flow control means for said outlet means and arranged when activated to cause a discrete amount of said ingredient to flow into said receptacle, said flow control means including a manually-operable control shaft rotatable throughout a range of positions and arranged to set the amount of said ingredient in accordance with its position, an offset finger member secured to said shaft to rotate therewith, and a resetting mechanism including a V-shaped scoop engageable with said finger member and movable to rotate said finger member and said control shaft back to a predetermined normal position after the preset amount of ingredient has been deposited in the receptacle.

3,045,871
NESTABLE DISPENSING CONTAINER
Henry G. Henrickson, Mount Prospect, Ill., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Sept. 6, 1957, Ser. No. 682,384
4 Claims. (Cl. 222—143)



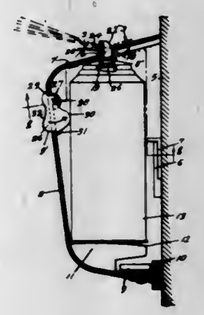
1. As an article of manufacture, a nestable dispensing container of the type described comprising the combination of an upstanding wall, bottom and top, the container bottom being integrally formed with said wall and including a centrally disposed recess encompassed by a ribbed portion, the container wall having an inwardly directed ledge located adjacent the top marginal edge of said wall with said top edge of said wall terminating in an inwardly directed flange, said container top comprising a lid supportingly mounted on said ledge and a cap rotatably mounted on said lid, said cap also being provided with an outwardly curved portion, said lid including an upstanding wall section which terminates in an inwardly curved outer lip, said lid wall section and lip interlockingly engaging the wall and flange of the container respectively, the inwardly curved outer lip on said lid also engaging the outwardly curved portion of the cap and holding the cap in firm but rotatable engagement therewith and a finger engaging raised element on said cap, which protrudes above the top edge of said wall and the flange thereon, whereby, when one container is nested upon another container having similar characteristics the finger engaging raised element on the cap of the lowermost container will be interlockingly and nestingly received within the recess in the bottom of the topmost container and the ribbed portion on the bottom of the topmost container will rest on the inwardly directed flange on the top edge of the lowermost container.

3,045,872
LIQUID DISPENSER
John J. Hronas, Greentree, and Charles T. Roland, Bethel Borough, Pa., assignors to Hagan Chemicals & Controls, Inc., a corporation of Pennsylvania
Filed Oct. 21, 1959, Ser. No. 847,712
1 Claim. (Cl. 222—146)



A dispenser for liquid detergents and rinse-aid compositions adapted to be placed in a hot water dishwasher to dispense liquids into said dishwasher, comprising (*a*) an open reservoir having a peripheral lip attached thereto and spaced therefrom; (*b*) an airtight rigid container body having an opening adapted to receive said reservoir and peripherally contact said peripheral lip; (*c*) a container closure adapted to seal the opening of said container body in airtight relation to said peripheral lip and said container body; and (*d*) a tube mounted on and adapted to pass through said closure, said tube having an opening within said reservoir and an opening without said closure, whereby the interior of the tube is subject to no pressure influences other than through said openings, so that, when the container body is heated by hot water and gases in the dishwasher, the expansion of air and heating of the liquid in the dispenser will cause liquid in the reservoir to be forced up the tube and into the dishwasher in a predetermined amount dependent upon the depth to which the tube extends into the reservoir.

3,045,873
WALL RECEPTACLE FOR AN AEROSOL BOMB
Richard W. Ryan, 1006 E. 36th St., Brooklyn 10, N.Y.
Filed Feb. 4, 1960, Ser. No. 6,713
3 Claims. (Cl. 222—162)



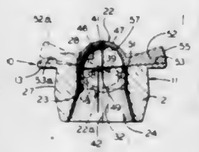
3. In combination, a wall receptacle having an open sided housing, a bracket support for said housing, said housing including top, bottom, and front walls, said top wall having portions defining a centrally disposed opening therein, the opposite sides of the opening being in parallel relation, one end of the opening being arcuately curved and a lug on said top wall extending into the opening at the opposite end between the opposite sides thereof, an aerosol bomb removably positioned in said housing and having a tiltable dispensing valve in the outlet opening thereof and a discharge nozzle on the dispensing valve, said discharge nozzle positioned in the opening in the top of said housing and including parallel opposite side portions and an arcuately curved end portion complementary to the opposite sides and arcuately curved end of the opening in the top wall of said housing, the end portion of said discharge nozzle opposite the arcuately curved end including portions defining a groove longitudinally thereof and in which said lug is disposed when the nozzle is positioned in the opening in said top wall to preclude rotative movement thereof, portions of said front wall defining an elongated opening therein adjacent said top wall, a lever pivotally mounted on said front wall and having a portion thereof extending through said opening and another portion in engagement with the aerosol bomb in said housing, and said lever pivotally movable to tilt the aerosol bomb whereby the dispensing valve is opened to allow a discharge of material through said discharge nozzle.

3,045,874
AIR EXPANSION DISPENSER WITH METERING MEANS
Henry Wolf Kogan, Oak Park, and Thomas Edmund Noakes, Detroit, Mich., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,411
9 Claims. (Cl. 222—282)



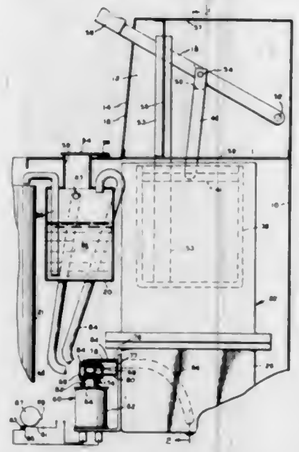
1. The combination comprising at least one liquid reservoir; a discharge conduit leading from the liquid contents of said reservoir; a contained gas in contact with said liquid contents; and pump means to displace said contained gas to in turn displace said liquid contents to dispense a portion thereof out of the discharge conduit; said pump means comprising an expansible gas chamber in contact with the contained gas; said expansible gas chamber being expandable to a predetermined size; means to thermally expand the gas in said chamber to cause chamber expansion with resultant displacement of the contained gas; and means responsive to a given chamber expansion to selectively vent the contained gas to atmosphere during a portion of the pump gas chamber expansion to permit metering the amount of liquid contents dispensed.

3,045,875
CLOSURE DEVICE FOR DISPENSING PILLS AND CAPSULES FROM BOTTLES
George T. Johannesen, Sr., Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
Filed July 17, 1958, Ser. No. 749,086
4 Claims. (Cl. 222—364)



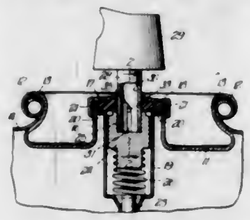
1. A closure device for an article container having a mouth, comprising: a body member engageable with said container around said mouth, said body member having a passageway therethrough communicating with said mouth and having a portion of circular cross section near the outer end thereof, said portion of said passageway having an annular segment near the outer end thereof; a hemispherical shell having an annular edge disposed within and snugly embraceable by said annular segment, at least one of said shell and body member being formed of distortable resilient material and said shell having an outside normal diameter slightly larger than the diameter of said circular portion; pivot means on said shell and the wall of said circular portion rotatably supporting said shell for movement through an angle in excess of 120° about an axis extending between substantially diametrically opposite points on the edge of said shell and substantially diametrically opposite points in said circular portion, said axis being slightly offset from the center of said shell in a direction parallel with the plane defined by the edge of the shell, and in an amount approximately equal to the difference between said diameters of the shell and the circular portion, whereby movement of said shell into a closed position effects a sealing engagement between the annular edge of said shell and the annular segment of said circular portion; and means on said shell for effecting said pivotal movement thereof.

3,045,876
LIQUID DISPENSER
Vito V. Marchi, Redwood City, Calif., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 11, 1960, Ser. No. 1,480
7 Claims. (Cl. 222—386)



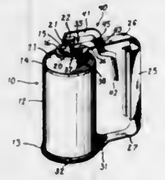
1. A liquid dispenser comprising a liquid reservoir having an outlet for dispensing liquids, and an inlet for admitting gas pressure to the liquid to develop a pumping pressure thereon; a gas pump for supplying gas at superatmospheric pressure to the reservoir to dispense liquid therefrom; conduit means between the pump and reservoir inlet for applying the pump pressure to the reservoir liquid; and means including a valve in said conduit means for controlling the time of application of the gas pressure to the liquid in the reservoir so as to control the time of liquid dispensing; said gas pump including a movable pumping wall, a manually settable thrust means, and a lost motion spring means between the pumping wall and thrust means whereby (1) when the valve is closed movement of the thrust means is effective to load the spring means without movement of the pumping wall, and (2) when the valve is opened the loaded spring means drives the pumping wall on a pumping stroke.

3,045,877
AEROSOL DISPENSER VALVE
Edward H. Green, % Newman-Green Inc., 151 Insterstate Road, Addison, Ill.
Filed July 1, 1960, Ser. No. 40,208
2 Claims. (Cl. 222—394)



1. In an aerosol dispenser valve of the type which is characterized by a sealing gasket of resilient material having a central aperture, a valve member beneath the gasket having a centrally located upwardly opening socket of cylindrical configuration coaxially aligned with said aperture and the upper end surface of said valve member surrounding said socket defining an annular rim, a spring normally urging said valve member upwardly to seal said annular rim against the underside of the gasket surrounding said aperture, a removable spray head having a depending hollow stem of cylindrical exterior configuration extending downwardly from above the gasket through the aperture in slidable but peripherally sealed engagement with said aperture, said stem having its lower portion seated in the socket in a sealed engagement therewith but removable therefrom, the lower portion of the stem having a vertically extending slot opening to the bottom end of the stem of a vertical length many times greater than its width, and open along its entire length to the exterior of the stem with the upper portion extending part way into the gasket above the said annular rim, said spray head being arranged for only vertical reciprocatory movement together with said valve member against said spring to unseat said rim and permit aersol product to pass into the upper portion of the slot above said rim and thence by way of said slot into said hollow stem; the improvement which comprises providing in said upper portion of said slot a web extending transversely of the slot and recessed away from said exterior of the stem to permit access from that open portion of the slot above said rim, past the web to the remainder of said slot, and the remainder of the slot being open clean through to the hollow of the stem, said web serving as a spacing strut to oppose closing of the upper end of the slot.

3,045,878
OPERATING HANDLE FOR AEROSOL CONTAINERS
William F. Blanford and Charles A. Dempsey, Dayton, Ohio, assignors to Aeroplast Corporation, Dayton, Ohio, a corporation of Ohio
Filed Feb. 2, 1959, Ser. No. 790,422
1 Claim. (Cl. 222—473)



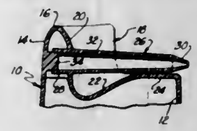
An operating handle for an aerosol container of the type having a finger pressure dispensing valve button in the top and a crimped rim surrounding such valve, comprising a generally U-shaped sheet metal handle member having a central gripping portion and upper and lower generally flat integral arms extending forwardly from opposite ends of said gripping portion and generally parallel to each other, said arms being resiliently deflectable between a released position which is less than the distance between the base of such container and said crimped rim thereof and an opened position providing for the insertion and removal of such container, said lower arm forming an integral container base receiving platform with opposite stops proportioned to receive said base for resisting lateral movement of said container, a container top gripping claw forming an integral part of said upper arm and having a central turned-down finger proportioned to be received over said rim in said open position of said arms and to engage said rim at the top and inside thereof in said released position, said claw further having a pair of outer fingers positioned on either side of said central finger and extending downwardly, outwardly and forwardly of said central finger and proportioned to engage said rim exteriorly thereof for preventing lateral movement of said container at said top with inwardly directed forces leaving said crimped rim substantially free of forces tending to open the same, means in said upper arm defining a trigger receiving slit, and a trigger pivotally received on said upper arm extending through said slit having an operating portion portion extending generally parallel to said upper arm with a button operator engageable with said push button and a lower finger engaging portion extending downwardly adjacent said central gripping portion.

3,045,879
PLASTIC BOTTLE POURER
John J. Daly, 438 W. 116th St., New York, N.Y.
Filed Oct. 24, 1960, Ser. No. 64,325
1 Claim. (Cl. 222—482)



A pourer comprising an upper circular hollow portion, a lower cylindrical bottle neck stopper portion and a connecting structure joining the upper and lower portions, said upper portion having juxtaposed walls closely spaced from each other, and merging into a solid neck portion, inwardly extending peripheral flanges on the wall contacting each other, the flanges on one side of the upper portion being enlarged and having a passage therethrough, said neck portion having a passage communicating with said latter passage, a pouring spout on said walls communicating with the passage in the enlargement on the flanges, said bottle stopper portion comprising a tapered tubular body portion, said bottle stopper portion having a central pouring opening, said connecting structure comprising a flat base wall having a passage communicating with the passage in the neck portion and communicating with the pouring opening in the bottle stopper portion and an air passage connecting the atmosphere with the central pouring opening in the bottle stopper portion, one of said circular walls having an outwardly extending flange around its periphery, said one circular wall having an arcuate shaped slot in its periphery inwardly of the outwardly extending flange and outwardly of said one circular wall for removably receiving a disk bearing advertising indicia in juxtaposition against the outer surface of said one circular wall.

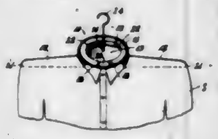
3,045,880
CLOSURE WITH SPOUT SECURABLE IN NON-USE POSITION
Edward G. Akers, 7652 Coolgrove Ave., Downey, Calif., assignor, by mesne assignments, of thirty-two and one-third percent to Woodrow S. Wilson, thirty-two and one-third percent to Edward G. Akers, thirty-two and one-third percent to Dell M. Malick, and three percent to Edward D. O'Brian
Filed July 6, 1959, Ser. No. 825,176
5 Claims. (Cl. 222—536)



1. A closure which includes: a rigid peripheral skirt; a rigid, upstanding back wall attached to said skirt so as

to extend therefrom; a flexible diaphragm attached to the edges of said wall remote from said skirt and to said skirt so as to cover said peripheral portion; a rigid spout held by said diaphragm so as to extend therefrom, said spout being spaced from said wall and said peripheral portion in an open position and including ends located on opposite sides of said diaphragm, said spout having a tapered passage formed therein extending between said ends, said passage being larger at the end of said spout adjacent to said wall than at the other end of said spout; a plug having a tapered exterior wall corresponding to the dimensions of said end of said spout adjacent to said wall mounted on said wall so as to extend therefrom toward said diaphragm and toward said end of said spout, said spout being capable of being moved from a normal open position in which said passage is open between the sides of said diaphragm to a closed position extending generally along said skirt, said plug fitting within said passage in said closed position so as to form a seal with the interior of said passage and so as to hold said spout against movement.

3,045,881
SHIRT HANGER
Eric E. Lilya, 1338 Cheshire St., Cheshire, Conn.
Filed July 13, 1959, Ser. No. 826,680
3 Claims. (Cl. 223—92)



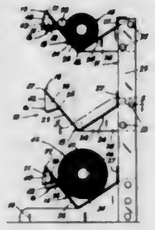
1. A shirt hanger comprising in combination an annular split neck portion, a pair of opposed side shoulder portions, integral with and extending outwardly from the opposite sides of said neck portion, the upper end of said neck portion being downwardly inclined from back to front to follow the neck line of a shirt collar, and means to expand said annular neck portion to snugly fit within a collar of a shirt buttoned on the hanger, the neck portion of said hanger being constructed of resilient material so that it will expand against said collar throughout the periphery thereof, so as to permit said neck portion to fit various sizes of shirt collars, the shoulder portions of said hanger being shaped to curve gently around the back of said neck portion from end to end to follow the natural curvature of the human back.

3,045,882
APPAREL HANGER
Henry F. Marrocco, 81 Woodlawn Ave., Clifton, N.J.
Filed Feb. 3, 1960, Ser. No. 11,401
5 Claims. (Cl. 223—95)



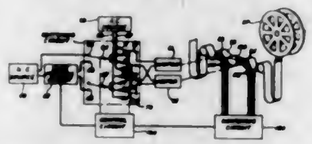
1. An apparel hanger comprising an elongate generally flat rigid body having guide channels on the opposite sides thereof, a hook rigidly fixed directly to said body at the center thereof to suspend the body, a pair of rods disposed in said guide channels, each rod having a plate secured at its inner end, each plate provided with an opening, the rods slidably disposed in the openings thereby slidably connecting said rods on opposite sides of the body, and resilient means between the plates reacting on said rods and extending parallel thereto to yieldingly oppose relative movement of said rods in one direction.

3,045,883
ROLL DISPENSER
Mark B. Andrews and William J. Burke, St. Louis, Mo., assignors to Roll-O-Sheets, Inc., St. Louis, Mo., a corporation of Missouri
Filed Aug. 5, 1959, Ser. No. 831,866
2 Claims. (Cl. 225—90)



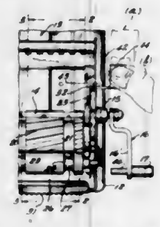
1. A roll dispenser for dispensing transversely scored material in the form of sheets, said dispenser comprising a trough having converging front and rear walls for receiving a roll of material in web form, said trough having means elevated with respect to the trough for piercing the web along a transverse scoring as the web is pulled out of the trough and across the piercing means, said piercing means comprising a pair of flanged extensions of said front wall having front edges convergng to a point intermediate the ends of said trough, and said flanged extensions providing a rest for the web portion connected to the roll while leaving the end exposed for ready handling in the next sheet tearing operation, said pair of flanged extensions being oppositely disposed and having flat surfaces connected integrally to the front wall of the trough and converging toward the point of said piercing means, said flange extensions forming a continuous surface extension with the trough and said flange extension forming an obtuse angle with the front wall of the trough.

3,045,884
TAPE DRIVE CONTROL SYSTEM
Frederick G. Buhrendorf, Westfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 4, 1959, Ser. No. 818,033
5 Claims. (Cl. 226—50)



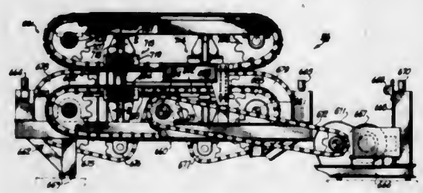
3. In a tape drive control system, a tape, a source of direct current, a source of alternating current, a first motor having first and second field windings, a second motor having first and second field windings, means connecting said source of alternating current to said field windings of said first motor, means connecting said source of direct current to said first field winding of said second motor, switching means connected to said first and second field windings of said second motor, means controlled by said switching means for applying a predetermined integral number of cycles of current varying as a cosine function to said first winding of said second motor and for concurrently applying a predetermined integral number of cycles of current varying as a sine function to said second winding of said second motor, means for selectively coupling one of said first and second motors to said tape, and control means for disconnecting said source of direct current from said first field winding of said second motor and substantially simultaneously operating said switching means when said tape is coupled to said second motor.

3,045,885
STOP MECHANISM FOR ROLL TOWEL DISPENSERS
Bernard A. Dahlin and Joseph A. Rademacher, Green Bay, and Edwin A. Filipowicz, Milwaukee, Wis., assignors to Fort Howard Paper Company, Green Bay, Wis., a corporation of Wisconsin
Filed Oct. 23, 1959, Ser. No. 848,396
6 Claims. (Cl. 226—130)



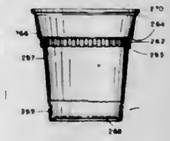
1. In a roll towel dispenser having a crankshaft equipped with an external crank and having means responsive to rotation of said crankshaft for dispensing towelling, stop means movably mounted adjacent said crankshaft, means on said crankshaft positioned for engagement with said stop means when the latter is in a first position, an externally accessible trigger connected to said stop means and independent of said crank for moving the stop means to releasing position, and means for returning said stop means to said first position, said trigger being located adjacent said crank, and said crank having means positioned to normally just clear said trigger when the crank is rotated but to hit a finger on the trigger if it is attempted to retain the finger on the trigger during rotation of the crank.

3,045,886
APPARATUS FOR HANDLING A CONTINUOUS RAIL
Norman L. Francis, Birmingham, Ala., Marvin G. Thomson, Chicago, Ill., and Albert Musschoot, Louisville, Ky., assignors to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,774
15 Claims. (Cl. 226—172)



8. In an apparatus for moving an elongated rail the combination of a drive tread acting upon the underside of the rail base, a squeeze tread acting upon the top of the rail to urge the rail against the drive tread, each of said treads being formed by a pair of parallel chains interconnected by a plurality of metal shoes, and a facing plate secured to each of the metal shoes of the squeeze tread and formed of a material which is softer than the rail in order to prevent damaging the top running surface of the rail and to increase the traction between the squeeze tread and the rail.

3,045,887
THIN WALLED PLASTIC CONTAINER
James R. Caine, 797 Crestview Ave., Akron, Ohio
Filed Jan. 28, 1958, Ser. No. 711,739
5 Claims. (Cl. 229—1.5)



1. A thin-walled plastic cup-like container of the type which would normally be gripped by hand comprising a bottom and annular flexible wall means extending upwardly from the periphery of said bottom and terminating in an open top, said annular wall means including a lower annular section adjacent said bottom, an upper annular section defining said open top and a central annular section between said upper and lower sections constituting a substantial part of said wall means, said upper section having a wall thickness and cross-sectional configuration producing a resistance to inward deflection not substantially greater than that sufficient to hold its shape when manually handled, said lower section and said bottom having a wall thickness and cross-sectional configuration providing a resistance to inward deflection not substantially greater than that sufficient to hold their shape when the container is filled and either resting on a flat surface or lifted therefrom, said central section adjacent said lower section gradually decreasing in wall thickness upwardly from said lower section from a thickness generally equal to the thickness of said lower section to a minimum thickness, and adjacent said upper section gradually decreasing in wall thickness downwardly from said upper section from a thickness generally equal to the thickness of said upper section to said minimum thickness, said minimum thickness being of such dimension that a planar-wall container of corresponding capacity having a uniform wall thickness of such dimension would be relatively unstable when manually handled in a liquid-filled condition, said central section including the area of said wall means which would normally be grasped when said container is manually handled and having an annular portion within such area shaped without increase of thickness so as to provide a resistance to inward deflection greater than that provided by a corresponding portion of said minimum thickness which is planar in section.

3,045,888
CONTAINER
Homer W. Forrer, East Point, Ga., assignor, by mesne assignments, to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Dec. 1, 1959, Ser. No. 856,506
5 Claims. (Cl. 229—7)

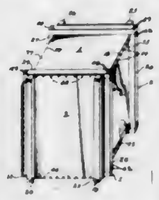
1. A liquid container comprising a plurality of adjoined side walls defining a tubular structure, a liquid impervious heat sealable coating on the inner surfaces of said side walls, a closure panel having a single flange along one edge and a double flange along an adjacent edge, a liquid impervious heat sealable coating on the inner surfaces of said closure panel and flanges, said double flange being arranged to receive and envelop an end edge of one of the container side walls and being secured thereto by said heat sealable coatings, an end

flange formed along and end of another of said side walls adjacent said end of said one side wall, said end flange being folded inwardly at least partially to envelop said single flange on said closure panel and being secured thereto by said heat sealable coatings and being slightly longer than the width of the adjacent part of the adja-



cent side wall so that an end edge thereof engages the inner surface of said double flange at the adjacent end thereof to impart an effective and continuous sealing pressure thereto thereby to prevent liquid leakage at the corner defined by the junction of said one edge and said adjacent edge of said closure panel.

3,045,889
CONTAINER
Arthur L. Whiton, Evanston, Ill., assignor to Chicago Mill and Lumber Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 22, 1960, Ser. No. 57,766
3 Claims. (Cl. 229—41)



1. A collapsible and drivable fastener assembled container comprising,

a fibrous sheet material, tubular and collapsible main body having a rectangular open end with two opposed side walls having ends which are longer and project beyond the ends of the other and shorter two side walls at said open end,

a rectangular fibrous sheet material end closure having two outer cleats adjacent two opposed edges thereof,

said outer cleats being adapted to be embraced by, and secured by drivable fasteners through,

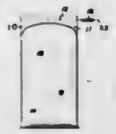
the longer two ends of said tubular main body,

said end closure having two inner braces adjacent its other two edges,

and integral flaps along only two opposed edges thereof,

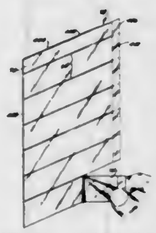
said flaps being bent over along lines parallel to and close to the outer sides of said inner braces to be adapted to directly engage and cover the otherwise exposed and tearable shorter free ends of said tubular main body and to be secured by drivable fasteners penetrating through said flaps, then through the shorter ends of said tubular body and then into said inner braces of said end closure.

3,045,890
COMBINATION CLOSURE AND OPENER ON STITCHED BAGS
Elmer C. Swanson, Larchwood, Iowa
Filed July 5, 1960, Ser. No. 40,765
1 Claim. (Cl. 229—66)



A bag closure and opening device comprising a pair of stitching cords stitched along a normally open end of a bag, one of said cords passing through the bag plies and including integral loops, the other of said cords looped engaging about and through said integral loops consecutively and thus continuing successively and retaining the same, a stretchable member attached at the end of said continued stitching and firmly retaining the integral loops of said cord of the stitching thus formed, said stretchable member including a tightly restricted extra opening, the other of said cords being looped and being engaged and retained in said tightly restricted extra opening, a portion of said stretchable member being positioned adjacently to one of the bag plies at a corner thereof.

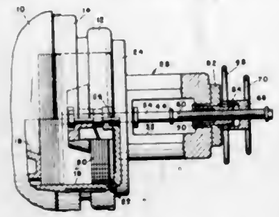
3,045,891
CONTINUOUS ENVELOPES
Felix Alvarez, Pasadena, Calif., assignor to A ABA Cellophane Products Corporation
Filed Sept. 11, 1959, Ser. No. 839,330
1 Claim. (Cl. 229—69)



An array of compartments comprising elongated overlying and underlying fusible sheets, a series of narrow parallel fused seals extending transversely the full width of said sheets and dividing said sheets into multiple compartments, each seal including closely spaced perforations which together extend the length thereof, the portions of the sheets defining the periphery of each perforation being fused together throughout, wherein said seal is formed by the merging of the fused peripheral seals of adjacent perforations.

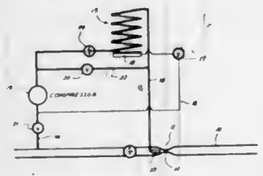
3,045,892
HYDRAULIC VARIABLE VOLUME CLEARANCE POCKET DEVICE
Kenneth H. White, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 23, 1959, Ser. No. 841,841
4 Claims. (Cl. 230—21)

1. An adjusting and holding means for a motor operated variable clearance capacity device when its motor is removed and having a cylinder providing a pocket, a moveable piston in the pocket to adjust the pocket capacity and having a piston rod member extending out of the pocket with means for connecting to the motor, and an adapter connected to the cylinder for mounting the motor; comprising a threaded member connected to the piston rod member motor connecting means, a nut holder mounted on the motor adapter, and a nut rotatably mounted in the nut holder and threadedly engaging the threaded mem-



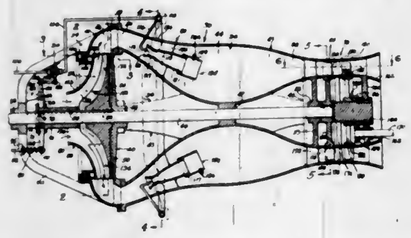
ber for moving the piston when such nut is rotated, said nut having means engaging both ends of the nut holder to prevent axial movement of the nut.

3,045,893
COMPRESSOR SYSTEM
Farrile S. Young, Houston, Tex., assignor to Gulf Interstate Company, Houston, Tex., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,022
13 Claims. (Cl. 230—95)



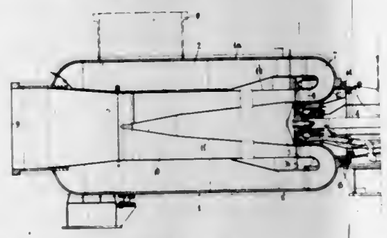
1. Apparatus for increasing pressure in a gas transmission line comprising, a gas transmission line, a jet compressor in the line, a branch conduit receiving gas from the line and feeding the gas to the jet compressor, a compressor in the branch conduit for maintaining positive flow through the conduit in one direction, and heater means for heating the gas in the branch conduit whereby the gas fed to the jet compressor through said conduit is at a greater temperature and pressure than line temperature and pressure.

3,045,894
GAS TURBINE ENGINE
Frederick W. Ross, 719 N. Melborn Ave., Dearborn, Mich.
Filed May 22, 1957, Ser. No. 660,912
3 Claims. (Cl. 230—114)



1. A variable flow compressor comprising a hollow housing structure containing a compressor chamber and an outlet chamber disposed outwardly of and in communication with said compressor chamber, a compressor driving shaft rotatably mounted in said housing structure, a centrifugal type air compressor rotor in said compressor chamber connected in driven relationship to said shaft and having an air passageway therethrough communicating with said outlet chamber, said rotor including a pair of rotor halves drivingly connected to one another for simultaneous rotation and having vanes extending toward one another in overlapping relationship with said air passageway disposed therebetween, mechanism for moving one rotor half axially relatively to the other rotor half for varying the cross-sectional area of the air passageway therebetween whereby to vary the mass flow rate of the gas passing through said rotor air passageway, and gas leakage prevention means comprising a non-rotatory cover wall connected to said movable rotor half for axial travel therewith and a flexible annular bellows structure connected at one end to said housing structure and at its other end to the non-rotatory rotor cover wall.

3,045,895
GAS CIRCULATORY MEANS
John R. Bolter and Richard H. Beaton, Newcastle-upon-Tyne, England, assignors to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed Jan. 22, 1958, Ser. No. 710,453
Claims priority, application Great Britain Jan. 30, 1957
1 Claim. (Cl. 230—120)



A gas circulatory means which comprise a chamber having an outer casing and an inner casing, the inner casing being spaced from the outer casing, an axial flow gas circulator located in the inner casing at one end thereof, and having a rotor, housing therefor and drive shaft for supporting and rotating the rotor, the said circulator passing through an opening in one end of the chamber and having means on a face of its housing forming a seal with the face on the wall of the said chamber surrounding the said opening, the circulator rotor having a frusto-conical face formed thereon which is capable of being moved into sealing contact with a similarly shaped face on the circulator housing by moving the said rotor in an axial direction when the circulator is at rest and the shaft having a collar and the rotor housing having a sealing ring cooperating therewith to form a seal when the rotor is so moved in an axial direction, an outlet for gas at the other end of the said inner casing, an inlet for gas to said space between inner and outer casing, and a flow path for the gas from the aforesaid space to the end of the chamber in which the circulator is located and thence in a reverse direction through the circulator and the inner casing to said outlet.

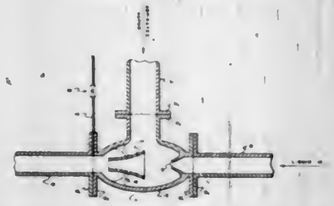
3,045,896
PUMP
Donald R. Compton, Belleville, Ill., and John P. Pratzki, St. Louis, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Nov. 12, 1959, Ser. No. 852,465
11 Claims. (Cl. 230—188)



1. A double acting booster pump adapted to be connected between a source of vacuum and a vacuum op-

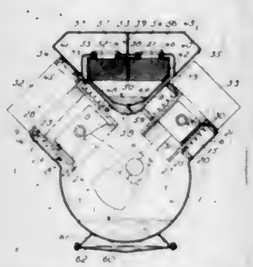
erated device, said pump comprising a housing, a piston slidably mounted within said housing and forming therewith a different pumping chamber on each side of said piston, a piston rod connected to said piston for providing movement of said piston within said housing to a retracted position, means to return said piston from said retracted position for pumping operation, means adapted to be connected to said vacuum operated device and forming an inlet to said housing, said housing including a passage from said inlet to said different pumping chambers, a first inlet valve closing said passage to one of said pumping chambers, a second inlet valve closing said passage to the other one of said pumping chambers, conduit means adapted to be connected to said source of vacuum and forming an outlet to said one pumping chamber, means forming an outlet passage from said other one pumping chamber, said piston rod having an air bleed passage formed with an opening extending into said other one pumping chamber upon movement of said piston into said retracted position.

3,045,897
VACUUM GENERATION
Bobby G. Wood, Pasadena, Tex., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,411
1 Claim. (Cl. 230—232)



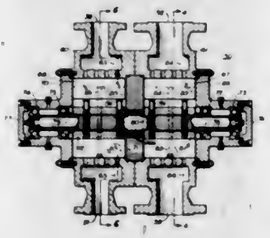
In the method of generation of vacuum, for inducing transport of liquids or the like, by an ejector operation, said method employing a motivating liquid comprising a volatile hydrocarbon capable of partially vaporizing at the vacuum generated in the ejector body, the improvement comprising injecting a non-condensible gas into the fluid stream discharged from the ejector, in proportions of from about 0.4 to 5 cubic feet per 10 gallons of the motivating liquid, thereby substantially decreasing the noise generally accompanying said vacuum generation.

3,045,898
WELDED SHEET METAL CASINGS
Karl Erik Hilfing, Gullanget, and Nils Lindell, Stockholm, Sweden, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed Jan. 7, 1957, Ser. No. 632,700
9 Claims. (Cl. 230—234)



2. A welded sheet metal casing for a reciprocating compressor having a crank case, cylinder frames in V-arrangement on said crank case, cylinder liners in said cylinder frames, spaced top and bottom plates in said frames perpendicular to the axis of said liners, front end walls of the crank case and the cylinder frames formed by a first sheet metal piece, rear end walls of the crank case and the cylinder frames formed by a second sheet metal piece, opposed inner walls of the cylinder frames and a top wall of the crank case formed by a third sheet metal piece, remote outer walls of the cylinder frames and side and bottom walls of the crank case formed by a fourth sheet metal piece, said top and bottom plates in the frames and said four sheet metal pieces being welded together to form a rigid unit.

3,045,899
MOTOR-COMPRESSOR UNIT
Joseph L. Maher and Richard F. Baker, Tulsa, Okla., assignors to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed June 5, 1958, Ser. No. 740,143
4 Claims. (Cl. 230—239)



1. A fluid pressure motor and compressor unit including;

a first drive shaft having,

(*a*) a cylindrical form,

(*b*) a shape for bearing support from one end,

(*c*) and a female spline on the other end;

a second driven shaft having,

(*a*) form, shape and female spline identical to that of the first drive shaft,

(*b*) and alignment with the first drive shaft in which the female splines are toward each other;

a third coupler shaft having,

(*a*) a cylindrical form.

(*b*) a shape for bearing support at its middle,

(*c*) a female spline on each end,

(*d*) and positional orientation between the first and second shafts and abutting both shafts so as to bring the female splines of each of the first two shafts into contiguous alignment with one of the female splines of this third coupler shaft;

a casing having a symmetrical cavity in which the shafts rotate;

a wall-partition within the cavity arranged to divide the casing into two cylindrical chambers of identical form through each of which one of the first two shafts extend;

a bearing-seal structure in the wall-parition receiving the middle of the third coupler shaft to support the shaft as the shaft turns with the female splines of the shaft extending away from the wall-partition;

a first bearing structure mounted in the wall of the casing and arranged to support the first drive shaft from the end remote from the coupler shaft;

a first cylindrical rotor journalled on the first drive shaft and extending from the wall-partition to the chamber wall opposite and having a male spline engaging the female splines of the drive and coupler shafts to couple the shafts together while the rotor is supported in the casing chamber between the coupler shaft adjacent the wall-partition and the first drive shaft at a point remote from the wall-partition;

a second bearing structure mounted in the wall of the casing and arranged to support the second driven shaft from the end remote from the coupler shaft;

a second cylindrical rotor journalled on the second driven shaft with a form identical to the first rotor and arranged to couple the driven and coupler shafts together in the same manner;

a plurality of vanes wherein,

(*a*) each vane is in the form of a flat plate,

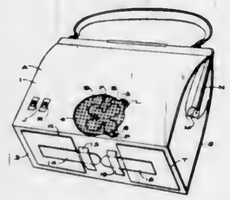
(*b*) each vane is disposed in a radially extended longitudinal slot of each of the identically formed cylindrical rotors,

(*c*) and each vane moves in its slot from the center of shaft-rotor rotation when the shaft rotates;

first connections into the first of the cylinder chambers through which is passed a first fluid to develop power in the chambers of the first cylinder between the vanes and against the vanes to rotate the shaft assembly;

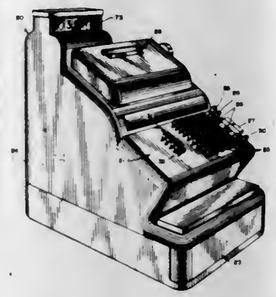
and second connections into a second of the cylinder chambers through which is passed a second fluid which is compressed in the chambers between the vanes as the shaft assembly is rotated by the power of the first cylinder.

3,045,900
LADY'S HANDBAG WITH FAN AND WARNING LIGHT
Otto Zekendorf, 423 E. 7th St., Los Angeles, Calif.
Filed Aug. 4, 1961, Ser. No. 129,444
1 Claim. (Cl. 230—241)



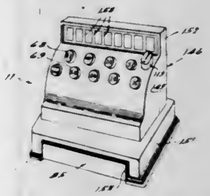
The combination with a lady's hand bag including opposite side walls, each wall having an opening therein aligned with the opening in the other wall; one of the side walls having a recess communicating with the opening therein; of a housing having walls of screening material, said housing being receivable in the interior of the hand bag and having screen side walls disposed adjacent to the inner surfaces of the side walls of the hand bag; whereby the openings in the side walls of the hand bag will be covered by screening material; a cylinder made of screening material and disposed in the housing so that the ends of the cylinder will be connected to the housing side walls and will register with the openings in the side walls of the hand bag; an electric fan mounted in the cylinder; a warning light mounted in the housing and disposed adjacent to the recess in the hand bag side wall; a source of electric current mounted in the housing; and switches for connecting the fan and warning light to the source of current; whereby a rotation of the fan will draw in air through an opening in the side wall of the hand bag and will force the air out through the opening in the other side wall for cooling a person having the hand bag; and an illumination of the warning light will cause the light rays therefrom to pass through the said recess in the hand bag side wall.

3,045,901
CHANGE-COMPUTING CASH REGISTER WITH FLAG CONCEALING MECHANISM
Ralph C. Allen, Holland, Mich., assignor to R. C. Allen Business Machines, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Sept. 2, 1958, Ser. No. 758,320
6 Claims. (Cl. 235—2)



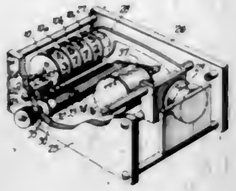
1. In a cash register of the itemizing type having a visual indicating mechanism and a keyboard, said keyboard having a plurality of banks of tabulating keys, a sub-total key, a total key, an amount tendered key, and a motor bar key, mechanisms responsive to the punching of said keys, an accumulator for accumulating and storing the itemized amounts, means for activating said visual indicating mechanism, means for subtracting an itemized amount from said accumulator responsive to punching of a pattern of tabulating keys and said amount tendered key, and thereafter said total key, and means responsive to punching of the amount tendered key to actuate said subtracting means and to disconnect said visual indicating activating means.

3,045,902
TOY CASH REGISTER
James E. Thomson, Jackson, Mich., assignor to Western Stamping Company, Jackson, Mich., a corporation of Michigan
Filed Jan. 25, 1960, Ser. No. 4,464
10 Claims. (Cl. 235—12)



1. In a toy cash register or the like, a housing, a drawer slidably mounted in the lower part of said housing, spring means urging said drawer to an open position, latch means for holding the drawer in a closed position, a plurality of indicators mounted in the upper part of said housing for movement between retracted and display positions, keys for each of said indicators, means responsive to movement of each key from a raised to a depressed position for moving its corresponding indicator to its display position and holding said indicator in such position, said drawer latch means being operative to hold said drawer in closed position during and after depression of each key, means operable independently of said keys for releasing said drawer latch means, and means responsive to return movement of said drawer to its closed position for returning said keys to their raised positions and said indicators to their retracted positions.

3,045,903
MAGNETIC DIAL READING APPARATUS
Howard M. Fleming, Jr., Basking Ridge, N.J., assignor, by mesne assignments, to Electro-Mechanical Research, Inc., Sarasota, Fla., a corporation of Connecticut
Filed July 8, 1958, Ser. No. 747,142
18 Claims. (Cl. 235—61)

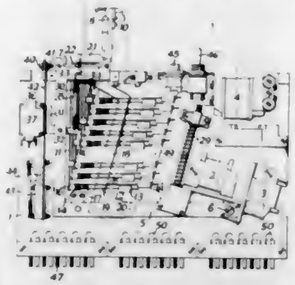


1. Counter apparatus comprising a rotatable member having a plurality of magnetically discontinuous areas spaced about the periphery thereof, said areas being arranged in a predetermined pattern, a read-out coil, a rotatable read-out member having means for successively altering the magnetic characteristics of the paths between a predetermined one of said areas and said coil and means for producing a magnetic field extending through said read-out member, said areas and said coil.

16. In measuring apparatus having a movable member movable in accordance with the value of a condition to be measured, a rotatable magnetic member rotatable by said movable member, said magnetic member having a group of spaced portions having magnetic characteristics different from the magnetic characteristics of the adjacent areas of said magnetic member, said portions being spaced from each other in a first predetermined direction and said magnetic characteristics of said portions of said group being selected in accordance with a predetermined code related to the position of said magnetic member, a rotatable read-out member mounted adjacent said magnetic member and having a group of spaced portions corresponding in number to at least the number of said spaced portions in said first mentioned group and having magnetic characteristics different from the magnetic characteristics of adjacent areas of said read-out member, said portions of said read-out member having a spacing in said first predetermined direction corresponding substantially to the spacing of said first mentioned portions in said first direction, the portions of one of said group also being spaced with respect to each other in a second predetermined direction extending transversely to said first predetermined direction, means for producing rotation of one of said magnetic and said read-out members and thereby causing said portions of said magnetic member and said portions of said read-out member to pass successively in close proximity to each other, and a read-out coil magnetically coupled to said portions.

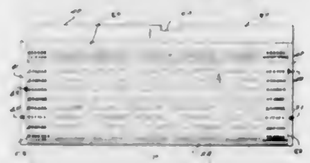
3,045,904
TAPE READERS AND THE LIKE
Harold Dodimead Gaite, Taplow, England, assignor to British Telecommunications Research Limited, Taplow, England
Filed May 11, 1959, Ser. No. 812,321
Claims priority, application Great Britain May 20, 1958
4 Claims. (Cl. 235—61.11)

1. In a tape reader for reading information stored on punched tape, a plurality of sets of substantially parallel sensing members spaced apart in parallel planes a distance equal to the distance moved by the tape between successive sensing operations, means for supporting said sensing members so as to be capable of longitudinal movement, a contact spring associated with each sensing member and operable due to the movement thereof, insulating means for supporting said contact springs, all the contact springs being substantially parallel and substantially at right angles to said sensing members in the plane of the set, contact bars co-operating with said contact springs and extending substantially at right angles to the planes of the sets of sensing members, said contact bars being



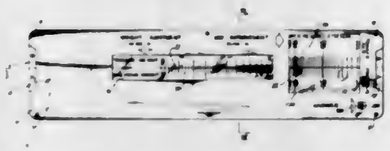
individual to the respective sensing members of a set but common to all said plurality of sets, and means for advancing the tape so as to present any particular item of information to said sets of sensing members in turn.

3,045,905
PUNCH CARD
George J. Tarasuk, 3454 Caniff, Hamtramck 12, Mich.
Filed May 21, 1959, Ser. No. 814,815
8 Claims. (Cl. 235—61.12)



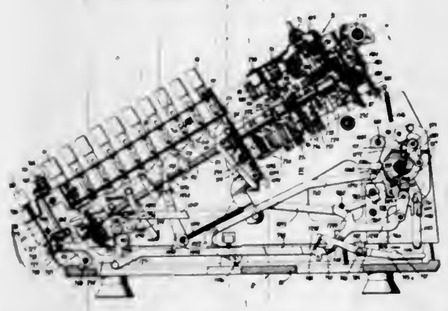
1. A punch card having a field provided with a plurality of horizontal rows, each of said rows having spaced locations thereon adapted to be selectively punched by a card user, said card having a pair of vertically extending margins on opposite sides of said field adjacent the side edges of said card, one of said margins having a prepunched hole therein disposed in alignment with one of the horizontal rows of said field, said one margin being unpunched in locations aligned with the majority of the other of said rows whereby said card may be sorted by electrically sensing the particular row with which said hole is aligned and thereby segregated from cards which no not have marginal holes in a like location.

3,045,906
CALCULATOR
Lawrence E. Burg, 7138 S. Coles, Chicago, Ill.
Filed Nov. 2, 1959, Ser. No. 850,365
5 Claims. (Cl. 235—70)



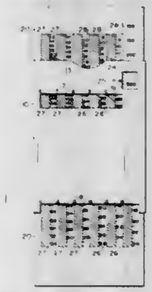
1. A calculator for determining racing time comprising a first movable member having a weight scale on one face graduated to indicate the weight carried by a race horse in a previous race, a second movable member having a weight scale on one face adjacent said one face of said first movable member graduated to indicate today's weight carried by the race horse, said first movable member having a track scale on the opposite face graduated in markings of different known race tracks in accord with speed potentials of the track and representative of a track used in today's race, said second movable member having a track scale on the opposite face adjacent the track scale of said first member and graduated in markings of different known race tracks in accord with speed potentials of the tracks and representative of a track used for said previous race, said first movable member having an age scale on said one face representative of age at a previous race and shifted longitudinally from said previous weight scale, a stationary member having an age scale thereon with graduation markings representative of age at said today's race with the scale positioned adjacent said age scale on said first movable member, index means on said stationary member, and a racing time change scale means on said first movable member graduated to indicate increase and decrease in racing time and positioned to be aligned with said index means.

3,045,907
CALCULATING MACHINE
Arthur J. Malavazos, Hayward, Calif., assignor to Friden, Inc., a corporation of California
Filed May 19, 1958, Ser. No. 736,091
18 Claims. (Cl. 235—73)



1. A calculating machine comprising ordinally arranged accumulator register wheels; a digitation means including ordinally arranged driving gears and intermediate gears selectively positionable with respect to their driving gears to enter a value determined by the relative position of said intermediate gears to their driving gears into said accumulator register wheels; means for connecting said accumulator wheels to the digitation means for additive or subtractive operation of the accumulator register wheels; a selection mechanism for positioning said intermediate gears; ordinally arranged counter register wheels; a counter actuating means normally operative to insert a value of "1" into a single order of said counter register wheels only and to effect tens-transfers between the respective orders of said counter register wheels; auxiliary counter actuators operative to insert a value of "1" into all orders of the counter register wheels subtractively; a plurality of ordinally arranged storage members connectable to the ordinally related intermediate gears; means for connecting said storage members to the ordinally related intermediate gears; a drive means for operating said machine through five cycles of operation of said digitation means; a cam on each of said accumulator register wheels, said cams having one extreme portion corresponding to a value of "0" and extending through an angle corresponding to the "0" value position of said wheel, an intermediate portion corresponding to a value of "1" and extending through an angle corresponding to the "1" value position of the wheel, and a second extreme portion corresponding to a value of "2" and extending through an angle corresponding to the "2" through "9" value positions of the wheel; a value cam on each of said counter register wheels, said cams having one extreme portion corresponding to a value of "0" and extending through an angle corresponding to the "0" position of the wheel, an intermediate portion corresponding to a value of "1" and extending through an angle corresponding to the "1" through "5" value positions of the wheel, and a second extreme portion corresponding to a value of "2" and extending through an angle corresponding to the "6" through "9" value positions of the wheel; a sensing mechanism selectively operable to sense either the accumulator cams or the counter cams and operative to set the coordinal selection mechanism to values corresponding to "0," "1" or "2"; means for operating the sensing mechanism to sense either the counter cams or the accumulator cams; a first control key operative to enable said storage member connecting means and thereby connect the storage members to the coordinal intermediate gears, to operate the means for operating the sensing means to sense the accumulator dials, to enable said accumulator wheel connecting means to connect the digitation means to the accumulator register wheels for subtractive operation, and to operate said drive means; and a second control key operative to enable said storage member connecting means and thereby connect said storage members to the coordinal intermediate gears, to operate the means for operating the sensing mechanism to sense the counter cams, to operate said auxiliary counter actuators to operate all of said counter dials subtractively with each cycle of machine operation, and to operate said drive means.

3,045,908
SLIDE CALCULATOR
Edward F. Donovan, 37 Calton Road, New Rochelle, N.Y.
Filed Feb. 24, 1959, Ser. No. 794,896
8 Claims. (Cl. 235—89)

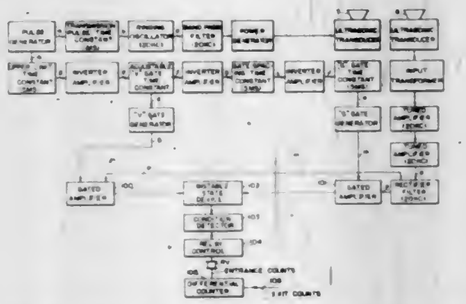


1. A slide calculator comprising, in combination, an element of sheet material having at least one elongated slot formed crosswise in it, separated horizontal scales marked off in divisions of their length along a horizontal edge of each elongated slot, a slide mounted to move lengthwise below said element, a vertical scale on said slide so that said slide may be moved a given amount for a given value on said vertical scale, columns of figures on said slide appearing in each elongated slot in said element with each column of figures appearing in the elongated slot below and to one side of one of said separated horizontal scales, and columns of sloping lines on said slide appearing in each elongated slot below said separated horizontal scales, said sloping lines allowing interpolation from any point on said horizontal scales to a value on one of said columns of figures.

3,045,909
PULSED ULTRASONIC DETECTOR
John H. Auer, Jr., Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed June 15, 1959, Ser. No. 820,325
11 Claims. (Cl. 235—92)

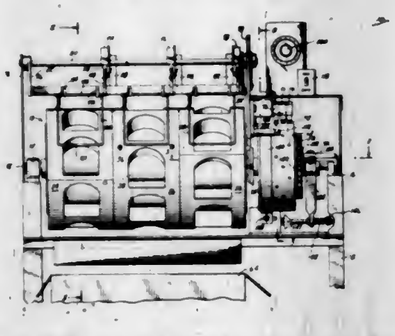
1. Apparatus for counting vehicles as each passes through a detection zone defined by a beam of repetitive

energy pulses which impinge upon the energy reflecting surfaces of said vehicle when it is within said detection zone but impinge instead when said vehicle is not within said detection zone upon a more distant fixed energy reflective surface, the combination comprising: transmitting means for transmitting said pulses, receiving means including a transducer responsive both to reflections of said pulses from said vehicle and from said fixed reflective surface, means electrically coupled to said receiving means for producing a first output signal for each received vehicle reflection pulse and a different second output signal for each received reflection pulse from said fixed reflective surface, binary means governed by said first and second output signals and being at substantially each instant in



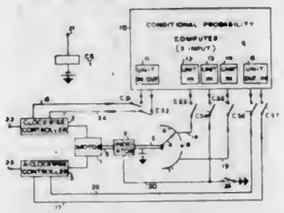
one or the other of its two conditions dependent upon whether said first or said second output signal has been the last to occur, registration means controlled by said binary means and being operable to a vehicle registering condition when said binary means has been in said one condition for at least a predetermined time which substantially exceeds the period of said transmitted pulses and being operable to its non-registering condition when said binary means has been in said other condition for at least a predetermined time which substantially exceeds the period of said transmitted pulses, and counting means responsive to said registering means to count said vehicles passing through said detection zone individually only if said registration means is operated to its said one condition and back to its said other condition for each such vehicle.

3,045,910
AUTOMATIC COUNTING MACHINE
Herbert M. McLearn, near Longwood, Fla., assignor to American Machinery Corporation, Orlando, Fla., a corporation of Florida
Filed Nov. 28, 1958, Ser. No. 776,962
3 Claims. (Cl. 235—98)



1. In an article counting and transferring machine, a cyclically operating rotary transfer drum having a plurality of circumferentially spaced object-receiving pockets in the face thereof for transferring objects individually in timed sequence from a source of objects to a container, an electrical control circuit, normally open first switch means in said control circuit associated with said object-receiving pockets of said rotary transfer drum, object operated means overlying the path of said object-receiving pockets of said drum operable by objects in said object-receiving pockets during the rotation of said drum for closing said first switch means for varying intervals by the presence of an object in said object-receiving pockets at the discharge point thereof during cyclic operation, normally open second switch means in said control circuit in series with said first switch means located at a fixed point adjacent said cyclically operating rotary drum, switch operating means mounted for rotation with said drum, said switch operating means having a switch closing element in axial alignment with each of said circumferentially spaced object-receiving pockets each adapted to successively contact and close said second switch means at a fixed point and for a predetermined interval during the rotation of said cyclically operating drum and within the period of closure of said first switch means, the predetermined interval of closure of said second switch means being short compared to the varying intervals of closure of said first switch means, counting means in said control circuit operated by the simultaneous closure of said first and second switch means adapted to register one count for each such simultaneous closure, third switch means associated with said counting means adapted to be operated when a predetermined number of counts is reached, and means responsive to said counting means when a predetermined number of counts is reached for operating said third switch means.

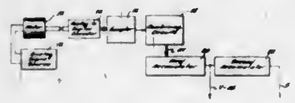
3,045,911
AUTOMATIC CONTROL SYSTEMS
Graham Russell, Malvern, and Albert Maurel Uttley, Esher, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed July 1, 1957, Ser. No. 669,255
Claims priority, application Great Britain July 5, 1956
9 Claims. (Cl. 235—151)



7. An automatic control system comprising a controlled element, one or more controlling means for controlling the behaviour of the controlled element by setting it into different states, first indicating means for indicating the state into which the controlled element is set by the controlling means, second indicating means for indicating the state of each controlling means as it controls the controlled element, and third indicating means for indicating the consequence of control of the controlled element, means for effecting random operation of the controlling means, a conditional probability computer connected to the indicating means and comprising a plurality of basic units each associated with a different received indication or a different set of received indications and each comprising a voltage-generating circuit for generating a voltage logarithmically related to the occurrence of its associated indication or set of indications, comparison means associated with the units for comparing generated voltages between units and thereby to compute conditional probability values, the comparison means being connected to the controlling means and actuating the controlling means according to computed conditional probabilities

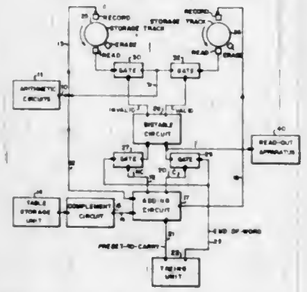
over-riding the random operation in doing so and means for establishing arbitrary probability values which the conditional probabilities of the states of the controlling means exceed before the controlling means are actuated and computer outputs providing output signals representing computed probabilities of the states of the controlling means, each computer output being connected to the controlling means to which its signal relates, and the system input means for applying input signals to computer inputs connected to the third indicating means, which input signals then provide to the computer inputs indications of the consequences of control of the controlled element.

3,045,912
VELOCITY QUANTIZER
Floyd G. Stele, La Jolla, Calif., assignor to Digital Control Systms, Inc., La Jolla, Calif.
Filed Aug. 29, 1958, Ser. No. 758,086
23 Claims. (Cl. 235—151)



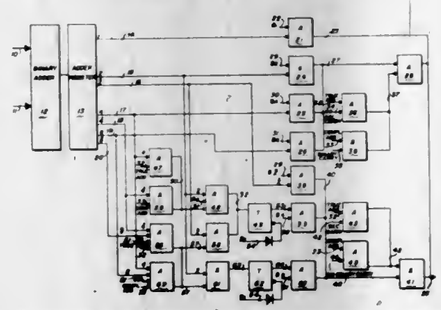
1. In a system for providing output signals representing velocity of a moving member including an encoding means coupled to the moving member for providing bivalued position signals representing the quantized position of said moving member relative to a reference position, the combination comprising: selective storage means for successively sampling the encoding means signals at predetermined times to store sampled position signals representing corresponding successive positions of said member at successive times of sampling; calculating means connected to said storage means and responsive to the sampled position signals representative of each three successive positions of said member for producing corresponding groups of signals representing the second differences of the quantities represented by the sampled position signals; and means responsive to said groups of signals for producing output signals representing the accumulated sum of the quantities represented by said groups of signals to provide a representation of velocity of said moving member.

3,045,913
APPARATUS FOR PERFORMING CONDITIONAL SUBTRACTION
Frederick C. Hallden, Floral Park, N.Y., and Joseph M. Rodriguez, Tampa, Fla., assignors to Hazeltine Research Inc., a corporation of Illinois
Filed Apr. 28, 1960, Ser. No. 25,381
7 Claims. (Cl. 235—155)



1. Apparatus for performing conditional subtraction in an uninterrupted series of word cycles, comprising: means for supplying two serial signals representative of binary minuend and subtrahend numbers, one of said signals being supplied in binary complement form; an adding circuit responsive to said supplied signals for developing an output signal representative of the difference between said two numbers; means for starting the adding circuit off in a carry status at the beginning of each word cycle; and temporary storage means for storing said minuend and difference signals during each word cycle and being responsive to the carry status of the adding circuit at the end of each cycle for presenting said stored minuend signal to the adding circuit as the minuend in the next succeeding cycle if the adding circuit ends in a status indicative of an invalid subtraction and said stored difference signal if the adding circuit ends in a status indicative of a valid subtraction.

3,045,914
ARITHMETIC CIRCUIT
Huberto M. Sierra, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 14, 1958, Ser. No. 715,282
5 Claims. (Cl. 235—170)

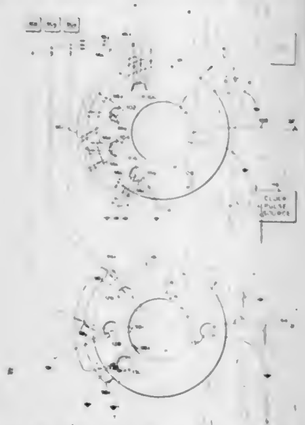


1. A circuit for converting the results of a serial by bit binary addition of two serial by bit binary coded decimal digits into binary coded decimal form comprising an input circuit and an output circuit, said input circuit including a multistage register for simultaneously indicating the various orders of the binary sum of two binary coded decimal digits, a first result line a plurality of, first gating means selectively controlled by the condition of the various orders of said register for serially gating signals onto said first result line representative of the sum indicated by said register, a second result line a plurality of, second gating means selectively controlled by the condition of the various orders of said register for serially gating signals onto said second result line representative of the sum indicated by said register minus 10, said first and second gating means being operable for gating said signals onto said first and second result lines simultaneously, means controlled by a "no carry" signal generated in response to a sum stored in said register representative of a decimal digit less than 10 for gating said signals taken from said first result line to said output circuit, and means controlled by a "carry" signal generated in response to a sum stored in said register representative of a decimal digit in excess of 9 for gating said signals from said second result line to said output circuit, whereby signals entered on said first or second result line are gated therefrom to said output circuit under control of said "carry" and "no carry" signals.

3,045,915
MAGNETIC CORE CIRCUITS
Ray T. Kikoshima, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 30, 1956, Ser. No. 619,199
29 Claims. (Cl. 235—176)

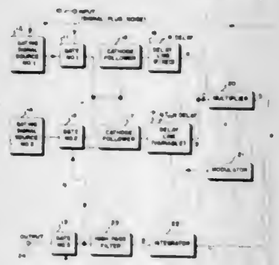
4. In a binary adder circuit, a first magnetic circuit and a second magnetic circuit each capable of assuming

at least two different stable states, and each normally in one of the stable states it is capable of assuming, first, second and third input winding means, means coupled to said input winding means for applying energizing information signals thereto during an input time interval; said first, second and third winding means being inductively associated with said magnetic circuits at a plurality of locations for producing in said magnetic circuits changes to cause said first magnetic circuit to assume the other of said stable states only when one of said winding means is energized exclusively and when all



three of said winding means are energized coincidently, and to cause said second magnetic circuit to assume the other of said stable states only when two or more of said winding means are energized coincidently, first individual output means inductively associated with said first magnetic circuit for sensing changes in said first magnetic circuit from one of said states to the other, and second individual output means inductively associated with said second circuit for sensing changes in said second magnetic circuit from one of said stable states to the other.

3,045,916
AUTOCORRELATION DETECTOR CIRCUIT
Lloyd C. Downes, Los Angeles, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Filed May 20, 1955, Ser. No. 509,903
7 Claims. (Cl. 235—181)



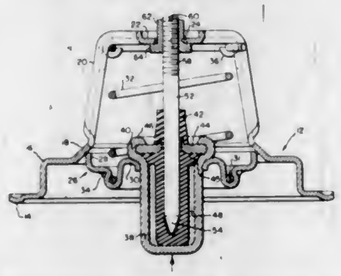
1. An autocorrelation circuit including, in combination, an input terminal, a first gate circuit coupled to said input terminal, a first gating signal source coupled to said first gate circuit for opening recurrently said first gate circuit for a first predetermined time interval, a second gate circuit, a second gating signal source coupled to said second gate circuit for opening said second gate circuit, a second time interval comprising the time duration between recurrent openings of said first gate circuit, the duration of the openings of said second gate circuit also constituting a predetermined whole multiple of said first time interval, first and second time delay circuits differing in electrical length coupled in parallel to each of said first and second gate circuits, a multiplier coupled jointly to said first and second time delay circuits, an integrator coupled to said multiplier and having an output circuit, a third gate circuit coupled to said output circuit of said integrator and also to said first gating signal source to be opened simultaneously with said first gate circuit, said output circuit of said integrator also being coupled to said second gate circuit, and an output circuit coupled to said third gate circuit.

3,045,917
ELECTRICAL DEVICE HAVING DEADBAND RESPONSE CHARACTERISTIC
Wayne A. Ring and Elwood J. Meyers, Rockford, Ill., assignors to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Jan. 2, 1958, Ser. No. 706,865
6 Claims. (Cl. 235—184)



1. An electrical device having a deadband response characteristic comprising, in combination, a pair of input terminals and a pair of output terminals, a polarized relay having a coil and two sets of normally open contacts which are respectively closed in response to current flow of a predetermined magnitude in one direction or the other through said coil, an adjustable resistor connected in series with said coil across said input terminals, means including said normally open contacts in parallel for connecting one of said input terminals to one of said output terminals, and means connecting the other input terminal to the other output terminal whereby adjustments in said resistor correspondingly change the width of the deadband in the response characteristic of the device.

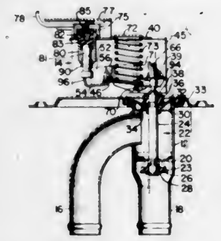
3,045,918
ACTUATOR
John E. Woods, Cohasset, Mass., assignor to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware
Filed Nov. 6, 1958, Ser. No. 772,235
7 Claims. (Cl. 236—34)



1. A temperature-controlled valve having, in combination, a seat member having a seat portion and a second portion longitudinally displaced from the seat portion, said second portion having an opening coaxial with the seat portion, a valve member to cooperate with the seat,

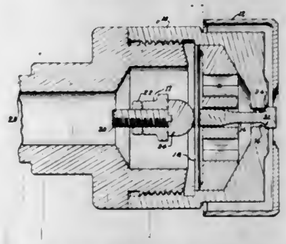
a tension spring secured to said second portion and valve member and tending to close the valve, and an actuator, the actuator having a housing secured to the valve member, a pin extending from the housing and having a threaded portion and an adjusting nut threaded on the pin, the nut having a portion of reduced outside diameter loosely received in said opening and a flange of larger outer diameter than said opening and situated between the housing and said opening, said seat member laterally restraining said actuator only by means of said nut and spring, the actuator further having means responsive to the temperature of a fluid circulated through the valve to tend to open the valve by extending the pin from the housing upon an increase in said temperature to cause said flange to bear against said second portion of the seat member about said opening.

3,045,919
THERMOSTATICALLY CONTROLLED FLUID VALVE
Herbert H. Rauh, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,429
2 Claims. (Cl. 236—99)



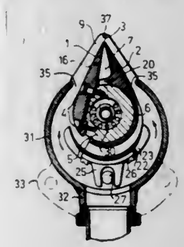
1. In a thermostatically controlled fluid valve comprising a valve housing having a fluid flow passage therethrough, valve means in said passage including a valve stem projecting vertically from said housing and operable to open or close said passage to the flow of fluid therethrough in accordance with the vertical position of said stem, a pair of spaced vertical sidewalls on said housing, an elongate control beam, means supporting said beam at a location intermediate its ends for pivotal movement between said sidewalls about a vertically adjustable horizontal axis extending transversely between said sidewalls, thermostatically responsive means including a pin mounted between said sidewalls above one end of said beam for thermally induced vertical movement, said pin being operable in response to a predetermined temperature increase to move downwardly in engagement with said one end of said beam to pivot said beam in a first direction about said axis, means coupling the other end of said beam to said stem to transmit to said stem vertical movement of said other end of said beam induced by pivotal movement of said beam about said axis or by vertical adjustment of said axis, said coupling means including resilient means biassing said beam in pivotal movement about said axis in the direction opposite to said first direction; the improvement comprising a pair of outwardly projecting ears on said beam adjacent said one end thereof engageable with said sidewalls to guide said one end of said beam in vertical movement between said sidewalls, means on said coupling means for guiding the other end of said beam in vertical movement between said sidewalls, and abutment means on said sidewalls engageable with said ears to define an end limit to upward movement of said one end of said beam to thereby absorb the load exerted on said pin of said thermostatically responsive means by said biassing means when the temperature sensed by said thermostatically responsive means is below a selected temperature.

3,045,920
WIDE FLOW RANGE FUEL INJECTOR
Ralph J. Hooker, Schenectady, N.Y., and Robert W. Macaulay and James O. Blanton, Cincinnati, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force
Filed Aug. 29, 1961, Ser. No. 134,781
6 Claims. (Cl. 239—105)



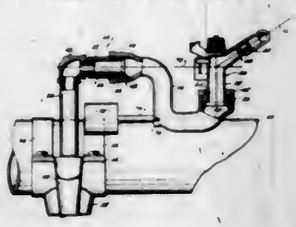
1. A variable area injection nozzle comprising a nozzle housing having fuel inlet and an outlet, a valve seat in said outlet, a valve head which is adapted to cooperate with said valve seat, a valve stem secured to said valve head and extending into said housing, said valve stem having a slot therethrough, a spring rod of circular cross-section mounted in said housing transverse to said valve stem and extending through the slot in said valve stem, means in said slot in contact with said spring rod for biasing said valve head to a closed position.

3,045,921
ELECTROSTATIC SPRAYING APPARATUS
Hans Heuschkel, Ravensburg, Germany, assignor to Escher Wyss G.m.b.H., Ravensburg, Germany, a corporation of Germany
Filed Oct. 28, 1960, Ser. No. 65,617
Claims priority, application Germany Nov. 3, 1959
11 Claims. (Cl. 239—132)



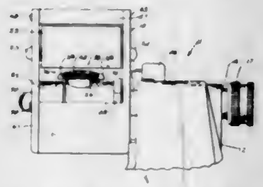
6. Spraying apparatus comprising in combination a housing having a pair of spaced end walls and a supporting body connected between said end walls; a pair of blades connected with said body and extending outward therefrom, the ends of said blades being adjacent said end walls and the adjacent surfaces of said blades being spaced to define a chamber, said blades having parallel spraying edges which are remote from said supporting body and which are spaced to define a gap, at least one of said blades being rotatable about an axis parallel with and equisdistant from the two spraying edges in all relative positions of said blades; means for supplying a medium to be sprayed to said chamber; and an adjustment means for rotating said blades relative to each other so as to vary the width of the gap between the edges of said blades.

3,045,922
SELF-ERECTING SPRINKLER HEAD FOR IRRIGATION PIPELINES
Arthur E. Jensen, 11372 SW. Skyline Drive, Santa Ana, Calif.
Filed Oct. 17, 1960, Ser. No. 62,940
7 Claims. (Cl. 239—225)



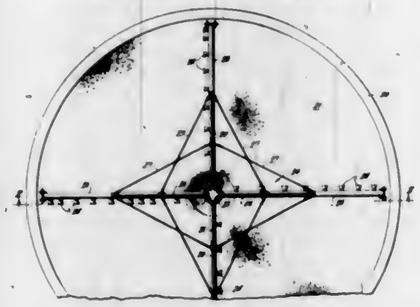
1. Sprinkler apparatus comprising, a rotary sprinkler, fluid conducting means to deliver fluid to said sprinkler and to support said sprinkler for rotation on a vertical axis, and second fluid conducting means to deliver fluid to and to support said first mentioned means for free rotation on a horizontal axis with the center of gravity of the combined first mentioned means and sprinkler being spaced from said axis to hold said sprinkler in erect position, said means supporting said sprinkler on substantially the same level as said horizontal axis.

3,045,923
LAWN SPRINKLER
George L. Turner, Hickory Corners, Mich., assignor to H. B. Sherman Manufacturing Company, Battle Creek, Mich., a corporation of Michigan
Filed Oct. 17, 1960, Ser. No. 63,166
16 Claims. (Cl. 239—230)



1. A wave type lawn sprinkler, comprising a supporting base having a bottom portion with an under face adapted to rest on a substantially horizontal surface such as a lawn, an inlet means for delivering water into said sprinkler, means for fixedly mounting and supporting said inlet means on said base, a hollow spindle including means extending from said inlet means over said base in a direction substantially parallel to the lawn contacting face of the latter, a body member rotatably fitting and receiving said hollow spindle, the axis of said body member lying in a plane substantially parallel to the bottom portion of said supporting base, a discharge nozzle opening out of the side of said body member and in a direction generally away from and at varying upward angles to the lawn contacting bottom portion of said base, said hollow spindle and body member having cooperating passageways for conducting the flow of a sprayable fluid from said inlet means to and through said discharge nozzle, an impulse motor rotatably mounted for movement of a portion of same back and forth at varying upward angles over said discharge nozzle and powered for intermittent step by step movement of said body member by the flow of sprayable fluid through said nozzle in contact with said portion moving back and forth over said nozzle, and reversing means which operates after said body member has been moved step by step by said impulse motor through a predetermined variable upward angle in either direction to then make said step by step application of power by said impulse motor move said body member in opposite direction.

3,045,924
LIQUID SEWAGE ROTARY DISTRIBUTOR
Alan McIlhenny, Newtown Square, Pa., assignor to Link-Belt Company, a corporation of Illinois
Filed July 16, 1959, Ser. No. 827,530
2 Claims. (Cl. 239—254)



1. An apparatus for distributing liquid sewage over a trickling filter bed, comprising a nozzle having a hollow body forming a flow passageway therethrough, the discharge end of said body having its edge beveled and adapted to be arranged to provide a generally upwardly and outwardly facing seating surface, a deflector having one face adapted to engage the seating surface of the nozzle to close the said flow passageway, means pivotally connecting one edge portion of the deflector to the nozzle body for free movement between its seating position and various other positions angularly arranged with respect to and above said upwardly and outwardly facing seating surface, said deflector being of generally trapezoidal shape in plan with its opposite side edges diverging away from the location of the pivotal connecting means, skirts formed on the opposite side edges of the deflector and angularly arranged with respect to its said nozzle body engaging face, said deflector having sufficient weight to retain it in its seating position against said nozzle body until the liquid head in the said passageway is increased to a value sufficiently high to overcome the force of gravity acting on said deflector, said deflector being moved into said other positions by liquid heads of increased values to vary the effective area of the outlet from said flow passageway.

3,045,925
MULTIPLE SPRAY APPARATUS
Michael N. Giangualano, Los Angeles, Calif. (1718 Chalet Ave., Anaheim, Calif.)
Filed Sept. 29, 1959, Ser. No. 843,246
1 Claim. (Cl. 239—306)

Apparatus for spraying a freshly admixed composition including a polymerizable resin and a catalyst therefor, comprising:

(*a*) a first pressurized aerosol container for said resin, said container being rigid, portable, and cylindrical and having a closure plate sealed thereto in pressure-tight relation,

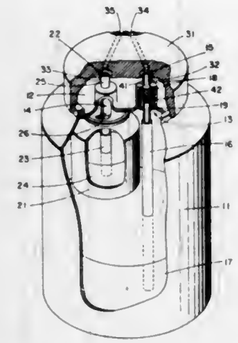
(*b*) a normally spring-closed egress valve for said resin secured directly to said closure plate,

(*c*) a second and smaller pressurized, rigid, and cylindrical aerosol container for said catalyst secured directly to said closure plate laterally of said valve and suspended solely from said plate within the confines of said first container, said second container being individual and separate from said first container so as to be capable of being pre-

packaged and pre-pressurized with an aerosol propellant and said catalyst independently of said first container,

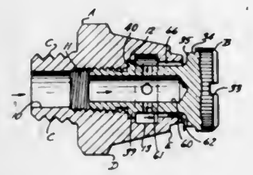
(*d*) a second normally spring-closed egress valve for said catalyst, said second valve being secured to said second container and passing through said plate in the region where said second container is secured thereto, and

(*e*) a movable cap element surmounting said egress valves and adapted to engage and simultaneously operate



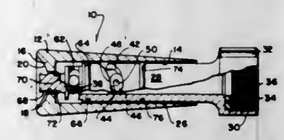
said valves, said cap having formations adapted to mate with the egress orifices of said valves and including fluid channels in communication with said respective formations, said channels converging toward closely-spaced respective exit openings at the outer surface of said cap so as to cause said resin and catalyst to be discharged from said cap in separate streams that mix in a region external to said cap.

3,045,926
SPRAY NOZZLE
William F. Steinen, Short Hills, N.J. (43 Bruen St., Newark, N.J.)
Filed Sept. 14, 1959, Ser. No. 839,640
15 Claims. (Cl. 239—457)



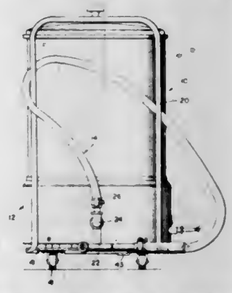
1. A spray nozzle having a main body with a reduced diameter exteriorly threaded inlet end, an intermediate enlarged hexagonal portion and a conical tapered outlet end portion having a peripheral end flat face and said body being provided with a central axial through passage, said passage having an intermediate threaded portion and a peripheral outlet equalizing recess and an outlet stem having an enlarged cylindrical knurled head with filister slot on its outer face and an annular flat face on its underside at one end and an enlarged threaded end portion at the other end threaded into said intermediate threaded portion, said stem having a central bore terminating short of the enlarged head and having radial transverse outlet passageways extending outwardly through the stem and opening into said peripheral equalizing recess, the spacing between the stem and the through passage forming an annular passageway opening under said head, said end flat face being parallel and closely spaced in respect to said annular flat face.

3,045,927
SPRAY NOZZLE
Robert A. Gilmour, % Gilmour Manufacturing Co., Somerset, Pa.
Filed Jan. 17, 1961, Ser. No. 83,210
9 Claims. (Cl. 239—458)



1. A spray nozzle comprising an outer nozzle member having a substantially cylindrical opening extending inwardly from one end thereof and an end wall on the opposite end thereof provided with a central nozzle outlet orifice communicating with said cylindrical opening, an inner nozzle member having a hollow substantially cylindrical barrel portion mounted within the cylindrical opening of said outer member, said barrel portion having a substantially helical groove of approximately 180° extent formed in the exterior periphery thereof, a shoe disposed in said groove and engageable with the sides thereof through a substantial area of contact, a fastening element connected with said shoe and extending outwardly through said outer member so as to effect relative longitudinal movement of said members between two limiting positions in response to relative rotational movement of said members of approximately 180° extent, annular sealing means between the inner portion of said cylindrical opening and the exterior of said barrel portion, said inner member having one end thereof extending outwardly of the cylindrical opening of said outer member and having inlet means thereon for connection with a conduit containing a liquid under pressure, the opposite end of said inner member having an orifice control portion extending therefrom, said inner member having opening means extending from the hollow interior thereof to the exterior thereof in a position between said annular seal means and said end wall, and annular guide means between the outer portion of said cylindrical opening and said barrel portion for maintaining said orifice control portion and said orifice in axial alignment in any position of movement of said members between said limiting positions.

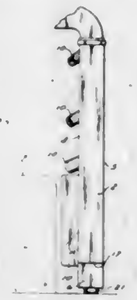
3,045,928
COUPLINGS
Kingsley E. Humbert, Jr., Ralph L. Young, and Lewis M. Hough, Jr., all of Gastonia, N.C., assignors to Wix Corporation, Gastonia, N.C., a corporation of North Carolina
Original application Jan. 10, 1955, Ser. No. 480,826. Divided and this application Dec. 9, 1958, Ser. No. 779,215
3 Claims. (Cl. 239—530)



1. A combination comprising a hollow handle, a tubular nozzle and a flexible hose, said handle having a plurality of longitudinally extending space fingers adja-

cent one end thereof, said nozzle having a plurality of longitudinally extending spaced fingers adjacent one end thereof, said nozzle extending into said handle so said handle fingers are disposed over and around said nozzle fingers, said flexible hose extending completely through said handle and into said nozzle beyond said nozzle fingers, and a split ring clamp means disposed around the outside of said handle fingers where said handle fingers are disposed over said nozzle fingers for clamping said handle and nozzle fingers and hose together in a liquid tight relationship.

3,045,929
COMPOUND BOOT
Loyd R. McEachern, Greenville, S.C., assignor to The American MonoRail Co., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 4, 1959, Ser. No. 791,105
12 Claims. (Cl. 239—566)



1. Apparatus for use in textile machine cleaning comprising an elongated boot adapted to be attached at its upper end to a device for simultaneously creating streams of air moving vertically in opposite directions at relatively high and low pressures, said boot defining vertical, parallel, adjacent tubes for said air streams, the tube for the high pressure air having a plurality of longitudinally spaced outlets to direct air streams toward a textile machine for removing lint therefrom at vertically spaced levels, the tube for the low pressure air having an inlet opening through which lint carrying air may flow, said low pressure tube having means to prevent collapse thereof when a stream of low pressure air is flowing therein.

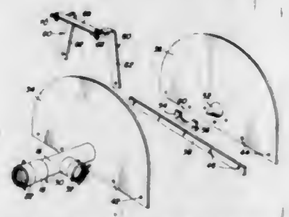
3,045,930
AIR HOSE NOZZLE ATTACHMENT
Hilton A. Rudd, Sr., 136 18th St., P.O. Box 33, Fort Belvoir, Va.
Filed July 14, 1961, Ser. No. 124,032
1 Claim. (Cl. 239—579)



An air hose nozzle control attachment for use with an air hose having a valve, the valve including a projecting head portion, a valve pin seated in the head portion for reciprocating motion from a depressed open location to a normal closed location, arranged to discharge the valve in a path disposed at a fixed, obtuse angle in relation to the hose, the attachment comprising:

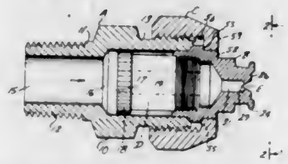
(*a*) a top plate overlying the head portion and an adjacent portion of the air hose, the top plate including an outer end edge and an inner end portion;
(*b*) a connecting wall secured at one end to the outer end edge of the top plate at an angle substantially that of the angle of discharge of the valve;
(*c*) an elongated handle secured to the other end of the connecting wall and extending therefrom in the direction of the hose and having a flat forward portion at least covering the valve head and a rear hand-grip portion adapted for clamping against the hose;
(*d*) clamp means projecting laterally from the inner end portion of the top plate and fitting about the hose to secure the attachment thereto;
(*e*) the clamp means including a semi-circular connecting wall and a bottom plate biased against the hose;
(*f*) an imperforate, fixed lug on the handle projecting inwardly and aligned to contact the valve pin to depress same to its open location; and
(*g*) the handle having an air passage, including a pair of semi-circular openings arranged on opposite sides of the lug, whereby upon movement of the handle in the direction of the valve head, the lug depresses the valve pin and the discharge path of the air hose is directed through said air passage.

3,045,931
FIRE PROTECTIVE WATER CURTAIN PROJECTOR
Forest D. Hall, 400 N. Clinton St., Defiance, Ohio
Filed Mar. 14, 1961, Ser. No. 95,576
11 Claims. (Cl. 239—598)



1. A fire protective water curtain projector comprising a spray head and means for connecting said spray head to a water supply conduit, said spray head including a pair of parallel spaced plates having an opening between their peripheries for discharging a continuous sheet of water over a circumferential extent of 180 degrees, spacer means interposed between said plates and rigidly connected thereto, said spacer means comprising a strip coterminous with the bottom edges of said plates and coextensive therewith and preventing escape of water from between the bottom edges of said plates.

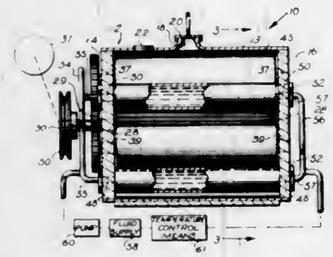
3,045,932
SPRAY NOZZLE
William F. Steinen, Short Hills, N.J.
(43 Bruen St., Newark, N.J.)
Filed June 22, 1959, Ser. No. 825,862
4 Claims. (Cl. 239—601)



1. In a four part spray nozzle construction of the type having a hexagonal base with threaded end portions and

a central axial longitudinal through passage relatively narrow at the inlet end and relatively wide at the outlet end with an intermediate beveled shoulder, a cylindrical insert in said relatively wide part of the through passage abutting said shoulder at its inlet end and extending slightly beyond the outlet end of the base and having a threaded exterior outlet portion and a through longitudinal axial passageway, a tip having an interiorly threaded inlet end threaded onto the threaded exterior outlet portion of the cylindrical insert and inserted between and filling the space in the outlet ends of the cylindrical insert and the hexagonal base, said tip having a peripheral spray bead portion giving a spray devoid of feather edging and with uniform sized spray particles, said tip having a cylindrical body with a relatively wide diameter central base portion, a relatively narrow diameter intermediate diameter portion and a terminal end enlarged diameter portion forming an end plateau said end plateau being transversely grooved with a V-cross sectional groove forming an oval passageway, and said plateau being provided with a recessed portion on both sides of said groove and said bead portion having a central axial passageway leading centrally through the bead portion to the central bottom portion of the groove, said groove having a downwardly convexly curved bottom edge projecting into said oval passageway.

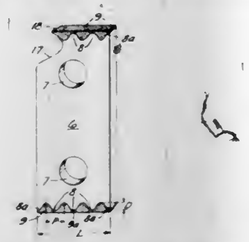
3,045,933
MILLING APPARATUS
Alfonso Di Mino, Woodcliff Lake, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 21, 1960, Ser. No. 77,397
7 Claims. (Cl. 241—111)



4. Milling apparatus including a housing, a central roll in said housing and freely rotatable on a shaft, and a plurality of rolls surrounding and in operative relation with said central roll, each of said plurality of rolls being adapted to be positively driven, said driven rolls being adapted to drive said central roll through the material being milled as it passes between them, the space between said driven rolls and the wall of said housing being small so that, as said positively driven rolls rotate, considerable turbulence is developed in said space and the milling action is aided by said turbulence.

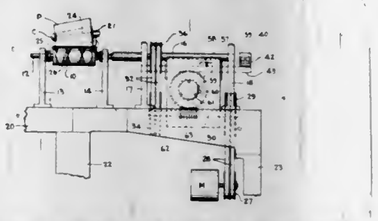
3,045,934
SURFACE HARDENING FOR HAMMERMILL HAMMERS
Howard F. Eilers, St. Paul, Minn., assignor to Paper Calmenson & Co., a corporation of Minnesota
Filed Aug. 18, 1961, Ser. No. 132,467
7 Claims. (Cl. 241—197)

1. A hammermill hammer comprising, a shock resistant steel body having an elongated working end portion of thickness in the range ⅛ inch to ⅜ inch subject to impact forces directed longitudinally of said working end portion and formed with a row of teeth having a pitch not substantially greater than one-half inch and not substantially less than one-quarter inch, the depth of said teeth being not substantially greater than one-quarter inch and not substantially less than one-eighth inch; and a relatively hard face material filling the spaces between the teeth and forming a hard working face extending to a thickness above the teeth not substantially greater



than the depth of the teeth and not substantially less than one-half the depth of the teeth, said face material being joined by a thermal bond directly to said body over the entire elongated surface defined by said teeth and the surface areas between them.

3,045,935
WINDING MACHINE
William H. O'Brien, Warwick, R.I., assignor to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts
Filed June 22, 1961, Ser. No. 118,991
2 Claims. (Cl. 242—18.1)

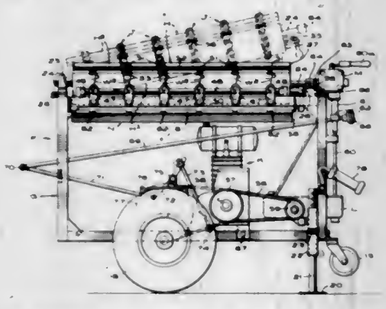


1. In a yarn winding machine, a drive shaft, drive means for rotating said shaft and for alternately accelerating and decelerating its speed of rotation, a grooved yarn traverse roll element axially movable on said shaft, a cam element fixed against axial movement on said shaft, one of said elements being relatively rotatable on said shaft incident to said acceleration and deceleration and the other element being secure against rotation, said roll element having a follower operatively engaging said cam element to axially move said roll element in response to said relative rotation between said elements, spring means on said shaft establishing a resiliently yieldable driving connection between said shaft and said rotatable element in one direction of relative rotation, means restricting the relative rotation between said shaft and said rotatable element in the opposite direction, said driving connection yieldably urging said rotatable element in said opposite direction of rotation with respect to the shaft.

3,045,936
MACHINE FOR PULLING SUPPORTING WIRES FROM A TRELLIS
Peter D. Ruggeri, % Silver Terrace Nursery, 525 Chesnut Ave., South San Francisco, Calif.
Filed May 29, 1961, Ser. No. 113,369
2 Claims. (Cl. 242—54)

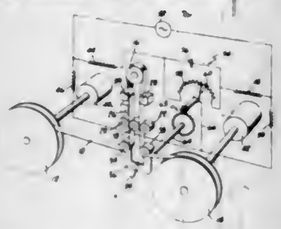
1. In a machine for pulling supporting wires from a trellis:
(*a*) a carriage frame movable into a position adjacent to one end of a trellis;
(*b*) a drum rotatably mounted on the carriage frame;
(*c*) means for anchoring one end of each of several supporting wires to the drum;

(*d*) means operable for rotating the drum to simultaneously pull the several supporting wires from the trellis, and to wind the wires in separate coils around the periphery of the drum;
(*e*) a plurality of spaced brackets provided on the carriage frame, one for each supporting wire, and being fashioned with apertures through which the supporting wires pass from the trellis to the drum, whereby the coils or wire will be separated one from the other as they are wound upon the drum;
(*f*) a roller mounted on the carriage frame to extend lengthwise of the drum;
(*g*) the roller being disposed between the drum and the apertured brackets;
(*h*) the roller being fashioned with a plurality of annular grooves therein that are spaced along the length of the roller so that each groove is aligned with one of the apertured brackets;



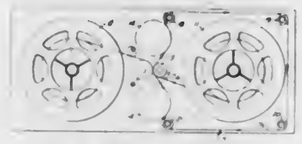
(*i*) the annular grooves being positioned so that the supporting wires will be pulled therethrough to remove kinks from these wires as they pass from the apertured brackets to the periphery of the drum;
(*j*) a guide bar mounted to extend lengthwise of the drum;
(*k*) the guide bar being fashioned with a plurality of concaved saddles therein, which are spaced one from the other along the length of the guide bar so that each concaved saddle is aligned with one of the apertured brackets;
(*l*) these saddles being positioned so that the convolutions of the supporting wires will be guided therethrough to thereby shape the coils as the wires are wrapped around the drum;
(*m*) and yielding means urging the guide bar toward the periphery of the drum, whereby the guide bar may be moved away from the drum as the diameters of the coils increase during the winding of the supporting wires on the drum.

3,045,937
WEB TENSION CONTROL
Keith O. Johnson, San Carlos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Dec. 6, 1960, Ser. No. 74,167
6 Claims. (Cl. 242—55.12)



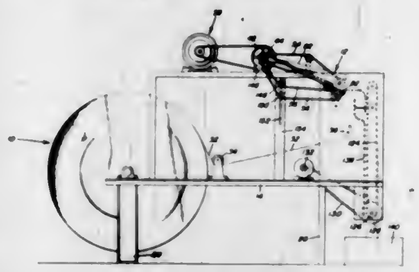
1. In recording apparatus, a pair of spaced reels, a recording medium extending between said reels, a capstan for moving said medium between said reels, a pair of split phase motors each of which is connected to one of said reels so as to apply a torque to that reel in a direction which tensions said medium, each of said motors having a pair of field windings, an alternating electrical power supply electrically connected to said windings, and means for varying the output torque of each of said motors, said means including phase shifting means electrically connected to said windings, for shifting the phase of the current in one field winding of each motor with respect to the current in the other field winding of the same motor, means connected to said phase-shifting means for controlling the phase shifts provided by the same, the phase shifts of the current in said one windings being changed inversely with respect to each other, means associated with said recording medium for determining the tension of the same, and means for connecting said determining means to said controlling means so as to vary the torque provided by each motor and thereby maintain the tension on the medium substantially constant.

3,045,938
TAPE DRIVING APPARATUS
Keith O. Johnson, San Carlos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Oct. 29, 1958, Ser. No. 770,495
5 Claims. (Cl. 242—55.12)



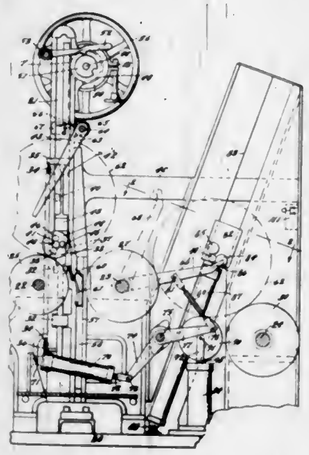
1. In apparatus for driving an elongated pliable record tape, a driving capstan having a peripheral surface for frictional contact with the tape, a single pinch roller for pressing tape into driving relation with the capstan, and guide means for engaging and maintaining a closed loop portion of the tape, said loop portion having input and output tape portions in superposed relation and in frictional slipping contact with one another between the driving capstan and the pinch roller, whereby such tape loop is maintained under tension by differential driving action.

3,045,939
FLEXIBLE MATERIAL WINDER
William G. Vander Waal, 400 Steel St., Ontonagon, Mich.
Filed May 6, 1960, Ser. No. 27,450
6 Claims. (Cl. 242—56)



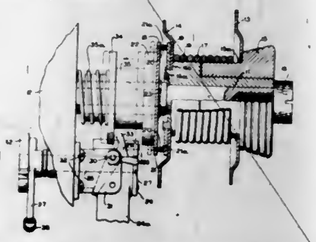
1. Apparatus for winding flexible material into coreless rolls comprising in combination with a rotatably mounted parent roll carrying said material, a powered drive roll engaged with said material unwinding said material from said parent roll, a powered winding roll, a powered ejection roll, said rolls defining parallel axes, said drive, winding, and ejection rolls defining a winding pocket therebetween, said winding roll vertically positioned between said drive roll and said ejection roll and adjacent to each, said drive roll normally horizontally positioned below said winding roll and said ejection roll, said ejection roll surface adjacent said pocket moving from said winding roll, said drive roll surface adjacent said pocket moving toward said winding roll, said drive, winding, and ejection rolls engaged with said material in said pocket whereby said material is caused to roll spirally, said spiral rotation of said material and said engagement of said material roll with said ejection roll causing said arm to pivot and said ejection roll to move vertically away from said drive roll whereby said material roll will be ejected from said pocket, a cutter blade, a mechanism operatively connected to said cutter blade, and means causing engagement between said material roll and said mechanism after the material roll is ejected from said pocket, said engagement causing said mechanism to move and force said blade into engagement with said flexible material whereby the material is severed.

3,045,940
THREE-DRUM WINDER
Walter E. Aulen, Woodstown, N.J., assignor to Eddystone Machinery Company, Chester, Pa., a corporation of Pennsylvania
Filed July 1, 1958, Ser. No. 745,921
2 Claims. (Cl. 242—66)



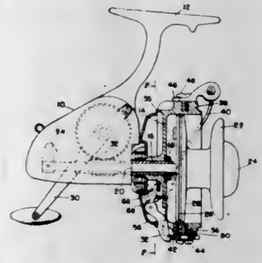
1. In a three-drum winder for stock, front, middle and rear drums rotatably supported and operating on parallel axes, the rear drum being the drum first contacted by the stock, let down arms cooperating with the middle drum, adapted to receive the pivot of a roll of cloth resting on the middle drum and hold the same from downward movement against the force of gravity, means for lowering the let down arms to lower and support the roll of cloth on the front and middle drums cooperating together, pivot jaws movable from a position above the pivots of the roll of cloth when supported on the front and middle drums to a position engaging the pivots of the roll of cloth supported on the front and middle drums and urging such pivots downward, and means for moving the pivot jaws downward including means for retarding the downward movement of the pivot jaws to permit the let down arms to place the roll of cloth on the front and middle drums before the pivot jaws engage the pivots on the roll of cloth.

3,045,941
TAPE WINDER
Thomas B. Keesling, Los Gatos, Calif., assignor to Cycle Equipment Company
Filed June 12, 1957, Ser. No. 665,197
9 Claims. (Cl. 242—71.8)



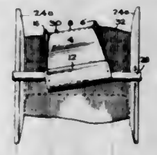
1. A tape winder comprising a frame, a motor mounted on said frame, a shaft driven by said motor journaled in said frame, a reel mounted on said shaft, said reel comprising an outer plate and an inner plate, a hub member attached to said outer plate and a hub member attached to said inner plate and flexible means extending over and engaging the outer surfaces of said hub members to hold said plates and said hub members assembled.

3,045,942
SPINNING REEL CONSTRUCTION
Herbert O. Henze, 3924 Netherfield Road, Philadelphia 29, Pa.
Filed May 20, 1960, Ser. No. 30,580
9 Claims. (Cl. 242—84.21)



3. A spinning reel comprising a housing, a spool cup rotatable on said housing, means for rotating said spool cup, a spool mounted in said spool cup, a winding bail pivotally mounted on said spool cup and spring biased to one position on said cup for winding line on said spool, means for engaging said bail and latching it in a second, opposite position on said cup, resilienty biased brake means actuated in response to movement of said latching means for braking rotation of said cup relative to said housing during casting, and an actuator for unlatching said bail and for releasing said cup for rotation by said first-named means.

3,045,943
LINE WINDING DEVICE
Clive B. Forrester, 10301 SW. 69th Ave., Miami 56, Fla.
Filed May 19, 1960, Ser. No. 30,156
3 Claims. (Cl. 242—84.43)



1. In a winding and reeling apparatus having side frames held in spaced relationship by posts and including

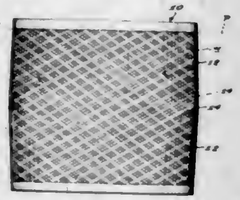
a spool carrying a line supply and journalled between said side frames, a line winding attachment comprising a plate mounted between said side frames, said plate including an arcuate body portion over which a strand of said line supply is guided and having at one end thereof a lip in engagement with said line supply, said lip having a transverse dimension substantially greater than the diameter of a strand of said line supply, means at the opposite end of said body portion for movably attaching said plate to one of said posts to provide a combined traversing and wobbling action of said plate during winding of the line supply, and guide means adjacent said lip for engaging and controlling the winding of a strand of said line supply upon said spool.

3,045,944
SPOOL FOR YARN MATERIAL
Ignazio Ciniglio, 40 Haldenstrasse, Lucerne, Switzerland
Filed Oct. 15, 1959, Ser. No. 846,668
Claims priority, application Switzerland Oct. 17, 1958
3 Claims. (Cl. 242—118.2)



1. A spool for yarn material having a circumference capable of decreasing within set limits under the pressure of material wound thereon and of increasing to its original size upon removal of the wound material, said spool comprising at least four juxtaposed radially and axially extending eleemnts, forming the spool circumference, means closely joining the remaining elements together for limited circumferential sliding movement with respect to each other, and leaf springs positioned between each pair of said adjacent elements for urging said adjacent elements apart in a circumferential direction.

3,045,945
TEXTILE YARN CARRIER HAVING CROWNED WINDING SURFACE
Charles K. Dunlap, Hartsville, S.C., assignor to Sonoco Products Company, a corporation of South Carolina
Filed Jan. 20, 1958, Ser. No. 709,994
5 Claims. (Cl. 242—118.32)



1. A textile yarn carrier comprising a tubular body, said body having a relatively narrow, yieldable portion intermediate its ends and having portions on each side of said yieldable portion of progressively decreasing yieldability toward the ends of said tubular body.

3,045,946
BOBBIN HOLDER
William H. O'Brien, Greenwood, and Thomas E. Pitts, Cranston, R.I., assignors to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts
Filed Oct. 12, 1959, Ser. No. 845,930
4 Claims. (Cl. 242—130)

1. A device for holding an unwinding bobbin of yarn comprising a bracket, means mounting said bracket for pivotal movement, a spindle carried by said bracket and adapted to be moved axially with respect thereto, a tubular balloon restraining member mounted coaxially of said spindle and adapted to encircle a bobbin carried



by said spindle for controlling the balloon generated by a strand of yarn unwinding from a bobbin carried by said spindle, and means for moving said spindle with respect to said bracket as said bracket is pivoted.

3,045,947
EJECTORS, PARTICULARLY FOR PRODUCING LIFT IN AIRCRAFT
Jean Henri Bertin, Paris, and Marcel Pierre le Nabour, Montreuil-sous-Bois, France, assignors to Bertin & Cie, Paris, France, a company of France
Filed Apr. 19, 1960, Ser. No. 23,189
Claims priority, application France Apr. 24, 1959
7 Claims. (Cl. 244—12)

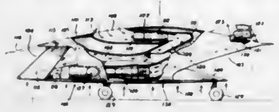


1. In an aircraft having a wing, a retractible ejector device comprising two cooperating flaps mounted spanwise along the wings and each having a leading edge and a trailing edge and an inside surface and an outside surface, means for supporting said flaps in a retracted position while permitting said flaps to be moved into an active position, said flaps in said retracted position having at least part of their inside surfaces substantially applied against each other and having at least their outside surfaces extending the surfaces of a fixed part of said wing to form part of the streamlined aerodynamic profile of said wing, and means for moving said flaps into said active position in which the inside surfaces of said flaps define a divergent downwardly-directed diffuser and their leading edges are spaced from said fixed part of said wing to provide a passage for the induction of ambient air, and spanwise nozzle means for injecting jets of fluid under pressure to induce said ambient air downward.

3,045,948
AIRCRAFT VEHICLE
Wilbert A. Howie, 52 Wragg St., Trenton, Ontario, Canada
Filed Apr. 17, 1961, Ser. No. 103,399
Claims priority, application Canada June 15, 1960
10 Claims. (Cl. 244—12)

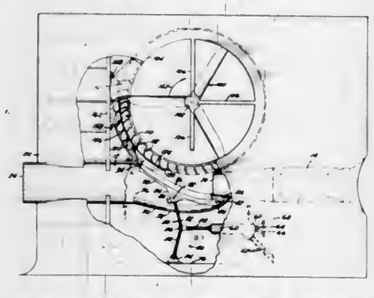
1. In an aircraft, a body having a lower main part and an upper main part thereover, said main parts joined together in spaced relation and providing an intermediate

chamber therebetween, said lower main part having a continuous upper face presenting an air-foil surface in said chamber and having a substantially free peripheral margin, said upper main part having a top surface interrupted by at least one air inlet opening which is in communication with said chamber, opposed surfaces of said upper and lower parts forming a venturi throat at said intermediate low pressure zone for discharge of a high velocity fluid to draw atmospheric air into said air inlet opening to lower the ambient air pressure in said



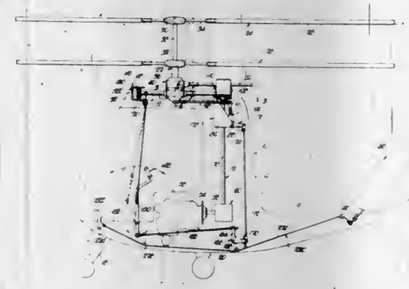
chamber on said air foil surface of said upper main part so that there will be a relatively higher pressure reacting on the underside of said lower main part thereby creating a lifting effect on said body, and a source of high velocity fluid directed angularly toward said air foil surface toward said air inlet opening, said air foil surface comprising a continuous arcuate surface having a substantially centrally located crest, said source of high velocity fluid being directed toward said crest and being radially dispensed thereby toward the peripheral margins of said air foil surface.

3,045,949
POWER CONTROL MEANS FOR VERTICAL LIFT PROPELLER JET AIRCRAFT
Bernhardt Stahmer, 1509 Chicago St., Omaha, Nebr.
Filed Oct. 4, 1956, Ser. No. 613,922
4 Claims. (Cl. 244—12)



1. A jet aircraft having a turbine-driven horizontally rotating propeller assembly mounted in a wing thereof, said assembly comprising a propeller, a rim around the propeller and a circular row of spaced turbine buckets disposed around and attached to said rim, a jet engine mounted in said aircraft, an elongated exhaust housing disposed in the path of exhaust gases from the jet engine of said aircraft, said housing having one end connected to said jet engine for receiving gases therein, said housing having an outlet opening at its other end disposed directly behind said jet engine for direct rearward unhindered thrust of said exhaust gases when it is desired for said aircraft to travel forwardly at maximum speed, said housing being disposed to one side of said propeller assembly, and said housing having a diversion opening in a side thereof for delivering the exhaust gas horizontally to said propeller assembly, a diversion baffle movably mounted in said housing adjacent said diversion opening, and means for controllably positioning said diversion baffle selectively in positions for diverting selected amounts of exhaust gases through said diversion opening to said turbine-driven propeller assembly, a housing surrounding and rotatably receiving said turbine buckets, said propeller housing being disposed horizontally to one side of said exhaust housing, said propeller housing having an opening therein disposed between and in communication with forward diversion opening in said exhaust housing, the position of said openings in said housing and the position of said baffle when said baffle is in a diversion position being such as to direct exhaust gases to said turbine buckets tangentially of said row of turbine buckets at a maximum deflection substantially less than 90° from the normal flow rearwardly from said exhaust housing being disposed rearwardly of said jet engine.

3,045,950
HELICOPTER CONTROL SYSTEM
Frank S. Jennings, Jr., 510 N. Delaware, Independence, Mo.
Filed Feb. 1, 1961, Ser. No. 86,516
11 Claims. (Cl. 244—17.11)

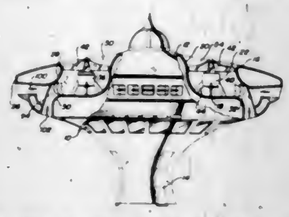


1. A helicopter having lifting means, power operated driving means and a vertical center of gravity through the helicopter, the improvement of which comprises a vertical drive shaft adapted to be mounted on the helicopter in a position operably carrying said lifting means and having a first pinion thereon; a collar adapted to be mounted on said helicopter, and provided with a vertical passage therethrough; a second shaft rotatably mounted within the passage of said collar and provided with a second pinion thereon; means operably coupling said power operated driving means to said second shaft; means operably coupling said second shaft to said vertical drive shaft and including a third shaft having a third pinion thereon operably meshing with said first pinion, said third shaft having a fourth pinion thereon operably engaging said second pinion, there being means for permitting reciprocation of said third shaft relative to said fourth pinion while the latter is maintained in operable engagement with said second pinion and said third shaft is rotated in response to the rotation of said fourth pinion; and manually operable means coupled with said drive shaft for permitting selective shifting movement of the latter and thereby said shaft with respect to the second shaft and thereby the center of gravity of the helicopter whereby the horizontal direction of movement of the latter may be changed in response to actuation of said manually operable means.

3,045,951
AIRCRAFT
Leonor Zalles Freeland, 4803 Grantham Ave., Chevy Chase 15, Md.
Filed Mar. 24, 1960, Ser. No. 17,296
8 Claims. (Cl. 244—23)

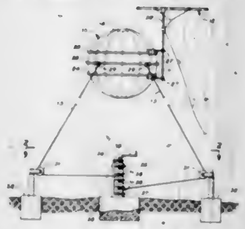
1. An aircraft having a body provided with an upper panel and a lower panel defining an annular chamber, said upper panel having a plurality of air inlet openings arranged around the vertical axis of said chamber, air moving motor means in said openings to draw air into said chamber, a plurality of groups of air discharge ducts registered with the chamber, each duct branching into a

first passageway which opens laterally outwardly of said body and a second passageway which opens downwardly



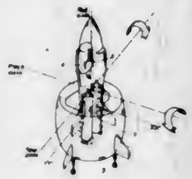
of said body, and a control deflector at the juncture of said passageway to direct air from said chamber selectively into said first and second passageways.

3,045,952
ANTENNA SUPPORT STRUCTURE
Lawrence E. Underwood, 24296 Hesperian Blvd., Hayward, Calif.
Filed Mar. 23, 1959, Ser. No. 801,168
1 Claim. (Cl. 244—33)



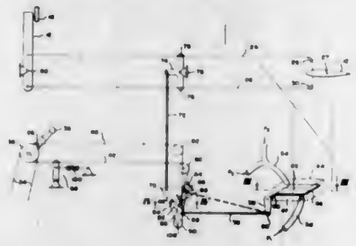
An antenna structure of the character described including a balloon inflated with lighter than air material, generally rigid antenna attachment means secured to said balloon, a receiving antenna attached to said means and including a lead-in transmission line having a length sufficient to reach the ground when the balloon is in the air, a plurality of guy lines secured to said balloon at points of substantially equal circumferential spacing around an equatorial portion of the balloon, controllable guy line play-out means attached to said guy lines and receiving the latter at a substantially common point on the gorund for selectively raising and lowering said balloon and maintaining the balloon and the antenna mounted thereon in a predetermined fixed directional position.

3,045,953
DEVICE FOR STEERING AIRCRAFT DESIGNED FOR VERTICAL FLIGHT
Gerhard Eggers, Dammarie-les-Lys, and Raoul Henri Dumez, Montrouge, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France
Filed July 19, 1960, Ser. No. 43,818
Claims priority, application France Aug. 3, 1959
5 Claims. (Cl. 244—52)



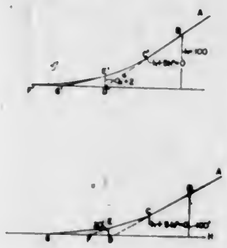
1. In an aircraft designed for vertical flight and to which at least a substantial part of the lift is supplied, during vertical flight or horizontal flight at low speed, by at least one jet of gas produced by a machine having a casing which supports a rotating part, a direction-control device comprising in combination: jet means for producing a control moment applied to the aircraft about a first axis of said aircraft, means for pivotally mounting said casing about a second axis perpendicular to said first axis, elastic means urging said casing to a neutral position, and linking means for applying the gyroscopic couples, generated on said rotating part and pivoted casing by the movement of the aircraft about said first axis, to manual means controlling said jet control means, in such manner as to counteract said movement of the aircraft.

3,045,954
LANDING GEAR TRIM COMPENSATION SYSTEM
Louis V. Schmidt, Alhambra, and Gale D. Hixenbaugh, San Diego, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Mar. 31, 1961, Ser. No. 99,737
9 Claims. (Cl. 244—76)



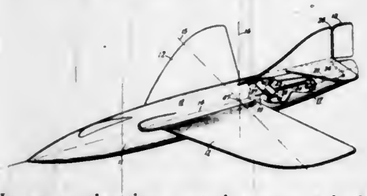
1. A landing gear trim compensation system for use in aircraft having a retractable landing gear that may be raised and lowered comprising, means for detecting the pressure differential between the static source air pressure of said aircraft in flight and the air pressure of the air disrupted by the lowering of said landing gear and for converting said pressure differential into a force proportional to said differential, force transmitting means responsive to said force for aiding in the control of the longitudinal pitch of said aircraft, and means for inactivating said force transmitting means upon said landing gear being raised.

3,045,955
AIRCRAFT LANDING PROCESS AND APPARATUS
David L. Markusen, Minneapolis, Robert C. McLane, St. Paul, and Orville R. Pomeroy, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 17, 1958, Ser. No. 761,567
8 Claims. (Cl. 244—77)



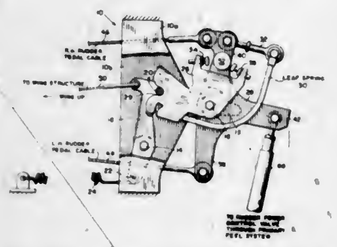
8. In combination: means giving a signal representative of the vertical acceleration of an aircraft; means giving a signal representative of a desired rate of descent of the aircraft; signal responsive apparatus for controlling the aircraft about the pitch axis thereof; an integrator; connecting means supplying both said signals to said integrator as inputs therefor; and means connecting the resulting output of said integrator to said signal responsive means.

3,045,956
DAMPING CONTROL
Frank A. Gaynor, Schenectady, Joseph B. Gibbons, West Albany, and Herbert W. Taylor, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed May 9, 1955, Ser. No. 506,822
3 Claims. (Cl. 244—78)



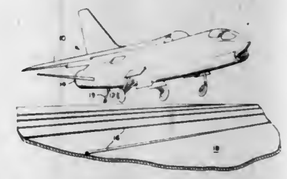
1. In an acceleration control system, a hydraulically operated actuator having two ports and a member reversibly movable in response to the direction of hydraulic flow through said ports, means responding to acceleration and the direction of acceleration for selectively controlling the direction of fluid flow through said ports, said means including an inertia-actuated element, spring restraining means for resisting movement of said element in opposite directions, means on said element for directly controlling the magnitude and direction of fluid flow through said ports in response to the direction of movement of said element, and electrical means for variably displacing said element in opposite directions.

3,045,957
AUXILIARY FEEL SYSTEM
William C. Boyce and Richard M. Johnson, Dallas, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 21, 1960, Ser. No. 70,876
7 Claims. (Cl. 244—83)



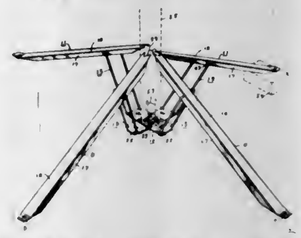
1. For an aircraft having a linkage connecting a pilot's control element to a power control operable for deflecting an aerodynamic control surface of said aircraft, said aircraft being provided with a primary artificial feel mechanism for indicating to the pilot the position of said aerodynamic control surface at any given instant of time, the improvement which comprises an auxiliary artificial feel device supplementing said primary artificial feel mechanism and having an additive effect with respect thereto, said auxiliary artificial feel device including a support fixedly mounted on said aircraft structure, a first bellcrank pivotally carried by said support, a pushrod constituting a portion of said linkage and leading to the said primary feel mechanism, said pushrod being connected to a point on said first bellcrank, a pair of cables leading to the said pilot's control element, each cable of said pair being connected to a different point on said first bellcrank, whereby selective movement of one of said cables produces a rotation of said bellcrank in a direction dependent upon the particular cable so moved, a second bellcrank also pivotally carried by said support in coaxial fashion with said first bellcrank, means for releasably locking said second bellcrank in position to preclude rotation thereof, and a resilient member connecting said first and second bellcranks, whereby rotation of said first bellcrank in either direction in response to selective movement of said cables while said second bellcrank is locked in position will act to place said resilient member under a degree of tension determined by the angle through which such rotation of said first bellcrank occurs.

3,045,958
SHOCK ABSORBING AIRCRAFT ARRESTING HOOK
William L. Mackie, Ventura, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 24, 1960, Ser. No. 31,494
4 Claims. (Cl. 244—110)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An aircraft arresting hook for engagement with an arresting cable comprising a body having a throat portion on a face thereof adapted to receive said cable, at least a portion of said face being formed of a tough, flexible plastic material having high impact strength and high resistance to abrasion, said plastic material containing a lubricant.

3,045,959
TREE BASE STAND
W. J. Herrington, 1512 SE. 18th St., Mineral Wells, Tex.
Filed Nov. 24, 1958, Ser. No. 775,921
3 Claims. (Cl. 248—47)



1. A tree base stand comprising in combination: a base member including a pair of metal strap pieces fixed together at their center portions in the form of a cross and having their free ends rolled to form sleeve pivot bearings; four leg members in the form of lightweight metal channels each having a foot portion at one end and an inwardly turned pronged portion at the other end; four linkage means each made of metal rod stock to have the form of a deep U forming pivot shaft means at the bottom of said U and having sides terminating in a pair of oppositely disposed inwardly turned stub pivot shafts, said pivot shaft means being disposed in said respective sleeve, coil spring means on said pivot shaft means within said sleeve bearing and having one end bearing on said base

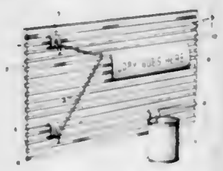
member and the other end restraining said linkage means, a pair of aligned oppositely disposed pivot bearing openings in the channel sides of each said leg member, with said stub shafts received by said openings, with the distance between said pivot points for a respective linkage member being greater than the distance from said leg member pivot openings to the pronged end of said respective leg member.

3,045,960
EASEL CLOCK AND THE LIKE WITH INTERCHANGEABLE FRAMES
Stanley H. Margulies, 182 Bennett Ave., New York, N.Y.
Filed Oct. 26, 1960, Ser. No. 65,132
3 Claims. (Cl. 248—117)



1. In an article of the character described, a panel having a hole therethrough, an object presenting a front display face, slidably fitted in said hole and extending rearwardly of the panel whereby said panel is a collar on said object and serves as a frame therefor; said object having opposite sides and a hole in each of said sides, protuberance structure extending laterally outwardly from said object in front of said panel and in contact with the front surface of such panel and a U-shaped leg member positioned behind said panel and extending in a direction rearwardly downwardly therefrom; the distal ends of said U-shape being inwardly bent to form aligned pintles; said pintles being releasably engaged in said holes in said object respectively; said pintles bearing against the rear surface of said panel whereby the panel is locked in place on said object; said leg member having some resilient quality and capable of being manually temporarily distorted to shift said pintles out of said holes to remove said leg member, whereupon said panel is free for removal from said object.

3,045,961
DISPLAY AND SUPPORT FIXTURE AND CLIP
Stanley J. Cygan, Chicago, Ill., assignor to Poster Products, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 11, 1958, Ser. No. 779,604
2 Claims. (Cl. 248—223)



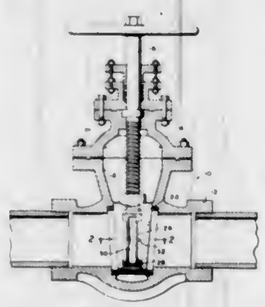
1. A display and support fixture which comprises a grooved baseboard having a plurality of parallel dovetail-shaped ribs, a snap-on resilient clip mounted thereon, said clip having a concavo-convex body, a front panel, oppositely disposed and outwardly flaring panels, and re-entrant flanges, said flanges being substantially shorter than the flaring panels, said re-entrant flanges being so angled and the front panel being so spaced from the baseboard that pressure placed on the front panel of said clip causes said flanges to engage said ribs, and means on said clip for mounting an article thereon.

3,045,962
GLASS HOLDER WITH GIMBAL MOUNTING
Edward F. Paulus, 14456 Scripps, Detroit, Mich.
Filed Dec. 24, 1959, Ser. No. 861,908
2 Claims. (Cl. 248—225)



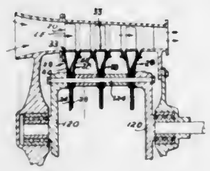
2. A device of the class described, comprising: a glass receptacle; a supporting yoke including a pair of laterally spaced apart arms which are pivotally connected to said receptacle on a first horizontal axis; a mounting bracket including a horizontally elongated boss provided with a pivot hole disposed on a second horizontal axis perpendicular to said first horizontal axis; a pivot pin on said yoke and being pivotally mounted in said pivot hole in said boss; said hole being enlarged at the rear end thereof; said pivot pin being provided with at least one laterally extended retainer pin on the rear end thereof; said retainer pin being normally disposed in a vertical position in the enlarged rear end of said hole; said boss being provided with at least one slot extending completely therethrough and communicating with said hole along one side thereof in a horizontal position, whereby, said pivot pin may be rotated so as to position said retainer pin in mating alignment with said slot and then said pivot pin may be removed from said hole by sliding the same away from said boss with the retainer pin sliding through said slot; said receptacle including a plurality of vertical legs; and, each of said legs having a horizontal shoulder adjacent the lower end thereof to form a seat for an article.

3,045,963
GATE VALVE
Edward M. Herrmann, 105 Round Bay Road, Severna Park, Md.
Filed July 17, 1959, Ser. No. 827,979
5 Claims. (Cl. 251—327)
(Granted under Title 35, U.S. Code (1952), sec. 266)



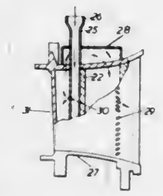
1. A gate valve comprising a body having a passageway extending therethrough, a metal gate reciprocable transversely of the passageway to selectively close said passageway, a plurality of guide ribs formed within said body portion, said guide ribs cooperating with said gate to provide a guide means therefor on opposite sides of said passageway, said guide means comprising a pair of recesses in opposite sides of said gate, a noise-reducing vibration dampening resilient deformable plastic insert located within each of said recesses, and a slot formed in each of said inserts cooperating with and slidably receiving the respective guide ribs, and means locking each of said inserts in its associated recess.

3,045,964
BLADED WHEELS FOR COMPRESSORS, TURBINES AND THE LIKE
Edward A. Stalker, Essexville, Mich., assignor to The Stalker Corporation, a corporation of Michigan
Original application Feb. 14, 1957, Ser. No. 640,199, now Patent No. 2,986,375, dated May 30, 1961. Divided and this application June 6, 1958, Ser. No. 740,276
3 Claims. (Cl. 253—39)



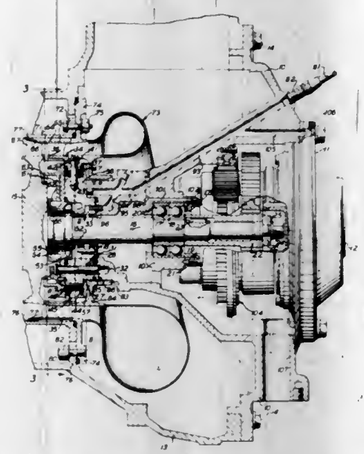
1. In a bladed rotor for compressors, turbines and the like, a rim having a blade opening, a blade extending through said opening spaced from the sides thereof, a separately formed relatively porous sintered powder metal fillet element in each said opening extending radially outward of said rim and interposed between the side of said blade and the side of said opening, said element extending along the surface of said blade and the outer surface of said rim and forming a concave fillet surface above said rim, and fused braze material bonding said piece to said blade and said rim and infiltrating said sintered metal fillet element.

3,045,965
TURBINE BLADES, VANES AND THE LIKE
Thomas Bowmer, Wollaton, Nottingham, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Feb. 19, 1960, Ser. No. 9,887
Claims priority, application Great Britain Apr. 27, 1959
9 Claims. (Cl. 253—39.1)



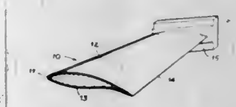
1. A blade adapted to be mounted radially relative to the longitudinal axis of a fluid flow machine, said blade having an internal chamber adapted to be supplied with cooling fluid, and a plurality of slots extending from one external surface of the blade adjacent the trailing edge thereof to said chamber, said slots having axes inclined to a mid-chord line of the blade and to a radius of the blade and emerging in said external surface in the form of elongated orifices each having a major axis extending obliquely relative to the direction of fluid flow across said external surface, the elongated orifices permitting bands of cooling fluid to escape over said trailing edge which bands intermingle at the edges thereof so that substantially the entire radial extent of said trailing edge is covered by the cooling fluid.

3,045,966
GAS TURBINE ENGINE
Ivan M. Swatman, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 15, 1959, Ser. No. 820,323
5 Claims. (Cl. 253—39.1)



1. In a gas turbine engine, a housing, a turbine wheel including a shaft, a turbine nozzle, a support member for said turbine nozzle, a bearing rotatably supporting said shaft in said housing, said support member engaging the bearing and the housing, an outer portion of said support member being spaced from an inner portion of said turbine nozzle, a plurality of radial pins extending into said turbine nozzle and said support member in a sliding fit relationship for supporting said turbine nozzle ring upon said support member, a plurality of heat shields positioned between said outer portion of said support member and the inner portion of said turbine nozzle, said radial pins extending through each of said heat shields for supporting said heat shields in spaced relationship to one another and to the outer portion of said support member and to the inner portion of said turbine nozzle, and means for circulating cooling air in the space between said outer portion of said support member and said inner portion of the turbine nozzle ring and over said heat shields.

3,045,967
HOLLOW BLADES AND MANUFACTURE THEREOF
Daniel Jarvis Clarke and Edward A. Stalker, Bay City, Mich., assignors to The Stalker Corporation, a corporation of Michigan
Original application Apr. 12, 1952, Ser. No. 282,012. Divided and this application Apr. 17, 1957, Ser. No. 653,342
1 Claim. (Cl. 253—77)



A hollow integral blade envelope for use in high speed axial flow compressors, turbines and the like and formed from a single relatively thin metal sheet, said blade comprising upper and lower blade walls each work-formed from the leading to the trailing edge of the blade to a predetermined blade wall contour in such manner and to such a degree that it maintains said walls in the completed blade substantially free from internal distortion producing

stress and in controlled stress condition and dimensionally stable such that under high temperatures and centrifugal force encountered in use the blade is capable of mounting in close running clearance with a casing, a nose portion on said blade formed as an integral spanwise connection between said walls and including a short radius bent portion restricted to a narrow zone forward of said walls, and a trailing edge portion formed as a permanently brazed joint along the span of the blade completing the blade envelope and maintaining said stress-free blade walls in proper relation to each other.

3,045,968
FIR TREE BLADE MOUNT
William S. Willis, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 10, 1959, Ser. No. 858,736
2 Claims. (Cl. 253—77)

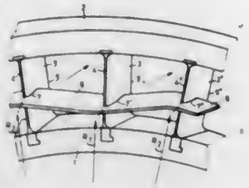


1. A turbine blade assembly comprising a circular turbine rotor having a series of substantially V-shaped slots in the periphery thereof, turbine blades having substantially V-shaped roots for fitting in said slots, a series of asymmetric serrations formed on each side wall of said slots, said serrations comprising an alternate series of axially extending V-shaped projections and recesses arranged such that the V-shaped projections on one side wall are disposed substantially opposite the V-shaped recesses on the other side wall, a series of asymmetric serrations formed on each side wall of each of said roots, said serrations comprising an alternate series of axially extending V-shaped projections and grooves arranged such that the V-shaped projections on one side wall of each root are disposed substantially opposite the V-shaped recesses on the other side wall of said root, the asymmetric serrations on each V-slot being arranged to slidably receive the asymmetric serration on one of said roots in intermeshing relationship, the intermeshing surfaces at one side of each root being disposed at a slope with respect to the longitudinal axis of the root, and the intermeshing surfaces at the opposite side of the root being disposed at an equal and opposite slope to said first slope with respect to the longitudinal axis of said root, a platform on each of said blades at the inner end of said blade formed integrally with said blade and root and disposed between said blade and root, each of said platforms overlying the open end of one of said slots and extending in a tangential direction with respect to said turbine rotor from each side of the blade, the platform on any one blade contacting a platform on the adjacent blades at opposite sides of said one blade when said roots are assembled in said turbine rotor.

3,045,969
VIBRATION DAMPING DEVICE FOR TURBO-MACHINE
Hans Meienberg, Zurich, Switzerland, assignor to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland
Filed Sept. 11, 1959, Ser. No. 839,518
Claims priority, application Switzerland Sept. 26, 1958
4 Claims. (Cl. 253—78)

1. A stationary guide blade apparatus of an axial flow turbo-machine comprising

(*a*) an annular blade carrier;
(*b*) a large number of circumferentially spaced radially extending blades mounted on the carrier and each having a leading edge and a trailing edge;
(*c*) a continuous endless stiffening and damping band extending circumferentially of the blades and containing slots which fit the blade profiles; and



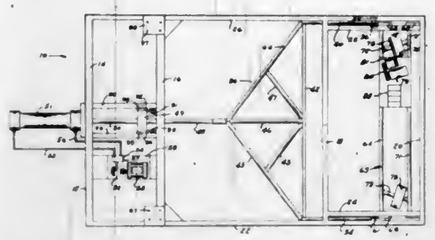
(*d*) means rigidly connecting the leading edges of the blades with the band at the edges of said slots,
(*e*) the band connections on adjacent blades being at different radii from the axis of the machine whereby adjacent blades are divided by the band into sections having different natural frequencies.

3,045,970
WIRE STRETCHER
Harvey M. Cochran, Camp Creek, W. Va.
Filed Mar. 25, 1960, Ser. No. 17,685
3 Claims. (Cl. 254—73)



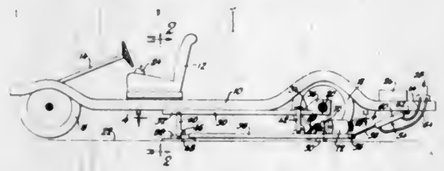
1. A wire tensioning device comprising a support formed with an arcuately curved concave forward edge formed to receive a vertical fence post, means to engage around a fence post and to clamp said support to the fence post with the fence post received in said concave forward edge, a horizontal lever pivoted to said support, a vertical outwardly facing abutment shoulder on said lever, a horizontal clamping arm pivoted to said lever at a location spaced outwardly from said abutment shoulder and having an inner end portion clampingly engageable with said abutment shoulder, whereby to clampingly secure a wire between said end portion and said abutment shoulder and having an outer end portion extending outwardly a substantial distance from the outer end of the lever and serving as a handle portion, said abutment shoulder limiting rotation of said clamping arm relative to said lever so that the clamping arm and the lever may be simultaneously rotated to tighten a wire responsive to a force exerted on said handle portion in the same direction as the clamping force exerted on the clamping arm, a second vertical abutment shoulder on said support spaced from said lever, and a second horizontal clamping arm pivoted to said support and having an end portion clampingly engageable with said second abutment shoulder, said lever being located between the first-named clamping means and the second clamping arm.

3,045,971
ROTARY DISPLAY DEVICE
Robert E. Mellencamp, South Lyon, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 12, 1957, Ser. No. 683,505
7 Claims. (Cl. 254—87)



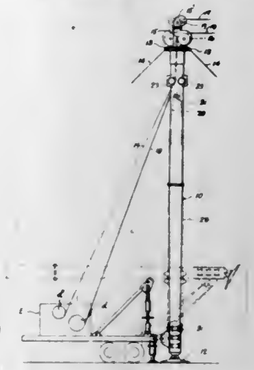
3. A display device comprising a carriage releasably clampable against the understructure of an automotive vehicle to be carried thereby during normal driving operations; a lowerable foot structure suspended from the carriage; lowerable rotary ground-engaging means suspended from the carriage at a point remote from the foot structure for driving the carriage around the axis defined by the foot structure; self-contained power means carried by the carriage for raising and lowering the foot structure and ground-engaging means; and a second power means carried on the display device in driving engagement with the rotary ground-engaging means.

3,045,972
STAGE CAR TURNTABLE
Robert W. Thomas, St. Clair Shores, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 26, 1957, Ser. No. 686,394
1 Claim. (Cl. 254—87)



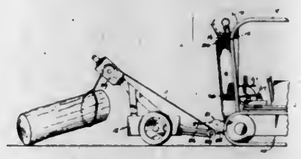
Apparatus for showing all sides of a vehicle to an audience, said apparatus including turntable means and drive means integral with said vehicle, said turntable means comprising a first generally triangular frame removably secured to the underside of said vehicle at points adjacent its apexes, a second generally triangular frame pivotally secured to said first frame at points adjacent its apexes, said first and second frame apexes including one pair of said apexes centered beneath said vehicle and forward of the center of gravity thereof and two pairs of said apexes transversely spaced from the center line of said vehicle and rearwardly of the center of gravity thereof, said second frame having a rotary pivot pad with its pivot axis adjacent said pair of forward apexes and a wheel adjacent each of said pair of rear apexes, power drive means mounted on said second frame for driving one of said wheels for pivoting said apparatus and said vehicle about said pivot pad, and power means interconnecting said vehicle and said second frame for lowering and raising said second frame, said vehicle and said apparatus being entirely supported on said pivot pad and said wheels when said second frame is lowered.

3,045,973
REVERSE RIGGING ARRANGEMENT FOR TOWER
Robert L. Slagle, Seattle, Wash., assignor to Berger Industries Incorporated, a corporation of Washington
Filed July 22, 1960, Ser. No. 44,712
4 Claims. (Cl. 254—139.1)



1. A cable logging system including a spar equipped at its top end with a self-aligning fairleader, opposed cable passing openings in the sidewalls of said spar below said fairleader, a logging cable operable through said openings and fairleader to a logging area at one side of the spar, an independently movable yarder including an engine and cable winding drum located at the other side of said spar, a belt carrier and guiding means mounted in said spar below said cable passing openings, a belt operable over said carrier with opposite side portions thereof passing outwardly through said opposed cable passing openings and depending at opposite sides of the spar to provide means by which the end of said logging cable passing downwardly through said fairleader and one of said openings may be attached to said belt and threaded through said cable passing openings from one side of the spar to the other to accommodate the cable to the position of the yarder on opposite sides of said spar.

3,045,974
REVERSIBLE POWER-DRIVEN WINCH WITH AUTOMATIC CONTROL OF REVERSE SPEED
Frank L. Lawrence, North Surrey, British Columbia, Canada, assignor to Aerialmatic Engineering Ltd., British Columbia, Canada, a corporation
Filed Nov. 7, 1960, Ser. No. 67,687
19 Claims. (Cl. 254—166)



11. In combination with a tractor having at the aft end a rearwardly facing yoke the two arms of which are vertically spaced, a hollow open-top standard made integral with the tractor frame and overlying the yoke, a horizontal winch surmounting the standard with its winding drum overlying said top opening of the standard, a fairleader journaled by trunnions between said yoke arms for swivel movement about a vertical axis, the upper trunnion having a hollow center communicating with the hollow center of the standard and giving access for cable fed to the fairleader from the winding drum of the winch, power means for driving the winding drum of said winch both for taking in and paying out cable, a control valve

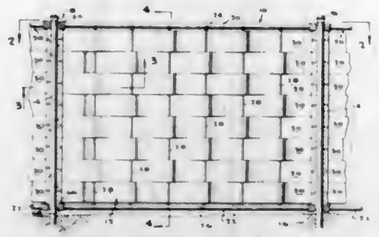
governed by an axially movable spindle and so associated with the winch as to control the speed at which the winding drum is driven by said power means, said valve being mounted alongside the standard with its spindle vertically disposed, a cross-arm mounted within the hollow center of the standard for fore-and-aft swing movement about a horizontal pivot through a swing arc traversing the line travelled by cable as it is drawn from the winding drum to the fairleader, a jointed vertically disposed rod connecting said valve spindle with a crank arm fixed to a projecting end of a pivot shaft for said cross-arm, normally operated means for moving the joint of said jointed connecting rod through an over-center travel from an inoperative position collapsing the joined sections into an operative position placing the sections in approximately an in-line condition, endwise movement of the in-line sections by cable-actuated swing motion of the cross-arm imparting axial winch-controlling movement to the valve spindle, said act of collapsing the jointed connecting rod placing the cross-arm in an out-of-the-way position, and means independent of the jointed connecting rod and subject to manual control for imparting axial winch-controlling movement to the valve spindle when said jointed connecting rod is collapsed.

3,045,975
ROPE GUIDE ROLLER
Robert Benjamin Bolton, 14 Middle Drive, Ponteland, Newcastle-upon-Tyne, England
Filed Mar. 16, 1960, Ser. No. 15,357
Claims priority, application Great Britain Sept. 11, 1959
4 Claims. (Cl. 254—190)



1. A guide roller for a haulage rope, comprising in combination a tube constituting a central portion, two bosses one at each end of said central portion, each of said bosses having on its inner face an annular shoulder supporting an end of said tube, a spindle whereon said bosses are rotatable, a pair of supports for the ends of said spindle, securing bolts penetrating each of said supports and engaging each end of said spindle to secure the spindle in said supports, said securing means also serving to clamp said tube between said bosses, each of said bosses having an inner end of a diameter at least equal to that of the contiguous end of said tube and each decreasing towards its outer end, and two spiral-helical grooves extending in opposite directions each through not more than one turn, and crossing once in the peripheral surface of each of said bosses, and having their inner ends emerging at the periphery of said flange, each of said grooves having throughout its length a continuously arcuate base and a width not substantially greater than the diameter of the rope to be guided therein.

3,045,976
METAL PANEL FENCE
Alfred Nayhouse, 566 Bigelow St.; Thomas Frankert, 34 Sunrise Drive; and John J. Long, 521 Sleepy Hollow Road, all of Pittsburgh, Pa.
Filed Mar. 17, 1961, Ser. No. 96,537
5 Claims. (Cl. 256—24)



1. A metal fence panel unit comprising a pair of laterally spaced and parallel, longitudinally extending rails, a plurality of spacer members extending between said rails and connected thereto, said spacer members being parallel to each other and being longitudinally spaced relative to said rails, a plurality of elongated strips of substantially rectangular metallic panels, said panels extending over and under each adjacent pair of said spacer members with each adjacent pair of said panels engaging said spacer members on opposed sides thereof, and means connecting together the adjacent ends of said panels and said rails to form said fence panel unit, said means comprising an elongated element extending across said adjacent ends of said panel on one side thereof, a second elongated element extending across the opposite side of said adjacent ends of said panels, and means extending through said panels and elements to draw said elements together and clamp said adjacent ends of said panels therebetween.

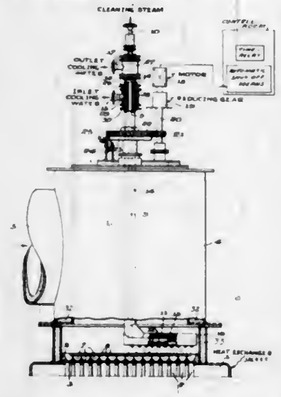
3,045,977
CONCRETE FENCE POSTS
John F. Haile, Minor, Va.
Filed Apr. 29, 1960, Ser. No. 25,718
8 Claims. (Cl. 256—51)



1. A reinforced concrete fence post of substantially rectangular cross section, said post having a longitudinal slot extending axially through said post from near one end for a major portion of its length toward the opposite end, said longitudinal slot being of such width as to receive the overlapped ends of conventional fence rails, a plurality of metallic rods extending transversely across said slot at uniformly spaced intervals and having their ends firmly secured in the opposite side walls defining said slot, said rods being adapted to support the overlapped ends of fence rails in uniformly spaced position along said slot, said opposite end of said post being bifurcated by a V-shaped notch, thereby forming a pair of outwardly tapering anchoring prongs, said V-shaped notch terminating near its vertex in a relatively narrow groove of substantially uniform width, said groove extending to within a relatively short distance from the proximate

end of said longitudinal slot, said groove being adapted to receive and retain in position a strand of barbed wire in close proximity to the surface of the ground and beneath the lowermost rail when the post is anchored in upright position.

3,045,978
TUBULAR BOILER OR HEAT EXCHANGER WITH SOOT BLOWER
Reinhard Waldhofer, Essen-West, Germany, assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,039
2 Claims. (Cl. 257—1)

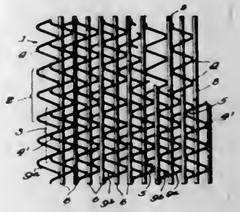


1. Heat exchange apparatus for transfer of heat to water from oil and powdered fuel gasification systems, comprising a combined cylindrical nest of vertical tubes disposed in a water jacket, a chamber disposed above the upper ends of the vertical tubes, an upper tube sheet disposed within the chamber and secured gas tight to the upper ends of the vertical tubes, a fluid distribution plate disposed over the tube sheet having converging surfaces forming openings conically tapered to converge downwardly towards the tops of each of the vertical tubes, with the upwardly diverging surfaces of each opening merging with the diverging surfaces of fluid entrance walls of adjacent conical openings to provide sharp entrance wall terminals, a soot blower rotatably mounted within the chamber above the fluid distribution plate, said blower comprising a water cooled fluid feed pipe arranged to rotate in the axial center of the nest of tubes above the fluid distribution plate, and a water cooled blast rack having a fluid discharge pipe extending radially from the feed pipe and rotatable therewith over the merging entrance wall terminals of said fluid distribution plate, said discharge pipe having downwardly directed nozzles in position thereon to discharge fluid into the conical openings above the nest of tubes during rotation of the blast rack.

2. Apparatus as claimed in claim 1, and which includes a motor drive for the blast rack with a control means operatively connected with the drive motor to connect and disconnect the drive motor automatically at regular time intervals.

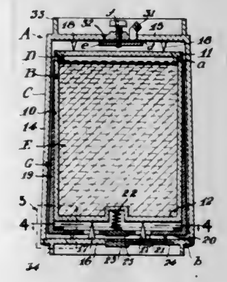
3,045,979
STAGGERED SERPENTINE STRUCTURE FOR HEAT EXCHANGES AND METHOD AND MEANS FOR MAKING THE SAME
Homer D. Huggins, James D. Morse, and Harold H. Dolister, Racine, Wis., assignors to Modine Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Filed Mar. 7, 1956, Ser. No. 570,128
1 Claim. (Cl. 257—130)

In a heat exchange structure, the combination of a plurality of fluid-conducting tubes arranged, from front to rear, in transversely extending rows, said tubes being of elongated cross-sectional shape having parallel side walls and relatively narrow end walls, the tubes of each row being staggered with respect to the tubes of an adjacent row thereby forming uniformly spaced pairs of tubes in staggered relationship, an array of staggered corrugated fin sections extending between and attached to said staggered pairs of tubes, said staggered array comprising a plurality of laterally offset sections of sheet metal fins, each of the corrugations constituting a fin loop, said off-



set arrangement thereby exposing the inner edges of said fin loops, the alternate loop surfaces of corresponding fin loops of adjacent sections lying in the same plane and being integrally attached at overlapping portions of said sections, each of the tubes being operatively engaged in heat transfer relation to the fin loops of the corresponding sections on opposite parallel side walls of the tube, and with one of the end walls of said tube being in contact with the edges of the fin loops of the adjacent offset section, the offset arrangement of said fin loops thereby providing a free passageway for air flow through said fin structure at each fin loop.

3,045,980
HEATING AND COOLING APPARATUS
Timothy Isham, 6128 Wilshire Blvd., Los Angeles, Calif.
Filed Jan. 28, 1959, Ser. No. 789,604
1 Claim. (Cl. 257—191)



In a heat and cold transferring apparatus embodying a pair of fixed elongated inner and outer annular heat conductive walls arranged in concentric spaced but proximate relation to each other with a sealed vacuum spaced therebetween and a temperature source located within and encompassed by the inner of said walls; the inner of said walls having a cylindrical outer surface of uniform external diameter throughout, and the outer of said walls having its interior surface longitudinally inclined relative to said cylindrical surface, a tubular heat conductive gate interposed between said walls in longitudinal slidable relation thereto having opposed inner, and outer sides the inner side of which is in constant superficial slidable contact throughout with the outer surface of said inner wall and the outer side of which is inclined in parallel relation to the inclined inner surface of said outer wall whereby on longitudinal reciprocation of said gate its inclined outer side may be disposed in or out of superficial contact with the inclined inner surface of said outer wall.

3,045,981
BAFFLE PLATE
John J. Hendrickson, Mentor, Ohio, assignor to Hendrickson Machine Company, Cleveland, Ohio, a corporation of Ohio
Filed May 9, 1958, Ser. No. 734,156
17 Claims. (Cl. 257—236)



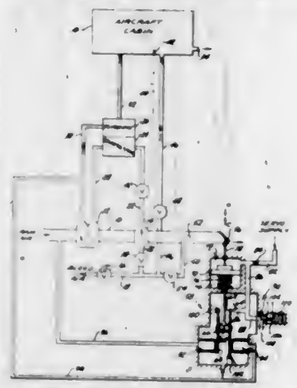
1. A baffle plate for a shell and tube heat exchanger and the like having tubes and a hollow shell with an interior wall, said baffle plate being adapted to be disposed in the shell and comprising a pair of spaced, parallel plate members each having an edge, said plate members being adapted to extend transversely of the shell and each said edge having a portion adapted to engage the interior wall of the shell and a portion adapted to be spaced from the interior wall of the shell when said baffle plate is disposed in the shell, said baffle plate also comprising a plurality of longitudinally aligned apertures in said plate members respectively, a sleeve in each aligned pair of said apertures, each said sleeve having an internal diameter adapted to closely though slidably engage over a tube, an external diameter less than the diameter of said pair of aligned apertures within which said sleeve is disposed and flared ends, said flared ends of each said sleeve having an external diameter greater than the external diameter of the sleeve by an amount greater than twice the difference between the external diameter of the sleeve and the diameter of the pair of aligned apertures, a spacing collar surrounding each said sleeve and disposed between said plate members and of greater internal diameter than the external diameter of the sleeve and having a sliding engagement with the sleeve and the adjacent surfaces of said plate members, said sleeves being of longer length intermediate said flared ends, respectively, than the sum of the thickness of said plate members and the length of said spacing collars respectively whereby said sleeves have movement longitudinally and transversely relative to said plate members and apertures, other pairs of aligned apertures in said plate members respectively, support rods extending through said other pairs of aligned apertures respectively and being of less external diameter than the diameter of said other pairs of aligned apertures respectively, a support collar surrounding each said support rod and positioned intermediate said plate members and being movable with respect thereto and fastening means securing each said support collar to the adjacent support rod.

3,045,982
THERMAL REGENERATOR
Jacob Willem Laurens Kohler, Herre Rinia, and Jan Gerbrand Piet, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 12, 1958, Ser. No. 779,954
3 Claims. (Cl. 257—270)



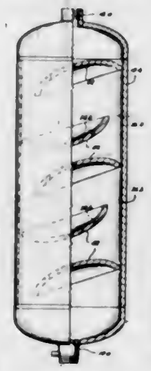
2. A regenerator of the type suitable for use with a cold gas refrigerator having a gaseous medium therein comprising a regenerator housing, a regenerator material in said housing being in the form of a rolled strip of textile fabric comprising a fabric foundation layer, a plurality of thin filamentary elements secured to the surface of the foundation layer adjacent to the regenerator wall and having their free ends bent into firm engagement with said regenerator wall, the greater part of the length of each filamentary element being substantially parallel to the regenerator wall.

3,045,983
RAM AIR CONTROL FOR AIRCRAFT AIR CONDITIONING SYSTEM
Stanley G. Best, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 15, 1958, Ser. No. 735,638
17 Claims. (Cl. 257—276)



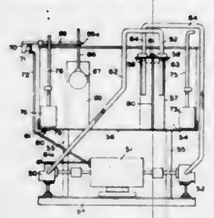
4. In an aircraft air conditioning system wherein ram air is utilized to cool air which is supplied to the cabin, heat exchange means adapted to transfer heat from the supply air for the cabin to the ram air which means includes air passage means adapted to receive a flow of ram air and to discharge said air, a valve movable in said air passage means for controlling the flow of ram air therethrough, and a valve control mechanism including a pneumatic actuator and a pressure ratio sensitive device operable responsive to ram air pressure and supply air pressure to control the operating pressure in said actuator whereby to position said valve in accordance with the ratio of said pressures and thereby to regulate the ratio of ram air flow to cabin supply air flow in keeping with said pressure ratio.

3,045,984
FLUID BLENDER
Fredric E. Cochran, 7222 Prestwick, Houston 25, Tex.
Filed June 8, 1959, Ser. No. 818,661
4 Claims. (Cl. 259—4)



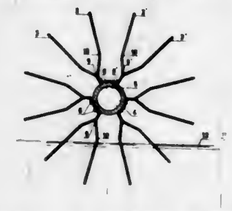
1. A fluid blender comprising, a housing having an inlet and outlet, a deflector plate in and partially restricting the inlet jetting the flow of fluid through the inlet into the housing interior, a plurality of spaced baffles alternately secured to opposite sides of the housing interior and extending transversely but not entirely across the housing interior, said baffles being arcuate in cross section, alternate baffles being curved in opposite directions with adjacent concave faces in alignment facing each other thereby providing a rotary mixing action to the fluid as it passes between the concave faces of adjacent baffles.

3,045,985
LIQUID BLENDING AND MIXING APPARATUS SYSTEMS
Harold E. La Rock, Sr., 512 Menomonie St., Eau Claire, Wis.
Filed Dec. 17, 1959, Ser. No. 860,267
12 Claims. (Cl. 259—4)



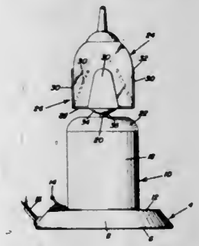
1. In combination apparatus for blending materials in liquid form and for mixing such blended materials with other liquids comprising, a blending chamber for materials to be blended, outlet means extending into said materials and having pump means connected thereto to withdraw said materials from the blending chamber, inlet means to said pumping means to force said materials into the blending chamber, means secured to said inlet means for circulating said materials within the blending chamber, a holding tank, means connecting said holding tank to said blending chamber, a mixing tank, a mixing chamber within the mixing tank, means for forcing the material at high pressure from said holding tank into said mixing chamber, means for simultaneously forcing other liquid into said mixing chamber to mix said materials and other liquid, means secured to said mixing chamber for transferring such mixture into said mixing tank, means for removal of such mixture from said mixing tank, and means in communication with said mixture for maintaining said mixture above a pre-determined level within said mixing tank.

3,045,986
AERATION ROTOR
Johannes Frauenberger, Michelbach, Nassau, Germany, assignor to Nederlandse Organisatie voor Toegepast-Natuurweten-Schappelijk Onderzoek ten behoeve van de Volksgezonheid, The Hague, Netherlands, a corporation of the Netherlands
Filed Aug. 17, 1959, Ser. No. 834,210
Claims priority, application Germany Aug. 16, 1958
9 Claims. (Cl. 259—136)



1. Aeration rotor for the aeration of water, sewage or waste liquid or for the introduction of gases into liquids, comprising a shaft having a number of toothed combs connected thereto, which shaft is adapted to rotate so as to make the teeth beat into the liquid, characterized in that it comprises a shaft adapted to rotate, a plurality of beater elements substantially uniformly spaced around said shaft for substantially the entire length of said shaft, each beater element having a base secured to said shaft, each base having an integral substantially radial section extending outward from said shaft, each radial section being divided into strips and each strip being bent at a spaced distance from said shaft to one side of the plane of said radial sections, to provide the teeth for said combs, and the teeth being further bent at a greater distance from said shaft to provide four rows of beater elements on each base, which beater elements from the second bend outwardly, extend substantially radially of the center line of said shaft and are alternately spaced one on one side and one on the other side of the plane of said radial sections, and means to secure said bases to said shaft.

3,045,987
AGITATING AND MIXING DEVICE
Frank A. Cake, Franklin, La.
(4214 West Central, Wichita, Kans.)
Filed Apr. 25, 1960, Ser. No. 24,560
3 Claims. (Cl. 259—72)



1. A portable fluid mixer comprising a base, an upstanding electric motor mounted on said base and including a vertical shaft comprising a threaded upper end portion, a holder removably mounted on the shaft, and a fluid mixing container removably mounted in the holder, said holder including a horizontal disk for receiving the container thereon, and means for releasably securing the container on the disk, said holder further including an integral plano-convex circular boss on the underside of the disk concentric therewith, said boss having a threaded vertical socket therein receiving the threaded upper end portion of the shaft for securing the holder thereon, said socket being off-center whereby the boss has the multiple functions of a detachable coupling, a vibrator and a flywheel for the holder.

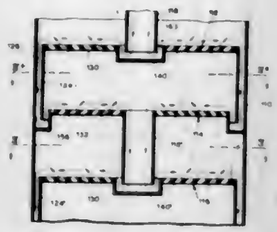
3,045,988
FLEXIBLE DRIVE BEATER
Donald M. Briscoe, Seattle, Wash., assignor to Sweden Freezer Manufacturing Co., Seattle, Wash., a corporation of Washington
Filed Aug. 15, 1960, Ser. No. 49,489
6 Claims. (Cl. 259—106)



1. In combination, a frame, a sleeve anchored on said frame, a tube journaled in said sleeve and projecting therefrom forwardly and bending downwardly, a motor mounted behind said tube, a beater having a depending

shaft journal-mounted at the top in the front end of said tube, and a flexible drive shaft in said tube and operatively connected at its back end to said motor and at its front end to said beater shaft.

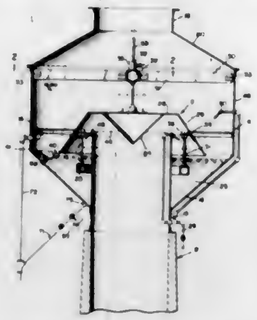
3,045,989
CONTACT PLATE ARRANGEMENT FOR CONTACT COLUMNS
Walter Kittel, Rhenaniastrasse, Mannheim, Germany
Filed May 18, 1959, Ser. No. 813,988
Claims priority, application Austria May 31, 1958
3 Claims. (Cl. 261—114)



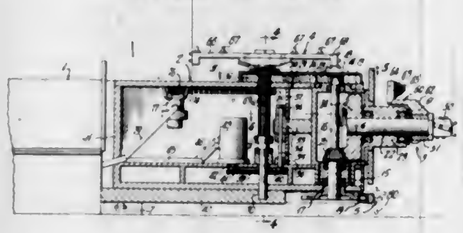
1. A column or the like gas-liquid contactor wherein a downwardly moving liquid is brought into intimate contact with rising gases, comprising in combination: an upright cylindrical column wall defining a vertical flow space, a plurality of contact plate pairs horizontally arranged within said flow space above one another, each plate pair having an upper and a lower plate, the upper plate having a central solid baffle surface and a plurality of inclined gas passages distributed over the plate area, the inclination of said gas passages being towards said column wall, a cylindrical element joined at its upper end to the circumference of said upper plate flush therewith and extending downwardly coaxially with said column wall to enclose an annular space therewith, said cylindrical element terminating above the level of said lower plate, said lower plate having a central hole, a tubular member fitted in said hole flush with said lower plate and terminating above the central solid baffle surface of the upper plate of the next lower plate pair, said lower plate having a plurality of inclined gas passages distributed over the entire plate area, the inclination of said gas passages being radially toward the center of the column, said lower plate further having a circumferential solid baffle portion below said cylindrical element joined to the circumference of the lower plate flush therewith, a first guide vane comprising element interposed between the central baffle surface of the upper plate and the lower end of the tubular member, and a second guide vane comprising element interposed between the circumferential baffle portion of the lower plate and the lower end of said cylindrical element.

3,045,990
DRAFT REGULATOR AND SCRUBBER
Thomas J. Keenan, Jr., 4350 Park Blvd., Oakland 2, Calif.
Filed Apr. 10, 1959, Ser. No. 805,576
3 Claims. (Cl. 261—120)

1. In a draft regulator for a vertical smoke stack of the type having a tank forming an annular water bath around the mouth of the stack, a cap mounted over the top of the stack and a float buoyantly supporting said cap on the water within said tank so that a variation in water level will change the effective spacing between the cap and the stack for egress of gases of combustion the improvement comprising, said cap being formed in a closed deep truncated conical configuration forming a flat top and an outwardly depending side wall overlying a substantial area of water adjacent the stack, said float being a buoyant ring of wider diameter than said stack and mounted around said stack within the water of said tank, spacer members connected to said float and extending upwardly to said cap, holding said cap spaced above the stack with the lower edges of the side wall spaced closely above the water level within said tank, a support member rigidly mounted on said tank above said cap, a vertical bearing mounted on said support member in axial alignment with said stack, and an inflexible shaft vertically slidably supported by said bearing and connected on its bottom extremity to the top portion of said cap, said bearing supporting said shaft for vertical movement in axial alignment with said stack and being connected to the center of said cap to maintain said cap and float in axial alignment relative to said stack.



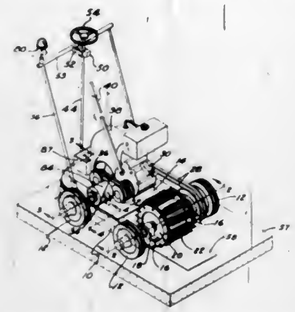
3,045,991
BORING TYPE CONTINUOUS MINING MACHINE
Virley W. Lilly, Box 93, Chapmanville, W. Va.
Filed May 6, 1938, Ser. No. 733,358
2 Claims. (Cl. 262—9)



1. A continuous mining machine comprising, a carriage, a boring head having cutters thereon mounted for rotation about a horizontal axis, means to rotate the cutters, the boring head pivotally mounted on the carriage for movement in a horizontal plane, means to move the boring head about its pivotal mounting to adjust the angle of the boring head relative to the carriage, a top shearing cutter mounted upon a vertical shaft, a vertical drive shaft concentric to the pivotal mounting head of the boring head, means drivingly interconnecting the drive shaft and boring head cutters to rotate the boring head cutters, a bottom kerf cutter mounted upon the drive shaft below the boring head, means to drive the bottom kerf cutter, and means drivingly interconnecting the drive shaft and the top shearing cutter shaft.

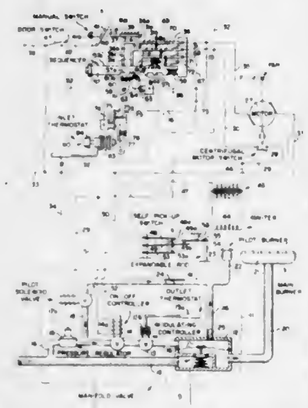
3,045,992
ABRADING MACHINE AND DRIVE THEREFOR
Charles T. Asbury, 717 Isle of Palms, Fort Lauderdale, Fla.
Filed Aug. 21, 1958, Ser. No. 756,324
3 Claims. (Cl. 262—20)

3. In an abrading apparatus of the nature described, U-shaped cutting elements having holes in their closed ends, a holder for swingably supporting said cutting elements and comprising a central shaft, means for reversibly driving said shaft, a pair of spaced end plates on the shaft, circumferentially spaced transversely aligned apertures in said end plates, rods extending from one end plate to the other and having their ends in said apertures extending through the holes in the cutting elements and swingably supporting said cutting elements, ring means attached to said end plates on the outside thereof overlapping the apertures to prevent the rods from becoming



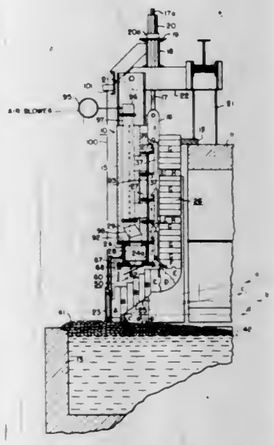
disassembled from the holder and at least one ring being detachable, and rigid cylindrical means coaxial with said shaft extending from one end plate to the other radially inwardly of said rods supporting the end plates relative to each other and providing stop means preventing inward movement of the cutting elements mounted on the rods, and the spacing between said rods being such that each row of cutting elements forms stop means limiting the deflecting movement of the adjacent row of cutting elements to a total swinging angle of about 20°.

3,045,993
DRYER CONTROL SYSTEM
Nickolas J. Sidaris, Long Beach, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 862,850
14 Claims. (Cl. 263—10)



7. The combination comprising drying apparatus having a source of heat for heating air flowing into said apparatus and means for exhausting the air from said apparatus, a timer having first switch means for controlling said heat source and second switch means for controlling said timer, and control means responsive to the heat input to the apparatus to control energization of said timer independently of said second switch means, said control means being arranged to cause energization of said timer only after the heat input to the apparatus has been relatively high and has dropped below a predetermined level, and said second switch means being arranged to break the circuit to said timer a short time after the timer is initially placed into operation, said time being sufficient to have the heat input rise above said predetermined level.

3,045,994
FURNACE BACK WALL CONSTRUCTION
Levi S. Longenecker, Pittsburgh, Pa.
(61 Mayfair Drive, Mount Lebanon, Pa.)
Filed Aug. 16, 1960, Ser. No. 50,005
8 Claims. (Cl. 263—46)

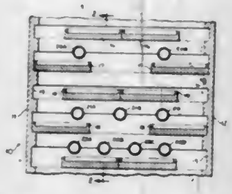


1. In a furnace back wall for suspension along an open back end and above a backwardly-projecting charging bay of a melting furnace and wherein the back wall has a metal structural member assembly that carries a refractory lining in a suspended relation therefrom to define a substantially vertical back wall for closing-off the open back end of the furnace forwardly of the charging bay, an apron backet carried by the structural member assembly and projecting longitudinally from the back wall backwardly along and above the charging bay, a refractory tile member row, open-end mounting portions along said apron bracket in a downwardly-backwardly stepped progression therealong from the interior of the furnace, metal hangers projecting downwardly from and removably positioned, along said mounting portions, said tile member row having refractory tile members carried in a suspended backwardly stepped-down relation by said hangers away from the interior of the furnace, and bottom end portions of said tile members being sloped backwardly to define a common backwardly-declining plane along the lower reaches of said row in such a manner that radiant heat from the furnace strikes against said plane and is refracted towards the charging bay to aid in heating and melting charging material being introduced thereto.

3,045,995
HEATED FRACTIONATING COLUMN
Erwin C. Handwerk, Lehighton, Pa., assignor to American Metal Climax, Inc., a corporation of New York
Filed Sept. 26, 1957, Ser. No. 686,317
3 Claims. (Cl. 266—19)

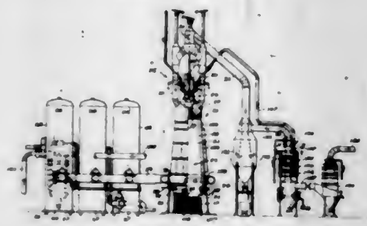
1. An improved fractionating column formed of refractory materials, wherein ascending hot metallic vapors are contacted with descending liquid metal condensed from said vapors and flowing on vertically spaced trays in said column, which comprises two pairs of substantially parallel walls arranged to provide a tower with an

opening having a rectangular horizontal cross-section, vertically spaced horizontal grooves in the inner sides of at least one pair of said walls, a rectangular tray with one pair of opposite edge portions fitted loosely in said grooves at each vertically spaced level in said tower, a weir along one vertical retaining edge portion of each said tray at right angles to said pair of edge portions fitted loosely in said grooves, lower heating means disposed in said tower above at least the two lowermost of said trays, and upper heating means disposed in said tower above at least one of said trays above said lower



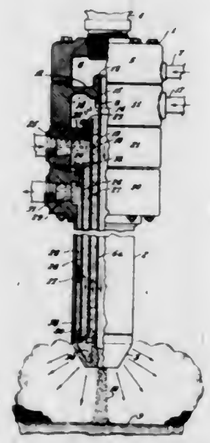
heating means, said lower and upper heating means being adapted to maintain an increasing temperature gradient in said descending liquid metal in the lower portion of said tower, each of said lower and upper heating means being a plurality of radiation refractory tubes extending substantially horizontally and straight through said tower and one pair of parallel walls thereof, and said radiation refractory tubes having an exteriorly convex form from end to end and being positioned substantially parallel to said weirs of said trays and away from the vertical paths of said descending liquid metal spilling over said weirs.

3,045,996
ULTRA HIGH PRESSURE BLAST FURNACE
Owen R. Rice, Ben Avon, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Nov. 19, 1959, Ser. No. 854,042
2 Claims. (Cl. 266—31)



1. A blast furnace for reducing iron bearing ores; comprising an annular wall formed of refractory blocks, a gas tight metal jacket which is structurally continuous from top to bottom and completely encompassing said wall, an annular cooling jacket cooperating with said metal jacket to cool same, a pair of spaced end bells mounted in the upper end of said annular wall and defining a pressure locking bell chamber so as to form a substantially closed furnace chamber, means for introducing gas under pressure into said furnace chamber, means for discharging gases from said furnace evolved during the reduction of said ore, gas washing means connected to said discharge means, said gas washing means including a plurality of lengthwise spaced orifice plates mounted in an elongate conduit, each of said orifice plates having variable size orifices so as to provide a sequence of controlled pressure drops and thereby to exert a back pressure within said furnace so as to maintain said furnace at a preselected internal pressure exceeding an average pressure of 13 p.s.i.g., means for introducing a liquid into said furnace gas before said furnace gas enters said orifice plates, and means connected to said washing means between two of said orifice plates, said connecting means communicating with said locking bell chamber so that said pressure in said locking bell chamber is maintained approximately equal to said preselected pressure in said furnace chamber adjacent said pressure locking bell chamber.

3,045,997
POROUS OXYGEN LANCE
Edwin B. Hudson, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Mar. 2, 1959, Ser. No. 796,343
7 Claims. (Cl. 266—34)



1. A lance for use under conditions of high temperature, said lance having an elongated tubular nozzle structure terminating in a nose, said nozzle structure comprising a plurality of porous sections formed from porous material having minute interstices therein through which a fluid coolant such as steam may be transmitted, said porous sections being of varying degrees of porosity, and means within said nozzle structure for delivering a fluid coolant to the inner surfaces of said porous sections, whereby said coolant may pass through the interstices therein so as to envelope the exterior surfaces of said nozzle structure in a protective blanket of the coolant fluid.

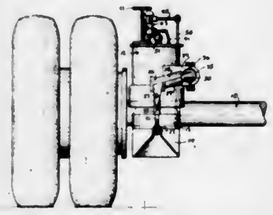
3,045,998
SIDE BEARERS FOR RAILWAY VEHICLES
Archie John Hirst, Leicester, England, assignor to Metalastik Limited, Leicester, England, a company of Great Britain
Filed July 30, 1959, Ser. No. 830,651
Claims priority, application Great Britain Aug. 5, 1958
14 Claims. (Cl. 267—3)



1. A side bearer assembly for a railway vehicle for supporting the body of the vehicle from a wheel-carrying frame thereof, the assembly comprising a rubber block which is use of the assembly acts mainly in compression to support the body from the wheel-carrying frame and which accommodates horizontal movements of the body relatively to the wheel-carrying frame mainly by shear deformation so that such movements are readily permitted, and connected with the block at one end of the

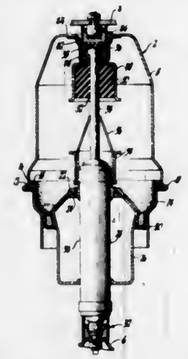
block a frusto-conical rubber ring which in use of the assembly acts in combined shear and compression to support the body from the wheel-carrying frame, said frusto-conical rubber ring permitting vertical movement of the body relatively to the wheel-carrying frame, the rubber block lying at least in part within the frusto-conical rubber ring.

3,045,999
VEHICLE SUSPENSION SYSTEM
Tyman H. Fikse, 3400 6th Ave. S., Seattle, Wash.
Filed Dec. 12, 1955, Ser. No. 552,387
5 Claims. (Cl. 267—22)



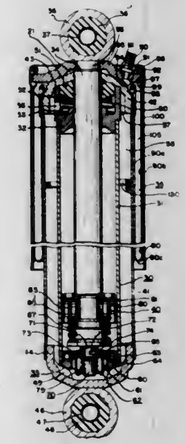
1. In a spring system, a frame assembly and a beam assembly movable with respect to one another, a pair of parallel spring units spaced apart lengthwise of the frame assembly and each having inner and outer members telescopically associated with one another, said outer members being rigidly mounted on one of said assemblies and said inner members being rigidly mounted on the other of said assemblies, an elastic ring radially compressed between the inner and outer members of each said spring unit, torsion rod means extending lengthwise of the frame assembly and journal mounted on one of said assemblies, and lever means operatively associated with said torsion rod means and the other of the assemblies whereby tilting of the beam assembly with respect to the frame assembly about a transverse axis causes a torsional windup of said torsion rod means for yieldingly resisting such tilting.

3,046,000
VEHICLE SUSPENSION SPRING ASSEMBLY
Von D. Polhemus, Franklin, and Ming-Chih Yew, Utica, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 15, 1960, Ser. No. 2,784
1 Claim. (Cl. 267—64)



A vehicle suspension spring assembly comprising, load supporting elastic means disposed between the sprung and unsprung mass of the vehicle, a hydraulic shock absorber arranged concentrically within said primary elastic means, said shock absorber including a piston rod flexibly connected to the sprung mass and a cylinder articulably connected to the unsprung mass, an annular rubber bumper surrounding said rod, a rigid inverted cup-shaped member surrounding said bumper and secured to said sprung mass, the peripheral wall of said inverted cup-shaped member being cylindrical in form and of uniform diameter from end to end, a conical striker portion on said cylinder engageable with said bumper upon predetermined compression deflection of said primary elastic means, and means forming a tapered mouth on said annular bumper aligned with said striker.

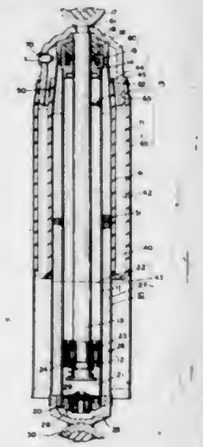
3,046,001
COMBINATION SHOCK ABSORBER AND AIR SPRING
Harold E. Schultze, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 13, 1960, Ser. No. 22,006
4 Claims. (Cl. 267—64)



1. A hydraulic direct acting shock absorber, including, a cylinder tube having a piston therein attached at one end of a piston rod, said rod extending exteriorly of the shock absorber through a seal chamber containing a rod seal member at one end of said cylinder tube, a reservoir tube surrounding said cylinder tube and having an end closure member closing the same and also closing the exteriorly positioned end of said seal chamber and through which said rod extends exteriorly of the shock absorber for mounting attachment to a device, a second tubular member surrounding a part of said reservoir tube in spaced relation thereto forming a space therebetween and including an end closure cap portion secured to said rod, said second tubular member being reciprocable relative to said reservoir tube on relative reciprocation between said rod and said reservoir tube, a resiliently flexible tubular fluid retaining wall means having inner and outer wall portions spaced in coaxially disposed arrangement connected by a U-shaped portion formed from the inner or the outer wall portions on relative axial movement therebetween with the free ends of the respective inner and outer wall portions disposed toward the same end of said flexible tubular wall means, said flexible tubular wall means surrounding a part of said reservoir tube and positioned in the said space between said reservoir tube and said second tubular member in supported rolling engagement on the exterior periphery of said reservoir tube and the inner periphery of said second tubular member, means effecting sealing engagement of the free end of said inner wall portion on the periphery of said reservoir tube, means effecting

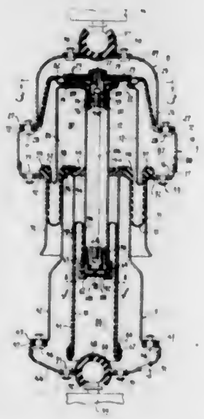
sealing engagement of said outer wall portion with the inner periphery of said second tubular member whereby reciprocation between said reservoir tube and said second tubular member effects reciprocation between the said inner and outer wall portions of said tubular wall means, said flexible tubular wall means cooperating with said reservoir tube end closure member and said second tubular member end closure cap to form therewith a closed fluid receiving chamber with the said U-shaped portion of said tubular wall means providing for closure of the said space between said reservoir tube and said second tubular member during reciprocal telescopic movement therebetween, said means in said second tubular member providing port means for admission or exhaust of fluid relative to said closed chamber.

3,046,002
COMBINATION SHOCK ABSORBER AND AIR SPRING
William F. Schmitz, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 30, 1960, Ser. No. 52,950
4 Claims. (Cl. 267—64)



1. A shock absorber and air spring unit assembly, comprising, a hydraulic direct-acting tubular shock absorber including a tubular pressure cylinder, a piston disposed in said pressure cylinder slidably fitting the same and having ports providing for hydraulic fluid flow through the piston between cylinder chambers at opposite sides of the piston during reciprocation thereof in said cylinder, valve means on each of opposite sides of said piston to control hydraulic fluid flow from one side of the piston to the other, a reservoir tube concentrically surrounding said cylinder tube in spaced relation thereto and forming therewith a reservoir space, valve means closing one end of said pressure cylinder and providing for hydraulic fluid flow in both directions between said pressure cylinder and said reservoir space, wall means closing the end of said reservoir tube adjacent said pressure cylinder valve means, a piston rod connected to said piston and having a portion extending beyond the opposite ends of said tubes, wall means closing said opposite ends and through which said rod slidably extends, a cup-shaped cap member secured to said extending portion of said rod adjacent the said opposite ends of said tubes and exterior thereof with the open end of the cap member directed toward the shock absorber, a guide skirt tube concentrically surrounding said reservoir tube in spaced relation thereto and having one end encircling the said open end of said cap member and extending substantially the full length of the shock absorber when in collapsed position, a resilient tubular wall unit having an inner tubular wall sleeved over said reservoir tube and an outer tubular wall sleeved within said guide skirt tube with the inner wall and the outer wall integrally connected by a return bend of wall portion formed by the inner and outer wall on relative reciprocation therebetween and with said inner and outer tubular walls having their free ends at the same end of the said unit, means securing the free end of said inner wall to said reservoir tube, said free end of said outer wall being positioned between said end of said cap member and said one end of said guide skirt frictionally securing thereby the free end of said outer wall between said cap member and said one end of said guide skirt.

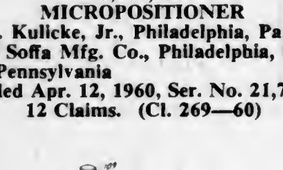
3,046,003
FLUID SPRING
Forrest O. E. Schultz, Owosso, Mich., assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 16, 1959, Ser. No. 827,562
15 Claims. (Cl. 267—65)



15. In a fluid suspension mechanism adapted to support variable loads at a mean height, a deformable fluid containing housing presenting a pair of spaced supports, fixed wall means in said housing forming a low pressure chamber therein, flexible wall means forming a variable volume chamber at one side of said flexible wall means and a high pressure chamber at the other side thereof, said variable volume chamber containing fluid under pressure to maintain said supports in spaced relation, pump means connected to both of said supports to deliver fluid from said low pressure chamber to said high pressure chamber upon movement of said supports from their normal spacing, and valve means movable between positions admitting fluid under pressure from said high pressure chamber at one side of said flexible wall to said variable volume chamber at the other side of said flexible wall and from said variable volume chamber to said low pressure chamber, said valve means being movable in response to a change in the spacing between said supports.

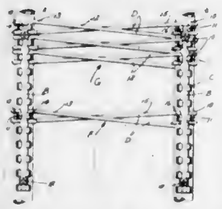
3,046,004
CUSHION AND METHOD OF MAKING THE SAME
William H. Struthers, Chicago, Ill., assignor, by mesne assignments, to Joseph J. Klein, Glencoe, Ill., and Emanuel N. Maisel, Farmington, Mich.
Filed Oct. 4, 1957, Ser. No. 688,229
9 Claims. (Cl. 267—80)

1. A one-piece cushion of compressible cellular material having imperforate top and bottom surfaces and two series of intersecting bores extending through the cushion in angular relationship to each other, each of



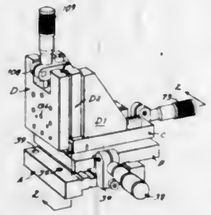
said bores having a larger cross sectional area within the cushion than at its peripheral edge.

3,046,005
ALUMINUM TUBULAR FURNITURE AND METHODS OF MAKING THE BACKS AND SEATS THEREOF
Solomon B. Raduns, Brooklyn, N.Y.
(14—50 128th St., College Point, N.Y.)
Filed July 13, 1959, Ser. No. 826,694
14 Claims. (Cl. 267—110)



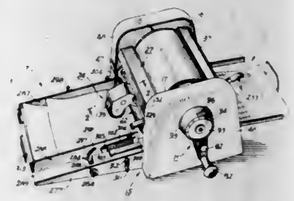
6. A criss-cross stranded back, seat and body support structure for furniture including tubular side structural elements having a plurality of tubular stretchable plastic extruded soft vinyl polymer strands looped in a criss-cross pattern around the sides of the structure, said tubular vinyl polymer strands in their final position extending alternately from side to side from the back of a tubular side element to the front of a tubular side element with the cross strands crossing each other midway between the tubular side elements and respectively being obliquely inclined so that they will extend below and above each other on the sides of said crossing and the ends of the strands being looped around the rear sides of the tubular side elements.

3,046,006
MICROPOSITIONER
Frederick W. Kulicke, Jr., Philadelphia, Pa., assignor to Kulicke & Soffa Mfg. Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 12, 1960, Ser. No. 21,706
12 Claims. (Cl. 269—60)
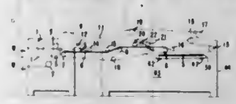


1. A micro-positioning manipulator comprising a base, a first stage axially reciprocable on said base in a plane parallel thereto, a second stage reciprocable on said first stage in a plane parallel thereto along an axis transverse to the reciprocation thereof, resilient means interconnecting said base and said first stage in slidable surface to surface engagement, resilient means interconnecting said first stage and said second stage in slidable surface to surface engagement whereby a point on said second stage is adapted to be oriented within a plane by selective manipulation of said first and second stages along the respective axes of reciprocation thereof, and a third stage coupled to said second stage and reciprocable along an axis intersecting the planes of manipulation of said first and second stages whereby a point on said third stage is adapted to be oriented tri-axially by selective manipulation of said first, second and third stages.

3,046,007
PAPER FEED TRAY FOR DUPLICATING MACHINES
Paul A. Stephenson, Hamden, Conn., assignor to Old Town Corporation, New York, N.Y., a corporation of New York
Division of application Ser. No. 666,369, June 18, 1957, now Patent No. 2,993,438, dated July 25, 1961. Continuation of application Ser. No. 638,022, Feb. 4, 1957. This application Jan. 15, 1960, Ser. No. 2,655
7 Claims. (Cl. 271—61)



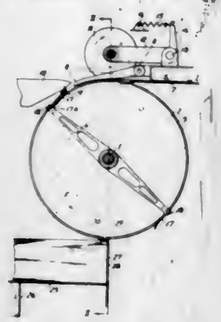
1. A paper feed table for a duplicating machine comprising a generally horizontal top plate, side plates mounted on the top plate for movement toward and away from each other, a control finger adjacent each side plate and adapted to overlie the end of the top plate, means for mounting the control fingers on the side plates for movement laterally with the side plates and upwardly relative to the side plates and a stack of sheets on the table to overlie the top sheet of the stack adjacent the side plates in any lateral position of the latter, and a manually operable member underlying the table and connected to raise the plurality of control fingers simultaneously.

3,046,008
MECHANISM FOR STACKING SHEETS
William Edward Velvel, Claymont, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 5, 1960, Ser. No. 20,105
10 Claims. (Cl. 271—68)



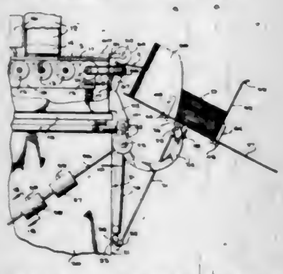
1. A mechanism for stacking successive sheets of flexible material into piles comprising a lower row of spaced continuous narrow carrier belts adapted to travel in a circuitous path and around a terminal rollover drum, an upper row of spaced continuous narrow holding belts adapted to travel in a circuitous path above the lower row of belts and coact therewith to guide sheets of flexible material, said path extending at least about a sheet length beyond the terminal rollover drum, a sheet stacking platen located beneath the drum and extending beyond said drum and beneath the upper belts, means on the platen for guiding and positioning the leading end of the successive sheets in the desired stacking location and means for diverting the leading end of successive sheets around the rollover drum substantially in the path of the lower belts until said end reaches the stacking location.

3,046,009
DEVICE FOR CONVEYING AND STACKING DOCUMENTS BEARING REGISTRATIONS
Pieter H. Hartel, Amsterdam, Netherlands, assignor to Bull Nederland, Administratie- en Statistiekmachine Mij. N.V., Amsterdam, Netherlands
Filed Feb. 1, 1961, Ser. No. 86,418
Claims priority, application Netherlands Feb. 9, 1960
4 Claims. (Cl. 271—71)



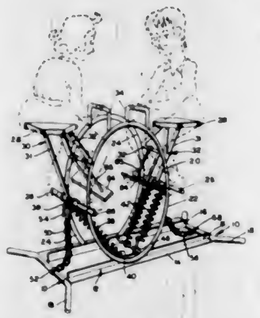
1. In apparatus for conveying and stacking flexible sheets, the combination of means including a track for separately advancing sheets to a selecting point; means at said selecting point for selecting sheets to be conveyed and stacked; a continuously rotatable driving device disposed adjacent said selecting point for receiving selected sheets and comprising two discs each provided on its periphery with a friction ring engageable with selected sheets; two conveying and guiding members fast with one another and mounted for movement in proximity to said friction rings; means for frictionally transmitting drive from said driving device to said conveying and guiding members in order to guide, convey and deposit selected sheets onto a stack; locking means for holding one of said conveying members stationary in a position to receive the forward edge of a selected sheet fed to said one of said conveying members by said friction rings, said locking means including means responsive to feeding of the sheet to said one of said conveying members for releasing said locking means to enable said driving means to drive said conveying members frictionally; and means cooperable with said one of said conveying members for releasing said sheet therefrom to deposit the released sheet on the stack substantially simultaneously with the movement of the other of said conveying members to said selecting point with attendant locking of said other of said conveying members by said locking means.

3,046,010
STACKER APPARATUS
Kurt Rudolf Schneider, Bainbridge, N.Y., assignor to Eureka Specialty Printing Co., Scranton, Pa., a corporation of Pennsylvania
Filed Feb. 4, 1960, Ser. No. 6,819
28 Claims. (Cl. 271—88)



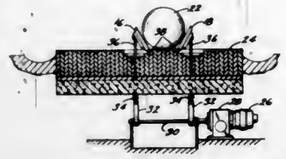
1. A stacking apparatus for receiving and stacking flat articles delivered successively thereto and removable as a group therefrom, comprising a support, a rock shaft journaled on the support, a first arm fixed to the rock shaft, a stack-receiving platform pivotally mounted on the arm, a counterweight arm fixed to the rock shaft, the said arms extending in opposite horizontal directions from the axis of the rock shaft, and means having a part connected to the platform at a fixed angle relative thereto said slidable along the support for controlling the position thereof during movement of the first arm.

3,046,011
SPRING ACTUATED ROLLING EXERCISE TOY
Francis H. Songer, Atlanta, Ga.
(Box 208A, Lawrenceville, Ga.)
Filed Mar. 17, 1959, Ser. No. 799,872
3 Claims. (Cl. 272—56)



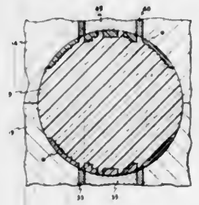
1. In a rolling exercise toy device of the class described, a ground support base member, a substantially circular ring frame mounted on said base for rolling movement thereon and in contact with said base to travel thereon, said ring frame being of sufficient width to support itself for unitary movement on said base, seat members mounted on said ring frame, said seat members being adapted to receive a child seated on each of said seat members, and hand hold means on said ring frame in front of said seat members, foot-rest members on said ring frame beneath said seat members, at least one large heavy coil spring interposed between said ring frame and said base member, said coil spring being connected at one end to said ring frame and having the other end thereof extending diagonally and being connected to said base member, a second coil spring in a direction converging with said first coil spring, said second coil spring being connected to said ring frame and extending diagonally therefrom and connected to said base member, whereby a child may sit on each of said seat members and by shifting their weights thereon, one child may overbalance the other to cause said ring frame to move in a forward direction whereupon said spring on that side is extended and resists movement thereof, and whereupon said other child may combine with the resistance force of said spring and cause said rolling ring frame to roll back toward the center of said base member and thence in the reverse direction so that said children may amuse themselves by rolling forwardly and backwardly along said base member being controlled by the resistance of said springs, said circular ring frame being sufficient in length measured along the circumference to permit the child in one seat to pass beyond the normal vertical when moving from a down to an up position against the action of the coil spring, thereby allowing the child to accomplish the sensation of rolling over on his head as he propels the device from one direction upwardly and over beyond the vertical in the other direction.

3,046,012
BOWLING ALLEY
David H. Marx, Shrewsbury, N.J.
(200 5th Ave., New York, N.Y.)
Filed July 1, 1959, Ser. No. 824,292
24 Claims. (Cl. 273—51)



24. The combination with a full size bowling alley of usual dimension for use with pins and balls of usual dimension, of two spaced guide means having a length which is only a small fraction of the length of the alley and which are located near the foul line and directed longitudinally of the alley toward the pins, said guide means projecting above the surface of the alley and being space apart a distance less than the diameter of a bowling ball so as to receive and guide a bowling ball toward the pins in order to aid a beginner.

3,046,013
POOL BALLS
Louis F. Kutik, West Hollywood, Fla.
(5601 SW. 56th St., Fort Lauderdale, Fla.)
Filed May 23, 1960, Ser. No. 31,113
3 Claims. (Cl. 273—59)



1. A pool ball formed from a molded plastic material, said ball comprising a surfaced body member including a main body portion, caps having a preformed concavo-convex shape of a plastic material and of a color different than said body member integrally bonded on diametrically opposite sides of said body member, each cap including a central disk having transverse indicia-forming openings, said caps including a slotted portion below the outer surface thereof and bordering said disk, web portions connecting said disk to said cap and underlying said slotted portion, the main body portion of said ball including portions extending through said transverse openings and said slotted portions and overlying said web portions and anchoring said caps and disks thereto and forming a ring about said indicia-forming openings of the same color as said main body portion and indicia.

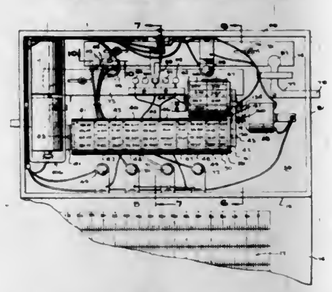
3,046,014
BOWLING BALL WRIST HANGER AND AUTOMATIC RELEASE
Cesare Abruzzi, 30740 Eleven Mile Road, Farmington, Mich.
Filed June 12, 1961, Ser. No. 116,348
3 Claims. (Cl. 273—64)

1. An automatically releasing auxiliary support for holding and impelling a bowling ball particularly suitable for use by persons having relatively weak fingers such as children, the aged, and invalids, comprising a bowling ball having a peripheral surface, finger holes, and a substantially radial aperture penetrating its peripheral surface constituting a socket for receiving a prong; a prong freely disposed in said ball socket, a link connected to said prong at a right angle thereto, and a wrist band connected to said link; said ball finger holes and socket aperture being spaced apart and said wrist band, link, and prong being so dimensioned relative to said spacing and relative to the size of the user's hand that the ball is suspended on the



user's wrist with the fingers cocking the ball relative to said prong, link, and wrist band so that tangential force is applied to said prong locking said prong in said socket and supporting the ball thereon; said ball upon release uncocking relative to said tangential force applied on said prong so as to permit said prong to unlock in said socket and move axially outwardly effecting an automatic disconnection therebetween.

3,046,015
ELECTRIC FOOTBALL GAME
George L. Schuh, 4910 Lila Ave., Pleasure Ridge Park, Ky., and Robert P. Bowlds, 3000 Dale Ann Drive, Louisville, Ky.
Filed June 17, 1960, Ser. No. 36,997
10 Claims. (Cl. 273—94)

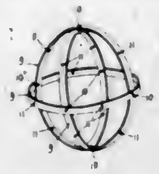


1. In an electric football game, a game board simulating a football playing field, a movable playing piece, a support adjacent said game board, a variable play result indicator mounted on said support, a plurality of play-indicating signal lamps, a pair of manually movable play-selecting members at opposite ends of the support, each having a similar series of predetermined play-selecting settings, cooperating movable switch members mechanically connected respectively to said play-selecting members, and means to energize different lamps in accordance with different relative positions of said switch members, as established by selected play-selecting settings of the movable play-selecting members.

3,046,016
TICKTACKTOE GAME APPARATUS
Leonard S. Laws, 311 Houston St., Winfield, Kans.
Filed Feb. 11, 1960, Ser. No. 8,088
1 Claim. (Cl. 273—130)

The combination with a game apparatus constituted as a spheroidal shaped member comprising at least two intersecting rings and having apertures each adapted to receive a play-piece and arranged in the rings of the spheroidal shaped member such that there are apertures common to more than one ring of the spheroidal shaped member and such that there is an aperture in each intermedi-

ate portion of a ring that is between two consecutive apertures that are common to more than one ring of the spheroidal shaped member, of a plurality of play-pieces of each of two different types distinguishable from each other, means carried by each play-piece for detachably engaging an aperture, said play-pieces adapted to be employed with the spheroidal shaped member in playing a game wherein each of two contestants controls the play-



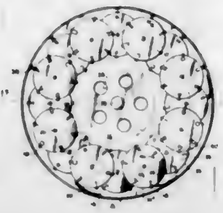
pieces of one of said different types and the contestants alternate in applying their play-pieces one at a time at any selected aperture of the spheroidal shaped member which may be without a play-piece, with the aim in view of each contestant being the first to get play-pieces controlled by the contestant in three adjacent apertures on any ring of the spheroidal shaped member such that the middle aperture of the three is common to more than one ring of the spheroidal shaped member.

3,046,017
GAME
Alger A. Kazakevich, 15750 Pinehurst, Detroit 38, Mich.
Filed Nov. 23, 1959, Ser. No. 854,977
4 Claims. (Cl. 273—130)



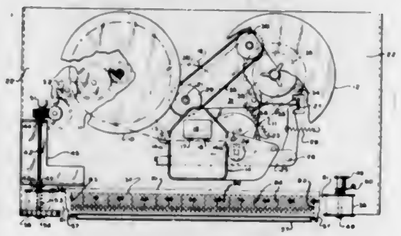
1. A game comprising a game board having two separate opposed similar playing board areas separated one from the other by a vision-obstructing partition whereby one playing board area cannot be viewed from the opposite playing board area, each of said two opposed playing board areas provided with a plurality of spaced-apart apertures extending upwardly through the board; an electric circuit associated with each playing board area and having a plurality of electromagnetic devices, one device for each aperture of a plurality of apertures of said area, each electromagnetic device individually connected in the circuit, each electromagnetic device supported adjacent the underside of the board underneath an aperture through the board and comprising a solenoid coil having a plunger reciprocable therein which plunger registers with the aperture through the board underneath which aperture it is disposed, whereby upon energization of the device the plunger is projected upwardly through the aperture to strike a game piece on the upper surface of the board above said aperture; selector switch mechanism in each circuit operable to connect one at a time each electromagnetic device in the circuit therein, each selector switch mechanism disposed adjacent to that end of the board remote from the end with which its circuit is associated; and a control switch in each circuit associated with the end of the board remote from the circuit and operable to make the circuit through the particular electromagnetic device connected by the selector switch in the circuit, and a plurality of game pieces for each playing board area, each of said pieces adapted to be supported upon its playing board area over an aperture therethrough.

3,046,018
MAGNETIC LETTER SPINNING GAME
Sebastian J. Serpico, 3A Maspeth Ave., Brooklyn, N.Y.
Filed Nov. 20, 1959, Ser. No. 854,360
2 Claims. (Cl. 273—142)



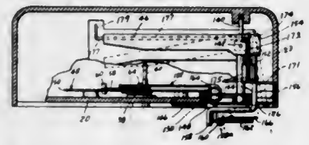
1. A game device comprising a cylindrical base, a circular disk rotatably mounted on said base, a plurality of circular dials carried by said disk and rotatable on pins, said pins being circumferentially spaced equally around the periphery of said disk, each of said dials carrying a plurality of circumferentially spaced letters, a plurality of magnetic elements carried by each dial and located respectively near corresponding letters on the dial, further magnetic elements carried circumferentially by said base and spaced radially slightly from said dials, a face plate on said base covering said disk and dials, means for rotating said disk and said dials, and means for displaying one letter of each of a number of said dials when said disk and said dails are stationary, the means for rotating said dials including flexible members carried by said base and frictionally engaging the dials during rotation of the disk, the means for rotating said disk including a plurality of holes in the disk and an arcuate slot in said face plate disposed over said holes, said aligned holes and slot adapted to receive a finger of the player for turning the disk, said base, face plate, disk, and each of said dials being formed of nonmagnetic material, each of the first-named magnetic elements on said dials being magnetic pins extending radially from the dials, each of said further magnetic elements being a magnet attracting the adjacent pins and dials.

3,046,019
INDEXING SYSTEM FOR MAGNETIC RECORDERS
Fred O. Holladay and Richard Kobler, West Orange, N.J., assignors to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Dec. 10, 1959, Ser. No. 858,616
4 Claims. (Cl. 274—1)



1. In an indexing system for a magnetic-tape recording machine comprising tape transporting means, a recorder head and drive means for advancing said tape past said recorder head: the combination of a pair of spools spaced in line with each other on parallel axes, a coupling with friction-slip clutch means between one of said spools and said drive means, an indexing ribbon trained around said spools, a mounting for receiving replaceably an index slip extending along the run of said ribbon between said spools, said index slip being mounted in a plane substantially at right angles to the plane of said run of the indexing ribbon, said indexing slip having a scale thereon lengthwise thereof, said indexing ribbon having a plurality of indicating marks thereon spaced from each other by the length of said scale, a translucent cover overlying said run of said indexing ribbon and having a scale thereon corresponding to that on the index slip, and said coupling being adapted to advance said indexing ribbon through a multiplicity of lengths of said scale for each traversal of said tape through its full length past said recording head.

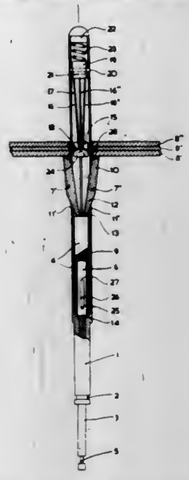
3,046,020
CONTROL MECHANISM FOR PHONOGRAPHS
Willard J. Faulkner, Coloma, and Jack E. Bayha, Benton Harbor, Mich., assignors to V-M Corporation, Benton Harbor, Mich., a corporation
Filed Dec. 13, 1957, Ser. No. 702,574
7 Claims. (Cl. 274—10)



1. An automatic record changer comprising a turntable having a relatively short centering spindle for receiving records having a relatively small centering aperture, an adaptor mountable on said turntable and over said short spindle for handling a stack of records having a relatively large centering aperture, a tone arm pivotally mounted adjacent said turntable for vertical and horizontal movement to and from positions beneath said stack, an automatic shutoff mechanism supported in said tone arm and comprising an elongated feeler rod mounted on and for rotation within said tone arm and having a looped portion extending from the outer end thereof together with a crank extending from the inner end thereof, a feeler rod adjusting member disposed beyond the periphery of said turntable and in the path of movement of said looped portion for moving said looped portion into the plane of the lowermost record of said stack and a record-feeling position when said tone arm approaches records supported on said adaptor, and a switch member positioned in the path of movement of the crank end of said feeler and responsive to said crank when said feeler remains in the record-feeling position for shutting off said phonograph automatically when said looped portion does not engage a record.

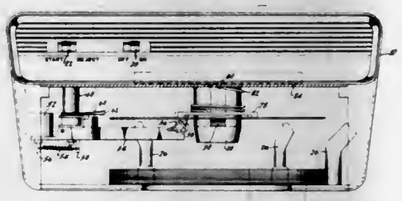
3,046,021
ARRANGEMENT IN CENTER POLES FOR RECORD CHANGING PHONOGRAPHS
Andreas Perge, Bromma, Sweden, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 8, 1958, Ser. No. 759,603
Claims priority, application Sweden Oct. 26, 1957
8 Claims. (Cl. 274—10)

1. A record changing apparatus for a phonograph turntable comprising a center hollow shaft, a control rod in said hollow shaft, means for moving said control rod axially in said shaft, a sleeve in said hollow shaft, at least two supporting members in said sleeve being movable laterally as well as axially, said supporting members when projected laterally being adapted to support a stack of records, at least one holding member movably supported within said hollow shaft, means operative to move said holding member radially to support the other records of the stack while the record to be played is released, said supporting members at that time being moved radially inwardly to enable the record to be played to be lowered on the turntable, means in the hollow shaft of said record changing apparatus which upon upward movement thereof actuates both said holding member and said supporting members, spring means urging said holding member downwardly, and a stop on said holding member for preventing the upward and radially inward



movement of at least one of said supporting members when there is no record positioned above said supporting member in said record changing apparatus whereby said means in the hollow shaft is prevented from completing its upward movement normally required for changing a record.

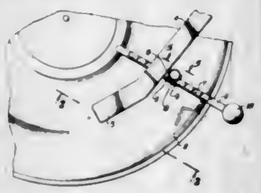
3,046,022
AUTOMATIC PHONOGRAPH RECORD PLAYER
Roland Di Sabatino, Oaklyn, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,700
3 Claims. (Cl. 274—10)



3. An automatic record changer comprising in combination, means providing a motorboard, a record receiving spindle rotatably supported by and extending downwardly from said motorboard, said spindle being of the type which is loaded with records from the lowermost extremity thereof and comprising a spindle body, a pair of oppositely disposed record supporting members normally extending from the body of said spindle for supporting a stack of records loaded on said spindle, a pair of oppositely disposed record separating blades positioned above the record supporting members and normally retracted within the body of said spindle, means interconnecting the record separating blades with said record supporting members such that a blade on one side of said spindle is connected with the member on the opposite side of said spindle so that the movement of a blade out of the spindle body causes the opposite member to be retracted, means including a member normally rotatable with said spindle which is operable when held against rotation to cause said record separating blades to extend from said spindle body whereupon said record supporting members are retracted into the spindle body, said means including a member extending above said motorboard which is normally rotat-

able therewith, a tone arm mounted on said motorboard, a record pickup device carried by said tone arm for cooperation with the lower side of the lowermost phonograph record supported on said spindle, means providing automatic record changer mechanism carried by said motorboard above said spindle which is actuable between a normally inoperative condition and an operative condition, said record changer mechanism in the operative condition thereof including an actuating lever which is movable into engagement with said member to hold said normally rotatable means in said spindle against rotation whereupon said record separating blades are caused to extend from said spindle body and said record supporting members are retracted into said spindle body, a blocking lever mounted on said motorboard said blocking lever normally being out of the path of said actuating lever, and means for selectively causing blocking lever to move into the path of said actuating lever to prevent said actuating lever from engaging said normally rotatable member and thereby preventing the extension of said record separating blades and retraction of said record supporting shelves.

3,046,023
PHONOGRAPH ATTACHMENT FOR GAUGING STARTING POSITION OF THE TONE ARM
William H. Wells, Woodland Hills, Calif., assignor to Newcomb Electronics Corp., Los Angeles, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,611
8 Claims. (Cl. 274—14)



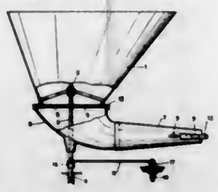
1. A phnograph attachment for determining the starting position of the tone arm of the phonograph, comprising: a tone arm support; a stop for the tone arm adjustably carried by the support; a manually operable rotatable member having an axis normal to the support; and means operating by rotation of said member in one direction to raise said support, and in the other direction to lower said support.

3,046,024
PICKUP SYSTEM FOR PHONOGRAPHS
Willard J. Faulkner, Coloma, and Robert J. Hammond, Niles, Mich., assignors to V-M Corporation, Benton Harbor, Mich., a corporation
Filed Nov. 3, 1958, Ser. No. 771,412
9 Claims. (Cl. 274—23)



4. A pickup system for a phonograph having a base plate and a rotatable turntable for playing records comprising a pickup including a stylus, means including a pad attached in fixed relation to said pickup for supporting it on a record with the stylus engaging the playing groove, and means including a pair of parallel flexible members anchored between spaced points on said pickup and spaced points on said base plate for holding said pickup in tangent playing relation to the playing groove of a rotating record.

3,046,025
APPARATUS FOR SPREADING PULVERIZED OR GRANULAR FERTILIZERS
Bastiaan Vissers, Nieuw Vennep, Netherlands, assignor to Landbouwwerktuigen- en Machinefabriek H. Vissers N.V., Nieuw Vennep, Netherlands
Filed Oct. 28, 1960, Ser. No. 65,814
Claims priority, application Netherlands Nov. 26, 1959
1 Claim. (Cl. 275—7)



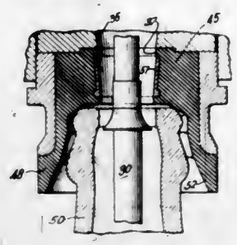
In mobile apparatus for spreading pulverized fertilizers, the combination comprising a fertilizer receiving hopper, a frame supporting said hopper, a spout located below said hopper and extending opposite to the direction of travel of said frame, said spout having at least one outlet orifice in its side walls and an open discharge end, means for angularly reciprocating said spout in a transverse direction, baffle means provided on both sides of the spout, said baffle means comprising a band whose end portions are secured to opposite sides of said spout, the medial portion of said band overlying and spaced from the open discharge end of said spout, said band positioned opposite to and spaced from said outlet orifice whereby the fertilizer discharged through said orifice strikes said band and is uniformly distributed.

3,046,026
HIGH PRESSURE SEAL
Lewis M. Burrows, North Quincy, Mass., assignor to Manning, Maxwell & Moore, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Oct. 22, 1958, Ser. No. 768,888
13 Claims. (Cl. 277—171)



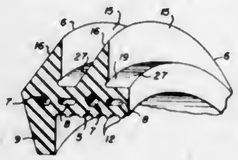
1. A device for sealing an annular joint in a pressure fluid container, said device comprising a stiffly resilient metallic ring coaxial with said joint and having an annular internal chamber to which the pressure fluid is admitted when the device is in use, said ring having resilient annular lips whose edges are opposed and which define an annular entrance slot in a plane perpendicular to the axis of the ring, the inner surfaces of said lips defining portions of the wall of said chamber, said lips having convex external surfaces for contacting annular seal-seating surfaces at opposite sides respectively, of said joint, thereby to seal the joint, the ring being of symmetrical contour at any radial section, and the aggregate of the areas of contact between said external contacting surfaces and said seating surfaces being less than said internal surface, whereby the fluid pressure, acting on said internal surface, will be translated through the substance of said resilient lips and force said contacting surfaces against the seal-seating surfaces of said joint with a unit pressure exceeding the fluid pressure.

3,046,027
VALVE SEALING ELEMENTS
George L. N. Meyer, Milwaukee, Wis., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin
Filed Feb. 11, 1960, Ser. No. 8,159
3 Claims. (Cl. 277—180)



1. In a device of the character described, a valve sealing element including a vertical cylindrical portion having a liquid passage axially positioned therethrough, said passage having a recess formed in its sides symmetrical to the vertical axis and extending vertically from a point spaced from the top to a point spaced from the bottom of the said cylindrical portion and a metallic nipple seated in the recess and forming a continuation of the liquid passage through the sealing element.

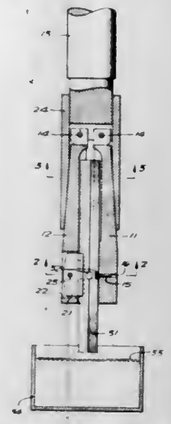
3,046,028
GASKET AND USE THEREOF
Tracy D. Nathan, Cuyahoga Falls, Ohio, assignor to Hamilton Kent Manufacturing Company, Kent, Ohio, a corporation of Ohio
Filed Dec. 1, 1959, Ser. No. 856,418
12 Claims. (Cl. 277—208)



1. An elastomeric gasket with a generally cylindrical body portion, a small plurality of ribs encircling the outer surface of the body portion in parallel relation, the major portion of the inner surface of the gasket extending inwardly from one edge of the gasket being adapted to rest on a flat surface and substantially in contact therewith, each of said ribs tapering outwardly and all of the ribs being adapted to be flattened toward only said edge of the gasket, with an enclosed opening in the body portion between each two ribs and a separate enclosed opening in the body portion below the base of each rib.

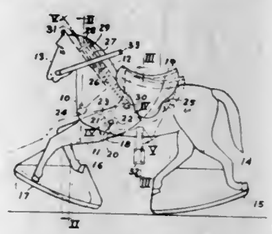
3,046,029
SEED CRYSTAL HOLDING CHUCKS
Joseph R. Weber, Chicago, and Svend E. Hauritz, Deerfield, Ill., assignors to Hoffman Electronics Corporation, a corporation of California
Filed Aug. 7, 1959, Ser. No. 832,379
2 Claims. (Cl. 279—37)

1. A seed holding chuck for drawing a polygonal crystal vertically out of a melt, comprising a lift means having a vertical axis, a plurality of elongate vertical gripping jaws for grasping a seed crystal, means pivotally mounting the upper end of each of said gripping jaws upon said lift means, the outer surface of each of said gripping jaws being tapered at the end which is pivoted to said lift means, and the inner surface of the lower end of each of said jaws being profiled for firm engagement with the corners of the seed crystal through a substantial lengthwise extent thereof to position the crystal in accurate alignment with said vertical axis; and a sleeve mounted for sliding movement along said lift means and over the tapered ends of said gripping jaws whereby said gripping jaws are brought together to grip the corners of a crystal



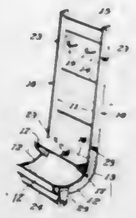
firmly therebetween as said sleeve is moved towards the free ends of said gripping jaws; the free end of one of said gripping jaws being provided with a cutout portion, and a clamp pivotally mounted in said cutout portion, said clamp having a surface for crystal-gripping cooperation with the inner surface of another one of said other gripping jaws.

3,046,030
GALLOPING TOY HORSE
Karl Otto Brauer, Mountain View, Calif.
(424 Middle Turnpike W., Manchester, Conn.)
Filed July 7, 1961, Ser. No. 122,500
2 Claims. (Cl. 280—1.177)



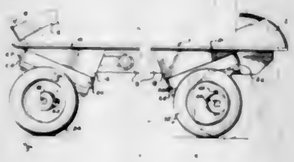
1. A device of the character described, comprising three detachably coupled units, namely a body unit, a front leg unit, and a spring unit, said body unit comprising a partly hollow body, a characterized head, and a pair of hind legs, said hind legs having a pair of aft rockers at the lower end, means pivotally mounting said front leg unit in the forward part of said body unit, said front leg unit comprising a pair of front legs having a pair of front rockers at the lower end, and an arm at the upper end extending through an aperture in the body in vertical direction, said arm extending above the upper surface of the body and carrying a saddle for supporting a rider, said spring unit for normally maintaining said saddle in raised position and for normally maintaining said front leg pair in aft position, said spring unit comprising an extension spring and a tension adjustment device at the upper end, said adjustment device mounted in an opening in said head of the body, the lower end of said spring attached to said arm of the front leg unit by a cross pin, a pair of stirrups for feet support attached to said body at both sides below the saddle, and a rein or a handle attached to said head.

3,046,031
BEACH DRAG
Adele W. Reynolds, 52 Cloverdale Circle, New Shrewsbury, N.J.
Filed Feb. 25, 1960, Ser. No. 10,958
7 Claims. (Cl. 280—8)



2. A drag adapted for use as a beach tote, comprising an elongated straight portion having top, bottom and sides, and a curved skid portion, said skid portion being at the bottom of the straight portion and extending from side to side thereof and engageable with a ground surface with the straight portion sloped at an angle of approximately 45°, and auxiliary rotary ground-engaging means raised from ground engagement while said straight portion is at an angle up to approximately said 45° of slope, said ground-engaging rotary means making contact with the ground on approach of slope of said straight portion more closely to a 90° angle to ground.

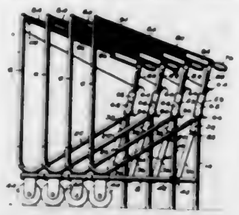
3,046,032
ROLLER SKATES WITH ECCENTRIC WHEELS
Warren J. Humphries, 1709 McGregor Ave., Wichita Falls, Tex.
Filed June 29, 1959, Ser. No. 823,569
6 Claims. (Cl. 280—11.19)



1. A roller skate comprising a shoe support plate, axle support members on the lower side of said shoe support plate near each end thereof, axles mounted on said axle support members transversely of said shoe support plate, a wheel mounted near each end of each axle and being secured fixedly thereto for rotation therewith and being fixed against longitudinal movement with respect to said axle, at least one of said wheels being so mounted that the periphery thereof is eccentric with respect to the rotational axis thereof.

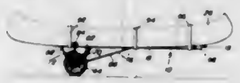
3,046,033
NESTABLE SHOP TRUCK
Johan M. Andersen and John H. Dockstader, Hopkinton, Mass., assignors to Duplicon Company, Inc., Westboro, Mass., a corporation of Massachusetts
Filed Sept. 25, 1959, Ser. No. 842,527
15 Claims. (Cl. 280—33.99)

1. A nestable shop truck comprising a tray having a bottom sloping upwardly toward the rear of said truck and decreasing in width from the front to the rear, said tray including a rear wall, tapering side walls and a removable front wall constituting a gate, a pair of legs, means connecting the upper ends of said legs and supporting the rear end of said tray, said legs spaced laterally a distance greater than the width of the front end of said tray, and supports affixed to the front end of said tray of less vertical dimension and less lateral spacing



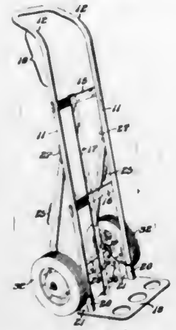
than the said legs, whereby said tray may be maintained in a sloping position by said rear legs and said supports.

3,046,034
CANOE, BOAT, ETC., CARRIER
Samuel W. Herrick, Elm St., Guilford, Maine, assignor of one-half to Paul E. Herrick, Harmony, Maine
Filed Mar. 17, 1960, Ser. No. 15,701
4 Claims. (Cl. 280—35)



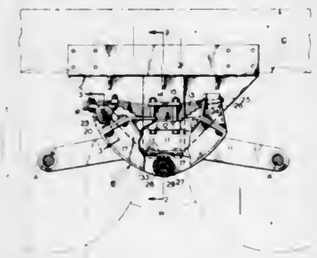
1. A wheeled boat carrier including an elongated support frame generally horizontal and rectangular in plan and having opposite side members, said side members converging at the forward end of said frame, a support block secured between said side members at the forward end of said frame and adapted to support the keel of a boat adjacent its bow, an elongated abridgment structure secured between said side members at the rear end of said frame, said abridgment structure including a pair of transversely spaced, depending wheel assemblies, said wheel assemblies each including a pair of transversely spaced depending inner and outer support frames, a pair of wheels, means journalling a wheel between the lower extremities of each pair of support frames for rotation about aligned transversely extending axes, support mounts secured to opposite end portions of said abridgment structure adapted to support the undersurfaces of the mid-portion of a boat, and a plurality of elongated flexible tensioning members each having one end secured to one of said side members, said tensioning members being spaced longitudinally of said one side member and being adapted at their other ends for engagement with the other side member to embrace the upper surfaces of a boat supported by said frame, said abridgment structure including three longitudinally spaced and transversely extending brace members secured between said side members, each outer support frame of said wheel assemblies including a generally V-shaped frame with the upper ends of the arms thereof secured to said side members at the intersection between the latter and the opposite ends of the forwardmost and rearmost brace members, vertical braces secured between the lower ends of said V-shaped frames and said side members at the intersection between the latter and the opposite ends of the intermediate brace member, the inner support frames of said wheel assemblies each including a depending support having its upper end secured to said intermediate brace member inwardly of said arms, an inverted V-shaped brace member, the lower ends of the arms of said inverted V-shaped brace member secured to the lower end portions of said depending supports, the apex of said V-shaped brace member secured to one of said transversely extending brace members at its mid-portion, an inclined longitudinally extending brace secured between the lower portion of each of said depending supports and the forwardmost brace member inwardly of its opposite ends.

3,046,035
HAND TRUCK
Walter S. Nichols, Philadelphia, Pa., assignor to Universal American Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 14, 1960, Ser. No. 75,810
7 Claims. (Cl. 280—47.27)



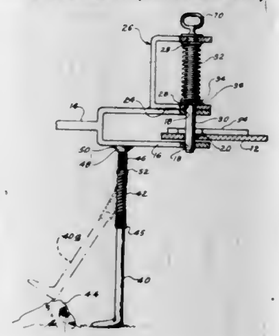
1. As a new product of manufacture, a hand truck having a frame with substantially parallel elongate tubular metallic side members and with hand grasp means at its upper end; a substantially rectangular metallic nose plate apertured at its rear corners for penetration by the bottom ends of the side members and there secured to the latter; foot mountings each fashioned in one piece from stiff plate metal with a collar portion embracing one of the side members of the frame directly above the nose plate and secured to the latter and with a pair of rearwardly-projecting spaced wing lugs; arcuate skid bars formed of metallic tubing each having one end portion flattened and engaged between the spaced wing lugs of one of the foot mountings, and the other end portion thereof concavely flattened to conform with the corresponding side member of the frame and secured to it at the back; an axle passed through aligned apertures in the first mentioned flattened end portions of the skid bars rearwardly beyond the spaced wing lugs of the respective foot mountings; and wheels mounted on the opposite ends of said axle.

3,046,036
VEHICLE RUNNING GEAR ASSEMBLY FOR TANDEM AXLE SUSPENSION
Ancel S. Page, Portland, Oreg., assignor to Dura Corporation, Oak Park, Mich., a corporation of Michigan
Filed Nov. 14, 1960, Ser. No. 68,960
3 Claims. (Cl. 280—104.5)



1. A vehicle running gear assembly for tandem axle suspension including a walking beam at each side of the vehicle, tandem axles carried in the respective ends of said walking beams, a leaf spring mounted on the top of the central portion of each walking beam, a hanger-bracket suspended from the ends of each of said leaf springs, said hanger-brackets extending down below said walking beams respectively, a trunnion shaft supported at its ends in said hanger-brackets, a bearing for an end of said trunnion shaft in a lower portion of each hanger-bracket spaced below the center portion of the corresponding walking beam, and a pair of inboard legs for the vehicle frame mounted on said trunnion shaft and located slight distances inwardly from said hanger-brackets respectively.

3,046,037
COUPLING AND SUPPORTING MEANS FOR VEHICLES
Howard P. Cain, R.R. 1, Danville, Ind.
Filed Apr. 13, 1960, Ser. No. 21,990
3 Claims. (Cl. 280—477)

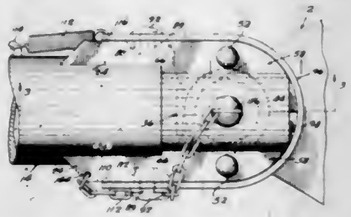


1. A coupling and supporting means for interconnecting support members of two vehicles and the like, comprising: a support leg extending from one of the support members for engaging the ground and thereby supporting said support member at an elevation operatively registering with the other of the said support members; the support members including a first support member and a second support member; retractable pin means carried by said first of said support members and pin-mating means carried by said second of said support members for interconnecting said two support members; the pin means being movably related to the said first support member and movable independently of said first support member; means biasing said pin means toward an extended position for said interconnecting of the two support members; the pin means being retractable to permit the two support members to be brought into operative registry of the pin means and the pin-mating means for coupling and to be moved away from operative registry for un-coupling; and guide means provided by the second of said support members for guiding the support members into registry by engaging said pin means; said guide means extending both rearwardly and forwardly from the location thereon of registry of the pin means permitting registering movement from either forwardly or rearwardly of the registry location of the pin means with the support member.

3,046,038
TRAILER COUPLING
Brooks S. Hollis, 1501 Roosevelt Drive, Ruston, La.
Filed Nov. 18, 1960, Ser. No. 70,182
3 Claims. (Cl. 280—512)

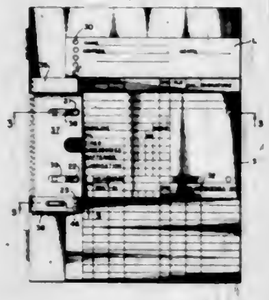
3. A coupling for a trailer having a forwardly extending tongue, comprising a housing fixed on and extending forwardly from the tongue, a pair of opposed jaws pivoted on vertical axes on the housing, said jaws having inner sides formed with hitch ball embracing concavities, said jaws having forward ends and outer sides, said outer sides having cam surfaces, a U-shaped jaw locking bail having a bight portion and legs, said legs being horizontally pivoted on the housing at opposite sides of the housing, said bail being swingable forwardly and downwardly from an elevated retracted position to a

horizontal jaw-locking position wherein said legs engage the outer sides of the jaw and said bight portion engages the forward ends of the jaws, in the closed positions of the jaws, the bail legs and the jaw cam surfaces being positioned relative to each other to cause the bail legs to make cam engagement with the cam surfaces, with the jaws in open spread positions, whereby the jaws are closed from open positions as the bail is moved toward jaw-locking position, latch means for releasably holding the bail in elevated retracted position, spring means biasing the bail toward its jaw-locking position, said latch means comprising a latch lug on the rear end of one leg of the bail, said one leg being flexible away from the housing, and a stop lug on the rear end of one jaw, said latch lug being engaged with a part of the housing in the



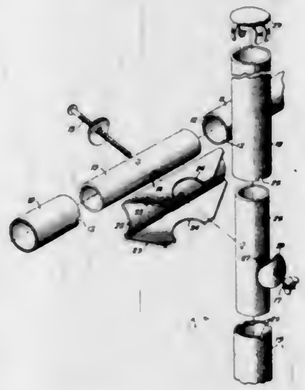
retracted position of the bail, said stop lug being engageable with the latch lug as said one jaw is moved toward closed position and push the one leg out laterally whereby the said one leg is flexed to dislodge the latch lug from the housing and enable said spring means to operate the bail to jaw-locking position, said housing being open-sided and having spaced top and bottom plates between which the jaws are positioned, pivot pins engaged in and extending between the top and bottom plates on which the jaws are pivoted, the bail legs being pivoted on the top plate, a vertical stop strut extending between and fixed to the top and bottom plates at a location centered with respect to and behind the jaws, the other jaw having a stop lug on its rear, the stop lugs having stop engagement with the stop strut in the open positions of the jaws.

3,046,039
POSTING REGISTER
Nephi J. Ward, 5901 Frament Ave., Norfolk, Va.
Filed Nov. 17, 1959, Ser. No. 853,481
12 Claims. (Cl. 282—3)



1. In combination, a posting register comprising a planar base, first and second co-linear posts extending vertically from said base, a third post extending vertically from said base in spaced co-linear relationship with said first and second posts, a die hole in said base in co-linear alignment with said posts and spaced from and immediately below said third post, a separator plate including spaced co-linear apertures removably received on said first and second posts, said separator plate extending transversely of said base in juxtaposed relation thereon, and displaceable support means on said base adjacent said posts, said support means including an aperture receivable on said third post, said support means including a depending punch registrable with said die hole for perforating a ledger card disposed therebeneath in spaced relation from said separator plate, said separator plate including intermediate aperture portions to permit only selected ledger card data to be observed therethrough, said separator plate including a marginal edge portion terminating intermediately of said base plate for permitting portions of a sales slip and ledger card to be in immediate juxtaposed relation to facilitate the inscribing of common data thereon.

3,046,040
JOINT STRUCTURE FOR TUBING
Forrest E. Luper, Avon, Ill., assignor to Forrest E. Luper and John R. Sundberg, doing business as Luper & Sundberg, Avon, Ill., a partnership
Filed May 31, 1960, Ser. No. 32,979
2 Claims. (Cl. 287—54)

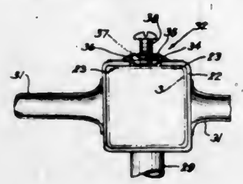


1. A joint structure for combining a plurality of pairs of tubular elements with each pair in abutting end-to-end relationship and with one pair transverse to the other pair, a notch at opposite ends of a diameter line of each of said tubular elements and at the abutting end of each tubular element, an elongate plug fitted slidably into the ends of each pair of said tubular elements and carrying an elongate fastening element adapted to be received in said notches, diametrically opposite connector plates adapted to be engaged adjacent opposite ends of said fastening element with said tubular elements therebetween and spanning the joint of each pair, said plates being shaped to fit closely against the surfaces of the tubular elements and a channel member between said pairs of tubular elements having a pair of flanges with aligned notches for straddling engagement with one pair of tubular members and a concave web surface transverse to said one pair for engagement with the other pair of said tubular members.

3,046,041
CLAMPING ARRANGEMENT
Carl E. Gingher and Carl E. Gingher, Jr., Scranton, Pa., assignors to Gingher Manufacturing Company, Scranton, Pa.
Original application Apr. 30, 1958, Ser. No. 752,966, now Patent No. 2,964,202, dated Dec. 13, 1960. Divided and this application Oct. 14, 1960, Ser. No. 62,768
4 Claims. (Cl. 287—58)

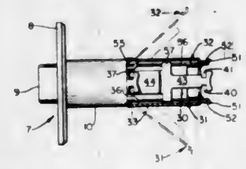
1. In a clothes rack a clamping arrangement for tubular members, a first tubular member, a second tubular member having a cross-section similar to that of said

first tubular member for telescoping engagement therewith, there being a longitudinally extending slot in said second tubular member, a flat strip on said second tubular member bridging said slot, there being a pair of slits in said strip extending across said slot, the portion of said strip between said slits being curved downwardly and engageable with the outer surface of said first tubu-



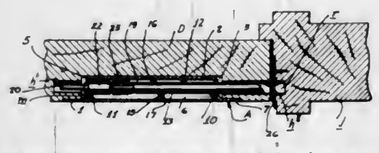
lar member, a block having its ends under the portions of said strip outwardly of said slits and its center portion engageable with the portion of said strip between said slits, and an adjusting screw in said block and bearing against said portion of the strip between said slits so that tightening of said screw will urge said portion against said first tubular member to clamp said tubular members together.

3,046,042
LATCHBOLT EXTENSION
Joseph F. Kane, San Francisco, Calif., assignor to Schlage Lock Company
Filed July 27, 1959, Ser. No. 829,824
10 Claims. (Cl. 292—1)



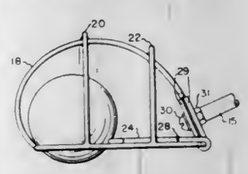
1. In combination with a latchset including a retractor and a housing therefor and provided with a retractor bar and a cylindrical latchbolt housing in which said bar is reciprocable, a latchbolt extension unit for extending the effective length of said retractor bar comprising: a retractor bar extension secured at one end to said retractor bar and formed at its other end to engage said retractor, a pair of extension links formed at one of their corresponding ends to connect with said latchbolt housing and at their opposite corresponding ends to connect with said retractor housing, said retractor bar extension being slidably received in said links and a tubular extension housing extending between said latchbolt housing and said opposite ends of said extension links for holding the latter together as a unit.

3,046,043
DOOR-LATCHES
Emory F. Matteson, Mamaroneck, N.Y., assignor, by mesne assignments, to Shampaine Industries, Inc., St. Louis, Mo., a corporation of Missouri
Filed Mar. 20, 1959, Ser. No. 800,830
9 Claims. (Cl. 292—175)



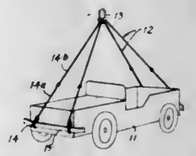
1. A door-latch comprising a shell having opposed side walls, one of said side walls having a first aperture, the other of said side walls having a second aperture, said apertures being aligned lengthwise of the shell, a rod-shaped bolt having one end sized for slidable insertion through the first aperture, said bolt being diametrally reduced at its other end in the provision of an annular shoulder and an axially extending tail-portion, a tubular bushing slidably mounted on the tail-portion and having an end surface facing said first aperture, said bushing being diametrally reduced at the end facing the second aperture in the provision of an annular shoulder, a skirt formed by the diametrally reduced portion, said skirt being seated in the second aperture and the annular shoulder of the bushing being in abutting relationship with the side wall in which the second aperture is formed, whereby to support said tail-portion for sliding movement in and through the second aperture, a spring disposed around the tail-portion in endwise abutment between the shoulder of the bolt and the end surface of the bushing whereby to hold the bushing seated and also bias the bolt toward locking position, a handle mounted on said bolt, and means for limiting the movement of the bolt toward the locking position.

3,046,044
GOLF BALL RETRIEVING DEVICE
Arnold B. Christle, Glezen Lane, Wayland, Mass.
Filed Nov. 19, 1958, Ser. No. 775,049
6 Claims. (Cl. 294—19)



1. A ball retrieving device comprising a receptacle for receiving a ball, having a bottom edge defining an opening at the lower side of said receptacle, a gate pivotally attached to said receptacle for movement inwardly and upwardly, stop means preventing said gate from swinging outwardly, said gate lying normally across said opening to form a bottom closure which is urged outwardly against said stop means by the weight of a ball within said receptacle, said gate and said bottom edge defining an entrance to said receptacle enlargeable by the inward movement of said gate upon contact with a ball, the length of said gate being such that inward motion thereof enlarges said entrance sufficiently to admit the ball and said gate returns to normal closure position entrapping the ball before the ball is entirely within said receptacle.

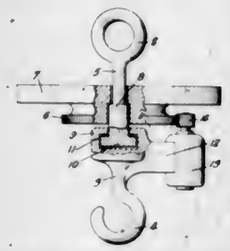
3,046,045
UNIVERSAL SLING SYSTEMS
Harris S. Campbell, Bryn Athyn, Pa., assignor to Eastern Rotorcraft Corporation, Doylestown, Pa., a corporation of Pennsylvania
Filed Jan. 26, 1960, Ser. No. 4,654
5 Claims. (Cl. 294—74)



1. A sling system having a plurality of divergent legs, each leg of the system including a plurality of mutually separable flexible tension members, each of said tension members having a closed loop at each end, each leg be-

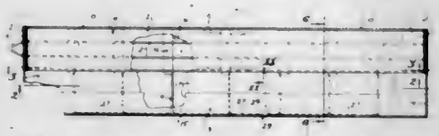
ing assembled with a first of said tension members wrapped around a portion of the load to be lifted and having a first looped end directed away from the load, a second of said tension members having a second looped end threaded through said first looped end and a third looped end threaded through said second looped end, said second member having its said third looped end extended in a direction away from said load to form at least a portion of one of said legs, a sling ring member, and one looped end of each sling leg being threaded through said ring member and then opened and brought back over the entire said ring member to provide for transfer of forces produced by said load to said ring member.

3,046,046
MOTOR ACTUATED ROTARY CRANE HOOK
Conrad D. Gris, Hamilton, Ontario, Canada, assignor to Mansaver Industries, Inc., New Haven, Conn., a corporation of Connecticut
Filed Dec. 22, 1958, Ser. No. 782,179
6 Claims. (Cl. 294—82)



1. A load carrying rotatable crane hook assembly comprising an upper member adapted for attachment to a crane, a lower hook member suspended from the upper member in rotatable relation thereto, a balance wheel rotatably mounted upon said upper member and motor means mounted upon said lower member and means driven by said motor means for rotating said balance wheel and epicyclically controlling the movement of said lower hook member.

3,046,047
FLOOR SUPPORTING STRUCTURE FOR EXPANDABLE TRAILERS
John Ferrera, 10838 Rose Ave., Los Angeles, Calif.
Filed June 5, 1961, Ser. No. 114,785
10 Claims. (Cl. 296—23)



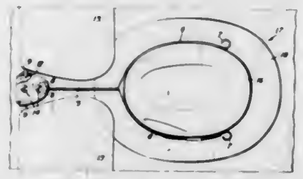
1. A floor supporting structure for trailers of the type having a fixed floor, a longitudinally extending foldable floor hinged to one side thereof and movable between an upwardly extended folded condition and a coplanar extended position, and a longitudinal base beam bordering the edge of the foldable floor distal from the fixed floor, said structure comprising: longitudinally extending floor beams under said fixed floor; a set of transversely extending tubular casing members of rectangular cross section connected to said floor beams and spaced from said fixed floor, said casing members disposed in a flatwise condition with their major transverse dimension in a horizontal plane; a plurality of cross beams slidable in said casing members between retracted and extended positions; means pivotally connecting said cross beams to said casing members and to said base beam; and means operable, when said cross beams are extended, to rotate said cross beams between a flatwise condition for sliding movement into said casing members and an edgewise condition for supporting said foldable floor.

3,046,048
MAGNETICALLY SECURED WINDSHIELD COVER
Roland A. Cheney, 54 State St., Portland, Maine
Filed Jan. 20, 1960, Ser. No. 3,543
4 Claims. (Cl. 296—95)



1. In combination, a vehicle having a windshield and a roof structure with longitudinally extending rain gutters extending along opposite sides of the roof, an automotive windshield cover for protecting said windshield comprising a flexible sheet of plastic, said sheet overlying and extending beyond the peripheral edges of said windshield, magnetic means carried by the lower edge of said sheet magnetically securing the lower edge of said sheet to metallic surfaces of said vehicle adjacent the lower edge of said windshield, the upper edge of said sheet overlying at least the forward ends of said rain gutters, a pair of fully exposed spaced elastic straps extending along and over the upper edge of said sheet with their adjacent ends secured to the outer side of said sheet along the portion thereof overlying said roof, a rigid strap hook secured to the free end of each of said straps with said straps being tensioned and said hooks each engaged beneath the adjacent rain gutters with the portions of said sheet adjacent said gutters being disposed and frictionally retained between said gutters and said strap hooks whereby said elastic straps will tension said sheet over the portion of said top disposed therebetween and retain the upper edge of said sheet in position in overlying relation to said windshield.

3,046,049
AUTOMOBILE HAT RACK
Lawrence E. Paxton, 16 Wells Ave. NW., Roanoke 17, Va.
Filed Dec. 20, 1960, Ser. No. 77,169
2 Claims. (Cl. 296—97)



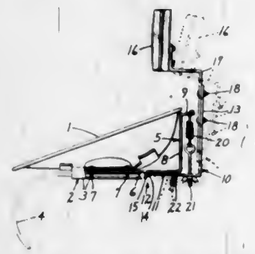
1. In combination, a vehicle body including a top, a pair of adjustable, transversely aligned sun visors mounted beneath the top, a holder mounted beneath the top between the visors for detachably securing the inner ends thereof to said top, and a hat rack secured between the holder and the top for removably mounting said rack beneath said top, said holder comprising a generally flat, apertured plate-like member and screws securing said member to the top, said rack including an arm, a yoke on one end of said arm for the reception of a hat, and a fork on the other end of the arm engaged between the member and the top astraddle the screws for mounting said member beneath said top and positively retaining said member against rotation.

3,046,050
CONVERTIBLE CHAIR
Hugh Fowler, 126 Lebanon Hills Drive, Pittsburgh 28, Pa.
Filed Sept. 8, 1960, Ser. No. 54,699
8 Claims. (Cl. 297—118)



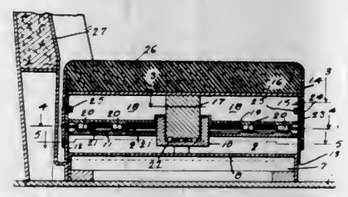
1. An article of repose for supporting the body of a person comprising in combination a body supporting frame consisting of two sections pivotally connected to each other, supporting means for said body supporting frame, said supporting means having a first base portion and a second base portion, said first base portion being curved and having converging surfaces, said converging surfaces forming an external angle greater than 180°, said second base portion having curved converging external surfaces forming an external angle at its intercept that is less than 180°, said supporting means adapted to receive said body supporting frame in a first position in which said body supporting frame is secured to said first base portion in a manner that said body supporting frame serves as a cot to support the human body in a substantially prone position, said second base portion serving as a floor contacting means, said supporting means adapted to receive said body supporting frame in a second position in which said body supporting frame is secured to said second base portion in a manner that said body supporting frame serves as a chair to support the human body in a sitting position, and said supporting means first base portion serving as a floor contacting portion.

3,046,051
TRACTOR SEAT BACK-REST
Willard C. Schmidt, Rte. 2, Willmar, Minn.
Filed Apr. 25, 1961, Ser. No. 105,478
3 Claims. (Cl. 297—306)



1. In a back-rest for tractor seats and the like, a generally L-shaped mounting bracket, a generally L-shaped mounting arm for said bracket and comprising a generally horizontal arm portion secured to the under side of a tractor seat and a generally vertically extended portion disposed rearwardly of said seat, said bracket including a generally horizontally disposed leg underlying the horizontal portion of said arm and a vertical leg disposed rearwardly of said vertically disposed mounting arm portion, means pivotally mounting said horizontally extended bracket leg to the horizontal portion of said mounting arm on a horizontal axis for generally forward and rearward swinging movements of the vertical leg of said bracket, a back-engaging pad, means mounting said pad on said vertical leg for common movements therewith, a coil spring, means operatively connecting the opposite ends of said spring to the upper end of said vertically disposed arm portion and to said bracket and including an adjustable element for varying the yielding bias of said spring, said spring yieldingly urging said bracket in a forward direction of movement of said vertical leg, and stop means for varying the forward limit of movement of said vertical leg, whereby to vary the position of said pad forwardly and rearwardly relative to said seat.

3,046,052
REVOLVABLE SEAT
Reuben E. Summers, San Diego, Calif.
Filed July 13, 1959, Ser. No. 826,619
2 Claims. (Cl. 297—337)

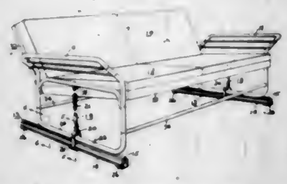


1. A revolvable automobile seat, comprising a circular base, a wide circular stationary retaining member rising from said base, a plurality of spaced vertical plates radiating from the axis of said circular retaining member, secured thereto, a stationary circular horizontal bearing plate having spaced roller bearing recesses in the upper surface thereof, secured within said wide circular retaining member, a stationary tubular support having an open upper end, secured axially of said supporting plate, a top horizontal rotatable bearing plate disposed above said stationary supporting plate, said top horizontal rotatable bearing plate having roller bearing recesses confronting said roller bearing recesses in said circular horizontal supporting plate, roller bearings disposed within said confronting roller recesses, a plurality of vertical seat plates having U-shaped openings in their outer ends, resting on said top horizontal rotatable bearing plate, a locking ring secured to said circular retaining member, an annular flange extending inwardly from the upper edge of said locking ring, disposed within said U-shaped openings of said vertical seat plates, rotatably securing said seat plates to said base, a horizontal cushion supporting plate mounted on said vertical seat plates, a center post depending from the axis of said cushion supporting plate, disposed within said tubular support, ball bearings within said tubular support on which said center post rests, and a cushion mounted on said seat supporting plate.

3,046,053
GLIDER CONSTRUCTION
Morton Pearlstine, Bala-Cynwyd, Pa., assignor to The Bunting Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 21, 1960, Ser. No. 64,122
7 Claims. (Cl. 297—344)

1. In a glider, in combination, a rigid superstructure including a seat and back rest unit, a pair of laterally spaced parallel tracks secured to the bottom of said superstructure and extending fore and aft thereof, a pair of floor-supported elongated tracks respectively disposed beneath and in substantial vertical registry with said superstructure tracks, plural revoluble bearing means interposed

between and spaced apart along the length of each floor-supported track and its associated superstructure track for supporting said superstructure upon said floor supported tracks for gliding movement therealong in opposite directions from an at-rest position, said revoluble bearing means being free to move longitudinally of both tracks between which it is disposed when said tracks move longitudinally relative to each other, harness means intercoupling and carried by the spaced apart plural revoluble bearing means and shiftable therewith when said bearing means move



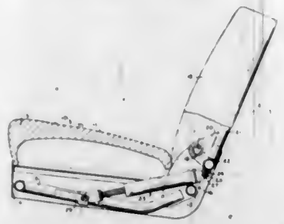
longitudinally along said tracks including spacer means effective to maintain substantially constant the spacing between the intercoupled plural revoluble bearing means, and means holding said harness means and plural revoluble bearing means captive to the said floor supported tracks effective to prevent the bearing means from being displaced out of said tracks while simultaneously permitting unrestricted shifting motion of said harness and bearing means within predetermined limits lengthwise of said tracks.

3,046,054
HEIGHT ADJUSTING CAM LOCK
Sidney Albert Ericson, Bridgeport, and Henry Wheeler Parrott, Shelton, Conn., assignors to The Bassick Company, Bridgeport, Conn., a corporation of Connecticut
Filed Dec. 7, 1960, Ser. No. 74,312
9 Claims. (Cl. 297—353)



1. In a chair having a seat portion and a back portion, an arrangement for effecting adjustment of the back portion with respect to the seat portion, comprising a support member associated with the seat portion including spaced side portions, a U-shaped back guide plate member associated with the back portion including resilient spaced arm portions positionable over and normally spaced from the support member side portions and movable with respect thereto, said arm and side portions having aligned apertures therein elongated in a generally common direction, a bolt member extending through the aligned apertures and projecting outwardly past the arm portions, stop means at one end of the bolt member adjacent one of the arm portions, and a lever pivotally connected to the bolt at the opposite end thereof to rotate about a pivot axis transverse to the longitudinal axis of the bolt, said lever having a camming surface extending generally in a direction parallel to the pivot axis and disposed adjacent the other of the arm portions, said camming surface being operable upon rotation of the lever to a first position to move the arm portions toward each other for frictionally locking the back portion relative the seat portion and being operable upon rotation of the lever to a second position to release the arm portions for effecting adjustment of said back portion.

3,046,055
POSITION-ADJUSTING MECHANISM
Jack E. Martens, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Feb. 19, 1960, Ser. No. 9,813
14 Claims. (Cl. 297—361)



1. A mechanical position-holding device comprising an elongate tubular element having one end portion adapted to be operatively connected to an output member, a support member aligned with said tubular element and adapted to be operatively connected to a member and held against rotation about its longitudinal axis, an elongate member extending into said tubular element and into said support member and rotatably mounted in the latter, an actuating rod rotatably mounted on said support member, means carried by said support member for urging one end of said support member into operative contact with an operative portion of the actuating rod, a nut carried by said tubular element and operatively engaging with a threaded portion of said elongate member, spring means in said tubular element for urging said elongate member toward said support member, brake means coacting with said elongate member and with said support member for preventing rotation of said elongate member relative to said support member whereby said output member is locked against movement toward said support member, and means for moving said actuating rod for disengaging the brake means whereby the elongate member is rotatable about its longitudinal axis as the tubular element and nut are moved axially of the elongate member in either direction.

3,046,056
SEAT BELT PROTECTOR BOOTS
Charles E. Greene, Milford, Mich., and Charles H. Pulley, Lexington, Ky., assignors to Irving Air Chute Company, Inc., Lexington, Ky., a corporation of Kentucky
Filed Feb. 20, 1961, Ser. No. 90,345
6 Claims. (Cl. 297—385)



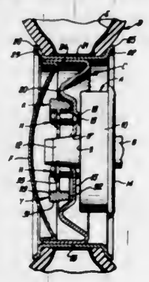
1. In a safety belt and guard boot assemblage the combination of a frame, a flexible belt, a bolt assemblage detachably connected to the frame, means connecting the belting to said bolting assemblage, and a flexible guard boot slidably mounted upon the belt and having a portion thereof covering the last mentioned means and the bolting assemblage at the upper portion of the latter and there being retained in position by a releasable connection to said bolting assemblage.

3,046,057
HEAD REST FOR SEAT BACKS
Francis M. Smetko, 1334 S. 56th Court, Cicero, Ill.
Filed May 27, 1960, Ser. No. 32,408
5 Claims. (Cl. 297—397)



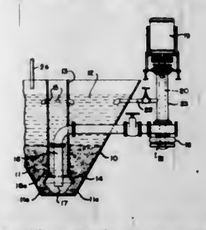
1. A head rest for a seat of the type having a generally horizontal seat and a separate generally vertically disposed back, said head rest comprising a cushion having a relatively deep base for disposition on top of the vehicle seat back and said cushion forming an upward continuation for said seat back, a covering for said cushion, said covering including a skirt depending down over the full height of the front of the generally vertically disposed seat back, a rigid member fastened transversely in the lower end of the skirt and arranged and constructed to be held between the generally horizontal seat and the generally vertical seat back to thereby hold the head rest cushion against rearward movement from its position on top of the seat back, and deformable bar members fastened to said cushion and arranged and constructed for bending over and around the back of the seat back to thereby hold the head rest cushion against relative forward movement away from its position on top of the seat back.

3,046,058
GYROSTATIC WHEEL STABILIZING APPARATUS
Leland S. Hamer, 4170 Lakewood Drive, Lakewood, Calif.
Filed June 13, 1960, Ser. No. 35,658
13 Claims. (Cl. 301—5)



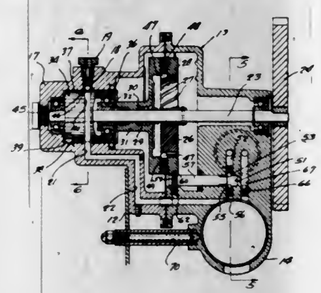
4. In a vehicle wheel: a hub member; a wheel removably mounted on said hub; a plurality of circumferentially spaced securing means holding said wheel on said hub, said securing means including enlargements engaging the outer face of said wheel; a pair of separate unitary weights, each separately, slidably and directly engaging said enlargements and being generally diametrically opposite each other; means releasably securing said weights to said enlargements; and means for guiding said weights circumferentially of said hub, on said enlargements.

3,046,059
SOLIDS HANDLING DEVICES
Royal N. Roberts, Media, Pa., assignor to Goyne Pump Company, a corporation of Pennsylvania
Filed May 5, 1960, Ser. No. 27,042
9 Claims. (Cl. 302—14)



1. A solids handling device comprising a sump into which a slurry of solids in a liquid is received for circulation, which slurry on standing forms precipitated solids and a supernatant liquid, liquid delivery means in said sump extending vertically from a point adjacent the top of said sump to a point spaced from the bottom of said sump, liquid inlet means in said liquid delivery means adjacent the top thereof, and below the normal level of liquid therein, hood means on the bottom of said liquid delivery means extending outwardly and downwardly therefrom, and spaced from the bottom of the sump forming a covered area such that precipitated solids are held away from the bottom end of the liquid delivery means, said liquid delivery means delivering liquid into the hood through a reduced area whereby to create a jetting action, pump means having a suction side and a discharge side, a connection from the bottom of the liquid delivery means to the suction side of said pump means whereby said supernatant liquid enters the liquid delivery means and the area within the hood and is delivered to the suction side of the pump means and discharge means on the discharge side of the pump for carrying away the liquid delivered to the pump through the suction line.

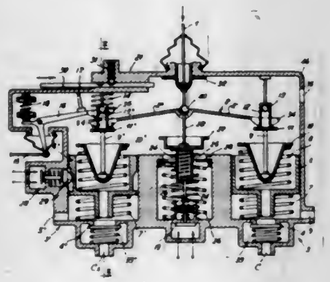
3,046,060
AUTOMOBILE ANTI-SKID CONTROL ASSEMBLY
Francis W. Stager, Rte. 1, Stafford Springs, Conn., and Robert N. Minor and Thomas A. Minor, both of R.F.D. 2, Rockville, Conn.
Filed June 16, 1961, Ser. No. 117,607
7 Claims. (Cl. 303—21)



1. In a vehicle wheel structure, a rotating brake drum, a brake shoe movable into engagement with the drum, a brake cylinder operatively connected to said shoe, a source of brake fluid under pressure, a shaft member rotatably mounted in said drum, means drivingly coupling said shaft member to said drum, a flywheel rotatably and slidably mounted on said shaft member, a cam wheel secured on said shaft member and having a helically grooved peripheral surface, yieldable coupling means on said flywheel engaging said peripheral surface and normal-

ly drivingly coupling said flywheel to said cam wheel, said coupling means being cooperable with the grooves in the peripheral surface of said cam wheel to move the flywheel axially on the shaft member when the shaft member decelerates relative to the flywheel, said yieldable coupling means allowing the cam wheel to rotate relative to the flywheel without axial movement of the flywheel when the rate of deceleration is relatively high, conduit means including a normally open valve connecting said source of brake fluid to said brake cylinder, and means closing said valve responsive to the axial movement of the flywheel on the shaft member.

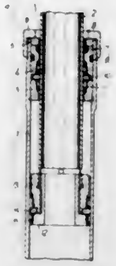
3,046,061
DUPLEX COMPRESSED AIR DISTRIBUTORS FOR PNEUMATIC BRAKING INSTALLATIONS
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed May 13, 1960, Ser. No. 29,097
Claims priority, application Italy May 23, 1959
5 Claims. (Cl. 303—53)



1. Apparatus comprising two parallel distributors including parallel pistons and valve members operatively disposed with respect to said pistons to be displaced thereby, a balancing member including two arms each associated with one of said pistons, disks displaceable by said arms, rods on said disks, caps each associated with a respective piston and engaged by one of said rods for being displaced thereby, springs between said caps and pistons, springs engaging said pistons and urging the same against said caps, spherical stops operatively positioned for engaging said disks to constitute a guide therefor to limit movement of the same, a push rod pivotally connected to said balancing member between said arms to displace the same, elastic means engaging one of said disks and urging the rod thereon into contact with the associated cap such that displacement of said push rod causes anticipatory displacement of said associated cap and the corresponding piston whereby advanced operation of the valve member associated with said piston is obtained, a manually pivotal rod, a lever system coupled to and actuated by said rod and adapted to engage and displace said one disk, means operatively coupled to the lever system to limit displacement thereof, and means engaging said push rod to limit displacement thereof.

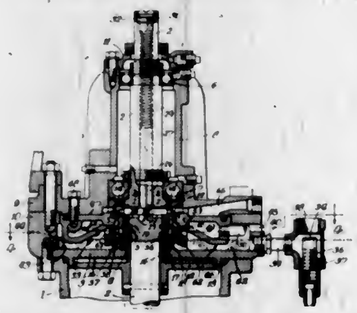
3,046,062
RESILIENT BUSHING OR PISTON ELEMENT
Fritz Alexander Wettstein, Goteborg, Sweden, assignor to Aktiebolaget Volvo, Goteborg, Sweden, a corporation of Sweden
Filed Feb. 16, 1960, Ser. No. 8,973
Claims priority, application Sweden Feb. 18, 1959
6 Claims. (Cl. 308—4)

1. A resilient bushing or piston element for relatively reciprocating motion comprising a central circular flange of comparatively small cross section and a plurality of axially extending segments directly and integrally connected to said flange, said segments having a common cylindrical sliding surface and being spaced from each



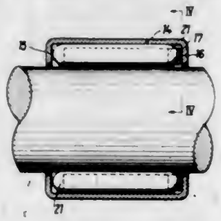
other so as to leave the intermediate portions of said flange free to flex.

3,046,063
SHAFT SEAL
Harry E. La Bour, % The La Bour Co. Inc., Elkhart, Ind.
Filed Sept. 27, 1960, Ser. No. 58,682
11 Claims. (Cl. 308—187.1)



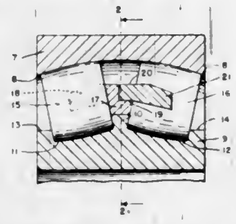
1. In combination with a pair of cooperating shaft seal members, a shaft carrying one of said members, said member being movable endwise of the shaft for application to the other seal member, said shaft having a longitudinal bore, spring means disposed in said bore, said shaft having radially disposed slots communicating with said bore, and a spider yieldingly loaded by said spring means and having radially extending arms guided in said slots, said arms engaging the movable seal member to apply spring pressure thereto endwise of the shaft.

3,046,064
NEEDLE BEARINGS
Georg Schaeffler, Herzogenaurach, Germany, assignor to Industriewerk Schaeffler oHG, Herzogenaurach, Germany, a German company
Filed Aug. 3, 1959, Ser. No. 831,419
Claims priority, application Germany Aug. 6, 1958
1 Claim. (Cl. 308—212)



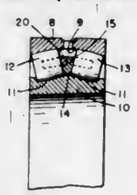
A needle bearing including a hardened metal race consisting of a sleeve and radially directed rims at opposite ends of said sleeve, a plurality of cylindrical bearing needles and a cylindrical comb-like cage made of resilient material extending co-axially of said sleeve between said rims, said cage having a single end ring, circumferentially spaced prongs extending axially to one side of said end ring, said prongs defining therebetween pockets in which said needles are rotatably disposed, and a radial slit extending axially through said end ring between two adjacent prongs, said slit and the pocket between said two adjacent prongs having the same width, and the needle disposed in the pocket between said two adjacent prongs extending into said slit.

3,046,065
DIVIDED RETAINER FOR ROLLER BEARINGS
John H. Lobeck and Walter Fisher, Jr., South Bend, Ind., assignors to Bantam Bearings Division, The Torrington Company, South Bend, Ind.
Filed Dec. 22, 1960, Ser. No. 77,548
5 Claims. (Cl. 308—217)



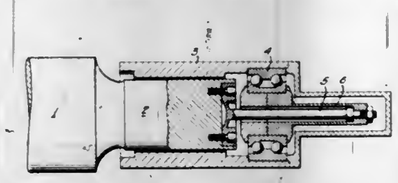
1. A spherical roller bearing comprising an outer member with an inner spherical raceway, an inner member having a center guiding rib, a concave raceway on each side of said rib and opposite the spherical raceway, a series of rollers in each concave raceway engaging the spherical raceway, a retainer between the two series of rollers, said retainer having a ring slidably carried on said center rib, a series of spaced fingers on said ring for separating the rollers of one series, said ring having a ledge over the entire center rib, a second ring slidably carried on the ledge and fingers on the second ring separating the rollers of the second series.

3,046,066
SPHERICAL ROLLER BEARING WITH BIPARTITE RETAINER
John H. Lobeck and Walter Fisher, Jr., South Bend, Ind., assignors to Bantam Bearing Division, The Torrington Company, South Bend, Ind.
Filed Dec. 23, 1960, Ser. No. 78,065
8 Claims. (Cl. 308—217)



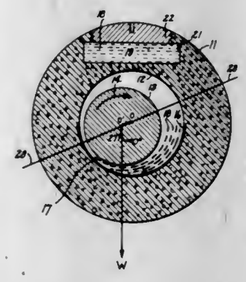
1. A spherical roller bearing comprising an outer member with a spherical raceway, an inner member with two spaced concave raceways opposite said spherical raceway, said inner member having a central land intersecting said concave raceways, two series of spherical rollers each engaging the outer raceway and one inner raceway, a retainer sliding on the land between said series of rollers, said retainer having a plurality of spacing fingers for one series of rollers, a seat on the retainer, a ring slidably carried in said seat and a plurality of spacing fingers on said ring for the second series of rollers.

3,046,067
AXIAL GUIDE FOR THE ROLLS OF ROLLING MILLS
Huldreich Gubler, Kreuzlingen, Switzerland, assignor to Aluminium - Industrie - Aktien - Gesellschaft, Chippis, Switzerland, a joint-stock company of Switzerland
Filed Dec. 22, 1959, Ser. No. 861,294
Claims priority, application Switzerland Dec. 24, 1958
4 Claims. (Cl. 308—233)



1. In or for a rolling mill comprising rolls each of which is provided with a journal and a radial bearing at one end and with a journal at the opposite end and which are arranged to be driven from beyond the journal of at least one of said rollers at said opposite end; a thrust bearing for axial stress components at said one end of each roll beyond said radial bearing and coaxial with said radial bearing, and means yieldable under radial deflections of the journal in said bearing and comprising an axial rod having one end secured to the last-mentioned journal against axial movement with respect thereto and having its other end at a distance therefrom, and a hollow coaxial shaft secured against axial movement to said other end of the rod and extending back over the same, and having with respect to said last-mentioned journal a clearance greater than the greatest possible radial deflection of the journal, said thrust bearing having a portion fixed to said hollow shaft and a portion fixed to said radial bearing, said rod having an elongated portion intermediate its secured ends and unrestricted in a radial direction, the transverse extent of said unrestricted elongated portion being much less than the axial extent of said unrestricted elongated portion.

3,046,068
SELF-LUBRICATING BEARINGS
Beno Sternlicht, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 11, 1957, Ser. No. 702,087
3 Claims. (Cl. 308—240)



1. In a bearing, the combination comprising a bearing body of lubricant impregnated porous material having a cylindrically extended opening for receiving a rotatable member, load carrying portions of the surface of said opening being non-porous with a substantially short porous length at each end, load free portions of the surface of said opening being porous.

3,046,069

RING SEGMENT SEAL CONSTRUCTION FOR ROTOR SIDE FACES IN ROTARY POSITIVE DISPLACEMENT INTERNAL COMBUSTION ENGINES

Ernst Schmidt, Nurnberg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg A.G., Nurnberg, Germany

Filed June 29, 1961, Ser. No. 120,572
Claims priority, application Germany July 30, 1960
3 Claims. (Cl. 309—1)



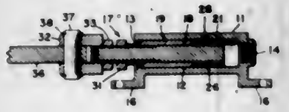
1. A ring segment seal construction for the side faces of the rotor in a rotary positive displacement internal combustion engine extending between the radial sealing vanes in the apices of the rotor comprising arc-shaped ring segments radially superimposed on each other in a rotor groove with each having one bevelled end and one square end opposite each other extending between the radial sealing vanes, a direct contact between each square end and the adiacent radial sealing vane, wedges between each bevelled end and the adjacent radial sealing vane, and spring means at the bottom of the rotor groove accommodating the ring segments to force the ring segment and said wedges outwards axially against the inner side surfaces of the casing.

3,046,070

WATER PUMP

Glenn D. Gearhart, Beresford, S. Dak., assignor to Sioux Steam Cleaner Mfg. Co., Inc., Beresford, S. Dak., a corporation of South Dakota

Filed Feb. 8, 1960, Ser. No. 7,468
3 Claims. (Cl. 309—4)



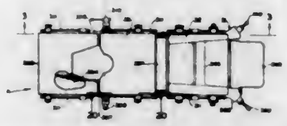
1. In a water pump, a housing having a cylindrical bore therein and a port in one end opening into the bore, a piston and piston rod slidably mounted within said bore for reciprocatory movement in said bore towards and away from said port in said housing, said piston and piston rod being comprised of a piston member having a cylindrical head portion with a diameter slightly less than the diameter of the cylindrical bore and a threaded portion, a cylindrical sleeve threadedly mounted on said threaded portion of said piston member and forming an annular groove between the sleeve and the head portion of the piston member, the axis of the groove being parallel to the axis of the piston, packing material disposed in the groove, said packing material being adapted to be compressed by axial movement of said sleeve with respect to said piston member to thereby urge the packing material into engagement with the cylindrical side wall forming the bore, said sleeve having a uniform diameter substantially identical to the diameter of the head portion and a length so that a substantial portion of the sleeve engages the sidewall of the bore, said sleeve also having a length so that a portion of the sleeve extends out of the housing in at least one position of the piston and piston rod so that the sleeve can be adjusted axially of the piston member without disassembly of the water pump, said sleeve forming the sole means for guiding the portions of the piston rod in the bore, remote from the piston and means mounted on said piston member for locking said sleeve in a predetermined axial position on said piston member.

3,046,071

HEAD-END CONTROL SURGICAL OPERATING TABLE

Hyman Robert Shampaine, 00 Dromara Road, Ladue 24, Mo., Roy T. Adolphson, Webster Groves, and John Douglass, Jr., St. Louis, Mo.; said Adolphson and said Douglass assignors to said Shampaine

Filed July 24, 1958, Ser. No. 750,711
22 Claims. (Cl. 311—7)



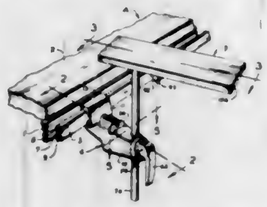
1. An operating table comprising a base, an articulated top portion operatively mounted on said base and including a center-section, said top portion also including an additional section swingably mounted adjacent each end of the center-section, driving means for laterally tilting said top portion, driving means for independently swinging each of said additional sections longitudinally, driving means for simultaneously longitudinally tilting the center-section in one direction and swinging one of said additional sections in the other direction, driving means for simultaneously longitudinally tilting the center-section in one direction and swinging the other of said additional sections in the other direction, a body elevator operatively mounted intermediate the center-section and one of said additional sections, driving means for moving said body elevator outwardly of the top portion, a main shaft for operating each of said driving means, means including a single manually operable crank for driving said main shaft, selector shaft means operatively interposed between said crank and main shaft, push-button controlled means for drivingly connecting said crank to said selector shaft means and at substantially the same time disconnect the drive from the crank to the main shaft whereby rotation of the crank will pre-select one of said drives for operation therewith, said push-button controlled means also being adapted to disconnect the drive from the crank to said selector shaft means, and at substantially the same time drivingly connect said crank to said main shaft, thereby permitting said crank to operate the pre-selected drive.

3,046,072

ACCESSORY SUPPORTS FOR SURGICAL OPERATING TABLES AND THE LIKE

John Douglass, Jr., and George R. Chervenka, St. Louis, Mo., assignors to Shampaine Industries, Inc., a corporation of Missouri

Filed Jan. 21, 1960, Ser. No. 3,757
3 Claims. (Cl. 311—10)



1. An adjustable arm brace assembly comprising a rod having an elongated axially extending portion and an elongated outwardly extending portion, said axial and outwardly extending portions being connected by an arcuate bend of substantial radius, said outwardly extending portion terminating in a collar provided with an aperture, a rod inserted loosely in said aperture, a first plate rigidly attached to said rod, a second plate loosely mounted on said rod between said collar and first plate, means for retaining said first and second plates in alignment, said first and second plates each being provided with a pair of parallel opposing sides which are aligned when said plates are aligned one to the other, spring means for biasing said first and second plates into spaced relationship, an arm rest base plate, a pair of complementary angle members rigidly secured to said base plate in spaced parallel relationship, said angle members each being provided with an inwardly extending flange in spaced relationship from said base plate whereby to define a trackway, said flange being spaced at a distance equal to the width of the plate, a padded arm rest secured to said base plate, said arm rest being provided with a pair of downwardly extending ends whereby to provide end stops for the slide trackway defined by the parallel angle members on the base plate, and means for drawing said first and second plates together and to said collar when said flanges are placed between the aligned parallel sides of said first and second plates, whereby to lock said arm rest with respect to said plates and to said collar.

3,046,073

FOLDING LEG FOR TABLES AND THE LIKE

William P. De Saussure, Englewood, N.J., assignor to De Saussure Equipment Company, Inc., Maywood, N.J., a corporation of New Jersey

Filed Oct. 6, 1960, Ser. No. 60,847
6 Claims. (Cl. 311—98)



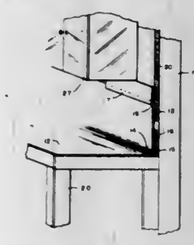
1. A brace for a folding table leg comprising a collapsible and extensible toggle including an angle member and a link pivotally connected to each other, said angle member having angularly-related flanges extending lengthwise thereof for substantially the full length of said angle member, said link being in substantially face-to-face relation to one of said flanges and having one end pivotally connected to said one flange about midway of its length, said link having opposite longitudinal edges, one of said longitudinal edges opposing the other flange of said angle member and being engageable with it along the major portion of the length of said link when said toggle is extended, and means on said angle member and said link for releasably retaining said toggle extended.

3,046,074

COUNTERTOP CONSTRUCTION

Philip Ben Lieber, 1166 E. Kingshighway, Shreveport, La.

Filed July 20, 1959, Ser. No. 828,261
2 Claims. (Cl. 312—140.1)



1. In a countertop construction wherein the covering material has only slight flexible characteristics, a countertop covering pre-bent to constitute countertop portion and backsplash portion, a bracing strip bonded to said covering in the bend area of said backsplash portion, an additional bracing strip bonded to the back side of said backsplash portion intermediate the height thereof, said aforementioned bracing strips comprising means for permitting bending of said covering in only a single plane, both of said bracing strips being constructed and arranged to fit in an area occupied by a section of wallboard removed from the wall studs to the rear of the backsplash portion, and a portion of said covering above said additional bracing strip being free of support for conforming to slight irregularities in the outer surface of the wall against which said countertop is installed.

CHEMICAL

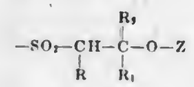
3,046,075

DYEING AND FINISHING TEXTILE MATERIALS

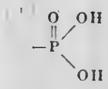
George C. Kantner, Philadelphia, and Melvin D. Hurwitz, Southampton, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa.

No Drawing. Filed Nov. 19, 1959, Ser. No. 853,993
4 Claims. (Cl. 8—17)

1. A process for coloring and finishing a cellulose textile material comprising impregnating the cellulose material with an alkaline aqueous solution, having a pH of about 8 to 11, of bis-(β-hydroxyethyl)-sulfone and a dyestuff containing a group reactive with the cellulose selected from the group consisting of cyanuryl halides and sulfone groups of the formula



wherein R, R_1 and R_2 are selected from the group consisting of hydrogen and hydrocarbon radicals of low molecular weight and Z is selected from the group consisting of —SO_3H, —SO_3Na, —SO_3K, and



the temperature of the impregnating bath being from about room temperature (72° F.) to 180° F., drying and heating the impregnated textile at a temperature of 220° to 400° F., then washing the textile, and drying it.

3,046,076

PROCESS FOR COLORING POLYOLEFINIC TEXTILE MATERIALS

Littleton Upshur, Greensboro, N.C., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware

No Drawing. Filed Aug. 25, 1959, Ser. No. 835,839
2 Claims. (Cl. 8—55)

1. A process for coloring a polyolefin textile material selected from the group consisting of polyethylene and polypropylene textile materials which comprises dissolving an essentially water-insoluble dyestuff in an organic

solvent selected from the group consisting of hydrocarbon and halogenated hydrocarbon solvents to obtain a solvent solution containing 0.1 to 10% by weight of dyestuff; emulsifying said solvent solution in water to form an emulsion in which water constitutes the continuous phase and the solvent solution the disperse phase, said emulsion containing from 30 to 70% organic solvent by volume; padding said textile material with said emulsion at a temperature of about 20–25° C.; allowing the padded material to stand at a temperature of 20° to 110° C. without substantial evaporation of water and solvent therefrom for a period of at least ten minutes and drying said material at a temperature between 100° and 150° C.

3,046,077

PROCESS FOR THE PREPARATION OF PRINTING DYES FROM VAT DYES AND SULFUR DYES, NOT SUITABLE BY THEMSELVES FOR PRINTING PURPOSES

Dénes Janko, Budapest, Hungary, assignor to Chemolimpex Magyar Vegyiaru Kulkereskedelmi Vallalat, Budapest, Hungary, a firm

No Drawing. Filed Nov. 18, 1958, Ser. No. 774,585
Claims priority, application Hungary Nov. 21, 1957
6 Claims. (Cl. 8—70)

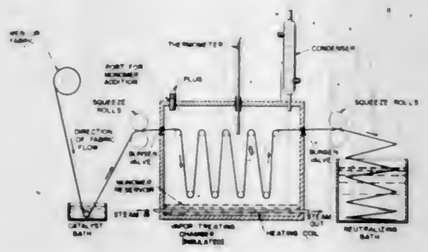
1. A process for the preparation of dyestuffs for printing textiles, selected from the group consisting of sulfur dyestuffs and vat dyestuffs, comprising reacting a solution of the dyestuff in an alkaline medium with a reducing agent to form the leuco-form of the dyestuff, reacting said leuco-form with a cation active condensation product of melamine-formaldehyde, to produce a complex precipitate of said condensation product and the leuco-form of the dyestuff, said precipitate being capable of being decomposed by steam to yield the leuco-form of the dyestuff, and preparing from the precipitate thus formed a printing paste by adding substances used in printing with vat dyestuffs.

3,046,078

GRAFT POLYMERIZATION PROCESS

Jason M. Salsbury, Watchung, Samuel Kaizerman, North Plainfield, and Guido Mino, Plainfield, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Mar. 18, 1958, Ser. No. 722,287
14 Claims. (Cl. 8—116)



1. A process comprising continuously contacting and wetting a cellulosic material with an acidic dispersion of a ceric salt, passing said wetted material through an atmosphere of a polymerizable monomer having a polymerizable $CH_2=C<$ group, wherein said monomer has a boiling point between about 20° C. and 150° C. and is soluble in water to at least 0.5%, in the vapor state, at a temperature elevated sufficiently to maintain said monomer in the vapor phase and for a period of time sufficient to graft-polymerize said monomer on said material wherein said process is carried out at substantially atmospheric pressure.

3,046,079

PROCESS OF REACTING PARTIALLY SWOLLEN COTTON TEXTILES WITH AQUEOUS SOLUTIONS OF SPECIFIC ALDEHYDES CONTAINING ACID CATALYSTS TO PRODUCE WET AND DRY CREASE RESISTANCE

Wilson A. Reeves, Rita M. Perkins, and Leon H. Chance, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed May 24, 1960, Ser. No. 31,491
6 Claims. (Cl. 8—116.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process comprising steeping a cotton textile in a solution containing, based on the weight of the solution, about from 50% to 90% of an organic water-soluble liquid in which water is soluble to the extent of at least 5% and selected from the group consisting of acetone, dioxane, diethylene glycol, dimethyl ether, tetrahydrofurane, formic acid, acetic acid, propionic acid, lactic acid, a mixture of benzene in acetic acid, and a mixture of xylene in tetrahydrofurane, about from 1% to 10% of an aldehyde selected from the group consisting of formaldehyde, glyoxal, glutaraldehyde, adipaldehyde, α-hydroxy adipaldehyde, acetaldehyde, and benzaldehyde, about from 8% to 40% of water, and about from 1% to 17.2% of a mineral acid catalyst selected from the group consisting of hydrochloric acid, sulfuric acid, and phosphoric acid at a temperature not exceeding about 45° C. to partially swell and react the cotton cellulose with the aldehyde, and removing all steeping solution from the thus-treated cotton textile to obtain a modified cotton textile characterized in that it has a combined aldehyde content of at least 0.25% based on the weight of the textile, a moisture regain value of at least 7% based on the weight of the textile, a breaking strength of at least 50% of the original untreated textile, and possessing both wet and dry wrinkle recovery.

3,046,080

TREATMENT OF KERATINOUS FABRICS AND FIBRES

Alan William Holmes, Walton-on-Thames, England, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,656
Claims priority, application Great Britain Feb. 5, 1959
5 Claims. (Cl. 8—128)

1. A process for the setting of keratinous fibres which comprises subjecting the fibres to an esterification treatment with an alcohol at elevated temperature in the presence of an acid esterification catalyst before submission to the setting operation.

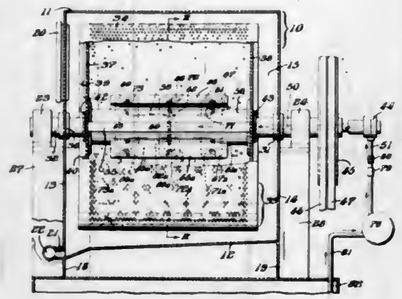
3,046,081

BATCH EXTRACTION RINSE

Jack C. Smith and Edwin E. Etterman, Bowling Green, Ky., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan

Filed Apr. 13, 1959, Ser. No. 806,130
2 Claims. (Cl. 8—159)

1. In a method of rinsing fabric materials previously washed in a dry cleaning solvent containing a soap, the steps which comprise rotating said materials in a foraminous drum at varying speeds, all of said varying speeds being above 100 r.p.m. to prevent a tumbling action of said materials while directing a spray of freshly distilled dry cleaning solvent against said materials from a rotating source disposed centrally within said drum until the concentration of said soap in the dry cleaning solvent contained in said materials is reduced to a range of about 0.3% to about 0.5% by volume, stopping said spraying



and then extracting the rinse solvent from said materials by rotating said drum at a higher speed.

3,046,082

VISCOSE PROCESS FOR THE MANUFACTURE OF LOW-SHRINK RAYON

Reid Logan Mitchell and Delmont K. Smith, Morristown, and Ralph C. Welton, Morris Plains, N.J., assignors to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

Filed Dec. 27, 1960, Ser. No. 78,779
7 Claims. (Cl. 18—54)

1. The improvement in the viscose process which comprises spinning viscose in an acid regenerating spin bath and stretching the filaments at least 90% in a primary stage while in contact with spin bath, then contacting the filaments which were not completely regenerated in the primary stage with a hot acid bath containing from 1% to 6% of sulfuric acid while stretching the filaments an additional 5% to 50% to completely fix and regenerate the filaments prior to any relaxation and then subsequently immersing the filaments in an aqueous solution containing a swelling agent at an elevated temperature while the filaments are free to shrink to effect complete relaxation of the filaments producing washable filaments having practically no shrinkage and which can be converted into yarns and woven fabrics which exhibit dimensional stability during repeated severe laundering.

3,046,083

METHOD FOR PRODUCING CRIMPED RAYON STAPLE FIBER

Arthur I. Bates, Wilmington, Del., and Joseph H. Anderer, Springfield, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Filed June 6, 1960, Ser. No. 34,294
3 Claims. (Cl. 18—54)

1. A method of producing improved regenerated cellulose fibers which comprises extruding viscose, having a common salt test figure of from 3.5 to 5 and containing from 7 to 12% by weight of cellulose, from 4.5 to 7.5% by weight of sodium hydroxide, and carbon disulfide in an amount sufficient to provide from 1.5 to less than 2.4% sulfur in the viscose, into a spinning bath containing from 5 to 6% by weight of sulfuric acid, from 0.1 to 0.4% by weight of zinc sulfate and from 17 to 21% by weight of sodium sulfate, and having a temperature of from 40 to 60° C.; applying tension in air to the formed filament to obtain a stretch of from about 5 to less than 20% of the original length of the filament, and then washing the filament in a relaxed state in an aqueous medium having a temperature ranging from about 60 to 100° C.

3,046,084

GLASS SURFACE TREATMENTS

Folsom Munro Veazie, Granville, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

No Drawing. Filed Dec. 13, 1960, Ser. No. 75,478
8 Claims. (Cl. 18—54)

1. A method for improving the fiber-forming characteristics of glass structures containing siliceous and non-siliceous constituents which are employed in fiberization methods wherein the glass structures are transformed to a molten state and attenuated to form filaments, comprising contacting the surfaces of said glass structures with an acidic medium capable of preferentially dissolving said non-siliceous constitutents of said glass structures.

3,046,085

VISCOSE SPINNING SOLUTION AND PROCESS

Ralph H. Burroughs, Jr., Rocky River, and Max Levine, Cleveland Heights, Ohio, assignors, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Sept. 16, 1959, Ser. No. 840,307
9 Claims. (Cl. 18—54)

7. An improved process for spinning regenerated cellulose filamentary articles of substantially improved tenacity and fatigue resistance comprising, extruding into an aqueous coagulating bath a viscose containing about 5% to about 9% cellulose, about 4% to about 8% sodium hydroxide, about 25% to about 55% total sulfur based on the weight of the cellulose and from about 0.2% to about 5%, based on the weight of the cellulose, of an alkali soluble polyalkylene oxide derivative of a nitrogen containing compound selected from the group consisting of ammonia, alkyl amines, alkyl polyamines, and alkyl amides said derivative having polyalkylene oxide chains of from about 5 to about 120 alkylene oxide units and at least about four terminal hydroxyl units per nitrogen atom and a turbidity point of at least about 45; said aqueous coagulating bath comprising about 4% to about 10% sulfuric acid, about 6% to about 25% sodium sulfate, and about 3% to about 15% zinc sulfate.

3,046,086

PREPARATION OF HALODECABORANE

Paul R. Wunz, Jr., Gibsonia, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 19, 1959, Ser. No. 794,260
6 Claims. (Cl. 23—14)

1. A method of preparing halodecaboranes which comprises contacting decaborane with a haloform of the formula CHX_3 where X is selected from the group consisting of chlorine, bromine and iodine in the presence of a Friedel-Crafts catalyst selected from the group consisting of aluminum chloride, aluminum bromide, ferric chloride, zinc chloride and stannic chloride, and recovering the halodecaboranes thus formed.

3,046,087

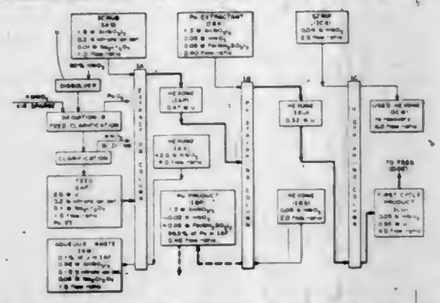
SOLVENT EXTRACTION PROCESS FOR SEPARATING URANIUM AND PLUTONIUM FROM AQUEOUS ACIDIC SOLUTIONS OF NEUTRON IRRADIATED URANIUM

Francis R. Bruce, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Jan. 13, 1956, Ser. No. 559,080
6 Claims. (Cl. 23—14.5)

1. An improved process for separating uranium and plutonium from an acidic aqueous solution of neutron-irradiated uranium containing same together with fission products and nitrate ions, which comprises securing plutonium in its hexapositive state, contacting the resulting

feed solution, under net nitrate ion deficient conditions, with an inert, substantially water-immiscible organic solvent, scrubbing the resulting uranium and plutonium-containing organic phase with an aqueous solution of aluminum nitrate, separating the scrubbed organic phase



from the resulting fission products-containing aqueous phase, contacting the separated organic phase with an aqueous nitric acid solution containing a plutonium reductant, separating the resulting reduced plutonium-containing aqueous phase from the resulting uranium containing organic phase.

3,046,088

PROTACTINIUM EXTRACTION

Frederick L. Horn, Sayville, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed June 22, 1960, Ser. No. 38,088
5 Claims. (Cl. 23—14.5)



1. A method for the production and extraction of protactinium consisting of exposing thorium-containing solids dispersed in molten liquid bismuth to irradiation from a neutron irradiation to form protactinium by neutron capture and beta decay, contacting the said irradiated thorium-containing solids with a non-aqueous liquid medium consisting of hydrogen fluoride and nitrogen dioxide at elevated temperature to form a protactinium complex in said non-aqueous solution, distilling off non-aqueous liquid medium, separating the said protactinium complex from said solids by contacting said solids with an aqueous liquid solvent and thereafter drying said solids for reuse in the process.

3,046,089

PROCESS OF TREATING URANIUM HEXAFLUORIDE AND PLUTONIUM HEXAFLUORIDE MIXTURES WITH SULFUR TETRAFLUORIDE TO SEPARATE SAME

Martin J. Steindler, Park Forest, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Feb. 8, 1961, Ser. No. 87,971
5 Claims. (Cl. 23—14.5)

1. A process of separating uranium hexafluoride from plutonium hexafluoride, comprising mixing these fluorides with sulfur tetrafluoride at a temperature of between 50 and 120° C. whereby the plutonium hexafluoride is reduced to the tetrafluoride while the uranium hexafluoride remains unreacted; cooling the fluoride mixture to about −60 to −100° C. and distilling off excess sulfur tetrafluoride and the sulfur hexafluoride formed; allowing the remaining fluoride mixture to warm to room temperature whereby the uranium hexafluoride distills away from the solid plutonium tetrafluoride; and condensing the uranium hexafluoride.

3,046,090

PRODUCTION OF URANIUM MONOCARBIDE

Richard M. Powers, Cold Spring Harbor, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed June 28, 1961, Ser. No. 120,446
4 Claims. (Cl. 23—14.5)



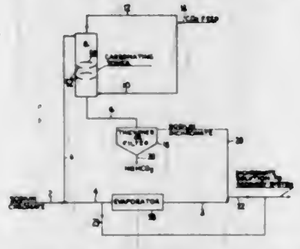
1. The method of making essentially stoichiometric uranium monocarbide that consists in mixing uranium tetrafluoride, silicon and carbon, pelletizing the mixture, reacting the pelletized mixture at a temperature of approximately 1500° C. to 1700° C. until the reaction goes to completion and forms unranium monocarbide powder, and arc melting the powder to produce a massive uranium monocarbide body.

3,046,091

PREPARATION OF ALKALI METAL DICHROMATE

John F. Van Hoozer, Corpus Christi, Tex., assignor, by mesne assignments, to Pittsburgh Plate Glass Company

Filed Dec. 19, 1958, Ser. No. 781,496
5 Claims. (Cl. 23—56)



1. A method of preparing alkali metal dichromate which comprises countercurrently contacting alkali metal chromate with carbon dioxide in a plurality of intercommunicating superimposed stages in a tower, introducing carbon dioxide into the lowermost of said stages, introducing an aqueous solution of alkali metal chromate containing at least 35 percent by weight of CrO_3 into the uppermost of said stages, withdrawing alkali metal dichromate from the lowermost of said stages, and feeding the carbon dioxide into the lowermost of said stages at a rate at least twice the rate at which the carbon dioxide is absorbed in all of said stages.

3,046,092

TRIPOLYPHOSPHATE PROCESS IMPROVEMENT

Joseph L. Montague, Bayonne, N.J., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 11, 1960, Ser. No. 14,207
7 Claims. (Cl. 23—106)

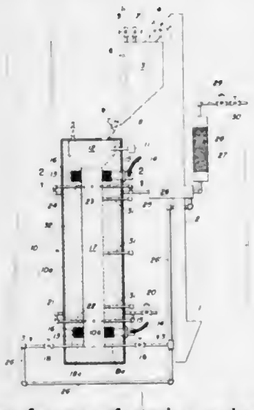
1. A process which comprises contacting anhydrous sodium tripolyphosphate with a quantity of water in the form of ice which is less than about 105% of the stoichiometric amount required to hydrate the said anhydrous sodium tripolyphosphate to the hexahydrate, and retaining said water in contact with said anhydrous sodium tripolyphosphate until at least a portion of said water has reacted with said anhydrous sodium tripolyphosphate to produce sodium tripolyphosphate hexahydrate.

3,046,093

PROCESS OF MANUFACTURING CARBON MONOXIDE

Walter N. Alexander, deceased, late of Verona, N.J., by Florence M. Alexander, executrix, Verona, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Continuation of application Ser. No. 539,848, Oct. 11, 1955. This application Aug. 2, 1960, Ser. No. 47,348
1 Claim. (Cl. 23—204)



In a process for manufacturing carbon monoxide by feeding carbonaceous material into a cylindrical reaction zone containing carbon electrodes of annular form respectively near the top of the reaction zone and near the bottom of said reaction zone, the improvement which comprises feeding a low ash and low volatile content carbonaceous material at room temperature into the top of said reaction zone whereby a cylindrical column of the carbonaceous material is formed between said electrodes and conducting the electric current therebetween to heat the column of coke, feeding carbon dioxide gas into the reaction zone at a point above the electrode at the bottom of said reaction zone, and during the reaction positively cooling the electrode at the bottom of said reaction zone below the temperature of the reaction by passing a recycle stream of carbon monoxide at a temperature below the reaction temperature in effective contact with said bottom electrode, and withdrawing the carbon monoxide formed at a point below the upper electrode thereby not interfering with the cooling effect of the delivered cool carbonaceous material on the upper electrode which is thus maintained at a temperature below the reaction temperature, the electrodes, cooled below reaction temperature, being guarded against erosion and combustion of the same.

3,046,094

METHOD OF PREPARATION OF INORGANIC CHEMICAL COMPOUND

Glen E. Arth, Cranford, and John Fried, Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 28, 1960, Ser. No. 45,794
3 Claims. (Cl. 23—205)

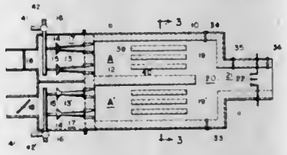
1. In the process for the production of sulfur tetrafluoride which is free of chlorinating agents, from sulfur tetrafluoride which contains chlorinating agents, the improvements of which comprise the steps of (1) adding mercury to sulfur tetrafluoride which contains chlorinating agents, (2) intimately mixing the sulfur tetrafluoride and the mercury, and (3) separating sulfur tetrafluoride free of chlorinating agents from the mercury.

3,046,095

PROCESS FOR CARBON BLACK PRODUCTION

Ira Williams, Borger, Tex., assignor to J. M. Huber Corporation, Locust, N.J., a corporation of New Jersey

Filed Jan. 13, 1958, Ser. No. 708,640
3 Claims. (Cl. 23—209.4)



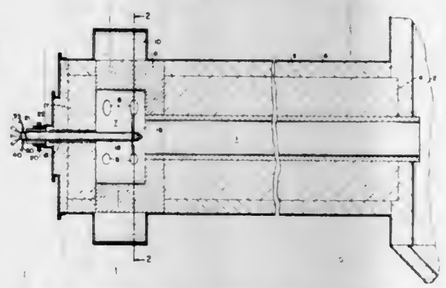
1. A process for the continuous production of finely divided thermal decomposition carbon comprising the steps of heating a checkerwork of refractory material in a furnace by means of burning a mixture of hydrocarbon fuel and air passing through the furnace and checkerwork from the inlet end to the outlet end thereof producing a relatively inert combustion gas, simultaneously passing a hydrocarbon gas through a previously heated adjacent similar furnace from the inlet end to the outlet end thereof with the hydrocarbon gas decomposing to form thermal carbon, mixing the products from both furnaces in a mixing chamber communicating with the outlet end of both furnaces to thereby dilute the decomposed gas and reduce the agglomeration of the thermal carbon entrained therein, continuing the operation until the checkerwork in the second furnace is reduced in temperature but remains sufficiently high to cause thermal decomposition, simultaneously changing the flow of hydrocarbon gas to the inlet end of the first furnace and the flow of hydrocarbon fuel and air to the inlet end of the second furnace and repeating such cycle to provide a continuous process.

3,046,096

CARBON BLACK MANUFACTURE

George L. Heller and Amos C. Warner, Monroe, and Charles L. De Land, West Monroe, La., assignors to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

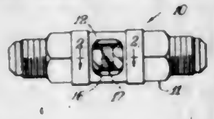
Filed Dec. 2, 1958, Ser. No. 777,635
10 Claims. (Cl. 23—209.4)



1. In the process for producing carbon black by the decomposition of hydrocarbons in which there is established and maintained within an elongated, heat-insulated reaction chamber of circular cross-section, a swirling stream of hot blast flame gases passing longitudinally through the chamber along a helical path at high velocity, the axial core of said gas stream swirling at a relatively low velocity and the gas velocity reaching a maximum in

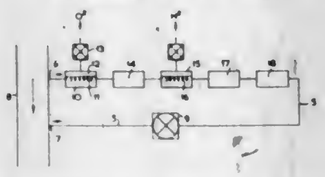
an annular zone intermediate said core and the periphery of the chamber, and the hydrocarbon to be decomposed is separately and forcefully injected radially into said hot gas stream and is dispersed therein and decomposed by heat absorbed therefrom to form carbon black in suspension, the effluent passing from the downstream end of the chamber and the carbon black separated and collected, the improvement comprising the step of injecting the hydrocarbon to be decomposed into the hot gas stream as a gas-atomized spray of liquid hydrocarbon initiated adjacent the longitudinal axis of the chamber and directed radially outwardly toward the delineating side wall of the chamber at an initial linear velocity such that the spray penetrates the swirling stream of hot gases to the zone of maximum velocity of said gases.

3,046,097
FLUID INDICATOR
Albert Wittlin, % Allin Manufacturing Co., 410 N. Hermitage Ave., Chicago 22, Ill.
Filed Aug. 26, 1958, Ser. No. 757,237
4 Claims. (Cl. 23—253)



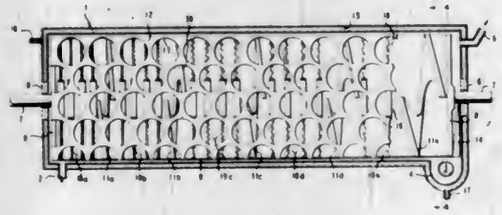
1. In a fluid indicator having a flow passage bounded at one portion by transparent means permitting the viewing of the interior thereof, and means in said passage for indicating the presence of another substance in the fluid, including a sheetlike arrangement of material having an appearance varying as a function of the presence of said another substance in the fluid, and spring means biasing said sheetlike arrangement of material outwardly toward the transparent means, spacing means comprising a plurality of elements between said sheetlike arrangement of material and the transparent means and spaced transversely to the direction of fluid flow through the passage to form a plurality of flow passage portions adjacent the transparent means, each of said elements extending fully across said sheetlike arrangement in the direction of fluid flow so that the opposite ends of said passage portions are open to said fluid flow passage whereby a portion of a fluid flowing through said fluid flow passage flows through said passage portions, said spacing means being defined by a sheet member having a plurality of parallel, spaced rectangular openings, the lands between said openings defining said elements.

3,046,098
DEVICE FOR DETERMINING THE CONTENT OF WATER VAPOUR IN A GAS FLOW
Bernard Brasseur, Arnonville-les-Gonesse, Georges Le Gargasson, Paris, and Jean Robert Perilhou, Bourg-la-Reine, France, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 4, 1958, Ser. No. 771,811
Claims priority, application France Nov. 4, 1957
2 Claims. (Cl. 23—254)



1. In an apparatus for continuously measuring water vapour in a gas flow in a main conduit, a sampler conduit leading from said main conduit, gas permeable means located in said sampler conduit for selectively removing free oxygen from the gas flow in said sampler conduit, means downstream from said oxygen removing means for chemically liberating hydrogen from water vapour in said oxygen free gas flow, said hydrogen liberating means being in flow communication with said oxygen free gas and comprising a gas path determining structure containing substances capable of liberating hydrogen from water vapor, a gas permeable wall downstream from and connected to said hydrogen liberating means for selectively removing the liberated hydrogen from said sampler conduit, and a means downstream and in flow communication with said gas permeable wall for determining the pressure of the liberated hydrogen which diffuses through said gas permeable wall.

3,046,099
IMPROVED POLYMER FINISHER APPARATUS
Leroy Deforest Willey, Jr., Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,751
13 Claims. (Cl. 23—285)



1. An improved polymer finishing apparatus comprising a cylindrical vessel; an inlet for liquid near one end of said vessel; an outlet for liquid near the other end; an outlet for vapor near at least one end; a peripherally perforated cylindrical structure mounted for rotation within said vessel, the diameter of said cylindrical structure being only slightly less than the inside diameter of the vessel; and a plurality of annular foraminous members mounted within said structure along its length and substantially perpendicular to the axis thereof, each of said members provided with a plurality of small evenly distributed passageways extending therethrough.

3,046,100
ZONE MELTING OF SEMICONDUCTIVE MATERIAL
Willem J. Siemons, Landenburg, Pa., and Denis G. Kelemen and Rudolph Steckl, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 709,960
4 Claims. (Cl. 23—301)

1. An improved process for floating zone refining a high-melting material selected from the group consisting of silicon, germanium and boron wherein a molten zone is caused to traverse a bar of said material, which comprises heating a vertically disposed bar of said material by electrical resistance means to establish and maintain throughout said bar an even temperature close to the melting point of said material but not less than 9/10 of its melting point temperature on an absolute scale, applying focused heat to a portion of the bar to create a narrow molten zone completely across said bar, traversing said molten zone along the bar while maintaining the solid portions of said bar at said even temperature by continued resistance heating, during said refining maintaining the liquid-solid interfaces between said molten zone and solid portions substantially flat and said bar



and molten zone substantially uniform in cross section, and recovering the refined product.

3,046,101
WAX COMPOSITION FOR CANDLES
John D. Tench, Prospect Park, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Jan. 20, 1959, Ser. No. 787,822
4 Claims. (Cl. 44—7.5)

3. A candle composition consisting essentially of from about 3 percent to about 30 percent by volume of stearic acid and from about 70 percent to about 97 percent by volume of a wax composition consisting essentially of: (A) from 45 percent to 55 percent by weight of a paraffin wax having a melting point of from 125° F. to 132° F., a penetration at 100° F. of from about 80 to about 120 and a viscosity at 210° F. of from 38 to 40 SUS; and (B) from 32 percent to 42 percent by weight of a paraffin wax having a melting point of from 130° F. to 136° F., a penetration at 100° F. of from about 30 to about 50 and a viscosity at 210° F. of from 36 to 39 SUS; and (C) from 10 percent to 16 percent by weight of a paraffin wax having a melting point of from 149° F. to 155° F., a penetration at 130° F. of from about 35 to about 65 and a viscosity at 210° F. of from 42 to 46 SUS.

3,046,102
STABILIZED DISTILLATE FUEL OIL
Harry J. Andress, Jr., Pitman, and Paul Y. C. Gee, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Oct. 6, 1958, Ser. No. 765,296
6 Claims. (Cl. 44—71)

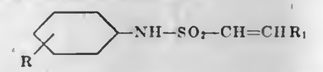
1. A distillate fuel oil containing between about 1 pound and about 200 pounds, per thousand barrels of fuel, of a material selected from the group consisting of (A) amic acids of itaconic acid and alphatic hydrocarbyl primary and secondary amines having between about 4 carbon atoms and about 30 carbon atoms per molecule and (B) salts of A with aliphatic hydrocarbyl primary amines having between about 4 carbon atoms and about 30 carbon atoms per molecule.

3,046,103
BONDING COMPOSITIONS CONTAINING MODIFIED TRIMETHYLOLPHENOL COMPOUNDS
Bruce P. Barth, Piscataway Township, Middlesex County, N.J., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed July 2, 1959, Ser. No. 824,458
15 Claims. (Cl. 51—298)

14. In an abrasive article comprising abrasive grains bonded together, the improvement which comprises having the abrasive grains bonded together with the cured reaction product of a trimethylolphenol compound selected from the group consisting of 2,4,6-trimethylolphenol, alkali metal salts of 2,4,6-trimethylolphenol and alkaline earth metal salts of 2,4,6-trimethylolphenol, and from 2 up to but not including 100 parts by weight of animal glue solids per 100 parts by weight of said trimethylolphenol compound.

3,046,104
METHOD FOR THE CONTROL OF WEEDS
Max Ehlers, Forstweg 64, Berlin-Frohnau, Germany; Gerhard Liedtke, N. 65 Guinestr. 38, Berlin, Germany; and Horst Hilgert, Schnepfenreuther Weg 65, Berlin-Spandau, Germany
No Drawing. Filed Mar. 15, 1960, Ser. No. 15,034
Claims priority, application Germany Apr. 11, 1959
7 Claims. (Cl. 71—2.3)

1. A method for the control of weeds which comprises applying to soil infested with weeds prior to the emergence of said weeds a herbicidal amount of an alkenyl sulfonamide having the general formula



wherein R is a member selected from the group consisting of hydrogen, halogen, alkyl and nitro, and R_1 is a member selected from the group consisting of hydrogen and alkyl.

3,046,105
LIQUID FERTILIZERS
Donald C. Young, Fullerton, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California
Filed July 18, 1960, Ser. No. 43,522
17 Claims. (Cl. 71—51)



1. An aqueous solution containing at least 41 weight percent of a mixture of dissolved salts, said mixture consisting of ammonium sulfate and ammonium phosphate of the average composition:

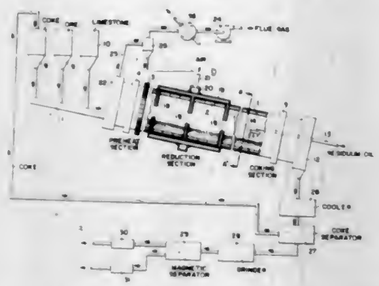
$$(NH_4)_xH_yPO_4$$

where $x+y=3$, and
x is between about 1.35 and about 1.85.

3,046,106
IRON ORE REDUCTION WITH COKE
Charles E. Hemminger, Westfield, N.J., and Edwin R. Gilliland, Arlington, Mass., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed June 22, 1960, Ser. No. 37,974
4 Claims. (Cl. 75—36)

1. In a process of reducing iron ore fines with coke moved as a solids bed continuously along a rotating cylindrical wall which receives heat from a stream of gases undergoing combustion superadjacent to the bed flowing counter-currently to the solids bed that passes from a preheating zone then through a reducing zone at iron oxide reducing temperatures, the improvement which comprises maintaining a top layer of coke pellets above finer

ore particles in said solids bed passing through the reducing zone, passing the thus layered bed from the reducing zone into a coking zone, spraying heavy hydrocarbon liquid oil over said coke pellets of the top layer to form a coke deposit on said pellets and evolve hot combustible gas containing H_2 and hydrocarbon gases, removing reduced ore fines and coke that become cooled as they are moved through the coking zone, discharging the combustible gas containing hydrogen and hydrocarbons



evolved in said coking zone into said reduction zone, introducing a free-oxygen-containing gas into said combustible gas downstream from said coking zone to convert carbonaceous materials principally to CO and evolve heat to effect reduction of the iron oxide by direct contact therewith and discharging the hot gaseous products from said reduction zone into said preheating zone whereby said hot gaseous products serve to preheat the solid materials supplied to said preheating zone.

3,046,107

DECARBURIZATION PROCESS FOR HIGH-CHROMIUM STEEL

Edward C. Nelson, Kenmore, and Neal R. Griffing, Grand Island, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 18, 1960, Ser. No. 84,956
5 Claims. (Cl. 75—59)

1. A process for removing carbon from molten steels containing about 3 to 30 percent chromium without substantial loss of chromium comprising adjusting the temperature of said molten steel bath to a range between about 1700 to 2300 degrees Kelvin, introducing into said molten steel containing from 3 to 30 percent chromium a decreasing ratio of volume percents of gaseous oxygen and at least one inert gas selected from the group consisting of argon, xenon, neon, and helium while maintaining said adjusted temperature within said range during said decarburization, said gaseous oxygen caused to react with said carbon to form a volatile carbon oxide to decarburize said molten steel, and said ratio decreasing as carbon is oxidized, the gaseous oxygen volume percent of the total volume of said gaseous oxygen and said selected inert gas in said varying ratio of volume percents of said gaseous oxygen and said selected inert gas being maintained substantially equal to the volume percent of gaseous oxygen resulting at any given carbon content during decarburization from the relationship

$$\text{Percent } O_2 = \sqrt{\frac{13{,}000}{\left[\frac{\text{Percent Cr}}{\text{Percent C}}\,\text{antilog}\left(\frac{13{,}800}{T}-8.46\right)\right]-1}}$$

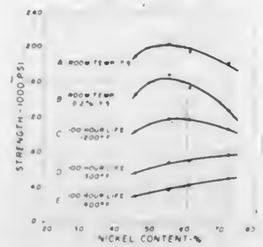
where percent C equals the percent carbon content of said molten steel during said decarburization, where percent Cr is substantially constant and equal to the percent chromium content of said molten steel at the point in the process where inert gas is introduced into said molten steel, and T is the temperature in degrees Kelvin during said process and within said adjusted range.

3,046,108

AGE-HARDENABLE NICKEL ALLOY

Herbert L. Eiselstein, Huntington, W. Va., assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 13, 1958, Ser. No. 773,702
9 Claims. (Cl. 75—171)



1. An age-hardenable, hot-workable nickel-base alloy consisting essentially of about 21% chromium, about 3% molybdenum, about 4% of metal from the group consisting of columbium and tantalum wherein the tantalum content does not exceed about 50% of the columbium, about 0.6% titanium, about 0.6% aluminum, about 0.03% carbon, about 0.27% silicon, about 0.18% manganese, about 0.009% boron, about 53% nickel, and the balance essentially iron, said alloy being characterized in the age-hardened condition by a yield strength (0.2% offset) of at least about 100,000 pounds per square inch at room temperature and by a 100-hour rupture strength of at least about 90,000 p.s.i. at 1200° F.

3,046,109

HIGH TEMPERATURE NIOBIUM BASE ALLOY

Neil M. Lottridge, Jr., Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed May 1, 1959, Ser. No. 810,499
4 Claims. (Cl. 75—174)

2. A gas turbine blade characterized by outstanding oxidation resistance upon exposure to oxidizing gases at a temperature of 2000° F., said blade being formed of an alloy comprising about 2% to 5% titanium, 9% to 11% molybdenum, 4% to 8% chromium, 0.5% to 2% zirconium and 76% to 84% niobium.

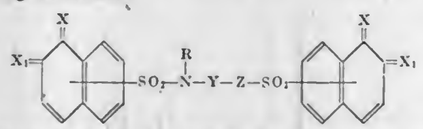
3,046,110

PROCESS OF MAKING PRINTING PLATES AND LIGHT SENSITIVE MATERIAL SUITABLE FOR USE THEREIN

Maximilian Paul Schmidt, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 2, 1962, Ser. No. 163,874
Claims priority, application Germany Feb. 1, 1950
64 Claims. (Cl. 96—33)

1. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



in which X and X_1 are selected from the group consisting of N_2 and O, those attached to the same ring being different, Y is selected from the group consisting of alkylene and arylene groups, Z is selected from the group consisting of oxygen and $—NR_1—$ groups, and R and R_1 are selected from the group consisting of hydrogen, lower alkyl groups, and aryl groups.

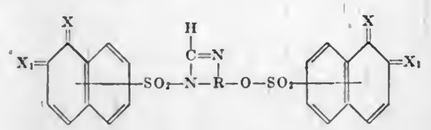
3,046,111

PROCESS OF MAKING QUINONE DIAZIDE PRINTING PLATES

Maximilian Paul Schmidt, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Jan. 2, 1962, Ser. No. 163,875
Claims priority, application Germany Feb. 1, 1950
8 Claims. (Cl. 96—33)

1. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



in which X and X_1 are selected from the group consisting of N_2 and O, those attached to the same ring being different, and R is an arylene group.

3,046,112

QUINONE DIAZIDE PRINTING PLATES

Maximilian Paul Schmidt and Oskar Süs, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed July 18, 1957, Ser. No. 672,564
Claims priority, application Germany June 30, 1951
30 Claims. (Cl. 96—33)

11. A presensitized printing plate comprising a base material having a coating thereon of a compound having the formula

$$D—SO_2—R$$

in which D is an ortho-quinone diazide group and R is an aryl group.

3,046,113

LIGHT SENSITIVE MATERIAL

Maximilian Paul Schmidt and Oskar Süs, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed July 18, 1957, Ser. No. 672,565
Claims priority, application Germany June 30, 1951
38 Claims. (Cl. 96—33)

9. A presensitized printing plate comprising a base material coated with an ortho-diazo phenanthrol.

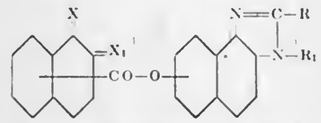
3,046,114

DIAZO COMPOUNDS AND PRINTING PLATES MANUFACTURED THEREFROM

Oskar Süs, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Dec. 9, 1957, Ser. No. 701,293
Claims priority, application Germany Mar. 1, 1955
30 Claims. (Cl. 96—33)

7. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



in which X and X_1 are selected from the group consisting of N_2 and O and are different, and R and R_1 are alkyl radicals.

3,046,115

LIGHT SENSITIVE MATERIAL FOR PRINTING AND PROCESS FOR MAKING PRINTING PLATES

Maximilian Paul Schmidt and Oskar Süs, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 27, 1957, Ser. No. 705,719
Claims priority, application Germany Feb. 2, 1951
34 Claims. (Cl. 96—33)

23. A presensitized printing plate comprising a metal base having a coating thereon of a compound of the formula

$$D—A—B—R—N=N—R_1$$

in which D is an ortho-quinone diazide group, A is selected from the group consisting of $—SO_2—$ and —CO— groups, B is selected from the group consisting of —O— and —NX— groups wherein X is selected from the group consisting of hydrogen and groups which taken together with R form an imidazole ring, R is an arylene group and R_1 is an aryl group.

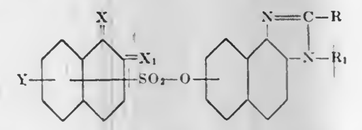
3,046,116

LIGHT SENSITIVE MATERIAL FOR PRINTING AND PROCESS FOR MAKING PRINTING PLATES

Maximilian Paul Schmidt, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Feb. 14, 1958, Ser. No. 715,220
Claims priority, application Germany Mar. 24, 1951
51 Claims. (Cl. 96—33)

10. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



in which X and X_1 are selected from the group consisting of N_2 and O and are different, Y is selected from the group consisting of hydrogen and halogen, R is selected from the group consisting of hydrogen and alkyl radicals, and R_1 is an alkyl radical.

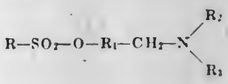
3,046,117

LIGHT SENSITIVE MATERIAL FOR PRINTING AND PROCESS FOR MAKING PRINTING PLATES

Oskar Süs, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Feb. 14, 1958, Ser. No. 715,221
Claims priority, application Germany Mar. 24, 1951
45 Claims. (Cl. 96—33)

11. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



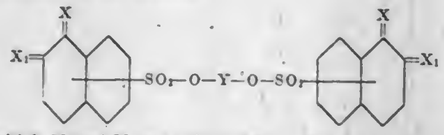
in which R is an ortho-quinone diazide group, R_1 is an arylene group, and R_2 and R_3 are selected from the group consisting of lower alkyl groups and groups which taken together with N form a piperidine ring.

3,046,118
PROCESS OF MAKING PRINTING PLATES AND LIGHT SENSITIVE MATERIAL SUITABLE FOR USE THEREIN

Maximilian Paul Schmidt, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 14, 1958, Ser. No. 715,222
Claims priority, application Germany Dec. 27, 1949
42 Claims. (Cl. 96—33)

9. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



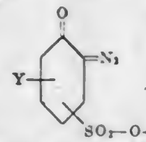
in which X and X_1 are selected from the group consisting of N_2 and O, those attached to the same ring being different, and Y is an arylene group.

3,046,119
LIGHT SENSITIVE MATERIAL FOR PRINTING AND PROCESS FOR MAKING PRINTING PLATES

Oskar Süs, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Feb. 14, 1958, Ser. No. 715,223
Claims priority, application Germany Aug. 1, 1950
31 Claims. (Cl. 96—33)

10. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



in which R is an aryl group, and Y is selected from the group consisting of hydrogen and lower alkyl radicals.

3,046,120
LIGHT-SENSITIVE LAYERS FOR PHOTOMECHANICAL REPRODUCTION

Maximilian Paul Schmidt and Oskar Süs, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Original application Nov. 30, 1954, Ser. No. 472,224. Divided and this application Feb. 14, 1958, Ser. No. 715,224
Claims priority, application Germany Oct. 31, 1950
19 Claims. (Cl. 96—33)

1. A presensitized printing plate comprising a base material having a coating thereon comprising the condensation product of a sulfonic acid halide of a quinone-(1,2)-diazide and a phenol-formaldehyde resin.

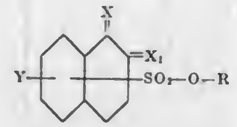
3,046,121
PROCESS FOR THE MANUFACTURE OF PRINTING PLATES AND LIGHT-SENSITIVE MATERIAL SUITABLE FOR USE THEREIN

Maximilian Paul Schmidt, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

Filed Feb. 14, 1958, Ser. No. 715,443
Claims priority, application Germany July 23, 1949
42 Claims. (Cl. 96—33)



10. A printing plate comprising a base material having printing and non-printing areas thereon, the printing areas comprising a compound having the formula



in which X and X_1 are selected from the group consisting of N_2 and O and are different,

Y is selected from the group consisting of hydrogen and halogen and

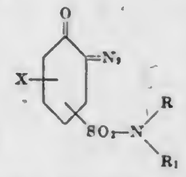
R is an aryl group.

3,046,122
PROCESS OF MAKING PRINTING PLATES AND LIGHT SENSITIVE MATERIAL SUITABLE FOR USE THEREIN

Oskar Süs, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,431
Claims priority, application Germany Aug. 1, 1950
55 Claims. (Cl. 96—33)

13. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



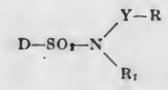
in which R is selected from the group consisting of hydrogen, an alkyl group and an aryl group, R is selected from the group consisting of an aryl group and an aralkyl group, and a group which taken together with N and R forms an imidazole ring; and X is selected from the group consisting of hydrogen, halogen, and lower alkyl.

3,046,123
PROCESS FOR MAKING PRINTING PLATES AND LIGHT SENSITIVE MATERIAL FOR USE THEREIN

Oskar Süs, Wilhelm Neugebauer, and Maximilian Paul Schmidt, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Original application June 21, 1955, Ser. No. 517,086. Divided and this application Mar. 3, 1958, Ser. No. 718,477
Claims priority, application Germany Dec. 14, 1951
52 Claims. (Cl. 96—33)

13. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



in which D is an ortho-quinone diazide radical, Y is selected from the group consisting of —SO_2— and —CO— radicals, R is selected from the group consisting of aryl and amido groups, R_1 is selected from the group consisting of alkyl and aryl groups and groups which together with R form a heterocyclic ring.

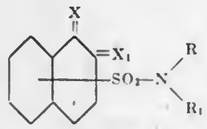
3,046,124
PROCESS FOR THE MANUFACTURE OF PRINTING PLATES AND LIGHT-SENSITIVE MATERIAL SUITABLE FOR USE THEREIN

Maximilian Paul Schmidt, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

Filed Mar. 3, 1958, Ser. No. 718,712
Claims priority, application Germany July 23, 1949
34 Claims. (Cl. 96—33)



30. A printing plate comprising a base material having printing and non-printing areas thereon, the printing areas comprising a compound having the formula



in which X and X_1 are selected from the group consisting of N_2 and O and are different, R is selected from the group consisting of hydrogen, lower alkyl and groups which together with R_1 form a ring selected from the group consisting of an imidazole ring and a pirimidene ring, and R_1 is selected from the group consisting of alkyl and aryl groups; the non-printing areas comprising the base material.

3,046,125
PRINT-OUT PHOTORESISTS AND METHOD OF MAKING SAME

Eugene Walner, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

No Drawing. Filed Apr. 19, 1960, Ser. No. 23,130
10 Claims. (Cl. 96—35)

1. A method for the preparation of photoresists which comprises: preparing a solution in a hydrocarbon solvent by dissolving therein at least one arylamine, at least one organic halogen-containing compound selected from the group of halogen substituted hydrocarbons which have an energy of formation of the free halogen radical of not less than about 40 kilogram calories per mol and which on exposure to light of a suitable wavelength generate a halogen containing free radical, and at least one carrier in which said arylamine and said halogen-containing hydrocarbon are dispersed, said carrier being selected from the group consisting of straight and branched chain paraffin and isoparaffin hydrocarbon waxes represented by the general formula C_nH_{2n+2} wherein *n* represents an integer between about 10 and 70 and mixtures of said waxes with polymers of vinylidene monomers, and a plasticizer for said hydrocarbon wax; the relative amounts of said solutes in said solution being such that there are between .05 and 2 parts by weight of amine for each part by weight of organic halogen compound which is a free radical source, and between 0.1 and 4 parts by weight total of hydrocarbon wax and polymer of vinylidene monomer for each part by weight of amine plus organic halogen compound and up to 10 parts by weight of a plasticizer for said hydrocarbon wax for each 20 parts by weight total of hydrocarbon wax and polymer of vinylidene monomer; applying a layer of said solution to a solid substrate; eliminating the solvent from said solution, thereby producing a film of the solutes on said support; exposing a portion of said film to radiant energy for shorter interval than about 60 seconds, thereby producing a reaction product in said exposed areas which is insoluble in said original hydrocarbon solvent; and producing a resist by washing off the soluble unexposed portion of the film by applying a liquid hydrocarbon to said film.

3,046,126
LIGHT SENSITIVE MATERIAL AND PROCESS

Oskar Süs, Wiesbaden-Biebrich, and Martin Glos, Wiesbaden, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Feb. 20, 1956, Ser. No. 566,326
Claims priority, application Germany Mar. 2, 1955
42 Claims. (Cl. 96—35)

22. A process for developing a printing plate which comprises exposing to light under a master a flexible base material coated with a layer comprising an organic colloid and a nitrothiophene compound, and treating the light-exposed layer with a developer to remove the layer at the unexposed portions.

3.046.127
PHOTOPOLYMERIZABLE COMPOSITIONS, ELEMENTS AND PROCESSES

Arthur Livingston Barney, Vaughn Arthur Engelhardt, and Louis Plambeck, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 7, 1957, Ser. No. 688,444
9 Claims. (Cl. 96—35)

1. A photopolymerizable composition comprising (1) 0.0001 to 2.0% by weight of a polynuclear quinone having two intracyclic carbonyl groups attached to intracyclic carbon atoms in a conjugated six-membered ring, there being at least one aromatic carbocyclic ring fused to the ring containing said carbonyl groups, said quinone being free from aromatic nitro, amino and hydroxyl groups, and having essentially no chain transfer activity and any such activity being less than that of the polymerizable component (3), (2) a chain transfer agent of addition polymerization having a transfer constant between 0.0005 and 1.0 when measured at 60° C. against polymerizing vinyl acetate monomer in a liquid, oxygen-free system under autogenous pressure comprising the transfer agent and a free-radical-generating addition polymerization initiator in solution in the monomer, said constituent (2) being present in an amount from 0.0!% up to equal parts by weight of constituent (3), and (3) at least one normally non-gaseous addition polymerizable ethylenically unsaturated compound free from oxyhydroxy ether, and the corresponding mercapto and thioether groups having at least one terminal ethylenic group, having a molecular weight less than 1500 and a boiling point above 100° C. at atmospheric pressure, being capable of forming a high polymer by free-radical initiated chain-propagating addition polymerization in the presence of an addition polymerization initiator therefor activatable by actinic radiation, and having a transfer constant no greater than 0.0005, said constituent (3) being the only type of addition polymerizable ethylenically unsaturated compound in the composition.

3,046,128
THERMALLY DEVELOPABLE DIAZOTYPE PHOTOPRINTING MATERIAL AND PRODUCTION THEREOF

Robert J. Klimkowski, Chicago, Ill., and John W. Krueger, Cottage Grove, Wis., assignors to Eugene Dietzgen Co., Chicago, Ill., a corporation of Delaware

Filed July 3, 1958, Ser. No. 746,544
6 Claims. (Cl. 96—49)



5. A diazotype photoprinting process which comprises providing a two-component diazotype photoprinting mate-

rial adapted for exposure and thermal development including a vapor permeable base selected from the group consisting of paper and cloth, an azo dye coupling component on one side of said base, a light-sensitive diazo compound capable of coupling with said coupling component on the same side of said base as said coupling component, and on the reverse side a compound which produces alkaline vapors when heated to temperatures up to 400° F., said base providing a barrier between said diazo and coupling compounds and said vapor producing compound; exposing said first named side to light under the design to be reproduced; and applying heat to said reverse side to produce said alkaline vapors whereby an image of the design develops on the first named side of said base.

3,046,129

SENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS CONTAINING COLOR-FORMING COMPOUNDS WITH POLYMERIC THIOETHERS

James L. Graham and John Sagal, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,839
16 Claims. (Cl. 96—55)

11. A process for increasing the speed of a photographic silver halide emulsion wherein the vehicle for the silver halide consisting of a water-permeable, hydrophilic colloid, comprising developing an exposed silver halide emulsion in a color developer containing a p-phenylenediamine color developing agent in the presence of a color coupler capable of coupling with the oxidation products of said p-phenylenediamine color developing agent, and a linear polymer consisting essentially of polymer units represented by the following general formula:

$$\{R—S\}_x$$

wherein R represents an aliphatic radical and x represents a positive integer of at least 3, the depicted sulfur atom in the polymer units of said general formula being attached to a carbon atom of said R radical, said carbon atom having directly attached thereto a hydrogen atom, said linear polymer having a molecular weight of at least about 250.

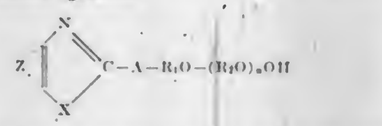
3,046,130

PHOTOGRAPHIC MATERIALS CONTAINING A CHEMICAL SENSITIZER

Fritz Dersch and Millet R. De Angelus, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 12, 1960, Ser. No. 28,525
19 Claims. (Cl. 96—66)

12. A photographic developer solution comprising a silver halide developing agent, an alkali, an anti-oxidant and an antifoggant containing as a speed increasing agent a water-soluble heterocyclic polyoxyalkylene compound selected from the group consisting of those having the following general formula:



wherein A is a member selected from the group consisting of oxygen and sulfur; R_1 and R_2 are alkylene groups containing from 2 to 3 carbon atoms; X represents the atoms necessary to complete a heterocyclic mononuclear ring and is a member selected from the group consisting of oxygen, sulfur, imino and vinylene; Z represents the atoms necessary to complete an aromatic ring system of the benzene and naphthalene series; and n is an integer between 4 and 40.

3,046,131

PHOTOGRAPHIC MATERIAL CONTAINING LIGHT SENSITIVE QUINONE DIAZIDES

Maximilian Paul Schmidt, Wilhelm Neugebauer, and August Rebenstock, Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed Feb. 14, 1958, Ser. No. 715,182
Claims priority, application Germany Jan. 5, 1952
6 Claims. (Cl. 96—75)

1. Laminated material for use in photography consisting of a support layer, an intermediate layer of light sensitive material comprising a water insoluble quinone diazide, and a top coat consisting essentially of a substance of the group consisting of dextrine, gum arabic, mesquite gum, water-soluble salt of the group consisting of pectic acid and alginic acid, water soluble cellulose ether, water soluble salt of carboxy alkyl cellulose, water soluble salt of carboxy alkyl starch, glue, albumen, pepton, water soluble, caseinate, polyvinylalcohol, polyvinylpyrrolidone, polyacrylamide, and water soluble salt of polyacrylic acid.

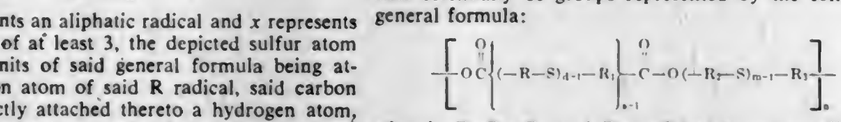
3,046,132

SENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS WITH POLYESTER COMPOUNDS CONTAINING A PLURALITY OF SULFUR ATOMS

Louis M. Minsk, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,840
10 Claims. (Cl. 96—108)

5. A photographic silver halide emulsion sensitized with (1) a gold compound and (2) a compound containing a labile sulfur atom and containing a sensitizing amount of (3) a linear polyester, the polymeric chain of which consists essentially of groups represented by the following general formula:



wherein R, R_1, R_2 and R_3 each represents an alkylene group containing from about 1 to 10 carbon atoms, d and m each represents a positive integer of from about 1 to 4, provided that d and m do not simultaneously represent 1, n represents a positive integer of at least about 2, and s represents a positive integer of from 1 to 2 provided s and m do not simultaneously represent 1, said linear polyester having a molecular weight of at least about 350.

3,046,133

SENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS WITH POLYESTER COMPOUNDS CONTAINING THIOETHER-SULFUR ATOMS IN THE SIDE CHAIN

Louis M. Minsk, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,852
12 Claims. (Cl. 96—108)

5. A photographic silver halide emulsion sensitized with (1) a gold compound, (2) a compound containing a labile sulfur atom, and (3) a sensitizing amount of a linear polyester the polymeric chain of which consists essentially of groups represented by the following general formula:

$$\{O—R_2—OOC(—R_3)_{m-1}—CO\}_n$$

wherein R_2 and R_3 each represents a member selected from the class consisting of an alkylene group and an alkylmercapto-substituted alkylene group, at least one of the radicals selected from the class consisting of R_2 and R_3 being an alkylmercapto-substituted alkylene group, m represents a positive integer of from 1 to 2, and n represents a positive integer of at least about 2, said linear polyester having a molecular weight of at least about 350.

3,046,134

SENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS WITH POLYMERIC COMPOUNDS CONTAINING A PLURALITY OF SULFUR ATOMS

John R. Dann, Rochester, and Jonas J. Chechak, Brockport, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,874
19 Claims. (Cl. 96—108)

11. A photographic silver halide emulsion which has been sensitized with a labile sulfur compound and a gold compound, said silver halide emulsion containing a sensitizing amount of a member selected from the class consisting of (1) a linear polymer containing at least three linear thioether atoms, said linear polymer being substantially non-vulcanizable and having a molecular weight of at least about 250 and (2) a ternary sulfonium salt of said linear polymer.

3,046,135

SENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS WITH SULFUR-CONTAINING POLYMERS

Dorothy J. Beavers, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,875
11 Claims. (Cl. 96—108)

2. A photographic silver halide emulsion containing a sensitizing amount of (1) a labile sulfur compound (2) a gold sensitizer and (3) a linear polyamide consisting essentially of polymer units represented by the following general formula:



wherein R and R_1 each represents an alkylene group, X represents a divalent aliphatic radical and n represents a positive integer of at least 2, said polymer having a molecular weight of at least about 350.

3,046,136

PHOTOSENSITIVE RESINOUS COMPOSITIONS

Franklin F. Ogden, Wilmington, Del., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 22, 1955, Ser. No. 554,633
12 Claims. (Cl. 96—114)

5. A resinous composition comprising a vinyl halide polymer capable of dehydrohalogenation with the formation of at least 5 conjugated double bonds per molecule, a minor amount of a vinyl chloride telomer having the formula

$$Y—\left(CH_2—CHCl\right)_n—CH_mX_{3-m}$$

wherein Y is selected from the group consisting of hydrogen and halogen, X is halogen, n is an integer from 2 to 50 and m is a number from 0 to 2, a metal hydrogen halide sequestering agent selected from the class consisting of silver carbonate, silver oxide, silver phosphate, silver naphthenate, silver acetate, silver cumate, silver octoate, silver compounds of phenols, silver compounds of mercaptans and the silver salt of 2-hydroxy-1,4-naphthoquinone and a stabilizer selected from the group consisting of dibutyl tin maleate, dibutyl tin diacetate, dibutyl tin alkyl phosphate, dibutyl tin dinaphthenate, tetrabutyl tin, triphenyl phosphite, phenol, lead tartrate, tributyl borate, ethyl silicate, thiodipropionitrile, triphenyl borate, monopropyl maleate, dibutyl maleate, ethyl methacrylate, lauryl methacrylate, and crotonic acid.

3,046,137

PHOTOSENSITIVE RESINOUS COMPOSITIONS

Franklin F. Ogden, Wilmington, Del., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 22, 1955, Ser. No. 554,646
5 Claims. (Cl. 96—115)

1. A resinous composition comprising a vinyl chloride polymer, a minor amount of a vinyl chloride telomer having the formula

$$Y—\left(CH_2—CHCl\right)_n—CH_mX_{3-m}$$

wherein Y is selected from the group consisting of hydrogen and halogen, X is halogen, n is an integer from 2 to 50 and m is a number from 0 to 2, and a minor amount of an aluminum compound which in the presence of HCl yields aluminum chloride.

3,046,138

STABILITY OF WHISKEY

John W. Eck, Peekskill, N.Y., and Richard R. Sucietto, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 5, 1958, Ser. No. 778,333
8 Claims. (Cl. 99—48)

1. A method of treating aged distilled alcoholic liquors which comprises contacting said liquor with a gas adsorbent activated carbon and with a decolorizing activated carbon, and separating said alcoholic liquors from said carbons.

3,046,139

PROCESS FOR PREPARING A PRE-COOKED CORN FLOUR

Max R. Gould and Leo P. Carroll, Barrington, and Ralph Cervantes, Algonquin, Ill., assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

No Drawing. Filed Apr. 9, 1959, Ser. No. 805,126
4 Claims. (Cl. 99—93)

1. A process for producing a precooked, storage-stable, white, arepa corn flour from substantially dehulled and substantially degerminated corn comprising steeping said corn in water at a temperature in the range from about 170° F. to 212° F. for a time period in the range from about 3 hours to about ½ hour; removing free water and drying the resulting cooked grits to a moisture content of not less than 30% by weight; and comminuting and further drying the partially-dried steeped grits to a moisture content of no more than 15% by weight and a particle size of less than about 20 mesh.

3,046,140

SLICED SWISS CHEESE

Eugene J. Hermann, Glen Ellyn, Ill., assignor to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 30, 1960, Ser. No. 79,587
5 Claims. (Cl. 99—116)

1. A process for texturizing sliced Swiss type cheese to improve the same, which comprises the steps of preparing Swiss cheese slices with hydrophilic surfaces and having a thickness of less than about one-half inch, contacting said

slices with an aqueous salt solution, wrapping said slices, sealing said slices in said wrapping together with said aqueous salt solution, and thereafter holding said wrapped slices until said aqueous salt solution is substantially completely absorbed by said slices, said salt solution comprising up to about six percent by weight of said slices.

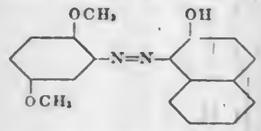
3,046,141
PROCESS OF DYEING ORANGES

Robert Sidney Long, Bound Brook, N.J., assignor, by mesne assignments, to FMC Corporation, San Jose, Calif., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 492,059, Mar. 4, 1955. This application Jan. 16, 1962, Ser. No. 165,072

5 Claims. (Cl. 99—148)

1. In the process of coloring the outer peel of oranges, the improvement which comprises applying externally to an orange a dyestuff having the formula:



3,046,142
WHEAT GERM PROCESS

Kenneth M. Gaver, Preville, Quebec, Eduard G. Adamek, Brockville, Ontario, and Alfred M. Barton, Montreal, Quebec, Canada, assignors to The Ogilvie Flour Mills Company, Limited, Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Filed July 13, 1959, Ser. No. 826,443

2 Claims. (Cl. 99—153)

1. Method for modifying wheat germ to substantially eliminate its beany taste, make it more appetizing and to increase its shelf life comprising exposing fresh wheat germ in a substantially air-free anhydrous system to the vapor of an epoxy compound selected from the group consisting of ethylene oxide, and propylene oxide and mixtures thereof, until the resulting wheat germ contains between about 2% and 5% by weight of reacted epoxy compound.

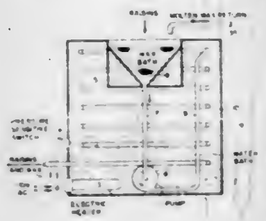
3,046,143
PROCESS FOR COATING FOOD PRODUCTS

Edison Lowe, El Cerrito, Everett L. Durkee, El Sobrante, and Walter E. Hamilton, El Cerrito, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

Filed Feb. 15, 1961, Ser. No. 89,589

12 Claims. (Cl. 99—168)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for coating foods which comprises immersing solid food particles into a turbulent bath of a hot, molten, normally-solid coating material, holding the food particles immersed in said bath until surface moisture on the particles has been evaporated, and then removing the food particles from the said bath.

3,046,144
PROCESS OF MAKING FROZEN CONCENTRATED MILK

Douglas R. Braatz, 607 E. Lieg Ave., Shawano, Wis., and William C. Winder, 418 Critchell Terrace, Madison 5, Wis.

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,823

3 Claims. (Cl. 99—192)

1. In the method of preparing frozen concentrated milk characterized by improved stability when stored at a temperature of about 10° F., the improvement which comprises subjecting pasteurized, homogenized, condensed milk to a temperature of about 150–160° F. for about 20–30 minutes, cooling the resulting hot concentrate in the absence of agitation after the temperature drops to about 105° F. and then freezing the cooled concentrate while maintaining the concentrate in a quiescent state.

3,046,145
PROCESS FOR PREPARING A PRECOOKED DEHYDRATED SWEET POTATO PRODUCT

Harold J. Deobald, Metairie, La., and Taylor A. McLemore, Taylorsville, Miss., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Apr. 7, 1961, Ser. No. 101,598

1 Claim. (Cl. 99—207)

(Granted under Title 35, U.S. Code (1952), sec. 266)

A process of preparing a pre-cooked dehydrated sweet potato product that retains the color, nutritional, and flavor characteristics of sweet potatoes, is amenable to long term storage without deterioration, and is capable of instant rehydration to form a cooked sweet potato puree, comprising the following sequential operations:

(*a*) Cooking peeled and trimmed sweet potatoes in the presence of moisture for a period of from 20 to 35 minutes at a temperature of about 212° F.;

(*b*) Mixing the cooked sweet potatoes with a sufficient amount of water to produce a mixture having a solids content of about from 18% to 25% and comminuting the sweet potatoes in said mixture to essentially completely rupture the sweet potato starch cells producing a puree of said solids content;

(*c*) Dehydrating of the pureed sweet potato product to a moisture content of less than 6% by weight; and

(*d*) Packaging the dehydrated sweet potato product in gas tight containers with an inert gas, the oxygen content of which inert gas amounts to less than 3%.

3,046,146
THERMOSETTING MATERIAL

James Seward Woodhead, 24 Tedder Road, Tunbridge Wells, Kent, England, and John Edward Worthington, 54 Old Hadlow Road, Tonbridge, Kent, England

No Drawing. Filed June 8, 1959, Ser. No. 818,558

Claims priority, application Great Britain June 12, 1958

24 Claims. (Cl. 106—38.5)

1. A thermosetting composition consisting of a carbohydrate selected from the group of compounds consisting of monosaccharides, disaccharides, hydrolysed polysaccharides, substituted compounds of the foregoing and polyhydroxy alcohols containing at least 3 carbon atoms, a member selected from the group of chemical extracts and physically disintegrated powders of certain woods, used for tanning leather and commonly referred to as tanning materials, the proportion of said tanning material not exceeding 25% by weight of said carbohydrate, and a compound containing a tri-valent nitrogen, selected from the group consisting of hexamethylene tetramine, anhydroformaldehyde aniline, the naphthyl-amines, thio carbanilamide, para-aminophenol, paraphenylene diamine, pyridine, urea, thiourea, isoamylamine, hydroxylamine, ammonia, aniline, melamine, and a combination thereof, the

proportion of said nitrogen compound not exceeding 15% by weight of the combined tanning material and carbohydrate.

3,046,147
WATER SOLUBLE MOLD AND CORE BINDERS AND METHOD

Clayton E. Hathaway, Jr., Donald C. Goetz, and Roger H. Kottke, Minneapolis, Minn., assignors to Archer-Daniels-Midland Company, Minneapolis, Minn., a corporation of Delaware

No Drawing. Filed Aug. 12, 1959, Ser. No. 833,133

3 Claims. (Cl. 106—38.9)

1. A molding form comprising an aggregate and a binder, said molding form being particularly useful in casting objects having fine tubular passageways, said molding form being stable to casting temperatures up to about 1500° F. and producing no detrimental gas fumes during casting, said molding form being readily removable from such passageways by merely immersing the casting in water and thereby dissolving the binder; said binder consisting essentially of 40 to 300 parts by weight of borax and 100 to 744 parts by weight of an alkali metal phosphate.

3,046,148
DENSE, NON-BROWNING, PLATE GLASS COMPOSITION

Earl T. Middleswarth, Cedar Grove, N.J., and James E. Duncan, Natrona Heights, Pa., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed May 19, 1961, Ser. No. 111,133

8 Claims. (Cl. 106—53)

1. A glass consisting of the following ingredients in percent by weight: 42 to 51 percent SiO_2, 30 to 38 percent PbO, 12 to 22 percent K_2O, 0.3 to 2 percent F, 0.5 to 3 percent CeO_2, 0 to 2 percent CaO and 0 to 1.5 percent Na_2O, said F being present in said glass to provide an increase in luminous transmittance.

3,046,149
ASPHALTIC BITUMINOUS COMPOSITIONS

Howard V. Moore, Gayle D. Edwards, and Myrl Lichtenwalter, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,689

13 Claims. (Cl. 106—273)

1. A bituminous composition comprising asphalt and a member selected from the group consisting of amine residue and the condensation product of amine residue and organic acid, said amine residue being produced by reacting a compound selected from the group consisting of monoethanolamine, ethylenediamine and ethylene glycol with ammonia at a temperature in the range of 150–400° C. and a pressure of 30–400 atmospheres in the presence of hydrogen and a hydrogenation catalyst and subjecting said reaction product to distillation to remove the low-boiling amine product and recover a high-boiling amine composition characterized by a minimum boiling point of about 150° C. at 50 mm. of mercury pressure as said amine residue, said condensation product being produced by reacting an organic acid represented by the formula $R'—(COOH)_n$ in which n equals an integer from 1 to 3 and R′ represents a hydrocarbon radical having from 1 to 36 carbon atoms, with said amine residue at a temperature above about 120° C. to form said amine residue-organic acid condensation product.

3,046,150
PIGMENTS

Helen Dolores Jamieson, Woodlands, Malpas, Newport, Wales, assignor to Associated Lead Manufacturers Limited, London, England, a British company

No Drawing. Filed Apr. 13, 1961, Ser. No. 102,651

Claims priority, application Great Britain Apr. 25, 1960

6 Claims. (Cl. 106—296)

1. A stain for incorporation in a glaze for ceramics which is constituted by a calcined mixture of the following ingredients: at least one compound selected from the group consisting of zirconia and zircon 25–90 parts by weight, ammonium metavanadate 0–0.1 part by weight, zinc oxide 1–12 parts by weight, iron oxide 1–12 parts by weight, chromium sesquioxide 1–12 parts by weight and aluminium hydroxide 0–6 parts by weight.

3,046,151
SILVER-ZIRCONIA PINK

Frederic K. Iliff, 314 Washington Ave., Newtown, Pa.

Filed Nov. 25, 1960, Ser. No. 71,572

9 Claims. (Cl. 106—299)

1. A method of preparing pink ceramic pigments comprising calcining an intimate mixture of from about 0.2% by weight to about 10% by weight, reported on the basis of silver present, of silver components capable of yielding metallic silver selected from the group consisting of silver powder, silver nitrate, silver carbonate, silver cyanide, and silver resinate; from about 20% by weight to 90% by weight of zirconium compounds capable of yielding zirconium oxide selected from the group consisting of zirconium hydrate, zirconium carbonate, zirconium oxide, zirconium fluoride, and zirconium oxyfluoride; there being present in the mixture a total of from about 7.0% by weight to about 50% by weight of fluoride compounds capable of yielding fluoride ions selected from the group consisting of ammonium bifluoride, zirconium fluoride and zirconium oxyfluoride, at a temperature of from about 600° C. to 1100° C.

3,046,152
METHOD OF PREPARING COLLOIDAL CALCIUM MAGNESIUM SILICATE

Tsuneyoshi Shiraishi, 50, 4-Chome, Motohama-cho, Amagasaki, Japan

No Drawing. Filed Nov. 25, 1958, Ser. No. 776,168

1 Claim. (Cl. 106—306)

A method of preparing colloidal calcium magnesium silicate which comprises heating a mixture under pressure of 4 to 45 kg./cm.² at a temperature of 150° C. to 250° C. for 30 to 90 minutes consisting essentially of 130 parts by weight of a material selected from the group consisting of diatomaceous earth and montmorillonite, 12 parts by weight of sodium sulfide and an aqueous viscous suspension of hydroxides formed by slaking 110 parts by weight of calcined dolomite with 2,000 to 2,500 parts by weight of water.

3,046,153
WATER DISPERSED DRIER COMPOSITIONS

Gilbert G. Unkefer, Russell, James G. Barrick, Cleveland, and William H. Meek, Jr., Akron, Ohio, assignors to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 11, 1958, Ser. No. 760,303

5 Claims. (Cl. 106—310)

1. As a composition of matter a water dispersion of from 0.7 to 2.5 grams per gram of water of a metal carboxylate having from 6 to 22 carbon atoms in the molecule, melting not higher than 110° C., said carboxylate being insoluble in water and soluble in oil, said carboxylate being selected from the group consisting of lead, cobalt, manganese, zirconium, zinc, calcium, copper, cadmium, barium, lithium, cerium, and iron salts of naph-

thenic acids, tall oil acids, 2-ethyl hexoic acid, petroleum sulfonate acids, linseed oil acids, soy bean oil acids, oleic acid, nonánoic acids, and ether acids, said dispersion having an average particle size not greater than from 1 to 2 microns, and containing from 2% to 8% based on the weight of the water plus the metal carboxylate of a nonionic surfactant selected from the group consisting of alkyl phenoxy polyoxyethylene ethanols, ethylene oxide condensates, ethyl aryl polyester alcohols, polyoxyethylated fatty alcohols, polyethylene glycol esters of fatty acids, alkyl aryl polyoxyethylene ethers, polyoxyethylene alkyl alcohols, polyoxyethylated vegetable oils, alkyl phenyl polyethylene glycol ethers, polyoxyethylene sorbitan esters of fatty acids, sorbitan esters of fatty acids, polyglycol esters, propylene glycol esters of fatty acids, alkyl aryl polyethylene glycols, alkyl aryl polyglycol ethers, alkyl polyoxyethylene ethers, polyoxyethylated fatty acids, and alkyl phenol ethylene oxide condensates.

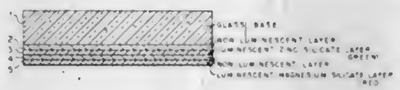
3,046,154
METHOD FOR FORMING LUMINESCENT SCREENS

Charles Feldman, Hollin Hills, Va., assignor to Davohn Corporation, a corporation of Delaware

Original application Apr. 19, 1957, Ser. No. 653,867. Divided and this application Dec. 22, 1959, Ser. No. 861,731

2 Claims. (Cl. 117—33.5)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of making a luminescent screen which comprises forming a thin transparent non-luminescent, non-conducting refractory layer on a transparent refractory glass base, condensing the vaporized solid components of zinc silicate and a vaporized luminescence activator on said transparent non-luminescent refractory layer within a high vacuum to form thereon a thin layer containing said solid components in the correct proportions for forming the zinc silicate therefrom on baking of said layer in the presence of oxygen, subjecting said layer to baking in the presence of oxygen at a temperature and for a time sufficient to form zinc silicate and activate the same, forming a thin transparent non-luminescent refractory layer on said zinc silicate layer, condensing the vaporized solid components of magnesium silicate and a vaporized luminescence activator on said transparent non-luminescent refractory layer within a high vacuum to form thereon a thin layer containing said solid components in the correct proportions for forming magnesium silicate therefrom on baking of said layer in the presence of oxygen and a luminescence activator capable of causing the formed magnesium silicate to emit light of a color different from that emitted by said luminescent zinc silicate when excited by bombardment with electrons, and subjecting said layer to baking in the presence of oxygen at a temperature and for a time sufficient to form magnesium silicate and activate the same.

3,046,155
POLYETHYLENE-PAPER ADHESION

Lester H. Reinke, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Oct. 6, 1960, Ser. No. 60,809

1 Claim. (Cl. 117—76)

A method of bonding polyethylene to paper comprising (1) treating the surface of said paper with a composition selected from the group consisting of

(A) a polyaminoalkylsilane of the formula

$$Z_nR'Si(OR)_3$$

in which each R is an alkyl radical of less than 4 carbon atoms, R' is an aliphatic hydrocarbon radical containing a number of carbon atoms selected from the group consisting of 1 and from 3 to 18 inclusive carbon atoms and having a valence of $n+1$ where n is a positive integer ranging in value from 1 to 3 inclusive, and each Z is a monovalent radical attached to R' by a carbon-nitrogen bond and is composed of nitrogen atoms, hydrogen atoms and from one to about eight carbon atoms and contains at least two amine groups, the ratio of carbon atoms to nitrogen atoms in the substituent $—R'Z_n$ being less than 6:1, and

(B) soluble hydrolyzates thereof, and

(2) applying a hot polyethylene film to said treated paper surface.

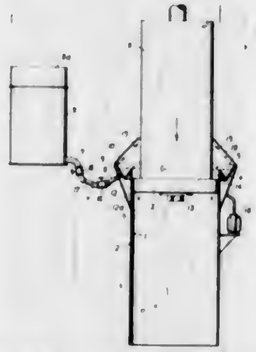
3,046,156
PROCESS AND APPARATUS FOR THE SEAMLESS COATING OF PRINTING ELEMENTS, SUCH AS PLATES AND CYLINDERS

Robert Kaulen, Lovenich, Bezirk Koln, Germany, assignor to Dr. Bekk & Kaulen Chemische Fabrik G.m.b.H., Lovenich, Bezirk Koln, Germany, a firm

Filed Sept. 15, 1959, Ser. No. 840,137

Claims priority, application Germany Sept. 17, 1958

11 Claims. (Cl. 117—94)



2. A process of applying a seamless coating of photosensitive solution to a printing cylinder comprising the steps of immersing the cylinder in a bath of photosensitive solution while directing a protective blast of filtered air completely overlying the bath and upwardly at an inclination to the downward direction of movement of the cylinder to remove all dust from the cylinder immediately prior to immersion while maintaining the surface of the bath dust free, and withdrawing the cylinder from the bath while directing a protective blast of filtered air above the bath and in the general direction of withdrawal of the cylinder to protect the bath and the freshly coated surface of the cylinder and to expedite the drying of the cylinder.

3,046,157
METHOD FOR COATING THE INNER WALL OF A TUBE INTENDED FOR ELECTRIC DISCHARGE LAMPS WITH A UNIFORM LIQUID LAYER AS WELL AS AN ARRANGEMENT FOR THE APPLICATION OF THE METHOD

Curt Elof Nyman, Trollbacken, Sweden, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

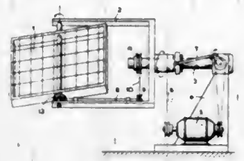
Filed May 4, 1959, Ser. No. 810,790

Claims priority, application Sweden May 7, 1958

5 Claims. (Cl. 117—97)

1. A method of coating the interior of an irregularly shaped tubular object comprising confining a plurality

of coated glass beads within said object, rotating said object about two mutually perpendicular axes while simultaneously reciprocating said object in the plane of one of



said axes, and maintaining the ratio of rotational velocities about said mutually perpendicular axes unequal to unity.

3,046,158
PROCESS FOR PRODUCING MAGNETIC MATERIAL

Shinro Fukuda, Ashigarakami-gun, and Hiroshi Goto, Goro Akashi, and Tokuaki Miyake, Odawara-shi, all of Kanagawa-ken, Japan, assignors to Fuji Photo Film Co., Ltd., Ashigara-Kamigun, Kanagawa, Japan, a company of Japan

Filed Nov. 27, 1959, Ser. No. 855,709

Claims priority, application Japan Dec. 31, 1958

3 Claims. (Cl. 117—100)

1. A process for producing magnetic materials of a form whereby the length is greater than the width comprising adding particles selected from the group consisting of zinc oxide and ferric oxide hydrate having a length less than about 6μ in a crystal form having a length to width ratio of about 6:1 to a solution of an iron salt having ferric and ferrous ions therein in the proportions necessary to form magnetic, adding alkali to the solution to precipitate the mixed hydrated ferrous and ferric oxides, agitating the solution, and allowing the solution to stand so as to deposit the mixed oxides on the particles.

3,046,159
METHOD OF COPPER PLATING BY CHEMICAL REDUCTION

Robert R. Brookshire, Canoga Park, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

No Drawing. Filed Dec. 17, 1957, Ser. No. 703,292

3 Claims. (Cl. 117—130)

1. The method of copper plating comprising the step of contacting the surface to be plated with an acidic plating solution at a temperature in the range of from about 50° to about 110° C., consisting essentially of a dissolved ammonium salt, a dissolved hypophosphite reducing agent, dissolved copper ions, and an undissolved-copper ion-containing compound in contact with the plating solution, the ion ratio of said hypophosphite ion to the undissolved copper ion being in the range of from about 0.5 to about 40, and the ion ratio of the ammonium ion of the dissolved ammonium salt to the undissolved copper ion being in the range of from about 0.025 to about 5.

3,046,160
PROCESS FOR TREATING PAPER WITH SILICONES

Ludwig Dengler, Nurnberg, Bavaria, Germany, assignor to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,891

Claims priority, application Germany Apr. 30, 1958

11 Claims. (Cl. 117—155)

1. A process for preparing non-adherent paper characterized in that the paper fibers are treated with a mixture of (1) room temperature vulcanizing silicone rubber stock comprising (*a*) 100 parts by weight of an organosiloxane polymer of the formula $XO[R_2SiO]_nX$ wherein each R is an organic radical selected from the group consisting of alkyl and aryl radicals, each X is selected from the group consisting of hydrogen atoms, alkyl radicals and aryl radicals and n is at least 50, (*b*) 50–200 parts inorganic filler, (*c*) 0.5 to 10 parts cross-linking agent and (*d*) 0.1 to 5 parts condensation catalyst and (2) a silicone resin fluid consisting essentially of units of the formulae $RSiO_{3/2}$ and R_2SiO where R is as above defined, the average R/Si ratio in said resin being in the range from 1.0/1 to 1.7/1.

3,046,161
RECOVERY OF AMYLOSE FROM HIGH AMYLOSE CORNSTARCH

Edna M. Montgomery and Kenneth R. Sexson, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Apr. 21, 1960, Ser. No. 23,861

7 Claims. (Cl. 127—71)

(Granted under Title 35, U.S. Code (1952), sec. 266)

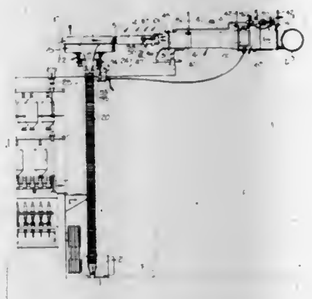
1. The method of pretreating sieved high amylose cornstarch (containing at least 46 percent amylose as indicated by an iodine affinity of at least 114 milligrams of I_2 per gram of starch), comprising the steps of slurrying one part of said cornstarch in about two parts of water, hard freezing the slurry by placing in a bath at —10° C. to —78° C. for a period of about between 360 minutes and 1 minute to form a solid cake, thawing the cake in about 5 parts of water at 25° C., and removing the excess water by filtration.

3,046,162
TEXTILE SUCTION CLEANING METHOD AND APPARATUS HAVING A WASTE COLLECTION SYSTEM

Robert L. Black, Jr., Charlotte, N.C., assignor to Parks-Cramer Company, Fitchburg, Mass., a corporation of Massachusetts

Filed May 12, 1961, Ser. No. 109,670

17 Claims. (Cl. 134—10)

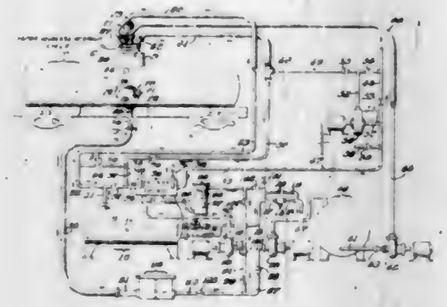


15. A method of cleaning lint and the like from textile mills, comprising the steps of removing lint, dust and other material therefrom by traveling suction, directing the lint-laden air stream created by said suction into a collection chamber, allowing the air to escape from the chamber through a filter while retaining the lint and other material therein, moving at least a portion, including a normally closed discharge opening, of the chamber into the restrictive confines of a receptacle while opening the discharge opening, subjecting the interior of the receptacle to a negative air pressure as the collection chamber moves thereinto, and discharging the collected material from the collection chamber into the receptacle by the combination of the air stream directed thereinto and the negative pressure in the receptacle.

3,046,163
METHOD AND APPARATUS FOR INTERIORLY CLEANING TANKS AND THE LIKE

Thomas J. Kearney, Detroit, and Bruce A. Young, Lathrup Village, Mich., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan

Filed Apr. 6, 1960, Ser. No. 20,467
2 Claims. (Cl. 134—11)

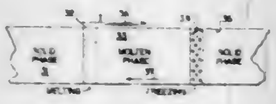


1. A method of interiorly cleaning a tank or the like, used in transporting, storing or processing commodities such as oil, grease, crude petroleum products, coal tar products, resinous products, paints, plasticizers or the like, said method comprising the steps of first passing hot vapor of a chlorinated hydrocarbon solvent into the tank and condensing said vapor on the tank walls thereby dissolving adhering dissolvable matter on the interior surfaces of the tank and loosening clinging solid deposits draining off the contaminated condensate thus formed and recovering the solvent; then pressure spraying the interior of the tank with chlorinated hydrocarbon solvent in liquid form to remove the clinging matter loosened during the first step, draining the incidentally formed sludge from the tank and recovering the solvent from the sludge; then again passing hot chlorinated hydrocarbon solvent vapor into said tank to vaporize the residual liquid solvent remaining on the tank walls after spraying; thereafter evacuating the solvent vapor from the tank, and finally passing unheated outside air through the tank to purge it of solvent odors and recovering the remaining traces of solvent vapor from the air before releasing the air into the atmosphere.

3,046,164
METAL PURIFICATION PROCEDURES

Charles A. Domenicali, Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Oct. 18, 1955, Ser. No. 541,183
11 Claims. (Cl. 148—1.6)



1. The method of purifying a metallic body consisting essentially of a substance having a thermoelectric coefficient of one sign for an electrical current passing between the solid phase and the molten phase respectively and a like coefficient of opposite sign for a current passing from the molten phase to the solid phase, said method including fusing a portion of said body to establish an incremental molten zone in said body and moving said incremental molten zone along the length of said body through the Peltier thermoelectric influence of a unidirectional electrical current moving through said body, said current being of a magnitude below that required to fuse said body due to Joule heat, the portion of said body adjacent to said incremental zone being heated to and maintained at a temperature which is just below the fusion point thereof during purification.

3,046,165
METHOD OF AND SOLUTION FOR FORMING PHOSPHATE COATINGS ON ZINC SURFACES

Roy A. Halversen, Dearborn, James I. Maurer, St. Clair Shores, and Karim Ibrahim Saad, Detroit, Mich., assignors to Parker Rust Proof Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Dec. 14, 1960, Ser. No. 75,660
14 Claims. (Cl. 148—6.15)

1. A method for conditioning zinc and zinc alloy surfaces to receive a phosphate coating which comprises the steps of applying to said surface an aqueous alkaline solution containing an oxidizing agent, said solution having at least the oxidizing ability equivalent to that obtained from the presence therein of about 0.05 gram per liter of permanganate ion.

3,046,166
TREATMENT OF BRASS

Robert F. Hartmann, St. Louis County, Mo., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

No Drawing. Filed July 1, 1959, Ser. No. 824,197
12 Claims. (Cl. 148—11.5)

1. A method of working copper-base alloys comprising subjecting an alloy selected from the class consisting of copper-zinc alloys and copper-nickel-zinc alloys to at least one consecutive series of steps consisting of cold working followed by heat treating operations, said cold working operation consisting of effecting at least a 50% reduction in the thickness of said metal and said heat treating operation consisting of a stress-relief anneal of said alloy below its recrystallization temperature, and further cold working said alloy with said further cold working effecting at least an additional 50 percent reduction in the thickness of said alloy.

3,046,167
HEAT-TREATING METHOD AND PRODUCT

James H. Waxweiler, Middletown, Ohio, and Robert M. Larrimore, Jr., Baltimore, Md., assignors to Armco Steel Corporation, a corporation of Ohio

No Drawing. Filed May 19, 1960, Ser. No. 30,090
6 Claims. (Cl. 148—135)

1. A method of heat-treating welded age-hardenable chromium-nickel stainless steel to impart thereto, while in hardened condition, a high degree of both ductility and toughness, which method comprises the sequential steps of welding; transforming the welded products to a structure which is essentially martensitic but which includes some ferrite; thereupon restoring the steel to a structure which is essentially austenitic although containing some ferrite, through annealing at a temperature and for a time sufficient to re-austenitize the martensite and ferrite and break up the original cast-weld structure; re-transforming the metal to a structure which is essentially martensitic, together with very little ferrite; and finally hardening the metal, through appropriate heat-treatment, to a condition which is essentially all martensite.

3,046,168
CHEMICALLY PRODUCED COLORED SMOKES

Lohr A. Burkardt, 52–B Rodman, William G. Finnegan, 202–B Byrnes, and Rex L. Smith, 408–B Forrestal, all of China Lake, Calif.

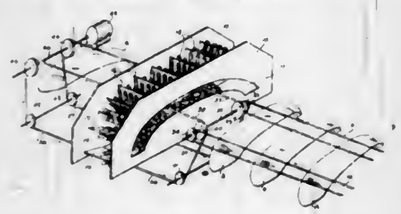
No Drawing. Filed Oct. 16, 1958, Ser. No. 767,751
4 Claims. (Cl. 149—42)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A pyrotechnic composition consisting essentially of about 70 to 90 weight percent of an iodine-containing oxidizing agent from the class consisting or iodic acid, iodine pentoxide, lead iodate, silver iodate and mercury iodate, and about 10 to about 30 weight percent of a fuel from the class consisting of aluminum, magnesium, titanium, boron, zirconium, hydrides of said metals, polyvinyltetrazoles, lower alkyl substituted polyvinyltetrazoles, and mixtures thereof.

3,046,169
PREPRESSING OF LAMINATED SAFETY GLASS PANELS

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Filed Mar. 17, 1958, Ser. No. 721,917
13 Claims. (Cl. 154—2.7)



1. Apparatus for prepressing curved laminated safety glass panels, comprising a bank of presser heads, each presser head having a face of resilient material, means for supporting and separately moving each of said presser heads in a direction normal to said face, means for positioning one of said panels in register with said bank of presser heads and for resisting forces exerted on said panel by said heads, said moving means being arranged for movement of each said presser head between an open position displaced from said panel positioning means for placement of one of said panels on said positioning means and a closed position in which the face of said presser head is in direct contact with said placed panel to force said placed panel against said positioning means, the faces of the presser heads of the bank cooperating, upon movement of the bank into the closed position, to define a curved, discontinuous panel-contacting surface.

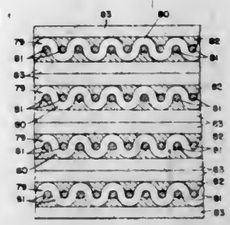
8. In a method of prepressing a curved laminated safety panel comprising two curved sheets of glass and a plastic interlayer between said two curved sheets, the improvement comprising first imposing a localized squeezing pressure directly on a first area of said curved panel remote from the extremities of said curved panel, and then imposing localized squeezing pressure directly on a second area immediately surrounding said first area on all sides while maintaining the localized squeezing pressure upon said first area and prior to imposition of squeezing pressure upon any part of said curved panel outside said first and second areas.

3,046,170
LAMINATES OF METAL PLATED GLASS FIBERS AND METHODS OF MAKING SAME

Harry A. Toulmin, Jr., Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York

Filed June 1, 1954, Ser. No. 433,604
23 Claims. (Cl. 154—43)

6. A new article of manufacture comprising a laminated structure consisting of metal coated siliceous fibers having an outer covering layer consisting of heat curable

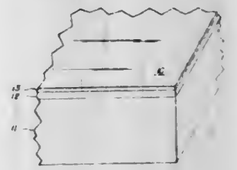


polyester resin which is adherent to said metal coated fibers.

3,046,171
CELLULOSIC PRODUCT

Sedgwick C. Rogers, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Oct. 27, 1958, Ser. No. 769,781
6 Claims. (Cl. 154—43.9)

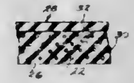


1. A composite lignocellulosic fibrous board comprising a particle board core, at least one greaseproof paper surfacing sheet consisting of highly hydrated wood pulp attached to said core, and means for adhesively attaching said sheet to at least one side of said core, said attaching means consisting of at least one layer of paper impregnated with a thermoset laminating resin and interposed between said core and said sheet, the outer surface of said sheet being substantially free of resin.

3,046,172
SPONGY ELASTOMERIC MATERIALS AND METHODS AND PRODUCTS USED IN THE MANUFACTURE OF THE SAME

James S. Reid, Hudson, Ohio, assignor to The Standard Products Company, Cleveland, Ohio, a corporation of Ohio

Filed Mar. 26, 1959, Ser. No. 802,210
6 Claims. (Cl. 154—46)



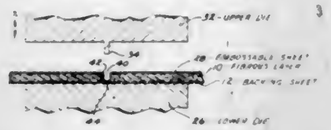
4. A flexible resilient cellular article comprising a solid elastomeric material selected from a member of the group consisting of a polyurethane and a plasticized polyvinyl chloride, said material having a plurality of pores therewithin, said pores containing remnants of crushed hollow friable bodies, the amount of hollow bodies used per 100 parts by weight of said elastomeric material being about 20 to 150 parts by weight.

6. A flexible resilient shoe sole material comprising a cellular layer of the cellular article defined in claim 4 and also a solid non-porous layer of said elastomeric material adjacent to said cellular layer.

3,046,173
EMBOSSED PLASTIC SHEETS AND METHOD OF MAKING SAME

Richard S. Copeland, Grand Rapids, Mich., assignor to Sackner Products, Inc., Grand Rapids, Mich., a corporation of Michigan

Filed Dec. 14, 1960, Ser. No. 75,829
5 Claims. (Cl. 154—47)

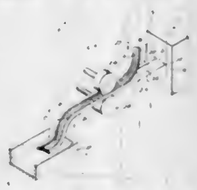


1. A decorative laminate comprising a sheet of woven cloth; a layer of fibers on said cloth; said fibers being randomly positioned at various angles with respect to each other in three dimensions and being needled to said cloth so that a substantial number of fibers are intertangled with each other and with said cloth; said layer containing a substantial share of interspersed fusible plastic fibers; and a sheet of dielectrically embossable material in contact with said layer opposite said cloth; said embossable sheet having a sharply defined and deeply impressed indentation embossed pattern thereon and being bonded along said pattern to said fibrous layer by virtue of adhesion and cohesion of said embossable sheet and said fusible fibers.

3,046,174
METAL REINFORCED VINYL PLASTIC STRIPPING

Charles Brooks, Forest Hills, and Thomas A. Sutton, Floral Park, N.Y., assignors to Cee-Bee Manufacturing Company, Inc., Brooklyn, N.Y., a corporation of New York

Filed Jan. 20, 1958, Ser. No. 712,057
7 Claims. (Cl. 154—52.1)



1. A process of making a reinforcing trilaminate for reinforcement of extruded vinyl chloride polymer plastics which comprises applying a metal deposit to one side of a thin corrugated criss cross diagonally ridged polyethylene terephthalate polyester sheet and then covering the metallized surfacing with a plastic adhesive of substantially the same chemical composition as the base material to which the trilaminate is to be applied, said metallizing resulting from vacuum evaporation and deposition and said application taking place immediately after the extrusion of the vinyl chloride polymer and while said extrusion still retains the heat of said extrusion, followed by immediately chilling in cold water and the vinyl plastic on the face of the metallized surface being merged into the extruded material.

3,046,175
METHOD OF STABLE MASKING HONEYCOMB CORE

Eldon L. Bowman, Redondo Beach, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California

Filed Mar. 1, 1960, Ser. No. 12,033
5 Claims. (Cl. 156—11)

1. The method of chemical milling a honeycomb structure which comprises preparing an edge reinforced contoured mold; inserting said honeycomb structure through a coating material and a release composition and into said mold; applying a hot melt sealant to the exposed surfaces of the honeycomb structure; removing the mold from the honeycomb; etching away the honeycomb material unprotected by the coating material; manually removing said hot melt sealant from said honeycomb structure;



placing a sheet of deformable material over the etched surface of said honeycomb structure; applying pressure to said sheet causing portions of the latter to enter the openings in said honeycomb structure whereby said coating material and release composition are loosened from said honeycomb structure and subsequently removing the loosened portions of said coating material and release composition from said honeycomb structure.

3,046,176
FABRICATING SEMICONDUCTOR DEVICES

Wolfram A. Bosenberg, Somerville, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed July 25, 1958, Ser. No. 751,046
9 Claims. (Cl. 156—11)

1. The process of dicing a slice of semiconductive material into pellets, comprising the steps of metalizing predetermined areas in registry on opposite faces of said slice with a thin coating of a metal selected from the group consisting of cobalt, nickel, rhodium, palladium, iridium, platinum, copper, silver and gold, dipping said slice in molten solder which coats only said metallized areas on said slice, said solder being selected from the group consisting of lead, tin and lead-tin alloys, and immersing said slice in an etchant relatively inert with respect to said solder thereby to dissolve the portions of said slice between said solder-coated areas and produce a plurality of pellets coated with said metallic coating and said solder.

3,046,177
METHOD OF APPLYING POLYURETHANE FOAM TO THE BACKS OF CARPETS AND EQUIPMENT THEREFOR

Kenneth E. Hankins, Carlisle, Pa., assignor to C. H. Masland and Sons, a corporation of Pennsylvania

Filed Mar. 31, 1958, Ser. No. 725,061
6 Claims. (Cl. 156—78)



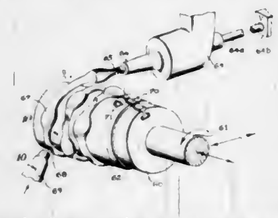
3. A method of forming a layer of polyurethane foam on a mold surface, using a housing and a rotating impeller within the housing, which comprises introducing controlled amounts of polyurethane catalyst into an inlet end of the housing in the space between the housing and the impeller, mixing the prepolymer and the catalyst in the space between the housing and the impeller, discharging the reacting stream of liquid polyurethane foam out an opening at the forward end of the housing before the foam has reach full expansion, projecting gas from all sides from a series of jets, each of which is directed in a different direction, into the stream of polyurethane foaming compound after it has been discharged from the opening, each of the said jets detaching a portion of the stream of polyurethane foaming compound and forming it into globules of polyurethane foam and distributing it to a different part of the mold area, said gas jets by distributing the polyurethane globules to different locations on the mold cooperating to coat the mold surface evenly with the polyurethane foam.

4. A method of claim 3, which comprises then completing the foaming cycle of the polyurethane reaction mixture deposited on the mold, bringing the back of a carpet into engagement with the exposed surfaces of the still uncured polyurethane foam, applying pressure to the face of the carpet and compressing the polyurethane foam to a thickness approximately half its final thickness, releasing the pressure on the face of the carpet and allowing the polyurethane foam to expand, curing the polyurethane foam, and releasing the polyurethane foam from the mold surface.

3,046,178
FILAMENTOUS DECORATION AND FABRICATION PROCESS

Earl S. Tupper, John Mowry Road, Smithfield, R.I.

Filed Feb. 1, 1957, Ser. No. 637,652
7 Claims. (Cl. 156—167)

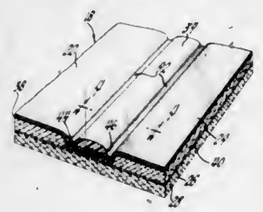


1. A method of processing in resinous materials comprising extruding a heat-plasticized resin in the form of a continuous tubular filament, simultaneously introducing a flow of shape-maintaining and cooling material during the formation of said filament, and applying by residual heat of formation the said filament directly to a receiving body for design formation.

3,046,179
TRIM PANEL JOINT COVERING

Ralph M. Stallard, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 13, 1957, Ser. No. 702,653
3 Claims. (Cl. 156—219)

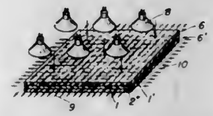


1. The method of making a laminated trim assembly comprising positioning a pair of thermoplastic sheets upon a supporting assembly, said sheets being so positioned that adjacent edges thereof define a joint, disposing a thermoplastic trim strip in overlaying relationship with said joint, bringing said strip into engagement with said joint, and then dielectrically heating said trim strip and said thermoplastic sheets under sufficient pressure to cause said strip to be bonded to said sheets and to cover said joint while simultaneously confining said strip and the thermoplastic sheet material subadjacent said strip by dielectrically embossing said sheets on either of said trim strip throughout the length of and immediately adjacent said joint.

3,046,180
METHOD OF MAKING LAMINATES USING UNSATURATED POLYESTERS

John M. Diehl and Luther L. Yaeger, Madison, Wis., assignors, by mesne assignments, to Tru-Scale, Inc.

Filed Aug. 12, 1955, Ser. No. 527,989
2 Claims. (Cl. 156—246)

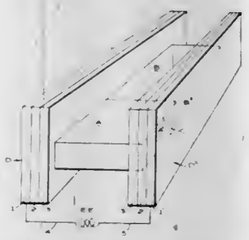


1. The method of making a polyester article devoid of any identifiable bond lines comprising the steps of subjecting to curing conditions an article comprising an unsaturated polyester synthetic resin normally adapted to require curing in the absence of air, and reinforced with glass fibers which are straightened and parallel, while exposing one surface of the article to the presence of air, then disposing against the air exposed surface a second layer of uncured, unsaturated polyester resin normally adapted to require curing in the absence of air, subjecting to curing conditions a second article comprising an unsaturated polyester synthetic resin normally adapted to require curing in the absence of air, while exposing one surface of the second article to the presence of air, then disposing against the second layer of uncured resin the exposed surface of the second article, subjecting the resulting assembly to curing conditions in the absence of air to cure the assembly of the unsaturated polyester synthetic resin.

3,046,181
PROCESS OF FINGER JOINT END GLUING

Julius W. Mann and George F. Russell, both of 711 St. Helens Ave., Tacoma, Wash.

Filed Feb. 13, 1958, Ser. No. 715,021
2 Claims. (Cl. 156—274)



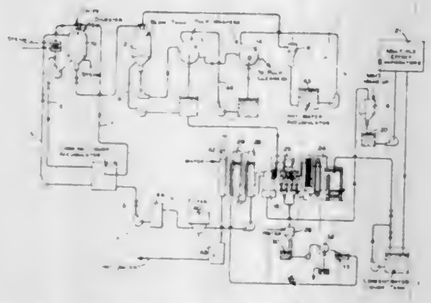
1. The herein described continuous process of end gluing of pieces of dielectric material in which the abutting ends of the pieces have areas that are covered with a film of adhesive that extends between opposite lateral sides of the pieces; the lengthwise dimensions of the pieces being greater than their widths; the steps of: urging the ends of the pieces toward one another while continuously moving them in the directions of their lengths so as to hold the end of one piece in interlocking relation with the

end of the other piece; in establishing a high frequency field of force which will extend between the opposite lateral sides of the moving pieces with the dominant lines of force passing through said adhesive film in a parallel direction therewith for setting the adhesive; and in creating heating areas on each side of the moving pieces and within the high frequency field of force by the action of the high frequency field of force and in conveying this heat by conduction to the areas of the abutting areas of adhesive disposed adjacent to the lateral sides of the pieces for setting these areas and for setting any squeeze out adhesive while the pieces are in continuous movement, and in delivering pieces of material with their ends provided with a film of adhesive and continuously moving them through the high frequency field of force for setting the adhesive on the ends as well as setting any squeeze out adhesive.

3,046,182
SULPHITE PULPING PROCESS

George H. Tomlinson, Montreal, Quebec, and George H. Tomlinson II, Cornwall, Ontario, Canada, assignors to Howard Smith Paper Mills, Limited, Montreal, Quebec, Canada, a company of Canada

Filed Nov. 29, 1956, Ser. No. 625,164
12 Claims. (Cl. 162—36)



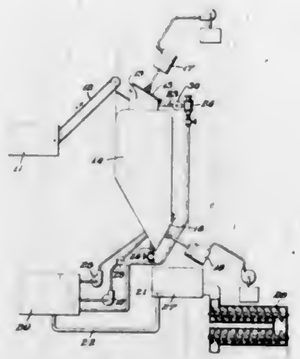
10. A cyclic method of preparing a chemical pulp from a cellulosic raw material and recovering heat and chemicals from the pulp residual liquor comprising impregnating the raw material with a magnesium bisulphite solution having a pH of 2.5 to 5.0 as measured at room temperature, digesting the impregnated material at a temperature of 160–190° C. for a predetermined time and at a predetermined superatmospheric pressure, maintaining the pH of the solution as measured at room temperature at a value between 3.0 and 4.0 at said cooking temperature during the period when the major sulphonation of the lignin and dissolution from the cellulose takes place, separating the residual liquor from the pulp, concentrating the liquor to a concentration in the range of 45–70% solids, burning the concentrated liquor with the recovery of heat, magnesium oxide and sulphur dioxide, recombining the magnesium oxide and sulphur dioxide to form an aqueous solution of magnesium bisulphite essentially free of excess sulphurous acid, and using said reformed liquor in the digesting step.

3,046,183
PROCESS AND APPARATUS FOR THE HYDRAULIC IMPREGNATION OF CELLULOSIC MATERIALS

Lionel M. Sutherland, Tequesta, Fla., and Thomas H. Paris, Trenton, N.J., assignors to Tomlon Corporation, Trenton, N.J., a corporation of New Jersey

Filed June 1, 1959, Ser. No. 817,303
9 Claims. (Cl. 162—56)

1. A process for thoroughly impregnating cellulosic material with a cooking liquid comprising the steps of charging pieces of cellulosic material into a container; filling the container with a cooking liquid having a temperature of not more than about 212° F.; closing said container; subjecting said cooking liquid and said pieces



of cellulosic material to hydrostatic pressure within the container of at least 500 pounds per square inch; maintaining said pressure for not longer than about one minute; and discharging said pieces from said container.

3,046,184
MANUFACTURE OF CELLULOSIC PRODUCTS

Ralph V. Braun, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

No Drawing. Filed Dec. 31, 1958, Ser. No. 784,026
5 Claims. (Cl. 162—86)

1. A method of manufacturing bisulfite pulp of improved tear strength which consists of cooking wood chips in an aqueous sodium bisulfite liquor containing no free SO_2 and having a pH of about 4–5 and a concentration of about 20% sodium bisulfite by weight, at a liquor to wood ratio of between about 7.5 to 1 and 4 to 1, at a temperature of about 145 to 165° C., and at a pressure autogenically produced by said temperature, for a time of about 14 hours to 4 hours, to a pulp yield of about 50–60 percent by weight of the dry wood chips, separating the resultant pulp from said liquor and extracting said pulp with an aqueous alkaline liquor having an alkali content of 20–30 grams of alkali expressed as sodium oxide per liter, at a temperature of about 120–195° C. and a pressure of between 25 and 190 pounds per square inch gauge, for about 2 hours to 5 hours to a yield for the extraction step of about 75–80 percent by weight of the pulp obtained from the bisulfite cook.

3,046,185
SLIME CONTROL AGENTS AND DISINFECTANTS IN PAPER MILL WHITE WATER

Joseph E. Buonanno, Providence, and James C. Shore, Edgewood, R.I., assignors to Metro Atlantic, Inc., Centerdale, R.I., a corporation of Rhode Island

No Drawing. Filed June 30, 1958, Ser. No. 745,244
2 Claims. (Cl. 162—161)

1. A process of controlling slime in the manufacture of paper pulp from ground wood chips where the fibers are agitated in large quantities of water and formed into a slurry and where the water is removed after screening and returned to new batches of ground chips, 80 to 100 parts of water being circulated for each part of paper pulp, the steps involving the addition to the circulating paper mill white water of between one part per million and 5 parts per million of sodium chlorite and maintaining a pH of about 4.5 to 7.

3,046,186
CATIONIC SIZING EMULSIONS AND PAPER SIZED THEREWITH

Herbert G. Arlt, Jr., Glenbrook, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

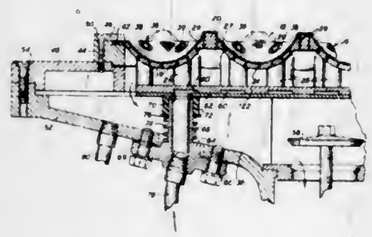
No Drawing. Filed June 12, 1957, Ser. No. 665,124
3 Claims. (Cl. 162—167)

1. A process for the manufacture of sized paper of improved tensile strength which comprises forming an aqueous suspension of cellulose papermaking fibers, adding thereto an emulsion of a hydrophobic ketene dimer in an aqueous medium containing a thermosetting cationic amido-aldehyde condensation product in acid condensed yet hydrophilic stage as paper-strengthening agent, the weight of said ketene dimer being between 1/10% and 3% of the dry weight of the fibers and the weight of said cationic nitrogenous paper-strengthening agent being between about 1/4% and 3% of the dry weight of the fibers, uniformly distributing said added emulsion through said aqueous suspension whereby a substantial proportion of said added ketene dimer and paper-strengthening agent are uniformly adsorbed on the surface of said fibers, sheeting said suspension to form a water-laid web at about pH 4.5, and heating said web to dry the same and to develop at least a substantial part respectively of the sizing and wet strengthening properties of the ketene dimer and paper strengthening agent thereon.

3,046,187
APPARATUS AND METHOD FOR MAKING MOLDED PULP ARTICLES HAVING HOLES THERETHROUGH

Ammon M. Leitzel, Portland, Oreg., assignor to Pacific Pulp Molding Company, Portland, Oreg., a corporation of Washington

Filed Nov. 3, 1958, Ser. No. 771,667
9 Claims. (Cl. 162—228)



9. The method of forming a molded pulp article having a hole therein which comprises immersing in a pulp slurry a surface in the shape of said article and having an aperture therein of the approximate size of said hole, applying suction through said surface to form a layer of pulp on said surface extending, at least, partly over said aperture, removing said surface from said slurry, forming a solid expanding jet of gas at a position spaced from said surface on the opposite side thereof from said layer by passing a confined stream of gas through a restricted orifice smaller than said aperture, and directing said jet through said aperture while said suction is still being applied and immediately after said removal of said surface from said slurry before the pulp around said aperture has partially dried in order to cause said jet to clear the pulp from said aperture and to form a smooth hole in said layer of pulp with a thickened rim of pulp around said hole.

3,046,188
FUNGICIDAL COMPOSITION

Bernhard Gaudian, 8 Ahrens St., Kitchener, Ontario, Canada, and Gunter Goeze, Koln-Bayenthal, Germany (% Fahlberg-List G.m.b.H. Chemische Fabrik, Gruner Platz 11, Postfach 140, Wolfenbuttel, Germany)

No Drawing. Filed July 27, 1959, Ser. No. 829,505
11 Claims. (Cl. 167—14)

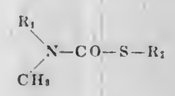
6. The process of controlling fungus growth of a fungus selected from the group consisting of Phytophthora, Fusicladium, Cercospora, and Peronospora on living plants which comprises applying to the plant a fungicidal composition having as an active ingredient a mixture consisting of a zinc compound selected from the group consisting of zinc sulphide and zinc chromate and a copper compound selected from the group consisting of cuprous oxide, copper hydroxide, copper oxychloride and basic copper carbonate the relative proportions of said zinc compound and said copper compound being between about 4 and 9 parts by weight of copper compound for each part of weight of zinc compound.

3,046,189
NEMATOCIDAL AGENTS

Ernest Jacobi, Siegmund Lust, and Albert van Schoor, Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Darmstadt, Germany, a corporation of Germany

No Drawing. Filed Mar. 5, 1958, Ser. No. 719,215
Claims priority, application Germany May 18, 1957
9 Claims. (Cl. 167—22)

1. Method of killing nematodes which comprises subjecting nematodes to the action of a substituted thiolcarbamic acid ester of the general formula:



wherein R_1 is a member of the group consisting of hydrogen and methyl and R_2 is a lower alkyl with a carbon content up to 5 carbon atoms.

3,046,190
GERMICIDES

David Alexander Lindsay Seiler, Burnham, England, and Joseph Patrick Brown, Bryn Castell, Geufron, Llangollen, Wales, assignors to Monsanto Chemicals Limited, London, England, a British company

No Drawing. Filed Aug. 30, 1957, Ser. No. 681,157
Claims priority, application Great Britain Sept. 28, 1956
4 Claims. (Cl. 167—31)

1. A germicide comprising 2:4-dichloro-3:5-dimethylphenol and a germicidal benzylmethylchlorophenol.

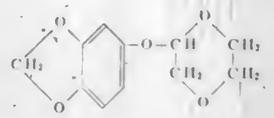
3,046,191
3,4-METHYLENEDIOXYPHENYL ACETALS AS SYNERGISTS FOR PYRETHRINS

Morton Beroza, Greenbelt, Md., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Original application June 15, 1955, Ser. No. 515,798; now Patent No. 2,832,792, dated Apr. 29, 1958. Divided and this application Feb. 28, 1958, Ser. No. 718,384
2 Claims. (Cl. 167—33)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An insecticide comprising a member selected from the group consisting of pyrethrins and allethrin and

2-(3,4-methylenedioxyphenoxy)dioxane having the formula



as a synergist therefor.

3,046,192

SCENT FOR ATTRACTING WILD GAME AND METHOD FOR ITS USE

Archie E. Bilyeu, Joice, Iowa, assignor to Aladdin Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota

Filed Feb. 12, 1959, Ser. No. 792,825
7 Claims. (Cl. 167—48)

1. An animal lure scent producing composition for luring a species of animal, said composition consisting of, as its effective ingredients, at least three drops of musk, at least three drops of urine from an animal in the family including said species in a total composition of about one-half ounce.

3. The method of attracting wild animals including the steps of:

Subjecting an animal lure scent producing composition including a component having a scent which is stimulating to animals to a temperature at least as high as the body temperature of an animal it is desired to attract to cause a scent to be driven off from said composition;

and permitting the resulting scent to permeate the atmosphere at a point to which it is desired to attract animals.

3,046,193

DIPHENYLMETHANE - PIPERAZINE - DICARBOCYANINE: VETERINARY ANTHELMINTIC TREATMENT

Cecil W. Parker, Matthews, N.C., assignor to Allied Animal Research Corporation, Charlotte, N.C., a corporation of North Carolina

No Drawing. Filed Apr. 28, 1959, Ser. No. 809,368
19 Claims. (Cl. 167—53)

18. A veterinary anthelmintic composition effective against hookworms and other worm infestations, the active component of which consists of a synergistic mixture of 2,2'-dihydroxy-5,5'-dichlorodiphenylmethane, in an amount of a minimum of about 10 mg./lb. of animal and a maximum of less than 22 mg./lb. of animal, piperazine citrate in an amount of a minimum of about 15 mg./lb. of animal and a maximum of less than 50 mg./lb. of animal and 3,3'-diethylthiadicarbocyanine iodide in an amount of a minimum of about 1 mg./lb. of animal to a maximum of less than 10 mg./lb. of animal.

3,046,194

TREATMENT OF PLANTS

Jack Ziffer, Milwaukee, Wis., assignor to Pabst Brewing Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,540
20 Claims. (Cl. 167—65)

1. The method of controlling powdery mildew plant disease which comprises contacting the causative fungus in the vicinity of susceptible plants with a fungicidal amount of an antifungal selected from the group consisting of polyamidohygrostreptin and polyaminohygrostreptin.

3,046,195

PROCESS FOR DEGLYCYRRHIZINATING LICORICE (SUCCUS LIQUIRITIAE)

Marinus A. Zagt, Jr., Amsterdam, Netherlands, assignor to Gerardus Van Loon, trading as Cedona, Haarlemmer Pharmaceutsiche Fabriek, Haarlem, Netherlands

No Drawing. Filed Mar. 14, 1957, Ser. No. 645,882
4 Claims. (Cl. 167—65)

1. A process for removing glycyrrhizin and glycyrrhetenic acid from licorice (succus liquiritiae), comprising the steps of diluting licorice in water and heating the diluted licorice to form an aqueous solution thereof, acidifying the solution with sulfuric acid at an elevated temperature to a pH value of about 3.0 to about 2.0, stirring the acidified solution, precipitating the syrupy glycyrrhizic acid formed and the glycyrrhetenic acid, removing the precipitate, neutralizing the resulting liquid from which the precipitate was removed with ammonia and concentrating the neutralized liquid.

3,046,196

THERAPEUTIC COMPOSITIONS

Dorothy de Vaulchier, New York, N.Y., assignor to Craig Pharmaceutical Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 25, 1959, Ser. No. 815,276
7 Claims. (Cl. 167—65)

3. A process for the amelioration of a diseased condition characterized by inflammation of osseous, fibrous or cartilaginous connective tissue, said process comprising applying to the skin of the diseased individual a composition consisting essentially of the following substances in approximately the following proportions: 30 grams of phenol, 4 ml. of glycerine, 1 ml. of water, 0.1 to 0.5 gram of sodium salicylate and 0.1 to 0.5 gram of citric acid.

3,046,197

NON-ANTIGENIC PROTEIN AND FAT COMPOSITION AND METHOD OF PREPARATION

Frederick R. Harper, Denver, Colo., assignor to Vernon F. Taylor, Jr., Denver, Colo.

No Drawing. Filed June 19, 1958, Ser. No. 743,009
3 Claims. (Cl. 167—66)

1. In the production of a non-antigenic, non-reactive non-toxic solution of whole protein and fat for injection into humans, the method which comprises preparing an adiaphoric serum from animal blood serum by rendering the serum acid to about pH 1.9 through the addition of hydrochloric acid and converting the solute protein content of the serum by digestion with pepsin at a temperature of about 20° to 40° C. for about 45 to 60 minutes; thereafter buffering the pepsin-treated serum to about pH 7.5 with sodium hydroxide and incubating the buffered serum in the presence of formaldehyde at room temperature for about 5 minutes to 72 hours; next destroying the agglutination factor and other antigenic factors of the treated serum by adding concentrated ammonia water thereto and sodium hydroxide to about pH 9.5 and reacting the serum at about 90° to 95° C. for about 30 minutes; buffering to about pH 7.2 with hydrochloric acid; adding lard oil in the amount of 5% to 20% by volume of serum; homogenizing the same at a pressure of 3200 to 3500 p.s.i.; and filtering.

3,046,198

BLOOD PRODUCT AND METHOD OF PREPARATION

Frederick R. Harper, Denver, Colo., assignor to Vernon F. Taylor, Jr., Denver, Colo.

Filed Apr. 24, 1958, Ser. No. 730,709
5 Claims. (Cl. 167—78)

1. The method of preparing sterile and cell-free beef serum which is thoroughly compatible with the blood stream of the human patient in which it is to be injected, comprising first drawing off beef blood and standing to clot; standing the resulting serum at room temperature and then refrigerating for about 6 to 72 hours to cast down blood cells and other sediment; decanting and filtering to collect the serum; rendering the serum acid to about pH 1.9 through the addition of hydrochloric acid and converting the solute protein content of the serum by digestion with pepsin at a temperature of about 20° C. to 40° C. for about 45 to 60 minutes; thereafter buffering the pepsin-treated serum to about pH 7.5 with sodium hydroxide and incubating the buffered serum in the presence of formaldehyde at room temperature for about 5 minutes to 72 hours; next destroying the agglutination factor and other antigenic factors of the treated serum by adding concentrated ammonia water thereto and sodium hydroxide to about pH 9.5 and reacting the serum at about 90° to 95° C. for about 30 minutes; and finally buffering to about pH 7.2 with hydrochloric acid.

3,046,199

COSMETIC COMPOSITION AND PREPARATION OF THE SAME

Tsuneshi Suzuki, 10 Higashi-Takajo-Machi, Shizuoka-shi, Japan

No Drawing. Filed May 25, 1959, Ser. No. 815,259
4 Claims. (Cl. 167—90)

2. A cosmetic composition being useful for facial treatments, said composition consisting of 0.1% to 0.2% by weight of scordinine, 0.01% to 0.1% by weight of 4,4,4-trimethyl-3,3,3-triheptyl-8(2-thiazol) - 2,2 - pentamethin thiazolocyanine-3,3-diiodid, 4% to 8% by weight of at least one member selected from the group consisting of stearic acid and palmitic acid, 1% to 3% by weight of at least one member selected from the group consisting of isopropyl palmitate, isopropyl myristate, lanolin, liquid paraffin and squalane, 0.7% to 1% by weight of sodium stearyl sulfate, 2% to 5% by weight of at least one member selected from the group consisting of polyoxyethylene glycol stearate, stearic monoglyceride, polyoxyethylene sorbitan monostearate and sorbitan monostearate, 0.5% to 1.2% by weight of triethanol amine, 4% to 12% by weight of a propellant selected from the group consisting of dichlorodifluoromethane, dichlorotetrafluoroethane and butane, and the balance of water.

3,046,200

METHOD OF PRODUCING STREPTOKINASE AND STREPTODORNASE

Stephen Aloysius Szumski, Pearl River, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 30, 1961, Ser. No. 85,465
7 Claims. (Cl. 195—68)

1. In a fermentation process for producing mixtures containing streptokinase and streptodornase which comprises inoculating an aqueous nutrient medium with a strain of beta hemolytic streptococci and allowing the bacteria to grow at a temperature between 23° C. and 31° C., the improvement which comprises adding to said medium from 5 to 40 grams per liter of magnesium carbonate when the pH of said medium first drops to 5.5–6.0, and continuing the fermentation while maintaining the pH of said medium within the range of 7.0–7.4 by the addition of an alkali selected from the group consisting of the hydroxides, carbonates, and bicarbonates of the alkali metals.

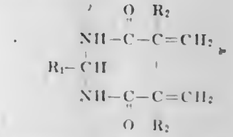
3,046,201

SYNTHETIC CULTURE MEDIA

Malcolm L. White and Donald C. Wehner, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 17, 1961, Ser. No. 124,358
4 Claims. (Cl. 195—100)

1. A nutrient microbiological medium comprising from about 3 to about 20 parts by weight of water and as a gelling constituent a polymer of (1) from about 0.01 to about 0.25 part by weight of at least one alkylidene-bisacrylamide of the formula:



wherein R_1 is selected from the group consisting of hydrogen and lower alkyl and R_2 is selected from the group consisting of hydrogen and methyl, and (2) one part by weight of acrylamide.

3,046,202

METHOD OF MAKING AN APERTURED MEMBER

Clifford E. Horner, Schuyler, and Donald R. Quinn and Charles E. Thayer, Horseheads, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 24, 1957, Ser. No. 667,652
3 Claims. (Cl. 204—11)



1. The method of making an apertured metallic member, said method utilizing a reusable master die having a conductive surface and a plurality of apertures, said method including the steps of extruding an insulative plastic material through said apertures so that a column of said plastic material extends through each of said apertures to a first height above said conductive surface, electrodepositing a layer of conductive material upon said conductive die surface, said layer having a thickness less than said first height, removing the portions of said insulative plastic material which are adjacent said layer of conductive material, and removing said layer of conductive material from said master die so that said master die may be used again.

3,046,203

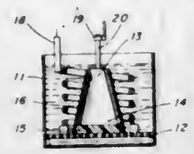
METHOD OF MAKING COPPER CATHODE STARTING SHEETS

Graham M. Cadwell, Black Eagle, Mont., assignor to The Anaconda Company, a corporation of Montana

No Drawing. Filed Nov. 20, 1959, Ser. No. 854,258
5 Claims. (Cl. 204—12)

2. The method of making pure copper cathode starting sheets for use in the electrolytic refining of copper which comprises disposing over the surface of a smooth copper plate a substantially continuous film of an emulsion comprising a major amount of water and a minor amount of a mineral oil lubricant emulsified therein, electrolytically depositing pure copper on the surface of said plate over said film, and stripping the electrolytically deposited copper from said copper plate substantially in the form of said starting sheet, whereby the substantially uniformly thick continuous film of the water-base soluble oil emulsion prevents adherence between said deposited copper and said copper plate.

3,046,204
METHOD FOR MAKING DIAMOND TOOLS
Lee H. Barron, 817 S. Maryland, Glendale, Calif.
Filed Aug. 2, 1957, Ser. No. 675,895
3 Claims. (Cl. 204—16)

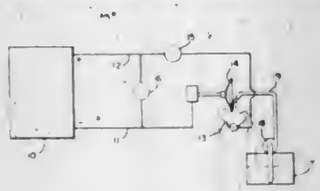


1. The method of attaching a coating of diamond grits of multigrit thickness to portions of a metal tool form comprising the steps of supporting said tool form in a nickel plating bath with said tool form serving as cathode; interposing a formed basket of fine-wire mesh between said tool form and an electroplating anode, the wire mesh of said basket being adjacent to and electrically insulated from said tool form and said anode; filling the space between said tool surface and said basket with loose diamond grits; electroplating a nickel anchoring deposit in the interstices between said diamond grits and on said tool form surface to form a layer of multigrit thickness, the electroplating anode being external to said basket; and removing said basket and excess unattached diamond grits after said electroplating.

3,046,205
NICKEL-ALUMINUM ALLOY COATINGS
Dwight E. Couch, Washington, D.C., Harold Shapiro, Hyattsville, and Abner Brenner, Chevy Chase, Md., and Jean H. Connor, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed July 23, 1959, Ser. No. 829,156
2 Claims. (Cl. 204—37)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of coating an article which comprises the steps in sequence of electrolytically depositing in a controlled manner a layer of nickel over the surface of the base metal of said article, electrolytically depositing a layer of aluminum from .0001 to .0018 inch thick over said nickel layer in such manner as to be about one-fourth the thickness of said nickel layer, heating the coated article at a temperature in excess of 550° whereby said aluminum alloys with less than the total thickness of said nickel layer thereby providing said article with a layer of nickel covered by a protective surface layer of nickel aluminide, said layer of nickel aluminide being free of contamination from the base metal.

3,046,206
ELECTRO-CHEMICAL MACHINING SYSTEM
Richard C. Johnson, 11713 Lytle St., Silver Spring, Md., and John W. Sawyer, 4519 18th St., North Arlington, Va.
Filed Feb. 23, 1955, Ser. No. 490,158
1 Claim. (Cl. 204—143)
(Granted under Title 35, U.S. Code (1952), sec. 266)



The method of electrochemically lapping a gear which comprises the steps of interconnecting the gear to the positive terminal of a direct current source of electrical energy, interconnecting a lap element to the negative terminal of the source of energy, translating and rotating the gear and lap element relative to each other, applying an electrolyte between tooth contact areas on the gear and lap element during relative movement thereof, and varying the current applied to the gear and lap element during relative movement thereof in a manner that a minimum current is applied when the lap is at a midpoint of a gear tooth and a maximum at the ends whereby more metal is removed from the ends of the tooth.

3,046,207
IRRADIATION OF ORGANOPOLYSILOXANES
Alexander A. Miller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 18, 1960, Ser. No. 22,987
11 Claims. (Cl. 204—154)

1. The method which comprises irradiating with high energy ionizing radiation to a dose of from 1×10^6 to 1×10^8 rep. a mixture comprising (1) an organopolysiloxane having the general formula

$$R_mSiO_{\frac{4-m}{2}}$$

where R represents a member selected from the class consisting of alkyl, cycloalkyl, aryl, alkaryl, aralkyl, haloaryl, haloalkyl, cyanoalkyl radicals, and mixtures of such radicals, at least 50 mole percent of said members being lower alkyl groups having from 1 to 2 carbon atoms, and *m* is a value of from 1.98 to 3, and (2) a minor proportion of an organic hydrogen transfer mercapto compound containing an —SH group and being free of olefinic unsaturation.

3,046,208
RADIOLYSIS OF MONOOLEFINS WITH A SENSITIZER
Carl E. Heath, Nixon, and Peter J. Lucchesi, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 29, 1957, Ser. No. 655,912
8 Claims. (Cl. 204—154)

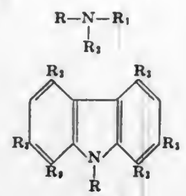


1. A process comprising irradiating a monoolefin reactant containing 2 to 8 carbon atoms in admixture with 99 to 80 wt. percent of a saturated hydrocarbon containing from 1 to 20 carbon atoms with high energy ionizing radiation equivalent to at least 30 electron volts in the presence of 0.1 to 15 wt. percent, based on total feed, of a halogenated hydrocarbon containing 1 to 6 carbon atoms, until in the range of 0.01 to 1.0 kwh. of radiant energy per pound of product has been absorbed, and thereby obtaining a product comprising in the range of 20 to 90 wt. percent of hydrocarbons with at least 2 alkyl side chains.

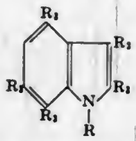
3,046,209
PREPARATION OF TRIPHENYLMETHANE DYES
Robert H. Sprague, Chagrin Falls, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey
No Drawing. Filed Jan. 12, 1961, Ser. No. 82,183
6 Claims. (Cl. 204—158)

1. A process for forming triphenylmethane dyes which comprises forming a mixture containing (1) a colorless

arylamine represented by a formula selected from the group consisting of



and



wherein: R represents a monovalent radical selected from the group consisting of hydrogen, alkyl, aralkyl and aryl;

R_1 represents a member selected from the group consisting of phenyl, α-naphthyl and β-naphthyl;

R_2 represents a member selected from the group consisting of alkyl, aryl and aralkyl;

and each R_3 represents a member selected from the group consisting of hydrogen, alkyl, aryl, aralkyl, alkoxy, halogen and dialkyl amino; and may be the same or different; and (2) an organic halogen containing compound represented by the formula

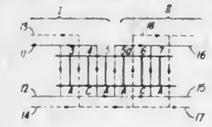
$$R—CX_3$$

wherein R represents a member selected from the group consisting of hydrogen, halogen, alkyl, aralkyl, aryl and substituted aryl, and each X represents a halogen atom selected from the group consisting of chlorine, bromine and iodine; exposing the mixture to radiation with light in the near-ultraviolet; thereby forming a triphenylmethane dye; and separately recovering the reaction product from the unreacted components of the reaction mixture.

3,046,210
PREPARATION OF GELATIN FROM COLLAGENOUS MATERIAL
John R. Lowry, White Plains, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 28, 1958, Ser. No. 711,554
6 Claims. (Cl. 204—158)

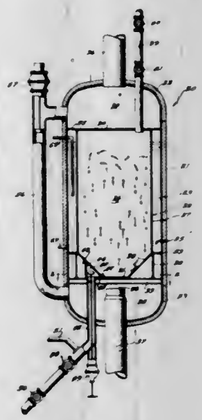
1. The method of extracting gelatin from a collagen-containing material which comprises irradiating the collagen-bearing material with ionizing penetrating radiation having an energy of at least about 10^{-3} million electron volts at a dose of at least about 0.5×10^6 rep., contacting the irradiated material with an aqueous acid medium at a temperature of about 50° to 95° C. to extract gelatin from said material, and recovering the extracted gelatin.

3,046,211
ELECTRODIALYSING CELLS
Frank Laurence Tye, Pinner, England, assignor to The Permutit Company Limited
Filed Dec. 21, 1959, Ser. No. 860,918
Claims priority, application Great Britain Mar. 12, 1958
3 Claims. (Cl. 204—180)



1. In an electrodialytic cell comprising end electrodes, a plurality of compartments between the electrodes, each compartment being bounded on one side by a membrane selectively permeable to ions of one sign and on the opposite side by a membrane selectively permeable to ions of the other sign, and passage-forming means for the flow of one liquid through alternate compartments and of a second liquid through the remaining compartments, said means dividing each liquid into streams flowing in parallel through the compartments of a plurality of groups of compartments and in series through the groups, the improvement which comprises the provision between adjacent groups of a compartment bounded on both sides by membranes selective to ions of the same sign, connected in parallel with the compartments of one of the adjacent groups and connected to receive the same stream as the adjacent compartment of the other of these two groups.

3,046,212
NUCLEAR REACTOR
Cleve R. Anderson, Pasco, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 14, 1959, Ser. No. 806,406
11 Claims. (Cl. 204—193.2)



1. A nuclear reactor comprising a cylindrical pressure vessel, an active portion enclosed by a cage formed of an inner cylindrical shell having a funnel-shaped portion on the lower end thereof, and upper and lower horizontal gratings, pellets of thermal-neutron-fissionable material clad in a corrosion-resistant material disposed in a liquid moderator in said active portion, an inlet line for moderator penetrating the bottom of the pressure vessel, and terminating in a nozzle just below the center of the lower grating, an outlet line for moderator at the top of the pressure vessel, means for charging and discharging fuel pellets to the active portion of the reactor, and variable pumping means for varying the flow of moderator upwardly through the reactor.

3,046,213
ANODE ASSEMBLY FOR CATHODIC PROTECTION
Richard B. Bender, Fort Worth, Tex., assignor to Tejas Plastics Materials Supply Company, Fort Worth, Tex., a corporation of Texas
Filed June 15, 1959, Ser. No. 820,214
1 Claim. (Cl. 204—196)

An anode assembly for cathodic protection in a metal vessel wherein a removable elongate anode is horizontally positioned in a hole in a wall of the vessel and extend-

ing inwardly thereof, said assembly comprising: an insulating head of dielectric synthetic resin material mounted directly on one end of said anode and including a closed end and an anode receiver of dielectric material integral therewith, said receiver extending through said hole, means tightly receiving one end of said anode in said receiver, the remaining end extending into said vessel and exposed therein, a nipple on the outer surface of said

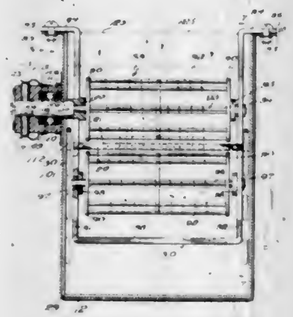


vessel around said hole and adapted to receive said receiver and anode, a circular clamp engaging said head on the outer end of said nipple, an electrical contact extending through the closed end of said head and into said anode, the diameter of said receiver being sufficiently large enough to rest on the bottom of said hole which comprises a support for said receiver inwardly of said head.

3,046,214
APPARATUS FOR CONTINUOUSLY ELECTROLYTICALLY TREATING FLEXIBLE ARTICLES

Herbert F. Ross, Barrington, R.I., assignor to Chain Anodizers Incorporated, a corporation of Rhode Island

Filed Sept. 8, 1958, Ser. No. 759,621
2 Claims. (Cl. 204—210)

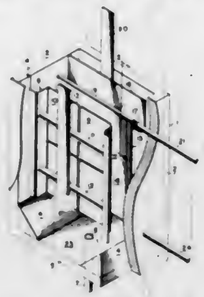


1. In an apparatus for the continuous anodizing of a flexible aluminum work piece, a container having metallic walls and an open top for an electrolyte in said container, a shaft extending through one of the walls of the container below the top of the tank and the surface of the electrolyte, means electrically insulating the shaft from the container, a guide on said shaft for contacting the work, means for introducing the flexible work through the top of the container spaced from the walls thereof to a position below the surface of the electrolyte and about said guide and means comprising the wall of the container as the cathode and the guide as the anode contact for passing current to the work below the surface of the electrolyte and from the work through the electrolyte to the container whereby no current passes through the work outside of the electrolyte, said guide comprising a reel rotatably mounted on said shaft and a second reel rotatably mounted on a parallel shaft about both of which the work is disposed and fixed axially spaced pins between said reels to direct a narrow length of work in a pseudo helical path about both reels.

3,046,215
ELECTROLYTIC CELL WITH VERTICAL MERCURY ELECTRODE

Paul M. Sullivan, Hyattsville, and David H. Chambers, Catonsville, Md., assignors to the United States of America as represented by the Secretary of the Interior

Filed May 26, 1959, Ser. No. 816,023
6 Claims. (Cl. 204—219)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. An electrolytic cell which comprises, a pair of vertical walls, a mercury electrode comprising a single vertically disposed sheet of hot-dipped galvanized iron, the upper portion of said sheet being bent in a U to form a horizontal gutter of relatively small volume, said gutter having a pair of edges, one of said edges being lower than the other and the remaining portion of said sheet depending from said lower edge, the ends of said gutter abutting said cell walls to form a trough, means for feeding mercury into said trough, whereby the mercury overflows the lower edge of said trough and forms a uniform downwardly flowing film over the surfaces of said sheet, and means for collecting mercury at the bottom of said cell.

3,046,216
IMPREGNATED CARBONACEOUS ELECTRODE AND METHOD OF MAKING THE SAME

Charles S. Lowe, Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,894
6 Claims. (Cl. 204—294)

5. A carbonaceous electrode being resistant to chemical attack in the electrolysis of brine, said electrode having within its pores a resinified and cured furfuraldehyde-ketone condensation product composed of a mixture of hydrogenated mono- and di-furfuryl ketones in a proportion of about 5.5% to 16.8% by weight of said electrode.

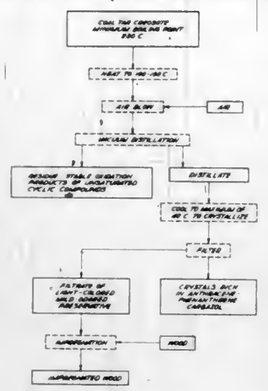
3,046,217
METHOD OF PREPARING IMPROVED WOOD PRESERVATIVE FROM COAL TAR CREOSOTE

William F. Hafner, Monroeville, Charles W. Leach, Trafford, and Thomas W. Smeal, Jeannette, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

Filed May 15, 1959, Ser. No. 813,515
2 Claims. (Cl. 208—2)

1. A method of preparing a refined creosote from coal tar creosote which has a minimum boiling point of about 230° C. comprising heating said coal tar creosote to about 100–150° C., introducing an air stream to the heated coal tar creosote at a rate of about 60 to 100 standard cubic feet per minute per ton of coal tar creosote for at least one hour and thus oxidizing unsaturated cyclic compounds present in the coal tar creosote and forming stable oxidation products, as a separate step distilling the coal tar creosote under vacuum to an end temperature corresponding to an end temperature of about 395–410° C. at atmospheric pressure and thus separating a creosote product as

distillate and said oxidation products as residue, cooling said distillate to a maximum temperature of about 40° C.,



and filtering said cooled distillate to remove crystals rich in anthracene-phenenathrene-carbazol, thus recovering a refined creosote having a light color and mild odor.

3,046,218
PROCESS FOR PREPARING AN IMPROVED LUBRICATING OIL

Alfred M. Henke, Springdale, and Rodney E. Peterson, Oakmont, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Aug. 10, 1959, Ser. No. 832,478
8 Claims. (Cl. 208—109)

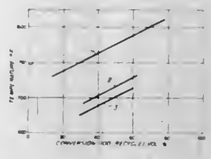
1. The process for preparing a multigrade lubricating oil from a hydrocarbon charge stock comprising essentially a mixture of (1) a high boiling petroleum fraction selected from the group consisting of deasphalted residuum and unpressable distillate having a V.I. between about 60 and 100 and a viscosity at 210° F. of between about 70 and 250 S.U.S. and a (2) hydrocarbon wax, the hydrocarbon wax component having a melting point above about 120° F. and constituting between about 12 and 80 percent of the hydrocarbon mixture which process comprises contacting said charge stock with hydrogen at a pressure above about 1750 p.s.i., at a temperature between about 715° and 825° F., at a space velocity between about 0.2 and 4.0 in the presence of a mixture of a sulfide of a metal of group VI and a sulfide of a metal of the iron group composited with a cracking catalyst having a cracking activity above about 12 on the Kellogg scale, whereby non-wax hydrocarbons contained in the original charge stock and the hydrocarbon wax components are converted into liquid hydrocarbons having the properties of a multigrade lubricating oil, and subjecting the product to a treatment for separation of multigrade lubricating oil components.

3,046,219
RECYCLE CATALYTIC HYDROCRACKING

Frank G. Ciapetta, Silver Spring, Md., and Harry L. Coonradt, Woodbury, and William E. Garwood, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed May 14, 1959, Ser. No. 813,247
7 Claims. (Cl. 208—111)

1. A process for cracking hydrocarbon fractions that has at least one of the following advantages over a once-through operation: lower operating temperatures, lower dry gas yield, lower light naphtha yield, higher heavy naphtha yield, and a fuel oil having a higher diesel index, which comprises contacting a mixture of a hydrocarbon fraction having an initial boiling point of at least about 400° F., a 50 percent point of at least about 500° F. and an end-boiling point of at least about 600° F. and boiling substantially continuously between said initial boiling point and said end-boiling point with a cycle stock which is obtained from hydrocracking said initial hydrocarbon fraction and which boils at temperatures higher than about 390° F., in which the volumetric ratio of said cycle stock to said hydrocarbon fraction ranges from about 1:1, respectively, to about 10:1, respectively, with a catalyst comprising about 0.05 percent to about 20 percent, by weight of the catalyst, of at least one metal of the plati-



num and palladium series deposited upon a synthetic composite of oxides of at least two metals of the groups IIA, IIIB and IV of the periodic arrangement of the elements, having an activity index of greater than 25, in the presence of hydrogen in amounts, expressed in a molar ratio of hydrogen to hydrocarbon charge, ranging from about 2 to about 80, pressures of about 100 pounds per square inch gauge to about 2500 pounds per square inch gauge, at a liquid hourly space velocity ranging from about 0.1 to about 10, and at temperatures of about 500° F. to about 825° F.

3,046,220
FIRE EXTINGUISHING COMPOSITION AND METHOD OF MAKING IT

Sweeney Volnovich, Bridgeville, Pa., assignor to Mercantile Metals, Inc., Carnegie, Pa., a corporation of Pennsylvania

Filed Oct. 25, 1957, Ser. No. 692,396
8 Claims. (Cl. 252—2)

1. A fire extinguishing composition consisting essentially of ground pitch, a ground, inert, inorganic, nonfusible material, and ground ammonium chloride in the proportions ranging from approximately 2 parts inorganic material to 1 part pitch by weight to 7 parts inorganic material to 1 part pitch by weight, the ammonium chloride being in proportions ranging from 0.1 part to 0.9 part by weight to the parts by weight of the other ingredients taken singly.

3,046,221
THERMALLY STABLE ATTAPULGITE-BASE DRILLING MUD

Charles G. Dodd, Norman, Okla., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Dec. 22, 1958, Ser. No. 781,886
12 Claims. (Cl. 252—8.5)

1. An oil-emulsion base, attapulgite clay, drilling mud for use at high temperatures comprising an alkaline oil-in-water emulsion phase, an attapulgite clay dispersed in said emulsion phase and a dispersing agent for said clay, a small amount of a high molecular weight, non-ionic, polysaccharide sufficient to restrict water loss to a value less than 30 ml. per 30 minutes measured in accordance with API Code #29, said polysaccharide having a molecular weight in excess of about 50,000 and being water soluble and a magnesium compound selected from the group consisting of magnesium oxide, magnesium hydroxide, and magnesium carbonate in an amount sufficient to inhibit decomposition of the clay at elevated temperatures.

3,046,222
LOW FLUID LOSS FRACTURING COMPOSITION

Achyut K. Phansalkar, Ponca City, Okla., Albert H. Roebuck, Midland, Tex., and James B. Scott, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed July 28, 1958, Ser. No. 751,125
30 Claims. (Cl. 252—8.55)

1. A low fluid loss additive for a fracturing oil consisting essentially of a primary plugging agent of finely divided oil-insoluble solid particles in an amount from 30 to 70 percent by weight of said additive with at least about 0.20 percent of said particles having a particle size less than about 10 microns, said particles being physically and chemically inert in oil; and a secondary plugging agent having a substantially water-insoluble, soft and pliable structure upon dispersion in oil capable of sealing interstices between said primary agent particles, said secondary agent, in an amount from 70 to 30 percent by weight of said additive, being selected from the group consisting of montan wax, asbestos fines, plastic fines, cellulose fines, rubber fines, and metal soaps of fatty acids having at least 14 carbon atoms, a major portion of the metal of said soaps being polyvalent; and containing an oil-soluble dispersing agent in an amount sufficient to disperse said plugging agents in oil.

3,046,223
METHOD OF LUBRICATING METAL PARTS EXPOSED TO NUCLEAR RADIATION AND HOT CARBON DIOXIDE

Arthur L. Morris, Didcot, England, assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 28, 1960, Ser. No. 17,756
Claims priority, application Great Britain Apr. 9, 1959
2 Claims. (Cl. 252—27)

1. A method of lubricating rubbing metal parts associated with nuclear reactors and exposed to nuclear radiation and hot carbon dioxide gas which comprises applying to said parts a radiation resistant lubricating grease composition having less than 1 wt. percent sulfur, said composition comprising a major amount of a base stock having a viscosity of at least 40 cs. at 210° F. and a grease thickening amount of carbon black, wherein said base stock consists essentially of mineral lubricating oil and petroleum resin having a viscosity of 1,500 to 4,000 cs. at 210° F., and wherein the amount of petroleum resin is about 5 to 50 wt. percent based on the weight of the total grease composition.

3,046,224
HIGH BARIUM CONTENT COMPLEX SALTS OF SULFONIC ACIDS AND PETROLEUM FRACTIONS CONTAINING THE SAME

Harry J. Andress, Jr., Pitman, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed June 10, 1957, Ser. No. 664,465
4 Claims. (Cl. 252—33)

1. A mineral lubricating oil containing a minor amount, sufficient to improve the detergent character thereof, of a high barium content complex salt of a sulfonic acid produced by the method which comprises the steps of (1) subjecting a hydrocarbon solution of a basic barium sulfonate salt to treatment with carbon dioxide while maintaining the temperature of said hydrocarbon solution at a level of from about 150° C. to about 250° C., the amount of carbon dioxide employed during said treatment being at least about 1 mol per mol of basic barium sulfonate salt in said hydrocarbon solution, (2) lowering the temperature of the reaction mixture from step 1 to a level of from about 25° C. to about 60° C., (3) adding barium methylate to the reaction mixture from step 2 in an amount to provide at least about 1 equivalent of barium per mol of basic barium sulfonate salt employed in step 1, (4) raising the temperature of the reaction mixture to a level of about 150° C. to about 250° C. and (5) filtering the reaction mixture to recover a hydrocarbon solution of the high barium content complex salt of sulfonic acid.

3,046,225
SOLUTION METAL CUTTING AND GRINDING FLUIDS

John L. Murray, Westfield, and Roy A. Westlund, Jr., Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 8, 1958, Ser. No. 765,957
4 Claims. (Cl. 252—33.6)

1. An aqueous metal working fluid comprising a major proportion of water, 0.5 to 10.0 wt. percent of sodium nitrite and 0.05 to 1.0 wt. percent of sodium lauroyl sarcosine in ratios of 1:1 to 11:1, respectively.

3,046,226
LUBRICATING OIL COMPOSITIONS

Carl L. Sandberg, St. Paul, Paul I. Roth, White Bear Lake, and JoAn M. Mullins, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Feb. 19, 1958, Ser. No. 716,013
3 Claims. (Cl. 252—57)

1. A lubricating oil containing from about 0.1 to about 10% by weight of a copolymer of monomeric esters of polymerizable ethylene carboxylic acids selected from the group consisting of acrylic and methacrylic acid, (1) one of said acids being esterified with a saturated primary monohydric alcohol having from about 1 to about 6 carbon atoms and no more than one other atom in the skeletal structure thereof, said other atom when present being oxygen and forming an ether linkage with adjacent carbons, (2) the other of said acids being esterified with an alkyl-phenyl-ether substituted ethylene glycol having less than four ethylene oxy units in the glycol chain, the alkyl substituent of said alkyl-phenyl-ether group comprising from about 9 to about 18 carbon atoms, said copolymer comprising between about 20 and about 90 mol percent (2) and having a terminal alkyl group in the side chain thereof having an average chain length of about 6.5–10.0 carbon atoms.

3,046,227
FERROMAGNETIC MATERIAL

Evert Willem Gorter, Frederik Karel Lotgering, and Hugo Gerrit Blejers, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 20, 1958, Ser. No. 768,039
Claims priority, application Netherlands Oct. 21, 1957
11 Claims. (Cl. 252—62.5)

1. A ferromagnetic body particularly adapted for use in microwave apparatus consisting essentially of a coherent mass of mixed crystals of compounds having a hexagonal crystal structure similar to that of the compound $BaFe_{12}O_{19}$, the composition of said mixed crystals corresponding to the formula

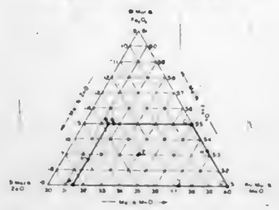
$$Ba_{(1-a-b-c)}Sr_aPb_bCa_cD_dMe_{(d-f)}Co_f^{II}Fe_{12-2d-f}^{III}Mn_f^{III}O_{19}$$

in which D is a quadrivalent metal ion selected from the group consisting of Ti^{4+}, Ge^{4+}, Zr^{4+}, Hf^{4+}, and Sn^{4+}, Me is a bivalent metal ion selected from the group consisting of Mn^{++}, Ni^{++}, Zn^{++}, Mg^{++}, and Cu^{++}, and in which *a*, *b*, and *e* are not more than 1, *c* is not more than 0.4, *d* is between 0.4 and 2.5, and *f* not more than 3, said crystals having a preferred direction of magnetization and being oriented in said preferred direction whereby said body is magnetically anisotropic and resonant at wavelengths of about 6 mms. to 1 cm.

3,046,228
METHOD OF PREPARING A ZINC MANGANESE FERRITE

Leonard W. Beaudoin, Milwaukee, Ralph G. Kraft, Whitefish Bay, and Kenneth W. Steinbrecher, Shorewood, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin

Filed June 8, 1959, Ser. No. 818,651
3 Claims. (Cl. 252—62.5)



1. The method of preparing a ferromagnetic zinc-manganese ferrite having a high usable flux density, low core loss and low core loss temperature coefficient comprising the steps of admixing a zinc, a manganese and an iron compound in amounts, in terms of the respective oxides, consisting of relative mol percentages of ZnO, MnO and Fe_2O_3 lying within the area defined approximately in the accompanying ternary diagram of FIG. 1 by the solid lines AB, BC, CD and DA; calcining said admixture in an air atmosphere at a temperature of about 2225° F.; milling the calcined mixture into a finely-divided particulate material; forming said material with an appropriate binder material into a desired shape; and sintering said formed material in an air atmosphere at a temperature of about 2550° F. for a period of approximately 2 hours, continuing said sintering at the said temperature for an additional hour in an atmosphere substantially devoid of oxygen to complete the chemical reaction of the various constituents and obtain desired densification thereof.

3,046,229
HIGH RESERVE ALKALINITY ANTI-FREEZE

John C. Cessna, Parma, and Robert E. Mallonee, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 14, 1958, Ser. No. 735,102
5 Claims. (Cl. 252—74)

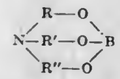
1. An ethylene glycol base anti-freeze solution having dissolved therein boric acid and a metallic oxide chosen from the group consisting of magnesium oxide, calcium oxide, strontium oxide and barium oxide, said boric acid and said selected metallic oxide being present in sufficient quantities to give a reserve alkalinity of at least 170 units to said solution; said reserve alkalinity being the measure of the cation concentration of a freshly prepared anti-freeze formula and defined as the number of milliliters of one-tenth normal hydrochloric acid required to titrate one-hundred milliliters of thirty-three percent aqueous anti-freeze to a pH of 5.5.

3,046,230
ANTIFREEZE COMPOSITION

Bernard H. Berger, Trenton, N.J., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 19, 1959, Ser. No. 834,660
6 Claims. (Cl. 252—75)

1. An antifreeze composition the aqueous portion of which consists essentially of water and the non-aqueous portion of which consists essentially of a water soluble alcohol selected from the group consisting of low molecular weight monohydroxy aliphatic alcohols having from to to 6 carbon atoms and low molecular weight dihydroxy aliphatic alcohols having from 2 to 6 carbon atoms and which contains between about 0.25 and about 1.0 weight percent alkali metal arsenite, between about 0.1 and about 0.6 weight percent alkali metal mercaptobenzothiazole, between about 0.5 and about 2.0 weight percent alkali metal metaborate and between about 0.2 and about 2.0 weight percent of a compound having the formula



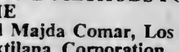
wherein R, R′ and R″ are each selected from the group consisting of hydrogen and alkyl hydrocarbon radicals having from 1 to 6 carbon atoms and at least one of R, R′ and R″ is an alkyl hydrocarbon radical.

3,046,231
COLOR STABILIZED N-ACYL ALKANE SULFONIC ACID SALTS AND METHODS FOR PRODUCTION OF THE SAME

Robert Ernst and Majda Comar, Los Angeles, Calif., assignors to Textilana Corporation, Hawthorne, Calif., a corporation of California

Filed May 18, 1960, Ser. No. 29,868
15 Claims. (Cl. 252—152)

1. A process comprising heating, in an acylating stage, an acylating agent selected from the group consisting of the aliphatic and alicyclic carboxylic acids of about 10 to about 18 carbon atoms, with a taurine salt of the formula



wherein R_1 is chosen from the group consisting of hydrogen and a hydrocarbon radical of about 1 to about 6 carbon atoms, and R_2 is chosen from the group consisting of hydrocarbon radicals of about 2 to about 8 carbon atoms, from about 0.5% to about 5%, calculated on the weight of the acylated tauride and excess carboxylic acid in the reaction product, of a discoloration inhibitor chosen from the group consisting of the organic phosphinic acids and the M salts of said phosphinic acids, organic phosphinous chlorides, and the alkali metal borohydrides, where M above is a salt-forming radical chosen from the group consisting of alkali metals, alkaline earth metals, and water soluble lower alkylamines and lower alkanolamines, in an inert atmosphere at a temperature of about 200° C. to 320° C., while removing water formed during the reaction, employing a mole ratio of at least 1.2 moles of acylating agent to one mole of taurine salt, and producing an acylated tauride mixed with an unreacted acylating agent.

3,046,232
METHOD OF PRODUCING A CHELATING CAUSTIC COMPOSITION

Paul W. Bonewitz, Burlington, Iowa, assignor to Bonewitz Chemicals, Inc., Burlington, Iowa, a corporation of Iowa

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,348
5 Claims. (Cl. 252—156)

1. A process of producing a chelating caustic composition, which comprises adding about ½ to 10% concentrated aqueous caustic soda solution to a mixture of 70 to 98% solid caustic soda and 2 to 30% of solid sodium gluconate.

3,046,233
TREATMENT OF AQUEOUS SOLUTIONS

Eli Levy, Cleveland Heights, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 17, 1957, Ser. No. 703,288
14 Claims. (Cl. 252—193)

1. A process for treating an aqueous solution containing oleaginous material the steps comprising; adding

a relatively small amount of an aqueous dispersion of colloidal clay to said aqueous solution; thoroughly mixing said dispersion and said aqueous solution in the presence of a relatively small amount of cation active material; and separating out the resultant agglomerated clay-oleaginous material complex from said aqueous solution thereby leaving said aqueous solution substantially free of said oleaginous material and readily treatable by standard recovery processes.

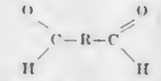
3,046,234

STABLE ALKALINE SILICA SOLS CONTAINING CERTAIN DIALDEHYDES

Daniel P. Roman and Thomas A. Taulli, Florissant, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

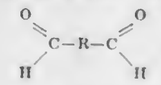
No Drawing. Filed Dec. 7, 1959, Ser. No. 857,582
11 Claims. (Cl. 252—313)

1. A composition of matter consisting essentially of (1) a stable alkaline silica sol having a colloidal silica disperse phase and a liquid continuous phase which liquid is selected from the group consisting of water and a solution of water and a water-miscible organic liquid selected from the group consisting of acetone and water miscible monohydric and polyhydric alcohols, in which solution said organic liquid is present in amounts of up to 50% by weight and (2) from about 0.002% to about 0.05% by weight of a dialdehyde having the structural formula



wherein R is an alkylene group containing from 1 to about 13 carbon atoms and wherein R is further characterized by a straight carbon atom chain having an uneven number of carbon atoms, said dialdehyde being further characterized in that it is soluble in said sol in an amount of at least 0.05% by weight.

5. The composition of matter consisting essentially of a stable alkaline silica aquasol having a pH in the range of about 8.5 to about 10.5, and having an SiO_2 to M_2O molecular ratio, where M is an alkali metal, in the range of about 40:1 to about 200:1, containing from about 5% to about 45% by weight of colloidal silica, and from about 0.002 to about 0.05% by weight of a dialdehyde having the structural formula



wherein R is an alkylene group containing from 1 to about 13 carbon atoms and wherein R is further characterized by a straight carbon atom chain having an uneven number of carbon atoms, said dialdehyde being further characterized in that it is soluble in said sol in an amount of at least 0.05% by weight.

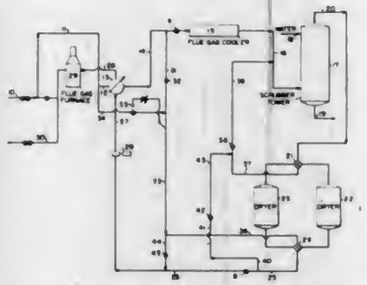
3,046,235

PROCESS TREATMENT OF GASES FROM THE REGENERATION OF A PLATINUM GROUP METAL HYDROFORMING CATALYST

Lewis G. King, Westfield, Jerome Bernstein, Plainfield, and Herbert P. Dengler, Fair Haven, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 1, 1959, Ser. No. 856,595
6 Claims. (Cl. 252—411)

1. A method for drying flue gases from the regeneration of a platinum group metal hydroforming catalyst which comprises withdrawing hot flue gases from a hydroforming reactor undergoing regeneration, passing the flue gas through a tower for countercurrent contact with a cool scrubbing liquid to eliminate corrosive acid gases and cool and dehumidify the flue gases, passing the cooled and scrubbed gases through a bed of solid desiccant to dry the same preparatory to recycling to the hydroforming reactor undergoing regeneration and simultaneously regenerating an exhausted bed of solid desiccant by withdrawing a sidestream of hot flue gases, passing the said sidestream of hot flue gases through the spent bed of solid desiccant to dry and regenerate the



same, combining the drier regeneration gases with the main stream of flue gases entering the scrubbing tower, withdrawing a sidestream of cooled and dried recycle flue gas, passing the sidestream of cooled and dried recycle flue gas through the hot bed of freshly regenerated desiccant and recombining the stream of cooling gas with the main stream of cooled, dried recycle flue gas and recycling the same to the hydroforming reactor undergoing regeneration.

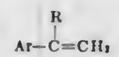
3,046,236

FLAME-PROOF FOAMABLE ALKENYL AROMATIC RESIN GRANULES AND METHOD OF MAKING

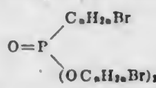
Alex K. Jahn, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 17, 1960, Ser. No. 9,180
9 Claims. (Cl. 260—2.5)

1. A foamable thermoplastic polymer composition capable of being expanded to produce a self-extinguishing cellular body comprising a flammable thermoplastic polymer consisting of at least 70 percent by weight of at least one alkenyl aromatic compound having the general formula:



wherein Ar represents an aromatic radical of the group consisting of hydrocarbon and nuclear halo-substituted hydrocarbon radicals of the benzene series and R is a member of the group consisting of hydrogen and the methyl radical, having uniformly dispersed throughout a volatile fluid organic compound having a molecular weight of at least 58 and a boiling point not higher than 95° C. and 760 millimeters absolute pressure, as foaming agent and in which the polymer is substantially insoluble and as flame-proofing agents, based on the weight of the polymer, from 0.5 to 8 percent of a bromine-containing phosphonate having the general formula:



wherein n is a whole number from 2 to 4, and from 0.01 to 2 percent of an organic peroxide having the general formula:

$$R[O—O—R']_n$$

wherein R represents a member of the group consisting of alkyl radicals containing from 2 to 9 carbon atoms, aryl and aralkyl hydrocarbon radicals of the benzene series, the acetoyl, the benzoyl and the phthaloyl radical, R′ represents a member of the group consisting of hydrogen, alkyl radicals containing from 2 to 9 carbon atoms, and aryl and aralkyl hydrocarbon radicals of the benzene series and n is an integer from 1 to 2, said organic peroxide having a boiling point of at least 100° C. at 760 millimeters absolute pressure, a half-life of at least 2 hours as determined in benzene at 100° C., containing at least 6 carbon atoms in the molecule and having at least one tertiary carbon atom attached to an oxygen atom of the peroxy group.

3,046,237

BLEND COMPRISING PLASTICIZED VINYL CHLORIDE RESIN AND A MONOOLEFINIC POLYMER AND PROCESS OF PREPARING SAME

William J. Rosenfelder and Jacob J. Rosen, New York, N.Y., assignors to Dublon, Inc., Newark, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 12, 1961, Ser. No. 158,879
15 Claims. (Cl. 260—23)

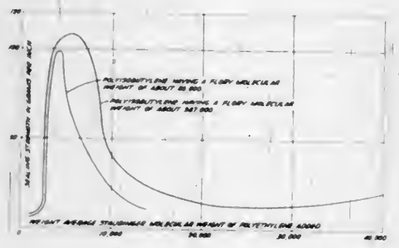
1. A uniform blend of (*a*) 5–50% plasticized vinyl chloride resin selected from the group consisting of polyvinyl chloride and copolymers of vinyl chloride with minor amounts of at least one copolymerizable material of the group consisting of vinyl esters of a saturated fatty acid having up to 4 carbon atoms, vinylidene chloride, acrylonitrile styrene, lower alkyl maleates and fumarates having 1 to 4 carbon atoms in the alkyl groups and maleic anhydride with (*b*) 95–50% of a polymer of a monoolefin having 2 to 3 carbon atoms, there being 10–100 parts of plasticizer per 100 parts of vinyl chloride resin.

3,046,238

PARAFFIN WAX COMPOSITION CONTAINING POLYISOBUTYLENE AND POLYETHYLENE

William P. Ridenour, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Mar. 6, 1958, Ser. No. 719,623
8 Claims. (Cl. 260—28.5)



1. An improved paraffin wax composition comprising essentially paraffin wax and a total of about one to about 20 percent by weight of a rubbery isobutylene polymer having a Flory molecular weight of at least about 750 and polyethylene having a weight average Staudinger molecular weight of about 3000 to about 12,000.

3,046,239

BLEND OF POLYMERIC PRODUCTS

William C. Calvert, Gary, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 22, 1958, Ser. No. 768,829
8 Claims. (Cl. 260—28.5)

1. A blend comprising (1) a major portion of a graft copolymer of a material selected from the group consisting of conjugated diolefine polymer latices and conjugated diolefine-monovinyl aromatic hydrocarbon copolymer latices with a mixture of vinyl cyanide and a material selected from the group consisting of monovinyl aromatic hydrocarbons and alpha methyl styrene and (2) a minor portion of a silicone derived from the condensation of at least one compound selected from the group of organo silane diols having the structural formula



where R is a lower alkyl radical and R′ is a radical selected from the group consisting of the hydrogen radical, lower alkyl radicals, the phenyl radical and the vinyl radical.

3,046,240

THERMO-SETTING CEMENT CONTAINING FURFURAL AND PITCH

Lester L. Winter, Fostoria, and Theodore Edstrom, Parkview, Ohio, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Oct. 11, 1955, Ser. No. 539,947, now Patent No. 2,884,391, dated Apr. 28, 1959. Divided and this application Feb. 24, 1959, Ser. No. 794,827
2 Claims. (Cl. 260—28.5)

1. A thermosetting cement for joining carbonaceous articles, said cement consisting of about 60 percent to 50 percent of a pitch, about 40 percent to 50 percent in the aggregate of at least one of the materials in the group consisting of furfural and furfuryl alcohol, and about two to 10 percent of an acid catalyst; said pitch having a melting point of between 150° C. and 225° C., a coking value at 1000° C. of from 60 percent to 80 percent, having a solubility in quinoline of 75 percent to 85 percent, having a specific gravity of at least 1.25, and being compatible with furfuryl compounds at temperatures below 100° C., said percentages based on the total weight of said cement.

3,046,241

COMPOSITION COMPRISING AN ALUMINUM ALKOXIDE AND A MIXTURE OF SILOXANES

John W. Gilkey, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,545
2 Claims. (Cl. 260—29.1)

1. A composition of matter consisting essentially of a mixture of (1) from 2 to 50 percent by weight of an aluminum compound selected from the group consisting of compounds of the formula $Al(OR)_3$ and partial hydrolyzates thereof, in which each R is selected from the group consisting of aliphatic monovalent hydrocarbon radicals of less than 13 carbon atoms and hydroxylated aliphatic monovalent hydrocarbon radicals of less than 13 carbon atoms and containing less than 4 hydroxyl radicals, (2) from 5 to 70 percent by weight of a methylpolysiloxane resin composed of trimethylsiloxane units and SiO_2 units in such proportion that the ratio of methyl radicals to silicon atoms ranges from about 0.8:1 to about 1.5:1, and (3) from 15 to 80 percent by weight of a polysiloxane composed essentially of units of the formula

in which each Z is a monovalent hydrocarbon radical of less than 7 carbon atoms, each n has a value of from 1 to 3 and n has an average value of from 2 to 2.9.

3,046,242

METHOD FOR PRODUCING AQUEOUS SILANOL DISPERSION BY CONTACTING A METAL SILICONATE WITH A CATION EXCHANGER AND PRODUCT THEREOF

Thomas R. Santelli, Toledo, Ohio., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

No Drawing. Continuation of application Ser. No. 279,470, Mar. 29, 1952. This application May 19, 1961, Ser. No. 111,145

9 Claims. (Cl. 260—29.2)

1. A method of producing a substantially salt-free aqueous silanol dispersion of superior stability that comprises bringing the pH of an aqueous solution consisting essentially of water and a water-soluble salt of an organo-substituted silicic acid and of a metal of the class consisting of alkali metals and alkaline earth metals to a value between 3 and 7 by contacting said solution with the hydrogen form only of an insoluble cation exchanger, the average number of organic groups attached to each silicon atom being from .05 to 3, and said organic groups being of the class consisting of saturated aliphatic hydrocarbon groups having from one to five carbon atoms, olefinically unsaturated hydrocarbon groups having from two to five carbon atoms, and aromatic hydrocarbon groups having from six to seven carbon atoms.

3,046,243

AQUEOUS GLASS-FIBER SIZING COMPOSITION CONTAINING POLYMER AND CATIONIC DEIONIZATION PRODUCT OF A VINYL SILICONATE

Thomas R. Santelli, Toledo, and John G. Mohr, Woodville, Ohio, and Calvin A. Calendine, Parkersburg, W. Va., assignors, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware

No Drawing. Continuation of application Ser. No. 344,454, Mar. 24, 1953. This application Feb. 5, 1958, Ser. No. 713,317

7 Claims. (Cl. 260—29.6)

1. A sizing composition for application to glass fibers during the formation thereof to improve the adhesion thereto of resinous materials, comprising an aqueous emulsion of a synthetic resinous film-forming agent formed from ethylenically unsaturated monomers, a glass fiber lubricating agent, and a deionized hydrolysis product of a vinyl silanol containing between 1 and 3 hydrolyzable groups and having a non-hydrolyzable group to silicon atom ratio between 0.8 and 1.5 prepared by the cationic deionization of a vinyl siliconate selected from the class consisting of alkali metal vinyl siliconates and alkaline earth metal vinyl siliconates by contact with a hydrogen form of a cation active exchanger.

3,046,244

METHOD OF PREPARING A SOLUTION OF BUTYL RUBBER IN HEXANE COMPRISING ADDING WET BUTYL RUBBER TO AN AGITATED MIXTURE OF HEXANE AND WATER

Edward Allen Hunter and Merlan Meredith Lambert, Baton Rouge, La., Marnell Albin Segura, Elizabeth, N.J., and Augustus Bailey Small, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 18, 1956, Ser. No. 578,965

4 Claims. (Cl. 260—29.7)

1. A method which comprises providing a wet solid rubbery copolymer of butyl rubber containing between about 27 and 50% by weight of water therein; forming a violently agitated mixture of 1 to 3 parts of hexane dispersed in 1 part of water as the continuous phase; and adding said wet rubbery copolymer directly to said agitated mixture to provide a solution of rubbery polymer in said hexane, with a relatively low viscosity.

3,046,245

PREPARATION OF CRYSTALLINE POLYSTYRENE SOLUTIONS

Roland J. Kern, Miamisburg, and Allen S. Kenyon, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 15, 1957, Ser. No. 634,164

12 Claims. (Cl. 260—30.4)

1. The method of preparing a solution of at least about 2 weight percent of isotactic polystyrene, which method comprises heating crystalline polystyrene to a temperature above the melting point of the crystalline portion thereof and below the decomposition point of the polystyrene, cooling said polystyrene to a temperature below about 110° C. at a rate sufficiently rapid to obtain an amorphous isotactic polystyrene having less than one percent crystallinity, and thereafter dissolving said polystyrene in between about 1 and about 49 times by weight of a solvent which will dissolve conventional amorphous polystyrene.

3,046,246

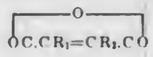
RESINOUS REACTION PRODUCT COMPRISING A COPOLYMER OF AN UNSATURATED DICARBOXYLIC ACID ANHYDRIDE AND AN OLEFINIC COMPOUND, AND AN ALIPHATIC POLYHYDRIC ALCOHOL, AND A MOLDING COMPOSITION COMPRISING SAME AND A PLASTICIZER

Irving E. Muskat, Miami, Fla., assignor, by mesne assignments, to Texas Butadiene & Chemical Corporation, a corporation of Delaware

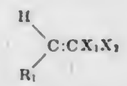
No Drawing. Filed Jan. 23, 1958, Ser. No. 710,624

25 Claims. (Cl. 260—30.4)

1. A molding composition adapted for molding under pressure at temperatures of about 120° C. to about 210° C., comprising a mixture of (A) a resin ingredient consisting of a solid copolymer produced by the copolymerization of unsaturated dicarboxylic acid anhydride having the general formula



wherein R_1 represents a member selected from the group consisting of hydrogen, halogen, hydrocarbon radical and substituted hydrocarbon radical, and R_2 is selected from the group consisting of halogen and hydrogen atoms, and olefinic compound having the general formula



where X_1 and X_2 represent activating atoms selected from the group consisting of hydrogen, halogen, alkoxy, aryloxy, alkaryloxy, acetyl, alkyl, substituted alkyl, alicyclic, substituted alicyclic, aromatic and nuclear hydrogen substituted aromatic radical, and R_1 is selected from the group consisting of hydrogen and alkyl radicals, (B) aliphatic polyhydric alcohol which is reactive in situ with said copolymer during molding to provide a thermoset crosslinked polymer and (C) at least 5% by weight of the molding composition of reactive plasticizer selected from the group consisting of monomeric organic oxirane compounds containing at least one oxirane group and polymers which are polyglycidyl ethers of polyhydroxy organic compounds, said copolymer containing anhydride groups as the sole functional group reactive with the hydroxyl groups of said aliphatic polyhydric alcohol and with the oxirane group of said reactive plasticizer.

3,046,247

NEW ESTER PLASTICIZER COMPOSITION COMPRISING A VINYL CHLORIDE RESIN AND AN ESTER PLASTICIZER

Howard L. Wilson, Arcola, Ill., and Fred W. Banes and Joseph F. Nelson, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 9, 1959, Ser. No. 805,151

4 Claims. (Cl. 260—31.8)

1. A composition of matter comprising 100 parts of a solid resin selected from the group consisting of polyvinyl chloride and vinyl chloride-vinyl acetate copolymers and about 5 to 100 parts of a mixture of neutral esters consisting essentially of the reaction product of phthalic acid and aliphatic alcohols selected from the group consisting of C_8, C_9 and C_{10} alcohols obtained by hydrogenating the oxonation products of C_7 to C_9 alpha olefins obtained by thermally cracking a paraffin wax-containing petroleum fraction; wherein at least 35 wt. percent of the esters are formed from said C_8 alcohols, at least 30 wt. percent of the esters are formed from said C_9 alcohols and the balance of the esters are formed from said C_{10} alcohols.

3,046,248

METHOD OF PREPARING SOLID ELASTOMERS FROM UNCURED LIQUID ORGANIC POLYTHIOPOLYMERCAPTAN POLYMERS

Eugene J. Molnar, La Grange, Ill., assignor to Coe Laboratories, Inc., Chicago, Ill.

No Drawing. Filed June 10, 1959, Ser. No. 819,250

16 Claims. (Cl. 260—31.8)

9. The method of producing a solid elastomeric cured product comprising the step of preparing a first mixture consisting essentially of about 80 parts by weight of cupric hydroxide as a curing agent, about 30 parts by weight of powdered titanium dioxide as a filler and about 82 parts by weight of a dibutylphthalate as a plasticizer, a second mixture consisting of about 99 parts by weight of uncured liquid organic polythiopolymercaptan polymers having an average molecular weight of between about 3000 to about 5000, one part by weight of elemental sulfur as a reaction promoting agent, and 25 parts by weight of powdered titanium dioxide as a filler, blending a composition consisting of about one part by weight of said first mixture with about two parts by weight of said second mixture, by intermixing said mixtures to form said blended composition, said blended composition thereafter curing to form said solid elastomeric cured product at not less than ambient temperature.

3,046,249

POLYMERS OF FORMALDEHYDE STABILIZED WITH HYDROXYANTHRAQUINONES AND PROCESS FOR MAKING THEM

Hans Dieter Hermann and Edgar Fischer, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Nov. 17, 1959, Ser. No. 853,455

Claims priority, application Germany Nov. 28, 1958

9 Claims. (Cl. 260—45.95)

1. Composition of matter comprising a polyformaldehyde which loses less than 80% of its weight within 30 minutes at 200° C. under nitrogen and as stabilizer 0.01 to 10%, calculated upon the weight of the polyformaldehyde, of a hydroxyanthraquinone containing 2 to 8 hydroxyl groups.

3,046,250

ORGANOSILICON HYDROXYLALKYL-AMINE POLYMERS

Edwin P. Plueddemann, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Oct. 4, 1957, Ser. No. 688,118

6 Claims. (Cl. 260—46.5)

1. An organopolysiloxane composition containing at least one unit of the formula

in which each Y is a divalent radical composed of atoms selected from the group consisting of carbon, hydrogen, oxygen, nitrogen, sulfur, metal and non-hydrolyzable halogen atoms and is attached to both X radicals by carbon-nitrogen bonds, said Y radical being free of acid groups having a dissociation constant greater than 10^{-3}, each X is a divalent organic radical connected to silicon by a silicon-carbon linkage and consisting of hydrogen atoms, carbon atoms and oxygen atoms, the latter being present in configurations of the group consisting of hydroxyl groups, epoxy groups and ether linkages, said X radical containing at least one pair of adjacent carbon atoms, one carbon atom of said pair being attached to a hydroxyl group and the other carbon atom of said pair being attached to a nitrogen atom of the radical Y, each R is a monovalent radical selected from the group consisting of the hydrogen atom, the hydroxyl radical, hydrocarbon radicals, halogenohydrocarbon radicals, hydrocarbonoxy radicals and halogenohydrocarbonoxy radicals, each m has a value of from 0 to 3 and each n has a value of from 0 to 2, any remaining units of said organopolysiloxane having the formula

in which R and m are as above defined.

3,046,251

PROCESS FOR THE ACYLATION OF POLYOXYMETHYLENES

Kuno Wagner, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 9, 1960, Ser. No. 13,708

Claims priority, application Germany Mar. 11, 1959

18 Claims. (Cl. 260—67)

1. A process of acylating a solid, film-forming high molecular polyoxymethylene which comprises contacting 1 part by weight of said high molecular polyoxymethylene at temperatures of about 50–200° C. with at least 2 parts by weight of a carboxylic acid anhydride and about 0.5–20 parts by weight of an organic isocyanate having as the sole reactive group at least one isocyanate group per 100 parts by weight of said anhydride.

3,046,252

BAKING POLYESTER RESIN

James R. Stephens, Gary, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,433

7 Claims. (Cl. 260—77)

1. A baking resin prepared by the reaction of (I) a polyester product of the condensation reaction of (*a*) an acidic member selected from the class consisting of trimellitic acid, trimellitic anhydride, trimesic acid, hemimellitic acid and hemimellitic anhydride with (*b*) a member selected from the class consisting of (*i*) alkylene oxides containing 2–4 carbon atoms and (*ii*) alkylene glycols containing 2–6 carbon atoms to obtain a product char-

acterized by an acid number of about 25–100 and hydroxyl number of about 100–200 with (II) hexamethoxymethyl melamine and (III) an alcohol selected from the class consisting of alkanols and ether-alkanols, said alkanols containing not more than about 22 carbon atoms, said reactants I, II, and III being charged to the reaction zone in proportions, as parts by weight of each of said reactants, I, 40–90; II, 5–50; and III, 10–60, said reactants being maintained at a temperature between about 100° F. and 350° F. until a baking resin product is obtained within the reaction zone in the form of a single phase liquid product.

3,046,253

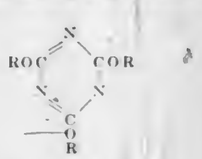
PREPARATION OF POLYMERIC PRODUCTS FROM CYANURATES

Louis Schmerling, Riverside, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 11, 1960, Ser. No. 21,101

12 Claims. (Cl. 260—77.5)

1. A process for the preparation of a polymeric product which comprises reacting a cyanurate of the formula



wherein R is selected from the group consisting of hydrogen and an olefinic radical of from 2 to 12 carbon atoms, at least one R being an olefinic radical of from 2 to 12 carbon atoms, with a saturated hydrocarbon selected from the group consisting of paraffins and cycloparaffins containing from 3 to about 16 carbon atoms per molecule in the presence of a free radical generating catalyst at a reaction temperature at least as high as the decomposition temperature of the catalyst.

3,046,254

METHOD FOR THE PREPARATION OF POLYUREAS

Yanosuke Inaba, Fujisawa City, Kunihiko Miyake, Kamakura City, and Goro Kimura, Fujisawa City, Japan, assignors to Toyo Koatsu Industries, Inc., Tokyo, Japan, a corporation of Japan

No Drawing. Filed June 2, 1960, Ser. No. 33,406

6 Claims. (Cl. 260—77.5)

1. The process of producing a polyurea copolymer which comprises heating at least one amine compound from the class consisting of primary diamines having two terminal primary amine groups and a connecting aliphatic hydrocarbon chain wherein at least one carbon atom of said chain is bonded to an alkyl group of no more than 10 carbon atoms, said diamine containing a total of 3–20 carbon atoms to the molecule and carbonates thereof; a polymethylene diamine compound from the class consisting of a primary straight-chained polymethylene diamine having a total of 2–20 carbon atoms to the molecule and carbonates thereof and a urea compound from the class consisting of urea, diurea, methylene diurea, ethylene diurea, methylene dithiourea and ethylene dithiourea in an inert gas atmosphere at a temperature of about 80° C.–130° C. with the evolution of ammonia for a period of time until the evolution of ammonia ceases, continuing heating at a temperature in the approximate range of 140° C.–190° C. with the further evolution of ammonia for a period of time until the evolution of ammonia ceases and subsequently continuing heating at a temperature of about 200° C.–280° C.

3,046,255

PROCESS FOR PREPARING POLYCARBONATES

Franklin Strain, Barberton, and Henry C. Stevens, Akron, Ohio, and George E. Foltz, Pittsburgh, Pa., assignors, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed June 20, 1957, Ser. No. 667,037

12 Claims. (Cl. 260—77.5)

1. A method of producing a high molecular weight polycarbonate which comprises reacting an acyclic, saturated diol and a dihaloformate of a diol in a heterogeneous medium containing an aqueous alkaline phase and an essentially water insoluble, inert organic solvent for the polycarbonate selected from the group consisting of nitroalkanes, dialkyl ethers and partially chlorinated aliphatic hydrocarbons.

3,046,256

OCTAMETHYLENEAMIDE-2,2'-p-PHENYLENE-BIS-ETHYLAMIDE COPOLYMER

Robert D. Evans, West Chester, and Arthur J. Yu, Swarthmore, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,066

6 Claims. (Cl. 260—78)

1. An isomorphous copolymer of octamethylenediamine, 2,2'-p-phenylene-bis-ethylamine and a dicarboxylic acid having the general formula $HOOC(CH_2)_nCOOH$ wherein n is 4 to 10, the copolymer being composed of 5 to 95 mol percent of the octamethyleneamide and 95 to 5 mol percent of the 2,2'-p-phenylene-bis-ethylamide.

3,046,257

SEBACAMIDE-P-XYLYLENEDIAMIDE COPOLYMER

Robert D. Evans, West Chester, and Arthur J. Yu, Swarthmore, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,068

6 Claims. (Cl. 260—78)

1. An isomorphous polymethylenesebacamide polymethylene-p-xylylenediacetamide copolymer composed of 5 to 95 mol percent of polymethylenesebacamide and 95 to 5 mol percent polymethylene-p-xylylenediacetamide and wherein the polymethylene contains 6 to 12 carbon atoms.

3,046,258

DIALLYL ALKYL ESTERS OF BENZENEPOLYCARBOXYLIC ACIDS

William Hodes, Stamford, Conn., and Richard E. Van Strien, Griffith, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Apr. 24, 1959, Ser. No. 808,560

3 Claims. (Cl. 260—78.5)

1. A copolymeric resin prepared by copolymerizing styrene, as the predominant reactant, and a hereinafter defined compound, in solution in a lower boiling benzene hydrocarbon, at a temperature between about 70° C. and 150° C., in the presence of a peroxy-type polymerization catalyst, and recovering a solid resin, wherein said compound is of the formula



where R is an alkyl group containing from 1 to 13 carbon atoms and R_a is an allyl group.

3,046,259

PROCESS FOR WATER SOLUBLE POLYMER RECOVERY

Irwin H. Hess, White Plains, N.Y., and Kerwin K. Kurtz, Whippany, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 14, 1957, Ser. No. 689,757

11 Claims. (Cl. 260—80)

1. A process for recovering a water-soluble addition polymer of a polymerizable compound containing a $CH_2=C<$ group from an aqueous solution thereof comprising

(1) blending said aqueous solution with an organic precipitating agent, at a temperature between about 0° C. and a temperature just below the boiling point of said precipitating agent, in an amount sufficient to reduce the viscosity of said solution and to produce a permanent uniform cloudiness throughout the medium, which cloudiness does not dissipate on continuous agitation, but not in an amount sufficient to precipitate said polymer therefrom,

(2) diluting the blend thus prepared with a further quantity of an organic precipitating agent in an amount sufficient to precipitate the polymer in the form of fine discrete particles,

(3) separating the solid precipitated polymer from the residual fluid, and

(4) drying the separated polymer, wherein said precipitating agent is at least partially soluble in water, inert to said polymer and in which said polymer is substantially insoluble and wherein said aqueous solution of said precipitating agent is a non-solvent for said polymer at a concentration up to and including saturation.

3,046,260

DETERGENT COPOLYMER

William T. Stewart, El Cerrito, Frank A. Stuart, Orinda, and Warren Lowe, San Francisco, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Original application Feb. 3, 1956, Ser. No. 563,206, now Patent No. 2,892,786, dated June 30, 1959. Divided and this application Feb. 12, 1958, Ser. No. 714,695

2 Claims. (Cl. 260—80.5)

1. As a new composition of matter an oil-soluble copolymer of (A) a polymerizable oil-solubilizing compound selected from the group consisting of olefinic hydrocarbons, olefinic ethers containing a single oxygen atom and hydrocarbon carboxylic acids containing at most two carboxy groups fully esterified with monohydroxy hydrocarbons, said compound having a single ethylenic linkage and containing a monovalent hydrocarbon group of from 10 to 20 aliphatic carbon atoms, (B) an amide of an α,β-ethylenically unsaturated monocarboxylic acid of from 3 to 6 carbon atoms wherein the amide nitrogen atom is attached to a substituted alkyl group of 2 to 7 carbon atoms which is substituted by at least one hydroxy group, and (C) α,β-ethylenically unsaturated monocarboxylic acid of from 3 to 6 carbon atoms, said copolymer having an apparent molecular weight of at least 2000 as determined by the light scattering method and a solubility in mineral lubricating oil of at least 2% by weight, said monomers being present in the copolymer in the ratio of from about 3 to 15 monomer units of the oil-solubilizing monomer (A) for each monomer unit of the amide (B) and the acid (C).

3,046,261

FLUORINATED ORGANIC COMPOUNDS

Hyman Iserson, Erdenheim, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,084

17 Claims. (Cl. 260—87.5)

1. Conjugated perfluorovinylcyclobutene.

3,046,262

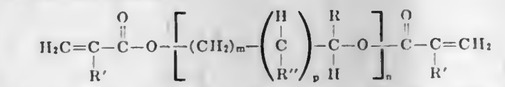
ACCELERATED ANAEROBIC CURING COMPOSITIONS

Vernon K. Krieble, % The American Sealants Co., 103 Woodbine St., Hartford, Conn.

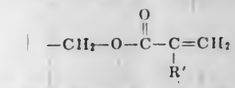
No Drawing. Filed Aug. 19, 1960, Ser. No. 50,594

6 Claims. (Cl. 260—89.5)

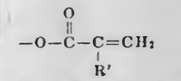
1. A sealant composition having extended shelf life when exposed to oxygen but capable of rapidly setting upon exclusion from contact with oxygen comprising a mixture of an unoxygenated monomer corresponding to the general formula:



wherein R is a member selected from the class consisting of hydrogen, $-CH_3$, $-C_2H_5$, $-CH_2OH$,



R' is a member selected from the class consisting of hydrogen, chlorine, $-CH_3$ and $-C_2H_5$, R'' is a member selected from the class consisting of hydrogen, —OH and



m is an integer equal to at least 1, n is an integer equal to at least 1, for example 1–20 or more, and p is one of the following: 0, 1; 0.1–10.0 percent by weight of a catalyst selected from the group consisting of hydrogen peroxide and organic hydroperoxides, said catalyst being characterized by its inability to remain ineffective to polymerize said monomer in the presence of oxygen and to initiate polymerization of said monomer in the absence of oxygen at room temperature; and 0.01–10.0 percent by weight of an organic sulfimide, said composition being free from amines.

3,046,263

COAGULATION OF COLLOIDAL POLYTETRAFLUOROETHYLENE DISPERSIONS

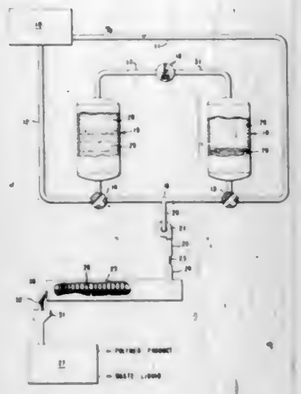
Harold Earl Whitlock, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed July 10, 1959, Ser. No. 826,339

3 Claims. (Cl. 260—92.1)

1. A process for the continuous coagulation of aqueous polytetrafluoroethylene by use of mechanical energy which comprises subjecting an aqueous, colloidal, dispersion of polytetrafluoroethylene containing 5 to 50 weight percent of polytetrafluoroethylene, based on the total composition to energy by (1) subjecting said dispersion to intense agitation, the amount of energy imparted to said dispersion by said intense agitation being in the range of 1 to 100 horsepower-seconds per gallon of dispersion; (2) thereafter passing said dispersion under sufficient applied pressure through a capillary pipe, the diameter of said capillary pipe being reduced to result in a pressure drop in the range of 0.5 to 20 p.s.i. and (3) thereafter subjecting said dispersion to agitation in the presence of air, the amount of energy applied to said

dispersion being in the amount of 0.25 to 50 horsepower-seconds per gallon of dispersion and (4) on separation



from the aqueous phase recovering a granular, free-flowing polytetrafluoroethylene powder.

3,046,264

OLEFIN POLYMERIZATION PROCESS

Erik Tornqvist, Westfield, and Arthur W. Langer, Jr., Watchung, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 1, 1958, Ser. No. 725,507
2 Claims. (Cl. 260—93.7)

1. The process for forming a high crystallinity polymer from propylene comprising the steps of passing said olefin into an aromatic hydrocarbon diluent containing from 0.1 to 0.5 wt. percent of a catalyst of a cocrystallized titanium trichloride-aluminum chloride activated with from 0.1 to 5.0 mols of a trialkyl aluminum compound, at a temperature in the range of 10 to 50° C., and at substantially atmospheric pressure, increasing said temperature at a rate not greater than 2° C. per minute until a polymerization temperature in the range of 60° to 120° C. is obtained while continuing the passage of said olefin into said aromatic diluent, maintaining the polymerization temperature to polymerize propylene, and isolating said high crystallinity polymer therefrom.

3,046,265

PROCESS FOR THE POLYMERIZATION OF DIOLEFINS WITH AN ALKYL ALUMINUM, COBALT HALIDE AND ACETYL HALIDE CATALYST

Stanley M. Hazen, Cheswich, and Leo F. Meyer, Pittsburgh, Pa., assignors to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,949
4 Claims. (Cl. 260—94.3)

1. A process for the homo polymerization of conjugated diolefinic hydrocarbons which comprises carrying out the polymerization in the presence of a catalyst system consisting essentially of an aluminum alkyl selected from the group consisting of a trialkyl aluminum, a dialkyl aluminum halide and an alkyl aluminum dihalide, an anhydrous cobalt halide and acetyl halide, wherein the molar ratio of said aluminum alkyl to said cobalt halide is at least about 1:1, the amount of said ecetyl halide present being at least about 0.5 millimol per mol of said conjugated diolefinic hydrocarbon, and the combined amounts of said three components in the catalyst system being at least about 2.5 millimols per mol of said conjugated diolefinic hydrocarbon.

3,046,266

POLYMERIZATION OF ETHYLENE WITH A CATALYST OF $TiCl_3$ GROUND IN PROPYLENE

Calvin J. Benning, Clarksville, and Walter R. Wszolek, Ellicott City, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed May 25, 1960, Ser. No. 31,523
6 Claims. (Cl. 260—94.9)

1. The method of preparing a normally solid polyethylene comprising polymerizing ethylene at a temperature in the range 75 to 200° C. and at a pressure of at least 100 p.s.i. in an inert organic solvent with a catalyst consisting essentially of $TiCl_3$ ground under propylene until the $TiCl_3$ picks up at least 0.5% by weight of propylene.

3,046,267

CATALYTIC PROCESS FOR POLYMERIZING ETHYLENICALLY UNSATURATED HYDROCARBONS

Howard J. Cohen and John M. Hoyt, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Sept. 22, 1959, Ser. No. 841,447
9 Claims. (Cl. 260—94.9)

1. A polymerization process which comprises contacting a lower molecular weight ethylenically unsaturated hydrocarbon with a combination catalyst comprising (1) a reducing agent from the group consisting of alkyl aluminum halides and trialkyl aluminum and (2) a compound of the formula

$$M^nO(OSiR_3)_y$$

wherein M is a member from the group consisting of vanadium, titanium and zirconium, n is the valence of M, $y=n-2$, and R is a hydrocarbon radical to produce a normally solid polymer of said unsaturated hydrocarbon.

3,046,268

CATALYTIC PROCESS FOR POLYMERIZING ETHYLENICALLY UNSATURATED HYDROCARBONS

Howard J. Cohen, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Sept. 22, 1959, Ser. No. 841,448
9 Claims. (Cl. 260—94.9)

1. A polymerization process which comprises contacting a lower molecular weight ethylenically unsaturated hydrocarbon with a combination catalyst comprising (1) a reducing agent from the group consisting of trialkylaluminum and alkylaluminum halides and (2) a compound of the formula

$$M'(R_1R_2R_3MO)_y$$

wherein M' is a metal from groups IVb and Vb of the periodic table, M is a member from the group consisting of Si and Sn, y is the valence of M', and R_1, R_2 and R_3 is a hydrocarbon radical to produce a normally solid polymer of said unsaturated hydrocarbon.

3,046,269

CATALYTIC PROCESS FOR POLYMERIZING ETHYLENICALLY UNSATURATED HYDROCARBONS

Howard J. Cohen and John M. Hoyt, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Sept. 22, 1959, Ser. No. 841,449
9 Claims. (Cl. 260—94.9)

1. A polymerization process which comprises contacting lower molecular weight ethylenically unsaturated olefinic hydrocarbon with a combination catalyst comprising (a) a reducing agent from the group consisting of alkylaluminum halides and trialkylaluminum and

(b) a mixture of a compound of the following Formula A

$$VO(OSiR_3)_3$$

R is a hydrocarbon radical and a compound of the following Formula B

$$Ti(OSiR_3)_4$$

R is a hydrocarbon radical, said combination catalyst being further characterized by containing Compound A and Compound B in mole ratio of one mole of Compound A to from about 0.1 to about 10 moles of Compound B providing synergistic activity in polymerizing said olefinic hydrocarbons.

3,046,270

METHOD OF EXTRACTING GELATIN FROM COLLAGEN-BEARING STOCK BY IRRADIATION AND LIMING

John R. Lowry, White Plains, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 25, 1959, Ser. No. 795,333
7 Claims. (Cl. 260—118)

1. The method of extracting gelatin from a collagen-bearing stock which comprises irradiating the collagen-bearing stock with ionizing penetrating radiation having an energy of from about 10^{-3} to about 15 million electron volts, liming the irradiated stock and extracting gelatin from said irradiated limed stock.

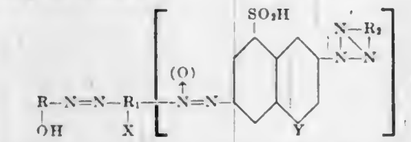
3,046,271

METAL-CONTAINING AZO DYESTUFFS

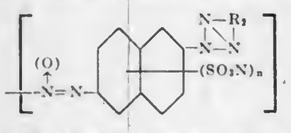
Fritz Suckfüll, Leverkusen, and Horst Nickel, Koln-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 13, 1959, Ser. No. 792,969
Claims priority, application Germany July 23, 1957
12 Claims. (Cl. 260—143)

1. A copper complex compound of an azo dyestuff having the formula



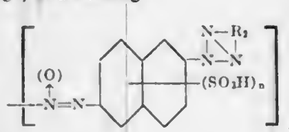
wherein Y is a member selected from the group consisting of H and SO_3H; wherein R is a radical of a coupling component selected from the class consisting of the sulfonaphthalene, azosulfonaphthalene, sulfobenzene and pyrazolone series, bearing the hydroxyl group in o-position to the azo bridge; R_1 is a radical selected from the group consisting of the benzene and naphthalene series bearing



in p-position, with respect to the azo bridge between R and R_1, when



is an azo bridge, and bearing



in amphi-position with respect to the azo bridge between R and R_1 when



is a member selected from the group consisting of an azo bridge and any azoxy bridge; X stands in o-position to the external azo bridge and is a group which is capable of forming a copper complex in combination with the hydroxyl group in R; R_2 is a radical of a sulfonaphthalene coupling component bearing the nitrogen atoms in o-position to one another; and n is one of the integers 1 and 2.

3,046,272

POLYSACCHARIDE-SULTONE REACTION PRODUCTS

Jan Strating, Groningen, Geert Moes, Hoogezand, and Willem Freerk Vogel, Groningen, Netherlands, assignors to W. A. Scholten's Chemische Fabrieken N.V., Groningen, Netherlands, a corporation of the Netherlands

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,600
Claims priority, application Great Britain Nov. 24, 1958
7 Claims. (Cl. 260—233.3)

1. A member of the group consisting of polysaccharide ether sulfonic acid and the alkali metal salts thereof, said polysaccharide ether sulfonic acid consisting essentially of the reaction product of a sultone selected from the group consisting of propane sultone, butane sultone, benzyl sultone and tolyl sultone, and a polysaccharide selected from the group consisting of starch and natural plant hydro-colloids.

3,046,273

NOVEL 17α-TRIFLUORO-PROPYNYL ANDROSTENES AND PROCESSES

John Fried, Plainfield, and Thomas S. Bry, Roselle, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 18, 1961, Ser. No. 83,389
28 Claims. (Cl. 260—239.55)

1. 17α - trifluoropropynyl - 3 - methoxy - 2,5(10) - androstadiene - 17β - ol.

19. Process for the preparation of 17α - trifluoropropynyl - 17β - hydroxy - 19 - nor - 4 - androstene - 3 - one which comprises reacting 17α - trifluoropropynyl - 3-methoxy - 2,5(10) - androstadiene - 17β - ol with a strong acid.

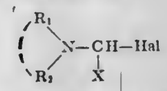
3,046,274

PROCESS OF PREPARING α-HALOGENATED AMINES

Horst Böhme, Marburg (Lahn), and Klaus Hartke, Lank, Lower Rhine, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main Hochst, Germany, a company of Germany

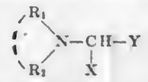
No Drawing. Filed Aug. 19, 1959, Ser. No. 834,682
Claims priority, application Germany Aug. 28, 1958
1 Claim. (Cl. 260—247)

A process of preparing tertiary N-α-halogeno-alkylamine derivatives of the formula

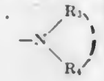


wherein R_1 and R_2 taken along are members selected from the group consisting of alkyl radicals containing 1 to 4 carbon atoms and benzyl, and taken together with the nitrogen atom are members selected from the group consisting of pyrrolidino, piperidino, 2'-methyl-piperidino, and morpholino rings, X is a member selected from the group consisting of hydrogen, alkyl radicals containing 1 to 4 carbon atoms, and phenyl, and Hal is a member selected

from the group consisting of chlorine, bromine and iodine, which process comprises reacting in the presence of an inert organic solvent and with exclusion of atmospheric moisture a compound of the formula



wherein R_1, R_2 and X have the meanings given above and Y is a member selected from the group consisting of



and

—O—R_5

wherein R_3 and R_4 have the meanings indicated for R_1 and R_2, and R_5 is an alkyl group containing 1 to 4 carbon atoms, with a carboxylic acid halide of the formula

R—CO—Hal

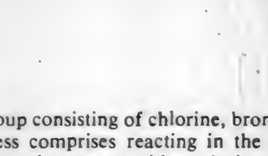
wherein R is a member selected from the group consisting of alkyl radicals containing 1 to 3 carbon atoms, ethoxy, phenyl, and trichloro-methyl, and Hal has the meaning given above.

3,046,275
N-SUBSTITUTED 2-PHENYL-7-AMINOALKOXY CHROMONES

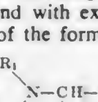
Erwin Kohlstaedt, Frankfurt am Main, and Karl-Heinz Klingler, Langen, Hesse, Germany, assignors to Chemiewerk Homburg Zweigniederlassung der Deutschen Gold- and Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed May 27, 1959, Ser. No. 816,056
Claims priority, application Germany May 30, 1958
13 Claims. (Cl. 260—247.7)

1. A compound of the formula:



wherein the



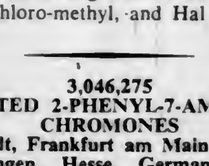
group represents a member selected from the group consisting of di-lower alkyl amino, piperidino, pyrrolidino and morpholino, R_3 is an alkylene chain having 2–3 carbon atoms and R_4 is a member selected from the group consisting of phenyl and p-methoxy phenyl.

3,046,276
S-TRIAZOLO-[2,3-c]PYRIMIDINE DERIVATIVES

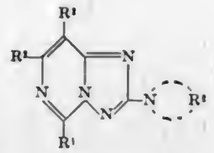
George William Miller and Francis Leslie Rose, Macclesfield, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 3, 1960, Ser. No. 33,626
Claims priority, application Great Britain June 15, 1959
7 Claims. (Cl. 260—256.4)

1. An s-triazolo-[2,3-c]pyrimidine derivative having a formula selected from the group consisting of



and



wherein R^1, R^2 and R^3 are selected from the group consisting of hydrogen, alkyl of up to seven carbon atoms, lower alkenyl, halogeno, trifluoromethyl and dihydroxypropyl; R^4 is selected from the group consisting of hydrogen, alkyl of not more than six carbon atoms and β-hydroxyethyl radicals; R^5 is selected from the group consisting of alkyl of not more than eight carbon atoms, lower alkenyl, β-hydroxyethyl, methoxycarbonylmethyl, benzyl, and β-phenylethyl radicals and R^6 represents the atoms necessary to complete with the adjacent nitrogen atom a ring from the group consisting of morpholino and piperidino; and the nontoxic, pharmaceutically-acceptable acid addition salts thereof.

2. The compound 2-methylamino-7-methyl-5-n-propyl-s-triazolo-[2,3-c]pyrimidine.

3,046,277
PIPERAZINE SULFITE

James R. Anslow, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,154
7 Claims. (Cl. 260—268)

1. Tripiperazine disulfite.

3,046,278
PROCESS OF CYANATION

Wayne E. Feely, Rydal, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Oct. 24, 1960, Ser. No. 64,249
7 Claims. (Cl. 260—283)

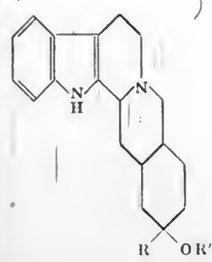
1. A process for the introduction of cyano groups into the nucleus of a nitrogen heterocycle selected from the group consisting of pyridine, quinoline and isoquinoline, said pyridine having at least one of the 2, 4 and 6 positions available for substitution, said quinoline having available for substitution at least one of the 2 and 4 positions, said isoquinolines having the 1 position available for substitution, said nitrogen heterocycles having as substituents groups selected from the group consisting of 0 to 1 electrophilic groups selected from the group consisting of CN and COOR in which R is an alkyl group containing 1 to 8 carbon atoms, 0 to 3 substituents selected from the group consisting of alkoxy having 1 to 4 carbon atoms, alkyl having 1 to 8 carbon atoms, and aryl, which comprises reacting the N-alkoxy-quaternary inorganic salts in which the alkoxy group has 1 to 10 carbon atoms of said nitrogen heterocycles with the cyanide salt of a strong base anion exchanger at a temperature of from —10° to 100° C. and recovering the cyano derivative so formed.

3,046,279
17-YOHIMBOL DERIVATIVES

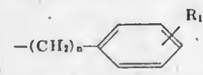
John Shavel, Jr., Mendham, and George Bobowski, East Orange, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed June 15, 1960, Ser. No. 36,164
19 Claims. (Cl. 260—287)

1. A member selected from the group consisting of yohimbane derivatives of the formula:



wherein R is a member selected from the group consisting of an alkyl group of the formula C_nH_{2n+1} where n is 1 to 18, an alkenyl group of the formula C_mH_{2m-1} where m is 2 to 18, an alkynyl group of the formula C_mH_{2m-3}, unsubstituted cycloalkyl having 5 to 7 carbon atoms, naphthyl and radicals of the formula:



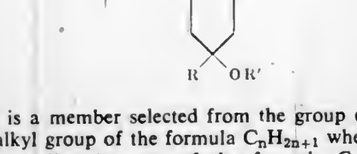
wherein n is 0 to 2 and R_1 is a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogen, phenyl and di-lower alkylamino, and wherein R′ is a member selected from the group consisting of hydrogen and an acyl radical of an acid selected from the group consisting of an unsubstituted lower alkyl carboxylic acid, an unsubstituted lower alkyl sulfonic acid, benzoic acid, benzene sulfonic acid, and benzoic and benzene sulfonic acids wherein the benzene ring is substituted with 1 to 3 members selected from the group consisting of lower alkyl, lower alkoxy, and halogen; and the pharmaceutically acceptable non-toxic acid addition and quaternary ammonium salts thereof.

3,046,280
PRIMARY, SECONDARY AND TERTIARY AMINES HAVING A SPASMOLYTIC EFFECT AND METHOD OF PRODUCING THESE COMPOUNDS

Teunis Kralt and Jan van Dijk, Weesp, Netherlands, assignors, by mesn: assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 19, 1956, Ser. No. 616,958
Claims priority, application Netherlands Nov. 24, 1955
1 Claim. (Cl. 260—293)

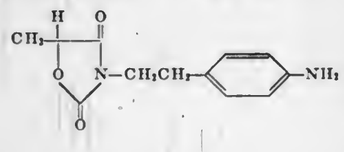
An amine having spasmolytic properties and corresponding to the structral formula



3,046,281
3-[β-(p-AMINOPHENYL)ETHYL]-5-METHYL-OXAZOLIDINE-2,4-DIONE

Seymour L. Shapiro, Hastings on Hudson, and Louis Freedman, Bronxville, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware

No Drawing. Filed June 3, 1960, Ser. No. 33,617
1 Claim. (Cl. 260—307)



3,046,282
PHTHALOCYANINE PIGMENTS AND METHOD OF MAKING SAME

Geoffrey R. Buckwalter, Flemington, N.J., assignor to Fred'k H. Levey Company, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed June 29, 1960, Ser. No. 39,443
6 Claims. (Cl. 260—314.5)

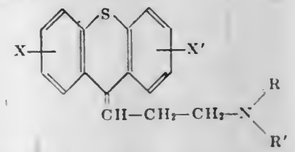
1. A method of producing pigmentary copper phthalocyanine having improved texture and tinctorial strength and especially adapted to use as a colorant in printing ink, which comprises subjecting crude copper phthalocyanine, in admixture with a granular, water-soluble grinding aid and 2-methyl-2,4-pentanediol to form a viscous, pasty mass, to vigorous shearing action, and removing the grinding aid and 2-methyl-2,4-pentanediol from the resultant pigment by water-washing.

3,046,283
10-(OMEGA-AMINOALKYLIDENE)-THIOXANTHENES

Edward L. Engelhardt, Gwynedd Valley, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 19, 1957, Ser. No. 678,961
7 Claims. (Cl. 260—328)

1. Compounds selected from the class consisting of those having the formula



and their pharmaceutically acceptable non-toxic acid addition salts, wherein X and X′ respectively is selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy and phenyl and in which



is selected from the group consisting of di-lower-alkylamino, 1-piperidyl, 1-pyrrolidyl, 4-morpholinyl and di-lower-alkylamino in which one of the alkyl radicals is attached to the 2-carbon of the propyl chain to thereby form 1-methyl-3-piperidylmethyl attached to the 10-carbon.

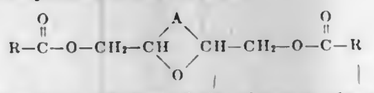
4. 2 - chloro - 10 - (3 - dimethylaminopropylidene)-thiaxanthene.

3,046,284
BISNAPHTHENATE HETEROCYCLIC ESTERS

John O. Van Hook, Abington, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

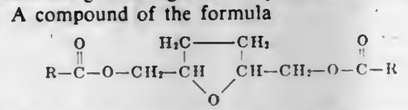
No Drawing. Filed Aug. 12, 1959, Ser. No. 833,160
4 Claims. (Cl. 260—347.4)

1. A compounnd of the formula



in which A is an alkylene chain of two to three carbon atoms, inclusive, and R represents a naphthenic acid residue containing from eight to thirty carbon atoms.

2. A compound of the formula



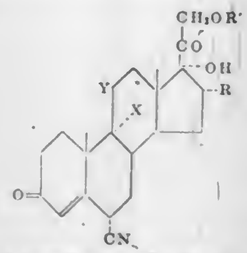
in which R is a naphthenic acid residue containing ten to sixteen carbon atoms.

3,046,285
6-CYANO CORTICAL HORMONES

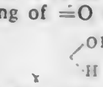
Albert Bowers and Howard J. Ringold, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Filed Aug. 25, 1959, Ser. No. 835,848
Claims priority, application Mexico Aug. 26, 1958
21 Claims. (Cl. 260—397.45)

1. A 6-cyano-corticoid derivative of the general formula:



in which X is a member of the group consisting of hydrogen and fluorine, Y is an arrangement selected from the group consisting of =O and

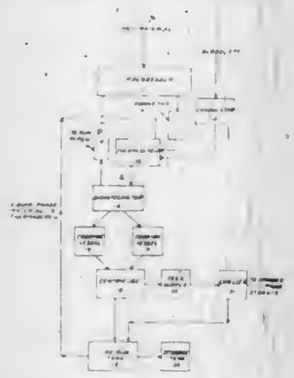


R is a member of the group consisting of hydrogen and methyl, and R′ is a member of the group consisting of hydrogen and acyl radicals derived from a hydrocarbon carboxylic acid having up to about 12 carbon atoms.

3,046,286
PROCESS FOR RECOVERING FATS AND MEAT AND BONE SCRAP FROM INEDIBLE SLAUGHTERHOUSE MATERIALS

Paul Speer, La Grange, Ill., Charles Griggs, Mason City, Iowa, and Daniel J. McAvoy, Downers Grove, Ill., assignors, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware

Filed Feb. 6, 1959, Ser. No. 791,743
4 Claims. (Cl. 260—412.6)



1. A continuous process for obtaining fats, and meat and bone scrap from inedible slaughterhouse materials comprising reducing substantially all solid portions including bones of said materials, introducing vascular portions of said materials to said reduced portions, heating the mixture thus formed at a temperature of from between 100° to 212° F. to denaturize said vascular portions and to lower the moisture content of said mixture, reducing further said solid portions in said materials to a predetermined particle size, heating the materials at a temperature of from about 220° to about 270° F. to rupture the fat cells, to further reduce the moisture content, and to render the material substantially free from deleterious agents, and centrifugally separating and recovering the solid and liquid phases of said materials.

3,046,287
ALIPHATIC MOLYBDENUM CARBOXYLATE CHLORIDES AND METHOD FOR MAKING SAME

Melvin Leo Larson, Royal Oak, Mich., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Apr. 2, 1959, Ser. No. 803,571
10 Claims. (Cl. 260—429)

1. A molybdenum carboxylate chloride having the formula:

$$(RCOO)_2MoCl_3$$

in which R is radical selected from the group consisting of aliphatic radicals having 1–17, inclusive, carbon atoms and aliphatic radicals having 1–17, inclusive, carbon atoms alpha-substituted with a halide.

3,046,288
CYCLOPENTADIENYL-METAL HALIDES AND METHOD OF MAKING

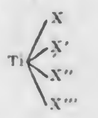
Carol L. Sloan, Yonkers, N.Y., and William A. Barber, Springdale, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 29, 1957, Ser. No. 693,030
2 Claims. (Cl. 260—429.5)

1. The method of preparing a compound represented by the general formula



wherein X, X′ and X″ each represent a halogen selected from the class consisting of chlorine, bromine and iodine, said method comprising effecting reaction between (1) a titanium tetrahalide represented by the general formula



wherein X, X′, X″ and X‴ each have the same meaning stated above for X, X′ and X″ in the first-given formula and (2) dicyclopentadienylmagnesium, the tetrahalide of (1) being employed in an amount corresponding to at least two moles thereof for each mole of dicyclopentadienylmagnesium, and said reaction being effected under anhydrous conditions, while the said reactants are contained in an inert, anhydrous, liquid medium and at a temperature ranging from about 20° C. up to the decomposition temperature of the reaction product; and isolating a product represented by the first-given formula from the resulting reaction mass.

3,046,289
REAGENTS DERIVED FROM DITHIOL

Robert E. D. Clark, Cambridge, England, assignor to Fisher Scientific Company, Pittsburgh, Pa.

No Drawing. Filed Oct. 3, 1960, Ser. No. 59,775
Claims priority, application Great Britain Mar. 20, 1957
1 Claim. (Cl. 260—429.9)

Zinc toluene-3,4-dithiol having the empirical formula $C_7H_6S_2Zn$.

3,046,290
MANUFACTURE OF ALKYL ALUMINUM HYDRIDES

Harold E. Podall, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 22, 1960, Ser. No. 50,823
5 Claims. (Cl. 260—448)

1. The process of manuafture of a dialkyl aluminum hydride comprising reacting a trialkyl aluminum with hydrogen at elevated pressure and temperature and in the presence of comminuted magnesium metal in the proportions of from about 0.1 to 2 parts by weight to 1 part by weight of the aluminum content of the trialkyl aluminum.

3,046,291
POLYMERS OF SILACYCLOBUTANES

Leo H. Sommer, State College, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

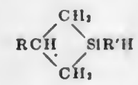
No Drawing. Filed May 5, 1958, Ser. No. 732,802
5 Claims. (Cl. 260—448.2)

1. A polymeric organosilicon compound consisting essentially of units having the general formula

$$[—CH_2CHRCH_2(R')(H)Si—]$$

where R is selected from the group consisting of H and the radical —CH_3, and R′ is a monovalent hydrocarbon radical free of aliphatic unsaturation.

3. A polymeric organosilicon compound containing siloxane linkages and consisting essentially of the reaction product obtained by the process comprising polymerizing an organosilicon compound (I) containing silicon-bonded hydrogen and selected from the group consisting of (A) monomers of the formula



where R is selected from the group consisting of H and the radical —CH_3 and R′ is a monovalent hydrocarbon radical free of aliphatic unsaturation, and (B) polymers consisting essentially of units having the general formula $[—CH_2CHRCH_2(R')(H)Si—]$ where R and R′ are as above defined, in the presence of a siloxane linkage-former (II) selected from the group consisting of water and oxygen, and in the presence of (III) an alkaline catalyst, by contacting (I), (II), and (III) in a liquid phase for a time sufficient to cleave at least some of the silicon-bonded hydrogen atoms in (I).

3,046,292
PROCESS OF MAKING CYANOALKYLSILANES

Roscoe A. Pike, Holden, Mass., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,748
7 Claims. (Cl. 260—448.2)

1. A process for preparing a cyanoalkylsilane wherein the cyano group is interconnected to silicon through at least two carbon atoms, which comprises reacting an alkene nitrile with a silane having one silicon-bonded hydrogen atom and three silicon-bonded hydrolyzable groups selected from the class consisting of halogen, acetoxy groups, alkoxy groups and aryloxy groups in the presence of a tertiary disilyl amine of the formula:

$$[A_3Si]_2NR$$

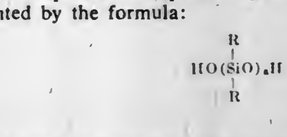
where A is selected from the class consisting of alkyl groups, phenyl groups, a halogen atom and an alkoxy group and R is a monovalent hydrocarbon group selected from the class consisting of alkyl groups, cyclohexyl groups and phenyl groups.

3,046,293
AMMONIA CATALYZED PROCESS FOR PRODUCING HYDROXYSILICON COMPOUNDS

Ronald M. Pike, Chelmsford, Mass., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,750
8 Claims. (Cl. 260—448.2)

1. A process for producing diorganosiloxanes represented by the formula:



wherein R is a member selected from the group consisting of the unsubstituted monovalent hydrocarbon groups and the substituted monovalent hydrocarbon groups containing at least one substituent selected from the group consisting of the amino, cyano, hydroxyl, alkoxy and aryloxy groups and *a* has a value of at least 2, which process comprises reacting (1) a cyclic diorganopolysiloxane having the formula:

$$(R_2SiO)_g$$

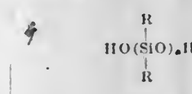
wherein R has the above-defined meaning and *g* has a value from 3 to 7 inclusive and (2) water in the presence of ammonia at a temperature from 100° C. to 150° C. and at a pressure above atmospheric pressure in a closed vessel, said process being conducted in the absence of any nitrile solvent.

3,046,294
PRIMARY AMINE CATALYZED PROCESS FOR PRODUCING HYDROXYSILICON COMPOUNDS

Roscoe A. Pike, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,106
12 Claims. (Cl. 260—448.2)

1. A process for producing diorganosiloxanes represented by the formula:



wherein R is a member selected from the group consisting of the unsubstituted monovalent hydrocarbon groups and the substituted monovalent hydrocarbon groups containing at least one substituent selected from the group consisting of the amino, cyano, hydroxyl, alkoxy and aryloxy groups and *a* has a value of at least 2, which process comprises reacting (1) a cyclic diorganopolysiloxane having the formula:

$$(R_2SiO)_g$$

wherein R has the above-defined meaning and *g* has a value from 3 to 7 inclusive and (2) water in the presence of at least one mole of an aliphatic primary amine per mole of water at a temperature from 75° C. to 150° C., said process being conducted in the absence of any nitrile solvent.

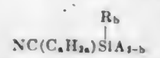
3,046,295
PROCESS FOR PRODUCING AMINOALKYLSILANES

Robert J. Lisanke, Buffalo, and Donald L. Bailey, Snyder, N.Y., assignors to Union Carbide Corporation, a corporation of New York

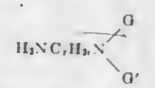
No Drawing. Filed June 21, 1960, Ser. No. 37,580
8 Claims. (Cl. 260—448.8)

1. A process for producing N-(aminoalkyl)aminoalkylsilanes which comprises contacting under essentially an-

hydrous conditions and at a temperature between about 50° C. and 300° C. (1) a cyanoalkyl silane represented by the formula:



wherein R is a monovalent hydrocarbon group free from aliphatic unsaturation containing from 1 to 10 carbon atoms, A is an alkoxy group containing from 1 to 8 carbon atoms, *a* is an integer having a value from 2 to 5, *b* is an integer having a value from zero to 1 and the cyano group is removed from the silicon atom by at least two carbon atoms, (2) a diamino compound represented by the formula:



wherein *r* is an integer having a value from 2 to 6, the nitrogen atoms bonded to the C_rH_{2r} group are separated by at least 2 carbon atoms, G is selected from the class consisting of hydrogen, beta-hydroxyethyl, alkyl groups having from 1 to 6 carbon atoms and $(CH_2CH_2NH)_sH$ groups wherein *s* is an integer having a value from 1 to 3, and G′ is selected from the class consisting of hydrogen, beta-aminoethyl, beta-hydroxyethyl, and alkyl groups having from 1 to 6 carbon atoms, (3) a hydrogenation catalyst, and (4) hydrogen at an initial pressure at temperature of at least 100 pounds per square inch gauge.

3,046,296
TOXIC O,O-DIMETHYL- AND O,O-DIETHYL S-PENTACHLOROPHENYL PHOSPHOROTHIOATE

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 8, 1957, Ser. No. 632,966
3 Claims. (Cl. 260—461)

1. A compound taken from the class consisting of O,O-dimethyl S-pentachlorophenyl phosphorothioate and O,O-diethyl S-pentachlorophenyl phosphorothioate.

3,046,297
METHOD FOR THE PREPARATION OF TRIS (2,3-DIBROMOPROPYL) PHOSPHATE

Donald E. Overbeek and Richard C. Nametz, St. Louis, Mich., assignors to Michigan Chemical Corporation, St. Louis, Mich., a corporation of Michigan

No Drawing. Filed Nov. 4, 1958, Ser. No. 771,738
13 Claims. (Cl. 260—461)

1. The method for the production of tris (2,3-dibromopropyl) phosphate which comprises adding phosphorus oxychloride to a mixture of 2,3-dibromopropanol, an aromatic tertiary amine selected from the group consisting of pyridine, β-picoline and γ-picoline and an inert, volatile, organic solvent and separating the resulting tris (2,3-dibromopropyl) phosphate from the hydrochloride of the organic base formed by the reaction and from the inert volatile organic solvent.

3,046,298
BICYCLO-[2,2,1]-HEPTANE HYDRAZINE DERIVATIVES

Hartmund Wollweber, Rudolf Hiltmann, Wolfgang Wirth, and Horst Kreiskott, all of Wuppertal-Elberfeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Sept. 27, 1960, Ser. No. 58,657
Claims priority, application Germany Sept. 30, 1959
5 Claims. (Cl. 260—468)

1. A chemical compound selected from the group consisting of 2-(2-bicyclo-[2,2,1]-heptyl)-isopropyl hydrazine; 1-(2-bicyclo-[2,2,1]-hept-5-enyl)-ethyl hydrazine; α-[1-(2-bicyclo-[2,2,1]-heptyl)-ethyl]-β-carbethoxy hydrazine; and 1-(2-bicyclo-[2,2,1]-heptyl)-ethyl hydrazine.

4. The chemical compound, α-[1-(2-bicyclo-[2,2,1]-heptyl)-ethyl]-β-carbethoxy hydrazine.

3,046,299
PROCESS FOR THE PREPARATION OF CYCLOPROPANE-CARBOXYLIC ACIDS OF TRANS-FORM

Marc T. Julia, Paris, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Filed June 25, 1959, Ser. No. 822,762
Claims priority, application France July 28, 1958
4 Claims. (Cl. 260—468)

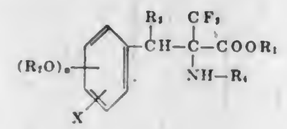
1. A process for converting the methyl ester of cis-chrysanthemic acid into the corresponding trans ester which comprises subjecting the said cis-ester to the action of an alkali metal alcoholate.

3,046,300
α-TRIFLUOROMETHYLOXYPHENYLALANINES

Meyer Sletzinger, North Plainfield, and Walter A. Gaines, Rahway, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,962
12 Claims. (Cl. 260—471)

1. Compounds of the formula



in which R_1 and R_3 are each selected from the group consisting of hydrogen and lower alkyl, R_2 and R_4 are each selected from the group consisting of hydrogen and lower alkanoyl, R_4 being hydrogen when R_2 is hydrogen, *n* is a positive whole number less than 4, and X is selected from the group consisting of hydrogen, halogen, lower alkyl and trifluoromethyl, X being para to the amino-acid side chain when other than hydrogen.

3,046,301
METHOD OF MAKING CHLORAMBUCIL

Arthur P. Phillips, Tuckahoe, and John W. Mentha, Hartsdale, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Oct. 29, 1959, Ser. No. 849,438
8 Claims. (Cl. 260—471)

1. The process of preparing methyl γ-[p-aminophenyl] butyrate which comprises reacting in the presence of hydrogen and a hydrogenation catalyst "selected from the class consisting of palladium and platinum", a compound selected from the class consisting of β-p-acetamidobenzoyl-propionic acid and β-p-acetamidobenzoyl-acrylic acid dissolved in methanolic solution containing excess mineral acid to the stoichiometric quantity.

3,046,302
METHYLCARBAMATES

Phyllis D. Oja, Walnut Creek, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 28, 1959, Ser. No. 836,593
2 Claims. (Cl. 260—482)

1. 1-(2-chlorophenyl)-2-propynyl methylcarbamate.

3,046,303
PROCESS FOR THE PURIFICATION OF LIQUIDS

Philip Alexander Cruickshank, Lexington, Mass., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 9, 1959, Ser. No. 838,830
7 Claims. (Cl. 260—486)

1. A process for purifying an ethylenically unsaturated polyester of a polyol which comprises passing gaseous anhydrous ammonia into a solution of an azeotropic organic solvent maintained at a temperature within the range of 0° C. to 30° C. and a polyester of a polyol, said polyol having an average molecular weight of not more than about 600 taken from the group consisting of polyhydric alcohols of 2–6 carbon atoms containing only hydrocarbon radicals and hydroxyl groups and polyethylene and polypropylene glycols and of an alpha-methylene monocarboxylic acid, said polyester containing cuprous oxide and cuprous chloride as impurities until precipitation of copper compounds is complete and the pH of a dilute aqueous slurry of the treated polyester is between about 5.5 and about 8.5, physically removing the precipitate copper compounds from the solvent solution containing the unsaturated polyester, admixing with the solvent solution a water-insoluble cation exchange agent and filtering the resulting solution to remove said agent.

3,046,304
COUPLING OF HALOGENATED ORGANIC COMPOUNDS

Robert Neville Haszeldine, Cambridge, England ("Windyridge," Lyme Road, Disley, Cheshire, England)

No Drawing. Filed Aug. 29, 1957, Ser. No. 680,915
Claims priority, application Great Britain Sept. 6, 1956
31 Claims. (Cl. 260—513)

1. A method for making compounds having the general formula

RCXYCXYR

which comprises coupling two molecules having the formula

RCXYZ

where R is selected from the group consisting of alkyl and halogenoalkyl groups having from 1 to about 20 carbon atoms, Z is selected from the group consisting of bromine and iodine, Y is a halogen atom of no greater atomic weight than Z and X is selected from the group consisting of hydrogen and halogen atoms having no greater atomic weight than Z.

31. A method of making a sulphonic acid compound of the general formula

$$MSO_3CF_2CHY''(R_j)_p(R_m)_qCHUCF_2SO_3M$$

where U and Y″ are selected from the group consisting of chlorine and fluorine, R_j and R_m are fluoroalkylene groups, the group $—(R_j)_p—$ having on the carbon atom nearest the $—(R_m)_q—$ group and the $—(R_m)_q—$ group having on the carbon atom nearest the $—(R_j)_p—$ group at least one atom selected from the group consisting of hydrogen, fluorine, chlorine and bromine and at least one atom selected from the group consisting of fluorine, chlorine and bromine, and where *p* and *q* are from 1 to about 20, M being an alkali metal, which comprises reacting a salt, $MHSO_3$, with a compound

$$CF_2=CY''(R_j)_p(R_m)_qCU=CF_2$$

3,046,305
PROCESS FOR THE PRODUCTION OF PARA-ALKYL-PHENOL AND PARA-ALKYL-BENZOIC ACID

John B. Braunwarth, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Sept. 24, 1959, Ser. No. 842,059
2 Claims. (Cl. 260—515)

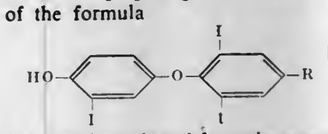
1. The process for the simultaneous production of p-alkyl-substituted phenols and p-alkyl-substituted benzoic acids which comprises reacting about one mol of a mono C_1—C-alkyl-substituted benzene compound with about 0.2 to 0.3 mol of phosgene in the presence of anhydrous aluminum chloride at a temperature of about −10° C. to 100° C. in a first reaction zone, separately removing hydrogen chloride and unconsumed phosgene from the reaction mixture, diluting said hydrogen chloride to form acidified water, passing said acidified water into said reaction mixture to destroy the aluminum chloride-complex present thereby forming a lower aqueous phase and an upper organic phase, separating said phases, passing the aqueous phase to a separator in contact with said mono-alkyl-substituted benzene compound as a solvent to remove any remaining organic material present as a solvent extract phase and forming a second aqueous phase containing spent aluminum chloride, combining said solvent extract phase with said organic phase, water-washing said combined phases to remove any remaining aluminum chloride thereby producing a third aqueous phase and a washed organic phase, separating said third aqueous phase and said washed organic phase, subjecting said washed organic phase to distillation to remove as overhead said mono-alkyl-substituted benzene compound, recycling said mono-alkyl-substituted benzene compound to said first reaction zone, recovering a distillation residue from said distillation comprising p,p′-dialkyl benzophenone, reacting said p,p′-dialkyl benzophenone with acetic anhydride, sulfuric acid and hydrogen peroxide at a temperature of about 20° to 40° C. in a second reaction zone, recovering the p-alkyl-substituted phenyl ester of p-alkyl-substituted benzoic acid from said second reaction zone as the organic phase, saponifying said ester with an alkali to form a mixture of the alkali metal salt of p-alkyl-substituted phenol and the alkali metal salt of p-alkyl-substituted benzoic acid, acidifying said mixture to produce p-alkyl-substituted phenol and p-alkyl-substituted benzoic acid and separating said products.

3,046,306
PROCESS OF PREPARING TRIIODINATED ANALOGS OF THYRONINE

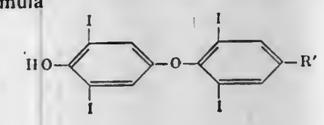
Robert I. Meltzer, Rockaway, Robert J. Stanaback, Bernardsville, and Wilson B. Lutz, Madison, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed June 24, 1959, Ser. No. 822,431
6 Claims. (Cl. 260—519)

1. A method of preparing triiodinated analogs of thyronine of the formula



wherein R is a member selected from the group consisting of carboxyl and radicals of the formula —A—COOH where A is a member selected from the group consisting of alkylene and mono-amino substituted alkylene containing 1 to 3 carbon atoms in the alkylene chain which comprises treating tetraiodinated analogs of thyronine of the formula



wherein R' is a member selected from the group consisting of carboxyl and radicals of the formula —A'—COOH where A' is a member selected from the group consisting of alkylene, mono-amino substituted alkylene and a carboxylic acid derived mono-acylamino- substituted alkylene containing 1 to 3 carbon atoms in the alkylene chain with an acid selected from the group consisting of phosphorous acid and hypophosphorous acid at a temperature between about 90° C. and about 150° C., the ratio by weight of said acid to said tetraiodinated analog of thyronine being at least 6 to 1.

3,046,307

DISTILLATION PROCESS FOR SYNTHESIZING UREA

Julius H. Bochinski, La Habra, Calif., assignor to The Fluor Corporation, Ltd., Los Angeles, Calif., a corporation of California

Filed Apr. 5, 1957, Ser. No. 651,073
11 Claims. (Cl. 260—555)

1. The process for synthesizing urea that includes feeding ammonia into a stripping zone for upward flow therein into a reaction zone, feeding carbon dioxide into the lower portion of the reaction zone for admixture with ammonia from the stripping zone and flowing the carbon doxide and ammonia upwardly in the reaction zone and countercurrently to an aqueous stream containing ammonium carbamate and urea, reacting the carbon dioxide and ammonia in the upper portion of the reaction zone to form said ammonium carbamate and urea, passing said stream downwardly through said stripping zone countercurrently to the ammonia introduced thereto to decompose the carbamate to carbon dioxide and ammonia, and vaporization of some water for passage with the ammonia fed into the reaction zone, passing an overhead stream of unreacted carbon dioxide, ammonia and water vapor from said reaction zone into a condensing zone and returning to the reaction zone substantially all the cooled stream including ammonium carbamate formed by the cooling so that such carbamate is carried by the down-flowing liquid stream in the reaction zone, heating the stripping zone to supplement the effect of the ammonia in promoting decomposition of carbamate to carbon dioxide and water, maintaining the reaction and stripping zones at substantially the same pressure, and withdrawing the urea from the stripping zone.

3,046,308

O-ALLYL-N,N-DIALLYLHYDROXYLAMINE AND METHOD OF PREPARATION

Jesse T. Dunn, Charleston, and Donald L. Heywood, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 16, 1958, Ser. No. 767,518
5 Claims. (Cl. 260—584)

1. A composition of matter, O-allyl N,N-diallylhydroxylamine.

2. A process for preparing O-allyl N,N-diallylhydroxylamine which comprises oxidizing triallylamine with an amine oxidizing agent selected from the group consisting of hydrogen peroxide and peracetic acid to produce triallylamine N-oxide, and heating said triallylamine N-oxide at a temperature of from about 30° C. to about 100° C. to form O-allyl N,N-diallylhydroxylamine.

3,046,309

ALKYLATION OF AROMATIC COMPOUNDS

Thomas F. McGrath, Norwalk, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 4, 1959, Ser. No. 810,594
6 Claims. (Cl. 260—612)

1. A method of ring alkylating aromatic compounds which consists essentially in bringing together into intimate contact at a rate to maintain reaction temperatures in the range of 0° C. to 85° C.: (*a*) an organic halide selected from the group consisting of RCH_2X, wherein R is a member selected from the group consisting of phenyl, naphthyl and anthracyl, and substituted phenyl, naphthyl and anthracyl, the substituents for said substituted phenyl, naphthyl and anthracyl being selected from the group consisting of halogen, lower alkyl and lower alkoxy, and X is a member selected from the group consisting of bromine and chlorine; a tertiary alkyl halide having only lower alkyl and substituted lower alkyl moieties on its tertiary carbon atom, the substituents for said lower alkyl moieties being selected from the group consisting of halogen and lower alkoxy; and an allyl monohalide and a substituted allyl monohalide in which the allyl moiety is substituted with a member selected from the group consisting of lower alkyl and phenyl; and (*b*) an aromatic compound selected from the group consisting of naphthalene, substituted naphthalene, anthracene, substituted anthracene and substituted benzene, said substituents being selected from the group consisting of lower alkyl and lower alkoxy, there being no more than two of said substituents on any of said aromatic moieties; (*c*) in the presence of an organometallic compound selected from the group consisting of bis(cyclopentadienyl)magnesium, bis(lower alkyl substituted cyclopentadienyl)magnesium, and a compound of the formula Y—Mg—Z, wherein Y is a member selected from the group consisting of bromine, chlorine and iodine, and Z is a member selected from the group consisting of phenyl, lower alkyl-substituted phenyl, naphthyl and lower alkyl-substituted naphthyl; (*d*) hydrolyzing the resulting reaction mixture; and (*e*) recovering the resulting ring alkylated aromatic product which is said aromatic compound (*b*) above containing on its ring the moiety remaining upon dehalogenation of the organic halide (*a*), above.

3,046,310

OXENIN INTERMEDIATE AND PROCESS FOR OBTAINING OXENIN

Joseph A. Kardys, Groton, Conn., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 23, 1958, Ser. No. 730,239
11 Claims. (Cl. 260—617)

1. The precipitate containing from about 1 to about 1.5 mols of alkali metal obtained by adding an aqueous solution of an alkali metal hydroxide to a solution of 3,7-dimethyl-9-(2,6,6-trimethylcyclohexen-1-yl)-nona-2,7-diene-4-yne-1,6-diol.

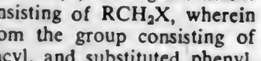
3,046,311

METHOD FOR PREPARING 1,5-PENTANEDIOLS

John G. Milligan, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed July 10, 1958, Ser. No. 747,571
5 Claims. (Cl. 260—635)

1. A method for preparing a 1,5-pentanediol which comprises reacting a 2-buten-1-al with formaldehyde, the mol proportion of formaldehyde to 2-buten-1-al being in the range of about 0.5 to 1 to about 1 to 1, at a temperature within the range of about 0° to about 100° C. in contact with an alkaline condensing agent selected from the group consisting of the hydroxides and carbonates of the alkali metals to form a condensation product comprising a 5-hydroxy-2-penten-1-al, separating said 5-hydroxy-2-penten-1-al from said reaction mixture and hydrogenating said 5-hydroxy-2-penten-1-al to form a 1,5-pentanediol, said 2-buten-1-al having the formula:



in which R and R_2 are selected from the group consisting of hydrogen and C_1 to C_3 alkyl groups.

3,046,312

PROCESS FOR MAKING ERYTHRITOL AND ETHYLENE GLYCOL FROM POLYMERIC DIALDEHYDES

Felix H. Otey, Carl A. Wilham, and Charles L. Mehltretter, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,616
5 Claims. (Cl. 260—635)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for producing erythritol and ethylene glycol in 75% to 95% yields from substantially water-insoluble dialdehyde starch having a dialdehyde content of about 95% of theory, comprising forming an aqueous mixture, having a pH of about from 3 to 7.5, and consisting of about 25% by weight, based on the weight of the mixture, of said dialdehyde starch, about from 11% to 25% by weight, based on the weight of the dialdehyde starch, of a hydrogenation catalyst selected from the group consisting of Raney nickel and nickel supported on kieselguhr, the said nickel supported on kieselguhr catalyst consisting of 65% reduced nickel and 35% kieselguhr, and, when the catalyst is Raney nickel, about from 20% to 25% by weight, based on the weight of the dialdehyde starch, of an adsorptive material selected from the group consisting of activated carbon and kieselguhr, and treating the thus-formed aqueous mixture with hydrogen at a temperature of about from 150° C. to 250° C. and at a pressure of about from 700 pounds to 10,000 pounds per square inch for about from 2 to 6 hours to simultaneously hydrogenate and hydrolyze the dialdehyde starch to erythritol and ethylene glycol.

3,046,313

PREPARATION OF PENTAFLUOROIODOBENZENE

Walter J. Pummer, Rockville, Md., and Leo A. Wall, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed May 3, 1960, Ser. No. 26,660
2 Claims. (Cl. 260—650)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process of making pentafluoroiodobenzene which comprises preparing the Grignard reagent pentafluorophenylmagnesium bromide from pentafluorobromobenzene; and reacting said Grignard reagent with 1,1,2-trifluoro-1-chloro-2-iodoethane.

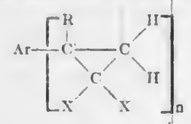
3,046,314

1-ARYL-2,2-DIHALOCYCLOPROPANES

Ellis K. Fields and Joseph M. Sandri, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Oct. 30, 1959, Ser. No. 849,751
5 Claims. (Cl. 260—650)

1. An aromatic dihalocyclopropane having the formula:



wherein Ar is an aromatic hydrocarbon radical whose valence corresponds to the value of *n* selected from the class consisting of alkyl substituted phenyl radicals, the divalent phenylene radical, aromatic hydrocarbon radicals containing more than one independent joined 6-membered aromatic ring, aromatic hydrocarbons containing fused rings, and alkyl hydrocarbon derivatives of these multi-ring aromatics, R is a member selected from the class consisting of hydrogen and an alkyl hydrocarbon radical, X is a halogen selected from the class consisting of chlorine and bromine and *n* is an integer from 1 to 2.

3,046,315

PROCESS FOR ALKYLATING AN AROMATIC HYDROCARBON WITH AN OLEFIN

Harold L. Dimond, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Mar. 18, 1960, Ser. No. 15,846
4 Claims. (Cl. 260—671)

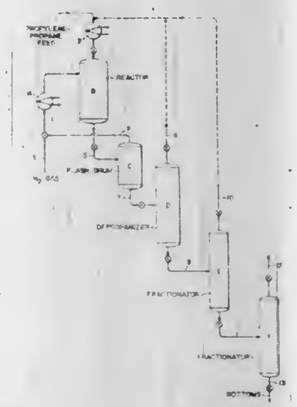
1. A process for alkylating an alkylatable aromatic which comprises reacting said alkylatable aromatic with an olefin in the presence of a $BF_3 \cdot nH_2O$ catalyst, wherein *n* has a value from about 0.5 to about 2.5, and terminating said reaction when the major amount of said alkylatable aromatic has been reacted but the amount of unreacted alkylatable aromatic remaining is at least about 17 percent by volume of the organic reaction mixture and prior to the formation of appreciable amounts of the ortho dialkylated aromatic formed by the introduction of a second alkyl group ortho to the first alkyl group introduced on said alkylatable aromatic, the product obtained comprising primarily a mono alkylated aromatic and appreciable amounts of dialkylated aromatic.

3,046,316

TETRAPROPYLENE QUALITY IMPROVEMENT

David A. Gudelis, Sarnia, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 30, 1959, Ser. No. 856,167
12 Claims. (Cl. 260—671)



10. In a process of alkylating benzene by the reaction of a C_9–C_{24} olefin with benzene in the presence of aluminum chloride catalyst wherein said olefin is a polymerization product prepared by introducing a propylene feedstock comprising at least 85 wt. percent propane and propylene in a molar ratio of between 0.5–4:1 into a

reactor containing a solid phosphoric acid polymerization catalyst maintained at a temperature in the range of 200° to 600° F. and a pressure of 500 to 800 p.s.i.g. and recovering said olefin therefrom, the improvement which comprises introducing into said reactor during said polymerization 0.3 to 0.7 mole of hydrogen gas per mole of said propylene, recovering said olefin from said reactor and employing said olefin to prepare alkyl benzene in the presence of aluminum chloride catalyst, the olefin recovered from the improved process having a lower HDI than the olefin recovered from the unimproved process.

3,046,317
HYDROCRACKING LIQUID ALKANES WITH A CATALYST CONSISTING OF A PLATINUM METAL IN ADMIXTURE WITH BORIA AND ZIRCONIA

John W. Myers, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,139
12 Claims. (Cl. 260—676)

5. A process for hydrocracking a normally liquid normal alkane having at least 5 carbon atoms per molecule comprising contacting said alkane admixed with hydrogen under hydrocracking conditions with a catalyst consisting essentially of a platinum metal in an amount in the range of 0.1 to 10 weight percent of the catalyst in admixture with boria and zirconia so as to hydrocrack said alkane.

3,046,318
ALKYLATION PROCESS

George W. Ayers, Chicago, and William A. Krewer, Arlington Heights, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,491
5 Claims. (Cl. 260—683.63)

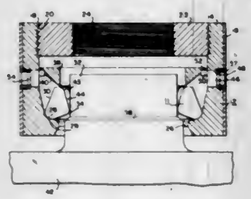
1. The process of continuously alkylating olefinic hydrocarbons of the group consisting of isobutylene and mixtures of isobutylene with other olefinic hydrocarbons having up to 9 carbon atoms per molecule with isoparaffinic hydrocarbons having up to 10 carbon atoms per molecules which comprises, continuously reacting said olefinic and isoparaffinic hydrocarbons with a catalyst consisting of concentrated sulfuric acid, about 4.5 to 20% by weight of acetic acid and no more than about 6% by weight of water in a reaction zone maintained at a temperature of about 10 to 80° F., continuously separating used acid catalyst containing tertiary butyl acetate from said reaction zone, continuously adding a sufficient amount of acetic anhydride to said acid catalyst to react with the water content thereof and maintain same below about 6% by weight, maintaining said acid catalyst at said reaction temperature to prevent decomposition of said tertiary butyl acetate, recycling said acid catalyst to said reaction zone and continuously recovering an alkylated product of enhanced octane number containing about 0.1 to 0.5% by weight of tertiary butyl acetate from said reaction zone.

ELECTRICAL

3,046,319
ELECTRODE STUB CLAMP

Robert W. Daley, Troy, N.Y., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania

Filed Jan. 20, 1960, Ser. No. 3,680
4 Claims. (Cl. 13—14)



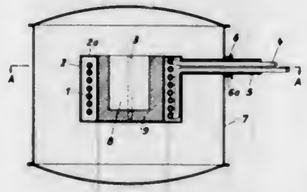
1. An electrode stub clamp comprising a housing and a ring-shaped toggle member positioned within said housing, said housing being formed with an opening disposed to receive an electrode stub, a shelf formed around the inside circumference of said housing, said shelf being disposed to seat said ring-shaped toggle member, said ring-shaped toggle member being formed of a multiplicity of individual segments, each said segment being disposed to tilt on said shelf so as to extend over the edge of said shelf and project into the said opening in said housing.

3,046,320
INDUCTION FURNACE COIL

Horst Gassen, Geisweid, Kreis Siegen, Germany, assignor to Stahlwerke Südwestfalen, A.G., Geisweid, Kreis Siegen, Germany, a corporation of Germany

Filed July 10, 1959, Ser. No. 826,184
Claims priority, application Germany July 22, 1958
11 Claims. (Cl. 13—31)

1. An induction furnace for heating metallic materials under vacuum conditions by means of induction current which comprises a furnace chamber capable of being maintained under vacuum conditions, an induction coil means disposed within said chamber, a metallic casing enclosing said coil means in vacuum sealed condition with respect to said chamber and having an open core space axially defined therethrough constructed and arranged to



receive therewithin metallic material to be treated, said casing having a transverse slit opening defined therein, said slit opening being in vacuum sealed condition with respect to said chamber, and means for supplying induction current to said coil means.

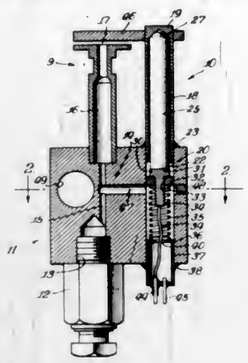
3,046,321
BURNER AND THERMOELECTRIC DEVICE ASSEMBLY

Russell B. Matthews, Milwaukee, Wis., assignor, by mesne assignments, to Penn Controls, Inc., Goshen, Ind., a corporation of Indiana

Filed Dec. 22, 1959, Ser. No. 861,398
10 Claims. (Cl. 136—4)

1. For use in an assembly of a fluid burner having connection with a source of supply of non-oxidizing combustible fluid under pressure, the combination of thermoelectric means comprising an oxidizable inner thermoelectric element, an outer thermoelectric element enclosing said inner thermoelectric element, and hot junction means between said inner and outer thermoelectric elements enclosed within said outer thermoelectric element, and

means for surrounding said inner thermoelectric element with non-oxidizing combustible fluid from said source of

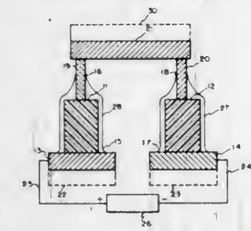


supply to protect said inner thermoelectric element and said hot junction means from ambient atmosphere.

3,046,322
THERMOELECTRIC DEVICE

Bernard S. Wildi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed Mar. 7, 1960, Ser. No. 13,356
11 Claims. (Cl. 136—5)



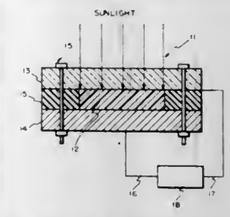
1. A thermoelectric device comprising an N-type thermoelectric element and a P-type thermoelectric element with electrical connections joining said elements and other electrical connections to said elements, provided at least one of said elements is made by the process comprising: (1) mixing pyromellitonitrile and hydrogen sulfide to form a reaction product having substantially 2 moles of hydrogen sulfide per mole of pyromellitonitrile, (2) separating said reaction product from the reaction mixture, (3) forming an element under pressure from said separated reaction product, and (4) heating said formed element at a temperature in the range of about 180°–700° C. for a time sufficient to produce the desired thermoelectric element.

3,046,323
PHOTOELECTRIC DEVICE

Bernard S. Wildi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed Mar. 7, 1960, Ser. No. 13,357
3 Claims. (Cl. 136—89)

1. A photoelectric device comprising a photosensitive element having a transparent conducting surface in ohmic contact with one side of said element and a conducting surface in ohmic contact with the other side of said element, said element having been made by the process comprising: (1) mixing pyromellitonitrile and hydrogen sulfide to form a reaction product having substantially 2 moles of hydrogen sulfide per mole of pyromellitonitrile, (2) separating said reaction product from the reaction mixture, (3) forming an element under pressure from

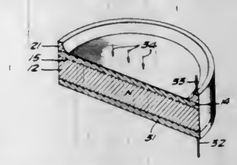


said separated reaction product, and (4) heating said formed element at a temperature in the range of about 180°–700° C. for a time sufficient to produce the desired thermoelectric element.

3,046,324
ALLOYED PHOTOVOLTAIC CELL AND METHOD OF MAKING THE SAME

Sheldon L. Matlow, Arcadia, Calif., assignor to Hoffman Electronics Corporation, a corporation of California

Filed Jan. 16, 1961, Ser. No. 82,801
12 Claims. (Cl. 136—89)

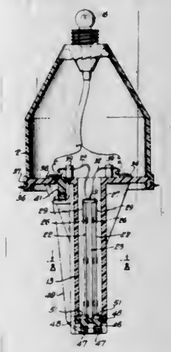


1. A method of making a solar cell, comprising the steps of: depositing an aluminum layer upon an n-type silicon wafer; alloying said aluminum layer to said wafer so as to form within said wafer n- and p-type regions separated by a p-n junction; masking a ring-like configuration of said aluminum layer; and etching away all of the unmasked portion of said aluminum layer, thereby exposing said p-type region in the central portion of said wafer through said ring-like configuration.

3,046,325
EMERGENCY BATTERY

Ralph M. Peffer, Camp Hill, Pa., assignor to Resistance Products Company, Harrisburg, Pa.

Filed Aug. 2, 1960, Ser. No. 46,934
3 Claims. (Cl. 136—90)



1. A device of the character described comprising first and second housing members sealed together along a hori-

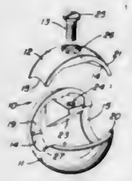
zontal flange, said first housing member forming an air chamber and having mounted thereon electrical voltage terminals, said second housing member having a portion forming one wall of said air chamber formed by said first housing member, said second member forming a battery containing chamber, said chambers being connected by an air passage, a battery in said battery chamber connected to said terminals, a plurality of plugs mounted in the walls of said second member, at least one of said plugs being mounted in a lower wall part of said battery containing chamber and another of said plugs being mounted in the same portion of said second member forming one wall of said air chamber said plugs being secured to said member by means of integral frangible webs, and a pull cord joining said plugs whereby when said cord is pulled the frangible webs give way and said plugs are pulled free of their mounting.

3,046,326
EXTENDED AREA ANODES
Paul A. Marsal, deceased, late of Rocky River, Ohio, by Jeannette Y. Marsal, executrix, Rocky River, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Filed July 10, 1958, Ser. No. 747,769
2 Claims. (Cl. 136—120)



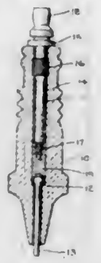
1. An anode having a carrier matrix consisting of preshrunk, open mesh cloth having thereon a thin coating of a gel-forming agent selected from the group consisting of starch and the alkaline salts of carboxymethyl cellulose methyl cellulose, hydroxyethyl cellulose, and hydroxypropyl cellulose, said agent forming a gel when said anode is contacted by alkaline electrolyte; said matrix having a porous layer of anodic particles, said particles being in contact with one another.

3,046,327
CORONA BALL
Robert W. Harmon, Doylestown, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Filed June 10, 1959, Ser. No. 819,424
8 Claims. (Cl. 174—73)



1. A corona device for an electrical conductor comprising a hollow metal body having two complementary exterior surface defining parts with a common longitudinal axis and cooperating adjoining faces, recesses in the said parts at opposed extremities thereof along the said axis for receiving the conductor, a tongue extending outward from a face of one of the said parts and within the remaining part, with adjacent portions of the tongue and the remaining face of the said one part spaced apart on opposite sides of the recesses to receive the conductor when the complementary parts are separated and a screw fastener received through an opening in the remaining said part and threaded into the said tongue, all for assembly of the said two parts upon the conductor by turning movement of the screw fastener.

3,046,328
SPARK PLUGS AND METHODS OF PRODUCING SAME
Harry G. Schurecht, Detroit, Mich., assignor to Champion Spark Plug Company, Toledo, Ohio, a corporation of Delaware
Filed July 20, 1959, Ser. No. 828,367
4 Claims. (Cl. 174—152)



1. In a spark plug assembly, an insulator having a firing end and a terminal end, and having a central bore extending therethrough, a first electrode part seated in the bore of said insulator, a second electrode part spaced axially in said bore from said first electrode part, anchoring means on second electrode part comprising a plurality of spaced, discontinuous, outwardly extending circumferential projections, the radii of which are greater than the radius of the insulator bore whereby said projections frictionally engage said insulator bore and anchor the second electrode part relative thereto, and an expanded, substantially gas-impervious, electrically conducting, vitreous sealing means disposed in at least a part of the insulator bore substantially filling the portion of the bore between, and in contact with each of, said electrode parts, said vitreous sealing means being vesicular in structure, and pressed by its expansion into sealing relationship with the insulator bore, and effective to prevent the flow of a gas therethrough.

3,046,329
STEREO SOUND SYSTEM FOR TV
Thomas W. Reesor, Box 305, La Center, Ky.
Filed Nov. 3, 1959, Ser. No. 850,729
16 Claims. (Cl. 178—5.6)



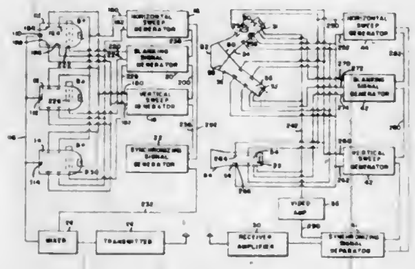
1. In combination with television transmission equipment having a predetermined horizontal scanning frequency and having means to modulate a sound carrier to a predetermined total bandwidth, a two-channel sound transmission system for applying to said sound carrier first and second audio messages, comprising means to add the audio messages to obtain a summation signal; first filter means to restrict the bandwidth of the summation signal to a first portion of said total bandwidth; means to subtract the audio messages to obtain a difference signal; second filter means to restrict said difference signal to a bandwidth not exceeding the remaining portion of said total bandwidth; subcarrier selecting means connected to said transmission equipment to receive said scanning frequency and to deliver a subcarrier harmonically related thereto and lying within said total bandwidth but outside of said first portion thereof; modulation means for modulating said subcarrier with the restricted difference signal; means for selecting a single sideband from the output of said modulation means said sideband lying within said remaining portion of said total bandwidth; and combining means for combining said sideband with said summation signal and connecting the combined signals to said means to modulate the sound carrier.

3,046,330
PROJECTION OF STEREOSCOPIC PICTURES
Karl F. Ross, 5121 Post Road, Riverdale, N.Y.
Filed Oct. 7, 1957, Ser. No. 688,566
4 Claims. (Cl. 178—6.5)



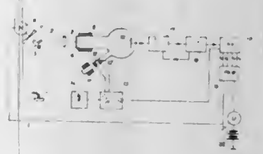
1. A system for the televised reception of stereoscopic pictures, comprising a cathode-ray tube having a luminous screen horizontally subdivided into a row of image areas, beam-forming means in said tube producing a plurality of electron beams staggered in the horizontal direction by a distance equal to the width of an image area whereby said image areas are combined into groups each consisting of a number of image areas equal to the number of said beams, signal-responsive means controlling said beam-forming means in a manner displaying identical strip images on the image areas of each group and different strip images on the areas of different groups, said different strip images representing aspects of a given scene viewed from different angles and together constituting a parallax panoramagram, and a row of magnifying lenses each substantially co-extensive with a respecgroup of image areas, said lenses having their fields of vision substantially coincident over a predetermined viewing area, thereby directing light from each associated image area toward a respective sector of said viewing area.

3,046,331
SUPERVISORY COMMUNICATION SYSTEM
Radames K. H. Gebel, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Sept. 11, 1959, Ser. No. 839,542
3 Claims. (Cl. 178—6.8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A communication system comprising a transmitter, a mixer connected to said transmitter, a plurality of modulation producing devices connected in parallel to said mixer, said modulation producing devices including a picture pickup device, an auxiliary pickup device viewing the area viewed by said picture pickup device, and a sensing device, sweep generator means operative to simultaneously produce a field pattern in each of said pickup devices, said field pattern including trace, retrace and field return sequences, said mixer device being operative to apply the outputs of said pickup devices and said sensing device in modulating relation to a carrier produced by said transmitter, a blanking signal generator for producing a blanking signal for each of said modulation producing devices, said blanking signal generator being connected in controlling relation to each of said pickup devices and said sensing device, said blanking signal generator being operative to blank said picture pickup device during the retrace sequences of the field pattern, to blank the auxiliary pickup device during the trace sequences of the field pattern, to blank said sensing device during the trace and retrace sequences of the field pattern and to blank the picture pickup device and the auxiliary pickup device during the field return sequence of the pattern whereby said modulation producing devices provide modulation in predetermined relation.

3,046,332
DEVICE FOR AUTOMATIC TRACKING OF TARGETS
Ernst Engler, Nussdorf, near Uberlingen (Bodensee), Germany, assignor to Bodenseewerk Perkin-Elmer & Co., G.m.b.H., Uberlingen (Bodensee), Germany
Filed Jan. 13, 1960, Ser. No. 2,152
Claims priority, application Germany Jan. 13, 1959
8 Claims. (Cl. 178—7.2)

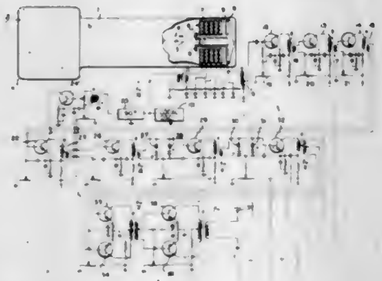


1. A device for automatic determination of the direction of a target from a tracking axis of the type having means for forming a real image of the area surrounding and including said target on the collector electrode of an optical to electronic transducer in which said transducer has means including deflector plates for electronic scanning of said image to produce an electrical signal representative of the significant characteristics of said image; said means for electronic scanning comprising means for producing on the scanning deflection plates two sine voltages 90° out of phase with each other and a sweep voltage modulating each of said sine voltages so that a spiral scan is effected on said collector electrode, said real image being initially so positioned on said electrode that the image of said target is positioned near the center of said scan spiral; means for amplifying and differentiating the first electrical signal formed by each spiral scan so as to produce a first impulse therefrom, said first signal being produced by that significant characteristic of the target area image lying nearest the center of said spiral scan and therefore being representative of the target intended to be tracked; means for converting said first impulse into a standard impulse of a predetermined amplitude and duration; and means for comparing the phase of said standard impulse with that of each of said scanning sine voltages and for producing at least one control signal the magnitude of which increases in accordance with coincidence of phase relation between said standard impulse and one of said scanning sine voltages, said control signal thereby being representative of the direction determined by said phase comparison means and of the direction which the target image and the center of said spiral scan should be moved relative to each other in order to make them coincident.

3,046,333
TRANSISTORIZED AMPLIFIER-TRANSMITTER FOR LOW LIGHT LEVEL TELEVISION CAMERAS

Radames K. H. Gebel, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed Jan. 29, 1960, Ser. No. 5,567
2 Claims. (Cl. 178—7.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

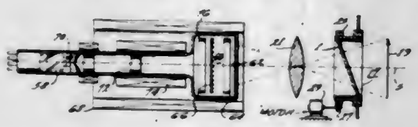


1. A television transmitter comprising: a television pickup tube containing an electron multiplier having several dynodes, the first of which receives an electron stream intensity modulated in accordance with a video signal, and an output electrode; a local oscillator for generating a carrier wave having a frequency considerably higher than the highest frequency of said video signal; means for applying said carrier wave to one of the dynodes of said electron multiplier whereby the signal appearing at said output electrode is said carrier wave amplitude modulated by said video signal; a transistor amplifier, having a pass band sufficient to pass only the band of frequencies constituting said amplitude modulated carrier, having its input connected to said output electrode, said transistor amplifier being biased beyond cut-off for the purpose of increasing the percentage modulation of said carrier; modulating means coupled to the output of said amplifier and to said local oscillator for combining the amplitude modulated carrier output of said amplifier with the carrier wave of said oscillator, with the two carrier waves in phase quadrature, for producing a carrier wave with both amplitude and phase modulation; transistor amplifying and limiting means coupled to the output of said modulating means for removing the amplitude modulation from said amplitude and phase modulated carrier; an antenna; and additional band pass transistor amplifying means connected between the output of said amplifying and limiting means and said antenna.

3,046,334
TELEVISION OPTICAL SYSTEM

John H. Roe, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Nov. 20, 1956, Ser. No. 623,344
6 Claims. (Cl. 178—7.2)
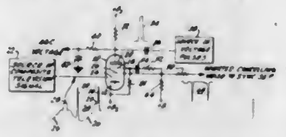


1. For use with a television image pickup tube having an image section including a photosensitive electrode and susceptible to burn-in of a complete image projected simultaneously on said photosensitive electrode by an optical system for said tube, the combination of means providing a light refracting plate adapted to be interposed between said photosensitive electrode and an object from which said image is produced, the plane of said plate being positioned so that at least one surface thereof is at an angle other than normal to the axis of said optical system and means for cyclically moving said light refracting plate relative to said optical axis to correspondingly circularly displace said complete image projected therethrough only an amount of the order of the visual resolution of said image and thereby prevent burn-in of an image projected on said photosensitive electrode.

3,046,335
NOISE PROTECTION CIRCUIT FOR TELEVISION RECEIVERS

Roland N. Rhodes, Levittown, Pa., and Jack Avins, New York, N.Y., assignors to Radio Corporation of America, a corporation of Delaware

Filed Nov. 24, 1959, Ser. No. 855,186
9 Claims. (Cl. 178—7.3)

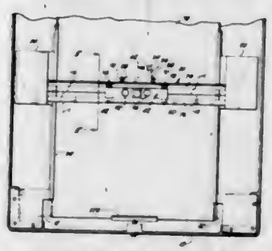


4. In a television receiver having a source of composite television signal which includes synchronizing signal components and video signal components which occur, respectively, during mutually exclusive, regular recurring intervals, said composite television signal also may include noise signal components which occur randomly, a circuit for developing separated noise signals representative of the noise signal components in said composite television signal comprising, in combination: an electron tube having at least a cathode, a control grid, a screen grid, and an anode; means for applying said composite television signal between said cathode and control grid in such polarity that the synchronizing signal components cause a greater cathode current flow in said tube than the video signal components; a source of voltage pulses occurring in synchronism with said synchronizing signal components; means for applying said voltage pulses to said anode; and noise signal load circuit means connected to said screen grid for developing separated noise signals thereacross substantially to the exclusion of signals corresponding to the video and synchronizing components of said composite television signal, said separated noise signals corresponding to noise signal components which may be present in said composite television signal that are larger in amplitude than the synchronizing signal components.

3,046,336
TELESCRIBER APPARATUS

Minard A. Leavitt, Playa Del Rey, and Edwin A. Pecker and David H. Burns, Los Angeles, Calif., assignors to Telautograph Corporation, Los Angeles, Calif., a corporation of Virginia

Filed Sept. 26, 1960, Ser. No. 58,455
7 Claims. (Cl. 178—18)



6. Apparatus comprising a main frame including a pair of spaced parallel guide members, a bridge member movably supported on said guide members, a carriage member, means for supporting the carriage member for movement along the bridge member in a direction perpendicular to the direction of movement of the bridge member, whereby the carriage member can be positioned anywhere within a predetermined area between the guide members, four cable drums mounted on a common drive shaft, means for driving the shaft, four clutches for selectively driving the drums from the common shaft, wherby any one of the four drums can be rotated with the drive shaft, cable means engaging the respective drums for moving the carriage member and bridge member in either direction along their respective paths of movement in response to engagement of selected clutches, and means for actuating selected clutches to drive the cable means to impart selective movement to the bridge member and carriage member for positioning the carriage member within a predetermined area.

3,046,337
STEREOPHONIC SOUND

William F. Hornyak, Silver Spring, Md., assignor to Hamner Electronics Company, Inc., a corporation of New Jersey

Filed Aug. 5, 1957, Ser. No. 676,160
6 Claims. (Cl. 179—1)



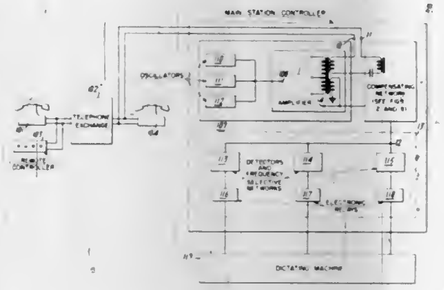
1. A single channel stereophonic sound system comprising an array of at least 10 microphones spaced from one another; a plurality of band-pass audio filters, one filter connected to each microphone, each filter tuned to pass a different, discrete frequency band in an audio frequency spectrum to which a normal human being has marked directional sensitivity, said microphones being arranged in a predetermined spatial order relative to the frequency bands passed by the filters connected thereto such that physically-adjacent microphones are connected to filters which pass relatively widely-spaced frequency bands and adjacent frequency bands are passed by filters connected to relatively widely-spaced microphones, said frequency bands, taken together, covering substantially all of said audio frequency spectrum; a signal mixer connected to receive the output signals of all filters for producing a mixed signal; and means connected to receive said mixed signal.

3,046,338
APPARATUS FOR CONTROLLING DICTATING MACHINES

Edward Hall Higham, Sutton, England, assignor to Unilever Limited, Port Sunlight, England, a company of Great Britain

Filed June 22, 1959, Ser. No. 821,790
Claims priority, application Great Britain June 30, 1958
7 Claims. (Cl. 179—2)

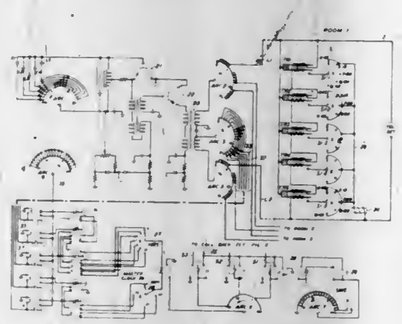
1. Apparatus for controlling dictating machines comprising means for producing an alternating current having a plurality of different frequency components, means for injecting that current into a telephone system, a remote controller connected to the system for altering the value of the impedance presented by the system to said current from one to another of a plurality of impedance values, each of said frequencies having a particular impedance value selective to it, a main station controller incorporating frequency selective networks responsive to changes in the level of said components, a signal source for producing an alternating current substantially identical to the first mentioned current, and a compensating network connected to the signal source and the frequency selective networks to substantially balance the input to the frequency selective networks due to the current injected into the telephone system when the remote controller is not operated.



3,046,339
MORNING CALL SYSTEM

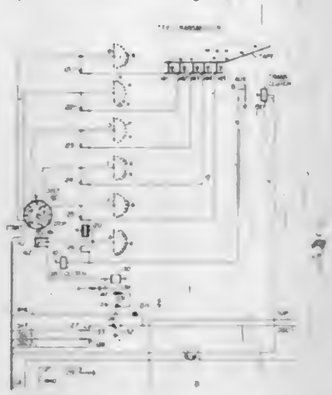
Charles Breen, Mineola, and Henry J. Michael, Rockville Center, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 7, 1959, Ser. No. 825,604
18 Claims. (Cl. 179—2)



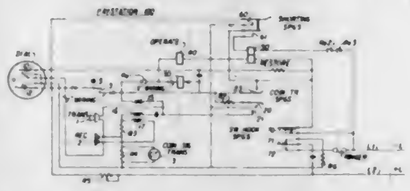
1. In a morning call system, a plurality of subscribers' telephone lines terminating at a central point, time indicating means at said central point, means independent of said time indicating means for selectively marking each of said lines to indicate a desired time of call, said marking means comprising selectively settable circuitry for providing different electrical signals for different settings thereof and representative of respective different said times of call, means at said central point for periodically scanning each of said lines for detecting congruity between the marking of a particular line and the position of said time indicating means, and means effective upon detection of such congruity for establishing a separate connection to the particular line involved.

3,046,340
TELEGRAPH SIGNAL ARRANGEMENT FOR A TELEPHONE SYSTEM
Robert E. Stoffels, Glen Ellyn Woods, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Mar. 28, 1961, Ser. No. 98,887
27 Claims. (Cl. 179—3)



1. In a telephone system, a calling station, a called station, means for automatically establishing a connection from said calling station to said called station and for automatically signaling said called station, control signal transmitting means and character signal transmitting means at each said station, control signal receiving means and character signal receiving means at each said station; a rotary switch at each said station having bank contacts marked with character signal codes designating a start-of-message code, a network code, an individual station code, and an end-of-message code; said network code with said station codes designating all the stations included in the network which are permitted to automatically send and automatically receive telegraph messages from such network stations; a function selector at each said station, means at said called station operated in response to the establishment of said connection and the signaling of said called station for operating said called station control signal transmitting means to transmit a first go-ahead signal over said connection to said calling station; said control signal receiving means at said calling station operated responsive to the receipt of said first go-ahead signal for operating said calling station rotary switch and the calling station character signal transmitting means to transmit the start-of-message code, the network code, the individual calling station code, and the end-of-message code to said calling station character signal receiving means and over said connection to said called station character signal receiving means; said calling station character signal receiving means operated responsive to the receipt of said calling station transmitted codes for operating the calling station function selector to stop further character signal transmission by said calling station rotary switch and character signal transmitting means and for thereafter operating said calling station control signal transmitting means to transmit a second go-ahead signal over said connection to said called station, said called station character signal receiving means operated in response to the receipt of said transmitted calling station codes for operating said called station function selector to identify the network of said calling station; said called station control signal receiving means operated responsive to the receipt of said second go-ahead signal for operating said called station rotary switch and the called station character transmitting means to transmit the start-of-message code, the network code, the individual called station code, and the end-of-message code marked in the banks of the called rotary switch to said called station character signal receiving means and over said connection to said calling station character signal receiving means; said called station character signal receiving means operated by the receipt of said called station transmitted codes for operating said called station function selector to stop further character signal transmission by said called station rotary switch and character signal transmitting means and for thereafter operating said called station control signal transmitting means to transmit a third go-ahead signal over said connection to said calling station, said calling station control signal receiving means operated responsive to the receipt of said third go-ahead signal for operating said calling station character signal transmitting means to transmit a prepared telegraph message over said connection to said called station.

3,046,341
POSTPAY PAYSTATION CIRCUIT PROVIDING SPECIAL SERVICE
Norbert J. Murphy, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,174
3 Claims. (Cl. 179—6.3)

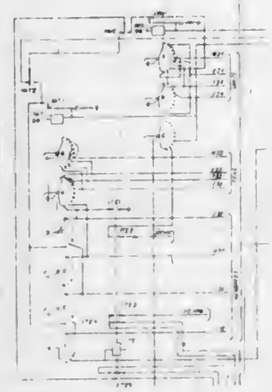


1. In a direct toll dialling telephone system wherein call numbers of toll subscribers are prefixed by a toll dialling area number, the combination therewith including a line having a paystation subscriber thereon, a finder-selector link, a normally incomplete loop circuit individual to said paystation line, hookswitch means in said paystation operated in response to the initiation of a call by said associated subscriber for completing said loop circuit, an impulsing circuit including a portion of said loop circuit and sad paystation line, means operated in response to said completion of said loop circuit for operating the finder portion of said link to hunt for and connect with said calling paystation line over said loop circuit, a special trunk circuit having normally reversed line conductors, a dial in said impulsing circuit operated by said calling paystation subscriber for directively controlling the selector portion of said link over said impulsing circuit to automatically extend a connection to said reversed line conductors of said special trunk circuit only in response to the dialling of said prefix toll dialling area number and before the remainder of a toll subscriber call number is dialled, and disabling means in said paystation operated in response to said extension of said connection to said reversed line conductors of said special trunk circuit for disabling said impulsing circuit to subsequent dialling of said remainder of said toll subscriber call number.

3,046,342
AUTOMATIC TOLL TICKETING TELEPHONE SYSTEM
John E. Ostline, Chicago, and Jack W. Taugner, Park Ridge, Ill., assignors to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Apr. 3, 1957, Ser. No. 650,508
9 Claims. (Cl. 179—7.1)

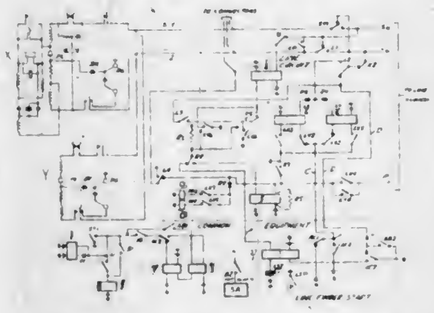
4. In an automatic telephone system, a first exchange and a second exchange, toll ticketing equipment in said first exchange comprising a calling station identification

detector and a toll ticketing repeater, an operator position operatively connected to said repeater, said toll ticketing repeater in said first exchange including a calling and called station directory number register and arranged to process toll calls from said second exchange and from its own exchange, first relay means operated upon seizure of said repeater to signal said detector to initiate the detection of the station identity of a calling subscriber in its own exchange when a toll call is originated therefrom, second means comprising a relay and rotary switch in said repeater operated in response to the first series of impulses received to count said pulses, said second means



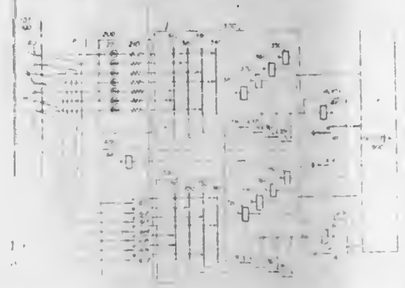
further operated upon counting ten pulses to condition said called station register means to register subsequent pulses, third means in said repeater operated upon access of said repeater from said second exchange to disable said second means and to condition said called station register means to register the called party's number and including first circuit means operated upon registration of the called number to signal said operator position that the operator must orally obtain the calling party directory number, second circuit means in said repeater directly operated from said operator position to operate said calling station register, other means operated in response to the receipt of the calling party identity in said register to complete the call.

3,046,343
TWO-PARTY LINE DISCRIMINATOR CIRCUIT FOR TELEPHONE SYSTEMS
John Edward Cox, Rutherford, N.J., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Feb. 3, 1958, Ser. No. 713,010
4 Claims. (Cl. 179—8.5)



1. In a telephone system serving party lines having first and second stations thereon, each of said lines including two oppositely poled unidirectional conducting devices connected between respective ones of said stations and ground, means in each station responsive to a calling condition thereat for connecting the associated ground-connected device to said line, a line circuit for each of said lines, discriminator means in said line circuit, means for operating said discriminator means responsive to a calling condition at either of said stations on a line for identifying the calling one, alarm means, and means for operating said alarm means responsive to the said ground connection at any calling station being altered.

3,046,344
CALLING STATION DETECTOR
Imre Molnar, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,551
4 Claims. (Cl. 179—9)



1. In an automatic toll ticketing telephone system, operable on a frequency-per-terminal basis, having a plurality of stations each having a multi-decimal-digit directory number and a party designation, and an identifying potential applied to each station upon initiation of a call therefrom, a calling station detector comprising: first register means for converting the identifying potential to a plurality of markings representative of the first two decimal digits of a calling station directory number; second register means for converting the identifying potential to a plurality of markings representative of the remaining decimal digits of the calling station directory number; first party means for grouping the stations on the basis of their associated party designations and extending the identifying potential on that basis to the first register means; second party means for grouping the stations on the basis of their associated party designations and extending the identifying potential on that basis to the second register means; potential activated gating means for connecting the identifying potential to the first party means; and control means for extending the identifying potential to the second party means upon operation of the first register means.

3,046,345
ALTERNATING CURRENT RECEIVERS
Lionel Roy Frank Harris, Kenton, and Fred Nicholas Martin, Eastcote, Pinner, England, assignors to Her Majesty's Postmaster General, London, England
Filed Dec. 27, 1956, Ser. No. 630,912
Claims priority, application Great Britain Jan. 4, 1956
9 Claims. (Cl. 179—15)



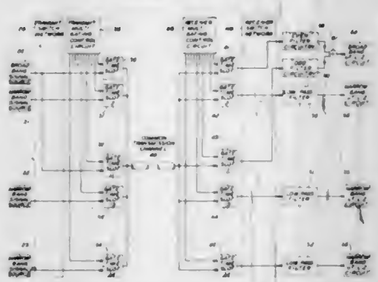
1. A receiver for the reception of alternating current signals from a plurality of sources comprising in com-

bination means for modulating a pulse train characteristic of a source with the signals emanating from the source, amplitude comparison means for suppressing those modulated pulses whose amplitude does not exceed a predetermined value, means for deriving from non-suppressed pulses time spaced pulses whose time spacing is determined by the frequency of said signal, a source of timing pulses, a pulse counting circuit to which said source of timing pulses is applied together with said time spaced pulses, gating circuits actuated by said counting circuit for producting outputs on given counts of said time spaced pulses and a further counting circuit for counting said outputs.

3,046,346
MULTIPLEX SIGNALING SYSTEM

Henry P. Kramer, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 17, 1958, Ser. No. 781,076
7 Claims. (Cl. 179—15)



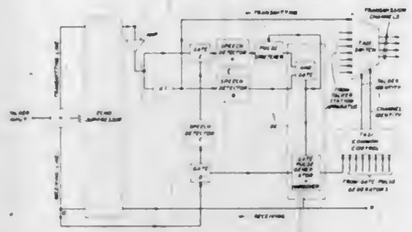
1. In a multiplex transmission system, a plurality of gates, a transmission channel connected in common to said plurality of gates, a signal source, means for selectively connecting said signal source to particular ones of said plurality of gates, means for enabling successively said plurality of gates with the time spacing between successive gates being nonuniform to transfer samples of signals directly from said source through said gates to said common transmission link, a plurality of receiving gates, filter means connected to a lesser number of said receiving gates than said plurality of receiving gates, means for enabling said lesser number of receiving gates to apply said signal samples transmitted through said plurality of gates to said filter means in a nonuniform manner with respect to time spacing between successive samples, said filter means comprising a pair of filter circuits each having transmission characteristics distinct from the other for providing phase shifts to said applied signal samples, a utilization circuit, and an adder circuit connected between said utilization circuit and said pair of filter circuits for combining said phase shifted signal samples free of distortion and for applying the combined signal to said utilization circuit.

3,046,347
TRANSMISSION CONTROL IN A TWO WAY COMMUNICATION SYSTEM

Hotze Miedema, Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 25, 1959, Ser. No. 795,525
13 Claims. (Cl. 179—15)

1. In a time assignment speech interpolation system including a plurality of talkers' lines, at least one of said lines having applied thereto speech signals of a first predetermined average duration and noise signals of a second predetermined average duration less than said first duration and a corresponding plurality of receiving lines, in combination, first means responsive to said signals on said one of said talker's lines above a preselected amplitude for generating a corresponding first output signal, second means responsive to said signals on said one of said talkers' lines above said preselected amplitude for generating a second corresponding output signal delayed in time with respect to said first signal by an interval greater than said second duration and less than said first duration, means responsive to a time overlap between said first and said second output signals for generating a con-

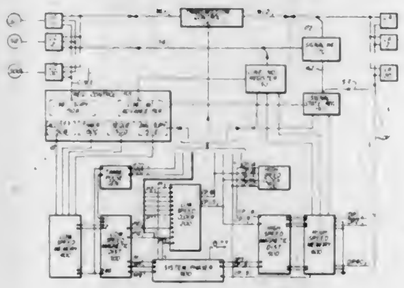


trol signal, thereby enabling said system to distinguish between speech signals and noise signals on a combined basis of signal amplitude and signal duration, means responsive to said control signal for connecting said one of said talkers' lines to one of said transmission channels, first means responsive to signals on that one of said receiving lines which corresponds to said one of said talker's lines for disabling one of said output signal generating means, and second means responsive to said control signal for disabling said first disabling means.

3,046,348
MEMORY FOR USE IN ELECTRONIC TELEPHONE SYSTEM

Peter E. Osborn, Addison, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware

Filed Oct. 12, 1959, Ser. No. 845,736
15 Claims. (Cl. 179—15)



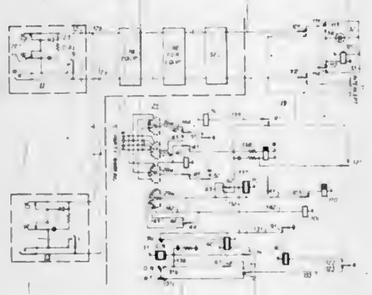
1. In a time division multiplex communication system, a plurality of stations including, a calling station and a called station, a transmission highway, switching means operable to establish a connection between said calling station and said called station over said transmission highway, register means responsive to the initiation of a call by said calling station to control said switching means, and a memory system effective to operate said register means and said switching means comprising: a pulse source; first storage means including a plurality of ferrite cores arranged in matrix form, each of said cores having circuit connections to said registering means; second storage means including a plurality of ferrite cores arranged in matrix form, each of said cores including circuit connections to said register means and to said switching means; first pulse distributing means comprising a plurality of pulse distributor circuits each including a plurality of output circuit connections connected to said first

storage means, and a plurality of input connections; pulse dividing means comprising a plurality of amplifiers each having an output termination connected to said first pulse distributing means, a plurality of gate circuits each connected at the input of one of said amplifiers and each of said gate circuits having connections to a scale of four counter, a multi-stage current steering type pulse distributor having a plurality of circuit connections to said pulse source, and having circuit connections to said scale of four counter; second pulse distributing means comprising a plurality of pulse distributor circuits each including a plurality of output circuits connected to said second storage means a plurality of input terminals connected to said pulse source; whereby said memory system is effective to establish a connection over said transmission highway between said calling station and said called station.

3,046,349
STATION IDENTIFICATION APPARATUS

Imre Molnar, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,278
14 Claims. (Cl. 179—17)



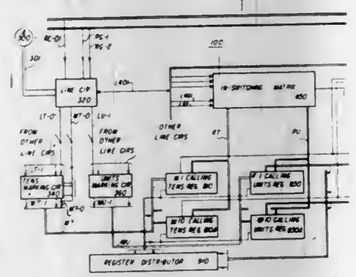
9. In a telephone system, an arrangement for identifying calling stations on a party line, said arrangement comprising central office equipment connected to said line, a loop circuit extending over said line between said stations and said equipment, said stations individually comprising a calling device having impulse springs included in said loop circuit for transmitting series of impulses by alternately opening and closing said circuit, and having station identifying means operable to hold said loop circuit open for a prolonged interval independently of said impulse springs at a selectable point during the transmission of an impulse series; and said central office equipment comprising a calling station identification circuit effective when taken into use to return a signal over said line for conditioning said identifying means for operation during the transmission of a subsequent impulse series, said identification circuit including means operated under the control of said identifying means for registering the identity of said calling station in accordance with the point during said impulse series at which said loop circuit was held open for said prolonged interval.

3,046,350
AUTOMATIC ELECTRONIC TELEPHONE SYSTEM

Alfred H. Faulkner, Redondo Beach, Calif., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware

Original application Aug. 23, 1955, Ser. No. 530,085, now Patent No. 2,931,863, dated Apr. 5, 1960. Divided and this application Dec. 11, 1958, Ser. No. 779,598
26 Claims. (Cl. 179—18)

1. In a time division multiplex telephone system, a group of line circuits each having a transmission gate for calls originating at said line circuit and a separate transmission gate for calls terminating at said line circuit, a group of finder-connector links each having a single pulse time position individually assigned thereto and each having a transmission gate on its finder side and a separate transmission gate on its connector side, a common two-way transmission conductor between said line circuit gates for originating calls and said finder gates and a separate common two-way transmission conductor between said line circuit gates for terminating calls and said connector gates, each link having individually associated therewith a calling-line register and a separate called-line register, a common electronic in-switching matrix with input connections from all of the calling-line registers and individual output connections to the originating-call gates of the line circuits, a common electronic out-switching matrix

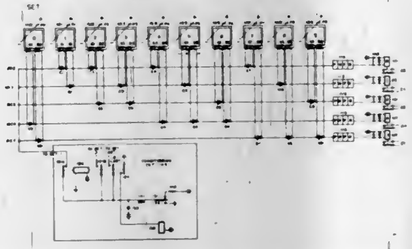


with input connections from all of the called-line registers, and individual output connections to the terminating-call gates of all of the line circuits, electronic means for enabling both the finder gate and the connector gate of the link used in a given connection in the one pulse time position of said link, the originating-call gate of the calling line corresponding to the registration in the calling-line register of that link being selectively enabled by means of the in-switching matrix in said one pulse time slot of the link, and the terminating-call gate of the called line corresponding to the registration in the called-line register of that link being selectively enabled by means of the out-switching matrix in said one pulse time position of that link, whereby said two line circuits are effectively connected for two-way voice transmission over a path including said finder-side transmission conductor, said link and said connector-side transmission conductor in series.

3,046,351
TRANSLATOR DEVICE FOR AUTOMATIC TELEPHONE SYSTEM

Peter H. Bennett and Edward E. Bauman, Galion, Ohio, assignors to North Electric Company, Galion, Ohio, a corporation of Ohio

Filed Apr. 20, 1959, Ser. No. 807,369
7 Claims. (Cl. 179—18)



1. In a translator device for use in an automatic telephone system including a plurality of switching sets con-

nected to translate digits in the decimal code to information in a two-out-of-five code, a plurality of marking circuits in each switching set, each of which marking circuits is comprised of a series connected marking conductor, a four layer diode, and a switching member, conditioning means including potential supply means for coupling a conditioning potential to said marking circuits preparatory to each translating operation, including a delay circuit for reducing the steepness of the waveform of the conditioning potential, and means for connecting said delay circuit between said marking circuits and said potential supply means, means for selectively coupling an enabling pulse to at least one marking conductor and the diode connected thereto, and means in said diode operative to complete an energizing circuit for its series connected switching member in response to coupling of said enabling pulse thereto.

3,046,352
DIRECT-ACCESS CROSSBAR-SWITCH CONNECTOR SYSTEM
Robert W. Hutton, Oak Lawn, and Arthur T. Sigo, Maywood, Ill., and Charles J. Adams, Los Gatos, Calif., assignors to International Telephone and Telegraph Corporation, a corporation of Maryland
Original application June 5, 1953, Ser. No. 359,761, now Patent No. 2,909,611, dated Oct. 20, 1959. Divided and this application Apr. 30, 1959, Ser. No. 810,158
4 Claims. (Cl. 179—22)



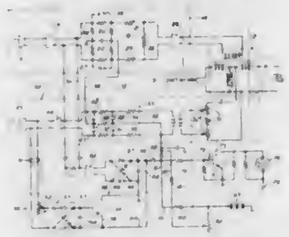
1. In a switching system, a connector frame or enabling trunks to be connected to respective called ones of a group of lines, crossbar switches each having ten horizontals and having vertical multiples corresponding respectively to the trunks, hold magnets corresponding respectively to the vertical multiples, principal select magnets corresponding respectively to the horizontal multiples, each switch serving a separate twenty of said lines, the lines comprising pairs connected respectively to the horizontal multiples, whereby each switch serves two tens groups of lines, each switch having two auxiliary select magnets corresponding respectively to the tens group of lines which it serves, means terminating the said trunks on the respective verticals of each switch, control means common to said trunks, means controlled over any trunk for operating said control means in accordance with the tens and units digits of any desired called line, said control means including means for selecting the switch terminating the called line according to the called tens digit and for operating the one of the auxiliary select magnets thereof which correspond to such tens digit, the control means further including means for operating the principal select magnet which corresponds to the called units digits and means for operating the hold magnet of the selected switch which corresponds to the last said trunk to complete a connection to the called line according to which auxiliary select magnet and which principal select magnet have been operated.

3,046,353
TELEPHONE SUB-STATION INCLUDING MICROPHONE AMPLIFIER
Otto Tschumi, Hans Kappeler, and Rudolf Streit, all of Solothurn, Switzerland, assignors to Autophon Aktiengesellschaft, Solothurn, Switzerland
Filed Nov. 7, 1957, Ser. No. 695,148
Claims priority, application Switzerland Nov. 10, 1956
1 Claim. (Cl. 179—81)



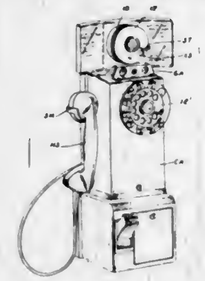
A telephone subscriber's station connected to a D.C. source with a first and second wire of a subscriber's line, containing a microphone amplifier with transistors, supplied via a first and a second connecting terminal over the subscriber's line, said station comprising two cradle switch contacts to connect said first connecting terminal to said first wire and said second connecting terminal to said second wire and comprising at least two rectifiers, said first connecting terminal being connected with said sedond wire via one of said rectifiers and said second connecting terminal being connected with said first wire via the other one of said rectifiers, whereby to switch on the microphone amplifier when the said cradle switch contacts are in the rest position, by reversing the polarity of said D.C. source.

3,046,354
LOUD SPEAKING TELEPHONE
William F. Clemency, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,417
6 Claims. (Cl. 179—81)



1. Loud speaking telephone apparatus comprising an incoming channel including a first variable impedance network and a loudspeaker, an outgoing channel including a microphone and a second variable impedance network, circuit means common to said networks for controlling the impedance of each of said networks, said networks being arranged in such manner that current flows through them simultaneously to vary the impedances thereof simultaneously, the impedance of one of said networks being varied inversely with respect to the impedance of the other of said networks by the flow of current therethrough through said circuit means, means for deriving a first unidirectional voltage from speech energy in said outgoing channel, means for establishing a threshold for said unidirectional voltage, means for impressing said unidirectional voltage on said threshold means, means for introducing the current passing through said threshold means into said variable impedance networks simultaneously through said circuit means, means for deriving a second unidirectional voltage from speech energy in said incoming channel, means responsive to said second unidirectional voltage for preventing the level of said first unidirectional voltage from reaching the conduction level of said threshold means, thereby rendering ineffective the control of said variable impedance networks through said circuit means in the presence of incoming signals.

3,046,355
IMPULSE TRANSMITTING MECHANISM
Pieter G. Cath, Plainfield, and William Pferd, Watchung, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1957, Ser. No. 705,996
2 Claims. (Cl. 179—90)



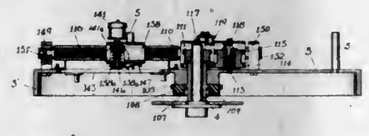
1. An impulse transmitter comprising inner and outer dial mechanisms, said dial mechanisms coaxially aligned in spaced relation, a shaft operatively connecting said mechanisms together to provide a unitary structure, a finger-wheel having a single finger aperture, connected to said shaft and in juxtaposition with respect to said outer dial mechanism, a pawl and latch mechanism, a set of pulsing contacts operatively associated with said inner dial mechanism, means associated with the outer dial mechanism for causing said dial mechanisms to operate simultaneously when said finger-wheel is rotated in a clock-wise direction, but permitting the outer dial mechanism to return to its normal position prior to the start of the run down of the inner dial mechanism and the subsequent operation of said pulsing contacts.

3,046,356
GUIDED CORD WEIGHT ASSEMBLY
William C. Jurgens, Warren Township, Somerset County, and Frederick W. Treptow, Chatham Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 16, 1959, Ser. No. 859,894
1 Claim. (Cl. 179—95)



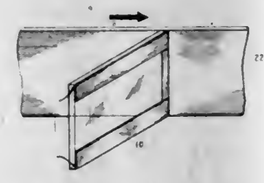
A guided cord weight assembly for a telephone switchboard comprising in combination a weight member having an aperture extending therethrough adjacent one end thereof, a pulley member secured to the weight member, a cord passing around the pulley member and supporting the weight member, and a sloping rod extending through the aperture and guiding the movement of the weight member along an inclined path.

3,046,357
MAGNETIC RECORDING AND REPRODUCING MACHINE
Sakae Fujimoto, Chofu, Japan, assignor to Riken Kogaku Kogyo Kabushiki-Kaisha, and Nihon Denki Bunka Kogyo Kabushiki-Kaisha, both of Tokyo, Japan, and both corporations of Japan
Filed Sept. 7, 1960, Ser. No. 54,404
Claims priority, application Japan Sept. 12, 1959
4 Claims. (Cl. 179—100.2)



4. In a magnetic recording and reproducing machine of the type including a rotatory disk carrying a transducer and inner and outer between limits thereon, the combination of a rotatable member operatively connected with the rotatory disk, a pair of protrusions having different lengths and secured to said rotatable member, said protrusion being circumferentially spaced apart and extending axially on said rotatable member and a pair of limit switches adapted to deenergize said machine secured thereto in position to be respectively engaged by the respective protrusions of different lengths to deenergize said machine at said inner and outer limits.

3,046,358
NON-MAGNETIC PICKUP LOOP FOR MAKING ABSOLUTE MEASUREMENT OF SIGNAL STRENGTH ON MAGNETIC RECORDINGS
Frank A. Comerci, Nutley, N.J., and Robert Schwartz and Sheldon I. Wilpon, New York, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 23, 1955, Ser. No. 555,213
5 Claims. (Cl. 179—100.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A device for generating in a loop of voltage proportional to the surface induction on a magnetic recording, which comprises a magnetic recording tape having an elongated face surface carrying on such face surface a signal magnetically recorded, a rigid plate of non-magnetic and electrically nonconducting material having a straight edge and a flat face contiguous with said edge, a plurality of U-shaped thin strips of electrically conducting non-magnetic material confined flat against said face in superposed, aligned relation with one another and with film-like layers of dielectric material disposed between and separating the superposed strips, and with the base portion of each strip disposed close to, and extending along, said straight edge of said plate, the total thickness of said superposed strips and interposed layers along said straight edge being equal to a fraction of half a wave length of the shortest wave length of signal impressed on said strips, and means connecting the free ends of the

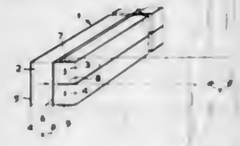
arms of said strips in a series arrangement in which the strips and connecting means form a single loop coil of a plurality of turns in series with one another, said plate with said loop coil thereon being disposed with said straight edge of the plate parallel to and contiguous with said elongated face of said tape face surface, whereby upon relative movement of said tape and said plate in a direction lengthwise along the said tape surface, a signal may be transferred from the recording on said tape to the coil on said plate, with maximum strength and clarity.

3,046,359
MAGNETIC HEADS
Henry Ray Warren, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,458
12 Claims. (Cl. 179—100.2)



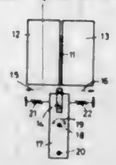
1. A magnetic head which comprises a triangular core having a signal gap adjacent one apex thereof, a signal coil wound around said core on the portion thereof opposite to said gap with said coil being wound away from said core portion and extending sufficiently close to said gap to cause fringe flux emanating from said gap to thread at least the upper turns of said coil, said coil having a plurality of successive layers of turns with successive ones of said layers having a lesser number of turns than preceding layers, the upper one of said layers being disposed immediately adjacent to said signal gap.

3,046,360
TRANSDUCER
Felix Robert Schepman, Nico Wittenberg, and Johannes Otto Michael van Langen, all of Emmasingel, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,856
Claims priority, application Netherlands May 5, 1958
7 Claims. (Cl. 179—100.41)



1. A transducer for selectively recording and reproducing oscillations corresponding to variations in two different directions in a groove comprising a member adapted to oscillate in said groove in accordance with said variations, and an element for selectively converting the oscillations into two separate electrical signals each corresponding to one of the directions of oscillation and for converting a composite signal into two oscillations each having a different direction, said element comprising a plurality of rods of piezo-electric material, each of said rods having a piezo-electrically active axis which is at right angles to a principal surface provided with an electrode extending in the length direction of the rod, said rods being mechanically joined together with their principal surfaces positioned so that the piezo-electrically active axis of a rod associated with one signal forms an angle with respect to the active axis of a rod associated with the other signal.

3,046,361
ELECTROACOUSTIC TRANSDUCER
Klemens Wiehl, near Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany
Filed Sept. 8, 1959, Ser. No. 838,735
Claims priority, application Germany Sept. 9, 1958
7 Claims. (Cl. 179—100.41)



1. An electroacoustic transducer for translating mechanical oscillation into voltage, comprising a permanent magnet oscillatingly mounted for motion in response to oscillations to be translated, Hall-voltage generating means having at least one Hall plate stationarily mounted in an inhomogeneous field portion of said magnet, two current supply terminals at opposite ends of the plate as well as two Hall-voltage output electrodes between said terminals at opposite edges of said plate, a Hall-plate energizing circuit connected to said terminals to supply current thereto, and two magnetizable structures stationarily mounted with respect to said magnet and spaced from each other to form a gap, said movable magnet having magnetic poles oriented in the plane of said Hall plate in one of its positions during its oscillations, one of the poles of said magnet being closer to said Hall plate than the other of said poles, said Hall plate being immovably mounted in and gap in face-to-face relation to said structures.

3,046,362
SPEAKER
Stanley F. White, Chicago, Ill.
(466 E. Vallette, Elmhurst, Ill.)
Filed Nov. 6, 1956, Ser. No. 620,606
7 Claims. (Cl. 179—115.5)



2. In a speaker the combination comprising an annular magnetic structure providing an annular axially extending air gap, means in said structure for establishing flux across said air gap, a diaphragm having a dome-shaped central portion surrounded by a brim portion, flexible means for supporting the diaphragm at the periphery of the brim portion, a voice coil secured to the diaphragm inside of said flexible supporting means and extending into said air gap, said diaphragm being wholly composed of stiff plastic material having smooth surfaces on each side with voids distributed throughout the mass and with a thickness which varies from point to point radially being maximum at the regions of greatest bending stress so that said diaphragm moves as a unit free of localized breakup in response to magnetic forces acting upon said voice coil.

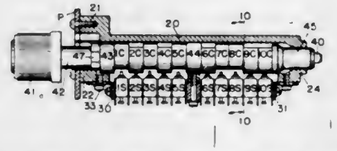
3,046,363
BILATERAL PARAMETRIC AMPLIFIER
George W. Reynolds, Corona Del Mar, Calif., assignor to Standard Coil Products Co., Inc., Melrose Park, Ill., a corporation of Illinois
Filed Oct. 23, 1959, Ser. No. 848,280
11 Claims. (Cl. 179—170)

1. An amplifier for transmitting signals with gain in both a forward and a reverse direction; said amplifier comprising a first signal input-output circuit for input signals in said forward direction and output signals in said reverse direction, a second signal input-output circuit for input signals in said reverse direction and output signals in said forward direction, and circuit means extending between said input-output circuits; said circuit means comprising a signal coupling device, a first variable impedance energy storage means interposed between said coupling device and said first input-output circuit a second variable impedance energy storage means interposed between said



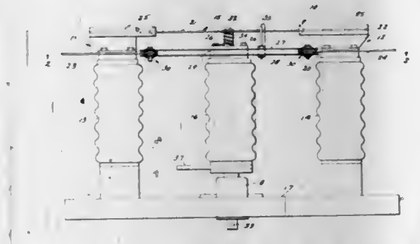
coupling device and said second signal input-output circuit, a local oscillator means operatively positioned to supply energy to said coupling device, and a transfer means operatively positioned to receive energy from and transfer energy to said coupling device; said first input-output circuit comprising means tuned to a first frequency, said local oscillator being tuned to a second frequency, and said transfer means comprising means tuned to a third frequency which is the sum of said first and said second frequencies.

3,046,364
TOKEN OPERATED ELECTRICAL SWITCHES
Isaac A. De Kramer and Robert A. Hagen, Rochester, N.Y., assignors to General Railway Signal Company, Rochester, N.Y.
Filed Sept. 28, 1959, Ser. No. 842,696
7 Claims. (Cl. 200—42)



1. In combination, a token operated device comprising a housing having a pair of spaced axially aligned openings, a plurality of plungers mounted in said housing between said openings, a token adapted to be removably inserted in operative position in said housing, said token comprising an elongate shank having a pair of axially aligned and spaced bearing surfaces, each bearing surface being of such a size and spaced from one another suffiently to engage rotatably the wall of a respective opening when the token is operatively positioned in the housing, cooperating means on the token and housing to permit the insertion of the token in said openings in one angular position only, a plurality of axially spaced cam means each having a continuous irregularly curved surface, said cam means being positioned on said shank between said bearing surfaces to be in registry with a respective plunger when the token is in operative position, each of said cam means having a working portion and a non-working portion, said working and non-working portions of said cam means being angularly spaced on said shank to a distinct operating and idle position, said working portions of each cam means occupying a sufficiently small sector of its respective cam means to cause the nonworking portions of each said plurality of cam means to be in registry and spaced from its associated plunger when the token is inserted through said openings in said one angular position and to cause those particular cam means positioned on the shank in an operating position only to engage operatively against corresponding plungers when the said token is rotated in one direction a predetermined distance.

3,046,365
HIGH VOLTAGE DOUBLE BREAK INTERRUPTER SWITCH
Howard W. Graybill, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 19, 1958, Ser. No. 743,070
4 Claims. (Cl. 200—48)



1. An interrupter switch comprising a first and a second stationary contact assembly, a movable blade assembly operatively positioned with the opposite ends thereof engageable with said first and said second contact assemblies respectively, said blade assembly being rotatable about an axis positioned midway between said contact assemblies thereby assuring that arcs drawn at said contact assemblies will be simultaneously created; said movable blade assembly comprising a main blade, a quick-break blade, and a torsion accelerating spring operatively connected between said blades and mounted concentrically with respect to said axis of said blades and operatively positioned to urge said blades toward a predetermined angular first position with respect to one another; said switch being operable between an open and a closed position by rotation of said blade assembly about said axis; both of said blades being in engagement with said contact assemblies when said switch is in said closed position; said switch being moved from said closed to said open position by a rotation of said blade assembly in a first direction; said contact assemblies comprising first means for restraining rotation of quick-break blade during initial rotation of said main blade through a predetermined angular distance in said first direction; said means being overcome after said initial rotation of predetermined angular distance and said accelerating spring thereafter rapidly rotating said quick-break blade to said first position; second means carried by said main blade engageable with said quick-break blade after said initial rotation; said second means comprising a rigid arm secured to and mounted transverse to said main blade and having a flanged end adapted to abut said quick-break blade upon rotation of said main blade through said predetermined angular distance for rotation of said quick-break blade; said second means providing a driving connection between said blades for overcoming said restraining means and rotating said quick-break blade in said first direction; each of said stationary contact assemblies including a main contact, engageable with said main blade, an arcing contact, engageable with said quick-break blade, and an arc chute operatively positioned to receive an arc drawn between said arcing contact and said quick-break blade upon operation of said interrupter to its open position; each of said arc chutes comprising a pair of gas evolving plates positioned substantially to the plane of movement of said quick-break blade.

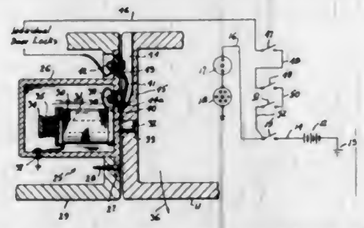
3,046,366
ROTARY ELECTRIC SWITCH FOR LADY'S HANDBAG
Otto Zekendorf, 423 E. 7th St., Los Angeles, Calif.
Filed May 22, 1961, Ser. No. 111,823
4 Claims. (Cl. 200—52)



1. A rotary electric switch for a lady's handbag and comprising two frame members of the handbag; a bolt constituting a hinge for the frame members; a first electrical conducting washer mounted on the bolt and insulated therefrom; a first arcuate conducting terminal carried by the washer and having a bevelled edge; a first arcuate insulating member mounted on the same face of the conducting washer as the arcuate terminal and having an edge spaced from the bevelled edge; a first insulating means connecting the conducting washer with one of the frame members so that a swinging of this frame member will rotate the washer and arcuate conducting terminal; a second electrical conducting washer mounted on the bolt and insulated therefrom; a second arcuate conducting terminal carried by the second washer and facing the first arcuate conducting terminal and having a bevelled edge; a second arcuate insulating member mounted on the same face of the second conducting washer as the second arcuate terminal and having an edge spaced from the bevelled edge of the second arcuate conducting terminal; a second insulating means connecting the second conducting washer with the other frame member so that a swinging of this frame member will rotate the second washer and second arcuate conducting terminal; said frame members when in closed position causing the first and second arcuate conducting terminals to have their bevelled edges disposed in overlapping relation, the first arcuate insulating member contacting the second arcuate conducting terminal and the second arcuate insulating member contacting the first arcuate conducting terminal to maintain the overlapping bevelled edges in spaced relationship; and manually controlled means for urging a portion of one of the electrical conducting washers toward the other conducting washer so that the bevelled edge of one arcuate conducting terminal will be moved into contact with the bevelled edge of the other arcuate conducting terminal; the space between each bevelled edge and the edge of the associate insulating arcuate member permitting this movement; whereby a contacting of the two bevelled edges constitutes a closing of the switch; the arcuate insulating members moving the bevelled edges out of contact wtih each other as soon as the pressure on the manually controlled means is freed.

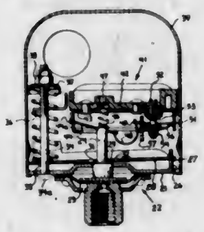
3,046,367
SAFETY LOCKING DEVICES FOR AUTOMOBILES
William E. Hanna, 13209 Silver Lane, Independence, Mo.
Filed July 14, 1959, Ser. No. 827,041
3 Claims. (Cl. 200—61.78)

1. In combination with a vehicle door frame and a cooperating swingable door, said door having a hinged side and a free outer side and also having inner and outer surfaces and an outer side edge swingable into an opposing relation to said frame when the door is closed, the outer side edge of said door being provided with an elongated recess open at the inner surface of the door and extending outwardly therefrom, said recess having a curved cam surfaced end terminating in the plane of said outer side edge at a point spaced inwardly from the outer surface of the door, and a door-actuated electric switch comprising an elongated resilient strip-like switch member accommodated longitudinally in said recess when



the door is closed, said switch member having an inner end secured to said door frame and a free outer end, and an insulated switch contact provided on the door frame and engageable by the free outer end of said switch member, said free outer end of the switch member engaging said cam surfaced end of said recess during closing of the door whereby to urge the same into engagement with said switch contact.

3,046,368
COMPRESSOR UNLOADER
Oscar H. Kaminky, Goshen, Ind., assignor to Penn Controls, Inc., Goshen, Ind., a corporation
Filed Mar. 31, 1960, Ser. No. 18,946
11 Claims. (Cl. 200—81)

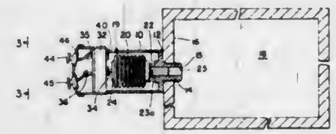


1. A control comprising an operator responsive to pressure variations, switching means operable by said operator between a predetermined cut-out point on increasing pressure and a predetermined cut-in point on decreasing pressure, a valve biased to closed position, a primary lever movable by said operator, a secondary lever movable to open said valve against its bias, a permanent magnet and a cooperating armature respectively carried by said levers, said levers being positioned so that said magnet picks up said armature as said operator moves in response to increasing pressure but prior to attaining said switch cut-out point, and said secondary lever is moved to open said valve as said operator subsequently moves in response to decreasing pressure, said armature breaking from said magnet to disconnect said levers and permit said valve to reclose as said operator continues to move in response to decreasing pressure but prior to attaining said switch cut-in point.

3,046,369
DEVICE FOR SENSING GAS DENSITY
Beatrice A. Hicks, Upper Montclair, N.J. (% Newark Controls Co., 15 Ward St., Bloomfield, N.J.)
Filed Apr. 27, 1959, Ser. No. 809,214
3 Claims. (Cl. 200—83)

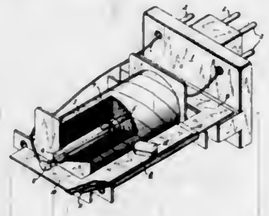
1. In a density sensing system, a chamber containing a gas the density of which is to be sensed, a hollow case

mounted so that its interior cavity is in communication with said chamber, a sealed expansible and contractible bellows mounted within said case so that the exterior of said bellows is in communication with the gas contained in said chamber, said bellows and said case being constructed of materials having balanced temperature coefficients of expansion, said bellows having an interior cavity filled with a gas, output means, said bellows having an actuating portion positioned to actuate said output means when said bellows moves to a critical position, the gas within said chamber having a predetermined pres-



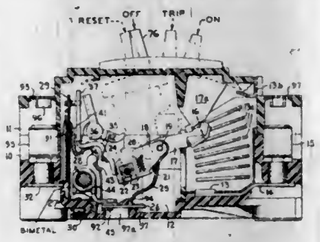
sure-versus-temperature function, said bellows being filled with a predetermined quantity of gas having a pressure-versus-temperature function such that, with variations in temperature, the gas within said bellows varies in pressure in accordance with its pressure-versus-temperature function which is at all times matched in slope to that of the gas in said chamber, thereby causing said bellows to actuate said output means at different pressures of the sensed chamber gas, under varying temperature conditions, but so as to actuate said output means at a critical density condition of the gas within said chamber.

3,046,370
ELECTROMAGNETIC RELAY
Charles J. Adams, Bloomington, and Everett W. Werts, Normal, Ill., assignors to General Electric Company, a corporation of New York
Filed Oct. 30, 1959, Ser. No. 849,936
6 Claims. (Cl. 200—87)



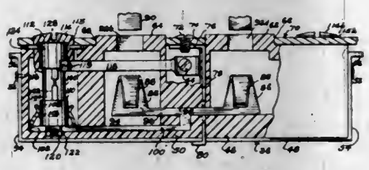
1. A reed switch relay comprising: a magnetic reed switch including a pair of elongated contact members of magnetic material having contact surfaces overlapping each other, said contact surfaces being biased toward normally open positions and being relatively movable to normally closed positions by a magnetic flux component of sufficient magnitude directed lengthwise of said contact members causing mutual attraction thereof; means for producing switch operating fluxes through said contact members comprising a coil surrounding said contact members and having its magnetic axis generally parallel to the longitudinal axis of said contact members; a pair of magnetic laminations in magnetic contact with opposite ends of said contact members extending exteriorly of said coil into close proximity with each other to form with said contact members a closed magnetic circuit for containing switch-closing magnetic flux components; and magnetic biasing means for said magnetic circuit comprising a permanent magnet spaced from said contact members and mounted on said laminations and providing a magnetic flux component within said circuit insufficient of itself to close said contact members when open but sufficient to maintain said contacts closed.

3,046,371
CIRCUIT BREAKER
Charles L. Jencks, Avon, Conn., assignor to General Electric Company, a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,766
5 Claims. (Cl. 200—88)



1. An electric circuit breaker comprising a relatively stationary contact, a relatively movable contact, operating mechanism for operating said movable contact between open and closed circuit positions comprising a releasable trip member movable between a latched and a released position, a pair of toggle links interconnected between said movable contact and said releasable trip member and movable between collapsed and straightened positions to move said movable contact between said open and closed circuit positions respectively while said trip member is in said latched position, latch means for retaining said releasable trip member in said latched position and movable between a holding position and a releasing position, current responsive means for causing movement of said latch from said holding to said releasing position, said latch means including a reset portion which when said latch is in releasing position extends into the path of movement of said toggle linkage as said toggle linkage moves to said collapsed position, said toggle linkage including a portion engaging said reset portion after said trip member is moved to said latched position and moving said latch from said releasing to said latching position.

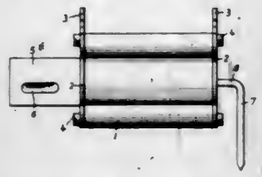
3,046,372
FUSED OUTLET DEVICE AND THE LIKE
Michael J. Civitano, 1244 44th St., Brooklyn 19, N.Y.
Filed May 25, 1959, Ser. No. 815,582
3 Claims. (Cl. 200—115.5)



1. An electrical connection device comprising a main housing having a main chamber formed therein, with first and second plug blade access openings formed therein to allow entering of plug blades of an external load, first and second spring blade means disposed in said main chamber in registry with said first and second plug blade access openings for engaging releasably with said plug blades, first and second main terminal means in said main housing for connection to the wires of a power line to draw electrical current therefrom, said main housing having first and second fuse receiving chambers at opposite ends thereof, fuse engaging socket means in said fuse receiving chambers and including first and second fuse clamp means for resiliently clamping a fuse contactively into the circuit, first bus means connecting said first clamp means respectively to said first and second main terminal means, second bus means connecting said second clamp means respectively to said first and second spring blade

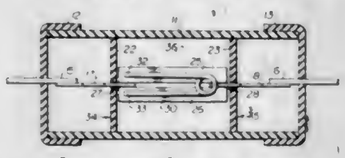
means, whereby said fuse engaging socket means interposes a fuse in both sides of the lines of the circuit, door means engageable with and overlying each of said first and second fuse receiving chambers and releasable for affording access thereto for insertion and removal of a fuse, and cover means disposable over said main housing and engageable therewith for covering the same, and resilient means for biasing said fuses into disengaging position.

3,046,373
FUSES
Max Schweer, Lindenstrasse 40, Neumunster, Germany
Filed Mar. 4, 1958, Ser. No. 719,016
Claims priority, application Germany Mar. 5, 1957
3 Claims. (Cl. 200—121)



1. A fuse comprising a fuse element, a first and second front plate mounted at opposite sides of said fuse element, an indicator button mounted in one of said front plates, a first contact blade lying in a plane parallel to the direction of longitudinal extension of said fuse element, and a second contact blade lying in a plane transverse to the longitudinal extension of said fuse element, said second contact blade and one of said front plates forming one integral piece and said second contact blade having a window allowing for observation of said indicator button.

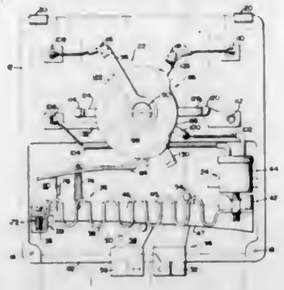
3,046,374
DUAL ELEMENT FUSE
James B. Wright, Warren, Pa., assignor to Cersolsun Research Corporation, Warren, Pa., a corporation of Delaware
Filed Oct. 12, 1959, Ser. No. 845,953
5 Claims. (Cl. 200—123)



1. A circuit-protecting fuse comprising a pair of fusible link members arranged in axial alignment with their inner ends spaced apart and being provided with regions of limited cross-sectional area to provide heat-generating sections, a pair of heat-storing, conductive elements each extending between said spaced inner ends of said link members and being secured thereto by a heat-sensitive material, and spring means adjacent to said conductive elements to cause a separation of the elements in an angular direction from the ends of said link members when the heat stored in said conductive elements causes said heat-sensitive material to soften.

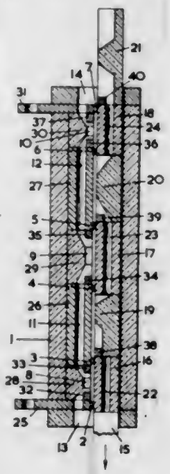
3,046,375
CONTROL DEVICE
Roy W. Houser, Anaheim, Calif., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed June 3, 1959, Ser. No. 817,752
14 Claims. (Cl. 200—138)

11. A thermostatically responsive control device comprising a support, control switch means mounted upon said support, adjusting means mounted upon said support for movement along a given path relative to said support throughout a given range of movement corresponding to a range of temperatures to which said device is to be responsive, a thermostatically responsive element mounted on said adjusting means in an operative relationship with said control switch means to actuate said control switch means at a selected temperature dependent upon the position of said adjusting means on said given path,



a pair of abutment means mounted upon said support for movement along said given path toward and away from said adjusting means, said pair of abutment means being cooperatively engageable with said adjusting means to confine movement of said adjusting means to a selected limited portion of said given range of movement, and cam means on said support for selectively urging said adjusting means into engagement with a selected one of said pair of abutment means.

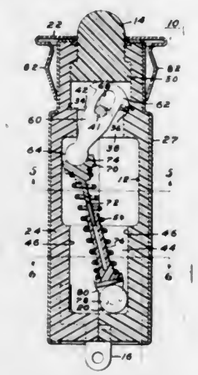
3,046,376
ELECTRICAL SWITCH
Bernt Ingvaldsen, Drammen, Norway, assignor to Emil Lange, Seine-et-Oise, France, and Aktieselskabet National Industri, Drammen, Norway, jointly
Filed Aug. 31, 1960, Ser. No. 53,595
Claims priority, application Germany Sept. 25, 1959
1 Claim. (Cl. 200—148)



An electrical switch of the kind in which during opening of said switch arcs in series with each other are quenched by quenching medium flowing under pressure produced by the arcs themselves, comprising a quenching chamber containing quenching medium and having two oppositely-disposed outlets, two connectors attached to said quenching chamber one at each of said outlets, a fixed arc terminal on each of said connectors, a plurality

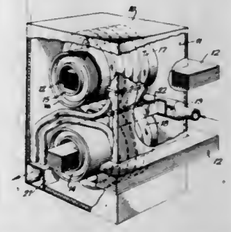
of fixed insulating parts in said quenching chamber, a plurality of fixed conductors in said quenching chamber between said fixed insulating parts, a fixed arc terminal on each end of each of said fixed conductors, and an axially-movable switch pin extending through said quenching chamber and passing through said outlets, said switch pin comprising a plurality of insulating pin parts and a plurality of conducting pin parts and an arc-drawing terminal on each of said conducting pin parts, said conducting pin parts being rigidly secured to and between said insulating pin parts, the arrangement being such that in the closed condition of said switch there is one of said insulating pin parts adjacent to each of said fixed conductors and said fixed conductors and said conducting pin parts complete a current path between said connectors, during opening of said switch each of said arc-drawing terminals draws out an arc so that there are formed a plurality of arcs which are in series with each other and generate pressure in said quenching medium and each of which extends between one of said arc-drawing terminals and one of said fixed arc terminals, and upon said switch reaching its open condition there is one of said conducting pin parts adjacent to each of said fixed conductors and one of said insulating pin parts opposite each of said fixed insulating parts, and said insulating pin parts and said fixed insulating parts are mutually complementary in defining the perimeters of a plurality of passages in each of which one of said arcs burns and is exposed to the action of said quenching medium until quenched by said medium flowing under said pressure, said insulating pin parts and said fixed insulating parts being so shaped and disposed that each of said passages widens towards its ends and said passages have a common longitudinal central axis, and said fixed arc terminals all lie near to said common longitudinal central axis.

3,046,377
PUSH PUSH SWITCH
Robert W. Fraser, Framingham, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Oct. 19, 1960, Ser. No. 63,537
2 Claims. (Cl. 200—153)



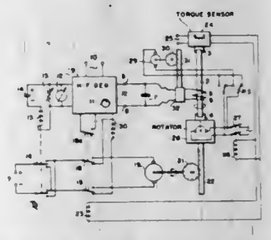
1. An electric push-push switch comprising a housing having a bearing shoulder disposed therein, a plunger, an actuator mechanism, a pair of stationary contacts and a moveable contact, said actuator mechanism having a cam element, a cam pin, a piston element, a sleeve element, and a compression coil spring, said cam element comprising an arcuate head portion having a support surface for moveable engagement with said bearing shoulder, an elongated shaft portion provided with a means for moveably engaging said cam pin, and a knuckle portion, said plunger having a surface for engagement with said arcuate head portion, said piston element having means for engaging said knuckle portion and means for slidably engaging said sleeve element, said sleeve element partially circumscribing a portion of said piston element, portions of said sleeve element and said piston element circumscribed by said compression spring and said sleeve element having means for engaging said moveable contact whereby pressure on said plunger will snap said moveable contact from one stationary contact to the other.

3,046,378
FLUID HEATER
George W. Holz, Chicago, Ill., assignor to Lindberg Engineering Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 25, 1960, Ser. No. 24,438
3 Claims. (Cl. 219—10.51)



1. A fluid heater comprising a pair of magnetic cores, two primary windings wound on said cores in a Scott connection and adapted to be connected to a source of three phase electric current, a secondary winding on each of the cores, the secondary windings comprising metal tubes interconnected at their ends for flow of fluid to be heated in parallel therethrough, and a conductor connecting the opposite ends of the secondary windings to short circuit them.

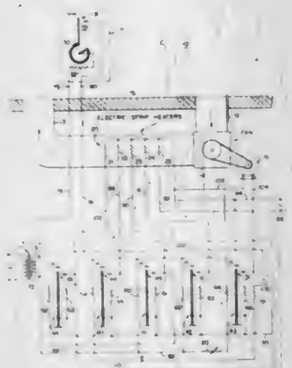
3,046,379
METHOD AND APPARATUS FOR ZONE MELTING OF SEMICONDUCTOR MATERIAL
Wolfgang Keller and Arnulf Hoffmann, Pretzfeld, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed Sept. 9, 1960, Ser. No. 55,051
Claims priority, application Germany Sept. 11, 1959
9 Claims. (Cl. 219—10.77)



9. In a method of zone melting a semiconductor rod, in which the rod is vertically supported at both ends and a molten zone is formed in the rod by a surrounding inductive heater coil energized by current from a high-frequency generator and the zone is caused to move lengthwise of the rod, the improvement comprising the steps of initiating the melting of the zone near the one end of the rod by varying the frequency of the generator current as the initial liquefaction of the zone progresses so as to maintain said current at a desired constant magnitude until the zone is melted through, thereafter shifting the frequency of the generator current to a value corresponding to the rod diameter and the desired current

magnitude, and simultaneously varying the axial spacing between the rod ends to maintain the current at said desired magnitude while moving the molten zone along the rod to the vicinity of the other end, then reducing the current magnitude so as to maintain an incandescent solid zone in the rod while returning the zone back to the said one rod end, and repeating the above-defined steps.

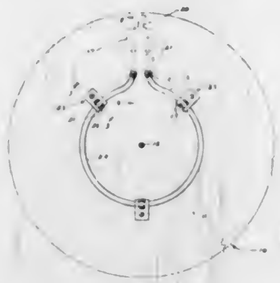
3,046,380
CONTROL APPARATUS
Elmer A. Carlson, Richfield, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 24, 1960, Ser. No. 64,339
10 Claims. (Cl. 219—20)



1. In a temperature control system for controlling a plurality of electric heaters and a fan which circulates air across the heaters to a space in which the temperature is being controlled; a plurality of switch means adapted to control the heaters and the fan; each of said switch means comprising a switch, a thermal operator for said switch to close said switch upon heating said operator to a predetermined temperature, and a first and a second electric heater for heating said operator, said first heater of each operator being connected in parallel with said switch of the respective operator to provide off cycle heat to said operator; a panel; means for mounting said plurality of switch means in said panel so a thermal relation exists between said switch means; a fast cycling space temperature responsive switch means; a source of power; and circuit means comprising said space switch means for connecting said second heaters in a parallel circuit and to said source so that upon said temperature responsive switch means closing said second heaters are energized, said thermal operators being affected by the combined effect of all of the heat sources in said panel whereby even though said second heaters are energized cyclically by equal amount said plurality of switch means operate in a random manner.

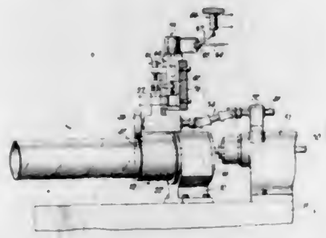
3,046,381
IGNITING DEVICE FOR CHARCOAL GRILLS
Ralph R. Olswang, Scarsdale, N.Y., assignor to Kamkap, Inc., New York, N.Y., a corporation of New York
Filed Dec. 5, 1958, Ser. No. 778,339
1 Claim. (Cl. 219—32)

In a charcoal grill having a fire box provided with a bed, the combination of an electrical heating element for igniting the charcoal mounted within the fire box in spaced relation to the upper face of the bed, the heating element being provided with two generally parallel terminals which are displaced downwardly from the general plane of the element and which are provided with electrical connectors, the bed having openings through which said terminals and connectors pass to receive a female connector, and spaced brackets on said upper face for supporting the element, the spacing between the ele-



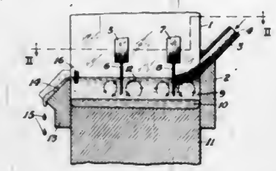
ment and the bed being sufficient to allow charcoal residue to pass freely therebetween without caking and the upper surface of the element being not more than ¾ inch above the bed so as to avoid subjecting said element to the zone of intense heat from the burning charcoal.

3,046,382
SPIRAL TUBE MILL
Jack Morris, Monsey, N.Y., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey
Filed May 5, 1959, Ser. No. 811,214
6 Claims. (Cl. 219—62)



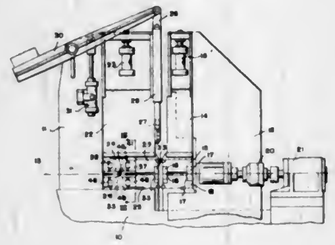
2. In welding apparatus of the class described, means for advancing a metal strip from a supply thereof, a forming head receiving said strip, said forming head comprising a stationary mandrel including a body portion axially disposed at the helix angle of the tube relatively to the line of advance of the strip and a stationary guide member substantially surrounding said body portion and formed with strip receiving means, said mandrel body portion and said guide member being slightly spaced apart whereby they cooperate to helically guide the advancing strip into tubular formation, means for heating a marginal region along an edge of said advancing strip and a similar region along the trailing edge of said tube in advance of the point of contact of said edges for forming a lap weld along a zone of juncture thereof, squeeze rollers rotatable about axes inclined at the complement of said helix angle relatively to the axis of said mandrel body portion and pressing said edges as they are brought together at the weld point, drive means for said squeeze rollers, and tube guide means connected to an end of said mandrel body portion and effectively extending the length thereof beyond the weld point in the direction of movement of the formed tube for guiding the welded tube away from said mandrel body portion.

3,046,383
PROCESS OF ELECTRICALLY WELDING UNDER A LAYER OF MOLTEN SLAG
Jozef Čabelka, Bratislava, Czechoslovakia, assignor to Vyskumny ustav svaracsky MHD, Bratislava, Czechoslovakia, a company of Czechoslovakia
Filed Sept. 9, 1960, Ser. No. 54,978
6 Claims. (Cl. 219—73)



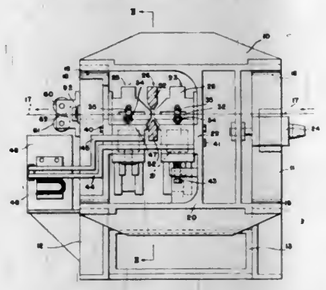
1. In an electric welding process, the steps of forming a layer of molten slag on an object to be welded; immersing an electrode of fusible material in said layer above said object; passing an electric current from said electrode through said layer to said object in such a manner that a portion of said electrode is fused and the fused material is deposited on said object; adding an additional amount of slag to said layer; and simultaneously withdrawing a substantially corresponding amount of said molten slag from said layer.

3,046,384
FLASH WELDING AND TRIMMING APPARATUS
Melvin M. Seeloff, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed May 4, 1960, Ser. No. 26,792
6 Claims. (Cl. 219—97)



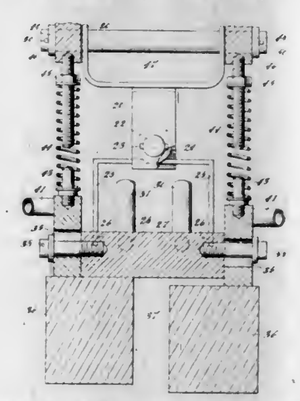
1. Apparatus for flash welding elongated workpieces such as strip in end-to-end relation and for trimming the welding flash from the line of weld comprising a first housing which is normally fixed in the longitudinal direction of workpiece travel through the apparatus and a second housing which is movable longitudinally with respect to the first housing, a welding clamp on the second housing comprising a pair of clamping electrode bars and a pair of clamping bars spaced longitudinally from said electrode bars, a welding clamp on said first housing comprising a normally fixed lower electrode bar as well as an upper electrode bar and a pair of lower and upper clamping bars, said lower and upper clamping bars being spaced longitudinally from said lower and upper electrode bars, a vertically movable carrier for said upper electrode and clamping bars, a lower tool slide guided on said first housing for transverse movement contiguous to said lower clamping bar, an upper tool slide guided on said carrier for transverse movement contiguous to said upper clamping bar, means to maintain said lower and upper tool slides aligned with respect to each other in a transverse direction and to move said slides transversely, and trimming tools mounted on said tool slides for engaging a line of weld in the joined workpieces closely adjacent one edge of said upper and lower clamping bars.

3,046,385
FLASH WELDING APPARATUS
Melvin M. Seeloff, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed Aug. 10, 1959, Ser. No. 832,779
15 Claims. (Cl. 219—97)



1. Flash welding apparatus for joining the adjacent ends of workpieces which comprises a frame, said frame comprising a pair of longitudinally spaced end members, a plurality of transversely extending structural members spanning and tying together said end members, said frame being open and generally rectangular, a generally H-shaped slide, said H-shaped slide having four end portions and a vertically extending body portion, each of said end portions being slidably mounted with respect said end members of said frame, the arrangement being such that said H-shaped slide is slidably supported at said end portions thereof, actuating means mounted on one of said end members and being drivingly connected with said H-shaped slide for moving the same, a first welding die clamp stationarily mounted on one of said end members, and a second movable welding die clamp mounted on said body portion of said H-shaped slide.

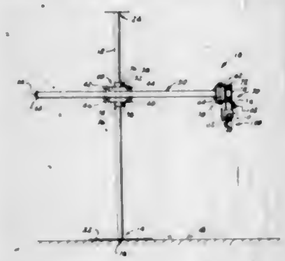
3,046,386
ARTICULATED WING SHOE FOR THE ELECTRO-SLAG AND ELECTROGAS WELDING EQUIPMENT
Walter H. Wooding, Broomall, Royal David Thomas, Jr., Narberth, and James E. Norcross, Media, Pa., assignors to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 3, 1961, Ser. No. 80,502
5 Claims. (Cl. 219—126)



1. In vertical welding mechanism, a welding shoe combination, comprising an intermediate shoe, means for sup-

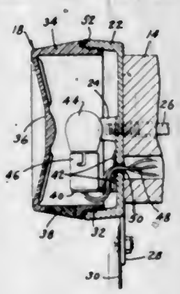
porting the intermediate shoe, wing shoes on either side of the intermediate shoe, guide means permitting the wing shoes to move relatively toward and away from the work and permitting the forward faces of the wing shoes to rock about a horizontal axis with respect to the vertical, resilient means for urging the top of each wing shoe toward the work and resilient means urging the bottom of each wing shoe toward the work.

3,046,387
WELDING DEVICE
Matt Killunen, 8331 Cahalan, Detroit, Mich.
Filed Nov. 13, 1959, Ser. No. 852,679
7 Claims. (Cl. 219—130)



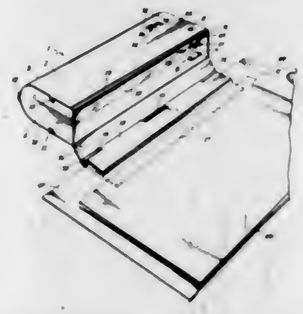
1. In a welding device, the combination of a vertically disposed mounting member; means for securing the top and bottom of said vertically disposed member to the floor and ceiling; adjustable bracket means on said vertical member; a generally horizontal bar slidably affixed to said adjustable means; a first bifurcated member on one end of said horizontal rod; a second bifurcated member pivotally secured to said first bifurcated member; a pivotal member secured to said second bifurcated member; and an electrode holder secured to said pivotal member on one end thereof.

3,046,388
WATER-PROOF TAIL LIGHT
Clifford L. Shinn, 320 Dyer Road, Santa Ana, Calif.
Filed Mar. 15, 1960, Ser. No. 15,164
1 Claim. (Cl. 240—8.3)



In a water-proof tail light construction for use in conjunction with submersive vehicles, the combination of: a casing of substantially cup-shaped configuration, said casing being provided with threads thereupon, said casing having a base incorporating a plurality of internal bosses incorporating screw threaded bores opening externally of said casing and adapted to receive mounting means therefor, said casing having an opening therein for the passage of electrical wires therethrough; a light bulb mounting socket secured entirely within said casing to the interior surface of said base below said bosses; a light bulb mounted in said socket; current carrying wires secured to said socket and extending through said opening in said base; sealing means in said wire receiving opening; an outer case element threadedly engaged upon the threads of said casing, said outer case being fabricated from translucent material and having a flange thereupon intermediate its extremities juxtaposed to the corresponding outer extremity of said case; and a gasket interposed between said flange and said extremity of said case to seal said case and outer case against the infiltration of fluid.

3,046,389
PORTABLE LIGHTING UNIT FOR CLIP BOARDS OR THE LIKE
Frank F. Catelli, 3000 Mission Road, and Derrell G. Quigel, 2425 W. Harding Way, both of Stockton, Calif.
Filed June 22, 1959, Ser. No. 821,949
1 Claim. (Cl. 240—10.65)

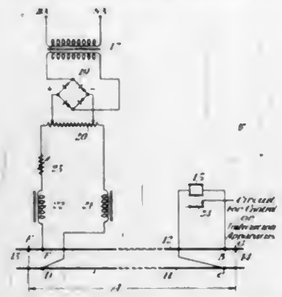


A portable lighting unit for attachment to a marginal portion of a rigid board, said unit comprising an elongated body open along the front side, said body including a top wall, a bottom wall, a back wall, and end plates one only of which is rigid with the top and bottom walls, a reflector in the body spaced from the back wall and secured to the top and bottom walls and extending the full distance between the end plates, an electric light globe mounted on the body in front of the reflector, the space between the reflector and back wall providing a compartment for the reception of a battery, means mounting the other end plate on the body for forward and backward sliding movement to open the corresponding end of the compartment and comprising ears on the top and bottom walls overlapping said other end plate, the latter being disposed between the walls of the body with its peripheral edge in engagement with the inner surface of said walls, a tongue on such end plate at the back slidably projecting through a slot in the back wall of the body, and a downwardly sloping lip on the top wall at the front, the upper edge of said other end plate being cut to match the slope of the lip; the top wall of the body and the reflector being of resilient material whereby the lip yieldably retains said end plate against forward sliding movement.

3,046,390
RAILWAY TRACK CIRCUIT APPARATUS
Harry Duckitt and Walter M. Sweetenham, London, England, assignors to Westinghouse Brake and Signal Company Limited, London, England
Filed June 8, 1960, Ser. No. 34,736
Claims priority, application Great Britain July 17, 1959
1 Claim. (Cl. 246—35)

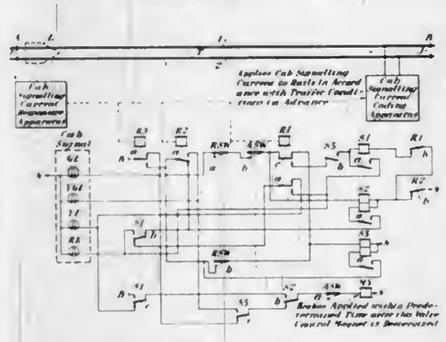
In combination, a stretch of railway track having one rail electrically continuous for the return of alternating electric propulsion current and having the other rail provided with insulated rail joints defining first and second ends of a track section, a direct current track relay having its control winding connected across the rails in said track section at said first end, a transformer having a primary and a secondary winding, a source of alternating current connected across the primary winding of said transformer,

a full-wave rectifier having its input terminals connected across the secondary winding of said transformer, a first and a second choke coil, a first electrical connection from one output terminal of said rectifier to one of the rails in said track section at said second end and including in a series circuit said first choke coil and said resistor, a second electrical connection from the other output terminal of said rectifier to the other of the rails in said track section at said second end and including in a series circuit said second choke coil; and a resistor having a value selected



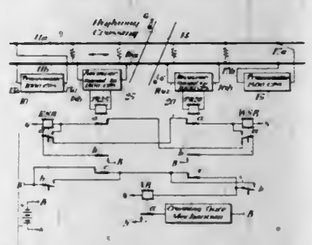
so as to provide a high resistance relative to the magnitude of direct current provided at the output terminals of said rectifier and a low impedance relative to a magnitude of alternating current that may intrude from said track rails to the output terminals of the rectifier, said resistor having a first terminal connected to said first electrical connection at a point between said first choke coil and said one output terminal of the rectifier, and a second terminal connected to said second electrical connection at a point between said second choke coil and said other output terminal of the rectifier.

3,046,391
RAILWAY TRAFFIC CONTROLLING APPARATUS
Harold W. Bryan, Penn Hills, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 27, 1959, Ser. No. 816,253
8 Claims. (Cl. 246—63)



4. In a railway traffic controlling system comprising train carried cab signaling apparatus including first, second, and third control relays so controlled that the first and third relays only are energized under clear traffic conditions, the first and second relays only are energized under approach medium traffic conditions, the first relay only is energized under approach traffic conditions, and all three relays are deenergized under stop traffic conditions; and said apparatus also including a manually operable acknowledging switch having normal and reverse positions and a contact closed only in said reverse position; in combination; first, second, and third stick relays; a pickup circuit for said first stick relay including a front contact of said third stick relay, a first back contact of said first control relay, said switch contact, a first back contact of said second control relay, and a back contact of said third control relay; a pickup circuit for said second stick relay including said switch contact, said back contact of said third control relay, and said first back contact of said second control relay; a pickup circuit for said third stick relay including said switch contact, a front contact of said first control relay and said back contact of said third control relay; a stick circuit for said first stick relay including a second back contact of said second control relay, said back contact of said third control relay and a second back contact of said first control relay; a stick circuit for said second stick relay including said second back contact of said second control relay and said back contact of said third control relay, and a stick circuit for said third stick relay including said back contact of said third control relay.

3,046,392
CONTROL CIRCUITS
Philip H. Luft, Penn Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Mar. 3, 1958, Ser. No. 718,557
13 Claims. (Cl. 246—130)

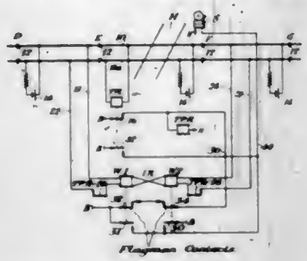


1. In combination with electrically continuous first and second track rails, a track circuit comprising, a transmitter of electrical energy operating at a given frequency and connected across said track rails at a first location, a receiver, means coupling inputs of said receiver at spaced points along the length of said first track rail and spaced from said first location, said receiver being tuned to the operating frequency of said transmitter and adapted to be energized by electrical energy at its tuned frequency flowing in said rails, and reactance means connected to said first rail at a location spaced from said length and on the opposite side from said first location and connected to said second rail to provide an electrical path for electrical energy at said operating frequency whereby the shunting action across said rails by a train axle occupying a position intermediate the transmitter and receiver connections actuates said track circuit at definite predetermined points independently of the ballast impedance existing across said rails.

3,046,393
APPARATUS FOR THE CONTROL OF HIGHWAY CROSSING SIGNALS
Arthur E. Dodd, Edgewood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 12, 1958, Ser. No. 779,948
7 Claims. (Cl. 246—130)

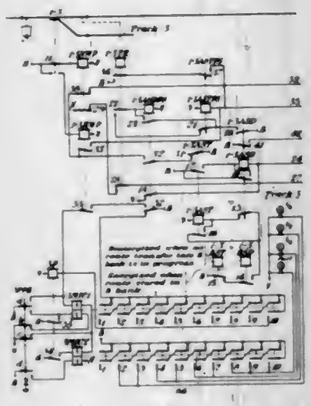
1. In combination with a stretch of railway track divided into an intermediate track section separating first and second approach track sections leading toward a highway intersecting said intermediate section, a track relay for said intermediate section, a repeater relay, a first pickup circuit for said repeater relay including a front contact of said track relay, an interlocking relay comprising first and second windings, a second pickup circuit for said repeater relay controlled by said first

and second windings, a track circuit for said first approach section including said first winding of said interlocking relay and a first front contact of said repeater relay, a track circuit for said second approach section including said second winding of said interlocking relay



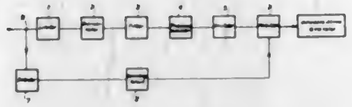
and a second front contact of said repeater relay, a signal at said intersection, and a circuit for energizing said signal including a contact controlled by said track relay and contacts controlled separately by said first and second windings of said interlocking relay.

3,046,394
CAR COUNTING SYSTEMS
Benjamin Mishelevich and Sih Hsuin Tsiang, Pittsburgh, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Feb. 7, 1956, Ser. No. 564,027
10 Claims. (Cl. 246—182)



1. At a railway track switch over which cuts of cars are routed into diverging tracks in accordance with preselected routes stored in an automatic switching system in the order of the approaching cuts, each route being moved into an active position to control said switch prior to the arrival of the corresponding cut and cancelled upon the arrival of said cut, the combination comprising, an electrical counting device which is advanced one count for each period of energization, an energizing circuit for said counting device, and an indicator, said circuit including a first contact closed in response to the passage of a car cut over said switch only if a preselected route is stored in said active position and a second contact controlled by said switch and closed only when said switch is positioned for a particular route, said first contact re-opening after the cancellation of said preselected route and being held open during the remainder of the passage of said cut, said indicator being controlled by said counting device to display an indication in accordance with the count to which said device has been advanced.

3,046,395
CARRIER WAVE CHANGING SYSTEMS
Eugène Oger, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed May 21, 1959, Ser. No. 814,910
Claims priority, application France June 5, 1958
4 Claims. (Cl. 325—430)

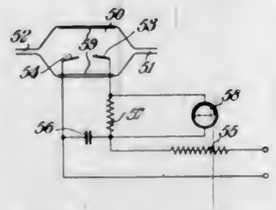


1. A system for translating in the frequency spectrum a first, amplitude and phase-modulated, wave having the form $a(t)\cos[\omega t+\varphi(t)]$, said system comprising first means having an input and an output for deriving from said first wave a first signal proportional to

$$\frac{d\varphi}{dt}$$

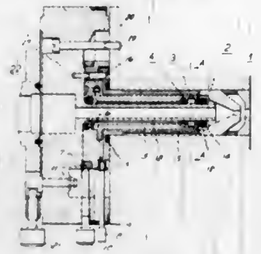
said first means comprising in series an amplitude limiter, a frequency discriminator and a high pass filter, second means having an input and an output for deriving from said first wave a second signal proportional to $a(t)$, means for applying said first wave to the input of said first means and to the input of said second means, a frequency modulating assembly coupled to the output of said first means and comprising oscillator means and frequency modulator means for providing a second wave frequency modulated by said first signal, and means coupled to the output of said frequency modulating assembly and to the output of said second means for amplitude modulating said second wave by said second signal.

3,046,396
METHOD AND APPARATUS FOR DETECTION OF GASES AND VAPORS
James E. Lovelock, London, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed May 6, 1958, Ser. No. 733,429
Claims priority, application Great Britain May 7, 1957
5 Claims. (Cl. 250—43.5)



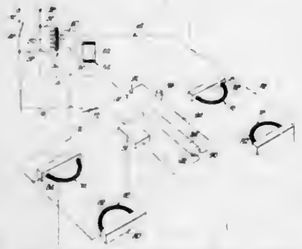
2. Apparatus for detecting low concentrations of gaseous and vaporized substances contained in an atmosphere of a rare gas comprising a chamber having an inlet opening at one end and an outlet opening at the other end for said rare gas, means for producing a source of free electrons within said chamber to partially excite said rare gas to a metastable state, means to apply a high intensity field not less than approximately two thousand volts per centimeter at normal temperature and pressure to said chamber to accelerate said electrons and thereby multiply the excitation of said rare gas, electrode means in said chamber, an external electrical circuit including a source of potential connected to said electrode means, and means to detect a change in an electrical characteristic of said circuit due to the presence of said substances.

3,046,397
DEVICE FOR COMPENSATING AXIAL ASTIGMATISM OF ELECTRON-OPTICAL SYSTEMS
Armin Delong, Vladimír Drahoš, and Jan Speciálný, all of Brno, Czechoslovakia, assignors to Tesla, narodni podnik, Prague, Czechoslovakia
Filed June 17, 1959, Ser. No. 821,052
2 Claims. (Cl. 250—49.5)



1. In combination in an apparatus for correcting the axial astigmatism of an electron-optical system which includes an evacuated chamber, magnetic lens means having a main axis along which an electron beam is to be projected, said magnetic lens means establishing an asymmetrical magnetic field configuration with respect to said main axis, means positioned adjacent to said magnetic lens means for correcting the asymmetrical configuration of the magnetic field of said magnetic lens means, said correction means including four series-connected electromagnets disposed outside the evacuated spaced of the electron-optical system in approximate quadrature relation with said main axis, said electromagnets having windings which are connected in series in such a manner that the poles of said electromagnets which face said axis and are opposite each other have identical magnetic polarities, variable direct-current power source means for energizing said four series-connected electromagnets, means for mechanically rotating said four series-connected electromagnets with respect to said main axis, and centering means for moving said four series-connected electromagnets in a plane perpendicular to said main axis.

3,046,398
EQUIPMENT FOR STERILIZING CARTS
Percy J. Barnes, Wilmington, Del., assignor to Advanced Development Association, Ltd., Kansas City, Mo., a corporation of Delaware
Filed July 6, 1959, Ser. No. 825,196
6 Claims. (Cl. 250—51)



1. Equipment for sterilizing wheeled carts comprising a housing having a top wall and a pair of opposed sidewalls depending from the top wall, said walls presenting a passage permitting the carts to be advanced through the housing; electrically operated radiation sterilizing structure within said housing and disposed to direct sterilizing rays downwardly onto carts therebeneath as the latter are advanced through the passage of the housing; electrical source means connected to said structure for energizing the latter; and mechanism interposed in said electrical source means and including components carried by the housing at each end of the passage therethrough and extending into the latter in positions to be engaged by the carts as the latter are advanced through the housing for effecting selective energization of said sterilizing structure, said mechanism being electrically coupled to said electrical source means to permit energization of the latter only when the carts are in simultaneous engagement with the components at each end of the passage through said housing.

3,046,399
X-RAY SPECTROGRAPH
Joshua Ladell, Flushing, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,621
5 Claims. (Cl. 250—51.5)

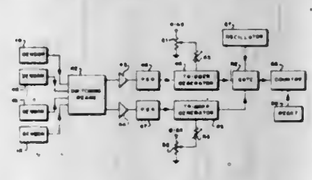


1. An X-ray spectrograph for determining the elements of a material comprising a source of X-rays, means for positioning a specimen of the material to be irradiated in the path of a beam of X-rays, a stationary diffracting crystal positioned to receive emergent radiation from the irradiated specimen, said crystal having a plurality of diffracting planes for reflecting each of a plurality of wavelengths into a plurality of fixed detectors each of which is pointed at the crystal in the direction of a radius drawn from the intersection of a sphere of reflection and a reciprocal lattice point, said sphere of reflection corresponding to one of said wave-lengths and having a radius equal to the reciprocal of said wave-length.

3,046,400
MEASUREMENT OF RADIATION
Jean A. Paymal, Neuilly-sur-Seine, France, assignor to Compagnie de Saint-Gobain, Paris, France
No Drawing. Filed May 29, 1959, Ser. No. 816,662
Claims priority, application France June 2, 1958
18 Claims. (Cl. 250—83)

1. A method of determining the quantity of ionizing radiation which comprises exposing manganese glass containing a radiation intensity compensating agent to ionizing radiation, and determining the change in optical density produced by the exposure.

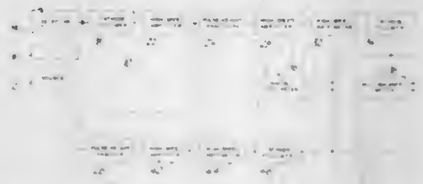
3,046,401
AIRCRAFT VELOCITY RECORDING DEVICE
Edward M. Feldman, Baederwood, and David F. Gould II, Newtown, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 29, 1960, Ser. No. 11,936
10 Claims. (Cl. 250—83.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A velocity recording device comprising: a pair of sensors adapted to be spaced a known distance apart along

the path of motion of an object the velocity of which is to be determined, each of said sensors comprising an optical system, and a member having a planar surface in the focal plane of said optical system, said member including an elongated photoconductive element having enhanced spectral response to radiant energy having wavelengths between approximately 0.25 and 3.5 microns symmetrically disposed on said planar surface with respect to said optical axis; means to align said sensors whereby the planes which respectively contain the optical axis of a sensor and the long dimension of the element thereof are parallel; differentiating means coupled to said elements; amplifier means having the input circuit thereof coupled to said differentiating means; trigger generating means having the input circuit thereof coupled to the output circuit of said amplifier means; a timing signal source; gating circuit means having the input circuits thereof respectively coupled to said timing signal source and to the output circuit of said trigger generating means; and counter means having the input circuit thereof coupled to the output circuit of said gating circuit means.

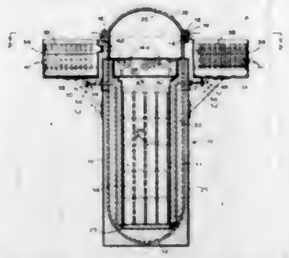
3,046,402
MULTIPLE THICKNESS TIMES DENSITY GAMMA GAUGE
Norman H. Cherry, Southampton, Pa., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 28, 1960, Ser. No. 25,489
6 Claims. (Cl. 250—83.3)



1. A thickness times densify gauge comprising a source of gamma radiation at two monoenergetic levels, a detector spaced from said source to permit the insertion therebetween of a sample to attenuate said radiation, said sample consisting of at least two dissimiliar materials in close proximity with each other, said detector including means in response to the incidence of said attenuated radiation to produce a series of voltage pulses whose amplitudes are functions of the gamma photon energy incident on said detector, and means for receiving said pulses and separating the latter into groups of pulses having preselected ranges of amplitudes corresponding with the attenuated radiation from each of said levels, and means for measuring and reading out the recurrence rates of said groups of pulses as a measure of the effect in terms of thickness times density of each of said material attenuating each of said radiation levels.

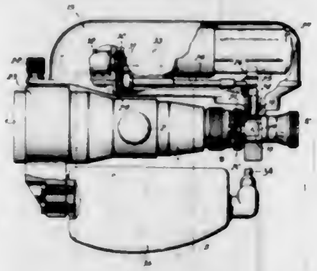
3,046,403
DEVICE FOR THE STORAGE OF A HEAT EVOLVING MATERIAL
Donald W. Montgomery, Lynchburg, Va., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 17, 1959, Ser. No. 807,196
9 Claims. (Cl. 250—106)

1. In a device for the storage of a heat evolving radiation source comprising a pressure vessel with a circular cross section having an opening therein, a removable closure for said opening, said radiation source contained within said pressure vessel, a lining of radiation shielding material associated with the inner surface of said pressure vessel and arranged to envelop said radiation source, and heat exchange means exterior of said pressure vessel and said shielding constructed and arranged to remove heat generated within said pressure vessel by



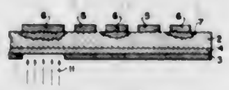
said radiation source by circulation of a fluid serially through said pressure vessel and said exterior heat exchange means.

3,046,404
METHOD OF AND MEANS FOR COMPARISON OF TWO ELECTRICAL POTENTIALS FOR PURPOSES OF PHOTOMETRY AND THE LIKE
Markus Biermann, Berlin-Halensee, and Christoph Kuehne, Berlin-Zehlendorf, Germany, assignors to Askania-Werke A.G., Berlin-Friedenau, Germany, a corporation of Germany
Filed May 8, 1959, Ser. No. 811,966
Claims priority, application Germany May 16, 1958
21 Claims. (Cl. 250—203)



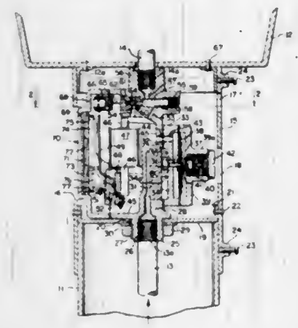
19. In apparatus for comparing two light beams, means for producing an electrical voltage signal having first and second halves of each fundamental cycle of the same general form and polarity but of amplitudes corresponding to the intensities of each of the respective beams, means for producing a reference alternating voltage of the same fundamental frequency as the signal, means for multiplicatively mixing the signal and the reference voltage, and means to detect the polarity and magnitude of the direct voltage component of the product thus produced.

3,046,405
TRANSISTOR DEVICE
Reimer Emeis, Pretzfeld, Upper Franconia, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, and Erlangen, Germany, a corporation of Germany
Filed Jan. 19, 1959, Ser. No. 787,732
Claims priority, application Germany Jan. 22, 1958
4 Claims. (Cl. 250—211)



3. A transistor device, comprising a plurality of individually operable junction transistors having a single semiconductor body and a single collector electrode in common, said body having flat shape and having two individually coherent main strata of different conductance types respectively, said collector electrode being joined on one flat side of said body with one of said strata, each of said transistors having a base electrode and an emitter electrode spaced from each other on the other flat side of said body, the base electrodes and emitter electrodes of all said transistors extending side by side in alternating sequence, said base electrodes being joined with said other coherent stratum, said body having locally limited zones adjacent to said respective emitter electrodes, said zones having the same conductance type as said one stratum joined to said collector electrode, conductor means connecting the emitter electrode of each preceding one of said transistors with the base electrode of the next one of said transistors to form a cascade amplifier, the one transistor that forms the input stage of said amplifier consisting of a phototransistor.

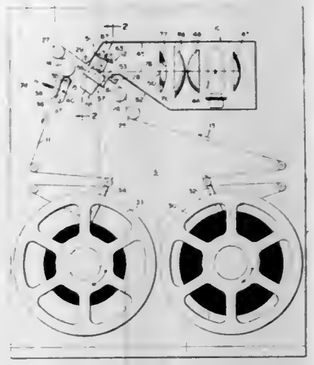
3,046,406
AUTOMATIC GAS VALVE
Paul Dietiker, Redondo Beach, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,293
1 Claim. (Cl. 250—215)



The combination comprising a gas light having a base and a lamp, a valve body having an inlet and an outlet, an inlet chamber, an outlet chamber, a valve seat positioned between said chambers, a control valve between said chambers and cooperative with said seat and normally biased to an open position, an electric actuator for said control valve, said actuator being operably energizable by current generated by a photoelectric cell unit when sensing daylight to close said control valve, a photoelectric cell unit directly connected to said electric actuator, said valve body supporting and confining said control valve and photoelectric cell unit and adapted to be inserted in a gas line to said lamp, said valve body having a light admitting window adjacent said unit and a tubular housing of substantially the same cross sectional area as said base having means to connect one end thereof to said base and the other end to said lamp for supporting said lamp on said base, said housing having an opening aligned with said window for admitting light to said photoelectric cell unit.

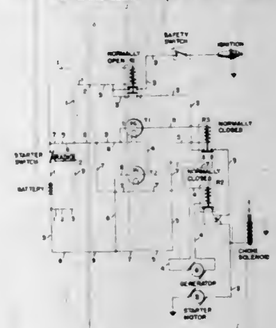
3,046,407
RECORD READER
Paul R. Hoffman, Woodlyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed July 27, 1960, Ser. No. 45,639
9 Claims. (Cl. 250—219)

5. In apparatus for reading indicia disposed in rows and columns in a tape, said indicia being in printed form in one mode of operation and in perforated form in an alternative mode of operation, comprising light source means adjacent one surface of said tape for emitting rays of light to intersect said tape along a line coinciding with a row of indicia thereon, photo-responsive means displaced from said light source and adjacent to said one surface and in one mode of operation to sense indirectly reflected rays of light which form angles with the tape which are dissimilar to the angle of incidence formed by the light rays emitted from said source, and an optical



prism having multi-reflective internal surfaces disposed adjacent an opposite surface of said tape whereby in said alternative mode of operation light from said light source passes through perforations in said tape and into said prism where it is first refracted and is thereafter reflected from said reflective surfaces to emerge from the prism and pass through the same perforations a second time but in a direction to be received by said photo-responsive means.

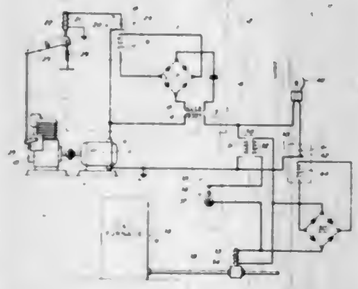
3,046,408
SELF-STARTER CIRCUIT FOR MOTOR VEHICLES
Georges Sturbois, 1595 Sauve E., Montreal, Quebec, Canada
Filed Feb. 27, 1959, Ser. No. 796,044
6 Claims. (Cl. 290—37)



1. In an engine starting system having a self-starter circuit including a battery, a starter switch, a starter motor and means operated by said engine to open said circuit when said engine has been started; means for alternately opening and closing said circuit to provide cranking periods of said starter motor alternating with rest periods, said last mentioned means comprising a double acting relay having a winding and two pairs of contacts, one of said pairs of contacts being closed in the deenergized condition of said relay and being included in said self-starter circuit, a first thermostatic switch having a filament and a pair of contacts open in the cold condition of said filament, a second thermostatic switch having a filament and a pair of contacts closed in the cold condition of said

filament, a first circuit including said battery, said starter switch, said contacts of said first thermostatic switch and said winding of said relay, a second circuit including said battery, said starter switch, said filament of said first thermostatic switch and said contacts of said second thermostatic switch, and a third circuit including said battery, said starter switch, said filament of said second thermostatic switch and the other of said pairs of contacts of said relay which pair is open in the deenergized condition of said relay.

3,046,409
SPEED CONTROL FOR ENGINE GENERATOR UNIT
Ronald A. Patnaude, Sioux City, Iowa, assignor to Wincharger Corporation, a corporation of Minnesota
Filed Mar. 23, 1959, Ser. No. 801,371
4 Claims. (Cl. 290—40)



4. For use in combination with an engine-generator unit having a speed control for changing the speed of the engine from an idling to an operating condition in response to the application across the generator output terminals of a load of predetermined value, a control system comprising: a normally open first load circuit coupled to said generator and presenting thereto a load of a value small with respect to said predetermined value; means for selectively closing said first load circuit; an auxiliary load circuit comprising a substantially resistive impedance presenting a load of a value which together with said primary load value at least equals said predetermined value; a direct-current operated solenoid having a pair of normally open contacts coupling said auxiliary load across said generator output terminals; and rectifier means responsive to closure of said first load circuit for energizing said solenoid to close said contacts and thereby impress a total load on said generator of a value at least equal to said predetermined value.

3,046,410
FREQUENCY DIVIDER SYSTEMS
Wesley A. Robinson, Santa Monica, Calif., assignor to Space Technology Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware
Filed May 14, 1959, Ser. No. 813,296
10 Claims. (Cl. 307—11)



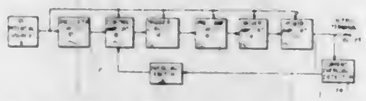
10. A frequency divider system for dividing a high frequency input signal of a predetermined frequency f to provide an output signal of a subharmonic f/n comprising: a first high frequency tunable, high impedance parallel resonant circuit having capacitive and inductive characteristics enhancing resonance at the subharmonic frequency f/n; a second high frequency tunable, high impedance parallel resonant circuit having capacitive and inductive characteristics enhancing resonances at a frequency $f(1-1/n)$; a variable reactance device; said first circuit, said second circuit, said variable reactance device being connected in a loop circuit such that any oscillations in either of said resonant circuits tend to regeneratively influence the other of said resonant circuits; connection means for applying the high frequency input signal across a portion of said loop circuit including a series connection of said variable reactance device and said first circuit whereby said first circuit will tend to resonate at the said subharmonic frequency f/n without the provision of any additional high frequency energy to said loop circuit; and output connection means for receiving a portion of the energy of the oscillations within said first circuit.

3,046,411
CONDITION SENSING APPARATUS
John E. Steiner, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Dec. 30, 1958, Ser. No. 783,959
3 Claims. (Cl. 307—43)



1. In apparatus for producing a composite signal which varies as a function adjustable in relative authority of two independently changeable conditions, the combination comprising first and second sources of signals which, respectively, change substantially in proportion to changes in the values of said two conditions, a potentiometer having an adjustable wiper movable therealong, means connecting said first source, said second source and said potentiometer in a series circuit, said series circuit including a common junction between said first and second sources, and two output terminals connected respectively to said wiper and said junction, whereby a composite output signal appearing between said two output terminals varies according to the combined effect of the signals produced by said first and second sources, and the relative authority of such first and second sources in contributing to said composite signal changes according to the adjusted position of said wiper along said potentiometer.

3,046,412
STATIC POWER INVERTER
Helmut K. Seike, Toledo, Ohio, assignor to Kaiser Industries Corporation, Toledo, Ohio, a corporation of Nevada
Filed Feb. 13, 1959, Ser. No. 793,129
14 Claims. (Cl. 307—82)



1. A static power inverter for converting the energy of a direct current source to an alternating current comprising a signal generator means for periodically providing current reversing signals responsive to the coupling thereof to said direct current source, means coupled to said signal generator means operatively controlled by said current reversing signals to provide output signals of a sharp rise time and a sharp decay time, amplifier means including at least one semiconductor unit connected as an amplifier, means for coupling at least certain of said output signals to said semiconductor unit, and output means for connecting the output of said semiconductor unit to associated load means.

3,046,413
TRANSISTOR MULTIPLE COUNT TRIGGER WITH STEPWAVE GENERATOR GATES
Genung L. Clapper, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 16, 1960, Ser. No. 76,263
8 Claims. (Cl. 307—88.5)



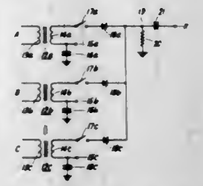
1. A multiple count trigger of the class described comprising, a pair of transistors each having emitter, base and collector electrodes, means cross-coupling the collector of each of said transistors with the base of the other transistor to form a binary trigger, a source of input pulses, an individual gating circuit connected between each base electrode of said binary trigger and said source of input pulses, means included in each said gate circuit and responsive to said input pulses for generating staircase voltages proportionate to the number of input pulses received, and control means responsive to the collector outputs of said binary trigger for effecting opposite control of said staircase voltage generating means whereby one gating circuit will count into one side of the trigger using an ascending staircase voltage while the other gating circuit is being reset using a descending voltage waveform.

3,046,414
PULSE GENERATOR FOR PRODUCING PERIODIC PULSES OF VARYING WIDTH FROM AN ALTERNATING VOLTAGE
Wolfgang Meissen, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Apr. 13, 1961, Ser. No. 102,696
Claims priority, application Germany Apr. 16, 1960
4 Claims. (Cl. 307—88.5)



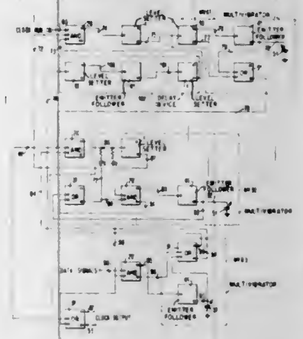
1. A pulse generator for producing periodic pulses from an alternating voltage comprising alternating-voltage supply means, a capacitor, a charging circuit connecting said capacitor with said voltage-supply means and having a diode in series with said capacitor, a discharging circuit connected to said capacitor and comprising a resistor and a variable direct-voltage source in series with said capacitor for discharging said capacitor through said resistor and forming from the capacitor voltage and the direct voltage a sum voltage whose zero passages have a phase position controllable by variation of said direct-voltage, and a pulse output circuit connected with said discharge circuit for deriving intermittent pulses from said sum voltage.

3,046,415
PRIORITY SWITCHING CIRCUIT
Paul H. Winslow, Stow, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Nov. 29, 1957, Ser. No. 699,782
2 Claims. (Cl. 307—88.5)



1. In a communication system having a plurality of input channels and a common output, means for assigning priority among input channels which comprises: an input transformer having a primary and a secondary winding for each channel; means for applying a modulating signal having positive and negative limits to the primary winding of each of said transformers; means for applying a direct current biasing voltage of the same polarity but a different magnitude to the secondary winding of each of said transformers, the magnitudes of each biasing voltage having greater separation than the voltage swing between positive and negative limits of the modulating signals concerned; a switch respective to each channel coupling its transformer secondary winding to said common output; and a unidirectional conducting device connected in series with each switch, each of said conducting devices being polarized for positive current flow toward said common output.

3,046,416
PHASED PULSE GENERATOR
Richard P. Case, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 20, 1958, Ser. No. 775,310
4 Claims. (Cl. 307—88.5)



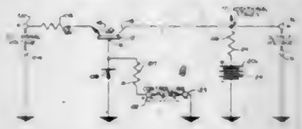
1. A pulse generator for issuing phased output signals in response to applied data signals which may vary with respect to the nominal time of said generator as determined by the free-running periods thereof while under control of a clock run gate signal comprising: first, second and third monostable multivibrators, each provided with associated input and out means, and each adapted to issue a disabling output when on and an enabling output when off; connecting means including first and second coincidence switching means for interconnecting said first and second multivibrators in a mutually alternating and free-running relationship; said first coincidence switching means responsive to a coincidence of enabling output signals from the second and third multivibrators and the clock run gate signal to switch on the first multivibrator

to initiate the free-running period of said first and second multivibrators; said second coincidence switching means responsive to a coincidence of enabling output signals from the first and third multivibrators to control the second multivibrator during the free running period of said first and second multivibrators; input means responsive to the applied data signal to switch on the third multivibrator either early or late with respect to the nominal time of said free-running period, depending upon the time of arrival of said data signals, to cause said third multivibrator to issue a correspondingly timed phased output signal and a disabling output signal to the first and second switching means, thereby preventing operations of the second multivibrator in the event the data signal is late or preventing operations of said first and second multivibrators in the event the data signal is early to thereby alter the free-running period; and means interposed between the output of the third multivibrator and the first switching means to prevent switching the first multivibrator before the second upon the switching off of the third multivibrator.

3,046,417
AMPLIFYING SWITCH WITH OUTPUT LEVEL DEPENDENT UPON A COMPARISON OF THE INPUT AND A ZENER STABILIZED CONTROL SIGNAL

Gustavo Garcia, West Covina, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

Filed Nov. 10, 1958, Ser. No. 772,917
13 Claims. (Cl. 307—88.5)

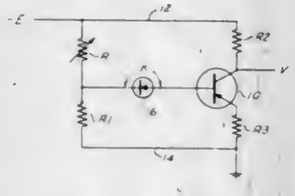


1. A switch comprising: an electron flow control device having input, output, and control electrodes; means for impressing an input signal voltage between an input electrode and ground; means for deriving a signal from an output electrode when said electron flow control device is conductive which is representative of the input signal voltage in amplitude and wave shape, a semi-conductor device connected to a control electrode, which conducts current in the reverse direction at a constant voltage larger in amplitude than the maximum input signal voltage; and means for impressing a pulse on said controlling electrode which is larger in amplitude than the reverse conducting constant voltage of said semi-conductor device, whereby said electron flow control device is made conductive.

3,046,418
ELECTRICAL IMPEDANCE MONITORING APPARATUS

Joseph J. Eachus, Cambridge, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 19, 1958, Ser. No. 781,752
11 Claims. (Cl. 307—88.5)

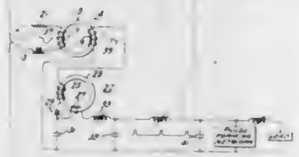


1. A variable impedance monitor circuit comprising a pair of power supply terminals, a first series circuit connected between said pair of supply terminals and comprising a pair of series connected impedance circuits, one of which is variable, a transistor having base, emitter, and collector terminals, a first resistor connecting said collector terminal to one of said supply terminals, a second resistor connecting said emitter terminal to the other of said supply terminals, the voltage on said emitter terminal being substantially entirely a function of the emitter-collector current flowing in said second resistor, and a diode connecting said base terminal to the junction of said pair of impedance circuits.

3,046,419
PULSE GENERATING APPARATUS

Robert A. Raber, Jr., East Berne, N.Y., assignor to General Electric Company, a corporation of New York

Filed Sept. 24, 1959, Ser. No. 842,041
7 Claims. (Cl. 307—106)



1. A pulse generating circuit for producing a pulse repetition rate that is any submultiple of the frequency of a source of power comprising means including at least one reactor energized from said source of power to derive pulses of constant and equal volt-time areas, storage means coupled to said reactor, means including a second reactor means and rectifying means coupled to said first reactor means and storage means for controlling the rate at which said storage means is charged so that a controllable number of positive pulses will occur before a following positive pulse is allowed to pass to said storage means, and pulse forming network means coupled to said second reactor means to produce a pulse repetition rate equal to any submultiple of the frequency of the source of power.

3,046,420
ELECTRICAL APPARATUS

Bruce Allen Ritzenthaler, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Dec. 31, 1958, Ser. No. 784,311
7 Claims. (Cl. 307—132)

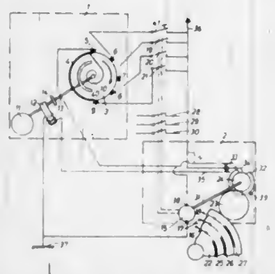


1. An improved electromagnetic relay pulsing circuit which comprises: a relay coil and means for supplying power thereto, a first armature driven by said coil and being alternately movable between normally-open and normally-closed contacts in the power supply means, a second armature driven by said coil and connected in a load circuit, capacitance means in shunt around said coil, a first discharge path including a low resistance connected to discharge said capacitance means through said normally-open contact whereby the portion of time when the first armature is engaged with the normally-closed contact is controlled, and a second discharge path including a high resistance bridged across the normally-closed contact to permit the application of power to said relay coil when said first armature is in the normally-open position and thereby provide rapid opening of the normally-closed contact and increase the contact pressure at the normally-open contact.

3,046,421
IMPULSE DEVICE CONNECTED WITH A MOTOR IN AN AUTOMATIC CUT-OUT FOR THE PROGRAM CONTROL IN WASHING-MACHINES

Walter Holzer, Schutzenrain, Meersburg (Bodensee), Germany

Filed Mar. 16, 1960, Ser. No. 15,388
Claims priority, application Germany Mar. 19, 1959
6 Claims. (Cl. 307—141)



6. A program selector switching system comprising: a plurality of operating contacts; switching means for selectively opening and closing said contacts, an electric motor for driving said switching means, a circuit interrupter driven by said electric motor and governing the current supply thereto; a cam disc driven by said electric motor; two switches operated by said cam disc so that one is open while the other is closed in alternating succession; circuit means for placing one of said switches in the supply circuit for said electric motor; a disc having a contact segment; a plurality of sliding contacts scanning said disc, being respectively connected in circuit with said operating contacts and being respectively associated thereto; controllable means for driving said last mentioned disc; circuit means for placing the other one of said switches into the supply circuit of said controllable means; a starter circuit for said electric motor including one of said operating contacts as selected by said switching means and an associated sliding contact; and spring means for recoiling said disc into a starting position when said means for driving said disc are rendered unenergized, which starting position is defined by an open-contact position with respect to said sliding contacts.

3,046,422
COAXIAL METAL ENCLOSED ISOLATED PHASE BUS

Roy H. Albright, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 5, 1959, Ser. No. 844,455
4 Claims. (Cl. 307—147)

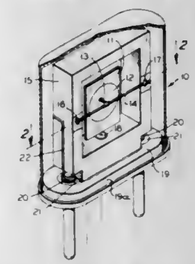


4. An isolated phase bus housing comprising a first, a second, a third and a fourth hollow housing of conductive material; said first, second and third hollow housings being coaxially positioned with respect to one another; each of said first, second and third hollow housings having respective first and second ends; said second end of said first housing being positioned adjacent said first end of said second housing and being electrically connected thereto; said second end of said second housing being positioned adjacent said first end of said third housing and being mechanically and electrically connected thereto; said second end of said third housing being positioned adjacent mid first end of said fourth housing and being mechanically and electrically secured thereto; said housing defining a continuous path for electrical current from said first end of said first housing through said second housing and said third housing to said second end of said fourth housing; a conductor positioned concentric to and within said isolated phase bus housing and being magnetically coupled thereto; said bus housing and said conductor being provided for each phase of a multiphase system; said housings for each phase being electrically tied to each other to thereby permit current to flow in only one direction at any one instant in any one of said bus housings.

3,046,423
HIGH SHOCK AND VIBRATION RESISTANT PIEZOELECTRIC CRYSTAL UNITS

John M. Wolfskill and Richard H. Tuznik, Erie, Pa., assignors to Bliley Electric Company, Erie, Pa., a corporation of Pennsylvania

Filed Oct. 9, 1958, Ser. No. 766,259
7 Claims. (Cl. 310—9.1)



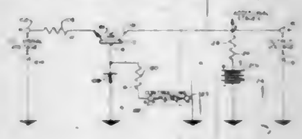
1. A piezoelectric crystal support for supporting the piezoelectric crystal so that the transmission of high shock and undesired vibrations to the crystal through the support thereof is reduced to the point where such vibrations have substantially no effect on the performance characteristics of the crystal, comprising the combination of a piezoelectric crystal having a pair of major faces, electrodes for said major faces, a frame of rigid material having an opening, means for supporting said crystal in said frame opening so that said frame surrounds said crystal and both of the major faces of said crystal are substantially centered in said opening, said supporting means comprising supporting members engaging said major faces at nodal points thereof and extending away from said crystal substantially at right angles thereto, said supporting members each having a length that is proportional to the frequency of vibration of said crystal, and additional supporting members extending across said frame, said additional supporting members having their ends attached to said frame, and means for attaching the outer ends of said first mentioned supporting members to said additional supporting members, the length and diameter of said additional supporting members being such that the mechanical resonant frequencies of these additional supporting members are outside of the range of mechanical vibration rates of the undesired extraneous vibrations which it is desired to isolate from the crystal, said additional supporting members being arranged so that said supporting means and said crystal form a symmetrical structure around the axis defined by said first mentioned supporting members the frequency of vibration of said supporting means as a

to initiate the free-running period of said first and second multivibrators; said second coincidence switching means responsive to a coincidence of enabling output signals from the first and third multivibrators to control the second multivibrator during the free running period of said first and second multivibrators; input means responsive to the applied data signal to switch on the third multivibrator either early or late with respect to the nominal time of said free-running period, depending upon the time of arrival of said data signals, to cause said third multivibrator to issue a correspondingly timed phased output signal and a disabling output signal to the first and second switching means, thereby preventing operations of the second multivibrator in the event the data signal is late or preventing operations of said first and second multivibrators in the event the data signal is early to thereby alter the free-running period; and means interposed between the output of the third multivibrator and the first switching means to prevent switching the first multivibrator before the second upon the switching off of the third multivibrator.

3,046,417
AMPLIFYING SWITCH WITH OUTPUT LEVEL DEPENDENT UPON A COMPARISON OF THE INPUT AND A ZENER STABILIZED CONTROL SIGNAL

Gustavo Garcia, West Covina, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

Filed Nov. 10, 1958, Ser. No. 772,917
13 Claims. (Cl. 307—88.5)

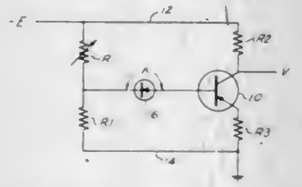


1. A switch comprising: an electron flow control device having input, output, and control electrodes; means for impressing an input signal voltage between an input electrode and ground; means for deriving a signal from an output electrode when said electron flow control device is conductive which is representative of the input signal voltage in amplitude and wave shape, a semi-conductor device connected to a control electrode, which conducts current in the reverse direction at a constant voltage larger in amplitude than the maximum input signal voltage; and means for impressing a pulse on said controlling electrode which is larger in amplitude than the reverse conducting constant voltage of said semi-conductor device, whereby said electron flow control device is made conductive.

3,046,418
ELECTRICAL IMPEDANCE MONITORING APPARATUS

Joseph J. Eachus, Cambridge, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 19, 1958, Ser. No. 781,752
11 Claims. (Cl. 307—88.5)

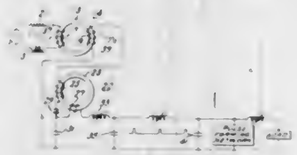


1. A variable impedance monitor circuit comprising a pair of power supply terminals, a first series circuit connected between said pair of supply terminals and comprising a pair of series connected impedance circuits, one of which is variable, a transistor having base, emitter, and collector terminals, a first resistor connecting said collector terminal to one of said supply terminals, a second resistor connecting said emitter terminal to the other of said supply terminals, the voltage on said emitter terminal being substantially entirely a function of the emitter-collector current flowing in said second resistor, and a diode connecting said base terminal to the junction of said pair of impedance circuits.

3,046,419
PULSE GENERATING APPARATUS

Robert A. Raber, Jr., East Berne, N.Y., assignor to General Electric Company, a corporation of New York

Filed Sept. 24, 1959, Ser. No. 842,041
7 Claims. (Cl. 307—106)



1. A pulse generating circuit for producing a pulse repetition rate that is any submultiple of the frequency of a source of power comprising means including at least one reactor energized from said source of power to derive pulses of constant and equal volt-time areas, storage means coupled to said reactor, means including a second reactor means and rectifying means coupled to said first reactor means and storage means for controlling the rate at which said storage means is charged so that a controllable number of positive pulses will occur before a following positive pulse is allowed to pass to said storage means, and pulse forming network means coupled to said second reactor means to produce a pulse repetition rate equal to any submultiple of the frequency of the source of power.

3,046,420
ELECTRICAL APPARATUS

Bruce Allen Ritzenthaler, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Dec. 31, 1958, Ser. No. 784,311
7 Claims. (Cl. 307—132)

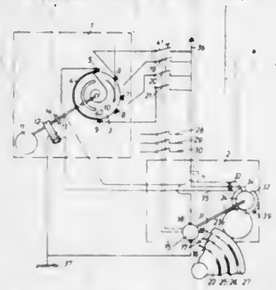


1. An improved electromagnetic relay pulsing circuit which comprises: a relay coil and means for supplying power thereto, a first armature driven by said coil and being alternately movable between normally-open and normally-closed contacts in the power supply means, a second armature driven by said coil and connected in a load circuit, capacitance means in shunt around said coil, a first discharge path including a low resistance connected to discharge said capacitance means through said normally-open contact whereby the portion of time when the first armature is engaged with the normally-closed contact is controlled, and a second discharge path including a high resistance bridged across the normally-closed contact to permit the application of power to said relay coil when said first armature is in the normally-open position and thereby provide rapid opening of the normally-closed contact and increase the contact pressure at the normally-open contact.

3,046,421
IMPULSE DEVICE CONNECTED WITH A MOTOR IN AN AUTOMATIC CUT-OUT FOR THE PROGRAM CONTROL IN WASHING-MACHINES

Walter Holzer, Schutzenrain, Meersburg (Bodensee), Germany

Filed Mar. 16, 1960, Ser. No. 15,388
Claims priority, application Germany Mar. 19, 1959
6 Claims. (Cl. 307—141)



6. A program selector switching system comprising: a plurality of operating contacts; switching means for selectively opening and closing said contacts, an electric motor for driving said switching means, a circuit interrupter driven by said electric motor and governing the current supply thereto; a cam disc driven by said electric motor; two switches operated by said cam disc so that one is open while the other is closed in alternating succession; circuit means for placing one of said switches in the supply circuit for said electric motor; a disc having a contact segment; a plurality of sliding contacts scanning said disc, being respectively connected in circuit with said operating contacts and being respectively associated thereto; controllable means for driving said last mentioned disc; circuit means for placing the other one of said switches into the supply circuit of said controllable means; a starter circuit for said electric motor including one of said operating contacts as selected by said switching means and an associated sliding contact; and spring means for recoiling said disc into a starting position when said means for driving said disc are rendered unenergized, which starting position is defined by an open-contact position with respect to said sliding contacts.

3,046,422
COAXIAL METAL ENCLOSED ISOLATED PHASE BUS

Roy H. Albright, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 5, 1959, Ser. No. 844,455
4 Claims. (Cl. 307—147)

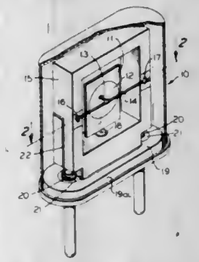


4. An isolated phase bus housing comprising a first, a second, a third and a fourth hollow housing of conductive material; said first, second and third hollow housings being coaxially positioned with respect to one another; each of said first, second and third hollow housings having respective first and second ends; said second end of said first housing being positioned adjacent said first end of said second housing and being electrically connected thereto; said second end of said second housing being positioned adjacent said first end of said third housing and being mechanically and electrically connected thereto; said second end of said third housing being positioned adjacent mid first end of said fourth housing and being mechanically and electrically secured thereto; said housing defining a continuous path for electrical current from said first end of said first housing through said second housing and said third housing to said second end of said fourth housing; a conductor positioned concentric to and within said isolated phase bus housing and being magnetically coupled thereto; said bus housing and said conductor being provided for each phase of a multiphase system; said housings for each phase being electrically tied to each other to thereby permit current to flow in only one direction at any one instant in any one of said bus housings.

3,046,423
HIGH SHOCK AND VIBRATION RESISTANT PIEZOELECTRIC CRYSTAL UNITS

John M. Wolfskill and Richard H. Tuznik, Erie, Pa., assignors to Bliley Electric Company, Erie, Pa., a corporation of Pennsylvania

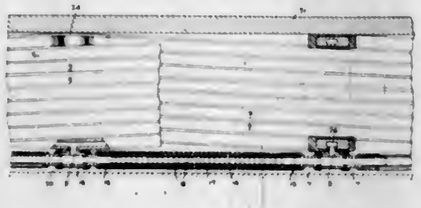
Filed Oct. 9, 1958, Ser. No. 766,259
7 Claims. (Cl. 310—9.1)



1. A piezoelectric crystal support for supporting the piezoelectric crystal so that the transmission of high shock and undesired vibrations to the crystal through the support thereof is reduced to the point where such vibrations have substantially no effect on the performance characteristics of the crystal, comprising the combination of a piezoelectric crystal having a pair of major faces, electrodes for said major faces, a frame of rigid material having an opening, means for supporting said crystal in said frame opening so that said frame surrounds said crystal and both of the major faces of said crystal are substantially centered in said opening, said supporting means comprising supporting members engaging said major faces at nodal points thereof and extending away from said crystal substantially at right angles thereto, said supporting members each having a length that is proportional to the frequency of vibration of said crystal, and additional supporting members extending across said frame, said additional supporting members having their ends attached to said frame, and means for attaching the outer ends of said first mentioned supporting members to said additional supporting members, the length and diameter of said additional supporting members being such that the mechanical resonant frequencies of these additional supporting members are outside of the range of mechanical vibration rates of the undesired extraneous vibrations which it is desired to isolate from the crystal, said additional supporting members being arranged so that said supporting means and said crystal form a symmetrical structure around the axis defined by said first mentioned supporting members the frequency of vibration of said supporting means as a

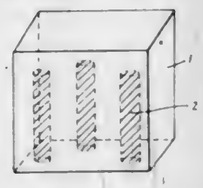
whole including said crystal being substantially different from the desired frequency of vibration of said crystal and also from the frequencies of the undesired extraneous vibrations.

3,046,424
DYNAMO ELECTRIC MACHINES
Joseph Tudge, Walkden, Manchester, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed June 27, 1960, Ser. No. 39,148
Claims priority, application Great Britain June 29, 1959
5 Claims. (Cl. 310—61)



1. An electrical alternator rotor comprising a core, around the periphery of which are surfaces defining conductor slots extending axially of the rotor, a plurality of coils, each coil comprising two coil sides extending through respective slots which are spaced apart around the rotor and each comprising a plurality of hollow conductors, each conductor comprising at least one portion which is radially inside the other conductors in the same slot, surfaces defining a plurality of cavities extending axially of the rotor, at least one inlet manifold and at least one discharge manifold in said cavities, ports between each discharge manifold and the interior passages of the radially innermost portions of said hollow conductors and ports between each inlet manifold and said interior passages.

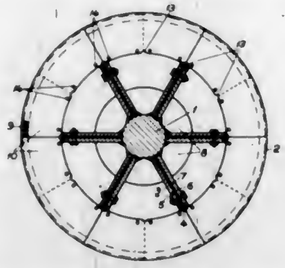
3,046,425
CARBON BRUSHES
Jacques Millet, Paris, France, assignor to Societe le Carbone-Lorraine, Paris, France, a company of France
Filed Apr. 21, 1959, Ser. No. 807,881
Claims priority, application France Apr. 29, 1958
4 Claims. (Cl. 310—228)



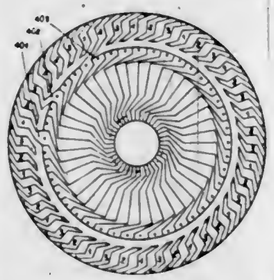
1. A carbon brush for use at high altitudes and under rarefied atmospheres containing at least one receptacle, and a mixture of tin sulphide and a binding agent in said at least one receptacle, said binder not being capable of modifying the structure of the tin sulphide.

3,046,426
ROTOR SPIDER FOR ELECTRICAL MACHINES
Sven Gynt, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed Mar. 5, 1959, Ser. No. 797,484
Claims priority, application Sweden Mar. 12, 1958
6 Claims. (Cl. 310—267)

1. Rotor spider for electrical machines comprising a central body, arms extending radially outward from said central body, and a ring of magnetic material shrunk onto said radial arms, the said arms each comprising at least one first element mounted between said ring and body and extending the full radial distance therebetween to absorb the shrinking forces and at least one second element engaged with and supporting said first element and fixed to said central body but spaced radially at its outer end from said ring, the said elements having means thereon operatively engaging the ring for transmitting turning moment between said ring and said central body.



3,046,427
MULTIPLE WINDING ELECTRIC ROTARY MACHINES
Jacques Henry-Baudot, Antony, Seine, France, assignor to Printed Motors Inc., New York, N.Y.
Filed Oct. 24, 1960, Ser. No. 64,583
Claims priority, application France Nov. 13, 1959
3 Claims. (Cl. 310—268)

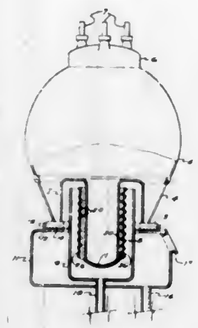


1. An electrical rotary machine of the axial air-gap type comprising an annular stator, a rotor adjacent said stator and comprising a disc-shaped insulating carrier having two printed-circuit windings formed on inner and outer annular areas thereof, a pair of brushes mounted to bear upon portions of said inner winding, said inner winding having printed-circuit tap extensions integrally connecting certain conductors thereof to certain conductors of said outer winding, whereby the current supplied to said inner winding from said brushes also circulates through said outer winding.

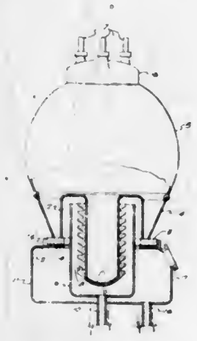
3,046,428
HIGH FREQUENCY ENERGY INTERCHANGE DEVICE
Charles A. E. Beurtheret, Saint-Germain-en-Laye, France, assignor to Compagnie Francaise Thomson-Houston, Paris, France
Filed June 5, 1959, Ser. No. 818,332
Claims priority, application France June 6, 1958
7 Claims. (Cl. 313—12)

1. In a high frequency energy interchange device having electrodes at least partially immersed in a cooling liquid including cooling means associated with an electrode of the device for cooling said electrode by vaporization of a cooling liquid, said cooling means including a generally

cylindrical electrode cooling member having a plurality of longitudinal circumferentially spaced solid rib members defining separate end portions and channels therebetween, a generally cylindrical fluid directing sleeve member positioned concentrically and substantially coextensively with respect to said electrode cooling member, said fluid directing sleeve member having such a diameter that a space is provided between the end portions of said solid rib members and said sleeve member whereby said channels and the space around said end portions support a first thermosiphon movement of cooling liquid past said rib members, and duct means extending along the said end portions in thermal contact therewith supporting substantially independent second thermosiphon movement of cooling liquid past the said end portions of said rib members.

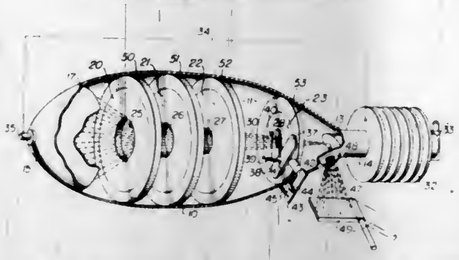


3,046,429
HIGH FREQUENCY ENERGY INTERCHANGE DEVICE
Charles A. E. Beurtheret, Saint-Germain-en-Laye, France, assignor to Compagnie Francaise Thomson-Houston, Paris, France
Filed June 5, 1959, Ser. No. 818,440
Claims priority, application France June 6, 1958
3 Claims. (Cl. 313—12)



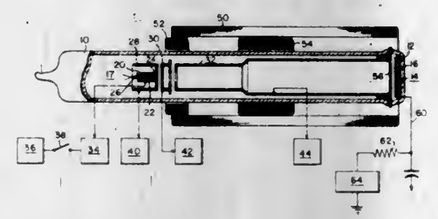
1. In a high frequency energy interchange device having electrodes, cooling means associated with an electrode of the device for cooling said electrode by vaporization of a cooling liquid, and means for immersing at least a portion of said cooling means in cooling liquid, said cooling means including a generally cylindrical member having at least two sets of substantially unbroken solid rib members protruding from said electrode and tapering with distance therefrom, said rib members intersecting to present a surface having a waffle-like appearance and define separate cavities having the shape of truncated pyramids.

3,046,430
ISOTOPE X-RAY
Donald T. Green, Shaker Heights, Ohio, assignor to Picker X-Ray Corporation, Waite Mfg. Div., Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 29, 1959, Ser. No. 789,884
9 Claims. (Cl. 313—57)



1. A self energized X-ray tube comprising a housing having an inner surface defining an evacuated chamber, a quantity of particle emitting radioactive material laminated on said inner surface, an X-ray emitting target carried by the housing and spaced from said material, means to prevent a substantial voltage differential between said target and said radioactive material, and focusing means carried in said chamber and interposed between the material and the target to focus material emitted particles against the target, said focusing means including a plurality of electrostatically charged rings, said focusing means being free of electrical connections.

3,046,431
STORAGE SYSTEM
James F. Nicholson, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 22, 1958, Ser. No. 782,035
15 Claims. (Cl. 313—65)

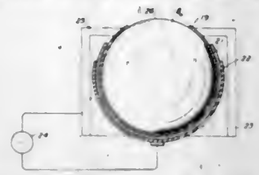


1. A storage member adapted to receive and to retain an electrostatic charge for a substantial length of time comprising a support member having an electrically conductive coating on one surface of said support member and a layer of a mixture consisting essentially of arsenic and selenium deposited on the exposed surface of said conductive layer and a layer of antimony trisulfide on the exposed surface of said mixture layer.

3,046,432
ELECTROLUMINESCENT LIGHT
Richard B. Nehrich, Jr., 4019 Marlesta Drive, San Diego, Calif.
Filed Oct. 19, 1960, Ser. No. 63,701
11 Claims. (Cl. 313—108)
(Granted under Title 35, U.S. Code (1952), sec. 266)

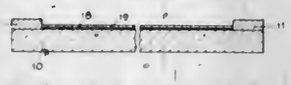
1. An electroluminescent indicator light comprising a transparent lens, the surface of said lens being divided into a window area and a reflector area much larger than said window area, an electroluminescent coating applied to the outside surface of said reflector area, the exterior surface of said coating being opaque and the interior surface adjacent said reflector area transparent, said reflec-

tor area being concave inward so that its focal center is opposite said window area, and electrical means for ex-



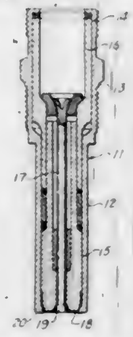
citing said coating and illuminating the reflector surface of said lens.

3,046,433
GLASS FRIT MATERIAL
Charles M. Browne, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Sept. 24, 1956, Ser. No. 611,486
15 Claims. (Cl. 313—108)



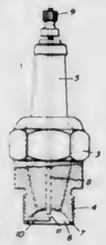
15. A method of producing an electrically conducting glass unit, which comprises applying a strip of metal electrode on the surface of a glass sheet, heating the said sheet to approximately its softening point, spraying the heated sheet with a solution of a tin compound to form a tin oxide film in permanent electrical contact with the electrode, preparing a second electrically conducting glass sheet, repeating the above steps to provide a second electrically conducting glass sheet, applying a glass frit material over the electrically conducting tin oxide film of one of the units, said glass frit material containing a field responsive phosphor, organic binder, and a glass frit composed of less than 20% SiO_2 and less than 10% alkali and alkaline earth oxides, heating the sheet to fire on the phosphor containing glass frit material, assembling the two electrically conducting glass units with a sheet of dielectric laminating plastic therebetween and the electrically conducting films in face to face relation and the electrodes out of contact with one another, and subjecting the unit to heat and pressure to form a composite unit.

3,046,434
ELECTRICALLY SEMI-CONDUCTING ENGOBE COATING
Harry G. Schurecht, Detroit, Mich., assignor to Champion Spark Plug Company, Toledo, Ohio, a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,699
15 Claims. (Cl. 313—131)



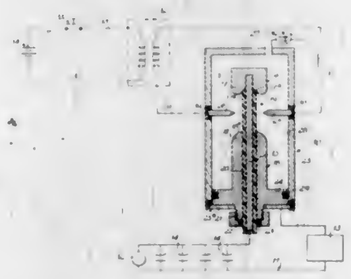
1. A method for producing an electrically semi-conducting coating which comprises applying to a surface of a ceramic insulator, a slip containing from 2 percent to 30 percent of a solid oxide material vitrifiable upon firing to a temperature from 2400° F. to 3000° F., and from about 98 percent to about 70 percent of iron oxide, heating the resulting assembly to a temperature of at least 2400° F., and rapidly cooling the fired assembly to a temperature not higher than about 1750° F. and at a rate of at least 50° F. per minute.

3,046,435
SPARK PLUG
Milton O. Campbell, Greenville St., Woodbury, Ga.
Filed Mar. 30, 1960, Ser. No. 18,747
3 Claims. (Cl. 313—143)



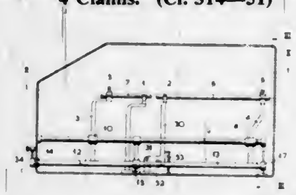
1. A spark plug comprising an externally threaded metallic shell, an insulating core mounted in said shell, said core and said shell having in one end thereof registering recesses shaped to provide a single smooth, true parabolic chamber having a continuous, unbroken, self-cleaning reflecting surface and further having its periphery closely adjacent the periphery of the shell for resisting the accumulation of carbon on said one end of said shell and for the rapid dissipation of heat therefrom, an inner electrode mounted in the core, and an outer electrode mounted in the shell, said electrodes projecting into the parabolic chamber, the free end portion of the outer electrode traversing the free end of the inner electrode in spaced relation thereto and providing a spark gap therebetween within the confines of and at the focal point of the parabolic chamber for receiving substantially continuous reflected heat therefrom for heating the points of said electrodes for improved firing efficiency.

3,046,436
ELECTRICAL SWITCH
Charles C. Cavalconte, Mineola, N.Y., assignor to Republic Aviation Corporation, near Farmingdale, N.Y., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,029
15 Claims. (Cl. 313—146)



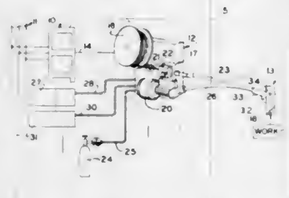
1. An electrical switch comprising coaxial conductors insulated lineally from each other and electrically connected adjacent one of their ends and electrically unconnected adjacent their other ends, each being individually connected at said other ends to opposite sides of a circuit, a gap in the length of one of the conductors interrupting current continuity, and control means operative to bridge said gap whereby current continuity is established through the conductors.

3,046,437
ADJUSTABLE ARRANGEMENT FOR POSITIONING CARBON RODS FOR STRIKING AN ARC
Bernardus Johannes Kuppens, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 28, 1959, Ser. No. 830,061
Claims priority, application Netherlands Sept. 23, 1958
4 Claims. (Cl. 314—51)



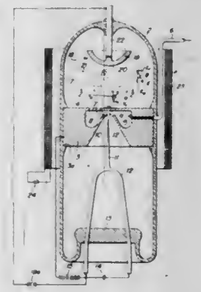
1. A device for striking carbon arcs in film projectors comprising supports for the facing ends of opposed carbon rods, said carbon rods being slidable in their axial direction in said supports, a plurality of carriages each located at the ends of the carbon rods remote from said facing ends, each carriage having a clamping device for removably holding said carbon rod, a guide rod, means connecting each of said carriages to said guide rod for movement thereon in the direction of the longitudinal axes of said carbon rods, and a profiled control member which is rotatably mounted and extends in a direction substantially parallel to the longitudinal axes of said carbon rods said control member operatively engaging said carriage thereby rotating said clamping device about said guide rod whereby the carbon rods may be adjustable.

3,046,438
APPARATUS FOR ELECTRIC ARC WELDING
Theodore V. Elseth, Orland Park Hills, Ill., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 1, 1959, Ser. No. 837,425
2 Claims. (Cl. 314—69)



1. In electric arc welding apparatus, a welding electrode, a welding head, an electrode drive unit including a pair of rotatable feed rolls mounted in parallel alignment on opposite sides of a portion of said electrode to propel said electrode through said head to a welding zone, said feed rolls respectively having compressible resilient outer rims, said rims being relatively thin as compared to the diameter of said feed rolls and of rubber, mounting means comprising a hinged pressure arm for at least one of said feed rolls arranged so that the axis of rotation of the feed roll associated with it is pivotally movable relative to the axis of rotation of the other feed roll to obtain a desired relative spacing between their respective axes of rotation, resilient biasing means comprising a spring urging the feed roll mounted on the pressure arm to pivot toward the other feed roll and into operative engagement with said electrode, means for selectively adjusting the pressure of the feed rolls on the electrode including a single adjustment screw arranged to compress said spring thereby to provide a resilient frictional electrode coupling means adapted to drive the electrode under normal conditions and to automatically disengage from driving relationship therewith when the electrode is abnormally restrained downstream of the feed rolls, portions of the rims of the feed rolls on either side of the electrode substantially enclosing the electrode so that it is protected against damage as it traverses the drive unit, and means for rotatably driving at least one of said feed rolls, said driving means including a motor and control means for said motor.

3,046,439
FIELD EMISSSION REFLEX KLYSTRON
John M. Houston, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 29, 1960, Ser. No. 25,770
6 Claims. (Cl. 315—5.19)

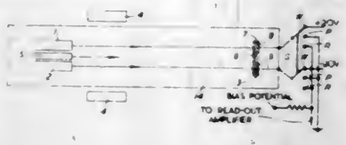


2. An apparatus comprising an enclosure having a resonant cavity for sustaining electromagnetic oscillations, portions of said enclousre being spaced to provide a gap in communication with said cavity, a field emitter electrode near said gap and on one side thereof for producing an electron beam and a repeller electrode having a convex surface facing said gap on the other side thereof, means immersing the region between said emitter and said repeller in a uniform axial magnetic field whereby application of a positive potential to said enclosure with respect to said emitter and a high negative potential to said repeller with respect to said enclosure is effective to cause electrons to pass from said emitter through said gap toward said repeller and to be repelled by said repeller to pass in bunches through said gap toward said emitter to produce electromagnetic wave oscillations in said cavity.

3,046,440
SIGNAL STORAGE ARRANGEMENTS
Eric Brian Butler Callick, Chelmsford, and Jervois Campbell Firmin, Little Baddow, England, assignors to English Electric Valve Company Limited, London, England, a British company
Filed Mar. 4, 1960, Ser. No. 12,826
Claims priority, application Great Britain June 26, 1959
12 Claims. (Cl. 315—8.5)

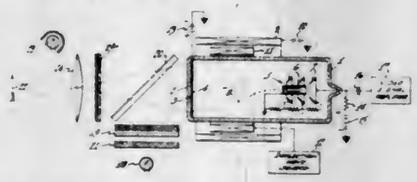
1. A signal storage tube adapted for use in a signal storage arrangement fed with positive and negative going signals, said tube including a storage target having a plurality of discrete storage elements including a B.I.C. material, means for scanning said storage target with two beams, means for modulating one of said beams with a positive going signal and means for modulating the other of said beams with a negative going signal for storing

charges on said elements in accordance with the amplitude difference between said two modulating signals,



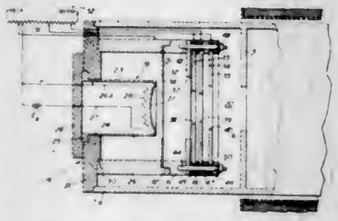
and reading means for deriving an output from the stored charges.

3,046,441
INFRA-RED SENSITIVE TELEVISION CAMERA SYSTEM
Henry B. De Vore, Belle Mead, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 29, 1951, Ser. No. 218,167
11 Claims. (Cl. 315—10)



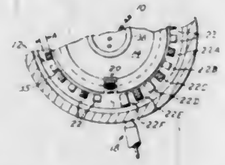
1. In a television system, a video signal generating tube having a photo-sensitive target electrode of semiconductor material of the kind that its conductivity is increased in response to excitation by radiation having a first predetermined range of frequencies and said increased conductivity is reduced in response to excitation by radiation having a second predetermined range of frequencies, means for uniformly exciting said target electrode with radiation of said first predetermined range of frequencies, means for additionally exciting said target electrode with radiation having said second predetermined range of frequencies and representing an object, and means for scanning said target electrode to produce video signals representative of said object.

3,046,442
HIGH PERVEANCE BEAM FORMING SYSTEM
Edward J. Cook, Burnt Hills, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 18, 1959, Ser. No. 860,595
8 Claims. (Cl. 315—31)



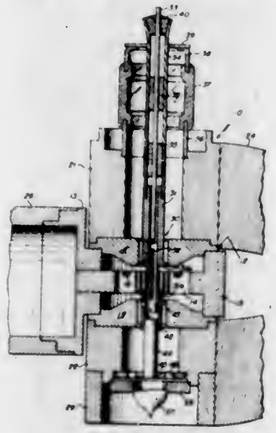
1. An electron beam forming system comprising a cathode in the shape of a hollow-spherical segment having an electron emissive coating on the concave surface thereof, an anode apparatus including a plurality of substantially parallel, apertured, disc shaped members, the apertures of said members being in alignment with each other and with the axis of said cathode, one of said members being disposed between a pair of further members and having an aperture smaller than the aperture in said further members, focusing electrode means including a disc parallel to said members and disposed between said anode electrode apparatus and said cathode and having an aperture aligned with the apertures in said members and being greater than any one of said apertures in said members, and means for applying high positive potentials to said members with respect to said cathode and a relatively low, negative potential to said focusing electrode with respect to said cathode, to establish an electric field between said cathode and anode apparatus having concentric, spherical equipotential surface sections.

3,046,443
TRAVELING WAVE TUBES
Edward C. Dench, Needham, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Sept. 30, 1958, Ser. No. 764,364
10 Claims. (Cl. 315—39.3)



1. In combination, a periodic interdigital slow wave energy propagating structure having a plurality of interdigital fingers and constructed to produce along a path adjacent thereto fields of electromagnetic wave energy being transmitted, means for directing a beam of electrons along said path in energy-exchanging relation with said wave fields, and external energy coupling means coupled to said structure, said structure including a major region and a transition region disposed between said major region and said external energy coupling means, the dimensions of the fingers transverse to said path in said transition region being progressively varied, said energy coupling means being coupled directly to one of said fingers.

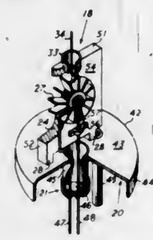
3,046,444
MAGNETRONS
Edward T. Downing, Winchester, and George F. Smith, Newtonville, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Apr. 28, 1959, Ser. No. 809,409
10 Claims. (Cl. 315—39.51)



1. In a magnetron having an anode structure and having a cathode whose longitudinal axis is coincident with the longitudinal axis of said magnetron, an elongated

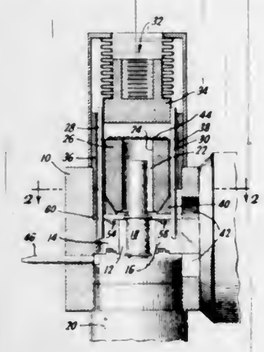
electrically insulating member arranged parallel to said longitudinal axis and slidably supporting said cathode at one end thereof, said member having substantially smaller cross wise dimensions than said one end of said cathode and an element attached to said member, said element extending substantially perpendicular to said longitudinal axis and being supported by said anode structure.

3,046,445
MAGNETRON ELECTRON DISCHARGE DEVICES
Palmer P. Derby, Weston, and Leonard W. Geier, Natick, Mass., assignors to Raytheon Company, Waltham, Mass., a corporation of Delaware
Filed Sept. 10, 1959, Ser. No. 839,148
8 Claims. (Cl. 315—39.51)



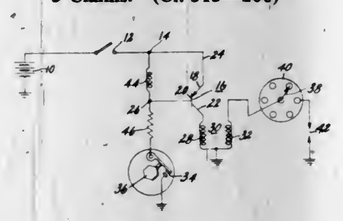
1. A magnetron comprising a cathode, a heater for said cathode, a header assembly including a member to which is attached an input sleeve for receiving cathode and heater lead-in conductors, and an anode surrounding said cathode and having a plurality of anode members at least partially defining cavity resonators, the portion of said cathode and heater lead-in conductors juxtaposed to said anode being positioned in alignment with first and second anode members respectively, said first and second anode members conducting high frequency currents which are in the same instantaneous phase.

3,046,446
MAGNETRON TUNER
Robert C. Sibley, Williamsport, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Aug. 12, 1960, Ser. No. 49,208
8 Claims. (Cl. 315—39.61)



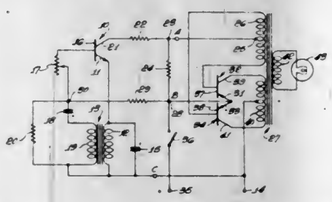
1. A tunable magnetron comprising a cathode, an anode block surrounding said cathode and having a plurality of cavity resonators each formed by radial vanes and a substantially cylindrical back wall, a conductive annular ring secured to one end of said anode block concentrically with said cathode, the inner diameter of said ring lying slightly inwardly from said cylindrical back walls, a tuning mechanism comprising a tuning ring axially movable with respect to said cathode and anode and a like plurality of tuning pins mounted on said tuning ring and axially movable therewith, each of said pins extending into a corresponding one of said resonators, said pins flaring outward from said tuning ring whereby the normal diameter of the circle defined by the free ends of said pins is larger than the inner diameter of said annular ring whereby said pins are urged into electrical, mechanical and thermal contact with the inner diameter of said annular ring and each spaced from the cylindrical back wall of its respective resonator.

3,046,447
INTERNAL COMBUSTION ENGINE IGNITION SYSTEM
Thomas E. Kirk and John H. Falge, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,221
3 Claims. (Cl. 315—206)



1. An ignition system for causing the firing of a spark plug in an internal combustion engine comprising, a source of direct current power, a transistor having emitter, base and collector electrodes, an ignition coil having a primary winding and a secondary winding, means connecting said secondary winding with said spark plug, a pair of breaker contacts operated in synchronism with said engine, a series connected inductance and resistor having a common junction, means connecting said series connected inductance and resistor between one side of said power source and one of said breaker contacts, means connecting the other of said breaker contacts with the other side of said power source, means connecting the emitter electrode of said transistor with said power source, means connecting the collector electrode of said transistor with one side of the primary winding of said ignition coil, means connecting the opposite side of said primary winding with one side of said power source, and means connecting said junction of said inductance and resistor with the base electrode of said transistor.

3,046,448
LAMP FLASHING CIRCUITS
Clarence B. Knudson, Inglewood, Calif., assignor to Hughey & Phillips, Inc., Burbank, Calif., a corporation of California
Filed June 8, 1959, Ser. No. 818,777
8 Claims. (Cl. 315—219)



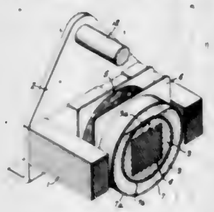
1. A transistorized lamp system for producing flashes of light with perceptible flicker in each flash, including: a self-quenching blocking oscillator producing spaced

groups of oscillations at a first frequency; a power oscillator operating at a second frequency coupled to said blocking oscillator and controlled thereby; said second frequency being high with respect to said first frequency; and a lamp coupled to said power oscillator and responsive to the intermittent, modulated energy therefrom to produce flashes of light with visually perceptible flicker.

3,046,449
CONDITION RESPONSIVE APPARATUS

Robert P. Alley, Shirley, and Robert B. Wilkerson, Bloomington, Ill., assignors to General Electric Company, a corporation of New York

Filed Sept. 21, 1960, Ser. No. 57,459
11 Claims. (Cl. 317—5)

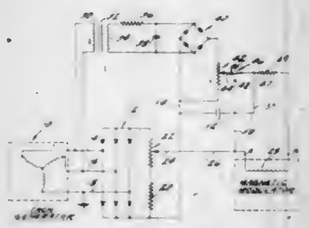


1. Condition responsive apparatus comprising: a magnetic core structure; a primary winding inductively associated with said core structure for connection to a source of alternating current potential to draw current therefrom for inducing alternating magnetic fluxes in said core structure; means for forming a shorted turn secondary winding in response to a variable condition to be monitored including a hollow annulus encircling a portion of said core structure and formed at least in part of insulating material to prevent the circulation of electrical currents therein, a conductive liquid partially filling said annulus to extend less than the total distance around said core structure when said annulus is at rest, and means responsive to said variable condition for spinning said annulus on its axis thereby to force said conductive liquid to form a shorted turn about said core structure; and means responsive to variations in current drawn by said primary winding for performing an operation depending on said variable condition.

3,046,450
SPEED RESPONSIVE FUEL CONTROL FOR HELICOPTERS

Henry E. Martin, Wapping, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed July 9, 1959, Ser. No. 825,988
8 Claims. (Cl. 317—5)

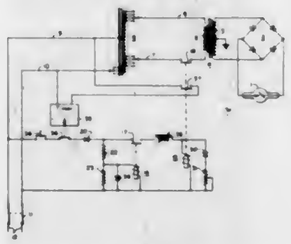


2. A circuit for producing an error signal proportional to the deviation of the speed of an engine from a preselected value comprising means for providing an A.C. signal proportional to actual engine speed, means including a rectifier for converting said A.C. signal into a D.C. speed signal, means including a rectifier and a frequency variable reactance acting on said A.C. signal and producing a constant D.C. datum signal, means for sensing a selectable portion of said speed signal, means for sensing a selectable portion of said datum signal, means including a coil connected with both said sensing means for comparing said datum signal and said speed signal and producing an error signal, switch means in the connection between said datum signal sensing means and said coil for selectively disconnecting and reconnecting said datum signal with said comparing means, means connecting said speed signal sensing means with said switch means when said datum signal is disconnected for providing a short circuit across said coil and disabling said comparison means, and signal storage means connected to receive the signal flowing through said switch means and to prevent rapid changes in said error signal upon reconnection and changes in said datum signal.

3,046,451
SWITCHING CIRCUIT

Kenneth A. Kiesel, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 1, 1958, Ser. No. 764,603
4 Claims. (Cl. 317—11)



4. Switching apparatus for establishment and disestablishment of electrical connection between a source of alternating current voltage and a load according to an instantaneous value of such voltage, said apparatus comprising rectifier means to produce time-separated direct current pulses from said alternating current voltage source, first electro-magnetic relay means energizable and de-energizable to effect the aforesaid establishment and disestablishment, respectively, second electro-magnetic relay means responsive to direct current energization from said rectifier means exclusively for a certain period greater than a quarter-wave period and less than a half-wave period to effect supply of energizing current to said first electro-magnetic relay means, time delay means interposed between the two relay means for correlating operation of said first electro-magnetic relay means with respect to an instantaneous value of the aforesaid alternating current voltage, normally open switch means operable to effect supply of pulsating current from said rectifier means to said second electro-magnetic relay means, and timing switch means operable upon effective energization of said first electro-magnetic relay means to terminate supply of energizing current thereto according to predetermined time intervals.

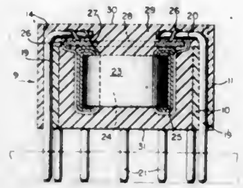
3,046,452
ENCAPSULATED COMPONENT ASSEMBLY

Alvin W. Gellert, Phoenixville, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Feb. 5, 1959, Ser. No. 791,332
11 Claims. (Cl. 317—101)

1. A component assembly comprising: a tubular housing, said housing comprising an external sleeve and an internal sleeve telescoped together and cooperating to form a plurality of apertures through the wall of said housing from one end thereof to the other end; terminal pins press fitted in said apertures, thus to secure them

firmly to the housing with the ends of said pins at one end of said housing extending from said housing to form means for connection of said assembly to associated apparatus, the pin ends at thes other end of said housing being

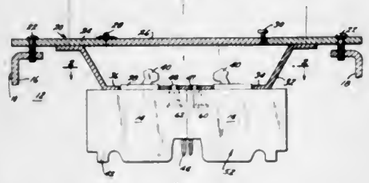


bent inwardly toward the center of and within said housing; an electrical component within said housing, said component having lead wires connected to the bent ends of said pins; and an insulating potting compound filling said housing, thus to encapsulate said component.

3,046,453
CIRCUIT BREAKERS AND ENCLOSURES THEREFOR

Paul S. Martin, Flushing, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware

Filed Sept. 19, 1958, Ser. No. 762,155
8 Claims. (Cl. 317—119)



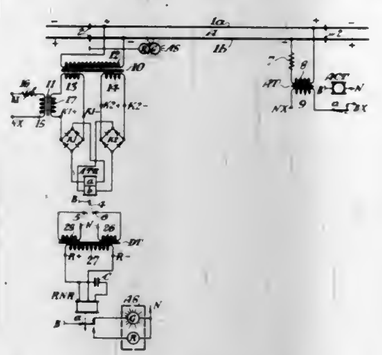
1. A circuit breaker panelboard, including a row of side-by-side circuit breakers, all the circuit breakers of the row having panelboard connecting terminals aligned with each other and having aligned forward-projecting portions comprising respective operating handles, and an enclosure containing and mounting said circuit breakers, said enclosure including a trim plate having openings therein corresponding to and receiving said aligned forward-projecting circuit-breaker portions, said panelboard having means defining a series of circuit-breaker mounting regions and said trim plate having rating classification means in each of said regions, said means of each region comprising a group of distinctively located discrete rating classification formations and said means comprising displaceable rating-classification devices contained by certain of said formations and others of said formations being at least partly clear of such displaceable rating classification devices, the rating classification of any one of said circuit-breaker mounting regions being established by the conditions of its respective formations as either containing or being at least clear of displaceable devices, said circuit breakers having rating classification means cooperating with and complementary to the rating classification means of the trim plate in the corresponding spaces.

3,046,454
CODE DETECTING APPARATUS

Crawford E. Staples, Homewood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Nov. 14, 1957, Ser. No. 696,525
9 Claims. (Cl. 317—134)

1. A code detecting means including, in combination; a transformer comprising a core of a material having a substantially rectangular hysteresis characteristic, and primary circuit means and secondary circuit means; a retained-neutral code detecting relay comprising two cores provided with windings connected to said secondary circuit means of said transformer, an auxiliary core and an armature arranged in a magnetically attractable relationship

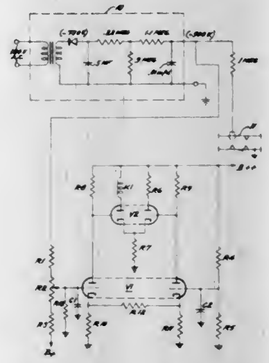


with said cores; and means provided for one winding of said relay for delaying the decay of the flux through the cores of said relay so that said armature of said relay is picked up and retained picked up when and only when the primary circuit means of said transformer is alternately energized by pulses of energy of opposite relative polarity at a predetermined code rate.

3,046,455
VOLTAGE MONITOR

Harold B. Nelson, Natick, and Floyd R. Scripture, Stoughton, Mass., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Dec. 9, 1958, Ser. No. 779,263
2 Claims. (Cl. 317—149)



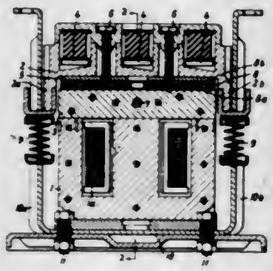
1. A means for indicating a voltage change greater than a predetermined amount comprising a pair of tubes, each having a cathode, anode and control grid, means for applying a voltage to the control grid of one of said tubes, means for applying the output of said one of said tubes to the control grid of the other of said tubes, relay means in the anode circuit of the other of said tubes, a second pair of tubes, each having a cathode, anode and control grid, a single source of potential for the anode circuits of all four of said tubes, means for applying a reference voltage to the control grid of one of said second pair of tubes, said means including the said single source of potential that supplies the anode circuits of all four of said paired tubes, means for applying the output of said one of said second pair of tubes to the control

grid of the other of said second pair of tubes, resistance means in the anode circuit of the other of said second pair of tubes, and means interconnecting the cathodes of the said ones of said pairs of tubes and the said others of the said pairs of tubes, the relation between said voltages being such that said relay has a low threshold differtial for rapid opening and closing of said relay and is operated by current flow through it only when said voltage is about equal to or negative with respect to said reference voltage.

3,046,456
ELECTROMAGNETIC DEVICE

Heinz Petrus, Padenstedt uber Neumunster, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany

Filed Feb. 10, 1959, Ser. No. 792,433
Claims priority, application Germany Feb. 17, 1958
4 Claims. (Cl. 317—195)

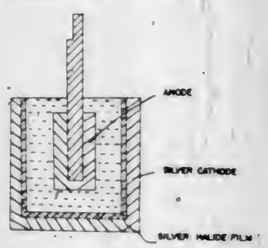


1. In an electromagnetic switching device, the combination which comprises; a core; a movable armature adapted to be attracted by said core upon energization of the switching device and having a flat surface extending perpendicular to its movements; spring means resiliently biasing said armature, said core when energized, attracting said armature against the force of said spring means; an armature carrier with switching head having a flat surface parallel to said flat surface of said armature; a flat cushioning plate made of packed mineral material interposed between said flat surfaces of said armature and said armature carrier for damping the recoil of said armature against said core upon energization of the switching device; and means gripping around said cushioning plate for nonrigidly connecting said armature to said carrier while permitting relative play in the direction of armature movement only.

3,046,457
ELECTROLYTIC CAPACITOR

Joannes Wilhelmus Andreas Scholte, Nijmegen, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 4, 1958, Ser. No. 719,074
Claims priority, application Netherlands Mar. 15, 1957
1 Claim. (Cl. 317—230)

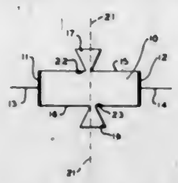


An electrolytic capacitor comprising an anode selected from the group consisting of tantalum and niobium, a dielectric oxide film being present on said anode, an electrolyte consisting of an aqueous solution of phosphoric acid and a nickel cathode, the surface of said cathode being formed of nickel phosphate.

3,046,458
HALL PLATE

Raymond Basiago, Morris Plains, and Neal T. Williams, Bloomfield, N.J., assignors to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed Apr. 23, 1959, Ser. No. 808,529
4 Claims. (Cl. 317—234)

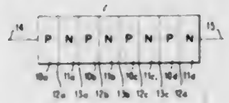


3. A Hall plate of rectangular shape having lead-in connections to the edges of opposite ends of the plate for supplying a bias current thereto, and having lead-out connections to the remaining opposite edges of the plate for providing an output voltage when the plate is threaded by a magnetic flux, said lead-out connections comprising integral side extensions of the Hall plate forming tabs on said plate and lead wires joined to said tabs, said tabs being located at equal distances along said plate to minimize output voltage across said lead-out connections from the bias current when the magnetic flux through the plate is zero, one of said tabs being at least slightly displaced along the Hall plate from the equipotential line through the other tab, and the side edge of said plate at the side of said tab which is the farther from said equipotential line being eroded to place the effective lead-out connection through said one tab at said equipotential line.

3,046,459
MULTIPLE JUNCTION SEMICONDUCTOR DEVICE FABRICATION

Richard L. Anderson, Poughkeepsie, and Mary J. O'Rourke, Salt Point, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 30, 1959, Ser. No. 862,887
7 Claims. (Cl. 317—235)



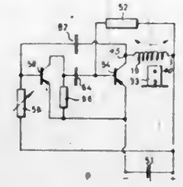
1. A multiple junction semiconductor structure comprising at least six contiguous zones of monocrystalline semiconductor material of alternately opposite conductivity type joined at p-n junctions wherein the conductivity type determining impurity concentration in each zone immediately adjacent each even number junction is sufficiently high to produce degenerate semiconductor material on both sides of said each even numbered junction.

3,046,460
MECHANICAL OSCILLATING ELEMENTS FOR TIMEPIECES AND THE LIKE, AND ELECTRONIC ACTUATING MEANS THEREFOR

Ewald Zemla, Pforzheim, Baden, Germany, assignor to Durowe A.G., Pforzheim, Baden, Germany

Filed June 15, 1959, Ser. No. 820,287
Claims priority, application Germany June 14, 1958
16 Claims. (Cl. 318—132)

1. A system of the character described comprising, in combination: a mechanical oscillatable element; stationary magnet means; and an electric circuit for oscillating said element including a single coil means serving both as control and driving member and connected to and oscillatable with said element relative to said magnet means, a first electronic triode, a condenser electrically connected between an electrode of said first triode and one end of said coil for controlling said first triode in response to charge and discharge of said condenser,

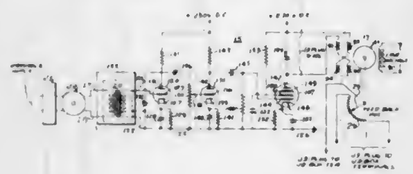


a source of continuous voltage having one pole connected to the other end of said coil, at least one resistance electrically connected between the other pole of said source and said electrode of said first triode, and a second electronic triode connected between said other pole of said source and said one end of said coil, and having a control electrode connected to said first triode for being controlled thereby.

3,046,461
ELECTRONIC CONTROLS WITH REVERSING SHADE POLE MOTORS

Robert H. Luppold, Jr., West Newton, Pa., assignor to Hagan Chemicals and Controls Incorporated, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 2, 1958, Ser. No. 706,643
5 Claims. (Cl. 318—208)



1. A dampened servo control free from undesirable hunting comprising a reversing motor having a separately excited A.C. main field winding receiving a first fixed A.C. current and a set of four spaced rotation direction control shading windings, the motor being of the type in which a selected pair of diagonally arranged windings are normally connected in a closed loop circuit with additive polarity to produce rotation of the motor in one direction or the other and a current output means imposing on said spaced direction control shading windings, a D.C. current having an A.C. component, said A.C. component being in one of two phase relationships with the fixed A.C. current, which phases are 0° and 180° respectively to said fixed current.

3,046,462
ELECTRIC MOTOR CONTROL

James R. Hampson, 2442 Dewey St., Munhall, Pa.

Filed Aug. 12, 1959, Ser. No. 833,217
7 Claims. (Cl. 318—259)

1. The combination of an electro-magnetic contactor for a relay circuit, a polarizing electro-magnet and an operating electro-magnet, means for energizing these magnets independently of the relay circuit, an oscillatory polarized contact lever magnetically yoked to one end of the polarizing magnet, pole pieces at opposite ends of the operating magnet, in positions to attract or repel the ends of the lever, depending upon the directions in which current is passed through the coils, a switch closed by the lever when it is rocked in one direction, a second polarized, tiltably-mounted contact lever magnetically yoked to the other end of the polarizing magnet and in the magnetic field of a pole of the operating magnet, switch

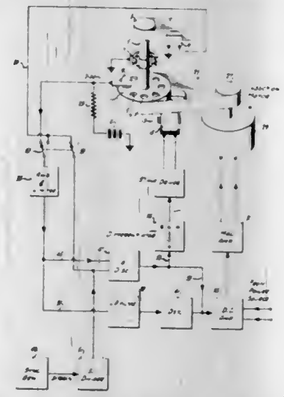


contacts that are closed by the second contact lever when the said other end of the operating magnet attracts the lever with sufficient force, and means yieldably holding the lever in its open position when not attracted by the operating magnet with sufficient force to move it to switch-closing position.

3,046,463
SPEED REGULATING APPARATUS FOR RECORDING MEDIA

Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Continuation of application Ser. No. 619,143, Oct. 30, 1956. This application Jan. 5, 1959, Ser. No. 785,306
18 Claims. (Cl. 318—302)



1. In apparatus for progressing a recording medium past a transducer head, means for maintaining the velocity of said medium at a constant selected value comprising the elements designated as elements (*a*) to (*j*) inclusive and defined as follows:

Element (*a*): a rotating element for engaging said medium and driving it at a speed directly proportional to the angular velocity of said element;

Element (*b*): a motor for driving element (*a*) at an average angular velocity equal to that required to drive said medium at said selected speed;

Element (*c*): means for applying to element (*a*) a braking force in response to the magnitude of an electric current;

Element (*d*): means for developing an electrical oscillation varying in frequency in direct proportion to the instantaneous angular velocity of element (*a*);

Element (*e*): a frequency discriminator connected to element (*d*);

Element (*f*): means for applying the output of element (*e*) to element (*b*) to vary the torque thereof so as to increase said torque when the speed of said medium is less than said selected value and decrease said torque when said speed is greater than said selected value;
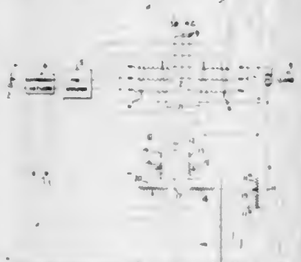
Element (*g*): a source of oscillations of a constant frequency equal to that of the oscillation produced by element (*d*) when the speed of said medium is equal to said selected value;

Element (*h*): a phase discriminator connected to compare the phase of the oscillations produced by elements (*d*) and (*g*) respectively and develop therefrom an error signal varying in direction and magnitude with the direction and magnitude of the departure of said oscillations from a selected phase relationship;

Element (*i*): a differentiating circuit connected for supply by said error signal; and

Element (*j*): connections from element (*i*) to element (*c*) for varying the braking force applied by element (*c*).

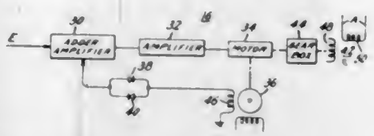
3,046,464
UNSYMMETRICAL STABILIZATION
William R. Miller, Lawrence Park, Pa., assignor to General Electric Company, a corporation of New York
Filed Jan. 6, 1960, Ser. No. 834
5 Claims. (Cl. 318—307)



1. In an arrangement for regulating the speed of a dynamoelectric machine including a unidirectional amplifying system, having control means, for supplying electrical energy to a circuit of the dynamoelectric machine in accordance with a reference signal applied to the control means, means for stabilizing the speed of the dynamoelectric machine comprising means for sensing a signal indicative of changes in an operating characteristic of the dynamoelectric machine, feedback means for applying the sensed signal to a control means in the amplifying system to modify the output of the amplifying means, said feedback means being effective to discriminate between directions of change of said sensed signal and further effective to selectively control the rate of application of the sensed signal applied to said control means dependent on the direction of change of the sensed signal, the rate of application of the sensed signal to said control means being unsymmetrical with respect to direction of change of the sensed signal.

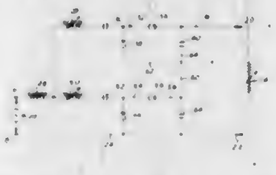
3,046,465
NON-LINEAR INTEGRATOR AND CORRECTIVE CONTROL SYSTEM
Raymond S. Litynski, Schenectady, and Michael F. Marx, Rexford, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,270
2 Claims. (Cl. 318—489)

1. A non-linear integrator circuit for use with a control system to provide improved overall response characteristics of such system comprising, an amplifier and motor combination, said amplifier and motor combination being energized by the error signal in said system, feedback generating means actuated by said motor to provide a feedback signal output in opposition to said error signal to said amplifier and motor combination, a pair of parallel



and reverse-connected diodes connected in series with the feedback signal generating means and said amplifier to provide a non-linear signal characteristic, said amplifier and motor combination thereby providing a non-linear output in conformance with the non-linearity of said feedback means.

3,046,466
VOLTAGE REGULATED POWER SUPPLIES
Paul C. Tyrrell, Kansas City, Mo., and Wallace F. Wiley, Jr., Prairie Village, Kans., assignors to Wilcox Electric Company, Inc., Kansas City, Mo., a corporation of Kansas
Filed Nov. 3, 1958, Ser. No. 771,612
8 Claims. (Cl. 321—16)



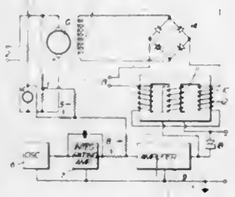
7. A voltage regulator for use with voltage quadrupling power supply apparatus having a pair of input terminals adapted for coupling with an alternating current power source of predetermined frequency, a pair of output terminals adapted for coupling with power consuming load equipment whose voltage requirements are substantially constant and whose current requirements vary within a predetermined range, a first series rectifier device, first electrical circuit means coupling one of said input terminals with one of said output terminals and having said first series rectifier device coupled therein in series therewith, second electrical circuit means coupling the other of said input terminals with the other output terminal, a pair of shunt capacitors, third electrical circuit means coupling said shunt capacitors in series with each other and between said second circuit means and a point on said first circuit means, a first shunt rectifier device, fourth electrical circuit means coupling said first shunt rectifier device between a zone of said first circuit means intermediate said one input terminal and said first series rectifier device and a portion of said third circuit means intermediate said shunt capacitors, a second series rectifier device, fifth electrical circuit means coupling said one input terminal with said portion of said third circuit means and having said second series rectifier device coupled therein in series therewith, a second shunt rectifier device, and sixth electrical circuit means coupling said second shunt rectifier device between said second circuit means and a part of said fifth circuit means intermediate said one input terminal and said second series rectifier device, said voltage regulator comprising a first swinging choke; a first series capacitor; electrically conductive means for coupling said first swinging choke in series with said first circuit means between said one input terminal and said first series rectifier device; electrically conductive means for coupling said first series capacitor in series with said first circuit means between said first swinging choke and said first series rectifier device; a second swinging choke; a second series capacitor; electrically conductive means for coupling said second swinging choke in series with said fifth circuit means between one input terminal means and said second series rectifier device; and electrically conductive means for coupling said second series capacitor in series with said fifth circuit means between said second swinging choke and said second series rectifier device.

3,046,467
APPARATUS FOR REGULATING BELT-TYPE ELECTROSTATIC GENERATORS
Robert L. Tucker, Tulsa, Okla., assignor to Well Surveys Incorporated, a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,624
5 Claims. (Cl. 322—2)



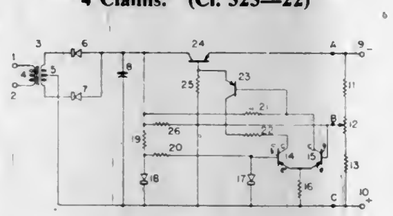
2. A device for indicating the charge carried by the belt of a belt-type electrostatic generator having a belt pulley and an induction plate adjacent said pulley for inducing an electrical charge on said belt from said pulley, said device comprising resistive means connected between said pulley and ground for deriving from electric current flowing from said pulley to ground a voltage proportional to the value of the current carried by said belt, a circuit connected to receive the voltage developed across said resistive means and to emit a pulse type signal having a repetition rate proportional to the value of said voltage, and means responsive to the repetition rate of said pulse type signal for providing an indication of the current carried by said belt.

3,046,468
CONTROL SYSTEMS FOR GENERATORS
Kenneth Arthur Robinson, Etchinghill, near Rugeley, and William Henry Woodward, Weeping Cross, Stafford, England, assignors to Lancashire Dynamo Electronic Products Limited, Rugeley, England, a British company
Filed June 22, 1959, Ser. No. 821,842
1 Claim. (Cl. 322—28)



A control system comprising a magnetic amplifier having a saturating winding and a reactance winding arranged to control the supply of alternating current to a load circuit, a transistor amplifier having an input circuit and an output circuit containing said saturating winding, a trigger circuit coupled to the input of said transistor amplifier for switching the same either to a low power output condition or to a high power output condition, and a feedback path comprising an integrating circuit having input derived from the output of said transistor amplifier and an output approximating to the integral of the difference between the input of said integrating circuit and the output thereof, and a coupling circuit connected between the output of said integrating circuit and the input of said trigger circuit.

3,046,469
TRANSISTOR REGULATED POWER SUPPLY
George V. Young, Los Angeles, Calif., assignor, by mesne assignments, to Endevco Corporation, Pasadena, Calif., a corporation of California
Filed Jan. 7, 1958, Ser. No. 707,607
4 Claims. (Cl. 323—22)

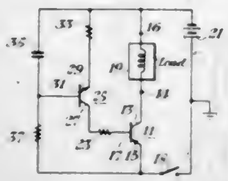


1. A regulator for a direct current electric power source having output terminals comprising a single cascade-connected two-Zener-diode constant-voltage circuit having a first resistor connected to said direct current source and a second resistor connected between said Zener diodes to render the voltage of said constant-voltage circuit insensitive to temperature changes, a third resistor connected to at least one of said output terminals to provide a voltage proportional to one component of electric power supplied at said output terminals, a single stage transistor differential amplifier having symmetrical electrical characteristics, said differential amplifier differentially connected directly to a Zener diode of said constant-voltage circuit and to said third resistor, a first emitter-follower transistor connected to the output of said differential amplifier, a second emitter-follower transistor, one electrode of said second emitter-follower transistor connected to the output of said first emitter-follower transistor and to a fourth resistor, two other electrodes of said second emitter-follower transistor connected between one of said output terminals and said direct current source, and a passive resistive impedance connected between said direct current source and said third resistor; said differential amplifier and said emitter-follower transistors phased to stabilize said one component of electric power supplied at said output terminals and said resistive impedance coactive through said differential amplifier to similarly stabilize said one component of electric power regardless of voltage variation of the electric power supplied from said direct current source.

3,046,470
TRANSISTOR CONTROL CIRCUITS
Thomas J. Blocher, Jr., Monroeville, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Sept. 9, 1958, Ser. No. 759,984
4 Claims. (Cl. 323—22)

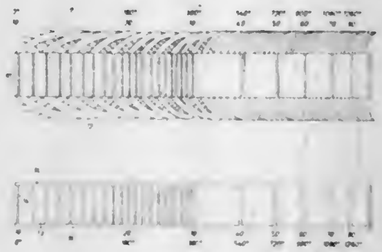
1. For use with switch means, a control circuit for applying current from a direct current source to a load connected across the source through the switch means comprising, a first and a second transistor of different conductivity types, each transistor including an emitter, a base and a collector, said first transistor having its collector and emitter interconnected through the load, the source and the switch means, said second transistor hav-

ing its collector connected to the base of said first transistor and its emitter connected to the source, a capacitor and a resistor connected in series with respect to one another and across the source, said load and the emitter to collector path of said first transistor connected in paral-



lel with said capacitor and resistor, and the base of said second transistor being connected to the junction of said capacitor and said resistor whereby when the switch means is closed a gradually increasing current is initially supplied until substantially the full supply voltage is applied to said load.

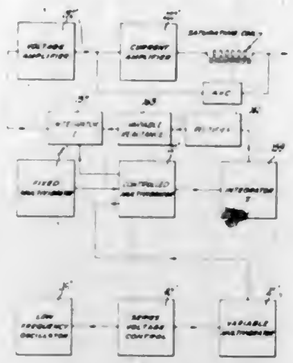
3,046,471
POLYPHASE TRANSFORMER ARRANGEMENTS AND INDUCTION MACHINES EMPLOYING POLYPHASE TRANSFORMER ARRANGEMENTS
Frederic Calland Williams, Romily, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed Mar. 31, 1959, Ser. No. 803,191
Claims priority, application Great Britain Apr. 8, 1958
6 Claims. (Cl. 323—52)



1. A polyphase transformer arrangement comprising a first slotted core structure, a logarithmically distributed primary winding accommodated on said first slotted core structure and energised from a polyphase supply, a second slotted core structure, a logarithmically distributed secondary winding accommodated on said second slotted core structure and electromagnetically coupled to said primary winding, a plurality of outputs connected to said secondary winding and means for adjusting the relative position between the said first and second core structures.

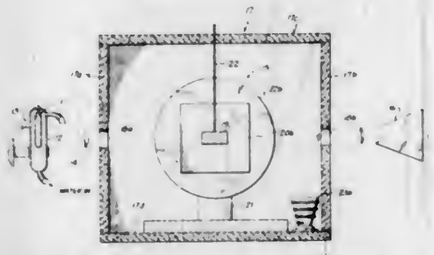
3,046,472
RANDOM SWEEP GENERATOR
Max J. Manahan, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 15, 1954, Ser. No. 404,268
8 Claims. (Cl. 323—89)

1. In a control circuit for changing the inductance of a coil, means for producing electrical oscillations of a fixed frequency, means for producing electrical oscillations of varying frequency, multi-vibrator means connected to the combined outputs of the first two oscillation producing means and actuated in accordance with the combined output of the fixed and the variable frequency-producing means, integrating means connected to the output of the multi-vibrator means providing a D.C. voltage that varies with the frequency of the output of the multi-vibrator, voltage amplifying means connected to the integrating means and to the output of the multivibrator to amplify said output, current amplifying means connected to the voltage amplifying means,



a core for said inductance coil whose effective inductance it is desired to control and means connected to the output of said current amplifying means to saturate the core to change the inductance of the coil.

3,046,473
VERY NARROW-PASS FILTER USING ZEEMAN-SPLIT ABSORPTION LINES
Karl G. Kessler, Bethesda, and Walter G. Schweitzer, Jr., Rockville, Md., assignors to the United States of America as represented by the Secretary of Commerce
Filed Jan. 26, 1960, Ser. No. 4,834
1 Claim. (Cl. 324—.5)

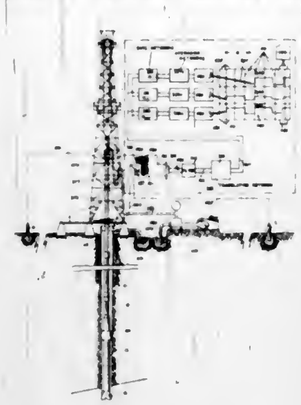


Apparatus for producing radiation having a very narrow line width comprising: an electrodeless lamp containing only the 198 isotope of mercury, means for exciting said lamp to produce radiation therefrom, means for collimating said radiation, and means positioned in the path of said collimated radiation for absorbing all but a narrow line width thereof, said absorbing means comprising a cell containing only the 198 isotope of mercury, means for subjecting said cell to a magnetic field of at least 800 gauss, said magnetic field being applied transversely to the axis of said collimated radiation, and means for heating said cell to a temperature of at least 80° C.

3,046,474
BORE-HOLE LOGGING SYSTEM AND METHOD
Jan J. Arps, Dallas, Tex., assignor to Arps Corporation, Dallas, Tex., a corporation of Delaware
Filed July 3, 1957, Ser. No. 669,864
15 Claims. (Cl. 324—1)

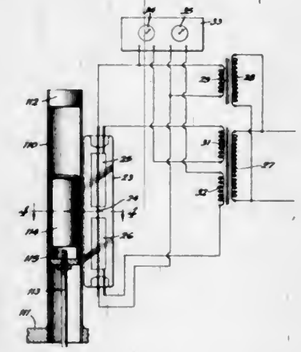
1. A method of signaling from the bottom of a bore hole during drilling which comprises the steps of generating electrical energy locally in said bore hole, capacitively storing said energy, and then suddenly discharging said stored energy through the formations adjoining said bore hole between two spaced zones in said bore hole,

radiating thereby a powerful electromagnetic pulse through such adjoining formations, repeating said aforementioned steps at controlled intervals responsively to



the varying values of a physical condition existing in said bore hole to produce a train of such radiated pulses, and detecting the radiated pulses at the surface of the earth.

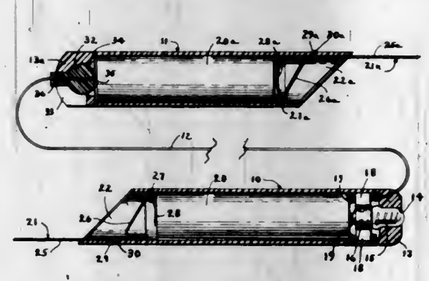
3,046,475
MAGNETIC MEASURING APPARATUS
Benjamin L. Binford, Elmwood Park, Ill., assignor to Magnetrol, Inc., Chicago, Ill., a corporation of Illinois
Filed May 19, 1958, Ser. No. 736,290
2 Claims. (Cl. 324—44)



1. Magnetic measuring apparatus comprising a magnet mounted for lineal movement along a straight path, means responsive to a condition to be measured to move the magnet along said path, an elongated sealed envelope adjacent and parallel to said path, a plurality of pairs of electrodes in the envelope spaced lengthwise thereof, and detecting means connected in circuit with each pair of electrodes, movement of the magnet varying the relative flux intensity in the space paths between the electrodes of different pairs.

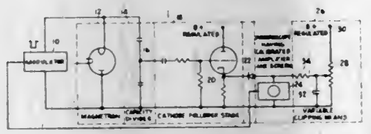
3,046,476
CONTINUITY TESTER
William O. McFarland, 523 Ravenna Road, Newton Falls, Ohio
Filed Aug. 7, 1957, Ser. No. 676,887
5 Claims. (Cl. 324—53)

1. An electrical device comprising a pair of cylindrical members each having an axially extending recess and the recess of one terminating in a socket adjacent the end of the member in which it is formed, a current carrying axially projecting probe carried by each of said members and the latter being adapted to be assembled together in end to end abutting relation with the respective probe of each member disposed within the opposite member and with said probes in electrical engagement with each other, battery means disposed within respective recesses provided by respective members, bulb means carried by one of said members, means providing an electrical circuit which includes said battery means, said bulb means and said probes and which also includes a flexible lead exteriorly connecting said members together, one of said probes, upon disassembly of said members, being adapted to engage a portion of an electrical circuit whose continuity is to be tested and the other probe being adapted to engage another portion of the circuit to be tested whereupon lighting of said bulb means will give visual



indication that the circuit being tested is complete, and switch means interposed in said device circuit for selectively interrupting the latter when said members are in assembled relation to prevent drain on said battery means when the device is not in use and for selectively completing said device circuit when said members are in assembled relation to thereby provide for use of said device as a flashlight, said switch means comprising a generally ball-like body seated within said socket and from which said flexible lead projects and having a current conducting portion electrically connected with said lead and also having a dielectric portion, said body being shiftable within said socket to selectively position either of said portions in said device circiut and in respective positions permitting current flow through such circuit and preventing current flow therethrough.

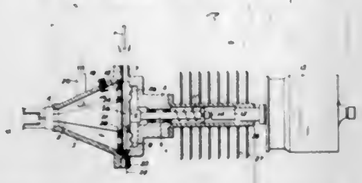
3,046,477
APPARATUS AND METHOD FOR PULSE HUM MEASUREMENTS
Gerald I. Klein, Wannamassa, N.J., and Marvin J. Ungar, New York, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 7, 1956, Ser. No. 564,085
4 Claims. (Cl. 324—57)
(Granted under Title 35, U.S. Code (1952), sec. 266)



3. A method of ascertaining the slope of the impedance of an electronic component at a selected operating point comprising the steps of first applying a continuous chain of substantially identical driving pulses having a small percentage ripple amplitude to the electronic component to cause a corresponding continuous chain of substantially identical current pulses to flow through the electronic component, then measuring the pulse amplitude ripple in the driving pulses and in the current pulses respectively, whereby the pulse amplitude ripple in the driv-

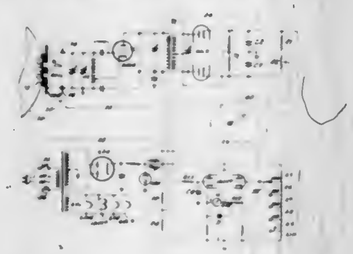
ing pulses divided by the pulse amplitude ripple in the current pulses is equal to the slope of the impedance of the electronic component at that operating point.

3,046,478
TESTING OF DIELECTRIC MATERIALS
Roger Neil Dawson, Ilford, England, assignor to The Plessey Company Limited, London, England, a company of England
Filed Nov. 24, 1959, Ser. No. 855,239
26 Claims. (Cl. 324—58)



1. In apparatus for the testing of dielectric materials at very high to ultra-high frequencies, wherein a capacitor adapted to incorporate a test disc of the material to be examined, is formed between a fixed electrode face and an opposed parallel electrode face movable at right angles to the said fixed face under the control of an axially acting micrometer device; the combination of a coaxial line element having an inner conductor conical on at least part of its length and an outer conductor conical on at least part of its length arranged coaxially with said inner conductor, the cone surface of said two conductors having a common apex, the larger end surface of said inner conductor constituting a fixed electrode face, and short-circuiting means attachable to the narrower ends of said inner and outer conductors.

3,046,479
MOISTURE CONTENT METER
Carver A. Mead, Pasadena, and Marvin L. McBrayer, Alhambra, Calif., assignors to Moisture Register Company, Alhambra, Calif., a corporation of California
Filed Sept. 9, 1958, Ser. No. 759,930
5 Claims. (Cl. 324—61)



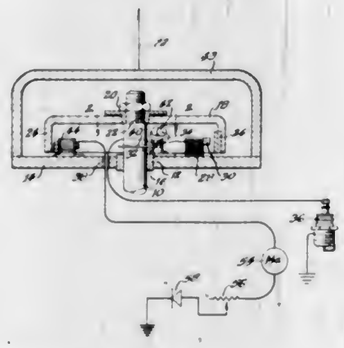
1. A moisture content meter, comprising: a capacitance sensitive probe adapted to interact with material to be tested; an electron-coupled oscillator connected to said probe, said oscillator producing an output signal which is variable in frequency according to capacitance changes from a preselected value as sensed by said probe and induced by the material tested; a center tuned discriminator connected as a load to said oscillator for demodulating the oscillator output signal, said discriminator having an ungrounded output to provide a direct voltage which is proportional in magnitude and polarity to the frequency change of the oscillator output signal; a cathode output-coupled differential amplifier having first and second inputs and an output; a first voltage divider for providing a ground referenced direct voltage which is applied in series with the discriminator direct voltage to the first differential amplifier input; a second voltage divider for providing another ground referenced direct voltage to the second differential amplifier input; and a meter adapted to be connected to the differential amplifier output coupling cathodes of said differential amplifier together, whereby variation of the discriminator output voltage produces a meter indication according to the moisture content of the material tested.

3,046,480
CIRCUIT TESTER
Francis M. Cummings, Manhattan Beach, and Walter H. Fleming and Victor H. Matson, Los Angeles, Calif., assignors, by mesne assignments, to The Electrada Corporation, Culver City, Calif., a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,293
15 Claims. (Cl. 324—62)



5. In combination for testing whether an impedance under test has a particular value, actuating means for producing a single pulse of energy upon actuation, switching means, means connected in an electrical circuit with the impedance and responsive to a portion of the energy in the pulse from the actuating means for operating the switching means upon the occurrence of the particular value for the impedance, and indicating means connected in an electrical circuit with the switching means and responsive to the remaining portion of the energy in the pulse from the actuating means for providing an output indication upon the operation of the switching means.

3,046,481
TACHOMETER
John F. Wood, Buchanan, and Jon C. Wirth, Three Oaks, Mich., assignors to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana
Filed Feb. 13, 1958, Ser. No. 715,031
8 Claims. (Cl. 324—69)



5. The combination of a tachometer and an internal combustion engine, said engine having an ignition system with a magneto, the magneto having a rotatable magnet and a coil positioned adjacent to the rotatable magnet for generating the ignition pulses, and said tachometer comprising a second coil positioned adjacent to the magnet and within the magnetic field of said magnet, whereby an electric pulse is generated in the second coil responsive to each rotation of the magnet, and means for indicating the number of electrical pulses per unit of time generated in the second coil.

3,046,482
ELECTRONIC CIRCUIT TESTER
William J. East, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 29, 1959, Ser. No. 843,315
2 Claims. (Cl. 324—72.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A circuit tester for indicating the presence of a voltage of a predetermined minimum magnitude at a socket, comprising: a holder having a barrel and a handle extending therefrom such that said holder is pistol-shaped, a probe extending from the muzzle end of said barrel and insertable in said socket for detecting the presence of voltage, a relay in said barrel, said relay being electrically connected to said probe, a bulb electrically connected to said relay, said bulb extending from the end of said barrel opposite said muzzle end, a transistor housed in said barrel and electrically connected to said relay and said probe, biasing circuit means for providing a constant preselected voltage to said transistor, said preselected voltage being less than said voltage of a predetermined minimum magnitude, means including said transistor for energizing said relay upon the occurrence of a voltage at said probe of a magnitude at least equal to the difference between said predetermined and said preselected voltages, and means mounted within said holder for checking the sensitivity of said tester, said means comprising a test switch, a battery in circuit with said test switch and said transistor, the voltage of said battery being equal to the difference between said predetermined and said preselected voltages.

3,046,483
PASSINE PULSE WIDTH DISCRIMINATOR UTILIZING DELAY LINE REFLECTIONS
Sam D. Breskend, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 30, 1960, Ser. No. 79,938
2 Claims. (Cl. 328—56)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A pulse width discriminator comprising: a delay line, means for applying input pulses to one end of said delay line, impedance means connected to the other end of said delay line for terminating said delay line in a short circuit in response to input pulses of a predetermined width and in an open circuit in response to pulses of a width greater than said predetermined width.

3,046,484
CAPACITOR STORAGE UNIT
Genung L. Clapper, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 18, 1956, Ser. No. 616,766
7 Claims. (Cl. 328—121)



6. An electronic storage circuit comprising the combination of, a storage capacitor for representing binary information as the presence or absence of an electrical charge, a source of potential connected in series with said capacitor, means for applying a read-out voltage signal to said capacitor to cause a voltage pulse to appear at the juncture of said potential source and said capacitor in the absence of a charge stored in said capacitor, an electronic latching circuit connected to said juncture and adapted to alternately assume a regenerative and a non-regenerative condition in response to predetermined voltages applied thereto and including means for maintaining said juncture at a first voltage level in response to said electrical signal at said juncture, and means coupled to said latching circuit for rendering said circuit non-regenerative at the termination of a read-out operation.

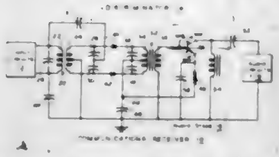
3,046,485
BI-STABLE SWITCHING CIRCUIT WITH PULSE OVERLAP DISCRIMINATION
Richard P. Brown, Johnson City, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 25, 1958, Ser. No. 731,002
2 Claims. (Cl. 328—195)



1. A switching arrangement comprising: a source of first and second alternately timed control signals which may overlap, a bi-stable device having a first and a second condition of stability and provided with an input and an output terminal, a first and a second coincidence switching means connected to said input, a latch back circuit connected intermediate said output and said input and operable to latch said device into either condition of stability depending upon the condition of said device, delay means connected to said output and responsive to the condition of said device to issue an appropriate delayed first or second condition signal, said delay means delaying the issuance of the appropriate delayed signal until after the device has been latched, means applying the delayed signal and said control signals to both the coincidence switching means, and gating means for applying

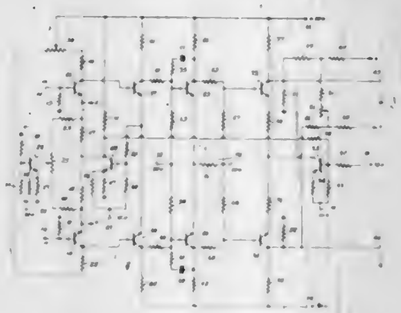
to the first and second switching means appropriate first and second gating signals to render the switching means alternately operative to switch said device alternately.

3,046,486
SIGNAL RECEIVING APPARATUS
Junior I. Rhodes, Lynchburg, Va., assignor to General Electric Company, a corporation of New York
Filed Apr. 6, 1959, Ser. No. 804,477
11 Claims. (Cl. 329—138)



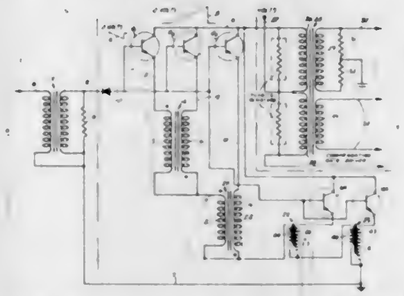
3. In signal receiving apparatus including signal amplifying means requiring operating power: a source of angle-modulated waves; a discriminator responsive to said source of angle modulated waves, said discriminator including a transformer means, first and second unilateral conducting means respectively coupled to said transformer means, an output means coupled between said first and second unilateral conducting means across which is developed an alternating current signal in response to the angle modulated waves received by said discriminator; and means coupling the midpoint of said transformer means and the midpoint of said output means to said signal amplifying means to provide at least a portion of the required operating power of said signal amplifying means.

3,046,487
DIFFERENTIAL TRANSISTOR AMPLIFIER
Walter T. Matzen and James R. Biard, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Mar. 21, 1958, Ser. No. 722,911
5 Claims. (Cl. 330—19)



1. In a differential amplifier, first, second and third amplifying devices each having input, output and common electrodes, a voltage source having first and second terminals, the output electrodes of said first and second amplifying devices being connected to said first terminal of said voltage source through separate load impedance means, resistance means connecting the common electrode of said first amplifying device to the common electrode of said second amplifying device, an intermediate point on said resistance means being connected to the second terminal of said voltage source through the output and common electrodes of said third amplifying device, said third amplifying device being biased such that the current from said intermediate point to said second terminal is substantially unrelated to the voltage on said intermediate point, means responsive to the output voltages on the output electrodes of said first and second amplifying devices and adapted to apply a control voltage to the input electrode of said third amplifying device, said control voltage being related to the average of the output voltages on the output electrodes of said first and second amplifying devices and effective to reject any change in such average by changing the magnitude of the current from said intermediate point to said second terminal, and output means having inputs coupled to the output electrodes of said first and second amplifying devices.

3,046,488
BALANCED LOAD PARALLEL COUPLED TRANSISTOR CIRCUIT
Eugene S. McVey, Lafayette, Ind., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 28, 1959, Ser. No. 843,024
5 Claims. (Cl. 330—30)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A load balancing circuit for transistors operating in parallel to a load comprising: a plurality of transistors having their base electrodes coupled in common to a signal voltage and the emitter and collector electrodes coupled in parallel between a supply voltage source and a load, said collector electrodes being coupled in common to said load; and a plurality of reversely polarized transformers coupled in sequence between the emitter electrodes and said supply voltage source in circuit with said load, said transformers each having one end of each winding coupled in common, a first transformer of said plurality of transformers in this sequence having each of the other windings thereof coupling the emitter of each of two transistors and the remaining transformers each having one of the other windings coupling the common coupling of the preceding transformer in said sequence and the other of the other windings coupled to the emitter electrode of another transistor of said plurality of transistors, the common coupling of the windings of the last transformer in said sequence being coupled to said supply voltage source, and the ratio of the number of turns of said windings of each succeeding transformer in said sequence of transformers increasing by one from said first transformer having a one-to-one number of winding turns ratio whereby currents through the emitters of said transistors are equalized to equalize the loads carried by each transistor.

3,046,489
WIDE BAND DIRECT COUPLED AMPLIFIER
John H. Reaves, McLean, and John F. Walton, Arlington, Va., assignors to Elcor, Inc., Falls Church, Va., a corporation of Virginia
Filed Nov. 28, 1958, Ser. No. 777,037
19 Claims. (Cl. 330—199)

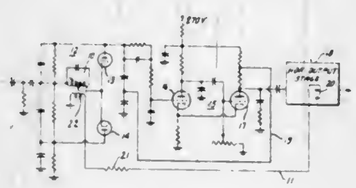
1. An amplifier comprising an amplifying element comprising, a common electrode, a third electrode, and a control electrode for controlling the flow of charge between said common and third electrodes, means adapted

to supply a control signal to said control electrode, a high pass filter, connected between said third electrode and a first terminal of a voltage source, an impedance connected between said common electrode and said second terminal of the voltage supply, said first and second



terminals having different voltages thereon, said impedance and the capacity to ground of said voltage source comprising a low pass filter, said low pass and said high pass filters being complementary, and means connecting said impedance to a source of reference potential at a point remote from said terminals of the voltage source.

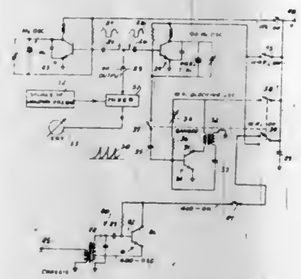
3,046,490
SYNCHRONIZED OSCILLATOR CONTROL SYSTEM
Donald E. Marshall, Jr., Broomall, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Aug. 13, 1959, Ser. No. 833,446
9 Claims. (Cl. 331—1)



1. In an automatic phase and frequency control system, an oscillator to be synchronized with an input signal, combined phase and frequency control means for maintaining the phase and frequency of the oscillator output signal identical to the phase and frequency of said input signal, said control means including a pair of diodes and at least one tuned circuit arranged to serve for both phase and frequency control of the oscillator, means for supplying the input signal and the oscillator output signal to said control means for phase control of the oscillator, and means for supplying to said control means a third signal resulting from operation of the oscillator to effect frequency control of the oscillator.

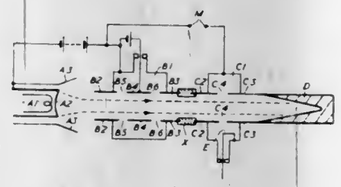
3,046,491
FREQUENCY STANDARD SIGNAL GENERATOR
Samuel K. Lackoff, Manchester, N.H., assignor to Van Norman Industries, Inc.
Filed Apr. 2, 1957, Ser. No. 650,237
2 Claims. (Cl. 331—52)

1. In a frequency signal standard generator, at least two transistor devices each having base, collector and emitter electrodes, a common power supply therefor, crystal devices connected between the collector and base electrodes of each of said transistor devices to operate at substantially different predetermined frequencies, tuning inductances coupling the collector electrode to the base electrode of each of said crystal devices and also coupled to one terminal of said power supply; tuning capacities connected between the collector and emitter electrodes of each of said crystal devices to vary the crystal frequency within relatively narrow limits; the latter electrodes being also connected to another terminal of said power supply, each of said tuning inductances together with the capacitances connected thereto being relatively broadly tuned to frequency ranges substantially outside of the frequency of the transistor device coupled thereto, means including resistances and switching means selectively connecting the base electrode of each crystal



device with said first terminal to bias said base electrode to a point near saturation, a common output circuit capacitively coupled to each of said base electrodes and a further transistor device in the form of a blocking oscillator operative at a frequency substantially below the frequencies of said other transistor devices, and switching means for capacitively coupling the base electrode of said further transistor device to the base electrodes of at least one of said other transistor devices, so as to be triggered by said transistor devices.

3,046,492
KLYSTRON MICROWAVE OSCILLATOR WITH PARTICULAR KEYING MEANS
John Dain and Eric Brian Butler Callick, Essex, England, assignors to English Electric Valve Company Limited, London, England, a British company
Filed Apr. 17, 1959, Ser. No. 807,222
Claims priority, application Great Britain Apr. 30, 1958
4 Claims. (Cl. 331—83)



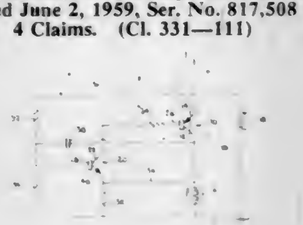
1. A Klystron microwave oscillator tube comprising an electron beam source, a continuous wave resonant oscillator section adapted to modulate the electrons of the beam from said source in velocity and space charge density in accordance with a modulating frequency, a resonant output section beyond said oscillator section in the direction of beam travel and provided with means for taking off radio frequency energy from the beam, a collector electrode for receiving the beam, and voltage control means situated between said oscillator section and said output section, adapted to control the electron current in the beam and thereby the fraction of the beam permitted to pass from said oscillator section to said output section, said oscillator section comprising a resonant cavity, a drift tube in said cavity having its ends spaced from said cavity to define gaps and surrounding a portion of the electron beam, said beam inter-acting with the field in the cavity through said gaps.

3,046,493
TRANSISTOR MULTIVIBRATOR CIRCUIT
Bock W. Lee, Berkeley, Calif., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 27, 1958, Ser. No. 757,622
9 Claims. (Cl. 331—111)



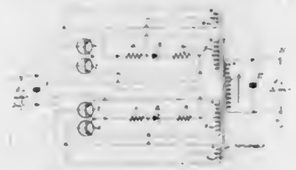
1 A pulse generator having an "on" and an "off" condition and comprising a pair of transistors of opposite conductivity types, each of said transistors having an emitter, a base and a collector, means for connecting said base of each of said transistors to said collector of the other of said transistors, impedance means connected to said base of one of said transistors for providing with said pair of transistors a negative resistance input characteristic, and a circuit arrangement including capacitive means connected between a point of fixed reference potential and said emitter of the other of said transistors to control the duration of said "on" condition, said arrangement also including isolation means responsive to said capacitive means and connected between said capacitive means and said emitter of said other of said transistors for isolating said capacitive means from said emitter of said other of said transistors during said "off" condition.

3,046,494
TRANSISTOR OSCILLATOR CIRCUIT
Elihu Root III, Clinton, N.Y., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
Filed June 2, 1959, Ser. No. 817,508
4 Claims. (Cl. 331—111)



1. In a transistor oscillator circuit having a point of reference potential: a first transistor having its collector and emitter electrodes interconnected through a load and a source of direct current; a second transistor having its collector electrode connected to the base electrode of said first transistor, the emitter electrode of said second transistor being connected in said circuit so that its potential is substantially equal to said reference potential when said transistors are not conducting; means in said circuit including a capacitor connected between the base electrode of said second transistor and collector electrode of said first transistor to alter the potential at the base electrode of said second transistor relative to the potential at the emitter electrode thereof whereby said second transistor is rendered conductive and energizes the base electrode of said first transistor to enable a closed circuit to be established through said source, load and first transistor; a voltage divider connected between the collector electrode of said first transistor and said point of reference potential; the emitter electrode of said second transistor being connected to an intermediate point on said voltage divider; said voltage divider being operable when said first transistor is conducting to establish a potential at the emitter electrode of said second transistor which is intermediate that of said source and said point of reference potential whereby the second transistor is rendered non-conductive at a different base potential than that at which it is rendered conductive.

3,046,495
HIGH-VOLTAGE INVERTER USING LOW-VOLTAGE TRANSISTORS
Alfred M. Faries, Menlo Park, and Maurice C. Harp, Belmont, Calif., assignors to Lenkurt Electric Co. Inc., San Carlos, Calif., a corporation of Delaware
Filed Sept. 27, 1957, Ser. No. 686,650
2 Claims. (Cl. 331—113)



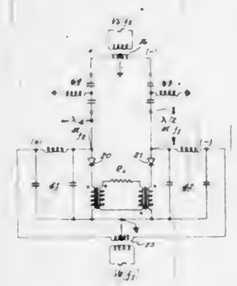
1. Electrical apparatus for converting direct-current power into alternating-current power, comprising four transistors each having base, emitter and collector terminals, a saturable-core transformer having five windings, a first one of said windings being connected between the base terminals of first and second ones of said transistors, a second one of said windings being connected between the base terminals of third and fourth ones of said transistors, a third one of said windings being connected between the emitter terminals of said first and second transistors, the collector terminals of said first and second transistors being connected together whereby said first and second transistors form a first pair, a fourth one of said windings being connected between the emitter terminals of said third and fourth transistors, the collector terminals of said third and fourth transistors being connected together, whereby said third and fourth transistors form a second pair, each of said first, second, third and fourth windings having a center tap, first and second input terminals that a direct voltage can be applied between, said first input terminal being connected to the center tap of said third winding, the collector terminals of said first and second transistors being connected to the center tap of said fourth winding, the collector terminals of said third and fourth transistors being connected to said second input terminal, whereby said four transistors are connected in a series-parallel D.C. circuit between said input terminals, a pair of output terminals, said fifth winding being connected between said output terminals, a resistor connected between the center tap of said first winding and the collector terminals of said first and second transistors, a diode rectifier and a resistor in series connected between the center taps of said first and third windings, a resistor connected between the center tap of said second winding and the collector terminals of said third and fourth transistors, and a diode rectifier and a resistor in series connected between the center taps of said second and fourth windings, said rectifiers and resistors forming bias circuits for maintaining appropriate bias voltages between the emitter and base terminals of said transistors, the relative polarities of said first and third windings and the relative polarities of said second and fourth windings being arranged to provide a cumulative switching action such that an increasing current in any of said transistors tends to increase further the currents in that transistor and to reduce the currents in the other transistor of the same pair, until the core of said transformer saturates, such saturation reversing said cumulative action so that self-sustaining oscillatory currents flow through each of said transistors, whereby direct-current power supplied to said input terminals is converted into alternating current power available at said output terminals.

3,046,496
STABILIZED FREQUENCY MODULATED OSCILLATOR
Bertram A. Trevor, Tucson, Ariz., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 21, 1959, Ser. No. 788,115
4 Claims. (Cl. 332—19)



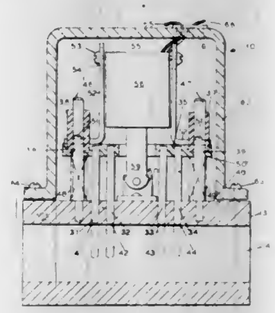
1. A system for frequency modulating a wave in correspondence with the amplitude of a signal, said system comprising a wave generator provided with a resonant circuit having a variable capacitance diode coupled thereto for controlling the frequency of said circuit, means operative to couple said signal to said diode, means to derive an output signal from said generator representative of the frequency thereof, means to derive a signal having a constant frequency related to the unmodulated frequency of said generator, a discriminator having an output circuit, means to supply said signal from said generator and said signal having a constant frequency to said discriminator whereby to provide a unidirectional control signal in said discriminator output circuit, said means to supply said signal to said discriminator from said generator including a lowpass filter, said discriminator output circuit and said means to derive said output signal from said generator having a portion which coincides, said lowpass filter having a low attenuation below the frequency range of said signal, and means operative to couple said discriminator output circuit to said diode.

3,046,497
WAVEGUIDE BALANCED MODULATOR
Max P. Forrer and Victor O. Met, Palo Alto, Calif., assignors to General Electric Company, a corporation of New York
Filed Aug. 10, 1959, Ser. No. 832,629
12 Claims. (Cl. 332—43)



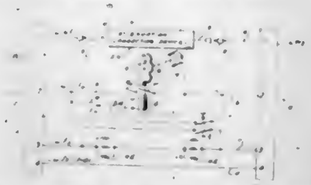
12. A microwave balanced modulator comprising a pair of substantially parallel coaxial transmission line sections, a ridged waveguide disposed substantially parallel to said coaxial line sections, a pair of crystal diodes, each of said diodes being coupled between the inner conductor of a corresponding one of said coaxial line sections and the ridge of said waveguide and being disposed on opposite sides of the plane of symmetry of said waveguide, the axes of said diodes being disposed in a plane oriented perpendicularly to the axes of said coaxial line sections, a first transducer coupled to said coaxial line sections at one end thereof and adapted to launch in said line sections a pair of oppositely phased first waves having a first frequency, wherein said first waves have opposite phases at cross-sections of said coaxial line sections equidistant from the corresponding one of said diodes, a second transducer coupled to said coaxial line sections at the other end thereof and adapted to launch in said line sections a pair of oppositely phased second waves having a second frequency, wherein said second waves have opposite phases at cross-sections of said coaxial line sections equidistant from the corresponding one of said diodes, wherein said first transducer is adapted to prohibit transmission of waves having said second frequency and said second transducer is adapted to prohibit transmission of waves having said first frequency, and wherein said ridged waveguide is adapted to transmit a wave having a frequency equal to the difference between said first and second frequencies.

3,046,498
POLARIZER MEANS
Frank J. Gardiner, Bryn Mawr, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 22, 1958, Ser. No. 750,196
2 Claims. (Cl. 333—21)



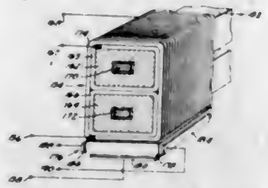
1. A polarizer converter for converting linearly polarized electromagnetic waves of a predetermined frequency to corresponding circularly polarized waves comprising a hollow wave guide member with cylindrical guide path, a plurality of pins of dielectric material insertable through individual spaced apertures into said guide member aligned longitudinally of the member on one side thereof and in 45° orientation to the input coupling direction thereto of the linearly polarized waves, said dielectric pins being proportioned to retard the phase of the component of the linearly polarized wave parallel thereto by substantially 90° and to have no effect upon the phase of the wave component perpendicular thereto to thereby produce a corresponding circularly polarized wave transmitted to the guide member output, a solenoid mechanism operatively connected to said pins to selectively insert and retract them through said apertures in unison and effect corresponding passage to the guide member output of linearly and circularly polarized waves and an adjustable stop means to preset the amount of penetration of said pins into said guide so the same amount of penetration will occur for each insertion, said solenoid means comprising an energizable coil and a cooperating armature member, a plate secured to said armature for positioning and securing said dielectric pins; said plate being positioned transverse to said armature and having a pair of threaded apertures at opposite ends thereof; said adjustable stop means comprising first and second stop pins threadably engaged by said threaded apertures, said stop pins being adapted to abut the exterior of said waveguide when said dielectric pins are inserted through their associated apertures to adjust the amount of penetration of said dielectric pins; said stop pins being independently movable, said dielectric pins being secured to said plate at points along a line drawn between said threaded apertures.

3,046,499
ARRANGEMENT FOR ADJUSTING THE FREQUENCY-DEPENDENT ATTENUATION IN SUBMARINE CABLE SYSTEM
Leo Waldick, Koln-Dellbruck, Germany, assignor to Felten & Guilleaume Carlswerk Aktiengesellschaft, Koln-Mulheim, Germany
Filed Oct. 31, 1960, Ser. No. 66,263
Claims priority, application Germany Oct. 31, 1959
5 Claims. (Cl. 333—28)



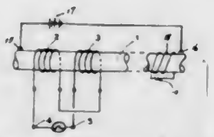
1. An arrangement for adjusting the frequency-dependent attenuation in submarine cable systems equipped with repeater stations, comprising, in combination, a sealed housing; a carrier member rotatably supported in said housing; electromechanical means including drive means operable by application of a predetermined first control frequency, for rotating said carrier member upon application of electric energy at said first control frequency; a plurality of differently pre-adjusted attenuation correcting devices operable at frequencies within a predetermined signal frequency band and distinct from said first control frequency, each having at least one input and one output terminal, mounted on said carrier member for being sequentially movable by rotary movement of said carrier member into a predetermined operative position; control means for starting and terminating said rotary movement of said carrier member when one of said correcting devices is in said operative position, and including relay means having coil means energizable by a second predetermined control frequency distinct from said first control frequency and from said frequency band and normally open contact means operable by energization of said coil means and connected in circuit with said drive means and including a wheel provided with a plurality of recesses and coupled with said carrier member, and a locking pawl positioned to engage one of said recesses whenever one of said correcting devices is moved into said operative position, said pawl means being movable into disengaged position by said relay means jointly with the movement of said contact means into closed position, whereby upon brief energization of said coil means the circuit for said drive means is closed, said locking pawl is disengaged and said carrier member is turned until a sequent correcting device is moved into said operative position, said pawl means then arresting said correcting device in that position; and input and output means respectively connectable to portions of the submarine cable into which the arrangement is to be inserted, said input and output means including at least one input and one output contact mounted on the inside of said housing and positioned to be in conductive engagement with said input and output terminals, respectively, of any one of said correcting devices when the latter is in operative position, said input and output means being capable of channeling electrical energy transmitted at frequencies within said frequency band and representing intelligence through a correcting device being in operative position and of channeling selectively outside electrical energy at said first control frequency to said electromechanical means and at said second control frequency to said control means, whereby, when said output means are connected to one portion of submarine cable, the prevailing attenuation can be adjusted from the outside by selecting the best suited one of said correcting devices by means of rotarily moving one after the other of said correcting devices into operative position until the best suited one is found.

3,046,500
ELECTRICALLY VARIABLE DELAY LINE
Gerhard H. Dewitz, Westport, Conn., assignor to Trak Electronics Company, Inc., Wilton, Conn., a corporation of Connecticut
Original application Dec. 31, 1952, Ser. No. 329,026, now Patent No. 2,907,957, dated Oct. 6, 1959. Divided and this application Jan. 26, 1959, Ser. No. 796,718
6 Claims. (Cl. 333—29)



1. A variable delay network comprising a toroidal shaped core of magnetizable material having a plurality of indentations therein at positions spaced about the axis and having a plurality of openings therein between said indentations, a plurality of signal windings on said core, each of said signal windings being wound through one of said openings, a control winding on said core having a plurality of winding portions, each of said winding portions being positioned in one of said indentations, a plurality of capacitive elements interconnected with said signal windings to form a time delay network, and means for varying the current through said control winding thereby to vary the delay characteristics of said network.

3,046,501
ACOUSTIC SOLID DELAY LINES
Hugh Alexander Dell, Horley, Surrey, and Michael Antony Snelling, Coulsdon, Surrey, England, assignors to North American Philips Company, Inc., New York, N.Y.
Filed Sept. 2, 1958, Ser. No. 758,362
Claims priority, application Great Britain Sept. 3, 1957
6 Claims. (Cl. 333—30)



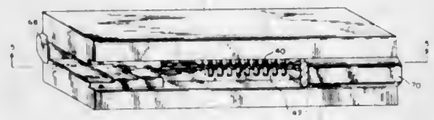
1. An acoustic delay line comprising a magnetostrictive member having a longitudinal axis, input means to said line comprising a pair of axially-adjacently-mounted coils surrounding the magnetostrictive member and wound and electrically-interconnected to generate in the magnetostrictive member oppositely-axially-directed magnetic flux when excited by an input signal, means coupled to said magnetostrictive member for generating a circumferential magnetic flux therein, and output means coupled to said magnetostrictive member for deriving an output signal corresponding to the input signal but delayed in time.

3,046,502
MAGNETOSTRICTIVE SYSTEM
Albert E. Powell, Chatham, N.J., assignor, by mesne assignments, to Sealectro Corporation, Mamaroneck, N.Y., a corporation of New York
Filed Oct. 13, 1958, Ser. No. 766,970
8 Claims. (Cl. 333—30)

1. A magnetostrictive system for producing a time delay comprising, a magnetostrictive line, a transmitting coil surrounding a portion of the line, and a solid resistor unit whose resistance changes with pressure connected in series with the line and spaced apart from the transmitting coil, said transmitting coil having terminals for connection to a wave transmitting circuit, said resistor coupled to a source of potential and a receiver circuit for receiving a wave generated by the change in resistance.

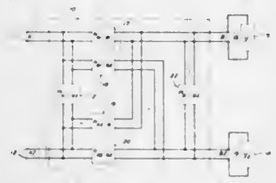


3,046,503
BROAD-BAND WAVEGUIDE FILTER
Seymour B. Cohn, Palo Alto, Calif., assignor to the United States of America as represented by the Secretary of the Army
Filed May 27, 1960, Ser. No. 32,499
1 Claim. (Cl. 333—73)



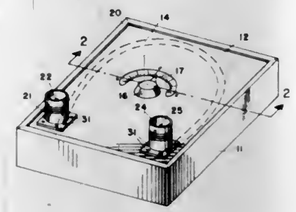
A broad band microwave filter comprising a section of rectangular waveguide having a longitudinal and transverse axis, a first section comprising a plurality of spaced conductive bosses within said waveguide section and extending upwardly from one wide surface thereof, a second section comprising a plurality of spaced conductive bosses extending downwardly from the other wide surface of said waveguide section in mutual opposition to and symmetrically arranged with said upwardly extending bosses, the bosses in said first and second sections being arranged colinearly in a plurality of spaced rows, said rows being parallel to said longitudinal and transverse axes and coextensive with the width of said waveguide section, the free ends of said oppositely arranged bosses being spaced from each other along the narrow dimension of said waveguide section, and a first and second transition section respectively terminating the ends of said first and second sections.

3,046,504
ACTIVE MULTIPORT NETWORKS
Irwin W. Sandberg, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 3, 1961, Ser. No. 93,064
11 Claims. (Cl. 333—80)



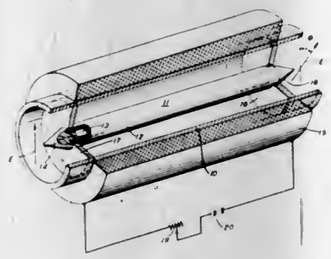
1. A signal transmission network having n ports, where n is greater than one, and comprising at least n two-terminal negative impedances and a $2n$-port passive network including only resistors and capacitors, a first n of said $2n$ ports comprising the ports of said signal transmission network, and means for connecting each individual one of said negative impedances across a corresponding one of the remaining n of said $2n$ ports.

3,046,505
HIGH FREQUENCY ATTENUATOR
William J. Wilson, Nashua, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Aug. 8, 1958, Ser. No. 753,983
4 Claims. (Cl. 333—81)



1. A unitary, composite, wave translating device for high frequency transmission lines, comprising: a pair of planar outer conductors providing ground planes; a pair of spaced, planar inner conductors adjacently disposed in different planes in register, and in parallel with and in insulated spaced relation between said outer conductors, said inner conductors being connected together to operate electrically as a single conductor while substantially confining high frequency energy between each inner conductor and its adjacent outer conductor; and attenuating means disposed in a plane intermediate the planes of said inner conductors, said attenuating means comprising a composite laminate of a metallic film layer and a layer of granular resistive material, said metallic film layer being of a thickness less than the penetrating depth of the energy transmitted along said transmission line.

3,046,506
BROADBAND POLARIZATION ROTATOR
Clare E. Barnes, Passaic Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 29, 1959, Ser. No. 843,214
6 Claims. (Cl. 333—81)



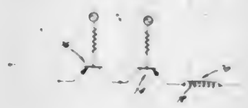
1. In combination, a section of transmission line for supporting electromagnetic wave energy, means for applying linearly polarized wave energy to said line, means for rotating the direction of polarization of said wave energy comprising a composite dielectric rod longitudinally disposed along said line, said rod comprising an outer layer of gyromagnetic material having a first dielectric constant and an inner core of nongyromagnetic material having a second dielectric constant substantially equal to said first dielectric constant, said gyromagnetic and said nongyromagnetic material being in contact along their common length and magnetic means for longitudinally biasing said rod.

3,046,507
WAVEGUIDE COMPONENTS
Howard S. Jones, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 18, 1957, Ser. No. 653,719
1 Claim. (Cl. 333—95)
(Granted under Title 35, U.S. Code (1952), sec. 266)



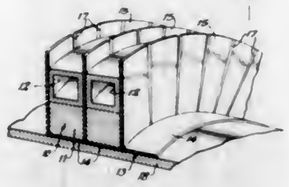
A waveguide section comprising in combination: a cylindrical stack of circular plates, said stack consisting of a first and last plate and a series of plates concentrically stacked therebetween, one face of each plate contacting the face of an adjacent plate in said stack, guide holes through each plate adjacent the periphery thereof, means passing through said guide holes for fastening said plates together, a rectangular waveguide slot formed in the center of each plate of said stack, each slot in each plate decreasing progressively in width from said first to said last plate of said stack, each slot being rotated with respect to the slot in the preceding plate of said stack so that a continuous twisted slot of decreasing width through said stack is formed.

3,046,508
ELECTRONIC CIRCUIT
Cleve C. Nash, Santa Barbara, Calif., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Feb. 12, 1960, Ser. No. 8,432
5 Claims. (Cl. 334—15)



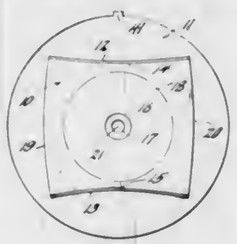
1. A variable frequency resonant circuit comprising an inductive coil, a pair of series connected transistors connected in series with the coil, and signal generating apparatus applying a varying reverse bias voltage to the transistors to vary their effective capacitances in synchronism and subsequently applying a varying reverse bias voltage to one transistor to vary its capacitance while simultaneously forward biasing the other transistor to cause an effective short circuit.

3,046,509
INDUCTION COIL WITH SPLIT FLEXIBLE INSULATING FLANGE
Othmar R. Wuczkowski, Chicago, Ill., assignor to Lindberg Engineering Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 9, 1959, Ser. No. 851,748
3 Claims. (Cl. 336—207)



1. An induction coil comprising a conductor wound into a helix with adjacent turns spaced apart and an insulating strip L-shaped in cross section helically interwound with the conductor with one flange of the strip lying radially within and contacting the inner surface of the conductor and defining a tubular liner therefor and the other flange extending radially between the turns of the conductor, said other flange being split radially at spaced points in the length of the strip.

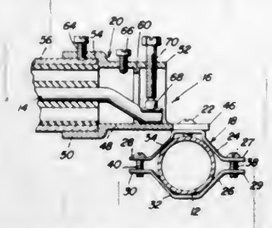
3,046,510
NON-LINEAR POTENTIOMETER
David G. Williams and Joyce W. Williams, Littleton, Mass., assignors to Ace Electronics Associates, Inc., a corporation of Massachusetts
Filed Aug. 18, 1961, Ser. No. 132,322
9 Claims. (Cl. 338—89)



1. A potentiometer comprising a resistance card, said card having a hole in the center thereof and four peripheral edges, a terminal strip applied along the length of each of two opposite ones of said four edges for establishing a voltage gradient across the face of the card between said two opposite edges when a voltage is applied to said terminal strips, said two opposite edges being shaped with a generally concave perimeter curvature, and the other two of said four peripheral edges being shaped with a generally convex perimeter curvature, a rotational shaft passing through said hole, a wiper tap supported by said shaft for traversing the surface of said card in a circular parth about said hole, and means for supporting said shaft and card for relative rotation about the axis of said hole.

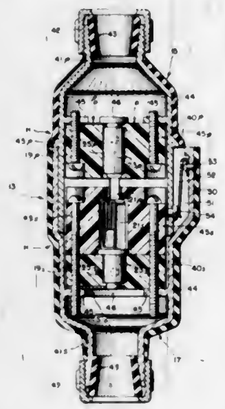
3,046,511
GROUND CLAMP
Cecil C. Rinehuls, Largo, Fla. (R.D. 1, Box 76, Lake Millsite, Bartow, Fla.), and Paul O. C. Jackson, 10720 59th Way N., Largo 2, Fla.
Filed Jan. 22, 1960, Ser. No. 4,112
1 Claim. (Cl. 339—13)

A grounding coupling for an electric conductor of the type including a wire enclosed in a conduit, said coupling comprising a conductive sleeve mounted on an end portion of the conduit in communication therewith and projecting longitudinally therefrom, means for securing the sleeve on the conduit, means for clamping the wire in the projecting end portion of the sleeve in contact therewith, and means for electrically connecting the sleeve to a grounding pipe, the last named means comprising a conductive clamp including a pair of opposed jaws for receiving and gripping the pipe therebetween, and a screw



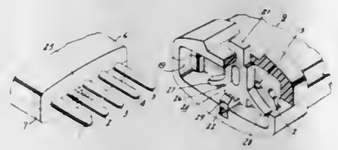
rotatably mounted on the sleeve and threaded through one of the jaws and engageable with the pipe for mounting the clamp on the sleeve and for frictionally securing said clamp against slippage on the pipe, the second named means including a screw threadedly mounted in the sleeve, and a pressure foot swivelly mounted on the second named screw and engageable with the wire for clamping same against the sleeve.

3,046,512
ELECTRICAL CONNECTOR
John L. Remke, Wilmette, and Alan Reed and Arnold E. Deam, Chicago, Ill., assignors to Ralco Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 2, 1959, Ser. No. 844,096
1 Claim. (Cl. 339—14)



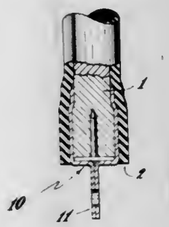
In a plug and socket connector, a coupling component comprising an insulating base having opposed faces and formed with an electrode mounting cavity provided with an open end extending at one face of the base and a bottom connected with the opposite face of the base through a conductor port, an electrode carrying block sized for loose interfitment in the cavity and carrying a contact making electrode at one end of the block in position extending outwardly of the base at the open end of the cavity, said block being formed with an axial pocket opening at its opposite end in registration with said port, a ferrule adapted to be removably mounted in the pocket in position to receive the end of an electrical conductor extending through said port, a set screw mounted in the block and having an inner end adapted to extend in said pocket in position to clampingly squeeze the ferrule in the pocket and upon the end of the conductor, said set screw having an outer end projecting in position for loose interfitting engagement in a radial seat formed in the base and opening upon the side of the cavity, a shell forming a housing for said component and having an integral lug disposed in position providing a component seat, a fastening bolt threaded in said lug for clampingly securing the base of the component thereon, and a grounding strip electrically connected with said ferrule at the open end of said pocket and extending in position to be clamped against said lug by said base, said strip being secured to said ferrule and extending in position overlying a face of said base between the ferrule and the lug.

3,046,513
DETACHABLE ELECTRICAL CONNECTOR
George C. Crowley, Purley, England, assignor to General Electric Company, a corporation of New York
Filed Jan. 30, 1961, Ser. No. 85,874
3 Claims. (Cl. 339—91)



1. A detachable electrical connector comprising a male member having a body of dielectric material and a plurality of conducting pins extending therefrom, the body of said male member also including walls defining a lock receiving recessed area, a female member having a body of dielectric material with a plurality of apertures to receive said conducting pins and walls defining an open-ended recess to receive an end portion of the male connector body, a one-piece locking member extending across the recess of said female member with at least one end thereof projecting through the wall of said female member to provide push button locking release means, a latch portion integral with said locking member within the end recess of said female member on a side opposite said push button to engage the locking recess in said male member, and flexible arms on said locking member engaging an internal wall of said female member biasing said locking member in a direction to engage said latch portion in said locking recess.

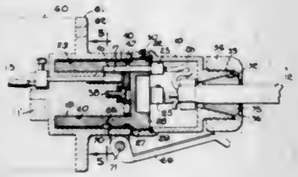
3,046,514
ELECTRIC TERMINAL
George E. Brackett, Candia, N.H., assignor to Basic Products Corporation, West Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 19, 1960, Ser. No. 76,794
7 Claims. (Cl. 339—100)



1. For application to the end of a conductor covered with insulation, a terminal lug comprising a tubular sleeve having an open end and an axial prong extending from the other end toward the open end along a portion of the length of the sleeve, said conductor being penetrable by said prong, the interior diameter of the sleeve approximating that of the conductor at said open end and being

larger throughout said portion of the length of the sleeve whereby, when the sleeve is inserted between the insulation and conductor, the insulation is expanded, the smaller end of the sleeve fits around the conductor and the prong expands the conductor into the larger portion of the sleeve, thereby to lock the sleeve on the conductor, said prong being free to move longitudinally of the sleeve so as to remain in the conductor when the sleeve is retracted.

3,046,515
PLUG AND RECEPTACLE CONNECTOR
Arthur I. Appleton, Northbrook, Ill. (% Appleton Electric Co., 1713 Wellington Ave., Chicago 13, Ill.)
Filed May 5, 1958, Ser. No. 732,861
7 Claims. (Cl. 339—111)



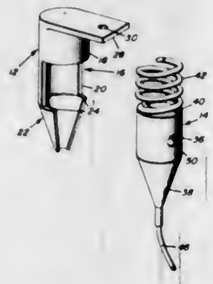
7. In an electrical connector, the combination comprising an elongated cylindrical contact support having a smooth external surface, a first and second axially spaced set of circumferentially spaced receptacle contacts recessed in said external surface adjacent the outer end of said contact support, means fixed to the outer end of said support for retaining said receptacle contacts and insulating the same against endwise electrical contact, an annular sleeve member fixed at its inner end to said support at a point spaced a substantial distance from said receptacle contacts and projecting therefrom in coextensive spaced coaxial surrounding relation with said support, said support and said sleeve member defining an annular plug receiving receptacle, an annular elongated contact support plug having a smooth internal wall surface and insertable into said receptacle with said internal wall surface in close coextensive proximity with the external surface of said cylindrical contact support, a first and second set of plug contacts recessed in the inner end of said internal wall surface adjacent the body and circumferentially spaced corresponding respectively to said first and second sets of receptacle contacts for engagement therewith upon the axial insertion of said plug into said receptacle and subsequent rotation thereof, and polarizing means cooperable between said annular sleeve member and said plug for guiding the latter for axial insertion into said receptacle and for subsequent rotation to selectively engage respective plug contacts with corresponding receptacle contacts.

3,046,516
PANEL-MOUNTED ELECTRICAL CONNECTOR
John Tymkewicz, 20200 Parkview Ave., Rocky River 16, Ohio
Filed Dec. 16, 1957, Ser. No. 702,949
4 Claims. (Cl. 339—126)



3. An electrical connector device of the class described, comprising a body having a peripheral flange engageable with one face of a mounting panel when a portion of said body is inserted through an opening through such panel, said body having a pair of T-shaped guide-ways at opposite sides of the body extending inwardly from said flange in converging directions, a respective correspondingly T-shaped clamping member disposed for sliding movement in each respective guideway, and means for effecting movement of said clamping members lengthwise of said guide-ways from positions protruding from the body and clampingly engageable with the opposite face of such panel when the clamping members are adjacent said flange to positions retracted into said body when said clamping members are moved away from said flange, whereby to permit withdrawal of said device from said opening in such mounting panel.

3,046,517
ELECTRICAL CONNECTOR
Cyril J. Loredo, 6944 20th St., Rio Linda, Calif.
Filed Oct. 7, 1959, Ser. No. 844,713
7 Claims. (Cl. 339—255)

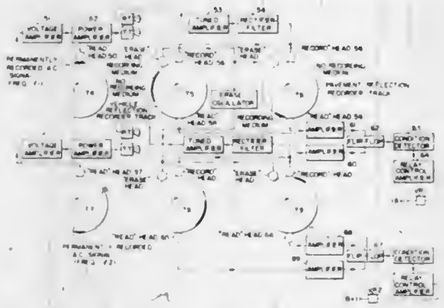


5. A device for making and maintaining an electrical connection between two conductive elements comprising a hollow member with a rigid unitary male member slidable therein, each of said members formed of electrically conductive material, means on each of said members for securing them to conductors, said hollow member having a wall defining a conical chamber therein, a triangular opening formed in said wall whereby said wall extends around the axis of said conical chamber more than 180°, said male member including a conical portion in said chamber having an outer surface of the same shape as said chamber, an abutment on said hollow member spaced from said chamber, power means between said abutment and male member urging the conical surface thereof into conductive engagement with the surface of the conical walls of said chamber, said male member being movable against said power means out of engagement with the chamber wall whereby it may be moved laterally through said opening for separating it from said hollow member.

3,046,518
ULTRASONIC VEHICLE DETECTOR SYSTEM
George Vande Sande, Bethesda, Md., assignor to General Railway Signal Company, Rochester, N.Y.
Continuation of application Ser. No. 52,876, Aug. 30, 1960. This application Dec. 18, 1961, Ser. No. 161,335
16 Claims. (Cl. 340—38)

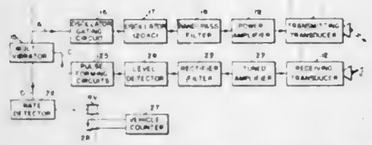
1. In a system for detecting the presence of a vehicle as it passes through a detection zone defined by at least one beam of repetitive sound pulses the combination comprising, transmitting means including an electro-acoustical transducer for transmitting said repetitive pulses across said detection zone so as to impinge upon said vehicle passing therethrough, receiving means including an electro-acoustical transducer being positioned and directed to receive reflections of said sound pulses from said vehicle, means including a magnetic storage drum rotating with a substantially constant angular velocity and having at least one track thereon upon which

electrical signals may be selectively recorded, said transmitting means being controlled by said drum as it passes through at least one predetermined angular position to transmit a respective one of said sound pulses, at least one electro-magnetic recording transducer for recording on said track, said recording transducer being energized by the output of said receiving means whereby it is energized in response to a vehicle reflection signal only during a predetermined time interval following the transmission of the last sound pulse which encompasses the expected reception time of a vehicle reflection pulse, said track having magnetizable material deposited only on that portion thereof which will pass through a magnetic coupling re-



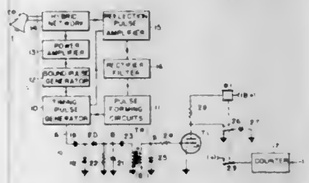
lationship with said recording transducer during said predetermined time interval, whereby only vehicle reflections are recorded on said track, circuit means including a reading electro-magnetic transducer positioned in a magnetic coupling relationship with said track so that any magnetization appearing thereon induces a signal in said reading transducer as it passes said reading transducer, erasing means for removing any magnetization from said track after it passes said reading transducer and before it passes said recording transducer, and circuit means being distinctively controlled by the output signal of said reading transducer for indicating the presence of a vehicle in said beam.

3,046,519
ULTRASONIC VEHICLE DETECTION SYSTEM
Morton A. Polster, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed Oct. 28, 1959, Ser. No. 849,326
8 Claims. (Cl. 340—38)



1. In a system for detecting the presence of vehicles moving along a defined path, the combination comprising, sound pulse transmitting means, sound pulse receiving means, said transmitting means directing a beam of sound pulses across said path so as to impinge upon a fixed reflecting surface only in the absence of a vehicle and being reflected by said fixed reflecting surface to said receiving means, gating means for controlling said receiving means to be responsive only to received reflection pulses obtained from said fixed reflecting surface, said receiving means controlling said transmitting means to transmit the next successive sound pulse at the time of reception of a reflection pulse occurring at a time when said receiving means is responsive, whereby said transmitting means transmits successive sound pulses at a predetermined frequency when no vehicle is present, said transmitting means being self-operating when not being controlled by said circuit means and having a frequency of operation when self-operating which is less than said predetermined frequency, and means being distinctively controlled by the frequency of operation of said transmitting means for providing a distinctive indication of the presence of a vehicle.

3,046,520
ULTRASONIC VEHICLE DETECTION SYSTEM
Morton A. Polster, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed Jan. 25, 1960, Ser. No. 4,483
12 Claims. (Cl. 340—39)

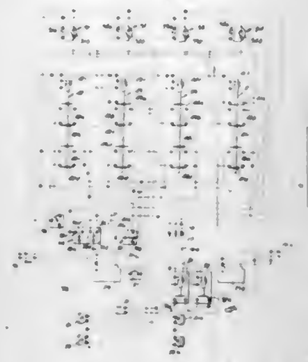


1. In a system for selectively detecting the passage of vehicles according to their direction of travel along a defined path, the combination comprising, transmitting means for generating discrete sound pulses and also including a transducer for directing said pulses in a beam at an angle oblique to said path, receiving means being distinctively controlled by reflections of said sound pulses from vehicles within a detection zone defined by said beam, said transmitting means including sound pulse generation means for controlling the rate of transmission of said sound pulses and normally causing said pulses to be transmitted with a period at least as long as the time required for a sound pulse to travel from said transmitting means to said receiving means via a reflection from a vehicle at maximum range in said zone, said receiving means in response to the reception of a reflection pulse acting on said sound pulse generation means to cause a following sound pulse to be transmitted by said transmitting means, whereby said repetition rate of said sound pulse generation means varies in a distinctive first or second manner according to whether said vehicle passes through said zone in a respective first or second direction, and vehicle detecting means including a binary device being operated by said sound pulse generation means from its normal condition to a distinctive condition to indicate thereby the passage of said vehicle in said first direction only when said repetition rate varies in said first distinctive manner.

3,046,521
PORTABLE TRAFFIC SIGNAL SYSTEM
Edward G. Cantwell, 700 Binns Blvd.; Robert S. Curl, 215 S. Stanwood Road; and Samuel O. Linzell, 147 Chatham Road, all of Columbus, Ohio
Filed Apr. 12, 1960, Ser. No. 21,638
5 Claims. (Cl. 340—41)

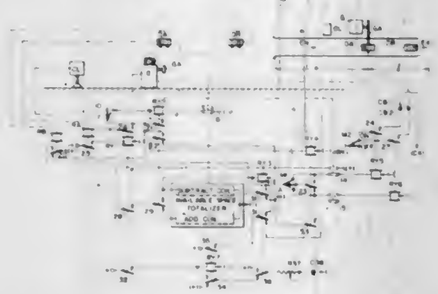
1. In a portable traffic signalling system; a plurality of physically separate, portable traffic signalling units for arrangement in relatively remote locations, each of said units comprising a plurality of electrically energizable, visual signals, a storage battery for supplying electrical energy to said signals and plural switching means having connections with said battery and said signals and operable to control the supply of electrical current from said battery to said signals; flexible cable means arranged to extend between said signalling units for electrically connecting the switching means of each of said units, the switching means of one of said units including a plurality of relays sequentially energizable to cause energization of the visual signals of both of said units in a given sequence,

a thermally-responsive time delay switch for each of said relays operable to control energization thereof, each of said time delay switches having an electrical heating element
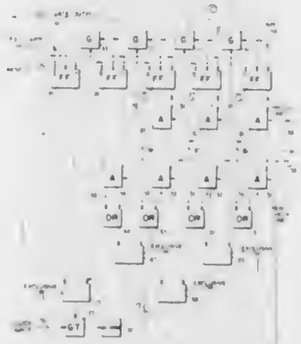


responsive to the energization of another of said relays for closing an operating circuit for its associated relay following a given interval of time, and a starter switch connected with one of said relays for initiating energization thereof.

3,046,522
GATE CONTROL SYSTEM FOR AUTOMOBILE PARKING AREAS
John H. Auer, Jr., Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed Aug. 15, 1960, Ser. No. 49,464
6 Claims. (Cl. 340—51)



1. A system for selectively controlling the passage of vehicles through a passageway comprising in combination, means operable between vehicle blocking and non-blocking conditions at a predetermined distance from one end of said passageway, said passageway from said one end thereof to at least the location of said barrier means being a single lane passageway, operating means for operating said barrier means selectively between its said blocking and non-blocking conditions, detection means being distinctively controlled by the presence of a vehicle approaching said barrier means from a side thereof which is opposite said one end of said passageway, said operating means being controlled at least in part by said detection means when it has detected the presence of a vehicle to operate said barrier means to its non-blocking condition and for maintaining said barrier means in said non-blocking condition until said vehicle has passed said barrier means, and means connected to said operating means to maintain said barrier in its said non-blocking condition when once operated thereto by said detection means for at least the expected time required for a vehicle to travel from the location of said barrier means to said one end of said passageway, control means accessible to the operator of a vehicle passing along said passageway between said one end and said barrier means and connected to said operating means for operating said barrier means to its non-blocking position, said detection means being differently controlled by vehicles according to their direction of travel through said passageway and controlling said operating means to operate said barrier means to its non-blocking condition only for a vehicle travelling toward said one end, whereby a vehicle passing through said one end of said passageway and travelling toward the barrier means can pass said barrier means only if said barrier means has been operated to its non-blocking condition by said control means and whereby successive vehicles passing through said passageway toward said one end thereof and sufficiently closely spaced so that the second thereof is detected by said detector means before the first thereof has emerged from said one end of said passageway, will cause said barrier means to constantly remain in said non-blocking condition.

3,046,523
COUNTER CHECKING CIRCUIT
James V. Batley, Kingston, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 23, 1958, Ser. No. 743,687
9 Claims. (Cl. 340—146.1)

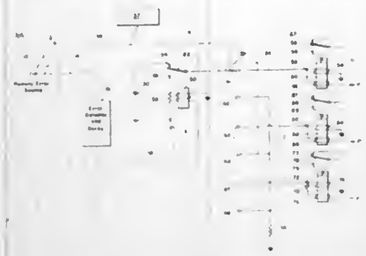


2. A parity checking circuit for checking the parity of the contents of a register comprising a plurality of bi-stable devices connected in binary fashion, parity determining means including a plurality of logical And circuits selectively associated with said bi-stable devices, pulse means coupled to said logical And circuits for making output signals from said parity determining means to indicate the status of said bi-stable devices, other means operative for indicating the parity status of said register devices, comparing means operative for comparing the contents of said parity determining means with the contents of said other parity indicating means, means controlled by said comparing means for indicating the non-comparison of said contents of said register and said parity determining means.

3,046,524
ERROR STORE AND RESET CIRCUIT
Miles C. Johnson, Mount Holly, and Thomas J. Burke, Westmont, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 21, 1959, Ser. No. 861,156
3 Claims. (Cl. 340—147)

1. In a self-clearing, error discriminating and storage system, an error detecting and delaying means, a first relay means responsive to said detecting means, charge storage means connectable to said first relay means, a voltage tap also connectable to said first relay means, a switch tap connecting said first relay means to any of a plurality of rotary switch contacts, a multiple contact

rotary switch means having a predetermined number of storage contacts according to the desired number of error periods to be registered and also having a signal clearing contact between each of said storage contacts, means connecting said signal clearing contacts to ground through



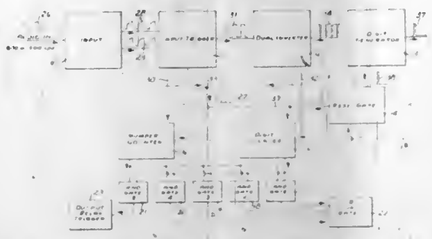
a load, a plurality of signal storage means connected to each of said storage contacts and arranged so that a signal is stored when received from said error detector and so that the storage means is automatically reset during the delay time produced by said error detector.

3,046,525
SUPERVISORY CONTROL SYSTEM
Royce D. Deming, Hollis, N.Y., Edward Jacobitti, Newark, N.J., James B. Kennedy, Brooklyn, and Wayne V. K. Large, Locust Valley, N.Y., and Harold M. Pruden, Maplewood, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 16, 1958, Ser. No. 761,386
27 Claims. (Cl. 340—163)



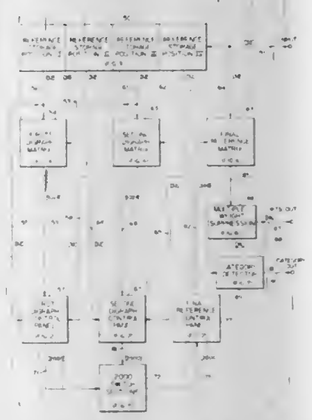
8. Apparatus comprising a plurality of controllable two-position keys located at a first geographical point, a first plurality of devices located at a second point geographically spaced from said first point, a second plurality of devices located at a third point geographically spaced from said first and second points, each of said devices adjustable into one of a plurality of predetermined states at a given time, a signaling transmission circuit interconnecting said keys and said first and second pluralities of devices, control means at said first point operatively connected with certain positions of said keys to transmit coded signals on said circuit to said first and second pluralities of devices for selectively adjusting said last-mentioned devices into desired states of said plurality of predetermined states, roll-call means at said first point connected to said control means and keys and operable to transmit coded signals on said circuit for selectively sensing the instant states of said respective devices in each of said first and second pluralities of devices, means connected to each of said first and second pluralities of devices for transmitting a predetermined code signal on said circuit when one device of only one of said first and second pluralities of devices effects an unauthorized change from said desired state to another state of said plurality of predetermined states, and means at said main station automatically responsive to said predetermined code signal received on said circuit thereat for automatically activating said roll-call means to automatically transmit coded signals on said circuit for sensing the instant states of said devices in said one of said first and second plurality of devices including the other state of said last-mentioned one device.

3,046,526
SELECTOR APPARATUS
John R. Scantlin, Los Angeles, Calif., assignor to Scantlin Electronics, Inc., a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 759,837
17 Claims. (Cl. 340—164)



2. In a selector apparatus for operation with a code having a series of groups of code signals, the combination of: group means for producing a series of group signals corresponding to each of the groups of the code; first signal counting means; second signal counting means; means for coupling the code to said first signal counting means as an input for counting code signals consecutively; means for coupling the series of signals from said group means to said second signal counting means as an input for counting group signals consecutively; a plurality of means for combining the outputs of said first and second signal counting means to produce a control signal after termination of each group, when a predetermined code is used as an input; and means for resetting each of said signal counting means to the zero condition on receipt of a signal group of the code except when a control signal has been produced with the preceding signal group, with both of said counting means continuing to count consecutively when the incoming code groups correspond to the predetermined code.

3,046,527
CHARACTER GROUP RECOGNITION SYSTEM
Russell A. Rowley, Binghamton, and Francis V. Adams and John F. Gaffney, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 12, 1956, Ser. No. 577,876
10 Claims. (Cl. 340—167)



6. Apparatus for identifying a plurality of predetermined sequences of information items, comprising: an individual multiposition shift register for receiving each unique information item, means for periodically advancing each said information item from position to position through each said shift register, means connected to each position of each said shift register and responsive to an

information item stored therein to provide an output, sensing means connected to said outputs for detecting sequences of information items stored respectively in the positions of said shift registers, and weighing means connected to said sensing means and responsive to said sequences of information items to provide weight output signals in accordance with values placed on predetermined sequences of information items, and means for developing a category signal whenever an odd-valued weight output signal is immediately followed by the next succeeding even-valued weight output signal.

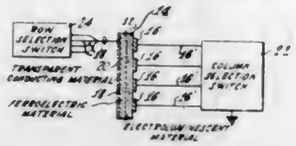
3,046,528
TRANSFER MECHANISM FOR STORAGE DEVICES
Thomas H. Rowe, James P. Hammer, and Charles J. Kennedy, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 6, 1957, Ser. No. 682,515
15 Claims. (Cl. 340—172.5)



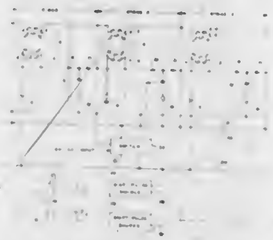
1. In a data processing machine the combination comprising a magnetic core data storage array having a plurality of addressable positions each position adapted to store a plurality of characters, a first sense register having a plurality of character storage positions and adapted to simultaneously store all the characters from a position in said storage array, first addressing means for repeatedly reading all the characters out from a first position in said storage array in parallel to said register, a transmission channel for serially transmitting data comprehending single characters, first switching means for selectively connecting successive positions of said register to said channel to transmit the character stored in said register at the selected position over said channel, means for reading all the characters out from said register in parallel to said storage array after each transmission of a character over said channel, second addressing means for reading all the characters out in parallel from a second position in said storage array to said register after each repeated reading out of the characters from said first position in said storage array, and second switching means for selectively connecting successive positions of said register to said channel, whereby successive characters from said first and said second positions in said storage array are alternatingly transmitted over said channel.

3,046,529
FERROELECTRIC MEMORY SYSTEMS
George R. Briggs, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 5, 1958, Ser. No. 740,116
18 Claims. (Cl. 340—173.2)

1. In a memory system, the combination of a ferroelectric element having two states of appreciable charge remanence, an electroluminescent element electrically connectd to said ferroelectric element, and means for applying first and second excitations to said ferroelectric element to successively change the charge therein back and forth between said remanent states, said changes of charge being successively transferred to and from said electroluminescent element, said electroluminescent element emitting a light pulse during the application of said second excitation and not emitting a light pulse during the application of said first excitation.



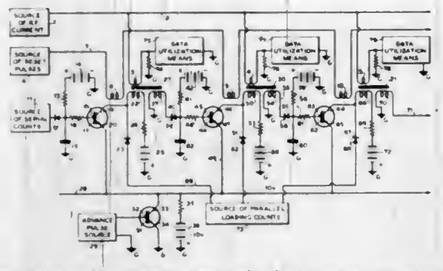
3,046,530
REVERSIBLE MAGNETIC SHIFT REGISTER
Robert C. Kelner, Concord, Mass., assignor to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Oct. 26, 1955, Ser. No. 542,829
7 Claims. (Cl. 340—174)



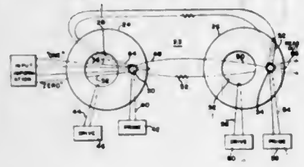
1. In a magnetic shift register for processing information, first and second bistable magnetic cores, each core having a substantially rectangular hysteresis characteristic, means including a shift pulse winding on each of said cores for applying shift pulses thereto, a first bias winding having two terminals wound on said first magnetic core, said first bias winding having one terminal connected to ground and the other terminal connected to a first junction point, unilaterally conductive means comprising first and second unilaterally conductive elements connected between said first junction point and a second junction point, a second bias winding having two terminals wound on said second magnetic core, said second bias winding having one terminal connected to said second junction point, means for applying bias pulses to the other terminal of said second bias winding, a third unilaterally conductive element connected between said second junction point and a third junction point, said second and third unilaterally conductive elements being poled to conduct current in mutually opposite directions, means for selectively applying bias pulses to said unilaterally conductive elements, said bias pulses being determinative of the conductivity thereof; whereby information stored in a selected one of said cores is transferred to the other core upon the application of said shift pulses.

3,046,531
SATURABLE REACTOR SHIFT REGISTER
Edward J. Armata, Glen Cove, N.Y., assignor to Potter Instrument Company, Inc., Plainview, N.Y., a corporation of New York
Filed June 28, 1957, Ser. No. 668,779
2 Claims. (Cl. 340—174)

1. In a shift register, the combination of a plurality of saturable reactors each including a signal winding for series connection between a source of radio frequency current and utilization means to develop a high impedance when the reactor is unsaturated and to develop a low impedance when the reactor is saturated; means to saturate the reactor including means to connect a source of serial count pulses to the reactor through a switching transistor; means to connect a source of bias potential to the switching transistor so that serial count pulses normally are blocked; means to remove the bias potential from the switching transistor responsive to a source of count advance pulses; reset winding means to reset the reactor to an unsaturated state responsive to a source of reset pulses; and another winding to develop an electrical potential responsive to the resetting of the reactor to develop a saturating current in the control winding of a succeeding stage upon removal of the bias potential from the switching transistor associated with the succeeding stage.



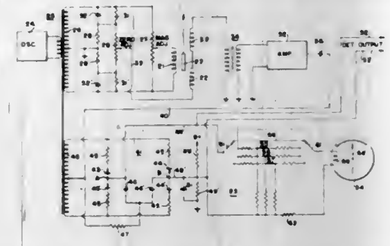
3,046,532
MAGNETIC DEVICE
Kent D. Broadbent, San Pedro, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Original application Aug. 2, 1957, Ser. No. 675,918. Divided and this application July 28, 1958, Ser. No. 751,383
7 Claims. (Cl. 340—174)



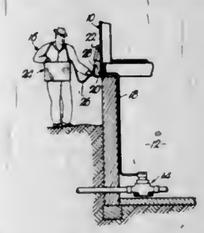
1. A bistable circuit comprising first and second magnetic elements, each of said elements having a plurality of apertures therein, a plurality of windings magnetically coupled to said elements, said plurality of windings comprising an input winding magnetically coupled to each of said elements, an output winding magnetically coupled to each of said elements, means for electrically coupling the input winding of said first element to the output winding of said second element and for electrically coupling the input winding of said second element to the output winding of said first element, a drive winding magnetically coupled to each of said elements, a prime winding magnetically coupled to each of said elements, a pair of information insertion windings magnetically coupled to said first element, and an information extraction winding magnetically coupled to said second element.

3,046,533
GAGING APPARATUS
Lawrence J. Torn, Seaford, and James P. Philbin, East Northport, N.Y., assignors, by mesne assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed July 29, 1957, Ser. No. 674,876
19 Claims. (Cl. 340—178)

1. Gaging apparatus which comprises gaging means including a transducer responsive to variations in the size of parts being gaged, an A.-C. power source connected to said gaging means, said gaging means being adapted to yield an A.-C. output signal of corresponding frequency which varies in amplitude with part size, a size control circuit connected with said A.-C. power source and adjustable to obtain therefrom an A.-C. correction signal of adjustable amplitude, circuit means for combining said correction and output signals, a detector supplied with said combined signals and yielding a correspondingly varying D.-C. output signal, an indicating meter supplied from the output of said detector through a variable attenuator, said variable attenuator presenting a substantially constant impedance to said detector, and an output circuit from said detector connected between said detector and said attenuator.



3,046,534
REMOTE METER READING APPARATUS
Paul C. Constant, Jr., 3014 E. Meyer, Kansas City, Mo.
Filed Oct. 5, 1959, Ser. No. 844,303
4 Claims. (Cl. 340—188)



1. In apparatus of the class described, a public utility consumption meter located in an area of restricted access and having a plurality of rotatable metering shafts each of whose position of angular rotation represents a different digit of the consumption measurement made by the meter; electrical switching means within said area for each of said shafts respectively and each including a plurality of electrically separated, stationary contact parts and a rotatable drum having thereon a plurality of electrically intercoupled contact parts operably engageable with different of said stationary contact parts as said drum is rotated to move said contact parts thereon into different positions; means within said area for operably coupling each of said drums with a corresponding shaft for shifting said drum carried contact parts of each switching mechanism into said different positions thereof successively as the corresponding shaft is rotated; stationary electrical connector means outside said area and having a plurality of electrical contact members; stationary conductor means electrically coupling each of said members with a corresponding stationary contact part; a portable unit outside said area movable to and from a location proximate said stationary connector means and including electrical power source means, a single set of electrically responsive read-out devices for registering in predetermined numerical units any value of a single digit of said measurement corresponding to the position of any one of said shafts, and conductive means electrically coupled

with said source means and said devices; portable electrical connector means for said unit outside said area and having an electrical contact element for each of said members respectively, said portable connector means being releasably coupled with said stationary connector means when said unit is in said location to place each of said elements temporarily in electrically coupled relationship with a corresponding member; portable conductor means electrically coupled with said elements; and structure in said unit for operably coupling those of said portable conductor means corresponding to each of said switching means respectively successively with said conductive means for selectively controlling successive operations of said set of devices in accordance with the respective positions of said drum carried contact parts of said plurality of switching means, said structure including electrical switching mechanism advanceable through a plurality of different switching conditions, electrically coupled with said portable conductor means and operative in successive conditions thereof, responsive to completion of electrical control paths through said portable conductor means, said elements, said members and engaged ones of said stationary and drum carried contact parts of that switching means corresponding to the condition of said mechanism, to change the state of completion of electrical energizing paths for the devices corresponding to said engaged parts of said corresponding switching means through said conductive means coupled with said devices and said source means, whereby the readings for each of said shafts may be registered successively by said single set of devices.

3,046,535
MEASUREMENT APPARATUS
James P. Philbin and Richard I. Salzer, East Northport, N.Y., assignors to Cutler-Hammer Inc., Milwaukee, Wis., a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,645
17 Claims. (Cl. 340—199)



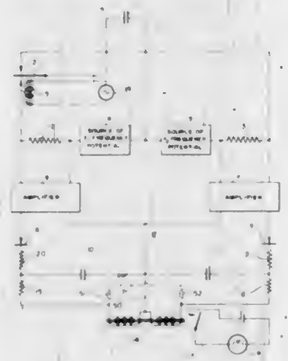
1. Gaging apparatus which comprises a gage head containing a variable differential transformer having primary and secondary windings and movable means for varying the coupling therebetween in accordance with a part being gaged, said differential transformer upon energization yielding an A.-C. output signal varying in amplitude with departure from the null position of said movable means, a pair of transistors each having a base, an emitter and a collector, the primary of said differential transformer being connected between the collectors of said transistors, a power source connected to supply operating voltage between emitters and collectors of respective transistors, a pair of impedances connected between respective emitters and one terminal of said power source, means for biasing the bases of said transistors, cross-coupling circuits connected between the collectors and opposite bases of said transistors respectively, means for tuning the primary of said differential transformer to produce oscillations at a desired oscillation frequency, said tuned primary being the primary frequency-determing circuit for said oscillations, an amplifier for amplifying the output signal of said differential transformer, a detector supplied with the output signal from said amplifier and adapted to yield a correspondingly varying D.-C. output signal, and indicating means connected to the output of said detector.

3,046,536
AUTOMATIC FIRE ALARM ENERGIZING MEANS
Alfred F. Sciuto, 4955 Magnolia Ave., St. Louis, Mo.
Filed May 23, 1960, Ser. No. 31,048
4 Claims. (Cl. 340—227)



1. In an independent alarm circuit adapted to be connected into a wall receptacle included in an existent electrical circuit, the combination comprising: a plug for insertion into the receptacle; an alarm device; a first pair of wires leading from the plug, one of said wires being connected to the alarm device and the other terminating in a free end portion; a single wire connected to the alarm device at one end and also terminating in a free end portion; a second pair of wires each connected at one end to one of the free end portions of the first pair of wires, each of the second pair of wires comprising a conductor covered with thermoplastic insulating material having a predetermined melting point, the trailing ends of said wires being separated; and a compression spring of metallic material applied to said second pair of wires and adapted to automatically engage the conductors thereof under fire conditions whereby to close the independent circuit and energize the alarm device into continuous operation, said spring consisting of tight wound spiral convolutions terminating in half convolution segments, and being manually applied to the second pair of wires by spreading said convolutions apart sufficiently to receive the wires therebetween, the combined inherent compressive forces of the convolutions and half convolution segments causing portions of said convolutions to penetrate into the thermoplastic insulating material aforesaid that covers the conductors of said wires.

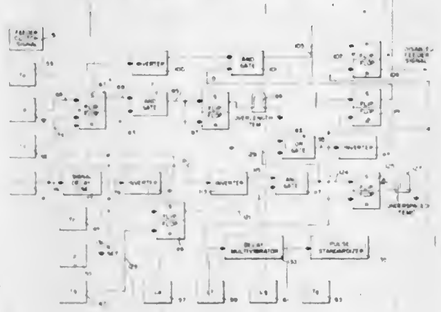
3,046,537
INDICATOR FOR ICE AND LIKE SUBSTANCES
Jennings B. Dow, Glen Head, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois
Filed Sept. 18, 1959, Ser. No. 840,858
18 Claims. (Cl. 340—234)



10. A device for monitoring the presence of a particular physical state of a predetermined substance, which physical state is characterized by an electrical property

varying widely with frequency, comprising: first means for providing a characteristic dependent on the environment of said means, which characteritic is affected by said electrical property; means coupled to said first means for deriving signals indicative of said electrical property at each of two different frequencies; and means responsive to said signals for using presupplied information as to the variations of said electrical property with frequency of said particular state of said predetermined substance for deriving an indication of the presence of said state, which state may be present with other substances and other physical states of the same substance.

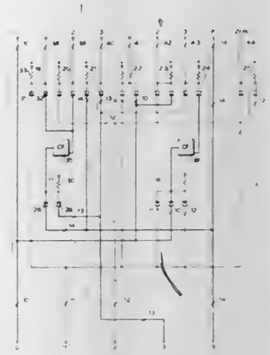
3,046,538
DOCUMENT MONITORING SYSTEM
John H. Pedersen, Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 24, 1959, Ser. No. 861,828
11 Claims. (Cl. 340—259)



1. A monitoring system for use with items in transport along an item transport path comprising, first monitoring signal source means located at a first station along said item transport path to provide a first station leading edge monitoring signal when said item is transported into said first station and to provide a first station trailing edge monitoring signal when said item is transported from said first station, second monitoring signal source means located at a second station along said item transport path to provide a second station leading edge monitoring signal when said item is transported into said second station, said second monitoring signal source means adapted to delay said second station leading edge monitoring signal, signal detecting means connected to receive said three monitoring signals and to be responsive to indicate an over-length item if said second station leading edge monitoring signal is received prior in time to said first station trailing edge monitoring signal.

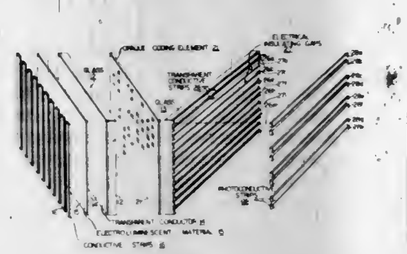
3,046,539
TRANSLATOR
George J. Saxenmeyer, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 21, 1958, Ser. No. 749,748
2 Claims. (Cl. 340—347)

1. A translator for an N position code including:
(*a*) input means for each said position wherein a number is represented by the energization of two of said input means;
(*b*) two groups of output means;
(*c*) each group of output means comprising one output means representing one position of said N position code exclusive of said other group and other output means in each group representing one position of said N position input code which is common to said other group;
(*d*) means connecting each output means exclusive to each group of output means to the corresponding input means represented thereby;
(*e*) means for selectively connecting an input means represented by an output means in each group to an output in one group; and



(*f*) means included in said connecting means responsive to the energization of an input means connected exclusively to one group of output means for connecting the input means common to both groups of output means to the output means in the other group.

3,046,540
ELECTRO-OPTICAL TRANSLATOR
Frank A. Litz and Marcel J. Vogel, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 10, 1959, Ser. No. 819,401
10 Claims. (Cl. 340—347)



8. An electro-optical translator for converting a first signal to another signal in accordance with a given code comprising an electroluminescent member, a plurality of parallel electrically conductive strips overlying said member, means for selectively energizing said strips as a function of said first signal to produce electroluminescence of selected areas of said electroluminescent member underlying said strips, a coding element disposed adjacent said electroluminescent member and having coded openings therein in registry with different areas of said electroluminescent member for transmitting light from said electroluminescent member in accordance with said code, a plurality of strips of photoconductive material disposed on the opposite side of said coding element from said electroluminescent material and extending in a direction normal to said conductive strips, each of said photoconductive strips being in registry with some of said openings for receiving said transmitted light, and means responsive to changes in the electrical characteristics of said photoconductive elements as a result of receipt of said transmitted light for producing an indication of said second signal.

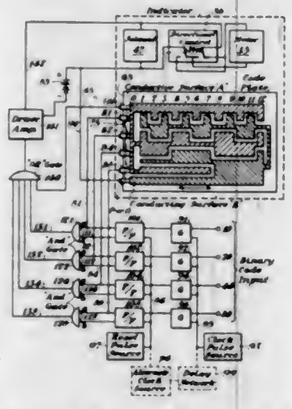
3,046,541
ANGLE DIGITIZER
Lewis A. Knox, Owego, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 29, 1959, Ser. No. 823,382
16 Claims. (Cl. 340—347)



13. An angle digitizer comprising; an input member adapted to be directly driven, a digital scale on said input member and means for reading out said scale to provide a digital representation of the angular position of the input member to a predetermined order, an optical scale on said input member, said optical scale including a pair of circular optical tracks of alternate opaque and transparent areas, the alternate opaque and transparent areas of each track being angularly offset, the optical scale effectively providing the next higher numerical order than that provided by the digital scale on the input member, means for projecting illumination from a source on to a restricted small area of said optical tracks, a symmetrical optical system for projecting the image of the opaque areas of each optical track on to the diametrically opposite portion of the same track, photosensitive means positioned adjacent each track to sense the intensity of the illumination transmitted through the transparent areas of each track, the angular offset of said tracks providing some illumination to the photosensitive means when the transmitted beams are low and of equal intensity, the input member being at a boundary position of an opaque and translucent area on said optical tracks when said transmitted beams are of equal intensity, a servo means operatively connected in an electric circuit to said photosensitive means and adapted to be rotated in either direction according to the unbalance of the transmitted beams and adapted to be nulled at a balanced beam transmission of low intensity, a vernier having an expanded digital scale thereon and mechanically connected to be driven by said servo; means to read out the expanded digital scale on said vernier, an optical refracting means rotatably mounted and driven from said servo, said optical refracting means adapted to refract the projected image of the optical tracks and deviate the projected image to balance the intensities of the transmitted beams at a low total intensity at an effective bit boundary position, the optical refracting means being constructed to provide image deviation which will increase and decrease in a substantially sawtooth curve as a function of the rotation of the refracting means.

3,046,542
DATA DISPLAY INDICATOR
Robert E. Hager, Avalon, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Sept. 3, 1959, Ser. No. 837,971
6 Claims. (Cl. 340—347)

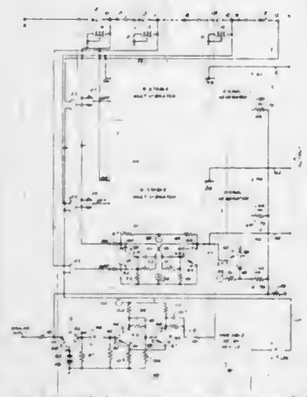
3. A display indicator comprising a belt carrying intelligence and movable to a plurality of selectable positions in response to binary data; a pair of spaced rotatable spools, reversible motor means for rotating said spools, the opposite ends of said belt being affixed to respective ones of said spools for positioning said belt by winding it on one spool and unwinding it from the other spool; a wheel including stop means, means on said belt for engaging and driving said wheel; a brake for said spools; a solenoid including a pair of plunger members extending from opposite ends of the solenoid, spring means biasing said plungers outwardly such that the first plunger engages said stop means to stop rotation of said wheel and the second plunger sets said brake to stop the rotation of said spools, said solenoid when energized pulling said plungers inwardly to free said wheel and release said brake, gear means driven by said wheel; a code plate movable by said gear means, said code plate comprising two conductive surfaces insulated from one another and forming a varied interleaved pattern, a plurality of brushes for contacting said first conductive surface, a first of said brushes contacting said first conductive surface, a last of said brushes contacting said second conductive surface and the intermediate ones of said brushes contacting said first and second surfaces in varying combinations dependent on the relative position of said code plate; and control means for controlling the operation of said motor and said solenoid, comprising separate electrical circuits each responsive to one bit of binary data, each circuit including a bi-



stable multivibrator having a first and a second output lead, each said multivibrator being in a first and a second conducting condition in response to a binary input of zero and one respectively, said first output lead having a first potential and said second output lead having a second potential when the respective multivibrator is in a first conducting condition and the potentials on said output leads being alternated when said multivibrator is in a second conducting condition, and gates each having two inputs, said two output leads of each said multivibrator being connected as the two inputs of a respective And gate, each said intermediate brush being connected to the first output lead of a respective multivibrator, an Or gate, the outputs of said And gates being connected in parallel to said Or gate, said first brush being connected to said Or gate and said last brush arranged to be connected to a source of potential, said motor being energized to move said belt to a new position when a pair of said first and second output leads has a potential applied thereto representative of a binary zero input to the associated multivibrator, and the voltage connected through a first electrical path extending from said source through said second brush, said second conducting surface, and the respective intermediate brush to said first output lead of said pair is equal to the potential on said second output lead of said pair, the associated And gate being opened and having an output when its two inputs are equal, an output from said associated And gate causing said Or gate to pass

a signal to operate said motor to move said code plate to a position at which said first electrical path is opened due to the correspondence of the received binary data and said brush combination connected to said conductive surfaces, and said motor also being energized to move said belt to a new position when a pair of said first and second output leads has a potential applied thereto representative of a binary one input to the associated multivibrator, and the potential on said first output lead is connected through an intermediate brush, said first conductive surface and said first brush to said Or gate to pass a signal to operate said motor to move said code plate to a position at which said second electrical path is opened due to a correspondence of the received binary data and said brush combination.

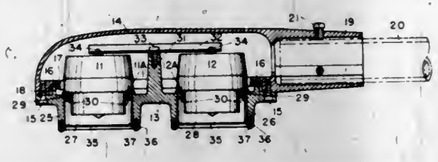
3,046,543
ANALOG-TO-DIGITAL CONVERTER
Reginald A. Kaenel, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 27, 1959, Ser. No. 855,819
6 Claims. (Cl. 340—347)



4. An analog-to-digital converter comprising a plurality of multivibrators, signal generating means connected to each of said multivibrators capable of producing electrical signals of distinct magnitudes, summing means connected to each of said signal generating means for producing a reference voltage level, input means for an analog signal, means connected to both said input means and said summing means for producing a control pulse exhibiting one characteristic when said analog signal is greater in magnitude than said reference signal and a control pulse exhibiting another characteristic when said reference signal is greater in magnitude than said analog signal, switching means for sequentially coupling said control pulses to said multivibrators, means for providing a signal transmission path for coupling said control pulses to said switching means, delaying means included in said transmission path for delaying the transmission of said control pulses, sensing means included in said delaying means responsive to said control pulses exhibiting a particular one of said characteristics for varying the delay time of said delaying means and output means connected to each of said multivibrators.

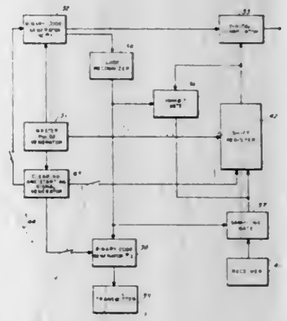
3,046,544
MOUNTING MEANS FOR ELECTRO-ULTRASONIC TRANSDUCERS
John H. Auer, Jr., Rochester, Norman A. Bolton, Scottsville, and Hugh C. Kendall and Robert A. Hagen, Rochester, N.Y., assignors to General Railway Signal Company, Rochester, N.Y.
Filed Feb. 12, 1960, Ser. No. 8,314
3 Claims. (Cl. 340—388)

1. In combination, an electro-acoustic transducer, a housing adapted to contain and support said transducer and having a base plate with an aperture defined therein, an elastic resilient gasket lining said aperture, said transducer having an orifice adapted to lie above said aperture and having a rim which surrounds said orifice and rests upon said resilient gasket, and means connected to said



housing and including a resilient pad cushioning said transducer and forcing said rim of said transducer tightly against said resilient gasket, whereby a weathertight seal is provided between said transducer and said base plate and mechanical vibrations are prevented from being transmitted between said housing and said transducer.

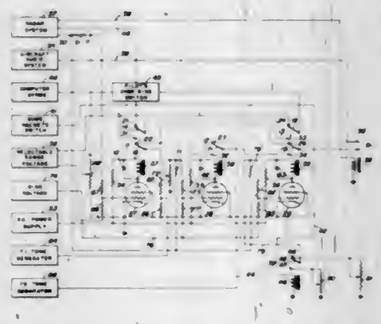
3,046,545
RAPID-CORRELATION ECHO-RANGING SYSTEM
Everett C. Westerfield, San Diego, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 28, 1959, Ser. No. 849,417
3 Claims. (Cl. 343—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A rapid-correlation echo-ranging system comprising; first and second recycling binary code generators, said binary code generators having a predetermined common starting state and a predetermined common cycle of repetition, clearing means for setting said binary code generators at said starting state, pulsing means for shifting said first binary code generator through said cycle of repetition, sensing means for sensing the starting condition of said first binary code generator, said sensing means operable to produce a gate pulse each time said first binary code generator passes through said starting state, a sampling gate having an input operably connected to the output of said sensing means, a feedback gate, said gate pulse from said sensing means operable to gate said sampling gate, to inhibit said feedback gate, and to shift said second binary code generator through a step of said cycle of repetition, an echo-ranging transmitter; said second binary code generator operably connected to said echo ranging transmitter for modulating said echo ranging transmitter; a receiver, said sampling gate having a signal input connected to the output of said receiver, said transmitter and receiver being complementary components of an integral echo-ranging system; a digital storage shift register capable of storing one bit less than one complete cycle of said binary code generator, the output of said sampling gate and the output of said feedback gate connected to the input of said digital storage shift register, said pulsing

means connected for shifting said digital storage shift register, a comparison means; the output of said first binary code generator connected to a first input of said comparison means, the output of said digital storage shift register connected to a second input of said comparison means and to the input of said feedback gate, said comparison means operable to yield an output amplitude directly proportional to the time and phase correlation of its input signals.

3,046,546
RANGE ALERT SYSTEM
John F. Lord, Box 171, Lexington Park, Md.
Filed Dec. 9, 1957, Ser. No. 701,687
11 Claims. (Cl. 343—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



11. In combination, a radar system operative to provide a positive range variable voltage and a radar range voltage, a plurality of electron discharge devices each having a control element, said electron discharge devices being in a conducting condition when the range variable voltage exceeds a predetermined value, a plurality of sources to provide negative voltages of different magnitudes, circuit means respectively coupling said plurality of negative voltage sources to the control elements of said electron discharge devices, circuit means simultaneously coupling said positive range variable voltage to the control elements of said electron discharge devices so that the electron discharge devices sequentially become non-conducting when the positive range variable voltage becomes smaller than the plurality of negative voltage sources, a plurality of relay means respectively connected with said plurality of electron discharge devices to be sequentially deenergized upon the non-conduction of said electron discharge devices and in accordance with radar range, computer means including rate gyro sensing means, a source of constant value voltage, circuit means selectively coupling said computer to said radar range voltage or to said constant value voltage in accordance wth the actuated condition of said plurality of relay means, a plurality of means for generating a plurality of audio tones, an audio output circuit, and means actuated by said plurality of relay means for selectively coupling said plurality of audio tone generating means to said audio output circuit.

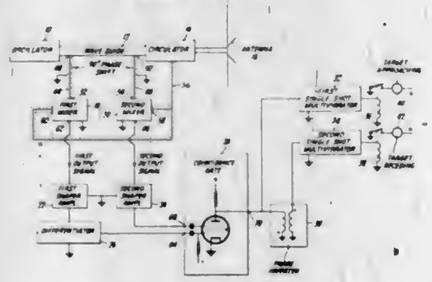
3,046,547
TWO-PULSE MTI RADAR SYSTEM
Nicholas A. Begovich, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Nov. 23, 1956, Ser. No. 624,155
2 Claims. (Cl. 343—7.7)

1. A moving target indication radar system comprising, a frequency-scan antenna for transmitting exploratory pulses in directions determined in each instance by the frequency of the excitation energy; means for generating a first group of 1, 2, . . . *n* trigger signals at a predetermined pulse repetition rate wherein *n* is a positive integer no less than two; means responsive to said first group of 1, 2, . . . *n* trigger signals for successively applying 1, 2, . . . *n* pulses of different predetermined frequencies, respectively, to said frequency-scan antenna whereby 1, 2, . . . *n* exploratory pulses are transmitted in successively changing directions; a receiver coupled to said antenna for receiving echo signals in response to exploratory pulses whereby a first series of trains of target echo signals are received in response to said first group of 1, 2 . . . *n* exploratory pulses; a delay line coupled to said receiver for delaying said first series of trains of target echo signals applied thereto for an interval of time equal to *n* pulse repetition intervals, means for generating a second



group of 1, 2, . . . *n* trigger signals having a pulse repetition rate equal to said predetermined pulse repetition rate and commencing one of said pulse repetition intervals after the transmission of the *n*th exploratory pulse of said first group of trigger signals; means responsive to said second group of 1, 2, . . . *n* trigger signals for successively applying 1, 2, . . . *n* pulses of said different predetermined frequencies, respectively, to said frequency-scan antenna whereby 1, 2, . . . *n* exploratory pulses are transmitted in exactly the same directions as said successively changing directions and a second series of trains of target echo signals received in response thereto; and means for comparing at least a portion of said delayed first series of trains of target echo signals with respective corresponding portions of said second series of trains of target echo signals to produce a third series of trains of signals indicative only of moving targets.

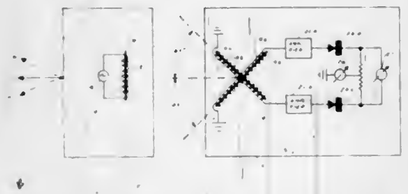
3,046,548
COLLISION WARNING DEVICE
Herbert B. Briskin, Syosset, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Aug. 13, 1958, Ser. No. 754,889
1 Claim. (Cl. 343—7.7)



A radar system positioned at a station for indicating the direction of movement, toward or away, of a moving target, said system comprising an antenna for transmitting a continuous alternating electromagnetic wave of a given frequency to said target and for receiving the wave reflected from said target, the frequency of the reflected

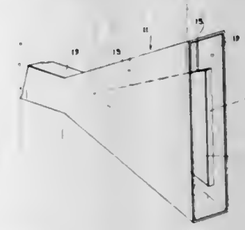
wave being higher than said given frequency when said target is approaching said station and lower than said given frequency when said target is receding from said station, an oscillator for generating said continuous alternating electromagnetic wave of given frequency; a circulator provided with a first input coupled to said antenna and a second input, said circulator preventing interaction of said transmitted and received waves; a waveguide coupling said oscillator to the second input of said circulator, said waveguide having first and second taps spaced one quarter wavelength apart at the oscillator frequency; first and second mixers, each of said first and second mixers having a first input coupled to the first and second taps on said waveguide respectively and a second input coupled to the output of said circulator; first and second pulse shaping amplifiers coupled to the outputs of said first and second mixers respectively; a differentiating circuit coupled to the output of said first pulse shaping amplifier; a coincidence gate having first and second inputs coupled to the outputs of said differentiating circuit and said second pulse shaping amplifier respectively, a pulse appearing at the output of said coincidence gate when a voltage having a given polarity is applied to the second input of said coincidence gate simultaneously with the application of a pulse to the first input of said coincidence gate by said differentiating circuit; first and second multivibrators having their inputs coupled to the output of said coincidence circuit, said first and second multivibrator being responsive to input voltages of the same polarity, a phase inverter, said phase inverter coupling the output of said coincidence circuit to the input of said second multivibrator, and first and second indicating means coupled to the outputs of said first and second multivibrator respectively, said first or second multivibrator activating said first or second indicating means in accordance with the polarity of the pulse at the output of said coincidence circuit, the activation of said first indicating means signifying that a target is approaching said station and the activation of said second indicating means signifying tbat a target is receding from said station.

3,046,549
SHORT RANGE TRACKING SYSTEM
Henry P. Kalmus, 3000 University Terrace NW., Washington, D.C.
Filed Aug. 7, 1959, Ser. No. 832,413
2 Claims. (Cl. 343—113)
(Granted under Title 35, U.S. Code (1952), sec. 266)



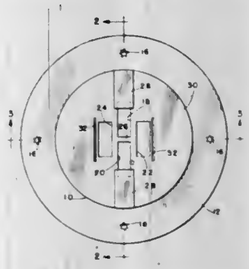
1. A short range tracking system for use in leader-follower vehicle arrangement wherein the follower vehicle is to follow movement of the leader vehicle, said system comprising, a transmitter mounted in said leader vehicle and adapted to produce an induction field, a receiver mounted in said follower vehicle, said receiver comprising a pair of identical coils surrounding identical ferrite rods, said rods being orthogonally positioned with respect to each other, said coils producing output voltages which are equal only when said receiver is oriented with respect to said transmitter with said follower vehicle aligned behind said leader vehicle, amplifying and rectifying means connected to the output of each coil, and means connected to said rectifying means for obtaining the difference between the output voltages of said coils to indicate the movement of said leader vehicle with respect to said follower vehicle.

3,046,550
INTERNAL DIELECTRIC MEANS FOR EQUALIZATION OF PATTERNS DUE TO PERPENDICULAR COMPONENTS OF CIRCULARLY POLARIZED WAVES
Johann Bartholomä and Albert Schlaud, Ulm (Danube), Germany, assignors to Telefunken G.m.b.H., Berlin, Germany
Filed Apr. 11, 1960, Ser. No. 21,346
Claims priority, application Germany Apr. 17, 1959
9 Claims. (Cl. 343—756)



8. A wave guide horn antenna comprising: a hollow flaring member having an aperture; and dielectric means arranged in said member for equalizing in a predetermined plane the radiation patterns of horizontally and vertically polarized components, said means including a plate portion which lies in said plane and which is dimensioned to be, in said plane, less than the width of said aperture.

3,046,551
OPENING MICROWAVE ANTENNA HAVING PARASITIC TUNING SLOTS AND TUNING PLATES TO ADJUST EFFECTIVE PHASE CENTER
Adam E. Ratkevich, San Diego, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.
Filed Mar. 31, 1958, Ser. No. 725,433
6 Claims. (Cl. 343—778)

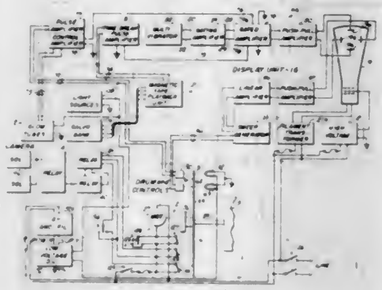


4. A microwave receiving antenna feed, comprising: a generally flat plate having a plurality of generally rectangular openings defining microwave conducting feeds extending through the plate, said feeds being arranged in two pairs, one of said pairs being longitudinally opposed and closely spaced about a common center, the other of said pairs being laterally opposed and spaced on opposite sides of said first mentioned pair about the common center; and a pair of parasitic tuning slots in one face of said plate and extending partially through said plate and being spaced from and parallel to the outer edges of said second mentioned pair of feeds.

3,046,552
WITHDRAWN

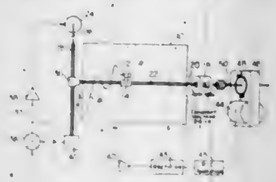
3,046,553
SEISMIC REPRODUCING AND RECORDING DEVICE
James E. Hawkins, Broken Arrow, Sidney W. Schoellhorn, Tulsa, and Robert W. Baltosser, Broken Arrow, Okla., assignors to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed Sept. 28, 1956, Ser. No. 612,779
15 Claims. (Cl. 346—17)

1. Apparatus for producing a single cross-section record of subsurface earth formations from a plurality of



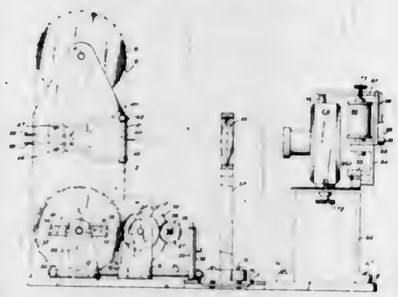
reproducible records each containing a plurality of side by side seismic traces, said apparatus comprising means for playing back said reproducible records, the playback means including a plurality of reproducing devices for simultaneously reproducing from each record a set of signals respectively corresponding to the seismic traces on that reproducible record, recording means responsive to said sets of signals for developing side by side sets of traces on said cross-section record with each set of traces corresponding to the seismic traces appearing on one of said reproducible records, and means for correlating the operation of said play back means with said recording means so that the different sets of traces on said cross-section record appear in corresponding time positions.

3,046,554
RECORDING APPARATUS
Corwin H. Brumley, Penfield, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed July 21, 1958, Ser. No. 749,971
14 Claims. (Cl. 346—29)



1. In a recording apparatus having a stylus movable across a chart for recording a dependent variable as a function of an independent variable, the combination comprising a first drive means for producing relative motion at constant speed between the stylus and the chart along one axis of the chart in accordance with variations in the independent variable, a second drive means for producing relative motion between the stylus and the chart along another axis in accordance with variations in the dependent variable, a circuit for producing a signal indicative of the difference between the actual position of the stylus along said another axis and the position to be occupied at instantaneous changes in the value of the dependent variable, and means operatively associated with said second drive means for producing a retarding force in accordance with said signal, said last-named means being arranged so that said retarding force is applied in opposition to the driving force of said first drive means whereby the speed of the relative movement between the stylus and the chart along said one axis is varied inversely by said signal.

3,046,555
DEVICE FOR RECORDING THE SPEED OF SHUTTERS IN PHOTOGRAPHIC APPARATUS
Charles D. Richard, Basking Ridge, N.J., and Arthur W. Ziegler, 47 Meadowbrook Road, Short Hills, N.J.; said Richard assignor to said Ziegler
Filed Oct. 21, 1960, Ser. No. 64,147
9 Claims. (Cl. 346—108)

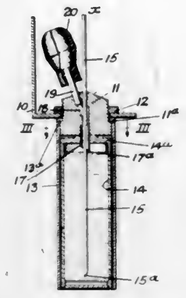


2. A device for recording the speed of a shutter in a photographic apparatus, said device comprising a pair of sprocket wheels, a belt connecting said wheels having a row of light openings therein disposed in staggered relation to each other, a gearing mechanism connecting one of said sprocket wheels and said motor for actuating said belt, a stationary screen plate disposed in juxtaposition to said belt having a plurality of parallely disposed rows of light openings, one row for each of the light openings in said belt, a plunger in the photographic apparatus for actuating the shutter therein, a stationary lamp disposed in juxtaposition to said screen plate and said belt and cooperating with said belt and said stationary screen plate for generating light pulses upon the movement of said belt, electromagnetic means operable for actuating the plunger in the photographic apparatus, and a cam shaft actuated by said gearing mechanism for controlling the operation of said electromagnet and said lamp in timed relation with the operation of said belt for recording the speed of such shutter in term of the number of light dots passing through the parallel rows of light openings in said screen plate impinged onto a film in the photographic apparatus.

3,046,556
INK SUPPLYING MEANS FOR THE PENS OF RECORDING METER APPARATUS
Frank P. Summers, Jr., Medford Township, Burlington County, and Russell E. Mattson, Pennsauken, N.J., assignors to The Esterbrook Pen Company, Camden, N.J., a corporation of New Jersey
Filed Feb. 29, 1960, Ser. No. 11,714
8 Claims. (Cl. 346—140)

1. Ink supply means for a recording pen comprising a fixed cap member, an ink-containing cartridge coaxial therewith and having a puncturable diaphragm closing the end of the cartridge disposed adjacent the cap member, a rigid tube of capillary dimensions extending axially through the cap member and having fixed axial position with respect thereto, the lower end of said tube having a cutting edge for piercing said diaphragm and extending

substantially to the bottom of the cartridge when said cartridge is in operative position against the cap member, the upper end of said tube extending beyond the cap member and providing an ink outlet from the cartridge interior to the pen, a short-length, larger-diameter rigid tube encircling the first tube and being affixed to the cap member and depending therefrom a short distance into the cartridge interior, the lower end of the short tube having a cutting edge for piercing a hole in the diaphragm in enlargement of the hole therein for the first tube, said short tube frictionally and detachably securing the cartridge in operative position aforesaid, and means on said cap member in communication with the bore of said short tube for venting the cartridge and applying positive pressure to the ink content thereof, the construction and arrangement being such that the cartridge is mounted and rendered operative by moving it with its end diaphragm disposed towards the under side of the cap member against said member, which in turn results in the cutting edges of the first and short tubes successively puncturing said diaphragm and thereby establishing communication between the cartridge interior and said tube bores and between said cartridge interior and said vent and pressure means and securing the cartridge in operative position to the cap member.



DESIGNS

JULY 24, 1962

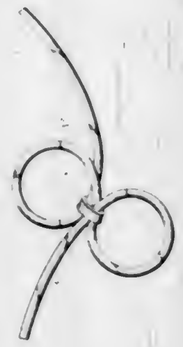
193,261
BEVERAGE ADVERTISING SIGN OR THE LIKE
Amber L. Cochran, 1019 Quinientos, Santa Barbara, Calif.
Filed Oct. 27, 1960, Ser. No. 62,641
Term of patent 14 years
(Cl. D1—12)



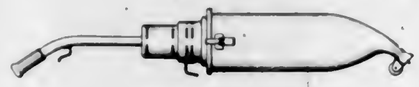
193,262
SIGN
Fred G. Owles, Jr., Orlando, Fla., assignor to George H. Rackensperger, Winter Park, Fla.
Filed Feb. 26, 1962, Ser. No. 68,967
Term of patent 14 years
(Cl. D1—12)



193,263
LIQUID SIPPING TUBE OR THE LIKE
William A. Rohlffs, 60 Crosswicks St., Bordentown, N.J.
Filed Apr. 21, 1961, Ser. No. 64,853
Term of patent 3½ years
(Cl. D2—3)



193,264
VACUUM CLEANER
John J. Kelnhofer, Ontario, Calif., assignor to Fabmagic, Inc., a corporation of California
Filed Apr. 6, 1961, Ser. No. 64,637
Term of patent 14 years
(Cl. D9—2)



193,265
CHAIR
Folke E. H. Ohlsson, Millbrae, Calif., assignor to Dux Incorporated, Burlingame, Calif., a corporation of California
Filed Aug. 22, 1960, Ser. No. 61,846
Term of patent 7 years
(Cl. D15—1)



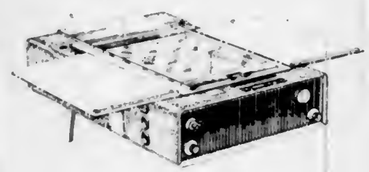
193,266
KNIFE OR THE LIKE
Tadahide Wada, Tokyo, Japan, assignor to Cosmos Products Company, New York, N.Y.
Filed May 15, 1961, Ser. No. 65,170
Claims priority, application Japan Jan. 11, 1961
Term of patent 14 years
(Cl. D22—3)



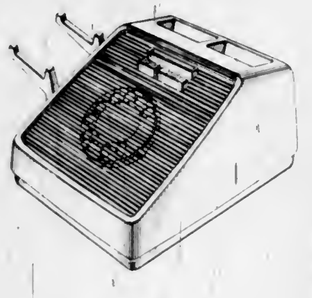
193,267
DICTATING MACHINE
Peter Sieber, Frankfurt-Main-Seckbach, and Arnold Schurer, Offenbach-Main, Germany, assignors to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Nov. 4, 1960, Ser. No. 62,897
Term of patent 14 years
(Cl. D26—14)



193,268
MAGNETIC SOUND RECORDING AND REPRODUCING INSTRUMENT
Synya Izumi, 445 2-chome Kashiwagi Shinjuki-ku, Tokyo, Japan
Filed Nov. 17, 1960, Ser. No. 63,076
Term of patent 7 years
(Cl. D26—14)



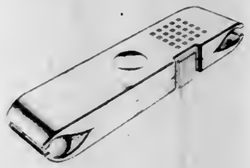
193,269
AUTOMATIC CARD-DIALING TELEPHONE DESK SET
Robert H. Hose, Mountainside, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 8, 1960, Ser. No. 63,162
Term of patent 14 years
(Cl. D26—14)



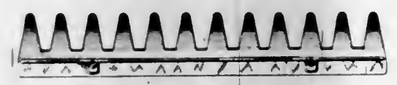
193,270
AUTOMATIC CARD-DIALING TELEPHONE DESK SET
Robert H. Hose, Mountainside, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 8, 1960, Ser. No. 63,163
Term of patent 14 years
(Cl. D26—14)



193,271
COMBINED MICROPHONE AND CORD REEL
Eliot Noyes, New Canaan, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 6, 1961, Ser. No. 65,490
Term of patent 14 years
(Cl. D26—14)



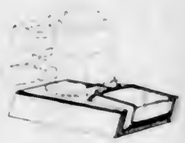
193,272
NECKTIE RACK OR SIMILAR ARTICLE
George Milkie, New York, N.Y., assignor to Charles Fischett, New York, N.Y.
Filed Apr. 9, 1959, Ser. No. 55,421
Term of patent 14 years
(Cl. D33—8)



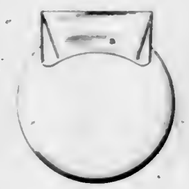
193,273
PLAYGROUND DEVICE
William T. Kennedy, Jr., Belleville, and Wayne Haubert, Mifflintown, Pa., assignors to The Mexico Forge, Inc., Mexico, Pa., a corporation of Pennsylvania
Filed June 28, 1961, Ser. No. 65,744
Term of patent 14 years
(Cl. D34—5)



193,274
COMBINED MOTOR MOUNT AND TRANSMISSION HOUSING FOR A ROTARY TILLER OR THE LIKE
Kenneth A. Hotz, Sheboygan, and John W. Davies, Milwaukee, Wis., assignors to Gilson Bros. Co., Plymouth, Wis., a corporation of Wisconsin
Original application Sept. 23, 1960, Ser. No. 62,254. Divided and this application July 10, 1961, Ser. No. 66,627
Term of patent 14 years
(Cl. D35—2)



193,275
WALL LAMP
Leonard Atkin, Springfield, N.J., assignor to Stone Manufacturing Co., a corporation of New Jersey
Filed Nov. 3, 1960, Ser. No. 62,725
Term of patent 14 years
(Cl. D48—4)



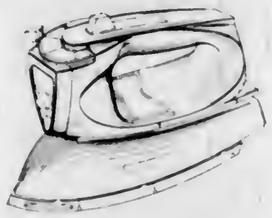
193,276
BUBBLING CANDLE LAMP
Frank Pettit, Union, N.J., assignor to Noma Lites, Inc., New York, N.Y., a corporation of Delaware
Filed June 26, 1961, Ser. No. 65,714
Term of patent 14 years
(Cl. D48—20)



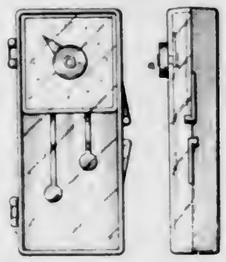
193,277
COMBINED POLE LAMP AND ANTENNA FOR TELEVISIONS OR THE LIKE
Roger Mark Singer, New York, N.Y., assignor to Snyder Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 24, 1961, Ser. No. 67,692
Term of patent 14 years
(Cl. D48—20)



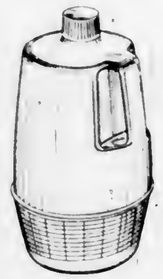
193,278
ELECTRIC IRON
Frederick W. Becker, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Nov. 1, 1961, Ser. No. 67,337
Term of patent 14 years
(Cl. D49—6)



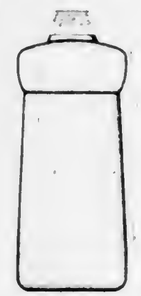
193,279
COMBINATION PARKING METER TIMER AND COIN HOLDER
John L. Palmer, 2100 N. Sawyer Ave., Chicago, Ill.
Filed Mar. 2, 1961, Ser. No. 64,120
Term of patent 3½ years
(Cl. D52—4)



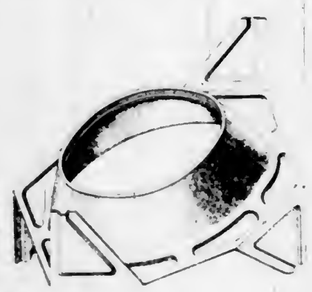
193,280
JUG OR THE LIKE
Clara Virginia Eicholtz, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 17, 1961, Ser. No. 67,572
Term of patent 14 years
(Cl. D58—5)



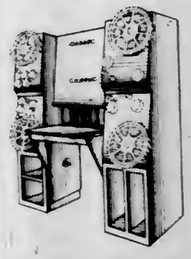
193,281
BOTTLE
David G. Hills, Bloomfield, Conn., assignor to Plax Corporation, Bloomfield, Conn., a corporation of Delaware
Filed Jan. 23, 1961, Ser. No. 63,661
Term of patent 14 years
(Cl. D58—6)



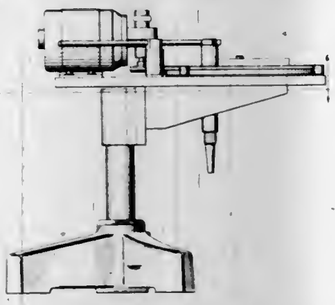
193,282
HATBOX STAY
Dudley H. Smith, Waterville, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Filed Jan. 23, 1961, Ser. No. 63,643
Term of patent 14 years
(Cl. D58—16)



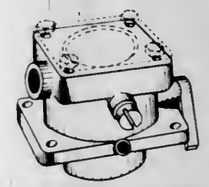
193,283
FILM INSPECTING MACHINE
Robert F. Menary, Northbrook, and Joseph Firych, Chicago, Ill., assignors to Paulmar, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 10, 1961, Ser. No. 66,288
Term of patent 7 years
(Cl. D61—1)



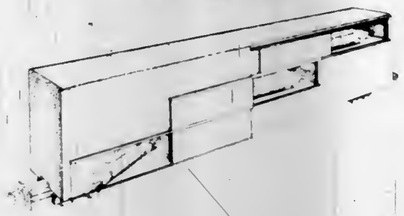
193,284
TORCH JIG FOR CIRCULAR WELDING
Frank Guida, 144 Harryel St., Pittsfield, Mass.
Filed Nov. 17, 1960, Ser. No. 62,878
Term of patent 14 years
(Cl. D62—2)



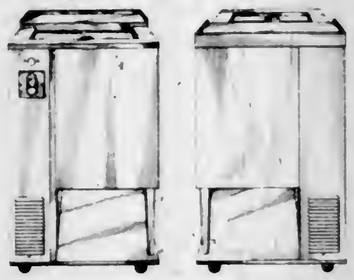
193,285
HOUSING FOR A FUEL INJECTION PUMP
Hans Hogeman, Longmeadow, Mass., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Apr. 21, 1961, Ser. No. 64,887
Term of patent 14 years
(Cl. D65—1)



193,286
RAILWAY CAR FOR TRANSPORTING VEHICLES
Jack E. Gutridge, Dyer, Ind., assignor to Pullman Incorporated, a corporation of Delaware
Filed Aug. 29, 1961, Ser. No. 66,537
Term of patent 14 years
(Cl. D66—1)



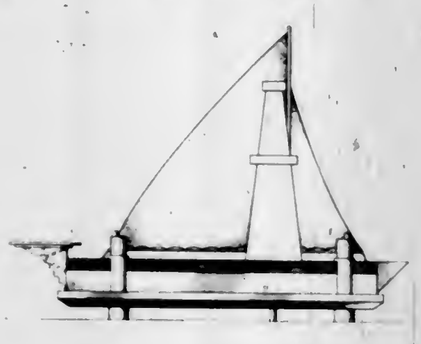
193,287
BEVERAGE COOLER
Frank R. Trulaske, Grafton, Ill., assignor to True Manufacturing Company, Inc., St. Louis, Mo., a corporation of Missouri
Filed Oct. 2, 1961, Ser. No. 66,930
Term of patent 14 years
(Cl. D67—4)



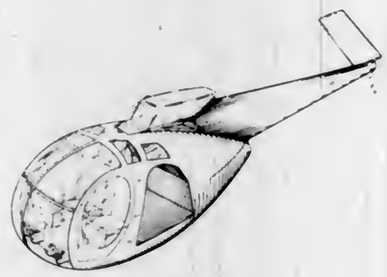
193,288
BOAT
Milton M. Siegel, Los Angeles, Calif., assignor to Columbia Plastics Corp., Culver City, Calif., a corporation of California
Filed Oct. 28, 1960, Ser. No. 62,801
Term of patent 14 years
(Cl. D71—1)



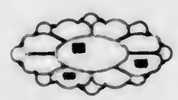
193,289
MARINE DRILLING RIG
William J. Travers, Pasadena, and John V. Kehoe, Los Angeles, Calif., assignors to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Apr. 3, 1961, Ser. No. 64,593
Term of patent 14 years
(Cl. D71—1)



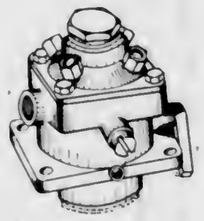
193,290
HELICOPTER
Malcolm S. Harned, Los Angeles, and Herbert T. Lund, Glendale, Calif., assignors to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed Oct. 2, 1961, Ser. No. 66,932
Term of patent 14 years
(Cl. D71—1)



193,291
RUG OR SIMILAR ARTICLE
Donna M. Fristoe, 209 Hawkinson Ave., Galesburg, Ill.
Filed Nov. 25, 1960, Ser. No. 62,963
Term of patent 7 years
(Cl. D92—21)



193,292
FUEL INJECTION PUMP
Hans Hogeman, Longmeadow, Mass., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Apr. 21, 1961, Ser. No. 64,885
Term of patent 14 years
(Cl. D65—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 24TH DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Becker, Carl H., to Western Geophysical Co. of America. Method of geophysical exploration. Re. 25,204, 7–24–62, Cl. 181—.5.
Feinstone, Wolffe H., to Plough Laboratories, Inc. Silicone composition for the relief of gastrointestinal distress and method of using same. Re. 25,205, 7–24–62, Cl. 167—55.
Hough, Frank G., Co., The: *See*—
Kampert, Keith W., and Zimmerman. Re. 25,207.
Kampert, Keith W., and R. F. Zimmerman, to The Frank G. Hough Co. Bucket operating means for tractor loaders. Re. 25,207, 7–24–62, Cl. 214—140.
Kolb, Robert H., to Shell Oil Co. Remote telemetering and recording system. Re. 25,209, 7–24–62, Cl. 340—18.
Momberg, James W., and E. W. Taylor, to The Singer Mfg. Co. Motor control system. Re. 25,203, 7–24–62, Cl. 318—246.
Perkins, Luther F. Oil gauge. Re. 25,208, 7–24–62, Cl. 73—313.
Plough Laboratories, Inc.: *See*—
Feinstone, Wolffe H. Re. 25,205.
Rust, Mack D. Moistening assembly for cotton picking spindle. Re. 25,206, 7–24–62, Cl. 56—42.
Shell Oil Co.: *See*—
Kolb, Robert H. Re. 25,209.
Singer Mfg. Co., The: *See*—
Momberg, James W., and Taylor. Re. 25,203.
Taylor, Edward W.: *See*—
Momberg, James W., and Taylor. Re. 25,203.
Western Geophysical Co. of America: *See*—
Becker, Carl H. Re. 25,204.
Zimmerman, Richard F.: *See*—
Kampert, Keith W., and Zimmerman. Re. 25,207.

LIST OF PLANT PATENTEES

Antaes Lineal 1948, ANL Medical Laboratory Division, Inc.: *See*—
Nettleship, Mae B. and A. 2,157.
Fischer, Carl H., to Selected Glads, Inc. Gladiolus plant. 2,158, 7–24–62, Cl. 47—60.
Nettleship, Anderson: *See*—
Nettleship, Mae B. and A. 2,157.
Nettleship, Mae B. and A., to Antaes Lineal 1948, ANL Medical Laboratory Division, Inc. Indigo plant. 2,157, 7–24–62, Cl. 47—60.
Selected Glads, Inc.: *See*—
Fischer, Carl H. 2,158.

LIST OF DESIGN PATENTEES

American Bosch Arma Corp.: *See*—
Hogeman, Hans. 193,285.
Hogeman, Hans. 193,292.
Atkin, Leonard, to Stone Mfgs. Co. Wall lamp. 193,275, 7–24–62, Cl. D48—4.
Becker, Frederick W., to Westinghouse Electric Corp. Electric iron. 193,278, 7–24–62, Cl. D49—6.
Bell Telephone Laboratories, Inc.: *See*—
Hose, Robert H. 193,269.
Hose, Robert H. 193,270.
Cochran, Amber L. Beverage advertising sign or the like. 193,261, 7–24–62, Cl. D1—12.
Columbia Plastics Corp.: *See*—
Siegel, Milton M. 193,288.
Cosmos Products Co.: *See*—
Wada, Tadahide. 193,266.
Davies, John W.: *See*—
Hotz, Kenneth A., and Davies. 193,274.
Dow Chemical Co., The: *See*—
Eicholtz, Clara V. 193,280.
Dux Inc.: *See*—
Ohlsson, Folke E. H. 193,265.
Eicholtz, Clara V., to The Dow Chemical Co. Jug or the like. 193,280, 7–24–62, Cl. D58—5.
Fabmagic, Inc.: *See*—
Kelnhofer, John J. 193,264.
Firych, Joseph: *See*—
Menary, Robert F., and Firych. 193,283.
Fischett, Charles: *See*—
Milkie, George. 193,272.
Fristoe, Donna M. Rug or similar article. 193,291, 7–24–62, Cl. D92—21.
Gilson Bros. Co.: *See*—
Hotz, Kenneth A., and Davies. 193,274.
Guida, Frank. Torch jig for circular welding. 193,284, 7–24–62, Cl. D82—2.
Gutridge, Jack E., to Pullman Inc. Railway car for transporting vehicles. 193,286, 7–24–62, Cl. D66—1.
Harned, Malcolm S., and H. T. Lund, to Hughes Tool Co. Helicopter. 193,290, 7–24–62, Cl. D71—1.
Haubert, Wayne: *See*—
Kennedy, William T., Jr., and Haubert. 193,273.
Hills, David G., to Plax Corp. Bottle. 193,281, 7–24–62, Cl. D58—6.
Hogeman, Hans, to American Bosch Arma Corp. Housing for a fuel injection pump. 193,285, 7–24–62, Cl. D65—1.
Hogeman, Hans, to American Bosch Arma Corp. Fuel injection pump. 193,292, 7–24–62, Cl. D65—1.
Hose, Robert H., to Bell Telephone Laboratories, Inc. Automatic card-dialing telephone deskset. 193,269, 7–24–62, Cl. D26—14.
Hose, Robert H., to Bell Telephone Laboratories, Inc. Automatic card-dialing telephone desk-set. 193,270, 7–24–62, Cl. D26—14.
Hotz, Kenneth A., and J. W. Davies, to Gilson Bros. Co. Combined motor mount and transmission housing for a rotary tiller or the like. 193,274, 7–24–62, Cl. D35—2.
Hughes Tool Co.: *See*—
Harned, Malcolm S., and Lund. 193,290.
International Business Machines Corp.: *See*—
Noyes, Eliot. 193,271.
Izumi, Synya. Magnetic sound recording and reproducing instrument. 193,268, 7–24–62, Cl. D26—14.
Kehoe, John V.: *See*—
Travers, William J., and Kehoe. 193,289.
Kelnhofer, John J., to Fabmagic, Inc. Vacuum cleaner. 193,264, 7–24–62, Cl. D9—2.
Kennedy, William T., Jr., and W. Haubert, to The Mexico Forge, Inc. Playground device. 193,273, 7–24–62, Cl. D34—5.
Keyes Fibre Co.: *See*—
Smith, Dudley H. 193,282.
Lund, Herbert T.: *See*—
Harned, Malcolm S., and Lund. 193,290.
Menary, Robert F., and J. Firych, to Paulmar, Inc. Film inspecting machine. 193,283, 7–24–62, Cl. D61—1.
Mexico Forge, Inc., The: *See*—
Kennedy, William T., Jr., and Haubert. 193,273.
Milkie, George, to C. Fischett. Necktie rack or similar article. 193,272, 7–24–62, Cl. D33—8.
Noma Lites, Inc.: *See*—
Pettit, Frank. 193,276.
Noyes, Eliot, to International Business Machines Corp. Combined microphone and card reel. 193,271, 7–24–62, Cl. D26—14.
Ohlsson, Folke E. H., to Dux Inc. Chair. 193,265, 7–24–62, Cl. D15—1.
Olympia Werke A.G.: *See*—
Sieber, Peter, and Schurer. 193,267.
Owles, Fred G., Jr., to G. H. Rackensperger. Sign. 193,262, 7–24–62, Cl. D1—12.
Palmer, John L. Combination parking meter timer and coin holder. 193,279, 7–24–62, Cl. D52—4.
Paulmar, Inc.: *See*—
Menary, Robert F., and Firych. 193,283.
Pettit, Frank, to Noma Lites, Inc. Bubbling candle lamp. 193,276, 7–24–62, Cl. D48—20.
Plax Corp.: *See*—
Hills, David G. 193,281.
Pullman Inc.: *See*—
Gutridge, Jack E. 193,286.
Rackensperger, George H.: *See*—
Owles, Fred G., Jr. 193,262.
Richfield Oil Corp.: *See*—
Travers, William J., and Kehoe. 193,289.
Robleffs, William A. Liquid sipping tube or the like. 193,263, 7–24–62, Cl. D2—3.
Schurer, Arnold: *See*—
Sieber, Peter, and Schurer. 193,267.

Sieber, Peter, and A. Schurer, to Olympia Werke A.G. Dictating machine. 193,267, 7-24-62, Cl. D26—14.
Siegel, Milton M., to Columbia Plastics Corp. Boat. 193,288, 7-24-62, Cl. D71—1.
Singer, Roger M., to Snyder Mfg. Co. Combined pole lamp and antenna for television or the like. 193,277, 7-24-62, Cl. D48—20.
Smith, Dudley H., to Keyes Fibre Co. Hatbox stay. 193,282, 7-24-62, Cl. D58—16.
Snyder Mfg. Co.: *See*—
Singer, Roger M. 193,277.
Stone Mfgs. Co.: *See*—
Atkin, Leonard. 193,275.
Travers, William J., and J. V. Kehoe, to Richfield Oil Corp. Marine drilling rig. 193,289, 7-24-62, Cl. D71—1.
True Mfg. Co., Inc.: *See*—
Trulaske, Frank R. 193,287.
Trulaske, Frank R., to True Mfg. Co., Inc. Beverage cooler. 193,287, 7-24-62, Cl. D67—4.
Wada, Tadahide, to Cosmos Products Co. Knife or the like. 193,266, 7-24-62, Cl. D22—3.
Westinghouse Electric Corp.: *See*—
Becker, Frederick W. 193,278.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 24TH DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ABA Cellophane Products Corp.: *See*—
Alvarez, Felix. 3,045,891.
ABC Chemical Corp.: *See*—
Simpson, Theodore S., Jr. 3,045,387.
ACF Industries, Inc.: *See*—
Boehlow, Robert W. 3,045,505.
Compton, Donald R., and Pratzki. 3,045,896.
Abildgaard, William H., to Plastomeric Products Corp. Surgeon's gown and glove assembly and method of sterilizing same. 3,045,815, 7-24-62, Cl. 206—63.2.
Abruzzi, Cesare. Bowling ball wrist hanger and automatic release. 3,046,014, 7-24-62, Cl. 273—64.
Ace Electronics Associates, Inc.: *See*—
Williams, David G. and J. W. 3,046,510.
Acme Highway Products Corp.: *See*—
Crone, Alfred F. 3,045,564.
Acrow-Wolff Gesellschaft mit beschrankter Haftung, Firma: *See*—
Dorn, Hans. 3,045,313.
Adamek, Eduard G.: *See*—
Gaver, Kenneth M., Adamek, and Barton. 3,046,142.
Adams, Charles J.: *See*—
Hutton, Robert W., Sigo, and Adams. 3,046,352.
Adams, Charles J., and E. W. Werts, to General Electric Co. Electromagnetic relay. 3,046,370, 7-24-62, Cl. 200—87.
Adams, Francis V.: *See*—
Rowley, Russell A., Adams, and Gaffney. 3,046,527.
Adams, Harold E., to Nash Engineering Co. Booster pumps. 3,045,602, 7-24-62, Cl. 103—113.
Adams, Norman I., III. Spectroscopy apparatus. 3,045,534, 7-24-62, Cl. 88—14.
Adams, Richard F., to Olin Mathieson Chemical Corp. Method for forming hollow sheet metal panels. 3,045,618, 7-24-62, Cl. 113—51.
Addie, Albert N., and M. Ephraim, Jr., to General Motors Corp. Lubrication systems and protective controls for turbocharged engines. 3,045,419, 7-24-62, Cl. 60—13.
Addie, Albert N., and W. G. Dilworth, to General Motors Corp. Lubrication systems and protective controls for turbocharged engines. 3,045,420, 7-24-62, Cl. 60—13.
Adolph, John L. Explosive power activated mechanisms. 3,045,242, 7-24-62, Cl. 1—44.5.
Adolphson, Roy T.: *See*—
Shampaine, Hyman R., Adolphson, and Douglass. 3,046,071.
Advanced Development Assn., Ltd.: *See*—
Barnes, Percy J. 3,046,398.
Aerialmatic Engineering Ltd.: *See*—
Lawrence, Frank L. 3,045,974.
Aerojet-General Corp.: *See*—
Garcia, Gustavo. 3,046,417.
Aeroplast Corp.: *See*—
Blanford, William F., and Dempsey. 3,045,878.
Agency of Industrial Science and Technology, Ministry of International Trade and Industry: *See*—
Tsujiuchi, Jumpei. 3,045,530.
Akahane, Niro, to Yashica Co. Ltd. Camera motor control. 3,045,536, 7-24-62, Cl. 88—16.
Akahane, Niro, to Yashica Co., Ltd. Automatic camera diaphragm. 3,045,575, 7-24-62, Cl. 95—64.
Akashi, Goro: *See*—
Fukuda, Shinro, Goto, Akashi, and Miyake. 3,046,158.
Akerib, Eskiel, to Bureau de Recherches et d'Exploitation de procedes et Brevets. Head for dry electric razor. 3,045,346, 7-24-62, Cl. 30—43.
Akers, Edward G.: *See*—
Akers, Edward G. 3,045,880.
Akers, Edward G., 32½% to W. S. Wilson, 32½% to E. G. Akers, 32½% to D. M. Mallick, and 3% to E. D. O'Brian. Closure with spout securable in non-use position. 3,045,880, 7-24-62, Cl. 222—536.
Aladdin Mfg. Co.: *See*—
Bilyeu, Archie E. 3,046,192.
Albrecht, Wolfram, to Jos. Schneider & Co., Optische Werke. High-speed photographic or cinematographic objective with wide image angle. 3,045,547, 7-24-62, Cl. 88—57.
Albright, Roy H., to I-T-E Circuit Breaker Co. Coaxial metal enclosed isolated phase bus. 3,046,422, 7-24-62, Cl. 307—147.
Alco Valve Co.: *See*—
Wiegers, Irvin E. 3,045,700.
Alexander, Florence M.: *See*—
Alexander, Walter N. 3,046,093.
Alexander, Walter N., deceased (F. M. Alexander, executrix); said W. N. Alexander assor. to General Aniline & Film Corp. Process of manufacturing carbon monoxide. 3,046,093, 7-24-62, Cl. 23—204.
Alexeff, Alexander V., and H. R. Richards, to Industrial Ovens, Inc. Expansible oven strip processing means. 3,045,360, 7-24-62, Cl. 34—52.
Alfieri, Giuseppe, to Marelli S.p.A., Fabbrica Italiana Magneti. Leveller for two-valve pneumatic suspension. 3,045,703, 7-24-62, Cl. 137—627.5.
Alfieri, Giuseppe, to Marelli S.p.A., Fabbrica Italiana Magneti. Duplex compressed air distributors for pneumatic braking installations. 3,046,061, 7-24-62, Cl. 303—53.
Alger, C. L., & Co., Inc.: *See*—
Hopkins, John D. 3,045,463.
Allegheny Ludlum Steel Corp.: *See*—
Daley, Robert W. 3,046,319.
Allegheny Plastics, Inc.: *See*—
Yost, James M., and Moritz. 3,045,287.
Allen-Bradley Co.: *See*—
Beaudoin, Leonard W., Kraft, and Steinbrecher. 3,046,228.
Allen, Herbert, to Cameron Iron Works, Inc. Valves. 3,045,693, 7-24-62, Cl. 137—315.
Allen Organ Co.: *See*—
Markowitz, Jerome, and Nelson. 3,045,522.
Allen, R. C., Business Machines, Inc.: *See*—
Allen, Ralph C. 3,045,901.
Allen, Ralph C., to R. C. Allen Business Machines, Inc. Change-computing cash register with flag concealing mechanism. 3,045,901, 7-24-62, Cl. 235—2.
Alley, Robert P., and R. B. Wilkerson, to General Electric Co. Condition responsive apparatus. 3,046,449, 7-24-62, Cl. 317—5.
Alliance Machine Co., The: *See*—
Stuckey, Richard L. 3,045,300.
Allied Animal Research Corp.: *See*—
Parker, Cecil W. 3,046,193.
Allmanna Svenska Elektriska Aktiebolaget: *See*—
Gynt, Sven. 3,046,426.
Alt, Carl G.: *See*—
McGrath, William L., and Alt. 3,045,440.
Alt, Carl G., to Carrier Corp. Grid and platen ice making. 3,045,439, 7-24-62, Cl. 62—66.
Althen, Harold: *See*—
Kurlander, John, and Althen. 3,045,649.
Altmann, Rudolf W. Facial showering device. 3,045,669, 7-24-62, Cl. 128—66.
Aluminium-Industrie-Aktien-Gesellschaft: *See*—
Gubler, Huldreich. 3,046,067.
Alvarez, Felix, to ABA Cellophane Products Corp. Continuous envelopes. 3,045,891, 7-24-62, Cl. 229—69.
Amada, Sanae, M. Matsumoto, and K.-I. Ukitsu. High speed printer. 3,045,590, 7-24-62, Cl. 101—93.
Ambrosini, Leonard R., to Lear, Inc. Fluid actuating device. 3,045,650, 7-24-62, Cl. 121—38.
American Brake Shoe Co.: *See*—
Dalrymple, William P. 3,045,411.
American Cyanamid Co.: *See*—
Arlt, Herbert G., Jr. 3,046,186.
Hess, Irwin H., and Kurtz. 3,046,259.
McGrath, Thomas F., 3,046,309.
Salsbury, Jason M., Kaizerman, and Mino. 3,046,078.
Sloan, Carol L., and Barber. 3,046,288.
Szumski, Stephen A. 3,046,200.
White, Malcolm L., and Wehner. 3,046,201.
American Cystoscope Makers, Inc.: *See*—
Wallace, Frederick J. 3,045,677.
American Machine & Foundry Co.: *See*—
Morris, Jack. 3,046,382.
American Machinery Corp.: *See*—
McLearn, Herbert M. 3,045,910.
American Metal Climax, Inc.: *See*—
Handwerk, Erwin C. 3,045,995.
Larson, Melvin L. 3,046,287.
American Monorail Co., The: *See*—
McEachern, Loyd R. 3,045,929.
American Radiator & Standard Sanitary Corp.: *See*—
Anderson, Axel F. L. 3,045,432.
Kogan, Henry W., and Noakes. 3,045,874.
Marchi, Vito V. 3,045,876.
American Viscose Corp.: *See*—
Bates, Arthur I., and Anderer. 3,046,083.
Breakell, James H., and Phillips. 3,045,358.
Evans, Robert D., and Yu. 3,046,256.
Evans, Robert D., and Yu. 3,046,257.
Wade, Worth. 3,045,303.
Ammerall, Peter, to Roxbury Carpet Co. Carpet fabric and method of making the same. 3,045,710, 7-24-62, Cl. 139—403.
Ampex Corp.: *See*—
Johnson, Keith O. 3,045,937.
Johnson, Keith O. 3,045,938.
Anaconda Co., The: *See*—
Cadwell, Graham M. 3,046,203.
Anderer, Joseph H.: *See*—
Bates, Arthur I., and Anderer. 3,046,083.
Andersen, Johan M., and J. H. Dockstader, to Duplicon Co., Inc. Nestable shop truck. 3,046,033, 7-24-62, Cl. 280—33.99.
Anderson, Arthur R., to Concrete Technology Corp. Concrete prestressing cable grip. 3,045,305, 7-24-62, Cl. 24—122.6.
Anderson, Axel F. L., to American Radiator & Standard Sanitary Corp. Fluid coupling. 3,045,432, 7-24-62, Cl. 60—54.

Anderson, Cleve R., to United States of America, Atomic Energy Commission. Nuclear reactor. 3,046,212, 7-24-62, Cl. 204—193.2.

Anderson Co., The: *See*—
Martens, Jack E. 3,046,055.

Anderson Controls, Inc.: *See*—
Anderson, Elroy H., and Heidorn. 3,045,290.

Anderson, Elroy H., and C. F. Heidorn, to Anderson Controls, Inc. Method of encapsulating coils. 3,045,290, 7-24-62, Cl. 18—59.

Anderson, Ralph F.: *See*—
Anderson, Swan F., and Strombeck. 3,045,405.

Anderson, Swan F., and L. Strombeck, ½ to S. F. Anderson, and ½ to R. F. Anderson. Wrapping machine. 3,045,405, 7-24-62, Cl. 53—182.

Anderson, Swan F.: *See*—
Anderson, Swan F., and Strombeck. 3,045,405.

Anderson, Richard L., and M. J. O'Rourke, to International Business Machines Corp. Multiple junction semiconductor device fabrication. 3,046,459, 7-24-62, Cl. 317—235.

Andreasson, Rudolf W. Drill. 3,045,513, 7-24-62, Cl. 77—68.

Andress, Harry J., Jr., to Socony Mobil Oil Co., Inc. High barium content complex salts of sulfonic acids and petroleum fractions containing the same. 3,046,224, 7-24-62, Cl. 252—33.

Andress, Harry J., Jr., and P. Y. C. Gee, to Socony Mobil Oil Co., Inc. Stabilized distillate fuel oil. 3,046,102, 7-24-62, Cl. 44—71.

Andrews, Mark B., and W. J. Burke, to Roll-O-Sheets, Inc. Roll dispenser. 3,045,883, 7-24-62, Cl. 225—90.

Aug, Choh-Yi, and E. W. Burkhammer, to P. R. Mallory & Co., Inc. Electrical contacts of high arc erosion resistance and method of making the same. 3,045,331, 7-24-62, Cl. 29—182.

Anslow, James R., to Jefferson Chemical Co., Inc. Piperazine sulfite. 3,046,277, 7-24-62, Cl. 260—268.

Apelbaum, Joseph H., and W. L. O'Brien, to Raytheon Co. Impregnated cathodes. 3,045,320, 7-24-62, Cl. 29—25.18.

Appleton, Arthur L. Plug and receptacle connector. 3,046,515, 7-24-62, Cl. 339—111.

Applied Power Industries, Inc.: *See*—
Colgan, William L. 3,045,653.

Arakawa, Naoji. Device for changing the course of a sliver in a draft apparatus. 3,045,291, 7-24-62, Cl. 19—250.

Archer Daniels-Midland Co.: *See*—
Hathaway, Clayton E., Jr., Goetz, and Kottke. 3,046,147.

Arcos Corp.: *See*—
Wooding, Walter H., Thomas, and Norcross. 3,046,386.

Arlt, Herbert G., Jr., to American Cyanamid Co. Cationic sizing emulsions and paper sized therewith. 3,046,186, 7-24-62, Cl. 162—167.

Armata, Edward J., to Potter Instrument Co., Inc. Saturable reactor shift register. 3,046,531, 7-24-62, Cl. 340—174.

Armco Steel Corp.: *See*—
Hudson, Edwin B. 3,045,997.
Waxweiler, James H., and Larrimore. 3,046,167.

Armour and Co.: *See*—
Speer, Paul, Griggs, and McAvoy. 3,046,286.

Armstrong Cork Co.: *See*—
Hager, Nathaniel E., Jr. 3,045,473.

Arnit, Fred H., to Garcy Corp. Leveling device for standards. 3,045,389, 7-24-62, Cl. 45—139.

Aronson, David, to Worthington Corp. Vessel for subcooled liquid. 3,045,437, 7-24-62, Cl. 62—54.

Arps Corp.: *See*—
Arps, Jan J. 3,046,474.

Arps, Jan J., to Arps Corp. Bore-hole logging system and method. 3,046,474, 7-24-62, Cl. 324—1.

Arth, Oder E., and J. Fried, to Merck & Co. Inc. Method of preparing 16-oxo-17-halo-17-alkyl-androstanes. 3,046,194, 7-24-62, Cl. 260—397.4.

Asbury, Charles T. Abrading machine and drive therefor. 3,045,992, 7-24-62, Cl. 262—20.

Asher, Ronald D.: *See*—
Spencer, Leland H., and Asher. 3,045,495.

Ashton, N. C., Developments Ltd.: *See*—
Ashton, Norman C., and Wilson. 3,045,516.

Ashton, Norman C., and C. V. Wilson, to N. C. Ashton Developments Ltd. Ring rolling mills. 3,045,516, 7-24-62, Cl. 80—5.

Ashworth Bros. Inc.: *See*—
Bechtel, Alfred R., Jr. 3,045,809.

Askania-Werke A.G.: *See*—
Biermann, Markus, and Kuehne. 3,046,404.

Askew, Andrew L., Jr.: *See*—
Reynolds, Richard H., and Askew. 3,045,692.

Associated Electrical Industries Ltd.: *See*—
Tudge, Joseph. 3,046,424.

Associated Lead Manufacturers Ltd.: *See*—
Jamieson, Helen D. 3,046,150.

Atchison, Charles T. Burglar prevention device. 3,045,615, 7-24-62, Cl. 169—3.

Ateliers Henze Malevez et Simon Reunis, Societe Anonyme: *See*—
Simon, Andre. 3,045,806.

Atkinson, Guy F., Co.: *See*—
Ferguson, John E. 3,045,785.

Atlas Copco Aktiebolag: *See*—
Hilling, Earl E., and Lindell. 3,045,898.

Attwood, William S., to General Motors Corp. Strip made of elastic deformable material for connecting two parts in edge-to-edge relation. 3,045,787, 7-24-62, Cl. 189—78.

Auer, John H., Jr., to General Railway Signal Co. Pulsed ultrasonic detector. 3,045,909, 7-24-62, Cl. 235—92.

Auer, John H., Jr., to General Railway Signal Co. Gate control system for automobile parking areas. 3,046,522, 7-24-62, Cl. 340—51.

Auer, John H., Jr., N. A. Bolton, H. C. Kendall, and R. A. Hagen, to General Railway Signal Co. Mounting means for electro-ultrasonic transducers. 3,046,544, 7-24-62, Cl. 340—388.

Aulen, Walter E., to Eddystone Machinery Co. Three-drum winder. 3,045,940, 7-24-62, Cl. 242—66.

Automatic Canteen Co. of America: *See*—
Surber, Curtis M. 3,045,364.

Automatic Electric Laboratories, Inc.: *See*—
Boyd, John M. 3,045,852.
Faulkner, Alfred H. 3,046,350.
Molnar, Imre. 3,046,344.
Molnar, Imre. 3,046,349.
Murphy, Norbert J. 3,046,341.
Osborn, Peter E. 3,046,348.
Ostline, John E., and Taugner. 3,046,342.
Stoffels, Robert E. 3,046,340.

Augsburg-Nurnberg A.G. Maschinenfabrik: *See*—
Schmidt, Ernst. 3,046,069.

Autophon Aktiengesellschaft: *See*—
Tschumi, Otto, Kappeler, and Streit. 3,046,353.

Auzolle, Robert, P. Chaumette, P. Garin, and P. Prugne, to Commissariat a l'Energie Atomique. Vacuum pumps of the getter type. 3,045,642, 7-24-62, Cl. 118—49.

Avco Corp.: *See*—
Domeisen, Karl A. 3,045,482.
Stein, Wolfgang J., and Stranitti. 3,045,479.

Avins, Jack: *See*—
Rhodes, Roland N., and Avins. 3,046,335.

Ayers, George W., and W. A. Krewer, to The Pure Oil Co. Alkylation process. 3,046,318, 7-24-62, Cl. 260—683.63.

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Bunt, Edgar A., and H. L. Olsen, to United States of America, Navy. Hypersonic wind tunnel. 3,045,481, 7-24-62 Cl. 73—147.

Bunting Co., Inc., The: *See*—
Pearlstine, Morton. 3,046,053.

Buonanno, Joseph E., and J. C. Shore, to Metro Atlantic, Inc. Slime control agents and disinfectants in paper mill white water. 3,046,185, 7-24-62, Cl. 162—161.

Bureau de Recherches et d'Exploitation de procedes et Brevets: *See*—
Akerib, Eskiel. 3,045,346.

Burg, Lawrence E. Calculator. 3,045,906, 7-24-62, Cl. 235—70.

Burgess Micro Switch Co. Ltd.: *See*—
Wright, Duane. 3,045,501.

Burkardt, Lohr A., W. G. Finnegan, and R. L. Smith. Chemically produced colored smokes. 3,046,168, 7-24-62, Cl. 149—42.

Burke, Thomas J.: *See*—
Johnson Miles C., and Burke. 3,046,524.

Burke, William J.: *See*—
Andrews, Mark B., and Burke. 3,045,883.

Burkhammer, Eugene W.: *See*—
Ang, Choh-Yi, and Burkhammer. 3,045,331.

Burks, Howard L., and T. E. Stewart, Jr. Dispenser apparatus. 3,045,719, 7-24-62, Cl. 141—104.

Burlington Industries, Inc.: *See*—
Upshur, Littleton. 3,046,076.

Burns, David H.: *See*—
Leavitt, Minard A., Pecker, and Burns. 3,046,336.

Burroughs Corp.: *See*—
Di Mino, Alfonso. 3,045,933.
Gellert, Alvin W. 3,046,452.
Hoffman, Paul R. 3,046,407.
Pedersen, John H. 3,046,538.

Burroughs, Ralph H., Jr., and M. Levine, to Midland-Ross Corp. Viscose spinning solution and process. 3,046,085, 7-24-62, Cl. 18—54.

Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Phillips, Arthur P., and Mentha. 3,046,301.

Burrows Lewis M., to Maxwell Manning & Moore, Inc. High pressure seal. 3,046,026, 7-24-62, Cl. 277—171.

Butt, Sheldon H.: *See*—
Johnson, Wallace C., and Butt. 3,045,330.

Buttner, Artur, to Schnellpressenfabrik Aktiengesellschaft Heidelberg. Curved cylinder for relief printing machines having a removable stereotype plate-carrying jacket. 3,045,594, 7-24-62, Cl. 101—375.

Bydalek, Theodore: *See*—
Johnson, Stanford E. and Bydalek. 3,045,580.

Byrnes, Dennis W. Animal husbandry. 3,045,612, 7-24-62, Cl. 104—178.

Cabelka, Jozef, to Vyskumny ustav svaracsky MHD. Process of electrically welding under a layer of molten slag. 3,046,383, 7-24-62, Cl. 219—73.

Cabot Corp.: *See*—
Ayres, Henry S. 3,045,791.

Cadwell, Graham M., to The Anaconda Co. Method of making copper cathode starting sheets. 2,046,203, 7-24-62, Cl. 204—12.

Cain, Howard P. Coupling and supporting means for vehicles. 3,046,037, 7-24-62, Cl. 280—477.

Caine, James R. Thin walled plastic container. 3,045,887, 7-24-62, Cl. 229—1.5.

Cake, Frank A. Agitating and mixing device. 3,045,987, 7-24-62, Cl. 259—72.

Calendine, Calvin A.: *See*—
Santelli, Thomas R., Mohr, and Calendine. 3,046,243.

California Research Corp.: *See*—
Stewart, William T., Stuart, and Lowe. 3,046,260.

Callahan, Fred T., to Olin Mathieson Chemical Corp. Metal forming by explosive force through a solid gel. 3,045,339, 3,045,339, 7-24-62, Cl. 29—421.

Callery Chemical Co.: *See*—
Wunz, Paul R., Jr. 3,046,086.

Callick, Eric B. B.: *See*—
Dain, John, and Callick. 3,046,492.

Callick, Eric B. B., and J. C. Firmin, to English Electric Valve Co. Ltd. Signal storage arrangements. 3,046,440, 7-24-62, Cl. 315—8.5.

Calvert, William C., to Borg-Warner Corp. Blend of polymeric products. 3,046,239, 7-24-62, Cl. 260—28.5.

Cambridge Rubber Co.: *See*—
Bingham, George H., Jr. 3,045,365.

Camco, Inc.: *See*—
Moore, Howard H., Jr. 3,045,760.

Cameron Iron Works, Inc.: *See*—
Allen, Herbert. 3,045,693.

Campbell, Edgar C., and F. F. Timpner, to General Motors Corp. Distributor. 3,045,458, 7-24-62, Cl. 64—25.

Campbell, Ernest F., to United States of America, Navy. Ordnance mount and supporting structure therefor. 3,045,554, 7-24-62, Cl. 89—37.

Campbell, Harris S., to Eastern Rotorcraft Corp. Universal sling systems. 3,046,045, 7-24-62, Cl. 294—74.

Campbell, Milton O. Spark plug. 3,046,435, 7-24-62, Cl. 313—143.

Campbell, Richard T.: *See*—
Brown, Calvin F., Jackson, and Campbell. 3,045,598.

Canada, Her Majesty the Queen in right of, as represented by the Minister of National Defence: *See*—
Smith, Donald R., and Gibson. 3,045,635.

Cantlin, John H., and A. J. Hildenbrandt, to The Wilcolator Co. Gas oven control. 3,045,689, 7-24-62, Cl. 137—66.

Cantwell, Edward G., R. S. Curl, and S. O. Linzell. Portable traffic signal system. 3,046,521, 7-24-62, Cl. 340—41.

Capitol Products Corp.: *See*—
Braginetz, Paul A. 3,045,464.

Capps, John P. Apparatus for simulating atomic and planetary motion. 3,045,362, 7-24-62, Cl. 35—19.

Caps, Arthur W., and A. N. Rittlinger, to Photostat Corp. Automatic copying camera. 3,045,540, 7-24-62, Cl. 88—24.

Caps Ltd.: *See*—
Frankel, Gerald. 3,045,567.

Card, William N., Sr. Fork-lift attachment. 3,045,853, 7-24-62, Cl. 214—672.

Carey, Philip, Mfg. Co., The: *See*—
Fasold, George A., and Leibrook. 3,045,395.

Carli, Vincent J., and M. Hallinan, to General Electric Co. Method for assembling tongue-and-groove members with locking keys. 3,045,329, 7-24-62, Cl. 29—156.8.

Carlson, Elmer A., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,046,380, 7-24-62, Cl. 219—20.

Carlson, William L., Jr., and F. M. Exner, to Minneapolis-Honeywell Regulator Co. Electromagnetic conductive fluid pump. 3,045,599, 7-24-62, Cl. 103—1.

Carlton, Raymond R., to Omark Industries, Inc. Saw chain sprocket. 3,045,502, 7-24-62, Cl. 74—243.

Carnagua, Harold E., and C. W. Kruckeberg, to Tokheim Corp. Single lever dispenser control apparatus. 3,045,868, 7-24-62, Cl. 222—33.

Carpenter, James D. Ground meat mold. 3,045,277, 7-24-62, Cl. 17—32.

Carr, Louis E., and D. C. Jones, to Koehring Co. Dual fork lift attachment. 3,045,850, 7-24-62, Cl. 214—620.

Carrier Corp.: *See*—
Alt, Carl G. 3,045,439.
Durham, Raymond F., and Koepeke. 3,045,442.
Foster, Theodore G. 3,045,438.
MacLeod, David E. 3,045,445.
McGrath, William L. 3,045,578.
McGrath, William L., and Alt. 3,045,440.
McGrath, William L., and MacLeod. 3,045,443.
Todd, Richard F. 3,045,444.

Carroll, Leo P.: *See*—
Gould, Max R., Carroll, and Cervantes. 3,046,139.

Case, Richard P., to International Business Machines Corp. Phased pulse generator. 3,046,416, 7-24-62, Cl. 307—88.5.

Castro, Raoul, and A. M. Hasse, said Hasse assor. to said Castro. Aircraft instrumentation. 3,045,483, 7-24-62, Cl. 73—178.

Catelli, Frank F., and D. G. Quigel. Portable lighting units for clip boards or the like. 3,046,389, 7-24-62, Cl. 240—10.65.

Cath, Pieter G., and W. Pferd, to Bell Telephone Laboratories, Inc. Impulse transmitting mechanism. 3,046,355, 7-24-62, Cl. 179—90.

Cavalconte, Charles C., to Republic Aviation Corp. Electrical switch. 3,046,436, 7-24-62, Cl. 313—146.

Cavanagh, Daniel A. Magnetic concentration method. 3,045,821, 7-24-62, Cl. 209—214.

Cavanagh, Patrick E., to Research-Cottrell, Inc. Magnetic separator. 3,045,822, 7-24-62, Cl. 209—219.

Cederholm, Carl I. Bayonet reel. 3,045,788, 7-24-62, Cl. 189—90.

Cedona, Haarlemmer Pharmaceutisiche Fabriek: *See*—
Zagt, Marinus A., Jr. 3,046,195.

Cee Bee Mfg. Co. Inc.: *See*—
Brooks, Charles, and Sutton. 3,046,174.
Brooks, Charles, Sutton, and Brownold. 3,045,742.

Cenco Instruments Corp.: *See*—
Nakata, Arthur H. 3,045,702.

Cerro Corp.: *See*—
Coan, Richard L. 3,045,268.

Cersoisun Research Corp.: *See*—
Wright, James B. 3,046,374.

Cervantes, Ralph: *See*—
Gould, Max R., Carroll, and Cervantes. 3,046,139.

Cessna, John C., and R. L. Mallonee, to Union Carbide Corp. High reserve alkalinity anti-freeze. 3,046,229, 7-24-62, Cl. 252—74.

Chabbal, Robert: *See*—
Jacquinot, Pierre, and Chabbal. 3,045,535.

Chalu Anodizers Inc.: *See*—
Ross, Herbert F. 3,046,214.

Chalu Belt Co.: *See*—
Potgieter, Fred M. 3,045,455.

Chambers, David H.: *See*—
Sullivan, Paul M., and Chambers. 3,046,215.

Champion Spark Plug Co.: *See*—
Schurecht, Harry G. 3,046,328.
Schurecht, Harry G. 3,046,434.

Chance, Leon H.: *See*—
Reeves, Wilson A., Perkins, and Chance. 3,046,079.

Chandler, Edward F. Air treating and cooling device. 3,045,450, 7-24-62, Cl. 62—311.

Chapman, Paul R., J. O. Schimmel, and R. G. Moyer, to The Pure Oil Co. Method and apparatus for testing lubricants. 3,045,471, 7-24-62, Cl. 73—10.

Chaumette, Paul: *See*—
Auzolle, Robert, Chaumette, Garin, and Prugne. 3,045,642.

Chechak, Jonas J.: *See*—
Dann, John R., and Chechak. 3,046,134.

Chemetron Corp.: *See*—
Elseth, Theodore V. 3,046,438.
Francis, Norman L., Thomson, and Musschoot. 3,045,886.

Chemiewerk Homburg Zweigniederlassung der Deutschen Gold- und Silber-Scheideanstadt vormals Roessler: *See*—
Kohlstaedt, Erwin, and Klingler. 3,046,275.

Chemolimpex Magyar Vegyiaru Kulkerekedelmi Vallalat: *See*—
Janko, Denes. 3,046,077.

Cheney, Roland A. Magnetically secured windshield cover. 3,046,048, 7-24-62, Cl. 296—95.

Cherreau, Andre G., A. R. M. Girard, and G. L. R. Maingault, to Societe Metallurgique d'Imphy. Rustless and refractory bimetallic strip for high temperatures. 3,045,335, 7-24-62, Cl. 29—195.5.

Cherry, Norman H., to United States of America, Atomic Energy Commission. Multiple thickness times density gamma gauge. 3,046,402, 7-24-62, Cl. 250—83.3.

Chervenka, George R.: *See*—
Douglass, John, Jr., and Chervenka. 3,046,072.

Chicago Mill and Lumber Co.: *See*—
Whiton, Arthur L. 3,045,889.

Childers, Earl W. Intermittent misting control apparatus. 3,045,699, 7-24-62, Cl. 137—624.14.

Cholet, Bertram. Electric razor having rotatable cutter of triangular shape. 3,045,344, 7-24-62, Cl. 30—43.

Christensen, Alfred C., Jr.: *See*—
Christensen, Alfred C., Sr. and A. C. Christensen, Jr. 3,045,298.

Christensen, Alfred C., Sr. and A. C. Christensen, Jr. Method and apparatus for shell molding. 3,045,298, 7-24-62, Cl. 22—36.

Christenson, James J., and F. G. Maloney, to Townotor Corp. Straddle trailer. 3,045,848, 7-24-62, Cl. 214—392.

Christle, Arnold B. Golf ball retrieving device. 3,046,044, 7-24-62, Cl. 294—19.

Ciapetta, Frank G., H. L. Coonradt, and W. E. Garwood, to Socony Mobil Oil Co., Inc. Recycle catalytic hydrocracking. 3,046,219, 7-24-62, Cl. 208—111.

Ciarlo, Eugene J. Fire extinguisher. 3,045,761, 7-24-62, Cl. 169—31.

Ciniglio, Ignazio. Spool for yarn material. 3,045,944, 7-24-62, Cl. 242—118.2.

Cinotti, Julius A. Universal concrete edger. 3,045,271, 7-24-62, Cl. 15—235.8.

Cities Service Research and Development Co.: *See*—
Berger, Bernard H. 3,046,230.

Civitano, Michael J. Fused outlet device and the like 3,046,372, 7-24-62, Cl. 200—115.5.

Clapper, Genung L., to International Business Machines Corp. Transistor multiple count trigger with stepware generator gates. 3,046,413, 7-24-62, Cl. 307—88.5.

Clapper, Genung L., to International Business Machines Corp. Capacitor storage unit 3,046,484, 7-24-62, Cl. 328—121.

Clark, Robert E. D., to Fisher Scientific Co. Reagents derived from dithiol. 3,046,289, 7-24-62, Cl. 260—429.9.

Clark, William E. Rack unloader. 3,045,846, 7-24-62, Cl. 214—310.

Clarke, Albert J. Jig for drilling dowel holes. 3,045,727, 7-24-62, Cl. 144—92.

Clarke, Daniel J., and E. A. Stalker, to The Stalker Corp. Fabrication of blades for compressors, turbines and the like. 3,045,327, 7-24-62, Cl. 29—156.8.

Clarke, Daniel J., and E. A. Stalker, to The Stalker Corp. Hollow blades and manufacture thereof.. 3,045,967, 7-24-62, Cl. 253—77.

Clemency, William F., to Bell Telephone Laboratories, Inc. Loud speaking telephone. 3,046,354, 7-24-62, Cl. 179—81.

Clemmer, Richard R.: *See*—
Lucken, John M., and Clemmer. 3,045,374.

Cleven, Antoon J., to North American Philips Co., Inc. Method of making grids for electron discharge tubes and a grid made by said method. 3,045,713, 7-24-62, Cl. 140—71.5.

Coan, Richard L., to Cerro Corp. Machine for deburring the ends of tubes and the like. 3,045,268, 7-24-62, Cl. 15—88.

Cobb, Clifton A., C. A. Orr, and Wm. F. Robandt, Jr., to Whirlpool Corp. Mixing valve for home appliance. 3,045,696, 7-24-62, Cl. 137—607.

Cochran, Frederic E. Fluid blender. 3,045,984, 7-24-62, Cl. 259—4.

Cochran, Harvey M. Wire stretcher. 3,045,970, 7-24-62, Cl. 254—73.

Coe Laboratories, Inc.: *See*—
Molnar, Eugene J. 3,046,248.

Coffman, Marcella M., and W. M. Vanderpool. Flexible handled mop holder. 3,045,269, 7-24-62, Cl. 15—147.

Cohen, Howard J., and J. M. Hoyt, to National Distillers and Chemical Corp. Catalytic process for polymerizing ethylenically unsaturated hydrocarbons. 3,046,267, 7-24-62, Cl. 260—94.9.

Cohen, Howard J., to National Distillers and Chemical Corp. Catalytic process for polymerizing ethylenically unsaturated hydrocarbons. 3,046,268, 7-24-62, Cl. 260—94.9.

Cohen, Howard J., and J. M. Hoyt, to National Distillers and Chemical Corp. Catalytic process for polymerizing ethylenically unsaturated hydrocarbons. 3,046,269, 7-24-62, Cl. 260—94.9.

Cohn, Seymour B., to United States of America, Army. Broadband wavegnide filter. 3,046,503, 7-24-62, Cl. 333—73.

Coleman Instruments, Inc.: *See*—
Staunton, John J. J. 3,045,532.

Colgan, William L., to Applied Power Industries, Inc. Hydraulic jack assemblage. 3,045,653, 7-24-62, Cl. 121—46.

Collier Carbon and Chemical Corp.: *See*—
Young, Donald C. 3,046,105.

Columbian Carbon Co.: *See*—
Heller, George L., Warner, and De Land. 3,046,096.

Comar, Majda: *See*—
Ernst, Robert, and Comar 3,046,231.

Comerci, Frank A., R. Schwartz, and S. I. Wilson, to United States of America, Navy. Non-Magnetic pickup loop for making absolute measurement of signal strength on magnetic recordings. 3,046,358, 7-24-62, Cl. 179—100.2.

Commissariat a l'Energie Atomique: *See*—
Auzolle, Robert, Chaumette, Garin, and Prugne 3,045,642.
Jacquinot, Pierre, and Chabbal. 3,045,535.

Compagnia Italiana Westinghouse Freni E. Segnali: *See*—
Pretini, Gisberto. 3,045,775.

Compagnie de Saint-Gobain: *See*
Paymal, Jean A. 3,046,400.

Compagnie Francaise Thomson-Houston: *See*—
Beurtheret, Charles A. E. 3,046,428.
Beurtheret, Charles A. E. 3,046,429.

Compagnie Generale de Telegraphie Sans Fil: *See*
Oger, Eugène. 3,046,395.

Compton, Donald R., and J. P. Pratzki, to ACF Industries, Inc Pump. 3,045,896, 7-24-62, Cl. 230—188.

Conaway, Bolyn H., to Whirlpool Corp. Absorber assembly. 3,045,452, 7-24-62, Cl. 62—491.

Concrete Technology Corp.: *See*—
Anderson, Arthur R. 3,045,305.

Concrete Thermal Casings, Inc.: *See*
Loper, Lincoln L., Jr. 3,045,707.
Ziegler, George E. 3,045,708.

Connor, Jean H.: *See*—
Couch, Dwight E., Shapiro, Brenner, and Connor. 3,046,205.

Conrad, C. Dewey: *See*—
Conrad, Gyle D. 3,045,833.

Conrad, Gyle D., deceased; M. E. Muse, administratrix, 90% to C. D. Conrad, as trustee, and 10% to Gadget-of-The-Month Club, Inc., by decree of distribution and assignment. Wall-mountable storage unit for an electric razor, cord, and shaving mirror during non-use periods. 3,045,833, 7-24-62, Cl. 211—87.

Conrad, Martin B., to Baker Oil Tools, Inc. Tubing anchor. 3,045,757, 7-24-62, Cl. 166—216.

Constant, Paul C., Jr. Remote meter reading apparatus. 3,046,534, 7-24-62, Cl. 340—188.

Continental Can Co.: *See*—
Hillegas, Julian M. 3,045,743.

Continental Can Co., Inc.: *See*—
Ganz, Henry. 3,045,401.

Continental Oil Co.: *See*—
Phansalkar, Achyut K., Roebuck, and Scott. 3,046,222.

Continental Vending Machine Corp.: *See*—
Danziger, William, Rush, and Gold. 3,045,870.

Cook, Edward J., to General Electric Co. High perveance beam forming system. 3,046,442, 7-24-62, Cl. 315—31.

Cook, Evan B.: *See*—
Cook, Robert G. and E. B. 3,045,254.

Cook, Gordon H., to Taylor, Taylor & Hobson Ltd. Optical objectives of variable focal length. 3,045,546, 7-24-62, Cl. 88—57.

Cook, Robert G. and E. B. Bathtub with liner. 3,045,254, 7-24-62, Cl. 4—173.

Cooke, David A.: *See*—
Kowalyshyn, Stephen, Daly, and Cooke. 3,045,626.

Coonradt, Harry L.: *See*—
Clapetta, Frank G., Coonradt, and Garwood. 3,046,219.

Cope, Geoffrey W., to Symington Wayne Corp. Transition buffer. 3,045,838, 7-24-62, Cl. 213—112.

Copeland, Richard S., to Sackner Products, Inc. Embossed plastic sheets and method of making same. 3,046,173, 7-24-62, Cl. 154—47.

Cormier, Leo P. Hair curler with resilient hair fastener. 3,045,685, 7-24-62, Cl. 132—42.

Cornell, Allen D., to United-Carr Fastener Corp. Gauging and attaching apparatus. 3,045,856, 7-24-62, Cl. 218—6.

Cornish, Harry J.: *See*—
Thomas, Herbert G., Cornish, Shenkle, and Last. 3,045,486.

Couch, Dwight E., H. Shapiro, A. Brenner, and J. H. Connor, to United States of America, Navy. Nickel-aluminum alloy coatings. 3,046,205, 7-24-62, Cl. 204—37.

Coulter, Thomas H., to Dumas Milner Corp. Protection of plant life from frost damage. 3,045,304, 7-24-62, Cl. 47—2.

Cox, John E., to International Telephone and Telegraph Corp. Two-party line discriminating circuit for telephone systems. 3,046,343, 7-24-62, Cl. 179—8.5.

Cox, Robert E., and J. F. Sullivan, to Deere & Co. Reversible disk plow. 3,045,765, 7-24-62, Cl. 172—212.

Coyne, John W., ½ to J. P. Noonan, and ½ to D Strater. Head for shellfish traps. 3,045,386, 7-24-62, Cl. 43—100.

Craig-Pharmaceutical Co., Inc.: *See*—
De Vaulchier, Dorothy. 3,046,196.

Cramer, Thomas F., to Holley Carburetor Co. Governor valve. 3,045,687, 7-24-62, Cl. 137—56.

Crandell, Richard M., and J. H. Hoffman, to Lockheed Aircraft Corp. Pressure controller. 3,045,470, 7-24-62, Cl. 73—4.

Croasdaile, Frederick G., to Oxygenaire (London) Ltd. Face masks for use in the administration of oxygen or other gases. 3,045,672, 7-24-62, Cl. 128—205.

Crompton & Knowles Packaging Corp.: *See*—
Engleson, Harry E., and Sramek. 3,045,558.

Crone, Alfred F., to Acme Highway Products Corp. Dowel supporting structure for highway joints. 3,045,564, 7-24-62, Cl. 94—8.

Crosman Arms Co., Inc.: *See*—
Malcolm, William R. 3,045,659.

Crowley, George C., to General Electric Co. Detachable electrical connector. 3,046,513, 7-24-62, Cl. 339—91.

Crown Machine & Tool Co.: *See*—
Harrison, James M. 3,045,286.

Cruickshank, Philip A., to E. I. du Pont de Nemours and Co. Process for the purification of liquids. 3,046,303, 7-24-62, Cl. 260—486.

Cummings, James D. Antivermin treatment for animals. 3,045,646, 7-24-62, Cl. 119—157.

Cummings, Francis M., W. H. Fleming, and V. H. Matson, to The Electrada Corp. Circuit tester. 3,046,480, 7-24-62, Cl. 324—62.

Curl, Robert S.: *See*—
Cantwell, Edward G., Curl, and Linzell. 3,046,521.

Curtis, John C., to Joy Mfg. Co. Crawler with independently tiltable tread frames 3,045,771, 7-24-62, Cl. 180—9.5.

Curler-Hammer, Inc.: *See*—
Philbin, James P., and Finnegan. 3,045,820.
Philbin, James P. and Salzer. 3,046,535.
Torn, Lawrence J., and Philbin. 3,046,533.

Cutts, Richard M. Choke attachment for shotguns. 3,045,379, 7-24-62, Cl. 42—79.

Cycle Equipment Co.: *See*—
Keesling, Thomas B. 3,045,941.

Cygan, Stanley J., to Poster Products, Inc. Display and support fixture and clip. 3,045,961, 7-24-62, Cl. 248—223.

Czerbina, Anatoly G.: *See*—
Kolenko, Evgeny A., and Czerbina. 3,045,341.

Dahlin, Bernard A., J. A. Rademacher, and E. A. Filipowicz, to Fort Howard Paper Co. Stop mechanism for roll towel dispensers. 3,045,885, 7-24-62, Cl. 226—130.

Daimler-Benz Aktiengesellschaft: *See*—
Beeskow, Bruno E. A. H. 3,045,789.

Dain, John, and E. B. B. Callick, to English Electric Valve Co., Ltd. Klystron Microwave oscillator with particular keying mean. 3,046,492, 7-24-62 Cl. 331—83.

Dale, Walter, to General Motors Corp. Retaining means. 3,045,499, 7-24-62, Cl. 74—102.

Daley, Robert W., to Allegheny Ludlum Steel Corp. Electrode stub clamp. 3,046,319, 7-24-62, Cl. 13—14.

Dalrymple, William P., to American Brake Shoe Co. Liquid and gas separators. 3,045,411, 7-24-62, Cl. 183—63.

Daly, John J. Plastic bottle pourer. 3,045,879, 7-24-62, Cl. 222—482.

Daly, Thomas A.: *See*—
Kowalyshyn, Stephen, Daly, and Cooke. 3,045,626.

Daly, Thomas A., and S. B. Hall, to United States of America, Navy. Speed change system for torpedoes. 3,045,624, 7-24-62, Cl. 114—20.

Dane Corp., The: *See*—
Rodth, Joseph J., Price, and Dexter. 3,045,869.

Daniels, Gordon E., to Kerrigan Iron Works Co. Standard for traffic signals, street lights and the like. 3,045,783, 7-24-62, Cl. 189—26.

Dann, John R., and J. J. Chechak, to Eastman Kodak Co. Sensitization of photographic silver halide emulsions with polymeric compounds containing a plurality of sulfur atoms. 3,046,134, 7-24-62, Cl. 96—108.

Danziger, William, C. D. Rush, and J. Gold, to Continental Vending Machine Corp. Hot beverage vender. 3,045,870, 7-24-62, Cl. 222—70.

Dashew Business Machines, Inc.: *See*—
Hill, George H., Sumida, and Dobrowsky. 3,045,589.

Davin, Joseph F., Jr. Machine for baling. 3,045,583, 7-24-62, Cl. 100—4.

Davio, Donald A., to Minneapolis-Honeywell Regulator Co. Panel instrument attachment. 3,045,638, 7-24-62, Cl. 116—129.

Davis, Jack C. Wire bending machine. 3,045,740, 7-24-62, Cl. 153—64.

Davis, Sidney: *See*—
Spencer, Leland H., and Asher. 3,045,495.

Dawson, Roger N., to The Plessey Co. Ltd. Testing of dielectric materials. 3,046,478, 7-24-62, Cl. 324—58.

Dayton, Theodore S. Mount for telescope sights. 3,045,351, 7-24-62, Cl. 33—50.

Deam, Arnold E.: *See*—
Remke, John L., Reed, and Deam. 3,046,512.

De Angelus, Millet A.: *See*—
Dersch, Fritz, and De Angelus. 3,046,130.

De Chelbor, William J., to Novo Industrial Corp. Plastic carrying case for bottles. 3,045,862, 7-24-62, Cl. 220—102.

De Chelbor, William J., to Novo Industrial Corp. Bottle carrying case. 3,045,863, 7-24-62, Cl. 220—102.

Decker, Elmer L., and R. C. McNeill, to Martin-Decker Corp. Load-sensing dead line anchor. 3,045,480, 7-24-62, Cl. 73—144.

Deere & Co.: *See*—
Cox, Robert E., and Sullivan. 3,045,765.
Peterson, Kenneth R. 3,045,804.
Skromme, Arnold B. 3,045,841.

De Kramer, Isaac A., and R. A. Hagen, to General Railway Signal Co. Token operated electrical switches. 3,046,364, 7-24-62, Cl. 200—42.

Delacretaz, Jean C. Device for cleaning slatted structures such as Venetian blinds and the like. 3,045,275, 7-24-62, Cl. 15—369.

De Land, Charles L.: *See*—
Heller, George L., Warner, and De Land. 3,046,096.

De la Rambelje, Henry A., to Hico Corp. of America. Form supporting girder for use in concrete construction. 3,045,786, 7-24-62, Cl. 189—37.

Dell, Hugh A. and M. A. Snelling, to North American Philips Co., Inc. Acoustic solid delay lines. 3,046,501, 7-24-62, Cl. 333—30.

Dell, John. Domestic hot water tanks. 3,045,654, 7-24-62, Cl. 122—17.

Dellner, Raymond P.: *See*—
Fencht, Jacob E., and Dellner. 3,045,769.

Delong, Armin, V. Drahoš, and J. Specialný, to Tesla, narodni podnik. Device for compensating axial astigmatism of electron-optical systems. 3,046,397, 7-24-62, Cl. 250—49.5.

Deming, Royce D., E. Jacobitti, J. B. Kennedy, W. V. K. Large, and H. M. Pruden, to Bell Telephone Laboratories, Inc. Supervisory control system. 3,046,525, 7-24-62, Cl. 340—163.

Dempsey, Charles A.: *See*—
Blanford, William F., and Dempsey. 3,045,878.

Denaux, Louis M. Shotgun choke. 3,045,378, 7-24-62, Cl. 42—79.

Dench, Edward C., to Raytheon Co. Traveling wave tubes. 3,046,443, 7-24-62, Cl. 315—39.3.

Dengler, Herbert P.: *See*—
King, Lewis G., Bernstein, and Dengler. 3,046,235.

Dengler, Ludwig, to Wacker-Chemie G.m.b.H. Process for treating paper with silicones. 3,046,160, 7-24-62, Cl. 117—155.

Denison, James W., Jr., to General Electric Co. Bonding member. 3,045,332, 7-24-62, Cl. 29—182.5.

Deobald, Harold J., and T. A. McLemore, to United States of America, Agriculture. Process for preparing a precooked dehydrated sweetpotato product. 3,046,145, 7-24-62, Cl. 99—207.

Derby, Palmer P., and L. W. Geier, to Raytheon Co. Magnetron electron discharge devices. 3,046,445, 7-24-62, Cl. 315—39.51.

Dersch, Fritz, and M. R. De Angelus, to General Anilin & Film Corp. Photographic materials containing a chemical sensitizer. 3,046,130, 7-24-62, Cl. 96—66.

Derwin, John W.: *See*—
Stresau, Richard H. F., and Derwin. 3,045,524.

Desauniers, Eugene W., Jr.: *See*—
Brouse, David Y., and Desauniers. 3,045,460.

De Saussure Equipment Co., Inc.: *See*—
De Saussure, William P. 3,046,073.

De Saussure, William P., to De Saussure Equipment Co., Inc. Folding leg for tables and the like. 3,046,073, 7-24-62, Cl. 311—98.

Desgagne, Edwige (nee Harvey). Cap for collapsible tube. 3,045,860, 7-24-62, Cl. 220—31.

Detrex Chemical Industries, Inc.: *See*—
Kearney, Thomas J., and Young. 3,046,163.
Smith, Jack C., and Etterman. 3,046,081.

De Vaulchier, Dorothy, to Craig Pharmaceutical Co., Inc. Therapeutic compositions. 3,046,196, 7-24-62, Cl. 167—65.

Devohn Corp.: *See*—
Feldman, Charles. 3,046,154.

De Vore, Henry B., to Radio Corp. of America. Infra-red sensitive television-camera system. 3,046,441, 7-24-62, Cl. 315—10.

Dewitz, Gerhard H., to Trak Electronics Co., Inc. Electrically variable delay line. 3,046,500, 7-24-62, Cl. 333—29.

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Rodth, Joseph J., Price, and Dexter. 3,045,869.

Diebold, Inc.: *See*—
Herlong, Robert P. 3,045,466.
Herlong, Robert P. 3,045,467.

Diehl, John M., and L. L. Yaeger, to Tru-Scale, Inc. Method of making laminates using unsaturated polyesters. 3,046,180, 7-24-62, Cl. 156—246.

Diehl, Walter A., Razor with shiftable handle means thereon. 3,045,342, 7-24-62, Cl. 30—32.

Dieter, Wesley E., P. L. Golden, and S. Nazaruk, to United States of America, Interior. Closure for evacuated and/or pressurized vessel. 3,045,861, 7-24-62, Cl. 220—57.

Dieter, William J., J. H. Schroeder, and P. F. Flynn, to Du Page Precision Products Co. Can opener. 3,045,617, 7-24-62, Cl. 113—1.

Dietiker, Paul, to Minneapolis-Honeywell Regulator Co. Automatic gas valve. 3,046,406, 7-24-62, Cl. 250—215.

Dietz, R. E., Co.: *See*—
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Dietzgen, Eugene, Co.: *See*—
Klimkowski, Robert J., and Krueger. 3,046,128.

Digital Control Systems, Inc.: *See*—
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Dillon, Wendell M., to Watts Regulator Co. Valve device insertable between flange fittings. 3,045,706, 7-24-62, Cl. 138—94.5.

Dilworth, William G.: *See*—
Addle, Albert N., and Dilworth. 3,045,420.

Di Mino, Alfonso, to Burroughs Corp. Milling apparatus. 3,045,933, 7-24-62, Cl. 241—111.

Dimond, Harold L., to Gulf Research & Development Co. Process for alkylating an aromatic hydrocarbon with an olefin. 3,046,315, 7-24-62, Cl. 260—671.

Dinlocker, Robert L., to Electro-Mechanical Instrument Co. Horsepower measuring system. 3,045,478, 7-24-62, Cl. 73—136.

Dinning, Robert W.: *See*—
Garrett, Henry U., Peters, and Dinning. 3,045,759.

Dinning, Robert W.: *See*—
Peters, Clifford M., Dinning, and Brown. 3,045,750.

Dintelmann, Edwin L. Sawhorse. 3,045,777, 7-24-62, Cl. 182—153.

Di Sabatino, Roland, to Radio Corp. of America. Automatic phonograph record player. 3,046,022, 7-24-62, Cl. 274—10.

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Hill, George H., Sumida, and Dobrowsky. 3,045,589.

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Dodd, Charles G., to The Pure Oil Co. Thermally stable attapulgite-base drilling mud. 3,046,221, 7-24-62, Cl. 252—8.5.

Dolister, Harold H.: *See*—
Huggins, Homer D., Morse, and Dolister. 3,045,979.

Domelsen, Karl A., to Avco Corp. Retraction volume gage. 3,045,482, 7-24-62, Cl. 73—149.

Domenicali, Charles A., to Minneapolis-Honeywell Regulator Co. Metal purification procedures. 3,046,164, 7-24-62, Cl. 148—1.6.

Donelson, Harlan J., Jr. Material spreading mechanism. 3,045,840, 7-24-62, Cl. 214—17.

Donovan, Edward F. Slide calculator. 3,045,908, 7-24-62, Cl. 235—89.

Dorn, Hans, to Acrow-Wolff Gesellschaft mit beschrankter Haftung, Firma. Scaffold for supporting formwork, particularly sliding or climbing molds. 3,045,313, 7-24-62, Cl. 25—131.

Dorsett, Clarence T. Anchor line retainers. 3,045,634, 7-24-62, Cl. 114—210.

Douglas, James K., to The Oilgear Co. Piston operated relief valve. 3,045,695, 7-24-62, Cl. 137—509.

Douglass, John, Jr.: *See*—
Shampaine, Hyman R., Adolphson, and Douglass. 3,046,071.

Douglass, John, Jr., and G. R. Chervenka, to Shampaine Industries, Inc. Accessory supports for surgical operating tables and the like. 3,046,072, 7-24-62, Cl. 311—10.

Dover Corp.: *See*—
Shepherd, Raymond P., and Boone. 3,045,721.

Dow Chemical Co., The: *See*—
Jahn, Alex K. 3,046,236.
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Dow Corning Corp.: *See*—
Gilkey, John W. 3,046,241.
Plueddemann, Edwin P. 3,046,250.
Reinke, Lester H. 3,046,155.
Sommer, Leo H. 3,046,291.

Dow, Jennings B., to Hazeltine Research, Inc. Indicator for ice and like substances. 3,046,537, 724-62, Cl. 340—234.

Downes, Lloyd C., to Hoffman Electronics Corp. Autocorrelation detector circuit. 3,045,916, 7-24-62, Cl. 235—181.

Downing, Edward T., and G. F. Smith, to Raytheon Co. Magnetrons. 3,046,444, 7-24-62, Cl. 315—39.51.

Drahoš, Vladimir: *See*—
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Dresser Industries, Inc.: *See*—
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Risley, Roger E., and Mann. 3,045,512.

Dublon, Inc.: *See*—
Rosenfelder, William J., and Rosen. 3,046,237.

Dubsky, Borivoj, O. Straka, H. Felkel, and R. Feuereisl, to Vyzkumny a zkusebni letecky ustav. Spirograph. 3,045,666, 7-24-62, Cl. 128—2.08.

Duckitt, Harry, and W. M. Sweetenham, to Westinghouse Brake and Signal Co. Ltd. Railway track circuit apparatus. 3,046,390, 7-24-62, Cl. 246—35.

Dumas, Roger E., to Tuber Instrument Corp. Pressure measuring instrument. 3,045,490, 7-24-62, Cl. 73—398.

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Dumez, Raoul H., to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Aerodynamic stabilizer for aircraft. 3,045,484, 7-24-62, Cl. 73—180.

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Dungan, Arthur. Meat tenderizer. 3,045,348, 7-24-62, Cl. 30—304.

Dunlap, Charles K., to Sonoco Products Co. Textile yarn carrier having crowned winding surface. 3,045,945, 7-24-62, Cl. 242—118.32.

Dunn, Jesse T., and D. L. Heywood, to Union Carbide Corp. O-allyl-N,N-diallylhydroxylamine and method of preparation. 3,046,308, 7-24-62, Cl. 260—584.

Du Page Precision Products Co.: *See*—
Dieter, William J., Schroeder, and Flynn. 3,045,617.

Duplicon Co., Inc.: *See*—
Andersen, Johan M., and Dockstader. 3,046,033.

Du Pont de Nemours, E. I. and Co.: *See*—
Barney, Arthur L., Engelhardt, and Palmbeck. 3,046,127.
Berzins, Tallvaldis. 3,045,334.
Billingsley, John G. S. 3,045,359.
Cruickshank, Philip A. 3,046,303.
Dusenbury, Charles E. 3,045,315.
Keiser, Neil. 3,045,283.
Siemons, Willem J., Kelemen, and Steckl. 3,046,100.
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Whitlock, Harold E. 3,046,263.
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Dupre, Gilbert J. Copy camera. 3,045,539, 7-24-62, Cl. 88—24.

Dura Corp.: *See*—
Page, Ancel S. 3,046,036.

Durdle, Harold, to Hupp Corp. Air conditioner condensate disposal system. 3,045,449, 7-24-62, Cl. 62—279.

Durham, Raymond F., and J. M. Koepcke, to Carrier Corp. Ice making. 3,045,442, 7-24-62, Cl. 62—71.

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Lowe, Edison, Durkee, and Hamilton. 3,046,143.

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Zemia, Ewald. 3,046,460.

Dusenbury, Charles E., to E. I. du Pont de Nemours and Co. Apparatus for orienting continuous filament yarns. 3,045,315, 7-24-62, Cl. 28—59.5.

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Eachus, Joseph J., to Minneapolis-Honeywell Regulator Co. Electrical impedance monitoring apparatus. 3,046,418, 7-24-62, Cl. 307—88.5.

East, William J., to United States of America, Army. Electronic circuit tester. 3,046,482, 7-24-62, Cl. 324—72.5.

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Campbell, Harris S. 3,046,045.

Eastman Kodak Co.: *See*—
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Dann, John R., and Chechak. 3,046,134.
Graham, James L., and Sagal. 3,046,129.
Minsk, Louis M. 3,046,132.
Minsk, Louis M. 3,046,133.

Ebbinghaus, Edgar, to Hartmann & Braun Aktiengesellschaft. Gas analyser. 3,045,474, 7-24-62, Cl. 73—27.

Eck, John W., and R. R. Sucietto, to National Distillers and Chemical Corp. Stability of whiskey. 3,046,138, 7-24-62, Cl. 99—48.

Eck, Robert C., to United States of America, Navy. Depth control system. 3,045,627, 7-24-62, Cl. 114—25.

Eddystone Machinery Co.: *See*—
Aulen, Walter E. 3,045,940.

Eder, Hans: *See*—
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Winter, Lester L., and Edstrom. 3,046,240.

Edwards, Gayle D.: *See*—
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Ehlers, Johann: *See*—
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Ehlers, Max, G. Liedtke, and H. Hilgert. Method for the control of weeds. 3,046,104, 7-24-62, Cl. 71—2.3.

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Elselstein, Herbert L., to The International Nickel Co., Inc. Age-hardenable nickel alloy. 3,046,108, 7-24-62, Cl. 75—171.

Eisenberg, Bernard C. Releasable tool for clicker die press. 3,045,521, 7-24-62, Cl. 83—532.

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Electrada Corp., The: *See*—
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Electrolux Corp.: *See*—
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Electro-Mechanical Instrument Co.: *See*—
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Electro-Mechanical Research, Inc.: *See*—
Fleming, Howard M., Jr. 3,045,903.

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Elias, Fred, J. and L. Pie cutter. 3,045,347, 7-24-62, Cl. 30—303.

Elias, John: *See*—
Elias, Fred, J. and L. 3,045,347.

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Elliott, Bernard V. to G. C. Price Co. Apparatus for advancing internal line-up clamps through end-to-end pipe sections. 3,045,338, 7-24-62, Cl. 29—272.

Elseth, Theodore V., to Chemetron Corp. Apparatus for electric arc welding. 3,046,438, 7-24-62, Cl. 314—69.

Emeis, Reimer, to Siemens-Schuckertwerke Aktiengesellschaft. Transistor device. 3,046,405, 7-24-62, Cl. 250—211.

Emery, Alfred H. Device for overcoming a false indication due to an actual linear error in lead screw threads. 3,045,504, 7-24-62, Cl. 74—424.8.

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Endicott Johnson Corp.: *See*—
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Engelhardt, Edward L., to Merck & Co., Inc. 10-(omega-aminoalkylidene)-thioxanthenes. 3,046 283, 7-24-62, Cl. 260—328.

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Engler, Ernst, to Bodenseewerk Perkin-Elmer & Co., G.m.b.H. Device for automatic tracking of targets. 3,046,332, 7-24-62, Cl. 178—7.2.

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Ericson, Sidney A., and H. W. Parrott, to The Bassick Co. Height adjusting cam lock. 3,046,054, 7-24-62, Cl. 297—353.

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Meienberg, Hans. 3,045,969.

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Smith, Jack C., and Etterman. 3,046,081.

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Evans, Robert D., and A. J. Yu, to American Viscose Corp. Sebacamide-p-xylylenediamide copolymer. 3,046,257, 7-24-62, Cl. 260—78.

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Carlson, William L., Jr., and Exner. 3,045,599.

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Hahn, Herbert S. 3,045,604.
Hoffmeister, Hans G. 3,045,733.
Long, Robert S. 3,046,141.
Schempp, Roy. 3,045,561.
Vadas, Leslie. 3,045,732.
Vadas, Leslie, and Wilbur. 3,045,731.
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Faries, Alfred M., and M. C. Harp, to Lenkurt Electric Co., Inc. High-voltage inverter using low-voltage transistors. 3,046,495, 7-24-62, Cl. 331—113.

Farrington, Floyd W. Boat hull. 3,045,629, 7-24-62, Cl. 114—56.

Fasold, George A., and W. V. Leibrook, to The Philip Carey Mfg. Co. Square butt strip shingles. 3,045,395, 7-24-62, Cl. 50—226.

Faulkner, Alfred H., to Automatic Electric Laboratories, Inc. Automatic electronic telephone system. 3,046,350, 7-24-62, Cl. 179—18.

Faulkner, Willard J., and J. E. Bayha, to V-M Corp. Control mechanism for phonographs. 3,046,020, 7-24-62, Cl. 274—10.

Faulkner, Willard J., and R. J. Hammond, to V-M Corp. Pickup system for phonographs. 3,046,024, 7-24-62, Cl. 274—23.

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Feely, Wayne E., to Rohm & Haas Co. Process of cyanation. 3,046,278, 7-24-62, Cl. 260—283.

Feldman, Charles, to Devahn Corp. Method for forming luminescent screens. 3,046,154, 7-24-62, Cl. 117—33.5.

Feldman, Edward M., and D. F. Gould II, to United States of America, Navy. Aircraft velocity recording device. 3,046,401, 7-24-62, Cl. 250—83.3.

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Ferrera, John. Floor supporting structure for expandable trailers. 3,046,047, 7-24-62, Cl. 296—23.

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Dubsky, Borivoj, Straka, Felkel, and Feuereisl. 3,045,666.

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Fields, Ellis K., and J. M. Sandri, to Standard Oil Co. 1-aryl-2,2-dihalocyclopropanes. 3,046,314, 7-24-62, Cl. 260—650.

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Dahlin, Bernard A., Rademacher, and Filipowicz. 3,045,885.

Finch, Walter G.: *See*—
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Finkelstein, Nisson A., to Bausch & Lomb Inc. Projection system corrected for marginal distortion. 3,045,542, 7-24-62, Cl. 88—24.

Finlay, Walter L., to Rem-Cru Titanium, Inc. Titanium coated article. 3,045,333, 7-24-62, Cl. 29—194.

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Philbin James P., and Finnegan. 3,045,820.

Finnegan, William G.: *See*—
Burkardt, Lohr A., Finnegan, and Smith. 3,046,168.

Fioravanti, Jean. Conveyor system. 3,045,807, 7-24-62, Cl. 198—153.

Firmin, Jervois C.: *See*—
Callick, Eric B. B., and Firmin. 3,046,440.

Fischer, Edgar: *See*—
Hermann, Hans D., and Fischer. 3,046,249.

Fisher, Coburn B. Automatic poultry nest front. 3,045,645, 7-24-62, Cl. 119—49.

Fisher, Elmer H. Wheelbarrow attachment. 3,045,847, 7-24-62, Cl. 214—370.

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Fisher, Walter, Jr.: *See*—
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Lobeck, John H., and Fisher. 3,046,066.

Fisher Scientific Co.: *See*—
Clark, Robert E. D. 3,046,289.
Harmon, Duane D. 3,045,533.

Fleming, David H., Jr., to Union Carbide Corp. Suspension type rotary piercing process and apparatus. 3,045,766, 7-24-62, Cl. 175—14.

Fleming, Howard M., Jr., to Electro-Mechanical Research, Inc. Magnetic dial reading apparatus. 3,045,903, 7-24-62, Cl. 235—61.

Fleming, Walter H.: *See*—
Cummings, Francis M., Fleming, and Matson. 3,046,480.

Floyd, Frederick, to Ozonair Engineering Co. Ltd. Filters. 3,045,410, 7-24-62, Cl. 55—352.

Fluor Corp., Ltd., The: *See*—
Bochinski, Julius H. 3,046,307.

Flynn, Frank M., to Seary Mfg. Co. Apparatus for separating a resilient plate from a stack thereof. 3,045,867, 7-24-62, Cl. 221—211.

Flynn, Philip F.: *See*—
Dieter, William J., Schroeder, and Flynn. 3,045,617.

Foll, John V., and J. Bell, to Muirhead & Co. Ltd. Ship stabilization. 3,045,630, 7-24-62, Cl. 114—122.

Foltz, George E.: *See*—
Strain, Franklin, Stevens, and Foltz. 3,046,255.

Fontein, Freerk J., to Stamicarbon N.V. Process and apparatus for separating a mixture of particles according to size. 3,045,823, 7-24-62, Cl. 209—273.

Ford Motor Co.: *See*—
Galaniuk, Alexander H. 3,045,431.
Swatman, Ivan M. 3,045,966.

Forgrove Machinery Co. Ltd., The: *See*—
Wilson, Peter G. 3,045,404.

Formia, Antonio, to Fiat Societa per Azioni. Cylinder head for internal combustion reciprocating engines. 3,045,655, 7-24-62, Cl. 123—30.

Forrer, Homer W., to The Mead Corp. Container. 3,045,888, 7-24-62, Cl. 229—7.

Forrer, Max P., and V. O. Met, to General Electric Co. Waveguide balanced modulator. 3,046,497, 7-24-62, Cl. 332—43.

Forrester, Clive B. Line winding device. 3,045,943, 7-24-62, Cl. 242—84.43.

Fort Howard Paper Co.: *See*—
Dahlin, Bernard A., Rademacher, and Filipowicz. 3,045,885.

Foster, Harold S., to General Electric Co. Steam iron with position controlled valve. 3,045,370, 7-24-62, Cl. 38—77.

Foster, Theodore G., to Carrier Corp. Ice making. 3,045,438, 7-24-62, Cl. 62—65.

Fowler, Hugh. Convertible chair. 3,046,050, 7-24-62, Cl. 297—118.

Francis, Norman L., M. G. Thomson, and A. Musschoot, to Chemetron Corp. Apparatus for handling a continuous rail. 3,045,886, 7-24-62, Cl. 226—172.

Frankel, Gerald, to Caps Ltd. Photographic type composing apparatus. 3,045,567, 7-24-62, Cl. 95—4.5.

Frankert, Thomas: *See*—
Nayhouse, Alfred, Frankert, and Long. 3,045,976.

Fraser, Robert W., to United-Carr Fastener Corp. Push push switch. 3,046,377, 7-24-62 Cl. 200—153.

Frauenberger, Johannes, to Nederlandse Organisatie voor Toegepast-Natuuriveten-Schappelijk Onderzoek ten behoeve van de Volksgezonheid. Aeration rotor. 3,045,986, 7-24-62, Cl. 259—136.

Frauenholtz, John E. Spark plug gap tool. 3,045,354, 7-24-62, Cl. 33—168.

Freedman, Louis: *See*—
Shapiro, Seymour L., and Freedman. 3,046,281.

Freeland, Leonor Z. Aircraft. 3,045,951, 7-24-62, Cl. 244—23.

Freeman Mfg. Co.: *See*—
Geimer, Cornelius J. 3,045,678.

Friden, Inc.: *See*—
Malavazos, Arthur J. 3,045,907.

Fried, John: *See*—
Arth, Glen E., and Fried. 3,046,094.

Fried, John, and T. S. Bry, to Merck & Co., Inc. Novel 17a-trifluoro-propynyl androstenes and processes. 3,046,273, 7-24-62, Cl. 260—239.55.

Fuji Photo Film Co., Ltd.: *See*—
Fukuda, Shinro, Goto, Akashi, and Miyake. 3,046,158.

Fujimoto, Sakae, to Riken Kogaku Kogyo Kabushiki-Kaisha and Nihon Denki Bunka Kogyo Kabushiki Kaisha. Magnetic recording and reproducing machine. 3,046,357, 7-24-62, Cl. 179—100.2.

Fukuda, Shinro, H. Goto, G. Akashi, and T. Miyake, to Fuji Photo Film Co., Ltd. Process for producing magnetic material. 3,046 158, 7-24-62, Cl. 117—100.

Fulton, Leota W.: *See*—
Fulton, Mervin J. 3,045,830.

Fulton, Mervin J., deceased; L. W. Fulton, executrix. Liquid dispersion separating device. 3,045,830, 7-24-62, Cl. 210—232.

Fyfe, William A., and A. W. Shore, to Western Electric Co., Inc. Component lead straightener. 3,045,739, 7-24-62, Cl. 153—2.

Gadget-Of-The-Month Club, Inc.: *See*—
Conrad, Gyle D. 3,045,833.

Gaffney, John F.: *See*—
Rowley, Russell A., Adams, and Gaffney. 3,046,527.

Gaines, Walter A.: *See*—
Sletzinger, Meyer, and Gaines. 3,046,300.

Gainor, Roselyn. Sanitary container closure with dispenser. 3,045,723, 7-24-62, Cl. 141—381.

Gaite, Harold D., to British Telecommunications Research Ltd. Tape readers and the like. 3,045,904, 7-24-62, Cl. 235—61.11.

Gajewski, Loren R. and M. Constant speed variable volume hydraulic pump. 3,045,600, 7-24-62, Cl. 103—37.

Gajewski Mervin: *See*—
Gajewski, Loren R. and M. 3,045,600.

Galaniuk, Alexander H., to Ford Motor Co. Hydrokinetic tongue converter. 3,045,431, 7-24-62, Cl. 60—54.

Ganz, Henry, to Continental Can Co., Inc. Machine for packaging articles. 3,045,401, 7-24-62, Cl. 53—48.

Garcia, Gustavo, to Aerojet-General Corp. Amplifying switch with output level dependent upon a comparison of the input and a zener stabilized control signal. 3,046,417, 7-24-62, Cl. 307—88.5.

Garcy Corp.: *See*—
Arnit, Fred H. 3,045,389.

Gardiner, Frank J., to I-T-E Circuit Breaker Co. Polarizer means. 3,046 498, 7-24-62, Cl. 333—21.

Gardner-Denver Co.: *See*—
Huffman, Mervin C. 3,045,768.

Garin, Paul: *See*—
Auzolle, Robert, Chaumette, Garin, and Prugne. 3,045,642.

Garrett, Henry U., C. M. Peters, and R. W. Dinning, to Udell, Inc. Well apparatus. 3,045,759, 7-24-62, Cl. 166—224.

Garwood, William E.: *See*—
Ciapetta, Frank G., Coonradt, and Garwood. 3,046,219.

Gassen, Horst, to Stahlwerke Südwestfalen, A.G. Induction furnace coil. 3,046,320, 7–24–62, Cl. 13—31.
Gaubis, Leonard L., and D. G. Hall, to United Aircraft Corp. Propeller spinner shutoff valve. 3,045,762, 7–24–62, Cl. 170—135.743.
Gaudian, Bernhard, and G. Goeze. Fungicidal composition. 3,046,188, 7–24–62, Cl. 167—14.
Gaver, Kenneth M., E. G. Adamek, and A. M. Barton, to Ogilvie Flour Mills Co. Ltd. Wheat germ process. 3,046,142, 7–24–62, Cl. 99—153.
Gaynor, Frank A., J. B. Gibbons, and H. W. Taylor, to General Electric Co. Damping control. 3,045,956, 7–24–62, Cl. 244—78.
Gearhart, Glenn D., to Sioux Steam Cleaner Mfg. Co., Inc. Water pump. 3,046,070, 7–24–62, Cl. 309—4.
Gebel, Radames K. H., to United States of America, Air Force. Supervisory communication system. 3,046,331, 7–24–62, Cl. 178—6.8.
Gebel, Radames K. H., to United States of America, Air Force. Transistorized amplifier-transmitter for low light level television cameras. 3,046,333, 7–24–62, Cl. 178—7.2.
Gee, Paul Y. C.: *See*—
Andress, Harry J., Jr., and Gee. 3,046,102.
Geier, Leonard W.: *See*—
Derby, Palmer P., and Geier. 3,046,445.
Geimer, Cornelius J., to Freeman Mfg. Co. Maternity garment. 3,045,678, 7–24–62, Cl. 128—554.
Gellert, Alvin W., to Burroughs Corp. Encapsulated component assembly. 3,046,452, 7–24–62, Cl. 317—101.
General Aniline & Film Corp.: *See*—
Alexander, Walter N. 3,046,093.
General Aniline & Film Corp.: *See*
Dersch, Fritz, and De Angelus. 3,046,130.
General Corrugated Machinery Co., Inc.: *See*—
Keely, Clifford D., and Baisley. 3,045,402.
General Dynamics Corp.: *See*—
Schmidt, Louis V., and Hixenbaugh. 3,045,954.
General Electric Co.: *See*—
Adams, Charles J., and Werts. 3,046,370.
Alley, Robert P., and Wilkerson. 3,046,449.
Carli, Vincent J., and Hallinan. 3,045,329.
Cook, Edward J. 3,046,442.
Crowley, George C. 3,046,513.
Denison, James W., Jr. 3,045,332.
Forrer, Max P., and Met. 3,046,497.
Foster, Harold S. 3,045,370.
Gaynor, Frank A., Gibbons, and Taylor. 3,045,956.
Houston, John M. 3,046,439.
Jencks, Charles L. 3,046,371.
Litynski, Raymond S., and Marx. 3,046,465.
Miller, Alexander A. 3,046,207.
Miller, William R. 3,046,464.
Raber, Robert A., Jr. 3,046,419.
Rhodes, Junior I. 3,046,486.
Sternlicht, Beno. 3,046,068.
General Foods Corp.: *See*—
Lowry, John R. 3,046,210.
Lowry, John R. 3,046,270.
General Instrument Corp.: *See*—
Morrison, Guy E., and Williams. 3,045,795.
General Motors Corp.: *See*—
Addie, Albert N., and Ephraim. 3,045,419.
Addie, Albert N., and Dilworth. 3,045,420.
Attwood, William S. 3,045,787.
Bernotas, Ralph J. 3,045,843.
Campbell, Edgar C., and Timpner. 3,045,458.
Dale, Walter. 3,045,499.
Graham, Robert W. 3,045,701.
Kirk, Thomas E., and Falge. 3,046,447.
Lottridge, Neil N., Jr. 3,046,109.
Manahan, Max J. 3,046,472.
McDonnold, Le Roy. 3,045,663.
Mellencamp, Robert E. 3,045,971.
Moyer, Elton S. 3,045,652.
Polhemus, Von D., and Yew. 3,046,000.
Rippingille, Edward V. 3,045,601.
Schmitz, William F. 3,046,002.
Schultze, Harold E. 3,046,001.
Stallard, Ralph M. 3,046,179.
Thomas, Robert W. 3,045,972.
Thomas, Wendell M. 3,045,446.
Turlay, Joseph D. 3,045,507.
Webbere, Fred J. 3,045,301.
Willis, William S. 3,045,968.
General Railway Signal Co.: *See*—
Auer, John H., Jr. 3,045,909.
Auer, John H., Jr. 3,046,522.
Auer, John H., Jr., Bolton, Kendall, and Hagen. 3,046,544.
De Kramer, Isaac A., and Hagen. 3,046,364.
Polster, Morton A. 3,046,519.
Polster, Morton A. 3,046,520.
Vande Sande, George. 3,046,518.
Gentry, Merle O. Sanitary rectal fountain. 3,045,248, 7–24–62, Cl. 4—7.
Gerarde, Horace W. Method of providing for blood count and pipette and assembly for use therein. 3,045,494, 7–24–62, Cl. 73—425.6.
Gianguaiano, Michael N. Multiple spray apparatus. 3,045,925, 7–24–62, Cl. 239—306.
Gibbons, Edwin J. Two-ply or multi-ply narrow woven fabrics. 3,045,711, 7–24–62, Cl. 139—408.
Gibbons, Joseph B.: *See*—
Gaynor, Frank A., Gibbons, and Taylor. 3,045,956.
Gibson, William A.: *See*—
Smith, Donald R., and Gibson. 3,045,635.
Gifford, William E., and H. O. McMahon, to International Business Machines Corp. Pneumatic expansion method and apparatus. 3,045,436, 7–24–62, Cl. 62—6.
Gilhart, Jack S., to The Babcock & Wilcox Co. Mineral wool blanket having imprinted surface and method of making the same. 3,045,316, 7–24–62, Cl. 28—72.3.
Gilkey, John W., to Dow Corning Corp. Composition comprising an aluminum alkoxide and a mixture of siloxanes. 3,046,241, 7–24–62, Cl. 260—29.1.
Gilliland, Edwin R.: *See*—
Hemminger, Charles E., and Gilliland. 3,046,106.
Gilmour, Robert A. Spray nozzle. 3,045,927, 7–24–62, Cl. 239—458.
Gingher, Carl E., Jr.: *See*—
Gingher, Carl E., and C. E. Gingher, Jr. 3,046,041.
Gingher, Carl E., and C. E. Gingher, Jr., to Gingher Mfg. Co. Clamping arrangement. 3,046,041, 7–24–62, Cl. 287—58.
Gingher Mfg. Co.: *See*—
Gingher, Carl E., and C. E. Gingher, Jr. 3,046,041.
Girard, Andre R. M.: *See*—
Cherreau, Andre G., Girard, and Maingault. 3,045,335.
Glasgow, Clarence O., to National Tank Co. Cam. 3,045,506, 7–24–62, Cl. 74—568.
Glos, Martin: *See*—
Sus, Oskar, and Glos. 3,046,126.
Goebel G.m.b.H., Maschinenfabrik: *See*—
Sauberlich, Willy. 3,045,591.
Goettl, Adam D., to McGraw-Edison Co. Air directing louver device. 3,045,576, 7–24–62, Cl. 98—40.
Goetz, Donald C.: *See*—
Hathaway, Clayton E., Jr., Goetz, and Kottke. 3,046,147.
Goeze, Gunter: *See*—
Gaudian, Bernhard, and Goeze. 3,046,188.
Gold, Joseph: *See*—
Danziger, William, Rush, and Gold. 3,045,870.
Goldberg, Samuel D., to Graham Chemical Corp. Hypodermic syringe piston. 3,045,674, 7–24–62, Cl. 128—218.
Golden, Paul L.: *See*—
Dieter, Wesley E., Golden, and Nazaruk. 3,045,861.
Gooding, Walter F.: *See*—
Bell, Raymond M., Gooding, Wellman, and McDevitt. 3,045,560.
Goodrich-Gulf Chemicals, Inc.: *See*—
Hazen, Stanley M., and Meyer. 3,046,265.
Goodwin, Robert J., to Gulf Research & Development Co. Device for perforating casing of a well and cracking cement surrounding the casing. 3,045,753, 7–24–62, Cl. 166—55.
Gorter, Evert W., F. K. Lotgering, and H. G. Bleijers, to North American Philips Co., Inc. Ferromagnetic material. 3,046,227, 7–24–62, Cl. 252—62.5.
Goto, Hiroshi: *See*—
Fukuda, Shinro, Goto, Akashi, and Miyake. 3,046,158.
Gould, David F., II: *See*—
Feldman, Edward M., and Gould. 3,046,401.
Gould, Max R., L. P. Carroll, and R. Cervantes, to The Quaker Oats Co. Process for preparing a pre-cooked corn flour. 3,046,139, 7–24–62, Cl. 99—93.
Goyne Pump Co.: *See*—
Roberts, Royal N. 3,046,059.
Grace, W. R., & Co.: *See*—
Benning, Calvin J., and Wszolek. 3,046,266.
Graham Chemical Corp.: *See*—
Goldberg, Samuel D. 3,045,674.
Graham, Eugene: *See*—
Klassen, Willis G. 3,045,767.
Graham, James L., and J. Sagal, Jr., to Eastman Kodak Co. Sensitization of photographic silver halide emulsions containing color-forming compounds with polymeric thioethers. 3,046,129, 7–24–62, Cl. 96—55.
Graham, Robert W., to General Motors Corp. Rotary valve. 3,045,701, 7–24–62, Cl. 137—625.42.
Graviner Mfg. Co. Ltd.: *See*—
Griffiths, Rupert. 3,045,326.
Graybeal, Warren E., to Stewart-Warner Corp. Transfer mechanism. 3,045,801, 7–24–62, Cl. 198—24.
Graybill, Howard W., to I-T-E Circuit Breaker Co. High voltage double break interrupter switch. 3,046,365, 7–24–62, Cl. 200—48.
Green, Donald T., to Picker X-Ray Corp., Waite Mfg. Div., Inc. Isotope X-ray. 3,046,430, 7–24–62, Cl. 313—57.
Green, Edward H. Aerosol dispenser valve. 3,045,877, 7–24–62, Cl. 222—394.
Greene, Charles E., and C. H. Pulley, to Irving Air Chute Co. Inc. Seat belt protector boots. 3,046,056, 7–24–62, Cl. 297—385.
Greeno, John R., and T. J. Dull. Automatic spring assembly machine. 3,045,714, 7–24–62, Cl. 140—92.94.
Greer, J. W. Co.: *See*—
Hill, William, and Lounsbury. 3,045,640.
Greller, Nelson P. Switching unit. 3,045,792, 7–24–62, Cl. 193—36.
Grenstad, Arvid, R. F. Hereth, L. R. Morris, and G. M. Sherman, to United States of America, Navy. Missile launcher front guide and latching mechanism therefor. 3,045,552, 7–24–62, Cl. 89—1.7.
Griffing, Neal R.: *See*—
Nelson, Edward C., and Griffing. 3,046,107.
Griffiths, Rupert, ½ to Graviner Mfg. Co. Ltd., ½ to Wilkinson Sword Ltd. Temperature detectors. 3,045,326, 7–24–62, Cl. 29—155.5.
Griggs, Charles: *See*—
Speer, Paul, Griggs, and McAvoy. 3,046,286.
Grillon, August B., B. J. Holland, S. V. Pope, and C. J. Steigleder, to Hughes Aircraft Co. Apparatus for handling fusible materials. 3,045,619, 7–24–62, Cl. 113—93.
Grim, Otto: *See*—
Waas, Heinrich, Ehlers, and Grim. 3,045,628.
Gris, Conrad D., to Mansaver Industries, Inc. Motor actuated rotary crane hook. 3,046,046, 7–24–62, Cl. 294—82.
Grogan, William D. Apparatus for separating boards or strips. 3,045,726, 7–24–62, Cl. 143—157.

Grose, Martin L. Method and means for handling articles to be dispensed from a bulk supply. 3,045,400, 7–24–62, Cl. 53—37.
Gruschow, Allan C., and H. C. Veryser. Disposable mouse trap. 3,045,384, 7–24–62, Cl. 43—81.5.
Gubler, Huldreich, to Aluminium-Industrie-Aktien-Gesellschaft. Axial guide for the rolls of rolling mills. 3,046,067, 7–24–62, Cl. 308—233.
Gudelis, David A., to Esso Research and Engineering Co. Tetrapropylene quality improvement. 3,046,316, 7–24–62, Cl. 260—671.
Gulf Interstate Co.: *See*—
Young, Farrile S. 3,045,893.
Gulf Research & Development Co.: *See*—
Dimond, Harold L. 3,046,315.
Goodwin, Robert J. 3,045,753.
Henke, Alfred M., and Peterson. 3,046,218.
Ridenour, William P. 3,046,238.
Gump, Richard E.: *See*—
Martin, Howard F. 3,045,381.
Gump, Robert G.: *See*—
Martin, Howard F. 3,045,381.
Günther, Willi: *See*—
Sauer, Edgar, Günther, and Wutzler. 3,045,570.
Gurin, Emanuel. Printing machine and printing blanket therefor. 3,045,595, 7–24–62, Cl. 101—415.1.
Gynt, Sven, to Allmanna Svenska Elektriska Aktiebolaget. Rotor spider for electrical machines. 3,046,426, 7–24–62, Cl. 310—267.
Hackett, Theodore N., and O. Puhlmann, to The Elmco Corp. Implement position control and indicator means. 3,045,845, 7–24–62, Cl. 214—140.
Hadlock, Clarence S., to DynaCo Mfg., Inc. Automotive vehicle. 3,045,774, 7–24–62, Cl. 180—51.
Hafner, William F., C. W. Leach, and T. W. Smeal, to United States Steel Corp. Method of preparing improved wood preservative from coal tar creosote. 3,046,217, 7–24–62, Cl. 208—2.
Hagan Chemicals & Controls, Inc.: *See*—
Hronas, John J., and Roland. 3,045,872.
Luppold, Robert H., Jr. 3,046,461.
Hagen, Robert A.: *See*—
Auer, John H., Jr., Bolton, Kendall, and Hagen. 3,046,544.
De Kramer, Isaac A., and Hagen. 3,046,364.
Hager, Nathaniel E., Jr., to Armstrong Cork Co. Apparatus for measuring thermal conductivity. 3,045,473, 7–24–62, Cl. 73—15.
Hager, Robert E., to Westinghouse Air Brake Co. Data display indicator. 3,046,542, 7–24–62, Cl. 340—347.
Hahn, Herbert S., to FMC Corp. Multi-cylinder pump. 3,045,604, 7–24–62, Cl. 103—173.
Hahn, Johann: *See*—
Sauer, Edgar, Wutzler, and Hahn. 3,045,568.
Haile, John F. Concrete fence posts. 3,045,977, 7–24–62, Cl. 256—51.
Hall, Donald G.: *See*—
Gaubis, Leonard L., and Hall. 3,045,762.
Hall, Forest D. Fire protective water curtain projector. 3,045,931, 7–24–62, Cl. 239—598.
Hall, Sherman B.: *See*—
Daly, Thomas A., and Hall. 3,045,624.
Hallden, Frederick C., and J. M. Rodriguez, to Hazeltine Research Inc. Apparatus for performing conditional subtraction. 3,045,913, 7–24–62, Cl. 235—155.
Halliburton Co.: *See*—
Briggs, George E., Jr. 3,045,756.
Hallinan, Mark: *See*—
Carli, Vincent J., and Hallinan. 3,045,329.
Halversen, Roy A., J. I. Maurer, and K. I. Saad to Parker Rust Proof Co. Method of and solution for forming phosphate coatings on zinc surfaces. 3,046,165, 7–24–62, Cl. 148—6.15.
Hamer, Leland S. Gyrostatic wheel stabilizing apparatus. 3,046,058, 7–24–62, Cl. 301—5.
Hamilton Kent Mfg. Co.: *See*—
Nathan, Tracy D. 3,046,028.
Hamilton, Walter E.: *See*—
Lowe, Edison, Durkee, and Hamilton. 3,046,143.
Hammer, James P.: *See*—
Rowe, Thomas H., Hammer, and Kennedy. 3,046,528.
Hammon, George L. Manual valve for gas torches. 3,045,694. 7–24–62, Cl. 137—328.
Hammond, Robert J.: *See*—
Faulkner, Willard J., and Hammond. 3,046,024.
Hamner Electronics Co., Inc.: *See*—
Hornyak, William F. 3,046,337.
Hampson, James R. Electric motor control. 3,046,462, 7–24–62, Cl. 318—259.
Handwerk, Erwin C., to American Metal Climax, Inc. Heated fractionating column. 3,045,995, 7–24–62, Cl. 266—19.
Hankins, Kenneth E., to C. H. Masland and Sons. Method of applying polyurethane foam to the backs of carpets and equipment therefor. 3,046,177, 7–24–62, Cl. 156—78.
Hanna, William E. Safety locking devices for automobiles. 3,046,367, 7–24–62, Cl. 200—61.78.
Hansen, Quinten A., to R. H. and R. N. Stearns. Detent for releasably holding an electromagnetic brake disengaged. 3,045,782, 7–24–62, Cl. 188—171.
Haraske, Edward T.: *See*—
Seymour, Raymond E., and Haraske. 3,045,799.
Hardin, N. A.: *See*—
Brandon, Clarence W. 3,045,749.
Harmon, Duane D., to Fisher Scientific Co. Optical system for spectrographic source. 3,045,533, 7–24–62, Cl. 88—14.
Harmon, Robert W., to The Ohio Brass Co. Corona ball. 3,046,327, 7–24–62, Cl. 174—73.
Harp, Maurice C.: *See*—
Faries, Alfred M., and Harp. 3,046,495.
Harper, Frederick R., to Vernon F. Taylor, Jr. Non-antigenic protein and fat composition and method of preparation. 3,046,197, 7–24–62, Cl. 167—66.
Harper, Frederick R., to Vernon F. Taylor, Jr. Blood product and method of preparation. 3,046,198, 7–24–62, Cl. 167—78.
Harris, Lionel R. F., and F. N. Martin, to Her Majesty's Postmaster General. Alternating current receivers. 3,046,345, 7–24–62, Cl. 179—15.
Harris, Stephen C. Braider carrier tension weight. 3,045,526, 7–24–62, Cl. 87—56.
Harrison, James M., to Crown Machine & Tool Co. Method of making dispensable cups. 3,045,286, 7–24–62, Cl. 18—48.
Harrison, John W.: *See*—
Baird, William G., Jr., and Harrison. 3,045,285.
Harshaw Chemical Co. The: *See*—
Unkefer, Gilbert G., Barrick, and Meek. 3,046,153.
Hart, Robert W. Dynamic pressure sensitive detector. 3,045,491, 7–24–62, Cl. 73—398.
Hartel, Pieter H., to Bull Nederland, Administratie-en Statistiekmachine Mij. N.V. Device for conveying and stacking documents bearing registrations. 3,046,009, 7–24–62, Cl. 271—71
Hartgenbush, John A. Alignment jig for butt welding. 3,045,621, 7–24–62, Cl. 113—102.
Hartke, Klaus: *See*—
Bohme, Horst, and Hartke. 3,046,274.
Hartmann & Braun Aktiengesellschaft: *See*—
Ebbinghaus, Edgar. 3,045,474.
Moyat, Peter. 3,045,665.
Hartmann, Robert F., to Olin Mathieson Chemical Corp. Treatment of brass. 3,046,166, 7–24–62, Cl. 148—11.5.
Haruyama, Ichizo, Apparatus for cutting chemical tows. 3,045,520, 7–24–62, Cl. 83—201.
Hasekamp, Lester W., to The Porcel Engineering Co. Metallic wall construction. 3,045,784, 7–24–62, Cl. 189—34.
Hasse, Alexander M.: *See*—
Castro, Raoul, and Hasse. 3,045,483.
Haszeldine, Robert N. Coupling of halogenated organic compounds. 3,046,304, 7–24–62, Cl. 260—513.
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Haver, Fritz, to Haver & Boecker. Packing machine for granular and powdered materials. 3,045,770, 7–24–62, Cl. 177—69.
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Hazen, Stanley M., and L. F. Meyer, to Goodrich-Gulf Chemicals, Inc. Process for the polymerization of diolefins with an alkyl aluminum, cobalt halide and acetyl halide catalyst. 3,046,265, 7–24–62, Cl. 260—94.3.
Heath, Carl E., and P. J. Lucchesi, to Esso Research and Engineering Co. Radiolysis of monoolefins with a sensitizer. 3,046,208, 7–24–62, Cl. 204—154.
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Stransky, Gustave. 3,045,632.
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Herlong, Robert P., to Diebold, Inc. Manipulation resistive combination lock. 3,045,467, 7-24-62, Cl. 70—322.
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Hodes, William, and R. E. Van Strien, to Standard Oil Co. Diallyl alkyl esters of benzenepolycarboxylic acids. 3,046,258, 7-24-62, Cl. 260—78.5.
Hoff, Herbert. Sleevelength adjustment device. 3,045,246, 7-24-62, Cl. 2—269.
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Matlow, Sheldon L. 3,046,324.
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Holt, Arthur D., to The Jeffrey Gallon Mfg. Co. Vibrating conveyor and assembly means therefor. 3,045,810, 7-24-62, Cl. 198—220.
Holz, George W., to Lindberg Engineering Co. Fluid heater. 3,046,378, 7-24-62, Cl. 219—10.51.
Holzer, Walter. Impulse device connected with a motor in an automatic cut-out for the program control in washing-machines. 3,046,421, 7-24-62, Cl. 307—141.
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Horn, Frederick L., to United States of America, Atomic Energy Commission. Protactinium extraction. 3,046,088, 7-24-62, Cl. 23—14.5.
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Horner, Clifford E., D. R. Quinn, and C. E. Thayer, to Westinghouse Electric Corp. Method of making an apertured member. 3,046,202, 7-24-62, Cl. 204—11.
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Hoshino, Yasushi. Packaging of a magnetic head assembly. 3,045,814, 7-24-62, Cl. 206—46.
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Houdry, Eugene J., to Oxy-Catalyst, Inc. Temperature control of a catalytic exhaust purifier. 3,045,422, 7-24-62, Cl. 60—30.
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Cohen, Howard J., and Hoyt. 3,046,269.
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Hudson, Edwin B., to Armco Steel Corp. Porous oxygen lance. 3,045,997, 7-24-62, Cl. 266—34.
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Brookshire, Robert R. 3,046,159.
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Durdle, Harold. 3,045,449.
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Hutchinson, Philip S., and D. L. Spanjer, to Ibis Enterprises Ltd. Conveying mechanism. 3,045,728, 7-24-62, Cl. 144—208.
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Gardiner, Frank J. 3,046,498.
Graybill, Howard W. 3,046,365.
Ibis Enterprises Ltd.: *See*—
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Schaeffler, Georg. 3,046,064.
Ingersoll-Rand Co.: *See*—
White, Kenneth H. 3,045,892.
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Batley, James V. 3,046,523.
Brown, Richard P. 3,046,485.
Case, Richard P. 3,046,416.
Clapper, Genung L. 3,046,413.
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Gifford, William E., and McMahon. 3,045,436.
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Knox, Lewis A. 3,046,541.
Litz, Frank A., and Vogel. 3,046,540.
Northrop, Arthur W., and Yevchak. 3,045,336.
Rowe, Thomas H., Hammer, and Kennedy. 3,046,528.
Rowley, Russell A., Adams, and Gaffney. 3,046,527.
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International Paper Co.: *See*—
Hollis, Clinton R. 3,045,559.
International Shoe Co.: *See*—
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International Telephone and Telegraph Corp.: *See*—
Cox, John E. 3,046,343.
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Lee, Arnold S. J. 3,045,668.
Irving Air Chute Co. Inc.: *See*—
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Isham, Timothy. Heating and cooling apparatus. 3,045,980, 7-24-62, Cl. 257—191.
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Jackson, Paul O. C.: *See*—
Rinehuls, Cecil C., and Jackson. 3,046,511.
Jackson, Roderick M.: *See*—
Brown, Calvin F., Jackson, and Campbell. 3,045,598.
Jacobi, Ernest, S. Lust, and A. van Schoor, to E. Merck, Aktiengesellschaft. Nematocidal agents. 3,046,189, 7-24-62, Cl. 167—22.
Jacobitti, Edward: *See*—
Deming, Royce D., Jacobitti, Kennedy, Large, and Pruden. 3,046,525.
Jacobson, Harvey B.: *See*—
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Jacquinot, Pierre, and R. Chabbal, to Commissariat a L'Energie Atomique. Variable step interferometers. 3,045,535, 7-24-62, Cl. 88—14.
Jahn, Alex K., to The Dow Chemical Co. Flame-proof foamable alkenyl aromatic resin granules and method of making. 3,046,236, 7-24-62, Cl. 260—2.5.
Jamieson, Helen D., to Associated Lead Manufacturers Ltd. Pigments. 3,046,150, 7-24-62, Cl. 106—296.
Janko, Denes, to Chemolimpex Magyar Vegyiaru Kulkereskedelmi Vallalat. Process for the preparation of printing dyes from vat dyes and sulfur dyes, not suitable by themselves for printing purposes. 3,046,077, 7-24-62, Cl. 8—70.
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Jenn, Louis J., and J. A. Payton, to Jenn Air Products Co., Inc. Vertical discharge roof exhauster. 3,045,579, 7-24-62, Cl. 98—43.
Jennings, Frank S., Jr. Helicopter control system. 3,045,950, 7-24-62, Cl. 244—17.11.
Jensen, Arthur E. Self-erecting sprinkler head for irrigation pipelines. 3,045,922, 7-24-62, Cl. 239—225.
Johannesen, George T., Sr., to The Upjohn Co. Closure device for dispensing pills and capsules from bottles. 3,045,875, 7-24-62, Cl. 222—364.
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Johnson, Keith O., to Ampex Corp. Tape driving apparatus. 3,045,937, 7-24-62, Cl. 242—55.12.
Johnson, Keith A., to Ampex Corp. Tape driving apparatus. 3,045,938 7-24-62, Cl. 242—55.12.
Johnson, Miles C., and T. J. Burke, to United States of America, Navy. Error store and reset circuit. 3,046,524, 7-24-62, Cl. 340—147.
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Johnson, Richard C., and J. W. Sawyer. Electro-chemical machining system. 3,046,206, 7-24-62, Cl. 204—143.
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Johnson Stanford E., and T. Bydalek, to Practical Tool & Engineering Co., Inc. Adjustable register for air flow. 3,045,580, 7-24-62, Cl. 98—107.
Johnson, Wallace C., and S. H. Butt, to Olin Mathieson Chemical Corp. Fabrication of hollow articles. 3,045,330, 7-24-62, Cl. 29—157.3.
Johnson, Warren B. Close cutting cultivator. 3,045,764, 7-24-62, Cl. 172—191.
Johnson, Wayne R., to Minnesota Mining and Mfg. Co. Speed regulating apparatus for recording media. 3,046,463, 7-24-62, Cl. 318—302.
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Jones, Howard S., Jr., to United States of America, Army. Waveguide components. 3,046,507, 7-24-62, Cl. 333—95.
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Julia, Marc T., to Societe des Usines Chimiques Rhone-Polenc. Process for the preparation of cyclopropane-carboxylic acids of trans-form. 3,046,299, 7-24-62, Cl. 260—468.
Jungmayr, Theodor, and P. Lohse, to Hesser, Fr., Maschinenfabrik-Aktiengesellschaft, Firma. Packaging machines. 3,045,720, 7-24-62, Cl. 141—145.
Jurgens, William C., and F. W. Treptow, to Bell Telephone Laboratories, Inc. Guided cord weight assembly. 3,046,356, 7-24-62, Cl. 179—95.
Jurs, Albert E., Jr., and T. E. Veltfort, Jr., to Shand and Jurs Co. Telemetering system and apparatus. 3,045,488, 7-24-62, Cl. 73—342.
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Kaenel, Reginald A., to Bell Telephone Laboratories, Inc. Analog-to-digital converter. 3,046,543, 7-24-62, Cl. 340—347.
Kaestlé, Charles E. Device for teaching, particularly for the teaching of drawing. 3,045,363, 7-24-62, Cl. 35—26.
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Kaiser Industries Corp.: *See*—
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Kaizerman, Samuel: *See*—
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Kalmus, Henry P. Short range tracking system. 3,046,549 7-24-62, Cl. 343—113.
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Kammer, Karl. Surgical thread dispenser. 3,045,866, 7-24-62, Cl. 221—69.
Kane, Joseph F., to Schlage Lock Co. Latchbolt extension. 3,046,042, 7-24-62, Cl. 292—1.

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Kappeler, Hans: *See*—
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Kaulen, Robert, to Bekk & Kaulen Chemische Fabrik G.m.b.H. Dr. Process and apparatus for the seamless coating of printing elements, such as plates and cylinders. 3,046,156, 7-24-62, Cl. 117—94.

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Kearney, Thomas J., and B. A. Young, to Detrex Chemical Industries, Inc. Method and apparatus for interiorly cleaning tanks and the like. 3,046,163, 7-24-62, Cl. 134—11.

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Keenan, Thomas J., Jr. Draft regulator and scrubber. 3,045,990, 7-24-62, Cl. 261—120.

Keesling, Thomas B., to Cycle Equipment Co. Tape winder. 3,045 941, 7-24-62, Cl. 242—71.8.

Keiser, Neil, to E. I. du Pont de Nemours and Co. Injection molding machine. 3,045,283, 7-24-62, Cl. 18—30.

Keithahn, Julian D., to Baker Oil Tools, Inc. Milling apparatus for removing objects from well bores. 3,045,752, 7-24-62 Cl. 166—55.

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Kelner, Robert C., to Laboratory for Electronics, Inc. Reversible magnetic shift register. 3,046,530, 7-24-62, Cl. 340—174.

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Kittel, Walter. Contact plate arrangement for contact columns. 3,045,989, 7-24-62, Cl. 261—114.

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Kohli, Benjamin. Central heating boiler with cooking plate. 3,045,661, 7-24-62, Cl. 126—34.

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Kolenko, Evgeny A., and A. G. Czerbina. Solder for joining thermocouples with copper. 3,045,341, 7-24-62, Cl. 29—501.

Kolling, Johann, to The Babcock & Wilcox Co. Method of making a gas-tight integral tube panel. 3,045,340, 7-24-62, Cl. 29—471.1.

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Korones, Herbert D., and H. E. Rosenberger, to Bausch & Lomb, Inc. Optical system for sighting instruments. 3,045,545, 7-24-62, Cl. 88—57.

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La Fata, Peter A. Vehicle roof mounted speedometer. 3,045,637, 7-24-62, Cl. 116—57.

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Mosle, Ernst. 3,045,553.
Stadelmann, Rudolf. 3,045,525.

Mackie, William L., to United States of America, Navy. Shock absorbing aircraft arresting hook. 3,045,958, 7-24-62, Cl. 244—110.

MacLeod, David E.: *See*—
McGrath, William L., and MacLeod. 3,045,443.

MacLeod, David E., to Carrier Corp. Ice making. 3,045,445, 7-24-62, Cl. 62—137.

Magnetrol, Inc.: *See*—
Binford, Benjamin L. 3,046,475.

Maguire, Frederick A.: *See*—
Hawthorne, Kenneth B., and Maguire. 3,045,835.

Maher, Joseph L., and R. F. Baker, to National Tank Co. Motor-compressor unit. 3,045,899, 7-24-62, Cl. 230—239.

Mahoney, Thomas P.: *See*—
Bonnafoux, Paul. 3,045,280.

Maingault, Guy L. R.: *See*—
Cherreau, Andre G., Girard, and Maingault. 3,045,335.

Maisel, Emanuel N.: *See*—
Struthers, William H. 3,046,004.

Majeske, Walter: *See*—
Severance, Robert H., and Majeske. 3,045,509.

Malavazos, Arthur J., to Friden, Inc. Calculating machine. 3,045,907, 7-24-62, Cl. 235—73.

Malcolm, William R., to Crosman Arms Co., Inc. Gas powered gun. 3,045,659, 7-24-62, Cl. 124—11.

Malick, Dell M.: *See*—
Akers, Edward G. 3,045,880.

Mallonee, Robert E.: *See*—
Cessna, John C., and Mallonee. 3,046,229.

Mallory, P. R. & Co., Inc.: *See*—
Ang, Choh-Yi, and Burkhammer. 3,045,331.

Maloney, Frederick G.: *See*—
Christenson, James J., and Maloney. 3,045,848.

Manahan, Max J., to General Motors Corp. Random sweep generator. 3,046,472, 7-24-62, Cl. 323—89.

Manley, John P., and H. A. Norberg. Picnic grill. 3,045,660, 7-24-62, Cl. 126—30.

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Mann, Julius W., and G. F. Russell. Process of finger joint end gluing. 3,046,181, 7-24-62, Cl. 156—274.

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Burrows, Lewis M. 3,046,026.

Mansaver Industries, Inc.: *See*—
Gris, Conrad D. 3,046,046.

Marchi, Vito V., to American Radiator & Standard Sanitary Corp. Liquid dispenser. 3,045,876, 7-24-62, Cl. 222—386.

Marelli S.p.A., Fabbrica Italiana Magneti: *See*—
Alfieri, Giuseppe. 3,045,703.
Alfieri, Giuseppe. 3,046,061.

Margulies, Stanley H. Easel clock and the like with interchangeable frames. 3,045,960, 7-24-62, Cl. 248—117.

Markowitz, Jerome, and M. F. Nelson, to Allen Organ Co. Light responsive variable resistance control devices for electronic musical instruments. 3,045,522, 7-24-62, Cl. 84—1.27.

Markusen, David L., R. C. McLane, and O. R. Pomeroy, to Minneapolis-Honeywell Regulator Co. Aircraft landing process and apparatus. 3,045,955, 7-24-62, Cl. 244—77.

Marrocco, Henry F. Apparel hanger. 3,045,882, 7-24-62, Cl. 223—95.

Mars, Oreste L. Means for taking dental impressions. 3,045,349, 7-24-62, Cl. 32—19.

Marsal, Jeannette Y.: *See*—
Marsal, Paul A. 3,046,326.

Marsal, Paul A., deceased, by J. Y. Marsal, executrix, to Union Carbide Corp. Extended area anodes. 3,046,326, 7-24-62, Cl. 136—120.

Marshall, Donald E., Jr., to Philco Corp. Synchronized oscillator control system. 3,046,490, 7-24-62, Cl. 331—1.

Martens, Jack E., to The Anderson Co. Position-adjusting mechanism. 3,046,055, 7-24-62, Cl. 297—361.

Martin-Decker Corp.: *See*—
Decker, Elmer L., and McNeill. 3,045,480.

Martin, Earl C., to Western Electric Co., Inc. Article assembling apparatus. 3,045,337, 7-24-62, Cl. 29—211.

Martin, Fred N.: *See*—
Harris, Lionel R. F., and Martin. 3,046,345.

Martin, Henry E., to United Aircraft Corp. Speed responsive fuel control for helicopters. 3,046,450, 7-24-62, Cl. 317—5.

Martin, Howard F., ¼ to R. G. Gump and ¼ to R. E. Gump. Fishing float or lure. 3,045,381, 7-24-62, Cl. 43—26.2.

Martin, Lucien J. A. Multi-stage toy missile. 3,045,392, 7-24-62, Cl. 46—228.

Martin, Paul S., to Federal Pacific Electric Co. Circuit breakers and enclosures therefor. 3,046,453, 7-24-62, Cl. 317—119.

Marx, David H. Bowling alley. 3,046,012, 7-24-62, Cl. 273—51.

Marx, Louis, & Co., Inc.: *See*—
Hirsch, Mahlon E., and Lohr. 3,045,377.

Marx, Michael F.: *See*—
Litynski, Raymond S., and Marx. 3,046,465.

Masland, C. H., and Sons: *See*—
Hankins, Kenneth E. 3,046,177.

Matlow, Sheldon L., to Hoffman Electronics Corp. Alloyed photovoltaic cell and method of making the same. 3,046,324, 7-24-62, Cl. 136—89.

Matson, Randolph. Soil moisture indicating gage. 3,045,477, 7-24-62, Cl. 73—73.

Matson, Victor H.: *See*—
Cummings, Francis M., Fleming, and Matson. 3,046,480.

Matsumoto, Michio: *See*—
Amada, Sanae, Matsumoto, and Ukitsu. 3,045,590.

Matteson, Emory F., to Shampaine Industries, Inc. Door-latches. 3,046,043, 7-24-62, Cl. 292—175.

Matthews, Russell B., to Penn Controls, Inc. Burner and thermoelectric device assembly. 3,046,321, 7-24-62, Cl. 136—4.

Mattingly, John J. and R. J. Mattingly, deceased, by R. R. Mattingly, executor. Abesive applicator for a can labeling machine. 3,045,643, 7-24-62, Cl. 118—415.

Mattingly, Ralph J.: *See*—
Mattingly, John J. and R. J. 3,045,643.

Mattingly, Richard R.: *See*—
Mattingly, John J. and R. J. 3,045,643.

Mattson, Russell E.: *See*—
Summers, Frank P., Jr., and Mattson. 3,046,556.

Matyas, Andrew M. Wall facing material. 3,045,396, 7-24-62, Cl. 50—342.

Matzen, Walter T., and J. R. Biard, to Texas Instruments Inc. Differential transistor amplifier. 3,046,487, 7-24-62, Cl. 330—19.

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Halversen, Roy A., Maurer, and Saad. 3,046,165.

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McAvoy, Daniel J.: *See*—
Speer, Paul, Griggs, and McAvoy. 3,046,286.

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Mead, Carver A., and McBrayer. 3,046,479.

McCachern, Carey W., Jr.: *See*—
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McCarty, George W., and A. C. Stanley, to The Black and Decker Mfg. Co. Anti-splintering resiliently-retained insert for shoe of jig saw. 3,045,725, 7-24-62, Cl. 143—68.

McDermott, Hugh L., to Buckbee-Mears Co. Abrading devices and method of making them. 3,045,321, 7-24-62, Cl. 29—78.

McDevitt, James A.: *See*—
Bell, Raymond M., Gooding, Wellman, and McDevitt. 3,045,560.

McDonnold, Le Roy, to General Motors Corp. Oven door mounting means. 3,045,663, 7-24-62, Cl. 126—190.

McEachern, Loyd R., to The American Monorail Co. Compound boot. 3,045,929, 7-24-62, Cl. 239—566.

McEwan, James. Lawn mower sharpener. 3,045,398, 7-24-62. Cl. 51—48.

McFarland, William O. Continuity tester. 3,046,476, 7-24-62, Cl. 324—53.

McGrath, Thomas F., to American Cyanamid Co. Alkylation of aromatic compounds. 3,046,309, 7-24-62, Cl. 260—612.

McGrath, William L., and C. G. Alt, to Carrier Corp. Ice making. 3,045,440, 7-24-62, Cl. 62—68.

McGrath, William L., and D. E. MacLeod, to Carrier Corp. Ice making. 3,045,443, 7-24-62, Cl. 62—71.

McGrath, William L., to Carrier Corp. Air distribution assembly. 3,045,578, 7-24-62, Cl. 98—40.

McGraw-Edison Co.: *See*—
Basiago, Raymond, and Williams. 3,046,458.
Goettl, Adam D. 3,045,576.
Holladay, Fred O., and Kobler. 3,046,019.

McIlhenny, Alan, to Link-Belt Co. Liquid sewage rotary distributor. 3,045,924, 7-24-62, Cl. 239—254.

McKeon, Jeanne B. Infant's shoe protector. 3,045,367, 7-24-62, Cl. 36—72.

McLane, Robert C.: *See*—
Markusen, David L., McLane, and Pomeroy. 3,045,955.

McLean, William B., 50% to W. G. Finch. Vortex gas turbine. 3,045,428, 7-24-62, Cl. 60—39.75.

McLemore, Taylor A.: *See*—
Deobald, Harold J., and McLemore. 3,046,145.

McMahon, George E., to Vulcan Containers Inc. Composite container. 3,045,859, 7-24-62, Cl. 220—23.

McMahon, Howard O.: *See*—
Gifford, William E., and McMahon. 3,045,436.

McNeill, Robert C.: *See*—
Decker, Elmer L., and McNeill. 3,045,480.

McVey, Eugene S., to United States of America, Navy. Balanced load parallel coupled transistor circuit. 3,046,488, 7-24-62, Cl. 330—30.

Mead, Carver A., and M. L. McBrayer, to Moisture Register Co. Moisture content meter. 3,046,479, 7-24-62, Cl. 324—61.

Mead Corp., The: *See*—
Forrer, Homer W. 3,045,888.

Mechanical Handling Systems, Inc.: *See*—
Klamp, Paul. 3,045,610.

Medart Lockers, Inc.: *See*—
Murphy, Raymond J. 3,045,292.

Meek, William H., Jr.: *See*—
Unkefer, Gilbert G., Barrick, and Meek. 3,046,153.

Mehltretter, Charles L.: *See*—
Otey, Felix H., Wilham, and Mehltretter. 3,046,312.

Meienberg, Hans, to Escher Wyss Aktiengesellschaft. Vibration damping device for turbo-machine. 3,045,969, 7-24-62, Cl. 253—78.

Meissen, Wolfgang, to Siemens-Schuckertwerke Aktiengesellschaft. Pulse generator for producing periodic pulses of varying width from an alternating voltage. 3,046,414, 7-24-62, Cl. 307—88.5.

Mellencamp, Robert E., to General Motors Corp. Rotary display device. 3,045,971, 7-24-62, Cl. 254—87.

Meltzer, Robert I., R. J. Stanaback, and W. B. Lutz, to Warner-Lambert Pharmaceutical Co. Process of preparing triiodinated analogs of thyronine. 3,046,306, 7-24-62, Cl. 260—519.

Mensing, Clifford E. Arch support forming fixture. 3,045,266, 7-24-62, Cl. 12—1.

Mentha, John W.: *See*—
Phillips, Arthur P., and Mentha. 3,046,301.

Mercantile Metals, Inc.: *See*—
Voinovich, Sweeney. 3,046,220.

Merck & Co., Inc.: *See*—
Arth, Glen E., and Fried. 3,046,094.
Engelhardt, Edward L. 3,046,283.
Fried, John, and Bry. 3,046,273.
Sletzinger, Meyer, and Gaines. 3,046,300.

Merck, E., Aktiengesellschaft: *See*—
Jacobi, Ernest, Lust, and van Schoor. 3,046,189.

Meredith, Pat. Fishing line brake for spinning reels. 3,045,380, 7-24-62, Cl. 43—25.

Merriman Bros., Inc.: *See*—
Wayson, Andrew J., and Bucchianeri. 3,045,417.

Met, Victor O.: *See*—
Forrer, Max P., and Met. 3,046,497.

Metalastik Ltd.: *See*—
Hirst, Archie J. 3,045,998.

Metro Atlantic, Inc.: *See*—
Buonanno, Joseph E., and Shore. 3,046,185.

Meyer, Geo. J., Mfg. Co.: *See*—
Meyer, George L. N. 3,046,027.

Meyer, George L. N., to Geo. J. Meyer Mfg. Co. Valve sealing element. 3,046,027, 7-24-62, Cl. 277—180.

Meyer, Leo F.: *See*—
Hazen, Stanley M., and Meyer. 3,046,265.

Meyers, Elwood J.: *See*—
Ring, Wayne A., and Meyers. 3,045,917.

Michael, Henry J.: *See*—
Breen, Charles, and Michael. 3,046,339.

Michigan Chemical Corp.: *See*—
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Middleswarth, Earl T., and J. E. Duncan, to Pittsburgh Plate Glass Co. Dense, non-browning, plate glass composition. 3,046,148, 7-24-62, Cl. 106—53.

Middleton, Forest L., to Lescoa, Inc. Ash tray. 3,045,813, 7-24-62, Cl. 206—19.5.

Midland-Ross Corp.: *See*—
Burroughs, Ralph H., Jr., and Levine. 3,046,085.
Levy, Eli. 3,046,233.
Schultz, Forrest O. E. 3,046,003.

Miedema, Hotze, to Bell Telephone Laboratories, Inc. Transmission control in two way communication system. 3,046,347, 7-24-62, Cl. 179—15.

Miller, Alexander A., to General Electric Co. Irradiation of organopolysiloxanes. 3,046,207, 7-24-62, Cl. 204—154.

Miller, Arthur L. R. Collapsible casket. 3,045,314, 7-24-62, Cl. 27—2.

Miller Engineering Corp.: *See*—
Miller, Frank H., Jr. 3,045,802.

Miller, Floyd E.: *See*—
Blanchard, Roy L., and Miller. 3,045,457.

Miller, Frank H., Jr., to Miller Engineering Corp. Method and apparatus for palletizing. 3,045,802, 7-24-62, Cl. 198—33.

Miller, George W., and F. L. Rose, to Imperial Chemical Industries Ltd. s-triazolo-[2,3-c]pyrimidine derivatives. 3,046,276, 7-24-62, Cl. 260—256.4.

Miller, William R., to General Electric Co. Unsymmetrical stabilization. 3,046,464, 7-24-62, Cl. 318—307.

Millet, Jacques, to Societe le Carbone-Lorraine. Carbon brushes. 3,046,425, 7-24-62, Cl. 310—228.

Milligan, John G., to Jefferson Chemical Co., Inc. Method for preparing 1,5-pentanediols. 3,046,311, 7-24-62, Cl. 260—635.

Milner, Dumas, Corp.: *See*—
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Minneapolis-Honeywell Regulator Co.: *See*—
Brandt, Carl R. 3,054,489.
Carlson, Elmer A. 3,046,380.
Carlson, William L., Jr., and Exner. 3,045,599.
Davio, Donald A. 3,045,638.
Dietiker, Paul. 3,046,406.
Domenicali, Charles A. 3,046,164.
Eachus, Joseph J. 3,046,418.
King, William R. 3,045,816.
Kutzler, Robert J. 3,045,492.
Markusen, David L., McLane, and Pomeroy. 3,045,955.
Nickells, Stanley W. 3,045,690.
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Minnesota Mining and Mfg. Co.: *See*—
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Sandberg, Carl L., Roth, and Mullins. 3,046,226.

Mino, Guido: *See*—
Salsbury, Jason M., Kaizerman, and Mino. 3,046,078.

Minor, Robert N.: *See*—
Stager, Francis W., and R. N. and T. A. Minor. 3,046,060.

Minor, Thomas A.: *See*—
Stager, Francis W., and R. N. and T. A. Minor. 3,046,060.

Minsk, Louis M., to Eastman Kodak Co. Sensitization of photographic silver halide emulsions with polyester compounds containing a plurality of sulfur atoms. 3,046,132, 7-24-62, Cl. 96—108.

Minsk, Louis M., to Eastman Kodak Co. Sensitization of photographic silver halide emulsions with polyester compounds containing thioether-sulfur atoms in the side chain. 3,046,133, 7-24-62, Cl. 96—108.

Mishelevich, Benjamin, and S. H. Tsiang, to Westinghouse Air Brake Co. Car counting systems. 3,046,394, 7-24-62, Cl. 246—182.

Missouri Wood Heel Co.: *See*—
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Mitchell, Mildred. Hair curlers. 3,045,683, 7-24-62, Cl. 132—34.

Mitchell, Reid L., D. K. Smith, and R. C. Welton, to Rayonier Inc. Viscose process for the manufacture of low-shrink rayon. 3,046,082, 7-24-62, Cl. 18—54.

Mitchell, Robert I. Circular saw guide and square attachment. 3,045,724, 7-24-62, Cl. 143—6.

Mitchell, Robert P. Skin diver's combined float and equipment carrier. 3,045,262, 7-24-62, Cl. 9—1.

Mitchell, Wallace F., to E-Z Packaging Corp. Packaging machine and method of forming packages. 3,045,403, 7-24-62, Cl. 53—74.

Miyake, Kunihiko: *See*—
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Miyake, Tokuaki: *See*—
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Moeller, Lowell J., to Western Electric Co., Inc. Method of and apparatus for forming cage-like terminal strip subassemblies. 3,045,712, 7-24-62, Cl. 140—71.

Moes, Geert: *See*—
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Mohr, John G.: *See*—
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Moisture Register Co.: *See*—
Mead, Carver A., and McBrayer. 3,046,479.

Moller, George A. Protective device for pocket wallets or the like. 3,045,734, 7-24-62, Cl. 150—47.

Molnar, Eugene J., to Coe Laboratories, Inc. Method of preparing solid elastomers from uncured liquid organic polythiopolymercaptan polymers. 3,046,248, 7-24-62, Cl. 260—31.8.

Molnar, Imre, to Automatic Electric Laboratories, Inc. Calling station detector. 3,046,344, 7-24-62, Cl. 179—9.

Molnar, Imre, to Automatic Electric Laboratories, Inc. Station identification apparatus. 3,046,349, 7-24-62, Cl. 179—17.

Monahan, Jack J., and R. C. Shafer, to Western Electric Co., Inc. Apparatus for mounting wires on articles. 3,045,715, 7-24-62, Cl. 140—112.

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Kern, Roland J., and Kenyon. 3,046,245.
Montague, Joseph L. 3,046,092.
Ogden, Franklin F. 3,046,136.
Ogden, Franklin F. 3,046,137.
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Seiler, David A. L., and Brown. 3,046,190.

Montague, Joseph L., to Monsanto Chemical Co. Tripolyphosphate process improvement. 3,046,092, 7-24-62, Cl. 23—106.

Montgomery, Donald W., to The Babcock & Wilcox Co. Device for the storage of a heat evolving material. 3,046,403, 7-24-62, Cl. 250—106.

Montgomery, Edna M., and K. R. Sexson, to United States of America, Agriculture. Recovery of amylose from high amylose cornstarch. 3,046,161, 7-24-62, Cl. 127—71.

Moore, Howard H., Jr., to Cameo, Inc. Storm choke. 3,045,760, 7-24-62, Cl. 166—224.

Moore, Howard V., G. D. Edwards, and M. Lichtenwalter, to Jefferson Chemical Co., Inc., Asphaltic bituminous compositions. 3,046,149, 7-24-62, Cl. 106—273.

Morgan, William H., T. W. Herbst, and D. R. King, to Ethyl Corp. Simultaneous evacuation of a vessel and separation of undesirable materials from vapors. 3,046,791, 7-24-62, Cl. 141—7.

Moritz, William E.: *See*—
Yost, James M., and Moritz. 3,045,287.
Morrell, Gerald, to United States of America, National Aeronautics and Space Administration. Method for continuous variation of propellant flow and thrust in propulsive devices. 3,045,424, 7–24–62, Cl. 60—35.3.
Morris, Arthur L., to Esso Research and Engineering Co. Method of lubricating metal parts exposed to nuclear radiation and hot carbon dioxide. 3,046,223, 7–24–62, Cl. 252—27.
Morris, Jack, to American Machine & Foundry Co. Spiral tube mill. 3,046,382, 7–24–62, Cl. 219—62.
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Moyat, Peter, to Hartmann & Braun Aktiengesellschaft. Instrument for maintaining constant oxygen partial pressure and measuring oxygen consumption. 3,045,665, 7–24–62, Cl. 128—207.
Moyer, Elton S., to General Motors Corp. Brake booster. 3,045,652, 7–24–62, Cl. 121—41.
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Mulrhead & Co. Ltd.: *See*—
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Mullett, Howard G.: *See*—
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Murcko, Nelson F. Magnetic sheet film loader. 3,045,571, 7–24–62, Cl. 95—11.
Murphy, Norbert J., to Automatic Electric Laboratories, Inc. Postpay paystation circuit providing special service. 3,046,341, 7–24–62, Cl. 179—6.3.
Murphy, Raymond, J., to Medart Lockers, Inc. Control systems for power-actuated extensible seat structures. 3,045,292, 7–24–62, Cl. 20—1.126.
Murray, Jerome L. Fluid pressure devices. 3,045,611 7–23–62, Cl. 104—155.
Murray, John L., and R. A. Westlund, to Esso Research and Engineering Co. Solution metal cutting and grinding fluids. 3,046,225, 7–24–62, Cl. 252—33.6.
Müschenborn, Walter, and E. Nötzold. Process for preparing smalls and fines of coal. 3,045,818, 7–24–62, Cl. 209—49.
Muse, John F., to Baker Oil Tools, Inc. Compensating tubing anchor. 3,045,758, 7–24–62, Cl. 166—216.
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Myers, William D., to Baker Oil Tools, Inc. Parallel tubing string packer and anchor. 3,045,754, 7–24–62, Cl. 166—120.
Nakata, Arthur H., to Cenco Instruments Corp. Gas sampling valve. 3,045,702, 7–24–62, Cl. 137—625.48.
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Nathan, Tracy D., to Hamilton Kent Mfg. Co. Gasket and use thereof. 3,046,028, 7–24–62, Cl. 277—208.
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Cohen, Howard J., and Hoyt. 3,046,269.
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Nederlandse Organisatie voor Toegepast-Natuuriveten-Schappelijk Onderzoek ten behoeve van de Volksgezonheid: *See*—
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Raezer, Spencer D. Method for the measurement of extreme temperatures and means therefor. 3,045,487, 7–24–62, Cl. 73—339.

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Reed, Alan: *See*—
Remke, John L., Reed, and Deam. 3,046,512.

Reed, Edgar, 2nd. Drill point screw having interrupted leading end threads formed by a flat chordal surface. 3,045,523, 7–24–62, Cl. 85—47.

Reesor, Thomas W. Stereo sound system for TV. 3,046,329, 7–24–62, Cl. 178—5.6.

Reeve, John E., to G. Hopkins & Sons Ltd. Racking heads for filling pressure casks. 3,045,718, 7–24–62, Cl. 141—37.

Reeves, Wilson A., R. M. Perkins, and L. H. Chance, to United States of America, Agriculture. Process of reacting partially swollen cotton textiles with aqueous solutions of specific aldehydes containing acid catalysts to produce wet and dry crease resistance. 3,046,079, 7–24–62, Cl. 8—116.4.

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Péras, Lucien. 3,045,656.

Reich, Harold A., to United States Steel Corp. Suspended refractory roof. 3,045,616, 7–24–62, Cl. 110—99.

Reid, James S., to The Standard Products Co. Spongy elastomeric materials and methods and products used in the manufacture of the same. 3,046,172, 7–24–62, Cl. 154—46.

Reinke, Lester H., to Dow Corning Corp. Polyethylene-paper adhesion. 3,046,155, 7–24–62, Cl. 117—76.

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Remembrance Memorials, Inc.: *See*—
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Remke, John L., A. Reed, and A. E. Deam, to Raico Mfg. Co. Electrical connector. 3,046,512, 7–24–62, Cl. 339—14.

Rentscher, Roland R., and R. C. M. Hume. Key holder. 3,045,469, 7–24–62, Cl. 70—459.

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Research-Cottrell, Inc.: *See*—
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Resistance Products Co.: *See*—
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Reynolds, Adele W. Beach drag. 3,046,031, 7–24–62, Cl. 280—8.

Reynolds, George W., to Standard Coil Products Co., Inc. Bilateral parametric amplifier. 3,046,363, 7–24–62, Cl. 179—170.

Reynolds, Richard H., and A. L. Askew, Jr., to United Carbon Co., Inc. Fluid seal valve. 3,045,692, 7–24–62, Cl. 137—240.

Rhodes, Junior L., to General Electric Co. Signal receiving apparatus. 3,046,486, 7–24–62, Cl. 329—138.

Rhodes, Roland N., and J. Avins, to Radio Corp. of America. Noise protection circuit for television receivers. 3,046,335, 7–24–62, Cl. 178—7.3.

Ribaudo, Tony. Ironing board construction. 3,045,372, 7–24–62, Cl. 38—121.

Rice, Owen R., to Koppers Co., Inc. Ultra high pressure blast furnace. 3,045,996, 7–24–62, Cl. 266—31.

Richard, Charles D., and A. W. Ziegler; said Richard assor. to said Ziegler. Device for recording the speed of shutters in photographic apparatus. 3,046,555, 7–24–62, Cl. 346—108.

Richard, Léon: *See*—
Kohli, Benjamin, and Richard. 3,045,662.

Richards, Howard R.: *See*—
Alexeff, Alexander V., and Richards. 3,045,360.

Richards-Wilcox Mfg. Co.: *See*—
Brown, Willard D., Jr. 3,045,609.

Richardson, Ronald E., to Pittsburgh Plate Glass Co. Prepressing of laminated safety glass panels. 3,046,169, 7–24–62, Cl. 154—2.7.

Richter, Magdoline R. Fitted bed sheet. 3,045,260, 7–24–62, Cl. 5—334.

Richter, Willy, to Hauni-Werke Korber & Co. K.G. Device for producing a continuous tobacco rod. 3,045,681, 7–24–62, Cl. 131—109.

Ridenour, William P., to Gulf Research & Development Co. Paraffin wax composition containing polyisobutylene and polyethylene. 3,046,238, 7–24–62, Cl. 260—28.5.

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Rinehuls, Cecil C., and P. O. C. Jackson. Ground clamp. 3,046,511, 7–24–62, Cl. 339—13.

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Rippingille, Edward V., to General Motors Corp. Mechanical heart pump or the like. 3,045,601, 7–24–62, Cl. 103—44.

Risley, Roger E., to Dresser Industries, Inc. Service T. 3,045,511, 7–24–62, Cl. 77—38.

Risley, Roger E., and J. P. Mann, to Dresser Industries, Inc. Service fitting. 3,045,512, 7–24–62, Cl. 77—38.

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Robinson, Kenneth A., and W. H. Woodward, to Lancashire Dynamo Electronic Products Ltd. Control systems for generators. 3,046,468, 7–24–62, Cl. 322—28.

Robinson, Wesley A., to Space Technology Laboratories, Inc. Frequency divider systems. 3,046,410, 7–24–62, Cl. 307—11.

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Roe, John H., to Radio Corp. of America. Television optical system. 3,046,334, 7–24–62, Cl. 178—7.2.

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Andrews, Mark B., and Burke. 3,045,883.

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Roman, Daniel P., and T. A. Taulli, to Monsanto Chemical Co. Stable alkaline silica sols containing certain dialdehydes. 3,046,234, 7–24–62, Cl. 252—313.

Root, Elihu, III, to R. E. Dietz Co. Transistor oscillator circuit. 3,046,494, 7–24–62, Cl. 331—111.

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Rosenfelder, William J., and J. J. Rosen, to Dublon, Inc. Blend comprising plasticized vinyl chloride resin and a monoolefinic polymer and process of preparing same. 3,046,237, 7–24–62, Cl. 260—23.

Rosenthal, Sidney, to United States of America, Air Force. Electromechanical linear reciprocal actuator. 3,045,779, 7–24–62, Cl. 185—37.

Ross, Frederick W. Gas turbine engine. 3,045,894, 7–24–62, Cl. 230—114.

Ross, Herbert F., to Chain Anodizers Inc. Apparatus for continuously electrolytically treating flexible articles. 3,046,214, 7–24–62, Cl. 204—210.

Ross, Karl F. Projection of stereoscopic pictures. 3,046,330, 7–24–62, Cl. 178—6.5.

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Rowley, Russell A., F. V. Adams, and J. F. Gaffney, to International Business Machines Corp. Character group recognition system. 3,046,527, 7–24–62, Cl. 340—167.

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Rudd, Hilton A., Sr. Air hose nozzle attachment. 3,045,930, 7–24–62, Cl. 239—579.

Rueb, Theodore O., to The Sherman Klove Co. Universal joint. 3,045,454, 7–24–62, Cl. 64—17.

Ruggeri, Peter D. Machine for pulling supporting wires from a trellis. 3,045,936, 7–24–62, Cl. 242—54.

Rule, Frank M., and J. L. Schmeller. Cleaning and aerating circulatory system for swimming pools. 3,045,829, 7–24–62, Cl. 210—169.

Rupert, Delbert C. Outboard motor lift cart. 3,045,851, 7–24–62, Cl. 214—653.

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Ryan, Richard W. Wall receptacle for an aerosol bomb. 3,045,873, 7–24–62, Cl. 222—162.

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Sagara, Atsuko. Cigarette holders. 3,045,682, 7–24–62, Cl. 131—187.

Saito, Shigeru, to Toho Rayon Kabushiki Kaisha. Apparatus for acetylating cellulose fibers in gaseous phase. 3,045,461, 7–24–62, Cl. 68—5.

Salsbury, Jason M., S. Kaizerman, and G. Mino, to American Cyanamid Co. Graft polymerization process. 3,046,078, 7–24–62, Cl. 8—116.

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Sampietro, Achilles C., to Thompson Ramo Wooldridge Inc. Valve operating means. 3,045,657, 7–24–62, Cl. 123—90.

Sampietro, Achilles C., to Thompson Ramo Wooldridge Inc. Valve operating mechanism. 3,045,658, 7–24–62, Cl. 123—90.

Sampietro, Achilles C. Front wheel suspension systems for automobile vehicles. 3,045,773, 7–24–62, Cl. 180—43.

Sandberg, Carl L., P. I. Roth, and J. M. Mullins, to Minnesota Mining and Mfg. Co. Lubricating oil compositions. 3,046,226, 7–24–62, Cl. 252—57.

Sandberg, Irwin W., to Bell Telephone Laboratories, Inc. Active multiport networks. 3,046,504, 7–24–62, Cl. 333—80.

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Santelli, Thomas R., to Johns-Manville Corp. Method for producing aqueous silanol dispersion by contacting a metal siliconate with a cation exchanger and product thereof. 3,046,242, 7–24–62, Cl. 260—29.2.

Santelli, Thomas R., J. G. Mohr, and C. A. Calendine, to Johns-Manville Fiber Glass Inc. Aqueous glass-fiber sizing composition containing polymer and cationic deionization product of a vinyl siliconate. 3,046,243, 7–24–62, Cl. 260—29.6.

Sarka, Albert J., to The Wean Engineering Co., Inc. Strip clamping and front stop means for cyclically operable shear. 3,045,519, 7–24–62, Cl. 83—157.

Sarns, William M. Releasable Marine anchor. 3,045,633, 7–24–62, Cl. 114—208.

Sauberlich, Willy, to Goebel G.m.b.H., Maschinenfabrik. Process for the production of shaped inking rollers for steel engraving or intaglio printing. 3,045,591, 7–24–62, Cl. 101—211.

Sauer, Edgar, H. Wutzler, and J. Hahn, to Zeiss Ikon Aktiengesellschaft. Photographic camera with automatic exposure control. 3,045,568, 7–24–62, Cl. 95—10.

Sauer, Edgar, W. Gunther, and H. Wutzler, to Zeiss Ikon A.G. Stuttgart. Photographic camera with built-in coupled exposure meter. 3,045,570, 7–24–62, Cl. 95—10.

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Scantlin, John R., to Scantlin Electronics, Inc. Selector apparatus. 3,046,526, 7–24–62, Cl. 340—164.

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Scheel, Henry A., to A. Wimpfheimer & Bro. Inc. Resin molded fabric. 3,045,319, 7–24–62, Cl. 28—80.

Scheidenheim, Earl L., to H. D. Hume. Reel finger. 3,045,414, 7–24–62, Cl. 56—221.

Schempp, Roy, to FMC Corp. Automatic box-wrapping system for loose-wrap and tight-wrap work. 3,045,561, 7–24–62, Cl. 93—54.

Schepman, Feliz R., N. Wittenberg, and J. O. M. Van Langen, to North American Philips Co., Inc. Transducer. 3,046,360, 7–24–62, Cl. 179—100.41.

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Schmidt, Arno G. Stereoscopic spectacle loupe. 3,045,544, 7–24–62, Cl. 88—41.

Schmidt, Benjamin F. Reciprocal piston oil well pump. 3,045,606, 7–24–62, Cl. 103—155.

Schmidt, Ernst, to Augsburg-Nurnberg A.G., Maschinenfabrik. Ring segment seal construction for rotor side faces in rotary positive displacement internal combustion engines. 3,046,069, 7–24–62, Cl. 309—1.

Schmidt, Louis V., and G. D. Hixenbaugh, to General Dynamics Corp. Landing gear trim compensation system. 3,045,954, 7–24–62, Cl. 244—76.

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Schmidt, Maximilian P., to Azoplate Corp. Process of making printing plates and light sensitive material suitable for use therein. 3,046,110, 7–24–62, Cl. 96—33.

Schmidt, Maximilian P., to Azoplate Corp. Process of making quinone diazide printing plates. 3,046,111, 7–24–62, Cl. 96—33.

Schmidt, Maximilian P., to Azoplate Corp. Process for the manufacture of printing plates and light sensitive material suitable for use therein. 3,046,124, 7–24–62, Cl. 96—33.

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Schmidt, Maximilian P., and O. Süs, to Azoplate Corp. Light sensitive material for printing and process for making printing plates. 3,046,115, 7–24–62, Cl. 96—33.

Schmidt, Maximilian P., to Azoplate Corp. Light sensitive material for printing and process for making printing plates. 3,046,116, 7–24–62, Cl. 96—33.

Schmidt, Maximilian P., to Azoplate Corp. Process of making printing plates and light sensitive material suitable for use therein. 3,046,118, 7–24–62, Cl. 96—33.

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Schmidt, Maximilian P., and O. Süs, to Azoplate Corp. Light-sensitive layers for photo-mechanical reproduction. 3,046,120, 7–24–62, Cl. 96—33.

Schmidt, Maximilian P., to Azoplate Corp. Process for the manufacture of printing plates and light-sensitive material suitable for use therein. 3,046,121, 7–24–62, Cl. 96—33.

Schmidt, Maximilian P., W. Neugebauer, and A. Rebenstock, to Azoplate Corp. Photographic material containing light sensitive quinone diazides. 3,046,131, 7–24–62, Cl. 96—75.

Schmidt, Willard C. Tractor seat back-rest. 3,046,051, 7–24–62, Cl. 297—306.

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Schwertz, Frederick A., to Xerox Corp. Two-color electrostatic printing apparatus. 3,045,644, 7–24–62, Cl. 118—637.

Sciuto, Alfred F. Automatic fire alarm energizing means. 3,046,536, 7–24–62, Cl. 340—227.

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Seeloff, Melvin M., to The Taylor-Winfield Corp. Flash welding apparatus. 3,046,385, 7–24–62, Cl. 219—97.

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Seiz, Edward A. Rack construction. 3,045,834, 7–24–62, Cl. 211—148.

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Severance, Robert H., and Majeske. 3,045,509.

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Shears, Stuart T., to United-Carr Fastener Corp. Buckle assembly. 3,045,304, 7–24–62, Cl. 24—77.

Sheffer, Leonard R. Tandem mowing mechanism. 3,045,413, 7–24–62, Cl. 56—25.4.

Shenk, Robert H., and L. E. Shaw, to Zurn Industries, Inc. Gear coupling with combination lubricant plug and stops for limiting end movement of hubs. 3,045,453, 7–24–62, Cl. 64—9.

Shenkle, Courtney C.: *See*—
Thomas, Herbert G., Cornish, Shenkle, and Last. 3,045,486.

Shepherd, Raymond P., and W. D. Boone, to Dover Corp. Under wing fueling nozzle. 3,045,721, 7–24–62, Cl. 141—346.

Sherman, George M. *See*—
Grenstad, Arvid, Hereth, Morris, and Sherman. 3,045,552.

Sherman, H. B., Mfg. Co.: *See*—
Turner, George L. 3,045,923.

Sherman Klove Co., The: *See*—
Rueb, Theodore O. 3,045,454.

Shinn, Clifford L. Water-proof tail light. 3,046,388, 7–24–62, Cl. 340—8.3.

Shipman, Gary M., to J. P. Stevens & Co., Inc. Process for producing sized glass yarns and cleaning fabrics woven therefrom. 3,045,317, 7–24–62, Cl. 28—75.

Shiraishi, Tsuneyoshi. Method of preparing colloidal calcium magnesium silicate. 3,046,152, 7–24–62, Cl. 106—306.

Shore, Alfred W.: *See*—
Fyfe, William A., and Shore. 3,045,739.

Shore, James C.: *See*—
Buonanno, Joseph E., and Shore. 3,046,185.

Sibley, Robert C., to Sylvania Electric Products Inc. Magnetron tuner. 3,046,446, 7–24–62, Cl. 315—39.61.

Sidaris, Nickolas J., to Minneapolis-Honeywell Regulator Co. Dryer control system. 3,045,993, 7–24–62, Cl. 263—10.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Emeis, Reimer. 3,046,405.
Keller, Wolfgang, and Hoffmann. 3,046,379.
Meisen, Wolfgang. 3,046,414.
Wiehl, Klemens. 3,046,361.

Siemons, Willem J., D. G. Kelemen, and R. Steckl, to E. I. du Pont de Nemours and Co. Zone melting of semiconductive material. 3,046,100, 7–24–62, Cl. 23—301.

Sierra, Huberto M., to International Business Machines Corp. Arithmetic circuit. 3,045,914, 7–24–62, Cl. 235—170.

Sigo, Arthur T.: *See*—
Hutton, Robert W., Sigo, and Adams. 3,046,352.

Silverman, Arthur. Awning type window structure with locking means. 3,045,296, 7–24–62, Cl. 20—42.

Simmons Co.: *See*—
Mayer, Edwin H. 3,045,259.

Simon, Andre, to Ateliers Henze, Malevez et Simon Reunis, Societe Anonyme. Equipment for moving from one level to another the units of automatic conveyor tables. 3,045,806, 7–24–62, Cl. 198—85.

Simon, Henry, Ltd.: *See*—
Bromley, Harold. 3,045,562.

Simpson, Theodore S., Jr., to ABC Chemical Corp. Bait station for rats and the like. 3,045,387, 7–24–62, Cl. 43—131.

Sioux Steam Cleaner Mfg. Co., Inc.: *See*—
Gearhart, Glenn D. 3,046,070.

Ski Waxer, Inc.: *See*—
Kurlander, John, and Althen. 3,045,639.

Skobel, Max. Process and apparatus for making supported sleeving. 3,045,281, 7–24–62, Cl. 18—13.

Skromme, Arnold B., to Deere & Co. Silo unloader. 3,045,841, 7–24–62, Cl. 214—17.

Slagle, Robert L., to Berger Industries Inc. Reverse rigging arrangement for tower. 3,045,973, 7–24–62, Cl. 254—139.1.

Slaten, John M. Vein stripper. 3,045,676, 7–24–62, Cl. 128—303.

Sletzinger, Meyer, and W. A. Gaines, to Merck & Co., Inc. α-Trifluoromethyloxyphenylalanines. 3,046,300, 7–24–62, Cl. 260—471.

Sloan, Carol L., and W. A. Barber, to American Cyanamid Co. Cyclopentadienyl-metal halides and method of making. 3,046,288, 7–24–62, Cl. 260—429.5.

Sloan, Theodore H., 25% to W. B. Jaspert. Method for honing bearing surfaces. 3,045,399, 7–24–62, Cl. 51—291.

Slosberg, Benjamin L., to Missouri Wood Heel Co. Heel structure. 3,045,366, 7–24–62, Cl. 36—24.5.

Small, Augustus B.: *See*—
Hunter, Edward A., Lambert, Segura, and Small. 3,046,244.

Smeal, Thomas W.: *See*—
Hafner, William F., Leach, and Smeal. 3,046,217.

Smetko, Francis M. Head rest for seat backs. 3,046,057, 7–24–62, Cl. 297—397.

Smith, Charles H., Jr., to United States of America, Navy. Automatic frequency search and following receiver. 3,045,625, 7–24–62, Cl. 114—23.

Smith, Delmont K.: *See*—
Mitchell, Reid L., Smith, and Welton. 3,046,082.

Smith, Donald R., and W. A. Gibson, to Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence. Automatic hydraulic saddle lock. 3,045,635, 7–24–62, Cl. 114—235.

Smith, George F.: *See*—
Downing, Edward T., and Smith. 3,046,444.

Smith, Horace V., to Oil Metering and Processing Equipment Corp. Liquid metering apparatus. 3,045,485, 7–24–62, Cl. 73—224.

Smith, Howard, Paper Mills, Ltd.: *See*—
Tomlinson, George H., and G. H. Tomlinson, H. 3,046,182.

Smith, Jack C., and E. E. Etterman, to Detrex Chemical Industries, Inc. Batch extraction rinse. 3,046,081, 7–24–62, Cl. 8—159.

Smith, Millard F. Smoke filtering device. 3,045,680, 7–24–62, Cl. 131—10.

Smith, Paul A.: *See*—
Howard, Herbert H., and Smith. 3,045,826.

Smith, Rex L.: *See*—
Burkardt, Lohr A., Finnegan, and Smith. 3,046,168.

Smith, Ronald F. Water sleds. 3,045,264, 7–24–62, Cl. 9—310.

Smithe, F. L., Machine Co., Inc.: *See*—
Shearer, Robert, Semple, and Nifontoff. 3,045,592.

Snelling, Michael A.: *See*—
Dell, Hugh A., and Snelling. 3,046,501.

Societa Minelba a.r.l.: *See*—
Viezzoli, Giorgio. 3,045,498.

Societe le Carbone-Lorraine: *See*—
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Societe Metallurgique d'Imphy: *See*—
Cherreau, Andre G., Girard, and Maingault. 3,045,335.

Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
Dumez, Raoul H. 3,045,484.
Eggers, Gerhard, and Dumez. 3,045,953.
Selferlein, Theo. 3,045,425.

Socony Mobil Oil Co., Inc.: *See*—
Andress, Harry J., Jr. 3,046 224.
Andress, Harry J., Jr., and Gee. 3,046,102.
Ciapetta, Frank G., Coonradt, and Garwood. 3,046,219.

Sohler, Hubert. Traveling suction cleaner for textile mills. 3,045,274, 7–24–62, Cl. 15—312.

Sohngen, Rudolf, to Bayer Aktiengesellschaft, Farbenfabriken. Welded constructions for rotationally symmetrical containers. 3,045,858, 7–24–62, Cl. 220—10.

Solar Light Mfg. Co.: *See*—
Lazerson, Herman M. 3,045,577.

Sommer, Leo H., to Dow Corning Corp. Polymers of silacyclobutanes. 3,046,291, 7–24–62, Cl. 260—448.2.

Songer, Francis H. Spring actuated rolling exercise toy. 3,046,011, 7–24–62, Cl. 272—56.

Sonoco Products Co.: *See*—
Dunlap, Charles K. 3,045,945.

Sony Kabushikihaisha (Sony Corp.): *See*—
Igarashi, Tadashi. 3,045,776.

Sorrells, Weldon B. Combination mop cart and mop sink. 3,045,252, 7–24–62, Cl. 4—167.

Space Technology Laboratories, Inc.: *See*—
Robinson, Wesley A. 3,046,410.

Spanjer, David L.: *See*—
Hutchinson, Philip S., and Spanjer. 3,045,728.

Speciálný, Jan: *See*—
Delong, Armin, Drahoš, and Speciálný. 3,046,397.

Speer, Paul, C. Griggs, and D. J. McAvoy, to Armour and Co. Process for recovering fats and meat and bone scrap from inedible slaughterhouse materials. 3,046,286, 7–24–62, Cl. 260—412.6.

Spencer, Leland H., and R. D. Asher. 25% to S. Davis. Liquid measuring container. 3,045,495, 7–24–62, Cl. 73—427.

Sperry Rand Corp.: *See*—
Seymour, Raymond E., and Haraske. 3,045,799.

Spicacci, Attilio R. Method and apparatus for describing circular arcs. 3,045,350, 7–24–62, Cl. 33—27.

Sprague Robert H., to Horizons Inc. Preparation of triphenylmethane dyes. 3,046,209, 7–24–62, Cl. 204—158.

Square D Co.: *See*—
Klessling, Rudolf H. 3,045,503.

Sramek, Elmer D.: *See*—
Engleson, Harry E., and Sramek. 3,045,558.

Stadelmann, Rudolf, to Machine Tool Works Oerlikon, Administration Co. Loading and unloading device for cartridge magazines. 3,045,525, 7–24–62, Cl. 86—47.

Stager, Francis W., and R. N. and T. A. Minor. Automobile anti-skid control assembly. 3,046,060, 7–24–62, Cl. 303—21.

Stahlwerke Südwestfalen, A.G.: *See*—
Gassen, Horst. 3,046,320.

Stahmer Bernhardt. Power control means for vertical lift propeller jet aircraft. 3,045,949, 7–24–62, Cl. 244—12.

Stalker Corp., The: *See*—
Clarke, Daniel J., and Stalker. 3,045,327.
Clarke, Daniel J., and Stalker. 3,045,967.
Stalker, Edward A. 3,045,964.

Stalker, Edward A., to The Stalker Corp. Bladed wheels for compressors, turbines and the like. 3,045,964, 7–24–62, Cl. 253—39.

Stalker, Edward A.: *See*—
Clarke, Daniel J., and Stalker. 3,045,327.
Clarke, Daniel J., and Stalker. 3,045,967.

Stallard Ralph M., to General Motors Corp. Trim panel joint covering. 3,046,179, 7–24–62, Cl. 156—219.

Stamicarbon N.V.: *See*—
Fontein, Freerk J. 3,045,823.

Stanaback, Robert J.: *See*—
Meltzer, Robert I., Stanaback, and Lutz. 3,046,306.

Standard Coil Products Co., Inc: *See*—
Reynolds, George W. 3,046,363.

Standard Oil Co. (Indiana) : *See*—
Fields, Ellis K., and Sandri. 3,046,314.
Hodes, William, and Van Strien. 3,046,258.
Ritzenthaler, Bruce A. 3,046,420.
Stephens, James R. 3,046,252.

Standard Products Co., The : *See*—
Reid, James S. 3,046,172.

Standard-Thomson Corp. : *See*—
Woods, John E. 3,045,918.

Stanley, Allen C. : *See*—
McCarty, George W., and Stanley. 3,045,725.

Stanzel, Victor. Model aircraft. 3,045,391, 7–24–62, Cl. 46—78.

Staples, Crawford E., to Westinghouse Air Brake Co. Code detecting apparatus. 3,046,454, 7–24–62, Cl. 317—134.

State of the Netherlands for the purposes of this Application Represented by the Board of Directors of the State Gas Concern, The : *See*—
Van Dijk, Adrianus. 3,045,614.

Staunton, John J. J., to Coleman Instruments, Inc. Diffraction grating having a plurality of blaze angles. 3,045,532, 7–24–62, Cl. 88—14.

Stearns, R. H. : *See*—
Hansen, Quinten A. 3,045,782.

Stearns, R. N. : *See*—
Hansen, Quinten A. 3,045,782.

Steckl, Rudolph : *See*—
Siemons, Willem J., Kelemen, and Steckl. 3,046,100.

Steele, Floyd G., to Digital Control Systems, Inc. Velocity quantizer. 3,045,912, 7–24–62, Cl. 235—151.

Stegeman, Raymond F. E. : *See*—
O'Dea, Martin J., and Stegeman. 3,045,543.

Steigerwald, Karl H. Reciprocating mold using a vacuum and pressure assist. 3,045,299, 7–24–62, Cl. 22—57.2.

Steigleder, Charles J. : *See*—
Grillon, August B., Holland, Pope, and Steigleder. 3,045,-619.

Stein, Wolfgang J., and S. Straniti, to Avco Corp. Torque meter. 3,045,479, 7–24–62, Cl. 73—136.

Steinbrecher, Kenneth W. : *See*—
Beaudoin, Leonard W., Kraft, and Steinbrecher. 3,046,-228.

Steindler, Martin J., to United States of America, Atomic Energy Commission. Process of treating uranium hexafluoride and plutonium hexafluoride mixtures with sulfur tetrafluoride to separate same. 3,046,089, 7–24–62, Cl. 23—14.5.

Steinen, William F. Spray nozzle. 3,045,926, 7–24–62, Cl. 239—457.

Steinen, William F. Spray nozzle. 3,045,932, 7–24–62, Cl. 239—601.

Steiner, John E., to Barber-Colman Co. Condition sensing apparatus. 3,046,411, 7–24–62, Cl. 307—43.

Stephens, James R., to Standard Oil Co. Baking polyester resin. 3,046,252, 7–24–62, Cl. 260—77.

Stephenson, Paul A., to Old Town Corp. Paper feed tray for duplicating machines. 3,046,007, 7–24–62, Cl. 271—61.

Sterling Seal Co. : *See*—
Patton, Franklin S. 3,045,854.

Sternlicht, Beno, to General Electric Co. Self-lubricating bearings. 3,046,068, 7–24–62, Cl. 308—240.

Stevens, George A., to Paper Sacks Ltd. Baling or packing machines. 3,045,407, 7–24–62, Cl. 53—258.

Stevens, Henry C. : *See*—
Strain, Franklin, Stevens, and Foltz. 3,046,255.

Stevens, J. P., & Co., Inc. : *See*—
Shipman, Gary M. 3,045,317.

Stewart-Warner Corp. : *See*—
Graybeal, Warren E. 3,045,801.
Nash, Cleve C. 3,046,508.

Stewart, William T., F. A. Stuart, and W. Lowe, to California Research Corp. Detergent copolymer. 3,046,260, 7–24–62, Cl. 260—80.5.

Stoffels, Robert E., to Automatic Electric Laboratories, Inc. Telegraph signal arrangement for a telephone system. 3,046,340, 7–24–62, Cl. 179—3.

Stoltz, Myrl R. Lock pin for curlers. 3,045,684, 7–24–62, Cl. 132—40.

Stoner, Eugene M., to Fairchild Engine and Airplane Corp. Automatic trigger mechanism with three sears and a rotatable control member. 3,045,555, 7–24–62, Cl. 89—142.

Strain, Franklin, H..C. Stevens, and G. E. Foltz, to Pittsburgh Plate Glass Co. Process for preparing polycarbonates. 3,046,255, 7–24–62, Cl. 260—77.5.

Straka, Oldřich : *See*—
Dubský, Bořivoj, Straka, Felkel, and Feuereisl. 3,045,-666.

Straniti, Salvatore : *See*—
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Stransky, Gustave, deceased (M. Hecht, executrix of the estate of G. Stransky), to MacGregor A.G. Water-tight flush hatch cover constructions. 3,045,631, 7–24–62, Cl. 114—201.

Stransky, Gustave, deceased (M. Hecht, executrix of the estate of G. Stransky), to MacGregor A.G. Hatch cover arrangements. 3,045,632, 7–24–62, Cl. 114—202.

Strater, David : *See*—
Coyne, John W. 3,045,386.

Strating, Jan, G. Moes, and W. F. Vogel, to W. A. Scholten's Chemische Fabrieken N.V. Polysaccharide-sultone reaction products. 3,046,272, 7–24–62, Cl. 260—233.3.

Straubing, Charles R., to Kenmore Machine Products, Inc. Apparatus for spinning metal tubing to prevent oxidation of parts subjected to heat of friction. 3,045,741, 7–24–62, Cl. 153—81.

Streit, Rudolf : *See*—
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Stremke, William F., Jr. : *See*—
Stremke, William F., W. F. Stremke, Jr., and Pazderski. 3,045,406.

Stremke, William F., W. F. Stremke, Jr., and R. R. Pazderski. Semi-automatic wrapping machine. 3,045,406, 7–24–62, Cl. 53—209.

Stresau, Richard H. F., and J. W. Derwin, to United States of America, Navy. Booster cup and method of making same. 3,045,524, 7–24–62, Cl. 86—1.

Strombeck, Leo : *See*—
Anderson, Swan F., and Strombeck. 3,045,405.

Struthers, William H., to J. J. Klein and E. N. Maisel. Cushion and method of making the same. 3,046,004, 7–24–62, Cl. 267—80.

Stuart, Frank A. : *See*—
Stewart, William T., Stuart, and Lowe. 3,046,260.

Stuart, James A., Jr. Flush valve. 3,045,249, 7–24–62, Cl. 4—56.

Stuckey, Richard L., to The Alliance Machine Co. Portable ingot strippers. 3,045,300, 7–24–62, Cl. 22—95.

Sturbois, Georges. Self-starter circuit for motor vehicles. 3,046,408, 7–24–62, Cl. 290—37.

Sucietto, Richard R. : *See*—
Eck, John W., and Sucietto. 3,046,138.

Suckfull, Fritz, and H. Nickel, to Bayer Aktiengesellschaft, Farbenfabriken. Metal-containing azo dyestuffs. 3,046,-271, 7–24–62, Cl. 260—143.

Sughrue, Rothwell, Mion & Zinn : *See*—
Ljungggren, Thor H. 3,045,651.

Sullivan, James F. : *See*—
Cox, Robert E., and Sullivan. 3,045,765.

Sullivan, Paul M., and D. H. Chambers, to United States of America, Interior. Electrolytic cell with vertical mercury electrode. 3,046,215, 7–24–62, Cl. 204—219.

Sumida, Kunio A. : *See*—
Hill, George H., Sumida, and Dobrowsky. 3,045,589.

Summers, Frank P., Jr., and R. E. Mattson, to Esterbrook Pen Co. Ink supplying means for the pens of recording meter apparatus. 3,046,556, 7–24–62, Cl. 346—140.

Summers, Reuben E. Revolvable seat. 3,046,052, 7–24–62, Cl. 297—337.

Sun Oil Co. : *See*—
Tench, John D. 3,046,101.

Sundberg, John R. : *See*—
Luper, Forrest E. 3,046,040.

Surber, Curtis M., to Automatic Canteen Co. of America. Currency identification device for the blind. 3,045,364, 7–24–62, Cl. 35—35.

Süs, Oskar : *See*—
Schmidt, Maximilian P., and Süs. 3,046,112.
Schmidt, Maximilian P., and Süs. 3,046,113.
Schmidt, Maximilian P., and Süs. 3,046,115.
Schmidt, Maximilian P., and Süs. 3,046,120.

Süs, Oskar, to Azoplate Corp. Diazo compounds and printing plates manufactured therefrom. 3,046,114, 7–24–62, Cl. 96—33.

Süs, Oskar, to Azoplate Corp. Light sensitive material for printing and process for making printing plates. 3,046,-117, 7–24–62, Cl. 96—33.

Süs, Oskar, to Azoplate Corp. Light sensitive material for printing and process for making printing plates. 3,046,-119, 7–24–62, Cl. 96—33.

Süs, Oskar, to Azoplate Corp. Process of making printing plates and light sensitive material suitable for use therein. 3,046,122, 7–24–62, Cl. 96—33.

Süs, Oskar, W. Neugebauer, and M. P. Schmidt, to Azoplate Corp. Process for making printing plates and light sensitive material for use therein. 3,046,123, 7–24–62, Cl. 96—33.

Süs, Oskar, and M. Glos, to Azoplate Corp. Light sensitive material and process. 3,046,126, 7–24–62, Cl. 96—35.

Sutherland, Lionel M., and T. H. Paris, to Tomlon Corp. Process and apparatus for the hydraulic impregnation of cellulosic materials. 3,046,183, 7–24–62, Cl. 162—56.

Sutton, Thomas A. : *See*—
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Brooks, Charles, Sutton, and Brownold. 3,045,742.

Suzuki, Tsuneshi. Cosmetic composition and preparation of the same. 3,046,199, 7–24–62, Cl. 167—90.

Svenska Rotor Maskiner Aktiebolag : *See*—
Wagenius, Hans B. 3,045,447.

Swanson, Elmer C. Combination closure and opener on stitched bags. 3,045,890, 7–24–62, Cl. 229—66.

Swatman, Ivan M., to Ford Motor Co. Gas turbine engine. 3,045,966, 7–24–62, Cl. 253—39.1.

Sweden Freezer Mfg. Co. : *See*—
Briscoe, Donald M. 3,045,988.
Patch, Robert S., and Swenson. 3,045,441.

Sweetenham, Walter M. : *See*—
Duckitt, Harry, and Sweetenham. 3,046,390.

Swenson, Harvey F. : *See*—
Patch, Robert S., and Swenson. 3,045,441.

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Sylvania Electric Products Inc. : *See*—
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Brouse, David Y., and Desauniers. 3,045,460.
Shappell, Stanley C. 3,045,805.
Sibley, Robert C. 3,046,446.
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Symington Wayne Corp. : *See*—
Cope, Geoffrey W. 3,045,838.

Syntex S.A. : *See*—
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Taber Instrument Corp. : *See*—
Dumas, Roger E. 3,045,490.

Talley, Robert E. : *See*—
Learmont, Tom, and Talley. 3,045,844.

Talon, Inc. : *See*—
Poux, Roland J. 3,045,307.

Tao, Deh C., to The Bassick Co. Leveling device. 3,045,390, 7–24–62, Cl. 45—139.

Tarasuk, George J. Punch card. 3,045,905, 7–24–62, Cl. 235—61.12.

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Taylor, Vernon F., Jr. : *See*—
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Harper, Frederick R. 3,046,198.

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Seeloff, Melvin M. 3,046,385.

Telautograph Corp. : *See*—
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Telefunken G.m.b.H. : *See*—
Bartholomä, Johann, and Schlaud. 3,046,550.

Tench, John D., to Sun Oil Co. Wax composition for candles. 3,046,101, 7–24–62, Cl. 44—7.5.

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Tesla, narodni podnik : *See*—
Delong, Armin, Drahoš, and Specialný. 3,046,397.

Texas Butadiene & Chemical Corp. : *See*—
Muskat, Irving E. 3,046,246.

Texas Instruments Inc. : *See*—
Matzen, Walter T., and Biard. 3,046,487.

Texas Plastics Materials Supply Co. : *See*—
Bender, Richard B. 3,046,213.

Textiliana Corp. : *See*—
Ernst, Robert, and Comar. 3,046,231.

Thayer, Charles E. : *See*—
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Thomas, De Loss V., and H. J. Roberts ; said Roberts assor. to said Thomas. Aquatic toy. 3,045,636, 7–24–62, Cl. 115—23.

Thomas, Herbert G., H. J. Cornish, C. C. Shenkle, and B. Last, to Rockwell Mfg. Co. Meter register. 3,045,486, 7–24–62, Cl. 73—273.

Thomas, Maxwell M. : *See*—
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Wooding, Walter H., Thomas, and Norcross. 3,046,386.

Thomas, Wendell M., to General Motors Corp. Refrigerating apparatus. 3,045,446, 7–24–62, Cl. 62—138.

Thompson Ramo Wooldridge Inc. : *See*—
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Sampietro, Achilles C. 3,045,658.

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Thomson, Marvin G. : *See*—
Francis, Norman L., Thomson, and Musschoot. 3,045,-886.

Tillotson Mfg. Co., The : *See*—
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Time, Inc. : *See*—
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Timpner, Fred F. : *See*—
Campbell, Edgar C., and Timpner. 3,045,458.

Tipton, James R. Advertising device. 3,045,375, 7–24–62, Cl. 40—125.

Tjernlund, Emil J. Burner assembly. 3,045,744, 7–24–62, Cl. 158—28.

Tobey, Silas B., to Western Electric Co., Inc. Fastener for panels and covers. 3,045,308, 7–24–62, Cl. 24—211.

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Toulmin, Harry A., Jr., to Union Carbide Corp. Laminates of metal plated glass fibers and methods of making same. 3,046,170, 7–24–62, Cl. 154—43.

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Tucker, Robert L., to Well Surveys Inc. Apparatus for regulating belt-type electrostatic generators. 3,046,467, 7–24–62, Cl. 322—2.

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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 24, 1962 Volume 780 Number 4

TRADEMARKS

NOTICES

Oppositions Under Section 13 of the Trademark Act of 1946

Section 13 of the Trademark Act of 1946 provides that any person who believes that he would be damaged by the registration of a mark upon the Principal Register may, upon payment of the required fee, file a verified notice of opposition in the Patent Office, stating the grounds therefor, within thirty days after publication under Section 12(a) of the mark sought to be registered.

An unverified opposition may be filed by a duly authorized attorney, but the opposition will be null and void unless verified by the opposer within a reasonable time after such filing to be fixed by the Commissioner.

A notice of opposition will not be accepted unless it complies with the statutory requirements, namely, it must be filed in the Patent Office within thirty days after publication under Section 12(a) of the mark opposed, be accompanied by the fee of $25.00, must state the grounds therefor and, if filed by the opposer, must be verified.

A request to extend the time for filing a notice of opposition under Rule 2.102 must be received in the Patent Office before the expiration of thirty days from date of publication under Section 12(a) of the mark sought to be registered. The request should specify the period of extension desired and be accompanied by a showing of good cause for the extension requested, but in the event circumstances do not permit submission of the showing of good cause with the request, it must be furnished within ten days after filing the request for extension.

Two or more parties may be joined in opposition to the registration of a mark, but separate fees of $25.00 for each party so joined must be paid. Likewise, two or more marks may be opposed in a single opposition, but a separate fee of $25.00 for each mark opposed must accompany the notice of opposition. The required fees must be received in the Patent Office within the opposition period or within such extension thereof as granted by the Commissioner for filing the notice of opposition under Rule 2.102.

HORACE B. FAY, JR.,
Assistant Commissioner.

Jan. 16, 1962.

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,359
Date of oldest new application	Sept. 18, 1961
Date of oldest amended application	Sept. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	9-18-61	9-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-17-61	11-20-61
Renewals (All Classes)	4-30-62	5-11-62
Sec. 12 (c) Publications (All Classes)	5-8-62	

Applications filed during the month of May 1962—2,420

Registrations Issued	368—No. 734,731 to No. 735,098
Renewals Issued	62

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

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MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1 — Raw or Partly Prepared Materials

SN 118,541. The Drackett Company, Cincinnati, Ohio, assignee, by mesne assignments, of American-Marietta Company, Chicago, Ill. Filed Apr. 25, 1961.

TORCH

For Chemical Preparation Used as a Fire Starter for Charcoal, Fireplaces, Rubbish, Campfires, Leaves and Incinerators, Said Preparation Being Dispensed From Pressurized Containers.
First use on or about Apr. 10, 1961.

SN 118,785. Island Creek Coal Sales Company, Huntington, W. Va. Filed Apr. 27, 1961.



The words "Genuine," "Coal," and "A Product of Island Creek," are disclaimed apart from the mark as shown. Owner of Reg. Nos. 586,666 and 612,394.
For Coal.
First use Jan. 10, 1951.

SN 119,913. American Latex Products Corporation, Hawthorne, Calif. Filed May 15, 1961.

STATEX

Owner of Reg. No. 728,299.
For Rebonded Polyurethane Material Used for Cushioning Applications Such as Packaging, Upholstery, and the Like.
First use June 11, 1958.

SN 122,599. Charcoal Unlimited, d.b.a. Hy-Co Sales, Inc., Los Angeles, Calif. Filed June 22, 1961.



For Charcoal Briquets.
First use Jan. 1, 1961.

SN 123,253. Alaska Lumber & Pulp Co., Seattle, Wash. Filed July 3, 1961.

ALAPUL

For Wood Pulp.
First use on or about Jan. 13, 1960.

SN 123,996. Mazzucchelli Celluloide S.p.A., Castiglione Olona, Italy. Filed July 14, 1961.

XELOX

Priority claimed under Sec. 44(d) on Italian application filed Jan. 17, 1961; Reg. No. 155,430, dated June 19, 1961.
For Semifinished Plastic Materials Made of Cellulose Nitrate Such as Slabs, Sheets, Rods, Filaments, Tubes and Wastes of Same.

SN 124,012. Thiokol Chemical Corporation, Bristol, Pa. Filed July 14, 1961.

LP

For Pre-Polymers Curable to High Molecular Weight Polymers.
First use in or about January 1944.

SN 125,157. Montecatini, Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Aug. 1, 1961.

MERAKRIN

Priority claimed under Sec. 44(d) on Italian application filed Feb. 14, 1961; Reg. No. 155,891, dated July 27, 1961.
For Monofilaments, Fibers, Horse Hairs.

SN 127,111. Hubbard Farms, Inc., Lancaster, Pa. Filed Sept. 1, 1961.

COMET

For Chicks.
First use Aug. 17, 1961.

SN 131,375. Macmillan Ring-Free Oil Co. Inc., Los Angeles, Calif. Filed Nov. 6, 1961.

MICROPHALT

For Industrial Asphalts.
First use Oct. 19, 1961.

SN 132,510. American Viscose Corporation, Philadelphia, Pa. Filed Nov. 22, 1961.

AVIFIL

Owner of Reg. No. 720,154.
For Synthetic Fibers and Bonded Quilt Filling.
First use Oct. 30, 1961.

SN 132,997. William Greiner Company, Chicago, Ill. Filed Nov. 29, 1961.

HOGWILD

For Pigskin.
First use Feb. 1, 1961.

SN 134,882. Geilich Tanning Company, Taunton, Mass. Filed Dec. 29, 1961.

CAMBI

Owner of Reg. Nos. 518,283 and 684,945.
For Leather.
First use at least as early as Jan. 1, 1950.

SN 135,267. English Clays Lovering Pochin & Company Limited, St. Austell, Cornwall, England. Filed Jan. 5, 1962.

REMBLEND

Owner of British Reg. No. 819,142, dated Apr. 6, 1961.
For China Clay.

SN 135,679. Humble Oil & Refining Company, Houston, Tex. Filed Jan. 12, 1962.



For purposes of this application and without waiver of any of its common-law rights, applicant makes no claim to the term "Butyl" apart from the mark.
For Hydrocarbon Polymers Such as Synthetic Rubber or Butyl Polymers.
First use at least since Dec. 5, 1961.

SN 135,869. CPR International Corp., Torrance, Calif. Filed Jan. 16, 1962.

CPR

For Rigid and Flexible Polyurethane Stock.
First use May 11, 1960.

SN 135,952. Bachman's, Inc., Minneapolis, Minn. Filed Jan. 17, 1962.

EXCELOAM

For Potting Soil.
First use October 1950.

SN 135,975. Geo. B. Hart, Inc., Rochester, N.Y. Filed Jan. 17, 1962.

PETTIPOINT

For Plastic Material in Sheet Form.
First use at least as early as June 19, 1961.

SN 136,183. Armour and Company, Chicago, Ill. Filed Jan. 22, 1962.

BORDOTIQUE

For Leather.
First use Dec. 22, 1961.

SN 136,453. The Dow Chemical Company, Midland, Mich. Filed Jan. 24, 1962.

PELASPAN-PAC

Owner of Reg. No. 671,064.
For Expandable Synthetic Resinous Insulating and Cushioning Material for Use Such as in Shipping Containers.
First use Oct. 31, 1961.

SN 136,566. The Kendall Company, Walpole, Mass. Filed Jan. 25, 1962.

WEBLINE

Owner of Reg. Nos. 565,501, 701,556, and 534,461.
For Felt-Like, Cloth-Like and/or Paper-Like Materials Composed of Unspun Fibers for General Application in the Industrial Arts.
First use Oct. 25, 1961.

SN 136,567. The Kendall Company, Walpole, Mass. Filed Jan. 25, 1962.

LENO-WEB

For Felt-Like, Cloth-Like and/or Paper-Like Materials Composed of Unspun Fibers for General Application in the Industrial Arts.
First use Oct. 18, 1961.

SN 136,663. The Kendall Company, Walpole, Mass. Filed Jan. 26, 1962.

WEBLOX

Owner of Reg. Nos. 565,501, 701,556, and 534,461.
For Felt-Like, Cloth-Like and/or Paper-Like Materials Composed of Unspun Fibers for General Application in the Industrial Arts.
First use Oct. 5, 1961.

Class 2 — Receptacles

SN 140,598. Union Carbide Corporation, New York, N.Y. Filed Mar. 23, 1962.

GLAD

For Plastic Bags.
First use Mar. 14, 1962.

Class 4 — Abrasives and Polishing Materials

SN 139,624. The Grand Union Company, East Paterson, N.J. Filed Mar. 12, 1962.

GRAND UNION

Owner of Reg. Nos. 424,332 and 426,390.
For Floor Wax and Cleanser Pads.
First use about 1935 on floor wax.

Class 5 — Adhesives

SN 131,374. Macmillan Ring-Free Oil Co., Inc., Los Angeles, Calif. Filed Nov. 6, 1961.

MICROPHALT

For All-Purpose Asphalt Base Industrial Adhesives.
First use Oct. 19, 1961.

Class 6—Chemicals and Chemical Compositions

SN 100,376. Luckie Magic Corporation, Miami, Fla. Filed July 6, 1960.

LUCKIE MAGIC

For Pharmaceutical Product, Specifically, an Insecticide for Killing Roaches, Water Bugs, Ants, and Mice.
First use Sept. 18, 1959.

SN 101,293. W. E. Zimmie, Inc., Bay Village, Ohio. Filed July 21, 1960.

ZIMMITE

For Chemical Compound Used in Preventing the Accumulation of Mud and Silt in and Removing Mud and Silt From Industrial Water Piping, Cooling Jackets of Blast Furnaces, Compressors and Transformers, Ballast Tanks of Ships, and Heat Exchangers.
First use February 1960.

SN 104,415. American Cyanamid Company, New York, N.Y. Filed Sept. 14, 1960.

NHF

For Preservative for Use in Food for Animals.
First use Aug. 25, 1960.

SN 104,458. Kemwell (Chur) Ltd., Chur, Switzerland. Filed Sept. 14, 1960.

NOBEX

Owner of Swiss Reg. No. 180,273, dated Mar. 9, 1960.
For Soldering and Welding Fluxes.

SN 104,459. Kemwell (Chur) Ltd., Chur, Switzerland. Filed Sept. 14, 1960.

KEMWELL

Owner of Swiss Reg. No. 180,274, dated Mar. 9, 1960.
For Soldering and Welding Fluxes.

SN 113,015. Hanlon Chemical Co., Inc., Kansas City, Kans. Filed Feb. 3, 1961.

Escort

For Chemical Solution for Contact With the Eyes of an Assailant To Induce Temporary Blindness and Staining of the Skin for Identification of the Assailant.
First use during the month of May 1960.

SN 122,944. Nu-Vita Products, Inc., Pittsburgh, Pa. Filed June 27, 1961.

Combat

For Insecticide.
First use Apr. 16, 1961.

SN 123,457. The Pure Oil Company, Palatine, Ill., assignee of American Mineral Spirits Company, Chicago, Ill. Filed July 6, 1961.

AMSCO-SOLV

Owner of Reg. No. 388,915.
For Liquid Solvent for General Industrial Use.
First use on or about Feb. 7, 1941.

SN 123,677. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed July 10, 1961.

PENNSORB

Owner of Reg. No. 672,023.
For Solvent Purifier.
First use Mar. 16, 1961.

SN 125,162. The Procter & Gamble Company, Cincinnati, Ohio. Filed Aug. 1, 1961.

OK LIQUID

The word "Liquid" is disclaimed apart from the mark.
Owner of Reg. No. 69,573.
For Foaming Agent Used in Drilling Oil Wells.
First use on or about July 5, 1961.

SN 125,228. Lancer Equipment Co., St. Louis, Mo. Filed Aug. 2, 1961.

LANCER

For Insect Bomb.
First use July 14, 1961.

SN 125,311. Kidde Manufacturing Company, Inc., Bloomfield, N.J. Filed Aug. 3, 1961.

medic air

Owner of Reg. No. 714,223.
For Room or Household Deodorant.
First use on or about May 23, 1961.

SN 125,586. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed Aug. 8, 1961.

POLY-LINK

For Curing Agents for Epoxide Resins.
First use June 2, 1960.

SN 127,112. Imperial Chemical Industries Limited, London, England. Filed Sept. 1, 1961.

KEPHOS

Owner of British Reg. Nos. 798,091 and 798,092, both dated Nov. 20, 1959.
For Chemical Solutions Containing Phosphorus for the Prevention of Corrosion of Metal Surfaces and the Treatment of Metal Surfaces so as To Obtain Improved Resistance to Corrosion of the Surface When Subsequently Painted.

SN 127,837. Bradley Paint Company, Connellsville, Pa. Filed Sept. 14, 1961.

POWER

For Liquid Chemical Composition Used as a Substitute for Water in Mixing Concrete To Improve the Strength and Bonding Characteristics Thereof.
First use April 1961.

SN 128,911. Miranol Chemical Company, Inc., Irvington, N.J. Filed Sept. 29, 1961.

MIRAPON

Owner of Reg. Nos. 419,639 and 419,640.
For Synthetic Surface Active Agents.
First use in June 1941.

SN 129,905. Arwell, Inc., Waukegan, Ill. Filed Oct. 16, 1961.

ARWELL SUPER FOG

No claim is made to the words "Super Fog" apart from the mark as shown. Owner of Reg. Nos. 239,245 and 281,237.
For Insecticide.
First use June 8, 1961.

SN 130,483. The North American Coal Corporation, Cleveland, Ohio. Filed Oct. 23, 1961.

MIRAL

For Chemicals—Namely, Aluminum Sulfate, Silica and Alumina.
First use Oct. 4, 1961.

SN 130,484. The North American Coal Corporation, Cleveland, Ohio. Filed Oct. 23, 1961.

miral

For Chemicals—Namely, Aluminum Sulfate, Silica and Alumina.
First use Oct. 4, 1961.

SN 130,604. Biddle Sawyer Corporation, d.b.a. Enzyme Development Corporation, New York, N.Y. Filed Oct. 25, 1961.

DEOXIN

For Purified Glucose Oxidase Enzyme.
First use June 8, 1959.

SN 131,027. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 31, 1961.

LEVAMID

Owner of German Reg. No. 749,145, dated May 24, 1961; and U.S. Reg. Nos. 563,874, 572,119, and 615,572.
For Sedimentation Accelerator.

SN 131,828. Faultless Starch Company, Kansas City, Mo. Filed Nov. 13, 1961.

OOMPH

For Laundry Preparation for Use as a Water Softener, Deodorant and Brightening Agent.
First use Oct. 25, 1961.

SN 133,890. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Dec. 12, 1961.

FREEPIPE

For Chemical Drilling Fluid Which Is Used in the Lubrication of Drilling Tubing During the Drilling Operations of an Oil or Gas Well.
First use on or about Oct. 11, 1961.

SN 134,760. The Procter & Gamble Company, Cincinnati, Ohio. Filed Dec. 27, 1961.

Stardust

The drawing is lined for the colors blue, green, yellow, orange and red. Owner of Reg. No. 608,531.
For Laundry Bleach.
First use Sept. 12, 1961; June 7, 1954, on "Stardust."

SN 135,870. CPR International Corp., Torrance, Calif. Filed Jan. 16, 1962.

CPR

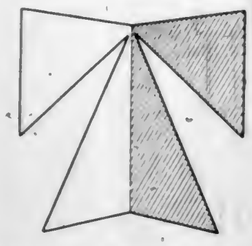
For Chemical Compositions Used in Creating Polyurethane Solid and Foamed Products.
First use June 9, 1960.

SN 139,625. The Grand Union Company, East Paterson, N.J. Filed Mar. 12, 1962.

GRAND UNION

Owner of Reg. Nos. 65,476 and 422,568.
For Laundry Starch and Bleach for Laundry and Other Uses.
First use about 1893 on laundry starch.

SN 140,058. Transcopy, Incorporated, Newton, N.J. Filed Mar. 16, 1962.



The lining appearing in the drawing constitutes lining forming part of the mark, but does not indicate color.
For Photographic Processing Chemicals and Solutions.
First use Feb. 3, 1961.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 114,672. Anstalt fuer Montage-Technik, Vaduz, Liechtenstein. Filed Mar. 1, 1961.

HILTI

Priority claimed under Sec. 44(d) on Liechtenstein application filed Nov. 16, 1960; Reg. No. 1,095, dated Nov. 21, 1960. Owner of U.S. Reg. No. 645,967.
For Propellent Charges, Sheils, Cartridges, Cartridge Cases, Cartridge Holders.

Class 10—Fertilizers

SN 104,790. Anton Miller, Ingolstadt (Danube), Germany. Filed Sept. 19, 1960.



Owner of German Reg. No. 613,674, dated Nov. 8, 1951.
For Fertilizer.

Class 11—Inks and Inking Materials

SN 128,904. Kee Lox Manufacturing Company, Rochester, N.Y. Filed Sept. 29, 1961.

GRIP-N-PULL

For Carbon Paper.
First use about Dec. 2, 1943.

Class 12—Construction Materials

SN 129,835. Fred S. Bremer, d.b.a. Fred S. Bremer Co., Chicago, Ill. Filed Oct. 13, 1961.

AREX

For Louvers.
First use on or about Jan. 15, 1912.

SN 130,661. Springer Construction Company, d.b.a. ES Homes, Toledo, Iowa. Filed Oct. 25, 1961.

ES HOMES
ECONOMY & STYLE

The words "Economy & Style" are disclaimed apart from the mark as shown.
For Wooden and Metal Construction Panels and Trusses Used as Component Parts for Homes.
First use May 15, 1961.

SN 136,248. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed Jan. 22, 1962.

MONO GUN

For Refractory Material Used in the Lining of Industrial Furnaces.
First use on or about Nov. 27, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 127,799. The Schultz Die Casting Company, Toledo, Ohio. Filed Sept. 13, 1961.



For Die Castings, Made of Substantially Non-Ferrous Metals and Combinations Thereof.
First use July 12, 1931.

Class 15—Oils and Greases

SN 131,281. Fleet Oil Company, Inc., New York, N.Y. Filed Nov. 1, 1961.

mpg+

For Lubricating Oil.
First use May 1, 1959.

Class 16—Protective and Decorative Coatings

SN 124,611. T. F. Washburn Company, Chicago, Ill. Filed July 24, 1961.

THIX-A-POL

For Organic Polymers Used as Vehicles in Paints and Protective Coatings of Various Kinds.
First use June 19, 1961.

SN 129,629. Pennsbury Paint Company, Inc., New Britain, Pa. Filed Oct. 10, 1961.

PENNSBURY

For Paints, Varnishes, Enamels, Lacquers, Thinners, Oils, Stains, Color Dispersions, Primers, Fillers.
First use January 1955.

SN 129,779. Benjamin Moore & Co., New York, N.Y. Filed Oct. 12, 1961.

Sunvar 440

For Varnish.
First use Sept. 29, 1961.

Class 17—Tobacco Products

SN 127,183. Bayuk Cigars Incorporated, Philadelphia, Pa. Filed Sept. 5, 1961.

FLEX-I-TIP

For Cigar Holder Sold as a Part of the Cigar.
First use July 26, 1961.

SN 131,050. Larus & Brother Company, Richmond, Va. Filed Oct. 31, 1961.

READY-RUBBED

Owner of Reg. Nos. 209,563 and 585,853.
For Smoking Tobacco.
First use 1912.

Class 18—Medicines and Pharmaceutical Preparations

SN 93,136. Beecham Research Laboratories Limited, Brentford, Middlesex, England. Filed Mar. 18, 1960.

EISMYCIN

Owner of British Reg. No. 792,941, dated July 6, 1959.
For Antibiotics for Internal Use.

SN 125,751. Loredana Lorenzini-Cremesini, Milan, Italy. Filed Aug. 10, 1961.

KATALIPID

Owner of Italian Reg. No. 152,029, dated Nov. 17, 1960.
For Pharmaceutical Preparations for the Treatment of Hypercholesterolemia and Arteriosclerosis.

SN 126,076. Blair Laboratories, Inc., New York, N.Y. Filed Aug. 16, 1961.

GENTLIRON

For Preparation for the Treatment of Iron Deficiency Anemias.
First use July 25, 1961.

SN 126,248. Murray-Frank and Associates, Chicago, Ill. Filed Aug. 18, 1961.

POSITIVE

For Hair-Conditioning Liquid.
First use Mar. 10, 1961.

SN 126,803. Sacrinpak Corporation, Verona, Pa. Filed Aug. 28, 1961.

BREATHPAK

For Tablets, for Freshening and Protecting the Breath From Odors Caused by Halitosis, Alcohol, Smoking or Onions, and Other Foods.
First use Aug. 11, 1960.

SN 127,095. Dairyland Food Laboratories, Inc., Waukesha, Wis. Filed Sept. 1, 1961.

pge

For Lipase Enzyme Preparation With Salt of Oxytetracycline, for Prevention and Treatment of Calf Scours.
First use Aug. 22, 1961.

SN 129,550. W. F. Young, Inc., Springfield, Mass. Filed Oct. 9, 1961.

WARM-UP

For Liniment.
First use Sept. 1, 1960.

SN 131,635. Jack N. Turner, d.b.a. Arcade Pharmacy, as Arcade First Aid Supply Co., and as Arcade Industrial Pharmacist, San Francisco, Calif. Filed Nov. 8, 1961.

ARCADE

For Pharmaceutical Preparations.
First use prior to 1910.

SN 131,871. Marcel R. Pitet, d.b.a. Bentomin Co., Billings, Mont. Filed Nov. 13, 1961.

BENTOMIN

For Laxative for Temporary Relief of Occasional Constipation.
First use Nov. 1, 1961.

SN 132,215. Adams Drug Brokerage, Denver, Colo. Filed Nov. 17, 1961.

C-TEX

For Dietary Supplement—Namely, Vitamin C.
First use Oct. 2, 1961.

SN 132,637. Chesebrough-Pond's Inc., New York, N.Y. Filed Nov. 24, 1961.

ENZALIN

For Antacid.
First use Nov. 2, 1961.

SN 134,541. Grove Laboratories Incorporated, St. Louis, Mo. Filed Dec. 22, 1961.

DEFENDER

Owner of Reg. No. 397,282.
For Vitamin Capsules.
First use at least as early as Dec. 14, 1961.

SN 135,089. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Jan. 3, 1962.

NARILEN

Owner of German Reg. No. 733,750, dated Feb. 12, 1960.
For Pharmaceutical Preparation Acting as a Tranquillizer on the Central Nervous System.

SN 135,090. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Jan. 3, 1962.

OLMISTAN

Owner of German Reg. No. 747,832, dated Apr. 21, 1961.
For Pharmaceutical Preparation for Treatment of Heart and Circulation Diseases.

SN 135,177. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Jan. 4, 1962.

CODEMPRAZIL

Owner of Reg. Nos. 542,059 and 557,321.
For Medicinal Preparation Having Antihistaminic, Analgesic and/or Antipyretic Properties.
First use Dec. 19, 1961.

SN 135,368. Laboratoire Choay, Paris, France. Filed Jan. 8, 1962.

INIPROL

Owner of French Reg. No. 490,884, dated Oct. 4, 1960 (Paris); Natl. Inst. No. 151,723.
For Preparation for Controlled Inhibition of Enzymatic Activity in Pancreatic, Fibrinolytic and Other Conditions.

SN 135,564. Bristol-Myers Company, New York, N.Y. Filed Jan. 11, 1962.

EXASMA

For Pharmaceutical Preparation for the Relief of Nasal Congestion Due to Pollen Allergies and Colds.
First use Oct. 27, 1961.

SN 135,992. National Biscuit Company, New York, N.Y. Filed Jan. 17, 1962.

HI-PEP

For Dog Vitamins.
First use Jan. 2, 1962.

SN 136,459. Nathan H. Friedman, Stratford, Conn. Filed Jan. 24, 1962.

K-digit

For Digitalis Preparation.
First use Feb. 19, 1960.

SN 136,623. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Jan. 26, 1962.

MUTHESA

For Preparation for the Treatment of Gastro-Intestinal Disorders.
First use Nov. 22, 1961.

SN 137,252. Mallinckrodt Chemical Works, St. Louis, Mo. Filed Feb. 5, 1962.

SONILYN

For Anti-Microbial Agent.
First use Nov. 22, 1961.

SN 137,773. Minette Pharmaceutical Corp., Buffalo, N.Y. Filed Feb. 12, 1962.

MINAPHEN

For Ethical Pharmaceutical Product in Capsule Form for Use as an Analgesic Antipyretic.
First use on or about Oct. 15, 1959.

SN 137,774. Minette Pharmaceutical Corp., Buffalo, N.Y. Filed Feb. 12, 1962.

MINABEL

For Ethical Pharmaceutical Antispasmodic-Anticholinergic Tablet.
First use on or about Jan. 1, 1960.

SN 137,775. Minette Pharmaceutical Corp., Buffalo, N.Y. Filed Feb. 12, 1962.

MINABAR

For Ethical Pharmaceutical Product in Tablet Form for Use as an Appetite Suppressant.
First use Mar. 1, 1960.

SN 137,914. International Latex Corporation, Dover, Del. Filed Feb. 14, 1962.

ISODETTES

Ownership of Reg. No. 674,848.
For Medicated Throat Lozenge and Pharmaceutical Preparation for the Treatment of Colds and Coughs.
First use Oct. 16, 1957, on a medicated throat lozenge.

SN 137,936. Peter Hand Brewery Company, Chicago, Ill. Filed Feb. 14, 1962.

CELL-U-ADE

For Livestock Feed Supplements.
First use in May 1960.

SN 138,129. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 16, 1962.

PROVERA-TESTPAC

Owner of Reg. No. 717,437.
For Progestational Agent To Aid in Determining Pregnancy.
First use Jan. 8, 1962.

SN 138,130. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 16, 1962.

NEO-ALPHADROL

Owner of Reg. Nos. 700,840 and 671,430.
For Antibiotic and Steroid Combination for Medicinal Use.
First use Dec. 18, 1961.

SN 138,346. Chas. Pfizer & Co. Inc., New York, N.Y. Filed Feb. 16, 1962.

QUANTRIL

For Medicinal Preparation for Combating Anxiety and Stress Conditions.
First use Jan. 25, 1962.

SN 138,435. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Feb. 21, 1962.

NEMACTIL

Priority claimed under Sec. 44(d) on French Reg. No. 500,030, dated Nov. 14, 1961 (Paris); Natl. Inst. No. 173,866.
For Preparation for Treatment of Nerve Disorders.

SN 138,436. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Feb. 21, 1962.

NEULEPTIL

Priority claimed under Sec. 44(d) on French Reg. No. 500,031, dated Nov. 14, 1961 (Paris); Natl. Inst. No. 173,867.
For Preparation for Treatment of Nerve Disorders.

SN 138,462. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Feb. 23, 1962.

THIOSPORIN

Owner of Reg. No. 660,027.
For Therapeutic Antibiotic Preparation.
First use Jan. 30, 1962.

SN 138,547. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Feb. 23, 1962.

MEGAZYME

For Proteolytic Enzyme Preparation.
First use Feb. 9, 1962.

SN 138,621. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Feb. 26, 1962.

LENETRAN

For Tranquilizing Medication.
First use Oct. 19, 1961.

SN 138,739. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Feb. 27, 1962.

DYTAC

For Diuretic Preparation.
First use Feb. 22, 1962.

SN 138,795. Mattox and Moore, Inc., Indianapolis, Ind. Filed Feb. 28, 1962.

Sol-U-Medic

For Penicillin-Streptomycin-Vitamin-Mineral Mixture for the Treatment of Poultry, Swine, and Calves.
First use Dec. 21, 1961.

SN 138,847. Dome Chemicals, Inc., New York, N.Y. Filed Mar. 1, 1962.

DOMEFORM

Owner of Reg. No. 383,764.
For Dermatological Preparation for the Treatment of Skin Irritations and Disease.
First use in or before December 1961.

SN 138,848. Dome Chemicals, Inc., New York, N.Y. Filed Mar. 1, 1962.

DOMOL

Owner of Reg. Nos. 383,764 and 387,772.
For Dermatological Preparation for the Treatment of Skin Irritations.
First use in or before January 1962.

SN 138,941. The British Drug Houses, Limited, London, England. Filed Mar. 2, 1962.

VOLPLAN

Owner of British Reg. No. 818,396, dated Mar. 17, 1961.
For Oral Contraceptives.

SN 139,018. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed Mar. 5, 1962.

MICELA

For Water Dispersible Vitamin A.
First use Dec. 6, 1961.

SN 139,049. Dumas Milner Corporation, Jackson, Miss. Filed Mar. 5, 1962.

REPLENZ

For Drug Containing Enzymes, Vitamins, and Minerals in Tablet Form.
First use Sept. 25, 1961.

SN 139,249. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Mar. 6, 1962.

PLATELIN

For Platelet Factor Reagent for Diagnostic Use.
First use Feb. 13, 1962.

SN 139,331. Riker Laboratories, Inc., Northridge, Calif. Filed Mar. 7, 1962.

MEDIHALER-ERGOTAMINE

Applicant makes no claim to exclusive use of the word "Ergotamine" apart from the mark as shown. Owner of Reg. Nos. 630,134, 652,645, and others.
For Medicinal Preparation for Inhalation Therapy.
First use Jan. 4, 1960.

SN 139,500. Kinney & Company, Inc., Columbus, Ind. Filed Mar. 9, 1962.

PLET

For Combination Analgesic-Antipyretic-Decongestant-Antihistaminic Pharmaceutical Preparations.
First use Dec. 29, 1961.

SN 139,537. William D. Shaw, d.b.a. Inter-Continental Pharmaceutical Co., Chicago, Ill. Filed Mar. 9, 1962.

BLOODY MARY-ETTES

For Compositions for Aid in Temporary Relief of Stomach Hyperacidity and in Restoring Mental Alertness.
First use on or about June 30, 1961

SN 139,670. Physicians and Hospitals Supply Company, Inc., d.b.a. Ulmer Pharmacal Company, Minneapolis, Minn. Filed Mar. 12, 1962.

DEXTRO-TUSSIN

For Antitussive.
First use Dec. 1, 1961.

SN 139,681. Reid Laboratories, Inc., Atlanta, Ga. Filed Mar. 12, 1962.

REID

Owner of Reg. No. 726,826.
For Medicinal Preparations.
First use Dec. 6, 1956.

SN 139,684. William H. Rorer, Inc., Fort Washington, Pa. Filed Mar. 12, 1962.

ROER
RORER

Owner of Reg. No. 167,403.
For Pharmaceutical and Medicinal Preparations.
First use Mar. 7, 1917.

SN 139,812. American Cyanamid Company, New York, N.Y. Filed Mar. 14, 1962.

LEVOPROME

For Analgesic Preparation.
First use Feb. 16, 1962.

SN 139,892. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Mar. 14, 1962.

ANCILLIN

For Penicillin Derivative.
First use Jan. 22, 1962.

SN 140,228. Breon Laboratories Inc., New York, N.Y. Filed Mar. 20, 1962.

ETRADIL

For Coronary Vasodilator.
First use Mar. 1, 1962

SN 140,279. Meyer Laboratories, Inc., Detroit, Mich. Filed Mar. 20, 1962.

DOCTATE

For Therapeutic Composition in Capsule Form for Use in Treating and Avoiding Constipation.
First use Jan. 26, 1962.

SN 140,304. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Filed Mar. 20, 1962.

FLUORAQUA

For Pharmaceutical Preparation for Oral Administration, Consisting of Vitamin A and Other Vitamins in Combination With Sodium Fluoride.
First use Feb. 8, 1962.

SN 140,305. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Filed Mar. 20, 1962.

FLUORAC

For Pharmaceutical Preparation for Oral Administration, Consisting of Vitamin A and Other Vitamins in Combination With Sodium Fluoride.
First use Feb. 8, 1962.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 107,068. Sonotone Corporation, Elmsford, N.Y. Filed Oct. 24, 1960.

FLEX-MIKE

For Microphones.
First use June 21, 1960.

SN 108,065. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Nov. 8, 1960.

SONO-SENTRY

For Motion Detection Alarm Systems Utilizing Devices for Generating Electrical Energy and for Receiving and Detecting Disturbances in the Normal Flow of Said Energy.
First use as early as Nov. 6, 1959.

SN 110,190. Arvin Industries, Inc., Columbus, Ind. Filed Dec. 14, 1960.

Cameo

For Radios and Clock-Radios.
First use Nov. 3, 1960.

SN 113,581. Varian Associates, Palo Alto, Calif. Filed Feb. 13, 1961.

VA SEMICON

Owner of Reg. Nos. 582,256 and 602,973.
For Emitters and Components for Electron Tubes Including Cathodes, Cathode End Hats and Heat Shield Assemblies, Glass and Ceramic-to-Metal Seals and Grid Coatings for Vacuum Tubes, Lossy Materials for Attenuators and Resistors, Metals and Their Alloys Utilized in the Fabricating and Sealing of Vacuum Tubes, Components for Thermoelectron Heat Generators, Electron Beam Welders, Spot Welding Points, and Heat Resistant Metals and Alloys and Products Fabricated Therefrom.
First use Jan. 20, 1961.

SN 118,224. Globe-Union Inc., Milwaukee, Wis. Filed Apr. 20, 1961.

SNAP-TITE

For Variable Resistance Controls Adapted To Be Mounted on Panels of High Fidelity and Television Sets.
First use May 29, 1953.

SN 123,383. Varo Inc., Garland, Tex. Filed July 3, 1961.

POWER-BLOC

For Power Supply Containing Steel, Copper and Silicon Diodes.
First use Mar. 20, 1961.

SN 125,964. Aaron H. Axelrod, d.b.a. Electronics Company, Brooklyn, N.Y. Filed Aug. 14, 1961.

Sonotrol

For Electronically Sound Operated Switch, Particularly Useful for the Deaf and Hard of Hearing.
First use June 1961.

SN 127,350. North Atlantic Industries, Inc., Plainview, N.Y. Filed Sept. 6, 1961.

NA

For Electrical and Electronic Instruments and Control Systems, Including Phase Angle Voltmeters Useful To Measure Both Magnitude and Phase Angle of Signal Components, Ratio Boxes Useful for Direct Readings of Nulls, Phase Angle Shifts and Quadrature Voltages, Instrument Servos Useful for Measurement, Remote Display of Data, Data Conversion, Control and Computation, A.C.-D.C. Converters Useful for Measuring Total Signal, Quadrature, In-Phase and Fundamental Components, and the Like.
First use on or about Jan. 1, 1956.

SN 128,947. Automotive Warehouse Distributor, Inc., Denver, Colo. Filed Oct. 2, 1961.

REMEX

Owner of Reg. No. 730,039.
For Generators, Distributors, Starting Motors, Voltage Regulators and Solenoids.
First use Jan. 20, 1961.

SN 131,156. RMS Engineering, Inc., Atlanta, Ga. Filed Nov. 1, 1961.

r s
m

The drawing is lined for the color blue.
For Electronic Devices—Namely, Radio Receivers, Antennas, Power Supplies, Attenuators, and UHF Switches.
First use Oct. 16, 1961.

SN 131,316. Techni Electronics, Inc., Orange, N.J. Filed Nov. 3, 1961.

BLENDAMATIC

For Electric Blender.
First use July 1959.

SN 133,059. Flo-Tronics, Inc., Minneapolis, Minn., assignee of Electro-Line Products Corp., Saukville, Wis. Filed Nov. 30, 1961.

BullDozer

For Electric Fence Chargers.
First use Feb. 1, 1959.

Class 22 — Games, Toys, and Sporting Goods

SN 126,011. Alvin E. Cormeny, d.b.a. Language Teaching Foundation, Washington, D.C. Filed Aug. 15, 1961.

TRAIN OF THOUGHT

For Equipment Comprising a Set of Models or Playing Pieces Representing Various Items of Rolling Stock of a Railroad, Which Also Represent Various Parts of Speech, Sold as a Unit for Playing an Educational Word Game.
First use Aug. 4, 1961.

SN 126,111. Walter F. Leuthner, d.b.a. Reel Boy Products, Alexandria, Minn. Filed Aug. 16, 1961.

REEL BOY

No claim of exclusive right is made to "Reel" is used on fishing reels.
For Fishing Reels.
First use May 27, 1961.

SN 126,944. The Ohio Art Company, Bryan, Ohio. Filed Aug. 30, 1961.

AstroRay

For Toy Guns.
First use Aug. 11, 1961.

SN 128,248. Canada Cycle and Motor Company Limited, Weston, Ontario, Canada. Filed Sept. 20, 1961.

PRO-GARD

Priority claimed under Sec. 44(d) on Canadian application filed June 15, 1961; Reg. No. 124,604, dated Dec. 1, 1961.
For Heel Protectors for Skates, Gauntlets, Helmets and Body Protective Equipment—Namely, Shoulder Pads, Elbow Pads, Shin Guards, Ankle Protectors, Hockey Pants Incorporating Protective Elements, Chest Protectors, Knee Pads, Tendon Protectors and Specific Area Protectors.

SN 132,540. The A. C. Gilbert Company, New Haven, Conn. Filed Nov. 22, 1961.

AUTO-RAMA

For Toys or Sets of Parts Simulating a Race Track and/or a Miniature Highway System With Model Vehicles Propelled Under Remote Control.
First use Sept. 1, 1961.

SN 133,810. Nordeco, Kohler, Wis. Filed Dec. 11, 1961.

NORDECO

For Golf Carts.
First use Nov. 27, 1961.

SN 133,837. Strike-King Corporation, El Segundo, Calif. Filed Dec. 11, 1961.



For Automatic Pin Setting Machines for Use in Bowling Alleys.
First use Sept. 3, 1961.

SN 133,895. Peterson Plastics, Inc., Claremont, N.H. Filed Dec. 12, 1961.

IMAJUNATION

For Toy Building Blocks.
First use Oct. 10, 1961.

SN 134,283. Strike-King Corporation, El Segundo, Calif. Filed Dec. 18, 1961.

Strike-o-matiK

For Bowling Score-Keeper Chairs for Use in Bowling Alleys.
First use on or about Dec. 6, 1961.

SN 134,284. Strike-King Corporation, El Segundo, Calif. Filed Dec. 18, 1961.

STRIKE-O-MATIC

For Bowling Score-Keeper Chairs for Use in Bowling Alleys.
First use on or about Dec. 6, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 118,865. Central Stamping and Manufacturing Company, Polo, Ill. Filed Apr. 28, 1961.

ROTO-SPRED

For Rotary Type Spreaders for Attachment to Power Mowers.
First use Mar. 30, 1961.

SN 122,048. Yeomans Brothers Company, Melrose Park, Ill. Filed June 14, 1961.

HI-COWAVE

For Sewage Treating Equipment.
First use May 22, 1961.

SN 130,873. B & W Incorporated, Torrance, Calif. Filed Oct. 30, 1961.

LEAF-LOC

For Cement Basket for Use on Well Casing or Pipe.
First use Aug. 22, 1961.

SN 131,460. Swingline Inc., Long Island City, N.Y. Filed Nov. 8, 1961.

ELECTRO-POINTER

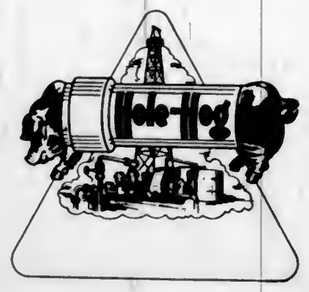
For Pencil Sharpeners.
First use 1940.

SN 132,645. Daffin Corporation, Hopkins, Minn. Filed Nov. 24, 1961.

FEEDMASTER

For Feed Mixers and Grinders.
First use Dec. 11, 1959.

SN 132,715. Petroleum Supply Company, Houston, Tex. Filed Nov. 24, 1961.



For Cylinder Liners for Reciprocating Pump.
First use Oct. 22, 1948.

SN 132,717. Pollard Bros. Mfg. Co. Inc., Chicago, Ill. Filed Nov. 24, 1961.

PRIDECRAFT

For Steel Work Bench Legs and Plans for Work Benches, Sold Together in the Same Packages.
First use Oct. 10, 1961.

Class 24—Laundry Appliances and Machines

SN 128,571. McGraw-Edison Company, Chicago, Ill. Filed Sept. 25, 1961.



For Washers and Dryers.
First use Aug. 4, 1961.

SN 129,055. William H. Stewart, Oklahoma City, Okla. Filed Oct. 2, 1961.

LAUNDER-EZE

For Starch Machines, Dry Cleaning Machines and Clothes Drying Machines.
First use May 7, 1961.

Class 25—Locks and Safes

SN 114,617. Independent Lock Company, Fitchburg, Mass. Filed Feb. 28, 1961.

H-1098-LA

Owner of Reg. No. 507,840.
For Key Blanks.
First use at least as early as 1935.

SN 114,618. Independent Lock Company, Fitchburg, Mass. Filed Feb. 28, 1961.

1176

For Key Blanks.
First use at least as early as Aug. 27, 1952.

SN 122,443. Independent Lock Company, Fitchburg, Mass. Filed June 20, 1961.

1307A

For Key Blanks.
First use as early as 1927.

Class 26—Measuring and Scientific Appliances

SN 109,792. Harris-Intertype Corporation, Cleveland, Ohio. Filed Dec. 7, 1960.

MONARCH

For Automatically-Controlled Typographical Composing Machines.
First use Apr. 20, 1960.

SN 119,576. Triangle Business Machines, Inc., Los Angeles, Calif. Filed May 8, 1961.

TRI LUX

For Photocopy Paper.
First use May 26, 1960.

SN 122,646. L. L. Ridgway Company, Inc., Houston, Tex. Filed June 22, 1961.

UNIPAC

For Unit Package of Diazotype Materials—Namely, Blue Line Ammonia Paper, Black Line Ammonia Paper, and Moist Developing Paper.
First use Feb. 14, 1961.

SN 125,173. Ultra Carbon Corporation, Bay City, Mich. Filed Aug. 1, 1961.

ULTRA

For Graphite and Carbon Electrodes and Powders for Use in Spectroscopic Analysis Apparatus and in Other Measuring and Scientific Appliances.
First use May 26, 1961.

SN 129,257. Aktiebolaget Atvidabergs Industrier, Atvidaberg, Sweden. Filed Oct. 5, 1961.

CAROUSEL

Owner of Swedish Reg. No. 100,085, dated Apr. 21, 1961.
For Electronic Data Processing and Data Transferring Apparatus as Well as Parts Thereof.

SN 131,587. L.A.B. Corporation, Skaneateles, N.Y. Filed Nov. 8, 1961.



For Vibration and Shock Testing Equipment.
First use Sept. 6, 1949.

Class 30—Crockery, Earthenware, and Porcelain

SN 128,688. Stetson Corporation, Lincoln, Ill., by change of name from Stetson China Company, Lincoln, Ill. Filed Sept. 26, 1961.

THERMOCERAM

For China Dinnerware.
First use Mar. 10, 1960.

Class 31—Filters and Refrigerators

SN 119,366. Joe I. Evans, d.b.a. Super Cold Company, Denver, Colo. Filed May 5, 1961.

SUPER COLD

The words "Super Cold" are disclaimed apart from the mark as shown.
For Refrigerated Display Cases, Refrigerated Reach-In Refrigerators, Refrigerated Vegetable Cases, Refrigerated Walk-In Coolers, Ice Cream Freezers, Ice Cream Hardening Cabinets, Ice Cream Dispensing Cabinets, Bottle Coolers, Beer Coolers, Mortuary Refrigerators, Refrigerating Machines, Cooling Coils, Refrigerated Fish Cases, Frozen Food Cabinets, Electrical Cube and Multiform Ice Makers and Refrigerated Salad Cabinets.
First use Apr. 5, 1961.

SN 133,160. Metropolitan Food Company, North Attleboro, Mass. Filed Dec. 1, 1961.

METROPOLITAN

For Food Freezers.
First use on or about Nov. 19, 1960.

Class 32—Furniture and Upholstery

SN 110,058. The I-XL Furniture Co., Inc., Goshen, Ind. Filed Dec. 12, 1960.

SCULPTURED

For Kitchen Cabinets.
First use Nov. 22, 1960.

SN 112,247. Fredon Company, Spearfish, S. Dak. Filed Jan. 23, 1961.

KID-NAPPER

For Combined Auto Bed and Tray for Children.
First use Dec. 26, 1960.

SN 120,827. Schnadig Corporation, Chicago, Ill. Filed May 25, 1961.

STEELFOAM

For Upholstered Furniture.
First use Apr. 15, 1961.

SN 122,455. Palace Metal Products, Inc., Brooklyn, N.Y. Filed June 20, 1961.

VAPOR BARRIER

For Kitchen Cabinets.
First use June 16, 1961.

SN 127,635. Pemco Wheel Company, Kalamazoo, Mich. Filed Sept. 11, 1961.

COLOR-FUSE

For Plastic, Protective and Decorative Coating Applied to Shelving and Brackets Therefor.
First use Aug. 11, 1961.

SN 131,623. The Safegard Corporation, Cincinnati, Ohio. Filed Nov. 8, 1961.

Safegard

The drawing is of a blue color superimposed with a stereoscopic effect on gold. These colors are not claimed as a feature of the mark. Owner of Reg. No. 544,341.
For Pillows and Mattresses.
First use Mar. 15, 1950, on pillows.

SN 133,034. Vertical Blinds Corporation of America, Santa Monica, Calif. Filed Nov. 29, 1961.

L

For Vertical Blinds.
First use Nov. 10, 1961.

SN 133,547. Drexel Enterprises, Inc., Drexel, N.C. Filed Dec. 7, 1961.

FIRENZE

For Bedroom and Dining Room Furniture.
First use Oct. 26, 1961.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 105,710. Airkem, Inc., New York, N.Y. Filed Oct. 4, 1960.

airkem

Owner of Reg. Nos. 427,893, 678,092, and others.
For Apparatus for Dispensing of Volatilizable Odor Control and/or Odor Counteractant Compositions, Including Apparatus Providing Either Free or Forced Volatilization, Whether Self-Contained or as Attachments for Air Conditioning and Ventilating Systems.
First use early in October 1959.

SN 129,323. Aeroglide Corporation, Raleigh, N.C. Filed Oct. 6, 1961.

CENTRILECTOR

For Dust Collectors for Grain Driers.
First use June 1961.

SN 131,504. Elastic Stop Nut Corporation of America, Union, N.J. Filed Nov. 7, 1961.

HAZARD

For Lenses and Reflex Light Reflectors.
First use Oct. 13, 1961.

SN 131,696. McGraw-Edison Company, d.b.a. Line Material Industries, Chicago, Ill. Filed Nov. 9, 1961.

LAWN-GLO

For Luminaires.
First use Oct. 31, 1960.

Class 36—Musical Instruments and Supplies

SN 122,463. Schrier Electronics Corp., Brooklyn, N.Y. Filed June 20, 1961.

PHONO MASTER

For Phonographs and Amplifiers for Electric Guitars.
First use May 11, 1961.

SN 128,447. Laboratory for Electronics, Inc., Boston, Mass. Filed Sept. 22, 1961.

BERNOULLI DISK

The word "Disk" is disclaimed as part of the mark now shown.
For Magnetic Recorders and Components Thereof.
First use July 1960.

Class 37—Paper and Stationery

SN 76,816. Maple Leaf Manufacturing Co., Inc., New York, N.Y. Filed June 30, 1959.



Owner of Reg. No. 629,531.
For Stationery—Namely, Writing Paper, Stenographers' Notebooks and Supplies.
First use Sept. 1, 1953.

SN 98,707. Fraser Paper, Limited, Madawaska, Maine. Filed June 9, 1960.

GIFTCOTE

For Decorative Gift Wrapping Paper.
First use Dec. 10, 1956.

SN 98,708. Fraser Paper, Limited, Madawaska, Maine. Filed June 9, 1960.

OPACOTE

For Opaque Decorative Gift Wrap and Food Wrapping Paper.
First use Apr. 25, 1959.

SN 119,134. James G. Joy, d.b.a. Joy Equipment & Sales Co., Pittsburgh, Pa. Filed May 2, 1961.

GRIME BUSTER

For Windshield Cleaning Tissue.
First use Mar. 1, 1948.

SN 120,352. The Standard Register Company, Dayton, Ohio. Filed May 18, 1961.

STANSET

For Business Forms.
First use Apr. 26, 1961.

SN 123,356. Leo Pevsner, Chicago, Ill. Filed July 3, 1961.

LETTEGRAM

For Paper Message Forms and Mailing Envelopes.
First use October 1960.

SN 127,137. Puget Sound Pulp & Timber Company, Taylorville, Ill. Filed Sept. 1, 1961.

HOPPER MULTIFORM

The word "Multiform" is disclaimed apart from the mark. Owner of Reg. No. 652,065.
For Paper and Stationery—Namely, Cut Size Sheets.
First use July 12, 1960.

SN 127,271. Royal McBee Corporation, New York, N.Y. Filed Sept. 5, 1961.

ROYAL

DUPLIFAX

Owner of Reg. Nos. 61,674, 142,117, and others.
For Copypaper—Namely, Heat Sensitive Reproduction Paper; and Offset Duplicating Masters.
First use Aug. 1, 1961.

SN 129,112. Blandin Paper Company, Grand Rapids, Minn. Filed Oct. 3, 1961.

BLANTONE

For Printing Paper.
First use Sept. 9, 1961.

SN 129,668. Cooper, McDougall & Robertson, Limited, Berkhamsted, England. Filed Feb. 16, 1962.

COOPERCOTE

Owner of British Reg. No. 792,538, dated June 24, 1959; and U.S. Reg. No. 513,490.
For Wrapping and Packaging Paper Impregnated or Coated With Insecticides, Germicides, Fungicides or Rodenticides.

SN 130,191. Draper Products, Appleton, Wis. Filed Oct. 18, 1961.

LOC LIN

For Towels and Sheets Made of Paper and Cellulose Fiber Materials.
First use Sept. 22, 1960.

SN 134,515. The Borden Company, New York, N.Y. Filed Dec. 22, 1961.

RESINITE

Owner of Reg. No. 595,747.
For Plastic Packaging Film.
First use Aug. 18, 1961.

SN 138,759. Bankers Box Company, Franklin Park, Ill. Filed Feb. 28, 1962.

DATA-PAK

For Storage Files of the Binder Type.
First use Feb. 21, 1962.

SN 138,896. Standard Manifold Company, Chicago, Ill. Filed Mar. 1, 1962.

DRIFAX

For Duplicating Paper.
First use Feb. 9, 1962.

SN 139,063. Finch, Pruyn & Company, Incorporated, Glens Falls, N.Y. Filed Mar. 5, 1962.

BRITTANY

For Paper for Printing and General Office Use.
First use June 1, 1961.

SN 139,445. Traffic Builders, Inc., Fort Thomas, Ky. Filed Mar. 8, 1962.

Notemaster

For Combination Calendar and Memorandum Boards.
First use Sept. 8, 1961.

SN 139,481. Fox River Paper Corporation, Appleton, Wis. Filed Mar. 9, 1962.

PERMASSURED

For Writing and Typewriter Paper.
First use Feb. 21, 1962.

SN 139,482. Fox River Paper Corporation, Appleton, Wis. Filed Mar. 9, 1962.

DURALIFE

For Writing and Typewriter Paper.
First use Feb. 21, 1962.

SN 139,745. Harris, Randolph & Baldwin, Inc., Boston, Mass. Filed Mar. 13, 1962.

MEM-O-RAMA

For Daily Reminder Calendars.
First use July 5, 1961.

SN 139,910. Wausau Paper Mills Company, Brokaw, Wis. Filed Mar. 14, 1962.

SNOWCREST

For Printing Papers.
First use Dec. 1, 1959.

SN 140,271. Koh-I-Noor, Inc., New York, N.Y. Filed Mar. 20, 1962.

BRUSHOGRAPH

For Ballpoint Pens and Parts Thereof.
First use Mar. 9, 1962.

SN 140,372. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 21, 1962.

THERMO-FAX

Owner of Reg. No. 560,098 and others.
For Paper Which Has Been Coated or Impregnated With Various Substances and Which Is Useful in Connection With the Making of Duplicate Copies of Typed, Printed or Pictorial Matter.
First use February 1950.

SN 140,381. The Peerless Paper Mills, Inc., Oaks, Pa. Filed Mar. 21, 1962.

VELVET SOFT

Owner of Reg. No. 696,451.
For Toilet Paper and Facial Tissues.
First use July 30, 1959.

SN 140,599. Union Carbide Corporation, New York, N.Y. Filed Mar. 23, 1962.

GLAD

For Plastic Wrap.
First use Mar. 14, 1962.

Class 38 — Prints and Publications

SN 103,171. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Aug. 22, 1960.

THE CROSS AND CRESCENT

For Magazine of a Fraternal Organization.
First use Jan. 2, 1915.

SN 122,343. Robert Frank Mitchell, Colorado Springs, Colo. Filed June 19, 1961.



For Political Cartoon Cards or Pamphlets About Issues Such as Freedom, Taxation, Government.
First use June 13, 1961.

SN 124,485. Roy Wheeler, d.b.a. Historic Virginia Publishing Company, Charlottesville, Va. Filed July 21, 1961.

HISTORIC VIRGINIA

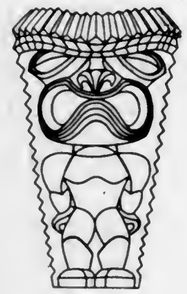
For Publication in the Nature of a Book Devoted to Real Estate Both Historical and Currently Available as Well as Related Matters.
First use Apr. 1, 1940.

SN 127,701. Chroma Glo, Inc., Duluth, Minn. Filed Sept. 12, 1961.

CHROMA GLO

For Decalcomanias.
First use Feb. 12, 1952.

SN 129,204. Richard H. Fairservice, d.b.a. Polynesian Productions Ltd., Honolulu, Hawaii. Filed Oct. 4, 1961.



The mark is a representation of a Hawaiian temple image oftimes dedicated to the god Ku.
For Motion Picture Films, Television Films, Video Tapes, Transparencies, and Slides.
First use March 1957.

SN 130,488. Bettie W. Pappas, Covina, Calif. Filed Oct. 23, 1961.

THE SAN GABRIEL SCANNER

For Bowling News Publication.
First use Oct. 1, 1960.

SN 131,210. Hunter Publishing Company, Chicago, Ill. Filed Nov. 2, 1961.

JOBBER EXECUTIVE

Owner of Reg. No. 709,366.
For Trade Magazine.
First use June 27, 1961.

SN 131,797. The Board of Christian Education of the United Presbyterian Church in the United States of America, Philadelphia, Pa. Filed Nov. 13, 1961.

THE GENEVA PRESS

For Periodicals and Other Printed Material for Non-Denominational Religious Educational Use—Namely, Books, Hymnals, Text Books, Pamphlets, Magazines, Tracts, Brochures, Printed Pictures, Church Record Forms, Sunday School Record Forms, and Choir Anthem Books and Sheet Music.
First use in or about the year 1956.

SN 133,764. Chicago Chapter, American Institute of Architects, Chicago, Ill. Filed Dec. 11, 1961.

INLAND ARCHITECT

For Magazine of Building and Planning.
First use Sept. 20, 1957.

SN 134,665. The Paramount Line, Inc., Pawtucket, R.I. Filed Dec. 26, 1961.



Owner of Reg. No. 727,727.
For Greeting Cards.
First use on or about Dec. 5, 1960.

SN 134,886. Monica Jarmyn, d.b.a. Senator Safety Productions, New York, N.Y. Filed Dec. 29, 1961.

Senator Safety



For Booklets and Cartoons.
First use Oct. 12, 1959.

Class 39 — Clothing

SN 94,283. Endicott Johnson Corporation, Endicott, N.Y. Filed Apr. 4, 1960.

RECORD HOP

For Boys' Shoes.
First use on or about Mar. 1, 1960.

SN 97,721. Sylray Underwear Company, Orwigsburg, Pa. Filed May 23, 1960.

BALLET-BRIEFS

Owner of Reg. No. 646,664.
For Ladies' and Women's Briefs and Underwear of Silk, Rayon, Nylon and Other Synthetic Fibers.
First use Jan. 15, 1955.

SN 109,270. The Popper Shoe Corporation, Boston, Mass. Filed Nov. 29, 1960.

Aleutian

For Shoes, Boots and Galoshes.
First use Nov. 1, 1950.

SN 113,415. Heywood Shirt Corp., New York, N.Y. Filed Feb. 10, 1961.

BRENTLEY

For Shirts and Blouses.
First use January 1946.

SN 118,574. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. Filed Apr. 25, 1961.

AQUA·GAB

Applicant disclaims the syllable "Gab" alone and apart from the mark as shown.
For Men's, Boys', Women's, Misses' and Children's Raincoats, Topcoats and Overcoats.
First use on or about Apr. 3, 1961.

SN 125,183. Advertisers Manufacturing Company, Ripon, Wis. Filed Aug. 2, 1961.

Admanco

For Sales Promotion Novelty Items of Clothing Such as Aprons, Bibs, Caps, Socks, and Mitts.
First use July 17, 1961; 1958 as to "Admanco."

SN 125,423. The Richman Brothers Company, Cleveland, Ohio. Filed Aug. 4, 1961.

RICHCRAFT

Owner of Reg. No. 701,875.
For Men's, Young Men's and Boys' Suits, Pants, Outer Coats, Rainwear, Sport Coats and Shirts.
First use Mar. 15, 1944.

SN 125,965. Meme Dysthe, Montreal, Quebec, Canada. Filed July 28, 1961.

AIRROBE

Priority claimed under Sec. 44(d) on Canadian application filed Feb. 2, 1961; Reg. No. 124,675, dated Dec. 15, 1961.
For Ladies' and Misses' Wearing Apparel—Namely, Millinery, Coats, Suits, Dresses, Hostess Gowns, Skirts, Blouses, Scarves, Slacks, Play Suits, and Raincoats.

SN 128,642. Audiain of Hyattsville, Inc., Hyattsville, Md. Filed Sept. 26, 1961.

Ballantino's

For Women's Shoes.
First use July 31, 1961.

SN 129,889. Silver Knit Hosiery Mills, Inc., High Point, N.C. Filed Oct. 13, 1961.

PED-LON

For Hosiery for Men, Women, Boys, and Girls.
First use Oct. 9, 1961.

SN 130,094. Mutual Buying Syndicate, Inc., New York, N.Y. Filed Oct. 17, 1961.

SELWYNN

For Men's and Boys' Wear—Namely, Shirts, Pajamas, Underwear, Hosiery, Knit Shirts, Sport Shirts, Slacks, and Gloves.
First use Sept. 8, 1961.

SN 131,157. Reliance Manufacturing Company, New York, N.Y. Filed Nov. 1, 1961.

Sedgwick

Owner of Reg. Nos. 586,207 and 390,067.
For Men's and Boys' Dress, Work and Sports Clothing—Namely, Shirts, Pants, Underwear, Pajamas, Overalls, Work Shorts, Deck Pants, Dungarees, Jackets, Slacks and Slack Suits.
First use May 1, 1961.

SN 132,204. Henry J. Tully & Co., Inc., New York, N.Y. Filed Nov. 16, 1961.

ROMART

For Men's, Women's and Children's Underwear—Namely, Pajamas; Knitted Outerwear—Namely, Polo Shirts, Sweat Shirts, and Cardigan Jackets.
First use Aug. 10, 1961.

SN 134,783. Aths Shirt Company, Inc., New York, N.Y. Filed Dec. 28, 1961.

SKEETER

For Men's and Boys' Dress and Sport Shirts.
First use Dec. 14, 1961.

SN 135,488. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Jan. 10, 1962.

WAUHEGANS

For Shoes for Men and Boys.
First use Jan. 4, 1962.

SN 135,505. Hat Corporation of America, Norwalk, Conn. Filed Jan. 10, 1962.

DOBBS

Owner of Reg. No. 513,066.
For Articles of Wearing Apparel for Men—Namely, Dress Shirts, Sport Shirts, Pajamas, Slacks, Raincoats, Belts for Personal Wear, Undershorts, Walking Shorts, and Hosiery.
First use 1919.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 125,156. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Aug. 1, 1961.

MERAKRIN

Priority claimed under Sec. 44(d) on Italian application filed Feb. 14, 1961; Reg. No. 155,891, dated July 27, 1961.
For Fabrics for Filtering, Underskirts, Upholstery, Tapestry, and Curtains; and Synthetic Horsehair Fabrics for Tailors; All Made From Synthetic Filaments.

Class 44—Dental, Medical, and Surgical Appliances

SN 118,925. Lewis Woolf Limited, Birmingham, England. Filed Apr. 28, 1961.

Cumfycurl

Owner of British Reg. No. 687,775, dated Mar. 29, 1950.
For Pacifiers.

SN 133,103. Theratron Corporation, St. Paul, Minn. Filed Nov. 30, 1961.

THERATRON

For Physiological Therapeutic, Diagnostic, and Patient Care Devices and Including an Electronic Muscle Stimulator Applied to the Patient's Body, a Mat or Pad for Therapeutic Exercises or for a Litter and a Mat or Pad for Wheel Chairs, an Electrolytic Solution for Use With Electrical or Electronic Devices in Contact With a Patient's Body; a Therapeutic Bath for Treatment of Body Extremities Such as Hands, Feet and Knee or Elbow Joints, and a Solution of Paraffin and Other Additives for Use in a Therapeutic Bath.
First use Feb. 13, 1961.

Class 45—Soft Drinks and Carbonated Waters

SN 98,602. Sweetie Beverages, Inc., Philadelphia, Pa. Filed June 7, 1960.

Brookside

For Soft Drinks.
First use on or about Apr. 1, 1960.

SN 119,856. The Cumberland Brewing Company of Allegany County, Maryland, d.b.a. Cumberland Beverage Division, Cumberland, Md. Filed May 12, 1961.



For Carbonated Soft Drinks.
First use Apr. 13, 1961.

Class 46—Foods and Ingredients of Foods

SN 52,276. The Chun King Corporation, Duluth, Minn., assignee of Chun King Sales, Inc., Duluth, Minn. Filed May 26, 1958.

THE ROYALTY OF NATIONALITY FOODS

For Canned Foods Prepared so as to Appeal to Various Nationalities—Namely, Bean Sprouts, Chop Suey or Chow Mein Vegetables, Chow Mein Noodles, Soya Sauce, Water Chestnuts, Bamboo Shoots, Vegetable Chow Mein Without Noodles, Wild Rice, Beef Sauce, Mushroom Sauce, Chicken Sauce, Subgum Chicken Mushroom Chow Mein, Brown Sauce, Chicken Chow Mein With Noodles, Mushroom Chow Mein With Noodles, Beef Chop Suey With Noodles, Chicken Chow Mein, Beef Chop Suey, Meatless Chow Mein, Fried Rice With Meat and Eggs, Chop Suey Vegetables With Bamboo Shoots, Sweet and Pungent Sauce, Dressing With Wild Rice, Spaghetti Sauce With Meat, Spaghetti Sauce With Mushrooms, Spaghetti Sauce With Meatballs, Marinara, Pizza, and Frozen Foods Prepared so as to Appeal to Various Nationalities—Namely, Frozen Chicken Chow Mein With Mushrooms With and Without Noodles, Frozen Fried Rice, Frozen Egg Foo Young, Frozen Chicken Chow Mein With Mushrooms, Frozen Shrimp Chow Mein With Mushrooms, Frozen Beef Chop Suey, Frozen Unitarily-Packed Complete Oriental Dinner Consisting of Chicken Almond Chop Suey, Rice and Egg Rolls, Frozen Wild Rice Conserve With Chicken, Frozen Fruit Filled Pastry, Frozen Won Ton Soup, Frozen Sweet and Sour Pork, Frozen Egg Rolls, Frozen Unitarily-Packed Complete Oriental Dinner Consisting of Beef Chop Suey, Rice and Fruit Roll, Frozen Unitarily-Packed Complete Oriental Dinner, Consisting of Shrimp Chop Suey, Fried Rice and Fruit Roll.
First use Apr. 15, 1958.

SN 79,644. Gordon Baking Company, Detroit, Mich. Filed Aug. 17, 1959.

SILVERCUP DUTCH LOAF

Applicant disclaims the word "Dutch" and the word "Loaf" apart from the mark as shown. Owner of Reg. Nos. 179,870 and 699,100.
For Bread.
First use Aug. 4, 1959.

SN 88,796. Ore-Ida Foods, Inc., Ontario, Oreg., by merger from Ore-Ida Potato Products, Inc., Ontario, Oreg. Filed Jan. 11, 1960.

GOLDEN CRINKLES

For Frozen French Fried Potatoes.
First use Oct. 1, 1959.

SN 94,585. Ida Mae Salads, Inc., d.b.a. Popolo Foods, Brentwood, Md. Filed Apr. 7, 1960.

POPOLO

The main Italian meaning of the trademark "Popolo" is "people."
For Pizza Pies.
First use Mar. 31, 1960.

SN 100,710. S. E. Johnson Company, Parma, Idaho. Filed July 12, 1960.

Ida·Gold

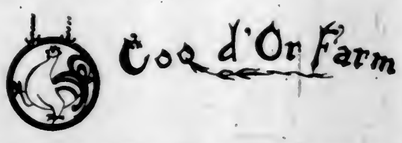
Owner of Reg. No. 353,616.
For Frozen French Fried Potatoes in Various Forms.
First use Feb. 24, 1958.

SN 100,946. Teddy's Frosted Foods, Inc., New York, N.Y. Filed July 15, 1960.

Teddy's

For Frozen Prepared and Uncooked Fish and Shellfish.
First use Apr. 6, 1960.

SN 102,810. Harold Weisberg, d.b.a. Coq d'Or Farm, Hyattstown, Md. Filed Aug. 16, 1960.



The expression "Coq d'Or" is French, and the English translation thereof is "golden rooster."
For Poultry, Fresh Dressed, Frozen Eviscerated, Canned, Precooked and Frozen; and Poultry Products—Namely, Fresh Eggs.
First use February 1952.

SN 103,444. Corn Products Company, New York, N.Y. Filed Aug. 26, 1960.

MOR-SWEET

For Corn Syrup.
First use at least as early as July 24, 1959.

SN 103,932. M. V. Knego, d.b.a. M. V. Knego & Co., Watsonville, Calif. Filed Sept. 6, 1960.



For Fresh Apples.
First use Apr. 15, 1960.

SN 104,746. The Nestlé Company, Limited, London, England. Filed Sept. 19, 1960.

MINTIPS

Owner of British Reg. No. 467,165, dated Feb. 15, 1926.
For Confectionery.

SN 105,176. La Lanne Incorporated, Hollywood, Calif. Filed Sept. 26, 1960.

JACK LA LANNE'S

The name "Jack La Lanne's" is that of the president of the applicant corporation, consent of record.
For Bread.
First use about Aug. 1, 1957.

SN 105,393. The Times Food Products Company, Limited, London, England. Filed Sept. 28, 1960.

TEMPO

Owner of British Reg. Nos. 619,858 and 619,859, both dated Aug. 17, 1942.
For Meat, Fish, Poultry and Game; Meat Extracts, Preserved, Dried and Cooked Fruits and Vegetables; Jellies, Jams, Eggs, Milk and Other Dairy Products; Edible Oils and Fats; Preserves, Pickles; Coffee, Tea, Cocoa, Sugar, Coffee Substitutes; Frozen Confectionery in the Nature of Cakes With Cream or Ice Cream Filling, Ices; Honey, Treacle; Yeast, Bakery Powder; Salt, Mustard, Pepper, Vinegar, Sauces, Spices.

SN 107,675. Hall Omar Baking Company, Rye, N.Y., by change of name from Hall Baking Company, Rye, N.Y. Filed Nov. 2, 1960.

BALANCE

For Bread.
First use Sept. 12, 1959.

SN 109,692. Japan Food Corporation, San Francisco, Calif. Filed Dec. 6, 1960.

WEL-PAC

Owner of Reg. Nos. 284,221 and 394,180.
For Canned Food Products—Namely, Fish and Shellfish.
First use at least as early as 1928.

SN 112,997. Archer-Daniels-Midland Company, d.b.a. The Larabee Flour Mills Company, Minneapolis, Minn. Filed Feb. 3, 1961.

GOLD DOLLARS

Owner of Reg. No. 141,591.
For Wheat Flour.
First use June 1, 1905.

SN 113,792. Archer-Daniels-Midland Company, d.b.a. The Larabee Flour Mills Company, Minneapolis, Minn. Filed Feb. 16, 1961.



Owner of Reg. No. 141,591.
For Wheat Flour.
First use in or about March 1947.

SN 114,118. Maize Industries, Earlville, Ill. Filed Feb. 21, 1961.



For Flavored Popped Corn, Flavored Corn Chips, Flavored Exploded Corn Meal in Baked, Nugget-Like Form, and Other Baked Snack Items Manufactured From Corn and Variously Flavored.
First use on or about May 3, 1954.

SN 116,346. Salvatore De Simone, d.b.a. La Pecorina Co., Paulsboro, N.J. Filed Mar. 23, 1961.



The expression "La Pecorina" is the Italian term meaning "the little sheep" in English.
For Grated Spaghetti Cheese.
First use February 1961.

SN 117,573. Van Leer Chocolate Corporation, Jersey City, N.J. Filed Apr. 10, 1961.

FREEZCOTE

For Edible Coating for Confections.
First use Jan. 1, 1950.

SN 119,066. Stevens Candy Kitchens, Incorporated (Delaware corporation), Chicago, Ill., assignee of Stevens Candy Kitchens, Incorporated (Illinois corporation), Chicago, Ill. Filed May 1, 1961.

AMERICANDIES

For Candies.
First use in or before October 1953.

SN 119,142. National Tea Co., Chicago, Ill. Filed May 2, 1961.

NATIONAL'S TOP TREAT

Owner of Reg. No. 667,796.
For Various Flavors Used as Toppings for Ice Cream and Other Foods.
First use June 8, 1959.

SN 119,408. P & C Food Markets, Inc., Syracuse, N.Y. Filed May 5, 1961.

HOSTESS

For Fresh Eggs.
First use Sept. 1, 1960.

SN 119,409. P & C Food Markets, Inc., Syracuse, N.Y. Filed May 5, 1961.

EASTPAC

For Canned Green and Wax Beans, and Ketchup.
First use at least as early as Jan. 1, 1955.

SN 119,410. P & C Food Markets, Inc., Syracuse, N.Y. Filed May 5, 1961.

P&C

For Bread.
First use at least as early as January 1950.

SN 119,412. P & C Food Markets, Inc., Syracuse, N.Y. Filed May 5, 1961.

COUNTRY MANOR

For Coffee.
First use at least as early as January 1946.

SN 119,414. P & C Food Markets, Inc., Syracuse, N.Y. Filed May 5, 1961.

PENNY CURTISS

The wording "Penny Curtiss" does not represent the name of any particular known living individual.
For Fresh Baked Goods—Namely, Molasses Cookies and Kuchen.
First use at least as early as January 1957.

SN 119,507. The R. T. French Company, Rochester, N.Y. Filed May 8, 1961.

FORMAN'S

For Sauerkraut, Vinegar, Pickles, Olives, Spiced Vegetable Relishes, Unfermented Cider, Canned Fruit and Vegetable Juices, Jams, Jellies, Canned, Dehydrated and Frozen Fruits and Vegetables.
First use at least as early as Oct. 28, 1923.

SN 120,237. Schiff Bio-Food Products, Inc., d.b.a. Schiff Bio-Foods, South Hackensack, N.J. Filed May 17, 1961.



The word "Lac" is disclaimed apart from the mark as shown.
For Special Dietary Food Wafers Consisting in the Main of Lactose, Lactic Acid, Banana Flakes and Banana Puree, for Encouraging a Normal Intestinal Flora.
First use on or about May 1, 1961.

SN 121,695. Beatrice Foods Co., Chicago, Ill. Filed June 9, 1961.



The drawing is lined for red. Owner of Reg. Nos. 624,612, 628,799, and others.
For Canned Barbecue Sauce; Canned Tamales With Chili Gravy; Canned Chili Meat Spread; Canned Chili Con Carne With Beans; Canned Spiced Chili Beans; Bottled and Packaged Powdered Seasoning To Be Mixed With Water and Meat in Making Chili Con Carne; Bottled and Packaged Chili Powder.
First use Mar. 1, 1961; Jan. 1, 1896, as to "Gebhardt's" and design of an eagle.

SN 121,822. Green Bay Food Co., Green Bay, Wis. Filed June 12, 1961.

MADISON

Owner of Reg. No. 353,022.
For Dill, Sweet, Sour, and Mixed Pickles, Sweet Pickle Relish, Salad Dressing, Mustard, Vinegar, Pickled Cauliflower, Waffle Syrup, and French Dressing.
First use March 1905.

SN 122,847. Sherman Poultry Industries, Gardena, Calif. Filed June 26, 1961.

TENDER GOLD

The word "Tender" is disclaimed apart from the mark as shown.
For Refrigerated and Fresh Dressed Chicken.
First use May 5, 1960.

SN 123,352. Oak Point Creameries, Inc., New York, N.Y. Filed July 3, 1961.

Charles
CONTINENTAL

For Ice Cream.
First use Sept. 7, 1954.

SN 124,184. Fireside Marshmallow Company, Alton, Ill. Filed July 18, 1961.

FIRESIDE

For Marshmallows.
First use in or about 1917.

SN 124,195. Peyton L. Hinkle, d.b.a. Hinkle Farms, Ottsville, Pa. Filed July 18, 1961.

PENNSYLVANIA DUTCH
WILD BIRD FEED

The words "Wild Bird Feed" are disclaimed.
For Wild Bird Feed.
First use Oct. 29, 1960.

SN 124,569. Mother Hubbard's Cake Co., Inc., d.b.a. Mother Hubbard Cake Company, Chicago, Ill. Filed July 24, 1961.

MOTHER HUBBARD

Owner of Reg. No. 390,559.
For Any Combined Concentrated Soup Mix.
First use about 1937.

SN 124,601. Swift & Company, Chicago, Ill. Filed July 24, 1961.

AZE

For Vegetable-Derived Shortenings.
First use on or about Sept. 1, 1928.

SN 125,727. Federated Egg & Poultry Sales, Inc., Wooster, Ohio. Filed Aug. 10, 1961.

HEALTH-RAY

For Fresh, Frozen and Dried Eggs, Dressed Poultry Comprising Chickens, Turkeys, Ducks and Geese, Fresh and Frozen.
First use July 8, 1938.

SN 126,211. Davis Canning Company, Atwater, Calif. Filed Aug. 18, 1961.

GOLDEN DAYS

For Canned Peaches.
First use July 17, 1961.

SN 126,360. Thomas J. Lipton, Inc., Hoboken, N.J. Filed Aug. 21, 1961.

GOLDEN LADLE

For Spaghetti Sauces.
First use Aug. 15, 1961.

SN 126,607. The Pillsbury Company, Minneapolis, Minn. Filed Aug. 24, 1961.

FAMILY STYLE

For Uncooked or Unbaked Dough for Making Biscuits.
First use July 5, 1961.

SN 126,711. Flavour Candy Company, Inc., Chicago, Ill. Filed Aug. 1, 1961.

FAN-TASTIX

For Candy.
First use May 22, 1961.

SN 127,012. D. E. Horn & Company, Inc., York, Pa. Filed Aug. 31, 1961.

HORNCO

For Manufactured Feeds for Poultry, Dairy and All Types of Live Stock.
First use Mar. 1, 1950.

SN 127,243. Mitsui & Co., Ltd., Minato-ku, Tokyo, Japan. Filed Sept. 5, 1961.

KOKESHI

"Kokeshi" is the Japanese form for a type of wooden doll.
For Canned Fish, Canned Crabmeat, Canned Oysters, Canned Peaches, Canned Pears, Canned Loquats, Canned Bamboo Shoots, Canned Fruit for Salad and Canned Mushrooms.
First use Dec. 1, 1960; in commerce Dec. 1, 1960.

SN 127,269. The Robb-Ross Company, Sioux City, Iowa. Filed Sept. 5, 1961.

ROBB ROSS

"Robb Ross" is not the name of a particular living individual. Owner of Reg. Nos. 152,970 and 394,716.
For Peanut Butter, Cane and Maple Syrup, Honey, Breakfast Cereals, Buckwheat Flour, Buckwheat Corn and Wheat Flour, Pancake Flour, Cake Flour, Waffle and Pancake Flour, Unpopped Popcorn, Imitation Vanilla Flavoring, White Distilled and Cider Vinegar, and Gelatin Dessert.
First use June 1, 1920.

SN 127,902. California Fruit Exchange, Sacramento, Calif. Filed Sept. 15, 1961.

Sutter-Buttes

For Fresh Deciduous Fruits.
First use July 2, 1961.

SN 130,652. Quality Bakers of America Cooperative, Inc., New York, N.Y. Filed Oct. 25, 1961. COLLECTIVE MARK.

BATTER WHIPPED

Owner of Reg. No. 709,134.
For Cake, Donuts, Pastry, Sweet Rolls and Sweet Buns.
First use Aug. 25, 1961; Apr. 11, 1955, on related goods—namely, bread.

SN 130,698. Home Brand of America, Inc., Chicago, Ill. Filed Oct. 26, 1961.

HOME BRAND
AppleCot

Applicant waives exclusive right to the word "Brand" apart from the mark as shown. Owner of Reg. Nos. 680,083, 684,119, and others.
For Fruit Concentrate Food Beverage.
First use Sept. 14, 1961; 1889 as to "Home" for related goods.

SN 131,214. Louis Milani Foods, Inc., Los Angeles, Calif. Filed Nov. 2, 1961.

SERV-PACK

Owner of Reg. No. 681,905.
For Salad Dressings.
First use Aug. 7, 1961.

SN 131,759. The Nestlé Company, Inc., d.b.a. The Crosse & Blackwell Company, White Plains, N.Y. Filed Nov. 10, 1961.

CROSSE & BLACKWELL

Owner of Reg. Nos. 301,073, 686,723, and others.
For Coffee.
First use July 31, 1961.

SN 131,760. The Nestlé Company, Inc., d.b.a. The Crosse & Blackwell Company, White Plains, N.Y. Filed Nov. 10, 1961.

CROSSE & BLACKWELL

Owner of Reg. Nos. 301,073, 686,723, and others.
For Coffee.
First use July 31, 1961.

SN 131,988. Pedro Marcos Noriega, Mexico City, Mexico. Filed Nov. 14, 1961.

SABRITAS

Owner of Mexican Reg. No. 98,999, dated Oct. 6, 1959.
For Food Product Made of Fried Wheat Flour Suitable for Use Particularly as a Cocktail Snack.

SN 132,329. The Griffith Laboratories, Inc., Chicago, Ill. Filed Nov. 20, 1961.

PROMIL

For Food Concentrate Containing Soy Protein and Milk Powder.
First use Oct. 27, 1961.

SN 132,908. Duffy-Mott Company, Inc., New York, N.Y. Filed Nov. 28, 1961.

FIGUR-TROL

Owner of Reg. Nos. 721,670 and 710,456.
For White Sauce.
First use Nov. 6, 1961.

SN 133,881. Kambly AG, Biscuits-, Confiserie- und Nährmittelfabrik, Trubschachen, Switzerland. Filed Dec. 12, 1961.

GOLDFISH

Owner of Swiss Reg. No. 185,631, dated Apr. 24, 1961; and U.S. Reg. No. 724,634.
For Confections and Bakery Products—Namely, Cookies, Salted Biscuits, Pastries and Cakes.

SN 134,399. The Nestlé Company, Inc., White Plains, N.Y. Filed Dec. 20, 1961.

NESTLÉ

Owner of Reg. Nos. 74,832, 681,916, and others.
For Candy.
First use Oct. 10, 1961.

SN 134,673. Purity Stores, Inc., Burlingame, Calif. Filed Dec. 26, 1961.

HICKORY RANCH

For Packaged Luncheon Meats, Bacon and Frankfurters.
First use Dec. 7, 1961.

SN 134,944. Norman M. Coffin, Inc., Pompano Beach, Fla. Filed Jan. 2, 1962.

WOW

For Fresh Vegetables.
First use Sept. 18, 1961.

SN 135,044. Penn Fruit Co., Inc., Philadelphia, Pa. Filed Jan. 2, 1962.

penny ¢ saver

For Bread.
First use Dec. 14, 1961.

SN 135,393. Louis Rich Foods, Inc., Rock Island, Ill. Filed Jan. 8, 1962.



No claim is made to the word "Brand" apart from the mark as shown.
For Fresh and Frozen Turkeys.
First use October 1956.

SN 135,556. Apex Feed & Supply, Inc., Marietta, Ohio. Filed Jan. 11, 1962.

ACTION PACKED

For Dog Food.
First use September 1954.

SN 136,366. Fritzsche Brothers, Inc., New York, N.Y. Filed Jan. 23, 1962.

COLOBRINE

For Flavoring Agent for Food.
First use Sept. 25, 1961.

SN 136,388. The Panipius Company, Rye, N.Y. Filed Jan. 23, 1962.

EXTRAM

For Protein Food Supplement.
First use Nov. 24, 1961.

SN 137,751. Hotel Bar Foods, Inc., New York, N.Y. Filed Feb. 12, 1962.



Applicant claims no rights with respect to the words "Farm Fresh" and "Lightly Salted Butter."
For Butter.
First use June 14, 1948.

SN 137,992. Continental Baking Company, Rye, N.Y. Filed Feb. 15, 1962.

NUTMEGGER

For Bread.
First use Dec. 18, 1961.

SN 139,521. Nolde Brothers, Incorporated, Richmond, Va. Filed Mar. 9, 1962.

SMOOTH-FLO

For Bread.
First use on or about Feb. 15, 1962.

SN 139,921. Continental Baking Company, Rye, N.Y. Filed Mar. 15, 1962.

RANCH HOUSE

For Bread, Pies, Pastry, Cake, Doughnuts, and Sweet Rolls.
First use June 29, 1957.

Class 47 — Wines

SN 126,713. Societe Anonyme Piat & Cie, Macon, Saone-et-Loire, France. Filed July 27, 1961.

VIN DES MOINES

Applicant claims no exclusive rights in "Vin." The English translation of "Vin des Moines" is "wine of the monks."
For Wines.
First use January 1894; in commerce November 1911.

SN 132,337. Les Caves Sequanaises (Société à Responsabilité Limitée), Paris, France. Filed Nov. 20, 1961.

LES VIGNES ROUSSES

The French words "Les Vignes Rousses" in English mean "the russet vineyards." Owner of French Reg. No. 492,115, dated Nov. 24, 1960 (Paris); Natl. Inst. No. 154,208.
For Wines.

Class 48 — Malt Beverages and Liquors

SN 93,180. G. Heileman Brewing Co., La Crosse, Wis. Filed Mar. 18, 1960.

Love that OLD STYLE tingle!

Owner of Reg. Nos. 63,492, 413,664, and 624,155.
For Beer.
First use Mar. 7, 1960.

SN 128,084. Piel Bros., d.b.a. Trommer Brewing Company, Brooklyn, N.Y. Filed Sept. 18, 1961.



The drawing is lined for red and gold. Applicant disclaims exclusive right to the use of the notation "Beer." Owner of Reg. Nos. 408,144, 511,338, and 515,926.
For Beer.
First use Aug. 31, 1961.

Class 49 — Distilled Alcoholic Liquors

SN 108,549. The Grand Union Company, East Paterson, N.J. Filed Nov. 16, 1960.

GRAND

For Bourbon Whiskey, Vodka, and Rum.
First use 1956.

SN 128,048. Industrias Pampero C.A., Caracas, Venezuela. Filed May 28, 1962.

PAMPERO

The English translation of the Spanish word "Pampero" is "plainsman," a dweller on the pampas or grassy plains.
For Rum, Creme de Cacao and Creme de Cafe.
First use May 24, 1939; in commerce Aug. 24, 1960.

SN 134,829. Mr. Boston Distiller Inc., Boston, Mass. Filed Dec. 28, 1961.

LONGIE

For Whiskey.
First use Dec. 13, 1961.

SN 135,449. Mr. Boston Distiller Inc., Boston, Mass. Filed Jan. 9, 1962.

TALL FELLOW

For Whiskey.
First use Dec. 14, 1961.

SN 135,670. Dailuaine-Talisker Distilleries Limited, Edinburgh, Scotland. Filed Jan. 12, 1962.

TALISKER

Owner of British Reg. No. 31,901, dated Apr. 2, 1883.
For Whisky.

Class 50 — Merchandise Not Otherwise Classified

SN 125,124. Balatum N.V., Huizen, Netherlands. Filed Aug. 1, 1961.

BALACRON

Priority claimed under Sec. 44(d) on Dutch application filed Mar. 1, 1961; Reg. No. 140,422, dated Apr. 10, 1961. Owner of U.S. Reg. No. 678,199.
For Artificial Leather.

Class 51 — Cosmetics and Toilet Preparations

SN 84,275. W. F. Young, Inc., Springfield, Mass. Filed Oct. 29, 1959.

ABSOR'BREATH

For Mouthwash.
First use Aug. 26, 1959.

SN 112,439. Clairol Incorporated, New York, N.Y. Filed Jan. 25, 1961.

GOODBYE MR. CHIPS

For Preparation for Hardening the Nails.
First use Sept. 6, 1960.

SN 115,575. Beardmore Products, Inc., East Rutherford, N.J. Filed Mar. 14, 1961.



Applicant hereby disclaims the use of the wording "Bubble Bath."
For Bubbling Bath Preparation.
First use Jan. 6, 1958.

SN 120,794. Helene Curtis Industries, Inc., Chicago, Ill. Filed May 25, 1961.

WOMAN OF THE WORLD

For Creme Color Rinse for the Hair.
First use Sept. 21, 1960.

SN 122,906. Borun Bros., Los Angeles, Calif. Filed June 27, 1961.

MR. PAUL

For Hair Spray.
First use Jan. 9, 1958.

SN 127,242. The Mennen Company, Morristown, N.J. Filed Sept. 5, 1961.



Owner of Reg. No. 703,672.
For After Shave Lotion, Pre-Shave Lotion, After Shave Talc, Personal Deodorant and Cologne.
First use Sept. 1, 1960.

SN 128,057. Hazel Bishop Inc., Newark, N.J., assignee of Lanolin Plus, Inc., Newark, N.J. Filed Sept. 18, 1961.

LIPS 'N TIPS

For Lipstick and Nail Enamel.
First use Aug. 31, 1961.

SN 128,310. Turet Products, Inc., New York, N.Y. Filed Sept. 20, 1961.

DENTUBRITE

For Dentifrice for Dentures.
First use Mar. 6, 1958.

SN 128,562. Shirley L. Hughes, d.b.a. Shirley Lou Bath Oils, Denver, Colo. Filed Sept. 25, 1961.

Noché

"Noché" means "night" in the Spanish language.
For Bath Oils.
First use Apr. 10, 1960.

SN 128,942. Alberto-Culver Company, Melrose Park, Ill. Filed Oct. 2, 1961.

DERMA-FRESH

Owner of Reg. Nos. 510,434 and 714,631.
For Hand Lotion and Skin Conditioner.
First use Sept. 15, 1942.

SN 129,091. Edward J. Bukowsky, d.b.a. Jan Laboratories, Rockville, Md. Filed Sept. 28, 1961.

Scrub

For Dentifrice Designed for Use by Wearers of Orthodontic Appliances.
First use June 17, 1961.

SN 129,133. Federated Department Stores, Inc., Cincinnati, Ohio. Filed Oct. 3, 1961.

Fedway

Owner of Reg. No. 575,506.
For Face and Dusting Powders, Dry and Cream Rouges, Lipsticks, Cleansing, Dry Skin and Eye Creams, Skin Fresheners, Skin and Hand Lotions, Perfumes, Colognes, Eyebrow Pencils, Eyelash Makeup, Bath Salts, Liquid and Cream Deodorants, Depilatories, Nail Polish and Nail Polish Remover, Shaving Creams and Lotions, Hair Tints, Hairspray, Dental Creams and Powders, Sachet Powders, Mouthwashes, and Sun Tan Lotions.
First use Dec. 28, 1951.

SN 130,041. Mary Chess, Incorporated, New York, N.Y. Filed Oct. 17, 1961.



CHESSMEN

For Toilet Preparations—Namely, Powders, Oils and Lotions for Use in the Bath, After Shaving Lotion, Toilet Water, Deodorants and Rubbing Preparations for Use After the Bath.
First use Dec. 1, 1933.

SN 130,042. Mary Chess, Incorporated, New York, N.Y. Filed Oct. 17, 1961.

ROMAN BATH

For Perfumed Bath Oil.
First use Dec. 12, 1932.

SN 130,367. Life Laboratories, North Hollywood, Calif. Filed Oct. 20, 1961.

PANTHO NAIL

The word "Nail" is disclaimed apart from the mark as shown.
For High Protein Cream for Fingernails and Toenails.
First use June 1, 1961.

SN 130,948. Murray P. Poznak, Rahway, N.J. Filed Oct. 30, 1961.

Scherell

For purposes of registration and without waiving other rights thereto, applicant disclaims the word "Scherell" in its capacity as a surname.
For Blemish Corrective Lotion, Chamomile Cream, Cream Cleanser, Deep Pore Cleanser, Eyebrow Pencil, Eye Cream, Eyelash and Eyebrow Oil, Eye Shadow, Illusion Tip Pencil, Iridescent Eye Liner, Lip Outline Pencil, Lip Overtones, Lipstick, Liquid Eye Liner, Liquid Make-Up, Mascara, Massage, Mint Herb Masque, Night Cream, Rouge, Shadow Stick, Skin Freshener, Toning Lotion.
First use Apr. 4, 1961.

SN 132,247. Manhattan Specialty, Yonkers, N.Y. Filed Nov. 17, 1961.

YOUNG AT HEART

For Eye Make-Up.
First use Aug. 28, 1961.

SN 132,261. Santen Pharmaceutical Company, Limited, Higashi-Yodogawa-ku, Osaka, Japan. Filed Nov. 17, 1961.

DARLIN

Owner of U.S. Reg. No. 722,356.
For Eye Lotion.
First use in July 1961; in commerce in July 1961.

SN 133,759. Bristol-Myers Company, New York, N.Y. Filed Dec. 11, 1961.

TRIACTON

For Personal Deodorant.
First use Aug. 30, 1961.

SN 135,549. Yardley of London, Inc., Paterson, N.J. Filed Jan. 10, 1962.

CLEAN SWEEP

For Skin Cream.
First use Nov. 29, 1961.

SN 135,731. Trylon Products Corporation, Chicago, Ill. Filed Jan. 12, 1962.

TRYLON

For Skin Creams and Bubble Bath Preparations.
First use December 1939.

SN 137,458. Prescripto Pharmaceuticals Inc., Brooklyn, N.Y. Filed Feb. 7, 1962.

HEXOLENT

For Preparation Used as a Gargle and Mouthwash.
First use Jan. 22, 1962.

Class 52—Detergents and Soaps

SN 105,712. Airkem, Inc., New York, N.Y. Filed Oct. 4, 1960.

a-33

Owner of Reg. No. 631,479.
For Liquid Detergent Compositions Having Combined Detergent, Deodorant and Disinfectant Action, and Particularly Adapted for Environmental Sanitation Use in Cleaning Walls, Floors and Hard Surface Equipment.
First use early in April 1959.

SN 111,411. The Kiwi Polish Company Proprietary Limited, Richmond, near Melbourne, Victoria, Australia. Filed Jan. 6, 1961.

KIWI

KWIK 'N' EASY

Without waiving common law rights, applicant disclaims "Kwik 'N' Easy" except in association with the mark as shown. Owner of U.S. Reg. Nos. 294,323, 697,306, and others.
For Dry Cleaner for Shoes.
First use Jan. 28, 1959; in commerce Jan. 28, 1959.

SN 116,139. Lipsner-Smith Corporation, Chicago, Ill. Filed Mar. 21, 1961.

CF2

Owner of Reg. No. 728,211.
For Film Cleaning Solvent Used in an Ultrasonic Film Cleaning Apparatus.
First use on or about Sept. 8, 1958.

SN 120,945. The Bell Company, d.b.a. Westley Industries, Cleveland, Ohio. Filed May 29, 1961.

GLOOM

For Vinyl and Leather Upholstery Cleaner of the Spray Type.
First use on or about Jan. 1, 1952.

SN 121,550. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 7, 1961.

VALCLENE

For Dry Cleaning Fluid for Use in Automatic Dry Cleaning Machines.
First use Mar. 24, 1961.

SN 122,776. Consolidated Laundries Corporation, New York, N.Y. Filed June 26, 1961.



For Detergent for Use in Automatic Washing Machines.
First use May 29, 1961.

SN 124,699. A & L Laboratories, Inc., Minneapolis, Minn. Filed July 26, 1961.

PIP-CLOR

For Detergent for Dairy Equipment.
First use Aug. 1, 1957.

SN 125,434. The Tanatex Chemical Corporation, Kearny, N.J. Filed Aug. 4, 1961.

AMPHICIDE

For Biologically Active Detergents and Cleansing Agents for Industrial Use.
First use Apr. 25, 1961.

SN 125,741. The Hubbard-Hall Chemical Company, Waterbury, Conn. Filed Aug. 10, 1961.

Hubbard Hall

For Laundry Soap, Dishwashing Compound, and Cleanser.
First use in or before May 1957.

SN 130,330. Bunny Products Co., Inc., Indianapolis, Ind. Filed Oct. 20, 1961.



Bunny Bags

Owner of Reg. No. 153,131.
For Composition for Cleaning Shoes, Gloves, or Other Articles of Skin, Including Human Skin, Leather, or Textile Fabric, Liquid or Paste.
First use Apr. 15, 1921.

SN 130,739. Spartan Chemical Company, Inc., Toledo, Ohio. Filed Oct. 26, 1961.

Sterigent

For Germicidal Liquid Cleaner for Surfaces of Glass, Wood, Porcelain, Linoleum, Asphalt, Leather, Plastic, Metal Terrazzo, Tile, Marble and Painted Walls, Rugs and Upholstered Furniture.
First use Dec. 19, 1960.

SN 131,873. The Procter & Gamble Company, Cincinnati, Ohio. Filed Nov. 13, 1961.

PERT

Owner of Reg. Nos. 409,079, 600,482, and others.
For Shampoo for the Hair.
First use Aug. 25, 1961.

SN 132,137. The Diversey Corporation, Chicago, Ill. Filed Nov. 16, 1961.

TOP-ET

For Cleaning Compound for Circulation Cleaning of Dairy Pipelines.
First use Oct. 17, 1961.

SN 132,775. White King Inc., Los Angeles, Calif. Filed Nov. 24, 1961.

MYRISOL

For Ingredient Used in Dishwashing Detergents—Namely, Myristy Dimethyl Sulphobetaine.
First use Oct. 18, 1961.

SN 133,483. J. Nelson Prewitt, Inc., Rochester, N.Y. Filed Dec. 6, 1961.

lady matey

The drawing is lined for yellow or gold, but no claim is made to such colors. Owner of Reg. No. 722,367.
For Bathing Detergent.
First use at least as early as Nov. 1, 1961.

SN 135,411. Washum Products Company, Incorporated, Billings, Mont. Filed Jan. 8, 1962.

Washum

For Hand Cleaners and Scouring Cleansers.
First use May 1, 1926.

SN 135,572. Danway Corporation, Baton Rouge, La. Filed Jan. 11, 1962.

DAN-WAY

For Industrial Type Cleaning Composition Used in the Exterior Cleaning of Buildings.
First use Nov. 6, 1961.

SN 135,964. Helene Curtis Industries, Inc., Chicago, Ill. Filed Jan. 17, 1962.

SHAMPUFF

For Hair Shampoo.
First use on or about Aug. 8, 1961.

SN 139,094. The Grand Union Company, East Paterson, N.J. Filed Mar. 5, 1962.

GRAND WAY

Owner of Reg. Nos. 52,300, 721,710, and others.
For Detergent for Use in Washing Dishes, Pots and Pans, and Fabrics.
First use on or about Nov. 15, 1961.

SN 140,166. J. Nelson Prewitt, Inc., Rochester, N.Y. Filed Mar. 19, 1962.

matey

The drawing is lined to indicate the color red, but no claim is made to such color. Owner of Reg. No. 722,367.
For Bath Detergent, Liquid Form and Shampoo.
First use at least as early as Mar. 14, 1961, on bath detergent, liquid form.

SERVICE MARKS

Class 100 — Miscellaneous

SN 81,882. Delta Delta Delta, Chicago, Ill. Filed Sept. 23, 1959. COLLECTIVE MARK.

TRI DELTA

Owner of Reg. Nos. 223,230 and 694,711.
For Organizing of Chapters, Establishment and Maintenance of Membership in a National College Fraternity as Well as in the Establishment and Maintenance of Interest in Good Scholarship, Excellence in Leadership and Collegiate Activities.
First use 1888.

SN 90,900. California Research Corporation, San Francisco, Calif. Filed Feb. 15, 1960.

ISOCRACKING

For Research, Development, Evaluation, Consultation and Technical Services for Others in Connection With the Process Design, Construction and Operation of Units for the Hydrocracking of Hydrocarbons.
First use July 21, 1959.

SN 97,777. The Mitre Corporation, Lexington, Mass. Filed May 24, 1960.

MITRE

For Technical and Scientific Research and Consulting Services in the Fields of Air and Space Traffic Control Systems, Surveillance Systems, Communication Systems, Data Processing Systems, Command and Control Systems, and Display Systems.
First use on or about Feb. 22, 1959.

SN 108,639. The Kiplinger Washington Editors, Inc., Washington, D.C. Filed Nov. 17, 1960.

KIPLINGER



BOOK CLUB

The block letter "K" is in the color brown against a black background. Owner of Reg. Nos. 506,031, 659,844, and others.
For Providing the Public With Periodic Résumés and Descriptions of Books and Other Literature of Current Interest.
First use Mar. 1, 1960.

SN 108,640. The Kiplinger Washington Editors, Inc., Washington, D.C. Filed Nov. 17, 1960.

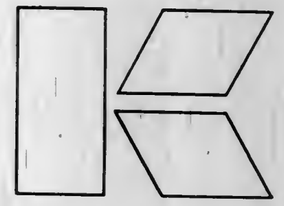
KIPLINGER



BOOK CLUB

The left hand vertical segment of the block letter "K" is in black and the right hand slanted segments of the "K" are in the color brown. Owner of Reg. Nos. 506,031, 659,844, and others.
For Providing the Public With Periodic Résumés and Descriptions of Books and Other Literature of Current Interest.
First use Mar. 1, 1960.

SN 108,641. The Kiplinger Washington Editors, Inc., Washington, D.C. Filed Nov. 17, 1960.



Owner of Reg. Nos. 506,031, 659,844, and others.
For Providing the Public With Periodic Résumés and Descriptions of Books and Other Literature of Current Interest.
First use Mar. 1, 1960.

SN 126,218. Fidelity Detective Bureau, Inc., d.b.a. Fidelity Electronic Protective Systems, Pittsburgh, Pa. Filed Aug. 18, 1961.



The drawing is lined to indicate the color red.
For Installation of Protective Alarm Systems and Detective Agency Services in Connection Therewith.
First use Feb. 12, 1960.

SN 134,461. Kellogg Company, Battle Creek, Mich. Filed Dec. 21, 1961.

KELLOGG NUTRITION COUNCIL

Applicant disclaims the words "Nutrition Council" apart from the mark as shown.

For Systematic Dissemination of Authoritative Nutritional Information for the Advancement of Nutritional Standards in the Improvement of Food and Diet.

First use Oct. 2, 1961.

SN 135,379. Northwest Wholesale Incorporated, Wenatchee, Wash. Filed Jan. 8, 1962.

NORTHWEST wholesale incorporated

Owner of Reg. Nos. 211,526 and 676,787.

For Services Rendered in Behalf of Applicant's Members Including the Circulating of Special Information Relating to Growing and Merchandising Techniques; Periodical Inspection of Fruit; Purchase and Delivery of Orchard and Warehouse Supplies for Production Packaging and Marketing Fruit.

First use July 1960; Sept. 18, 1925, as to "Northwest" as part of trademark "Great Northwest" for fresh apples.

Class 101 — Advertising and Business

SN 101,599. Big Bonus Stamp Company, Houston, Tex. Filed July 28, 1960.

BIG BONUS

For Promoting the Sale of Goods of Others Through the Issuance and Redemption of Trading Stamps.

First use Mar. 17, 1960.

SN 109,262. Nash-Finch Company, Minneapolis, Minn. Filed Nov. 29, 1960.

Jack & Jill

For Consultation and Advice to Others in the Establishment and Operation of Grocery Stores.

First use May 3, 1956.

SN 112,810. Williams and Associates, Inc., Denver, Colo. Filed Jan. 30, 1961.

ELECTROLAB

For Manufacturer's Representative Services in the Field of Electronic Equipment.

First use on or about Dec. 19, 1959.

SN 115,610. Keystone Readers' Service, Inc., Bryn Mawr, Pa. Filed Mar. 14, 1961.

KEYSTONE READERS' SERVICE

No claim of exclusive right is made to the words "Readers' Service" apart from the mark as shown.

For Subscription Service Authorized To Sell Subscriptions for Various Magazines on a Cash or Installment Basis.

First use February 1933.

SN 122,815. Marketing Merchandisers, Inc., Oklahoma City, Okla. Filed June 26, 1961.

STOP -N- GO FOODS

No claim is made to the word "Foods."

For Retail Grocery Store Services.

First use Dec. 15, 1960.

SN 124,138. Statistical Tabulating Corporation, Chicago, Ill. Filed July 17, 1961.



For Preparing Punched Data Cards, Analysing Data on Such Cards, Bookkeeping and Accounting Services, Typing and Stenographic Services, Operation of Business Machines, Including Key Punch Machines, Calculating Machines and Comptometers and Supplying Temporary Help for Clerical Work.

First use June 15, 1961.

SN 124,934. The National Litho Company, Washington, D.C. Filed July 28, 1961.

TYPE-A-TONE

For Printing Services, Particularly Printing of Simulated Original Typewritten Matter.

First use on or about June 1, 1959.

SN 138,731. The National Cash Register Company, Dayton, Ohio. Filed Feb. 27, 1962.

National

Owner of Reg. Nos. 53,129, 704,650, and others.

For Providing Complete Computer Hardware and Systems Supporting Services for Existing and Future Computer Installations, and for the Processing of Input Media, Either Furnished by Customers, or Created for the Customers, for the Purpose of Preparing Various Statements, Reports, and Analyses for Said Customers.

First use on or about Feb. 15, 1961.

SN 139,108. Louis E. La Berge, d.b.a. The Silent-Bookkeeper Co., San Diego, Calif. Filed Mar. 5, 1962.

THE SILENT-BOOKKEEPER

For Advisory Services in the Field of Bookkeeping and Tax Computation.

First use Nov. 5, 1947.

Class 102 — Insurance and Financial

SN 98,340. Citizens Bank and Trust Company, Park Ridge, Ill. Filed June 3, 1960.

CITIZENS SANTA CLAUS CLUB*

*World's Only Christmas Club That Works Backwards

The words "Christmas Club" are disclaimed apart from the mark without prejudice to applicant's common law rights.

For Personal Loan Banking Services.

First use on or about Dec. 1, 1958.

SN 122,922. Employers Mutual Liability Insurance Company of Wisconsin, Wausau, Wis. Filed June 27, 1961.



The word "Wausau" is disclaimed apart from the mark as shown.

For Underwriting of Fire, Marine and Casualty Insurance.

First use Jan. 16, 1954.

SN 130,010. Union Bank, Los Angeles, Calif. Filed Oct. 16, 1961.

UNION BANK

The word "Bank" is disclaimed apart from the association shown.

For General Banking Services Such as Loans, Savings and Checking Accounts, Escrow Transactions, Various Trust Services, and the Like.

First use at least as early as December 1957.

Class 103 — Construction and Repair

SN 89,926. Logan Co., Louisville, Ky. Filed Jan. 29, 1960.

PLANT DYNAMATION

The word "Plant" is disclaimed apart from the mark as shown.

For Engineering and Designing of Materials Handling Systems for Industrial Plants.

First use Jan. 4, 1960.

SN 113,871. Taylor-Made Homes, Inc., East Hartford, Conn. Filed Feb. 16, 1961.

TAYLOR-MADE HOMES

The word "Homes" is disclaimed apart from the mark as shown.

For Construction and Architectural Services for Custom-Built Homes.

First use December 1958.

SN 135,501. Getz Exterminators, Inc., St. Louis, Mo. Filed Jan. 10, 1962.

Getz

Owner of Reg. Nos. 297,145, 653,904, and others.

For Exterminating Services.

First use 1888.

Class 105 — Transportation and Storage

SN 56,510. Transcontinental Bus System, Inc., Dallas, Tex. Filed Aug. 1, 1958.



For Transporting Persons, Property and Cargo by Highway Motor Coach.

First use on or about Sept. 30, 1935.

SN 125,933. Matson Navigation Company, San Francisco, Calif. Filed Aug. 14, 1961.

FUNCRUISES

For Transportation Services—Namely, Operating Ocean Passenger Cruises.

First use July 30, 1961.

SN 136,223. The Flying Tiger Line Inc., Burbank, Calif. Filed Jan. 22, 1962.

Skycruise

For Multiple-Stop Transportation of Persons and Their Baggage by Aircraft on a Charter Basis.

First use early part of December 1961.

Class 106 — Material Treatment

SN 92,404. Spraycraft Franchises Company, San Francisco, Calif. Filed Mar. 8, 1960.

SPRAY CRAFT

For Automobile Painting and Finishing.
First use on about Mar. 8, 1956.

SN 124,790. The Amerbelle Corporation, Rockville, Conn. Filed July 27, 1961.

AMERFOAM

For Fabric Dyeing Service.
First use May 29, 1961.

Class 107 — Education and Entertainment

SN 108,939. Calvary Baptist Church, New York, N.Y. Filed Nov. 23, 1960.

ENCOUNTER

For the Title of a Television Program—Namely, a Religious Program.
First use Oct. 9, 1960.

SN 135,850. Westinghouse Broadcasting Company, Inc., Pittsburgh, Pa. Filed Jan. 15, 1962.

PM WEST

Owner of Reg. No. 673,662.
For Title of a Television Program Comprised Principally of Interviews and Popular Entertainment, Such as Music, Comedy, Singing and Dancing.
First use on or about June 12, 1961.

SN 135,851. Westinghouse Broadcasting Company, Inc., Pittsburgh, Pa. Filed Jan. 15, 1962.

PM EAST

Owner of Reg. No. 673,662.
For Title of a Television Program Comprised Principally of Interviews, Film Features and Discussions.
First use on or about June 12, 1961.

SN 135,852. Westinghouse Broadcasting Company, Inc., Pittsburgh, Pa. Filed Jan. 15, 1962.

PROGRAM-PM

Owner of Reg. No. 673,662.
For Title of a Radio Program Comprised Principally of Community News and Interviews, Special Entertainment Features, and On-the-Spot Live and Recorded Features.
First use on or about June 24, 1957.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

734,731. HEXAGRID. General Grid Corporation. SN 104,385. Pub. 5–8–62. Filed 9–13–60.

734,732. WEIGH-A-HEAD. Farrington R. Carpenter. SN 110,421. Pub. 5–8–62. Filed 12–19–60.

734,733. POLAR PATENT. Colonial Tanning Company, Inc. SN 112,126. Pub. 5–8–62. Filed 1–19–61.

734,734. EUROPRENE N. Anic S.p.A. SN 120,941. Pub. 5–8–62. Filed 5–29–61.

734,735. EUROPRENE LATICE. Anic S.p.A. SN 120,942. Pub. 5–8–62. Filed 5–29–61.

734,736. KEEBUSH AND DESIGN. Kestner Evaporator and Engineering Company Limited. SN 120,999. Pub. 5–8–62. Filed 5–29–61.

734,737. SOUFFLE. Fabric Leather Corporation. SN 121,477. Pub. 5–8–62. Filed 6–6–61.

734,738. VACUTHERM. Hamilton-Skotch Corporation. SN 122,307. Pub. 5–8–62. Filed 6–19–61.

734,739. VACUTRON. Hamilton-Skotch Corporation. SN 122,308. Pub. 5–8–62. Filed 6–19–61.

734,740. GENALITE. General Foam Plastics Corp. SN 124,354. Pub. 5–8–62. Filed 7–20–61.

734,741. BRISTEX. Allen G. Hawkins, d.b.a. The Bristex Company. SN 129,208. Pub. 5–8–62. Filed 10–4–61.

734,742. B-W, MARBON CHEMICAL BORG-WARNER AND DESIGN. Borg-Warner Corporation. SN 130,328. Pub. 5–8–62. Filed 10–20–61.

734,743. WONDERCHIP. Anglo-Canadian Pulp and Paper Mills, Limited. SN 131,103. Pub. 5–8–62. Filed 11–1–61.

734,744. FANTASY. Armour and Company. SN 131,104. Pub. 5–8–62. Filed 11–1–61.

734,745. EMBATEX. May & Baker Limited. SN 131,492. Pub. 5–8–62. Filed 11–7–61.

734,746. MUNCY-CHIEF. M. Milton Hoffman, d.b.a. The Hoffman Seed & Grain Co. SN 133,270. Pub. 5–8–62. Filed 12–4–61.

Class 2 — Receptades

734,747. SPACE-SAVER. Kimberly-Clark Corporation. SN 108,181. Pub. 5–1–62. Filed 11–10–60.

734,748. SATIN-PAK. Packaging Components, Inc. SN 111,994. Pub. 5–8–62. Filed 1–17–61.

734,749. ROLA-DOLA. Vincent Danielle, Inc. SN 116,484. Pub. 5–8–62. Filed 3–27–61.

734,750. TRI-TAINER. Cadillac Products, Inc. SN 123,601. Pub. 5–8–62. Filed 7–10–61.

734,751. THERMO-SAFE. Polyfoam Packers Corporation. SN 126,797. Pub. 5–8–62. Filed 8–28–61.

734,752. CLEARVIEW. Airmold Corporation. SN 127,069. Pub. 5–8–62. Filed 9–1–61.

734,753. TRADEMARK DESIGN. Dura Steel Products Co. SN 128,260. Pub. 5–8–62. Filed 9–20–61.

734,754. LABEL-ON. Plastic Packaging Company. SN 128,584. Pub. 5–8–62. Filed 9–25–61.

734,755. JET FOLD. Retail Packaging Corporation. SN 128,856. Pub. 5–8–62. Filed 9–28–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

734,756. SAFARI CRATE AND DESIGN. Robert C. Steele, d.b.a. R. C. Steele Company. SN 114,363. Pub. 5–8–62. Filed 2–24–61.

Class 6 — Chemicals and Chemical Compositions

734,757. INCRONITE. George W. McDougall, d.b.a. Incronite Co. SN 110,695. Pub. 5–8–62. Filed 12–22–60.

734,758. CHEM-AQUA. National Chemsearch Corporation of Texas. SN 111,423. Pub. 5–8–62. Filed 1–6–61.

734,759. CARUS. Carus Chemical Company. SN 113,986. Pub. 5–8–62. Filed 2–20–61.

734,760. FYNE SOFT. Food Fair Stores, Inc. SN 118,569. Pub. 5–8–62. Filed 4–25–61.

734,761. PELLEMENTS. Westinghouse Electric Corporation. SN 120,268. Pub. 5–8–62. Filed 5–17–61.

734,762. BOOK LIFE. Product Research and Development Corporation. SN 120,665. Pub. 5–8–62. Filed 5–23–61.

734,763. STARBAR. Agricultural Specialties. SN 122,587. Pub. 5–8–62. Filed 6–22–61.

734,764. DU TONE AND DESIGN. Du-Tone Chemical Company, Inc. SN 124,179. Pub. 5–8–62. Filed 7–18–61.

734,765. VERTON. The Dow Chemical Company. SN 128,974. Pub. 5–8–62. Filed 10–2–61.

734,766. KUROSAL. The Dow Chemical Company. SN 128,977. Pub. 5–8–62. Filed 10–2–61.

734,767. APITIN. Geigy Chemical Corporation. SN 129,141. Pub. 5–8–62. Filed 10–3–61.

734,768. FONDAREN. Geigy Chemical Corporation. SN 129,142. Pub. 5–8–62. Filed 10–3–61.

734,769. AMETRYNE. Geigy Chemical Corporation. SN 129,143. Pub. 5–8–62. Filed 10–3–61.

734,770. PONOLITH. E. I. du Pont de Nemours and Company. SN 129,202. Pub. 5–8–62. Filed 10–4–61.

Class 8 — Smokers' Articles, Not Including Tobacco Products

734,771. BREWSTER. Brown & Williamson Tobacco Corporation. SN 109,031. Pub. 5–8–62. Filed 11–25–60.

734,772. KINGSWAY BRUYERE. Poul Nielsen, d.b.a. Firmaet Stanwell Briar Pipes. SN 111,682. Pub. 5–8–62. Filed 1–11–61.

Class 10 — Fertilizers

734,773. GARDEN FAIR. Garden Fair, Inc. SN 129,934. Pub. 5–8–62. Filed 10–16–61.

Class 12 — Construction Materials

734,774. LAUAN ONE-ELEVEN. Douglas Fir Plywood Association. SN 101,382. COLLECTIVE MARK. Pub. 5–8–62. Filed 7–25–60.

734,775. STAR DESIGN. Timberline, Inc. of Oregon. SN 104,342. Pub. 5–8–62. Filed 9–12–60.

734,776. TRUSSGRID. General Grid Corporation. SN 104,384. Pub. 5–8–62. Filed 9–13–60.

734,777. TEXX. Marson Corporation. SN 109,501. Pub. 5–8–62. Filed 12–2–60.

734,778. LAM-O-BASE. Allied Chemical Corporation. SN 110,016. Pub. 5–8–62. Filed 12–12–60.

734,779. SHELTER-ALL. Shelter-All Corporation. SN 113,449. Pub. 5–8–62. Filed 2–10–61.

734,780. CUSHION LOCK. Edward T. Berg, d.b.a. Morrison & Co. SN 113,653. Pub. 5–8–62. Filed 2–14–61.

734,781. DRI-SHIELD. Weyerhaeuser Company. SN 117,146. Pub. 5–8–62. Filed 4–4–61.

734,782. DRIVE PATCH. Drive-Patch, Inc. SN 117,626. Pub. 5–8–62. Filed 4–11–61.

734,783. CURTAINSCREEN. Julius Blum & Co. Inc. SN 118,553. Pub. 5–8–62. Filed 4–25–61.

734,784. PALCOTE. The Pacific Lumber Company. SN 120,326. Pub. 5–8–62. Filed 5–18–61.

734,785. PALCO-LOC. The Pacific Lumber Company. SN 120,327. Pub. 5–8–62. Filed 5–18–61.

734,786. PALCO. The Pacific Lumber Company. SN 120,328. Pub. 5–8–62. Filed 5–18–61.

734,787. PALCO-PLY. The Pacific Lumber Company. SN 120,329. Pub. 5–8–62. Filed 5–18–61.

734,788. EL DORADO. The William L. Bonnell Company, Inc. SN 128,400. Pub. 5–8–62. Filed 9–22–61.

734,789. ACE-CRETE. Ace-Crete Products, Inc. SN 129,559. Pub. 5–8–62. Filed 10–10–61.

734,790. ASTROWELD. Hexcel Products Inc. SN 129,617. Pub. 5–8–62. Filed 10–10–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

734,791. SAF-T-SEAL. ACF Industries, Incorporated. SN 109,139. Pub. 5–8–62. Filed 11–28–60.

734,792. AIROUT. General Fittings Company. SN 109,488. Pub. 5–8–62. Filed 12–2–60.

734,793. SWIV-L-BALL. Blue Ribbon Metal Products Co. SN 110,252. Pub. 5–8–62. Filed 12–15–60.

734,794. FLYLOCK. Isidor Stern, d.b.a. Rapid Products Company. SN 116,356. Pub. 5–8–62. Filed 3–23–61.

734,795. BREECH LOCK. The Lunkenheimer Company. SN 116,895. Pub. 5–8–62. Filed 3–31–61.

734,796. TRU-WELD. Tru-Fit Screw Products Corporation. SN 118,381. Pub. 5–8–62. Filed 4–21–61.

734,797. COGEGAL. Compagnie Generale des Gaz Liquéfiés Cogegal. SN 125,972. Pub. 5–8–62. Filed 8–14–61.

734,798. KURLOK. Unistrut Products Company. SN 128,224. Pub. 5–8–62. Filed 9–19–61.

Class 15—Oils and Greases

734,799. YELLOW 77. Ideal Industries, Inc. SN 117,191. Pub. 5–8–62. Filed 4–5–61.

Class 16—Protective and Decorative Coatings

734,800. STOPS RUST. Rust-Oleum Corporation. SN 73,740. Pub. 9–15–59. Filed 5–14–59.

734,801. SEMI SHINE. Great Lakes Paint and Varnish Company. SN 113,206. Pub. 5–8–62. Filed 2–7–61.

734,802. TRIANGULAR SYMBOL ENCLOSING CURVED DESIGN. Laketine Corporation. SN 129,155. Pub. 5–8–62. Filed 10–3–61.

734,803. SHIVA. Laketine Corporation. SN 129,157. Pub. 5–8–62. Filed 10–3–61.

734,804. CONTEMPORARY. Laketine Corporation. SN 129,158. Pub. 5–8–62. Filed 10–3–61.

Class 17—Tobacco Products

734,805. NO 221 B, BAKER STREET. F.D.B. Cigar and Tobaksfabrikker. SN 126,159. Pub. 5–8–62. Filed 8–17–61.

734,806. HALF AND HALF ETC. AND DESIGN. The American Tobacco Company. SN 132,793. Pub. 5–8–62. Filed 11–27–61.

734,807. JAMESTOWN. R. J. Reynolds Tobacco Company. SN 133,086. Pub. 5–8–62. Filed 11–30–61.

734,808. BEDFORD. R. J. Reynolds Tobacco Company. SN 133,087. Pub. 5–8–62. Filed 11–30–61.

Class 18—Medicines and Pharmaceutical Preparations

734,809. DISTRA-PEARLS. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 73,531. Pub. 1–5–60. Filed 5–13–59.

734,810. SHUR-GAIN. The Tanvilac Co., Inc. SN 109,907. Pub. 5–8–62. Filed 12–8–60.

734,811. SOMALGIC. Carter Products, Inc. SN 119,748. Pub. 5–8–62. Filed 5–11–61.

734,812. VMF. Grain States, Inc. SN 120,055. Pub. 5–8–62. Filed 5–12–61.

734,813. TOXIRHUS. Lloyd Brothers, Inc. SN 120,643. Pub. 5–8–62. Filed 5–23–61.

734,814. HI-HORSE. Vit-A-Way, Inc. SN 123,384. Pub. 5–8–62. Filed 7–3–61.

734,815. SUS-TAN. Paul B. Elder Company. SN 123,533. Pub. 5–8–62. Filed 7–7–61.

734,816. ASCAVET. Drugs for Veterinary Medicine, Inc. SN 126,088. Pub. 5–8–62. Filed 8–16–61.

734,817. FBA AND DESIGN. Farbenfabriken Bayer Aktiengesellschaft. SN 127,705. Pub. 5–8–62. Filed 9–12–61.

734,818. ROSE-VEL. The Mifflin, McCambridge Company. SN 128,073. Pub. 5–8–62. Filed 9–18–61.

734,819. IOPREP. Johnson & Johnson. SN 128,172. Pub. 5–8–62. Filed 9–19–61.

734,820. IOPREP AND DESIGN. Johnson & Johnson. SN 128,173. Pub. 5–8–62. Filed 9–19–61.

734,821. HERITAGE. The Evron Company, Inc. SN 128,540. Pub. 5–8–62. Filed 9–25–61.

734,822. LINCTIFED. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 128,886. Pub. 5–8–62. Filed 9–29–61.

734,823. LINCTIFED-C. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 128,887. Pub. 5–8–62. Filed 9–29–61.

734,824. CHRYSENEX. Societe Anonyme Belgo-Canadienne Continental Pharma. SN 129,174. Pub. 5–8–62. Filed 10–3–61.

734,825. ETNABOLATE. U.S. Ethicals Inc., by change of name from Ethica Standard Co., Inc. SN 129,850. Pub. 5–8–62. Filed 10–13–61.

734,826. AS AND DESIGN. Arnar-Stone Laboratories, Inc. SN 129,904. Pub. 5–8–62. Filed 10–16–61.

734,827. TEAR-X. Contactisol Inc. SN 129,923. Pub. 5–8–62. Filed 10–16–61.

734,828. HOMADRIN. Crookes-Barnes Laboratories, Inc. SN 130,183. Pub. 5–8–62. Filed 10–18–61.

734,829. TIGLYSSIN. Duncan, Flockhart & Company Limited. SN 130,337. Pub. 5–8–62. Filed 10–20–61.

734,830. VITA-KIDS. Home Makers Savings Corporation. SN 130,556. Pub. 5–8–62. Filed 10–24–61.

734,831. TEMPRAFEN. Mead Johnson & Company. SN 130,570. Pub. 5–8–62. Filed 10–24–61.

734,832. ELATON. Carter Products, Inc. SN 131,183. Pub. 5–8–62. Filed 11–2–61.

734,833. CELOCOL. Endo Laboratories Inc. SN 133,460. Pub. 5–8–62. Filed 12–6–61.

734,834. TREST. The Wander Company, d.b.a. Dorsey Laboratories. SN 134,295. Pub. 5–8–62. Filed 12–18–61.

734,835. REPROMIX. The Upjohn Company. SN 134,699. Pub. 5–8–62. Filed 12–26–61.

734,836. SOLUSEPT. Soluble Products Corp. SN 134,844. Pub. 5–8–62. Filed 12–28–61.

734,837. LAXOBERON. C. H. Boehringer Sohn. SN 135,088. Pub. 5–8–62. Filed 1–3–62.

Class 20—Linoleum and Oiled Cloth

734,838. INTERLOCKEN. Creative Plastics Engineering Company. SN 129,749. Pub. 5–8–62. Filed 10–12–61.

Class 21—Electrical Apparatus, Machines, and Supplies

734,839. A AND DESIGN. Aerotex Industries, Inc. SN 115,872. Pub. 5–8–62. Filed 3–17–61.

734,840. TENSOR. Tensor Electric Development Company, Inc. SN 116,600. Pub. 5–8–62. Filed 3–27–61.

734,841. S AND DESIGN. Texas Instruments Incorporated. SN 117,560. Pub. 5–8–62. Filed 4–10–61.

734,842. T/I AND HEXAGONAL DESIGN. Texas Instruments Incorporated. SN 117,562. Pub. 5–8–62. Filed 4–10–61.

734,843. DARKLITE. Edison Price, Incorporated. SN 120,003. Pub. 5–8–62. Filed 5–15–61.

734,844. REPRESENTATION OF A 76 SALESMAN. Union Oil Company of California. SN 120,040. Pub. 5–8–62. Filed 5–15–61.

734,845. 76 UNION WITHIN CIRCLE. Union Oil Company of California. SN 120,156. Pub. 5–8–62. Filed 5–16–61.

734,846. PTX. Essex Wire Corporation. SN 122,293. Pub. 5–8–62. Filed 6–19–61.

734,847. RA AND DESIGN. All-Steel Equipment Inc. SN 122,741. Pub. 5–8–62. Filed 6–26–61.

734,848. AMERICAN QUEEN. Knapp Monarch Company. SN 123,654. Pub. 5–8–62. Filed 7–10–61.

734,849. ARCOFIX. Societe Anonyme des Ateliers de Secheron. SN 124,464. Pub. 5–8–62. Filed 7–21–61.

734,850. CIRCUITIP. AMP Incorporated. SN 124,868. Pub. 5–8–62. Filed 7–28–61.

734,851. NANALINE. Bel Fuse Inc. SN 124,875. Pub. 5–8–62. Filed 7–28–61.

734,852. HELICON. AMP Incorporated. SN 125,122. Pub. 5–8–62. Filed 8–1–61.

734,853. CRICKET. Fansteel Metallurgical Corporation. SN 125,376. Pub. 5–8–62. Filed 8–4–61.

734,854. STAR LIGHT. Thomas Industries Inc. SN 126,274. Pub. 5–8–62. Filed 8–18–61.

734,855. MICRO-RAC. Amphenol-Borg Electronics Corporation. SN 126,500. Pub. 5–8–62. Filed 8–23–61.

734,856. REPRESENTATION OF AN INDIAN. Marathon Electric Manufacturing Company. SN 126,602. Pub. 5–8–62. Filed 8–24–61.

734,857. TELEBANK. The Teleregister Corporation. SN 126,698. Pub. 5–8–62. Filed 8–25–61.

734,858. INFRALITE. N. J. Thermex Company, Inc. SN 127,347. Pub. 5–8–62. Filed 9–6–61.

734,859. VU-TRON 7. The Crescent Company, Inc. SN 127,521. Pub. 5–8–62. Filed 8–11–61.

Class 22—Games, Toys, and Sporting Goods

734,860. BLISZ. A.T.B. Associates, Inc. SN 121,956. Pub. 5–8–62. Filed 6–15–61.

734,861. PUNCH ME. Dartmore Corporation. SN 124,723. Pub. 5–8–62. Filed 7–26–61.

734,862. ROTOMATIC. Wen-Mac Corporation. SN 127,683. Pub. 5–8–62. Filed 9–11–61.

734,863. TRU-AIM. Shakespeare Company. SN 129,298. Pub. 5–8–62. Filed 10–5–61.

734,864. PIONEER. Boone Bait Company Incorporated. SN 129,336. Pub. 5–8–62. Filed 10–6–61.

734,865. FIRE BOUNCER. Viceroy Manufacturing Company Limited. SN 129,438. Pub. 5–8–62. Filed 10–6–61.

734,866. WATER LOG. William E. Welch. SN 129,828. Pub. 5–8–62. Filed 10–12–61.

734,867. DUCOY. Ducoy, Inc. SN 129,848. Pub. 5–8–62. Filed 10–13–61.

734,868. BOLO. Lester M. Davis, d.b.a. Les Davis Fishing Tackle Co. SN 129,925. Pub. 5–8–62. Filed 10–16–61.

734,869. FLOPY. Etablissements Rublex (Société à Responsabilité, Limitée). SN 130,056. Pub. 5–8–62. Filed 10–17–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

734,870. CONVERTOR. Barnard & Leas Manufacturing Company, Inc. SN 106,178. Pub. 5–8–62. Filed 10–11–60.

734,871. SCHICK DE LUXE. Eversharp, Inc. SN 106,250. Pub. 5–8–62. Filed 10–12–60.

734,872. DYNAPOWER. The New York Air Brake Company. SN 116,057. Pub. 5–8–62. Filed 3–20–61.

734,873. MAC M AND DESIGN. MacMillin Hydraulic Engineering Corporation. SN 118,259. Pub. 5–8–62. Filed 4–20–61.

734,874. LOCKE. The Locke Steel Chain Company. SN 118,592. Pub. 5–8–62. Filed 4–25–61.

734,875. VEN-PAR CO. The Vendo Company. SN 119,085. Pub. 5–8–62. Filed 5–1–61.

734,876. KEMCO. J. & A. Keller Machine Co., Inc. SN 120,101. Pub. 5–8–62. Filed 5–16–61.

734,877. FORCE-FLO FEEDER. F. J. Stokes Corporation. SN 120,583. Pub. 5–8–62. Filed 5–22–61.

734,878. BLACKMER. Blackmer Pump Company. SN 124,878. Pub. 5–8–62. Filed 7–28–61.

734,879. COLE SPA. Cole Vending Industries, Inc. SN 125,467. Pub. 5–8–62. Filed 8–7–61.

734,880. 1847 ROGERS BROS. The International Silver Company. SN 127,405. Pub. 5–8–62. Filed 9–7–61.

734,881. DYNA-BLOCK. SKF Industries, Inc. SN 127,655. Pub. 5–8–62. Filed 9–11–61.

734,882. ELECTROMATION. Stearns Manufacturing Company, Inc. SN 127,731. Pub. 5–8–62. Filed 9–12–61.

734,883. TEX-VIT. Tex-Vit Manufacturing Company. SN 127,813. Pub. 5–8–62. Filed 9–13–61.

734,884. TEX-QUAD. Tex-Vit Manufacturing Company. SN 127,818. Pub. 5–8–62. Filed 9–13–61.

734,885. FULINE. The Fuline Corporation. SN 137,908. Pub. 5–8–62. Filed 2–14–62.

Class 26—Measuring and Scientific Appliances

734,886. MEMRY-DIAL. Nord Photocopy & Electronics Corporation. SN 111,531. Pub. 5–8–62. Filed 1–9–61.

734,887. RICOHFAX. Riken Optical Industries, Ltd. SN 113,028. Pub. 5–8–62. Filed 2–3–61.

734,888. ALTO AND DESIGN. Alto Scientific Company, Inc. SN 117,157. Pub. 5–8–62. Filed 4–5–61.

734,889. ARKLA AND DESIGN. Arkansas Louisiana Gas Company. SN 131,253. Pub. 5–8–62. Filed 11–3–61.

Class 27 — Horological Instruments

734,890. MIDO OCEAN STAR AND DESIGN. Mido-G. Schaeren & Co. S.A. SN 123,236. Pub. 5–8–62. Filed 6–30–61.

734,891. SYMBOL (LAST LETTER OF THE GREEK ALPHABET). Omega Louis Brandt & Frere, S.A. SN 127,631. Pub. 5–8–62. Filed 9–11–61.

734,892. VANTAGE. Hamilton Watch Company. SN 128,896. Pub. 5–8–62. Filed 9–29–61.

Class 28 — Jewelry and Precious-Metal Ware

734,893. NP AND DESIGN. Nomo Products. SN 117,523. Pub. 5–8–62. Filed 4–10–61.

Class 29 — Brooms, Brushes, and Dusters

734,894. ION. Lion Burashi Kabushiki Kaisha. SN 121,570. Pub. 5–8–62. Filed 6–7–61.

Class 30 — Crockery, Earthenware, and Porcelain

734,895. CAPRI. Capri Creations. SN 137,419. Pub. 5–8–62. Filed 2–7–62.

Class 31 — Filters and Refrigerators

734,896. BOTRON. Syncromatic Corporation. SN 113,457. Pub. 5–8–62. Filed 2–10–61.

734,897. KOBY. The Koby Corporation. SN 121,105. Pub. 5–8–62. Filed 5–31–61.

734,898. SLIP COAT. Culligan, Inc., assignee of National Marketing Service, Inc. SN 123,675. Pub. 5–8–62. Filed 7–10–61.

734,899. MONOVALVE. Union Tank Car Company. SN 123,709. Pub. 5–8–62. Filed 7–10–61.

734,900. PARTILOK. Union Tank Car Company. SN 123,710. Pub. 5–8–62. Filed 7–10–61.

Class 32 — Furniture and Upholstery

734,901. CUSTOM SCIENCE. Thomas N. Scoville, d.b.a. Standard Foundry Products. SN 108,835. Pub. 5–8–62. Filed 11–21–60.

734,902. FABRY. Fabry Associates, Inc. SN 122,523. Pub. 5–8–62. Filed 6–21–61.

734,903. PLYBLEND. Brinktun, Inc. SN 130,269. Pub. 5–8–62. Filed 10–19–61.

734,904. VIRGINIA MAID AND DESIGN OF MAP OF VIRGINIA. The Lane Company, Inc. SN 130,286. Pub. 5–8–62. Filed 10–19–61.

734,905. PRIVATE EYE. Century Industries, Inc. SN 130,332. Pub. 5–8–62. Filed 10–20–61.

734,906. DH AND DESIGN. The Display House, Inc. SN 130,543. Pub. 5–8–62. Filed 10–24–61.

734,907. SANI-SEAL. Simmons Company. SN 130,835. Pub. 5–8–62. Filed 10–27–61.

734,908. HEART SAVERS. Victor Wood Products Company. SN 130,983. Pub. 5–8–62. Filed 10–30–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

734,909. AMC MONOGRAM DESIGN. Adelta Manufacturing Co. Inc. SN 119,660. Pub. 5–8–62. Filed 5–10–61.

734,910. ULTRA-RAY. Caloric Corporation, assignee of Caloric Appliance Corporation. SN 119,676. Pub. 5–8–62. Filed 5–10–61.

734,911. GLIDE-O-MATIC. Dyna Mfg. Co. SN 125,901. Pub. 5–8–62. Filed 8–14–61.

734,912. BROILEVATOR. Tennessee Stove Works, Inc. SN 126,058. Pub. 5–8–62. Filed 8–15–61.

734,913. NORGE. Borg-Warner Corporation. SN 126,079. Pub. 5–8–62. Filed 8–16–61.

734,914. ROL-AIR-TROL. Bell & Gossett Company. SN 126,296. Pub. 5–8–62. Filed 8–21–61.

734,915. ELECTROMATIC. Patrick B. McCarthy. SN 126,368. Pub. 5–8–62. Filed 8–21–61.

734,916. UNI-COOLER. The Coleman Company, Inc. SN 126,906. Pub. 5–8–62. Filed 8–30–61.

Class 36 — Musical Instruments and Supplies

734,917. TONE EDUCATOR. Scientific Industries, Inc. SN 96,270. Pub. 5–8–62. Filed 5–2–60.

734,918. TON-KLAR. William Lewis and Son. SN 103,030. Pub. 5–8–62. Filed 8–19–60.

734,919. MEHLIN & SONS NEW YORK-TORONTO. Paul G. Mehlin & Sons, Inc. SN 107,363. Pub. 5–8–62. Filed 10–28–60.

734,920. SKYLARK RECORDS AND DESIGN. Skylark Records Inc. SN 115,188. Pub. 5–8–62. Filed 3–8–61.

734,921. CENTENNIAL. M. Hohner Inc. SN 119,515. Pub. 5–8–62. Filed 5–8–61.

734,922. MEMOREX. Memorex Corporation. SN 124,571. Pub. 5–8–62. Filed 7–24–61.

734,923. TITANIC. Gordon S. Wolf, d.b.a. Titanic Records. SN 124,693. Pub. 5–8–62. Filed 7–25–61.

Class 37 — Paper and Stationery

734,924. OAKVILLE. Scovill Manufacturing Company. SN 119,562. Pub. 5–8–62. Filed 5–8–61.

734,925. SONATA. Puget Sound Pulp & Timber Company. SN 127,136. Pub. 5–8–62. Filed 9–1–61.

734,926. CALLIOPE. Peninsular Paper Company. SN 129,387. Pub. 5–8–62. Filed 10–6–61.

734,927. DRURY LANE. Katz Drug Company. SN 129,499. Pub. 5–8–62. Filed 10–9–61.

734,928. FORLAN. Miliprint, Inc. SN 130,223. Pub. 5–8–62. Filed 10–18–61.

734,929. BLUE CORE AND DESIGN. American Can Company. SN 130,317. Pub. 5–8–62. Filed 10–20–61.

734,930. FILMAC. Minnesota Mining and Manufacturing Company. SN 131,146. Pub. 5–8–62. Filed 11–1–61.

734,931. PENN/PRINT GLOSS. New York & Pennsylvania Co., Inc. SN 131,391. Pub. 5–8–62. Filed 11–6–61.

734,932. MICON. Mid-Continent Manufacturing Corporation. SN 132,176. Pub. 5–8–62. Filed 11–16–61.

734,933. PT PERMA-TALLY AND DESIGN. Paul E. Guenther, d.b.a. Perma-Tally. SN 132,238. Pub. 5–8–62. Filed 11–17–61.

734,934. HI BROWS. American Greetings Corporation. SN 133,352. Pub. 5–8–62. Filed 11–30–61.

734,935. GOLDORNA. Austen Display Inc. SN 134,086. Pub. 5–8–62. Filed 12–15–61.

734,936. STA-LOCK. Curtis 1000, Incorporated. SN 134,949. Pub. 5–8–62. Filed 1–2–62.

734,937. CREAM-PAC. Dixie Wax Paper Company. SN 135,489. Pub. 5–8–62. Filed 1–10–62.

734,938. SUNWORTHY. Canadian Wallpaper Manufacturers Limited. SN 135,566. Pub. 5–8–62. Filed 1–11–62.

734,939. BROOKLACE. Brooklyn Lace Paper Works, Inc. SN 136,024. Pub. 5–8–62. Filed 1–18–62.

734,940. MOUNT VERNON. Fort Howard Paper Company. SN 136,224. Pub. 5–8–62. Filed 1–22–62.

734,941. COMMANDER. Modern Mold and Tool Corp. SN 136,475. Pub. 5–8–62. Filed 1–24–62.

734,942. MEDALIST. Venus Pen & Pencil Corporation. SN 137,021. Pub. 5–8–62. Filed 1–31–62.

Class 38 — Prints and Publications

734,943. CAS AND DESIGN. Chicago Aerial Industries, Inc. SN 111,858. Pub. 5–8–62. Filed 1–16–61.

734,944. NAVY HISTORY AND TRADITION AND DESIGN. Stokes Walesby. SN 118,385. Pub. 5–8–62. Filed 4–21–61.

734,945. BENEVOLENT. Werner J. Scherer. SN 121,670. Pub. 5–8–62. Filed 6–8–61.

734,946. KEYBOARD. Keyboard Jr. Publications, Incorporated. SN 123,106. Pub. 5–8–62. Filed 6–29–61.

734,947. ART-DOT. Art-Dot. SN 125,556. Pub. 5–8–62. Filed 8–7–61.

734,948. RAND McNALLY. Rand McNally & Company. SN 127,267. Pub. 5–8–62. Filed 9–5–61.

734,949. THE "REP." The Real Estate Pictorial, Inc. SN 127,795. Pub. 5–8–62. Filed 9–13–61.

734,950. NEWS TRAILS. Scholastic Magazines, Inc. SN 128,473. Pub. 5–8–62. Filed 9–22–61.

Class 39 — Clothing

734,951. CHAS. CREED AND DESIGN. J. Maimon & Sons, Inc. SN 98,912. Pub. 5–8–62. Filed 6–13–60.

734,952. WAIKIKINI. Sportville Mens Wear, Inc. SN 103,975. Pub. 5–8–62. Filed 9–6–60.

734,953. GRENFELL. Haythornthwaite & Sons Limited. SN 115,693. Pub. 5–8–62. Filed 3–15–61.

734,954. POWR-HOUSE. Montgomery Ward & Co., Incorporated. SN 116,332. Pub. 5–8–62. Filed 3–23–61.

734,955. AL LEVY'S. Al Levy's, Inc. SN 120,642. Pub. 5–8–62. Filed 5–23–61.

734,956. TAB-SPANDER. Piedmont Shirt Company. SN 121,313. Pub. 5–8–62. Filed 6–2–61.

734,957. BEEBE AND DESIGN OF CROSSED TEN PINS. Beebe Rubber Company. SN 122,504. Pub. 5–8–62. Filed 6–21–61.

734,958. BERNICE. A. M. Knitwear Corp. SN 122,673. Pub. 5–8–62. Filed 6–23–61.

734,959. TARA-KNITS. Talbott, Inc. SN 123,781. Pub. 5–8–62. Filed 7–11–61.

734,960. BIG YANK AND DESIGN. Reliance Manufacturing Company. SN 123,839. Pub. 5–8–62. Filed 7–12–61.

734,961. MOTHER GOOSE AND DESIGN. Mother Goose Corporation. SN 127,245. Pub. 5–8–62. Filed 9–5–61.

734,962. NYL-KOTED. Melville Shoe Corporation. SN 127,486. Pub. 5–8–62. Filed 9–8–61.

734,963. TRAMPEZE. Penobscot Shoe Company. SN 127,721. Pub. 5–8–62. Filed 9–12–61.

734,964. KNITEMPOS. Sportempos, Inc. SN 127,728. Pub. 5–8–62. Filed 9–12–61.

734,965. SKIRTEMPOS. Sportempos, Inc. SN 127,729. Pub. 5–8–62. Filed 9–12–61.

734,966. QUALITIZED. Quality Mills, Incorporated. SN 127,794. Pub. 5–8–62. Filed 9–13–61.

734,967. ROCK. Milsan Mills, Inc. SN 127,867. Pub. 5–8–62. Filed 9–14–61.

734,968. GRIN-WOOD. J. Grinchuck Company. SN 127,923. Pub. 5–8–62. Filed 9–15–61.

734,969. SEW-PRON. Grace Middlemiss. SN 128,072. Pub. 5–8–62. Filed 9–18–61.

734,970. KLEENEX AND DESIGN. Kimberly-Clark Corporation. SN 130,078. Pub. 5–8–62. Filed 10–17–61.

Class 40 — Fancy Goods, Furnishings, and Notions

734,971. CARRI PIN. Carri Pin, Inc. SN 88,897. Pub. 5–8–62. Filed 1–13–60.

734,972. REDI-BOW. Redi-Knot, Inc. SN 103,600. Pub. 5–8–62. Filed 8–29–60.

734,973. HOLD-TITE. A. H. Miller, Inc. SN 113,751. Pub. 5–8–62. Filed 2–15–61.

734,974. OAKVILLE. Scovill Manufacturing Company. SN 119,563. Pub. 5–8–62. Filed 5–8–61.

734,975. LORD WINDSOR. Lord and Lady Windsor Inc. SN 128,060. Pub. 5–8–62. Filed 9–18–61.

734,976. WINDSOR AND DESIGN. Lord and Lady Windsor Inc. SN 129,085. Pub. 5–8–62. Filed 9–27–61.

Class 41 — Canes, Parasols, and Umbrellas

734,977. AMICO. Bruder Wuster. SN 131,445. Pub. 5–8–62. Filed 11–6–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

734,978. GRENFELL. Haythornthwaite & Sons Limited. SN 115,694. Pub. 5–8–62. Filed 3–15–61.

734,979. ADAGIO. Deering Milliken, Inc. SN 117,172. Pub. 5–8–62. Filed 4–5–61.

734,980. HI-FOAM. Knitbrook Mills Corp. SN 117,196. Pub. 5–8–62. Filed 4–5–61.

734,981. BONDYNE. Bondyne Associates, Inc. SN 117,593. Pub. 5–8–62. Filed 4–6–61.

734,982. TJAP BAPAK TANI AND DESIGN. Faibish Corporation. SN 118,060. Pub. 5–8–62. Filed 4–18–61.

734,983. GALLERY SCREEN PRINTS AND DESIGN. Loomskill, Inc. SN 124,743. Pub. 5–8–62. Filed 7–26–61.

734,984. OCEAN BREEZE. Textile Corporation of America. SN 125,566. Pub. 5–8–62. Filed 8–7–61.

734,985. QUALITERRY. Cannon Mills Company. SN 130,611. Pub. 5–8–62. Filed 10–25–61.

734,986. PLUTON. Minnesota Mining and Manufacturing Company. SN 130,717. Pub. 5–8–62. Filed 10–26–61.

734,987. LITEKING. Harry M. Pryor, d.b.a. Pryor & Company. SN 130,736. Pub. 5–8–62. Filed 10–26–61.

734,988. RIPCORD. Fabrex Corp. SN 131,359. Pub. 5–8–62. Filed 11–6–61.

Class 43 — Thread and Yarn

734,989. WILLOWSPUN. Emile Bernat & Sons Company. SN 119,921. Pub. 5–8–62. Filed 5–15–61.

Class 44 — Dental, Medical, and Surgical Appliances

734,990. VIVODENT. Etablissement Dentaire Ivoclar. SN 105,802. Pub. 4–11–61. Filed 10–5–60.

734,991. LIFEGUARD. Lifeguard Corporation. SN 125,828. Pub. 5–8–62. Filed 8–11–61.

Class 45 — Soft Drinks and Carbonated Waters

734,992. SPINNING WHEEL. Spinning Wheel Products Co. SN 127,960. Pub. 5–8–62. Filed 9–15–61.

Class 46 — Foods and Ingredients of Foods

734,993. ISOTEIN. J. R. Short Milling Company, assignee of J. R. Short Milling Company and General Mills, Inc. (joint venture). SN 101,045. Pub. 5–1–62. Filed 7–18–60.

734,994. KERN FRUIT. Kern Fruit Company (California corporation—new corporation), assignee, by mesne assignments, of Kern Fruit Company (California corporation). SN 105,173. Pub. 5–1–62. Filed S.R. 9–26–60; Am. P.R. 12–11–61.

734,995. RE UMBERTO AND DESIGN. Strohmeyer & Arpe Company, d.b.a. United Pure Food Co. SN 110,954. Pub. 5–8–62. Filed 12–28–60.

734,996. OVALTINE SPORTSBAR. The Wander Company, d.b.a. Ovaltine Food Products. SN 111,564. Pub. 6–6–61. Filed 1–9–61.

734,997. MERORY ETC. AND DESIGN. Merory Flavors, Inc. SN 111,902. Pub. 5–8–62. Filed 1–16–61.

734,998. ENGLE FARM DAIRIES AND DESIGN. Sunbury Milk Products Company, d.b.a. Engle Farm Dairies. SN 112,925. Pub. 5–8–62. Filed 2–1–61.

734,999. LU-WOW. Universal Foods Corporation. SN 112,986. Pub. 5–8–62. Filed 2–2–61.

735,000. SPACE WHEELS. V. La Rosa & Sons, Inc. SN 113,427. Pub. 5–8–62. Filed 2–10–61.

735,001. SPEAR DESIGN. Wm. Wrigley Jr. Company. SN 114,029. Pub. 5–8–62. Filed 2–20–61.

735,002. LAUREL. Wilson & Co., Inc. SN 114,735. Pub. 5–8–62. Filed 3–1–61.

735,003. MIZZA. P.D.P. Company, Inc. SN 119,551. Pub. 5–8–62. Filed 5–8–61.

735,004. TROPIC-ANA AND DESIGN. Tropicana Products, Inc. SN 121,773. Pub. 5–8–62. Filed 6–9–61.

735,005. OVENRITE. Badger Turkey Industries, Inc. SN 121,791. Pub. 5–8–62. Filed 6–12–61.

735,006. GOLDEN-GLO. Badger Turkey Industries, Inc. SN 121,792. Pub. 5–8–62. Filed 6–12–61.

735,007. STRIP TEASERS. Atkins Pickle Company. SN 123,267. Pub. 5–8–62. Filed 7–3–61.

735,008. DELLA MOORE AND DESIGN. Moore's Sea Food Co., Inc. SN 128,835. Pub. 5–8–62. Filed 9–28–61.

735,009. FORT BEDFORD INN. Ort Bros. Bakery, Inc. SN 129,971. Pub. 5–8–62. Filed 10–16–61.

735,010. TOP TREAT. National Tea Co. SN 130,719. Pub. 5–8–62. Filed 10–26–61.

735,011. FIGURE CONTROL. Duffy-Mott Company, Inc. SN 131,479. Pub. 5–8–62. Filed 11–7–61.

735,012. IDACOOL. R. C. Kellett, Inc. SN 131,485. Pub. 5–8–62. Filed 11–7–61.

735,013. MAP-O-SPREAD. Ernest Carriere, Inc. SN 133,211. Pub. 5–8–62. Filed 12–4–61.

735,014. REQUEST. Dehn & Co., Inc. SN 133,225. Pub. 5–8–62. Filed 12–4–61.

735,015. MONTCHANIN. Montchanin Products, Inc. SN 133,573. Pub. 5–8–62. Filed 12–7–61.

735,016. BUTTONDOWN. Montchanin Products, Inc. SN 133,575. Pub. 5–8–62. Filed 12–7–61.

735,017. WAGON TRAIN. Tony Downs Foods Company. SN 134,015. Pub. 5–8–62. Filed 12–14–61.

735,018. PROVIMI AND DESIGN. Bonda's Veevoederfabriek Provimi N.V. SN 134,182. Pub. 5–8–62. Filed 12–18–61.

735,019. FORTRITION. International Fortrition Co., Inc. SN 134,234. Pub. 5–8–62. Filed 12–18–61.

735,020. NUJETS. International Fortrition Co., Inc. SN 134,235. Pub. 5–8–62. Filed 12–18–61.

735,021. FORTRITION NUJETS. International Fortrition Co., Inc. SN 134,236. Pub. 5–8–62. Filed 12–18–61.

735,022. FULINE. The Fuline Corporation. SN 137,907. Pub. 5–8–62. Filed 2–14–62.

Class 48 — Malt Beverages and Liquors

735,023. REGAL. The National Brewing Co., assignee of Anheuser-Busch, Incorporated. SN 106,463. CONCURRENT USE. Pub. 5–1–62. Filed 10–17–60.

Class 49 — Distilled Alcoholic Liquors

735,024. SEAGERS REDCOAT. Seager, Evans & Co., Ltd. SN 29,830. Pub. 3–18–58. Filed 5–10–57.

735,025. SEAGER'S ENGLISH. Seager, Evans & Co., Ltd. SN 32,212. Pub. 10–28–58. Filed 6–18–57.

735,026. SPEYSIDE. Speyside Distillery & Bonding Company Limited. SN 120,241. Pub. 5–8–62. Filed 5–17–61.

735,027. BARRIASSON AND DESIGN. Maison Barriasson. SN 125,396. Pub. 5–8–62. Filed 8–4–61.

735,028. WILD BULL. Popper Morson Corp. SN 129,632. Pub. 5–8–62. Filed 10–10–61.

735,029. QUEEN'S HAME. Scottish Distilled Products Limited. SN 130,247. Pub. 5–8–62. Filed 10–18–61.

735,030. KING'S HAME. Scottish Distilled Products Limited. SN 130,248. Pub. 5–8–62. Filed 10–18–61.

Class 50 — Merchandise Not Otherwise Classified

735,031. QUICK-TWIST. Gerber Products Company. SN 105,353. Pub. 5–8–62. Filed 9–28–60.

735,032. QUEEN BEE SUPER QUALITY AND DESIGN. Specialty Items Company. SN 114,645. Pub. 5–8–62. Filed 2–28–61.

735,033. RUBBERMAID AND DESIGN. Rubbermaid Incorporated. SN 118,004. Pub. 5–8–62. Filed 4–17–61.

735,034. HIDE-A-SINK. Excel Homefurnishings, Inc. SN 123,972. Pub. 5–8–62. Filed 7–14–61.

735,035. DRY BOTTOM. Harry P. Matson, d.b.a. H. P. Matson Company. SN 123,995. Pub. 5–8–62. Filed 7–14–61.

Class 51 — Cosmetics and Toilet Preparations

735,036. SHEER TOUCH. Avon Products, Inc. SN 112,202. Pub. 5–8–62. Filed 1–23–61.

735,037. DYNAMIQUE. Virginia L. Strasberg. SN 119,320. Pub. 5–8–62. Filed 5–4–61.

735,038. AI "THE MAGNIFICENT LOVE." Cosmetic Chemicals Corporation. SN 120,622. Pub. 5–8–62. Filed 5–23–61.

735,039. KOLORZIT AND DESIGN. Pro-Capa Products, Inc. SN 120,743. Pub. 5–8–62. Filed 5–24–61.

735,040. SHINE. Carter Products, Inc. SN 123,603. Pub. 5–8–62. Filed 7–10–61.

735,041. SMOOTH RADIANCE. Germaine Monteil Cosmetiques Corp. SN 124,267. Pub. 5–8–62. Filed 7–19–61.

Class 52 — Detergents and Soaps

735,042. CLENS AND DESIGN. Burton, Parsons Chemicals, Inc. SN 103,258. Pub. 3–13–62. Filed 8–23–60.

735,043. TROPIGLAZE. Medical Products Co., Inc. SN 121,841. Pub. 5–8–62. Filed 6–12–61.

735,044. CARESS. Lever Brothers Company. SN 128,677. Pub. 5–8–62. Filed 9–26–61.

735,045. LON. Kemtech, Inc. SN 128,738. Pub. 5–8–62. Filed 9–27–61.

735,046. UNALON. Kemtech, Inc. SN 128,739. Pub. 5–8–62. Filed 9–27–61.

735,047. K2R AND DESIGN. Chemiro A.G. SN 129,737. Pub. 5–8–62. Filed 10–12–61.

735,048. FYNE. Food Fair Stores, Inc. SN 129,757. Pub. 5–8–62. Filed 10–12–61.

735,049. INSTANT GEM GLO AND DESIGN. Daniel Malachuk. SN 130,369. Pub. 5–8–62. Filed 10–20–61.

735,050. MISTER JINX. Claire Manufacturing Co. SN 130,402. Pub. 5–8–62. Filed 10–17–61.

735,051. MIGHTY MIX. The Pillsbury Company. SN 130,725. Pub. 5–8–62. Filed 10–26–61.

Service Marks

Class 100 — Miscellaneous

735,052. OPIS. O.P.I.S. (Organizacion Puertorriquena de Inversiones y Servicio, Inc.). SN 111,534. Pub. 5–8–62. Filed 1–9–61.

735,053. THE PLACE WHERE LOUIE DWELLS. Singbap Corporation. SN 119,432. Pub. 5–8–62. Filed 5–5–61.

735,054. NTC AND DESIGN. Nationwide Tabulating Corporation. SN 121,583. Pub. 5–8–62. Filed 6–7–61.

735,055. EMBLEM DESIGN. John Warren Carkin. SN 123,408. Pub. 5–8–62. Filed 7–5–61.

735,056. CALCOMP. California Computer Products, Inc. SN 123,725. Pub. 5–8–62. Filed 7–11–61.

Class 101 — Advertising and Business

735,057. SHELTER-ALL. Shelter-All Corporation. SN 113,450. Pub. 5–8–62. Filed 2–10–61.

735,058. DESIGN OF CIRCLES, CAMERA LENS AND ARTIST'S BRUSH. U. O. Colson Company. SN 123,524. Pub. 5–8–62. Filed 7–7–61.

Class 102 — Insurance and Financial

735,059. SB & H AND DESIGN. Salomon Brothers & Hutzler. SN 120,909. Pub. 5–8–62. Filed 5–26–61.

735,060. COSMO. Cosmopolitan Insurance Company. SN 128,525. Pub. 5–8–62. Filed 9–25–61.

Class 103 — Construction and Repair

735,061. TES AND DESIGN. Universal Mfg. Corp. SN 108,684. Pub. 5–8–62. Filed 11–17–60.

Class 105 — Transportation and Storage

735,062. FRATERNAL HOLIDAYS. David Gilbert. SN 123,981. Pub. 5–8–62. Filed 7–14–61.

735,063. ALITALIA AND WINGED ARROW DESIGN. Alitalia-Linee Aeree Italiane-Societa per Azioni. SN 129,088. Pub. 5–8–62. Filed 9–28–61.

735,064. UPS IN SHIELD DESIGN. United Parcel Service of America, Inc. SN 129,821. Pub. 5–8–62. Filed 10–12–61.

Class 106 — Material Treatment

735,065. WW PROCESSORS AND DESIGN. Western Wool Processors, Inc. SN 120,049. Pub. 5–8–62. Filed 5–15–61.

Class 107 — Education and Entertainment

735,066. BLUE FAIRY. WGN, Inc. SN 57,035. Pub. 9–29–59. Filed 8–11–58.

Collective Membership Marks

Class 200

735,067. NATIONAL ARCHERY ASSOCIATION OF THE UNITED STATES NAA ETC. AND DESIGN. National Archery Association of the United States. SN 120,555. Pub. 5–8–62. Filed 5–22–61.

735,068. ADVISORY BOARD FOR MEDICAL SPECIALTIES ETC. AND DESIGN. Advisory Board for Medical Specialties. SN 121,526. Pub. 5–8–62. Filed 6–7–61.

Certification Mark

Class B — Services

735,069. SWISSEDENTURE. Swissedent Foundation, Inc. SN 108,411. Pub. 5–8–62. Filed 11–14–60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

735,070. Washington Steel Products, Inc., Tacoma, Wash. SN 108,524. Filed P.R. 11–15–60; Am. S.R. 5–21–62.

CELLINI

For Decorative Finish and Coating Applied to Cabinet Hardware Parts.
First use Sept. 1, 1960.

735,071. Hancock Gross Manufacturing, Inc., Philadelphia, Pa. SN 119,126. Filed 5–2–61.

MASTER PLUNGER

For Force Cups.
First use Apr. 1, 1960.

Class 18 — Medicines and Pharmaceutical Preparations

735,072. Dr. Salsbury's Laboratories, Charles City, Iowa. SN 114,537. Filed P.R. 2-27-61; Am. S.R. 5-21-62.

TON-PAK

For Veterinary Preparation for the Prevention of Coccidiosis, Stimulation of Growth, Increasing Feed Efficiency, and Better Pigmentation in Chicks and Growing Chickens.
First use Jan. 27, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

735,073. Filmohm Corporation, New York, N.Y. SN 101,672. Filed P.R. 7-29-60; Am. S.R. 4-2-62.

FILMCARD

For Metal Film Coated Fibreglass Microwave Resistance Material in Card Form.
First use Dec. 23, 1958.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

735,074. Carpenter Manufacturing Company, Inc., De Witt, N.Y. SN 101,472. Filed P.R. 7-26-60; Am. S.R. 6-6-62.

SWING BLADE

For Wire Strippers and Parts Thereof.
First use on or about July 15, 1959.

735,075. C & S Products Company, Inc., Detroit, Mich. SN 124,625. Filed 7-25-61.

HEATALL

For Machines for Heating and Drying Particulate Material Such as Foundry Sand, Metal Turnings, and the Like.
First use July 15, 1959.

Class 36 — Musical Instruments and Supplies

735,076. Ed. Archambault Incorporée, Montreal, Quebec, Canada. SN 97,365. Filed P.R. 5-18-60; Am. S.R. 5-28-62.

SELECT

For Phonograph Records.
First use Sept. 18, 1959; in commerce Nov. 1, 1959.

Class 37 — Paper and Stationery

735,077. Automated Systems, Inc., Kansas City, Mo. SN 85,274. Filed P.R. 11-16-59; Am. S.R. 5-23-62.

AUTOMATED SYSTEMS

For Printed Forms Used in Index and Inventory Control Systems.
First use during February 1959.

735,078. American Can Company, New York, N.Y. SN 113,064. Filed P.R. 2-6-61; Am. S.R. 6-6-62.

TIFFANY

For Facial Tissue and Paper Towels.
First use Dec. 28, 1960.

735,079. Chalk-Chuck Co., Denver, Colo. SN 116,969. Filed P.R. 4-3-61; Am. S.R. 12-8-61.

Chalk Chuck

For Chalk Holders.
First use Feb. 1, 1956.

735,080. Sterling Pulp & Paper Company, Eau Claire, Wis. SN 131,419. Filed P.R. 11-6-61; Am. S.R. 4-9-62.

BEST VALUE

For Paper Toilet Tissue.
First use June 1, 1954.

Class 39 — Clothing

735,081. Flexnit Company, Inc., Elizabeth, N.J. SN 103,131. Filed P.R. 8-22-60; Am. S.R. 11-21-61.

Support your baby in style with

NU-LIFT

For Maternity Girdles and Brassieres.
First use Aug. 15, 1960.

735,082. Kayser-Roth Corporation, New York, N.Y. SN 109,071. Filed 11-25-60.

SHEER-STRONG

For Women's Hosiery.
First use Oct. 8, 1959.

Class 46 — Foods and Ingredients of Foods

735,083. Texasweet Citrus, Inc., Pharr, Tex. SN 80,598. Filed P.R. 8-31-59; Am. S.R. 1-5-62.

Sweeter by Nature

For Fresh Citrus Fruits.
First use July 20, 1959.

735,084. Cafe Salvador, Inc., San Francisco, Calif. SN 89,551. Filed P.R. 1-25-60; Am. S.R. 9-28-61.

THEY REACHED A MILE IN THE SKY TO BRING YOU THIS RARE COFFEE

For Instant Coffee.
First use Nov. 19, 1959.

735,085. Dayle Products Company, Inc., Boston, Mass. SN 92,729. Filed P.R. 3-14-60; Am. S.R. 7-20-61.

DOGGIE DO-NUTS

For Dog Food.
First use Feb. 8, 1959.

735,086. David Berg & Company, Chicago, Ill. SN 98,426. Filed P.R. 6-6-60; Am. S.R. 5-8-62.

CHICAGO'S LAKESIDE

For Packaged Corned Beef.
First use at least as early as April 1960.

735,087. Comparte's, Santa Monica, Calif. SN 99,416. Filed P.R. 6-21-60; Am. S.R. 11-29-61.

Comparte's
OF CALIFORNIA
"FRUIT TREASURES OF THE ORCHARD"

For Mixtures of Stuffed Fruits and Nuts, Sold in Boxes.
First use August 1947.

735,088. Bird Provision Co., Pekin, Ill. SN 110,307. Filed P.R. 12-16-60; Am. S.R. 4-24-62.

Vogel's

For Sausage.
First use June 15, 1937.

735,089. Derry Products, Inc., Brooklyn, N.Y. SN 110,413. Filed P.R. 12-19-60; Am. S.R. 5-17-62.

BRUSH-ON

For Meat, Fish and Poultry Seasoning.
First use Apr. 15, 1960.

735,090. Gebr. Wernli, Biscuitsfabrik Trimbach-Olten, Trimbach, Switzerland. SN 118,147. Filed 4-19-61.

SWISS DOT WAFERS



Owner of Swiss Reg. No. 184,272, dated Oct. 14, 1960.
For Biscuits and Cookies.

735,091. Rodriguez Hermanos de Cordoba S.A., Cordoba, Spain. SN 122,565. Filed P.R. 6-21-61; Am. S.R. 4-30-62.



The mark shows a container the front panel of which depicts an olive tree rising from the globe and on top a container pouring out a liquid (olive oil). Across the panel is the word "Olifyus" in script form and below is applicant's name. Exp. No. 20 refers to the inscription on the official list of Spanish exporters. The side panel shows a Latin cross, an olive branch, a house, a mountain, and the words "Aceite de Oliva Puro" which in English mean "pure olive oil," and the word "Olifyus" which has no meaning in any language. Owner of Spanish Reg. No. 370,412, dated Feb. 14, 1961.
For Olive Oil.

Class 47 — Wines

735,092. Società per Azioni Fratelli Folonari, Brescia, Italy. SN 118,732. Filed P.R. 4-26-61; Am. S.R. 4-5-62.



Priority claimed under Sec. 44(d) on Italian application filed Nov. 26, 1960; Reg. No. 153,828, dated Mar. 6, 1961.

The mark consists of the conformation of a bottle, together with a tag, label, wording and designs thereon. The Italian word "Leone" means "lion." Owner of U.S. Reg. No. 318,732.
For Wines.

735,093. Società per Azioni Fratelli Folonari, Brescia, Italy. SN 118,733. Filed P.R. 4-26-61; Am. S.R. 4-5-62.



Priority claimed under Sec. 44(d) on Italian application filed Nov. 26, 1960; Reg. No. 153,827, dated Mar. 6, 1961. The words "Vino Bianco Superiore Del Lago di Garda" is "superior white wine from Lago di Garda." The Italian word "Leone" means "lion." Owner of U.S. Reg. No. 318,732.
For White Wines.

Class 49 — Distilled Alcoholic Liquors

735,094. Kansas Distributors, Inc., d.b.a. Chil 'N Serv Spirits Co., Kansas City, Kans. SN 91,389. Filed P.R. 2-23-60; Am. S.R. 5-21-62.

Chil'n Serv

For Alcoholic Cocktails.
First use Nov. 3, 1959.

Class 50 — Merchandise Not Otherwise Classified

735,095. Eprad Inc., Toledo, Ohio. SN 80,866. Filed P.R. 9-4-59; Am. S.R. 10-23-61.

SLIDE-AWAY

For Post Mounted Extensible Serving Units for Drive-In Restaurants.
First use July 9, 1959.

Class 51 — Cosmetics and Toilet Preparations

735,096. Elizabeth Arden Sales Corporation, New York, N.Y. SN 73,535. Filed P.R. 5-13-59; Am. S.R. 12-28-61.



The mark consists of the conformation of a jar used as the container for applicant's cosmetic face cream. The tip of the container is lined for color gold, and the three lines encircling the body of the jar are gold.
For Creamy Emulsion for Use as a Cosmetic Face Cream.
First use Oct. 11, 1957.

Service Marks

Class 101 — Advertising and Business

735,097. James R. Bremner, Jr., Chicago, Ill. SN 48,824. Filed P.R. 4-1-58; Am. S.R. 11-17-60.

NATIONAL CARSHOPPERS SERVICE

For Aiding Would-Be Car Purchasers To Locate the Precise New or Used Car They Desire (Make, Model, Year, Color, Etc.), Said Service Being Effected by Virtue of Applicant's Extensive Contacts With All Types of Automobile Sales Agencies.
First use Jan. 24, 1958.

735,098. Thomas M. Koenig, d.b.a. Personnel Engineering, Rockford, Ill. SN 84,672. Filed P.R. 11-5-59; Am. S.R. 1-3-62.

PERSONNEL ENGINEERING

For Consultant and Employment Services in the Field of Personnel Management.
First use Sept. 3, 1958.

TRADEMARK REGISTRATIONS RENEWED

151,785. CHEEZ-IT. Cl. 46. 2-14-22.
155,690. GAME WELL AND DESIGN. Cl. 21. 6-6-22.
155,983. KLADNO AND DESIGN. Cl. 14. 6-13-22.
156,636. BRUNSWICK. Cl. 36. 7-11-22.
157,099. GOODFORM. Cl. 50. 7-25-22.
157,149. MECCANO. Cl. 22. 7-25-22.
157,212. JACK TAR TOGS. Cl. 39. 7-25-22.
157,939. BIRDSEYE. Cl. 42. 8-22-22.
158,481. LOURNAY. Cl. 51. 9-5-22.
158,601. AUNT NELLIE'S GARDEN. Cl. 46. 9-12-22.
158,603. GOLD BOND. Cl. 12. 9-12-22.
158,902. BOSS SHUCKY. Cl. 39. 9-19-22.
158,903. BOSS TA-TUM. Cl. 39. 9-19-22.
158,906. BRONOCO. Cl. 15. 9-19-22.
159,784. SUPER X AND DESIGN. Cl. 9. 10-3-22.
161,565. CALSOM FINISH. Cl. 16. 11-14-22.
161,601. LITTLE MEN AND LITTLE WOMEN. Cl. 28. 11-14-22.
161,859. SCARAB. Cl. 23. 11-21-22.
394,715. HALLMARK. Cl. 26. 4-28-42.
394,780. ZEBRETTA AND DESIGN. Cl. 1. 4-28-42.
394,834. DIXI. Cl. 26. 4-28-42.

395,072. Q.B. Cl. 16. 5-12-42.
395,142. MOORDALE. Cl. 39. 5-12-42.
395,338. BAL-CON AND DESIGN. Cl. 18. 5-19-42.
395,480. GRANDLEE. Cl. 39. 5-26-42.
395,571. CUMBOW. Cl. 30. 6-2-42.
395,722. ART METAL. Cl. 21. 6-9-42.
395,782. SCOPE. Cl. 38. 6-9-42.
395,863. STROBLITE. Cl. 16. 6-16-42.
396,088. KING PINE AND DESIGN. Cl. 6. 6-30-42.
396,096. CHOO-CHOO. Cl. 21. 6-30-42.
396,203. AMOCO. Cl. 6. 6-30-42.
396,513. PERMAS. Cl. 26. 7-21-42.
396,515. VOLUSTAT. Cl. 26. 7-21-42.
396,700. KAPSEALS. Cl. 18. 7-28-42.
396,785. RENAULT. Cl. 47. 8-4-42.
396,921. WESTON'S. Cl. 46. 8-11-42.
396,924. V IN RECTANGLE DESIGN. Cl. 21. 8-11-42.
396,935. SPEEDYVAP. Cl. 26. 8-11-42.
397,087. NATVAR AND DESIGN. Cl. 21. 8-18-42.
397,096. FILTRATOR. Cl. 31. 8-18-42.
397,158. DESIGN OF ELSIE'S HEAD IN DAISY. Cl. 46. 8-25-42.
397,239. HEMO. Cl. 46. 8-25-42.
397,308. BANKWAY. Cl. 37. 9-1-42.
397,666. BLUSURF. Cl. 39. 9-15-42.
397,676. NUTRAMIGEN. Cl. 46. 9-15-42.
397,778. BUDDIES. Cl. 38. 9-22-42.
397,805. PARK SLOPE. Cl. 32. 9-22-42.
397,826. AIR CORE. Cl. 8. 9-22-42.
397,838. KALVA. Cl. 46. 9-22-42.
398,208. 3XB. Cl. 18. 10-13-42.
398,323. RUBEROL AND DESIGN. Cl. 4. 10-20-42.
398,421. AIROLITE. Cl. 34. 10-27-42.
398,432. LAURON. Cl. 18. 10-27-42.
398,479. GOLDEX. Cl. 51. 11-3-42.
398,486. FLAVORSEAL. Cl. 46. 11-3-42.
398,524. ASTRA. Cl. 27. 11-3-42.
398,542. CARDIOMONE. Cl. 18. 11-3-42.
398,543. NIADRIN. Cl. 18. 11-3-42.
398,548. ENTRIDIN. Cl. 18. 11-3-42.
398,611. KILOWATT. Cl. 22. 11-10-42.
398,784. MODERN MISS. Cl. 38. 11-24-42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

217,026. SUREFAT. Cl. 46. 8-24-26.
399,570. HOLIDAY. Cl. 46. 1-19-43.
421,111. EL WITH WINGS. Cl. 21. 5-21-46.
444,251. SUPERIOR PORTLAND CEMENT—OBOURG AND DESIGN. Cl. 12. 9-26-50.
625,103. LARRO FARM TESTED AND DESIGN. Cl. 46. 4-10-56.
625,549. SURECREEP. Cl. 46. 4-17-56.
651,540. SURESTART. Cl. 46. 9-10-57.
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628,050. FRONTIER. Cl. 2.
628,053. EARRING TENDA. Cl. 2.
628,054. GLAMOR PAK. Cl. 2.
628,055. KEG-IT. Cl. 2.
628,056. "PANTA-LOONY." Cl. 2.
628,080. VELVASIL. Cl. 6.
628,082. MERCULINE. Cl. 6.
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628,102. GALVA-LINE. Cl. 13.
628,104. AACC WITHIN A CIRCLE. Cl. 14.
628,110. CANDLEGEM. Cl. 15.
628,112. STONEKOTE. Cl. 16.
628,118. AYLON. Cl. 17.
628,119. SCOPE. Cl. 17.
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628,127. MEPHENAMINE. Cl. 18.
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628,149. HY-POWER. Cl. 19.
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628,310. LINKMASTER. Cl. 39.
628,312. VISCOUNT. Cl. 39.

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628,363. DRAN'R AND DESIGN. Cl. 44.
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628,398. VP POINT BRAND AND DESIGN. Cl. 47.
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628,404. SLEE-FORM. Cl. 50.
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628,416. ORAMIST. Cl. 51.
628,431. PROCOMET. Cl. 52.
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628,456. KAR LARM AND DESIGN. Cl. 21.
628,460. TWIST-FREE PAK. Cl. 22.
628,463. TAPEMAKER. Cl. 23.
628,464. TIMEPIECE OF THE AMERICAS. Cl. 27.
628,466. CUBE-ETTES AND DESIGN. Cl. 31.
628,468. NICOSIA'S AND DESIGN. Cl. 46.
628,469. LADY HAMILTON. Cl. 51.
628,470. AQUEEZ-N-BRUSH. Cl. 51.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

205,575. B & D. Cl. 21. 11–10–25. The Black & Decker Manufacturing Co. The Black and Decker Manufacturing Company, Towson, Md. Amended: In the statement, column 1, line 21 through column 2, line 2, "electric air pumps and air compressors, portable electric augers and post grinders," is deleted, and the drawing is amended to appear:

B&D

216,294. B & D AND DESIGN. Cl. 21. 8–10–26. The Black & Decker Manufacturing Co. The Black and Decker Manufacturing Company, Towson, Md. Amended: In the statement, column 1, lines 25 and 26, "and twist-drill grinders," is deleted and in column 2, lines 5 and 6, "portable electric augers, and post grinders," is deleted, lines 11 through 13, "portable electric tire regroovers," is deleted, and lines 15 through 17, "electric air pumps, air compressors and attachments," are deleted, and the drawing is amended to appear:



355,814. McNEIL AND DESIGN. Cl. 18. 4–5–38. McNeil Laboratories, Incorporated, Philadelphia, Pa. Amended to appear:

McNEIL

440,112. COTTAN AND DESIGN. Cl. 51. 8–10–48. Societe a Responsabilite Limitee: Cottan, Parfumeur-Paris. Societe Anonyme Cottan Parfumeur-Paris, Paris, France. Amended: In the new certificate, line 4, after "France," *now by change of name Societe Anonyme Cottan Parfumeur-Paris, 28 Rue de Quatre Septembre, Paris, France* is inserted.

510,788. COTTAN ETC. AND DESIGN. Cl. 6. 6–7–49. Societe a Responsabilite Limitee: Cottan, Parfumeur-Paris. Societe Anonyme Cottan Parfumeur-Paris, Paris, France. Amended: In the new certificate, line 4, after "France," *now by change of name Societe Anonyme Cottan Parfumeur-Paris, 28 Rue de Quatre Septembre, Paris, France* is inserted.

514,604. NULOX. Cl. 51. 8–30–49. Nulox Corporation of America, Houston, Tex. Amended: In the statement, column 1, lines 9 and 10, "Class 6, Chemicals, Medicines, and Pharmaceutical Preparations" is deleted and *Class 51, Cosmetics and Toilet Preparations* is inserted, and the drawing is amended to appear:

NULOX

520,354. B & D AND DESIGN. Cl. 21. 1–31–50. The Black & Decker Manufacturing Company. The Black and Decker Manufacturing Company, Towson, Md. Amended: In the statement, column 1, line 35, "electric fans," is deleted, and the drawing is amended to appear:



535,909. B & D AND DESIGN. Cl. 23. 1–9–51. The Black and Decker Manufacturing Company, Towson, Md. Amended: In the statement, column 1, lines 12 and 13, "air pumps and air compressors," is deleted and in line 20, "back stand idlers," is deleted, and the drawing is amended to appear:



536,011. K/D. Cl. 46. 1–9–51. Mark L. Morris, Denver, Colo. Amended to appear:

k/d

538,128. I/D. Cl. 46. 2–20–51. Mark L. Morris, Denver, Colo. Amended to appear:

i/d

538,129. R/D. Cl. 46. 2–20–51. Mark L. Morris, Denver, Colo. Amended to appear:

r/d

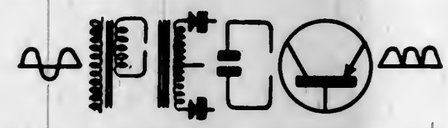
539,608. P/D. Cl. 46. 3–20–51. Mark L. Morris, Denver, Colo. Amended to appear:

p/d

619,549. WRIGLEY'S JUICY FRUIT AND DESIGN. Cl. 46. 1–17–56. Wm. Wrigley Jr. Company, Chicago, Ill. Amended: In the statement, column 2, lines 3 and 4 are deleted, and the drawing is amended to appear:

WRIGLEY'S JUICY FRUIT

624,866. PECO AND DESIGN. Cl. 21. 4–10–56. Power Equipment Company. North Electric Company, Galion, Ohio. Amended to appear:



643,055. HIS AND DESIGN. Cl. 51. 3–19–57. The House of Men, Inc., Chicago, Ill. Amended: In the statement, column 2, lines 7 and 8 are deleted, and the drawing is amended to appear:



TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

167,748. KENTUCKY AGE AND DESIGN. Cl. 1. The Southern Coal & Coke Co. 5–8–23. New Cert. Sec. 7(c) to Southern Coal & Coke Company, Incorporated, Tazewell, Va.

168,690. SOUTHERN STAR AND DESIGN. Cl. 1. The Southern Coal & Coke Co. 5–29–23. New Cert. Sec. 7(c) to Southern Coal & Coke Company, Incorporated, Tazewell, Va.

514,604. NULOX. Cl. 51. Nulox Corporation of America. 8–30–49. New Cert. Sec. 7(c) to Nulox Corporation of America, Houston, Tex.

621,668. BOLD. Cl. 17. Bobrow Bros., Inc. 2–21–56. New Cert. Sec. 7(c) to Regina Cigar Company, Inc., Philadelphia, Pa.

690,725. DIXIE PINE. Cl. 1. Southern Coal & Coke Company, Inc. 1–5–60. New Cert. Sec. 7(c) to Southern Coal & Coke Company, Incorporated, Tazewell, Va.

INDEX OF REGISTRANTS

JULY 24, 1962

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

ACF Industries, Inc., New York, N.Y. 734,791, pub. 5–8–62. Cl. 13.
A.M. Knitwear Corp., Brooklyn, N.Y. 734,958, pub. 5–8–62. Cl. 39.
AMP Inc., Harrisburg, Pa. 734,850, pub. 5–8–62. Cl. 21.
AMP Inc., Harrisburg, Pa. 734,852, pub. 5–8–62. Cl. 21.
A.T.B. Associates, Inc., Massapequa, N.Y. 734,860, pub. 5–8–62. Cl. 22.
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Ace-Crete Products, Inc., Bayville, N.J. 734,789, pub. 5–8–62. Cl. 12.
Adelta Mfg. Co. Inc., Philadelphia, Pa. 734,909, pub. 5–8–62. Cl. 34.
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Advance Aluminum Castings Corp., Chicago, Ill. 628,104, canc. Cl. 14.
Advisory Board for Medical Specialties, Rochester, Minn. 735,068, pub. 5–8–62. Cl. 200.
Aerotex Industries, Inc., Greenwich, Conn. 734,839, pub. 5–8–62. Cl. 21.
Agricultural Specialties, Dallas, Tex. 734,763, pub. 5–8–62. Cl. 6.
Airboats, Inc., St. Louis, Mo. 628,198, canc. Cl. 23.
Airmaid Hosiery Mills, Dallas, Tex. 628,331, canc. Cl. 39.
Airmold Corp., Glendale, Calif. 734,752, pub. 5–8–62. Cl. 2.
Airolite Co., The, Marietta, Ohio. 398,421, ren. 7–24–62. Cl. 34.
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Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. 734,809, pub. 1–5–60. Cl. 18.
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Aktiebolaget Addo.
Aktiebolaget Fixfabriken, Goteborg, Sweden. 628,175, canc. Cl. 21.
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American Can Co., New York, N.Y. 734,929, pub. 5–8–62. Cl. 37.
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American Wood Fabric Institute, Inc., Washington, D.C. 628,453, canc. Cl. A.
Amphenol-Borg Electronics Corp., Broadview, Ill. 734,855, pub. 5–8–62. Cl. 21.
Anchell Corp., St. Thomas, Virgin Islands. 628,271, canc. Cl. 37.
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Anglo-Canadian Pulp and Paper Mills, Ltd., Quebec, Canada. 734,743, pub. 5–8–62. Cl. 1.
Anheuser-Busch, Inc. : *See*—
National Brewing Co., The.
Anic S.p.A., Milan, Italy. 734,734–5, pub. 5–8–62. Cl. 1.
Arden, Elizabeth, Sales Corp., New York, N.Y. 735,096. Cl. 51.
Arkansas Louisiana Gas Co., Shreveport, La. 734,889, pub. 5–8–62. Cl. 26.
Armour and Co., Chicago, Ill. 734,744, pub. 5–8–62. Cl. 1.
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Art Metal Co., The, Cleveland, Ohio, to Wakefield Corp., Detroit, Mich. 395,722, ren. 7–24–62. Cl. 21.
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Artic Scent, Seward, Alaska. 628,409, canc. Cl. 51.
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Atkins Pickle Co., Atkins, Ark. 735,007, pub. 5–8–62. Cl. 46.
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Aunt Nellie's Foods, Inc. : *See*—
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Austen Display Inc., New York, N.Y. 734,935, pub. 5–8–62. Cl. 37.
Automated Systems, Inc., Kansas City, Mo. 735,077. Cl. 37.
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BJ Service, Inc., Long Beach, Calif. 628,437, canc. Cl. 100.
Badger Turkey Industries, Inc., Barron, Wis. 735,005–6, pub. 5–8–62. Cl. 46.
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Bel Fuse Inc., Jersey City, N.J. 734,851, pub. 5–8–62. Cl. 21.
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Black and Decker Mfg. Co., The, Towson, Md. 535,909. Am. 7(d). Cl. 23.
Blackmer Pump Co., Grand Rapids, Mich. 734,878, pub. 5–8–62. Cl. 23.
Blue Ribbon Metal Products Co., New York, N.Y. 734,793, pub. 5–8–62. Cl. 13.
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Breier, Marcus, Sons, Inc., Amsterdam, N.Y. 628,302, canc. Cl. 39.
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British & Foreign Tobacco Co. Ltd., London, England. 628,118, canc. Cl. 17.
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Bruder Wuster, Vienna, Austria. 734,977, pub. 5–8–62. Cl. 41.
Brunswick-Blake-Collender Co., The, Wilmington, Del., and Chicago, Ill., to Coral Records, Inc., New York, N.Y. 156,636, ren. 7–24–62. Cl. 36.
Buffalo, Industrial Bank, to Bank of Buffalo, Buffalo, N.Y. 397,308, ren. 7–24–62. Cl. 37.
Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. 734,822–3, pub. 5–8–62. Cl. 18.
Burton, Parsons Chemicals, Inc., Washington, D.C. 735,042, pub. 3–13–62, Cl. 52.
C & S Products Co., Inc., Detroit, Mich. 735,075. Cl. 23.
Cadillac Products, Inc., Warren, Mich. 734,750, pub. 5–8–62. Cl. 2.

Cafe Salvador, Inc., San Francisco, Calif. 735,084. Cl. 46.
California Computer Products, Inc., Downey, Calif. 735,056, pub. 5–8–62. Cl. 100.
Caloric Appliance Corp.: *See*—
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Caloric Corp., from Caloric Appliance Corp., Topton, Pa. 734,910, pub. 5–8–62. Cl. 34.
Campbell, E. K., Co., Kansas City, Mo. 628,247, canc. Cl. 34.
Canadian Wallpaper Manufacturers Ltd., Toronto, Ontario, Canada. 734,938, pub. 5–8–62. Cl. 37.
Cannon Mills Co., Kannapolis, N.C. 734,985, pub. 5–8–62. Cl. 42.
Cape Ann Fisheries Inc., Gloucester, Mass. 628,383, canc. Cl. 46.
Capri Creations, Philadelphia, Pa. 734,895, pub. 5–8–62. Cl. 30.
Carkin, John W., Salem, Oreg. 735,055, pub. 5–8–62. Cl. 100.
Carpenter, Farrington R., Hayden, Colo. 734,732, pub. 5–8–62. Cl. 1.
Carpenter Mfg. Co., Inc., Dewitt, N.Y. 735,074. Cl. 23.
Carri Pin, Inc., North Massapequa, N.Y. 734,971, pub. 5–8–62. Cl. 40.
Carriere, Ernest, Inc., Montreal, Quebec, Canada. 735,013, pub. 5–8–62. Cl. 46.
Carter Products, Inc., New York, N.Y. 734,811, pub. 5–8–62. Cl. 18.
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Carter Products, Inc., New York, N.Y. 735,040, pub. 5–8–62. Cl. 51.
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Century Industries, Inc., Chicago, Ill. 734,905, pub. 5–8–62. Cl. 32.
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Claire Mfg. Co., Chicago, Ill. 735,050, pub. 5–8–62. Cl. 52.
Cole Vending Industries, Inc., Chicago, Ill. 734,879, pub. 5–8–62. Cl. 23.
Coleman Co., Inc., The, Wichita, Kans. 734,916, pub. 5–8–62. Cl. 34.
Colgate-Palmolive Co.: *See*—
Lournay, Inc.
Collins, Ashton B., d.b.a. Reddy Kilowatt Service, Birmingham, Ala., to Reddy Kilowatt, Inc., New York, N.Y. 398,611, ren. 7–24–62. Cl. 22.
Colonial Tanning Co., Inc., Boston, Mass. 734,733, pub. 5–8–62. Cl. 1.
Colson, U. O., Co., Paris, Ill. 735,058, pub. 5–8–62. Cl. 101.
Columbian Enameling and Stamping Co., Inc., Terre Haute, Ind. 628,050, canc. Cl. 2.
Combo Inc., Seattle, Wash. 628,297, canc. Cl. 38.
Com-Bow Tie Co.: *See*—
Bradley, John H.
Compagnie Generale dos Gaz Liquefies Cogegal, Paris, France. 734,797, pub. 5–8–62. Cl. 13.
Comparte's, Santa Monica, Calif. 735,087. Cl. 46.
Connelly Containers, Inc., from Haelan Laboratories, Inc., Philadelphia, Pa. 628,470, canc. Cl. 51.
Contactisol Inc., Lindenhurst, N.Y. 734,827, pub. 5–8–62. Cl. 18.
Coral Records, Inc.: *See*—
Brunswick-Blake-Collender Co., The.
Corbman, Abe, d.b.a. Adelta Stove & Mfg. Co., Philadelphia, Pa. 334,188, canc. Cl. 34.
Cosmetic Chemicals Corp., New York, N.Y. 735,038, pub. 5–8–62. Cl. 51.
Cosmopolitan Insurance Co., Chicago, Ill. 735,060, pub. 5–8–62. Cl. 102.
Cove Bay Tackle Co., Gary, S. Dak. 628,179, canc. Cl. 22.
Cowden Mfg. Co., Kansas City, Mo., to Erwin Mills, Inc., Durham, N.C. 397,666, ren. 7–24–62. Cl. 39.
Creative Plastics Engineering Co., Chicago, Ill. 734,838, pub. 5–8–62. Cl. 20.
Crescent Co., Inc., The, Pawtucket, R.I. 734,859, pub. 5–8–62. Cl. 21.
Crookes-Barnes Laboratories, Inc., Wayne, N.J. 734,828, pub. 5–8–62. Cl. 18.
Crown Cork & Seal Co., Inc., Baltimore, Md. 628,045, canc. Cl. 2.
Culligan, Inc., Northbrook, Ill., from National Marketing Service, Inc., Fullerton, Calif. 734,898, pub. 5–8–62. Cl. 31.
Cumbow China Decorating Co.: *See*—
Ruskin, Mabel C.
Curtis 1000, Inc., West Hartford, Conn. 734,936, pub. 5–8–62. Cl. 37.
Danielle, Vincent, Inc., Brooklyn, N.Y. 734,749, pub. 5–8–62. Cl. 2.
Dartmore Corp., Brooklyn, N.Y. 734,861, pub. 5–8–62. Cl. 22.
Daval Co., Inc., Los Angeles, Calif. 628,130, canc. Cl. 18.
Davis, Les, Fishing Tackle Co.: *See*—
Davis, Lester M.
Davis, Lester M., d.b.a. Les Davis Fishing Tackle Co., Tacoma, Wash. 734,868, pub. 5–8–62. Cl. 22.
Dayle Products Co., Inc., Boston, Mass. 735,085. Cl. 46.
Deering Milliken, Inc., New York, N.Y. 734,979, pub. 5–8–62. Cl. 42.
Dehn & Co., Inc., Seattle, Wash. 735,014, pub. 5–8–62. Cl. 46.
Derry Products, Inc., Brooklyn, N.Y. 735,089. Cl. 46.
Dirilyte Co. of America, Inc., Kokomo, Ind. 628,212, canc. Cl. 23.
Diskin, Beatrice, d.b.a. Harbee Products Mfg. Co., New York, N.Y. 628,434, canc. Cl. 52.
Display House, Inc., The, Philadelphia, Pa. 734,906, pub. 5–8–62. Cl. 32.
Dixie Wax Paper Co., Dallas, Tex. 734,937, pub. 5–8–62. Cl. 37.
Dr. Salsbury's Laboratories, Charles City, Iowa. 735,072. Cl. 18.
Dornfeld, A. M.: *See*—
Dornfeld, Abraham.
Dornfeld, Abraham M., d.b.a. A. M. Dornfeld, New York, N.Y. 628,236, canc. Cl. 28.
Dorsey Laboratories: *See*—
Wander Co., The.
Douglas Fir Plywood Association, Tacoma, Wash. 734,774, pub. 5–8–62. Cl. 12.
Dow Chemical Co., The, Midland, Mich. 734,765–6, pub. 5–8–62. Cl. 6.
Downs, Tony, Foods Co., St. James, Minn. 735,017, pub. 5–8–62. Cl. 46.
Drive-In Magazine, Inc., The, Pratt, Kans. 628,295, canc. Cl. 38.
Drive-Patch, Inc., Gettysburg, Pa. 734,782, pub. 5–8–62. Cl. 12.
Drugs For Veterinary Medicine, Inc., Yonkers, N.Y. 734,816, pub. 5–8–62. Cl. 18.
Ducoy, Inc., Mound, Minn. 734,867, pub. 5–8–62. Cl. 22.
Duffy-Mott Co., Inc., New York, N.Y. 735,011, pub. 5–8–62. Cl. 46.
Duffy Silk Co., The, Buffalo, N.Y. 628,357, canc. Cl. 43.
Duncan, Flockhart & Co. Ltd., Edinburgh, Scotland. 734,829, pub. 5–8–62. Cl. 18.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 734,770, pub. 5–8–62. Cl. 6.
Dura Steel Products Co., Los Angeles, Calif. 734,753, pub. 5–8–62. Cl. 2.
Du-Tone Chemical Co., Inc., Waukeegan, Ill. 734,764, pub. 5–8–62. Cl. 6.
Dyna Mfg. Co., Los Angeles, Calif. 734,911, pub. 5–8–62. Cl. 34.
Eagle Roll Leaf Stamping Co., Brooklyn, N.Y. 628,466, canc. Cl. 31.
Ed. Archambault Incorporee, Montreal, Quebec, Canada. 735,076. Cl. 36.
Einiger Mills, Inc., New York, N.Y. 628,348, canc. Cl. 42.
Einiger Mills, Inc., New York, N.Y. 628,350, canc. Cl. 42.
Elder, Paul B., Co., Bryan, Ohio. 734,815, pub. 5–8–62. Cl. 18.
Electronic Laboratories, Inc., Indianapolis, Ind. 421,111, canc. Cl. 21.
Empire Silk Co., Wilmington, Del., and New York, N.Y., to Rosewood Fabrics, Inc., New York, N.Y. 157,939, ren. 7–24–62. Cl. 42.
Endo Laboratories Inc., Richmond Hill, N.Y. 734,833, pub. 5–8–62. Cl. 18.
Endo Laboratories Inc.: *See*—
Endo Products, Inc.
Endo Products, Inc., New York, N.Y., to Endo Laboratories Inc., Richmond Hill, N.Y. 398,432, ren. 7–24–62. Cl. 18.
Endo Products, Inc., New York, N.Y., to Endo Laboratories Inc., Richmond Hill, N.Y. 398,542–3, ren. 7–24–62. Cl. 18.
Endo Products, Inc., New York, N.Y., to Endo Laboratories Inc., Richmond Hill, N.Y. 398,548, ren. 7–24–62. Cl. 18.
Engle Farm Dairies: *See*—
Sunbury Milk Products Co.
Eprad Inc., Toledo, Ohio. 735,095. Cl. 50.
Erwin Mills, Inc.: *See*—
Cowden Mfg. Co.
Essex Wire Corp., Fort Wayne, Ind. 734,846, pub. 5–8–62. Cl. 21.
Etablissement Dentaire Ivoclar, Schaan, Liechtenstein. 734,990, pub. 4–11–61. Cl. 44.
Etablissements Rublex, Paris, France. 734 869, pub. 5–8–62. Cl. 22.
Ethica Standard Co., Inc.: *See*—
U.S. Ethicals Inc.
Evergard Co., The: *See*—
Seal, Nathaniel.
Eversharp, Inc., Milford, Conn. 734,871, pub. 5–8–62. Cl. 23.
Evron Co., Inc., The, Chicago, Ill. 734,821, 5–8–62. Cl. 18.
Excel Homefurnishings, Inc., New York, N.Y. 735,034, pub. 5–8–62. Cl. 50.
F.D.B. Cigar and Tobaksfabrikker, Esbjerg, Denmark. 734,805, pub. 5–8–62. Cl. 17.
FMC Corp.: *See*—
Food Machinery Corp.
Fabrex Corp., New York, N.Y. 734,988, pub. 5–8–62. Cl. 42.
Fabric Leather Corp., New Hyde Park, N.Y. 734,737, pub. 5–8–62. Cl. 1.
Fabry Associates, Inc., New York, N.Y. 734,902, pub. 5–8–62. Cl. 32.
Faibish Corp., New York, N.Y. 734,982, pub. 5–8–62. Cl. 42.
Fansteel Metallurgical Corp., North Chicago, Ill. 734,853, pub. 5–8–62. Cl. 21.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 734,817, pub. 5–8–62. Cl. 18.
Feature Ring Co., Inc., New York, N.Y. 628,232, canc. Cl. 28.
Federated Department Stores, Inc.: *See*—
Abraham & Straus, Inc.
Filmohm Corp., New York, N.Y. 735,073. Cl. 21.
Fiore, John, Pasadena, Calif. 628,364, canc. Cl. 44.
Fisher Scientific Co., Pittsburgh, Pa. 396,513, ren. 7–24–62. Cl. 26.
Fisher Scientific Co., Pittsburgh, Pa. 396,515, ren. 7–24–62. Cl. 26.
Fisher Scientific Co., Pittsburgh, Pa. 396,935–6, ren. 7–24–62. Cl. 26.
Flexnit Co., Inc., Elizabeth, N.J. 735,081. Cl. 39.
Flocker, John, and Co., Pittsburgh, Pa. 628,088, canc. Cl. 7.

Food Fair Stores, Inc., Philadelphia, Pa. 734,760, pub. 5–8–62. Cl. 6.
Food Fair Stores, Inc., Philadelphia, Pa. 735,048, pub. 5–8–62. Cl. 52.
Food Machinery Corp., to FMC Corp., San Jose, Calif. 398,486, ren. 7–24–62. Cl. 46.
Fort Howard Paper Co., Green Bay, Wis. 734,940, pub. 5–8–62. Cl. 37.
Free-Lock Corp., Denver, Colo. 628,151, canc. Cl. 19.
Fuline Corp., The, Kansas City, Kans. 734,885, pub. 5–8–62. Cl. 23.
Fuline Corp., The, Kansas City, Kans. 735,022, pub. 5–8–62. Cl. 46.
G. & C. Novelty Co., Brookline, Mass. 628,262, canc. Cl. 37.
Gaims Co., The: *See*—
Seale, Frank E.
Gamewell Co., The: *See*—
Gamewell Fire Alarm Telegraph Co., The.
Gamewell Fire Alarm Telegraph Co., The, New York, N.Y., to The Gamewell Co., Newton Upper Falls, Mass. 155,690, ren. 7–24–62. Cl. 21.
Garden Fair, Inc., Minneapolis, Minn. 734,773, pub. 5–8–62. Cl. 10.
Gebr. Wernli, Biscuitsfabrik Trimbach-Olten, Trimbach, Switzerland. 735,090. Cl. 46.
Geckler, E. Walter, Minneapolis, Minn. 628,054, canc. Cl. 2.
Geigy Chemical Corp., Ardsley, N.Y. 734,767–9, pub. 5–8–62. Cl. 6.
General Electric Co., Schenectady, N.Y. 628,080, canc. Cl. 6.
General Features Corp., New York, N.Y. 628,290, canc. Cl. 38.
General Fittings Co., East Greenwich, R.I. 734,792, pub. 5–8–62. Cl. 13.
General Foam Plastics Corp., Portsmouth, Va. 734,740, pub. 5–8–62. Cl. 1.
General Grid Corp., Army Chemical Center, Md. 734,731, pub. 5–8–62. Cl. 1.
General Grid Corp., Army Chemical Center, Md. 734,776, pub. 5–8–62. Cl. 12.
General Mills, Inc., Minneapolis, Minn. 625,103, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 651,540, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 654,869, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 656,535, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 657,230, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 660,627, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 686,436, canc. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 688,068, canc. Cl. 46.
General Mills, Inc., Wilmington, Del. 625,549, canc. Cl. 46.
General Products Co.: *See*—
Gorfinkel, H. J.
Gerber Products Co., Fremont, Mich. 735,031, pub. 5–8–62. Cl. 50.
Germaine Monteil Cosmetiques Corp., New York, N.Y. 735,041, pub. 5–8–62. Cl. 51.
Gilbert, A. C., Co., The: *See*—
Meccano Ltd.
Gilbert, A. C., Co., The, New Haven, Conn. 396,096, ren. 7–24–62. Cl. 21.
Gilbert, David, New York, N.Y. 735,062, pub. 5–8–62. Cl. 105.
Goldsmith Bros., New York, N.Y. 398,479, ren. 7–24–62. Cl. 51.
Goodform Hanger Co., Inc.: *See*—
Hincher Mfg. Co. of Indiana.
Gorfinkel, H. J., d.b.a. General Products Co., Montreal, Canada. 628,119, canc. Cl. 17.
Grain States, Inc., West Point, Nebr. 734,812, pub. 5–8–62. Cl. 18.
Great Lakes Paint and Varnish Co., Chicago, Ill. 734,801, pub. 5–8–62. Cl. 16.
Green and Green Co., The, Dayton, Ohio, to Sunshine Biscuits, Inc., Long Island City, N.Y. 151,785, ren. 7–24–62. Cl. 46.
Grinchuck, J., Co., Braidwood, Ill. 734,968, pub. 5–8–62. Cl. 39.
Guenther, Paul E., d.b.a. Perma-Tally, Wyomissing, Pa. 734,933, pub. 5–8–62. Cl. 37.
Hancock Gross Mfg., Inc., Philadelphia, Pa. 735,071. Cl. 13.
Hadley Production, Inc., Fort Wayne, Ind. 628,251, canc Cl. 36.
Haelan Laboratories, Inc.: *See*—
Connelly Containers, Inc.
Hamilton Watch Co., Lancaster, Pa. 734,892, pub. 5–8–62. Cl. 27.
Hamilton-Skotch Corp., Hamilton, Ohio. 734,738–9, pub. 5–8–62. Cl. 1.
Harbee Products Mfg.: *See*—
Diskin, Beatrice.
Hart, Schaffner, & Marx, Chicago, Ill. 628,312, canc. Cl. 39.
Harvey, Alfred, to Eva Harvey, N.Y. 397,778, ren. 7–24–62. Cl. 38.
Harvey, Eva: *See*—
Harvey, Alfred.
Hawaiian Speed Swimmers Inc., Madison, Wis. 628,185, canc. Cl. 22.
Hawkins, Allen G., d.b.a. The Bristex Co., Oklahoma City, Okla. 734,741, pub. 5–8–62. Cl. 1.
Haythornthwaite & Sons Ltd., Burnley, England. 734,953, pub. 5–8–62. Cl. 39.
Haythornthwaite & Sons Ltd., Burnley, England. 734,978, pub. 5–8–62. Cl. 42.
Heliogen Products, Inc., Long Island City, N.Y. 628,121, canc. Cl. 18.
Hexcel Products Inc., Berkeley, Calif. 734,790, pub. 5–8–62. Cl. 12.
High Production Machine Co., Inc., Philadelphia, Pa., to E. G. Staude Mfg. Co., Inc., St. Paul, Minn. 628,193, canc. Cl. 23.
Hincher Mfg. Co. of Indiana, Washington, Ind., to Goodform Hanger Co., Inc., Sparta, Tenn. 157,099, ren. 7–24–62. Cl. 50.
Hoffman, M. Milton, d.b.a. The Hoffman Seed & Grain Co., Muncy, Pa. 734,746, pub. 5–8–62. Cl. 1.
Hoffman Seed & Grain Co., The: *See*—
Hoffman, M. Milton.
Hohner, M., Inc., Hicksville, N.Y. 734,921, pub. 5–8–62. Cl. 36.
Home Makers Savings Corp., Pittsburgh, Pa. 734,830, pub. 5–8–62. Cl. 18.
House of Men, Inc., The, Chicago, Ill. 643,055. Am. 7(d). Cl. 51.
Hunt, C. Howard, Pen Co., Camden, N.J. 628,401, canc. Cl. 50.
I-T-E Circuit Breaker Co.: *See*—
Victor Insulators, Inc.
Ideal Industries, Inc., Sycamore, Ill. 734,799, pub. 5–8–62. Cl. 15.
Imperial Chemical Pharmaceuticals Ltd., London, England. 628,133, canc. Cl. 18.
Incronite Co.: *See*—
McDougall, George W.
Ingles, E. H., Arlington Heights, Ill. 628,414, canc. Cl. 51.
Ingram, Arthur T.: *See*—
Pierce, Marion E., and Arthur T. Ingram.
Intercontinental Mfg. Co., Inc., Dallas, Tex. 628,191–2, canc. Cl. 23.
International Fortrition Co., Inc., Forest Park, Ga. 735,019–21, pub. 5–8–62. Cl. 46.
International Paper Co., New York, N.Y. 628,055, canc. Cl. 2.
International Silver Co., The, Meriden, Conn. 734,880, pub. 5–8–62. Cl. 23.
Jackson, Arthur, Personalised Cleaning Service, Inc., Bronxville, N.Y. 628,440, canc. Cl. 103.
Jason Corp., The, Hoboken, N.J. 628,400, canc. Cl. 50.
Jensen, Georg, Inc., New York, N.Y. 628,412, canc. Cl. 51.
Johnson Chemical Co.: *See*—
Uddo, Joseph.
Johnson & Johnson, New Brunswick, N. J. 734,819–20, pub. 5–8–62. Cl. 18.
Joy, Oliver T., d.b.a. Notifier Mfg. Co., Lincoln, Nebr. 628,456, canc. Cl. 21.
Kalva Corp., The, Waukegan, Ill. 397,838, ren. 7–24–62. Cl. 46.
Kansas Distributors, Inc., Kansas City, Kans. 735,094. Cl. 49.
Katz Drug Co, Kansas City, Mo. 734,927, pub. 5–8–62. Cl. 37.
Kayser-Roth Corp., New York, N.Y. 735,082. Cl. 39.
Keller, J. & A., Machine Co., Inc., Tonawanda, N.Y. 734,876, pub. 5–8–62. Cl. 23.
Kellett, R. C., Inc., Caldwell, Idaho. 735,012, pub. 5–8–62. Cl. 46.
Kemtech, Inc., Boston, Mass. 735,045–6, pub. 5–8–62. Cl. 52.
Kern Fruit Co., San Francisco, Calif., from Kern Fruit Co., Bakersfield, Calif. 734,994, pub. 5–1–62. Cl. 46.
Kestner Evaporator and Engineering Co., Ltd., London, England. 734,736, pub. 5–8–62. Cl. 1.
Keyboard Jr. Publications, Inc., New Haven, Conn. 734,946, pub. 5–8–62. Cl. 38.
Kimberly-Clark Corp., Neenah, Wis. 734,747, pub. 5–1–62. Cl. 2.
Kimberly-Clark Corp., Neenah, Wis. 734,970, pub. 5–8–62. Cl. 39.
King, Sandy R., Durant, Miss. 628,291 canc. Cl. 38.
King, Thomas J., New City, N.Y. 628,183, canc. Cl. 22.
Kloz Kleen: *See*—
Levitt, J. Stanley.
Knapp Monarch Co., St. Louis, Mo. 734,848, pub. 5–8–62. Cl. 21.
Knitbrook Mills Corp., New York, N.Y. 734,980, pub. 5–8–62. Cl. 42.
Koby Corp., The, Boston, Mass. 734,897, pub. 5–8–62. Cl. 31.
Koenig, Thomas M., d.b.a. Personnel Engineering, Rockford, Ill. 735,098. Cl. 101.
Kurt Orban Co., Inc., New York, N.Y. 628,195, canc. Cl. 23.
Kwikset Locks, Inc., Anaheim, Calif. 628,145, canc. Cl. 19.
Lady Hamilton Beauty Preparations Co. Ltd., Montreal, Quebec, Canada. 628,469, canc. Cl. 51.
Laketine Corp., Chicago, Ill. 734,802–4, pub. 5–8–62. Cl. 16.
Lane Co., Inc., The, Altavista, Va. 734,904, pub. 5–8–62. Cl. 32.
La Rosa, V., & Sons, Inc., Brooklyn, N.Y. 735,000, pub. 5–8–62. Cl. 46.
Lehman Bros. Corp., Jersey City, N.J. 398,323, ren. 7–24–62. Cl. 4.
Lesselli Marionettes, Sacramento, Calif. 628,449, canc. Cl. 107.
Lever Brothers Co., New York, N.Y. 735,044, pub. 5–8–62. Cl. 52.
Levitt, J. Stanley, d.b.a. Kloz Kleen, Kansas City, Mo. 628,239, canc. Cl. 29.
Levy's, Al, Inc., Montgomery, Ala. 734,955, pub. 5–8–62. Cl. 39.
Lewis, William, and Son, Chicago, Ill. 734,918, pub. 5–8–62. Cl. 36.
Lifeguard Corp., Philadelphia, Pa. 734,991, pub. 5–8–62. Cl. 44.
Linkmaster, Inc.: *See*—
Brownstein-Louis Co.
Lion Burashi Kabushiki Kaisha, Sumida-ku, Tokyo, Japan. 734,894, pub. 5–8–62. Cl. 29.
Lloyd Brothers, Inc., Cincinnati, Ohio. 734,813, pub. 5–8–62. Cl. 18.
Locke Steel Chain Co., The, Huntington, Ind. 734,874, pub. 5–8–62. Cl. 23.
Loomskill, Inc., New York, N.Y. 734,983, pub. 5–8–62. Cl. 42.
Lord and Lady Windsor Inc., New York, N.Y. 734,975–6, pub. 5–8–62. Cl. 40.
Lournay, Inc., to Colgate-Palmolive Co., New York, N.Y. 158,481, ren. 7–24–62. Cl. 51.
Love, Joseph, Inc., New York, N.Y. 628,326, canc. Cl. 39.
Lull-A-Baby Products, New York, N.Y. 628,056, canc. Cl. 2.
Lunkenheimer Co., The, Cincinnati, Ohio. 734,795, pub. 5–8–62. Cl. 13.

MacMillin Hydraulic Engineering Corp., Skokie, Ill. 734,873, pub. 5–8–62. Cl. 23.
Magnus Oceanic Corp., Livingston, N.J. 628,190, canc. Cl. 22.
Mehlin, Paul G., & Sons, Inc., New York, N.Y. 734,919, pub. 5–8–62. Cl. 36.
Maimon, J., & Sons, Inc., Philadelphia, Pa. 734,951, pub. 5–8–62. Cl. 39.
Maison Barriasson, Cognac, Charente, France. 735,027, pub. 5–8–62. Cl. 49.
Malachuk, Daniel, Plainfield, N.J. 735,049, pub. 5–8–62. Cl. 52.
Manufacturers Corp. of Mansfield, Ohio, Mansfield, Ohio. 628,102, canc. Cl. 13.
Marathon Electric Mfg. Co., Wausau, Wis. 734,856, pub. 5–8–62. Cl. 21.
Marson Corp., Revere, Mass. 734,777, pub. 5–8–62. Cl. 12.
Martin, Robert S., d.b.a. Ra-Mana Distributors, Los Angeles, Calif. 628,126, canc. Cl. 18.
Matson, H. P., Co.: *See*—
Matson, Harry P.
Matson, Harry P., d.b.a. H. P. Matson Co., Akron, Ohio. 735,035, pub. 5–8–62. Cl. 50.
May & Baker Ltd., Dagenham, Essex, England. 734,745, pub. 5–8–62. Cl. 1.
McCarthy, Patrick B., Van Nuys, Calif. 734,915, pub. 5–8–62. Cl. 34.
McColl, Harold D., South Gate, Calif. 628,091, canc. Cl. 8.
McDougall, George W., d.b.a. Incronite Co., New York, N.Y. 734,757, pub. 5–8–62. Cl. 6.
McKenzie, Edward J., and Andrew A. Nowak, Jr., New York, N.Y. 628,110, canc. Cl. 15.
McNeil Laboratories, Inc., Philadelphia, Pa. 355,814. Am. 7(d). Cl. 18.
Mead Johnson & Co., Evansville, Ind. 397,676, ren. 7–24–62. Cl. 46.
Mead Johnson & Co., Evansville, Ind. 734,831, pub. 5–8–62. Cl. 18.
Meccano Ltd., Liverpool, England, to The A. C. Gilbert Co., New Haven, Conn. 157,149, ren. 7–24–62. Cl. 22.
Medical Products Co., Inc., Miami, Fla. 735,043, pub. 5–8–62. Cl. 52.
Melville Shoe Corp., New York, N.Y. 734,962, pub. 5–8–62. Cl. 39.
Memorex Corp., Mountain View, Calif. 734,922, pub. 5–8–62. Cl. 36.
Merory Flavors, Inc., Boonton, N.J. 734,997, pub. 5–8–62. Cl. 46.
Mid-Continent Mfg. Corp., Chicago, Ill. 734,932, pub. 5–8–62. Cl. 37.
Middlemiss, Grace, Bayshore, N.Y. 734,969, pub. 5–8–62. Cl. 39.
Midland Steel Products Co., The, Cleveland, Ohio. 628,149, canc. Cl. 19.
Mido-G. Schaeren & Co. S.A., Bienne, Switzerland. 734,890, pub. 5–8–62. Cl. 27.
Millin, McCambridge Co., The, Riverdale, Md. 734,818, pub. 5–8–62. Cl. 18.
Miller, A. H., Inc., Boston, Mass. 734,973, pub. 5–8–62. Cl. 40.
Miller Industrial Corp., Nashville, Tenn. 628,304, canc. Cl. 39.
Millikin, Paul H., Los Angeles, Calif. 628,288, canc. Cl. 38.
Miliprint, Inc., Milwaukee, Wis. 734,928, pub. 5–8–62. Cl. 37.
Milsan Mills, Inc., Lebanon, Pa. 734,967, pub. 5–8–62. Cl. 39.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 734,930, pub. 5–8–62. Cl. 37.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 734,986, pub. 5–8–62. Cl. 42.
Modern Mold and Tool Corp., New York, N.Y. 734,941, pub. 5–8–62. Cl. 37.
Mon-O-Coach, Inc., Ironwood, Mich. 628,146, canc. Cl. 19.
Montchanin Products, Inc., Montchanin, Del. 735,015–16, pub. 5–8–62. Cl. 46.
Montclair Records: *See*—
Newton, Frederick G.
Montgomery Ward & Co., Inc., Chicago, Ill. 734,954, pub. 5–8–62. Cl. 39.
Montres Rolex S.A. (Rolex Uhren A.G.) (Rolex Watch Co.), Geneva, Switzerland. 628,464, canc. Cl. 27.
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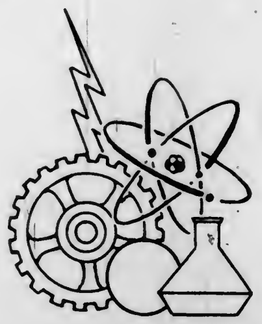
U.S. GOVERNMENT PRINTING OFFICE: 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

July 31, 1962 • Volume 780 • Number 5



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

July 31, 1962 Volume 780 Number 5

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of June 1962

Examiner affirmed	367
Examiner affirmed in part	38
Examiner reversed	81
Total	486

Patents Available for Licensing or Sale

2,506,330. Safety Signal for Motor Vehicles. C. O. Badgett, Route 1, Box 121, Yanceyville, N.C.

2,729,026. Self-Steering Vehicle. Ollie F. Slaby, 4600 Laurelwood Way, Sacramento, Calif.

2,953,033. Adjustable Multiple V-Belt Pulley Control Mechanism. William R. Hall, 1461 Shore Parkway, Brooklyn 14, N.Y.

3,021,463. Automatic Curve Sensing System. Contraves A.G., Zurich 52, Switzerland. Correspondence to Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,025,527. Dress. Ruth E. Seward, 5709 NW. 58th St., Oklahoma City 22, Okla.

3,038,192. Roller Mop. Frank M. McNeill, P.O. Box 656, Spur, Tex.

3,039,244. Tool Grinding Fixture. W. S. Vickerman, 1836 Hillcrest Drive, Moses Lake, Wash.

The following 2 patents are offered by D. H. Dave Associates, 1298 E. 22nd St., Brooklyn 10, N.Y.

2,966,718. Method for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

3,037,259. Apparatus for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

General Electric Company is prepared to grant non-exclusive licenses under the following 11 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 3 patents may be addressed to: Patent Counsel, Major Appliance Div. General Electric Company, Appliance Park, Louisville 1, Ky.

3,029,953. Refrigerator Door Shelf Arrangement.

3,032,004. Adjustment Device Between a Dial and Its Shaft.

3,034,703. Compressor Construction.

Applications for license under the following 8 patents may be addressed to: General Electric Company, X-Ray Department, 4855 Electric Ave., Milwaukee 1, Wis.

2,902,604. Scintillation Converter.

2,909,669. Means for and Method of Regulating the Operation of Electrical Translation Systems.

2,922,887. Inspection Apparatus and Method.

2,939,086. High Voltage Transformer.

2,956,172. Voltage Regulator.

2,975,313. Metal X-Ray Image Tube.

2,983,819. Radiation Gauge.

2,992,927. Process of Stabilizing Meat.

Eastman Kodak Company announces that, in accordance with its policy, nonexclusive licenses upon reasonable terms are available to responsible domestic applicants (under the circumstances prevailing at the time) under the following U.S. patents:

2,816,027. Photographic Element Having a Polystyrene Support.

2,983,317. Photographic Viewing Apparatus.

2,983,609. Chemical Sensitization of Photographic Emulsions.

2,986,967. Projection Apparatus.

2,991,656. Device for Imparting a Predetermined Pattern of Movement to an Element.

2,996,184. Automatic Sorting Device.

3,008,708. Photographic Viewing Apparatus.

3,009,007. Galvanic Cell.

Re. 24,972. (Orig. Pat. 2,828,670.) Prism-Lens Optical Systems of Variable Focal Length and Including Two Anamorphotic Prismatic Systems.

Applications for license may be addressed to the Director, Patent Department, Eastman Kodak Company, 343 State St., Rochester 4, N.Y.

Classification Order No. 333

Classification Order No. 333, dated June 13, 1962, incorporates changes in the following class:

340, COMMUNICATIONS, ELECTRICAL

Classification Order No. 334

Classification Order No. 334, dated June 21, 1962, incorporates changes in the following classes:

117, COATING: PROCESSES AND MISCELLANEOUS PRODUCTS
178, TELEGRAPHY
179, TELEPHONY
210, LIQUID PURIFICATION OR SEPARATION
250, RADIANT ENERGY
254, PUSHING AND PULLING IMPLEMENTS

New Applications Received During May 1962

Patents	7,782
Designs	453
Plant Patents	12
Reissues	29
Total	8,276

Issue

Patents	1316—No.	3,046,557 to No.	3,047,872, incl.
Designs	31—No.	193,293 to No.	193,323, incl.
Plant Patents	1—No.	2,159	
Reissues	5—No.	25,210 to No.	25,214, incl.
Total	1353		

293, VEHICLE FENDERS
298, LAND VEHICLES, DUMPING
312, SUPPORTS, CABINET STRUCTURES
317, ELECTRICITY
325, MODULATED CARRIER WAVE COMMUNICATION SYSTEMS—New Class (Bulletin No. 449)
340, COMMUNICATIONS, ELECTRICAL
343, COMMUNICATIONS, RADIO WAVE

The above changes will be incorporated in the Manual of Classification replacement pages dated July 1962.

M. C. ROSA,
Director, Patent Examining Operation.

Disclaimer

3,010,585.—*Leslie V. Slikkers*, Grand Rapids, Mich. ADJUSTABLE SHELVING. Patent dated Nov. 28, 1961. Disclaimer filed June 20, 1962, by the assignee, *The Bulman Corporation.*

Hereby enters this disclaimer to claims 1 through 9, of said patent.

Adjudicated Patents

(Ct. Cl.) Beall Patent No. 2,335,474 (128—1), for pressure producing apparatus, *Held* invalid. *Beall* v. *United States*, 302 F.2d 526; 133 USPQ 482.

(D.C. Fla.) Lorenz Patent No. 2,918,113 (297—89), for multiple position reclining chair, *Held* invalid and not infringed. *General Steel Products Co.* v. *Lorenz*, 204 F. Supp. 518; 132 USPQ 574.

(D.C. Fla.) Fletcher Patent No. 2,940,509 (297—89), for multiple-position chair. Claims 1, 2, 10, 11, 14 and 16 *Held* invalid and not infringed. *Id.*

(D.C. Fla.) Schliephaeke Patent No. 2,940,510 (297—88), for multiple position reclining chair, *Held* invalid and not infringed. *Id.*

Foreign Patents Received in the Scientific Library as of June 30, 1962

Source	Date received	Highest number
Australia:		
(*Abstracts*)	Apr. 18, 1961	63,890
(*Patents*)	June 19, 1962	236,834
Austria	June 27, 1962	221,500
Belgium	June 19, 1962	572,300
Canada	June 18, 1962	642,951
Czechoslovakia	Apr. 27, 1962	100,300
Denmark	May 10, 1962	92,445
East Germany	June 25, 1962	23,239
Egypt	Apr. 20, 1962	2,606
Finland	May 7, 1962	32,010
France:		
(*Patents*)	June 4, 1962	1,280,250
(*Medicaments*)	June 4, 1962	400M
(*Additions*)	June 4, 1962	76,950
Germany:		
(*Auslegeschriften*)	June 21, 1962	1,128,370
(*Patents*)	Apr. 3, 1962	1,109,847
Great Britain	June 22, 1962	898,470
India	June 1, 1962	75,400
Ireland	May 1, 1962	23,050
Italy	May 16, 1962	587,000
Japan	June 21, 1962	3,250/62
Netherlands	June 13, 1962	101,466
Norway	June 14, 1962	99,953
Pakistan	June 15, 1962	110,809
Philippine Republic	Apr. 13, 1962	458
Poland	May 21, 1962	45,795
Rumania	June 13, 1962	41,641
Sweden	June 5, 1962	178,958
Switzerland	June 14, 1962	361,547
U.S.S.R.	June 22, 1962	146,258

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1962

Total number of pending applications (excluding Designs)	191,242
Total number of pending Design applications	5,865
Total number of applications awaiting action (excluding Designs)	100,882
Total number of Design applications awaiting action	2,096
Date of oldest new application	Jan. 26, 1961
Date of oldest amended application	Nov. 3, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) Manian, J. A. (acting), AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	7-21-61	8-30-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	10-31-61	9-21-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	4-4-61	4-5-61
4. (VI) FALLER, E. A., Material or Article Handling	6-29-61	6-19-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	6-29-61	7-3-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	4-4-61	4-13-61
7. (IV) ANDERSON, E. G., Optics	5-1-61	5-15-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-9-61	7-18-61
9. (VI) BRANSON, J. H., Pumps; Fans	7-31-61	6-13-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	6-26-61	6-29-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	6-23-61	7-3-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	5-19-61	5-3-61
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	4-12-61	3-31-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	3-6-61	2-24-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	6-6-61	7-6-61
16. (II) ROSE, R. H. (acting), Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	5-11-61	5-19-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	6-27-61	6-19-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	6-5-61	5-29-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	4-28-61	4-28-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	7-14-61	6-19-61
21. (III) MADER, R. C., Textiles	5-2-61	5-12-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	5-16-61	5-15-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	6-23-61	6-19-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	6-28-61	6-1-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	4-12-61	4-21-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5-1-61	5-4-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6-12-61	6-14-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	5-15-61	6-1-61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	5-29-61	5-1-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6-27-61	7-6-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	5-1-61	4-20-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	4-17-61	5-1-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	5-8-61	5-22-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-4-61	3-7-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	6-29-61	7-5-61
36. (V) EVANS, R. L., Measuring and Testing (part)	4-10-61	5-4-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-21-61	3-17-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-1-61	6-2-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	4-17-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-5-61	5-1-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-14-61	4-3-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-1-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-16-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	1-26-61	2-6-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	10-12-61	6-6-61
46. (I) WILES, W. O. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-2-61	3-30-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles	6-20-61	6-9-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-13-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	4-14-61	4-14-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-5-61	4-17-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	4-25-61	4-19-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	9-13-61	9-26-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	5-22-61	6-12-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-3-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	3-30-61	3-16-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-2-61	6-12-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	6-21-61	5-2-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	7-24-61	6-19-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	5-22-61	5-3-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-27-61	11-3-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	9-7-61	9-13-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-1-61	6-1-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-1-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	3-16-61	3-13-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	2-28-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	3-13-61	4-11-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	5-4-61	5-5-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	7-26-61	8-15-61
81. (III) HANNAH, A. B., Industrial Arts	2-5-62	2-16-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	2-2-62	2-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	3-30-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-20-61	5-9-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	12-5-61
95. ANGEL, C. D., Metallic Building Structures	7-7-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	4-18-61	5-17-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958.*

Patents.....Numbers 2,379,404 to 2,380,912 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

United States District Court
District of Columbia

THE COMMONWEALTH ENGINEERING COMPANY OF OHIO AND CARL BERGER

v.

DAVID L. LADD, COMMISSIONER OF PATENTS

Civil Action No. 2997-59. Decided October 31, 1961

131 USPQ 255

1. PATENTABILITY—35 U.S.C. 101—NOVELTY AND UTILITY.

"It is, of course, well established that two elements must exist in order to justify the issuance of a patent on the product of the inventive faculty: first, novelty; and, second, usefulness."

2. SAME—UTILITY—SOME DEGREE OF UTILITY REQUIRED—*In re Nelson* CONSTRUED.

"It is true, as is argued by counsel for the plaintiff and as was held in a thorough and well considered opinion by the Court of Customs and Patent Appeals in the *Application of John A. Nelson*, 280 F.2d 172, 178, that a high degree of usefulness need not be established, all that is needed is some degree of usefulness. In this case, however, the Patent Office held that there was no usefulness whatever in any degree, on the ground that the process will destroy the usefulness and the value of the very product which it is designed to produce by ruining its vital properties. Consequently, on that basis, the process is entirely lacking in utility."

3. SAME—SAME—COMPOSITION OF MATTER—*Isenstead* v. *Watson* CONSTRUED.

"This court held in *Isenstead* v. *Watson*, 157 F. Supp. 7, that the term utility is a broad term and implies, among other things, capacity to perform the function or attain the result claimed by the applicant in his disclosure. It further held that, in connection with a composition of matter, the test of utility is whether the invention will attain the purpose and will operate as disclosed and claimed by the inventor."

4. SAME—SAME—PROCESS.

Held that "* * * in connection with an invention consisting of a process or a method, the term utility must necessarily mean whether the process will operate as claimed and will produce the result intended by the inventor."

5. REVIEW BY THE DISTRICT COURT FOR THE DISTRICT OF COLUMBIA—CIVIL ACTION UNDER 35 U.S.C. 145—RULING OF PATENT OFFICE PRESUMPTIVELY CORRECT.

Where the Patent Office concluded that plaintiff's process for rapidly thawing frozen blood was lacking in utility in that the result intended by the inventor will not be produced, and, where the "plaintiff sought to overcome the opinion of the Patent Office on this technical scientific subject by adducing contrary opinions of other technicians," *Held* that "Ordinarily, in such a situation, the court should sustain the ruling of the Patent Office since it is presumptively correct"; and that "It has been said time and time again that a great weight must attach to the findings of the Patent Office, especially on highly technical matters."

6. PATENTABILITY—UTILITY—EVIDENCE—PROOF OF UTILITY BY ACTUAL REDUCTION TO PRACTICE OR LABORATORY EXPERIMENTS.

"It may be repeated that it is sought to overcome the impartial opinion of the Patent Office by a partisan opinion of the plaintiff's expert, without demonstrating the error or alleged error of the Patent Office by actual reduction to practice or even by laboratory experiments. To be sure, from a technical legal standpoint the filing of the application constitutes a reduction to practice, but when the Patent Office expresses a technical opinion that a process would not operate as claimed or would not result in the product desired to be obtained by the process, in order to overcome this conclusion some proof must be submitted and not merely another expert's a priori opinion, especially a partisan expert."

7. SAME—SAME—*In re Krimmel* DISTINGUISHED.

"The plaintiff strongly relies on the recent decision of the Court of Customs and Patent Appeals in the case of *In re Krimmel*, 130 USPQ 215, • • •. That case is clearly distinguishable, however, because there a certain amount of experimentation had been conducted successfully, and the court held that this was sufficient to show the utility of the alleged invention there involved."

8. SAME—SAME—PROCESS—*Isenstead* v. *Watson* CONSTRUED.

The remarks in *Isenstead* v. *Watson*, 157 F. Supp. 7, that "Great care and scrutiny should be particularly taken in connection with applications for medical patents"; and that "While the granting of a patent does not legally constitute a certificate that the medicine to which it relates is a good medicine and will cure the disease or successfully make the test which it was intended to do, nevertheless the granting of such a patent gives a kind of official imprimatur to the medicine in question on which as a moral matter some members of the public are likely to rely," *Held* "equally applicable to a process intended for medical use."

Dwight F. Bickel and *Folsom E. Drummond* for plaintiffs.

Clarence W. Moore (*Jack E. Armore*, of counsel) for defendant.

HOLTZOFF, *J.*:

Opinion of the Court

This is an action against the Commissioner of Patents under 35 United States Code 145 for an adjudication that the plaintiffs are entitled to a patent on an application that the defendant has rejected.

The application was filed by Carl Berger and assigned to the plaintiff Commonwealth Engineering Co. of Ohio on July 27, 1953, and is numbered 370533. It is entitled "Reconstitution of Frozen Biological Cellular Material." It involves a process for rapidly thawing and melting frozen blood. The specific process, in a general way, consists of passing the frozen blood through an elongated tube, which is heated to a high temperature, but the temperature of which gradually decreases to a temperature at the discharge end which it is desired the blood to reach.

The specification does not indicate the purpose or purposes for which this process is to be used. Testimony introduced in behalf of the plaintiff through an expert witness is to the effect that it may be used in connection with the making of medical diagnoses in medical laboratories, as well as in connection with blood transfusion in human beings, and that it may be employed both in connection with human blood and with animal blood inasmuch as animal blood is used in certain tests in connection with medical science.

The application was rejected on the ground that the alleged invention was lacking in utility. Thus, the Examiner in his answer before the Board of Appeals stated:

"The Examiner is of the opinion that high temperatures denature blood, thus making it unfit for transfusion purposes. In order to rebut the position taken by the Examiner, applicant has presented two affidavits. These affidavits are nothing more than opinion affidavits in that they set forth nothing more than conclusions."

The Examiner concluded:

"In the absence of tests establishing the utility of applicant's process the rejection for lack of utility is considered proper."

The Board of Appeals, in its opinion, pointed out that:

"Appellant has not submitted any factual evidence to establish that frozen blood when rapidly thawed by the claimed process gives a composition useful for transfusion."

It might be added that the plaintiff has not submitted any factual evidence to establish that frozen blood when rapidly thawed by the claimed process gives a composition useful for any purpose whatsoever.

And, again, the Board of Appeals states:

"The Examiner has given sound scientific reasons for rejecting the claims for lack of utility or inoperativeness for the intended purpose. Appellant has not shown wherein the Examiner is in error and has thus far failed to prove his case."

Accordingly, the Board of Appeals affirmed the rejection.

[1] It is, of course, well established that two elements must exist in order to justify the issuance of a patent on the product of the inventive faculty: first, novelty; and, second, usefulness.

We are dealing here with the element of usefulness. 35 United States Code 101.

[2] It is true, as is argued by counsel for the plaintiff and as was held in a thorough and well considered opinion by the Court of Customs and Patent Appeals in the *Application of John A. Nelson*, 280 F.2d 172, 178, that a high degree of usefulness need not be established, all that is needed is some degree of usefulness. In this case, however, the Patent Office held that there was no usefulness whatever in any degree, on the ground that the process will destroy the usefulness and the value of the very product which it is designed to produce by ruining its vital properties. Consequently, on that basis, the process is entirely lacking in utility.

In this connection, it might be useful to advert briefly to the question as to what constitutes utility within the meaning of the patent law. The Circuit Court of Appeals for the Eighth Circuit in *Besser* v. *Merrilat Culvert Core Co.*, 243 F. 611, 612, held, in connection with defining the term useful as applied to a machine:

"The term useful, as contained in the patent law when applied to a machine, means that the machine will accomplish the purpose practically when applied in industry. It is to be given a practical and not a speculative meaning. It means that the machine will work and accomplish the purposes set forth in the specifications."

[3] This court held in *Isenstead* v. *Watson*, 157 F. Supp. 7, that the term utility is a broad term and implies, among other things, capacity to perform the function or attain the result claimed by the applicant in his disclosure. It further held that, in connection with a composition of matter, the test of utility is whether the invention will attain the purpose and will operate as disclosed and claimed by the inventor.

[4] Similarly, in connection with an invention consisting of a process or a method, the term utility must necessarily mean whether the process will operate as claimed and will produce the result intended by the inventor.

[5] In this case, the Patent Office held that such a result will not be produced. The plaintiff sought to overcome the opinion of the Patent Office on this technical scientific subject by adducing contrary opinions of other technicians. Ordinarily, in such a situation, the court should sustain the ruling of the Patent Office since it is presumptively correct. It has been said time and time again that a great weight must attach to the findings of the Patent Office, especially on highly technical matters.

Under the circumstances, in this state of the record, it would seem that some experimentation is necessary to demonstrate the error of the opinion of the Patent Office. One a priori opinion as against another a priori opinion is not sufficient.

It is argued in behalf of the plaintiff that it should not be necessary to show that the process will operate successfully with human blood as against animal blood. This argument is, however, irrelevant because it has not been shown by experimentation that this invention will accomplish the desired objective even with animal blood.

[6] It may be repeated that it is sought to overcome the impartial opinion of the Patent Office by a partisan opinion of the plaintiff's expert, without demonstrating the error or alleged error of the Patent Office by actual reduction to practice or even by laboratory experiments. To be sure, from a technical legal standpoint the filing of the application constitutes a reduction to practice, but when the Patent Office expresses a technical opinion that a process would not operate as claimed or would not result in the product desired to be obtained by the process, in order to overcome this conclusion some proof must be submitted and not merely another expert's a priori opinion, especially a partisan expert. By referring to the expert as partisan the court does not mean to imply any criticism. The court was impressed with the experience and the attainments of the plaintiff's expert. His opinion, however, was reached entirely on a priori reasoning, and it must be realized that partisanship is part of the unconscious make-up of every human being.

Under those circumstances, the court is of the opinion that the ruling of the Patent Office has not been sufficiently overcome to justify the court in reaching the conclusion that the Patent Office erred.

In this connection, it is interesting and significant to refer to some of the proceedings in the Patent Office as contained in the file wrapper. In his first action the Examiner concluded:

"The claims are rejected for lack of utility in the absence of clear convincing scientific proof that the composition produced by applicant's process is safe, effective, reliable for the purpose set forth in the specification."

Obviously, this might well have been construed as an invitation to submit some proof, but it seems to have been ignored by the plaintiff.

In a later action, found on page 48 of the file wrapper, the Examiner again stated:

"The claims are again rejected for lack of utility. There has been no showing made to the effect that the high temperature that applicant uses would not cause denaturization of the blood proteins due to localized heating."

A similar statement was made by the Examiner in a still later action, found on page 64 of the file wrapper.

Then, finally, the plaintiff submitted an affidavit to the Patent Office. That affidavit was made by the chairman of the board of the plaintiff corporation. It is very general in its nature and it states what the inventor has found. No affidavit was submitted from the inventor or from anyone else giving any details.

Finally, another affidavit was submitted, sworn to by one Leo J. Novak, vice-president in charge of research and development for the plaintiff corporation. He stated:

"Frozen blood cells reconstituted in accordance with applicant's invention have been used and found to be satisfactory."

Such a general conclusion is of no value as evidence. If there had been experimentation in the laboratory, those experiments should have been summarized; if there had been use in actual practice, such uses should likewise have been summarized.

[7] The plaintiff strongly relies on the recent decision of the Court of Customs and Patent Appeals in the case of *In re Krimmel*, 130 USPQ 215, not yet reported officially. That case is clearly distinguishable, however, because there a certain amount of experimentation had been conducted successfully, and the court held that this was sufficient to show the utility of the alleged invention there involved.

The foregoing discussion necessarily leads to the conclusion that no error has been shown in the ruling of the Patent Office that the invention is lacking in utility.

The court might well, however, in addition, refer to its opinion in *Isenstead* v. *Watson*, 157 F. Supp. 7, in which we suggested that:

"Great care and scrutiny should be particularly taken in connection with applications for medical patents. While the granting of a patent does not legally constitute a certificate that the medicine to which it relates is a good medicine and will cure the disease or successfully make the test which it was intended to do, nevertheless the granting of such a patent gives a kind of official imprimatur to the medicine in question on which as a moral matter some members of the public are likely to rely."

[8] These remarks are equally applicable to a process intended for medical use.

Accordingly, judgment will be rendered on the merits in favor of the defendant dismissing the complaint.

The court is indebted to both counsel for a very able and interesting presentation of this case.

Counsel for the Patent Office will submit proposed findings of fact and conclusions of law and judgment.

Findings of Fact

1. This is an action brought under Section 145 of Title 35 United States Code, in which plaintiff Commonwealth Engineering Company of Ohio, assignee, and plaintiff Carl Berger, applicant, of application for patent Serial No. 370,533, filed July 27, 1953, entitled "Reconstitution of Frozen Biological Cellular Material," sought to have the court authorize the defendant, the Commissioner of Patents, to grant to plaintiffs a patent containing claims 17, 24, 25 and 26 of that application.

2. The specification of the application at bar states that the invention relates to a process for reconstituting frozen blood cells, by rapidly thawing and melting frozen blood, which consists of passing the frozen blood through an elongated tube heated to a high temperature (250° C. to 1100° C.) at the entrance, gradually decreasing the temperature to from 37° C. to 50° C. at the discharge end, and collecting the cells in an isotonic solution having substantially the same temperature as the thawed cells.

3. The specification does not indicate the purpose or purposes for which this process is to be used.

4. Claim 24 at issue, which is representative, as set forth in paragraph 16 of the complaint, reads as follows:

A process for the reconstitution of frozen blood cells which consists in passing the same through an enclosure having a temperature gradient from the entrance to the exit of between 1100° C. and 250° C. at said entrance and 37° C. to 50° C. at said exit, the temperature decreasing substantially uniformly therebetween, said blood cells entering and passing through said temperature gradient enclosure within approximately one to two seconds to thaw the same quickly, and thereafter collecting the resultant thawed cells in an isotonic liquid having substantially the same temperature as the thawed cells.

5. The application claims were rejected on the ground that the alleged invention was lacking in utility. The Patent Office tribunals

were of the opinion that high temperatures denature blood, making it unfit for transfusion purposes, and that in the absence of factual evidence of tests establishing that frozen blood, when rapidly thawed by the claimed process, gives a composition useful for transfusion, the statutory requirement for usefulness (35 U.S.C. 101) is lacking.

6. Plaintiffs sought to overcome the opinion of the Patent Office on this technical scientific subject by adducing contrary opinions of other technicians, and by the testimony of an expert witness to the effect that the product of the process may be used in making medical diagnoses in medical laboratories, as well as in connection with blood transfusions in human beings, and that it may be employed both in connection with human blood and with animal blood.

7. Plaintiffs have not submitted any factual evidence to establish that frozen blood when rapidly thawed by the claimed process gives a composition useful for any purpose whatsoever.

8. In this state of the record, some experimentation is necessary to demonstrate the error of the opinion of the Patent Office. One a priori opinion, as against another a priori opinion, is not sufficient.

9. No error has been shown in the ruling of the Patent Office that the invention is lacking in utility.

Conclusions of Law

1. It is well established that two elements must exist in order to justify the issuance of a patent on the product of the inventive faculty: first, novelty; and second, usefulness.

2. Utility, within the meaning of 35 U.S.C. 101, is a broad term and implies, among other things, capacity to perform the function or attain the result claimed by the applicant in his disclosure. *Isenstead* v. *Watson*, 157 F. Supp. 7.

3. The test for utility, in connection with a composition of matter, is whether the invention will attain the purpose and will operate as disclosed and claimed by the inventor. *Isenstead* v. *Watson*, 157 F. Supp. 7.

4. The term utility, in connection with an invention consisting of a process or method, necessarily means whether the process will operate as claimed and will produce the result intended by the inventor.

5. A holding by the Patent Office that a claimed process has no usefulness whatever on the ground that it will destroy the very product which it is designed to produce by ruining its vital properties, should, in the absence of some experimentation to demonstrate the error of the opinion of the Patent Office, be sustained by the court since it is presumptively correct.

6. Great weight must attach to the findings of the Patent Office, especially on highly technical matters.

7. One a priori opinion as against another a priori opinion is not sufficient to demonstrate error in the opinion of the Patent Office.

8. Although from a technical legal standpoint, the filing of a patent application constitutes a reduction to practice, when the Patent Office expresses a technical opinion that a process will not operate as claimed or will not result in the product desired to be obtained by the process, some proof must be submitted, and not merely another expert's a priori opinion, in order to overcome this conclusion.

9. General conclusions, set forth in affidavits submitted during the proceedings in the Patent Office, are of no value as evidence.

10. The following remarks in the court's opinion in *Isenstead* v. *Watson*, 157 F. Supp. 7, are equally applicable to a process intended for medical use:

"Great care and scrutiny should be particularly taken in connection with applications for medical patents. While the granting of a patent does not legally constitute a certificate that the medicine to which it relates is a good medicine and will cure the disease or successfully make the test which it was intended to do, nevertheless the granting of such a patent gives a kind of official imprimatur to the medicine in question on which as a moral matter some members of the public are likely to rely."

11. Claims 17, 24, 25 and 26 are unpatentable.

12. Plaintiffs are not entitled to a patent containing any one of claims 17, 24, 25 and 26, set forth in paragraph 16 of the complaint.

13. The complaint should be dismissed.

United States Court of Appeals
District of Columbia Circuit

THE COMMONWEALTH ENGINEERING COMPANY OF OHIO AND CARL BERGER

v.

DAVID L. LADD, COMMISSIONER OF PATENTS

No. 16,862. Decided May 31, 1962

[—U.S. App. D.C.—; —F.2d—; 133 USPQ 618]

PATENTABILITY—UTILITY—PARTICULAR SUBJECT MATTER—PROCESS OF THAWING HUMAN BLOOD.

"The trial judge, in a de novo proceeding, patiently afforded appellants every opportunity to develop their case. But they failed to show that their frozen blood thawing process would produce the result claimed or be otherwise useful. Accordingly, we affirm on the opinion of the District Court."

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Folsom E. Drummond, with whom *Harry A. Toulman, Jr.* was on the brief, for appellants.

Clarence W. Moore (*J. E. Armore*, of counsel) for appellee.

Before WILBUR K. MILLER, *Chief Judge*, and BURGER and WRIGHT, *Circuit Judges*

PER CURIAM:

This appeal from the denial of a patent application is wholly without merit. The trial judge, in a de novo proceeding, patiently afforded appellants every opportunity to develop their case. But they failed to show that their frozen blood thawing process would produce the result claimed or be otherwise useful. Accordingly, we affirm on the opinion of the District Court. *Commonwealth Engineering Co.* v. *Ladd*, D. D.C., 199 F.Supp. 51.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE CLAUS L. SPORCK

No. 6709. Decided May 4, 1962.

[49 CCPA—; 301 F.2d 686; 133 USPQ 360]

1. PATENTABILITY—INVENTION—OBVIOUSNESS—EVIDENCE OF OBVIOUSNESS.

"In judging what requires *uncommon* ingenuity, the best standard is what *common* ingenuity has failed to contrive."

2. SAME—SAME—SAME—SIMPLE INVENTIONS.

"The fact that the invention seems simple after it is made is not determinative of the question of obviousness."

3. SAME—SAME—SAME—EVIDENCE OF UNOBVIOUSNESS.

"If those skilled in the mechanical arts are working in a given field and have failed to discover a certain new and useful improvement, the one who first makes the discovery frequently has done more than make an obvious improvement which would have suggested itself to a mechanic skilled in the art, and such an invention is entitled to the grant of a patent thereon."

4. SAME—SAME—SAME—JUDICIAL NOTICE—35 U.S.C. 103.

"Obviousness is a legal conclusion which we are required to draw from facts appearing in the record or of which judicial notice may be taken. Thus before we can conclude that any disclosed invention is 'obvious' under the conditions specified in 35 U.S.C. 103, we must evaluate facts from which to determine (1) what was shown in the prior art at the time the invention was made, and (2) the knowledge which a person of ordinary skill in the art possessed at the time the invention was made."

5. SAME—SAME—SAME—DOUBT AS TO OBVIOUSNESS.

Where the court found there was "a doubt as to the factual basis supporting the conclusion of the Board of Appeals that the invention would have been obvious to one of ordinary skill in the art," *Held* that "• • • the doubt should be resolved in favor of the applicant."

6. SAME—PARTICULAR SUBJECT MATTER—METHOD OF FORMING HOLLOW FRUSTO-CONICAL ARTICLES.

The decision of the Board of Appeals refusing certain claims for a method of forming hollow frusto-conical articles as unpatentable over the prior art is reversed.

APPEAL from the Patent Office. Serial No. 536,086.

REVERSED.

Frederick J. Olsson, Synnestredt & Lechner, for appellant.

Clarence W. Moore (*Joseph F. Nakamura*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

This appeal is from a decision of the Patent Office Board of Appeals which affirmed the Examiner's rejection of claims 1–5, inclusive, of appellant's application Serial No. 536,086 for a method of forming hollow, frusto-conical articles from flat metal stock. The claims were rejected under 35 U.S.C. 103 as being obvious in view of the following references:

Kelley et al., 1,901,035, March 14, 1933.
Lindgren, Re. 19,790, December 17, 1935.
British patent, 436,768, October 17, 1935.

Claim 1 is typical of the claims on appeal and reads as follows:

1. The method of making a hollow generally conical-shaped article having a tapered side comprising the steps: working a blank having an annular portion of tapering cross [section][1] by mounting said blank on a spindle having a conical-shaped portion and while the spindle and blank are rotating, axially displacing said annular portion by making a roller move in a path non-parallel to the surface of the conical-shaped portion of the spindle so that the thickness of the side being formed taken at any point thereon in a direction generally parallel to the rotational axis of the spindle is equal to the corresponding thickness of the original blank.

[1] The word "section" is omitted from claim 1 as presented but the applicant, the Examiner and the Board of Appeals all agree that it should be inserted as is here done.

Appellant's claims 1–3 are similar and for present purposes can be considered as one. Claim 4 recites the steps of making a cup-shaped blank with a tapered cross-section and claim 5 requires use of a cup-shaped blank with tapered cross-section.

The sole issue for determination is whether the Board was correct under 35 U.S.C. 103 in holding that appellant's claimed invention was obvious at the time it was made to one of ordinary skill in the art in view of the disclosures in the cited references.

Appellant's invention relates to a method of forming a hollow, frusto-conical article with a tapered wall from a flat or cup-shaped blank by spinning the blank and axially displacing the layers or strata of metal with a roller which moves relative to the face of a rotating spindle.

Appellant's spinning method is similar in general to that used in the metal spinning arts, as shown by the Lindgren and British patents. A round metal blank is first clamped on the top of a spindle having a frusto-conical shape. As the spindle and blank are rotated, the roller pushes the metal along the tapered sides of the spindle to form a hollow frusto-cone and the metal is deformed to the shape of the spindle by axial displacement. To understand that operation it is necessary to visualize the starting blank as being composed of an infinite number of layers or strata lying in a plane parallel to the axis of the spindle. The roller is so directed during the spinning operation that the metal strata of the blank are axially displaced relative to each other, i.e., they slide relative to each other and are not compressed or elongated in length. Thus at any point on the surface of the spindle, appellant contends, the thickness of the frusto-cone wall, measured in a direction parallel to the spindle axis, is equal to the thickness of the original blank, measured in the same direction at an equal radial distance from the rotational axis. In forming a hollow frusto-cone by a spinning method utilizing the principles of axial displacement, as disclosed by the prior patents, the inner surface of the wall of the hollow frusto-cone is defined by the spindle surface, and the outer surface of the cone wall is defined by the path of the roller which moves in a path parallel to the outer surface of the spindle.

Lindgren and the British reference, supra, both disclose the general method described. Appellant, however, predicates novelty and unobviousness of his method on the asserted fact that the methods of such references are unable to form by spinning a metal frusto-cone with a tapered or non-uniform wall thickness following the principle of axial displacement while he is able to do so. In appellant's method, he first rolls or otherwise forms a tapered or cup-shaped blank from a flat piece of sheet metal. This tapered or cup-shaped blank is then spun on a frusto-conical spindle. To form a fruso-cone with a tapered wall, appellant's roller is positioned to move along a path non-parallel to the spindle surface, so that it comes closer to the spindle as it moves along the spindle surface. Appellant asserts that this method results in axial displacement of the metal blank since the non-parallel roller path is so designed that the thickness of the *tapered wall*, measured in a direction parallel to the spindle axis, is the same as the thickness of the *tapered* or *cup-shaped blank*, measured in the same direction at the same radial distance from the spindle axis.

Appellant states his position in his brief:

> The change over the reference is a simple one, the change being in the use of the tapered blank and in a non-parallel roller path being chosen so that the thickness of the side being formed, taken at any point on the side in a direction parallel to the axis of the spindle, is equal to the corresponding thickness of the tapered blank.

The sole issue thus is whether, in using a blank having a tapered cross section and a roller path not parallel to the conical surface of the spindle, appellant has done anything more than would have been obvious to a worker of ordinary skill in the art at the time appellant's invention was made, having before him the method of forming cones taught by Lindgren and the British patent, and faced with the problem of adapting that method to forming a cone with a tapered wall.

The Board held that the use of a blank with a tapered cross section and a roller path not parallel to the conical surface of the spindle is a mere extension of the idea of axial displacement taught by the Lindgren and British references and was, therefore, but an obvious adaptation of that idea to the specific shape desired in the finished article and that the steps of forming a tapered blank from flat metal stock is fully shown by the Kelley et al. reference.

Appellant does not predicate any patentable significance on the steps relating to forming a tapered blank from flat stock.

Appellant's contention is that the references do not suggest how the methods as therein disclosed can be used for forming cones with a tapered wall without relying on appellant's disclosure. Specifically, appellant contends that Lindgren's discussion of axial or strata displacement where the blank is flat and the roller moves parallel to the spindle surface and is spaced therefrom at a distance $t_2=t_1$ sine k is not applicable to the process of forming a frusto-cone with a tapered wall.

In determining the issue here we are required by 35 U.S.C. 103 to do so from the vantage point of one having ordinary skill in the metal spinning art and then to determine whether or not the claimed invention would have been obvious to such a person at the time the invention was made. This requires us to view the prior art without reading into that art the teachings of appellant's invention. *In re Murray and Peterson*, 46 CCPA 905, 268 F.2d 226, 122 USPQ 364.

Neither appellant's application nor the record before us give us anything of a factual nature upon which to ascertain the problem faced by the prior art in spinning a frusto-cone with a tapered wall. Assertions are made by appellant's counsel that the problem was to prevent swaging in the metal as it was spun and was solved by appellant through use of (1) a tapered blank and (2) a non-parallel roller path. These assertions have not been disputed by the Examiner or the Board, nor has any reference been cited which shows the formation by a metal spinning method of any article having a tapered wall. [1] In judging what requires *uncommon* ingenuity, the best standard is what *common* ingenuity has failed to contrive. *Western States Machine Co.* v. *S. S. Hepworth Co.*, 147 F.2d 345, 347. In the absence of any contrary showing in the record before us, we must assume that no one before appellant had ascertained, as he did, that a frusto-conical article with a tapered wall could be axially spun by use of (1) a *tapered blank* and (2) a roller path *non-parallel* to the surface of the forming spindle.

Once appellant's solution to the problem of making a tapered wall frusto-cone is disclosed, it is easy to see how the prior references can be modified and manipulated to produce this type of cone. The change admittedly is simple and by hindsight seems obvious. However, the simplicity of new inventions is oftentimes the very thing that is not obvious before they are made. This court, in *In re Osplack*, 39 CCPA 932, 195 F.2d 921, 93 USPQ 306, stated:

> We think this case is one of that category of inventions which, when viewed after disclosure and explanation by an applicant, seem simple and such as should have been obvious to those in the field. Yet this does not necessarily negative invention or patentability. *Goodyear Tire & Rubber Co., Inc. et al.* v. *Ray-O-Vac Company*, 321 U.S. 275; *In re DeLancey*, 34 CCPA (Patents) 849, 159 F.2d 737, 72 USPQ 477. Indeed, simplicity may even be some evidence of invention. *Baldwin-Southwark Corporation* v. *Tinius Olsen Testing Mach. Co. et al.* 88 F.2d 910.

[2] The fact that the invention seems simple after it is made is not determinative of the question of obviousness. If this were the rule, many of the most beneficial patents would be stricken down. [3] If those skilled in the mechanical arts are working in a given field and have failed to discover a certain new and useful improvement, the one who first makes the discovery frequently has done more than make an obvious improvement which would have suggested itself to a mechanic skilled in the art, and such an invention is entitled to the grant of a patent thereon. *Expanded Metal Co.* v. *Bradford*, 214 U.S. 366.

The Solicitor, in answer to appellant's assertion that the Lindgren formula $t_2=t_1$ sin K is not applicable to spinning an article with a tapered wall, has submitted a drawing based upon Lindgren's FIGURE 6 to show that the formula can be made applicable to appellant's process. While we agree with the Board and Solicitor that the formula disclosed by Lindgren could be used by appellant to define the relation between the roller path distance and the blank width in a direction parallel to the axis of rotation at any point on the surface of the spindle, we do not think that this conclusion is determinative of the issue of obviousness. Lindgren (and the British reference) discloses spinning processes where the roller path is *parallel* to the spindle surface and the blank thickness is *constant*. The formula disclosed by Lindgren is useful in ascertaining the roller path in one calculation only where the blank thickness, t_1, remains constant. Appellant's *non-parallel* roller path cannot be found unless the formula of Lindgren is applied several times along the radial width of the *tapered* blank, which *tapered* blank is not shown by Lindgren or the British reference.

Lindgren shows in FIGURE 4 a product which has a cone wall of constant thickness with a lower or outer flange of thickness greater than the cone wall. It is clear that Lindgren did not contemplate use of a blank of variable thickness to obtain such a product, since he states:

> If the desired thickness of the outer flange is less than of the original material but greater than that of the conical mantle, I produce, by spinning, a semi-manufactured disk in the shape of two conical mantles, one below the other, the *top* angle of the lower mantle being made greater than that of the upper mantle. [Emphasis added.]

It is also clear that the British patent did not contemplate use of a tapered blank to vary the wall thickness of the product. This patent states:

The thickness of the [cone wall] material will of course vary and depends at each point on the *angle* of inclination. [Emphasis added.]

We are unable to find in the art relied upon by the Board any teaching prior to appellant's invention that a metal spinning process could be used to provide the desired hollow conical-shaped article having a tapered side. Nor do we find any teaching in the art of the use of a tapered blank of variable thickness in order to form a spun article with a tapered or variable thickness wall.

[4] Obviousness is a legal conclusion which we are required to draw from facts appearing in the record or of which judicial notice may be taken. Thus before we can conclude that any disclosed invention is "obvious" under the conditions specified in 35 U.S.C. 103, we must evaluate facts from which to determine (1) what was shown in the prior art at the time the invention was made, and (2) the knowledge which a person of ordinary skill in the art possessed at the time the invention was made. Here, neither the record nor the facts of which we are able to take judicial notice supplies the factual data necessary to support the legal conclusion of obviousness of the invention at the time it was made. We are unwilling to substitute speculation and hindsight appraisal of the prior art for such factual data. For this reason we think there is a doubt as to the factual basis supporting the conclusion of the Board of Appeals that the invention would have been obvious to one of ordinary skill in the art of metal spinning. [5] Under these circumstances, the doubt should be resolved in favor of the applicant. *In re Devine*, 46 CCPA 725, 261 F.2d 241, 120 USPQ 84; *In re Altmann and Bureau*, 46 CCPA 818, 264 F.2d 894, 121 USPQ 262.

[6] For the foregoing reasons, the decision of the Board of Appeals is reversed.

REVERSED.

MARTIN, *J.* (dissenting):

I disagree with the majority because I believe that one skilled in this art who wanted to manufacture a hollow generally conical-shaped article having a tapered side by means of the axial displacement procedure, would know that a tapered blank should be used and that the path of the roller should not be parallel to the spindle. I find nothing else in this application upon which patentability can be predicated.

KIRKPATRICK, *J.* (dissenting):

I cannot agree that the appellant's contribution is anything beyond what could be expected of a person having ordinary skill in the art. The Lindgren and British references fully disclose the metal spinning technique used by the appellant to make a frusto-conical article from a flat disk. As described in the majority opinion, a round metal blank is first clamped on the top of a spindle having a frusto-conical shape. As the spindle and blank are rotated, a roller pushes the metal down along the sides of the spindle to form a hollow frusto-cone. If the finished article is to have tapered sides, it is hard for me to think of anything more obvious than to use a tapered disk to start with—the first of the two steps which the appellant says constitute the advance over the prior art made by his invention.[1] Being provided with a tapered disk to work on, the necessity of moving the roller in a path not parallel to the sides of the spindle (the second step claimed by the appellant as novel) would seem to be equally obvious. In fact, if the taper of the disk is to be carried over into the finished article, it could not be done in any other way. In short, I cannot find anything unobvious about the features which the appellant asserts constitute an advance over the prior art.

[1] "The change over the references is a simple one, the change being in the use of the tapered blank and in a non-parallel roller path • • •"

The record supports the majority's finding that what the appellant did is new, and its utility has not been challenged. However, novelty and usefulness do not add up to patentability. The majority opinion speaks of the appellant's "solution to the problem of making a tapered wall frusto-cone." It is true that in a doubtful case the fact that an invention solves a problem in the art may sometimes be taken as evidence that it was not obvious, but that is only where there is evidence of an old and recognized need which the invention satisfies and which others have tried without success to supply. In the present case, if any such need existed, the record does not show it, nor does it appear that anyone ever tried or wanted to do what the appellant did. So far as the record shows, the "problem" which the appellant is said to have solved was merely that of accomplishing, by a simple adaptation of known methods, something which he set out to do. The farmer who sets out to construct a fence around his ten-acre field has that kind of "problem," and he solves it when he completes the job. The fence and the way in which the farmer goes about building it will almost certainly differ from all other fences, but the fact that the desired result has been accomplished is no evidence that it was not perfectly obvious.

The majority, to fortify its conclusion, invokes the principle that a doubt as to patentability should be resolved in favor of the applicant. It is too late for me to question the existence of that rule, although I think it wrong to clothe an invention of admittedly doubtful validity with a strong presumption that the patent based on it is valid—a presumption which of itself, without more, puts the owner in a position to compel others to defend their use of it in a usually costly and always troublesome infringement suit. However, in the present case I feel that the invention before the court is so plainly an obvious one that there exists no doubt whatever which would call the rule referred to into play. Such doubt cannot be created by novelty and utility alone.

I would affirm the decision of the Board of Appeals.

U.S. Court of Customs and Patent Appeals

TAGE EMANUEL MORTSELL, DECEASED, SALA MASKINFABRIKS, A.B., ASSIGNEE *v.* ERRKI A. LAURILA, ASSIGNOR TO AKTIENGESELLSCHAFT FUR UNTERNEHMUNGER DER EISEN- UND STAHLINDUSTRIE.

No. 6758. Decided May 4, 1962.

[49 CCPA—; —F.2d—; 133 USPQ 380]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—REASONS OF APPEAL—UNCONTROVERTED FINDING—INTERFERENCE.

"The Board of Patent Interferences, after finding that Laurila had proven a date of conception prior to any date of invention provable by Mortsell, held Laurila diligent up to the filing date of his United States application in the Patent Office. Appellant having neither alleged as error nor controverted in his brief this finding of diligence on the part of the Board, that issue is not before us."

2. INTERFERENCE—QUESTIONS ANCILLARY TO PRIORITY—THIRD PARTY INVENTORSHIP NOT ANCILLARY.

"• • • we note that there is no evidence indicating an originality issue as between the parties, i.e., an issue of derivation. Clearly, the burden of establishing the existence of such an issue is on Mortsell. *Rider* v. *Griffith*, 33 CCPA 884, 154 F.2d 193, 69 USPQ 112. Viewed in this light, we can only conclude that appellant's questioning of Laurila's having 'made the invention which is the subject-matter of the counts in interference' is merely an attempt to raise in this appeal the inapposite issue of third party inventorship."

3. SAME—SAME—SAME.

"It is axiomatic that an interference is limited to a determination of priority and questions 'ancillary' thereto. Third party inventorship is not one of these questions. We have frequently held that any evidence or lack of evidence going to this subject is not pertinent to the issue of priority as between the parties in a two party interference."

APPEAL from the Patent Office. Interference No. 88,914.

AFFIRMED.

Eric Y. Munson for appellant.

Connolly and Hutz (*Werner H. Hutz*, of counsel) for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Patent Interferences awarding priority to Errki A. Laurila, the junior party in Interference No. 88,914.

The sole issue is whether Laurila sustained his burden of establishing by a preponderance of the evidence introduction of the conception of his invention into the United States prior to the effective filing date of Tage Emanuel Mortsell, the senior party.[1]

The subject-matter of this interference relates to devices which separate magnetic and non-magnetic particles from a mixture of such particles.[2] In view of the sole issue presented for our determination, the two counts of the interference sufficiently indicate the subject matter. They are:

1. A magnetic separator for separating magnetizable particles from unmagnetizable particles comprising a rotatable drum consisting of a rotatable disc, a rotatable annular cover member mounted coaxially with said disc in spaced relation thereto, said disc and said cover member being arranged to rotate independently of each other, said cover member being constructed of a dielectric material, a plurality of pole pieces mounted between said disc and said cover member, the space between said disc and said cover member being annularly uniform and having a predetermined minimum width.

2. In combination, a rotatable drum comprising an inner rotatable member and an outer rotatable cover member coaxial with said inner member, a plurality of radially extending magnetic pole pieces between said inner and outer members, and a cylinder rotatably mounted adjacent said drum, said cylinder being adapted to rotate at the same speed but in the opposite direction relative to said drum, said cylinder having means on the periphery thereof for removing magnetically held particles from said drum.

[1] [1]The Board of Patent Interferences, after finding that Laurila had proven a date of conception prior to any date of invention provable by Mortsell, held Laurila diligent up to the filing date of his United States application in the Patent Office. Appellant having neither alleged as error nor controverted in his brief this finding of diligence on the part of the Board, that issue is not before us.

[2] Laurila is involved in the interference on the basis of his Patent No. 2,711,249, issued June 21, 1955, on application Ser. No. 431,210, filed May 20, 1954. The patent is assigned to Aktiengesellschaft fur Unternehmungen der Eisen- und Stahlindustrie.

Mortsell, deceased, is involved on the basis of his application Ser. No. 500,963, filed April 12, 1955, and assigned to Sala Maskinfabriks Aktiebolag, of Sala, Sweden. Upon motion to shift the burden of proof, he was given the benefit of his application in Sweden No. 3622/1954, filed April 15, 1954, and he thus became senior party.

The testimony on behalf of Laurila[3] comprises the testimony of Werner H. Hutz, a partner in the law firm of Connolly & Hutz which represents Laurila in this case, and Arthur A. Jacobs, a former employee of Connolly & Hutz, who prepared the Laurila application in its United States form. It appears from this testimony that Connolly & Hutz received, on or about March 12, 1954, a carbon copy of a letter dated March 9, 1954, from a German patent attorney, Dr. Louis, of Essen, Germany. Dr. Louis requested that a U.S. application be prepared from a seven page German language disclosure consisting of two pages of patent claims, seven pages of description, and four sheets of temporary drawings which were to accompany the original of Dr. Louis' letter.[4] Referring to certain remarks that appeared on the reverse side of this letter, Mr. Hutz testified:

Now, the remarks on the reverse side of this carbon copy are substantially as follows:

The present application should be filed as soon as possible in America without claiming a priority. The present application corresponds to applications previously filed in—then it [the letter] identifies a Swedish application filed December 16, 1952; a Finnish application filed February 23, 1953; and a German application filed June 29, 1953.

Dr. Louis' "remarks" continued by requesting: (1) a literal English translation of the German description and patent claims; (2) the prepared American application pages with an application disclosure, suitable for the United States; and (3) a prepared assignment to Aktiengesellschaft fur Unternehmungen der Eisen- und Stahlindustrie, Essen.

Mr. Hutz testified that upon receipt of this material, "the job of translating the German disclosure" was promptly assigned to his secretary, Miss Ilse Witt. There appears to be general agreement between the parties that Miss Witt's literal translation was "reasonably accurate." Miss Witt's translation was sent to Dr. Louis in Germany accompanied by a letter, the substance of which, Mr. Hutz testified, was in part:

• • • we acknowledged receipt of the assignment to prepare an application and that we had immediately prepared a word for word English translation of the German text of which we were sending him copies. We hope that within the next weeks the American application papers, along with an assignment, can be sent to you via boat mail. We assume that you will send us the final formal drawings. If you wish that they be prepared here, please let us know immediately.

It was at this time that Mr. Jacobs undertook the job of preparing the Laurila United States patent application primarily from Miss Witt's English translation. As to the manner in which this was done, Mr. Jacobs testified as follows:

• • • I made • • • pencil notations on the English translation • • • and rewrote the claims to correspond with claim terminology in U.S. patent practice in a manner which I considered would most effectively cover the invention disclosed in the specification and drawings.

I then handed the English translation • • • with my pencil notations thereon, to my secretary • • •. She then typed a ribbon and various carbon copies of the specification and claims as they would be filed in the U.S. Patent Office. • • • the specification and claims to be filed in the U.S. Patent Office, were mailed [on April 1, 1954] to Dr. Louis, together with an assignment which was

[3] Mortsell took no testimony, electing to rely solely on the filing date of his application in Sweden.

[4] Mr. Hutz testified that "It was the practice of Dr. Louis • • • to forward the carbon copy air mail and subsequently send us the original in the form of a confirmation copy that came by boat mail."

prepared for the signature of Mr. Laurila assigning the application to Aktiengesellschaft fur Unternehmungen der Eisen- und Stahlindustrie, Essen.

I also included, of course, a single signature oath, petition and power of attorney to be executed by the inventor at the time of executing the assignment.

To keep the chronological significance of these events before us, it was two weeks after this transmittal of the United States application papers to Dr. Louis, i.e., on April 15, 1954, that Mortsell filed his application in Sweden. Clearly, if the actions of the junior party up to April 1, 1954, do not amount to an introduction of a conception of his invention into the United States, the senior party, Mortsell will prevail, Laurila having taken no further action in the United States prior to April 15, 1954.[5]

Appellant attacks the sufficiency of Laurila's proof of introduction of a conception into the United States on two counts, namely, that there is no evidence that Laurila is the originator of the invention disclosed to Connolly & Hutz, and that the record does not show any corroboration of a conception in the United States prior to Laurila's constructive reduction to practice on May 20, 1954, by the filing of the United States application.

[2] As to appellant's first ground, we note that there is no evidence indicating an originality issue as between the parties, i.e., an issue of derivation. Clearly, the burden of establishing the existence of such an issue is on Mortsell. *Rider* v. *Griffith*, 33 CCPA 884, 154 F.2d 193, 69 USPQ 112. Viewed in this light, we can only conclude that appellant's questioning of Laurila's having "made the invention which is the subject matter of the counts in interference" is merely an attempt to raise in this appeal the inapposite issue of third party inventorship.

Appellant states in his brief:

The Senior party does not contend that the right of priority as between a Junior and Senior party can be decided upon the ground that the invention was made by a third party • • •.

In view of this statement, we do not understand why appellant has raised this point at all. [3] It is axiomatic that an interference is limited to a determination of priority and questions "ancillary" thereto. Third party inventorship is not one of these questions. We have frequently held that any evidence or lack of evidence going to this subject is not pertinent to the issue of priority as between the parties in a two party interference. *Sherman* v. *Hope, Jr.*, 34 CCPA 980, 161 F.2d 263, 73 USPQ 387; *Smith* v. *Kliesrath*, 28 CCPA 1293, 120 F.2d 1015, 50 USPQ 82, and cases cited therein, particularly at 28 CCPA 1297;[6] *Hess* v. *Dreyfuss*, 26 CCPA 1407, 104 F.2d 801, 42

[5] See footnote 1. We note for the sake of completeness that Laurila executed the U.S. application papers on May 3 and 5, 1954, and the assignment on May 5, 1954. The executed papers were then forwarded by Dr. Louis to Connolly & Hutz on May 11, 1954. Receipt of these papers was acknowledged by Connolly & Hutz on May 18, 1954. The Laurila application was forwarded to the Patent Office on May 19, 1954, and filed on May 20, 1954.

[6] We do not attempt to distinguish the instant case from that of *Brown, Jr.* v. *Barton*, 26 CCPA 880, 102 F.2d 193, 41 USPQ 99, where the court did consider the question of third party originality as it related to the junior party Barton and his attorneys Goldsborough and Greenberg and their draftsman. The question in that case involved a determination of when and by whom an element in one figure of the drawing was added. We merely note that in *Smith* v. *Kliesrath*, supra, an almost identical factual question was presented. The question there was when and by whom a drawing or sketch of one figure of the application drawing was presented to a draftsman. In the *Smith* case this court did not mention the *Brown, Jr.* case but instead quoted with approval the Board's satement that:

> • • • [sic] It is well settled in interference practice that rights of priority cannot be defeated by a showing that the subject matter was the invention of some third party. The arguments made by appellant seem intended to eestablish some such situation.

We believe that the rule stated in *Smith* v. *Kliesrath*, in the cases cited therein, and in the *Hess* and *Sherman* cases, supra, is the proper rule of law.

USPQ 142. Our decision on this point makes it unnecessary to consider the pertinence of the foreign-filed applications, mentioned in Laurila's application oath but not introduced in evidence before the Board of Interferences.

Appellant's second argument, that which concerns the alleged lack of "corroboration" of conception in the United States, assuming Laurila to be the inventor, proceeds as follows: (1) Laurila, as the junior party to this interference, had the burden of proving priority of invention by a preponderance of the evidence; (2) in Laurila's case this involves proving that the knowledge of his conceived invention must either have been brought to the United States or communicated to someone in the United States prior to April 15, 1954; (3) communication of the conception to someone in the United States may amount to corroboration if:

> • • • the person to whom the invention has been communicated was in such full and complete possession of all details thereof and understood it, so that it could be reduced to practice by a person possessed of ordinary technical skill.

(4) since there is no proof that either Miss Witt or Mr. Jacobs understood the invention disclosure they dealt with, the Board was in error in holding that "Laurila should be accorded a date of conception at least as early as the completion of editing of the English translation by Jacobs."

The Board stated, concerning appellant's general corroboration argument:

> The requirement for corroboration by independent evidence of the testimony of one of the parties to an interference does not extend to testimony of witnesses other than the parties themselves. The testimony of such other witnesses is subject only to the usual consideration to determine its probative value. Here there is nothing to cast suspicion on the testimony of either Hutz or Jacobs, *or on the documentary exhibits*. [Emphasis ours.]

Appellant admits that Miss Witt's translation was "reasonably accurate." From what the record discloses of Miss Witt's qualifications it would appear that this admission was not unfounded. No allegation is made, nor does the record show, that the alterations of this translation made by Mr. Jacobs amounted to anything more than placing it in proper idiomatic English and in proper form for the Patent Office. Subsequent to Mr. Jacobs' preparation of the Laurila application it does not appear that any further alterations were made thereto. The record further shows that after receipt of the Laurila application the Patent Office at no time made any objection to the sufficiency of this disclosure, nor the operativeness of the disclosed invention. The application as filed, except for an omnibus claim cancelled by Examiner's amendment, was passed to issue containing the very claims which are now the counts of this interference. We find such circumstances [7] irrefutably establish the existence in the United States, before April 15, 1954, of a complete written disclosure of an invention conceived by a person we must presume, for the purposes of this appeal, there being no contrary evidence, to be the appellant Laurila.

[7] It is not a thought new to this court that the existence and content of a document relied on to prove conception may be proved by circumstantial evidence. See *Levy* v. *Gould et al.*, 24 CCPA 910, 87 F.2d 524, 32 USPQ 397

The facet of appellant's second argument involving the understanding of the Laurila invention by Miss Witt and Mr. Jacobs is rendered moot by the above disposition of this second argument.[8]

For the above reasons the decision of the Patent Office Board of Interference is affirmed.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

U.S. Court of Customs and Patent Appeals

JOHNSON & JOHNSON
v.
VEON CHEMICAL CORPORATION

No. 6786. Decided May 4, 1962.

[49 CCPA—; 301 F.2d 952; 133 USPQ 395]

1. TRADEMARK—CONFUSING SIMILARITY—NON-DISTINCTIVE PORTION—"PERMACEL" AND "PERMA LINE."

Upon consideration of the similarities of the marks "PERMACEL" and "PERMA LINE," *Held* that "The only common part of the two marks is the non-distinctive portion 'perma' while the other parts of the marks differ so in spelling, meaning, sound and appearance that the entire marks are not similar."

2. SAME—SAME—GOODS—LANHAM ACT, SECTION 2(d).

"Section 2(d) of the Lanham Act (15 U.S.C. 1025(d) requires that the confusion, mistake or deception of purchasers therein referred to must be that arising from applicant's use of its mark on its goods."

3. SAME—SAME—SAME—DISCRIMINATING TECHNICAL PURCHASERS—"PERMACEL" AND "PERMA LINE."

"We think the most closely competing goods of the respective parties are so different that when such goods are marked with the respective marks in issue, there is no likelihood of confusion or mistake or deception of purchasers. The fact that the product of applicant is a highly technical product, a 25-pound block of plastic which must be melted before it can be used, clearly distinguishes it from the pressure sensitive tapes to which opposer applies its mark. Applicant's product purchased and used as it is by discriminating technical purchasers and users only, indicates the goods are of such a widely diverse nature that we are unable to see where purchasers of applicant's goods would be likely to be confused, mistaken or deceived as to the origin of such goods."

4. SAME—SAME—DIFFERENCES IN MARKS AND GOODS.

Held that "* * * considering the specific differences in both the marks and goods of applicant and opposer, we find no likelihood of confusion or mistake or deception of purchasers."

APPEAL from the Patent Office. Opposition No. 38,854.

AFFIRMED.

Francis C. Browne, Mead, Browne, Schuyler and Beveridge (*William E. Schuyler, Jr., Andrew B. Beveridge and Norman St. Landau*, of counsel) for appellant.

Judah B. Felshin for appellee.

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[8] The instant case is distinguishable on its facts from those cases where the *original content* of invention disclosures, either written or unwritten, is in dispute. The opinion in *Eastman v. Houston*, 18 App. D.C. 135, 1901 C.D. 386, 95 O.G. 2064, is pertinent in this regard. In the *Eastman* case the court, after holding that the witnesses to Houston's "disclosure" of his invention lacked "any intelligent comprehension of the thing which was exhibited to them," stated:

> Of course, if it be the fact that the roller-holder, as it now stands, contains the invention, and if it were satisfactorily shown that it is now precisely in the same condition as it was at the time at which these witnesses claim to have seen it in the year 1894 or 1895, it might be assumed that there was sufficient disclosure.

We note that the court expressly avoided setting forth any inflexible rule when it stated further:

> Disclosure, in the sense of the patent law, must be made, *ordinarily* to persons competent to understand and appreciate the alleged invention. [Emphasis ours.]

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

Appellant, as owner of numerous registrations of its mark "PERMACEL,"[1] opposed registration of appellee-applicant's mark "PERMA LINE," application Serial Number 51,833, filed May 16, 1958, for a "Thermoplastic Road Marking Compound." The Trademark Trial and Appeal Board, in dismissing the opposition, concluded "that the differences between the marks are sufficient to obviate any reasonable likelihood of confusion or mistake or deception of purchasers." Opposer has appealed.

We shall first consider the similarities of the two marks, PERMACEL and PERMA LINE. We agree with appellant as stated in its brief that:

> While it is well settled that marks cannot be dissected for purposes of comparison, but must be considered in their entireties [*Montgomery Ward & Co., Inc. v. Spiegel, Inc.*, 30 CCPA (Patents) 721, 56 USPQ 185; *Miles Laboratories, Inc. v. Foley & Co.*, 32 CCPA (Patents) 714, 63 USPQ 64], it is also well settled that this court, in considering the significance of the registered marks in their entireties, can consider the respective portions thereof, including descriptive or disclaimed portions, to determine the dominant part of each of the marks, *West Disinfecting Co. v. Lan-O-Sheen Co.*, supra. * * *

A visual comparison of the two marks indicates that the only similarity or common part is the prefix "perma." The Trademark Trial and Appeal Board found that "this feature possesses an obvious connotation of permanence which is a desirable characteristic of the goods of both parties" and held:

> * * * Considering the nature of this term, it is concluded that the differences between the marks are sufficient to obviate any reasonable likelihood of confusion or mistake or deception of purchasers.

Appellant has attempted to show that the "perma" in PERMACEL has no such connotation, as shown in the record by the testimony of witness Hickok:

> Q134. What is Perma, that part of your mark, what does that indicate to you? A. Nothing. It's just part of Permacel trademark, to me.
>
> Q135. It wouldn't have anything to do with the word "permanent," as far as you know? A. No.

This testimony of appellant's witness Hickok, the "Product Director of Permacel," taken together with the third party registrations of record indicates that the prefix "perma" alone has very little distinctiveness as an indicator of source or origin of appellant's goods.

[1] The only common part of the two marks is the non-distinctive portion "perma" while the other parts of the marks differ so in spelling, meaning, sound and appearance that the entire marks are not similar.

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[1] Reg. No. 388,238, issued June 17, 1941 to a predecessor for pressure-sensitive adhesive tapes.
Reg. No. 433,551, issued Oct. 21, 1947 to a predecessor for adhesive cements in liquid and solid form.
Reg. No. 511,583, issued June 28, 1949 to a predecessor for heat-sealing tape.
Reg. No. 535,567, issued Jan. 2, 1951 to a predecessor for adhesive tape dispensers.
Reg. No. 588,607, issued April 20, 1954 to a predecessor for tack cloth cut to size for collecting dirt and dust prior to finishing or refinishing the surfaces of automobiles, furniture, and the like and for cleaning and polishing purposes.
Reg. No. 596,535, issued Oct. 12, 1954 to a predecessor; and Reg. No. 609,362, issued July 26, 1955 to a predecessor for abrasives and abrasive coated fabrics including sandpaper.
Reg. No. 597,932, issued Nov. 9, 1954 to a predecessor; and Reg. No. 625,429, issued April 17, 1956 to a predecessor for publications issued at irregular intervals.
Reg. No. 633,833, issued Sept. 4, 1956 to a predecessor for steel wool pads.
Reg. No. 639,274, issued Jan. 1, 1957 to a predecessor for electrical insulation.
Reg. No. 642,428, issued March 5, 1957 to a predecessor for pre-paint cleaners, wax, silicone, and oil removers and degreasing preparations.

We do not, however, rest the present decision on the foregoing analysis alone. [2] Section 2(d) of the Lanham Act (15 U.S.C. 1052(d)) requires that the confusion, mistake or deception of purchasers therein referred to must be that arising from applicant's use of its mark on its goods. Here the goods of applicant on which its mark "PERMA LINE" is used are goods of a highly technical nature which are marketed through municipal engineers and traffic officials, by contract, and not over the counter, and usually applied by contractors using special equipment supplied by applicant.

Applicant's witness Lipkins described as follows the product on which the mark "PERMA LINE" is used:

Q5. What is the business of Veon Chemical Corporation? A. To manufacture and sell a thermoplastic traffic marking material.

Q6. Do you also do the actual marking? A. We do not do the installation work. The installation work is done by private contractors, who are agents of ours, who sell to municipalities, whether it be city, state, county. Then the installation is done by these people after they have bought the necessary equipment to install this material.

Q7. What does this equipment consist of? A. It consists of a master kettle, No. 1, which melts the material, the hardened material, to a liquid, brought to a temperature of 400 degrees Fahrenheit. The material is then drained out from the master kettle into an applicating machine, which applies the material to the pavement.

Q8. Under what mark do you sell this material? A. Under the name "Perma-Line."

Q.9 Do you also sell the machines? A. We sell the master kettle to the distributor. We retain possession, however, loan the applicating machine to each one of the distributors.

Q10. In what form does this Veon come, or in what form is it sold? A. It comes in a block, a 25-pound block, which is actually of no value to anybody until it is melted down and brought up to the temperature, and then applied to the pavement.

Q11. These distributors who install, or who apply the marks with that equipment, is that done by contract, or, how is that done, with their customers? A. It is done by sale to the municipality, and then the application to the pavement is done by the contractor.

Q12. And your Perma-Line material is never sold over the counter or by the piece to—— A. No, it cannot be. Because Perma-Line material is of no value whatsoever unless it is melted down and brought up to temperature, which is 400 degrees Fahrenheit.

The goods of opposer most nearly like the goods of applicant and on which it uses its mark "PERMACEL" are, "Pressure-Sensitive Adhesive Tapes," which may be used as a traffic marking material of a somewhat temporary or transient nature.

[3] We think the most closely competing goods of the respective parties are so different that when such goods are marked with the respective marks in issue, there is no likelihood of confusion or mistake or deception of purchasers. The fact that the product of applicant is a highly technical product, a 25-pound block of plastic which must be melted before it can be used, clearly distinguishes it from the pressure sensitive tapes to which opposer applies its mark. Applicant's product purchased and used as it is by discriminating technical purchasers and users only, indicates the goods are of such a widely diverse nature that we are unable to see where purchasers of applicant's goods would be likely to be confused, mistaken or deceived as to the origin of such goods.

As was stated in *L. Nachman & Son, Inc.* v. *E. Lasner, Inc.*, 46 CCPA 780, 263 F.2d 342, 120 USPQ 479,

In cases such as the instant one, where there are specific differences in both the marks and the goods involved, all the differences must be taken into consideration. *In re Malvina D. Myers, etc.*, 40 CCPA 747, 201 F.2d 379, 96 USPQ 238; *Princess Pat, Ltd.* v. *Tursi*, 43 CCPA 795, 230 F.2d 440, 109 USPQ 45.

[4] Thus, considering the specific differences in both the marks and goods of applicant and opposer, we find no likelihood of confusion or mistake or deception of purchasers.

Appellant contends that applicant's mark "PERMA LINE" differs from appellant's mark only by the use of the word "line" in place of the syllable "cel" and since "line" is descriptive of applicant's product, that such a difference cannot be relied upon to obviate confusion or mistake or deception of purchasers arising from the common use of what appellant terms the "distinctive" portion of the marks. It seems to us this argument is based on two unsupported premises. First, that applicant's product is a "line." As previously indicated, applicant's product is a 25-pound block of thermoplastic material, which when melted may be so applied as to form a line. We can find no definition of the word "line" which supports appellant's first premise. Second, that the first syllable of both marks, "Perma" is the distinctive portion of the mark. We have previously explained our reasons for disagreeing with this premise.

The decision of the Board is affirmed.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,283,871, E. F. Norelius, Bearing; **2,667,388**, F. A. Schick, Bearing and seal assembly, **filed** May 4, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/640–TC, *Allis-Chalmers Manufacturing Company* v. *Westrac Company*.

2,429,828, F. S. Lapeyre et al., Shrimp peeler; **2,537,355**, same, Machine for peeling shrimp; **2,574,044**, same, Shrimp peeling machine, **filed** Apr. 30, 1962, D.C., Alaska (Anchorage), Doc. A–32/62, *The Peelers Company* v. *King Crab, Inc.*

2,537,355. (See 2,429,828.)

2,563,794, Rickes and Wood, Vitamin B_{12}; **2,703,302**, same, Vitamin B_{12}-active composition and process of preparing same, **filed** Dec. 1, 1961, D.C., S.D.N.Y., Doc. 61/4251, *Merck & Co., Inc.* v. *AFRO American Trading Corporation et al.* Stipulation and order discontinuing action and counterclaim. **Same, filed** Apr. 25, 1962, D.C.P.R. (San Juan), Doc. 187/62, *Merck & Co., Inc.* v. *Arroyo Pharmaceutical Corporation*.

2,574,044. (See 2,429,828.)

2,624,315, Weisser and Kahn, Fountain pens, **filed** May 7, 1962, Ct. Cls., Doc. 152/62, *David Kahn, Inc.* v. *The United States*.

2,630,521, I. M. Kirlin, Enclosed lamp receptacle with outlet box attached, **filed** May 18, 1962, D.C., E.D. Mich. (Detroit), Doc. 22592, *The Kirlin Company* v. *Wakefield Corporation*.

2,649,136, C. Eames, Furniture shock mount constructions; **2,893,469**, same, Nesting chair, **filed** Oct. 7, 1960, D.C., S.D.N.Y., Doc. 60/3907, *Cole Steel Equipment Co., Inc.* v. *Herman Miller, Inc.* Stipulation and order dismissing action with prejudice May 11, 1962.

2,657,618, W. Eisbein, Developing apparatus, **filed** Sept. 1, 1961, C.C.A., 7th Cir., Doc. 13295, *Copease Manufacturing Co., Inc.* v. *American Photocopy Equipment Company et al.* Paragraphs 3 and 5 of decree of District Court holding patent invalid reversed and cause remanded Dec. 26, 1961. Petition for rehearing denied Feb. 23, 1962. **Same, filed** same, Doc. 13296, *Copease Manufacturing Co., Inc.* v. *Poray, Inc.* Paragraph 2 of judgment of District Court as to right of plaintiff to sue reversed as to acts occurring before Nov. 16, 1954; decree of District Court in all other respects affirmed; cause remanded Dec. 26, 1961. Petition for rehearing denied Feb. 23, 1962.

2,667,388. (See 2,283,871.)

2,703,302. (See 2,563,794.)

2,703,909, D. R. Harwin et al., Apparatus and method for producing sponge carpet underlay; **2,740,739**, same, Carpet underlay, **filed** Sept. 12, 1956, D.C., S.D. Calif. (Los Angeles), Doc. 20438–T, *National Sponge Cushion Co., Inc.* v. *Rubber Corporation of California et al.*

2,713,683, L. L. Krieger, Brassieres; **3,002,516**, R. C. Cole, Brassiere; **Des. 185,240**, C. M. Sachs, same, **filed** May 14, 1962, D.C., S.D. Ala. (Mobile), Doc. 2814, *International Latex Corporation* v. *Biflex Marion, Inc.*

2,740,739. (See 2,703,909.)

2,763,758, F. Kohler, Arc suppresser for dielectric heating equipment; **2,896,055**, same, **filed** Jan. 25, 1960, D.C., S.D.N.Y., Doc. 60/333, *Fred Kohler* v. *Guild Electronics, Inc.* Order of discontinuance May 14, 1962. **Same, filed** same, Doc. 60/332, *Fred Kohler* v. *Cosmos Electronic Machine Corporation*. Decree as above.

2,777,272 (included by amendment June 16, 1961), Smith and Baggs, Under-tree mower and harvester; **2,974,735**, same, Earth banking apparatus, **filed** May 8, 1961, D.C., S.D. Fla. (Jacksonville), Doc. 4691–J, *B & S Manufacturing Co.* v. *Hester Plow Co. et al.* Consent decree (notice May 17, 1962). **Same, filed** same, Doc. 4690–J, *Dillard Tractor Co., Inc. et al.* v. *Hester Plow Co. et al.* Decree as above.

2,796,958, E. M. Hill, Mesh structure for cribs; **2,804,227**, E. T. Elfgren, Wire container structure, **filed** Mar. 12, 1959, D.C. Nebr. (Omaha), Doc. 0787, *Speedy Manufacturing Company* v. *Irrigation Pump Company*. Amended complaint dismissed May 18, 1962.

2,804,227. (See 2,796,958.)

2,809,194, F. C. Novello, Thiadiazine type natriuretic agents, **filed** May 18, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62–C–546, *Merck & Company, Inc.* v. *GYMA Laboratories of America, Inc.*

2,816,328, Carmichael and Hampton, Silver coiler, **filed** Mar. 1, 1961, D.C., N.D. Ga. (Atlanta), Doc. 7518, *McDonough Power Equipment, Inc.* v. *Southern States Equipment Corporation*. Patent held valid and infringed by plaintiff Mar. 27, 1962.

2,828,657, A. J. Fromberg, Tubeless tire repair plug applicator; **2,828,791**, same, Plug, **filed** May 5, 1961, D.C., N.D. Tex. (Dallas), Doc. 8791, *Fromberg, Inc.* v. *Jack W. Thornhill et al.*

2,828,791. (See 2,828,657.)

2,828,791(a), A. J. Fromberg, Plug, **filed** June 6, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/758-TC, *Fromberg, Inc.* v. *Gross Manufacturing Company.*

2,867,767, McGillem and Williams, Signal detectors, **filed** May 22, 1962, D.C., S.D. Ind. (Indianapolis), Doc. 62-C-199, *Gerveice C. Hopkins* v. *City of Greenwood.*

2,893,469. (See 2,649,130.)

2,896,055. (See 2,763,758.)

2,896,938, B. Walker, Vehicle suspension device; **2,912,235**, same, Automatic auxiliary support for a vehicle, **filed** May 4, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c949, *Monroe Auto Equipment Company* v. *Armstrong Hydraulics, Inc.*

2,910,922, F. P. Horning, Compositions containing coal tar and a polysulfide polymer and pavement sealed therewith, **filed** Mar. 29, 1961, D.C., N.D. Calif. (San Francisco), Doc. 39817, *Allied Materials Corporation* v. *Superior Products Company.* Consent judgment; patent held infringed by defendant May 21, 1962.

2,912,235. (See 2,896,938.)

2,918,290, F. A. Werstein, Chuck and adapter for self-drilling expansion shells; **2,936,736**, same, Handle for percussive drill, **filed** Aug. 16, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1293, *Phillips Drill Company* v. *U.S. Expansion Bolt Company.* Dismissed by stipulation without prejudice Nov. 8, 1961.

2,919,990, H. G. Podlerak et al., Method of continuously producing packaged units, **filed** May 2, 1962, D.C., W.D. Wis. (Madison), Doc. 3555, *National Dairy Products Corporation* v. *The Borden Company et al.*

2,936,736. (See 2,918,290.)

2,971,256, H. Leflon, Fasteners for conveyor belts and the like, **filed** May 22, 1962, D.C., S.D. W. Va. (Huntington), Doc. 1128, *Henri Leflon* v. *Logan Mine Supply, Inc.*

2,974,735. (See 2,777,272.)

2,975,462, Yonkers and Lathrop, Apparatus for applying detergent to rugs and the like; **2,976,112**, same; **2,976,559**, same, **filed** Mar. 29, 1961, D.C., E.D. Wis. (Milwaukee), Doc. 61-C-88, *Bissell, Inc.* v. *E. R. Wagner Manufacturing Company et al.* Patent No. 2,975,462 held valid and infringed and defendants enjoined; Patent No. 2,976,112 withdrawn from suit by plaintiff; Patent No. 2,976,559 held invalid; if valid, would be infringed by defendant May 8, 1962.

2,976,112. (See 2,975,462.)

2,976,559. (See 2,975,462.)

2,991,592, M. W. Raven, Metal siding with integral nailing tabs, **filed** May 21, 1962, D.C., S.D. Ill. (Springfield), Doc. 3138, *Lyf-Alum, Inc.* v. *The Weather-Proof Company.*

3,002,316. (See 2,713,683.)

3,025,398, W. F. Dameron, Method and apparatus for determining depth of well samples, **filed** May 7, 1962, D.C., W.D. Tex. (Pecos), Doc. 3546, *Core Laboratories, Inc.* v. *Darrell W. Smith Company.*

3,029,503, E. S. Meyer, Seal installer and method of repairing, **filed** May 17, 1962, D.C.N.J. (Newark), Doc. 403/62, *Tool Aid Manufacturing Co., Inc.* v. *Edward S. Meyer, doing business as R.A.R. Manufacturing Company.*

3,032,181, Hutter and Stricker, Masking sheet material, **filed** May 2, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c921, *Daubert Chemical Company* v. *Dan Hart et al.*

Re. 23,849 (of 2,437,015), W. Baltz, Suspended horse, **filed** May 23, 1962, D.C., E.D. Okla. (Muskogee), Doc. 5161, *William Baltz et al.* v. *White Stores, Inc.*

Des. 182,759, B. Berger, Bathroom cabinet, **filed** Sept. 29, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1772, *National Steel Cabinet Co.* v. *Monarch Metal Products Corporation.* Stipulation and consent decree; patent held valid and infringed; defendant enjoined; count 2 of complaint as amended dismissed May 18, 1962.

Des. 185,240. (See 2,713,683.)

REISSUES

JULY 31, 1962

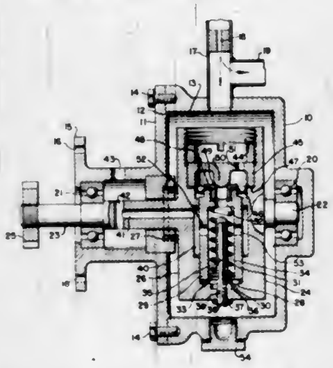
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,210
PRECISION PNEUMATIC SPEED SENSING GOVERNOR

John K. Jackson, Torrance, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Original No. 2,858,839, dated Nov. 4, 1958, Ser. No. 391,099, Nov. 9, 1953. Application for reissue Oct. 25, 1960, Ser. No. 64,973

26 Claims. (Cl. 137—56)



1. In a speed responsive pneumatic governor, a stationary casing having a fluid inlet, a rotor in said casing, a centrifugally responsive member movably positioned in said rotor, a valve communicating with said inlet and having a pair of valve elements adapted to be in open or closed position, one of said valve elements being carried by said rotor, the other of said valve elements being carried by said member, a vent communicating with said valve and a region of lower pressure than that at said inlet, a diaphragm responsive to fluid pressure in said casing and interconnecting said rotor and said member in sealed relationship to each other to prevent fluid leakage therebetween, said diaphragm responsive to a differential between fluid pressures in said inlet and said vent and means tending to resist centrifugal response of said member in said rotor and to maintain said valve elements in a predetermined position relative to each other, said valve disposed to change a pressure differential across said diaphragm in response to a speed increase of said rotor, said change in said pressure differential effective in a direction to assist said last mentioned means.

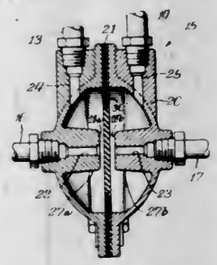
25,211
SAFETY VALVE

Hans W. Fellberg, Park Ridge, Ill., assignor, by mesne assignments, of one-half each to Louis F. Guenther and Wallace F. Mitchell, doing business as Guenther-Mitchell Engineering Company

Original No. 2,992,652, dated July 18, 1961, Ser. No. 620,162, Nov. 1, 1956. Application for reissue Oct. 26, 1961, Ser. No. 148,797

9 Claims. (Cl. 137—118)

8. A safety valve for passing air from a source of pressurized air to an air actuated device and for stopping the flow of air to said device in the event of air leakage therefrom, said valve comprising a casing having opposed wall portions defining an air tight enclosure, a resilient, flexible diaphragm, means including at least a portion of said casing clampingly engaging the peripheral portion of said diaphragm and supporting the latter normally in generally planar position for dividing said enclosure into two compartments, and a rigid annular member coplanar with said diaphragm embedded in the portion of said diaphragm which is engaged by said clamping means and in the portion immediately inwardly thereof, said diaphragm having a section of reduced wall thickness in the portion in which said annular member is embedded,



an outlet opening leading from one of said compartments and through the corresponding wall, connectible to said air actuated device, a seat in said one compartment surrounding the outlet opening, an inlet opening in said compartment connectible to said source, said diaphragm having a seating surface arranged to move toward and against said outlet opening to close such outlet opening when the pressure within said one compartment falls below the pressure in the other compartment by a predetermined value.

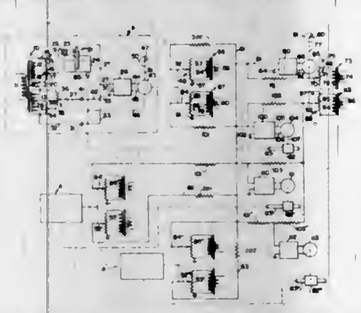
25,212
CONTROL APPARATUS

John D. Kling, South Lincoln, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Original No. 2,817,351, dated Dec. 24, 1957, Ser. No. 395,650, Nov. 16, 1953. Application for reissue June 4, 1959, Ser. No. 818,239

17 Claims. (Cl. 137—98)

(Filed under Rule 47(b) and 35 U.S.C. 118)



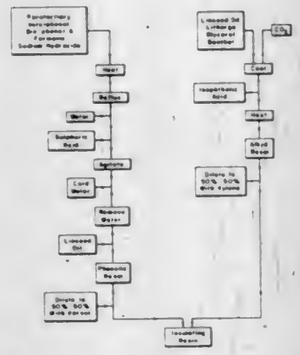
12. Means for regulating fluid flow from a plurality of simultaneously discharging tanks each having an outlet for fluid flow therefrom, comprising means detecting the fluid level in each of several tanks and creating a fluid level signal for each tank, means creating a reference signal which is a function of the fluid levels in selected tanks, means comparing said fluid level signals with said

reference signal and means responsive to any difference between said fluid level signals and said reference signal for adjusting the fluid flow from the respective tank in accordance with said difference.

25,213
HEAT RESISTANT ELECTRICAL INSULATING VARNISH

Robert H. Runk and Leonard E. Edelman, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Original No. 2,977,333, dated Mar. 28, 1961, Ser. No. 733,697, May 7, 1958. Application for reissue Aug. 31, 1961, Ser. No. 136,979
3 Claims. (Cl. 260—20)

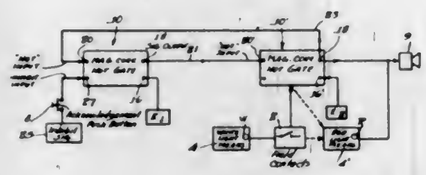


1. A high temperature electrical insulating varnish composition comprising in admixture (A) from 25% to 75% by weight of an alkyd resin derived by admixing and heating to a temperature in the range of 200° C. to 240° C. (1) at least one dibasic acid selected from the group consisting of isophthalic acid, terephthalic acid, and methyl esters of terephthalic acid, with (2) an aliphatic polyhydric alcohol and (3) a drying oil, said reactants being employed in such proportions that the drying oil constitutes 40% to 55% by weight of the total weight of alkyd resin, and said alkyd resin being reacted to an acid number in the range of 4 to 15 and [(b)] (*B*) from 75% to 25% by weight of a phenol resin derived by admixing and heating to a temperature within the range of 70° C. to reflux (1) from 90 to 80 mol percent of paratertiary butyl phenol, (2) from 10 to 20 mol percent of diphenylol propane, and (3) from 1.5 to 2 mols of an aldehyde selected from the group consisting of formaldehyde and polymers of formaldehyde in the presence of from 0.2% to 5% based on the weight of the phenols, of an alkali metal hydroxide, the aqueous reaction product then being neutralized and rendered acidic with an acid to a pH in the range of 4 to 7, removing the water from the acidified reaction product by evacuation, heating and maintaining the product at a temperature of 135° C. to 140° C. until a ball and ring softening temperature of 100° C. is obtained, and then admixing maleinized linseed oil therwith in such proportion that there is [25 gallons to 40 gallons] *12 gallons to 25 gallons* of maleinized linseed oil per 100 pounds of reaction product, said maleinized linseed oil being the reaction product of 100 parts of linseed oil and from 3 to 8 parts of maleic anhydride at a temperature of from 240° C. to 270° C. for not more than 4 hours until an adduct is produced, after which an aliphatic polyhydric alcohol is admixed in an amount to furnish from 1 to 1.1 hydroxyl groups for each maleic anhydride molecule present in the adduct, the polyhydric alcohol having no other reactive groups than the hydroxyl groups, and an esterifying reaction between the polyhydric alcohol and the maleic anhydride radicals in the adduct is effected by heating the mixture at a temperature up to 270° C. for at least one hour.

25,214
ANNUNCIATOR SYSTEM

Harold E. Tellefsen, Chicago, Richard L. White, Skokie, and Sergio Alessio, Chicago, Ill., assignors, by mesne assignments, to Isi, Incorporated, Los Angeles, Calif., a corporation of Delaware

Original No. 2,931,018, dated Mar. 29, 1960, Ser. No. 660,137, May 20, 1957. Application for reissue Sept. 19, 1960, Ser. No. 57,092
13 Claims. (Cl. 340—213)



1. An annunciator unit comprising: a first and a second magnetic core "not" gate circuit, each "not" gate circuit including a magnetic core unit with windings thereon, a main signal input terminal, a "not" control signal input terminal and a signal output terminal, main signal voltage means connected to said main signal input terminals of said first and second "not" gate circuits, said first and second magnetic "not" gate circuits each further including means connecting said various associated terminals to the associated core windings so that a signal output condition exists where appreciable signals from said signal voltage means appear at the associated signal output terminal if a no-signal condition exists at the associated control signal input terminal, and a no-signal output condition exists at the associated signal output terminal if an uninhibited signal condition exists at the associated "not" signal input terminal, means connecting said signal output terminal of said first "not" gate circuit to the "not" input terminal of said second "not" gate circuit, whereby the output condition of the first "not" gate circuit controls the output condition of said second "not" gate circuit, means connecting said signal output terminal of said second "not" gate circuit to the "not" input terminal of said first "not" gate circuit, whereby the output condition of said second "not" gate circuit controls the output condition of said first "not" gate circuit, field switch means connected to at least one of said "not" gate circuits for controlling the output condition thereof and responsive to the condition of a variable to be monitored, said field switch means having opposite positions indicating respectively a normal and an abnormal condition of the variable said "not" gate circuits having a given initial output condition when said field switch means is initially in a normal indicating position, visual alarm means for providing a normal, an initial abnormal, and an acknowledged abnormal indication, said visual alarm means being connected to said field switch means and to said signal output terminal of said second "not" gate circuit, said field switch means, when in its normal indicating position, operating said visual alarm means to its normal indicating condition, and, when in its abnormal indicating position, effecting the operation of said visual alarm means to its initial abnormal indicating condition, acknowledgement switch means for selectively providing a signal condition at the "not" input terminal of the "not" gate circuit which has a signal output condition whereby a no-signal output condition is produced thereat, said visual alarm means being responsive to said last-mentioned change in the output condition of said latter gate circuit and to the alarm indicating position of said field switch means by providing said acknowledged alarm indication, and said field switch means operating said last mentioned gate circuit to said signal output condition during the operation thereof to one of said positions.

PLANT PATENTS

GRANTED JULY 31, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,159
CAMELLIA PLANT

John H. Urabec, 2555 Hill Drive, Los Angeles, Calif.

Filed Apr. 4, 1961, Ser. No. 100,767
1 Claim. (Cl. 47—60)

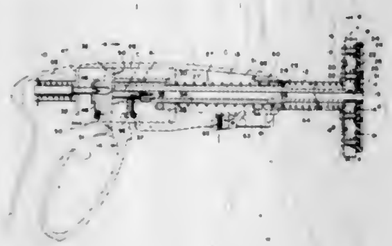
A new and distinct variety of camellia plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an exceptionally large flower size, attractive, loosely arranged flowers of incomplete double form with large and small inner petals and a distinctive and attractive Rhodamine Pink general color tonality of the flowers which tends to deepen in color with age.

PATENTS

GRANTED JULY 31, 1962

GENERAL AND MECHANICAL

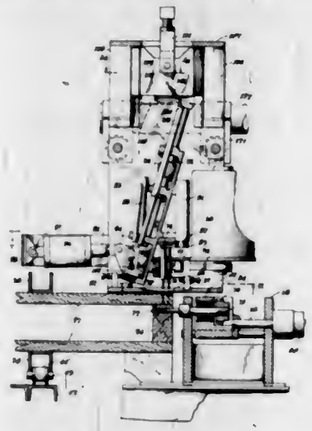
3,046,557
EXPLOSIVELY ACTUATED TOOL
Sidney H. Broughton and Virginius Robert Erickson, Portland, Oreg., assignors, by mesne assignments, to Omark Industries, Inc., a corporation of Oregon
Original application May 17, 1954, Ser. No. 430,288, now Patent No. 2,773,259, dated Dec. 11, 1956. Divided and this application Nov. 5, 1956, Ser. No. 628,945
7 Claims. (Cl. 1—44.5)



1. In a stud driving tool, a rear handle portion including a breech block comprising a yoke member having spaced apart yoke sections extending forwardly from said handle portion, a front barrel containing portion including a barrel block positioned between said yoke sections, a barrel mounted in and extending through said barrel block and between said yoke sections, a pivot pin connecting said yoke sections and said barrel block to provide for pivotal movement of said portions to expose the breech end of said barrel and interlock means normally preventing relative pivoting movement between said portions, parts of said portions being connected to have relative sliding movement in a direction longitudinally of said barrel away from each other, resilient means urging said parts toward each other to engage said interlock means, said interlock means being released by relative movement of said parts away from each other.

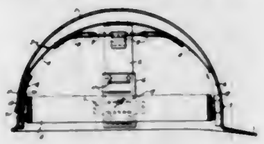
3,046,558
MACHINE FOR MANUFACTURING MERCHANDISE-SUPPORTING PALLETS OR PLATFORMS
Thomas D. Hadnagy, 17 Briar Lane, Roslyn Heights, N.Y.
Continuation of application Ser. No. 713,399, Feb. 5, 1958. This application Jan. 6, 1961, Ser. No. 81,669
3 Claims. (Cl. 1—302)

1. In a machine of the character described in combination, means for supporting a pair of members to be secured to each other in superposed relationship, means for positioning a securing element adjacent the surface of one of said members, means for forming an opening within the second of said members in line with the path of progress of said securing element into the body of such member, means for advancing said element into the body of said second member and along such path, means for maintaining such opening-forming means in position during that advance, whereby said element will engage said forming means and have part of its body obstructed and



diverted thereby from that path, and means for thereupon withdrawing such forming means.

3,046,559
PROTECTIVE HELMET LINING
Wilma W. Cox and Clara W. Cox, New York, N.Y., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 24, 1958, Ser. No. 744,240
11 Claims. (Cl. 2—3)



2. A helmet shell lining comprising straps radiating outward and downward from a central point and having upper inner portions and lower outer head-engaging portions, means connecting the upper portions of the straps together to form a head cradle, means adapted to attach the lower portions of the straps to the lower part of a helmet shell to space the top of the cradle from the top of the shell, a headband positioned below said head-engaging portions of the straps, means connecting the headband with the lower part of the cradle, and adjustable means connected with said head-engaging portions of the straps at points spaced above the headband for pulling said portions together to reduce the interior height of the cradle, said adjustable means being in addition to said first-mentioned connecting means.

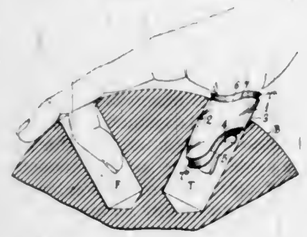
5. A helmet shell lining comprising a head cradle including straps, means adapted to connect them to a helmet shell, means for adjusting the height of the cradle, separate supporting members secured to the lower portions of the straps, a headband, and means for detachably connecting the headband to the cradle straps through said supporting members in locked relation at different distinct elevations in the cradle.

3,046,560
NECK SHIELD FOR PROTECTIVE HELMET
Joseph de Grazia, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed July 14, 1960, Ser. No. 42,952
5 Claims. (Cl. 2—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



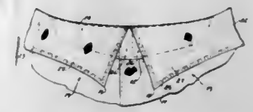
1. The combination with a protective helmet including a brim having a front visor portion, two opposite side portions and a back portion; of a flexible cover complementary to said helmet and receiving the same therein, a relatively stiff armored curtain secured to said cover and depending therefrom below at least said side and back portions of said brim, flexible anchor means secured within said helmet, said anchor means extending across at least said back portion of said brim and upwardly over said helmet beneath said cover, said anchor means having a tip secured to said cover a substantial distance above said back portion of said brim whereby to provide a substantially wide cover portion below said connection which is free to move upwardly of said helmet with said curtain.

3,046,561
BOWLER'S PROTECTIVE THUMB RING
Anthony J. Marinese, Buffalo, N.Y. (505 Maple View Road, Cheektowaga 25, N.Y.), and Carl A. Oddo, Buffalo, N.Y. (58 Cloverdale Road, Cheektowaga 25, N.Y.)
Filed Jan. 15, 1960, Ser. No. 2,664
3 Claims. (Cl. 2—21)



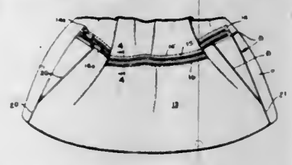
1. A bowler's protective thumb ring to fit upon the thumb and comprising an outer member of generally cylindrical configuration and of stable form having a relatively long semicircular wall section of a length to overlie the inner side of the thumb for substantially its full length and longitudinally curved to conform to the curvature of the thumb and a diametrically opposed semicircular short wall section to overlie the outer side of the thumb above the knuckle and an inner member composed of resilient cushioning material conforming substantially in shape and dimension to the outer member and secured thereto, the inner member projecting above and below the upper and lower edges of the outer member, and the outer member being diametrically proportioned to have a free and easy fit within the usual thumb opening of a bowling ball with its long wall section adapted for frictional engagement under the pressure of the thumb with the wall of said thumb opening.

3,046,562
SHIRT COLLAR
Anthony I. Bellanti, 2084 N. Summit Ave., Milwaukee 2, Wis.
Filed June 23, 1958, Ser. No. 743,669
1 Claim. (Cl. 2—132)



In a shirt collar formed of cloth and having a neck band and a lapel with the lapel being folded over the neck band to form a crease at the juncture of the neck band with the lapel, the lapel being widened at its ends to form a decorative corner; a lining attached to the cloth of the collar by stitching along the edges of the collar and being creased in conformance with the crease in the cloth of the collar, said lining having a slit formed along its crease at both ends of the collar; a pair of stiffener members adapted to be inserted through the slits to be disposed between said lining and the cloth of the collar with one stiffener member being located at each end of the collar, each of said stiffener members comprising; a neck band portion conforming in height and shape to the configuration of the neck band of the collar and adapted to be located along the neck band of the collar between said lining and the collar cloth; and a lapel portion attached to said neck band portion along the central portion of their juncture, the end portions of the lapel and neck band portions being disconnected, with the lapel portion being folded downwardly along a crease formed at the juncture of said neck band portion with said lapel portion, the length of the juncture between the lapel and neck band portions being less than the length of the slit in the lining to facilitate the insertion and removal of the stiffener from the collar, said lapel portion having a widened end to form a corner in conformance with the configuration of the lapel corner and extending from the end of the collar rearwardly along the front of the collar to a point near the side of the collar.

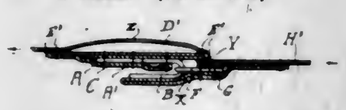
3,046,563
DETACHABLE GAME POCKET
Garlin J. Coleman, 549 Academy St., New York, N.Y.
Filed May 15, 1959, Ser. No. 813,523
1 Claim. (Cl. 2—251)



A detachable game pocket adapted to be secured to the inner side of an ordinary suit coat comprising pocket material folded upon itself and having rear and drop edges overlying one another, the said rear edge being adapted to extend throughout and be hung from the inner side of the suit coat, upper and lower parallel running slide fastening elements having their tapes joined together and to the rear edge of the pocket material, a cooperating slide fastener element for the upper slide fastening element being adapted to be attached to the inner side of the coat and another slide fastener element

adapted to cooperate with the lower slide fastener element secured to the drop edge of the pocket material, said pocket providing side openings through which the game can be extended into the pocket, slides provided on the respective cooperating slide fastener elements, one of which is operable to separate the pocket from the coat and the other of which being operable to separate the drop edge from the rear edge of the jocket material to spread open the pocket, said slide fastener elements being joined to the respective rear and drop edges of the pocket material by a single stitching operation extending across the full width of the pocket, said front pocket being cut at the upper end portions so as to provide the pocket with easy access entrance openings at the opposite sides of the game pocket, the lower end portions of the front pocket material being secured to the rear portion adjacent to the folded lower edge of the pocket material to prevent the game from slipping out of the pocket as it is suspended from the coat.

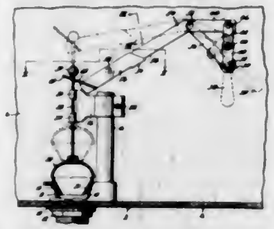
3,046,564
ARTICLE HAVING HOOK FASTENER TAPE STITCHED THEREON
Leo Roseman, 377 S. Harrison St., East Orange, N.J., and Richard J. Roseman, Union Township, Hunterdon County, N.J. (R.D. 2, Milford, N.J.)
Filed Oct. 28, 1960, Ser. No. 65,764
1 Claim. (Cl. 2—338)



A flexible needle-penetrable article having sewed thereon with one side thereof in abutting relation to one side of the article, a flexible needle-penetrable fastener strip having one longitudinal edge coincident with a longitudinal edge of the article and also having at least one hook fastener element secured thereto whose bill projects from and is in spaced relation to the other side of said fastener strip for connection to an eye fastener element secured on another article adjacent an edge thereof, and parallel lines of stitches running longitudinally of and penetrating all of the layers of said strip and said article at opposite sides of said hook fastener element, the width of the zone of said article between said lines of stitches being greater than the width of the zone of said fastener strip between said lines of stitches so as to form a slackness in the zone of said article between said lines of stitches, providing, when said hook of one article is connected to said eye of the other article upon exertion of tension on the connected articles in directions tendjng to separate them in their own planes, for transmission of strains incident to said tension to the point of engagement of said hook fastener element and said eye fastener element prior to the imposition of tension on said edges of the first-mentioned article and the fastener strip to thereby prevent said edges of the hook-bearing article from being pulled upwardly and away from the edge of the eye-bearing article.

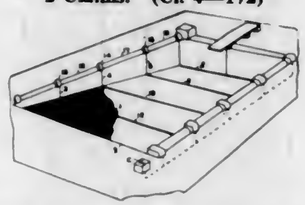
3,046,565
TOILET FLUSH VALVE
Cecil H. Taylor, 1508 High Grove Road, Grandview, Mo.
Filed Mar. 29, 1961, Ser. No. 99,238
2 Claims. (Cl. 4—67)

1. A toilet flush valve comprising a valve body having an upwardly opening valve seat, a buoyant valve ball normally engaging in said seat and being elevatable to open said valve, a valve stem affixed to said valve ball and rising vertically therefrom, a guide member supported rigidly relative to said valve body and guiding said valve stem for limited vertical movement, a lift member supported for vertical movement adjacent said stem, means for elevating said lift member, a horizontally extending lift plate affixed to said lift member and having an aperture formed therethrough, said stem extending upwardly from said guide member through said aperture and engaging loosely therein, and an enlargement affixed to the upper end of said stem of sufficient size that it cannot pass through said aperture, whereby as said lift member is elevated, said lift plate will engage said enlargement and lift said stem and valve ball, said lift plate being



inclined from horizontal at all positions of said lift member, and wherein said means for elevating said lift member is so arranged that it moves said lift plate horizontally as it is elevated, in a direction toward the higher edge of said lift plate, said enlargement having sliding engagement with the upper surface of said plate and said aperture being elongated in the direction of horizontal movement of the plate whereby said movement will not cause interference between said plate and said stem, as a result of which said lift plate acts as a sliding wedge multiplying the lifting force applied thereby to said stem.

3,046,566
SWIMMING POOL PROTECTIVE MEANS
Simon A. Berman, 447 E. 45th St., Brooklyn, N.Y.
Filed Dec. 30, 1959, Ser. No. 862,827
2 Claims. (Cl. 4—172)



1. Protective means for a swiming pool comprising frame means fitting closely inside the interior sides of said swimming pool, said frame means comprising a series of straight members connected together, a net on said frame members, a plurality of spools around the edge of said swimming pool, a cable having one end connected to each of said spools, the other end of said cables being connected to said frame, a plurality of electric motors each connected to one of said spools to raise said net, the diameter and rate of cable takeup of each spool being proportional to the depth of said pool at the location of said respective spools whereby said net may be lifted to a substantially level position at the top of said pool, electrical control means connected to said motors to operate said motors in synchronism, and alarm means connected to said electrical control means to give warning when said motors are operated to raise said net.

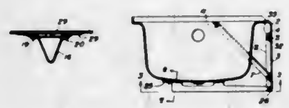
3,046,567
SHOWER BOARD
Selma S. Jackson, Rte. 2, Box 47, Marshall, Tex.
Filed Oct. 9, 1961, Ser. No. 143,668
2 Claims. (Cl. 4—185)

1. A shower board comprising an elongated substantially flat bottom, side walls and an end wall, said side walls and end wall being connected to an rising from the bottom, said end wall extending across one end of the bottom and being joined at its ends to complementary ends of said side walls, said side walls extending along side edges of the bottom from end-to-end thereof and having upper edges sloping downwardly relative to the plane of the bottom from said end wall, said bottom having a part located near said end wall and adapted to rest on an edge of a drainboard, said bottom having drainage openings between said part of the bottom and the end wall,



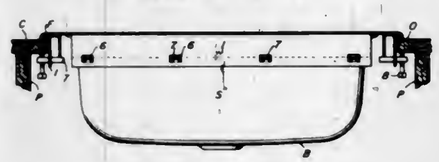
and an elongated stand disposed crosswise of and beneath the bottom, remote from said end wall, said stand including an elongated base adapted to rest on the drainboard and an elongated top portion disposed above and at an incline to said base and engaging flush against another part of the underside of the bottom for supporting the shower board with the bottom thereof disposed at an incline downwardly from said stand to provide a receptacle in which an infant is adapted to be supported for bathing.

3,046,568
BATH-TUB SUPPORT
Henry A. Holberson, Youngstown, Ohio, assignor to The Youngstown Sheet and Tube Company, Youngstown, Ohio, a corporation of Ohio
Filed Jan. 30, 1962, Ser. No. 169,741
5 Claims. (Cl. 4—186)



1. In combination with a bath-tub providing a sump and having a depending flange paralleling one of its edges, a decorative apron associated therewith, an elongated supporting element extending transversely beneath the tub comprising spaced outwardly projecting flanges engaging the bottom of the sump portion thereof, an end engaging the apron and a finger proximate the other end, a member fixed to the tub adjacent said other end of the element having an aperture removably receiving said finger, the first end of the element being secured to the apron remote from the sump, and means removably attaching an edge of th apron to said depending flange.

3,046,569
RIMLESS MOUNTING FOR SHEET STEEL ENAMELED SINKS, LAVATORIES AND THE LIKE
Henry A. Holberson, Youngstown, Ohio, assignor to The Youngstown Sheet and Tube Company, Youngstown, Ohio, a corporation of Ohio
Filed July 25, 1961, Ser. No. 126,544
5 Claims. (Cl. 4—187)



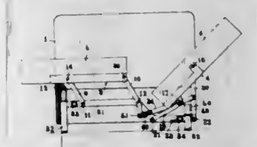
1. A sink for mounting in a counter or the like having a hole therein, said sink comprising a sheet steel vitreous enameled body formed to define a bowl receivable in the hole and an integral peripheral downturned flange adapted to overlie and engage the counter proximate the periphery of the hole, an elongated inverted U-channel-shaped member rigidly fixed to the under side of the flange between its edge and the bowl adapted to maintain the flange and its edge in spaced parallel flat planes, one leg of said member having an opening and the other leg providing a fulcrum, a clamp bar adapted to enter said opening and bear against said fulcrum, and adjustable means cooperative with the bar engageable with the under side of the counter operable to clamp the flange to the latter.

3,046,570
HINGE
Sherwood L. Young, Monson, Mass., assignor to American Radiator & Standard Sanitary Corporation, Holyoke, Mass., a corporation of Delaware
Filed July 16, 1959, Ser. No. 827,614
1 Claim. (Cl. 4—240)



A hinge for a toilet cover for use with a toilet bowl having a seat assembly comprising a toilet seat cover, a toilet seat, a pair of semi-rigid resilient plastic hinge members having countersunk fasteners securing said hinge members to the under side of said cover, one portion of each of said hinge members being an integral arm of the same semi-rigid plastic material extending downwardly at an angle away from said cover, a pivot connection to which said arm is pivotally connected and extending upwardly from said toilet bowl, a toilet seat pivotally connected to said pivot connection, each of said cover hinge members having a downwardly extending enlarged portion being adapted to lie in closely spaced relation to the seat when in closed position so that the same will engage said toilet seat when pressure is applied to said seat cover due to the resiliency of said semi-rigid plastic integral arm.

3,046,571
CONVERTIBLE SOFA-BED
Albert Ducrot, 75 Blvd. Malesherbes, Paris, France
Filed Sept. 20, 1960, Ser. No. 57,342
Claims priority, application France Sept. 22, 1959
2 Claims. (Cl. 5—41)



1. A convertible sofa-bed comprising a main frame, two independent spring-mattress elements adapted to receive the seat and back mattresses, two pairs of lateral links forming a parallel motion structure supporting the seat and causing by their rotation about their axes of pivotal mounting on said frame a movement of translation of said seat, another set of two pairs of lateral links supporting the back and pivoted on said frame at points located beneath the level of the pivotal mounting of said seat links and causing during their rotation about their pivot axes a tilting movement of said back, a pair of lateral rods for connecting the pair of rear links of said seat with the pair of rear links of said back, each lateral connecting rod being pivotally attached at one end through a slot engaged by a pin carried by a bent extension of the rear seat link and at the other end at an intermediate point on the rear back link, and stop means on said frame for limiting the displacements of said links in either direction.

3,046,572
BED
Charles Eames, Venice, Don Albinson, Culver City, and Peter J. Pearce, Los Angeles, Calif., assignors to Herman Miller Inc., Zeeland, Mich., a corporation of Michigan
Filed Jan. 14, 1960, Ser. No. 2,545
6 Claims. (Cl. 5—136)



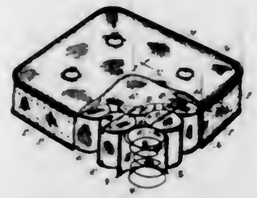
1. A bed movable from a flat position to a vertical position including a pair of supports spaced apart generally the width of said bed; a pair of pivot plates secured to the sides of said bed near one end thereof; said pivot plates secured to said supports whereby said bed pivots about an axis lying above said bed and spaced from said one end; a headboard secured to said one end of said bed and vertically movable between said supports; a horizontal hinge in said headboard whereby the top of said headboard folds toward said bed when said bed is moved to its vertical position; a first bar secured to the back of said top of said headboard; a pair of spaced, vertically positioned guide tracks receiving the ends of said first bar; a fixed second bar lying below said first bar and extending between said supports; a plurality of spaced, vertically extending coil springs secured at one of their ends to said first bar and anchored at their other ends to said fixed second bar; and said coil springs tensioned when said bed is in its flat position and contracting when said bed is moved toward its vertical position as said top of said headboard moves downwardly toward a generally parallel relationship with said bed.

3,046,573
REVERSIBLE AUTOMOBILE ARM REST PILLOW
Robert E. Davis, Sr., and Robert E. Davis, Jr., both % Southland Sox Company, Fort Payne, Ala.
Filed Dec. 14, 1960, Ser. No. 75,840
1 Claim. (Cl. 5—337)



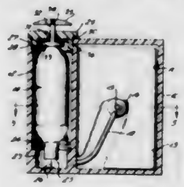
A pillow for use on a padded arm rest of an automobile door comprising a six-sided removable and reversible cushion comprised of a resilient material, all of said sides being quadrangular, two pairs of opposed sides being of substantially equal length and approximately two times as long in the longitudinal dimension of the pillow as the third pair of opposed sides in the transverse dimension of the pillow, the height of said cushion having a dimension intermediate the length of said two pairs of opposed sides and said third pair of opposed sides to provide alternate elongated quadrangular top and bottom surfaces for said cushion, a channel extending from end to end of said cushion along one of its longer sides connecting said alternate faces, said channel having a depth equal to about one-half of said third pair of opposed sides and a width lying within the limits of from about one-third to about one-sixth of the height of said cushion, said channel being disposed nearer one of said alternate faces of said cushion than to the other alternate face thereof, all of said sides and said channel being covered by fabric, said pillow adapted to be positioned with said channel removably embracing an arm rest with either alternate top and bottom surface disposed above the arm rest.

3,046,574
MATTRESS CONSTRUCTION
Victor Erenberg, Beverly Hills, and George J. Peck, Monterey Park, Calif., assignors to Superior Bedding Company, a corporation of Nevada
Filed Dec. 23, 1959, Ser. No. 861,494
11 Claims. (Cl. 5—351)



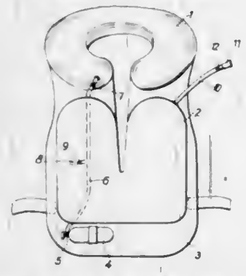
3. A mattress comprising: a spring core; a quilted sidewall extending around said core; insulator means on the upper and lower surfaces of said core; a pair of parallel, internally-padded sheaths secured to the inside of said sidewall to extend longitudinally therearound, each sheath being longitudinally secured to said sidewall along a line offset from an edge of said sidewall to leave a gap between said sidewall and said sheath, said sheaths being separated by the intermediate portion of the sidewall and said sidewall having padding therein both between and alongside of said sheaths, and each sheath having sufficient width to be foldable over an edge of said core to extend inwardly on one of the upper and lower surfaces of said core; means to fasten the innermost longitudinally extending edge of said sheath to the innermost portions of the end loops of the peripheral springs of said core; a layer of padding on each of the surfaces of said core over said insulator means and having folded longitudinal edges, at least, disposed in said gap between one of said sheaths and said sidewall and thus between the padding in the sheath and the padding in the sidewall; and ticking over the padding of the upper and lower surfaces of said core and peripherally secured to an edge of said sidewall.

3,046,575
PERSONAL INFLATABLE LIFE GUARD
Daniel O. Davis, Wilmington, and Landon G. McGill, St. Paul, N.C., assignors to Davis & McGill, Incorporated, St. Paul, N.C., a corporation of North Carolina
Filed Oct. 15, 1959, Ser. No. 846,673
5 Claims. (Cl. 9—316)



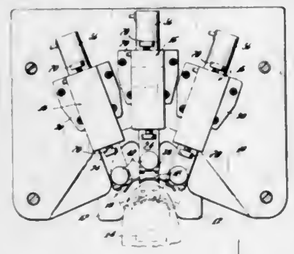
5. A personal inflatable life preserver comprising a relatively small housing, wall structure separating said housing into first and second compartments, said first compartment having an open end and a closure member therefor in which a cartridge of compressed gas is received, a firing pin fixed in said first compartment, means for moving the cartridge relative to said firing pin, means which become operable for hermetically sealing said first compartment about said closure member when the gas is released from the cartridge, said wall structure having a discharge opening in spaced relation to said open end, an inflatable container received within said second compartment, and means for connecting said inflatable container to said discharge opening to cause said container to be inflated when the cartridge is pierced.

3,046,576
LIFE JACKET
Jost Bernhardt, Holstentwiete 21–25, Hamburg, Altona, Germany
Filed Feb. 16, 1959, Ser. No. 793,425
4 Claims. (Cl. 9—338)



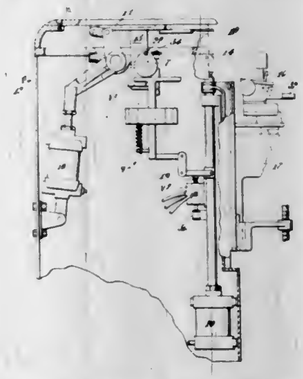
1. A life jacket having a support for connection with the upper body portion of a person and comprising: a first inflatable container in the form of a collar connected to said support and forming the neck portion of said life jacket for receiving and floating the neck of the wearer of said life jacket in the water, a second inflatable container connected to said support and forming the chest portion of said packet for floating the upper body portion of the wearer of said life jacket in the water, a compressed gas containing vessel likewise connected to said support for releasing gas under pressure to said inflatable containers, a first conduit leading from said vessel along a nearly straight line into said first inflatable container, and a second conduit branching off from said first conduit at such an angle that the flow resistance at the branching off point of said second conduit to the flow of compressed gas from said vessel into said second conduit during the initial inflating phase is higher than the flow resistance offered by said first conduit to the flow of compressed gas from said vessel into said first inflatable container during said first inflating phase.

3,046,577
SPREADER FOOT MOTION FOR TOE LASTING MACHINE
Jacob S. Kamborian, 133 Forest Ave., West Newton, Mass., and Heinz W. Stemmler, Roslindale, Mass.; said Stemmler assignor to said Kamborian
Filed June 7, 1960, Ser. No. 34,563
18 Claims. (Cl. 12—8.8)



1. A toe lasting machine comprising wiper means, a shoe support for supporting a last with a shoe upper and insole assembled thereon bottom side up adjacent the wiper means, a spreader foot positioned above the last, spreader foot driving means, means for actuating said drive means to drive the spreader foot downwardly in a rectilinear path towards the insole and to then move the spreader foot horizontally across the insole and wiper means to clamp the upper margin against the wiper means, means for lowering the shoe support to stretch the upper heightwise of the last, means for moving the wiper means against the upper margin to fold it against the insole, and means for actuating said driving means to raise the spreader foot vertically in a rectilinear path and then move it horizontally in a rectilinear path over the last.

3,046,578
CONTROL FOR LASTING MACHINE
Jacob S. Kamborian, West Newton, Mass. (% International Shoe Machine Corp., 1380 Soldiers Field Road, Brighton, Mass.), and Karl F. Vornberger, Somerville, Mass.; said Vornberger assignor to said Kamborian
Filed Mar. 8, 1960, Ser. No. 13,607
26 Claims. (Cl. 12—12.4)

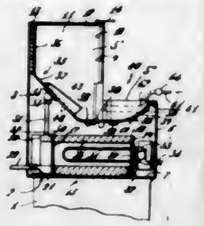


1. In a lasting machine, a shoe support and wipers, means mounting the shoe support and wipers for movement relative to each other, power operated means for effecting vertical movement of the shoe support, power operable means for effecting horizontal movement of the wipers, manually operable means for controlling said power operated means thereby to enable the wipers to be moved over the supported shoe and to enable the shoe to be pressed upwardly against the wipers, and separate control means operable, when the shoe has been pressed against the wipers by the manipulation of said manually operable means, to automatically lower the shoe support and move the wipers away from the shoe support.

3,046,579
APPARATUS FOR CONDITIONING SHOE FILLER COMPOSITIONS
Robert A. Spence, Lincoln, Mass., assignor to North American Chemical Company, Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 29, 1960, Ser. No. 25,668
4 Claims. (Cl. 12—18.2)

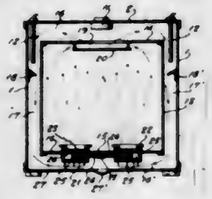
1. Apparatus for the continuous conditioning of shoe bottom filler compositions which are susceptible to softening by heat and moisture, comprising a conditioning chamber having an inlet for receiving a charge of non-conditioned shoe bottom filler composition and an outlet for discharging the same in conditioned form, means for generating a supply of steam vapor, at least one steam vapor chamber located within said conditioning chamber and interconnected with the supply of steam vapor for distributing the same in heat conductive relationship through the entire charge of said filler com-

position, and vent means disposed within said conditioning chamber and interconnected with said steam vapor



chamber to provide communication with atmospheric pressure.

3,046,580
MULLING CABINET
Balthasar Creter, Moerfelder Landstrasse 212, Frankfurt am Main, Germany
Filed Oct. 21, 1958, Ser. No. 768,626
4 Claims. (Cl. 12—59.7)



1. A mulling cabinet comprising inner and outer enclosures, said inner enclosure being positioned inside said outer enclosure and spaced therefrom along the top, bottom and sides, means securing said enclosures together and supporting said enclosures in spaced apart relationship thereby defining spaces therebetween, door means on said enclosures for providing access from said outer to said inner enclosure, the inner enclosure having openings at the top and bottom thereof, water-mist spraying means located in said openings in the bottom of said inner enclosure for projecting water-mist towards the top of said inner enclosure, means for supplying water to said water-mist spraying means, and air circulating means located in the top of said cabinet for causing air within the inner enclosure to flow out the top openings thereof, downwardly through the side spaces between the enclosures and through the water-mist spraying means back into said inner enclosure.

3,046,581
METHOD OF MAKING FOOTWEAR
George H. Bingham, Jr., Westminster, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland
Original application July 23, 1959, Ser. No. 829,040, now Patent No. 3,034,158, dated May 15, 1962. Divided and this application Jan. 25, 1962, Ser. No. 168,747
4 Claims. (Cl. 12—142)



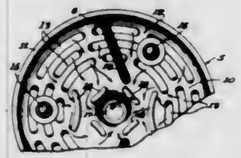
1. The method of making an overshoe which includes as steps: providing an upper which comprises partially cured waterproofing material, the upper having a throat opening whose opposite edges are defined by folds of the material of the upper, inserting in each fold a stiffly resilient element operative to impart a definite shape to the folds and concomitantly drawing the folds toward each other and into approximate contact throughout substantially their entire lengths, and completing the curing of the waterproofing material while the parts are in this relative position, thereby imparting such a set to the material that the folds tend to remain in contact.

3,046,582
PROCESS OF SKIVING AND GROOVING COUNTERS
Abraham Blustein, Haverhill, Mass., assignor to Brown Counter Company, Haverhill, Mass., a partnership
Filed Nov. 13, 1961, Ser. No. 151,623
5 Claims. (Cl. 12—146)



1. The process of making shoe counters comprising the steps of forming in a flat counter blank a marginal area tapering to a feather edge, and in one and the same operation removing from the tapering area an elongated groove-forming strip spaced within the upper edge of the counter.

3,046,583
SWIMMING POOL CLEANER
Emil J. Drennan, 324 New Ave., Anaheim, Calif.
Filed Feb. 8, 1960, Ser. No. 7,173
8 Claims. (Cl. 15—1.7)



7. A pool cleaning head comprising a plate having a plurality of openings therethrough and a downwardly projecting peripheral skirt, means located substantially inwardly of the edge of the plate to movably support the plate on a surface to be cleaned and to support the plate a short distance above the surface to be cleaned and to permit pool water around the head to pass through said openings and through the space between the bottom of the skirt and the support surface and to enter the interior of the head below the plate, and a suction outlet from said interior extending through the plate.

3,046,584
MECHANICAL TOOTHBRUSH AND THE LIKE
Federico Wepfer, 2935 Virrey Loreto St., Buenos Aires, Argentina
Filed Nov. 2, 1960, Ser. No. 66,761
6 Claims. (Cl. 15—22)

1. Drive means for an electrically operated toothbrush comprising an elongated housing defining a main handle, an electric motor in said housing, a toothbrush shaft projecting out of said housing, a transmission means interconnecting said motor and said shaft for rotationally oscillating said shaft, said housing having a front end portion defining a discharge member, said shaft having a free end projecting through said discharge member, a partition sealingly separating said discharge member from the remainder of said housing, discharge means for discharging liquid from said discharge member, said discharge means being defined by said discharge member having at least one perforation therethrough providing



communication between the interior of said discharge member and the exterior thereof, and at least one disc mounted on said toothbrush shaft in said discharge member, said disc being spaced apart and positioned forwardly of said perforation, said free end of said toothbrush shaft being adapted to receive a toothbrush member.

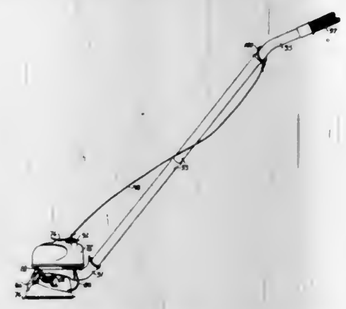
3,046,585
REVERSIBLE TURBINE DRIVEN ORAL HYGIENE APPARATUS
Gordon R. Ledingham, 1795 La Jolla Rancho Road, and Wilbert V. Carter, 1640 La Jolla Rancho Road, both of La Jolla, Calif., and Irvin Olson, 4173 Altadena, San Diego, Calif.
Filed June 20, 1960, Ser. No. 37,127
3 Claims. (Cl. 15—24)



1. Oral hygiene apparatus, comprising: a hand held drive unit having an elongated casing; a drive shaft rotatively mounted in said casing and extending axially thereof; a reversible turbine connected directly to one end of said drive shaft within said casing; said turbine having an imperforate front plate with an axially extending rim on the periphery of said front plate and having a plurality of inclined ducts extending through said rim, said ducts being positioned to form two axially-spaced circumferential rings, the ducts of one ring being inclined from the radial in the opposite direction to the ducts of the other ring; valve means operatively mounted adjacent said turbine to direct fluid to each of said rings of ducts selectively; a source of pressurized fluid connected to said valve means; said casing having a fluid outlet communicating with said turbine; the other end of said drive shaft having a tool holding portion; said drive shaft being hollow and having an open end adjacent said outlet to conduct a portion of the fluid therefrom to the tool holding portion.

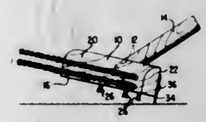
3,046,586
RUG SCRUBBING DEVICE
Oliver L. Allen, Riverside, and John T. Ferraris and Robert C. Lampe, Stamford, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,345
2 Claims. (Cl. 15—50)

1. In a surface scrubbing device, a power unit comprising an air turbine having air flow openings adjacent to the top surface thereof, said power unit having a depending rotary shaft, a skirt member removably secured to said power unit and extending downwardly therefrom around said shaft, the bottom of said skirt member being formed as a bearing surface for supporting said device on the surface to be scrubbed, a brush member secured to said shaft within said skirt member and having flexible bristles of sufficient length when straight to extend beyond said bearing surface, hollow handle means removably connected to said power unit and extending upwardly therefrom, said handle means communicating with said



air turbine and being connectable with means for producing flow of air, a liquid reservoir mountable on the top surface of said power unit, latch means on said reservoir engageable in said air flow openings for removably securing said reservoir to said power unit, a conduit extending from said reservoir to within said skirt member for supplying liquid to said brush, a valve for controlling flow through said conduit, and valve actuating means extending from said valve to the upper part of said handle means.

3,046,587
UTILITY BRUSH
Alvin Hamburger, 3275 E. Wood Valley Road, Atlanta, Ga.
Filed Jan. 30, 1961, Ser. No. 85,668
1 Claim. (Cl. 15—111)



A utility brush comprising a brush head having a flat bottom surface and a pair of side surfaces extending in perpendicular relationship to each other and to said bottom surface, a convexly curved side surface on said brush head extending between and connecting the adjacent ends of said perpendicular side surfaces, and a rear side surface extending substantially at a 45 degree angle to each of said perpendicular side surfaces, a first group of brush bristles mounted in said head and projecting downwardly from said bottom surface to locate the outer ends of said first group of bristles in a first plane, a second group of brush bristles mounted in said head and projecting outwardly from one of said pair of side surfaces to locate the outer ends of said second group of bristles in a second plane parallel to said one of said side surfaces and perpendicular to said first plane, a third group of brush bristles mounted in said head and projecting outwardly from the other of said pair of side surfaces to locate the outer ends of said third group of bristles in a third plane parallel to said other of said side surfaces and perpendicular to said first plane and to said second plane, a fourth group of brush bristles mounted in said head and projecting outwardly from said convexly curved side surface, the outer ends of said fourth group of brush bristles projecting outwardly from said curved

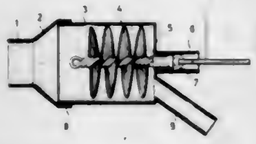
side surface to be located in an extension of the plane of the outer ends of the brush bristles on the adjacent side surface, and an adjustable scraper plate mounted upon said rear side surface and projecting downwardly below said bottom surface.

3,046,588
TOOTHBRUSH
Alvin W. Tobolski, 127 Ray St., Mishawaka, Ind., and Camiel C. La Cluyse, 416 Oregon, Osceola, Ind.
Filed Aug. 3, 1959, Ser. No. 831,412
4 Claims. (Cl. 15—143)



3. A toothbrush, comprising a back, bristles secured to said back and projecting therefrom on one side, a handle attached at one end to said back and having a hole in the other end extending therethrough in the same direction as said bristles extend, a member of resilient material having a stem extending through said hole and gripping the portion of the handle defining said hole and said member including a disc-shaped member on the end of said stem on the side of the handle opposite said bristles, a button on the other end of said stem, and a disc-shaped permanent magnet mounted on said disc-shaped member and projecting beyond the adjacent surface of said handle, the contact surface of said magnet being at such an angle that the portion of said brush inserted in the mouth is held away from supporting surfaces.

3,046,589
DEVICE FOR USE WHEN SWEEPING SMOKE TUBES, BOILERS AND THE LIKE
Per Bonnevie-Svendsen, Eiksveien 61, Roa, Oslo, Norway
Filed Feb. 27, 1961, Ser. No. 91,871
Claims priority, application Norway Mar. 1, 1960
1 Claim. (Cl. 15—162)



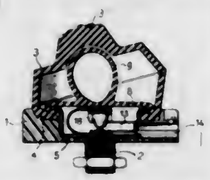
A device for sweeping smoke tubes, boilers, and the like, comprising a brush composed of steel lamella bristles and having a helical screw configuration, the diameter of said brush exceeding the diameter of the smoke tube being swept, a cylindrical housing open at one end and having a diameter greater than the diameter of said brush, a removable funnel-shaped member mounted tightly over the open end of said housing, said funnel member terminating in a cylindrical section with a diameter providing a tight fit with the inside of said smoke tube when inserted therein, a flexible guide rod coupled to one end of said brush, a tube member for at least partially supporting said guide rod mounted at the center of the closed end of said housing, and an exhaust tube communicating with the interior of said housing and adapted to be connected to a vacuum source for removing soot or the like from said brush and said housing.

3,046,590
HOLDING DEVICE FOR STEEL WOOL PADS
Aldis C. Robertson, Box 143, Morrisville, Pa.
Filed July 7, 1961, Ser. No. 122,466
3 Claims. (Cl. 15—209)



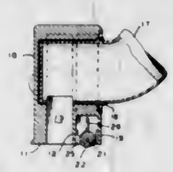
1. In a metal wool pad and holder the combination of a metal wool pad having thereon tabs oppositely disposed along its periphery and openings in said tabs, and a separate disc shaped metal wool pad holder having a pair of studs on one face of the holder in spaced relationship equivalent to that of said openings in said tabs when said pad is draped over the other face of the holder with the tabs extending around and over the edge of said holder and having clamping means to retain said pad and said holder in affixed relationship.

3,046,591
FOOT-OPERATED BELLOWS PUMP FOR WINDSHIELD WASHING APPARATUS
Hans Prohaska and Alfred Kohler, Bietigheim, Wurttemberg, Germany, assignors to SWF-Spezialfabrik für Autozubehör Gustav-Rau G.m.b.H., Bietigheim, Wurttemberg, Germany
Filed Aug. 19, 1958, Ser. No. 756,025
Claims priority, application Germany Aug. 21, 1957
10 Claims. (Cl. 15—250.02)



1. A foot-operated pressure pump for a windshield washing apparatus of a motor vehicle comprising a rubber bellows having a hollow chamber therein, an electric switch for operating a windshield wiper motor mounted on said bellows, and switch-actuating means within said chamber including elastic force-transmitting means adapted to directly abut against said switch for elastically actuating said switch by abutment thereagainst of said elastic force-transmitting means upon compression of said bellows.

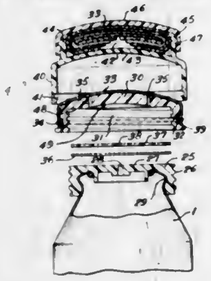
3,046,592
VACUUM CLEANER NOZZLE
Amen Atiyeh, 151 Bennett St., Kingston, Pa.
Filed May 2, 1960, Ser. No. 26,178
3 Claims. (Cl. 15—369)



1. A suction nozzle comprising an elongated rectangular hollow body having a work face to ride on a floor

covering, a partition lengthwise of said body forming a main air slot and a supplement air slot, said slots opening through said work face, an elongated cylindrical control member, means pivotally mounting said member in the opening from said supplemental slot with said member projecting to contact a rug in one position and to be lifted out of such contact in another position, said means including a clearance to permit transverse sliding of said member during one stroke of said nozzle, said means also including cams causing said member to lift out of rug contacting position during another stroke of said nozzle, and means to admit supplemental air above said control member.

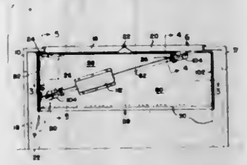
3,046,593
APPLICATOR
David H. Goldman and Norman L. Goldman, Cleveland, Ohio; Rose Goldman, executrix of said David H. Goldman, deceased, assignor of one-half to Norman L. Goldman
Filed July 7, 1959, Ser. No. 825,585
1 Claim. (Cl. 15—565)



In an applicator of the class described, a container having a neck with an opening in its top, means surrounding the opening for receiving an applicator head assembly in sealed relation thereto, an applicator head assembly removably mounted on the container and over the opening therein, said head assembly comprising a body formed with a central convex surface having an opening therethrough, an outer rim portion adapted to overlie and embrace the neck of the container and having an annular seat formed between the convex surface and the outer rim portion, an applicator disk of porous material secured to lie over said convex surface and said seat, and a resilient annular retainer member engageable with that portion of the disk disposed in the seat to retain the same on the body, said body comprising a pair of complementary sections releasably secured together, one of said sections including said central convex portion, said other section having a flat top surface adjacent the inner surface of the convex wall and spaced from the central portion thereof when the sections are secured together, said second complementary section having a central opening therein and communicating with the interior of the container, a baffle plate having an opening therethrough and in substantial alignment with the opening in the said other complementary section of the body, and a sealing disk interposed between said other complementary section and said baffle plate, said baffle plate and sealing disk being disposed between the two complementary sections when they are secured together.

3,046,594
TELEPHONE BOOTH DOOR HANGER CONSTRUCTION
Percival H. Sherron, Jamaica, N.Y. (% Sherron Metallic Corporation, 1201 Flushing Ave., Brooklyn 37, N.Y.)
Filed Apr. 28, 1961, Ser. No. 106,316
3 Claims. (Cl. 16—95)

1. In a telephone booth, a door including a plurality of folding sections, a pair of stationary partition members having upper surfaces extending in a horizontal plane above said door, said members having spaced mutually facing edges defining vertical sides of a horizontally extending guideway, a carriage having arm portions extending laterally above said guideway and a depending portion of rectangular cross-section extending downwardly into said guideway, a roller journaled for rotation on each



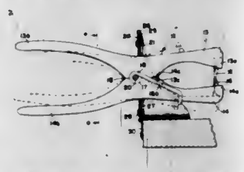
of said arm portions, said rollers bearing against said upper surfaces of said partitioned members on opposite sides of said guideway and, a swivel support member interconnecting one of said door sections and said carriage so that said carriage and rollers transmit the weight of said door to said partitioned members and said depending portion of said carriage maintains said rollers in fixed angular position with respect to said guideway.

3,046,595
HINGES FOR SECTIONAL FOLDING TABLE TOPS
Ebbe Anders Israel Johansson, 6 Kaptensgatan, and Sture Allan Mattias Johansson, 10 Felix Korlingsgatan, both of Halmstad, Sweden
Filed Feb. 10, 1960, Ser. No. 7,883
2 Claims. (Cl. 16—146)



1. An improvement in hinges comprising a pair of hinge leaves each having a flat portion capable of being attached to one section of a foldable table top and a second portion extending at an angle to its respective flat portion, a pintle, each of said leaf second portions having a free end surrounding said pintle for the pivoting of said leaves therearound, a latch having a flat portion pivotally mounted on one of said leaf flat portions for pivoting in a plane parallel to its respective leaf flat portion to and from said leaves second portion when said leaves flat portions extend in line with one another and having slots in one edge thereof positioned for receiving the second portions of both leaves when said latch is pivoted thereto retaining said leaf second portions in a fixed position and thereby preventing said table top sections from movement.

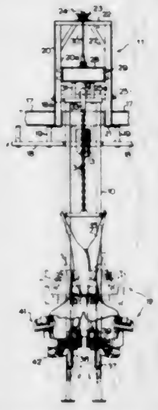
3,046,596
FISH AND ANIMAL HOLDING AND MANIPULATING DEVICE
Ralph E. Young, Hutchinson, Minn., assignor of one-half to D. O. Comer, Hutchinson, Minn.
Filed Aug. 8, 1960, Ser. No. 48,086
2 Claims. (Cl. 17—8)



1. A fish and animal clamping device comprising a base, an upright frame member having a horizontal opening therethrough, a pivot means below said opening and mounting said frame member on the base for tilting

movement, a pair of elongate horizontally oriented swingable jaw members with cooperating jaws and handles at opposite ends thereof and extending generally transversely of the axis of said pivot means, means securing said jaw members together and resiliently urging said jaws one toward the other, said jaw members having means defining a fulcrum intermediate said jaws and handles and permitting swinging of the jaw members about an axis generally transversely of the jaw members, said jaw members extending transversely of the tilt axis of said pivot means and extending horizontally through the opening in said frame member with the jaws disposed on one side of the frame member and the handles disposed at the other side of the frame member and having said fulcrum in closely spaced relation with the frame member, and a mounting member carrying said jaw members and being rotatably mounted on the frame member about an axis extending longitudinally of the jaw members.

3,046,597
MACHINE FOR REMOVING HIDES FROM SLAUGHTER ANIMALS AND THE LIKE
Christian D. Macy and Palmer C. Ludvigson, Austin, Minn., assignors to Geo. A. Hormel & Co., Austin, Minn., a corporation of Delaware
Filed May 28, 1959, Ser. No. 816,439
6 Claims. (Cl. 17—21)



1. Apparatus for removing hides from animals comprising means for vertically suspending an animal carcass, mechanism for raising and lowering said suspending means, hide gripping means including a pair of yoke members adapted for relative opening and closing movement therebetween for substantially enclosing the suspended animal carcass, said yoke members carrying thereon a plurality of hide gripping units disposed to grasp the hide at circumferentially spaced points around the body of he animal, means for opening and closing said yoke members, and means providing relative vertical movement between the suspending means and the hide gripping means whereby the hide is longitudinally removed from the carcass in tubular fashion.

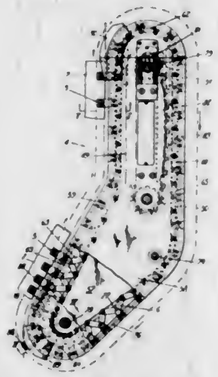
3,046,598
RELEASABLE HANGING DEVICE
Harry V. Daugherty, 301 W. 23rd St. North, Wichita, Kans.
Filed Dec. 23, 1959, Ser. No. 861,599
5 Claims. (Cl. 17—44.3)

1. A releasable hanging device comprising, in combination, a supporting body having an eye at the upper end thereof adapted for attachment to a pulley, a hook member pivoted to said body, said member having an upwardly curved hook extending in one direction from the pivot upon which a carcass can be hung, and a lever portion extending in the other direction from the pivot, a locking assembly comprising two links of different lengths pivotally secured to each other, the longer link being pivoted to said lever portion and the shorter link being pivoted to said body, the distance between the last mentioned pivot and the pivot of said hook member being less than the combined length of said links, thereby defining an over-center locking device, a spring having one end connected to the shorter link adjacent the pivotal connection between said links, and its other end connected to the upper part of said body, said spring passing



around the pivotal connection between said body and said shorter link, a release latch pivoted to said body adjacent the junction between said links, said latch having a cam member bearing against an intermediate portion of said locking assembly and arranged to displace said assembly laterally from its locked position to an unlocked position, when said latch is actuated wherein the hook swings downwardly to release the carcass, said spring passing around said pivotal connection between said body and said shorter link and thereby being in position to urge the locking assembly back to its locked position when the weight of the carcass is removed from the hook, and means for actuating said latch.

3,046,599
STRETCHING APPARATUS
Donald Cameron Nicholas, Ipswich, and James William Hempstead, Manningtree, England, assignors to B.X. Plastics Limited, London, England, a British company
Filed Dec. 30, 1960, Ser. No. 79,769
Claims priority, application Great Britain Dec. 30, 1959
9 Claims. (Cl. 18—1)



1. Apparatus for stretching a moving web of material including two endless articulated chains, means for guiding each chain in a closed path having a working run and a return run, the links of the chains at the commencement of each working run being guided by said guiding means so as to be folded in zig-zag fashion and to unfold in the course of their movement along said working run, the working runs of the two chains being positioned to extend along opposite sides of a moving web, at least a part of the working runs of the chains over which said links are expanded being divergent, drive means for each chain being disposed to make a plurality of driving engagements therewith along a part of said return run, said guiding means extending continuously along at least said working run and up to said drive means whereby said chains are drawn along said working runs under tension, and a plurality of web holding means mounted on each chain at intervals therealong so that the spacing of the holding means varies according to the degree of folding of the links of the chains, and means for actuating said holding means to grip and hold the sides of a moving web at the commencement of said working runs and to release said holding means from the moving web at the end of said runs whereby in operation the moving web is stretched as a result of the increase in the spacing of the holding means whilst they are holding the web consequent upon the unfolding of the links of the chains in the course of their movement along said working runs.

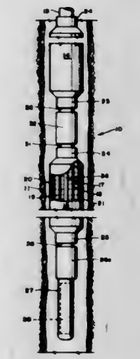
3,046,600
MOLDING METHOD AND APPARATUS
Erwin F. Linhorst, Paterson, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed May 15, 1961, Ser. No. 109,965
14 Claims. (Cl. 18—5)



1. Molding apparatus, comprising: a frame; a structure forming a channel carried by said frame and adapted to receive at an inlet thereof a plurality of mold members which form a column within said channel; means for adding uncured molding compound between at least two adjacent mold members within said channel; means to compress said column of molds; and means to confine the compound between said two adjacent mold members and within said channel during compression of the column while at least a portion of the remaining mold members in said channel remains unconfined so that said compound flows into the cavities of at least one of said two adjacent mold members while the excess uncured compound in said portion of the remaining mold members flows out of said channel.

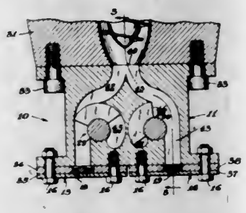
3,046,601
CAVITY CONFIGURATION DETERMINATION
Marion K. Hubbert, William C. Smith, and Chrest B. Johnson, Jr., Houston, Tex., assignors to Shell Oil Company, a corporation of Delaware
Filed Aug. 28, 1959, Ser. No. 837,320
8 Claims. (Cl. 18—6)

7. Apparatus for obtaining a form which is equal in volume and configuration to a portion of a well bore hole traversing earth formations, said apparatus comprising an elongated tubular body member, a cylindrical elastic permanently-deformable sheath carried on the outer surface of said body member, said sheath including a layer of uncured rubber thereon, clamp means holding the upper and lower of said sheath against said body member, geographic directional orientation device carried by said body member, port means through the wall of said tubular body member at a point covered by said sheath, a string of pipe connected to the top of said body member and adapted to suspend said body member in a well bore hole with the top of the pipe extending to



the surface, said pipe string forming fluid transmission means between said body member and the top of the well, means in communication with the bore of said tubular body member for expanding said sheath against the wall of the bore hole, and heating means adapted to be positioned in said tubular body member for curing the rubber to a permanently-set flexible form having the configuration of the adjacent bore hole.

3,046,602
EXTRUDING APPARATUS
Irving S. Houvener, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,121
6 Claims. (Cl. 18—12)



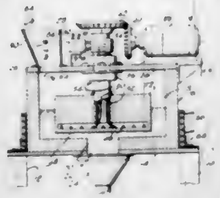
1. In an extruding machine for extruding a plurality of parts from a single source of supply, the combination comprising a head member, a terminal die plate member including a plurality of extrusion orifices, each of said extrusion orifices being in communication with said source of supply by means of at least one passageway, each of said passageways having cooperatively associated therewith an individually adjustable interposable flow restricting portion, each of said flow restricting portions having a generally arcuate surface adapted to restrict one of said passageways and maintain within said passageway a flow pattern that is generally streamlined when a flowable material is passed through at any setting of the flow restricting portions lying between closure of said passageways and the least passageway restricting position of said flow restricting portions.

3,046,603

METHOD AND APPARATUS FOR EXTRUSION

Bryce Maxwell, Princeton, N.J., assignor to Research Corporation, New York, N.Y., a corporation of New York

Filed Dec. 15, 1958, Ser. No. 780,352
27 Claims. (Cl. 18—12)



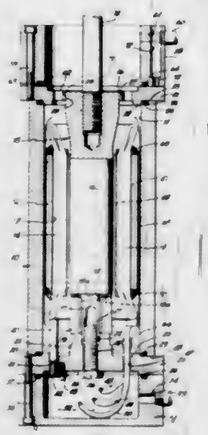
27. An extruder for visco-elastic plastic materials comprising a first substantially impervious surface having an outlet opening therethrough, a second surface congruent with but spaced from said first surface, die means in communication with said outlet opening for forming the desired extruded shape, a supply of plastic material between said first and second surfaces, and means fer relatively rotating said surfaces to shear the visco-elastic plastic material therebetween at a rate sufficient to cause a centripetal force in excess of the centrifugal force on the material therebetween to thereby cause a flow of the plastic material in the space between said first and said second surfaces toward the axis of relative rotation and outwardly through said outlet opening and die means.

3,046,604

WATERPROOF STATOR CONSTRUCTION FOR SUBMERSIBLE DYNAMOELECTRIC MACHINE

Frank S. Graham and Peter S. Komor, Los Angeles, and Albert Redding, Jr., Southgate, Calif., assignors to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California

Filed Feb. 4, 1958, Ser. No. 713,131
1 Claim. (Cl. 18—36)



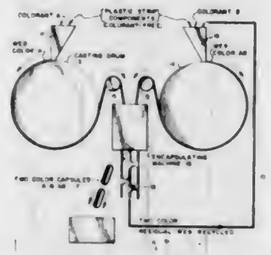
A mold structure for encapsulating a stack of apertured and slotted stator laminations having a substantially cylindrical external contour: a hollow open ended mold member having a substantially cylindrical space of a diameter in excess of that of the stack of stator laminations; detachable end members for sealing said space; a plug fixed with respect to the mold member when the end members are in place and extending axially of said space to form a guiding post fitting the apertures of said stator laminations to hold them entirely in peripheral clearance relationship with respect to said space; and abutment means engaging the stator laminations at a place spaced from the stator slots and limiting axial movement of said stack of stator laminations and holding the stack of laminations inwardly of the ends of the mold member in spaced relationship to the end members, comprising a threaded member projecting partially beyond said space at one of said end members, and adapted to be embedded in the encapsulating material to form, in addition, means for attachment of the encapsulated structure to companion apparatus.

3,046,605

MANUFACTURE OF TWO-COLOR AND TWO-TONE SOFT SHELL CAPSULES

Martin Greif and Lloyd Frank Hansen, New City, and Ernest Chu Yen, Orangeburg, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Jan. 12, 1960, Ser. No. 1,925
2 Claims. (Cl. 18—47.5)



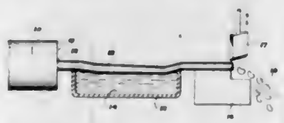
1. A method of forming two-color soft gelatin capsules and reworking the web which comprises (*a*) mixing a first castable gelatin composition containing a dissolved stain which tends to bleed across a seal line of a capsule and an insoluble pigment; (*b*) mixing a second castable gelatin composition containing the same concentration of the same stain as said first castable gelatin composition, and a different concentration of the same insoluble pigment as said first castable gelatin composition; (*c*) forming each said composition into a strip, forming soft gelatin capsules from the strips, such that each capsule is cut out from part of each of said castable gelatin compositions, and a sealed together, combined, residual web remains containing part of each of said castable gelatin compositions; and (*d*) mixing a subsequent batch of each of said first castable gelatin composition and said second castable gelatin composition, each such subsequent batch containing part of the combined residual web, and such new quantities of said stain and said pigment that the resulting batches are of the same composition as the initial first castable gelatin composition and the initial second gelatin composition.

3,046,606

PROCESS FOR PRODUCING SOLID NON-POROUS PELLETS FROM POLYOLEFINS AND PELLETS PRODUCED THEREBY

William D. Carter, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed July 29, 1959, Ser. No. 830,218
4 Claims. (Cl. 18—47.5)



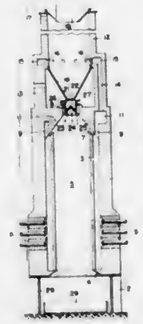
1. The process for preparing solid, non-porous pellets of thermoplastic material which comprises extruding a rod of hot, thermoplastic material, floating the rod on the surface of a cooling liquid inert thereto to cause rapid cooling of the surface of the rod contacting the liquid to a rigid state with slower cooling of the remaining portion of the surface of the rod and concommitant contraction of the upper portion of the rod, and cutting the rod into short lengths to form pellets.

3,046,607

METHOD OF FORMING FUSED PARTICLES

Emil Blaha, Cheltenham, Pa., assignor to Selas Corporation of America, a corporation of Pennsylvania

Filed July 17, 1961, Ser. No. 127,083
14 Claims. (Cl. 18—48)



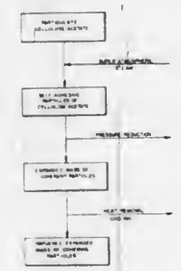
1. The method of forming fused particles which comprises dropping a plurality of non-spherical particles of substantially the same size and shape under the force of gravity through a heated zone of a furnace, introducing said particles into said zone in the form of an annular stream in the central portion only of said zone and of a size substantially smaller in area than the area of said heated zone so that the particles will be out of contact with the sides of said zone, maintaining the atmosphere in said zone still enough so that the particles will not be deflected substantially from a free falling path, heating said particles by radiant heat to above their fusion temperature as they are falling through said zone, and collecting the fused particles.

3,046,608

CELLULOSE DERIVATIVE MATERIALS

John William Grebby, Selwyn George Hawtin, and John Downing, Spondon, near Derby, England, assignors to British Celanese Limited, London, England, a British company

Filed Apr. 16, 1958, Ser. No. 728,765
Claims priority, application Great Britain May 21, 1957
4 Claims. (Cl. 18—48)



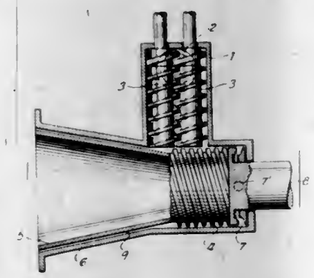
1. A process for the production of a coherent foraminous product which comprises forming a loose and substantially unconfined body of particles of cellulose acetate having an acetyl value of 40 to 50 percent, said cellulose acetate being capable of retaining at least twice its weight of water when soaked in cold water and allowed to drain, bringing said body of cellulose acetate into direct contact with saturated steam at a temperature between about 120° C. and about 170° C., maintaining said steam in contact with said cellulose acetate for a time sufficient for said steam to penetrate the particles and to cause the particles to become self-adhesive, the steam treatment being effected while the body of cellulose acetate is free to expand, and suddenly reducing the pressure of the steam thereby causing the steam which had penetrated the particles of the cellulose acetate to expand and so expand the adherent particles.

3,046,609

PROCESS FOR DRYING THERMOPLASTIC MATERIALS

Eduard Bergmeister, Joseph Heckmaier, and Martin Doriat, all of Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany, a firm of Germany

Filed Nov. 27, 1959, Ser. No. 855,746
Claims priority, application Germany Oct. 26, 1955
2 Claims. (Cl. 18—48)



1. In a process for removing the water from and drying a dispersion of polyvinyl acetate in water, the steps which comprise removing the major part of the water present in the aqueous polyvinyl acetate dispersion by exerting a pressure on said dispersion to force the water out so that the water content is reduced to a maximum of about 10% by weight, passing the resulting moist polyvinyl acetate under shearing mechanical force through a narrow annular work space in which the surfaces forming the work space have a rotational movement relative to each other and in which the diameter of said annular work space increases and flares outwardly in the direction of movement of said polyvinyl acetate, converting the polyvinyl acetate by the shearing mechanical force while in said work space into a plurality of strands, imparting a rotational motion to said strands by the relative movement of the surfaces forming the work space while subjecting said strands to compression so that the frictional component of the shearing mechanical force is converted to heat energy thereby raising said polyvinyl acetate strands to a temperature above the boiling point of water and in the range of from 125° C. to 200° C., maintaining said polyvinyl acetate strands at said temperature and subject to said force and rotational motion for a period of from 0.5 to 2 minutes while passing through said outwardly flaring annular work space thereby to permit the heat energy produced to vaporize off substantially all of the water in said polyvinyl acetate, removing said water vapor and discharging the polyvinyl acetate from said narrow annular work space in the form of strands of substantially dry polyvinyl acetate material.

3,046,610
PROCESS FOR PREPARING SYNTHETIC PEARLESCENT RESIN WITH FIXED PATTERNS

Louis Grunin, 1 Trinity Ave., Spring Valley, N.Y.

Filed Aug. 12, 1960, Ser. No. 49,181
5 Claims. (Cl. 18—58)

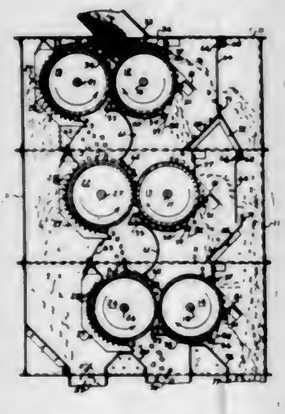


1. A process for preparing a cast synthetic pearlescent plastic sheet composition having a fixed lamellae crystal orientation pattern which comprises putting down a liquid pearlescent resin of an organic compound adapted to give a polymer solid under the influence of ultra violet light, and having a viscosity range of about 5 to 2,000 poises at room temperature in an open plate to form an ordered design, the viscosity of the liquid resin being such as to maintain the design and treating the liquid resin with the ordered design with ultra violet light to polymerize the resin to a solid, until a sheet having the fixed lamellae crystal orientation is obtained, the ultra violet light treatment being uniform in nature so as to fix the ordered design in the sheet.

3,046,611
APPARATUS FOR REMOVING FOREIGN MATTER FROM SEED COTTON

Arvel L. Vandergriff, Columbus, Ga., assignor to Lummus Cotton Gin Company, a corporation of Georgia

Filed Nov. 24, 1958, Ser. No. 775,935
13 Claims. (Cl. 19—35)

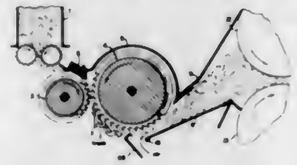


1. In apparatus for removing hulls, sticks and other foreign material from seed cotton and having an inlet adjacent the upper end thereof, a horizontally disposed rotary main saw cylinder positioned beneath the inlet of the apparatus and receiving the main stream of the seed cotton and foreign material whereby seed cotton containing said foreign material is fed through the inlet and directly to the upper side of said main saw cylinder to be carried around thereby, first and second cotton control means fixedly mounted adjacent the downgoing side of said saw cylinder, said first and second control means being closely adjacent the periphery of the cylinder and in position to engage and direct the cotton against the periphery of the cylinder, said first and second control means being angularly spaced a sufficient distance from each other around the periphery of said saw cylinder whereby a majority of the foreign material after passing under said first control means is discharged by the centrifugal force of the rotating saw cylinder over the second control means, and a partial housing mounted in spaced relation to said saw cylinder adjacent the bottom periphery thereof and having an edge adjacent said second control means disposed generally at the line of tangency drawn from the point on the periphery of said saw cylinder directly adjacent said second control means whereby a majority of the foreign material after passing under said second control means is discharged over said housing edge.

3,046,612
AIR-BLAST DOFFER AND CONDENSER

George J. Kyame and William A. Latour, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

Filed Feb. 19, 1960, Ser. No. 10,009
1 Claim. (Cl. 19—203)
(Granted under Title 35, U.S. Code (1952), sec. 266)

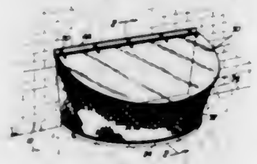


In combination a rotatable fiber working cylinder having peripheral teeth, a fiber condenser cage, and an air-flow fiber carrying conduit leading from the fiber working cylinder to the condenser cage, opposite sides of the conduit flaring outwardly to the condenser cage, one of said sides having a straight portion terminating in a nose near the periphery of the fiber working cylinder thus to form an entrance nozzle for an air-blast doffer for removing the fibers from the fiber working cylinder and jetting them into the conduit, said conduit being devoid of any constriction between the entrance nozzle thereof and the condenser cage, air for the air-blast doffer being supplied from the atmosphere and drawn through the conduit and condenser cage, said straight portion of the conduit side forming an angle of not less than 15° with a line tangent to the fiber working cylinder, the point of tangency lying on a line drawn from the center of the fiber working cylinder through the nose, thus to give an even distribution of the fibers on the condenser cage.

3,046,613
WINDOW WELL COVER

Francis J. Smith, 920 S. 72nd St., Omaha, Nebr.

Filed Jan. 8, 1960, Ser. No. 1,268
7 Claims. (Cl. 20—1)

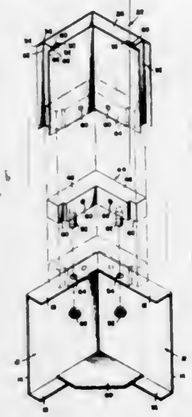


1. A window well enclosure comprising a rigid perforated sheet material side wall wherein the perforations are greater in area than the remaining material and said wall being of a shape corresponding to that of a window well retaining wall, means securing said side wall at its lower edge to the upper edge of the retaining wall, a cover of a light transmitting sheet material, hinge means pivotally securing the upper edge of said cover to a building above said window well and said side wall, the edge of said cover overlying and extending laterally outwardly of the upper edge of said side wall, all of said perforations in said side wall located below said cover.

3,046,614
CORNER POST CONNECTION FOR TELEPHONE BOOTH

Percival H. Sherron, Jamaica, N.Y. (% Sherron Metallic Corporation, 1201 Flushing Ave., Brooklyn 37, N.Y.)

Filed Jan. 24, 1961, Ser. No. 84,578
2 Claims. (Cl. 20—3.5)

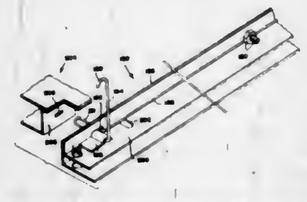


2. In a telephone booth, the combination comprising an upright sheet metal hollow corner post L-shaped in transverse section including one-piece inner and outer sections each having a longitudinally extending right angle bend providing opposite side areas normal to each other, the remote longitudinally extending marginal portions of the inner section being reversely bent sharply to form a pair of hooks the bights of which face away from said right angle bends, the remote longitudinally extending marginal portions of the outer section being bent to provide a pair of lips presenting toward said right angle bends and interlocking respectively with said hooks, an L-shaped insert fitted snugly into and affixed to the lower end portion of said post including a pair of legs each rectangular in transverse section and notched to clear the associated one of said hooks, and a pair of threaded elements affixed to and depending respectively from the undersurfaces of said legs, and a horizontally disposed base having openings through which said threaded elements project for securing said post to said base through said insert.

3,046,615
HINGED CEILING TELEPHONE BOOTHS

Percival H. Sherron, Jamaica, N.Y. (% Sherron Metallic Corporation, 1201 Flushing Ave., Brooklyn 37, N.Y.)

Filed Dec. 2, 1957, Ser. No. 699,983
4 Claims. (Cl. 20—3.5)

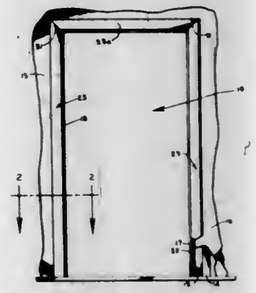


1. In a telephone booth, a ceiling structure forming a chamber adapted for housing electrical equipment and wiring for the telephone booth comprising first and second positionally fixed panels, a third panel disposed in coplanar relation to and interposed between said fixed panels and forming therewith a horizontally extending bottom wall for said chamber, means for hinging said third panel to the first one of said fixed panels for swinging movement downwardly thereby to afford access to the electrical equipment and wiring housed in said chamber means including a spring for selectively urging said hinged panel toward closed position when said hinged panel is disposed to one side of a predetermined partially open position and toward open position when said hinged panel is disposed on the opposite side of said predetermined position, and one piece combination primary and secondary latch means consisting of a single rod-like member anchored to said hinged panel including a primary latch portion projected into said second fixed panel for releasably securing said hinged panel in a closed position, and a secondary latch portion overhanging said second fixed panel and adapted for engaging with said second fixed panel when said hinged panel is partially open, said rod-like member being inherently resilient, and being displaceable against the influence of said inherent resilience for withdrawal of said primary latch portion from said second fixed panel and for withdrawal of said secondary latch portion to a position clear of said second fixed panel.

3,046,616
DOOR TRIM

Frederick H. Sampsell, 1107 E. 54th St., Indianapolis 20, Ind.

Filed June 6, 1960, Ser. No. 34,011
6 Claims. (Cl. 20—11)



1. The combination of a wall surface terminating by an edge at the margin of a wall opening, and a jamb in the opening along said edge and having an edge approximately in the plane of said wall surface, and said jamb edge having a slot entering its said edge extending longitudinally thereof with the side walls of the slot being parallel and at right angles to said jamb edge; with a flexible trim strip having a pair of legs and a web initially interconnecting said legs in the nature of a channel iron; one of said legs extending through an angle to and under said web to a free edge and the other of said legs being longer than said one leg extending from the web first outwardly from thereunder and, from a longitudinal line, thence inwardly; said other leg being forced into said slot tending to set up a bending stress between the web and said other leg; said one leg bearing by its free edge against said wall surface spacing said web therefrom; and said web being concavely shaped between the legs under said bending stress.

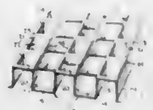
3,046,617
LIGHT-TRANSMITTING STRUCTURAL PANEL

Marilyn Grayboff, 51 Perry Road, Bloomfield, N.J.

Filed Jan. 23, 1959, Ser. No. 788,619
8 Claims. (Cl. 20—15)

1. A light-transmitting structural panel comprising a single sheet bent along parallel lines to provide a generally corrugated cross-sectional contour having alternate flat-faced ridges and troughs, the ridges on each side of

the panel defining the troughs on the other, the side walls of each ridge and trough being parallel to each other and perpendicular to the face thereof, the trough bottoms being provided with spaced struck-up portions extending into said troughs, each of said portions lying across almost the entire width of said troughs to define light barriers, the ridge crests being provided with spaced struck-down portions extending into the interior of said ridges, each of said portions lying across almost the entire width



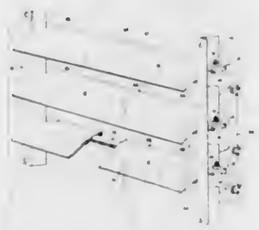
of said ridges to define light barriers, said trough bottoms and ridge crests having openings in the regions originally occupied by said struck-up and struck-down portions respectively, said openings occupying most of the area of said ridge crests and trough bottoms and said openings being separated by relatively narrow connecting bridges joining the side walls of said ridges and troughs, and said barriers and the trough and ridge side walls conjointly defining a grid-like pattern of adjacent rows of light-transmitting passages through the panel.

3,046,618
COUNTERBALANCES AND WEATHER STRIPS OR JAMBS
Claude J. Teggelaar, Grand Rapids, Mich., assignor to Grand Rapids Hardware Company, Grand Rapids, Mich.
Filed Sept. 12, 1960, Ser. No. 55,216
13 Claims. (Cl. 20—52.4)



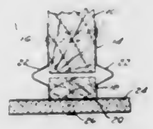
12. A counterbalance for a sash having a grooved stile comprising an elongated body member adapted to be mounted on a window casing and having inwardly facing way members on its longitudinal edges, a spring hanger mounted on said body member, a coil spring supportedly connected at its upper end to said spring hanger, a pulley support and cord anchor mounted on said body member adjacent the lower end thereof and provided with a pulley, a slide member slidably engaged with said body member and suspendingly connected to the lower end of said spring and provided with a plurality of pulleys, a sash engaging member, and a cord connected to said sash engaging member and rove upon said pulleys on said slide member and cord anchor member, said body member being provided at the lower end with a stop for said sash engaging member.

3,046,619
SHUTTER
Elmer J. Shustrom, Coldwater, Mich., assignor to The Cadillac Co. Incorporated, Coldwater, Mich., a corporation of Michigan
Filed July 6, 1959, Ser. No. 825,230
3 Claims. (Cl. 20—62)



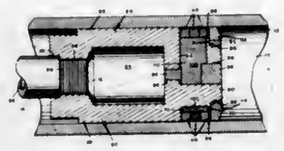
1. In a shutter construction, a supporting framework including an elongated vane supporting member, an elongated vane having a pair of parallel longitudinal edges, a hinge of flexible material having a pair of longitudinally extending edges, one of said hinge edges being mounted on said member and the other hinge edge being affixed to said vane at a location substantially centrally located between and parallel to said vane edges, said hinge being of a length substantially equal to the length of said vane and continuously affixed throughout its length to said member and vane.

3,046,620
CEILING HANGER
Stephen W. Tvorik, 7066 Beresford Ave., and Andrew Braunitzer, 6966 Orchard Blvd., both of Cleveland 30, Ohio
Filed Mar. 20, 1956, Ser. No. 572,650
3 Claims. (Cl. 20—92)



2. A ceiling suspension clip for ultimately resiliently supporting wood furring strips adjacent and spaced below wooden ceiling joists comprising a thin narrow strip of resilient sheet material, said strip being formed to include a substantially rectangular, three-sided, upwardly-opening bottom section having a flat bottom leg and two flat side legs extending perpendicularly upwardly from each end of said bottom leg, said strip having an outwardly-extending, spring-like rebent portion formed symmetrically immediately above the upper terminus of each said bottom section side leg, and two flat upper legs each extending upwardly from the upper terminus of a respective rebent spring-like portion within the plane of the respective bottom section side leg, whereby said clip may be applied to hold a furring strip in alignment below and in direct contact with a joist prior to application thereto of ceiling elements, said rebent portion being adapted to span the space between the furring strip and the joist.

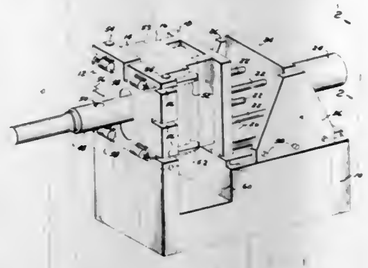
3,046,621
DIE CASTING MACHINE PLUNGER TIP
Glen R. Morton, 7025 S. Sarpy, Omaha, Nebr.
Filed Nov. 17, 1958, Ser. No. 774,804
3 Claims. (Cl. 22—68)



1. A plunger tip for a die casting machine comprising: a main body portion of cylindrical shape having a hollow center having an opening extending through its rearward side, a soft material retaining portion spaced apart from the forward end of said main body portion providing an annular space between the material retaining portion and said main body portion, web portions interconnecting said soft material retaining portion and said main body portion, the exterior of said web portions being spaced inwardly toward the axis of the plunger tip from the exterior of the rearward end of said soft material retaining portion, a forward end portion attached to and extending outwardly from the forward end of said soft material retaining portion and having a threaded cylindrical outer surface having the same axis as said main body portion, said forward end portion having a forward plug aperture extending through said forward end portion from the forward side inwardly and also through said retaining portion, a forward plug in said forward plug aperture, said main body portion having a removal plug aperture disposed extending through the forward side of said main body portion inwardly to its hollow center opposite said forward plug aperture, said forward plug aperture and said removal plug aperture and said rearward side opening of said main body portion all being disposed in alignment, a plurality of ring segments disposed forwardly of said main body portion and arranged with their exterior surfaces in a cylindrical configuration approximately of the same diameter as said main body portion, and a mass of soft solid material adapted to change shape under the pressures and temperatures of die casting machine shot chambers, said mass being disposed in and filling the space between said material retaining portion and said main body portion whereby as the exterior of said rings wears away said forward plug moves rearwardly under the pressure in said shot chamber causing said mass of material to change shape and exert pressure against said rings to hold them outward to provide them with a substantially constant outer diameter.

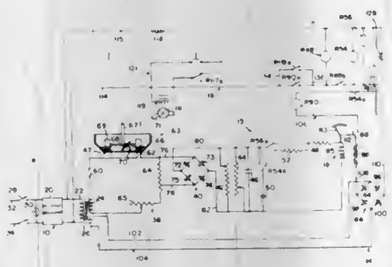
3,046,622
DIE CASTING MACHINE
Heinz C. Wernecke, Royal Oak, Mich.
(946 13th Ave., Grafton, Wis.)
Original application Jan. 2, 1958, Ser. No. 706,851. Divided and this application Nov. 26, 1958, Ser. No. 776,490
1 Claim. (Cl. 22—68)

In a die casting machine having a first fixed die half, a second movable die half, and latching means operable across the parting line of the die halves to maintain the halves in fixed cooperating relationship, means for moving said movable die half into and out of cooperating relationship with said first die half, said means comprising: a fluid actuated ram having its piston end fixed with respect to said first die half; at least a pair of fluid passages passing through a portion of said first fixed die half and the rod of said cylinder and terminating on both sides of the piston of said cylinder whereby hydraulic fluid may be admitted into the cylinder on either side of said piston; and a plurality of tie rods connecting the cylinder end of



said ram with said second die half, whereby as fluid is admitted or extracted from the chambers of said ram the second die half is moved with the cylinder of said ram.

3,046,623
TWO-STAGE MOISTURE METER
Harry W. Dietert and Alexander L. Graham, Detroit, Mich., assignors to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed Apr. 27, 1959, Ser. No. 809,009
5 Claims. (Cl. 22—89)

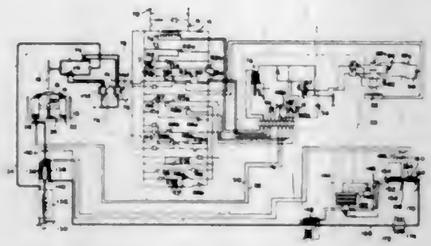


3. Conditioning apparatus for granular material comprising means for periodically producing an electric signal proportional to the moisture content of the granular material including an electronic probe exposed to the granular material, a variable resistance and a transformer connected in series in a closed loop circuit, means for mixing the granular material and pressing a specimen of the granular material against the probe at predetermined intervals, a rectifier connected in parallel with part of the variable resistance, a meter actuating coil and a meter resistor connected in series with each other across the output of the rectifier, a meter capacitor connected in parallel with the coil and meter resistor, a signal reducing resistor, means for connecting the signal reducing resistor in series with the meter resistor in response to the electric signal reaching a predetermined value, means for adding moisture to the granular material, and means for stopping the addition of moisture to the granular material when the signal reaches the predetermined value.

3,046,624
METHOD AND APPARATUS FOR WEATHER RESPONSIVE MOISTURE COMPENSATION
Harry W. Dietert and Randolph L. Dietert, Detroit, Mich., assignors to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed Dec. 21, 1959, Ser. No. 860,749
19 Claims. (Cl. 22—89)

6. Tempering equipment comprising a mixer, means for measuring the moisture content of granular material in

the mixer, means for adding water to the mixer, means for measuring the moisture content of the material during the addition of water, and means responsive in part to the temperature and humidity of air to which the tempered



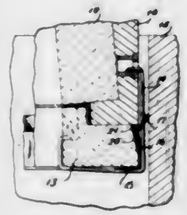
material will be subjected subsequent to tempering to terminate the addition of water when the moisture content of the material is appropriate for the air temperature and humidity.

3,046,625

HOT TOP AND WIPER STRIP CONSTRUCTION

Joel C. Carpenter, Chagrin Falls, Ohio, assignor to Ogle-bay Norton Company, Cleveland, Ohio, a corporation of Delaware

Filed Oct. 13, 1960, Ser. No. 62,384
11 Claims. (Cl. 22—147)



7. In a reusable composite floating hot top structure adapted to be inserted into an ingot mold and including a casing and a refractory bottom ring connected to the lower end of said casing, said bottom ring having a tapering relief extending inwardly of its outer periphery and substantially completely around said ring, and a wiper strip of sheet material having an attaching and bottom ring engaging portion and an integral wiper lip extending from an edge of said portion and outwardly of the periphery of the bottom ring, said attaching and engaging portion having a part extending from the junction between said portion and said wiper lip and which part overlies said relieved portion of said bottom ring and can move into the space provided by said relieved portion when the wiper lip is subjected to forces incident to its engagement with the mold during the insertion of the hot top structure into the mold, wherefore such insertion is facilitated due to the ability of said part to move into said space.

3,046,626

SELF-CLOSING SELF-LOCKING SAFETY PIN

Ferdinand E. Khattar, Tripoli, Lebanon (% Government Guest House, Suleibikhat, Kuwait, Arabia), and Jean E. Khattar and Ange E. Khattar, both of Meetein St., Tripoli, Lebanon

Filed Feb. 19, 1960, Ser. No. 9,914
1 Claim. (Cl. 24—158)

A safety pin comprising a first section including a hollow shank and a socket extending parallel to said shank adjacent to and spaced from one end of said shank and facing in the same direction as the other end of said shank, a second section including a shank and a prong element extending parallel to said shank adjacent to and spaced from one end of said shank and facing in the same direction as the other end of said shank, said second section being arranged so that the other end of the shank is in alignment with and extends into the other end of the shank of the first section with the prong element extending toward said socket and having the free end portion loosely seated in said socket, the shank of said second section being slidably movable in response to the application of a manually applied pulling force to said second



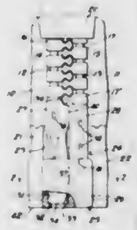
section from the position within said first section shank to a position exteriorly of said first section shank one end, means embodying a transversely-disposed pivot pin extending through the other end of the shank of said second section connecting said shanks together for movement from the aligned position to a position in which the shank of said second section is at an angle with respect to the shank of said first section with the prong element parallel to the shank of said second section when said second section shank has been moved to the exterior position, and spring means operatively connected to the shank of said first section and said pivot pin for biasing said shanks to the aligned position.

3,046,627

SEPARATOR FOR INVISIBLE SEPARABLE FASTENER STRINGERS

Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)

Filed May 9, 1960, Ser. No. 27,741
1 Claim. (Cl. 24—205.11)



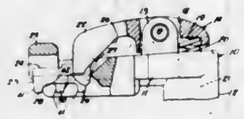
In separable fasteners, the stringer tapes of which includes scoops arranged upon reversely folded beaded edge portions of the tapes in concealing the scoops upon the inner surfaces of the tapes, a separator comprising a box part and a pin part detachable with respect to the box part, each of said parts having longitudinal channel portions arranged upon and secured to the reversely folded beaded edge portions of the stringer tapes, said box part including an extended bar portion having a channel in alinement with the channel of the box part, said extended bar portion also having a straight edge facing said pin part and adapted to cooperate therewith when said pin and box separator is in closed position said box part also including at the side thereof opposed to the channel a chamber in which the pin part is removably mounted, said side of the box part including an end wall limiting inward movement of the pin part in said box part, said pin part having an undulating edge adapted to cooperate with the straight edge of said extended bar portion so that when said pin and box separator is operatively joined said pin part engages said bar portion near the upper end thereof and again within the confines of said box part and the cross-section of said box part in a plane at right angles to said box channel and through said box chamber being such that the half which encompasses said chamber is substantially the shape of the letter L whereas the part which includes the box channel has substantially the shape of the letter U.

3,046,628

LOCKING YOKE FOR SLIDERS OF SEPARABLE FASTENER STRINGERS

Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 5, 1960, Ser. No. 20,187
1 Claim. (Cl. 24—205.14)



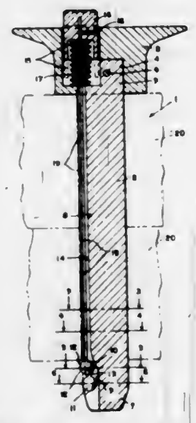
A lock yoke for sliders of the character described, comprising an apertured end portion partially defined by opposed side walls, said walls having studs projecting into said aperture, the other end portion of the yoke having an offset arm terminating in an elongated extended bar arranged centrally and longitudinally of the yoke, the lower surface of the bar at one side thereof having alined projecting lugs, another lug arranged intermediate the first named lugs and disposed at the opposed side of said bar, and inner side surfaces of all of said lugs being in common alinement centrally and longitudinally of said yoke.

3,046,629

SOLID BEAD LOCK PIN

Joseph Malesko, 1817 Brookline Ave., Dayton, Ohio

Filed Dec. 15, 1960, Ser. No. 76,078
7 Claims. (Cl. 24—211)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A locking detent pin comprising an elongated body having an enlarged head at one end and an insertion end at its other end and formed with a shallow spherical locking recess adjacent said insertion end for seating a spherical detent locking ball member therein with a material portion of the ball member projecting outwardly beyond the surface of the body, said body having a second deeper spherical detent release recess formed therein between said shallow spherical locking recess and said insertion end, to seat the aforesaid ball detent member therein below the outer surface of said body and formed with an inclined barrier between said recesses, said body having a detent actuating wire receiving groove formed in one side thereof extending longitudinally of the body from said enlarged head across said recesses to said insertion end, a flexible resilient detent actuator wire shiftable longitudinally in said wire receiving groove, a detent ball member seatable in said recesses fixed to one end of said wire for shifting movement by said wire across said inclined barrier between a seated position in the first mentioned spherical detent locking recess and a seated position in said second deeper spherical detent release recess, and shiftable means in said enlarged head connected to the other end of said wire for moving said wire in said groove to move said spherical detent member between its seated positions in said recesses.

3,046,630

CROSS CHAIN END CLIP

John J. Morrissey, 289 Charles St., Torrington, Conn.

Filed July 27, 1959, Ser. No. 829,771
1 Claim. (Cl. 24—236)



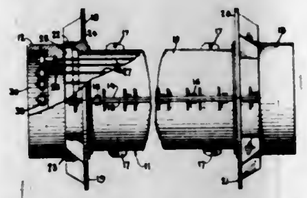
In a non-skid chain clip for use with a standard U-shaped end link having spaced parallel side members terminating in spaced inturned parallel semi-circular top hook members, the combination comprising a rectangular bottom strip metal base member of malleable iron extending between and welded at its sides to the parallel side members of said link, a resilient outwardly and upwardly extending leaf spring of thin tempered spring strip metal having an initially upstanding inner end, means for securing the inner upstanding end of said leaf spring to the inner end of said base member by means of an upstanding inturned loop at the inner end of said base member which embraces the inner end of said leaf spring clip, said loop being pressed downwardly upon the bottom of said base member, the free end of said leaf spring resiliently pressing upwardly against the inner portions of the semi-circular members of said link near the open ends thereof.

3,046,631

APPARATUS AND METHOD FOR MAKING PRESTRESSED CONCRETE TUBULAR MEMBERS

Daniel E. Olivier, Bedminster, N.J., assignor to Lock Joint Pipe Company, East Orange, N.J., a corporation of New Jersey

Filed Dec. 11, 1957, Ser. No. 702,035
6 Claims. (Cl. 25—118)



1. In apparatus for making a prestressed concrete pipe with tensioned wires embedded in the wall of the pipe

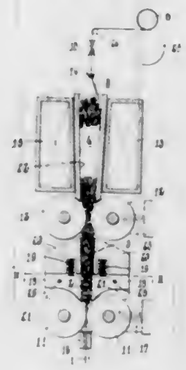
and maintaining the pipe longitudinally compressed, the combination comprising a tubular mould casing, a mould end axially abutting one end of said casing and formed to mould one end of said concrete pipe, a mould end axially abutting the other end of said casing and formed to mould the other end of said concrete pipe, a plurality of highly tensioned high tensile steel wires extending generally longitudinally through the moulding cavity within said tubular casing and through openings in said mould ends to beyond the outer sides of said mould ends, each of said tensioned wires having a section of reduced cross-sectional area adjacent the inner side of the respective mould ends which provides break-off points for said tensioned wires within the wall of a hardened concrete pipe contained in said moulding cavity, and a plurality of wire-anchoring devices supported by said mould ends at the outer sides of said mould ends whereby the mould ends are pressed against the tubular casing by the pull of said wires, each of said devices having jaws frictionally gripping one of said tensioned wires, said jaws positionable laterally to the axis of a tensioned wire, and means acting on said jaws for forcing the jaws in gripping engagement with a wire while the wire gripped thereby is maintained in tension by said devices and said mould ends, each of said devices rotatable about the axis of a gripped tensioned wire with said jaws in gripping engagement with the gripped tensioned wire so that all of the gripped tensioned wires may be broken adjacent the inner sides of the mould ends upon rotation of said devices and the mould ends freed from the lengths of said wires embedded in said pipe.

3,046,632
METHOD AND APPARATUS FOR PRODUCING WOOL-LIKE YARN FROM SYNTHETIC FIBERS
Kikuichi Tsutsumi, Higashisumiyoshi-ku, Osaka-shi, Japan
Filed Feb. 23, 1960, Ser. No. 10,150
5 Claims. (Cl. 28—1)



1. Apparatus for manufacturing yarn of crimped synthetic fibers, comprising supply means for supplying crimped untwisted yarn having fibers close together, block means at least partly of electrically insulating material, yarn guide means guiding the crimped untwisted yarn from said supply means over said block means for generating a charge of static electricity on the yarn fibers, means for heat setting the electrically charged yarn over which the yarn passes after it passes over said block means, and a collecting means receiving and collecting yarn from said heat setting means.

3,046,633
APPARATUS FOR PRODUCING CRIMPED THERMOPLASTIC SYNTHETIC YARNS
Hideichiro Ohashi, Hyogo-ken, Kentaro Kawasaki, Niigata-ken, and Jyunichi Koshiba and Ryutaro Tsuji, Ishikawa-ken, Japan, assignors to Chori Company Ltd. and Tsudakoma Industrial Co., Ltd., both corporations of Japan
Filed Mar. 15, 1960, Ser. No. 15,235
Claims priority, application Japan Mar. 16, 1959
1 Claim. (Cl. 28—1)

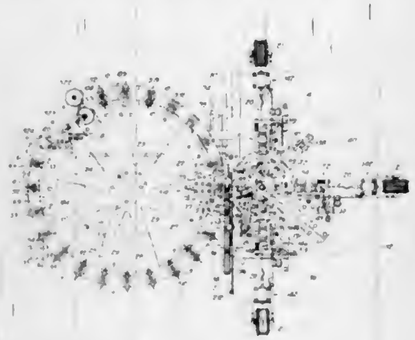


Apparatus for crimping yarn comprising a pair of feed rollers for advancing said yarn, a spring operatively associated with said feed rollers for urging the same together, means defining a crimping chamber adjacent said rollers and including a pair of spaced opposed block members each being adjacent one of the feed rollers and adapted to contact the same, a side wall member on either side of the block members and adjacent the same, each block member being pivotally connected to the side wall members, a further pair of spaced block members coextensive with the first said block members and positioned between said side wall members, and elastic means between both said pairs of block members to urge the first said block members against the feed rollers, the apparatus further comprising a pair of heat insulating rollers adjacent said crimping chamber for further advancing said yarn therefrom, means for driving said pairs of rollers at different peripheral speeds, the heat insulating rollers having a slower peripheral speed than the feed rollers whereby said yarn is accumulated and crimped in the crimping chamber, a spring weaker than the first said spring urging said heat insulating rollers together, means defining a crimp fixing chamber having an end adjacent said heat insulating rollers and including sides divergently extending therefrom for accumulating the further advanced yarn, and a source of heat in heat exchangeable relationship with the latter said means.

3,046,634
LAMP BRIDGE MAKING MACHINE
Frank V. Kolda, Independence, and Martin J. Briehl, Cleveland Heights, Ohio, assignors to General Electric Company, a corporation of New York
Filed May 4, 1959, Ser. No. 810,957
7 Claims. (Cl. 29—25.2)

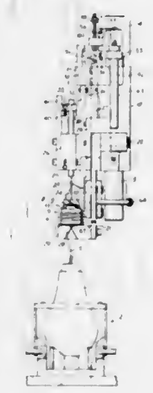
1. In a machine for making bridge members of the class described, the combination of a first horizontal turret, a plurality of vertically disposed chuck members equally spaced about the periphery of said turret and each adapted to support a length of glass rod, means for indexing said turret to carry the chucks to a series of stations, means at one of said stations to effect lowering

of the rod in a chuck at said station to a predetermined elevation, means at a series of said stations for heating to plasticity portions of said glass rods extending from said chucks, a second horizontal turret mounted adjacent said first turret, a plurality of heads spaced about the periphery of said second turret, means for indexing said second turret in synchronism with said first turret to bring successive heads of said second turret into registry with successive chuck members at an inserting station at the periphery of said first turret, each of said heads comprising a horizontally reciprocable slide member having holding means for supporting a plurality of horizon-



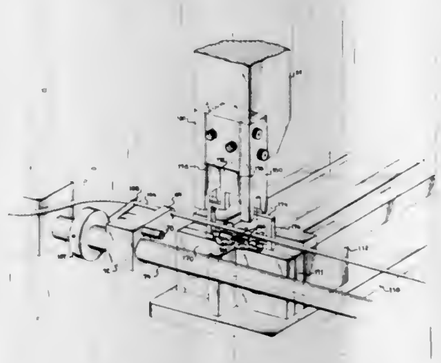
tally disposed wires in vertical alignment and with their forward ends projecting from the front end of said slide member, means arranged at the periphery of said second turret for inserting lengths of wire into the holding means of said slide members, and means for actuating the slide member of a head as it comes into registry with a chuck member at said inserting station to carry the slide member forward and thrust and embed the ends of the wires carried thereby into the plastic glass rod held by the chuck member, and means adjacent said first turret at a location subsequent to said inserting station for severing the lower end portions of successive said rods which have the said wires embedded therein.

3,046,635
LAMP BASE AND BULB ASSEMBLY APPARATUS
Clarence S. Terez, Maple Heights, Ohio, assignor to General Electric Company, a corporation of New York
Filed Mar. 7, 1955, Ser. No. 492,558
6 Claims. (Cl. 29—25.19)



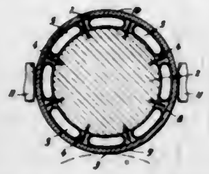
1. In combination, a holder for supporting a lamp bulb with a lead-in wire extending upwardly therefrom, and a base-threading mechanism comprising a base-receiving chamber member open at its bottom and including a roof having a needle-receiving aperture therein and sides adapted to enclose a base at least partially around its periphery and at a position above and in alignment with the lamp bulb in said holder, a pair of jaws mounted adjacent said chamber member to cover the bottom thereof and define a floor therefor, when closed, and having their meeting faces shaped to define a funnel-shaped wire-threading aperture aligned with said needle-receiving aperture, a hollow threading needle mounted above said chamber in alignment with the needle-receiving aperture therein and with the wire-threading aperture in said jaws, means for applying a differential air pressure within the interior of said chamber in a direction and amount to supply a flow of air to a base in said chamber sufficient to lift and float the base pneumatically at the top of said chamber and off the floor defined by said jaws, means for lowering the needle through the said needle-receiving aperture and through the base in said chamber into registry with said wire-threading aperture during the application of the differential air pressure whereby the base is free to adjust slightly within the chamber to ensure entry of the needle therethrough, means for then lowering the chamber member, jaws and needle in unison to cause the lead-in wire to enter said needle by way of the said wire-receiving aperture, means for then causing the said jaws to open and uncover the bottom of said chamber member during continued movement of said chamber member to carry the base therein along the needle and the lead-in wire and onto the bulb in said holder, and means for terminating the differential air pressure when said chamber member has approached its lowered position.

3,046,636
LEAD MAKING MACHINE
Robert L. Albright, Hershey, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Feb. 9, 1959, Ser. No. 792,098
9 Claims. (Cl. 29—33.5)



1. A lead making machine having a crimping zone, a pair of aligned and spaced-apart crimping die sets for supporting uncrimped terminals in said crimping zone, at least one die of each set being mounted on a ram and movable relatively towards and away from the other die of the set, wire pulling means reciprocable along a path past said crimping zone, fixed wire holding means at the end of said path whereby wire pulled from a substantially endless source by said pulling means is pulled past said crimping zone and the end of said wire is held by said holding means during return of said pulling means, and wire severing means carried by said ram and effective to cut said wire along at least one plane in said crimping zone between said die sets.

3,046,637
ROLLERS FOR THE PRESSURE TREATMENT OF MATERIAL IN WEB FORM
Eduard Kusters and Valentin Appenzeller, Krefeld, Germany, assignors to Textilmaschinen Eduard Kusters, Krefeld, Germany, a firm
Filed Oct. 6, 1960, Ser. No. 60,866
Claims priority, application Germany Oct. 9, 1959
3 Claims. (Cl. 29—113)



1. A roller for the pressure treatment of web material comprising a hollow cylinder forming the working periphery of the roller and a core adapted to rotate coaxially with the cylinder but separated therefrom by an annular space and pressure-loaded toward the effective side of the roller, there being a series of pockets in the periphery of the core and parallel to the axis of the roller, in combination with closed elastic tubes in the axial pockets having no connection with each other, each containing a fluid filling and adapted to exert pressure across the annular space against the cylinder when located in the vicinity of the effective side of the roller; whereby when a tube is on the side opposite to the effective side of the tube it exerts no pressure on the cylinder and all the pressure of the core is transmitted to the web material.

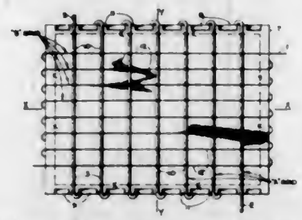
3,046,638
METHOD OF PRODUCING HOLLOW SHEET-METAL PANEL STRUCTURES
Jean H. Melzer, Vogler Str. 36, Weinheim an der Bergstrasse, Germany
Filed Feb. 11, 1959, Ser. No. 792,522
Claims priority, application Germany Feb. 17, 1958
5 Claims. (Cl. 29—155)



1. The method of producing a hollow sheet-metal panel structure from two skin sheets and intermediate struts, which comprises placing a lattice of mutually spaced strut means face-to-face upon one of the skin sheets and placing the other skin sheet face-to-face upon the lattice, permanently joining said lattice on one end of the struts with only one of said skin sheets and at the other end of the struts with the other skin sheet, said struts having a given direction of erection in common relative to said skin sheets, and thereafter forcing the two skin sheets in said direction and away from each other along an arcuate path of mutual separation to cause permanent deformation of the struts until each strut extends between said two skin sheets substantially in a plane normal to each sheet.

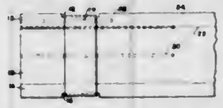
3,046,639
METHOD OF MAKING HEAT EXCHANGER
Helmut A. Freyholdt, 2385 Roscomare Road, Los Angeles 24, Calif.
Original application May 10, 1954, Ser. No. 428,516. Divided and this application May 15, 1958, Ser. No. 735,528
14 Claims. (Cl. 29—157.3)

1. In a method of making a heat exchanger core, the steps of: coiling sealing material at a given location in one direction around a supporting member; coiling heat conductive members in another direction in spaced, side by side windings around said supporting member and across said sealing material to define a layer of heat conductive members; repeating the aforegoing steps in alternation on the same supporting member and bringing successive coils of sealing material into stacked alignment with preceding coils to thereby provide a fluid-tight wall



structure formed of overlying lengths of sealing material at said given location around said supporting member and maintaining lateral spacing of said heat conductive members in each layer and between successive layers while causing the members to be embedded and sealed in the wall, said wall structure thereby having spaced heat conductive members extending transversely therethrough in a plurality of layers.

3,046,640
PROCESS AND PRODUCT OF ZINC AND ALUMINUM LAMINATION
Ogle R. Singleton, Jr., Richmond, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Dec. 4, 1957, Ser. No. 700,719
17 Claims. (Cl. 29—197)



1. The method of cladding zinc to an aluminum core comprising the steps of heating an aluminum ingot to a temperature within the range of from about 600° F. to about 775° F., applying a zinc plate of materially lower temperature to a side of the heated ingot, lightly rolling the composite to adhere the plate to the ingot when the adjoining faces thereof reach approximately the same temperature, and thereafter hot rolling the composite to a suitable hot line guage to complete the bonding of said plate to said ingot.

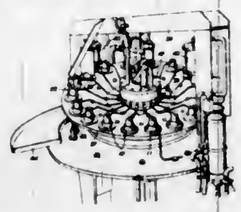
14. The method of cladding zinc to an aluminum core comprising the steps of heating an aluminum ingot to a temperature within the range of from about 600° F. to about 775° F., applying a zinc plate of materially lower temperature to a side of the heated ingot, lightly rolling the composite to adhere the plate to the ingot when the adjoining faces thereof reach approximately the same temperature, and hot rolling the composite to a hot line guage of about 0.15".

15. A solder furnishing aluminum article produced by the method of claim 14.

3,046,641
AUTOMATIC ASSEMBLING-APPARATUS FOR ASSEMBLING CLEAN SEMICONDUCTORS IN CLEAN SHELLS
Masao Takahashi, Tokyo, Sumio Imaoka, Yokohama, and Osamu Kubouchi, Tokyo, Japan, assignors to Tokyo Shibaura Electric Co., Ltd., Kawasaki-shi, Japan, a corporation of Japan
Filed Dec. 11, 1959, Ser. No. 858,901
2 Claims. (Cl. 29—203)

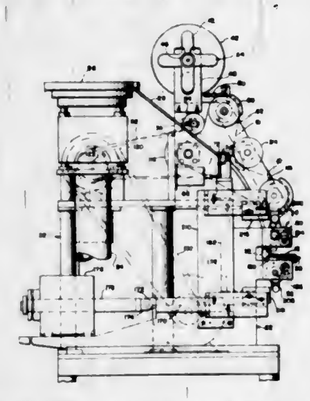
1. Apparatus for sealing in a clean shell a clean semiconductor element mounted on a stem, said apparatus

comprising a holder for said stem, a second holder for supporting said shell, said shell being adapted for enclosing said stem in sealing relation with said semiconductor element therein, a fixed sleeve having therein a hollow bore, said two holders being slidably supported in said bore and opposite to one another for movement towards and away from one another, said sleeve and holders coopera-



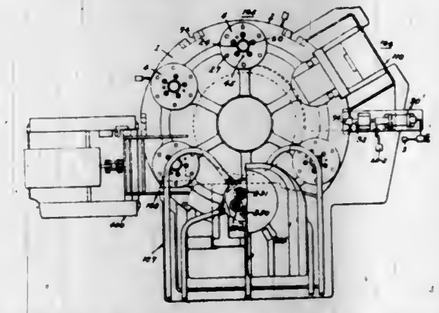
tively defining a closed chamber, gas feeding means for continuously circulating clean dry gas through the chamber defined by said two holders and said sleeve, and means for displacing said stem holding the semi-conductor element into said shell with said clean dry gas circulating in said chamber so that said semiconductor element is sealed into said shell with the dry gas.

3,046,642
AUTOMATIC KEY CHAIN ASSEMBLY APPARATUS
Isaac J. White, Bethel, and Paul C. Martin, Newtown, Conn.; said Martin assignor to said White
Filed June 15, 1960, Ser. No. 32,242
22 Claims. (Cl. 29—208)



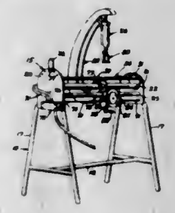
1. In an apparatus for assembling the ends of a predetermined length of bead chain in a clasp: a source of supply for the bead chain, a frame structure having an assembly station, means carried by said frame structure for feeding a predetermined length of bead chain having a free end from said source of supply to the assembly station, means carried by said frame structure at the assembly station and operative after said feeding means has fed the predetermined length of bead chain thereto for grasping said bead chain adjacent said free end and at a spaced location adjacent a point at which said bead chain is to be severed into the predetermined length, means carried by said frame structure and operative after said grasping means grasps said bead chain for severing said bead chain, a clasp receiving means carried by said frame structure at the assembly station for receiving a clasp, means operatively associated with said grasping means for moving the same, said last-mentioned means being operative to move said grasping means with the severed length of bead chain to a position where free ends of the severed length of bead chain are positioned in said clasp, and means positioned adjacent said clasp-receiving means and operative to engage and crimp said clasp about the free ends of said length of bead chain.

3,046,643
STUD INSERTING MACHINE
Frederick P. Sharpe, Dearborn, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Original application Apr. 8, 1957, Ser. No. 651,209, now Patent No. 2,983,999, dated May 16, 1961. Divided and this application Mar. 16, 1959, Ser. No. 799,607
8 Claims. (Cl. 29—208)



1. Apparatus for inserting a stud in a hole comprising a support for a workpiece having the hole, an elongated tubular stud holder aligned with the hole, means guiding said holder for axial reciprocation toward and away from the hole between inner and outer limits, a stop determining said inner limit, a stud chute, a port in the side of said holder in register with the outlet of said stud chute in the outer limit of said holder, yieldable means on said holder for holding a stud received from said chute, a plunger reciprocable within said holder and having a lost-motion connection therewith, means for retracting said plunger away from the hole to an outer limit clearing said port and, through said lost-motion connection, retracting said holder to its outer limit, means for advancing said plunger toward said hole, means between said plunger and holder for advancing said holder with said plunger to its inner limit determined by said stop and yieldable to permit further advance of said plunger relative to said holder sufficient to eject the stud from said holder and force it into the hole under pressure.

3,046,644
VALVE SPRING DEPRESSOR
Albert K. Gehrig, 2021 Junction Ave., and Herbert W. Day, 417 Sea View Drive, El Cerrito, Calif., assignors of one-third to Florence Vivian Gehrig, Richmond, Calif.
Filed May 12, 1960, Ser. No. 28,680
8 Claims. (Cl. 29—213)



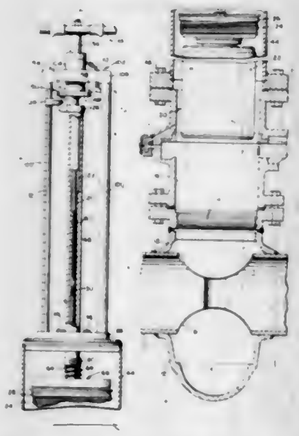
1. An engine-head stand for valve removal and the like, including in combination: a main frame having two parallel shafts; a table journaled to one said shaft and lying above it; means to hold said table in desired orienta-

tion; a crane arm rotatably and slidably mounted on said one shaft; a pneumatic cylinder having an outer end swivel-mounted to said crane arm and an inner end from which a piston rod projects; a valve-spring-contacting member secured to said rod; and means slidable on the shaft other than that on which said arm and table are mounted for changing the rotational and longitudinal position of said crane arm.

3,046,645
STOPPER INSERTING AND EXTRACTING MACHINE

John J. Smith, Decatur, Ill., assignor to Mueller Co., Decatur, Ill., a corporation of Illinois

Filed Dec. 3, 1959, Ser. No. 856,980
8 Claims. (Cl. 29—240)

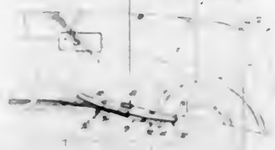


1. In apparatus for manipulating a part within a pressure chamber from the exterior of the latter and without the escape of fluid therefrom, the combination comprising: means detachably connectable to the pressure chamber to form a portion of the wall thereof; plunger means sealingly extending through said wall portion and independently reciprocable and rotatable relative thereto for demountably carrying and manipulating a part within the chamber by rotating said plunger means and moving the same inwardly and outwardly of the chamber from the exterior thereof, said plunger means including threadedly-engaged telescoping inner and outer parts with said outer part sealingly extending through said wall portion; means fixedly connected to said wall portion and detachably engaging said inner part for restraining the latter against axial movement so that rotation of said inner part relative to said outer part will reciprocate said outer part; slideway means fixed to said wall portion and extending longitudinally of said plunger means; means mounted to said outer part and alternatively operable to engage said slideway means to restrain rotation of said outer part or, when said outer part has advanced a predetermined distance into the chamber, to engage said inner part in a manner to lock said parts together for reciprocation and rotation as a unit; a cylinder having said plunger means extending therethrough; means for securing said cylinder to said wall portion against reciprocation with said plunger means; piston means on said plunger means within said cylinder; means for venting said cylinder, to atmosphere; and conduit means for connecting said cylinder with the pressure chamber in order to counterbalance the pressure force acting on the plunger to move it outwardly of the pressure chamber when said wall portion is connected thereto and said axial-movement restraining means is disconnected from said inner part.

3,046,646
TOOL FOR REMOVING WINDSHIELD WIPER ARMS

Robert C. Buck, 9901 E. 18th St., Independence, Mo.

Filed Sept. 6, 1960, Ser. No. 54,030
1 Claim. (Cl. 29—278)

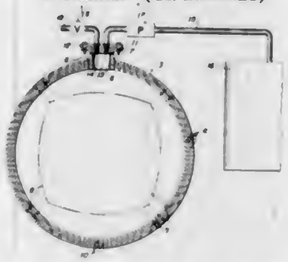


A tool for holding a windshield wiper arm assembly having a pair of swingably interconnected portions continuously biased toward disposition in angular relationship, said tool including an elongated member having a fulcrum point bend adjacent each end thereof; a pair of spaced, L-shaped, stationary hooks integral with said member and disposed one at each end of said member, said stationary hooks extending transversely from said member for holding said portions of said assembly between one of said fulcrum point bends and said stationary hooks against the continuous bias of said portions toward disposition in angular relationship; at least one movable fulcrum element shiftably mounted on said member intermediate said stationary hooks for adjustable positioning between said stationary hooks for adjusting the fulcrum point of said tool for use on assemblies of various thicknesses; and handles integral with said member and extending longitudinally therefrom permitting said tool to be easily grasped by the user.

3,046,647
METHOD OF FABRICATING HEMISPHERICAL MULTI-LAYER HEADS

Fred A. Carstens, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Mar. 3, 1959, Ser. No. 796,964
4 Claims. (Cl. 29—421)



1. In a method of fabricating hemispherical multi-layer heads, the steps of forming a multi-layer spherical shell structure wherein each layer is generally in contact with the next adjacent layer or layers, subjecting said shell structure to internal pressure with a relatively incompressible fluid until a discernable permanent set has occurred in the outermost layer of the structure to provide tightness between the layers and a true spherical shape, and severing said shell structure on a diameter line to provide a pair of matched hemispherical multi-layer heads.

3,046,648
METHOD OF MANUFACTURING REPLACEABLE LABYRINTH TYPE SEAL ASSEMBLY

Thomas N. Kelly, Detroit, Mich., assignor to Aircraft Precision Products, Inc., Oak Park, Mich., a corporation of Michigan

Original application Apr. 13, 1959, Ser. No. 805,954. Divided and this application Mar. 7, 1960, Ser. No. 13,067
6 Claims. (Cl. 29—455)

1. The method of manufacturing a replaceable labyrinth type seal assembly; comprising the steps of making

a ring of channel-shaped cross section and of predetermined diameter having the channel thereof opening radially, making a substantially annular honeycomb member of predetermined length having free ends and having a radial thickness greater than the depth of said channel with the cells thereof extending radially, assembling the substantially annular member and ring by placing said ring and member concentrically one within the other and then radially flexing said member toward and within said channel so that the base of said channel

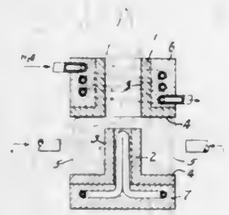


will be in surface-to-surface engagement with the adjacent radially facing surface of said substantially annular member and said substantially annular member will project radially from said channel beyond the edges of the side walls thereof and so that the free ends of said substantially annular member will be in end to end abutting relation with each other, securing said radially facing surface of said substantially annular member to the base of said channel, and securing the abutting ends of said substantially annular member to each other.

3,046,649
METHOD OF PRODUCING COMPOSITE METAL ARTICLES

Joseph B. Brennan, 13018 Lake Shore Blvd., Cleveland, Ohio; Helen E. Brennan, executrix of said Joseph B. Brennan, deceased

Filed Oct. 11, 1954, Ser. No. 461,461
7 Claims. (Cl. 29—474.3)



1. A method of producing composite metal articles from dissimilar, bondable metal components, each component being dimensionally preshaped and having a mating surface, which comprises heating such mating surface of each component whereby the surface of the metal component having the higher melting point is heated at least to the softening temperature of the other metal component without softening the former, simultaneously cooling each component to confine the effect of such heating to such mating surface, and slidably engaging such heated surfaces with each other without substantially disturbing such preshaped dimensions of either component by bodily relatively moving such components while such surfaces are in contact with one another to bond such components together.

3,046,650
BRAZE BONDING OF COLUMBIUM

Richard L. Heestand, Oak Ridge, and Marion L. Picklesimer, Knoxville, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

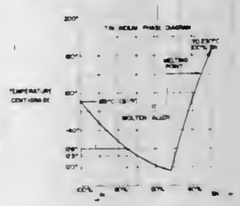
No Drawing. Filed Nov. 23, 1959, Ser. No. 854,988
6 Claims. (Cl. 29—488)

5. In an improved process for brazing columbium parts together in which the formation of a brittle phase in the heat-affected area is avoided, the steps which comprise disposing selected surfaces of said parts to be brazed together in abutting relationship with a brazing alloy disposed adjacent said abutting surfaces, said brazing alloy being selected from the group consisting of, by weight, (A) 12–25% columbium and the balance zirconium (B) 0.5–5% molybdenum, 12–25% columbium and the balance zirconium, heating said alloy to at least its melting point to braze said parts together, and thereafter cooling the brazed joint, said heating and cooling taking place in an atmosphere selected from argon and helium.

3,046,651
SOLDERING TECHNIQUE

Wilfrid E. Olmon, Crystal, and Richard J. Zelinka, Lino Lakes, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 14, 1958, Ser. No. 721,550
4 Claims. (Cl. 29—498)



1. The method of attaching an indium rich alloyed junction of a semiconductor body to a mounting pedestal, said method including the steps of coating the surface of said mounting pedestal with a relatively thin layer of indium-tin solder including from about 52% up to about 70% indium, balance tin, heating said layer to a predetermined temperature exceeding the fusion temperature thereof, but substantially below the melting point of said indium rich alloyed junction placing said alloyed junction in contact with said layer and maintaining contact until the indium content of said layer had increased and a composition having a fusion temperature substantially equal to said predetermined temperature is formed.

3,046,652
METHODS OF AND APPARATUS AND MATERIALS FOR MAKING STRIP MATERIAL

Richard A. Wilkins, Rome, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland

Filed Mar. 8, 1956, Ser. No. 570,372
12 Claims. (Cl. 29—528)

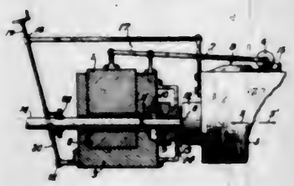
1. The process of making material of the character described, having one or more longitudinally extending slits parallel to its opposite faces, by an operation comprising forming a billet in which the metal is cast about pulverizable elongated members, one for each slit to be formed in the material, and, without removing said members, hot rolling the billet, followed by cold rolling it, for decreasing its thickness and, in the directions of the lengths of said members, elongating it, and for moving opposite sides of the spaces occupied by said members toward each other to form said slits, and for crushing said members to weld preventing powder and extending such

powder along said spaces and slits as the billet is being so elongated, which process is characterized by employing, for the elongated members, bodies formed at least to a substantial extent of fibers of fused vitreous material compatible with the metal being cast at the pouring temperature of that metal and when said metal has solidified and being sufficiently fine to be flexible per se and pul-



verizable to fine weld preventing powder by such rolling of the billet, and in which process the bodies constituting the elongated members are flexible, said process being further characterized by vertically parallelly positioning said members and subjecting them to and holding them under longitudinal tension while casting the billet-forming metal about them and thereby to keep them straight and in spaced parallelism.

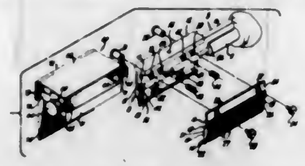
3,046,653
FORGING OF RINGS AND SIMILAR PARTS
Josef Martínek, Brno, Czechoslovakia, assignor to Zavody presneho strojirenstvi Lisen narodni podnik zavod Antonina Zapotockeho, Lisen, Czechoslovakia
Filed May 14, 1958, Ser. No. 735,149
4 Claims. (Cl. 29—552)



1. In a method of forging a metal ring and the like, the steps of clamping an elongated bar having a longitudinal axis in such a manner that an end portion of said bar projects through an opening into a die cavity in an axial direction; moving a mandrel member into said cavity against the projecting end portion of said clamped bar in a direction opposite to said axial direction to displace the material of said end portion of said bar in a radially outward direction about said axis until said material partially fills said cavity and forms an annular blank about said mandrel; further moving said mandrel member in said opposite direction and through said opening so as to sever said blank from the remainder of said bar, said mandrel member substantially conforming to said opening; and forcing said severed blank into said die cavity about said mandrel in said opposite direction until the blank is shaped into a ring conforming with said cavity.

3,046,654
PERSONAL HAIR CUTTER
Francis T. Letchfield and Francis T. Letchfield, Jr., both of 431 Canyon Road, San Mateo, Calif.
Filed June 9, 1961, Ser. No. 115,986
7 Claims. (Cl. 30—201)

1. A personal hair cutter comprising a housing substantially symmetrical about an axis and adapted to be held in the hand, a frame member secured to said housing on one side of said axis and extending therefrom in the direction of said axis, means on said frame member defining a mounting block having a planar guide way thereon disposed on said side of and parallel to said axis and having parallel planar side faces disposed on either side of said axis, serrated members secured to said mounting block in contact with said side faces and extending therefrom in parallel spaced relationship from said side of said axis to



the other side thereof, a cutter disposed between said serrated members in operative relationshp therewith, said cutter having a bar head in sliding engagement with said guide way and having a planar portion extending to said other side of said axis, a shaft extending from said housing along said axis and connected to one end of said bar head of said cutter, and driving means in said housing for reciprocating said shaft and said cutter in the direction of said axis.

3,046,655
SHEARS
Kenneth W. Sproson, East Orange, N.J., assignor to Bedard-Sproson, Inc., New York, N.Y., a corporation of New York
Filed Nov. 6, 1961, Ser. No. 150,261
7 Claims. (Cl. 30—233)

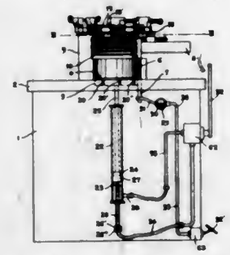


1. Shears comprising a pair of pivoted lever members, each lever member comprising a blade portion and a handle portion, each of said lever members having an integral rib portion upstanding from the outer face thereof, said rib portion extending continuously along the outer edge of said handle portion and the outer edge of the blade portion associated with said handle portion.

3,046,656
MACHINE FOR CUTTING CHEESES OF CYLINDRICAL SHAPE INTO SECTOR PORTIONS
Jacques Raymond Roger Bertrand, Roquefort-sur-Soulzon-Aveyron, France, assignor to Societe Anonyme des Caves & des Producteurs Reunis de Roquefort, Roquefort-sur-Soulzon, France, a body corporate of France
Filed Apr. 26, 1960, Ser. No. 24,786
Claims priority, application France July 10, 1959
9 Claims. (Cl. 31—26)

1. A machine for cutting cheeses of cylindrical shape into sector shaped portions, comprising a worktable having a circular opening therein, a circular platform on which the cheese to be cut is placed and fitting at rest in said opening, a stationary centering cylinder coaxially arranged with said platform at a distance above the worktable and of which the inner diameter and the height are substantially equal to those of the cheese respectively, said cylinder being provided with horizontal circular slots arranged from another at spaces equal to the thickness of the cheese sector portions to be made, means to vertically move said circular platform to introduce in a first step the cheese into said centering cylinder, a horizontal cutting device for preliminary cutting the cheese into slices of the said thickness and comprising an arc shaped hori-

zontal arm, a vertical shaft pivotally arranged on the worktable and carrying said arm, means for swinging said arm, steel wires horizontally stretched between the ends of said arm and facing the slots of the centering cylinder respectively, the distance between the middle of said wires and the middle of said arm being larger than the diameter of the centering cylinder whereby said wires are disengaged from the cheese at the end of the swinging stroke of the arm, a stationary vertical cutting device comprising a horizontal frame arranged above the cen-



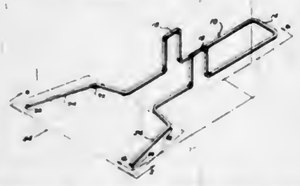
tering cylinder and having a circular opening therein coaxially arranged with the movable circular platform to move the cheese therethrough in a second step after the horizontal cut has been performed, a number of crossed steel wires regularly distributed and diametrically stretched across said opening of the frame, and regularly distributed diametrical grooves provided on the upper face of the support platform and adapted to be engaged by said steel coins at the end of the upward movement thereof in order to disengage said wires from the cut up cheese.

3,046,657
PROTECTIVE COVERING FOR BOVINE TEETH AND PROCESS OF APPLYING SAME
Albion Rood Menter, % Cottonwood Ranch Co., Sedgwick, Colo., and Ward C. Newcomb, P.O. Box 1002, Chappell, Nebr.
Filed Feb. 20, 1959, Ser. No. 794,613
5 Claims. (Cl. 32—12)



4. A bovine tooth crown comprising a solid top and a skirt having its skirt progressively decreased in cross sectional area from the top of the crown to the bottom of the skirt and a single fold in said skirt between a plane at approximately the mid-height parallel to the top of the crown and the bottom of the skirt.

3,046,658
MARKING DEVICE FOR DETECTING DENTAL PREMATURE CONTACT OF OPPOSING TEETH
Seymour L. Joffe, Dorchester House, 2480 16th St. NW., Washington, D.C.
Filed May 25, 1959, Ser. No. 815,585
15 Claims. (Cl. 32—19)



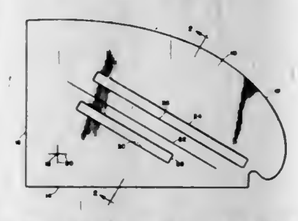
1. In a device of the class described, a holder having a pair of arms spaced at substantially mouth-wide distance from each other, and a thin and flexible marking film affixed to and held in substantially planar taut condition between said arms, said film having a marking medium transferable to promontories of teeth when said film is contiguous therewith.

3,046,659
MATRIX BAND RETAINING CLAMP
Benjamin F. Tofflemire, P.O. Box 677, Lafayette, Calif.
Filed Mar. 6, 1961, Ser. No. 93,435
9 Claims. (Cl. 32—63)



3. In a matrix band retaining clamp: a unitary substantially U-shaped member having a pair of juxtapositioned legs which are interconnected by an arch; the legs defining a narrow slot therebetween that is open at one end of the legs, whereby the member may be applied over the occlusal edges of overlapped end sections of a looped matrix band which encircles a patient's tooth, and the member may be moved gingivally so that the legs will straddle the end sections of the band, and with the member being movable into a position adjacent to the looped portion of the band; the slot being dimensioned so that the overlapped end sections of the band may be pulled therethrough by a matrix retainer to thus constrict the looped portion of the band around the patient's tooth; the material of the clamp member being malleable so that the legs may be crimped upon the overlapped end sections of the band by beaks of crimping pliers straddling the clamp member; at least one of the legs having a pair of spaced lugs disposed on its exterior surface; these lugs projecting beyond the outer surface of the leg on which they are formed and providing a vertical guideway through which a beak of the crimping pliers may be inserted into a final position over the clamp member.

3,046,660
ELLIPSE TEMPLATE
Eugene A. Fuess, San Diego, Calif. (439A W. Earll Drive, Scottsdale, Ariz.)
Filed Nov. 21, 1960, Ser. No. 70,720
2 Claims. (Cl. 33—1)



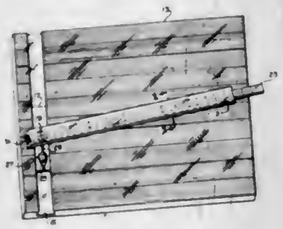
1. An ellipse drawing guide, comprising: a template of transparent flat sheet material having a curved edge of progressively varying radius corresponding to a composite curve of one quadrant of the ellipses in the range of ellipses to be drawn; a reference center point marked on said template; a linear visual reference line marked on said template and spaced from said center point; a pair of slots in said template; said slots having guide edges spaced in relation to said reference line such that, along a line projected from said center point to intersect a given point on said reference line, the distance from the center point to the reference line represents a known radius of the ellipse to be drawn and the distances from the center point to said guide edges represent two other radii of the ellipse.

3,046,661
METHOD FOR USE IN AERIAL PHOTOGRAPHY
Gilard Kargl, P.O. 6563, San Antonio, Tex.
Filed Apr. 20, 1955, Ser. No. 502,617
1 Claim. (Cl. 33—1)



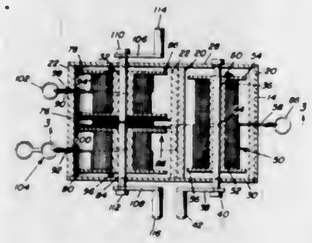
A method of determining the tilt of an aerial camera mounted on a surveying aircraft for use in rectifying the aerial photograph produced by such camera comprising the steps of photographically recording from immediately adjacent the aerial camera focal axis simultaneously with the taking of the aerial photograph a pair of views of the infrared light from the horizon with such views being taken through lines of sight angularly spaced approximately 90° relative to one another and each approximately 45° relative to an axis of the aerial photograph which axis is generally aligned with the direction of flight of the aircraft, determining the magnitude and direction of the slope of the horizon line represented by the recorded infrared light on each of said views relative to a horizontal reference line on such views, transposing the magnitudes of the slopes of said horizon lines into vectors, relating the vectors in a vector diagram to said axis of the aerial photograph at the angular relations between such an axis and the lines of sight through which the views were recorded, extending the respective vectors relative to said axis in accordance with the directions of slope of the respective horizon lines on said views, determining from the vector diagram the magnitude of tilt by reference to the vector length of the hypotenuse of the vector right triangle having as the legs thereof the vectors representing the magnitudes of slope of the respective horizon lines on the views and determining the azimuth of tilt of the aerial camera relative to said axis of the aerial photograph by reference to the azimuthal spacing such hypotenuse has to such axis as related to the vector diagram.

3,046,662
INTERPOLOMETER
Robert E. Chabot, Jr., Georgetown, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed July 15, 1958, Ser. No. 748,776
3 Claims. (Cl. 33—76)
(Granted under Title 35, U.S. Code (1952), sec. 266)



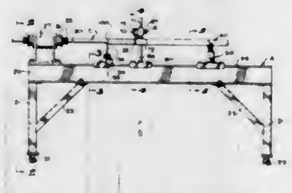
3. A device for performing linear interpolation comprising a rectangular base portion having a slot extending along one side thereof, said base portion having a series of horizontal lines ruled thereon to represent Y-axis values, a guided element slidably mounted in said slot, an arm pivotally mounted on said guided element for rotation about a point located on the longitudinal axis of said slot, a scale marked to represent X-axis values and adapted to slide along said arm, said scale having a centerline passing through the pivot point of said arm, thereby enabling determination of intermediate values of X and Y by adjusting said guided element to the known initial Y value and setting the known initial X value at the pivot point, rotating the X-scale until another known X value rests upon a corresponding known Y value on the base portion, any other X and Y value being found by reading corresponding values from the X-scale and the horizontal lines on the base portion.

3,046,663
THREE LINE CHALK BOX
Fred Romero, 2432 Del Sur Drive SW., Albuquerque, N. Mex.
Filed Sept. 16, 1959, Ser. No. 840,295
3 Claims. (Cl. 33—87)



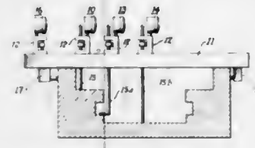
1. A device for drawing straight lines of various colors comprising a casing divided into a plurality of closed compartments, at least one spool rotatable in each compartment, a flexible line wound upon each of said spools and each line having a free end extending through a hole in each compartment wall, a quantity of marking powder of different color in each compartment, a removable transparent window in a wall of each compartment for viewing and refilling said powder, a crank connected to each spool for rewinding same and a ring secured to the free end of each of said lines for withdrawing the lines from their respective compartments, two of said spools being rotatably mounted on two spaced parallel axes, the crank connected to each of said two spools having a handle parallel to said axes, said handle being rotatable to a position closely adjacent one another, the ring connected to one of said two spools being a double ring whereby it may be fitted simultaneously over both of said handles when they are rotated to said adjacent position so as to permit the ring and line connected to the other of said two spools to support the device in a suspended position for using it as a plumb.

3,046,664
APPARATUS FOR MEASURING WALL THICKNESS OF TUBULAR MEMBERS
Vernon R. Powell, 35 59th Place, Long Beach 3, Calif.
Filed Feb. 29, 1960, Ser. No. 11,669
5 Claims. (Cl. 33—147)



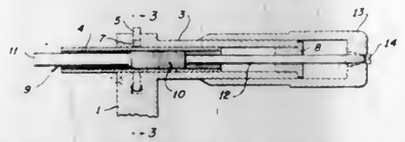
1. An apparatus for use in measuring the true wall thickness of a circumferentially extending segment of a tubular member at any desired longitudinal position thereon, comprising: an elongate base; an elongate rigid mandrel disposed above said base; first means mounted on said base for adjustably supporting said mandrel above said base and parallel thereto; a transversely positioned index wheel rotatably supported from an end of said mandrel, said wheel being of greater transverse cross section than that of said mandrel but of lesser transverse cross section than that of the bore of said tubular member; second means mounted on said base for rotatably supporting an intermediate portion of said tubular member when a part of said tubular member extends over said mandrel and has the interior surface thereof in contact with said wheel; third means positioned externally of said tubular member when said tubular member is supported on said wheel and second means for measuring variations in the wall thickness of said tubular member, said third means including a movable element in contact with the external surface of said tubular member and an indicating element operatively associated with said movable element to indicate the amount of movement thereof, said movable element and indicating element being calibrated with respect to said wheel to measure the thickness of the portion of the wall of said tubular member situated therebetween when said first means is adjusted to dispose said mandrel in a position where said tubular member is horizontal; and fourth means for limiting the movement of said tubular member toward said first means to a position where said circumferentially extending segment of said tubular member is transversely aligned with said movable element.

3,046,665
GAUGE ASSEMBLY
John C. Nilsson, 9 Van Duzer Drive, Poughkeepsie, N.Y.
Filed Aug. 24, 1959, Ser. No. 835,534
5 Claims. (Cl. 33—147)



1. In a gauge assembly, in combination, an erector bar having two sides and a central portion of uniform width and of less thickness than the height of the sides forming a web interconnecting the inner faces of the said sides, the web having openings therethrough, the upper and lower extremities of the said sides of the erector bar being ground flat surfaces determining, respectively, an upper and lower horizontal plane, the said planes being exactly parallel, a housing assembly having an upper and lower face and two sides, the housing sides being so spaced apart as to have a sliding fit between the inner faces of the sides of the erector bar, the housing being arranged between the said inner faces and on one side of the said web of the erector bar, means affixed on each of the sides of the housing assembly near one face thereof and including a ground flat thereon adjacent the said one housing face, the last-mentioned flats all being in the same horizontal plane, the body of the housing also defining a bore therein beginning from the said one face thereof, the central longitudinal axis of said bore being normal to the plane of the flats carried by said housing assembly, a clamp lug having an axial passage therethrough and arranged between the inner faces of the sides of the erector bar on the other side of the web, and a securing means arranged in order through the passage in the lug, one of the openings in the said web, and into the vertical bore of the said housing, whereby the erector bar, the housing and the lug are held in fixed relation with the flats on the means affixed to the housing in contact with the flat surfaces adjacent thereto on the erector bar.

3,046,666
MICROMETER
Paul Mesich, 2907 N. Downer Ave., Milwaukee, Wis.
Filed Nov. 24, 1959, Ser. No. 855,136
2 Claims. (Cl. 33—164)



1. A micrometer, comprising a yoke, an anvil mounted on one end of the yoke, a generally cylindrical barrel carried by the other end of the yoke and disposed in axial alignment with the anvil, a tubular internally threaded sleeve slidably disposed within the barrel, a lock nut to removably secure the sleeve to the barrel, stop means secured to the outer end of the barrel and extending radially inward of the barrel in position to be engaged by the outer end of the sleeve to prevent outward displacement of the sleeve from the barrel, said stop means having an axial opening therethrough, a spindle having a threaded portion threadedly engaged with the sleeve and having an inner end portion disposed to cooperate with the anvil to measure an article therebetween, said spindle having an outer end portion of reduced diameter disposed within said opening in said stop means and extending therebeyond, and a knob secured to the outer end of said spindle and slidably disposed with respect to the outer surface of the barrel, sliding movement of the sleeve within the barrel serving to move the spindle with relation to the anvil to provide a coarse adjustment of measurement of the article and rotation of said knob serving to move the spindle axially within the sleeve and provide a fine adjustment of measurement of the article.

3,046,667
UNIVERSAL SPOTTING MACHINE
Paul A. Martineau, Detroit, Mich., assignor to Aceweb Tool & Mfg. Co., Detroit, Mich., a company of Michigan
Filed Nov. 25, 1960, Ser. No. 71,615
6 Claims. (Cl. 33—174)

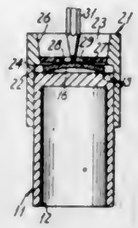


1. A die spotting fixture, comprising; a mobile support stand having a work receiving cradle member trunnion supported thereon, said cradle including a bed, a slide table provided on the bed of said cradle member and a rotary table provided on said slide table, a ram guided for reciprocal travel relative to the bed of said cradle, said ram being receptive of a master checking member and said rotary table being receptive of a work piece to be checked, and means for locking said tables in die checking fixed position relative to said cradle and the master die supporting ram thereof.

3,046,668
BIFOCAL MARKING DEVICE FOR CONTACT LENS BLANKS
Philip L. Salvatori, Sarasota, Fla., assignor to Obrig Laboratories Inc., New York, N.Y., a corporation of New York
Filed Jan. 4, 1961, Ser. No. 80,578
4 Claims. (Cl. 33—174)

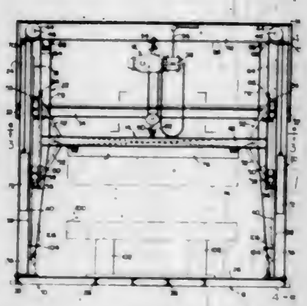
1. A marking device for bifocal contact lenses comprising a base member having a top surface area for sup-

porting a lens blank, said top surface area having indicia for centering said lens blank thereon, and a tubular top member to be mounted telescopically over the top of said base member, said top member having a templet mounted therein made of material incapable of scratching said



lens blank, said lens blank being holdingly engaged by said template, said template having an aperture corresponding to the shape of the marking to be applied to said lens blank, whereby a marking device may be projected through said aperture in said templet to block out a corresponding area on said lens blank.

3,046,669
FREE STANDING DIE SPOTTING RACK
John C. Lasko, Detroit, Mich., assignor to Republic Die & Tool Company, Wayne, Mich., a corporation of Michigan
Filed Nov. 16, 1959, Ser. No. 853,290
4 Claims. (Cl. 33—174)



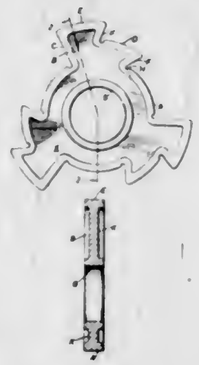
1. In an improved free standing device for spotting die units,
a floor bed to support a die unit to be spotted,
a framing structure for said device mounted upon said floor bed and comprising
spaced vertical corner columns at the corners of said floor bed,
horizontal beams conjoining said spaced vertical corner columns at their upper ends into a rigid frame,
a pair of spaced vertical columns supported on said floor bed and located medially at two opposite sides thereof and extending above said framing structure, and each having an
inwardly facing, opposed, vertically aligned guide plate mounted inwardly thereon,
an elevatable frame movably engaged on said guide plates, extending and disposed between said spaced vertical medial columns and within the peripheral limits of said framing structure, and adapted to support a die spotting element,
a beam member fixedly secured to and connecting the upper ends of said spaced vertical medial columns,
counterbalances movably supported on said beam member and connected to said elevatable frame,
cable means secured to said beam member and to said floor bed and through said elevatable frame to maintain said elevatable frame in true parallel relationship to said floor bed during vertical movement of said elevatable frame on said guide plates,
and means secured to said beam member to elevate and lower said elevatable frame from and toward a die spotting position,
whereby said elevatable frame when said die spotting element is supported thereon is maintained in true parallel and balanced relationship with respect to said floor bed upon said guide plates during vertical movement toward and into a position where said die spotting element makes true aligned die spotting contact with said floor bed supported die unit.

3,046,670
RADIUS GAGE
Anthony J. Wydra, 1974 Delaware Ave., Buffalo, N.Y.
Filed June 13, 1958, Ser. No. 741,944
2 Claims. (Cl. 33—178)



1. A radius gage comprising a substantially flat elongated metallic sheet having at one end a laterally bent portion arranged at an acute included angle to the normal and formed with an end edge recess not exceeding a quarter circle extending from one face of said sheet to the opposite face thereof and generated by a radius having a center in a plane intersecting the longitudinal center line of the gage and substantially bisecting said recess.

3,046,671
TEMPLET FOR CHUCK JAWS OF LATHES
Charles Clifford Moores, Mill House Farm, Warmingham, Sandbach, England
Filed June 18, 1958, Ser. No. 742,952
Claims priority, application Great Britain June 18, 1957
6 Claims. (Cl. 33—178)



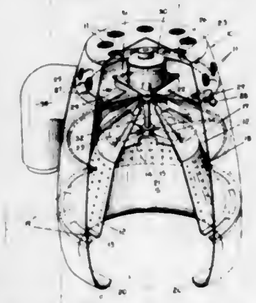
1. A templet for use in the preshaping of chuck-jaws comprising a plate, angularly spaced peripheral portions extending outwardly from said plate, said portions having a common radius of curvature about the center of said plate, angularly spaced arms having a common radius of curvature less than that of said portions and concentric with said portions, said arms being interposed between said portions, one edge of said portions being approximately radial and the other edge merging into the adjacent arm.

3,046,672
LEVEL
Harry S. Lace, 1441 N. Washtenau Ave., Chicago 22, Ill.
Filed Jan. 19, 1959, Ser. No. 787,434
13 Claims. (Cl. 33—207)



5. A level comprising a frame, a level indicating element mounted in readily visible position on said frame, said frame being formed with an internal chamber, magnet means embodying a permanent magnet element shiftably mounted on said frame in position normally retracted within said chamber and having portions movable into position outwardly of said frame to engage an external support of magnetically permeable material and hold the level thereon when applied thereto.

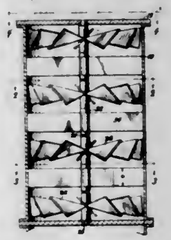
3,046,673
HAIR DRYER
George Nawroth, R.R. 6, Galt, Ontario, Canada
Filed June 15, 1959, Ser. No. 820,415
1 Claim. (Cl. 34—100)



A hair dryer having in combination a hair drying chamber having a perforate side wall and a dome shaped top formed with an air outlet, a casing surrounding said drying chamber and spaced therefrom to form an air heating chamber between adjacent walls of the heating chamber and the drying chamber, a partition in the upper portion of the casing, said partition having a central opening coaxial with said air outlet and valve control means having passages communicating with the air heating chamber, a ported baffle connecting the lower ends of the perforate side wall to the inner wall of the air heating chamber, a centrally apertured horizontally disposed partition in the upper portion of said hair drying chamber to provide a fan chamber in the upper portion of the hair drying chamber, a low velocity upwardly acting suction fan mounted within the fan chamber, a low velocity downwardly acting blowing fan mounted in the air heating chamber, an electric heater mounted in the air heating chamber adjacent the fan chamber, and a motor in the top portion of said casing and having a vertically and downwardly extending drive shaft on which said fans are coaxially mounted.

3,046,674
PELLET DISTRIBUTION
Ernest Wesche, Wellsville, N.Y., assignor, by mesne assignments, to Combustion Engineering, Inc., a corporation of Delaware
Filed June 5, 1958, Ser. No. 740,051
2 Claims. (Cl. 34—171)

1. A pellet heat exchange apparatus for the transfer of heat between a descending stream of pellets and a contra-flowing stream of gaseous fluid that comprises in combination an upright cylindrical housing including a pellet inlet port at its uppermost end and a pellet outlet port at its remotely spaced end, an inlet port for gaseous fluid in said housing adjacent the pellet outlet port and an outlet port for the gaseous fluid adjacent the pellet inlet port adapted to permit opposed flow of the pellets and gaseous fluid through the housing, pellet retarding and distribution means arranged axially within said housing to retard the descent of the pellets and intermix them thoroughly with the gaseous fluid, said retarding and



distribution means including an axial pivot rod supported concentrically within the housing on spaced radial supports; a series of axially spaced fan-like distributing elements rotatably mounted on said pivot rod, said fan-like element comprising essentially a series of laterally spaced radial blades that rotate freely upon contact with the descending pellets to retard their descent and distribute their flow throughout the housing while simultaneously permitting the ascent of gaseous fluid through the spacing between the blades to provide an optimum contact with the pellets.

3,046,675
COMPROMISE PROOF TEACHING DEVICE
Alexander Schure, Belle Harbor, N.Y., assignor, by mesne assignments, to Educational Aids Publishing Corp., Long Island, N.Y., a corporation of New York
Filed Nov. 16, 1960, Ser. No. 69,599
21 Claims. (Cl. 35—9)



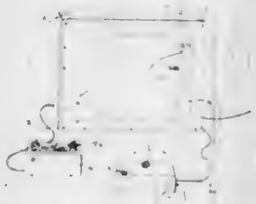
1. A teaching device comprising a backing, a program sheet attached to said backing containing stimuli on a first portion thereof and correct responses on a second portion spaced from said first portion, a response sheet of sufficient width to cover said second portion of the program sheet and adapted for movement over said second portion, means attached to said backing for guiding the movement of said response sheet so that the response sheet covers said second portion during movement thereof, a pressure sensitive transfer member located between said response sheet and said second portion, whereby a response to a question indicated by pressure pro-

ducing means is transferred to said second portion, and said response sheet and transfer member being formed with openings in locations to overlie the correct responses on said second portion when said response sheet is moved into predetermined positions.

3,046,676
TRAINING APPLIANCES FOR MARKSMEN

Joachim Hermann, Munich, and Horst Senger, Ottobrunn, near Munich, Germany, assignors to Bölkow-Entwicklungen K.G., Ottobrunn, near Munich, Germany

Filed Mar. 21, 1960, Ser. No. 16,567
Claims priority, application Germany Mar. 26, 1959
21 Claims. (Cl. 35—25)

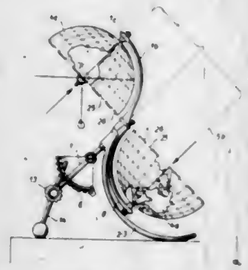


9. In a guided missiles simulator of the kind described, a housing containing a single-beam cathode ray tube, a deflection amplifier effective to control said cathode ray tube, an electronic switching unit connected to said deflection amplifier, a first electronic unit connected to said switching unit, a second electronic unit connected to said switching unit and a program unit connected to said first and second units, steering means adapted to be installed apart from the housing, a control element in the form of a control column on said steering means, operating means adapted to be installed apart from the housing, switching elements and a control element on said operating means effective to set the apparent target distance, said steering means being electrically connected by cable to said first unit and to said program unit, said operating means electrically connected by cable to said second unit and to said program unit, said control element being connected to said program unit and determining the duration of an operation therein.

3,046,677
METHOD AND MEANS FOR REPRODUCING IN A PERFECTLY CORRECT MANNER TERRESTRIAL AND CELESTIAL MAPS

Luigi Patella, % Realization Industriales Technia S.A., Montevideo, Uruguay

Filed June 28, 1960, Ser. No. 39,322
Claims priority, application Switzerland June 29, 1959
4 Claims. (Cl. 35—47)



3. An article illustrating the celestial and terrestrial spheres, comprising two hemispheres forming a globe, the outer surface of which carries a representation of the actual terrestrial sphere and the inner surface of which carries a representation of the celestial sphere, means for supporting said hemispheres for relative rotation about an axis perpendicular to a plane passing through the equatorial line of said globe from a globe forming position to a side by side position in which relative directions in the hemispheres remain unchanged and means for simultaneously obtaining a correct setting of said four representations of the actual terrestrial sphere and of the celestial sphere upon correct setting of one of the latter.

3,046,678
COMBINATION STILT AND FLOAT

Gino Ramon, 2317 N. Palmer St., Milwaukee, Wis.

Filed Feb. 8, 1961, Ser. No. 87,881
1 Claim. (Cl. 36—7.6)

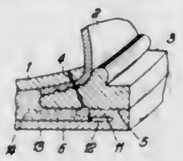


A stilt comprising a body having a lower flat surface, a pair of spaced bosses thereon adjacent each side margin thereof having threaded apertures extending therethrough, long threaded pins received in said apertures and depending therefrom, whereby said body portion is spaced from an underlying supporting surface by said pins, angular strap holders retained by said pins, and foot retaining straps held by said holders.

3,046,679
FOOTWEAR WITH BOTTOM SOLES MADE OF ELASTIC MATERIAL

Klaus Maertens, St. Heinrich Strasse, Seeshaupt, Germany; Herbert Funck, 83 Planegger Strasse, Munchen-Pasing, Germany; and Heinrich Götz, 7 Farberstrasse, Augsburg, Germany

Filed May 23, 1957, Ser. No. 661,199
4 Claims. (Cl. 36—17)



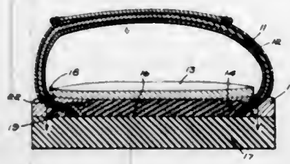
1. An article of footwear comprising an upper, an insole, an elastic welt member having a flat undersurface, means securing the upper, insole and welt together, an elastic bottom sole member having a flat marginal surface bound to the undersurface of the welt member, said insole, welt and bottom sole members defining a spacing between the insole and the bottom sole member, a cushion element arranged in said spacing, one of said members having a deep slot-shaped groove of narrow width and greater depth than width spaced a distance from said undersurface and substantially parallel thereto, said groove remaining permanently open and extending over at least the region of the ball portion of the article so that stresses tending to break the connection between the flat surfaces at the edge of the connection adjacent to the groove are transferred through the body of the member having said groove towards the inner region of the surfaces.

3,046,680
RUBBER-SOLED SAFETY SHOE

Lawson T. Hill and Lawson T. Hill, Jr., Weston, Mass., assignors to Hill Bros. Co., Hudson, Mass., a corporation of Massachusetts

Filed May 2, 1960, Ser. No. 26,302
1 Claim. (Cl. 36—77)

A safety shoe comprising an upper, a metal box incorporated in the toe portion of the upper and having a downwardly directed bottom margin, a flexible insole, a leather welt stitched to the upper and insole, a resilient outsole secured to said welt, and a bottom filler of soft, resilient material disposed between the insole and outsole at the forepart of the shoe; said welt having a base portion extending inwardly of the shoe a substantial distance relative to said bottom margin of the metal box, and having a stitch groove disposed inwardly of the shoe a substantial distance relative to the edge of said margin;

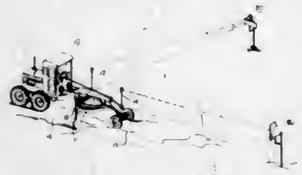


said welt base having an outer portion of substantial thickness in the path of downward movement of said box margin, whereby such downward movement of the box relative to the outsole causes said box-edge to engage the thick portion of the welt at a region remote from said stitch groove and remote from said resilient bottom filler; said insole flexible downwardly on the resilient filler when pressure is applied to the top of the metal box with the foot in the shoe.

3,046,681
CONTROL APPARATUS

Robert J. Kutzler, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed May 23, 1960, Ser. No. 31,172
10 Claims. (Cl. 37—143)



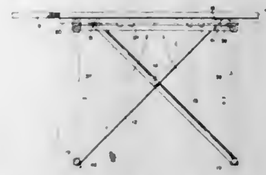
1. Control apparatus comprising; an earth working instrumentality; a vehicle adapted to carry said earth working instrumentality; control means mounted on said vehicle and connected to control the position of said instrumentality relative to a reference datum; means for establishing a reference datum including a tri-planar reflecting device and further means for selectively limiting the reflection of incident energy thereon so that a reference datum is defined by the apex of said reflecting device and said selective limiting means; transmitting and receiving means carried by said vehicle and mounted so as to provide relative movement thereto, said receiver being responsive to reflected energy to supply a signal for controlling the position of said transmitter and receiver and said instrumentality to a position corresponding to said reference datum.

3,046,682
IRONING TABLE WITH EXTENSIBLE IRONING BOARD SURFACE

Bernadette Butler, 120 Wellbroock Ave., Staten Island, N.Y.

Filed Apr. 20, 1961, Ser. No. 104,453
8 Claims. (Cl. 38—138)

1. An ironing table comprising a main ironing board having main legs supporting the same and means for widening the ironing area of the table comprising a panel normally in a position under the board adjacent one longitudinal edge of the board adapted to be pulled out laterally from said position and raised to a position in the plane of the board with a longitudinal edge of the panel in contact with said longitudinal edge of the board, alternately extensible and retractable means connecting the panel to the board for supporting the panel when extended in said second-named position and for supporting said panel when retracted in said first-named position, and

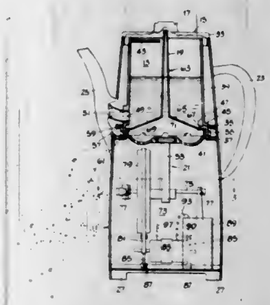


resilient means normally urging the panel laterally into either of said positions, said connecting means comprising a linkage having one end pivoted to the underside of the panel, the board having at least one headed pin extending downwardly from the underside thereof, a bracket slidably mounted on said pin and having the other end of said linkage pivoted thereto, and a coiled spring surrounding said pin between the head thereon and said bracket.

3,046,683
TOY

William F. Buh, Jr., Waukegan, and Carl Ayala, Chicago, Ill., assignors to Marvin I. Glass, Chicago, Ill.

Filed June 20, 1960, Ser. No. 37,140
8 Claims. (Cl. 40—106.22)

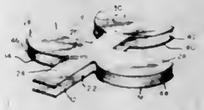


6. A toy percolator comprising a pot having a lid with a transparent portion, a liquid reservoir in the pot, and a mechanical pump in the pot having a discharge conduit directed upwardly and terminating in an open end beneath and adjacent to said transparent portion, said pump and conduit being capable of spouting liquid freely upwardly from said open end toward said transparent portion.

3,046,684
HONEYCOMB DISPLAY DEVICE

Robert D. Tritt, 702 N. Pitt St., Carlisle, Pa.

Filed Mar. 5, 1959, Ser. No. 797,524
2 Claims. (Cl. 41—11)



2. A display device comprising a pair of stiff sheet facing support members having a trunk portion and a plurality of branch portions, at least two of said branch portions of one member being oppositely disposed to a

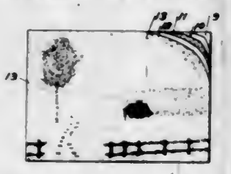
like number of branch portions of the other member, and flexible extensible honeycomb structure mounted between and attached to said oppositely disposed portions and comprising the only connection between said portions, said honeycomb structure being of sufficient length to enable it when extended to assume more than one position.

3,046,685
WREATH
Charles A. Blum, 40 Raynham Road, Merion, Pa.
Filed Mar. 7, 1961, Ser. No. 93,985
2 Claims. (Cl. 41—12)



1. A holiday wreath comprising a plastic wire-like member having integral pins extending therefrom in a direction substantially perpendicular to the longitudinal axis of said member, said pins being disposed at spaced points along the length of said member, said member having two free ends, one end of said member having a hollow portion frictionally receiving the other end of said member, a plurality of hubs corresponding in number to to the number of pins, each hub having a plurality of simulated holly leaves integrally connected therewith and extending outwardly therefrom in a direction substantially perpendicular to the longitudinal axis of said pins, means frictionally and releasably securing each hub to a separate one of said pins in a manner so that said hubs are frictionally interconnected with said pins in all angular dispositions of said member and so that the simulated leaves may be removed in a direction corresponding to the longitudinal axis of its respective pin without interfering with the mounting of other simulated leaves, and at least one simulated berry having a hub frictionally and releasably secured to each pin.

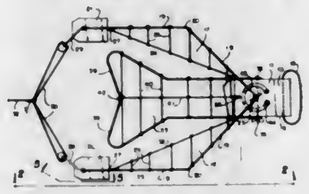
3,046,686
WORK OF ART IN THREE DIMENSION AND METHOD OF MAKING SAME
Arnold B. Fogle, Shelbyville, Ind.
Filed Sept. 8, 1959, Ser. No. 839,048
3 Claims. (Cl. 41—22)



1. A method of producing a work of art in the form of an image having a realistic appearance when observed as if being viewed through depths of atmosphere corresponding to the relative distance from an observer to various objects in the image, comprising the steps of applying a complete, two dimensional original image having background and foreground objects to a surface, applying to said original image a plurality of perceptibly translucent coverings in sufficient number and density to produce the effect of varying depths of atmosphere at selected distances from an observer of the image, and applying color tones only to foreground objects of the image perspectively nearer an observer on selected ones of said translucent coverings before covering with additional layers of said plurality of coverings to provide a number of translucent coverings above each foreground and background object proportional to the real atmospheric depth of said objects pictured in the original image.

2. A pictorial device in the form of an image having a realistic appearance when observed as if being viewed through depths of atmosphere corresponding to the relative distances from an observer to various objects in the image, comprising a surface to which is applied a complete, two dimensional, original image having background and foreground objects, a plurality of consecutive perceptibly translucent coverings on said surface and original image in sufficient number and density to produce the effect of varying depths of atmosphere at selected distances from an observer of the image, and color tones applied only over and registering with foreground objects of the image perspectively nearer an observer on selected ones of said translucent coverings before covering with additional layers of said plurality of coverings to provide a number of translucent coverings above each foreground and background object proportional to the real atmospheric depth of said objects pictured in the original image.

3,046,687
DUCK RETRIEVING DEVICE
Donald D. Erdman, P.O. Box 394, Kodiak, Alaska
Filed Nov. 27, 1959, Ser. No. 855,883
1 Claim. (Cl. 43—1)

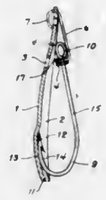


A water game retriever comprising, a main float having four sides of substantially rectangular cross section, four wire loops each interlaced with netting to form four wings projecting from the ends of the four sides of the float, said loops having ends secured by bolts to opposite sides of the float in an adjustable angular relationship with respect to said sides, said wings forming a substantially conical trap having an apex formed by one end of said float, an elastic cord longitudinally bisecting each wing to retain the netting in a taut condition, two of said wings disposed opposite to each other having further floats mounted at their extremities, handles attached to the ends of each of said floats, a yoke connecting the handles of said further floats, and a line for attachment to the centre of said yoke, said retriever being adapted to float in water on said floats such that the water level substantially bisects the conical trap formed by the wings.

3,046,688
DEVICE ON A SPOON-HOOK
Aimo E. Leisti, Puistotie 6, Kotka, Finland
Filed Dec. 4, 1959, Ser. No. 857,439
3 Claims. (Cl. 43—35)

1. In a spoon hook, a spoon, means for mounting a hook thereon, and a hook of the Kirby type carried by said mounting means, said mounting means including means for mounting the upper end of the shaft of said hook on said spoon adjacent the upper end thereof, said mounting means including resilient means for holding said upper end of said hook in engagement with the surface of said spoon and said mounting means and said hook being formed for rotation of said hook with respect to said mounting means, the barbed end of said hook being

carried by an arm portion extending laterally from the line of the shaft of said hook, said spoon being formed with a groove therein co-extensive with said arm of said hook, said arm being seated in said groove in the protected position of said hook, said resilient mounting means serving to hold said hook with said arm in engagement with said spoon in said protected position with a



projection of the line of said hook shaft falling on said spoon to the side of a line drawn between the respective points of engagement of said upper end of said hook and of said arm with said spoon, whereby, when pressure is applied to said shaft, said hook is released from said protected position and rotates into an operational position with said barbed end of the hook facing outwards.

3,046,689
BAIT HARNESS ASSEMBLY
James M. Woodley, Maplewood, La., assignor to Dido Lures, Inc., Houston, Tex., a corporation of Texas
Filed July 6, 1960, Ser. No. 41,188
1 Claim. (Cl. 43—42.24)



In a lure, the combination of a bait harness for securing a relatively soft and pliable worm body to a double hook having elongate shank means and a pair of hook bends diverging therefrom and forming a crotch therebetween, comprising a plastic ring encircling and engaging around the hook shank means and the worm body, the diameter of the plastic ring being slightly less than the combined normal straight-line distance diametrically through the body and hook shank means, and having an axial length which is a small fraction of the length of the hook shank means whereby to constrict said worm body and compress the same tightly against said hook shank means, said worm body nesting in said crotch, an attractor blade having an eye at one end thereof, a blade support including a wire having an elongate body portion and a closed loop at one end thereof, said loop freely engaging through said eye with substantially universal swinging movement, and means including said plastic ring for mounting the body portion of said blade support alongside the hook shank means, said loop being disposed in the crotch between the diverging hook bends, whereby reactive forces resulting from the swinging of said blade cause said worm to wiggle.

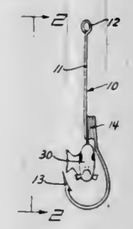
3,046,690
ATTRACTOR MOUNTING FOR FISHHOOK
James M. Woodley, Maplewood, La., assignor to Dido Lures, Inc., Houston, Tex., a corporation of Texas
Filed July 6, 1960, Ser. No. 41,187
1 Claim. (Cl. 43—42.38)

An attractor mounting for fishhooks comprising a fishhook having a shank, a flexible plastic sleeve engaging loosely over the shank, a substantially J-shape spring wire having a stem and a leg engaging in and being surrounded by the sleeve, the free end of the leg being normally divergent from the stem whereby to snag the inner side of the sleeve in response to pulling on the



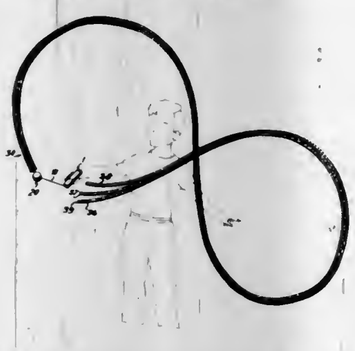
free end of the stem, and means on the free end of the stem for attaching an attractor to the same.

3,046,691
LIVE BAIT FISH HOOKS
William R. Courtright, 11335 Artesian, Detroit, Mich.
Filed Aug. 22, 1957, Ser. No. 679,694
1 Claim. (Cl. 43—44.8)



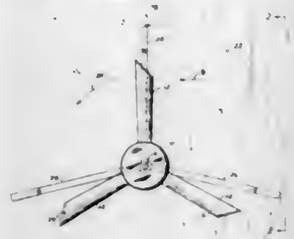
A live bait fish hook including an upper vertical shank portion, a lower open looped barbed hook portion, and an intermediate coiled spring bait holding portion of at least two full coils having a horizontal axis substantially normal to said shank portion and interconnecting said shank and hook portions with said shank and hook portions disposed at opposite ends of said coiled spring portion, the said open loop of said barbed hook portion being disposed below said shank portion and said coiled spring portion and in a plane substantially in alignment with the horizontal axis of said coiled spring portion.

3,046,692
WHIRLING TOY
Albert M. Steiner, Cincinnati, Ohio, assignor to Bromo Mint Company, Cincinnati, Ohio, a corporation of Delaware
Filed June 2, 1961, Ser. No. 114,349
4 Claims. (Cl. 46—52)



1. A toy for producing visual and sound effects comprising a hollow, tubular baton member, a diaphragm mounted in said baton member interiorly thereof, a cord secured to the diaphragm and extending outwardly therefrom and streamers secured to the extended end of the cord whereby swinging of the baton extends the streamers and the simultaneous chafing of the cord against the baton edge produces a sound effect.

3,046,693
WIND OPERATED AMUSEMENT DEVICE
Edward M. Blackburn, West Nyack, N.Y.
(521 5th Ave., New York 17, N.Y.)
Filed Dec. 29, 1959, Ser. No. 862,616
8 Claims. (Cl. 46—53)



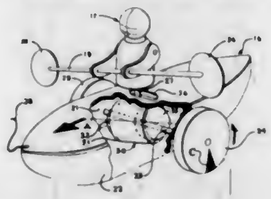
1. An amusement device of the type described comprising a hollow hub member, means supporting the hub for rotation about a given axis, a plurality of hollow generally transparent arms opening into and extending from the hub member in a direction generally outwardly from said axis and formed so the device is wind rotated about its axis when disposed in an enveloping air stream generally normal to said axis, said arms being arranged so the device is generally dynamically balanced for rotation about said axis, an active member loosely disposed in at least one of said arms for free movement therewithin with the outer ends of the arms being open to permit the ingress and egress of air but being formed to prevent the escape of the active member therethrough.

3,046,694
JET PROPELLED TOY ARRANGEMENT
Oscar C. Holderer, 2304 Oakwood Ave. NW., Huntsville, Ala.
Filed Sept. 20, 1957, Ser. No. 685,127
3 Claims. (Cl. 46—74)



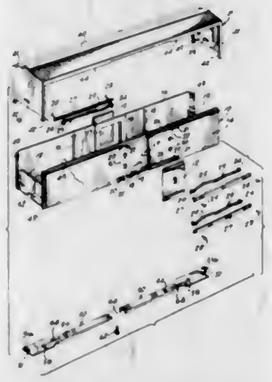
1. A self-propelled toy arrangement comprising a propelled unit and a launcher unit, said propelled unit comprising a body having a pressure chamber formed therein and a nozzle orifice connecting between said chamber and the outside of said body, the bounding surface forming said orifice having a continuous annular circumferential transverse recess formed therein and spaced from the outer end of said orifice, said launcher unit comprising a stem substantially complementary to said orifice, said stem having a continuous circumferential nodule formed thereon complementary to and in substantially fluid-sealing relation to said recess, said nodule having on its side extending toward the outer end of said orifice a surface extending at a first average angle of slope with respect to the longitudinal axis of said stem and said orifice, said nodule having on its side extending toward the interior of said pressure chamber a surface extending at a second average angle of slope with respect to the longitudinal axis of said stem and said orifice, said second average angle of slope being substantially smaller than said first average angle of slope.

3,046,695
WOBBLE MOTION MECHANISM
Erling G. Henrickson, 9151 S. Hobart Blvd., Los Angeles 47, Calif., and George A. Moore, 1607 Crest Ave., Encinitas, Calif.
Filed Sept. 22, 1958, Ser. No. 762,462
8 Claims. (Cl. 46—104)



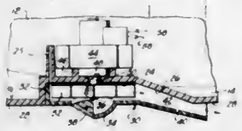
1. An animated pull toy comprising: a substantially horizontal, longitudinal frame having transversely spaced sides in the shape of a boat; a transversely disposed, substantially horizontal shaft rotatably carried at its ends by said sides; spaced wheels fixed on said shaft and adapted to engage a surface; a transversely disposed sleeve surrounding said shaft between said wheels and having an axis which angularly intersects the axis of said shaft; a substantially vertically extending member in the shape of a man holding a transversely disposed double-ended paddle fixed on said sleeve; guide means on said boat frame having an opening formed therein for slidably receiving the vertically extending member and thereby limiting longitudinal and lateral movement of said member; rotatable means fixed on said shaft and having two bearing surfaces rotatably cooperating with the inner surface of said sleeve for causing said sleeve and man member to wobble and oscillate when said shaft is rotated; and adjustable means operatively connected to said shaft for varying the angle between the axis of said sleeve and the axis of said shaft.

3,046,696
TOY RAILROAD CARS
Moses Zion, Brooklyn, N.Y., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed Nov. 27, 1957, Ser. No. 699,263
11 Claims. (Cl. 46—218)



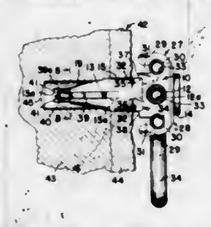
1. A toy comprising a car body with separable floor and end portions, a pair of securing straps each having one end secured to one of the car end portions and said straps having their adjacent ends in contact and secured to the car floor portion by means secured to their adjacent ends.

3,046,697
TOY MOTOR BOATS
Eric V. Pullen, Canoga Park, Calif., assignor, by mesne assignments, to Eldon Industries, Inc., Hawthorne, Calif., a corporation of California
Filed Feb. 5, 1960, Ser. No. 7,040
2 Claims. (Cl. 46—243)



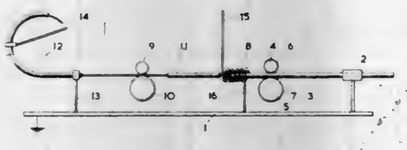
1. A toy electrical motor boat which includes:
a hull having a bow, a stern, a keel and a water line, said hull having a flat cylindrical cavity located in the bottom thereof beneath said water line, the upper side of said cavity having a centrally located hole formed therein leading into the interior of said cavity, said hull including a continuous wall located within the interior thereof and extending around said hole and above said water line, said hull also including a curved groove leading from the periphery of said cavity toward said stern and a vent pipe leading from the top of said cavity to above said water line;
electrical motor means positioned within said hull so as to be supported by said wall, said motor means having a drive shaft extending vertically therefrom through said hole into the center of said cavity along the axis of said cavity;
a cover secured to the periphery of said cavity, said cover enclosing said cavity and conforming in external appearance to a part of said hull, said cover including an inlet scoop located adjacent to the center of said cavity and extending outwardly from said hull, said scoop being pointed toward said bow and defining an inlet into the center of said cavity, said cover also including an extension covering said groove and extending from the exterior of said hull toward said stern, said extension defining in conjunction with said groove a passage leading from the periphery of said cavity toward said stern; and
impeller means mounted upon said shaft within said cavity;
electric means for operating said motor means mounted within said hull above said water line and being electrically connected to said motor means; and
separate rudder means mounted on said hull adjacent the stern thereof, said rudder means being located so as to be capable of directing fluid ejected through said passage defined by said extension.

3,046,698
APPARATUS FOR COLLECTING SAP
George B. Breen, Jamaica, Vt., and John E. Cahill, Birchwood, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,280
15 Claims. (Cl. 47—52)



1. A sap collecting fitting comprising a body portion defining the juncture of at least two conduits, an open ended tubular spile segment extending from said body portion and defining an extension of one conduit from said body portion, said spile segment including a tapered portion and being adapted to be removably inserted into a tree bore, a plurality of radially projecting angularly spaced ribs extending axially of said tapered portion, said spile segments also having a plurality of grooves extending back from its terminal end, and at least one tubular conduit connector extending from said body portion and defining an extension of another conduit from said body portion.

3,046,699
PROCESS FOR PRODUCING GLASS HELICES
Denis Henry Desty, John Norman Haresnape, and Barry Herbert Francis Whyman, all of Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London England, a joint-stock corporation of Great Britain
Filed Sept. 29, 1959, Ser. No. 843,189
Claims priority, application Great Britain Apr. 9, 1959
6 Claims. (Cl. 49—84)



1. A process for the production of filaments of vitreous material in helical form which comprises causing a filament of vitreous material to advance successively through a softening zone, a shaping zone and a setting zone; confining said filament in its advance through said softening zone to a rectilinear path while supplying heat to said filament in said path at a rate to heat it to a temperature at which it is in a softened state; confining the softened filament in its advance through said shaping zone to a curvilinear path shaped to an arc of a circle while supplying heat to the softened filament in its advance along said curvilinear path, to maintain the softened filament at a temperature at which it remains in said softened state, such that the softened filament is caused to conform to the shape of said curvilinear path; and confining the shaped filament in its advance through said setting zone to a curvilinear path shaped to an arc of the same circle while cooling the advancing shaped filament in said last mentioned path to a temperature at which it is set to shape.

3,046,700
WEATHERBOARDING CONSTRUCTION AND METHOD FOR EXTERIOR WALLS
Aaron W. L. Davenport, 4814 10th St. NE., Washington, D.C.
Filed Sept. 21, 1955, Ser. No. 535,650
6 Claims. (Cl. 50—200)

2. In a weatherboarding for the vertical studs of a building frame, a plurality of spaced nailing strips secured to said studs transversely thereof, each of said strips having a downwardly and forwardly opening rabbet defined by wall portions providing downwardly and forwardly facing portions in the lower and forward portion of each strip, and a plurality of courses of overlapping weather units placed over said studs and strips, each of said units comprising an inner insulation layer and an outer shingle, the top edge of said insulation layer engaging the downwardly and forwardly opening rabbet of a nailing strip and being at least substantially continuously backed up thereby, and the top edge of said shingle overlying the

face of the same strip and being in alignment with the top edge of said strip, the said nailing strip thereby serv-



ing as a nailing guide for the course of units in engagement therewith.

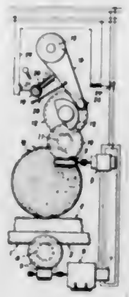
3,046,701
HINGED SECTION FOR UMBRELLA TOPS
Samuel N. Small, Valley Stream, N.Y., assignor to Alfred G. Cohen and Paul Weiss, both of Flushing, N.Y.
Filed June 15, 1959, Ser. No. 820,498
2 Claims. (Cl. 50—229)



1. A structure of the character described, comprising a plurality of pairs of sections, each section of the pair having contracted side edge portions, adjacent side edge portions of the sections having interfitting curved hinge portions, one of said hinge portions directly engaging a rib extending longitudinally of the hinge portion, the hinge portions of each of said sections including adjacent the curved portions thereof wall portions angularly offset with respect to each other in providing clearances for movement of the sections into extended and collapsed positions, at least one of the offset wall portions of each section being straight and parallel to the body portion of its section, outer side edge portions of said pairs of sections including other interfitting curved hinge portions hingedly joining one pair of sections with adjacent pairs of sections, a bracket fixed to said rib at a point intermediate the ends of the rib, and the first named curved hinge portions of said pairs of sections being cutout to clear said bracket in hinge movement of the sections one with respect to the other.

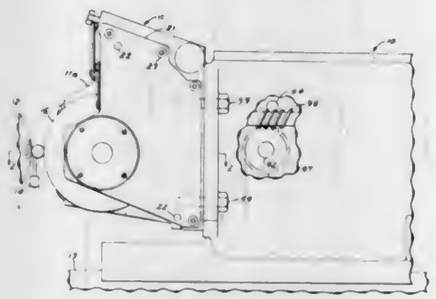
3,046,702
DEVICE FOR GRINDING WORK SURFACES CURVED IN THE LONGITUDINAL DIRECTION
Otto Bretscher, Dorf, Zurich, Switzerland, assignor to Gesellschaft der Ludw. von Roll'schen Eisenwerke Aktiengesellschaft, Gerlafingen, Switzerland, a company of Switzerland
Filed Dec. 17, 1958, Ser. No. 781,094
Claims priority, application Switzerland Dec. 17, 1957
3 Claims. (Cl. 51—92)

1. A device for grinding substantially flat work pieces so as to arch said work piece in one direction, comprising a rectilinearly reciprocal work table for supporting a work piece, a grinding wheel, a support located above said table and rotatably carrying said grinding wheel, said support being mounted for raising and lowering movements, an electrical generator operatively connected to said work table, an electric motor in circuit with said electrical generator, said electric motor being energized by said electrical generator in timed relation with the movement of said work table, an interchangeable cam operatively connected with said electric motor, cam follower means cooperating with said cam and with said grinding wheel



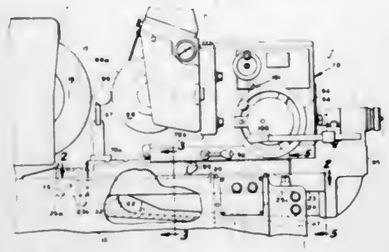
so that the deflections generated from the cam are transmitted to the grinding wheel for regulating the elevation-adjusting operation in dependence on the motion of said work table, whereby the work piece may be ground with a high degree of precision, said cam follower means including a swivelling lever having a roller engaging said cam so as to follow its movements, said lever being in operative connection with said support, said support being eccentrically mounted so that rotation of said lever will adjust the grinding wheel.

3,046,703
REGULATING WHEEL SPINDLE MOUNTING AND DRIVE FOR A CENTERLESS GRINDING MACHINE
George L. Grove, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 21, 1959, Ser. No. 841,393
7 Claims. (Cl. 51—103)



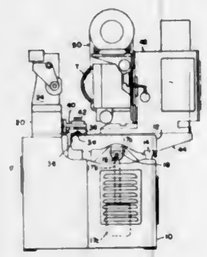
1. In a centerless grinding machine having a grinding wheel, a regulating wheel housing mounted opposite the grinding wheel, a pair of spaced aligned bearings mounted in said housing, a spindle rotatably supported by said bearings, a regulating wheel mounted on said spindle between the bearings, and means operatively engaged with said spindle between said bearings to preload the spindle in the bearings away from the grinding wheel to prevent cocking of the spindle in the bearings as force is applied to the regulating wheel during grinding.

3,046,704
MACHINE TOOL SLIDE AND MOUNTING THEREOF
Albert H. Dall and George L. Grove, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 24, 1959, Ser. No. 842,007
10 Claims. (Cl. 51—103)



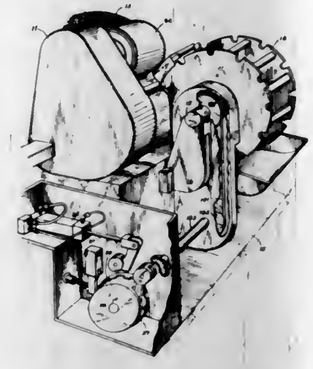
1. In a center grinding machine, a base having a grinding wheel mounted thereon and having a flat way in front of the grinding wheel, a guide member pivotally connected to the base and angularly adjustable in a plane parallel to the way and relative to the plane of the grinding wheel, said guide member having means defining a pair of oppositely facing guide faces, a workpiece supporting slide having a pair of faces positioned for guiding engagement with said guide faces, respectively, said slide mounted directly on the way and supported solely thereby for guided movement thereon along said guide member towards and away from the grinding wheel.

3,046,705
GEAR FINISHING MACHINE
Thomas S. Gates, Grosse Pointe Woods, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed June 8, 1959, Ser. No. 818,574
16 Claims. (Cl. 51—105)



1. A gear finishing machine comprising a base, a work support on said base, said work support including a rotary work spindle adapted to support a work gear, a tool slide mounted on said base for reciprocation in a plane parallel to the axis of said work spindle, a cross slide mounted on said tool slide and including a column, a tool supporting and driving assembly mounted on said column for angular adjustment about an axis perpendicular to and intersecting the axis of said work spindle, a relatively light tool head mounted on said assembly for limited movement toward and away from said work support, said tool head including a rotary tool spindle for supporting a gear-like tool, said assembly including a drive motor, flexible transmission means connecting said motor to said tool spindle and providing for movement of said tool spindle relative to said tool supporting and driving assembly, and means for urging said tool head toward said work support with a predetermined constant force.

3,046,706
AUTOMATIC PLUNGE GRINDER
Ralph E. Price, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.
Filed Mar. 25, 1960, Ser. No. 17,596
23 Claims. (Cl. 51—165)

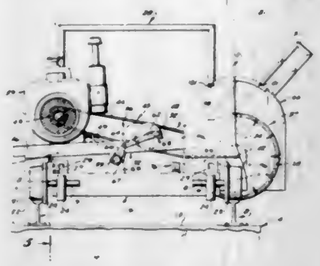


1. In a machine tool, a bed, means for rotatably supporting a workpiece on said bed comprising spaced extended portions on the front of said bed, a headstock mounted on one of said portions and a footstock mounted on the other of said portions, a work carrier rotatably supported between said extended portions for presenting successive workpieces to be supported by said headstock and said footstock, means for actuating said headstock and footstock to engage and support a workpiece, a tool support slidably mounted on said bed for movement toward and from a workpiece carried by said headstock and footstock, means for indexing said work carrier comprising a shaft for driving said work carrier, a drum rotatable on said shaft, a notched ring rotatable with said shaft relative to the peripheral surface of said drum, a retractable pin in said drum for engaging said notches to lock said notched ring and said drum together, means for rotating said notched ring, said drum, and said work carrier, a resiliently actuated pawl for centering said notched ring and removing said pin therefrom whereby to permit said notched ring to return to starting position and said pin to enter the next notch, and means to prevent the return of said tool support toward said workpiece until after said indexing means has turned said work carrier to place another workpiece in position for machining.

3,046,707
CUT-OFF SAW
Edward F. Obear, 940 W. Florence Ave., Los Angeles, Calif.
Filed Apr. 11, 1960, Ser. No. 21,390
6 Claims. (Cl. 51—178)

1. A rail cutting device comprising: carriage means having a plurality of wheels arranged so as to ride on a pair of spaced, parallel rails; frame means having ends and pivotally mounted on said carriage means for pivotal movement about a transverse axis intermediate said ends; cutter means rotatably mounted on one end of said frame means for rotation in a plane transverse to said rails and said axis of pivotal movement and overlying one of said rails; power drive means mounted on the opposite end of said frame means and having a driven shaft; power transmission means connecting said power drive means and said cutter means for translating rotation of said driven shaft into rotation of said cutter means, and oscillating means actuatable by said power transmission means for oscillating said axis of pivotal movement so as to oscillate said frame means and there-

by said cutter means during rotation of said cutter means, said frame means being pivotable in a direction to engage said cutter means with said one rail for transversely cutting said one rail.

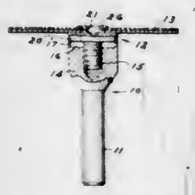


3,046,708
LENS SURFACING TECHNIQUE
Louis J. Prunier, Oxford, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Nov. 2, 1959, Ser. No. 850,289
7 Claims. (Cl. 51—185)



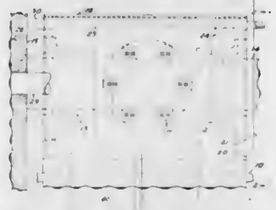
1. A replaceable facing for the surface of a lens abrading tool comprising a sheetlike member embodying a strand of wire of a controlled circular cross-sectional diameter spirally wound in an initially single plane and to an area sufficient to cover the area of the surface of the tool, means for securing said windings in said initial single plane to form a unitary structure which may be handled as such and means for removably securing said facing in intimate conforming relation with the surface of the tool when placed thereon with said facing being self-conforming to the shape of said surface of the tool.

3,046,709
ABRASIVE TOOL
Herbert E. Cook, Dayton, Ohio, assignor to Michigan Abrasive Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 10, 1960, Ser. No. 61,579
7 Claims. (Cl. 51—195)



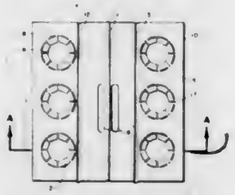
1. An abrading tool comprising a mandrel having an axially extending threaded opening in one end thereof, an abrasive pad assembly removably mounted on said mandrel, said assembly comprising a body, a threaded shank engaging said threaded opening in said mandrel, a pad, and means for fixing said pad on said body, said mandrel having a continuous shoulder surrounding the opening in the end thereof and engaging said body of said abrasive pad assembly.

3,046,710
COOLING DEVICE FOR MACHINE TOOL MEMBER
George L. Grove and Jacob Decker, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 22, 1960, Ser. No. 24,069
2 Claims. (Cl. 51—266)



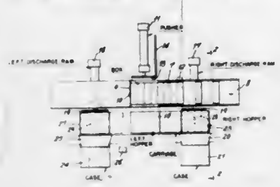
1. In a machine tool for performing a liquid cooled operation on a workpiece, the machine tool having a surface subjected to generated heat and in the path of the liquid sprayed from the operation, the combination comprising a source of aqueous coolant, a plate extending over said surface and spaced therefrom to shield said surface from said sprayed liquid, said plate and surface defining a chamber having an opening at the bottom, a conduit in said chamber having a plurality of spaced openings directed toward said surface, means connecting said conduit to said source of aqueous coolant to deposit a thin sheet of coolant over said surface for at least partial evaporation thereby, and means to return liquid coolant draining from the bottom of the chamber to the source of coolant.

3,046,711
MULTIPLE CAN CARRIER AND SANITARY SEAL
John W. Harrison, Winchester, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Dec. 8, 1960, Ser. No. 74,629
1 Claim. (Cl. 53—30)



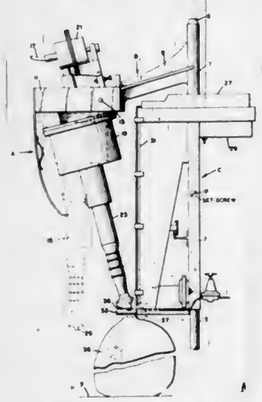
The method of forming a can carrier which comprises spaced rows, forming hinge creases in the intermediate forming a retainer having a series of apertures cut in area of the retainer between the rows, surrounding each aperture with a series of radial slits extending from the margins of each aperture to a root-circle approximately that of the can end, spreading a film of heat-shrinkable plastic material over the tops of pre-arranged cans, pushing the retainer down over the assembly of cans until the sectors between the radial slits produce upthrust fingers which lock beneath the can end seams and draw the plastic down over each can as a pleated hood, heating the area between the cans to cause the rows of cans to draw together and upthrust the intermediate area of the retainer into an erect handle, then heat-shrinking the film covering the can ends and the adjacent portions of the can bodies to complete the carrier.

3,046,712
CASE PACKER
Terry L. Carter, Box 75, Glen Road, Sparta, N.J.
Filed Nov. 2, 1960, Ser. No. 66,854
10 Claims. (Cl. 53—61)



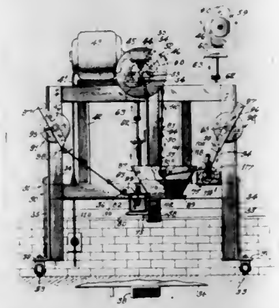
1. A case packer comprising the combination of a pair of case load holders for holding each a case load of objects to be packed, a load assembler having means for assembling and placing a case load of the objects in predetermined load formation into one of said case load holders, a pair of load dischargers having means for discharging a case load from a loaded case load holder, means for shifting one of said case load holders from said assembler to one of said dischargers and the other case load holder from the other discharger to said assembler and to then shift the first case load holder from said first mentioned discharger back to the assembler and the second mentioned case load holder from the assembler to the second discharger and means for actuating said load assembler to case load a holder when an empty holder is shifted to the same and to actuate one load discharger to discharge a holder when a loaded holder is shifted to the same and whereby said dischargers may alternately discharge case loads one after another while said assembler is loading empty holders shifted to the same from said dischargers.

3,046,713
COMBINATION VACUUM LIFTER AND BAG CLIPPING ASSEMBLY
Kenneth E. Belknap, Dinuba, Calif., assignor to Hydrahone Equipment Company, Milwaukee, Wis.
Filed Apr. 22, 1960, Ser. No. 24,170
2 Claims. (Cl. 53—112)



1. In a vacuum packing and lifting device of the type adapted to raise and carry a collapsible air tight bag containing poultry or the like at the lower end thereof for evacuating the air therefrom, the improvements comprising: means for mounting said vacuum packing device and a bag clipping and trimming device for simultaneous and equidistant vertical reciprocal movement on a primary support; a bracket on said mount for suspending said vacuum packing device and bag clipping device in spaced apart releationship; pivotal means located at a position removed from the vertical axis of said packing device and connecting said packing device to said bracket for swingable movement of said packing device when carrying a collapsible air tight bag containing poultry to a first position away from vertical at which the neck of a collapsible bag at the lower end thereof is in bag clipping and trimming position.

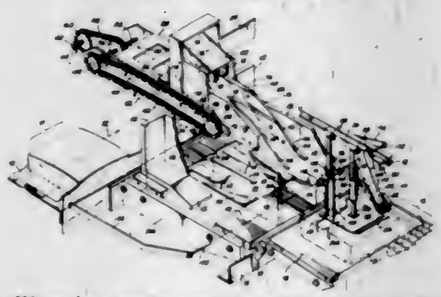
3,046,714
METHOD OF AND APPARATUS FOR MAKING SEED TAPE
Leandro J. Malicay, P.O. Box 75495, Sanford Station, Los Angeles 5, Calif.
Filed Mar. 16, 1961, Ser. No. 96,293
1 Claim. (Cl. 53—180)



In a machine for making seed tape, a frame including spaced parallel horizontally disposed bars, casters mounted below said bars, a pair of spaced parallel vertically disposed legs extending upwardly from said bars and secured thereto, spaced apart inclined braces extending between said legs and bars and secured thereto, a horizontally disposed cross piece extending between said legs and secured thereto, a horizontally disposed top piece extending between the upper ends of said legs and affixed thereto, a vertically disposed support piece secured to said top piece and cross piece, a horizontally disposed support element affixed to the intermediate portion of said support piece, a pair of spaced parallel horizontally disposed arms secured to said top piece, inclined braces extending between said arms and cross piece and secured thereto, a horizontally disposed platform affixed to said arms, a motor supported on said platform, a worm driven by said motor, a horizontally disposed shaft rotatably supported above said platform, a gear on said shaft meshing with said worm, a collar connected to an end of said shaft, a plurality of spaced apart studs extending from said collar and secured thereto, a takeup reel mounted on said shaft and having said studs extending therethrough, fasteners engaging the ends of said studs, there being a slot in said platform, a cam affixed to the intermediate portion of said shaft and said cam registering with said slot, a casing depending from said support element and secured thereto, a vertically disposed rod movably arranged in said casing, a head on the upper end of said rod for selective engagement by said cam, a fitting on the lower end of said rod, a support member including a portion connected to said fitting, an applicator connected to said support member, a bracket affixed to said support piece and said bracket including horizontally disposed upper and lower sections, a fluid holding container mounted on the lower section of said bracket, a

cover on said container and said cover having an opening therein arranged above the applicator, a seed holding hopper secured to the upper section of said bracket, and said hopper including a removable bottom, first and second opposed spools rotatably supported by said legs for supporting rolls of backing material and transparent material respectively, spaced apart straps straddling said spools, pins extending between the ends of said straps, a pair of spaced apart lugs affixed to said container, a horizontally disposed guide member extending between said lugs and said guide member adapted to have backing material move therebelow from said first spool, and said backing material moving across the top of the cover of the container, there being a slit in said hopper for the ingress therethrough of the backing material, a horizontally disposed guide piece in the lower portion of the hopper and said backing material moving below said guide piece, a roller journaled in the upper portion of the hopper, and a pair of spaced apart guide elements in the upper portion of the hopper for guiding transparent material from the second spool to the vicinity of the roller.

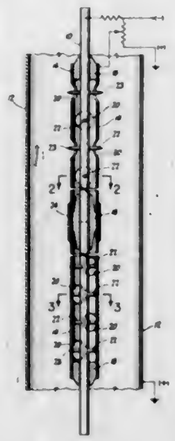
3,046,715
PACKAGE WRAPPING AND FEEDING MECHANISM
Richard F. Kent and Harry H. Schafer, Bellingham, Wash., assignors to Washington Packaging Corporation, Seattle, Wash., a corporation of Washington
Filed Aug. 24, 1959, Ser. No. 835,596
25 Claims. (Cl. 53—231)



1. Wrapping mechanism comprising means delivering a unit being packaged to an infeed station on a feed deck for wrapping as the package is conveyed along the feed deck, fold forming means along said feed deck, fold sealing heater means along said feed deck, and unit feeding means successively delivering units from said infeed station continuously past said fold forming means and said heater means, said unit feeding means comprising pushing means rectilinearly pushing the unit to advance the same and pressure means elevated over and moving along with the advancing unit as it passes said fold forming means and then moving continuously along with and exerting downward pressure on the top of the advancing unit when the package folds have been formed and are being sealed by said heater means, the said unit feeding means including a carriage and means rectilinearly reciprocating said carriage above said feed deck, and the said unit feeding means manipulating said pusher means during a return stroke of said carriage to be raised above a package at said infeed station.

3,046,716
ELECTRODES AND SHIELDS
James Rodger, Paisley, Scotland, assignor to Apra Precipitator Corporation, New York, N.Y., a corporation of Delaware
Filed May 14, 1959, Ser. No. 813,263
2 Claims. (Cl. 55—152)

1. In an electrostatic precipitator having an electrically grounded collecting surface; a discharge electrode of conductive material associated with said surface; a plurality of pins of conductive material projecting radially from said discharge electrode and being disposed thereon in axially and circumferentially spaced relationships; and a cylin-



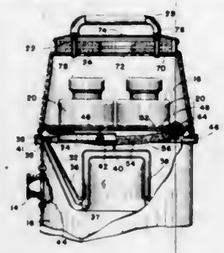
drical shield of conductive material surrounding said discharge electrode electrically insulated therefrom and formed with apertures through which said pins extend toward said collecting surface.

3,046,717
FILTER AND PRECIPITATOR
Milton G. Northrup, Van Nuys, and Dale F. Pinkerton, Chatsworth, Calif., assignors to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Mar. 6, 1961, Ser. No. 93,484
2 Claims. (Cl. 55—320)



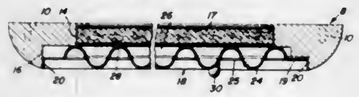
1. Filter and precipitator apparatus comprising, an elongate cylindrical housing having a corrugated wall portion intermediate the ends thereof, first and second perforate members mounted within said housing transversely of and spaced apart along the longitudinal axis thereof, said perforate members defining an intermediate chamber having an axial length co-extensive with the axial length of said corrugated wall portion, an expansion chamber within said housing and located adjacent said first perforate member, fluid inlet means connected with said expansion chamber and adapted to impart a vortical flow pattern to fluid entering said expansion chamber, fiberglass filter media substantially filling the space between said perforate members and the corrugations of said corrugated wall portion thereby preventing channeling of fluid along the walls of said housing between said first and said second perforate members, and fluid outlet means co-extensive with and located adjacent said second perforate member to provide axial flow discharge of fluid passing through said second perforate member.

3,046,718
SUCTION CLEANER
Frederick H. Ide and Robert C. Kimball, Rome, N.Y., assignors to The Kent Company, Inc., Rome, N.Y.
Filed Apr. 8, 1959, Ser. No. 805,050
3 Claims. (Cl. 55—323)



1. In a vacuum cleaning machine for hospital use: a housing having separable upper and lower portions, said lower portion forming a refuse collector and container; a member sealed in said upper housing portion to form an air-tight partition between said portions; a plurality of fan members mounted on said partition member; a corresponding plurality of apertures in said partition member in communication with said fan members; an inverted frusto-conical filter frame in said lower housing portion, said filter frame having gasket means about its upper edge mounted between said upper and lower housing portions to form an air-tight seal therebetween upon assembly; air inlet means in said lower housing portion adapted to receive a cleaning hose and tool; air discharge means in said upper housing portion arranged to discharge air from the machine in a substantially horizontal direction; means in said lower housing portion adjacent said air inlet means for circumferentially deflecting air entering the machine; a first filtering means of the porosity type comprising a bag-like member formed of impregnated paper, a second filtering means of the porosity type comprising a bag-like member formed of fabric; said second filtering means being positioned inside said first filtering means; said first and second filtering means depending from the top of said lower housing portion into the interior thereof and being partially drawn up into the interior of said filter frame when the machine is in operation; a third filtering means of the inertial impaction type positioned adjacent the upstream side of said partition apertures, said third filtering means including in combination a first and a second dished screen each having an area greater than the combined areas of said partition member apertures, and a first and a second layer of filter material formed of inorganic glass fibers held in contiguous relation between said screens, the fibers of said layers of filter material having a maximum nominal diameter of 1.25 microns; and means for releasably supporting said third filtering means in said upper housing portion including sealing means under pressure to restrict the passage of air into the upper housing portion to that passing through the filtering means.

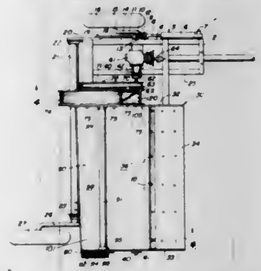
3,046,719
ROOM REGISTER
Ralph Tropiano, 42 David Drive, East Haven, Conn.
Filed Aug. 4, 1960, Ser. No. 46,626
2 Claims. (Cl. 55—417)



1. A room register comprising a rectangular frame for mounting on a vertical wall around an air outlet therein,

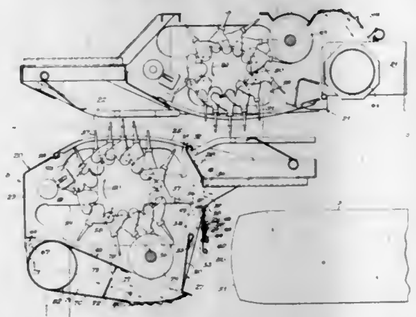
said frame including inner walls having stepped outer and inner rabbets therein, a removable air filter in the frame seated in the inner rabbet, a damper slidable in the outer rabbet and retaining the filter in position in said inner rabbet, a grating in said outer rabbet abutting the damper for retaining same in position in said outer rabbet and having air passages therein controlled by said damper, an actuating handle on the damper operable through the grating, means for releasably securing the grating in the frame, said outer rabbet having sockets therein, said means including marginal flanges on the grating and detents on said flanges engageable in the sockets, and means for removably securing the frame on the vertical wall.

3,046,720
FORAGE HARVESTER
Raymond C. Fischer, Hinsdale, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 12, 1959, Ser. No. 786,267
3 Claims. (Cl. 56—24)



1. A forage harvester of the type having an elongated crop cutting and collecting rotor, a screw conveyor alongside and substantially coextensive with said rotor, and a rotary impeller adjacent one end of said rotor and conveyor, said conveyor having a discharge end adjacent said impeller, and the opposite end of said conveyor mounted for unitary support on said harvester, and drive means extending from said impeller to said opposite end of said conveyor and providing driving connection therebetween.

3,046,721
COTTON HARVESTER WITH AUXILIARY TRASH DISCHARGE MEANS
John J. Kowalik, Glenview, Ill., and Delos A. Walker, Memphis, Tenn., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 10, 1960, Ser. No. 61,642
10 Claims. (Cl. 56—41)



1. A picking unit for a cotton harvester comprising a vertically elongated housing having a side, a picking drum mounted in said housing, said drum having picking spindles extending laterally therefrom, said housing having a vertical opening through which said spindles ex-

tend, said portion having a pair of stepped portions spaced fore and aft of the housing and defining a laterally directed discharge opening.

3,046,722
GARDEN SHEARS
James E. Bridegum, 419 Reed St., Covina, Calif.
Filed Oct. 10, 1960, Ser. No. 61,684
1 Claim. (Cl. 56—241)



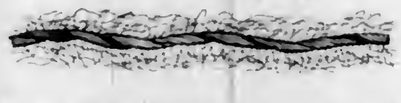
Garden shears comprising; an upper blade; a lower blade; a pivot constraining said blades to angular motion with respect to one another, said pivot being affixed to said lower blade and having an enlarged head arranged so that the lower surface of said head bears against the upper surface of said upper blade; a foot beneath said lower blade adjacent said pivot; an upwardly extending outer tube affixed to said upper blade coaxially with said pivot, said outer tube being provided with two opposite, essentially helical slots; an upwardly extending inner tube affixed to the head of said pivot coaxially therewith, said inner tube being provided with two opposite, essentially helical slots of pitch opposite to that of the slots in said outer tube; an intermediate tube fitting in the annulus between said inner tube and said outer tube, said intermediate tube being provided with two opposite holes; a transverse pin passing through said holes and all of said slots; a handle affixed to said intermediate tube, and a helical spring within said intermediate tube, its lower end bearing against the upper end of said inner tube, whereby said blades move horizontally toward one another when said handle is pressed downwardly and move away from one another when said handle is released.

3,046,723
NON-CLOGGING OUTER SHOE FOR MOWERS
William A. Young, East Moline, and Ellsworth T. Johnson, Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,011
5 Claims. (Cl. 56—314)



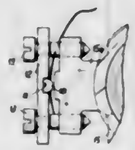
1. In a mower having a transversely extending mower bar including an outer end and a sickle paralleling and mounted for reciprocation lengthwise of the bar and having a plurality of sickle sections projecting ahead of the bar and including an outer section proximate to the outer end of the bar, the improvement comprising: an outer shoe at the outer end of the bar and having an upright fore-and-aft wall provided with an opening accommodating the outer end of the bar and the outer sickle section, said opening being so shaped that a lower portion of the shoe bordering said opening provides a rear pad on which the outer end of the bar rests and further provides a support ahead of said pad; a forward ledger element on said support and over which the outer sickle section lies for shearing cooperation with said element as the sickle reciprocates, said opening being further so shaped that an upward forward portion of the wall is spaced a substantial distance above the top of the outer sickle section to provide a relatively large clearance gap for said outer sickle section; means securing the outer end of the bar to the aforesaid pad; a filler member juxtaposed on the wall in closing relation to said gap and having a lower fore-and-aft edge over the top surface of said outer sickle section, said lower edge being substantially coextensive in length with said ledger element and terminating at a rear portion thereof clear of the mower bar; and means mounting said filler member on said wall and independently of the mower bar for vertical adjustment relative to said outer sickle section so as to selectively vary the vertical clearance between the lower edge of said member and the top surface of said outer sickle section.

3,046,724
YARN FOR NOVEL FABRICS
Barry John Ward, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 23, 1958, Ser. No. 730,276
9 Claims. (Cl. 57—140)



1. A novel yarn comprising a blend of high and low denier synthetic organic staple fibers, a substantial number of the high denier fibers having free ends protruding at least ¼ inch from the yarn surface, the opposite ends of these fibers held in the yarn due to frictional constraint with the low denier fibers, the low denier fibers being less than about 10 denier per filament and the high denier fibers having a denier from about 2 to about 15 times that of the low denier fibers.

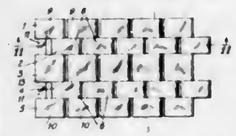
3,046,725
HAIRSPRING ADJUSTMENT DEVICE FOR A TIMEPIECE
Marcel Vuilleumier, Baugy, Clarens, Switzerland, assignor to Parechoc S.A., Canton of Vaud, Switzerland, a firm of Switzerland
Filed Oct. 27, 1959, Ser. No. 848,965
Claims priority, application Switzerland Oct. 29, 1958
3 Claims. (Cl. 58—115)



1. In a regulating device for a timepiece comprising a frame, a balance, a balance spring, and a cylindrical stud

provided with a flat portion and carried by the said frame, to which the outer end of said balance spring is fixed, in such a regulating device: two screws screwed in the said frame, a bridge held in place by the said two screws, said bridge being provided with a notch showing a flat bottom facing the said frame, the said stud being partially engaged in the said notch, with its flat portion bearing on the flat bottom of the said notch, and being pinched between the said bridge and a lateral face of the said frame on which it bears by its cylindrical surface, whereby said screws permit to change the position of the said stud and thereby to modify the adjustment of the balance spring.

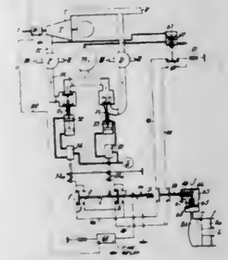
3,046,726
CHAIN OF CHESS-BOARD PATTERN
Jean-Pierre Gay, Geneva, Switzerland, assignor to Gay Freres S.A., Geneva, Switzerland, a corporation of Switzerland
Filed Jan. 18, 1960, Ser. No. 3,067
Claims priority, application Switzerland Jan. 28, 1959
3 Claims. (Cl. 59—80)



1. A chain of staggered parallel sections pivotally connected together of substantially uniform thickness and with a smooth and continuous rim over the whole length of the chain, made of hinged links of rectangular shape, consisting of a series of elements forming links of a first kind and a series of links of a second kind, each one of said elements being formed as one single piece by a rectangular metallic frame made of one single sheet having central aperture means, each of two opposite sides of said frame being folded twice over itself so that the folded parts of each side are formed by superposed adjacent layers, said elements extending over the whole width of the chain, with their parts thus folded disposed transversally to the length of the chain, and each of said elements forming at least two links of said first kind which two links are integral with each other by means of said folded parts and spaced transversally of the chain length by means of said aperture means, the links of said second kind being each made of a rectangular metallic sheet, two opposite sides of which are folded one around one folded part of one of said elements and through its associated aperture means and the other one around one folded part of the neighboring one of said elements and through its associated aperture means, so that each link of said second kind joins together substantially pivotally two successive elements, whereby said folded parts of said elements for pivots for the links of said second kind.

3,046,727
POWER PLANTS INCLUDING AT LEAST ONE FREE PISTON AUTO-GENERATOR AND AT LEAST ONE GAS TURBINE FED WITH POWER GAS FROM SAID GENERATOR
Helge Horgen, Lyons, France, assignor to Societe d'Etudes et de Participations Eau, Gaz, Electricite, Energie S.A., Geneva, Switzerland, a Swiss company
Filed June 29, 1959, Ser. No. 823,553
Claims priority, application France July 18, 1958
13 Claims. (Cl. 60—13)

1. A power plant which comprises, in combination, a gas turbine having a gas intake, an intake conduit leading to said gas intake, a free piston auto-generator including a power portion having a power cylinder and a power piston reciprocable in said power cylinder, an air compressor portion having a compressor cylinder rigid with said power cylinder and a compressor piston reciprocable in said compressor cylinder and rigid with said power piston, said pistons being freely movable with respect to their respective cylinders, said power portion further including a casing to receive compressed air from said compressor portion to feed it to said power cylinder, means for feeding compressed air from said compressor portion to said casing, means for feeding fuel to said power cylinder, means responsive to variations of the load of said turbine for discharging some compressed air from said casing away from said power cylinder for values of said load lower than a given minimum, output conduit means extending between said power cylinder and said



intake conduit, discharge conduit means extending between said power cylinder and the atmosphere, first valve means in said output conduit means capable of occupying only two positions, to wit a wholly opened position and a wholly closed position, second valve means in said discharge conduit means capable of occupying only two positions, to wit a wholly opened position and a wholly closed position, control means for operating said first and second valve means to open one while closing the other, and temporary reversing means operative in response to a sudden increase of the speed of said turbine beyond a given value to reverse for a predetermined time the positions of said first and second valve means respectively.

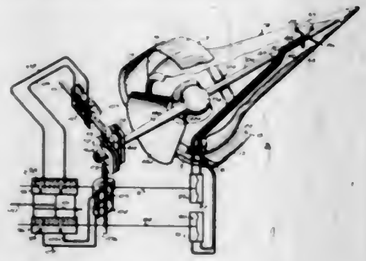
3,046,728
HYDROGEN GAS GENERATING PROPELLANT COMPOSITIONS
John A. Fitzpatrick, Washington, D.C., assignor to Airtronics, Inc., Washington, D.C., a corporation of Maryland
No Drawing. Original application Nov. 25, 1953, Ser. No. 394,481. Divided and this application Feb. 6, 1959, Ser. No. 810,519
5 Claims. (Cl. 60—35.4)

1. In the method of propelling a missle by the discharge therefrom of a gaseous reaction product, the improvement which comprises utilizing as the gaseous reaction product, the product obtained by mixing together (1) a powdered reducing metal above hydrogen in the electromotive series and coated with a catalyst which induces the decomposition of hydrogen peroxide and (2) an aqueous solution of at least 15% by weight of hydrogen peroxide, said catalyst being present in an amount sufficient to substantially decompose said hydrogen peroxide and thereby facilitate reaction between said metal and water to generate hydrogen gas.

3,046,729
SUPERSONIC AIR INLET FOR JET AIRCRAFT HAVING ANGLE-OF-ATTACK AND SIDE-SLIP CONTROL
Anatoly Victor Petren, Canoga Park, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Jan. 18, 1960, Ser. No. 3,036
2 Claims. (Cl. 60—35.6)

1. A supersonic air inlet for jet engines comprising an inlet spike open at its base, a cowl member surrounding a

portion of the base of said spike, the forward edge of said cowl member forming the lip of said air inlet, means for holding said cowl member in fixed relationship with said spike for movement therewith and to provide an inlet air opening to said engine, a socket located centrally of said cowl member within said spike, means extending through said open base for rigidly supporting said socket by said engine and independently of said spike, a ball located within said socket, means connecting said ball with said spike for supporting said spike for movement to any angle within a cone about the engine axis, a first pair of pressure taps on the upper and lower surfaces, respectively, of said spike, a second pair of pressure taps on opposite side surfaces of said spike, first means operative upon said ball and responsive to the pressure differences between said first pair of taps for positioning said spike and cowl member in the vertical plane, second means operative upon said ball and responsive to the pressure difference between said second pair of taps for positioning said spike and cowl member in the horizontal plane, said spike continually assuming a position to maintain the angle-of-attack and side-slip substantially zero, said first and second positioning means comprising a shaft connected with said ball and extending rearwardly thereof, said shaft extension terminating in a second ball and socket connection, a sleeve containing said connection at one end thereof, each of said positioning means including a frame receiving said sleeve in a rectangular opening with one dimension the same size as the sleeve and the other dimension larger than the sleeve, the larger dimension of said first positioning means being in the horizontal direction and of sa second positioning means being in the vertical directi



3,046,730

VARIABLE AREA EXIT NOZZLE

Anatoly Victor Petren, Canoga Park, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California

Filed Sept. 21, 1960, Ser. No. 57,490
1 Claim. (Cl. 60—35.6)



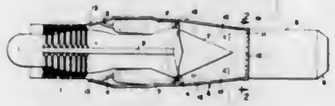
A convergent-divergent, variable area exhaust nozzle for a jet engine comprising a forward convergent portion and a rearward divergent portion located on opposite sides of the nozzle throat, means for hinging said portions together at substantially the throat position to permit movement of the throat portion inwardly and outwardly to vary the throat area of the nozzle, pivot means for pivotally connecting the end of one of said portions away from said throat to the engine structure, each of said nozzle portions comprising a plurality of ribs extending longitudinally of the engine and spaced apart in substantially radial planes, flexible sealing means connected between adjacent ribs, an L shaped member secured to each of said sealing means at the end of one leg of the member so that said one leg extends between adjacent ribs in a substantially radial direction, the other leg of each member closely overlapping an adjacent member to form the surface of the nozzle portion, said sealing means comprising a pair of sealing support elements each having one end connected to the inner edge of one of said ribs and the other end connected to the outer edge of said one leg of said L shaped member and being flexible to permit change in spacing between said ribs, and actuator means connected to one of said nozzle portions for positioning said portions to provide a desired nozzle configuration.

3,046,731

FLAME STABILIZATION IN JET ENGINES

Ali Bulent Cambel, 1810 Hinman Ave., Evanston, Ill., and Allan B. Schaffer, Box 495, Rte. 3, Salem, Va., assignors of twenty-five percent to Edward Pohlmann, East Orange, N.J.

Filed Oct. 7, 1955, Ser. No. 539,116
11 Claims. (Cl. 60—35.6)



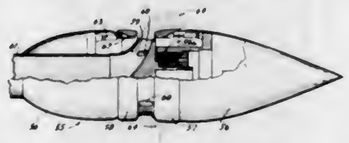
1. A jet engine comprising an afterburner provided with primary fuel mixture discharge means, an exit opening for exhaust gases and means in said afterburner downstream of said primary fuel mixture discharge means and upstream of said exit opening providing a jet of a combustion sustaining fluid in a direction opposed to the flow of the fuel mixture from said fuel discharge means and in an amount corresponding to a minor proportion by volume compared to the volume of the primary flow of fuel mixture, said fuel mixture providing a flame originating upstream of said jet means and said jet being adapted to stabilize the flame in said afterburner.

3,046,732

METHOD OF ENERGY EXCHANGE AND APPARATUS FOR CARRYING OUT THE SAME

Joseph V. Foa, Troy, N.Y., assignor, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York

Filed June 20, 1956, Ser. No. 592,642
48 Claims. (Cl. 60—35.6)



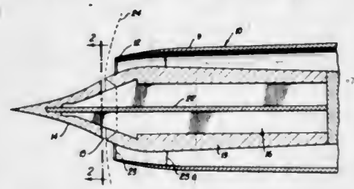
1. In a propulsion device in which energy is directly transferred in a first frame of reference from a primary fluid to a secondary fluid independent of mixing, diffusion and heat transfer therebetween to generate a propulsive force, a rotatably mounted casing exposed externally to a circumambient secondary fluid, means for supplying a primary fluid under pressure to the interior of said casing, at least one nozzle skewed to the axis of rotation of said casing and rotatable therewith, said nozzle communicating on one side with the interior of said casing and on the other side with an external interaction space occupied by said second fluid, means comprising said nozzle for injecting said primary fluid into said interaction space and for controlling the same so that it enters said interaction space as a directed stream relative to a second frame of reference moving in a predetermined direction relative to said first frame of reference so that the direction of said primary stream in said second frame of reference is inclined at an angle greater than 90° but less than 180° to said direction, and means including said first mentioned means for controlling at least a significant portion of said primary stream and said secondary fluid in said interaction space and confining at least said portion of said secondary fluid with respect to said primary stream so that both are deflected to move in a common direction in said second frame of reference substantially parallel to an interface therebetween, whereby in said first frame of reference energy and momentum in a direction away from said predetermined direction are transferred from said primary stream to said secondary fluid across said interface through forces acting normal to said interface, said primary stream occupying a limited region in said interaction space, and means for inducing said region occupied by said primary stream and the region occupied by the portion of the secondary fluid energized by said primary stream to advance along said axis of rotation and thereby apply to said casing a propulsive force generated by the interaction of said primary and secondary fluids.

3,046,733

ACOUSTIC BUZZ SUPPRESSOR

Edward P. French, Whittier, and Stanley J. Minton, Woodland Hills, Calif., assignors to The Marquardt Corporation, a corporation of California

Filed May 29, 1959, Ser. No. 816,737
3 Claims. (Cl. 60—35.6)



1. In a supersonic inlet, a diffuser cowl having a diffuser lip at its forward end, a diffuser body located within said cowl, an external compression surface on said body extending forwardly of said diffuser lip and along which normal shock expelled from said engine moves, a chamber within said diffuser body, and slot means in said diffuser body for placing said chamber in communication with the exterior of said compression surface at the location of said slot, said slot means being located forwardly of said diffuser lip at a position where diffuser buzz commences so that said chamber reduces the back pressure behind the expelled shock as it moves over said slot means and thereby prevents continuation of the diffuser buzz, said slot means and chamber being of sufficient size to handle the volume of air flow required to suppress diffuser buzz and move the expelled shock rearwardly.

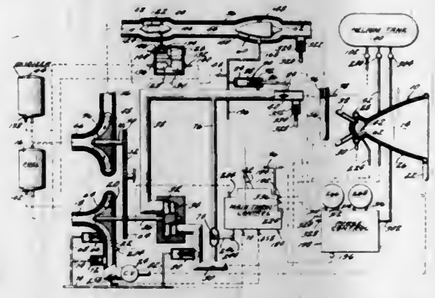
3,046,734

ROCKET THRUST CONTROL

Robert N. Abild, New Britain, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 30, 1959, Ser. No. 824,136
7 Claims. (Cl. 60—35.6)

7. In a liquid rocket engine having fuel conduit means and oxidizer conduit means through which propellants are delivered to a combustion chamber, means for pumping said fuel and said oxidizer through said conduits, a valve in each conduit for shutting off propellant flow to said combustion chamber, a utilization valve in one of said conduits for regulating the flow rate of the propellant in that conduit, means for heating fuel by the heat generated in said combustion chamber, means for driving said pumping means by expansion of said heated fuel, means for regulating the quantity of heated fuel flowing to said pumping means, and thrust control means for controlling said quantity regulating means, said thrust control means including servo motor means operatively connected with said quantity regulating means, a power lever, means actuated by movement of said power lever to admit fuel to said servo motor means as a motor fluid, means actuated by said power lever to admit a signal pressure to open said shutoff valves and actuate said utilization valve, means actuated by said power lever to deliver a signal of selected thrust to said thrust control means, and means responsive to the pressure in said combustion chamber to deliver a signal of actual thrust to said thrust control means.

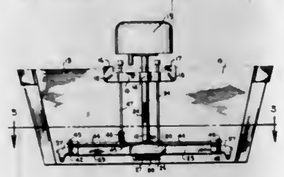


3,046,735

WATER JET DRIVE FOR BOATS

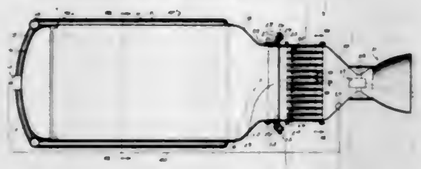
Kermit H. Burgin, R.R. 1, Whitestown, Ind., assignor, by direct and mesne assignments, of forty percent to Frederick B. Cline, and twenty-five percent to Florence T. Cline, both of Indianapolis, Ind., and ten percent to Guernsey Van Riper, Jr.

Filed Apr. 10, 1961, Ser. No. 101,938
6 Claims. (Cl. 60—35.55)



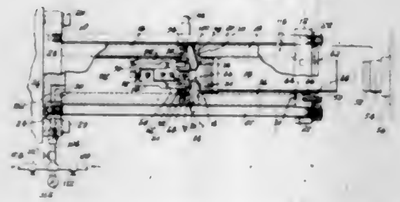
1. In a boat drive the combination with a pump housing having a water intake opening from an under side; a water wheel in the housing taking water from through said opening; a grill carried by said housing across and under said opening and comprising a plurality of spaced apart slots extending in parallel alignment in fore and aft direction of travel of said housing; said grill having apertures through said slots across said opening; a rotating weed cutter carried by said housing and traveling in shearing action across said apertures and over said grill; and means entering said housing and driving said cutter; said cutter shearing off weeds entering said apertures when said grill rides over and combs weeds in water along said slots into alignment and the weeds are carried upwardly by weed end portions through said apertures by current of water generated by said wheel entering said housing opening, the sheared-off weed portions reaching said wheel.

3,046,736
DIRECTION CONTROL FOR GELATIN MONO-PROPELLANT ROCKET ENGINE
Arthur R. Thomson, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Feb. 10, 1958, Ser. No. 714,316
6 Claims. (Cl. 60—35.55)



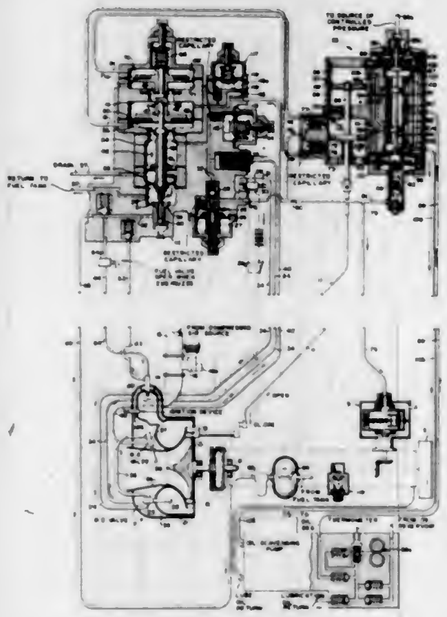
1. A gelatin mono-propellant rocket engine comprising a fuel tank adapted to contain said gelatin monopropellant, a combustion chamber unit, one end of said fuel tank being in open communication with one end of said unit, said one end of said fuel tank having substantially the same cross-sectional area as said one end of said unit at the point of open communication, means to extrude said gelatin monopropellant from said fuel tank to the combustion chamber defining portion of said unit, means to ignite said gelatin monopropellant supplied to said combustion chamber portion, an exhaust nozzle rigidly attached to the other end of said unit, and said unit being adjustably attached to said fuel tank at said point of open communication to permit variation in the direction of thrust of gases discharged from said nozzle.

3,046,737
INTERNAL COMBUSTION ACTUATOR
Jack B. Ottestad, Claremont, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Nov. 30, 1959, Ser. No. 856,036
7 Claims. (Cl. 60—39.6)



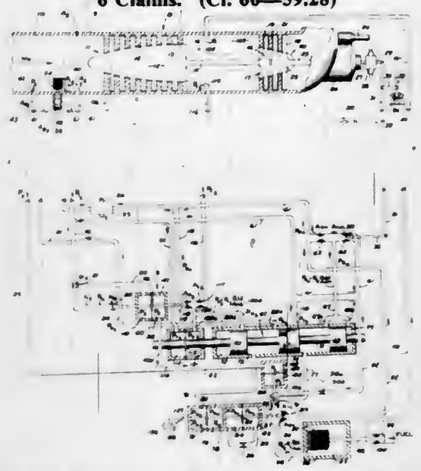
1. An internal combustion actuator comprising wall means defining an orifice within the actuator, a release plunger having an end portion confronting one side of the wall means and adapted for cooperation therewith to provide a pressure seal about said orifice, means defining a combustion chamber communicating with an area of said plunger end portion outside said pressure seal, means cooperating with the release plunger to define a set pressure chamber, means for introducing a combustible mixture under a set pressure into said set pressure chamber, means defining a leakage area whereby said chambers are in restricted communication to permit leakage to establish said combustible mixture in the other of said chambers, the set pressure in said set pressure chamber exerting a set force to urge the release plunger against the wall means to effect said pressure seal, and means for igniting the combustible mixture in the combustion chamber to generate a combustion pressure to produce a dynamic pressure differential across said leakage area between said chambers, said internal combustion pressure acting on said plunger end portion area outside said pressure seal to overbalance said set force, thereby rapidly eliminating said pressure seal to expose an increased area of the plunger end portion to the combustion pressure, whereby the release plunger is impelled from said wall means to release the combustion pressure through the orifice at a predetermined intensity to act on an output member.

3,046,738
COORDINATED FUEL AND TURBINE INLET CONTROL RESPONSIVE TO COMBUSTION GAS TEMPERATURE AND SPEED
John K. Jackson and William D. Whitaker, Phoenix, Ariz., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed May 20, 1957, Ser. No. 660,349
22 Claims. (Cl. 60—39.25)



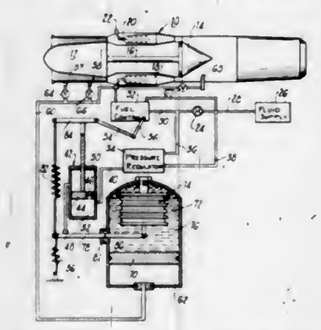
13. In a gas turbine control system, the combination of: a turbine having an inlet; a combustor communicating with the inlet of said turbine; passage means disposed to conduct fuel and air under pressure to said combustor; variable area nozzle means at the inlet of said turbine for controlling the flow of gases from said combustor to said turbine; temperature responsive means disposed to sense the temperatures of gases flowing to said turbine; bypass type fuel flow control means in the passage means conducting fuel to said combustor; fluid pressure responsive means disposed to operate said fuel flow control means to govern the action thereof, said temperature responsive means being operative to modulate the fluid pressures applied to said fluid pressure responsive means in response to changes in temperature of the gases flowing to said turbine; means for temporarily rendering said temperature responsive means ineffective to modulate fluid pressures applied to said fluid pressure responsive means; a second fluid pressure responsive means disposed to operate said variable area nozzle means; valve means for controlling the application of fluid pressure to said second fluid pressure responsive means; speed responsive means disposed for actuation by said turbine and connected with said valve means; and means actuated by said second fluid pressure responsive means for simultaneously transmitting operating signals to the first-mentioned fluid pressure responsive means and said valve means.

3,046,739
GAS TURBINE FUEL CONTROL SYSTEM
Philip R. Dahl, Sepulveda, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed May 26, 1960, Ser. No. 32,034
6 Claims. (Cl. 60—39.28)



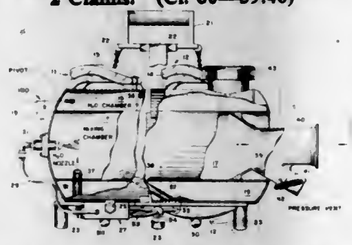
1. A gas turbine fuel control system comprising means for obtaining a first pressure P_{D_2} substantially proportional to gas turbine speed, said obtaining means comprising a probe receiving total compressor inlet pressure and connected with a pair of spaced restrictions having sonic flow at the throats thereof, a first pressure differential means receiving the static compressor inlet pressure on one side thereof and receiving the static pressure in said probe on the other side thereof, a needle valve connected to said first differential means for varying the area of one of said restrictions so that the pressure between said restrictions corresponds to said first pressure P_{D_2}, means for producing a second pressure P_{D_N} proportional to a selected speed, a second pressure differential means receiving said first pressure on one side thereof and said second pressure on the other side thereof, and means connected with said second differential means for controlling the fuel flow to said gas turbine to maintain said first and second pressures equal and said gas turbine speed at the selected speed.

3,046,740
FLUID PRESSURE RESPONSIVE CONTROL APPARATUS
Russell C. Perkey and Rodney J. Satory, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Dec. 5, 1956, Ser. No. 626,393
2 Claims. (Cl. 60—39.28)



2. In fluid responsive control apparatus subject to physical vibrations, the combination of a fluid chamber having an open end and being filled with a high viscosity non-compressible control fluid, an evacuated bellows member positioned within said chamber and responsive to the pressure of said control fluid, a movable member operative with said chamber and positioned to close said open end, with said movable member having an outer surface against which the control signal is applied to move the member and thereby vary the pressure of said control fluid as a function of said control signal, said high viscosity control fluid operative to dampen the physical vibration acting on said evacuated bellows member.

3,046,741
STARTING SYSTEM HAVING A GAS GENERATOR
Emil A. Volk, Jr., Hasbrouck Heights, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 8, 1958, Ser. No. 778,842
2 Claims. (Cl. 60—39.46)

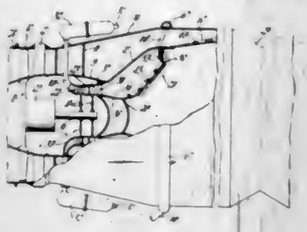


1. A small, self-contained gas generator comprising tubular means providing a cylindrical horizontally-arranged mixing chamber and annular liquid tank surrounding said mixing chamber, said mixing chamber having an end wall and opposite therefrom a reduced-diameter outlet pipe, a capped filling tube extending from the top of said annular liquid tank, a spray nozzle mounted in said end wall and arranged to spray axially into said mixing chamber, a vertically-arranged cartridge breech, support structure having said tubular means and said cartridge breech mounted thereon and including a carrying handle, liquid passage means connecting the bottom of said annular tank to said spray nozzle, pressurizing means connecting the bottom of said cartridge breech to the top of said annular liquid tank for gas pressurizing of liquid in said tank, said liquid passage means including a valve responsive to the pressure of liquid in said tank for varying the liquid passed to said spray nozzle, gas passage means connected from the bottom of said cartridge breech to said mixing chamber, said gas passage means including a flow restriction and being constructed to introduce gases at the location of said spray nozzle toward and around said spray nozzle for better mixing and cooling, an atmospheric vent pipe connected to the bottom of said outlet pipe, said vent pipe having a pressure regulating device responsive to the pressure in said outlet pipe for maintaining a predetermined pressure by venting, said gas passage means being constructed to pass gases in heat exchange relation with said valve, an electrical control for firing a cartridge in said cartridge breech including a battery mounted on said tubular means and a firing switch, said liquid tank and said electrical control including a liquid-level switch for preventing firing of a cartridge if the liquid tank is not filled to a predetermined level.

3,046,742
COMBUSTION APPARATUS
William F. Egbert, Brownsburg, and Esten W. Spears, Jr., Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 5, 1959, Ser. No. 785,090
6 Claims. (Cl. 60—39.65)

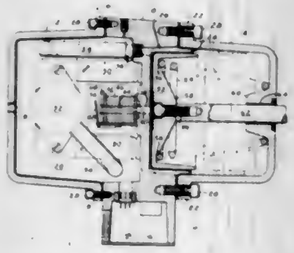
1. A combustion apparatus comprising, in combination, a duct adapted to convey air, structure defining an inlet

chamber for gaseous fuel adjacent the axis of the duct, a plurality of hollow struts radiating from the structure communicating with the chamber, the struts having fuel outlets distributed along the struts and flame holding means on the struts, an annular segmented gaseous fuel discharge and mixing and flame holding ring composed



of segments mounted on the outer ends of the struts supplied with fuel through the struts and with air through the duct, and nozzle means for introducing a liquid fuel into the duct, the nozzle means comprising nozzles mounted between the ring segments and fuel supply tubes supporting the nozzles in the duct.

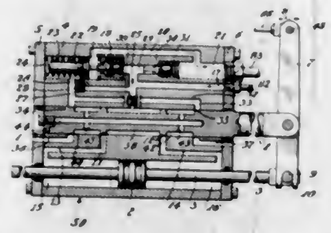
3,046,743
HYDRAULIC ACTUATOR
Billy Burley, Dallas, Tex., assignor to Fischbach and Moore, Inc., New York, N.Y., a corporation of New York
Filed July 13, 1961, Ser. No. 123,809
9 Claims. (Cl. 60—52)



1. In a hydraulic actuator first and second variable volume fluid chambers defined by first and second flexible bag members, respectively, the combined volume of the two said chambers remaining constant and being filled with hydraulic fluid, and pump means in said first chamber having a suction port in communication with said first chamber and an outlet port in communication with said second chamber for pumping said fluid from said first into said second chamber to expand said second flexible bag and contract said first flexible bag around said pump to maintain said pump completely submerged in hydraulic fluid, whereby said actuator may be mounted in any desired position without impairing the action of said pump.

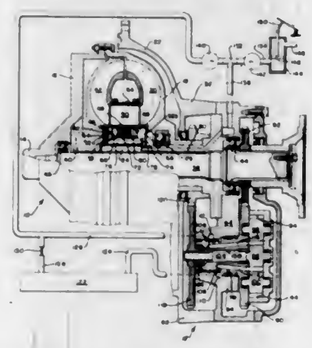
3,046,744
HYDRAULIC CONTROL APPARATUS
Kaspar Ritter, Kirchheim, Teck, Germany, assignor to Allgaier-Werke G.m.b.H., Uhingen, Wurttemberg, Germany
Filed Mar. 29, 1961, Ser. No. 99,173
20 Claims. (Cl. 60—53)

1. A hydraulic control apparatus comprising, in combination, main conduit means including an inlet conduit for a pressure fluid and first and second parallel outlet conduits connected to said inlet conduit; a normally open first control valve in said first outlet conduit; a normally closed second high pressure control valve in said second outlet conduit adapted to open when the pressure in said second outlet conduit increases due to closing of said first control valve; control conduit means connected to said main conduit means and having a discharge opening; a hydraulic control member operated by the pressure in said control conduit means to operate said first control valve; an operating cylinder communicating with said control conduit means, and an operating piston in said operating cylinder adapted to be connected to a controlled element for shifting the same; and an operating valve means in said control conduit means including a



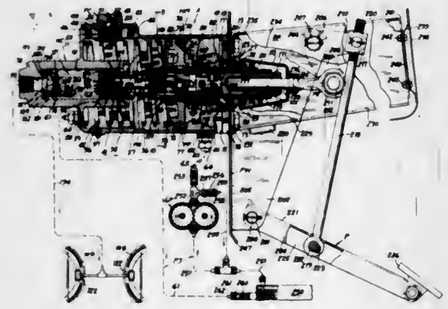
shiftable valve member having a closing position closing said operating cylinder, and a connecting position connecting said control conduit means with said discharge opening to effect closing of said first control valve by said hydraulic control member and thereby a pressure increase in said inlet conduit until said second high pressure control valve opens, and connecting said inlet conduit with one end of said operating cylinder and said discharge opening with the other end of said operating cylinder so that said operating piston is moved by the pressure fluid under said high pressure.

3,046,745
HYDROKINETIC TORQUE CONVERTER HAVING VARIABLE PITCH BLADES
Stanley J. Price, Jr., and George Raynovich, Jr., Pittsburgh, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 8, 1960, Ser. No. 20,866
2 Claims. (Cl. 60—54)



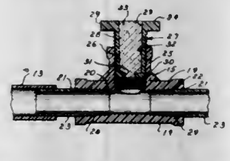
1. In combination, a hydrokinetic torque converter including a rotatable impeller member, a rotatable turbine member and a stator member, said members disposed to form at least a portion of a toroidal flow passage within said torque converter, said stator member having a plurality of blades movably mounted thereon to vary the pitch angle of said blades relative to said stator member, an annular piston motor mounted in said stator member and operable to position said blades at various pitch angles, resilient means urging said piston motor to position said blades at an extreme low pitch angle, a differentially driven positive displacement pump including first and second relatively rotatable driven members, said differentially driven pump being operable to pressurize a volumetric quantity of fluid upon relative rotation of said pump driven members, said volumetric quantity of fluid pressurized by said differentially driven pump varying with the instantaneous differential in speed between said pump driven members, first fixed ratio drive means drivingly connecting said torque converter impeller member to said pump first driven member, second fixed ratio drive means drivingly connecting said torque converter turbine member to said pump second driven member, supply conduit means to conduct pressurized fluid from said differentially driven pump to said annular piston motor, a bypass conduit with restricted orifice means therein connected to said supply conduit means and operable to vary the pressure of said pressurized fluid being conducted to said piston motor as said volumetric quantity of fluid pressurized by said differentially driven pump varies, said pressurized fluid urging said piston motor in opposition to said resilient means, the instantaneous pitch angle of said blades being determined by the equilibrium position of said piston motor between the opposing forces of said resilient means and said pressurized fluid.

3,046,746
HYDRAULICALLY-OPERATED BRAKE BOOSTER MECHANISM
Glenn T. Randol, 2nd and Paul Sts., Box 53, Mountain Lake Park, Md.
Filed Mar. 19, 1958, Ser. No. 722,425
7 Claims. (Cl. 60—54.6)



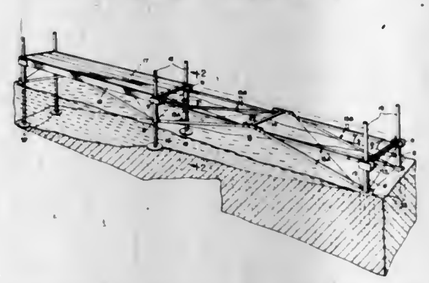
1. In braking apparatus and in combination, fluid-pressure-operated brakes, a brake fluid therefor, a normally non-activating fluid circulating system for said fluid including a pump for pressurizing said fluid and a fluid supply for said pump, a fluid-pressure-producing cylinder closed at one end and open at the other, a double-ended fluid-actuated power cylinder, a power member reciprocably mounted within the power cylinder and adapted to divide the interior thereof into a variable power chamber and a variable supply chamber; a normally preloaded compression spring operably disposed in the supply chamber to react between one end of the power cylinder and said power member to establish the latter in normally released position; an axially bored work-performing member actuatable in part by said power member, and having a portion reciprocably projecting into the pressure-producing cylinder to provide a variable pressure-working chamber therein between the closed end thereof and said work member, to pressurize the brake fluid; a discharge port through the closed end of said pressure-producing cylinder for the fluid in said pressure-working chamber; a power control valve including an element slidably disposed in a portion of the axial bore in said work member, and adapted to normally enable non-activating circulation of the fluid through both chambers in the power cylinder and return the same to the pump fluid supply, said control valve element having limited relative operating movement to interrupt the fluid circulating system to induce pressure build-up therein to an activating pressure status in the power chamber against the power member to actuate the latter; a removable filler cap normally closing an opening in the power cylinder, said opening communicating with the supply chamber to enable replenishment of fluid in the latter chamber; fluid passage means including an axial bore in said valve element adapted to interconnect said power and supply chambers; a reactive plunger slidably mounted in another portion of the axial bore in said work-performing member, one end of which being exposed to hydraulic pressure reaction from the pressure-working chamber aforesaid, and the other end coaxially engaging the said control valve element to move as a unit therewith; another normally preloaded compression operably disposed to react between said work-performing element and the control valve element to bias the latter toward its normal position; and an operator-operated member having a normally released position for controlling the element of said control valve and said reactive plunger simultaneously in opposition to reaction from said pressure-working chamber and last-mentioned spring, to interrupt the fluid circulating system.

3,046,747
SUBTERRANEAN IRRIGATION
Atwood M. Timpe, 5149 Parkglen Ave., Los Angeles 43, Calif.
Filed Jan. 29, 1959, Ser. No. 789,827
7 Claims. (Cl. 61—13)



1. An underground irrigation system comprising a source of water, a plurality of pipes connected to said source, and a plurality of water discharge cartridges located in said pipes, said cartridges comprising a semi-rigid foamed plastic having an interconnected cellular structure of a size such that water will seep through said cartridges and be discharged in the form of drops into the soil.

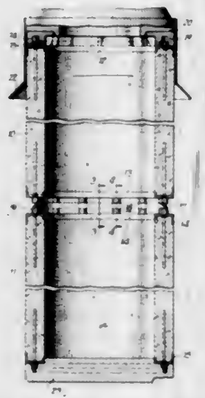
3,046,748
FOLDABLE PIER
Freeman Monroe, 367 Potter St., Wooddale, Ill.
Filed Aug. 17, 1959, Ser. No. 834,184
5 Claims. (Cl. 61—48)



3. A pier of the class described comprising, a plurality of pairs of tubular support-standards, channel-shaped elements embracively bonded to each standard to form open-top and open-end seats for deck side rails, a pair of deck-supporting cross-bars bonded at their ends to the respective elements transversely thereof to dispose the support-standards in parallel relationship, crossed guy-rods secured at their ends to the support-standards, and

double-section side-link permanently hinged at their opposite ends to an intermediate deck-supporting cross-bar and to adjacent pairs of support-standards for folding the side-link sections into vertical jack-knife relationship to locate pairs of support-standards in substantial abutting parallel disposition for storage or transport with the intermediate cross-bar spaced above the abutting support-standards and for unfolding the side-link sections into horizontally-extended disposition to locate adjacent pairs of support-standards in horizontally-spaced vertically-parallel disposition with the cross-bars of the support-standards and the cross-bar of the side-link sections in horizontal coplanar relationship for the support of deck planks and supporting side rails seated in the channel-shaped elements.

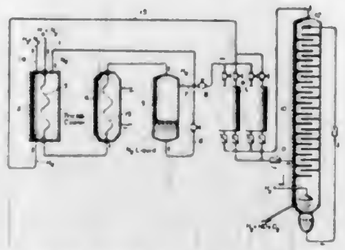
3,046,749
PRECAST PILING AND SPLICE JOINT THEREFOR
Walter E. Blessey, Metairie, La., assignor to Raymond International Inc., New York, N.Y., a corporation of New Jersey
Filed Mar. 19, 1959, Ser. No. 800,575
3 Claims. (Cl. 61—56)



1. A prestressed, sectional pile comprising, a series of tubular shells of cast concrete having holes extending longitudinally therethrough at circumferentially spaced intervals, each shell being capped at its opposite ends by metal rings, each ring circumferentially channeled on one side thereof for reception of said concrete therein, and having formed on the other side thereof, a plurality of centrally disposed upstanding ribs extending arcuately thereabout, said ribs alternating with conically cored bosses disposed in alignment with the holes in said shells, respectively, tensioned cables extending through the holes of said shells and bosses, said cables being bonded under tension by grouting, the ribs of the respective rings being grooved along their inner and outer walls, respectively, to provide complementarily disposed tongues whereby the tongues of one ring may be sleeved relatively to the tongues of a ring on an adjacent shell to form a splice joint therewith, and anchoring rods secured to each ring and extending into and embedded in said concrete.

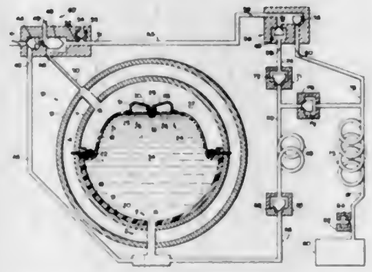
3,046,750
PRE-PURIFYING STAGE FOR GAS LIQUEFACTION PLANTS
Rudolf Becker, Munich-Solln, Germany, assignor to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Munich, Germany, a German company
Filed Aug. 3, 1959, Ser. No. 831,441
Claims priority, application Germany Aug. 6, 1958
3 Claims. (Cl. 62—13)

1. A process for the purification of a compressed gas mixture by separating at least a part of the impurities thereof in liquid form, which comprises cooling said compressed gas mixture, thereby liquefying at least part of said impurities, separating said liquid impurities from the resulting gas, treating said resulting gas in a gas separation plant, thereby expanding it to low pressure, throttling the liquid impurities to said low pressure,



vaporizing at least part of said liquid in counter current with at least part of the treated gas, thereby cooling said compressed gas mixture to be purified in indirect heat-exchange, and withdrawing the mixture of said treated gas and said vaporized impurities together from the plant.

3,046,751
CONVERSION APPARATUS AND SYSTEMS
Paul J. Gardner, Davenport, Iowa, assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,806
12 Claims. (Cl. 62—52)

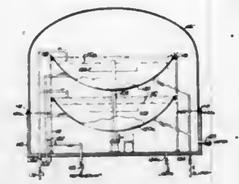


1. A liquid to gas conversion system for breathing purposes responsive to a breathing demand and operable in normal and zero gravity environments having multi-attitude capabilities comprising a liquid storage vessel having an inner vessel and an outer vessel forming an evacuated chamber, a flexible semi-permeable container disposed in said inner vessel comprising a lower section lining the lower portion of said inner vessel and an upper section movable in said inner vessel with the liquid level therein, means for withdrawing said liquid from said flexible semi-permeable container at a rate commensurate with said breathing demand, means for evaporating and warming said liquid withdrawn from said semi-permeable container.

3,046,752
CHEMICAL APPARATUS
Irwin B. Margiloff, New York, N.Y., assignor to Scientific Design Company, Inc., a corporation of Delaware
Filed Jan. 23, 1961, Ser. No. 84,214
6 Claims. (Cl. 62—123)

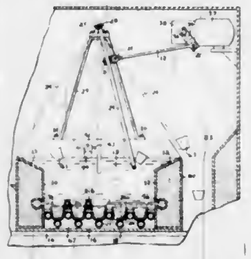
1. An apparatus adapted for use in refrigerating a liquid comprising the combination of: an enclosure having a rigid bottom portion and a flexible top portion; a horizontally disposed flexible sheet adapted to contain a shallow pool of liquid of uneven depth thereon; support members rigidly affixed to the said bottom portion of said enclosure and the periphery of said flexible sheet so as to

maintain said flexible sheet within said enclosure; inlet means adapted to introduce a liquid onto said flexible sheet; refrigerant inlet means adapted to introduce a liquid



refrigerant into the lower portion of said flexible sheet; outlet means for withdrawing a slurry from said flexible sheet; and outlet means adapted to withdraw vaporous refrigerant from said enclosure.

3,046,753
APPARATUS FOR PRODUCING ICE CUBES
Frank Carapico, Jr., 26 Woodcroft Road, Havertown, Pa., assignor of one-third to Frank Carapico, Sr., and one-third to Joseph D. Carapico, Havertown, Pa.
Filed Apr. 27, 1961, Ser. No. 106,046
5 Claims. (Cl. 62—132)



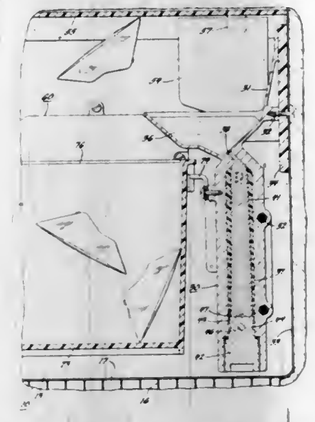
5. An evaporator structure adapted for use in an ice making machine designed to operate in a two part cycle consisting of a freezing period followed by a defrosting period, comprising in combination, a plurality of open-topped spaced individual metal pockets, a coil of metal tubing secured in good metal-to-metal contact with selected regions of the sidewalls and bottom walls of said pockets to provide good thermal transfer between said coil and pockets, a defrost tube structure at least a portion of which is disposed proximately above the top edges of and between the sidewalls of adjacent ones of said spaced pockets, and thermal barrier means intervening said defrost tube structure and the top edges of said pockets, said coil and said defrost tube structure each having its own inlet and its own outlet, and the defrost tube structure outlet being connected to the coil inlet.

3,046,754
ICE MAKER CONTROL SYSTEM
Walter G. Kniffin, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 20, 1960, Ser. No. 63,851
5 Claims. (Cl. 62—135)

4. In an automatically operated ice making apparatus including a freezing compartment and a mold disposed therein having a plurality of immovable walls formed integral therewith defining chambers containing water to be frozen into ice blocks wherein the blocks of ice are thereafter ejected from said chambers solely by freezing water in said mold the combination comprising:

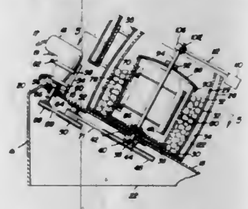
(*a*) means on and in direct heat exchange relation with a wall of said mold adapted to heat same only after ejection of ice blocks from said chambers, and

(*b*) thermostatic means secured to a wall of the mold against movement relative thereto actuated in response to a low temperature thereof attained subse-



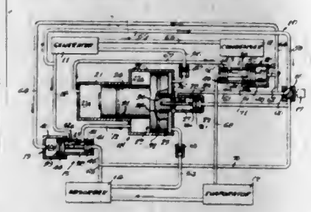
quent to ejection of ice blocks from said chambers for rendering said heating means effective.

3,046,755
ICE CREAM FREEZER
Roberson Y. Sale, 2345 Frisse Ave., Evansville, Ind.
Filed Jan. 26, 1961, Ser. No. 85,084
5 Claims. (Cl. 62—136)



1. A freezer for freezing ice cream comprising a base, an ice cream container rotatable on the base in a bath of cooling medium, a dasher rotatably mounted within the container, means for rotating the container drivingly connected thereto, an overload release means connected to the dasher and preventing rotation of the dasher when the viscosity of the ice cream is below a predetermined value, said overload release means automatically permitting continuous rotation of said dasher with said container when the ice cream reaches said predetermined viscosity.

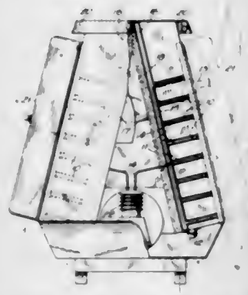
3,046,756
MEANS FOR TRANSFERRING FLUIDS IN AN ABSORPTION REFRIGERATION SYSTEM
Eugene P. Whitlow and Robert W. Fink, Benton Harbor, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Filed May 3, 1960, Ser. No. 26,603
3 Claims. (Cl. 62—141)



1. In an absorption refrigeration system having a first portion containing high pressure fluid and a second por-

tion containing low pressure fluid, apparatus comprising: a pump for pumping fluid from the second portion to the first portion including a housing having an inlet and an outlet at one end, a port at the other end, and a piston in the housing reciprocable toward and from said one end; first passage means for delivering fluid from said second portion of the system to said inlet upon spacing of said piston from said one end; a second passage means for delivering fluid from said outlet to said first portion of the system upon juxtaposing of said piston to said one end; a third passage means including a control valve responsive to pressure differentials thereacross for selectively connecting said port with either of said first and second portions of the system; means for selectively applying pressure differentials to said control valve for cyclically operating the control valve at preselected time intervals; and piston means at one end of said pump and arranged to use a portion of the energy of the high pressure fluid directed thereto by the control valve for reciprocating the piston.

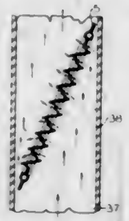
3,046,757
REFRIGERATORS
Abraham H. Bank, 30 Beit St., New Doornfontein, Johannesburg, Union of South Africa
Filed Apr. 18, 1960, Ser. No. 22,811
Claims priority, application Union of South Africa Apr. 30, 1959
1 Claim. (Cl. 62—251)



A refrigerator comprising a cabinet having at least one side thereof sloping inwardly toward the top, an additional sloping side sloping backwardly at an angle between 7° and 9° to the vertical plane of said refrigerator, a plurality of hollow, continuous and open shelf members having the same width and being disposed on said additional sloping side in substantially perpendicular relationship thereto, said shelf members overlapping each other for downward flow of cold air from a higher to a lower shelf member, said shelf members being equally disposed apart vertically at a distance to support articles thereon in an inclined and readily accessible manner, tubes carrying a cooling fluid disposed in said hollow shelf members to impart coolness thereto, pipe means disposed in a hollow portion of said additional sloping side interconnecting said tubes, and compressor means connected to said pipe means.

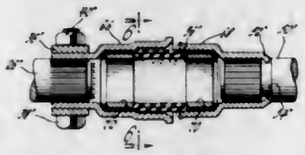
3,046,758
HEAT EXCHANGERS
Charles A. Heuer and Norval A. Keith, East Alton, Ill., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Aug. 11, 1960, Ser. No. 49,041
2 Claims. (Cl. 62—426)

1. A heat exchange structure comprising a duct forming a passage for a first heat exchange fluid therethrough, at least two spaced openings in said duct, a first fluid impeller at one of said openings for moving a current of said first fluid through said duct, a plate-like heat exchange element secured in said duct, within said current, said element containing internally disposed therein a system of internal passages having their opposite walls bulged out of corresponding faces of said element and bounded by solid web portions of said element, a plurality of slits in said web portions between said passageways with the portions of said web portions between and adjacent said slits rotated to an angle with the plane of said element into fins projecting out of both said opposite faces of said element, transfer openings for said first fluid in the portions of said element displaced by said fins, a second fluid impeller for moving a second heat exchange fluid



in said passage, and conduit means interconnecting said second impeller to a terminal end of said passages, said element being disposed transverse said passage at an angle to the normal of the wall of said duct to form a perforate partition in said duct, and said portion of said element between each pair of adjacent slits being rotated to an angle where said fins constrain said first fluid to flow tangentially through said transfer openings in said element and deflect at least a portion of said first fluid in a direction countercurrent to the flow of said first fluid through said duct.

3,046,759
SHAFT COUPLING
Donald E. Deford and Duane K. Dye, Saginaw, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 18, 1960, Ser. No. 16,022
4 Claims. (Cl. 64—11)

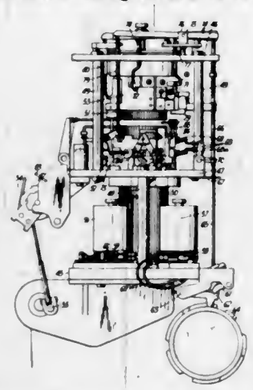


1. A coupling for transmitting torque between two shaft members or the like, said coupling permitting a degree of relative axial and angular displacement between said shaft members and comprising a yoke element at the coupled end of each said shaft member, each of said yoke elements carrying spaced fingers, at least one being connected to the corresponding shaft member through splining, the fingers of said yoke elements being interlocked with spaces between the interlocking fingers, and a reinforced hose section secured to said yoke elements inwardly of said fingers by means of expander rings located within said hose section.

3,046,760
CIRCULAR KNITTING MACHINE
Roland Peberdy, Leicester, England, assignor to The Bentley Engineering Company Limited, Leicester, England
Filed June 26, 1956, Ser. No. 594,052
Claims priority, application Great Britain June 27, 1955
7 Claims. (Cl. 66—14)

1. In a knitting machine of the type described, in combination, an upper cylinder having tricks; a lower cylinder having tricks; a set of needles slidable in said tricks

between said upper and lower cylinders; first patterning means for retaining selected needles in said lower cylinder; second patterning means for effecting movement of selected needles to assume an inoperative non-knitting position, said first and second patterning means being located at the same knitting station of said knitting machine and being operatively connected with said lower knitting cylinder, said second patterning means being operatively connected to said first patterning means and controlled to act only on the needles which are retained by said first patterning means in said lower cylinder; and third patterning means for shifting the remaining needles of said set of needles to said upper cylinder.



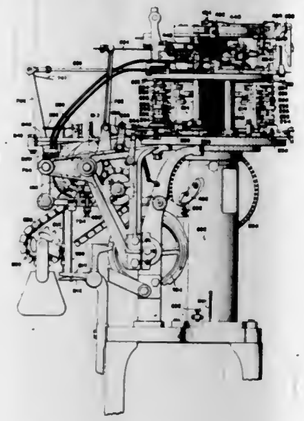
3,046,761
METHOD OF KNITTING PATTERNED FABRIC
Richard M. Janda, Mount Penn, and James D. Moyer, Wyomissing, Pa., assignors to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Mar. 25, 1960, Ser. No. 17,626
17 Claims. (Cl. 66—43)



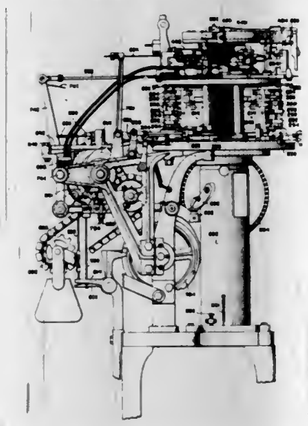
1. A method of knitting on a circular knitting machine having four knitting stations and adapted to reciprocatorily knit at said stations, including the step of knitting a first pair of oppositely disposed fabric areas at a first opposed pair of said knitting stations, the step of knitting an overplaid design in each of said first pair of fabric areas at each of a second opposed pair of knitting stations, the step of knitting a second pair of oppositely disposed fabric areas at said second opposed pair of knitting stations, and the step of knitting an overplaid design in each of said first pair of fabric areas at said first opposed pair of knitting stations.

3,046,762
KNITTING METHOD AND MACHINE
Stanley R. Shelmire, Laconia, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed Apr. 2, 1952, Ser. No. 280,050
68 Claims. (Cl. 66—43)

1. In a circular knitting machine comprising a needle cylinder, needles carried by said cylinder, yarn feeding means at each of a plurality of yarn feeding stations, and means for producing relative reciprocatory movements between said cylinder and said yarn feeding means; means for controlling needles so that different groups of needles take yarn at each feed during successive reciprocatory strokes to produce at least one diagonal junction between areas knit primarily from yarns fed at different feeding stations, and means producing a yarn change effecting knitting of outgoing and incoming yarns together in at least one loop during a single reciprocatory stroke of the last mentioned knitting with removal of the outgoing yarn during said stroke.



3,046,763
MULTI-FEED CIRCULAR KNITTING MACHINE
Robert H. Lawson, Laconia, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed Apr. 2, 1952, Ser. No. 280,057
36 Claims. (Cl. 66—43)



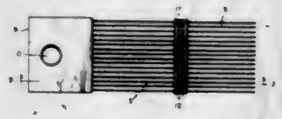
27. In a circular knitting machine comprising a needle cylinder, independent needles carried by said cylinder, yarn feeding means at each of at least four spaced feeding stations, and means for producing relative reciprocatory movements between said cylinder and said yarn feeding means; means for controlling needles during one period of reciprocatory knitting to cause selected needles to knit at least four suture-joined contiguous partial courses, each of a separate yarn, at said stations to form a composite circular course during each of single strokes of reciprocatory knitting, said needle controlling means varying the selected needles in successive strokes to cause at least one suture of a series of successive composite circular courses to extend at an angle to the wales.

3,046,764
THREAD GUIDE UNIT
Ronald M. Torrence, Torrington, Conn., assignor to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Oct. 7, 1960, Ser. No. 61,235
5 Claims. (Cl. 66—86)



1. A thread guide unit for a warp knitting machine comprising a holder, a plurality of long thread guides anchored in parallel separated relation in the holder, a plurality of relatively shorter thread guides equally spaced between and in alignment with the ends of the long guides and a crossbar connecting the rear ends of the short guides and the adjacent parts of the long guides.

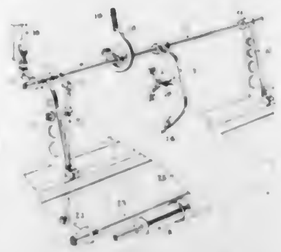
3,046,765
YARN GUIDE UNIT
Ronald M. Torrence, Torrington, Conn., assignor to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Dec. 17, 1959, Ser. No. 860,224
4 Claims. (Cl. 66—86)



1. A yarn guide unit comprising a plurality of parallel yarn guides having eyes at their free ends, a holder of light metal alloy or the like cast around the rear ends of the shanks of the guides flush with the edges of the guides on one side and a spacing bar cast around the guides at an intermediate point spaced between the free ends of the guides and the front edge of the holder.

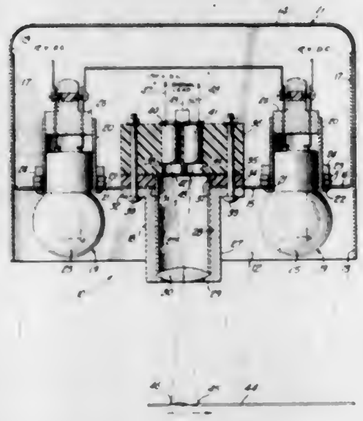
3,046,766
KNITTING MACHINE
Frank G. Weisbecker, 8th and Maple Sts., Lansdale, Pa.; Mary Weisbecker, executrix of said Frank G. Weisbecker, deceased
Filed Sept. 12, 1956, Ser. No. 609,440
3 Claims. (Cl. 66—96)

1. An attachment for a standard flat bed full fashion knitting machine including a back narrowing shaft comprising in combination: a shaft rotatably journaled above the machine bed coextensive in length therewith and extending parallel to the back narrowing shaft; at least one arm per machine section, rigidly attached to said shaft and extending substantially radially therefrom to a point substantially adjacent to and in front of the knitting area; yarn holding means carried by the outer end of said arms, operative when said shaft is rotated placing said means into the knitting area, to engage and hold a sinker or divider loop; means normally urging rotation of said shaft in a direction to bring said yarn holding means into operative position in the knitting area; holding means



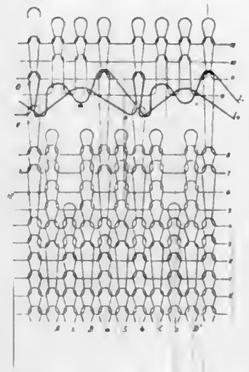
normally positively preventing rotation of said shaft; and means for releasing said holding means in timed relation to the knitting action.

3,046,767
SCANNING HEADS FOR STOP-MOTION DEVICES FOR KNITTING MACHINES
Lawrence Creigh Nickell, Ronceverte, W. Va., assignor to Appalachian Electronic Instruments Inc., Ronceverte, W. Va., a corporation of West Virginia
Filed May 31, 1960, Ser. No. 32,962
4 Claims. (Cl. 66—166)



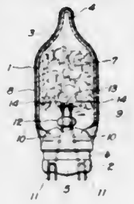
1. A scanning head for a stop-motion device of the type wherein a scanning means is traversed repeatedly across the width of an illuminated fabric to inspect the fabric as it emerges from a knitting machine and produce output signals for stopping the knitting machine upon detection of a defect in the fabric, the scanning head comprising a lens arranged on a vertical optical axis to produce an image of the fabric area under inspection, a pair of laterally spaced photocells arranged in parallelism with the optical axis of said lens and disposed symmetrically with respect to said optical axis and on opposite sides thereof to receive light directly from said lens, said lens being focused substantially on said photocells, a mask disposed in the path of light from said lens to said photocells having a pair of light admitting apertures therein to pass light to a respective one of said photocells, said light admitting apertures being spaced apart a distance to render said photocells responsive to light reflected from closely adjacent but different discrete zones of the fabric to produce an output signal indicative of the relative reflectivity of the respective fabric zones for activating a stop circuit to stop a knitting machine responsive to an unbalance in the light received by said two photocells from said adjacent fabric zones.

3,046,768
TWO BY TWO RIB KNIT FABRIC
Frantisek Barton, Brno, Czechoslovakia, assignor to Sdruzeni podniku textilniho strojirenstvi, Chrastava, Czechoslovakia
Filed July 22, 1959, Ser. No. 828,879
Claims priority, application Czechoslovakia July 25, 1958
1 Claim. (Cl. 66—172)



A two by two rib knitted fabric of uniform yarn adapted to be produced on a circular knitting machine without racking of the dial needles relative to the cylinder needles; said fabric having a selvage including threads forming first and second courses of loops at the beginning thereof, said first and second courses having loops thereof alternatingly disposed at the front and back, respectively, of the fabric with said threads forming the first and second courses being wound around each other at least between the first and second rows of loops at the opposite faces, respectively, of the fabric to provide a run-proof edge for the selvage.

3,046,769
FLASH LAMP AND IGNITION MEANS THEREFOR
Robert M. Anderson, Euclid, and Louis A. Demchock, Cleveland, Ohio, assignors to General Electric Company, a corporation of New York
Filed Apr. 29, 1960, Ser. No. 25,626
3 Claims. (Cl. 67—31)



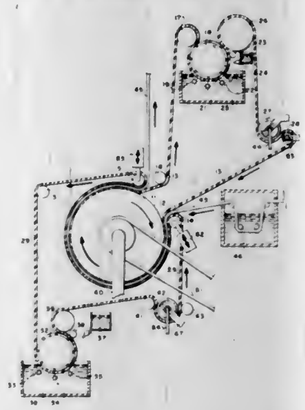
1. A flash lamp comprising a sealed envelope having an oxidizing atmosphere therein, a quantity of filamentary combustible material loosely arranged within said envelop and consisting essentially of material of the group consisting of zirconium and metallic materials having a low heat-energy ignition characteristic substantially corresponding to that of zirconium, and ignition means disposed in said envelope within effective ignition range of said combustible material, said ignition means comprising a fulminating substance consisting essentially of magnesium, zirconium, potassium perchlorate and marble flour in the approximate proportions by weight of between 0.5–7.5% of magnesium, 40 to 85% of zirconium, 5–33% of potassium perchlorate and 5 to 35% of marble flour, said admixture ingredients being bonded together by a suitable binder.

3,046,770
METHOD OF MAKING A MOUNT STRUCTURE FOR FLASH LAMPS
Robert M. Anderson, Euclid, Ohio, assignor to General Electric Company, a corporation of New York
Filed Nov. 12, 1959, Ser. No. 852,552
1 Claim. (Cl. 67—31)



The method of making a mount structure for flash lamps which comprises sealing a pair of lead-in wires into a glass support member to position end portions of said wires alongside one another and spaced apart a distance of at least 50 mils, connecting a straight wire filament substantially taut across the said ends of said wires, applying coatings of primer material to the said ends of said wires at their junctions with the filament, and then bending the said wires toward each other to close the space between the said end portions thereof to a distance less than 50 mils and the space between the primer coatings thereon to a distance less than 40 mils and form the portion of the filament extending between said primer coatings into open loop shape.

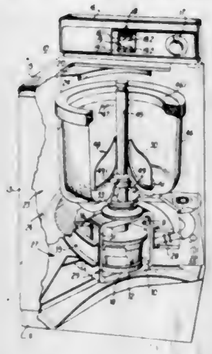
3,046,771
TEXTILE PROCESSING APPARATUS
Herman Herbert Bailey, Belmont, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Aug. 4, 1958, Ser. No. 752,747
3 Claims. (Cl. 68—5)



1. Apparatus for heat treating strip material such as a textile which comprises a drum, means for heating said drum to a predetermined temperature, means for rotating said drum, hold down means comprising an endless, impermeable, heat resistant, belt passing around the majority of the surface of said drum, means for washing the surface of said hold down means at a point remote from said drum, support means for preventing formation of deposits upon the surface of said drum comprising an endless, impermeable, heat resistant, belt passing between said hold down means and the surface of said drum, means remote from said drum for washing the surface of said support means, means for introducing said strip material between said hold down means and said support means, means for maintaining said hold down means and said support means under tension and means including continuous interfitting V-shaped grooves located at least

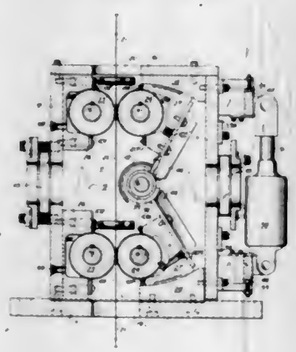
on the marginal surfaces of said hold down means and said support means to form a labyrinth seal along the side of said hold down means and said support means.

3,046,772
WASHING MACHINE DRIVE SYSTEM
Robert C. Aberle, Lombard, Ill., assignor to General Electric Company, a corporation of New York
Filed Feb. 29, 1960, Ser. No. 11,682
8 Claims. (Cl. 68—12)



5. In a clothes washing machine of the type having a basket within which clothes are washed, said basket being arranged for rotation to centrifugally extract washing liquid from the basket and the clothes therein, the combination of mechanism for accelerating said basket from a rest position to rotation at an extraction speed, said mechanism including a motor having a power circuit for operating the same at either a first speed or a substantially slower second speed; preselector switch means in said circuit to preselect the first or the second motor speed; and other switch means in said circuit to maintain the motor at its first speed for a period sufficient to accelerate said basket to a speed substantially the basket speed effected by said motor second speed and thereafter restoring the motor circuit for continued operation at the preselected speed.

3,046,773
PRESSURE SEAL
Amos C. Healey, Gulf Breeze, Fla., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Dec. 18, 1961, Ser. No. 160,227
12 Claims. (Cl. 68—22)



1. A pressure-sealing device adapted to permit the continuous passage therethrough of a continuous length of elongated material from a first zone maintained at one pressure to a second zone maintained at a different pressure, said device comprising:

(*a*) a hollow chamber having openings therein communicating with said first zone and with said second zone, and through which said elongated material is passed, said chamber having a pair of opposite end walls and being adapted to contain a body of liquid therein;

(*b*) a first roll supported within said chamber between said end walls for rotation about its axis;

(*c*) a second roll also supported within said chamber between said end walls for rotation about its axis, the axes of said rolls being substantially parallel;

(*d*) means for resiliently urging at least one of said rolls toward the other of said rolls to define a constricted passageway between the peripheries of said rolls through which said elongated material is passed;

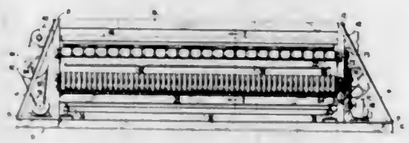
(*e*) means for rotating said rolls at a peripheral speed substantially equal to and in the same direction as the linear speed of the elongated material passing through the constricted passageway between the rolls;

(*f*) closure means extending between said end walls and substantially blocking the space between each roll and said hollow chamber, said closure means being provided with recesses facing said rolls;

(*g*) means for supplying liquid to said recesses whereby liquid will flow from said recesses through the constricted spaces between said closure means and said rolls; and

(*h*) means for supplying a liquid to the interior of said hollow chamber to maintain therein a body of liquid a portion of which extends into the constricted passageway between the rolls.

3,046,774
RUG CLEANING MACHINE
Charles R. Glock, P.O. Box 847, Lima, Ohio
Filed Jan. 18, 1962, Ser. No. 167,089
5 Claims. (Cl. 68—39)



4. A continuous automatic rug cleaning machine comprising; belt transport means for carrying a rug to be cleaned, a scrub table backing up the belt transport means and being resiliently supported for leveling, a plurality of scrub brushes positioned above the belt transport means and adapted to contact a rug to be cleaned, motor driven automobile engine block means for driving the scrub brushes in a reciprocating manner, and means for injecting a cleaning fluid onto the rug to be cleaned.

3,046,775
APPARATUS FOR TREATING RETICULATE MATERIAL
Victor E. Wellman, Westfield, N.J., and Norbert M. Bikales, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Original application Sept. 25, 1957, Ser. No. 686,134. Divided and this application Nov. 20, 1959, Ser. No. 854,321
1 Claim. (Cl. 68—147)

In an apparatus for the cyanoethylation of reticulate cellulosic material, said apparatus comprising:

a small first container, adapted to receive compacted reticulate material,

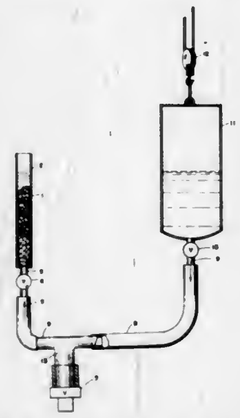
said first container having a closed bottom, an open port in said bottom, a first short conduit extending vertically downward from said port and a first valve in said first conduit;

a large second container adapted to contain reactant liquor,

said second container having a closed bottom with an open port therein, a second short conduit extending vertically downward from the said open port in the bottom of said second container and a second valve in said second conduit;

a flexible U-shaped conduit connecting the lower open ends of said first and second short conduits below said first and second valves; a first mounting means for one of said first and second containers; a vertically-movable supporting means for the other of said first and second containers,

said movable supporting means being adapted to raise or lower the elevation of the container



supported thereby relative to the elevation of the container mounted in said first mounting means, whereby liquid may be caused to flow from either of said containers through said U-shaped conduit into the other container;

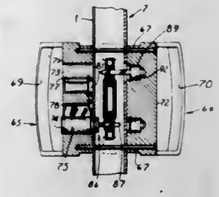
the improvement which comprises the combination therewith of a T-shaped trap,

two horizontal arms of said T being interposed in said U-shaped conduit at a point in the length thereof which is at the lowest level below the bottom of both said containers at all positions of said movable mounting means, the vertical arm of said T extending vertically downward and adapted to serve as a container for material settling from liquid in said U-shaped tube, whereby material in said vertical arm of said T is prevented from return to either of said containers; and

a valve means in the lower part of said vertical arm.

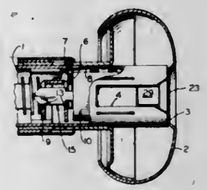
3,046,776
LATCH MECHANISM FOR SLIDING DOOR
Robert A. Marotto, Redwood City, and Hollis L. De Vines, San Mateo, Calif., assignors to Schlage Lock Company, a corporation
Filed Mar. 23, 1959, Ser. No. 801,137
5 Claims. (Cl. 70—97)

3. In a latch for a vertically disposed sliding door, a keeper adapted to be fixed to a door frame in the plane of said door, a latch carried by said door and adapted to be translated horizontally along a straight path of travel in the plane of the door toward and away from said keeper, said latch comprising a pair of vertically disposed opposed jaws on opposite sides of the central plane of said door and pivotally mounted at one of their corresponding ends for swinging about axes parallel to said plane of the door, spring means urging the opposite corresponding ends of said jaws toward each other at all times, said keeper being positioned on said frame to be received between said opposite corresponding ends of said jaws when said door is in latched position, an unlatching cam pivotally mounted for swinging about a horizontal



axis and horizontally spaced from and between the pivoted ends and keeper ends of said jaws, said cam including a wedge-like camming portion movable upon swinging of said cam in one direction to a position in engagement at its opposite sides with the opposed sides of said jaws and at a point intermediate said pivoted ends and said keeper ends for spreading said keeper ends of said jaws apart to permit release of the keeper when said door is in latched position.

3,046,777
CONSTRUCTION CYLINDER
Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation
Filed Feb. 3, 1959, Ser. No. 790,958
3 Claims. (Cl. 70—371)

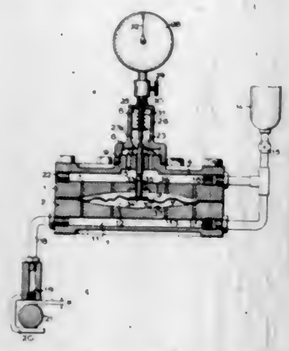


1. In combination with a lockset that includes a doorknob spindle provided with a longitudinally extending slot and a knob mounted on said spindle and provided with a central aperture for receiving a key therethrough, a construction cylinder comprising: a generally cylindrical body rotatably received in the outer end of said spindle and provided with an outer face adapted to cover said aperture in said knob to prevent entrance of foreign material through said aperture, an extension on the inner end of said body adapted to engage the rollback mechanism of said lockset for actuating the same upon rotation of said body, and means carried by said body to prevent removal of said body through said aperture, said last mentioned means comprising a clip having a portion thereof extending radially outwardly relative to said aperture in said knob and received in said slot in said spindle.

3,046,778
PNEUMATIC GAUGE
André Fortier, 12 Rue Leon Cambillart, Clamart, France
Filed Feb. 28, 1958, Ser. No. 718,193
Claims priority, application France Mar. 6, 1957
9 Claims. (Cl. 73—37.5)

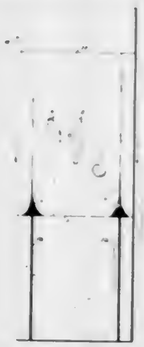
1. In a pneumatic gauge comprising a casing having a pair of separate gas chambers therein and means for admitting a restricted flow of gas under pressure into each of said chambers, the combination of a pressure

sensitive wall common to said chambers and consisting of pliable substantially non-elastic folding material, a pair of perforated concave members having a permanent fixed relationship relative to the neutral position of said folding wall to thereby limit the displacement thereof, the surface area of said wall adapted to engage the surface of one or the other of said concave members conforming to said surface when abutting against the latter whereby substantially no tension results in said wall when in the



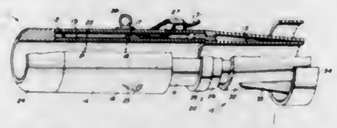
abutting position, one of said chambers having an outlet adapted to be disposed in proximity to a surface to be gauged, and the other chamber having an outlet adapted to receive a valve therein, said valve being connected with said folding wall for movement therewith to vary the rate of discharge of gas from its corresponding chamber in accordance with the displacements of the wall, and indicating means having a movable element, said element being connected for movement with said valve.

3,046,779
SOLVENT-FRONT INDICATOR FOR PAPER CHROMATOGRAMS
Charles H. Coleman, Aurora, Ill., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 25, 1961, Ser. No. 105,522
4 Claims. (Cl. 73—53)
(Granted under Title 35, U.S. Code (1952), sec. 266)



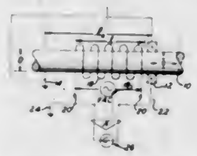
1. In a method of paper chromatography, wherein a chemical substance is placed on the starting line of a paper chromatogram, and a solvent is applied to said starting line and caused to migrate along siad paper chromatogram in a direction perpendicular to said starting line, whereby chemical substance is left on said paper chromatogram in a new location intermediate said starting line and the line of farthest progress of the front of said solvent: the improvement which comprises the steps of forming an ink line perpendicular to said starting line and parallel to an edge of said paper chromatogram, the ink of said ink line containing coloring matter soluble in said solvent and not substantially absorbable by the paper of said paper chromatogram, said ink line being laterally spaced from said deposit of chemical substance on said starting line; and terminating the migration of said solvent at a distance of the solvent front from said starting line sufficient to permit the deposit of chemical substance on said paper chromatogram in said new location, said distance of said solvent front being indicated by a permanent change in the appearance of said ink line resulting from contact of said solvent with said ink line.

3,046,780
HYDROPHONE FLUID CONDITION MONITOR
Leonard N. Liebermann, San Diego, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 30, 1959, Ser. No. 824,140
17 Claims. (Cl. 73—53)



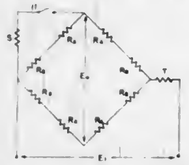
1. An acoustic resonator adapted to be immersed in and towed through a fluid medium, said resonator being adapted to readily pass fluid therethrough as it is towed through the fluid medium, comprising an open-ended hollow longitudinally-disposed tubular member whose inner surface is to be acoustically exposed to the given fluid medium and which has an open fluid-entry end and an open fluid-exit end, the fluid-exit end of said tubular member being of smaller inside diameter than the fluid-entry end of said tubular member to define a constriction means at the fluid-exit end of said tubular member for reducing the likelihood of cavitation in the fluid medium when said acoustic resonator is being towed at high speeds; envelope means disposed outwardly of said tubular member in encompassing position therearound and defining with the outer surface of said tubular member an annularly-disposed cavity between said tubular member and said envelope means; and at least one electromechanical converter means disposed within said cavity and in vibration-transmitting relationship with the outer longitudinally-extending surface of said tubular member, said electromechanical converter means being adapted to connect to an externally-leading electrical lead.

3,046,781
MAGNETOSTRICTIVE TORQUE METER
Norman F. Pratt, Ypsilanti, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 21, 1959, Ser. No. 841,146
3 Claims. (Cl. 73—136)



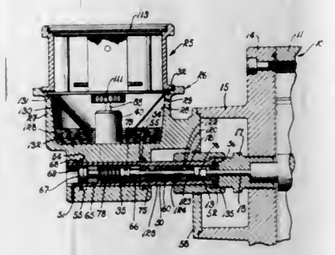
1. In a torque meter for measuring the stress applied to a shaft having magnetic properties, a housing for receiving said shaft, bearing means in said housing for supporting said shaft, plural electrical windings disposed in the vicinity of said shaft, means for exciting said windings with an alternating current potential thereby establishing a magnetic flux field, a secondary winding including an electrical lead, means for establishing an electrical connection between said lead and said bearing means at one location on the shaft, a galvanometer, one side of said galvanometer being connected to said lead, the other side of said galvanometer being grounded to said housing at a location spaced from said bearing means, and means for grounding said shaft to said housing at another location on the shaft, variations in the stresses in said shaft intermediate said one location and said grounding means for said shaft influencing the induced voltage measurable by said galvanometer.

3,046,782
STRAIN GAGE TRANSDUCER CIRCUIT
Eric Laimins, Cambridge, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Filed Apr. 28, 1959, Ser. No. 809,395
3 Claims. (Cl. 73—141)



1. A condition responsive transducer in which the response to a condition to be measured is produced by the action of a force, a force actuated elastic transducer element whose elastic modulus decreases with an increase in temperature, a first strain sensitive filament having a positive coefficient of electrical resistance and a negative coefficient of gage factor, a second strain sensitive filament electrically connected to said first filament so as to form a single two-terminal strain gage, a bridge network including a Wheatstone bridge circuit and having two power input terminals and two output terminals, a source of power connected across said two power input terminals, means responsive to the output of said network connected across said output terminals, said two-terminal gage comprising one arm of said Wheatstone bridge circuit, the electrical resistances of said first and second filaments varying in accordance with strain applied thereto and being so proportioned to each other that said two-terminal strain gage has predetermined positive temperature coefficient of resistance and a predetermined negative temperature coefficient of gage factor, said first and second filaments being connected to said elastic transducer element so as to be responsive to strains thereof resulting from said condition to be measured and both being subject to strain of the same algebraic sign and to substantially the same temperature as said elastic transducer element, an electrical shunt resistance which is larger than the resistance of said two-terminal strain gage and which is connectible across one output terminal and one input terminal so as to shunt across the lowest resistance path through said two-terminal gage to produce a network output signal corresponding to a given condition, temperature responsive means included within said network and connected in series with and external of said Wheatstone bridge circuit and said power input terminals and being so located as to be subject to substantially the same temperature as said elastic transducer element, said predetermined temperature coefficients and the magnitude of resistance of said temperature responsive means being so related that acting together the response of said bridge to the output of said network in response to a given condition is substantially independent of temperature and so that the output of said network due to connecting said shunt resistance is substantially independent of temperature.

3,046,783
FLUID SEALING SYSTEM
Lloyd W. Bills, Downey, Calif., assignor to Flow Equipment Co., Inc., Santa Fe Springs, Calif., a corporation of California
Filed May 18, 1959, Ser. No. 813,959
15 Claims. (Cl. 73—272)



7. A fluid sealing system for use about a rotating shaft linkage subjected at one end to a fluid of high penetrability under high pressure and an opposite end subjected to atmospheric pressure comprising a body member having a passage communicating with said fluid of high penetrability under pressure, and a chamber open to the atmospheric pressure in communication with the passage; means journaling the shaft linkage in the passage with the linkage extended from said fluid under pressure into the chamber; a piston slidably mounted on the shaft linkage within the passage for reciprocable engagement with the body member about the pasage for reciprocal movement longitudinally of the shaft having an end exposed to said fluid under pressure and an opposite end; fluid seals positioned between the shaft linkage and the piston and between the piston and the surrounding body member; sealing means mounted about the shaft linkage in fixed engagement with the body member, said sealing means having an outer end disposed toward the chamber subject to atmospheric pressure, an inner end in spaced relation to said opposite end of the piston and constituting an effective barrier to fluids of large molecular size; and a fluid of large molecular size substantially filling the passage between the piston and the sealing means, whereby said sealing system constitutes an effective barrier against a fluid of relatively small molecular size.

3,046,784
DEPTH AND PRESSURE GAUGE
Otto A. Vicik, 4 Triangle Place, Tuckahoe, N.Y., and Joseph S. Serocki, 18—11 160th St., Whitestone, N.Y.
Filed June 8, 1959, Ser. No. 818,788
14 Claims. (Cl. 73—300)

1. A depth and pressure gauge of the type having elongated graduated vertical cylindrical tubular sleeve communicating at its lower end with a bag-like diaphragm, said gauge of the type for measuring the depth and pressure at the bottom of a body of water and of the type having a vertical column receiving a body of an indicating liquid with a bottom container in communication with the column also receiving the indicating liquid, comprising a gauging means, means to actuate said gauge when it descends to the bottom and spring pressed plunger means to lock said actuation at the bottom, said gauge having an enlarged diameter lower cylindrical sleeve with side walls having open passageways therein, the lower end of said sleeve carrying said actuating means including a reciprocatory weight and the upper end of said sleeve carrying the gauging means including an elongated graduated column having a suspension means at the top thereof and

said sleeve itself carrying a reciprocatory spring pressed plunger and means to enclose said plunger including said



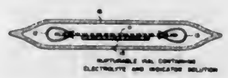
diaphragm, said spring pressed plunger including a valve to open and close the lower end of said column.

3,046,785
GUARD FOR SIGHT GAUGE GLASS AND METHOD OF MAKING SAME
Jay P. Au Werter, 23276 Laureldale Road, Cleveland, Ohio
Filed Apr. 7, 1958, Ser. No. 726,870
7 Claims. (Cl. 73—325)



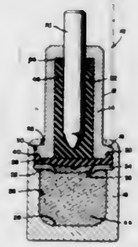
1. A sight gauge glass guard comprising end members adapted to receive the ends of a tubular gauge glass having a cylindrical outer surface,
and a shield member extending between the end members to parallel and partially enclose such a gauge glass received between the end members, said shield member comprising a body portion and a longitudinally extending inturned flange portion,
one of the end members comprising an outer cap and a circular inner ring part,
the cap being formed with internal threads,
the ring part having an attaching portion and an axially extending arcuately curved segmental portion of substantially uniform thickness disposed inside the shield member and constituting a spacer between the shield member and such a received gauge glass, said segmental portion having an axially extending edge, the flange portion of the shield extending into the cap and being disposed against said edge to thereby locate the shield in predetermined position circumferentially of the ring part,
bonding means interposed between and bonded to the segmental portion of the ring part and the shield member, said bonding means being recessed in and of less axial extent than such segmental portion, and
the ring part also having thread means on said attaching portion adapted to receive the threaded cap for facile removal and replacement.

3,046,786
CONDITION RESPONSIVE DEVICE
Bernt M. Tessem, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 12, 1958, Ser. No. 754,573
9 Claims. (Cl. 73—356)
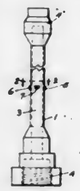


1. Apparatus for indicating the extent of exposure to a temperature exceeding a certain minimum comprising an impregnated porous matrix medium having a pair of dissimilar metal bodies arranged in contact with said medium at spaced interfaces to form a galvanic cell, said porous medium being impregnated with a certain ionized electrolyte and certain indicator to form a conductive path in a portion of the galvanic cell, the ions of said electrolyte being capable of undergoing an oxidation-reduction reaction at said interfaces to form a certain reaction product, said reaction product migrating along said porous medium, said indicator being sensitive to the presence of said reaction product and reacting therewith to indicate visually the presence thereof, said migration being at a rate proportional to both time and to the increase in temperature above said minimum.

3,046,787
FUSION TYPE THERMAL ELEMENT
Joseph P. Wagner, Knoxville, Tenn., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Oct. 6, 1958, Ser. No. 765,523
2 Claims. (Cl. 73—368.3)



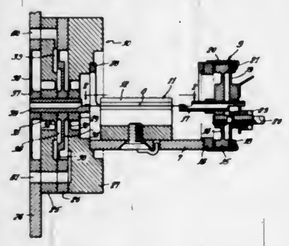
1. A fusion type thermal element comprising a hollow casing, a fusion type charge disposed within one portion of said casing, a diaphragm in the interior of said casing enclosing said fusion type charge and movable in response to expansion and contraction of said charge, a second substantially cylindrical portion of said casing formed with a bore extending from said diaphragm to a shoulder forming an opening of reduced diameter in the end of the bore, a substantially cylindrical member of rubberlike material fitted within said second portion having a closed end in engagement with said diaphragm and an open end spaced from said shoulder formed with a bore extending from said closed end having a diameter substantially the same as the diameter of an actuating stem to be slidably positioned in said bore, and an annular ridge projecting inwardly from said open end of said member forming an opening having a diameter smaller than the stem so that said ridge is deformed by insertion of the stem and pressed into engagement with said shoulder to form a seal.

3,046,788
FLUID PRESSURE ELECTRICAL TRANSDUCER
Eric Laimins, Cambridge, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Filed Aug. 4, 1960, Ser. No. 47,411
2 Claims. (Cl. 73—398)



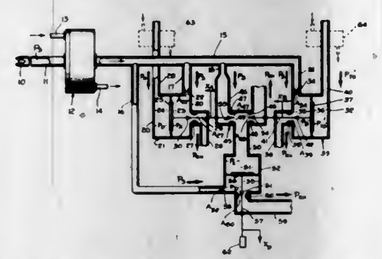
1. A fluid pressure electrical transducer comprising a hollow fluid pressure member containing a cross-sectional portion with opposed walls of initial concave shape connected by partial-annulus end walls, the external surface of the concave walls being subject to bending strains in tension and the external surfaces of the partial-annular walls being subject to bending strains in compression in response to internal pressure, whereby the distance between the focal points of the partial-annular surfaces increases as the tube expands to change the concave wall to a flat surface and decreases after the tube is expanded past a flat condition into a convex shape, and electrical resistance filament type strain gages bonded throughout their effective length to the external surfaces of the concave portions of said walls so as to be responsive to said tension bending strains and whose electrical outputs will deviate successively on opposite sides of a linear output line as the tube changes from concave to convex thereby to obtain an average output approaching the linear line.

3,046,789
DIFFERENTIAL PRESSURE TRANSDUCER
Harold O. Boss, Newport Beach, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 20, 1957, Ser. No. 660,111
4 Claims. (Cl. 73—398)



1. A pressure sensitive device adapted to be connected to one end of a vibrating wire of a transducer comprising a first sealing diaphragm having a first sealing diaphragm hub portion, a first sealing diaphragm web portion adjacent said first sealing diaphragm hub portion, a first sealing diaphragm outer portion and an opening therein for receipt of a pin; a second sealing diaphragm having a second sealing diaphragm hub portion, a second sealing diaphragm web portion adjacent said second sealing diaphragm hub portion, a second sealing diaphragm outer portion and an opening therein for receipt of a pin; a pressure diaphragm having a pressure diaphragm hub portion, a cavity portion defining a first pressure responsive side of said pressure diaphragm and a second pressure responsive side of said pressure diaphragm adjacent said pressure diaphragm hub portion, a pressure diaphragm web portion adjacent said cavity portion, a pressure diaphragm outer portion, and an opening therein for the receipt of a pin; said pressure diaphragm being interposed intermediate said first sealing diaphragm and said second sealing diaphragm such that said pressure diaphragm hub portion engages said first sealing diaphragm hub portion and said second sealing device hub portion and such that pressure diaphragm outer portion engages said first sealing diaphragm outer portion and said second sealing diaphragm outer portion; first means communicating fluid intermediate said first sealing diaphragm and said first pressure responsive side of said pressure diaphragm; second means communicating fluid intermediate said second sealing diaphragm and said second pressure responsive side of said pressure diaphragm; and a pin adapted to be connected to said vibrating wire extending through and connected to said first sealing diaphragm hub portion, said pressure diaphragm hub portion and said second sealing diaphragm hub portion.

3,046,790
PRESSURE RATIO COMPUTER
Ernest A. Bauer, Burbank, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Nov. 28, 1960, Ser. No. 72,022
11 Claims. (Cl. 73—407)



1. A pressure ratio computer comprising first means for producing a movement proportional to a first static pressure of said ratio, second means for producing a movement proportional to a second static pressure of said ratio, third means responsive to both said movements for deriving from a working fluid pressure a control pressure P_c proportional to the pressure ratio and to the working fluid pressure, and fourth means responsive to said working fluid pressure and to said control pressure for producing an output movement proportional solely to said pressure ratio.

3,046,791
SAMPLER FOR FLOWING LIQUIDS
Johannus C. van Dinteren, Geleen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Sept. 12, 1960, Ser. No. 55,415
Claims priority, application Netherlands Sept. 12, 1959
10 Claims. (Cl. 73—422)

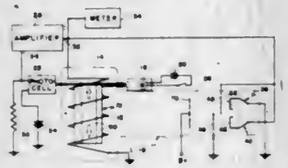
1. A sampler for continuously withdrawing, diluting and filtering samples from a flowing liquid comprising a screen, first conduit means for directing diluent liquid against one surface of said screen, second conduit means

for removing diluted liquid from adjacent said surface, a chamber adjacent the other surface of said screen and means for connecting said chamber to a passageway through which the first said liquid is flowing whereby dilu-



ent liquid is supplied through said first conduit means and flows through said screen to clear it of solids and diluted solid-free liquid is continuously withdrawn through said second conduit.

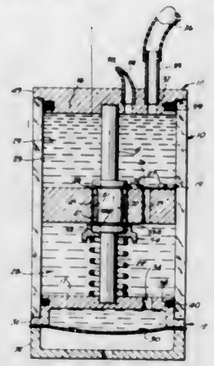
3,046,792
ACCELEROMETER WITH VELOCITY AND DISTANCE INTEGRATING MEANS
James J. Morgan, Box 296B, Del Mar, Calif.
Filed Dec. 5, 1958, Ser. No. 778,527
6 Claims. (Cl. 73—490)



3. In an accelerometer system: an electromagnetic field coil; a ferromagnetic sensing element suspended in and entirely supported by the magnetic field of said coil; detecting means sensitive to linear motion of said sensing element; a source of voltage connected through said detecting means to said coil, whereby the voltage in said coil varies in proportion to the motion of said sensing element; a pair of electron guns mounted adjacent said sensing element and positioned to direct parallel electron beams to strike the sensing element on opposite sides of the axis thereof; said electron guns being operatively connected to said coil, whereby the electron beam intensity varies proportionally with the voltage in the coil; said electron guns being connected in opposite polarity so that each gun operates individually to cause rotation of the sensing element in either direction according to the polarity of the voltage in said coil; an evacuated sealed envelope enclosing said electron guns, said coil and said sensing element; spin measuring means operatively mounted adjacent said sensing means to measure the rotational speed of the sensing element; and counting means coupled to said spin measuring means to indicate the total number of revolutions of said sensing element.

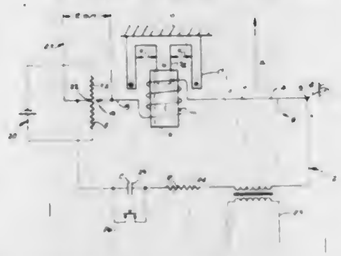
3,046,793
HYDRAULIC AVERAGING ACCELEROMETER
Hugh E. Riordan, Wyckoff, N.J., assignor to General Precision, Inc., Little Falls, N.J., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,557
10 Claims. (Cl. 73—515)

1. An averaging accelerometer comprising a hollow substantially cylindrical housing, a pair of end caps adapted to seal the ends of the hollow housing, fixedly attached to the hollow housing, a substantially cylindrical piston reciprocally fitted to the hollow housing, concentrically therewith, means co-axial with the cylindrical housing adapted to slidably guide the piston, compressible means fitted to one end of the piston between the piston and one end cap adapted to normally urge the piston toward the opposite end cap, a hydraulic fluid substantially filling the interior of the hollow housing, between the end surfaces of the piston and the corresponding surfaces of



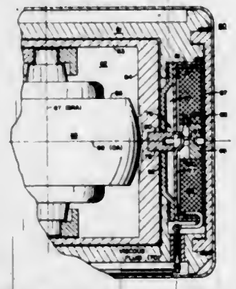
the end caps, said piston having an opening therethrough, substantially parallel to the reciprocating axis of the piston, and valve means attached to the piston adjacent said opening, the valve means being adapted to permit hydraulic fluid to flow through said opening in one direction, while preventing the flow of hydraulic fluid through said opening, in the opposite direction, said piston having a controlled leak opening therein, means adapted to supply hydraulic fluid to one end of the hollow housing, and means adapted to permit hydraulic fluid to be exhausted from said hollow housing.

3,046,794
ACCELEROMETER
Eduard M. Fischel, Caldwell, N.J., assignor to General Precision Inc., Little Falls, N.J., a corporation of Delaware
Filed July 19, 1960, Ser. No. 43,806
1 Claim. (Cl. 73—517)



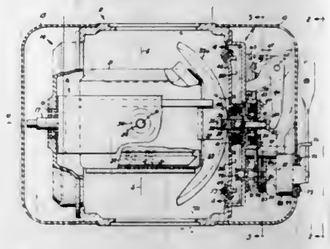
In an accelerometer, in combination,
a base containing the accelerometer wire network;
potentiometer terminals at opposed sides of said base;
a potentiometer intermediate said potentiometer terminals;
a center tap on said potentiometer;
a bridge straddling said base and potentiometer including legs and a center portion thereof;
a pivot rod depending from said bridge center portion;
a cup-shaped magnet affixed to one of said bridge legs with inner and outer poles;
a rocker arm, one end of which is mounted on said pivot rod;
a coil towards said rocker arm other end adapted to swing in and out of said cup-shaped magnet between said inner and outer poles;
a potentiometer wiper connected to said rocker arm other end in series with said coil;
a terminal panel affixed to said bridge other leg;
D.C. terminals on said panel for the D.C. power input of a D.C. circuit extending from said panel to said potentiometer terminals to provide a D.C. drop in potential across said potentiometer;
A.C. terminals on said panel for the A.C. power input, and including an A.C. circuit extending from said panel to said potentiometer wiper and potentiometer center tap through said coil said A.C. circuit providing an A.C. excitation current to energize said coil and creating a D.C. drop across said coil as said wiper is displaced along said potentiometer from said center tap, the windings on said coil and the polarity of said D.C. source being such that when said coil is subjected to a D.C. drop because of said displacement, as said coil on said rocker arm swings inward in said cup-shaped magnet, the polarity of the field created by the coil will be such as to tend to repel said coil outwards, while when said coil swings outward of said cup-shaped magnet, the field created by said coil will tend to attract said coil into said cup-shaped magnet;
resistor terminals in said panel in series with said A.C. circuit terminals, for a series resistor for said coil, the drop in potential across said resistor being a function of acceleration;
capacitor terminals in said panel in series with said resistor terminals and A.C. circuit terminals, for a capacitor designed to build up a potential in said A.C. circuit by the displacement of said potentiometer wiper from said potentiometer center tap; and,
output terminals in said panel furnishing to utilization means the drop in potential in said A.C. circuit between said potentiometer wiper and said center tap.

3,046,795
CONTROL APPARATUS
John S. Wilkerson, Overland Park, Kans., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 27, 1960, Ser. No. 78,404
9 Claims. (Cl. 74—5)



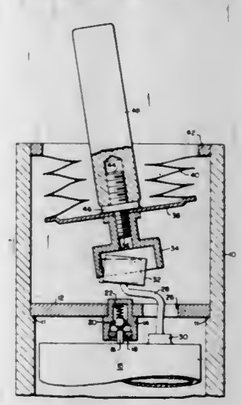
1. In a floated inertial instrument: a housing member; a gimbal member positioned within said housing member; fluid means in said housing member and surrounding said gimbal member, said fluid means having a density substantially equal to the density of said gimbal member; means rotatably connecting said gimbal member to said housing member for relative rotation therewith about an axis comprising a pair of axially spaced bearing assemblies each including a pivot element connected to one of said members, a pivot receiving element connected to the other of said members, and means for axially oscillating said elements relative to one another so as to pump said fluid means between said elements; and baffle means positioned between said gimbal member and said oscillation producing means.

3,046,796
GYROSCOPE CAGING MEANS
Irwin B. Thierman, Portland, Oreg., assignor to Iron Fireman Manufacturing Company, a corporation of Oregon
Filed July 25, 1960, Ser. No. 44,970
9 Claims. (Cl. 74—5.1)



1. A gyroscope having a stationary base, an outer gimbal ring supported on said base for rotary motion in either direction about an outer gimbal ring axis, an inner gimbal ring supported on said outer ring for rotary motion in either direction about an inner axis perpendicular to said outer ring axis, a gyroscope wheel supported on said inner gimbal ring for rotary motion in a selected direction about a spin axis perpendicular to said inner ring axis, each one of said three axes always intersecting each other of said three axes at a common point, said outer gimbal ring being said to be caged when said outer ring is rotated about said outer ring axis to a selected angular position of said outer ring with respect to said base, said inner gimbal ring being said to be caged when said inner ring is rotated about said inner ring axis to a position of perpendicularity of said outer ring axis and said spin axis, together with caging means for said gyroscope including a first caging means operable to move said outer gimbal ring to its caged position, a second caging means operable to move said inner gimbal ring to its caged position and a third caging means for operating at one time both said first and second caging means simultaneously to finish caging both said outer gimbal ring and said inner gimbal ring.

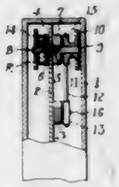
3,046,797
APPARATUS FOR ADJUSTING SEALED MECHANISMS
Edward L. Swainson, Newtonville, and S. Edward Borg, Westwood, Mass., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Mar. 31, 1960, Ser. No. 18,921
5 Claims. (Cl. 74—5.4)



1. A balancing device for the gimbal of an instrument sealed in a housing comprising a weight disposed adja-

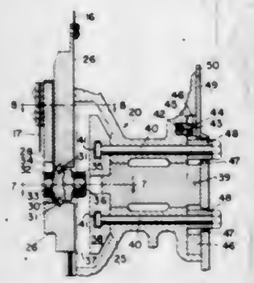
cent one end of said gimbal, at least a support member normally retaining said weight in a fixed position relative to said gimbal, a bellows forming an integral part of said housing adjacent said weight, a member attached to the inside of said bellows for effecting radial movements of said weight, and means detachably secured to the outside of said bellows for manipulating said bellows to move said weight relative to said gimbal in a direction perpendicular to the axis of symmetry of said bellows.

3,046,798
PORTABLE ELECTRICAL APPARATUS
Tadashi Igarashi, Tokyo, Japan, assignor to Sony Kabushikikaisha (Sony Corporation), Tokyo, Japan, a corporation of Japan
Filed Mar. 25, 1959, Ser. No. 801,788
Claims priority, application Japan Apr. 23, 1958
3 Claims. (Cl. 74—10)



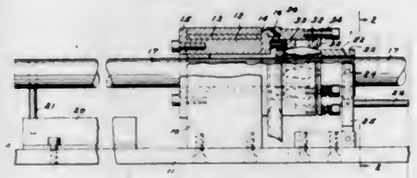
1. A small electrical appliance having a generally rectangular and flat casing of a thin, pocket fitting thickness to be held in one hand and having two adjacent, independently manually operable controls, said casing having its internal thickness substantially equally divided by an internal partitioning base plate secured to at least one end of said casing, a hole through said base plate adjacent one end of said casing, nut and bolt-like means through said hole clamping said base plate therebetween and forming the sole mounting and rotary bearings for two coaxial and axially spaced apart control discs positioned one on each side of, and substantially parallel to, said partition plate, said casing having two spaced apart openings through its thin side adjacent said end and said control discs having only small portions of their peripheries extending therethrough to be selectively thumb actuated.

3,046,799
ADJUSTABLE RATIO TRANSMISSION
John L. Ash II and Harry Pedersen, Rochester, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York
Filed Feb. 23, 1961, Ser. No. 91,026
11 Claims. (Cl. 74—25)



1. An adjustable ratio transmission comprising a support, first and second slides supported for rectilinear motion on said support, a cross-slide movable rectilinearly on the first slide, a straight roller guide member having a roller member in rolling contact therewith, one of said members being on the cross-slide and the other one of them being on the second slide, said straight roller guide member extending at an acute angle to the path of the cross-slide on the first slide, and a straight roller guide adjustable angularly on the support and in rolling contact with a roller member on the cross-slide, said rectilinear motions of the three slides being in planes perpendicular to the axis of the angular adjustment.

3,046,800
BI-DIRECTIONALLY MECHANICALLY MOVED SHAFT
Herman E. Pravel, 1275 Robson Lane, Bloomfield Township, Oakland County, Mich.
Filed May 8, 1961, Ser. No. 108,457
7 Claims. (Cl. 74—25)

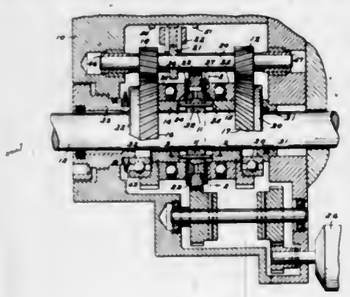


1. A mechanical rotary motion to lineal motion converter device comprising an axially movable rotationally secured first member having an annular surface, an axially secured rotationally movable second member having an annular surface; said members being concentrically disposed about an axis with their annular surfaces in spaced relationship to one another; spaced opposed camming rings on and rotating with said second member spaced from said first member annular surface, rollers disposed between said camming rings and said first axially movable member annular surface; said rollers having an axis and a contact portion located in a plane transverse to said roller axis radially contacting said first axially movable member annular surface; said rollers having paired opposed cam portions riding said camming rings with said camming rings exerting force thereagainst to cam said rollers radially toward said first axially movable member surface to drive said roller contact portion into frictional engagement therewith; a sleeve race concentrically disposed between said members endwise and sidewise containing and locating said rollers; said rollers and sleeve race planetwise rotating between said rotationally secured and rotationally movable members; said roller's axis normally lying parallel to said member's axis with the plane of said roller contact portion at a right angle to said member's axis defining no helix angle relative to said first axially movable member annular surface so that planetwise rotation of said rollers relative to said first axially movable member exerts no axial thrust; and means for axially moving said sleeve race against said rollers to urge said rollers against one said camming ring to increase the force therebetween to move and cant said rollers with their axis out of parallel with said member's axis to position the plane of said rollers contact portion at an angle on one side of a right angle relative to the member's axis to describe a helix relative to said first axially movable member surface by the line of contact therebetween as said rollers rotate relative thereto to effect axial thrust to axially move said axially movable first member.

3,046,801
ROTARY TO LINEAL MOTION CONVERTER
Herman E. Pravel, 1275 Robson Lane, Bloomfield Township, Birmingham, Mich.
Filed July 31, 1961, Ser. No. 128,094
6 Claims. (Cl. 74—25)

1. A rotary motion to lineal motion mechanical converter comprising, a case having an axial bore, a thrust shaft axially slideably disposed in said case bore, means

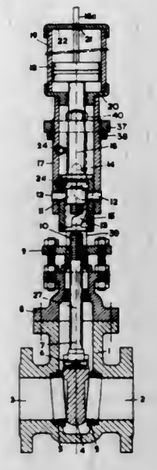
preventing rotational movement of said shaft, paired spaced opposed races freely sleeved about said shaft and rotationally mounted on said case having opposed sockets, balls disposed between said races in rolling contact with shaft pins diametrically disposed through said balls having opposite ends lying in said race sockets providing an axis about which said balls rotate, paired opposed cam rings surrounding said balls, a key connecting said ring gear and cam rings for imparting drive to said cam rings, means for rotating said ring gear to rotate said cam rings via said key to roll said balls about said shaft in planetary orbit with said ball pins rotationally driving said races and with said pins normally lying parallel to said thrust shaft locating said balls rolling axis at zero helix angle and zero axial thrust angle relative to said thrust shaft, a first helical gear fixed on each said race having the helix angle of each gear angularly opposed to the other constituting opposed camming sur-



faces, a second helical idler gear meshing with each said first helical gear, a control shaft fixed in said second helical gears; said control shaft being axially and rotationally movably disposed; and means for moving said control shaft and second helical idler gears thereon axially relative to said first helical gears on said races whereby the opposed helix angle of said helical gears in conjunction with axial movement of said second helical idler gears fixed on said control shaft causes one said first helical gear to angularly move in one direction and the other said first helical gear to angularly move in the opposite direction to cause said races to angularly move in opposite directions carrying said pins' ends in opposite directions to move the balls' rotation axis out of parallel to said thrust shaft and to lie at a helical angle of some degree relative thereto to effect axial thrust on said thrust shaft to move said thrust shaft axially in conjunction with ball rotation.

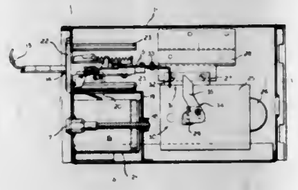
3,046,802
APPARATUS FOR HYDRAULICALLY OR PNEUMATICALLY OPERATING A MEMBER, SUCH AS THE SLIDE OR THE VALVE MEMBER OF A STOP VALVE
Douwe Janse Cupedo, Koningin Wilhelminalaan 23, Leidschendam, Netherlands
Filed Sept. 28, 1959, Ser. No. 842,950
4 Claims. (Cl. 74—89)

1. An apparatus for hydraulically or pneumatically operating a member, such as the valve member of a stop valve, said member having a spindle connected thereto, said apparatus comprising a body having at least one radial projection thereon, said body being adapted to be threaded to the spindle on the member to be operated, an element around said body and adapted to be moved axially of said body and having at least one slot therein through which said radial projection extends, and a stationary element around said element and having at least one slot therein through which said radial arm also projects, said axially movable element being slidably and non-rotatably mounted in said stationary element, the edges of said two slots cooperating to act on said radial projection to move



said body when said axially movable element is moved within said stationary element.

3,046,803
MECHANICAL MOVEMENT FOR COIN OPERATED TIMER
Joe Bowman, Greentown, Ind., assignor to Kingston Products Corporation, Kokomo, Ind., a corporation of Indiana
Filed Apr. 9, 1958, Ser. No. 727,424
9 Claims. (Cl. 74—104)



1. A mechanical means adapted for connecting and coordinating a coin-receiving mechanism and a timer mechanism, said means comprising:

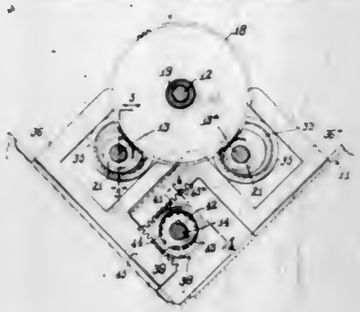
(*a*) a slide member adapted to be secured to and reciprocated by the coin mechanism;

(*b*) a first rigid drive arm extending angularly and rigidly from said slide member and movable therewith in a path;

(*c*) a rotatable shaft adapted to be always co-movable with the timer mechanism and disposed with its axis in offset relation to said path; and

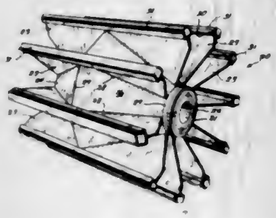
(*d*) a second drive arm carried by said shaft and extending radially therefrom to intersect said path, said second drive arm being pivotally supported on said shaft for relative angular movement, and being resiliently biased in only one angular direction to a drive attitude (1) in such a manner that when said first arm is reciprocated in a first direction, to engage said second arm, said one arm will yieldably pivot about said shaft in one direction out of the way and thereafter immediately return by pivoting on said shaft in the opposite direction to said drive attitude, (2) and in such manner that when said first arm is returned, said arms will engage to effect an angular shift of said shaft in response thereto.

3,046,804
POWER TRANSMISSION MECHANISM
Donald D. Mackintosh, R.R. 6, Box 122A, Crane, Ind.
Filed Aug. 24, 1959, Ser. No. 835,482
12 Claims. (Cl. 74—120)



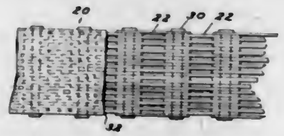
1. A power transmission mechanism including a drive shaft, a direct drive connection between the drive shaft and the auxiliary shafts, a plurality of integrally connected gears mounted for free rotation on said drive shaft, a gear mounted firmly on said drive shaft, planet pinions mounted on one of said plurality of gears and meshed with said firmly mounted gear, a normally stationary ring gear surrounding and meshed with the planet pinions, said firmly mounted gear, planet pinions and ring gear cooperating to rotate the plurality of gears when the drive shaft is rotated, pinions mounted for free rotation on the auxiliary shafts and meshed with selected gears of the integrally connected gears so as to be rotated when said gears are rotating, eccentrics fixed on the auxiliary shafts one adjacent to each pinion thereon, an eccentric sleeve fitted on each eccentric, an internal gear on each eccentric sleeve meshed with the respective pinion, the drive connections between the drive shaft and auxiliary shafts and between the drive shaft and the pinions being such that the pinions rotate the eccentric sleeves at the same rate of speed as the eccentrics during operation, pinions on the take-off shaft, a one way ratchet mechanism connecting said last named pinions to said take-off shaft, a yoke embracing each eccentric sleeve, a rack arm on each yoke each meshed with a pinion on the take-off shaft, said yokes and rack arms being reciprocated during eccentric sleeve rotation to oscillatably rotate the engaged pinions for rotating the take-off shaft in one direction, and means manually operable to rotate the ring gear for adjusting the relation of the eccentric sleeves to the eccentrics to vary the amount of yoke reciprocation.

3,046,805
WING PULLEY BELT GRIPPING DEVICE
Franklin Van Gorp, Pella, Iowa, assignor to Van Gorp Manufacturing, Inc., Pella, Iowa, a corporation of Iowa
Filed Feb. 1, 1960, Ser. No. 5,831
3 Claims. (Cl. 74—230.7)



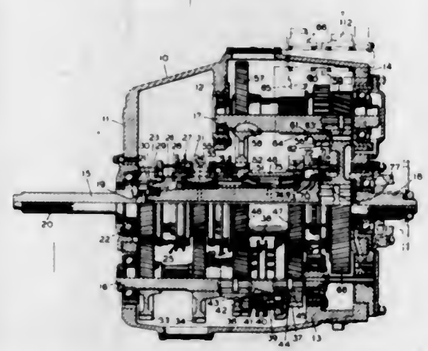
1. In a pulley for driving a flat belt and having at least one radially extended wing which has an elongated, substantially flat outer face, a belt gripping device comprising, an elongated bar of resilient material substantially square in cross section for drivingly engaging said belt, an elongated metallic retainer U-shaped in cross section and having a substantially flat base and a pair of parallel side walls terminating at their outer edges in curved flanges having concavely formed outer surfaces facing outwardly and away from each other, said retainer clamped to said bar wherein said flanges are embedded in the sides of said bar, and means holding said retainer securely to the said face of a respective wing.

3,046,806
DRIVE CHAIN
Jack D. Collins, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,794
4 Claims. (Cl. 74—245)



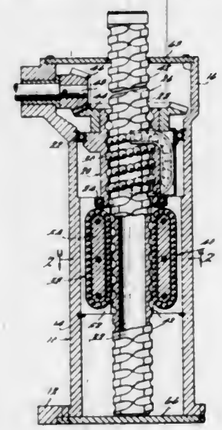
1. A device for transmitting power having an articulated chain comprising closely spaced pinned-together flat parallel links, a sound absorbing flat thin band of flexible elastomeric material secured to the exterior periphery of said chain in contact with said links, said band having a width approximately equal to that of said chain, and reinforcing strands embedded in said band.

3,046,807
DOUBLE COUNTERSHAFT MULTISPEED TRANSMISSION
Elmer J. Barth, 2526 Drummond Road, and Carl J. Gustafsson, 2946 Edgebrook Drive, both of Toledo, Ohio
Filed Aug. 12, 1958, Ser. No. 754,637
12 Claims. (Cl. 74—331)



4. In a change speed transmission, the combination comprising a drive shaft, a driven shaft, a pair of countershafts parallel to said drive and driven shafts and to each other, a pair of driving gears carried on the drive and driven shafts and adapted to be selectively connected to the drive shaft, a pair of drive gears drivingly connected to one of said countershafts and meshing with said driving gears on said drive and driven shafts, change speed gearing carried on said one countershaft and adapted to be selectively connected thereto, a cluster gear carried on the driven shaft and adapted to be selectively connected thereto, said cluster gear meshing with said change speed gearing on said one countershaft, a drive gear drivingly connected to the other countershaft and meshing with said cluster gear, an output gear on said other countershaft, another output gear on said driven shaft adapted to be selectively connected thereto and clutch means disposed on at least three of said shafts to selectively include any of the gearing in the power train.

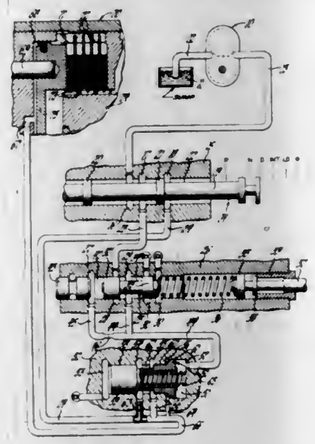
3,046,808
TRANSLATIONAL DRIVE MECHANISM
Le Roy S. De Mart, 105 Woodland Heights, Lancaster, Ohio
Filed Mar. 6, 1959, Ser. No. 797,677
16 Claims. (Cl. 74—424.8)



1. A translational drive mechanism comprising recirculating ball-type screw and nut portions, said screw and nut portions having opposed coacting concave helical thread-defining raceways thereupon, a recirculating ball set comprising balls bridging the space between and projecting into both of said opposed raceways to journal the screw and nut portions while transmitting force axially therebetween, the screw portion having peak peripheral parts between convolutions of its helical raceway and lying on a cylindrical surface, said screw portion also having a longitudinal extending flat thereon intersecting said cylindrical surface and extending to a depth which does not exceed the depth of the raceway of the screw portion, rotation controlling means engaged with said flat and held by said flat against relative rotation with respect to the screw portion about the axis of the screw portion while permitting relative movement in an axial direction, and means for producing relative rotation between said screw and nut portions to drive one of said portions longitudinally with respect to the other.

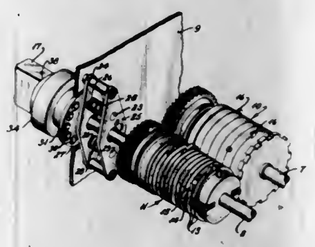
3,046,809
SERVO PRESSURE REGULATOR
Kenneth E. Snyder, Northville, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 13, 1956, Ser. No. 621,617
12 Claims. (Cl. 74—472)

4. In a transmission control system, a fluid pressure source, a fluid pressure responsive servo member adapted to be connected to said fluid pressure source, means for selectively connecting said servo member to said fluid pressure source and to exhaust including a drive range selector valve, a first passage connecting said selector valve to said source, a second passage connecting said selector valve to said servo member, a pressure regulator valve for varying the rate of admission of fluid pressure to said servo member, said pressure regulator valve including a movable valve member having a pair of spaced lands of equal diameter and a third land of greater diameter than said pair of spaced lands, first and second ports in said pressure regulator valve connected to said second passage, a restriction in said second passage positioned between said first and second ports, a control chamber in said pressure regulator valve adjacent said third land, a third passage connecting said control chamber to said second passage between said servo and said second port whereby said fluid pressure in said servo is continuously admitted to said control chamber irrespective of the position of said movable valve member in its path of travel, said movable valve



member being movable in response to a rise in fluid pressure in said control chamber and said servo member to increasingly restrict the flow of fluid through said ports, a second control chamber associated with said third land, and a driver operable pressure metering valve connected to said source and adapted to deliver a variable pressure to said second control chamber, the pressure in said second control chamber being effective upon said third land to bias said movable valve member to reduce the restriction to fluid flow through said ports.

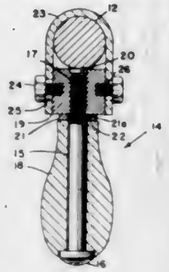
3,046,810
DETENT MECHANISM
Gordon P. McCouch, Concord, Mass., assignor, by mesne assignments, to Aircraft Radio Corporation, Boonton, N.J., a corporation of New Jersey
Filed July 14, 1958, Ser. No. 748,239
8 Claims. (Cl. 74—527)



1. In an automatic shaft positioning apparatus having a plurality of washers adjustable angularly about a shaft and a locking screw extending longitudinally of the shaft for clamping said washers to prevent relative rotation between the washers and the shaft, a releasable detent mechanism for said shaft comprising a detent plate slidable along said shaft and secured against rotation relative to said shaft, a stationary member adjacent said shaft, cooperating detent devices on said plate and said stationary member engageable by movement of said plate axially of said shaft for locating the angular position of

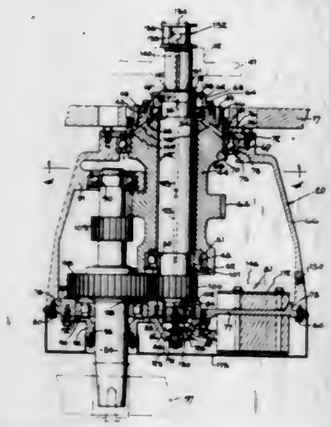
said shaft with respect to said stationary member, and means operated by rotation of said locking screw in a direction to release said washers for shifting said plate for engaging said detent devices.

3,046,811
VALVE WHEEL HANDLE
Oscar Anton Seubert, 4037 Annapolis Ave., Dayton, Ohio
Filed Jan. 29, 1960, Ser. No. 5,433
1 Claim. (Cl. 74—557)



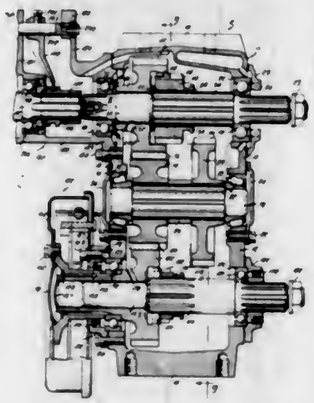
A valve actuating means including a wheel and a handle, said handle comprising a U-shaped clamp encircling the rim of said wheel, a solid block mounted between the sides of and cooperating with said clamp to provide engagement with said rim, removable attaching means mounting said block on said clamp, a bolt threadably engaged in said block, a handgrip loosely mounted on said bolt, and a spacer mounted on said bolt between said block and said handgrip in alignment with the major axis of said rim, said block and clamp engaging said rim sufficiently closely to permit said handle to remain in any predetermined position relative to the plane of the wheel, yet permitting rotation of said entire handle to attain any other position relative to said plane.

3,046,812
VERTICAL MIXER
Norman V. Beaman, La Habra, Calif., Harold P. Hudson, Kansas City, Kans., and Hugo E. Gauss, Batavia, Ohio, assignors, by mesne assignments, to C. J. Patterson Company, Kansas City, Mo., a corporation of Missouri
Filed Oct. 27, 1959, Ser. No. 849,017
3 Claims. (Cl. 74—660)



1. In a vertical mixer having an elevated frame member, the improvement which comprises a head, said head including a depending hollow rigid center member secured to said frame member and having a central vertical bore extending completely therethrough, a main drive shaft, means rotatably journalling said main drive shaft for rotation within the bore of said hollow center member, said drive shaft extending upwardly beyond said bore, a motor, means interconnecting said motor and the upper end of said main drive shaft, a heavy bell shaped housing member, means disposed adjacent to the top of said housing member for rotatably supporting said housing member from said center member, a sun gear extending horizontally around the periphery of said center member, a vertically disposed agitator shaft, means carried by said housing for rotatably journalling said agitator shaft, first gear means interconnecting said agitator shaft and said drive shaft, said first gear means comprising a drive gear mounted upon said drive shaft and a driven gear mounted upon said agitator shaft in engagement with said drive gear, second planetary gear means interconnecting said agitator shaft and said sun gear, whereby said agitator shaft is rotated on its own axis and is simultaneously moved in a planetary movement about the axis of said main drive shaft, a bottom wall secured to said bell-shaped housing member, bearing means carried by said bottom wall and engaging said drive shaft below said drive gear, said bell shaped housing being effective to act as an inertia member and absorb some of the shock loads of said agitator shaft.

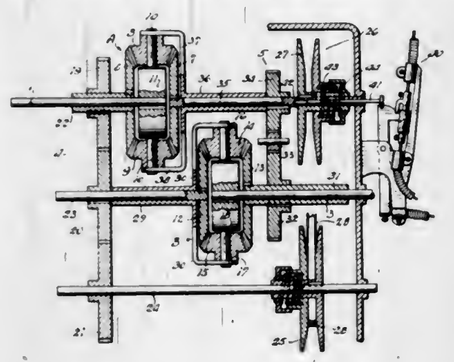
3,046,813
TRANSFER CASE WITH BRAKE AND POWER TAKE-OFF
Leo A. Bixby, Niles, Mich., assignor to Rockwell-Standard Corporation, a corporation of Pennsylvania
Filed Feb. 26, 1958, Ser. No. 717,769
10 Claims. (Cl. 74—665)



1. In a transfer case having a housing, an input shaft journalled in said housing, a power take-off shaft carried by said housing coaxially of said input shaft, front and rear drive axle output shafts journalled in said housing, a first gear fixed on the rear drive axle output shaft, a second gear rotatable on the front drive axle output shaft, a releasable clutch for coupling said second gear to the front drive axle output shaft, and intermediate shaft journalled in said housing, a third gear on said intermediate shaft meshed with both of said first and second gears, means driving the intermediate shaft from the input shaft, and brake means for controlling rotation of said second gear.

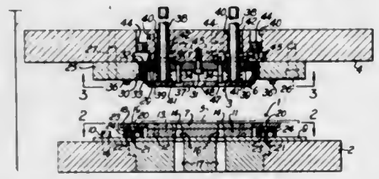
3,046,814
POWER TRANSMISSION
Walter E. Soehrman, 1515 S. 3rd St., Lombard, Ill.
Filed May 6, 1959, Ser. No. 811,365
2 Claims. (Cl. 74—689)

1. A power transmission comprising a power transmitting gearing unit and an accumulator gearing unit, each having a pair of sun gears and a spider positioned between said sun gears, rotatably supported pinion means carried by each of said spiders and meshing with said sun gears, two shafts for said power transmitting gearing unit, the first of said shafts constituting the input shaft being drivingly connected to said spider of said power transmitting gearing unit, the second said shaft carrying one of the sun gears of said power transmitting gearing unit and driven thereby, a sleeve disposed about said first shaft in driving relation with the second sun gear of said power transmitting unit, two shafts for said accumulator gearing unit, the first of said last mentioned shafts being drivingly connected to one of the sun gears of said accumulator gearing unit, the second of said last mentioned shafts constituting the output shaft being connected to and driven by the spider of said accumulator gearing unit, a sleeve disposed about the second of said last mentioned



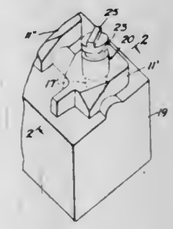
shafts and fixed to the other sun gear of said accumulator gearing unit, a first driving connection between said sleeve of the power transmitting gearing unit and the first of the latter two shafts of the accumulator gearing unit to drive one of the sun gears of said accumulator gearing unit, a second driving connection between the second said shaft of the power transmitting gearing unit and the said sleeve of the accumulator gearing unit to drive the other of said sun gears of the accumulator gearing unit and variable speed regulator means bridging and connected across said two driving connections for varying the relative movements of the sun gears of said accumulator gearing unit said variable speed regulator means including two pulleys, a belt therefor and a further shaft geared to said first driving connection, one of said pulleys being connected to said further shaft and the other pulley being connected to said second shaft of said power transmitting gearing unit.

3,046,815
BLANKING DIE AND METHOD OF MAKING THE SAME
Frank R. Moe, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed July 10, 1957, Ser. No. 670,910
3 Claims. (Cl. 76—107)



1. A method of making a blank forming device, which comprises burning out a centerpiece having an enlarged outline of the blank to be formed from a die block of easily machined metal to form a die ring, stacking the centerpiece and a punch with a master pattern, machining the edges of the centerpiece and the punch together to the outline of the master pattern, hardening the machined punch, reducing the thickness of the centerpiece, securing a cutting rule having a depth slightly greater than the depth of the die ring and centerpiece to the periphery of the centerpiece with the rule extending from only one surface of the centerpiece, reassembling the centerpiece centrally within the opening of the die block with the lower surfaces of the die ring and the centerpiece in the same horizontal plane, filling the space between the wall of the opening and the rule with a mixture of uncured plastic and sand, curing the plastic to a hardened mass, and operatively mounting said die ring and punch in opposed relation with said punch and said centerpiece in exact superposed relation.

3,046,816
METHOD OF PRODUCING DIES FROM A PREFORMED DIE PART ANCHORED IN AND PROJECTING FROM A POWDERED METAL DIE BODY
Louis H. Morin, 125 Beechwood Ave., Bronx, N.Y.
Filed July 30, 1959, Ser. No. 830,568
4 Claims. (Cl. 76—107)



1. The method of producing powdered metal dies including a preformed die part, which consists in shaping a hob for producing the desired form of the cavity in the powdered metal die to be formed, supporting on the hob a preformed die part, magnetically retaining the preformed die part on the hob, preparatory to shaping the powdered metal on the hob and around said die part, forming on said preformed die part means engaged by the powdered metal of the dye to key said die part against rotation in the powdered metal die, then compacting powdered metal under high pressure upon the hob and around said die part in forming the resulting die with said preformed die part secured thereto and including a portion protruding into the cavity of the die, and then hardening and otherwise finishing the powdered metal die.

3,046,817
ACCESSORY FOR PORTABLE DRILLS
Wilfrid A. Schwable, Rte. 4, Box 37, Traverse City, Mich.
Filed Sept. 12, 1961, Ser. No. 137,677
20 Claims. (Cl. 77—7)

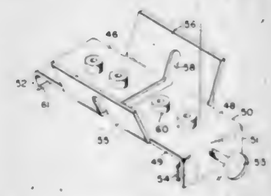
1. A device for three dimensional guidance and control of a hand-held portable electrical drill comprising a base having a flat lower surface adapted to be positioned against a workpiece to be drilled, said base having a pair of legs positioned at right angles with respect to each other in a common plane, a column secured to said base at the junction of said legs with the column being perpendicular to said flat lower surface, a member slidably received on said column and adapted to carry said electric drill whereby the drill and said member may move along a path extending parallel to the column, a bore extending through one of said legs and having an axis extending

parallel to the axis of said column, a guide rod adapted to be received within said bore, and means for securing the rod in the bore with any desired length of the rod extending below the bottom surface of the base, the arrange-



ment being such that the device may be supported for angle drilling on a workpiece with the other leg of the base and the lower end of the rod resting on the workpiece while said one leg extends upwardly from the workpiece at an angle.

3,046,818
JIGS
Richard A. Saha, 101 S. 11th St., Darby, Pa.
Filed June 1, 1960, Ser. No. 33,176
11 Claims. (Cl. 77—62)



1. In a jig for forming holes in a tubular member having an upstanding portion, said jig including a body portion, said body portion having an opening for receiving said upstanding portion for positioning said jig in approximately the proper position, said body portion including means for indicating the position of the holes to be formed, said body portion having locating edge portions, and a fastening device secured to said body portion including depending lips and a screw for securing the jig to said tubular member.

3,046,819
RIM ROLLING MILL
John S. Miller, Youngstown, Ohio, assignor to The McKay Machine Company, Youngstown, Ohio, a corporation of Ohio
Filed Feb. 1, 1956, Ser. No. 562,688
6 Claims. (Cl. 80—5)

6. A multiple stand rim rolling plant comprising a plurality of rim rolling machines each having

(1) a horizontally disposed upper roll and a horizontally retractable lower roll to thereby permit feeding of a workpiece in a vertically upward direction,

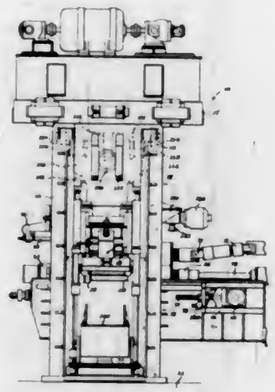
(2) a pair of cradle supports normally positioned below said rolls and generally parallel therewith,

(3) means to raise and lower said pair of cradle supports whereby a workpiece supported thereon may be fed into and unloaded from the machine,

(4) means to tilt said pair of cradle supports bodily about an axis generally parallel with said rolls whereby the workpiece may be rolled off said cradle support,

(5) a basket positioned on the entry side of said cradle supports to receive and support in upstanding relation the workpiece in a position generally parallel with the rolling position of the workpiece,

(6) means to tilt said basket about an axis spaced outwardly of but generally parallel to the axis of tilt



of said pair of cradle supports whereby a workpiece so supported in said basket may roll onto said pair of cradle supports;

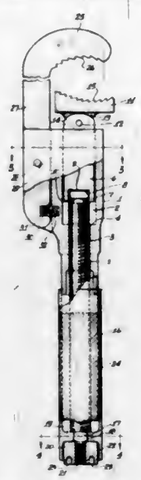
said machines being arranged in closely spaced position and so aligned that the workpiece discharged from any particular machine except the last in the line by said tilting of the cradle supports of said particular machine is automatically deposited in the basket of the next succeeding machine in the line.

3,046,820
WIRE STRIPPER
Stanley R. Patrick, Irwin, Pa.
(65 Cherry Ave., Washington, Pa.)
Filed July 15, 1959, Ser. No. 827,332
3 Claims. (Cl. 81—9.5)



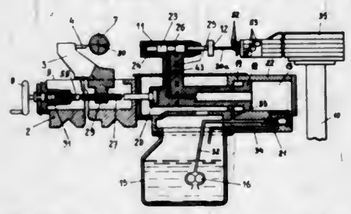
1. A wire stripper comprising a pair of elongated lever members crossed and pivotally secured together at points spaced intermediate their opposite ends, a pair of elongated generally parallel jaws carried by and projecting laterally from one pair of corresponding free end portions of said lever members, disposed in side-by-side relation and movable toward and away from each other upon relative pivotal movement of said lever members, said jaws including elongated, opposing, parallel and coacting insulated wire gripping faces extending longitudinally of said jaws, said faces being smoothly transversely convexed and divergent toward one pair of corresponding sides thereof and the other pair of corresponding free ends of said lever members, lines tangent to said faces at their closest points to each other, defining an acute included angle.

3,046,821
ROTATABLE SHANK, SLIDABLE INNER JAW WRENCH
William Leo Legris, Renfrew, Ontario, Canada
Filed Nov. 28, 1960, Ser. No. 71,951
1 Claim. (Cl. 81—164)



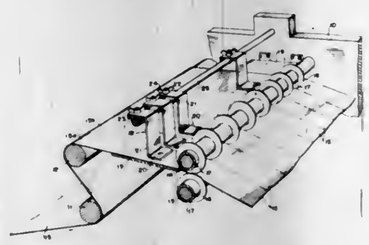
A wrench comprising a body member having a socket therein of non-circular cross section, a shank slidably and non-rotatively mounted in said socket, a first jaw carried by one end of said shank for movement therewith, a second jaw carried by said body member in opposed relation to said first jaw, and means for moving said first jaw towards and away from said second jaw comprising a rod screw-threadedly mounted in said body member and having an inner end portion extending into said socket, means coupling said inner end portion of said rod to said shank, and comprising a shoulder on said rod, and a pair of shoulders on said shank engaging said rod shoulder, and an outer end portion lying externally of said body member, and a manually rotatable sleeve sleeved upon said outer end portion of said rod in spaced relation thereto, said sleeve having an inner end rotatably mounted on said body member and an outer end, and means coupling said sleeve outer end to said rod for simultaneous rotative movement of said sleeve and rod comprising a web in said sleeve having an opening of non-circular cross-section therein, said rod having a section of complementary non-circular cross-section extending through said opening.

3,046,822
DEVICE FOR CHANGING DUPLICATING TEMPLATES IN DUPLICATING UNITS
Ottomar von Zelewsky, Nehausen am Rheinfall, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland
Filed Dec. 17, 1959, Ser. No. 860,246
Claims priority, application Switzerland Dec. 20, 1958
4 Claims. (Cl. 82—14)



1. A duplicating template changer mechanism for a duplicating machine tool comprising, a stationary template case, a multiplicity of template carrier means slidably mounted within said template case in relatively closely spaced parallel relation to each other, each of said template carrier means attachably carrying duplicating template means, means for selectively displacing said multiplicity of template carrier means but only one at a given interval of time from said case in the same direction into operating position, and a feeler member for engagement with said template means spanning the said template means so as to be engaged with any of the template means that is in operating position.

3,046,823
TENSIONING DEVICE FOR A WEB IN A SLITTING APPARATUS
James E. Cole, Alpha, N.J., assignor to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 4, 1957, Ser. No. 688,215
1 Claim. (Cl. 83—175)



In combination with a web slitting device for slitting paper webs, said slitter being of the type having a plurality of pairs of cooperating disc-type slitting knives arranged in pairs in overlapping relation for continuously severing a paper web drawn longitudinally past the knives into a plurality of separate strips, a rigid and fixed continuous web supporting plate disposed horizontally positioned adjacent the entry side of said slitting knives for continuously supporting the web across its entire width as the web moves toward the knives, a rigid and fixed supporting rod positioned over said plate and extending across the width of said web, a Z-shaped pressure member for each of said separate strips, each of said pressure members having a depending portion and a cantilever-supported pressure foot extending horizontally forward from said depending portion, each of said pressure members further having a clamping arm extending rearward toward and adjustably mounted on said supporting rod for adjustably securing the pressure member to the rod, each of said pressure members being formed of strip like material for accommodation of flexing of the pressure foot thereof in accordance with adjustments of the pressure member on said rod, said pressure members being slidably and rotatably adjustable on said rod, freely accessible means on the clamping arm of each pressure member for independently releasably securing each of the pressure members in predetermined adjusted position on said rod, said pressure members being positioned adjacent the entry side of said slitting knives with their pressure feet slidably engaging portions of the web passing forwardly over said plate and pressing said portions of the web against the fixed plate to longitudinally tension the web, said pressure members being of a width slightly less than the spacing between adjacent sets of slitting knives and being arranged such that a pressure member is positioned in alignment between each set of two pairs of slitting knives, each of said pressure members being further arranged with its pressure foot pressing upon a separate area of said web to individually tension a separate longitudinal strip area of

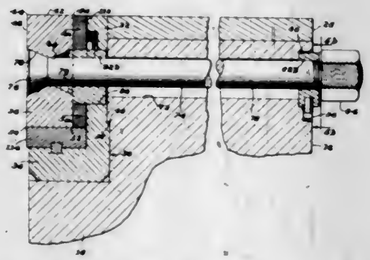
the web, which ultimately becomes a separate slit strip, and wind-up means on the exit side of the slitting knives for drawing the web past the knives.

3,046,824
CUTTING STICK MEMBER FOR PAPER CUTTING MACHINES
Rudolf Mohr, Hattersheimer Strasse 16–22, Hofheim (Taunus), Germany
Filed Apr. 22, 1959, Ser. No. 808,217
Claims priority, application Germany Apr. 26, 1958
5 Claims. (Cl. 83—658)



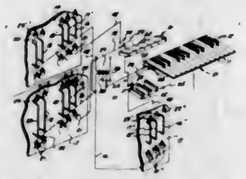
1. In a paper cutting machine, a cutting stick member adapted to be mounted in a retaining groove having side walls and a base defining a U-shaped member formed in a rigid support of such machine, said cutting stick member being of resilient material of generally rectangular cross-section having opposed plane faces for cooperation with a cutter blade, one of said members having opposite side faces, each side face being provided with alternate high points and low points with the high points of one side face lying opposite the low points of the other side face, the other of said members having flat side faces, and the distance between the high points of said one side face and the adjacent high points of said other side face being slightly greater than the distance between the side faces of said other member so that when the stick member is mounted in the retaining groove member, the inherent elasticity of said cutting stick member will produce a wedging friction between the side faces having the alternate high points and low points and the flat side faces for retaining the stick member in the retaining groove member.

3,046,825
FILLER MEMBER FOR POSITIVELY ATTACHING AND POSITIONING A SHEAR KNIFE
Wallace M. Thompson, Cordele, Ga., assignor to Harris Foundry & Machine Co., Cordele, Ga., a corporation of Georgia
Filed June 22, 1959, Ser. No. 821,910
3 Claims. (Cl. 83—698)



1. In a shearing machine the combination comprising: a shear blade seat; a shear blade disposed in said seat, said blade having two exposed substantially planar faces which intersect to form a cutting edge and a bolt hole extending through one of said faces; means defining a bolt hole extending through a wall of said seat in general alignment with said blade bolt hole and having a non-circular portion adjacent to said seat; a bolt extending through said holes and engaged with said blade against radial movement relative thereto, the diameter of the shank of said bolt being considerably less than the minimum transverse dimension of said seat wall hole normal to said edge whereby to permit adjustment of said bolt together with said blade in directions normal to said edge; filler means snugly engaged with said bolt and generally complemental to and engaged with the side walls of said non-circular portion of said seat wall hole to restrain said bolt against radial movement therein; and enlargements on the opposite ends of said bolt, one threadedly engaged therewith, for detachably securing said blade in said seat, whereby said blade can be removed, its said faces ground to resharpen said cutting edge, and replaced together with different filler means and with shims between said blade and said seat to reposition said blade so that its sharpened edge will occupy the same position in said seat as it did before sharpening.

3,046,826
SINGLE KEYBOARD ELECTRONIC CARILLON
Justin A. Kramer, 3112 W. Olympic Blvd., Los Angeles, Calif.
Filed July 7, 1958, Ser. No. 746,866
10 Claims. (Cl. 84—1.11)

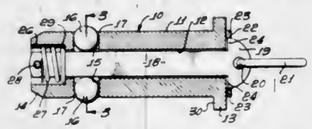


1. In a musical instrument employing tone generators and an electrically actuated striker for each tone generator, the combination of a single keyboard encompassing at least one octave of keys and a separate key on the keyboard corresponding to each nominal pitch in the octave, alternate banks of generators with nominal pitches in musical scale order, said generators in the alternate banks being of substantially the same timbre and quality, one of said banks of generators having nominal pitches tuned to Minor partials and another of said banks having nominal pitches tuned to Major partials, a plurality of electrically energized circuit loops comprising a loop for each key, each said loop comprising a normally open switch in operative engagement with the respective key, a striker and generator combination of one of said banks, a two-pole switch in each loop having an armature in one position against one of said poles normally closing a connection to said last identified striker only, a striker and generator combination of the other of said banks having the same nominal pitch as the first striker and generator combination and a connection from the other pole of said two-pole switch to said last identified striker only; a set of shift levers comprising a lever corresponding to each nominal pitch in the octave, one lever being operably connected to the armature of each of the two pole switches and operable upon actuation to shift the armature to the other of said poles whereby to set the circuit in open condtion to the respective generator in one of said banks and set the circuit in closed condition to the respective generator in the other of said banks.

3,046,827
TWIST LOCK PIN WITH BALL DETENTS AND A RECTANGULAR ACTUATOR
Paul D. Myers, La Canada, Calif., assignor to Aerpat Aktien Gesellschaft, Glarus, Switzerland, a corporation of Switzerland
Filed June 15, 1959, Ser. No. 820,318
1 Claim. (Cl. 85—5)

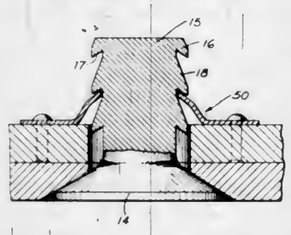
In a releasable fastener device the combination of: a tubular shank having a cylindrical bore and a coaxial

counterbore and having side apertures communicating with the said bore, an elongated actuator of generally rectangular cross section throughout its length mounted to turn within the cylindrical bore, balls mounted in said apertures and in contact with said actuator, said actuator in one angular position relative to the shank acting to project the balls outward through the side apertures and in another angular position permitting the balls to move radially inward to a retracted position, the actuator having a laterally extending integral head projecting exteriorly of the shank, said head being substantially flat and coplanar with said actuator and having



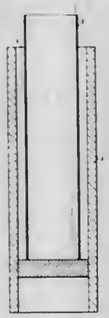
transversely extending and axially facing edge portions engageable with a groove-defining element on an end of the shank remote from the counterbore to maintain the actuator in the first said angular position, a cross pin fixed to the actuator and positioned within said counterbore, and a coil spring in the counterbore encircling a portion of the actuator and acting against the cross pin to hold the head in engagement with said groove-defining element on the shank, and handle means on said actuator adjacent said head for manually moving said actuator against the actions of said spring to disengage said axially facing edge from said groove-defining element and for turning said actuator in said bore.

3,046,828
STUD HAVING OVERHANGING RE-ENTRANT LOAD BEARING THREADS AND A SHEET METAL NUT WITH RESILIENT HELICALLY INCLINED WINGS
William Dzus, West Islip, N.Y.
(% Dzus Fastener Co., Inc., Babylon, Long Island, N.Y.)
Filed Apr. 17, 1958, Ser. No. 728,959
1 Claim. (Cl. 85—36)



A threaded fastening device comprising a stud member having a cylindrical shank with an external helical thread and a cooperating receptacle member in the form of a clip made of relatively resilient sheet metal and having an opening of a size to receive the shank of the stud with a plurality of integral resilient wings surrounding the opening and contractible towards and expandable away from each other and being engageable with the external thread of the stud when the stud and receptacle are rotated relative to each other, said external thread on the stud having a side wall presenting a load bearing surface which in a direction diametrically of said shank is disposed at an overhanging, re-entrant angle and said stud being formed with a cylindrical root portion immediately adjacent said re-entrant, load bearing surface and each of said wings having its leading end formed integrally with and directly connected to said sheet metal clip at the edge of said opening and its trailing end spaced above and separated from said sheet metal clip and separated therefrom by a slot and said wings in a direction diametrically of said shank being disposed at an angle generally complementary but greater than the angle of the overhanging, re-entrant, load bearing surface and being also disposed at an angle circularly in the direction of rotation generally complementary to but greater than the pitch of the thread and being directly engageable with the load bearing surface so that the overhanging, re-entrant, load bearing surface exerts a wedging, contracting force thereon when the parts are stressed in tension to bring the one surface of the wings into direct contacting engagement with the load bearing surface of the stud thread and generally parallel thereto and the inner edges of the wings into direct contact with the root portion of the stud thereby reinforcing the parts and so as to cause a self-locking action.

3,046,829
COMPOSITE PROPELLENT GRAINS
Theodore J. Roemer, Herrin, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed June 22, 1959, Ser. No. 821,921
1 Claim. (Cl. 86—1)



A process for the manufacture of inhibited composite solid propellant grains comprising tamping a composite propellant charge including an inorganic oxidizing agent and a binder into a cylindrical shape, tamping an inhibitor containing a cooling agent and a second binder as in the composite charge into an annular shape about the composite charge, separating means being positioned between the composite charge and inhibitor during tamping, removing the separating means, subjecting the composite charge and inhibitor to axial consolidating compression, and simultaneously curing the binders in the composite charge and in the inhibitor.

3,046,830
OPTICAL NAVIGATIONAL DEVICE
Maurice R. Pierce, 6400 Primrose Ave., Los Angeles, Calif., and James S. Fassero, 4622 Loleta Ave., Eagle Rock, Calif.
Filed June 17, 1958, Ser. No. 742,535
18 Claims. (Cl. 88—2.7)

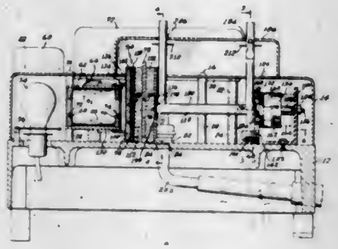
1. In an optical device, useful in celestial navigation for obtaining a composite representation of an image representing the point of assumed position and the images of two stars simultaneously as plotted on a Universal Plotting Sheet in celestial navigation for the purpose of obtaining a fix, comprising a first optical means forming a first optical path and providing an image of a first star in a focal plane, the entrance optical aperture of said first optical means being adjustable with respect to the altitude and azimuth of said star, a second means for forming an optical image of the point representing the assumed

position and introducing said image into said first optical path and thereby providing in said focal plane an image of a point representing the assumed position, and a third optical means forming a second optical path and introducing an image of a second star into said first focal plane simultaneously with the image of said first star, the entrance optical aperture of said third optical means being adjustable with respect to the altitude and azimuth of said second star, said first, second and third means being structurally related in such a way that said image of the point



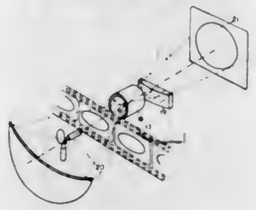
representing the assumed position, the image of said first star, and the image of said second star appear in said focal plane as plotted on a Universal Plotting Sheet with each of said star images spaced from the point of assumed position a distance representing the difference between the altitude for each star calculated for the assumed position and the observed altitude for each star, and a line from one star image through the point of assumed position corresponds with the azimuth of said star and a line from the other star image through the point of assumed position corresponds with the azimuth of said other star.

3,046,831
COLORIMETER FLOW CUVETTES
Jack Isreeli, Tuckahoe, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Sept. 12, 1958, Ser. No. 760,687
8 Claims. (Cl. 88—14)



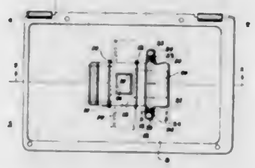
1. In a colorimeter, a housing having therein a source of light, a photo-electric device disposed in the light path from said source, and a flow cuvette mounted between said light source and said photo-electric device, said flow cuvette comprising a liquid inlet part, a liquid outlet part horizontally spaced from said liquid inlet part, and a horizontally extending elongated light-permeable liquid receiving tube in liquid flow communication with said inlet and outlet parts and disposed therebetween, said inlet part comprising a vented inlet tubular member, a tubular portion interconnecting the lower end of said inlet member and one end of said liquid receiving tube in liquid flow communication with each other, tubular means providing a vent opening above said one end of said liquid receiving tube, said outlet part comprising a vented outlet tubular member connected to the opposite end of said liquid receiving tube, and other tubular means providing a vent opening above said opposite end of said liquid receiving tube.

3,046,832
METHOD FOR PRODUCING AND PROJECTING MOTION PICTURES
Wilhelm Winzenburg, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden
Filed Feb. 5, 1958, Ser. No. 713,461
Claims priority, application Germany Feb. 5, 1957
8 Claims. (Cl. 88—16)



6. The method of increasing luminous intensity in projecting motion picture print films, comprising the subsequent steps of recording images on a light-sensitive motion picture camera film by exposing said camera film in a camera to light rays reflected by an object, developing the exposed camera film, projection printing the developed camera film in an optical printing step onto a light-sensitive print film, said printing step including orienting said developed camera film and said print film at right angles with respect to each other, uniformly enlarging said images recorded on said camera film and also additionally enlarging said camera film images only in one planar direction, by means of an anamorphotic optical system, so as to form on said print film images expanded parallel with its longitudinal extension, developing the exposed print film, and exposing said expanded images of the developed print film to a light source in a projector through a picture window having an overall aperture greater than that of said camera film frames, whereby the light beam emitted by said projector is intensified.

3,046,833
FILM GATE MECHANISM
James E. Harvey and Stephen F. Michatek, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 28, 1959, Ser. No. 816,478
6 Claims. (Cl. 88—17)



1. In a film gate mechanism, the combination comprising:

(*a*) a support member;

(*b*) a pressure plate carried by said support member and movable relative thereto between film-threading and film-guiding positions;

(*c*) said plate having adjacent handle and film-guiding portions of magnetic material joined together and lying in different planes;

(*d*) said plate having a part along which said handle and film-guiding portions are joined and which provides a sliding pivot for said plate on said support member;

(*e*) means for connecting one of said portions to said support member to allow said relative movement between said pressure plate and said support; and

(*f*) magnetic means mounted on said support member and adapted to selectively co-operate with said handle and film-guiding portions to magnetically hold said plate in each of said film-threading and film-guiding positions when it is manually moved to these positions.

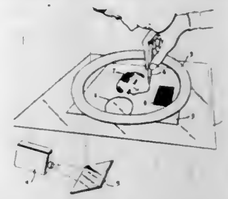
3,046,834
MOTION PICTURE CAMERA
Alfredo Ferrari and Adolf Gasser, Mauren, Liechtenstein, assignors to Contina Bureaux und Rechenmaschinenfabrik, Aktiengesellschaft, Mauren, Liechtenstein
Filed July 31, 1959, Ser. No. 830,829
Claims priority, application Austria Aug. 6, 1958
8 Claims. (Cl. 88—18)



1. In a motion picture camera, in combination, governor means; manually operable speed selecting means for selecting the number of frames to be exposed each second; speed control means actuated by said selecting means and cooperating with said governor means for setting the latter to operate the camera at the speed selected with said selecting means; diaphragm adjusting means; motion transmitting means operatively connected to said speed control means and cooperating with said diaphragm adjusting means for setting the latter to provide an aperture which harmonizes with the speed selected by said selecting means; and manually operable means cooperating with said speed control means for moving the latter at the will of the operator independently of the selected speed of said selecting means so that the operator can manually provide a variation in the speed of operation of the camera.

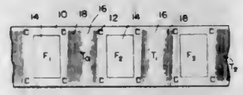
3,046,835
METHOD OF AND APPARATUS FOR PRODUCING AND PHOTOGRAPHING DISPLAYS
Joseph W. Richards, Key Biscayne, Fla., assignor to Fels & Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 14, 1961, Ser. No. 95,637
8 Claims. (Cl. 88—24)

1. In a method of making and photographing displays, the steps of producing a relatively opaque display on one, the working, surface of a translucent sheet; producing a border of source illumination extending generally about the margin of said sheet and at and adjacent to said working surface but entirely on the working surface side of said sheet so that said working surface is between said source illumination and the other side of said sheet and light from said source illumination will be transmitted into and through said sheet only from said working surface side of said sheet; and photographing, with a camera,



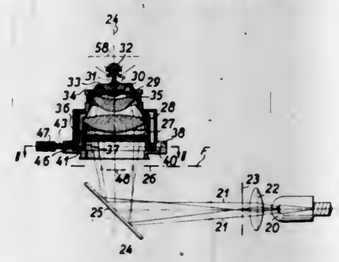
the image of said display as defined by light transmitted from said source illumination through said sheet, partially interrupted by said display.

3,046,836
STRIP FILM FOR PICTURE AND SOUND REPRODUCTION
Morris Schwartz, Plainville, Conn., and Edward K. Kaprelian, Red Bank, N.J., assignors to The Kalart Company, Inc., Plainville, Conn.
Original application Jan. 27, 1956, Ser. No. 561,891, now Patent No. 2,925,753, dated Feb. 23, 1960. Divided and this application Nov. 16, 1959, Ser. No. 853,059
5 Claims. (Cl. 88—28)



1. A strip of film for projection and reproduction therefrom while the film is stationary, said film having thereon a picture area and a sound record area in longitudinally spaced relationship, the sound track of said sound record area being in the form of a plurality of separate rectilinear and parallel photographic track sections, the recording being continued from the end of one track section to the beginning of the next adjacent track section, said track sections being inclined in reference to a common rectilinear reference line, whereby said track sections when brought to a cylindrical configuration transverse of the length thereof constitute parts of a continuous helical line.

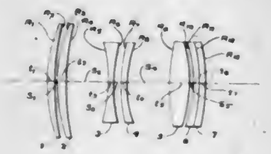
3,046,837
CONDENSER FOR INCREASING THE RESOLVING POWER OF MICROSCOPES
Janos Barabás, 32 Hamzsabegi ut, Laszlo Zselyonka, 74 Baross u., Ferenc Kiss, 87/c Ady Endre u., and Albert Libik, 23 Szekely Bertalan u., all of Budapest, Hungary
Filed Jan. 12, 1959, Ser. No. 790,999
Claims priority, application Hungary May 22, 1958
4 Claims. (Cl. 88—40)



1. An optical system for increasing the resolving power of microscopes operating with transmitted light and hav-

ing a light source, said system comprising a frame, a condenser mounted within said frame, said condenser comprising a plurality of cooperating lenses forming the optical system and defining an optic axis, one of said lenses comprising a front lens removably mounted on one end of said frame, means mounted on said front lens along said optic axis for removably mounting a light masking cap, a light masking cap mounted on said cap mounting means, a filter mounted within the other end of said frame, and means for linearly displacing said frame in a plane at right angles to said optic axis for varying the illumination of an object.

3,046,838
SIX-COMPONENT LENS
Max Reiss, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Nov. 21, 1960, Ser. No. 70,741
2 Claims. (Cl. 88—57)



1. A three component photographic objective comprising in optical alignment, a front and a rear positive component and a middle negative component, each component comprising at least two elements, in which the radii of curvature R of the optical surfaces and the refractive indices N of the lens elements, each numbered by subscripts from front to rear, are within the following limits:

$0.38F<R_1<0.42F$
$0.82F<R_2<1.0F$
$0.60F<R_3<0.68F$
$3.3F<R_4<10F$
$-0.78F<R_5<-0.67F$
$0.67F<R_6<0.78F$
$2.0F<R_7<3.3F$
$0.30F<R_8<0.33F$
$0.89F<R_9<1.1F$
$-0.29F<R_{10}<-0.27F$
$-0.29F<R_{11}<-0.27F$
$-0.65F<R_{13}<-0.57F$
$1.70<N_1=N_2$
$1.70<N_3=N_4$
$1.70<N_5$
$N_6<1.65$

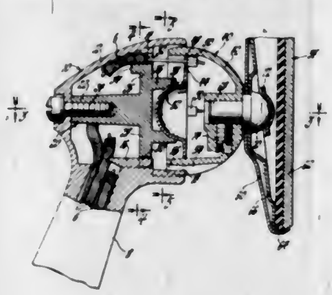
where the front of the objective is that end turned toward the longer conjugate distance, the + and − signs indicate surfaces respectively convex and concave toward the front, and F is the equivalent focal length of the objective.

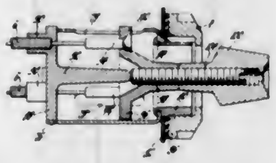
3,046,839
PROCESSES FOR PREPARING LIGHT POLARIZING MATERIALS
George R. Bird, Concord, and Maxfield Parrish, Jr., Lexington, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,414
7 Claims. (Cl. 88—65)

1. A process for producing an improved light-polarizing material having a high dichroic density ratio, comprising the steps of marking on the surface of a transparent material adapted to transmit light of at least the visible spectrum an optical grating composed of a large number of extremely fine, indented, closely and substantially evenly spaced and uniform lines, mounting said transparent material thus marked at a given location in an enclosure containing a substance which is linearly evaporable at a high temperature in a vacuum and which, when thus evaporated, is adapted to be disposed on a given limited portion of each of said lines as a coating substantially opaque to the light to be polarized, said substance being located in said enclosure at a predetermined emitting position spaced from and slightly at one side of said transparent material, evacuating the air from said enclosure, heating said substance to a degree such that it is vaporized, and directing said vaporized substance linearly upon given portions of said grating to the exclusion of other portions thereof so that it is coated only on predetermined, relatively small transverse portions, but substantially throughout the length of said lines, thereby to form a regular grid composed of a plurality of microscopic, effectively opaque, threadlike and generally parallel bands on the aforesaid portions only of the lines of said grating, the fineness, continuity and regularity of said bands, thus produced, taken with the light absorption properties of said substance and the transmittance characteristics of said transparent material, being such that, in use, substantially all of the light incident upon said sheet material in directions generally normal to the plane thereof and falling upon said bands is absorbed and light which is transmitted by non-coated portions of said grating is plane polarized and is characterized by a high dichroic density ratio.



3,046,840
REMOTELY CONTROLLED REAR VIEW MIRROR
Edward L. Barcus, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 27, 1959, Ser. No. 836,502
3 Claims. (Cl. 88—93)





1. A remotely controlled mirror mechanism comprising a mounting bracket, a mirror assembly, a universal ball joint connection between said mounting bracket and mirror assembly, said universal ball joint connection comprising a first cable plate having a spherical ball member formed thereon and seated within a socket member, an actuator assembly located remotely from said mirror assembly and having a housing, a second cable plate mounted in the housing, a plurality of operating cables having the opposite end portions thereof directly connected at spaced points to the respective cable plates of said ball joint connection and said actuator, a set screw threaded into said second cable plate and having its axis centrally disposed with respect to the cable end portions, means in the housing coacting with said screw and maintaining the latter from movement along its axis relative to the housing so that rotation of the set screw serves to adjustably position the second cable plate relative to the screw to tension the cables.

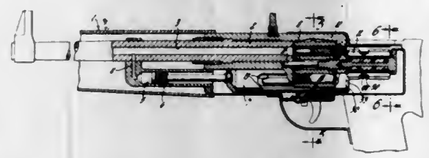
3,046,841
REMOTELY CONTROLLED MIRROR
Henry S. Kawecki, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 19, 1959, Ser. No. 834,845
4 Claims. (Cl. 88—98)



1. A remotely controlled mirror mechanism comprising a mounting bracket, a mirror support, a ball and socket connection universally pivotally mounting said mirror support on said bracket, a mirror assembly, a pivot pin mounting said mirror assembly on said mirror support for rotation about a fixed axis relative to the latter, cooperating stop means on said mounting bracket and mirror support to prevent rotation of the latter in response to pivotal adjustment of said mirror assembly about said fixed axis, an adjustable actuator located remotely from said mirror support, and a plurality of operating cables having the opposite ends thereof respectively connected at spaced points to said mirror support and actuator.

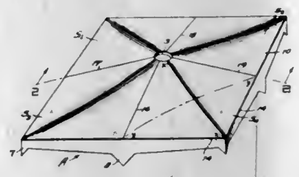
3,046,842
REVOLVER GUN WITH MEANS FOR CUTTING THE LINKS OF BELTED AMMUNITION
Dimitry B. Sergay, Clawson, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 26, 1959, Ser. No. 823,244
4 Claims. (Cl. 89—33)

1. In a revolver type gun for use with belted ammunition having adjacent pairs of cartridges integrally connected by link bars of flexible plastic material, the combination of a revolver drum having a plurality of circumferentially spaced firing chambers extending longitudinally therethrough, a toothed sprocket axially opposite the rearward end of the drum and rotatable therewith, adjacent pairs of teeth of said sprocket defining cartridges receiving recesses aligned with said chambers, each of said teeth having cutting edges on both sides thereof, said cutting edges facing rearwardly of the sprocket for shearing the cartridges from the ends of their adjacent link bars during ramming of the cartridges



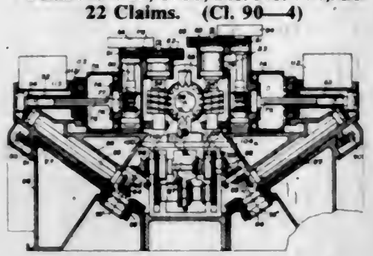
into said chambers, ramming means including a cartridge engageable finger movable longitudinally of the sprocket, said drum and sprocket being rotatably indexable to successively station said recesses for ramming of their cartridges into their chambers by said finger, and severed link bar ejection means including link bar guiding members extending generally tangentially of the sprocket and into receiving relation with the leading end of the leading link bar of each cartridge during final indexing thereof to station the same for ramming.

3,046,843
MORTAR BASE PLATE
Robert S. Rowe, Box Cm, Duke Station, Durham, N.C.
Filed July 15, 1960, Ser. No. 43,252
1 Claim. (Cl. 89—37)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A mortar base-plate structure supported on the ground and adapted for use in firing a mortar, including in combination, a unitary frame of regular design comprising, a socket centrally disposed in said frame; a plurality of center spade members radiating outwardly from said socket; a plurality of edge spade members integral, one each, with the outer ends of each said center spade member, said edge spade members being integrally joined at their ends to completely surround said center spade members; a first plurality of downwardly depending hardened points integral one each with the lower side of each outer end of each said center spade member and a second plurality of downwardly depending hardened points integral one each with the joining ends of said edge spade members for engagement with the ground; and a doubly curved top surface fixed to the top surface of said rigid frame, said top surface comprising a plurality of doubly curved portions developed by straight line generatrices and having coplanar outer extremities, each said doubly curved portion being of a curvature whereby a vertical section parallel to an edge of one of said portions depicts a straight line; the intersection between a portion surface and a vertical plane at 45° to a section edge depicts a parabola; and the intersection between a section surface and a horizontal plane depicts a hyperbola.

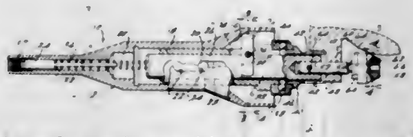
3,046,844
METHOD OF AND MACHINE FOR PRODUCING CROWNED TEETH
Ernest Wildhaber, Brighton, N.Y.
(124 Summit Drive, Rochester 20, N.Y.)
Filed Nov. 19, 1958, Ser. No. 774,928
22 Claims. (Cl. 90—4)



5. The method of generating crowned sides on the teeth of a gear-coupling member, which comprises providing a rotary tool having cutting portions disposed in at least one thread, positioning said tool adjacent a gear-coupling member to be processed to engage one side of its teeth, rotating said tool and member on their respective axes in time with each other, and feeding said tool angularly about an axis inclined at right angles to the direction of the axis of said member and offset from the axis of said tool a distance smaller than the outside radius of said member.

10. A machine for producing crowned tooth sides, which comprises a work support for rotatably mounting a work piece, a pair of tool supports for rotatably mounting a pair of tools adjacent said workpiece to operate simultaneously on opposite sides, respectively, of the teeth of the workpiece, means for rotating said tool supports and said work support on their respective axes in time with each other, means for effecting feed motion between said tool supports and work support along the teeth of said workpiece, and means for turning both tool supports relative to the work support at a gradually varying rate, the rate varying more for one tool support than for the other tool support.

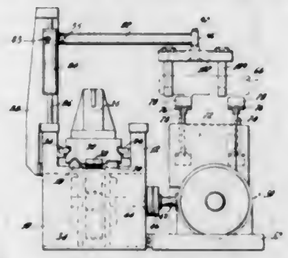
3,046,845
BACK SPOTFACE TOOL
Stuart A. Cogsdill, Orchard Lake, Mich., assignor to Cogsdill Tool Products, Inc., Oak Park, Mich.
Filed Aug. 17, 1959, Ser. No. 834,016
11 Claims. (Cl. 90—11)



1. A cutting tool comprising a sleeve, a spindle slidably keyed within said sleeve for limited longitudinal movement relative thereto, a drive member slidably extending over said sleeve and slidably keyed for limited longitudinal movement relative thereto, and pivoted camming means for camming said spindle upwardly relative to said sleeve in response to the downward movement of said drive member relative to said sleeve.

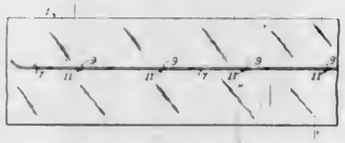
3,046,846
HORIZONTAL BROACHING MACHINE
Oliver W. Bonnafe, Hudson, Mass., assignor to The Lapointe Machine Tool Company, Hudson, Mass., a corporation of Maine
Filed June 27, 1960, Ser. No. 39,038
9 Claims. (Cl. 90—92)

1. In a broaching machine, a work support, a draw bar, means supporting the draw bar parallel to the work support for reciprocation through a predetermined stroke, rearwardly on a cutting stroke, and forwardly on a return stroke, a reversible motor for effecting reciprocation, jaws at the forward ends of the draw bar for engagement with a broach, and means for stopping the draw bar at each end of its stroke; a carrier mounting a plurality of broach-receiving pockets for holding a plurality of broaches in spaced parallel relation in horizontal positions, said carrier having its forward and rear ends situated at the forward and rear ends of the stroke of the draw bar, an intermittently operable motor for effecting movement of the carrier forwardly to move a broach-receiving pocket into a position adjacent the forward end of the draw bar



stroke for transfer of a broach therefrom to the draw bar, a transfer device at the forward end of the machine movable to a position above the broach-receiving pocket, at the forward end, to engage and lift a broach from the pocket and move it into a position in alignment with the draw bar for engagement with the jaws at the forward end of the draw bar, means operable during the rearward movement of the draw bar to initiate operation of the carrier motor to advance the next broach-carrying pocket in succession, into position at the forward end of the carrier, and to stop it at said position, and means operable when the draw bar reaches the rearmost end of the stroke to remove the broach from the draw bar and replace it in an empty pocket at the end of the carrier.

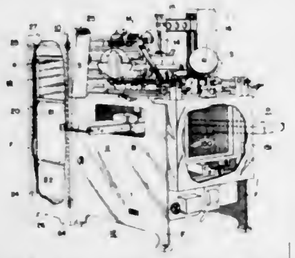
3,046,847
BAG
James E. Voege, Alton, Ill., and Leonard C. Thomas, Jennings, Mo., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Original application July 22, 1953, Ser. No. 369,664, now Patent No. 2,888,187, dated May 26, 1959. Divided and this application Feb. 26, 1959, Ser. No. 795,791
5 Claims. (Cl. 93—35)



1. The method of making bags with means for tearing an opening in the bag comprising the steps of combining a continuous tearing member with a continuous web of bag material with the tearing member extending longitudinally of the web, perforating the web and tearing member to form lines of perforations defining thumb tabs recurring at intervals corresponding to bag lengths and traversing the tearing member, folding the web longitudinally with the tearing member thereon and prepared with the lines of perforations into a tube with the tearing member on the inside and extending lengthwise of the tube and adhering together the longitudinal margins of the web to form a longitudinal tube seam, segmenting the tube into individual bag lengths by cutting along lines transversely of said tube and adjacent to but spaced from the base ends of the thumb tabs, said lines being so located

that the base end of the thumb tab of each bag length is adjacent to but spaced inward from one end of the bag length to provide space for forming a closure at said one end outward from said thumb tab, each bag length thereupon having a tearing member on the inside thereof extending from end-to-end of the bag length and extending across the thumb tab of the bag length, and forming an end closure at an end of each bag length.

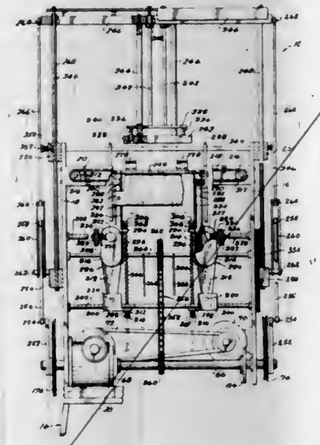
3,046,848
BOX FORMING APPARATUS
Sherman Wight Twitchell, Contoocook, and John Bruce Bradicich, Warner, N.H., assignors to FMC Corporation, a corporation of Delaware
Original application Oct. 7, 1958, Ser. No. 765,849, now Patent No. 3,016,240, dated Jan. 9, 1962. Divided and this application Nov. 19, 1959, Ser. No. 854,204
9 Claims. (Cl. 93—41)



1. Apparatus for manufacturing set-up boxes from sheet material comprising a main frame for supporting said apparatus, a plunger carried by said frame, means for feeding successive sheets of material to a box-forming position beneath said plunger, a motor for operating said sheet-feeding means and said plunger cyclically to move said plunger downwardly to form said sheet material into box structure, means carried by said main frame for applying stay strips to the corners of the box structure to transform the box structure into set-up boxes, a sub-frame carried by said main frame and slidably mounted for lateral movement, a telescoping conveyor pivotally supported intermediate its ends on said sub-frame for rotation about a substantially vertical pivot and disposed beneath said plunger to receive the stayed set-up boxes, drive means extending between said conveyor and said motor, and means for connecting said drive means to either side of said conveyor whereby said conveyor may be pivoted on said sub-frame to discharge set-up boxes from either the side or end of said apparatus without removing said conveyor therefrom.

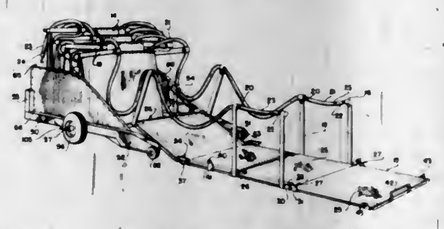
3,046,849
BOX FORMING MACHINES
Paul F. Bowman, Ridgewood, N.J., assignor to Continental Folding Paper Box Co., Inc., Ridgefield, N.J., a corporation of New York
Filed May 15, 1961, Ser. No. 110,270
13 Claims. (Cl. 93—51)

1. A machine for forming boxes from one-piece flat blanks each having a rectangular bottom defining portion, front, back and end wall defining portions foldably joined to the margins of the bottom defining portion and tabs foldably joined to the ends of the front and back wall defining portions; said machine comprising means operative to apply adhesive to limited zones of the end wall defining portions of each blank, forming means acting on each blank after adhesive has been applied to be latter and including a forming plate having an opening therein and a rectangular mandrel coextensive with the bottom defining portion of the blank and movable through said opening to push the bottom defining portion of a blank disposed against said plate through said opening in the latter, said opening having substantial clearance with respect to the longitudinal and end edges of said rectangular mandrel and smaller clearance with respect to the corners of the latter so that, as the bottom defining portion of a blank is pushed through said opening, the tabs are folded with respect to the front and back wall defining portions at a relatively fast rate while the front, back and end wall defining portions are folded with respect to the bottom defining portion, thereby ensuring the disposition of the folded tabs inside of the folded end wall defining portions for engagement with said zones of adhesive on the latter, pressing members disposed adjacent the path of travel of said mandrel after the latter passes through said



opening of the forming plate, means urging said pressing members against the ends of said mandrel so that the tabs and end wall defining portions of the folded blank pushed through said opening of the forming plate are securely pressed together between said pressing members and said ends of the mandrel to ensure a firm bond between said tabs and end wall defining portions at said zones of adhesives, means mounting said pressing members to move in the direction of movement of said mandrel, and means operative to move said pressing members with said mandrel while said pressing members are urged against said ends of the mandrel, thereby avoiding sliding of said pressing members relative to the end wall defining portions of the folded blank while the tabs and end wall defining portions are being pressed together.

3,046,850
FOLDABLE WALKWAY AND STORAGE APPARATUS THEREFOR
Clair W. Tellefson, 1067 E. Mountain Drive, Santa Barbara, Calif.; Charles E. Smith, 1333 E. Mountain Drive, Montecito, Calif.; and Melvin E. Nelson, 2450 Sycamore Canyon Road, Santa Barbara, Calif.
Filed Mar. 10, 1958, Ser. No. 720,462
5 Claims. (Cl. 94—1)



1. Apparatus of the character described comprising, a foldable walkway of substantial length in its unfolded

or extended position including a plurality of rigid panels of different lengths hingeably connected together in a continuous end-to-end fashion, the extended walkway having a continuous ground engaging and supporting surface on one side thereof and a continuous walking surface on the opposite side thereof, a plurality of rigid stanchions secured to the walkway forming a pair of parallel rows, flexible guide means connecting the stanchions formed in each row, alternate sets of high and low rollers secured to different panels of the walkway along its length, means independently carried on each panel for mounting the sets of high and low rollers on the edges of the walkway in fixed spaced relationship with respect to each other and projected above the walking surface of the walkway, a cart having a storage compartment opening through one side thereof for collecting, storing and dispensing the walkway including the stanchions, and track means arranged in outward divergent spaced relationship extending away from the opening of the cart carried on the cart slidably engageable with the sets of high and low rollers alternately for selectively folding and unfolding the walkway including the rows of stanchions on the cart.

3,046,851
HIGHWAY MARKING COMPOSITION

Eduard R. de Vries, Huntingdon, Pa., assignor to Prismo Safety Corporation, Huntingdon, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 24, 1958, Ser. No. 775,690
15 Claims. (Cl. 94—1.5)

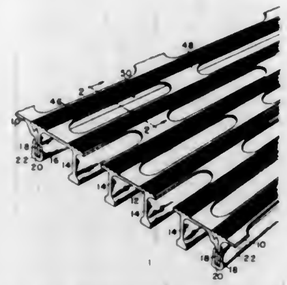
1. A highway marking composition consisting essentially of a mixture of 40–95% by weight of a binder containing 5–60% by weight pigments and extenders therein, said binder comprising a mixture of 60–98% by weight of at least one polyester resin composition, and 2–40% by weight of an epoxy resin, polymerization catalyst for said polyester resin composition, accelerator for said polyester resin composition and a curing agent for said epoxy resin, said polyester resin composition comprising the reaction product of at least one dicarboxylic acid and at least one polyhydric alcohol wherein at least one acid or alcohol component contains a reactive double bond, in admixture with a vinylidene monomer copolymerizable therewith, said epoxy resin comprising at least one resinous material containing reactive epoxy groups curable by said curing agent to a solid state, said mixture having a gel time of less than a minute and curing to a traffic dry condition within several minutes after addition of said accelerator and said curing agent.

3,046,852
GRATINGS

Donald Conway Graham, Dover, Pa., assignor to Capitol Products Corporation, Mechanicsburg, Pa., a corporation of Pennsylvania

Filed July 3, 1958, Ser. No. 746,392
3 Claims. (Cl. 94—30)

3. A grating including a plurality of adjoining elongated longitudinally extending grate sections of extruded metal, each grate section having a floor providing an upper tread surface, said floor along one longitudinal side thereof being depressed below the level of said tread surface, a longitudinally extending flange depending from the outer edge of the depressed portion of said floor, a longitudinally extending flange depending from said floor and offset inwardly of the opposite longitudinal side edge of said floor a distance to form an overhanging floor portion providing a lateral depth of engagement thereof in the depressed floor portion of an adjoining grate section to bring the adjacent flanges of adjoining grate sections in abutting relation, said overhanging and depressed floor portions each having on their respective nether and top surfaces interengaging longitudinally extending ribs and grooves securing adjoining grate sections against relative lateral displacement, the opposed sides of said adjacent flanges being provided with longitudinally extending notches, and resilient clip means U-shaped in cross section having inwardly extending lips projecting from the upper



sides thereof, the distance between the adjacent ends of said lips being slightly less than the combined thickness of said adjacent flanges, whereby said lips are resiliently engageable in said notches upon forcing of said clip means over said adjacent flanges for rigidly securing adjoining grate sections in assembled relation.

3,046,853
MANHOLE CLOSURE

Cyrille Legendre, 106 South Ave., Lewiston, Maine

Filed Mar. 2, 1959, Ser. No. 796,629
5 Claims. (Cl. 94—34)



1. Closure means for manholes and similar apertures in a substantially horizontal surface comprising a circular one-piece seat member defining the surface opening of the aperture and a one-piece cover seated in said seat member; said cover having a relatively smooth upper surface lying substantially flush with the horizontal surface when it is seated in said seat member, and a plurality of wedges, more than three in number, integral with said cover and extending downwardly therefrom, said wedges being spaced from each other near the outer edge of the cover, said seat member being formed with a plurality of recesses of corresponding shape located to receive said wedges in wedging relationship, said wedges and recesses constituting the sole supporting and retaining means for the cover in said seat member, each of said wedges having one wedge side lying in a plane perpendicular to the bottom of the cover and extending substantially through the central axis of the cover, the other wedge side sloping from its junction with the bottom of said cover toward said one wedge side at an angle of approximately 30°, the sloping side of all of said wedge-shaped members being similarly oriented with respect to the center of said cover so that they all face the same way circumferentially.

3,046,854
PAVEMENT MARKER

Ellery A. Wilson, 171 Cedar Lane, Santa Barbara, Calif.

Filed Dec. 14, 1954, Ser. No. 475,252
4 Claims. (Cl. 94—44)

1. An apparatus for rapidly applying a stripe of paint to a surface, which comprises: a wheeled vehicle; means attached to said vehicle for depositing paint on said surface beneath said vehicle; and means responsive to the speed of said vehicle and to a stripe of paint already on said surface ahead of said means for depositing paint for

actuating said means for depositing paint whereby a paint stripe is applied by said apparatus only upon said previ-

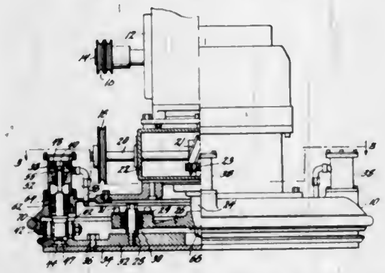


ously painted stripe as said wheeled vehicle is moved along said surface.

3,046,855
CONCRETE FINISHING MACHINE

Joseph J. Moro-Lin, Glen Rock, and Leverette Hoeninghausen, East Paterson, N.J., assignors to Kalman Floor Company, Incorporated, New York, N.Y., a corporation of Delaware

Filed Dec. 19, 1957, Ser. No. 703,940
8 Claims. (Cl. 94—45)

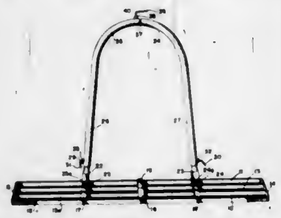


1. In a concrete finishing machine or the like, a stationary housing, a wear plate rotatably mounted relative to said housing, means for rotating said wear plate, cam surface means on said wear plate, impact surfaces intermediate said cam surface means, reciprocating plunger means mounted in said housing at intervals around said housing above said cam surface means for selectively engaging said cam surfaces and said impact surfaces, fluid actuating means for selectively delivering a fluid, and fluid actuated means coupled to said fluid actuating means and slidably coupled to said reciprocating plunger means and having cooperating shoulders thereon, each fluid actuated means having an internal shoulder cooperating with an external shoulder on one of said plunger means for selectively lifting said plunger means out of engagement with said cam surfaces and said impact surfaces in response to the delivery of fluid from said fluid actuating means to said fluid actuated means.

3,046,856
CONCRETE FINISHING DEVICE

Orion Martin Baxter, 4802 Roosevelt, San Antonio, Tex.

Filed Apr. 6, 1959, Ser. No. 804,480
1 Claim. (Cl. 94—48)



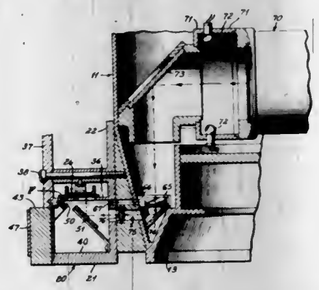
A concrete working device for urging large aggregate toward subgrade and fines to the surface for subsequent finishing comprising

(*a*) an aggregate separating member having openings therethrough and adapted to enter the plastic mix, said openings permitting fines to work their way to the surface through the openings of said member,
(*b*) spaced parallel pivots mounted on the member,
(*c*) stub shanks pivoted on said pivots,
(*d*) a pair of handle members each having a straight lower end and curved upper end,
(*e*) the lower end of each handle member being hollow and receiving one of said stub shanks therein,
(*f*) means for securing each said stub shank in one of said handle members in one of a plurality of angularly related positions whereby said handle members may occupy parallel planes or lie in a common plane,
(*g*) the upper termini of said handle members being in juxtaposition when said handle members are in a common plane, and
(*h*) means for connecting said juxtaposed upper ends of said handle members whereby said two handle members function as a single handle.

3,046,857
APPARATUS FOR USE IN AERIAL PHOTOGRAPHY

Gilard Kargl, P.O. 6563, San Antonio, Tex.

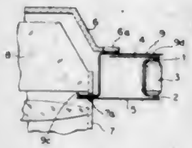
Original application Apr. 20, 1955, Ser. No. 502,617. Divided and this application May 9, 1958, Ser. No. 734,176
6 Claims. (Cl. 95—1.1)



6. An apparatus for aerial surveying comprising a surveying aircraft having a fuselage opening, a support mounted adjacent said opening, an aerial camera mounted on said support having a shutter and an aerial lens with the focal axis directed generally vertically of said support and through said opening, said aerial camera having a housing enclosing said shutter and aerial lens and including a camera cone portion extending downwardly and through said fuselage opening, an air deflector formed on the underside of said fuselage upstream from said fuselage opening and protruding downwardly to deflect the airstream from the part of said camera cone portion disposed beneath said fuselage, means within said housing for positioning a photographic film in the focal plane of said aerial lens, means on the lower end of said camera cone portion for holding a supply of auxiliary film for recording thereon data pertinent to the attitude of the aerial camera relative to the earth, first means mounted on the lower end of the downwardly extending camera cone portion of said housing in close proximity to said auxiliary film holding means and disposed below the aircraft fuselage for focusing a horizon view on the auxiliary film through a first line of sight, second means mounted on the lower end of the downwardly extending portion of said housing in close proximity to said auxiliary film holding means and disposed below the aircraft fuselage for focusing a horizon view on the auxiliary film through a second line of sight, said first and second lines of sight through which said horizon views are received lying in

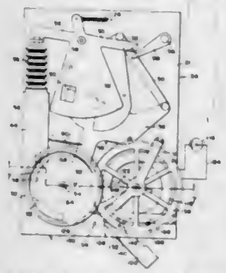
a common plane and disposed at a predetermined angle relative to one another and to the aerial camera with said common plane being generally normal to the focal axis of the aerial camera lens and below the aircraft fuselage, a shutter associated with each of said first and second means, and means for simultaneously actuating all of said shutters whereby a pair of horizon views will be recorded on the auxiliary film along with the taking of the aerial photograph by said aerial camera.

3,046,858
INDICATOR MECHANISMS FOR PHOTOGRAPHIC CAMERAS
Kurt Steisslinger, Stuttgart-Hedelfingen, Germany, assignor to Eastman Kodak Company, Rochester, N.Y.
Filed Jan. 18, 1960, Ser. No. 3,121
Claims priority, application Germany Mar. 25, 1959
4 Claims. (Cl. 95—10)



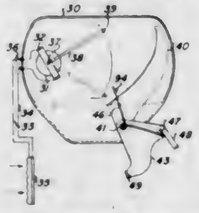
1. In a camera having a follow-up pointer type exposure control system, a cover with a viewing window, and an exposure meter constituting a part of said exposure control system and including a coil adapted for automatic angular movement as a function of scene brightness, the combination comprising: a viewfinder including an optical system having a real image plane; a first pointer secured to said coil for angular movement therewith and having a free end underlying said window for observation through the latter; a second pointer secured to said coil for angular movement therewith and having a free end extending approximately into said real image plane of said optical system for observation in said viewfinder through at least a part of said optical system; and a follow-up pointer manually adjustable into alignment with both said first and second pointers and observable through both said window and said viewfinder, said follow-up pointer having a free end extending approximately into said real image plane, and said follow-up pointer extending between said first pointer and said window and having an aperture aligned with said window, one edge of said aperture defining a reference pointer for alignment with said first pointer.

3,046,859
PHOTOGRAPHIC EXPOSURE CONTROL
Joseph W. Distel, Boston, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Mar. 11, 1959, Ser. No. 798,627
3 Claims. (Cl. 95—10)



1. A control device for shutter mechanisms which comprise exposure value setting means movable through a range of exposure value settings, and a galvanometer including a rotatable indicator having a rotational displacement in accordance with electric signals produced by photoelectric means, said device including rotatable mounting means mounted coaxially with said indicator, a sensory element mounted on said mounting means for movement therewith and for rotation relative to the latter, said sensory element including a portion thereof engageable with said indicator for arresting the movements of both said mounting means and said setting means in accordance with the position of the indicator and with the position of said sensory element relative to said mounting means at engagement, and cam means stationary with respect to both said indicator and said mounting means and having surface predeterminedly shaped in accordance with a displacement of said indicator responsively to said photoelectric means, said sensory element including a cam follower portion in sliding engagement with said surface for so varying said relative position during movement of said mounting means and in accordance with the shape of said surface that the arrest of said setting means is at a position determined both by the displacement of said indicator and the shape of said surface.

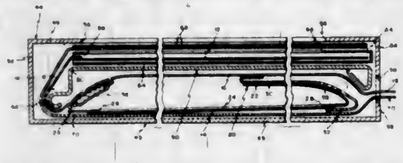
3,046,860
AUTOMATIC EXPOSURE CONTROL SYSTEM FOR PHOTOGRAPHIC CAMERAS
Hubert Nerwin, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Aug. 3, 1959, Ser. No. 831,355
6 Claims. (Cl. 95—10)



1. In a photographic camera having means for focusing an image of a viewed scene onto a photosensitive surface, and adjustable means for regulating the amount of scene light transmitted to said surface, the combination comprising: an exposure meter positioned for illumination by light from said scene and having a first pointing member positioned as a function of the intensity of said light; a rotatable shaft; a first sensing device mounted on said shaft for sensing the position of said first pointing member; a housing enclosing said meter and said first sensing member and having a seal through which said shaft extends; a second pointing member mounted on said shaft outside of said housing and positioned by said shaft as a function of the position of said first pointing member; a second sensing device for sensing the position of said second pointing member; and means coupling said second sensing device and said regulating means for adjusting the latter as a function of the position of said second pointing member, whereby the adjustment of said regulating means is a function of the intensity of said light.

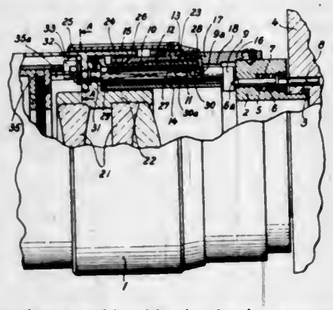
3,046,861
PHOTOGRAPHIC PRODUCT
Vaito K. Eloranta, Needham, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed May 7, 1959, Ser. No. 811,707
5 Claims. (Cl. 95—13)

4. A photographic film assemblage comprising, in combination, a plurality of film units arranged to be exposed successively within said assemblage and following exposure to be withdrawn in succession therefrom for processing, each of said film units including a photosensitive sheet positioned for exposure within said assemblage, a second sheet arranged for superpositioning with said photosensitive sheet during withdrawal of said each film unit from said assemblage for aiding in the distribution of a processing fluid between said sheets, a connecting sheet joined to the leading ends of said photosensitive and second sheets for aligning said photosensitive and second sheets in superposition during withdrawal of said each film unit from said assemblage, and a rupturable container of said processing fluid mounted on said connecting sheet adjacent said leading end of one of said photosensitive and second sheets; a housing for enclosing and positioning said film units, said housing including an exposure aperture in one side for transmitting light for exposing said photosensitive sheets and a withdrawal aperture in one end through which said film units may be withdrawn, said photosensitive sheets being arranged



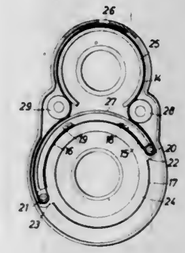
in said housing in overlying stacked relation in alignment with said exposure aperture and with said leading ends of said photosensitive sheets located adjacent one another at the opposite end of said housing from said withdrawal aperture, said second sheets being arranged in overlying stacked relation with the leading ends of said second sheets located adjacent one another and said one end of said housing in position to be withdrawn through said withdrawal aperture, the stacked photosensitive and second sheets being arranged in overlying relation with said stacked second sheets being located to the side of said stacked photosensitive sheets opposite said exposure aperture, said connecting sheet of each of said film units being disposed between the photosensitive and second sheets of said each film unit in overlying stacked relation with said second sheet of said each film unit, the container of succeeding film units being mounted on said connecting sheets at positions spaced from one another toward opposite ends of said assemblage so as to reduce the overall thickness of said assemblage.

3,046,862
PHOTOGRAPHIC OBJECTIVE MOUNT
Helmut Müller, Wetzlar (Lahn), Germany, assignor to Ernst Leitz Gesellschaft mit beschränkter Haftung, Wetzlar (Lahn), Germany
Filed Feb. 20, 1961, Ser. No. 90,436
Claims priority, application Germany July 7, 1960
8 Claims. (Cl. 95—45)



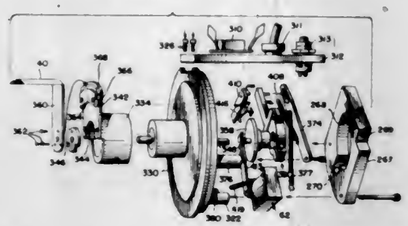
1. In a photographic objective having a moveable component, the combination of a pair of telescoping cylindrical sleeves, there being a plurality of pairs of cooperating axial grooves in the adjacent surfaces of said sleeves, a corresponding plurality of rod-like guiding elements positioned in said pairs of grooves so that said sleeves are axially moveable with respect to each other but rotary movement therebetween is prevented, and means on one of said guiding elements for drivingly interconnecting a moveable objective component with an adjusting means on the camera so as to transmit the adjusting movements to the moveable objective component.

3,046,863
PHOTOGRAPHIC CAMERA
Hermann Bretthauer, Klein-Stockheim, near Braunschweig, and Joachim Mädge, Braunschweig, Germany, assignors to Franke & Heidecke, Fabrik Photographischer Präzisions-Apparate, Braunschweig, Germany, a firm of Germany
Filed Feb. 3, 1960, Ser. No. 6,518
3 Claims. (Cl. 95—64)



1. A photographic camera of the twin lens reflex type having a picture taking lens axis and a finder lens axis located about and substantially parallel to the taking lens axis and having a housing part located above the finder axis and an observation window in such housing part, and having a ring rotatable substantially about the taking axis, the position of which ring is to be indicated at said observation window, and having a scale-bearing tape movable beneath said housing part in such position that a scale thereon may be seen through said observation window, said tape being operatively connected to said ring to be moved by rotation of said ring, characterized by the fact that said tape is driven directly by a part fastened to and moving with said ring, without intervening gears, and by the fact that said tape has two opposite ends, both of which are fastened to maintain said tape under a constant degree of tautness in all rotary positions of said ring, rotation of said ring in one direction serving to produce a pull on the portion of said tape near one end thereof and to release tension on the portion of said tape near the other end thereof, rotation of said ring in the opposite direction serving to produce a pull on the portion of said tape near said other end thereof and to release tension on the portion of said tape near said one end thereof, and further characterized by the fact that said ends of said tape are fastened to a stationary member, and that said ring carries two rollers mounted on and moving bodily with said ring during rotation of said ring, the portion of said tape near each end thereof passing over one of said rollers between the fastened end of the tape and the portion of said tape near said observation window, in such manner that rotation of said ring will cause multiplied movement of said tape to a greater extent than the extent of circumferential movement of said ring.

3,046,864
HIGH SPEED AUTOMATIC DIAPHRAGM MECHANISM AND CONTROL
Theodore W. Batterman, Park Ridge, and Mathew Pobog, Danville, Ill., assignors to Electric Eye Equipment Company, Danville, Ill., a corporation of Delaware
Filed Sept. 30, 1958, Ser. No. 764,331
26 Claims. (Cl. 95—75)



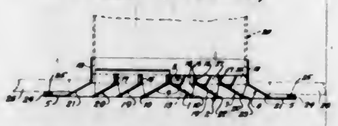
25. In a motion picture printing system in which a master and a sensitized film are exposed to a source of light under control of a diaphragm for registering successive scenes recorded on said master upon said sensitized film and in which the light exposure for each scene must vary in accordance with a previously recorded value for each scene, the improvement comprising: means for successively deriving a series of electrical signals corresponding respectively to different previously recorded values, a bridge circuit successively controlled responsive to each successive one of said electrical signals for comparing each signal with the previous signal, and last means operated in accordance with each comparison for positioning said diaphragm successively to control the light exposure in accordance with each successive previously recorded value.

3,046,865
VENTILATOR
Daniel Allcott Kelly, 312 Broad St., Salem, Va.
Filed June 29, 1959, Ser. No. 823,505
10 Claims. (Cl. 98—2)



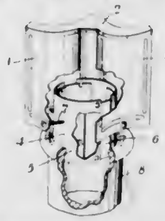
1. A ventilator for ventilating a compartment through an opening in a wall thereof, comprising a closure member swingable against one surface of said wall for opening and closing said opening, guide means fixed to an opposite surface of said wall and extending crosswise of said opening, means secured to said closure member against relative movement in a direction longitudinal of said guide means, means movably connected to said secured means and spaced from said closure member, said connected means being engageable with said guide means and held by said secured means against movement relative to said closure member in a direction longitudinal of said guide means for positioning said closure member relative to said opening and said connected means being spring-urged toward said closure member and into engagement with said guide means for forcing said member against said one surface of said wall, and interfitting means on said closure member and wall and urged into engagement by said spring-urged means for substantially fixing the swinging axis of said closure member on swinging thereof in one direction relative to said wall.

3,046,866
AIR DEFLECTORS OR DIFFUSERS AND THROW CONTROL DEVICES THEREFOR
Harold E. Straub, Cedar Falls, and Eugene F. Averill, Waterloo, Iowa, assignors to Titus Manufacturing Corporation, Waterloo, Iowa, a corporation of Iowa
Filed Sept. 22, 1959, Ser. No. 841,592
17 Claims. (Cl. 98—40)



1. An air diffuser having a series of substantially parallel air deflector vanes with air deflecting surfaces disposed at an angle with respect to the axis of said diffuser, and a throw control device comprising a series of longitudinally aligned, diverging, connected vane pairs interconnected with the next adjacent vane pairs at the apex of said diverging vane pairs by a narrow neck, clip-on means attaching said throw control device on the axially rearward side of said diffuser with said vane pairs diverging axially forwardly and outwardly between said deflector vanes into approximate contact with said air-deflecting surfaces of said deflector vanes.

3,046,867
CHIMNEY COWLS AND VENTILATING DEVICES
Clifford Edmund Brewer, "Lucky Stars," Lagoon Road, Lippiput, Parkstone, Dorset, England
Filed Mar. 27, 1959, Ser. No. 802,374
Claims priority, application Great Britain Apr. 1, 1958
5 Claims. (Cl. 98—82)

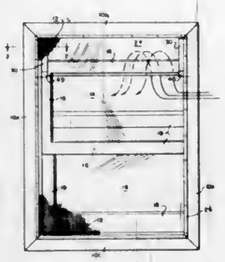


1. A cowl for a chimney, comprising an outer hollow body having upstanding side walls, a top wall closing the upper end of the body, and lengthwise extending apertures in said side walls, a central tubular structure having an expansible peripheral wall extending co-axially a substantial distance into the body in spaced relation therewith, a portion of said tubular structure extending downwardly from the lower end of the body for engagement in a chimney, means accessible from outside the body for expanding or contracting the peripheral wall of the tubular structure to obtain a close fit between the downwardly extending portion of the tubular structure and the chimney, the said means further providing a sole means supporting the body on the tubular structure.

3,046,868
WINDOW RAIN GUARD AND VENTILATOR
Roy E. Mann, 301 E. Downing, Tahlequah, Okla.
Filed Mar. 4, 1960, Ser. No. 12,762
2 Claims. (Cl. 98—98)

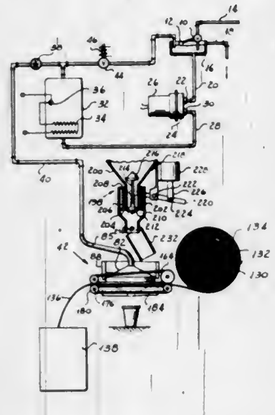
1. A window rain guard and ventilator adaptable for mounting on the back side of a rectangular window screen between parallel vertical frame members adjacent one horizontal frame member, comprising,
a rectangular substantially transparent panel of horizontal length slightly less than the distance between the inside edges of said vertical members,
first and second resilient tubular members,

each of said tubular members of length substantially equal to height of said panel,
a vertical slit along the length of each of said tubular members,
said tubular members vertically positionable along the said inside edges contiguous with said screen wherein



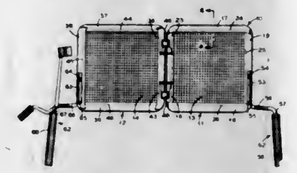
said slits face each other to receive and clamp the vertical ends of said panel,
first and second vertical L-shaped side brackets for each of said tubular members, and
means to attach the long leg of each of said brackets to said vertical members to cause the short leg to retain said tubular members in said position.

3,046,869
FILTER TAPE COFFEE BREWER
Donald Reynolds, Wilmette, Ill., assignor to Robert Z. Greene, Norwalk, Conn., as trustee
Filed Oct. 2, 1959, Ser. No. 844,092
10 Claims. (Cl. 99—289)



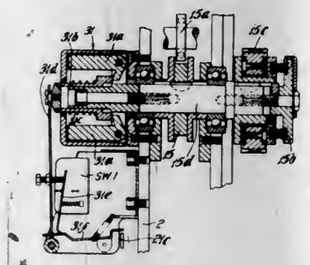
1. A coffee brewer including in combination a brewing chamber comprising a stationary base and a top and means mounting the top for movement from an open position to a closed position on said base, a supply of filter tape, means for moving said top to its open position, means for moving a length of tape from said supply to a position over said base and for positioning said length of tape from said supply over said base, a container for holding a supply of coffee, means for depositing a charge of coffee from said supply on said length of tape, means for closing said top following the positioning of said length of tape and the deposit of said charge of coffee to close said chamber, a source of hot water, and means for passing a charge of water from said source through said closed chamber.

3,046,870
TOASTER ACCESSORY
Adam Bork, 164 Beach 65th St., Arverne, N.Y.
Filed Nov. 15, 1960, Ser. No. 69,349
5 Claims. (Cl. 99—402)



1. An accessory for an automatic toaster of the type described having a pair of complementary frames, said frames having bottom edges and top edges and being hingedly connected together along their bottom edges so as to permit the frames to be brought into and out of facing relationship with each other, said frames being formed so as to be able to contain food and to be removably insertable into a toaster when in their facing relationship, and a pair of complementary handles respectively assembled to said frames, said handles extending outwardly from said frames and adjacent to each other when said frames are in their facing relationship so as to permit said handles to be held single handedly and latch means for said frames comprising an arm having a finger-actuable end, a clasp mounted on said arm and spaced from said end, said arm being pivotally connected to a respective assembly of frame and handle at a point of said arm spaced from said finger-actuable end, said arm being pivoted between a first position thereof in which said finger-actuable end is remote from said handles and a second position thereof in which said finger-actuable end is adjacent to said handles, said clasp in one of said positions of said arm being positioned and adapted to releasably engage and retain said frames when said frames are in their facing relationship and in the other of said positions of said arm being positioned and adapted to disengage said frames thereby allowing said frames to be separated, said finger-actuable end in both aforementioned positions being located proximate to said handles so as to permit manipulation of said finger-actuable end by the same hand as is holding said handles.

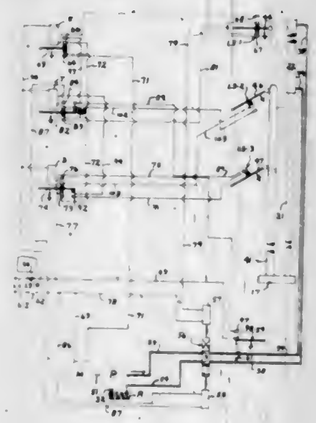
3,046,871
PACKAGE AND LIKE BINDING MECHANISM
John James Cheesman and Maurice Robert Mills, London, England, assignors to Automatic Strapping Machines Limited, London, England, a British company
Filed Jan. 16, 1958, Ser. No. 709,247
Claims priority, application Great Britain Jan. 21, 1957
19 Claims. (Cl. 100—26)



1. Mechanism for binding packages or the like of the type having means for feeding flexible material from a supply in a binding plane to form a loop around the package, a holding gripper for said material adjacent the

free end of said loop, means for reversing said feeding means for thereby closing the loop onto said package, means for connecting the parts of the material defining the ends of the loop and means for severing the loop from the supply, said reverse feed including a roller, means for continuously rotating said roller reversely and means for moving the material into frictional engagement therewith, in combination with a governor responsive to retardation of the reverse rotation of the roller consequent on the change in tension of the material as the loop closes onto the package to a predetermined degree of tightness and means responsive to the consequent actuation of said governor for thereby automatically effecting a remaining operation of the mechanism.

3,046,872
FLUID PRESSURE CONTROL MECHANISM FOR BALING PRESSES
William C. Pease III, Columbus, Ga., assignor to Lummus Cotton Gin Company, a corporation of Georgia
Filed Nov. 20, 1959, Ser. No. 854,493
14 Claims. (Cl. 100—52)



1. The combination with a baling press having a press box and a tramper associated with the press box for packing material therein, fluid pressure means to reciprocate said tramper, apparatus for automatically stopping the downward movement of the tramper within the press box when a predetermined fluid pressure is reached in the fluid pressure means through contact of the tramper with the material in the press box, said apparatus comprising fluid pressure lines to convey fluid to and away from the fluid pressure means to reciprocate said tramper, means to pump fluid through said fluid lines, means operatively connected to said fluid pump to drive said pump, a pressure switch operatively connected to the pressure within said fluid pressure means when said tramper is moving on its packing stroke and being actuated when said fluid pressure reaches a predetermined amount in said pressure line, valve means operatively connected to said fluid pressure lines and to said pressure switch to permit the reversal of the flow of fluid in said fluid lines when said pressure switch is actuated by said predetermined fluid pressure, means independent of the pressure switch to reverse the downward movement of the tramper when it reaches a predetermined position before the predetermined fluid pressure is reached, control means operatively connected to said pressure switch and effective only upon actuation of the pressure switch to stop the movement of the tramper out of the press box, and additional controls independent of the pressure switch to stop the tramper in its upper position out of the press box.

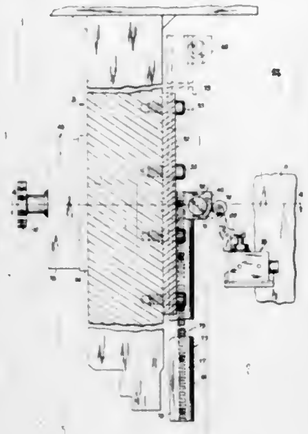
3,046,873
BALING DEVICE
Frank S. Landis, Lancaster, Pa., assignor to Bayuk Cigars Incorporated, Philadelphia, Pa., a corporation of Maryland
Filed July 26, 1961, Ser. No. 127,058
7 Claims. (Cl. 100—215)



7. A baling apparatus comprising a tower having an upper portion with an open inlet end for the reception of material to be baled and a lower portion with a lower discharge end, means to close off and open up the discharge end, a hollow plunger telescoped within the lower portion of the tower and telescoped over the exterior of the upper portion of the tower, normally open door means in the lower end of said plunger, normally open tower door means between the open inlet end of the upper portion of the tower and the uppermost position of the plunger door means, motor means to lower and raise the plunger, cam-actuated means to close the plunger door means when the plunger is lowered and to open the plunger door means when the plunger is raised, means to close the tower door means when the plunger is lowered and to open the tower door means when the plunger is raised to release the material to be baled, said last mentioned means including a line having one end fixed and the other end connected to the tower door means, a pulley engaging a bight in said line, an upstanding rod having an enlarged upper end supporting said pulley and a collar secured to the plunger and having an opening therein which freely embraces the lower portion of said rod and frictionally engages the upper portion of said rod, said motor means being adapted to carry the plunger downwardly to compact the material into the form of a bale at the bottom of the tower.

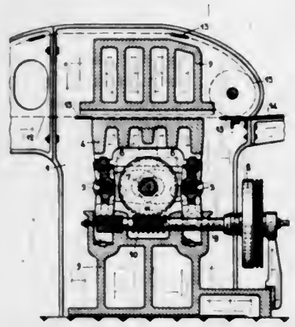
3,046,874
PRESS BRAKE
Roy F. Dehn, Wickliffe, Ohio, assignor to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Mar. 21, 1960, Ser. No. 16,323
4 Claims. (Cl. 100—256)

1. A device of the character described comprising a frame; a ram member mounted for reciprocating movement through power and return strokes with respect to said frame; drive means for effecting said movement of said ram, and control means for selectively controlling the length of said power stroke including a power stroke limit switch, a slide member mounted on one side of said ram for vertical movement therewith and for sliding movement relative thereto, a cam member for operating said switch, means adjustably mounting said cam member on said slide member, a gear rack on said slide member, a shaft extending from a second side of said ram through said ram to said one side thereof on which said slide member is mounted, a pinion mounted on said shaft and



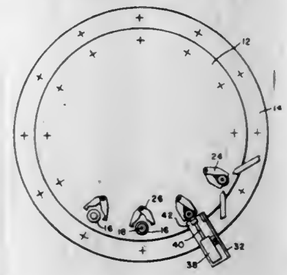
meshing with said rack on said slide member, gear means mounted on the end of said shaft adjacent said second side of said ram, means for rotating said gear means and shaft so as to move said slide member for adjustably positioning said cam, and means for locking said shaft to said ram against rotation relative thereto.

3,046,875
PRESSES WORKING SHEET MATERIAL
Henri Bobst, Lausanne, Switzerland, assignor to Bobst and Son S.A., Lausanne, Switzerland, a corporation of Switzerland
Filed Sept. 10, 1959, Ser. No. 839,229
Claims priority, application Switzerland Sept. 19, 1958
7 Claims. (Cl. 101—3)



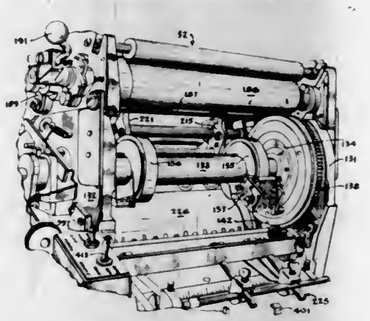
1. Apparatus comprising a sheet embossing press including at least one reciprocable member, a conveyor system for conveying sheets to said press, and means for driving said system and press at different speeds; said means comprising a shaft coupled to said member and system to drive the same, and a control for said shaft comprising means operatively coupled to said shaft to rotate the same at one speed before said reciprocating member is brought to its range of operative positions and at the other speed before the reciprocating member leaves the range of operative positions.

3,046,876
APPARATUS FOR MANUFACTURING ELECTRONIC TUBES
Douglas G. Noiles, Bath, and Donald A. Boylan, Painted Post, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 25, 1959, Ser. No. 815,402
4 Claims. (Cl. 101—41)



2. A sealing and exhaust machine for receiving tubes comprising rotating means for moving envelopes and mounts of said receiving tubes through a plurality of stations including heating means to seal and exhaust said tubes, apparatus located at one of said stations for marking envelopes successively brought to said station, said apparatus comprising a marking head, means for moving said marking head into and out of contact with said envelopes, applicator means for applying marking ink to said marking head, marking ink holding means for supplying ink to said applicator means, cooling means connected to said ink holding means and heat shielding provided between said ink holding means and said heating means.

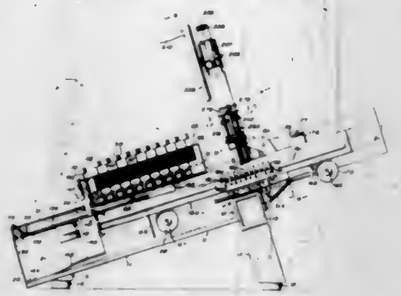
3,046,877
PRINTING MACHINES
Edward J. Janke, Euclid, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed July 16, 1959, Ser. No. 827,585
19 Claims. (Cl. 101—76)



1. A number printing machine comprising: a plurality of individual indexible numbering mechanisms mounted on a first operating shaft for rotation therewith; and impression cylinder mounted on a second operating shaft; means for mounting one of said shafts for movement toward and away from the other between a print position and a non-print position; at least one indexing member engageable with said numbering mechanisms to change the number settings thereof; an electrically operable automatic print control system, connected to said mounting means, for selectively moving said one shaft between said print and non-print positions; an electrically operable automatic index control system for moving said indexing mem-

ber between an indexing position and a non-indexing position; and means for manually overriding each of said automatic control systems independently of the other to control printing in said machine in accordance with a number of substantially different numbering programs.

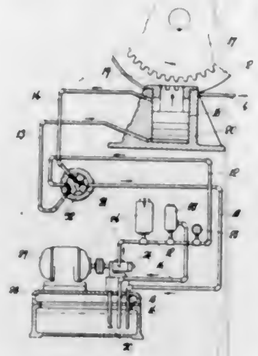
3,046,878
TICKET MARKING MACHINE
Charles L. Westbrook, 510 Park Ave., Ayden, N.C.
Filed Oct. 23, 1959, Ser. No. 848,308
34 Claims. (Cl. 101—93)



1. A ticket marking machine including printing means for printing information upon tickets, said printing means including a plurality of elongated support members mounted on said machine for linear movement, a plurality of different character members movably supported by said support members, selecting means associated with said printing means for determining which of said character members are in printing position during a cycle of operation of the machine, means engaging each of said support members for guiding the movement of the support members and mounting the support members for free reciprocatory movement, control means for maintaining said support members in a forward position, said machine including a base means for resting on a supporting surface, the support members being disposed obliquely to said base means such that when in operative position on a substantially horizontal surface, the support members are disposed at an angle to the horizontal such that they slide downwardly into a rearward position solely under the influence of gravity upon movement of said control means, means for operating the machine to move the printing means into printing relationship with respect to tickets to be printed upon, and means for advancing tickets through the machine for disposing tickets in operative relationship with respect to said printing means.

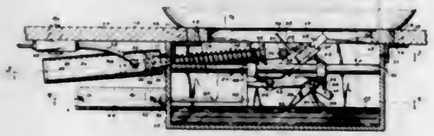
3,046,879
FIXING DEVICE FOR A DRIVING ROLLER OF AN AUTOMATIC SCREEN PRINTING MACHINE
Hisakichi Ichinose, 57 Sanbancho, Koushien, Nishinomiya City, Hyogo Prefecture, Japan
Filed Dec. 15, 1959, Ser. No. 859,608
Claims priority, application Japan May 23, 1959
4 Claims. (Cl. 101—115)

1. In a screen printing machine, the combination of a driving roller for an endless belt on which the material to be printed is carried through the machine, means for intermittently driving said roller, and means for fixing said roller in position in the intervals between successive advancements thereof by said intermittent driving means, said fixing means comprising a gear on one end of the roller, a piston adjacent the gear having a rack on the end thereof toward the gear and engageable with the gear, a cylinder in which said piston is slidable, a reservoir for pressure fluid, a pump connected to said reservoir for drawing pressure fluid therefrom, a rotary valve movable between at least two positions, and conduit means from opposite ends of said cylinder to said rotary valve and from said rotary valve to said pump and to said reservoir, said rotary valve having a rotatable valve member having passages therein which in one position connect the conduit means from the pump to the conduit means to one end of said cylinder and connect the conduit means from the other end of said cylinder to the conduit means to said reservoir, and which in the other position connect



the conduit means from the pump to the conduit means to the other end of the cylinder, and connect the conduit means from the one end of said cylinder to the conduit means to said reservoir, whereby rotation of the rotary valve causes said piston to reciprocate and causes the teeth of the rack to engage the teeth of the gear at timed intervals.

3,046,880
SCREEN STENCILLING MACHINE, RECIPROCATING TYPE
James A. Black, % General Research and Supply Co., 572 Division Ave. S., Grand Rapids, Mich.
Filed Nov. 24, 1961, Ser. No. 157,031
16 Claims. (Cl. 101—123)

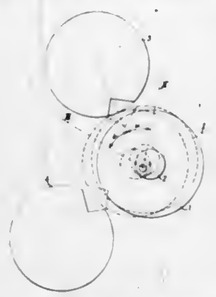


1. In a screen stencilling machine, in combination with a table top or the like having a flat, stock-supporting upper surface and an opening therethrough: a stencil frame having a stencil screen thereon and mounted in said opening with the stencil screen substantially flush with the flat upper surface of the top; said machine including a reservoir containing coating material and applying means for applying said coating material to said screen and a squeegee mounted on the underside of the top for reciprocating movements beneath the stencil to effect print strokes during which the squeegee forces said coating material upwardly through the stencil screen and onto stock placed on the stock-supporting upper surface of said top, and returning non-print strokes during which the squeegee is out of contact with the stencil.

3,046,881
DEVICE FOR THE PRESSURE ADJUSTMENT OF PRINTING ROLLERS
Josef Jurný, Sebranice, near Kunstat, Czechoslovakia, assignor to Adamovske strojirny, Adamov, Czechoslovakia
Filed Aug. 22, 1960, Ser. No. 51,180
Claims priority, application Czechoslovakia Aug. 26, 1959
3 Claims. (Cl. 101—218)

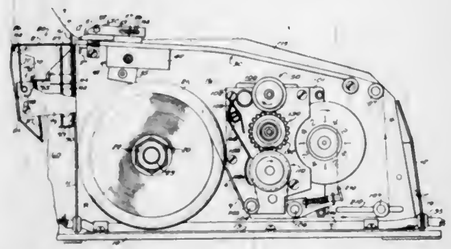
1. A device for position adjustment of printing rollers in a printing machine, comprising an offset roller, a metal

foil roller, and a counterpressure roller, a rotatable shaft carrying the offset roller for rotation about an axis radially spaced from the axis of rotation of said shaft, a sleeve with recesses mounted on said shaft, a rocker arm mounted for rotation on said sleeve, a roller track with a recess provided on the rocker arm, a cam rigidly connected to the offset roller, a lever mechanism adapted to be actuated by said cam, a feed lever carried by said lever mechanism and adapted to cooperate with said sleeve and rocker arm, a guide rail provided with retaining projections, a control lever pivotally connected to the sleeve, a slidable guide pin mounted in the control



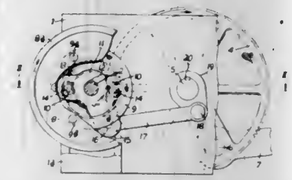
level and adapted for engagement with the projections on the guide rail to retain the control lever and thus the offset roller in the desired adjusted positions, said lever mechanism comprising a two-armed lever adapted to carry out rocking movements, said feed lever being attached to the two-armed lever, a roller on the feed lever adapted to cooperate with the rocker arm and another roller adapted to cooperate with the sleeve and to actuate said rocker arm and said sleeve when their respective recesses are in register to successively move said shaft from an initial inoperative position to a plurality of operative positions, and spring means adapted to return the shaft to the initial position thereof.

3,046,882
TAPE AND LABEL SELECTIVE LENGTH PRINTER AND DISPENSER
Howard W. Aubrey, Westwood, Mass., and Ralph V. Cudhea, Nashua, N.H., assignors to Nashua Corporation, Nashua, N.H., a corporation of Delaware
Filed June 12, 1959, Ser. No. 820,022
12 Claims. (Cl. 101—227)



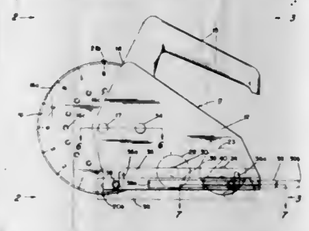
1. In a tape and label dispenser having a housing providing support therein for a roll of tape to be drawn on for adhesive application and having means defining a path for the tape from the roll to a delivery point and along which path the tape is adapted to be advanced by manual seizure and draft upon the free end thereof, a rotary printer assembly unit comprising bed, printer and ink rolls having generally parallel axes, said printer roll having a determined degree of rotation for defining one imprint pattern, a frame for said assembly unit mounted in the housing and presenting said unit intermediately along and operatively in the tape path, said bed roll presenting a substantial arc thereof for non-slip driving engagement by the tape and said printer roll being driven from the bed roll under draft upon the tape, variable length selector means correlated with said assembly to furnish on draft by the operator tape lengths of one or more imprint patterns as preselected by said means, and said selector means having associated therewith means operable at and by the start of tape draft for halting the draft at the selected number of imprint patterns.

3,046,883
VARIABLE SPEED MECHANISMS
Arthur Willard Ranger, Brighton, Sussex, England, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany
Filed Nov. 14, 1960, Ser. No. 69,200
Claims priority, application Great Britain Jan. 6, 1960
7 Claims. (Cl. 101—282)



1. A variable speed mechanism comprising a flywheel, a shaft on which the flywheel is freely rotatably mounted, first gear means rotatable about the shaft with the flywheel, a carrier freely rotatably mounted on the shaft, second gear means mounted on the carrier and engaging the first gear means so as to be driven thereby, third gear means mounted on the shaft so as to be rotatable therewith and operatively engaging the second gear means, and means for rocking the carrier on the shaft, said means comprising a pinion carried on the shaft, a driven shaft on which is keyed a main gear co-operating with said pinion, crank means driven by the main gear, and a link connecting the crank means with the carrier so that on rotation of the driven shaft the carrier is rocked by the link and drives the shaft carrying the flywheel for successive periods at relatively low and high speeds according to the carrier being rocked in the direction of rotation of the flywheel in the direction opposite thereto.

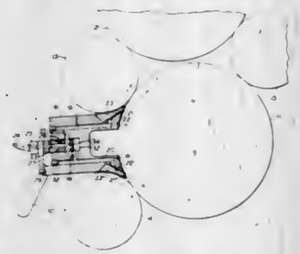
3,046,884
MARKING DEVICE
Jack W. Pearson, 141 Miami Ave., Elyria, Ohio
Filed May 11, 1960, Ser. No. 28,271
9 Claims. (Cl. 101—329)



9. A marking device comprising a frame member, said frame member forming an inverted channel defined by spaced side walls and a top wall, a marking roller journaled to said side walls adjacent a first end of the frame member, a supporting roller journaled to said side walls adjacent an opposite end of the frame member, an ink-supplying roller for supplying ink to the marking roller journaled to said side walls immediate of said marking roller and said supporting roller, the axes of said marking roller, supporting roller and ink-supplying roller being

disposed in parallel relationship, said marking roller being adapted to make an ink mark at the point of tangency between said marking roller and a common plane tangent to both said marking roller and said supporting roller and along which the device is rolled, said side walls extending between said marking roller and said supporting roller to embrace and protect the ends of said ink-supplying roller, at least one of said side walls extending beyond said common plane along which the device is rolled at a location adjacent the said first end of said side wall and at a location adjacent the said opposite end to provide guiding engagement at said locations with the side edge of a board or the like along which the device is rolled, said frame member having a reference portion extending at said opposite end along a side wall thereof a distance beyond said supporting roller to provide a predetermined spacing of said point of tangency from a reference point on said plane coinciding with said reference portion.

3,046,885
PRINTING MACHINE INK RAIL
Frank Neal, New City, N.Y., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed May 12, 1960, Ser. No. 28,572
13 Claims. (Cl. 101—350)



1. An inking mechanism comprising a hard surfaced ink drum and cooperating soft surfaced roller, an ink rail having arcuate surfaces in cooperative relation to said drum and roller and defining therewith a small cuspidal ink holding space adjacent the nip of the drum and roller, the said rail having a line of orifices in its face adjacent the drum positioned close to the said nip and the said ink rail surfaces being in wiping relation to both drum and roller for smoothing out any globules thereon, a further hard surfaced ink drum and a soft surfaced roller transferring ink from the first said drum to the second said drum.

3,046,886
SEISMIC EXPLOSIVE ANCHOR
Charles M. Joslin, Quitman, Miss., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed Apr. 6, 1959, Ser. No. 804,322
2 Claims. (Cl. 102—21.8)



1. In a seismic charge array wherein a plurality of tubular explosive charge containers are to be connected together in an end-to-end array with threadedly mating male and female elements prior to introduction into a borehole, the combination which comprises an elongated strap including a central portion having an aperture adapted to receive one of said male elements, and to be fitted and directly secured between said tubular containers by the male and female coupling elements with arms extending in diametrically opposed direction from said central portion at an angle of the order of 15° with respect to the walls of said containers, and extending in direction opposite the direction of movement of said array into the borehole, each of said arms including an end portion directed outward at an angle of the order of 30° with respect to the plane of its associated arm.

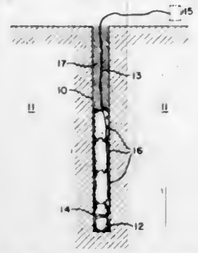
3,046,887
EXPLOSIVE SYSTEM CONTAINING AMMONIUM NITRATE
Stuart R. Brinkley, Jr., Coraopolis, and Guenther Von Elbe, Pittsburgh, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Original application June 21, 1957, Ser. No. 667,141. Divided and this application July 7, 1958, Ser. No. 747,047
8 Claims. (Cl. 102—22)



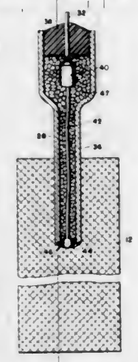
1. An explosive system comprising a main explosive charge, a primer charge and an initiator, said main explosive charge being cap-insensitive, said primer charge being sensitive to blasting caps and detonating fuse initiators and consisting essentially of finely divided ammonium nitrate homogeneously admixed with 0.5 to 3.5 percent by weight of liquefiable hydrocarbons, said ammonium nitrate before admixture with said hydrocarbons being free of any coating and of any particles smaller than 100 mesh, said initiator being in detonating relation with said primer charge, and said primer charge being in detonating relation with said main charge.

3,046,888
EXPLOSIVE COMPOSITIONS CONTAINING AMMONIUM NITRATE
William E. Gordon, Winchester, Mass., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Original application June 16, 1958, Ser. No. 742,279. Divided and this application May 28, 1959, Ser. No. 816,531
3 Claims. (Cl. 102—22)

2. An explosive system consisting essentially of two confined explosive charges and a high velocity detonating fuse, the first of said charges consisting essentially of prilled ammonium nitrate containing as a surface coating from 0.1 to 0.6 percent by weight of finely divided inert solids and being homogeneously admixed with 0.5 to 3.5 percent by weight of liquid hydrocarbons, the second of said charges consisting essentially of prilled ammonium nitrate containing as a surface coating from 0.1 to 0.6 percent by weight of finely divided inert solids and being homogeneously admixed with 4 to 8 percent by weight of liquid hydrocarbons, said first charge and said second charge being free from any ingredient that is per se sensitive to detonation by a high velocity detonating fuse, said first charge being positioned in detonating relation with said second charge, said high velocity detonating fuse being positioned in detonating relation with said first charge and extending out of confinement to initiating point, and means for initiating detonation of said detonating fuse.



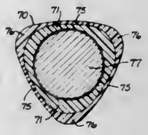
3,046,889
SEISMIC EXPLORATION
Eugen Merten, Houston, Tex., assignor to Shell Oil Company, a corporation of Delaware
Original application Feb. 27, 1957, Ser. No. 642,725. Divided and this application Dec. 14, 1959, Ser. No. 859,517
4 Claims. (Cl. 102—24)



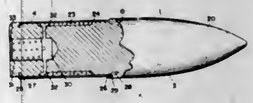
1. In a seismic surveying system for detonating a plurality of explosive charges in a timed sequence, a time delay device for each charge comprising a casing defining a substantially pressure-tight chamber, a combustible time delay fuse extending longitudinally within said chamber, said time fuse having a first end connected to an ignitable detonator, means connected to a second end of said time fuse for igniting the fuse in response to a firing signal, and a solid gas absorbent material disposed around the entire length of said fuse and interposed between said fuse and chamber for absorbing gaseous combustion products in said chamber and maintaining a substantially constant pressure therein during the burning of said time fuse.

3,046,890
AMMUNITION FOR OPEN CHAMBER GUNS
David Dardick, New York, N.Y., assignor to Dardick Corporation, a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,407
12 Claims. (Cl. 102—38)

1. Ammunition for an open chamber gun comprising an elongated hollow body having, from end to end, an external configuration which, in cross-section, is generally that of an equilateral triangle, said body having relatively thin side walls thickened at the triangle apices and having an end wall at right angles to said side walls, at least one of said side walls having an arcuate outer surface in planes paralleling said end wall; an obturating sleeve telescopically received within said body, said sleeve having an inner end and an outer end, with said inner end being the end nearest said end wall, said sleeve also having, within said body, an external configuration which, in cross section, is complementary in size and shape to the internal cross-sectional configuration of said body, having a cylindrical bore portion and having a tapered bore portion between said cylindrical bore portion and said inner end of said sleeve, said tapered bore portion tapering radially outwardly in the direction from said cylindrical portion to said inner end of said sleeve; a projectile in said cylindrical bore portion; and, igniter means in said end wall.



3,046,891
PROJECTILE
John W. Treat, Jr., East Hampton, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn.
Original application Nov. 7, 1955, Ser. No. 545,290, now Patent No. 2,922,341, dated Jan. 26, 1960. Divided and this application Nov. 4, 1958, Ser. No. 779,802
1 Claim. (Cl. 102—45)

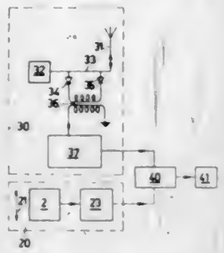


A projectile having a configuration defining an ogival nose portion and a cylindrical body portion, said body portion being formed with a pair of spaced annular channels, one said channel having a circular crimping tab, the region of the body portion intermediate said channels being undercut to define a circumferential groove containing a primer composition having an annular shape, said groove and said primer composition being enclosed by a tubular band having opposed end portions, the end portions of said band being received in said channels and the crimping tab of said one channel being operative in conjunction with the body portion of the projectile to crimp a mating end portion of the band whereby the band is fixed to the body portion, said band being percussively deformable so as to initiate the primer composition when deformed.

3,046,892
PROXIMITY FUSE
Claude Cosse, Paris, and Fernand Loy, Neuilly-sur-Seine, France, assignors to Telecommunications Radioelectriques et Telephoniques, T.R.T. (Societe Anonyme), Paris, France
Filed June 18, 1959, Ser. No. 821,259
Claims priority, application France June 20, 1958
3 Claims. (Cl. 102—70.2)

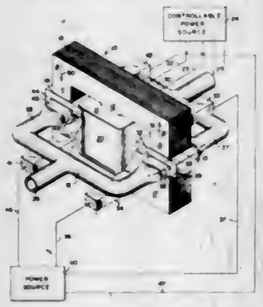
1. A proximity fuse for detonating the charge of a projectile, comprising a source of radio signals, means for transmitting said radio signals, means for receiving said radio signals to provide a first output signal depen-

dent upon the proximity of a target, optical means for providing a second output signal dependent upon the occurrence of a target at a predetermined angular position with respect to the longitudinal axis of said projec-



tile, a coincidence device, means applying said first and second output signals to said coincidence device whereby a detonating signal is produced only when said first and second signals both indicate the presence of a target.

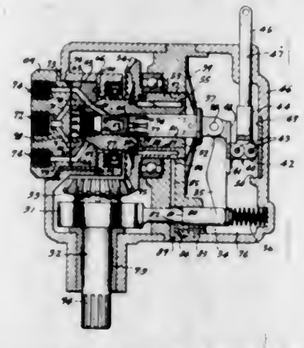
3,046,893
CONDUCTIVE FLUID PUMP
William L. Carlson, Jr., Bloomington, and Richard H. Cole, Crystal, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Jan. 16, 1961, Ser. No. 83,002
5 Claims. (Cl. 103—1)



1. An electromagnetic conductive fluid pump filled with a conductive fluid: magnetic core means having a plurality of legs and two said legs having air gaps therein; fluid filled conduit means passing through each of said air gaps; said conduit means having common inlet means and common outlet means; electrode means including current source means connected to said conduit means at said air gaps; said electrode means positioned to pass currents through said conduit means at said gaps creating a pumping pressure in said conduit means at each air gap by interaction of said currents and a self-generated flux at each gap; and flux generating means associated with said core means and generating a magnetic control flux in said legs; said control flux combining with said self-generated flux to vary the pumping pressures in said conduit means; said pressures combining in said conduit means thereby varying the total outlet pressure available from said pump as said control flux varies.

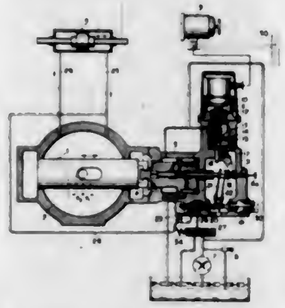
3,046,894
METERING PUMP MECHANISM
James F. Machen, Toledo, Ohio, assignor to Simmonds Aerocessories, Inc., Tarrytown, N.Y., a corporation of New York
Filed Jan. 27, 1960, Ser. No. 5,027
2 Claims. (Cl. 103—2)

1. In a variable-delivery liquid injection pump for an internal combustion engine having a housing and means therein for converting rotary motion to reciprocatory motion and including also a rotating distributor barrel provided with a bore and a reciprocable plunger positioned therein: the combination comprising a head-piece partially recessed in said housing and including an apertured inlet coaxially disposed with respect to said bore and a series of circumferentially disposed outlet apertures; a removable apertured valve block recessed in said housing in face-adjacent relation to said head-piece; said valve block being provided with conduits intersecting said inlet and said outlets in said head-piece; said rotating distributor barrel having a frusto-conical face in rotary engagement with a complemental frusto-conical recess in said valve block and including an angularly disposed



bore in communication with the interior of said distributor barrel and said frusto-conical faces serving to feed fuel thereto; said head-piece, valve block and distributor barrel being in appropriate alignment to accommodate fuel flow; a follower, a rocking beam pivotally secured at one end to a reciprocable plunger slidably received in said distributor barrel with the free end thereof in working contact relation with said follower, said follower also serving to pump lubricant from said housing to said reciprocable plunger through said distributor barrel, a cam means to actuate said follower, and reciprocable fulcrum means in rolling contact with said rocking beam and the interior of said housing to vary the stroke of said plunger and drive means associated with said distributor means and said follower for imparting motion thereto.

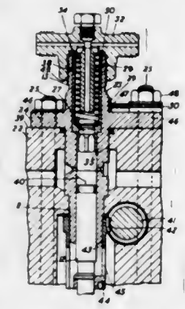
3,046,895
VARIABLE DISPLACEMENT PUMP CONTROL
Fritz Berg, Friedrich Arndt, and Karl Wrabetz, Leipzig, Germany, assignors, by mesne assignments, to VEB Zentrale Entwicklung und Konstruktion (Zek) Hydraulik, Leipzig, Germany
Filed Feb. 27, 1958, Ser. No. 717,994
Claims priority, application Germany Feb. 27, 1957
8 Claims. (Cl. 103—37)



1. A variable delivery pump comprising, in combination, a coordinated fluid motor, conduit means between

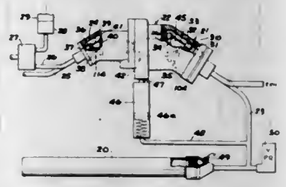
said pump and said motor for a fluid circulated by said pump, reactor ring means shiftable for the adjustment of delivery and direction of flow of said fluid in said conduit means, a control device including first hydraulic servo motor means having a first movable portion connected to said reactor ring means for shifting the position thereof, movable control means connected to said first hydraulic servo motor means and effective to move the latter and said reactor ring means an amount in proportion to movement of said movable control means, second hydraulic servo motor means having a second movable portion connected to said movable control means for movement of the latter in response to movement of said second movable portion, and supplemental control means acting at the connection of said second servo motor means and said movable control means, and including a sliding member, a predetermined biasing force means biased against one side of said member to urge said member in one direction, and means communicating the other side of said member with said conduit means to bias this side in the opposite direction by means of said fluid delivered by said pump.

3,046,896
FUEL INJECTION PUMPS FOR INTERNAL COMBUSTION ENGINES
Herbert Hargrave Basil Minett, Chalfont St. Peter, and Kenneth William Course, Acton, London, England, assignors to D. Napier & Son Limited, London, England, a British company
Filed Mar. 23, 1959, Ser. No. 801,033
Claims priority, application Great Britain Feb. 28, 1956
1 Claim. (Cl. 103—41)



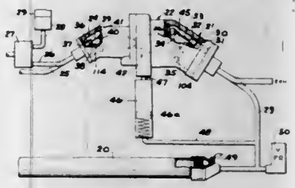
A fuel injection pump for an internal combustion engine comprising a pump body having a recess therein, a one-piece barrel and delivery valve housing unit comprising a lower barrel portion and an upper delivery valve housing portion mounted in said recess with at least a part of said delivery valve housing portion projecting out of said recess externally of said body, said delivery valve housing portion having an upper end, said unit having a stepped bore extending throughout its length, a plunger slidable in a lower part of said stepped bore which part has the smallest diameter of any part of said bore, a delivery valve contained in an upper part of said bore in said delivery valve housing portion, said upper part of said bore being of larger diameter than said lower part, a delivery valve spring contained within said delivery valve housing portion above said valve, a detachable sleeve within said delivery valve housing portion and having a lower part and an upper end, said lower part of said sleeve providing guide means and seating means for said valve and said upper end thereof being flush with said upper end of said delivery valve housing portion, a fuel delivery pipe connector screwed on to said projecting part of said unit externally of said body, and a common sealing washer compressed between on the one hand said upper ends of said housing and said sleeve and on the other hand said fuel delivery pipe connector, said body having an upper seating surface and including a cam box, cam means in said box for reciprocating said plunger, a mounting flange on said unit contacting said upper seating surface of said body, and through-bolts extending from said mounting flange to said cam box through said body and serving to transmit pumping reaction forces from said unit to said cam box.

3,046,897
POWER TRANSMISSION
Benjamin W. Badenoch, Birmingham, Mich., assignor to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Filed June 10, 1959, Ser. No. 819,300
14 Claims. (Cl. 103—48)



8. A power transmission comprising a solid propellent type hot gas generator adapted to be carried by a missile, a rotary fluid pressure energy translating device mounted on said missile, said device being of the type having a drive member, a plurality of axially positioned cylinders, pistons reciprocable in said cylinders and motion converting means for converting the reciprocating movement of said pistons to rotation of said drive member, said device having an inlet and an outlet communicating successively with one of the ends of each said cylinder, conduit means for connecting said inlet to said hot gas generator, and a rotary fluid pump of the type having an input member, a plurality of axially positioned cylinders, pistons reciprocable in said last mentioned cylinders and motion converting means for converting the rotating movement of said pump input member to reciprocating motion of said pistons of said pump, means forming a driving connection between the drive member of said pressure energy translating device and the input member of said pump, means defining a chamber between the other ends of said cylinders of said pressure energy translating device and the adjacent ends of said cylinders of said pump, and means responsive to the operation of said device for applying a pressure to hydraulic fluid in said chamber at least as great as the pressure of hot gases supplied to said inlet of the pressure energy translating device by said hot gas generator.

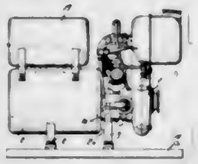
3,046,898
POWER TRANSMISSION
Benjamin W. Badenoch, Birmingham, and Robert M. Stewart, Detroit, Mich., assignors to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Filed June 10, 1959, Ser. No. 819,299
6 Claims. (Cl. 103—49)



2. A power transmission comprising a solid propellent type hot gas generator adapted to be carried by a mis-

sile, a rotary fluid pressure energy translating device mounted on said missile, said device being of the type having a drive member, a plurality of axially positioned cylinders, pistons reciprocable in said cylinders and motion converting means for converting the reciprocating movement of said pistons to rotation of said drive member, said device having an inlet and an outlet communicating successively with one of the ends of each said cylinder, conduit means for connecting said inlet to said hot gas generator, and a rotary fluid pump of the type having an input member, a plurality of axially positioned cylinders, pistons reciprocable in said last mentioned cylinders and motion converting means for converting the rotating movement of said pump input member to reciprocating motion of said pistons of said pump, means forming a driving connection between the drive member of said pressure energy translating device and the input member of said pump, means defining a chamber between the other ends of said cylinders of said pressure energy translating device and the adjacent ends of said cylinders of said pump, and an accumulator having a pressure responsive member therein and fluid connections on each side of said member, first conduit means extending between one side of said member and said chamber and second conduit means extending between the other side of said member and the conduit means which connects the hot gas generator to the inlet of said pressure energy translating device for applying a pressure to hydraulic fluid in said chamber substantially equal to the pressure of said hot gases provided to said inlet of said hot gas generator substantially immediately when said hot gas generator is energized.

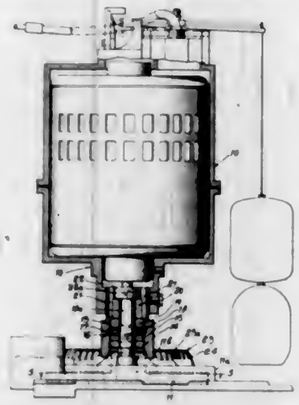
3,046,899
GENERATOR OR PUMP ASSEMBLY
Ernst Biefang, Pinneberg, near Hamburg, Germany, assignor to Rockwell G.m.b.H., Pinneberg, near Hamburg, Germany, a corporation of Germany
Filed Aug. 14, 1959, Ser. No. 833,825
10 Claims. (Cl. 103—54)



1. A unitary assembly comprising an internal combustion engine having a housing and a crankshaft, a rotor equipped driven power output machine having a housing, means directly mounting and supporting said driven machine rotor on said engine crankshaft for concomitant rotation therewith, said crank shaft constituting the sole support for said driven machine rotor at the end of said driven machine rotor adjacent said engine, means directly and rigidly connecting said engine housing to said driven machine housing, a base, and means resiliently and independently mounting each of said housings on said base.

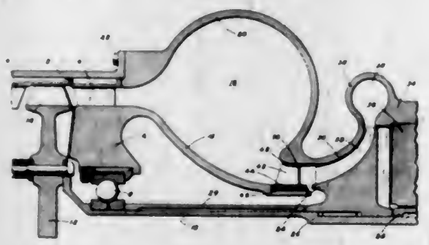
3,046,900
SUBMERSIBLE SUMP PUMP ASSEMBLIES
Abraham Pollak, Linfield, Pa.
Filed Jan. 2, 1959, Ser. No. 784,789
3 Claims. (Cl. 103—87)

1. In combination with a submersible pump having a rotatable pumping element, a casing forming a pumping chamber surrounding said pumping element and a drive shaft for effecting rotation of said pumping element, a seal construction including non-rotatable means surrounding said shaft having an oil impregnated fibrous member in sliding sealing engagement with said shaft and located with one face thereof exposed to the pressure produced by said pumping element to provide a principal sealing action and effect filtration of fractional flow past said fibrous member, and a second sealing member disposed in axially spaced relation from said fibrous member and including two relatively rotatable means one of which is operatively secured to said drive shaft and in operative



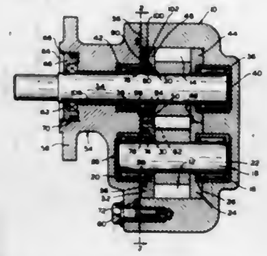
sliding sealing engagement with an opposed complementary surface of the other said means to impede fluid passage of said fractional flow, said seal construction including a recess defined at least partially by said sealing means in proportion to receive lubricant for effecting anti-friction sliding relation between said two relatively rotatable means.

3,046,901
PUMP STAGE CONNECTION
Robert L. Montgomery, Windsor, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 26, 1961, Ser. No. 112,846
2 Claims. (Cl. 103—88)



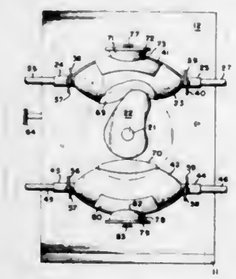
1. A multi-stage pump having an axis and including an axial flow first stage pump and a radial flow centrifugal second stage pump each including a bladed rotor adjacent a vaned stator and each further including inlet and outlet passages, a shaft connecting said pumps to cause the pump rotors to rotate in unison, casing means connecting said pump stages and forming said first stage pump outlet passage and said second stage pump inlet passage and so shaped that an annular collecting chamber which is substantially circular in axial cross section and several times larger than said first stage pump outlet passage and said second stage pump inlet passage is formed therebetween and is so positioned with respect to said pumps that said first stage pump outlet passage is axial radial with respect to said collecting chamber while the inlet passage to said second stage pump is axial from said collecting chamber.

3,046,902
PUMP
John A. Lauck, Benton Harbor, and Louis R. Bobnar, St. Joseph, Mich., assignors to Clark Equipment Company, a corporation of Michigan
Filed Mar. 23, 1959, Ser. No. 801,385
16 Claims. (Cl. 103—126)



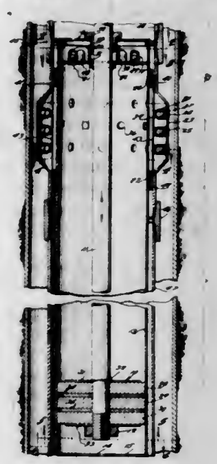
1. In a pressure generating pump of the type including a housing containing intermeshing gears and having an inlet leading to and an outlet leading from said housing, an axially movable sealing member having a sealing surface engageable with a side face of one of the gears and a motive surface remote from the sealing surface, a pump housing surface in facing relation to said motive surface, and means separating said motive surface from said housing surface to form a pressure chamber therebetween, said pressure chamber communicating with a pump generated pressure for urging the sealing surface of the sealing member into sealing engagement with the side face of the gear, said separating means providing an effective end clearance between the chamber forming surfaces, said end clearance restricting the axial movement of the sealing surface of the sealing member in a direction away from the adjacent side face of the gear to a distance equivalent to the said end clearance such that the pump generates a substantial fluid pressure at a reduced efficiency in the event of loss of said sealing engagement following a loss of pump generated pressure in one of said pressure chambers.

3,046,903
ARTIFICIAL BLOOD CIRCULATION APPARATUS
George W. Jones, 503 Fairmont Ave., Winchester, Va.
Filed Mar. 18, 1960, Ser. No. 15,908
4 Claims. (Cl. 103—149)



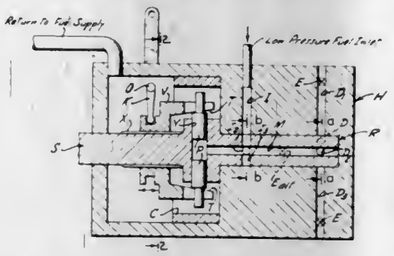
1. A device of the character described comprising a chamber having resiliently collapsible walls, means on the exterior of the chamber for applying pressure against the resilient action of the walls to compress the chamber from an unstressed normal condition and alternately to release the pressure and permit the chamber to recover its normal condition under the resilient action, tubular valved means connected to the chamber for conveying fluid into and out of the chamber unidirectionally, said chamber having an access opening therein, a removable plug within said opening, said plug having a passageway therethrough from the exterior to the interior of the chamber, and a removable closure member in said passageway.

3,046,904
TOP LOADING FLUID PUMP
Edward L. Crow, Star Rte., Kermit, Tex.
Filed Jan. 13, 1960, Ser. No. 2,214
2 Claims. (Cl. 103—155)



1. A top loaded pump for a well casing comprising a pump barrel having an outlet opening in the lower end and perforations spaced downwardly from the upper end, an outlet valve positioned in the upper end of the pump barrel, a piston in the pump barrel, a piston rod extended from the piston through said outlet valve, a well string positioned around the pump barrel, a perforated nipple carried by the well string and having check valves therein and seal rings between the pump barrel and well string and positioned above and below the perforated nipple, and said perforated nipple being positioned in registering relation with the perforations in the pump barrel.

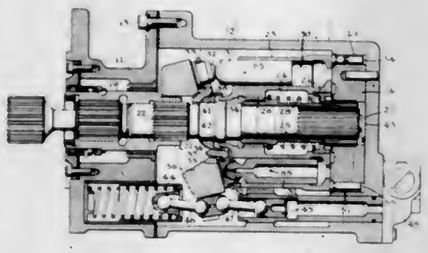
3,046,905
FUEL INJECTION PUMP
Charles W. Davis, Fishkill, N.Y., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 27, 1957, Ser. No. 705,612
7 Claims. (Cl. 103—161)



1. In a fuel injection system for an internal combustion engine, a fuel injection pump comprising a pump housing having an axial bore with fuel inlet and discharge passages leading therefrom and a fuel distributing and pumping means comprising a rotor having an axial passage with fuel inlet and discharge passages leading therefrom adapted to be placed in communication with the corresponding passages in said housing when said rotor is positioned and rotated in said bore, said rotor having a diametral chamber in communication with said axial

passage, a pair of plungers housed in said chamber and forming a fuel pumping means therewith, and internal cam means located in a section of said housing in operative position with the outer ends of said plungers so that when said rotor revolves within said axial bore of said housing said plungers are moved radially outward when said fuel inlet passages in said pump housing and said rotor are in communication with each other and fuel is being admitted to the rotor, and being forced inward when said discharge passages in said pump housing and said rotor are in communication with each other and fuel is being delivered to individual engine cylinders, and means for regulating the quantity of fuel to be injected by the positive control of the displacement of said plungers comprising a sleeve member mounted on said rotor and capable of axial adjustment therealong for effecting contact engagement with each of the outer end portions of said pair of plungers thereby to limit positively the amount of plunger travel and so regulate the quantity of fuel injected.

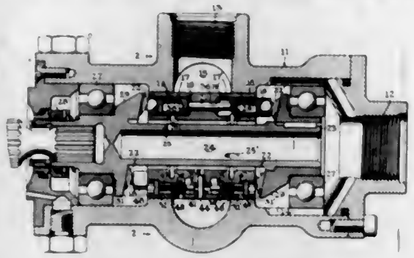
3,046,906
MEANS FOR COUNTERACTING CENTRIFUGAL FORCE MOMENTS IN ROTARY CYLINDER BARREL ENGINES
Tadeusz Budzich, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed May 31, 1957, Ser. No. 662,723
6 Claims. (Cl. 103—162)



6. In combination with an engine of the type including a rotary cylinder barrel and a plurality of longitudinally reciprocating pistons mounted therein and in which the pistons are moved on their discharge strokes by a cam plate inclined with respect to the axis of rotation of the cylinder barrel, whereby the centers of gravity of the pistons lie in a common plane inclined with respect to a plane normal to said axis so that the centrifugal forces generated by the pistons produce a tilting moment on the barrel, the improvement which comprises means for exerting a moment on the cylinder barrel which acts in a direction opposite to and about the same axis as the tilting moment produced by the centrifugal forces generated by the pistons.

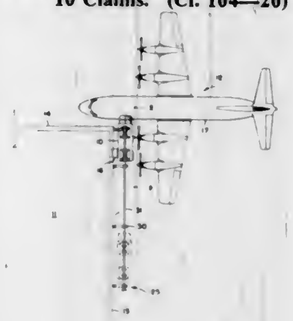
3,046,907
PUMP
Ralph J. Pschunder, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed July 9, 1959, Ser. No. 826,057
3 Claims. (Cl. 103—173)

1. In a reciprocating piston pump having a working chamber and a discharge port, the improvement which comprises a valve bore containing two longitudinally spaced ports separated by a fixed valve land; a first passage connecting one of the ports with the working chamber and a second passage connecting the other port with the discharge port; a sliding plunger type valve member reciprocable in the bore and having a control edge arranged to move between a flow-establishing position outside the fixed valve land and a flow-interrupting position inside the fixed valve land for controlling flow between the two ports; first and second reaction surfaces carried by the valve member and subject to the pressures in the first and second passages, respectively, the first surface developing a force which urges the valve member toward



the flow-establishing position and the second surface developing a force which urges the valve member in the opposite direction; a spring urging the valve member in the flow-interrupting direction; and an hydraulic stop for limiting movement of the valve member in the flow-interrupting direction, the stop being effective after the valve member has reached said flow-interrupting position.

3,046,908
APPARATUS FOR FACILITATING THE LOADING AND UNLOADING OF PASSENGERS AND CARGO
Frank Der Yuen, Inglewood, Calif., assignor to Lockheed Air Terminal, Inc., Burbank, Calif.
Filed Aug. 31, 1959, Ser. No. 838,016
10 Claims. (Cl. 104—20)



1. A passenger loading and unloading apparatus adapted to be moved to and from a terminal building wherein the building entrance is at least one floor level above ground, a passageway comprising, a main section and a vestibule pivotally carried therewith to raise and lower relative to the ground, fixed means supporting and suspending the main section above ground level and arranged in close proximity to the building for movement relative to the building entrance, and power means carried on the main section for moving the main section on its supporting means to and from the building entrance.

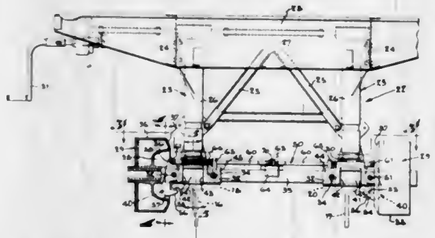
3,046,909
MATERIAL HANDLING DEVICE
Henry A. Gorjanc, Wickliffe, Ohio, assignor to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Feb. 24, 1960, Ser. No. 10,702
6 Claims. (Cl. 104—102)

1. In an overhead monorail carrier system, a switch having a first frame; a second frame supporting said first frame for horizontal movement transversely of a rail on one side of the switch; a reversible electric motor mounted on one of said frames and connected by transmission means to the other of said frames; circuit means for controlling said motor for effecting movement of said first frame between first, second and third positions for selectively connecting said rail with any of three rails on the other side of the switch to provide a continuous path of travel for a carrier; said circuit means including first and second limit switches mounted on one of said frames and actuatable by movement between said frames; solenoid operated locking means for releasably retaining said



first frame in said positions; a third limit switch actuatable by said locking means; first, second, and third control switches corresponding to said first, second, and third positions and adapted to be selectively connected by said first, second and third limit switches respectively to a power conductor; latching relay means responsive to said first, second, and third control switches and connected to said motor for energization thereof to effect movement of said first frame into said first, second and third positions respectively; and said first and second limit switches adapted to directly de-energize said motor when said first frame moves into a selected position.

3,046,910
LANDING GEAR CLAMPING DEVICE
James J. Black, Cincinnati, Ohio, assignor to Trailmobile, Inc., Cincinnati, Ohio, a corporation of Delaware
Filed Sept. 4, 1956, Ser. No. 607,941
9 Claims. (Cl. 105—368)



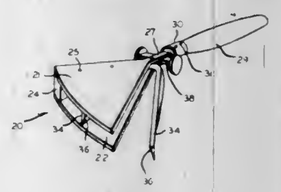
1. A landing gear adapted to support a semi-trailer upon a railroad car having longitudinally extending flanged rails, said landing gear comprising a pair of spaced posts mounted beneath the trailer chassis, an axle carried by said posts and mounted beneath and secured to the ends of said posts, wheels rotatably journaled at the ends of said axle, load rollers rotatably journaled on said axle directly beneath each of said posts, latching members, means pivotally mounting said latching members upon said axle intermediate said landing gear wheels and said load bearing rollers, each of said latching members comprising an inwardly extending lip adapted to engage the under surface of said rail flange, and means for selectively shifting said latching members to a rail engaging position, said means comprising a rod secured to each of the latching members, a bar pivotally secured to the axle at the central portion thereof, means pivotally connecting said rods to said bar on opposite sides of its pivotal connection to the axle.

3,046,911
PIE MAKING MACHINE
Robert O. Manspeaker, 1120 McNeil St., Memphis, Tenn., assignor of one-half to Maurice F. Keathley, Sr., Memphis, Tenn.
Filed Jan. 18, 1960, Ser. No. 3,132
3 Claims. (Cl. 107—1)



1. In a pie making machine, an endless supporting member, a plurality of substantially rectangular base plates secured adjacent to each other on said supporting member, a pie mold on each base plate comprising a continuous upstanding wall having an upper crimping surface, said wall comprising a pair of aligned parallel wall sections mounted along the opposite sides of each base plate in a contiguous relation to the respective leading and trailing sides of adjacent base plates and a connecting wall section joining one of the ends of one parallel wall section with the corresponding end of the other parallel wall section, said parallel wall sections extending from adjacent one end of each base plate into the medial portion thereof, thereby leaving about one-half of the base plate substantially flat to support part of the dough not held by the mold, and a cutting edge arranged along the outer periphery of the connecting wall section and one of the said parallel wall sections of each continuous upstanding wall so that the cutting edge along the parallel wall section is common to a pair of contiguous parallel wall sections.

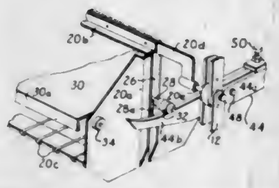
3,046,912
DISPENSERS FOR ICE CREAM OR THE LIKE
William A. Starck, 324 E. Wisconsin Ave., Milwaukee, Wis.
Filed Apr. 7, 1960, Ser. No. 20,661
5 Claims. (Cl. 107—48)



1. In a device of the character described, a pair of spaced plate members, handle means for supporting said plate members in such spaced relationship, said plate mem-

bers being shaped as sectors of a circle and having generally blade-like edges adapted to enter a mass of plastic consistency, dispensing means adapted to be positioned between said plate members and having converging wall members to define a generally wedge shaped recess with said plate members for receiving a mass of said plastic material and to be moved to a position where said mass is discharged from said dispenser means, a hub joining said converging wall members and adapted to pivot in said handle means at a point substantially near where said plate members are joined to said handle means, and an actuator extending from said hub for moving said converging wall members to a position where said plastic mass can freely move from between said wall members.

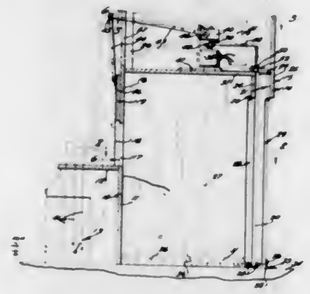
3,046,913
CONTINUOUS BAKING OVENS
Leslie Henry Wilson, 28 Gould St., Frankston, Victoria, Australia
Filed Dec. 14, 1959, Ser. No. 859,253
Claims priority, application Australia Dec. 17, 1958
12 Claims. (Cl. 107—57)



1. A continuous baking oven comprising a plurality of swing trays, each tray having a base on which baking tins or the like may be removably supported and which normally is disposed substantially horizontally, the said tray base being arranged at such a distance below the pivotal axis of the tray that baking tins supported on the base are disposed wholly therebelow, a lid individual to each tray and disposed substantially parallel to and above the base thereof, the said lid being substantially equal in length to the tray base and being adapted to rest on and cover baking tins supported on the base, the said lid being also adapted to support material to be baked, coacting guide means on the tray and lid to permit the latter to be raised and lowered in a path substantially at right angles to the plane of the base while maintaining it substantially parallel thereto at all times, means operable to raise and lower the lids, and means arranged to tilt the successive trays at a predetermined position in the path of movement thereof, thereby to discharge the loads carried thereby, each lid, when in its lowermost position, being disposed close to the base of the respective tray and, when in its uppermost position, being disposed close to the said pivotal axis of the tray so as to be above and spaced from the baking tins when the latter are supported on the base.

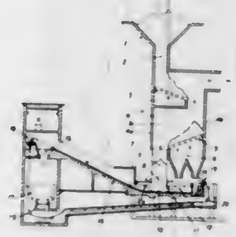
3,046,914
SAFETY DEVICE FOR BANKS OR THE LIKE
Carlyle C. Sandberg, 11719 Sitka St., El Monte, Calif.
Filed June 1, 1960, Ser. No. 33,165
1 Claim. (Cl. 109—5)

In a device of the character described for use in a bank or the like wherein there is provided a counter which includes a vertically disposed front portion and a horizontally disposed top portion, the improvements consisting in providing a safety device which includes a switch arranged below the top portion of the counter, an enclosure comprising a housing embodying a vertically disposed front wall extending upwardly from the top portion of said counter, there being an opening in the lower portion of said front wall, tracks arranged on opposite sides of said opening, a vertically movable door slidably mounted in said tracks and said door being mounted for movement into and out of opened and closed relation relative to the opening in the front wall, said enclosure further including spaced apart inner and outer wall members with each including generally straight side portions and curved rear end portions, vertically disposed studs between the side portions of said inner and outer wall portions, there being registering aligned openings in the rear portions of said inner and outer wall members, a closure slidably mounted between said inner and outer wall members, and said closure being mounted for movement into and out of opened and closed relation with respect to the aligned openings in the rear portions of the wall members, support members connected to the



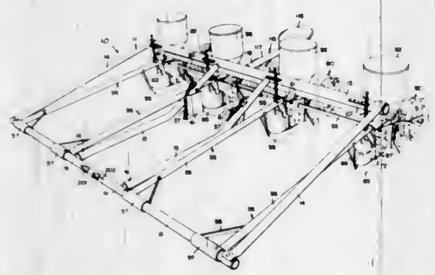
lower ends of said wall members, a plurality of guide wheels connected to said support members for engaging the lower portion of said closure; a horizontally disposed top wall in the upper portion of said enclosure, a motor on said top wall electrically connected to said switch, a shaft connected to said motor, a gear reducer operatively connected to said shaft, an arm connected to said gear reducer, a link connecting said arm to said door, a collar on said shaft, a pair of angularly arranged bars connected to said collar, brackets on the outer ends of said bars, said brackets being fastened to the top of said closure, rollers connected to said brackets, and tracks having said rollers arranged in engagement therewith.

3,046,915
FURNACE FOR THE COMBUSTION OF DOMESTIC REFUSE AND OTHER INFERIOR-GRADE FUELS
Werner Ludin, Zurich, Switzerland, assignor to L. von Roll, AG., Zurich, Switzerland, a company of Switzerland
Filed Apr. 1, 1953, Ser. No. 346,213
Claims priority, application Switzerland Apr. 26, 1952
1 Claim. (Cl. 110—15)



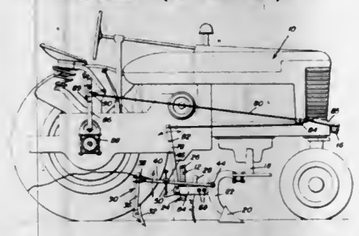
A furnace for continuously and automatically burning a charge of refuse and low-grade fuel material for obtaining gaseous products; comprising a pair of substantially parallel vertical walls defining a combustion chamber in part, which is substantially of greater height than width, a hopper for delivering said charge into said combustion chamber and located at the upper end of the latter, one of said vertical walls forming a part of said hopper, an exhaust flue located at the upper end of the other of said vertical walls and extending in a direction away from said hopper, a first foraminous grate below said hopper and mounted at one of its ends on said one vertical wall and extending therefrom at an angle and in downward direction into said chamber, said first grate terminating with its opposite end spaced from the other vertical wall, a second foraminous grate mounted within said combustion chamber and spaced from and below said first grate, said second grate being mounted at one end on the other vertical wall and extending therefrom at an angle and in downward direction, the opposite end of said second grate being spaced from said one vertical wall to thereby define between the opposite ends of said grates a passageway for gaseous products escaping to said exhaust flue, an upright discharge shaft forming a gas generator and located between and within the confines of said vertical walls at the lower ends thereof, said discharge shaft reaching with its upper end to said opposite end of said second grate for receiving ash and clinker from the latter, means leading into said discharge shaft for introducing air through ash and clinker in said shaft, thereby to gasify at least part of said ash and clinker, trough means located at the lowermost end of said upright discharge shaft and adapted to contain a liquid for quenching said ash and clinker, means for continuously removing ash and clinker from the lowermost end of said discharge shaft, said fuel material when delivered from said hopper to said first grate crossing said passageway defined by and between said two grates, said gaseous products when released from said vertical discharge shaft being guided past said second grate and along said passageway into said exhaust flue and deviated from said first grate and said hopper, and respective means located below said first and second grates for supplying air to the same from therebelow, said trough means extending below said pair of vertical walls, said hopper, said first grate and said discharge shaft being disposed in spaced relation to each other at said one vertical wall.

3,046,916
COTTON PLANTER
Leslie W. Johnson, Moline, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,242
7 Claims. (Cl. 111—59)



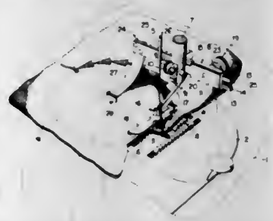
1. The combination with a tractor having power lift means, of an implement including a tractor-carried frame, means movably connecting the forward portion of said frame with the tractor, means movably connecting the rear portion of said frame with said power lift means, whereby operation of the latter serves to raise and lower the rear portion of the frame relative to the tractor, a plurality of generally fore and aft extending planter furrow opener units, each having a forward end and a rearward end, means movably connecting the forward ends of said opener units with the forward portion of said frame whereby the opener units underlie the rear portion of said frame, lift means connecting the rear portion of said frame with the rear ends of said opener units, whereby the rear ends of said opener units are raised when said power lift means is actuated to raise the rear portion of said frame, said power lift means including a connection disposed between the rear portion of said frame and said opener units whereby the weight of the rear portion of said frame may be imposed on said units so as to increase the penetration of said furrow opening units.

3,046,917
PLANTER SHOVEL COVERER CONTROLS
Elwood C. Kasper, Rte. 1, Shiner, Tex.
Filed Oct. 15, 1959, Ser. No. 846,675
2 Claims. (Cl. 111—69)



1. For use on a tractor-mounted planter including a plurality of furrow openers comprising shanks, plows mounted thereon and seed drop tubes rearwardly of said furrow openers, seed covering means comprising brackets fixedly mounted on the shanks and extending rearwardly therefrom and receiving the drop tubes therebetween, a rocker shaft journaled on said brackets, pairs of spaced, parallel, longitudinally extending arms straddling the drop tubes and having their forward end portions pivotally connected to the shanks for swinging movement in a vertical plane, pairs of seed covering shovels mounted on the free end portions of said arms rearwardly of the drop tubes, means for manually actuating the rocker shaft, and means operatively connecting said rocker shaft to intermediate portions of the arms for positively raising the shovels and permitting the same to be freely floating independently of the furrow openers, the last named means comprising transverse bars extending between intermediate portions of the pairs of arms and affixed thereto rearwardly of the drop tubes, arms affixed to the end portions of the shaft, upstanding push rods pivotally mounted on the second named arms and extending slidably through the bars, and collar means mounted for sliding adjustment on the rods and positioned beneath the bars for operatively connecting said push rods thereto.

3,046,918
CIRCULAR STITCHING DEVICE FOR SEWING MACHINES
Harvey Carleton Hess, Williamsport, Pa., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Nov. 24, 1958, Ser. No. 776,082
1 Claim. (Cl. 112—2)



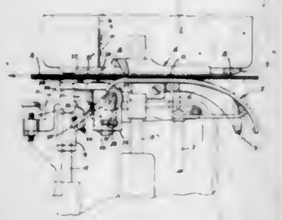
In a sewing machine, a work supporting surface, stitching mechanism defining a point of stitch formation on

the work supporting surface, work feeding means for advancing work past the point of stitch formation to define a line of feed, a presser mechanism including a presser bar, a mounting bracket, means for securing said mounting bracket to said presser bar, a mounting plate formed as an integral laterally extending portion of said mounting bracket and having a guide channel arranged generally transversely to the line of feed, a presser foot comprising a shank having a laterally extending arm provided with an elongated slot and a sole plate pivotally mounted on said shank and adapted to hold the work in engagement with said work feeding means, said laterally extending arm being received in said guide channel for adjustment laterally of the line of feed, a shouldered fastening screw extending through said slot and threaded into said mounting bracket for securing said shank to said mounting bracket in adjusted position laterally of the line of feed, a bar having an elongated slot, said bar being adapted to be disposed between said mounting bracket and the arm of said presser foot shank with said screw extending loosely through the slot therein whereby said bar is secured by said screw to said mounting bracket in adjusted position laterally of the line of feed, and means carried by said bar and provided with a work holding point for engaging the work supporting surface resiliently at a point laterally of the line of feed and opposite the point of stitch formation for anchoring the work at that point to cause the work to turn about that point during sewing and thereby effect circular stitching.

3,046,919
AUTOMATIC THREAD CLIPPER FOR BAG END SEWING MACHINES

Harold K. Fox, Minneapolis, Minn., assignor to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri

Filed Nov. 27, 1959, Ser. No. 855,724
4 Claims. (Cl. 112—11)

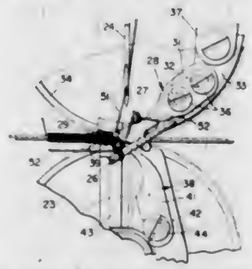


1. In a machine for sewing the open tops of filled bags, a sewing head including a stitch-forming mechanism for continuously forming a chain stitch on said bag tops and a chain thread connecting adjacent bag tops, a presser foot, and a feed dog cooperable with said presser foot to progressively advance the bag tops along a predetermined travel path in closely spaced relation, a thread clipper spaced laterally from one side of said travel path comprising coacting cutting blades disposed at right angles to said path, means for positively advancing the trailing end of each bag top to a point beyond the thread clipper, said means comprising elongated coacting bag top engaging extensions provided respectively on the presser foot and said feed dog, a pivoted guide element located at the opposite side of said travel path being provided with spring means to constantly urge said pivoted guide element in a direction to traverse said travel path, said guide element having a notch therein which normally rides said chain stitch being formed on said bag tops and which is adapted to guide each chain thread between adjacent bag tops into immediate cutting engagement with said blades when said pivoted guide element momentarily traverses said travel path to free the bag tops from one another, actuation of said pivoted element being controlled by movement of the bag tops through said sewing mechanism.

3,046,920
SEWING MACHINE HAVING DOUBLE STITCH FINGERS

Francis D. McCann, Kenilworth, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Aug. 25, 1959, Ser. No. 835,875
10 Claims. (Cl. 112—16)

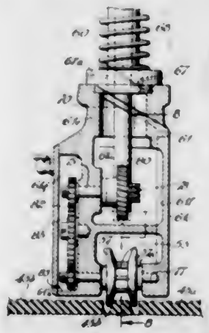


1. A sewing machine having, in combination, stitch-forming devices, a fixed axle, a first feed-cup rotatably mounted on said fixed axle, means for supporting said fixed axle, a first stitch-finger mounted on the means for supporting said fixed axle, a second feed-cup, movable means for rotatably supporting said second feed-cup in such a manner that said second feed-cup can be moved toward or away from said first feed-cup, and a second stitch-finger mounted on the movable means for supporting said second feed-cup, at least a portion of said second stitch-finger being placed in adjacent structural relationship to a portion of said first stitch-finger so as to permit said stitch forming devices to form stitches around the outside of both portions of said stitch-fingers taken as a pair.

3,046,921
FOLLOWER UNITS FOR QUILTING MACHINES

Arthur Schwarzberger, % A.B.M. Mfg. Co., 1306 S. Pulaski Road, Chicago 23, Ill.

Filed Jan. 5, 1960, Ser. No. 548
4 Claims. (Cl. 112—118)



1. In a quilting machine or the like, the combination with a carrier, and a linear pattern below the same; of a follower supported by the carrier, the follower including a gear wheel having relatively straight peripheral teeth directed for rolling engagement with the pattern, said pattern including a relatively low gear-rack profile on the upper surface thereof for meshing engagement and positive traction with said gear teeth, the pattern including relatively straight sides; said follower including horizontal shaft means upon which said gear wheel is mounted, and individual guard discs journalled for free rotation on said shaft means alongside said gear wheel for traveling along said pattern sides when said gear wheel is rotated.

3,046,922
BOBBIN CASE CARRIER FOR SEWING MACHINES

Ludwig J. Kuhar, Clark Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed May 19, 1958, Ser. No. 736,160
3 Claims. (Cl. 112—231)

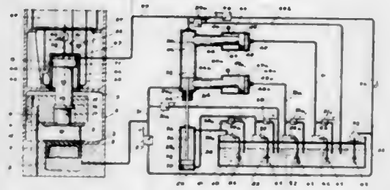


1. A bobbin case carrier for a sewing machine having a cylindrical side wall and a laterally extending flange on the top of said side wall and having a rotation restraining notch formed in the face of said flange, said notch comprising an outer portion having a planar bottom and parallel side walls extending generally radially relatively to said bobbin case carrier, and an inner portion having side walls diverging inwardly and intersecting and constituting bevels on the inner ends of the side walls of said outer portion and a planar bottom arranged at a slight angle to the bottom of said outer portion.

3,046,923
HYDRAULIC STAMPING PRESS WITH A DIE MADE OF RESILIENT MATERIAL

Maurice Yolin, 35 Ave. de Chatillon, Paris, France

Filed July 22, 1959, Ser. No. 828,907
Claims priority, application France July 25, 1958
4 Claims. (Cl. 113—45)

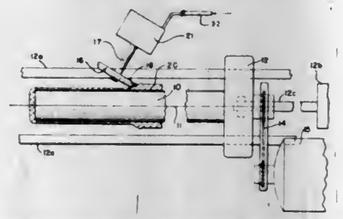


1. An hydraulic forming press having a die-cavity filled with liquid, a resilient diaphragm closing said cavity and constituting a die-element, a punch located in front of said die for cooperation therewith, a piston connected to said punch for actuation thereof, a stamping cylinder into which said piston is slidably mounted to delimit an actuating chamber and a releasing chamber, means for supplying said operating chamber with liquid under low pressure bringing said punch in contact with a blank placed to bear on said diaphragm, a slide connected to said punch to have a free limited movement with respect to the latter, a blank-clip carried by said slide to bear on said blank when said operating chamber is filled with liquid, an hydraulic cylinder arrangement interconnecting said die-cavity and said actuating chamber of the stamping cylinder, hydraulic pressure generating means associated to said cylinder arrangement to evolve therein a static pressure thus applied simultaneously into said actuating chamber and into said die-cavity, a separator piston slidably mounted inside said cylinder arrangement, said separator piston constituting a movable partition inserted between said die-cavity and said actuating chamber and means for actuating said separator piston to increase the pressure into said actuating chamber with respect to the static pressure established into said die-cavity.

3,046,924
APPARATUS FOR SPIN EXTRUDING METAL ARTICLES

Thomas C. Kane, Youngstown, Ohio, assignor to The Commercial Shearing and Stamping Company, a corporation of Ohio

Filed Apr. 23, 1957, Ser. No. 654,487
4 Claims. (Cl. 113—52)



1. An apparatus for cold spinning metal objects comprising a mandrel having the internal shape of the desired product and rotatable on an axis, means mounted on the apparatus for rotating said mandrel on its axis, means mounted on the apparatus for moving the mandrel axially, a frusto-conical work roll mounted for rotation on the end of a shaft transverse to the axis of the mandrel, said shaft being positioned so that the apex of the cone of the work roll lies within the mandrel and adjacent the axis of the mandrel and the working surface of the roll and the surface of the product being worked lie on the surface of a frustrum of a cone whose apex lies substantially on the axis of the mandrel, said surface lying at an acute angle to the mandrel surface.

3,046,925
APPARATUS FOR RAISING SHIPS FROM UNDERWATER

Salvatore De Lisio, Room 814, 101 Tremont St., Boston 8, Mass.

Filed July 24, 1959, Ser. No. 829,321
7 Claims. (Cl. 114—54)

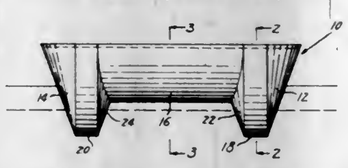


1. Apparatus for raising ships from under water comprising an inflatable gas-tight receptacle, a solid member of carbon dioxide loosely enclosed within said receptacle, excelsior surrounding said member, and a relatively dense cover of water pervious material enclosing said receptacle.

3,046,926
BOAT HULL CONSTRUCTION

Andrew J. Miller, Hollywood, Fla.

Filed June 29, 1959, Ser. No. 823,489
1 Claim. (Cl. 114—61)



A boat hull comprising a pair of laterally spaced floats and an intermediate transverse connecting wall, a

common, vertically extending flat stern wall connecting the rear ends of said floats and said transverse wall, said spaced floats and said transverse connecting wall being shaped and arranged so as to provide below the operating waterline of said hull two discrete hull portions, and above the operating waterline forming a longitudinally extending tunnel extending throughout the major portion of the length of the hull, the top of said tunnel being formed by the bottom surface of said transverse connecting wall having a generally smooth flat surface which is substantially horizontal and parallel to the waterline for the major distance from its stern end, the longitudinal elements of the sides of said tunnel being formed by the inner walls of said floats, the inner walls, the outer walls, and the bottom walls of said floats being flat throughout a major portion of their length from their stern ends, said float bottom walls extending horizontally throughout said major portion of their length from their stern ends, said inner walls being inclined inwardly and upwardly from their bottom walls to said transverse connecting wall, said outer walls being inclined outwardly and upwardly from said flat bottom walls, said flat bottom walls being of uniform width and flat in transverse cross section from their stern ends to their bow ends, the top edges of said stern wall and of said outer inclined walls defining a common horizontal deck plane, said float bottom walls curving upwardly from their major horizontal portions in a smooth curve to said common horizontal deck plane, said transverse connecting wall also curving upwardly from its major portion to meet said common deck plane in the same transverse line with the bow ends of said float bottom walls, said inner walls and said outer walls of said floats each curving inwardly and forwardly in smooth curves from their major flat portions to a terminal point in said transverse bow meeting line of said float bottom walls and said transverse connecting wall thereby providing a streamlined bell mouth to said tunnel and streamlined forward portions to said float outer inclined walls.

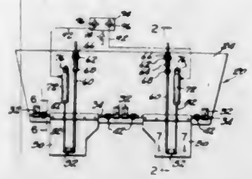
3,046,927
HYDROFOIL VEHICLE
Reinhard N. Lahde, Tarzana, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Dec. 27, 1960, Ser. No. 78,675
8 Claims. (Cl. 114—66.5)



6. A hydrofoil vehicle including a body, a hydrofoil spaced below the body, means to pivot the hydrofoil about an axis transverse to the body, means to extend a wire from a point in front of the body to the hydrofoil in a taut fashion so that the wire will sense the average height of the oncoming waves so as to change the angle of attack of the hydrofoil about its pivot so that the body will be caused to clear the tops of the waves in a smooth manner.

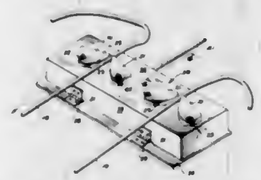
3,046,928
BOAT TRIMMING STABILIZER
John F. Sherrill, Plymouth, Ind., assignor to Sea-Trim Corporation, Plymouth, Ind., a corporation of Indiana
Filed Sept. 28, 1959, Ser. No. 842,928
17 Claims. (Cl. 114—66.5)

17. In combination, a power driven boat having a transom, water reactance means pivoted at one end thereof to the lower part of said transom on an axis transverse of said boat, spring means urging said reactance means forwardly and downwardly about its pivot axis, strut means extensible and retractable between predetermined limits and connecting said transom and reactance member spaced from the pivot axis of said reactance member,



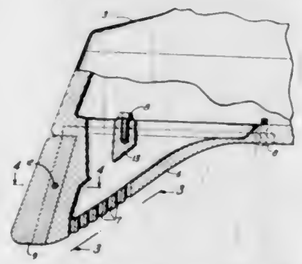
said strut means being fluid pressure responsive to retard retraction thereof in response to water reactance swinging of said reactance means rearwardly and upwardly on its pivot, said strut means being freely extensible, and means for regulating the retarding action of said strut means.

3,046,929
AUTOMATIC RELEASE CLEAT FOR SAIL BOATS
Arthur Piver, % PI-Craft, 344 Sacramento St., San Francisco 11, Calif.
Filed Apr. 10, 1961, Ser. No. 101,816
6 Claims. (Cl. 114—218)



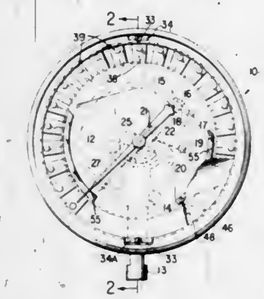
3. A safety-type sheet retainer comprising a support, a cam-type cleat pivotally mounted on support, means for pivotally mounting said support about a pivot axis transverse to the plane of pivotal movement of said cleat, and a detent resiliently biased to restrain said support against pivotal movement.

3,046,930
WATER COOLED OUTBOARD MOUNTED MARINE PROPULSION DEVICE WITH CORROSION PREVENTION
Elmer Carl Kiekhaefer, Cedarburg, Wis., assignor, by mesne assignments, to Kiekhaefer Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 5, 1960, Ser. No. 47,816
3 Claims. (Cl. 115—17)



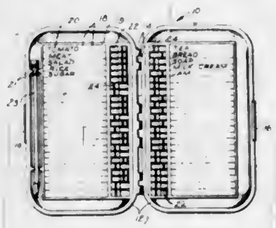
1. In an outboard motor having a water-cooled engine and an underwater gear housing carrying a propeller, a metallic water intake in said housing above and to the rear of said propeller and having a plurality of relatively small inlet openings facing said propeller for passage of water therethrough to cool the engine, and a removable metallic fin mounted on said housing adjacent and rearwardly of the said intake with said fin being constructed of a metal of less noble characteristics than said intake to thereby prevent corrosion and clogging of the said intake when the latter is submerged in water and resultant overheating of the engine.

3,046,931
ADJUSTABLE GRADUATIONS FOR INSTRUMENT DIAL
Charles J. Beer, Sellersville, Pa., assignor to Ametek, Inc., a corporation of Delaware
Filed Feb. 8, 1961, Ser. No. 87,919
5 Claims. (Cl. 116—129)



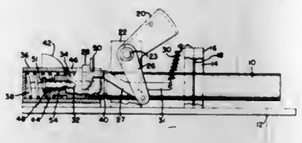
1. In an adjustable instrument dial, the combination including dial plate means, pointer means adapted to be moved with respect to said dial plate means, said dial plate means having groove means disposed adjacent the path of travel of said pointer means, movable tab means adapted to be retained in said groove means, and graduation means on said tab means, said groove means having an undercut portion, said tab means having means engageable with said undercut portion for adjustably securing said tab means in said groove means, whereby said instrument dial is adapted for adjustment by moving said tab means to place said graduation means thereon in register with said pointer means when said pointer means is at a predetermined position.

3,046,932
MEMO SELECT
Wilbrod G. Rodrigue, Burlington, Ontario, Canada (% R. C. Rasberry, R.R. 3, Campbellville, Ontario, Canada)
Filed Nov. 7, 1960, Ser. No. 67,703
3 Claims. (Cl. 116—135)



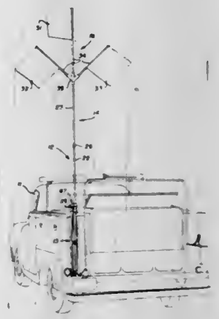
1. In a memo pad assembly a pair of cover elements, hinge means pivotally connecting said cover elements together along one edge for pivotal movement between an open and a closed position, a plurality of upstanding bosses integral with each one of said cover elements adjacent said hinge means thereof, said upstanding bosses defining projecting fins extending beyond the axis of said hinge means, said bosses limiting the movement of said cover elements toward an open position of 180 degrees and said upstanding bosses abutting each other in a fully opened position.

3,046,933
REMOTE CONTROL TRANSMITTER
Julius Kemeny, Liverpool, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 24, 1961, Ser. No. 112,349
5 Claims. (Cl. 116—137)



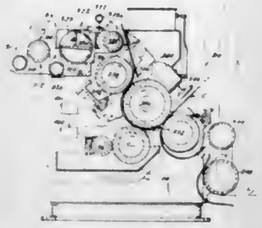
1. A mechanical transmitter for use in a remote control system comprising a rod having a natural resonant frequency which is transmitted in a longitudinal mode when said rod is struck on an end thereof, a receiver positioned in alignment with respect to one end of said rod, a hammer mounted for axial movement in said receiver with the hammer being in contact with said one end of said rod, actuating means associated with said hammer for moving said hammer away from the end of said rod in said receiver, spring means associated with said hammer and being carried in said receiver for storing energy when said hammer is moved away from the end of said rod by said actuating means, means associated with said receiver for releasing said actuating means from said hammer after a predetermined movement of said hammer in said receiver thereby releasing the energy of said spring means to drive said hammer against the end of said rod, means associated with said hammer for retrieving said hammer after it has struck said rod, and means including said actuating means for returning said hammer to its initial position against the end of said rod to damp any further vibration of said rod.

3,046,934
VEHICLE MOUNTED TRAFFIC WARNING DEVICE AND MOUNTING BRACKET THEREFOR
Montgomery C. Swezy, Palo Alto, Calif., assignor to Western Progress, Inc., Palo Alto, Calif., a corporation of Nevada
Filed Apr. 12, 1961, Ser. No. 102,609
3 Claims. (Cl. 116—173)



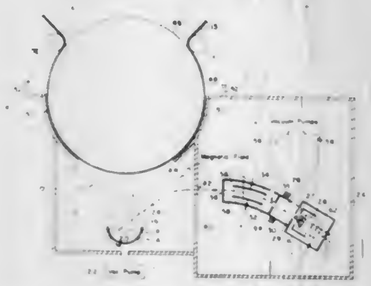
1. In the combination of a bracket and a warning device for use on a vehicle, the warning device having an upper telescoping signal carrying portion and a lower collapsed tripod portion, the bracket having means adapted for interconnection with a portion of the vehicle, said bracket also having a lower retaining portion and an upper clamping portion, the collapsed tripod portion being engaged with said lower portion, and the section of the telescoping portion immediately above said collapsed tripod portion being engaged by said clamping portion.

3,046,935
GLUING CONTROL MEANS
Harry W. Wilson, Millbrae, Calif., assignor to S & S Corrugated Paper Machinery Company, Inc., Brooklyn, N.Y., a corporation of New York
Filed May 24, 1957, Ser. No. 661,339
11 Claims. (Cl. 118—7)



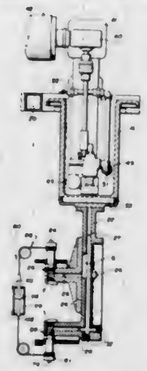
5. A gluing device comprising a rotatably mounted gluing roll, a doctor means and a spacing means; said doctor means being positioned in a closely spaced relationship with respect to said gluing roll; said spacing means including a crank and a pressure responsive means operatively connected to a first end of said crank; said doctor means being mounted on a second end of said crank; said pressure responsive means being constructed and operatively connected to said gluing roll whereby the spacing between said gluing roll through said crank and said doctor means will vary as a direct function of the rotational speed of said gluing roll.

3,046,936
IMPROVEMENT IN VACUUM COATING APPARATUS COMPRISING AN ION TRAP FOR THE ELECTRON GUN THEREOF
John C. Simons, Jr., Belmont, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed June 4, 1958, Ser. No. 739,742
2 Claims. (Cl. 118—49.1)



1. In apparatus for heating a metal to a temperature sufficiently high to vaporize said metal in an evacuated chamber by directing a beam of electrons against a surface of a mass of said metal to be heated to said high temperature, the improvement which comprises a cathode for emitting electrons, a means including an accelerating anode for accelerating said electrons to a high energy level and for focusing the electrons emitted from the cathode into a beam and projecting the beam of electrons in a given path, said path missing the surface to be heated, a vapor shield between the focusing means and the surface to be heated, magnetic means positioned to bend the electron beam so that the electron beam is directed towards the surface to be heated when said beam is beyond the point of interception of the beam by the shield, and means positioned between said shield and said anode for creating an electrostatic field transverse to the electron beam, said transverse electrostatic field trapping ions migrating towards said cathode.

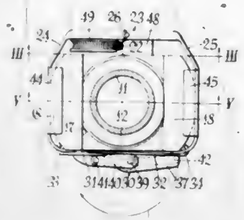
3,046,937
APPLICATOR DEVICE FOR EJECTING DISCRETE DROPLETS
Albert R. Lubersky, Belvedere, and John D. Winters, Oakland, Calif., assignors to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed Dec. 1, 1959, Ser. No. 856,397
9 Claims. (Cl. 118—302)



1. An adhesive applicator device for ejecting discrete droplets of adhesive onto each of opposite ends of a carton or like container conveyed in an uninterrupted fashion therepast, comprising spaced valve bodies between which such carton is movable with its opposite ends adjacent to but free of direct contact with the respective valve bodies, an inlet port and adhesive metering valve means in each of said bodies, said adhesive metering valve means including a discharge port formed in said valve body and an oscillatable disc journaled to said housing wall and formed with an opening registrable with said discharge port, a supply container in which a quantity of adhesive is maintainable read for use, conduit means extending between said supply container and each of said valve bodies, said conduit means including a fluid passageway terminating in an outlet port bringing said supply container into communication with said valve body inlet port, one of said inlet and outlet ports being elongated longitudinally of said conduit means whereby said valve bodies are adjustable relative to each other along said conduit means without interrupting communication therebetween for applying adhesive to cartons of varying sizes, means for applying pressure to said adhesive metered by said metering valve means whereby said adhesive may be ejected in discrete droplets from said valve bodies under pressure and such droplets applied to said carton without said carton contacting said valve bodies, and control means operatively connected with said valve bodies and regulating metering of adhesive droplets from each of said valve bodies in a predetermined controlled manner in timed relationship with movement of said carton whereby adhesive may be ejected from said valve bodies when a carton is located therebetween.

3,046,938
HOSE AND CABLE COUPLING
Albert G. Perkins, Grand Island, N.Y., assignor to Perkins Pipe Linings, Inc., Grand Island, N.Y.
Filed May 3, 1960, Ser. No. 26,546
8 Claims. (Cl. 118—506)

1. A combination conduit and cable assembly comprising a conduit having a plurality of spaced coupling members disposed therealong, a cable extending generally parallel and adjacent to said conduit, means associated with each of said plurality of couplings for engaging said cable therewith, each said means including uni-directional



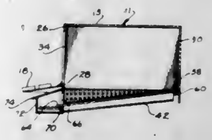
cable gripping means whereby said cable may be pulled freely in one direction relative to said coupling members but is gripped against relative movement in the opposite direction relative to said couplings.

3,046,939
ROTARY FEEDER FOR CAGES
Jerry Vlach, 6740 Dunham Road, Bedford, Ohio
Filed Dec. 27, 1960, Ser. No. 78,390
2 Claims. (Cl. 119—18)



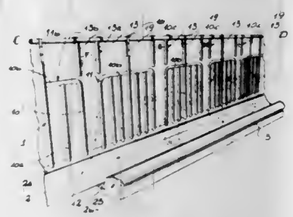
1. In combination with a cage or enclosure wall having a horizontally elongated opening therein, a rotary type feeder of the character described, comprising, two anchor strips adapted to be secured to the upper and lower horizontal edges of the opening in opposed parallel alignment; a shaft immovably supported by and between said anchor strips and extending across said wall opening; and, a rotor mounted on the shaft for rotation in the opening between the two anchor strips, said rotor comprising a disk having an upstanding diametrically extending gate dividing the rotor disk into separate feed supporting segments normally extending from opposite sides of said wall opening and one of which is disposed on the inner side of said opening in feeding position, the gate having a longitudinally extending channel in the lower face thereof between the disk segments; the rotor being movable vertically of the shaft between a first, normal position wherein the lower anchor strip is nested within the rotor channel, whereby the rotor is locked against movement in either direction from a position in which the gate is disposed to close the wall opening; and a second, raised, position, wherein the rotor channel is clear of the lower anchor strip with the lower surface of the rotor disk bearing on top of the lower anchor strip, for rotation thereon, whereby the disk segment may be interchanged inwardly and outwardly of the cage opening, upon which occurrence the rotor will automatically fall back into its first position, under the pull of gravity.

3,046,940
ROLL-A-WAY NEST
John S. Kurtz, Ephrata, Pa., assignor to Automatic Poultry Feeder Company, Zeeland, Mich., a corporation of Michigan
Filed Dec. 27, 1960, Ser. No. 78,625
6 Claims. (Cl. 119—48)



1. A nest for fowl comprising: a nest housing having a plurality of compartments each with support means for separately supporting bottom inserts; a removable insert in each of said compartments and supported on said support means forming the complete bottom for an egg laying fowl nest comprising in combination a layer of wire mesh material adapted to support a laying fowl and to receive eggs laid directly thereon when inserted into a nest housing; a contoured layer of stiff sheet material underlying said wire mesh and attached to the edges of said wire mesh; said sheet material and said wire mesh both having a generally concave contour to fit the underside of a laying fowl; said sheet material being suspended from said mesh and generally spaced therefrom to catch dirt passing through said wire mesh; said sheet material and wire mesh being removable from said housing as a unit and being thereafter separable from each other to permit cleaning.

3,046,941
ANIMAL STANCHION APPLIANCE
Giovanni Battista De Filippi, Viarolo, Parma, Italy (% Ing. A. Giambrocono, Via Durini 4, Milan, Italy)
Filed Apr. 29, 1960, Ser. No. 25,745
Claims priority, application Italy May 16, 1959
9 Claims. (Cl. 119—148)



8. An appliance for captivating animals, comprising a number of spaced vertical pillars, a horizontal rail mounted upon the upper ends of said pillars for rotation about its axis, at least one disc-like flange provided on and concentrically of said rail and having an annular system of holes therein, a pin carried upon one of said pillars adjacent to said flange, said pin being longitudinally adjustable relatively to said adjacent pillar for engagement in and disengagement from any one of said holes, a corresponding forked unit mounted upon and rotatable on said rail between each two adjacent pillars and co-operating means on said rail and units for determining both the direction and the angle in and through which each of said units may be rotated on the rail.

3,046,942
AUTOMATIC LIVESTOCK INSECTICIDE APPLICATOR
Mervin P. Hale, R.D. 2, Mansfield, Ohio
Filed Sept. 29, 1959, Ser. No. 843,107
6 Claims. (Cl. 119—157)



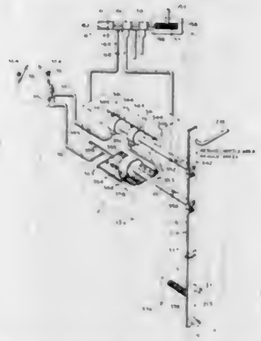
1. In an automatic livestock insecticide applicator, the combination comprising:
support means;
an absorbent tubular fabric secured at an inclined angle between said support means and having an opening at the upper end of said inclined angle, said fabric being sufficiently porous and therefore adapted to retain and dispense insecticide when rubbed thereagainst by livestock;
a flexible reservoir encased within and extending substantially the length of said absorbent tubular fabric and having a fill opening at said opening of said tubular fabric;
said flexible reservoir having at least one bleeder hole spaced a predetermined distance from said fill opening and from a predetermined normally maintained level of insecticide so as to permit issuance of said insecticide from said reservoir into communication with said absorbent tubular fabric when said applicator is engaged by the vigorous rubbing action of said livestock.

3,046,943
WRITING INSTRUMENTS
Nolan Kent Rhoades, Shopiere, Wis., assignor to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Filed Jan. 23, 1958, Ser. No. 710,691
7 Claims. (Cl. 120—42.03)



2. A writing instrument comprising first and second semitubular exterior barrel elements capable of being grasped by the hand, said elements forming a tubular exterior barrel, said first element having a tubular portion at its forward end, and a writing unit fixed in said second element having its front end extending into said tubular portion, said elements being slidable for relative axial motion, said second element being in overlapping relation to and slidable over said tubular portion, each of said elements having stop means mutually engageable for preventing axial separation, in either axial direction, of said second element and said tubular portion.

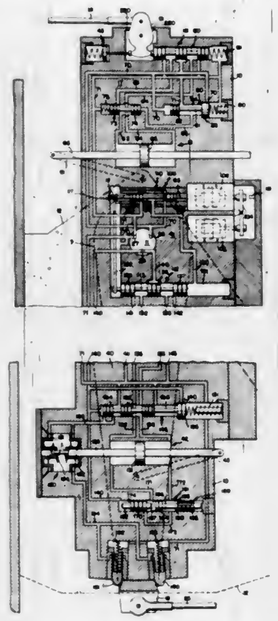
3,046,944
PROPORTIONAL-PLUS-INTEGRAL COMPUTER
Richard T. Dungan, Encino, Henry A. Long, San Diego, Albert F. Stupka, Van Nuys, and Burt L. Taylor, Fullerton, Calif., and James C. Wise, Cleveland, Ohio, assignors to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Original application Sept. 21, 1954, Ser. No. 457,388, now Patent No. 2,966,140, dated Dec. 27, 1960. Divided and this application Aug. 13, 1959, Ser. No. 833,478
4 Claims. (Cl. 121—41)



1. A servo unit comprising an output member, valve means having two valve members movable from a null position for controlling the application of fluid pressure to said output member to position said output member, a piston located in a fluid chamber and having a shaft connected with said valve means, opposed springs in spaces in said chamber on opposite sides of said piston for normally centering said piston, first passage means controlled by one of said valve members and connecting directly with one of said spaces on one side of said piston and with one side of said output member through an orifice, a second passage means controlled by the other valve member and connecting directly with the other side of said output member, a branch passage connecting the other of said spaces on the other side of said piston to said first passage means at a location between said orifice and said output member, said piston being displaced upon initial movement of said valve means from its null position to cause fluid pressure to be directed to said output member independently of said orifice, the displacement of said piston causing return movement of said valve means back towards but short of its null position, the remaining displacement from the null position of said valve means after the return movement causing fluid pressure to be directed to said output member through said orifice at a rate proportional to the time integral of remaining error.

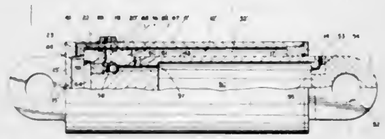
3,046,945
HYDRAULIC CONTROL APPARATUS FOR AIRCRAFT FLIGHT CONTROL APPARATUS
Paul F. Hayner, Nashua, N.H., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Original application Oct. 25, 1954, Ser. No. 464,221. Divided and this application Sept. 11, 1959, Ser. No. 839,531
12 Claims. (Cl. 121—41)

1. In flight control apparatus for aircraft, a main member; a base member; pivotal connection means connecting said main member to said base member, said main member comprising input means for receiving a flight condition signal and output means for controlling a craft control means; automatic flight control means, said flight control means having control valve means being controlled in response to a second flight control signal; and actuator means being mechanically coupled to said output means, said control valve including a first valve unit having a plug and a sleeve both controlling flow through a fluid pressure line and through an exhaust line, a second valve unit having a plug alternatively connectable with said pressure or exhaust lines by said first valve unit, and means connecting the sleeve of said first valve and the plug of



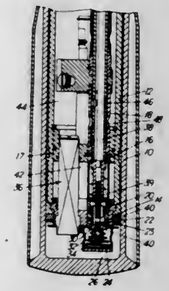
said second valve, so that upon displacement of said plug of said first valve unit to apply pressure to said plug of the second valve unit, movement of the plug of said second valve through the connecting means will apply a force to the sleeve of said first valve to restore it to its normal position with respect to the plug of the first valve unit.

3,046,946
DOUBLE ACTING HYDRAULIC CYLINDER WITH PRESSURE FLUID BYPASS
Zdenek J. Lansky, North Riverside, Ill., assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 8, 1960, Ser. No. 13,496
11 Claims. (Cl. 121—46)



1. A fluid pressure operated device comprising a cylinder, a piston having a rod connected thereto mounted in said cylinder and reciprocable between extended and retracted positions, said piston having opposed areas, first passage means in one end of said cylinder through which fluid under pressure may be admitted from an external source and directed against one of said areas for moving the piston to said extended position, second passage means leading from an external portion of said rod to the other of said areas and through which fluid under pressure may be admitted from an external source and directed against said other of said areas for moving the piston to rod retracted position, third passage means leading from said second passage means, a fourth passage means leading from said first passage means and communicating with said third passage means when said piston is in retracted position whereby fluid from said second passage means may pass through said third and fourth passage means to said first passage means, and means for blocking said communication between said fourth and third passages when said piston is in said extended position and fluid pressure in said second passage is greater than in said first passage.

3,046,947
HYDRAULIC PROPS
Reginald Reynolds and Peter Haig Stammers, Saffron Walden, England, assignors to Acrow (Engineers) Limited, London, England
Filed Aug. 19, 1960, Ser. No. 50,795
Claims priority, application Great Britain Aug. 21, 1959
4 Claims. (Cl. 121—46)

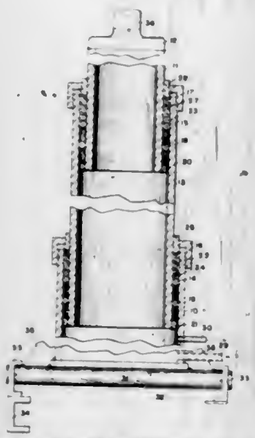


1. A hydraulic prop comprising a cylinder, a ram slidable in the cylinder, a pressure chamber in the cylinder below the ram head, a release valve closing a passage through the ram head connecting the pressure chamber, said release valve comprising a main valve element having a bleed passage through it and a closure member arranged normally to close said bleed passage, the main valve element being of greater size than said closure member so that the force which is to be applied to unseat it against a given fluid pressure in the pressure chamber is substantially greater than that needed to unseat said closure member, and a push rod extending down within the ram and being arranged to act firstly on said closure member to open said bleed passage and thereafter on said main valve element to open the passage connecting the pressure chamber and the reservoir.

3,046,948
TELESCOPIC POWER CYLINDER AND METHOD OF MAKING SAME
Charles E. Margala, 2610 Hubbard Road, Youngstown, Ohio
Filed Mar. 6, 1961, Ser. No. 93,723
2 Claims. (Cl. 121—46)

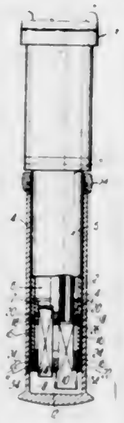
1. A telescopic power cylinder comprising a plurality of lengths of seamless steel tubing of graduated diameters and adapted to nest one within the other when the cylinder is collapsed, each of said lengths except the one of smallest diameter having welded to its inner wall a solid metal ring, each of said lengths except the one of largest diameter having welded to its outer wall and adjacent its inner end a solid metal ring, said second mentioned rings being adapted upon outward sliding movement of said lengths to contact said first mentioned rings and thereby limit the outward movement of all of said lengths except for the one of largest diameter, packing placed in the outer end portion of the tube lengths to which said first

mentioned rings are respectively welded and retained by said rings, means carried by said outer end portions and encircling the outer walls of the next smaller diameter tube lengths to engage and compress said packings, solid metal stabilizing rings, devoid of grooves, welded to the outer wall of each of said tube lengths except the one of largest diameter and positioned at the inner ends of said lengths in spaced relation to the above second mentioned rings which are also welded onto said lengths, the outer



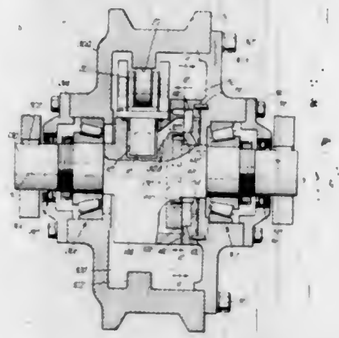
peripheral surfaces of said stabilizing rings being faced with an adhering layer of low-friction metal of a thickness to provide an accurate sliding fit with the inner walls of the surrounding tubes, a cap for the outer free end of the tube length of smallest diameter, and a cap welded onto the free end of the tube length of largest diameter in fluid tight relation therewith to thus complete a telescopic closed cylinder which is operative to exert an expansive force between said caps.

3,046,949
PROPS OR JACKS
Reginald Reynolds and Peter Haig Stammers, Saffron Walden, England, assignors to Acrow (Engineers) Limited, London, England
Filed Mar. 10, 1961, Ser. No. 94,758
Claims priority, application Great Britain Mar. 14, 1960
3 Claims. (Cl. 121—46)



1. A hydraulic prop comprising a cylinder, a ram working in the cylinder said ram having a barrel and a head, and two half shells of bearing metal connecting the said barrel and head of the ram, said half shells being held in position radially by contact with the ram cylinder and each being provided with an inwardly projecting rim at each end engaging a corresponding abutment surface on the ram head and barrel to hold said ram head and barrel against relative axial movement.

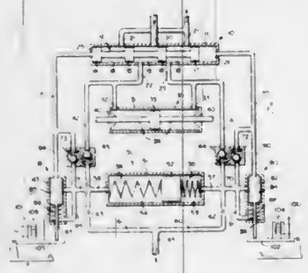
3,046,950
CONSTANT MECHANICAL ADVANTAGE ROTARY HYDRAULIC DEVICE
Fred T. Smith, Olympia Fields, Ill., assignor to Whiting Corporation, a corporation of Illinois
Filed Jan. 22, 1958, Ser. No. 710,452
3 Claims. (Cl. 121—121)



1. Hydraulic motor apparatus comprising a shaft member, a plurality of piston and cylinder assemblies carried by said shaft member in symmetrically arranged relation about the axis thereof, said assemblies each including a piston reciprocably mounted in a cylinder bore formed in said shaft member, a cam member encircling said shaft member, said shaft member being mounted for rotatable movement with respect to said cam member, said cam member being formed with a constant effective mechanical advantage cam surface, a torque transmitting connection between said cam surface and said pistons, said cam surface comprising four symmetrically spaced concave surface portions separated by symmetrically placed connecting surface portions, the first mentioned surface portions each being proportioned to extend about a distance in relation to said shaft member that is on the order of a quadrant thereof, said first mentioned surface portions each including a power stroke section and a return stroke section in that order in the direction of rotation of said shaft member, whereby the rate of displacement of the respective pistons during the power and return strokes thereof is controlled by said cam surface, said power and return stroke sections each including acceleration, uniform velocity, and deceleration segments in that order in the direction of rotation of said shaft member, said acceleration and deceleration segments of said power and return stroke sections being respectively blendingly related about the axis of said shaft member, and said return stroke sections of each of said concave surface portions being symmetrically arranged with respect to said power stroke sections thereof, said pistons each including roller means on one end thereof for rolling engagement with said cam surface and an oppositely disposed inwardly directed hydraulic liquid contacting surface, said shaft member being formed to define a conduit for each of said cylinder bores and extending between the inner end of the respective cylinder bores and a port formed in said shaft member at a point spaced from said bores, said ports being aligned in coplanar relation transversely of said shaft member, an annular valve member received over said shaft member about said ports, said valve member being fixed with respect to said cam member, a housing member received about said valve member, said

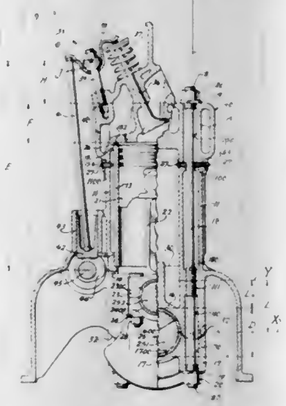
valve member and said housing member being formed to define annular pooling areas that encircle said shaft member in coplanar relation with said ports, said valve member defining openings that respectively communicate between said pooling areas and said ports, and that are positively related about said pooling areas to define hydraulic liquid supply and return passages corresponding to the positioning of said power and return stroke sections of said cam surface, means for connecting one of said pooling areas to a source of hydraulic liquid under pressure, and means for connecting the other of said pooling areas to hydraulic liquid discharge, said valve member, said ports, said openings, and said pooling areas comprising hydraulic liquid flow orienting means for controlling the flow of hydraulic liquid to and from the respective cylinder bores.

3,046,951
HYDRAULIC CONTROL VALVE
John C. Freeborn, Richfield, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 27, 1961, Ser. No. 98,688
6 Claims. (Cl. 121—150)



1. A hydraulic multivibrator comprising: a control valve having a movable element and including a supply pressure conduit, a return line conduit, and a pair of outlet conduits; said outlet conduits being adapted to be connected to a device to be actuated by said hydraulic multivibrator; motive means included at the extremities of the movable element for said control valve and adapted to selectively control the position of the same relative to said conduits to effect switching of a said supply pressure conduit to one of said outlet conduits and said other of said outlet conduits to said return line conduit; pressure actuated timing means including a cylinder having a floating piston therein defining pressure chambers at either extremity of said cylinder and including centering springs in said pressure chambers acting on said piston; conduit means connecting said pressure chambers of said timing means to said outlet conduits; directional check valve means included in said last named conduit means; additional passage means including restrictions connecting the pressure chambers of said timing means to said return line conduit; additional conduit means connecting the pressure chambers of said timing means and motive means of said control valve such that the pressure differential existing in the pressure chambers of said timing means will cause operation of said control valve; directional check valve means included in said additional conduit means and preventing flow reversal from said motive means of said control valve to the pressure chambers of said timing means and the restricted passages connected thereto; pressure responsive valve means connected to and normally communicating with the motive means of said control valve and the pressure chamber of said timing means in a bypass connection around said last named directional check valve means, said pressure responsive valve means being operative upon a predetermined pressure differential to bypass said directional check valve means allowing rapid change in pressure in one or the other of said motive means of said control valve to cause the movable element of said control valve to rapidly move between operating positions and effect switching of said supply pressure conduit to the opposite outlet conduit thereof; and electromagnetic biasing means for each of said pressure responsive valve means including a coil adapted to be selectively energized to determine the pressure differential controlling the operation of said pressure responsive valve means and the operation of said control valve.

3,046,952
INTERNAL COMBUSTION ENGINES
John Dolza, 15080 Fenton Road, Fenton, Mich.
Filed Feb. 11, 1960, Ser. No. 8,091
2 Claims. (Cl. 121—194)

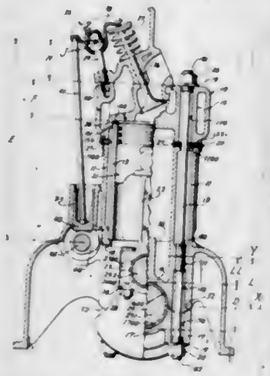


1. In an internal combustion engine, an engine block assembly comprising a cylinder block having cylinder bores therein, a cylinder head, main crankshaft bearing blocks cast integral with said cylinder block, and a main bearing cap for each said main bearing block, through bolts disposed substantially parallel to said cylinder bores securing said cylinder head, cylinder block and main bearing caps into a unitary assembly, transverse beams cast integral with said cylinder block at the top of the said main crankshaft bearing blocks, the said cylinder head, cylinder block and main bearing caps having through bores therethrough to freely accommodate said through bolts except at the opposite ends of said transverse beams, and means anchoring said through bolts to said cylinder block at the ends of said transverse beams, the cylinder block having a relatively high coefficient of expansion generally equivalent to that of aluminum alloy, and through bolts and main bearing caps having a relatively low coefficient of expansion substantially equivalent to that of steel, and interlocking means provided between the main bearing blocks and the main bearing caps consisting of mating curved surfaces of relatively large radii formed to laterally restrict the main bearing blocks against undue lateral expansion.

3,046,953
INTERNAL COMBUSTION ENGINES
John Dolza, 810 State St., Fenton, Mich.
Filed May 3, 1960, Ser. No. 26,557
3 Claims. (Cl. 121—194)

1. In an internal combustion engine including an engine block assembly, a crankshaft and main crankshaft bearings, said engine block assembly comprising a cylinder block of aluminum or other alloy having a relatively high coefficient of expansion, said cylinder block having shouldered cylinder bores therein and arcuate main bearing blocks cast integral therewith between and adjacent

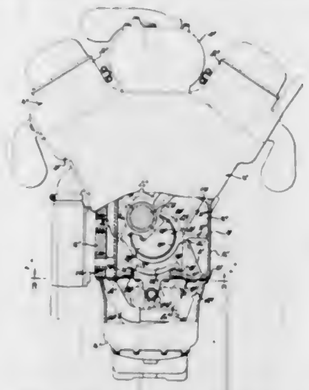
said cylinder bores, an arcuate upper main bearing shell in each said main bearing block, cylinder liners of steel or other material having a relatively low coefficient of expansion in said cylinder bores bearing on said shoulders, a cylinder head, and a main bearing cap for each said main crankshaft bearings having a coefficient of expansion substantially equivalent to that of steel, an arcuate lower main bearing shell in each said main bearing cap, said cylinder liners extending to the top of said cylinder block for engagement by said cylinder head when said engine block is assembled, transverse beams cast integral with said cylinder block located between and adjacent said cylinder bores above said main bearing blocks, the said cylinder block, cylinder head and bearing caps having aligned anchorage stud bores therethrough substantially parallel to the axis of the said cylinder bores, steel anchor studs extending through said anchorage bores fixed in the said cylinder block opposite the ends of said transverse



beams and extending from said cylinder head and said main bearing caps, nuts on the upper ends of said studs for drawing the cylinder block, cylinder liners and cylinder head into assembly with the cylinder liners exerting pressures on said transverse beams causing a deflection of the central upper portion of the said arcuate main bearing blocks, and nuts on the lower ends of said studs for drawing the main bearing caps into assembly with the said main bearing blocks of said cylinder block, said upper and lower nuts drawing the said cylinder block, cylinder liners, cylinder head and bearing caps into an integral whole, interlocking means provided between the main bearing blocks and the main bearing caps consisting of mating curved surfaces of relatively large radii formed on said main bearing blocks and main bearing caps to restrict the said main bearing blocks against undue lateral expansion, and means compensating for the assembly deflection of the central upper portion of the said arcuate main bearing blocks.

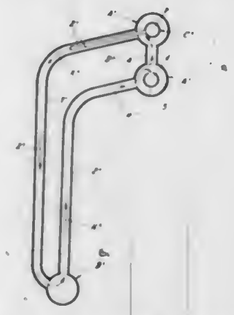
3,046,954
CRANKCASE AND BEARING STRUCTURE FOR INTERNAL COMBUSTION ENGINES
Carl S. Hoffman, Royal Oak, and Virgin C. Reddy, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 18, 1961, Ser. No. 83,554
20 Claims. (Cl. 121—194)

1. In a V-type internal combustion engine having a multi-throw crankshaft rotatably mounted therein and a plurality of connecting rods journaled in pairs on the several throws thereof, a lightweight engine frame member comprising two longitudinally extending side walls and an upper cylinder supporting wall extending transversely therebetween to partially define a crankcase chamber closely embracing the swept arcs of the paired crankthrow journaled ends of said connecting rods, a plurality of crankshaft supporting semi-circular arches spaced longitudinally and extending tranversely of the upper portion of said crankcase chamber and structurally connected to and supported by said chamber defining walls, said arches each having transversely spaced end faces extending in a diametrical plane parallel to the end of the side walls opposite said cylinder supporting wall and opposed side thrust shoulders normal to said end faces, a crankshaft supporting cap member piloted within each pair of opposed side thrust shoulders and having end faces thereon mateable with the end faces of the asso-



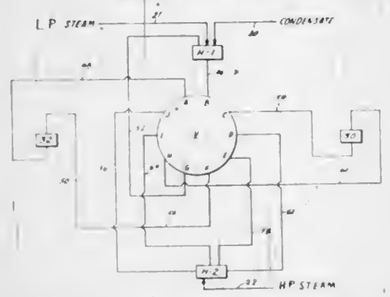
ciated arch, said cap members extending downwardly from the end faces thereof to a plane adjacent said opposite side wall ends and without the swept arcs of said connecting rod ends, means for securing said cap members to their respective supporting arches, a plurality of load transmitting tie plates, each of said tie plates extending longitudinally between at least two adjacent bearing caps and laterally to the adjacent side wall without the swept arcs of said connecting rod ends, and means for securing said tie plates to said bearing supporting cap members and the adjacent side walls.

3,046,955
HEAT EXCHANGER WITH TUBULAR ELEMENTS, ESPECIALLY FOR HOT-WATER AND SUPER-HEATED-WATER HEATING BOILERS
Giovanni Rossi, Via Gonzaga 7, Milan, Italy
Filed June 25, 1957, Ser. No. 667,791
Claims priority, application Italy July 13, 1956
7 Claims. (Cl. 122—406)



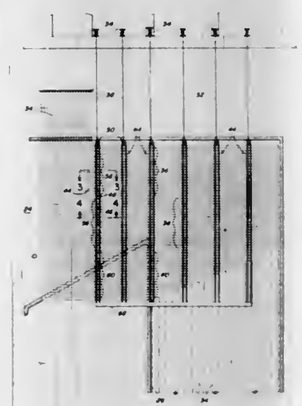
1. In a boiler, a heat exchanger comprising an elongated upper collector and an elongated lower collector, downcomer and boiler tubes interconnecting said collectors, conduit means disposed in and enclosed by said upper collector comprising a feed water intake conduit and a fluid discharge conduit, an injector nozzle disposed centrally at the interior of each downcomer tube and extending therein throughout at least one-third of the length thereof, said injector nozzles being connected to said intake conduit for injecting feed water into said downcomer tubes, the exterior of each injector nozzle defining with the internal surface of its downcomer tube an annular space for the circulation therein of some of the fluid heated in said boiler tubes, said discharge conduit comprising a horizontal conduit member including an upper wall having perforations to admit for subsequent discharge some of the fluid heated in said boiler tubes.

3,046,956
PUMPLESS LIQUID HEATER AND TRANSLATOR
Harry Asdour Kuljian, Merion, and William Joseph Fadden, Jr., Ridley Park, Pa., assignors to The Kuljian Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 3 1959, Ser. No. 817,765
3 Claims. (Cl. 122—451)



1. A heat exchanger including a first upper heater having a condensate inlet, a condensate outlet, and a vent opening, means supplying liquid to be heated to said first heater through said inlet, means supplying steam of a relatively low pressure to said first heater to heat said liquid, a second heater having a condensate opening and a vent opening, means supplying steam of a relatively high pressure to said second heater, a first pressure equalizing chamber having a condensate opening and a vent opening, a second equalizing chamber having a condensate opening and a vent opening, a fixed valve casing having a plurality of circumferentially spaced ports, conduits connecting said ports with said outlet condensate of said first heater and said condensate and vent openings, in a predetermined order, a valve body rotatable in said casing, said valve body having a first and second passage therethrough located to one side of the axis of rotation of said valve body, with said second passage between said first passage and said axis, said valve body also having a third and fourth passage located to the other side of said axis and diametrically opposed to said first and second passages, said third passage being between said axis and said fourth passage, and means for rotating said valve body, said ports being so spaced circumferentially and so connected by said conduits that, when said valve body is rotated to a first position, the ends of said first passage register with the ports which connect the condensate outlet of said first heater in liquid flow relation to the condensate opening of said first pressure equalizing chamber, and the ends of said fourth passage register with the ports which connect the vent opening of said first pressure equalizing chamber in steam flow relation to the vent opening of said first heater, and in which position the ends of said second passage register with ports which connect the condensate opening of said second pressure equalizing chamber in liquid flow relation to the condensate opening of said second heater and the ends of said third passage register with the ports which connect the vent opening of said second heater in steam flow relation to said second pressure equalizing chamber, whereby the pressure in said first and fourth passages will be equal to each other and the pressure in said second and third passages will be equal to each other, and so that when said valve is rotated to a second position, the ends of said first passage register with the ports which connect the condensate opening of said second pressure equalizing chamber in liquid flow relation to the condensate outlet of said first heater, and the ends of said fourth passage register with the ports which connect the vent opening of said second pressure equalizing chamber in liquid flow relation to the vent opening of said first heater, and in which second position the ends of said second passage register with the ports which connect the condensate opening of said first pressure equalizing chamber in liquid flow relation to the condensate opening of said second heater, and the ends of said third passage register with the ports which connect the vent opening of said second heater in steam flow relation to the vent opening of said first pressure equalizing chamber, whereby in said second position of said valve, the pressure in said first and fourth passages, and the pressure in said second and third passages will be equal.

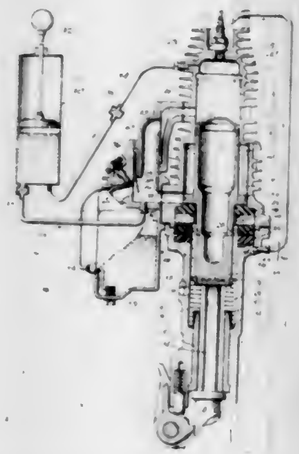
3,046,957
TUBULAR WALL ARRANGEMENT AND SUPPORT THEREFOR
Ernest C. Witzke, Bayside, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 10, 1958, Ser. No. 779,334
6 Claims. (Cl. 122—510)



1. In an organization of the type described, an upright elongated furnace forming part of a vapor generator, a passageway extending laterally therefrom for the conveyance of combustion gases from the furnace and a vertically extending passageway in spaced relation with said furnace and connected with the lateral passageway to form an extension thereof, a group of economizer tubes of the vapor generator extending vertically along each of the side walls of the vertical passageway and at the upper region thereof being bent in unison and internested fashion so that they extend laterally along the corresponding side wall of the lateral passageway with the group of tubes extending back and forth as a group horizontally along this wall forming panels and effectively covering generally area thereof with the ends of the horizontal runs of the group forming adjacent panels being interconnected by U bends that are internested, and means supporting these tubes lining the side walls of the lateral passageway from above in-

cluding vertically extending support bars constructed and arranged to provide for relative horizontal movement between the several superimposed panels said bars being disposed solely on the side of the panels remote from the interior of the lateral passageway and means to rigidly secure said bars to various tubes of some of the panels, and so arranged to permit the tubes of adjacent panels to move horizontally relative to each other.

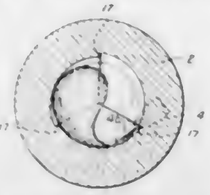
3,046,958
INTERNAL COMBUSTION DEVICE
Francis N. Bard, % Barco Manufacturing Co., 500 N. Hough St., Barrington, Ill., Victor W. Breitenstein, Arlington Heights, and Ralph F. Holtz, Cary, Ill.; said Breitenstein and Holtz assignors to said Bard
Filed June 10, 1959, Ser. No. 819,484
10 Claims. (Cl. 123—7)



1. A free piston internal combustion percussive device, comprising: a cylinder; a piston freely movable in said cylinder and dividing it into a combustion chamber and a fuel mixture pump chamber, said piston having a tail portion extending through said fuel mixture pump chamber; guide means for the tail portion of said piston forming a boundary for said fuel mixture pump chamber and through which said piston tail extends; a tool carried in an extension of said cylinder for engagement by said piston tail portion; a source of fuel connected with said fuel mixture pump chamber; fuel passage means connecting said pump and combustion chambers; a shoulder in said cylinder extension adjacent said tool and a piston return spring seated on said shoulder and engaged with said piston tail portion outside said fuel mixture pump chamber.

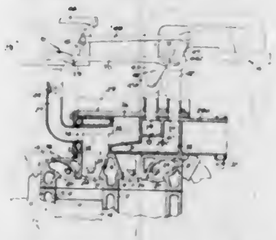
3,046,959
COMBUSTION CHAMBERS FOR PISTONS
Siegfried Meurer, Nurnberg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg A.G., Nurnberg, Germany
Original application June 9, 1958, Ser. No. 740,908, now Patent No. 2,975,773, dated Mar. 21, 1961. Divided and this application Dec. 8, 1960, Ser. No. 74,652
Claims priority, application Germany July 6, 1957
3 Claims. (Cl. 123—32)

1. In a piston having a combustion chamber for receiving a film of fuel injected upon the wall of the chamber, said fuel being then vaporized and burned, the improvement comprising a downwardly directed combustion chamber extending from the top of the piston into the piston body, said chamber having a stepped wall surface with the steps extending from the top to the bottom



of said chamber and transversely of the direction of both the injected fuel and the air swirl in said chamber.

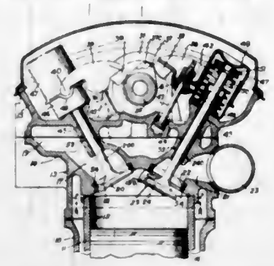
3,046,960
INTERNAL COMBUSTION ENGINES
John Dolza, Fenton, Mich., assignor to Fiat Motor Company (Fiat S.p.A.), Turin, Italy
Filed Sept. 26, 1960, Ser. No. 58,456
3 Claims. (Cl. 123—76)



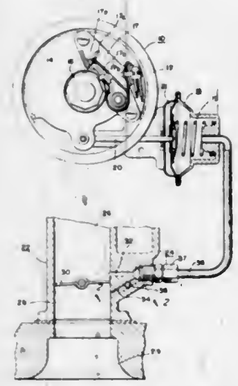
1. In a four-cycle internal combustion engine, a cylinder including a head forming a combustion chamber, a piston reciprocable in said cylinder, intake and exhaust passages to and from said combustion chamber, intake and exhaust valves for opening and closing said passages, a carburetor connected to said intake passage including a butterfly valve, and means for opening and closing said butterfly valve to accelerate and decelerate said engine, a movable valve member having an air-fuel chamber, a supercharging air pressure chamber, and a scavenging air pressure chamber, ports leading from said chambers to the intake passage to said cylinder, means operable in timed relation to the opening and closing of said intake and exhaust valves for positioning said movable valve whereby the port in said supercharging air pressure chamber communicates with said intake passage during the latter part of the closing of said intake valve, and the port in said scavenging air chamber communicates with said intake passage during the latter part of the closing of said exhaust valve, and separate means for controlling said supercharging air and said scavenging air to said movable valve member, said separate means being operable responsive to said means opening and closing the butterfly valve of said carburetor.

3,046,961
INTERNAL COMBUSTION ENGINES
John Dolza, Fenton, Mich., assignor to Fiat Motor Company (Fiat S.p.A.), Turin, Italy
Filed Sept. 26, 1960, Ser. No. 58,457
2 Claims. (Cl. 123—76)

1. In a four-cycle internal combustion engine, a cylinder, a cylinder head forming a combustion chamber with said cylinder, a piston reciprocating in said cylinder, intake and exhaust ports in said head leading to and from said combustion chamber, intake and exhaust valves for opening and closing said ports, a scavenging air passage in said head, means supplying air above atmospheric pressure to said scavenging air passage, a scavenging valve in said head having a poppet valve portion for opening and closing said scavenging air port and passage, and a piston valve portion for opening and closing said scavenging air passage while said poppet valve portion is in its open position.



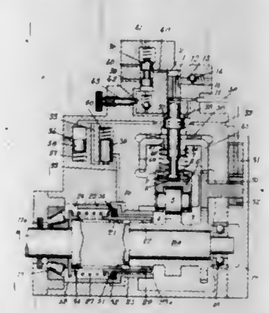
3,046,962
VACUUM ADVANCE CONTROL MECHANISM
James C. Norris, Pendleton, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,802
1 Claim. (Cl. 123—117)



In combination, an internal combustion engine having an intake manifold, a carburetor having a chamber, a throttle valve positioned in said carburetor and separating the carburetor into an air intake side and an intake manifold side which is connected with said intake manifold, a pair of passages formed in a carburetor wall having inlets positioned on opposite sides of said throttle valve when said throttle valve is in a fully closed position, manually adjustable means for increasing and decreasing the flow capacity of one of said passages, a distributor having a rotatable part for controlling the ignition timing of said engine, a vacuum motor for shifting said rotatable part, and means connecting said passages with said vacuum motor, said passages being sized such that at least some spark advance can be obtained when said throttle valve is fully closed by adjustment of said adjustable means.

3,046,963
FUEL INJECTION SYSTEMS FOR INTERNAL COMBUSTION ENGINES WITH AUTOMATIC VARIATION OF THE ADVANCE OF FUEL INJECTION
Pierre Etienne Bessiere, 55 Blvd. Commandant Charcot, Neuilly-sur-Seine, France
Filed Dec. 5, 1960, Ser. No. 73,857
Claims priority, application France Dec. 10, 1959
13 Claims. (Cl. 123—139)

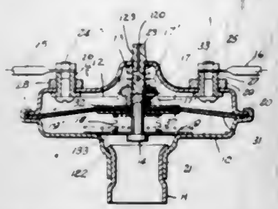
1. A fuel injection system for an internal combustion engine which comprises, in combination, a fuel injection pump including a cylinder and a piston mounted for reciprocating movement in said cylinder, a rotating member having its axis located in fixed position with respect to said cylinder, said rotating member being operatively connected with said piston for imparting thereto said reciprocating movement, a driving shaft coupled with said engine and in line with said rotating member, a threaded sleeve in mesh both with said shaft and with said rotating member for coupling them in rotation, both said shaft and said member being fixed in the direction of their common axis with respect to said cylinder and said sleeve being movable axially with respect to said shaft and said member so that axial displacement of said sleeve with respect to said shaft and said member varies the angular setting of said rotating member with respect to said shaft, a hydraulic ram comprising on the one hand, a casing fixed with respect to said cylinder and provided with a cylindrical recess coaxial with said shaft and said member and on the other hand a ram piston fitting slidably in said recess, said recess and said ram piston limiting between them a working chamber for liquid under pressure, said ram piston being operatively connected with said sleeve for transmitting thereto the liquid pressure in said working chamber, resilient means operatively connected with said ram piston for yieldingly opposing the action of said liquid pressure on said ram piston, whereby variation of said liquid pressure causes a change in the phase relation between the cycle of operation of said fuel injection pump and the cycle of operation of said internal combustion engine fed by said pump, a volumetric pump, means operatively connected to said driving shaft and to said volumetric pump for driving the latter at the speed proportional to that of said engine, conduit means leading from the output of said volumetric pump to said working chamber of said ram, and means mounted in said conduit means to produce a leak of liquid therefrom the greater as the liquid pressure in said conduit means upstream of said leak producing means is higher, said leak producing means comprising a cylinder in communication at one end with said conduit means, a piston slidable in said cylinder, one wall of said cylinder being provided with a longitudinal outlet slot of a width varying along its length, said slot being partly closed by said piston, and resilient means operatively connected with said last mentioned piston to urge it in the direction tending to reduce the portion of said slot uncovered by said last mentioned piston, the shape of said slot being adapted to produce a predetermined law of variation of the uncovered portion thereof as a function of the liquid pressure in said conduit means.



3,046,964
AUTOMOBILE STARTING DEVICE
Walter V. Chery, 908 Fairview Ave., Meadville, Pa.
Filed Jan. 11, 1960, Ser. No. 1,622
5 Claims. (Cl. 123—179)

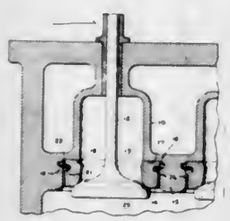
1. An electrical ignition circuit for a vehicle having an engine comprising a battery having one side thereof connected to ground and the other side connected in series

with an ignition switch, said ignition switch connecting said battery to a three branch parallel circuit, one branch of said parallel circuit including the ignition system of said vehicle, the second branch including a starting switch in series with a transmission switch closed when said vehicle is shifted to engage its gears, said starting switch and said transmission switch being connected in parallel with an



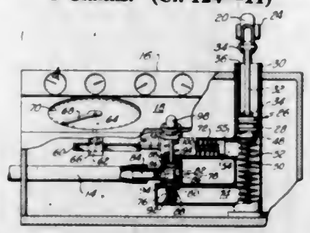
improved starting switch, said improved starting switch, said transmission switch, and said starting switch being connected in series with the starter motor of said vehicle, said improved starting switch having means thereon to automatically hold it open during engine operation and further means to close said improved starting switch for a predetermined time when said engine stops, and then to open the same.

3,046,965
VALVE SEAT ASSEMBLY
William Martin Kauffmann, Hamburg, and Franklin E. Carter, East Aurora, N.Y., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed July 6, 1961, Ser. No. 122,269
6 Claims. (Cl. 123—188)



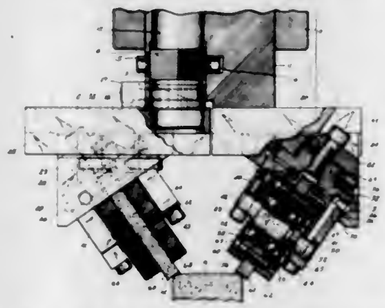
2. A valve seating device in a cylinder of an internal combustion engine comprising a valve port having a counterbore of substantially uniform diameter and extending inwardly from the valve port exterior to the inner edge of the counterbore, the counterbore having an inner end and an outer end adjacent the valve port exterior, an annular groove in the counterbore in the inner end thereof and in spaced relationship with the inner edge of the counterbore, the annular groove of the counterbore extending inwardly therefrom, an annular insert received in the counterbore, said insert having a periphery divided into an upper portion and a lower portion, said upper portion adjacent the inner end of the counterbore and said lower portion adjacent the outer edge of the counterbore, said upper portion of said insert having a slightly larger diameter than said lower portion thereof, an annular groove disposed on the periphery adjacent the upper portion and extending inwardly from the periphery, the annular groove of said insert adjacent the annular groove of the counterbore, a split expansion ring in the annular groove in said insert and engaging in the annular groove in the counterbore to urge said insert to seat in the counterbore, said upper portion of said insert and the counterbore of substantially equal diameters, said upper portion of said insert in close engagement with the counterbore to permit said insert to seat in alignment thereto.

3,046,966
TOY AIR COMPRESSOR ROCKET LAUNCHER
Stanley C. Butler, 15272 Penn Ave., San Lorenzo, Calif., and De Loss L. Marsh, 1453 Revere Ave., Hayward, Calif.
Filed Sept. 8, 1958, Ser. No. 759,808
3 Claims. (Cl. 124—11)



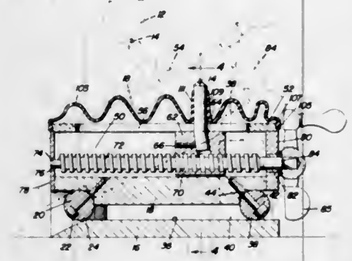
1. A toy air compressor rocket launcher which includes: a housing; a cylinder having an open top mounted within said housing; a handle pivotally mounted on said housing; a piston movable within said cylinder, said piston having a peripheral groove formed therein adjacent to said cylinder, at least part of the wall of said piston leading from said peripheral groove to the top of said cylinder being spaced from said cylinder, said piston also having bleed grooves formed therein leading from said peripheral groove to the side of said piston remote from said open top; link means pivotally attached to said piston and said handle; a flexible, elastomeric O-ring located in said peripheral groove, said ring extending from said peripheral groove so as to engage the interior of said cylinder, said ring being capable of moving within said peripheral groove as said piston is moved so as to allow air to pass around said piston and through said grooves or so as to seal said piston with respect to the interior of said cylinder; pressure chamber means within said housing; valve means connecting said pressure chamber means so as to only allow air to flow from said cylinder into said pressure chamber; discharge valve means mounted within said housing and connected to said pressure chamber means; means mounted on said housing for activating said discharge valve means so as to open the same; a flexible rubber conduit attached to said discharge valve means, said flexible conduit leading from said housing; and a launcher including a tube having a closed end and an open end adapted to carry an object so that a closed end of a passage within said object fits against the open end of said tube, the interior of said tube being connected to said flexible conduit.

3,046,967
CORNER DRESSING MEANS FOR GRINDING WHEELS
Harold E. Balsiger, Waynesboro, Pa. assignor to Landis Tool Company, Waynesboro, Pa.
Filed Apr. 3, 1959, Ser. No. 803,933
3 Claims. (Cl. 125—11)



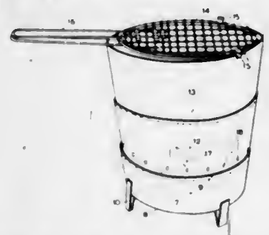
3. A dressing device for a grinding wheel comprising a housing, a dresser bar mounted in said housing for movement toward and from said grinding wheel, a dressing roller rotatably mounted on said dresser bar, means for effecting preliminary rotation of said dressing roller comprising a roughened surface on said dressing roller, and means for directing a high velocity stream of air against said surface.

3,046,968
GRINDING WHEEL DRESSER
Lewis C. White, Brookville, Ohio
(171 S. Lansdowne, Dayton, Ohio)
Filed Nov. 20, 1959, Ser. No. 854,449
5 Claims. (Cl. 125—11)



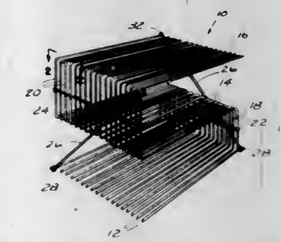
1. In a precision grinding wheel dresser, the combination of an essentially L-shaped base having an elongated portion and an upstanding portion, a frame, a spindle, said upstanding portion having a bore constituting a bearing in which said spindle is mounted for rotation, selectively operable means expanding said spindle into frictional locking engagement with said bore for infinitely adjustable positioning of said spindle in said bore, said frame having an elongate channel therein, a nut in said channel, a screw extending through said nut and mounted for rotation in the ends of said channel, means by which to turn said screw and thereby move said travelling nut in said channel, means provided in said nut for accommodating an object to be moved with said travelling nut and wherein the object has an elongate part, said frame having an elongate slot registered with said channel through which said part is extended and protective flexible shield means anchored to the frame and said elongated part for enclosing all surfaces of the travelling nut and channel.

3,046,969
STOVE FOR GRILLING VIANDS
Derek Edward Thorrold Davis, Culross Road, Bryanston, Johannesburg, Transvaal, Union of South Africa
Filed June 26, 1961, Ser. No. 119,699
2 Claims. (Cl. 126—9)



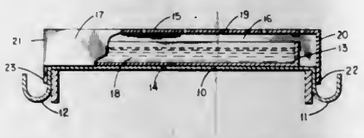
1. A portable grilling unit comprising a body means formed of relatively thin sheet-like fireproof material and being of tubular construction, said body means being open at the top end thereof and closed at the bottom end thereof, said body means including a base portion having leg means connected thereto and extending downwardly therefrom for supporting the base portion in spaced relation to a supporting surface, the closed lower end of said body means having a plurality of spaced holes formed therethrough, said body means having a plurality of circumferentially spaced holes formed therethrough only in the lower third of the body means so that air may pass through said circumferentially spaced holes, said body means having a height greater than the maximum cross-sectional dimension of the body means, the average interior cross-sectional area of said body means having a ratio to the total area of all of said holes generally on the order of eighty to one, and means for supporting fatty viands at the open upper end of the body means, said base portion being adapted to receive and support therein paper as an initial fuel, the paper being of limited quantity so as not to block the passage of air through the circumferentially spaced holes, the fuel being disposed inwardly of the circumferentially spaced holes and fats from fatty viands supported at the open upper end of the body means dripping down on the paper and serving as a supplemental fuel.

3,046,970
BARBECUE GRILL
Bernard Seaman, 60 Fairview Ave., Tarrytown, N.Y.
Filed Feb. 25, 1960, Ser. No. 11,038
6 Claims. (Cl. 126—25)



1. A barbecue grill comprising, in combination, a plurality of substantially identical S-shaped elements each having a plurality of spaced apart parallel members extending between alternately opposite ends of adjacent ones of said members, the corresponding ones of said members of all of said elements defining individual article supporting platforms, and risers extending between said platforms defining at least one pair of oppositely opening individual three sided compartments for receiving separate material therewithin.

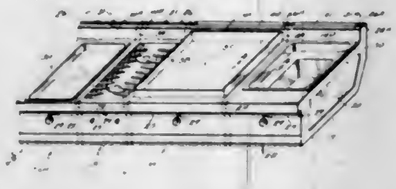
3,046,971
GRILL SANDWICH WARMER
Richard R. Hogshire, 7551 Washington Blvd., Indianapolis, Ind.
Filed July 20, 1959, Ser. No. 828,122
1 Claim. (Cl. 126—33)



The combination with a flat, imperforate rectangular cooking grill adapted to be heated from underneath and having a gutter along each of two opposite sides with a rectangular water pan having a flat bottom resting on the grill; a water pan cover plate over and above said pan; two opposite sides extending downwardly from opposite edge portions of said plate, extending across and bearing by edges of the sides on top of said grill, spacing the plate above the pan; and end walls extending downwardly into said gutters from ends of said plate and below the top of said grill along and engaging with side portions of the gutters; said sides and end walls of the cover plate

forming an enclosure across said grill sealing off escape of steam generated from water in said pan laterally and downwardly of the grill; said plate being perforate as the sole means of steam escape; and said pan being spaced from direct heat conductivity from said plate.

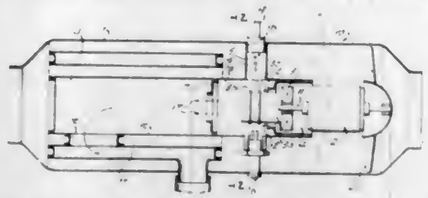
3,046,972
COUNTER TYPE COOKING AND WARMING EQUIPMENT
Phillip M. Pappas, 2318 Blue Bonnet, Houston, Tex.
Filed July 27, 1959, Ser. No. 829,752
3 Claims. (Cl. 126—37)



1. Cooking apparatus comprising a plurality of independent cooking and warming units, each unit having substantially identical profile configuration and open sides, each unit having top, bottom, front and rear walls, said profile configuration being substantially rectangular in shape with backsplash and front overhang portions formed by an upwardly extended peninsular shaped rear portion and a forward extended peninsular shaped front portion, respectively, with a diagonal lower rear corner portion cutaway from the rear wall to the bottom wall of each unit adapted to provide a recessed transverse passage for supply piping, identical dimensioned unit sides having continuous perimeter flanges perpendicular to the vertical planes of said sides with said perimeter flanges extending inward toward the center of said units and in contact with the inner periphery of the open sides of the units to support and form an attachment to the inner surfaces of said units, said units having a plurality of co-planar outwardly formed horizontal channels having slots therein, said channels being provided with snug fitting slide bars within each unit with hand operable knob means attached to said slide bars through said slots provided in said channels with said hand operated knob and associated open slot providing for the limited horizontal extension of said slide bars from each unit to each adjacent unit within said channels to align said transverse outer surfaces in a co-planar manner holding said adjacent units together, strip means bridging over the surface crack presented by abutted edges of the outer transverse co-planar surface coverings of adjacent units with said strip means having heat resistant adhesive on the underside thereof to provide leak-proof sanitary surface joints between adjacent units with said strip means pressed in place to bridge over and seal said exposed cracks.

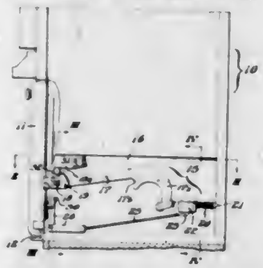
3,046,973
HEATING APPARATUS FOR LIQUID FUELS
Siegfried Kofink, Esslingen am Neckar, Germany, assignor to J. Eberspacher, Esslingen am Neckar, Germany, a German firm
Filed Nov. 16, 1959, Ser. No. 853,389
*** Claims priority, application Germany Mar. 4, 1959**
8 Claims. (Cl. 126—110)

1. A combustion device comprising an elongated tubular member having an opening at one end, baffle means therein defining within said tubular member a secondary combustion chamber and a pre-combustion chamber, a rotary drum disposed coaxially in said pre-combustion chamber, a fan in said tubular member, means to rotate said drum and said fan to cause air to circulate in through one opening, around said drum, through said pre-combustion chamber to said secondary combustion chamber, means defining an ante-chamber leading radially inwardly into said pre-combustion chamber, nozzle means disposed in said ante-chamber arranged to produce a spray



of fuel particles with portions thereof directed to impinge on said rotating drum whereby these portions are whirled by said drum into said combustion air stream to vaporize said particles, and means to ignite said air and fuel mixture in said pre-combustion chamber.

3,046,974
DOOR STOP MECHANISM
Walter R. Kimberley, Signal Mountain, Tenn., assignor to Samuel Stamping & Enameling Company, Chattanooga, Tenn., a company of Tennessee
Filed Nov. 2, 1960, Ser. No. 66,764
5 Claims. (Cl. 126—191)

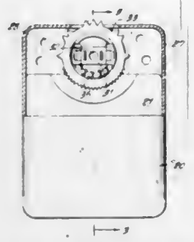


1. The combination with an oven or the like having an access opening in the upper part of its front, a door for said opening, and a hinge connecting the door to the bottom edge of said opening, of door mechanism comprising a catch element located at one side of the oven somewhat above the level of the oven floor; a rearwardly extending latch bar pivotally connected at one end to the back of the door adjacent one side edge thereof at a distance from the door hinge and adapted to override the catch element, said bar having at an intermediate point in its bottom edge a hook projection to cooperate with said stop element in holding the door horizontally in open position and also a hook projection at its distal end; and means connected to the distal end of the latch bar for yieldingly resisting opening of the door and permitting said bar to be lifted to disengage its intermediate hook from the catch element after the door has been swung to horizontal position, so that the door can be further moved to a position of vertical suspension out of the way for full access to the oven chamber stopped by engagement of the hook projection at the distal end of said bar with said stop element.

3,046,975
CATALYTIC HAND WARMER
Antonin Gottwald, New Rochelle, N.Y., assignor to Siangelis Associates Inc., New York, N.Y., a corporation of New York
Filed Feb. 20, 1961, Ser. No. 90,371
7 Claims. (Cl. 126—208)

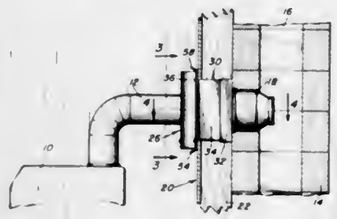
1. In a catalytic heater suitable for use as a pocket heater, hand warmer or the like the improvement comprising in combination

(*a*) a receptacle for a volatile fuel having a wall formed with an arcuate surface and a discharge outlet opening therein for the fumes emanating from the fuel;
(*b*) a burner having a wall formed with an arcuate surface concentric with the arcuate surface of said receptacle and provided with at least one inlet opening selectively registrable with said discharge outlet opening;
(*c*) a catalytic heating element mounted within said burner and covering said inlet opening;



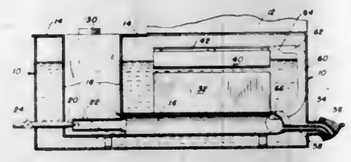
(*d*) means supporting said receptacle and said burner for relative rotation about the common axis of said arcuate surfaces and with said arcuate surfaces in engagement;
(*e*) at least one of said outlet and inlet openings being elongated in the direction of such relative rotation so that the degree of registry of said outlet and inlet openings is variable by relative rotation of said burner and said receptacle to vary the effective area of the flow path between said receptacle and said burner.

3,046,976
VENTED WALL FLUE
Robert E. Aggson, Azalea, Oreg. (5322 McKenzie Highway, Springfield, Oreg.), assignor of forty-nine percent to Eddie E. Parker, Glendale, Oreg.
Filed June 26, 1956, Ser. No. 593,953
4 Claims. (Cl. 126—316)



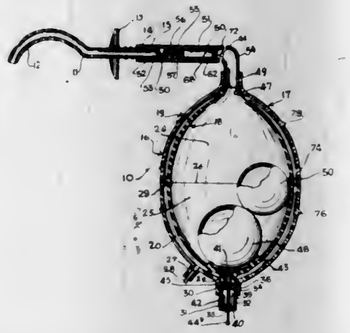
1. A vented wall flue comprising an inner sleeve for engagement in a chimney opening and an outer sleeve for engagement in a wall opening registered with said chimney opening, connecting means mounting said inner sleeve in spaced nested relation within said outer sleeve, spacing means carried by said inner sleeve for retaining a smoke pipe in spaced nested relation within said inner sleeve, one end portion of said outer sleeve adapted to project outwardly of a wall opening and into a room and including a transverse passage means having inlet and outlet openings enabling air within a room into which said one portion projects to circulate through said outer sleeve, transverse passage means in said inner sleeve having inlet and outlet openings enabling air circulating through said outer sleeve to also circulate through said inner sleeve, baffle means in said outer sleeve for effecting a tortuous path of the air circulating therethrough, portions of said tortuous path extending longitudinally of said outer sleeve.

3,046,977
HEATING KETTLE
Carroll C. Figge, Batavia, Ill. (189 W. Madison St., Chicago 2, Ill.)
Filed May 21, 1957, Ser. No. 660,689
1 Claim. (Cl. 126—343.5)



A heating kettle for heating masses of bituminous material, comprising a receptacle open at the top having a hinged lid over a portion and a removable cover over the remainder of the top, a heating pipe near the bottom with an open well at one end extending upwardly from the heating pipe through the cover, fuel feeding means extending through this end of the receptacle and through the adjacent wall of the well to discharge into the pipe, oppositely bent return portions of the pipe at the other end extending parallel thereto and having an upward discharge portion extending through the cover at the sides of the well, in combination with floatation means for receiving chunks of bituminous material and feeding them into the receptacle as the mass within the receptacle becomes heated and leaving a space between the top of material in the receptacle and the cover, and an ejector pipe having an inlet above the normal surface of liquid in said space at the top of the receptacle for removing fumes, and an ejecting end projecting into the heating pipe containing exhaust gases whereby said fumes are siphoned through the ejector pipe with the exhaust gases of the heating pipe.

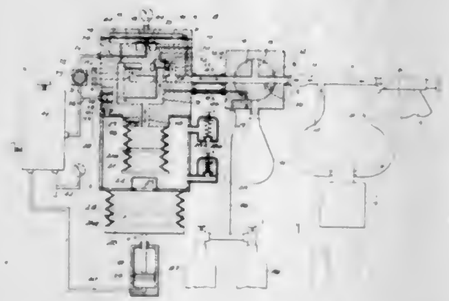
3,046,978
MANUALLY OPERATED RESUSCITATOR
Lawrence N. Lea, 1683 University Ave., Bronx, N.Y.
Filed June 22, 1960, Ser. No. 37,871
9 Claims. (Cl. 128—29)



1. A manually operable resuscitator device, comprising a nozzle having a curved end adapted for disposition in the mouth of a patient, a flexible compressible bulb provided with one-way valve means for passing fresh air into the bulb, a tube detachably connecting the nozzle and bulb for passing fresh air from the bulb to the nozzle, and two-way valve means in the tube to pass fresh air to the nozzle and to divert exhaled air away from the bulb, said two-way valve means including a short flexible resilient tubular member slidably disposed in said tube,

said member having normally closed end walls slit to form flexible separable flaps, said tube having opposed openings normally disposed beyond the tubular member and adapted to be closed by said member when disposed thereat, and a spring normally retracting said member to clear said openings, there being at least one compressible member in the bulb to limit compression thereof for controlling the amount of fresh air discharged from the bulb when compressed at said compressible member, said spring being sufficiently stiff to permit the flexible tubular member to move past the opposed openings before the flexible flaps are opened.

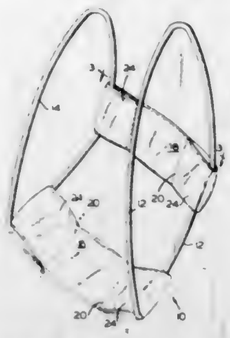
3,046,979
LUNG VENTILATORS AND CONTROL MECHANISM THEREFOR
Christian B. Andreasen, New Hope, Pa., assignor to Air-Shields, Inc., Hatboro, Pa., a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,390
16 Claims. (Cl. 128—29)



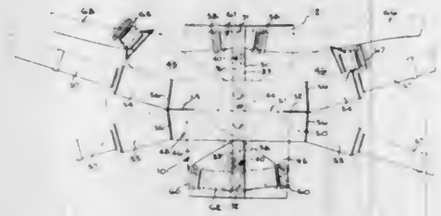
1. Lung ventilating apparatus having a delivery system for supplying breathing gas to a patient, pressure applying means for applying alternate positive and negative pressure phases to the system, a controller having a connection to said pressure applying means for changing the phase from positive to negative and vice versa, said controller having a supply of pressure gas thereto for actuating purposes, a valve in said controller to release the controller pressure to atmospheric during the positive phase of operation of the ventilating apparatus, an auxiliary control for causing a change from negative to positive pressure application in response to a negative pressure induced in the delivery system by attempted spontaneous respiration on the part of the patient, said auxiliary control including a pressure responsive member and a valve, said pressure responsive member being connected to said delivery system and said valve having a connection to said controller, and a connection to the atmosphere to permit release of the controller pressure to atmospheric in response to spontaneous inhalation.

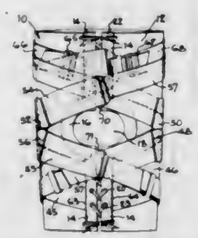
3,046,980
DISPOSABLE HALTER
Arthur R. Moore, % Florida Manufacturing Corporation, and Robert C. Blair, Jr., 281 White St., both of Daytona Beach, Fla.
Filed Nov. 6, 1961, Ser. No. 150,506
6 Claims. (Cl. 128—75)

1. A head halter for applying traction to the head of a wearer, comprising, a pair of flexible closed loops the components of which are adapted for disposition along opposite sides of the wearer's head, and a pair of support pads carried by said loops and extending transversely therebetween, one of said pads being engageable with and beneath the jaw of the wearer and the other pad being engageable with the wearer's head in back of the occiput portion thereof.



3,046,981
KNEE BRACE
Ernest R. Biggs, Jr., Columbus, and Hector E. Lewis, Cincinnati, Ohio, assignors to Surgical Appliance Industries, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 29, 1957, Ser. No. 655,689
13 Claims. (Cl. 128—80)

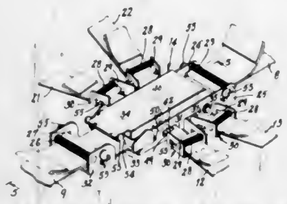




1. A knee brace comprising a sleeve of flexible material for surrounding substantially the entire leg portion at the knee area, a lateral brace strap fixed intermediate its ends to the rear of said sleeve, said lateral brace strap having upper strap portions extending in opposite directions generally helically upwardly passing around the front of said brace above the kneecap and being connectable to the rear of said brace, said brace strap having lower strap portions extending in opposite directions generally helically downwardly passing around the front of said brace below the kneecap and means fixed to the rear of said sleeve for connecting the ends of said strap portions to the rear of said brace.

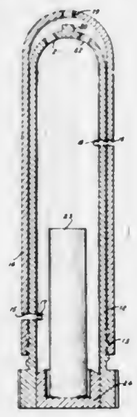
3,046,982
SAFETY BELT AND HARNESS FOR CONFINING PATIENT TO A LITTER
Frank L. Davis, 129—07 7th Ave., College Point, N.Y.
Filed Sept. 20, 1960, Ser. No. 57,178
1 Claim. (Cl. 128—134)

A safety belt construction for litter patients, comprising a belt buckle frame having opposed parallel side walls, a hand lever pivoted to said side walls at one end of the frame, means at said end of the frame for securing one end of a body encircling belt thereto, spring means for yieldingly holding said hinged hand lever down on the frame, the free end of said hand lever having a holding abutment shoulder and a beveled edge leading from the end of said lever to said abutment shoulder, a body belt connected at one end with said belt end securing means on the frame, a securing plate on the opposite end of said belt insertable into the end of the frame into engagement with said beveled edge and holding shoulder of the yieldingly hinged hand lever, said



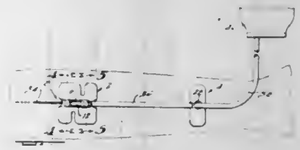
side walls of the frame having openings therein, body holding webs having end fittings inserted through said openings into position beneath the hand lever, inwardly displaceable holding dogs for said end fittings pivotally mounted on said lever over said openings in holding engagement with said web end fittings inserted through said openings whereby said hand lever will secure or release all of said body holding webs and belt, and a slide on the free end of said hand lever manually shiftable into and out of locking engagement with one of the side walls of said buckle frame whereby to lock or release all of the body holding webs and belt secured by said hand lever.

3,046,983
VARIABLE DOSE INHALER
Thomas Christman Grubb, Mamaroneck, and Karsondas Jethalal Master, Mount Vernon, N.Y.
Filed Oct. 1, 1959, Ser. No. 843,718
3 Claims. (Cl. 128—200)



1. An inhaler for dispensing volatile medicaments which comprises a tubular elongated barrel having at one end an air inlet port and at the other end an air outlet port, a second air inlet port between the first air inlet port and air outlet port, an absorbent body adapted to hold a volatile medicament within said barrel poistioned adjacent to the first air inlet port, a tubular outlet casing covering said tubular barrel closely fitting thereover but being adapted to turn, an air inlet port at one end of said casing positioned so as to overlap the first air inlet port of said barrel, a second air inlet port in said casing so positioned as to overlap the intermediate air inlet port, an air outlet port in said casing permitting air to flow from the air outlet port of said barrel through the air outlet port of said casing, the two air inlet ports of said casing and said barrel being in such relationship that as the casing is turned with respect to the barrel overlapping of one set of ports is increased while the overlapping of the second set of air inlet ports is decreased.

3,046,984
ANCHORING DEVICES
Florence O. Eby, 28574 Red Leaf Lane, Royal Oak, Mich.
Filed Dec. 29, 1958, Ser. No. 783,361
5 Claims. (Cl. 128—214)



1. An anchor device for securing to a patient a pair of intravenous needles of the type having a transparent section, comprising; a first substantially rectangular sheet member of a material which is readily deformable by manual manipulation and which when deformed will retain its shape against forces normally encountered in intravenous feeding operations, a layer of adhesive on one surface of said sheet member whereby said member may be secured to the skin of a patient, said member having a rectangular aperture substantially centrally thereof and adapted when in place to overlie the transparent section of one of said needle apparatus, said member having a slot extending inwardly from one edge portion thereof in the general direction of said aperture to provide a leaf section for securing a second of said needle apparatus to the patient in fixed relation to said one needle apparatus, said sheet member having a second slot extending inwardly from a second edge of said member, said slots extending over halfway from the said edge through which it extends toward said aperture, said slots extending substantially perpendicularly to the longitudinal axis of said aperture and adjacent opposite longitudinal ends thereof.

3,046,985
DENTAL SYRINGE ADAPTER
Candelario Saenz, 508 Houston Bldg., San Antonio, Tex.
Filed Dec. 19, 1958, Ser. No. 781,523
7 Claims. (Cl. 128—218)



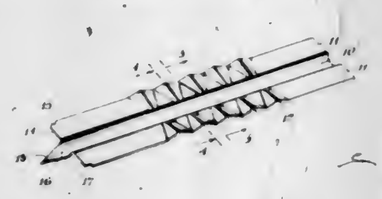
1. A syringe comprising, in combination, an elongated tubular body for receiving an ampule, a tubular needle in the forward end portion of the body for puncturing the ampule for receiving fluid therefrom, means on the rear end portion of the body for ejecting the fluid through the needle, a sleeve connected to and slidable longitudinally on the body, a tip mounted on the sleeve and slidable on the needle to a forward operative position wherein the needle is concealed and to a rearward inoperative position wherein said needle is exposed, resilient means yieldingly urging the tip forwardly on the needle, and means for releasably anchoring the tip in either position against the tension of said resilient means.

3,046,986
MANUFACTURE OF CELLULOSIC PRODUCT
Kenneth J. Harwood, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Feb. 15, 1961, Ser. No. 89,399
4 Claims. (Cl. 128—290)



1. A sanitary napkin having in combination, a plurality of layers of fluid absorbent and fluid control elements, a fluid pervious wrapper enclosing and maintaining said elements in unitary assembly, one of said fluid absorbent elements being positioned contiguously of said wrapper and comprising multiple plies of creped sheets of fibrous material, said multiple-ply element being provided throughout an area spaced inwardly of the margins thereof with a plurality of spaced-apart chamber-like depressions leading from the wrapper side of said element to extend therethrough and terminate at the opposite side of said element in outwardly projecting cup-like portions, the fibers of said multiple sheets being substantially densified in areas marginally of said depressions and throughout said cup-like portions, and a second fluid absorbent element in contiguous engagement with the cup-like portions of said multiple-ply element for fluid transfer therebetween.

3,046,987
DISPOSABLE LANCET
Joseph C. Ehrlich, 31 W. 10th St., New York, N.Y.
Filed June 5, 1957, Ser. No. 663,756
3 Claims. (Cl. 128—314)



1. A lancet for piercing tissue and letting blood samples therefrom comprising: an elongated strip of material including a finger gripping body portion and an integral tissue piercing projection extending axially from one end of said body portion; said piercing projection having a base portion integral with said body portion and tapering to a piercing point at its outer end; the body portion of said strip adjacent said projection being wider than the base portion of said projection thereby presenting shoulders adjacent said projection at each side thereof to limit the extent to which the piercing projection may penetrate tissue; the strip of material being composed of thin normally flexible sheet metal and formed with a longitudinal stiffening rib extending from the base portion of said projection into the body portion; and the pointed outer end of the projection being relatively flat to facilitate penetration into the tissue with the projection at its base portion in the area of said rib being substantially arcuate to provide a gape tissue incision.

3,046,988
ESOPHAGEAL NASOGASTRIC TUBE
William J. Moreau, Pawtucket, and Leon R. Nodine, Cranston, R.I., assignors to Davol Rubber Company, Providence, R.I., a corporation of Rhode Island
Filed Dec. 1, 1958, Ser. No. 777,241
5 Claims. (Cl. 128—325)



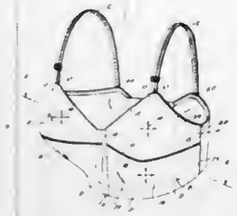
1. An esophageal nasogastric tube comprising a flexible shaft having a proximal and a distal end, a first lumen extending completely through said shaft from end to end, a gastric balloon affixed to said shaft adjacent to but spaced from the shaft distal end, a separate and distinct elongated esophageal ballon affixed to said shaft in abutting relation to the proximal end of said gastric balloon, a second lumen extending through said shaft and in communication with said gastric balloon for inflation thereof, and a third lumen extending through said shaft and in communication with said esophageal balloon for inflation thereof, said gastric balloon normally having an asymmetrical configuration when inflated whereby to conform to the shape of the stomach.

3,046,989
MEANS FOR HOLDING NASAL TUBES IN POSITION
Edward J. Hill, 15892 Dunblaine, Birmingham, Mich.
Filed Sept. 29, 1960, Ser. No. 59,438
2 Claims. (Cl. 128—348)



1. Means for holding a nasal tube in proper position after intubation through a patient's nostril comprising a moldable sheet of ductile material having essential strength for the purpose including a nose piece, an integral stem portion depending from said nose piece sufficiently off-center thereof for positioning opposite the intubated nostril when said nose piece is applied to the patient's nose, and a tab formed at the lower part of said stem portion extending laterally therefrom, a non-hardening and non-irritating to the skin adhesive on the underside of said moldable sheet, and a stripable protective sheet over said adhesive which may be stripped therefrom prior to placing and digitally molding the said nose piece on a patient's nose with the said stem and tab depending therefrom in alignment with the intubated nostril, the said tab being fixable by the adhesive thereon to that portion of the nasal tube depending from and adjacent to the patient's nose.

3,046,990
BRASSIERE CONSTRUCTION
Herma Wiedle Dozier, 6609 Olive Blvd., St. Louis, Mo.
Filed July 24, 1959, Ser. No. 829,274
1 Claim. (Cl. 128—460)



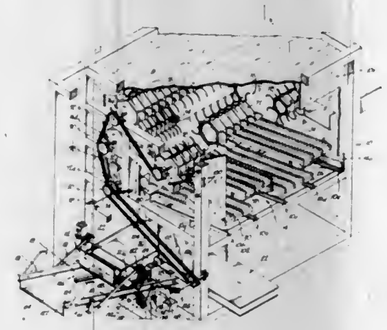
A double front breast cup structure nursing brassiere having an exterior breast cup structure with upper and lower breast cup sections, having a separable fastener connection extending vertically across the middle front portion of the brassiere, and an interior breast cup structure with upper and lower breast cup sections and said upper breast cup sections leaving oblique top and outside edges and said cup sections being joined at the side seams and having a vertical front seamed connection and a central opening extending across portions of the interior of each breast cup structure, the interior cup sections having overlapping side portions adjacent the sides of the brassiere and secured together at the side seams of the brassiere, with the upper portions of the interior breast cup structure and the lower portions of the interior breast cup structure being extended toward the side seams and overlapping one another, sidewardly and rearwardly extending trapezoidal sections stitched at their front edges to the outside edges of the exterior and interior breast cup structures, an adjustable elastic connection strap at the rear of the garment connecting the rear edges of the trapezoidal sections, each of said breast cup sections having a vertical and horizontal bias and said sections reaching a maximum height at the nipple portions and a minimum height at the vertical central connections and at the side edge seams, said exterior and interior structures being stitched together along the outside side edges thereof and along the oblique top and outside edges as the upper breast cup sections extend upwardly toward a peak above the nipple portion and said interior and exterior structures having elastic bands forming the lower margins thereof with the elastic band of the exterior structure being heavier and wider than the elastic band of the interior structure.

3,046,991
SHOULDER GUARDS
Pearl L. Heberling, now by change of name, Pearl L. Andersen, St. Paul, Minn.
Filed Aug. 24, 1959, Ser. No. 835,458
2 Claims. (Cl. 128—510)



1. In combination, a brassiere having shoulder straps, said straps having a series of spaced apertures extending therethrough intermediate the side edges of the strap, and a shoulder guard, the guard comprising an elongated base of soft resilient flexible material having a series of upwardly extending longitudinally spaced projections thereon midway between the sides thereof, said projections being spaced apart a distance equal to the spacing of certain of said apertures, and upwardly extending longitudinal side edges on said base, the projections sliding freely through said apertures.

3,046,992
VINER AND HULLER
George Butler, P.O. Box 326, Monroe, Wash.
Filed July 20, 1959, Ser. No. 828,379
15 Claims. (Cl. 130—30)

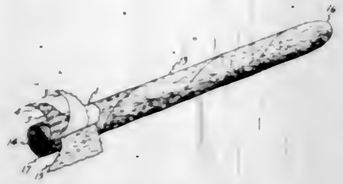


1. Viner and huller apparatus for hulling of fruit from hull-bearing vines and the like, comprising a frame, a plurality of elongated generally horizontal beaters rotationally mounted in said frame in generally parallel relationship one above another, each of said beaters having a plurality of elongated beater fingers projecting generally radially therefrom at various locations along its length, generally horizontally disposed vine-supporting conveyor means operable to feed vines to the beaters and having a vine-supporting upper surface means which extends lengthwise of the beaters and transversely outward from a location adjacent the lowermost beater, means to operate said vine-supporting conveyor means by movement thereof in upright planes angled to planes perpendicular to the beater rotation axes, and means operable during conveyor operation to rotate the beaters in a direction which is upward on the side of the beaters adjacent the conveyor means and at a peripheral speed sufficient to hull the fruit by repeated blows of the fingers on the vines and to fling the vines upwardly and outwardly to fall back upon the conveyor means in order to be fed thereby again to the beaters, the angled direction of conveyor movement effecting progressive advancement of vines lengthwise of the beaters as they are repeatedly fed to beaters and flung back on the conveyor means.

3,046,993
CIGAR USING HOMOGENIZED LEAF
Sidney L. Rich, Clearwater, Fla., assignor to Lenardo Cigar Corporation, Clearwater, Fla., a corporation of Florida
Filed May 15, 1961, Ser. No. 109,972
4 Claims. (Cl. 131—8)

1. In a cigar comprising a bunch, a binder comprising two sheets of reconstituted leaf tobacco, one sheet being disposed against and laminated by a plurality of spaced stripes of non-burning adhesive, extending longitudinally of the cigar, to a face of the other said sheet, said binder

being helically wound on said bunch with said one sheet outwardly of said other sheet, and a tobacco leaf wrapper



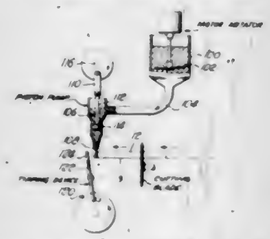
helically wound upon said binder and in contact with said one sheet of said binder.

3,046,994
VENTILATED CIGARETTE
Milton O. Schur, Asheville, N.C., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed July 2, 1959, Ser. No. 824,673
1 Claim. (Cl. 131—10)



A cigarette adapted to deliver air-attenuated smoke containing at least one-fifth of its volume of air, comprising a column of tobacco, a wrapper therefor, and a mouthpiece element at one end of said column, said element having a resistance to gas flow substantially greater than that of an equal length of said column, and said wrapper having an initial porosity index of about 20 to 30 and being provided with a plurality of spaced perforations having a diameter of 0.01 to 0.25 millimeter, the size and number of said spaced openings being such as to impart to said wrapper a porosity index of about 10 to 15 and to the said cigarette an initial resistance to gas flow substantially equal to that of a normal untipped cigarette of equal length having a substantially non-porous wrapper.

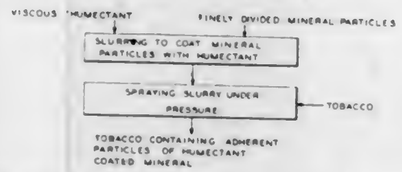
3,046,995
IGNITING TIP CIGARETTE
Alexander C. Christy, Morgantown, W. Va. (40 Linden St., Westover, W. Va.)
Filed May 5, 1960, Ser. No. 27,083
9 Claims. (Cl. 131—20)



1. In a process of making smoking product consisting of an elongated, tobacco-filled body portion and a self-igniting tip portion affixed to one end thereof, the improvement which comprises: formulating a composition suitable for said tip portion by first forming a supersaturated aqueous solution of a sodium chlorate, adding thereto gum arabic in an amount sufficient to emulsify the composition and a mixture consisting of precipitated calcium carbonate in an amount sufficient to reduce and control burning of the sodium chlorate upon ignition to flameless combustion mixed with fluffy tannic acid in an amount sufficient to acidify the composition to assure ignition of the chlorate; cooling the resultant emulsion to about 20° C. and thereafter applying a metered amount of said emulsion to one end of the body portion of the smoking product.

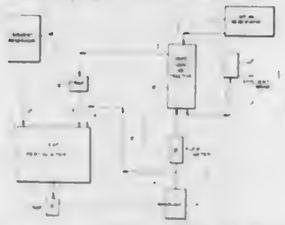
2. The method of claim 1 wherein the product is a cigarette.

3,046,996
PROCESS FOR AFFIXING PARTICULATED MINERAL-TYPE MATERIAL TO TOBACCO
Wright W. Gary, Princeton, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland
Filed Sept. 24, 1957, Ser. No. 685,819
5 Claims. (Cl. 131—140)



1. A method of affixing a finely divided mineral-type material on tobacco which comprises forming a slurry of sprayable consistency and comprising essentially finely divided particles of a mineral-type material and at least one viscous humectant in amount sufficient to coat said finely divided particles, and spraying said slurry onto tobacco under conditions such that said finely divided particles impinge surfaces of said tobacco while said particles are coated with said viscous humectant whereby said finely divided particles adhere to said tobacco when impinged thereon.

3,046,997
SELECTIVE ALKALOID EXTRACTION
John D. Hind, Richmond, Va., assignor to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Sept. 27, 1960, Ser. No. 58,825
12 Claims. (Cl. 131—143)



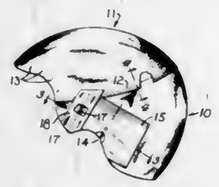
1. A process for selective removal of alkaloid from tobacco which comprises the steps of extracting tobacco with organic solvent, contacting the resultant solvent extract with brine to remove alkaloid selectively from said extract, recycling the alkaloid-relieved solvent to tobacco, alkalizing the alkaloid-enriched brine, contacting said alkaloid-enriched brine with a second organic solvent to remove alkaloid from said brine, and recovering alkaloid from the resultant alkaloid-enriched second solvent.

3,046,998
TOBACCO PROCESSING MACHINERY
Noel R. F. Mortimer, Guildford, England, assignor to Vokes Limited, Surrey, England
Filed Aug. 27, 1959, Ser. No. 836,400
Claims priority, application Great Britain Aug. 27, 1958
3 Claims. (Cl. 131—146)

1. A tobacco leaf processing plant comprising a rotary drum thresher having a coarse shredder to which fresh leaf is fed and a fine shredder, said shredders being laterally displaced on the same shaft, a classifying duct receiving the discharge of both said shredders, pneumatic means for separating cleaned leaf from the tobacco discharged by said shredders and forcing the cleaned leaf along the classifying duct to a first discharge outlet, a second outlet approximate to the lower end of the classifying duct for discharging unclean leaf and stripped and unstripped stems, a recirculating duct receiving the discharge from said second outlet, pneumatic means for forcing air in a location immediately past said second outlet and for occasioning a separation of the stripped stems from the unstripped stems and unclean leaf in said recirculating duct, said recirculating duct being arranged to return the unstripped stems together with unclean leaf to said fine shredder, and an outlet in the recirculating duct near the bottom thereof for discharge of the stripped stems.



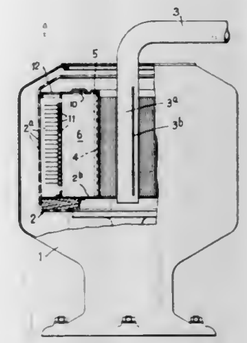
3,046,999
WIG FOUNDATION OR CAP
Geraldine F. Lint, 137 Peckham St., Coldwater, Mich.
Filed Nov. 23, 1959, Ser. No. 854,876
9 Claims. (Cl. 132—54)



9. A wig cap for a head shaped like that of a human being, said cap having a unitary, head-embracing body portion with an open top, said body portion being in the form of a coarsely woven and stiffened fabric material shaped so as to solely engage the sides and back of said head with front ends terminating substantially at the temple portion of said head, a flexible and elastic crown means secured to the upper edge of said body portion, said body portion being relatively stiff in comparison with said crown means which extends completely across from side to side of the top of said body portion so as to make the front and top portions of said wig cap expansible and yet self-contracting across the top of said wig cap to grip an appropriate size head when said wig cap is fitted on said head.

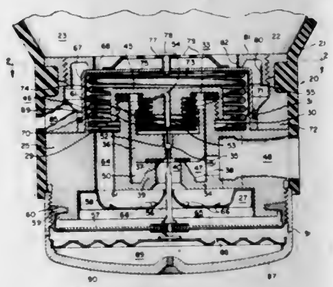
3,047,000
APPARATUS FOR CLEANING SYRINGES
Ernst Stingelin, Basel, Switzerland, assignor to Burgerspital Basel, Basel, Switzerland, a Swiss corporation
Filed May 4, 1959, Ser. No. 810,928
Claims priority, application Switzerland May 6, 1958
7 Claims. (Cl. 134—152)

1. In a syringe cleaning apparatus including a vertical pipe adapted to project water radially and a centrifugal drum coaxial with said pipe, the provision of needle cleaning means comprising a plurality of flat containers arranged along vertical radial planes inside said drum between the pipe and the outer wall of said drum, each container having radially spaced outer and inner peripheral walls with openings, means for removably and fluidtightly



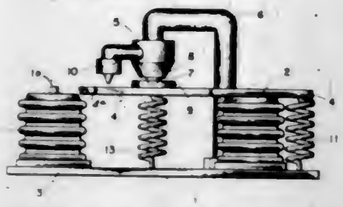
securing a plurality of radially directed needles in each container in superposed relationship along the outer peripheral wall of each container including a web carrier surrounding said needles to constrain the water passing out of the pipe to flow through each container into the needles to clean the latter, and means rigidly and removably securing the containers inside the drum.

3,047,001
RESPIRATORY APPARATUS
Norman F. Hosford, Davenport, Iowa, assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 23, 1957, Ser. No. 704,701
3 Claims. (Cl. 137—63)



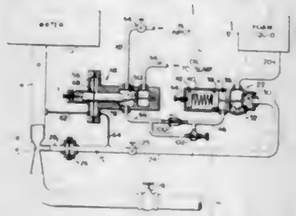
1. A gas flow regulator comprising a demand regulator section, including a gas supply passage, and means for regulating gas flow through said passage, including a valve in said passage, a demand chamber connected to said passage, a movable demand diaphragm in a wall of said chamber, means responsive to diaphragm movement for actuating the valve, and means for varying the demand chamber pressure in accordance with flow rate in said passage, comprising means including a shield separating the demand chamber from the passage for shielding the diaphragm from gas flow in the passage and aspirator means formed in the shield for aspirating gas from the demand chamber in accordance with the rate of gas flow in said passage.

3,047,002
CONTROLLER
Howard R. Jaquith, Rochester, N.Y., assignor to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York
Filed Dec. 5, 1956, Ser. No. 626,537
20 Claims. (Cl. 137—85)



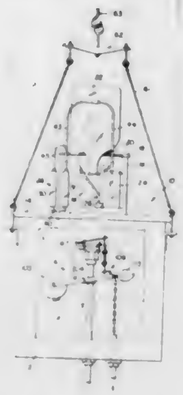
1. In combination, a plate, a support; elongated, flexible means connecting a place on said plate to said support, said flexible means being substantially inextensible along its length, whereby said flexible means forms a universal hinge permitting said plate to tilt about a plurality of axes at least approximately intersecting at said place, condition responsive means mounted on said support and operatively connected to said plate for tilting said plate about one of said plurality of axes in response to said condition, detecting means for sensing tilting of said plate, feedback means mounted on said support for tilting said plate about another of said plurality of axes, said feedback means being responsive to detection by said detecting means of plate tilting so as to tilt said plate about said another of said plurality of axes, said plate being elastically supported on said support in a position such that said elongated flexible means is under tension and its length is transverse to the plane of said plate.

3,047,003
FLOW PROPORTIONING SYSTEM FOR FOAM PRODUCING APPARATUS
Gordon T. Gurney, Worcester, Mass., assignor to The Gamewell Company, Worcester, Mass., a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 22,909
8 Claims. (Cl. 137—100)



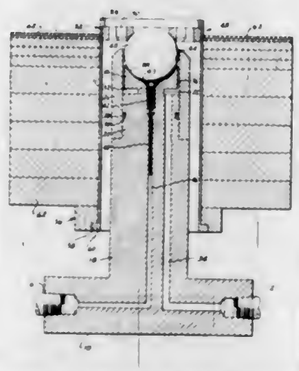
1. In apparatus for producing fire fighting foam, a water-foam liquid proportioning system comprising, a conduit for conducting water under pressure, a second conduit for conducting foam liquid under pressure, a venturi-like element in said first conduit, said second conduit being connected at one end to the throat of said venturi-like element, metering orifice means in said second conduit, fluid pressure responsive throttling valve means in said second conduit on the side of said orifice means opposite said venturi-like element, and fluid differential pressure amplifier means connected to the first and second conduits and including valve means adapted to be connected to a source of pressurized control fluid and connected to said throttling valve means to supply control fluid to said throttling valve means at a pressure which varies with the differential between the pressure in said first conduit upstream of said venturi-like element and in said second conduit between said orifice means and throttling valve means.

3,047,004
PROPORTIONER AND MIXER, AND TUMBLING DIFFERENTIAL FOR CONTROLLING THE ACTION THEREOF
Vance C. Sterrett, Logansport, Ind.
(1135 N. Beville, Indianapolis 1, Ind.)
Filed Dec. 1, 1958, Ser. No. 777,318
17 Claims. (Cl. 137—101.25)



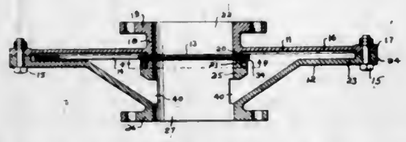
1. A liquid proportioning and mixing device comprising a first receptacle for containing a liquid supply, a second receptacle adapted to receive a liquid vehicle, a liquid inlet means and a liquid outlet means for the second receptacle, said second receptacle being air-tight means for controlling flow of liquid through said inlet means and said outlet means such that introduction of liquid vehicle into the second receptacle through said inlet means creates a hyperatmospheric pressure therein and withdrawal of liquid vehicle through said outlet means creates subatmospheric pressure therein, and means operating alternately under the influence of said pressures respectively to extract a measured quantity of liquid from the first receptacle and transfer the said measured quantity of liquid into the second receptacle.

3,047,005
PRESSURE REGULATOR
Robert J. Karr, 1605 16th St., Wyandotte, Mich.
Filed May 6, 1960, Ser. No. 27,433
11 Claims. (Cl. 137—115)



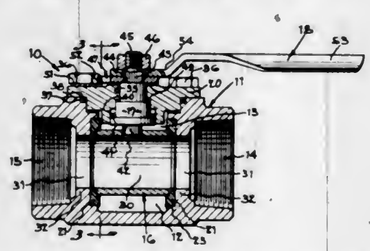
10. A pressure regulating device comprising a seat; a freely movable weight positioned above said seat; a substantially vertical housing surrounding said seat and weight; said weight having a circumferentially extending spherical portion adjacent the interior walls of the housing; means for introducing inlet fluid under pressure beneath and near the point of adjacency of the spherical portion and the interior walls of the housing; the spherical portion of said weight positioned to cooperate with said housing to define a variable cross-section discharge flow path leading out of the upper end of the housing; the cross-section of said discharge flow path increasing with slight upward movement of the weight and decreasing with slight downward movement of the weight; and outlet means leading from said seat.

3,047,006
SELF-CLEANING CUT-OFF GATE CONSTRUCTION
Sherman T. Transeau, R.D., Riverside, N.J.
Filed Aug. 24, 1959, Ser. No. 835,508
8 Claims. (Cl. 137—243)



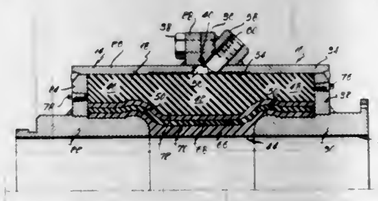
1. A cut-off valve for use in a material conveying conduit system comprising, in combination, a pair of axially aligned conduit systems disposed in axially separated relation to provide a space between the proximate inner ends thereof, a cut-off gate in the form of an apertured flat plate disposed in said space for shifting movement laterally of said axially aligned conduit sections, one of said sections on the upstream side of said gate plate being provided with a flat-surfaced seat against which the upstream face of said plate is adapted to be seated and the other of said sections on the downstream side of said gate plate being externally provided with an annular shoulder spaced axially from the plane of shifting of said gate plate, an annular pressure ring in axially spaced registry with said annular shoulder, a plurality of compression springs spaced circumferentially about said shouldered conduit section and disposed between said ring and shoulder to constantly bias said gate plate into flat-wise sealing engagement with said flat-surfaced seat, means for automatically preventing conduited material from packing between said ring and shoulder to thereby avoid eventual binding of said gate plate, and means for laterally shifting said cut-off gate plate to position the aperture therein into and out of registry with said aligned conduit sections to open and close the valve as desired.

3,047,007
BALL VALVE
Edmund P. Lunken, Cincinnati, Ohio, assignor to The Lunkenheimer Company, Cincinnati, Ohio, a corporation of Ohio
Original application Apr. 1, 1959, Ser. No. 803,431. Divided and this application Aug. 4, 1960, Ser. No. 47,542
10 Claims. (Cl. 137—315)



1. A valve comprising a valve body having a valve chamber accessible from the top of said body and inlet and outlet fluid ports disposed at opposite sides of the valve chamber, said body having an annular recess surrounding each of said fluid ports, an elastically yieldable seat ring disposed within each of said annular recesses and having a seat surface disposed within said valve chamber, a rotatable closure member of generally spheroid form disposed within said seat chamber in engagement with said seat rings, said rotatable closure member having a bore formed therein for registry with said inlet and outlet ports in the open position of the valve, said rotatable closure member having a reduced vertical dimension transversely of said fluid bore, said vertical dimension being less than the spacing of said seats, the spacing of the seats and the dimensions of the closure member being so related that the closure member preloads the seats in all operative positions of the closure member whereby said rotatable closure member is insertable within said valve chamber by aligning the vertical dimension of said member transversely of said seats and is effective to preload said seats upon rotation in a direction about an axis transverse to an axis through said transverse fluid bores.

3,047,008
VALVE
John Robert Clarkson, Palo Alto, Calif., assignor, by mesne assignments, to The J. R. Clarkson Company, a corporation of California
Filed May 24, 1957, Ser. No. 661,488
8 Claims. (Cl. 137—315)

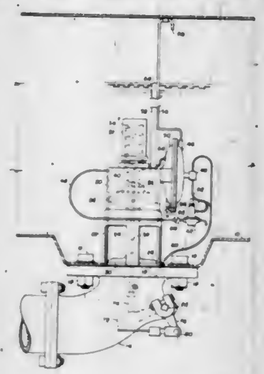


1. A valve comprising a tubular elastomeric structure defining a radially contractible flow passage, a casing for said structure, means securing the ends of said tubular structure in fixed axially spaced relation in said casing, and selectively operable means for subjecting an annular central portion of said structure to uniform radial compression to constrict the size of the opening through said tubular structure at said central portion, said casing being formed of two separable parts, the parting surfaces of which extend transversely of the longitudinal dimension of said tubular structure and lie intermediate its end, said casing being provided with means by which fluid pressure can be selectively exerted axially against at least one end of said tubular elastomeric structure to forcibly eject said structure from said casing upon disassembly thereof.

3,047,009
BOTTOM LOADING VALVE MECHANISM
Wesley L. Hunter, Arlington Heights, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed July 24, 1959, Ser. No. 829,262
3 Claims. (Cl. 137—403)

1. A tank valve mechanism comprising a housing adapted to attach to the bottom of a tank, said housing having an aperture formed therein, valve means for opening and closing said aperture including a cylinder having one closed end and supported in axially aligned relationship with said aperture, a piston-valve member, the piston portion of which is slidable in said cylinder, the valve end of which forms a closure for said aperture, said housing being adapted to attach to said tank so that said valve end closes against the direction of flow through said aperture into said tank, means biasing said piston-valve member to

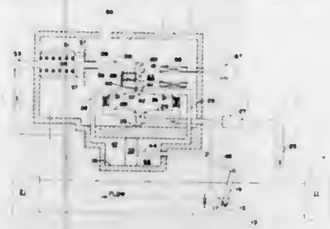
the closed position, a fluid conduit communicating the space enclosed by said cylinder and the piston-valve member with the side of said valve end remote from said cylinder, whereby at least a part of fluid pressure applied externally against the valve end of said piston-valve member is applied also to the piston portion of said piston-valve member; a pressure relief conduit communicating with said space enclosed by the cylinder and the piston-valve member, a valve yieldably biased to the open position controlling said pressure relief conduit, an overflow tube responsive to fluid level having an open upper end, the lower end of said overflow tube communicating with means actuated by the presence of fluid in said overflow tube to close said last-named valve, said means including a diaphragm-operated valve having opened and closed positions yieldably biased to the closed position, said diaphragm being in fluid communication with said overflow tube, whereby fluid pressure in said overflow tube will cause said dia-



phragm operated valve to open when said overflow tube is full of fluid, a fluid conduit communicating said aperture externally of said valve end and the inlet side of said diaphragm-operated valve, a fluid conduit communicating between the outlet side of said diaphragm-operated valve and pressure-sensitive means for closing said pressure relief conduit controlling valve, whereby a small pressure in said overflow tube releases a larger pressure applied externally of said valve end to actuate said pressure-sensitive means; whereby the pressures on the piston portion and the valve end of said piston-valve member will become balanced through said first-named conduit, and the biased piston-valve member will move to the closed position, and a check-valve controlled bleeder passage operatively communicating with the lower end of said overflow tube, whereby fluid will be bled out of said overflow tube when said tank is empty, but reverse flow into said overflow tube is prevented.

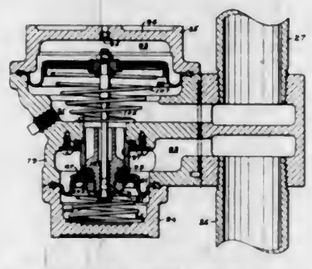
3,047,010
AIR PRESSURE REGULATOR
Neal B. Rothfuss, Clinton, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,747
3 Claims. (Cl. 137—489)

1. An air pressure regulating system comprised of a tubular conduit having an inlet end and an outlet end, a pressure-regulating butterfly valve rotatably mounted in said conduit on a shaft extending across said conduit and arranged to open from contact with said conduit toward said outlet end, said shaft being off-set from the axial center line of said conduit so that by pressure unbalance said valve will be urged toward open position during pressure regulation and will be closed when outlet pressure in said conduit exceeds the inlet pressure, servo means including an actuating piston for adjusting said valve, said servo means being connected to said conduit upstream of said butterfly valve and arranged to admit upstream air to each side of said piston, said piston being operably linked to said shaft to cause said butterfly valve to open toward said outlet end of said conduit, said servo means having a vent device for variably releasing air alternately from the sides of said piston, bellows means responsive to the pressure in said conduit



downstream of said butterfly valve for adjusting said vent device and hence regulating the pressure differential on said actuating piston for adjusting said valve and shut-off means including a manually-operated control for causing said vent device, while under control of said bellows means, to give a valve-closing pressure differential on said actuating piston.

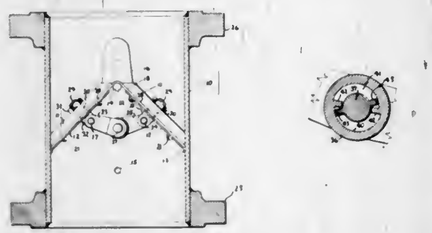
3,047,011
VACUUM RESPONSIVE SERVO FLOW CONTROL VALVE
George W. Wright, Yoder, and Burdette W. Foss, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Original application June 13, 1956, Ser. No. 591,188. Divided and this application Jan. 21, 1959, Ser. No. 788,244
5 Claims. (Cl. 137—490)



1. A control valve comprising a body, first and second displacement means defining with said body an inlet and an outlet chamber, said body defining a first port connecting said chambers, a control valve for said first port connected for operation by said first displacement means, yieldable means for urging said control valve toward said port to close it, means cooperating with said first displacement means for form a third chamber, means defining an orifice connecting said third chamber in communication with said inlet chamber, means defining a second port connecting said third chamber in communication with said outlet chamber, second valve means mounted to control said second port and connected for operation by said second displacement means in a direction to open said second port when a vacuum is applied to said outlet chamber, yieldable means for urging said second valve means toward said second port, said means defining said second port being connected for movement by said first displacement means and relative to said second valve means in a port closing direction, as said control valve opens, said second valve means and second port defining means being constructed so as to gradually

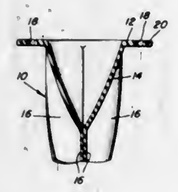
increase and decrease the effective area of said second port upon relative port opening and closing movement thereof, said first displacement means being movable in response to the opening of said second valve means to open said control valve to the degree necessary to establish equilibrium between the respective total forces acting on said first and second displacement means.

3,047,012
VISCOUS DAMPENER FOR VALVES
Edward M. Smith, Mansfield, Ohio, assignor to Techno Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Apr. 16, 1959, Ser. No. 806,850
7 Claims. (Cl. 137—512.15)



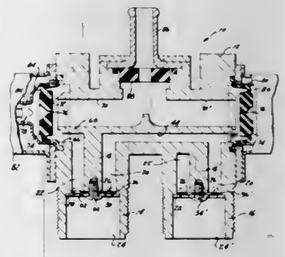
5. A valve comprising a hollow body, a closure member having a first and a second part swingably attached to said hollow body to swing from an open to a closed position, damping means, said damping means comprising a member with a hollow therein attached to said first part of said closure member, a rotatable member rotatably supported in said hollow member and attached to said second part of said closure member and having means thereon to move relative to and spaced from the surface of said hollow member as it rotates in said hollow member, the space between said rotatable member and said hollow member decreasing as said closure member moves from an open to a closed position, said hollow in said hollow member comprising a first and a second cavity, said first and second cavities being divided by said means on said rotatable member, and a liquid in said first and second cavities, said liquid being forced from said first cavity to said second cavity through said space between said means on said rotatable member and said surface of said hollow member when said closure member swings whereby a varying force is exerted on said closure member.

3,047,013
DIAPHRAGM FOR WATER CLOSETS
William J. Baumbach, 4147 Wilson Blvd., Arlington, Va.
Filed Mar. 22, 1957, Ser. No. 647,832
2 Claims. (Cl. 137—525.1)



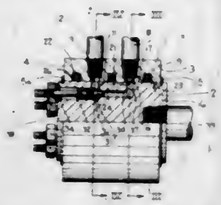
1. A diaphragm for use with water closets to prevent back flow therethrough, said diaphragm comprising a base in the form of a mounting flange for positioning between the base of a toilet fixture and a pipe coupling upon which the fixture is mounted, a normally closed conical valve portion depending from said base, said conical valve portion being divided into a plurality of individual circumferentially spaced and longitudinally extending segments, said conical valve portion having formed integral therewith a plurality of radiating pairs of lips, said lips being disposed at edges of said segments, lips of each pair of lips being integrally connected together remote from said segments along a line parallel to the axis of said conical valve portion and normally being in contact with each other to seal said conical valve portion, said conical valve portion of said lips being formed of resilient material whereby said lips are separable in response to water disposed within said conical valve portion to open said conical valve portion and permit escape of water through said conical valve portion, said lips having spirally formed lower portions whereby back pressure of liquid upon said conical valve portion and said lips effects a tighter closing of said conical valve portion of said lips, said lips projecting downwardly below said conical valve portion, said lips being generally triangular in elevation and terminating at their upper ends adjacent said base.

3,047,014
FIVE-TEMPERATURE NON-THERMAL MIXING VALVE
Julius William Kovach, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y.
Filed Dec. 19, 1957, Ser. No. 703,895
2 Claims. (Cl. 137—607)



1. In a five-temperature liquid mixing valve, a valve valve body having first and second inlet conduits for introducing hot and cold liquids into the valve, a wall within each of the conduits forming two separate passages within each conduit for receiving fluid, a resilient check valve disk positioned against the upstream edge of each of said walls and extending across said inlet conduits, an apertured wall member positioned against the upstream face of each of said resilient disks to prevent reverse fluid flow into the fluid conduits, first annular passage extending from one of said passages of said first inlet conduit, a passage extending from the other passage of said first inlet conduit into interconnection with one of the passages of said second inlet conduit, a second annular passage extending from said interconnected passage of said second inlet conduit, said first and second annular passages being axially aligned, first and second outlet passages extending axially within the first and second annular passages to form first and second annular valve surfaces, a third outlet passage commuicating with said first and second outlet passages, a third annular passage surrounding said third outlet passage to form a third annular valve surface, a passage connecting said third annular passage with the other passage of said second inlet conduit, diaphragms secured to the valve body and extending actuated plunger overlying each of the diaphragms for selectively opening and closing the three connected passages to provide five outlet fluid temperature combinations.

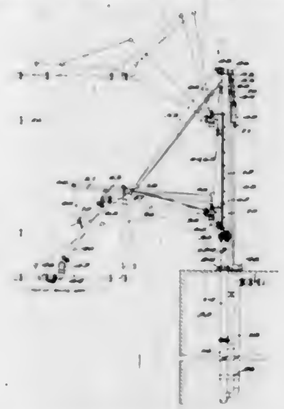
3,047,015
TURRET VALVE
William H. Buck, Portage Township, Kalamazoo County, Mich., assignor to Atlas Press Company, Kalamazoo, Mich., a corporation of Michigan
Filed Sept. 21, 1959, Ser. No. 841,222
2 Claims. (Cl. 137—614.17)



1. A control valve, comprising: a casing having a cylindrical internal opening and having an inlet port and an outlet port which are axially aligned and which extend substantially radially from said opening at axially spaced points therealong; a rotatable, cylindrical core rotatably and snugly arranged within said internal opening; retaining rings seated in said core and engaging the axial ends of said casing and holding said core against axial movement with respect to said casing; O-ring means within said casing encircling and sealingly contacting said core and located between said inlet and outlet ports and between said ports and the ends of said casing for preventing flow of fluid along the external surface of said core; means defining a plurality of circumferentially spaced passageways in said core, each passageway consisting of a pair of axially spaced, radially extending arm portions spaced apart the same distance as and adapted to simultaneously register with said inlet and outlet ports, each passageway also including an axially extending bight portion connecting the inner ends of said arm portions, said bight portion having a valve seat on one end thereof; means defining an axially extending, threaded opening for each passageway, which opening is of larger diameter than the bight portion of its associated passageway and which is axially aligned therewith and which extends from the valve seat at the juncture of an arm and the bight of said passageway through one end of said core; a needle valve core having a threaded portion threaded into each opening and having a tapered end of smaller diameter than said threaded portion and disposed in opposition to the associated valve seat for limiting flow of fluid through said bight, said needle valve core extending through and beyond said one end of said cylindrical core whereby the position of the tapered end thereof with respect to said valve seat may be adjusted; lock nut means for holding said needle valve core in axially nonmovable position within said opening, and means secured to the other end of said cylindrical core for rotating same with respect to said casing.

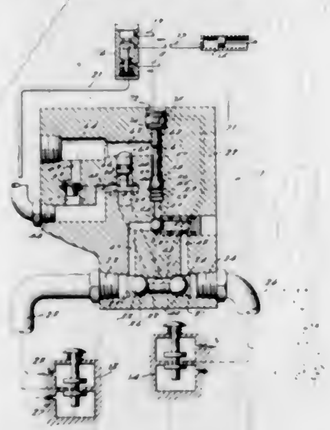
3,047,016
MARINE LOADING AND UNLOADING APPARATUS
Raymond A. Andresen, 55 Lincoln Ave., Port Chester, N.Y.
Filed May 27, 1960, Ser. No. 32,341
4 Claims. (Cl. 137—615)

1. An on-shore loading and unloading apparatus for the transmission of fluid material between a shore installation and a floating ship, said apparatus being mountable on a stable, marine structure and comprising: a substantially vertical, tubular mast having a lower section adapted to be anchored below the floor of the marine structure, and an upper section adapted to extend above the marine structure floor and having an elongated opening formed in the seaward side thereof; a slidable fluid conduit positioned within said mast, and open at its lower end to be in fluid communication with said lower section; conduit means connected to the upper portion of said slidable conduit and extending through said elongated opening to establish a fluid connection between the ship and said slidable conduit; means for adjustably supporting said conduit means from the upper end portion of said mast; bearing means supporting the upper end of said slidable conduit for vertical movement through a distance substantially equal to the length of said elongated opening;



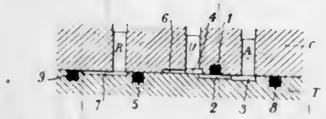
seal means for supporting the lower end of said slidable conduit throughout said movement, said seal means being disposed between the inside of said mast and the exterior of said slidable conduit to prevent the escape of fluid material from said lower mast section exteriorly of said slidable conduit; means for moving said slidable conduit vertically within said mast; and means establishing a fluid connection between said lower section and the shore installation.

3,047,017
NON-TIE-DOWN VALVE
Edwin P. Brinkel, Royal Oak, Mich., assignor to Ross Operating Valve Company, Detroit, Mich., a corporation of Michigan
Filed Nov. 20, 1959, Ser. No. 854,437
17 Claims. (Cl. 137—620)



1. In a safety mechanism for use in conjunction with a pair of manually actuatable valves and a fluid control device, a safety valve movable between a first position disenabling said device and a second position enabling said device, means responsive to simultaneous actuation of both manual valves for urging said safety valve toward its second position, and normally inactive means responsive to actuation of only one of said manual valves for urging said safety valve toward its first position.

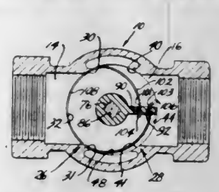
3,047,018
FLUID DISTRIBUTOR DEVICE
René Lucien, Neuilly-sur-Seine, France, assignor to Société à Responsibilité Limitée Recherches Etudes Production R.E.P., Paris, France, a corporation of France
Filed Dec. 8, 1959, Ser. No. 858,155
Claims priority, application France Dec. 22, 1958
2 Claims. (Cl. 137—625.25)



1. A fluid distributor comprising a distributor body having a cylindrical cavity, three transverse bores being provided in said body, said bores being adapted for connection respectively to a fluid inlet source, a fluid utilization source and a fluid return source, said body having in correspondence with each of said bores an orifice opening into said cavity, said orifices thus constituting utilization, inlet and return orifices, the utilization orifice being positioned between the other two orifices, a cylindrical slide piston in said cavity and movable axially therein, said distributor body having a circular groove encircling and opening into said cavity in correspondence with said utilization orifice and axially extending grooves in communication with said circular groove and extending towards the return orifice; the slide piston having a first annular peripheral groove adapted to communicate with the inlet orifice and being further provided with axially extending grooves in communication with said annular groove and being adapted in cooperation with the latter to establish communication between the inlet orifice and the utilization orifice with the slide piston in predetermined position, said slide piston being further provided with a second annular peripheral groove of an axial extension adapted to establish communication between the utilization orifice and the return orifice with the slide piston in a further predetermined position; two circular gasket channels being provided respectively in the distributor body in communication with the cavity between the inlet and utilization orifices and on the slide piston between the axially extending grooves and said second annular groove, and packings in each of the channels for providing a fluid tight relation between the slide piston and the distributor body, said packings being deformed under the action of fluid pressure with said packings facing said grooves such that said packings are deformed in a direction away from said grooves to prevent entry of said packings into said grooves.

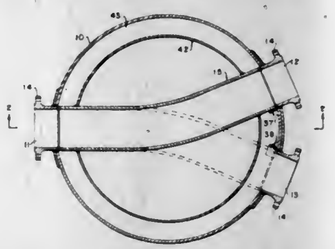
3,047,019
CURTAIN VALVE
Robert L. Simpson, Farmington, Conn. (R.F.D. 1, Elmwood, Conn.)
Filed June 3, 1960, Ser. No. 33,845
9 Claims. (Cl. 137—625.28)

1. In a valve, the combination of a housing having a generally cylindrical valve chamber therewithin which communicates with discharge and inlet ports in opposite portions of its side wall, a rotary actuator in said valve chamber with a generally radial arm provided with two axially elongated and radially spaced slots, and a generally spiral flexible valve member in said chamber with opposite end portions entered respectively in said slots and projecting therethrough in opposite directions, each of said opposite end portions of said member being provided with means for preventing withdrawal of the end portion from its slot and an intermediate portion of said valve member being disposed adjacent said discharge port and acted on by fluid from said inlet port to close said discharge port, said means being engageable selectively by



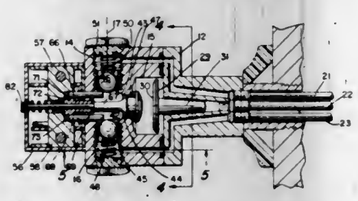
said radial arm on said actuator on rotation of said actuator in one or an opposite direction whereby said intermediate portion of said valve member can be selectively pulled away from opposite sides of said discharge port in a peeling motion to progressively open the said port.

3,047,020
PIPE LINE SCRAPER DIVERTER
Maurice L. Barrett, Jr., Zionsville, Ind., assignor to Shell Oil Company, a corporation of Delaware
Filed Jan. 6, 1959, Ser. No. 785,277
3 Claims. (Cl. 137—625.46)



1. A scraper diverter for use at a pipe line junction, said diverter comprising a housing having a single inlet port and two discharge ports, a conduit rotatably-mounted within said housing and fixedly positioned against axial movement for selectively connecting the inlet port with one of siad outlet ports, said conduit being in the form of a pipe section smoothly curved in an axial direction and adapted to be positioned in full-flow communication between the inlet port and selectively with each of said discharge ports, means for rotating the conduit within said housing, and flow passage means within said housing outside said conduit in open communication between said inlet port and both of said outlet ports when either outlet port is in communication with said conduit.

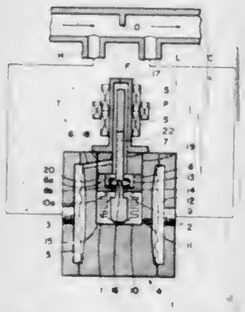
3,047,021
FLUID MIXING VALVE
Anthony Turak, 11208 Lorain Ave., Cleveland, Ohio
Filed Oct. 1, 1959, Ser. No. 843,702
10 Claims. (Cl. 137—636.1)



1. A plural mixing and dispensing valve comprising, in combination, a body having a longitudinal axis, first,

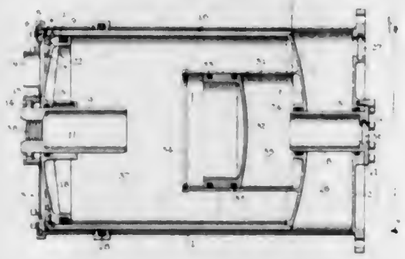
second and third fluid lines connected to said body, an outlet in said body, first, second and third valve openings in said outlet communicating with said first, second and third lines, respectively, said first and third valve openings being on opposite sides of said outlet and said second valve opening being in the rear of said outlet, first, second and third valve members seatable in said first, second and third valve openings, respectively, spring means urging closed said valve members, first, second and third valve stems aligned parallel to the longitudinal axis of said body and slidable in said body, the rearward ends of said first and third valve stems being disposed in said outlet to cammingly engage said first and third valve members to unseat same upon rearward movement of said first and third valve stems, said second valve member being operably connected to said second valve stem and seating in said second valve opening upon forward axial movement of said second valve stem, first and second cam members journalled on the front of said dispensing valve, a first cam surface on said first cam member, second and third cam surfaces on said cam member, first, second and third cam followers, complementary surfaces on said second cam follower and said body to permit non-rotative sliding movements of said second cam follower parallel to said longitudinal axis, complementary surfaces on said first and second and said second and third cam followers to permit non-rotative relative sliding movements of said first and second and said second and third cam followers parallel to said longitudinal axis, said first and third cam followers operably connected to said first and third valve stems, respectively, and overlying said second cam follower, a forwardly facing shoulder on said second valve stem, said second cam follower engageable with said forwardly facing shoulder, each of said cam members having a neutral position and a first arcuate position and said second cam member having a second arcuate position on the other side of neutral, said first cam surface actuating both said first and second cam followers, said second cam surface actuating only said second cam follower, and said third cam surface actuating both said second and third cam followers.

3,047,022
PRESSURE RESPONSIVE DEVICE
Donald J. Aldinger, Webster, N.Y., assignor to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York
Filed Dec. 24, 1958, Ser. No. 782,832
5 Claims. (Cl. 137—784)



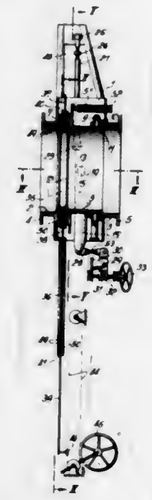
1. A chambered body having walls enclosing a liquid, portions of said walls being composed of elastic material and being elastically deformable inwardly and outwardly of a chamber in said body, said chamber being entirely filled with said liquid, one of said portions being arranged to have a fluid pressure directly applied thereto externally of said chamber for deforming said wall inwardly of said chamber, whereby to deform another of said portions outwardly of said chamber, said one of said portions being larger in effective area than the said another portion, and also being stiffer than said another portion, whereby deformation of said one portion inwardly of said chamber in terms of its linear displacement inwardly of said chamber is transformed by hydraulic amplification into a much larger linear displacement of said another portion outwardly of said chamber; said body also including a liquid-filled second chamber, a third portion of said walls like the said one portion is provided and is arranged to be deformable inwardly and outwardly of said second chamber, the said chambers being arranged in said body so that said another portion of said walls is common to both said chambers, the arrangement being that if said another portion is deformed outwardly of one of said chambers, it at the same time is deformed inwardly of the other of said chambers; said third portion being arranged to have a second fluid pressure applied thereto externally, whereby said another portion deforms inwardly of one chamber and outwardly of the other in correspondence to difference in said fluid pressure to provide a linear displacement also corresponding to said difference.

3,047,023
GAS-CHARGED ACCUMULATOR-RESERVOIR UNIT
Willard K. Dick, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed June 26, 1959, Ser. No. 823,234
3 Claims. (Cl. 138—31)



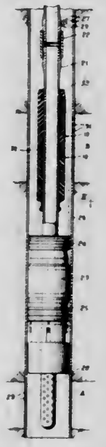
1. A gas-charged reservoir and accumulator unit comprising a first casing having a cylindrical wall and a front transverse end wall fixed to and closing one end of the cylindrical wall; a rear transverse end wall fixed to the opposite end of the first casing; tubes, one carried by each end wall of the first casing and each projecting into the casing, the cross-sectional areas of the tubes being unequal and the tube carried by the front wall having the smaller area; a second casing reciprocable within the first casing and having a cylindrical wall and front and rear transverse end walls fixed to and closing the opposite ends of its cylindrical wall, each transverse end wall of the second casing having an opening through which one of the tubes projects, the second casing being shorter than the first casing so that the front walls of the two casings and a portion of the outer periphery of one of the tubes define a variable volume annular reservoir chamber within the first casing; a third casing located within the second casing and having a cylindrical wall and front and rear transverse end walls closing the opposite ends of its cylindrical wall, one of the transverse end walls of the third casing being carried by the front transverse end wall of the second casing and the other transverse end wall of the third casing being movable relatively to said front transverse end wall of the second casing along the longitudinal axis of the third casing and subject to the pressure in the second casing, the cylindrical wall of the third casing being fixed to only one of the end walls whereby a variable volume accumulator chamber is defined within the third casing, the front transverse end wall of the third casing having an opening through which the tube carried by the front transverse end wall of the first casing projects; an accumulator port formed in the front wall of the first casing and leading into the tube carried by that wall; a reservoir port formed in the first casing and communicating with the reservoir chamber; and a gas-charging port formed in the rear wall of the first casing and leading into the tube carried by that wall, the cylindrical walls of the three casings and the two tubes being coaxial.

3,047,024
SLIDE VALVE
Heri Schuller, Rohrbach (Saar), Germany, assignor to Th. Jansen G.m.b.H., Rohrbach (Saar), Germany, a firm of Germany
Filed Sept. 19, 1958, Ser. No. 762,050
Claims priority, application Germany Sept. 20, 1957
9 Claims. (Cl. 138—94.3)



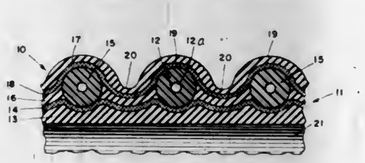
1. A gate type slide valve for gas lines comprising a housing having a central part, pipe sockets secured to two opposite sides of said housing part, a sealing pipe disposed between said pipe sockets within said housing part and axially slidable therein, a corrugated tubular member forming a diaphragm flexibly connecting one end of said sealing pipe to said housing part, the other end of said sealing pipe having a sealing surface, a corresponding sealing surface on the inner side of said housing part opposite to said first sealing surface, and a spectacle gate slidably disposed between said sealing surfaces for movement between the open and closed positions of said gate, said gate also having sealing surfaces at both sides thereof, the adjacent sealing surfaces of said sealing pipe, said housing part, and said gate being adapted to be pressed against each other in the open and close positions of said gate, a pair of pressure levers pivotally mounted on said housing part and connected to said sealing pipe at diametrically opposite points thereof for shifting said sealing pipe in the axial direction, a pair of guide rods pivotably mounted at one end on said housing part independently of said pressure levers and at the other end on said sealing pipe at opposite sides thereof and above said diametrically opposite points at a location spaced from said pivotal connection of said pressure levers to said sealing pipe substantially by an amount equal to the spacing between the connections of said pressure levers to said sealing pipe and said lever pivotal mounting on said housing part for guiding said sealing pipe in its longitudinal direction, compression springs mounted between said housing part and said sealing pipe and extending parallel to the axis of said sealing pipe and tending to press said sealing pipe in the direction toward said sealing surfaces, and means for adjusting the tension of said springs from the outside of said housing part.

3,047,025
TUBING PROTECTORS
Roy C. Davis, Dallas, Tex., assignor to The Guiberson Corporation, Dallas, Tex., a corporation of Texas
Filed Jan. 30, 1957, Ser. No. 637,294
3 Claims. (Cl. 138—106)



3. In a protected device, a well pipe; a plurality of elastic sleeves radially stretched about the well pipe and held in such stretched condition thereby; each sleeve when relaxed having a bore of lesser diameter than the outer diameter of the well pipe on which it is used, the said sleeves being in abutting relationship and having overlapping end portions; one end portion being forced within the other end portion to fill and elastically expand same to thereby provide elastically gripped and sealed overlapping ends.

3,047,026
FLEXIBLE HOSE
Marvin M. Kahn, Trenton, N.J., assignor to The Acme-Hamilton Manufacturing Corp., Trenton, N.J., a corporation of Delaware
Filed Sept. 23, 1959, Ser. No. 841,723
7 Claims. (Cl. 138—122)

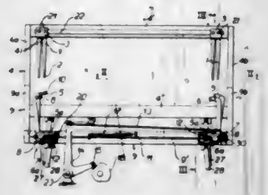


1. A flexible, crushproof hose comprising an elastomeric carcass including helical peak and valley portions on the outer surface thereof, and a helical polypropylene reinforcing element, the successive convolutions of said reinforcing element being located within the successive, respective peak portions of said carcass.

3,047,027
DEVICE FOR SELVEDGE FORMING

Vladimir Svatý, Liberec, Miloslav Riha, Rumburk, and Lubomir Taticek, Liberec, Czechoslovakia, assignors to Sdruzeni podniku textilniho strojirenstvi, Chrastava, Czechoslovakia

Filed July 31, 1959, Ser. No. 830,913
5 Claims. (Cl. 139—54)

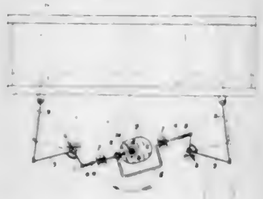


1. In a loom, in combination, a device for forming a selvage along the edge of a fabric, comprising, in combination, first and second harness frame means movable toward and away from each other in one direction; needle means mounted on said first harness frame means and having at one end at least one aperture for guiding a binding warp thread; holder means mounted on said second harness frame means and including a pivot means; a pair of scissor-like members, each having at least one opening, said openings being adapted to guide a pair of braiding warp threads, said scissor-like members being mounted on said pivot means for angular reciprocation between two positions in which said openings move transverse to said one direction and are alternately located on opposite sides of said aperture, said scissor-like members having arms extending in said two positions at different angles to each other; camming means located between said arms; resilient means for biassing said arms to move toward each other and to engage said camming means; actuating means connected to said camming means and being operated in synchronism with said loom to reciprocate said camming means toward and away from said pivot means so that said scissor-like members move between said two positions at every second pick of a weft thread; and operating means for reciprocating said harness frame means toward and away from each other so that said binding warp thread and said braiding warp threads form sheds for every weft while said braiding warp threads cross at every second weft.

3,047,028
SHREDDING MEANS

Otto Rotrekl, Brno, Czechoslovakia, assignor to Sdruzeni podniku textilniho strojirenstvi, Chrastava, Czechoslovakia

Filed Sept. 10, 1958, Ser. No. 760,180
3 Claims. (Cl. 139—57)

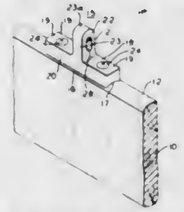


1. In a heald shaft weaving machine, in combination, a heald shaft movable between two positions for effecting a warp weave and a weft weave, respectively; linkage means connected to said heald shaft and being movable between two positions for shifting said heald shaft between said positions; a pair of guide means aligned in a plane; shifting means including two supporting portions guided in said guide means for movement in said plane and an intermediate connecting portion; a cam follower on said shifting means between one of said supporting portions and said connecting portion; and a rotary cam having an axis located in said plane between said supporting portions and having a cam portion of smaller eccentricity and a cam portion of greater eccentricity successively engaging said cam follower during rotation of said cam whereby said shifting means is shifted in said plane; and means for detachably connecting said supporting portions of said shifting means to said linkage means so that upon turning of said shifting means with respect to said axis of said rotary cam through 180° and interchange of said supporting portions in said guide means different weaves are produced.

3,047,029
LOOM HARNESS

John J. Kaufmann, Jenkintown, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Nov. 29, 1960, Ser. No. 72,397
1 Claim. (Cl. 139—88)



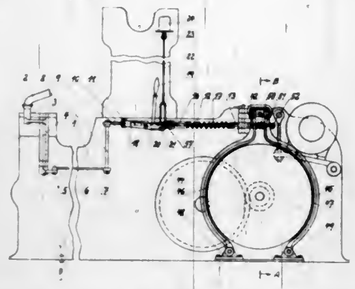
In loom harness, the means for securing connector devices to a rail of a heddle frame at a selected location intermediate the ends of the rail and limiting the movement thereof with respect to the main plane of the heddle frame and in which the rail has opposite side faces in spaced planes and an outer connecting edge face, which comprises a T-shaped body of a single piece of synthetic plastic material having aligned side sections extending along the outer edge face of the rail with an inner face in engagement with the outer edge face of the rail and an arm extending outwardly from the rail outer edge, said side sections and said arm having opposite bounding faces spaced a lesser distance than the opposite side faces of the rail, said arm having a pair of faces transverse to and intersecting the planes of the side faces and having a vertically elongated horizontal opening therebetween spaced from the rail, said opening being parallel to the main plane of the heddle frame.

3,047,030
DEVICE FOR INSTANTANEOUS STOPPING OF POWER LOOMS

Kurt Metzler, Duwockskamp 15, Hamburg-Bergedorf, Germany

Filed Oct. 12, 1959, Ser. No. 845,984
Claims priority, application Germany Oct. 15, 1958
10 Claims. (Cl. 139—336)

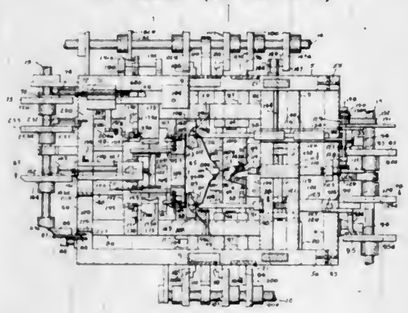
1. In a power loom in combination, brake-and-clutch means having an operating position where a brake thereof is disengaged while a clutch thereof is engaged and having an inoperative position where the brake is engaged and the clutch is disengaged; a first linkage operatively connected with said brake-and-clutch means for moving the latter between said positions thereof; spring means operatively connected with said first linkage for urging the latter to place said brake-and-clutch means in said inoperative position thereof; shipper lever means; a second linkage interconnecting said shipper lever means with said first linkage for transmitting movement of said shipper lever means to said first linkage for manual operation of said brake-and-clutch means, said second linkage including a collapsible rod means and releasable means releasably maintaining said collapsible rod means in an expanded condition during normal operation of the loom, said rod means, when collapsed, preventing transmission of motion between said shipper lever means and said first linkage and releasing the latter to said spring means for placing said brake-and-clutch means in said inoperative position thereof.



3,047,031
MACHINE FOR MAKING GARMENT HANGERS

George E. Came, Gadsden, Ala., and Harry M. Simmons, Ann Arbor, Mich., assignors to Cleaners Hanger Company, Detroit, Mich., a corporation of Michigan

Filed June 27, 1955, Ser. No. 518,038
19 Claims. (Cl. 140—81.5)



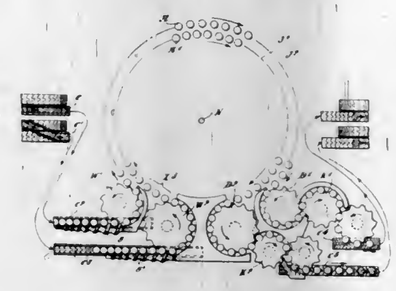
12. In a machine for making garment hangers of the type comprising a wire member having a pair of downwardly divergent arms, and a strut formed of tubular material bridged between and carried by the arm ends, the combination with mechanism for periodically and singly establishing such wire members in an assembly-forming position, of mechanism for singly delivering the hanger struts to said position and disposing them between the ends of the wire members, and mechanism for imposing an approximate U form on such ends and thrusting such ends respectively into the respective strut ends, and means for actuating said mechanisms in a predetermined cyclic relation.

3,047,032
CONTAINER FILLING APPARATUS

Sidney T. Carter, Shrewsbury, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin

Filed Apr. 13, 1959, Ser. No. 806,128
23 Claims. (Cl. 141—99)

1. A filling machine of the kind which comprises article supports arranged in concentric rows and revolving at the same angular velocity about a vertical axis, each support being of a size to hold a single article and being movable up and down, an apparatus comprising a frame, stationary plates carried by the frame, said plates having horizontal surfaces, all in the same horizontal plane, along which articles may slide in moving onto or off of the supports, article-transfer means operative to deliver articles to and for removing articles from the supports

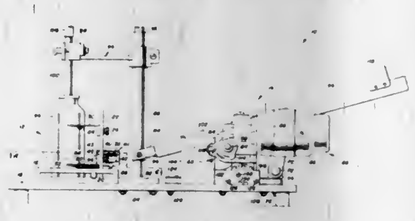


of both rows, power-actuated means for moving the supports of both rows vertically, said power-actuated means being operative to dispose the supports of both rows simultaneously at a receiving-discharging level or alternatively to dispose the supports of both rows simultaneously at a filling level, and, at times, to disposed the supports of the outer row, only, at a third level such that they freely pass the article-transfer means without interference with the latter, and means for automatically controlling the operation of said power-actuated means.

3,047,033
BOTTLE FILLING APPARATUS

Sidney Rosen, 4119 Fordleigh Road, Baltimore 15, Md.

Filed Mar. 21, 1960, Ser. No. 16,403
5 Claims. (Cl. 141—284)

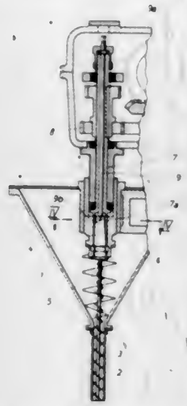


1. An automatic, adjustable apparatus for use in filling containers of various heights with a fluid from a source of pressurized fluid, comprising, means including at least one adjustable way for receiving at least one container to be filled with a fluid, means for sensing the presence of each said container in said adjustable way, a nozzle connected to said source of pressurized fluid and spaced above each said container, cam means to move each said nozzle towards and away from each said container, pump means for each said nozzle for pumping a fluid, means for moving each said nozzle down into its respective container and for automatically raising said nozzle to maintain a fixed relationship between said nozzle and the fluid level in its respective said container when said container is being filled with said pressurized fluid by said nozzle, and circuit means for synchronizing the operation of each said pump means and the position of said nozzle while its respective container is being filled thereby.

3,047,034
FEEDING DEVICE FOR PLASTIC MATERIAL, ESPECIALLY EXPLOSIVES FOR USE IN CONNECTION WITH PACKING MACHINES

Werner Sassmannshausen, Leverkusen-Schleebusch, and Otto Niepmann, Gevelsberg, Westphalia, Germany, assignors to Maschinenfabrik Fr. Niepmann & Co., Gevelsberg, Westphalia, Germany

Filed June 23, 1960, Ser. No. 38,372
Claims priority, application Germany July 6, 1959
4 Claims. (Cl. 141—311)

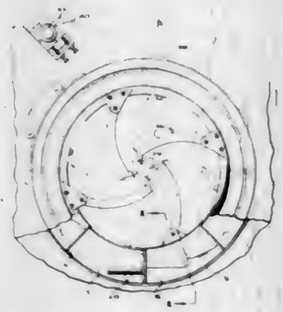


1. In a feeding device for plastic masses adapted to be fed by a worm conveyor, especially plastic explosive materials, having a filling mandrel adapted to receive the container to be filled: a storage container adapted to receive the material to be fed into said filling mandrel, a first rotatable inner worm conveyor extending from said storage container into said filling mandrel, a second rotatable outer feeding worm conveyor coaxial with said filling worm conveyor and surrounding said filling worm conveyor in spaced relationship thereto, said inner and outer worm conveyors defining an annular space therebetween, said worm conveyors being rigidly interconnected to a common driving means during operation, and being disengageable and selectively adjustable relative to each other, during cessation of operation.

3,047,035
LOG-DEBARKING MACHINES

Carl Wilson Mullis, Sr., P.O. Box 470, Lancaster, S.C.

Filed July 6, 1960, Ser. No. 41,075
6 Claims. (Cl. 144—208)

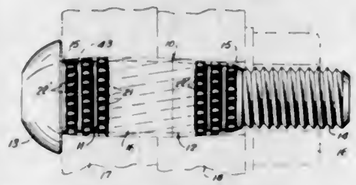


1. In a log-skinning machine, an annular tank divided transversely into a series of compartments with alternate compartments containing fluid under pressure, means establishing communication between said alternate compartments to equalize the pressure in said compartments, cylinders mounted in said alternate compartments in open communication with said compartments and at right angles to the radius of said tank, pistons slidably mounted in said cylinders, a series of askew-shaped skinner arms pivotally mounted on the inner periphery of said tank for swinging movement towards the axis of said tank, means connecting said arms with said pistons, and means for rotating said tank.

3,047,036
KNURLED BEARING BOLT

William Glen Waltermire, Cleveland, Ohio, assignor to The Lamson & Sessions Company, Cleveland, Ohio, a corporation of Ohio

Filed Feb. 18, 1959, Ser. No. 794,039
6 Claims. (Cl. 151—41.73)

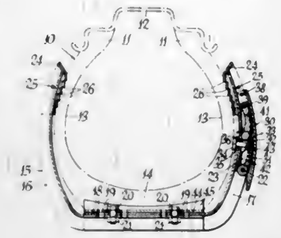


1. A bolt for connecting a pair of host members having holes for receiving the bolt, said bolt having a shank which is to be received in the holes, a threaded portion disposed adjacent and forwardly of said shank to extend outwardly of the holes in said host members to receive a nut to apply a clamping presure to said host members, a head at the end of said shank remote from said threaded portion, said shank having a diameter approximately equal to but less than the inside diameter of the receiving holes and the plurality of knurl projections thereon extending radially therefrom to interfere with the material of the host members adjacent said holes, said projections being arranged in a plurality of rows extending about the periphery of said shank with the rows being spaced from each other and each of said projections being a pressure-formed integral projection having a pyramidal shape converging radially outwardly of said shank from a base lying at the junction of the projection with said shank and including a forwardly inclined rear face and a top comprising an apex and an axially extending entry portion extending forwardly and downwardly from the apex along a convex curvature from a point of maximum radial height at the apex to a point of minimum radial height at the forward end of said base to provide a convexly curved entry face which leads the projection into the holes in the host members, said apex of each of said projections being located at an intermediate point of the axial length of the projection with the intermediate point being displaced from the entry end of the projection and the entry face of the projection extending for a substantial portion of the axial length of the projection and when the projection is viewed in plan having a narrow portion adjacent the apex thereof and a portion of maximum width adiacent the forward end of the base thereof and the base of each projection being of substantially uniform width substantially throughout its axial length and the projections of each of said rows being arranged with respect to the projections of the other of said rows to define helical rows extending axially of said shank and the first-mentioned rows of projections lying in planes generally transverse to the axis of the bolt with the projections on the bolt extending outwardly of the shank to a maximum outside diameter at an intermediate portion of the shank and the projections proceeding progressively to either end of the shank from the intermediate portion extending outwardly of the shank to progressively smaller outside diameters.

3,047,037
TRACTION DEVICE FOR VEHICLE TIRES

Ralph B. Frederick, 734 Taunton Place, Buffalo, N.Y.

Filed Aug. 22, 1961, Ser. No. 133,151
5 Claims. (Cl. 152—228)



1. An auxiliary traction device for vehicle tires comprising a tread engaging base member and a pair of sidewall engaging leg members extending rigidly from opposite sides thereof, one of said leg members extending to approximately the wide portion of one of the tire sidewalls and having a recess adjacent to the end thereof opening generally away from said base member, a movable leg member pivoted at one end to said one leg member in said recess and extending generally away from said base member, and means for locking said movable leg member in sidewall engaging position comprising a locking lever pivoted at one end to an outer portion of said movable leg member and movable pivotally toward and away from said one leg member, an elongate wedge member pivoted at one end to said locking lever at a point thereon spaced from the pivotal mounting thereof, said wedge member having a wedge formation at its other end directed generally toward said recess, whereby pivotal movement of said locking lever toward said one leg member moves said wedge member into said recess adjacent to the outer side of said movable leg member to force the latter against said sidewall.

3,047,038
TIRE CHAINS

Shelby L. Huston, 1451B Hayes St., San Francisco, Calif.

Filed Feb. 20, 1961, Ser. No. 90,278
6 Claims. (Cl. 152—241)

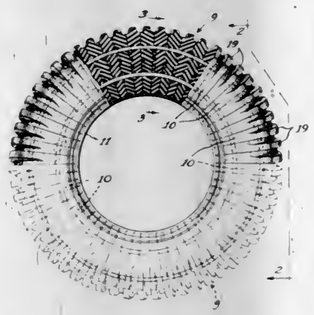


1. A tire chain for removable mounting upon a wheel-mounted tire of a vehicle while at rest; said tire chain comprising a series of road-gripping link elements each adapted to extend transversely of the tire in separately spaced arrangement circumferentially of the tire and including a pair of link elements adapted to be supported on the tire in opposed relationship to one another; each of said separately spaced road-gripping link elements having an outer terminal link presented to the outside of the tire and having an inner terminal link presented to the inside of the tire, a link chain adapted to extend circumferentially about the inside of the tire and terminating in opposed longitudinal extremities; said link chain being connected to said inner terminal link of each of said road-gripping link elements, a first adjustable tensioner adapted to adjustably connect together said opposed longitudinal extremities of said link chain and said inner terminal links of said pair of link elements a second adjustable tensioner adapted to adjustably connect together said outer terminal links of said pair of link elements, a plurality of flexible members adapted to be anchored adjacent to a central area of the wheel in radial arrangement with respect thereto and each connected to an outer terminal link of said road-gripping link elements, and a flexible web connected to and between adjacently disposed flexible members of said plurality of flexible members and connected to and between adjacently disposed road-gripping link elements of said series of road-gripping link elements thereby to constrain displacement of said flexible members and said road-gripping link elements during movement of the tire over a surface.

3,047,039
VEHICLE TIRES

Louis Fishman, 442 W. Garfield Blvd., Chicago, Ill.

Filed Mar. 16, 1959, Ser. No. 799,586
2 Claims. (Cl. 152—308)



1. A tire for vehicle wheels comprising an annular rim, a series of abutting resilient sections, each section being integrally formed of a resilient material and having a base of the same material, said base conforming to the shape of the rim and seated within the rim, each section having opposed end walls tapering toward said base, each section having an outer arcuate surface between said end walls, a flange of less width than the width of the arcuate surface and extending outwardly of said surface and angularly in one continuous direction across substantially the entire width of said section and between said end walls, the radius of curvature of the radially outer surface of the flange being greater than that of the outer arcuate surface, the arcuate sections on the opposite sides of each said flange on each section being substantially identical but in opposed relation, said flanges in combination simulating substantially the outer portion of a screw having substantially square threads and bent into a circular form, and means extending through said sections for securing said sections together to form a toroidal body.

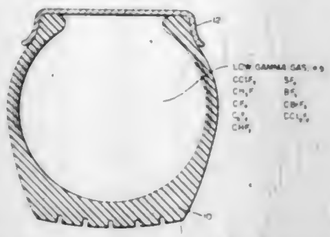
3,047,040
PNEUMATIC LOAD BEARING DEVICES

Thomas A. O. Gross, Concord Road, Lincoln, Mass.

Filed Jan. 25, 1950, Ser. No. 4,314
4 Claims. (Cl. 152—330)

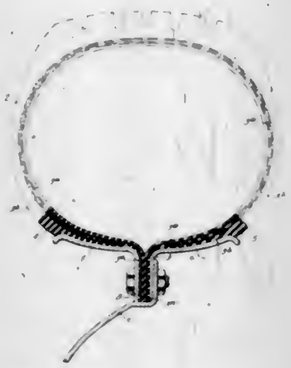
1. A pneumatic yieldable load bearing device comprising an enclosed container having wall portions movable and effective to vary the volume of the container, said portions supporting a load tending to move said portions, and a gas within said container, said gas being under a

pressure effective to support said load and having a ratio of *Cp/Cv* of no more than about 1.25 and being un-



condensible at temperatures and pressures within the container encountered during normal operation of the device.

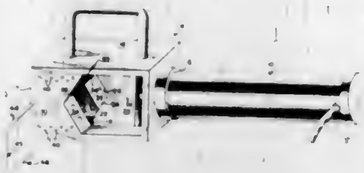
3,047,041
PNEUMATIC TIRE WITH INTEGRAL RIM
Carlo Bottasso and Luigi Amici, Milan, and Luigi Maiocchi, Moncucco di Vernate, Milan, Italy, assignors to Pirelli S.p.A., Milan, Italy
Filed Sept. 4, 1959, Ser. No. 838,124
Claims priority, application Italy Sept. 6, 1958
4 Claims. (Cl. 152—363)



1. A pneumatic tire of the type having its carcass integral with the rim, characterized in that the carcass has end portions which are, in section, of tapered shape and which contain the ends of the carcass plies, each carcass end portion being permanently fastened to at least one circumferentially continuous metallic annular profile along a complete peripheral surface of contact therewith, said profiles constituting the component elements of a divisible rim and having such a shape as to form supports for the extensions of the ends of the carcass, each carcass end portion being encased between two annular profiles.

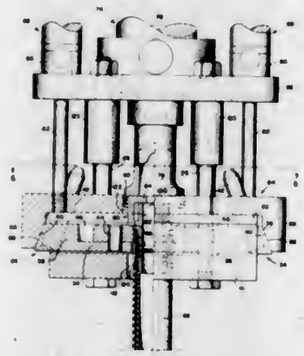
3,047,042
CRIMPING APPARATUS
Henry Esch, Newark, Ohio, assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Oct. 21, 1958, Ser. No. 768,763
4 Claims. (Cl. 153—1)

1. In a compression tool for deforming sleeve-type connectors, a first die means and a second die means, means for moving said first die means relative to said second die means, a housing for supporting both of said die means and provided with guide means for guiding said first die means during the movement thereof toward and away from said second die means, said first die means having coplanar land portions and each of said die means being provided with generally V-shaped working faces disposed in cooperating opposed face-to-face relationship so as to define a contractible work-receiving aperture therebetween, and selectably disposed stop means provided on said second die means for selectively engaging and limiting the movement of said first die means with respect to said second die means, said stop means comprising a plurality of pairs of linearly spaced stop aper-



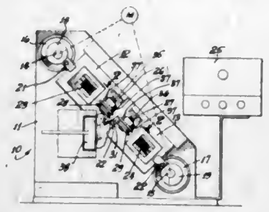
tures and pin means insertable into selected pairs of said spaced apertures and engageable with the land portions of said first die means, the relationship of said spaced stop apertures being so correlated with the work-receiving aperture defined between the first and second die means whereby the minimum to which said work-receiving aperture can be reduced is a function of a pair of the stop apertures in which the pin means is inserted.

3,047,043
APPARATUS FOR APPLYING HOSE COUPLINGS TO HOSES
David E. Albrecht, Philadelphia, Pa., assignor to Hose Accessories Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 18, 1959, Ser. No. 853,842
5 Claims. (Cl. 153—1)



1. A machine for automatically securing a conduit in a fixed position, applying a coupling thereto and thereafter releasing said conduit comprising; a plurality of combination die and conduit securing members, means for limiting the movement of said members to radial motion in a single plane transverse to the longitudinal axis of said conduit, double acting cam means for alternatively moving said members toward and away from said conduit between radially innermost and outermost positions fixed by said cam means for alternatively securing and releasing said conduit, means for forcing said coupling at least partially through said members when said members are in said radially innermost position for contracting said coupling about end one of said conduit, and means for disengaging said cam means to permit movement of said members radially outward of said outermost position.

3,047,044
CIRCULAR DIE SETS
Lemuel A. Pratt, Los Angeles, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,033
4 Claims. (Cl. 153—9)



1. In a machine for bending the leads of electronic components to a predetermined configuration, the combination of: first and second die block carriages synchronized for cyclical linear movement toward and away from each other; first and second cyclindrical die blocks, the peripheral surface of said first cylindrical die block presenting a continuous die face formed by a surface of revolution generally of said predetermined configuration, the peripheral surface of said second cylindrical die block presenting a continuous die face at least partially complementary to the die face of said first cylindrical die block, said cylindrical die blocks being adapted to be mounted for rotation about their central axes; and, mounting means on said carriages to which said die blocks are rotatably mounted with their central axes in parallel alignment, one die block being so secured to each of said carriages, said mounting means including disengageable securing means which when engaged with said die blocks prevent their rotational movement and which when disengaged from said die blocks allow said die blocks to be rotated to different angular positions, said securing means being engaged with said die blocks during normal machine operation.

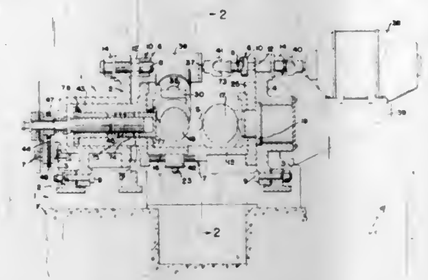
3,047,045
TUBE EXPANDER
Virgil H. Baker, Springfield, Ohio, assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,126
12 Claims. (Cl. 153—82)



1. A tube expander including a cage, a mandrel concentrically mounting said cage in free bearing relation thereto, means contained between said mandrel and cage and projectable relative said cage to establish a frictional engagement of said mandrel to a tube for expansion thereof, said mandrel being so related to said projectable means to provide both projection and retraction thereof on relative movement of the mandrel and the cage in each of opposite directions.

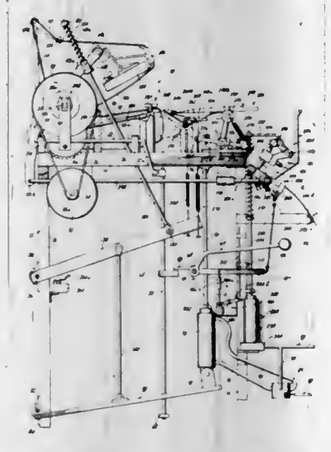
3,047,046
CROSS-ROLL STRAIGHTENER
Einar W. Nilsson, Youngstown, Ohio
(438 E. Curtin St., Bellefonte, Pa.)
Filed Mar. 10, 1958, Ser. No. 720,454
17 Claims. (Cl. 153—108)

1. A cross-roll straightener and the like comprising a frame assembly including a pair of upstanding spaced apart frame members; opposed cross-roll mounts carried by the respective frame members, cross-rolls journalled on the respective mounts and forming therebetween a pass through which elongated round stock is adapted to be lineally fed and rotated while in contact with said cross-rolls; drive means operatively connected to at least one of said cross-rolls to drive the same; and at least one



preloaded tie rod extending between said frame members to reduce deformations due to loads caused by stock entering the pass between said cross-rolls, said rod being prestressed in a hollow member and secured to said member in such prestressed condition, and means to mount said rod in such prestressed condition in said frame assembly.

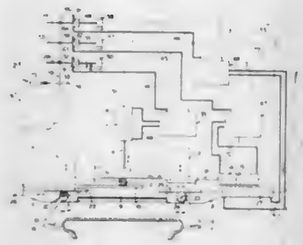
3,047,047
APPARATUS FOR FORMING A BELT ASSEMBLY INCLUDING A BACKING AND FACING
Ragnar W. Winberg, 115 W. Elder Ave., Floral Park, N.Y.
Filed Feb. 2, 1959, Ser. No. 790,732
13 Claims. (Cl. 156—356)



1. In a belt-making machine, a support, a stop on said support at an intermediate assembly location, conveying and guiding means for advancing a length of backing along a first feed path to an assembly position with its leading end engaging said stop, guide means providing a second feed path for a length of belt facing, a point-forming mechanism operable to point the leading end of said length of facing and including a tongue operative to advance the pointed leading end of said facing along said second feed path to said assembly position with said pointed leading end engaging said stop, an adhesive applying head along said first feed path in advance of said stop for applying adhesive to said length of backing, a source of adhesive under pressure, means connecting said source to said head and including a normally closed valve, and means for imparting drive to said conveying and guid-

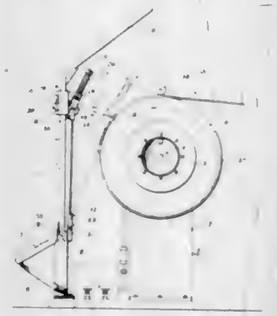
ing means and for opening said valve so that said length of backing may be advanced to said assembly position with the application of adhesive thereto.

3,047,048
TIRE STITCHING APPARATUS
Paul E. Appleby, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Jan. 9, 1959, Ser. No. 785,821
9 Claims. (Cl. 156—410)



1. An apparatus for stitching plies of rubberized fabric to form a tire carcass comprising a rotatable building drum having rounded shoulders, a rotatable stitching member operable upon each of said shoulders, a support for each stitching member said supports each mounted upon a traversing means for moving said stitching members in opposite directions along a linear path extending parallel to the rotational axis of the drum, a carriage for supporting said traversing means said carriage being movable along a linear path in a direction radially of the drum, fluid actuated means for moving said traversing means, fluid actuated means for moving said carriage, a pair of templates and sensers, each template movable relative to a senser for simultaneously varying the output of each senser, a pair of control means responsive to the output of its respective senser for simultaneously varying the amount of fluid supplied respectively to each of said moving means whereby said stitching members are moved simultaneously along resulting controlled curvilinear pathways at a variable velocity.

3,047,049
TIRE TREAD BUILDERS
Melvin R. Bader, Lodi, Calif., assignor to Super Mold Corporation of California, Lodi, Calif., a corporation of California
Filed May 17, 1960, Ser. No. 29,702
4 Claims. (Cl. 156—411)



1. A tread builder comprising a pedestal, a rotary wh el journaled on the pedestal with its axis horizontal and disposed to support a tire vertically for the application of camelback to the periphery thereof, a main upstanding yoke including legs connected together at their upper end for manual manipulation, means pivoting the legs at their lower end parallel to the wheel axis in transversely symmetrical relation to the wheel supported tire rearwardly thereof and laterally out therefrom, stitching units mounted on the legs and including transverse-axis stitching rollers facing each other in end to end relation and at a height to engage a tire toward the top thereof, means to drive the wheel to rotate the same and the tire in a direction such that the upper portion of the tire turns rearwardly, and means acting on the units upon forward swinging of the yoke to cause the rollers contacting the camelback to be shifted circumferentially of the tire in a direction opposite that of the rotation of the wheel.

3,047,050
HOT AIR WELDING APPARATUS
Earl Jacob Sourber, 1817 Highland St., Allentown, Pa.
Filed June 19, 1959, Ser. No. 821,558
4 Claims. (Cl. 156—497)

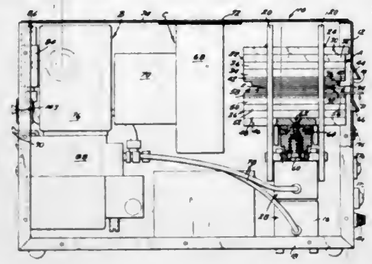


1. A gun for welding elongated pieces of thermoplastic material to a panel, said gun comprising an elongated hollow housing having a heating element disposed therein, an air inlet means at one end of said housing and air outlet at the other end of said housing, an outlet tip structure carried by said housing and communicated with said air outlet, a guide mechanism supported from said housing adjacent but in poor transfer relationship with said tip structure and adapted to guide an elongated strip of thermoplastic material past said tip structure, said air inlet means including relief valve means for selectively venting said air inlet means to the ambient atmosphere, said relief valve means including a movable actuator operable from the exterior of said gun, said gun including a handle adjacent said relief valve means and having a portion adapted to be at least partially encircled by an operator's handle and shaped and positioned relative to said actuator for ease of actuation of said actuator by said hand without disengagement of said hand from said handle, said actuator being mounted for reciprocal movement between limited positions defining open and closed positions of said relief valve means and normally resiliently urge toward dependent position thereof defining said closed position.

3,047,051
LAMINATING PRESS
Alexander Matveeff, Tomkins Cove, N.Y., assignor to Glassoloid Corporation of America, Clifton, N.J., a corporation of New York
Filed July 16, 1958, Ser. No. 748,858
3 Claims. (Cl. 156—539)

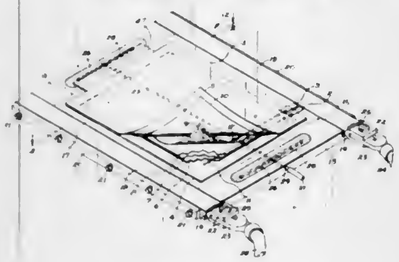
1. Lamination apparatus comprising a fixed casing having a front wall with an opening therethrough, and, within said casing, a press adjacent said front wall and including a pair of platens relatively movable toward and away from one another without escaping from said casing, said platens when separated having a space therebetween in line with said opening, a blower in said casing on the other side of said press from said front wall and in air flow communication with said opening, and means for actuating said press and moving said platens, the lower platen of said press being movable vertically and

said press comprising a tray mounted between said platens for vertical movement between upper and lower positions, and stop structure engageable with said tray when said tray is below its upper position and effective



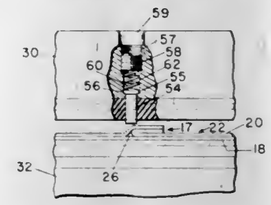
to support it in its lower position against further downward movement, said lower platen when at its lower limit of movement being spaced below said tray and when in its upper limit of movement having engaged said tray and lifted it to its upper position.

3,047,052
APPARATUS FOR LAMINATING AN ELECTROLUMINESCENT CELL LAY-UP
Elmer G. Fridrich, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York
Filed July 14, 1958, Ser. No. 748,537
4 Claims. (Cl. 156—580)



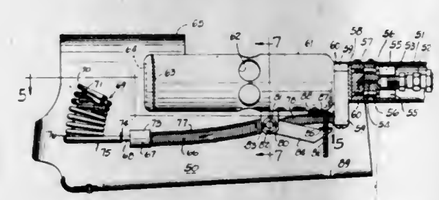
1. Apparatus for laminating an electroluminescent cell lay-up of the kind comprising outer thermoplastic sheets enclosing and overreaching inner electrically active components including a metal foil coated with an electroluminescent phosphor having positioned thereagainst a sheet of conducting glass paper, comprising a vacuum plate having a central thermally insulating portion for positioning said lay-up thereupon, a porous portion in said vacuum plate, a pair of heavy bus bars embedded in said vacuum plate on either side of said thermally insulating portion, said bus bars being electrically insulated from said vacuum plate, an electrically insulating sheet laid over said lay-up and overlapping the inside edges of said bus bars, an electrically conductive sheet laid over said insulating sheet and overlying said bus bars, an impermeable conformable diaphragm applied over said vacuum plate to cover the electroluminescent lay-up and overreaching a porous portion in said plate, a pressure plate fitting over said vacuum plate and adapted to make a hermetic seal with said diaphragm, said pressure plate having a cavity therein for accommodating said lay-up, means for clamping the vacuum and pressure plates together, means for applying a vacuum under the conformable diaphragm through said porous portion, means for applying hydrostatic pressure between the pressure plate and conformable diaphragm, and connections for supplying electric current to said bus bars in order to pass current at high density through said conductive sheet for heating said lay-up.

3,047,053
CONTAINER FORMING MACHINE
Stanley R. Howard, Milton, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts
Filed June 27, 1958, Ser. No. 744,965
3 Claims. (Cl. 156—581)



1. In a container forming machine, in combination, means for supporting a container having a longitudinal face-to-face side seam and having a transverse face-to-face end closure in which a portion of the side seam occurring in the end closure forms a channel opening, end closure sealing mechanism comprising a pair of opposed cooperating sealing elements relatively movable to press together opposed walls of said face-to-face end closure in sealing relation, one of said sealing elements being heated and provided with a metal facing, the other sealing element being unheated and having a resilient facing, and auxiliary pressure applying means carried by one of said sealing elements and engageable with the side seam portion of the end closure to compress and compact the material in a circular area adjacent the channel opening to close the same whereby to provide a leakproof end closure, said auxiliary pressure applying means comprising a cylindrical spring pressed metal pin having a flat end surface carried by the unheated sealing element and extended through and a short distance beyond the plane of said resilient facing and cooperating with the metal facing of the heated sealing element.

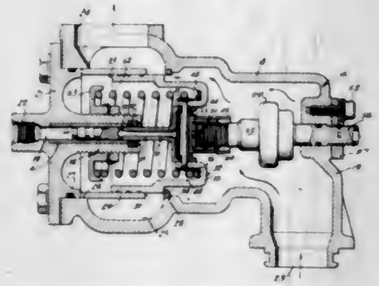
3,047,054
GENERATOR FOR LIQUID FUEL TORCH
Robert H. Hunter, Gates Mills, Abe J. Hanje, Northfield, and Harris W. Smith, Bainbridge, Ohio; said Hanje and said Smith assignors to said Hunter
Filed Jan. 2, 1958, Ser. No. 706,718
12 Claims. (Cl. 158—33)



3. In a liquid fuel torch of the type comprising an elongated combustion tube, a nozzle, body means mounting the nozzle in fixed relation to the tube to project fuel axially into one end of the tube, the other end of the tube having a discharge opening through which ignited fuel issues as a torch flame along a predetermined axis, a helical coil tube fuel heater having spaced convolutions disposed at the other end of the combustion tube, means mounting the coil heater for movement toward and away from said flame axis, conduit means fast at one end to the body means and at the other end to the heater for connecting the heater tube to a fuel source and to the nozzle for serial flow first through the heater and second through the nozzle, a deflector mounted on and wholly supported by the endmost convolution of the coil heater at one end of and for movement with the latter as a unit

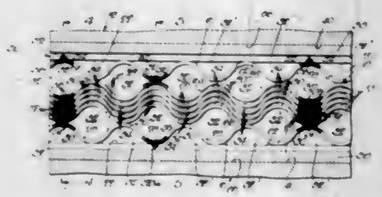
and disposed to intercept a torch flame emanating from the discharge opening in said other end of the combustion tube and to deflect the intercepted flame to flow through the helical coil heater, and a stop at the other end of the heater coil for movement with the latter as a unit to intercept the deflected flame flow through the helical coil, thereby influencing the deflected flame to flow radially out of the heater coil between the convolutions of the latter, said stop being secured to and wholly supported by the heater tube.

3,047,055
FUEL HEATING APPARATUS
Ewald J. Kimm, Dayton, Ohio, assignor to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed May 6, 1958, Ser. No. 733,397
5 Claims. (Cl. 158—36.3)



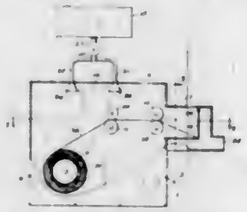
1. A thermostatic and pressure responsive throttling valve, including a valve body having an inlet and an outlet for a fluid flowing under pressure, a slide type valve in said body controlling flow therethrough from said inlet to said outlet, means to nearly balance fluid pressures applied to said valve in such manner as to provide a resultant pressure applied in a direction to open said valve, a spring urging said valve closed and adapted to be overcome by a resultant pressure of sufficient magnitude, and a thermostat in said body intermediate said inlet and said outlet in the path of flow of the fluid responding directly to rising fluid temperature to open said valve.

3,047,056
RIBBON ASSEMBLY FOR GAS BURNERS
John H. Flynn, 234 Elk Ave., New Rochelle, N.Y.
Filed Nov. 12, 1959, Ser. No. 856,326
3 Claims. (Cl. 158—116)



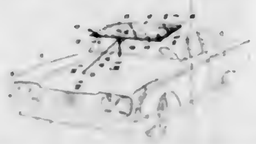
3. A ribbon assembly for a machined longitudinal passage in a burner casing between a gas chamber therein and the outside thereof, comprising a sub-assembly of side-by-side engaged longitudinal burner ribbons forming complemental port formations widthwise thereof and having intermediate their widths longitudinally spaced identical male and female formations of which male and female formations of adjacent ribbons are sidewise releasably interlocked, and two flat rigid plates on opposite sides of said ribbon sub-assembly having spaced confronting plane faces defining a burner slot and being adapted for clamping engagement with the ribbons of said subassembly therebetween, said confronting plate faces having intermediate their widths longitudinal grooves, respectively, sidewise releasably receiving substantially fittingly male formations of adjacent ribbons, respectively, to lock all ribbons to said plates and permit differential expansion of the former and latter, the ribbons of said subassembly extending widthwise within the widthwise confines of said plates when locked thereto and the locked plates and ribbons being adapted for forced drive as a unit with a tight fit into a burner passage through the outward opening thereof on applying an inward driving force to said plates only.

3,047,057
INTRODUCTION OF A METAL INTO A COMBUSTION ZONE
Robert L. Carlyle, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,394
10 Claims. (Cl. 158—117.5)



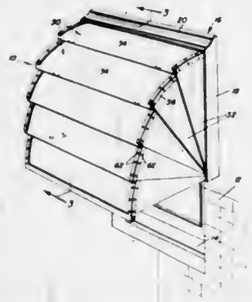
10. A process for the introduction of a metal into a combustion zone of a heat producing unit, which comprises charging a thermoplastic synthetic non-self-extinguishing flexible resin ribbon containing dispersed therein a member of the group consisting of magnesium, aluminum, calcium, and compounds and alloys thereof in a fine particulate form sufficient to pass through a 300 mesh Tyler Standard Screen, into contact with a heated surface heated to a temperature sufficient to ignite the ribbon, passing a stream of air to be used in the combustion of a fuel in the combusition zone of the heat producing unit over the heated ribbon to ignite and oxidize the ribbon introducing fine sized particles of the metal in the air stream, discharging the resulting stream of air containing the metal into the air intake of the combustion zone of the heating unit.

3,047,058
SHIELD FOR AUTOMOBILE
Louis A. Cormier, 42 Central St., Southbridge, Mass., assignor of fifty percent to Norman S. Blodgett, Westboro, Mass.
Filed Dec. 16, 1959, Ser. No. 859,931
4 Claims. (Cl. 160—45)



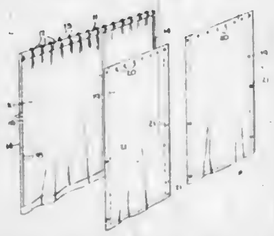
3. A shield for an automobile, comprising a generally rectangular canopy formed of flexible, water-resistant material, means located at two adjacent corners to connect the said corners to the top of the automobile rearwardly of the windshield, a bar of channel form extending along the side opposite the said corners, a prop hingedly attached at one end to the center of the bar and adapted to extend downwardly into contact with the hood of the automobile, a friction tip on the other end of the prop, a brace extending from the prop to the bar to hold the prop at a right angle to the bar, and a cord attached at one end adjacent the center of the bar and adapted to be attached at the other end to the automobile forwardly of the prop, the prop being hinged to the bar between the channel flanges and being narrower than the distance between the flanges so that it may be folded into position within the bar for storage.

3,047,059
COLLAPSIBLE AWNING CANOPY
Eneas J. Trinchero, 619 Vassar St., Reno, Nev.
Filed July 27, 1959, Ser. No. 829,877
3 Claims. (Cl. 160—132)



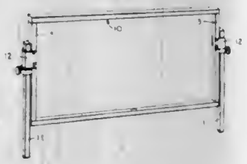
1. A collapsible hood or canopy comprising a plurality of U-shaped sections disposed in nested relation, pivot means for the free ends of said sections, actuating means connected to each of said sections for controlling the raising and lowering of said sections about said pivot means, a longitudinally extensible brace secured to the underside of each of said sections intermediate the ends thereof, said brace comprising a plurality of tracks with one track being secured to each section, a body secured to each track at one end thereof, a pair of opposed channel members carried by each body and disposed above and projecting outwardly beyond the associated track, the track of one section being slidably retained in the pair of channel members of an adjacent section, said body having spaced upstanding side walls, said opposed channel members being supported by and secured each to one of said side walls.

3,047,060
OPTIONALLY APPLICABLE LINING FOR DRAPERIES
Efi Heimberg, New Bedford, Mass., assignor to Cameo Curtains Inc., New York, N.Y., a corporation of New York
Filed May 26, 1961, Ser. No. 112,811
1 Claim. (Cl. 160—330)



An optionally applicable lining for a drapery panel having rearwardly inturned side hems and spaced suspension pins along its upper edge, said lining consisting of a separate panel of lining material substantially as long as the drapery panel, said lining having apertures at spaced horizontal intervals along its upper edge for engagement with said suspension pins, said apertures being only about as wide as the diameter of said suspension pins whereby said lining will be maintained against horizontal movement with respect to said drapery panel, and at least one fastener adjacent at least one side edge of the lining, said fastener being provided with a base portion and a tongue overlying said base portion and extending toward said side edge, said tongue being adapted to be inserted behind, and frictionally grip, the corresponding inturned side hem of the drapery panel to secure said lining thereto and conceal said fastener and tongue behind said drapery panel, said frictional grip allowing the lining to be secured to said drapery panel at different heights along said side hem to compensate for differential dimensional changes and thus avoid distortion of the drapery panel by the lining.

3,047,061
SCREEN FRAME FIXTURE
Harvey N. Wilcox, Chicago, and Donald P. Smith, Wheaton, Ill., assignors to Commercial Picture Equipment, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 7, 1959, Ser. No. 785,487
3 Claims. (Cl. 160—351)



1. The combination with a picture projection screen frame and a screen frame supporting upright, of a bracket by which the screen frame is detachably supportable at selectable elevations on the upright, the bracket having an elongated opening therethrough providing a slideway through which the upright extends telescopically for adjustment of the bracket therealong, said opening being defined by bracket walls one of which has a pair of laterally spaced slits providing an elongated bendable wall portion therebetween and the bracket having a threaded member thereon which is operable to clamp said bendable wall portion against the upright to lock the bracket in selectable positions of adjustment along the upright, and the bracket having means by which a portion of the projection screen frame is detachably securable thereto in general parallelism with the upright in said opening of the bracket.

3,047,062
ENHANCING PETROLEUM OIL PRODUCTION
Victor G. Meadors, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
No Drawing. Filed Apr. 29, 1959, Ser. No. 809,590
15 Claims. (Cl. 166—9)

1. A process for the secondary recovery of petroleum oil from a subterranean oil-bearing reservoir which comprises: injecting into said reservoir at a first selected point a quantity of an alkylene oxide, injecting a quantity of water into said reservoir behind said quantity of alkylene oxide and recovering produced oil from said reservoir at a second selected point removed from said first selected point.

3,047,063
RECOVERY OF PETROLEUM OIL
Carl Connally, Jr., Dallas, Tex., and John J. Justen, Calgary, Alberta, Canada, assignors, by direct and mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed July 17, 1959, Ser. No. 827,828
7 Claims. (Cl. 166—10)

7. In the process for recovering petroleum oil from a subterranean formation containing zones of different

permeabilities and provided with input means including at least one input well and output means including at least one output well, the steps comprising:

(1) injecting into said formation through said input means a material miscible with said petroleum oil in said formation to establish a fluid phase within said formation in a flow path between said input means and said output means,

(2) injecting a driving gas, said driving gas being miscible with said fluid phase, into said formation through said input means and forcing said fluid phase through said formation into the direction of said output means whereby petroleum oil is displaced from within said formation and enters said output means, said driving gas distributing itself within each of said zones of different permeabilities in said formation in amounts proportional to the product of the thickness and permeability of each of said zones and said fluid phase advancing into the direction of said output means at a higher rate in a zone of higher permeability than in a zone of lower permeability,

(3) recovering petroleum oil from said formation through said output means,

(4) continuing injection of said driving gas into said input means at least until said driving gas enters said output means from a zone of higher permeability and the ratio of said driving gas to said petroleum oil entering said output means increases,

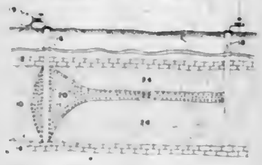
(5) subsequent to the time said driving gas enters said output means from a zone of higher permeability in said formation discontinuing injection of said driving gas through said input means,

(6) thereafter injecting water into said formation through said input means to establish a water phase in said formation whereby said water distributes itself within each of said zones of different permeabilities in said formation in amounts proportional to the product of the thickness and permeability of each of said zones and reduces the permeability of said zones,

(7) discontinuing injection of said water through said input means, and

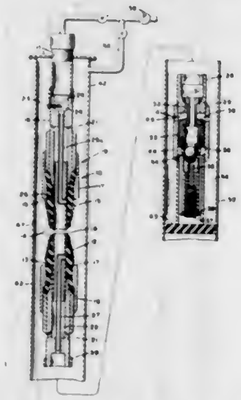
(8) thereafter injecting a non-aqueous driving fluid into said formation through said input means and forcing said water phase through said formation into the direction of said output means whereby the rate of advance of fluid through said zones of different permeabilities will be reduced to a relatively greater extent in a zone of higher permeability than in a zone of lower permeability and flow of said driving gas into said output means is reduced to a relatively greater extent from a zone of higher permeability than a zone of lower permeability and the ratio of said driving gas to said petroleum oil entering said output means decreases.

3,047,064
INTERMITTENT IN-SITU BURNING
Robert C. West and Bertram T. Willman, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Filed Mar. 12, 1958, Ser. No. 721,033
12 Claims. (Cl. 166—11)



1. The method of recovering oil and gas from a subterranean oilbearing reservoir which has been penetrated by an input well and an adjacent producing well which comprises initiating a zone of combustion within said reservoir adjacent the bore of said input well, injecting an oxygen-containing fluid into said reservoir through said input well to maintain said combustion thus causing a burned-out channel, stopping the injection of fluids when the temperature in said producing well reaches a preselected maximum whereby fluid in the reservoir flows into the permeable burned-out channel from the regions of higher saturation of reservoir fluid, such preselected maximum being below the temperature which will damage the producing well equipment, reinstituting the injection of said oxygen-containing fluid through said input well when the temperature in said producing well decreases to a predetermined value not less than about 200° F., and producing oil from the reservoir through the producing well.

3,047,065
METHOD AND APPARATUS FOR LINING PRESSURE VESSELS
Renic P. Vincent, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,893
6 Claims. (Cl. 166—14)



1. A method of patching a hole in the wall of a substantially vertical elongated cylindrical pressure vessel comprising building up on an expansible tube an expansible sleeve having at least one layer of fabric impregnated with unset thermosetting resin, inserting said tube and said expansible sleeve built up thereon into said vessel until said tube is substantially centered on said hole, injecting fluid into said tube before the resin in said fabric is set to expand said tube and said sleeve against the wall of said vessel and plug said hole, injecting fluid into said vessel until a pressure is built up therein substantially as great as the working pressure of said vessel, maintaining said pressure in said vessel substantially as great as said working pressure of said vessel and the pressure in said tube greater than said pressure in said vessel outside said tube so that said vessel and said tube remain expanded until said resin is set, equalizing the pressure in said tube with the pressure in said vessel to contract said tube and release it from said sleeve, and then withdrawing said tube from said vessel.

3,047,066
TREATING GEOLOGICAL FORMATION TO IMPROVE FLOW OF OIL
Neal J. Mosely, Deerfield, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed May 1, 1959, Ser. No. 810,234
11 Claims. (Cl. 166—32)

1. A process for improving the penetrability characteristics of a subterranean geological formation traversed by a well bore, which comprises introducing into said bore an oil solution of an amine selected from the group consisting of primary and secondary amines having C_1–C_{18} hydrocarbyl substituents, introducing into said bore sufficient carbon dioxide to react with the amine to form a substituted carbamate according to the equation:

$$2R_2NH+CO_2 \rightarrow R_2NCO_2NH_2R_2$$

where R is selected from the group consisting of hydrogen and C_1–C_{18} hydrocarbyl radicals, not more than one R being hydrogen, the amine being introduced in a concentration sufficient to produce a 5–50% concentration of the product carbamate in the oil, thereby causing said oil to set into a firm grease-like gel within the more permeable portions of the formation, then subjecting the formation to treatment with a fluid formation penetrator, and decomposing the carbamate to effect recovery of the amine with the oil produced from the well.

3,047,067
SAND CONSOLIDATION METHOD
Robert E. Williams and Horace H. Spain, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
No Drawing. Filed Sept. 8, 1958, Ser. No. 759,441
3 Claims. (Cl. 166—33)

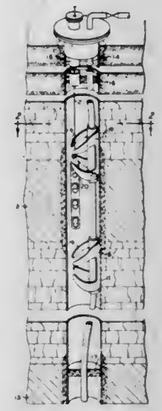
1. A method for consolidating the sands of an incompetent subsurface formation containing oil and connate liquids comprising pretreating the formation prior to introduction into the formation of liquids capable of forming a resin by introducing into the formation a liquid mixture of a surface-active agent and a polar organic compound miscible with both the resin-forming liquids and the connate liquids in the formation so as to remove the connate liquids and wet the sands with the polar organic compound; and then introducing into said formation said resin-forming liquids which set in the formation and bind the sand particles of the formation together, said resin-forming liquids comprising a low molecular weight hydroxy aryl compound, a water soluble aldehyde and a catalyst.

3,047,068
FLUID-LOSS PREVENTION IN WELL TREATMENT
Alden W. Hanson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Feb. 24, 1959, Ser. No. 794,847
3 Claims. (Cl. 166—42)

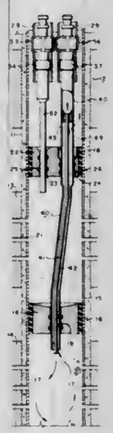
2. The method of fracturing a fluid-bearing porous subterranean formation traversed by a wellbore and having a natural temperature above 32° F., consisting of injecting a slurry of ice fragments in a fracturing liquid into the formation at a pressure sufficient to produce fractures therein, at least a portion of said ice fragments being forced into natural passageways formed by interconnecting pores and into fractures thus produced into which ice fragments are so forced, thereby to serve as a fluid-loss preventive while at least a portion of said ice fragments is melting and sufficient pressure is being maintained on the injected slurry, and thereafter releasing the pressure on said slurry and discontinuing the injection thereof.

3,047,069
TUBING POSITIONER FOR UPPER ZONE OF DUALLY COMPLETED WELL
Charlie D. Carter, Jr., Tehuacana, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 9, 1959, Ser. No. 845,345
2 Claims. (Cl. 166—55.1)

1. In a dual production well provided with a casing and a well head, the improvement comprising, in combination, a first packer set in said casing at a level above the upper of two formations, a second packer set in said casing at a level intermediate the two formations, a first tubing extending from the well head down the casing and through said first packer and terminating near its lower surface, a second tubing extending from the well head down the casing and through both packers, a plate in said casing shaped to conform to the inner wall of said casing at a level intermediate said packers, said plate extending around a major portion of the inner circumference of said casing, the outer diameter of said plate being slighlty less than the inner diameter of said casing, said second tubing being rigidly attached to the inner wall of said plate in such a manner that the outer wall of said second tubing is substantially in contact with said plate thereby leaving a sufficient area within said plate to accommodate a perforating gun lowered downward through said first tubing and so adapted as to form guide means for said perforating gun and being of a diameter to accommodate and orient said perforating gun when lowered in the area within said plate but of slightly less diameter than the perforating gun with the charges therein extended.



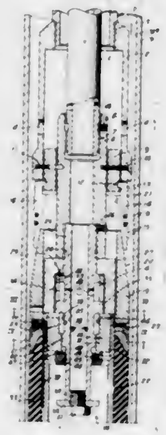
3,047,070
MULTIPLE COMPLETION OF WELLS
Wallace M. O'Reilly, Midland, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed June 8, 1959, Ser. No. 818,738
5 Claims. (Cl. 166—114)



1. Apparatus for use in completion and workover of a well having a casing arranged therein and perforated in

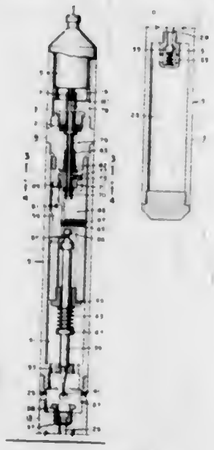
a plurality of vertically spaced-apart zones which comprises two eccentrically arranged substantially parallel tubing strings suspended in tension throughout their lengths in said casing with their lower ends above said plurality of zones, a first packing means having two parallel bores arranged in said casing and spaced vertically below the lower ends of said tubing strings and above an upper of said zones, a second packing means having a single bore and arranged in said casing spaced vertically below the first packing means and below the upper and above a lower of said zones, a first tubular conduit supported by its upper end in the lower end of one of said tubing strings and provided with means for sealing with the inner wall of said one of said tubing strings of a length sufficient to extend into and through one of the bores of said first packing means, a second tubular conduit supported by its upper end in the lower end of the other of said tubing strings and provided with means for sealing with the inner wall of said other of said tubing strings and of a length sufficient to extend into and through the other of the bores of the first packing means and through the bore of the second packing means, and means carried in the bores of said first and second packing means for sealing with the outer walls of said tubular conduit.

3,047,071
ADAPTER ASSEMBLY
Roy C. Davis, Dallas, Tex., assignor to The Guiberson Corporation, Dallas, Tex., a corporation of Texas
Filed Apr. 22, 1959, Ser. No. 808,155
23 Claims. (Cl. 166—124)



1. In a detachable running tool for a well tool having a tubular mandrel with threads on the inner side thereof; a tubular latch support extending into the mandrel bore and having a fluid passageway therethrough; a plurality of latch members carried by the support having exteriorly threaded portions arranged for threaded engagement with the threads in the mandrel, the said latch members being arranged for longitudinal and pivotal movement on the support; means for suspending the latch members on the support; a holding member carried by the support exteriorly thereof engageable with the latch members to hold them in threaded engagement with the mandrel; frangible means engaged with the support and the latch members exteriorly of the support to prevent upward movement of the support relative to the latch members; a reduced wall thickness on the latch members adjacent and above the holding member arranged to receive the holding member to permit the threaded portions of the latch members to move inwardly upon upward movement of the support relative to the latch members, whereby when the frangible means is broken the support is permitted to move upwardly with relation to the latch members and the latch members are permitted to move inwardly out of threaded engagement with the mandrel.

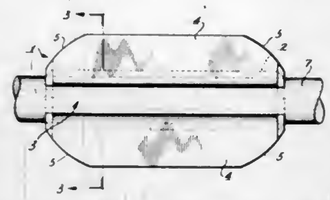
3,047,072
WELL FLUID SAMPLER
Beldon A. Peters and Elvis Rich, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Feb. 15, 1961, Ser. No. 89,401
3 Claims. (Cl. 166—164)



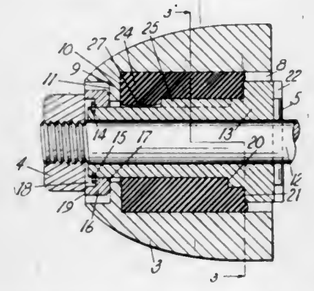
1. A well sampler comprising:
a housing:
a timing motor in said housing:
a sample chamber in said housing;
means controlling fluid access to said sample chamber including a passageway between said chamber and the exterior of said housing, a closure in said passageway, an elongated rod, and spring means connected to said rod for dirving said rod to an operative position of said rod to open said closure and permit fluid entry into said chamber;
a sear positioned in said housing to hold said rod away from said operative position thereof;
spring means supported in said housing and connected to said sear for urging said sear away from the rod-holding position thereof;
a rotatable cam assembly connected to said timing motor, including a cam having a cam surface, and a lost motion coupling for coupling said cam to said motor, said cam surface having a substantially constant radius portion and a valley portion; and
a cam follower on said sear in following relationship with said cam surface to hold said sear in the rod-holding position thereof while following the constant radius portion of said cam, and to release said sear from the rod-holding position thereof while following the valley portion of said cam whereby said sear releases said rod to open said sample chamber.

3,047,073
OIL WELL TUBING SCRAPER
Roderick M. Fry, Edmonton, Alberta, Canada (158 Jeffcoat Drive, Rexdale, Ontario, Canada)
Filed Dec. 29, 1960, Ser. No. 79,250
5 Claims. (Cl. 166—176)

1. A scraper for oil well tubing comprising a unitary spring steel member having a tubular portion and an opening in said tubular portion extending longitudinally from end to end thereof, the internal circumferential extent of said tubular portion being greater than 240°, and a scraper blade extending outwardly from each edge of said tubular portion defining said opening each said blade having a length substantially greater than its width and having a free longitudinal edge constituting a scraping edge, said scraping edge lying radially beyond the external surface of said tubular portion.



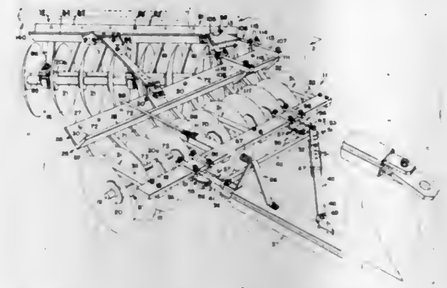
3,047,074
CUSHIONED MARINE PROPELLER MOUNTING
John H. Rielag, Grand Rapids, Mich., assignor to Marine Propeller Company, Grand Rapids, Mich.
Filed Oct. 24, 1960, Ser. No. 64,408
4 Claims. (Cl. 170—160.54)



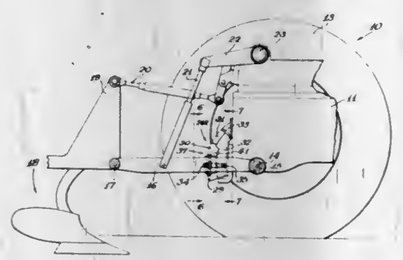
4. A marine propeller comprising a chambered hub on which the blades of the propeller are carried, an interior annular flange formed around the chamber of said hub to form rearwardly and forwardly facing shoulders, a rigid shaft receiving bushing positioned in said chamber and extending through said flange, an annular rigid washer positioned around the rear end of said bushing and having a forward face bearing against said rearwardly facing shoulder, means axially retaining said washer on said bushing, said bushing having a radially projecting shoulder on its forward end, a cushion sleeve of deformable elastic material compressed between said shoulder on said bushing and said forwardly facing shoulder on said hub into frictional gripping contact with the chamber wall of said hub and the outside of said bushing, and axially extending ribs on the exterior of said bushing of lesser height than the shoulder on the bushing received in slots provided therefor in the interior of said sleeve, said bushing having means located forwardly of said hub to receive a shear pin passed through a shaft received in said bushing.

3,047,075
OFFSET DISK HARROWS
William R. Frank, Bell, Calif., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 764,618
11 Claims. (Cl. 172—187)

1. A tandem type disk harrow having front and rear disk gangs, each having a set of axially aligned disks, the front disks, which operate on firm soil being generally circular and having relatively narrow spacing so as to cut through soil and vegetation and reduce the same to small masses, and the rear disks also being generally circular, larger than the front disks and spaced apart farther than the front disks so as to turn the soil and vegetation reduced by the front disks and mix the soil and vegetation for improved decomposition of the vegetation in the soil.

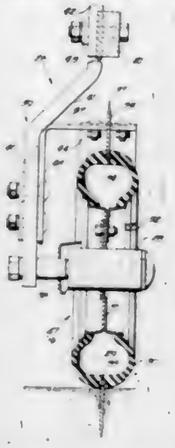


3,047,076
HITCH SWAY LIMITING DEVICE
Thomas G. Wier, Oak Lawn, and Fosco L. Di Vita, Chicago, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 28, 1960, Ser. No. 71,957
12 Claims. (Cl. 172—450)



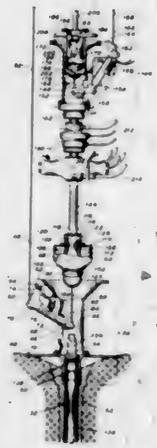
1. In a hitch mechanism for supportably and detachably fastening an earthworking implement to a tractor, the combination, comprising: a pair of generally fore-and-aft extending laterally spaced-apart draft links pivotally mounted at the forward ends thereof on a rear portion of the tractor for lateral and vertical swinging; a pair of structures laterally spaced apart and affixed to the tractor intermediate said draft links; each of said structures being fashioned to provide a first upward extending surface, a second surface extending upwardly and outwardly diverging from the upper end of said first surface, a third surface upwardly extending from the upper end of said second surface, and a fourth surface extending vertically and being disposed forwardly of said first, second and third surfaces; abutment means movably mounted one each on said draft links and being displaceable fore-and-aft for alignment and selective contacting engagement with certain of the surfaces on said structures; said abutment means being positionable in one fore-and-aft disposed position thereof for engagement with said fourth vertical surfaces to prevent lateral sway of said draft links in either the raised or lowered positions of said links, and in another fore-and-aft disposed position thereof for engagement with said third surfaces to prevent lateral sway of said draft links when said links are in a raised position while being spaceable from said first surfaces to permit limited lateral sway of said draft links when said links are in a lowered position.

3,047,077
COMBINATION GAUGE WHEEL AND COLTER
Vinson R. Simpson, Forest Park, and John W. Orendorff, Downers Grove, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 2, 1960, Ser. No. 26,353
5 Claims. (Cl. 172—519)



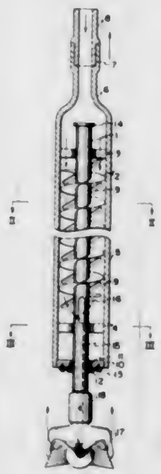
1. An article of manufacture comprising a wheel having thereon an inflatable tire, said tire having a centrally disposed peripheral groove, and a disk having a central opening adapted to receive said peripheral groove therein, the inner diameter of said disk being substantially equal to the inner diameter of said groove.

3,047,078
METHOD AND APPARATUS FOR OFFSHORE DRILLING
William R. Postlewaite, Menlo Park, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 764,574
17 Claims. (Cl. 175—7)



17. Apparatus for drilling a well in an offshore location comprising a drilling platform at the surface of the water anchored above a submerged well site, a winch means on said platform, a towing head, a base assembly submerged at the bottom of the water at said well site, a casing means projecting vertically downwardly into the earth from said base assembly and affixed to said base assembly and said earth, a pulley means mounted on said base assembly, a single towline mounted over said pulley means and disposed with one end portion thereof in substantially axial alignment with said casing means and connected to said towing head and with the other end portion thereof connected to said winch means, a string of tubing supported in a vertical position by said platform, means connecting said towing head to said string of tubing, said winch means being operable to pull said towing head and said string of tubing downwardly through said water to said base assembly with sufficient force to overcome lateral displacement effects of water currents on said towing head and said string of tubing as they progress downwardly through said water, a first concentric centering means on said towing head and complementary second centering means on said base assembly and concentric with said casing means, said first and said second centering means being constructed to be pulled into axial alignment with each other to seat said towing head on said base assembly with said tubing in axial alignment with said casing means as said towline pulls said towing head into engagement with said base assembly.

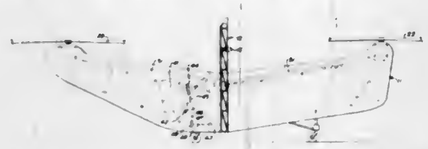
3,047,079
FLOATING SHAFT TURBO-DRILL
George B. Wepsala, Jr., Irvington, N.Y., assignor to Jersey Production Research Company, a corporation of Delaware
Filed Jan. 5, 1959, Ser. No. 785,067
2 Claims. (Cl. 175—107)



1. A down-hole turbine assembly for rotating a drill bit within a borehole in response to the passage of fluid through said assembly which comprises:
- a tubular housing provided with means for connecting said assembly to a drill string and for admitting fluid from said drill string into said housing, said housing containing discontinuous internal recesses for directing the flow of fluid through said assembly;
- a rotatable shaft extending axially from within said housing to a point below said housing, said shaft containing a lateral port located within said housing and a passageway extending from said port to an outlet below said housing;
- a turbine blade mounted on the outer surface of said shaft above said lateral port;
- means within said housing for retaining said shaft coincident with the longitudinal axis of said assembly, said means permitting axial movement of said shaft with respect to said housing and the passage of drilling fluid downwardly to said turbine blade;

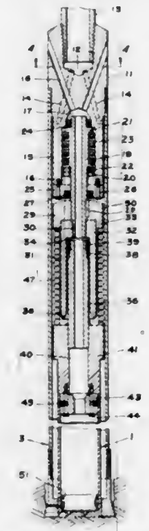
and means for limiting axial movement of said shaft to permit retention of the upper portion of said shaft containing said port within said housing.

3,047,080
AIR TRANSPORTABLE DRILL FRAME
William H. Gunther, Jr., Greenwich, Conn., assignor to Indair, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 8, 1958, Ser. No. 759,650
2 Claims. (Cl. 175—201)



1. An apparatus for positioning a drill rig and drilling a hole therewith in a predetermined area for seismographic exploration which comprises: a helicopter having a fuselage and at least one rotor; a drill rig affixed to the middle portion of said fuselage; a rotary drill bit contained within said drill rig; a first and second support means affixed to said fuselage afore and aft said middle portion and adapted to support said fuselage; a power source contained within said fuselage; a first transmission means adapted to transmit power from said power source to said rotor, while positioning said helicopter and said drill rig in said predetermined area, said drill rig being outside the path of said rotor during said positioning; a second transmission means adapted to transmit power from said power source to said rotary drill bit after said drill rig is vertically positioned in said predetermined area; said first and second transmission means being adapted so that when one is in operation the other is inactive; said rotary drill bit being adapted to bore vertical holes while under the bearing pressure of said helicopter.

3,047,081
SOIL SAMPLER
John N. Pitcher, 2852 Adeline Drive, Burlingame, Calif.
Filed Apr. 16, 1959, Ser. No. 806,928
4 Claims. (Cl. 175—239)



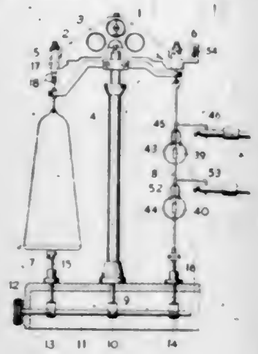
1. A soil sampler comprising: an elongated outer tube including an annular core cutting bit on one end thereof and an inlet for liquid at its opposite end; an inner soil sampler tube within said outer tube and coaxial therewith supported for reciprocable movement within the latter longitudinally thereof between an extended position projecting through said bit a substantial distance outwardly of the latter and a collapsed position in which said sampler tube is enclosed within said outer tube with the one end thereof that is remote from said inlet being within said bit; said one end of said sampler tube being formed with an axially outwardly directed, annular cutting edge; a passageway for liquid extending through said outer tube and bit outside said sampler tube for conducting liquid from said inlet to said bit for discharge at the latter when said sampler tube is in a partially collapsed position within said outer tube; first means within said outer tube carried thereby, second means carried by said sampler tube movable therewith into sealing relation with said first means sealing said sampler tube against entry of said liquid into said sampler tube upon said movement of said sampler tube to said partially collapsed position and movable away from said first means to open said sampler tube to admission of said liquid into said sampler tube at the end of the latter that is opposite to said cutting edge when said sampler tube is moved to its said extended position.

3,047,082
MASONRY DRILL
Lowell N. Brown, 9422 Trenton Ave., Overland, Mo.
Filed Mar. 9, 1960, Ser. No. 13,897
1 Claim. (Cl. 175—415)



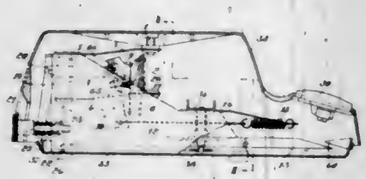
A bit end for a power operated drill wherewith to drill a circular opening through or into masonry, said bit end being integrally formed therewith on the head end of the cylindrical shank of said drill and comprising in combination: a main body having opposed flat sides each merging into said shank and flaring forwardly from its mergence thereinto, said body terminating in a pair of diametrically opposite salient cutting tip formations concentric with said shank, the peripheral surfaces of the tip formations being formed on a radius considerably greater than that whereon the shank is formed; two pairs of circumferentially spaced diametrically opposite arcuate edge segments forming the extremities of said salient tip formations and merging into the flat sides of said main body, one of each pair of circumferentially spaced edge segments being formed on a radius larger than that whereon the other is formed, with the diametrically opposite edge segments being formed on corresponding radii; a diametric cutting edge disposed rearwardly of the salient tip formations and extending longitudinally between them; two pairs of arcuate cutting edges, each of said arcuate cutting edges merging at its outer end into one of the salient tip formations and at its inner end into one extremity of the diametric cutting edge, each pair of arcuate cutting edges converging to a point at the mergence of them into said diametric cutting edge; a pair of opposed generally triangular faces that are connected by the diametric cutting edge and merge into the salient tip formations, each of said faces being curved rearwardly from the point of its mergence into one of said tip formations to its mergence into the adjacent end of said diametric cutting edge, the sides of said faces being defined by the arcuate cutting edges aforesaid; and a pair of oblique rearwardly sloping faces that converge to define the diametric cutting edge at their forward juncture and merge at their rearward ends into the flat sides aforesaid of the main body.

3,047,083
WEIGHING BALANCE
Toshio Chyo, 262 Kashiracho, Kamichojamachi-Agaru, Nishinotoindori, Kamigyoku, Kyoto, Japan
Filed May 21, 1958, Ser. No. 736,844
4 Claims. (Cl. 177—150)



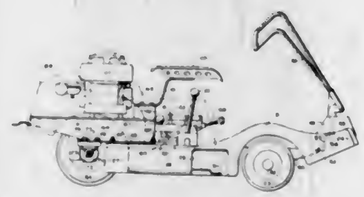
1. In weighing balance apparatus, the combination with a balance beam, and first and second scales for receiving the substance to be weighed and for counterweights respectively, of an electric sensing device responsive to the weight of said substance, said sensing device including a strain gage operatively associated with said first scale and having an electric parameter which is responsive to said weight of said substance during the condition when said balance beam is held at rest, means for holding and releasing said balance beam, drive means responsive to changes in said electrical parameter and means operative to cause the output of said drive means to deposit counter-weights roughly equal to the weight of said substance on said second scale before the balance beam is released from its rest position.

3,047,084
SPRING BALANCE OR WEIGHING DEVICE
Uwe Vogel, Hamburg-Wellingsbuttel, Germany, assignor to Vogel & Halke, Hamburg, Germany
Filed Feb. 25, 1960, Ser. No. 11,029
Claims priority, application Germany Aug. 17, 1959
16 Claims. (Cl. 177—229)



1. In a weighing device, a frame, a bridge, parallel leaf spring means connecting said bridge to said frame for parallel movement of said bridge, first lever means, second lever means, pivot means rotatably connecting said first and second lever means to said frame, first adjustment means inter-connecting said first and second lever means at an adjustable angle with each other, bracket means, second adjustment means connecting said bracket means to said bridge and adapted to permit adjustment of the position of said bracket means in two perpendicular directions relative to said bridge, first bearing means on said first lever means, second bearing means on said bracket means substantially below said first bearing means, connecting link means supported on said first and second bearing means to transmit movement of said bridge to said first and second lever means, dial disc means, axle means rotatably connecting said dial disc means to said frame, gear means secured to said dial disc means for rotation about the axis of said axle means, gear rack means in meshing engagement with said gear means, third bearing means on said second lever means, means rockably connecting said gear rack means with said third bearing means, and spring means connecting said gear rack means with said frame to bias said rockable connecting means against said third bearing means.

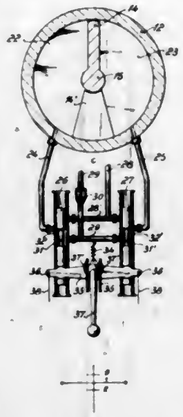
3,047,085
LAWN MOWER
Joseph D. Kieffer III, Camillus, and Francis R. J. Duhamel, Syracuse, N.Y., assignors, by mesne assignments, to Moto-Mower, Inc., Richmond, Ind., a corporation of Delaware
Filed Mar. 4, 1960, Ser. No. 12,821
5 Claims. (Cl. 180—70)



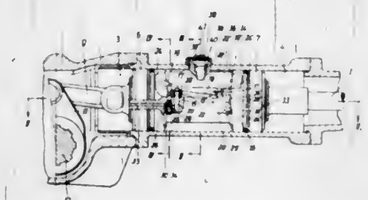
5. A self-propelled riding type lawn mower comprising a chassis, a steerable front wheel assembly attached to the front end of the chassis, a differential housing fixedly secured to the rear end of said chassis, axles journalled in said housing and ground driving wheels fixed to said axles, a gear casing mounted on said differential housing, an input shaft journalled vertically in said casing, motion transmitting means including differential gearing in said housing and casing operatively connecting said input shaft to said axles, an engine mounted on said chassis intermediate the ends thereof, said gear casing being movable about a vertical axis toward and from said engine, reversible motion transmitting means connecting said engine to said input shaft and being operable upon movement of said casing about said vertical axis in a direction away from said engine to effect forward rotation of said axis and upon movement of said casing about said axis in a direction toward said engine to effect rearward rotation of said axis.

3,047,086
CONTROL ARRANGEMENT FOR TRACTORS
Otmar Mayr, Plochingen (Neckar), Germany, assignor to Firma Dr. Ing. h.c.F. Porsche K.G., Stuttgart-Zuffenhausen, Germany
Filed Mar. 21, 1958, Ser. No. 722,873
Claims priority, application Germany Mar. 30, 1957
14 Claims. (Cl. 180—79.2)

8. A control arrangement for a tractor, especially agricultural tractors, having a servo mechanism aiding the steering movement of the steerable wheels, comprising steering means including a steering gear with a steering servo motor means operatively connected with said steering means, and a control device including control means for controlling said servo motor means and operative to be adjusted into different operating positions corresponding to a plurality of mutually different servo control functions, said servo motor means being operatively connected in said steering means intermediate said steering gear and said steerable wheels and remote from said control device, said servo motor means including a rotary piston means and a plurality of pressure spaces, said rotary piston means having a hollow shaft in communication in the interior thereof with said pressure spaces, said control device including automatic tracking means comprising a control piston means within said hollow shaft and operatively connected to control pressure in said spaces from a pressure source to readjust said rotary piston means.



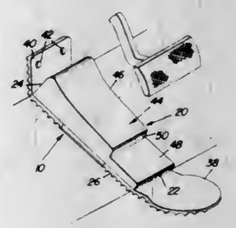
3,047,087
LIMITED MOTION POWER STEERING DEVICE
Erich Jablonsky, Albstrasse 80, Schwabisch-Gmund, Germany
Filed July 10, 1959, Ser. No. 826,372
Claims priority, application Germany July 18, 1958
11 Claims. (Cl. 180—79.2)



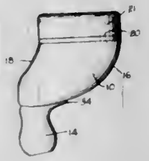
1. In a power booster steering system, a cylinder having a pressure chamber, a power booster piston movable in said cylinder by fluid pressure in said cylinder acting on said piston, and relief means for relieving said fluid pressure prior to said piston traversing a full stroke, a steering element actuated by said piston, said system having an exhaust passage, said relief means comprising a normally closed valve, a passage controlled by said valve for effecting communication between said pressure chamber and said exhaust passage, and control means for moving said valve to open position responsive to a predetermined position of said piston in moving through a power boosting stroke, and a manually actuatable steering rod and means intermediate said rod and said piston wherein actuation of said rod effects movement of said piston by manual force for extreme limits of steering subsequent to relief of said fluid pressure to avoid power booster force being effective at said extreme limits.

3,047,088
FOOT REST FOR VEHICLE DRIVERS
Carl T. Murrell, 44 SW. Ave. B, Hamlin, Tex.
Filed Jan. 13, 1961, Ser. No. 82,606
2 Claims. (Cl. 180—90.6)

1. A foot rest for a vehicle driver adapted to support his foot not normally positioned on the accelerator pedal at substantially the same level and inclination of his foot engaged with the accelerator whereby his legs and feet may be comfortably positioned, said foot rest comprising a demountable elongated support member having a substantially planar under surface adapted to closely overlie and rest upon the forwardly and upwardly inclined portion of a vehicle floor board in the driver's area thereof with the lower end of said support member positioned at the intersection of the inclined portion of the floor board and the generally horizontal portion thereof disposed immediately rearwardly of said inclined portion, said elongated support member including an upper surface complementary to the general contour of the bottom of a shoe and adapted to support the shoe of the driver on his foot not normally positioned on the accelerator of the vehicle, said upper surface being of a height above and disposed at an angle relative to said lower surface so as to be adapted to position said shoe in a manner simulating the manner in which the driver's other shoe engaged with the accelerator is positioned relative to the driver's seat and the various inclined and horizontal portions of said floor board, said lower surface comprising a panel of flexible material secured to the bottom surface of said support member, said panel extending beyond the opposite ends of said support member and terminating at its rear end in a laterally enlarged portion adapted to overlie an area of said horizontal portion of said floorboard adjacent said support member and at its forward end in a tab portion adapted to overlie an area of the fire wall of the vehicle adjacent the upper end of said support member, means adapting said tab portion for readily removable securement to said fire wall, said upper surface including a forward concave recess adapted to conform to the contour of the lower surfaces of the sole of a shoe and a rear substantially flat bottomed notch opening upwardly and defined by an upstanding shoulder portion disposed between said recess and notch, said flat bottomed notch being adapted to conform to the contour of the bottom surface of the heel of a shoe.

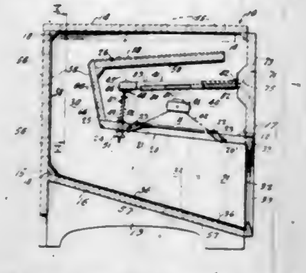


3,047,089
EAR PLUGS
Jozef J. Zwislocki, Syracuse, N.Y., assignor to Syracuse University, Syracuse, N.Y., a corporation of New York
Filed Aug. 31, 1959, Ser. No. 837,058
6 Claims. (Cl. 181—23)



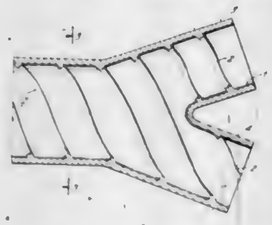
1. An ear plug comprising an essentially rigid thin wall enclosure having a volume in the order of 2 cubic centimeters, said enclosure ending at one side in a short thin wall rigid tubular portion adapted for communication with the ear canal and of a length in the order of 0.8 centimeter, said tubular portion having an acoustic inertance of less than 10^{-2} g./cm.^{4}.

3,047,090
TUNED ACOUSTICAL DEVICE
Robert G. Pruden, 5108 Brandel Circle, Toledo 7, Ohio
Filed May 7, 1958, Ser. No. 733,571
13 Claims. (Cl. 181—31)



4. A tuned horn transducer comprising an enclosure, a baffle in said enclosure, an indirectly radiating electro-acoustical transducing means for emanating sound waves from two opposite sides thereof and mounted on said baffle, a tuned low frequency accentuating folded horn having a throat and a mouth, said horn extending from one side of said baffle around said baffle configured to include said baffle as a part of said horn between said throat and said mouth, an acoustic impedance matching chamber for said horn throat on one side of said baffle, said chamber opening to said throat, phase correcting porting means in said baffle between said chamber and said horn, and a second horn extending directly from said chamber to the exterior of said enclosure and resonant at a higher frequency than that of said folded horn.

3,047,091
MUFFLER
John E. Gerli, Taconic Road, Greenwich, Conn.
Filed Mar. 10, 1960, Ser. No. 14,141
2 Claims. (Cl. 181—52)



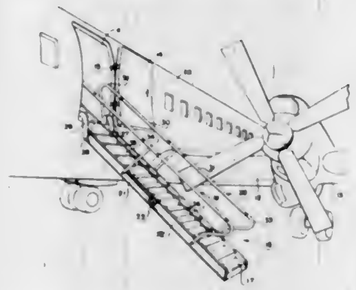
1. An exhaust coupling between V-type marine engine exhaust manifolds and their tail pipes comprising a Y portion, said portion having a smooth interior surface with spiral rib means thereon, the pitch of said rib means being substantially the same throughout said Y portion.

3,047,092
SAW HORSE AND TABLE COMBINATION
Albert Janda, R.R. 4, Box 13, South Elgin, Ill.
Filed May 29, 1961, Ser. No. 113,553
4 Claims. (Cl. 182—28)



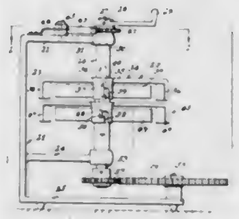
4. A saw buck structure comprising a ridge bar, a plurality of supporting legs connected firmly at their upper ends to said ridge bar, said legs being channel-shaped in section and being arranged in pairs with one pair adjacent to each end of the ridge bar and one of each pair on each side of said ridge bar, the legs of each pair being offset longitudinally from one another, an extendable member nested into each leg, and means pivotally connecting each extendable member at its upper end with the upper end of the respective leg, said members each being movable about said pivots from a position nested within a leg into a plane parallel with the plane of the ridge bar and into cross relationship extending above said ridge bar.

3,047,093
FOLDABLE STAIRWAY FOR AIRCRAFT
Edward S. Cruz, Van Nuys, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Apr. 2, 1958, Ser. No. 725,872
5 Claims. (Cl. 182—97)



1. Passenger loading steps for aircraft comprising, a frame pivotally secured at one end thereof to the aircraft and having a plurality of steps formed therein, a second frame pivotally secured to the opposite end of the first mentioned frame and having a plurality of steps formed therein, linkage means pivotally attached to the first mentioned frame connecting with the second frame for controlling the pivotal movement of the latter frame between an extended position generally aligned with the first mentioned frame and a stowed position wherein the frames are folded back against each other, actuating means operatively connected to the first mentioned frame for swinging the frames relative to the aircraft between the extended position and the stowed position, a segmental handrail composed of rigid segments pivotally carried at one end to the aircraft and pivotally connected to both the first and second frames, and means connecting the actuating means to the handrail so that the handrail and the frames fold at a differential rate.

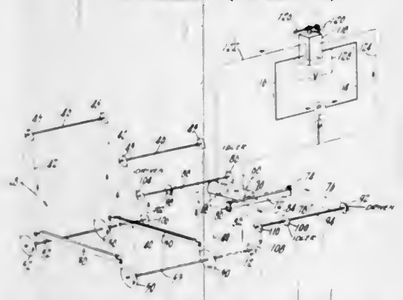
3,047,094
MULTIPLYING SPRING MOTOR
Joseph F. Oblazney, 1402 Sheridan St., Camden, N.J.
Filed Apr. 22, 1960, Ser. No. 24,019
2 Claims. (Cl. 185—9)



1. In a multiplying spring motor, a drive shaft having a head on its inner end, there being a recess in the head portion of said shaft, a bracket including a flat portion

provided with an opening for snugly receiving the head of said shaft, said opening having the same configuration as said head so that there is a non-rotatable relationship between the head and bracket, a plurality of spaced apart lugs depending from the outer ends of said flat portion, one of said lugs having a slot therein, a spiral spring member having its outer end portion engaging said slot, a second bracket contiguous to said first bracket and said second bracket including a triangular flat portion provided with an opening therein, a bushing provided with a central longitudinally extending recess, a head on the lower end of said bushing engaging the opening of a second bracket, said last named head having the same configuration as the opening of the second bracket so that there is a non-rotatable relationship between the last named head and the opening of the second bracket, the inner end of said spring member being connected to said bushing, lugs depending from said second bracket, one of said last named lugs having a slot therein, a second spring member having its outer end portion engaging said last named slot, a driven shaft having a recess therein, a pin extending through said bushing and engaging the recess in said driven shaft, and said second spring member having its inner end connected to said driven shaft.

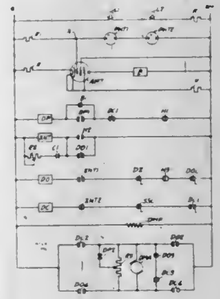
3,047,095
PALLET ELEVATOR
Carl Lee Bell, Kenosha, Wis., and William Selenak Repp, Waukegan, Ill., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed May 6, 1960, Ser. No. 27,415
5 Claims. (Cl. 187—3)



1. A hydraulically operated elevator for raising and lowering a pallet and the like, comprising a support engageable beneath said pallet, a pair of parallel shafts disposed on opposite sides of said support, a pair of endless lift chains operating around and driven by each of said shafts, the opposed inner flights of said lift chains extending vertically and secured to said pallet support, a pair of endless drive chains disposed in spaced parallel relation in vertical planes extending transversely of said shafts, said chains each including spaced parallel flights, means operatively connecting said drive chains to said shafts respectively, and means extending between said drive chains and secured at opposite ends to different spaced flights thereof for simultaneously driving the chains in opposite directions, whereby to rotate said shafts in opposite directions while moving said inner lift chain flights in the same vertical direction.

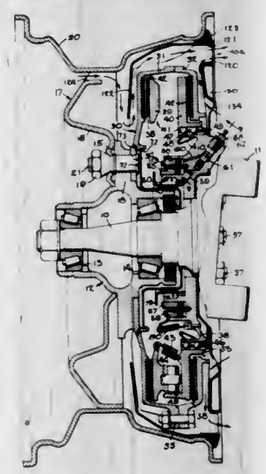
3,047,096
CONTROL FOR AN ELEVATOR CLOSURE
John Edward Magee, Ardsley, N.Y., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 22, 1958, Ser. No. 782,148
4 Claims. (Cl. 187—48)

1. A control for a horizontally sliding type elevator door mounted for sidewise movement for opening and closing an elevator entranceway to passenger transfer, said control comprising, door operating means for opening and closing operation of said door, object-sensing means including a transmitter of radiant energy positioned on one side of said entranceway and directing a beam of radiant energy horizontally across said entranceway across the path of passengers transferring through said entranceway and a radiant energy receiver positioned on the other side of said entranceway in line with said beam of energy and responsive to said beam, said object-sensing means being operatively responsive to interruption of said beam by a transferring passenger during a door closing operation of said door operating means,



means for reducing the speed of said door below normal closing speed in closing, said speed reducing means being actuated by operation of said object-sensing means and remaining so actuated notwithstanding that said beam is subsequently reestablished only so long as said door continues moving in the closing direction, object-detecting means for detecting the presence of an object adjacent the leading edge of said door in the closing path of said door, and switching means operatively responsive to such detection by said object-detecting means for causing said door operating means to stop the closing movement of said door and return said speed reducing means to unactuated condition.

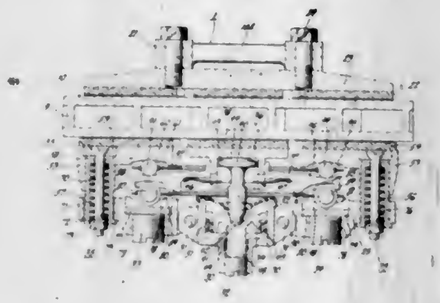
3,047,097
BRAKE CONSTRUCTION
Edward A. Rockwell, 167 Ashdale Place, Los Angeles 49, Calif.
Filed July 2, 1958, Ser. No. 746,292
17 Claims. (Cl. 188—72)



1. In a brake mechanism the combination comprising, a rotary wheel to be braked having a hub, a brake housing

mounted on said wheel having an annular braking surface concentric with the hub, a braking unit for the wheel mounted on the hub inside the housing including a brake disk axially movable into engagement with the housing braking surface, and manually operated hydraulic means for moving said disk into frictional engagement with said braking surface, said hydraulic means including dual concentric annular cylinders defined about said hub, annular pistons in said cylinders, and connections between said pistons and said brake disk so that pressure fluid admitted to either of said cylinders is effective to move said brake disk axially into contact with the braking surface.

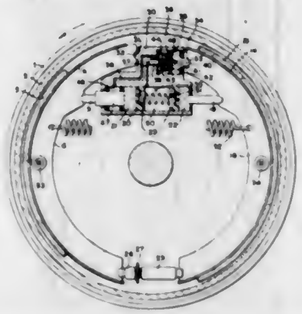
3,047,098
VEHICLE DISK BRAKE
Maurice Olley, Pasadena, Calif., assignor, by mesne assignments, to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 26, 1959, Ser. No. 823,257
4 Claims. (Cl. 188—73)



1. A vehicle disk brake comprising in combination; a brake disk for rotation with a vehicle wheel, a brake support member, a primary shoe for frictionally engaging said brake disk, hydraulic actuating means mounted on said brake support member connected to said primary shoe for actuation thereof, a secondary brake shoe actuating plate connected to said primary shoe and extending laterally to transmit a lateral movement of said primary shoe through said secondary brake shoe actuating plate, a secondary shoe, said secondary shoe and said support member provided with camming means, said secondary brake shoe actuating plate provided with mating camming means facing said camming means on said secondary shoe and said support member for reception of rolling elements, said primary shoe depending solely upon the hydraulic means for energizing said primary shoe, said primary shoe providing the sole actuating means through transverse movement of said secondary brake shoe actuating plate thereby providing an axial thrust on said rolling elements which act on said camming means to create an axial thrust on said secondary brake shoe and actuate said secondary shoe subsequent to actuation of said primary shoe.

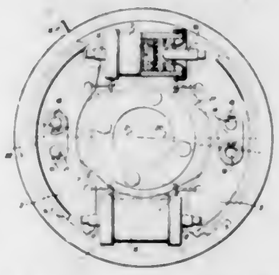
3,047,099
CONSTANT TORQUE DRUM BRAKE
Edwin A. Dahle, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,504
4 Claims. (Cl. 188—78)

1. A vehicle brake including a torque regulating device comprising in combination, a brake support member, a brake drum rotatably mounted adjacent to said brake support member, a primary brake shoe, a secondary brake shoe, said brake shoes mounted on said brake support member for frictionally engaging said brake drum, means connecting two ends of said brakes shoes, hydraulic fluid actuating and anchor means mounted on said brake support member including, a hydraulic wheel cylinder, a primary piston in said wheel cylinder connected to said primary brake shoe, a secondary piston in said wheel cylinder connected to said secondary brake shoe, a fluid actuating cylinder formed by said pistons and said wheel cylinder, a compensating chamber formed by said primary piston and said wheel cylinder, a portion of said primary piston extending through said compensating cylinder to reduce the effective area exposed to hydraulic fluid in said compensating chamber relative to said actuating chamber, an anchor cylinder connected to said hydraulic cylinder, an anchor piston in said anchor cylinder con-



nected to said secondary brake shoe, an anchor chamber formed by said anchor piston and said anchor cylinder, valve means in said anchor chamber, means for biasing said valve means to a closed position, conduit means connecting said actuating chamber through said anchor chamber to said compensating chamber, and said valve means in said conduit means intermediate said actuating chamber and said anchor chamber operating in response to pressure in said anchor chamber and controlling the communication between said actuating chamber and said compensating chamber through said anchor chamber to reduce the torque input to said primary shoe in response to the torque output of said secondary brake shoe as reflected by pressure in said anchor chamber to provide a constant input actuating force on said primary brake shoe when said vehicle brakes are actuated.

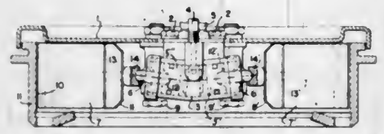
3,047,100
BRAKE SHOE CONSTRUCTION
Franz G. F. Behles, Stuttgart-Schoenberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Oct. 6, 1959, Ser. No. 845,059
Claims priority, application Germany Oct. 11, 1958
7 Claims. (Cl. 188—78)



1. A brake shoe construction provided with an outer rotatable brake drum and with rotatable brake shoes comprising a pair of brake shoes each having a brake lining

along the outer circumference thereof adapted to engage said brake drum to produce a braking effect, a pair of brake cylinders with actuating means for said brake-shoes, the center line of each brake lining forming a radial line thereof subtending an angle with a line essentially parallel to said brake cylinders and passing through the center point of the brake, a plate-like, double-armed member and a pair of shackle means for supporting one of said brake shoes at each of the arms of said double-armed member, said double-armed member and said means supporting said brake shoes being so constructed and arranged that the center line of each of said brake linings is located, with respect to the direction of rotation of said brake drum, rearwardly of said line parallel to said brake cylinders.

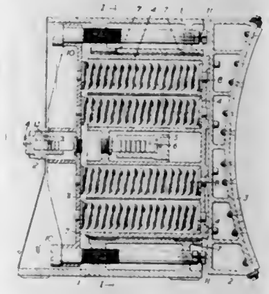
3,047,101
HYDRAULIC BRAKE FOR VEHICLES
Hans O. Scherenberg, Stuttgart-Heumaden, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Oct. 18, 1957, Ser. No. 691,022
Claims priority, application Germany Oct. 26, 1956
18 Claims. (Cl. 188—152)



1. A hydraulically actuated shoe brake for motor vehicles comprising brake shoe means having brake lining means, means for energizing said brake shoe means including hydraulic means, a relatively stationary part in said brake, said means for energizing said brake shoe means including further means operatively connected with said hydraulic means for preventing vibrations and therewith objectionable brake noises by said brake shoe means during braking operation by selectively forcing said brake shoe means into and out of contact with said relatively stationary part in dependence on the hydraulic contact pressure existing in said hydraulic means, said hydraulic means including a piston and cylinder assembly, and said further means operatively connected with said hydraulic means being actuated by the piston of said assembly to force said brake shoe means against said relatively stationary part.

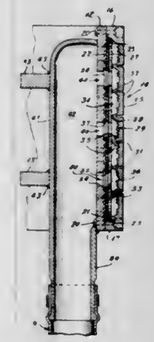
3,047,102
MECHANICAL BRAKE SYSTEM FOR WINDING ENGINES, CONVEYORS AND OTHER ROTATING MACHINES
Arthur Crompton, Lincoln, England, assignor of one-half to Robey & Co., Limited, Lincoln, England, a British company
Filed Apr. 9, 1958, Ser. No. 727,368
Claims priority, application Great Britain Oct. 23, 1957
1 Claim. (Cl. 188—170)

A brake suitable particularly for use on mine hoists and rope conveyers and consisting of a single independent unit comprising a housing for securing the brake in correct alignment with a brake tread on the machine it is required to brake, a brake shoe slidably mounted in guides secured to said housing, the respective bearing faces of the brake shoe and guides being arcuate in form so that the brake shoe may align itself correctly with the brake tread when applied, spring means by which the brake shoe is normally urged into contact with the brake tread with sufficient force exerted by the springs and controlled and governed by a ram acting in a cylinder formed integral with the housing, a pressure medium in the cylinder operating against a part of the brake shoe thereby the force of the springs is opposed to a degree infinitely variable depending on the pressure of the pressure medium, the variation of the pressure medium being controlled by a pressure control valve with means for automatic operation, means whereby the maximum force exerted by the springs on the brake shoe and thence on the brake path when not opposed by the thrust of the ram being initially set and adjusted as the wear of the brake linings occur and comprising a cover secured to the fixed frame by adjustable bolts against which the springs react and which as the bolts are screwed in or out either increases or decreases the compression of the springs to effect the adjustment, a secondary ram acting



in a secondary cylinder formed integral with the housing and which is utilized to compress the springs to the desired amount with the spring adjustment bolts being set into position to retain the desired compression upon release of fluid pressure in the secondary cylinder, said bolts being capable of being screwed freely in or out to a new position, a pressure existing in the secondary cylinder when the cover is allowed to return against the heads of the adjusting bolts without imposing any force thereon, the means by which the pressure may be controlled in the secondary cylinder consisting of the opening of a valve to make a connection with the normal control circuit thus enablirg the normal brake control to be used for the purpose.

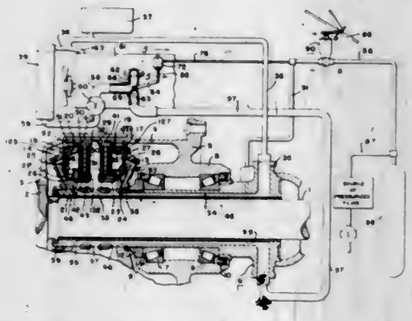
3,047,103
FRICTION DEVICE
Robert E. Schwartz, University City, Mo., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,288
12 Claims. (Cl. 188—264)



6. A friction element for a fluid cooled friction device comprising a metallic wall having growth characteristics effected by cyclical thermal differentials, a friction surface on one side of said wall adapted to engage another friction element, an integral supporting rib on the other side of said wall directly opposite said friction surface, and

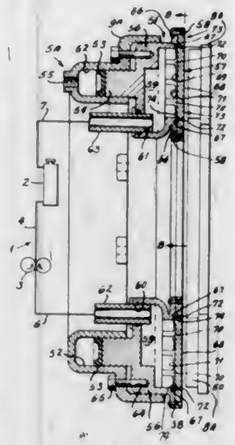
a groove in said friction surface positioned relative to said supportng rib, the narrowest cross-section of said wall being between said groove and rib to provide a predetermined locus of weak points for absorbing permanent distortion of said wall in response to the metal growth characteristics thereof.

3,047,104
VEHICLE ENGINE AND BRAKE COOLING SYSTEM
Hans O. Schjolin, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,896
2 Claims. (Cl. 188—264)



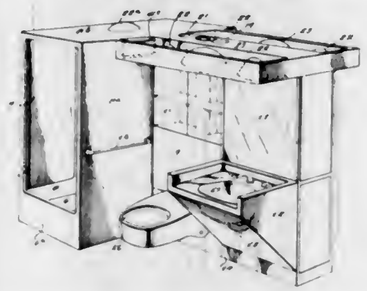
1. In a device of the character described comprising in combination, a vehicle brake including, actuating fluid passage means within said vehicle brake, a source of pressurization fluid, a cooling fluid valve control means including, an expansible chamber, a pressure responsive member in said valve control means, actuating fluid conduit means connecting said source of pressurizing fluid with said actuating fluid passage means in said vehicle brake and said expansible chamber in said cooling fluid valve control means, an actuating valve in said actuating fluid conduit means controlling the flow of pressurized fluid to actuate said vehicle brakes and to said expansible chamber in said cooling fluid valve control means, an engine cooling fluid system comprising a motor vehicle engine, cooling fluid passage means in said engine, a heat exchanger, cooling fluid conduit means connecting said heat exchanger, means for circulating fluid through said cooling fluid passage means in said engine with said engine cooling fluid system, cooling fluid passage means in said vehicle brake cooling fluid conduit means connecting said engine cooling fluid system with said cooling fluid passage means in said vehicle brake, a cooling fluid control valve in said cooling fluid conduit means connecting said cooling fluid passage means in said vehicle brake with said engine cooling fluid system for controlling the flow of cooling fluid through said engine cooling fluid system and said cooling fluid passage in said vehicle brake, said cooling fluid control valve including a first valve seat, a second valve seat, a valve element pivotably mounted for selectively engaging said valve seats, opening means in said valve element permitting limited flow of cooling fluid through engine cooling fluid system when fluid is circulated through said vehicle brake, means connecting said valve element with said pressure responsive member in said expansible chamber, said cooling fluid control valve directing flow of cooling fluid through said vehicle engine when said vehicle brakes are not in actuation and diverting a greater portion of the cooling fluid through said vehicle brake in response to pressurization of actuating fluid in said expansible chamber of said cooling fluid control means when said vehicle brake is actuated.

3,047,105
FRICTION DEVICE
Robert E. Schwartz, University City, Mo., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,191
9 Claims. (Cl. 188—264)



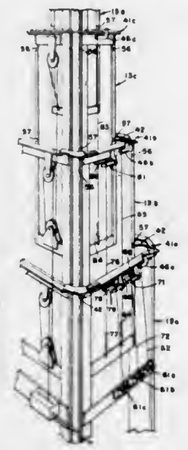
1. An annular friction element for a fluid cooled friction device comprising a relatively thin metallic wall, radially spaced annular marginal edges defining the circumferential extremities of said wall, opposed annular friction and cooling surfaces on said wall intermediate said edges, said friction surface having a predetermined symmetry, supporting means for supporting said wall against distortion inward of said friction surface, and groove means radially spaced between said edges in said friction surface and aligned with said supporting means dividing said wall into annular supported spans, said groove means absorbing permanent radial distortion in response to metal growth characteristics of said wall effected by cyclical thermal differentials between said friction and cooling surfaces to substantially maintain the predetermined symmetry of said friction surface.

3,047,106
PREFABRICATED COMBINATION BATHROOM, KITCHEN AND UTILITY ROOM UNITS
Emmett J. Callahan, 117 Pacific Bldg., Salem, Oreg.
Filed Sept. 30, 1959, Ser. No. 843,518
10 Claims. (Cl. 189—1)



1. A prefabricated combination bathroom unit comprising a central hollow framework, a base frame supporting said central hollow framework, a canopy framework secured to the upper end of said first named framework, a combined tub-shower stall supported in said framework at one end of said base frame, a waterproof door closing opposite ends of said combined tub-shower stall on opposite sides of said framework, means in said framework vertically adjustable thereon for supporting a stool adjacent to said framework, a soil pipe mounted in said framework and supported by said vertically adjustable means whereby said soil pipe may be supported completely within said framework during shipment of said unit and lowered into contact with a sewer pipe when installing said unit.

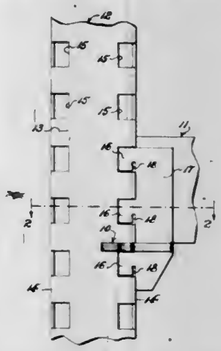
3,047,107
TELESCOPING TOWER
Charles R. Parmenter, Belmont, and Robert V. Laustrup, Woodside, Calif., assignors to Alpar Manufacturing Company, Redwood City, Calif., a corporation of California
Filed Nov. 25, 1957, Ser. No. 698,561
6 Claims. (Cl. 189—14)



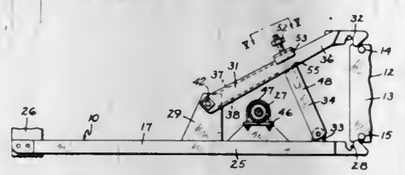
1. A telescoping tower comprising a plurality of sections adapted to be telescoped one within the other, locking means carried at the top of each of said sections with the exception of the innermost section, said locking means adapted to lock adjacent inner sections in their telescoped and extended positions, and means operable at the base of the tower for selectively releasing said locking means, said last named means including means for preventing the release of the locking means of the sections other than the next innermost telescoped section whereby the tower is extended from the outermost sections inwardly.

3,047,108
AUTOMATIC LOCK FOR DEMOUNTABLE STORAGE RACKS
Thomas N. D'Altrul, 495 S. 21st St., Irvington, N.J.
Filed Apr. 24, 1961, Ser. No. 113,583
9 Claims. (Cl. 189—36)

1. In a storage rack, the combination of an upright post including a cross wall and at least one side wall merging in a substantially right-angled corner, portions of said corner being cut away at vertical intervals to provide entrance slots each of which opens through both the cross wall and the side wall, a horizontally elongated load-supporting member including a flat connector plate lying in a vertical plane and having at least one connector tongue projecting longitudinally outward for demountable engagement within a selected entrance slot of the upright post and being slightly less in length than the horizontal width of the cross wall portion of each entrance slot, slightly less in vertical width than the height of said slot, and slightly less in horizontal thickness than the horizontal depth of the side wall portion of said slot, whereby the connector tongue of the connector plate may be introduced directly by horizontal movement in a front to rear direction into the engaged entrance slot through the cross wall portion thereof until it overlies the lower edge of the side wall portion of said slot, the connector tongue being provided with a vertical anchor slot in its lower edge to embrace the lower edge of the side wall portion of the engaged entrance slot, the vertical extent of the anchor slot in the connector tongue being such that a detent-receiving gap is created between the upper edge of the cross wall portion of each entrance slot and the upper edge of a connector tongue when engaged with said slot with its anchoring slot embracing the lower edge of the side wall portion of the entrance slot, and an automatic locking device removably attached to the connector plate of the load-supporting member to prevent dislodgment of the connector tongue of said connector plate from post entrance slot engagement when the load-supporting member is accidently thrust upwardly, said locking device comprising a base portion, means to attach said base portion rigidly to the connector plate of the load-supporting member, a resilient shank portion extending horizontally from said base portion in the same direction as the connector tongue and located directly above the level of the upper edge of said tongue, and a detent portion provided on the free end of said shank portion and facing horizontally rearward for locking engagement with the detent-receiving gap when the connector tongue of the load-supporting member becomes completely engaged with the post entrance slot.



3,047,109
COUPLING
Vaino J. Holopainen, Rutland, Mass., assignor to Wainoy Corporation, Hubbardston, Mass., a corporation of Massachusetts
Filed Jan. 20, 1959, Ser. No. 787,962
8 Claims. (Cl. 189—36)



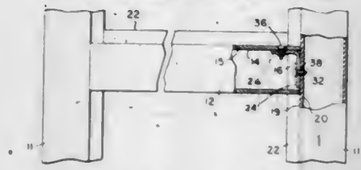
6. A coupling in combination with an attachment for a vehicle, the attachment having a main body of substantial height and having oppositely-facing, generally vertical side surfaces, upper and lower pins extending laterally from the said side surfaces, the pins on each side being substantially separated in the vertical direction and lying in a substantially vertical line, base members adapted to be fixed one to each side of the vehicle, an upper link pivotally connected at one end to each of the base members a locking link pivotally connected to each of the bas

members at a point spaced from the point of connection of the corresponding upper link, each base member having an upwardly-facing notch at one end thereof and each upper link having a similar notch formed in the end thereof opposite the end which is connected to the base member, the notches of each set of upper link and base member facing one another and adapted to engage a pair of the upper and lower pins on the corresponding side of the attachment, the locking links being engageable with the upper links and swingable lengthwise thereof to cause the upper links to swing upwardly and downwardly to move the said notches farther apart or closer together, respectively.

3,047,110
IMPROVED BRACKET AND METHOD OF ASSEMBLY UTILIZING IT

Richard A. Saha, 101 S. 11th St., Darby, Pa.

Filed Aug. 14, 1959, Ser. No. 833,832
8 Claims. (Cl. 189—36)

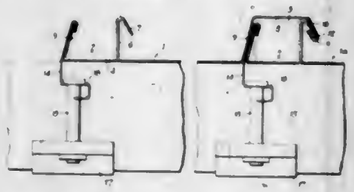


4. In apparatus of the character described a bracket securable within one tube for joining said tube in substantial right angle abutment with another tube, said bracket having two legs each of which is secured to one of said tubes, and said legs being disposed at an angle of less than 90° to each other.

3,047,111
METAL SHEETING

Stephen Geoffrey Clements, St. Albans, and Eric Hugh Laithwaite, Windsor, England, assignors to The British Aluminium Company Limited, London, England, a company of Great Britain

Filed Nov. 2, 1959, Ser. No. 850,370
Claims priority, application Great Britain Nov. 4, 1958
14 Claims. (Cl. 189—86)



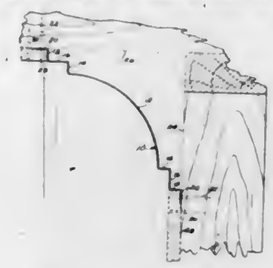
1. A metal sheet provided with a channel along each of two opposed parallel edges, the two channels opening in opposite directions and being dimensioned so that the walls of one channel are capable of extending into the other channel of a similar sheet, the free edge of the inner wall of one channel being turned over away from the outer wall thereof and the free edge of the outer wall of the other channel being formed with a hook portion adapted to engage the turned over portion of the one channel of a similar sheet.

3,047,112
COVE MOLDING

Stephen W. Tvorik, 7066 Beresford Ave., and Andrew Braunitzer, 6966 Orchard Blvd., both of Cleveland, Ohio

Filed May 23, 1958, Ser. No. 737,449
3 Claims. (Cl. 189—87)

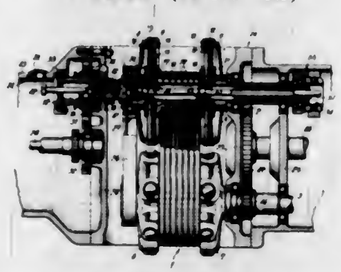
1. A cover for dry wall construction in a building structure comprising a sheet-like section shaped to a quadrant of a cylinder, a shoulder joined to the marginal edge of said section and perpendicular thereto, a second section joined to the marginal edge of said shoulder and perpendicular to said shoulder, a second shoulder joined to the marginal edge of said second section and perpendicular to said second section, and a flat leg portion joined to said second shoulder and perpendicular to said second shoulder and adapted to engage said wall and underlie the dry wall plaster board, said shoulders having a height equal to the thickness of the plaster board.



3,047,113
V-BELT TRANSMISSION

Hans Hoenick, Stuttgart-Zuffenhausen, Germany, assignor to Firma Dr. Ing. h.c. F. Porsche KG, Stuttgart-Zuffenhausen, Germany

Filed May 10, 1960, Ser. No. 28,084
Claims priority, application Germany May 27, 1959
8 Claims. (Cl. 192—3.5)



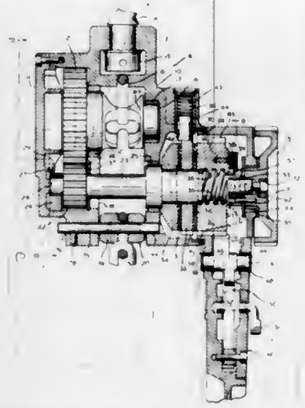
1. A continuously variable belt transmission, especially for the drive of vehicles, comprising a driving shaft, a driven shaft, a transmission housing surrounding the transmission and including common supporting wall means, adjustable belt transmission means operatively connecting said shafts and operative to selectively vary the transmission ratio therebetween, means supporting said shafts in overhung position within said common supporting wall means, and freely supported means mounted over the free ends of said shafts to relieve the same of bending stresses.

3,047,114
HOIST CONSTRUCTION

Howard C. Stevens, Jr., Muskegon, Mich., assignor to Manning, Maxwell & Moore, Inc., Muskegon, Mich., a corporation of New Jersey

Filed July 18, 1958, Ser. No. 749,489
7 Claims. (Cl. 192—16)

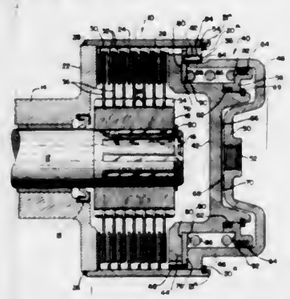
1. A hoist construction comprising, a relatively narrow body portion, a sprocket shaft and load shaft supported in general vertical alignment within said body portion, a driving member mounted for rotation upon the load shaft, a load brake including a ratchet wheel freely supported upon the load shaft, detent means connected to the driving member, means on said load shaft and rotatable therewith forming a detent receiving surface for rendering the load brake ineffective when the sprocket shaft is freely rotated, a pawl located within a bore in the body portion and resiliently urged axially in said bore in opposite directions in continuous engagement with the ratchet wheel during a raising or lowering or free-wheeling operation, a hand lever assembly for rotating the load shaft and moving the driving member axially away from the load brake to disengage the same, and a lever reversal mechanism comprising a rotatable control member mounted on said lever assembly, resilient means arranged for expansion by said member, and a pawl supported by the lever assembly and rotatable upon movement of the control member clockwise or counter-clockwise into locking contact with the driving member to permit reversal of the lever assembly during raising or lowering of the hoist.



3,047,115
FLUID OPERATED CLUTCH

Arthur L. Lee and Arthur B. Coval, Columbus, Ohio, assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 29, 1960, Ser. No. 39,587
8 Claims. (Cl. 192—85)



1. In a fluid operated clutch, the combination comprising a first member and a second tubular member axially positioned on said first member, said members being rotable relative to each other, said second member having a cylindrical end portion forming a housing, said housing having an annular free end portion, clutch plates positioned within said housing, alternate clutch plates being nonrotatable and axially movable relative to said housing and the intermediate clutch plates being nonrotatable and axially movable relative to said first member, said housing having an inner wall with a shoulder portion and an annular groove adjacent its free end portion, fluid operated actuator means secured to and removable from said housing as a unit, said actuator means adapted to axially move said plates relative to said housing to thereby frictionally engage said plates to each other, said actuator means including an actuating cylinder having an annular end portion, said actuator means positioned partially within said housing with said cylinder annular end portion in abutting relation with said housing shoulder portion, means nonrotatably maintaining said actuator means within said housing, and an annular ring member positioned in said housing inner wall anular groove in abutting relationship with said cylinder annular end portion thereby axially securing said actuator means in said housing and permitting removal of said actuator means as a unit from said housing upon removal of said annular ring member.

3,047,116
SAFETY DEVICE FOR POWER PRESSES

Ariel I. Stiebel, Detroit, and Miles G. Rigby, Birmingham, Mich., assignors to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania

Filed Aug. 27, 1958, Ser. No. 757,581
15 Claims. (Cl. 192—131)



1. In a safety device for an operator-actuated power press having movable parts, a pair of flexible cuff members having free terminal ends, fastener means associated with each of said cuff members for detachably retaining said cuff members arcuately about the wrists of the operator, said cuff members having a slotted section intermediate the terminal ends thereof, a staple member joined to each of said cuff members for projection through its associated slotted section in assembled relation on the wrist of the operator, electrical circuit means for selectively controlling the movement of said movable press parts including at least one circuit energizing electrical switch and means cooperating with said staple members for simultaneously actuating said electrical switch and for rendering said cuff members unfastenable in assembled relation about the operator's wrist comprising detachable cable fastener hooks having an open end for receiving respective ones of said staple members projecting through its associated slotted section in assembled relationship on the wrist of the operator, a flexible arm rigidly secured to each of said cable fastener hooks and extending across said open end of associated ones of said hooks, said arm being movable by respective ones of said staple members in assembled relation to actuate said switch to circuit energizing position to permit movement of said parts.

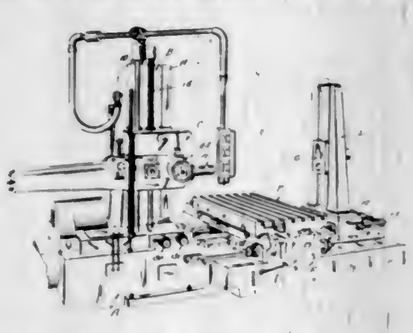
3,047,117
COMBINED HORIZONTAL BORING, DRILLING AND MILLING MACHINE

Hallis N. Stephan, Cleveland Heights, Ohio, assignor to The New Britain Machine Company, New Britain, Conn., a corporation of Connecticut

Filed Dec. 10, 1956, Ser. No. 627,465
4 Claims. (Cl. 192—139)

1. In a positioning system, a movable element, first drive means for moving said element at a fast speed, second drive means for moving said element at a slow speed, first control means actuatable to change the speed at which said element is moved from the fast speed to the slow speed, second control means actuatable to stop said element, a rotatable member, means connecting said ro-

tatable member to said element to rotate in timed relation to the movement of said element, a first dial member, a support member supporting said first dial member for rotation relative to said support member and to said rotatable member, a zero reference line on said support member indicating the angular displacement of said first dial member from a predetermined angular position, means for selectively connecting the rotatable member to said first dial member for rotation therewith, signal means on said first dial member, means supported by said support member adjacent said first dial member and responsive to said signal means to provide a first control signal each time said dial member is in its said predetermined angular position, a second dial member rotatably supported by said support member, third drive means con-



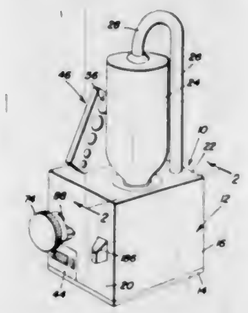
nected to said second dial member and rotating said second dial member in timed relation to the rotation of said first dial member and through a predetermined portion of one revolution for each complete revolution of said first dial member and including means for selectively disconnecting said drive means from said second dial member, signal means on said second dial member, means on said support member responsive to said signal means on said second dial member and providing a second control signal when the second dial member is moved to a predetermined angular position, means responsive to said second control signal to actuate said first control means to change the speed of said element, and means responsive to said first control signal to actuate said second control means to stop said element when said dial members have been driven to their said predetermined positions.

3,047,118
FEEDER TRACK AND CLEARING WHEEL
James W. Batchelder, Springfield, Vt., assignor to Textron Inc., a corporation of Rhode Island
Filed July 11, 1960, Ser. No. 41,963
5 Claims. (Cl. 193—43)



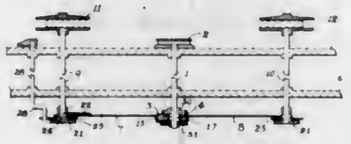
1. In a device of the type feeding headed parts in soldiered array in a vertical plane along a feed track, improved means for ensuring against discharge of improperly positioned pieces comprising: a said feed track adapted to support parts being fed thereon suspended by their heads with shanks dependent in the feed track structure. a toothed and circumferentially grooved clearing wheel rotatable in the plane of the feed track with an edge of the wheel proximate to the track and adapted to permit properly suspended parts to pass thereunder on the track, and means associated with the track adapted to apply locally in the region of the wheel a force lightly restraining parts against force inducing movement of parts under the wheel, thereby to cause succeeding parts to form a closed-up array of parts moving toward and under the wheel.

3,047,119
COIN CONTROLLED LIQUID DISPENSER
John H. Smith, 1806 E. Long St., Columbus 3, Ohio, and Raymond H. Miller, Columbus, Ohio; said Miller assignor to said Smith
Filed Aug. 29, 1958, Ser. No. 758,045
8 Claims. (Cl. 194—87)



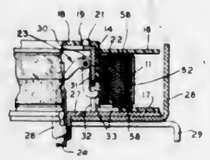
1. A dispensing device comprising a casing, a container detachably mounted on said casing, said container having an open end facing downwardly, vertically reciprocal seal means normally forming closure means for the open end of the container, and means for temporarily releasing the seal means for permitting discharge of a predetermined quantity of liquid from the container, said releasing means including a cam rotatable on a shaft, and removable means forming an interlock between the shaft and cam for rotating the cam only when the last named means is present, said seal means including a siphon tube movable vertically therewith for dispensing only when the seal means is lowered.

3,047,120
RIBBON FEED MECHANISM OF TYPEWRITERS
Edward Victor Byers, 16 Barrack, The Park, Nottingham, England
Filed Feb. 21, 1961, Ser. No. 90,852
6 Claims. (Cl. 197—151)



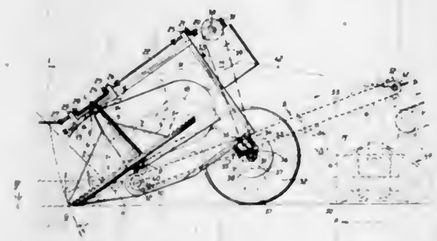
1. Ribbon feed mechanism for a typewriter comprising an axle driven from the carriage escapement wheel, a cam thereon, two ribbon spools, a ribbon carried thereby, axles to carry the ribbon spools, links extending from the axle driven by the carriage escapement wheel to the respective ribbon spool axles, two abutments on each link for engagement by the cam, a ratchet wheel on each ribbon spool axle, a detent on each link to engage with the teeth of the ratchet wheels, and means to hold each detent in an inoperative position, said means being interconnected so that when one detent is in its operative position the other detent is held in its inoperative position.

3,047,121
TYPEWRITER RIBBON GUARD AND MOUNTING
Edwin Otto Roggenstein, Stamford, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Original application Jan. 17, 1958, Ser. No. 709,582, now Patent No. 2,930,469, dated Mar. 29, 1960. Divided and this application Dec. 22, 1959, Ser. No. 861,401
3 Claims. (Cl. 197—160)



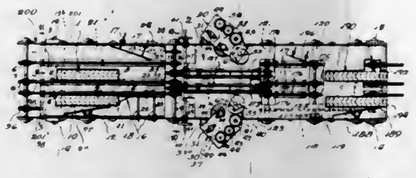
1. In a writing machine, a ribbon feed reversing mechanism including trip lever means, a ribbon spool rotating shaft means including a hub having a circularly arranged row of projections and a slot therein through the latter of which said trip lever means projects, a ribbon spool having a thimble adapted to fit over said hub and said thimble having slots for register selectively with the slot in said hub to provide access by said trip lever means to a ribbon found on said hub, and holes in the thimble for said hub projections providing a driving connection between the shaft means and said ribbon spool.

3,047,122
EARTH WORKING MACHINES
Kurt Rosetz, Ariadnestrasse 15, Berlin-Frohnau, Germany
Filed Feb. 16, 1960, Ser. No. 9,112
12 Claims. (Cl. 198—7)



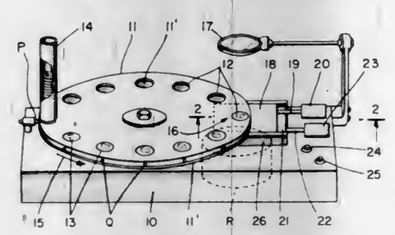
1. In a machine for working and removing soil or similar material, in combination, support means; rotary tool means mounted on said support means turnable about an axis inclined to a horizontal plane for engaging material located forwardly of and above said rotary tool means and for transporting the engaged material in a rotary motion in rearward direction, said rotary tool means being formed in a plane substantially normal to said axis with openings therethrough so that material engaged and transported by said rotary tool means may fall through said openings; and a receiving plate mounted on said support means stationary with respect to said axis and extending in a plane substantially normal thereto beneath and closely adjacent to said rotary tool means, said receiving plate extending forwardly of said axis to underlie the openings located at any instant forwardly of said axis while leaving at least one of said openings located at any instant rearwardly of said axis uncovered, all portions of said rotary tool means located at any instant forwardly of said axis being located substantially within the area of said plate.

3,047,123
CARTON ROTATING AND CONVEYING APPARATUS
James G. McKay, 5138 N. Mobile Ave., Chicago, Ill.
Filed Feb. 29, 1960, Ser. No. 11,693
8 Claims. (Cl. 198—33)



1. In a conveying system of the type wherein a plurality of cartons are successively received and moved with one axis parallel to the direction of movement and upon each of which an operation is to be performed successively at a predetermined position thereon parallel to an axis perpendicular to said one axis, the improvement comprising a pair of belts displaced with respect to the longitudinal axis of said system and arranged to engage respective bottom portions of each carton while moving at different speeds whereby each carton is successively rotated, and means for restraining the extent of said rotation while said carton is so engaged whereby said one axis is placed perpendicular to the direction of said movement and said perpendicular axis is placed parallel to the direction of movement, said means arranged to displace said perpendicular axis substantially in coincidence with said longitudinal axis while each carton is conveyed in said one direction, the length of said carton along said one parallel axis being greater than a predetermined dimension, and means adjacent one belt for restraining a corner of each carton as it approaches the end of said belt whereby the other belt will rotate said carton around said restrained corner to cause release of said restrained corner.

3,047,124
EXAMINING APPARATUS
Mandell S. Wexler, 3732 Sawtelle Blvd., Los Angeles, Calif.
Filed May 5, 1960, Ser. No. 27,176
3 Claims. (Cl. 198—33)



1. A coin examining apparatus for enabling the successive examination of a series of coins, comprising, in combination: hopper means for holding said coins; conveyor means for successively moving individual coins from said hopper means to a given location for examination of one side; flipping means for turning over each coin and repositioning it in said same location for enabling examination of its other side, said conveyor means including a flat surface having a member movable thereover, said member including a coin receiving opening of depth corresponding substantially to the thickness of said coin, said flipping means including a guide structure having a coin flipper slide plate, the top surface of said plate being coplanar with said flat surface and positioned such that said coin receiving opening passes thereover, said plate

including a control opening; means for moving said plate from a first position in which its top surface supports the bottom of said coin to a second position in which said control opening is disposed beneath said coin receiving opening; and a slide block having a thickness corresponding to the thickness of said plate positioned in said control opening and movable from one side of said control opening to the other when said plate is moved from said first position to said second position, whereby movement of said slide plate towards said second position permits an edge of said coin to fall into said control opening, said slide block then engaging the opposing side of said coin to cause it to fall onto the top of said slide block in a turned over position, return of said slide plate returning said slide block to its initial position; collecting means; and discarding means for passing each coin to said collecting means after examination thereof.

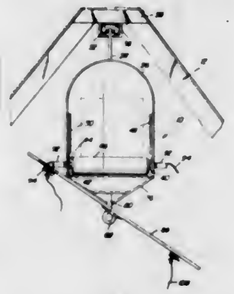
3,047,125
FEEDER CONVEYOR
Kenneth D. Schreyer, Williamsville, N.Y., assignor to Columbus McKinnon Corporation, Tonawanda, N.Y.
Filed July 18, 1960, Ser. No. 43,419
6 Claims. (Cl. 198—57)



1. A material feeder for receiving loadings of material and delivering the same at a uniform rate of discharge, said feeder comprising a portable unit including a base plate substantially bounded by hopper walls and slotted in plan-view converging relation, a plurality of conveyor components each comprising an endless power chain having a top strand portion sliding within one of said slots and mounting transversely disposed conveyor flights at relatively spaced apart positions, said slots being arranged in relatively close relation at the discharge end of the feeder while being relatively widely spaced apart at the load receiving end of the feeder, said flights being arranged on said strands so as to gather the material loadings and to deliver the material at the discharge end of the feeder while intermeshing thereat, and a load flow control device comprising a flat plate disposed above said conveyors and running lengthwise of said feeder from a position at the intake end thereof between said conveyors along the plan view center line thereof, said plate being plan-view shaped so as to leave the conveyor paths at the intake end of said machine substantially uncovered and shaped so as to progressively cover more substantial portions of the paths of said conveyors as they approach the discharge end of said feeder.

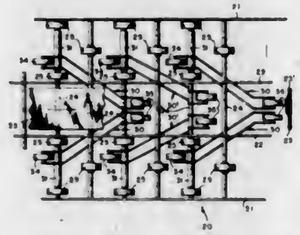
3,047,126
HAY BALE CONVEYOR
Lewis J. Ebner, Lansing, Iowa
Filed Dec. 21, 1959, Ser. No. 861,046
4 Claims. (Cl. 198—68)

1. A conveyor adapted to be mounted longitudinally adjacent the apex of the roof of a barn comprising an elongated frame, a plurality of horizontally disposed rollers mounted on said frame, an endless conveyor belt supported by said rollers with the rollers being in driving engagement with the belt, means mounted on the frame and drivingly connected to one of said rollers for driving said belt, means connected with the frame and adapted to be mounted on the barn for supporting the frame in substantially horizontal position, said means including a trackway adapted to be connected with the barn and a plurality of supporting yokes connected with the frame and having rollers on the upper end thereof engaged with the trackway for movably supporting said frame, said drive means for said one of said rollers being reversible for reversing the direction of movement of the belt thereby discharging material from either end of the conveyor and at longitudinally adjusted positions in the barn, deflector means at each end of said frame, each of said deflector means including a deflector plate mounted below the discharge end of the conveyor and means supporting the deflector plate from the frame for longitudinal movement of the deflector plate to an operative position beneath the conveyor and for angular tilting movement of the deflector plate in relation to the end roller thereby deflecting the material discharged from the conveyor belt laterally to either side thereof or permitting straight vertical discharge of the material when



the deflector plate is retracted under the conveyor, said means supporting the deflector plate including an elongated horizontally disposed mounting rod suspended below the end portion of the conveyor and extending longitudinally thereof, a tubular sleeve slidable and rotatable on said rod, said rod being supported adjacent its inner end by an upstanding member extending from said frame, said sleeve having a longitudinal slot in the upper edge thereof extending for substantially one-half the length of the sleeve whereby the slot will receive the supporting member when moved inwardly on the rod thereby permitting the sleeve to be retracted, said deflector plate being rigid with said sleeve with the rear edge of the deflector plate being disposed at the inner end of the slot with the deflector plate being disposed completely under the conveyor when the sleeve is moved inwardly on the supported rod and the slot receives the support member for the rod.

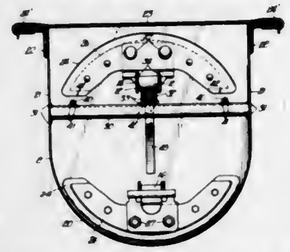
3,047,127
WEIGHT SENSITIVE CONVEYOR
Thomas C. McGow, Convent, N.J., assignor to The Rapids-Standard Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Jan. 19, 1959, Ser. No. 787,409
16 Claims. (Cl. 198—160)



1. Weight responsive means for use with conveyors, said means comprising: a power driven article propelling

means, sensing means disposed to be successively contacted by each article moving along said conveyor and effective to detect the presence and weight of each individual article on said conveyor, propelling force increasing means disposed to influence the same article and disposed apart from said sensing means and effective to urge said article propelling means against the article to increase the propelling force applied by said propelling means to the same article as necessary to move the same article detected by said sensing means, and an operative interconnection between said sensing and said propelling force increasing means for transferring and utilizing information received by said sensing means at said propelling force increasing means.
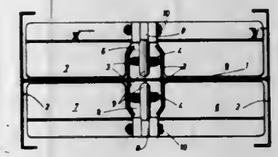
3,047,128
PUSHER-TYPE CONVEYOR
Edward P. Escher, Flossmoor, Ill., assignor to Screw Conveyor Corporation, Hammond, Ind., a corporation of Illinois
Filed Oct. 28, 1959, Ser. No. 849,306
5 Claims. (Cl. 198—174)



1. A conveyor for conveying free-flowing materials comprising a conveyor trough having a bottom and spaced upright sides, an endless conveyor trained about sprockets and having upper and lower runs operable within said trough, flights attached to said conveyor, the flights along the lower run operating to move the material longitudinally along the bottom of said trough and the upper run constituting the return run of the conveyor, longitudinally spaced guide supports extending transversely between and secured to said upright sides of said trough with the space within said trough along the upper run of the conveyor in open communication with the bottom of said trough through the spaces between said guide supports, said flights being disposed in generally vertical planes along the upper and lower runs of the conveyor with the lower edges of the flights along the upper run directed downwardly toward and spaced above said guide supports, an upper guide bar extending longitudinally within said trough over said spaced guide supports and secured thereto, said guide bar cooperating with the upper run of the endless conveyor to support the same in its movement above said guide supports, and a straight hold-down bar disposed longitudinally within said trough between the upright sides thereof and beneath and secured to said guide bar, said hold-down bar depending downwardly into close spaced proximity to the lower run of the conveyor and coacting with said lower run of the conveyor to prevent undue rise of the flights along the lower run of the conveyor from the volume of material in the bottom of the conveyor trough.
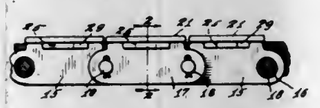
3,047,129
SINGLE-CHAIN SCRAPER CONVEYOR
Rainer Wiener, Linz on the Danube, Austria, assignor to Vereinigte Osterreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz on the Danube, Austria
Filed Nov. 20, 1959, Ser. No. 854,322
Claims priority, application Austria Nov. 26, 1958
4 Claims. (Cl. 198—174)

1. A single-chain scraper conveyor which comprises a conveyor trough consisting of several longitudinal sections each of which has a bottom and two side walls, a plurality of scrapers movably arranged in said trough to slide on said bottom and in guided engagement with said side walls, a central chain guide consisting of two stay plates welded to the upper surface of said bottom and two stay plates welded to the lower surface of said bottom of each of said sections, and a universally movable link chain disposed in said chain guide and operable to move said scrapers, said chain comprising horizontal and vertical links, said stay plates having free longitudinal edges inwardly embracing said horizontal chain links, said scrapers having a recess conforming to and receiving said chain guide, one of two adjacent sections of said trough being formed at the end next to the other of said two sections with a recess having an end wall of



approximately semicircular section in a longitudinal plane, and longitudinal walls flaring outward of said recess transversely of said plane in a direction toward said other trough section, and the other of said two sections being provided with a tongue conforming to and engaging the end wall of said recess said tongue being pivotable in said plane and between said side walls transversely of said plane, said recess and tongue being disposed between said stay plates, two cover rails being provided which extend across said sections above and below the same adjacent to said recess and which are formed with a guide groove for the vertical chain links, said cover rails being welded to the bottom of one of said two sections and having protruding parts defining between them a wedge-shaped gap.

3,047,130
CONVEYOR CHAIN
Baird E. Resener, Indianapolis, Ind., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Sept. 5, 1958, Ser. No. 759,331
8 Claims. (Cl. 198—189)



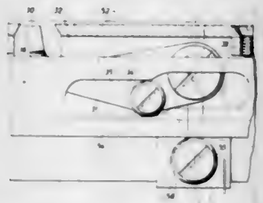
1. In a conveyor chain having a plurality of pivotally interconnected links each comprising a pair of spaced link plates, corresponding side edges of the link plates being provided with notches, guide plates disposed in said notches and located thereby in fixed positions longitudinally of the chain, each of said guide plates having oppositely facing shoulders engaging at least one link plate beyond the limits of the notch therein to hold the plate in fixed position transversely of the chain, said guide plates projecting laterally outwardly from the chain for cooperation with a chain guiding means, and conveyor platforms respectively associated with said links, said platforms being secured to the respective links in positions overlying the guide plates to hold the latter in said notches.

3,047,131
BELT CONVEYORS
Angus Wellesley Duncan, Leigh Sinton, near Malvern, England, assignor to The Mining Engineering Company Limited, Meco Works, England, a British company
Filed Sept. 1, 1959, Ser. No. 837,513
Claims priority, application Great Britain Sept. 27, 1958
5 Claims. (Cl. 198—192)



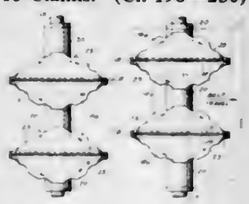
1. An idler for a self-troughing belt conveyor comprising a plurality of rollers having their axes substantially in a common plane and having their adjacent ends hingedly connected, suspension members mounted for sliding axial movement in the outermost rollers and adapted to be pivotally connected at their outer ends to stationary supports, said outermost rollers having substantially enclosed hollow cavities, bearing means extending axially through the ends of said outermost rollers adjacent the outer ends of said suspension members for slideably supporting said members, and spring means enclosed entirely within the cavities and connected to said suspension members and said rollers so as to resiliently resist axial movement of said rollers relative to said members.

3,047,132
CONVEYOR FOR PACKING MACHINES
Willi Wachsmuth, Hamburg-Bergedorf, Germany, assignor to Hauni-Werke Korber & Co. K.G., Hamburg-Bergedorf, Germany
Filed Feb. 8, 1961, Ser. No. 87,915
Claims priority, application Germany Feb. 10, 1960
4 Claims. (Cl. 198—221)



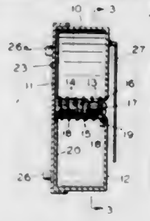
1. In a conveyor for packing machines, a plurality of adjustable dogs for engaging and moving the packages, and means for controlling the adjustment of said dogs in such a manner that same are movable into and out of the packing path in the rhythm of the machine, said means including a conveyor carriage on which said dog is pivotally mounted, a control carriage for controlling the adjustment of said dog, and means for moving said conveyor carriage relatively to said control carriage along parallel paths.

3,047,133
CONVEYOR BELT CLEANER
Amos Searles, 643 Adams St., Scranton, Pa.
Filed Jan. 10, 1961, Ser. No. 81,739
15 Claims. (Cl. 198—230)



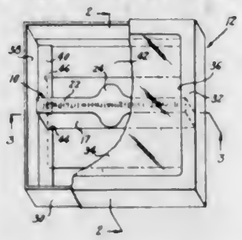
1. Apparatus for cleaning a moving conveyor belt, comprising rotatable disc means, an outer resilient portion on said disc means, an inner relatively non-resilient portion on said disc means, and means urging said disc means and conveyor belt into engagement to deflect said outer resilient portion, said outer resilient portion presenting a substantially flat circular segment in wiping engagement with said conveyor belt and rotating in a plane parallel to the plane of that portion of the conveyor belt being cleaned.

3,047,134
ASH DISPOSAL CONTAINER
Alfred Wilton Peck, 2227 SE. Tibbetts, Portland, Oreg.
Filed Aug. 23, 1961, Ser. No. 133,429
2 Claims. (Cl. 206—37)



1. An ash receiver adapted to be attached to the person of a user comprising, in combination, a cylindrical receptacle having a top, a bottom, and a cylindrical side wall, the top wall of said receptacle having portions defining an opening therein, a sleeve extending inwardly from the center of said bottom wall, a circular top rotatably mounted in overlying relation to said top wall and having an opening therein movable into and out of registry with the opening in the top wall of said receptacle, a spindle dependent from said circular top into said sleeve and revolvable therein, spring means biasing said spindle to rotate said cover to a position wherein said openings are out of registry, said spring means positioned in encircling relation to a portion of said spindle and in encircling relation to said sleeve, one end of said spring secured to said ash receiver at the juncture of said spindle and said circular top, and a spring stop member adjacent said sleeve against which the other end of said spring abuts, a manual knob for rotating said cover to a position wherein said openings are in registry, and stop means limiting the rotative movement of said cover relative to said receptacle, and a clip mounted on the bottom wall of said receptacle for attachment to the clothing of the user.

3,047,135
COMBINATION BOX AND BOX-INSERT
Samuel Miller, 70 Washington St., Brooklyn, N.Y.
Filed Aug. 25, 1960, Ser. No. 51,816
1 Claim. (Cl. 206—45.14)



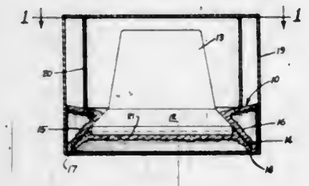
In combination, a box of suitably folded sheet material having a box bottom, two opposite vertical sides, and two opposite vertical ends, said two opposite vertical sides each having tabs extending downwardly and then inwardly partly toward each other over said box bottom, and a box-insert of sheet material providing a supplementary box bottom extending transversely of said box bottom, substantially as far as said vertical sides but stopping short a substantial distance from said vertical ends of said box, said box-insert having its mid portion elevated to form a platform having two parallel spaced apart vertical marginal supports formed by bent-up connecting portions of the box-insert bottom, said inwardly extending tabs being cut away only in the area of said platform to embrace the ends of said platform with the end portions of the box-insert bottom extending under said tabs to lock said box-insert in fixed position in said box between said vertical sides and spaced substantially from both said ends of said box.

3,047,136
MIGRATION RESISTANT PACKING MATERIAL
Arthur Graham, 1548 Edgewood, Palo Alto, Calif.
Filed Oct. 28, 1958, Ser. No. 770,031
6 Claims. (Cl. 206—46)



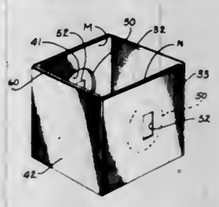
1. As an article of manufacture, a mass of packing material particularly adapted to providing maximum absorption of shock while preventing migration of relatively heavy packed articles therethrough, such mass of packing material having a multiplicity of partially interlocked elongated strings of hollow crushable cylinders, each of said strings comprising a hollow tube partially cut through at spaced apart intervals, such cut portions forming individual articulated tubular segments having hinging relation at said cuts wherein the hinging provides wedge-shaped openings at said cuts and wherein each of the strings interlock with at least one of the other strings at said wedge-shaped openings, said interlocking strings extending throughout said mass, said packing material being capable of being positioned as a resilient, loose, substantially crushable mass within and around a packed item whereby said mass prevents migration of said item.

3,047,137
PACKAGE CONSTRUCTION
Harold V. Kindseth, Minneapolis, Minn., assignor to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri
Filed Nov. 2, 1959, Ser. No. 850,276
5 Claims. (Cl. 206—46)



2. A composite protective package for delicate irregularly shaped articles having laterally extending projections, said package comprising in combination (1) a rectangular outer container having a top and a bottom and four side walls, (2) an inner molded fibrous cushion adapted to securely retain said article immovably in spaced relationship with respect to said outer container, said cushion comprising (*a*) a generally rectangular article supporting base section adapted to fit in the bottom of the outer container, the upper surface of the base being adapted to engage a surface of the article to be packaged, downwardly inclined side walls integral with the edges of said base section to hold the article supporting surface spaced from the bottom wall of the outer container, and (*b*) a pair of article retaining sections integral with said article supporting section disposed at opposite ends thereof and each foldable with respect thereto along the base of one of said downwardly inclined side walls, said article retaining sections each being provided with at least one projecting retaining member, said projecting article retaining members being adapted to fold over the top of said lateral projections extending from said article to firmly engage the same and clamp the article in place against the article supporting section of the fibrous cushion, and (3) a relatively rigid sheet of fiberboard extending as a sleeve around the outer periphery of the body of the packaged delicate article, one end edge of said fiberboard sleeve bearing against top wall of said outer container and the opposite end edge of said sleeve bearing against the top of said article retaining members of said fibrous cushion to maintain said article retaining members folded in clamping relation against the packaged article and to maintain said article immovably in spaced relation against the bottom wall of said container, whereby said packaged article is held clamped against movement and locked against the bottom wall of said container.

3,047,138
TAPE DISPENSER
Wilbur G. Anderson, Jr., Grand Rapids, Mich., assignor to Packaging Corporation of America, a corporation of Delaware
Filed Jan. 7, 1960, Ser. No. 989
2 Claims. (Cl. 206—52)

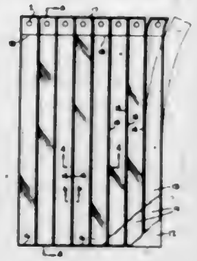


1. A blank for a rolled tape holder and dispenser, comprising: at least eight panels arranged in two tiers of at least four panels each, said panels in each of said tiers of panels joined together along fold lines and the end panels of each of said tiers of panels joined together along fold lines; said end panels being of generally equal size and one of the center panels of each of said tiers of panels being slightly larger than the other of said center panels, the larger of said center panels of one of said tiers of panels positioned above the smaller of said center panels of the other said tiers of panels; and openings struck from each of said end panels.

3,047,139
ARTICLE HOLDER
Richard Jacoff, Lake Success, N.Y., assignor to Great Neck Saw Manufacturers, Inc., Mineola, N.Y., a corporation of New York
Filed July 5, 1960, Ser. No. 40,757
1 Claim. (Cl. 206—56)

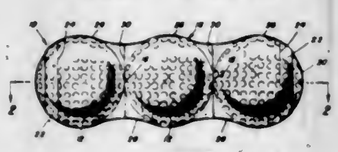
A hacksaw blade package comprising a backing sheet and a front sheet, a plurality of spaced pocket-forming strips interposed between said two sheets, the entire area of the front face of each of said pocket-forming strips being adhered to said front sheet, the back face of each of said pocket-forming strips being joined to said back-

ing sheet along an outer zone only to form a plurality of pockets, transverse slits in said strips, a plurality of aligned spaced transverse slits in said front sheet, said spaced transverse slits overlying and communicating with the slits in the pocket-forming strips, hacksaw blades in



said pockets removable and insertable through said slits, a plurality of spaced hanger openings through said two sheets, hanger openings in said strips communicating with the openings in said two sheets to permit the holder to be suspended, and said two sheets being severable in the spaces between said strips.

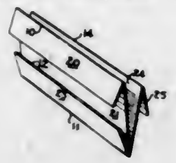
3,047,140
PACKAGE FOR SPHERE-LIKE ARTICLES
Seymour Robins, New York, N.Y., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed June 28, 1961, Ser. No. 120,325
2 Claims. (Cl. 206—56)



1. A package for golf balls or the like comprising a plurality of sphere-like articles disposed in a row on a common axis, a one-piece unseamed, tubular sleeve circumposed about said sphere-like articles and retaining them in linear relation on said common axis, and semi-spherical end caps at opposite ends of said package in juxtaposed relation on the sphere-like articles at said opposite ends, said tubular sleeve terminally overlapping the outer periphery of said end caps and retaining them in situ, said sleeve comprising a diametrically and longitudinally shrunken, plastic material closely adhering to an intermediate, circumferential portion of said sphere-like articles and conforming to the intermediate outer surface portion thereof, portions of said sleeve between said circumferential portions comprising hyperbolic cylinders, said sphere-like articles being drawn into abutting relation by said shrunken sleeve whereby one of said sphere-like articles may be separated by severing it from said package and the package still remains intact.

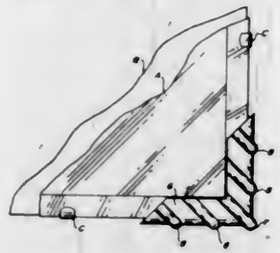
3,047,141
FOLDED SHEET
John R. Burns, Scotch Plains, N.J., assignor to American Can Company, Jersey City, N.J., a corporation of New Jersey
Filed Mar. 16, 1961, Ser. No. 96,138
4 Claims. (Cl. 206—57)

1. A towel formed of a sheet of paper comprising a pair of superposed main portions; a pair of superposed middle portions hingedly connected to each by a fold line along one edge and along their opposite edges to said main portions; said middle portions being folded together to lie superposed on one of said main portions; a pair of edge portions hingedly connected by fold lines to the opposite edges of said main portions with each



of said edge portions folded back to lie superposed on the outside surface of the main portion to which it is attached.

3,047,142
HOLLOW RIBBED MIRROR CORNER PROTECTOR
Howard H. Heffley, Toledo, Ohio, assignor to The Toledo Plate & Window Glass Co., Toledo, Ohio, a corporation of Ohio
Continuation of application Ser. No. 621,741, Nov. 13, 1956. This application Mar. 2, 1959, Ser. No. 800,613
3 Claims. (Cl. 206—62)

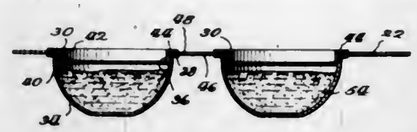


1. A corner protector for mirrors or like articles comprising a generally V-shaped structure adapted to fit around the corner of a mirror or like article consisting of a glass or other frangible plate assembled with a backing sheet, said V-shaped structure having an edge embracing strip and a front flange to overlie the face of the corner and adjacent marginal portions of such glass plate, there being a hollow rib formed in said edge embracing strip and front flange at the apex of said V-shaped structure, said hollow rib projecting beyond the intersecting planes of the plate and forming a supporting leg for the plate when said corner protector is in place on such mirror, said structure also having a back flange to overlie the corner and adjacent marginal portions of such backing sheet, whereby said corner protector is adapted to be reliably attached to but readily removed from an individual mirror and to protect the corner of such individual mirror against damage both when packaged and when unpackaged, said corner protector having additional hollow ribs that are formed in the edge embracing strip and front flange and are parallel to the hollow rib that is formed at the apex of the V-shaped structure.

3,047,143
COMBINATION PACKAGE AND DISPLAY DEVICE
Ralph W. Voigt, 5747 Waveland Ave., Chicago, Ill.
Filed Mar. 21, 1960, Ser. No. 16,241
1 Claim. (Cl. 206—80)

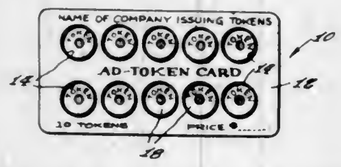
A combination package and display product comprising, a flat paperboard card having at least one transverse opening therethrough and a container removably assembled on the card in association with each opening, said container including a cup-shaped shell having a mouth at one end thereof and a closure member adapted to be removably engaged within said shell to seal the

mouth thereof, said shell having a marginal flange surrounding said mouth and extending outwardly substantially perpendicular to the longitudinal axis of the shell, said marginal flange being larger than the size of the opening, said closure member comprising a dish-shaped body having a transverse bottom wall and upstanding side walls, said closure member having a perimetric flange normal to said side walls and extending outwardly along the upper edges of said side walls, said perimetric flange



being larger than the size of the opening, said container being assembled on the card with the flanges engaged against opposite surfaces of the card surrounding said opening and with said mouth in registry with said opening and the bottom wall of the closure member closing the mouth with said side walls extending through the opening and into the mouth in frictional engagement with inner surface portions of the shell adjacent said marginal flange so that the card is disposed between said flanges.

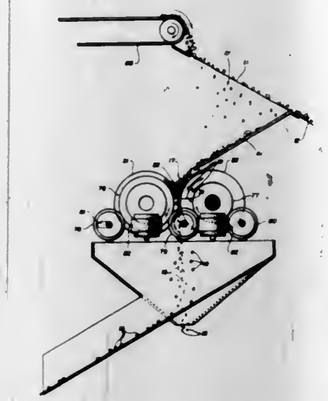
3,047,144
AD-TOKEN CARD
Joseph A. Wissel, 118—35 228th St., Cambria Heights 11, N.Y.
Filed Oct. 10, 1960, Ser. No. 61,482
1 Claim. (Cl. 206—.83)



A package for holding transit tokens, comprising a substantially rectangular rigid base card having one side defining a smooth surface with advertising indicia imprinted thereupon, recesses in the opposite side of the base card from the advertising indicia to form sockets each for receiving individual transit tokens, and adhesive disposed on the bottoms of said recesses providing a sufficiently tacky surface attractiveness in each of said recesses to detachably mount a transit token therein.

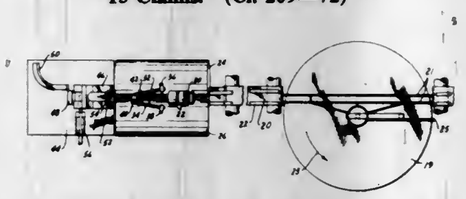
3,047,145
THREE DIMENSIONAL PARTICLE SIZE CLASSIFIER
Ralph L. Abos, Whittier, Calif., assignor to Polycarbide Corporation, a corporation of California
Filed Oct. 3, 1960, Ser. No. 59,884
8 Claims. (Cl. 209—12)

4. A three-dimensional particle size classifier comprising, a material classifying screen passing therethrough particles each having two of its three dimensions smaller than a first pre-determined size, a pair of substantially parallel and substantially horizontally mounted elongated rollers defining a vortex therebetween, means depositing material passing through said screen into said vortex medially of the length of said rollers, means rotating said rollers at different speeds so as to tumble the material in said vortex and work the material retained in said vortex towards the opposite ends of said rollers, said rollers being spaced to pass therebetween particles having any of its three dimensions less than a second pre-determined size less than said first size, whereby particles retained on said rollers will have two out of three dimensions graded between said first and second sizes and all of its dimensions greater than said second size thereby elim-



inating from the retained material flakes and slivers having a minimum dimension less than said second spacing, and means collecting material retained on said rollers from the opposite ends thereof.

3,047,146
METHOD AND APPARATUS FOR DETECTING FLAWS
Carlos S. Clark, Batavia, Ill., assignor to Burgess-Norton Mfg. Co., Geneva, Ill., a corporation of Illinois
Filed Nov. 8, 1960, Ser. No. 68,043
13 Claims. (Cl. 209—72)

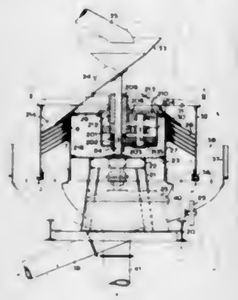


1. An inspection system for cylindrical workpieces or the like including a hard surface point for scanning said workpieces, said point being positioned relative to said workpieces so that defects in said workpieces cause vibration of said point, means for producing an electrical signal in response to vibrations of said point, a conditioning circuit for comparing said signal against a predetermined reference, signals exceeding said reference indicating a defective workpiece, said signals indicating a defective workpiece registering on said conditioning circuit, and means for rejecting a defective workpiece when the succeeding workpiece enters the inspection system and actuates the conditioning circuit.

3,047,147
INSTALLATION FOR THE CONTINUOUS SEPARATION OF OBJECTS ACCORDING TO SPECIFIC GRAVITY
Jacob de Koning, Geleen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Dec. 10, 1957, Ser. No. 701,783
Claims priority, application Netherlands Dec. 14, 1956
2 Claims. (Cl. 209—73)

1. In an apparatus for continuously separating objects according to specific gravity, a plurality of cantilever elements radially arranged in fixed superposed groups about a vertical axis to form a resilient bed, each of said elements having an outer free end capable of flexural movement in a vertical plane, an annular wall disposed

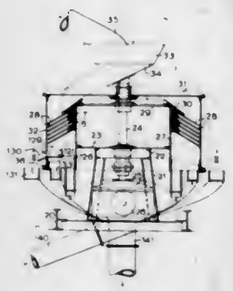
adjacent the outer free ends of said elements, the outer end of each element being deflected from a state of equilibrium upon impact with an object, each group of elements cooperating with said wall to develop a resultant force on an object substantially opposed to the direction of gravitational movement of said objects, means for rotating said wall about said vertical axis relative to the free ends of said elements, delivery means positioned above said resilient bed for supplying objects to the uppermost elements of the groups, said delivery means including a plurality of blades fixed to said wall and rotatable there-



with for evenly dispersing said objects across the uppermost elements of the groups, a feed hopper rotatable on said vertical axis mounted above said blades, means for rotating said feed hopper at a speed exceeding the speed of said wall and blades, said wall having a plurality of circumferentially spaced discharge outlets formed therein corresponding to and cooperating with said blades for selectively separating objects in accordance with their gravitational movement through said bed, and collecting means disposed below said resilient bed for selectively receiving objects which pass downwardly through said bed.

3,047,148
INSTALLATION FOR THE CONTINUOUS SEPARATION OF OBJECTS ACCORDING TO SPECIFIC GRAVITY

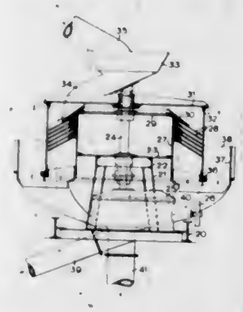
Jacob de Koning, Geleen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Dec. 10, 1957, Ser. No. 701,789
Claims priority, application Netherlands Dec. 14, 1956
5 Claims. (Cl. 209—74)



1. In an apparatus for continuously separating objects according to specific gravity, a plurality of cantilever elements arranged in superposed groups about a vertical axis to form a resilient bed, each of said elements having an outer free end capable of flexural movement in a vertical plane, an annular wall disposed adjacent the outer free ends of said elements, the outer end of each element being deflected from a state of equilibrium upon impact with an object, each group of elements cooperating with said wall to develop a resultant force on an object substantially opposed to the direction of gravitational movement of said objects in order to decrease the momentum thereof in proportion to the specific gravity of each object, delivery means positioned above said resilient bed for supplying objects to the uppermost elements of the groups, means for rotating said delivery means about said vertical axis relative to each group of elements, collecting means cooperating with each group of elements for selectively receiving said objects in accordance with the velocity of gravitational movement through said resilient bed, said collecting means including an annular trough-shaped member positioned beneath said resilient bed and having radially disposed partitions defining separate compartments for receiving objects of different specific gravity, and means for rotating said trough-shaped member about said vertical axis in a retarded position relative to the angular movement of said delivery means whereby the time for objects to pass through said separating bed is such that the compartments of said trough-shaped member will be moved to a predetermined position relative to said groups of elements for selectively receiving the objects in accordance with the specific gravity thereof.

3,047,149
SEPARATING OBJECTS ACCORDING TO THEIR SPECIFIC GRAVITY

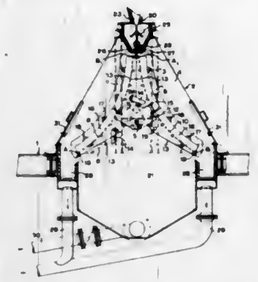
Jacob de Koning, Geleen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed July 3, 1957, Ser. No. 669,818
Claims priority, application Netherlands July 11, 1956
14 Claims. (Cl. 209—121)



1. An apparatus for separating objects in accordance with their specific gravity comprising, means for delivering the objects to be separated along a path independently of one another, retarding means including a group of resilient cantilever elements positioned one behind another each with a free end disposed in the path of objects to be separated, coacting means disposed adjacent the free end of each element to define a path therebetween for objects while they are moving independently in succession with respect to the elements, the free ends of each of the elements of each group being positioned to deflect from a normal state of equilibrium when engaged by an object, said elements developing reactive forces on each of the objects when moved out of their state of equilibrium, the spacing between said free ends not exceeding about half the smallest dimension of said objects whereby the resultant forces developed on each of the objects are increased to a maximum substantially proportional to a volumetric quantity determined by the dimensions of the objects for separately controlling the movement of each object with respect to the group of elements in accordance with the specific gravity of the objects, and means cooperating with the group of elements for collecting the objects separately in accordance with their movement with respect to the group of elements.

3,047,150
APPARATUS FOR SEPARATING PARTICLES ACCORDING TO SIZE

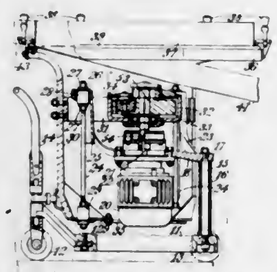
Hubert G. A. Dumont, Bocholtz, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Filed Oct. 14, 1960, Ser. No. 62,598
Claims priority, application Netherlands Oct. 16, 1959
6 Claims. (Cl. 209—251)



1. Apparatus for separating particles according to size comprising a pair of substantially identical screening decks each having the shape of a segment of a cylindrically curved surface, feed means for each of said screening decks for feeding a mixture of particles and a suspending liquid at one end over the full width of the associated screening deck onto the concave side thereof in a direction perpendicular to the generatrices thereof, said feed means being fixedly disposed in adjacent parallel relation on opposite sides of a vertical plane, and means mounting said screening decks for rotational movement about a common axis disposed in said vertical plane between a first operative position wherein said screening decks are disposed in symmetrical relation with respect to said vertical plane and one end of each of said screening decks is positioned adjacent the associated feed means to receive the mixture fed thereby, and a second operative position wherein said screening decks are disposed in symmetrical relation with respect to said vertical plane and the opposite ends of said screening decks are positioned adjacent said feed means to receive the mixture fed thereby.

3,047,151
STRAINING AND SIFTING PROCESSES AND APPARATUS

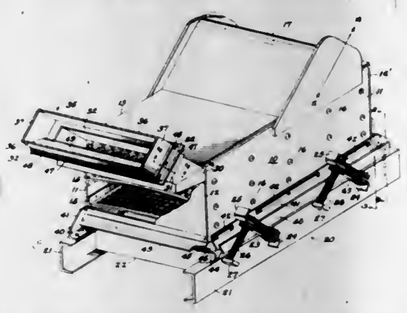
Justin Hurst, London, England, assignor to Russell Constructions Limited, London, England, a company of Great Britain
Filed Sept. 21, 1959, Ser. No. 841,188
Claims priority, application Great Britain Sept. 24, 1958
4 Claims. (Cl. 209—366.5)



1. Apparatus for straining and sifting comprising in combination a stationary frame, spaced suspension rods flexibly attached to said frame and depending downwardly from their points of attachment thereto, a sieve-carrying frame secured flexibly to the lower ends of the suspension rods and extending upwardly above the stationary frame, a sieve septum supported horizontally on the sieve-carrying frame above the top of the suspension rods and overhanging them on all sides, an out-of-balance weight on the sieve-carrying frame located at about the level of the top of the suspension rods, means for rotating the out-of-balance weight at a speed in excess of the natural frequency of vibration of the suspension, and an upstanding wall supported with and surrounding the edge of the sieve septum and an outlet for oversize in said wall.

3,047,152
SCREEN BOX WITH SEALING MEANS

Harold C. Pollitz, Cedar Rapids, Iowa, assignor to Iowa Manufacturing Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Jan. 14, 1960, Ser. No. 2,434
1 Claim. (Cl. 209—372)



In a vibrating material grading screen assembly including a generally rectangular, open-bottom screen box having a pair of parallel side walls, a pair of parallel end walls, and a top wall having a material ingress therein adjacent one of said end walls, a plurality of material grading screen decks enclosed within said box between said end and side walls in material grading relation to each other and to said ingress, a horizontal generally rectangular open base frame having a pair of enclosed side members and a pair of enclosed end members parallel to and spaced below said side and end walls respectively to form a structure having an open top and bottom generally congruent with said open bottom of said box and bounded by said frame member so that material graded by said box may fall through said frame, said box being mounted upon said frame to permit a material grading vibratory motion of said box relative to said frame in a predetermined linear direction both parallel to said side walls and inclined with respect to the open top of said frame, and means to induce said vibratory motion, the combination therewith of sealing means between said box and frame, said means comprising: a first pair of strips of horizontally extending sealing flashing, each strip being secured by its upper portion to and along the lower edge of the outer face of one of said side walls and having lower horizontally extending inner and outer sealing faces parallel thereto and resiliently movable from said upper portion outwardly and inwardly with respect to said wall, a first pair of sealing flanges, each flange etxending horizontally along the upper edge of one of said side members and having an upstanding inner sealing face parallel to and constantly overlapping and sliding on said outer face of one of said flashing strips during said vibratory motion of said box, said flanges preventing said resilient outward movement of said flashing with respect to said walls and said flashing and flanges together extending beyond each of said side walls, a second pair of sealing flanges, each flange being secured horizontally along and outwardly from the lower edge of the outer face of one of said end walls and provided with an inclined lower sealing face in a plane perpendicular to said side walls and parallel to said vibratory direction, a pair

of support lips, each lip extending horizontally along and upwards from one of said end members and provided with an inclined flashing support face perpendicular to and spaced below said face of one of said second pair of flanges, a second pair of strips of horizontally extending sealing flashing, each strip being secured by its lower portion to and along one of said supporting faces and having its upper portion extending above said face to one of said sealing faces of one of said second pair of flanges and resiliently movable from said lower portion with respect to said support face, each of said sealing and support faces and each of said second pair of flashing strips extending laterally of said box and frame directly between the opposed inner faces of the extended portions of said first pair of flashing strips at one end of said box, and each of said second pair of flashing strips having a sealing upper edge face and opposite sealing end faces parallel to and in constant sliding engagement with respectively said sealing surface thereabove and the opposed inner faces of said extended portions of said first pair of flashing strips during vibratory motion of said box.

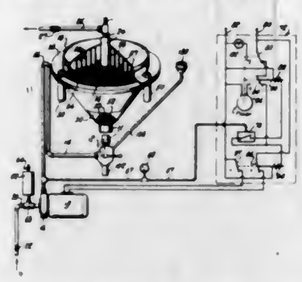
3,047,153
FOUNDRY RIDDLE
Alex A. Zelinski, 3630 W. Orchard St., Milwaukee 15, Wis.
Filed Apr. 20, 1959, Ser. No. 807,465
1 Claim. (Cl. 209—408)



In a foundry riddle for sifting molding sand; a rim having an upstanding annular wall that tapers outwardly from its lowermost edge so that its bottom edge is of minimum diameter with its diameter increasing progressively upwardly to its uppermost edge which is of maximum diameter to form an inverted truncated cone, said rim being formed of molded plastic; an upper solid plastic flange molded integrally with said rim and formed by increasing the thickness of the wall of said rim along its upper annular edge with the flange extending radially outwardly of said rim to reinforce the upper edge of said rim as well as to constitute a convenient grasping means; a lower plastic flange molded integrally with said rim about its lower edge, said flange being formed by increasing the thickness of the wall of said rim and extending radially inwardly of said rim, said lower flange having an annular recess located interiorly of said rim and opening upwardly; and a flat circular sifting screen having a downwardly extending peripheral edge cemented within the annular recess in said lower flange to operably attach said screen to said rim.

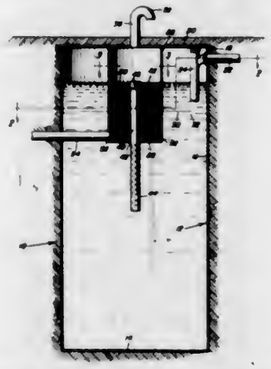
3,047,154
LIQUID FILTER
Paul R. Deschere, 16 Park Ave., New York, N.Y.
Filed Jan. 13, 1958, Ser. No. 708,470
2 Claims. (Cl. 210—100)

1. High efficiency liquid filter apparatus comprising a housing enclosing a vertical central volume, a filter septum generally horizontally positioned and dividing said housing into an upper chamber and a lower chamber extending downward to an inlet opening, liquid supply means including a pipe and a centrifugal pump for supplying a flow of liquid to said inlet and upward into said lower chamber, a check valve in said supply pipe, an air expansion chamber branched onto said supply pipe between said check valve and said pump, a liquid outlet pipe extending from said upper chamber, a charge of filter aid contained in said lower chamber, and an electric control circuit including a pressure responsive switch for



stopping said pump when the pressure in said lower chamber exceeds a predetermined level, said circuit including a timer and counter for restarting said pump after a short interval and after a predetermined number of times of turning on said pump for turning it off until manually restarted whereby the used charge of filter aid can be removed from said lower chamber and a fresh charge introduced therein.

3,047,155
COMBINED SEPTIC TANK AND FILTER
Benjamin J. Frasca, 9621 Goodwood Blvd., Baton Rouge, La.
Filed Feb. 16, 1959, Ser. No. 793,476
4 Claims. (Cl. 210—256)



1. A combined septic tank and filter assembly comprising an outer tank including a removable top wall, an inner tank suspended in the outer tank and engaged beneath the top wall thereof to be covered and closed thereby, said outer tank having a sewage inlet adjacent the upper end thereof and between the outer tank and the inner tank, said inner tank having a bottom drainage outlet pipe extending outwardly therefrom and out through the outer tank in sealed relation thereto, a vertical standpipe extending through the bottom of the inner tank and extending for approximately equal distances above and below the bottom of the inner tank, said standpipe having a plurality of perforations in the portion thereof extending below the bottom of the inner tank and being disposed substantially throughout the length thereof, said standpipe having a plurality of hollow pipes extending radially from the upper end thereof, each of said hollow pipes having a plurality of apertures therein for discharge of liquid over substantially the entire area

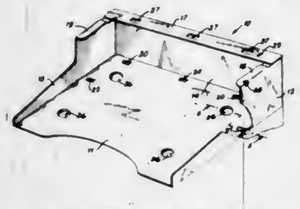
of the inner tank, an air vent extending upwardly from the center of the top wall and communicating the top of the inner tank with the atmosphere for supplying oxygen to the inner tank, and relatively large aggregate filtering material disposed in the inner tank and completely filling the inner tank below the discharge pipes whereby the drain for the inner tank will normally retain the inner tank dry for filling of the inner tank with air from the atmosphere throughout the filter aggregate, and a plurality of radial braces extending between the inner and outer tank intermediate the ends of the inner tank for stabilizing the inner tank in relation to the outer tank.

3,047,156
REINFORCED PLASTIC POROUS TUBULAR STRUCTURE AND METHOD OF MANUFACTURE
Loerwood C. Wasson, Wauwatosa, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 1, 1959, Ser. No. 810,375
8 Claims. (Cl. 210—497)



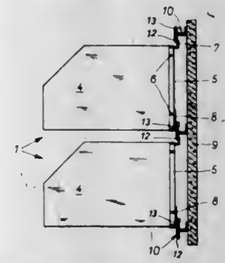
1. A non-corrosive, porous, plastic, reinforced tubular structure, comprising a screening material disposed in a tubular shape and having a plurality of openings of substantially uniform size, a fibrous reinforcing strand disposed in a generally helical pattern and disposed contiguous to said screening, the adjacent turns of the strand in the helical pattern being spaced apart uniformly to expose the screening, and a cured thermosetting resin disposed between the strand and the screening extending continuously throughout each turn of said strand to bond the strand and screening as a rigid, composite integral self-supporting structure.

3,047,157
STACKABLE DESK TRAYS
Edward Bergman, New York, N.Y., assignor to Art Steel Company, Inc., New York, N.Y., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 72,911
2 Claims. (Cl. 211—126)



1. A desk tray adapted to be arranged in stacked relationship with other similar trays, comprising a floor, opposed side walls, a back wall, a rear flange extending over and parallel to said floor and attached to the upper edge of said back wall, lateral flanges also extending over and parallel to the floor and attached to the upper edges of said side walls, the floor being deformed directly beneath said rear flange to present a first set of spaced-apart gripping members, each of said members having a sidewise facing tongue spaced below said floor a distance about equal to the thickness of said flange, said rear flange having a plurality of spaced-apart apertures vertically disaligned from the gripping members and adapted to accommodate the gripping members of an upper tray when the side walls of said upper tray are vertically disaligned with the side walls of the lower tray, said apertures permitting sidewise sliding movement of one tray relative to the other to align the side walls of both trays and cause said first set of gripping members to move laterally within the apertures to gripping positions beneath said rear flange, said floor being also provided with a second set of gripping members lying forwardly of said first set adjacent to the side walls, each having a tongue facing in the same sidewise direction as the first-mentioned tongues, one of the side walls having an aperture where it joins the adjacent lateral flange, said aperture being positioned to receive one of said second set of gripping members and allow the tongue thereof to move beneath said lateral flange, the other one of said second set being positioned to engage beneath and grip the other lateral flange when a pair of trays are interengaged.

3,047,158
FILING DEVICE
Walter Scholl, Zollikon (Zurich), Switzerland, assignor to Gebruder Scholl Aktiengesellschaft, Zurich, Switzerland
Filed Sept. 30, 1959, Ser. No. 843,537
6 Claims. (Cl. 211—126)

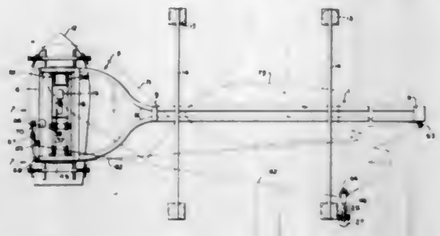


1. A storage system comprising vertically spaced, substantially horizontal rails, the upper of said rails including a downwardly extending flange and the lower of said rails including an upwardly extending flange, said flanges including respective extremities spaced at a predetermined distance, a container including a rear portion having upper and lower ends, rearwardly extending members on said upper and lower ends and spaced at a distance which is less than said predetermined distance, and upwardly and downwardly extending members on the rearwardly extending members of the upper and lower ends of said rear portion respectively and adapted for hooking behind said flanges so that the weight of the container rests on the lower rail and so that the upwardly extending member limits the tendency of said container to pivot about said lower rail, the upper member being larger than the lower member to permit ready detachment of the container from said rails.

3,047,159
BOAT LAUNCHING APPARATUS
George P. Hurst and Mowatt M. Hurst, both of 946 Bransten Road, San Carlos, Calif.; said Mowatt H. Hurst assignor to said George P. Hurst
Filed Mar. 14, 1960, Ser. No. 14,891
11 Claims. (Cl. 212—20)

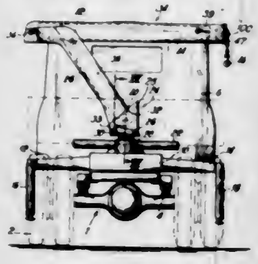
1. Boat launching apparatus comprising: a horizontally extending, overhead, generally Y-shaped carriage support providing a horizontally elongated leg portion and a pair of arm portions extending divergently from one end of said leg portion to horizontally spaced relation; means supporting said carriage support in a position with said arm portions spaced above the shore adjoining the body of water into which a boat is to be launched and with said leg portion spaced above said body; a carriage having a forward and a rear end, means on said carriage for suspending a boat therefrom with the bow and stern of

said boat adjacent to said forward and rear ends respectively, means mounting said carriage on said carriage support for movement thereof from a position with said forward and rear ends respectively carried by said arm portions to a position onto said leg portion with said



forward and rear ends on a line substantially parallel with said leg portion whereby a boat suspended from said carriage during said movement thereon from said arms to said leg portion will be rotated about a vertical axis through approximately 90 degrees and to a position for launching into said body of water.

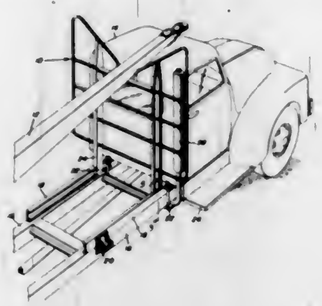
3,047,160
TRUCK CRANE
Adolf Paul, Moosburg, Germany, assignor to Steinback G.m.b.H., Moosburg, Upper Bavaria, Germany
Filed Jan. 3, 1961, Ser. No. 80,164
12 Claims. (Cl. 212—35)



1. A truck crane comprising a vehicle constituting a support; a base member mounted on said support for rotation about a vertically extending axis; an elongated pillar member having one end portion secured to said base member for pivoting movement in a substantially vertical plane; elongated jib means having one end portion hingedly secured to the other end portion of said pillar member; hydraulic jack means interposed between said pillar member and said support for actuating said pivoting movement of said pillar member between an operative position in which said pillar member extends substantially vertically from said support, and an inoperative position; and actuating means for hingedly moving said jib means relative to said pillar member toward and away from a rest position in which said jib means longitudinally extends in a substantially horizontal direction when said pillar member is in said inoperative position thereof.

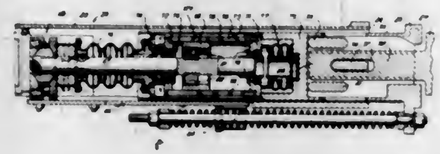
3,047,161
FUNNEL-TYPE CAB AND STACK GUARD
Ellis C. Thacker, 1647 Chester Ave., Arcata, Calif.
Filed June 1, 1960, Ser. No. 33,173
4 Claims. (Cl. 212—59)

1. The combination of a vehicle having a frame, a cab and a swingable boom, and a readily attachable and detachable boom rest and cab guard comprising a vertically disposed framework mounted on the frame of said vehicle rearwardly of the cab, said framework being wider than the cab and including a pair of side members, a cross member extending between said side members in a plane spaced above the top of the cab, said side members extending upwardly beyond said cross member, a pair of downwardly convergent boom guiding rails extending inwardly from the upper ends of said side members and connected at their lower ends to said cross member at points spaced longitudinally of the latter, a portion of the



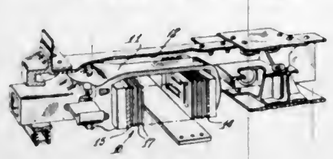
cross member between the lower ends of said guiding rails constituting a rest for said boom, a pair of spaced uprights disposed inwardly from said side members, the upper ends of said uprights being secured to intermediate portions of said guiding rails, and a pair of horizontal base members disposed in transversely spaced relation and having the lower ends of said uprights secured thereto, said base members being secured to the frame of said vehicle.

3,047,162
HYDRAULIC AND RESILIENT CUSHIONED RAILWAY CAR DRAFT ASSEMBLY
William T. Blake, 4424 Morris Court, Fort Worth, Tex.
Filed Jan. 16, 1961, Ser. No. 83,021
10 Claims. (Cl. 213—8)



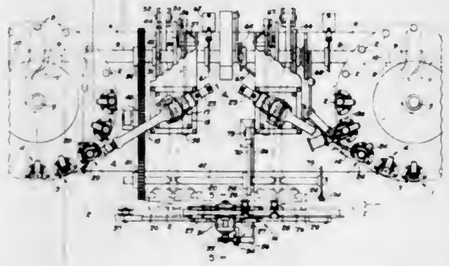
1. In a railway car having a center sill member affixed to the car, a draft assembly comprising: a sliding member longitudinally slidably mounted in said center sill member; a car coupler attached to said sliding member; a double-acting hydraulic buffer mechanism having a fixed element and a moving element, one of said elements being attached to the center sill member and the other of said elements being attached to said sliding member; cooperating stop means on said center sill member and said sliding member permitting limited longitudinal movement of said sliding member in said center sill member; light-duty resilient means acting between said center sill member and said sliding member in at least one longitudinal direction urging said sliding member to a neutral position between its limits of travel; heavy-duty resilient means mounted on one of said members; and lost motion coupler means coupling said heavy-duty resilient means to the other of said members over a terminal portion of the total permitted movement of said sliding member, said lost motion coupler means uncoupling said heavy-duty resilient means from said other of said members over an intermediate portion of the total permitted movement of said sliding member.

3,047,163
CUSHIONING ASSEMBLY
John A. Johnson, Short Hills, N.J., and George R. Kennedy, Nescopeck, Pa., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Aug. 7, 1957, Ser. No. 676,734
15 Claims. (Cl. 213—40)



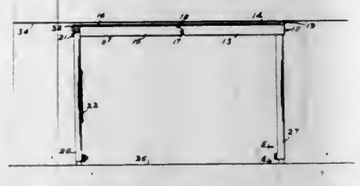
1. A cushioning assembly of the class described comprising, in combination, a pair of followers, and a stack of resilient means and separator means in alternate superimposed relation between said followers, said resilient means each including two elongate members, each member having a body V-shaped in cross-section throughout the entirety thereof and said two members having their longitudinal axes in perpendicular relation to each other, and each separator means being formed of one piece with contours of V-shape in cross-section formed therein for mating with its adjacent resilient means, said separator means and resilient means being free of attachment one to the other.

3,047,164
APPARATUS FOR TRANSFERRING LAMPS
Carl R. Meckstroth, South Euclid, Ohio, assignor to General Electric Company, a corporation of New York
Filed Apr. 1, 1960, Ser. No. 19,226
7 Claims. (Cl. 214—1)



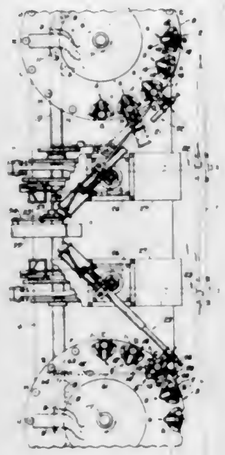
1. In combination with means to support vertically extending tubular lamp envelopes at an initial pick-up position and means to support said envelopes vertically at a final delivery position spaced horizontally from said pick-up position, an inverting transfer mechanism comprising first and second horizontally extending transfer arms pivoted on respective vertical axes spaced apart horizontally between said pick-up and delivery positions, gripping means mounted on the ends of said arms, means mounting said gripping means for rotation about the longitudinal axes of their respective associated arms, means mounting said arms for pivotal oscillation about their respective axes in a common horizontal plane and between respective initial pick-up and final delivery positions and respective intermediate delivery and pick-up positions whereat the arms extend substantially normal to a line joining their vertical axes of oscillation with their gripping means in horizontal alignment, shifter mechanism having means thereon to support a lamp horizontally in alignment with the gripping means on said arms when the arms are in their respective intermediate pick-up and delivery positions, means mounting said shifter mechanism for oscillation along a path parallel to the path of alignment of said gripping means in the intermediate delivery and pick-up positions of said arms, and means for actuating said arms and shifter mechanism in a sequence of steps wherein, with the first arm at the initial pick-up position, the gripping means thereon is actuated to grasp an envelope, the said first arm is oscillated to its intermediate delivery position and is rotated 90° about its longitudinal axis during its oscillation so that the envelope held thereby extends horizontally at the intermediate delivery position of the arm at which time the shifter mechanism is in position to receive the envelope held by said arm, the gripping means on the first arm is actuated to release its grip on the envelope, the shifter mechanism is moved along its aforesaid path of oscillation toward the intermediate pick-up position of the second arm at which time said second arm is in its said intermediate pick-up position, the gripping means on said second arm is actuated to grasp the envelope on said shifter mechanism, and the second arm is oscillated to the final delivery position and is simultaneously rotated 90° in the same angular direction as the first arm to complete inversion of the envelope through 180° and delivery thereof to the final delivery position.

3,047,165
CEILING BOARD JACK
Jack B. Hutchinson, 823 E. Fellows, Medical Lake, Wash.
Filed May 29, 1961, Ser. No. 113,210
4 Claims. (Cl. 214—1)



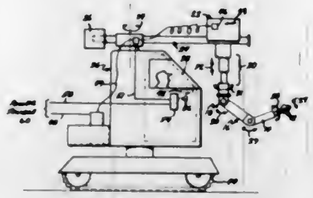
1. In a ceiling board jack, the combination comprising:
a first rigid U-shaped section formed of angle stock including bent side portions and an integral supporting surface extending perpendicularly inward along one edge thereof;
a second rigid U-shaped section formed of angle stock including bent side portions and an integral supporting surface extending perpendicularly inward along one edge thereof, the outside dimensions of the bent side portions of said second section being less than the inside dimensions of the bent side portions of said first section;
a pivotal connection joining the side portions of said first and second sections adjacent their open ends, each section being pivotally mounted thereby for rotational movement relative to one another about an axis perpendicular to the pivoted side portions, the perpendicular distances between said axis and the supporting surfaces of each section being identical to one another, the supporting surface of one surface being recessed at its open end to thereby enable the ends of the supporting surfaces to abut one another when aligned in a common plane;
raised abutment means fixed to and extending outwardly from the supporting surface of a first one of said sections adjacent the closed end thereof;
a pair of legs pivotally connected at one end to the remaining one of said sections adjacent the outer surfaces of the side portions thereof at its closed end for rotation about an axis parallel to the pivotal axis of said sections;
brace means rigidly connected to each of said legs;
and a single leg having one end pivotally mounted on the first one of said sections at the closed end thereof for rotation about an axis parallel to the pivotal axis of said sections.

3,047,166
LAMP TRANSFER AND INVERTING APPARATUS
Arthur W. Lamp, Lyndhurst, and Carl R. Meckstroth, South Euclid, Ohio, assignors to General Electric Company, a corporation of New York
Filed Dec. 26, 1957, Ser. No. 705,208
2 Claims. (Cl. 214—1)



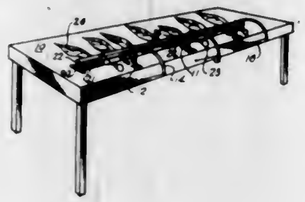
1. In combination with means to support vertically extending tubular lamp envelopes at an initial pick-up position and means to support said envelopes vertically at a final delivery position spaced horizontally from said pick-up position, an inverting transfer mechanism comprising first and second horizontally extending transfer arms mounted for rotation about their respective longitudinal axes and for pivotal oscillation in a common horizontal plane about respective vertical axes spaced apart horizontally between said pick-up and delivery positions, envelope gripping means on the ends of said arms, means for actuating the gripping means on said first arm to closed position with the arm at said initial pick-up position to grasp an envelope thereat, means for pivotally oscillating said first arm in said common horizontal plane to an intermediate delivery position whereat it extends substantially normal to a horizontal line joining the vertical pivot axes of the two arms, means for rotating said first arm 90° about its longitudinal axis during its oscillation so that the envelope held thereby extends horizontally at the intermediate delivery position of the arm, means for pivotally oscillating said second arm in said common horizontal plane, the last-named means holding said second arm, upon arrival of said first arm at its intermediate delivery position, in an intermediate pick-up position wherein it also extends substantially normal to the said line joining the vertical pivot axes of the two arms so that its gripping means is in alignment with the gripping means on the first arm and receives therein a portion of the envelope spaced from the portion gripped by the first arm, means for actuating the gripping means on said second arm to closed position with the second arm at said intermediate pick-up position to grasp the envelope therein, means for then actuating the gripping means on the first arm to open position to release its grip on the envelope, the means for pivotally oscillating said second arm being operable to then oscillate the second arm to the final delivery position, and means for rotating said second arm 90° about its longitudinal axis during its oscillation to the final delivery position, the last-named means rotating the second arm in the same angular sense as said first arm to thereby complete inversion of the envelope through 180°.

3,047,167
ELECTRIC CIRCUIT RESET SYSTEM
Glenn R. Rose, St. Paul, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Sept. 19, 1958, Ser. No. 762,115
9 Claims. (Cl. 214—1)



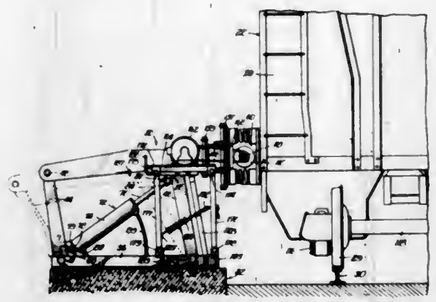
1. An electrically operated material handling system comprising a cab having a shielded operating space, a remotely controlled articulated handling unit mounted on said cab, said handling unit being capable of various motions, motors situated outside said space and linked to said handling unit for producing said motions, heavy load current carrying conductors positioned outside of said space and in circuit with said motors, circuit breakers in series with said conductors and located outside of said space, movable arms on said circuit breakers, said arms being movable to—first positions when said breakers are closed and to—second positions when said breakers are tripped, means for actuating said movable arms into their first positions, control means located within said shielded operating space for effecting operation of said actuating means, and control means for producing said various motions of said unit.

3,047,168
TOBACCO STRINGERS
Roy G. Byrd, James B. Byrd, and Edgar J. Byrd, Norman Park, Ga., assignors of forty-nine percent to K. Wilson Corder, Atlanta, Ga.
Filed Nov. 2, 1959, Ser. No. 850,499
7 Claims. (Cl. 214—5.5)



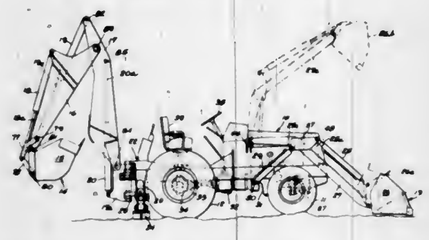
1. In a device of the character described, a working surface, a plurality of offset tobacco stick holders spacedly and fixedly mounted thereon, L-shaped upright studs positioned opposite said holders, scimitar-like booms pivoted to said studs adjacent the tops thereof, needle-snoots formed integral with the ends of said booms opposite said holders, cable actuating means connecting with the opposite ends of the booms, an operating lever for said cables, a pair of tobacco sticks, spaced tension springs, holding said sticks together, lower and upper notches formed in said sticks in their inner faces, the lower notches being engageable by the holders, and the upper notches engageable by the snoots of the booms, whereby upon actuation the operating lever to put the cables under progressive tension, the snoot ends of the booms are rocked upwardly, exerting a spreading action on the sticks to permit loading thereof with loose leaf tobacco.

3,047,169
RAILROAD CAR VIBRATOR
Carl G. Matson, Kewanee, Ill., assignor to Vibrator Manufacturing Company, Neponset, Ill., a corporation of Illinois
Filed Feb. 12, 1959, Ser. No. 792,850
23 Claims. (Cl. 214—64.2)



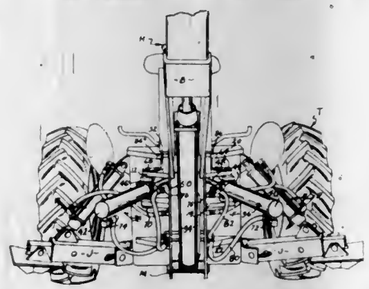
1. In a railroad car vibrator, the combination of a base structure stationarily located at the dumping site, mounting linkage carried by said base structure and movable substantially horizontally relatively thereto, a vibrator head carried by said mounting linkage and comprising a moving vibrator, means for driving said moving vibrator, hydraulic means for swinging said mounting linkage to carry said vibrator head into high pressure engagement against the side of the railroad car body, and toggle linkage embodied in said mounting linkage for permitting upward movement of said vibrator head with the car body in the dumping operation, while simultaneously therewith creating a downward force component in said vibrator head concurrently with its high pressure engagement against the side of the railroad car and acting in opposition to such upward movement.

3,047,170
EARTH HANDLING APPARATUS
Frank G. Hough, Highland Park, and Robert M. Peterson and Wallace H. Gilson, Libertyville, Ill., assignors to The Hy-Dynamic Co., a corporation of Illinois
Filed June 13, 1960, Ser. No. 35,765
5 Claims. (Cl. 214—131)



1. An earth handling machine, comprising a generally rectangular frame, said frame including transverse members at the front and rear ends of the machine connected with longitudinal members, front and rear axles mounted on said frame extending transversely below thereof, said rear axle being spaced from the rear transverse member, diagonal buttress members extending between said longitudinal members adjacent said rear axle and said rear transverse member to provide a generally rigid rear section, a back hoe pivotally mounted on said rigid rear section, a motor mounted on said longitudinal members and said front transverse members to provide a generally rigid front section, said front and rear sections being spaced apart to provide a relatively unbraced intermediate portion in each of said longitudinal members adapted to flex under loads applied to either end so as to prevent the development of localized stress points but insufficient to exceed the elastic limit of said intermediate portion, said motor being mounted on said longitudinal members at a spaced distance from said front member, a column member on each longitudinal member adjacent the motor mounting thereon, a loader arm pivotally mounted on each column member at a spaced distance above the longitudinal member associated therewith, a beam member interconnecting said column members adjacent the mounting of said load arms, a bucket pivotally connected between said load arms remote from said column members, and a cylinder and piston rod unit interconnected between each load arm and its associated longitudinal member.

3,047,171
SWING MECHANISM FOR BACKHOE
Elton B. Long, Burlington, Iowa, assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Oct. 12, 1959, Ser. No. 845,676
6 Claims. (Cl. 214—138)

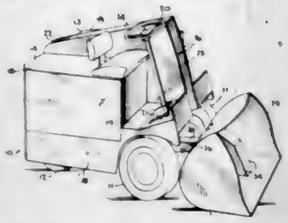


1. In a backhoe mounted on a tractor, the combination of a support on the rear of the tractor, a pivotal connection on the support, a boom element mounted on the pivotal connection for swinging from side to side, rearwardly of the tractor, a pivot on the support, a pivot on the boom element, an expansible hydraulic motor comprising a cylinder unit having a head end, a rod end, and a piston rod projecting from said rod end, means in the region of said rod end connected to one of said pivots, and said piston rod being connected with the other of said pivots, said pivots being positioned so that said hydraulic motor will extend along one side of the above-mentioned pivotal connection, stop means limiting the swinging movement of said boom element so positioned that said hydraulic motor will swing to the opposite side of said pivotal connection prior to the arresting of said boom element by said stop means, a pressure fluid supply for said hydraulic motor including a conduit connected to expand said motor upon flow of fluid from said conduit into said motor, and a relief valve opening out of said conduit to relieve excess pressure built up by contraction of said hydraulic motor caused by swinging of said boom element beyond the point where said hydraulic motor swings to said opposite side of said pivotal connection, whereby said excess pressure acts on said hydraulic motor to tend to prevent contraction thereof and to check the swinging of said boom prior to its being arrested by said stop means.

3,047,172
LIFT TRUCK
Bronislaus I. Ulinski, Flossmoor, Ill., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed July 22, 1959, Ser. No. 828,805
5 Claims. (Cl. 214—140)

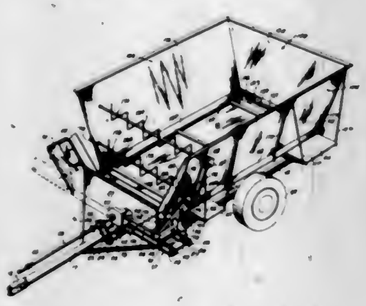
1. In a truck of the class described, a main frame having two opposed portions extending longitudinally on the

truck, an operator's platform on one of said opposed frame portions, parts of the frame securing said opposed portions in spaced relation to one another to form a vertical opening extending longitudinally through the front of the truck, a transverse part of said frame extending above said vertical opening between the opposed frame portions and positioned below the operator's line of vision, a lifting arm pivoted to a rear part of the truck



frame for lifting movement in said opening, said arm extending from its pivot past said operator's platform and supporting a load member at the front of the truck, and an angular end portion of said arm extending upwardly at the front of the truck during the lifting movement of said arm, so that the arm while remaining below said transverse frame part and the operator's line of vision will lift the load member to a relatively high position.

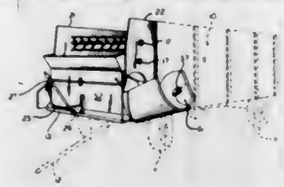
3,047,173
TRANSPORTING AND UNLOADING DEVICES
Richard Curry Raney, Rte. 1, Cookville, Tex.
Filed Sept. 23, 1959, Ser. No. 841,750
8 Claims. (Cl. 214—519)



1. A device of the type described comprising: a mobile chassis; a box mounted on the chassis and having an open front end, a pair of sides, a rear wall and a floor extending between the side walls; a side conveyor movable transversely relative to the box floor and spaced vertically below the main floor adjacent the front end of the box; a pair of vertically spaced beaters extending transversely across the front open end of the box; a main conveyor movable about the main floor of the box for moving material of the box forwardly toward the side conveyor and the beaters; a rotatable main shaft; and means connecting said main shaft to said beaters and to said main conveyor for selectively and intermittently actuating said beaters and said main conveyor.

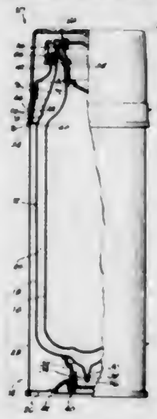
3,047,174
DEVICE FOR UNLOADING FORAGE CROPS FROM WAGONS OR THE LIKE
John E. Kasten, % Kasten Mfg. Corp., Allenton, Wis.
Filed July 21, 1959, Ser. No. 828,598
2 Claims. (Cl. 214—520)

1. In an unloading machine for forage crops or the like, a vehicle having ground engaging elements and including means for attaching said vehicle to a tractor or the like, means for taking power from said tractor, a vehicle bed including an endless flight conveyor moving longitudinally of said bed, a pair of frames extending from said vehicle, a screw conveyor supported by said frames and having the longitudinal axis thereof extending transversely of said vehicle, said screw conveyor being adapted to receive the material moved by said flight conveyor, driving means for said flight conveyor and said screw conveyor supported by one of said frames, said driving means being connected to said power taking means, means cooperating with said driving means for



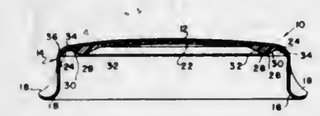
giving intermittent motion to said flight conveyor comprising an eccentric and oscillatory follower, a ratchet wheel driving said flight conveyor and a dog cooperating therewith driven by said follower, at least one beater supported by said frames and spaced above said screw conveyor for urging material into position for movement by said screw conveyor, means for driving said beater including means for connecting said last named driving means to the driving means for said screw conveyor and said flight conveyor, and an auxiliary screw conveyor driven from said first named screw conveyor and extending from one of said frames, and means for detachably securing said auxiliary screw conveyor to said frame.

3,047,175
COLLAR AND JACKET CONSTRUCTION FOR VACUUM BOTTLES
Carl Bramming, Nashville, Tenn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois
Filed Apr. 2, 1959, Ser. No. 803,657
2 Claims. (Cl. 215—13)



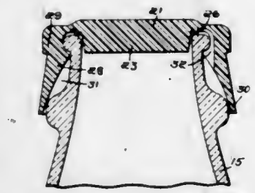
1. In a vacuum bottle, the combination comprising a vacuum insulated receptacle, a protective jacket received around said receptacle, said jacket having a lower generally cylindrical sheet metal shell and an upper collar received around the upper portion of said receptacle, said collar being made of a plastic material which is substantially stretchier than said sheet metal shell, a continuous circular one-piece sheet metal ring secured to the upper end of said shell and extending upwardly therefrom, said ring having an externally threaded portion extending upwardly from said shell, said externally threaded portion being substantially reduced in diameter relative to said shell, said ring having an upwardly facing annular shoulder extending around the lower end of said externally threaded portion, said shoulder slanting downwardly in an inward direction, said collar having an internally threaded lower portion screwed onto said externally threaded portion of said ring, said collar having an annular bevelled lower surface slanting downwardly and inwardly for wedging action with said shoulder to compress the lower end of said collar inwardly and thereby maintain said collar in threaded engagement with said ring when said collar is screwed very tightly onto said ring.

3,047,176
CLOSURE
Eibe A. Wilckens, Baltimore, Md., assignor to Crown Cork & Seal Company, Inc., Baltimore, Md., a corporation of New York
Filed Mar. 29, 1956, Ser. No. 574,658
1 Claim. (Cl. 215—40)



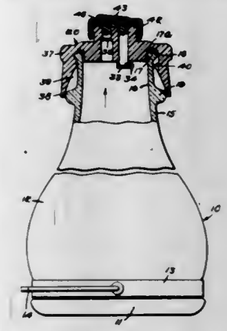
A plastic unitary sealing liner adapted for use with a container having a cap of the crown type as a closure therefor, said sealing liner comprising a thin central web portion, a peripheral web portion of substantially the same thickness as said central web portion and a continuous circular boss connecting said central web portion and said peripheral web portion, said boss being inwardly spaced from the edge of said liner and having a continuous rounded apex thereon, said apex of said boss being eccentrically positioned with respect to a vertical line extending through the center of said boss whereby the slope of the inner surface of said boss is substantially less than the slope of the outer surface of said boss, said peripheral web portion being curved and the outer edge thereof being in substantially the same plane as the top of said boss.

3,047,177
CLOSURE SYSTEM
Edward J. Poitras and Carl W. Walter, Holliston, Mass., assignors, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 694,985
5 Claims. (Cl. 215—56)



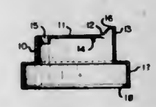
1. A closure system comprising a container having an open mouth terminating at a transverse rim, a pouring lip, and spaced from said lip a sealing bead, and a one-piece elastic stopper having an end wall overlying said mouth and a side wall telescoped over said lip and bead, an end wall groove closed by said rim, a side wall rib gripping and sealing around said lip, a side wall band engaged and sealing over said bead, and a side wall recess extending from said band through said rib to said end wall groove, said end wall groove and side wall band lifting from said rim and bead subject to the pressure developed and to vent the container during sterilization.

3,047,178
CLOSURE SYSTEM
Edward J. Poitras and Carl W. Walter, Holliston, Mass., assignors, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed June 24, 1958, Ser. No. 744,132
6 Claims. (Cl. 215—56)



1. A closure for an open mouth container comprising an elastic bushing having an end wall overlying and biased to the container mouth, a side wall telescoped over and gripping around said mouth, a recess in said side wall opening to the container upon the forcing of said end wall from said mouth, an upstanding projection on said end wall, sealing formation on said projection, access and vent openings through said end wall and projection, a vacuum sensitive valve closing said vent opening, and a cap fitting tightly over said formations.

3,047,179
BOTTLE CAPS AND THE LIKE
Edward A. Madej, 1209 Riverview Drive, Verona, Pa.
Filed May 3, 1961, Ser. No. 107,516
4 Claims. (Cl. 215—73)

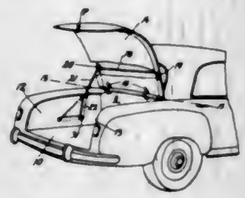


1. A cap for bottles and the like comprising a resilient cylindrical body portion, a cover integral with said body portion at one end having an elliptical opening therein bounded on one edge by the wall of the cylinder and an integral lip thereon extending above the plane of the cover, a depending dog on the opposite edge adapted to releasably engage the edge of the lip when the lip is bent over the elliptical opening and depending holding ring means on the opposite end of the body portion adapted to fit over and engage a bottle top to be covered.

3,047,180
BALANCING MECHANISM FOR A LID, MORE PARTICULARLY FOR THE LID OF THE LUGGAGE COMPARTMENT OR THE MOTOR COMPARTMENT OF A VEHICLE
Ernst J. H. Fiala, Sindelfingen, Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Apr. 16, 1959, Ser. No. 806,797
Claims priority, application Germany Apr. 16, 1958
7 Claims. (Cl. 217—60)

7. The combination comprising a compartment composed of a bottom wall, of a rear wall, and of side walls,

a lid mounted for pivotal movement about an axis extending in proximity to the top edge of said rear wall, means for balancing the weight of said lid in its lowermost position and for exerting a lifting couple on said lid when it approaches its uppermost position, comprising a torsional spring rod mounted on said lid to extend parallel to said axis at a distance therefrom and having its one end fixed to said lid and its other end rotatably mounted on said lid, an arm fixed to said spring rod at said other end extending towards said bottom wall near one side wall, and a link having one of its ends pivotally



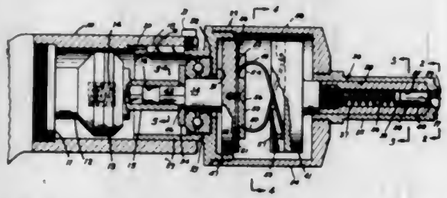
mounted on one of said two last-mentioned walls and having its other end pivotally connected to the end of said arm, said link being formed by a sheet metal member of U-shaped cross section having a pair of spaced web portions, one of said web portions being provided with an aperture, said arm extending between said web portions and having a bent end portion journaled in said aperture, said link being further provided with an abutment limiting the angle of oscillation of said arm relative to said link so as to prevent a straightening of the toggle formed by said arm and said link.

3,047,181
RIVET COMBINATION
Hermann Heidenwolf, Bad Sodenerstrasse 29, Salmunster, Germany, assignor of one-half to Hans-Georg Biermann, Frankfurt am Main, Germany
Filed Feb. 27, 1957, Ser. No. 642,771
Claims priority, application Germany Feb. 28, 1956
4 Claims. (Cl. 218—29)



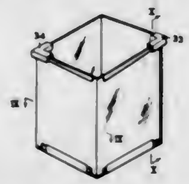
1. A rivet combination for arrangement in work having at least one face accessible, said combination comprising a hollow rivet member having a rivet head on one end for engaging one face of said work and being formed with an inward taper toward said rivet head at its other end, said taper extending from said other end to the smallest inner diameter of said hollow rivet member, said hollow rivet member being of a length sufficient to pass through said work so that said other end of said hollow rivet member will extend beyond said work, a mandrel positioned in said hollow rivet member and comprising at the end thereof adjacent said other end of said rivet member a terminal, substantially spherical portion having a smooth uninterrupted surface and an outer diameter not greater than the outer diameter of the tapered end of said hollow rivet member, as well as an axial length substantially at least equal to the axial length of said tapered portion, and having in the direction of said rivet head a cylindrical portion of a diameter greater than said smallest inner diameter of said hollow rivet member and adapted to form a filling portion in said hollow rivet member, and still further in the direction of said rivet head a tapered portion narrowing down towards the other end of said mandrel to a diameter substantially corresponding with said smallest inner diameter of said hollow rivet member, said terminal portion and said cylindrical portion having a combined length in axial direction between their remote extremities substantially equal to the length of said hollow rivet member, said tapered portion of said hollow rivet member being adapted to enclose said terminal portion of said mandrel after riveting and thereby to form a tail-end head, the latter functioning for engaging the other face of said work, and said cylindrical portion of said mandrel being adapted to be tightly fitted into said hollow rivet member in the final upset stage of said combination.

3,047,182
FASTENER INSTALLING TOOL
Ronald W. Batten, Torrance, Calif., assignor to Hi-Shear Corporation, Torrance, Calif., a corporation of California
Filed Apr. 7, 1961, Ser. No. 101,487
7 Claims. (Cl. 218—43)



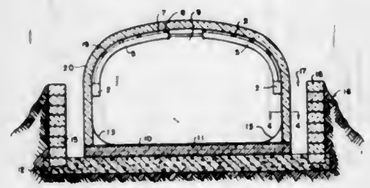
1. A fastener installing tool comprising: a driven shaft adapted to be turned by a motor; a driver; fastener-engaging means on the driver; said driven shaft and driver having a common axis of rotation, and a spring linkage interconnecting the driven shaft and driver, the spring linkage comprising a spring whose width is substantially greater than its thickness, and whose thickness is disposed so as to transmit said axial movement, and whose width is disposed so as to transmit rotational movement.

3,047,183
CONTAINER CONSTITUTING A DISMANTLABLE FLOWER POT
René Papa, 51 Blvd. de Compostelle, Marseille, France
Filed Sept. 3, 1959, Ser. No. 837,801
2 Claims. (Cl. 220—4)



1. A dismantlable flowerpot comprising two identical wall elements each including a pair of plane rectangular walls rigidly joined at one of their side edges and disposed at a right angle to each other, the other side edge of one of the walls being tapered to form a tongue and the other side edge of the other of the walls being provided with a groove of the same cross-section as the tongue, the two wall elements being assembled with the tongue of each in the groove of the other to constitute in assembly a body of rectangular horizontal section for the flowerpot, a bottom for the flowerpot comprising a plane rectangular base having adjacent its edges and in its upper surface a set of four channels into which the bottom edges of the assembled wall elements are engaged, an external shoulder on each wall adjacent to but spaced from the bottom end of said wall, detent means in and spaced from the bottom of the channels of the base, said detents having the shoulder of the respective walls engaged beneath them, the base being resilient whereby the shoulders may ride past the detent means by resilient deformation of the base, two corner pieces including channels engaged onto the top edges of the assembled wall elements, a further shoulder positioned along the upper edge of each wall, and detents disposed in each of the channels of the corner pieces, the detents being engaged past and abutting against the further shoulder at its side remote from the upper edge of the wall, said corner pieces including notches adjacent their channels, and tenons on the walls at their top edge engaged into said notches to key the walls against longitudinal movement with respect to the corner pieces.

3,047,184
STORAGE TANK
Johannes C. van Bergen, Clement R. J. Laqueuille, and Simon A. Boon, all of The Hague, Netherlands, assignors to Shell Oil Company, a corporation of Delaware
Filed Jan. 15, 1960, Ser. No. 2,741
1 Claim. (Cl. 220—9)

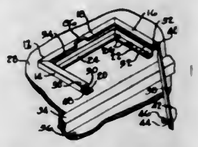


A tank construction for the storage of liquefied petroleum gases at approximately atmospheric pressure and at substantially subatmospheric temperatures comprising:

(*a*) a vertical cylindrical metal shell;
(*b*) a sheet metal domed roof mounted on said shell;
(*c*) a plurality of curved trusses radially directed from the vertical axis of the cylindrical metal shell supporting said roof;
(*d*) a plurality of concentric ring members joining said trusses together;
(*e*) the innermost ends of said trusses terminating at the innermost of said ring members;
(*f*) the outermost ends of said trusses terminating at the upper end of said vertical cylindrical metal shell;
(*g*) a round dished metal tank bottom;
(*h*) the peripheral edge of said dished tank bottom joining said vertical cylindrical shell at a point above the lower end of said vertical cylindrical shell;
(*i*) solid weighting elements located in the peripheral space between the lower portion of the vertical cylindrical shell and the curved portion of said dished metal tank bottom; and
(*j*) a heat-insulating gas-tight covering enclosing the entire metal tank unit.

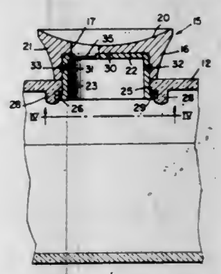
3,047,185
RECEPTACLE APPARATUS
Linford H. Lewis, 3408 Ashville St., Philadelphia 36, Pa.
Filed June 5, 1961, Ser. No. 115,031
16 Claims. (Cl. 220—18)

1. A receptacle apparatus comprising a mounting base for being secured with a supporting surface having track means and a track enclosing means, said base having first and second parallel arms and a connecting section forming a substantially U configuration and being provided with means for securing said base with said supporting surface positioned proximate said track means and said enclosing means enclosing the open ends of the first and second arms of said base to form a substantially rec-



tangular configuration, and a container having track engaging means for being received by the track means of said base and secured within said base by the enclosing means of said base.

3,047,186
VENT KNOB
Anthony W. Serio, 1704 Caton Ave., Elmira, N.Y.
Filed Dec. 6, 1957, Ser. No. 701,169
7 Claims. (Cl. 220—44)

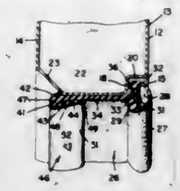


1. A vent knob for a cover member having an opening formed therethrough which comprises a substantially cylindrical hollow body means extending through the opening in the cover and having an annular radially extending flange formed adjacent the lower end thereof, said flange having at least one indentation formed therein adapted to engage a complementary projection on the lower surface of the cover, said flange having resilient means on the upper surface thereof for engaging the lower surface of the cover, said body means having at least one aperture formed therethrough in communication with the hollow interior of said body means, means for removably fixing said body means to the cover member, hollow movable means rotatably mounted on and substantially surrounding said cylindrical body means, said movable means having at least one aperture formed therethrough whereby said movable means may be angularly moved from a position closing the aperture through said body means to a position uncovering the aperture through said body means, said body means and said movable means each having stop means thereon, the stop means on said body means being disposed so as to engage the stop means on said movable means for limiting relative rotation in both directions of said body means and said movable means.

3,047,187
PROTECTOR FOR GASKET FOR CLOTHES DRYER DOOR
Christopher G. Taylor, South San Francisco, and Frank A. Barsocchini, Kentfield, Calif., assignors to Service Distributors, Inc., San Francisco, Calif.
Filed Dec. 15, 1959, Ser. No. 859,712
3 Claims. (Cl. 220—46)

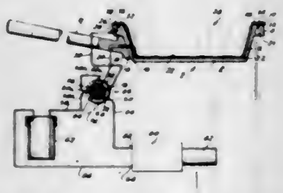
1. In combination, a clothes dryer panel formed with a circular aperture defined by cylindrical side walls, a resilient circular gasket installed in said aperture having a cylindrical collar fitting tightly in said aperture with its axis transverse to the plane of said panel, a bulbous nose on the external end of said collar to seal against

the inside of a door for said aperture, and an inwardly folded bead on the internal end of said collar, a split ring protector for said gasket comprising a smooth, metallic circular member protecting said inwardly folded bead, and separated from said panel around its entire circumference, said protector having a conical portion lying tightly against said inner bead and flaring from the inside to the outside of said panel, said protector having at the



inner end of its conical portion a radially outwardly turned portion of substantial semi-circular cross section enclosing the inner end of said inner bead and terminating in close proximity to said panel, said protector terminating at the outer end of its conical portion in a radially outwardly curled arcuate section terminating in close proximity to said gasket collar outwardly of said inner bead.

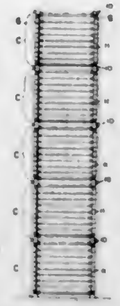
3,047,188
COOKING UTENSIL
Vernon Durbin, Waban, Mass., assignor to Holtyer-Cabot Corporation, a corporation of Delaware
Filed Feb. 11, 1960, Ser. No. 8,111
14 Claims. (Cl. 220—63)



1. In combination, a cooking utensil comprising a body having a cooking surface and a support surface, said support surface surrounding said cooking surface, said utensil having first and second passages through said body communicating respectively with said cooking surface and said support surface, said utensil being adapted to be used in conjunction with removable flexible liners having first portions adapted to cover said cooking surface and second portions adapted to cover said support surface, a source of suction, and means connecting said suction source to said passages, said connecting means including control means effective selectively to connect either one only or both of said passages to said suction source, whereby the application of suction through said passages is transferred to said cooking surface and supporting surface respectively and is adapted to cause said first and second portions of said flexible liners to conform to said cooking surface and said supporting surface respectively, engagement between said second portions of said liners and said supporting surface causing a seal therebetween.

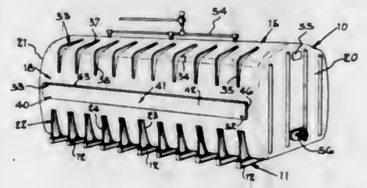
3,047,189
SIDE GUARDS FOR STACKABLE CARGO CONTAINERS
John M. Paul, Levittown, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 11, 1961, Ser. No. 102,260
4 Claims. (Cl. 220—71)

1. A side guard assembly for a stackable container having vertical load bearing posts, comprising an elongated guard member secured to a post at a number of connection joints along its length, each joint including a thin resilient spacer between the guard member and the post,



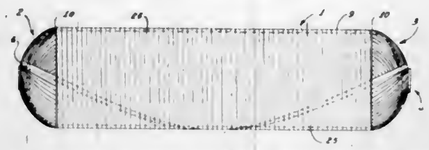
a shanked and headed retaining member and a resilient sleeve for the shank of the retaining member providing relative longitudinal movement between the guard member and the post.

3,047,190
BEER FERMENTING TANK
August H. Bayer, Cincinnati, Ohio, assignor to The Bishopric Products Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 29, 1959, Ser. No. 809,862
8 Claims. (Cl. 220—71)



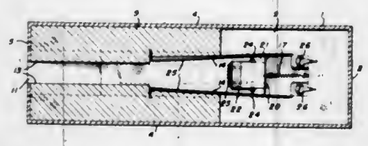
1. A fermenting tank of generally rectangular cross section, said tank having a thin metal bottom, a thin metal top, thin metal side walls interconnecting the bottom and top, and end members joined to the bottom, side, and top walls to form a closed tank, a plurality of transverse beam members disposed beneath said tank, said beam members being secured to said thin metal bottom wall, said side walls being curved outwardly in vertical plane adjacent to the center portions thereof, and a plurality of vertically extending horizontally spaced upper and lower reinforcing members respectively secured to the top and bottom portions of each of the side walls, the lower ends of said lower reinforcing members being rigidly interconnected to the transverse beams, said upper reinforcing members also being rigidly secured to said top wall, said reinforcing members engaging the top and bottom portions of each of said side walls over an appreciable vertical extent, the upper and lower reinforcing members being spaced vertically from one another, the center portion of each of said side walls not being reinforced, the upper and lower portions of each of said side walls being effective to function as beams resisting outward deflection, the thickness of the side walls and the radius thereof being sufficiently small so that the center portion of each of said side walls functions as a membrane and deflects an amount in excess of four times the thickness of the side wall when a tank is placed under pressure.

3,047,191
FILAMENT WOUND VESSELS AND METHODS FOR FORMING SAME
Richard E. Young, Rocky Hill, N.J., assignor, by mesne assignments, to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 26, 1957, Ser. No. 699,077
18 Claims. (Cl. 220—83)



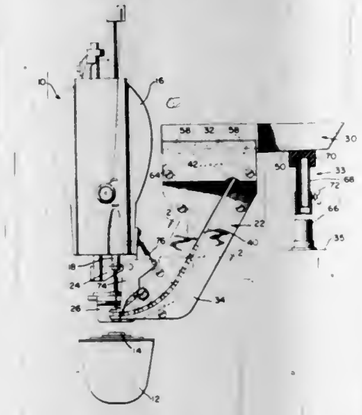
5. A filament wound hollow vessel having substantially closed ends comprising, a pair of axially aligned ovaloid elements positioned with their enlarged ends in opposed relation, said elements being formed as integral parts of said vessel, the wall of said vessel including said ovaloid elements being formed substantially of helical filament windings bonded together by a suitable binder, said windings forming a helical pattern and said windings extending at an angle substantially less than a right angle with respect to the axis of alignment of said ovaloid elements and continuing from one of said ovaloid elements to the other and back again, said ovaloid elements having an interior surface shaped substantially the same as the shape of an ovaloid end pattern for a filament wound pressure vessel determined by the following method—the method of determining end patterns of filament wound pressure vessels having a central axis which comprises, establishing the circle of maximum circumference of the end pattern in a plane with said axis passing through the center of said circle and at right angles to said plane, establishing a position on said axis in spaced relation with respect to said plane, which position is approximately the position of the closing end of said end pattern on said axis, establishing a relatively smaller circle than said circle of maximum circumference having its center at about said approximate closing end position and lying in a plane perpendicular to said axis, passing thread under substantially uniform tension between said circle of maximum circumference and said relatively smaller circle to form a net-work of thread therebetween, and expanding with uniform pressure said net-work outwardly from the inner side thereof to form an end curvature wherein all the threads are in uniform tension.

3,047,192
CIGARETTE DISPENSER
James Max Sykes, Murray, Ky. (Wickliffe, Ky.)
Filed Aug. 17, 1959, Ser. No. 834,027
4 Claims. (Cl. 221—143)



1. A portable device for igniting and dispensing cigarettes comprising a casing having a dispensing outlet, a moveable cigarette receiving slider plate within the casing moveable between receiving and dispensing positions in alignment with the dispensing outlet, an igniter coil mounted on said slider plate to slide along a path above said slider plate toward and away from the dispensing outlet, a pair of metal contact strips disposed on opposite sides of the path of movement of the igniter coil and biased to converge toward the dispensing outlet for connection to a source of electrical energy, and a pair of contact members connected to said coil for continuous engagement with said strips during at least a portion of the motion of the slider plate toward the dispensing outlet to energize said coil during said portion of motion to ignite and simultaneously dispense a cigarette, said coil contacting and igniting a cigarette during said portion of motion of said slider plate.

3,047,193
ARTICLE FEEDING DEVICE
Neil O. Broderson, Rochester, N.Y., assignor, by mesne assignments, to Rochester Button Company, Rochester, N.Y., a corporation of New York
Filed Feb. 29, 1960, Ser. No. 11,726
3 Claims. (Cl. 221—163)

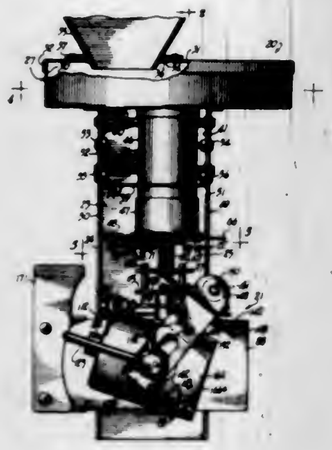


1. In a vibratory feeding device for irregular shaped articles, a hopper comprising an inclined bottom, upstanding side walls, partition walls dividing said hopper into at least three chambers, said chambers including a supply chamber for receiving said articles in random positions, an orienting chamber, and a feed chamber, one of said side walls having an opening communicating with said feed chamber, a first partition wall between said supply chamber and said orienting chamber provided with a single aperture at the bottom of said first partition wall and of a size permitting passage of only a single article therethrough at any one time, a second partition wall between said orienting chamber and said feed chamber provided with a plurality of orienting openings therein at the bottom of said second partition wall, each of said openings being shaped in relation to the irregular shape of the articles to pass said articles in predetermined position only from said feed chamber to the opening in said upstanding side wall and means for maintaining said articles in said predetermined position.

3,047,194
DISPENSER FOR A COFFEE BREWING APPARATUS
Donald S. Reynolds, Wilmette, and Otto E. Werner, Skokie, Ill., assignors to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Original application Apr. 3, 1958, Ser. No. 726,149. Divided and this application July 27, 1959, Ser. No. 829,696
4 Claims. (Cl. 222—242)

4. A device for dispensing a measured amount of material comprising a material reservoir, a feed hopper for feeding material to said reservoir, an opening in the bottom of said reservoir, an open ended measuring chamber having one end in communication with said opening,

a gate normally closing the other end of said chamber, means operable to displace the gate normally closing said other end of said chamber, means in said reservoir for conveying material to said chamber, said conveying means including a substantially disc shaped member rotat-

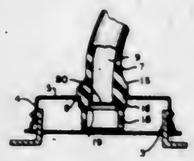


able in said reservoir, said disc shaped member having a first portion which contains at least one aperture therein, and a second portion extending vertically above said first portion, said second portion being substantially imperforate and covering said one end of said measuring chamber when said gate is displaced from closed position.

3,047,195
CLOSURE CAP AND FLEXIBLE POUR SPOUT FOR STORAGE CONTAINERS

Roy H. Richmond, Wellsburg, W. Va., assignor to Eagle Manufacturing Company, Wellsburg, W. Va., a corporation of West Virginia

Filed Apr. 9, 1958, Ser. No. 727,316
1 Claim. (Cl. 222—570)



A pour spout and closure cap for the filling opening of a portable gasoline storage and dispensing container comprising,

a rigid closure cap for detachably mounting upon the filling opening of said container and provided with an apertured top surface portion,

a flexible pour spout base portion of generally cylindrical shape axially insertable into said cap top surface aperture and provided with an annular recess intermediate the ends thereof receiving and sealing the peripheral edges of said closure cap aperture,

said pour spout exterior base portion beneath said annular recess being tapered for initial insertion and compression within said cap aperture surface for reception thereof within the said recess,

a flexible elongated tubular neck portion integral with said base portion above said cap top surface,

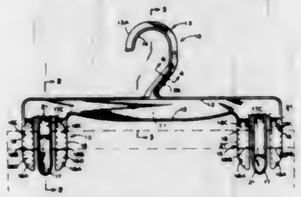
a continuous internal passageway extending axially through said spout neck and base portion in communication with said dispenser interior,

said passageway within said base portion and beneath said base recess being enlarged for a portion of its length to receive a sediment screen member.

3,047,196
GARMENT HANGER

Bernard B. Levine, New York, and Robert Phillips, Forest Hills, N.Y., assignors to Bernard Plastics Molding Corp., Brooklyn, N.Y., a corporation of New York

Filed Nov. 29, 1961, Ser. No. 155,707
6 Claims. (Cl. 223—96)

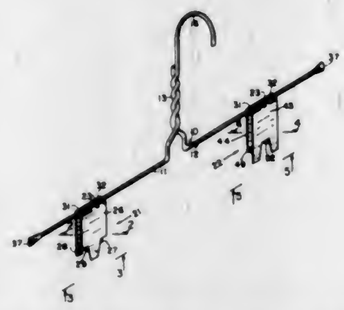


1. An integrally formed garment hanger formed of a molded resilient thermoplastic comprising a horizontally extending web, a hook connected to the web intermediate the ends thereof, and a series of depending fingers connected to each end of said web, said series of depending fingers including longitudinally spaced apart inner, outer and middle fingers, each of said fingers being laterally offset with respect to the central axial plane of said web, and each of said fingers having a spoonshaped end whereby the spoonshaped end of adjacent fingers face and extend across said axial plane so that a garment slipped up between said fingers is frictionally retained therebetween.

3,047,197
SKIRT HANGERS

Albert Singer, 820 West End Ave., New York, N.Y.

Filed Aug. 31, 1959, Ser. No. 837,070
1 Claim. (Cl. 223—96)



A skirt hanger comprising a pair of wires whose adjacent ends are twisted together and bent to form a hanging hook, the other ends of said wires extending in opposite directions to provide horizontal support wires, and

(*a*) a spaced pair of inverted U-shaped clamping members having a base section and a pair of pendant arms,

(*b*) each clamping member having an integrally formed bearing member in its base section slidably receiving one of said horizontal support wires,

(*c*) one arm of each clamping member being longer than the other arm,

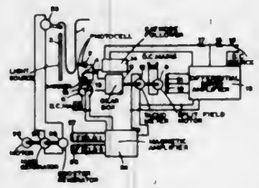
(*d*) one of said arms having spaced projections and the other arm having a single projection in a different plane from the projections of the first arm,

(*e*) said projections extending inwardly and being of sufficient length to overlap when penetrating a skirt secured clampingly therebetween.

3,047,198
MECHANISM FOR THE CONTROL OF STRIP MATERIALS

John James Long, Stevenage, England, assignor to W. H. Sanders (Electronics) Limited, Stevenage, England

Filed Aug. 15, 1960, Ser. No. 49,506
Claims priority, application Great Britain Aug. 21, 1959
4 Claims. (Cl. 226—42)



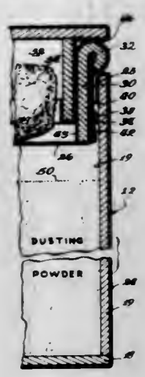
1. A strip material control apparatus for a strip delivery means, comprising a chamber, a variable speed driving motor for the strip material, means to maintain a downward loop of the strip material under gravity in said chamber, a photoelectric means to generate signals in accordance with the position and the vertical velocity of the bottom of the loop and a control for the variable speed motor energized by said signals to adjust the motor speed to cause the bottom of the loop to move to a predetermined vertical position and to tend to reduce vertical velocity of the bottom of the loop away from the predetermined position, said photo-electric means comprising a vertically elongated single light source in said chamber, a first photo-electric device in said chamber receiving a light beam from said source controlled in accordance with the depth of the loop, a reference photo-electric device mounted in said chamber below the first photo-electric device so as to receive a substantially constant amount of light from said source, means connecting the two photo-electric devices so that the combined output therefrom is a difference signal, a servo controlled light directing means to adjust flow of light from the source to the first photo-electric device below the bottom of the loop, a servo control energized by said difference signal to adjust the light passing below the bottom of the loop and falling on said first photo-electric device to a predetermined amount, and position and velocity signal generators operated by the servo controlled light directing means.

3,047,199
DUSTING POWDER BOX

John Kenneth McBain, Chicago, Ill., assignor to W. C. Ritchie Division Stone Container Corporation, Chicago, Ill.

Filed Dec. 23, 1960, Ser. No. 78,133
3 Claims. (Cl. 229—6)

1. A container for finely divided powder or the like comprising a tubular bottom member at least the walls of which are of paperboard adapted to be charged with a quantity of said powder while erect, an open topped drum member having a drum head of frangible paper material capable of being readily ruptured and of a dimension and configuration to be pushed telescopically within said tubular member in substantially dust-tight engagement, said head serving as the bottom of said drum member, the walls of said drum member being rolled outwardly at the top edge thereof to form an outwardly extending lip adapted to engage upon the upper edge of said bottom member limiting the extent of said telescopic movement, the drum member forming an applicator stor-

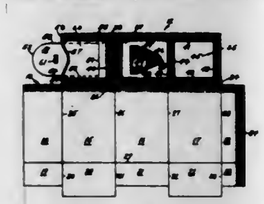


age space above said drum head, and a cover member having an annular flange adapted to be engaged within said drum member to close said container.

3,047,200
DISPENSING CONTAINER

Howard M. Hill, Hamilton, Va.

Filed Jan. 11, 1961, Ser. No. 82,029
11 Claims. (Cl. 229—17)



1. A container for liquids comprising a tubular fibre body closed at its lower end, three side walls of said body terminating at their upper edges in a necked-in area and outwardly extending end seam flanges, the fourth side wall terminating in a necked-in area and an outwardly extending end seam flange and integral therewith a triple-ply dispensing top closure including a lower reinforcing ply, with a filling opening, adhesively attached to said end seam flanges and an inner ply integral with said lower ply and adhesively attached thereto, said inner ply having a dispensing opening therein, and an outer ply integral with said inner ply and adhesively attached thereto, said outer ply having a tear tab and weakened scores defining a partially rupturable tear strip therein covering said dispensing opening.

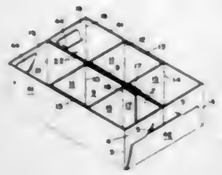
3,047,201
MULTI-COMPARTMENT TRAY

Morris W. Kuchenbecker, Neenah, Wis., assignor to American Can Company, Jersey City, N.J., a corporation of New Jersey

Filed Dec. 9, 1960, Ser. No. 74,807
1 Claim. (Cl. 229—28)

A multi-compartment tray made from a single blank, comprising a bottom wall, side walls hinged to said bottom wall, end flaps hinged to said bottom wall, partition panels hinged to the ends of said side walls, said partition panels being adapted to be folded and adhered to form a plurality of aligned and endlessly connected open-ended cells, said cells having a width about half the width of said bottom wall, said partition panels being folded over and positioned with one open end thereof on said bottom wall, the cells adjacent each of said side walls being po-

sitioned in aligned relation, said end flaps being provided with locking means for retaining said partition members



in upright open position on said bottom wall; the end partitions of the terminal cells being provided with slits for retaining said locking means of said end flaps.

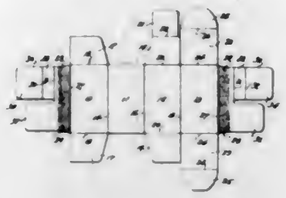
3,047,202
MULTIPLE COMPARTMENT CONTAINER
Louis R. Schaefer, Quincy, Ill., assignor to Packaging Corporation of America, Dover, Del., a corporation of Delaware
Filed Mar. 31, 1960, Ser. No. 18,980
2 Claims. (Cl. 229—29)



1. A folded carton of sheet material comprising an elongated center wall provided with a plurality of longitudinally spaced transversely extending elongated slots, a pair of elongated side walls disposed on opposite sides of said center wall each side wall having the lower marginal portion thereof foldably connected to the lower marginal portion of said center wall, each side wall being provided with a plurality of longitudinally spaced transversely extending elongated slots, corresponding slots in said center and side walls being substantially transversely aligned relative to said center wall, the upper end limit of each side wall slot terminating within a tongue-like tab formed in the side wall and adapted to be automatically struck out from the remainder of said side wall when the upper marginal portion of said side wall is moved outwardly beyond a predetermined distance from said center wall, and a plurality of partition members disposed within the transversely aligned slots in said center and side walls and cooperating with said walls to form rows of article accommodating cavities, each partition member having an elongated upper marginal portion provided with a pair of longitudinally spaced abutments, each abutment being disposed said predetermined distance from said center wall and in interlocking engagement with one of said tongue-like tabs; the portions of each side wall intermediate the adjoining tongue-like tabs being yieldable outwardly from said center wall beyond said predetermined distance.

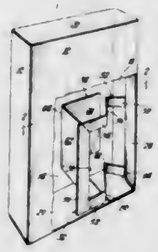
3,047,203
FOLDING BOX OR CARTON TO ENCLOSE A SMALL ARTICLE
Daniel H. Etlinger, Kearny, N.J., assignor to The Wilkata Folding Box Co., Kearny, N.J., a corporation of New Jersey
Filed Jan. 25, 1962, Ser. No. 168,604
5 Claims. (Cl. 229—39)

1. A carton adapted to contain and immovably support a small article within its relatively large interior comprising side walls disposed in right angular relation one to another, thereby to provide a body of rectangular cross-section, partition means within one end portion of said body disposed to extend diagonally across its interior between opposite corners thereof, said partition means including angularly related walls to provide an



endwise open pocket to receive the small article, stop means within the opposite end portion of said body also disposed to extend diagonally across its interior between opposite corners thereof and so as to intersect an inner open end of said pocket, and means to close the ends of the carton body.

3,047,204
FOLDING CARTON WITH INTERNAL REINFORCING STRUCTURE
Richard S. Wolowicz, Chicago, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,159
2 Claims. (Cl. 229—41)



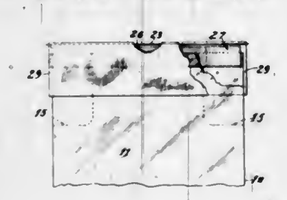
1. A collapsible carton for granular material formed from a single blank of foldable paperboard, comprising:
(*a*) a pair of spaced, parallel side walls;
(*b*) a pair of spaced, parallel end walls hingedly interconnected to corresponding side edges of said side walls to define a tubular structure;
(*c*) end closure flaps hinged to opposite end edges of certain of said walls and foldable into overlapped relation to close the ends of said tubular structure; and
(*d*) a reinforcing structure secured to and extending transversely between said side walls to prevent their movement away from each other and thereby maintain the carton in squared condition;
(*e*) said reinforcing structure being spaced inwardly from said end closure flaps to provide openings between the reinforcing structure and the opposite ends of the carton;
(*f*) said reinforcing structure including a pair of generally flat first and second panels adhesively secured to opposed inner surfaces of respective side walls and interconnected by a third panel hinged to said first and second panels;
(*g*) said first and third panels being cut from said second panel.

3,047,205
BAG CLOSURE
Hubert H. Southard, 740 Palm Ave., Seaside, Calif.
Filed Nov. 20, 1959, Ser. No. 854,412
1 Claim. (Cl. 229—62)



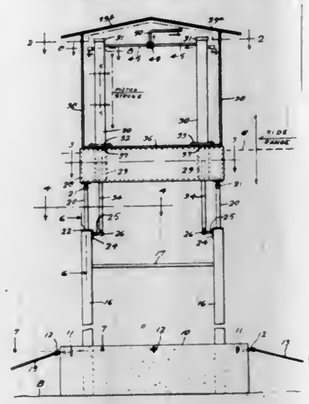
A bag container for granular material and the like having two parallel but laterally extensible side walls and end walls having accordion infolds, said side walls having top and bottom edges forming top and bottom openings into said bag, one of said side walls including top and bottom flap portions extending across said top and bottom edges thereof, each of said flap portions being folded back upon itself into said bag over said accordion infolds; means stitching across the width of said bottom opening, said means piercing said side walls and said interposed bottom flap portion; said bag then being adapted for filling with a granular-like material to a level slightly below the depending edge of said top flap portion and sealed by stitching across the width of said top opening through said side walls and said interposed top flap portion; whereby upon sealing said bag, a substantial portion of said flaps will lie in parallel adjacency with the inner surface of the opposite side wall, granular material tending to be lodged in the crease of each fold between said one side wall and its said top and bottom flap portions.

3,047,206
CLOSURE MEANS
Edward J. Monahan, Oradell, and Harry E. Peckham, Ridgewood, N.J., assignors to National Biscuit Company, a corporation of New Jersey
Filed May 18, 1960, Ser. No. 29,839
5 Claims. (Cl. 229—66)



1. A closure for sealing the flattened mouth portion of a bag, said closure comprising a rectangular sheet folded flatly along a longitudinal crease line to insertably receive said mouth portion, said closure sheet having a margin overlapping each longitudinal end of said flattened mouth portion, coating means on the inwardly facing side of said closure sealably securing said closure to said mouth portion and the overlapping margins to one another, whereby sealing of said bag is effected by said closure without sealing the mouth portions to each other, unsealing means extending longitudinally across said closure for unsealing said mouth portion, said unsealing means comprising an opening thread secured to said sheet adjacent said crease line, means for facilitating the manual grasping of said opening thread, and an insert in the mouth portion of said bag having a portion extending outside said bag, thereby to aline said opening thread a predetermined distance from said mouth portion and to prevent sealing of said closure to itself along the area immediately adjacent said opening thread and between said overlapping margins.

3,047,207
WAVE AND TIDE MOTOR
Winton B. Baldwin, 2519 Kit Carson St., Sacramento, Calif., and Holice B. McPherson, 3641 Highway 50 W., Placerville, Calif.
Filed Apr. 28, 1960, Ser. No. 25,296
1 Claim. (Cl. 230—67)

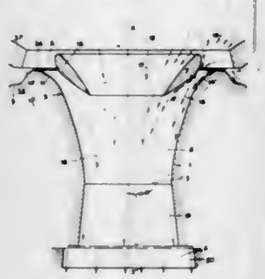


A wave and tide motor compressor unit comprising a substantially square anchor block adapted to be positioned on the bottom of a body of water, vertically positioned guide cylinders mounted in said anchor block adjacent the corners thereof, supporting rods mounted for reciprocating movement within each of said guide cylinders and having one end thereof extending vertically therefrom, a barge including parallel top and bottom walls mounted on the extending ends of said supporting rods and adapted to float on the surface of a body of water, pivotal connections between said supporting rods and the bottom wall of the barge, sleeves extending in perpendicular relation between the top and bottom walls of said barge in inwardly spaced adjacent relation to the ends of said supporting rods, vertically positioned compressor cylinders mounted on said barge in vertical alignment with said sleeves, pistons reciprocal in said compressor cylinders, piston rods connected at their upper ends to said pistons, said piston rods extending through the sleeves in said barge and having their free ends terminating adjacent the free ends of said guide cylinders, an arm secured at right angles to each of said guide cylinders and each pivotally connected at its free end to the free end of each of said piston rods, a check valve mounted at the upper end of said compressor cylinders, a discharge line secured to each of said compressor cylinders at the upper end thereof through which air compressed in said compressor cylinders passes, and a protective housing for said compressor cylinders mounted on said barge, said housing including opposed side and end walls and a pitched roof structure.

3,047,208
DEVICE FOR IMPARTING MOVEMENT TO GASES
Henri Coanda, Paris, France, assignor to Sebac Nouvelle S.A., Lausanne, Switzerland, a corporation of Switzerland
Filed Apr. 30, 1957, Ser. No. 656,081
Claims priority, application France Sept. 13, 1956
2 Claims. (Cl. 230—95)

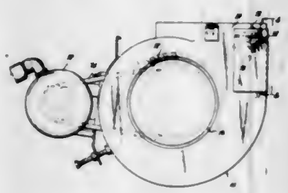
1. A device for imparting a high velocity of flow to a compressible fluid by means of a relatively small flow of an auxiliary compressible fluid, said device comprising a secondary convergent-divergent nozzle providing a main fluid path for a compressible ambient fluid to which rapid flow is to be imparted, said secondary nozzle having an annular wall defining a convergent inlet and a divergent outlet and a circular throat coupling together

said inlet and outlet, annular means coaxial with said secondary nozzle defining in conjunction with said convergent inlet of the secondary nozzle at least one annular primary nozzle in the inlet of said secondary nozzle and having a convergent inlet and a divergent outlet disposed for delivering said compressible ambient fluid into and within the inlet of said secondary nozzle, said annular wall of said secondary nozzle having an annular Coanda slot extending around said annular means and spaced radially outwardly therefrom, said slot having spaced lips, a chamber communicating with said slot and adapted to receive an auxiliary gaseous fluid under pressure which is discharged as a high-speed jet through



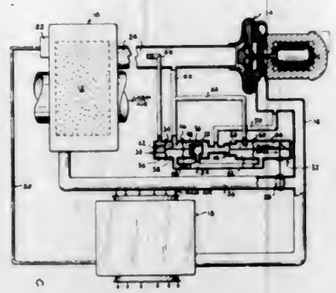
said Coanda slot into said convergent inlet of said primary nozzle, said wall having an annular portion defining a cross-section of said primary nozzle a surface forming an extension of the lip of said slot on the side toward the outlet of said primary nozzle and which progressively recedes from the direction of emergence of said pressure fluid through said slot so that a stream of fluid discharged through said slot tends to follow said surface and to induce adjacent ambient fluid in said primary and secondary nozzles to join in the stream, and said stream of pressure fluid and ambient fluid flowing outwardly through said divergent outlet of said secondary nozzle.

3,047,209
AIR FLOW CONTROL SYSTEMS
Malcolm W. Patrick, Bedford Heights, Ohio, assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Aug. 13, 1959, Ser. No. 833,461
6 Claims. (Cl. 230—114)



1. Apparatus for regulating the output of a forced hot air heating system comprising a blower for delivering warm air to the space to be heated, a vane pivotally mounted in the discharge throat of said blower for movement betwen a flow restricting position and a non-restricting position, a bi-metallic coil spring having one end rigid with said blower and the other end operably connected to said vane and arranged to move said vane toward said non-restricting position when said spring is heated and to move said vane to said restricting position when said spring is cooled, a heater element for selectively heating said spring, and means for energizing said heater element when said blower is initially energized.

3,047,210
COMPRESSOR SURGE CONTROL
Stanley G. Best, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 26, 1958, Ser. No. 783,060
5 Claims. (Cl. 230—115)

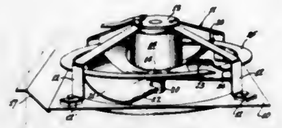


1. In combination,
(*a*) a nonpositive displacement compressor for elastic fluids,
(*b*) a movable control member,
(*c*) means for adjusting the flow of fluid through the compressor independently of demand in response to movements of said control member,
(*d*) a first pressure sensing means for sensing a pressure differential proportional to fluid flow through the compressor,
(*e*) pressure responsive means secured to said movable control member, said means being in communication with said first pressure sensing means and responsive to said pressure differential for applying the resultant force of said pressure differential to the control member,
(*f*) a second pressure sensing means for sensing a static pressure differential in the compressor,
(*g*) said second pressure sensing means having means for sensing a higher static pressure at one point in the compressor and means for sensing a lower static pressure at another point in the compressor,
(*h*) a second pressure responsive means secured to said movable control member, said means being in communication with said second pressure sensing means and responsive to said static pressure differential for applying the resultant force of said static pressure differential to the control member in opposition to the resultant force of said first mentioned pressure differential,
(*i*) said second pressure responsive means being modified in accord with predetermined design constants based on the surge limit curve of the compressor to vary the resultant force of each of said static pressures sensed in unequal degree, and
(*j*) means for exerting a bias on said movable control member in proportion to an absolute reference pressure.

3,047,211
VENTILATING APPARATUS
Arthur Donald Hay, Princeton, N.J., assignor to McLean Engineering Laboratories
Filed Apr. 16, 1959, Ser. No. 806,905
12 Claims. (Cl. 230—119)

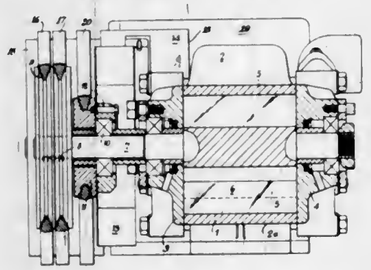
1. A fan assembly for producing a mixed flow of output air including a fan having a plurality of blades, said blades having a comparatively steep pitch and having leading edges lying in substantially the same plane, said blades each having a split trailing edge the outer portion of each of said trailing edges being formed to extend

rearwardly of said trailing edge and to lie in a plane transverse of the axis of rotation of said fan, and a flat



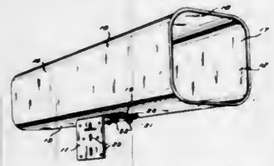
ring-like member secured to and overlying the outer portions.

3,047,212
ROTARY AIR COMPRESSORS
George Harold Briscoe, Beddington, Croydon, England, assignor to Lacy-Hulbert & Company Limited, Beddington, England
Filed Mar. 24, 1958, Ser. No. 723,158
Claims priority, application Great Britain Apr. 2, 1957
2 Claims. (Cl. 230—210)



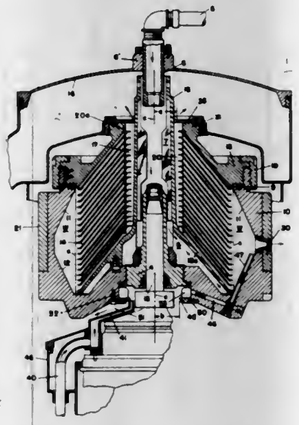
1. The combination of an air compressor of the rotary vane type having a casing, fins on the outer surface of said casing, compression means within the casing, a continuous, integral rotary shaft extending within and outside of said casing for driving said compression means, a first drive means keyed to said shaft outside said casing, a second drive means freely mounted upon said shaft outside of said casing, a fan rotatably mounted on said shaft and directly connected to said second drive means to be driven thereby, said fan having blades arranged to blow cooling air over the finned outer surface of said compressor casing, said second drive means being arranged on the shaft between the casing and said first drive means and constructed to drive said fan at a higher speed than said first drive means drives said compression means.

3,047,213
NEWSPAPER DELIVERY TUBE
Meade Monroe, Cleveland, Ohio, assignor to NEA Service, Inc., Cleveland, Ohio, a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,977
1 Claim. (Cl. 232—17)



A newspaper delivery tube comprising a one-piece molded plastic elongated hollow body member generally rectangular in cross section, open at one end and partly closed at the other end; the said partly closed end having an arcuate opening adjacent the bottom wall of said body, the top wall and side walls of said body converging slightly from said open end toward said partly closed end, the said bottom wall having an integral rectangular raised portion centrally located on its outer surface to define thereat a bracket seat, the lower surface of said raised portion being provided with ribs spaced apart to permit water drainage from the surface of said bracket seat, circular drainage openings located upon and adjacent said raised portion, said drainage openings being provided with downwardly raised edges, spaced openings in said bracket seat and a bracket for attaching said tube to a supporting member having complementary openings therein for attaching said tube to said bracket.

3,047,214
CENTRIFUGAL PROCESS AND APPARATUS
Francis P. Downing, Philadelphia, Pa., assignor to The Sharples Corporation, a corporation of Delaware
Filed Apr. 23, 1958, Ser. No. 730,326
8 Claims. (Cl. 233—14)

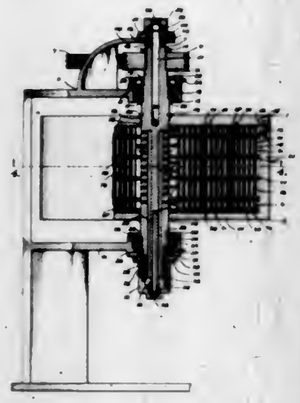


1. In a centrifuge, the combination of a rotatable centrifuge bowl having a separating chamber, means for feeding a mixture to be separated into said separating chamber, said bowl having a plurality of circumferentially spaced radially positioned peripheral outlets, a ring dam at the top of said bowl for the discharge of a liquid effluent from said bowl, a ring dam at the bottom of said bowl, a plurality of circumferentially spaced channels leading from said second-mentioned ring dam to the outer region of said separating chamber, said second-mentioned ring dam having an inner radius larger than that of said first-mentioned ring dam, means for feeding a liquid influent to said bowl over said second-mentioned ring dam from a locus terminating short of overlapping radially the inner edge of said second-mentioned ring dam, and means for controlling the density of said last-mentioned liquid influent.

3,047,215
APPARATUS FOR SEPARATING LIQUIDS OF DIFFERENT DENSITIES
Herbert W. Stratford, Leawood, Kans., assignor to H. W. Stratford Company, Inc., Kansas City, Mo., a corporation of Missouri
Filed July 16, 1959, Ser. No. 827,497
10 Claims. (Cl. 233—31)

1. Apparatus for parallel exchange between liquids of different densities comprising, a rotor including a bowl, a plurality of radically spaced partition walls within the rotor bowl with adjacent partitions eccentric to the rotor axis in diametrically opposed relation, said partitions defining spaces therebetween with said spaces of progressively increased width from one side to the diametrically opposite side of the rotor axis with the greatest width of one space being on the opposite side of the axis to the

greatest width of the next adjacent space, means supplying liquids to be separated to the rotor bowl adjacent the outer portion thereof, said partitions defining the inner portion of the respective spaces at the greatest width being perforated for flow of lighter liquid phases therethrough toward the axis whereby said lighter liquid phases pass through a partition on one side of the axis and then flow through the next inner space to the opposite side and through the perforations in the next inner partition, means

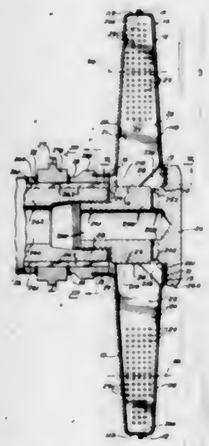


in said rotor communicating with outer portions of said spaces at their greatest widths for flow of heavier liquid phases in their separated state to the outer portion of the bowl as they are progressively separated from the lighter liquid phases as the lighter liquid phases progress toward the axis of the bowl, and means communicating with the bowl at inner and outer portions for separately discharging lighter and heavier liquids respectively from said rotor.

3,047,216
CENTRIFUGAL OIL CLEANER VIBRATION DAMPENERS

John Dolza, 15080 Fenton Road, Fenton, Mich.

Filed May 21, 1959, Ser. No. 814,828
3 Claims. (Cl. 233—32)

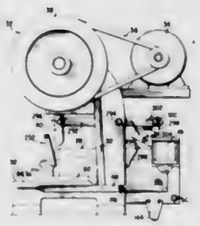


1. A centrifugal oil cleaner and vibration dampener in combination with and for use on a rotating shaft having pressure oil inlet and outlet ports therein comprising a cylindrical disc shaped hollow housing including an annular hub, means mounting said hollow housing at its hub in sealed relationship on said rotating shaft in communication with said oil inlet and outlet ports therein, a plurality of closely spaced radially and axially disposed partitions in said housing extending from said hub to the periphery thereof forming radially extending oil passages therein, said partitions being crimped together alternately at said hub to provide communication between alternate radial oil passages and said oil inlet and outlet ports, the said partitions having a plurality of closely spaced oil apertures through at least the outer one-third thereof to admit of movement of oil circumferentially between alternate radially extending oil passages, the said oil apertures being sufficiently small to provide a restricted flow of oil between alternate radial oil passages outwardly of said hub.

3,047,217
APPARATUS FOR FORMING DRUM JACKS

Kalin I. Sheppard, 609 Baker Road, and Neal M. Pierce, 1315 Florida Ave., both of High Point, N.C.

Filed Jan. 26, 1961, Ser. No. 85,152
21 Claims. (Cl. 234—48)



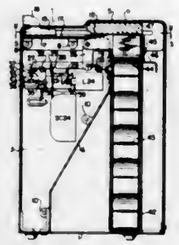
1. Apparatus for forming drum jacks from flat metallic blanks each having a row of uniformly spaced teeth projecting from one edge thereof, said apparatus comprising a frame, locating means on said frame for supporting a blank at a selected location on said frame with the teeth of said blank projecting from said locating means, a plurality of like flat striker blades supported upon said frame for movement relative to said locating means in respective edgewise alignment with the teeth of a blank supported at said selected location, means resiliently biasing said blades to a rest position wherein said blades are located at one side of a blank supported at said selected location, drive means actuable to drive said blades concurrently from said rest position to an actutaed position located at the opposite side of a blank at said selected location, and control means operable when said blades are in said rest position to shift said blades toward or away from said locating means to locate selected ones of said blades in extended position adjacent said locating means and to locate the remaining ones of said blades in retracted position withdrawn from said locating means, the extended and retracted positions of said blades being respectively spaced from said locating means so that those blades in said extended positions engage and strike from a blank at said selected location the respective teeth of said blank aligned therewith while those blades in said retracted position pass clear of the respective teeth aligned therewith during movement of said blades from said rest position to said actuated position.

3,047,218
PRICE TAG COLLECTOR

Franklin W. Perry and Jack H. Reynolds, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed May 25, 1960, Ser. No. 31,590
4 Claims. (Cl. 235—11)

1. In a tag collector apparatus having controls for controlling the operation of a utilizing device, the combination including a switch operable to close a circuit for the operation of the utilizing device; a chute located in the tag collector for receiving a tag therein; a slide slidably mounted in said chute and capable of supporting a tag for insertion into the tag collector apparatus; a plurality of arms extending into said chute and actuated from a normal position by a tag supported on said slide when the slide is moved within said chute in a tag-inserting operation, said arms returning to normal position upon the complete insertion of the tag; a switch-closing

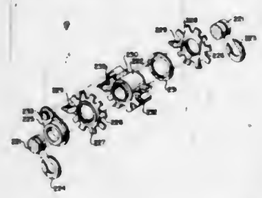


member actuated by said arms for movement in one direction upon movement of the arms from normal position to condition the said circuit-closing switch for closing and actuated in the reverse direction to close said switch upon the return of the arms to normal position, said switch-closing member latching the switch in the closed position; a solenoid energized upon operation of the utilizing device for additionally locking said switch in a closed position; and means operated by said solenoid on de-energization thereof to provide an unlatching movement for the switch closing member to release said switch.

3,047,219
SELECTIVE AMOUNT TRANSFER CONTROL MECHANISM FOR ACCOUNTING MACHINES

Russell E. Kneisley, Norman E. Hypes, and Darrell L. Flory, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed June 8, 1960, Ser. No. 34,693
20 Claims. (Cl. 235—60.3)

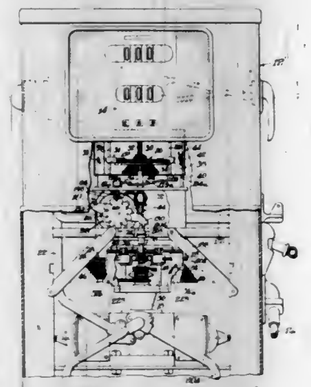


1. In a device of the class described, cyclically operable to perform various types of accounting operations, including posting operations, the combination comprising totalizers for accumulating and storing amount information therein; differential mechanism for entering amount information into said totalizers; automatic entry means for controlling said differential mechanisms to cause the entry of a predetermined amount into said totalizers; manually operable means selectively settable to a plurality of different positions to control whether or not predetermined amounts are to be entered into said totalizers following certain operations; first multiple-position switching means controlled by the manually operable means; second multiple-position switching means set in accordance with the type of operation performed; operating means controlled by said first and second multiple-position switching means and operable to cause a further automatic cycle of operation following a posting operation; means controlled by said manually operable means and operable to shift said automatic entry means to determine the predetermined amount which is to be entered into the totalizers by the differential mechanism under control of said automatic entry means; and control means actuated by said operating means to render said automatic entry means effective in said further automatic cycle of operation to enter said selected predetermined amount into said totalizers.

3,047,220
SELECTING APPARATUS FOR VARIABLE TRANSMISSION

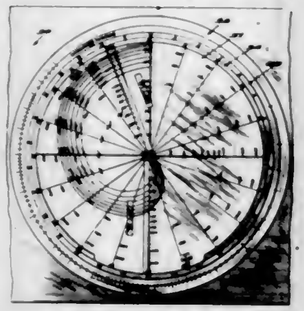
Stephen George, Pompton Lakes, N.J., assignor, by mesne assignments, to Symington-Wayne Corporation, Salisbury, Md., a corporation of Maryland

Continuation of application Ser. No. 712,206, Jan. 30, 1958. This application Dec. 14, 1961, Ser. No. 160,697
24 Claims. (Cl. 235—61)



16. A device for conveniently adjusting a quantity and price computer to a predetermined number of price settings, said computer including a cone and a number of associated idler gear assemblies rotatably mounted upon parallel shafts, said device comprising sets of multiple cam and follower means operatively associated with each of said idler gear assemblies, each of said multiple cam means including discrete elements corresponding in number to said predetermined number of price settings of said computer, said discrete elements being variable over a range of positions corresponding to the range of variable engagement of said associated sets of cone and idler gear assemblies, the follower means of each of said sets of multiple cam and follower means being operatively associated with said idler gear assemblies for causing said idler gear assemblies to be moved selectively into engagement and disengagement with said cone gear member, said multiple cam means having a number of stations corresponding to said predetermined number of price settings for selectively activating each of said discrete elements to engage respective idler gear assemblies with said cone gear at each of stations, a unitary selector means associated with said multiple cam means which is operable through a number of positions corresponding to said predetermined number of price settings, and a coordinating means connecting said unitary selector means with said multiple cam means for simultaneously adjusting them to respective stations which provide selected ones of said predetermined number of price settings in accordance with the selected positions of said unitary selector means.

3,047,221
CALCULATOR
Raymond Alfaya, Bloomfield, Peter A. Landskroener, Middletown Township, Monmouth County, and Karl L. Thaxton, Cranford, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 10, 1960, Ser. No. 35,313
7 Claims. (Cl. 235—64.7)



1. A calculator in the form of a circular slide rule for determining appropriate exposure and development conditions of photographic films, said calculator comprising a fixed base plate containing a polar coordinate array with logarithms of optical density measured radially and with logarithms of relative exposure measured angularly, over which is rotatably mounted, in order, on a central axis the following transparent elements:

(*a*) a member containing a series of curves of log optical density versus log relative exposure plotted thereon, each of said curves representing a certain development time, said member in cooperative relation to said base plate and capable of being rotated relative thereto to allow the use of emulsions which have different sensitivities to light,

(*b*) a member containing developer temperature compensation values in terms of development times in cooperative relation with the base plate and member (*a*),

(*c*) an exposure time scale member containing at least one concentric circle, said circle having a logarithmic plot of exposure time corrected for reciprocity law failure for a given photographic emulsion,

(*d*) a time index member having a pointer thereon which indicates the required exposure time on member (*c*),

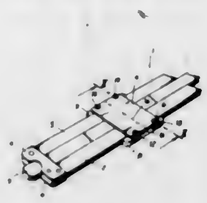
(*e*) a density scale member containing a circumferential plot of optical density which relates to the log exposure scale of the fixed base plate,

(*f*) an "original-high," "copy-low" read-out scale member having an "original-high" index pointer thereon for cooperation with said density scale member (*e*) and having a "copy-low" radial logarithmic scale of optical density for cooperation with the said curves of member (*a*), and

(*g*) an "original-low," "copy-high" read-out scale member having an "original-low" index pointer thereon for cooperation with said density scale member (*e*) and having a "copy-high" radial logarithmic scale of optical density for cooperation with the said curves of member (*a*).

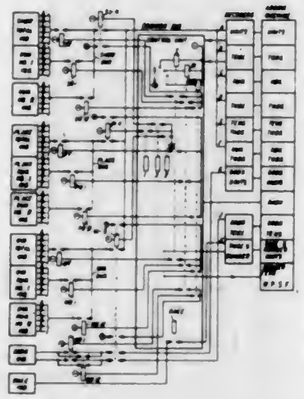
3,047,222
REMOVABLE SLIDE FOR SLIDE RULE
Bernhard Kasmann, Neuweiherhaus 65, Nurnberg [illegible] Germany
Filed July 5, 196[illegible], Ser. No. 40,810
3 Claims. (Cl. 235—70)

1. An improved slide for a slide rule having upper and lower faces and opposite longitudinal sides comprising: upper and lower transparent and resilient face plates arranged to extend transversely across the upper and lower faces respectively of said rule with the corresponding edges of said face plates coinciding, and those corresponding edges extending along one longitudinal side of said rule defining apertures adjacent said edges; guide strips oppositely arranged along said longitudinal sides and positioned to space said face plates apart, and, respectively,



to slidably engage said longitudinal sides, one of said guide strips being rigidly connected to corresponding unapertured edges of said face plates; smooth surfaced connecting means extending both upwardly and downwardly from the other of said guide strips and adapted to slidably engage in the apertures defined in said corresponding apertured edges of the upper and lower face plates when said plates are sprung apart, and to be retained therein by the resilient return of the plates to their original positions.

3,047,223
AUTOMATIC OBSERVER
Le Roy J. Lange, Towson, Md., assignor to American Totalisator Company, Division of Universal Controls, Inc., Towson, Md., a corporation of Maryland
Filed Nov. 9, 1960, Ser. No. 68,302
16 Claims. (Cl. 235—92)



1. The combination with a race track totalisator system in which are registered total values in each of three pools and individual runner values on each of a plurality of runners in each of said pools and in which the values so registered are transferred, at regular intervals during operation of the totalisator, in code to indicators that employ five relays and conductors per digit, two of which are energized to register the digit in the indicator, which values are also transferred to the indicators as final cycle values immediately after the totalisator is locked against further operation; of an automatic observer comprising: a solenoid operated adding machine having a larger number of decades than the number of digits in the values registered in the indicators; a plurality of decoders each arranged to register digits in a corresponding decade of said adding machine; a bus common to said decoders; a bus for each of said pools individual to that pool; a control unit; means in said control unit for connecting said common bus to said pool busses one at a time in predetermined order; means in said control unit for connecting the indicators in the pool associated with the connected pool bus, to said connected pool bus one at a time in sequence, thereby to transfer the digits in that indicator to the corresponding decoder to operate the same to decode the digit; means in the control unit for registering the decoded digits in said adding machine and for operating the adding machine to record the digits on the tape; and means in the control unit responsive to the recording operation of the adding machine for disconnecting the then connected indicator from the pool bus and for connecting the next indicator to that bus.

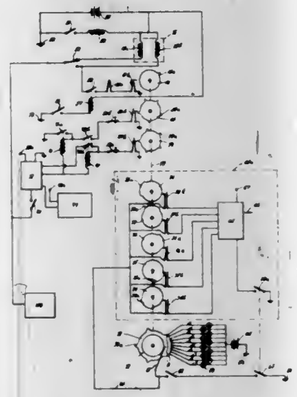
3,047,224
ELECTROMAGNETIC COUNTER
William A. Ray, North Hollywood, Calif., and Burnell J. Wollar, Barrington, and Raymond Wilson, Niles, Ill., assignors to General Controls Co., Glendale, Calif., a corporation of California
Filed Feb. 25, 1959, Ser. No. 795,414
4 Claims. (Cl. 235—92)



1. In an electromagnetic counter: a base; an electromagnet adapted to be energized by direct current of selected polarity, mounted on one end of said base; said electromagnet comprising an elongated core projecting perpendicularly from a surface of the base, and an energizing coil around said core and arranged so that a part of the core adjacent one of its ends is exposed; a pair of elongated armature members each pivotally mounted on said base so that it can rock in a plane parallel to that of said base-surface and in the general plane of said exposed part of the core; each of said armature members having adjacent one of its ends a portion of permanent-magnet material disposed adjacent a side of said exposed part of the core, said armature-member portions being of opposite polarity and disposed at opposite sides of said core-part, the other ends of the armature members extending toward the other end of said base; and a counting device mounted on said other end of the base and having actuating means operable by said other ends of the armature members.

3,047,225
SYSTEM FOR RECORDING AND READING OUT DATA
Paul L. Grafstein, Brooklyn, and Robert Meisel and George P. Panchak, Westbury, N.Y., assignors to Matronics, Inc., a corporation of New York
Filed Apr. 2, 1959, Ser. No. 803,670
3 Claims. (Cl. 235—92)

1. An information recording and indicating system comprising a longitudinally extending shaft, a plurality of moving memory units, means mounting said memory units in longitudinally spaced, aligned array so as to be each turnable about a longitudinal axis which is parallel to the axis of said shaft and so as to be individually movable towards and away from said shaft, said shaft having drive means adapted to engage a memory unit when it is moved towards said shaft, means for turning said shaft for pre-determined degrees of rotation in accordance with a number to be stored, each of said memory units having a pre-determined number of angular positions for storing a number as an angular displacement, each of said angular positions indicating a different value for a stored number, means for selectively moving one of said memory units into operative engagement with said drive means while said shaft is being rotated, whereby the selected memory unit assumes an angular position in accordance with the value of the number being stored, a plurality of longitudinally extending, angularly spaced, fixed contact members, each of said fixed contact members being common to one of the angular positions of said plurality of memory units, said memory units being normally positioned away from said shaft and having contact tips then engaging said fixed contact members in accordance with the angular positions of said memory

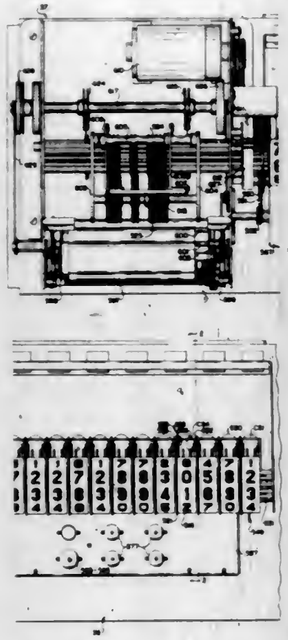


units, an electric signal circuit associated with each of said fixed contact members, each of said electric circuits including a control switch connected to each of said memory units so that the number being stored by a selected memory unit can be indicated by closing the switch associated therewith and thereby energizing the electric signal circuit associated with the fixed contact member engaged by said contact tip.

3,047,226
DATA ANALYZING AND RECORDING MEANS
Desmond R. Hearsum, Dayton, and Ernest V. Gulden, Centerville, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application Apr. 16, 1953, Ser. No. 349,297, now Patent No. 2,943,788, dated July 5, 1960. Divided and this application Mar. 25, 1960, Ser. No. 17,682
11 Claims. (Cl. 235—151)

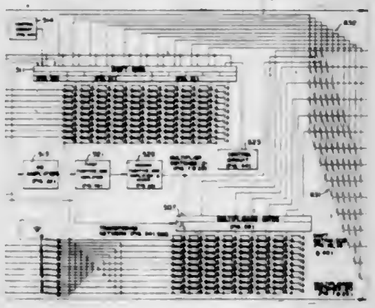
3. In a device of the class described, the combination of an accumulator for accumulating amounts and indicating the total thereof; a conductor for each order of the accumulator and controlled thereby to have a distinctive potential applied thereto whenever its related order stands at zero; an amount-manifesting means; read-out means controlled by the accumulator for setting the manifesting means according to the amount in the accumulator; and disabling means coupled to the conductors for the several

orders and operable when the distinctive potential has been applied to all the conductors, indicating that the ac-



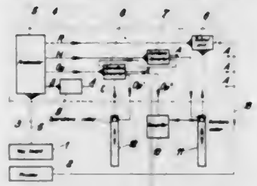
cumulator is at zero, for disabling the read-out means to prevent the setting of the manifesting means.

3,047,227
MULTIPLIER APPARATUS
Edward R. Thomas, Dayton, Edgar H. Sonnanstine, Jr., West Carrollton, and Edward J. Carey, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland (incorporated in 1926)
Filed Aug. 3, 1959, Ser. No. 831,124
16 Claims. (Cl. 235—153)



8. In a multiplier apparatus, a data entry and readout machine having a plurality of settable differential actuators for performing various types of operations; electronic multiplying means for effecting a multiplication; an electronic product accumulator for accumulating the products of multiplications under control of said electronic multiplying means; means for causing said electronic multiplying means to effect a multiplication of two factors to cause the product thereof to be accumulated in said electronic product accumulator; means for converting one of said factors into its ten's complement; further means for causing said multiplying means to effect a multiplication of said ten's complement of said one factor and the other of said factors to cause the total of the products of the two multiplications to be accumulated in said electronic product accumulator; means for determining identity or lack of identity between the significant digits of the total in said electronic product accumulator resulting from the two multiplications and the digits of said other factor in order; product storage means controlled by said electronic product accumulator for storing the product of the first multiplication; means operable to prevent setting of said differential actuators according to the product resulting from the first multiplication until said identity is established; means to cause an operation of said determining means following the second multiplication; and means controlled by said determining means upon said identity being established for terminating operation of said preventing means to allow said differential actuators to be set according to the product resulting from the first multiplication stored in said product storage means.

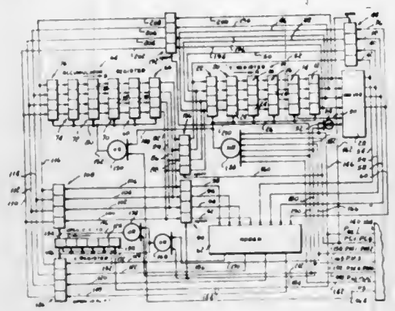
3,047,228
AUTOMATIC COMPUTING MACHINES AND METHOD OF OPERATION
Friedrich Ludwig Bauer, 40 Portschacherstrasse, and Klaüs Samelson, 19 Hiltenspergerstrasse, both of Munich, Germany
Filed Mar. 28, 1958, Ser. No. 724,770
14 Claims. (Cl. 235—157)



1. A formula controlled computer, comprising an input device for generating a series of machine characters including a machine character representative of each numerical and operational symbol of a mathematical expression to be evaluated, means for separating numerical and operational characters generated by said input device, storage means for numerical characters and storage means for operational characters, each said storage means being arranged to make said characters available for operations on a last-in, first-out basis, computer means, output means for delivering the results of computation, and control means comprising a matrix for producing specific control impulses responsive to specific combinations of incoming and last-in operational stored characters, including impulses directing the introduction of an incoming operational character into said storage means and the stepping of an already stored character to an adjacent position to make room for such incoming character, impulses directing the removal of the newest operational character stored in said storage means and the stepping of the next newest stored character into the position vacated by the removed character, impulses directing the transfer of numerical characters from said numerical storage means to said computer means, impulses specifying the nature of the operation to be performed by said computer means, and impulses directing the printing out of information by said output means.

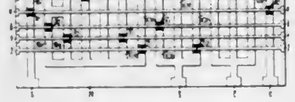
3,047,229
APPARATUS FOR CONVERSION OF DEGREES TO MINUTES
Willis E. Dobbins, Manhattan Beach, Calif., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Nov. 21, 1958, Ser. No. 775,589
7 Claims. (Cl. 235—159)

1. Apparatus for multiplying a number by six-tenths including in combination means comprising a first register having weighted positions of significance from most significant to least significant for receiving and storing a binary-coded decimal representation of the number in said positions of significance, means comprising a second register for receiving and storing the binary-coded decimal representation of the number, means for shifting the rep-



resentation of the first register one decimal place in a direction from the most significant weighted position of the register to the least significant weighted position of the register, means for halving the representation of the second register, and means for adding the shifted first register representation and the halved second register representation.

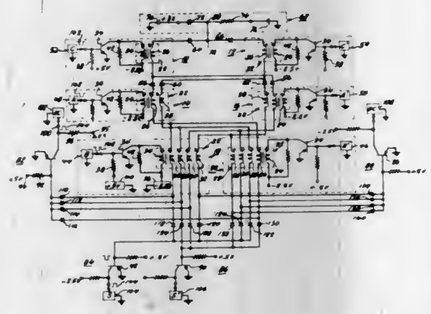
3,047,230
SUPERCONDUCTOR ADDER CIRCUIT
John L. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 7, 1958, Ser. No. 765,760
6 Claims. (Cl. 235—175)



1. A superconductor binary full adder comprising a sum circuit and a carry circuit, said sum circuit comprising a first group of planar superconductor gates forming a plurality of series connected parallel circuits and a first planar shunt gate only in parallel with said series connected parallel circuits across a current source, said carry circuit comprising a second group of planar superconductor gates forming a further parallel circuit and a second planar shunt gate only in parallel with said further parallel circuit across a current source, means maintaining said gates at a temperature at which each is superconductive in the absence of a magnetic field, a reset control conductor only arranged in magnetic field applying relationship to said first and second shunt gates and effective when a current signal is applied thereto to drive these gates resistive, a plurality of input control conductors each arranged in magnetic field applying relationship to one or more corresponding ones of said gates of said sum and carry circuits and each effective when a current pulse is applied thereto to drive only said one or more corresponding gates resistive, means for applying a reset signal to said reset control conductor to drive said first and second shunt gates resistive and thereby

cause the current in each of said sum and carry circuits to be directed through the circuit connected in parallel with the shunt gate across the current source therefor, and means for applying current signals representative of first, second and third binary values to be added to said input control conductors after said reset signal is terminated whereby the circuit in parallel with said first shunt gate is driven resistive directly in response to said signals on said input control conductors only when the inputs applied require a sum output in accordance with the rules of binary addition and the circuit connected in parallel with said second shunt gate is driven resistive directly in response to said signals on said input control conductors only when the inputs applied require a carry output in accordance with the rules of binary addition.

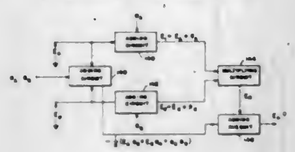
3,047,231
ELECTRICAL SWITCHING CIRCUITS
Theodore H. Bonn, Merion Station, and Noah S. Prywes, Bala-Cynwyd, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 14, 1958, Ser. No. 767,112
26 Claims. (Cl. 235—176)



23. A binary adder comprising a plurality of transformers arranged in three levels of a pyramid circuit and each having primary and secondary windings, said transformers in first, second, and third ones of said levels having at least one, at least two, and at least four secondary windings respectively, means for energizing said primary windings of three of said transformers in first, second, and third ones of said levels respectively in accordance with addend, augend, and carry signals, respectively, and for energizing said primary windings of three others of said transformers in said first, second, and third levels respectively in accordance with the complements of said addend, augend, and carry signals, respectively, a plurality of unidirectional means connecting said secondary windings in a plurality of different series circuits each including windings from said three levels and corresponding to a different combination of said addend, augend, and carry signals, each of said secondary windings in said first level being connected to two of said secondary windings in said second level and each of said secondary windings in said second level being connected to two of said secondary windings in said third level, each of said unidirectional means being poled to pass in the forward direction signals induced in said secondary winding of the associated one of said series circuits upon the energization of said primary windings by said energizing means and connected to have applied in the back direction said induced signals of another of said series circuits, and separate output means connected to said series circuits for producing sum and carry signals in accordance with the currents therein.

3,047,232
COMPUTING CIRCUITS
Omar L. Patterson, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Original application Jan. 13, 1954, Ser. No. 403,799. Divided and this application Sept. 16, 1957, Ser. No. 684,632

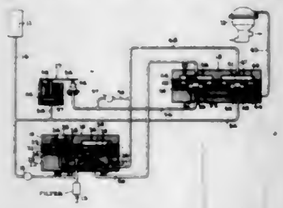
6 Claims. (Cl. 235—195)



1. Apparatus of the type described comprising a monostable multivibrator which includes a normally conducting tube and a normally nonconducting tube, a first time constant resistance-capacitance circuit connected to the cathode of the normally nonconducting tube, a first terminal receiving a potential from a first source and connected to a grid of said normally nonconducting tube through a diode of which the anode is connected to said first terminal and of which the cathode is connected to the grid, means providing an initial positive potential to said first time constant circuit during a period of conductivity of said normally nonconducting tube, a third tube, means for maintaining positive the anode of said third tube, a second time constant resistance-capacitance circuit connected to the cathode of said third tube, a second terminal receiving a potential from a second source and connected to a grid of said third tube through a diode of which the cathode is connected to said second terminal and of which the anode is connected to the grid, means effecting charging of said second time constant circuit during a period of conductivity of said normally nonconducting tube, means sampling the potential of said second time constant circuit at the time the potential of the first time constant circuit reaches a predetermined relationship to the potential of said first terminal during the stable state of said multivibrator, and means reestablishing at the last mentioned time the astable state of said multivibrator.

3,047,233
DIRECT AND REVERSE ACTING TEMPERATURE REGULATING APPARATUS
Otto Scharpf, Milwaukee, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 26, 1960, Ser. No. 58,446

6 Claims. (Cl. 236—1)

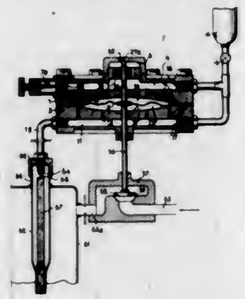


1. In combination, a supply passage; a flow restriction in the supply passage, a thermostat including a leak port connected with the supply passage and temperature responsive means for varying the rate of leakage through the leak port; a branch line connected with the supply passage between the leak port of the thermostat and the flow restriction; a fluid pressure motor operated valve for regulating the flow of a heat exchange medium in accordance with the pressure transmitted thereto; and control mechanism connected with and responsive to the pressure in the supply passage for connecting the motor operated valve directly with the branch line when supply pressure is one value and, when supply pressure is another value for transmitting to the motor operated valve a control pressure which varies inversely with the pressure in the branch line.

3,047,234
PNEUMATICALLY OPERATED CONTROL DEVICES
André Fortier, 12 Rue Léon Cambillart, Clamart, France
Original application Feb. 28, 1958, Ser. No. 718,193. Divided and this application July 9, 1959, Ser. No. 830,979

Claims priority, application France Mar. 6, 1957

3 Claims. (Cl. 236—87)

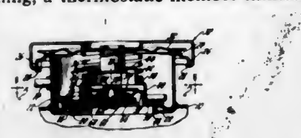


1. In a variable condition responsive flow restriction system, comprising a casing having a pair of separate gas chambers therein and means for admitting a restricted flow of gas under pressure into each of said chambers, the combination of a pressure sensitive wall common to said chambers and consisting of pliable substantially nonelastic foldable material, concave wall means in said chambers to limit the displacement of said pressure sensitive wall, the surface area of said pressure sensitive wall adapted to engage the concave wall means and adapted to conform to said surface when abutting against said concave wall means whereby substantially no tension results in said pressure sensitive wall when it is in the concave wall means abutting position, a variable flow restriction means operated by means responsive to a condition, one of said chambers having an outlet connected to said variable flow restriction means and the other chamber having an outlet, a valve controlling said last-mentioned outlet, said valve being connected with said pressure sensitive wall for movement therewith, and means for controlling the condition to which said variable flow restriction means are responsive, said control means including a movable element connected for movement with said pressure sensitive wall and adapted to change said condition in accordance with the displacements of the pressure sensitive wall.

3,047,235
THERMOSENSITIVE RADIATOR CAPS
Jesse E. Eshbaugh and John A. McDougal, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,549

4 Claims. (Cl. 236—92)

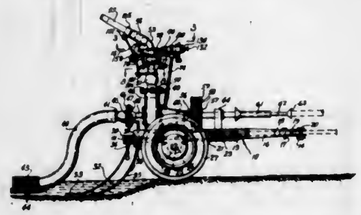
1. A radiator cap of the pressurized type and attachable to a radiator filler spout, said cap having fixed parts including a vented valve element and a closure wall traversing said valve element and having a vent opening therein, a stud vertically slidable in said wall, a valve member carried by said stud beneath said wall, said valve member being vertically movable to seat on said wall around said opening, a thermostatic member immediately



above said wall and supporting said stud on said fixed parts, and the arrangement being such that a rise in temperature plus the effect of vapor flow through said opening cooperates to effect flexure of the thermostatic member and seating of the valve member around said opening.

3,047,236
IRRIGATION APPARATUS
Landon W. Fahrner, 720 Hauser Road, Helena, Mont.
Filed Oct. 6, 1960, Ser. No. 60,967

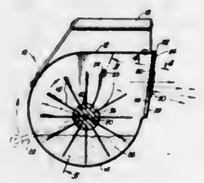
6 Claims. (Cl. 239—179)



1. Irrigation apparatus comprising a wheeled frame adapted for connection to a towing vehicle, a pump on said frame, a drive shaft for said pump adapted to be driven by the power take off of a towing vehicle, a water intake for said pump comprising a flexible tube, a trailing flexible dam on said frame between said frame and said tube, a nozzle support on said frame, an inclined nozzle connected to said pump and rotatably mounted in said support, means connected to said pump for automatically reciprocating said nozzle, and means for automatically varying the angle of inclination of said nozzle during reciprocation, said last-mentioned means comprising a tubular resilient flexible coupling positioned between said nozzle and said nozzle support, a cord secured to said nozzle at one end, and to said nozzle support at the other end, and means for varying the relative position of said connection to said nozzle support.

3,047,237
PLASTERING MACHINE
Mario V. Tambolleo, 10812 Capistrano Ave., Lynwood, Calif.
Filed Nov. 3, 1961, Ser. No. 149,935

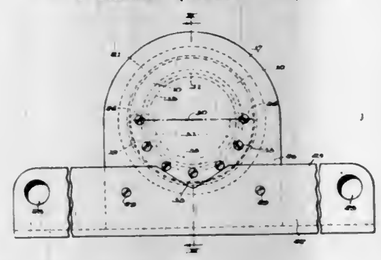
2 Claims. (Cl. 239—215)



1. A plastering machine comprising: a hand holdable housing having a substantially cylindrical portion and being predominantly closed and including substantially planar wall portions disposed perpendicularly to the length of said cylindrical portion, an axle extending parallel to said length between and supported by said wall portions, a cranking handle affixed to said axle and extending through one of said wall portions, bushing means disposed on each of said wall portions for rotatably supporting said axle and cranking handle, an elongated rubber hub disposed substantially concentrically about said axle and rotationally secured thereto, thrust bushings disposed about said axle between each end of said hub and a respective one of said bushings, a plurality of more than ten and less than twenty planar comb members composed of spring sheet metal and including a longitudinal back member and a plurality of resilient teeth extending transversely therefrom, said longitudinal back member extending beyond the end ones of said teeth thereby to form a longitudinal retaining edge at each end of said back member, said rubber hub and said extending longitudinal back member being approximately of equal length, said rubber hub being relieved to form a plurality of radial-axial retaining slots for said longitudinal back members of said planar comb members, retaining ring means for compressibly retaining said retaining edges of all of said comb members when inserted into said slots, said resilient teeth extending radially outwardly to a predetermined radius, a splattering rod extending substantially parallel to said axle at a radial distance therefrom such that said rod lies at least partially within said radius, said housing being relieved to form a general opening therein to provide access into said housing and communication between said rod and a surface to be plastered along a solid angle substantially symmetrically disposed about a direction generally perpendicular to the radius between said rod and said axle, a removable spray reducing cover for said general opening which is relieved to form a smaller opening for reducing the angle of said communication, and a holding handle means rigidly affixed to said housing for hand holding said housing and directing said solid angle toward said surface to be plastered.

3,047,238
FIRE HOSE NOZZLE
George J. Sacco, 311 Orchard Drive, O'Hara Township, Allegheny County, Pa.
Filed Jan. 16, 1962, Ser. No. 166,652

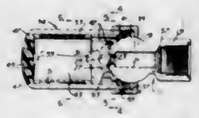
5 Claims. (Cl. 239—275)



1. A manually portable whip-free fire hose nozzle adapted to be set and left to rest at will in different stationary areas, whereby a solid curtain of water can be established in the path of flame and burning gases, to prevent spreading of flame, sparks, and ignition heat to surrounding areas comprising, in combination: a tubular body having a spreader plate disposed transversely across all of one extremity of the tubular body and extending beyond the perimeter of the body; an outwardly open vertical slot between the spreader plate and the adjacent end of the upper half of the circumferential wall of the tubular body; a semi-circumferential portion extending the lower half of the circumferential wall of the tubular

body outwardly under the slot to the spreader plate, to divert the flow of liquid from the lower half of the end of the body and the spreader plate upwardly out through the slot; flow controlling means in adjustable relation with said tubular body for adjustment of the flow controlling means across the vertical slot, toward and from the spreader plate, to increase and decrease the flow of water out of said slot; and a base member for supporting the nozzle in a state of rest, at different stationary areas at will, said base member comprising a vertical part disposed across the bottom of the spreader plate, below the flow controlling means on the tubular body, and on the side of the spreader plate opposite the side to which the semi-circumferential member extends, and a horizontal part extending under the bottom of the spreader plate and back under the flow controlling means on the tubular conduit, at a spaced distance therefrom, to permit rotation of the flow controlling means by hand, said vertical and horizontal parts of the base member projecting beyond the lateral extremities of the spreader plate and flow controlling means to distribute the thrust exerted by water in the conduit on the semi-circumferential portion of the nozzle to ground, so as to prevent whipping of the nozzle and tilting and overturning of the same when the nozzle is left to rest in an area for discharging a solid curtain wall of water, free of an attendant to maintain the vertical slot in a position for discharge of the water as a wall in the path of flame and burning gas to prevent spreading of the latter.

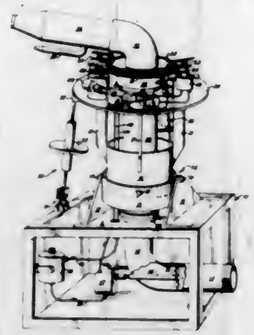
3,047,239
NOZZLE CONSTRUCTION
Joseph M. Canavan, 370 Newport Ave., Hermiston, Oreg.
Filed Feb. 15, 1960, Ser. No. 8,857
6 Claims. (Cl. 239—579)



1. A nozzle construction comprising a base member for connection to a supply of fluid, a nozzle member mounted on said base member for predetermined pivotal movement, a valve for closing off flow of fluid through the nozzle construction, said valve including an outlet opening formed in said base member, a loose valve member next to said opening, means for retaining said loose valve member next to said opening during pivotal movement of said nozzle member relative to said base member, said means being on said nozzle member and being carried by said nozzle member as a consequence of the pivotal movement of said nozzle member into engagement with the surface of said valve member remote from said outlet opening for pressing said valve member against the edges of said opening in at least one pivoted position of said nozzle member to close said valve, but releasing said loose valve member in at least one other pivoted position of said nozzle member to open said valve.

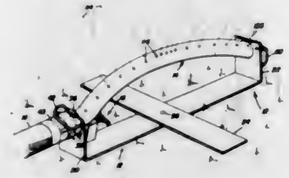
3,047,240
IRRIGATION UNIT
Ralph C. Lent, Ewa, Hawaii, assignor, by mesne assignments, to Hanawai Manufacturing Company, Limited, Honolulu, Hawaii, a corporation of Hawaii
Filed Dec. 30, 1960, Ser. No. 79,756
9 Claims. (Cl. 239—265)

1. An irrigation device including in combination a base member, a spray nozzle, a swivel joint having fixed and rotary portions, said nozzle being mounted on said rotary portion of said swivel joiht, a water intake adapted for attachment to a source of water under pressure, a flexible pipe connecting said water intake to said fixed portion of said swivel joint, driving means motivated by fluid pressure connected to said rotary portion of said



swivel joint for rotating the latter, means tiltably supporting said swivel joint on said base member, and adjusting means connected between said base member and said swivel joint for setting the tilt of the latter and simultaneously the axis of rotation of said spray nozzle.

3,047,241
ADJUSTABLE SPRAYING DEVICE
William S. McLhinney, 222 E. College St., Canonsburg, Pa.
Filed Aug. 17, 1961, Ser. No. 132,107
9 Claims. (Cl. 239—273)

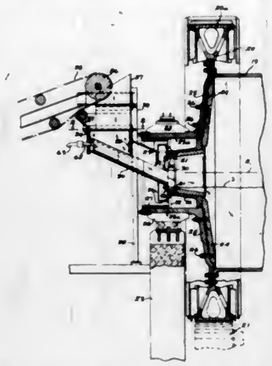


1. A device for fighting fires comprising a self-supporting U-shaped base having a flat bight for resting upon a supporting surface, first and second upstanding flanges; and an arcuate spray tube terminating at one end in a horizontally extending portion; said first flange on the base having a U-shaped slot formed in its upper end, said slot rotatably receiving the horizontal end portion of the spray tube, a vertically extending plate closing the other end of the spray tube, a horizontally extending bearing shaft fixed to the center of the plate, a U-shaped slot in the second base flange rotatably receiving the horizontal bearing shaft, and a plurality of bore holes arranged in a line in the upper surface of the spray tube.

3,047,242
ROD MILL FEEDING MEANS
Henry L. Genier, Silver Bay, Minn., assignor to Reserve Mining Company, Silver Bay, Minn., a corporation of Minnesota
Filed Nov. 23, 1960, Ser. No. 71,219
3 Claims. (Cl. 241—171)

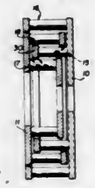
1. In a material-grinding apparatus of the character described wherein a cylindrical grinding drum is being rotated on a horizontal axis, and wherein said drum has a substantially vertically disposed end wall provided with an axially located inlet port therein, means for charging fragmented material sludge into said inlet port comprising a feed chute having a delivery end including a collar surrounding and carried by said delivery end, and fitted

to be insertible into said port, and a sealing gasket of resilient material surrounding and attached to said collar and operatively contacting the internal periphery of said port whereby to prevent outward leakage of sludge, said gasket and said collar having aligned segmental portions



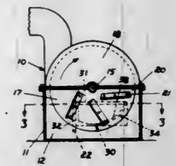
cut from an upper portion thereof to provide an aperture whereby material entrapped between the outer surface of said gasket and the inner peripheral edge of said port is permitted to drop inwardly through said aperture and into the delivery end of said chute during rotation of said drum.

3,047,243
DISINTEGRATING MILL
Alfred F. Meger and Arthur L. Hawthorne, St. Clairsville, Ohio, assignors to J.M.J. Industries, Inc., Belleville, Ill., a corporation of Illinois
Filed Sept. 23, 1959, Ser. No. 841,849
1 Claim. (Cl. 241—188)



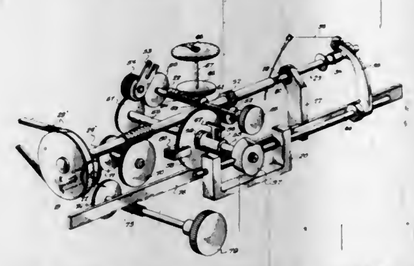
A disintegrating mill comprising at least a pair of concentrically disposed and spaced ring-like rotors, each of said rotors including substantially flat opposed facing ring-like sides with a pair of radially spaced annular rows of laterally disposed impact means fixedly supported between the said sides, the rows of impact means of one rotor alternating with the rows of impact means of the other rotor, each of said impact means including a bar having a leading face portion, a wear member only on the face portion of each of said bars and having a radial dimension greater than that of the leading face portion of the associated bar, said wear members being removably attached to said bars, said wear members each having a radially inward leading edge and a relieved clearance angle ranging from greater than a 90° angle to substantially a 135° angle with respect to a radius, said clearance angle forming the radially inward trailing edge of each of said wear members to provide a minimum of interference with the path of movement of the particles passing through the mill, said trailing edges lying in planes, the bar associated with each of said wear members being disposed such that no portion thereof extends radially inwardly of a radially adjacent point lying in the associated plane, the innermost edge of each of said wear members having a circumferential dimension of the main body portion of the wear member.

3,047,244
FEED SPOUTS FOR WOOD CHIPPERS
Sydney Hansel, 980 Cherry St., Edmonds, Wash.
Filed June 20, 1960, Ser. No. 37,126
6 Claims. (Cl. 241—278)



1. In a chipper having a rotary disc fitted with knives, said disc knives having cutting edges uniformly spaced away from the plane of the disc and a coacting bed knife having a straight cutting edge, a feed spout comprising a tubular member extending into the chipper adjacent to the bed knife, said member having an inner end and an outer end, said inner end being disposed in a plane substantially parallel to the plane of the disc and to the cutting edge of the bed knife, said member having a flat side wall disposed parallel to the straight cutting edge of the bed knife, a top wall disposed substantially at right angles to the side wall and a curved wall connecting the side and top walls, the radius of curvature of the curved wall progressively decreasing from the inner end to the outer end of the tubular member.

3,047,245
ADJUSTABLE CAM MEANS FOR WINDING MACHINES
Howard A. George, Connecticut View Drive, Mill Neck, N.Y.
Filed Jan. 20, 1960, Ser. No. 3,648
3 Claims. (Cl. 242—9)

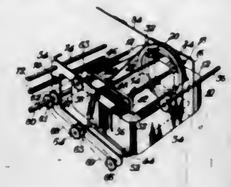


1. Coil winding means comprising a movable rack, a spindle rotatably mounted on said rack, drive means connected to rotate said spindle, movable gear means for connecting said drive means to said rack, a coil form on said spindle, a cam shaft mounted perpendicular to said rack and said spindle, a cam on said cam shaft, cam follower means mounted adjacent said cam and adapted to be oscillated by said cam, wire guide means connected to said cam follower means and extending over said coil form, a gear train connecting said driven spindle to said cam shaft including change gears for adusting gear ratio, and means to move said cam shaft and cam axially to move said cam surface relative said cam follower.

3,047,246
COIL WINDING MACHINE
Yoshinobu Ojima, 5 Ashibe-cho, Karahashi, Minami-ku, Kyoto, Japan
Filed Sept. 24, 1959, Ser. No. 842,060
Claims priority, application Japan Sept. 30, 1958
5 Claims. (Cl. 242—9)

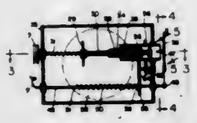
5. A winding machine for forming a winding on a leg of a wound type transformer core having lateral dimen-

sions, said machine including a winding unit, wherein said winding unit comprises an endless belt having a guiding eye for receiving a wire to be wound, said endless belt being disposed on rollers around the core leg so as to conform to each said lateral dimension, means for driving said endless belt around the core leg, means for gradually shifting said belt sidewise, a wire guiding capstan surrounding one end of the core leg and adapted to be



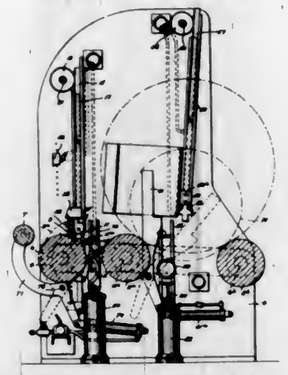
rotated at the same speed and in the opposite direction as said endless belt, and a guide ring having a wire guiding eye and loosely mounted on said capstan and adapted to freely rotate in the same direction as the endless belt by virtue of the tension of the wire, whereby wire wound on said capstan by the rotation thereof and threaded through said guide ring eye to said belt eye is unwound from said capstan and wound on said core by the rotation of said belt.

3,047,247
APPARATUS FOR PRODUCING WOUND BOBBINS WITH CONTROLLED THREAD TENSION
Willy Kotte, Ruck, Spessart, Kloster Himmelthal, Germany, assignor to Vereinigte Glanzstoff-Fabriken AG., Wuppertal-Elberfeld, Germany
Filed Feb. 17, 1956, Ser. No. 566,257
Claims priority, application Germany Feb. 18, 1955
5 Claims. (Cl. 242—45)



1. In a machine for winding thread having a rotating take-off roller engaging and feeding the thread to a winding bobbin and having a reciprocating thread laying means guiding the thread winding on the bobbin, apparatus for controllably varying the speed of rotation of the roller according to the hoard on the thread, said apparatus comprising a continuously rotatable drive disc; a friction wheel frictionally engaging the disc, said wheel being movable to engage the disc at various radial positions thereon; means drivingly coupling the wheel to the roller; control means for controllably moving the wheel with respect to the disc, said control means including a rotatably mounted control cylinder and threaded means operatively associated with the cylinder and coupled to the wheel for moving the wheel radially on the disc as the cylinder is rotated; continuously oscillating drive means; a pair of dogs coupled to the oscillating drive means, each of said dogs engaging an opposite side of the control cylinder; means responsive to the thread hoard for offsetting the dogs with respect to each other, said dogs when offset more than a given amount being operative to rotate the control cylinder by increments as the dogs oscillate, the rotatable direction and incremental amount corresponding to the offsetting of the dogs, said given amount of offsetting being sufficient to permit changes in hoard of the thread due to the reciprocating movement of said thread laying means without the dogs becoming operative to rotate the control cylinder.

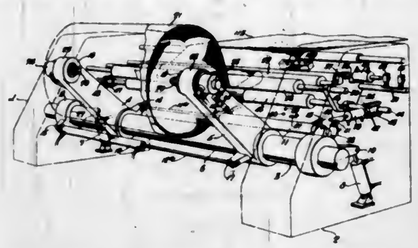
3,047,248
AUTOMATIC CUT-OFF WEB WINDER
Clifford W. Birch, Jr., Lexington, and Richard Briggs, Reading, Mass., assignors to Birch Brothers, Inc., Somerville, Mass., a corporation of Massachusetts
Filed May 23, 1960, Ser. No. 31,085
6 Claims. (Cl. 242—56)



1. A machine for winding a web of material into a roll, said machine comprising a frame, power driving rolls including a pair of primary winding rolls supported in the frame in spaced-apart relationship to define a gate aperture therebetween and a secondary winding roll arranged in spaced relation to the said pair of rolls, first jaw means for releasably supporting a shell in rolling contact with one of the said pair of primary driving rolls, fluid pressure means for opening and closing the first jaw means and for yieldably maintaining the first jaw means so as to exert a vertically downwardly directed pressure against the shell during the period in which a partly wound roll of cloth is formed on the primary winding roll, a pair of transfer arms pivotally mounted at either side of the frame and having a roller transversely disposed between the extremities of said arms for engaging the partly wound roll of cloth and transferring it into rolling contact with the said secondary winding roll, second jaw means for holding the partly wound roll on said secondary winding roll, fluid pressure means for yieldably exerting through the second jaw means a vertically downwardly directed pressure against the roll of cloth during the period in which a winding is being completed, a vertically adjustable gate structure including side walls normally supported within the gate aperture, fluid pressure means for moving said gate in said gate aperture, a sectional web cutting device mounted at the upper portion of said gate for cutting said web when the latter is supported in an extended position above the said pair of primary winding rolls, and a doffing mechanism including a vertically reciprocating doffing roll and fluid pressure means for raising the doffing roll into contact with a fully wound roll of cloth at a point when the web has been cut thereby to displace the fully wound roll from the secondary winding roll.

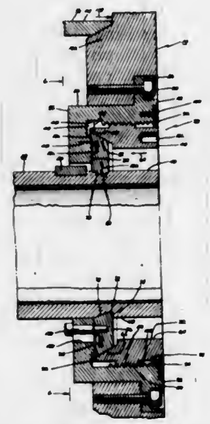
3,047,249
MILL ROLL STAND
Henry W. Moser, Haddonfield, and Thomas H. Paris, Trenton, N.J., and John Paterson, Springfield, Pa., assignors to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey
Original application Jan. 23, 1957, Ser. No. 635,808, now Patent No. 2,991,953, dated July 11, 1961. Divided and this application Mar. 24, 1961, Ser. No. 98,237
3 Claims. (Cl. 242—75.43)

2. A mill roll stand comprising a pair of roll-supporting spindles engageable in the axial ends of a roll, said spindles being rotatable with the roll when the component web material of the roll is unwound from the latter, brake means for at least one of said spindles, an hydraulic system in operative association with the brake means and including therein a valve for controlling brake actuation,



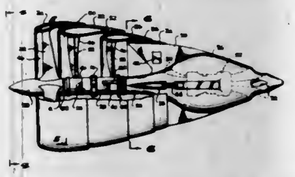
a valve control element responsive to variations in tension in the unwinding web for actuating the valve to regulate the tension in the unwinding web, a cylinder and piston unit operatively connected to the said control element, and means for applying constant pressure to one side of said cylinder.

3,047,250
REEL CONSTRUCTION
Tore V. Saether, Auburn, Ind., assignor to Van Norman Industries, Inc., Garrett, Ind., a corporation of Massachusetts
Filed June 23, 1961, Ser. No. 119,088
12 Claims. (Cl. 242—77)



1. A reel for elongated material comprising: a first annular flange member; an axially extending tubular member coaxial with said first flange member and having one end secured thereto; a second annular flange member axially spaced from said first flange member and coaxial therewith, said second flange member being removably positioned on said tubular member adjacent the other end thereof; an annular locking member coaxial with said tubular member and threadingly engaging one of said tubular and second members for axial movement with respect thereto, said locking member having an annular tapered surface spaced radially from said tubular member, one of said tubular and second members having an annular groove formed therein, said groove having tapered surfaces defining generally a V; and a plurality of locking segments normally positioned between said locking member tapered surface and said groove and respectively having first surfaces normally seated in said groove and slidingly engaging said surfaces thereof, said locking segments respectively having other surfaces normally slidingly engaging said locking member tapered surface whereby said locking member exerts a force on said segments having an axial component and a radial component thereby normally locking said second flange member on said tubular member, said second flange member having a portion exerting an axial force on said segments in a direction opposite from said axial force component responsive to said material on said reel exerting lateral force on said second flange member; said first surfaces on said segments cooperating with said groove surfaces to tend to move said segments radially out of said groove responsive to said force exerted thereon by said second flange member portion to permit removal of said locking member and second flange member.

3,047,251
AERODYNAMIC PROPULSION UNIT
William L. Lewis, Glendale, Calif. (2038½ Griffith Park Blvd., Los Angeles 39, Calif.)
Filed July 14, 1960, Ser. No. 42,906
21 Claims. (Cl. 244—12)



7. An aerodynamic assembly for a vehicle comprising: a fixed axial support structure; a first rotary annular member power actuated for rotation in one direction; a second adjacent concentric rotary annular member power actuated for rotation in the opposite direction, said two rotary annular members being mounted on said fixed axial structure concentrically thereof at radial spacing therefrom to form therewith an annular passage for gaseous fluid flow therethrough, the upper portion of each of said annular members when the axis thereof is horizontal having the radial cross-sectional configuration of a lift-producing airfoil of nonuniform thickness with a rearward taper, the tapered trailing portion of said first rotary member being adjacent and overlapping the leading end of said second rotary member to form therewith a rearwardly directed annular passage for outward diversion of a portion of the gaseous fluid over the leading end and over the peripheral surface of said second rotary member.

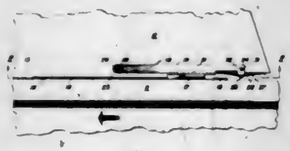
3,047,252
BALLOON AND METHOD OF MANUFACTURING THE SAME
William F. Huch, St. Paul, and Edward P. Ney and John R. Winckler, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 30, 1959, Ser. No. 810,201
20 Claims. (Cl. 244—31)



1. A balloon formed of a flexible rectangular sheet, the ends of one margin of the sheet being joined respectively to the corresponding ends of the opposite margin of the sheet, whereby said margins together constitute a first

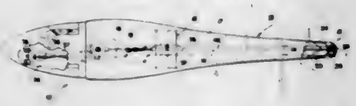
endless rim whose length is substantially twice the length of the sheet and the other two opposite margins constitute respectively second and third endless rims, the first rim having a transverse fold spaced from the second and third rims, a first seam extending in a spiral and commencing at the fold and connecting together the entire first rim portions extending from the fold, each of the second and third rims having a transverse center fold, a second seam commencing at the center fold of the second rim and connecting together the second rim portions extending from the second rim center fold, and a third seam commencing at the center fold of the third rim and connecting together the third rim portions extending from the third rim center fold.

3,047,253
WING VIBRATION DAMPER
David D. Grimes, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 7, 1952, Ser. No. 319,221
7 Claims. (Cl. 244—35)



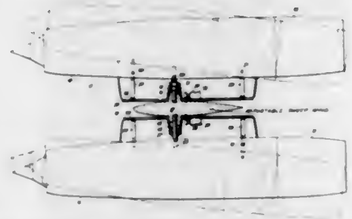
1. In an aerial vehicle having a body and a wing, a device for damping regenerative vibrations produced in the wing during flight of the vehicle, comprising a bracket having a pair of convergent legs, a flat intermediate portion connecting said legs and a U-shaped end portion connecting the convergent ends of said legs, the divergent ends of said legs being pivotally mounted on the external surfaces of said wing adjacent to said body of said vehicle, the legs of said bracket being disposed on opposite sides of said wing, a block of friction material mounted on said body adjacent to said flat intermediate portion, and spring means mounted on said U-shaped end portion and bearing upon said wing to urge continually said bracket away from said wing towards said body, whereby said flat intermediate portion engages said block to provide frictional restraint to vibrational movements.

3,047,254
CONTROL MEANS FOR VEHICLE
Charles K. Spearman, Van Nuys, and Edward G. Ward, Glendale, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Mar. 14, 1960, Ser. No. 14,617
1 Claim. (Cl. 244—52)



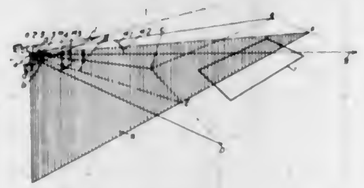
Control means for a vehicle comprised of a source of high velocity air, duct means from said source to a position spaced from the center of gravity of said vehicle, said duct means terminating at said position in a plane substantially perpendicular to the axis of said duct means to define an opening, a pair of closure doors, the area of each of said doors being equal, the total area of said pair of closure doors being less than the area of said opening, pivot means for said doors on an axis substantially perpendicular to a line from the center of gravity of said vehicle and said position, a cross bar fixed to one of said door means pivoted on said axis, means to oscillate said cross bar so as to direct said high velocity, air, a first pulley at said axis, secondary pulleys on each end of said cross bar, a flexible cable extending from a control device around said first pulley, one of said secondary pulleys and being fixed to a point on the other of said door means, a second flexible cable extending from said control device, around said first pulley, the other of said secondary pulleys and fixed to said point so that said pair of door means may be controlled as a unit or separately by operation of said control device to direct said high velocity air to one or both sides of said opening or through the center of said opening to cause forces to be exerted against said vehicle lateral or parallel to a line from said center of gravity to said position.

3,047,255
ENGINE MOUNTING FOR SWEPT-WING AEROPLANES
Barnes N. Wallis, Effingham, England, assignor to Vickers-Armstrongs (Aircraft) Limited, Westminster, England, a company of Great Britain
Filed Dec. 18, 1959, Ser. No. 860,512
2 Claims. (Cl. 244—55)



1. An airplane comprising a body, a pair of wings mounted thereon with a pivotal movement of sweep with respect to said body, each of said wings including at least one jet engine in a pod, mounting means securing said engine to said wing, said mounting means including a pylon mounted on the wing in association with each jet engine pod, a stub shaft rotatably mounted in each pylon, a pivotal connection between each engine pod and the relative stub shaft to permit movement of the engine about an axis parallel to the OY axis of the aircraft, a jack-beam mounted on each pylon for rotatable movement about an axis parallel to the OZ axis of the aircraft, a hydraulic jack connecting each end of each engine pod to the relative jack-beam by a pivot joint of which the axis is parallel to said OY axis, and a means for selectively operating the jack system in the manner herein described.

3,047,256
NAVIGATION DEVICE FOR AIRCRAFT
Alan Arnold Griffith, Derby, and Roland James Lees, Ronald Andrew Shaw, and Reginald William Willmer, Strand, London, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Oct. 21, 1959, Ser. No. 847,742
Claims priority, application Great Britain Oct. 23, 1958
6 Claims. (Cl. 244—77)



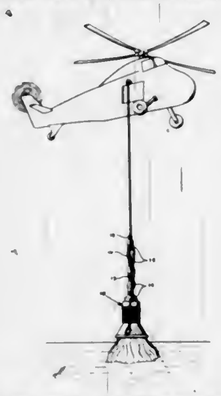
6. A navigation device adapted to be mounted on mobile craft for establishing the three-dimensional position of the craft with respect to at least three spaced apart non-colinear transmitters at known positions on the ground and each radiating a distinguishable signal, which apparatus comprises: means including at least three universally rotatable directional aerials each adapted to receive and detect a respective one of said signals, means for moving each aerial to have a predetermined positional relationship to its incoming signal, means for establishing the directions of reception with respect to each other of the respective signals from their transmitters, and means responsive to the direction establishing means for establishing an indication of said three-dimensional position.

3,047,257
DEVICE FOR CHANGING AIRFOIL PROFILE
Milton A. Chester, Sedalia, Colo., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Apr. 24, 1958, Ser. No. 730,650
6 Claims. (Cl. 244—85)



3. A fluid operated control system for actuating a control surface of an aircraft, comprising a fixed airfoil surface, and a movable airfoil surface hinged to said fixed airfoil surface, an interior portion of said movable airfoil surface forming a fluid motor, said motor comprising a fixed bulkhead forming an integral part of said fixed airfoil surface and being directly connected to the hinge between said surfaces, a second bulkhead on said movable airfoil surface disposed closely adjacent said fixed bulkhead, said second bulkhead being directly connected to said hinge and being capable of movement about said hinge away from said fixed bulkhead, said bulkheads together with said hinge forming an expansible chamber motor capable of actuating said movable airfoil surface, means for applying fluid pressure to said motor to bring about movement of said second bulkhead away from said fixed bulkhead when it is desired to deflect said movable airfoil surface, and automatic locking means to prevent undesired deflection of said movable airfoil surface.

3,047,258
PARACHUTE COLLAPSING AND RETRIEVAL DEVICE
Blanchard S. Hutchins, Warrington, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 1, 1961, Ser. No. 128,600
7 Claims. (Cl. 244—137)
(Granted under Title 35, U.S. Code (1952), sec. 266)



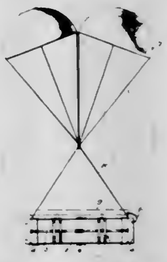
1. A device for use by a helicopter for recovering parachutes from the water, comprising in combination: a hollow retrieval cone having openings at both ends, elastic means disposed about the outside periphery of said cone, initiating means, and means connecting said initiating means to said elastic means whereby said elastic means are pulled off said cone and disposed about a parachute passing through said cone when said initiating means are activated.

3,047,259
SPEED BRAKE RETARDING MECHANISM FOR AN AIR-DROPPED STORE
George J. Tatnall, Southampton, and Albert F. Scarcelli, Hatboro, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 25, 1959, Ser. No. 855,473
12 Claims. (Cl. 244—138)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a store apparatus adapted to be launched from an aircraft, means for controlling the descent to a low terminal velocity with minimum shock deceleration and minimum dispersion, comprising: a container ballistic-shaped for low drag in flight; stabilizing fins attached to the aft end of said container; a plurality of deflecting blades each pivotally connected at one end and equally spaced about the circumference of said container for rotation about an axis transverse to said container, the other end of each blade being disposed rearwardly of said one end; a cam surface at said one end of each blade; an opening plate abutting each blade at its cam surface; an actuating spring operatively disposed between said plate and said container such that said other ends of the blades are uniformly biased outwardly and forwardly of said container as a function of the air impact pressure; release mechanism supported by the stabilizing fins including a hoop spring positioned for retaining the blades against the container and a ram pressure responsive means operatively connected to the hoop spring for relieving the hoop spring from the retaining position at a predetermined pressure.

3,047,260
AERIAL DELIVERY MEANS FOR MAPS AND THE LIKE
Harold S. Jones, Framingham, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Apr. 11, 1961, Ser. No. 102,324
3 Claims. (Cl. 244—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Means for delivering an elongated article from an airplane or the like while flying at a relatively low altitude, in substantially parallel relation to the ground, comprising a pair of straps having their ends secured adjacent the ends of the article, a load-orienting parachute slidably connected to one of the straps intermediate the ends of the

strap and a second load-orienting parachute slidable connected to the other strap intermediate the ends of the strap, said parachutes being carried at opposite ends of the elongated article so that when the parachutes are released they will insure orientation of the article in parallel relation to the ground by initially pulling the straps in opposite directions.

3,047,261
PARACHUTE DISREEFING DEVICE
Victor G. Bockelmann, El Centro, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 10, 1959, Ser. No. 819,513
5 Claims. (Cl. 244—150)
(Granted under Title 35, U.S. Code (1952), sec. 266)



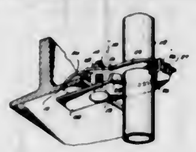
1. In combination with a parachute having a canopy with a skirt portion, a plurality of guide means secured around said skirt portion at predetermined spaced intervals, a reefing line having two ends freely threaded through said guide means, the length of said reefing line being less than the peripheral length of the canopy skirt for restricting the mouth of said skirt by folding the periphery thereof when the ends of the reefing line are secured, a cutter to which said ends are connected, said cutter having an opening through with said reefing line passes, said cutter having means for separating said reefing line and disreefing the parachuate at the occurrence of a predetermined event, said cutter having means for locking the cutter in a disarmed condition, said locking means being connected to said reefing line and being unlocked by a tension applied to said reefing line to arm said cutter when the parachute is reefed being after the parachute is subjected to a snatch force.

3,047,262
HOLDER FOR FISHING RODS AND THE LIKE
Andrew J. Ripich, Angola, Ind., assignor to Carol G. Ripich, Angola, Ind.
Filed Sept. 20, 1960, Ser. No. 57,245
6 Claims. (Cl. 248—42)



1. An integrally molded holder for removably supporting fishing rods and the like comprising an elongated member having means intermediate its ends for removably supporting the lower surface of the handle of a fishing rod forwardly of the butt thereof, said member having an upwardly extending projection at the rear end thereof for removably supporting the end of said butt, said member having means for attaching the same to a surface, said member having at least one loop element thereon extending upwardly from said supporting means spaced forwardly from said projection and cooperating with said supporting means to encircle said handle, the other end of said member being bifurcated defining two transversely spaced elongated legs extending generally parallel with said rod for receiving therebetween and supporting a portion of said rod thereby preventing twisting of said rod in said holder, said legs having resilient properties so that downward force exerted on the outer end of said rod causes said rod portion to be wedged downwardly between said legs and the upper surface of said handle end to engage the top portion of said loop element thereby to prevent slipping of said rod out of said holder.

3,047,263
BRACKET
Charles F. Mittenzwei, 4811 Edgewood Place, Los Angeles 19, Calif.
Filed Jan. 18, 1960, Ser. No. 3,109
13 Claims. (Cl. 248—72)



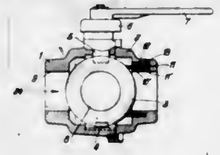
1. A bracket comprising: a first generally planar member having a jaw and a hook adjoining each other; a pair of fingers extending from said hook; a bolt secured to said jaw and extending generally normal to the plane of said member; a second member adjacent said first member, said second member having a jaw and a hook adjoining each other, the jaw of said second member being domed by being curved in two directions, the surface of said jaw which is remote from said first member being convex, an oval opening formed in said domed jaw, said second member being swingably connected to said first member by receiving said bolt through said oval opening, said hook on said second member facing opposite the hook on said first member, a pair of projections on said second member adapted to be located in engagement with said fingers when said first and second members are in position in which said hooks form an opening to receive a rod-like member to be supported; and a nut threaded on said bolt to move the jaws together, said oval opening being positioned so that only one edge of said nut is engaged by the convex surface of said domed jaw.

3,047,264
WALER BRACKET
Allen P. Terry, 425 W. 17th South St., Salt Lake City, Utah
Filed Jan. 8, 1960, Ser. No. 1,364
6 Claims. (Cl. 248—205)



1. A waler bracket comprising an elongated, horizontally disposed body having a bearing end face at one end thereof adapted to abut the outer surface of a form panel, said body including a longitudinally extending upper surface disposed in right angle relationship with said bearing end face and adapted to abut and support the undersurface of a waler, a bearing plate integral with said body, said bearing plate having at least a portion thereof disposed above said upper surface and provided with an inner surface disposed in a plane spaced from and paralleling the plane in which said bearing end face is disposed, elongate passage means formed longitudinally through said body and adapted to receive a tie rod projecting outwardly at substantially a right angle relationship from said form panel, integral wedge means fixedly disposed with respect to the end of said body remote from said bearing end face, projecting outwardly therefrom and extending along opposite sides of and disposed adjacent said passage means, said wedge means constituting means by which to engage the head of a tie rod disposed through and outwardly of said passage means and urge the body and the waler supported thereby into bearing engagement with said form panel, said upper and inner surfaces being disposed at right angles to each other and being fixedly disposed to form with the outer surface of said form panel an upwardly opening pocket substantially rectangular in cross-section for tightly receiving a waler, and wherein said body comprises a substantially U-shaped member including a pair of spaced legs interconnected at one end by a connecting member whose outer surface comprises said bearing end face, said bearing plate being rigidly secured between said legs remote from said bearing end face plate.

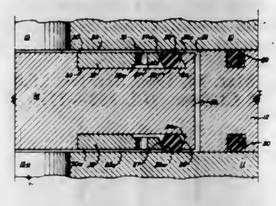
3,047,265
SPHERICAL-PLUG COCK HAVING A PISTON-TYPE PACKING RING DISPLACEABLY MOUNTED AT ONE SIDE OF THE COCK BODY
Rudolf Kaiser, Ruhrerweg 18, Ettlingen, Baden, Germany
Filed Dec. 2, 1958, Ser. No. 777,756
Claims priority, application Germany Aug. 11, 1958
6 Claims. (Cl. 251—172)



1. A spherical-plug cock comprising a cock body member with a throughflow passage therein, a piston-type packing ring member of non-deformable material mounted at one side of said body coaxially with said passage and being reciprocably movable and operable to be displaced in one direction into contact with the spherical plug under the pressure of the flowing medium, an automatic reversing valve associated with said cock, said valve having a bore and two oppositely disposed ducts defined in one of said members and connecting the opposite sides of the cock passage before and after the packing ring with the bore of the automatic valve, and a duct closing valve member movably disposed in the bore of said valve and operable to close either duct, said packing ring having a rear side, a passage defined in one of said members establishing a communication between said rear side and said bore, whereby the pressure of the flowing medium is always transmitted to the rear side of said packing ring remote from the spherical plug urging the packing ring in said one direction irrespective of the direction of flow of the medium through the cock.

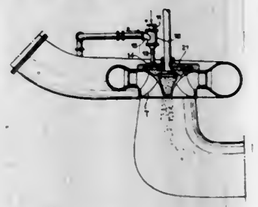
3,047,266
VALVE
Burton Ver Nooy, Tulsa, Okla., assignor to T. D. Williamson, Inc., Tulsa, Okla.
Filed Dec. 18, 1957, Ser. No. 703,678
4 Claims. (Cl. 251—175)

1. A high pressure valve for liquid comprising two plates having substantially flat parallel inner faces opposing each other; a closure ring disposed therebetween providing a space between the plates; ports in each plate opposite to each other, said ports cooperating with each other and with said space to form a flow passage through the valve; a substantially flat valve closure disc movable in said space from a seated position across said ports to an unseated position laterally of the ports, said valve disc being loosely fitting within said space with sufficient clearance between the opposing faces of said disc and plates to provide high tolerance in manufacture of said disc and plates; a pair of annular grooves, each respectively disposed on opposite sides of said closure disc to surround the passage when the disc is across said ports, each of said grooves having side walls converging toward its mouth facing an adjacent seat; an O-ring seal in each of said grooves, said grooves and O-rings having proportions such



that each O-ring is pressed against both side walls and bottom of its groove and is distorted to protrude from the mouth of its groove into initial sealing contact with its adjacent seat when the disc is in seated position and also into initial sealing contact with an adjacent face of said plates when the disc is in unseated position, the faces of said disc, when the disc is in unseated position, being spaced due to the aforementioned clearance from the respective opposing faces of the plates to define chambers bounded by said seals in which chambers liquid tends to be trapped as the disc is moved to its unseated position; and a bypass passage across the seals when the disc is in unseated position permitting substantial relief of pressure across the seals.

3,047,267
METHOD AND MEANS FOR QUIETING THE HYDRAULIC OPERATION OF TURBINES
Henri Peyrin, Grenoble, France, assignor to Etablissements Neyrpic, Grenoble (Isere), France, a corporation of France
Filed Feb. 17, 1958, Ser. No. 715,795
Claims priority, application France Feb. 18, 1957
7 Claims. (Cl. 253—26)



1. Apparatus for quieting the operation of a reaction type hydraulic turbine in which the wheel thereof turns in water, comprising a straight mixing pipe of substantial uniform diameter adapted to be connected at its discharge end with a chamber formed in the turbine between the casing and the upstream side of the wheel thereof, and means for feeding air and water to said mixing pipe so as to cause the creation therein of an emulsion thereof, said feeding means including a water feeding pipe extending towards said mixing pipe to terminate at a place adjacently spaced from the entry end of said mixing pipe, means connected to the entry end of said mixing pipe and forming an air chamber, the discharge end of said water feeding pipe projecting into said means forming the air chamber and being directed toward the entry

end of said mixing pipe so that it discharges through the air chamber between such discharge end and said entry end directly into the latter, means at the discharge end of said water feeding pipe for fractionating the water fed therethrough before its entry into said mixing pipe, and means for feeding air to the fractionated water in the air chamber adjacent to the entry end of the mixing pipe so that the water and air will enter the mixing pipe in such turbulent condition as to cause the creation therein of an emulsion thereof.

3,047,268
BLADE RETENTION DEVICE
Stanley L. Leavitt, Bristol, Conn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 14, 1960, Ser. No. 15,002
2 Claims. (Cl. 253—77)



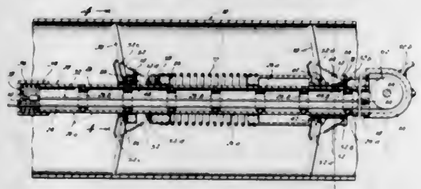
1. For a gas turbine engine, the combination with a turbine rotor comprising a rotor disc, a series of axial dovetail slots extending through the outer circumference of said rotor disc, a series of rotor blades, each of said blades having a blade portion of airfoil cross-section, a root section secured to said blade portion, said root section comprising a platform and a dovetail of a size to be received by said dovetail slots, said platform being located between said blade portion and said dovetail, a shoulder on the outer circumference of said rotor disc forming circumferential segments separated by said dovetail slots in said rotor disc, said platforms having cutout portions equal to the depth of said shoulder segments such that insertion of said root section in said slots provides abutment of said platform against said shoulder segments to limit axial movement of said rotor blades in one direction, a notch in said platform opposite said cutout portions and on the side of said platform adjacent said dovetail, and an annular plate in engagement with said notch for limiting movement of said rotor blades in the other of said axial directions.

3,047,269
HYDRAULIC JACK
Robin Renshaw, West Chicago, Ill., assignor to Modern Hydraulics, Inc., West Chicago, Ill., a corporation of Illinois
Filed Aug. 30, 1960, Ser. No. 52,961
14 Claims. (Cl. 254—93)



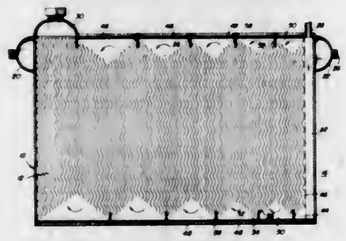
1. A hydraulic jack comprising, a body, a pair of spaced apart, vertically extending cylinders formed in said body, a vertically extending passage formed in said body between said cylinders in alignment therewith, a pair of pistons disposed one in each of said cylinders, a lifting toe characterized by a vertically elongated shank portion slidably disposed in said vertically extending passage and operably connected at its upper end to the upper ends of said pair of pistons for vertical movement therewith and by a toe portion disposed normally to said shank portion and projecting forwardly therefrom through a vertical slot formed in the front surface of said body with the lifting surface of said toe portion being disposed adjacent the lower ends of said pistons, said shank portion of said lifting toe bearing against the rear surface of said vertically extending passage formed in said body whereby to transmit to said body the bending moment resulting from the lifting surface of said toe portion being disposed forwardly of said pair of pistons, and hydraulic means for simultaneously raising and lowering said pair of pistons and said lifting toe.

3,047,270
APPARATUS FOR MOVING A LINE THROUGH A CONDUIT
Jerry W. Moore, Jr., Shreveport, La., assignor to United Gas Corporation, Shreveport, La., a corporation of Delaware
Filed Sept. 17, 1956, Ser. No. 610,186
7 Claims. (Cl. 254—134.6)



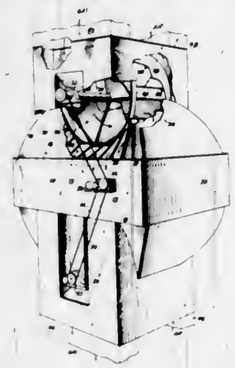
1. Apparatus for moving a line through a pipe and the like having means advancing said apparatus in successive movements with respect to the pipe by exerting an intermittent axial pulling force on said apparatus from the rear including, an elongated body having a plurality of aligned sections, a flexible joint between adjacent sections, and resilient means in tension exerting axial pressure against the sections so as to normally maintain such sections in longitudinal alignment.

3,047,271
BRAZED PLATE AND RUFFLED FIN HEAT EXCHANGER
Jack R. Burtt, Raymond D. Palino, and Kurt Stalger, Indianapolis, Ind., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Aug. 7, 1958, Ser. No. 753,746
6 Claims. (Cl. 257—245)



2. A multi-channel multi-pass heat exchanger comprising at least one continuous ruffled fin element, spaced plates sandwiching said fin element to define a series of parallel open-ended channels, said ruffled fin element being notched along the opposite edges thereof aligned with the open ends of the channels to form spaces between said plates communicating with said channels, a plurality of closure members interconnecting said plates adjacent said edges, said closure members each including one portion extending slightly within the peak portions of said ruffled fin element and having another portion extending therefrom to an adjacent peak portion to completely seal the adjacent spaces from each other except through the communicating channels, whereby said closure members and said ruffled fin element form a continuous multi-pass flow passage within said heat exchanger.

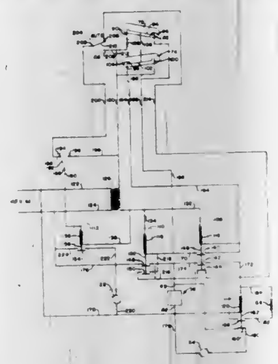
3,047,272
HEAT EXCHANGER
Elio J. Speca, Wellsville, N.Y., assignor, by mesne assignments, to Combustion Engineering, Inc., a corporation of Delaware
Filed Feb. 21, 1958, Ser. No. 716,637
7 Claims. (Cl. 257—264)



1. Regenerative heat exchange apparatus for the transfer of heat between a heating fluid and a fluid to be heated comprising a rectangular housing divided into a series of rectangular open ended compartments by parallel partition plates, a transition section including partition extension members having their end edges abutting partitions at each end of the housing and having their oppositely facing end edges arranged to terminate in arcuate surfaces with parallel axes of curvature, regenerative heat exchange material carried by the compartments of said housing, flow distributing means at opposite ends of the housing mounted on parallel axes lying at the axis of curvature of each arcuate surface, duct means for supplying the heating fluid and the fluid to be heated to said spaced flow distributing means, duct means for simultaneously discharging said fluids from said flow distributing means at opposite ends of the apparatus, and actuating means for rotating the spaced flow distributing means continuously in opposing directions about their respective axes whereby the heating fluid and the fluid to be heated are successively directed to and from each compartment of the housing.

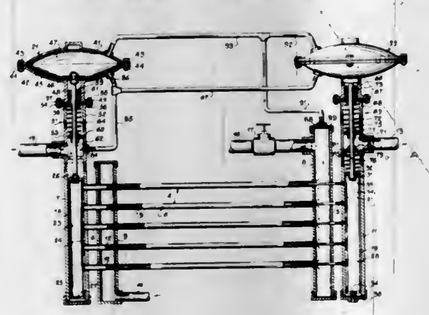
3,047,273
AIR CONDITIONING APPARATUS
John Scarr, Jr., Penn Hills Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed July 31, 1959, Ser. No. 830,897
3 Claims. (Cl. 257—287)

1. Apparatus comprising in combination air heating means, air cooling means and temperature control means, said temperature control means including first and second mercury switches, temperature sensitive means coupled to said mercury switches to rotate said switches on a substantially horizontal axis in response to temperature changes, each of said switches having a first and a second set of contacts at its opposite ends, each of said first set of contacts being at the forward end of its respective switch in relation to direction of switch rotation upon temperature change in one direction, each of said second set of contacts being at the forward end of its respective switch in relation to direction of switch rotation upon temperature change in the opposite direction, said mercury switches being inclined with respect to each other in the vertical plane so that one of said switches is more for-



wardly inclined in the direction corresponding to rotation upon temperature change in one direction while the other of said switches is more forwardly inclined in the direction corresponding to rotation upon temperature change in the opposite direction, said air heating means actuated only upon closing of both of said first sets of contacts, said air cooling means actuated only upon closing of both of said second sets of contacts, said air heating means and said air cooling means remaining off during closure of only one of said first sets of contacts and only one of said second sets of contacts.

3,047,274
VARIABLE AREA HEAT EXCHANGER
Warren M. Wilson, 809 Lake St., Huron, Ohio
Continuation of application Ser. No. 630,927, Dec. 27, 1956. This application Feb. 18, 1959, Ser. No. 794,204
29 Claims. (Cl. 257—313)



1. A variable area heat exchanger comprising a first manifold means interconnected by a plurality of pipe means arranged to transmit therethrough fluid or liquid the temperature of which is to be controlled, second manifold means interconnected by a plurality of pipe means and arranged to transmit therethrough a heat controlling fluid or liquid, the individual pipes of one of said plurality of pipe means being disposed within and extending in spaced relationship through corresponding individual pipes of the other of said plurality of pipe means, fluid

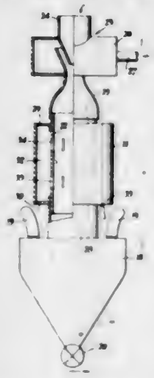
or liquid control means comprising valves movably disposed within both of said manifold means and having a plurality of spaced ports arranged to sequentially and selectively connect said manifold means to said individual pipes, an actuator means for said valves responsive to the flow of the fluid or liquid the temperature of which is to be controlled for moving said valves in phase and placing one or more of said ports into selective registry with said individual pipes.

3,047,275

MIXING OF GRANULAR AND/OR POWDERY SOLID MATERIALS

Ronald Leslie Cox, 62 The Uplands, Loughton, England

Filed Apr. 27, 1960, Ser. No. 24,938
Claims priority, application Great Britain Apr. 29, 1959
9 Claims. (Cl. 259—4)



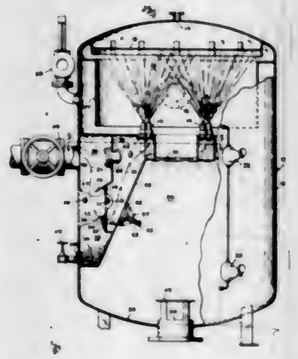
1. A method of mixing granular and/or powdery solid materials, wherein the materials are passed in a substantially vertical direction through at least two mixing zones, into each of which a gas is injected in a plane transverse to the direction of passage of the materials, the gas being injected so as to rotate in alternate directions in adjacent mixing zones.

3,047,276

CONTACT HEATER FOR LIQUIDS CONTAINING UNDISSOLVED SOLIDS

Joseph F. Sebald, Bloomfield, and Alonzo L. Jones, West Orange, N.J., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware

Filed Aug. 11, 1960, Ser. No. 49,072
5 Claims. (Cl. 261—3)



1. A direct contact heater comprising:

(*a*) a unitary housing having an upper portion and a lower portion therein,

(*b*) a contact chamber formed in the upper portion of said housing by the walls thereof for mixing water with steam for heat exchange,

(*c*) means connected to said housing to deliver steam to said contact chamber from a steam source,

(*d*) a filter chamber formed in the lower portion of said housing bounded by a portion of the side wall thereof and wall means connected about said side wall portion of said housing,

(*e*) partition means in said filter chamber forming a settling compartment and a second compartment,

(*f*) inflow means for admitting water into said settling compartment,

(*g*) filter means disposed in said partition means between said settling compartment and said second compartment,

(*h*) blowdown means in said housing including a blowdown port communicating with said settling compartment and adapted to operate to remove sediment and water therefrom,

(*i*) water spreading means connected to said filter chamber and to communicate water from said second compartment to said contact chamber,

(*j*) said water spreading means to spread water in said contact chamber in heat exchange relationship with the steam therein,

(*k*) vent means operatively connected to said housing downstream of said contact chamber to remove steam therefrom,

(*l*) outflow means for removing water from said contact chamber,

(*m*) control means connected to said inflow means and adapted to shut off the inflow of water therethrough,

(*n*) the lower portion of said housing forming a reservoir for heated water below said water spreading means,

(*o*) backwash means connected in said filter chamber between said reservoir and said second compartment adjacent said filter means,

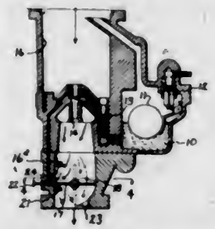
(*p*) said backwash means adapted to automatically operate responsive to a pre-set pressure differential in said reservoir and said second compartment to flush water from said reservoir through said second compartment and said filter means on said control means shutting off the inflow of water and said blowdown means being operated.

3,047,277

CARBURETOR FOR INTERNAL COMBUSTION ENGINES

Porter Landrum, 7225 2nd Ave. S., Birmingham, Ala.

Filed Aug. 3, 1959, Ser. No. 831,280
2 Claims. (Cl. 261—65)



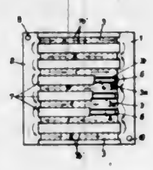
1. The combination with a carburetor having a main air inlet passage and a butterfly valve therein together with fuel discharge passages opening into the main air passage adjacent the butterfly valve, of a baffle immediately downstream from the butterfly valve having its upper surface struck substantially on the turning radius of the butterfly valve and cooperable therewith as the butterfly valve opens to restrict said main air passage, said baffle being effective to restrict that side of the main air passage opposite the entrance of the fuel discharge passages, whereby as the butterfly valve opens a stream of high velocity air passes by the discharge ends of the fuel discharge passages.

3,047,278

EXCHANGE DEVICE FOR THE CONTACT OF GASES AND LIQUIDS

Hans-Peter Streuber, Hagdorstr. 46, Hilden, Rhineland, Germany

Filed Oct. 2, 1958, Ser. No. 764,864
Claims priority, application Germany June 20, 1958
1 Claim. (Cl. 261—114)



In apparatus for controlling the flow of gas and liquid in exchange relationship, a tray comprising:

separate spaced intake and output manifold supports,

spaced rectilinear troughs extending between the manifold supports and defining a plurality of parallel passages connecting the manifold supports to each other for the flow of liquid in parallel from each manifold to the other,

means for admitting liquid to the intake manifold support,

means for removing liquid from the output manifold support,

each trough including upstanding spaced parallel side walls,

the side walls of adjacent troughs defining therebetween openings for the admission of gas therethrough,

rectilinear hoods covering the gas admission openings and encompassing the adjacent side walls of adjacent troughs,

each hood including closed end walls extending downwardly toward the manifold supports and spaced parallel side walls extending into adjacent troughs,

only the side walls of said hoods including fins having apertures therebetween for enabling the flow of gas out of said hoods into said troughs,

and the fins on respective side walls of each hood being inclined in opposite directions longitudinally of said hood and the fins on respective side walls of adjacent hoods extending into a same trough being inclined in a same direction longitudinally of said trough,

whereby the flow of gas in a trough causes flow of liquid therethrough in the direction of fin inclination and the flow of liquid extends in opposite directions in successive troughs and in parallel from one manifold support to the other in alternate troughs.

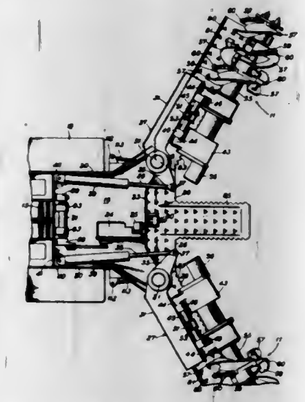
3,047,279

SCISSORS TYPE CONTINUOUS MINING AND LOADING MACHINE

Ernst R. Bergmann, Evergreen Park, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Feb. 2, 1959, Ser. No. 790,666
9 Claims. (Cl. 262—19)

8. In a continuous mining and loading machine of the class described, a mobile main frame, a conveyor extending along said main frame from a position adjacent the ground at the forward end thereof beyond the rear end thereof, two independently movable laterally swingable side cutting mining heads spaced in advance of said main frame, two angularly movable feeder frames pivotally mounted on said main frame for movement about vertical axes at opposite sides of said conveyor adjacent the receiving end portion thereof, power means for angularly moving said feeder frames about the forward end of said main frame and for holding said feeder frames in position, conveyor means extending along said feeder frames for advancing the mined material to said conveyor, each mining head including a support housing having a side



cutting auger journalled thereon and projecting from the forward end thereof, a shaft mounted on each feeder frame on the inner side thereof and extending longitudinally therealong, each support housing having an arm projecting radially therefrom and mounted on an associated shaft, and hydraulic cylinder and piston means connected between each feeder frame and an associated support housing for pivotally moving the associated side cutting mining heads relative to said feeder frames, about the axes of said shafts, and for retaining said mining heads in fixed relation with respect to said shafts.

3,047,280

SPRING MOTOR

Charles Pernetta, London, England, assignor, by mesne assignments, to Ametek, Inc., New York, N.Y.

Filed Feb. 18, 1960, Ser. No. 9,612
Claims priority, application Great Britain Feb. 25, 1959
10 Claims. (Cl. 267—1)



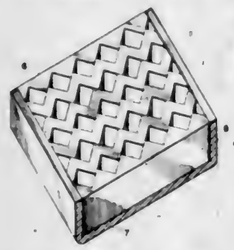
1. A spring motor comprising a curved member, a guide member spaced from said curved member, said members being mounted for relative movement with respect to each other, a laminated strip coil spring set to a predetermined curvature, the spring having one end thereof secured to said curved member and the spring bearing locally against the guide member and making a partial turn around and spaced from the guide member, said motor being energized by a relative angular movement of less than 360° between said members such that the spring is drawn around the guide member and parts thereof are bent over the curved member in a curvature which is in the reverse sense to that which the spring is preset.

3,047,281
SPRINGS
Charles Pernetta, London, England, assignor, by mesne assignments, to Ametek, Inc., New York, N.Y.
Filed Sept. 9, 1960, Ser. No. 54,892
9 Claims. (Cl. 267—1)



1. In combination with an element whereof a substantially linear movement is to be effected and a support relatively to which the said movement is to be effected, a laminated leaf spring disposed in a plane containing the line of movement of said element and having one end secured to said support and an arcuate portion spaced from said end, the maximum dimension of said element in said plane being substantially less than the free diameter of said spring, the concave portion of said arcuate portion engaging the element at a point displaced from the free end of the spring whereby relative movement between the element and the support in one sense tends to straighten the arcuate portion of the spring as the element advances along the length of the spring and the spring exerts a restoring force tending to move the element in the opposite direction, the arcuate portion of the spring being less than 360° in extent.

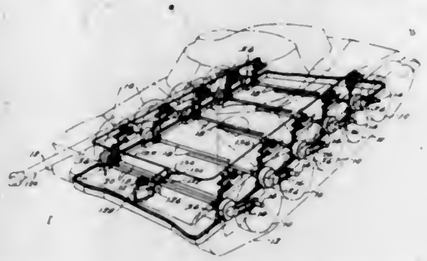
3,047,282
UPHOLSTERY UNITS
Edgar E. Hardy, New Martinsville, W. Va., assignor to Mobay Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed Apr. 26, 1956, Ser. No. 580,951
6 Claims. (Cl. 267—1)



1. As a new article of manufacture, an upholstery unit comprising a pair of spaced strips of cellular polyurethane having opposing longitudinally extending substantially parallel sides, a plurality of strips of cellular polyurethane having opposing longitudinally extending substantially parallel sides which lie in a plane generally perpendicular to the longitudinal axis of the first said strips and have one end secured to one of the said pair of strips and the other end secured to the other of the said pair of strips, each of the said plurality of strips forming a sinuous path substantially longitudinally opposed to the path of adjacent strips thereby forming a plurality of regularly spaced and regularly shaped cavities therebetween.

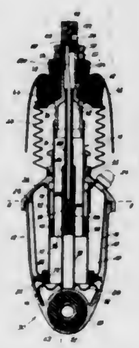
3,047,283
FLUID ACTUATED FRICTIONAL DAMPING DEVICE
William J. Kivell, Monroe, Mich., assignor to Monroe Auto Equipment Company, Monroe, Mich., a corporation of Michigan
Filed May 1, 1958, Ser. No. 732,229
9 Claims. (Cl. 267—9)

1. A damping device for use in a resilient suspension system comprising a fluid pressure actuatable friction device for connection between a sprung portion and an unsprung portion of a suspension system, a bidirectional fluid pressure device connected between said sprung and unsprung portions and having first and second fluid outlets, said fluid pressure device being arranged to develop fluid pressure at said first outlet responsively to relative



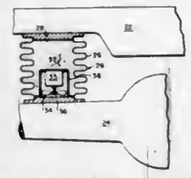
movement between said portions in one direction and to develop fluid pressure at said second outlet responsively to relative movement between said portions in the opposite direction, both of said outlets being connected to said friction device for actuation thereof responsively to relative movement between said portions both in said one direction and in said opposite direction.

3,047,284
SHOCK-ABSORBING SPRING STRUT, PARTICULARLY FOR MOTOR VEHICLES
Franz G. F. Behles, Stuttgart-Schonberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Oct. 28, 1958, Ser. No. 770,185
Claims priority, application Germany Nov. 7, 1957
10 Claims. (Cl. 267—64)



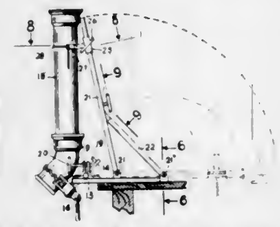
10. Shock-absorbing spring strut comprising a cylinder, a housing surrounding said cylinder and fixed thereto, a flexible partition in said housing dividing its internal space into an outer chamber and an inner chamber, said outer chamber being confined by the wall of said housing and by said partition and communicating with one end of said cylinder, valve means mounted between said one end of said cylinder and the wall of said housing for restricting the communication between said outer chamber and said cylinder, a single mounting member for securing both said valve means and said partition to said cylinder, a plunger slidable in and extending out of the other end of said cylinder and out of said housing, said inner chamber being confined by said cylinder and by said partition, means for sealing said inner chamber, a gaseous filling in said inner chamber, and a liquid filling in said cylinder and in said outer chamber, said liquid filling being thereby effectively disposed on both sides of said inner chamber.

3,047,285
SEMI-ISOTHERMAL PNEUMATIC SUPPORT
Thomas A. O. Gross, Concord Road, Lincoln, Mass.
Filed June 30, 1959, Ser. No. 824,127
10 Claims. (Cl. 267—65)
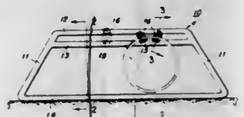


4. A suspension system for supporting a load subject to sudden shocks and jolts with a cushioning action to protect the load against said shocks and jolts comprising a pneumatic spring subject to rapid compression and expansion, said spring including an enclosed substantially gas tight container having wall portions movable and effective to vary the volume of the container, a gas within said container under a pressure sufficient to support said wall portions under said load, and solid fibrous material dispersed substantially throughout said gas and in intimate contact therewith, said material bearing substantially none of said load and having a total heat capacity which is at least about equal to but not more than about twenty times the total heat capacity of the gas and having a surface area distributed in intimate heat exchange relation with the gas, so that the heat caused by pressure and volume changes of the gas is exchanged with the solid material.

3,047,286
PIVOTING VISE MOUNT AND IMPROVED JIG
Miles T. Kinne, 10553 Kewen Ave., Pacoima, Calif.
Filed Dec. 23, 1959, Ser. No. 861,493
1 Claim. (Cl. 269—45)



A device of the class described, in which a table element which has a length, a straight front, and a rear edge, and is provided with a substantial forward extension on each side of the straight front, on the upper surface, adjacent to the forward end of each said substantial forward extension is provided a hand operated clamp, and said clamps pivotally support opposite ends of a trunnion, and that part of said trunnion which is between the said substantial forward extensions of said table element having a suitable vise mounting surface thereon to form a pivoting vise mount; and in which the aligning bar of a work holding jig which has a length, a width and two sides, the upper surface flat and joined to the sides at a 90° angle, the sides are flat and joined at their bottom edge to a short extension inward, which inward extension forms a 90° angle at its junction with the side, said aligning bar is pivotally supported at one end on the upper surface of said table element and the center of the width of the aligning bar is common with the longitudinal vertical center plane of the table element, said aligning bar is provided with a sliding part retained to the under side of the aligning bar by said inward extensions at the bottom edge of the sides, a threaded bore through this slide, a hand operated set screw in said threaded bore where it can bear against the center of the width of the under side of the aligning bar, an aligning bar brace pivotally mounted at one end on said sliding part, the opposite end of said aligning bar brace pivotally retained at the rear edge of the table element, and the longitudinal pivoting axes of the pivots on the aligning bar brace, the aligning bar, and the pivoting vise mount are substantially parallel; a support slidably retained on the sides of the aligning bar, and one side of said support having a threaded bore, and a hand operated set screw in the bore where it can engage against a side of the aligning bar, the top of said sliding support provided with brackets at each side, and between said brackets is pivotally mounted the work centering and holding part of the jig and the longitudinal axis of this pivot is substantially parallel with the pivoting axis of the pivoting vise mount, two flat extensions provided at the sides of the work centering and holding part, on one flat extension is mounted the threaded end of an eye-bolt through a loose hole in said one flat extension, a spring guide, a helical compression spring, a spring guide, washer, and locking nut in same order, an end of a length of link chain in the eye-bolt, and the other end of the chain received in a slot formed in the other flat extension.

3,047,287
PIPE HOLDING DEVICE
Ben B. Griffin, 4710 41st St. NW., Washington, D.C., and Glen S. Carrico, Rte. 2, Box 17M, Springfield, Va.
Filed Aug. 6, 1959, Ser. No. 831,970
1 Claim. (Cl. 269—104)



A pair of holding devices for use in cooperation with a ground engaging supporting element, said ground engaging supporting element comprising a trapezoidal frame having integral top, bottom and side members, the top member being shorter than said bottom member, a transverse member integral with said frame and parallel to and spaced from the top member a short distance, forming a longitudinally extending horizontally disposed slot, each of said holding devices comprising a U-shaped body member having a pair of arms projecting therefrom, said arms having pipe clamping means thereon and being arranged on opposite sides of the longitudinal center line of said U-shaped body member to provide a slot therebetween to receive the end edge portion of a length of pipe for positioning the pipe for cutting operations thereon, a threaded bolt integral with said U-shaped body member and extending outwardly therefrom in an opposite direction relative to said arms, said bolt being arranged along the longitudinal center line of said U-shaped body member and mounted in the longitudinally extending slot of said ground engaging supporting element whereby said U-shaped body member is supported in a predetermined adjusted position on said ground engaging supporting element and thereby positions the pipe for cutting operations thereon, and means engageable with said bolt for retaining said U-shaped body member in adjusted position on said ground engaging supporting element.

3,047,288
AUTOMATIC ARTICLE REVERSING MECHANISM
Joseph L. Ramm, New Orleans, La., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Sept. 11, 1958, Ser. No. 760,373
28 Claims. (Cl. 270—58)

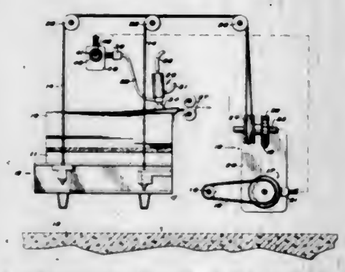
1. In a mechanism for reversing flexible articles of manufacture conveyed on a conveyor comprising a ro-

tating shaft, an article clamp operatively connected with said shaft, an article deflector to divert the conveyed



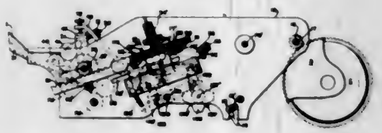
articles into the clamp, and releasing means to release the article held by the clamp after a predetermined degree of rotation of the shaft.

3,047,289
PILE RAISING CONTROL MECHANISM
Kenneth H. Gulick, Wooster, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,573
12 Claims. (Cl. 271—30)



1. In a machine for feeding sheets from a pile to a sheet handling machine, a member reciprocable toward the pile into engagement therewith and away from the pile once for each sheet fed, a pile support, pile advancing means operably connected to said support and adapted to be intermittently operated to maintain the top of the pile within predetermined high and low limits within the reach of the member, means momentarily operable by said member when the member reaches its low limit, and time delay control means operable independently of cyclical operation of said machine for controlling operation of said pile advancing means, said control means being actuated by the means operated by said member to cause the advancing means to advance the pile when the top of the pile has been depleted to its low limit and being timed to discontinue advancing when the pile reaches its predetermined high limit.

3,047,290
ENVELOPE AND SHEET FEEDER AND COLLATING APPARATUS
Elmer R. Thomsen, 11022 SE. Stephens St., Portland, Oreg.
Filed Dec. 8, 1960, Ser. No. 74,696
37 Claims. (Cl. 271—36)



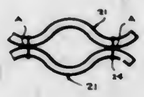
1. A sheet feeding apparatus having an actuating shaft mounted for limited rotation in opposite directions, a sheet feeding roll journalled thereon adapted to remain stationary relatively thereto during rotation of the shaft in the first of said directions, mechanism to impart said limited rotation in the opposite direction to said shaft, and means to cause said roll to rotate with the shaft in the second of said directions.

3,047,291
SKI PRACTICING METHOD AND APPARATUS
Raymond L. Hall, Box 8, Morris Plains, N.J., assignor, by direct and mesne assignments, of 24.8 percent to Cyril Farny, Morris Plains, N.J., 6.3 percent to Christopher H. Farny, Chicago, Ill., 6.3 percent to David H. Farny, Aspen, Colo., 6.3 percent to Michael H. Farny, Morris Plains, N.J., and 6.3 percent to Charles L. Saunders, Jr., Washington, D.C.
Filed Nov. 4, 1960, Ser. No. 67,279
26 Claims. (Cl. 272—56.5)



7. A moving ski and ski slope assembly adapted for snowless skiing which includes an endless belt having a ski receiving stretch substantially longer and wider than an average ski length, whereby to provide space for transverse skiing, spaced rollers, means for driving said belt at predetermined speeds around said spaced rollers, said rollers being positioned, one to another, such that the ski receiving stretch of the belt conforms generally to a predetermined inclined profile, a support beneath the ski receiving stretch of said belt which provides substantially uniform support throughout the area of said ski receiving stretch, a pile ski receiving surfacing for the belt said surfacing being bulkier at the top than at the base and being formed and adapted to permit a ski edge to sink therein, while resisting edgewise movement of the ski across the belt, whereby to afford edge control, upper and lower platforms adjacent the upper and lower ends of said belt, means for varying the angle of inclination of the belt, said last named means including means for raising and lowering one of said platforms, and skis for said assembly having lower edges and surfaces of a material which, in relation to the material of the belt surfacing have substantially the coefficient of friction of usual skis on snow.

3,047,292
ARTIFICIAL SKI-TRACK CONSTITUTED BY BRUSH-MEMBERS
Pietro Acquaderni, Strada Maggiore 94, Bologna, Italy
Filed Nov. 30, 1959, Ser. No. 856,083
Claims priority, application Italy Dec. 5, 1958
1 Claim. (Cl. 272—56.5)



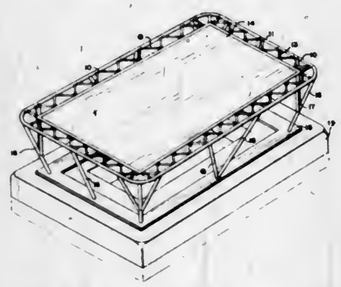
An artificial skiing surface comprising a network consisting of generally undulated strip members having angular bends, said strip members being arranged in mesh-forming relationship with the strip members lying alongside each other and with the bends of one strip member contiguous with the bends of an adjoining strip member, said strip members having upper surfaces and a bunched plurality of adjoining upright resilient and laterally bendable projections upstanding from the upper surfaces for forming a non-continuous sliding surface.

3,047,293
ADJUSTABLE EXERCISING BAR
Bernarr C. Schaeffer, Battle Creek, Mich., assignor to Battle Creek Manufacturers, Inc., Battle Creek, Mich., a corporation of Michigan
Filed May 2, 1960, Ser. No. 26,248
9 Claims. (Cl. 272—62)



1. An extensible and retractible exercising bar comprising an outer tube and an inner tube slidably telescoped with each other for relative longitudinal adjustment, means within said tubes for non-rotatably connecting and holding same in lengthwise relatively adjusted positions, a mounting head carried by the outer end of one of said tubes to abut a fixed vertical support, a manually rotatable sleeve threaded adjustably onto the outer end of the other of said tubes, and a second mounting head swivelled to the outer end of said sleeve to abut a second vertical support and be tightened against same when said rotatable sleeve is moved to lengthen said bar.

3,047,294
WATER-BORNE TRAMPOLINE
Robert H. Maxwell, 296 Cedar Ave., Sharon, Pa.
Filed Dec. 8, 1961, Ser. No. 158,050
3 Claims. (Cl. 272—65)



1. Gymnastic apparatus comprising in combination
(*a*) a rigid rectangular frame for use in horizontal position and supporting in tightly stretched condition a centrally disposed expanse of a flexible platform connected around its edges to said frame through a multiplicity of circumferentially spaced yieldable members,
(*b*) means to float said frame on a body of water with said frame elevated above the top surface of said body, and
(*c*) said means to float having a centrally disposed open space to receive center portions of said platform when depressed by the rebound of a performer thereon.

3,047,295
LASSOING TOY
David Sachs, 3933 Topanga Canyon Lane, Malibu, Calif.
Filed May 22, 1961, Ser. No. 111,633
9 Claims. (Cl. 273—1)

1. In a lassoing toy: a base having a pedestal rising from the center thereof; a platform rotatably mounted upon said pedestal for rotation above said base and having a running horse figure mounted thereon near its periphery for movement in a circular orbital path with its head projecting forwardly, a lassoing figure mounted upon said pedestal above said platform, said figure including an arm pivotally attached thereto on a horizontal axis for movement in a vertical plane, and a lasso element attached to said arm, projecting generally radially over said platform and terminating in a lasso loop disposed in a generally vertical plane, normally above the head of said running horse figure but



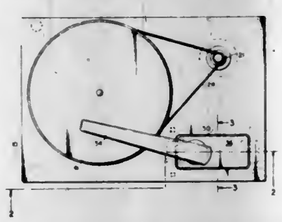
movable downwardly in a position to receive said head as said horse figure moves in said orbital path; said arm being adapted to be moved vertically by a player to manipulate said lasso loop into said position to receive said running horse head.

3,047,296
DEVICE FOR ALTERING PHONOGRAPH SPEED
Nelson Chade, Rua Santa Efigenia 485, Sao Paulo, Brazil
Filed May 5, 1960, Ser. No. 27,215
3 Claims. (Cl. 274—9)



1. In a phonograph speed changer for changing the speed ratio between a motor and a turntable, a step shaft on the motor; a base plate and a vertical shaft post thereon; an horizontally swingable plate bearingly mounted on the post; an axially vertical friction disk mounted on the plate for transmitting motion of the step shaft to the turntable; a shelf-like member fast on the plate and thereabove and extending beyond the plate in the general direction toward the axis of the turntable; a plurality of levers pivotally mounted under the base plate and thereon and having inner end portions extending generally radially toward the axis of the turntable, said portions having upper and lower beveled edges as cam surfaces meeting at substantially a common point, the lever being provided with somewhat arcuate upwardly projecting extensions of differing height for engaging under the shelf-like member to lift same and the swingable plate for the disc to engage on a preselected step of the shaft, latching means for holding the beveled end portion of respective levers in elevated position.

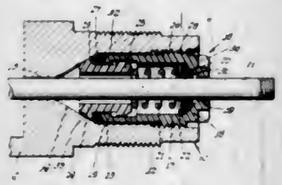
3,047,297
PHONOGRAPH TURNTABLE ASSEMBLY
Frederick H. Drake, Boonton, N.J. (Squire Road, Roxbury, Conn.)
Filed July 7, 1958, Ser. No. 747,093
6 Claims. (Cl. 274—39)



1. A phonograph turntable assembly including a mounting board with driving motor secured thereon, a record

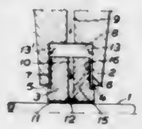
turntable driven by said motor through resilient means and otherwise isolated from physical contact with said motor, a bearing housing for said turntable, a platform adapted to receive a pick-up arm, second resilient means, and a rigid supporting structure, said bearing housing and platform being attached in rigidly fixed relationship on said supporting structure, said structure being coupled to said mounting board by said second resilient means, and the combined mass of turntable, bearing housing, structure and platform so proportioned to the resilient means that the combination can oscillate freely, in both vertical and horizontal directions, only at frequencies below the audio range.

3,047,298
GAS METER SEALING MEANS
Theodore A. St. Clair, Fairfield, and Robert K. Fairchild, Bridgeport, Conn., assignors, by mesne assignments, to Textron, Inc., Providence, R.I., a corporation of Rhode Island
Filed May 10, 1960, Ser. No. 28,097
8 Claims. (Cl. 277—4)



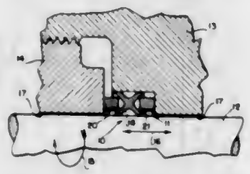
1. Means for sealing a gas meter casing having a rotatable shaft projecting therefrom comprising a bushing on the casing having a bore through which the shaft passes, said bore being of a diameter at the inner end to receive the shaft and being connected by an inner wall to an enlarged portion of the bore at the outer end to receive a sealing unit, said sealing unit comprising a sleeve adapted to fit within the enlarged bore and having a closed outer end provided with a bore of reduced diameter to engage the shaft, an O-ring within the sleeve engaging the closed end, a washer within the sleeve engaging the O-ring, a spring engaging the washer, a plug mounted in the other end of the sleeve for relative movement, and an O-ring surrounding the plug adjacent the end of the sleeve, said unit being inserted over the shaft and into the bushing and having means for moving the sleeve in the bushing, said plug in said unit engaging the inner wall in said bushing, when the unit is moved inwardly relative to the bushing, and moving relative to the sleeve to compress the spring and cause the O-ring within the sleeve to deform and form a seal between the shaft and unit and cause the O-ring around the plug to be clamped against the end of the sleeve and deformed to seal the unit to the bushing.

3,047,299
GLAND SEALS FOR GAS-FILLED ELECTRIC MACHINES
Olav Karsten, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed Dec. 8, 1959, Ser. No. 858,250
Claims priority, application Sweden Dec. 8, 1958
5 Claims. (Cl. 277—27)



1. A gland seal for a gas filled electric machine having a shaft and a seal housing around the shaft, comprising an annular seal-ring fitted within the housing and encircling the shaft with a small clearance, the inner surfaces of the inner and outer side walls of said housing overlapping parts of the respective inner and outer side surface of said seal-ring, thereby defining two spaces of small clearance between said walls and providing an annular chamber surrounding the outer periphery of said seal-ring, means to supply said chamber with sealing liquid under pressure, said seal-ring having a plurality of circumferentially disposed grooves in its shaft-facing surface, and means including passages in the seal-ring communicating with the ends of said grooves lying hindmost in relation to the direction of rotation of the shaft and with said annular sealing chamber to supply sealing liquid to said grooves, said last means forming the only direct communication between the annular chamber and the grooves.

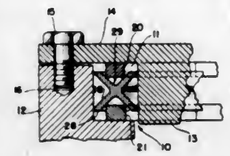
3,047,300
METAL SEALING ASSEMBLY
Donald L. Taylor, Glendale, and Douglas G. Thompson, Los Angeles, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed July 1, 1959, Ser. No. 824,341
5 Claims. (Cl. 277—102)



1. In combination with a pair of concentric, axially telescoped parts having adjacent concentric surfaces to be sealed against axial leakage therebetween, one of which has an open annular recess concentric with the axis thereof and facing the concentric surface of the other part to form a chamber therewith, the recess having an annular back wall and two relatively adjustable radial walls, a semi-rigid metal annular ring disposed concentrically in said chamber, said ring having a body portion of substantial radial and axial thickness and inner and outer solid, elongated, deflectable, annular legs integral with and diverging radially and axially from the body portion at the respective inner and outer radial sides thereof, said legs terminating at free ends with broad, flat, sealing surfaces, said legs forming an annular, axially opening, V-shaped channel, one of the sealing surfaces engaging the back wall, and the other such surface engaging the opposed concentric surface of the other part, and annular loading ring disposed in the channel between the inner and outer legs and one of the radial walls and engaging the legs midway between the body portion and the free ends so that movement of the radial walls toward each other produces leg flexing action to resiliently urge the whole area of each of the sealing surfaces on the free ends of the legs into sealing contact with the respective parts.

3,047,301
STATIC SEALING ASSEMBLY
Donald L. Taylor, Glendale, and Douglas G. Thompson, Los Angeles, Calif., assignors to Lockheed Aircraft Corporation, Burkbank, Calif.
Filed Feb. 12, 1960, Ser. No. 8,460
6 Claims. (Cl. 277—117)

1. A semi-flexible metal sealing assembly comprising: a packing chamber having two opposed planar walls; a metal sealing ring within said chamber compressed between said walls; said ring having a cruciform cross section including an annular central body having only two pairs of outwardly radiating solid deflectable legs, each of said legs having a sharp pointed toe, each pair cooperating with its respective planar wall; said pairs of legs upon compression of the seal ring being sufficiently flexed to cause the toes of each pair of legs to spread outwardly and bite into the respective wall to produce a tight sealing engagement under varying operating conditions; each of said walls extending a substantial distance on either side of the toes of each pair of legs and more than the distance of greatest travel of the toes along the wall when said legs are flexed; the flexure of said legs when under compression being sufficient to maintain tight sealing engagement of the toes with the wall surfaces under variable operating conditions caused by fluctuation of temperature and pressure; and means associated with the packing chamber to effect compression of the seal ring.



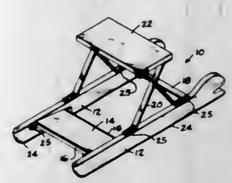
3,047,302
PROPELLING DEVICE FOR SKIERS AND THE LIKE
Constantin A. Krylov, United States Army (Field Detachment "R" (9839) OACSI, DA, APO 172, New York, N.Y.)
Filed Oct. 4, 1960, Ser. No. 60,535
3 Claims. (Cl. 280—11.37)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A propelling device for skiers and the like comprising a bearing and its housing, a propeller shaft rotatably mounted in the bearing, a pair of propeller blades fixed to the forward end of the shaft, each blade comprising a ski pole, a series of crossbars spaced along each pole, each crossbar having an aerodynamic profile, a fabric sheath covering each series of crossbars thereby providing blades having the cross-sectional shape of conventional airplane wings, and a pair of hand grips projecting outwardly of the housing for said hearing at positions to be gripped by a skier using the device whereby the skier may be propelled by the wind when the propelling device is so held as to take advantage of the wind currents.

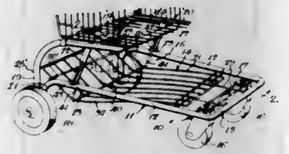
3,047,303
ICE RACER
Felix Pliska, 6408 La Clenega Drive, North Highlands, Calif.
Filed Feb. 8, 1960, Ser. No. 7,364
1 Claim. (Cl. 280—12)

An ice racer comprising a seat, depending frame members spaced from each other and connected to the sides of the seat, a pair of stringers each spaced from the other and connected to the frame members, the frame members having a transverse element at their lower ends connected to the top of the stringers rearward of the seat, a foot rest disposed forward of the seat the ends thereof being connected to the sides of the stringers and its front edge being elevated over its trailing edge and adjacent to the top of the stringers, to space and prevent the stringers from twisting, each stringer having a groove in its bottom edge extending substantially the full length thereof, a runner disposed in each groove, and a plurality of fas-



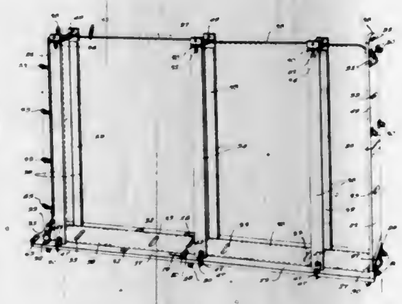
teners through each stringer on both sides of the groove and the runner in such groove for clamping the stringer against the runner and holding such runner in its groove.

3,047,304
CART SUPPORT
William C. Kampf, % Sides Mfg. Co., 811 Belden Road, Jackson, Mich.
Filed July 18, 1960, Ser. No. 43,619
16 Claims. (Cl. 280—33.99)



1. In a telescoping shopping cart, a base frame having a pair of spaced side members and a front member; a platform carried by said base frame to extend generally intermediate said side members, said platform having front, medial, and rear portions, said rear portion extending rearwardly upwardly to terminate at an elevation at least equal to the elevation of the top of said front member; and co-operating slide means on said base frame and medial portion of said platform slidingly guiding the medial portion of the platform upwardly as a result of an upward movement of the rear portion thereof as by movement of the front member of another such shopping cart forwardly against said rear portion of the platform.

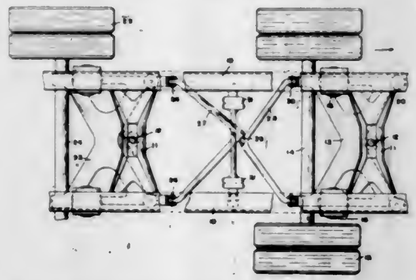
3,047,305
DEVICE FOR MOVING MATTRESSES AND OTHER ARTICLES
Albert A. Kleinschmidt, 9 E. Main St., Dundee, Ill.
Filed June 12, 1958, Ser. No. 741,645
10 Claims. (Cl. 280—36)



2. In an article moving unit, a horizontal wheeled elongated panel member, an upright panel member hingedly attached to one end portion of the horizontal panel member and foldable onto the horizontal panel member when it is desired to collapse the unit for storage

purposes and arranged to be swung up from folded relation to the horizontal panel member for article moving purposes, and a plurality of upright supporting members removably attachable to the longitudinal margins of said horizontal panel member for retainingly engaging the sides of an article in upright position on said horizontal panel member and between said upright members and with the swung-up upright panel member opposing an end of the article, said horizontal member having roller means on its lower face and said swung-up panel member having roller means on its outer face so that the unit with an article supported thereby can be rollably moved either on said horizontal member or on said swung-up panel member.

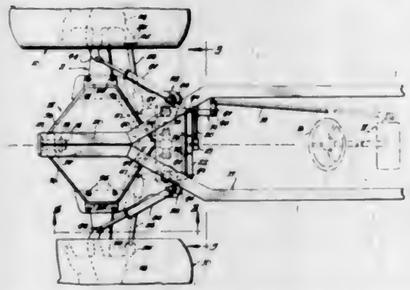
3,047,306
ARTICULATED SELF-STEERING TANDEM AIR SUSPENSION GEAR FOR TRAILERS AND THE LIKE
Franklin B. Easton, Sevakeen Country Club, R.D. 2, Salem, Ohio
Filed Oct. 4, 1960, Ser. No. 60,369
9 Claims. (Cl. 280—81)



1. A tandem axle assembly for road trailers and the like comprising a pair of longitudinally spaced pivot members adapted to be rigidly connected to the body or frame of the vehicle in depending relation therewith, an axle carrier pivotally mounted on each of said pivot members, a transversely disposed axle for road-engaging wheels rigidly carried on each of said carriers and positioned rearwardly of the pivot members whereby said carrier and axle assemblies may have castering movement with respect to said body or frame upon turning movement thereof in either direction, a pair of transversely spaced load-bearing air springs interposed between the carrier and said frame or body adjacent the axle in each of said axle and carrier assemblies, a pair of stabilizing air springs interposed between each of said carriers and the frame or body on the longitudinally opposite sides of said pivot members from said axles, said air springs being of the kind which have freedom of relative transverse movement between their top and bottom end portions, and means interconnecting said carriers to effect substantially equal and opposite turning movement of said carriers upon turning movement of the vehicle.

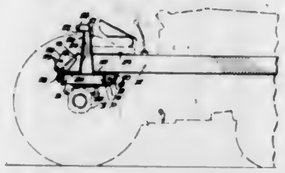
3,047,307
TRACTOR STEERING ARRANGEMENT
Ralph L. Beyerstedt, Libertyville, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Aug. 4, 1960, Ser. No. 47,446
3 Claims. (Cl. 280—95)

1. In a mechanical steering system for a tractor with the tractor having a rigid axle assembly connected to the frame of said tractor for oscillation of said rigid axle assembly relative to said frame of said tractor about a longitudinally center line of said frame and having steerable wheels at each end of said axle assembly comprising, a pair of links, means pivotally connecting one end of each of said pair of links to one of said wheels, a pair of levers, means pivotally mounting each of said levers substantially intermediate the ends thereof on said axle assembly, means pivotally connecting one end of each of said levers to the other end of one of said links, a third link, means pivotally connecting said third link at each end thereof to the other end of each of said levers, said pair of links, said pair of levers and said third link being formed to position said third link substantially transversely of the axis of oscillation of said axle assembly relative to said frame of said tractor and



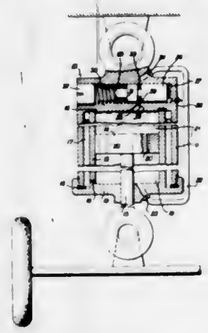
so that said wheels are steered responsive to movements of said third link along the longitudinal axis thereof, a steering wheel carried on said frame of said tractor, means pivotally connecting said steering wheel to the longitudinal center of said third link for steering movement of said wheels responsive to movement of said steering wheel, said last-mentioned means being formed to maintain said third link against any longitudinal movement when said axle assembly oscillates relative to said frame of said tractor and the wheels of said tractor are aligned in the straight ahead driving position.

3,047,308
MOTOR VEHICLE AXLE SUPPORT
Karl Salna, Mundelein, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Aug. 1, 1960, Ser. No. 46,500
7 Claims. (Cl. 280—111)



1. In a vehicle having a rigid axle assembly interconnecting a pair of wheels, an arrangement for mounting the frame of said vehicle on said axle assembly for a certain limited range of oscillation of the frame of the vehicle relative to the axle assembly about an axis positioned longitudinally of the vehicle comprising, an axle carrier securable on said axle assembly, pin means including a pin connected between one end of the frame of said vehicle and one end portion of said axle carrier, said pin being positioned longitudinally of said vehicle and said pin means being formed to permit pivotal movement of said carrier relative to said frame about the axis of said pin, a second pin means including a second pin, flange means connected to another end portion of said axle carrier on the side thereof opposite from said one end and to said second pin, second flange means connected to the underside of the frame of said vehicle immediately above said another end of said axle carrier and to said second pin, said first and second flange means positioned longitudinally of the vehicle, and said first and second flange means positioning said second pin transversely of said vehicle and substantially intersecting the axis of said first pin and said second pin means being formed with a partial spherical bearing on said second pin for permitting limited pivotal movement of said frame relative to said carrier about an axis substantially coincident with the axis of said first pin and for preventing any shifting of said carrier longitudinally of said frame of said vehicle.

3,047,309
AUTOMATICALLY DAMPENED SHOCK-ABSORBER
Friedrich K. H. Nallinger, Albrecht Duerer Weg 5, Stuttgart-N, Germany
Filed Feb. 2, 1959, Ser. No. 790,465
Claims priority, application Germany Feb. 14, 1958
11 Claims. (Cl. 280—124)



11. A fluid shock absorber for vehicles, especially motor vehicles, operatively connected between two parts of the vehicle relatively movable with respect to one another, comprising cylinder means operatively connected with one of said two parts and including a head, piston means arranged within said cylinder means operatively connected with the other of said two parts, throttling means normally providing a predetermined throttling effect of said shock absorber and interconnecting two cylinder chambers formed in said cylinder means and separated from each other by said piston means, additional adjustable throttling means interconnecting said two cylinder chambers and adapted to adjustably provide a connection for the flow of fluid medium between said cylinder chambers which is substantially less throttled than the flow thereof through said first-mentioned throttling means, and control means for said additional adjustable throttling means including a bore within said head of the cylinder means extending transversely to the axis of said cylinder means, a throttle valve means including a valve piston slidably mounted within said bore, coacting transverse control surfaces in said bore and said throttle valve means for effecting a variable throttling of said additional throttling means upon the movement of said valve piston, connecting means between one transverse control surface in said bore and one of said two chambers on the one hand and between another transverse control surface in the bore and said additional throttling means, means for applying a control pressure against one end of said valve piston including a control means for adjustment of the pressure in relation to the drive speed of the vehicle, and means engaging the end face of said valve piston opposite to said one end face for the exertion of a counter pressure thereagainst, and control means for said means for applying a pressure against said one end face of the valve piston acting against said counter pressure in such a manner that upon the surpassing of a specific drive speed and upon a corresponding change in the pressure applied against said one end face of the valve piston, said piston will move against said counter pressure to a new position and the throttle effect in said additional throttling means will thereby be increased at said transverse control surfaces.

3,047,310
BICYCLE DRIVING MECHANISM
John E. De Baun, 335 Marshall St., Ridgewood, N.J.
Filed Nov. 9, 1959, Ser. No. 851,696
6 Claims. (Cl. 280—261)



1. In a vehicle of the character described, having wheels, one of which is driven by a chain and sprocket, in combination, a housing on each side of said sprocket; fastening means fastening one housing on one side of said sprocket to said sprocket across the diameter thereof, and on the other side to an axle secured to the other side of said sprocket; the other housing being secured to an axle projecting from the other side of said sprocket; an arm in each housing adapted to reciprocate therein and which is longer in length than each housing with the ends projecting beyond the ends of said housings; a guide wheel and pin disposed on each said arms towards one of said projecting ends; and retaining means retaining each said guide wheel and pin on each said arms for rotation in a ring-like orbit path of travel, each said guide wheel being caused to travel along said orbit path, said orbit path being disposed so that the geometric center thereof is substantially over and above the center of said sprocket, and the lower rim edge of said path being above the horizontal level of the wheels of the vehicle; and, a pedal on one of the ends of each said arms.

3,047,311
CONTINUOUS TABULATING CARD STRIP
George D. Lyall and Milton J. Grandin, Niagara Falls, N.Y., assignors to Moore Business Forms, Inc., Niagara Falls, N.Y., a corporation of Delaware
Filed Feb. 18, 1960, Ser. No. 9,647
2 Claims. (Cl. 281—5)



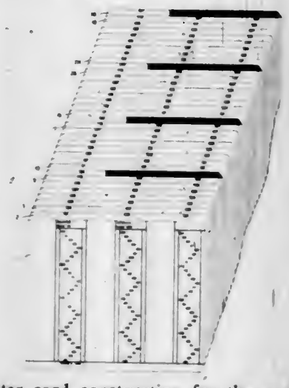
1. The process for making and assembling a tabulating machine punch card strip or the like consisting of a series of multiple card units attached edge to edge, which process comprises preparing an initial web of card stock with the grain extending longitudinally of the web in conventional manner, delineating on said web the outlines of tabulating cards in multiple alignment across the web as well as longitudinally thereof, with the dimension of said cards along which is to extend the longest projection of contact orifices disposed in alignment with said grain, rabbeting the opposite side edges of said web on respectively opposite surfaces thereof to a depth equal to approximately one-half the thickness of the stock and in

such manner as to somewhat roughen the rabbeted areas, severing the forward terminal multiple card unit from the web, applying adhesive to the relatively rough rabbet areas, rejoining the severed unit to the next succeeding unit of the web by overlapping one rabbeted edge of said severed unit with a rabbeted edge of said next unit, and then severing the next unit from the web and successively repeating the rejoining of the severed units, whereby the resulting assembled strip comprises a series of tabulating cards with the grain extending transversely of said strip.

3,047,312
REGISTER CARDS FOR ASSIGNMENT OF ACCOUNT NUMBERS IN SIMULTANEOUS ALPHABETIC-NUMERIC SEQUENCE

Rodney T. Sampson, Canton, Ohio, assignor to Diebold, Incorporated, Canton, Ohio, a corporation of Ohio

Filed Mar. 16, 1960, Ser. No. 15,360
3 Claims. (Cl. 283—36)



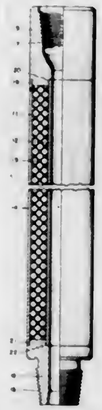
1. Register card construction for the assignment and register of account numbers to names in simultaneous alphabetic-numeric sequence including a set of register cards, the set consisting of four successive series of cards, a plurality of individual cards in each series, each card having top, bottom, left and right side edges, each series of cards having 25 successive number columns printed thereon, there being 32 three-digit numbers in each column, the last two digits of the numbers in the number columns ranging between 00 and 99, the numbers in each column being consecutive and the numbers in the 25 successive number columns being consecutive, thereby providing 800 consecutive three-digit numbers in each series and 4 series of 800 consecutive numbers in each set; the first numbers of said 800 consecutive numbers being consecutive from series to series whereby an even distribution of the last two digits from 00 to 99 throughout the three-digit numbers is obtained; said columns being horizontally spaced from each other and from one side edge of each card, the first column being spaced from the left side edge of the card and the last column being located adjacent the right side edge of the card, the spacing of the number columns forming a name-space column adjacent to each number column, there being a name-space in each name-space column adjacent to each three-digit number in the adjacent number column.

3,047,313
WEIGHTED DRILL COLLAR

George H. Bruce, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Oct. 27, 1961, Ser. No. 148,268
5 Claims. (Cl. 285—47)

1. A drill collar for use in a drill string which comprises inner and outer spaced apart tubular wall members, cellular reinforcing means between and bondedly attached and secured at least to said wall members throughout the length thereof, said cellular reinforcing means forming a plurality of cells in and throughout the length and width of said space with passageways in said cellular reinforcing means into each cell, the inner of said wall members providing an unobstructed bore for passage of fluid, means attached to each end of said wall members for connecting

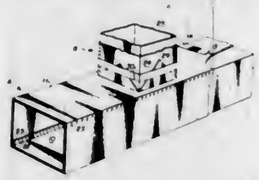


said drill collar into a drill string, and metal weighting means having a specific gravity greater than 8.0 in and filling said cells whereby a heavy drill collar and a pendulum effect to said drill string are provided, said cellular reinforcing means being formed of a high melting point metal substantially chemically inert to and unattacked by said metal weighting means received into said cells in a liquid state.

3,047,314
COUPLINGS FOR AIRCONDITIONING DUCTS MADE FROM CORRUGATED PAPER MATERIAL

Charles J. Bean, Fort Worth, Tex., assignor to First Container Corporation, Fort Worth, Tex., a corporation of Texas

Filed July 2, 1958, Ser. No. 746,270
2 Claims. (Cl. 285—55)

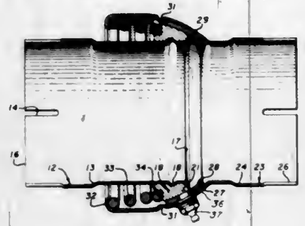


1. A duct for conveying warm or cool air, said duct comprising multiple lengths of abutting inner and outer sleeves of corrugated paper material, said corrugated paper consisting of an inner corrugated medium having inner and outer liners covering said corrugated medium, said sleeves being rectilinear in cross section and having corners along the lengths thereof, the abutting end connections of the respective inner and outer sleeves being in staggered relation relative to one another, metal foil covering the outer surfaces of said inner and outer sleeves, and wherein the flutes of said corrugated paper material are transversely disposed with respect to the length of said sleeves, said inner sleeve being spaced from the outer sleeves in which it is received, and the corners of said inner sleeve being provided with angularly extending flanges which engage with the inner corners of said outer sleeves.

3,047,315
SPRING URGED BALL AND SOCKET EXHAUST PIPE CONNECTOR

Court J. Kinnison, Oakland, Calif., assignor to Western Piping & Engineering Co., Inc., San Francisco, Calif.

Filed Feb. 5, 1960, Ser. No. 6,947
1 Claim. (Cl. 285—269)

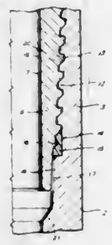


An exhaust pipe connector comprising a straight cylindrical pipe of uniformly thick, stiff metal; a rigid bearing band encircling the end of said pipe and having a seat on the end of said band away from said end of said pipe; said band having a spherical outer surface entirely disposed between said seat and said end of said pipe and diminishing in chordal diameter from said seat toward said end of said pipe and said band having a cylindrical inner surface with a circumferential groove therein; means for securing said band on said pipe including a circumferential bead on said pipe extending into said groove in said band; a straight conduit of uniformly thick, stiff metal; means at the end of and integral with said conduit forming a hollow spherically enlarged portion of said conduit overlying said end of said pipe; a rigid bearing ring within said enlarged portion, said ring having a spherical inner surface abutting said spherical surface of said band and said ring having a margin at the largest chordal diameter on said ring; means for securing said ring in said conduit including an inwardly extending circumferential bead on said enlarged portion engaging said margin of said ring; a spring surrounding said pipe and disposed within said enlarged portion with one end of said spring abutting said seat on said bearing band; and an inturned flange on the end of said conduit and integral with said enlarged portion in abutment with the other end of said spring and in position to hold said pipe and said conduit permanently assembled.

3,047,316
PACKED PIN AND BOX DRILL PIPE COUPLING WITH MEANS PREVENTING EXTRUSION OF PACKING RING

Elwood Wehring and Alfred A. Dula, Houston, Tex., assignors to Atlas Bradford Company, a corporation of Texas

Filed Oct. 1, 1958, Ser. No. 764,533
3 Claims. (Cl. 285—334)

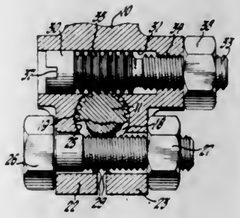


1. A pipe joint comprising a tapered threaded box having at the inner end of the threads a groove of a depth at least as great as the height of said threads and a width at least as great as the distance between corresponding portions of adjacent threads with the threads running out into the groove, a seal ring of a synthetic resin having substantially the properties of tetrafluorethylene substantially filling said groove and of a thickness slightly greater than the depth of said groove, and a tapered threaded pin with threads thereon complementary to the threads in said box and of an extent to enter the groove on full make-up of the pin into the box, said pin having an externally smooth end part projecting beyond the smaller end of the threads on the pin by a distance at least as great as the width of said groove but insufficient to abut any portion of said box at full make-up and fitting closely within said box at the edge of the groove opposite from the threads in the box with a clearance small enough to prevent extrusion of said ring under normal sealing pressures, and said threads on the pin disappearing gradually from full crest height into the surface of the externally smooth end part within approximately 90° to 180°, whereby said end part will first confine said ring, said disappearing thread will then thread into and cut and force a part of said ring into and seal the space between the first two threads, and the full thread on the pin will then compress said ring axially.

3,047,317
ADJUSTABLE CONNECTION

Robert J. Wente, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 12, 1959, Ser. No. 852,512
4 Claims. (Cl. 287—52.02)



1. The combination of a shaft; a member fixed thereon so as to be angularly adjustable relative the shaft, the member having a split portion embracing the shaft and piloted thereon; compressing means engaging the split portion operable to clamp the member to the shaft; and a rotatable adjusting screw having a portion threadedly engaged with the member and a toothed portion; the shaft having a gear portion meshing with the toothed portion so that rotation of the screw angularly adjusts the member with respect to the shaft; the adjusting screw being disposed generally tangent to the shaft on one side thereof, and the compressing means comprising a tension member generally tangent to the shaft at the other side thereof.

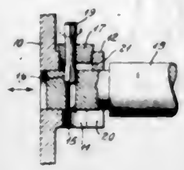
3,047,318
DEVICE FOR THE PRECISION MOUNTING OF A GEAR ON A SHAFT

Robert H. Berkshire, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed June 6, 1957, Ser. No. 664,118
16 Claims. (Cl. 287—52.08)

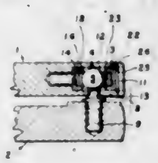
10. Means for the accurately positioning on a shaft a member having an annular hub, said means comprising a through hole defined along a diameter of said shaft, a radial bore in said annular hub, a tapered plug having an eccentric bore, said plug wedged for press fit in said radial bore, and a pin secured in said eccentric bore and in said through hole, said pin being wedged for press fit into said eccentric bore, said pin extending into said through hole

before said press fit of said pin and said tapered plug, the plug and the pin cooperating to provide accurate axial



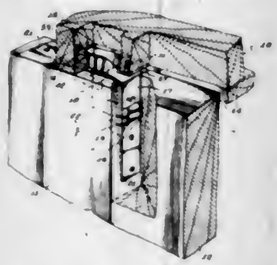
adjustment on said shaft of said member by rotation of said tapered plug in said radial bore.

3,047,319
LINKAGE JOINT
Robert L. Saylor, San Francisco, Calif., assignor to Schlage Lock Company, a corporation
Filed Apr. 13, 1959, Ser. No. 805,814
3 Claims. (Cl. 287—90)



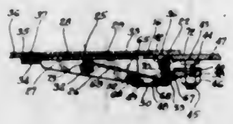
1. A linkage joint for pivotally connecting a pair of links comprising: a spherical ball member carried by one of said links and a pair of similar socket members axially spaced apart in the other of said links for supporting said ball member at opposite sides thereof, each of said socket members comprising a bearing cup having an open side directed toward the adjacent side of said ball member, a bearing element tightly received in each of said cups and extending only slightly beyond said open side to provide a bearing face formed complementarily to the adjacent side of said ball and in slidable engagement therewith, each of said bearing cups being formed with an annular shoulder surrounding said open side and of a diameter substantially less than the diameter of said ball and engaging said ball when the latter is forcibly urged against said open side to compress said element completely into said cup.

3,047,320
SNUGGER BOLT
Richard W. Earle, 1224 Whitnall Highway, Burbank, Calif.
Filed Jan. 8, 1960, Ser. No. 1,206
9 Claims. (Cl. 292—203)



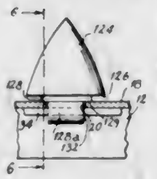
2. In a door latch, the combination comprising: a casing having a pair of angularly related faces; a pair of bolts each of which is mounted on said casing for movement through the plane of one of said faces between extended and fully retracted positions; means on said casing for translating inward movement to fully retracted position of one of said bolts through the plane of its face into outward movement of the other of said bolts through the plane of the other of said faces; and means yieldably biasing said bolts inwardly of said casing against said movement translating means.

3,047,321
FLUSH-TYPE TOGGLE LATCH
Arnold F. Gander, Berkeley, Calif.
Filed Aug. 26, 1959, Ser. No. 836,255
3 Claims. (Cl. 292—223)



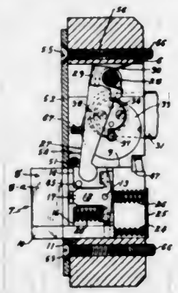
1. In a flush-type toggle latch mechanism, the combination comprising a base member having an open slot at one end which extends to the mid-portion thereof, a latch actuator having a portion mounted in said slot and including an actuating plate with one end of a size for covering said slot and an opposite end portion extending outwardly from the base member, a cross pin providing a fixed axis and supporting the latch actuator at its mid-portion for rocking movements relative to said one end of the base member between a latching position substantially parallel to the base member and a releasing position in angular relation to the base member, a latch bolt, a second cross pin providing a fixed axis and supporting the latch bolt for swinging movements relative to the end of the base opposite said open slot, said latch bolt having a holding position in which it projects beyond the end of the base opposite said open slot and a retracted position in which it is withdrawn from the holding position and extends angularly from the base member, a link having opposite ends movably connected by cross pins to the latch actuator and latch bolt for effecting movements of the latch bolt between said holding and retracted positions in response to said rocking movements of the latch actuator between said latching and releasing positions by pressure applied to opposite end portions of said actuating plate, unitary spring means including a plurality of coil portions with integral arm portions on opposite ends of each of the coil portions, said arm portions on each of the coil portions having normal unsprung positions in predetermined angular relationship to one another, each coil portion encompassing one of said cross pins and the arm portions thereon having engagement with cross pins other than said one and exerting forces thereon in the same directions in all positions of the latch mechanism.

3,047,322
HANDBAG FRAME LATCH
Edward M. Karron, New York, N.Y. (518 Beach 139th St., Belle Harbor, N.Y.)
Filed Dec. 30, 1958, Ser. No. 783,929
2 Claims. (Cl. 292—228)



1. A latch member for separably securing a pair of associated members to one another, said members including a latch supporting member having a wall formed with an elongated slot therethrough, said latch member comprising a body of greater thickness than said slot, said body having an integrally-formed projection on a face thereof of lesser thickness than the width of said slot, said projection including spaced parallel terminal portions adapted to pass through said slot and to hold between them against the underside of said wall a rectangular portion of one leg of an L-shaped spring, said projection including an inner portion of greater length than said slot connecting each of said terminal portions to said body face, said terminal portions each offset from each end of said inner portion, the underside of the ends of the inner portion lying in a common plane and adapted to overlie the marginal end edge portions of said slot.

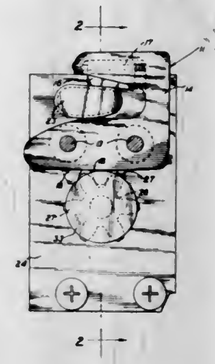
3,047,323
DOOR LOCK
Nicholas A. Welch, West Hartford, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Filed Mar. 4, 1957, Ser. No. 643,568
13 Claims. (Cl. 292—245)



10. In a door lock, a casing having side walls defining an opening therein, a latch bolt slidable in said opening between projected and retracted positions and spring pressed into projected position, an operating lever mounted upon one of said side walls for rotation in opposite directions and having a free end portion engageable with and adapted to retract said latch bolt, an abutment on said latch bolt, a latch bolt holdback member including side portions extending along the outer sides of said side walls and pivotally mounted intermediate their ends on said side walls whereby said holdback member is adapted for rocking movement into and out of holdback position, a projection on at least one of said side portions movable into the path of said abutment when the latch bolt is retracted and the holdback member is in holdback position whereby movement of the latch bolt to projected position is prevented, crossbars extending between the opposite ends of said side portions and transversely across the opening in said casing, said crossbars being engageable by the free end of said operating lever whereby, when said lever is rotated in one direction it engages one of said crossbars and rocks the holdback member into holdback position and when rotated in the opposite direction it engages the other of said crossbars and rocks said holdback member out of holdback position.

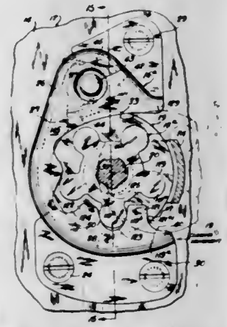
3,047,324
DOOR LATCH MECHANISM
Robert H. Fredericks, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 13, 1955, Ser. No. 515,017
2 Claims. (Cl. 292—280)

1. In combination, a rotatable latch device mounted on the free edge wall of a swinging door, said latch device being axially divided into a rotatable plate portion and a rotatable portion having tooth-like projections thereon, a keeper device mounted on the jamb face of a door framing member, said keeper device having projections forming tooth spaces to receive said tooth-like projections and



a recess to receive said plate portion when said door is in closed position, said plate portion being adapted to coact with said keeper projections to resist any force urging the free edge wall of the door away from said jamb face thereby preventing lateral disengagement of said projections when in mesh with each other.

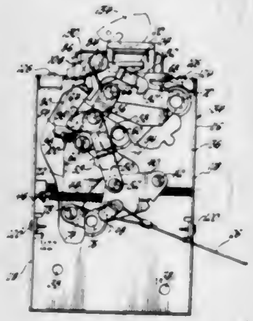
3,047,325
DOOR CONTROL MECHANISMS
Angelo R. De Vito, 1210 Mayfair Place, Rockford, Ill., assignor to Lisle W. Menzimer, Rockford, Ill., trustee
Filed July 2, 1959, Ser. No. 824,689
17 Claims. (Cl. 292—280)



1. In door control mechanism for use with a doorpost and a swingable door having an edge face in an opposed relation to said doorpost when the door is in closed position; a hollow keeper secured on said doorpost comprising connected front and edge walls and having a latch receiving opening which includes a notch in said front wall and a keeper pocket at the rear of said front wall; said edge wall having an access opening communicating in a lateral direction with said pocket and notch; said pocket having upper and lower pocket portions extending above and below said notch, and an intermediate pocket portion on the side of said notch remote from said access opening; said front wall having continuously connected portions comprising vertically spaced upper and lower front wall portions above and below said notch and overlying said upper and lower pocket portions, and an intermediate front wall portion overlying said intermediate pocket portion; holding means on said lower front wall portion; a latch pivoted on said door adjacent said edge face and movable into said latch receiving opening to

a door-latched position in engagement with said holding means; said edge wall having a lower edge wall portion spaced below said holding means and forming the bottom of said lower pocket portion; and a roller pivoted on said door adjacent said edge face for guiding engagemen: with said lower edge wall portion during movement of the roller into said access opening to facilitate entry of the latch into said latch receiving opening; said latch and roller having a common pivot axis; said roller being movable into said pocket to a door-latched position behind, and in overlapping relation to, said upper, lower and intermediate front wall portions to prevent spreading apart of said door and doorpost; the door-latched position of said roller being with the lower portion thereof in spaced relation to said lower edge wall portion, and the door-latched position of said latch being in a door-supporting engagement with said holding means.

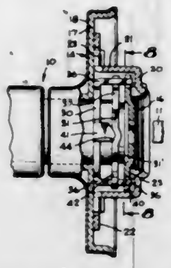
3,047,326
CLOSURE LATCH
James D. Leslie, Birmingham, and Gerhard Rehkugler, Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 15, 1960, Ser. No. 36,420
11 Claims. (Cl. 292—341.15)



7. A striker assembly comprising, a fixed support, striker means mounted on said fixed support for bodily movement relative thereto between extended and retracted positions, detented means swingably mounted on said fixed support, detent means mounted on said striker means for selective and alternate engagement with said detented means in said extended and said retracted positions of said striker means, means for disengaging said detent means from said detented means in said extended and retracted positions of said striker means, first means for moving said striker means from said extended position to said retracted position upon release of said detented means, and second means for moving said striker means from said retracted position to said extended position upon release of said detented means.

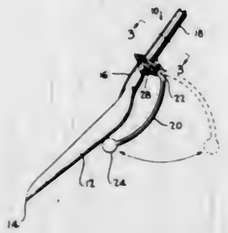
3,047,327
LOST MOTION LOCKING DEVICE
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif.
Filed Oct. 31, 1960, Ser. No. 66,384
3 Claims. (Cl. 292—359)

1. In a door lock having an outer operating member, an inner operating member, a stationary member, and a collar, said inner operating member having a rotatable and axially movable mounting relative to said stationary member and said collar, a lock washer having a non-rotatable engagement with said outer operating member, said lock washer having a locking engagement with said stationary member in one axially shifted position and disengaged from said stationary member in another axially shifted position, a detent element on said inner operating member, an extension of said collar being in axially slidable and non-rotatable engagement with said lock washer, cam elements respectively on said collar and said detent element, a lost motion space extending in a circumferential direction between the detent element and



a portion of said extension of said collar when said detent element is in locked position and said cam elements are in full engagement whereby to inhibit disturbance of said detent element from locked position as a result of rotative impact transferred to said collar from said outer operating member.

3,047,328
SELF-CLEARING SHOVEL AND ATTACHMENT
Jonas H. Mumma, P.O. Box 263, Columbia, Pa.
Filed May 31, 1961, Ser. No. 113,788
3 Claims. (Cl. 294—59)

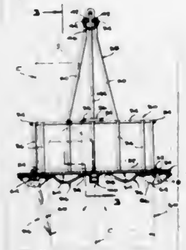


1. A self-clearing shovel comprising a generally rectilinear handle portion and a blade carried at the forward end of said handle portion symmetrically to a plane containing the major longitudinal axis of said handle portion, in combination with a rigid pendulum supported from said shovel for free swinging movement in said plane about a fixed axis extending transversely to said plane in a location adjacent the rear end of said blade, said pendulum having a free end positioned to impact against said blade medially thereof along said plane.

3,047,329
DROP BOTTOM BASKET
Henry W. Gunderson, Jr., Box 696, and Albert A. McGrath, 1819 Ruby St., both of Ely, Nev.
Filed Oct. 16, 1959, Ser. No. 846,953
4 Claims. (Cl. 294—69)

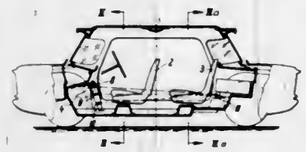
1. A drop bottom basket comprising a horizontal open frame having side members and end members, an upstanding fence fixed to said frame, said frame having side walls and end walls severally located on said side and end members, a pair of doors having outer side edges and inner side edges, said doors extending across the opening of said frame, means hinging the doors at their outer side edges to the side members of the frame, spring means on said side members biasing the doors upwardly toward

the frame for closing the frame opening, latch assemblies mounted on the frame end members, said assemblies having spring projected latch bars normally engaged with the undersides of the doors and bridging the inner side edges of the doors in the closed positions of the doors, an inverted bail handle comprising a horizontal cross member and downwardly extending legs, said legs being fixed at their lower ends to the end walls of the fence, and



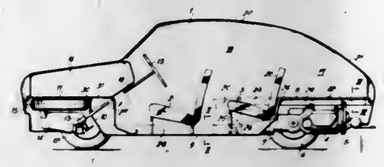
an inverted U-shaped operator for the latch assemblies having a cross piece extending along the handle cross member and downwardly extending legs, the operator legs being cam rods having lower ends, means mounting the operator on the frame for vertical movement relative to the handle, said latch assemblies comprising cam levers operatively connected to their latch bars, the lower ends of the cam rods being operatively engaged with the cam levers.

3,047,330
AUTOMOBILE WITH CAMPING BED
Béla Barényi, Stuttgart-Vaihingen, and Hermann Renner, Magstadt, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Dec. 17, 1959, Ser. No. 860,241
Claims priority, application Germany Dec. 20, 1958
10 Claims. (Cl. 296—23)



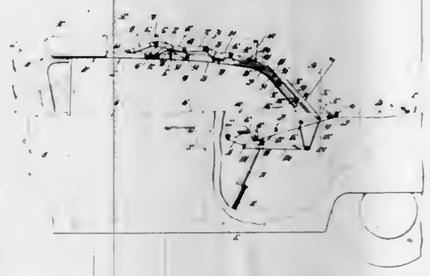
1. In an automobile having an enclosed passenger compartment defined by side walls and a bottom and having removable seats adapted to be removed to substitute therefor beds, the combination of at least two pairs of members on each longitudinal side of the passenger compartment having securing means disposed above the level of said bottom adapted to secure removable bed means, each of said bed means including a front crossbar and a rear crossbar each adapted to be secured by respective pairs of said members, and including a wide strip of material connecting each front bar with each rear bar, at least two of said pairs being mounted in a relatively fixed position in said compartment, means for adjustably mounting at least two laterally adjacent pairs of said members, tightening means for shifting said laterally adjacent pairs in the longitudinal direction of said compartment for tightening said strips, said adjustable mounting means and said tightening means including lever means, said lever means being rotatably secured to said bottom between said forward crossbars substantially on the longitudinal axis of said vehicle, each of said forward crossbars being removably mounted upon said lever means, and said lever means being adapted to tighten both of said strips simultaneously.

3,047,331
FRAME CONSTRUCTION FOR VEHICLES
Ferdinand Porsche, Erwin Komenda, and Friedrich Blaschka, Stuttgart, Germany, assignors to Dr.-Ing. h.c.F. Porsche K.G., Stuttgart-Zuffenhausen, Germany
Filed Feb. 12, 1959, Ser. No. 792,841
Claims priority, application Germany Mar. 1, 1958
2 Claims. (Cl. 296—24)



1. A sub-frame for a self-supporting vehicle body of a passenger motor vehicle normally including a drive aggregate, wheel suspension means, and front and rear axle means and provided with fire wall means and with seat means including a seat for the vehicle driver and a passenger seat by the side thereof having backrest means defining a passenger space between said fire wall means and said backrest means, comprising sheet metal floor means extending essentially over the entire vehicle width and including a center portion and two end portions, said end portions extending outwardly from said passenger space in the longitudinal direction of the vehicle from said fire wall means and said backrest means and being offset upwardly with respect to said center portion of said floor means, said end portions and said center portion of said floor means extending essentially uninterruptedly over essentially the entire length of the vehicle, said end portions constituting simultaneously within the region of said front and rear axle means cover means for the drive aggregate, the wheel suspension means and auxiliary aggregates disposed therebelow, and a dashboard means secured to said sheet metal floor means at the front end of said passenger space including means for pivotally mounting the part of said dashboard means disposed in front of the passenger seat and to the side of the driver's seat of said seat means to thereby make available effectively as a loading area a space sufficient to accommodate objects which have a length almost equal to the length of the vehicle.

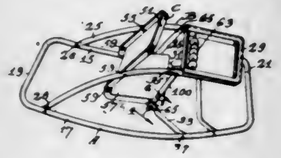
3,047,332
CONVERTIBLE TOP
Arthur J. Carpenter, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 6, 1961, Ser. No. 115,119
5 Claims. (Cl. 296—116)



5. In a convertible vehicle body, the combination comprising, a foldable top frame including a pair of pivotally connected rail sections, means swingably mounting one of said rail sections on said body to mount said top frame thereon for movement between raised and lowered positions, operating means for so moving said top frame, a power arm, means pivotally connecting

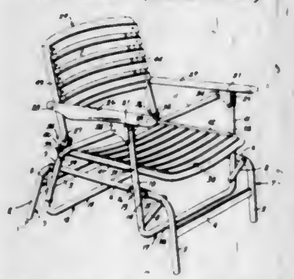
said power arm to said one rail section for movement therewith and movement relative thereto, control means operatively connected to the other rail section to fold said other rail section relative to said one rail section, a shiftable link pivotally interconnecting said control means and said power arm, a channel guide secured to said one rail section and receiving said link therein, means slidably connecting the pivots of said link to said guide to control the movement of said link, and means controlling the movement of said power arm relative to said one rail section upon swinging movement of said one rail section relative to said body.

3,047,333
CHILD'S COLLAPSIBLE ROCKING CHAIR
William Stanimir, Rosemount, Montreal, Quebec, Canada, assignor to Victoria Precision Works Company Limited, Montreal, Quebec, Canada
Filed June 1, 1960, Ser. No. 33,220
3 Claims. (Cl. 297—32)



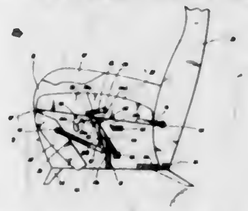
1. A collapsible rocking chair, comprising, a rocker base frame, an upper frame having a pair of parallel arms each pivoted to the base frame adjacent one end thereof, a pair of collapsible struts extending between the base and upper frames toward the other end thereof, the struts in extended position retaining the second end of the upper frame spaced from the base frame and in collapsed position permitting the upper frame to be folded against the base frame, a back pivoted to the upper frame midway of its height, and a seat pivoted to the bottom of the back and to the struts whereby the seat can move from set-up position when the respective frames are in set-up position to collapsed position when the frames are in collapsed position, and releasable means on the struts for retaining them in extended position and releasing them for collapse.

3,047,334
FOLDABLE SWING CHAIR
Robert D. Vanderminden, Granville, N.Y., assignor to The Telescope Folding Furniture Co., Inc., Granville, N.Y., a corporation of New York
Filed Feb. 17, 1960, Ser. No. 9,299
6 Claims. (Cl. 297—39)



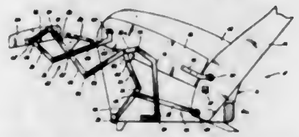
1. A foldable swing chair comprising a seat portion, a back-rest portion and arm-rests, pivotal means for joining said seat portion, back rest portion and arm-rests to move into substantially parallel planes and to move into a disposition in which said seat portion and arm-rests are in planes substantially at right angles to the plane of said back-rest, a base member, frame means comprising two substantially U-shaped structures hinged together at their open ends on which said seat portion, back-rest portion and arm-rests are carried, link means pivotally secured to the base member and to the frame means to permit relative gliding movement of said seat and back-rest portions with respect to said base member, and said base member including side pieces each including front and rear legs joined by a cross member and forming an inverted substantially U-shaped side piece, said side pieces having their front and rear legs joined by rigid transverse members, and each cross member having hinging means to permit the collapse of the base member to a compass substantially smaller than that of its uncollapsed compass with its front legs extending towards its rear legs in a plane substantially parallel to said substantially parallel planes.

3,047,335
RECLINING CHAIR
Anton Lorenz, Ocean Ridge, Boynton Beach, Fla.
Filed Sept. 22, 1958, Ser. No. 762,482
10 Claims. (Cl. 297—85)



1. A reclining chair comprising a support, a body-supporting unit including a seat and back-rest movable relative to each other for inclining and reclining movement respectively and mounted on said support for movement through a first phase of chair movement from a sitting position into an intermediate resting position and for further movement through a second phase from said resting position into a reclining position, and seat control means for displacing said seat relative to said back-rest in response to movement of said body-supporting unit, said seat control means including a carrier pivotally mounted on said support at a carrier pivot, means engageable with said carrier in the sitting position of said body-supporting unit for establishing a substantially stationary position for said carrier, and interengaging guide means on said carrier and said seat for imparting a first inclination to said seat during said first phase of chair movement, said interengaging guide means providing a lost-motion interconnection between said seat and carrier during said first phase of chair movement such that said carrier remains in said stationary position and providing an operative interconnection between said carrier and said seat during said second phase of chair movement such that said carrier turns about said carrier pivot and imparts a second inclination to said seat during said second phase of chair movement.

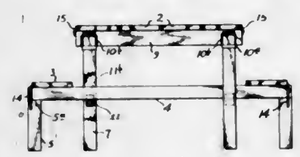
3,047,336
RECLINING CHAIR AND SEAT CONTROL
Fridtjof F. Schliephacke, Berlin-Schmargendorf, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed May 6, 1959, Ser. No. 811,315
8 Claims. (Cl. 297—85)



1. A reclining chair comprising a support, body-supporting means including a seat and back-rest adapted to

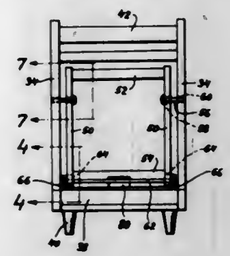
be mounted for inclining and reclining movement respectively for a first movement phase from a sitting position to an intermediate tilted sitting position with a substantially fixed angular relationship between said seat and back-rest and for a second movement phase from said intermediate tilted sitting position to a fully reclined position during which there is an increasing angular relationship between said seat and back-rest, means movably mounting said back-rest on said support at a back-rest pivot for reclining movement, means movably mounting said seat on said back-rest at a seat pivot spaced above said back-rest pivot for inclining movement, seat control means including a toggle linkage for inclining said seat at a variable rate in response to uniform movement imparted thereto from said back-rest such that there is substantially no angular change between said seat and back-rest during said first movement phase as said body-supporting means moves into said intermediate tilted sitting position and such that there is an increase in the angular relationship between said seat and back-rest during said second movement phase and as said body-supporting means moves into said fully reclined position, said toggle linkage mechanism including a pair of links joined together at a knee pivot and disposed at an angle with respect to each other in said sitting position, one of said links serving as a driver link and having a pivotal mount on said support and the other of said links serving as a connecting link and being pivotally connected to said seat to produce a toggle effect thereon, and means coupling said driver link to said back-rest such that said driver link moves in a rotary path and produces an axial force along the line of action of said connecting link such that said seat is inclined relative to said back-rest during said first movement phase to maintain said fixed angular relationship and is inclined during said second movement phase to establish said increasing angular relationship.

3,047,337
COLLAPSIBLE TABLE
Clema Carver, 5311 SE. Bush, Portland, Oreg.
Filed Mar. 6, 1961, Ser. No. 93,782
4 Claims. (Cl. 297—157)



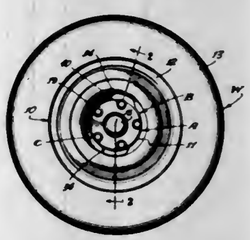
1. A combination table and seat having the members detachably joined for quick attachment and detachment, comprising a plane trestle board top member, a pair of sawhorse supports comprising inclined related pairs of leg members, laterally extending beam members extending between the upper ends of related pairs of leg members by self-wedging joint means, securing said beam members to said leg members, detachable brace members joining related pairs of leg members at points thereon intermediate the ends of said leg members, plane stretchers extending laterally between related pairs of leg members bearing upon and notched into the braces between said related pairs, plane elongated seat members, said stretchers being substantially longer than the sawhorse supports with which they are related, respectively, the excess length extending equal distances beyond the related sawhorse supports to constitute rests for the elongated seat members, seat supporting legs detachably joined to the extremities of the stretchers, and quick detachable fastening devices for securing certain of said members together to produce a rigid structure.

3,047,338
UPHOLSTERED ARTICLES OF FURNITURE
Poul Frederik Wiberg Jörgensen, 27 Frodesgade, Esbjerg, Denmark
Filed Feb. 24, 1959, Ser. No. 794,924
Claims priority, application Denmark Feb. 24, 1958
7 Claims. (Cl. 297—357)



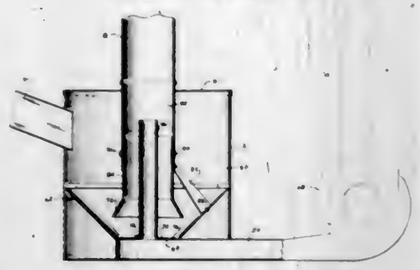
1. An upholstered article of furniture provided with a seat and a back, said back comprising two side members and at its upper end a neck cushion, each side member including a side frame member, said neck cushion including a transverse member interconnecting said two side frame members, said transverse member and said two side frame members defining between them an opening, a back support made as a separate upholstered unit arranged in said opening, said back support comprising a frame, said frame comprising two side frame bars and a lower transverse frame bar interconnecting said two side frame bars, said side frame bars having upper parts pivotably connected to said two side frame members, said lower transverse frame bar having a rear face and a lower edge, a rod being arranged along said lower transverse frame bar at said rear face thereof connected to said back support transversely displaceable upwards and downwards between at least two rod positions, each said side frame member being provided with a fitting secured thereto opposite said rod, said fitting being provided with at least one upwardly extending abutment edge for engagement with said rod when this rod is in one of its said two rod positions.

3,047,339
WHEEL BALANCER
Leland S. Hamer, 4170 Lakewood Drive, Lakewood, Calif.
Filed Jan. 6, 1960, Ser. No. 871
5 Claims. (Cl. 301—5)



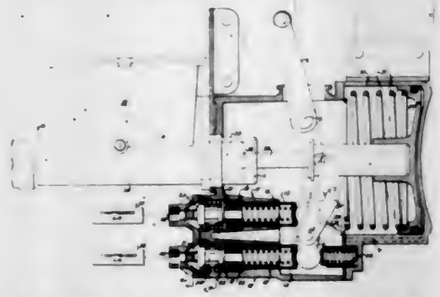
1. A balancing ring assembly including, a pair of rings, each having axially disposed inner and outer ends and a radially offset balance weight extending circumferentially about a portion thereof and projecting axially inwardly from the inner end thereof, said rings being arranged in axial alignment with their inner ends in opposed relationship and with the weight on each ring slidably engaging the other ring about a portion thereof, whereby the weight of each ring supports a portion of the other ring and maintains it in axial alignment therewith.

3,047,340
MATERIAL HANDLING APPARATUS
Verl K. Graves, South Bend, Ind., assignor to George O. Graves, South Bend, Ind.
Filed Sept. 29, 1958, Ser. No. 763,987
7 Claims. (Cl. 302—17)



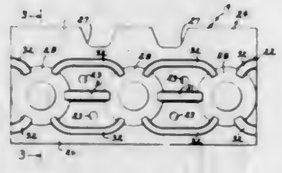
1. A conveyor system for handling in bulk relatively light frangible objects, comprising a cylindrical housing with its axis in vertical position, a frusto-conically shaped wall member positioned with its small end downwardly in said housing, a bottom in the lower end of said member having a plurality of concentrically arranged arcuate slots therethrough, a rotatable plate on the upper surface of said bottom having slots corresponding to the slots in said bottom, a blower, a conduit connecting said blower with said slots, a vertically arranged outlet pipe of substantially the same diameter as said bottom positioned above and spaced from said bottom, an extension in the lower end of said pipe movable toward and away from said bottom, an outwardly and downwardly flaring annular flange on the bottom of said extension, the lower end of said flange having a cross-sectional area sufficiently large to embrace the area in said bottom containing said holes, a vertically arranged tube in the center of said bottom extending upwardly into the lower end of said pipe and communicating with said conduit, and a materials inlet opening in said housing above said wall member.

3,047,341
SERVOBRAKE WITH DUPLEX DISTRIBUTOR FOR BRAKING EQUIPMENT OF THE HYDROPNEUMATIC KIND
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiani Magneti Marelli S.p.A., Milan, Italy, a company of Italy
Filed Mar. 24, 1958, Ser. No. 723,580
Claims priority, application Italy Mar. 23, 1957
3 Claims. (Cl. 303—53)



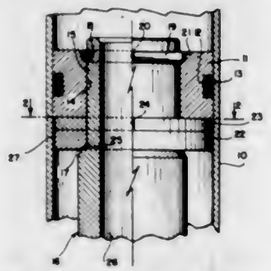
1. Brake control apparatus adapted for operative connection to first and second braking sections and for initiating the operation of the first section in advance of the second section, said apparatus comprising a source of pressure fluid adapted for connection to said second section, a plunger in said source to urge said fluid towards said second section, a chamber, a piston in said chamber, a rod connecting said piston to said plunger to control movement of the plunger in said source whereby the connection of the fluid to said second section is controlled, first and second distributors, a source of pressure fluid connected to said distributors, elements in the distributors to open the same for the discharge of pressure fluid supplied thereto, means connecting the first distributor to said first braking section for supplying pressure fluid to the same, means defining a passageway between said second distributor and said chamber for the discharge of pressure fluid supplied to said second distributor for actuating said piston, a lever system coupled to said elements for displacing the same thereby to cause discharge of the fluid supplied to the distributors, and means including a spring operatively associated with said lever system to supplement the action of the same on the element in said first distributor whereby the latter discharges in advance of the second distributor, discharge of the second distributor acting through said piston to move said plunger to discharge pressure fluid to said second section whereby the operation of the said second section is initiated after the first section.

3,047,342
TRACK SHOE FOR CRAWLER TYPE VEHICLE
Hall W. Thompson and Evard R. Stewart, Birmingham, Ala., assignors to Thompson Tractor Co., Inc., a corporation of Alabama
Filed June 9, 1961, Ser. No. 116,072
4 Claims. (Cl. 305—53)



1. The combination with an endless track of a crawler type vehicle, of a plurality of movable ground engaging shoes on the track and having generally flat outer surfaces, a plurality of substantially equally spaced projections on the outer surface of each shoe extending in a direction generally perpendicular to the outer surface of the shoe and aligned transversely of the direction of travel of the vehicle, and ribs on the outer surface of each shoe, each extending in a direction generally transversely of the direction of travel of the vehicle and between the projections, said ribs comprising an intermediate rib and an outer rib on each side of the intermediate rib spaced therefrom whereby the ribs and projections tend to compact the ground over which the track moves.

3,047,343
RETAINING DEVICE
Alford K. Stewart, Burbank, and Roger A. Keech, Glendale, Calif., assignors to Menasco Manufacturing Company, Burbank, Calif., a corporation of California
Filed Feb. 8, 1960, Ser. No. 7,340
1 Claim. (Cl. 308—3)



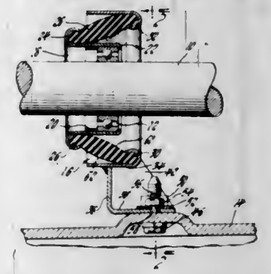
In combination, a cylinder, a shaft located within said cylinder, a retaining end portion on said shaft of reduced diameter, an offset shoulder on said shaft connecting one end of said end portion with the remainder of said shaft, a single circular member having a close sliding fit in said cylinder, an annular groove on its outer surface adapted to receive an annular resilient member coactive with the bore of said cylinder for sealing said single member relative to said bore of said cylinder and an opening for slidably receiving said end portion, an annular groove in the other end of said end portion, a split retaining ring partially contained within said annular groove and extending outwardly from said end portion, a grooved recess at one end of said single member for receiving and confining the extending portion of said retaining ring, an annular ring located adjacent said offset shoulder and having an outer diameter substantially smaller than said single member and substantially greater than said offset shoulder, and a split ring positioned between said annular ring and the other end of said single member for holding said grooved recess against the retaining ring and retaining said member in position on said end portion.

3,047,344
DRILLING TOOLS FOR TURBINE DRILLS
Charles Gros, La Tronche, France, assignor to Etablissements Neyrpic, Grenoble, France, a corporation of France
Filed Apr. 7, 1959, Ser. No. 804,751
1 Claim. (Cl. 308—8.2)



A turbine drilling tool operable at high speed and under heavy stress and wear conditions comprising a metal axial member having an exterior surface extending over the sides and outer end of said member and formed to provide a surface of revolution of large area and capable of supporting both axial and radial forces created during a drilling operation, a rotatable cutting wheel mounted on said axial member and having a metallic interior surface in spaced relation to the metallic exterior surface of said axial member and being coextensive with and enclosing said exterior surface, and a layer of self-lubricating material located between said spaced metallic surfaces of said axial member and said cutting wheel to enable the rotation of said cutting wheel on said axial member to take place by a sliding movement between a metal surface and a surface of said self-lubricating material, said layer of material having a coefficient of friction of the order of .005, and including a solid lubricant and a binding agent constituted of a resin having high resistance to mechanical forces and selected from the group consisting of ethylenoxyd and superpolyamid resins, said material being in the form of a continuous layer of substantially uniform constitution and of substantial thickness, and having a configuration corresponding to and coextensive with said surfaces so as to continuously occupy the area between said spaced metal surfaces of said axial member and cutting wheel, and to be subject to the axial and radial forces imparted by said cutting wheel in the operation of the tool, said axial member having a reduced root portion to provide an annular shoulder at the inner end of said exterior surface of said axial member, said cutting wheel having an annular shoulder at the inner end of the interior surface thereof and in substantial radial alignment with said axial member shoulder, a flat annular gasket of said self-lubricating material seated on both of said shoulders and extending transversely across the inner end of said layer of self-lubricating material, an annular locking ring seated on said gasket of self-lubricating material and both of said shoulders, the inner side of said locking ring in opposed relation to the exterior surface said reduced root portion of said axial member being provided with an annular recess encircling said root portion, and a resilient gasket of elastic material disposed in said annular recess and being in compressed condition between the inner wall of said annular recess and said exterior surface of said root portion to provide a pressure seal against leakage of the drilling fluid along said latter surface to said self-lubricating material.

3,047,345
DRIVE SHAFT BEARING SUPPORT
Robert W. Burton, Farmington, and Edward Sich, St. Clair Shores, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 68,742
5 Claims. (Cl. 308—28)

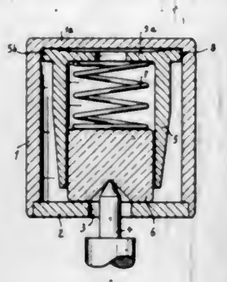


1. A vehicle drive shaft center bearing support and vibration isolating means comprising a first cylindrical member adapted to be secured to a vehicle underbody frame member and to receive a vehicle drive shaft therethrough, a second cylindrical shaft receiving member spacedly embraced by said first cylindrical member, and a resilient annular sleeve member in the form of a frustum of an oblique cone interposed between and secured at opposite ends thereof to said first and second cylindrical members, said resilient sleeve member having convex inner and outer surfaces intermediate the secured end portions thereof and being adapted to provide variable deflection rate characteristics due to rolling action between said resilient and cylindrical members and variations in the deflective arm lengths of the resilient member as a result of lateral, longitudinal and torsional shaft deflections under vehicle operating conditions, the intermediate portion of the resilient sleeve member further serving as an initially soft variable stop bumper between said first and second cylindrical members thereby preventing excessive deflection of the drive shaft under certain road and torque load conditions.

3.047.346
SHOCK-ABSORBING BEARING FOR THE MOVABLE ELEMENT OF A SMALL MECHANISM
Edouard Loretan, Le Sentier, Switzerland, assignor to Parechoc S.A., Le Sentier, Switzerland, a firm of Switzerland
Filed Apr. 24, 1961, Ser. No. 105.027
Claims priority, application Switzerland May 6, 1960
2 Claims. (Cl. 308—159)

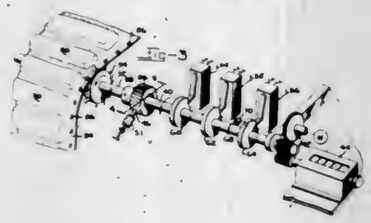
1. In a shock-absorbing bearing for a movable element of a small mechanism, a bearing support, a tubular mount

movably mounted in the said support, the rear end of which is provided with an inner shoulder, a step-bearing mounted in the said mount so as to be axially movable therein, the front end of the said mount being open so as to permit the free passage of the said step-bearing, and



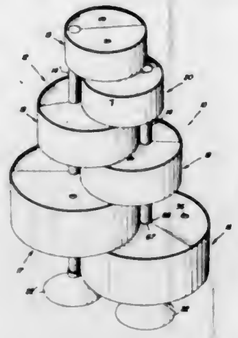
a resilient element housed in the said mount, behind the said step-bearing, interposed between the latter and the said inner shoulder, whereby the said resilient element acts axially on the said step-bearing and on the said mount to apply them respectively to two opposite surfaces of the bearing support.

3,047,347
CONTROLLING MOVEMENT OF ARTICLES
Robert C. Groves, 335 Aberdeen Ave., Dayton, Ohio
Filed Apr. 25, 1955, Ser. No. 503,769
3 Claims. (Cl. 312—39)



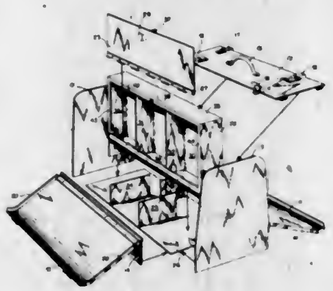
1. In a dispensing device; a frame, a discharge opening therein, said device being adapted for feeding a tubular carrier strip within said frame through said discharge opening, said carrier strip having punched holes distributed uniformly along the length thereof, a driving pinwheel having pins adapted for engaging said series of punched holes, a motor for driving said pinwheel, a one-way drive between the motor and pinwheel, means for controlling the energization of said motor to control the feeding of said strip from said device, said last-mentioned means comprising a plurality of cam means connected with said motor to move in unison with the motor, a limit switch under the control of each said cam means, each switch being actuated by its respective cam means in a different rotated position of said motor, a relay pertaining to each switch, each switch being operable to deenergize its pertaining relay when actuated, each relay being connected with the motor so energization of any of the relays will energize the motor, coin-operated means for selectively energizing said relays thereby seelctively making said limit switches effective for de-energizing said motor in response to a predetermined rotation, resilient means operable to return the motor to its starting position upon de-energization thereof, a latch normally effective to lock the pinwheel against rotation, and means connected to said relays operable automatically for making the latch ineffective when the motor is energized and effective when the motor is de-energized.

3,047,348
POLE-MOUNTED SUPERPOSED COMPARTMENTS
Barbara J. Hickox, 2014 Dawson, Long Beach, Calif.
Filed Dec. 21, 1960, Ser. No. 77,308
7 Claims. (Cl. 312—202)



1. A structure comprising a longitudinally extending pole, a plurality of elements on said pole, each of said elements having a flat surface extending substantially normal to the axis of said pole, at least some of said elements being eccentrically and rotatably mounted on said pole, said pole being divided into a plurality of separately rotatable sections, each of said elements being fixed to one of said sections by means of radially extending arms fixed to said section and clips fixed on said elements, said clips each comprising a pair of parallel plates overlapping said arms, each plate lying in a plane parallel to the axis of said pole.

3,047,349
CARRIER FOR FISHING TACKLE
Horace C. Powell, Rte. 2, Fuquay Springs, N.C.
Filed Apr. 24, 1959, Ser. No. 808,664
2 Claims. (Cl. 312—287)



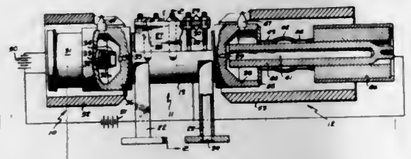
1. A fishing tackle carrier in the form of a rigid structure comprising a rectangular shaped box including a pan like base for storage and having its opposite sides open above said base; a fixed vertical wall acting to vertically partition said box including said base; an L-shaped wall contiguous to said vertical wall, mounted above said base and between the ends of said box whereby to form a second storage pan above said base; a first closure hingedly mounted on said L-shaped wall and closing the space above said base opposite said vertical wall; additional closures hingedly connected to said base and adapted to close opposite sides of the box in substantially wide spaced relation to the first closure and vertical wall thereby allowing vertical hanging storage of the tackle to be effected between the vertical wall and the first closure, between the first closure and the box closure adjacent thereto and between the vertical wall and the box closure adjacent thereto.

3,047,350
AUDIOMETER CASE
Joel Eckstein and Leo H. Eckstein, both of 1907 Beverly Blvd., Los Angeles, Calif.
Filed July 6, 1960, Ser. No. 41,104
2 Claims. (Cl. 312—300)



1. A portable electronic unit including: a casing having a bottom and a pair of parallel upstanding end walls and a pair of parallel upstanding side walls all integral with one another and with said bottom, a chassis for electronic equipment and circuitry having an essentially solid rectangular configuration, a first hinge means affixed to one of said side walls and to said chassis to cause said chassis to be pivotable about the pivotal axis of said first hinge means from a position within the casing essentially parallel to the bottom thereof and below the plane defined by the upper edges of said upstanding walls to an inclined position in which said chassis extends out of said casing up through said plane, spring means included in said casing for pivotally biasing said chassis to an upright position, a cover member for said casing, a second hinge means affixed to said cover member and to the other of said side walls to have a pivotal axis spaced from said first hinge means so that said cover member and said chassis may form an apex when said chassis is in said inclined position, a fastener means affixed to one of said side walls, a housing supported on said cover member with said cover member forming a bottom for said housing, said housing being formed of two hinged sections to permit access thereto, and means mounted on one of said hinged sections of said housing to be engaged by said fastener means to enable said housing to be held in a closed condition and further to enable said cover to be held closed over the top edges of said side walls to retain said chassis in said first position against the biasing force of said spring means.

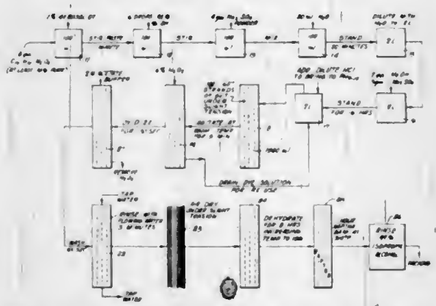
3,047,351
ELECTRON DISCHARGE DEVICE
Frederick L. Salisbury, Los Altos, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California
Original application Mar. 25, 1954, Ser. No. 418,714, now Patent No. 2,892,121, dated June 23, 1959. Divided and this application May 14, 1959, Ser. No. 813,157
2 Claims. (Cl. 316—23)



1. The method, in a multicavity klystron having a plurality of drift tube members longitudinally aligned in the main section of the klystron and a beam-producing cathode, of aligning the cathode with the electron beam path through the central openings in the drift tube members which comprises the steps of forming a small hole through the center of the cathode, longitudinally aligning a source of light with the openings in the drift tubes adjusting the position of the cathode at the cathode end of the main section until the light is longitudinally projected through the central hole in the cathode and the drift tube openings, and fixedly securing said cathode in that position.

CHEMICAL

3,047,352
DYED SURGICAL GUT AND PROCESS
Anthony F. Santoro, Bound Brook, N.J., and Walter P. Hwozdek, Fairfield, Conn., assignors to Ethicon, Inc., a corporation of New Jersey
Filed Jan. 11, 1960, Ser. No. 1,470
8 Claims. (Cl. 8—3)



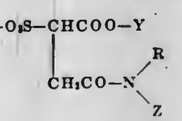
3. The process of dyeing surgical gut comprising the steps of impregnating surgical gut formed of protein collagen with indigotin solution in leuco form, said gut being secured under slight tension to retard deformation and hydration, and exposing said gut to an oxidizing agent to change the color of said indigotin.

3,047,353
OIL-IN-WATER EMULSIONS
Arthur F. Klein, Holland, Pa., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Feb. 11, 1960, Ser. No. 7,974
12 Claims. (Cl. 8—86)

1. A stable, creamy-white oil-in-water type emulsion suitable for use as a vehicle in the coloring of fibrous materials, said emulsion having

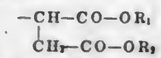
(*a*) an inner disperse phase comprising an inert liquid hydrocarbon in an amount of from about 15 to about 80 weight percent of the total weight, said hydrocarbon having the upper limit of its boiling range between about 300° and about 400° C., and

(*b*) an outer phase comprising water and an amide of sulfosuccinic acid having the following formula



wherein X and Y are cations selected from hydrogen and salt-forming radicals, R is selected from the alkyl, hydroxyalkyl and alkoxyalkyl radicals of from

about 12 to about 20 carbon atoms, and Z is selected from hydrogen and



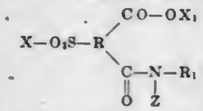
wherein R_1 and R_2 are selected from hydrogen and alkyl and hydroxyalkyl groups containing from about one to about six carbon atoms, the total number of carbon atoms in $R+R_1+R_2$ being in the range from about 16, when R_1 and R_2 are hydrogen, to about 30 when R_1 and R_2 contain carbon atoms, said amide comprising from about 0.4 to about 2.0 weight percent of the total weight.

3,047,354
OIL IN WATER EMULSIONS FOR TEXTILE PRINTING

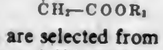
Erling Owren, Foster, R.I., assignor to Cranston Print Works Company, Cranston, R.I., a corporation of Rhode Island

No Drawing. Filed July 15, 1959, Ser. No. 827,152
5 Claims. (Cl. 8—86)

1. In a vehicle suitable for use in the coloring of fibrous materials with indirect dyes, said vehicle being compatible with pigmented water-in-oil emulsions and comprising an oil-in-water emulsion having as an inner disperse phase from about 15 to about 80% by weight of an inert liquid hydrocarbon, said hydrocarbon having the upper limit of its boiling range between about 300° and about 400° C., and as an outer phase water and an emulsifier said emulsifier being selected from the group consisting of (1) those having the general formula



in which X and X_1 are cations selected from the group consisting of hydrogen and salt forming materials, R is a saturated hydrocarbon residue of an aliphatic polycarboxylic acid, R_1 is selected from alkyl, hydroxyalkyl and alkoxyalkyl, and Z is selected from hydrogen and



in which R_2 and R_3 are selected from hydrogen, alkyl and salt forming cations; and (2) a mixture of a major amount of an ammonium soap of a fatty acid with a small amount of a nonionic polyoxyethylene surfactant, the improvement which comprises including in the said inner disperse phase from 2 to 5% by weight based on the weight of said disperse phase of a cellulose ether, said ether being substantially insoluble in water and soluble in said inert liquid hydrocarbon.

3,047,355
PROCESS FOR TREATING TEXTILE MATERIALS

Hanswilli von Brachel, Koln-Sulz, Georg von Finck, Leverkusen, and Werner Langmann, Koln-Mulheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 21, 1959, Ser. No. 807,756
Claims priority, application Germany Apr. 24, 1958
2 Claims. (Cl. 8—115.5)

1. A process for treating textile materials which consists of impregnating the textile materials with a solution of (*a*) a condensate of a member selected from the group consisting of an aromatic amine and a phenolic compound with at least two units of a polyalkylene glycol ether, and (*b*) a member of the group consisting of formaldehyde, a compound splitting off formaldehyde on heating, a compound containing at least two free active methylol groups and a compound containing at least two active methylol groups etherified by a low molecular weight aliphatic alcohol, and heating the impregnated textile materials.

3,047,356
POLYURETHANES

Seymour Polansky, Somerset, Mass., assignor to Globe Manufacturing Company, Fall River, Mass., a corporation of Massachusetts

No Drawing. Original application Sept. 25, 1959, Ser. No. 842,207. Divided and this application Aug. 5, 1960, Ser. No. 53,330
5 Claims. (Cl. 18—54)

1. A process comprising spinning a curable polyurethane from the state of incipient gelation in a solvent into a liquid in which the polymer is insoluble and the solvent is soluble to form a polyurethane filament and adding a curing agent to said filament and then completing the cure.

3,047,357
METHOD FOR PREVENTING DRY ROT IN TIMBER ASSOCIATED WITH MASONRY

Gerald Gobert, 48 Meadway Court, Meadway, London, England

No Drawing. Filed Dec. 10, 1958, Ser. No. 779,282
Claims priority, application Great Britain Dec. 11, 1957
5 Claims. (Cl. 21—7)

1. The method of preventing dry rot in timber associated with masonry, said masonry defining a path along which moisture is inherently conveyed to said timber, said method comprising the steps of forming at least one cavity in said masonry, said cavity being located in said path, and inserting in said cavity a water-soluble mixture of a wetting agent and a dry rot inhibiting composition.

3,047,358
PREPARATION OF BORON-HYDROGEN COMPOUNDS

Herbert Jenkner, Hannover-Wulfel, Germany, assignor to Kali-Chemie Aktiengesellschaft, Hannover, Germany

No Drawing. Filed Oct. 24, 1957, Ser. No. 692,051
Claims priority, application Germany Oct. 27, 1956
3 Claims. (Cl. 23—14)

1. A process for the preparation of sodium borohydride and partially organo-substituted borines, comprising reacting a chlorine containing boron compound of the formula

$$BCl_xR_yR'_z$$

wherein x is an integer from 1 to 3, y and z each are integers from 0 to 2, $x+y+z=3$, R and R′ designate a monovalent organic radical selected from the group consisting of alkyl and alkoxy, in an inert anhydrous organic diluent at a temperature of about 50 to 150° C. with sodium hydride in the presence of about .1 to 50 mol percent, calculated on the sodium hydride, of a sodium hydride activating compound of the formula

$$MH_aR_bR'_c$$

wherein M is an element of the group consisting of boron and aluminum, a is an integer from 0 to 2, b and c are integers from 1 to 3, $a+b+c=3$, and R and R′ have the same significance as in said chlorine containing boron compound, and isolating the obtained hydrogenated boron compound.

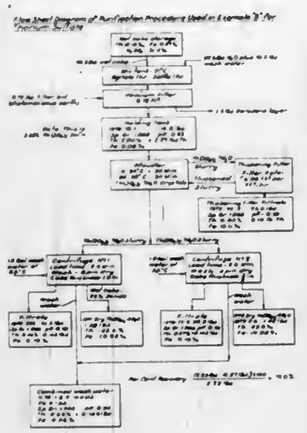
3,047,359
PURIFICATION OF CRUDE THORIUM SULFATE

Clifford W. Kline and Wallis R. Bennett, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed June 16, 1958, Ser. No. 742,000
9 Claims. (Cl. 23—14.5)

1. Process for purifying crude wet cake thorium sulfate containing, as major impurities, sulfates of iron,

yttrium and rare earth elements, which process comprises, initially preparing a solution of the crude thorium sulfate from said wet cake by dissolving it in water at a temperature between about 20° C. and about 50° C. so as to obtain between about 0.75 and 5 weight percent of dissolved thorium sulfate in said solution; heating the crude thorium sulfate solution to a temperature between about



80° C. and the boil; maintaining the crude thorium sulfate solution at said elevated temperature until at least a portion of the thorium sulfate therein precipitates therefrom in the form of a crystallized thorium sulfate hydrate comprising thorium sulfate heptahydrate; then separating the precipitated and purified thorium sulfate hydrate from the crude aqueous solution.

3,047,360
PROCESS FOR EXTRACTING NEPTUNIUM AND PLUTONIUM FROM NITRIC ACID SOLUTIONS OF SAME CONTAINING URANYL NITRATE WITH A TERTIARY AMINE

John C. Sheppard, San Diego, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed July 15, 1958, Ser. No. 748,769
1 Claim. (Cl. 23—14.5)

A process of separating plutonium values and neptunium values from uranium values contained in an aqueous nitric acid solution in which uranyl nitrate is present in a maximum concentration of 1 M, comprising adjusting the nitric acid concentration to about .4 M, adding nitrous acid to yield a concentration of about 0.03 M; adding a solution of about 10% of a tertiary amine, said amine being selected from the group consisting of tri-n-hexylamine, tri-n-heptylamine, tri-n-octylamine, tri-iso-octylamine and trilaurylamine, in a substantially water-immiscible organic diluent whereby the neptunium and plutonium values are taken up by an organic extract phase while the uranium values remain in an aqueous raffinate; and separating said organic extract phase from the aqueous raffinate.

3,047,361
PROCESS FOR THE EXTRACTION OF TUNGSTEN VALUES FROM MATERIALS CONTAINING SAME

Harold M. Hobbard, Green Acres, and John H. Kennedy, Radnor Green, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

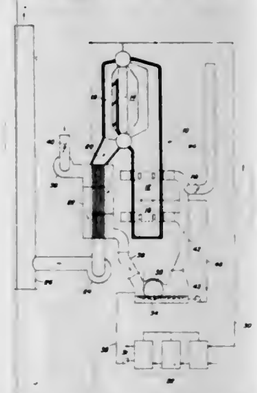
No Drawing. Filed Sept. 11, 1961, Ser. No. 135,418
7 Claims. (Cl. 23—19)

1. A process for the extraction of tungsten values from tungsten-bearing ores, minerals, ore leaches, ore concentrates and the like which comprises heating the tungsten-containing material to a temperature between 80° C. and the boiling point of the mass with a strong mineral acid composition which consists of at least in part of orthophosphoric acid to form a heteropoly phosphotungstic acid complex, said acid composition being present in an amount such that the pH of the resultant acidic mass is not greater than about 2, separating the phosphotungstic acid complex from the acidic reaction mass by extraction with an oxygenated polar organic solvent which preferentially takes up the phosphotungstic acid complex and decomposing said phosphotungstic acid complex into separate tungstate and phosphate components by contacting the organic solution of the phosphotungstic acid complex with an aqueous alkaline solution having sufficient base capacity to raise the pH of the mass to above about 7, said tungstate and phosphate components passing into the aqueous phase.

3,047,362
TREATMENT OF WASTE LIQUORS

Edmond L. Smith, Tenafly, N.J., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 29, 1958, Ser. No. 783,400
9 Claims. (Cl. 23—48)



1. In a chemical recovery unit which includes a furnace and a boiler and wherein liquor obtained in the chemical digestion process of cellulose bearing material is introduced into the furnace of the unit and burned with a portion of the heat that is evolved being imparted to the boiler to generate steam the process comprising concentrating the liquor prior to introducing it into the furnace by first passing it through a multiple effect evaporator, thereafter passing it through a housing, passing air in indirect heat exchange relation with the combustion gases issuing from the boiler thereby heating said air and decreasing the temperature of said gases, conveying this heated air through said housing and contacting the liquor therein with said air thereby evaporating moisture therefrom and further concentrating the same, introducing the liquor from this housing into the furnace and introducing at least a portion of the air conveyed through the housing into the furnace as combustion supporting air for said liquor.

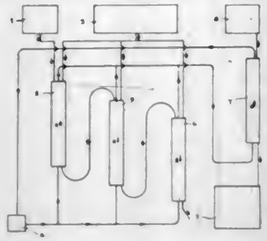
3,047,363
MANUFACTURE OF INORGANIC THIOCYANATES

John Edward Field, Coventry, and Wilhelm Georg Schmidt, Walsgrave, Coventry, England, assignors to Courtaulds Limited, London, England, a company of Great Britain

Filed May 6, 1960, Ser. No. 27,313
Claims priority, application Great Britain May 14, 1959
7 Claims. (Cl. 23—75)

1. A process for the manufacture of the thiocyanates of the alkali metals and of calcium and barium, compris-

ing reacting an aqueous solution of an inorganic thiocyanate with a strong acid in the presence of an inert, substantially water-immiscible liquid in which the thiocyanic acid formed has a markedly greater solubility than in water, separating the aqueous and non-aqueous

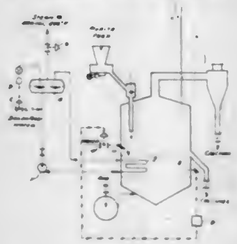


layers, and reacting the thiocyanic acid in the non-aqueous layer with an inorganic reactant selected from the group consisting of the alkali metals, barium, calcium, the oxides and hydroxides of the alkali metals and of barium and calcium.

3,047,364
SULFUR DIOXIDE RECOVERY FROM GASES EMPLOYING ORGANIC BASES
Angel Vian-Ortuño, Madrid, Spain, assignor to Instituto Nacional de Industria, Madrid, Spain
Filed Apr. 13, 1959, Ser. No. 805,973
Claims priority, application Spain Apr. 12, 1958
7 Claims. (Cl. 23—178)

1. A process for the recovery of sulfur dioxide from gases containing the same, comprising the steps of contacting an organic base selected from the group consisting of xylidine, toluidine, quinoline, dimethylaniline, heavy pyridic bases from coal tar, methylamine and ethanolamine with a gas containing sulfur dioxide so as to cause absorption of at least the major portion of said sulfur dioxide by said base; treating said sulfur dioxide containing base with an oxygen-containing gas which is substantially free of sulfur dioxide so as to oxidize a portion of said absorbed sulfur dioxide to sulfur trioxide and to increase the capacity of said base for absorbing additional sulfur dioxide; contacting the thus-treated base with additional sulfur dioxide-containing gas so as to cause absorption of at least the major portion of the thus additionally introduced sulfur dioxide; and recovering absorbed sulfur dioxide from said base.

3,047,365
TEMPERATURE CONTROL IN THE FLUIDIZED ROASTING PROCESS OF SULFIDIC ORES WITH THE BY-PRODUCT RECOVERY OF STEAM
Walfred W. Jukkola, Westport, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware
Filed Apr. 13, 1959, Ser. No. 805,825
5 Claims. (Cl. 23—179)

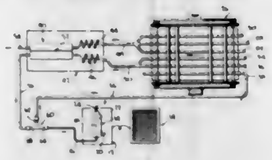


1. In the roasting of sulfidic ores in a fluidized bed reaction chamber with the fluidized material in the bed undergoing exothermic reaction with the fluidizing air to produce SO_2 containing gases, the method of maintaining a required reaction temperature at fluctuating load rates in the bed by the controlled withdrawal of excess heat from the bed with byproduct steam generation by said heat, characterized thereby that a predetermined major portion of the excess exothermic heat is removed from the bed at a constant rate by means of heat exchange elements having predetermined heat transfer area located in the bed whereby sufficient water is circulated at a constant rate through said elements to produce saturated steam with a portion of the water passing through said elements being continuously converted into saturated steam with the result that heat removal from the bed is effected at a constant rate by said elements, while the remainder of said excess heat is removed directly and instantaneously by feeding into the bed injection water while controlling the rate of feed thereof into said bed in accordance with temperature changes in the bed, thus maintaining the reaction temperature constant irrespective of load changes in the bed, and while maintaining a constant differential between the temperature of the reacting fluidized material and the surface temperature of the exchange elements by holding the pressure of the saturated steam constant at a point at which the corresponding temperature of the saturated steam will keep the temperature of the elements themselves sufficiently high to prevent corrosion of said elements by H_2SO_4 incident to the roasting reaction in the bed, and thus maintaining the byproduct steam generation at a uniform rate, with uniform temperature and uniform pressure of the saturated steam, while maintaining predetermined reaction temperature in the bed.

3,047,366
PRODUCTION OF PURE ARSENIC AND PHOSPHORUS
Forrest V. Williams, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 21, 1959, Ser. No. 860,663
6 Claims. (Cl. 23—223)

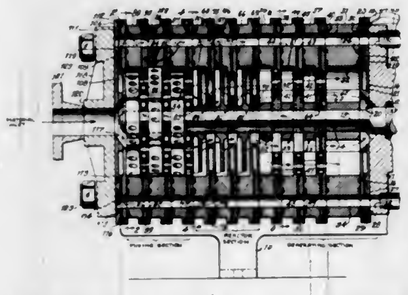
1. Process for purification of an element selected from the class consisting of arsenic and phosphorus containing impurities of the group of fluorine, chlorine, and sulfur compounds which comprises volatilizing the said element and impurities and subjecting the same in the substantial absence of foreign gases to a temperature in the range of from 850° C. to 1,000° C. and thereafter cooling the said gaseous mixture to condense the purified element.

3,047,367
AUTOMATIC ANALYSIS WITH FLUID SEGMENTATION
Gerald Kessler, Tarrytown, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Dec. 1, 1959, Ser. No. 856,463
12 Claims. (Cl. 23—230)



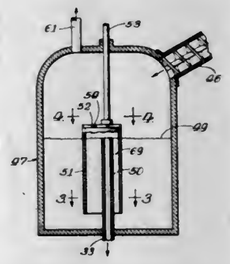
1. In an analyis method wherein a stream of liquid in a tubular passage is dialyzed into a second stream of liquid in a second tubular passage and thereby forming a stream of dialysate in a tubular passage, introducing into said second stream of liquid a stream of cleansing liquid immiscible with and inert to said dialysate and thereby forming a liquid stream comprising segments of dialysate separated from each other by segments of said cleansing liquid, abstracting said segments of cleansing liquid from said dialysate and concomitantly consolidating said segments of dialysate into a continuous liquid stream, and concurrently analyzing said continuous liquid stream with respect to a substance introduced therein by said dialysis from said first mentioned stream of liquid.

3,047,368
COMBINED MIXER, REACTOR AND DEAERATOR FOR CHEMICAL PROCESSES
John Marco, Earleville, Md.
Filed Feb. 20, 1961, Ser. No. 90,310
16 Claims. (Cl. 23—252)



1. A chemical apparatus providing a combined mixer, reactor and deaerator, said apparatus comprising a frame having a flange providing an inner end plate, an impeller drive shaft rotatably mounted in said end plate and projecting axially therefrom, the projecting portion of said shaft having a continuous polygonal cross section, an annular recess in the outer end face of said end plate surrounding said shaft, an air discharge passage in said end plate communicating with said recess, a heat exchange plate abutting the outer end surface of said end plate and having an inner annular opening surrounding said shaft in communication with said recess, a passage in said heat exchange plate for receiving a heat exchange medium, a spacing ring abutting the outer end surface of said heat exchange plate concentric with said shaft to provide an impeller receiving chamber communicating with said opening, a material discharge passage in said ring communicating with said chamber at the periphery thereof, a deaerating section providing a series of axially disposed heat exchange plates abutting the outer end surface of said spacing ring and surrounding said shaft in spaced concentric relationship to an axially extending air flow passage communicating with said chamber, a passage in each of said last named heat exchange plates for receiving a heat exchange medium, an annular recess in each of said last named heat exchange plates providing an impeller receiving chamber, a circular series of axially extending apertures in each of said last named heat exchange plates adjacent the periphery of each of said last named recesses to provide material flow passages between each of said chambers, an impeller disposed in each chamber, each impeller having a polygonal aperture receiving said shaft to provide a driving connection, a plurality of radially extending blades on each impeller, the outer portion of each blade being formed to provide a centrifugal pump for forcing material radially outward in said chambers and through said material flow passages to said material discharge passage, the inner portion of each blade being formed to provide a centripetal pump for forcing air radially inward in said chambers and through said air flow passages to said air discharge passage, a reactor section comprising a second series of axially disposed heat exchange plates abutting the outer end surace of said first series and surrounding said shaft in spaced concentric relationship to provide an axially extending flow passage for material through said reactor section and into said deaerator section, a passage in each of said last named heat exchange plates for receiving a heat exchange medium, an annular recess in each of said last named heat exchange plates providing an impeller receiving chamber, an impeller disposed in each of said last named chambers, each of said last named impellers having a polygonal aperture receiving said shaft to provide a driving connection, each of said last named impellers comprising a set of radially extending vanes curved in one direction and engaging one sidewall of the associated chamber with a wiping contact, a second set of radially extending vanes curved in the opposite direction and engaging the opposite sidewall of the associated chamber with a wiping contact and a disk separating said first and second sets of vanes, the outer diameter of said disk being less than the outer diameters of said set of vanes to provide a material passage between opposite sides of said disk, a mixer section comprising a third series of axially disposed exchange plates abutting the outer end surface of said second series and surrounding said shaft in closely spaced concentric relationship, a passage in each of said last named heat exchange plates for receiving a heat exchange medium, an annular recess in each of said last named heat exchange plates providing an impeller receiving chamber, an impeller disposed in each of said last named chambers, each of said last named impellers having a polygonal aperture receiving said shaft to provide a driving connection, each of said last named impellers comprising a plurality of radially extending vanes curved in one direction and engaging the sidewalls of said last named chambers with a wiping contact, each of said last named vanes having a plurality of radially spaced apertures to provide a mixing action and each of said last named heat exchange plates having a plurality of axially disposed apertures providing a flow passage for material through said mixer section into said reactor section, a heat exchange plate abutting the outer surface of said mixer section, a passage in said last named heat exchange plate for receiving a heat exchange medium, a central aperture in said last named heat exchange plate, an outer end plate abutting the outer surface of said last named heat exchange plate and a material inlet passage in said outer end plate communicating with said mixer section through the aperture in said last named heat exchange plate.

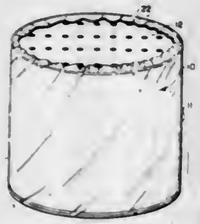
3,047,369
APPARATUS FOR DECOMPOSING SOLID AMMONIUM SULFATE
John C. Montgomery, Hammond, Ind., assignor to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed May 8, 1959, Ser. No. 811,854
7 Claims. (Cl. 23—252)



1. In apparatus for decomposing solid ammonium sulfate crystals into gaseous ammonia and liquid ammonium

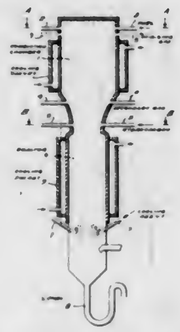
bisulfate, the improvement comprising: an ammonium sulfate decompositon chamber having lower and upper end wall sections and a lateral wall section, a heating means associated with said chamber, a wall of said chamber having an aperture in an upper portion of said chamber to provide a solid material inlet passage for introducing solid ammonium sulfate crystals into a primary decomposition zone within said chamber wherein molten ammonium bisulfate is maintained at a predetermined liquid level, a tubular baffle member with a substantially unobstructed lower end extending downwardly from above said liquid level to a point adjacent and spaced from said lower end wall section whereby said baffle member defines a secondary decomposition zone within said primary decomposition zone with said zones being in communication only at the lower ends thereof, and said baffle member mounted for rotatable movement about a vertical longitudinal axis substantially parallel with the longitudinal axis of said chamber to effect agitation within said chamber, an ammonium bisulfate outlet tube extending through said lower end wall section comprising the only liquid outlet passage of said chamber and extending upwardly from said lower end wall section into the interior of said chamber within said tubular baffle member to the height of said predetermined liquid level for maintaining liquid at said predetermined level, and a wall of said chamber being apertured at a point therein spaced from said first mentioned aperture above said predetermined liquid level to provide a gas outlet passage for conveying gaseous ammonia from said chamber; whereby said molten ammonium bisulfate formed within said decomposition zone is first conveyed downwardly and then upwardly within said chamber while being heated and agitated to separate solid ammonium sulfate and gaseous ammonia from said liquid ammonium bisulfate before said ammonium bisulfate is withdrawn from said chamber through said outlet tube.

3,047,370
TRANSPARENT SODA LIME CARTRIDGE
James A. Avtges, Watertown, John W. Harrison, Winchester, and Robert G. Shaver, Concord, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed July 28, 1959, Ser. No. 830,072
3 Claims. (Cl. 23—252)



1. A non-channeling, disposable, gas absorbent cartridge for re-breathing apparatus comprising a charge of soda lime granules surrounded by a transparent wall formed from a biaxially oriented polymeric membrance possessing the properties when heated to 205° C. of shrinking to 40% of its unheated dimensions and exhibiting shrink energy of from 100 to 300 p.s.i., said soda lime being made dustless by the addition of from 1 percent to 3 percent of sodium carboxymethylcellulose, perforated end-plates positioned on top of and at the bottom of the charge, said end-plates being secured in position by a thickened annulus of the wall material surrounding the periphery of the plates and overlying a portion of their exposed outer surface adjacent the periphery, said membrane throughout its wall area being in tight contact with the boundary granules of the soda lime charge and conforming to the external configuration of each boundary granule, the surface enclosure of the boundary granules thereby preventing gas channelling between the absorbent charge and the wall.

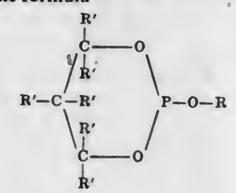
3,047,371
DEVICE FOR CARRYING OUT CHEMICAL REACTIONS AT HIGH TEMPERATURES
Walter Krause, Frankfurt am Main, Werner Fischer, Bad Soden (Taunus), and Rudolf Wirtz and Hartmut Schilken, Frankfurt am Main, all in Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
Filed Aug. 13, 1958, Ser. No. 754,900
Claims priority, application Germany May 13, 1955
1 Claim. (Cl. 23—277)



In an apparatus for carrying out a pyrolysis of hydrocarbons with contacting hydrocarbons with a stream of hot combustion gases, a combustion chamber for producing a continuous stream of said hot combustion gases, said combustion chamber having a closed end, a metal side wall for contact with said hot combustion gases, a cooling jacket for said side wall, and bore holes for separately introducing fuel and an oxidizing gas therefor, said bore holes being adjacent said closed end and tangential to said side wall, and said apparatus having a contracted opening between the combustion chamber and the place where the hydrocarbon to be pyrolized is introduced.

3,047,372
ANTI-KNOCK GASOLINE
Alexander H. Popkin, Maplewood, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 29, 1957, Ser. No. 699,462
19 Claims. (Cl. 44—63)

1. An improved gasoline additive composition consisting essentially of a volatile organic lead compound; from about 1.6 to about 3.0 theories, based upon the lead, of a halogenated hydrocarbon scavenger agent boiling between about 50° and about 250° C. said halogenated hydrocarbon scavenger agent containing from 0.1 to 1.5 theories of a stoichiometric excess of a chlorinated hydrocarbon scavenger; and from about 0.05 to about 1.0 theory, based upon the lead, of a cyclic phosphorus compound having the formula



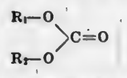
where R' is a radical having the formula C_nH_{2n+1}, n ranging from 0 to 3 inclusive and there being at least 2 carbon atoms which are each attached directly to carbon atoms in the ring; and where R is selected from the group consisting of the phenyl radical and branched alkyl radicals containing from 6 to 12 carbon atoms.

3,047,373
FUEL OILS HAVING IMPROVED COMBUSTION CHARACTERISTICS
Robert J. McGuire, Monroeville, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Dec. 21, 1959, Ser. No. 860,672
6 Claims. (Cl. 44—66)

1. A fuel oil composition comprising a major amount of a hydrocarbon fuel oil that has an API gravity less than 34° and an aromatics content greater than 20 percent and that normally tends to form smoke and soot during combustion, and containing an amount sufficient to reduce the smoke and soot forming tendencies of the oil in the range of about 0.01 to 0.1 percent by weight of the oil of an ester of a fatty acid containing 12 to 18 carbon atoms per molecule and a polyoxyethylene glycol whose average molecular weight is about 380 to 630.

3,047,374
MOTOR FUEL COMPOSITIONS
Albert C. Condo, Jr., Newtown Square, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Mar. 2, 1960, Ser. No. 12,264
4 Claims. (Cl. 44—69)

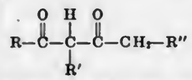
1. A gasoline motor fuel comprising a major amount of hydrocarbons boiling in the gasoline boiling range and a minor amount of a fluorine-containing organic compound sufficient to reduce octane requirement increase in an internal combustion engine, the fluorine-containing organic compound having the general formula:



wherein R_1 and R_2 are radicals selected from the group consisting of alkyl, alkaryl, and fluoro-alkyl and wherein at least one of the radicals R_1 and R_2 is fluorine-substituted, the total number of carbon atoms in the molecule ranges between 3 and 30, the total number of fluorine atoms in the molecule ranges between 2 and 16, and each fluorine substituted carbon atom has at least two fluorine atoms attached thereto.

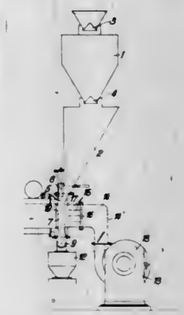
3,047,375
BETA-DIKETONES IN AVIATION TURBINE FUELS
John P. Pellegrini, Jr., Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Dec. 30, 1958, Ser. No. 783,723
5 Claims. (Cl. 44—77)

1. A combustion gas turbine fuel composition comprising a major amount of a normally thermally unstable, liquid hydrocarbon aviation turbine fuel and a small amount, sufficient to improve the thermal stability of said fuel, of a beta-diketone having the general formula:



where R is an aromatic hydrocarbon group having a nuclear carbon atom thereof connected directly to the adjacent carbonyl carbon atom and containing 6 to 22 carbon atoms, and R' and R'' are open-chain aliphatic hydrocarbon radicals that contain 8 to 22 carbon atoms.

3,047,376
GAS PRODUCERS
Josef Münster, Dusseldorf-Oberkassel, and Hans-Dieter Textor, Dusseldorf, Germany, assignors to Ferdinand Lentjes Kesselschmiede u. Maschinenbau, Dusseldorf-Oberkassel, Germany
Filed May 4, 1960, Ser. No. 26,833
Claims priority, application Germany May 21, 1959
11 Claims. (Cl. 48—76)

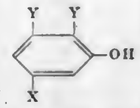


1. A gas generator for the production of a carbon-monoxide-containing gas, comprising housing means forming a reaction chamber of constant width and a feeding chamber aligned with and constituting a longitudinal extension of said reaction chamber, said feeding chamber opening freely into said reaction chamber, a container for solid carbonaceous fuel, a wall of said feeding chamber being provided with a passage interconnecting said container and said feeding chamber whereby said fuel may be supplied to the latter, a piston longitudinally displaceable in said feeding chamber to compact the fuel fed into said feeding and reaction chambers, said piston having a width substantially equal to that of said reaction chamber, discharge means at an extremity of said reaction chamber remote from said feeding chamber for removing combustion residue from said reaction chamber, inlet means for supplying an oxygen-containing gas to said reaction chamber laterally through one wall portion thereof, and outlet means at another lateral wall portion of said reaction chamber for discharging carbon-monoxide gas produced therewithin, said other wall portion being formed with an array of closely spaced wall members each provided with a bore for the passage of a cooling fluid therethrough and with intersecting longitudinal and transverse slots opening into said reaction chamber, said slots confronting the carbonaceous fuel in said reaction chamber whereby said carbon-monoxide gas may travel to said outlet means.

3,047,377
PRODUCT AND PROCESS FOR PREVENTING NITROGEN LOSSES FROM SOIL
Cleve A. I. Goring, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 20, 1957, Ser. No. 647,450
11 Claims. (Cl. 71—1)

1. A method useful for suppressing the nitrification of ammonium nitrogen in soil and preventing rapid loss of ammonium nitrogen therefrom, and improving plant nutrition therein which comprises impregnating soil below the soil surface in the growing area thereof, with a halophenol compound in an amount of from about 2 to 150

parts by weight per million parts by weight of soil, wherein said halophenol compound is selected from the group consisting of (1) halophenols having the formula



wherein X represents a member of the group consisting of chlorine and bromine, one Y represents a member of the group consisting of chlorine and bromine and the other Y represents hydrogen; and (2) salts of said halophenols.

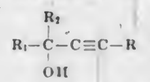
3,047,378

TERTIARY ALKYNOL COMPOSITION AND METHOD FOR SUPPRESSING THE NITRIFICATION IN SOIL

Cleve A. I. Goring, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 22, 1958, Ser. No. 762,219
10 Claims. (Cl. 71—1)

1. A method for suppressing the nitrification of ammonium nitrogen in soil which comprises dispersing through soil in concentration sufficient to suppress nitrification, a tertiary alkynol having the structure



wherein R is selected from the group consisting of hydrogen and methyl, R_1 is an alkyl radical containing from 1 to 9 carbon atoms, inclusive, and R_2 is a lower alkyl radical containing from 1 to 4 carbon atoms, inclusive.

3,047,379

PRODUCTION OF A COMPLEX FERTILIZER

John Kenneth Bradley and Thomas Pride Dee, Ipswich, and William Francis Sheldrick, Felixstowe, England, assignors to Fisons Limited, Suffolk, England

No Drawing. Filed Dec. 26, 1957, Ser. No. 705,093
Claims priority, application Great Britain Jan. 10, 1957
10 Claims. (Cl. 71—37)

1. In a process for the production of a complex fertilizer, the steps of reacting together potassium chloride and nitric acid of a concentration in the range 50–95% by weight at a temperature in excess of 80° C., the acid being employed in an amount comprising 10 to 200% excess over the requirement of 4 mols of nitric acid per 3 mols of potassium chloride, thereby producing a liquid reaction product containing potassium nitrate, free nitric acid, nitrosyl chloride and chlorine, removing the nitrosyl chloride and chlorine from said liquid reaction product, admixing the resultant liquid nitric acid- and potassium nitrate-containing product with phosphate rock in particulate form and separating the resulting fertilizer product.

3,047,380

METHOD OF MAKING SEMI-CONDUCTIVE MATERIAL FOR USE IN SEMI-CONDUCTIVE DEVICES

Jan Bloem, Nijmegen, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 21, 1960, Ser. No. 3,865
Claims priority, application Netherlands Jan. 23, 1959
6 Claims. (Cl. 75—84)

1. A method of removing oxygen from and purifying a germanium body by zone-melting, comprising the steps of adding to the germanium body an element having the following combination of properties:

(*a*) a greater affinity for oxygen than that of germanium,
(*b*) forms an oxide whose specific gravity differs by at least 25% from that of molten germanium,
(*c*) a relatively small segregation constant enabling its removal from germanium by zone-melting;



thereafter passing a molten zone through the germanium body to sweep the said element if uncombined to one end, and removing any oxide formed by said element from the body.

3,047,381

HIGH TEMPERATURE HEAT AND CREEP RESISTANT ALLOY

Dean K. Hanink, Indianapolis, Ind., and Fred J. Webbere, Orchard Lake, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Feb. 3, 1958, Ser. No. 712,628
5 Claims. (Cl. 75—171)

1. A high temperature creep resistant alloy consisting as follows:

	Percent
Carbon	0.10 to 0.20
Manganese (maximum)	0.25
Silicone (maximum)	0.75
Chromium	13.00 to 17.00
Molybdenum	4.00 to 6.00
Titanium	1.50 to 4.00
Aluminum	2.00 to 4.00
Boron	0.01 to 0.15
Iron	3.50 to 6.00
Nickel	Balance

said titanium and aluminum being equal to a sum of about 5.5% to 7.5%.

3,047,382

AGE HARDENING COBALT BASE ALLOY

Norman R. Harpster, Canonsburg, Pa., assignor to Universal-Cyclops Steel Corporation, Bridgeville, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 13, 1959, Ser. No. 786,463
8 Claims. (Cl. 75—171)

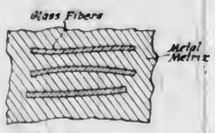
2. An age hardenable cobalt base alloy consisting essentially of, by weight, about 12 to 30 percent of chromium, 10 to 30 percent of nickel, at least 0.10 percent of carbon, up to 20 percent of iron, 0.08 to 0.40 percent of phosphorus and the remainder cobalt together with incidental impurities and elements that do not deleteriously affect the characteristics of the resulting alloy.

3,047,383

POLYPHASE MATERIALS

Games Slayter, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Dec. 27, 1955, Ser. No. 555,528
1 Claim. (Cl. 75—201)



A method for producing a metal product formed of a substantially continuous phase of the metallic component and a discontinuous phase of the glass fibers wherein the

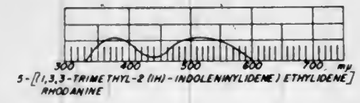
latter are uniformly distributed throughout the continuous metallic phase, comprising the steps of mixing glass particles with a metal in finely divided form having a sintering temperature below the softening point temperature for the glass composition of which the particles are formed and in which the glass fibers are present in an amount greater than 5% by volume but less than 95% by volume of the metallic product, compressing the mixture of materials to the desired shape, heating the compressed mass to a temperature above the sintering temperature of the metal, but below the softening temperature for the glass particles, and thereafter elongating the shape of the mass at a higher temperature at which both glass and metal are plastic and said glass is extended into fibrous form dispersed as a discontinuous phase in the substantially continuous phase of the metal.

3,047,384

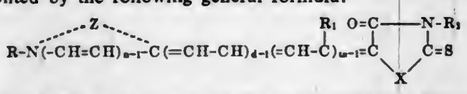
SENSITIZED PHOTOCONDUCTIVE COMPOSITIONS COMPRISING POLYMETHINE DYES CONTAINING A MERCAPTO GROUP

Jean E. Jones and Paul H. Stewart, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Apr. 9, 1959, Ser. No. 805,156
13 Claims. (Cl. 96—1)



1. A photoconductive composition comprising sensitized photoconductive zinc oxide particles uniformly dispersed in a high dielectric, organic binder-insulating material for said zinc oxide, said zinc oxide being sensitized with a merocyanine dye selected from the class represented by the following general formula:



wherein R represents an alkyl group containing from 1 to 4 carbon atoms, R_1 represents a member selected from the class consisting of a hydrogen atom and an alkyl group containing from 1 to 2 carbon atoms, *d* and *m* each represents a positive integer of from 1 to 2, R_2 represents a member selected from the class consisting of a hydrogen atom, an alkyl group containing from 1 to 4 carbon atoms and an aryl group containing from 6 to 7 carbon atoms, X represents a member selected from the class consisting of an oxygen atom, a sulfur atom, a



group and a



group, wherein R′ and R″ each represents a member selected from the class consisting of a hydrogen atom, an alkyl group containing from 1 to 8 carbon atoms and an aryl group containing from 6 to 7 carbon atoms, provided at least one of the members selected from the class consisting of R_2, R′ and R″ is a hydrogen atom, Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the class consisting of a thiazole nucleus, a benzothiazole nucleus, a naphtho thiazole nucleus, a thianaphtheno-7′,6′,4,5-thiazole nucleus, an oxazole nucleus, a benzoxazole nucleus, a naphthoxazole nucleus, a selenazole nucleus, a benzoselenazole nucleus, a naphthoselenazole nucleus, a thiazoline nucleus, a 2-quinoline nucleus, a 4-quinoline nucleus, a 1-isoquinoline nucleus, a benzimidazole nucleus, a 3,3-dialkylindolenine nucleus, a 2-pyridine nucleus and a 4-pyridine nucleus, and *n* represents 1 when Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus containing 5 atoms in the heterocyclic ring and *n* represents a positive integer of from 1 to 2 when Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of a 2-quinoline nucleus, a 4-quinoline nucleus, a 1-isoquinoline nucleus, a 2-pyridine nucleus and a 4-pyridine nucleus.

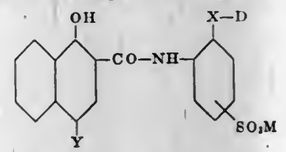
3,047,385

PRODUCTION OF COLOR PHOTOGRAPHIC IMAGES

Maurice Antoine de Ramaix and Jan Jacken, Hove-Antwerp, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a Belgium company

No Drawing. Filed Nov. 29, 1960, Ser. No. 72,298
Claims priority, application Great Britain Nov. 30, 1959
6 Claims. (Cl. 96—9)

1. A method of forming a color corrected image in a photographic element having at least one silver halide emulsion layer containing a color coupler of the formula:



wherein:

X represents a member selected from the group consisting of an oxygen atom, a sulfur atom, a

—NH—CO—

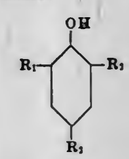
group, a —CO—NH— group, a —SO_2—NH— group, a —NH—SO_2— group, a —N-alkyl group and a sulfonyl group;

Y represents a member selected from the group consisting of an hydrogen atom and a halogen atom;

D represents an aliphatic radical comprising a linear chain of at least 5 and at most 20 carbon atoms;

M represents a member selected from the group consisting of an hydrogen atom, an alkali metal atom and an ammonium group,

and which is reactive with the oxidation product of an aromatic amino developing agent to form by color development a cyan dye image which absorbs a major proportion of light in the red region of the visible spectrum, and undesirably absorbs a minor proportion of light in at least one other region of the visible spectrum, which method comprises treating said photographic element, after image-wise exposure and color development, with an oxidizing solution in the presence of a mask forming compound of the formula:



wherein:

R_1 and R_2 each represents a sterically hindering group selected from the group consisting of tert-butyl, cyclohexyl and phenyl;

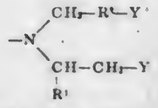
R_3 represents a member selected from the group consisting of a hydrogen atom, a halogen atom and a radical which is sufficiently unstable for splitting off on treatment of said mask forming compound with an oxidizing solution in the presence of said color coupler.

3,047,386
ANTHRAQUINONE DYE DEVELOPERS

Elkan R. Blout, Belmont, and Myron S. Simon, Newton Center, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Aug. 26, 1957, Ser. No. 680,437
22 Claims. (Cl. 96—29)

1. A photographic developer composition comprising an aqueous alkaline solution containing at least one auxiliary silver halide developing agent and a dye developer having an anthraquinone nucleus, at least one and not more than two of the nuclear carbon atoms in the one, four, five and eight positions of said anthraquinone nucleus having linked directly thereto a group of the formula:

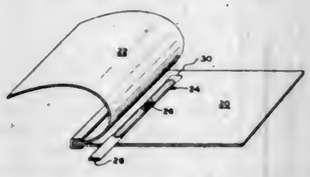


wherein R^1 is selected from the group consisting of methyl and ethyl groups, R^3 is an alkylene group containing less than six carbon atoms and each Y is selected from the group consisting of ortho- and para-dihydroxyphenyl radicals.

3,047,387
PHOTOGRAPHIC PROCESSES, PRODUCTS AND DEVICES

Edwin H. Land, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed June 15, 1959, Ser. No. 820,266
27 Claims. (Cl. 96—48)



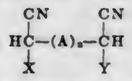
1. The method of distributing a photographic fluid in contact with an area of a sheet to produce a composite photographic structure comprising a plurality of superposed layers, at least one of said layers including said fluid and at least one of said layers including a photographic image-recording material, said method comprising positioning a container, having an elongated cavity approximately equal in length to the width of said area, of substantially uniform cross section throughout its length and filled with said photographic fluid, adjacent a surface of said sheet near an edge of said area; moving said container in the direction of its length relative to and across said sheet along said edge of said area transversely of the direction of subsequent distribution of said fluid in contact with said sheet; while so moving said container, engaging sections of said container in the region of said cavity succeeding from the leading end of said cavity to eject substantially all of said fluid from said cavity and thereby dispense a quantity of said fluid substantially equal to the contents of said cavity from a mouth, located at the trailing end of said container and having a cross-sectional area substantially equal to the cross-sectional area of said cavity onto said sheet in the form of an elongated mass approximately equal in length to said cavity; and thereafter distributing said fluid from said elongated mass in a direction transversely of the direction of said mass by superposing said area of said sheet with another surface and applying compressive pressure to successive sections of said sheet commencing in the region of said elongated mass and progressing in the direction of distribution of said fluid.

3,047,388
COLOR PHOTOGRAPHY

Theodore Le Sueur Cairns, Greenville, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 18, 1958, Ser. No. 774,586
5 Claims. (Cl. 96—55)

1. A process which comprises developing a photographic element containing a reducible silver halide image with a developer solution comprising an aqueous alkaline solution having a pH greater than 7.6 and containing from 0.01% to 5.0% by weight of a color-coupling polycyano developing agent of the formula:



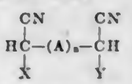
wherein A is a member selected from the group consisting of phenylene and naphthylene, *n* is a cardinal number taken from the group consisting of 0 and 1, X is a member taken from the class consisting of —CN, —COOR, $—CONH_2$, CONHR, $—CONR_2$, —COR, $—NO_2$, p-O_2N-phenyl and p-NC-phenyl, and Y is a member taken from the class consisting of —CN, —COOR, $—CONH_2$, —CONHR, $—CONR_2$, —COR, $—SO_2R$, $—NO_2$, —F, —Cl, —Br, —OR, $—ONO_2$, $—OSO_2R$, and —OCOR, and R is a hydrocarbyl radical of 1 to 18 carbon atoms, in the presence of a color former having at least one hydrogen atom and capable of condensing with tetracyanoethylene to form a dye.

3,047,389
PHOTOGRAPHIC DEVELOPER AND PROCESS

Clifford Lee Dickinson, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 18, 1958, Ser. No. 774,582
6 Claims. (Cl. 96—66)

1. A process for reducing an exposed silver halide to silver which comprises subjecting said silver halide to the action of a developer solution comprising an aqueous alkaline solution having a pH greater than 7.6 and containing from 0.01% to 5.0% by weight of at least one polycyano compound of the formula



wherein A is a member taken from the group consisting of phenylene and naphthylene, *n* is a cardinal number taken from the group 0 and 1, X is a member taken from the class consisting of —CN, —COOR, $—CONH_2$, —CONHR, $—CONR_2$, —COR, $—NO_2$, p-O_2N-phenyl, and p-NC-phenyl, and Y is a member taken from the class consisting of —COOR, $—CONH_2$, —CONHR, $—CONR_2$, —COR, $—SO_2R$, $—NO_2$, phenyl, p-O_2N-phenyl, p-NC-phenyl, p-R_2N-phenyl, —F, —Cl, —Br, —OR, $—ONO_2$, $—OSO_2R$, and —OCOR, and wherein R is a hydrocarbyl radical of 1 to 18 carbon atoms.

3,047,390
METHOD FOR OPTICAL BLEACHING COATED PAPERS

Willem Karel Koerber and Ferdinand Leonard Schouteden, Wilrijk-Antwerp, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a company of Belgium

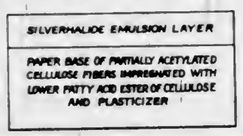
No Drawing. Filed June 2, 1958, Ser. No. 739,211
Claims priority, application Netherlands June 6, 1957
9 Claims. (Cl. 96—82)

1. Light-sensitive photographic paper comprising a paper base, a white pigmented coating and a light-sensitive silver halide emulsion layer, said white pigmented coating containing a fluorescent mass comprising a member selected from the group consisting of α,β-di(5-methylbenzimidazyl-2)-ethylene, α,β-di(benzimidazyl-2)-ethylene, α,β-di(5-methylbenzoxazolyl-2)-ethylene and 1,3-dioxo-2-butyl-6-acetylamino-1,2,3H-benz [de] isoquinoline, and a finely divided polyethyleneglycolphthalate.

3,047,391
METHOD OF COATING PARTIALLY ACETYLATED PAPER WITH PLASTICIZED CELLULOSE ESTER AND RESULTING PAPER COATED WITH A PHOTOGRAPHIC EMULSION

Carl J. Malm, Lloyd E. Herdle, and Gerald C. Gandy, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Jan. 12, 1959, Ser. No. 786,043
7 Claims. (Cl. 96—85)



1. A method of preparing paper resistant to the effect of moisture which comprises impregnating paper essentially consisting of partially acylated cellulose fibers with a solution in lower alcohol of a mixture of lower fatty acid ester of cellulose and a plasticizer therefor, in such manner as to leave less than 1 part of solution per part of paper, evaporating off the alcohol therefrom and subjecting to heat and pressure to impart a smooth finish to the paper.

3,047,392
PHOTOGRAPHIC HYDROXYETHYL STARCH-SILVER HALIDE PRINT-OUT COMPOSITION

Troy A. Scott, Minnetonka Village, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,653
3 Claims. (Cl. 96—108)

1. A photosensitive "print-out" composition comprising a mixture of a washed precipitated silver halide from the class consisting of silver bromide and silver bromo-iodide, doped by addition of a doping agent from the class consisting of lead iodide and cadmium iodide, said doping agent being from 0.5 to 20% by weight of said silver halide for cadmium iodide and from 0.5 to 10% by weight of said silver iodide for lead iodide, said mixture being dispersed in a suspension of hydroxyethyl starch.

3,047,393
ESTERS OF THIOSULFONIC ACIDS AS ANTIFOGGANTS

Arthur H. Herz and Frank D. Allen, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,408
13 Claims. (Cl. 96—109)

1. A photographic silver halide emulsion stabilized by the addition thereto of from 0.05 to 10 g. per mole of silver halide of an ester selected from those represented by the following general formula:

$$R—SO_2S—R_1$$

wherein R represents a member selected from the class consisting of an alkyl group and an aryl group and R_1 represents a member selected from the class consisting of an alkyl group, an aryl group and an aralkyl group.

3. A photographic silver halide emulsion stabilized by the addition thereto of from 0.05 to 10 g. per mole of silver halide of an ester selected from those represented by the following general formula:

$$R—SO_2S—R_2—SO_2S—R$$

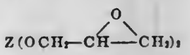
wherein R represents a member selected from the class consisting of an alkyl group and an aryl group and R_2 represents an alkylene group.

3,047,394
PHOTOSENSITIVE PRODUCTS CONTAINING THEREIN LAYERS HARDENED BY BIS-EPOXIDES

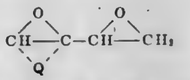
Charles F. H. Allen, Ralph H. Talbot, Joseph Yudelson, and Donald A. Smith, all of Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 1, 1958, Ser. No. 752,402
5 Claims. (Cl. 96—111)

3. A silver-halide photographic emulsion containing as the vehicle for the silver halide a water soluble polymer containing carboxyl groups and as the hardener therein 0.5–10%, based on the weight of the polymer, of a water soluble bisepoxide selected from the group consisting of the following:



Z being selected from the group consisting of phenylene, alkylene and —R—O—R—,
R being a hydrocarbon group,
and



Q being selected from the group consisting of 2 hydrogens and the non-metallic atoms necessary to complete a hydrocarbon nucleus.

3,047,395
PROTEIN FOOD PRODUCT AND PROCESS

Irving I. Rusoff, Park Ridge, N.J., and William J. Ohan and Calvin L. Long, New City, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed June 15, 1960, Ser. No. 40,989
18 Claims. (Cl. 99—14)

1. A process for preparing a meat-like protein product having a shred-like texture which comprises rapidly heating a protein material in a substantially undenatured, finely divided, hydrated state to a temperature of 300°–400° F., continuously agitating said protein material during heating to orient and coagulate it, and cooling said orientated and coagulated protein material as rapidly as possible.

3,047,396
PREPARATION OF TEA BEVERAGE AND PRODUCTS USED THEREIN

Marvin D. Steinberg, 136 Gaylor Road, Eastchester, N.Y.

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,239
5 Claims. (Cl. 99—77)

1. The process of preparing a tea infusion of lowered tannin content comprising steeping the tea leaves in hot water in the presence of a powdered, water-insoluble nylon, and removing said tea leaves and nylon from the infusion.

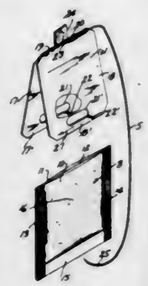
3,047,397
COMPRESSIBLE INFUSION PACKAGE

Hans O. Irmscher, Elmont, N.Y., assignor to National Tea Packing Company, Inc., Long Island City, N.Y., a corporation of New York

Filed Sept. 21, 1960, Ser. No. 57,564
2 Claims. (Cl. 99—77.1)

1. A compressible infusion package comprising an infusion bag containing an infusion material, a packaging

wrapper embracing the same, the said wrapper comprising two wings free from each other at one of their ends and hinged together at their other and opposite ends, a suspending string connecting the bag and the wrapper, one end of said string being loosely threaded through the wrapper adjacent its hinge, the other end of said string being stapled onto the opposite sides of the package through the free ends of the wrapper wings and to the contiguous end of the infusion bag, thereby attaching said free ends of the wings to the said bag end through



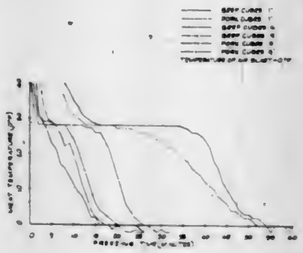
the medium of said string, means formed at the free ends of the wrapper wings for permitting detachment of the wrapper, said means comprising for each wing a wing end having an aperture and a through slit communicating with said aperture, the said string being stapled to the bag end through registering apertures of said wing ends, whereby detachment of the wrapper may be effected by merely slipping the wrapper laterally from the bag with the string being slipped through the slits in said wing ends.

3,047,398

PREPARATION OF COMMINUTED MEAT PRODUCTS

Desmond B. Watt, La Grange, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 14, 1959, Ser. No. 846,348
4 Claims. (Cl. 99—109)



1. The improvement in the method of preparing meat trimmings of various types of meat for use in sausage manufacturing, which comprises comminuting the meat trimmings to form substantially uniform particles, freezing said particles while maintaining them in a substantially segregated condition, classifying each type of separate meat trimmings in accordance with origin and composition, separately storing each type of said classified particles at a temperature below about 0° F., and combining quantities of said classified particles to obtain specific formulations thereof.

3,047,399

METHOD AND COMPOSITION FOR PRODUCING MEATY FLAVOR IN FOODS AND FOOD PRODUCTS

Wendell A. Landmann, Clarendon Hills, and Othmer F. Batzer, Chicago, Ill., assignors to Ray Brown, Frank J. Madden, James Seldon, A. W. Brickman, and John E. Thompson, all of Chicago, Ill., as trustees for the Benefit of American Meat Institute Foundation, Chicago, Ill., a non-profit corporation of Illinois

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,505
13 Claims. (Cl. 99—110)

1. A method of producing a meaty flavor in foods and food products, which method is characterized by the steps of: bringing selected, flavor-precursing fractions of a relatively cold water extract of lean meat into contact with an edible medium; and heating said medium to react said fractions and generate said meaty flavor.

3,047,400

METHOD OF MAKING SWEET CURD CHEESE

Ralph Cuomo, Casilla (P.O. Box) 9293, Santiago, Chile

No Drawing. Filed Sept. 7, 1960, Ser. No. 54,350
2 Claims. (Cl. 99—116)

1. A process for manufacturing a sweet curd cheese from milk of low fat content comprising forming a cheese mix including 80% skim milk and 20% whole milk, adding a lactic acid starter in an amount to effect a titratable acidity of between about 0.19 to 0.22%, then subjecting the mixture to a pasteurization temperature of about 176° F., cooling the mixture to between about 95° to 96.8° F., then treating the cooled mixture with rennet for 30 minutes to effect coagulation, draining the whey from the mixture, cubing the coagulated mixture, molding the mixture, refrigerating the mixture prior to packaging.

3,047,401

ALL-PURPOSE CULINARY OILS

Fredric J. Baur, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,027
4 Claims. (Cl. 99—118)

1. An all-purpose clear culinary oil comprising a liquid glyceride vehicle in which is dissolved from about 1.0% to about 4.5%, by weight of oil, of erucic acid, said oil having a smoke point of at least 300° F. and capable of being maintained at a temperature as low as 40° F. for at least 10 hours without clouding.

3,047,402

FLUID SHORTENING

Werner H. Schmidt, Tenafly, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 6, 1959, Ser. No. 851,250
5 Claims. (Cl. 99—118)

1. A fluid shortening composition consisting essentially of an edible oil base having, in stable suspension therein, from about 3% to about 4% of finely divided substantially fully saturated glycerides of fatty acids having from 12 to 20 carbon atoms, the saturated glycerides including diglycerides, from about 1% to about 2% by weight of the shortening of monoglycerides and from 0.0% to about 0.5% by weight of the shortening of triglycerides, the said diglycerides and monoglycerides being present in the shortening in a weight ratio of at least 1:1 and no greater than 3:1, and the fatty acid complement of said saturated glycerides comprising from about 35% to about 42% of palmitic acid.

3,047,403

NOVEL POTATO PACKAGE

William C. McConnell, Pittsburgh, Pa., assignor, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed May 21, 1959, Ser. No. 814,684
2 Claims. (Cl. 99—154)

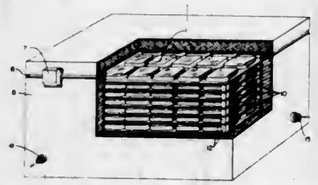
1. A package comprising a container with potatoes therein, said container being comprised of packaging material containing an amount of at least 0.01 percent isopropyl N-3-chlorophenylcarbamate by weight sufficient to retard sprouting of the potatoes.

3,047,404

PACKAGING RED MEATS

Paul J. Vaughan, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Sept. 23, 1958, Ser. No. 762,839
5 Claims. (Cl. 99—174)



1. The method of prolonging the life of freshly cut red meat which comprises

exposing a freshly cut surface of the meat to an atmosphere containing at least 30 percent by weight of oxygen

while the meat is enclosed in an oxygen-permeable transparent container,

for a period not greater than substantially five days,

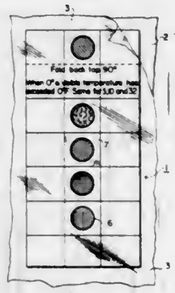
and then displaying the meat for sale while still in the container.

3,047,405

INDICATORS

William M. Lanier, 1317 Seaton Lane, Falls Church, Va.

Filed Jan. 25, 1960, Ser. No. 4,524
5 Claims. (Cl. 99—192)



1. A delayed-action visual indicator for indicating a rise in temperature of frozen food adjacent the indicator for an interval of time long enough to damage the food, comprising a sheet of absorbent material having plural mutually-spaced recesses in one surface and having temperature indicia graduated successively and printed in the bottoms of the recesses; a series of frozen substantially opaque pellets in the recesses, each pellet having a melting point corresponding with the temperature of the indicia printed in the recess in which that pellet is located; and sizing material homogeneously impregnated in said absorbent material and in sufficient quantity to delay the complete absorbing of a melted pellet into said material for an appreciable interval of time after the pellet melts.

3,047,406

METHODS FOR PREPARING OXIDATIVELY ACTIVE COMPOSITIONS

Charles G. Ferrari, Evanston, and Kazuo Higashiuchi, Chicago, Ill., assignors to J. R. Short Milling Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed June 23, 1959, Ser. No. 822,177
8 Claims. (Cl. 99—232)

7. The method for producing an essentially pure, individual, acyclic hydroperoxide of methyl ethyl ketone which is titratable by thiosulfate titration and has an active oxygen content of about 22.4% and is capable of maturing and bleaching flour, comprising

combining methyl ethyl ketone and aqueous hydrogen peroxide, in proportions providing .5–2.5 moles of hydrogen peroxide per mole of methyl ethyl ketone, to form a liquid reaction mixture containing water in an amount equal to 10–50% by volume;

maintaining said mixture in liquid form at a temperature below 100° C. for a period not exceeding 48 hours and thereby causing the methyl ethyl ketone and hydrogen peroxide to react;

allowing the resultant reaction product mixture to separate into phases of lower and higher specific gravity;

recovering the phase of lower specific gravity;

extracting the recovered phase with a low boiling hydrocarbon solvent;

recovering the extract; and

removing the solvent from the recovered extract to leave said essentially pure individual acyclic peroxide as the residue.

3,047,407

WATERPROOFING AGENTS FOR CEMENT AND CONCRETE

Leonid Ehrenburg, Kaiserswertherstrasse 252, Dusseldorf, Germany

No Drawing. Filed Aug. 17, 1955, Ser. No. 529,081
Claims priority, application Germany Nov. 23, 1954
1 Claim. (Cl. 106—12)

A method of producing a waterproofing agent for cement and concrete mixtures and a bonding agent for concrete, comprising the steps of preparing an aqueous solution of substantially 3 parts of a fatty soap, 2 parts of a saponifiable resin soap, 7 parts of sodium hydroxide, and 0.5 part of glycerin, stirring an aqueous solution of substantially 36 parts of aluminum chloride and 42 parts of potassium hydroxide into the first named solution, and stirring into the mixture obtained an aqueous solution of substantially 24 parts of potassium hydroxide, 30 parts of caustic lime, and 9 parts of calcium chloride.

3,047,408

DENTAL CEMENT MATERIAL

Emery W. Dougherty, Milford, Del., assignor to The L. D. Caulk Company, Milford, Del., a corporation of Delaware

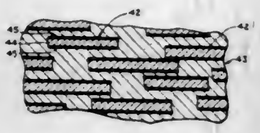
No Drawing. Filed Nov. 10, 1959, Ser. No. 851,960
8 Claims. (Cl. 106—35)

1. A dental composition consisting essentially of calcium hydroxide and an ester of a polyhydric alcohol and salicylic acid, the calcium hydroxide being present in stoichiometric excess over said ester, said ester and said calcium hydroxide being reactable to form a hard, rigid and permeable mass of a calcium phenolate containing available calcium hydroxide dispersed therein.

3,047,409
METHODS FOR COMBINING METALS AND COMPOSITIONS CONTAINING METALS WITH GLASS AND MATERIALS PRODUCED THEREFROM

Games Slayter and Harry B. Whitehurst, Newark, Ohio, and Willard L. Morgan, Pittsburgh, Pa., assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

Filed Feb. 3, 1955, Ser. No. 485,862
9 Claims. (Cl. 106—47)



1. A metal mass capable of being formed by molding, casting, forging, extruding and the like operations involving at least softening of the metal by heat which has dispersed throughout its mass a quantity of glass flakes coated with a metallic composition different from the metal, said flakes embedded in and adhered to the metal.

3,047,410
GLASS COMPOSITION

Edward L. Woodall, Jr., Lyndhurst, and Gerald E. Reinker, South Euclid, Ohio, assignors to General Electric Company, a corporation of New York

No Drawing. Filed Apr. 13, 1961, Ser. No. 102,671
1 Claim. (Cl. 106—53)

A lithia-free glass having approximately the following composition in percent by weight as calculated from the batch:

PbO	51.36	CaO	0.73
SiO_2	37.95	Na_2O	0.56
K_2O	6.41	MgO	0.51
B_2O_3	1.08	Al_2O_3	0.36
BaO	0.92	Sb_2O_3	0.11

said glass having a softening point of 603° C. and an electrical resistance at 350° C. of approximately 9.5 log 10 ohm-cm.

3,047,411
MAGNESIA GUNNING MIXES

Lewis W. Chantler and William O. Hund, Charles Town, W. Va., assignors, by mesne assignments, to Martin-Marietta Corporation, Chicago, Ill., a corporation of Maryland

No Drawing. Filed May 1, 1959, Ser. No. 810,221
17 Claims. (Cl. 106—81)

1. A magnesia refractory gunning composition consisting essentially of dead-burned magnesite particles, and between 1% and 5% of alkali metal silicate having an alkali metal oxide:silicon dioxide ratio in the range between about 1:1.5 and 1:3.5 and between 0.1% and 1% of water soluble cellulose carboxyether having a viscosity at 25° C. and at 1% concentration of between 1000 and 2800 centipoises.

3,047,412
VISCOSE COMPOSITION AND METHOD OF SPINNING

Edwin H. Wolfe, Maplewood, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 13, 1961, Ser. No. 102,655
12 Claims. (Cl. 106—165)

1. A viscose composition containing from 1 to 5% of the cellulose in said viscose of a polyoxyethylenated butynediol containing an average of from 4 to 20 moles of ethylene oxide per mole of 2-butyne-1,4-diol.

3,047,413
FAST SURFACE-DRY OIL EMULSION PAINT

Arthur W. Schwab and Howard M. Teeter, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,803
1 Claim. (Cl. 106—170)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An ionic paint composition, washable from a paint brush in running water and which will, when in a film, air dry to touch at room temperature in about 10–30 minutes, consisting essentially of a potassium dimerate-assisted pH 8.5 aqueous emulsion of a highly bodied linseed oil having a Gardner-Holdt viscosity of Z_9-, the linseed oil being the only film forming ingredient of the composition, finely divided pigment solids suspended in the emulsion, a naphthenate dryer, and about 4 percent based on the water, of hydroxyethyl cellulose, said hydroxyethyl cellulose being of such viscosity grade that a 1 percent aqueous solution thereof has a viscosity of about 300 cps.

3,047,414
ASPHALT COMPOSITIONS AND WETTING AND ANTI-STRIPPING AGENTS FOR USE IN CONNECTION THEREWITH

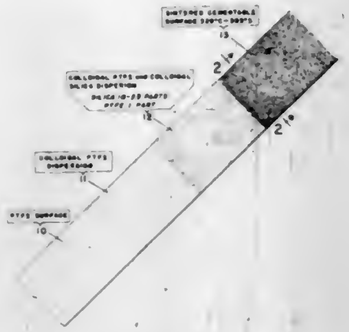
Jacob Katz, Providence, R.I.
(% Universal Chem. Corp., Lonsdale, R.I.)

No Drawing. Filed Aug. 28, 1957, Ser. No. 680,656
8 Claims. (Cl. 106—273)

1. A method of enhancing the bonding, wetting and anti-stripping properties of asphalt, tar and bituminous compositions on aggregates for road building which comprises adding thereto about ¼ to 2% of an additive of the formula:

$$(R)_3N(CH_2)_n.N.(CH_2)_n.N(R)_3$$
$$\quad\quad\quad

loidal dispersion of polytetrafluoroethylene on the surface, drying the coating, coating the dried surface with a coating comprising a dispersion mixture by weight of



10 to 25 parts of colloidal silica and 1 part of colloidal polytetrafluoroethylene, and sintering at from 329° to 393° C.

3,047,422

COATING MATERIAL AND METHOD OF DRYING SAME

Benjamin L. Sites, Elmhurst, and Meyer S. Agruss, Chicago, Ill., assignors to Miehle-Goss-Dexter, Incorporated, a corporation of Delaware

No Drawing. Filed Jan. 9, 1956, Ser. No. 557,865
24 Claims. (Cl. 117—93)

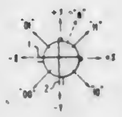
1. In the art of printing a sheet, the improvement which comprises forming a printing ink comprising a non-aqueous solution of a drying oil binder having a conjugated system of double bonds, and an oil-soluble dye capable of initiating the polymerization of the binder upon irradiation with actinic energy, said ink being free of any substance rendering it polymerizable by visible light and having a viscosity that enables it to be applied as a thin coating, printing the sheet with said ink, and irradiating the printed surface of the sheet with actinic energy, thereby rapidly indurating the ink.

3,047,423

ISOTROPIC THIN MAGNETIC FILM

John S. Eggenberger, Wappingers Falls, and John C. Lloyd and Robert S. Smith, both of Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 17, 1958, Ser. No. 781,117
4 Claims. (Cl. 117—107)



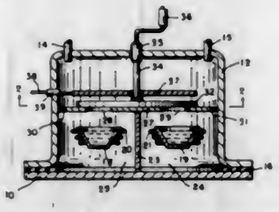
3. A method of making a thin magnetic film element by vacuum evaporation having substantially isotropic magnetic orientation comprising, the steps of depositing a continuous metallic film of ferromagnetic material having a thickness of approximately 2000 A. on a non-magnetic and electrically non-conductive substrate member in the presence of an external magnetic field applied in the plane of said film and thereafter annealing said film at elevated temperatures of 400° C.–800° C. for an extended period of at least three hours.

3,047,424

ULTRA-PURE, ULTRA-THIN FILMS OF NIOBIUM OXIDE

Lydia A. Suchoff, Shrewsbury, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed May 2, 1960, Ser. No. 26,383
1 Claim. (Cl. 117—119.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A process for producing ultra-thin, ultra-pure and uniformly homogeneous niobium oxide films comprising preparing a 1 to 3% solution of a member of the group consisting of niobium ethylate and niobium isopropylate in an organic solvent selected from the group consisting of methyl alcohol, ethyl alcohol and isopropyl alcohol, coating the surface of a substrate with a thin film of said solution at room temperature, exposing said film at room temperature to the combined action of air and moisture to decompose it into niobium oxide and heating the dried niobium oxide film at a temperature of about 200 to 300° C. for about fifteen minutes to remove all volatile matter.

3,047,425

METHOD FOR PRODUCING FLAME AND SOIL RESISTANT ACRYLIC POLYMER FIBERS CONTAINING CARPET FABRIC

Julian J. Hirshfeld and Edward V. Burnthall, Decatur, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed July 16, 1959, Ser. No. 827,433
2 Claims. (Cl. 117—137)

1. A method for imparting flame and soiling resistance to carpet fabric and the like containing a major portion of acrylic fibers which are formed from polymers containing at least 80 percent by weight of acrylonitrile in polymeric form comprising impregnating said fabric with an aqueous solution containing from about 1 percent to about 35 percent by weight of a solute comprising the following ingredients in the specified proportions by weight: (1) from about 30 to 50 parts of ammonium bromide, (2) from about 7 to about 20 parts of urea, (3) from about 10 to about 40 parts of formaldehyde, (4) from about 1 to about 7 parts of guanyl urea phosphate, and (5) from about 1 to about 15 parts of hydroxylalkyl glyoxalidine where (1), (2), (3), (4) and (5) are supplied in an amount of from about 4 percent to about 15 percent based on the weight of said fabric; and thereafter drying the impregnated fabric followed by heating the dried fabric to a temperature within the range of about 260° F. to about 300° F. until a water-insoluble finish is formed thereon.

3,047,426

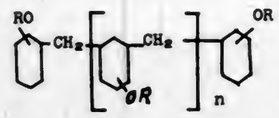
PROCESS FOR TREATING A "NITRILE ALLOY" ARTICLE WITH A POLYPHENOLIC ANTISTATIC AGENT AND PRODUCT OBTAINED THEREBY

Stanley A. Murdock and Allan R. Wirth, Newport News, Va., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed July 29, 1958, Ser. No. 751,656
16 Claims. (Cl. 117—138.8)

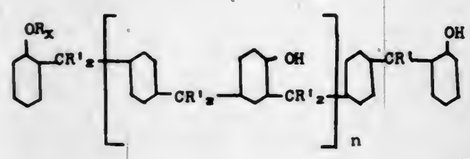
1. An improvement in the textile art consisting of a destaticizing treatment which comprises applying between

about 0.5 and 10 weight percent to a shaped "nitrile alloy" article an antistatic agent which is a hydrophilic derivative of a polyphenolic polymer that is selected from the group consisting of those represented by the general formulae:



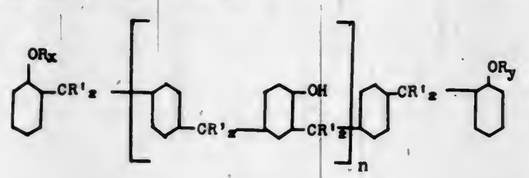
(I)

wherein *n* is a whole integer having an average value of from about 2 to 8 and each R is independently selected from the group consisting of hydrogen and polyoxyethylene groups containing from 2 to 20 moles of ethylene oxide with the limitation that at least one-quarter and not less than 3 of the R substituents in each molecule are hydrogen;



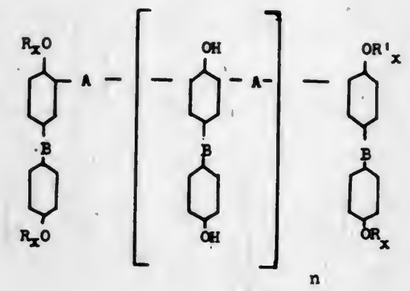
(IIa)

wherein *n* is a number having an average value of from about 2 to 8; each R′ is independently selected from the group consisting of hydrogen and methyl with the limitation that not more than a single R′ is hydrogen in any given linkage; R is selected from the group consisting of oxyethylene and oxypropylene; and *x* is a number having an average value from 2 to 10;



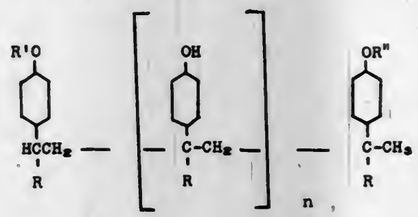
(IIb)

wherein *n* is a number having an average value of from about 3 to 8; each R is independently selected from the group consisting of oxyethylene and oxypropylene; *x* is a number having an average value of from 2 to 10; each R′ is independently selected from the group consisting of hydrogen and methyl with the limitation that not more than a single R′ is hydrogen in any given linkage; and y is a number having an average value of from 1 to 10;



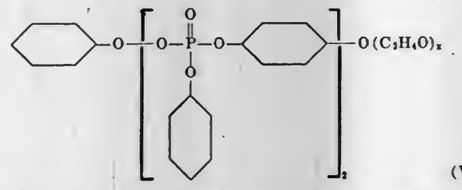
(III)

wherein each A is independently selected from the group consisting of methylene, ethylene and propylene; each B is independently selected from the group consisting of isopropylidene, sulfone and sulfinyl; R and R′ are independently selected from the group consisting of hydrogen, oxyethylene units and polyoxyethylene units of up to 10 moles of ethylene oxide per unit; *n* is a number that has an average value of from 2 to 8 when R′ is hydrogen and an average value of from 3 to 8 when R and R′ are identical with the limitations that at least three hydroxyl groups are adjacent to one another in each molecule and at least one R per molecule is a polyoxyethylene units containing an average of from about 2 to 10 moles of ethylene oxide;



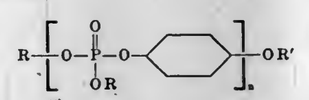
(IV)

wherein R′ and R″ are independently selected from the group consisting of hydrogen and oxyethylene; R is selected from the group consisting of hydrogen and methyl; and *n* is a number having an average value of from about 2 to 8 with the limitation that at least 3 hydroxyl substituents are present in each molecule;



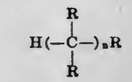
(Va)

wherein *x* is a plural number having an average value up to about 20;



(Vb)

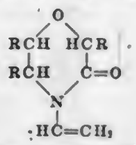
wherein *n* is a number having an average value of from 3 to 8; R′ is a polyoxyethylene unit containing up to 20 moles of ethylene oxide; at least 3 of the R units are hydroxyphenyl with the remainder being independently selected from the group consisting of alkali metal and hydrogen; and



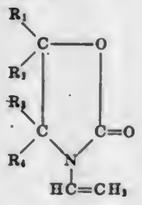
(VI)

wherein *n* is a number that has an average value from about 2 to 8; and each R is selected from the group consisting of para-hydroxyphenyl and polyoxyethylated oxyphenyl units containing up to 20 moles of ethylene oxide with the limitations that at least one R is a polyoxyethylene oxyphenyl unit and not less than two of them are para-hydroxyphenyls; and mixtures thereof, said "nitrile alloy" being selected from the class of synthetic polymer compositions consisting of (A) intimate polymer blends comprised essentially of (A1) at least about 80 weight percent, based on composition weight, of an acrylonitrile addition polymer with (A2) up to about 20 weight percent, based on composition weight, of an azotic polymeric dye-assisting adjuvant selected from the group consisting of addition polymers of at least about 50 weight percent, based on the weight of the azotic poly-

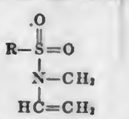
mer of (A2*a*) N-vinyl lactam monomers; (A2*b*) N-vinyl-3-morpholinone monomers of the structure:



wherein each substituent R unit is independently selected from the group consisting of hydrogen, 1 to about 4 carbon atom alkyl substituents and 6 to about 10 carbon atom aryl substituents; (A2*c*) N-vinyl-2-oxazolidione monomers of the structure:



in which R_1, R_2, R_3 and R_4 are independently selected from the group consisting of hydrogen, 1 to about 4 carbon atom alkyl substituents and 6 to about 10 carbon atom aryl substituents; (A2*d*) N-vinyl-N-methyl-alkyl-sulfonamide monomers of the structure:



wherein R is selected from the group consisting of hydrogen, 1 to about 4 carbon atom alkyl substituents and 6 to about 10 carbon atom aryl substituents; and (A2*e*) mixtures thereof; (B) graft copolymers comprised essentially of (B1) at least about 80 weight percent, based on composition weight, of a pre-formed acrylonitrile addition polymer substrate with graft copolymerized substituents thereon of (B2) up to about 20 weight percent, based on composition weight, of addition polymerized azotic monomer substituents of at least about 50 weight percent, based on the weight of graft copolymerized substituent, of (B2*a*) N-vinyl lactam monomers; (B2*b*) said N-vinyl-3-morpholinone monomers; (B2*c*) said N-vinyl-2-oxazolidinone monomers (B2*d*) said N-vinyl-N-methyl-alkylsulfonamide monomers; and (B2*e*) mixtures thereof; and (C) graft copolymers comprised essentially of (C1) at least about 80 weight percent, based on composition weight, of acrylonitrile graft copolymerized on (C2) up to about 20 weight percent, based on composition weight, of a pre-formed, dye-assisting, azotic addition polymer substrate of at least about 50 weight percent, based on the weight of said substrate, of (C2*a*) N-vinyl lactam monomers polymerized in the substrate; (C2*b*) said N-vinyl-3-morpholinone monomers polymerized in the substrate; (C2*c*) said N-vinyl-2-oxazolidinone monomers polymerized in the substrate; (C2*d*) said N-vinyl-N-methyl-alkylsulfonamide monomers polymerized in the substrate; and (C2*e*) mixtures thereof.

3,047,427
PAPER SUBSTRATE HAVING A COATING OF MINERAL PIGMENT, NATURAL ADHESIVE BINDER, AND HOMOPOLYMER OF BUTADIENE

Richard A. Dratz, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

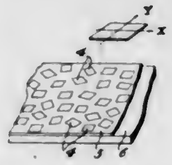
No Drawing. Filed Nov. 17, 1958, Ser. No. 774,090
6 Claims. (Cl. 117—155)

1. A printing paper having a coating of 100 parts of mineral pigment and 10–30 parts of a binder, said binder containing on a solids basis 80–60 weight percent of a natural adhesive selected from the group consisting of casein, starches, and soya protein and 20–40 percent of a homopolymer of butadiene having a second order transition temperature of less than —75° C.

3,047,428
MAGNETIC RECORDING MATERIAL

Hiroshi Goto and Goro Akashi, Odawara-shi, Kanagawa, Japan, assignors to Fuji Photo Film Co., Ltd., Kanagawa-ken, Japan, a corporation of Japan

Filed Jan. 26, 1959, Ser. No. 789,028
Claims priority, application Japan Jan. 27, 1958
2 Claims. (Cl. 117—169)

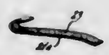


1. A magnetic sound record comprising non-magnetic carrier, a lacquer coating on said carrier, and particles of gamma ferric oxide in the form of thin flat plates in said coating, said thin flat plates having a thickness which is about one-tenth of the length, the length and the width of the thin flat plates being substantially equal, said thin flat plates being oriented in the coating in a manner so that the flat plates are substantially parallel to the carrier.

3,047,429
MAGNETIC RECORDING MEDIUM COMPRISING COATINGS OF FERRITE PARTICLES OF THE MOLAR COMPOSITE $aMnO.bZnO.cFe_2O_3$

Arthur I. Stoller, New Brunswick, and Irwin Gordon, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Mar. 27, 1959, Ser. No. 802,448
13 Claims. (Cl. 117—169)



1. A magnetic recording medium comprising a support and a magnetic coating on said support; said coating comprising ferrite particles in a binder; said ferrite particles having a spinel type crystal structure and the molar composition:

$$aMnO.bZnO.cFe_2O_3$$

wherein:

a=0.0 to 0.50
b=0.0 to 0.30
c=0.55 to 0.85, and
$a+b+c=1.0$

3,047,430
COUNTERCURRENT EXTRACTION PROCESSES

Alan E. Goodban, Walnut Creek, and John B. Stark, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

Filed May 26, 1961, Ser. No. 113,042
3 Claims. (Cl. 127—45)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a countercurrent extraction process wherein a vegetable material is moved through an extraction zone in a direction from the head end of the zone to the tail end of said zone, while a solvent is concomitantly moved through the extraction zone in the opposite direction and wherein the total solvent for the extraction includes (*a*) solvent containing dissolved material and (*b*) solvent relatively free from dissolved material, the improvement which comprises feeding the said solvents separately into the extraction zone, solvent (*a*) being introduced at the tail end thereof and solvent (*b*) being introduced at a point spaced from the tail end in a direction toward the head end, whereby to reduce the amount of dissolved material which is contained in the extract produced by the process.

3,047,431
SMOKING COMPOSITION

Abraham Bavley, Bon Aire, and Ernest W. Robb II, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 8, 1961, Ser. No. 108,300
20 Claims. (Cl. 131—17)

1. A method of imparting a flavor to smoking tobacco comprising forming an inclusion complex between a host compound and a guest flavoring material, and thereafter combining the said smoking tobacco in a major proportion with the said inclusion complex in a minor proportion, whereby the said flavoring material is rendered inert within said smoking tobacco until such time as the tobacco is subjected to elevated temperatures, said flavoring material being capable of release upon combustion of the tobacco.

3,047,432
SMOKING COMPOSITION AND METHOD OF IMPARTING FLAVOR THERETO

Abraham Bavley, Bon Aire, and Ernest W. Robb II, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 8, 1961, Ser. No. 108,301
16 Claims. (Cl. 131—17)

1. A composition of matter comprising smoking tobacco and a tri-o-thymotide inclusion complex.

3,047,433
USE OF DIELS-ALDER ADDUCTS AS TOBACCO ADDITIVES

Abraham Bavley, Bon Aire, and Ernest W. Robb II, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia

No Drawing. Filed Oct. 19, 1961, Ser. No. 146,372
16 Claims. (Cl. 131—17)

1. A tobacco product containing a member selected from the group consisting of non-volatile, flavor-containing Diels-Alder adducts and their salts.

3,047,434
SOLUTIONS AND METHODS FOR RADIOACTIVE DECONTAMINATION

Thomas J. Bulat, Davenport, Iowa, assignor to The Bendix Corporation, a corporation of Delaware

No Drawing. Filed Mar. 28, 1958, Ser. No. 724,501
2 Claims. (Cl. 134—1)

1. A solution for radioactive decontamination comprising a mixture of water, ethylene diamine tetra acetic acid, sodium sulfate, sodium hydroxide, manganese dioxide, and carbon black.

2. The decontamination method which comprises immersing a radioactively contaminated article in a solution comprised of water, ethylene diamine tetra acetic acid, sodium sulfate, sodium hydroxide, manganese dioxide, and carbon black, and subjecting said solution to ultrasonic vibration forces sufficient to produce cavitation therein.

3,047,435
RECOVERY OF POLYESTER FILM BASE FROM TERPOLYMER-SUBBED PHOTOGRAPHIC FILM SCRAP

Richard E. Wemple, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 10, 1958, Ser. No. 772,724
7 Claims. (Cl. 134—2)

1. A process for recovering film base from photographic film scrap having a highly polymeric linear polyester of a bifunctional aromatic carboxylic acid selected from the group consisting of terephthalic acid, 4,4′-sulfonyldibenzoic acid and trans-1,4-cyclohexanedicarboxylic acid and a dihydroxy compound selected from the group consisting of a glycol having the general formula:

$$HO—C_nH_{2n}—OH$$

wherein n is a whole number of from 2–10, and 1,4-cyclohexanedimethanol as the base material and as a substratum thereon a resinous terpolymer of from 35–96% by weight of a compound selected from the group consisting of vinyl chloride and vinylidene chloride, from 3.5–40% by weight of a compound selected from the group consisting of an alkyl acrylate, an alkyl methacrylate and acrylonitrile, wherein in each instance the said alkyl group contains from 1–18 carbon atoms, and from 0.5–25% by weight of a compound selected from the group consisting of itaconic acid, acrylic acid and methacrylic acid, which comprises the successive steps of treating the scrap first with (1) an aqueous solution of a caustic alkali containing from 0.1–1.0% by weight of said caustic alkali, based on the weight of the said solution at 150°–220° F. for a time sufficient to soften the said substratum and then with (2) an aqueous oxidizing solution containing from 0.05–0.5% by weight, based on the weight of oxidizing solution, of a compound selected from the group consisting of an alkali metal permanganate, an alkali metal peroxide and an alkali metal dichromate, at from 150°–220° F., until the said substratum loosens and separates from the said base material.

3,047,436
METHOD AND APPARATUS FOR CLEANING TUBES AND THE LIKE

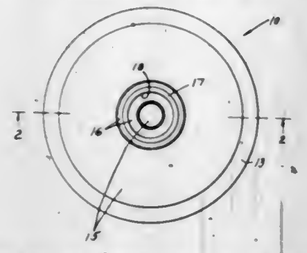
Marcel J. Zinty, New York, N.Y., assignor to Magnus Chemical Company, Inc., Garwood, N.J., a corporation of New York

Filed Aug. 27, 1958, Ser. No. 757,621
6 Claims. (Cl. 134—23)



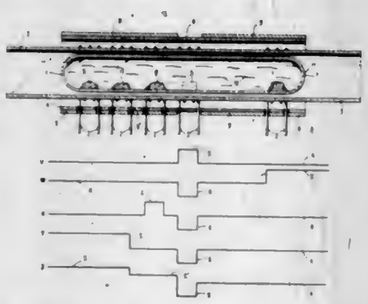
1. The method of cleaning the interior of a bore in an elongated article having openings at opposite ends of the article wherein the article is alternately moved vertically between a lowered position where the article is immersed in a bath of a cleaning fluid and a raised position where at least one end of the article is above the surface of the liquid in said bath, the steps which comprise positioning one end of the article at a higher elevation than the other end thereof as the article is moved to the raised position thereof and reversing the relative positions of said ends of the article on the next movement of the article to said raised position.

3,047,437
METHOD OF MAKING A RECTIFIER
Lake D. Brown, Jr., Torrance, Calif., assignor to International Rectifier Corporation, El Segundo, Calif., a corporation of California
Filed Aug. 19, 1957, Ser. No. 678,983
5 Claims. (Cl. 148—1.5)



1. The method of annealing a silicon junction type rectifier of the type comprising silicon having fused to it a material which forms the junction, which comprises heating said rectifier for about five to ten minutes during which time the temperature of said rectifier is raised from ambient temperature to about 600 degrees C., then maintaining the temperature of said rectifier at about 600 degrees C. for about ten minutes, then cooling said rectifier from said 600 degrees C. temperature to ambient temperature in about five to ten minutes.

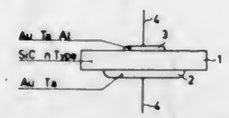
3,047,438
EPITAXIAL SEMICONDUCTOR DEPOSITION AND APPARATUS
John C. Marinace, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 28, 1959, Ser. No. 816,572
10 Claims. (Cl. 148—1.5)



3. The method of forming a structure of germanium semiconductor material comprising positioning a monocrystalline germanium substrate, a source of P conductivity type germanium, a source of N conductivity type germanium and a source of iodine each in a separate location in a sealed container, maintaining the substrate location in said container at approximately 400° C. and selectively maintaining each location of source germanium in said container in the range of approximately 500 to 600° C.

3,047,439
SILICON CARBIDE SEMICONDUCTOR DEVICE
Hubert Jan Van Daal, Wilhelmus Franciscus Knippenberg, and Albert Huizing, Eindhoven, Netherlands, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed July 31, 1959, Ser. No. 830,842
Claims priority, application Netherlands Aug. 27, 1958
12 Claims. (Cl. 148—33)

1. A semiconductor device comprising a semiconductive body of silicon carbide containing a surface region of n-type conductivity, and a fused mass alloyed and adherent to the said surface region and constituting an ohmic connection thereto, said mass comprising essen-



tially an alloy of gold and between 0.1 and 60 at. percent of a high-melting-point transition element selected from the group consisting of molybdenum, tungsten, tantalum, titanium, niobium, vanadium, zirconium, and hafnium.

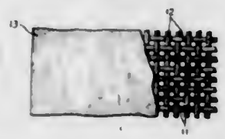
3,047,440
INORGANIC NITRATES
Jesse E. Hughes, Bridgeport, and Leroy E. Layton, Raymond Lozier, and Edmond J. Nolan, Woodbury Heights, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 19, 1956, Ser. No. 598,968
6 Claims. (Cl. 149—8)

1. A waterproof insensitive explosive pellet consisting essentially of a symmetrical core of at least one inorganic nitrate surrounded by a continuous coating of a plasticized polyvinyl chloride composition, said core being of such dimensions that an amount of coating of less than 10% by weight of said pellet will be sufficient to provide an average coating thickness of at least 3 mils.

3,047,441
HYDROGEN PEROXIDE EXPLOSIVES
Arthur W. Baker, Webster Groves, Mo., assignor, by mesne assignments, to American Cyanamid Company, a corporation of Maine
No Drawing. Filed Apr. 8, 1946, Ser. No. 660,432
5 Claims. (Cl. 149—109)

1. A high explosive comprising a solution of hydrogen peroxide and water, the hydrogen peroxide being between about 75% and about 90% of said solution, and finely divided solid combustible material mixed with said hydrogen peroxide solution to render the mixture sensitive to detonation with a blasting cap, said hydrogen peroxide solution being between about 65% and 85% of the explosive mixture, and the finely divided combustible material being between about 35% and 15% of said mixture.

3,047,442
INORGANIC LAMINATE
Francis A. Bozzacco, Massillon, Ohio, assignor to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed July 29, 1957, Ser. No. 674,813
5 Claims. (Cl. 154—2.6)



1. The method of preparing an inorganic laminate which is characterized by excellent stability and di-electric properties at temperatures to 2500° F. and higher comprising

(1) Coating a fiber glass fabric with a silicone resin dissolved in a solvent,

(2) Heating said coated fabric to a temperature of about 100° F. for a period of about 2 hours in order to remove the solvent,

(3) Coating the treated fiber glass fabric with a layer about .015 inch thick comprised of about 50% by weight of sodium silicate and about 50% by weight of finely ground quartz,

(4) Assembling the laminate by plying together from 10 to 30 sheets of the previously prepared fabric,

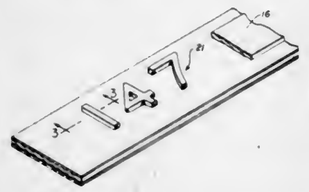
(5) Pressing the laminate assembly under a pressure of about 5 to 10 pounds per square inch,

(6) Curing the laminate at a temperature of about 200° F. for about three and one-half hours,

(7) Continuing the cure at a temperature of about 500° F. for about 10 hours in order to provide the laminate,

5. An inorganic laminate characterized by excellent stability and dielectric properties at temperatures to 2500° F. and higher comprised of a multiplicity of sheets of inorganic glass fibers, said fibers being coated with a protective silicone resin, the sheets of treated glass fiber being held together in spaced apart relationship by means of an inorganic binder comprised of an inorganic binder selected from the group consisting of sodium silicate, potassium silicate, magnesium oxysulfate, magnesium oxychloride, calcium aluminate, silica gel, and a phosphate cement and an inorganic filler selected from the group consisting of ground quartz, mica, aluminum oxide, silica, furnace slag, magnesium silicofluoride, magnesium oxide, zinc oxide, aluminum hydrate, barium fluosilicate, potassium fluosilicate, sodium fluosilicate, strontium fluosilicate, and silica.

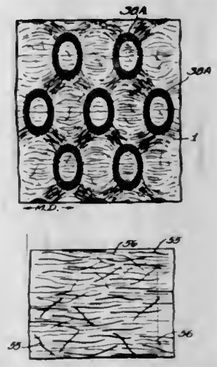
3,047,443
EMBOSSING TAPE
James D. Anderson, Berkeley, Calif., assignor to Dymo Industries, Inc., Berkeley, Calif., a corporation of California
Filed May 13, 1960, Ser. No. 28,882
12 Claims. (Cl. 154—46)



1. An embossable material of the character described comprising a base capable of cold flow embossment to provide permanently offset embossed portions on the upper surface thereof, a coating overlying said surface of said base, said coating being more brittle than said base whereby upon permanent offset of the latter, said coating will fracture in the zone of such offset embossed portions, and means overlying and removably secured to said coating and removable therefrom for removal of the fractured coating portions.

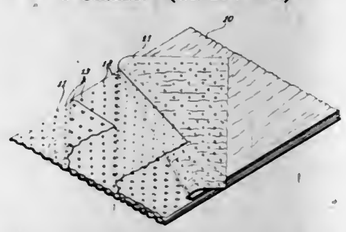
3,047,444
NON-WOVEN FABRIC AND METHOD OF MAKING THE SAME
Kenneth J. Harwood, Neenah, Wis., assignor, by mesne assignments, to Kimberly-Clark Corporation, a corporation of Delaware
Filed July 15, 1955, Ser. No. 522,312
12 Claims. (Cl. 154—46)

1. Webbing comprising a non-woven web of fibers having thereon a network of binder material, at least some of the binder in said network having the characteristic of being strengthenable by stretching and at least some of said binder tending to contract from a stretched condition when relieved of stretching forces, said web and said network of binder thereon having been stretched to elongate that portion of the network which becomes stronger when stretched, that portion which tends to contract from a stretched condition being contracted to a lesser extent than it was stretched, whereby some of the binder in said network is strengthened as an incident to said stretching and some of the fibers of said web are puckered as an incident to said contraction, a puffed characteristic being thereby imparted to the web.



11. A non-woven web comprising a mixture of stretch-strengthenable thermoplastic fibers and non-thermoplastic fibers, said fibers being securely and finally interbonded at crossings thereof to provide a stable integrated structure, and the web having thereafter been stretched to strengthen said thermoplastic fibers with the latter in condition for strengthening by stretching, whereby the tensile strength and the porosity of the web are increased.

3,047,445
CELLULOSIC WIPING MATERIAL
James T. Gresham, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed June 2, 1958, Ser. No. 739,281
5 Claims. (Cl. 154—46)

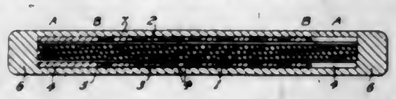


1. A wiping material comprising a pair of outer plies of relatively strong creped cellulose wadding having substantial wet strength characteristics and a plurality of plies of relatively weak creped cellulose wadding of high liquid absorbency characteristics disposed intermediate said outer plies, said inner and outer plies being maintained as a loose laminated assembly by spaced discrete adhesive bonds extending through the inner plies and partially through contiguous contacting areas of the outer plies, whereby to maintain the plies in unitary assembly with the outer surfaces of said outer plies devoid of said bonding material.

3,047,446
CONVEYOR BELTING
Douglas Ronald Henson, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, a British company
Filed May 25, 1960, Ser. No. 31,738
Claims priority, application Great Britain June 23, 1959
8 Claims. (Cl. 154—52.1)

1. A conveyor belt comprising a plane, flat, length of resilient material, a longitudinal reinforcement ply of

cords in said resilient material, said ply extending from one edge margin of said length to the other and said cords extending longitudinally, and transverse stiffening plies of cords in said resilient material, said stiffening plies extending from one edge margin to the other, the cords lying transverse to the length of said belt, the cords lying in side-by-side relationship in each of said plies,



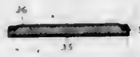
the belt having a longitudinally extending central region wherein the cords of said transverse stiffening plies are inclined at an angle with respect to the longitudinal axis of the belt and longitudinally extending side regions between said central region and said margins, said cords of said transverse stiffening plies lying at a greater angle with respect to the longitudinal axis of the belt in the side regions than in the central region.

3,047,447

METHOD FOR BONDING GYPSUM TO PAPER

Henry L. Stasse, Hawthorne, N.J., assignor to Allied Chemical Corporation, a corporation of New York

Filed Nov. 25, 1957, Ser. No. 698,703
6 Claims. (Cl. 156—40)



1. In the method for preparing gypsum board comprising continuously advancing a first paper sheet, depositing a settable slurry of water and calcinated by-product gypsum upon said first sheet, folding the edges of said first sheet to partially enclose the slurry, continuously advancing a second paper sheet, applying paste to edge portions of the advancing second sheet which will contact folded edge portions of said first sheet, pressing the sheets and slurry therebetween to form a board of substantially uniform thickness, allowing the slurry of the formed board to set, and thereafter drying the board, the improvement which comprises utilizing as the aforesaid settable slurry a slurry of water and calcined by-product gypsum prepared by slurrying by-product gypsum containing residual free and occluded phosphoric acid as an impurity with water, incorporating ammonium hydroxide into the resulting slurry in amount sufficient to bring the pH thereof to between 8 and 10 and to neutralize the free phosphoric acid to form the ammonia neutralization salt of the phosphoric acid in the slurry, de-watering the thus-treated slurry to form a de-watered gypsum cake, calcining the de-watered cake whereby calcium sulfate hemihydrate is formed and occluded phosphoric acid is liberated, pulverizing the calcium sulfate hemihydrate to powder form, slurrying the calcium sulfate hemihydrate powder with water, and incorporating ammonium hydroxide into the slurry in amount sufficient to bring the pH thereof prior to setting to between 7 and 8.5 and to neutralize liberated phosphoric acid to form the ammonia neutralization salt of the liberated phosphoric acid in the slurry.

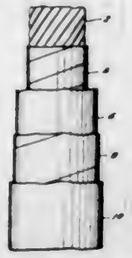
3,047,448

METHOD OF MAKING ELECTRIC CABLES

Robert G. Feller, Clifton, and John J. Sweeney, Saddle Brook, N.J., assignors to The Okonite Company, Passaic, N.J., a corporation of New Jersey

Filed June 7, 1957, Ser. No. 664,315
4 Claims. (Cl. 156—56)

1. The method of manufacturing an electric cable capable of continuous operation at temperatures up to 200° C., which method comprises applying to the cable conductor an incompletely cured, semi-conducting tape consisting of a vinyl-containing silicone gum, conducting black, and a curing agent selected from the group consisting of di-tertiary butyl peroxide and di-cumyl peroxide; applying an uncured insulating layer about said partially



cured tape, said insulating layer consisting of a vinyl-containing silicone gum, silica, and a curing agent selected from the group consisting of di-tertiary butyl peroxide and di-cumyl peroxide; and subjecting the assembly to a curing operation to complete the curing of the said tape and to effect complete cure of the insulating layer in situ.

3,047,449

PROCESS FOR PREPARING A THIN CELLULAR POLYURETHANE LAYER OF UNIFORM THICKNESS

George W. Coble, Nashville, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Jan. 16, 1958, Ser. No. 709,390
8 Claims. (Cl. 156—79)



1. A process for forming a thin cellular layer between two sheets of flexible material wherein two superimposed sheets of said flexible material are horizontally passed, at the same speed, through a pair of rollers preceded by introducing a foamable mixture containing an isocyanate-terminated polyurethane, water, and a tertiary amine between said sheets prior to passing said sheets with interdeposed foamable mixture through said rolls, said foamable mixture being spread uniformly between said flexible sheets followed by passing said sheets and interdeposed foamable mixture through a heated zone maintained at a temperature between about 55 to 75° C. wherein said mixture expands to form a thin uniform cellular layer between said flexible sheets.

3,047,450

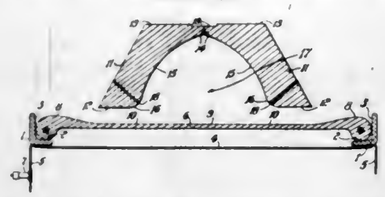
MANUFACTURE OF PNEUMATIC TYRES

George Edward Drakeford, Walmley, Sutton Coldfield, and Raymond Norgrove Manning, Erdington, Birmingham, England, assignors to Dunlop Rubber Company Limited, London, England, a company of Great Britain

Filed Sept. 1, 1959, Ser. No. 837,411
Claims priority, application Great Britain Sept. 3, 1958
6 Claims. (Cl. 156—110)

1. Method of shaping a pneumatic tyre carcass comprising the steps of contracting it axially and applying to it a radially outward expanding force whilst restraining it at circumferential zones spaced symmetrically from a plane transverse to its axis and midway between its beads

to permit initially only its central region to expand radially outwardly, and varying the restraint as expansion proceeds



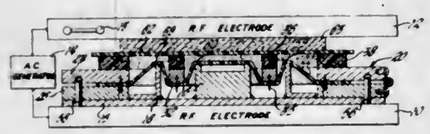
to permit the region of radial expansion to increase progressively radially outwardly towards the beads of the carcass.

3,047,451

DIELECTRIC EMBOSSING PROCESS AND APPARATUS

Ronald D. Beck, Clawson, and Bruce E. Kevelin, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 28, 1959, Ser. No. 862,252
9 Claims. (Cl. 156—219)



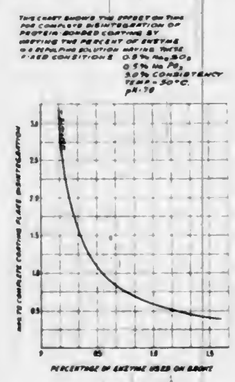
1. A method for making a decorative embossed panel comprising positioning a sheet of flexible thermoplastic material adjacent a base sheet, applying pressure to an inner finite portion of the thermoplastic sheet and to a continuous outer finite portion of the thermoplastic sheet surrounding said inner portion to press such portions into engagement with the base sheet, and simultaneously applying tension between said finite portions and other portions of the thermoplastic sheet and applying high frequency electrical energy to said finite portions to thereby heat-soften such portions and allow the tension to cause separation thereof from said other portions while continuing the application of pressure to said finite portions to bond them to the base sheet.

3,047,452

MANUFACTURE OF CELLULOSIC PRODUCTS

John Wallace De Vos, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed May 1, 1959, Ser. No. 810,344
4 Claims. (Cl. 162—5)



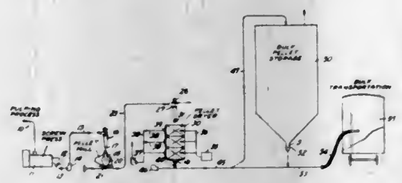
4. A process for recovering papermaking fibers and pigments from paper broke coated with a mineral pigment bonded by a formaldehyde-insolubilized protein which comprises the steps of adding warm water to said broke in an amount sufficient to partially disintegrate said broke and obtain an aqueous suspension thereof having a consistency of from 2 to 10%, adding to said suspension, while maintaining the temperature thereof at between about 40° C. and 60° C. and the pH thereof at between 6 and 8, a proteolytic enzyme in an amount of at least 0.25% by weight based on the dry weight of said broke, agitating said suspension until the protein material is substantially hydrolyzed and dissolved, whereby the fibers and pigments in said paper broke are substantially completely separated and available for reuse in the papermaking process without further treatment.

3,047,453

PULP HANDLING SYSTEM, METHOD AND APPARATUS

Raymond E. Shook, Jr., Muncy, Pa., assignor to Sprout, Waldron & Company, Inc., Muncy, Pa., a corporation of Pennsylvania

Filed Apr. 6, 1959, Ser. No. 804,464
6 Claims. (Cl. 162—100)



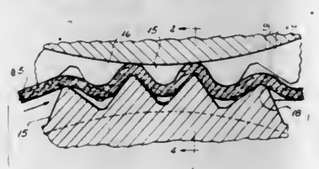
1. In a method for handling paper pulp produced as a water slurry of pulp fibers in a pulping process for transportation and storage between a pulp mill and a paper mill, the steps which comprise dewatering said pulp slurry under pressure, introducing said dewatered pulp to a pellet mill for mechanically working and pelleting said pulp fibers, said dewatering increasing the consistency of said slurry to a degree permitting pelleting, subjecting said pulp fibers in said pellet mill to mechanical working by a rolling pressure against a hard surface, extruding said worked pulp under high pressure through a restricted compacting extrusion passage in said pellet mill thus forming compacted and self-sustaining pellets of said dewatered and worked pulp fibers, and drying said pellets to a substantially free flowing consistency for bulk storage and transportation and handling thereof.

3,047,454

EMBOSSING

Nicholas Marcalus, West Englewood, N.J. (1 Market St., East Paterson, N.J.)

Filed Sept. 25, 1959, Ser. No. 842,370
10 Claims. (Cl. 162—117)



1. An article of manufacture comprising, a relatively thin supple paper sheet capable of use as toweling and having opposite sides each formed with relatively large projections and wells adjacent and between said projections with the projections of one side constituting the walls of the wells of the other side, said walls being imperforate and of a substantially uniform thickness and suppleness throughout their entireties, said projections and wells con-

stituting brushing and storage means capable of removing and storing foreign matter from a soiled surface when either side of said sheet is wiped over said surface.

3,047,455
PAPER MANUFACTURE FROM SYNTHETIC NON-CELLULOSIC FIBERS

Richard R. Holmes and Nealie T. Anderson, Decatur, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Mar. 13, 1959, Ser. No. 799,080
3 Claims. (Cl. 162—157)

1. In the process for the manufacture of a paper product wherein: filaments are wet-spun from an acrylonitrile polymer containing at least 80 percent by weight of acrylonitrile and up to 20 percent by weight of a monoolefinic monomer copolymerized therewith; the said filaments are cut into fibers of paper-making lengths; the said fibers are fibrillated in an aqueous slurry to develop interlockable fibrils projecting therefrom; the fibrillated fibers are sheeted out into an article of a predetermined shape and thickness; and the resulting article is dried to form a paper product; the improvement comprising fibrillating the said fibers when same have a gel and an uncollapsed structure.

3,047,456
MANUFACTURE OF PAPER PRODUCTS FROM FIBERS WET SPUN FROM POLYMER BLENDS

Pompelio A. Ucci and Nealie T. Anderson, Decatur, Ala., assignors, by mesne assignments, to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

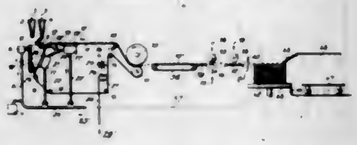
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,466
11 Claims. (Cl. 162—157)

1. A process for the manufacture of a paper product comprising the steps of preparing wet spun fibers from a solution containing a physical blend of about 95 to 75 percent by weight of a base polymer of a long chain synthetic polymer from which an acrylic textile fiber can be formed and containing at least 85 percent by weight combined acrylonitrile and about 5 to 25 percent by weight of a modifying polymer of a cellulose lower fatty acid ester of the fiber forming type, said blend being capable of forming a solution of at least 5 percent concentration by weight in N,N-dimethylacetamide, beating said fibers in an aqueous slurry to fibrillate same, sheeting out the beaten fibers into a predetermined shape and thickness, and drying the resulting sheeted out material to form a strong coherent paper product.

3,047,457
PROCESS FOR PRODUCING CONSTRUCTION ELEMENTS OF ANY SHAPE

Alfons N. Knauf, Beaumarais-Siersburg, Germany, assignor to Nikolaus Wilhelm Knauf, Saar County, Germany

Filed Feb. 14, 1958, Ser. No. 715,453
Claims priority, application Germany Feb. 14, 1957
13 Claims. (Cl. 162—174)

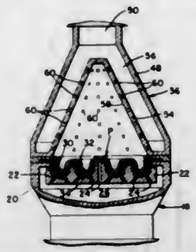


1. A method of continously manufacturing building elements, which comprises preparing a suspension of a fibrous material having fibers capable of interlacing with each other, a settable mineral sulphurous binder material, a large excess of water and a retarding material adapted to retard the setting of said binder material, continuously shaping said suspension into a web-like fleece, continuously removing the major amount of said water from said fleece and allowing said fleece to set.

3,047,458
DISTENDED MOLDING OF PAPER PULP

Wendell H. Stickney, Springdale, Conn., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 19, 1960, Ser. No. 76,699
5 Claims. (Cl. 162—223)



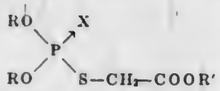
1. The method of producing an elongated article from a relatively short depth article comprising depositing a preform on a mold, disposing said preform in receiving relationship to a transfer head of a configuration differing from that said mold, and drawing said preform into said transfer head and distending the same longitudinally to form a distended preform having a distended length far exceeding the practical depth of the originally deposited preform.

3,047,459
NEW PESTICIDAL COMPOUNDS AND METHODS OF MAKING SAME

Mario Perini, Milan, and Giovanni Speroni, Florence, Italy, assignors to Montecatini-Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy

No Drawing. Filed Nov. 8, 1955, Ser. No. 545,779
Claims priority, application Italy Nov. 9, 1954
15 Claims. (Cl. 167—22)

1. As new pesticides, thiophosphoric acid esters of the general formula



wherein X is taken from the group consisting of oxygen and sulphur, R represents lower alkyls and R' represents a member of the group consisting of lower straight and branched-chain alkyls.

3,047,460
FUNGICIDAL COMPOSITIONS AND PROCESS FOR THE PREPARATION THEREOF

Albrecht Heymons, Berlin-Nikolassee, and Willy Schnabel, Berlin-Schoneberg, Germany, assignors to Riedel-de Haen Aktiengesellschaft, Hannover, Germany

No Drawing. Filed Oct. 28, 1954, Ser. No. 465,448
Claims priority, application Germany Oct. 29, 1953
7 Claims. (Cl. 167—33)

1. A fungicidal composition comprising lactic anhydride, copper-8-hydroxy quinoline, and an organic solvent.

3,047,461
CENTRAL NERVOUS SYSTEM STIMULANT

Robert A. Hardy, Jr., Ridgewood, N.J., and Charles F. Howell, New City, and Nicanor Q. Quinones, New York, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 10, 1960, Ser. No. 35,114
3 Claims. (Cl. 167—65)

3. A process of stimulating the central nervous system of mammals which comprises administering a composition to mammals containing between about 1 and about 100 milligrams of 5-phenyl-2-methylimino-4-oxazolidinone per dosage unit and a pharmaceutical carrier therefor.

3,047,462
QUINAZOLONE ANTI-INFLAMMATORY COMPOSITION

Jacques Georges Albert Eugéne Maillard and Robert Marcel Morin, Paris, Michel Marius Jean Vincent, Soisy-sur-Seine, and Madeleine Marie Benard, Paris, France, assignors to Societe d'Exploitation des Laboratoires Jacques Logeais (S.A.R.L.), Issy-les-Moulineaux, Seine, France, a company of France

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,566
1 Claim. (Cl. 167—65)

An anti-inflammatory composition containing as its essential active anti-inflammatory agent 3-methyl-3,4-dihydro-quinazolone-4 together with a pharmacologically acceptable inert carrier.

3,047,463
PREPARATION OF NON-HYGROSCOPIC GRANULES OF POWDERED VALERIAN EXTRACT, EXTRACTS OF HOPS, AND POWDERED DRY MILK

Hans Merkel, Ruthmanninstrasse 5, Nurtingen, Germany

No Drawing. Filed June 10, 1959, Ser. No. 819,215
Claims priority, application Germany June 16, 1958
7 Claims. (Cl. 167—65)

1. A process for preparing non-hygroscopic, easily soluble granules containing a powdered extract selected from the group consisting of valerian extract, extracts of hops and mixtures thereof, comprising mixing said powdered extract with a proportionate excess over the extract of powdered dry milk selected from the group consisting of dry skim milk and dry whole milk and subjecting the resulting mixture to granulation with an organic solvent containing up to 10% of water and drying the granules thus formed.

3,047,464
GOLD-ISOQUINOLINE-YOHIMBINE COMPLEX FOR RHEUMATIC DISEASES

Johann Heinrich Schaeppi, Mitlodi, Switzerland, assignor to Dr. Schaeppi, Aktiengesellschaft, Mitlodi, Switzerland, a corporation of Switzerland

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,176
6 Claims. (Cl. 167—65)

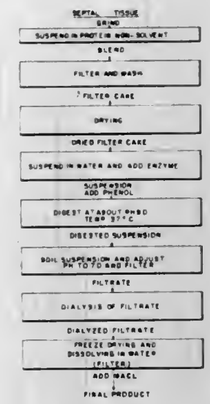
1. The method of making an injectable preparation for the treatment of rheumatic diseases which comprises heating an aqueous solution of about 0.2% of isoquinoline and about 1% of yohimbine, at a pH of 2.5 to 3.5, to the boil, adding slowly to the boiling mixture a solution of auric chloride containing up to 1% auric chloride and containing an amount of gold chloride from about 0.5% to 1% of the weight of the isoquinoline plus yohimbine, continuing the heating until the precipitation of insoluble gold monoxide is complete, filtering the solution from the precipitated gold monoxide, diluting the filtrate to a gold content of .0002 to .00025% gold and adjusting its pH to 3.9 to 4.0, and ampuling the resultant solution.

3,047,465
THERAPEUTIC AGENT FOR TREATMENT OF MENTAL ILLNESS AND METHOD FOR PREPARATION THEREOF

Robert G. Heath, New Orleans, and Byron E. Leach, Metairie, La., assignors to The Administrators of The Tulane Educational Fund, New Orleans, La.

Filed Nov. 14, 1958, Ser. No. 773,965
9 Claims. (Cl. 167—74)

1. A process of preparing a new therapeutic agent for the treatment of schizophrenia and other mental illnesses which comprises subjecting protein and protein complex containing tissue material from the septal region of the brain to hydrolysis for a time sufficient to form



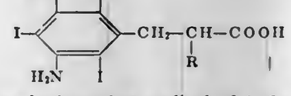
the active component of the therapeutic agent, terminating hydrolysis, and purifying the resulting activated material.

3,047,466
X-RAY CONTRAST AGENT

Hans Priewe, Berlin-Steglitz, Alexander Poljak, Berlin-Frohnau, and Karl Junkmann, Berlin, Germany, assignors to Firma Schering A.G., Berlin, Germany

No Drawing. Filed Dec. 9, 1958, Ser. No. 779,065
Claims priority, application Germany Dec. 18, 1957
12 Claims. (Cl. 167—95)

1. A compound selected from the group consisting of compounds of the following general formula:



wherein R is a hydrocarbon radical of 1–6 carbon atoms; and non-toxic salts thereof.

3,047,467
PROCESS FOR THE PREPARATION OF PENICILLINS

Frank Peter Doyle, Betchworth, John Herbert Charles Nayler, Catford, London, and George Newbolt Rolinson, Betchworth, England, assignors to Beecham Research Laboratories, Limited, Betchworth, England, a British company

No Drawing. Application July 13, 1959, Ser. No. 826,491, which is a division of application Ser. No. 750,075, July 22, 1958, now Patent No. 2,941,995, dated June 21, 1960. Divided and this application Mar. 30, 1960, Ser. No. 18,488
Claims priority, application Great Britain Aug. 2, 1957
11 Claims. (Cl. 195—36)

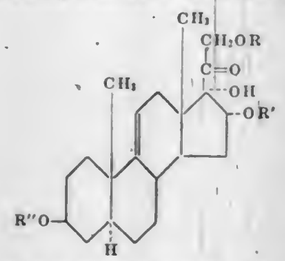
1. A process for the preparation of derivatives of penicillanic acid which comprises growing a species of *Penicillium chrysogenum* by submerged, aerobic fermentation in a nutrient medium consisting essentially of a naturally-occurring nitrogenous nutrient, a naturally-occurring source of carbon, at least one inorganic salt, and water, removing any penicillins formed, and mixing the liquid thus obtained with a reagent selected from the group consisting of carboxylic acid chlorides, carboxylic acid bromides, sulfonic acid chlorides, esters of chlorocarbonic acid, acid anhydrides of carboxylic acids, and mixed anhydrides derived from carboxylic acids to form the reaction product of 6-aminopenicillanic acid and said reagent.

3,047,468
METHOD OF PREPARING $\Delta^{1,4}$-3-KETO STEROIDS OF THE PREGNANE SERIES

Victor E. Origoni, Emerson, and Neil E. Rigler, Ridgewood, N.J., and Joseph J. Goodman, Nanuet, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 6, 1961, Ser. No. 115,102
3 Claims. (Cl. 195—51)

1. A process which comprises inoculating a nutrient medium containing assimilable carbon, nitrogen and mineral salts with a strain of the species *Bacterium havaniensis*, adding a steroid of the formula:



in which R, R' and R'' are selected from the group consisting of hydrogen and lower alkanoyl radicals, permitting the fermentation to proceed until a substantial amount of 16α,17α,21-trihydroxy-1,4,9(11)-pregnatriene-3,20-dione is produced and recovering said steroid therefrom.

3,047,469
DEHYDROGENATION OF STEROIDS BY DEHYDROGENASE AND HYDROGEN CARRIER

Charles John Sih, New Brunswick, and Ralph E. Bennett, Princeton, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed July 8, 1959, Ser. No. 825,668
6 Claims. (Cl. 195—51)

1. A process for dehydrogenating steroids in the A-ring which comprises subjecting a 1,2-saturated steroid to the action of a mixture of (1) a hydrogen carrier and (2) a ring A dehydrogenase which is a cell-free extract of a 1,2-dehydrogenating strain of a microorganism selected from the group consisting of Nocardia, Corynebacterium, Mycobacterium and Cylindrocarpon; and recovering the ring A-dehydrogenated-steroid thus formed.

3,047,470
MICROBIOLOGICAL 11α-HYDROXYLATION OF 16α,17α-EPOXY PREGNENES

Louis M. Pruess, Pearl River, N.Y., and Charles Pidacks, Montvale, and Neil E. Rigler, Ridgewood, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,973
11 Claims. (Cl. 195—51)

1. The process of 11-hydroxylating a steroid selected from the group consisting of 4-pregnene-21-ol-3,20-dione-16α,17α-epoxide; 5-pregnene-3β-ol-20-one-16α,17α-epoxide; and 4-pregnene-3,20-dione-16,17α-epoxide, which comprises subjecting said steroid to the fermentative action of a hydroxylating organism selected from the group consisting of *Botryodiplodia theobromae, Didymocladium ternatum, Myrothecium roridum, Hormodendrum hordei* and *Hormodendrum pallidum*.

3,047,471
METHOD OF REFINING AMYLOGLUCOSIDASE

Thomas L. Hurst and Almerin W. Turner, Decatur, Ill.

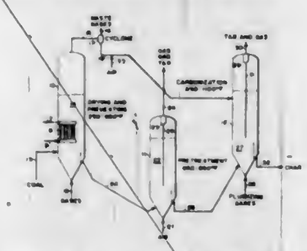
No Drawing. Filed Sept. 26, 1960, Ser. No. 58,206
13 Claims. (Cl. 195—66)

1. The method of increasing the glucogenic activity of aqueous amyloglucosidase preparations which comprises mixing with said preparation at a pH within the range of 2 to 5 an effective amount of an amyloglucosidase-refining agent selected from the group consisting of lignin and tannic acid, and separating solids from aqueous solution, whereby an aqueous solution of amyloglucosidase having increased glucogenic activity is obtained.

3,047,472
SIZE SEPARATION, PREOXIDATION AND FLUIDIZED LOW TEMPERATURE CARBONIZATION OF COAL

Everett Gorin and Robert Theodore Struck, Pittsburgh, Pa., assignors to Consolidation Coal Company, a corporation of Pennsylvania

Continuation of application Ser. No. 590,428, June 11, 1956. This application Jan. 9, 1959, Ser. No. 785,888
11 Claims. (Cl. 202—9)



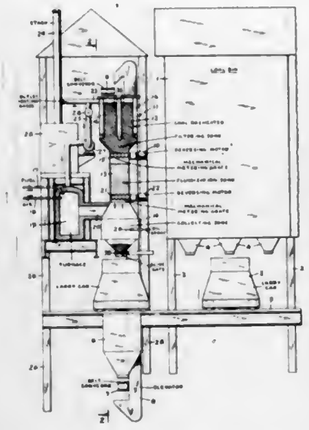
1. The method for processing finely divided caking bituminous coal under fluidized low temperature carbonization conditions which comprises introducing said finely divided coal into a stream of gases moving upwardly through a drying and preheating zone maintained at a temperature within the range 250 to 600° F., which serves to separate said coal into two fractions, comprising a dried relatively coarse fraction which contains at least 50 percent of said coal and a dried relatively fine fraction which contains at least 10 percent of said coal, said relatively coarse fraction comprising coal particles of larger median size than the coal particles comprising said relatively fine fraction, reacting said relatively coarse fraction with sufficient oxygen-containing gases under fluidized non-agglomerating conditions at a temperature within the range of 600 to 850° F. to render said relatively coarse fraction non-agglomerating in a subsequent fluidized low temperature carbonization treatment, recovering both of said fractions and subjecting them in admixture to low temperature carbonization under fluidized non-agglomerating conditions at a temperature within the range of 850 to 1100° F. and recovering as products solid carbonization residue and evolved gases and tar vapors.

3,047,473
DRYING, PREHEATING, TRANSFERRING AND CARBONIZING COAL

Lawrence D. Schmidt, New York, N.Y., assignor to Allied Chemical Corporation, a corporation of New York

Filed Sept. 10, 1956, Ser. No. 608,990
23 Claims. (Cl. 202—27)

7. A process for drying and preheating wet coal preliminary to carbonizing the coal which comprises passing hot gases up through a fluidized bed of coal supported on a mechanically operated grate at a sufficient velocity to maintain the bed of coal in the fluidized state and to dry and preheat said coal, mechanically operating said grate to discharge dried, preheated coal at a controlled rate down through said grate, passing the gases leaving the top of the fluidized bed of coal and containing suspended finely divided particles of coal elutriated from the fluidized bed upwardly through a second mechanically operated grate supporting a compact column of coal, said gases penetrating the lowermost portion of the compact column of coal thereby transferring sensible heat of the gases to the coal and filtering suspended finely divided particles of coal from the gases, discharging the cooler filtered gases from the coal at a point near the bottom of the column of coal, said compact column of coal being

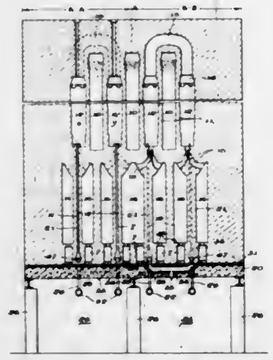


of sufficient height to prevent the flow up through the column of coal, mechanically operating said upper grate supporting the compact column of wet, cold coal to permit controlled amounts of coal to fall down through the grate into the fluidized bed of coal beneath it, and feeding wet coal into the top of the compact column of coal.

3,047,474
RECIRCULATION UNDERJET COKING RETORT OVEN

Linwood G. Tucker, Jr., Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Nov. 14, 1956, Ser. No. 622,170
6 Claims. (Cl. 202—143)



1. A regenerative coke oven, comprising: a silica brickwork masonry mass constituted of horizontal coking chambers alternating in position side-by-side with flued heating walls; regenerators separated by oven supporting regenerator division walls located below the coking chambers and heating walls, brick sole channels below the regenerators; a concrete oven supporting mat above an accessible basement space beneath the mat; said regenerator division walls resting directly on the top of the concrete mat and being constituted of silica brickwork masonry where they rest on the top of the mat, and said brick sole channels being laid intermediate the silica masonry of the adjacent regenerator division walls and also resting directly on the top of the mat; "on" and "off" rich gas risers extending upwardly through the silica masonry regenerator division walls; rich gas riser pipes having inlet nozzles in axial alignment with the gas risers; waste gas recirculation ducts extending longitudinally of the battery from one regenerator division wall to another underneath the sole channels of the intervening regenerators to interconnect the gas risers in said division walls, said recirculating ducts being located in spaced relation to each other and to the rich gas risers crosswise of the battery and provided at each end with an upwardly open outlet flush with the top part of the concrete mat for communicable connection with the off and on gas risers in the regenerator division walls that they interconnect; and branch ducts located in the silica brickwork of the regenerator division walls, for communicably connecting the outlets at the ends of the recirculating ducts with the rich gas risers in the regenerator division walls, each branch duct comprising a downwardly opening inlet flush with the base of its regenerator division wall and aligned with the upwardly open outlet at one end of its recirculation duct and a discharge outlet leading to its gas riser in the silica masonry at the level at which the aforesaid gas inlet nozzles discharge therein and which includes the novel combinational arrangement of parts in which the rich gas nozzles are fixed to the silica brick of the regenerator division walls for movement in unison therewith with the riser pipes freely movably disposed in passages in the concrete for such movement, to insure the discharge of the rich gas in the form of a jet into the rich gas risers in the silica masonry coaxially of the latter, and the waste gas ducts are immovably disposed within the concrete below the top of same.

3,047,475
METHOD FOR PRODUCING MAGNETIC MATERIALS

Wilbur G. Hespenheide, Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Sept. 25, 1958, Ser. No. 763,169
4 Claims. (Cl. 204—43)

1. The process comprising electrodepositing a magnetic nickel-iron alloy having a coercive force of not more than 10 oersteds from an aqueous bath whose content of metallic cations consists of between 5 and 150 grams per liter of iron as dissolved iron sulfamate and between 6 and 77 grams per liter of nickel as dissolved nickel sulfamate, having a pH between 1.5 and 4.0, at a temperature between 70 and 200 degrees Fahrenheit, upon a cathode operating at a current density between 0.17 ampere per square inch and 10.0 amperes per square inch.

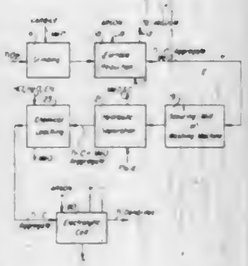
3,047,476
PROCESS FOR THE RECOVERY OF NIOBIUM

Fritz Kern, Therwil, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a company of Switzerland

No Drawing. Filed Nov. 29, 1960, Ser. No. 72,274
Claims priority, application Switzerland Dec. 11, 1959
2 Claims. (Cl. 204—64)

1. A process for the recovery of niobium from mixtures of niobium pentachloride and tantalum pentachloride in which the ratio by weight of tantalum to niobium is less than 3:1, which comprises subjecting the mixture of pentachlorides to electrolysis in a melt of sodium chloride, potassium chloride and potassium fluoride, and discontinuing the electrolysis when the ratio by weight of tantalum to niobium in the melt is substantially equal to 3:1.

3,047,477
REDUCTION OF TITANIUM DIOXIDE
Joseph R. Spraul, Munster, and David Batzer, East Chicago, Ind., assignors to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Filed Oct. 30, 1957, Ser. No. 693,450
26 Claims. (Cl. 204—64)



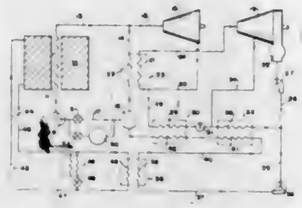
1. The process of reacting in the solid state titanium dioxide and the carbide of a metal selected from the class consisting of aluminum and alkaline earth metals to produce free titanium metal, comprising preparing an intimate mixture of said ingredients in finely divided form, and heating said mixture to an elevated temperature below about 1200° C. throughout a time interval sufficiently long to effect a substantially complete reaction to produce particles of free titanium metal and of carbon and of the oxide of said class metal.

3,047,478
MITIGATING CORROSION OF MARINE STRUCTURES
Glenn A. Marsh and Edward Schaschl, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Nov. 25, 1959, Ser. No. 855,385
10 Claims. (Cl. 204—148)



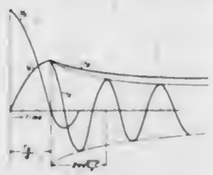
1. A method of mitigating the corrosion of a corrodible, metallic, marine structure extending in a generally vertical direction from a point above the water surface to a point below mean low tide comprising ensheathing that portion of said structure extending from a point above the splash zone to a point below mean low tide with a corrosion-resistant metal which is cathodic with respect to said structure, and disposing a generally disc-shaped sacrificial member at the lower terminus of said corrosion-resistant sheath and encompassing said structure, said sacrificial member being in electrical contact with said sheath, fabricated of a metal not substantially anodic or cathodic with respect to said structure, and extending radially from said structure a distance of at least about 1 foot.

3,047,479
STEAM REACTOR SYSTEM
Gale J. Young, Hawthorne, and David M. Poole, Rye, N.Y., assignors to United Nuclear Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 9, 1957, Ser. No. 682,917
10 Claims. (Cl. 204—154.2)



1. The method of utilizing heat energy produced by the fission process occurring in a nuclear power reactor which comprises passing an easily vaporizable and condensable medium in its vaporous phase through said reactor in heat exchange relation to at least a portion of said reactor in which heat energy is produced by said fission process to heat the vaporous medium, condensing at least a portion of the heated, vaporous medium, transforming the condensed medium in its vaporous phase by mixing therewith a portion of heated, vaporous medium, and recirculating the transformed medium through the reactor in heat exchange relation.

3,047,480
PLASMA DEVICE UTILIZING SELF-TRAPPING OF PLASMA CURRENT AND MAGNETIC FIELD
Ralph H. Lovberg and Louis C. Burkhardt, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed July 30, 1958, Ser. No. 752,148
3 Claims. (Cl. 204—154.2)



1. An improved method of obtaining fusion reactions with the release of energetic neutrons comprising the steps of confining a thermonuclear fuel within a reactor consisting of a gas-tight container including a non-conducting tube surrounded by a conductive shell to form a coaxial line, providing an essentially constant magnetic field along the common axis of said tube and said shell, and coupling said coaxial line to a driving circuit consisting of a capacitor bank of low capacitance charged to a high voltage and leads of low resistance and inductance to ionize said fuel, inducing a pinched discharge current therein which compresses said magnetic field and causes current entrapment within said ionized fuel, crowbarring, short-circuiting or isolating said pinched discharge current by providing the parameters L, C, ρ and r with such values that the ringing period of the external circuit, τ_b, is less than the time constant of decay of the pinched plasma current,

$$\frac{\mu_0 r^2}{\rho}$$

where $\tau_b = 2\pi\sqrt{LC}$, L being the combined series inductance

of the external circuit and said reactor and C being the capacitance of said external source of energy,

$$\mu_0 = 4\pi \times 10^{-7}$$

henries/meter, r=the inside radius of said container, and ρ=resistivity of said ionized fuel external to the central current-carrying sheath formed by connecting said external source of energy to said reactor, said entrapped current preventing the premature expansion of said pinched discharge to the walls of said container and thereby allowing inter-diffusion of said trapped magnetic field and the azimuthal magnetic field of said discharge current to increase the energy of said pinched discharge.

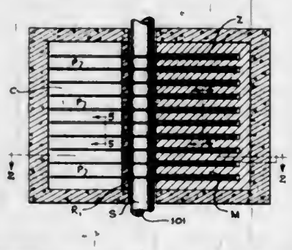
3,047,481
METHOD OF PRODUCING OXIMES OF ALICYCLIC KETONES
Kurt Kahr, Chur, Graubunden, Switzerland, assignor to Inventa A.G. für Forschung und Patentverwertung, Lucerne, Switzerland
No Drawing. Filed Dec. 9, 1957, Ser. No. 701,329
8 Claims. (Cl. 204—162)

1. A process of producing an oxime of an alicyclic ketone containing more than four carbon atoms in the molecule which comprises reacting the corresponding saturated alicyclic hydrocarbon in the presence of active light with a crude gaseous mixture derived from ammonia combustion with an oxygen-containing gas and comprising 9% to 12% of nitrogen oxides at least half of which consists of NO and the remainder of which consists of NO_2 produced by residual oxygen still present in the ammonia combustion gas, and with hydrochloric acid gas in a molar ratio such that NO_2:HCl is greater than 1:2 and not greater than 1:20.

3,047,482
PRODUCTION OF OXIMES
Chao-shing Cheng and Bernard Taub, Williamsville, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed July 31, 1959, Ser. No. 830,743
23 Claims. (Cl. 204—162)

1. In a process for production of a saturated aliphatic oxime wherein a nitrosating agent and a saturated aliphatic compound react in the presence of acitinic light, the improvement which comprises providing throughout the reaction mixture, as catalyst, at least one compound of the group consisting of quinones; phenols; aryl iodides; aldehydes; open chain alcohols; nitrous esters of said alcohols; esters of carboxylic acids; open chain ketones; peroxycarboxylic acids; peroxycarboxylic esters; carboxylic acid peroxides; organic hydroperoxides; and aliphatic iodides.

3,047,483
NUCLEAR ENERGY REACTORS
Henri Polak, 19 Chemin de Fossard, Geneva, Switzerland
Filed Oct. 6, 1960, Ser. No. 61,034
5 Claims. (Cl. 204—193.2)

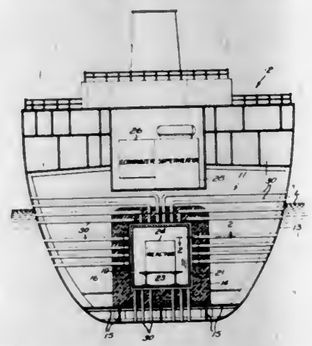


1. In a nuclear reactor the combination comprising a core containing a plurality of disc-shaped, fuel-containing elements, said elements being mounted for rotation about their respective centers in a plurality of spaced parallel planes, means for rotating said elements, means for creating a condition of criticality in said plurality of discs over segments of said discs, said segments progressing around said discs during rotation thereof, coolant means surrounding each of said discs including said critical segments, and means for passing said coolant means around said discs in a direction parallel to the plane of rotation of said discs with the coolant flow rate highest adjacent the center of rotation of said discs.

3,047,484
IRON BASE ALLOYS AND ARTICLES MADE THEREFROM
John T. Stacy and Henry A. Saller, Columbus, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Mar. 30, 1955, Ser. No. 498,119
5 Claims. (Cl. 204—193.2)

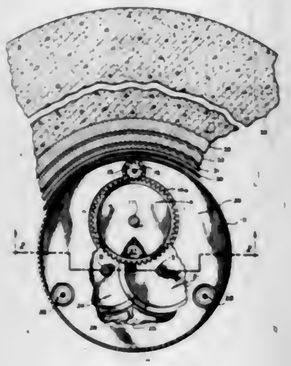
1. A jacket for a fuel element of a neutronic reactor consisting of an alloy consisting of from 15 to 30% by weight of chromium, from 5 to 6.5% by weight of aluminum, a total of from 2.5 to 10% by weight of at least one metal selected from the group consisting of niobium and tantalum, said niobium content being within the range of from 2.5 to 10% and said tantalum content being within the range of from 5 to 10% and the balance of said alloy being iron.

3,047,485
SAFETY ARRANGEMENT FOR NEUTRONIC REACTORS ABOARD WATER-SUSTAINED CRAFT
Cecil B. Ellis, White Plains, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Nov. 15, 1957, Ser. No. 696,856
10 Claims. (Cl. 204—193.2)



1. A safety system for neutronic reactors aboard water-sustained vessels, comprising a shield for a neutronic reactor disposed within a vessel in sustaining water, a fluid-tight compartment within said shield defined by a wall and containing the reactor, said wall being spaced from the shield to define a water channel disposed below the level of the sustaining water, and conduit means having inlets communicating with the water channel at a plurality of points thereof and having outlets for communicating with sustaining water exterior of a vessel along at a plurality of points thereof, said conduit means being so disposed in said vessel that one outlet is at an elevation above another outlet with both outlets permitting passage of water therethrough regardless of the position of the vessel in the sustaining water, whereby decay heat liberated by reactor fuel after reactor shut-down causes a natural circulation of water through said water channel and said mentioned inlets and outlets of the conduit means to remove the decay heat from the compartment.

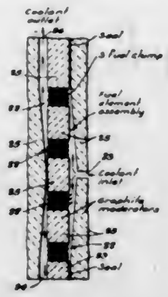
3,047,486
NUCLEAR REACTOR
George H. Hanson, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 726,796
5 Claims. (Cl. 204—193.2)



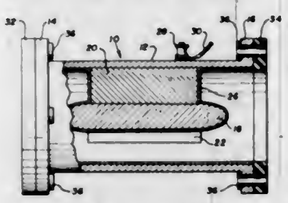
1. A nuclear reactor comprising a generally cylindrical housing; three support rods positioned within said housing in parallel relationship with the axis of said housing and in spaced relationship with one another to form the corners of an equilateral triangle in a plane perpendicular to the axis of said housing; a plurality of first circular plates positioned in spaced relationship with one another within said housing coaxial with and surrounding the first of said support rods; a plurality of second circular plates positioned in spaced relationship with one another within said housing coaxial with and surrounding the second of said support rods; a plurality of third circular plates positioned in spaced relationship with one another within said housing coaxial with and surrounding the third of said support rods; said first, second and third plates being positioned alternately in a direction parallel to the axis of said housing, said plates being spaced from one another and being of such size as to overlap at the center of said housing; means to rotate said first, second and third plates about said first, second and third support rods, respectively; plates of neutron moderator material enclosing said first, second and third plates; said first, second and third plates being formed at least in part of fissionable material so that said overlapping sections form a critical mass to sustain a nuclear reaction; at least one control element of a neutron absorbing material adjustably positioned within said housing; and means to circulate a coolant through said housing so that said coolant is in continuous heat exchange relationship with said first, second and third plates.

3,047,487
SOLID FUEL AND HEATING ELEMENT FOR GAS-COOLED NUCLEAR REACTORS
Guy H. Cannon, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,461
2 Claims. (Cl. 204—193.2)

1. An assembly of interlocked wedge S-shaped fuel elements for gas-cooled nuclear reactors having legs of substantially equal length and width but containing an uneven distribution of nuclear fuel, and having the thicker leg of one element interlocked with the thinner leg of the next element, whereby more of the fuel mass is positioned near the coolant inlet and less of the fuel mass is positioned near the coolant outlet.



3,047,488
REFERENCE ELECTRODE
William M. Laird, Fox Chapel Borough, and Malcolm R. J. Wyllie, Indiana Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Original application Dec. 29, 1953, Ser. No. 401,030. Divided and this application Mar. 20, 1959, Ser. No. 800,704
3 Claims. (Cl. 204—195)



1. An electrode construction comprising an open-ended tubular casing, an elongated body centrally disposed in the casing in longitudinal alignment with the casing, a plurality of vanes in longitudinal alignment with the casing connecting the body to the casing and supporting the elongated body in its central position within the casing, said casing, body and vanes being electrically conductive, an active electrode material electrochemically reversible with respect to a selected ion defining the exposed surfaces of the body, the vanes and the interior of the casing, means carried at the ends of the casing for electrically insulated connection to a fluid conduit, and electrically conducting means in electrical contact with the casing for conducting the electric potential from the casing.

3,047,489
APPARATUS FOR ZONE ELECTROPHORESIS
Samuel Raymond, 341 S. 26th St., Philadelphia, Pa.
Filed May 25, 1961, Ser. No. 112,650
2 Claims. (Cl. 204—299)

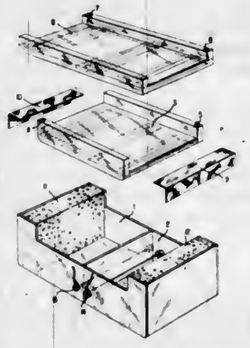
1. Apparatus for spreading mixtures by zone electrophoresis, the apparatus comprising;

(*a*) a tank containing separate open top buffer solution chambers with electrodes therein,

(*b*) a readily removable lower plate having a size and shape to partially cover the tank and extend from one solution chamber to the other and provide open spaces above each chamber for access to each chamber, the lower plate being positioned on top of the tank with the top of the lower plate above the normal level of the buffer solution chambers,

(*c*) a readily removable upper plate having a size and shape to substantially cover the lower plate and extend completely over the open top of the buffer solution chambers and completely cover the tank and thereby substantially prevent the escape of vapors therefrom,

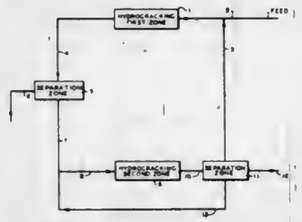
(*d*) the space between the top of the lower plate and the bottom of the upper plate containing an electrophoresis zone supporting medium which is electrolytically connected to the buffer solution in the chambers,



(*e*) means defining coolant passages extending through both of the plates for individually cooling both of the plates by the circulation of a liquid cooling medium, and

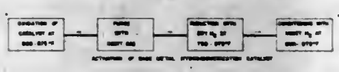
(*f*) an electrically inert porous substance in each of the buffer solution chambers adapted to be saturated with the buffer solution used, the porous electrically inert substance being shaped and positioned to fill up all of the vapor spaces within the open top chambers below the level of the upper plate to thereby prevent evaporation.

3,047,490
HYDROCRACKING PROCESS
John W. Myers, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 4, 1958, Ser. No. 771,711
6 Claims. (Cl. 208—59)



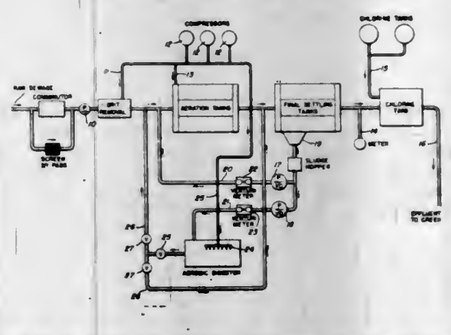
1. A process for conversion of hydrocarbons which comprises the steps of hydrocracking a hydrocarbon feed having a boiling range in the range from 400 to 1000° F., together with a heavy gasoline recycle feed described hereafter, in the presence of a hydrocracking catalyst containing 1–10 weight percent of a group VIII metal selected from the group consisting of platinum, palladium, rhodium, iridium, nickel and cobalt deposited on a solid inorganic metal oxide cracking component, under conditions favoring dehydrogenation of naphthenes to aromatics, employing a temperature from 800 to 950° F., a pressure from 300 to 1000 p.s.i.a., a liquid hourly space velocity of total hydrocarbon feed from 0.2 to 10, and a ratio of hydrogen to total hydrocarbon feed of at least 1000 s.c.f. per barrel; separating the residue fraction of the effluent boiling above 400° F. from the product gasoline fraction, hydrocracking said residue in another hydrocracking step in the presence of a catalyst of the foregoing description under conditions favoring hydrogenation of aromatics to naphthenes, employing a temperature from 600 to 780° F., a pressure from 500 to 2000 p.s.i.a., a liquid hourly space velocity of total hydrocarbon feed from 0.2 to 10, and a ratio of hydrogen to total hydrocarbon feed of at least 1000 s.c.f. per barrel; separating a heavy gasoline fraction from the effluent from said another hydrocracking step and recycling same as part of the said total feed to the first-mentioned hydrocracking step.

3,047,491
METHOD OF ISOMERIZING AND DEMETHANATING C_5–C_8 n-PARAFFINS
Norman L. Carr, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 23, 1957, Ser. No. 704,615
3 Claims. (Cl. 208—136)



1. A method of isomerizing and demethanating C_5–C_8 n-paraffins which comprises passing a mixture of hydrogen and C_5–C_8 paraffins in a hydrogen/hydrocarbon mol ratio of 0.5–6.0/1, at a pressure of 50–1000 p.s.i.g., and temperature of 600°–800° F., over an isomerization catalyst consisting essentially of a promoter selected from the group consisting of nickel, reduced nickel molybdate, and reduced nickel phosphate supported on an acidic silica-alumina hydrocarbon cracking catalyst, containing 50–87% wt. silica, said catalyst having been preconditioned to increase catalytic activity and selectivity for isomerization by oxidizing the catalyst with a dry mixture of an inert gas containing oxygen at a partial pressure of 30–500 mm. Hg, at a temperature of about 800°–875° F., for a time sufficient to completely oxidize the oxidizable constituents of the catalyst, removing oxygen and combustion products from the catalyst, subjecting the oxidized catalyst to reduction with a dried hydrogen at 850°–975° F. for a time, in the range from about 15–30 hours, sufficient to reduce completely all reducible catalyst components, followed by contacting the reduced catalyst with hydrogen containing water vapor at a partial pressure of 15–100 mm. Hg, at a temperature of 800°–975° F. for a time, in the range from about 5 to 50 hours, sufficient to condition the catalyst so that the isomerization reaction is substantially free of exothermic hydrocracking.

3,047,492
SEWAGE DIGESTING PROCESS
Anthony A. Gambrel, 751 Wildwood Drive, Youngstown 12, Ohio
Filed Jan. 22, 1959, Ser. No. 788,301
6 Claims. (Cl. 210—7)



1. The process of sewage treatment which comprises exposing raw sewage to aerobic treatment through the

forced introduction of atmospheric air thereinto in a first zone, moving the treated sewage into a second zone and settling the treated sewage to separate sludge and effluent therefrom, discharging said effluent from said second zone, moving about 88% of said separated sludge back to said first zone and mixing the same with raw sewage being introduced thereinto, re-exposing said 88% of said separated sludge to said aerobic treatment through said forced introduction of atmospheric air thereinto, moving the remaining 12% of said separated sludge to a third zone and exposing said 12% of said separated sludge to aerobic digestion in said third zone through the forced introduction of atmospheric air thereinto for a period of time sufficient to completely digest said last-mentioned sludge and form a clear effluent, and discharging said clear effluent into said first and second zones.

3,047,493

DRILLING PROCESS AND WATER BASE DRILLING MUDS

Milton Rosenberg, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed May 26, 1958, Ser. No. 737,494
24 Claims. (Cl. 252—8.5)

1. A water base drilling mud of high load carrying capacity consisting essentially of water, an organic carboxylic compound selected from the group consisting of monobasic carboxylic acids having 8 to 20 carbon atoms per molecule, triglycerides of fatty acids having 12 to 18 carbon atoms per molecule and rosin acids and an emulsifier effective in dispersing the organic carboxylic compound in the water, the concentration of the organic carboxylic compound in the mud being between about 0.3% and 7% and sufficient to impart a Timken load carrying capacity of at least 30 pounds.

3,047,494

METHOD OF CONTROLLING THE EXTRA PRESSURE LUBRICATION OF DRILLING MUDS

William C. Browning, Houston, Tex., assignor to Milwhite Mud Sales Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,787
32 Claims. (Cl. 252—8.5)

12. A drilling mud composition consisting essentially of clay solids and weighting agents in an aqueous phase, at least 5% of a stabilizing agent dissolved in the aqueous phase, said stabilizing agent consisting of at least one suitable member of the group consisting of lignosulfonate, polyphenolic compounds derived from bark extracts and lignite, and from ¼ to 5 pounds per barrel of mud of a water insoluble metal soap dispersed in the aqueous phase, said soap consisting of a metal salt of an organic acid having a carbon chain length of 5 to 29, said metal consisting of at least one member of the group consisting of the alkaline earth metals, aluminum and the group four and group eight metals of the periodic table.

3,047,495

CORROSION INHIBITORS AND METHODS OF PREPARATION AND USE THEREOF

Willard H. Kirkpatrick, Sugar Land, and Virgil L. Seale and Harold C. Noe, Jr., Houston, Tex., assignors to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed Aug. 17, 1956, Ser. No. 604,608
11 Claims. (Cl. 252—8.55)

1. A corrosion inhibiting composition comprising in stick form, a basic amine salt composed of the reaction products resulting from the reaction between polyethylene glycol chloride having an average molecular weight in the range of about 200–800 and an amino hydrogen of a partial amide of a polyalkylene polyamine having terminal primary amino groups and 2–3 carbons per alkylene group and higher molecular weight fatty acids, said amine salt having a melting point within the range of 145–240° F. and a sufficient quantity of an inorganic weighting material to provide a specific gravity for the stick substantially in excess of 1.0.

3,047,496

WIRE DRAWING COMPOSITIONS AND PROCESSES OF MAKING THE SAME

Russell H. Rogers, Palos Park, and John D. Opem, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed July 27, 1959, Ser. No. 829,545
13 Claims. (Cl. 252—18)

1. An improved wire drawing composition which is essentially dry, firm and of good mechanical strength and which comprises a stable uniform dispersion of about 20–70% calcium hydroxide adsorbed by 80–30% calcium soap of a glyceride ester of higher aliphatic monocarboxylic acids, and from about 0.5–14.8% glycerine.

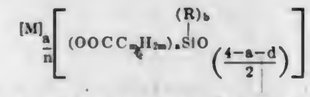
3,047,497

GREASES THICKENED WITH METAL SALTS OF CARBOXYALKYLPOLYSILOXANES

Ben A. Bluestein, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,448
4 Claims. (Cl. 252—28)

1. A grease composition comprising (*a*) 4 to 95 percent based on the weight of said grease composition of a base oil selected from the class consisting of a mineral oil, and an organopolysiloxane oil (*b*) 5 to 96 percent based on the weight of said grease composition of a carboxyalkylpolysiloxane salt corresponding to the formula:



where M is a metal, *n* represents the valence number of the metal and is an integer equal to from 1 to 4 inclusive, *a* is equal to .001 to 1.0, *b* is equal to 0 to 2.0, and the sum of *a* and *b* is equal to 1.00 to 2.5, *m* is an integer equal to from 1 to 5, and R is a member selected from the class consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals, and (*c*) from 0 to 35 percent based on the weight of said grease composition of a thickener selected from the class consisting of inorganic fillers and metallic soaps.

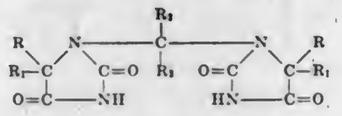
3,047,498

LUBRICATING OIL THICKENED TO A GREASE CONSISTENCY WITH A BISHYDANTOIN

Joseph J. McGrath, Monroeville, and John P. Pellegrini, Jr., Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Sept. 26, 1960, Ser. No. 58,221
11 Claims. (Cl. 252—28)

1. A lubricating composition comprising a dispersion in a lubricating oil of a sufficient amount to thicken the lubricating oil to a grease consistency of a bishydantoin having the following structural formula:



wherein R is selected from the group consisting of alkyl, aryl, alkaryl, aralkyl and cycloalkyl radicals and R_1, R_2 and R_3 are selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl and cycloalkyl radicals.

3,047,499

GREASE COMPOSITIONS

Francis G. A. de Monterey, Troy, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,447
5 Claims. (Cl. 252—37)

1. A grease composition comprising (A) a major proportion of a base oil selected from the class consisting of an organopolysiloxane oil and a mineral oil and (B) a minor proportion of thickener consisting essentially of an alkali metal soap of a fatty acid having its fibers modified at a temperature in the range of between 80° C. to 250° C. with a mixture of ingredients consisting of (1) from 0.01 to 5 percent, based on the weight of (A) of a polyvalent metal material selected from the class consisting of tin copolymers having the characteristic linkage Si—C—Sn, tin copolymers having the characteristic linkage, Si—O—Sn, tin salts of fatty acids having from 8 to 20 carbon atoms, tin carbonate, tin oxide, zinc salts of fatty acids having from 8 to 20 carbon atoms, zinc carbonate, zinc oxide, lead salts of fatty acids having from 8 to 20 carbon atoms, lead carbonate, and lead oxide, and (2) from 1 to 15 percent, based on the weight of said alkali metal soap of a fatty acid of a carboxyalkylpolysiloxane having the formula



where *m* is an integer equal to from 1 to 5, inclusive, *a* is equal to from 0.001 to 1.0, *b* is equal to from 1.001 to 2, and the sum of *a* and *b* is equal to from 1.001 to 2.5, and R is a member selected from the class consisting of monovalent hydrocarbon radicals, halogenated monovalent hydrocarbon radicals, and a mixture of radicals consisting of at least one of the aforementioned members and up to 20 mole percent of cyanoalkyl radicals.

3,047,500

LUBRICANT INCLUDING A MOLYBDENUM-CONTAINING ORGANIC MATERIAL

Howard J. Matson, Harvey, Ill., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 4, 1958, Ser. No. 726,321
13 Claims. (Cl. 252—42.7)

1. A lubricant consisting essentially of an oleaginous liquid lubricating base oil and a sufficient amount of an oil-soluble molybdenum dichloride tri (alkyl) phenolate to impart extreme pressure characteristics to the lubricating base oil, said alkyl portion of the phenolate groups containing a total of 6 to 24 carbon atoms.

3,047,501

RADIATION RESISTANT MINERAL OIL COMPOSITION

James Harold Thurston Brook, Rock Ferry, and Roy William Glazebrook, Upton, England, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed July 24, 1958, Ser. No. 750,575
Claims priority, application Great Britain Aug. 16, 1957
12 Claims. (Cl. 252—45)

1. A radiation resistant mineral oil consisting essentially of a major amount of mineral oil and from 1% to 30% of a dihydroaromatic compound selected from the group consisting of (1) a dihydroaromatic compound having 3 fused rings selected from the group consisting of dihydroanthracene, dihydrophenanthrene, and the C_{1-10} alkyl derivatives thereof and (2) a dihydroaromatic compound having one benzene ring and a fused heterocyclic ring which has a single hetero atom in the ring selected from the group consisting of oxygen, sulfur and nitrogen, the heterocyclic ring being selected from the group consisting of 5 and 6 membered ring.

7. The mineral oil composition of claim 1 containing a minor amount of a chain transfer agent selected from the class consisting of C_{8-12} alkyl mercaptans selected from the group consisting of nonyl mercaptan, decyl mercaptan, dodecyl mercaptan, tri(tert. butyl) phenol, C_{1-18} alkylated aromatic amines selected from the group consisting of C_{1-18} alkyl aniline, C_{4-8} alkyl naphthylamine, and benzyl naphthylamine, halogenated lower hydrocarbons selected from the group consisting of chloroform, ethylene dichloride, and ethylene trichloride, and thiophenols selected from the group consisting of thiophenol, thiocresol, alpha-thionaphthol and beta-thionaphthol, the weight concentration ratio of the chain transfer agent to the dihydroaromatic compound being not greater than 2:1.

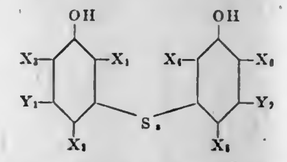
3,047,502

IMPROVED LUBRICATING OIL COMPOSITIONS

Walther Retter, Leverkusen, Werner Müller, Koln, and Max Zimmerman, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Original application May 16, 1956, Ser. No. 585,166, now Patent No. 2,937,208, dated May 17, 1960. Divided and this application Feb. 9, 1960, Ser. No. 13,414
Claims priority, application Germany May 18, 1955
4 Claims. (Cl. 252—48.4)

1. A high pressure lubricating oil composition comprising a major amount of a mineral oil and from about 0.1 to about 2% of a metasulfide of the formula



wherein X_1, X_2, X_3, X_4, X_5 and X_6 stand for a member of the group consisting of halogen and an alkyl radical, Y_1 and Y_2 stand for a member of the group consisting of halogen, an alkyl radical and hydrogen, and the number of alkyl radicals at most equals the number of halogen substituents, whereas *z* denotes a number of the group consisting of 1 and 2.

3,047,503

POLYCYCLIC POLYPHENOLS

Gunter S. Jaffe, Oakland, Albert L. Rocklin, Walnut Creek, and John L. Van Winkle, San Lorenzo, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 11, 1960, Ser. No. 41,735
15 Claims. (Cl. 252—52)

1. The polynuclear phenol comprising a polycyclic hydrocarbon aromatic nucleus, comprising up to six six-membered fused rings, and said nucleus having at least one 3,5-dialkyl-4-hydroxybenzyl substituent, wherein each alkyl radical has up to 8 carbon atoms, attached to a ring carbon atom.

7. The stabilized composition consisting essentially of a hydrocarbon material normally subject to oxidative deterioration containing the polynuclear phenol of claim 1 in amount sufficient to stabilize the composition against oxidative deterioration.

3,047,504

PROCESS FOR TREATING COMPLEX ESTERS TO IMPROVE VISCOSITY STABILITY

Theodore J. Peters, Somerville, and John F. Collins, Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,107

12 Claims. (Cl. 252—56)

1. A method of improving the viscosity stability of a complex ester, wherein said complex ester is formed from dicarboxylic acids, glycols, and a material selected from the group consisting of alcohols and monocarboxylic acids, and wherein said complex ester has from 20 to 80 carbon atoms, comprising blending about 5 vol. percent of a complex ester with about 95 vol. percent of a solvent selected from the group consisting of C_8 to C_{16} paraffinic hydrocarbons and C_{20} to C_{36} aliphatic diesters, treating the blend with 0.1 to 10 wt. percent of an adsorbent with agitation for approximately ½ to 10 hours and at a temperature of from 0 to 200° F. and separating the adsorbent from the blend.

3,047,505

MAGNETIC RECORDING MEDIA

Arthur Miller, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed May 7, 1959, Ser. No. 811,719

12 Claims. (Cl. 252—62.5)

1. A magnetic recording medium comprising a support and a magnetic layer thereon comprising a particulate magnetic material in a solid, film-forming binder, said magnetic material consisting essentially of acicular magnetic ferrite particles having a length-to-width ratio of at least 2 to 1 and the molar composition:

$$A_a^{+\alpha}B_b^{+\beta} \ldots N_n^{+\nu}O_4$$

where A, B, . . . N represent cations, which are at least two in number, a, b, . . . n represent respectively the number of atoms of cations A, B, . . . N per formula unit, and α, β, . . . ν represent respectively the valences of cations A, B, . . . N, where one of the cations present in appreciable amounts is trivalent iron, where

$$a+b+ \ldots n$$

has a value that is essentially between 2⅔ and 3, where $a\alpha+b\beta+ \ldots n\nu$ is about eight, and where the cations A, B, . . . N include at least one of the class of rapidly diffusible cations selected from the group consisting of lithium, zinc, manganese, cobalt, copper, nickel, germanium, silver, aluminum, gallium, indium, thallium, and tin.

4. The method for preparing acicular magnetic ferrite particles comprising heating a physical mixture of acicular iron oxide particles having a length-to-width ratio of at least 2 to 1 and other particles containing cations and anions which are rapidly-diffusible in said iron oxide, said cations being selected from the group consisting of lithium, zinc, manganese, cobalt, copper, nickel, germanium, silver, aluminum, gallium, indium, thallium, and tin, and said anions being selected from the group consisting of oxygen, chlorine, bromine, sulfur, selenium, nitrogen, phosphorus, and arsenic, until a portion of said cations and anions have diffused into said iron oxide and a spinel-type crystal structure is formed, the heating step being carried out at temperatures between about 500 and 1000° C. and for time intervals insufficient to destroy the acicular shape of said iron oxide particles.

3,047,506

REFRIGERATION PROCESS

Robert D. Broadley, Hanover Township, Morris County, N.J., assignor to Allied Chemical Corporation, a corporation of New York

Filed Dec. 13, 1957, Ser. No. 702,646

2 Claims. (Cl. 252—67)

1. The process of producing refrigeration which comprises evaporating, in the vicinity of a body to be cooled, a mixture consisting of dichlorotetrafluoroethane and ethyl chloride which mixture boils at a substantially constant temperature and functions as a substantially single substance, and in which mixture the mol percent of ethyl chloride is in the range of 22–50, and subsequently condensing the said mixture.

3,047,507

FIELD RESPONSIVE FORCE TRANSMITTING COMPOSITIONS

Willis M. Winslow, Wheat Ridge, Colo., assignor to Wefco, Inc., Denver, Colo., a corporation of Colorado

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,465

23 Claims. (Cl. 252—75)

1. A composition which is substantially unresponsive to a magnetic field but which readily responds to an electrical field by a significant increase in viscosity and in resistance to shear, which composition comprises; at least about 15% by weight of a liquid oleaginous vehicle having a viscosity not greater than a lubricating oil and having a dielectric constant of from about 2 to about 5.5; from about 30 to about 70% by weight of finely divided solids selected from the group consisting of silica gel, barium titanate and magnesium silicate having an average diameter not greater than about 5 microns; from about 0.75% to about 15% by weight of water; and from about 5% to about 15% by weight of surface active dispersing agent.

3,047,508

METAL CLEANING COMPOSITION

Daniel Fuentes, 240 W. 10th St., New York, N.Y.

No Drawing. Filed Feb. 26, 1960, Ser. No. 11,149

1 Claim. (Cl. 252—99)

A metal cleaner composition for removing plaster and lime from metal surfaces, consisting essentially of by weight 32.4% potassium sodium tartrate; 20.2% sodium sulphate; 5.6% potassium bitartrate; 10.4% sodium perborate; 4.5% sodium bicarbonate; 24.1% sodium-N-methyl-N-oleoyl taurate; 2.8% sodium hypochlorite and water.

3,047,509

PROCESS FOR PREPARING A MIXTURE OF SOAP AND FATTY-ACYL-AMINOMETHANE SULFONATE

Allan Alsbury, Wirral, Kenneth A. Phillips, Bedington, and Bernard Taylor, Birkenhead, England, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 11, 1958, Ser. No. 747,844

Claims priority, application Great Britain July 15, 1957

5 Claims. (Cl. 252—117)

1. A process for the preparation of a mixture comprising a water soluble soap and an alkali metal salt of a fatty-acyl-aminomethane sulphonate selected from the group consisting of sodium and potassium salts and having from 10 to 18 carbon atoms in the acyl radical, said process comprising reacting a fatty amide having from 10 to 18 carbon atoms with from 0.8 to 1.2 molecular proportions of an alkali metal formaldehyde bisulphite selected from the group consisting of sodium formaldehyde bisulphite and potassium formaldehyde bisulphite, in the presence of: (*a*) from 15 to 40%, by weight of the amide, of a free fatty acid having from 10 to 18 carbon atoms, and (*b*) from about 1 to 26% by weight of the amide of a water soluble alkali metal soap having from 10 to 18 carbon atoms, the reaction being carried out at a temperature of from 150° C. to 210° C.

3,047,510

CORROSION INHIBITING COMPOSITIONS AND PROCESS

Arthur Cizek, Bellaire, Tex., assignor, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed June 5, 1957, Ser. No. 663,618

13 Claims. (Cl. 252—136)

4. A composition substantially non-corrosive to metals comprising an aqueous solution of an acid selected from the group consisting of sulfuric, sulfamic and phosphoric acids, and from 0.1 to 1.0 weight percent, based on the acid, of a corrosion inhibiting synergistic combination of about 1 part by weight of dibutylthiourea and from 1 to 5 parts by weight of a quaternary ammonium compound having the formula R_4NX wherein X is a halide and R is an aliphatic hydrocarbon radical containing from 1 to 22 carbon atoms, and further characterized by the presence of at least 1 and no more than 2 aliphatic hydrocarbon radicals containing from 8 to 22 carbon atoms.

3,047,511

MINERAL ACID INHIBITOR

Billy D. Oakes, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,429

2 Claims. (Cl. 252—146)

1. An aqueous solution of a non-oxidizing acid containing an effective amount of 3-butyn-2-one corrosion inhibitor.

3,047,512

HALOPHOSPHATE PHOSPHOR TREATMENT PROCESS

William C. Martyny, Lyndhurst, Ohio, assignor to General Electric Company, a corporation of New York

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,432

5 Claims. (Cl. 252—301.4)

1. A process for improving the brightness and maintenance of alkaline earth halophosphate phosphors which comprises thoroughly agitating the phosphor in an ammoniacal solution of ethylenediamine tetraacetic acid containing at least 3% by weight of ethylenediamine tetraacetic acid relative to weight of phosphor, separating the phosphor from the liquid, and rinsing the phosphor to remove residual ethylenediamine tetraacetic acid.

3,047,513

POLYMERIZATION CATALYST

William Franklin Gresham and Nicholas George Merckling, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 7, 1955, Ser. No. 533,023

7 Claims. (Cl. 252—429)

1. A polymerization catalyst comprising the product formed by admixing a chromium compound, selected from the class consisting of chromium trichloride, chromyl chloride and chromium acetylacetonate, with an alkali metal aluminum tetraalkyl in a molar ratio ranging from 0.5 to 5 in an inert organic solvent.

3,047,514

METHOD FOR MANUFACTURING AN ACTIVE CATALYST COMPOSITION

Emmett H. Burk, Jr., Hazel Crest, and John Mooi, Homewood, Ill., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

No Drawing. Filed Aug. 7, 1959, Ser. No. 832,131

10 Claims. (Cl. 252—442)

1. A method for manufacturing an active catalyst composition including about 0.01 to 2 percent of a platinum group noble metal, about 5 to 50 percent of an aluminum halide, and about 40 to 95 percent of an activated alumina, the steps comprising mixing under substantially anhydrous conditions a noble metal-activated alumina composition, a lower alkyl aluminum compound, and a non-aqueous solvent for the lower alkyl aluminum compound at temperatures from about 40° F. to 350° F. to form a mixture and contacting the mixture with halogenating agent to convert alkyl aluminum to aluminum halide and produce the noble metal-aluminum halide-activated alumina catalyst.

3,047,515

PREPARATION OF POLYESTERS USING TITANIUM-CONTAINING CATALYSTS

Aleksander Pirma, Stow, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed July 9, 1956, Ser. No. 596,419

11 Claims. (Cl. 260—2)

11. As a new compound, polymeric crosslinked ethylene glycol titanate.

3,047,516

WEAKLY BASIC ANION EXCHANGE RESINS

Charles A. Feldt, Naperville, and George T. Kekish, Chicago, Ill., assignors to Nalco Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 22, 1960, Ser. No. 23,914

17 Claims. (Cl. 260—2.1)

1. A weakly basic water insoluble anion exchange resin comprising the condensation terpolymer formed as the reaction product of an addition polymer of a nitrogen heterocyclic vinyl compound, and a condensation copolymer of ammonia and a compound selected from the group consisting of epihalohydrins and glycerol α-monohalohydrins, said copolymer being the reaction product of aqueous ammonia to halohydrin in a molar ratio of from 1:1 to 4:1.

3,047,517

LOW DENSITY, RESILIENT POLYURETHANE FOAM AND METHOD FOR PREPARING SAME

Fred J. Wherley, Cleveland, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed May 15, 1959, Ser. No. 813,351

4 Claims. (Cl. 260—2.5)

1. The foamed structure having a density of less than two pounds per cubic foot and a resiliency of from about 26 to 38% comprising the product which results from (1) reacting at least one hydroxyl terminated polymer selected from the group consisting of hydroxyl terminated polyethers which result from the polymerization of an alkylene oxide onto at least one member selected from the group consisting of alkylene glycols and a trihydroxy alkane having from 3 to 6 carbon atoms and polyesters which result from the esterification-condensation of a dicarboxylic acid with an excess of a glycol said polymer having a molecular weight of from about 500 to about 10,000 and containing a maximum of about 0.5% by weight of water with from 2 to 3 equivalents per equiv-

alent of hydroxyl present in said polymer of a diisocyanate containing from 20 to 100% by weight based on the weight of diisocyanate of a member of the group consisting of 2,6-tolylene diisocyanate, m-phenylene diisocyanate, p,p'-diisocyanato diphenylamine and p-phenylene diisocyanate at a temperature of from about 30° C. to about 90° C. and (2) mixing with (1) additional diisocyanate containing from 80 to 100% by weight based on the weight of additional diisocyanate of 2,4-cumene diisocyanate to impart a free —NCO content of from 10 to 17% by weight based on the weight of (2), and (3) stirring into (2) a foam stabilizer followed by a mixture of from 90 to 130% by weight of the water required to react completely with the free —NCO present in (2) and at least one member of the group consisting of triethyl amine, N-methyl morpholine, N,N,N',N'-tetramethyl 1,4-butane diamine, ethylene oxide treated lauryl amine, triethylene diamine, 2-dimethyl amino-2-methyl propanol-1, N,N'-dihydroxyl propyl-2-methyl piperazine, dibutyl tin dilaurate and potassium ricinoleate.

3,047,518

COMPOSITION COMPRISING A POLY(HALOMETHYL)DI-AROMATIC ETHER AND A PHENOL, METHOD OF FOAMING SAME, AND FOAMABLE PRODUCT OBTAINED THEREFROM

James D. Doedens, Midland, and Earl H. Rosenbrock, Auburn, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 2, 1960, Ser. No. 66,696

10 Claims. (Cl. 260—2.5)

1. A composition of matter comprising a major proportion of a poly(halomethyl)di-aromatic ether composition of the benzene series having an average halomethyl functionality of at least about 1.5 and up to 4 per aromatic molecule wherein the halogens are selected from the group consisting of chlorine and bromine, and a minor proportion of about 0.5 up to about 20 percent by weight of the halomethylated di-aromatic ether composition of a phenol selected from the group consisting of mono- and diphenols having at least one active aromatic ring position.

3,047,519

PROCESS FOR PREPARING A RUBBER COMPOSITION CONTAINING A CROSS-LINKED POLYMER OF A MONOVINYL AROMATIC COMPOUND

Stanley Maurice Ardley, Penarth, Glamorgan, Wales, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Apr. 8, 1955, Ser. No. 500,274

Claims priority, application Great Britain May 7, 1954

1 Claim. (Cl. 260—5)

A process for the production of a vulcanized rubber-like composition which comprises mixing a cross-linked polymer of a mono-vinyl aromatic compound with natural rubber at about 150° C., to form a homogeneous reinforcing product containing 1 part by weight of rubber and 1 to 3 parts by weight of the cross-linked polymer, mixing said product with more rubber and vulcanising agents and then vulcanising the mixture, said cross-linked polymer of a mono-vinyl aromatic compound being obtained by copolymerising the mono-vinyl aromatic compound with a minor proportion in the range of 1 to 5% of a cross-linking agent containing at least two and not more than three unconjugated polymerisable ethylenic double bonds in its monomeric molecular structure and said mono-vinyl aromatic compound being selected from the group consisting of styrene and the homologues thereof obtained by substituting a nuclear hydrogen atom of styrene with an alkyl group containing not more than four carbon atoms.

3,047,520

PROTECTIVE URETHANE COATING COMPOSITION

Robert J. Fiel, Tonawanda, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 28, 1958, Ser. No. 770,008

7 Claims. (Cl. 260—18)

1. A protective coating composition comprising an anhydrous mixture constituting 80% to 20% by weight of an organic solvent having a boiling point within the range of 30° C. to 175° C. free of active hydrogen as determined by the Zerewitnoff method, and 20% to 80% by weight of a film-forming urethane solute prepared by reaction of an aliphatic hydrocarbon triol selected from the group consisting of glycerine, hexanetriol-1,2,6, trimethylol propane and trimethylol ethane, castor oil, and an organic diisocyanate in the proportion in which the hydrocarbon triol OH/castor oil OH ratio is between 0.05 and 2.50 and the isocyanate NCO/total OH ratio is between 1.5 and 3.5.

3,047,521

METHOD OF MAKING IMPROVED POLYMERIC DIHYDROQUINOLINE COMPOSITIONS

Carl A. Harman, St. Albans, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 13, 1959, Ser. No. 833,395

6 Claims. (Cl. 260—23)

1. The method which comprises mixing polymeric dihydro-2,2,4-trimethylquinoline with a compatible melting point depressant 15 percent of which lowers the point at which the polymer begins to soften to at least about 85° C., the amount of said melting point depressant being not more than 15 percent and insufficient to lower the initial softening point below 65° C. but sufficient to lower to at least about 85° C. the point at which the polymer begins to soften, heating the mixture to homogeneous molten liquid condition, cooling and subdividing the fused mixture into discrete free-flowing particles.

3,047,522

PROCESS FOR EXTENDING THE FILM FORMING LIFE OF A LATEX OF A CRYSTALLINE VINYLIDENE CHLORIDE-ACRYLONITRILE COPOLYMER

Roland H. Gray, Jr., Midland, Raymond J. Rygwelski, Auburn, and Ronald G. Tigner, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 24, 1956, Ser. No. 605,953

1 Claim. (Cl. 260—29.6)

A process for extending the useful film-forming life of a latex of a normally crystalline vinylidene chloride polymer containing from about 30 to about 50 percent by weight of polymer solids and which latex normally is capable of depositing a continuous coherent film when fresh and loses that ability on aging and which is prepared by subjecting an aqueous emulsion of vinylidene chloride and acrylonitrile to heating and catalytic conditions to cause polymerization of the monomers, said process consisting of the sequential steps of (1) adding to said latex after polymerization has stopped but before the latex has cooled to room temperature in increment of not more than 5 percent by weight of total monomers charged and less than coagulating amounts of a fresh supply of acrylonitrile, (2) sealing the so-treated latex in containers hermetically, and (3) storing the latex in the sealed containers at a temperature of from slightly above 0° C. to 20° C.

3,047,523

LATEX CONTAINING POLYVINYLACETOL AND ETHYL SILICATE AND BASE COATED WITH DRIED PRODUCT THEREOF

Wilbur M. Sullivan, Bloomfield, and Leonard A. Carlson, Murray Hill, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 1, 1959, Ser. No. 843,635

8 Claims. (Cl. 260—29.6)

1. A polyvinyl acetate latex composition for producing self-induced textured coatings which comprises:

(*a*) A polyvinyl acetate latex having: a non-volatile content of from about 45 to about 65 percent by weight, a surface tension of at least about 48 dynes/cm., a pH within a range of from about 4 to about 8, and wherein the said polyvinyl acetate has a particle size of from about 0.75 to about 3.0 microns; and,

(*b*) For every 100 parts by weight of polyvinyl acetate solids in said latex from about 20 to about 100 parts by weight of ethyl silicate.

3,047,524

GLYCOLIC ACID POLYMER

Norman J. Bowman, Philadelphia, Pa., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Original application Sept. 30, 1957, Ser. No. 687,853. Divided and this application Mar. 19, 1959, Ser. No. 800,596

6 Claims. (Cl. 260—32.4)

1. A composition consisting essentially of the homopolymer of glycolic acid which polymer melts between 90° C. and about 130° C. and between about 1 and 5 mol percent of an alcohol selected from the class consisting of (*a*) aliphatic alcohols containing only hydrogen, oxygen and 1–6 carbon atoms and (*b*) nitroaliphatic alcohols containing only hydrogen, oxygen, 1–6 carbon atoms and a nitro substituent.

3,047,525

BAKING TYPE RESINS FROM BENZENE TRICARBOXYLIC ACIDS

Ronald L. Broadhead, Park Forest, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Dec. 14, 1959, Ser. No. 859,121

15 Claims. (Cl. 260—32.8)

1. A composition consisting essentially of (A) the resin polyester condensation reaction product of (1) a benzene tricarboxylic acidic member selected from the class consisting of trimellitic acid, trimellitic anhydride, trimesic acid, hemimellitic acid and hemimellitic anhydride, (2) an alkandioic acid containing from 4 to about 20 carbon atoms, and (3) a glycol containing not more than 12 carbon atoms, wherein the mole ratio of tricarboxylic acidic member:alkandioic acid:glycol is between about 1:1:2 to 10:1:25, said reaction being continued until the product has an acid number between about 20 and about 100, which resin is characterized by the formation of a thermoset solid upon air-baking at a temperature on the order of 400° F., and (B) about 0.5–10 weight percent, based on said resin A, of an agent which lowers the thermosetting temperature of said resin A, which agent is a dialdehyde selected from the class consisting of adipaldehyde and hydroxyadipaldehyde.

3,047,526

LEATHER-COATING COMPOSITION

Clifford A. Stephens, 1575 Stanford Ave., Palo Alto, Calif., and Robert W. McCandless, 3671 Farm Hill, Redwood City, Calif.

No Drawing. Application Feb. 3, 1958, Ser. No. 713,024, now Patent No. 2,983,131, dated May 9, 1961, which is a division of application Ser. No. 540,104, Oct. 12, 1955, now Patent No. 2,854,267, dated Sept. 30, 1958. Divided and this application Nov. 16, 1959, Ser. No. 859,830

2 Claims. (Cl. 260—32.8)

1. A coating composition for leather liquid-lubricant-sealing members, consisting essentially of a solvent-elastomer dispersion of

(1) 80–95% by weight of a solvent mixture consisting of

(A) an aromatic solvent selected from the group consisting of benzene, toluene and xylene, and

(B) an aliphatic solvent selected from the group consisting of acetone, methyl ethyl ketone, gasoline, kerosene and naphtha, and

(2) 5–20% by weight of a solids mixture consisting essentially of

(C) liquid-lubricant-resistant flexible elastomer selected from the group consisting of polychloroprene, copolymers of ethyl acrylate and chloroethyl vinyl ether, copolymers of butyl acrylate and acrylonitrile, and chlorosulfonated polyethylene, and

(D) 10–60 parts by volume per 100 parts by volume of (C) of a dry lubricant selected from the group consisting of graphite, molybdenum disulfide, talc, and mica.

3,047,527

COMPOSITION COMPRISING POLYMERIC REACTION PRODUCT OF AMMONIACAL COMPOUND AND A HALOSILANE AND A HYDROXYL-CONTAINING FILLER

Hyman M. Molotsky, Chicago, William M. Boyer, Tinley Park, and Harlan E. Tarbell, Jr., Elmhurst, Ill., assignors to The Richardson Company, Melrose Park, Ill., a corporation of Ohio

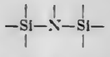
No Drawing. Filed Nov. 10, 1958, Ser. No. 772,718

22 Claims. (Cl. 260—37)

1. A moldable composition capable of being cured by heat and pressure including a binder comprising the polymeric reaction product of an ammoniacal compound, selected from a class consisting of ammonia and a primary amine, with a halosilane having the generic formula

$$R_nSiHal_{4-n}$$

wherein "R" is a monovalent hydrocarbon radical and "*n*" is a number from 0–2, said reaction product being characterized by the presence of an



linkage as a part of its molecular structure; and an hydroxyl-containing inorganic filler, a reaction occurring between amino groups in said polymeric reaction product and the hydroxyl groups in said hydroxyl-containing inorganic filler.

3,047,528

ELASTOMER COMPOSITION

Ben A. Bluestein, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,449

15 Claims. (Cl. 260—37)

1. A curable composition comprising (A) an organopolysiloxane having a viscosity of at least 100,000 centi-

stokes when measured at 25° C. and containing an average of about 2 organic groups per silicon atom, from about 0.01 to 10 percent of the silicon atoms in said organopolysiloxane being attached to a carboxyalkyl radical, with the remaining organic groups being selected from the class consisting of monovalent hydrocarbon radicals, halogenated monovalent hydrocarbon radicals and cyanoalkyl radicals, (B) a filler selected from the class consisting of finely divided silica and finely divided carbon and (C) as a curing agent, a polyvalent metal compound selected from the class consisitng of polyvalent metal oxides, polyvalent metal hydroxides, polyvalent metal carbonates, polyvalent metal salts of carboxylic acids containing up to 11 carbon atoms, polyvalent metal alcoholates of alcohols containing up to 11 carbon atoms, and polyvalent metal salts of enols containing up to 11 carbon atoms.

3,047,529

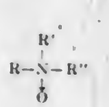
PROCESS OF HEAT TREATING RUBBER AND CARBON BLACK WITH A TERTIARY AMINE N-OXIDE OR A PYRIDINE N-OXIDE AND RESULTING PROCESS

Richard Leshin, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

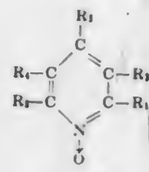
No Drawing. Filed Feb. 10, 1959, Ser. No. 792,279

19 Claims. (Cl. 260—41.5)

19. The process which comprises mixing rubber with a relatively large amount of a rubber reinforcing carbon black and a relatively small amount of at least one compound selected from the group consisting of (*a*) tertiary amine N-oxides conforming to the following structure



wherein R, R', and R'' are selected from the group consisting of alkyl radicals having from 1 to 9 carbon atoms, cycloalkyl radicals having from 6 to 9 carbon atoms, aryl radicals and aralkyl radicals having from 7 to 16 carbon atoms, and (*b*) a pyridine N-oxide conforming to the following structure



wherein R_1, R_2, R_3, R_4, and R_5 are selected from the group consisting of hydrogen, alkyl radicals having from 1 to 9 carbon atoms, cycloalkyl radicals having from 6 to 9 carbon atoms, aryl radicals, aralkyl radicals having from 7 to 16 carbon atoms, benzo radicals wherein two adjacent R's together with the pyridine ring form a fused dicyclic structure, nitro radicals, halo radicals and carboxyl radicals; heating and masticating the mixture at a temperature of at least 250° F. for a short period of time; adding other desired compounding ingredients, shaping the vulcanizable rubber mass and thereafter curing the same.

3,047,530

REACTION PRODUCT OF AN ISOCYANATE-MODIFIED UNSATURATED POLYESTER WITH AN ETHYLENICALLY UNSATURATED MONOMER AND A POLYAMINO COMPOUND, AND PROCESS FOR PREPARING SAME

Gunther Nischk, Leverkusen, and Karl E. Müller, Leverkusen-Bayerwerk, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed July 14, 1955, Ser. No. 545,102

Claims priority, application Germany July 16, 1954

5 Claims. (Cl. 260—45.4)

(Filed under Rule 47(a) and 35 U.S.C. 116)

1. A method for making polymers which comprises reacting an isocyanate-modified unsaturated polyester having terminal —NCO groups, from about 10 percent to about 50 percent of a polymerizable ethylenically unsaturated monomer based on the weight of said polyester and a member selected from the group consisting of an aromatic polyamine and a polyamino alcohol having at least one hydrogen atom on each nitrogen atom; said isocyanate-modified polyester having been prepared by reacting an excess organic polyisocyanate with a polyester prepared by condensation of a dicarboxylic acid including an ethylenically unsaturated dicarboxylic acid and a polyhydric alcohol and having an average molecular weight of from about 250 to about 5,000, an hydroxyl number of from about 80 to about 450 and an acid number of from zero to about 40; said polyamino alcohol having been prepared by reaction of ethylene oxide and an aromatic polyamine.

3,047,531

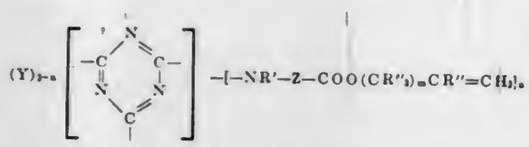
POLYMERIZATION PRODUCTS OF UNSATURATED AMINO-TRIAZINE

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corportaion of Delaware

No Drawing. Filed Sept. 30, 1958, Ser. No. 764,247

8 Claims. (Cl. 260—45.4)

1. A composition of matter comprising a copolymerization product of a polymerizable mass comprising at least one unsaturated alkyd resin and at least one monomer of the structure:



wherein *n* is an integer having a value of at least 2 and not more than 3, Z is a divalent radical selected from the class consisting of divalent aliphatic, cycloaliphatic and aromatic hydrocarbon radicals having no more than 12 carbon atoms therein, R' is a radical selected from the class consisting of hydrogen and hydrocarbon radicals having no more than 14 carbon atoms therein, Y represents a monovalent radical, R'' is a radical selected from the class consisting of hydrogen, halogen, and hydrocarbon radicals having no more than 6 carbon atoms therein, and *m* is selected from the class consisting of 0 and 1 said unsaturated alkyd resin being an esterification product of a polyhydric alcohol and an alpha, beta-unsaturated aliphatic polycarboxylic acid.

3,047,532

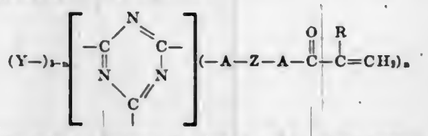
TRIAZINYL VINYL MONOMER AND POLYMER AND COPOLYMERS THEREOF

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Sept. 30, 1958, Ser. No. 764,248

12 Claims. (Cl. 260—45.4)

1. A composition of matter comprising a polymerization product of a polymerizable mass comprising at least one monomer of the structure:



wherein *n* is an integer having a value of at least 2 and not more than 3, Z is a divalent radical selected from the class consisting of divalent aliphatic, cycloaliphatic and aromatic hydrocarbon radicals having no more than 12 carbon atoms therein, Y represents a monovalent radical, R is a radical selected from the class consisting of hydrogen, halogen, cyano, and aliphatic and aromatic hydrocarbon radicals having no more than 6 carbon atoms therein, and A is selected from the class consisting of —O— and —NR'— radicals, R' being a radical selected from the class consisting of hydrogen and hydrocarbon radicals having no more than 10 carbon atoms therein.

3,047,533

VINYLCHLORIDE POLYMER BLENDS WITH GRAFT COPOLYMERS OF A CONJUGATED DIENE/ALKYL ACRYLATE COPOLYMER, AN UNSATURATED HYDROCARBON, AND AN UNSATURATED NITRILE

William C. Calvert, Gary, Ind.

No Drawing. Filed Aug. 3, 1959, Ser. No. 831,023

16 Claims. (Cl. 260—45.5)

1. An impact resistant blend comprising (A) a material selected from the group consisting of vinyl chloride homopolymers and copolymers of at least 80% by weight vinyl chloride and up to 20% by weight of a monovinyl compound copolymerizable therewith and (B) a graft copolymer, said graft copolymer formed by polymerizing a mixture of material selected from a group consisting of vinyl benzene, vinyl toluene, vinyl xylene, alpha methyl vinyl benzene, alpha methyl vinyl toluene, alpha methyl vinyl xylene, and mixtures thereof with a material selected from a group consisting of acrylonitrile, methacrylonitrile, ethacrylonitrile, and mixtures thereof in the presence of a copolymer consisting of a conjugated diolefin and an alkyl acrylate, the alkyl substituent of said alkyl acrylate containing from one to about eight carbon atoms.

3,047,534

GRAFT POLYMERIZATION ON A RUBBERY POLYMER IN AQUEOUS SUSPENSION EMPLOYING POLYVINYL ALCOHOL AND A METAL PHOSPHATE AS SUSPENDING AGENTS, AND PRODUCT OBTAINED THEREBY

Robert H. Dyer and Rene P. Brown, Big Spring, Tex., assignors to Cosden Petroleum Corporation, Big Spring, Tex., a corporation of Delaware

No Drawing. Filed Oct. 7, 1959, Ser. No. 844,871

31 Claims. (Cl. 260—45.5)

1. Method of graft polymerization comprising dissolving rubbery polymer in a polymerizable ethylenically unsaturated monomer liquid and suspending said solution in a hot agitated aqueous bath containing a small quantity of a polyvinyl alcohol and a phosphate of the group consisting of calcium, barium and magnesium, the polyvinyl alcohol being in the range of about .001 to 5%, and the phosphate being in the range of about 0.01 to 5%, the component suspending agents being variable in quantity within the said ranges whereby the said minimum quantity of polyvinyl alcohol will be increased to at least 0.1% when the phosphate is near the minimum quantity of its range.

10. The method as defined in claim 1 wherein the rubbery polymer is a copolymer of styrene and butadiene.

11. The method as defined in claim 10 wherein the monomer is styrene.

3,047,535

METAL SALTS OF SUBSTITUTED PHOSPHORIC ACID AS CURING AGENTS FOR POLYSILOXANES

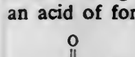
John Gwynant Evans, Menston-in-Wharfdale, and Geoffrey Howard Crawshaw, Leeds, England, assignors to The Bradford Dyers' Association Limited, Yorkshire, England, a corporation of Great Britain

No Drawing. Original application Jan. 13, 1958, Ser. No. 708,378. Divided and this application Sept. 3, 1958, Ser. No. 758,683

Claims priority, application Great Britain Jan. 14, 1957

27 Claims. (Cl. 260—46.5)

13. A process for rendering material water repellent comprising applying to said material a mixture of (*a*) an organosilicon compound selected from the group consisting of the product obtainable by hydrolysis of hydrolyzable organosilanes containing organic groups linked to the silicon through carbon-silicon linkage and containing hydrolyzable substituents directly attached to silicon and (*b*) a curing agent therefor, said curing agent being a metal salt selected from the group consisting of tin, copper and lead of an acid of formula:



wherein R is selected from the group consisting of aryl and substituted aryl radicals and R' is selected from the group consisting of hydrogen and alkyl radicals, and curing said organosilicon compound on said material.

3,047,536

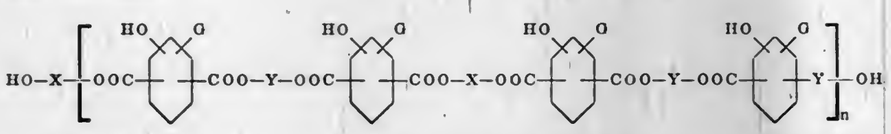
POLYESTERS

David A. Gordon, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Feb. 5, 1957, Ser. No. 638,259

15 Claims. (Cl. 260—47)

1. Polyester of the general formula:



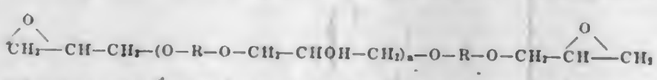
wherein G is selected from the group consisting of a hydroxyl radical and a hydrogen atom; X and Y are independent, two to ten carbon atom-containing bivalent radicals derived from the group consisting of glycols and polyglycols; and *n* is a plural integer of such magnitude that the molecular weight of said polyester is at least about 5,000, with the limitation that the ester-forming carboxyl units on each of the aromatic nuclei are being positioned on carbon atoms separated by at least one other carbon atom.

3,047,537
EPOXY RESIN COMPOSITION

Bobby Legler, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 25, 1959, Ser. No. 822,732
4 Claims. (Cl. 260—47)

1. A process for producing permanently thermoplastic epoxy resin molding compositions which comprises reacting at a temperature of about 24° to 100° C. a mixture consisting essentially of an epoxy resin of the structure



wherein *n* is a number from 0 to 25 and R is a divalent hydrocarbon radical of a dihydric phenol, with hexamethylenetetramine wherein the weight ratio of epoxy resin to hexamethylenetetramine is from about 1/1 to about 10/1.

3,047,538
PREPARATION OF UREA-FORMALDEHYDE FOAMED RESIN

Henry W. Steinmann, Broomall, Pa., assignor to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania

No Drawing. Filed June 16, 1958, Ser. No. 742,002
3 Claims. (Cl. 260—70)

1. A process of preparing a urea-thiourea-formaldehyde prepolymer particularly adapted for foaming and subsequent conversion into a papermaking material which comprises condensing at a pH of from 5–7 an admixture of thiourea and urea, the thiourea representing approximately 5 mol percent of such admixture, with formaldehyde in the presence of pyridine in an amount constituting about 10 percent by weight of the condensing mixture, the mixed ureas and the formaldehyde being in a molar ratio of approximately 1 to 2, and removing sufficient distillate from the condensing mixture to provide a residual solution containing from 55 to 75 percent by weight of solids.

3,047,539
PRODUCTION OF POLYESTERS

Brian W. Pengilly, Stow, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,758
11 Claims. (Cl. 260—75)

1. In a process for preparing a linear superpolyester by subjecting at least one bis ester selected from the group consisting of methyl, ethyl, propyl, butyl, and phenyl esters of an acid selected from the group consisting of terephthalic acid and isophthalic acid to alcoholysis in the presence of an excess of a glycol selected from the group consisting of polymethylene glycols containing from 2 to 4 methylene groups, 1,4-cyclohexane dimethanol and 1,4-phenyl dimethanol and thereafter subjecting the bis glycol ester thus formed to self condensation with the removal of the glycol, the improvement which comprises carrying out both the alcoholysis and condensation in the presence of a catalytic amount of an antimony compound of the general formula



in which R_1 is a radical selected from the group consisting of hydrogen, alkyl radicals containing from 1 to 12 carbon atoms, aralkyl, aryl and alkaryl and R_2 and R_3 are the same or different radicals selected from the group consisting of alkyl radicals containing from 1 to 12 carbon atoms, aralkyl, aryl, and alkaryl radicals.

3,047,540
POLYURETHANE PLASTICS

Rudolf Merten, Koln-Mulheim, Gunther Loew, Koln, and Otto Bayer, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 12, 1960, Ser. No. 1,878
Claims priority, application Germany Feb. 18, 1959
8 Claims. (Cl. 260—77.5)

1. The method of catalyzing the reaction between an organic isocyanate and an organic compound containing

at least one active hydrogen-containing group as determined by the Zerewitinoff method which comprises mixing said materials in the presence of a catalytic amount of an organo-tin chelate chelated with an organic chelating agent and containing at least one carbon to tin bond and containing at least one tertiary nitrogen atom, the arrangement of the tertiary nitrogen and the tin in the compound being such that each of these functions as a catalyst in the reaction.

3,047,541
PROCESS FOR THE CONTINUOUS PRODUCTION OF POLYAMIDE FIBERS AND RIBBONS

Kaspar Ryffel, Ems, Hans Rutishauser, Winterthur, and Ernst Schweizer, Zollikon, Switzerland, assignors to Inventa A.G. für Forschung und Patentverwertung, Zurich, Switzerland

Filed Aug. 5, 1958, Ser. No. 753,266
1 Claim. (Cl. 260—78)



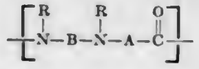
A process for the continuous production of polyamide fibers by polymerization of episilon-caprolactam, which consists of continuously admixing to said lactam, as the sole polymerization catalyst, water in an amount up to 1 percent based on said lactam, continuously polymerizing said lactam plus water to a polyamide under pressure and at temperatures above the melting point of said polyamide but below 100° C. in a completely filled vessel to exclude air, continuously extruding said polyamide and immediately stretching the extrudate.

3,047,542
POLYAMIDE RESINS

John L. Lang, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 1, 1959, Ser. No. 810,208
11 Claims. (Cl. 260—78)

1. A polyamide resin the repeating unit of which has the formula



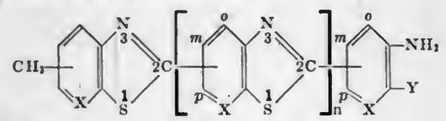
wherein the two R-radicals are selected from the group consisting of H, lower alkyl and an alkylene group consisting of the two R's joined together, thus forming with the group —N—B—N— a six-membered ring, B represents an alkylene radical containing 2 to about 6 carbon atoms and A represents an alkylene radical containing 1 to about 4 carbon atoms.

3,047,543
SULPHUR-CONTAINING HEAT-RESISTANT RESINS

Avery A. Morton, Watertown, Mass., and John B. Littlefield, Monsey, and William D. Mecum, Sloatsburg, N.Y., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 25, 1958, Ser. No. 717,307
6 Claims. (Cl. 260—79)

5. A resin having the formula



and wherein:

n is at least 2

X is selected from



and =N—

o, *m* and *p* respectively identify ortho, meta and para positions on the ring nuclei

Y is selected from —H and —SH

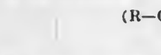
and wherein each of the No. 2 thiazole carbon atoms in the thiazole groups linking the thiazole groups to the ring nuclei is attached to the adjacent ring nucleus at one of the identified ortho, meta and para positions; and wherein not more than about ninety percent of the thiazole carbon attachments are in any one of the ortho, meta and para positions thereby characterizing the series of said attachments within the resin chain as inclusive of at least two different of the identified ortho, meta and para positions.

3,047,544
DIFUNCTIONAL POLYMERS AND METHODS FOR THEIR PREPARATION

Norman R. Byrd, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 20, 1958, Ser. No. 768,014
6 Claims. (Cl. 260—79)

1. A method for preparing polymeric dimercaptans which comprises mixing at least one monomer containing at least one $H_2C{=}C<$ group with a xanthogen disulfide defined by the formula



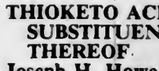
wherein R is an organic radical selected from the group consisting of aliphatic, aryl, aralkyl and alicyclic radicals and polymerizing, to a number average degree of polymerization of at least 10, at least one of said monomers in the presence of said xanthogen disulfide to form polymeric bis xanthate esters and hydrolyzing the said xanthate ester groups to produce polymeric dimercaptans.

3,047,545
POLYMERS OF POLYFLUOROTHIOALDEHYDES

John Ferguson Harris, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 19, 1959, Ser. No. 821,378
13 Claims. (Cl. 260—79)

1. A copolymer of a polyfluorothioaldehyde of the formula



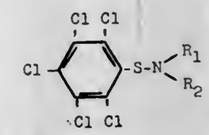
wherein X is a member selected from the class consisting of hydrogen and fluorine and *n* is 1–8 and at least one other copolymerizable monomer.

3,047,546
VULCANIZATION ACCELERATORS

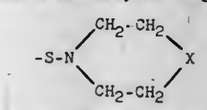
Friedrich Lober, Leverkusen-Bayerwerk, Helmüt Frëytag, Koln-Stammheim, and Hans Pohle, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 13, 1958, Ser. No. 708,399
Claims priority, application Germany Jan. 2, 1957
16 Claims. (Cl. 260—79.5)

12. A rubbery material containing as a vulcanization accelerator 0.05–10% by weight of a sulfenamide of the formula:



wherein R_1 and R_2 represents radicals selected from the group consisting of hydrogen, saturated hydrocarbon, and unsaturated hydrocarbon radicals, the sum of R_1 and R_2 being at most 12 carbon atoms, and radicals which, together with the nitrogen atom through a carbon to nitrogen bond forms a heterocyclic ring of the formula:

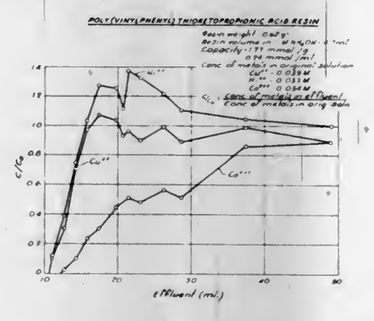


wherein X is selected from the group consisting of oxygen and sulfur; said rubbery material being a member selected from the group consisting of homopolymers of conjugated diolefins, copolymers of conjugated diolefins with polymerizable monovinyl monomers, copolymers of conjugated diolefins with isoolefins, polychlorobutadiene, and copolymers of chlorobutadiene with a copolymerizable vinyl monomer.

3,047,547
THIOKETO ACID CONTAINING A VINYLPHENYL SUBSTITUENT AND POLYMERIC PRODUCTS THEREOF

Joseph H. Howe, Freeland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed May 5, 1960, Ser. No. 27,120
5 Claims. (Cl. 260—79.7)



1. As a new compound, 2-thioketo-3-(ar-vinylphenyl)-propionic acid.

3,047,548
SYNTHETIC POLYMERS

Robert Y. Garrett, Avon Lake, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,849
10 Claims. (Cl. 260—80.7)

1. The interpolymer of (1) from about 50 to about 93% by weight of a conjugated diolefin having from 4 to 9 carbon atoms, (2) from about 4 to about 49.8% by weight of at least one ester of an alpha,beta-olefinically unsaturated monocarboxylic acid having the structure

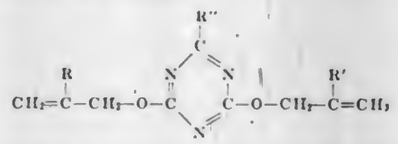
wherein R is a member selected from the class consisting of hydrogen, an alkyl group having from 1 to 6 carbon atoms, a halogen, and a cyano group and R′ is a hydrocarbon group having from 1 to 12 carbon atoms, (3) from 0 to 5% by weight of a monovinyl cyanide having from 3 to 10 carbon atoms, (4) from 0 to 5% by weight of a monovinyl aromatic compound having from 8 to 18 carbon atoms, (5) from about 0.1 to about 3% by weight of a member of the group consisting of N-methylol acrylamide and N-methylol methacrylamide, and (6) from about 0.1 to about 5% by weight of an alpha,beta-monoolefinically unsaturated monocarboxylic acid having from 3 to 6 carbon atoms.

3,047,549
BINARY VINYL CHLORIDE COPOLYMERS

Richard H. Martin, Jr., Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 31, 1959, Ser. No. 830,697
8 Claims. (Cl. 260—875)

1. A resinous interpolymer of a binary mixture of monomers consisting of vinyl chloride and a polyallyloxy compound of the formula:



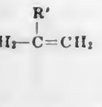
where R and R′ are independently selected from the group consisting of a hydrogen atom and a methyl radical and R″ is selected from the group consisting of a halogen atom, a hydroxy radical, allyloxy radical and the methallyloxy radical; said monomer mixture consisting of 99.70–99.99 weight percent of vinyl chloride and, correspondingly, 0.30–0.01 weight percent of the polyallyloxy compound when R″ in the above formula is free of polymerizable terminal ethylenic groups; said monomer mixture consisting of 99.95–99.997 weight percent of vinyl chloride and, correspondingly, 0.05–0.003 weight percent of the polyallyloxy compound when R″ in the above formula contains a polymerizable terminal ethylenic group of the group consisting of allyl group and the methallyl group.

3,047,550
BINARY INTERPOLYMERS OF VINYL CHLORIDE

Richard H. Martin, Jr., Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 31, 1959, Ser. No. 830,702
6 Claims. (Cl. 260—87.5)

1. A resinous interpolymer of a binary mixture of monomers consisting of vinyl chloride and an allyl phosphate monomer of the formula:



where R and R′ are independently selected from the group consisting of a hydrogen atom and a methyl radical and R″ is selected from the group consisting of a hydrogen atom, allyl radical, the methallyl radical, an alkyl radical, an aralkyl radical, an aryl radical and an alkaryl radical; said monomer mixture consisting of 99.95–99.997 weight percent of vinyl chloride and, correspondingly, 0.05–0.003 weight percent of the allyl phosphate monomer when R″ in the above formula is selected from the group consisting of an allyl radical and the methallyl radical; said monomer mixture consisting of 99.70–99.99 weight percent of vinyl chloride and, correspondingly, 0.30–0.01 weight percent of the allyl phosphate monomer when R″ in the above formula is a substituent other than a member of the group consisting of allyl radical and the methallyl radical.

3,047,551
CONTINUOUS POLYMERIZATION OF OLEFINS USING A FIXED BED, SUPPORTED TRANSITION METAL-ORGANOMETALLIC CATALYST

Charles L. Thomas, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Jan. 20, 1960, Ser. No. 3,482
4 Claims. (Cl. 260—88.2)

1. A process for polymerizing olefins which comprises continuously passing a first stream consisting essentially of an inert hydrocarbon solvent, alpha-olefinic material capable of forming normally solid polymer soluble in the solvent at the temperature of polymerization, and an organo-aluminum compound, at a temperature of from 25° C. to 120° C. through a reaction zone containing catalytic material which consists essentially of a mass of finely divided adsorptive solid material carrying on its surface a catalytic material selected from the group consisting of halides and oxyhalides of titanium, zirconium, vanadium, and tungsten, which halides and oxyhalides are in a valence state lower than the maximum, continuously polymerizing the olefinic material in contact with the catalytic material, separating a second stream containing dissolved olefin polymer from the fixed bed of catalytic material while retaining the solid material in the reaction zone, and recovering solid polymer from the second stream.

3,047,552
VULCANIZATION OF ELASTOMERS

Richard J. Reynolds, Walnut Creek, and Sven H. Ruetman, Oakland, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 25, 1959, Ser. No. 815,275
16 Claims. (Cl. 260—88.2)

1. A method of vulcanizing elastomeric copolymers of mono-alpha-olefins having up to 6 carbon atoms, the copolymer being essentially free of ethylenic unsaturation and containing from about 25 to about 90 mole percent of polymerized ethylene, comprising blending the copolymer with (1) from 0.1 to 10 parts per hundred of elastomer of an organic peroxide having a decomposition temperature between 100 and 200° C. and (2) from 0.1 to 4 parts per hundred of copolymer of a compound selected from the group consisting of quinones, hydroquinones, quinhydrone, and mixtures thereof, and vulcanizing the blend, the said peroxide and said compound being in parts by weight per hundred parts by weight of copolymer.

3,047,553
POLYMERIZATION PROCESS USING POLYFLUOROAZOALKANES AS INITIATORS

Donald Drake Coffman, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,982
34 Claims. (Cl. 260—88.7)

1. A method for polymerizing ethylenically unsaturated compounds which comprises subjecting said compounds to polymerization conditions under the influence of heat and in the presence of a polyfluoroazoalkane of the formula $R—CF_2—N=N—CF_2—R$ where R represents a member of the group consisting of fluorine, a perfluorocarbon radical and an omega-hydroperfluorocarbon radical, the amount of polyfluoroazoalkane being between 0.0001 and 0.05 mole per mole of total polymerizable material.

3,047,554
POLYMERIZATION CATALYST OF COBALTOUS CHLORIDE AND ALUMINUM TRIISOBUTYL FOR VINYL ACETATE

Frank P. Gay, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 23, 1957, Ser. No. 654,451
1 Claim. (Cl. 260—89.1)

A process which comprises polymerizing a polymerizable material consisting of vinyl acetate in bulk form and under substantially anhydrous conditions, in contact with catalytic amounts of a catalyst system comprising essentially an admixture of cobaltous chloride and aluminum triisobutyl.

3,047,555
PROCESS OF MAKING POLYMERS OF VINYL ETHERS

Gordon J. Arquette, Plainfield, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed May 9, 1958, Ser. No. 734,128
3 Claims. (Cl. 260—91.1)

1. A process for making high molecular weight polymers of a vinyl lower alkyl ether wherein said lower alkyl radical contains from 1 to 4 carbon atoms, which comprises combining one part of boron trifluoride-ether complex with 1 to 500 parts of a chlorinated methane and allowing the reaction mixture to stand for at least one minute, thereby forming a polymerization catalyst, adding said catalyst to a vinyl lower alkyl ether monomer in the amount of 0.1 to 10% by weight of catalyst based on the weight of monomer, and polymerizing said vinyl lower alkyl ether in admixture with said catalyst at a temperature of —50 to 90° C.

3,047,556
PROCESS FOR THE PRODUCTION OF POLYVINYL HYDROGEN SULPHATES

Jenö Szita, Hechtsheim, near Mainz, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 12, 1960, Ser. No. 1,872
Claims priority, application Germany Jan. 17, 1959
5 Claims. (Cl. 260—91.3)

1. A process for the production of polyvinyl hydrogen sulfates containing 70–100% of sulfuric acid groups referred to the hydroxy groups of the polyvinyl alcohol which comprises heating a pyridine solution of a chlorosulfonic acid-pyridine salt and polyvinyl alcohol, the molar ratio between the hydroxyl groups of the polyvinyl alcohol and said pyridine salt being 1:1 to 1:5.

3,047,557
PROCESS FOR POLYMERIZING OLEFINS WITH CATALYSTS OF $TiCl_3$ DIALKYL ALUMINUM FLUORIDES IN COMBINATION WITH ANOTHER DIALKYL ALUMINUM HALIDE

Kurt Rust, Ernst Junghanns, Siegfried Sommer, and Gerhard Bier, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Oct. 14, 1958, Ser. No. 767,085
Claims priority, application Germany Oct. 19, 1957
6 Claims. (Cl. 260—93.7)

1. An improved process for the preparation of isotactic polypropylene which comprises contacting propylene with $TiCl_3$ under atmospheric pressure, the $TiCl_3$ being activated by adding to the system a 1:1 mixture of aluminum diethyl chloride and aluminum diethyl fluoride, and recovering polypropylene having an isotactic content exceeding 90%.

3,047,558
PRESSURE STAGED POLYMERIZATION PROCESS

Arthur W. Langer, Jr., Watchung, and Erik Tornqvist, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed May 15, 1959, Ser. No. 813,419
5 Claims. (Cl. 260—93.7)

1. In a staged polymerization of an alpha olefin monomer having more than 2 carbon atoms with a catalyst system formed by admixing an aluminum alkyl with a partially reduced titanium halide containing aluminum halide cocrystallized therewith at a temperature in the range of 0–100° C. and a total pressure in the range of 15 to 200 p.s.i., the improvement which comprises adjusting monomer concentration so as to have a monomer partial pressure of between about 5 and 100 p.s.i., and thereafter increasing the monomer partial pressure within the range of 5 to 100 p.s.i. as the polymerization proceeds without substantial reduction of total pressure by addition of fresh monomer whereby both improved polymer product crystallinity and catalyst activity are obtained.

3,047,559
METHOD OF MAKING POLYMER

Rowland H. Mayor, Stow, and Richard Leshin, Akron, Ohio, and Bernard Wargotz, Long Branch, N.J., assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Continuation of application Ser. No. 564,121, Feb. 8, 1956. This application Sept. 11, 1961, Ser. No. 137,019
9 Claims. (Cl. 260—94.3)

1. A method which comprises polymerizing isoprene in the presence of a catalytic amount of a complex of titanium tetrachloride with an etherate of a compound selected from the group consisting of organo metallic compounds of the general formula



in which R_1 is selected from alkyl, aryl and aralkyl groups and R_2 and R_3 are selected from alkyl, aryl and aralkyl groups and hydrogen.

3,047,560
SODIUM DERIVATIVES OF OCTAKIS(2-HYDROXY PROPYL) SUCROSE

Clayton D. Callihan and Samuel M. Rodgers, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 23, 1959, Ser. No. 808,323
5 Claims. (Cl. 260—209)

1. Sodium octakis (2-hydroxy propyl) sucrose compounds wherein a sodium atom replaces the active hydro-

gen atom of the hydroxy group in from one to eight of the secondary hydroxy propyl radicals of the octakis (2-hydroxy propyl) sucrose.

3,047,561
PREPARATION OF STABLE CELLULOSE TRIESTERS

Carlton L. Crane, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 2, 1959, Ser. No. 837,574
12 Claims. (Cl. 260—227)

1. A method of preparing cellulose triesters of excellent stability, which comprises substantially completely esterifying cellulose with an esterification bath of fatty acid anhydride, diluent and sulfuric acid catalyst and subjecting the thus formed cellular ester in solution in the completed esterification bath to a temperature of 200–350° F. under anhydrous conditions after the sulfuric acid catalyst used has been completely neutralized with a chemically equivalent amount of base material selected from the group consisting of the carbonates, hydroxides, oxides, and acetates of calcium, magnesium, barium, iron, and aluminum plus further addition of base material so that the total base material added to the bath is chemically equivalent to 1½ to 5 times the amount of sulfuric acid catalyst used.

3,047,562
RAUWOLFIA ALKALOIDAL COMPLEXES AND PROCESS FOR ISOLATING THE SAME FROM RAUWOLFIA PLANT MATERIAL

Salimuzzaman Siddiqui, % Pakistan Council of Scientific and Industrial Research, Karachi, Pakistan

Filed Sept. 3, 1958, Ser. No. 758,713
14 Claims. (Cl. 260—236)

1. A process for the isolation of an alkaloidal complex from *Rauwolfia serpentina*, Benth., comprising

(I) the steps of percolating a source material from said Rauwolfia plant with an alcohol selected from the group consisting of methanol and ethanol and removing the alcohol from the resulting percolate to obtain a semi-solid residue;

(II) partitioning the resulting semi-solid residue between water and a water-immiscible organic solvent selected from the group consisting of acetates of lower alcohols with 2 to 5 carbon atoms per molecule, thereby obtaining an organic and an aqueous phase;

(III) extracting the aqueous phase resulting from (II) at least once with a monohydric alcohol having from 4 to 6 carbon atoms per molecule;

(IV) extracting the alcoholic phase resulting from (III) at least once with water; and

(V) removing the water from the aqueous phase resulting from (IV) by distillation under vacuum at a temperature up to 60° C., thereby obtaining a light cream colored amorphous powder named serpajmaline and constituting a complex of alkaloids of Rauwolfia which is of greater hypotensive activity than reserpine and free from the sedative and depressant properties of the latter.

3,047,563
RAUWOLFIA ALKALOIDAL COMPLEXES AND PROCESS FOR ISOLATING THE SAME FROM RAUWOLFIA PLANT MATERIAL

Salimuzzaman Siddiqui, % Pakistan Council of Scientific and Industrial Research, Karachi, Pakistan

Filed Sept. 3, 1958, Ser. No. 758,714
10 Claims. (Cl. 260—236)

1. A process for the isolation of certain alkaloidal complexes from *Rauwolfia serpentina*, Benth., comprising

(I) the steps of percolating a source material from said Rauwolfia plant with an alcohol selected from the group consisting of methanol and ethanol and removing the alcohol from the resulting percolate to obtain a first semi-solid residue;

(2) partitioning at least once the first semi-solid residue between water and a water-immiscible organic solvent selected from the group consisting of acetates of lower alcohols with 2 to 5 carbon atoms per molecule, thereby obtaining an organic and an aqueous phase;

(3) separating the organic phase from step (2) and removing the solvent and any residual water from the organic phase by distillation under vacuum at a temperature up to 60° C. to obtain a second residue;

(4) digesting the second residue with petroleum ether and separating the petroleum ether solution, thereby obtaining as a third solid residue a petroleum-ether insoluble residue an alkaloidal complex named ajmalexine and being a concentrate of the weaker bases with about 5.5% of reserpine and about 2.2% of rescinnamine and being a light cream colored powder, soluble in ethyl acetate, largely soluble in benzene, and fairly soluble in ethanol and methanol; which complex after drying at 30° C. over P_2O_5 phosphorus pentoxide for 3 hours shrinks and turns brown at 72° C., froths up at 110° C. and melts at 118°–120° C.;

(5) removing the solvent from the petroleum ether solution, thereby obtaining an alkaloidal complex named resajmaline and being a greenish viscous oily liquid having a kinematic viscosity of 4000 centistokes at 31.5° C., soluble in ethyl acetate, ether and petroleum ether and fairly soluble in ethanol and methanol which complex contains lipoids, serposterol and unsaturated higher alcohols as well as about 2.5% of reserpine, and about 0.5% of rescinnamine.

3,047,564
PURIFICATION OF IMPURE α-AMINOLACTAMS

Willem Pesch and Ulrich Verstrijden, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,201
Claims priority, application Netherlands Sept. 15, 1959
7 Claims. (Cl. 260—239.3)

1. A process for purifying impure α-aminolactam in aqueous solution, said impure α-aminolactam being the reaction product obtained by reducing α-nitrolactam in an aqueous medium which comprises adding the aqueous solution of impure α-aminolactam to a hydrocarbon of the benzene series, distilling off water azeotropically from the resulting mixture whereby impurities are precipitated and the α-aminolactam is dissolved in said hydrocarbon and separating the precipitated impurities from the solution of α-aminolactam in hydrocarbon.

3,047,565
PROCESS FOR EXTRACTION OF MONOMERIC CAPROLACTAM FROM ITS POLYMER

Wilhelm Braun, Lucerne, and Walter Zehnder, Ems, Switzerland, assignors to Inventa A.G. fur Forschung und Patentverwertung, Zurich, Switzerland

Filed Nov. 18, 1959, Ser. No. 853,814
Claims priority, application Switzerland Nov. 20, 1958
6 Claims. (Cl. 260—239.3)

1. A process for the recovery of volatile monomeric caprolactam entrained in a stream of inert gas, which comprises bringing said gas stream in contact with liquid monomeric caprolactam which acts as solvent for said entrained caprolactam.

3,047,566
6a,6a-DIHALO-6,7-METHYLENE STEROIDS AND METHOD

Wagn Ole Godtfredsen, Copenhagen, and Sven Llisberg, Trorod, Denmark, assignors to Løvens Kemiske Fabrik Ved A. Kongsted, Ballerup, Denmark

No Drawing. Filed Jan. 7, 1960, Ser. No. 941
Claims priority, application Great Britain June 13, 1958
16 Claims. (Cl. 260—239.55)

1. As an intermediate in the production of 6-methyl steroids, a member of the group consisting of

Δ^4-3-keto-6a,6a-dichloro-6,7-methylene androstenes,

Δ^4-3-keto-6a,6a-dibromo-6,7-methylene androstenes,

Δ^4-3-keto-6a,6a-dichloro-6,7-methylene pregnenes, and

Δ^4-3-keto-6a,6a-dibromo-6,7-methylene pregnenes.

13. 6a,6a - dibromo-6,7-methylene-cortisone - 20-ethylene-glycolketal.

3,047,567
12-HALO AND 11,12-EPOXY STEROIDS OF THE PREGNANE SERIES

Josef Fried, Princeton, N.J., and Josef E. Herz, Lomas, Mexico City, Mexico, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application Apr. 5, 1956, Ser. No. 576,259, now Patent No. 2,963,495, dated Dec. 6, 1960. Divided and this application May 26, 1960, Ser. No. 31,806
13 Claims. (Cl. 260—239.55)

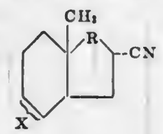
1. 12α-halo-allopregnane-3β,16β - diol - 11,20-dione 3-acylate 16-(4-methyl-5-acyloxy)pentanoate, wherein the halo radical has an atomic number less than 35 and wherein the acyl radical is that of a hydrocarbon carboxylic acid of less than ten carbon atoms.

3,047,568
16-CYANO STEROIDS, INTERMEDIATES AND METHOD OF PREPARING SAME

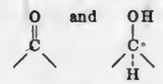
Henry M. Kissman and Arlene M. Hoffman, Nanuet, N.Y., and Martin J. Weiss, Oradell, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 23, 1960, Ser. No. 71,129
8 Claims. (Cl. 260—239.55)

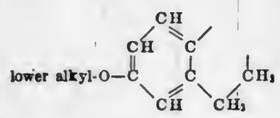
1. A steroid having the formula:



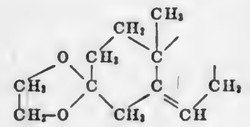
in which R is a divalent radical of the group consisting of:



groups and X is a divalent radical of the group consisting of:



and



radicals.

3,047,569
SUBSTITUTED STEROIDS OF THE PREGNANE SERIES

Chester E. Holmlund, Pearl River, Louis I. Feldman, Spring Valley, and Henry M. Kissman, Nanuet, N.Y., and Martin J. Weiss, Oradell, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 31, 1961, Ser. No. 86,010
7 Claims. (Cl. 260—239.55)

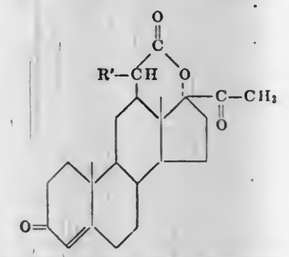
1. The compound 3-hydroxy-2-methoxalyl-17α,20:20,21-bismethylenedioxy-2,4-pregnadiene-11-one.

3,047,570
C–12-SUBSTITUTED PROGESTERONE

Otto Halpern, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Feb. 10, 1961, Ser. No. 88,259
9 Claims. (Cl. 260—239.57)

3. A compound of the following formula:



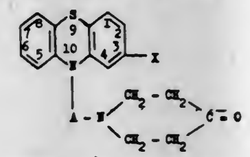
wherein R^1 is selected from the group consisting of hydrogen and a lower alkyl group.

3,047,571
DERIVATIVES OF OXOPIPERIDINYL PHENTHIAZINES

Robert Michel Jacob, Ablon-sur-Seine, and Jacques Georges Robert, Gentilly, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Filed May 2, 1960, Ser. No. 25,864
Claims priority, application Great Britain May 8, 1959
8 Claims. (Cl. 260—243)

1. A compound selected from the group consisting of phenthiazine derivatives of the formula:



wherein A represents an alkylene group containing from 2 to 4 carbon atoms with at least two carbon atoms between the nitrogen atoms of the piperidine and phenthiazine nuclei, X is selected from the class consisting of hydrogen and halogen atoms and lower alkyl, lower alkoxy, lower acyl, cyano, methylthio, methanesulphonyl, dimethylsulphamoyl and trifluoromethyl groups, and the non-toxic acid addition and quaternary ammonium salts of said phenthiazine derivatives.

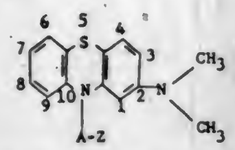
3,047,572
DIMETHYLAMINOPHENOTHIAZINE DERIVATIVES

Paul N. Craig, Roslyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 10, 1958, Ser. No. 779,288
6 Claims. (Cl. 260—243)

1. A chemical compound selected from the group con-

sisting of a free base and its nontoxic, acid addition salts, the free base of the formula:



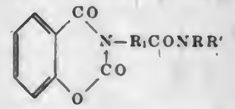
in which A is an alkylene chain having from 2 to 4 carbon atoms, separating the nitrogens to which it is attached by at least 2 carbon atoms; and Z is a member selected from the group consisting of dimethylamino, diethylamino, N-formylpiperazinyl, piperazinyl, N-methylpiperazinyl, N-hydroxyethylpiperazinyl, N-acetoxyethylpiperazinyl, N-hydroxyethoxyethylpiperazinyl, N-pyrrolidinyl, N-p-nitrophenethylpiperazinyl, N-p-aminophenethylpiperazinyl.

3,047,573
N-ALKYLAMIDO SUBSTITUTED 1,3-BENZOXAZINES

Torizo Takahashi, Kikuo Ogiu, Hajime Fujimura, Isao Satoda, Tomijiro Fukui, and Yasuo Yamamoto, all of Kyoto, Japan, assignors to Nippon Shinyaku Co., Ltd., Kyoto, Japan, a corporation of Japan

No Drawing. Filed June 7, 1960, Ser. No. 34,381
Claims priority, application Japan July 1, 1959
4 Claims. (Cl. 260—244)

1. A salicylic acid derivative of the formula:



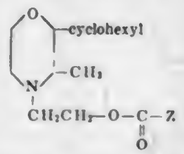
in which R_1 is CH_2 and R and R' are each selected from the group consisting of methyl and ethyl.

3,047,574
2 - CYCLOHEXYL - 4 - (2 - HYDROXYETHYL) - 3-METHYLMORPHOLINE ESTERS OF SUBSTITUTED BENZOIC ACIDS

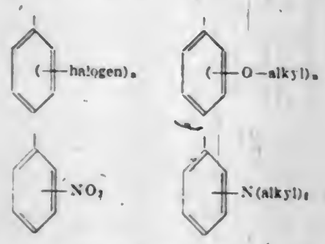
Max J. Kalm, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Mar. 28, 1960, Ser. No. 17,743
11 Claims. (Cl. 260—247.2)

1. A compound of the formula



wherein Z represents a member of the group consisting of radicals of the formulas



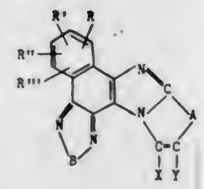
in which *n* represents a positive integer less than 6 and the alkyl radicals called for contain fewer than 9 carbon atoms.

3,047,575
NEW HETEROCYCLIC ORTHOQUINONES

Richard J. Boyle, Neshanic, N.J., Oscar G. Birsten, New York, N.Y., and William L. Mosby, North Plainfield, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application Apr. 4, 1958, Ser. No. 726,346, now Patent No. 2,970,146, dated Jan. 31, 1961. Divided and this application Nov. 29, 1960, Ser. No. 72,285
4 Claims. (Cl. 260—256.4)

1. The compounds of the formula



in which A is selected from the group consisting of —S—, —CH=CH—, and —CH=N—, X and Y are selected from the group consisting of hydrogen, and lower alkyl and, taken together, the group —CH=CH—CH=CH—, R, R', R'' and R''' are selected from the group H, Cl, Br and NO_2 and in which B is selected from the group consisting of phenyl and anthraquinonyl to which the nitrogens are linked at adjacent carbons.

3,047,576
1,1'-(HEXAFLUOROGLUTARYL)-BIS(4-PHENYLPIPERAZINE)

Joe Haller Clark, Woodcliff Lake, N.J., and Leon Goldman, Nanuet, Lee Norman Starker, Pearl River, and Janet K. Paul, Spring Valley, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 20, 1959, Ser. No. 847,461
1 Claim. (Cl. 260—268)

The compound 1,1'-(hexafluoroglutaryl)-bis(4-phenylpiperazine).

3,047,577
PROCESS FOR THE PRODUCTION OF DYESTUFFS AND DYESTUFF INTERMEDIATES

Heinz-Werner Schwechten and Otto Bayer, both of Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 8, 1959, Ser. No. 804,863
Claims priority, application Germany Apr. 28, 1958
11 Claims. (Cl. 260—276)

1. Process for the production of dyestuffs and dyestuff intermediates which comprises contacting at a temperature from about 60 to about 250° C. in an inert solvent an alkali metal cyanide with a member selected from one group consisting of anthraquinone-benzacridone, chloroanthraquinone-benzacridone, bromoanthraquinone-benzacridone, alkoxyanthraquinone-benzacridone, phenylanthraquinone-benzacridone, phenoxyanthraquinone-benzacridone, alkylanthraquinone - benzacridone, anthraquinone naphthalene-acridone, N-alkyl anthrapyridone, N-phenyl anthrapyridone, N-alkylphenyl anthrapyridone, dibenzpyrenequinone, isodibenzpyrenequinone, dibromo-dibenzpyrenequinone, anthanthrone, dibromo-anthanthrone, pyranthrone, violanthrone, chloro-violanthrone, bromo-violanthrone, isoviolanthrone, chloro-isoviolanthrone, bromo-isoviolanthrone, the alkyl and alkoxy groups having from 1 to 5 carbon atoms; oxidizing the leuco addition products thus obtained and recovering resultant cyano compounds.

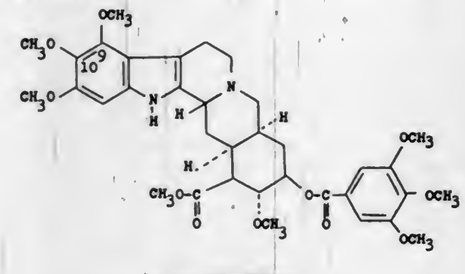
4. A compound obtained according to the process of claim 1.

3,047,578
SUBSTITUTED RESERPINE AND PROCESS OF MAKING THE SAME

Leon Velluz, Paris, Georges Muller, Nogent-sur-Marne (Seine), and Andre Allais, Paris, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed June 27, 1961, Ser. No. 119,785
Claims priority, application France July 29, 1957
1 Claim. (Cl. 260—287)

Levorotatory (chloroform) 9,10-dimethoxy reserpine of the formula:



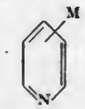
3,047,579
PROCESS FOR PREPARING N-OXIDES

Robert C. Witman, Westfield, N.J., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed July 18, 1958, Ser. No. 749,345
8 Claims. (Cl. 260—289)

1. A process for preparing N-oxides which comprises reacting:

(*a*) a compound of the formula:



wherein all of the ring substituents except M are hydrogen atoms and M is selected from the group consisting of hydrogen, chlorine, and methyl, and (*b*) hydrogen peroxide at a temperature of from 40° C. to 80° C. in the presence of a catalytic amount of an inorganic per-compound of an acid-forming element selected from the group consisting of the elements of group VI of the periodic table.

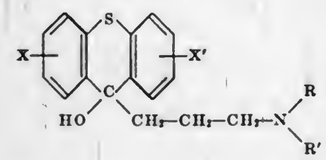
8. A process for preparing the N-oxide of quinoline which comprises reacting quinoline and hydrogen peroxide in a carboxylate-free environment at a temperature of from 40° C. to 80° C. in the presence of an inorganic per-compound of an acid-forming element selected from the group consisting of the elements of group VI of the periodic table.

3,047,580
10-(OMEGA-AMINO ALKYL)-10-HYDROXY-THIAXANTHENES

James M. Sprague, Gwynedd Valley, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 29, 1961, Ser. No. 141,600
6 Claims. (Cl. 260—293.4)

1. Compounds having the structural formula:



wherein X and X' respectively is selected from the group consisting of hydrogen, halogen, lower-alkyl, perfluoro-lower-alkyl, lower-alkoxy, and phenyl;



is selected from the group consisting of di-lower alkylamino, 1-piperidyl, 1-pyrrolidyl, 4-methyl-1-piperazinyl, and 4-morpholinyl, and di-lower-alkylamino in which one of the alkyl radicals is attached to a carbon of the propyl chain to thereby form radicals attached to the 10-carbon which are selected from the group consisting of 1-methyl-3-piperidylmethyl and 1-methyl-4-piperidyl.

6. 10 - (1-methyl-4-piperidyl)-10-hydroxythiaxanthene.

3,047,581
SUBSTITUTED ISOXAZOLYL COMPOUNDS

Thomas Samuel Gardner, Rutherford, John Lee, Montclair, and Edward Wenis, Leonia, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 16, 1961, Ser. No. 82,702
4 Claims. (Cl. 260—307)

1. N - (5 - methyl - 3 - isoxazolyl) - 3 - methyl - 5-isoxazolecarboxamide.

3,047,582
PHTHALOCYANINE-SULFONAMIDES AND -CARBONAMIDES

Berthold Bienert, deceased, late of Leverkusen-Bayerwerk, Germany, by Hildegard Bienert, Leverkusen-Bayerwerk, Germany; Dorothea Hildegard Prochaska, Rock Hill, S.C.; and Berthold Klaus Bienert, Leverkusen-Bayerwerk, Germany, heirs; Kurt Breig, Manfred Groll, and Heinrich Gutjahr, all of Koln-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 15, 1960, Ser. No. 43,249
Claims priority, application Germany Apr. 20, 1957
4 Claims. (Cl. 260—310)

1. A phthalocyanine dyestuff of the formula

$$Pc\langle X-R_1)_n$$

wherein Pc stands for a phthalocyanine radical, X means a radical selected from the group consisting of —SO_2— and —CO—, R_1 stands for an amino group containing radical selected from the group consisting of the benzene, naphthalene, arylpyrazole and acylacetic acid arylamide series, said amino group containing radical being linked to the radical X via the amino group and bearing an esterified hydroxyl group adjacent to a carbon atom which in adjacent position to the unesterified hydroxyl group is capable of coupling with a diazonium compound, and *n* stands for an integer from 1 to 4.

3,047,583
VINYLATION OF AROMATIC HETEROCYCLIC NITROGEN COMPOUNDS

Victor A. Sims, Bayonne, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,231
3 Claims. (Cl. 260—313)

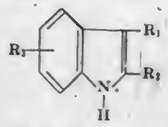
1. A process for the preparation of N-vinyl pyrrole comprising contacting in the vapor phase acetylene and pyrrole with a catalyst consisting of a support selected from the group consisting of magnesium oxide and calcium oxide impregnated with from 5 to 15 percent by weight of potassium hydroxide at a temperature of 150 to 350° C. and substantially atmospheric pressure.

3,047,584
INDOLE-CARBOXYLIC ACID-DIALKYLAMINO ALKYL ESTERS

Samuel Elkin, 6308 Elmhurst St., Philadelphia 11, Pa., and Francis Marion Miller, 1109 Gary Drive, Baltimore 28, Md.

No Drawing. Filed Apr. 27, 1960, Ser. No. 24,869
13 Claims. (Cl. 260—319)

1. A compound selected from the group consisting of those having the formula:



wherein at least one of the substituents R_1 and R_2 is the radical COOXN=B, the other being hydrogen, X is a lower alkylene group and N=B is N,N-di-lower alkylamino, R_3 is a member of the group consisting of hydrogen and nitro, and therapeutically active acid addition salts thereof.

3,047,585
SYNTHESIS OF 3-INDOLEALKANOIC ACIDS

Herbert E. Johnson, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 28, 1960, Ser. No. 65,590
6 Claims. (Cl. 260—319)

1. The process for producing a 3-indolealkanoic acid which comprises heating at from 150° C. to 350° C. indole and a hydroxy acid represented by the formula:

$$HO—C_nH_{2n}—CO_2H$$

wherein n is an integer having a value of from 1 to 10 with at least one mole of an alkali metal hydroxide per mole of said hydroxy acid for a period of time sufficient to produce an alkali metal salt of a 3-indolealkanoic acid, and thereafter acidifying the reaction mixture to produce said 3-indolealkanoic acid.

3,047,586
1-HYDROXYMETHYL - 6,8 - DIOXABICYCLO(3.2.1)-OCTANE AND PROCESSES FOR ITS PREPARATION

Andrew P. Dunlop, Riverside, and Daniel S. P. Eftax, Barrington, Ill., assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

No Drawing. Original application Mar. 30, 1959, Ser. No. 802,652, now Patent No. 2,980,703, dated Apr. 18, 1961. Divided and this application Jan. 10, 1961, Ser. No. 81,681
4 Claims. (Cl. 260—340.9)

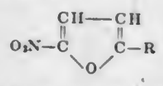
1. 1-hydroxymethyl-6,8-dioxabicyclo(3.2.1)octane.

3,047,587
PROCESS FOR PREPARING 2-FLUOROALKYL-5-NITROFURANS

William R. Sherman, Lake Forest, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed May 12, 1960, Ser. No. 28,544
6 Claims. (Cl. 260—346.1)

A method for the preparation of a compound corresponding to the formula



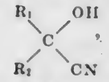
wherein R is selected from the group consisting of difluoromethyl, trifluoromethyl and α,α-diffuoroethyl which comprises heating a mixture of sulphur tetrafluoride and a compound selected from the group consisting of 5-nitro-2-furaldehyde, 2-acetyl-5-nitrofuran and 5-nitro-furoic acid in a closed reaction vessel at a temperature of from 50° C. to 150° C. under autogenous pressure and recovering the resulting product from the reaction mixture.

3,047,588
EPOXY CYANOHYDRINS

Paul R. Van Ess, Berkeley, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 18, 1960, Ser. No. 22,659
7 Claims. (Cl. 260—348)

1. The epoxy cyanohydrin of the structure



where R_1 is vicinal epoxy-substituted alkyl and R_2 is selected from the group consisting of vicinal epoxy-substituted hydrocarbon alkyl, hydrocarbon alkyl and the hydrogen atom, R_1 and R_2 having a total of up to 11 carbon atoms.

5. Glycidyl cyanohydrin.

3,047,589
PREPARATION OF SUBSTITUTED PERCHLORYL-AROMATIC COMPOUNDS

Francis Leslie Scott, Elkins Park, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 23, 1959, Ser. No. 841,684
9 Claims. (Cl. 260—349)

1. A perchlorylbenzene compound selected from the group consisting of 4-methoxyperchlorylbenzene, 4-phenylthioperchlorylbenzene, 4-azidoperchlorylbenzene and 4-hydrazinoperchlorylbenzene.

3,047,590
ACYLTHIO-HYDROXY-STEROIDS AND PREPARATION THEREOF

Taichiro Komeno, Sumiyoshi-ku, Osaka-shi, Japan, assignor to Shionogi & Co., Ltd., Osaka-shi, Japan

No Drawing. Filed July 22, 1960, Ser. No. 44,546
Claims priority, application Japan July 27, 1959
3 Claims. (Cl. 260—397.4)

1. 5α-hydroxy-6β-acetylthio-pregnane-3,20-dione.

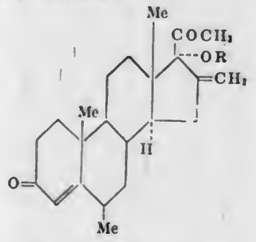
2. A process for preparing 5α-hydroxy-6β-acetylthio-pregnane - 3,20 - dione which comprises reacting 5α,6α-epoxy-pregnane - 3,20 - dione 3,20 - diethylene - ketal with ethanethiolic acid, whereby 5α-hydroxy-6β-acetylthio-pregnane-3,20-dione is produced, and recovering the latter from the reaction mixture.

3,047,591
PREPARATION OF 17α-ACYLOXY-6α-METHYL-16-METHYLENEPREGN-4-ENE-3,20-DIONES

Vladimir Petrow and David Morton Williamson, London, England, assignors to The British Drug Houses Limited

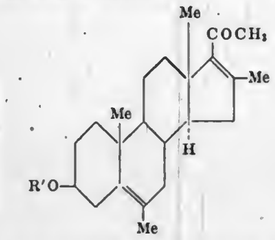
No Drawing. Filed Aug. 25, 1960, Ser. No. 51,801
Claims priority, application Great Britain Aug. 31, 1959
6 Claims. (Cl. 260—397.4)

1. A process for the preparation of 17α-acyloxy-6α-methyl - 16 - methylenepregn - 4 - ene - 3,20 - diones having the general formula



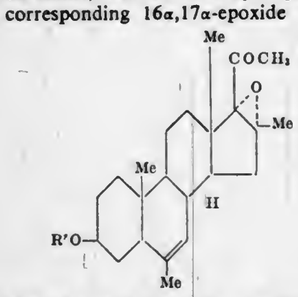
(I)

wherein R is a carboxylic acid residue containing up to 10 carbon atoms, which process comprises oxidising a steroid selected from the group consisting of a 3β-hydroxy and 3β - acyloxy - 6,16 - dimethylpregna - 5,16 - dien - 20-one having the general formula



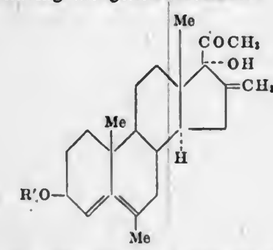
(II)

(wherein R' is a group selected from the class consisting of hydrogen and a carboxylic acid residue containing up to 10 carbon atoms) with alkaline hydrogen peroxide to form the corresponding 16α,17α-epoxide



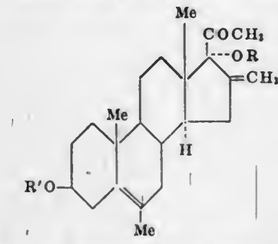
(III)

(where R' has the same meaning as above), acylating the 16α,17α-epoxide derivative in cases where R'=H by reaction with an acylating agent providing a residue of a hydrocarbon carboxylic acid containing up to 10 carbon atoms, reacting the 16α,17α-epoxide derivative with an acid selected from the group consisting of a hydrogen halide, sulphuric and perchloric acid to form a 3β-acyloxy - 17α - hydroxy - 6 - methyl - 16 - methylenepregn-5-en-20-one having the general formula



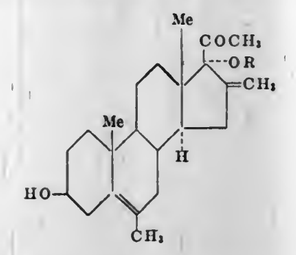
(IV)

(wherein R' is a carboxylic acid residue containing up to 10 carbon atoms), acylating the 17α-hydroxyl group by reaction with an acylating agent providing a residue of a hydrocarbon carboxylic acid containing up to 10 carbon atoms to give a 3β,17α-diacyloxy-6-methyl-16-methylene-pregn-5-en-20-one having the general formula



(V)

(wherein R' is a carboxylic acid residue containing up to 10 carbon atoms and R has the same meaning as above) preferentially hydrolysing the 3β-acyloxy group to give an acyloxyhydroxyketone having the general formula



(VI)

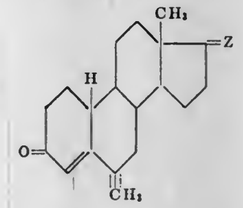
(wherein R has the same meaning as above) and subjecting said acyloxyhydroxyketone to Oppenauer oxidation to oxidise the 3β-hydroxyl group with isomerisation of the 5,6-double bond to the conjugate 4,5 position thereby providing a compound having the Formula I above.

3,047,592
NEW 6-METHYL-19-NOR-TESTERONE DERIVATIVES AND PROCESS FOR THE PREPARATION THEREOF

Karl Heinz Schönemann, Nijmegen, and Hendrik Paul de Jongh, Oss, Netherlands, assignors to Organon Inc., West Orange, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,584
Claims priority, application Netherlands Sept. 20, 1958
2 Claims. (Cl. 260—397.4)

1. Steroids of the general formula:



in which

Z is selected from the group consisting of R(βOH), R(βOAcyl) and =O, in which R is selected from the group consisting of an alkynyl radical containing 2–4 carbon atoms.

3,047,593
PREPARATION OF A 3-AMINO-ANDROSTANE COMPOUND

Willem Jacob van der Burg, Oss, Netherlands, assignor to Organon Inc., West Orange, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 2, 1962, Ser. No. 170,818
Claims priority, application Netherlands Feb. 13, 1961
3 Claims. (Cl. 260—397.5)

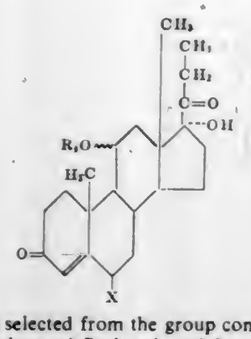
1. Process for the preparation of 3α-amino-17β-acetoxy-5α-androstane, the 3-amino group of which is protected, by oxidation og 3α-amino-20-keto-5α-pregnane, the 3-amino group of which is protected, with performic acid.

3,047,594
PREPARATION OF 21-METHYL STEROIDS AND INTERMEDIATES

Hans-Jurgen E. Hess, Groton, George M. K. Hughes, Gales Ferry, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 11, 1960, Ser. No. 28,185
20 Claims. (Cl. 260—397.45)

18. A compound selected from the group consisting of those having the formula:



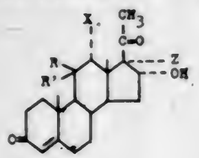
wherein X is selected from the group consisting of hydrogen and fluorine and R_4 is selected from the group consisting of mesyl and tosyl.

3,047,595
12α-HALO-16α-HYDROXY STEROIDS OF THE PREGNENE SERIES

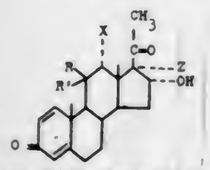
Josef Fried, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 14, 1958, Ser. No. 728,051
7 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of steroids of the general formulae



and



wherein R is hydrogen, R' is β-hydroxy and together R and R' is keto, X is a halogen of atomic number less than 53, and Z is selected from the group consisting of hydrogen and hydroxy.

3,047,596
6α-HALOGEN-9α-HALOGEN-$\Delta^{1,4}$-PREGNADIENE-3-ONE COMPOUNDS

Dale R. Hoff, Cranford, and Joyce M. Korntved, Metuchen, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 17, 1959, Ser. No. 853,451
11 Claims. (Cl. 260—397.45)

1. 9α - fluoro - 16α - methyl - $\Delta^{1,3,5}$ - pregnatriene-3,17α,21-triol-11,20-dione-3,17α,21-triacetate.

3. Process for the preparation of 9α-fluoro-16α-methyl-$\Delta^{1,3,5}$-pregnatriene-3,17α,21-triol-11,20-dione 3,17α,21-triacetate by heating 9α-fluoro-16α-methyl-$\Delta^{1,4}$-pregnadiene-17α,21-diol-3,11,20-trione 21-acetate with p-toluenesulfonic acid monohydrate and acetic anhydride at a temperature of about 90–100° C. for several hours.

3,047,597
PURIFICATION OF PHOSPHATIDES

Hermann Pardun, Cleves, Germany, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 9, 1960, Ser. No. 27,527
Claims priority, application Great Britain May 12, 1959
6 Claims. (Cl. 260—403)

1. Process for obtaining an improved phosphatide product from crude vegetable lecithin, which comprises subjecting the crude lecithtin to the action of two liquids in admixture,

one being a solvent for the phosphatide, selected from the class consisting of cyclohexane, saturated aliphatic hydrocarbons containing 5 to 7 carbon atoms, and chlorinated aliphatic hydrocarbons containing up to 2 carbon atoms and boiling below 100° C.,

and the other a non-solvent for the phosphatide, selected from the class consisting of acetone, methyl acetate, ethyl acetate, methyl formate and ethyl formate,

said solvent and non-solvent being present in the mixture in such proportions that two liquid phases are formed during the treatment, the solvent phase containing most of the phosphatide, the said proportions lying between 2 and 6 parts by volume of non-solvent to 1 of solvent and the weight ratio of solvent plus non-solvent to crude lecithin being between 1.5:1 and 10:1,

separating the two phases and recovering the improved phosphatide from the solvent phase by removal of the solvent therefrom.

3,047,598
VITAMIN A ESTER COMPOSITIONS

William E. Stieg, Uncasville, Conn., and Axel T. Nielsen, Skaneateles, N.Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Original application Aug. 30, 1957, Ser. No. 681,182, now Patent No. 2,971,966, dated Feb. 14, 1961. Divided and this application Dec. 23, 1960, Ser. No. 77,800
3 Claims. (Cl. 260—410)

1. A stabilized vitamin A composition consisting of a vitamin A ester of an aliphatic hydrocarbon carboxylic acid having from about ten to about twenty-two carbon atoms and from 0.2% to 2.0% by weight of a foodgrade antioxidant selected from the group consisting of alkylated phenols and alkylated polyhydric phenols wherein the alkyl group has between about 3 and 6 carbon atoms.

3,047,599
PROCESS FOR THE PRODUCTION OF MIXTURES OF ISOMERIC ALIPHATIC OR CYCLOALIPHATIC CARBOXYLIC ACIDS HAVING MOLECULAR SIZES OF FROM C_5 TO C_{10}

Karl Büchner, Oberhausen-Sterkrade, and Hans Tummes, Oberhausen-Sterkrade-Nord, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

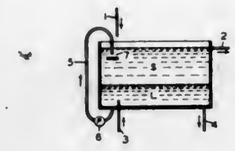
No Drawing. Filed Dec. 17, 1959, Ser. No. 860,094
Claims priority, application Germany Dec. 22, 1958
19 Claims. (Cl. 260—413)

1. In a process for the production of mixtures of isomeric carboxylic acids of C_5 to C_{10} molecular size by subjecting an olefin selected from the group consisting of aliphatic olefins of C_4 to C_9 molecular size and cycloaliphatic olefins of C_4 to C_9 molecular size to a catalytic addition of carbon monoxide and hydrogen and thereafter treating the resultant mixture of aldehydes of C_5 to C_{10} molecular size in the liquid phase with oxygen-containing gases, the improvement which comprises passing an at least partially purified aldehyde synthesis product in the form of a thin film into a reaction zone under conditions whereby the surface area of said aldehyde is substantially increased, passing an oxygen-containing gas in contact with said thin film of aldehyde, said contacting being effected in the absence of any oxidation catalyst and at a temperature of between about 65 and 110° C. and recovering the isomeric mixture of carboxylic acids of C_5 to C_{10} molecular size formed.

3,047,600
SOAP

Arne Finsberg, Oslo, Norway, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

Filed Oct. 14, 1957, Ser. No. 690,127
Claims priority, application Great Britain Oct. 19, 1956
18 Claims. (Cl. 260—419)



1. A process for washing soap in which unwashed soap is mixed with fresh lye, the mixture of soap and lye is continuously supplied to a vessel, the lye is separated from the soap and separated soap and lye are continuously removed from the vessel, a portion of the separated lye continuously removed from the vessel being intimately mixed with the mixture of unwashed soap and fresh lye continuously supplied to the vessel, said portion of separated lye being at least equal in weight to the quantity of fresh lye mixed with the unwashed soap.

3,047,601
SEPARATION OF THORIUM FROM RARE EARTH VALUES IN AQUEOUS ACIDIC SOLUTION BY SOLVENT EXTRACTION WITH AN ALKYL PHOSPHATE-OXYGEN CONTAINING ORGANIC DILUENT

Oliver Johnson, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Oct. 18, 1950, Ser. No. 190,867
2 Claims. (Cl. 260—429.1)

1. A process for separating thorium values from rare earth metal values contained in aqueous solutions, comprising providing a mineral acid content of from 3 to 7 N in said solution, mixing from 10 to 25% by volume of tributyl phosphate and from 90 to 75% by volume of dibutyl ether, contacting the aqueous solution with the mixture obtained, and separating an aqueous phase containing said rare earth metal values from a solvent extract phase containing said thorium values.

3,047,602
BASIC ALUMINUM SALTS OF ACYLAMINO-ALIPHATIC MONO- AND POLYCARBOXYLIC ACIDS AND A PROCESS FOR PREPARING SAME

Remsen Ten Eyck Schenck, Bangor, Pa., assignor to Keystone Chemurgic Corporation, Bethlehem, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 2, 1956, Ser. No. 613,388
10 Claims. (Cl. 260—448)

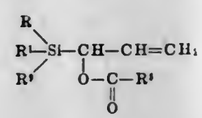
6. In a process for preparing dihydroxy aluminum salts of aliphatic hydroxy- and acylamino- mono- and polycarboxylic acids having an even number of carbon atoms in the range of 2 to 6 inclusive, containing one atom of aluminum for each free carboxylic group of the corresponding carboxylic acid, the steps of heating freshly precipitated aluminum hydroxide with an aqueous solution of a carboxylic acid selected from the group consisting of aliphatic hydroxy carboxylic acids and aliphatic acylamino carboxylic acids, said hydroxy carboxylic acids containing not more than one hydroxyl group per carboxylic group, and said acylamino carboxylic acids containing not more than one acylamino group per carboxyl group while stirring, then boiling the reaction mixture.

3,047,603
ALLYLIC ESTERS AND THE PRODUCTION THEREOF

George Sosnovsky, Chicago, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a not-for-profit corporation of Illinois

No Drawing. Filed July 1, 1960, Ser. No. 40,142
3 Claims. (Cl. 260—448.2)

1. An allylic ester of the formula



wherein R, R^1, R^2, and R^3 are selected from the group consisting of alkyl and aryl.

3,047,604
PROCESS FOR MANUFACTURE OF ETHYL SULFURIC ACID

Martin Leatherman, Bel Air, Md., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed Nov. 14, 1958, Ser. No. 774,068
1 Claim. (Cl. 260—459)
(Granted under Title 35, U.S. Code (1952), sec. 266)

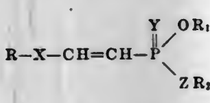
The method of preparing anhydrous ethyl sulfuric acid which comprises reacting ethyl alcohol and sulfuric acid, thereby obtaining ethyl sulfuric acid and water as products of the said reaction, adding anhydrous sodium sulfate in the form of a finely divided powder, such that about 22% of said powder is held back by a 325 mesh screen, the balance of said powder passing said screen and in a concentration of at least one mole of sulfate for every ten moles of water formed and reducing the temperature of the reaction mixture to below about 32.38° C., the temperature at which the decahydrate of sodium sulfate is formed, and separating the hydrated sodium sulfate from the reaction mixture.

3,047,605
PHOSPHONIC ACID ESTERS AND THEIR PRODUCTION

Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed May 20, 1958, Ser. No. 736,465
Claims priority, application Germany June 5, 1957
11 Claims. (Cl. 260—461)

1. A phosphonic acid ester of the following formula



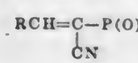
in which R and R_1 stand for lower alkyl radicals up to 4 carbon atoms, R_2 stands for a member selected from the group consisting of lower alkyl mercapto substituted lower alkyl, lower dialkyl amino substituted lower alkyl, lower carbalkoxy substituted lower alkyl, cyano substituted lower alkyl, chlorine substituted lower alkyl, phenyl substituted lower alkyl, chlorophenyl substituted lower alkyl, phenyl mercapto substituted lower alkyl, chlorophenyl mercapto substituted lower alkyl, cyclohexyl, phenyl, chloro substituted phenyl, nitro substituted phenyl, lower alkyl mercapto substituted phenyl, lower alkyl substituted phenyl, and chromanyl, and X, Y and Z stand for a chalcogen which has an atomic weight from 16 to 33, at least one of the chalcogens Y and Z being sulfur.

3,047,606
DIALKYL 1-CYANOVINYLPHOSPHONATES, THEIR PREPARATION, AND POLYMERS AND COPOLYMERS THEREOF

William S. Wadsworth, Jr., Elkins Park, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Dec. 1, 1958, Ser. No. 777,231
3 Claims. (Cl. 260—461)

1. A process for preparing a compound of the formula



wherein R is a member of the class consisting of an alkyl group of one to four carbon atoms, a C_6H_5 group, and a $C_6H_5CH{=}CH$ group, and R^1 is an alkyl group of one to four carbon atoms, which comprises reacting together, while in intimate contact with a basic catalyst, an aldehyde, RCHO, and a compound of the formula

$$CH_2(CN)P(O)(OR^1)_2$$

wherein R and R', respectively, are as defined above.

3,047,607
BORON CONTAINING PHOSPHORUS ESTERS AND PROCESS FOR PREPARATION

Helen I. Thayer, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed June 11, 1959, Ser. No. 819,569
17 Claims. (Cl. 260—461)

1. A process comprising reacting at least one member selected from the group consisting of partially esterified orthophosphoric acid esters and the thio analogues thereof that contain 1 to 2 organic substituents per molecule, at least one of which is a hydrocarbon radical containing 5 to 22 carbon atoms and the other of which, when present, is a hydrocarbon radical containing 1 to 22 carbon atoms, each of said hydrocarbon radicals being a member selected from the group consisting of alkyl, cycloalkyl, and alkenyl radicals and monovalent mono- and dinuclear aromatic radicals, with a borylating agent selected from the group consisting of boric acid, boric oxide and an anhydride of boric oxide and an aliphatic monocarboxylic acid, in the range of about 0.5 to about 6 moles of phosphoric acid ester per mole of borylating agent under conditions conducive to anhydride formation between the borylating agent and the phosphoric acid ester.

3,047,608
PHOSPHITES

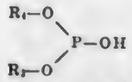
Lester Friedman, Whitestone, N.Y., and Henry Gould, West Orange, N.J., assignors to Weston Chemical Corporation, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 15, 1960, Ser. No. 56,129
24 Claims. (Cl. 260—461)

1. A process comprising transesterifying an aromatic phosphite having the formula



wherein R_1, R_2 and R_3 are selected from the group consisting of phenyl, lower alkyl phenyl and halophenyl by liberation of the corresponding phenol by reaction with an alcohol from the group consisting of alkanols, 1,2-alkanediols, 1,3-alkanediols, polyethylene glycols, polypropylene glycols, thiodiglycol, sulfonyl diglycol pentaerythritol, mono lower alkyl ethers of ethylene glycol, phenyl and lower alkyl phenyl ethers of ethylene glycol, mono lower alkyl ethers of polyethylene glycol and tetrahydrofurfuryl alcohol and initiating said transesterification in the presence of a secondary phosphite having the formula



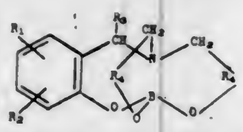
wherein R_4 and R_5 are selected from the group consisting of an alkyl group having up to 18 carbon atoms, cyclohexyl, phenyl, lower alkylphenyl and halophenyl as a catalyst.

3,047,609
BENZAZABOROXANES AND THEIR PREPARATION

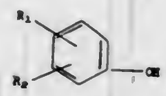
Ronald Swidler, Pasadena, Calif., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Oct. 14, 1960, Ser. No. 62,533
29 Claims. (Cl. 260—462)

1. A method for the preparation of benzazaboroxanes of the formula:



which comprises reacting a compound (A) of the formula



wherein R_1 taken individually is selected from the group consisting of hydrogen, hydroxy, and alkyl groups, R_2 taken individually is selected from the group consisting of hydrogen, halogen, hydroxyl, alkyl, alkoxy, haloalkyl, aryl, haloaryl, carboxyl, p-hydroxydialkylbenzyl and R_5CONH— groups wherein R_5 is an alkyl group, R_1 and R_2 taken collectively with the benzene ring to which they are joined form a naphthalene group, with (B) an aldehyde, and (C) an alkanolamine, and (D) a boron-containing compound, said aldehyde having the formula:

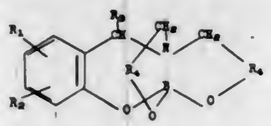
$$R_3CHO$$

wherein R_3 is selected from the group consisting of hydrogen and alkyl groups, said alkanolamine having the formula:

$$NH(CH_2R_4OH)_2$$

wherein R_4 is selected from the group consisting of $-CH_2-$, $-CH_2-CH_2-$, and $CH_3-CH<$ groups, said boron-containing compound being selected from the group consisting of boric acid and trialkyl borates of the formula $(R_6O)_3B$ wherein R_6 is an alkyl group, said alkyl group of the alkyl and alkyl-containing substituents of R_1, R_2, R_3, R_5 and R_6 having from 1 to 5 carbon atoms, said aryl group of the aryl and aryl-containing substituents of R_2 having not more than 8 carbon atoms, and said halogen group of the halogen and halogen-containing substituents of R_2 being selected from the group consisting of chlorine, bromine and iodine.

17. Benzazaboroxanes of the formula:



wherein R_1 taken individually is selected from the group consisting of hydrogen, hydroxy and alkyl groups, R_2 taken individually is selected from the group consisting of hydrogen, halogen, hydroxy, alkyl, alkoxy, haloalkyl, aryl, haloaryl, carboxyl, p-hydroxydialkylbenzyl and R_5CONH— groups wherein R_5 is an alkyl group, R_1 and R_2 taken collectively with the benzene ring to which they are joined form a naphthalene group, R_3 is selected from the group consisting of hydrogen and alkyl groups, and R_4 is selected from the group consisting of $-CH_2-$, $-CH_2-CH_2-$ and $CH_3-CH<$ groups, said alkyl group of the alkyl and alkyl-containing substituents of R_1, R_2 R_3, R_4 and R_5 having from 1 to 5 carbon atoms, said aryl group of the aryl and aryl-containing substituents of R_2 having not more than 8 carbon atoms and said halogen group of the halogen and halogen-containing substituents of R_2 being selected from the group consisting of chlorine, bromine, and iodine.

3,047,610
PROCESS FOR PREPARING HIGHLY FLUORINATED ACID CHLORIDES AND NOVEL ESTERS USEFUL THEREIN

Neal O. Brace and William B. McCormack, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 9, 1958, Ser. No. 766,185
18 Claims. (Cl. 260—463)

8. An ester of the formula



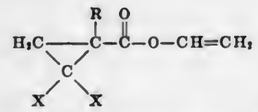
wherein R^1 is a radical of the group consisting of $-O-CCl_2-(CF_2)_mX$ and $-(CF_2)_mX$, each X is a member of the group consisting of Cl and F, and each of *n* and *m* represents an integer of from 2 to 22.

3,047,611
VINYL 2,2-DIHALOCYCLOPROPYL CARBOXYLATES

Carl Moore and William F. Tousignant, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 3, 1961, Ser. No. 142,503
2 Claims. (Cl. 260—468)

1. A compound of the formula:



wherein R is a member of the group consisting of hydrogen and the methyl radical and X is a member of the group consisting of bromine and chlorine.

3,047,612
ESTER PREPARATION BY OXIDATION OF HYDROCARBONS

Robert E. Pennington and Louis T. Yule, Baytown, and Charles F. Snyder, Houston, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Nov. 7, 1958, Ser. No. 772,500
6 Claims. (Cl. 260—475)

1. In a method of preparing a product aromatic compound containing at least one methyl ester group by reacting in the liquid phase a polyalkyl aromatic hydrocarbon having from 1 to 4 carbon atoms in each alkyl substituent with methanol and molecular oxygen in a reaction zone in the presence of a catalytically effective amount of a polyvalent heavy metal containing oxidation catalyst, the improvement which comprises conducting the reaction at a temperature and pressure correlated to maintain said methanol preferentially in the liquid phase, whereby oxidative degradation of methanol is minimized.

3,047,613
CONTINUOUS PROCESS FOR OXIDATION OF ALKYL BENZENES

Robert E. Pennington, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Mar. 29, 1960, Ser. No. 18,406
7 Claims. (Cl. 260—475)

1. In a continuous method for the production of a carbomethoxy benzene by the catalytic liquid phase reaction of an alkyl benzene having from 1 to 4 carbon atoms per alkyl substituent with methanol and oxygen in a reaction zone under oxidation-esterification conditions, wherein a vapor product is continuously withdrawn from said reaction zone and cooled to form a condensate stream, and a liquid product is withdrawn from said zone, flashed and cooled to produce a vapor fraction stream, the improvement which comprises adding to at least one of said streams both a water stream amounting to about 5% to about 50% of the weight of said stream and an alkyl benzene stream amounting to about 5% to about 25% of the weight of said stream, whereby said stream separates into an aqueous and a supernatant alkyl benzene phase, withdrawing said aqueous phase, and recycling said alkyl benzene phase to said reaction zone.

3,047,614
CONDENSATE RECOVERY IN OXIDATION OF ALKYL BENZENES

Robert E. Pennington and James K. Nickerson, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed July 5, 1960, Ser. No. 40,775
8 Claims. (Cl. 260—475)

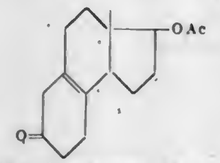
1. In a continuous method for the production of a carbomethoxy benzene by the catalytic liquid phase oxidation of a C_1 to C_4 alkyl benzene in a reaction zone with molecular oxygen in the presence of methanol and wherein reaction products, including an off gas stream and a liquid product stream, are continuously withdrawn from said reaction zone, said off gas stream and said liquid reaction mixture stream comprising normally liquid components including water of reaction, unreacted methanol, methanol oxidation products, unreacted alkyl benzene, and alkyl benzene conversion products, and wherein at least a portion of said reaction products are recovered as a condensate fraction comprising water of reaction, unreacted methanol, methanol oxidation products, unreacted alkyl benzene and alkyl benzene conversion products, by continuously charging said condensate fraction to a first separation zone, continuously charging additional water to said separation zone in an amount sufficient to cause separation of said condensate fraction and said added water into a lower phase comprising water, methanol and methanol oxidation products and a supernatant phase comprising unreacted alkyl benzene and alkyl benzene conversion products, the improvement which comprises fractionating said lower water phase into a heavy water fraction and a light overhead fraction comprising methanol and methanol oxidation products, continuously admixing said heavy water fraction with said supernatant phase in a second separation zone wherein there is formed an alkyl benzene phase comprising unreacted alkyl benzene and alkyl benzene conversion products and a water phase substantially free of alkyl benzene conversion products, and recycling said alkyl benzene phase to said reaction zone.

3,047,615
NOVEL CYCLOPENTANO-NAPHTHALENE COMPOUNDS

Gérard Nominé, Noisy-le-Sec, France, assignor, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,111
Claims priority, application France Feb. 12, 1959
3 Claims. (Cl. 260—476)

1. The $\Delta^{9(10)}$-3-methyl - 7 - oxo-3,4-[3'-acyloxy-cyclopentano - (2',1')] - octahydronaphthalene compounds of the formula



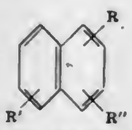
wherein Ac and acyl represent the acyl radical of an organic carboxylic acid having 1 to 12 carbon atoms selected from the group consisting of alkanoic acids, cycloalkyl alkanoic acids, phenyl alkanoic acids, cycloalkanoic acids, cycloalkanedioic acids and benzene carboxylic acids.

3,047,616
LIQUID PHASE OXIDATION OF ALKYL NAPHTHALENES TO ALDEHYDES AND ESTERS

Edgar A. Blair, Drexel Hill, John J. Melchiore, Wallingford, and Ivor W. Mills, Glenolden, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,610
17 Claims. (Cl. 260—488)

12. Method of producing non-acidic aromatic products selected from the group consisting of naphthaldehydes and alkanoic acid esters of hydroxymethyl-substituted naphthalene hydrocarbons which comprises: contacting in liquid phase an aromatic compound having the formula



where R is an alkyl group having 1 to 6 carbon atoms per molecule and R' and R'' are each selected from the group consisting of hydrogen, alkyl group having 1 to 6 carbon atoms per molecule, and carboxyl; with oxygen at a rate of from 0.05 to 2.5 liters per minute per 100 grams of said compound, in the presence of from 0.5 to 60 weight percent of heavy metal oxidation catalyst calculated as cobaltous acetate tetrahydrate and 7.5 to 15 parts per part said compound of alkanoic acid solvent, at a temperature between 70° C. and 125° C.

3,047,617
ALKANOIC ACID ESTERS OF 5-HYDROXYTETRACYCLINE AND PROCESS FOR PREPARATION

Robert K. Blackwood, Gales Ferry, and Charles R. Stephens, Jr., Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 18, 1959, Ser. No. 813,652
14 Claims. (Cl. 260—490)

1. A compound selected from the group consisting of 10,12a-(O,O-diacyl)-5-hydroxytetracycline, the acid addition salts, the metal salts, and the metal salt complexes thereof, each of said acyl groups being of the formula RCO— wherein R is an alkyl group having from 1 to 5 carbon atoms.

5. A process for the preparation of 10,12a-(O,O-diacyl)-5-hydroxytetracycline which comprises treating a mixture of one molecular proportion of amphoteric 5-hydroxytetracycline and from about 2 to 8 molecular proportions of pyridine with from about 2 to 8 molecular proportions of an alkyl carboxylic acid anhydride having the formula $(RCO)_2O$ wherein R is an alkyl group having from 1 to 5 carbon atoms at a temperature of from about 15 to 40° C.

8. The process which comprises treating 10,12a-(O,O-diacyl)-5-hydroxytetracycline with an aqueous solution containing an approximately equimolecular proportion of an alkali metal hydroxide and approximately a ½ molar proportion of a water soluble magnesium salt at a temperature of about 15 to 40° C. and recovering resulting 5,12a-diester of 5-hydroxytetracycline, said acyl groups being of the formula RCO— wherein R in an alkyl group having 1 to 5 carbon atoms.

10. The process which comprises treating 10,12a-(O,O-diacyl)-5-hydroxytetracycline with at least a molar equivalent of aqueous ammonia at a temperature of from about 15 to 40° C. for a period of time just sufficient to selectively hydrolyze said 10-O-acyl group, said O-acyl groups being of the formula RCO— wherein R in an alkyl group having from 1 to 5 carbon atoms.

3,047,618
PROCESS FOR CONDENSING ALDEHYDES TO ESTERS

Charles M. Selwitz, Pitcairn, and Robert A. Walde, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed May 18, 1960, Ser. No. 29,781
12 Claims. (Cl. 260—494)

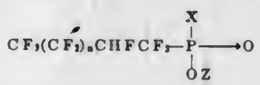
1. A process for condensing aldehydes in a mixture containing a hydrocarbon aldehyde selected from the group consisting of saturated aliphatic aldehydes and aromatic aldehydes and a hydrocarbon ketone which comprises condensing such aldehydes in the presence of a catalyst obtained by reacting an aluminum trialkyl with a hydrocarbon aldehyde selected from the group consisting of saturated aliphatic aldehydes and aromatic aldehydes, said catalyst having been obtained at a temperature up to about 100° C. and a pressure up to about 1000 pounds per square inch gauge.

3,047,619
BETA-HYDROPERFLUOROALKYL COMPOUNDS OF PHOSPHORUS

Neal O. Brace, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,552
5 Claims. (Cl. 260—500)

1. A compound of the formula



wherein *n* is an integer of from 2 to 5, X represents a member of the group consisting of H and OZ, and Z is a member of the group consisting of H, Na and K.

3,047,620
PRODUCTION OF TEREPHTHALIC ACID FROM TOLUENE

Curtis G. Christian, Anaheim, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Apr. 5, 1954, Ser. No. 421,202
6 Claims. (Cl. 260—522)

1. A process for producing terephthalic acid from toluene which comprises subjecting toluene to alkylation with propylene in the presence of an alkylation catalyst consisting essentially of phosphorous pentoxide, continuing said alkylation at between about 20° and 110° C. until between about 40% and 90% of said toluence has been alkylated and between about 1.3 and 2.0 moles of propylene per mole of toluene converted has been absorbed, and then terminating the alkylation, thereby forming a mixture of toluene, cymenes and 1,2,4-di-isopropyl toluenes, removing unreacted toluene from the reaction mixture, subjecting the remaining residue to oxidation to convert substantially all of the alkyl side-chains to carboxyl groups thereby forming a mixture comprising isophthalic acid, terephthalic acid and trimellitic acid, and thereafter subjecting said trimellitic acid to monodecarboxylation by heating at a temperature between about 250° and 400° C. in the presence of water thereby forming further quantities of isophthalic acid and terephthalic acid, combining the isophthalic acid and terephthalic acid mixtures resulting from said oxidation step and said decarboxylation step, and recovering terephthalic acid therefrom.

3,047,621
PURIFICATION OF PHTHALIC ACIDS

Cilton W. Tate, Decatur, Ala., assignor, by mesne assignments, to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,104
6 Claims. (Cl. 260—525)

1. A process for purifying crude phthalic acid obtained by the oxidation of a dialkylbenzene in the liquid phase by means of an oxygen-containing gas which comprises the steps of subjecting said crude phthalic acid to contact in an alkaline solution with at least 3 percent on the weight of said crude phthalic acid of an agent selected from the group consisting of sodium and potassium dichromates and sodium and potassium permanganates for a period of from about 30 to 180 minutes and at a temperature of from about 0° C. to 100° C., thereafter treating said alkaline solution with activated carbon, forming and precipitating phthalic acid by adding the thus-treated solution to a second acid having an ionization constant greater than that of the phthalic acid, separating the precipitated acid therefrom, and then washing the thus-separated phthalic acid with water.

3,047,622
PRODUCTION OF CARBOXYLIC ACIDS

George A. Kurhajec, Orinda, Dwight L. Johnston, Concord, and Kenneth E. Furman, Richmond, Calif., assignors to Shell Oil Company, a corporation of Delaware

Filed Sept. 16, 1958, Ser. No. 761,376
4 Claims. (Cl. 260—533)

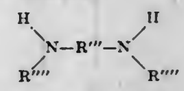
1. The process for the production of trimethylacetic acid which comprises admixing isobutylene with dilute aqueous sulfuric acid having a sulfuric acid content of from about 60 to about 80% by weight, combining the resulting admixture with sufficient concentrated sulfuric acid under carbon monoxide pressure to obtain a fortified admixture of isobutylene with sulfuric acid of at least 90% concentration, reacting said fortified admixture with carbon monoxide at a temperature of from about —10 to about 100° C., and a carbon monoxide pressure of from about atmospheric to about 1500 p.s.i.g., reacting the resulting reaction mixture with water, thereby forming a dilute reaction mixture comprising trimethylacetic acid and dilute aqueous sulfuric acid, and separating trimethylacetic acid from said dilute reaction mixture.

3,047,623
METHOD OF PRODUCING BORON-CONTAINING COMPOUNDS

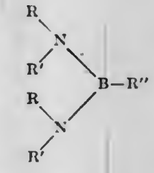
John E. Milks, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 15, 1960, Ser. No. 56,122
8 Claims. (Cl. 260—551)

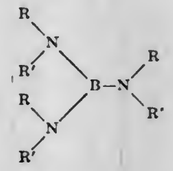
1. The method which comprises effecting a transamination reaction, at a temperature within the range of from 20° C. to 200° C., between (1) a hydrocarbon diamine represented by the formula



wherein R''' represents a divalent hydrocarbon containing from 2 to 26 carbon atoms and wherein any unsaturation between adjacent carbon atoms is solely double bonded, and R'''' represents a monovalent hydrocarbon containing from 1 to 18 carbon atoms and wherein any unsaturation between adjacent carbon atoms is solely double-bonded and (2) a polyaminoborane selected from the group consisting of diaminoboranes represented by the formula



and triaminoboranes represented by the formula



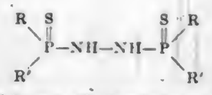
in which formulas R represents lower alkyl, R' represents a member of the group consisting of hydrogen and lower alkyl, and R'' represents a monovalent hydrocarbon containing from 1 to 18 carbon atoms and wherein any unsaturation between adjacent carbon atoms is solely double-bonded, the hydrocarbon diamine of (1) and the polyaminoborane of (2) being employed in approximately equal molar proportions and being so selected that the alkyl amine evolved as a by-product of the reaction has a higher volatility than the hydrocarbon diamine reactant; and continuing the said reaction until all of the by-product alkyl amine has been evolved when the polyaminoborane is a diaminoborane of the above-defined kind and until from 2 to 3 moles of by-product alkyl amine have been evolved when the polyaminoborane is a triaminoborane of the above-defined kind, the resulting transamination product comprising a diazoboroline formed from the hydrocarbon diamine of (1)) and the polyaminoborane of (2).

3,047,624
ORGANIC COMPOUNDS CONTAINING PHOSPHORUS AND SULPHUR

Henry Tolkmith, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 30, 1959, Ser. No. 809,899
6 Claims. (Cl. 260—551)

1. 1,2 - bis[bis(dialkylamino)phosphinothioyl]hydrazines of the formula:



wherein R is a di-lower alkylamino group of the formula:



wherein R_1 is alkyl from 1 to 4 carbon atom and R_2 is alkyl from 1 to 4 carbon atoms; R' is a di-lower alkylamino group of the formula:



wherein R_1 is alkyl from 1 to 4 carbon atoms and R_2 is alkyl from 1 to 4 carbon atoms.

3,047,625
NEW N-ARYLSULFO-N'-ALKOXYUREAS

Walter Gauss, Koln-Stammheim, and Siegfried Petersen, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 19, 1960, Ser. No. 23,136
Claims priority, application Germany Apr. 23, 1959
6 Claims. (Cl. 260—553)

1. A compound selected from the group consisting of N-toluene-sulfo-N'-butoxy carbamide, N-benzene-sulfo-N'-n-butoxy carbamide, N-p-toluene-sulfo-N'-methoxy carbamide, N-p-chlorobenzene-sulfo-N'-n-butoxy carbamide, and N-p-toluene-sulfo-N'-ethyl-N'-ethoxy carbamide.

3,047,626
4-DESDIMETHYLAMINO-6-DEOXY-TETRACYCLINE DERIVATIVES

Charles R. Stephens, Jr., Niantic, and Lloyd H. Conover, Quaker Hill, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 24, 1959, Ser. No. 841,929
4 Claims. (Cl. 260—559)

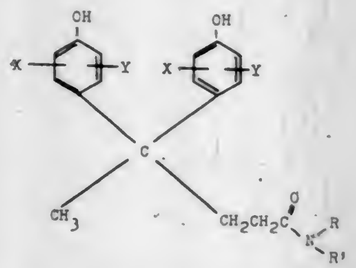
1. A compound selected from the group consisting of 4-desdimethylamino-6-deoxytetracycline, 4-desdimethylamino-6-deoxy-5-oxytetracycline, 4-desidimethyl-amino-6-deoxy-6-demethyltetracycline and alkali and alkaline earth metal salts thereof.

3,047,627
N-SUBSTITUTED-4,4-BIS-(4-HYDROXYPHENYL) PENTANOIC ACID AMIDES

Sylvan Owen Greenlee, West Lafayette, Ind., assignor to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,956
6 Claims. (Cl. 260—559)

1. As a composition of matter, the amide having the formula:



wherein X and Y are members of the group consisting of hydrogen and lower alkyl; R is a member selected from a group consisting of hydrogen, unsaturated aliphatic hydrocarbon radical of from 10–36 carbon atoms and saturated aliphatic hydrocarbon radical of from 10–36 carbon atoms; and R' is a member selected from a group consisting of unsaturated aliphatic radical of from 10–36 carbon atoms and saturated aliphatic radical of from 10–36 carbon atoms.

3,047,628
BENZYLAMINE DERIVATIVES

Moses Wolf Goldberg, Upper Montclair, and Sidney Teitel, Nutley, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Original application Feb. 19, 1957, Ser. No. 641,018, now Patent No. 2,879,293, dated Mar. 24, 1959. Divided and this application Jan. 16, 1959, Ser. No. 787,115
6 Claims. (Cl. 260—570.7)

1. A member of the group consisting of 2-(dilower alkyl-amino-lower alkoxy)benzylamine, 4-(dilower alkyl-amino-lower alkoxy)benzylamine and acid addition salts thereof with pharmaceutically acceptable acids.

3,047,629
PROCESS OF PREPARING CYCLOHEXANONE AND CYCLOHEXANOL

Johannes W. M. Steeman, Beek, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Jan. 22, 1960, Ser. No. 4,017
5 Claims. (Cl. 260—586)

1. In a process for preparing cyclohexanone and cyclohexanol by oxidizing cyclohexane with a gas-containing oxygen whereby an oil containing cyclohexanone, cyclohexanol and unconverted cyclohexane is obtained, unconverted cyclohexane is thereafter essentially completely removed from said oil and the oil is then heated at a temperature of 70–96° C. with an aqueous alkaline solution after which a mixture of cyclohexanone and cyclohexanol is separated from the oil by steam distillation, the improvement wherein the treatment with the alkaline aqueous solution is carried out in two steps, first with an aqueous solution of a carbonate selected from the group consisting of sodium and potassium carbonate and thereafter, after the greater part of the resulting carbon dioxide has escaped from the oil, with an aqueous solution of a hydroxide selected from the group consisting of potassium and sodium hydroxides, in amount such that the hydroxide concentration in the water layer resulting from said treatment is from 0.05 to 2 milligram equivalents per gram.

3,047,630
PRODUCTION OF CONDENSATION PRODUCTS OF ALIPHATIC ALCOHOLS

Leslie Ernest Addy, Dollar, Scotland, assignor to British Hydrocarbon Chemicals Limited, London, England, a British company

No Drawing. Filed June 15, 1959, Ser. No. 820,132
Claims priority, application Great Britain July 7, 1958
8 Claims. (Cl. 260—593)

8. The process for the production of higher ketone condensation products of lower monohydric secondary aliphatic alcohols, which comprises contacting a lower monohydric secondary aliphatic alcohol selected from the group consisting of isopropanol and secondary butanol in the vapor phase at an elevated temperature in the range of 100 to 300° C. with a nickel catalyst supported on kieselguhr, the catalyst having been prepared by impregnating nickel oxide on kieselguhr with an aqueous solution of an alkali metal compound selected from the group consisting of the oxides and hydroxides of the alkali metals and their carbonates, bicarbonates, acetates and mixtures thereof, and then heating with hydrogen

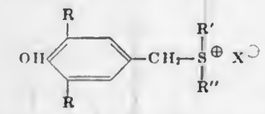
at a temperature which effects reduction of nickel oxide, and isolating the thus formed higher ketone condensation product.

3,047,631
DIALKYLHYDROXYBENZYL SULFONIUM SALTS

Albert L. Rocklin, Walnut Creek, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 8, 1960, Ser. No. 74,464
5 Claims. (Cl. 260—607)

1. As a new composition of matter, a 3,5-dialkyl-4-hydroxybenzyl sulfonium halide having the formula:



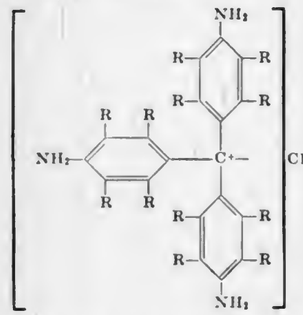
in which R represents an alkyl group containing from 3 to 8 carbon atoms and is branched on each alpha carbon atom thereof, R' and R'' each represents an unsubstituted alkyl radical of 1 to 18 carbon atoms and X represents a halide anion selected from the group consisting of chloride, bromide and iodide ions.

3,047,632
PROCESS FOR PREPARING TRIS-(4-METHYL-MERCAPTOPHENYL)-CARBINOL COMPOUNDS

Ludwig Harbort and Hans-Jürgen Rahn, Hannover, Germany, assignors to Günther Wagner, Hannover, Germany

No Drawing. Filed Aug. 28, 1961, Ser. No. 134,136
Claims priority, application Germany Aug. 29, 1960
9 Claims. (Cl. 260—609)

1. A process of preparing tris-(4-methylmercaptophenyl)-carbinol compounds and its derivatives which comprises subjecting to diazotization a carbenium chloride compound of the formula



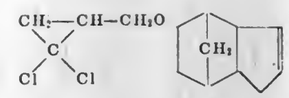
wherein each R stands for a member selected from the group consisting of hydrogen, halogen and alkyl, reacting the diazotization product with a xanthate to obtain the corresponding xanthic acid ester, saponifying the ester to the corresponding mercaptide and methylating the mercaptide.

3,047,633
ETHERS OF DICHLOROCYCLOPROPANE

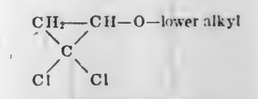
Herman A. Bruson, North Haven, and Thomas P. O'Day, Hamden, Conn., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Original application July 1, 1957, Ser. No. 668,850, now Patent No. 3,012,079, dated Dec. 5, 1961. Divided and this application June 17, 1960, Ser. No. 40,990
4 Claims. (Cl. 260—611)

1. A substituted dichlorocyclopropane selected from the group consisting of:



and



3,047,634
PRODUCTION OF ISOZEAXANTHIN DIALKYL ETHERS

Otto Isler, Basel, Rudolf Rüegg, Bottmingen, and Gabriel Saucy, Riehen, Switzerland, assignors to Hoffmann-La Roche, Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,238
Claims priority, application Switzerland Nov. 8, 1957
6 Claims. (Cl. 260—611)

1. 15,15'-dehydro-isozeaxanthin di-lower alkyl ether.

3,047,635
PREPARATION OF POLYHYDRIC ALCOHOLS

Leo Kasehagen, West Chester, Pa., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 13, 1959, Ser. No. 812,824
6 Claims. (Cl. 260—635)

1. The process of isomerizing an acyclic polyhydric alcohol containing from 4 to 6 carbon atoms and one hydroxyl group attached directly to each carbon atom which comprises preparing a solution of said polyhydric alcohol in a solvent selected from the group consisting of water, aliphatic monohydric alcohols containing from 1 to 4 carbon atoms, and glycols containing from 2 to 4 carbon atoms, heating the resulting solution in the presence of a hydrogenation catalyst selected from the group consisting of supported nickel, supported cobalt and copper-chromium oxide catalysts at a temperature of from 160° C. to 200° C., under a hydrogen pressure of from 500 to 3000 pounds per square inch, for at least a half hour while maintaining the pH of the said solution in the range of from about 7 to about 11, discontinuing the said heating before any absorption of hydrogen has taken place, cooling the reaction mixture and separating the resulting solution of isomerized polyhydric alcohols from the hydrogenation catalyst.

3,047,636
HALOGENATED ORGANIC COMPOUNDS

Murray Hauptschein, Glenside, and Milton Braid, Philadelphia, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,440
4 Claims. (Cl. 260—653)

1. A method for preparing the iodide CF_2ClCCl_2I, comprising the step of reacting $CF_2{=}CCl_2$ with iodine monochloride at a temperature of from −20° C. to +15° C.

3,047,637
PREPARATION OF VINYLIDENE FLUORIDE

Franciszek Olstowski, Jones Creek, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

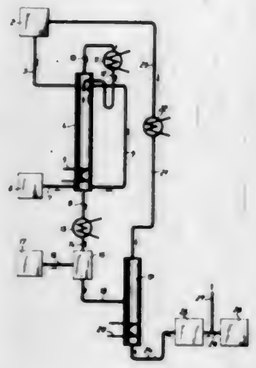
No Drawing. Filed Jan. 25, 1960, Ser. No. 4,225
5 Claims. (Cl. 260—653.3)

1. A process for preparing vinylidene fluoride which comprises contacting, at a temperature of from about 700° C. to about 1100° C., fluoroform with a hydrocarbon selected from the group consisting of methane, ethane, and ethylene, and separating vinylidene fluoride from the reaction mixture.

3,047,638
PROCESS FOR PREPARING NITRO COMPOUNDS OF CHLORO-SUBSTITUTED ETHYLENES

Wilhelm Vogt, Knapsack, near Koln, and Klaus Gehrmann, Bonn, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

Filed Jan. 12, 1960, Ser. No. 1,950
Claims priority, application Germany Jan. 16, 1959
11 Claims. (Cl. 260—644)



10. A process for preparing nitro compounds of chloro-substituted ethylenes which comprises reacting nitrogen dioxide with 1,2-dichloroethylene at temperatures within the range of about −20° C. to about +90° C. to form a reacting mixture consisting of nitro compounds of mono- and dichloroethylene, oxalic acid and some unreacted 1,2-dichloroethylene, cooling the mixture, separating crystallized oxalic acid from the mixture, and distilling off unreacted 1,2-dichloroethylene, whereby a mixture consisting of nitro compounds of mono- and dichloroethylene is obtained as residue of distillation.

3,047,639
MANUFACTURE OF CHLOROFLUOROPROPENES

William J. Cunningham, Rockaway, Richard F. Sweeney, Randolph Township, Morris County, and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 22, 1960, Ser. No. 16,633
8 Claims. (Cl. 260—653.3)

1. Process for making 3-chloropentafluoropropene-1 which comprises heating in a reaction zone a gaseous mixture of $CHClF_2$ and not less than about one molecular proportion of $CClF{=}CF_2$ to temperature substantially in the range of 625–750° C., and recovering from the reaction zone exit monochloropentafluoropropene containing a dominant weight proportion of 3-chloropentafluoropropene-1.

3,047,640
PRODUCTION OF FLUOROPROPENE

Richard F. Sweeney, Randolph Township, Morris County, and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 22, 1960, Ser. No. 16,630
7 Claims. (Cl. 260—653.4)

1. The process which comprises subjecting gaseous 3-chloropentafluoropropene-1 to the action of gaseous substantially anhydrous HF, in amount sufficient to react with a substantial quantity of said 3-chloropentafluoropropene-1, at elevated reactive temperature not in excess of about 450° C., and while in the presence of activated carbon catalyst, and recovering from the resulting reaction product material of the group consisting of hexafluoropropene and 1,1,1,2,3,3,3-heptafluoropropane.

3,047,641
PRODUCTION OF CHLOROFLUOROPROPANE

Ronald H. Neill, Montclair, and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 22, 1960, Ser. No. 16,629
3 Claims. (Cl. 260—653.7)

1. The process for making 2-chloroheptafluoropropane in a gas-phase reaction which process comprises subjecting vapor-phase 3-chloropentafluoropropene-1 to the action of substantially anhydrous HF, in amount sufficient to react with a substantial quantity of said 3-chloropentafluoropropene-1, while maintaining temperature substantially in the range of 475–625° C. and while in the presence of activated carbon catalyst, and recovering 2-chloroheptafluoropropane from the resulting reaction product.

3,047,642
HALOGENATION INITIATOR

Herbert Otto Wolf, Mill Creek Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

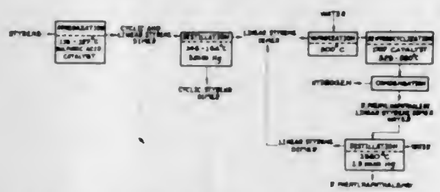
Filed Feb. 17, 1960, Ser. No. 9,289
4 Claims. (Cl. 260—653.8)

1. A process for the preparation of monochloro-1,1-difluoroethanes which comprises forming a solution of 0.2 to 0.9 mol of chlorine, 1.0 mol of 1,1-difluoroethane and, as the sole initiator for the reaction, 0.05 to 1.0 percent by weight of azo-bis-isobutyronitrile based on the weight of 1,1-difluoroethane, heating the resulting solution to a temperature of about 70 to 100° C. under a pressure of about 375 to 550 lbs./sq. in. gauge to initiate the reaction, continuing the reaction at temperatures of not over 450° C. and recovering the monochloro-1,1-difluoroethanes thereby obtained.

3,047,643
PREPARATION OF 2-PHENYLNAPHTHALENE

Ben B. Corson, Pittsburgh, Pa., and Henry Moe, Pullman, Wash., assignors to Koppers Company, Inc., a corporation of Delaware

Filed June 14, 1960, Ser. No. 36,055
9 Claims. (Cl. 260—668)



1. A process for the production of 2-phenylnaphthalene comprising dimerizing styrene in the presence of a catalyst to form a mixture of linear and cyclic styrene dimers, separating said linear styrene dimer from said mixture, vaporizing said linear styrene dimer with water to form a vapor mixture of said water and said linear styrene dimer, passing said vapor mixture over a metallic oxide dehydrogenation catalyst at a temperature of at least 500° C. and an LHSV of at least 0.2 to dehydrocyclize said linear styrene dimer to 2-phenylnaphthalene, condensing said dehydrocyclized vapor mixture, separating said 2-phenylnaphthalene and said styrene dimer therefrom and recycling said separated styrene dimer.

3,047,644
PROPYLENE POLYMERIZATION PROCESS

Charles N. Winnick, Great Neck, N.Y., assignor to Scientific Design Company, Inc., New York, N.Y., a corporation of Delaware

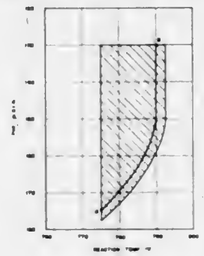
No Drawing. Filed Oct. 2, 1958, Ser. No. 764,760
9 Claims. (Cl. 260—683.15)

1. A process for the polymerization of propylene, comprising contacting propylene in the vapor phase in the presence of water with an acidic clay catalyst at polymerization conditions, the weight ratio of propylene to water being in the range of from approximately 2.5:1 to 30:1, said contacting being carried out at a temperature in the range of from about 550° to 1000° F. and at superatmospheric pressure up to about 250 p.s.i.g.

3,047,645
PROCESS FOR THE CATALYTIC HYDROISOMERIZATION OF CRUDE NORMAL-PENTANE

Norman L. Carr, Allison Park, Pa., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Dec. 7, 1959, Ser. No. 857,635
7 Claims. (Cl. 260—683.65)

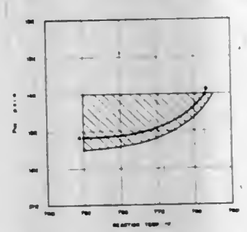


1. A process for isomerization of a sulfur-free hydrocarbon feed comprising n-pentane containing an appreciable amount of other C_4–C_7 hydrocarbon as impurities, not exceeding about 10% vol. which comprises contacting said hydrocarbon feed and hydrogen with a catalyst consisting essentially of 0.5–0.75% wt. palladium on silica-alumina, containing 70–90% silica, at a hydrogen partial pressure of 375–425 p.s.i.a., and a hydrocarbon partial pressure of about 130–175 p.s.i.a. and reaction temperature of about 775–790° F. lying within the shaded area of the drawing, said process being characterized by a reaction rate constant of about 8–12, which remains constant for periods of operation in excess of 100 hrs.

3,047,646
PROCESS FOR THE CATALYTIC HYDROISOMERIZATION OF CRUDE NORMAL-PENTANE

Norman L. Carr, Allison Park, Pa., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Dec. 7, 1959, Ser. No. 857,674
10 Claims. (Cl. 260—683.68)



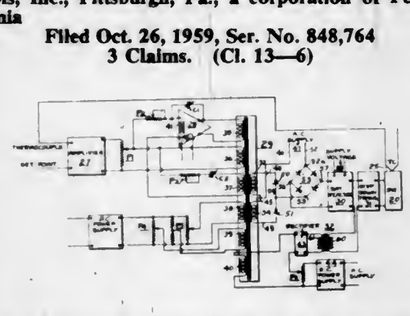
1. A process for the isomerization of a sulfur-free hydrocarbon feed comprising n-pentane, containing an appreciable amount of other C_4–C_7 hydrocarbons as impurities, but not exceeding about 10% vol., which comprises contacting said hydrocarbon feed and hydrogen with a catalyst consisting essentially of 0.50–0.75% wt. palladium on silica-alumina, containing 70–90% silica having 1–5% combined fluorine, at a hydrogen partial pressure of 425–475 p.s.i.a., at a hydrocarbon partial pressure of about 140–155 p.s.i.a., a reaction temperature of 750–785° F., lying within the shaded area of the drawing, said process being characterized by the reaction rate constant of about 17–22, which remains substantially constant for periods of operation in excess of 100 hrs.

ELECTRICAL

3,047,647
CONTROL SYSTEMS AND COMPONENTS THEREOF

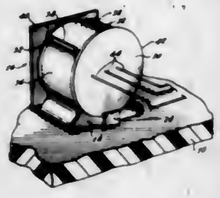
Robert E. Harkins, Orrville, Ohio, and Paul E. Straight, Pittsburgh, Pa., assignors to Hagan Chemicals & Controls, Inc., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 26, 1959, Ser. No. 848,764
3 Claims. (Cl. 13—6)



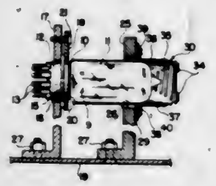
1. A system for regulating the heating of glass in a metal glass fiber forming die having glass forming orifices from which glass fibres issue and whose diameters are controlled by the temperature of the glass in the die, said system comprising means for passing electric current through the die, a controller for regulating the die current, a thermocouple-Wheatstone bridge circuit having the hot junction of the thermocouple in temperature sensing relation with the glass, said thermocouple-bridge circuit generating an E.M.F. proportional to the glass temperature, said bridge having means for establishing a temperature control set point E.M.F. whereby the bridge output is a function of the difference between said set point E.M.F. and the thermocouple E.M.F., electronic means for amplifying said E.M.F. difference, a magnetic amplifier, an output reactor for controlling the die heating current controller, said magnetic amplifier having an input winding responsive to said amplifier output, the output reactor having a saturable magnetic core structure having thereon power windings energizable by A.C. voltage and rectifier means in circuit with said windings whereby D.C. output is provided, and input control windings on said core structure, one of which is a reset winding connected to the output of the magnetic amplifier for controlling the magnetization of the core structure in accordance with the time integral of the difference between said set point and the thermocouple E.M.F.'s, another of said input windings magnetizing said core structure in accordance with the rate of change of the difference between said set point and thermocouple E.M.F.'s, and another of which input windings provides magnetization of said core structure to establish proportional band control to the die current controller, the die current controller being responsive to the output of said saturable controller to control the current in such manner as to hold the temperature error within predetermined limits of the set point temperature, said saturable controller being provided with a die current limit control winding, and means responsive to the magnitude of the die heating current for so energizing the die current limit winding that the output of the reactor limits the current output of the die current controller to a predetermined maximum value

3,047,648
TRANSISTOR CLIP, HEAT SINK TYPE
Allan Q. Mowatt, Lexington, Mass., assignor, by mesne assignments, to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed May 4, 1959, Ser. No. 810,889
2 Claims. (Cl. 174—16)



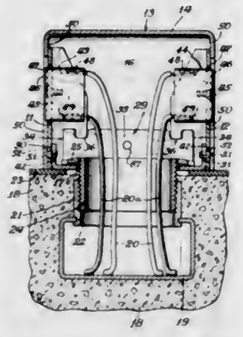
2. In combination with an electrical power article of the class described having a generally cylindrical housing, a substantially flat first end, and electrical leads projecting from the other end; a single-piece heat sink retaining device comprising a generally U-shaped body having a pair of integral spring legs and a bight, said legs extending upwardly from opposite sides of said bight and having respective inwardly facing arcuate surfaces with the lower ends thereof positioned appreciably away from said bight, said surfaces being nearly as wide as the length of said housing and having a radius of curvature substantially equal to that of said housing; a first tab on one end of said bight that extends in the same direction as said legs; a heat sink panel, substantially as wide as said body, integral with the other end of said bight and extending in the same directioin as said legs; a second tab at said other end of said bight extending in the direction opposed to said legs and integral with said body; said article mounted with said housing gripped in heat exchanging contact with said legs and spaced appreciably above said bight thereby; said first tab being only long enough to overlap said other end of said article without contacting said leads, and positioned to hold substantially the full area of said flat first end in heat exchanging contact with said panel.

3,047,649
TUBE SHIELD
William S. August, Altadena, Calif., assignor to The Birtcher Corporation, Los Angeles, Calif., a corporation of California
Filed Sept. 3, 1957, Ser. No. 681,771
4 Claims. (Cl. 174—35)



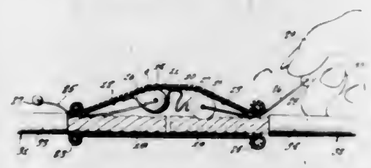
1. A tube shield and attachment therefor for a tube installed in a socket comprising a split flexible shield member placed around the body of said tube and in gripping engagement therewith, with its inner surface in substantially complete contact with the outer surface of said body, support means spaced from the tube socket and having an opening for receiving the tube body and said member without contact of the member with said support means, and attachment means for detachably connecting said member to said support means, said attachment means comprising elements extending outwardly from said member and means connected with said support means and having raised portions located adjacent said opening to overlap said extending elements upon rotation of said shield member and indexing means on said raised portions and said extending elements and engageable in response to said rotation of said shield member to index said extending elements substantially centrally of said raised portions.

3,047,650
SERVICE FITTING HOUSING FOR UNDER-FLOOR WIRING SYSTEM
Frank D. Reiland, Chicago, Ill., assignor, by mesne assignments, to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed June 24, 1959, Ser. No. 822,543
8 Claims. (Cl. 174—49)



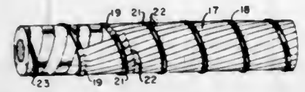
1. A housing and service fitting assembly for an electrical wiring system comprising, in combination, a base member formed at opposite ends with upturned flanges each of which is formed with a pair of recesses, one adjacent either end thereof, opposed side walls formed separate from the base and provided with tongues fitted into said recesses to provide interlocking engagement with the base, an electrical service fitting supported above said base, there being an access opening in at least one of said side walls leading to the service fitting, and a slipover cover provided with opposed end walls formed with lower marginal portions overlapping the base and formed with marginal flanges overlapping the upper edges and the opposed vertical edges of said side members to hold these members interlocked with the base.

3,047,651
CABLE SPLICE
William T. Hawkes, Box 485, Montgomery, W. Va.
Filed Feb. 20, 1961, Ser. No. 90,555
6 Claims. (Cl. 174—84)



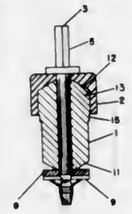
1. A cable splice including a rigid metal sleeve with open ends for receiving bare ends of two metal cables to be interconnected, and means within the sleeve capable of being wedged between each bare cable end and the internal wall of said sleeve, the intermediate portion of said sleeve being higher than the end portions and formed with inclined wall portions tapering symetrically from the intermediate portions of said sleeve toward the ends thereof, said means to be wedged including a pair of metal members located within said sleeve and having individual pull cords attached thereto and extending out through the ends of the sleeve to exterior accessible positions.

3,047,652
PIPE-TYPE CABLE CORE WITH ARMOR TAPE REINFORCING
Sigmund Ege, Hastings-on-Hudson, N.Y., assignor to Anaconda Wire and Cable Company
Filed Oct. 6, 1960, Ser. No. 60,948
7 Claims. (Cl. 174—108)



2. An extended length of pipe-type cable core comprising a conductor, an annular layer of insulation around said conductor, a plurality of tensile tapes served in a long lay external to said insulation over a portion less than the whole of said length, a skid wire over said tapes and extending over said length of core free from said tapes.

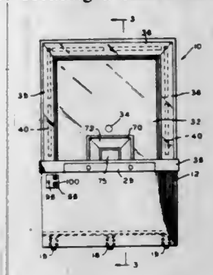
3,047,653
UNITARY HIGH TORQUE RESISTANT ELECTRICAL TERMINALS
Richard U. Clark, 40 Orchard Drive, West Acton, Mass.
Filed Feb. 14, 1961, Ser. No. 89,294
1 Claim. (Cl. 174—153)



A unitary electric terminal for lock-in use in an opening in a mounting panel comprising an elastomeric insert having a major diameter tubular section, a minor diameter tubular section, each of said sections having a convex conical termination, an intermediate tubular insert section having a keyable configuration and a predetermined length of 1.1 times the thickness of said mounting panel, a cup-like rigid insulating cap encompassing said major diameter section of said insert, a flanged rod-like electrode having a keyable termination on one end that lines up in planes parallel to the keyable outline of the intermediate insert section, said electrode having a remaining section of round cross-section shank terminating in a taper at its free end, an annular groove around said shank adjacent said taper, a bonding insulating washer on said shank adjacent said minor diameter section of said insert at the conical termination thereof, a push-on nut having oppositely twisted teeth adjacent said washer and adapted to bite into said round section of said electrode shank when said push-on nut is compressed against said minor diameter section of said elastomeric insert to form a nut encasing elastomeric doughnut, and a uniform highly compressed intermediate insert section within the opening in the panel.

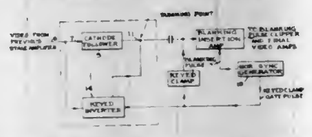
3,047,654
TELEVISION MAKEUP APPARATUS
Sol Cornberg, 240 Central Park S., New York 19, N.Y.
Filed June 15, 1960, Ser. No. 36,422
9 Claims. (Cl. 178—6.8)

1. A television makeup apparatus comprising a housing having a substantially upright mirror, a window in said mirror, a television camera on one side of said mirror having a lens adjacent said window, a television monitor on said housing on said one side of said mirror, means in said housing cooperating with said television camera and monitor for forming a closed circuit, said television



monitor having a screen visible from the other side of said mirror and switch means on said housing for selectively operating said television camera and monitor.

3,047,655
BLACK LEVEL STABILIZING CIRCUIT FOR TELEVISION SYSTEMS
Roy Allen Kampmeyer, Baltimore County, Md., assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,538
1 Claim. (Cl. 178—7.1)



In a television system including a kinescope, linear scanning means provided with synchronizing pulses, means for blanking the kinescope output during retrace intervals, a video signal channel, a coupling impedance in said channel through which video signals are applied to said kinescope, and keyed clamping means connected to said channel following said coupling impedance for restoring a direct current component to the video signals thereon, said clamping means being rendered periodically conductive by synchronizing pulses derived from said scanning means;

a circuit for stabilizing the black level of said kinescope during blanking intervals comprising a first signal path forming part of said channel for conducting video signals,

a summing point connected in said path ahead of said coupling impedance,

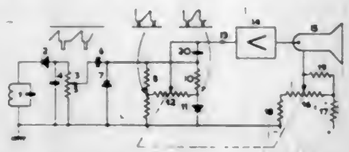
a normally non-conductive phase inverting amplifier having its input connected to said first signal path ahead of said coupling impedance and supplying its output to said summing point, and

means rendering said amplifier conductive in synchronism with said clamping means by the application of pulses derived from said scanning means, whereby during blanking of said signal the retrace noise appearing on said first signal path and appearing at said summing point is cancelled by noise of opposite phase appearing at said summing point from said amplifier.

3,047,656
TELEVISION BACKGROUND AND CONTRAST CONTROL
Robert Suhrmann, Hamburg-Rahlstedt, and Gerhard Förster, Hamburg-Stellingen, Germany, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 718,039
Claims priority, application Germany Mar. 9, 1957
6 Claims. (Cl. 178—7.5)

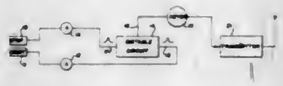
1. A circuit arrangement for the control of background brightness and gamma of an electro-optical reproducing

device, comprising input means for an image signal having intensity variations determining variations in brightness of light elements of an image to be reproduced, means for producing a second image signal having intensity variations non-linearly proportional to the intensity variations of said first signal, means for adjusting



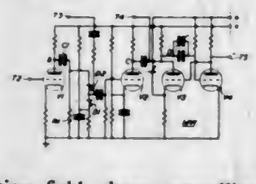
the intensity of said second signal, means for adjusting the background brightness of said reproducing device and means for simultaneously actuating said image signal adjusting means and said background brightness adjusting means to effect the simultaneous control of background brightness and gamma correction of signals applied to said reproducing device.

3,047,657
AUTOMATIC KEYING SYSTEM
John A. Doremus, Denville, N.J., assignor to Aircraft Radio Corporation, Boonton, N.J., a corporation of New Jersey
Filed May 2, 1960, Ser. No. 25,989
2 Claims. (Cl. 178—17)



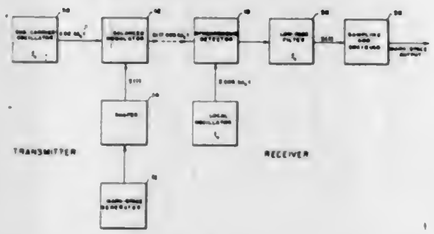
1. A code keying system comprising means for feeding a record medium along a path, a pair of sensing devices spaced transversely of said path and responsive to data stored on separate tracks of a multi-track record medium moving along said path for respectively producing signals, a keying circuit, and means coupling each of said sensing devices to said keying circuit such that said sensing devices alternately render said keying circuit operative or inoperative according to a code on the record medium, means including polarity sensitive devices for limiting the outputs of said coupling means to signals of a selected polarity.

3,047,658
TELEVISION TRANSMITTER SYNCHRONIZATION BY REMOTE SYNCHRONIZING SOURCE
Roy Collins March, Chelmsford, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a company of Great Britain
Filed Nov. 12, 1959, Ser. No. 852,371
Claims priority, application Great Britain Dec. 5, 1958
7 Claims. (Cl. 178—69.5)



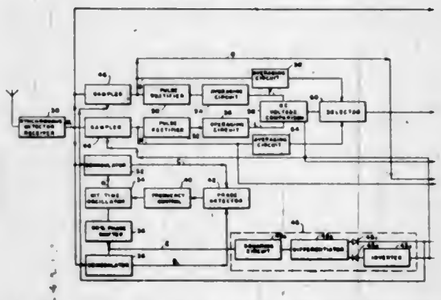
1. A television field phase controlling arrangement adapted automatically to control the phase of the field pulses in a locally produced synchronising waveform, including field and line pulses, to be in step with the field pulses in a controlling externally produced waveform, also including field and line pulses, said arrangement comprising means, synchronised by the line pulses in said externally produced waveform, for providing triggering pulses at line frequency or a multiple thereof, means, controlled by said triggering pulses, for providing the line pulses in the locally produced waveform, means, including a counter chain to which pulses, including triggering pulses, are supplied, for providing a field pulse in the locally produced waveform each time a predetermined number of pulses has been counted by said counter chain, means for initiating a pulse of predetermined length by each field pulse in the externally produced waveform, means for initiating a pulse by each field pulse in the locally produced waveform, the initiated pulses being of substantially the same length as the pulses of predetermined length in the externally produced waveform and means, responsive to phase difference between the initiated pulses to cut off the supply of triggering pulses to the counter chain thereby changing the number of pulses supplied to the counter chain and restoring and maintaining the in-phase condition.

3,047,659
RECEIVER FOR COMMUNICATION SYSTEM
John P. Costas, Fayetteville, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 6, 1960, Ser. No. 826
11 Claims. (Cl. 178—88)



1. In a system utilizing a transmitted suppressed carrier amplitude modulated signal with the modulation being in the form of a message signal comprising bits which are positive and negative pulses of equal widths, a chosen number of bits comprising a character, and interval of bit width between successive characters, one set of alternate intervals being blanks, the other set of alternate intervals containing a bit of a chosen polarity; a receiver for providing mark-space, bit time, and character time information comprising phase-lacking synchronous detecting means responsive to the application thereto of said transmitted signal for demodulating said signal and for phase locking the detected message signal to the phase of the carrier contained in the sidebands of the transmitted signal, means for generating a first signal having the frequency of the message signal and for phase locking the first signal with the detected message signal, means responsive to the application thereto of said phase locked first signal for generating first and second pulse trains having pulses occurring at the centers of said bits and between said bits respectively, sampling means, means for applying said first and second pulse trains and said detected signal to said sampling means, means responsive to the output of said sampling means for selecting the pulse train whose pulses occur at the centers of said bits and the pulse train whose pulses occur between adjacent bits, means for generating a second signal having a period equal to the sum of two character periods, means responsive to the application thereto of said second signal and said detected signal for phase locking said second signal with said detected signal, means responsive to the application thereto of said phase locked second signal for generating a third pulse train having pulses occurring at the zero crossover points of said second phase locked signal, means responsive to the application thereto of said third pulse train for providing a fourth pulse train having pulses occurring in those intervals containing said bit pulses of said chosen polarity, and means responsive to the application thereto of said detected signal and said fourth pulse train for controlling the polarity of said message signal.

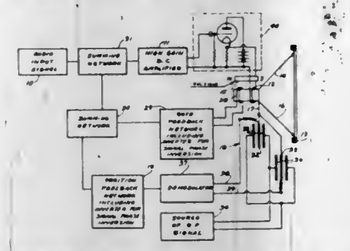
3,047,660
MEANS FOR OBTAINING CHARACTER TIME IN A RADIO COMMUNICATION SYSTEM RECEIVER
John P. Costas, Fayetteville, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 6, 1960, Ser. No. 858
8 Claims. (Cl. 178—88)



1. In a radio Teletype system wherein there is utilized a transmitted wave whose phase is shifted by 180° during a mark-space transition, the wave effectively being a suppressed carrier amplitude modulated signal modulated by a message signal comprising bits which are positive and negative pulses, each of the bits having equal widths, a chosen number of bits comprising a single character, an interval of bit width between successive characters, one set of alternate intervals being blanks, the other set of alternate intervals containing a bit pulse of a chosen polarity; a receiver in said system for providing character time information comprising phase locking synchronous detecting means for demodulating said transmitted wave and for phase-locking the detected message signal with the phase of the carrier contained in the sidebands of the transmitted suppressed carrier signal, means for applying said transmitted modulated wave to said synchronous detecting means, means for generating a signal for a period equal to the sum of two characters and two interval periods, means for phase-locking said generated signal with the phase of said detected message signal, means for applying said generated signal and said phase-locked detected signal to said last named phase-locking means and means responsive to the application thereto of said phase-locked signal for generating a pulse train comprising pulses occurring at the zero crossover points of said generated signal.

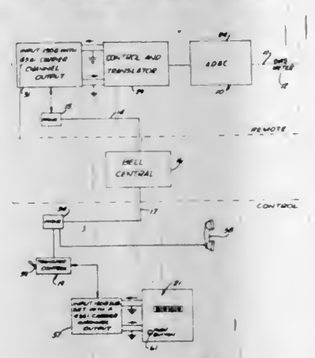
3,047,661
HIGH FIDELITY AUDIO SYSTEM
Daniel E. Winker, 8230 Irondale Ave., Canoga Park, Calif.
Filed Jan. 18, 1957, Ser. No. 635,035
3 Claims. (Cl. 179—1)

1. An audio system including a source of electrical audio input signal, an audio amplifier, a loud speaker including a diaphragm member, means for maintaining a magnetic field and a voice coil fixedly mounted with respect to said diaphragm member in said magnetic field, an electromechanical transducer operably associated with said diaphragm member, said transducer having an electrical output the magnitude and polarity of which are determined by the deviation in the immediate position of said diaphragm from a neutral, non-potential position, a transducer circuit including the electrical output component of said transducer and a feedback network for inverting the phase of signals generated in said electrical output components of said transducer, an electrical connection between said source of audio input signal and the input side of said audio amplifier, an electrical connection between the output side of said amplifier and said voice coil of said speaker, an electrical connection between said feedback network and the input side of said amplifier, said transducer being constituted



as a capacitance bridge transducer including first and second capacitor plates, third and fourth plates in spaced, parallel and surrounding relation to said first plate, fifth and sixth plates in spaced, parallel and surrounding relation to said second plate, a radio frequency field set up in opposite directions between said third and fourth plates and said fifth and sixth plates, respectively, and a demodulator electrically connected between said feedback network and said transducer to receive a modulated radio frequency signal from said first and second plates.

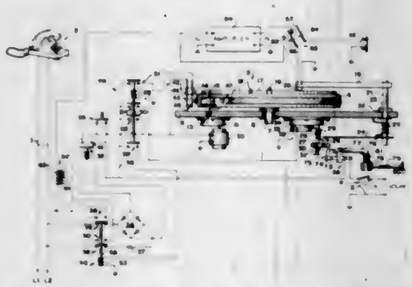
3,047,662
REMOTE STATION DIGITAL DATA TRANSMISSION SYSTEM
Edgar J. Smith, Verona, N.J., assignor to General Precision, Inc., Little Falls, N.J., a corporation of Delaware
Filed Mar. 22, 1960, Ser. No. 16,742
9 Claims. (Cl. 179—2)



1. A data transmission system for use in combination with a meter having a rotating shaft adapted to indicate by angular shaft position, the quantity of fluid passing through the meter during a predetermined time interval, comprising an analog to digital converter having a rotating shaft, operatively connected to the meter shaft, said analog to digital converter being adapted to convert the momentary angular position of the meter shaft to an electrical digital signal, means adapted to convert the digital signal to electrical signal voltages suitable for transmission over conventional telephone lines, a conventional telephone instrument adapted to transmit said electrical signal voltages to a remotely located central receiving station, a second telephone instrument located at said central receiving station, adapted to receive the converted electrical signal voltage, means adapted to convert the elec-

trical signal voltage received from the second telephone instrument, to a plurality of numerical electrical signal pulses operative to control a numerical display mechanism, an electrically controlled numerical display mechanism located in the central receiving station and connected to the second telephone instrument, and means mounted in said numerical display mechanism adapted to display numerical figures, co-ordinated with the momentary angular positions of the meter shaft, under control of the electrical signals received over the second telephone instrument, the analog to digital converter including a plurality of rotatable interconnected drums mounted co-axially with the meter shaft, one of said drums being directly coupled to the meter shaft, each of said drums having a plurality of substantially parallel progressively angularly positioned metal inserts around the outer circumference thereof, a plurality of brushes mounted adjacent the drums, each of said brushes being adapted to transmit an electrical pulse signal from one row of inserts, said drum inserts being adapted to transmit electrical digital signals in binary code through said brushes, a stepping switch having a plurality of contacts, co-ordinated with the number of brushes, one of the contacts of the stepping switch being connected to each of said brushes, said stepping switch being adapted to examine individually the electrical pulse signals received from said brushes, and transmit said electrical pulse signals, to an external point.

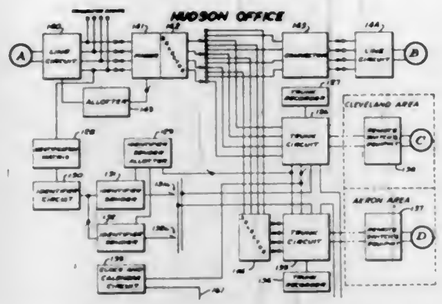
3,047,663
AUTOMATIC SCANNING CONTROL
Joseph J. Zimmermann, Milwaukee, Wis., assignor to Electronic Secretary Industries, Inc., Waukesha, Wis., a corporation of Wisconsin
Filed Dec. 6, 1957, Ser. No. 701,246
22 Claims. (Cl. 179—6)



1. In a record device including a record member moving during actuation of the record device, a transducing means adapted to scan the record member and to trace a path on the record member, means to hold said transducing means inactive relative to said record member, and means under the control of the relative position of the movable record member and the transducing means to disenable said last named means and to release said transducing means incident to predetermined alignment of the transducer means and the record member in both the direction of movement of the transducer means and the record member to establish successive tracking of the record member by the transducer means.

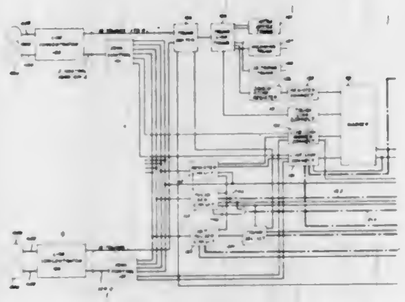
3,047,664
TOLL TICKETING TRUNK CIRCUIT
Milton A. Clement, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware
Filed Sept. 26, 1955, Ser. No. 536,576
7 Claims. (Cl. 179—7.1)

1. In a telephone system including data utilizing means, a calling line, a trunk circuit, a register individual to said trunk circuit and including a movable sensible medium for storing data pertaining to a toll call, means for extending a connection from said line to said trunk circuit to permit said trunk circuit to control the storage of data on said medium, connecting means for seizing the trunk circuit and for conditioning said register to transmit the stored data to said utilizing means, means in said trunk circuit



controlled by said connecting means for moving said medium at a high speed until said medium is advanced to a predetermined position, and means controlled at least in part by said data utilizing means for thereafter controlling the movement of said medium to intermittently move said medium at a slower speed to transmit the data stored on said medium to said data utilizing means.

3,047,665
TRAFFIC RECORDER
Alfred Zarouni, Brooklyn, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 28, 1958, Ser. No. 724,559
9 Claims. (Cl. 179—8)



4. In a telephone system wherein a large number of subscriber lines are connected by a remote concentrator unit to a small number of trunks extending from a central office, a memory circuit at said central office for maintaining a continuous record of the connections established through said concentrator unit, circuit means including means for scanning said memory circuit to determine the traffic condition of each of said lines, said circuit means being in a mutual lockout arrangement with said concentrator unit, and means controlled by said scanning means for permanently recording a representation of the determined conditions.

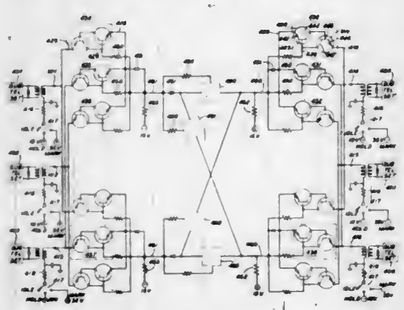
3,047,666
COMPATIBLE STEREOPHONIC SYSTEM
Murray G. Crosby, % Crosby Laboratories Inc., 299 Robbins Lane, Syosset, N.Y.
Filed Oct. 27, 1958, Ser. No. 769,718
16 Claims. (Cl. 179—15)

1. Apparatus for the binaural transmission of sound on two channels having different components such that audio frequencies are delayed more in one than the other, said apparatus comprising spaced microphones, means to add the microphone outputs to obtain a summation audio signal, means to subtract the microphone outputs to obtain a subtraction audio signal, means to delay the undelayed one of the summation and subtraction audio signals over substantially the complete frequency



range an amount to compensate for the aforesaid delay in order to maintain synchronism, means to transmit the summation signal over one channel, and means to transmit the subtraction signal over the other channel, said delay means at the transmitter helping maintain separation of the binaural channels at the receiver over substantially the full audio frequency range.

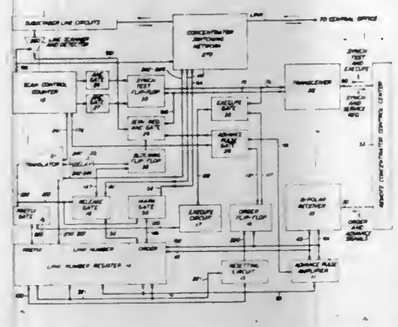
3,047,667
TRANSISTOR CROSSPOINT SWITCHING NETWORK
Luther W. Hussey, Sparta, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 24, 1958, Ser. No. 717,216
11 Claims. (Cl. 179—18)



11. A telephone switching network comprising opposed pluralities of terminals, transistor crosspoint circuits connecting each terminal of one plurality with each terminal of the other plurality, means for applying control potentials to said transistor crosspoint circuits for establishing communication paths between selected pairs of terminals, and means for establishing the peak breakdown voltage of said transistor crosspoint circuits within predetermined limits including a first reverse voltage breakdown diode connected between the collector and base of said transistor and a second reverse voltage breakdown diode in parallel with a resistance connected in series with the emitter of said transistor.

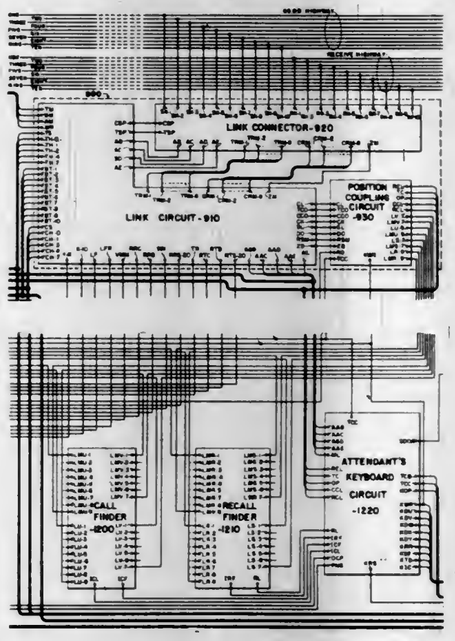
3,047,668
CONTROL ARRANGEMENT FOR LINE CONCENTRATOR
Manfred R. Gotthardt, Succasunna, and Terrell N. Lowry, Boonton, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,438
40 Claims. (Cl. 179—18)

1. In a telephone line concentrator, a system for controlling the connection of subscriber line circuits to talking paths to a central office comprising control information receiving means, means for selecting a predetermined line circuit operative responsive to the receipt of control information indicative thereof, means for disabling said line circuit selecting means operative responsive to the receipt of control information indicative of a predetermined operation to be accomplished by said concentrator, means for registering received control information indicative of a predetermined operation to be accomplished by



said concentrator, means operative responsive to the receipt of registered control information for selecting the control function to be accomplished, execute information receiving means, and means operative responsive to the receipt of execute information for transferring said registered control information to said means for selecting the control function to be accomplished.

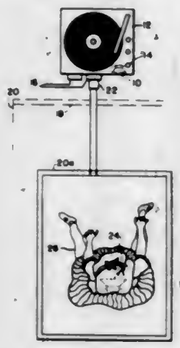
3,047,669
AUTOMATIC COMMUNICATION SYSTEM
Gerhard O. K. Schneider, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,927
22 Claims. (Cl. 179—27)



1. A communication system comprising a plurality of geographically remote communication offices, an operator position in each of at least two of said offices, means for extending a communication path through said offices, control means connected to said path for applying a control signal over said path to all of the offices in said path

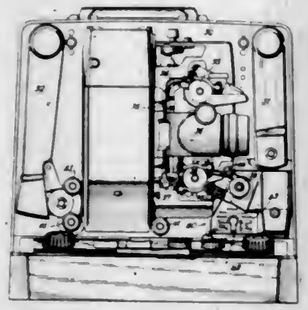
having an operator position, and means responsive to said control signal for determining which office having an operator position thereat is closest to said control means and connecting the operator position in the office that is closest to said control means to said path.

3,047,670
EDUCATIONAL DOLL
Harry B. Gardner, Jr., % Gardner Associates, Inc., 335 5th Ave., Pittsburgh 22, Pa.
Filed July 10, 1959, Ser. No. 826,162
13 Claims. (Cl. 179—82)



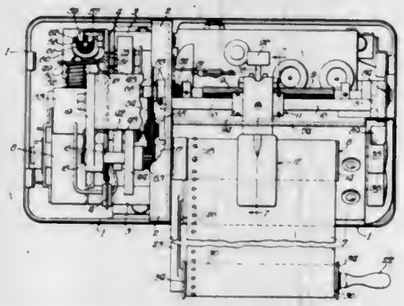
3. Wireless talking doll with a self-contained, self-powered sound outlet system therein comprising a pick-up coil affixed to the doll responsive to space emitted audio output frequency signals, a speaker in the doll's head and directed towards the doll's mouth, and energized audio amplifier stages operated in response to said pick-up coil and coupled in driving relation to said speaker for reproducing the audio output signals, the input to said audio amplifier stage being constituted solely by said pick-up coil.

3,047,671
SOUND MOTION PICTURE PROJECTOR
George F. Krtous, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed May 29, 1959, Ser. No. 816,813
7 Claims. (Cl. 179—100.1)



1. In a sound type motion picture projector including a sound drum for engaging a portion of a film, light projecting means for projecting light through the portion of the film at a predetermined point in the path of travel of the film around the drum, a light pipe for receiving the light travelling through the film at one point in the travel of the film around the drum and a frame mounting the light projecting means, a magnetic sound sub-assembly comprising guide means on the frame, a mounting member slidable on the guide means, a pivot plate mounted pivotally on the mounting member, a tangential adjustment plate mounted for pivotal adjustment on the pivot plate and having a socket portion, a rocker plate having a rounded projection fitting into the socket to form a ball and socket joint therewith, azimuth adjustment means for pivoting the rocker plate about one axis relative to the tangential adjustment plate, parallel adjustment means for pivoting the rocker plate relative to the tangential adjustment plate about a second axis at a right angle to said one axis, and a magnetic sound head mounted on the rocker plate and having an arcuate face and a sound gap extending across the arcuate face, the head being mounted on the rocker plate in a position such that the center of curvature of the arcuate face is in a plane generally perpendicular to said one axis and said second axis and the sound gap is spaced around the drum from said one point.

3,047,672
MAGNETIC RECORD TRANSDUCER APPARATUS
Alfred E. Lorenz, Algonquin, Ill., assignor, by mesne assignments, to Victor Comptometer Corporation, Chicago, Ill., a corporation of Illinois
Original application Feb. 8, 1954, Ser. No. 408,907. Divided and this application June 18, 1957, Ser. No. 666,311
9 Claims. (Cl. 179—100.2)

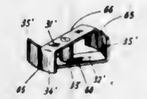


1. In combination, a driving roll, a belt tightener spaced therefrom, an endless magnetic belt laced drivingly over said driving roll and tightener and forming two taut runs, a magnetic transducer head, lead screw means for moving said head transversely across said belt along a helical path with respect to said belt to record or respond to magnetic signals in said path, electric motor means for driving said driving roll and said screw together either forwardly or reversely, friction clutch means for controlling the motion of said drive either in a forward or reverse direction in unidirectional movement of said electric motor means, manually actuated electro-magnetic means for controlling said clutch means, a microphone for recording and reproducing, an electric circuit connecting said transducer head and said microphone, and a mute switch responsive to said electro-magnetic means for muting said electric circuit and de-energizing the audio portion thereof, when the driving roll is idle as well as when the driving roll is in reverse operation.

3,047,673
ROTATABLE MAGNETIC SYSTEMS FOR TRANSFORMING AUDIO CURRENTS
Anton M. Springer, Homburg vor der Hohe, Germany, assignor to Telefonbau und Normalzeit G.m.b.H., Frankfurt am Main, Germany, a German firm
Original application Oct. 29, 1956, Ser. No. 618,766, now Patent No. 3,022,383, dated Feb. 20, 1962. Divided and this application Jan. 7, 1958, Ser. No. 707,628
10 Claims. (Cl. 179—100.2)

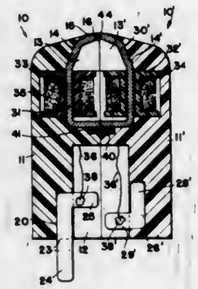
8. A sound reproducing system adapted to control playback speed comprising a driving shaft, a toroidal magnet

coil arranged substantially coaxially with respect to said shaft, a magnetic core structure supported by said shaft supporting said coil, said core structure including a first plurality of angularly spaced magnetic arms situated above said coil extending from points adjacent said shaft substantially radially outwardly to points remote from said shaft, a second plurality of angularly spaced magnetic arms situated below said coil extending from said points adjacent said shaft substantially radially outwardly to points remote from said shaft and angularly displaced with respect to said first plurality of arms, magnetic path means situated inside said coil providing a magnetic con-



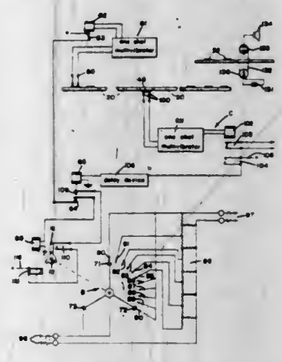
nection between said first plurality of arms and said second plurality of arms, each of said first plurality of arms and each of said second plurality of arms comprising a pole piece arranged outside said coil substantially in a cylindrical surface coaxial with respect to said shaft and each said pole piece having a leading and a trailing pole-surface-forming edge parallel to said shaft and equal in length to the axial spacing of said first plurality of arms from said second plurality of arms, and a magnetic tape having a sound track thereon positioned in a surface parallel to said shaft and wound in a direction longitudinally thereof to engage said cylindrical surface along a predetermined angle less than 360 degrees.

3,047,674
RECORDING AND REPRODUCING HEAD FOR MAGNETIC TAPE
Allan R. Keskinen, Conneaut, Ohio, assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed Mar. 31, 1959, Ser. No. 803,265
5 Claims. (Cl. 179—100.2)



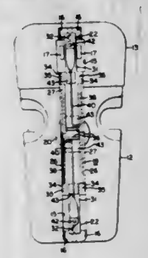
1. A recording and reproducing head for magnetic tape and the like which comprises a pair of identical sub-assemblies, each of said sub-assemblies comprising a housing section, said housing section having an upper recess and a lower recess in the inner face thereof, at least one magnetic assembly nestingly received in said upper recess, said magnetic assembly comprising a magnetic core member and a coil of wire about said core member, said coil of wire having a pair of wire leads, a terminal pin and a terminal connector mounted in said lower recess in longitudinally spaced relation, said pair of wire leads being connected to said terminal pin and said terminal connector, said terminal pin and said terminal connector having leg portions projecting inwardly toward said inner face, said sub-assemblies having the inner faces thereof abutted, the leg portions of the terminal connectors of said sub-assemblies being aligned with respect to each other, the terminal pins of said sub-assemblies being spaced with respect to each other and said aligned terminal connectors, and means electrically interconnecting said aligned terminal connectors whereby the coils of the magnetic assemblies of said sub-assemblies are connected in series relation between said terminal pins.

3,047,675
DIGITAL DATA RECORDING DEVICE
Joseph L. Berryhill, San Anselmo, Calif., assignor to Mechron, San Francisco, Calif., a corporation of California
Filed June 19, 1959, Ser. No. 821,478
3 Claims. (Cl. 179—100.3)



1. A device for controlling output of information reproduced from a sprocket driven strip of the type having a plurality of uniformly spaced and dimensioned sprocket holes aligned longitudinally on at least one edge of the strip and by which the strip is driven through a reproducing device the combination of at least one cluster of markings mounted on said strip only between sprocket holes and referenced to information carried by said strip whereby the sprocket holes form a consistent spacing between markings, means to sense and count the number of markings in each cluster of markings, and means responsive to the marking count to control the output of information reproduced from the strip.

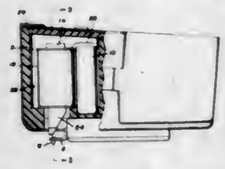
3,047,676
CHANNEL AND REPLACEABLE STYLUS ASSEMBLIES
Roy Dally, Liverpool, and George W. Fabel, Fulton, N.Y., assignors to General Electric Company, a corporation of New York
Filed Apr. 3, 1957, Ser. No. 650,512
14 Claims. (Cl. 179—100.41)



1. In a phonograph pickup combination including: a reluctance type cartridge having a channel-shaped recess extending along the bottom thereof, two pole pieces on opposite sides of said recess near one end thereof, trough-like projections at both ends of said recess, a hole extending from the center of said recess perpendicularly through said cartridge; a channel assembly having a post arrange-

ment that fits into said hole of said cartridge for providing rotatable mounting for said channel assembly, a channel having a horseshoe shaped cross-section comprising two parallel walls having inwardly extending lips, means for mounting said post to said channel, a stylus assembly including a base removably insertable into said channel assembly, and expansible members on said stylus assembly for frictionally engaging the walls and lips of said channel when said stylus assembly is inserted into said channel assembly, tongues on both ends of said channel for cooperating with said trough-like projections on said cartridge for providing positive locating of said channel between the pole pieces of said cartridge, each of said tongues having a first detent therein adjacent its extremity and a second detent in said stylus assembly base for cooperating with said detent of said channel for providing positive location of said stylus assembly in said channel assembly.

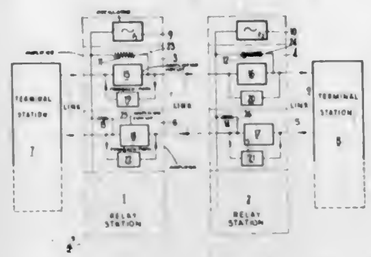
3,047,677
MAGNETIC STEREOPHONIC PHONOGRAPH PICKUP
Peter E. Pritchard, Skaneateles, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 20, 1958, Ser. No. 736,603
11 Claims. (Cl. 179—100.41)



1. A magnetic stereophonic phonograph pickup comprising a supporting body, a ferromagnetic armature on said body having a stylus adapted to engage simultaneously both walls of a V-section record groove, said armature being freely movable from a neutral position and in all directions in a reference plane generally perpendicular to both walls of the record groove, a pair of ferromagnetic pole pieces on said body having spaced ends situated above said armature neutral position and forming an air gap for magnetic flux linking said pole pieces and said armature, each respective pole piece having a distal portion of quasi-conical shape tapering in said reference plane and pointing toward the neutral position of said armature, a coil magnetically coupled with each respective pole piece, and a permanent magnet symmetrically disposed relative to said coils.

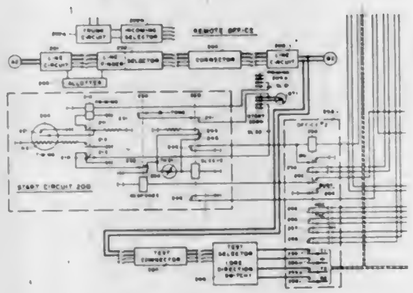
3,047,678
TELECOMMUNICATION SYSTEMS
Derek George Woodward Ingram, Harrow, England, assignor to The General Electric Company Limited, London, England
Filed Feb. 16, 1959, Ser. No. 793,394
Claims priority, application Great Britain Feb. 18, 1958
8 Claims. (Cl. 179—175.31)

1. A repeater for a telecommunication system wherein there are provided a negative feedback amplifier having a predetermined operational frequency band and comprising an amplifier circuit having an input and an output; an output circuit connected to the output of the amplifier circuit and adapted to pass signals supplied to that output; a degenerative feedback circuit connected between said output circuit and the input of the amplifier circuit to feed back to that input a predetermined portion of signals supplied to said output circuit; the amplifier circuit, said output circuit and said feedback circuit comprising a loop circuit that provides a phase shift whereby a signal of frequency within said frequency band that is supplied into the loop circuit and the corresponding signal which is returned through that loop circuit and of which the amplitude depends upon the gain of the amplifier circuit, are substantially opposed in phase; a source of supervisory signal of predetermined amplitude and of a frequency that is within said frequency band; and means connecting said source and said loop circuit at the output of the amplifier circuit to supply the super-



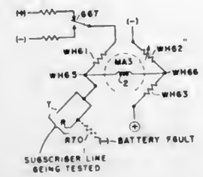
visory signal into said loop circuit at the output of the amplifier circuit whereby the amplitude of the resultant signal of said frequency supplied by said output circuit is determined by the amplitude of the corresponding signal that is returned through said loop circuit to the output of the amplifier circuit and increases as the gain of the amplifier circuit decreases.

3,047,679
ROUTINER
William W. Pharis and Ernest H. Gatzert, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 18, 1958, Ser. No. 742,801
15 Claims. (Cl. 179—175.2)



1. In a telephone system, a line testing routiner, a signal source, common control means responsive to signals from said signal source for individually connecting said routiner with a selected one of a plurality of offices, each of said offices having a recognition terminal, a plurality of subscriber terminals, individual directory numbers for each of said terminals, switching means responsive to signals from said signal source for sequentially connecting said routiner to individual ones of said terminals, register means responsive to signals from said signal source for registering informaiton indicative of the particular terminal to which said routiner should be connected, and means responsive to said register means having reigstered therein the directory number of said recognition terminal to determine whether said recognition terminal is connected to said routiner.

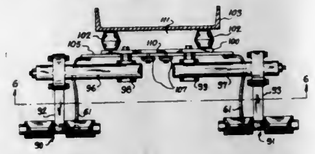
3,047,680
PRE-TEST TEST CIRCUIT FOR A LINE ROUTINER
David T. Robb, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,783
10 Claims. (Cl. 179—175.2)



1. A device for testing electrical circuits comprising means operative to "no fault," "null" and "fault" conditions in the course of making each of a plurality of tests to determine if the various electrical characteristics of each of said electrical circuits is above, equal to or below a predetermined value, means operative for making said testing means cyclically conducting each of said tests in a pre-established sequence, means for immediately advancing said sequence of testing to make the next of said tests when a "no fault" condition is indicated, means for delaying the advance of said sequence of testing for a predetermined time period when a "null" condition is indicated, means effective during said predetermined time period for continuing the test in progress when said "null" condition was detected, means effective after expiration of said predetermined time period for advancing said sequence of testing to make the next of said tests, and means for delaying the advance of said sequence of testing for a particular time period when a "fault" condition is indicated, whereby transitory conditions may subside prior to the final determination of test results on detection of said "fault" conditions.

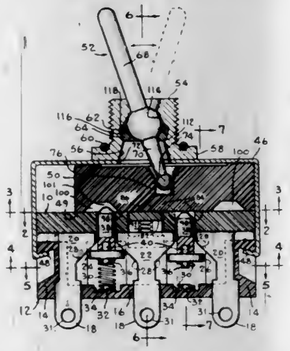
9. A telephone system comprising a plurality of subscriber lines, switch means for automatically seizing each of said lines in a particular order, means including a Wheatstone bridge operative to "no fault" and "fault" unbalanced conditions and to a "null" or balanced condition for conducting a plurality of tests on each of said subscriber lines, means for successively connecting said bridge to individual subscriber lines to conduct a cycle comprising each of said tests in a pre-established sequence, means including a magnetic amplifier connected to detect currents resulting from unbalanced bridge conditions for indicating the results of each of said tests, means for immediately advancing said sequence of tests to make the next of said tests responsive to currents in said magnetic amplifier indicating "no fault" conditions, means for delaying the advance of said sequence of tests for a predetermined time period responsive to no currents flowing in said magnetic amplifier thus indicating "null" conditions, means for continuing a test in progress during said predetermined time period, whereby time is provided for said bridge to become unbalanced if a "null" condition does not exist in fact, means for delaying the advance of said sequence of tests for a particular time period responsive to currents in said magnetic amplifier indicating "fault" conditions, whereby transitory conditions may subside prior to the final determination of test results on faulty lines, and means for making a record of said "fault" condition and an identification of said subscriber line under test when said "fault" condition is detected.

3,047,681
CURRENT COLLECTOR
Roy F. Dehn, Wickliffe, Ohio, assignor to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Aug. 19, 1959, Ser. No. 834,824
3 Claims. (Cl. 191—45)



1. In a current collector device, first and second contactor means adapted to engage and travel along a conductor bar, first and second support members having connected thereto said first and second contactors respectively, a base member, said support members connected to said base member by first and second swinging arm means and pantograph linkages, said swinging arm means each being pivoted to said base member and said pantograph linkages connecting said first and second support members to said first and second swinging arm means respectively, bus bar means on said base member, shunt conductors connecting said contactors to said base member, said base member comprising a plate adapted to be mounted on and in spaced relation to supporting means by insulating means, said plate having an opening for passing power conductors from an adjacent collector device between said base member and said supporting means.

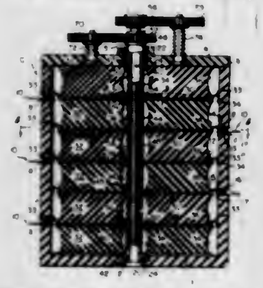
3,047,682
ELECTRIC SWITCHES
Harold W. Hults, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed July 18, 1958, Ser. No. 749,357
7 Claims. (Cl. 200—16)



1. In an electric switch, insulating base means, a pair of stationary contacts mounted in said base means, said stationary contacts comprising contact surfaces extending toward one another and being inclined in a first direction, a bridging contactor mounted between said stationary contacts and comprising cam follower means extending in said first direction beyond said base means, resilient means biasing said bridging contactor in said first direction electrically to connect said inclined surfaces of said stationary contacts, a cam actuator block mounted on said base means for reciprocal movement transverse to said first direction, said cam actuator block comprising a cam surface effective when said block is moved in one direction to actuate said cam follower means and to move said bridging contactor opposite to said first direction against

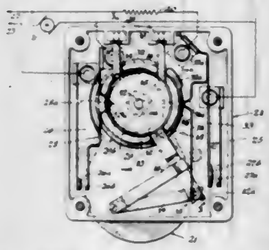
the force of said resilient means to disengage said bridging contactor from the inclined surfaces of said stationary contacts, said cam actuator block further comprising a depression for freely receiving said cam follower means when said block is moved back in the other direction, and said depression being deeper than the normal extension of said cam follower means beyond said base means to provide for wear allowance between the inclined surfaces of said stationary contacts and said bridging contactor.

3,047,683
MULTIPLE CONTACT SWITCH
Bernard Edward Shlesinger, Jr., 906 Bruce Lane, Annandale, Va.
Filed Mar. 22, 1961, Ser. No. 97,603
54 Claims. (Cl. 200—26)



1. A multiple contact switch comprising a casing, contacts in wall of said casing, a plurality of stacked contact plates having spaced contact members thereon, non-conductive springy resilient expansible and compressible spacer members between said contact plates, means for rotating said plates and said spacer members, and means for compressing and expanding said spacer members, whereby upon rotation of said plates and said spacer members, or compression or expansion of said spacer members, or both, the electrical circuits between said wall contacts and said contact plates are changed.

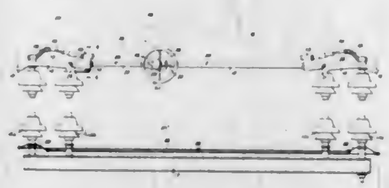
3,047,684
VARIABLE SWITCH
Donald E. Heerdt, Cicero, Ill., assignor to Ferro Corporation, a corporation of Ohio
Filed July 10, 1959, Ser. No. 826,255
10 Claims. (Cl. 200—38)



1. A switch comprising: a fixed contact; a contact associated with said fixed contact, movable between open and closed positions and spring urged toward said open position; a timer cam for moving said movable contact to said closed position periodically; means for latching said movable contact in said closed position; and control means for releasing said latching means.

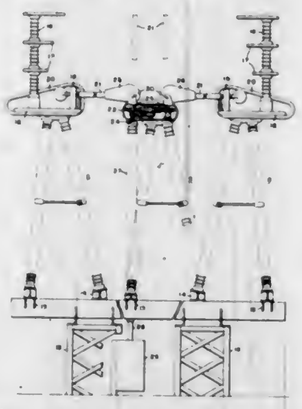
3,047,685
HIGH VOLTAGE DISCONNECT SWITCH
Philip Scisclone, Morton, Pa., assignor to General Electric Company, a corporation of New York
Filed June 6, 1960, Ser. No. 34,026
7 Claims. (Cl. 200—48)

1. An electric switch comprising a pair of spaced-apart pivots disposed in a predetermined reference plane, a first blade mounted on one of said pivots for pivotal motion movement in an operating plane generally perpendicular to said reference plane, a pair of contact jaws mounted on said first blade at a free end thereof and spaced-apart laterally of said operating plane, a second blade mounted on the other of sid pivots for pivotal movement in said operating plane, said second blade having a contact-making portion at its free end for engaging said contact jaws, said blades having switch-open positions generally perpendicular to said reference plane and switch-closed positions substantially in said reference plane, switch-operat-



ing means for pivoting said blades substantially simultaneously from their respective switch-open positions to their respective switch-closed positions to locate said contact-making portion of said second blade between said jaws, means for twisting said contact-making portion into high pressure engagement with said jaws after said second blade has reached its switch-closed position, means for maintaining said first blade in a fixed position during twisting of said contact-making portion, the distance between said jaws and the pivot of said first blade being substantially less than the distance between said contact-making portion and the pivot of said second blade.

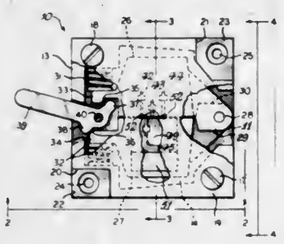
3,047,686
OUTDOOR DISCONNECTING SWITCH
Chester W. Upton, Jr., Penn Township, Westmoreland County, and Earl F. Beach, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 25, 1959, Ser. No. 842,486
5 Claims. (Cl. 200—48)



1. In a high voltage disconnect switch: a base, a pair of spaced insulator support means secured to the base; a stationary contact secured to each insulator support means; an additional insulator support means on the base intermediate said spaced insulator support means; a gear

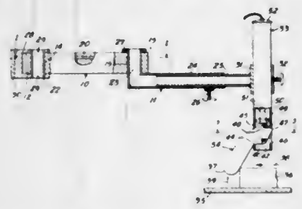
housing supported by said additional insulator support means; a pair of spaced pivot means on said gear housing; a switch blade supported by each one of said pivot means; reduction gear means in said housing for simultaneously actuating the switch blades about a transverse axis through the corresponding pivot means to effect engagement and disengagement between each blade and the corresponding stationary contact, and means for driving said reduction gear means.

3,047,687
ELECTRICAL SOCKET
Stanley J. Majewski, Chicago, Ill., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 57,975
3 Claims. (Cl. 200—51)



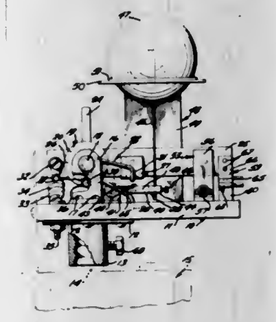
1. In a socket for use with electric components having leads defining conductors therfore, a base provided with a compartment therein, a pair of carriers constrained within said compartment for selective movement between open and closed positions, resilient means operative between said base and said carriers for floatingly supporting the same within said compartment and for biasing the carriers into their closed position, lever structure pivotally supported by said base and being selectively engageable with said carriers to urge the same into the open position thereof against the biasing force of said resilient means, a plurality of contacts supported by at least one of said carriers for engagement with such leads when said carriers are in the closed position thereof, at least one presser pad structure associated with said contacts and being supported by one of said carriers for urging such leads and said contacts into engagement with each other when said carriers are in their closed position, and a cover mounted upon said base and extending over said compartment and being provided with a plurality of apertures adapted to pass such leads therethrough to orient the same for engagement with said contacts.

3,047,688
UNIVERSALLY ADJUSTABLE CONTROL DEVICE
Samuel N. Small, 920 Val Park Ave., Valley Stream, N.Y., assignor of one-half to Jacob Salzman, Jamaica, N.Y.
Filed Nov. 12, 1959, Ser. No. 852,436
9 Claims. (Cl. 200—61.41)



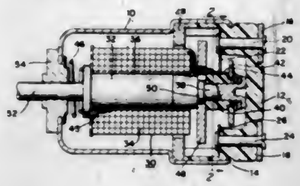
8. A device of the character described, comprising two arms, one arm having at the ends thereof jaws, means pivotally supporting the other arm in one of the jaws, a pivotal support for the first named arm arranged in the other jaw, a single clamping element extending longitudinally of said first arm for simultaneously moving both jaws into operative and inoperative positions, a post slidably and rotatably adjustable in the second named arm, and an element pivotally supported in one end portion of the post.

3,047,689
INERTIA SAFETY SWITCH
Walter Gregory Vardara, 487 6th Ave., San Francisco, Calif.
Filed Aug. 2, 1960, Ser. No. 46,923
1 Claim. (Cl. 200—61.45)



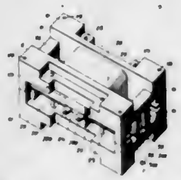
In an inertia safety switch, an insulated base, a conductor plate positioned below said base and affixed thereto, an adaptor depending from said plate for engaging a battery terminal, a pair of L-shaped lugs mounted on the upper portion of said base, a pin extending between said pair of lugs, a body member mounted on said pin and including first and second sections of different sizes, a reset handle extending upwardly from the second section of said body member, a contact blade connected to the first section of said body member, a U-shaped yoke connected to said blade, means including conductors having coiled portions electrically connecting said blade to said plate, a spring member having a portion thereof circumposed on said pin and said spring member having an end portion anchored to said base and its other end engaging said yoke, the first section of said body member being provided with a recess which defines a shoulder, L-shaped support members affixed to said base, a securing element extending between said support members, a trigger bar pivotally mounted on said securing element and said trigger bar including first and second portions which are arranged angularly with respect to each other, the free end of the first portion of the bar adapted to selectively engage the recess and shoulder of the first section of the body member, a projection on the free end of the second portion of the bar, a cable having its lower end fastened in said projection, a stand connected to said base and including an elevated seat, a ball provided with a circular band thereon, and said ball engaging said seat and said cable being connected to said ball, a pair of L-shaped brackets affixed to said base and said brackets including horizontally disposed legs and vertically disposed legs, conductors connected to the horizontal legs of the brackets, a secondary switch assembly on said base and said secondary switch assembly comprising a lower arm provided with a contact on an end thereof, an upper arm having a contact on an end thereof, an insulated bushing on the blade for engaging a portion of the upper arm, and conductors connected to said arm.

3,047,690
MAGNETIC SWITCH
Richard L. Sprague and Donald F. Wigner, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 8, 1960, Ser. No. 1,265
9 Claims. (Cl. 200—87)



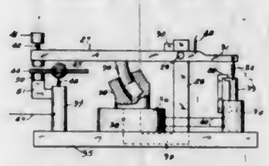
4. A magnetic switch comprising, a base member formed of insulating material carrying a pair of fixed electrical contacts, one of which is adapted to be connected to a power source and the other of which is adapted to be connected to a load, a housing secured to said base member formed of magnetic material, a bushing carried by said housing, a plate member formed of magnetic material carried by said housing, a shiftable assembly including an armature core member having a portion slidable through said bushing, a coil winding, a second plate member formed of magnetic material and a contactor, said contactor being adapted to engage said fixed contacts when shiftable assembly is shifted and said second plate member being adapted to contact said first plate member when said shiftable assembly is shifted, resilient means interposed between said shiftable assembly and said housing and an electrical conductor connecting said coil winding with said contactor.

3,047,691
BUILT-UP POLARIZED RELAY
Jindřich Kohoutek and Olaf Kožený, Jablonec on Nisa, Czechoslovakia, assignors to Závody Jana Svermy, Brno, Czechoslovakia
Filed July 19, 1960, Ser. No. 43,908
Claims priority, application Czechoslovakia July 21, 1959
10 Claims. (Cl. 200—93)



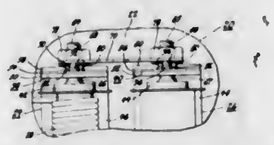
1. A polarized relay comprising two substantially identical body parts of insulating material, each body part having two flange portions and a web portion integrally connecting said flange portions; fastening means for securing said body parts to each other with the respective flange and web portions of one body part superimposed on the corresponding portions of the other body part, said parts when secured to each other constituting the body of said relay and substantially defining the external dimensions thereof, said web portions jointly defining a coil former having an internal cavity; a magnetizable core in said cavity, said body being formed with a first recess extending in at least one of said flange portions and communicating with said cavity, and with a second recess spaced from said cavity and communicating with said first recess; a plurality of windings on said coil former for magnetizing said core and energizing a magnetic field thereof; polarizing magnet means mounted in said second recess, said magnet means having spaced pole piece means; an elongated armature member mounted in said first recess, said armature member having one portion located in said magnetic field and another movable portion partly interposed between said pole piece means; and cooperating contact means on said movable armature portion and on said body in one of said recesses for opening and closing a circuit when said movable armature member portion moves between said pole piece means.

3,047,692
COMBINATION SENSITIVE AND POWER RELAY
Albert G. Thomas, 1711 Galloway Drive, Charlottesville, Va.
Filed Dec. 8, 1958, Ser. No. 778,867
9 Claims. (Cl. 200—97)



1. In a relay, a pair of relatively movable contacts, an armature for moving at least one of said contacts, a magnetizing winding for causing movement of said armature, resilient means for moving said armature in one direction, and means including a magnetizing winding for increasing stress of said resilient means when said second named magnetized winding is energized.

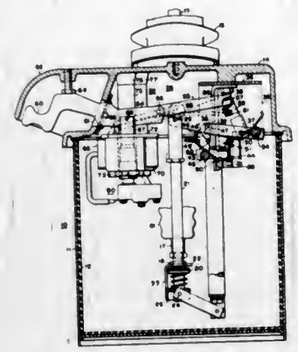
3,047,693
ELECTROMAGNETIC DEVICE
Lyman A. Rice, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 10, 1957, Ser. No. 664,804
15 Claims. (Cl. 200—98)



1. In an electromagnetic device, the combination comprising; a magnetic core, a coil winding surrounding at least a portion of a core, an extension projecting from one end of the core, an armature spaced from the core and adapted to be attracted by the core in response to energization of the coil winding, a contact on the armature, a stationary contact engageable with the contact carried on the armature, a support for the stationary contact, and a member formed of insulating material having an adjustable connection with said extension and carrying said support.

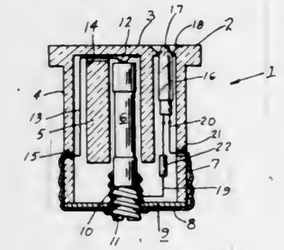
3,047,694
LOAD PICKUP SWITCH LATCH MECHANISMS
Jimmie D. Sullivan, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 12, 1957, Ser. No. 671,511
2 Claims. (Cl. 200—106)

1. A switch comprising, separable contacts, an operating lever for opening and closing said contacts, a supporting lever pivotally mounted at one end, said operating lever being pivotally attached to the supporting lever intermediate its ends, a toggle linkage pivotally attached to the operating lever for actuating the operating lever about its pivotal support, a latch releasably engaging the supporting lever at the end opposite its pivoted end, a trip lever for releasing the latch to open the contacts independently of said toggle linkage, a spring for biasing the trip lever to release the latch, said spring being connected to the operating lever to be energized only when the contacts are closed, a trigger holding the trip lever against the bias



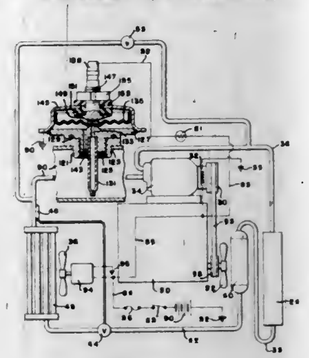
of the spring, tripping means for releasing said trigger, and said operating lever moving to a position in which said spring is deenergized to facilitate resetting of said latch and said trip lever when the contacts are opened.

3,047,695
CARTRIDGE FUSE HOLDER AND INDICATOR
Emil Borys, 710 Old Rand Road, Lake Zurich, Ill.
Filed Nov. 13, 1959, Ser. No. 852,914
4 Claims. (Cl. 200—121)



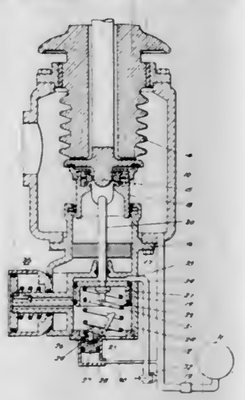
1. A screw plug type cartridge fuse holder and indicator comprising, a plug body formed of insulation material having an exposed window in the outer end thereof, a screw shell contact with an inturned flange secured over and surrounding the front end of said body, a centrally apertured washer formed of insulation material secured over the front end of said body by said inturned flange, a female support member formed of electrically conductive material disposed in the central aperture of said washer, a male insert formed of electrically conductive material removably insertable in said female support member to serve as a center contact, said plug body having a central well on the interior thereof in alignment with said male insert for receiving a cartridge type fuse therein, a terminal positioned on the inside of said plug body at the bottom of said central well, a first conductor interconnecting said terminal with said screw shell, said plug body having a second well therein in alignment with said window, a miniature neon type bulb disposed within said second well with the tip end projecting into and viewable through said window, a second conductor interconnecting said female support member with one terminal of said bulb, and a third conductor interconnecting said second terminal of said bulb with said screw shell, said window being large enough to accommodate said tip end but too small to accommodate the main body of said bulb.

3,047,696
SUPERHEAT CONTROL
John H. Heldorn, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 11, 1959, Ser. No. 858,895
3 Claims. (Cl. 200—140)



1. A control for a container having an aperture therein including a removable closure fitting connecting with said container for closing said aperture, a tube having a closed end extending into said container and having an open end mounted upon said fitting, a closed diaphragm means mounted upon said fitting having its interior communicating with the open end of said tube, the interior of said tube and diaphragm means containing a thermosensitive fluid for applying a first pressure to the interior of said diaphragm means, an enclosure mounted upon and hermetically sealed to said fitting enclosing said diaphragm means, said fitting being provided with a passage outside of said tube and diaphragm means connecting the interior of said enclosure with the interior of said container to apply a second pressure to the exterior of the diaphragm means, and a control device operated by the displacement of said diaphragm means.

3,047,697
LATCH-OPEN MECHANISM FOR AIR BLAST CIRCUIT BREAKER
Haakon Forwald, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed June 2, 1959, Ser. No. 817,645
Claims priority, application Sweden June 4, 1958
10 Claims. (Cl. 200—148)



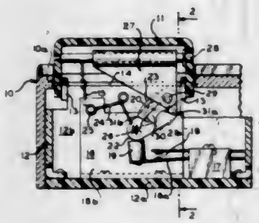
1. A latch mechanism for a pneumatically operated circuit breaker; said pneumatically operated circuit

breaker including a first and second housing, said first housing being removably connected to said second housing, said first housing carrying a first contact, said second housing carrying a second contact movable between an engaged and disengaged position with respect to said first contact when said first housing is connected to said second housing, a pneumatic operating means for moving and maintaining said second contact out of engagement with respect to said first contact, a source of air under pressure, connections from such source to said pneumatic operating means and to said first housing, a valve in said connection to said pneumatic operating means, latch means engageable with said movable contact and movable to a latching position to latch said movable contact in said disengaged position, and means operatively connected to said latch means and responsive to a predetermined pressure condition in said compressed air source to move said latch means to latching position upon the drop of pressure in said first housing below a predetermined pressure and to move said latch means to unlatching position upon a rise of pressure in said first housing above said predetermined pressure.

3,047,698
SUCCESSIVELY DEPRESSIBLE ALTERNATING SWITCH

Richard K. Walker, Convent, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed May 3, 1961, Ser. No. 107,449
4 Claims. (Cl. 200—153)

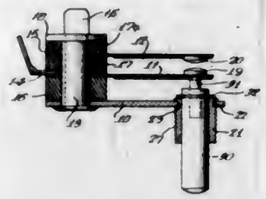


1. A successively depressible alternating switch device for a dictation transcribing machine comprising a manually operable push button biased into an unoperated position, an electrical switch, a pivoted rocker, means biasing said rocker over-center into one position wherein it bears against said switch to hold it in one position and into a second position wherein it is free of said switch and the switch assumes its other position, a guide slot in said rocker on a diameter line of the pivot axis thereof, limit stops for said rocker limiting the movement thereof to one end position wherein said slot is oblique in a clockwise direction to the direction of movement of said manual push button and to a second end position wherein said slot is oblique in a counterclockwise direction to the direction of movement of said push button, said slot having notches at the ends thereof in the edges at the far side from said push button, and a slide member on said push button having a pin engaging said slot for holding said slide member in an end position to engage one of said notches and shift said rocker over center in one direction as the manual push button is depressed and for camming said slide to its other end position upon release of the push button to place said pin in position to engage the other of said notches and shift said rocker over center in the other direction as said push button is again depressed whereby successive depressions of said manual push button cause said switch to be shifted alternately between open and closed positions.

3,047,699
ELECTRIC SWITCH

Fred D. Patti, 1371 Division St., Morris, Ill.

Filed May 21, 1959, Ser. No. 814,817
5 Claims. (Cl. 200—159)

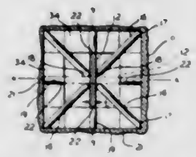


1. A switch including a base, first and second contact arms, stack means rigidly joining said base and said arms in superposed relation with one of said arms and said base in straddling relation to the other of said arms, said stack means extending along an axis perpendicular to the plane of said base, said first contact arm being movable relative to the second contact arm between operating and return positions and biased to normally occupy one of said positions, a contact on said first contact arm engageable with a contact on said second contact arm when said first arm is in operating position, and means for securing said switch to a supporting panel, said means including a sleeve fixed to said base to define a tubular guideway leading to the area occupied by said first arm along an axis parallel to the axis of said stack means, said sleeve being externally threaded, a pair of nuts having threaded connection with said threads on said sleeve which nuts provide opposed surfaces between which said supporting panel may be engaged along edge portions of an opening in said supporting panel at selected positions along the length of said sleeve, and an actuating member with which the first contact arm is engageable at a free end thereof to move said first arm relative to said second arm toward a position opposite to the normally biased position of said first arm, said actuating member comprising a rod having guided movement in said sleeve toward and away from the area occupied by said first arm.

3,047,700
PUSH BUTTONS FOR SWITCHES

James R. Bailey, Chicago, Ill., assignor to Switchcraft, Inc., Chicago, Ill., a corporation of Illinois

Filed Apr. 12, 1960, Ser. No. 21,692
3 Claims. (Cl. 200—172)

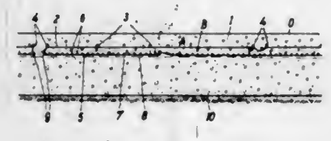


1. In a push button adapted to be supported on the blade of a switch, a hollow body member including a walled cavity which is substantially symmetrical to transverse axes intersecting said body member, the walls of said cavity having lands extending longitudinally thereof and diagonally inward into said cavity, the distances between the ends of said lands as measured in directions parallel to one of the transverse axes of said body member being substantially equal to the thickness of said blade so as to maintain the blade in alignment with the other of said transverse axes, the walls of said cavity having other lands extending longitudinally thereof and inward into said cavity and between said diagonally extending lands and substantially in alignment with the transverse axes of said hollow body member, the distance between an aligned pair of said last named lands being slightly less than the width of said blade, said last named lands being adapted to engage the edges of said blade and hold same frictionally while the other of said lands guide said blade whereby said push button can be placed on said blade in 90° apart positions.

3,047,701
DEVICE FOR HEATING A GROUND COVERING

Frank Früngel, Wittenbergenes Weg 79, Hamburg-Rissen, Germany

Filed May 13, 1960, Ser. No. 29,084
Claims priority, application Germany Mar. 3, 1960
14 Claims. (Cl. 219—19)

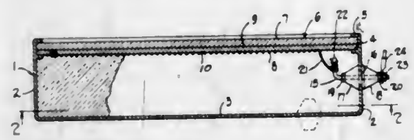


1. Apparatus for heating a ground covering having a surface, said apparatus comprising spaced heating elements in the ground covering in a plane parallel to the surface of the ground covering, heat equalizing elements in the ground covering and interconnected for efficient heat conduction, said heat equalizing elements being of a metal having a substantially greater thermal conductivity than the ground covering and being distributed in a second plane parallel to the surface of the ground covering with a density which is greater than the density with which the heating elements are distributed in the first said plane to provide for equalized heat distribution, said heating element being constituted by two groups of rectangularly intersecting metal wires fixed together at their intersections, the wires of one group having a higher electric resistance than the wires of the other group and the wires of the first said group being longer than the wires of the other group and being adapted for connection to a source of electrical energy and pieces of foil located in the ground covering underneath the heating elements and the heat equalizing elements, said foil being adapted to reflect upwardly the heat impinging on it from above.

3,047,702
PLATE HEATER

Fredrick L. Lefebvre, 4944 Glenlynn, Lyndhurst, Ohio

Filed Oct. 3, 1958, Ser. No. 765,204
6 Claims. (Cl. 219—19)

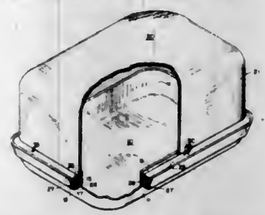


1. In a heater of the class described, in combination, a relatively thin quartz plate member, a layer of cementitious material intimately adhered to one face of said member, and a resistance element comprised of a helically wound member embedded in said material, the coils constituting the member being arranged in contact with the face aforesaid, and likewise extending beyond the surface of the layer of material.

3,047,703
SEALING APPARATUS

Leonard E. Aske, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 26, 1959, Ser. No. 802,248
12 Claims. (Cl. 219—19)
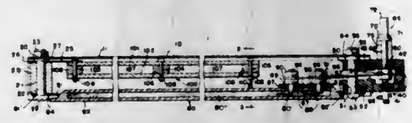


5. Apparatus for mechanically connecting two members together comprising, in combination: a tube of meltable material which contracts when melted and which expands when solidified; a heater element imbedded in the tube to melt the meltable material when electrical current is applied thereto; and deformations on each of the two members proximate the point of connection, the meltable material being placed near the deformations so that when melted the material flows around the deformations and when re-solidified, expands so as to lock the two members together.

3,047,704
STRIP HEATER

Lawrence R. Van Noy, Newport News, and Paul N. Craig, Yorktown, Va., assignors to J. B. Nottingham & Co., Inc., New York, N.Y., a corporation of New York

Filed Apr. 22, 1959, Ser. No. 808,130
13 Claims. (Cl. 219—19)



1. In combination, an elongated strip heater including a body means having upper and lower portions, a heating element supported by said body means and projecting below the lower portion of the body means for contacting a surface to be heated, and a hold-down means including an integral member disposed in spanning relationship to said body means and having opposite end portions adapted to be fixed relative to the surface to be heated, said hold-down means including a clamping means supported by said integral member and engaging said strip heater for maintaining a strip heater in operative position relative to the surface to be heated.

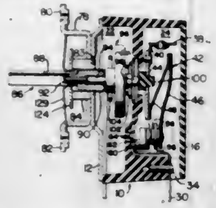
3,047,705
THERMOSTATIC CONTROL DEVICE

Siegfried E. Manecke, Indiana, Pa., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware

Filed Mar. 1, 1960, Ser. No. 12,025
4 Claims. (Cl. 219—20)

1. A control device adapted to be connected in an electric circuit to control energization of an electric heating unit; said device comprising an on-off switch connected in said circuit to energize or deenergize said heating unit and having a stationary contact and a movable contact, a bimetallic element thermally responsive to the flow of current therethrough supporting said movable contact for movement into and out of electric contact with said stationary contact, said bimetallic element being adapted to flex in a direction urging said movable contact away from said stationary contact upon heating of said bimetallic element induced by the flow of current therethrough and

to flex in a direction urging said movable contact toward said stationary contact upon cooling of said element, temperature responsive means operable to move said bimetallic element in a direction urging said movable contact away from said stationary contact in proportionate response to an increase in temperature adjacent said heating element, and means biasing said movable contact toward said stationary contact with a biasing force at least equal to the maximum current induced flexing force of said bimetallic element whereby said contacts are maintained in engagement with each other until the temperature adjacent said heating element reaches a selected minimum temperature.

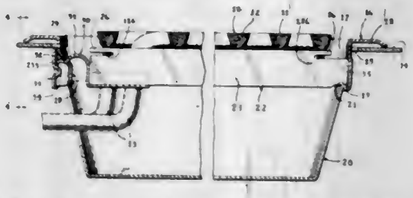


3,047,706

ELECTRIC HEATER ASSEMBLIES

Fritz R. L. Zentgraf, Thistletown, Ontario, Canada, assignor to Edwin L. Wiegand Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 19, 1959, Ser. No. 814,335
12 Claims. (Cl. 219—37)



9. A heater assembly for a range comprising an apertured, generally vertical wall, an electric heating element having a heat-generating surface normally supported by the range adjacent said wall on one side thereof in a generally horizontal heating position, a leg carried by said element and projecting beyond the periphery of said element heating surface and through the aperture in said wall to the other side thereof, said leg cooperating with a defining margin of said wall aperture to provide a hinge about which said element is shiftable from said horizontal heating position to a non-heating position, and an abutment resiliently supported on said other wall side adjacent said wall aperture for engagement with the free end of said projecting leg, a portion of the free end of said leg being disposed above said abutment when said element is in its horizontal heating position and such portion being disposed beneath said abutment for engagement therewith when said element is in its non-heating position to resiliently retain said element thereat.

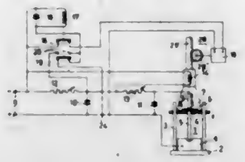
3,047,707

DEVICE FOR WORKING METALS

Hendrik Elias de Bruyn, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 17, 1960, Ser. No. 36,990
Claims priority, application Netherlands July 1, 1959
11 Claims. (Cl. 219—69)

1. A device for working a conductive work piece by application of spark discharges to spark-erode particles therefrom, said device comprising an electrode, capacitive energy storage means coupled to said electrode and said work piece, circuit charging means coupled to said energy storage means to charge said energy storage means to an energy level dependent upon the distance between said electrode and said work piece, and means for discharging said energy storage means through said electrode and said work piece to provide said spark discharges, said means for discharging comprising means to position said electrode relative to said work piece, first means responsive to the energy level of said storage means to actuate



and adjust said positioning means to provide a relative spacing between said electrode and said work piece sufficient to maintain a spark discharge therebetween, and second means responsive to the energy level of said storage means to move said electrode with respect to said work piece to maintain a uniform gap therebetween to compensate for increases in said gap caused by the removal of the spark-eroded particles from said work piece.

3,047,708

ELECTRIC ARC WELDING METHOD

Louis E. Stark, Youngstown, Ohio, assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Dec. 12, 1957, Ser. No. 702,235. Divided and this application Dec. 18, 1959, Ser. No. 860,360
3 Claims. (Cl. 219—74)

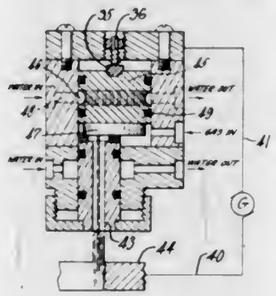
1. An electric arc welding method in which a consumable electrode is connected to a source of welding current which comprises: advancing the consumable electrode toward a workpiece, passing a welding current through the electrode to establish a magnetic flux thereabout and to form an electric arc at the workpiece, directing a stream of shielding gas along the electrode and towards the said arc, feeding toward said electrode a powdered welding material composed of particles of a non-magnetic welding material having on the outer surface thereof a coating consisting of a layer of a magnetic metal whereby said powdered welding material will be magnetically drawn to the electrode and conveyed thence to the weld area as the electrode is advanced thereto.

3,047,709

ELECTRIC ARC TORCH

James A. Browning, Hanover, N.H., assignor to Thermal Dynamics Corporation, a corporation of New Hampshire

Filed Mar. 30, 1961, Ser. No. 99,403
4 Claims. (Cl. 219—75)



1. In an electric arc torch, at least one rotatable electrode, an arc passageway extending from said electrode

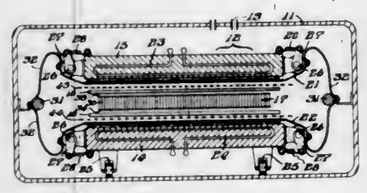
and having its axis parallel to and offset from the axis of rotation of said electrode, means for supplying cooling fluid under pressure to said torch, and means adapted to be driven by said fluid to rotate said electrode.

3,047,710

APPARATUS FOR BRAZING AND HEAT TREATING HONEYCOMB SANDWICH STRUCTURES

Donald C. Rowe, Glen Mills, Pa., assignor, by mesne assignments, to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Original application Oct. 24, 1958, Ser. No. 769,449, now Patent No. 3,011,926, dated Dec. 5, 1961. Divided and this application Sept. 29, 1960, Ser. No. 59,276
3 Claims. (Cl. 219—85)



1. Apparatus for brazing honeycomb sandwich structures, said apparatus comprising an open brazing fixture having top and bottom fixture plates for receiving therebetween a honeycomb sandwich structure comprising a metal honeycomb core between two thin metal sheets; and a vacuum chamber for receiving said brazing fixture and honeycomb sandwich structure, said brazing fixture including flat-surfaced cooling plates and flat strip heating elements positioned between said honeycomb sandwich structure and said top and bottom fixture plates; means for evacuating said chamber to form substantially a vacuum therein; a flexible metal pressure bag positioned immediately beneath said top fixture plate for maintaining a controlled positive pressure on said honeycomb sandwich structure sufficient to clamp said sandwich structure without crushing the core thereof; electrical means for generating high temperature heat in said heating elements for brazing said honeycomb structure; and means for passing refrigerant coolant through said coolant plates for rapidly cooling said honeycomb sandwich structure.

3,047,711

ELECTRIC WELDING SYSTEM

Harold J. Graham, Sharon, Mass., assignor, by mesne assignments, to Omark Industries, Inc., Portland, Oreg., a corporation of Oregon

Filed Sept. 8, 1958, Ser. No. 759,583
7 Claims. (Cl. 219—99)



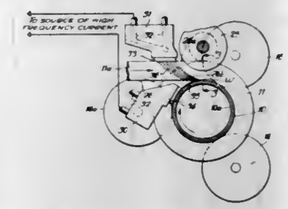
1. A method of pressurable arc welding to join two work-pieces which comprises the following steps: initially contacting the two work-pieces; applying welding current while maintaining the initial relative position of the two work-pieces to form an arc therebetween which burns off and melts adjacent metal portions thereof; pressing said work-pieces together to join them at said melted portions; and confining said arc and melted metal while regulating escape of gases by holding a refractory chamber throughout the welding around one work-piece at a slight distance from the other work-piece.

3,047,712

METHOD AND APPARATUS FOR WELDING STRIP-LIKE MATERIAL TO CURVED SURFACES

Jack Morris, Monsey, N.Y., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 23, 1961, Ser. No. 91,236
8 Claims. (Cl. 219—107)



1. Method of controlling the shape of an advancing metal strip while applying, bending and welding same on an edge thereof to an advancing metal surface which veers away from the direction of advance of the strip in approaching said surface, which method comprises applying the terminals of a source of high frequency current respectively to the strip and to said surface at points thereon in advance of the point of application of the strip to the surface, for heating the said edge and the opposed portion of said surface to welding temperature at a welding point where same come into contact, said current as applied to the strip being applied at the edge portion thereof opposite from its said first mentioned edge whereby the current flows from such opposite edge across on the surface of the strip to said first-mentioned edge thence along the latter to the weld point and thence from the weld point along on said metal surface portion to the other terminal of the current source, said current being of a frequency of the order of 50,000 cycles per second or higher and sufficient to heat and anneal portions of the strip along its said opposite edge, to a degree whereby said portions are readily stretched substantially and the shape thereof controlled during such bending thereof.

3,047,713

METHOD OF ARC WELDING ALUMINUM MEMBERS

James A. Liptak, E. 1331 23rd St., Spokane, Wash.

No Drawing. Filed Sept. 13, 1961, Ser. No. 137,740
13 Claims. (Cl. 219—118)

1. A method for arc welding of aluminum members having a thickness of at least about ¾ inch wherein an arc is established between said aluminum members and the terminal portion of a consumable aluminum filler metal wire electrode which is continuously fed into said arc and wherein an inert gaseous medium shields said arc, said method comprising the steps of

supplying, under an arc voltage, an arc welding current to the terminal portion of said electrode,

maintaining the current density of said current between about 12,000 and about 35,000 amperes per square inch of filler metal wire electrode cross-section,

maintaining said terminal portion of said electrode in a spaced relationship with said aluminum members during welding operation, and

(1) correlating

(*a*) said arc voltage and

(*b*) said arc current with

(i) said spaced relationship and with

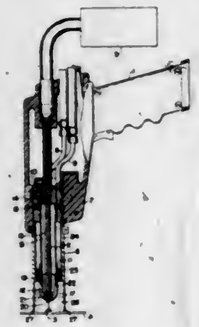
(ii) the rate of metal deposition and

(2) adjusting the rate of wire feed in response to variations in arc length in order to maintain and insure

(A) globular transfer of metal from said wire electrode to said aluminum members and

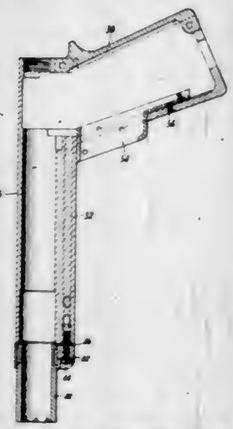
(B) an unstable arc having
(I) a crackling sound and
(II) a short length.

3,047,714
ARC WELDING APPARATUS
George R. Wepfer, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 12, 1959, Ser. No. 812,626
9 Claims. (Cl. 219—127)



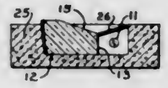
1. In a gas-shielded consumable electrode apparatus having an insulating handle and a front tubular water jacket defining an annular gas passage about a contact tube coupled to the handle and insulated from the water jacket, a gas cup releasably secured to the forward end of the water jacket to substantially close said gas passage and having radial gas ports communicating with said annular gas passage, said gas cup having an axial opening larger than the diameter of the electrode and aligned with said contact tube, an insulating medium disposed between the contact tube and the gas cup to insulate the gas cup and water jacket from the electrode and the contact tube, and a metallic tubular gas shield tightly encircling said water jacket and extending forwardly of the gas cup to engage the work area during a spot welding operation, the water jacket serving to dissipate the heat energy in said shield.

3,047,715
GAS SHIELDED ARC WELDING TORCH
Frank J. Pilia, West Orange, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed May 20, 1959, Ser. No. 814,473
3 Claims. (Cl. 219—127)



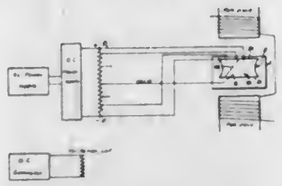
1. In a gas shielded arc welding torch, an outer shell comprising a barrel with a gas directing nozzle at the front of said barrel and a pistol grip at the rear of said barrel having an access opening in the back thereof; and an insert comprising an electrode holder tube adapted to receive an electrode contactor, said tube having an outer diameter to slide into the rear of said barrel while carrying the contactor on through said barrel to extend into said nozzle at the front thereof; said insert having a gas passage for supplying shielding gas to said nozzle, said insert having supply conduits secured thereto and extending laterally therefrom for supplying shielding gas to said insert passage and welding current to said contacting means, said conduits being slidable through said access opening into said pistol grip as said tube slides into said barrel.

3,047,716
LUMINAIRE
John P. Hoxie and Franklin M. Neal, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Jan. 31, 1961, Ser. No. 86,208
2 Claims. (Cl. 240—1.2)



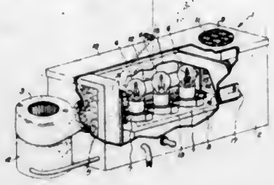
1. A luminaire for directing light through a range of low angles of elevation above a horizontal surface comprising a light source located below the level of said horizontal surface and a lens extending from slightly above said horizontal surface to a level silghtly below said light source, said lens comprising an entrance surface located on the same side of said lens as said light source positioned to receive light rays therefrom, an exit surface located on the same side of said lens as said light source and at the top of said lens and forming an acute angle with said horizontial surface when measured in the direction away from said light source, and a reflecting surface located at the side of said lens opposite said light source, said reflecting surface being curved in both horizontal and vertical directions, said lens spreading light from said source vertically through angles of elevation above said horizontal surface varying continuously from a maximum for light emerging near the bottom of said exit surface to a minimum for light emerging near the top thereof.

3,047,717
FOCUSING MASS SPECTROMETER
Giichi Iwata, 1209 Sugano, Ichiwaka City, Japan
Filed Mar. 11, 1957, Ser. No. 645,282
Claims priority, application Japan Mar. 31, 1956
5 Claims. (Cl. 250—41.9)



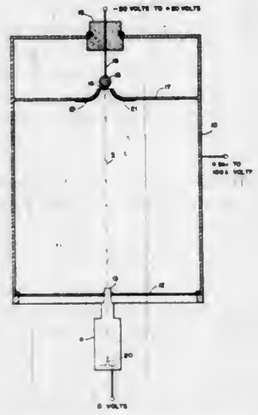
3. A mass spectrometer comprising in combination an evacuated tank, means to produce a hyperboloidal electric field within said tank including an electrode, means to produce a uniform magnetic field in parallel with the symmetrical axis of said electrode and an ion source and an ion current detector within said electric field.

3,047,718
NEGATIVE ION GENERATOR
David G. Fleming, Cleveland Heights, and Sylvester K. Guth, South Euclid, Ohio, assignors to General Electric Company, a corporation of New York
Filed Nov. 24, 1959, Ser. No. 855,156
6 Claims. (Cl. 250—43)



1. A negative ion generator comprising an ultraviolet lamp producing 2537 A. radiation, a target surface of relatively low work function metal which oxidizes in air at an inntermediate rate, said target surface being located for irradiation by said lamp, means adapted to convenient replacement of said target surface as it becomes coated with a film inhibitive of electron emission, and means for blowing air across said target surface.

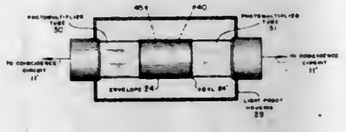
3,047,719
BALL MICROSCOPE
Ludwig J. Mayer, St. Paul, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Sept. 16, 1959, Ser. No. 840,374
8 Claims. (Cl. 250—49.5)



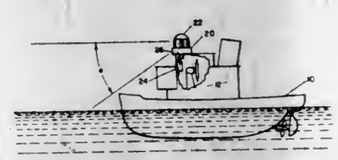
1. An electron mirror microscope comprising an electron gun, a curved reflecting and magnifying mirror-specimen, and a luminescent screen through which said electron gun projects, said electron gun, mirro-specimen and luminescent screen means being arranged whereby electrons emitted by the electron gun will travel to and be reflected by the mirror-specimen onto the luminescent screen means to produce a magnified image.

3,047,720
HELIUM 3 SCINTILLATION NEUTRON DETECTOR
James A. Rickard, Bellaire, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 7, 1956, Ser. No. 626,882
3 Claims. (Cl. 250—71.5)

1. A helium 3 scintillation neutron detector adaptable for use in well logging comprising two spaced apart photomultipliers, each adapted to translate light rays into electrical pulses; a plurality of spaced apart scintillating means arranged between said photomultipliers adapted to generate light rays upon interaction with charged particles; the space between said scintillating means containing helium 3 gas, said gas producing upon reaction with neutrons an elastic scatter reaction product comprising one charged particle, the recoiling nucleus helium 3 and an (n, p) reaction product comprising two charged particles, the triton H^3 and a secondary particle, the proton; the surface of each of said scintillating means being selectively coated with a reflecting substance opaque to light such that said scintillating means are optically isolated from each other and adjacent scintillating means are optically coupled to different photomultipliers; said photomultipliers being arranged for coincident counting whereby ionizations resulting from (n, p) reactions are distinguished from elastic scatter reactions by simultaneously detecting tritons in one scintillating means and protons in an adjacent scintillating means in order to obtain good neutron spectra.



3,047,721
DIRECTIONAL GAMMA RAY DETECTION UNIT
Theodore R. Folsom, La Jolla, and John D. Isaacs, Encinitas, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 1, 1959, Ser. No. 837,559
6 Claims. (Cl. 250—83.3)



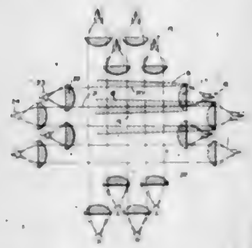
1. A gamma ray detection unit for use on radioactive contaminated land or water-borne vehicles for directionally indicating a source of gamma ray radiation in the two forward quarters of the horizon with respect to said vehicle and for indicating the present and intensity of radioactive fallout on said vehicle comprising, in combination:
a radiation detector unit consisting of two gamma ray sensing elements, said unit being mounted well forward and high on said vehicle;
an indicating means for registering the presence of radioactive radiation, said indicating means being located at a point in said vehicle remote from said detector unit;
electric cable means connecting said detector unit to said indicating means;
comparatively massive shielding means associated with said sensing elements whereby each of said elements is responsive only to a source of radioactive radiation situated in one forward quadrant of the horizon and is not responsive to radioactive radiations emanating from said vehicle; and
a plurality of radiation permeable cover means covering said sensing elements and said shielding.

3,047,722
ELECTRIC APPARATUS
Balthasar H. Pinckaers, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 24, 1959, Ser. No. 835,613
6 Claims. (Cl. 250—83.6)



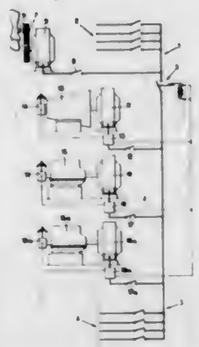
1. Electric apparatus, comprising, a nonselfquenching condition sensor of the type having a pair of electrodes disposed in an ionizable gaseous medium, impedance means, a source of operating voltage, circuit means connecting said condition sensor, said impedance means and said source of voltage in circuit to provide an operating voltage for said condition sensor, said condition sensor being effective upon being subjected to a condition to which it is sensitive to become conductive and to remain conductive until the voltage applied thereto is reduced at least to the extinction potential of the condition sensor; a bistable circuit having an input connected to said condition sensor to be controlled thereby and having an output connected to said impedance means, said bistable circuit being effective when said condition sensor becomes conductive to assume a stable state of operation in which a voltage is developed across said impedance means in opposition to said source of operating voltage to thereby cause said condition sensor to become nonconductive; and timing means connected to control said bistable circuit and to cause said bistable circuit to assume a further stable state of operation in which said voltage is no longer developed across said impedance means and said condition sensor is again rendered operative.

3,047,723
PHOTOELECTRIC HIT DETECTOR SYSTEM
Phillip M. Knapp, Timonium, Md., assignor to Aircraft Armaments, Inc., Baltimore, Md., a corporation of Maryland
Filed Dec. 31, 1958, Ser. No. 784,155
8 Claims. (Cl. 250—222)



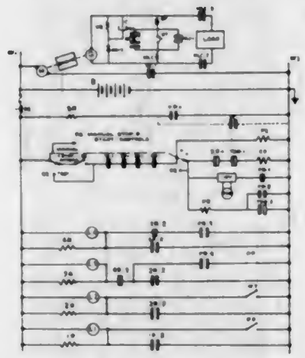
1. A hit detecting system comprising a frame having coordinate axes defining a plane adapted to be pierced by a projectile, a plurality of light sources for forming a plurality of light beams, a plurality of receivers associated with said sources for forming a plurality of detecting units, detector units on each unit responsive to the interruption of its associated light beam by a projectile for producing a signal, and means mounting said units on each axis so that the piercing of said plane by said projectile will interrupt at least a portion of at least one beam on each axis whereby a signal will be produced by at least one unit on each axis.

3,047,724
DEVICE FOR SUPPLYING A SHIP WITH ELECTRICAL ENERGY
Jean Marie Marcel Neufville, 17 Rue Borghese, and Jean Emile Trottier, 128 Ave. du Roule, both of Neuilly-sur-Seine, France
Filed Jan. 6, 1960, Ser. No. 2,092
Claims priority, application Luxembourg Jan. 9, 1959
7 Claims. (Cl. 290—4)



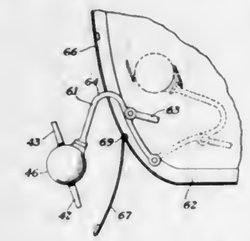
1. An arrangement for supplying an electrical load in part from a first alternator driven at a varying speed which cannot conveniently be regulated to suit the requirements of the load, said arrangement comprising a second alternator connected to supply said load in parallel with said first alternator, means for driving said second alternator, a high stability governor connected to control the speed-load characteristic of said driving means, and means responsive to the power delivered by one of said alternators connected to adjust said governor and thereby maintain the power delivered by said one alternator substantially constant.

3,047,725
ENGINE STARTING CONTROL SYSTEM
Frank P. Spinelli, Teaneck, and René Castenschiold, New Vernon, N.J., assignors to Automatic Switch Co., Florham Park, N.J., a corporation of New York
Filed Feb. 23, 1960, Ser. No. 10,371
6 Claims. (Cl. 290—36)



1. In a control system for an engine having a cranking motor and being connected in driving relation to a generator: a timer, a motor for driving said timer through a complete pattern of operation which defines repetitive operating intervals and then restores the timer to its start position after an accurate total interval, a cranking circuit including a first switch actuated by said timer to engage and disengage once during each of a series of said repetitive intervals, cranking control means in said circuit responsive to the operation of said switch for connecting the cranking motor to a source of power, a circuit including a control relay and a switch for energizing it responsive to generator speed, switches actuated by said control relay including one which opens said cranking circuit thus de-energizing the cranking control means without interrupting the pattern of operation of the timer, a circuit for said timer-driving motor, a circuit including a delayed-action relay and a switch for energizing it, said last-mentioned switch being a second switch actuated by said timer upon completion of its pattern of operation, and a switch actuated by said delayed-action relay for opening said motor circuit to discontinue timer operation.

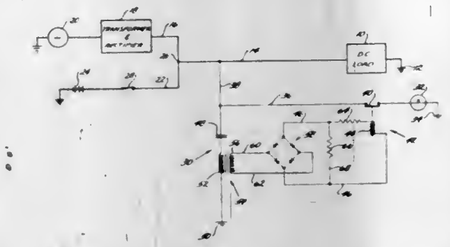
3,047,726
SWINGING PROPELLER BLADE
Elmer P. Warnken, Cincinnati, Ohio, assignor, by mesne assignments, to Studebaker-Packard Corporation, South Bend, Ind., a corporation of Michigan
Filed May 28, 1957, Ser. No. 662,232
2 Claims. (Cl. 290—55)



1. In combination with an aircraft, a propeller driven generator which comprises a body, means for mounting the body for movement into and out of the aircraft a hub rotatably mounted on said body, a plurality of circumferentially spaced hinges mounted on said hub, and a propeller blade pivotally mounted on each of said hinges, the axis of the hinge of each blade extending chord-wise at the hub end of the blade and being skewed with relation to the hub, the blade swinging freely on the hinge on opposite sides of an outstanding extended position, the propeller blades being adapted to swing when the generator enters an air stream adjacent the aircraft, centrifugal force holding the blades in extended position when the blades are driven by the air stream.

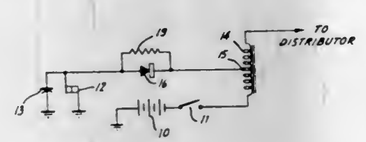
3,047,727
ELECTRICAL POWER SUPPLY SYSTEM
Raymond J. McAllise, Granby, Conn., assignor to The Kaman Aircraft Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed Feb. 29, 1960, Ser. No. 11,736
5 Claims. (Cl. 307—2)

5. In an electrical system, the combination of a load which requires a direct current supply voltage, an alternating current power source connected in circuit with the load, first voltage rectifying means connected in circuit with said power source and with the load to provide a primary direct current supply voltage for the load, said primary direct current supply voltage having a significant ripple component, a battery conected in circuit with the load and in parallel with said alternating current power source and said first voltage rectifying means to provide a secondary direct current supply voltage for the load, a signal light, a switch connected in circuit with said battery and said signal light and adapted to be closed and opened respectively to energize and de-energize said light, a relay coil operatively associated with said switch and adapted to be energized and de-energized respectively to open and close said switch, a condenser connected in circuit with said alternating current power source and battery and said first rectifying means so as to provide a signal voltage which comprises



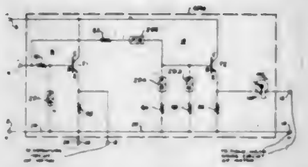
only the aforesaid ripple component of said primary supply voltage, a transformer connected with said condenser to amplify said signal voltage, and second voltage rectifying means connected in circuit with said transformer and said relay coil so as to provide an amplified direct current signal voltage across said relay coil, said relay coil thus being energized and de-energized in response to changes in said signal voltage whereby to operate said switch and signal light to indicate the presence and absence of said primary supply voltage.

3,047,728
IGNITION SYSTEM
Walter C. Martin, Feasterville, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed June 22, 1959, Ser. No. 822,094
4 Claims. (Cl. 307—10)



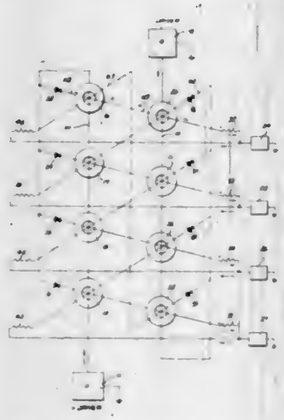
1. In an ignition system, step-up transformer means comprising a primary winding and a secondary winding, a secondary circuit including said secondary winding, a primary circuit including said primary winding, a battery in said primary circuit, breaker points in said primary circuit, which points are recurrently closed and opened whereby energy is stored in said transformer means when the breaker points are closed and is released to said secondary circuit when the breaker points open, a condenser connected across said breaker points to reduce arcing thereacross when the breaker points open, said primary winding and said condenser inherently constituting a resonant combination and tending to produce deleterious oscillations when the breaker points open, a unilaterally-conductive device serially included in said primary circuit and arranged to permit free flow of battery current in one direction but to prevent reverse current flow through said device, and a resistive path in shunt with said device, said resistive path permitting reverse current flow but having a resistance value effective to suppress said oscillations.

3,047,729
VOLTAGE CONTROL SYSTEM
Norman L. Peterson, Wauwatosa, and Charles E. Smith, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,299
14 Claims. (Cl. 307—18)



1. In a voltage control system for providing two diversely controlled output voltages in response to an adjustable input voltage; a source of linearly adjustable input voltage; first output voltage control means comprising means responsive to said input voltage in a first range of adjustment thereof up to a predetermined magnitude for providing a first output voltage which varies in magnitude linearly in proportion to change in magnitude of said input voltage, and semi-conductor means responsive to said input voltage at said predetermined magnitude for maintaining the magnitude of said first output voltage substantially constant at a value proportional to said predetermined magnitude of input voltage as said input voltage is adjusted above said predetermined magnitude; and second output voltage control means comprising means responsive to said input voltage at said predetermined magnitude for initiating control of a second output voltage, and means responsive to said input voltage in a second range of adjustment thereof above said predetermined magnitude for causing the magnitude of said second output voltage to vary non-linearly in a relation whereby successive increments of input voltage magnitude afford respective increments of said second output voltage of successively decreasing magnitude proportionality and successive decrements of input voltage magnitude afford respective decrements of said second output voltage of successively increasing magnitude proportionality.

3,047,730
BIPOLAR CURRENT STEERING SWITCH
Joseph Reese Brown, Jr., Pasadena, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 10, 1960, Ser. No. 61,432
3 Claims. (Cl. 307—88)

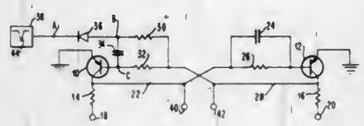


1. A bipolar magnetic switch circuit comprising first and second groups of magnetic cores having a square hysteresis loop characteristic, a drive winding on each core of both groups, a first current pulse source of one polarity connected in series with the drive windings of the first group of cores, a second current pulse source of opposite polaity connected in series with the drive windings of the second group of cores, the pulse sources being connected to a common return, first and second driven windings on each core, a first group of output circuits, each output circuit of the first group including a diode, a first driven winding of a core in the first group of cores and a second driven winding of a core in the second group of cores connected in series, the first group of circuits being connected at one end to the first current pulse source through the series connected first group of drive windings, a second group of output cicuits, each circuit of the second group including a diode, a first driven winding of a core in the second group of cores and a second driven winding of a core in the first group of cores connected in series, the second group of output circuits being connected at one end to the second current pulse source through the series connected second group of drive windings, a plurality of load circuits connected at one end to the common return and at the other end to one of the output circuits in both the first and second group of output circuits, the diodes in the two output circuits associated with each load circuit being arranged to pass current in opposite directions through the associated load circuit.

3,047,731
MAGNETIC CORE CIRCUIT
Eugene Preston Hamilton, Richmond, Raymond Manuel Trebino, Martinez, and Harold Raymond Dell, Palo Alto, Calif., assignors, by mesne assignments, to Smith-Corona Marchant Inc., a corporation of New York
Filed July 14, 1958, Ser. No. 748,287
7 Claims. (Cl. 307—88)

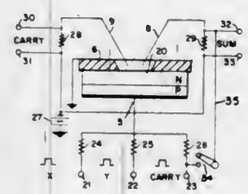
1. A regenerative monostable circuit, comprising: a saturable magnetic core in a normal state of magnetization; a source of trigger signals; first driving means magnetically coupled with said core and responsive solely to a trigger signal to drive said core to a state of magnetization opposite said normal state; an input circuit connected solely between said source of trigger signals and said first driving means to couple trigger signals solely to said first driving means; second driving means magnetically coupled with said core and responsive to the cessation of magnetic flux change from said normal state to said opposite state in said core for driving said core to said normal state of magnetization; first electromotive coupling means coupling said first driving means and said core sufficiently to said second driving means to control said second driving means to drive said core to said normal state of magnetization; and second electromotive coupling means coupling said second driving means and said core to said first driving means to a degree insufficient to control said first driving means to drive said core to said state of magnetization opposite said normal state.

3,047,732
FLIP-FLOP RESPONSIVE TO LEADING AND TRAILING TRANSIENTS OF SUCCESSIVE INPUT PULSES EMPLOYING DIODE, R-C COMBINATION
John W. Skerritt, Kingston, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,115
9 Claims. (Cl. 307—88.5)



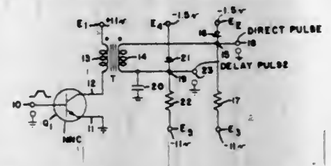
1. A multivibrator circuit comprising a pair of cross coupled switching devices, one of said devices comprising means adapted to supply a reference potential having first and second values corresponding to different conductive states of said one device, steering means connected to the input of the other said switching device and comprising an asymmetrically conductive device and an alternating current coupling-direct current isolating device, means communicating said reference potential to said steering means, signal source means connected to said steering means and adapted to provide signal pulses of the same polarity as said reference potential and of larger amplitude than the same, said steering means being operable to change the conductive state of said other switching device by and upon each excursion of said signal pulses beyond the amplitude value of said reference potential, said steering means being sensitive to the leading transient and the trailing transient, alternately, of successive ones of said signal pulses.

3,047,733
MULTIPLE OUTPUT SEMICONDUCTOR LOGICAL DEVICE
Richard F. Rutz, Fishkill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Continuation of application Ser. No. 511,047, May 25, 1955. This application Mar. 12, 1957, Ser. No. 645,627
23 Claims. (Cl. 307—88.5)



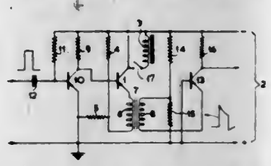
1. A semi-conductor device comprising a body of semiconductor material, a junction emitter to said body, an ohmic base connection to said body and at least two high amplification factor collectors one of which is favored for low emitter currents, the spacing from said emitter to each of said collectors being within the diffusion distance of the average excess carrier during the carrier lifetime of said semi-conductor body and the spacing between each of said collectors and the nearest adjacent collector being such that conduction in said nearest adjacent collector, at a time when one of said collectors is in conduction, is operable to cut off conduction in said one collector.

3,047,734
PRODUCTION OF DIRECT AND DELAYED PULSES IN RESPECTIVE CIRCUITS EACH HAVING LEVEL-SETTING CLAMPS
George L. Johnson, East Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 14, 1957, Ser. No. 678,120
5 Claims. (Cl. 307—88.5)



2. A pulse producing circuit comprising a transistor having at least base, emitter, and collector electrodes; a pulse transformer having a primary and a secondary winding; a first means to apply unidirectional potential of fixed magnitude; one end of said primary winding being connected to said means to apply said first source of potential, the other end of said primary winding being connected to the collector of said transistor; means connecting the emitter of said transistor to ground, and means to apply an input pulse to the base of said transistor; means to apply second and means to apply third sources of unidirectional potential of fixed magnitude respectively; a first unidirectionally conducting device and a first resistor connected in series between said means to apply second and said means to apply third unidirectional potentials, a first end of said secondary winding being directly connected to the junction point of said first unidirectionally conducting device and said first resistor; a second unidirectionally conducting device and a second resistor connected in series between said means to apply second and said means to apply third unidirectional potentials, the second end of said secondary winding being directly connected to the junction point of said second unidirectionally conducting device and said second resistor; a capacitor connected between said second end of said secondary winding and ground; and first and second pulse output terminals connected respectively to said first and second ends of said secondary winding.

3,047,735
PULSE WIDTH DISCRIMINATOR EMPLOYING A TRANSISTOR WHEREIN THE BIAS IS CONTROLLED BY AN INTEGRATING CIRCUIT
Gerardus Rosier, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 31, 1957, Ser. No. 693,573
Claims priority, application Germany Nov. 3, 1956
3 Claims. (Cl. 307—88.5)



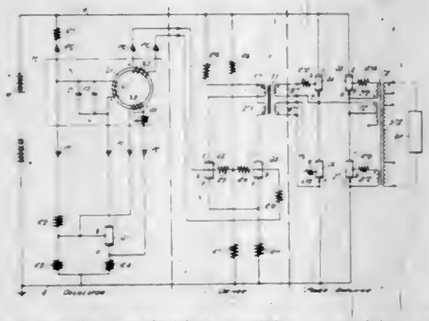
1. A selective circuit arrangement for discriminating between a first series of pulses and a second series of pulses, said first series having a ratio of pulse duration to pulse interval larger than a predetermined value and said second series having said ratio less than said predetermined value, said circuit comprising at least one transistor having a base electrode, an emitter electrode and a collector electrode, means for applying input pulses between said base electrode and a point of constant potential, bias voltage means comprising a voltage divider connected between said base and emitter electrodes, said bias

voltage means having a polarity and magnitude to cut off said transistor during a pulse interval, an inductance included in the emitter-collector circuit of said transistor, said inductance forming an integrating network with the impedance of the collector-emitter circuit of the transistor and said voltage divider, said inductance, said impedance and the resistance of said voltage divider having a value such that the time constant of said integrating network is greater than the repetition period of any of said series of pulses, the integrated voltage set up across said inductance acting to control the conductivity of said transistor in response to said ratio of pulse duration to pulse interval, and a threshold device having input and output terminals, means for deriving pulses from the collector-emitter circuit of the transistor and for applying them to the input terminals of said threshold device, said derived pulses having an amplitude varying with said integrated voltage, said threshold device blocking the transmission of derived pulses having an amplitude smaller than a predetermined value.

3,047,736
TRANSISTOR SWITCHING AMPLIFIER

Warren J. Dornhoefer, Groton, Mass., assignor to The Warren Manufacturing Company, Inc., Littleton, Mass., a corporation of Massachusetts

Filed Dec. 2, 1957, Ser. No. 700,147
4 Claims. (Cl. 307—88.5)



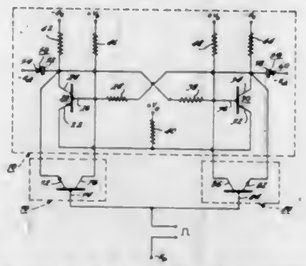
1. A transistor switching amplifier comprising two direct-current buses for supplying energizing current, two pairs of junction-type switching transistors each having the respective collector-emitter circuits of its two transistors serially connected with an intermediate collector-emitter connection extending between the two transistors, each pair of said serially connected transistors being connected across said two buses and all four transistors having the same poling relative to said two buses, each of said four transistors having an emitter-base control circuit, a signal input transformer having a primary signal circuit means and having two secondary windings connected in said respective control circuits of the two transistors of one of said pairs for alternate switching thereof, an output transformer having a primary winding connected across said intermediate collector-emitter connections and having a secondary main winding to furnish square-wave output current and two secondary feedback windings connected in said respective other two control circuits for current limit control, whereby the switching amplifier is protected from damage due to excessive output current.

3,047,737
TRANSISTOR MULTIVIBRATOR CIRCUIT WITH TRANSISTOR GATING MEANS

Louis Kolodin, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Jan. 16, 1958, Ser. No. 709,274
8 Claims. (Cl. 307—88.5)

4. Transistor circuitry comprising a first pair of transistors coupled to operate as a bistable multivibrator upon the application of suitable operating potentials; a second pair of gating transistors; means for applying pulses to said gating transistors; and direct current conducting means connecting each of said pair of gating transistors

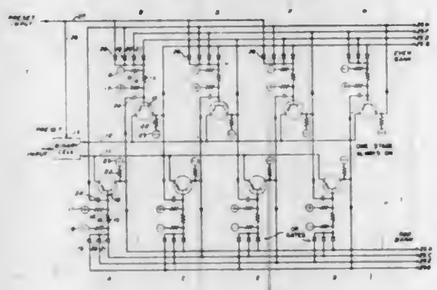


to a different one of said first pair of transistors, said pair of gating transistors being adapted to trigger said multivibrator from one stable state to the other stable state in response to each applied pulse.

3,047,738
RING COUNTER PULSE DISTRIBUTOR USING A SINGLE TWO-STATE DEVICE PER STAGE AND A SOURCE OF PHASE-OPPOSED ALTERNATING VOLTAGES FOR DRIVING COMMON PUSH-PULL LINES

Charles W. Haas, Jr., Morris Plains, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 12, 1958, Ser. No. 741,491
15 Claims. (Cl. 307—88.5)



1. A ring counter comprising a plurality of two-state devices arranged in two banks, each of said devices having an input terminal, an output terminal and a control terminal and adapted to assume and be maintained in either of said two states solely in accordance with the potential between said input and control terminals, bistable means responsive to input pulses for producing a pair of phase-opposed alternating voltages and having a control means which when energized causes said bistable means to assume a particular one of its two states, means responsive to one of said alternating voltages for applying to said input terminals of said devices in one of said banks voltages which have amplitudes at least equal to a predetermined amplitude during substantially all of each of the alternate intervals between said input pulses and amplitudes less than said predetermined amplitude during substantially all of each of the remaining intervals between said input pulses, means responsive to the other of said alternating voltages for applying to said input terminals of said devices in the other of said banks voltages which have amplitudes at least equal to said predetermined amplitude during substantially all of each of said remaining intervals between said input pulses and amplitudes less than said predetermined amplitude during substantially all of each of said alternate intervals between said input pulses, means connecting the output terminal of at least one of said devices to the control terminal of its succeeding device in the opposite bank, means connecting the control terminal of at least one of said devices to the output terminals of the remaining devices in the same bank, and means for applying pulses to both the control means of said bistable means and the control terminal of at least one of said devices.

3,047,739
SHIFT REGISTER UTILIZING FREE CHARGE CARRIER STORAGE OF CASCADED DELAY NETWORK COUPLED TRANSISTORS

Heine Andries Rodrigues de Miranda, Mollenhutseweg, Nijmegen, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 12, 1958, Ser. No. 741,497
Claims priority, application Netherlands June 13, 1957
13 Claims. (Cl. 307—88.5)

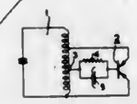


1. A circuit arrangement comprising a plurality of transistors connected in cascade and acting as memory elements, each transistor having emitter, base and collector electrodes and exhibiting a collector cut-off voltage at which the current path from the emitter to the base electrode is at least partially cut off and each having a load impedance associated therewith, the emitter of each transistor being connected to a point of constant potential through its associated load impedance, a circuit connection comprising a delay network between the base of each transistor and the emitter of the preceding transistor, a source of voltage pulses connected to and simultaneously supplying the collector electrodes of all the transistors with voltage pulses having an amplitude greater than said collector cut-off voltage, whereby electrical energy is stored in a corresponding delay network upon the production of a voltage pulse through the load impedance of a transistor, said electrical energy producing a substantial number of free charge carriers in the base-zone of the succeeding transistor after termination of said voltage pulse.

3,047,740
CIRCUIT ARRANGEMENT FOR LIMITING ELECTRICAL SIGNAL OSCILLATIONS

Johannes Meijer Cluwen, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 5, 1958, Ser. No. 778,360
Claims priority, application Germany Jan. 7, 1958
4 Claims. (Cl. 307—88.5)

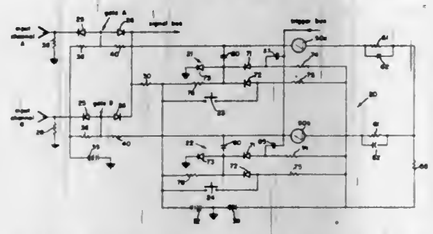


1. A circuit arrangement for suppressing amplitude variations of electrical signal oscillations comprising a parallel resonant circuit, a transistor having base, emitter and collector electrodes, means connecting the emitter-collector path of said transistor in parallel with said parallel resonant circuit, and means comprising a resistor and capacitor connected in parallel from said resonant circuit to the base of said transistor.

3,047,741
MULTIPLE CHANNEL ELECTRONIC SWITCHING CIRCUIT

Robert G. Snow, San Francisco, Calif., assignor to Mechron, San Francisco, Calif., a corporation of California

Filed May 1, 1959, Ser. No. 810,490
3 Claims. (Cl. 307—88.5)

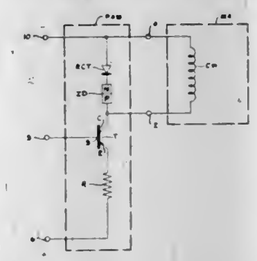


1. A control device for switching voltage to one of a plurality of output lines from a fixed voltage source comprising: a plurality of NPNP diodes each connected between the voltage source and one of the output lines; bias means to supply sufficient current flow through a first said diode to hold said first diode in a low impedance condition and to bias all said NPNP diodes with a first voltage being insufficient to switch the NPNP diodes from a condition of high impedance to a condition of low impedance; means to pulse a second NPNP diode with sufficient voltage to supplement said biasing voltage to change the diode from the high impedance condition to the low impedance condition; means connected to said NPNP diodes and said first voltage supply to cause the majority of current to pass through the second NPNP diode at the instant when the second NPNP diode changes to the low impedance condition to lower the current flow through the first NPNP diode sufficiently to drop the current flow through said first NPNP diode to a value below the current required to maintain the first NPNP diode in the low impedance condition.

3,047,742
TRANSISTOR AMPLIFIER SYSTEM FOR AN INDUCTIVE LOAD WITH TRANSISTOR PROTECTION MEANS

Donald J. Greening, Thiensville, and Charles E. Smith, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Aug. 17, 1959, Ser. No. 834,280
2 Claims. (Cl. 307—88.5)



1. The combination with a source of constant direct current potential, an inductive load, a source of variable direct current potential, a transistor having its emitter collector circuit connected across said constant potential source in series with said load and having its base connected to said variable potential source, of a Zener diode and a half-wave rectifier connected in series and together in parallel across said load to provide a stored energy dissipation path for said load which bypasses said transistor whenever the induced voltage across said load exceeds

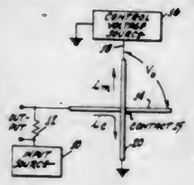
the critical voltage of said diode, said rectifier being poled to prevent current flow through it and said diode whenever the applied voltage across said load as determined by the current flow through said transistor exceeds the induced voltage across said load.

3,047,743
SUPERCONDUCTIVE CIRCUIT ELEMENT EXHIBITING MULTI-STATE CHARACTERISTICS
Andrew E. Brennemann, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 18, 1959, Ser. No. 840,824
12 Claims. (Cl. 307—88.5)



1. A superconductive circuit comprising; a gate conductor and at least one control conductor; said gate conductor including a plurality of first and second sections consisting of the same superconductive material; each of said first sections having a first value of critical current; and each of said second sections having a second value of critical current greater than said first value.

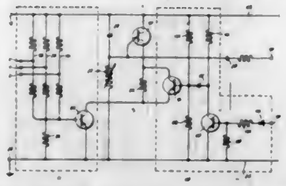
3,047,744
CRYOELECTRIC CIRCUITS EMPLOYING SUPERCONDUCTIVE CONTACT BETWEEN TWO SUPERCONDUCTIVE ELEMENTS
Jacques I. Pankove, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 10, 1959, Ser. No. 852,010
30 Claims. (Cl. 307—88.5)



1. In combination, a superconducting contact between adjacent superconducting elements, which quenches at a lower value of current flow through the contact than required to quench either of said elements; and means for increasing the contact resistance comprising means for applying to one of said elements a control current which passes adjacent to the contact so that the magnetic field due to the control current can quench the superconductivity of the contact.

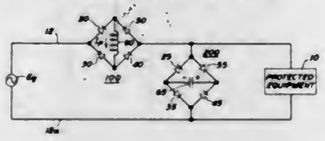
3,047,745
SEMICONDUCTOR TIME DELAY CIRCUITS UTILIZING THE SWITCHING CHARACTERISTICS OF UNIJUNCTION TRANSISTORS
Gerald F. Frank, Bloomington, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 15, 1959, Ser. No. 859,813
6 Claims. (Cl. 307—88.5)

6. A time delay circuit comprising; a unijunction transistor having an emitter electrode and two base electrodes, means including a switch for applying an electric potential across the base electrodes of said transistor to provide said transistor with a predetermined electrical characteristic, an RC timing circuit including a resistor and a capacitor connected in series relation to have applied thereacross an electric potential, said capacitor being connected between the emitter and one of the base electrodes of said transistor to be charged through said resistor from electric potential applied across the series connected resistor and capacitor, said resistor having a resistance value too great to supply sufficient emitter current to convert the emitter electrode of the transistor to a low impedance



condition, and pulse generating means operable during charging of said capacitor for periodically and momentarily reducing the interbase potential of said transistor thereby to permit the charge on said capacitor to support a peak point discharge current through said emitter electrode.
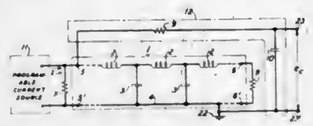
3,047,746
SURGE SUPPRESSION FOR POWER SUPPLIES
Eugene A. Berkery, Osborneville, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 8, 1959, Ser. No. 858,187
6 Claims. (Cl. 307—93)



1. A source of an input wave of regular predetermined shape susceptible to random instantaneous increases in maximum amplitude, a load connected to said source, circuit means continuously connected in series with said load and said input which after the period of time required to reach steady-state conditions presents a relatively small impedance to said input wave if no random instantaneous increase in the maximum amplitude of said input wave form occurs, said circuit means adapted to present a relatively large impedance to said input wave during the portions of time that any random instantaneous increase in the maximum amplitude of said input wave occurs, said circuit means comprising a bridge circuit having a diode in each branch, one pair of diametrically opposed terminals of said bridge circuit being connected in series with said load and said input and the other pair of diametrically opposed terminals of said bridge circuit having an inductor connected thereacross.

3,047,747
FUNCTION GENERATORS
Wilbur H. Highleyman, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 24, 1959, Ser. No. 835,586
12 Claims. (Cl. 307—108)

6. An electric circuit for generating an output voltage in response to an input current comprising an integrating circuit including an integrating element; a first resistance element; a second resistance element; a delay network coupling said first and second resistance elements; means for simultaneously applying a current step to said integrating circuit, said first resistance element, and said delay network; and a third resistance element included in said integrating circuit, said third resistance element being of an ohmic value sufficient to permit the voltage across said integrating element to change to the voltage level appearing across said first and second resistance ele-



ments at a time interval after said current step is applied to twice the time necessary for an energy wave initiated by said current step to propagate in said delay network from said first to said second resistance elements.

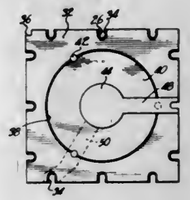
3,047,748
FRICTION CHARGERS
Ole G. Landsverk, Glendale, Zenonas Glodenis, Los Angeles, and Delbert L. Merriner, Glendale, Calif., assignors to Landsverk Electrometer Company, Glendale, Calif., a corporation of California
Filed Mar. 30, 1959, Ser. No. 803,029
14 Claims. (Cl. 310—7)



5. A friction charger which includes: a rotatably mounted rotor having a surface of revolution, said surface being formed of a first highly non-conductive material; a body of a second material resiliently biased against a part of said surface, said second material being highly non-conductive and differing from said first material; a conductor in contact with said body of the second material at one side thereof, said conductor resiliently engaging the surface of said rotor at one side of said body of a second material; a body of a third material resiliently biased against another part of said surface, said third material being conductive and being different from said first and said second materials, said bodies of second and third materials being disposed with respect to said rotor so that an area of said rotor first contacts one of said bodies and then the other of said bodies as said rotor is rotated in one direction; and a conductor resiliently engaging said body of a third material so as to convey electrical charges from said surface of said rotor through said body of a third material.

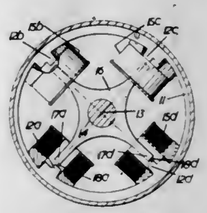
3,047,749
MINIATURIZED PIEZOELECTRIC CRYSTAL APPARATUS AND METHOD OF MAKING SAME
George F. Fisher, Parkville, Mo., assignor to Midland Manufacturing Co., Inc., Kansas City, Kans., a corporation of Kansas
Filed Aug. 5, 1959, Ser. No. 831,877
8 Claims. (Cl. 310—9.4)

1. Miniaturized piezoelectrical crystal apparatus comprising: three relatively thin, electrically nonconductive wafers including a central wafer and a pair of outer wafers, said wafers being provided with a plurality of aligned notches in the outer edges thereof, said central wafer being provided with a circular opening therethrough disposed generally centrally thereof; a relatively thin, circular, quartz, piezoelectric element of lesser thickness than said central wafer and of lesser diameter than said opening disposed entirely within the latter; means for supporting said element for piezoelectric vibration within



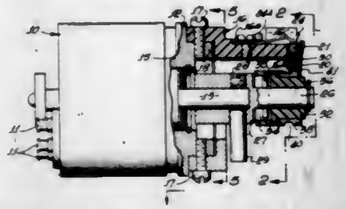
said opening; electrically conductive, electrode structure for each major face respectively of said element; means for holding said wafers in superimposed relationship with said central wafer between and spaced from said outer wafers; and electrically conductive means for each of said structures respectively disposed between said central wafer and a corresponding one of said outer wafers and extending from a zone of electrical contact with the corresponding structure outwardly to an edge of a wafer.

3,047,750
TORQUE MOTORS HAVING A RESTRICTED RANGE OF ANGULAR MOVEMENT
Kenneth Robson Brown, Wilkieston, Kirknewton, Scotland, assignor to Ferranti, Limited, Hollinwood, England, a company of United Kingdom of Great Britain and Northern Ireland
Filed Mar. 9, 1959, Ser. No. 798,091
Claims priority, application Great Britain Mar. 13, 1958
5 Claims. (Cl. 310—38)



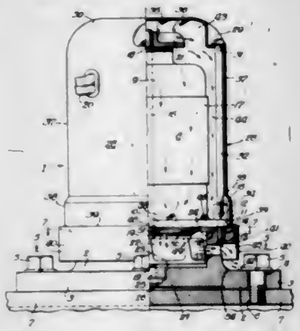
1. A torque motor for a restricted range of angular movement including a stator having a plurality of salient stator poles extending radially inwardly toward the axis of the motor, an unwound rotor having a like plurality of poles for co-operation with the stator poles, each to each, the end portion at least of each rotor pole being elongated in the radial direction toward the co-operating stator pole, and for each rotor pole and its co-operating stator pole a winding fixed with respect to the stator pole and extending over said end portion of the rotor pole in surrounding relationship thereto, the inner dimensions of the winding being such as to allow the angular movement of the rotor pole over said range within said winding, the respective lengths in the radial direction of each rotor pole and the co-operating stator pole being such as to provide an airgap between them lying closely adjacent to that end of the associated winding which is remote from the rotor axis, and to provide the maximum torque for a given radial length of said airgap, a given value of the energising power, and given overall dimensions of the motor.

3,047,751
MOTOR-POTENTIOMETER ASSEMBLY
Harold R. Hudson, Santa Monica, Calif., assignor to Molectronics Corporation, a corporation of California
Filed May 4, 1959, Ser. No. 810,744
9 Claims. (Cl. 310—72)



1. A motor and potentiometer assembly including a motor having a casing, an armature shaft rotatably mounted in said casing and extending outwardly thereof, said casing having an annular shouldered portion coaxial with the axis of said shaft, an insulated member having a cylindrical portion with an integrally formed semi-cylindrical portion, said cylindrical portion being mounted on said shouldered portion, a resistance strip mounted on said semi-cylindrical portion, said shaft having an extension which is rotatably supported solely by said casing and a wiper arm mounted on said extension for rotation therewith and contacting said resistance strip.

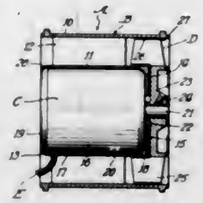
3,047,752
AIR COOLED MOTOR VIBRATOR
Edwin F. Peterson, P.O. Box 151, Neponset, Ill.
Filed June 11, 1959, Ser. No. 819,595
20 Claims. (Cl. 310—81)



1. A vibration inducing device comprising a securing base, a self-contained motor mounted upon said base, a shroud connected with said base to completely enclose said motor between said base and shroud, air circulating means, said motor driving said air circulating means connected therewith to move the air through said auxiliary shroud and over said motor to cool the motor, said coacting shroud and base motor enclosure including air inlet and air outlet openings for air circulation through said shroud and base enclosure, and one of said air circulating means having a rotating air moving element including an unbalanced section thereon to create off center loads to vibrate the entire device.

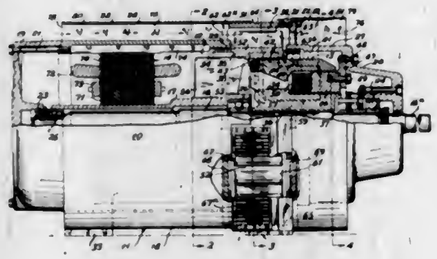
3,047,753
ELECTRIC MOTOR HOUSING
John R. Westell, Chagrin Falls, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 11, 1959, Ser. No. 798,769
1 Claim. (Cl. 310—91)

An electric motor housing comprising an outer hollow cylindrical housing; an inner hollow cylindrical housing disposed within said outer housing and being connected thereto by a plurality of vanes, said inner housing having a pair of opposed ends, one of said ends providing an abutment plate projecting radially inwardly from said inner housing; means defining an opening in said abutment plate; a motor case having a pair of end walls, a motor disposed in said case and having a rotatable shaft extending through one of said end walls, said case being



disposed in said inner housing with said one end wall disposed in engagement with said abutment plate and said shaft projecting through said opening, the other of said ends of said inner housing being turned substantially radially inwardly from said inner housing against the other of said end walls of said motor as the sole means for securing said motor case in said inner housing against said abutment plate.

3,047,754
ELECTROMAGNETIC APPARATUS
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 5, 1960, Ser. No. 47,646
18 Claims. (Cl. 310—105)



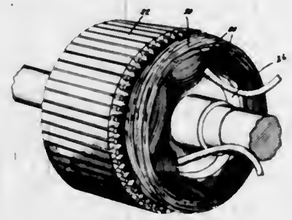
1. In electromagnetic apparatus of the character described; a hollow frame structure provided with bearing means and containing a substantially closed main chamber; first and second rotors in said main chamber and supported by said bearing means for rotation on a common axis; said first rotor having an annular series of pole members thereon and said second rotor comprising annular inductor means in an adjacent air-gap relation to the pole members of said series; field excitation means disposed relative to said rotors to produce flux linkage between said pole members and inductor means; cooling chamber means defining an annular cooling chamber substantially isolated from fluid flow communication with said main chamber and provided with cooling fluid inlet and outlet passages communicating with said cooling chamber; said cooling chamber means having stationary wall means comprising portions of said structure, and cooperating movable wall means comprising portions of said inductor means; and heat-conducting fins on said inductor means and operable in said cooling chamber in heat-exchange contact with cooling fluid in the latter.

3,047,755
SYNCHRONOUS RELUCTANCE ROTOR
Gustave Angst and Alan F. Lukens, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Jan. 15, 1960, Ser. No. 2,765
9 Claims. (Cl. 310—162)



6. A synchronous reluctance motor comprising a rotor and a stator, said rotor comprising a plurality of one-piece laminations stacked together to form the rotor core, a central bore in said core and axially extending grooves in the outer peripheral surface having a width sufficient to provide salient poles in the rotor, at least a portion of a squirrel cage winding in slots near the rotor surface, radial slots positioned in the central axis of each pole and extending throughout the length of the rotor, arcuately shaped slots positioned substantially concentric with the rotor bore, and radially extending openings punched in each of the aligned laminations, said openings having their outermost ends terminating at a point equidistant between the adjacent arcuate slots for cooperating therewith and providing a high reluctance barrier to the flow of flux into the rotor bore, a magnetic shaft in the bore, the reluctance of said slots and openings being such that the quadrature axis flux is reduced to a minimum.

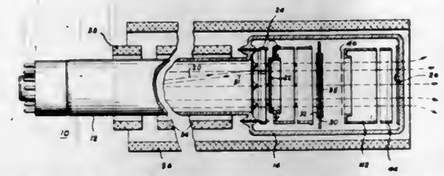
3,047,756
GLASS-RESIN TAPE FOR ARMATURE BANDING
Almy D. Coggeshall, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 2, 1959, Ser. No. 784,744
6 Claims. (Cl. 310—271)



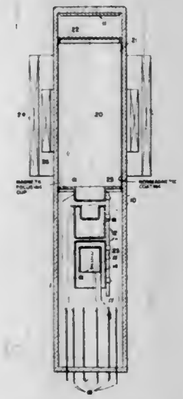
4. A magnetic core for a dynamoelectric machine comprising a plurality of laminations having coils therein, coil end turns projecting outwardly from the core, substantially parallel glass fibers impregnated with a resinous composition cured to its optimum level and wound on the peripheral portions of the end turns such that during the winding process, the impregnated glass fibers are elongated .75% or greater to impart an inward compressive force substantially greater than any outward forces expected to be exerted by the end turns.

3,047,757
IMAGE INTENSIFIER DEVICES
Alexander A. Rotow, Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 22, 1959, Ser. No. 841,508
3 Claims. (Cl. 313—65)

1. An image intensifier comprising an evacuated envelope, said envelope including a first photocathode for producing an electron image, a phosphor screen within said envelope and in the path of said electron image, a second photocathode within said envelope and positioned in the path of light from said phosphor screen, an apertured electrode within said envelope and positioned between said first photocathode and said phosphor screen, and magnetic focusing means around said envelope and extending at least around the region between said first photocathode and said apertured electrode.



3,047,758
CATHODE RAY TUBES
Martin Rome and Harold O. W. Jordan, Stamford, Conn., assignors to The Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Filed Dec. 1, 1959, Ser. No. 856,429
9 Claims. (Cl. 313—76)

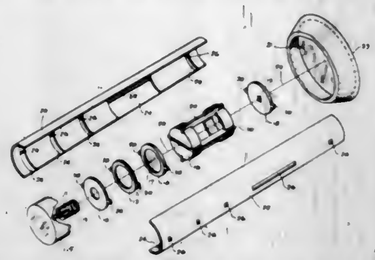


1. A cathode ray tube comprising an evacuated dielectric envelope, an electron gun in one end of the envelope, and a target in the opposite end of the envelope and arranged to be scanned by an electron beam passing through the envelope along a controlled path from the electron gun, the electron gun including a cathode electrode, a grid adjacent the target side of the cathode electrode and having an aperture therein, and a first focusing electrode at the end of the gun nearest the target and apertured to permit passage of the electron beam from the grid aperture, a hollow cylindrical second focusing electrode extending from the first focusing electrode to a point adjacent the target and encircling the path of the electron beam, said first focusing electrode being of magnetic material and said second focusing electrode being of nonmagnetic material whereby the electron beam passing from the first focusing electrode will be automatically aligned with respect to a given longitudinal axis.

3,047,759
CATHODE-RAY TUBE STRUCTURE
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,904
5 Claims. (Cl. 313—82)

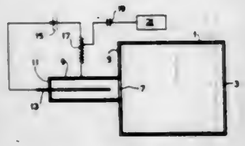
1. An electron gun construction capable of use in a cathode-ray tube comprising a plurality of electron optical

elements, said elements having functions that require that they bear a proper angular orientation with respect to each other in order to properly coact, a pair of semitubular members having corresponding recesses displaced along their lengths, said members being capable of being joined together into a tubular member, each of said optical elements having means capable of coacting with at least one



of said corresponding recesses for securing said elements at predetermined positions along said length of said members and means for angularly positioning said elements within said recesses in a fixed angular position which provides said proper angular orientation with respect to the other of said elements and prevent rotational movement of said elements in said tubular member when said members are joined together into said tubular member.

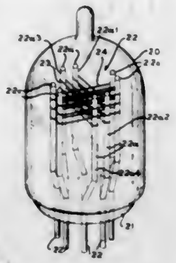
3,047,760
GEIGER-MÜLLER COUNTING TUBE
Johannes Hermsen and Pieter Johannes Kraaijeveld, Amsterdam, and Nicolaas Warmoltz, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 13, 1959, Ser. No. 799,147
Claims priority, application Netherlands Apr. 8, 1958
8 Claims. (Cl. 313—93)



1. A Geiger-Müller counting tube comprising an envelope having closely-spaced wall portions forming a first smaller counting discharge space and widening extensions of said wall portions and integral therewith forming a second larger radiation-receiving space communicating with the first space via an opening located at the junction of the closely-spaced wall portions and widening extensions, an ionizable gaseous filling including at least 0.001% of a halogen-type quench within said envelope, and cathode and anode electrodes adapted and arranged to sustain a discharge within only the first smaller space and being located in positions permitting the passage of particules generated substantially anywhere in the second space by incident radiation to the first space between the electrodes to initiate discharges therein.

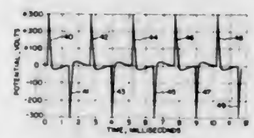
3,047,761
RADIATION DETECTOR TUBES
Dennis H. Howling, West Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,625
10 Claims. (Cl. 313—93)

1. A radiation detector tube comprising a pair of spaced electrodes, a gas tight radiation permeable envelope enclosing said electrodes, an ionizable gas in said envelope, means supporting said electrodes with a portion of each electrode adjacent to a corresponding portion of the other to provide a single integrated working region therebetween within which the emission of electrons by incident photons is capable of triggering an avalanche discharge between the electrodes when a firing potential is



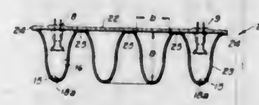
applied across the electrodes, said electrodes having smooth uniform surfaces free of contaminants to provide a uniform work function throughout said working region, and said electrodes comprising only wire elements each doubly supported out of said working region to avoid disturbing the electric field within the working region and to provide a rugged and vibration-free electrode structure.

3,047,762
ELECTROLUMINESCENCE
Samuel V. Edens, Blacklick, and Clarence I. Goodrich, Jr., and Wesley H. Seals, Columbus, Ohio, assignors to North American Aviation, Inc.
Filed Sept. 27, 1960, Ser. No. 58,729
19 Claims. (Cl. 313—108)



1. A method of exciting an electroluminescent lamp which includes the steps of applying successive pulses of electrical energy to said lamp, said pulses each being characterized by a voltage-time history having a near-instantaneous rise time from a reference voltage value to a peak voltage value, having a zero time duration at said peak voltage value, and having a comparatively rapid voltage fall off from said peak voltage value to said reference voltage value.

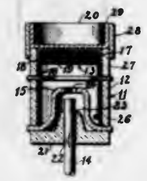
3,047,763
PANEL-SHAPED FLUORESCENT LAMP
George E. Inman, East Cleveland, Ohio, assignor to General Electric Company, a corporation of New York
Filed Nov. 24, 1959, Ser. No. 855,168
3 Claims. (Cl. 313—109)



2. An electric discharge lamp comprising a pair of plate-like vitreous components sealed together along their margins, one of said components being substantially flat and the other being deeply ridged to provide a labyrinthine discharge channel therebetween extending substantially throughout the area of said lamp, the cross section

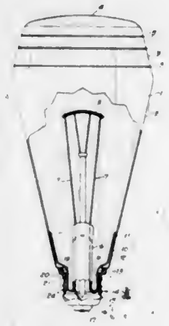
of said discharge channel being constricted out of round and having a major dimension transverse to the principal plane of said lamp and a minor dimension parallel thereto, the ratio of said major to said minor dimension being at least two to one, a pair of electrodes sealed into opposite ends of said channel, a filling of an inert gas and mercury within said channel, and a coating of phosphor on at least a portion of the inside surface thereof of said channel.

3,047,764
COLD CATHODE DISCHARGE DEVICE
Robert A. Lee, Locust, and Keith W. Olson, Neptune, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Jan. 23, 1958, Ser. No. 710,689
3 Claims. (Cl. 313—220)



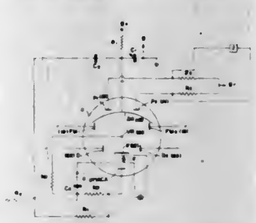
1. An electron discharge device comprising a substantially cup shaped ceramic envelope, an anode extending through and brazed with said cup shaped envelope at the closed end thereof, a control grid positioned adjacent to said anode, a circular flange having a portion telescoping and brazed to the open end of said cup shaped envelope, a cup shaped member having a cathode secured to the underside thereof positioned within said circular flange, and means sealing said flange with said cup shaped member near the open end of the latter to form a vacuum tight structure for said device.

3,047,765
BASE ASSEMBLY FOR ELECTRIC LAMPS
Ralph J. Vichill, Cleveland, Ohio, assignor to General Electric Company, a corporation of New York
Filed Aug. 20, 1959, Ser. No. 834,979
4 Claims. (Cl. 313—318)



1. In an electric lamp, the combination of a glass bulb containing a light source and having at one end thereof a generally cylindrical neck portion and an adjoining enlarged generally cylindrical portion terminating, at its junction with the main portion of the bulb, in an annular portion defining an external shoulder, and a base assembly comprising a base including a metallic shell surrounding said bulb neck portion and adapted to engage with a socket, means fixedly securing said base shell to said bulb neck portion, an insulating collar member telescopically engaging within the rim of said base shell, and an ornamental metallic skirt member having one end telescopically engaging within said collar member and spaced and electrically insulated by said collar member from said base shell, said skirt member loosely surrounding said adjoining portion of said bulb and abutting at its other end against said shoulder, said collar and skirt members being firmly retained in place by and between said shoulder and the rim of said base shell.

3,047,766
ELECTRONIC HEADING-SENSING DEVICE
John P. Glass, 718 Lorraine Ave., Ardmore, Pa.
Filed Jan. 21, 1960, Ser. No. 3,913
21 Claims. (Cl. 315—21)



1. An electronic heading-sensing device comprising an evacuated envelope having positioned therein an electron emitting member, at least two electron collecting members adapted to collect electrons when positively polarized, a drive member opposed to said electron emitting member, a vibratory element positioned between said emitting and collecting members and between said emitting and drive members, said vibratory member having a portion thereof adapted to be negatively polarized and in the path of said electron emitting member, and electronic amplitude control means for automatically controlling the maximum amplitude of vibration of said vibratory element.

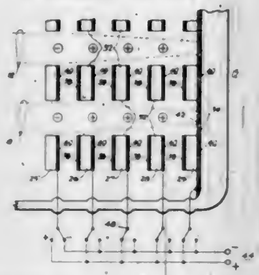
3,047,767
CIRCULAR TRACE SCOPE DISPLAY
Robert B. Allured, Rochester, and Merle Weiss, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 31, 1959, Ser. No. 837,157
7 Claims. (Cl. 315—24)



1. Apparatus for modulating a circular trace on an oscilloscope such that the visible arcuate length of the trace will be proportional to the magnitude of a signal voltage including, in combination, an oscilloscope having beam deflecting elements and a beam intensity modulating element, means coupled to said deflecting elements and connected with an alternating voltage supply source for driving said deflecting elements such that a circular trace results on said oscilloscope, a pulse generating circuit having an input and output, and a driving circuit having an input connected to said alternating voltage supply source and also with a source of said signal voltage and having an output circuit adapted to develop an output voltage when the voltage of said supply source is approximately equal to said signal voltage, said pulse generating circuit having its input connected to the output of said driving circuit and having its output connected to said modulating element whereby a pulse is applied to said element, said pulse having its leading edge synchronized with a fixed

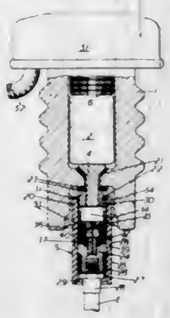
point in each cycle of said alternating voltage supply and the pulse width of each pulse is a function of the magnitude of said signal voltage.

3,047,768
CATHODE RAY TUBE STRUCTURE
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 2, 1959, Ser. No. 856,783
5 Claims. (Cl. 315—31)



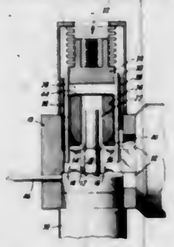
1. The combination comprising: a plurality of apertured, spaced apart sheets; said sheets having an electron-responsive phosphor positioned on the front surface of each sheet around said apertures; means for causing an electron beam to enter selected said apertures from the side facing said front surface; and means for causing the electrons of said beam to impinge upon the phosphor around said selected apertures of a selected one of said sheets—whereby said impingement can produce light in a selected plane, to thereby produce a three dimensional display.

3,047,769
SPARK GAP DEVICES
Bruce Clifford Hicks and William Miles, both of Garman Road, Tottenham 17, London, England
Filed Sept. 7, 1960, Ser. No. 54,476
20 Claims. (Cl. 315—36)



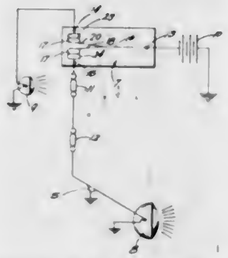
1. Spark gap unit for installation in a lightning arrester casing for electric power lines in a surge current path within an arrester casing comprising a plurality of nonlinear resistor blocks, said unit comprising spaced pairs of circular electrodes one electrode of each pair being of disc shape and the other of cupped shape, a spacer of arc-resisting insulating material positioned between said electrodes to define a circular gap between the cupped portion of said other electrode and the said disc electrode, a radially polarized ring magnet surrounding the central cupped portion of said other electrode and the spacer member within it, said electrode being flanged outwardly over one radial face of the magnet to define a circular spark gap between said electrodes, said spark gap being peripherally divergent in the outward direction, and means on said spacer member extending to a point adjacent the peripheral gap between the electrodes to regulate and make uniform the electro-static field distribution in said spark gap.

3,047,770
TUNABLE MAGNETRONS
John Horrigan, West Newton, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Sept. 8, 1960, Ser. No. 54,665
2 Claims. (Cl. 315—39.61)



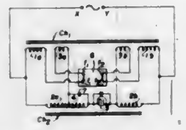
1. In a tunable magnetron including an annular resonant anode structure, a cathode concentrically positioned within said anode, a pole piece at one end of said anode having a central opening therein coaxial with said cathode, and a tuning structure including a conductive ring having pins extending through said pole piece into said anode structure, said ring being positioned at the end of said pole piece remote from said anode and axially movable relative to said pole piece, a conductive screen secured to the end of said pole piece remote from said anode and covering the central opening therein for preventing transmission of radio frequency power between said anode structure and the region between said tuning ring and said pole piece, said screen being of sufficiently open mesh to permit the evacuation of air from the region between said tuning ring and said pole piece through said central opening in said pole piece.

3,047,771
SAFETY HEADLIGHT SWITCH
Harry C. Clark, 226 W. Perry St., Belvidere, Ill.
Filed Nov. 20, 1958, Ser. No. 775,240
8 Claims. (Cl. 315—83)



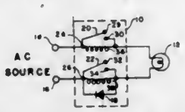
7. In combination, in a thermostatic assembly, a main bimetallic blade element that is adapted to have electric current flow therethrough and is supported at one end and is adapted to be heated by such current flow and is arranged to have its other end portion free to move from one extreme position upon heating to a predetermined temperature to another extreme position upon cooling to a predetermined temperature, and a second bimetallic blade element having one end portion thereof carried on said first-mentioned blade element and arranged to be heated and cooled with it by conduction, this other end portion of said second-mentioned blade element being free and lying in spaced relation to the free end portion of the first-mentioned blade element and being arranged upon heating to distort in diverging relation thereto.

3,047,772
HIGH OUTPUT STARTING DEVICE FOR A PREHEATING TYPE FLUORESCENT LAMP
Takizo Kobayashi, Kawanishi City, Japan, assignor to Keiji Tanaka, Ikoma-gun, Nara Prefecture, Japan
Filed Oct. 22, 1957, Ser. No. 691,715
Claims priority, application Japan Jan. 14, 1957
9 Claims. (Cl. 315—99)
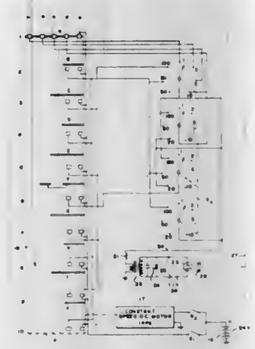


1. A high output lighting circuit for a gaseous discharge lamp of the type having a pair of spaced preheated filaments, said circuit comprising four choke elements of predetermined impedance, and a pair of power supply terminals, one of said terminals being connected to spaced points on one of said filaments through corresponding choke elements, the other of said terminals being connected to spaced points on the other of said filaments through the remaining choke elements, respectively, whereby two parallel paths are formed between said terminals through said choke elements and the discharge space separating corresponding points on said filaments, so that after said lamp is started, properly distributed discharge currents flow along said paths and form two arc spots at each of said filaments, and starting switch means shunting said lamp, said switch means electrically coupling said filaments to provide for heating the same and electrically isolating the filaments to provide for discharge therebetween.

3,047,773
AUTOMATIC LIGHT CONTROL FOR INCANDESCENT LAMPS
Robert C. Morton, Inglewood, Calif., assignor to California Computer Products, Inc., Downey, Calif., a corporation of California
Filed Feb. 10, 1960, Ser. No. 7,926
13 Claims. (Cl. 315—205)



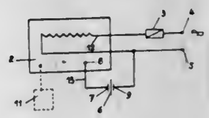
1. An incandescent lamp flashing arrangement, comprising: a current responsive element connected to be energized to produce a change in shape in response to the flow of a predetermined current therethrough; half-wave rectification means; circuit input means for the arrangement; and incandescent lamp circuit output means for the arrangement; said element being oriented with respect to said rectification means and to said input and output means to provide a direct connection between said input and output means during one time interval, to connect said rectification means in a series circuit between said input and output means during a different time interval, and to completely break the circuit between said input and output means during a still different time interval.

3,047,774
VARIABLE FREQUENCY PULSE GENERATOR
Glenwood Grewell, Enon, and Kenton J. Jones, Dayton, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force
Original application Apr. 23, 1958, Ser. No. 730,504, now Patent No. 2,980,771, dated Apr. 18, 1961. Divided and this application Nov. 7, 1960, Ser. No. 67,865
2 Claims. (Cl. 315—207)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A variable frequency generator of sharp relatively high voltage pulses comprising: a relatively low voltage source of direct current: a step-up transformer; a variable frequency periodic switching device connected between said source and the primary of said transformer; and a condenser, a unidirectional device, a gaseous discharge device and an output circuit all connected in shunt to said secondary winding, said condenser tuning said secondary winding to resonate at a frequency higher than the highest frequency of said switching device, said unidirectional device being poled to be nonconductive during the first half-cycle of the resonant wave in said secondary winding following each closure of said switching device and said gaseous discharge device having a firing potential greater than the voltage of said source but less than the maximum voltage generated across said secondary winding.

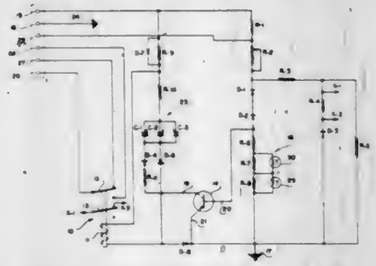
3,047,775
PROTECTIVE DEVICE FOR ELECTRICAL APPLIANCE
Marie André Leriche, deceased, late of 30 Ave. Brugmann, Brussels, Belgium, by Marie Madeleine Thérèse Leriche, executrix, 45 Rue de la Republique, Amiens, France
Filed July 16, 1957, Ser. No. 672,245
Claims priority, application France July 23, 1956
3 Claims. (Cl. 317—18)



1. A protection and safety means for an electrical appliance having a conductive body and containing an energy utilization means energized via two lines of a single phase alternating current system, one of said lines having high voltage with respect to the other line, said other line being a neutral line of said system, comprising in combination a circuit connected between said body and said neutral line; a pair of electrodes inserted in said circuit and spaced by a stationary dielectric element clamped therebetween to provide a spark gap therein, said dielectric element being subject to electrical

breakdown at a leakage voltage substantially less than half of said high voltage to cause a leakage current to flow through said body and across said gap between the electrodes; and a circuit interrupter in series with said energy utilization means to interrupt application of said high voltage to said energy utilization means when said leakage current flows through said interrupter.

3,047,776
OVER VOLTAGE RELAY
Robert C. Mauer, Sunland, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Mar. 15, 1957, Ser. No. 646,335
2 Claims. (Cl. 317—31)



1. An automatically operating D.C. over voltage protecting device for controlling an electrical apparatus by switching off power to said apparatus in response to over voltages occurring in said apparatus comprising in combination:

I. a switching relay circuit containing the following elements in series with one another between input voltage terminals;
   A. the coil of a normally de-energized switching relay having first and second sets of contacts,
   B. a controlling transistor connected by collector and emitter for controlling current through said relay coil,
   C. a unidirectional conducting diode in reverse position with respect to normal current direction and connected across said collector and emitter of said transistor,

II. a transistor base controlling circuit connected in parallel to the total circuit of said switching relay circuit and containing in series;
   A. at least one variable resistive element,
   B. a temperature compensating diode circuit having unidirectional conducting diodes arranged in reverse position with respect to normal current direction and having a connection to the base of said transistor extended from the reverse side of the last of said diodes,
   C. said temperature compensating diode circuit containing in series after said transistor base connection at least one resistor and at least one thermistor in parallel with said resistor,
   D. a by-pass circuit for by-passing current around and in parallel with said diode circuit when normal operating voltage is impressed from said apparatus load and containing a normally shunted out resistive element,

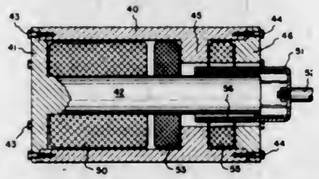
III. a time delay circuit arranged in parallel with said switching relay circuit for momentarily by-passing current around said relay coil to provide for a time lapse in said relay actuation containing;
   A. a plurality of capacitors arranged in parallel,
   B. unidirectional conducting diodes arranged in reverse relationship to one another in separate parallel legs both in series with said plurality of capacitors,

IV. all of said unidirectional conducting diodes having the characteristic of passing current freely in one direction and passing current in the opposite direction only after a predetermined voltage is impressed thereupon without destruction,

V. said first set of relay contacts controlling the power to said apparatus, and

VI. said shunted out resistive element controlled by said second set of relay contacts for adding said shunted out resistive element to said by-pass circuit simultaneously with controlling of power to said apparatus so that greater current is impressed upon said transistor base which in turn increases relay current through said transistor which controls chattering of said relay contacts.

3,047,777
HIGH-PERFORMANCE ELECTROMAGNETIC TRANSDUCER
Orlien N. Becker, Alderwood Manor, Wash., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 24, 1958, Ser. No. 782,781
8 Claims. (Cl. 317—123)

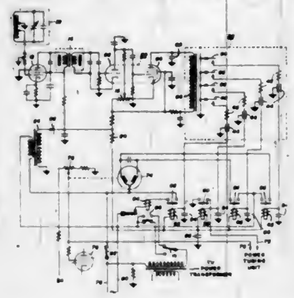


6. In an electromagnetic transducer, a cylindrical magnetic yoke closed at one extremity and having a centrally located magnetic pole member extending from the closed extremity toward the opposite extremity, a pair of magnetic poles integral with said yoke and positioned near said opposite extremity being spaced at different distances from said closed extremity, first and second winding means electromagnetically linking both of said spaced poles through said centrally located pole member, a third winding means electromagnetically linking only one of said spaced poles on said yoke located the furthest distance from said closed extremity, means energizing said first winding means to provide a reference magnetomotive force between said poles and said centrally located pole member, means energizing said second and third winding means simultaneously and variably, and a segment of magnetic material positioned between said poles and said centrally located pole member and adapted to be motivated by said magnetomotive force supplied by all of said winding means.

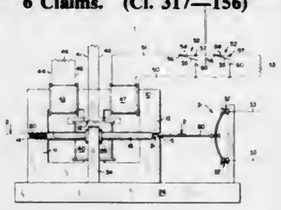
3,047,778
WIRELESS REMOTE CONTROL SYSTEM
Van R. Gibson, Jr., North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 9, 1960, Ser. No. 34,958
4 Claims. (Cl. 317—138)

1. A remote control unit responsive to a plurality of signals having different predetermined frequencies for performing a plurality of control functions, a plurality of reed relay circuits each having a vibrating reed therein responsive to a different predetermined frequency for closing its associated circuit, a relay winding in each of said circuits having a pair of associated contacts which are adapted to be closed when said winding is energized to close circuits for performing the different control functions, each of said circuits including a relatively slow time network which constantly has a charging potential applied thereto and a relatively fast time constant network which is adapted to act rapidly once one of said reeds

stops vibrating so that the contacts which were closed open as soon as the reed stops vibrating, said fast and slow time network further cooperating to require a relatively heavy pull-in current for closing the contacts of a winding and a relatively small drop-out current to open the contacts.



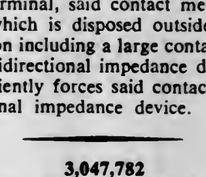
3,047,779
ELECTROMAGNETIC DEVICE
William L. Carlson, Jr., Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 27, 1959, Ser. No. 816,245
6 Claims. (Cl. 317—156)



1. In a relay of the class described: a laminated magnetic core in the shape of a figure 8; said core having an air gap in each of two outside legs and said air gaps being substantially in the same plane; a single electrical energizing winding on a center leg of said core; substantially identical electrical output windings on each of said two outside legs and said output windings wound to have substantially identical voltage outputs when said energizing winding is connected to an electrical source; an armature forming a closed electrical circuit passing through said air gaps and encircling said center leg of said core; support means arranged to hold said armature in said air gaps; said support means further allowing said armature means to move into and out of said air gaps; switch means connected to said armature; fixed impedance means continuously electrically loading one said output winding; variable impedance means electrically loading said second output winding; and said armature having an electrical current induced in it which reacts with a magnetic flux induced across said air gaps by said energizing winding and said source; said armature shifting in said air gaps to operate said switch means whenever the variable impedance means varies the loading of said second output winding.

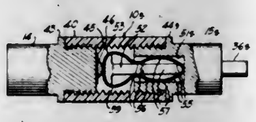
3,047,780
PACKAGING TECHNIQUE FOR FABRICATION OF VERY SMALL SEMICONDUCTOR DEVICES
E. David Metz, Los Angeles, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware
Filed July 21, 1958, Ser. No. 750,008
6 Claims. (Cl. 317—234)

1. A semiconductor crystal wafer having substantially parallel planar upper and lower surfaces; a first metal tab in low resistance contact to the entirety of said upper planar surface; a second metal tab in low resistance contact with the entirety of said lower planar surface; a first elongate electrical lead having a portion thereof ohmically bonded to said first metal tab; a second elongate electrical



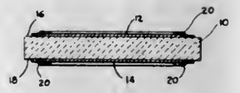
lead having a portion thereof ohmically bonded to said second metal tab; and a polysiloxane film completely surrounding said crystal wafer, said metal tabs, and the portions of said electrical leads bonded to said metal tabs to hermetically seal said crystal wafer from the ambient.

3,047,781
DIODE
George Eannarino, Los Angeles, Calif., assignor to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Original application Aug. 15, 1956, Ser. No. 604,162, now Patent No. 2,958,020, dated Oct. 25, 1960. Divided and this application Oct. 17, 1960, Ser. No. 63,098
1 Claim. (Cl. 317—234)



A diode comprising a tubular housing, a plurality of terminal members extending into said housing from the opposite ends thereof, a unidirectional impedance device electrically connected to and mounted on one of said terminals within said housing, means defining an axially directed recess in the other of said terminals, said recess opening toward said impedance device, a unitary resilient contact member comprising a star-shaped member having radially extending protrusions thereof folded toward one another to provide a first portion received in said recess, said first portion resiliently engaging the walls of said recess to electrically connect said contact member to said other terminal, said contact member having another portion which is disposed outside of said recess, said other portion including a large contact surface which engages said unidirectional impedance device and a portion which resiliently forces said contact surface against said unidirectional impedance device.

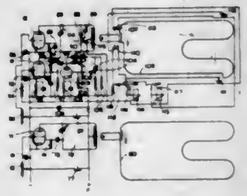
3,047,782
CAPACITOR
William McCarthy, Syracuse, N.Y., assignor, by mesne assignments, to Speer Carbon Company, Inc., a corporation of Delaware
Filed Nov. 13, 1958, Ser. No. 773,760
4 Claims. (Cl. 317—258)



1. A capacitor comprising a dielectric blank, electrodes mounted on opposite side surfaces of the blank, at least

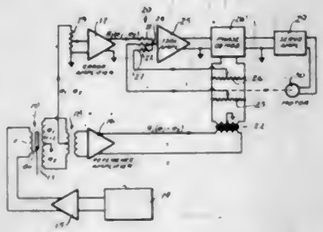
one of said electrodes comprising a main portion and a secondary portion, said secondary portion being formed on the periphery of said main portion, such secondary portion having a conductivity intermediate that of the main portion and said blank.

3,047,783
REMOTE CONTROL ARRANGEMENTS
Johannes Franciscus Van Oort and Willem Bakker, Eindhoven, Netherlands, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed July 18, 1958, Ser. No. 749,524
Claims priority, application Netherlands Aug. 27, 1957
7 Claims. (Cl. 318—16)



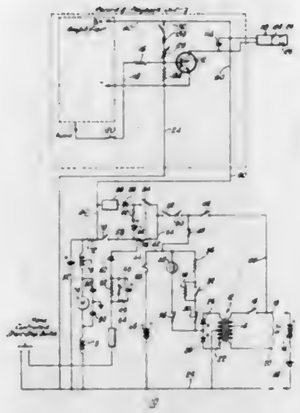
1. A remote control arrangement for actuating electrical apparatus within a control area comprising an exciter winding arranged to define said control area within which said apparatus is actuated, a source of alternating current coupled to said exciter winding in a manner whereby an alternating magnetic flux is produced by the said exciter winding, said magnetic flux having a predetermined frequency, an open core of ferromagnetic material having a high permeability at the frequency of said magnetic flux, means mounting said core on said apparatus in a manner whereby a substantial portion of said magnetic flux concentrates in the said core, and means for energizing said electrical apparatus comprising a winding on said core and means coupling said last-mentioned winding to the said apparatus.

3,047,784
SUPPLY VOLTAGE VARIATION COMPENSATED SERVOSYSTEM
Edward V. Hardway, Jr., Houston, Tex., assignor to Houston Instrument Corporation, Houston, Tex.
Continuation of application Ser. No. 856,075, Nov. 30, 1959. This application Feb. 2, 1961, Ser. No. 87,054
4 Claims. (Cl. 318—28)



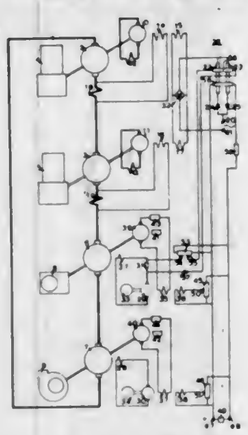
3. In an apparatus for determining the core position of a differential transformer, a potentiometric rebalance servomechanism having a rebalance potentiometer connected to the transformer so that the voltage applied to the potentiometer is a function of the sum of the voltages across said transformer secondaries and means for comparing the potentiometer output voltage with the difference of the voltage across said transformer secondaries and for driving the said rebalance potentiometer in response to a departure from a predetermined relationship between the potentiometer output voltage and said difference voltage.

3,047,785
POWER SUPPLY FOR PORTABLE DICTATING MACHINE AND THE LIKE
Roger C. Curtis, New Haven, and Frederick W. Roberts, Fairfield, Conn., assignors to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York
Filed Nov. 10, 1960, Ser. No. 68,414
11 Claims. (Cl. 318—139)



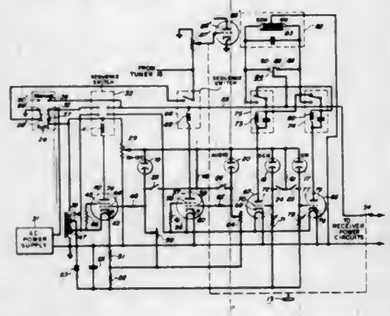
1. A self-contained power supply for a dictating machine and the like, said supply including a re-chargeable storage cell, an electro-mechanical relay for controlling operation of the machine, means including a first resistor connecting said relay in series with said battery and a first switch controlled by said relay and shunting said resistor, said first switch being closed when said relay is not energized and open when said relay is connected to said battery and the voltage thereof is below a given value said relay will first be energized and then not energized in rapid succession to prevent operation until said battery is re-charged.

3,047,786
PLURAL CONDITION RESPONSIVE GENERATOR FED MOTOR CONTROL SYSTEM
Wouter den Ouden, Slikkerveer, Netherlands, assignor to N.V. Electrotechnische Industrie Voorheen Willem Smit & Co., Gemeente Ridderkerk, Netherlands, a Dutch limited company of the Netherlands
Filed Dec. 29, 1960, Ser. No. 79,446
Claims priority, application Netherlands Dec. 30, 1959
9 Claims. (Cl. 318—153)



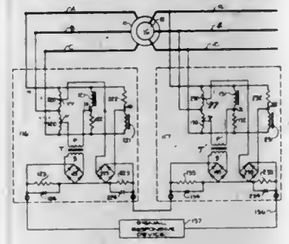
1. In an electric system having a loop circuit including at least one direct-current generator and at least one direct-current motor; generator control means responsive to loop circuit current adapted to maintain through generator energizing means a normal substantially constant current in said loop circuit; said generator control means including a transductor supplying a reference current; motor control means responsive to the speed of said motor operative through motor energizing means to maintain the speed of said motor at a predetermined value; and system control means responsive to said motor energizing means adapted to enable said generator control means to increase said loop circuit current when the energizing flux of said motor exceeds a predetermined value; said generator control means including said transductor supplying a reference current; said system control means including a control winding of said transductor adapted to receive a current from said motor energizing means.

3,047,787
TUNER DRIVE APPARATUS
Clarence W. Wandrey, Wheaton, and Howard C. Grossenheider, Deerfield, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,780
1 Claim. (Cl. 318—265)



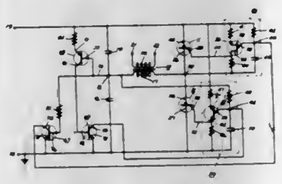
In an apparatus for controlling the operation of a station selector having a shaft rotatable selectively in either direction sequentially through a predetermined plurality of circumferentially spaced positions to select different stations under the control of a bidirectional drive mechanism including an electric motor, means coupling said motor to said station-selector shaft to rotate the latter sequentially through said positions, a disc coupled to said station-selector shaft to rotate therewith with the periphery of said disc having a like plurality of portions one of which is peripherally spaced in correspondence with a respective one of each of said circumferentially spaced positions, and means responsive to a control action for energizing said motor to rotate said disc selectively in either direction, the improvement comprising: means defining a plurality of notches one each in each of said portions of said disc; cam-follower means, disposed at an acute angle to and normally cutting across the plane of said disc and receivable in said notches, movable transversely of the disc out of any given one of said notches in one direction by one side and in the other direction by the other side of that notch during rotation of said disc respectively in one direction or the other in response to energization of said motor; a first electric contact coupled to and movable in response to movement of said cam-follower means; second and third electric contacts disposed respectively on opposite sides of said first contact with each in a position to be engaged by said first contact upon movement of the latter respectively in one direction or the other in response to movement of said cam-follower means from a location in a given notch to a location out of and between said notches; and means responsive to engagement of said first contact with a respective one of said second and third contacts for maintaining energization of said motor and rotation of said shaft in the corresponding direction when said shaft is between said circumferentially spaced positions.

3,047,788
SIGNAL DEVICE
Charles Allan Schurr, Warrensville Heights, Ohio, assignor to Square D Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 26, 1959, Ser. No. 788,975
8 Claims. (Cl. 318—461)



1. In a signal system, a plurality of multiphase circuits, a plurality of phase converter means electrically connected in parallel with said multiphase circuits, respectively, each phase converter means including output devices operative, when the converter means is energized, to provide output voltages representative of the phase voltages in the multiphase circuits, respectively, additional circuit means serially connecting all of said output devices together whereby a resultant single voltage signal representing the algebraic summation of said output voltages is provided.

3,047,789
INVERTER CIRCUIT
Hugh R. Lowry, De Witt, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,439
12 Claims. (Cl. 321—18)



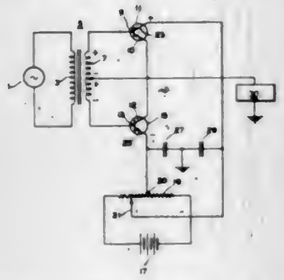
11. An inverter circuit comprising: a pair of direct current input terminal connections; a pair of serially connected capacitors connected across said input terminal connections; first and second controlled rectifiers connected in series across said input terminal connections; a first output terminal connection in circuit with said serially connected capacitors; a second output terminal connection in circuit with said serially connected controlled rectifiers, said output terminal connections being adapted for providing an alternating current supply load; a first relaxation oscillator having a first unijunction transistor and a serially connected resistor and a capacitor joined at a first junction; a second relaxation oscillator having a second unijunction transistor and a serially connected resistor and a capacitor joined at a second junction; circuit means connecting said first and second relaxation oscillators in circuit with said first and second controlled rectifiers and said input terminal connections so that when a direct current is impressed across said input terminal connections, during the period of the first half of the cycle of said alternating current supply said first controlled rectifier is fired by said first relaxa-

tion oscillator and the capacitor of said second relaxation oscillator is being provided with a charging current and during substantially the other half of the cycle said second controlled rectifier is fired by said second relaxation oscillator and said capacitor of said first relaxation oscillator is being provided with a charging current; and a first, second and third transistor each having a collector, an emitter and a base electrode, said collector of said first transistor being connected to said first junction of said first relaxation oscillator, said emitter being connected to ground and said base electrode being connected in circuit with said first output terminal connection; said emitter of said second transistor being connected in circuit with one of said input terminal connections, said collector being connected in circuit with said base electrode of said third transistor and said base electrode of said second transistor being connected in circuit with said first output terminal connection; and said emitter of said third transistor being connected to ground and said collector being connected in circuit with said second junction of said second relaxation oscillator whereby said controller rectifiers are prevented from simultaneously conducting during operation of the circuit.

3,047,790
DIRECT CURRENT MODULATOR

Eugene Grosbaum, East Paterson, and Robert L. Worthington, East Orange, N.J., assignors to The Bendix Corporation, a corporation of Delaware

Filed Apr. 30, 1958, Ser. No. 732,022
6 Claims. (Cl. 321—45)



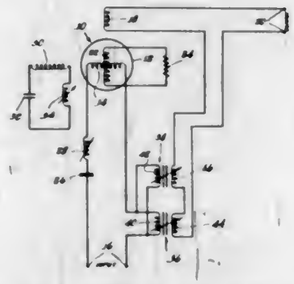
6. A modulator comprising a pair of transistors each having a base and emitter and a collector, the bases of the transistors being energized by alternating current voltages of opposite phases and the emitters of the transistors being energized by signals of opposite polarities from a floating direct current source to gate the transistors and provide a modulated voltage at the emitters corresponding in phase and amplitude to the polarity and amplitude of the direct current signal relative to the alternating current voltage, a load connected to the collectors and energized by the modulated voltage, and a pair of condensers connected to the emitters in parallel with the direct current source and providing a low impedance return path to both transistors for modulated voltages.

3,047,791
TACHOMETER GENERATOR

Kurt Burian, Highland Park, Ill., assignor to G-M Laboratories Inc., Chicago, Ill., a corporation of Illinois

Filed Oct. 28, 1959, Ser. No. 849,277
11 Claims. (Cl. 322—34)

8. A compensated tachometer generator comprising a stator, a drag-cup, means mounting said drag-cup for rotation relative to said stator, an energizing winding on said stator, input terminal means, electric circuit means connecting said input terminal means and said energizing winding, said electric circuit means including an inductor and a capacitor, one of which is variable, and further including the primary windings of a pair of transformers, said pair of primary windings being connected in parallel with one another and in series between the input terminal means and the energizing winding, an output winding on said stator, output terminal means, electric circuit means connecting said output winding and said output terminal means including the secondary windings of said trans-

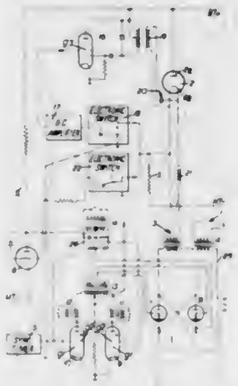


formers, said secondary windings being connected in series with one another and in series between the output winding and the output terminal means, a compensating auxiliary winding in inductive relation to one of the energizing and output windings and not in inductive relation with the other thereof, and electric circuit means connected across said auxiliary winding and including an inductor and a capacitor, one of which is variable.

3,047,792
AUTOMATIC ELECTRIC CURRENT REGULATORS

Kenneth Arthur Robinson, Etchinghill, near Rugeley, England, assignor to Lancashire Dynamo Electronic Products Limited, Rugeley, England, a British company

Filed Apr. 28, 1959, Ser. No. 809,559
Claims priority, application Great Britain Apr. 30, 1958
4 Claims. (Cl. 323—18)

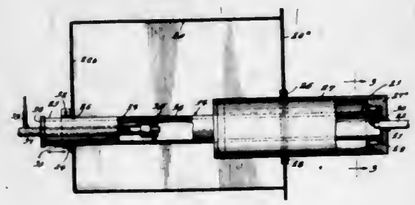


1. In an automatic control system for controlling the strength of an intermittent alternating current supply, the combination of a thermionic valve having an anode, a cathode, an anode circuit and a cathode heating circut; means for applying a voltage to the anode circuit of said valve to cause a flow of space current in said valve upon heating of said cathode; means for supplying to said cathode heating circuit a heating current which is variable in dependence upon the strength of the current to be controlled within a range in which variations in the strength of the heating current cause variations in the space current of said valve, means for intermittently switching on said alternating current supply and regulating the current strength thereof when switch on in dependence upon the space current of said valve; a current supply of higher frequency than said alternating current supply, and means for switching on said current supply of higher frequency to preheat the cathode of said valve prior to switching on said alternating current supply.

3,047,793
VOLTAGE REGULATOR

Jack E. Bridges, Park Ridge, Ill., assignor to Warwick Manufacturing Corporation, a corporation of Delaware

Filed Jan. 16, 1958, Ser. No. 709,369
4 Claims. (Cl. 323—94)



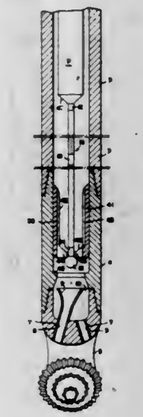
1. In a regulated power supply having a source of high voltage relative to a common potential: an elongated tubular voltage regulating element of a semiconductor material, the resistance of which varies inversely with the voltage applied thereto, said element having an inner and an outer surface and having one end connected to said source of high voltage; a protective housing for said element, having a conductive portion at said common potential, with a pair of aligned openings therein; means mounted in fixed relationship with said housing providing an adjustable connection with the outer surface of said tubular element and connected to said common potential, both ends of said element extending from the openings in said housing with the end opposite said one end being at said common potential and exposed for manipulation of the element with respect to said adjustable connection; an insulating shield for the exposed portion of said one end of said element; means providing a connection to the inner surface of said element intermediate the connection at said common potential and the connection at said one end; and a manipulating element for said intermediate connection extending out through said opposite end of said element.

3,047,794
BORE HOLE LOGGING METHODS AND APPARATUS

John Bennett, Richardson, Preston E. Chaney, Dallas, and Jack Weir Jones and Fred M. Mayes, Richardson, Tex., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Sept. 23, 1957, Ser. No. 685,717
21 Claims. (Cl. 324—10)

6. Apparatus comprising a hollow drill stem carrying coder, said register means being responsive to the type-mud passage extending downwardly and non-concentric with the drill stem axis, logging apparatus arranged to move downwardly through the drill stem and including a housing containing log recording means and an elongated member supported thereby and extending downwardly therefrom, said member carrying a logging element connected to said log recording means to provide signals thereto and requiring for operation projection below the bit, and means for guiding said member into and through said mud passage to effect said projection, said member having both flexibility and substantial stiffness so that by the action of downward pushing force exerted on its upper end it will be deflected from parallelism with the drill stem axis to pass through said mud

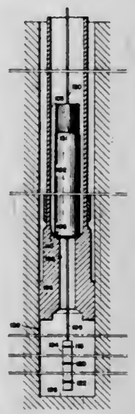


passage and extend downwardly in substantially straight condition along the bore hole below the bit.

3,047,795
BORE HOLE LOGGING METHODS AND APPARATUS

John M. Pearson, deceased, late of Swarthmore, Pa., by Grace Davie Pearson, executrix, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

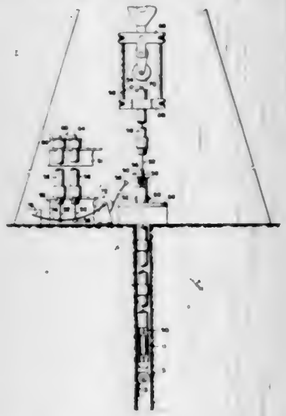
Filed Jan. 17, 1958, Ser. No. 709,710
4 Claims. (Cl. 324—10)



3. The method of logging a bore hole while there is within the hole a sectional drill stem carrying at its lower end a bit provided with a mud flow passage comprising dropping freely through the drill stem a bore hole logging instrument, including a housing, and an electrode assembly supported by said instrument below the same and having electrical connection with said instrument, said instrument including means within its housing for supplying current to said electrode assembly and means within its housing connected to said electrode assembly for measuring and recording quantitatively over an extended period of time electrical conditions of earth formations in the vicinity of said electrode assembly, said dropping of the instrument and electrode assembly effecting passage of the electrode assembly through said mud flow passage and arrest of the instrument to locate the electrode assembly at a predetermined position below and relative to

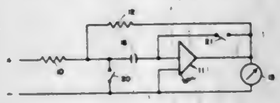
the bit, so that said electrode assembly is exposed to the earth formations below the bit, moving the drill stem lengthwise of the hole to cause said electrode assembly to traverse earth formations while said measuring and recording means operate independently of any connection to the surface to measure and record said electrical conditions at various depths, and thereafter recovering said instrument from the hole.

3,047,796
BORE HOLE LOGGING METHODS AND APPARATUS
John Bennett and Fred M. Mayes, Richardson, Tex., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Nov. 13, 1958, Ser. No. 773,653
8 Claims. (Cl. 324—10)



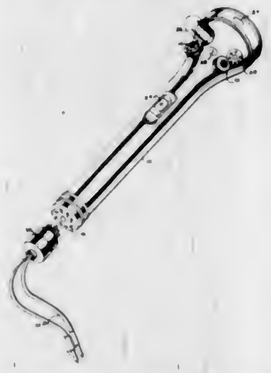
1. A bore hole logging method comprising lowering through connected sections of a sectional drill stem carrying a bit, a cable supporting detecting means, said cable being freely movable relatively to the drill stem sections during said lowering, said lowering being carried out to effect projection of said detecting means below the bit, and effecting logging by raising of the drill stem and detecting means therewith while transmitting signals through said cable to the surface, said raising of the drill stem involving removal of at least one section thereof while the detecting means remains below the bit and connected to at least a portion of the cable extending to the surface.

3,047,797
MEASURING CONDUCTIVITY OF LIQUIDS
Albertus C. H. Borsboom, Amsterdam, Netherlands, assignor to Shell Oil Company, a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,376
Claims priority, application Netherlands July 23, 1958
4 Claims. (Cl. 324—30)



1. An instrument for determining the conductivity of a liquid comprising: a measuring cell having a pair of spaced electrodes, said measuring cell disposed to be filled with the liquid; a source of direct voltage coupled to said electrodes; an operational amplifier coupled to said electrodes and having a low input current compared to the current flow between said electrodes; a feedback loop for said amplifier containing a large resistance; switch means for decoupling said amplifier from said electrodes, the output voltage of said amplifier when decoupled being stored in a capacitor, said switch means in addition being disposed to selectively recouple said amplifier to said electrodes and in addition couple said capacitor in series with said amplifier and electrodes, said capacitor when disposed in series supplying a drift correcting voltage to the amplifier in addition to the signal voltage from the electrodes and measuring means for determining the initial output signal of the amplifier when said switch means recouples said amplifier to said electrodes.

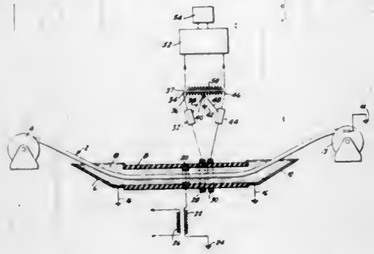
3,047,798
FLASHLIGHT TESTER
Arthur B. Winslett, P.O. Box 431, San Simon, Ariz.
Filed July 13, 1959, Ser. No. 826,586
8 Claims. (Cl. 324—53)



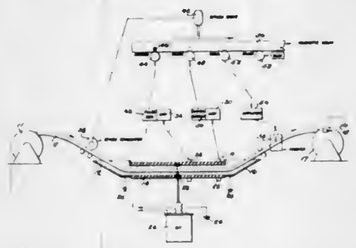
7. A flashlight tester comprising: a tubular case, plurality of batteries in said case, a lamp, a switch, electrical connections connecting said batteries, lamp, switch, and case in series, a plurality of tube sockets connected in said case, said tube sockets being means for inserting a standard vacuum tube therein, electrical connections connecting certain designated pins of said tube sockets in series with said batteries, lamp, and case, therefore said sockets being in parallel with said switch, an electrical test point terminating on the exterior of the case which is in series with said lamp, batteries, and case and therefore in parallel with said switch and sockets, pin straighteners on the exterior of the case, said pin straighteners projecting beyond the surface of the case, said pin straighteners on either side of said test point thus serving to protect the test point against accidental contact.

3,047,799
INTERFERENCE-FREE PROBE APPARATUS FOR TESTING INSULATED ELECTRIC CONDUCTORS
Robert W. Peer and David Eigen, Passaic, N.J., assignors to The Okonite Company, Passaic, N.J., a corporation of Delaware
Filed Apr. 13, 1960, Ser. No. 21,911
5 Claims. (Cl. 324—54)

5. Interference-free probe apparatus for testing insulated electric conductors to detect deleterious occlusions within the same, said apparatus comprising, in combination, means for advancing the insulated conductor longitudinally while progressive subjecting the conductor insulation to progressively increasing electrical stress to cause corona to form at an occlusion within the insulation; a pair of probes positioned to be responsive to the radiating occlusion, said probes being responsive at all times simultaneously and equally to interference originating at sources other than the insulated conductor being tested, said probes being identical in size, shape, and geometrical orientation and spaced from each other in the direction of advance of the insulated conductor, whereby the signals picked up by the two probes will be unequal in phase and amplitude at all positions of the occlusion other than midway between the two probes, response of the probes when the occlusion is in midway position being equal in phase and amplitude; a transducer; a transformer having a center-tapped primary winding; means electrically connecting one of said probes to one terminal of said center-tapped winding and to the center-tap of the winding; means for electrically connecting the other probe to the other terminal of the said center-tapped winding and to the center-tap of the winding; a secondary for said transformer; and circuitry for feeding the output of said secondary to said transducer to activate the same.

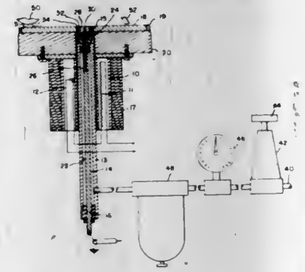


3,047,800
CORONA-TESTING OF THE INSULATION OF ELECTRIC CABLES
David Eigen, Passaic, N.J., assignor to The Okonite Company, Passaic, N.J., a corporation of New Jersey
Filed Nov. 25, 1957, Ser. No. 698,417
9 Claims. (Cl. 324—54)



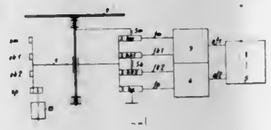
2. Apparatus for the corona-testing of insulated electric wire and cable, said apparatus comprising, in combination, a tube of insulating material containing a semiconducting fluid; means for advancing the insulated wire or cable, with its conductor grounded, through the tube; an electrode within the tube; a high-voltage source electrically connected to said electrode whereby, as the wire or cable advances through said tube, the insulation of the wire or cable will be electrically stressed progressively; a pick-up ring about said tube between said electrode and the exit end of the tube; an amplifier for said ring; a pulse generator connected to the output of said amplifier; a recording head connected to said generator; a magnetic recording device upon which the recording head records the presence of an ionizable occlusion in the insulation as the occlusion moves into said pick-up ring; means for moving said recording device at a speed in constant ratio to the speed of the wire or cable; a second pick-up ring about said tube positioned intermediate the first ring and the exit end of said tube at a point where the stress on the insulation is lower than at the first ring; an erase head connected to the said second ring and operative to erase records of occlusions which are not deleterious when such occlusions reach said second ring, said erase head otherwise being inoperative; and a marker activated by a record which has passed the erase head without being erased, for applying a marking to the insulation at the site of the occlusion.

3,047,801
MOISTURE PROBE
Randolph L. Dietert, Detroit, Mich., assignor to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed Sept. 8, 1959, Ser. No. 838,615
9 Claims. (Cl. 324—61)



1. A probe comprising a central electrode having a smooth specimen contact surface, an annular insulator surrounding said central electrode and having a smooth specimen contact surface forming a smooth continuous extension of the contact surface of said central electrode, an outer annular electrode surrounding and immediately adjacent said annular insulator, said annular electrode having a smooth specimen contact surface forming a smooth continuation of the contact surfaces of said central electrode and said annular insulator, an air passage extending through said insulator and having an air escape port located in the plane of the contact surface thereof.

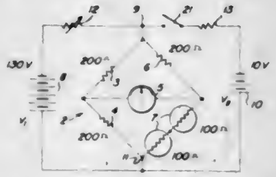
3,047,802
ELECTROMECHANICAL SYSTEM FOR MEASURING OF ANGLES
Karel Štěpánek, Prague, Czechoslovakia, assignor to Vyzkumny ustav obrabecich stroju a obrabeni, Prague, Czechoslovakia
Filed Feb. 23, 1960, Ser. No. 10,506
Claims priority, application Czechoslovakia Feb. 24, 1959
8 Claims. (Cl. 324—83)



1. An apparatus for measuring angles comprising a table supported for rotation about an axis perpendicular to the plane of said table, rotor means supported for rotation about an axis which coincides with said axis of rotation of the table, means operative to rotate said rotor means at a predetermined constant speed, means on said rotor means and pick-up means adjacent said rotor means cooperating, during rotation of said rotor means at said predetermined constant speed, to generate electrical impulses at a measuring frequency, a reference frequency and first and second compensating frequencies, respectively, said measuring frequency being different from said first compensating frequency and said reference frequency

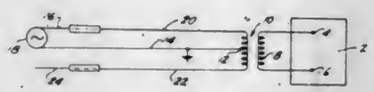
being different from said second compensating frequency by a value equal to the value of the difference between said measuring and first compensating frequencies, said pick-up means corresponding to both compensating frequencies being connected together and movable angularly about said axis of rotation of the rotor means, said pick-up means corresponding to the measuring frequency being connected to said table for rotation with the latter, and said pick-up means corresponding to said reference frequency being stationary, and means indicating the phase relationship between the difference between the measuring and first compensating frequencies and the difference between the reference and second compensating frequencies.

3,047,803
RADIO-FREQUENCY POWER BRIDGE
Gunther U. Sorger, Rockville, and Samuel J. Raff, Chevy Chase, Md., assignors, by mesne assignments, to Weinschel Engineering Co., Inc., Kensington, Md., a corporation of Delaware
Filed June 30, 1959, Ser. No. 823,970
4 Claims. (Cl. 324—106)



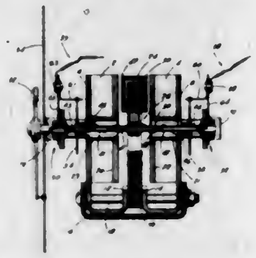
3. Apparatus for measuring R.-F. power comprising three fixed resistors comprising three arms of a bridge circuit and bolometric resistance means comprising the fourth arm of the bridge, electric measuring means connected across one diagonal of said bridge, and power supply means connected across the other diagonal of the bridge, said power supply means comprising two separate and independent D.-C. supply circuits each with its own independent voltage source, the first being a temperature difference compensating supply circuit and the second being a power substitution circuit, each of said circuits separately supplying current to said bridge, the respective voltages and impedances of said two circuits being such that the cross product current term of the bolometric resistance power due to the sum of both sources is substantially independent of the first supply setting, means for adjusting the impedance of said first to balance the bridge, and means for substituting a source of adjustable R.-F. frequency power for said second source to rebalance the bridge at an R.-F. power input equal to the power input of said second supply circuit.

3,047,804
APPARATUS FOR REMOVING SPURIOUS SIGNALS FROM ELECTROMAGNETIC PROBING DEVICES
Robert W. Peer and David Eigen, Passaic, N.J., assignors to The Okonite Company, Passaic, N.J., a corporation of New Jersey
Filed Apr. 9, 1959, Ser. No. 805,262
6 Claims. (Cl. 324—149)



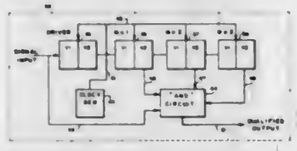
3. In apparatus of the class described, the combination of a transducer; a primary probe responsive to desired electromagnetic signals emanating from a source of alternating-current electrical energy and responsive to undesired electromagnetic signals emanating from a source removed from said source of alternating-current electrical energy; a secondary probe of similar geometric shape and orientation as the said primary probe, said secondary probe being responsive to the said undesired electromagnetic signals but being sufficiently remote from said source of alternating-current electrical energy as to be substantially unresponsive to electromagnetic signals therefrom, the response of the two probes to the undesired signals being substantially the same; and circuitry to which the energy picked up by both probes is fed, said circuitry so adjusting the relative phase of the electromagnetic undesired signals coming from the probes that these signals oppose and cancel each other, whereby the desired electromagnetic signals picked up by the primary probe pass unopposed to the transducer.

3,047,805
METER MOVEMENT
Adolph E. Gersch, Chicago, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Feb. 12, 1960, Ser. No. 8,414
3 Claims. (Cl. 324—150)



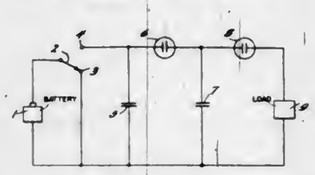
1. A wide scale meter movement comprising a pair of annular axially polarized ceramic magnets, a generally annular laminated pole piece, means including a pair of generally L-shaped brackets of magnetic material each connected to a similarly polarized end of a respective one of the magnets and to the pole piece mounting the magnets and pole piece in spaced coaxial relation between the brackets with the pole piece intermediate the magnets, a pair of flat annular pole pieces each secured to the other end of a respective one of the magnets, the opposed pole piece surfaces being parallel to form uniform air gaps, a coil encircling the laminated pole piece and pivotally mounted for movement along a substantial portion of the pole piece, and spring means urging the coil angularly to a start position.

3,047,806
RANDOM PULSE DISCRIMINATOR CIRCUIT
Moylen D. Heslop, Mountain View, Calif., assignor to Sylvania Electric Products, Inc., a corporation of Delaware
Filed Oct. 22, 1959, Ser. No. 847,945
2 Claims. (Cl. 328—37)



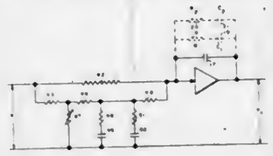
1. In a pulse-type receiver, a random noise gate adapted to discriminate between pulse signals and noise signals on the basis of time spacing between successive signals and comprising a multi-stage shift register having a clock pulse generator supplying a pulse during each clock period of predetermined length, means for applying the output of the clock generator to each stage of the register, an "AND" circuit having an output line, means for supplying input pulse signals to said shift register and to said "AND" circuit, and means for connecting said "AND" circuit to said register whereby said "AND" circuit is responsive to said register for passing an input pulse signal to said output line only when the several stages of the register are in a predetermined state, said predetermined state being defined by the occurrence of at least one input pulse signal during each clock period.

3,047,807
DELAY TIMER COMPRISING SUCCESSIVELY CHARGED CAPACITORS WITH GASEOUS TUBE DISCHARGE MEANS
Jeremiah E. Langan, 51 Carleton Terrace, Cresskill, N.J.
Filed Feb. 28, 1958, Ser. No. 718,346
5 Claims. (Cl. 328—72)



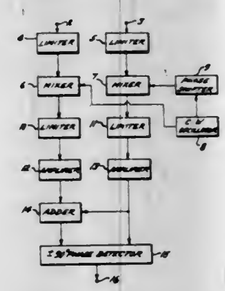
1. A timing circuit comprising a constant direct current source having a first and a second output terminal, a series circuit connected between said first and said second output terminal including a first gas diode, a second gas diode and a load, a first capacitor connected between said first and said second terminal and a second capacitor connected to said second terminal and to a point in said series circuit intermediate said first and said second gas diodes.

3,047,808
INTEGRATOR WITH MEANS FOR COMPENSATING FOR CAPACITY ABSORPTION EFFECTS
John W. Gray, Pleasantville, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Feb. 6, 1959, Ser. No. 791,672
1 Claim. (Cl. 328—127)



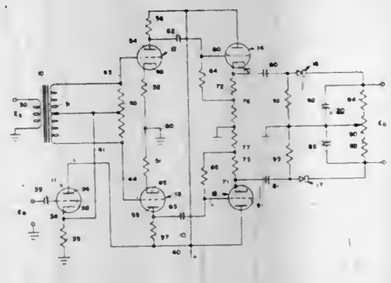
A feedback amplifier RC integrator exhibiting reduced dielectric soaking effect comprising,
a high-gain amplifier,
a shunt capacitor connected between the input and output terminals thereof, said capacitor having an absorbent dielectric and thereby exhibiting the phenomenon of soaking as if shunted by branches consisting of soaking capacitance and soaking resistance in series, whereby a time-potential error is inserted in the integrated output,
a three-terminal network having first and second signal input terminals and a third terminal connected to the input terminal of said amplifier,
said network including a single first resistor directly connected between said first and third terminals,
at least a pair of resistors connected between said first and third terminals,
a first capacitor and a first resistor connected in series between the common terminal of said pair of resistors and said second terminal, and
a second capacitor connected in series between the common terminal of said pair of resistors and said second terminal.

3,047,809
PULSE PHASE COMPARISON SYSTEM
Clarence E. Bergman, Fairfax County, Va., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 22, 1960, Ser. No. 24,181
3 Claims. (Cl. 328—133)



1. A phase comparison system to compare a first intermediate frequency pulse signal to a second comprising an input circuit for each of said pulse signals, each of said input circuits including a limiter, a pair of mixer means, one of said mixer means receiving the output signal from one of said limiters, and the other of said mixer means the output signal from the other of said limiters, means to generate a continuous wave signal for one of said mixers, means to phase shift said generated continuous wave signal prior to application thereof to the other of said mixer means, means to add the output signal from each of said mixers, and means to phase compare said added signal to one of said output signals.

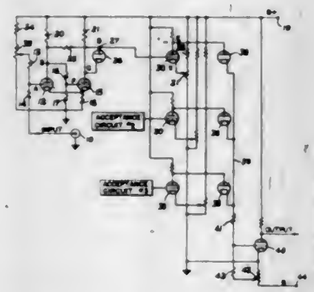
3,047,810
POLARIZED PHASE DISCRIMINATING CIRCUIT WITH LIMITED DIRECT CURRENT FLOW
Thorwald J. Tvedt, Houston, Tex., assignor to Shell Oil Company, a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,757
2 Claims. (Cl. 328—134)



1. A polarized phase detector having limited direct current flow, said phase detector comprising: inductive means for combining a first signal and a reference signal to supply a first output signal equal to the vector sum of said first and said reference signals and a second output signal equal to the vector difference of said first and said reference signal; separate vacuum tube amplifier means for said first and second output signals; each of said separate amplifier means being coupled to separate cathode follower devices having low internal impedance;

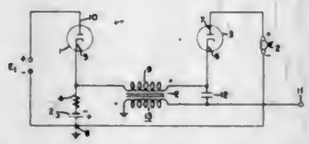
each of said cathode follower devices being coupled to a separate rectifier; the output of said separate rectifiers being coupled to an impedance network, the voltage across said impedance network being proportional to the component of said first signal in phase with said reference signal.

3,047,811
ACCEPTANCE CIRCUITS
Henry K. Bradford, Fairfax, Va., assignor to Outlook Engineering Corporation, Alexandria, Va., a corporation of Virginia
Filed Dec. 2, 1960, Ser. No. 73,280
7 Claims. (Cl. 328—142)



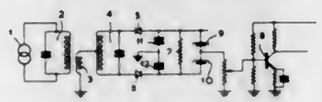
4. An acceptance circuit for providing an output signal in response to an input voltage falling within a predetermined range comprising a first tube having an input grid connected to receive said input voltage, a voltage divider connected to the plate of said first tube, a second tube having an input grid connected at said divider to receive an inverted form of said input voltage at substantially its original level, one-way conducting means connected between the plates of said first and second tubes for conduction therebetween when the plate of said first tube is at a higher voltage than the plate of said second tube and forming an alternately increasing and decreasing signal with a progressive change in the input voltage through said predetermined range, and an output amplifying tube having a grid connected at said load resistor and biased for conduction at and above a predetermined maximum signal at said conducting means.

3,047,812
AMPLITUDE COINCIDENCE CIRCUIT
Stanley R. Brown, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 17, 1958, Ser. No. 722,032
7 Claims. (Cl. 328—147)



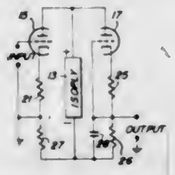
1. An arrangement for determining the instant of amplitude coincidence of two voltages whose relative amplitudes vary with time, comprising: a first circuit having a first pair of input terminals for connection to a source of one of said voltages and comprising a first unidirectionally conducting device in series with an impedance, between said input terminals said device being poled to permit current flow through said impedance for one polarity of said voltage, a second circuit having a second pair of input terminals for connection to a source of the second of said voltages and comprising a second unidirectionally conducting device in series with an inductive reactance and with said impedance between said second pair of input terminals, said second device being poled to permit current flow in the same direction through said impedance for the same polarity of said second voltage, and means responsive to change in said current flow through said inductive reactance to produce a voltage pulse.

3,047,813
RECEIVING CIRCUIT ARRANGEMENT COMPRISING A RATIO DETECTOR
Berend Danker, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,684
Claims priority, application Germany Jan. 28, 1959
1 Claim. (Cl. 329—129)



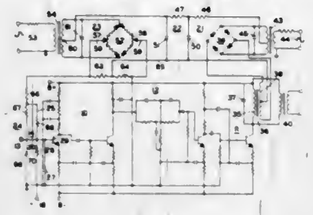
A symmetrical ratio detector comprising, a source of modulated carrier waves, a tuned circuit coupled to said source, a pair of rectifier elements coupled in opposite polarities to the respective ends of said tuned circuit, a first pair of capacitors connected in series across said rectifier elements, means connecting the junction of said first pair of capacitors to a point of constant potential, a resistor connected across said rectifier elements, and a second pair of capacitors also connected across said rectifier elements, each of said second pair of capacitors having a capacitance substantially greater than that of each of said first pair, and means connecting the junction of said second pair of capacitors to the input of a low-frequency transistor amplifier.

3,047,814
BRIDGE-TYPE DIRECT-COUPLED AMPLIFIER
John F. Walton, Arlington, Va., assignor to Elcor, Inc., Falls Church, Va., a corporation of Virginia
Filed Nov. 28, 1958, Ser. No. 777,033
22 Claims. (Cl. 330—40)



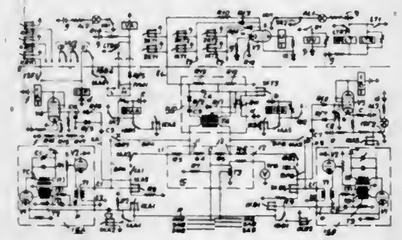
1. A signal amplifier comprising two parallel circuits, an amplifying element having a common electrode, a further electrode and a control electrode for controlling the flow of charge between the other of said electrodes, at least one impedance having two end terminals, means connecting one of said end terminals of said impedance to said common electrode of said amplifying element in one of said two parallel circuits, means connecting a voltage source in series with said amplifying element and said impedance with one end of said source connected to the other end terminal of said impedance, means for connecting said one end terminal of said impedance to a reference potential, means connecting said other parallel circuit across the voltage source, a voltage divider connected in said other parallel circuit, and an output means connected to a predeterminable voltage point along said voltage divider and to the reference potential, and means for coupling an input signal to said control electrode.

3,047,815
PHASE COMPONENT ELIMINATOR
Emery F. Boose, Georgetown, Mass., assignor to General Electric Company, a corporation of New York
Filed July 3, 1959, Ser. No. 824,892
6 Claims. (Cl. 330—86)



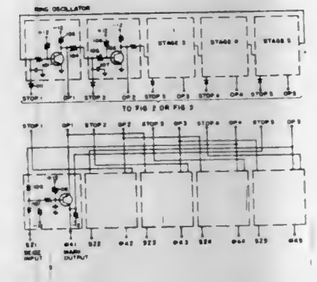
1. A constant phase shift alternating current amplifier adapted for use in a servo system comprising; alternating current amplifying means having an alternating current input and output, feedback means interconnecting said output and input to selectively cancel undesired phase components of signals of a particular frequency appearing at said input, said feedback means including a demodulator to provide a direct current signal proportional to said undesired phase components of the signal provided by said output, said demodulator having a reference voltage supplied thereto at said particular frequency and at a phase with said output such as to provide said direct current signal, a modulator to provide an alternating signal related to said direct current signal, said modulator having a reference voltage supplied thereto at said particular frequency, and means to combine said alternating signal at a phase with the alternating current signal at said input such as to cancel said undesired phase components.

3,047,816
PARALLEL CONNECTED SYNCHRONIZED OSCILLATORS WITH AUTOMATIC DISABLING CONTROLS
Bernard Drake, Blackheath, London, and Donald Keith Hicks, Dartford, England, assignors to Siemens Edison Swan Limited, London, England, a British company
Filed July 23, 1959, Ser. No. 829,101
Claims priority, application Great Britain Aug. 6, 1958
14 Claims. (Cl. 331—49)



1. An A.C. supply arrangement for providing a nominally constant frequency supply with freedom from significant discontinuity, comprising at least two self-sustaining oscillator generators having respective output connections and a synchronising connection for said generators which is separate from their output connections, an output combining circuit to which said generators are connected by their output connections, respective interrupting switches included in said output connections, said switches being closed for normal operation, means associated with each generator for opening the interrupter switch in its output connection and thereby disconnecting it from the combining circuit in response to reduction in the output voltage of that generator by more than a certain amount, and means responsive to synchronisation failure between the generators for opening the interrupting switch in the output connection of one of the generators involved, thereby to prevent the voltage of the combined outputs from going through a low value due to such synchronisation failure.

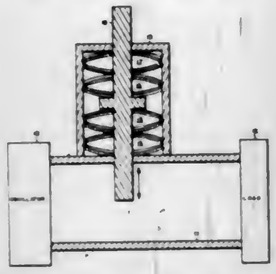
3,047,817
ELECTRONIC RING CIRCUIT DISTRIBUTOR INCLUDING SELECTABLE INTERRUPTING MEANS AND OUTPUT GATES TO PROVIDE NON-OVERLAPPING OPERATION
Gerhard O. K. Schneider, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Feb. 24, 1958, Ser. No. 716,948
13 Claims. (Cl. 331—57)



1. A distributor comprising a ring circuit, said ring circuit comprising an odd number plurality of inverter amplifiers, each of said amplifiers comprising an input circuit and an output circuit, direct current conductive means for connecting the output circuit of each amplifier to the input circuit of the next succeeding amplifier, means including said direct current conductive means for biasing each of said amplifiers for conduction and non-conduction when the next preceding amplifier is non-conductive and conductive, respectively, so that said ring circuit is normally free running, and means for interrupting the operation of said ring circuit at any point in its cycle of operation, said last named means comprising means for maintaining the state of conduction of any one of said amplifiers when the next preceding amplifier changes its state of conduction.

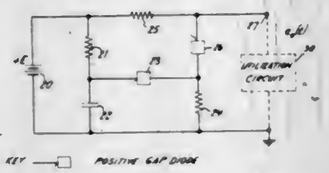
3. A distributor comprising a ring circuit, said ring circuit comprising an odd number plurality of inverter amplifiers, each of said amplifiers comprising an input circuit and an output circuit, direct current conductive means for connecting the output circuit of each amplifier to the input circuit of the next succeeding amplifier, means including said direct current conductive means for biasing each of said amplifiers for conduction and non-conduction, respectively, when the next preceding amplifier is non-conductive and conductive, respectively, so that said ring circuit is free running, a gating transistor having a base, an emitter, and a collector, means for connecting said emitter to the output circuit of a first one of said amplifiers, means for connecting said base to the output circuit of a second one of said amplifiers preceding said first amplifier in said ring circuit by an even number, an output circuit connected to said collector, and means including said means for connecting the emitter and base of said gating transistor to the output circuits of said first and second amplifiers, respectively, for biasing the base and emitter of said gating transistor in the forward direction to thereby produce a signal in said collector output circuit during each alternate cycle of operation of said ring circuit for the period of time elapsing from the time that said second amplifier changes its state of conduction until said first amplifier changes its state of conduction.

3,047,818
OSCILLATOR FREQUENCY COMPENSATOR
Robert Regis, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 9, 1959, Ser. No. 805,240
4 Claims. (Cl. 331—66)



4. An oscillator frequency compensator comprising: an oscillator subject to frequency variations due to temperature changes, said oscillator having a load impedance; detection means for detecting said temperature changes; and means responsive to said detection means for controlling the frequency of said oscillator by changing the load impedance thereof.

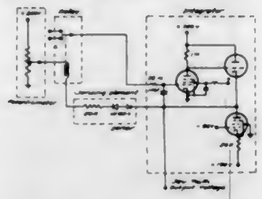
3,047,819
SOLID-STATE PULSE GENERATOR
Isy Haas, Menlo Park, Calif., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 11, 1959, Ser. No. 833,030
6 Claims. (Cl. 331—107)



1. A pulse generator circuit comprising a voltage source, first and second resistors each having one terminal connected to a first terminal of said source, first and second positive-gap diodes each having a first element connected to another terminal of the respective resistors, a third resistor having one terminal thereof connected to both of the second elements of said diodes, said third resistor having another terminal connected to a second terminal of said source, and a capacitor having one terminal connected to said second terminal of said source, said capacitor having another terminal connected to one of said first elements of said diodes.

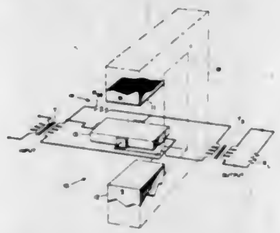
3,047,820
SAW-TOOTH VOLTAGE GENERATOR UTILIZING INTEGRATOR
John G. Lawton, Snyder, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 19, 1960, Ser. No. 10,003
5 Claims. (Cl. 331—143)

1. A voltage generator having an adjustable mean level output voltage comprising, in combination, a potentiometer having a slidable resistance arm, a coil electrically connected in series with said resistance arm; a relay having voltage input terminals and a reversible quick-acting switch actuated by an armature; said armature being disposed so that it is under the influence of currents in said coil; a sensing element in series with said coil comprising back to back connected silicon diodes, said sensing element controlling the current in said coil and thereby controlling the position of the switch in said relay; and an integrator in series with the output current



of said relay and said sensing element and having electrical components therein such that the voltage output will remain linear so long as the voltage input to the integrator is at a constant value.

3,047,821
ISOLATOR USING HALL EFFECT GYRATOR
Albert R. Hilbinger, Cockeysville, Md., assignor to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed Dec. 27, 1960, Ser. No. 78,647
2 Claims. (Cl. 333—24)



1. An isolator comprising:
a Hall effect gyrator having a pair of input terminals and a pair of output terminals,
and only one effective shunt resistance connected between said pair of input terminals and said pair of output terminals,
said effective shunt resistance having substantially the following value:

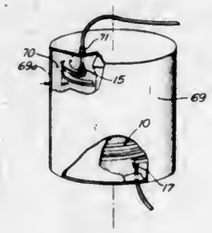
$$(R_e)_s \doteq \frac{(R_{11})^2+(R_H)^2}{6(R_H)}$$

where R_{11} is the input or output self resistance of the gyrator and R_H is the forward transfer resistance of the gyrator.

3,047,822
WAVE COMMUNICATING DEVICE
Emory Lakatos, Santa Monica, James E. Holland, Los Angeles, and Earl M. Polzin, Lawndale, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 23, 1957, Ser. No. 704,443
4 Claims. (Cl. 333—31)

1. A delay line device having substantially sixty percent bandwidth characteristics and a substantially dispersionless wave propagation characteristic for accepting and guiding electromagnetic waves, comprising in combination: an elongated body of ceramic material conformed to a helix and having substantially constant delay characteristics and a relatively high dielectric constant with respect to air; first and second layers of electrically conductive material fixed on opposing surfaces of said body, insulated from one another by said ceramic material and extending the length of said body to end faces thereof;

said surfaces being disposed generally in planes transverse to the axis of said helix; said first and second layers of electrically conductive material being spaced apart to provide for the propagation of an electric wave along the length of said body; said electric wave propagated within said body providing a mode establishing a substantial value of electrical field potential at the boundaries defined by outer surfaces of said body directly in contact with a surrounding environment; said body having adjacent each end faces thereof a cylindrical aperture of predetermined diameter; each said aperture being substantially perpendicular to the two surfaces comprising said first and second layers of electrically conductive



material; conductor means positioned within each said aperture; said conductor means being of substantially the same shape as each of said apertures but of smaller dimensions; each said conductor means being centered in its respective aperture; electrically conductive means physically coupling each said conductor means to one of said first and second layers of conductive material; a closed container of electrically conductive material surrounding said helix; and a shock absorbing body of electrically insulating material of low dielectric constant conformed around and between the turns of said helix and in shock supporting relation therewith to the interior of said container.

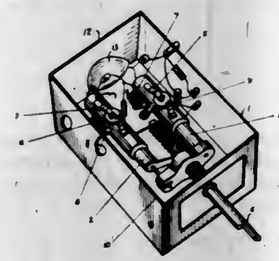
3,047,823
TUNABLE PIEZO-ELECTRIC CRYSTAL
Bela Ranky, Flushing, N.Y., assignor to Panoramic Radio Products, Inc., Mount Vernon, N.Y., a corporation of New York
Filed May 7, 1959, Ser. No. 811,577
9 Claims. (Cl. 333—72)



8. A piezo-electric system comprising a piezo-electric crystal having two pairs of separate, opposed electrodes, means coupled to only one of said pair of electrodes for supplying and removing energy substantially at the crystal resonant frequency, and only tuning means coupled to the other of said pair of electrodes for varying the resonant frequency of said crystal, said last named means consisting of a variable reactive element.

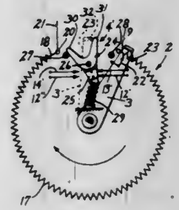
3,047,824
TUNER CHASSIS WITH INTEGRAL SHIELD AND CONDENSER PLATE
Seymour Napolin, Westbury, and Mark H. Harwood, Syosset, N.Y., assignors to Granco Products, Inc., Long Island City, N.Y., a corporation of New York
Filed Dec. 18, 1959, Ser. No. 860,578
4 Claims. (Cl. 334—46)

1. In a frequency modulation tuner, a metal chassis supporting therein adjustable and fixed tuning elements, means supported on said chassis outside thereof for adjusting said adjustable tuning elements, said fixed tuning elements including at least one inductance coil coupled to said adjustable tuning elements supported within said chassis parallel to one side wall between said side wall and one of said adjustable tuning elements, said side wall having a portion partially stamped out therefrom without being completely



cut off from the wall forming a substantially perpendicular projection integrally connected with said wall extending into said chassis facing one end of said fixed coil, said stamped out wall portion being bendable to and fro with respect to said fixed coil end so as to preadjust the tuning during assembly of the tuner.

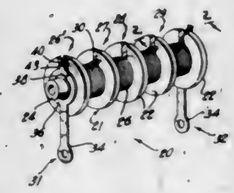
3,047,825
COMBINATION VARIABLE RESISTOR AND SWITCH
Francis J. Blitz, Glen Lake, Minn., assignor to Electro-Solid Controls, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 23, 1961, Ser. No. 146,923
2 Claims. (Cl. 338—172)



1. A variable resistor and switch combination comprising a longitudinally extended resistive element generally circularly disposed with its opposite ends spaced apart and having at least one end connected to a conductor terminal, a wiper arm mounted for rotation about the axis of the resistive element and having its radially outwardly disposed end portion in conductive contact with said resistive element and said end portion being connected to a second conductor terminal to provide a variable resistance between said conductor terminals upon rotation of the wiper arm, means for controlling the movement of said wiper arm whereby said wiper arm is free for rotation in one direction for approximately 720° and to rotate twice around said resistive element, after movement twice around said resistive element in one direction further movement of said wiper arm is stopped and said wiper arm is free for rotation in the opposite direction approximately 720° and for movement twice around said resistive element in said opposite direction, and then further movement of said wiper arm in said opposite direction is stopped; a switch comprising a fixed contact element and a movable contact element; means for actuating the movement of said movable contact element into and out of contact with said fixed element in relation to the position of said wiper arm, whereby said movable element is moved into contact with said fixed element upon the rotation of said wiper arm in one direction and at the place of movement of said wiper arm from a position

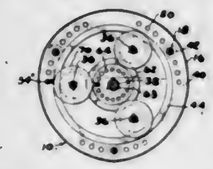
completing one rotation around said resistive element and prior to the commencement of a second rotation around said wiper arm in one direction and whereby said movable element is moved out of contact with said fixed element upon the rotation of said wiper arm in the opposite direction and at the place of movement of said wiper arm from a position completing one rotation around said resistive element and prior to the commencement of a second rotation around said resistive element in said opposite direction.

3,047,826
PRECISION WIRE-WOUND RESISTANCE APPARATUS AND RESISTORS
Loebe Julie, New York, N.Y., assignor to Julie Research Laboratories, Inc., New York, N.Y.
Filed Mar. 29, 1957, Ser. No. 649,439
7 Claims. (Cl. 338—329)



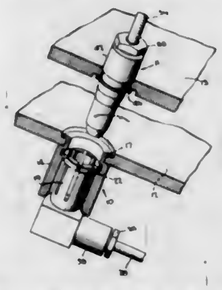
1. A precision resistor comprising, an axial bobbin of insulating material, a resistance wire of selected diameter wound along said bobbin, individual transition members of conductive material spaced along said bobbin, said resistance wire having individual ends for making substantially perpendicular electrical point terminations with correlated ones of said transition members, each end of said resistance wire being butt-welded to a point on the correlated one of said transition members, said butt-weld point connections achieving a resistance wire of preselected overall length within a precision comparable to the diameter of such wire, the area of a transition member being many times larger than the area of the resistance wire end terminating thereto and the resistivity of said transition members being comparable to the resistivity of said resistance wire to accomplish butt-welding of the individual wire terminations to correlated ones of said transition members and also to achieve transition members of negligible resistance in comparison to the resistance of said resistance wire winding, and conductive means of negligible resistance in comparison to the resistance of said winding for making electrical and mechanical terminal connections with individual transition members, said resistance wire being substantially isolated against mechanical strains imposed upon said conductive means and transition members.

3,047,827
SLIP RING ASSEMBLY
Glenn G. Stoddard, Washington, Mich., assignor to Curtiss-Wright Corporation, Utica Division, Utica, Mich., a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 789,011
4 Claims. (Cl. 339—5)



1. A slip ring assembly for conducting electrical current between relatively rotatable members, and comprising: an annular member having a circular member disposed in concentric spaced relation thereto and each having flat side faces and a current conducting surface provided on at least one side face of each thereof, a current conducting disk disposed in planetary relation between said annular and circular members and in engagement with the side faces thereof including said current conducting surfaces, and drive means operatively connected to one of said annular and circular members for rotation thereof.

3,047,828
CONNECTOR
Alvero C. Gregson, 154 Brook St., Garden City, N.Y.; Roy A. Ahlberg, 23 Plane Tree Lane, St. James, N.Y.; and Henry C. Ferri, 18 Central St., Greenlawn, N.Y.
Filed June 16, 1960, Ser. No. 36,572
5 Claims. (Cl. 339—64)

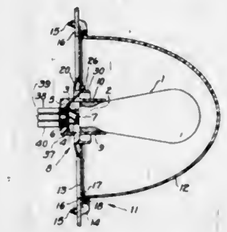


1. A connector comprising first and second base plates mechanically joinable in substantially fixed relationship to each other; a first connector member fixedly attached to said first plate and extending therefrom and comprising first and second conductors in fixed, spaced relationship to each other; a second connector member comprising an outer portion rigidly attached at one end thereof to said second plate and an elongated inner portion recessed within said outer portion and extending beyond the other end of said outer portion, said inner portion having an outwardly extending flange fitting into a channel within said outer portion to be held thereby, said inner portion being longitudinally divided along a substantial portion of its length to said other end of the outer portion and having outer dimensions smaller than the inner dimensions of said outer portion to permit a limited lateral movement of said inner portion within the outer portion, the outermost end of said first connector member fitting into the recess of said second connector member to spread said longitudinally divided inner portion along at least a substantial portion of its length and causing said flange to fit farther into said channel, said inner portion comprising third and fourth conductors fixedly spaced apart with respect to each other and positioned to connect with the first and second conductors of said first connector member, respectively.

3,047,829
ELECTRIC LAMP BASE
Robert W. Mouat, Mentor-on-the-Lake, Ohio, assignor to General Electric Company, a corporation of New York
Filed Nov. 18, 1959, Ser. No. 853,764
1 Claim. (Cl. 339—127)

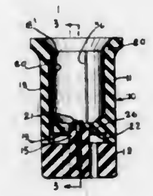
A unitary lamp base comprising a molded base body consisting of stiffly resilient organic thermoplastic material, said body having a cylindrical shell open at one end for receiving and attachment to the neck of a lamp bulb having current carrying inlead wires extending from its neck, the opposite end of the shell being closed by an integral end wall, hollow electrical contacts affixed to the end wall of the shell and exposed thereat for engagement

with terminals of an electric power source and opening into the interior of the shell for receiving the outer ends of the lamp bulb inlead wires, a centering collar integral with the shell, a plurality of arcuate holding ears of different dimensions integral with the centering collar, arranged in a common seating plane normal to the longitudinal axis of the shell and extending radially outward at approximately equal angular distances around the collar, and a dished annular resilient flange integral with the collar and disposed with its concavity facing toward the common seating plane of the ears, said flange and said ears being spaced apart longitudinally of said base body a distance sufficient to accommodate and clamp therebe-



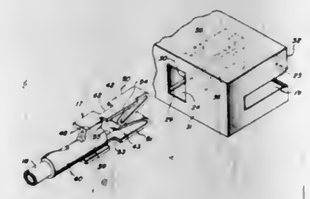
tween a lamp supporting wall of a lamp housing provided with a keyhole opening for said centering collar with the flange flexed against the accommodated wall and sealing the keyhole opening in the housing wall against contaminants, said base body having longitudinally extending protrusions on said collar constituting means for orienting and locking the base in a rotated position on a lamp housing wall, one of said protrusions extending between the flange and the ear of largest dimension to limit the rotation of the base and another of said protrusions extending from an ear of smaller dimension toward said flange and terminating short of said flange to serve to lock the base against rotation on a lamp supporting wall.

3,047,830
SOLDERLESS CONNECTION FOR ELECTRIC SOCKETS
Alfonso Yslas, 327 W. 17th St., New York, N.Y.
Filed July 12, 1960, Ser. No. 42,323
2 Claims. (Cl. 339—174)



1. A solderless connection electric socket comprising a sectional insulating body including a top tubular section with a closed bottom end and a base section, said sections having complementary mating portions for aligning and interlocking said sections, the closed bottom end of said top section having a cutout portion, a central electrical contact extending centrally through the top and base sections, said contact securing said sections to each other, an elongated contact strip in the top tubular section disposed along the side of the top section, having an angular portion disposed between the top and base sections, a contact strip engaging said central contact, a slide disposed in the cutout portion of the top section, said slide having a passage adjacent one end thereof, the bottom end of said top section having a passage therethrough, said base section having a passage therethrough in line with the passage in the top section, the passage in the slide adapted to be aligned with the other passages, and conductors extending through the aligned passages in the top and bottom sections and in the slide in the path of movement of the slide whereby inward movement of the slide carries said conductors into contact with the contacts, said slide having a detent on its surface for interlocking with a depression in the bottom end of the top section to hold the slide in moved condition.

3,047,831
SNAP-IN CONTACT FOR EDGE CONNECTOR
Stanley J. Majewski, Chicago, Ill., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Jan. 11, 1960, Ser. No. 1,607
12 Claims. (Cl. 339—176)



1. In combination with a connector body part provided both with a transversely extending contact-receiving cavity adapted to receive a terminal of a mating connector, said cavity having a pair of spaced apart and generally parallel, facing walls equipped intermediate the ends thereof with a pair of locking elements respectively disposed along diagonally opposite corner portions of said cavity, a contact structure mounted within said cavity and having a pair of generally parallel legs respectively disposed along said facing walls and being provided with openings therein respectively receiving said locking elements to constrain said contact structure against displacements in a transverse direction, and said contact structure being provided with a base adapted to be connected to a lead wire and being formed integrally with said legs and extending diagonally therebetween, said contact structure being adapted to snap into an interlocking engagement with said cavity upon insertion thereinto and to ride over said locking elements during such insertion to align the same with said openings and thereby seat the locking elements therein and said legs being rotatable slightly about the respective locations of connection thereof with said base during such insertion and movement of the legs over said locking elements so as to avoid excessive compression of said contact legs and thereby facilitate insertion of said contact structure into said cavity.

3,047,832
ELECTRICAL SOCKET CONTACTS
Stanley Thomas Deakin, Walton-on-Thames, England, assignor to Sealectro Corporation, Walton-on-Thames, England, a corporation of New York
Filed Sept. 12, 1960, Ser. No. 55,504
Claims priority, application Great Britain Sept. 11, 1959
7 Claims. (Cl. 339—217)

1. An electrical socket contact in the form of a channel of resilient metal to be received in a vertical throughway in a supporting receptacle, the base of the channel being omitted from the side walls along an intermediate portion of the length of the member adjacent the upper end of the channel, thus leaving a pair of spaced webs along the base of the channel between said side walls, the side walls of the channel being bowed inwardly along said portion to provide, within the channel shape, resilient contact sur-

faces for engagement with a pin or the like inserted lengthwise into the mouth of the channel formed at its



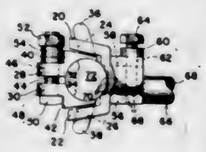
upper end, and means for securing the channel in the throughway against downward and upward movement.

3,047,833
BATTERY TERMINAL CONNECTOR
William S. Ausherman, 3500 N. Topeka, Wichita, Kans.
Filed Apr. 12, 1961, Ser. No. 102,605
9 Claims. (Cl. 339—236)



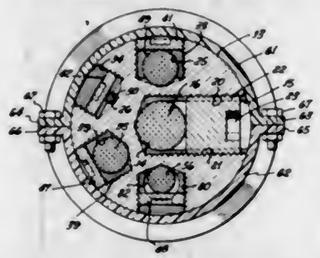
1. A battery terminal connector comprising an electrically conductive body member that includes a portion having a concave surface area substantially coextensive with and extending between first and second margins of such portion adapted to engage a battery terminal, said body member including an integral lug adjacent the first margin of said portion, an electrically conductive clamp member that includes a portion having an concave surface area substantially coextensive with and extending between first and second margins of such portion adapted to engage a battery terminal, said clamp member including an integral lug adjacent the first margin of said portion thereof, securing means for forcibly urging said lugs toward each other, and cooperating cam means carried by the body member portion and the clamp member portion adjacent their respective second margins for moving said concave surface areas toward substantially direct opposition during operation of said securing means, said cam means comprising an ear on the second margin of one of said portions that is offset and overlaps the second margin of the other portion, said ear being apertured, and a finger on the last-mentioned second margin slideable through the aperture.

3,047,834
CABLE CONNECTOR
William S. Ausherman, 3500 N. Topeka, Wichita, Kans.
Filed July 5, 1961, Ser. No. 122,000
9 Claims. (Cl. 339—236)



1. An electrical connector clamp comprising a clamp body of electrically conductive material having a generally cylindrical concave surface, said clamp body including a pair of lateral extensions that are offset from and disposed on opposite sides of a cylinder defined by the concave surface, each of said extensions having an opening therethrough, a pair of opposed clamp members of electrically conductive material disposed between the extensions, each of said clamp members having a generally cylindrical concave surface essentially complementary to a cylinder defined by the concave surface of the clamp body, said clamp members each having an integral lug which lugs are generally parallel to each other, means for forcibly urging the lugs toward each other, each of said clamp members having an ear extending through the opening in one of the extensions, said ears being inclined to the general parallelism of the lugs and in a direction inclined toward the center of said concave surface of the clamp body, whereby the movement of the lugs toward each other cams the clamp members toward the center of a cylinder defined by the concave surface of the clamp body through camming coaction of the ears and the extensions, and said clamp body having an opening therethrough that is generally perpendicular to the axis of a cylinder defined by the concave surface of the clamp body.

3,047,835
LEAD-OFF SPLICE BLOCK FOR CONTINUOUS AND OTHER CABLES
Myron G. Kelly, 75 Story Place, Alhambra, Calif., assignor of fifty percent to Raymond Blakeman, Los Angeles, Calif.
Filed Sept. 19, 1960, Ser. No. 56,758
6 Claims. (Cl. 339—242)

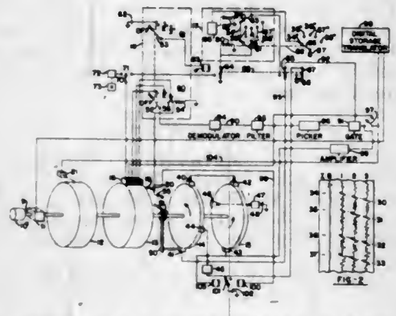


1. A splice fitting for splicing electric lead-off cables to a continuous electric bus cable comprising a block of electrically conducting material having opposite ends and a side wall intermediate the ends, said block having a bore therethrough, means forming in said block an access pasasge to said bore located laterally of the bore and extending from end to end thereof, an aperture extending from the bore laterally outwardly and exposed to the exterior of the block, and a fastener plug extending into the aperture to the bore to a location adapted to mechanically secure the bus cable in the block in an electrically conducting contact, means forming a plurality of lead-off cable bores in the block, and fastening means in the block extending from the exterior of the block to a location in said respective lead-off cable bores adapted to secure the lead-off cables in the block in an electrically conducting contact.

3,047,836
APPARATUS FOR PROCESSING SEISMIC DATA
Virgil R. Johnson and Jesse D. Skelton, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Filed Nov. 23, 1956, Ser. No. 624,035
14 Claims. (Cl. 340—15.5)

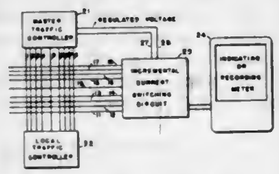
1. An apparatus for reproducing a reflection crossing from a multi-trace reproducible seismogram which comprises, supporting means adapted to receive said seismogram, transducing means adapted to scan along the length of each trace of the seismogram to form a separate train

of electrical signals for each trace, signal gating means, event selection means adapted to pass portions of each train of signals having a predetermined characteristic, electrical circuit means adapted to conduct each train of said electrical signals to said event selection means to conduct the portions passed thereby to said gating means.



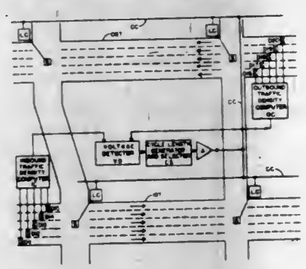
means responsive to a preselected event on a first of said traces corresponding to said crossing to actuate said gating means for a period sufficient to pass one of said portions received from said event selection means, and time delay means adapted to receive a signal transmitted through said gating means and to open said gating means after a predetermined period of time on the seismogram.

3,047,837
SINGLE PEN, MULTICHANNEL RECORDING OR INDICATING METER
Garland E. Fieser, East Moline, Ill., assignor, by mesne assignments, to The Gamewell Company, Newton, Mass., a corporation of Delaware
Filed Jan. 14, 1959, Ser. No. 786,779
6 Claims. (Cl. 340—22)



1. A circuit for use with a recording ammeter to adapt the ammeter for use as a monitor of the control positions of devices controlled by a master control device, comprising: a master control device having conductor energizing means; a plurality of conductors leading away from said master and energizable thereby adapted to be connected to units controlled by said master control device, said conductors divided into two groups, the first of said groups transmitting instructions relating to a first control function, and the second of said groups transmitting instructions relating to a second control function, and each conductor in said first group corresponding to a different control position of said first control function, and each conductor in said second group corresponding to a different control position of said second control function; a like plurality of electric paths, said electric paths divided into two groups corresponding to the two said groups of said conductors, the electric paths of the first group connected to the conductors of said first group of conductors, and the electric paths of said second group connected to the conductors of said second group of conductors, whereby each electric path may receive current from the conductor to which it is connected when said conductor is energized by said master; a stable impedance in each electric path, the impedances in said first group of electric paths differing from each other in values to permit successively larger flows of current to said ammeter related in arithmetic progression, and the impedances in said second group also differing from each other in values to permit successively larger flows of current to said ammeter related in arithmetic progression, with the largest flow of current from the electric paths of said first group being smaller than the smallest flow and smallest increment of current from the electric paths of said second group; an output circuit connected to receive the output of each of the electric paths, said output carried by said output circuit consisting of the current carried by any energized electric path in one group and the current of any energized electric path in the second group; a recording ammeter connected to said output circuit; and means forming a part of said ammeter for recording the current value received by said ammeter from said output circuit.

3,047,838
TRAFFIC CYCLE LENGTH SELECTOR
George Donald Hendricks, Campbell's Island, Ill., assignor, by mesne assignments, to The Gamewell Company, Newton, Mass., a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,256
17 Claims. (Cl. 340—31)

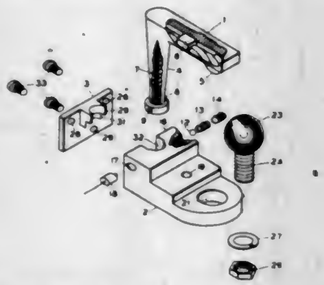


1. A method of adjusting traffic cycle length on a street in relation to the density of traffic in the heavier direction thereon, comprising, counting traffic in each direction and developing an output potential proportional thereto, comparing the two potentials and utilizing only the higher, admitting the higher potential to a level detector having a succession of levels, energizing a level of one of said succession of levels corresponding to the level of the potential, operating a plurality of signal generators continuously to produce a plurality of output signals of different frequencies, the energized level of said level detector applying the output signal of one of the signal generators to an amplifier, transmitting the amplified output to a series of local traffic controllers, energizing a synchronous motor in each controller from the amplified output, driving a traffic cycle timing dial by the motor, the duration of a traffic cycle being proportional to the heavier traffic count.

3,047,839
TRAILER HITCH SAFETY DEVICE
Raymond R. Brown, Box 336, Copan, Okla., and Donald D. Goff, Bartlesville, Okla., assignors to Raymond R. Brown
Filed Dec. 2, 1959, Ser. No. 856,865
7 Claims. (Cl. 340—52)

1. A trailer hitch for connecting a towing vehicle and a towed vehicle by means of a coupler and mating ball on said hitch comprising the combination of a base mounted on a backing plate attached by screws to said towing vehicle, said base and said backing plate having a cylindrical recessed portion for mounting a unit formed by a vertically positioned pivot stem and disk with an arm connected to and at right angles with said pivot stem and disk, said arm containing an electrical switch one terminal of which is grounded, the other terminal of said switch being connected by an insulated electrical lead

which passes through said arm, said pivot stem and disk to an electrically insulated contact in said disk, a spring biased electrical contact in said base and touching said insulated contact when said arm is positioned longitudinally with said hitch, and electrically connected to an alarm, manually operated electrical switch, and source



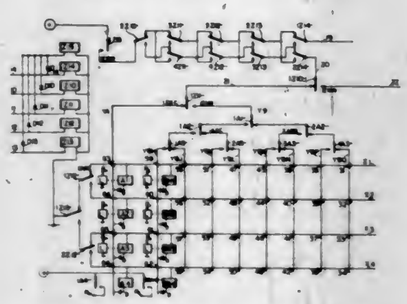
of current to ground, said alarm being supplied current by said source and actuated when said arm is rotated causing said spring biased switch to become grounded to said disk, said arm being maintained in a longitudinal position by a detent mounted in said base and extending into a recessed portion of said disk.

3,047,840

TRANSLATORS FOR MULTI-CHANNEL CODES EMPLOYING MATRICES

Victor Harms, 4224 16th St. SW., and Jerry Howard Schwartz, 3032 Hampton Crescent, both of Calgary, Alberta, Canada

Filed Feb. 3, 1960, Ser. No. 6,525
18 Claims. (Cl. 340—166)



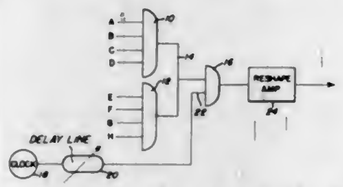
11. A remote control switching circuit for controlling a selected one of a multiplicity of loads, comprising a primary matrix having a set of horizontal bars and a primary bus forming path control junctions with said bars, a plurality of auxiliary matrices each having said bars in common and separate pluralities of secondary buses forming with said bars load controlling junctions each having one of said loads connected between a bus and a bar, first and second sources of differing reference potentials, a set of input signal lines, first and second groups of primary selector switch arms having associated alternate contacts each group of said arms and contacts comprising a primary tree circuit branching from respective sources, means responsive to signals fed to said lines for connecting a bar and a primary bus with respective sources through said primary trees, storage means energizeable from respective path control junctions for actuating ranks of auxiliary selector switch arms, said ranks of auxiliary arms having associated alternate contacts interconnected in a first sub-tree circuit branching from a contact of a terminal arm of said second primary tree, a first group of secondary buses individually connected with terminal contacts of said first sub-tree, one bus of said first group forming auxiliary path control junctions with said bars, a second group of secondary buses, and auxiliary storage means operable in response to energizing of respective auxiliary path control junctions to control further ranks of auxiliary selector switch arms and associated contacts interconnected in a second sub-tree circuit, whereby to extend a path leading through said second sub-tree from a terminal contact of said second primary tree to select a bus from said second group of secondary buses connected with terminal contacts of said second sub-tree.

3,047,841

MARGINAL CHECKING MEANS FOR ELECTRICAL PULSE CIRCUITS

Spiro Eric Kondi, Belmont, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Aug. 26, 1959, Ser. No. 836,092
7 Claims. (Cl. 340—167)



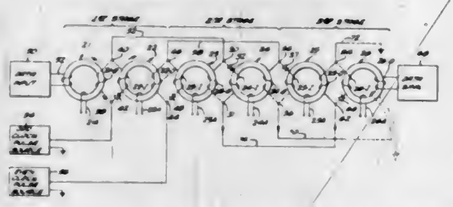
1. An electrical circuit comprising an amplifier having an input and an output, a pulse-type logical circuit connected to said input, a timing clock pulse source connected to said input and being adapted to produce a single clock pulse for each signal pulse passed through said logical circuit to control the activation of said amplifier when a signal passes through said logical circuit and selectively adjustable means connected to said clock pulse source to adjust the timing of each clock pulse from said source at said input relative to the pulse signal passing through said logical circuit so that the time period of coincidence of said clock pulse and said signal pulse is varied to thereby provide a check of the operability of said circuit.

3,047,842

MAGNETIC-CORE SHIFT REGISTER

William R. Johnston, Los Angeles, Calif., assignor, by mesne assignments, to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed May 16, 1960, Ser. No. 29,293
4 Claims. (Cl. 340—174)



1. A shift register comprising a plurality of magnetic cores in a sequence alternate ones of said cores in said sequence being designated as odd cores, remaining ones of said cores in said sequence being designated as even cores, each core in said plurality of cores having two stable states of magnetic remanence and being drivable therebetween, means for transferring the state of magnetic remanence of said odd cores to said even cores comprising, for each odd and even core, a first winding wound with one sense on said odd core, a second winding

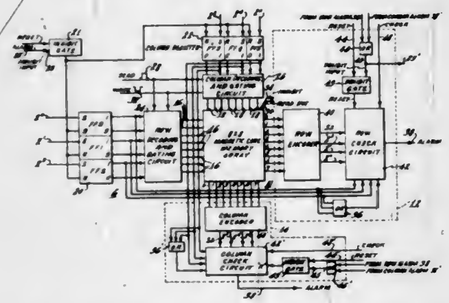
wound with an opposite sense on said even core, a first and second terminal, means connecting the ends of said first winding to said first and second terminals, means connecting one end of said second winding to said second terminal, a first rectifier connected between the other end of said second winding and said first terminal, and means connecting the second terminal provided for each odd and even core to the first terminal provided for a succeeding odd and even core, means for transferring the state of magnetic remanence of said even cores to said odd cores comprising, for each odd and even core, a third winding wound with one sense on said even core, a fourth winding wound with an opposite sense on said odd core, a third and fourth terminal, means connecting the ends of said third winding to said third and fourth terminals, means connecting one end of said fourth winding to said fourth terminal, a second rectifier connected between the other end of said fourth winding and said third terminal, and means connecting the fourth terminal provided for each even and odd core to the third terminal provided for a succeeding even and odd core.

3,047,843

MONITORING CIRCUITS

Abraham Katz, Haddonfield, N.J., and Andrew Rauchwerk, Norristown, Pa., assignors to Radio Corporation of America, a corporation of Delaware

Filed Feb. 15, 1957, Ser. No. 640,518
8 Claims. (Cl. 340—174)



1. In combination with a magnetic core array having a set of array lines and having means for selecting a desired line in accordance with a first group of coded signals, a monitoring circuit comprising means generating a second group of coded signals, and a check circuit, said generating means including a plurality of monitor cores each linked by at least one of said array lines of said set, and sensing windings linked to said monitor cores, said check circuit being connected to said sensing windings and being responsive to both said first and second groups of coded signals.

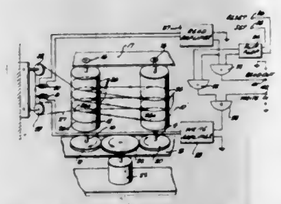
3,047,844

LARGE CAPACITY CLOSED-LOOP DELAY APPARATUS

Philip N. Armstrong, Santa Monica, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Jan. 4, 1960, Ser. No. 427
4 Claims. (Cl. 340—174.1)

1. A long-line delay device comprising a first cylinder having a predetermined axis of rotation and a plurality of grooves disposed about the periphery thereof in respective planes that are normal to said axis of rotation; a second cylinder spaced from and co-extensive with at least a portion of said first cylinder and having an axis of rotation that is parallel to said predetermined axis of rotation, said second cylinder having a corresponding plurality of grooves disposed about the periphery thereof in respective planes that are normal to said axes of rotation; a continuous longitudinal magnetic member disposed about and from each groove of said first cylinder to and about each corresponding groove of said second cylinder; means for returning said continuous longitudinal magnetic member from the outermost groove at one extremity of one of said first and second cylinders to the outermost groove at the opposite extremity of one of said first and second cylinders; means coupled to at



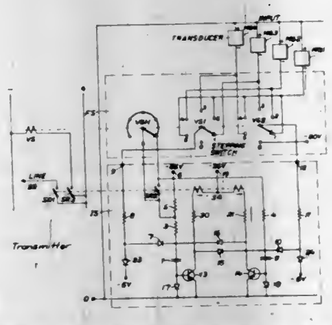
least one of said first and second cylinders for rotating said cylinders; means disposed adjacent a first elemental portion of said longitudinal magnetic member for affecting the magnetic configurations thereof in accordance with an intelligence signal; and means disposed along a second elemental portion of said longitudinal magnetic member spaced from said first portion in the direction of travel for converting said magnetic configurations into a delayed intelligence signal.

3,047,845

TELEMETERING OVER A SINGLE CHANNEL BY VARIABLE PULSE AND VARIABLE INTERVAL ENCODING

Hugo Hansson, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation

Filed Apr. 13, 1959, Ser. No. 806,060
Claims priority, application Sweden Apr. 19, 1958
2 Claims. (Cl. 340—184)



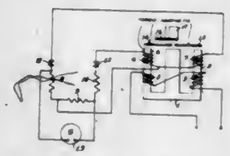
1. A system for remote metering of a plurality of values of variable magnitude, comprising a transmitting station, a receiving station and a single transmitting channel connecting said transmitting and receiving stations, said transmitting station comprising a plurality of converting means, one for each value to be metered, said transmitting station having two input terminals and including means responsive to the imposition of voltage on said input terminals to produce an impulse on said connecting channel and an interval, said impulse and interval together constituting an impulse series, a cyclically operating step-by-step switching means, said switching means having at least as many positions as the number of converting means and including means at each such position to connect one of said converting means to one of said input terminals and a different converting means to the other input terminal, whereby said transmitting station imposes on said connecting channel an impulse propor-

tional in length to the electrical value on one of said connected converting means and an interval proportional in length to the electrical value on the other connected converting means, means responsive to the termination of each impulse series to move said switching means one step to connect at least one of said input terminals to a different one of said converting means, said receiving means comprising a plurality of storage means equal in number to the number of values to be metered, an impulse receiver having two output terminals and including means to impose on one of said output terminals an electrical value proportional to the length of an imposed impulse and on the other output terminal an electrical value proportional to the length of an interval, a second cyclically operating step-by-step switching means, said switching means having at least as many positions as the number of converting means and including means at each such position to connect one of said storage means to one of said output terminals and a different one of said storage means to the other output terminal, and means responsive to the termination of each impulse series to move said second switching means one step to connect at least one of said output terminals to a different storage means, said second switching means being synchronized with said first switching means so as to always connect each of said output terminals to the same storage means as the converting means connected during the same impulse series to the corresponding input terminal of the transmitting station.

3,047,846
ELECTRO-MAGNETIC POSITION TRANSMITTER

Basile Koscheleff, 59 Rue Boileau, Paris, France, assignor of one-half to Nicholas John Katenov, Long Island City, N.Y.

Filed Feb. 17, 1958, Ser. No. 715,610
2 Claims. (Cl. 340—199)

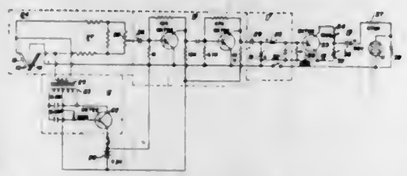


1. In an electro-magnetic device for electrically transmitting the position of a member, an E-shaped magnetic core having two laterally spaced legs and an intermediate leg between said laterally spaced legs defining a pair of magnetic flow paths having substantially identical permeability characteristics, one of said magnetic flow paths comprising one of said lateral legs and said intermediate leg and the other of said magnetic flow paths comprising the other of said lateral legs and said intermediate leg, companion primary and secondary electric circuit windings encircling each of said laterally spaced legs only, said intermediate leg being devoid of an electric winding thereon but providing part of each of said magnetic paths, said primary windings being connected in series circuit relation and wound in opposite directions on the companion leg of said core, and said secondary windings being connected in series circuit relation and wound in opposite directions on the companion leg of said core, said primary winding and said secondary winding on one of said laterally spaced legs being wound in one direction on said one leg and said primary winding and said secondary winding on the other of said laterally spaced legs being wound on said other leg in a direction opposite to said one direction, and a magnetic permeable member positioned adjacent the free ends of the three legs of said E-shaped core and mounted for rotary movement relative to said free ends of said legs of said core about an axis parallel to said legs to positions closer to said end of one of said lateral legs than to said end of said other lateral leg for increasing the permeability of one of said magnetic paths and decreasing the permeability of the other of said magnetic paths, a circuit for determining the difference between the output signals of said secondary windings, and means operable in accordance with said difference to indicate the position of said movable permeable means.

3,047,847
DEVICE FOR REMOTELY INDICATING CORROSION

Glenn A. Marsh, Lynn E. Ellison, and Edward Schaschl, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Dec. 12, 1958, Ser. No. 779,973
2 Claims. (Cl. 340—235)

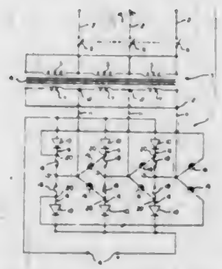


1. A meter for signalling the change in impedance of an impedance-change sensing element comprising said sensing element, a second impedance connected in series therewith to form a first branch of a bridge circuit, a second bridge circuit branch including a variable impedance connected with said first branch to form a Wheatstone bridge circuit, alternating potential-source-means for energizing said bridge, an electrical circuit connected to the output of said bridge including means for amplifying an alternating signal, rectifying means, direct current amplifying means including an adjustable bias adapted to cut off the output of said direct current amplifier until the unbalance of said bridge circuit is sufficient to overcome said bias, and means responsive to the magnitude of the output of said direct current amplifier for producing intermittent sensible signals at frequencies proportional to the extent of resistance change of said sensing element, and detectable at a long distance from said element.

3,047,848
SAFETY CIRCUIT FOR RECTIFIER POWER SOURCES

Arthur E. Johnson, Elkhorn, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Filed Mar. 25, 1957, Ser. No. 648,329
5 Claims. (Cl. 340—250)

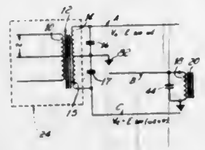


1. A direct current power supply employing rectifying devices connected in parallel to an A.C. input, which comprises individual current-conditioned means serially connected one each with each of said rectifying devices, said means being responsive to abnormal operation of the associated rectifier device to disconnect the main A.C. input to the defective device, and a plurality of alternating current devices connected one each in series connection with each current-conditioned means to said A.C. input and responsive to the disconnection of the associated rectifier device to identify the rectifier device disconnected.

3,047,849
ELECTRONIC INTRUSION PROTECTION ARRAY SYSTEM

Donald E. Hansen, Danbury, Conn., assignor to Mosler Research Products, Inc., Danbury, Conn., a corporation of Delaware

Filed Nov. 21, 1960, Ser. No. 70,581
11 Claims. (Cl. 340—258)

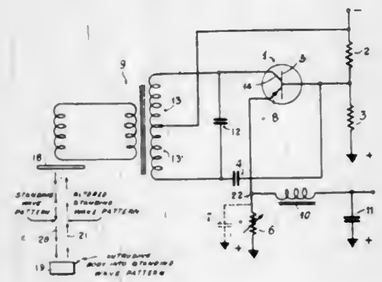


1. A perimeter protective array system comprising spatially related means creating overlapping opposing electrostatic fields, a pair of said overlapping opposing electrostatic fields defining a plane of zero potential therebetween, means disposed in close proximity to said plane of zero potential for receiving induced voltage from said pair of said overlapping opposing electrostatic fields, a rectifier circuit, a galvanometer-type relay, an alarm circuit, said galvanometer-type relay being inductively coupled to said last mentioned means through said rectifier circuit to excite said alarm circuit upon detection of a distortion of said overlapping opposing electrostatic fields.

3,047,850
SONIC SPACE ALARM

Kenneth H. Schmidt, Danbury, Conn., assignor to Mosler Research Products, Inc., Danbury, Conn., a corporation of Delaware

Filed Aug. 12, 1959, Ser. No. 833,291
10 Claims. (Cl. 340—258)

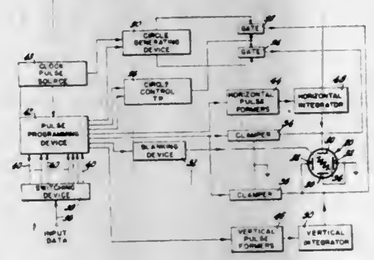


8. A sonic space alarm system having a standing wave establishing oscillator circuit, a standing wave variation detection circuit, a transducer having an acoustical force producing means therein, said transducer being of a type that gives very close coupling to air, said oscillator circuit and said acoustical force producing means being effective to produce a steady state wave pattern, said steady state wave pattern being altered by the intrusion of a body into said pattern, a detection circuit, said acoustical force producing means being coupled with said oscillator circuit and said detection circuit and being effective to simultaneously establish said standing wave pattern and detect any variations in said standing wave pattern, and alarm circuit means responsive solely to changes in the amplitude of oscillations generated in said oscillator for providing an alarm upon the occurrence of a variation in said standing wave pattern.

3,047,851
ELECTRONIC CHARACTER GENERATING AND DISPLAYING APPARATUS

Russell B. Palmiter, Cohasset, Mass., assignor, by mesne assignments, to The Marquardt Corporation, a corporation of California

Filed Mar. 21, 1958, Ser. No. 723,030
13 Claims. (Cl. 340—324)



6. In an electronic character display device of the type adapted to trace and display selected alphanumeric characters on the face of a cathode ray tube having vertical and horizontal deflection controls and having an intensity blanking control, character line segment, wave form generating apparatus, comprising, means for selecting a character to be displayed, said character comprising a combination of character line segments, means for generating a plurality of equally spaced timing pulses, pulse programming means connected to said pulse generating means and operative in response to selection of a character by said character selecting means for selecting at least one sequence of discrete pulses representative of the line segments of a selected character to be displayed, a first gating means for producing a first gated wave form having at least two levels of voltage and being a function of the horizontal components of said displayed character, said function being determined solely by the time periods of said levels, a second gating means for producing a second gated wave form having at least two levels of voltage and being a function of the vertical components of said displayed character, said function being determined solely by the time periods of said levels, each of said gating means being operatively connected to said pulse programming means, a first linear voltage generating means connected to said first gating means and having a first output voltage whose instantaneous amplitudes are a function of said character and are variable during the time periods of at least one of said levels, means to apply said output voltage to the horizontal deflection controls of said cathode ray tube, a second linear voltage generating means connected to said second gating means and having a second output voltage whose instantaneous amplitudes are a function of said character and are variable during the time periods of at least one of said levels, and means to apply said second output voltage to the vertical deflection control of said cathode ray tube.

3,047,852
CHANGEABLE INDICATOR

Willis R. Smith, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.

Filed Dec. 15, 1958, Ser. No. 780,609
4 Claims. (Cl. 340—324)

1. A changeable display indicator unit comprising, in combination,

(*a*) a housing having a plurality of terminal leads mounted for communicating exteriorly thereof with

an external electrical source and having a plurality of walls including a display opening cut in one wall thereof,

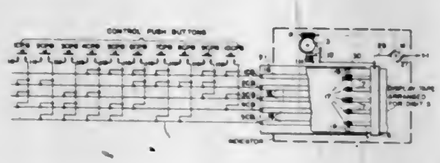
(*b*) an endless tape having a plurality of indicia spaced longitudinally on one face thereof and a plurality of selectively spaced perforations for each of said plurality of indicia,

(*c*) a drum rotatably mounted in said housing remote from said display opening to frictionally engage a portion of the opposite face of said tape,

(*d*) roller guides rotatably mounted in said housing adjacent said display opening to engageably support a portion of said opposite face of said tape to position a corresponding portion of said one face of said tape opposite to said display opening so as to display an indicium through said display opening,

(*e*) a plurality of laterally spaced contact strips each electrically connected to one of said plurality of terminal leads and affixedly mounted in said housing between said one face of the tape and a second wall of said plurality of walls comprising the housing,

(*f*) a plurality of spaced conductor arms affixedly connected at one end to a conductor supported by a third wall of said plurality positioned normal to said second wall and having their opposite ends biased in one direction against said opposite face of the tape to cause particular of said arms to engage particular of said contact strips when a plurality of perforations in said tape are positioned therebetween,



(*g*) a D.C. motor,

(*h*) a Geneva gear having two rotatably movable elements, one of said movable elements being driven by said motor, the other of said movable elements being driven intermittently by said one movable element during which time said drum is driven in one direction intermittently by said other movable element,

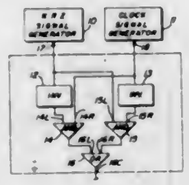
(*i*) a first circuit means including said contact strips, said conductor arms and said supported conductor effective to energize said motor when particular of said conductor arms are in electrical engagement with selectively energized ones of said contact strips through particular of said perforations,

(*j*) an electrical contact fixedly supported by said third wall in said housing apart from said conductor arm and normally biased to an electrically closed position during the intermittent driving of said other movable element,

(*k*) said one movable element having a projection rotatable therewith and positioned at a predetermined location in its arcuate path to urge said contact to an electrically open position whereat particular of said conductor arms are in electrical engagement with particular of said contact strips while the intermittent driving of said other movable element is interrupted,

(*l*) and a second circuit means effective to energize said motor through said electrical contact when said projection is without said predetermined location permitting said electrically closed position of said electrical contact to prevail.

3,047,853
SIGNAL CONVERTER
Guenther K. Machol, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 4, 1958, Ser. No. 726,479
1 Claim. (Cl. 340—347)



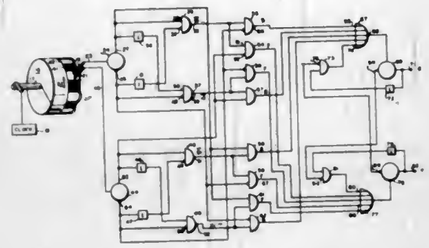
A system for converting a non-return-to-zero binary input to a Ferranti type binary output represented by changes from one voltage level to another in the middle of a bit period, the system comprising: means for generating a non-return-to-zero signal representing binary numbers by a voltage level during a bit period, means for generating a clock signal represented by a voltage level pulse each half bit period and in timed relationship to the non-return-to-zero signal, first and second inverters, first and second AND gates, means connecting the output of the non-return-to-zero signal generating means directly to an input of a first AND gate and indirectly through the first inverter to the second AND gate, means connecting the output of the clock signal generating means directly to the other terminal of said second AND gate and indirectly through said second inverter to the other terminal of said first AND gate, an OR gate, and means connecting the output of said first and second AND gates to the input of said OR gate to provide at the output terminal of said OR gate a Ferranti type output signal in which the voltage level changes in one direction to represent said one binary number and changes in the opposite direction to represent said other binary number.

3,047,854
ELECTRICAL DECODER
Millard J. Coleman, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1958, Ser. No. 783,845
3 Claims. (Cl. 340—347)



1. A digital-to-analog converter comprising an A.C. voltage source, a capacitor, a resistor, said capacitor and resistor being connected in series with the A.C. voltage source, electronic D.C. switching means including unidirectional devices responsive to the digital information to be converted, a variable A.C. voltage attenuator providing an attenuation which is dependent on the condition of said D.C. switching means, said variable A.C. voltage attenuator being connected to the common junction of said capacitor and resistor so as to provide a variable A.C. output voltage at the terminal of said capacitor remote from said common junction, said output voltage having an amplitude commensurate with the analog of said digital information to be converted.

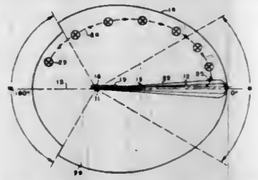
3,047,855
MOTION SENSING SYSTEM
Albert Wolinsky, New Rochelle, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 799,012
6 Claims. (Cl. 340—347)



6. A motion sensing system for indicating direction of rotation comprising, a rotating member having incorporated thereon 0 and 1 segments alternating in the direction of motion, a clock pulse generator, means applying a pulse train generated thereby to said 1 segments, first and second sensing elements juxtaposed to said segments in a line parallel to said motion thereat, said elements being spaced apart by a distance greater than $(n-1)r+s$ in which n is any positive integer, not zero, r is the length of the least segment, and s is the length of each of said sensing elements, and being spaced apart by a distance less than $nr-s$, said sensing elements being positioned to sense said clock pulses applied to said 1 segment and to emit a signal representative thereof, a first transition-indicating circuit indicating by first 01 and 10 signals when said first sensing element passes a transition boundary from a 0 segment to a 1 segment and from a 1 segment to a 0 segment respectively, a second transition-indicating circuit indicating by second 01 and 10 signals when said second sensing element passes a transition boundary from a 0 segment to a 1 segment and from a 1 segment to a 0 segment respectively, a first pair of AND circuits, a first pair of INHIBIT-AND circuits, means applying said first and second 01 and 10 signals thereto, means applying said sensing element signals thereto whereby single pulse signals representative of rotation in one direction are emitted, a second pair of AND circuits, a second pair of INHIBIT-AND circuits, means applying said first and second 01 and 10 signals thereto, means applying said sensing element signals thereto whereby second single-pulse signals representative of rotation in the direction opposite to said one direction are emitted, a first pulse-train generator converting said single-pulse signals into a first pulse train, a second pulse-train generator converting said second single-pulse signals into a second pulse train, and means interlocking said first and second pulse-train generators to stop either by the start of the other.

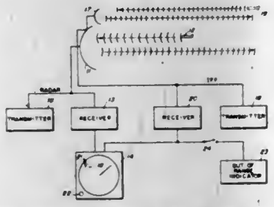
3,047,856
RADAR GUIDANCE TECHNIQUES
Richard K. Mosher, Cochituate, and Albert B. Wight, Quincy, Mass., assignors to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Apr. 14, 1958, Ser. No. 728,232
14 Claims. (Cl. 343—5)

8. In a radar system, a beam radiating azimuth antenna adapted to rotate continuously about a first axis through a 360° angle, means for rotating said azimuth antenna at a non-uniform rate to provide regions of minimum and maximum angular velocity, respective regions of minimum and maximum angular velocity being centered substantially about the 0° and 180° positions of said 360° angle, said azimuth antenna scanning an azimuth sector having regions of maximum and minimum effective beam range coextensive with said regions of minimum and maximum angular velocity respectively, a beam radiating elevation antenna adapted to oscillate about a second axis to scan



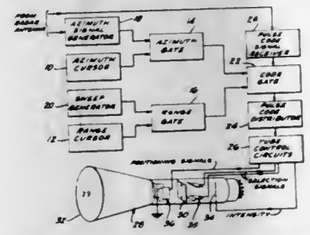
an elevation sector, said axes being positioned orthogonally relative to each other such that said elevation sector intersects said azimuth sector substantially in said region of maximum effective beam range.

3,047,857
EMERGENCY INDICATOR ALARM
Charles W. Rockett, United States Navy, and Lawrence N. Higgins and Vernon E. Terp, San Diego, Calif.
Filed Nov. 30, 1955, Ser. No. 550,224
5 Claims. (Cl. 343—6.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a target detection and identification system of the type employing echo ranging means for transmitting signals and receiving echo signals from targets within a maximum range; means for transmitting IFF signals to challenge targets within said maximum range, identification signal transmitting means on said targets for transmitting identification signals and a distress signal of a certain characteristic, receiving means for receiving said distress and identification signals and common indicator means connected to said echo ranging means and said receiving means for indicating reception of said echo signals and said identification and distress signals from targets, the improvement comprising separate indicating means for receiving said identification and distress signals, and signal discriminating means included within said separate indicating means for allowing only said distress signals to be indicated.

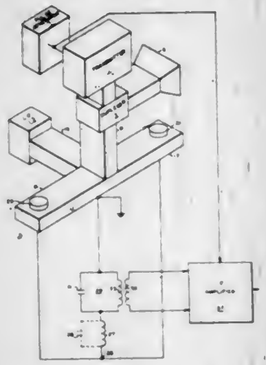
3,047,858
RADAR IDENTIFICATION SYSTEM
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Jan. 17, 1958, Ser. No. 709,670
6 Claims. (Cl. 343—6.5)



1. In a radar system of the type wherein in response to an inquiry from a transmitter there is received from an

equipped target a pulse code representing characters identifying said target, means for identifying a desired target comprising a pulse-code receiver, gate means to which output from said receiver is applied, means for establishing the location of a desired target, means for enabling said gate when a response to an inquiry is received from the location established by said means for establishing, means responsive to output from said gate means to establish potentials analogous to said pulse code, and cathode-ray tube apparatus to which said potentials are applied for displaying characters identifying said desired target in response to said potentials.

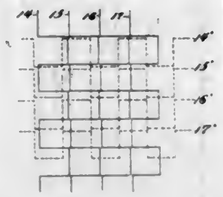
3,047,859
CRYSTAL MIXER PROTECTION CIRCUIT
John F. Zaleski, Pleasantville, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,974
9 Claims. (Cl. 343—8)



7. A crystal mixer protection circuit suitable for use in Doppler radar navigation systems comprising, a pulsed transmitter, a duplexer for applying the transmitter output to an antenna system for radiating the energy toward the ground and receiving the Doppler frequency shifted energy which is back scattered toward the said antenna system and for applying the Doppler frequency shifted energy to a first arm of a hybrid junction, a local oscillator for supplying an output having a frequency differing from the frequency of the transmitter output by a predetermined amount and having an intensity substantially lower than the intensity of the transmitter energy which leaks past the duplexer and is applied to the hybrid junction during the transmitting period, said local oscillator output being applied to the said hybrid junction by a second arm, a pair of collinear arms extending from said hybrid junction each of which contains a crystal diode mixer similar elements of which are connected to ground and to a common junction, respectively, and circuit means connected between said common junction and ground for presenting an infinite impedance to pulsating currents having a frequency equal to the pulsing frequency of the transmitter.

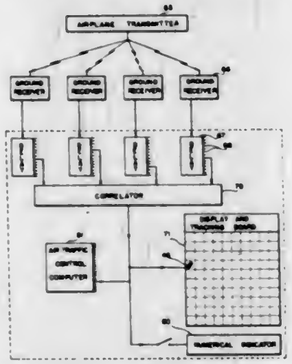
3,047,860
TWO PLY ELECTROMAGNETIC ENERGY REFLECTING FABRIC
Austin B. Swallow, 32 Algonquin Road, East Providence, R.I., and Chandler E. Swallow, Jr., 65 Lyon St., Pawtucket, R.I.
Filed Nov. 27, 1957, Ser. No. 699,388
3 Claims. (Cl. 343—18)

1. A reflector for electromagnetic energy within a band of frequencies comprising two plies of open mesh net the strands of which comprise a metallic core with a non-metallic covering encasing the core with each of the strands in one ply extending generally in one direction without electrical conductive connection to adjacent



strands and each of the strands in the other ply extending generally at right angles to said direction without electrical conductive connection to adjacent strands.

3,047,861
AIRCRAFT TRAFFIC CONTROL AND SURVEILLANCE SYSTEM
George L. Arnold, Granada Hills, Kenneth D. Bailey, Glendale, William W. Lindsay, Jr., Los Angeles, and John A. Smithson, Encino, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed June 25, 1959, Ser. No. 822,776
11 Claims. (Cl. 343—112)

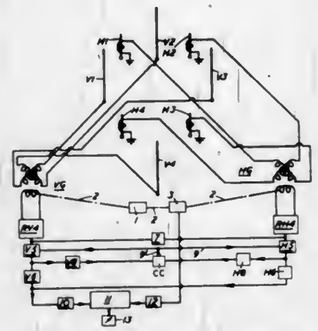


1. A vehicle surveillance system having a surveillance center for cooperating with a plurality of receivers arranged remotely from the station and each other, comprising, at least one vehicle transmitter emitting an identification signal to the plurality of receivers, a plurality of time delay devices located in the surveillance center arranged so that one time delay device is operately coupled with one receiver, each time delay device having a plurality of outputs wherein each output represents a selected time delay, a correlator connected to each time delay device via a selected output and adapted to pass the identification signal upon the occurrence of a signal coincidence among the selected outputs coupled to the correlator, and means coupled to the correlator for interpretating the signal information for vehicle identification and position.

3,047,862
RADIO DIRECTION FINDERS
Sidney Arthur Walter Jolliffe, Maldon, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a company of Great Britain
Filed Apr. 18, 1958, Ser. No. 729,440
Claims priority, application Great Britain May 20, 1957
3 Claims. (Cl. 343—113)

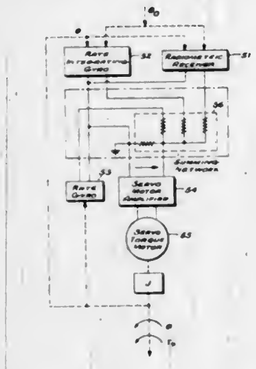
1. A radio direction finder comprising two directional aerial systems, one of said aerial systems comprising a plurality of ferrite rod aerials responsive to the magnetic

field of an incoming wave and having one plane of polarization, and the other of said systems comprising a plurality of conductive rod aerials parallel to said ferrite rod aerials and displaced therefrom, said conductive rod aerials being responsive to the electric field of an incoming wave and having a plane of polarization perpendicular



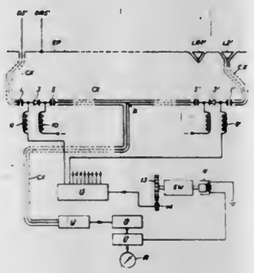
to said one plane, means responsive to signals derived from that of the two aerial systems which, at any given time, is providing the more powerful signal for ascertaining the incoming signal direction, and wherein each aerial system includes a plurality of spaced aerials with an associated radio-goniometer.

3,047,863
RADIOMETRIC NAVIGATION SYSTEM
Victor W. Bolie, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Sept. 7, 1956, Ser. No. 608,572
6 Claims. (Cl. 343—117)



1. A stable radiometric sextant comprising a base having essentially a flat surface, said base affixed to a surface of a vehicle where said vehicle is free to move in at least three axes, a first axis rigidly fixed to said base at right angles to the plane of said base, a first gimbal ring attached to said first axis and supported by said first axis, said first gimbal ring comprising a portion of a ring, a second axis at right angles to said first axis, said second axis including two rigid cylindrical members supported at one end by said gimbal ring with said support points being separated by 180 degrees on said gimbal ring, a second gimbal ring, said second gimbal ring supported by the other end of each of said second axis members at points 180 degrees apart on said second ring, a third axis, said third axis including two rigid cylindrical members each supported at one end by said second ring at points 180 degrees apart on said second ring, a third gimbal ring supported by the other end of each of said third axis members, a fourth axis, said fourth axis at right angles to said third axis and including two rigid cylindrical members each supported at one end by said third gimbal ring at points 180 degrees apart on said third ring, a spherical housing supported by the other ends of said members of said fourth axis, each of said gimbal rings and said housing being free to rotate about its supporting axis whereby said gimbal rings form a stable platform with the mass in said spherical housing being suspended in dynamic balance, a plurality of servo motors, one of said servo motors fitted to each individual axis to individually control the action of the associated gimbal ring, first and second ones of said servo motors fitted to axes one and two respectively and permitting only slow rotation of the associated gimbal rings, third and fourth ones of said servo motors fitted to axes three and four respectively and permitting rapid motion of the associated gimbal ring and housing with such motions being independent of the motion of the vehicle, means for deriving signals indicative of the average angular position of said third and fourth axes with respect to said second and third gimbal rings respectively, said first and second servo motors positioned in accordance with said third and fourth axes position indicative signals respectively, a radiometric receiver including an antenna, a local oscillator and a balanced mixer, said antenna being initially pointed at a radiating celestial body by an initial positioning of said first and second servo motors and means including the radiometric receiver and said third and fourth servo motors for generating and applying correction signals to said third and fourth axes whereby said antenna is continuously and accurately pointed at the desired celestial body.

3,047,864
RADIO DIRECTION FINDING SYSTEMS
Dennis Byatt, Essex, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Filed Aug. 10, 1959, Ser. No. 832,514
Claims priority, application Great Britain Sept. 9, 1958
7 Claims. (Cl. 343—120)

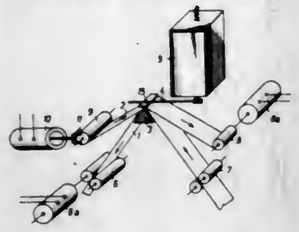


1. A radio direction finder including a first set of aerials of one plane of polarisation, the aerials of this set being angularly spaced round a centre point; a second set of aerials having a plane of polarisation substantially different from that of the first set, the aerials of said second set being also angularly spaced round said centre point and interspersed with the aerials of the first set; means for cyclically and alternately sampling the signals on all the aerials, means for deriving from the sampled signals a wave whose phase is characteristic of the direction of a signal received by the aerials, and phase comparison means fed with the derived wave for indicating incoming signal direction.

3,047,865
DIRECTLY REGISTERING RECORDING APPARATUS

Johann Albrecht Schaeder, Merzhausen, near Freiburg im Breisgau, Germany, assignor to Fritz Hellige & Co. G.m.b.H., Freiburg im Breisgau, Germany, a company of Germany

Filed Dec. 1, 1959, Ser. No. 856,619
Claims priority, application Germany Dec. 3, 1958
9 Claims. (Cl. 346—69)

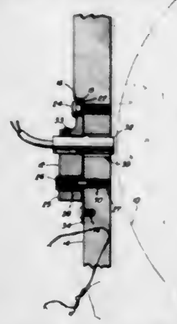


1. Recording apparatus for directly recording variations in electrical voltages at a recording station on a strip form record carrier comprising a recording base disposed at said recording station, measuring means responsive to the variations in the electrical voltages, said means including a recording arm movable across said recording base, means for supporting, traversing and tensioning the strip form record carrier between said recording base and said recording arm, a strip form pigment carrier having a pigmented face, means for supporting, traversing, and tensioning the strip form pigment carrier also between said recording base and said recording arm with the pigmented face of said pigment carrier facing said record carrier and means for imparting to said pigment carrier at said recording station a vibratory motion in the plane of recording, said vibratory motion having a frequency of at least two hundred cycles per second and an amplitude no greater than 0.5 millimeter, being applied continuously during the time the variations in electrical voltages are being recorded in order to minimize the adhesive friction between said record arm and said pigment carrier.

3,047,866
MAGNETIC HEAD MOUNT

Richard A. Stover, Perkinsville, Vt., assignor to Vermont Research Corporation

Filed Apr. 20, 1961, Ser. No. 104,465
5 Claims. (Cl. 346—74)

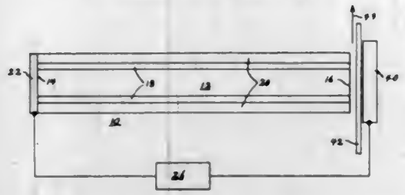


1. An adjustable mount for adjustably positioning a magnetic transducer carried by said mount relative to the surface of a record medium, the mount comprising; a record medium housing and mount support, a transducer head mount element adapted to rigidly carry a magnetic transducer, the head mount element capable of flexure along a line of flexure intermediate its ends, means securing one end of said head mount element to said support, screw means adjustably connecting the other end of said head mount element to said support, said transducer being carried by said head mount element between the screw means and the line of flexure.

3,047,867
SPECTROELECTRIC DEVICE

Joseph T. McNaney, 8548 Boulder Drive, La Mesa, Calif.

Filed Apr. 25, 1961, Ser. No. 105,367
9 Claims. (Cl. 346—74)

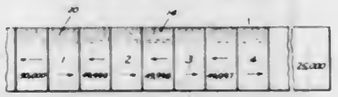


8. A light radiation to electrical energy converter comprising: an optical fiber having a predetermined index of refraction, having a longitudinal dimension exceeding its cross sectional dimension and presenting outer surfaces generally along the longitudinal dimension and transverse ends of the cross sectional dimension; a light conducting jacket having an index of refraction lower than the predetermined index of the fiber and having predetermined thickness dimensions, intimately joined with the outer surface of the fiber, and presenting an outer surface generally along its longitudinal dimension; photoconductive material disposed upon the outer surface of the jacket, extending to the transverse ends of the fiber; said thickness dimension of the jacket adapted to control, selectively, the reflection of light waves to the fiber, and the admittance of light waves to the photoconductive material; record means related operatively to one end of the photoconductive material, and a conductor connected operatively with the opposite end of the photoconductive material; and a source of potential connected between said record means and said conductor whereby said potential is presented across said recorder means upon the admittance of light waves to the photoconductive material.

3,047,868
INFORMATION STORAGE APPARATUS

Henry W. Schrimpf, Waltham, Mass., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware

Filed May 7, 1956, Ser. No. 583,118
8 Claims. (Cl. 346—74)

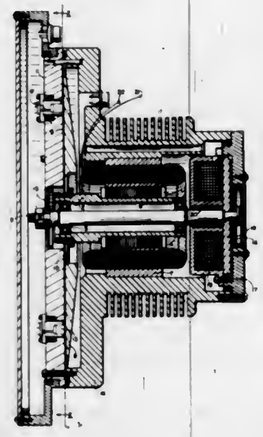


1. Apparatus for recording information data signals on a tape comprising means positioned adjacent said tape for moving said tape in a first direction, data signal transfer means positioned adjacent to said tape for applying to said tape data signals in a first set of predetermined areas on said tape, where all of the data signals in each of said areas are recorded in the same direction, said first set of areas being spaced apart a preselected distance along the length of the tape, means for moving said tape in a second direction, and means connected to said data signal transfer means to activate said data signal transfer means to apply to said tape information data signals in a second set of predetermined areas on said tape along the length thereof, said second set of areas being alternately and longitudinally displaced in the spaces between said first set of areas along the length of the tape and each of said second set of areas having all the information therein recorded in the same direction.

3,047,869
ROTATABLE MAGNETIC DISC MOVABLE TOWARD AND FROM DISC CARRYING TRANSDUCER

Norman E. Marcum, La Habra, and William A. Farrand, Downey, Calif., assignors to North American Aviation, Inc.

Filed May 25, 1959, Ser. No. 815,556
4 Claims. (Cl. 346—74)

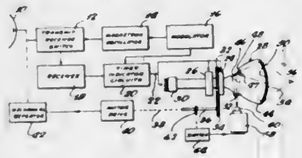


1. In a magnetic recorder, a housing, a first disc fixedly mounted to said housing, a second disc having a magnetizable medium on one face and adapted to assume a position in which the magnetizable face of said second disc is contiguous to a face of said first disc, and shaft means for rotating said second disc relative to said first disc to develop a self-lubricated viscous shear gas bearing between said discs, said second disc having a resilient portion between said magnetizable face and said shaft means, said shaft means comprising a shaft on which said second disc is journalled and resilient means for mounting said shaft to the first disc and to the housing with axial compliance and radial rigidity.

3,047,870
OSCILLOGRAPHIC VIEWING AND RECORDING SYSTEMS

Samuel Bousky, River Grove, Ill., assignor, by mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware

Filed Sept. 13, 1955, Ser. No. 533,943
2 Claims. (Cl. 346—110)

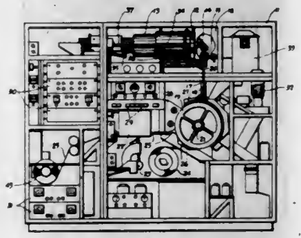


1. An oscillographic camera system for signals received by an external signal pickup device comprising an indicator including a two-ended sealed envelope, an electron-emitting structure at one end of said envelope producing a signal-controlled electron beam directed toward the other end of said envelope, an image viewing screen at said other end of said envelope for converting said electron beam energy into radiant energy, means for deflecting said electron beam as a function of said signal pickup device, a window in said envelope, a radiant energy-deflecting surface in said envelope which deflects radiant energy from said image viewing screen through said window, a radiant energy recording device at said window actuatable at periodic intervals, means for translating the signals received by said signal pickup device into a video signal to control said electron beam, said image viewing screen providing a visual display of said video signal, a circuit energized as a function of said signal pickup device; means for adjusting the time of energization of said circuit and a stepping selector switch controlled by said circuit and arranged to actuate said radiant energy recording device in at least one of its positions to record the video displayed on said image viewing screen.

3,047,871
ELECTRONIC PRINTER

Theodore M. Hider, Justin J. Rennilson, and Roger A. Frech, San Diego, Calif., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Mar. 31, 1958, Ser. No. 725,078
15 Claims. (Cl. 346—110)

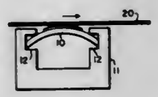


1. In an electronic recorder capable of recording on a permanent medium character information presented on the screen of a cathode ray tube, a cathode ray tube having a light responsive screen for displaying lines of illuminated characters on said screen, said lines being arranged in a column, a light sensitive recording medium, optical means including distinct portions each receiving a separate one of said lines of illuminated characters in its entirety, said optical means transferring said lines so received through separate paths for imaging upon said recording medium in single line form.

3,047,872
STYLI UNIT

Alexander Proudfit, Glen Cove, N.Y., assignor to Hazeltine Research Inc., a corporation of Illinois

Filed Dec. 22, 1959, Ser. No. 861,389
3 Claims. (Cl. 346—139)

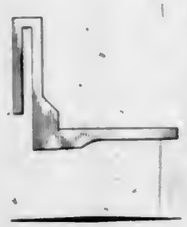


1. A styli unit for recording apparatus comprising: a resilient backing adapted to be clamped in a holder; and a plurality of electrically independent conductive styli affixed to said backing in predetermined positions.

DESIGNS

JULY 31, 1962

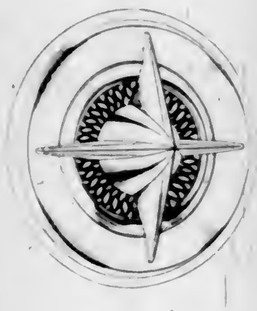
193,293
BRACKET FOR A BED SPRING OR THE LIKE
Ray C. Brewer, 56 E. Acacia St., Salinas, Calif.
Filed Nov. 28, 1960, Ser. No. 62,997
Term of patent 14 years
(Cl. D5—2)



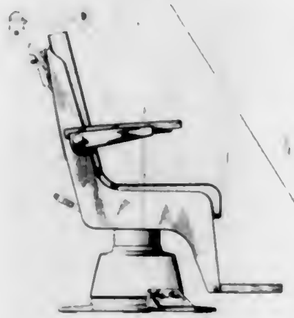
193,294
TANK TRAILER
Charles E. Mendez, Tampa, Fla., assignor to Redwing Carriers, Inc., Tampa, Fla., a corporation of Florida
Filed Oct. 31, 1961, Ser. No. 67,327
Term of patent 14 years
(Cl. D14—3)



193,295
WHEEL COVER
Arthur F. Carlson, Los Angeles, Calif., assignor to Shore-Calnevar, Inc., Paramount, Calif., a corporation of California
Filed Aug. 8, 1960, Ser. No. 61,668
Term of patent 14 years
(Cl. D14—30)



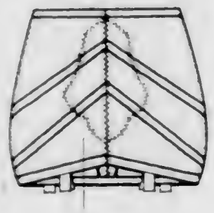
193,296
DENTAL CHAIR OR SIMILAR ARTICLE
John T. Armbruster, Niagara Falls, and Irwin A. Bosack, Cheektowaga, N.Y., assignors to American Optical Company, Southbridge, Mass.
Filed June 5, 1961, Ser. No. 65,455
Term of patent 14 years
(Cl. D15—3)



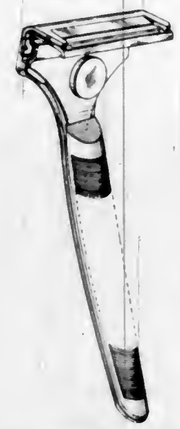
193,297
PULL FOR A SLIDE FASTENER
Alfred E. Carlile, 572 Chestnut St., Meadville, Pa.
Filed Sept. 11, 1961, Ser. No. 66,672
Term of patent 14 years
(Cl. D17—8)



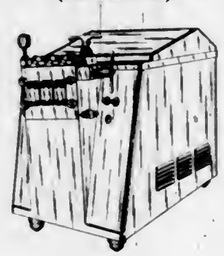
193,298
GIRDLE
Mario Laguzzi, Long Island City, N.Y., assignor to Poirette Corsets, Inc., New York, N.Y.
Filed Jan. 31, 1962, Ser. No. 68,592
Term of patent 14 years
(Cl. D20—2)



193,299
SAFETY RAZOR
Henry Dreyfuss, South Pasadena, Calif., assignor to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed Sept. 29, 1961, Ser. No. 66,907
Term of patent 14 years
(Cl. D22—3)



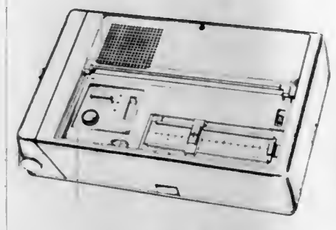
193,300
HOMOGENIZER
Harold C. Beck, Malden, and Francis C. Kensley, Lexington, Mass., assignors to Manton-Gaulin Manufacturing Company, Inc., Everett, Mass., a corporation of Massachusetts
Filed Apr. 1, 1960, Ser. No. 59,983
Term of patent 14 years
(Cl. D23—1)



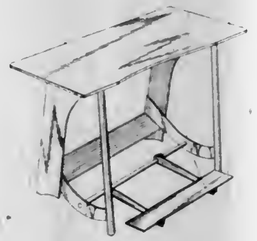
193,301
ELECTRICAL CONTROLS CABINET
Robert W. Brokaw, Roanoke, Va., assignor to General Electric Company, a corporation of New York
Filed Sept. 21, 1960, Ser. No. 62,218
Term of patent 14 years
(Cl. D26—5)



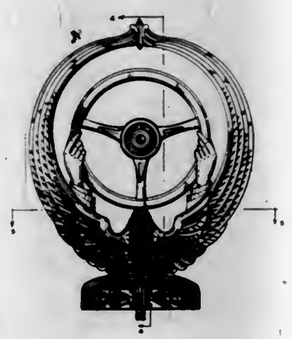
193,302
PORTABLE DICTATING MACHINE
Eliot Noyes, New Canaan, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 6, 1961, Ser. No. 65,494
Term of patent 14 years
(Cl. D26—14)



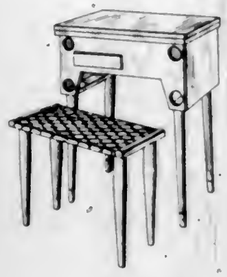
193,303
DEVOTIONAL DESK
William M. Goodson, 145 Norwood Ave. NE., Atlanta, Ga.
Filed May 31, 1961, Ser. No. 65,409
Term of patent 3½ years
(Cl. D29—23)



193,304
TROPHY OR SIMILAR ARTICLE
Alexander M. Pistey, 87 Reservoir Ave., Bridgeport, Conn.
Filed Feb. 1, 1962, Ser. No. 68,610
Term of patent 7 years
(Cl. D29—23)



193,305
COMBINED CABINET AND BENCH UNIT
Albert C. Weber, 600 Glen Ridge Drive, Glenview, Ill.
Filed Dec. 14, 1960, Ser. No. 63,220
Term of patent 3½ years
(Cl. D33—12)



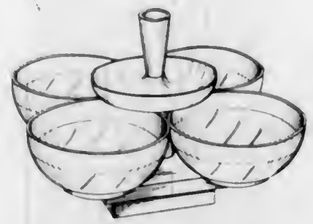
193,306
STAND FOR STRAPPING MATERIAL OR THE LIKE
Charles R. Johnson, Jr., West Chester, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed July 27, 1961, Ser. No. 66,095
Term of patent 14 years
(Cl. D41—1)



193,307
CLOCK
Steven T. Bille, West New York, N.J., and Knute Heinz, Pearl River, N.Y., assignors to The Curtis Publishing Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1961, Ser. No. 67,833
Term of patent 14 years
(Cl. D42—7)

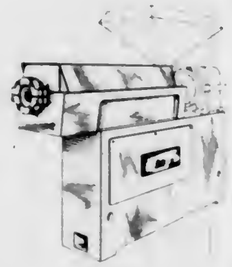


193,308
LAZY SUSAN OR THE LIKE
Duane O. Jackson, Waterloo, Iowa, assignor to Distinguished Gift Manufacturers, Waterloo, Iowa, a corporation of Iowa
Filed Nov. 24, 1961, Ser. No. 67,672
Term of patent 14 years
(Cl. D44—10)

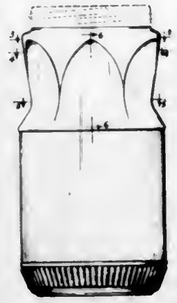


193,309
DISH OR SIMILAR ARTICLE
Victor J. Bergeron, Hillsborough, Calif. (20 Cosmo Place, San Francisco, Calif.)
Filed Nov. 21, 1961, Ser. No. 67,638
Term of patent 14 years
(Cl. D44—15)

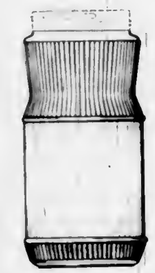
193,310
EXTRUDER
Robert J. Jacobs, Plainfield, N.J., assignor to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 7, 1960, Ser. No. 61,270
Term of patent 14 years
(Cl. D55—1)



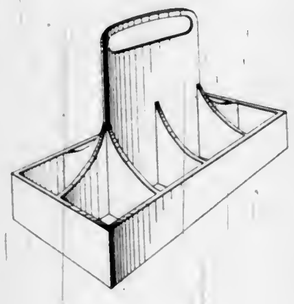
193,311
JAR
William H. Buckley, New York, N.Y., assignor to Standard Brands Incorporated, New York, N.Y., a corporation of Delaware
Filed July 31, 1961, Ser. No. 66,130
Term of patent 14 years
(Cl. D58—25)



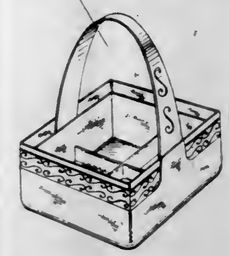
193,312
JAR
William H. Buckley, New York, N.Y., assignor to Standard Brands Incorporated, New York, N.Y., a corporation of Delaware
Filed July 31, 1961, Ser. No. 66,142
Term of patent 14 years
(Cl. D58—25)



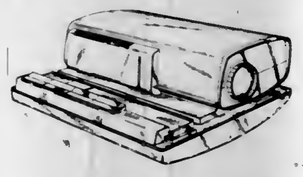
193,313
CARRIER FOR BABY BOTTLES OR THE LIKE
Peter S. Peca, 119 Alsace Way, Colorado Springs, Colo.
Filed Sept. 1, 1960, Ser. No. 51,977
Term of patent 14 years
(Cl. D58—26)



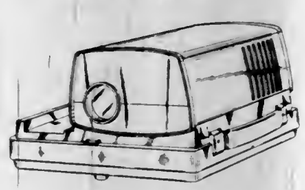
193,314
BOTTLE CARRIER
Mila Mangold, 2954 Magnolia St., Berkeley, Calif.
Filed May 29, 1961, Ser. No. 65,389
Term of patent 14 years
(Cl. D58—26)



193,315
SLIDE PROJECTOR
Herbert S. Barnhart, Scarsdale, N.Y., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 7, 1961, Ser. No. 66,232
Term of patent 14 years
(Cl. D61—1)



193,316
PHOTOGRAPHIC PROJECTOR
William R. King, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 22, 1961, Ser. No. 66,857
Term of patent 14 years
(Cl. D61—1)



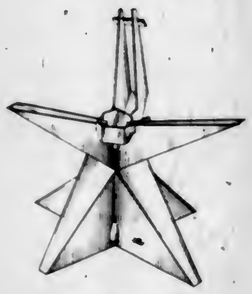
193,317
GUIDED MISSILE
Otho E. McCrackin, Overland, Mo., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 4, 1949, Ser. No. 2,424
Term of patent 14 years
(Cl. D71—1)



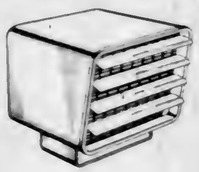
193,318
TROUSER HANGER
James William Kelley, 3 Warwick St., Leamington Spa, England
Filed Feb. 2, 1961, Ser. No. 63,799
Claims priority, application Great Britain Sept. 14, 1960
Term of patent 14 years
(Cl. D80—8)



193,319
STAND FOR MERCHANDISE DISPLAY BINS OR THE LIKE
Steve Iannucci, Caldwell, N.J., assignor to Gabriel Frank Associates, Inc., Englewood Cliffs, N.J., a corporation of New Jersey
Filed Dec. 9, 1960, Ser. No. 63,178
Term of patent 14 years
(Cl. D80—9)



193,320
ELECTRIC HEATER
David Knoll, Bayside, Albert Greenhaus, Brooklyn, and Herbert R. Jaffe, Plainview, N.Y., assignors to Berko Electric Manufacturing Corporation, Queens Village, N.Y., a corporation of New York
Filed Mar. 9, 1961, Ser. No. 64,269
Term of patent 14 years
(Cl. D81—10)



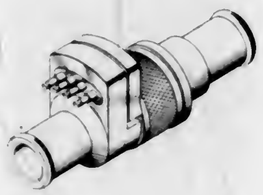
193,321
VIBRATING LOUNGE
Richard Thomas, 14 9th Place, Long Beach, Calif.
Filed June 27, 1961, Ser. No. 65,737
Term of patent 3½ years
(Cl. D83—1)



193,322
VIBRATING LOUNGE
Richard Thomas, 14 9th Place, Long Beach, Calif.
Filed June 27, 1961, Ser. No. 65,738
Term of patent 3½ years
(Cl. D83—1)



193,323
COMBINED FLUID AND ELECTRIC COUPLING FOR AIRCRAFT OR THE LIKE
Richard H. Hahn, Burbank, Calif. (% Airborne Research & Development Co., 7530 San Fernando Road, Sun Valley, Calif.), and Howard V. French, Sepulveda, Calif.
Filed Sept. 21, 1959, Ser. No. 57,613
Term of patent 14 years
(Cl. D91—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 31ST DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Edelman, Leonard E.: *See*—
Runk, Robert H., and Edelman. Re. 25,213.
Fellberg, Hans W., to L. F. Guenther, and W. F. Mitchell, d.b.a. Guenther-Mitchell Engineering Co. Safety valve. Re. 25,211, 7–31–62, Cl. 137—118.
Garrett Corp., The: *See*—
Jackson, John K. Re. 25,210.
Guenther, Louis F.: *See*—
Fellberg, Hans W. Re. 25,211.
Guenther-Mitchell Engineering Co.: *See*—
Fellberg, Hans W. Re. 25,211.
Isl, Inc.: *See*—
Tellefsen, Harold E., White, and Alessio. Re. 25,214.
Jackson, John K., to The Garrett Corp. Precision pneumatic speed sensing governor. Re. 25,210, 7–31–62, Cl. 137—956.
Kling, John D., to Minneapolis-Honeywell Regulator Co. Control apparatus. Re. 25,212, 7–31–62, Cl. 137—98.
Minneapolis-Honeywell Regulator Co.: *See*—
Kling, John D. Re. 25,212.
Mitchell, Wallace F.: *See*—
Fellberg, Hans W. Re. 25,211.
Runk, Robert H., and L. E. Edelman, to Westinghouse Electric Corp. Heat resistant electrical insulating varnish. Re. 25,213, 7–31–62, Cl. 260—20.
Tellefsen, Harold E., R. L. White, and S. Alessio, to Isl, Inc. Annunciator system. Re. 25,214, 7–31–62, Cl. 340—213.
Westinghouse Electric Corp.: *See*—
Runk, Robert H., and Edelman. Re. 25,213.
White, Richard L.: *See*—
Tellefsen, Harold E., White, and Alessio. Re. 25,214.

LIST OF PLANT PATENTEES

Urabec, John H. Camellia plant. 2,159, 7–31–62, Cl. 47—60.

LIST OF DESIGN PATENTEES

Aguzzi, Mario, to Poirette Corsets, Inc. Girdle. 193,298, 7–31–62, Cl. D20—2.
American Optical Co.: *See*—
Armbruster, John T., and Bosack. 193,296.
American Viscose Corp.: *See*—
Johnson, Charles R., Jr. 193,306.
Armbruster, John T., and I. A. Bosack, to American Optical Co. Dental chair or similar article. 193,296, 7–31–62, Cl. D15—3.
Beck, Harold C., and F. C. Kensley, to Manton-Gaulin Mfg. Co., Inc. Homogenizer. 193,300, 7–31–62, Cl. D23—1.
Bergeron, Victor J. Dish or similar article. 193,309, 7–31–62, Cl. D44—15.
Berko Electric Mfg. Corp.: *See*—
Knoll, David, Greenhaus, and Jaffe. 193,320.
Bernhart, Herbert S., to Minneapolis-Honeywell Regulator Co. Slide projector. 193,315, 7–31–62, Cl. D61—1.
Bille, Steven T., and K. Heinz, to The Curtis Publishing Co. Clock. 193,307, 7–31–62, Cl. D42—7.
Bosack, Irwin A.: *See*—
Armbruster, John T., and Bosack. 193,296.
Brewer, Ray C. Bracket for a bed spring or the like. 193,293, 7–31–62, Cl. D5—2.
Brokaw, Robert W., to General Electric Co. Electric controls cabinet. 193,301, 7–31–62, Cl. D26—5.
Buckley, William H., to Standard Brands Inc. Jar. 193,311, 7–31–62, Cl. D58—25.
Buckley, William H., to Standard Brands Inc. Jar. 193,312, 7–31–62, Cl. D58—25.
Carlile, Alfred E. Pull for a slide fastener. 193,297, 7–31–62, Cl. D17—8.
Carlson, Arthur F., to Shore-Calnevar, Inc. Wheel cover. 193,295, 7–31–62, Cl. D14—30.
Curtis Publishing Co., The: *See*—
Bille, Steven T., and Heinz. 193,307.
Distinguished Gift Manufacturers, Inc.: *See*—
Jackson, Duane O. 193,308.
Dreyfuss, Henry, to Philip Morris, Inc. Safety razor. 193,299, 7–31–62, Cl. D22—3.
French, Howard V.: *See*—
Hahn, Richard H., and French. 193,323.
Gabriel Frank Associates, Inc.: *See*—
Iannucci, Steve. 193,319.
General Electric Co.: *See*—
Brokaw, Robert W. 193,301.
Goodson, William M. Devotional desk. 193,303, 7–31–62, Cl. D29—23.
Greenhaus, Albert: *See*—
Knoll, David, Greenhaus, and Jaffe. 193,320.
Hahn, Richard H., and H. V. French. Combined fluid and electric coupling for aircraft or the like. 193,323, 7–31–62, Cl. D91—3.
Heinz, Knute: *See*—
Bille, Steven T., and Heinz. 193,307.
Iannucci, Steve, to Gabriel Frank Associates, Inc. Stand for merchandise display bins or the like. 193,319, 7–31–62, Cl. D80—9.
International Business Machines Corp.: *See*—
Noyes, Eliot. 193,302.
Jackson, Duane O., to Distinguished Gift Manufacturers, Inc. Lazy Susan or the like. 193,308, 7–31–62, Cl. D44—10.
Jacobs, Robert J., to Midland-Ross Corp. Extruder. 193,310, 7–31–62, Cl. D55—1.
Jaffe, Herbert R.: *See*—
Knoll, David, Greenhaus, and Jaffe. 193,320.
Johnson, Charles R., Jr., to American Viscose Corp. Stand for strapping material or the like. 193,306, 7–31–62, Cl. D41—1.
Kelley, James W. Trouser hanger. 193,318, 7–31–62, Cl. D80—8.
King, William R., to Minneapolis-Honeywell Regulator Co. Photographic projector. 193,316, 7–31–62, Cl. D61—1.
Knoll, David, A. Greenhaus, and H. R. Jaffe, to Berko Electric Mfg. Corp. Electric heater. 193,320, 7–31–62, Cl. D81—10.
Mangold, Mila. Bottle carrier. 193,314, 7–31–62, Cl. D58—26.
Manton-Gaulin Mfg. Co., Inc.: *See*—
Beck, Harold C., and Kensley. 193,300.
McCrackin, Otho E., to United States of America, Navy. Guided missile. 193,317, 7–31–62, Cl. D71—1.
Mendez, Charles E., to Redwing Carriers, Inc. Tank trailer. 193,294, 7–31–62, Cl. D14—3.
Midland-Ross Corp.: *See*—
Jacobs, Robert J. 193,310.
Minneapolis-Honeywell Regulator Co.: *See*—
Bernhart Herbert S. 193,315.
King, William R. 193,316.
Morris, Philip, Inc.: *See*—
Dreyfuss, Henry. 193,299.
Noyes, Eliot, to International Business Machines Corp. Portable dictating machine. 193,302, 7–31–62, Cl. D26—14.
Peca, Peter S. Carrier for baby bottles or the like. 193,313, 7–31–62, Cl. D58—26.
Pistey, Alexander M. Trophy or similar article. 193,304, 7–31–62, Cl. D29—23.
Poirette Corsets, Inc.: *See*—
Aguzzi, Mario. 193,298.
Redwing Carriers, Inc.: *See*—
Mendez, Charles E. 193,294.
Shore-Calnevar, Inc.: *See*—
Carlson, Arthur F. 193,295.
Standard Brands Inc.: *See*—
Buckley, William H. 193,311.
Buckley, William H. 193,312.
Thomas, Richard. Vibrating lounge. 193,321, 7–31–62, Cl. D83—1.
Thomas, Richard. Vibrating lounge. 193,322, 7–31–62, Cl. D83—1.
United States of America, Navy: *See*—
McCrackin, Otho E. 193,317.
Weber, Albert C. Combined cabinet and bench unit. 193,305, 7–31–62, Cl. D33—12.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 31ST DAY OF JULY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Johnson, John A., and Kennedy. 3,047,163.
AMP Inc.: *See*—
Albright, Robert L. 3,046,636.
Abbott Laboratories: *See*—
Sherman, William R. 3,047,587.
Aberle, Robert C., to General Electric Co. Washing machine drive system. 3,046,772, 7–31–62, Cl. 68—12.
Abild, Robert N., to United Aircraft Corp. Rocket thrust control. 3,046,734, 7–31–62, Cl. 60—35.6.
Abos, Ralph L., to Polycarbide Corp. Three dimensional particle size classifier. 3,047,145, 7–31–62, Cl. 209—12.
Aceweb Tool & Mfg. Co.: *See*—
Martineau, Paul A. 3,046,667.
Acme-Hamilton Mfg. Corp., The: *See*—
Kahn, Marvin M. 3,047,026.
Acquaderni, Pietro. Artificial ski-track constituted by brush-members. 3,047,292, 7–31–62, Cl. 272—56.5.
Acrow (Engineers) Ltd.: *See*—
Reynolds, Reginald, and Stammers. 3,046,947.
Reynolds, Reginald, and Stammers. 3,046,949.
Adamovske strojirny: *See*—
Jurny, Josef. 3,046,881.
Addressograph-Multigraph Corp.: *See*—
Janke, Edward J. 3,046,877.
Addy, Leslie E., to British Hydrocarbon Chemicals Ltd. Production of condensation products of aliphatic alcohols. 3,047,630, 7–31–62, Cl. 260—593.
Aerpat Aktien Gesellschaft: *See*—
Myers, Paul D. 3,046,827.
Aggson, Robert E., 49% to E. E. Parker. Vented wall flue. 3,046,976, 7–31–62, Cl. 126—316.
Agruss, Meyer S.: *See*—
Sites, Benjamin L., and Agruss. 3,047,422.
Ahlberg, Roy A.: *See*—
Gregson, Alvero C., Ahlberg, and Ferri. 3,048,828.
Aircraft Armaments, Inc.: *See*—
Hillbinger, Albert R. 3,047,821.
Knapp, Phillip M. 3,047,723.
Aircraft Precision Products, Inc.: *See*—
Kelly, Thomas N. 3,046,648.
Aircraft Radio Corp.: *See*—
Doremus, John A. 3,047,657.
McCouch, Gordon P. 3,046,810.
Air Reduction Co., Inc.: *See*—
Arquette, Gordon J. 3,047,555.
Sims, Victor A. 3,047,583.
Air-Shields, Inc.: *See*—
Andreasen, Christian B. 3,046,979.
Airtronics, Inc.: *See*—
Fitzpatrick, John A. 3,046,728.
Akashi, Goro: *See*—
Goto, Hiroshi, and Akashi. 3,047,428.
Aladdin Industries, Inc.: *See*—
Bramming, Carl. 3,047,175.
Albinson, Don: *See*—
Eames, Charles, Albinson, and Pearce. 3,046,572.
Albrecht, David E., to Hose Accessories Co. Apparatus for applying hose couplings to hoses. 3,047,043, 7–31–62, Cl. 153—1.
Albright, Robert L., to AMP Inc. Lead making machine. 3,046,636, 7–31–62, Cl. 29—33.5.
Aldinger, Donald J., to Taylor Instrument Companies. Pressure responsive device. 3,047,022, 7–31–62, Cl. 137—784.
Alfaya, Raymond, P. A. Landskroener, and K. L. Thaxton, to E. I. du Pont de Nemours and Co. Calculator. 3,047,221, 7–31–62, Cl. 235—64.7.
Alferi, Giuseppe, to Fabbrica Italiani Magneti Marelli S.p.A. Servobrake with duplex distributor for braking equipment of the hydropneumatic kind. 3,047,341, 7–31–62, Cl. 303—53.
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Badenoch, Benjamin W., and R. M. Stewart, to Vickers Inc. Power transmission. 3,046,898, 7–31–62, Cl. 103—49.
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Becker, Orlien N., to Minneapolis-Honeywell Regulator Co. High-performance electromagnetic transducer. 3,047,777, 7–31–62, Cl. 317—123.
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Bennett, John, and F. M. Mayes, to Sun Oil Co. Bore hole logging methods and apparatus. 3,047,796, 7–31–62, Cl. 324—10.

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Bergman, Edward, to Art Steel Co., Inc. Stackable desk trays. 3,047,157, 7–31–62, Cl. 211—126.

Bergmann, Ernst R., to Goodman Mfg. Co. Scissors type continuous mining and loading machine. 3,047,279, 7–31–62, Cl. 262—19.

Bergmeister, Edhard, J. Heckmaier, and M. Doriat, to Wacker-Chemie G.m.b.H. Process for drying thermoplastic materials. 3,046,609, 7–31–62, Cl. 18—48.

Berkery, Eugene A., to Bell Telephone Laboratories, Inc. Surge suppression for power supplies. 3,047,746, 7–31–62, Cl. 307—93.

Berkshire, Robert H., to Texas Instruments Inc. Device for the precision mounting of a gear on a shaft. 3,047,318, 7–31–62, Cl. 287—52.08.

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Berryhill, Joseph L., to Mechron. Digital data recording device. 3,047,675, 7–31–62, Cl. 179—100.3.

Bertrand, Jacques R. R., to Societe Anonyme des Caves & des Producteurs Reunis de Roquefort. Machine for cutting cheeses of cylindrical shape into sector portions. 3,046,656, 7–31–62, Cl. 31—26.

Bessiere, Pierre E. Fuel injection systems for internal combustion engines with automatic variation of the advance of fuel injection. 3,046,963, 7–31–62, Cl. 123—139.

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Bienert, Berthold, deceased (by H. Bienert, H. D. Prochaska, and B. K. Bienert, heirs), K. Breig, M. Groll, and H. Gutjahr, to Farbenfabriken Bayer Aktiengesellschaft. Phthalocyanine-sulfonamides and -carbonamides. 3,047,582, 7–31–62, Cl. 260—310.

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Birch, Clifford W., Jr., and R. Briggs, to Birch Brothers, Inc. Automatic cut-off web winder. 3,047,248, 7–31–62, Cl. 242—56.

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Blackwood, Robert K., and C. R. Stephens, Jr., to Chas. Pfizer & Co., Inc. Alkanoic acid esters of 5-hydroxy-tetracycline and process for preparation. 3,047,617, 7–31–62, Cl. 260—490.

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Blair, Edgar A., J. J. Melchiore, and I. W. Mills, to Sun Oil Co. Liquid phase oxidation of alkyl naphthalenes to aldehydes and esters. 3,047,616, 7–31–62, Cl. 260—488.

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Bloem, Jan, to North American Philips Co., Inc. Method of making semi-conductive material for use in semi-conductive devices. 3,047,380, 7–31–62, Cl. 75—84.

Blout, Elkan R., and M. S. Simon, to Polaroid Corp. Anthraquinone dye developers. 3,047,386, 7–31–62, Cl. 96—29.

Bluestein, Ben A., to General Electric Co. Greases thickened with metal salts of carboxyalkylpolysiloxanes. 3,047,497, 7–31–62, Cl. 252—28.

Bluestein, Ben A., to General Electric Co. Elastomer composition. 3,047,528, 7–31–62, Cl. 260—37.

Blum, Charles A. Wreath. 3,046,685, 7–31–62, Cl. 41—12.

Blumstein, Abraham, to Brown Counter Co. Process of skiving and grooving counters. 3,046,582, 7–31–62, Cl. 12—146.

Bobnar, Louis R.: *See*—
Lauck, John A., and Bobnar. 3,046,902.

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Bobst, J., and Son, S.A.: *See*—
Bobst, Henri. 3,046 875.

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Rowe, Donald C. 3,047,710.

Bolie, Victor W., to Collins Radio Co. Radiometric navigation system. 3,047,863, 7–31–62, Cl. 343—117.

Bonn, Theodore, and N. S. Prywes, to Sperry Rand Corp. Electrical switching circuits. 3,047,231, 7–31–62, Cl. 235—176.

Bonnafe, Oliver W., to The Lapointe Machine Tool Co. Horizontal broaching machine. 3,046,846, 7–31–62, Cl. 90—92.

Bonnevie-Svendsen, Per. Device for use when sweeping smoke tubes, boilers and the like. 3,046,589, 7–31–62, Cl. 15—162.

Boon, Simon A.: *See*—
Van Bergen, Johannes C., Laqueuille, and Boon. 3,047,184.

Boose, Emery F., to General Electric Co. Phase component eliminator. 3,047,815, 7–31–62, Cl. 330—86.

Borg, S. Edward: *See*—
Swainson, Edward L., and Borg. 3,046,797.

Borg-Warner Corp.: *See*—
Ross, Harold O. 3,046,787.
Westell, John R. 3,047,753.

Bork, Adam. Toaster accessory. 3,046,870, 7–31–62, Cl. 99—402.

Borsboom, Albertus C. H., to Shell Oil Co. Measuring conductivity of liquids. 3,047,797, 7–31–62, Cl. 324—30.

Borys, Emil. Cartridge fuse holder and indicator. 3,047,605, 7–31–62, Cl. 200—121.

Boss, Harold O., to Borg-Warner Corp. Differential pressure transducer. 3,046,789, 7–31–62, Cl. 73—398.

Bottasso, Carlo, L. Amici, and L. Malocchi, to Pirelli S.p.A. Pneumatic tire with integral rim. 3,047,041, 7–31–62, Cl. 152—363.

Bousky, Samuel, to Chicago Aerial Industries, Inc. Oscillographic viewing and recording systems. 3,047,870, 7–31–62, Cl. 346—110.

Bowman, Joe, to Kingston Products Corp. Mechanical movement for coin operated timer. 3,046,803, 7–31–62, Cl. 74—104.

Bowman, Norman J., to Standard Oil Co. Glycolic acid polymer. 3,047,524, 7–31–62, Cl. 260—32.4.

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Boyer, William M.: *See*—
Molotsky, Hyman M., Boyer, and Tarbell. 3,047,527.

Boyle, Richard J., O. G. Birsten, and W. L. Mosby, to American Cyanamid Co. New heterocyclic orthoquinones. 3,047,575, 7–31–62, Cl. 260—256.4.

Boylan, Donald A.: *See*—
Nolles, Douglas G., and Boylan. 3,046,876.

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Brace, Neal O., and W. B. McCormack, to E. I. du Pont de Nemours and Co. Process for preparing highly fluorinated acid chlorides and novel esters useful therein. 3,047,610, 7–31–62, Cl. 260—463.

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Bradford Dyers' Association Ltd., The: *See*—
Evans, John G., and Crawshaw. 3,047,535.

Bradford, Henry K., to Outlook Engineering Corp. Acceptance circuits. 3,047,811, 7–31–62, Cl. 328—142.

Bradicich, John B.: *See*—
Twitchell, Sherman W., and Bradicich. 3,046,848.

Bradley, John K., T. P. Dee, and W. F. Sheldrick, to Fisons Ltd. Production of a complex fertilizer. 3,047,379, 7–31–62, Cl. 71—37.

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Hauptschein, Murray, and Braid. 3,047,636.

Bramming, Carl, to Aladdin Industries, Inc. Collar and jacket construction for vacuum bottles. 3,047,175, 7–31–62, Cl. 215—13.

Braun, Wilhelm, and W. Zehnder, to Inventa, A.G. fur Forschung und Patentverwertung. Process for extraction of monomeric caprolactam from its polymer. 3,047,565, 7–31–62, Cl. 260—239.3.

Braunitzer, Andrew: *See*—
Tvorik, Stephen W., and Braunitzer. 3,046,620.
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Breen, George B., and J. E. Cahill, to Minnesota Mining and Mfg. Co. Apparatus for collecting sap. 3,046,698, 7–31–62, Cl. 47—32.

Breig, Kurt: *See*—
Bienert, Berthold, Breig, Groll, and Gutjahr. 3,047,582.

Holtz, Ralph F.: *See*—
Bard, Francis N., Breitenstein, and Holtz. 3,046,958.

Brennan, Helen E.: *See*—
Brennan, Joseph B. 3,046,649.

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Brennemann, Andrew E., to International Business Machines Corp. Superconductive circuit element exhibiting multistate characteristics. 3,047,743, 7–31–62, Cl. 307—88.5.

Bretscher, Otto, to Gesellschaft der Ludw. von Roll'schen Eisenwerke Aktiengesellschaft. Device for grinding work surfaces curved in the longitudinal direction. 3,046,702, 7–31–62, Cl. 51—92.

Bretthauer, Hermann, and J. Madge, to Franke & Heidecke, Fabrik Photographischer Präzisions-Apparate. Photographic camera. 3,046,863, 7–31–62, Cl. 95—64.

Brewer, Clifford E. Chimney cowls and ventilating devices. 3,046,867, 7–31–62, Cl. 98—82.

Brickman, A. W.: *See*—
Landmann, Wendell A., and Batzer. 3,047,399.

Bridegum, James E. Garden shears. 3,046,722, 7–31–62, Cl. 56—241.

Bridges, Jack E., to Warwick Mfg. Corp. Voltage regulator 3,047,793, 7–31–62, Cl. 323—94.

Briell, Martin J.: *See*—
Kolda, Frank V., and Briell. 3,046,634.

Briggs, Richard: *See*—
Birch, Clifford W., Jr., and Briggs. 3,047,248.

Brinkel, Edwin P., to Ross Operating Valve Co. Non-tiedown valve. 3,047,017, 7–31–62, Cl. 137—620.

Brinkley, Stuart R., Jr., and G. Von Elbe, to Consolidation Coal Co. Explosive system containing ammonium nitrate. 3,046,887, 7–31–62, Cl. 102—22.

Briscoe, George H., to Lacy-Hulbert & Co. Ltd. Rotary air compressors. 3,047,212, 7–31–62, Cl. 230—210.

British Aluminium Co. Ltd., The: *See*—
Clements, Stephen G., and Laithwaite. 3,047,111.

British Celanese Ltd.: *See*—
Grebby, John W., Hawtin, and Downing. 3,046,608.

British Drug Houses Ltd., The: *See*—
Petrow, Vladimir, and Williamson. 3,047,591.

British Hydrocarbon Chemicals Ltd.: *See*—
Addy, Leslie E. 3,047,630.

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Desty, Denis H., Haresnape, and Whyman. 3,046,699.

Broadhead, Ronald L., to Standard Oil Co. Baking type resins from benzene tricarboxylic acids. 3,047,525, 7–31–62, Cl. 260—32.8.

Brondley, Robert D., to Allied Chemical Corp. Refrigeration process. 3,047,506, 7–31–62, Cl. 252—67.

Broderson, Neil O., to Rochester Button Co. Article feeding device. 3,047,193, 7–31–62, Cl. 221—163.

Bromo Mint Co.: *See*—
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Brook, James H. T., and R. W. Glazebrook, to Shell Oil Co. Radiation resistant mineral oil composition. 3,047,501, 7–31–62, Cl. 252—45.

Broughton, Sidney H., and V. R. Erickson, to Omark Industries, Inc. Explosively actuated tool. 3,046,557, 7–31–62, Cl. 1—44.5.

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Blustein, Abraham. 3,046,582.

Brown, Joseph R., Jr., to Burroughs Corp. Bipolar current steering switch. 3,047,730, 7–31–62, Cl. 307—88.

Brown, Kenneth R., to Ferranti Ltd. Torque motors having a restricted range of angular movement. 3,047,750, 7–31–62, Cl. 310—38.

Brown, Lake D., Jr., to International Rectifier Corp. Method of making a rectifier. 3,047,437, 7–31–62, Cl. 148—1.5.

Brown, Lowell N. Masonry drill. 3,047,082, 7–31–62, Cl. 175—415.

Brown, Ray: *See*—
Landmann, Wendell A., and Batzer. 3,047,399.

Brown, Raymond R., and D. D. Goff, to R. R. Brown. Trailer hitch safety device. 3,047,839, 7–31–62, Cl. 340—52.

Brown, Rene P.: *See*—
Dyer, Robert H., and Brown. 3,047,534.

Brown, Stanley R., to General Electric Co. Amplitude coincidence circuit. 3,047,812, 7–31–62, Cl. 328—147.

Brown, James A., to Thermal Dynamics Corp. Electric arc torch. 3,047,709, 7–31–62, Cl. 219—75.

Browning, William C., to Milwhite Mud Sales Co. Method of controlling the extra pressure lubrication of drilling muds. 3,047,494, 7–31–62, Cl. 252—8.5.

Bruce, George H., to Jersey Production Research Co. Weighted drill collar. 3,047,313, 7–31–62, Cl. 285—47.

Bruson, Herman A., and T. P. O'Day, to Olin Mathieson Chemical Corp. Ethers of dichlorocyclopropane. 3,047,633, 7–31–62, Cl. 260—611.

Buck, Robert C. Tool for removing windshield wiper arms. 3,046,646, 7–31–62, Cl. 29—278.

Buck, William H., to Atlas Press Co. Turret valve. 3,047,015, 7–31–62, Cl. 137—614.17.

Buchner, Karl, and H. Tummes, to Ruhrchemie Aktiengesellschaft. Process for the production of mixtures of isomeric aliphatic or cycloaliphatic carboxylic acids having molecular sizes of from C_8 to C_{10}. 3,047,599, 7–31–62, Cl. 260—413.

Budd Co., The: *See*—
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Budzich, Tadeusz, to The New York Air Brake Co. Means for counteracting centrifugal force moments in rotary cylinder barrel engines. 3,046,906, 7–31–62, Cl. 103—162.

Buh, William F., Jr., and C. Ayala, to M. I. Glass. Toy. 3,046,683, 7–31–62, Cl. 40—106.22.

Bulat, Thomas J., to The Bendix Corp. Solutions and methods for radioactive decontamination. 3,047,434, 7–31–62, Cl. 134—1.

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Clark, Carlos S. 3,047,146.

Burgin, Kermit H., 25% to F. B. Cline, 20% to F. T. Cline, and 10% to G. Van Ryper, Jr. Water jet drive for boats. 3,046,735, 7–31–62, Cl. 60—35.55.

Burian, Kurt, to G-M Laboratories Inc. Tachometer generator. 3,047,791, 7–31–62, Cl. 322—34.

Burk, Emmett H., Jr., and J. Moot, to Engelhard Industries, Inc. Method for manufacturing an active catalyst composition. 3,047,514, 7–31–62, Cl. 252—442.

Burkhardt, Louis C.: *See*—
Lovberg, Ralph H., and Burkhardt. 3,047,480.

Burley, Billy, to Fischbach and Moore, Inc. Hydraulic actuator. 3,046,743, 7–31–62, Cl. 60—52.

Burns, John R., to American Can Co. Folded sheet. 3,047,141, 7–31–62, Cl 206—57.

Burnthall, Edward V.: *See*—
Hirshfeld, Julian J., and Burnthall. 3,047,425.

Burroughs Corp.: *See*—
Brown, Joseph R., Jr. 3,047,730.
Hespenheide, Wilbur G. 3,047,475.

Butler, Bernadette. Ironing table with extensible ironing board surface. 3,046,682, 7–31–62, Cl. 38—138.

Butler, George. Viner and hulier. 3,046,992, 7–31–62, Cl. 130—30.

Butler, Stanley C., and D. L. L. Marsh. Toy air compressor rocket launcher. 3,046,966, 7–31–62, Cl. 124—11.

Burton, Robert W., and E. Sich, to General Motors Corp. Drive shaft bearing support. 3,047,345, 7–31–62, Cl. 308—28.

Burtt, Jack R., R. D. Palino, and K. Staiger, to Stewart-Warner Corp. Brazed plate and ruffled fin heat exchanger. 3,047,271, 7–31–62, Cl. 257—245.

Byatt, Dennis, to Marconi's Wireless Telegraph Co. Ltd. Radio direction finding systems. 3,047,864, 7–31–62, Cl. 342—120.

Byrd, Edgar J.: *See*—
Byrd, Roy G., J. B., and E. J. 3,047,168.

Byrd, James B.: *See*—
Byrd, Roy G., J. B., and E. J. 3,047,168.

Byrd, Norman R., to The Goodyear Tire & Rubber Co. Difunctional polymers and methods for their preparation. 3,047,344, 7–31–62, Cl. 260—79.

Byrd, Roy G., J. B., and E. J., 49% to K. W. Corder. Tobacco stringers. 3,047,168, 7–31–62, Cl. 214—5.5.

Byers, Edward V. Ribbon feed mechanism of typewriters. 3,047,120, 7–31–62, Cl. 197—151.

Cadillac Co. Inc., The: *See*—
Shustrom, Elmer N. 3,046,619.

Cahill, John E.: *See*—
Breen, George B., and Cahill. 3,046,698.

Cairns, Theodore L. S., to E. I. du Pont de Nemours, and Co. Color photograph. 3,047,388, 7–31–62, Cl. 96—55.

California Computer Products, Inc.: *See*—
Morton, Robert C. 3,047,773.

California Research Corp.: *See*—
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Callahan, Emmett J. Prefabricated combination bathroom, kitchen and utility room units. 3,047,106, 7–31–62, Cl. 189—1.

Callihan, Clayton D., and S. M. Rodgers, Jr. Sodium derivatives of octakis(2-hydroxy propyl) sucrose. 3,047,560, 7–31–62, Cl. 260—209.

Calvert, William C. Vinylchloride polymer blends with graft copolymers of a conjugated dien/alkyl acrylate copolymer, an unsaturated hydrocarbon, and an unsaturated nitrile. 3,047,533, 7–31–62, Cl. 260—45.5.

Cambel, Ali B., and A. B. Schaffer, 25% to E. Pohlmann. Flame stabilization in jet engines. 3,046,731, 7–31–62, Cl. 60—35.6.

Cambridge Rubber Co.: *See*—
Bingham, George H., Jr. 3,046,581.

Came, George E., and H. M. Simmons, to Cleaners Hanger Co. Machine for making garment hangers. 3,047,031, 7–31–62, Cl. 140—81.5.

Cameo Curtains Inc.: *See*—
Heimberg, Ell. 3,047,060.

Canavan, Joseph M. Nozzle construction. 3,047,239, 7–31–62, Cl. 239—579.

Cannon, Guy H., to The Dow Chemical Co. Solid fuel and heating element for gas-cooled nuclear reactors. 3,047,487, 7-31-62, Cl. 204—193.2.

Capitol Products Corp.: *See*—
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Carapico, Frank, Jr., ½ to F. Carapico, Sr., and ½ to J. D. Carapico. Apparatus for producing ice cubes. 3,046,753, 7-31-62, Cl. 62—132.

Carapico, Frank, Sr.: *See*—
Carapico, Frank, Jr. 3,046,753.

Carapico, Joseph D.: *See*—
Carapico, Frank, Jr. 3,046,753.

Carey, Edward J.: *See*—
Thomas, Edward R., Sonnanstine, and Carey. 3,047,227.

Carlson, Leonard A.: *See*—
Sullivan, Wilbur M., and Carlson. 3,047,523.

Carlson, William L., Jr., and R. H. Cole, to Minneapolis-Honeywell Regulator Co. Conductive fluid pump. 3,046,893, 7-31-62, Cl. 103—1.

Carlson, William L., Jr., to Minneapolis-Honeywell Regulator Co. Electromagnetic device. 3,047,779, 7-31-62, Cl. 317—156.

Carlyle, Robert L., to The Dow Chemical Co. Introduction of a metal into a combustion zone. 3,047,057, 7-31-62, Cl. 158—117.5.

Carpenter, Arthur J., to General Motors Corp. Convertible top. 3,047,332, 7-31-62, Cl. 296—116.

Carpenter, Joel C., to Ogiebay Norton Co. Hot top and wiper strip construction. 3,046,623, 7-31-62, Cl. 22—147.

Carr, Norman L., to The Pure Oil Co. Method of isomerizing and demethanating C_5-C_8 n-paraffins. 3,047,491, 7-31-62, Cl. 208—136.

Carr, Norman L., to The Pure Oil Co. Process for the catalytic hydroisomerization of crude normal-pentane. 3,047,645, 7-31-62, Cl. 260—683.65.

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Carrico, Glen S.: *See*—
Griffin, Ben B., and Carrico. 3,047,287.

Carrier Corp.: *See*—
Baker, Virgil H. 3,047,045.

Carstens, Fred A., to A. O. Smith Corp. Method of fabricating hemispherical multi-layer heads. 3,046,647, 7-31-62, Cl. 29—421.

Carter, Charles D., Jr., to Phillips Petroleum Co. Tubing positioner for upper zone of dually completed well. 3,047,069, 7-31-62, Cl. 166—55.1.

Carter, Franklin E.: *See*—
Kauffmann, William M., and Carter. 3,046,965.

Carter, Sidney T., to Geo. J. Meyer Mfg. Co. Container filling apparatus. 3,047,032, 7-31-62, Cl. 141—99.

Carter, Terry L. Case packer. 3,046,712, 7-31-62, Cl. 53—61.

Carter, Wilbert V.: *See*—
Ledingham, Gordon R., Carter, and Olson. 3,046,585.

Carter, William D., to Eastman Kodak Co. Process for producing solid non-porous pellets from polyolefins and pellets produced thereby. 3,046,606, 7-31-62, Cl. 18—47.5.

Carver, Clema. Collapsible table. 3,047,337, 7-31-62, Cl. 297—157.

Case, J. I., Co.: *See*—
Long, Elton B. 3,047,171.

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Spinelli, Frank P., and Castenschiold. 3,047,725.

Caulk, L. D., Co., The: *See*—
Dougherty, Emery W. 3,047,408.

Caves & des Producteurs Reunis de Roquefort, Societe Anonyme des: *See*—
Bertrand, Jacques R. R. 3,046,656.

Chabot, Robert E., Jr., to United States of America, Air Force. Interpolometer. 3,046,662, 7-31-62, Cl. 33—76.

Chade, Nelson. Device for altering phonograph speed. 3,047,296, 7-31-62, Cl. 274—9.

Chaney, Preston E.: *See*—
Bennett, John, Chaney, Jones, and Mayes. 3,047,794.

Chantler, Lewis W., and W. O. Hund, to Martin-Marietta Corp. Magnesia gunning mixes. 3,047,411, 7-31-62, Cl. 106—81.

Cheesman, John J., and M. R. Mills, to Automatic Strapping Machines Ltd. Package and like binding mechanism. 3,046,871, 7-31-62, Cl. 100—26.

Cheng, Chao-Shing, and B. Taub, to Allied Chemical Corp. Production of oximes. 3,047,482, 7-31-62, Cl. 204—162.

Chery, Walter V. Automobile starting device. 3,046,964, 7-31-62, Cl. 123—179.

Chester, Milton A., to Martin-Marietta Corp. Device for changing airfoil profile. 3,047,257, 7-31-62, Cl. 244—85.

Chicago Aerial Industries, Inc.: *See*—
Bousky, Samuel. 3,047,870.

Chori Co. Ltd.: *See*—
Chashi, Hideichiro, Kawasaki, Koshiba, and Tsuji. 3,046,633.

Christian, Curtis G., to Union Oil Co. of California. Production of terephthalic acid from toluene. 3,047,620, 7-31-62, Cl. 260—522.

Christy, Alexander C. Igniting tip cigarette. 3,046,995, 7-31-62, Cl. 131—20.

Chyo, Toshio. Weighing balance. 3,047,083, 7-31-62, Cl. 177—150.

Ciba Ltd.: *See*—
Kern, Fritz. 3,047,476.

Cincinnati Milling Machine Co., The: *See*—
Dall, Albert H., and Grove. 3,046,704.
Grove, George L. 3,046,703.
Grove, George L., and Decker. 3,046,710.

Cizek, Arthur, to Armour and Co. Corrosion inhibiting compositions and process. 3,047,510, 7-31-62, Cl. 252—136.

Clark, Carlos S., to Burgess-Norton Mfg. Co. Method and apparatus for detecting flaws. 3,047,146, 7-31-62, Cl. 209—72.

Clark Equipment Co.: *See*—
Lauck, John A., and Bobnar. 3,046,902.

Clark, Harry C. Safety headlight switch. 3,047,771, 7-31-62, Cl. 315—83.

Clark, Joe H., L. Goldman, L. N. Starker, and J. K. Paul, to American Cyanamid Co. 1,1'-(hexafluoroglutaryl)-bis (4-phenylpiperazine). 3,047,576, 7-31-62, Cl. 260—268.

Clark, Richard C. Unitary high torque resistant electrical terminals. 3,047,653, 7-31-62, Cl. 174—153.

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Clarkson, John R., to The J. R. Clarkson Co. Valve. 3,047,008, 7-31-62, Cl. 137—315.

Cleaners Hanger Co.: *See*—
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Clement, Milton A., to General Dynamics Corp. Toll ticketing trunk circuit. 3,047,664, 7-31-62, Cl. 179—7.1.

Clements, Stephen G., and E. H. Laithwaite, to The British Aluminium Co. Ltd. Metal sheeting. 3,047,111, 7-31-62, Cl. 189—86.

Cleveland Crane & Engineering Co., The: *See*—
Dehn, Roy F. 3,046,874.
Dehn, Roy F. 3,047,681.
Gorjanc, Henry A. 3,046,909.

Cline, Florence T.: *See*—
Burgin, Kermit H. 3,046,735.

Cline, Frederick B.: *See*—
Burgin, Kermit H. 3,046,735.

Clorox Co., The: *See*—
Melrose, Richard E. 3,047,417.

Cluwen, Johannes M., to North American Philips Co., Inc. Circuit arrangement for limiting electrical signal oscillations. 3,047,740, 7-31-62, Cl. 307—88.5.

Coanda, Henri, to Sebac Nouvelle S.A. Device for imparting movement to gases. 3,047,208, 7-31-62, Cl. 230—95.

Coats & Clark Inc.: *See*—
Morin, Louis H. 3,046,628.

Coble, George W., to E. I. du Pont de Nemours and Co. Process for preparing a thin cellular polyurethane layer of uniform thickness. 3,047,449, 7-31-62, Cl. 156—79.

Coffman, Donald D., to E. I. du Pont de Nemours and Co. Polymerization process using polyfluoronzoalkanes as initiators. 3,047,553, 7-31-62, Cl. 260—88.7.

Coggeshall, Almy D., to General Electric Co. Glass-resin tape for armature banding. 3,047,756, 7-31-62, Cl. 310—271.

Cohen, Alfred G.: *See*—
Small, Samuel N. 3,046,701.

Cole, James E., to Riegel Paper Corp. Tensioning device for a web in a slitting apparatus. 3,046,823, 7-31-62, Cl. 83—173.

Cole, Richard H.: *See*—
Carlson, William L., Jr., and Cole. 3,046,893.

Coleman, Charles H., to United States of America, Army. Solvent-front indicator for paper chromatograms. 3,046,779, 7-31-62, Cl. 73—53.

Coleman, Garlin J. Detachable game pocket. 3,046,563, 7-31-62, Cl. 2—251.

Coleman, Millard J., to International Business Machines Corp. Electrical decoder. 3,047,854, 7-31-62, Cl. 340—347.

Collins, Jack D., to Ford Motor Co. Drive chain. 3,046,806, 7-31-62, Cl. 74—245.

Collins, John F.: *See*—
Peters, Theodore J., and Collins. 3,047,504.

Collins Radio Co.: *See*—
Bolle, Victor W. 3,047,863.

Combustion Engineering, Inc.: *See*—
Smith, Edmond L. 3,047,362.
Specn, Elio J. 3,047,272.
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Witzke, Ernest C. 3,046,957.

Comer, D. O.: *See*—
Young, Ralph E. 3,046,596.

Commercial Picture Equipment, Inc.: *See*—
Wilcox, Harvey N., and Smith. 3,047,061.

Commercial Shearing and Stamping Co., The: *See*—
Kane, Thomas C. 3,046,924.

Compton, Max D., to Gladding, McBean & Co. Method of producing novel decorative effects on ceramic objects. 3,047,418, 7-31-62, Cl. 117—37.

Condo, Albert C., Jr., to The Atlantic Refining Co. Motor fuel compositions. 3,047,374, 7-31-62, Cl. 44—69.

Connally, Carl, Jr., and J. J. Justen, to Socony Mobil Oil Co., Inc. Recovery of petroleum oil. 3,047,063, 7-31-62, Cl. 166—10.

Conover, Lloyd H.: *See*—
Stephens, Charles R., Jr., and Conover. 3,047,626.

Consolidation Coal Co.: *See*—
Brinkley, Stuart R., Jr., and Von Elbe. 3,046,887.
Gordon, William E. 3,046,888.
Gorin, Everett, and Struck. 3,047,472.
Lee, Arthur L., and Coval. 3,047,115.
Price, Stanley J., Jr., and Raynovich. 3,046,745.

Container Corp. of America: *See*—
Wolowicz, Richard S. 3,047,204.

Contina Bureaux und Rechenmachinenfabrik, Aktiengesellschaft: *See*—
Ferrari, Alfredo, and Gasser. 3,046,834.

Continental-Diamond Fibre Corp.: *See*—
Taylor, John S. 3,047,421.

Continental Folding Paper Box Co., Inc.: *See*—
Bowman, Paul F. 3,046,849.

Cook, Herbert E., to Michigan Abrasive Co. Abrasive tool. 3,046,709, 7-31-62, Cl. 51—195.

Corder, K. Wilson: *See*—
Byrd, Roy G., J. B. and E. J. 3,047,168.

Cormier, Louis A., 50% to N. S. Blodgett. Shield for automobile. 3,047,058, 7-31-62, Cl. 160—45.

Cornberg, Sol. Television makeup apparatus. 3,047,654, 7-31-62, Cl. 178—6.8.

Corning Glass Works: *See*—
Hoxie, John P., and Neal. 3,047,716.

Corson, Ben B., and H. Moe, to Koppers Co., Inc. Preparation of 2-phenylnaphthalene. 3,047,643, 7-31-62, Cl. 260—668.

Cosden Petroleum Corp.: *See*—
Dyer, Robert H., and Brown. 3,047,534.

Cosse, Claude, and F. Loy, to Telecommunications, Radioelectriques et Telephoniques R.T. (Societe Anonyme). Proximity fuse. 3,046,892, 7-31-62, Cl. 102—70.2.

Costas, John P., to General Electric Co. Receiver for communication system. 3,047,659, 7-31-62, Cl. 178—88.

Costas, John P., to General Electric Co. Means for obtaining character time in a radio communication system receiver. 3,047,660, 7-31-62, Cl. 178—88.

Course, Kenneth W.: *See*—
Minett, Herbert H. B., and Course. 3,046,896.

Courtaulds Ltd.: *See*—
Field, John E., and Schmidt. 3,047,363.

Courtright, William R. Live bait fish hooks. 3,046,691, 7-31-62, Cl. 43—44.8.

Coval, Arthur B.: *See*—
Lee, Arthur L., and Coval. 3,047,115.

Cox, Clara W.: *See*—
Cox, Wilma W. and C. W. 3,046,559.

Cox, Ronald L. Mixing of granular and/or powdery solid materials. 3,047,275, 7-31-62, Cl. 259—4.

Coz, Wilma W. and C. W., to Mine Safety Appliances Co. Protective helmet lining. 3,046,559, 7-31-62, Cl. 2—3.

Craig, Paul N.: *See*—
Van Noy, Lawrence R., and Craig. 3,047,704.

Craig, Paul N., to Smith Kline & French Laboratories. Dimethylaminophenothiazine derivatives. 3,047,572, 7-31-62, Cl. 260—243.

Crane, Carlton L., to Eastman Kodak Co. Preparation of stable cellulose triesters. 3,047,501, 7-31-62, Cl. 260—227.

Cranston Print Works Co.: *See*—
Owren, Erling. 3,047,354.

Crawshaw, Geoffrey H.: *See*—
Evans, John G., and Crawshaw. 3,047,535.

Creter, Balthasar. Mulling cabinet. 3,046,580, 7-31-62, Cl. 12—59.7.

Crompton, Arthur, ½ to Robey & Co., Ltd. Mechanical brake system for winding engines, conveyors and other rotating machines. 3,047,102, 7-31-62, Cl. 188—170.

Crosby, Murray G. Compatible stereophonic system. 3,047,666, 7-31-62, Cl. 179—15.

Crow, Edward L. Top loading fluid pump. 3,046,904, 7-31-62, Cl. 103—155.

Crown Cork & Seal Co., Inc.: *See*—
Wilckens, Eibe A. 3,047,176.

Cruz, Edward S., to Lockheed Aircraft Corp. Foldable stairway for aircraft. 3,047,093, 7-31-62, Cl. 182—97.

Cudhea, Ralph V.: *See*—
Aubrey, Howard W., and Cudhea. 3,046,882.

Cunningham, William J., R. F. Sweeney, and C. Woolf, to Allied Chemical Corp. Manufacture of chlorofluoropropenes. 3,047,639, 7-31-62, Cl. 260—653.3.

Cuomo, Ralph. Method of making sweet curd cheese. 3,047,400, 7-31-62, Cl. 99—116.

Cupedo, Douwe J. Apparatus for hydraulically or pneumatically operating a member, such as the slide or the valve member of a stop valve. 3,046,802, 7-31-62, Cl. 74—89.

Curtis, Roger C., and F. W. Roberts, to Dictaphone Corp. Power supply for portable dictating machine and the like. 3,047,785, 7-31-62, Cl. 318—139.

Curtiss-Wright Corp.: *See*—
Stoddard, Glenn G. 3,047,827.

Cutler-Hammer, Inc.: *See*—
Greening, Donald J., and Smith. 3,047,742.
Hults, Harold W. 3,047,682.
Peterson, Norman L., and Smith. 3,047,729.

Dahl, Philip R., to The Marquardt Corp. Gas turbine fuel control system. 3,046,739, 7-31-62, Cl. 60—39.28.

Dahle, Edwin A., to General Motors Corp. Constant torque drum brake. 3,047,099, 7-31-62, Cl. 188—78.

Daimler-Benz Aktiengesellschaft: *See*—
Barenyi, Bela, and Renner. 3,047,330.
Behles, Franz G. F. 3,047,100.
Behles, Franz G. F. 3,047,284.
Fiala, Ernst J. H. 3,047,180.
Scherenberg, Hans O. 3,047,101.

D'Alelio, Gaetano F., to Dal Mon Research Co. Polymerization products of unsaturated aminotriazine. 3,047,531, 7-31-62 Cl. 260—45.4.

D'Alelio, Gaetano F., to Dal Mon Research Co. Triazinyl vinyl monomer, and polymer and copolymers thereof. 3,047,532, 7-31-62, Cl. 260—45.4.

Dall, Albert H., and G. L. Grove, to The Cincinnati Milling Machine Co. Machine tool slide and mounting thereof. 3,046,704, 7-31-62, Cl. 51—103.

Dally, Roy, and G. W. Fabel, to General Electric Co. Channel and replaceable stylus assemblies. 3,047,676, 7-31-62, Cl. 179—100.41.

Dal Mon Research Co.: *See*—
D'Alelio, Gaetano F. 3,047,531.
D'Alelio, Gaetano F. 3,047,532.

D'Altrui, Thomas N. Automatic lock for demountable storage racks. 3,047,108, 7-31-62, Cl. 189—36.

Danker, Berend to North American Philips Co., Inc. Receiving circuit arrangement comprising a ratio detector. 3,047,813, 7-31-62, Cl. 329—129.

Dardick Corp.: *See*—
Dardick, David. 3,046,890.

Dardick, David, to Dardick Corp. Ammunition for open chamber guns. 3,046,890, 7-31-62, Cl. 102—38.

Daugherty, Harry V. Releasable hanging device. 3,046,598, 7-31-62, Cl. 17—44.3.

Davenport, Aaron W. L. Weatherboarding construction and method for exterior walls. 3,046,700, 7-31-62, Cl. 50—260.

Davis, Charles W., to Texaco Inc. Fuel injection pump. 3,046,905, 7-31-62, Cl. 103—161.

Davis, Daniel O., and L. G. McGill, to Davis & McGill, Inc. Personal inflatable life guard. 3,046,575, 7-31-62, Cl. 9—316.

Davis, Derek E. T. Stove for grilling viands. 3,046,969, 7-31-62, Cl. 126—9.

Davis, Frank L. Safety belt and harness for confining patient to a litter. 3,046,982, 7-31-62, Cl. 128—134.

Davis & McGill, Inc.: *See*—
Davis, Daniel O., and McGill. 3,046,575.

Davis, Robert E., Jr.: *See*—
Davis, Robert E., Sr., and R. E., Jr. 3,046,573.

Davis, Robert E., Sr., and R. E., Jr. Reversible automobile arm rest pillow. 3,046,573, 7-31-62, Cl. 5—337.

Davis, Roy C., to The Guiberson Corp. Tubing protectors. 3,047,025, 7-31-62, Cl. 138—106.

Davis, Roy C., to The Guiberson Corp. Adapter assembly. 3,047,071, 7-31-62, Cl. 166—124.

Davol Rubber Co.: *See*—
Moreau, William J., and Nodine. 3,046,988.

Day, Herbert W.: *See*—
Gehrig, Albert K., and Day. 3,046,644.

Deakin, Stanley T., to Sealectro Corp. Electrical socket contacts. 3,047,832, 7-31-62, Cl. 339—217.

De Baun, John E. Bicycle driving mechanism. 3,047,310, 7-31-62, Cl. 280—261.

De Bruyn, Hendrik E., to North American Philips Co., Inc. Device for working metals. 3,047,707, 7-31-62, Cl. 219—69.

Decker, Jacob: *See*—
Grove, George L., and Decker. 3,046,710.

Dee, Thomas P.: *See*—
Bradley, John K., Dee, and Sheldrick. 3,047,379.

Deere & Co.: *See*—
Frank, William R. 3,047,075.
Johnson, Leslie W. 3,046,916.
Young, William A., and Johnson. 3,046,723.

De Filipi, Giovanni B. Animal stanchion appliance. 3,046,941, 7-31-62, Cl. 119—148.

Deford, Donald E., and D. K. Dye, to General Motors Corp. Shaft coupling. 3,046,759, 7-31-62, Cl. 64—11.

De Grazia, Joseph, to United States of America, Army. Neck shield for protective helmet. 3,046,560, 7-31-62, Cl. 2—6.

Dehn, Roy F., to The Cleveland Crane & Engineering Co. Current collector. 3,047,681, 7-31-62, Cl. 191—45.

Dehn, Roy F., to The Cleveland Crane & Engineering Co. Press brake. 3,046,874, 7-31-62, Cl. 100—256.

De Jongh, Hendrik P.: *See*—
Schönemann, Karl H., and de Jongh. 3,047,592.

De Koning, Jacob, to Stamicarbon N.V. Installation for the continuous separation of objects according to specific gravity. 3,047,147, 7-31-62, Cl. 209—73.

De Koning, Jacob, to Stamicarbon N.V. Installation for the continuous separation of objects according to specific gravity. 3,047,148, 7-31-62, Cl. 209—74.

De Koning, Jacob, to Stamicarbon N.V. Separating objects according to their specific gravity. 3,047,149, 7-31-62, Cl. 209—121.

Dell, Harold R.: *See*—
Hamilton, Eugene P., Trebino, and Dell. 3,047,731.

De Lisio, Salvatore. Apparatus for raising ships from underwater. 3,046,925, 7-31-62, Cl. 114—54.

De Mart, Le Roy S. Translational drive mechanism. 3,046,808, 7-31-62, Cl. 74—424.8.

Demchock, Louis A.: *See*—
Anderson, Robert M., and Demchock. 3,046,769.

De Miranda, Heine A. R., to North American Philips Co. Inc. Shift register utilizing free charge carrier storage of cascaded delay network coupled transistors. 3,047,739, 7-31-62, Cl. 307—88.5.

De Monterey, Francis G. A., to General Electric Co. Grease compositions. 3,047,499, 7-31-62, Cl. 252—37.

Den Ouden, Wouter, to Electrotechnische Industrie Voorheen Willem Smit & Co., N.V. Plural condition responsive generator fed motor control system. 3,047,786, 7-31-62, Cl. Cl. 318—153.

De Ramaix, Maurice A., and J. Jacken, to Gevaert Photo-Producten N.V. Production of color photographic images. 3,047,385, 7-31-62, Cl. 96—9.

Der Yuen, Frank, to Lockheed Air Terminal, Inc. Apparatus for facilitating the loading and unloading of passengers and cargo. 3,046,908, 7-31-62, Cl. 104—20.

Deschere, Paul R. Liquid filter. 3,047,154, 7-31-62, Cl. 210—100.

Desty, Denis H., J. N. Haresnape and B. H. F. Whyman, to The British Petroleum Co. Ltd. Process for producing glass helices. 3,046,699, 7-31-62, Cl. 49—84.

De Vines, Hollis L.: *See*—
Marotto, Robert A., and De Vines. 3,046,776.

De Vito, Angelo R., to L. W. Menzimer. Door control mechanism. 3,047,325, 7-31-62, Cl. 292—280.

De Vos, John W., to Kimberly-Clark Corp. Manufacture of cellulosic products. 3,047,452, 7-31-62, Cl. 162—5.

De Vries, Eduard R., to Prismo Safety Corp. Highway marking composition. 3,046,851, 7-31-62, Cl. 95—1.5.

Diamond National Corp.: *See*—
Robins, Seymour. 3,047,140.
Stickney, Wendell H. 3,047,458.

Dick, Willard K., to The New York Air Brake Co. Gas-charged accumulator-reservoir unit. 3,047,023, 7-31-62, Cl. 138—31.

Dickinson, Clifford L., Jr., to E. I. du Pont de Nemours and Co. Photographic developer and process. 3,047,389, 7-31-62, Cl. 96—66.

Dictaphone Corp.: *See*—
Curtis, Roger C., and Roberts. 3,047,785.

Dido Lures, Inc.: *See*—
Woodley, James M. 3,046,689.
Woodley, James M. 3,046,690.
Diebold, Inc.: *See*—
Sampson, Rodney T. 3,047,312.
Dietert, Harry W., and A. L. Graham, to Harry W. Dietert Co. Two-stage moisture meter. 3,046,623, 7–31–62, Cl. 22—89.
Dietert, Harry W. and R. L., to Harry W. Dietert Co. Method and apparatus for weather responsive moisture compensation. 3,046,624, 7–31–62, Cl. 22—89.
Dietert, Harry W., Co.: *See*—
Dietert, Harry W. and R. L. 3,046,624.
Dietert, Harry W., and Graham. 3,046,623.
Dietert, Randolph L. 3,047,801.
Dietert, Randolph L.: *See*—
Dietert, Harry W. and R. L. 3,046,624.
Dietert, Randolph L., to Harry W. Dietert Co. Moisture probe. 3,047,801, 7–31–62, (3. 324—61.
Distel, Joseph W., to Polaroid Corp. Photographic exposure control. 3,046,859, 7–31–62, Cl. 95—10.
Distillers Co. Ltd., The: *See*—
Ardley, Stanley M. 3,047,519.
Di Vita, Fosco L.: *See*—
Wier, Thomas G., and Di Vita. 3,047,076.
Dobbins, Willis E., to United Aircraft Corp. Apparatus for conversion of degrees to minutes. 3,047,229, 7–31–62, Cl. 235—159.
Doedens, James D., and E. H. Rosenbrock, to The Dow Chemical Co. Composition comprising a poly(halomethyl) diaromatic ether and a phenol, method of foaming same, and foamable product obtained therefrom. 3,047,518, 7–31–62, Cl. 260—2.5.
Dolza, John. Internal combustion engines. 3,046,952, 7–31–62, Cl. 121—194.
Dolza, John. Internal combustion engines. 3,046,953, 7–31–62, Cl. 121—194.
Dolza, John, to Fiat Motor Co. (Fiat S.p.A.). Internal combustion engines. 3,046,960, 7–31–62, Cl. 123—76.
Dolza, John, to Fiat Motor Co. (Fiat S.p.A.). Internal combustion engines. 3,046,961, 7–31–62, Cl. 123—76.
Dolza, John. Centrifugal oil cleaner vibration dampeners. 3,047,216, 7–31–62, Cl. 233—32.
Doremus, John A., to Aircraft Radio Corp. Automatic keying system. 3,047,657, 7–31–62, Cl. 178—17.
Doriat, Martin: *See*—
Bergmeister, Eduard, Heckmaier, and Doriat. 3,046,609.
Dornhoefer, Warren J., to The Warren Mfg. Co., Inc. Transistor switching amplifier. 3,047,736, 7–31–62, Cl. 307—88.5.
Dorr-Oliver Inc.: *See*—
Jukkola, Walfred W. 3,047,365.
Dougherty, Emery W., to The L. D. Caulk Co. Dental cement material. 3,047,408, 73–1–62, Cl. 106—35.
Dow Chemical Co., The: *See*—
Cannon, Guy H. 3,047,487.
Carlyle, Robert L. 3,047,057.
Doedens, James D., and Rosenbrock. 3,047,518.
Gordon, David A. 3,047,536.
Goring, Cleve A. I. 3,047,377.
Goring, Cleve A. I. 3,047,378.
Gray, Roland H., Jr., Rygwelski, and Tigner. 3,047,522.
Hanson, Alden W. 3,047,068.
Houvener, Irving S. 3,046,602.
Howe, Joseph H. 3,047,547.
Kline, Clifford W., and Bennett. 3,047,359.
Lang, John L. 3,047,542.
Legler, Bobby. 3,047,537.
Moore, Carl, and Tousignant. 3,047,611.
Murdock, Stanley A., and Wirth. 3,047,426.
Oakes, Billy D. 3,047,511.
Olstowski, Franciszek. 3,047,637.
Tolkmith, Henry. 3,047,624.
Downing, Francis P., to The Sharples Corp. Centrifugal process and appartaus. 3,047,214, 7–31–62, Cl. 233—14.
Downing, John: *See*—
Grebby, John W., Hawtin, and Downing. 3,046,608.
Dozier, Herma W. Brassiere construction. 3,046,990, 7–31–62, Cl. 128—460.
Doyle, Frank P., J. H. C. Nayler, and G. N. Rollinson, to Beecham Research Laboratories, Ltd. Process for the preparation of penicillins. 3,047,467, 7–31–62, Cl. 195—36.
Drake, Bernard, and D. K. Hicks, to Siemens Edison Swan Ltd. Parallel connected synchronized oscillators with automatic disabling controls. 3,047,816, 7–31–62, Cl. 331—49.
Drake, Frederick H. Phonograph turntable assembly. 3,047,297, 7–31–62, Cl. 274—39.
Drakeford, George E., and R. N. Manning, to Dunlop Rubber Co. Ltd. Manufacture of pneumatic tyres. 3,047,450, 7–31–62, Cl. 156—110.
Dratz, Richard A., to Kimberly-Clark Corp. Paper substrate having a coating of mineral pigment, natural adhesive binder, and homopolymer of butadiene. 3,047,427, 7–31–62, Cl. 117—155.
Drennan, Emil J. Swimming pool cleaner. 3,046,583, 7–31–62, Cl. 15—1.7.
Ducrot, Albert. Convertible sofa-bed. 3,046,571, 7–31–62, Cl. 5—41.
Duhamel, Francis R. J.: *See*—
Kieffer, Joseph D., III, and Duhamel. 3,047,085.
Dula, Alfred A.: *See*—
Wehring, Elwood, and Dula. 3,047,316.
Dumont, Hubert G. A., to Stamicarbon N.V. Apparatus for separating particles according to size. 3,047,150, 7–31–62, Cl. 209—251.
Duncan, Angus W., to The Mining Engineering Co. Ltd. Belt conveyors. 3,047,131, 7–31–62, Cl. 198—192.
Dungan, Richard T., H. A. Long, A. F. Stupka, B. L. Taylor, and J. C. Wise, to The Marquardt Corp. Proportional-plus-integral computer. 3,046,944, 7–31–62, Cl. 121—41.
Dunlop, Andrew P., and D. S. P. Eftax, to Quaker Oats Co. 1-hydroxymethyl-6,8-dioxabicyclo(3.2.1) octane and processes for its preparation. 3,047,586, 7–31–62, Cl. 260—340.9.
Dunlop Rubber Co. Ltd.: *See*—
Drakeford, George E., and Manning. 3,047,450.
Henson, Douglas R. 3,047,446.
Du Pont de Nemours, E. I., and Co.: *See*—
Alfaya, Raymond, Landskroener, and Thaxton. 3,047,221.
Brace, Neal O. 3,047,619.
Brace, Neal O., and McCormack. 3,047,610.
Cairns, Theodore L. S. 3,047,388.
Coble, George W. 3,047,449.
Coffman, Donald D. 3,047,553.
Dickinson, Clifford L., Jr. 3,047,389.
Gay, Frank P. 3,047,554.
Gresham, William F., and Merckling. 3,047,513.
Harris, John F., Jr. 3,047,545.
Hubbard, Harold M., and Kennedy. 3,047,361.
Hughes, Jesse E., Layton, Lozier, and Noland. 3,047,440.
Ward, Barry J. 3,046,724.
Wolf, Herbert O. 3,047,642.
Durbin, Vernon, to Holtyer-Cabot Corp. Cooking utensil. 3,047,188, 7–31–62, Cl. 220—63.
Dye, Duane K.: *See*—
Deford, Donald E., and Dye. 3,046,759.
Dyer, Robert H., and R. P. Brown, to Cosden Petroleum Corp. Graft polymerization on a rubbery polymer in aqueous suspension employing polyvinyl alcohol and a metal phosphate as suspending agents, and product obtained thereby. 3,047,534, 7–31–62, Cl. 260—45.5.
Dymo Industries, Inc.: *See*—
Anderson, James D. 3,047,443.
Dzus, William. Stud having overhanging re-entrant load bearing threads and a sheet metal nut with resilient helically inclined wings. 3,046,828, 7–31–62, Cl. 85—36.
Eagle Mfg. Co.: *See*—
Richmond, Roy H. 3,047,195.
Eames, Charles, D. Albinson, and P. J. Pearce, to Herman Miller, Inc. Bed. 3,046,572, 7–31–62, Cl. 5—136.
Eannarino, George, to Sarkes Tarzian, Inc. Diode. 3,047,781, 7–31–62, Cl. 317—234.
Earle, Richard W. Snugger bolt. 3,047,320, 7–31–62, Cl. 292—203.
Eastman Kodak Co.: *See*—
Allen, Charles F. H., Talbot, Yudelson, and Smith. 3,047,394.
Carter, William D. 3,046,606.
Crane, Carlton L. 3,047,501.
Harvey, James E., and Michatek. 3,046,833.
Herz, Arthur H., and Allen. 3,047,393.
Jones, Jean E., and Stewart. 3,047,384.
Maim, Carl J., Herdle, and Gandy. 3,047,391.
Nerwin, Hubert. 3,046,860.
Reiss, Max. 3,046,838.
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Wemple, Richard E. 3,047,435.
Easton, Franklin B. Articulated self-steering tandem air suspension gear for trailers and the like. 3,047,306, 7–31–62, Cl. 280—81.
Eaton Mfg. Co.: *See*—
Jaeschke, Ralph L. 3,047,754.
Ebner, Lewis J. Hay bale conveyor. 3,047,126, 7–31–62, Cl. 198—68.
Eby, Florence O. Anchoring devices. 3,046,984, 7–31–62, Cl. 128—214.
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Eckstein, Leo H.: *See*—
Eckstein, Joel and L. H. 3,047,350.
Edens, Samuel V., C. I. Goodrich, Jr., and W. H. Seals, to North American Aviation, Inc. Electroluminescence. 3,047,762, 7–31–62, Cl. 313—108.
Educational Aids Publishing Corp.: *See*—
Schure, Alexander. 3,046,675.
Eftax, Daniel S. P.: *See*—
Dunlop, Andrew P., and Eftax. 3,047,586.
Egbert, William F., and E. W. Spears, Jr., to General Motors Corp. Combustion apparatus. 3,046,742, 7–31–62, Cl. 60—39.65.
Ege, Sigmund, to Anaconda Wire and Cable Co. Pipe-type cable core with armor, tape reinforcing. 3,047,652, 7–31–62, Cl. 174—108.
Eggenberger, John S., J. C. Lloyd, and R. S. Smith, to International Business Machines Corp. Isotropic thin magnetic film. 3,047,423, 7–31–62, Cl. 117—107.
Ehrenburg, Leonid. Waterproofing agents for cement and concrete. 3,047,407, 7–31–62, Cl. 106—12.
Ehrlich, Joseph C. Disposable lancet. 3,046,987, 7–31–62, Cl. 128—314.
Eigen, David: *See*—
Peer, Robert W., and Eigen. 3,047,799.
Peer, Robert W., and Eigen. 3,047,804.
Eigen, David, to The Okonite Co. Corona-testing of the insulation of electric cables. 3,047,800, 7–31–62, Cl. 324—54.
Elcor, Inc.: *See*—
Walton, John F. 3,047,814.
Eldon Industries, Inc.: *See*—
Pullen, Eric V. 3,046,697.
Electric Eye Equipment Co.: *See*—
Batterman, Theodore W., and Pebog. 3,046,864.
Electrolux Corp.: *See*—
Allen, Oliver L., Ferraris, and Lampe. 3,046,586.
Electronic Secretary Industries, Inc.: *See*—
Zimmermann, Joseph J. 3,047,663.

Electro-Solid Controls, Inc.: *See*—
Blitz, Francis J. 3,047,825.
Electrotechnische Industrie Voorheen Willem Smit & Co., N.V.: *See*—
Den Ouden, Wouter. 3,047,786.
Elkin, Samuel, and F. M. Miller. Indole-carboxylic acid-dialkylamine alkyl esters. 3,047,584, 7–31–62, Cl. 260—319.
Ellis, Cecil B., to Foster Wheeler Corp. Safety arrangement for neutronic reactors aboard water-sustained craft. 3,047,485, 7–31–62, Cl. 204—193.2.
Ellison, Lynn E.: *See*—
Marsh, Glenn A., Ellison, and Schaschl. 3,047,847.
Elonranta, Valto K., to Polaroid Corp. Photographic product. 3,046,861, 7–31–62, Cl. 95—13.
Engelhard Industries, Inc.: *See*—
Burk, Emmett H., Jr., and Mool. 3,047,514.
Erdman, Donald D. Duck retrieving device. 3,046,687, 7–31–62, Cl. 43—1.
Erenberg, Victor, and G. J. Peck, to Superior Bedding Co. Mattress construction. 3,046,574, 7–31–62, Cl. 5—351.
Erickson, Virginius R.: *See*—
Broughton, Sidney H., and Erickson. 3,046,557.
Esch, Henry, to Kaiser Aluminum & Chemical Corp. Crimping apparatus. 3,047,042, 7–31–62, Cl. 153—1.
Escher, Edward P., to Screw Conveyor Corp. Pusher-type conveyor. 3,047,128, 7–31–62, Cl. 198—174.
Eshbaugh, Jesse E., and J. A. McDougal, to General Motors Corp. Thermosensitive radiator caps. 3,047,235, 7–31–62, Cl. 236—92.
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Dolza, John. 3,046,961.
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Greenlee, Sylvan O., to S. C. Johnson & Son, Inc. N-substituted-4,4-bis-(4-hydroxyphenyl) pentanoic acid amides. 3,047,627, 7–31–62, Cl. 260—559.
Greif, Martin, L. F. Hansen, and E. C. Yen, to American Cyanamid Co. Manufacture of two-color and two-tone soft shell capsules. 3,046,605, 7–31–62, Cl. 18—47.5.
Gregson, Alvero C., R. A. Ahlberg, and H. C. Ferri. Connector. 3,048,828, 7–31–62, Cl. 339—64.
Gresham, James T., to Kimberly-Clark Corp. Cellulosic wiping material. 3,047,445, 7–31–62, Cl. 154—46.
Gresham, William F., and N. G. Merckling, to E. I. du Pont de Nemours and Co. Polymerization catalyst. 3,047,513, 7–31–62, Cl. 252—429.
Grewell, Glenwood, and K. J. Jones, to United States of America, Air Force. Variable frequency pulse generator. 3,047,774, 7–31–62, Cl. 315—207.
Griffith, Alan A., R. J. Lees, R. A. Shaw, and R. W. Willmer, to Rolls-Royce Ltd. Navigation device for aircraft. 3,047,256, 7–31–62, Cl. 244—77.
Griffin, Ben B., and G. S. Carrico. Pipe holding device. 3,047,287, 7–31–62, Cl. 269—104.
Grimes, David D., to United States of America, Navy. Wing vibration damper. 3,047,253, 7–31–62, Cl. 244—35.
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Grosbaum, Eugene, and R. L. Worthington, to The Bendix Corp. Direct current modulator. 3,047,790, 7–31–62, Cl. 321—45.
Gross, Thomas A. O. Pneumatic load bearing devices. 3,047,040, 7–31–62, Cl. 152—330.
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Davis, Roy C. 3,047,071.
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Haas, Charles W., Jr., to Bell Telephone Laboratories, Inc. Ring counter-pulse distributor using a single two-state device per stage and a source of phase-opposed alternating voltages for driving common push-pull lines. 3,047,738, 7–31–62, Cl. 307—88.5.
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Hanson, George H., to Phillips Petroleum Co. Nuclear reactor. 3,047,486, 7–31–62, Cl. 204—193.2.

Hansson, Hugo, to Allmanna Sevenska Elektriska Aktiebolaget. Telemetering over a single channel by variable pulses and variable interval encoding. 3,047,845, 7–31–62, Cl. 340—184.

Harbort, Ludwig, and H.-J. Rahn, to G. Wagner. Process for preparing tris-(4-methylmercaptophenyl)-carbinol compounds. 3,047,632, 7–31–62, Cl. 260—609.

Hardway, Edward V., Jr., to Houston Instrument Corp. Supply voltage variation compensated servosystem. 3,047,784, 7–31–62, Cl. 318—28.

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Healey, Amos C., to American Cyanamid Co. Pressure seal. 3,046,773, 7–31–62, Cl. 68—22.

Hearsum, Desmond R., and E. V. Guilden, to The National Cash Register, Co. Data analyzing and recording means. 3,047,226, 7–31–62, Cl. 235—151.

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Hermsen, Johannes, P. J. Kraaijeveld, and N. Warmoltz, to North American Philips Co., Inc. Geiger-Müller counting tube. 3,047,760, 7–31–62, Cl. 313—93.

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Hess, Harvey C., to The Singer Mfg. Co. Circular stitching device for sewing machines. 3,046,918, 7–31–62, Cl. 112—2.

Heuer, Charles A., and N. A. Keith, to Olin Mathieson Chemical Corp. Heat exchangers. 3,046,758, 7–31–62, Cl. 62—426.

Heymons, Albrecht, and W. Schnabel, to Riedel-de Haen Aktiengesellschaft. Fungicidal compositions and process for the preparation thereof. 3,047,460, 7–31–62, Cl. 167—33.

Hickox, Barbara J. Pole-mounted superposed compartments. 3,047,348, 7–31–62, Cl. 312—202.

Hicks, Bruce C., and W. Miles. Spark gap devices. 3,047,709, 7–31–62, Cl. 315—36.

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Hill, Lawson T., and L. T. Hill, Jr. 3,046,680.

Hill, Edward J. Means for holding nasal tubes in position. 3,046,989, 7–31–62, Cl. 128—348.

Hill, Howard M. Dispensing container. 3,047,200, 7–31–62, Cl. 229—17.

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Hill, Lawson T., Jr.: *See*—
Hill, Lawson T., and L. T. Hill, Jr. 3,046,680.

Hind, John D., to Philip Morris, Inc. Selective alkaloid extraction. 3,046,997, 7–31–62, Cl. 131—143.

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Goldberg, Moses W., and Teitel. 3,047,628.
Isler, Otto, Ruegg, and Saucy. 3,047,634.

Hogshire, Richard R. Grill sandwich warmer. 3,046,971, 7–31–62, Cl. 126—33.

Holberson, Henry A., to The Youngstown Sheet and Tube Co. Bath-tub support. 3,046,568, 7–31–62, Cl. 4—186.

Holberson, Henry A., to The Youngstown Sheet and Tube Co. Rimless mounting for sheet steel enameled sinks, lavatories and the like. 3,046,569, 7–31–62, Cl. 4—187.

Holderer, Oscar C. Jet propelled toy arrangement. 3,046,694, 7–31–62, Cl. 46—74.

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Holmlund, Chester E., L. I. Feldman, H. M. Kissman, and M. J. Weiss, to American Cyanamid Co. Substituted steroids of the pregnane series. 3,047,569, 7–31–62, Cl. 260—239.55.

Holopainen, Vaino J., to Wain-Roy Corp. Coupling. 3,047,109, 7–31–62, Cl. 189—36.

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Horgen, Helge, to Societe d'Etudes et de Participations Eau, Gaz, Electricite, Energie S.A. Power plants including at least one free piston auto-generator and at least one gas turbine fed with power gas from said generator. 3,046,727, 7–31–62, Cl. 60—13.

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Houston Instrument Corp.: *See*—
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Houvener, Irving S., to The Dow Chemical Co. Extruding apparatus. 3,046,602, 7–31–62, Cl. 18—12.

Howard, Stanley R., to Pneumatic Scale Corp., Ltd. Container forming machine. 3,047,053, 7–31–62, Cl. 156—581.

Howe, Joseph H., to The Dow Chemical Co. Thioketo acid containing a vinylphenyl substituent and polymeric products thereof. 3,047,547, 7–31–62, Cl. 260—79.7.

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Hoxie, John P., and F. M. Neal, to Corning Glass Works. Luminaire. 3,047,716, 7–31–62, Cl. 240—1.2.

Hubbard, Harold M., and J. H. Kennedy, to E. I. du Pont de Nemours and Co. Process for the extraction of tungsten values from materials containing same. 3,047,361, 7–31–62, Cl. 23—19.

Hubbert, Marion K., W. C. Smith, and C. B. Johnson, Jr., to Shell Oil Co. Cavity configuration determination. 3,046,601, 7–31–62, Cl. 18—6.

Huch, William F., E. P. Ney, and J. R. Winckler, to United States of America, Navy. Balloon and method of manufacturing the same. 3,047,252, 7–31–62, Cl. 244—31.

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Hughes, George M. K.: *See*—
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Hughes, Jesse E., L. E. Layton, R. Lozier, and E. J. Nolan, to E. I. du Pont de Nemours and Co. Inorganic nitrates 3,047,440, 7–31–62, Cl. 149—8.

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Hurst, Justin, to Russell Constructions Ltd. Straining and sifting processes and apparatus. 3,047,151, 7–31–62, Cl. 209—366.5.

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Hurst, Thomas L., and A. W. Turner. Method of refining amyloglucosidase. 3,047,471, 7–31–62, Cl. 195—66.

Hussey, Luther W., to Bell Telephone Laboratories, Inc. Transistor crosspoint switching network. 3,047,667, 7–31–62, Cl. 179—18.

Huston, Shelby L. Tire chains. 3,047,038, 7–31–62, Cl. 152—241.

Hutchins, Blanchard S., to United States of America, Navy. Parachute collapsing and retrieval device. 3,047,258, 7–31–62, Cl. 244—137.

Hutchinson, Jack B. Ceiling board jack. 3,047,165, 7–31–62, Cl. 214—1.

Hwozdek, Walter P.: *See*—
Santoro, Anthony F., and Hwozdek. 3,047,352.

Hydrahone Equipment Co.: *See*—
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Hy-Dynamic Co., The: *See*—
Hough, Frank G., Peterson, and Gilson. 3,047,170.

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Ichinose, Hisakichi. Fixing device for a driving roller of an automatic screen printing machine. 3,046,879, 7–31–62, Cl. 101—115.

Ide, Frederick H., and R. C. Kimball, to The Kent Co., Inc. Suction cleaner. 3,046,718, 7–31–62, Cl. 55—323.

Igarashi, Tadashi, to Sony Kabushikikaisha (Sony Corp.). Portable electrical apparatus. 3,046,798, 7–31–62, Cl. 74—10.

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Inman, George E., to General Electric Co. Panel-shaped fluorescent lamp. 3,047,703, 7–31–62, Cl. 313—109.

Instituto Nacional de Industria: *See*—
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International Business Machines Corp.: *See*—
Anderson, John L. 3,047,230.
Brennemann, Andrew E. 3,047,743.
Coleman, Millard J. 3,047,854.
Eggenberger, John S., Lloyd, and Smith. 3,047,423.
Machol, Guenther K. 3,047,853.
Marinace, John C. 3,047,438.
Rutz, Richard F. 3,047,733.
Skerritt, John W. 3,047,732.

International Harvester Co.: *See*—
Fischer, Raymond C. 3,046,720.
Kowalik, John J., and Walker. 3,046,721.
Simpson, Vinson R., and Orendorff. 3,047,077.
Wier, Thomas G., and Di Vita. 3,047,076.

International Rectifier Corp.: *See*—
Brown, Lake D., Jr. 3,047,437.

Inventa A.G. fur Forschung und Patentverwertung: *See*—
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Kuhr, Kurt. 3,047,481.
Ryffel, Kaspar, Rutishauser, and Schweizer. 3,047,541.

Iowa Mfg. Co.: *See*—
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Thierman, Irwin B. 3,046,796.

Isaacs, John D.: *See*—
Folsom, Theodore R., and Isaacs. 3,047,721.

Isler, Otto, R. Ruegg, and G. Saucy, to Hoffmann-La Roche Inc. Production of isozeaxanthin dialkyl ethers. 3,047,634, 7–31–62, Cl. 260—611.

Isreeli, Jack, to Technicon Instruments Corp. Colorimeter flow curettes. 3,041,831, 7–31–62, Cl. 88—14.

Iwata, Giichi. Focusing mass spectrometer. 3,047,717, 7–31–62, Cl. 250—41.9.

J.M.J. Industries, Inc.: *See*—
Meger, Alfred F., and Hawthorne. 3,047,243.

Jablonsky, Erich. Limited motion power steering device. 3,047,087, 7–31–62, Cl. 180—79.2.

Jackson, John K., and W. D. Whitaker, to The Garrett Corp. Coordinated fuel and turbine inlet control responsive to combustion gas temperature and speed. 3,046,738, 7–31–62, Cl. 60—39.25.

Jackson, Selma S. Shower board. 3,046,567, 7–31–62, Cl. 4—185.

Jacob, Robert M., and J. G. Robert, to Usines Chimiques Rhone-Poulenc, Societe des. Derivatives of oxopiperidinyl phenthiazines. 3,047,571, 7–31–62, Cl. 260—243.

Jacoff, Richard, to Great Neck Saw Manufacturers, Inc. Article holder. 3,047,139, 7–31–62, Cl. 206—56.

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Jaffe, Gunter S., A. L. Rocklin, and J. L. Van Winkle, to Shell Oil Co. Polycyclic polyphenols. 3,047,503, 7–31–62, Cl. 252—52.

Janda, Albert. Saw horse and table combination. 3,047,092, 7–31–62, Cl. 182—28.

Janda, Richard M., and J. D. Moyer, to Textile Machine Works. Method of knitting patterned fabric. 3,046,761, 7–31–62, Cl. 66—43.

Janke, Edward J., to Addressograph-Multigraph Corp. Printing machines. 3,046,877, 7–31–62, Cl. 101—76.

Jansen, Th., G.m.b.H.: *See*—
Schuller, Herl. 3,047,024.

Jaquith, Howard R., to Taylor Instrument Companies. Controller. 3,047,002, 7–31–62, Cl. 137—85.

Jenkner, Herbert, to Kali-Chemie Aktiengesellschaft. Preparation of boron-hydrogen compounds. 3,047,358, 7–31–62, Cl. 23—14.

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Bruce, George H. 3,047,313.
Johnson, Virgil R., and Skelton. 3,047,836.
Mendors, Victor G. 3,047,062.
O'Reilly, Wallace M. 3,047,070.
Peters, Heldon A., and Rich. 3,047,072.
Rickard, James A. 3,047,720.
Wepsala, George B., Jr. 3,047,079.
West, Robert C., and William. 3,047,064.
Williams, Robert E., and Spain. 3,047,067.

Joffe, Seymour L. Marking device for detecting dental premature contact of opposing teeth. 3,046,658, 7-31-62, Cl. 32—19.

Johansson, Ebbe A. I. and S. A. M. Hinges for sectional folding table tops. 3,046,593, 7-31-62, Cl. 16—146.

Johansson, Sture A. M.: *See*—
Johansson, Ebbe A. I. and S. A. M. 3,046,593.

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Hubbert, Marion K., Smtih, and Johnson. 3,046,601.

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Young, William A., and Johnson. 3,046,723.

Johnson, George L., to General Electric Co. Production of direct and delayed pulses in respective circuits each having level-setting clamps. 3,047,734, 7-31-62, Cl. 307—88.5.

Johnson, Herbert E., to Union Carbide Corp. Synthesis of 3-indolcalkanoic acids. 3,047,585, 7-31-62, Cl. 260—319.

Johnson, John A., and G. R. Kennedy, to ACF Industries, Inc. Cushioning assembly. 3,047,163, 7-31-62, Cl. 213—40.

Johnson, Leslie W., to Deere & Co. Cotton planter. 3,046,916, 7-31-62, Cl. 111—59.

Johnson, Oliver, to United States of America, Atomic Energy Commission. Separation of thorium from rare earth values in aqueous acidic solution by solvent extraction with an alkyl phosphate-oxygen containing organic diluent. 3,047,601, 7-31-62, Cl. 260—429.1.

Johnson, S. C., & Son, Inc.: *See*—
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Johnson Service Co.: *See*—
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Johnson, Virgil R., and J. D. Skelton, to Jersey Production Research Co. Apparatus for processing seismic data. 3,047,836, 7-31-62, Cl. 340—15.5.

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Jones, George W. Artificial blood circulation apparatus. 3,046,903, 7-31-62, Cl. 103—149.

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Jorgensen, Poul F. W. Upholstered articles of furniture. 3,047,338, 7-31-62, Cl. 297—357.

Joslin, Charles M., to Socony Mobil Oil Co., Inc. Seismic explosive anchor. 3,046,886, 7-31-62, Cl. 102—21.8.

Jukkola, Walfred W., to Dorr-Oliver Inc. Temperature control in the fluidized roasting process of sulfidic ores with the by-product recovery of steam. 3,047,365, 7-31-62, Cl. 23—179.

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Julie, Loebe. 3,047,826.

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Junkmann, Karl: *See*—
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Jurny, Josef, to 'Adamovske strojirny. Device for the pressure adjustment of printing rollers. 3,046,881, 7-31-62, Cl. 101—218.

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Kaiser Aluminum & Chemical Corp.: *See*—
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Kaiser, Rudolf. Spherical-plug cock having a piston-type packing ring displaceably mounted at one side of the cock body. 3,047,265, 7-31-62, Cl. 251—172.

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Kaman Aircraft Corp., The: *See*—
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Kamborian, Jacob S., and H. W. Stemmler; said Stemmler assor. to said Kamborian. Spreader foot motion for the lasting machine. 3,046,577, 7-31-62, Cl. 12—8.8.

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Kampf, William C. Cart support. 3,047,304, 7-31-62, Cl. 280—33.99.

Kampmeyer, Roy A., to The Bendix Corp. Black level stabilizing circuit for television systems. 3,047,655, 7-31-62, Cl. 178—7.1.

Kane, Thomas C., to The Commercial Shearing and Stamping Co. Apparatus for spin extruding metal articles. 3,046,924, 7-31-62, Cl. 113—52.

Kaprelian, Edward K.: *See*—
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Kargl, Gilard. Apparatus for use in aerial photography. 3,046,857, 7-31-62, Cl. 95—1.1.

Karr, Robert J. Pressure regulator. 3,047,005, 7-31-62, Cl. 137—115.

Karron, Edward M. Handbag frame latch. 3,047,322, 7-31-62, Cl. 292—228.

Karsten, Olav, to Allmanna Svenska Elektriska Aktiebolaget. Gland seals for gas-filled electric machines. 3,047,299, 7-31-62, Cl. 277—27.

Kasehagen, Leo, to Atlas Chemical Industries, Inc. Preparation of polyhydric alcohols. 3,047,635, 7-31-62, Cl. 260—635.

Kasmann, Bernhard. Removable slide for slide rule. 3,047,222, 7-31-62, Cl. 235—70.

Kasper, Elwood C. Planter shovel coverer controls. 3,046,917, 7-31-62, Cl. 111—69.

Kasten, John E. Device for unloading forage crops from wagons or the like. 3,047,174, 7-31-62, Cl. 214—520.

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Katz, Abraham, and A. Rauchwerk, to Radio Corp. of America. Monitoring circuits. 3,047,843, 7-31-62, Cl. 340—174.

Katz, Jacob. Asphalt compositions and wetting and antistripping agents for use in connection therewith. 3,047,414, 7-31-62, Cl. 106—273.

Kauffmann, William M., and F. E. Carter, to Worthington Corp. Valve seat assembly. 3,046,965, 7-31-62, Cl. 123—188.

Kaufmann, John J., to Steel Heddle Mfg. Co. Loom harness. 3,047,029, 7-31-62, Cl. 139—88.

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Kaweckl, Henry S., to General Motors Corp. Remotely controlled mirror. 3,046,841, 7-31-62, Cl. 88—98.

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Keech, Roger A.: *See*—
Stewart, Alford K., and Keech. 3,047,343.

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Kekish, George T.: *See*—
Feldt, Charles A., and Kekish. 3,047,516.

Kelly, Daniel A. Ventilator. 3,046,865, 7-31-62, Cl. 98—2.

Kelly, Myron G., 50% to R. Blakeman. Lead-off splice block for continuous and other cables. 3,047,835, 7-31-62, Cl. 339—242.

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Kent Co., Inc., The: *See*—
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Kent, Richard F., and H. H. Schafer, to Washington Packaging Corp. Package wrapping and feeding mechanism. 3,046,715, 7-31-62, Cl. 53—231.

Kern, Fritz, to Ciba Ltd. Process for the recovery of niobium. 3,047,476, 7-31-62, Cl. 204—64.

Keskinen, Allan R., to The Astatic Corp. Recording and reproducing head for magnetic tape. 3,047,674, 7-31-62, Cl. 179—100.2.

Kessler, Gerald, to Technicon Instruments Corp. Automatic analysis with fluid segmentation. 3,047,367, 7-31-62, Cl. 23—230.

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Khattar, Ferdinand E., J. E. and A. E. Self-closing self-locking safety pin. 3,046,626, 7-31-62, Cl. 24—158.

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Khattar, Ferdinand E., J. E., and A. E. 3,046,626.

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Kiekhaefer, Elmer C., to Kiekhaefer Corp. Water cooled outboard mounted marine propulsion device with corrosion prevention. 3,046,930, 7-31-62, Cl. 115—17.

Kimball, Robert C.: *See*—
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Gresham, James T. 3,047,445.
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Kimm, Ewald J., to United Aircraft Products, Inc. Fuel heating apparatus. 3,047,055, 7-31-62, Cl. 158—36.3.

Kindseth, Harold V., to Bemis Bro. Bag Co. Package construction. 3,047,137, 7-31-62, Cl. 206—46.

Kingston Products Corp.: *See*—
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Kinne, Miles T. Pivoting vise mount and improved jig. 3,047,286, 7-31-62, Cl. 269—45.

Kinnison, Court J., to Western Piping & Engineering Co., Inc. Spring urged ball and socket exhaust pipe connector. 3,047,315, 7-31-62, Cl. 285—269.

Kirkpatrick, Willard H., V. L. Seale, and H. C. Noe, Jr., to Naico Chemical Co. Corrosion inhibitors and methods of preparation and use thereof. 3,047,495, 7-31-62, Cl. 252—8.55.

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Kissman, Henry M.: *See*—
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Kissman, Henry M., A. M. Hoffman, and M. J. Weiss, to American Cyanamid Co. 16-cyano steroids, intermediates and method of preparing the same. 3,047,568, 7-31-62, Cl. 260—239.55.

Kivell, William J., to Monroe Auto Equipment Co. Fluid actuated frictional damping device. 3,047,283, 7-31-62, Cl. 267—9.

Klein, Arthur F., to American Cyanamid Co. Oil-in-water emulsions. 3,047,353, 7-31-62, Cl. 8—86.

Kleinschmidt, Albert A. Device for moving mattresses and other articles. 3,047,305, 7-31-62, Cl. 280—36.

Kline, Clifford W., and W. R. Bennett, to The Dow Chemical Co. Purification of crude thorium sulfate. 3,047,359, 7-31-62, Cl. 23—14.5.

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Kniffin, Walter G., to General Motors Corp. Ice maker control system. 3,046,754, 7-31-62, Cl. 62—135.

Knippenberg, Wilhelmus F.: *See*—
Van Daal, Hubert J., Knippenberg, and Huizing. 3,047,439.

Kobayashi, Takizo, to K. Tanaka. High output starting device for a preheating type fluorescent lamp. 3,047,772, 7-31-62, Cl. 315—99.

Koerber, Willem K., and F. L. Schouteden, to Gevaert Photo-Producten N.V. Method for optical bleaching coated papers. 3,047,390, 7-31-62, Cl. 96—82.

Kofink, Siegfried. Heating apparatus for liquid fuels. 3,046,973, 7-31-62, Cl. 126—110.

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Kohoutek, Jindrich, and O. Kožený, to Zavody Jana Svermy. Built-up polarized relay. 3,047,691, 7-31-62, Cl. 200—93.

Kolda, Frank V., and M. J. Briehl, to General Electric Co. Lamp bridge making machine. 3,046,634, 7-31-62, Cl. 29—25.2.

Kolodin, Louis, to Radio Corp. of America. Transistor multivibrator circuit with transistor gating means. 3,047,737, 7-31-62, Cl. 307—88.5.

Komenda, Erwin: *See*—
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Komeno, Taichiro, to Shionogi & Co., Ltd. Acylthio-hydroxysteroids and preparation thereof. 3,047,590, 7-31-62, Cl. 260—397.4.

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Kondi, Spiro E., to Minneapolis-Honeywell Regulator Co. Marginal checking means for electrical pulse circuits. 3,047,841, 7-31-62, Cl. 340—167.

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Koscheleff, Basile, ½ to N. J. Katenov. Electro-magnetic position transmitter. 3,047,846, 7-31-62, Cl. 340—199.

Koshiba, Jyunichi: *See*—
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Kotte, Willy, to Vereinigte Glanzstoff-Fabriken AG. Apparatus for producing wound bobbins with controlled thread tension. 3,047,247, 7-31-62, Cl. 242—45.

Kovach, Julius W., to American Radiator & Standard Sanitary Corp. Five temperature non-thermal mixing valve. 3,047,014, 7-31-62, Cl. 137—607.

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Krtous, George F., to Bell & Howell Co. Sound motion picture projector. 3,047,671, 7-31-62, Cl. 179—100.1.

Krylov, Constantin A. Propelling device for skiers and the like. 3,047,302, 7-31-62, Cl. 280—11.37.

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Kuljian, Harry A., and W. J. Fadden, Jr., to The Kuljian Corp. Pumpless liquid heater and translator. 3,046,956, 7-31-62, Cl. 122—151.

Kurhajec, George A., D. L. Johnston, and K. E. Furman, to Shell Oil Co. Production of carboxylic acids. 3,047,622, 7-31-62, Cl. 260—533.

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Kutzler, Robert J., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,046,681, 7-31-62, Cl. 37—143.

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Lace, Harry S. Level. 3,046,672, 7-31-62, Cl. 33—207.

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Laimins, Eric, to Baldwin-Lima-Hamilton Corp. Strain gage transducer circuit. 3,046,782, 7-31-62, Cl. 73—141.

Laimins, Eric, to Baldwin-Lima-Hamilton Corp. Fluid pressure electrical transducer. 3,046,788, 7-31-62, Cl. 73—398.

Laird, William M., and M. R. J. Wyllie, to Gulf Research & Development Co. Reference electrode. 3,047,488, 7-31-62, Cl. 204—195.

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Lakatos, Emory, J. E. Holland, and E. M. Polzin, to Thompson Ramo Wooldridge Inc. Wave communicating device. 3,047,822, 7-31-62, Cl. 333—31.

Lamp, Arthur W., and C. R. Meckstroth, to General Electric Co. Lamp transfer and inverting apparatua. 3,047,166, 7-31-62, Cl. 214—1.

Lampe, Robert C.: *See*—
Allen, Oliver L., Ferraris, and Lampe. 3,046,586.

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Land, Edwin H., to Polaroid Corp. Photographic processes, products and devices. 3,047,387, 7-31-62, Cl. 96—48.

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Price, Ralph E. 3,046,706.

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Landrum, Porter. Carburetor for internal combustion engines. 3,047,277, 7-31-62, Cl. 261—65.

Landskroener, Peter A.: *See*—
Alfaya, Raymond, Landskroener, and Thaxton. 3,047,221.

Landsverk Electrometer Co.: *See*—
Landsverk, Ole G., Glodenis, and Merriner. 3,047,748.

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Lang, John L., to The Dow Chemical Co. Polyamide resins. 3,047,542, 7-31-62, Cl. 260—78.

Langan, Jeremiah E. Delay timer comprising successively charged capacitors with gaseous tube discharge means. 3,047,807, 7-31-62, Cl. 328—72.

Lange, Le Roy J., to American Totalisator Co., Division of Universal Controls, Inc. Automatic observer. 3,047,223, 7-31-62, Cl. 235—92.

Langer, Arthur W., Jr., and E. Tornqvist, to Esso Research and Engineering Co. Pressure staged polymerization process. 3,047,558, 7-31-62, Cl. 260—93.7.

Langmann, Werner: *See*—
Von Brachel, Hanswilli, Von Finck, and Langmann. 3,047,355.

Langston, Samuel M., Co.: *See*—
Moser, Henry W., Paris, and Paterson. 3,047,249.
Lanier, William M. Indicators. 3,047,405. 7-31-62. Cl. 99—192.
Lansky, Zdenek J., to Parker-Hannifin Corp. Double acting hydraulic cylinder with pressure fluid bypass. 3,046,946, 7-31-62. Cl. 121—46.
Lapointe Machine Tool Co., The: *See*—
Bonnafe, Oliver W. 3,046,846.
Laqueuille, Clement R. J.: *See*—
Van Bergen, Johannes C., Laqueuille, and Boon. 3,047,-184.
Lasko, John C., to Republic Die & Tool Co. Free standing die spotting rack. 3,046,669. 7-31-62. Cl. 33—174.
Latour, William A.: *See*—
Kyame, George J., and Latour. 3,046,612.
Laubach, Gerald D.: *See*—
Hess, Hans-Jurgen E., Hughes, and Laubach. 3,047,594.
Lauck, John A., and L. R. Bobnar, to Clark Equipment Co. Pump. 3,046,902. 7-31-62. Cl. 103—126.
Laustrup, Robert V.: *See*—
Parmenter, Charles R., and Laustrup. 3,047,107.
Lawson, Robert H., to Scott & Williams, Inc. Multi-feed circular knitting machine. 3,046,763. 7-31-62. Cl. 66—43.
Lawton, John G., to United States of America, Army. Sawtooth voltage generator utilizing integrator. 3,047,820, 7-31-62. Cl. 331—143.
Layton, Leroy E.: *See*—
Hughes, Jesse E., Layton, Lozier, and Nolan. 3,047,440.
Lea, Lawrence N. Manually operated resuscitator. 3,046,-978, 7-31-62. Cl. 128—29.
Leach, Byron E.: *See*—
Heath, Robert G., and Leach. 3,047,465.
Leatherman, Martin, to United States of America, Navy. Process for manufacture of ethyl sulfuric acid. 3,047,604, 7-31-62. Cl. 260—459.
Leavitt, Stanley L., to United States of America, Air Force. Blade retention device. 3,047,268. 7-31-62. Cl. 253—77.
Ledingham, Gordon R., W. V. Carter, and I. Olson. Reversible turbine driven oral hygiene apparatus. 3,046,585, 7-31-62 Cl. 15—24.
Lee, Arthur L., and A. B. Coval, to Consolidation Coal Co. Fluid operated clutch. 3,047,115, 7-31-62. Cl. 192—85.
Lee, John: *See*—
Gardner, Thomas S., Lee, and Wenis. 3,047,581.
Lee, Robert A., and K. W. Olson, to The Bendix Corp. Cold cathode discharge device. 3,047,764. 7-31-62. Cl. 313—220.
Lees, Roland J.: *See*—
Griffith, Alan A., Lees, Shaw, and Willmer. 3,047,256.
Lefebvre, Fredrick L. Plate heater. 3,047,702. 7-31-62. Cl. 219—19.
Legendre, Cyrille. Manhole closure. 3,046,853. 7-31-62. Cl. 94—34.
Legler, Bobby, to The Dow Chemical Co. Epoxy resin composition. 3,047,537. 7-31-62. Cl. 260—47.
Legris, William L. Rotatable shank, slidable inner jaw wrench. 3,046,821. 7-31-62. Cl. 81—164.
Leisti, Aimo E. Device on a spoon-hook. 3,046,688. 7-31-62. Cl. 43—35.
Leitz, Ernst, Gesellschaft mit beschrankter Haftung: *See*—
Muller, Helmut. 3,046,862.
Lenardo Cigar Corp.: *See*—
Rich, Sidney L. 3,046,993.
Lent, Ralph C., to Hanawai Mfg. Co., Ltd. Irrigation unit. 3,047,240. 7-31-62. Cl. 239—265.
Lentjes, Ferdinand Kesselschmiede u. Maschinenbau: *See*—
Munster, Josef, and Textor. 3,047,376.
Leriche, Marie A., deceased, by M. M. T. Leriche, executrix. Protective device for electrical appliance. 3,047,775. 7-31-62. Cl. 317—18.
Leriche, Marie M. T.: *See*—
Leriche, Marie A. 3,047,775.
Leshin, Richard: *See*—
Mayer, Rowland H., Leshin, and Wargotz. 3,047,559.
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Leslie, James D., and G. Rehkugler, to General Motors Corp. Closure latch. 3,047,326. 7-31-62. Cl. 292—341.15.
Letchfield, Francis T. and F. T., Jr. Personal hair cutter. 3,046,654 7-31-62 Cl. 30—201.
Letchfield, Francis T., Jr.: *See*—
Letchfield, Francis T. and F. T., Jr. 3,046,654.
Lever Brothers Co.: *See*—
Alsbury Allan, Phillips, and Taylor. 3,047,509.
Finsberg, Arne. 3,047,600.
Pardun, Hermann. 3,047,597.
Schmidt, Werner H. 3,047,402.
Levine, Bernard B., and R. Phillips, to Bernard Plastics Molding Corp. Garment hanger. 3,047,196. 7-31-62. Cl. 223—96.
Lewis, Hector E.: *See*—
Biggs, Ernest R., Jr., and Lewis. 3,046,981.
Lewis, Linford H. Receptacle apparatus. 3,047,185. 7-31-62. Cl. 220—18.
Lewis, William L. Aerodynamic propulsion unit. 3,047,251, 7-31-62. Cl. 244—12.
Libik, Albert: *See*—
Barabas, Janos, Zselyonka, Kiss, and Libik. 3,046,837.
Liebermann, Leonard N., to United States of America, Navy. Hydrophone fluid condition monitor. 3,046,780. 7-31-62. Cl. 73—53.
Lilsberg, Sven: *See*—
Godtfredsen, Wagn O., and Lilsberg. 3,047,566.
Linhorst, Erwin F., to United States Rubber Co. Molding method and apparatus. 3,046,600. 7-31-62. Cl. 18—5.
Lint, Geraldine F. Wig foundation or cap. 3,046,999. 7-31-62. Cl. 132—54.
Lionel Corp., The: *See*—
Zion, Moses. 3,046,696.
Liptak, James A. Method of arc welding aluminum members. 3,047,713. 7-31-62. Cl. 219—118.
Littlefield, John B.: *See*—
Morton, Avery A., Littlefield, and Mecum. 3,047,543.
Lloyd, John C.: *See*—
Eggenberger, John S., Lloyd, and Smith. 3,047,423.
Lober, Friedrich, H. Freytag, and H. Pohle, to Bayer Aktiengesellschaft, Farbenfabriken. Vulcanisation accelecators. 3,047,546. 7-31-62 Cl. 260—79.
Lock Joint Pipe Co.: *See*—
Ollvier, Daniel E. 3,046,631.
Lockheed Aircraft Corp.: *See*—
Arnold, George L., Bailey, Lindsay, and Smithson. 3,047,861.
Cruz, Edward S. 3,047,093.
Lahde, Reinhard N. 3,046,927.
Mauer, Robert C. 3,047,776.
Spearman, Charles K., and Ward. 3,047,254.
Taylor, Donald L., and Thompson. 3,047,300.
Taylor, Donald L., and Thompson. 3,047,301.
Lockheed Air Terminal, Inc.: *See*—
Der Yuen Frank. 3,046,908.
Loew, Gunther: *See*—
Merten, Rudolf, Loew, and Bayer. 3,047,540.
Long, Calvin L.: *See*—
Rusoff, Irving I., Ohan, and Long. 3,047,395.
Long, Elton B., to J. I. Case Co. Swing mechanism for backhoe. 3,047,171 7-31-62, Cl. 214—138.
Long, Henry A.: *See*—
Dungan, Richard T., Long, Stupka, Taylor, and Wise. 3,046,944.
Long, John J., to W. H. Sanders (Electronics) Ltd. Mechanism for the control of strip materials. 3,047,198, 7-31-62. Cl. 226—42.
Lorenz, Alfred E., to Victor Comptometer Corp. Magnetic record transducer apparatus. 3,047,672, 7-31-62, Cl. 179—100.
Lorenz, Anton: *See*—
Schliephacke, Fridtjof F. 3,047,336.
Lorenz, Anton. Reclining chair. 3,047,335, 7-31-62, Cl. 297—85.
Loretan, Edouard, to Parechoc S.A. Shock-absorbing bearing for the movable element of a small mechanism. 3,047,346, 7-31-62. Cl. 308—159.
Lovberg, Ralph H., and L. C. Burkhardt, to United States of America, Atomic Energy Commission. Plasma device utilizing self-trapping of plasma current and magnetic field. 3,047,480. 7-31-62. Cl. 204—154.2.
Lovens Kemiske Fabrik Ved A. Kongsted: *See*—
Godtfresden, Wagn O., and Lilsberg. 3,047,566.
Lowry, Hugh R., to General Electric Co. Inverter circuit. 3,047,789. 7-31-62. Cl. 321—18.
Lowry, Terrell N.: *See*—
Gotthardt, Manfred R., and Lowry. 3,047,668.
Loy, Fernand: *See*—
Cosse, Claude, and Loy. 3,046,892.
Lozier, Raymond: *See*—
Hughes, Jesse E., Layton, Lozier, and Nolan. 3,047,440.
Lubersky, Albert R., and J. D. Winters, to Fibreboard Paper Products Corp. Applicator device for ejecting discrete droplets. 3,046,937. 7-31-62. Cl. 118—302.
Lucien, Rene, to Societe a Responsabilite Limitee Recherches Etudes Production R.E.P. Fluid distributor device. 3,047,-018. 7-31-62. Cl. 137—625.25.
Ludin, Werner, to L. von Roll A.G. Furnace for the combustion of domestic refuse and other inferior-grade fuels. 3,046,915. 7-31-62 Cl. 110—15.
Ludvigson, Palmer C.: *See*—
Macy, Christian D., and Ludvigson. 3,046,597.
Lukens, Alan F.: *See*—
Angst, Gustave, and Lukens. 3,047,755.
Lummus Cotton Gin Co.: *See*—
Pease, William C., III. 3,046,872.
Vandergriff, Arvel L. 3,046,611.
Lunken, Edmund P., to The Lunkenheimer Co. Ball valve. 3,047,007. 7-31-62. Cl. 137—315.
Lunkenheimer Co., The: *See*—
Lunken, Edmund P. 3,047,007.
Lyall, George D., and M. J. Grandin, to Moore Business Forms, Inc. Continuous tabulating card strip. 3,047,311, 7-31-62. Cl. 281—5.
Machen, James F., to Simmonds Aerocessories, Inc. Metering pump mechanism. 3,046,894. 7-31-62. Cl. 103—2.
Machlett Laboratories, Inc., The: *See*—
Rome, Martin, and Jordan. 3,047,758.
Machol, Guenther K., to International Business Machines Corp. Signal converter. 3,047,853. 7-31-62. Cl. 340—347.
Mackintosh, Donald D. Power transmission mechanism. 3,046,804 7-31-62. Cl. 74—120.
Macy, Christian D., and P. C. Ludvigson, to Geo. A. Hormel & Co. Machine for removing hides from slaughter animals and the like. 3,046,597 7-31-62. Cl. 17—21.
Madden, Frank J.: *See*—
Landmann, Wendell A., and Batzer. 3,047,309.
Madej, Edward A. Bottle caps and the like. 3,047,179, 7-31-62, Cl. 215—73.
Madge, Joachim: *See*—
Bretthauer, Hermann, and Madge. 3,046,863.
Maertens, Klaus, H. Funck, and H. Gotz. Footwear with bottom soles made of elastic material. 3,046,679, 7-31-62, Cl. 36—17.
Magee, John E., to Otis Elevator Co. Control for an elevator closure. 3,047,096. 7-31-62, Cl. 187—48.
Magnus Chemical Co., Inc.: *See*—
Zinty, Marcel J. 3,047,436.

Maillard, Jacques G. A. E., R. M. Morin, M. M. J. Vincent, and M. M. Benard, to Societe d'Exploitation des Laboratoires Jacques Logeais (S.A.R.L.). Quinazolone anti-inflammatory composition. 3,047,462 7-31-62, Cl. 167—65.
Malocchi, Luigi: *See*—
Bottasso, Carlo, Amicl, and Malocchi. 3,047,041.
Majewski, Stanley J., to United-Carr Fastener Corp. Electrical socket. 3,047,687, 7-31-62, Cl. 200—51.
Majewski, Stanley J., to United-Carr Fastener Corp. Snap-in contact for edge connector. 3,047,831, 7-31-62, Cl. 339—176.
Malesko, Joseph. Solid bead lock pin. 3,046,629. 7-31-62, Cl. 24—211.
Mallcay, Leandro J. Method of and apparatus for making seed tape. 3,046,714, 7-31-62, Cl. 53—180.
Malm, Carl J., L. E. Herdle, and G. C. Gandy, to Eastman Kodak Co. Method of coating partially acetylated paper with plasticized cellulose ester and resulting paper coated with a photographic emulsion. 3,047,391, 7-31-62, Cl. 96—85.
Manecke, Siegfried E., to Robertshaw-Fulton Controls Co. Thermostatic control device. 3,047,705, 7-31-62, Cl. 219—20.
Mann, Roy E. Window rain guard and ventilator. 3,046,868, 7-31-62, Cl. 98—98.
Manning, Maxwell & Moore, Inc.: *See*—
Stevens, Howard C., Jr. 3,047,114.
Manning, Raymond N.: *See*—
Drakeford, George E., and Manning. 3,047,450.
Manspeaker, Robert O., ½ to M. Keathley, Sr. Pie making machine. 3,046,911, 7-31-62, Cl. 107—1.
Marcalus, Nicholas. Embossing. 3,047,454, 7-31-62, Cl. 162—117.
March, Roy C., to Marconi's Wireless Telegraph Co. Ltd. Television transmitter synchronization by remote synchronizing source. 3,047,658, 7-31-62, Cl. 178—69.5.
Marco, John. Combined mixer, reactor and deaerator for chemical processes. 3,047,368, 7-31-62, Cl. 23—252.
Marconi's Wireless Telegraph Co. Ltd.: *See*—
Byatt, Dennis. 3,047,864.
Jolliffe, Sidney A. W. 3,047,862.
March, Roy C. 3,047,658.
Marcum, Norman E., and W. A. Farrand, to North American Aviation, Inc. Rotatable magnetic disc movable toward and from disc carrying transducer. 3,047,869, 7-31-62, Cl. 346—74.
Marelli S.p.A., Fabbrica Italiani Magneti: *See*—
Alfieri, Giuseppe. 3,047,341.
Margala, Charles E. Telescopic power cylinder and method of making same. 3,046,948, 7-31-62, Cl. 121—46.
Margiloff, Irwin B., to Scientific Design Co., Inc. Chemical apparatus. 3,046,752, 7-31-62, Cl. 62—123.
Marinace, John C., to International Business Machines Corp. Epitaxial semiconductor deposition and apparatus. 3,047,-438, 7-31-62, Cl. 148—1.5.
Marine Propeller Co.: *See*—
Rielag, John H. 3,047,074.
Marinese, Anthony J., and C. A. Oddo. Bowler's protective thumb ring. 3,046,561, 7-31-62, Cl. 2—21.
Marotto, Robert A., and H. L. De Vines, to Schlage Lock Co. Latch mechanism for sliding door. 3,046,776, 7-31-62, Cl. 70—97.
Marquardt Corp., The: *See*—
Bauer, Ernest A. 3,046,790.
Dahl, Philip R. 3,046,739.
Dungan, Richard T., Long, Stupka, Taylor, and Wise. 3,046,944.
French, Edward P., and Minton. 3,046,733.
Northrup, Milton G., and Pinkerton. 3,046,717.
Palmiter, Russell B. 3,047,851.
Petren, Anatoly V. 3,046,729.
Petren, Anatoly V. 3,046,730.
Marsh, De Loss L.: *See*—
Butler, Stanley C., and Marsh. 3,046,966.
Marsh, Glenn A., and E. Schaschl, to The Pure Oil Co. Mitigating corrosion of marine structures. 3,047,478, 7-31-62, Cl. 204—148.
Marsh, Glenn A., L. E. Ellison, and E. Schaschl, to The Pure Oil Co. Device for remotely indicating corrosion. 3,047,-847, 7-31-62, Cl. 340—235.
Martinek, Josef, to Zavody presneho strojirenstvi Lisen narodni podnik zavod Antonina Zapotockeho. Forging of rings and similar parts. 3,046,653, 7-31-62, Cl. 29—552.
Martin-Marietta Corp.: *See*—
Chantler, Lewis W., and Hund. 3,047,411.
Chester, Milton A.. 3,047,257.
Martin, Paul C.: *See*—
White, Isaac J., and Martin. 3,046,642.
Martin, Richard H., Jr., to Monsanto Chemical Co. Binary vinyl chloride copolymers. 3,047,549, 7-31-62, Cl. 260—875.
Martin, Richard H., Jr., to Monsanto Chemical Co. Binary interpolymers of vinyl chloride. 3,047,550, 7-31-62, Cl. 260—87.5.
Martin, Walter C., to Philco Corp. Ignition system. 3,047,-728, 7-31-62, Cl. 307—10.
Martineau, Paul A., to Aceweb Tool & Mfg. Co. Universal spotting machine. 3,046,667, 7-31-62. Cl. 33—174.
Martyny, William C., to General Electric Co. Halophosphate phosphor treatment process. 3,047,512, 7-31-62, Cl. 252—301.4.
Master, Karsondas J.: *See*—
Grubb, Thomas C., and Master. 3,046,983.
Matronics, Inc.: *See*—
Grafstein, Paul L., Meisel, and Panchak. 3,047,225.
Matson, Carl G., to Vibrator Mfg. Co. Railroad car vibrator. 3,047,169. 7-31-62, Cl. 214—64.2.
Matson, Howard J., to Sinclair Research, Inc. Lubricant including a molybdenum-containing organic material. 3,047,-500, 7-31-62, Cl. 252—42.7.
Matveeff, Alexander, to Glassoloid Corp. of America. Laminating press. 3,047,051, 7-31-62, Cl. 156—539.
Mauer, Robert C., to Lockheed Aircraft Corp. Over voltage relay. 3,047,776, 7-31-62, Cl. 317—31.
Maxwell, Bryce, to Research Corp. Method and apparatus for extrusion. 3,046,603, 7-31-62, Cl. 18—12.
Maxwell, Robert H. Water-borne trampoline. 3,047,294, 7-31-62, Cl. 272—65.
Mayer, Ludwig J., to General Mills, Inc. Ball microscope. 3,047,719, 7-31-62, Cl. 250—49.5.
Mayes, Fred M.: *See*—
Bennett, John, Chaney, Jones, and Mayes. 3,047,794.
Mayes, Fred M.: *See*—
Bennett, John, and Mayes. 3,047,796.
Mayor, Rowland H., R. Leshin, and B. Wargotz, to The Goodyear Tire & Rubber Co. Method of making polymer. 3,047,-559, 7-31-62, Cl. 260—94.3.
Mayr, Otmar, to Dr. Ing. Porsche Firma, h.c.F., K.G. Control arrangement for tractors. 3,047,086, 7-31-62, Cl. 180—79.2.
McAllise, Raymond J., to The Kaman Aircraft Corp. Electrical power supply system. 3,047,727, 7-31-62, Cl. 307—2.
McBain, John K., to W. C. Ritchie Division Stone Container Corp. Dusting powder box. 3,047,199, 7-31-62, Cl. 229—6.
McCandless, Robert W.: *See*—
Stephens, Clifford A., and McCandless. 3,047,526.
McCann, Francis D., to The Singer Mfg. Co. Sewing machine having double stitch fingers. 3,046,920, 7-31-62, Cl. 112—16.
McCarthy, William, to Speer Carbon Co., Inc. Capacitor. 3,047,782, 7-31-62, Cl. 317—258.
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Brace, Neal O., and McCormack. 3,047,610.
McCouch, Gordon P., to Aircraft Radio Corp. Detent mechanism. 3,046,810, 7-31-62. Cl. 74—527.
McDougal, John A.: *See*—
Eshbaugh, Jesse E., and McDougal. 3,047,235.
McGill, Landon G.: *See*—
Davis, Daniel O., and McGill. 3,046,575.
McGow, Thomas C., to The Rapids-Standard Co., Inc. Weight sensitive conveyor. 3,047,127, 7-31-62, Cl. 198—160.
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McGrath, Joseph J., and J. P. Pellegrini, Jr., to Gulf Research & Development Co. Lubricating oil thickened to a grease consistency with a bishydantoin. 3,047,498, 7-31-62, Cl. 252—28.
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Howling, Dennis H. 3,047,761.
Walker, Richard K. 3,047,698.
McGuire, Robert J., to Gulf Research & Development Co. Fuel oils having improved combustion characteristics. 3,047,373, 7-31-62, Cl. 44—57.
McKay, James G. Carton rotating and conveying apparatus. 3,047,123, 7-31-62, Cl. 198—33.
McKay Machine Co., The: *See*—
Miller, John S. 3,046,819.
McKinnon, Columbus, Corp.: *See*—
Schreyer, Kenneth D. 3,047,125.
McLean Engineering Laboratories: *See*—
Hay, Arthur D. 3,047,211.
McLhinney, William S. Adjustable spraying device. 3,047,-241, 7-31-62, Cl. 239—273.
McNaney, Joseph T., to General Dynamics Corp. Cathode-ray tube structure. 3,047,759, 7-31-62, Cl. 313—82.
McNaney, Joseph T., to General Dynamics Corp. Cathode ray tube structure. 3,047,768, 7-31-62, Cl. 315—31.
McNaney, Joseph T., to General Dynamics Corp. Radar identification system. 3,047,858, 7-31-62, Cl. 343—6.5.
McNaney, Joseph T. Spectroelectric device. 3,047,867, 7-31-62, Cl. 346—74.
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Berryhill, Joseph L. 3,047,675.
Snow, Robert G. 3,047,741.
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Lamp, Arthur W., and Meckstroth. 3,047,166.
Meckstroth, Carl R., to General Electric Co. Apparatus for transferring lamps. 3,047,164, 7-31-62, Cl. 214—1.
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Morton, Avery A., Littlefield, and Mecum. 3,047,543.
Meger, Alfred F., and A. L. Hawthorne, to J.M.J. Industries, Inc. Disintegrating mill. 3,047,243, 7-31-62, Cl. 241—188.
Meisel, Robert: *See*—
Grafstein, Paul L., Meisel, and Panchak. 3,047,225.
Melchiore, John J.: *See*—
Blair, Edgar A., Melchiore, and Mills. 3,047,616.
Melrose, Richard E., to The Clorox Co. Method of rendering glass bottles dripless and article produced thereby. 3,047,-417, 7-31-62, Cl. 117—37.
Melzer, Jean H. Method of producing hollow sheet-metal panel structures. 3,046,638, 7-31-62, Cl. 29—155.
Menasco Mfg. Co.: *See*—
Stewart, Alford K., and Keech. 3,047,343.
Menter, Albion R., and W. C. Newcomb. Protective covering for bovine teeth and process of applying same. 3,046,657, 7-31-62, Cl. 32—12.
Menzimer, Lisle W.: *See*—
De Vito, Angelo R. 3,047,325.
Merck & Co., Inc.: *See*—
Hoff, Dale R., and Korntved. 3,047,596.
Sprague, James M. 3,047,580.

Merckling, Nicholas G.: *See*—
Gresham, William F., and Merckling. 3,047,513.
Merkel, Hans. Preparation of non-hygroscopic granules of powdered valerian extract, extracts of hops, and powdered dry milk. 3,047,463, 7-31-62, Cl. 167—65.
Merriner, Delbert L.: *See*—
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Merten, Eugen, to Shell Oil Co. Seismic exploration. 3,046,889, 7-31-62, Cl. 102—24.
Merten, Rudolf, G. Loew, and O. Bayer, to Bayer Aktiengesellschaft, Farbenfabriken. Polyurethane plastics. 3,047,540, 7-31-62, Cl. 260—77.5.
Mesich, Paul. Micrometer. 3,046,666, 7-31-62, Cl. 33—164.
Metz, E. David, to Pacific Semiconductors, Inc. Packaging technique for fabrication of very small semiconductor devices. 3,047,780, 7-31-62, Cl. 317—234.
Metzler, Kurt. Device for instantaneous stopping of power looms. 3,047,030, 7-31-62, Cl. 139—336.
Meurer, Siegfried, to Augsburg-Nurnberg A.G. Maschinenfabrik. Combustion chambers for pistons. 3,046,959, 7-31-62, Cl. 123—32.
Meyer, Geo. J., Mfg. Co.: *See*—
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Michatek, Stephen F.: *See*—
Harvey, James E., and Michatek. 3,046,833.
Michigan Abrasive Co.: *See*—
Cook, Herbert E. 3,046,709.
Midland Mfg. Co., Inc.: *See*—
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Miehle-Goss-Dexter, Inc.: *See*—
Sites, Benjamin L., and Agruss. 3,047,422.
Miles, William: *See*—
Hicks, Bruce C., and Miles. 3,047,769.
Milka, John E., to American Cyanamid Co. Method of producing boron-containing compounds. 3,047,623, 7-31-62, Cl. 260—551.
Miller, Andrew J. Boat hull construction. 3,046,926, 7-31-62, Cl. 114—61.
Miller, Arthur, to Radio Corp. of America. Magnetic recording media. 3,047,505, 7-31-62, Cl. 252—62.5.
Miller, Francis M.: *See*—
Elkin, Samuel, and Miller. 3,047,584.
Miller, Herman, Inc.: *See*—
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Miller, John S., to The McKay Machine Co. Rim rolling mill. 3,046,819, 7-31-62, Cl. 80—5.
Miller, Raymond H.: *See*—
Smith, John H., and Miller. 3,047,119.
Miller, Samuel. Combination box and box-insert. 3,047,135, 7-31-62, Cl. 206—45.14.
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Blair, Edgar A., Melchiore, and Mills. 3,047,616.
Mills, Maurice R.: *See*—
Cheesman, John J., and Mills. 3,046,871.
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Cox, Wilma W. and C. W. 3,046,559.
Minerals & Chemicals Philipp Corp.: *See*—
Gary, Wright W. 3,046,996.
Minett, Herbert H. B., and K. W. Course, to D. Napier & Son Ltd. Fuel injection pumps for internal combustion engines. 3,046,896, 7-31-62, Cl 103—41.
Mining Engineering Co. Ltd., The: *See*—
Duncan, Angus W. 3,047,131.
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Aske, Leonard E. 3,047,703.
Becker, Orlien N. 3,047,777.
Carlson, William L., Jr. 3,047,779.
Carlson, William L., Jr., and Cole. 3,046,893.
Freeborn, John C. 3,046,951.
Hayner, Paul F. 3,046,945.
Kondl, Spiro E. 3,047,841.
Kutzler, Robert J. 3,046,681.
Olmon, Wilfrid E., and Zelinka. 3,046,651.
Pinckaers, Balthasar H. 3,047,722.
Schrimpf, Henry W. 3,047,868.
Scott, Troy A. 3,047,392.
Tessem, Bernt M. 3,046,786.
Wilkerson, John S. 3,046,795.
Minnesota Mining and Mfg. Co.: *See*—
Breen, George B., and Cahill. 3,046,698.
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Mobay Chemical Co.: *See*—
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Renshaw Robin. 3,047,269.
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Corson, Ben B., and Moe. 3,047,643.
Mohr, Rudolf. Cutting stick member for paper cutting machines. 3,046,824, 7-31-62, Cl. 83—658.
Molectronics Corp.: *See*—
Hudson, Harold R. 3,047,751.
Molotsky, Hyman M., W. M. Boyer, and H. E. Tarbell, Jr., to The Richardson Co. Composition comprising polymeric reaction product of ammoniacal compound and halosilane. 3,047,527, 7-31-62, Cl. 260—37.
Monahan, Edward J., and H. E. Peckham, to National Biscuit Co. Closure means. 3,047,206, 7-31-62, Cl. 220—66.
Monroe Auto Equipment Co.: *See*—
Kivell, William J. 3,047,283.
Monroe, Freeman. Foldable pier. 3,046,743, 7-31-62, Cl. 61—18.
Monroe, Meade, to NEA Service, Inc. Newspaper delivery tube. 3,047,213, 7-31-62, Cl. 232—17.
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Harman, Carl A. 3,047,321.
Hirshfeld, Julian J., and Burnthall. 3,047,425.
Holmes, Richard R., and Anderson. 3,047,455.
Martin, Richard H., Jr. 3,047,549.
Martin, Richard H., Jr. 3,047,550.
Tate, Clifton W. 3,047,621.
Ucci, Pompello A., and Anderson. 3,047,456.
Williams, Forrest V. 3,047,366.
Montecatini-Societa Generale per l'Industria Mineraria e Chimica: *See*—
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Montgomery, Robert L., to United Aircraft Corp. Pump stage connection. 3,046,901, 7-31-62, Cl. 103—88.
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Burk, Emmett H., Jr., and Mool. 3,047,514.
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Moore, Carl, and W. F. Tousignant, to The Dow Chemical Co. Vinyl 2,2-dihalocyclopropyl carboxylates. 3,047,611, 7-31-62, Cl. 260—468.
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Henrickson, Erling G., and Moore. 3,046,695.
Moore, Jerry W., Jr., to United Gas Corp. Apparatus for moving a line through a conduit. 3,047,270, 7-31-62, Cl. 254—134.6.
Moores, Charles C. Templet for chuck jaws of lathes. 3,046,671, 7-31-62, Cl. 33—178.
Moreau, William J., and L. R. Nodine, to Davol Rubber Co. Esophageal nasogastric tube. 3,046,988, 7-31-62, Cl. 128—325.
Morgan, James J. Accelerometer with velocity and distance integrating means. 3,046,792, 7-31-62, Cl. 73—490.
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Morin, Louis H. Method of producing dies from a preformed die part anchored in and projecting from a powered metal die body. 3,046,816, 7-31-62, Cl. 76—107.
Morin, Louis H., to Coats & Clark Inc. Locking yoke for sliders of separable fastener stringers. 3,046,628, 7-31-62, Cl. 24—205.14.
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Bayley, Abraham, and Robb. 3,047,432.
Bayley, Abraham, and Robb. 3,047,433.
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Morrissey, John J. Cross chain end clip. 3,046,630, 7-31-62, Cl. 24—236.
Mortimer, Noel R. F., to Vokes Ltd. Tobacco processing machinery. 3,046,998, 7-31-62, Cl. 131—146.
Morton, Avery A., J. B. Littlefield, and W. D. Mecum, to American Brake Shoe Co. Sulphur-containing heat-resistant resins. 3,047,543, 7-31-62, Cl. 260—79.
Morton, Glen R. Die casting machine plunger tip. 3,046,621, 7-31-62, Cl. 22—68.
Morton, Robert C., to California Computer Products, Inc. Automatic light control for incandescent lamps. 3,047,773, 7-31-62, Cl. 315—205.
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Mosler Research Products, Inc.: *See*—
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Schmidt, Kenneth H. 3,047,850.
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Kieffer, Joseph D., III, and Duhamel. 3,047,085.
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Mumma, Jonas H. Self-clearing shovel and attachment. 3,047,328, 7-31-62, Cl. 294—59.
Munster, Josef, and H.-D. Textor, to Ferdinand Lentjes Kesselschmiede u. Maschinenbau. Gas producers. 3,047,376, 7-31-62, Cl. 48—76.
Murdock, Stanley A., and A. R. Wirth, to The Dow Chemical Co. Process for treating a "nitrile alloy" article with a polyphenolic antistatic agent and product obtained thereby. 3,047,426, 7-31-62, Cl. 117—138.8.
Murrell, Carl T. Foot rest for vehicle drivers. 3,047,088, 7-31-62, Cl. 180—90.6.
Myers, John W., to Phillips Petroleum Co. Hydrocracking process. 3,047,490, 7-31-62, Cl. 260—59.
Myers, Paul D., to Aerpat Aktien Gesellschaft. Twist lock pin with ball detents and a rectangular actuator. 3,046,827, 7-31-62, Cl. 85—5.
NEA Service, Inc.: *See*—
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Feldt, Charles A., and Kekish. 3,047,516.
Kirkpatrick, Willard H., Seale, and Noe. 3,047,495.
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Hearsum, Desmond R., and Gulden. 3,047,226.
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Nawroth, George. Hair dryer. 3,046,673, 7-31-62, Cl. 34—100.
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Nerwin, Hubert, to Eastman Kodak Co. Automatic exposure control system for photographic cameras. 3,046,860, 7-31-62, Cl. 95—10.
Neufville, Jean M. M., and J. E. Trottier. Device for supplying a ship with electrical energy. 3,047,724, 7-31-62, Cl. 290—4.
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Newcomb, Ward C.: *See*—
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New York Air Brake Co., The: *See*—
Budzich, Tadeusz. 3,046,906.
Dick, Willard K. 3,047,023.
Pschunder, Ralph J. 3,046,907.
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Peyrin, Henri. 3,047,267.
Nicholas, Donald C., and J. W. Hempstead, to B.X. Plastics Ltd.. Stretching apparatus. 3,046,599, 7-31-62, Cl. 18—1.
Nickell, Lawrence C., to Appalachian Electronic Instruments Inc. Scanning heads for stop-motion devices for knitting machines. 3,046,767, 7-31-62, Cl. 66—166.
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Sassmannshausen, Werner, and Niepmann. 3,047,034.
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Sassmannshausen, Werner, and Niepmann. 3,047,034.
Nilsson, Einar W. Cross-roll straightener. 3,047,046, 7-31-62, Cl. 153—108.
Nilsson, John C. Gauge assembly. 3,046,665, 7-31-62, Cl. 33—147.
Nippon Shinyaku Co. Ltd.: *See*—
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Nischk, Gunther, K. E. Müller, ½ to Bayer Aktiengesellschaft, Farbenfabriken, and ½ to Mobay Chemical Co. Reaction product of an isocyanate modified unsaturated polyester with an ethylenically unsaturated monomer and a polyamino compound, and process for preparing same. 3,047,530, 7-31-62, Cl. 260—45.4.
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Nomine, Gerard, to Roussel UCLAF, S.A. Novel cyclopentanonaphthalene compounds. 3,047,615, 7-31-62, Cl. 260—476.
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Cluwen, Johannes M. 3,047,740.
Danker, Berend. 3,047,813.
De Bruyn, Hendrik E. 3,047,707.
De Miranda, Heine A. R. 3,047,739.
Hermsen, Johannes, Kraaljeveld, and Warmoltz. 3,047,760.
Rosier, Gerardus. 3,047,735.
Suhrmann, Robert, and Forester. 3,047,656.
Van Cort, Johannes F., and Bakker. 3,047,783.
Van Daal, Hubert J., Knippenberg, and Hulzing. 3,047,439.
Northrop Corp.: *See*—
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Swainson, Edward L., and Borg. 3,046,797.
Northrup, Milton G., and D. F. Pinkerton, to The Marquardt Corp. Filter and precipitator. 3,046,717, 7-31-62, Cl. 55—320.
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Van Noy, Lawrence R., and Craig. 3,047,704.
Oakes, Billy D., to The Dow Chemical Co. Mineral acid inhibitor. 3,047,511, 7-31-62, Cl. 252—146.
Obear, Edward F. Cut off saw. 3,046,707, 7-31-62, Cl. 51—178.
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Oddo, Carl A.: *See*—
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Ohan, William J.: *See*—
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Ohashi, Hidekichiro, K. Kawasaki, J. Koshiba, and R. Tsuji, to Chori Co. Ltd., and Tsudakoma Industrial Co., Ltd. Apparatus for producing crimped thermoplastic synthetic yarns. 3,046,633, 7-31-62, Cl. 28—1.
Ojima, Yoshinobu. Coil winding machine. 3,047,246, 7-31-62, Cl. 242—9.
Okonite Co., The: *See*—
Eigen, David. 3,047,800.
Feller, Robert G., and Sweeney. 3,047,448.
Peer, Robert W., and Eigen. 3,047,799.
Peer, Robert W., and Eigen. 3,047,804.
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Fried, Josef, and Herz. 3,047,567.
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Schur, Milton O. 3,046,994.
Sih, Charles J., and Bennett. 3,047,469.
Swidler, Ronald. 3,047,609.
Treat, John W., Jr. 3,046,891.
Olivier, Daniel E., to Lock Joint Pipe Co. Apparatus and method for making prestressed concrete tubular members. 3,046,631, 7-31-62, Cl. 25—118.
Olley, Maurice, to General Motors Corp. Vehicle disk brake. 3,047,098, 7-31-62, Cl. 188—73.
Olmon, Wilfrid E., and R. J. Zelinka, to Minneapolis-Honeywell Regulator Co. Soldering technique. 3,046,651, 7-31-62, Cl. 29—498.
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Origoni, Victor E., N. E. Rigler, and J. J. Goodman, to American Cyanamid Co. Method of preparing $\Delta^{7,4}$-3-keto steroids of the pregnane series. 3,047,468, 7-31-62, Cl. 195—51.
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Ottestad, Jack B., to General Dynamics Corp. Internal combustion actuator. 3,046,737, 7-31-62, Cl. 60—39.6.
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Bradford, Henry K. 3,047,811.
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Slayter, Games, Whitehurst, and Morgan. 3,047,409.
Owren, Erling, to Cranston Print Works Co. Oil in water emulsions for textile printing. 3,047,354, 7-31-62, Cl. 8—86.
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Anderson, Wilbur G., Jr. 3,047,138.
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Pankove, Jacques I., to Radio Corp. of America. Cryoelectric circuits employing superconductive contact between two superconductive elements. 3,047,744, 7-31-62, Cl. 307—88.5.
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Ranky, Bela. 3,047,823.
Papa, René. Container constituting a dismantlable flower pot. 3,047,183, 7-31-62, Cl. 220—4.
Pappas, Phillip M. Counter type cooking and warming equipment. 3,046,972, 7-31-62, Cl. 126—37.
Pardun, Hermann, to Lever Brothers Co. Purification of phosphatides. 3,047,597, 7-31-62, Cl. 260—403.
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Parker, Eddie E.: *See*—
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Patrick, Stanley R. Wire stripper. 3,046,820, 7-31-62, Cl. 81—9.5.
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Beaman, Norman V., Hudson, and Gauss. 3,046,812.
Patterson, Omar L., to Sun Oil Co. Computing circuits. 3,047,232, 7-31-62, Cl. 235—195.
Patti, Fred D. Electric switch. 3,047,699, 7-31-62, Cl. 200—159.
Paul, Adolf, to Steinback G.m.b.H. Truck crane. 3,047,160, 7-31-62, Cl. 212—35.
Paul, John M., to The Budd Co. Side guards for stackable cargo containers. 3,047,189, 7-31-62, Cl. 220—71.
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Pearson, Grace D.: *See*—
Pearson, John M. 3,047,795.
Pearson, Jack W. Marking device. 3,046,884, 7-31-62, Cl. 101—329.
Pearson, John M., deceased (by G. D. Pearson, executrix), to Sun Oil Co. Bore hole logging methods and apparatus. 3,047,795, 7-31-62, Cl. 324—10.
Pease, William C., III, to Lummus Cotton Gin Co. Fluid pressure control mechanism for baling presses. 3,046,872, 7-31-62, Cl. 100—52.
Peberdy, Roland, to The Bentley Engineering Co. Ltd. Circular knitting machine. 3,046,760, 7-31-62, Cl. 66—14.
Peck, Alfred W. Ash disposal container. 3,047,134, 7-31-62, Cl. 206—37.
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Ash, John L., II, and Pedersen. 3,046,799.
Peer, Robert W., and D. Elgen, to The Okonite Co. Interference-free probe apparatus for testing insulated electric conductors. 3,047,799, 7-31-62, Cl. 324—54.
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McGrath, Joseph J., and Pellegrini. 3,047,498.
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Perkey, Russell C., and R. J. Satory, to The Bendix Corp. Fluid pressure responsive control apparatus. 3,046,740, 7-31-62, Cl. 60—39.28.
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Perkins, Albert G. 3,046,938.
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Hess, Hans-Jurgen E., Hughes, and Laubach. 3,047,594.
Stephens, Charles R., Jr., and Conover. 3,047,626.
Stieg, William E., and Nielsen. 3,047,598.
Pharis, William W., and E. H. Gatzert, to General Dynamics Corp. Routiner. 3,047,679, 7-31-62, Cl. 179—175.2.
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Pilrma, Aleksander, to The Goodyear Tire & Rubber Co. Preparation of polyesters using titanium-containing catalysts. 3,047,515, 7-31-62, Cl. 260—2.
Pilia, Frank J., to Union Carbide Corp. Gas shielded arc welding torch. 3,047,715, 7-31-62, Cl. 219—127.
Pinckaers, Balthasar H., to Minneapolis-Honeywell Regulator Co. Electric apparatus. 3,047,722, 7-31-62, Cl. 250—83.6.
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Poitras, Edward J., and C. W. Walter, to Baxter Laboratories, Inc. Closure system. 3,047,177, 7-31-62, Cl. 215—56.
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Porsche, Ferdinand, E. Komenda, and F. Blaschka, to Dr.-Ing. Porsche h.c.F., K.G. Frame construction for vehicles. 3,047,331, 7-31-62, Cl. 296—24.
Postlewaite, William R., to California Research Corp. Method and apparatus for offshore drilling. 3,047,078, 7-31-62, Cl. 175—7.
Powell, Horace C. Carrier for fishing tackle. 3,047,349, 7-31-62, Cl. 312—287.
Powell, Vernon R. Apparatus for measuring wall thickness of tubular members. 3,046,664, 7-31-62, Cl. 33—147.
Pratt, Lemuel A., to Pacific Semiconductors, Inc. Circular die sets. 3,047,044, 7-31-62, Cl. 153—9.
Pratt, Norman F., to Ford Motor Co. Magnetostrictive torque meter. 3,046,781, 7-31-62, Cl. 73—136.
Pravel, Herman E. Bi-directionally mechanically moved shaft. 3,046,800, 7-31-62, Cl. 74—25.
Pravel, Herman E. Rotary to lineal motion converter. 3,046,801, 7-31-62, Cl. 74—25.
Price, Ralph E., to Landis Tool Co. Automatic plunge grinder. 3,046,706, 7-31-62, Cl. 51—165.
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Prismo Safety Corp.: *See*—
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Pritchard, Peter E., to General Electric Co. Magnetic stereophonic phonograph pickup. 3,047,677, 7-31-62, Cl. 179—100.41.
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Prohaska, Hans, and A. Kohler, to SWF- Spezialfabrik für Autozubehör Gustar-Rau G.m.b.H. Foot-operated bellows pump for windshield washing apparatus. 3,046,591, 7-31-62, Cl. 15—250.2.
Proudfit, Alexander, to Hazeltine Research Inc. Still unit. 3,047,872, 7-31-62, Cl. 346—139.
Pruden, Robert G. Tuned acoustical device. 3,047,090, 7-31-62, Cl. 181—31.
Pruess, Louis M., C. Pidacks, and N. E. Rigler, to American Cyanamid Co. Microbiological 11α-hydroxylation of 16α, 17α-epoxy pregnenes. 3,047,470, 7-31-62, Cl. 195—51.
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Carr, Norman L. 3,047,645.
Carr, Norman L. 3,047,646.
Hunter, Wesley L. 3,047,009.
Marsh, Glenn A., Ellison, and Schaschl. 3,047,847.
Marsh, Glenn A., and Schaschl. 3,047,478.
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Miller, Arthur. 3,047,505.
Pankove, Jacques I. 3,047,744.
Rotow, Alexander A. 3,047,757.
Stoller, Arthur I., and Gordon. 3,047,429.
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Sorger, Gunther U., and Raff. 3,047,803.
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Randol, Glenn T. Hydraulically-operated brake booster mechanism. 3,046,746, 7-31-62, Cl. 60—54.6.
Raney, Richard C. Transporting and unloading devices. 3,047,173, 7-31-62, Cl. 214—519.
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Raymond, Samuel. Apparatus for zone electrophoresis. 3,047,489, 7-31-62, Cl. 204—299.
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Reynolds, Reginald, and P. H. Stammers, to Acrow (Engineers) Ltd. Hydraulic props. 3,046,947, 7-31-62, Cl. 121—46.
Reynolds, Reginald, and P. H. Stammers, to Acrow (Engineers) Ltd. Props or jacks. 3,046,949, 7-31-62, Cl. 121—46.
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Rhoades, Nolan K., to The Parker Pen Co. Writing instruments. 3,046,943, 7-31-62, Cl. 120—42.03.
Rhodes, Philip H., and T. W. Findley, to Swift & Co. Vinyl resin-epoxy fatty acid coating composition, method and article. 3,047,415, 7-31-62, Cl. 117—21.
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Peters, Beldon A., and Rich. 3,047,072.
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Pruess, Louis M., Pidacks, and Rigler. 3,047,470.
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Rickard, James A., to Jersey Production Research Co. Helium 3 scintillation neutron detector. 3,047,720, 7-31-62, Cl. 250—71.5.

Riordan, Hugh E., to General Precision, Inc. Hydraulic averaging accelerometer. 3,046,793, 7-31-62, Cl. 73—515.

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Bayley, Abraham, and Robb. 3,047,433.

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Romero, Fred. Three line chalk box. 3,046,663, 7-31-62, Cl. 33—87.

Rose, Glenn R., to General Mills, Inc. Electric circuit reset system. 3,047,167, 7-31-62, Cl. 214—1.

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Roseman, Leo and R. J. 3,046,564.

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Rosetz, Kurt. Earth working machines. 3,047,122, 7-31-62, Cl. 198—7.

Rosier, Gerardus, to North American Philips Co., Inc. Pulse width discriminator employing a transistor wherein the bias is controlled by an integrating circuit. 3,047,735, 7-31-62, Cl. 307—88.5.

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Rossi, Giovanni. Heat exchanger with tubular elements, especially for hot-water and superheated-water heating boilers. 3,046,953, 7-31-62, Cl. 122—406.

Rothfuss, Neal B., to The Bendix Corp. Air pressure regulator. 3,047,010, 7-31-62, Cl. 137—489.

Rotow, Alexander A., to Radio Corp. of America. Image intensifier devices. 3,047,757, 7-31-62, Cl. 313—65.

Rotrekl, Otto, to Sdruzeni podniku textilniko strojirenstvi. Shredding means. 3,047,028, 7-31-62, Cl. 139—57.

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Rowe, Robert S. Mortar base plate. 3,046,843, 7-31-62, Cl. 89—37.

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Rusoff, Irving I., W. J. Ohan, and C. L. Long, to General Foods Corp. Protein food product and process. 3,047,395, 7-31-62, Cl. 99—14.

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Russell, Fred J. Lost motion locking device. 3,047,327, 7-31-62, Cl. 292—359.

Rust, Kurt, E. Junghanns, S. Sommer, and G. Bier, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for polymerizing olefins with catalysts of Ti Cl dialkyl aluminum fluorides in combination with another dialkyl aluminum halide. 3,047,557, 7-31-62, Cl. 260—93.7.

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Ryffel, Kaspar, Rutishauser, and Schweizer. 3,047,541.

Rutz, Richard F., to International Business Machines Corp. Multiple output semiconductor logical device. 3,047,733, 7-31-62, Cl. 307—88.5.

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Gray, Roland H., Jr., Rygwelski, and Tigner. 3,047,522.

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Sacco, George J. Fire hose nozzle. 3,047,238, 7-31-62, Cl. 239—275.

Sachs, David. Lassoing toy. 3,047,295, 7-31-62, Cl. 273—1.

Saenz, Candelario. Dental syringe adapter. 3,046,985, 7-31-62, Cl. 128—218.

Saether, Tore V., to Van Norman Industries, Inc. Reel construction. 3,047,250, 7-31-62, Cl. 242—77.

Saha, Richard A. Jigs. 3,046,818, 7-31-62, Cl. 77—62.

Saha, Richard A. Improved bracket and method of assembly utilizing it. 3,047,110, 7-31-62, Cl. 189—36.

St. Clair, Theodore A., and R. K. Fairchild, to Textron Inc. Gas meter sealing means. 3,047,298, 7-31-62, Cl. 277—4.

Sale, Roberson Y. Ice cream freezer. 3,046,755, 7-31-62, Cl. 62—136.

Salisbury, Frederick L., to Varian Associates. Electron discharge device. 3,047,351, 7-31-62, Cl. 316—23.

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Sampsell, Frederick H. Door trim. 3,046,616, 7-31-62, Cl. 20—11.

Sampson, Rodney T., to Diebold, Inc. Register cards for assignment of account numbers in simultaneous alphabetic-numeric sequence. 3,047,312, 7-31-62, Cl. 283—36.

Sandberg, Carlyle C. Safety device for banks or the like. 3,046,914, 7-31-62, Cl. 109—5.

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Scarr, John, Jr., to Gulf Research & Development Co. Air conditioning apparatus. 3,047,273, 7-31-62, Cl. 257—287.

Schaeder, Johann A., to Fritz Hellige & Co., G.m.b.H. Directly registering recording apparatus. 3,047,865, 7-31-62, Cl. 346—69.

Schaefer, Louis R., to Packaging Corp. of America. Multiple compartment container. 3,047,202, 7-31-62, Cl. 229—29.

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Schaeppi, Johann H., to Dr. Schaeppi Aktiengesellschaft. Gold-isoquinoline-yohimbine complex for rheumatic diseases. 3,047,464, 7-31-62, Cl. 167—65.

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Saylor, Robert L. 3,047,319.
Schlage, Ernest L. 3,046,777.

Schliephacke, Fridtjof F., to A. Lorenz. Reclining chair and seat control. 3,047,336, 7-31-62, Cl. 297—85.

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Schönemann, Karl H., and H. P. de Jongh, to Organon Inc. New 6-methyl-19-nor-testerone derivatives and process for the preparation thereof. 3,047,592, 7-31-62, Cl. 260—397.4.

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Schreyer, Kenneth D., to Columbus McKinnon Corp. Feeder conveyor. 3,047,125, 7-31-62, Cl. 198—57.

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Schuller, Heri, to Th. Jansen, G.m.b.H. Slide valve. 3,047,024, 7-31-62, Cl. 138—94.3.

Schur, Milton O., to Olin Mathieson Chemical Corp. Ventilated cigarette. 3,046,994, 7-31-62, Cl. 131—10.

Schure, Alexander, to Educational Aids Publishing Corp. Compromise proof teaching device. 3,046,675, 7-31-62, Cl. 35—9.

Schurr, Charles A., to Square D Co. Signal device. 3,047,788, 7-31-62, Cl. 318—461.

Schwab, Arthur W., and H. M. Teeter, to United States of America, Agriculture. Fast surface-dry oil emulsion paint. 3,047,413, 7-31-62, Cl. 106—170.

Schwable, Wilfrid A. Accessory for portable drills. 3,046,817, 7-31-62, Cl. 77—7.

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Schwarzberger, Arthur. Follower units for quilting machines. 3,046,921, 7-31-62, Cl. 112—118.

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Scott, Francis L., to Pennsalt Chemicals Corp. Preparation of substituted perchlorylaromatic compounds. 3,047,589, 7-31-62, Cl. 260—349.

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Shelmire, Stanley R. 3,046,762.

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Sculhoff, Lydia A., to United States of America, Army. Ultrapure, ultra thin films of niobium oxide. 3,047,424, 7-31-62, Cl. 117—119.6.

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Rotreki, Otto. 3,047,028.
Svaty, Vladimir, Riha, and Taticek. 3,047,027.

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Kirkpatrick, Willard H., Seale, and Noe. 3,047,495.

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Seals, Wesley H.: *See*—
Edens, Samuel V., Goodrich, and Seals. 3,047,762.

Seaman, Bernard. Barbecue grill. 3,046,970, 7-31-62, Cl. 126—25.

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Borsboom, Albertus C. H. 3,047,797.
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Sheppard, Kalin I., and N. M. Pierce. Apparatus for forming drum jacks. 3,047,217, 7-31-62, Cl. 234—48.

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Sherrill, John F., to Sea-Trim Corp. Boat trimming stabilizer. 3,046,928, 7-31-62, Cl. 114—66.5.

Sherron, Percival H. Telephone booth door hanger construction. 3,046,594, 7-31-62, Cl. 16—95.

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Siddiqui, Salimuzzaman. Rauwolfia alkaloidal complexes and process for isolating the same from Rauwolfia plant material. 3,047,563, 7-31-62, Cl. 260—236.
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Simpson, Robert L. Curtain valve. 3,047,019, 7-31-62, Cl. 137—625.28.
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Sims, Victor A., to Air Reduction Co., Inc. Vinylation of aromatic heterocyclic nitrogen compounds. 3,047,583, 7-31-62, Cl. 260—313.
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Sourber, Earl Jacob. Hot air welding apparatus. 3,047,050, 7-31-62, Cl. 156—497.
Southard, Hubert H. Bag closure. 3,047,205, 7-31-62, Cl. 229—62.
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Sproson, Kenneth W., to Bedard-Sproson, Inc. Shears. 3,046,655 7-31-62, Cl. 30—233.
Sprout, Waldron & Co., Inc.: *See*—
Shook, Raymond E., Jr. 3,047,453.
Square D Co.: *See*—
Relland, Frank D. 3,047,650.
Schurr, Charles A. 3,047,788.
Stacy, John T., and H. A. Saller, to United States of America, Atomic Energy Commission. Iron base alloys and articles made therefrom. 3,047,484, 7-31-62, Cl. 204—193.2.
Staiger, Kurt: *See*—
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Stamicarbon N.V.: *See*—
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Broadhead, Ronald L. 3,047,525.
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Starck, William A. Dispensers for ice cream or the like. 3,046,912, 7-31-62, Cl. 107—48.
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Goodban, Alan E., and Stark. 3,047,430.
Stark, Louis E., to Union Carbide Corp. Electric arc welding method. 3,047,708, 7-31-62, Cl. 219—74.
Stasse, Henry L., to Allied Chemical Corp. Method for bonding gypsum to paper. 3,047,447, 7-31-62, Cl. 156—40.
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Steeman, Johannes W. M., to Stamicarbon N.V. Process of preparing cyclohexanone and cyclohexanol. 3,047,629, 7-31-62, Cl. 260—586.
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Steiner, Albert M., to Bromo Mint Co. Whirling toy. 3,046,692, 7-31-62, Cl. 46—52.
Steinmann, Henry W., to Scott Paper Co. Preparation of urea-formaldehyde foamed resin. 3,047,538, 7-31-62, Cl. 260—70.
Steisslinger, Kurt, to Eastman Kodak Co. Indicator mechanisms for photographic cameras. 3,046,858, 7-31-62, Cl. 95—10.
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Kamborian, Jacob S., and Stemmler. 3,046,577.
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Stephan, Hallis N., to The New Britain Machine Co. Combined horizontal boring, drilling and milling machine. 3,047,117, 7-31-62, Cl. 192—139.
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Stephens, Charles R., Jr., and L. H. Conover, to Chas. Pfizer & Co., Inc. 4-desdimethylamino-6-deoxy-tetracycline derivatives. 3,047,626, 7-31-62, Cl. 260—559.
Stephens, Clifford A., and R. W. McCandless. Leather-coating composition. 3,047,526, 7-31-62, Cl. 260—32.8.
Sterrett, Vance C. Proportioner and mixer, and tumbling differential for controlling the action thereof. 3,047,704, 7-31-62, Cl. 137—101.25.
Stevens, Howard C., Jr., to Manning, Maxwell & Moore, Inc. Hoist construction. 3,047,114, 7-31-62, Cl. 192—16.
Stewart, Alford K., and R. A. Keech, to Menasco Mfg. Co. Retaining device. 3,047,343, 7-31-62, Cl. 308—3.
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Stickney, Wendell H., to Diamond National Corp. Distended molding of paper pulp. 3,047,458, 7-31-62, Cl. 162—223.
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Stieg, William E., and A. T. Nielsen, to Chas. Pfizer & Co., Inc. Vitamin A ester compositions. 3,047,598, 7-31-62, Cl. 260—410.
Stingelin, Ernst. Apparatus for cleaning syringes. 3,047,000, 7-31-62, Cl. 134—152.
Stoddard, Glenn G., to Curtiss-Wright Corp., Utica Division. Slip ring assembly. 3,047,827, 7-31-62, Cl. 339—5.
Stover, Richard A., to Vermont Research Corp. Magnetic head mount. 3,047,866, 7-31-62, Cl. 346—74.
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Straub, Harold E., and E. F. Averill, to Titus Mfg. Corp. Air deflectors or diffusers and throw control devices therefor. 3,046,866, 7-31-62, Cl. 98—40.
Streuber, Hans-Peter. Exchange device for the contact of gases and liquids. 3,047,278, 7-31-62, Cl. 261—114.
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Bennett, John, and Mayes. 3,047,796.
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Thomas, Charles L. 3,047,551.
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Biggs, Ernest R., Jr., and Lewis. 3,046,981.
Svaty, Vladimir, M. Riha, and L. Taticek, to Sdruzeni podniku textilniko strojirenstvi. Device for selvedge forming. 3,047,027, 7-31-62, Cl. 139—54.
Swainson, Edward L., and S. E. Borg, to Northrop Corp. Apparatus for adjusting sealed mechanisms. 3,046,797, 7-31-62, Cl. 74—5.4.
Swallow, Austin B. and C. E., Jr. Two ply electromagnetic energy reflecting fabric. 3,047,860, 7-31-62, Cl. 343—18.
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Sweeney, Richard F., and C. Woolf, to Allied Chemical Corp. Production of fluoropropene. 3,047,640, 7-31-62, Cl. 260—653.4.
Swezy, Montgomery C., to Western Progress, Inc. Vehicle mounted traffic warning device and mounting bracket therefor. 3,046,934, 7-31-62, Cl. 116—173.
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Szita, Jenö, to Bayer Aktiengesellschaft, Farbenfabriken. Process for the production of polyvinyl hydrogen sulphates. 3,047,556, 7-31-62, Cl. 260—91.3.
Takahashi, Masao, S. Imaoka, and O. Kubouchi, to Tokyo Shibaura Electric Co., Ltd. Automatic assembling apparatus for assembling clean semiconductors in clean shells. 3,046,651, 7-31-62, Cl. 29—203.
Takahashi, Torizo, K. Ogiu, H. Fujimura, I. Satoda, T. Fukui, and Y. Yamamoto, to Nippon Shinyaku Co., Ltd. N-alkylamido substituted 1,3-benzoxazines. 3,047,573, 7-31-62, Cl. 260—244.
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Tate, Cilton W., to Monsanto Chemical Co. Purification of phthalic acids. 3,047,821, 7-31-62, Cl. 260—525.
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Taylor, Burt L.: *See*—
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Taylor, Cecil H. Toilet flush valve. 3,046,565, 7-31-62, Cl. 4—67.
Taylor, Donald L., and D. G. Thompson, to Lockheed Aircraft Corp. Metal sealing assembly. 3,047,300, 7-31-62, Cl. 277—102.
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Aldinger, Donald J. 3,047,022.
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Taylor, John S., to Continental-Diamond Fibre Corp. Method of making cementable fluorocarbons, such as polytetrafluoroethylene and the like and the product. 3,047,421, 7-31-62, Cl. 117—70.
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Telecommunications, Radioelectriques et Telephoniques R.T. (Societe Anonyme): *See*—
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Springer, Anton M. 3,047,673.
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Tellefson, Clair W., C. E. Smith, and M. E. Nelson. Foldable walkway and storage apparatus therefor. 3,046,850, 7-31-62, Cl. 94—1.
Terez, Clarence S., to General Electric Co. Lamp base and bulb assembly apparatus. 3,046,635, 7-31-62, Cl. 29—25.19.
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Thierman, Irwin B., to Iron Fireman Mfg. Co. Gyroscope caging means. 3,046,796, 7-31-62, Cl. 74—5.1.
Thomas, Albert G. Combination sensitive and power relay. 3,047,692, 7-31-62 Cl. 200—97.
Thomas, Charles L., to Sun Oil Co. Continuous polymerization of olefins using a fixed bed, supported transition metal-organometallic catalyst. 3,047,551, 7-31-62, Cl. 260—88.2.
Thomas, Edward R., E. H. Sonnanstine, Jr., and E. J. Carey, to The National Cash Register Co. Multiplier apparatus. 3,047,227, 7-31-62, Cl. 235—153.
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Taylor, Donald L., and Thompson. 3,047,301.
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Thomson, Arthur R. 3,046,736.
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Thompson, Wallace M., to Harris Foundry & Machine Co. Filler member for positively attaching and positioning a shear knife. 3,046,825, 7-31-62, Cl. 83—698.
Thomsen, Elmer R. Envelope and sheet feeder and collating apparatus. 3,047,290, 7-31-62, Cl. 271—36.
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Transeau, Sherman T. Self-cleaning cut-off gate construction. 3,047,006, 7-31-62, Cl. 137—243.
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Ohashi, Hidekichiro, Kawasaki, Koshiba, and Tsuji. 3,046,633.
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Tvedt, Thorwald J., to Shell Oil Co. Polarized phase discriminating circuit with limited direct current flow. 3,047,-810, 7-31-62, Cl. 328—134.
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Twitchell, Sherman W., and J. B. Bradicich, to FMC Corp. Box forming apparatus. 3,046,848, 7-31-62, Cl. 93—41.
Ucci, Pompello A., and N. T. Anderson, to Monsanto Chemical Co. Manufacture of paper products from fibers wet spun from polymer blends. 3,047,456, 7-31-62, Cl. 162—157.
Ulinski, Bronislaus I., to The Yale and Towne Mfg. Co. Lift truck. 3,047,172, 7-31-62, Cl. 214—140.
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Van Bergen, Johannes C., C. R. J. Laqueuille, and S. A. Boon, to Shell Oil Co. Storage tank. 3,047,184, 7-31-62, Cl. 220—9.
Van Daal, Hubert J., W. F. Knippenberg, and A. Huizing, to North American Philips Co., Inc. Silicon carbide semiconductor device. 3,047,439, 7-31-62, Cl. 148—33.
Van der Burg, Willem J., to Organon Inc. Preparation of a 3-amino-androstane compound. 3,047,593, 7-31-62, Cl. 260—397.5.
Vandergriff, Arvel L., to Lummus Cotton Gin Co. Apparatus for removing foreign matter from seed cotton. 3,046,611, 7-31-62, Cl. 19—35.
Vanderminden, Robert D., to The Telescope Folding Furniture Co., Inc. Foldable swing chair. 3,047,334, 7-31-62, Cl. 297—39.
Van Dinteren, Johannus C., to Stamicarbon N.V. Sampler for flowing liquids. 3,046,791, 7-31-62, Cl. 73—422.
Van Ess, Paul R., to Shell Oil Co. Epoxy cyanohydrins. 3,047,588, 7-31-62, Cl. 260—348.
Van Gorp, to Van Gorp Mfg., Inc. Wing pulley belt gripping device. 3,046,805, 7-31-62, Cl. 74—230.7.
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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
July 31, 1962 Volume 780 Number 5

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 74,530 (FORD), Ford Motor Company, Automobiles and their parts; **Reg. No. 74,765**, same, Explosive-engines and their parts; **Reg. No. 115,500**, same, Electrical sparking and timing apparatus, magnetos, etc.; **Reg. No. 119,956**, same, Electrically-self-propelled automobiles, bodies, running-gears, chassis; **Reg. No. 249,345**, same, Locks, ignition switch locks, and keys; **Reg. No. 250,072**, same, Plate glass and lenses for automobiles; **Reg. No. 250,230**, same, Speedometers, ammeters, and parts thereof, and motion picture films; **Reg. No. 251,383**, same, Belts of leather or fabric, portable tire-repair kits, non-metallic washers, gaskets and tire covers; **Reg. No. 252,216**, same, Automobile body floor mats; **Reg. No. 257,500**, same, Spark plugs, electric switches, electric starter driving mechanism, etc.; **Reg. No. 260,470**, same, Starting cranks, radiator fans, mufflers, automobile repair tools, etc.; **Reg. No. 266,453**, same, Vehicle gasoline tanks, vehicle springs and shackles, spring clips and radiators used in the manufacture and assembling of vehicles, etc.; **Reg. No. 266,454**, same, Drive chains, bolts, screws, nuts, washers, hinges, cotter pins, clevis pins, etc.; **Reg. No. 374,336**, same, Gasoline combination heating and forced draft ventilating units; **Reg. No. 377,814**, same, Oil filters and oil bath air cleaners; **Reg. No. 377,815**, same, Cushions and seat covers; **Reg. No. 383,900**, same, Tractors, plows and cultivators, and parts thereof, **filed** Apr. 17, 1962, D.C., W.D. Okla. (Oklahoma City), Doc. 9670, *Ford . tor Company v. Meeker Motor Sales et al.*

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 16,359
Date of oldest new application ..... Sept. 18, 1961
Date of oldest amended application ..... Sept. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	9-18-61	9-16-6
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	11-17-61	11-20-61
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Sec. 12 (c) Publications (All Classes)	5-8-62	

Applications filed during the month of May 1962—2,420

Registrations Issued ..... 405—No. 735,099 to No. 735,503
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 83,672. Reichhold Chemicals, Inc., White Plains, N.Y., assignee of Varcum Chemical Corporation, Niagara Falls, N.Y. Filed Oct. 20, 1959.

VARCUM

For Synthetic Resin (Phenol-Aldehyde Condensate), Used in Abrasives, Adhesives, Molding Powders and Surface Coatings.
First use 1938.

SN 125,935. Mother Lode Turkey Farms, Modesto, Calif. Filed Aug. 14, 1961.



No claim is made to the representation of the turkey and eggs appearing as a part of the mark.
For Turkey Hatching Eggs and Live Turkeys.
First use Oct. 1, 1952.

SN 127,512. L. Teweles Seed Co., Milwaukee, Wis. Filed Sept. 8, 1961.

CLOVAMOR

Owner of Reg. No. 677,509.
For Red Clover Seed.
First use Feb. 1, 1961.

SN 130,700. Jewell Smokeless Coal Corporation, Knoxville, Tenn. Filed Oct. 26, 1961.



Applicant disclaims the right to the exclusive use of the word "Smokeless" apart from the mark as shown.
For Bituminous Coal.
First use Nov. 13, 1951.

SN 130,738. Shamrock Coal Company, Knoxville, Tenn. Filed Oct. 26, 1961.



The drawing is lined for the color green. Applicant disclaims the right to the exclusive use of the word "Coal" apart from the mark as shown.
For Bituminous Coal.
First use Jan. 1, 1961.

SN 131,987. George Barratt Park and William John Park (joint owners), d.b.a. Geo. W. Park Seed Company, Greenwood, S.C. Filed Nov. 14, 1961.

PARKSPAK O'GOLD

For Seed Packages and Containers Sold Filled.
First use Oct. 1, 1961.

SN 132,837. International Shoe Company, St. Louis, Mo. Filed Nov. 27, 1961.

CUSH-N-SOLE

For Leather.
First use Sept. 19, 1958.

SN 133,257. Floralife, Inc., Chicago, Ill. Filed Dec. 4, 1961.

STYRO-CLAY

For Clay and Plastic Composition Used for Mounting Floral Arrangements.
First use Sept. 14, 1960.

SN 133,710. Santa Claus Christmas Tree Farms, Peoria, Ill. Filed Dec. 8, 1961.

Santa Claus



The drawing is lined for the color red.
For Christmas Decorations—Namely, Christmas Trees, Greens, Boughs, Wreaths, and Decorative Ropes of Bound Evergreen Boughs.
First use Sept. 28, 1961.

Class 2—Receptades

SN 122,702. International Resistance Company, Philadelphia, Pa. Filed June 23, 1961.

GRIP STRIP

For Elongated, Flexible Strip Adapted To Hold Articles, Such as Electrical Components, in Spaced Parallel Relation.
First use in November 1957.

Class 4—Abrasives and Polishing Materials

SN 109,069. S. C. Johnson & Son, Inc., Racine, Wis. Filed Nov. 25, 1960.

MINIDRUM

For Preparations, Packaged in Drums, for Cleaning, Polishing, and Protecting Hard and Other Surfaces and Combinations Thereof for Use in Commercial, Industrial, and Institutional Establishments.
First use August 1960.

SN 127,743. Atlas Supply Co., Newark, N.J. Filed Sept. 13, 1961.

ATLAS Color Guard

Owner of Reg. No. 654,901.
For Cleaner and Polish.
First use Aug. 17, 1961.

Class 6—Chemicals and Chemical Compositions

SN 119,830. American Sports & Hygiene Accessories, Inc., Jersey City, N.J. Filed May 12, 1961.

GRIP 300

Applicant makes no claim to the word "Grip" apart from its use in the mark as shown.
For Composition for Application to the Skin To Enhance the Friction Properties Thereof.
First use Mar. 15, 1961.

SN 122,044. United States Rubber Company, New York, N.Y. Filed June 14, 1961.

VIBRATHANE

Owner of Reg. No. 642,183.
For Chemical Compositions for Use in Polyurethane Rubbers and Foams—Namely, Liquid and Millable Prepolymers, Polyisocyanates, Polyether Glycols and Catalysts.
First use Aug. 8, 1955.

SN 123,759. Olin Mathieson Chemical Corporation, New York, N.Y. Filed July 11, 1961.

CLOUD

Owner of Reg. No. 565,860.
For Sulphur for Industrial Uses.
First use at least as early as Oct. 1, 1952.

SN 125,740. The Hubbard-Hall Chemical Company, Waterbury, Conn. Filed Aug. 10, 1961.



For Insecticides, Barrel Brightener, Antifreeze, and Industrial Chemicals—Namely, Mineral Spirits, Acetone, Trichlorethylene, Xylol, Benzol, Isopropyl, Naphtha, and Toluol, Bleach, Laundry Sour, and Bluing and Dyes.
First use in or before May 1957.

SN 128,830. Mayborn Products Limited, London, England. Filed Sept. 28, 1961.

DYLON SUPER-WHITE

No claim is made to the words "Super White" apart from the mark as shown. Owner of British Reg. No. 755,090, dated June 25, 1956; and U.S. Reg. Nos. 575,562, 703,348, and 712,706.
For Bleaching Preparations, Optical Bleaching Agents, and Chemical Compositions Comprising Bleaching Preparations and Optical Bleaching Agents, All for Laundry Use.

SN 131,341. Chemetron Corporation, Chicago, Ill. Filed Nov. 6, 1961.

GIRDLER

For Catalysts.
First use in April 1942.

SN 135,106. Chicopee Manufacturing Corporation, d.b.a. Refined Products Company, New Brunswick, N.J. Filed Jan. 3, 1962.

KARASAN

For Textile Softening Agent.
First use June 26, 1956.

SN 135,107. Chicopee Manufacturing Corporation, d.b.a. Refined Products Company, New Brunswick, N.J. Filed Jan. 3, 1962.

KARA WELD

For Textile Slip-Proof Finishing Agent.
First use July 6, 1956.

SN 135,111. Chicopee Manufacturing Corporation, d.b.a. Refined Products Company, New Brunswick, N.J. Filed Jan. 3, 1962.

KARA SOF

For Textile Softener.
First use Aug. 24, 1956.

SN 135,279. Eli Lilly and Company, Indianapolis, Ind. Filed Jan 5, 1962.

TREFLAN

For Chemical Compound Used as a Herbicide for Killing Unwanted Grasses and Certain Broadleaf Weeds Such as: Crabgrass, Goosegrass, Barnyard Grass, Foxtail, Chickweed, Knotweed, Pigweed, Lambsquarters, Smartweed.
First use Dec. 21, 1961.

SN 135,401. Southern Wire Mesh Company, Memphis, Tenn. Filed Jan. 8, 1962.

AIR-FLOW

For Air Entraining Agent for Concrete.
First use Nov. 28, 1961.

SN 135,437. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Jan. 9, 1962.

NATA

Owner of German Reg. No. 615,655, dated Jan. 16, 1952.
For Agents for the Destruction of Animals and Plants, Weed Killers.

SN 135,543. Arthur H. Thomas Company, Philadelphia, Pa. Filed Jan. 10, 1962.

ASCARITE

Owner of Reg. No. 129,552.
For Sodium Hydrate Asbestos Absorbent.
First use November 1918.

Class 12 — Construction Materials

SN 114,314. Ceramica Sao Caetano S.A., Sao Paulo, Brazil. Filed Feb. 24, 1961.



The English translation of "Ceramica Sao Caetano" is "St. Caetano ceramics." The word "Ceramica" is hereby disclaimed apart from the mark as shown. Owner of Brazilian Reg. No. 126,656, dated Sept. 1, 1950.
For Ceramic Building Materials—Namely, Pressed Bricks, Flooring Tiles and Roofing Tiles.

SN 116,193. American-Marietta Company, Chicago, Ill. Filed Mar. 22, 1961.



Owner of Reg. No. 99,163.
For Hardening and Curing Compositions for Improving the Durability and the Impact and Wear Resistance of Concretes and Mortars.
First use Mar. 6, 1961.

SN 121,962. Ames Metal Moulding Co., Inc., Saddle Brook, N.J. Filed June 14, 1961.

HAMMER-TEX

For Wood Core and Extruded Metal Mouldings and Trim—Namely, Binder Bars, Door Edgings, Stair Nosings and Saddles.
First use Apr. 1, 1961.

SN 128,513. Ling-Temco-Vought, Inc., Dallas, Tex., assignee of Chance Vought Corporation, Dallas, Tex. Filed Sept. 25, 1961.

THERMOSORB

For Thermal Energy Shielding Panels.
First use Aug. 23, 1961.

SN 129,340. Clark-Burt Roofing Company, d.b.a. Observa-Dome, Jackson, Miss. Filed Oct. 6, 1961.



Applicant disclaims the representation of the observatory dome apart from the mark as shown, without waiver of, prejudice to, or affect on its common law rights now existing or hereafter arising in said disclaimed matter.
For Prefabricated Observatory Domes and Parts Thereof.
First use July 1, 1961.

SN 129,820. Unit Structures, Inc., Peshtigo, Wis. Filed Oct. 12, 1961.

UNIT

Owner of Reg. Nos. 443,340, 729,615, and others.
For Laminated Wood Arches and Beams and Wood Decking for Building Construction.
First use in January 1942.

SN 132,865. Pennsylvania Western, Inc., Pottstown, Pa. Filed Nov. 27, 1961.

COVENTRY

For Precast Stone, Brick and Concrete Blocks.
First use Aug. 28, 1961.

SN 133,044. American Associated Companies, Inc., Atlanta, Ga. Filed Nov. 30, 1961.

TARZAN

Owner of Reg. No. 640,001.
For Cotton or Fiber Glass Waterproofing Fabrics Saturated With Asphalt or Tar; Also Copper or Plastic Vapor Barrier Flashings.
First use Feb. 1, 1940.

SN 135,876. Cramer Acoustics, San Francisco, Calif. Filed Jan. 16, 1962.

DESIGNLINE

For Building Partitions and Partition Systems.
First use Nov. 30, 1961.

SN 136,098. Architectural Systems, Incorporated, Grand Rapids, Mich. Filed Jan. 19, 1962.



For Movable Partitions and Door Units.
First use on or about July 6, 1959.

SN 136,269. Monarch Tile Manufacturing, Inc., d.b.a. Monarch Tile Mfg. Co., Inc. and Monarch Tile Mfg., Inc., San Angelo, Tex. Filed Jan. 22, 1962.

MONOTILE

For Ceramic Building Tile.
First use June 10, 1953.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 125,141. Hydraulic Unit Specialties Company, Waukesha, Wis. Filed Aug. 1, 1961.

HUSCO

Owner of Reg. No. 432,278.
For Selector and Control Valves, Check Valves, Relief Valves, Swivel Line Connectors.
First use Sept. 17, 1946.

SN 129,731. Briles Manufacturing, El Segundo, Calif. Filed Oct. 12, 1961.

TEMP-LOK

For Bolts and Metal Fasteners.
First use Aug. 2, 1961.

SN 131,300. Mueller Co., Decatur, Ill. Filed Nov. 3, 1961.

AUTOSAFE

For Safety Valve.
First use Sept. 27, 1961.

SN 131,336. The Bloomfield Manufacturing Company, Bloomfield, Ind. Filed Nov. 6, 1961.

KANT-SLAM

For Door Check-Closer.
First use on or about Oct. 1, 1927.

SN 131,858. Henry J. Modrey, d.b.a. Perforation Fastener Company, Stamford, Conn. Filed Nov. 13, 1961.

TURNEX

For Fasteners for Securing Objects and Panels to Surfaces and Walls.
First use Aug. 31, 1961.

SN 131,862. Nibco Inc., Elkhart, Ind. Filed Nov. 13, 1961.

COLOR GUARD

For Fittings and Valves for Fluid Conduits.
First use Oct. 13, 1961, on fittings.

SN 131,869. Phillips Screw Company, East Boston, Mass. Filed Nov. 13, 1961.

TAP-SERT

For Fastening Devices—Namely, Self-Tapping Inserts.
First use Aug. 15, 1959.

SN 131,894. Spring Crest Company, La Habra, Calif. Filed Nov. 13, 1961.

SPRING CREST

For Drapery Hardware—Namely, Pleaters, Glides, Cord Pulleys, Floor Pulleys, Master Carriers, Brackets, Stirrups, Track, and Cord.
First use on or about Nov. 1, 1961.

SN 131,907. United States Steel Corporation, Pittsburgh, Pa. Filed Nov. 13, 1961.

TIGER-GRIP

Owner of Reg. Nos. 195,078, 275,065, and 661,548.
For Wire Rope Fittings.
First use Sept. 20, 1961.

Class 14 — Metals and Metal Castings and Forgings

SN 106,478. Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany. Filed Oct. 17, 1960.

REMANIT

Owner of German Reg. No. 360,467, dated Dec. 4, 1926.
For Rust-, Corrosion-, and Acid-Resistant Steel.

Class 15 — Oils and Greases

SN 111,125. The Pure Oil Company, Palatine, Ill. Filed Dec. 30, 1960.

TRI-TANE

For Chemicals for Use as Multi-Functional Motor Fuel Additive.
First use on or about Dec. 14, 1960.

SN 117,981. Musolino and Sons, Inc., Alexandria, Va. Filed Apr. 17, 1961.

PRIMO

For Gasoline.
First use May 1958.

SN 133,341. Universal Candles, Inc., Los Angeles, Calif. Filed Dec. 4, 1961.



For Candles.
First use June 21, 1961.

Class 17—Tobacco Products

SN 122,301. Gebr. van Schuppen's Ritmeester Sigarenfabrieken N.V., Veenendaal, Netherlands. Filed June 19, 1961.

RITMEESTER

"Ritmeester" is Dutch for a military rank, viz. "captain of cavalry."
For Cigars and Cigarillos.
First use 1939; in commerce 1952.

SN 123,275. Carreras Limited, Basildon, Essex, England. Filed July 3, 1961.



Owner of British Reg. No. 600,477, dated May 5, 1939.
For Cigarettes, Smoking and Chewing Tobacco, Cigars, Cigarillos, Cheroots and Snuff.

SN 133,928. The Bloch Brothers Tobacco Co., Wheeling, W. Va. Filed Dec. 13, 1961.

WEEDE'S CAVENDISH

No claim is made to the word "Cavendish" apart from the mark as shown.
For Smoking Tobacco.
First use July 24, 1952.

SN 137,153. Philip Morris Incorporated, New York, N.Y. Filed Feb. 2, 1962.

BELMONT

For Cigarettes.
First use Jan. 24, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 123,467. Carter Products, Inc., New York, N.Y. Filed July 6, 1961.

SILENT SLEEP

For Pharmaceutical Preparation for Use as an Alleviation of Snoring.
First use May 9, 1961.

SN 124,877. Horace Benton, d.b.a. Desert Traveler Products, Phoenix, Ariz. Filed July 28, 1961.

DESERT TRAVELER

For Ringworm Oil for the Control and Elimination of Irritations and Infections of the Skin.
First use Jan. 15, 1956.

SN 125,146. Lingner-Werke G.m.b.H., Dusseldorf, Germany. Filed Aug. 1, 1961.

SENSATOL

Owner of German Reg. No. 246,232, dated Apr. 27, 1920.
For Ointment for the Sensitive Neck of the Tooth.

SN 126,146. Ben Venue Laboratories, Inc., Bedford, Ohio. Filed Aug. 17, 1961.

CAL-MIST

For Aerosol Spray Calamine Lotion for Treating Poison Ivy, Poison Oak, Insect Bites and Other Minor Skin Irritations.
First use May 31, 1961.

SN 130,133. Vitamin Research Corporation of America, New York, N.Y. Filed Oct. 17, 1961.

VICOA

For Vitamins.
First use on or about July 19, 1961.

SN 132,289. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed Nov. 20, 1961.

BIO-TOSMOSAN

Owner of Reg. Nos. 350,399, 531,020, and 687,487.
For Pharmaceutical Preparation for the Treatment of Ear Diseases.
First use Feb. 1, 1960.

SN 134,762. Shulton, Inc., Clifton, N.J. Filed Dec. 27, 1961.

RESPIR-AID

For Medicated Room Spray for the Relief of Congestion Due to Colds and Hay Fever.
First use Dec. 15, 1961.

SN 135,977. Charles M. Hunter, d.b.a. C. M. Hunter Drug Co., Lima, Ohio. Filed Jan. 17, 1962.

SUPER DEXETTES

The word "Super" is disclaimed apart from the mark as shown.
For Drugs, Specifically, Appetite Depressants.
First use on or about Sept. 19, 1958.

SN 136,434. Clarence E. Bly, d.b.a. United Products Co., Portland, Oreg. Filed Jan. 24, 1962.

SILVER-BULLET

For Vitamin and Mineral Preparation.
First use Dec. 12, 1961.

SN 136,435. Clarence E. Bly, d.b.a. United Products Co., Portland, Oreg. Filed Jan. 24, 1962.

GOLD-BULLET

For Vitamin and Mineral Preparation.
First use Dec. 12, 1961.

SN 137,379. Sedaph Société d'Applications Pharmaceutiques, Paris, France. Filed Feb. 6, 1962.



Priority claimed under Sec. 44(d) on French Reg. No. 499,760, dated Oct. 31, 1961 (Seine), Natl. Inst. No. 173,218.
For Pharmaceutical Preparations for Human and for Veterinary Use.

SN 138,618. Knoll Pharmaceutical Company, Orange, N.J. Filed Feb. 26, 1962.

OCTINUM

Owner of Reg. No. 309,916.
For Antispasmodic and Vasoconstrictor.
First use Feb. 2, 1962.

SN 140,136. Key Pharmaceuticals, Inc., Miami, Fla. Filed Mar. 19, 1962.

LUCODE

For Analgesic Tranquilizer Combination.
First use Mar. 8, 1962.

SN 140,179. The Progonasyl Company, Inc., Tulsa, Okla. Filed Mar. 19, 1962.

PRO-OTASYL

For Decongestant Pharmaceutical for the Ears.
First use Mar. 24, 1961.

SN 140,252. Geigy Chemical Corporation, Ardsley, N.Y. Filed Mar. 20, 1962.

PERTOFRANE

Owner of Reg. No. 728,464.
For Anti-Depressant Preparation.
First use Mar. 13, 1962.

SN 140,335. Cole Chemical Company, St. Louis, Mo. Filed Mar. 21, 1962.

BARBA-NIACIN

For Pharmaceutical Preparation for Use as a Sedative.
First use Jan. 29, 1962.

SN 140,809. Savage Laboratories, Inc., Houston, Tex. Filed Mar. 26, 1962.

VI-TESTRIN

For Pharmaceutical Preparation Consisting of a Balanced Vitamin, Hormone and Mineral Supplement.
First use June 6, 1957.

SN 140,831. Geigy Chemical Corporation, Ardsley, N.Y. Filed Mar. 27, 1962.

DIGNIL

For Psychosomatic Preparation.
First use Mar. 2, 1962.

Class 19—Vehicles

SN 129,299. Donald F. Sloat, d.b.a. Sloat Manufacturing Company, Fort Worth, Tex. Filed Oct. 5, 1961.

GYPSY

For Housing Units Adapted for Mounting on Beds of Lightweight Truck Vehicles.
First use Oct. 31, 1960.

SN 129,353. Ford Motor Company, Dearborn, Mich. Filed Oct. 6, 1961.

BLUE CREST

For Used Cars.
First use Aug. 16, 1961.

SN 129,354. Ford Motor Company, Dearborn, Mich. Filed Oct. 6, 1961.

GOLD CREST

For Used Cars.
First use Aug. 16, 1961.

SN 129,355. Ford Motor Company, Dearborn, Mich. Filed Oct. 6, 1961.

SILVER CREST

For Used Cars.
First use Aug. 16, 1961.

SN 129,362. Globe Rubber Products Corp., Philadelphia, Pa. Filed Oct. 6, 1961.

ASTRO MAT

For Rubber Mat for Automobiles.
First use Sept. 13, 1961.

SN 130,071. Morton J. Helper, d.b.a. Slalom Sailboats, Cleveland, Ohio. Filed Oct. 17, 1961.



For Sailboats.
First use on or about June 15, 1961.

SN 130,305. Santa Fe Trailer Co., Inc., Sun Valley, Calif. Filed Oct. 19, 1961.

SANTA FE

For Travel Trailers, Mobile Homes, and Mobile Offices.
First use June 1, 1956.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 93,697. Matsushita Electric Industrial Co., Ltd., Kadomacho, Kitakawachi-gun, Osaka, Japan. Filed Mar. 25, 1960.

National

Owner of Japanese Reg. No. 318,461, dated July 7, 1939.
For Portable Electric Space Heaters, Portable Electric Percolators, Portable Electric Rice Boilers, Portable Electric Bakers, Portable Electric Blenders.

SN 98,577. Robert Gates Fisher, d.b.a. James F. Burns Company, Philadelphia, Pa. Filed June 7, 1960.

ENCLOSURES Burns UNLIMITED

The lining is an indication of shading and not of a particular color. Applicant makes no claim to the word "Enclosures" apart from the mark as shown.
For Cabinets for the Protection and Mounting of Transformers and Other Electrical Controls, Protective Housings Such as Wireways for Electrical Conduits and Open or Closed Unit Receptacles for Housing and Protection Purposes According to Special Needs.
First use Nov. 18, 1959.

SN 120,709. Essex Wire Corporation, Fort Wayne, Ind. Filed May 24, 1961.

EPOXYBOND

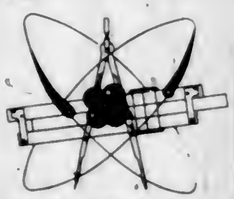
For Film Insulated Magnet.
First use May 10, 1961.

SN 122,187. General Railway Signal Company, Rochester, N.Y. Filed June 16, 1961.

GRS SYSTEMS

No claim is made to the word "Systems" apart from the mark as shown without prejudice to common law rights.
Owner of Reg. Nos. 108,789 and 597,028.
For Electrical Railway Signaling and Control Apparatus.
First use June 12, 1961.

SN 122,998. Cooke Engineering Company, Alexandria, Va. Filed June 28, 1961.



For Electrical and Electronic Equipment Such as Amplifiers, Power Supplies, Switching Devices and Jacks.
First use July 1954.

SN 123,262. Applied Technology, Inc., Palo Alto, Calif. Filed July 3, 1961.

ATI

For Electronic Systems and Instruments—Namely, Radio Receiving Systems, Radio Transmitting Systems, Multicouplers, and Amplifiers.
First use July 13, 1959, on multicouplers.

SN 123,263. Applied Technology, Inc., Palo Alto, Calif. Filed July 3, 1961.



For Electronic Systems and Instruments—Namely, Radio Receiving Systems, Radio Transmitting Systems, Multicouplers, and Amplifiers.
First use July 13, 1959, on multicouplers.

SN 124,801. Crouse-Hinds Company, Syracuse, N.Y. Filed July 27, 1961.

CROUSE/HINDS

Owner of Reg. Nos. 443,222 and 664,339.
For Fittings for Electrical Conduit Installations—Namely, Wiring and Outlet Boxes, Switch Plug and Receptacle Housings, and Wiring Devices Therefor, Hangers, Expansion Joints, Pedestals, Service and Grounding Equipment, Connectors, Couplings and Unions, Cord Clamps, Pipe Plugs, Reducers, Stuffing Boxes, T's, Seals, Drains, Breathers, and Vents; Industrial and Non-Industrial Lighting Fixtures and Portable Lamps and Fixture Hangers; Electrical Connectors—Namely, Plugs and Receptacles; Circuit Breakers, Control Stations and Pilot Lights, Panel Boards, Telephones, Industrial Control Alarm and Signal Device and Instruments; Lighting Equipment—Namely, Flood Lights, Searchlights and Accessories Therefor for Both Hazardous and Non-Hazardous Locations; Traffic Signal Equipment—Namely, Signals, Beacons and Flashers, Control, and Poles, Pedestals, Cabinets and Accessories Therefor; Airport Equipment—Namely, Beacons, Marker Lights, Obstacle Lights, Control Desk and Panels, Flood Lights, Weather Equipment, and Accessories Therefor.
First use July 6, 1961.

SN 127,064. Ward Leonard Electric Co., Mount Vernon, N.Y. Filed Aug. 31, 1961.

SOLITROL

For Lighting Control Systems and Components Used in Stages, Television Studios, Auditoriums, Display Rooms and the Like.
First use in May 1961.

SN 127,585. General Electric Company, Baltimore, Md. Filed Sept. 11, 1961.

LOCKE

Owner of Reg. Nos. 167,606 and 393,782.
For Electrical Insulators.
First use on or about Apr. 1, 1922.

SN 127,629. Omark Industries, Inc., Portland, Oreg. Filed Sept. 11, 1961.

GRAMWELD

For Electrical Welding Apparatus and Equipment, Parts, and Components, Including Welding Studs.
First use Oct. 20, 1960.

SN 127,630. Omark Industries, Inc., Portland, Oreg. Filed Sept. 11, 1961.

OMARK

Owner of Reg. Nos. 641,710 and 655,025.
For Electrical Welding Apparatus and Equipment, Parts, and Components, Including Welding Studs.
First use August 1959.

SN 128,368. The Reliance Electric and Engineering Company, Cleveland, Ohio. Filed Sept. 21, 1961.

VARI-CYCLE

Owner of Reg. Nos. 564,879 and 628,613.
For A.-C. Generators.
First use Mar. 15, 1961.

SN 129,375. Henry Lewis Lampshade Corp., New York, N.Y. Filed Oct. 6, 1961.

HAREM LITES

The word "Lites" is disclaimed apart from the mark as shown.
For Electrical Lighting Fixtures and Lampshades.
First use July 25, 1961.

SN 129,740. Clements Mfg. Co., Chicago, Ill. Filed Oct. 12, 1961.

STERLING

Owner of Reg. No. 383,577.
For Electric Portable Vacuum Cleaners.
First use Nov. 11, 1930.

SN 130,712. Mallory Electric Corporation, Detroit, Mich. Filed Oct. 26, 1961.

DOUBLE-LIFE DISTRIBUTOR

No claim is made to the word "Distributor" apart from the mark.
For Distributors and Parts Thereof for Internal Combustion Engine Ignition Systems.
First use Aug. 2, 1961.

SN 130,838. Standard Elektrik Lorenz Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany. Filed Oct. 27, 1961.

ILLUSTRAMATIC

Owner of German Reg. No. St 5042/22b Wz, dated Dec. 7, 1960.
For Radio and Television Receiving Apparatus, as Well as Parts of These Apparatus; Electrical Sound Recording and Reproducing Apparatus; Chest and Console-Type Radio and Phono Cabinets; Attachments for Radio and Television Receivers, as Well as for Sound Recording and Reproducing Equipments—Namely, Secondary Speakers; Remote Control Apparatus, Power Supply Attachments.

SN 133,230. Dixie Controller, Inc., Birmingham, Ala. Filed Dec. 4, 1961.

EMERG-O-MATIC

For Emergency Electrical Lighting and Power Units.
First use Sept. 30, 1960.

SN 133,482. Moloney Electric Company, St. Louis, Mo. Filed Dec. 6, 1961.

DURATHERM

For Electrical Insulation and Transformers.
First use Nov. 9, 1961.

Class 22 — Games, Toys, and Sporting Goods

SN 53,914. Wham-O Mfg. Co., San Gabriel, Calif. Filed June 19, 1958.

HULA-HOOP

For Plastic Toy Hoops.
First use May 20, 1958.

SN 115,359. MacGregor Sport Products Inc., Cincinnati, Ohio. Filed Mar. 10, 1961.



For Playing Equipment and Accessories for Use in Playing Golf.
First use June 1959.

SN 116,190. American Doll & Toy Corporation, Brooklyn, N.Y. Filed Mar. 22, 1961.

TOODLE-LOO

Owner of Reg. No. 622,088.
For Dolls.
First use Feb. 28, 1961.

SN 116,795. Bankers Utilities Company, South San Francisco, Calif. Filed Mar. 30, 1961.

ADD-A-COIN

For Portable Savings Banks.
First use in 1922.

SN 120,136. Shakespeare Company, Kalamazoo, Mich. Filed May 16, 1961.

SP MONO

For Fishing Line.
First use Aug. 1, 1959.

SN 120,905. Roberts Dental Manufacturing Co., Inc., Buffalo, N.Y. Filed May 26, 1961.

Shield

For Athletic Mouth Guard.
First use Apr. 17, 1961.

SN 121,395. The Kingfisher-Bristol Company, New York, N.Y. Filed June 5, 1961.

BONNYL

For Fishing Line.
First use at least as early as Mar. 13, 1961.

SN 127,221. Mary Fitch Greenwood, Carmel, Calif. Filed Sept. 5, 1961.

BLACKEM

For Game Board and Playing Pieces Sold as a Unit for Playing a Game.
First use May 12, 1961.

SN 130,949. Vegas Kards, Inc., Dallas, Tex., assignee of Pullman Games, Inc., Dallas, Tex. Filed Oct. 30, 1961.

VEGAS KARDS

No claim of exclusive right is made to "Kards" as used on playing cards.
For Special Playing Cards and Equipment for Playing Various Type Games and Card Games.
First use Sept. 1, 1961.

SN 131,938. F. M. Crump & Co., Memphis, Tenn. Filed Nov. 14, 1961.

BUBBLE BEANIE

No claim is made to an exclusive right to use of the word "Beanie" apart from the other features of the mark shown.
For Child's Plastic Toy Hat Having an Article-Containing and Dispensing Compartment.
First use Oct. 17, 1961.

SN 134,285. Strike-King Corporation, El Segundo, Calif. Filed Dec. 18, 1961.

JET-SET

For Bowling Score-Keeper Chairs for Use in Bowling Alleys.
First use on or about Dec. 6, 1961.

SN 134,286. Strike-King Corporation, El Segundo, Calif. Filed Dec. 18, 1961.

Strike Kleen

For Bowling Score-Keeper Chairs for Use in Bowling Alleys.
First use on or about Dec. 6, 1961.

SN 134,608. Cadaco-Ellis, Inc., Chicago, Ill. Filed Dec. 26, 1961.

TOP COP

For Apparatus for Playing a Parlor Game.
First use Mar. 1, 1961.

SN 134,621. Dunlop Tire and Rubber Corporation, Buffalo, N.Y. Filed Dec. 26, 1961.

SPRITE

For Golf Balls.
First use Oct. 31, 1961.

SN 134,622. Dunlop Tire and Rubber Corporation, Buffalo, N.Y. Filed Dec. 26, 1961.

X 15

For Golf Balls.
First use Oct. 31, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 74,475. Sun Ray Hair Preparations Co., New York, N.Y. Filed May 25, 1959.

SUN-RAY

Owner of Reg. Nos. 213,840 and 441,638.
For Cutlery, Including Hair Clippers and Blades, Razors, Scissors for Cutting Hair.
First use in 1950.

SN 101,338. Peter G. Pritz, d.b.a. P. G. Pritz, Engineering, Willow Grove, Pa. Filed July 22, 1960.

MAG-NO-LEAK

For Electrically Driven Pumps of the Rotary Type for Maintaining a Continuous Flow to Such Devices as Aquariums and Fish Bowls.
First use May 13, 1960.

SN 107,389. The Tool Steel Gear and Pinion Company, Cincinnati, Ohio. Filed S.R. Oct. 28, 1960; Am. P.R. May 16, 1962.



For Toothed Machine Parts—Namely, Gears of All Types, Sprockets and Pinions.
First use 1910.

SN 109,789. The Gamewell Company, Newton, Mass. Filed Dec. 7, 1960.

BLISS ROCKWOOD

The drawing is lined for red, but no claim is made for color. Owner of Reg. Nos. 512,680, 513,556, and 624,264.
For Fire Extinguishing Equipment, Fire Protection Systems and Parts Therefor.
First use on or about Sept. 15, 1960.

SN 117,529. Peters Machinery Company, Chicago, Ill. Filed Apr. 10, 1961.

Peters

The lining on the drawing represents a series of parallel oblique lines.
For Machines and Conveyors for Bakery and Packaging Fields.
First use May 1956; December 1918 on "Peters" in a different form.

SN 117,530. Peters Machinery Company, Chicago, Ill. Filed Apr. 10, 1961.

PETERS

For Machines and Conveyors for Bakery nd Packaging Fields.
First use December 1918.

SN 118,604. H. R. Radomski & Co. Limited, Toronto, Ontario, Canada. Filed Apr. 25, 1961.

TRUE FRIENDS

Owner of Canadian Reg. No. 111,761, dated Oct. 3, 1958.
For Grass and Garden Shears.

SN 118,935. The American Agricultural Chemical Company, New York, N.Y. Filed May 1, 1961.

BRUSHON

For Spreaders.
First use Mar. 10, 1961.

SN 123,291. Feedall, Incorporated, Willoughby, Ohio. Filed July 3, 1961.

FEEDALL

For Material Handling Apparatus for Moving Parts of Various Sizes and Shapes From One Station to Another in a Processing Line.
First use in or about February 1947.

SN 127,409. Loomis Engineering & Manufacturing Company, Caldwell, N.J. Filed Sept. 7, 1961.

ISOMATIC

For Presses Used for Compacting Powdered Materials.
First use May 12, 1961.

SN 129,906. Automated Products, Inc., Englewood, Colo. Filed Oct. 16, 1961.

TEAOJOY

For Machines for Making and Dispensing Flavored Drinks.
First use June 23, 1961.

SN 129,907. Automated Products, Inc., Englewood, Colo. Filed Oct. 16, 1961.

LEMOJOY

For Machines for Making and Dispensing Flavored Drinks.
First use June 23, 1961.

SN 130,115. Louis W. Schultz, River Forest, Ill. Filed Oct. 17, 1961.

PORT-A-POINT

For Portable Drill Sharpening or Pointing Tool.
First use Jan. 1, 1961.

SN 131,289. Kimberly-Clark Corporation, Neenah, Wis. Filed Nov. 3, 1961.



Owner of Reg. No. 705,597.
For Vending Machines for Dispensing Package of Absorbent Paper Tissue.
First use Oct. 6, 1961.

SN 131,290. Kimberly-Clark Corporation, Neenah, Wis. Filed Nov. 3, 1961.



Owner of Reg. No. 706,967.
For Vending Machines for Dispensing Packages of Absorbent Paper Tissue.
First use Oct. 6, 1961.

SN 131,880. Saco-Lowell Shops, Chicago, Ill. Filed Nov. 13, 1961.

MAGNEDRAFT

For Textile Machinery—Namely, Spinning Frame.
First use Oct. 24, 1961.

SN 133,236. Emil Egger & Co., A.G., Cressier, Switzerland. Filed Dec. 4, 1961.

TURO

Priority claimed under Sec. 44(d) on Swiss Reg. No. 186,389, dated June 8, 1961.
For Pumps, Particularly Hydraulic Centrifugal Pumps.

SN 133,406. Outboard Marine Corporation, Waukegan, Ill. Filed Dec. 5, 1961.

ELECTRAMATIC

For Outboard Motors.
First use July 15, 1961.

SN 133,523. Bar-Master, Inc., Los Angeles, Calif. Filed Dec. 7, 1961.



For Electrically Operated Beverage Dispensing Units.
First use Mar. 10, 1961.

Class 25—Locks and Safes

SN 114,616. Independent Lock Company, Fitchburg, Mass. Filed Feb. 28, 1961.

1092

For Key Blanks.
First use at least as early as 1929.

SN 114,619. Independent Lock Company, Fitchburg, Mass. Filed Feb. 28, 1961.

1004

For Key Blanks.
First use at least as early as 1922.

SN 114,620. Independent Lock Company, Fitchburg, Mass. Filed Feb. 28, 1961.

1145

For Key Blanks.
First use at least as early as 1937.

Class 26—Measuring and Scientific Appliances

SN 97,406. Metrawatt Aktiengesellschaft, Nurnberg, Germany. Filed May 18, 1960.



For Ammeter, Measuring Transformer, Precision Resistor for Measuring Purposes, Voltmeter, Frequency Meter, Wattmeter, Power Factor Meter, Multimeter, Ohmmeter, Bridge Insulation and Earth Tester, Cable Tracer, Line Recorder, Chopper Bar Recorder, Potentiometric Recorder, Controller, Compensator, Telemetering Converter, D.C. to D.C. Converter, Illumination Meter, Photo-Electric Exposure Meter.
First use Oct. 19, 1935; in commerce Aug. 1, 1938, on Photoelectric exposure meters.

SN 101,171. Carl Haas, Schramberg, Wurttemberg, Germany. Filed July 20, 1960.

NIOX

For Spiral Springs and Hair Springs for Use on Measuring Instruments, Such as Ammeters, Voltmeters, Wattmeters, Photoelectric Illumination Meters.
First use Oct. 6, 1958; in commerce Nov. 6, 1958.

SN 102,239. Hewlett-Packard Company, Palo Alto, Calif. Filed Aug. 8, 1960.



Owner of Reg. No. 672,204.
For Instruments and Equipment for Data Handling, Control, Measuring or Testing Purposes—Namely, Attenuators, Data Handling Systems, Electronic Counters and Accessories, Frequency Counters, Oscillators, Power Meters, Signal Generators, Simulators, Tachometers, Test Sets, Time Control Units, Voltmeters, Voltage to Frequency Converters.
First use in April 1960.

SN 107,039. Motometer Hermann Schlaich, Stuttgart, Germany. Filed Oct. 24, 1960.

MOTOMETER

For Automobile Accessories and Dashboard Instruments and Garage Equipment—Namely, Speed and Distance Measuring and Indicating Devices, Electric Measuring Devices, Gas Tank Gauges, Automobile Tire Pressure and Compression Testers and Recorders, and Temperature and Pressure Measuring, Recording and Controlling Devices.
First use in or about the year 1920; in commerce at least as early as 1939.

SN 117,369. International Controls Corporation, Houston, Tex. Filed Apr. 7, 1961.



For Automatic and Remote Control Systems Wherein a Variable To Be Controlled Is Sensed at a Satellite Station and the Resulting Intelligence Employed Locally To Control the Variable or Transmitted Through a Suitable Communication Channel to a Control Station Where the Intelligence Can Be (a) Stored, (b) Displayed, (c) Recorded, or (d) Converted to a Feedback to the Satellite Station To Control the Variable; or Wherein a Control Station Can Initiate an Action by Sending a Signal to a Satellite Station Which in Turn Responds To Cause the Action; an Example of Such Systems Being the Automatic Control of Pumps and Other Equipment at a Pipeline Pumping Station.
First use Aug. 9, 1960.

SN 122,467. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

H.H.SCOTT

For Audio-Frequency, Video-Frequency, Carrier-Frequency, Noise and Radio-Frequency Signal Generators; Sound-Level Meters; Sound Analyzers; Meters Including Voltmeters, Ammeters, Wattmeters and Differential Voltmeters; Electron-Beam or Cathode-Ray Devices and Indicators; Electro-Optical Indicators; Electrical Signal-Level Indicators; Sound and Radio Detecting Apparatus; and Stroboscopic Devices.
First use in or about 1951.

SN 122,469. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

Scott

For Audio-Frequency, Video-Frequency, Carrier-Frequency, Noise and Radio-Frequency Signal Generators; Sound-Level Meters; Sound Analyzers; Meters Including Voltmeters, Ammeters, Wattmeters and Differential Voltmeters; Electron-Beam or Cathode-Ray Devices and Indicators; Electro-Optical Indicators; Electrical Signal-Level Indicators; Sound and Radio Detecting Apparatus; and Stroboscopic Devices.
First use in or about early 1955.

SN 132,071. The Procter & Gamble Company, Cincinnati, Ohio. Filed Nov. 15, 1961.

RAY-VIEW

For Device To Teach Dental Patients the Value of Radiographs in Dental Prognosis and Therapy.
First use May 1957.

SN 133,852. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Dec. 12, 1961.

POSISTAT

Owner of German Reg. No. 751,449, dated Aug. 2, 1961.
For Light Sensitive Photographic Papers.

SN 133,853. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Dec. 12, 1961.

POSIFLEX

Owner of German Reg. No. 751,449, dated Aug. 2, 1961.
For Light Sensitive Photographic Papers.

SN 133,913. Ware Engineering Incorporated, Redwood City, Calif. Filed Dec. 12, 1961.

MICRO-INCH

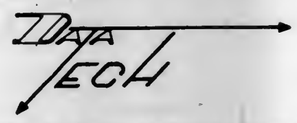
For Precision Measuring Instruments—Namely, Measuring Stage or Microscope, Spectrogram Comparator, Interferometer (Precision Screw), Interferometer (Instruction), Coordinate Cathetometer, and Fringe Counter.
First use Aug. 5, 1961.

SN 134,289. The Technicon Company, Inc., Chauncey, N.Y. Filed Dec. 18, 1961.

TECHNICON

Owner of Reg. Nos. 529,538, 648,589, and others.
For Automatic Immersion Apparatus for Processing Histologic Tissue for Microscopic Examination.
First use Aug. 22, 1956.

SN 135,883. Data Technology, Inc., Cambridge, Mass. Filed Jan. 16, 1962.



For Encoders Providing Angular or Linear Position Information.
First use July 15, 1961.

SN 136,122. The Esterbrook Pen Company, Camden, N.J. Filed Jan. 19, 1962.

MARK-TROL

For Marking Apparatus for Recording Meter Instruments, Parts and Ink Cartridges Therefor.
First use Sept. 25, 1961.

SN 136,244. Intercontinental Marketing Corporation, Long Island City, N.Y. Filed Jan. 22, 1962.

INTERCONTINENTAL

Owner of Reg. No. 690,197.
For Photographic Articles—Namely, Finders, Distance Meters, Range Finders, Exposure Meters, Color Filters With and Without Mountings, Auxiliary Lenses, Automatic Releases, Cases, Tripods, Tripod Heads, Enlarging Apparatus, Projection Apparatus, Printing Apparatus, Film Spools, Film Slides, Lenses, Camera Shutters, Carrying Straps, Stereo Auxiliaries, Stereo Viewers, Lens Caps, Solar Diaphragms, Apparatus for Developing Sensitized Photographic Materials, Viewing Lenses and Apparatus for Determining the Depth of Focus Tables, Thermometers for Photographic Developing

Tanks, Electrical Flash Bulbs and Synchronizers, Flash Gun Units (Synchronizers), Film Rewinds for Rewinding Photographic Films From One Reel to Another, Binoculars, Telescopes, Plastic Recording Tape, Lighting Units, Batteries, Viewers, Sensitized Plates, Developing Trays, Sensitized Film, Sensitized Photographic Papers, Cameras, Camera Parts, Audio-Visual Projectors, Teaching Machines, Tape Recorders, Microfilm Readers, Motion Picture Projectors, Still Projectors.
First use January 1938.

Class 30 — Crockery, Earthenware, and Porcelain

SN 138,875. Onondaga Pottery Company, Syracuse, N.Y. Filed Mar. 1, 1962.

GALLERY COLLECTION

No claim is made by the applicant to exclusive use of the word "Collection" apart from the mark as shown.
For Dinnerware and Tableware Made of China.
First use Jan. 31, 1962.

Class 31 — Filters and Refrigerators

SN 127,034. Pall Corporation, Glen Cove, N.Y. Filed Aug. 31, 1961.

SEPALL

For Coalescer Separators and Filters for Removing Liquids and Other Matter Suspended in Another Liquid, Particularly Water From Fuel.
First use Mar. 3, 1961.

SN 131,331. Bally Case and Cooler, Inc., Bally, Pa. Filed Nov. 6, 1961.

SPEED-LOK

For Panel Assembly Connectors for Walk-In Storage Freezers.
First use 1958.

SN 131,386. Modern Water Equipment Company, Freeport, Ill. Filed Nov. 6, 1961.

Holiday

For Base Exchange Water Softeners.
First use Mar. 3, 1959.

SN 131,843. Robert E. JoDon, Scottsdale, Ariz. Filed Nov. 13, 1961.



For Refrigerating Apparatus to Provide Chilled Water at Sink Tap.
First use Nov. 3, 1961.

SN 131,925. Aktiebolaget Electrolux, Stockholm, Sweden. Filed Nov. 13, 1961.



Owner of Swedish Reg. No. 100,383, dated Aug. 18, 1961; and U.S. Reg. No. 570,610.
For Household Refrigerators.

SN 131,928. Ansul Chemical Company, Marinette, Wis. Filed Nov. 14, 1961.

SYSTEM BOSS

For Drier Unit for Refrigerating Systems.
First use at least as early as Mar. 1, 1961.

Class 32 — Furniture and Upholstery

SN 98,670. Modern Metal Products Co., Greensboro, N.C. Filed June 8, 1960.

ROLL-A-DOOR

For Outdoor Merchandise Rack for Warehousing and Displaying Tires.
First use Mar. 29, 1960.

SN 109,959. Fleischman Industries of California, Lynwood, Calif. Filed Dec. 9, 1960.

SLACRAC

For Multiple Trouser Hanging and Displaying Apparatus for Use in a Retail Store.
First use Nov. 21, 1956.

SN 122,051. A.C. Development Co., Inc., New York, N.Y. Filed June 15, 1961.

the jolly•go•crib

The word "Crib" is disclaimed apart from its use as shown.
For Infants' Cribs.
First use Apr. 10, 1961.

SN 123,191. Gladwin Plastics, Inc., Altanta, Ga. Filed June 30, 1961.

SHELF-ETTE

Owner of Reg. No. 701,378.
For Walk-Up Partial Telephone Enclosures.
First use on or about May 19, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 119,931. Carrier Corporation, Syracuse, N.Y. Filed May 15, 1961.

MODULINE

For Air Terminals for Use in Air Conditioning, Heating, Ventilating, and Cooling Systems.
First use Apr. 7, 1961.

SN 132,920. Holland Industries, Incorporated, Buffalo, N.Y. Filed Nov. 28, 1961.

TEENY WEENY

For Cooking Grills.
First use on or about Oct. 4, 1961.

SN 133,073. Hoyt Heater Company, Orange, Calif. Filed Nov. 30, 1961.

BALBOA

For Hot Water Heaters.
First use Nov. 10, 1961.

SN 133,089. Ruud Manufacturing Company, Kalamazoo, Mich. Filed Nov. 30, 1961.

FLOATER V

For Gas Fired Water Heaters.
First use July 19, 1961.

Class 36 — Musical Instruments and Supplies

SN 123,566. Record Sales Service Inc., Oakton, Va. Filed July 7, 1961.

SELL YOURSELF RICH

For Grooved Phonograph Record.
First use May 8, 1961.

Class 37 — Paper and Stationery

SN 98,913. Marcal Paper Mills, Inc., Paterson, N.J. Filed June 13, 1960.

AUTO HANKIES

Because "hankies" is a common name for the goods, applicant makes no claim to the term "Hankies" apart from the mark shown, but applicant waives none of its common law rights in the composite mark shown.
For Paper Handkerchiefs.
First use May 3, 1960.

SN 118,972. A. B. Dick Company, Niles, Ill. Filed May 1, 1961.

AZOFAX

For Lithographic Masters and Transfer Sheets and Lithographic Master and Transfer Sheet Assemblies.
First use Oct. 21, 1960.

SN 119,450. The Executive Desk Diary, Ltd., New York, N.Y. Filed May 4, 1961.

CLIP-WRITE

For Identification and Place Marker for Books, and the Like.
First use Oct. 15, 1959.

SN 121,198. Hudgeons, Cleveland Ohio. Filed June 1, 1961.



No claim is made to the wording "E-Z Seal" apart from the mark.
For Cardboard Coin Mounting and Holding Device.
First use Dec. 1, 1960.

SN 121,228. L. L. Ridgway Company, Inc., Houston, Tex. Filed June 1, 1961.



For Blueprint Paper and Cloth, Drawing Papers, Tracing Papers and Tracing Cloths, Graph Sheets, Field Books, Lettering Pens, Drawing Pencils, Erasers, and Pen Points.
First use 1936 on blueprint paper.

SN 133,216. Columbia River Paper Co., Portland, Oreg. Filed Dec. 4, 1961.

TIMBERLINE

Owner of Reg. No. 548,175.
For Duplicating Paper Employed Primarily in Commercial Duplicating.
First use Aug. 1, 1954.

SN 138,668. The Steck Company, Austin, Tex. Filed Feb. 26, 1962.

RECORDETTE

For Birth Certificates.
First use Aug. 1, 1961.

SN 140,035. Nashua Corporation, Nashua, N.H. Filed Mar. 16, 1962.

DIAZOTHERM

For Thermal Copying Paper.
First use Dec. 28, 1961.

SN 141,079. Kimberly-Clark Corporation, Neenah, Wis. Filed Mar. 29, 1962.

SCRIBECOAT

Owner of Reg. No. 706,015.
For Writing Paper.
First use Mar. 22, 1962.

SN 141,317. Lakeside-Central Company, Chicago, Ill. Filed Apr. 2, 1962.

RITEWORTHY

Owner of Reg. No. 724,841.
For Writing Tablets, Note Books, Composition Books, Blank Spelling Books, Music Books, Drawing Books, Stenographic Notebooks, Memorandum Books, Fillers, Filler Pads for Use With Loose Leaf Books, Typewriter Paper and Second Sheets Both Padded and Not Padded, Scratch Pads, Index Cards, Index Guides, Art Paper, Packages of Note Sheets and/or Envelopes and Box Stationery Containing Writing Paper and Envelopes.
First use Dec. 1, 1960.

Class 38 — Prints and Publications

SN 105,475. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Sept. 19, 1960.

Ambassador

YOUR PERSONAL EMBOY OF GOOD TASTE

Owner of Reg. No. 689,926.
For Greeting Cards, Party Invitations, Birth Announcements, Dance Programs, Calendars, Tally and Place Cards.
First use on or about Dec. 15, 1959.

SN 114,302. Vance Publishing Corporation, Chicago, Ill. Filed Feb. 16, 1961.

Building Materials MERCHANDISER

Owner of Reg. Nos. 520,336 and 565,113.
For Magazine.
First use Jan. 2, 1961.

SN 121,271. Continental Air Lines, Inc., Denver, Colo. Filed June 2, 1961.

CONTINENTAL

For Newsletter Published From Time to Time.
First use on or about July 1, 1960.

SN 121,272. Continental Air Lines, Inc., Denver, Colo. Filed June 2, 1961.

CONTINENTAL AIRLINES

For Newsletter Published From Time to Time.
First use on or about Aug. 25, 1941.

SN 126,569. Chapel Art Studios, St. Louis, Mo. Filed Aug. 24, 1961.

SLENDORAMA

Applicant disclaims right to the exclusive use of the words "Tall Cards" apart from the mark as shown.
For Greeting Cards.
First use June 1955.

SN 126,574. Chapel Art Studios, St. Louis, Mo. Filed Aug. 24, 1961.

Parchment Elegance

Applicant disclaims the right to exclusive use of the word "Parchment" apart from the mark as shown.
For Greeting Cards.
First use June 1959.

SN 130,632. Franz J. Katz, New York, N.Y. Filed Oct. 25, 1961.

LIVING GEOGRAPHY

For Travel Newsletter.
First use Oct. 20, 1961.

SN 131,004. The Board of Christian Education of the United Presbyterian Church in the United States of America, Philadelphia, Pa. Filed Oct. 31, 1961.

The Westminster Press

Owner of Reg. No. 389,538.
For Books, Hymnals, Textbooks, Magazines, Pamphlets, Tracts, Brochures, Printed Pictures, Announcements, Church Record Forms, Sunday School Record Forms and Choir Anthem Books and Sheet Music.
First use Since 1897.

SN 133,138. Dell Publishing Co., Inc., New York, N.Y. Filed Dec. 1, 1961.

KOOKIE

For Magazine of the Comic Book Type.
First use Nov. 13, 1961.

SN 133,703. Random House, Inc., New York, N.Y. Filed Dec. 8, 1961.

GIBRALTAR LIBRARY BINDING

No claim is made to the words "Library Binding" apart from the mark as shown.
For Book Bindings Incorporated in Finished Books.
First use Nov. 24, 1961.

SN 133,952. Edward A. Harris, d.b.a. Fortune Features, Huntly, Va. Filed Dec. 13, 1961.

ADAM AND EVE

For Newspaper Column.
First use Oct. 15, 1961.

SN 134,879. Eros Magazine, Inc., New York, N.Y. Filed Dec. 29, 1961.

EROS

For Periodical Magazine.
First use Nov. 15, 1961.

SN 135,205. Kanrom, Inc., New York, N.Y. Filed Jan. 4, 1962.

DAILY-DILLY

For Humorous Yearly Reminder and Appointment Calendar.
First use Mar. 15, 1959.

SN 139,742. Robert H. Frame, d.b.a. Gallery Arts, Dayton, Ohio. Filed Mar. 13, 1962.

LATE DATE

For Calendars.
First use Feb. 7, 1962.

Class 39 — Clothing

SN 98,028. Earl R. Shaw, d.b.a. Tie Rite Neckwear Company, Asheboro, N.C. Filed May 27, 1960.

TIE RITE

Owner of Reg. No. 585,806.
For Men's and Boys' Ties.
First use June 15, 1957.

SN 105,135. August Charles Bollar, d.b.a. Tailored Baby of California, Van Nuys, Calif. Filed Sept. 26, 1960.

Terri-Dypes

For Diapers Made Principally of Terry Cloth.
First use Aug. 15, 1960.

SN 114,372. Toby, Incorporated, Thiensville, Wis. Filed Feb. 24, 1961.



The drawing is lined for the colors pink and blue.
For Infants', Boys', and Girls' Coats, Jackets, Raincoats, Dresses, Pinafores, Skirts, Sweaters, Blouses, Shirts, Slacks, Overalls, Ski-Wear, Robes, Pajamas, Buntings, Slippers, Caps, Hats, Scarves, Mittens and Gloves.
First use Aug. 26, 1938.

SN 115,259. Sarong, Inc., New York, N.Y. Filed Mar. 9, 1961.

TAHITI

For Elastic Girdles.
First use Dec. 1, 1960.

SN 116,097. Arnold J. Weber, New York, N.Y. Filed Mar. 20, 1961.

1-HOUR FASHIONS

The word "Fashions" is disclaimed apart from the mark as shown.
For Women's and Children's Dresses, Women's Blouses, Men's Shirts and Underwear.
First use Mar. 10, 1961.

SN 117,004. Harrods of California, Los Angeles, Calif. Filed Apr. 3, 1961.

HARRODS

For Women's Suits, Coats, Blouses, Skirts and Jackets.
First use 1945.

SN 117,406. Spartans Industries, Inc., New York, N.Y. Filed Apr. 7, 1961.

COORDI-MATES

For Women's and Girls' Shirts, Blouses, Skirts, and Pants.
First use Feb. 4, 1961.

SN 119,734. AB Jersey Modeller, Boras, Sweden. Filed May 11, 1961.

jer-sea of Sweden

Applicant disclaims the phrase "of Sweden" apart from the mark as shown.
For Articles of Beach Wear—Namely, Swim Suits, Swim Trunks, Hats, Head-Bands, Beach Jackets.
First use spring 1957; in commerce Apr. 9, 1959.

SN 123,335. Maidenform, Inc., New York, N.Y. Filed July 3, 1961.

DREAMLINER

Owner of Reg. Nos. 715,818 and 741,771.
For Foundation Garments.
First use May 31, 1961.

SN 123,773. Sarong, Inc., Dover, Del. Filed July 11, 1961.

PERFECTION CONTROL

The word "Control" is disclaimed apart from the mark as shown.
Owner of Reg. Nos. 154,641 and 212,478.
For Foundation Garments.
First use Dec. 1, 1960.

SN 125,365. The Walker T. Dickerson Company, Columbus, Ohio. Filed Aug. 4, 1961.

Dickerson
TISHU-WELT

Owner of Reg. Nos. 341,121, 690,936 and others.
For Women's and Misses' Shoes.
First use on or about June 1, 1961; February 1930 as to "Dickerson."

SN 125,366. The Walker T. Dickerson Company, Columbus, Ohio. Filed Aug. 4, 1961.

Dickerson
FLEX-WALKER

Owner of Reg. Nos. 341,121, 690,936 and others.
For Women's and Misses' Shoes.
First use on or about June 1, 1961; February 1930 as to "Dickerson."

SN 125,367. The Walker T. Dickerson Company, Columbus, Ohio. Filed Aug. 4, 1961.

Dickerson
ARCHLOCK

Owner of Reg. Nos. 341,121, 690,936 and others.
For Women's and Misses' Shoes.
First use on or about June 1, 1961; February 1930 as to "Dickerson."

SN 125,368. The Walker T. Dickerson Company, Columbus, Ohio. Filed Aug. 4, 1961.

Dickerson
ARCH-RELIEF

Owner of Reg. Nos. 195,446, 581,513 and others.
For Women's and Misses' Shoes.
First use on or about June 1, 1961; February 1930 as to "Dickerson," June 3, 1919 as to "Arch-Relief."

SN 125,806. Coat Craft Company, Inc., Philadelphia, Pa. Filed Aug. 11, 1961.

MINDY MODES

Applicant disclaims the word "Modes" apart from the mark as shown.
For Coats for Young Juniors.
First use June 7, 1961.

SN 127,475. Hagerstown Manufacturing Co., Inc., Hagerstown, Md. Filed Sept. 8, 1961.

Jane Lee

For Children's Dresses.
First use July 29, 1961.

SN 128,819. Genesco Inc., Nashville, Tenn. Filed Sept. 28, 1961.

marie-paule

The name "Marie-Paule" is not the name of an individual but merely a fanciful name selected for its feminine appeal.
For Shoes of Leather, Rubber, Fabric, or a Combination of Those Materials for Women and Girls.
First use Nov. 2, 1960.

SN 128,884. Blue Bell, Inc., Greensboro, N.C. Filed Sept. 29, 1961.



Owner of Reg. Nos. 544,681, 721,639 and others.
For Ladies' and Misses' Blouses, and Ladies', Girls' and Little Girls' Sportswear—Namely, Sport Jackets and Sport Coats, Shorts, Bermuda Shorts, Jamaica Shorts, Capri Pants, Pedal Pushers and Slacks.
First use Sept. 2, 1961.

SN 130,453. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. Filed Oct. 23, 1961.

ASTROLYTE

For Coats.
First use on or about Sept. 29, 1961.
Subj. to Intf. with SN 136,918.

SN 130,539. Blue Bell, Inc., Greensboro, N.C. Filed Oct. 24, 1961.

JEANIE

Owner of Reg. Nos. 544,681, 721,639 and others.
For Ladies' and Misses' Blouses, and Ladies', Girls' and Little Girls' Sportswear—Namely, Sport Jackets and Sport Coats, Shorts, Bermuda Shorts, Jamaica Shorts, Capri Pants, Pedal Pushers and Slacks.
First use Sept. 15, 1961.

SN 131,269. Cherberg Company, Inc., Philadelphia, Pa. Filed Nov. 3, 1961.

PETIT LEIGUE BY CHERBERG

Owner of Reg. No. 708,121.
For Dresses.
First use Oct. 20, 1961.

SN 132,299. City Stores Company, New York, N.Y. Filed Nov. 20, 1961.

Norgate

Owner of Reg. No. 694,291.
For Men's Socks, Handkerchiefs, Pajamas, Underwear, and Belts.
First use Sept. 30, 1960.

SN 133,294. Modern Shoe Company, St. Louis, Mo. Filed Dec. 4, 1961.

STRATO-LITE

For Men's and Boys' Shoes.
First use Oct. 16, 1961.
Subj. to Intf. with SN 138,195.

SN 134,374. Compax Corp., Woodside, N.Y. Filed Dec. 20, 1961.

Pak-nit

Owner of Reg. Nos. 724,857 and 725,070.
For Knitted Textile Garments—Namely, T-Shirts, Athletic Shirts, Polo Shirts, Briefs, Shorts, Pajamas, Sleepers, and Similar Garments Made of Knitted Fabric.
First use Nov. 27, 1961.

SN 134,903. Somersworth Manufacturing Company, Inc., Somersworth, N.H. Filed Dec. 29, 1961.

SOFT-N-MELLO

For Women's Shoes.
First use June 13, 1961.

SN 135,522. Mariday Casuals, Inc., New York, N.Y. Filed Filed Jan. 10, 1962.

STEEPLE TOWN

For Ladies' Dresses and Soprtswear.
First use Sept. 22, 1961.

SN 135,935. Wonderknit Corporation, New York, N.Y. Filed Jan. 15, 1962.

PREP CLUB

For Knit Outer Shirts and Sweaters for Men, Young Men and Boys.
First use Dec. 21, 1961.

SN 136,918. Pamper Footwear, Inc., New York, N.Y. Filed Jan. 30, 1962.

ASTROLITES

For Slippers.
First use Oct. 15, 1961.
Subj. to Intf. with SN 130,453.

SN 138,195. Genesco Inc., Nashville, Tenn. Filed Feb. 19, 1962.

STRATOLIGHTS

For Men's and Boys' Shoes.
First use Aug. 14, 1961.
Subj. to Intf. with SN 133,294.

Class 40—Fancy Goods, Furnishings, and Notions

SN 107,069. Sta-Rite Ginnie Lou, Inc., Shelbyville, Ill. Filed Oct. 24, 1960.

BOBBY STRONG

For Hair Pins.
First use Sept. 23, 1960.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 121,213. Graniteville Company, Graniteville, S.C., assignee of McCampbell & Company, Inc., New York, N.Y. Filed June 1, 1961.

Laminized

For Fabrics Bonded to Foam, Used for Coats, Jackets, Slacks, and the Like.
First use Apr. 7, 1961.

SN 125,661. Glen Mfg. Inc., Milwaukee, Wis. Filed Aug. 9, 1961.

DOROTHY DEAN

"Dorothy Dean" is the name of a fictitious person.
For Textile-Covered Bathroom Accessories—Namely, Scale Covers, Tissue Box Covers, Wastebasket Covers, Toilet Bowl Covers, Rugs, Lingerie Bags, Footstool Covers and Toilet Brush Container Covers.
First use June 23, 1958.

SN 125,662. Glen Mfg. Inc., Milwaukee, Wis. Filed Aug. 9, 1961.

SOFTEE

For Textile-Covered Bathroom Accessories—Namely, Scale Covers, Tissue Box Covers, Wastebasket Covers, Laundry Hamper Covers, Curler Hamper Covers, Toilet Bowl Covers, Rugs, Lingerie Bags, Footstool Covers, and Toilet Brush Container Covers.
First use June 7, 1958.

SN 126,989. Crown Rubber Company, Fremont, Ohio. Filed Aug. 31, 1961.

VULCO-SPONGE

Foam-Coated Fabrics Used for Padding, Cushioning and Upholstery Purposes, and the Like.
First use July 19, 1961.

SN 127,503. Soptra Fabrics Corporation, New York, N.Y. Filed Sept. 8, 1961.

"CREPE FAVORITE"

No claim is made to the word "Crepe" apart from the mark as shown.
For Cotton Fabrics.
First use Apr. 19, 1961.

SN 129,020. Lynrus Finishing Company, Inc., Poughkeepsie, N.Y. Filed Oct. 2, 1961.

LYNRUS FR-I

For Cotton Fabrics, Having a Flame Retardant Finish, for Making Into Clothing, Curtains, and the Like.
First use Mar. 27, 1956.

SN 129,977. Dobco Ltee, Dobco Ltd., St. Jerome, Quebec, Canada, assignee of J. P. Quennville, St. Jerome, Quebec, Canada. Filed Oct. 16, 1961.

DOBCO

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 22, 1961; Reg. No. 124,690, dated Dec. 15, 1961.
For Bed Sheets and Blankets.

SN 131,554. Chicopee Manufacturing Corporation, New Brunswick, N.J. Filed Nov. 8, 1961.

SUPER G

For Fabrics for Apparel Lining.
First use June 13, 1961.

SN 132,847. Lynnfield Fabrics Inc., Boston, Mass. Filed Nov. 27, 1961.

LYNGUARD

For Fabrics in the Piece Treated With Crease-Resistant and Water-Repellant Chemicals for Use in Making Garments for Men, Women and Children—Namely, Raincoats, Rain Hats, Jackets, Pants, and Slacks.
First use Oct. 11, 1961.

SN 135,785. Fieldcrest Mills, Inc., Spray, N.C. Filed Jan. 15, 1962.

PRIVILEGE

For Textile Rugs and Carpeting.
First use Dec. 19, 1961.

SN 135,854. Wyandotte Worsted Company, Waterville, Maine. Filed Jan. 15, 1962.

DUVWYN

For Woolen Fabrics.
First use June 17, 1958.

SN 135,855. Wyandotte Worsted Company, Waterville, Maine. Filed Jan. 15, 1962.

JUNIOR LUSTROSA

Owner of Reg. Nos. 630,118, and 676,065.
For Woolen Fabrics.
First use Nov. 28, 1961.

Class 43 — Thread and Yarn

SN 134,178. Emile Bernat & Sons Company, Jamaica Plain, Mass., assignee of Armstrong Knitting Mills, West Roxbury, Mass. Filed Dec. 18, 1961.

ARMSTRONG

For Hand Knitting Yarns.
First use 1940.

SN 134,453. The B. F. Goodrich Company, Akron, Ohio. Filed Dec. 21, 1961.

BUTHANE

For Elastic Thread.
First use Nov. 22, 1961.

Class 44 — Dental, Medical, and Surgical Appliances

SN 101,216. Elisabeth Ungar-Skin Care, Inc., New York, N.Y. Filed July 20, 1960.

TONATRONE

For Electrotherapeutic Appliances for the Treatment of Skin Conditions.
First use Feb. 1, 1960.

SN 109,346. Plasti-Liner Co., Inc., d.b.a. Quik-Fix Company, Buffalo, N.Y. Filed Nov. 30, 1960.

QUIK-FIX

For Denture Repair Kits.
First use July 1959.

SN 128,457. Medco Electronics Company, Inc., Tulsa, Okla. Filed Sept. 22, 1961.

Stimu-Sonic

For Combined Electrical Muscle Stimulation and Ultrasonic Medical Therapy Apparatus Providing Combined Vibrations and Injections of Electric Current to the Body for Therapeutic Purposes.
First use Sept. 21, 1961.

SN 130,003. K. H. Teeter, d.b.a. Porto-Lift Manufacturing Company, Higgins Lake, Mich. Filed Oct. 16, 1961.

PORTO-LIFT

For Hydraulic Lifts for Use in Hospitals, Nursing Homes and Residences for the Lifting and Transfer of Invalid Patients.
First use Aug. 15, 1945.

Class 46 — Foods and Ingredients of Foods

SN 85,557. Central Soya Company, Inc., Fort Wayne, Ind. Filed Nov. 18, 1959.

SWEETS

Owner of Reg. Nos. 599,202, and 688,879.
For Livestock Feed.
First use Sept. 15, 1952.

SN 95,635. W. B. Roddenbery Co., Inc., d.b.a. Roddenbery Brothers, Cairo, Ga. Filed Apr. 22, 1960.

OH! BOY

CONCURRENT USE to be restricted to Mississippi, Tennessee, Alabama, Virginia, North Carolina, South Carolina, Louisiana, Georgia and Florida. Concurrent use with Reg. No. 222,319.
Owner of Reg. No. 197,035.
For Fruit Flavored Food Drinks, Table Syrup, Pickles and Peanut Butter.
First use Sept. 16, 1924, on table syrup.

SN 99,365. H. J. Heinz Company, Pittsburgh, Pa., assignee of Reymer & Brothers, Inc., Pittsburgh, Pa. Filed June 20, 1960.

Blennd

Owner of Reg. Nos. 569,310, 570,091, and 600,082.
For Fruit Flavored Food Beverage and a Fruit Juice Concentrate for Making a Food Beverage and Also for Use as a Food Flavoring.
First use 1951.

SN 103,435. Avoset Company, Oakland, Calif. Filed Aug. 26, 1960.

TAPER WEIGHT

For Liquid Food Concentrate for Special Use in Weight Reducing Diets, Consisting Principally of Condensed Skim Milk, Cocoa, Lactose, Cottonseed Oil and Added Vitamins and Minerals.
First use Aug. 12, 1960.

SN 104,747. The Nestlé Company, Limited, London, England. Filed Sept. 19, 1960.

FRUTIPS

Owner of British Reg. No. 770,234, dated Oct. 8, 1957.
For Non-Medicated Confectionery.

SN 110,102. Baker Brands, d.b.a. H. Rubinoff and Company, Pittsburgh, Pa. Filed Dec. 12, 1960.



The word "Brand" is disclaimed separate and apart from the mark as a whole.
For Nut, Fruit and Seed Fillings for Baked Goods.
First use January 1948.

SN 112,187. All Star Dairy Association, Inc., New York, N.Y. Filed Jan. 23, 1961. COLLECTIVE MARK.



For Ice Cream.
First use Oct. 24, 1957.
Subj. to Intf. with Reg. No. 732,786.

SN 112,952. Harold A. Corbett, d.b.a. Corbett Unic Aquarium, Longueuil, Quebec, Canada. Filed Feb. 2, 1961.

UNIC

Owner of Canadian Reg. No. 113,123, dated Feb. 6, 1959.
For Fish Food.

SN 113,606. Atlas Chemical Industries, Inc., Wilmington, Del., by merger and change of name from Atlas Powder Company, Wilmington, Del. Filed Feb. 14, 1961.

TWEEN-MOS

Owner of Reg. Nos. 390,506 and 533,378.
For Food Emulsifier.
First use Jan. 30, 1961.

SN 113,975. Atlas Chemical Industries, Inc., Wilmington, Del., by merger and change of name from Atlas Powder Company, Wilmington, Del. Filed Feb. 20, 1961.



For Food Emulsifier.
First use Jan. 30, 1961.

SN 115,967. Reliable Packing Company, Chicago, Ill. Filed Mar. 17, 1961.

THOMPSON FARMS BRAND

Applicant disclaims exclusive rights to the word "Brand."
For Fresh Pork, Cured Pork, Smoked Pork Products, and Lard.
First use June 1956.

SN 115,994. Belevins Popcorn Company, Inc., Nashville, Tenn. Filed Mar. 20, 1961.

POPCORN VILLAGE

No claim is made to the word "Popcorn" apart from the mark as shown. Owner of Reg. Nos. 531,687, 606,145, and others.
For Unpopped Popcorn, Popcorn Seasoning, Popped Popcorn, and Popcorn Popping Oil.
First use July 15, 1948.

SN 116,415. Northwest Marketers, Inc., d.b.a. Famous Foods, Minneapolis, Minn. Filed Mar. 24, 1961.



For Frozen Processed Poultry.
First use Sept. 1, 1960.

SN 116,681. Tolibia Cheese Manufacturing Corporation, d.b.a. Pizzalone Cheese Company, Fond du Lac, Wis. Filed Mar. 28, 1961.

PIZZALONE

For Cheese.
First use Mar. 2, 1961.

SN 117,551. Russell Stover Candies, Inc., Kansas City, Mo. Filed Apr. 10, 1961.

RUSSELL STOVER

The name "Russell Stover" is the name of the individual who founded the applicant company, but who is now deceased.
For Candy.
First use during 1941.

SN 117,552. Russell Stover Candies, Inc., Kansas City, Mo. Filed Apr. 10, 1961.

RSC

For Candy.
First use during January 1956.

SN 117,609. Louis Burk Company, d.b.a. Fairdale Farm Co., Philadelphia, Pa. Filed Apr. 11, 1961.

Fairdale Farm Brand

Applicant disclaims the word "Brand" separate and apart from the mark as shown.
For Potato Salad, Coleslaw, Macaroni Salad, Creamed Cabbage, Pepper Hash, Health Salad, Bologna, Liverwurst, Lunch Roll Meat, and Meat Loaf.
First use Feb. 10, 1961.

SN 117,610. Louis Burk Company, d.b.a. Fairdale Farm Co., Philadelphia, Pa. Filed Apr. 11, 1961.

FAIRDALE FARM

For Potato Salad, Coleslaw, Macaroni Salad, Creamed Cabbage, Pepper Hash, Health Salad, Bologna, Liverwurst, Lunch Roll Meat, and Meat Loaf.
First use Feb. 10, 1961.

SN 119,999. Ore-Ida Potato Products, Inc., Ontario, Oreg. Filed May 15, 1961.

ORE-IDA

Owner of Reg. Nos. 608,910 and 610,048.
For Frozen Prepared Potatoes.
First use Feb. 1, 1954.

SN 120,557. National Dairy Products Corporation, New York, N.Y. Filed May 22, 1961.

KOFLAY

For Liquid Oil for Frying.
First use Apr. 24, 1961.

SN 120,906. Roma Packing Co., Chicago, Ill. Filed May 26, 1961.

ROMA'S
ITALIAN BRAND

The drawing is lined for red, but no claim is made to the color so named. No claim of exclusive right is made to the word "Italian" as the variety of the goods herein or to the descriptive word "Brand."
For Pork Sausage.
First use in September 1943.

SN 120,914. South Pacific Canning Company, d.b.a. South Pacific Canning Co., Long Beach, Calif. Filed May 26, 1961.

7th HEAVEN

For Canned Cat Food.
First use Mar. 28, 1961.

SN 120,981. Gard Pressure Foods Corp., Northfield, Ill. Filed May 29, 1961.

TASTE TAP

For Pressurized Edible Products—Namely, Liquid Flavorings, Such as Garlic Oil, Onion Oil, Meat Tenderizer, Hickory Smoked Flavoring and the Like, in Pressurized Containers.
First use Nov. 18, 1959.

SN 121,033. Spanish Gardens, Inc., d.b.a. Spanish Gardens, Kansas City, Kans. Filed May 29, 1961.

Spanish Gardens



For Sauce for Tacos, Tortillas, Steaks, Chops, Roasts, and Sea Foods.
First use Mar. 15, 1951.

SN 121,425. Pasquale Foods, Inc., Cincinnati, Ohio. Filed June 5, 1961.



For Food and Ingredients of Foods—Namely, Ground Sausage, Prepared Sandwich Meat, Garnish Having a Hot Flavor and Including Pickle, Cauliflower, Onion, Spices, Etc., Ice Cream, Breadhoggie (Which Is an 8" Loaf of Bread), Mushrooms, Mushroom Sauce, Meat Balls, Pizza Doughs, Pizza Sauce, Pepperoni, Pickles, Ravioli, Spaghetti Cheese, Spaghetti (Dry), Ground Beef, Steaks, Salad Dressing, Individual Servings of Sugar in Paper Bound Sugar Packs, Spaghetti Sauce, Tartar Sauce.
First use in September 1958.

SN 122,056. Brook Hill Farms, Inc., d.b.a. Brook Hill Farms, Chicago, Ill. Filed June 15, 1961.

Fluorilac

For Fluoridated Fluid Milk.
First use May 19, 1961.

SN 123,115. Marine Colloids, Inc., New York, N.Y. Filed June 29, 1961.

Carraloid

For Carrageenan With Added Dextrin for Use as a Stabilizer in Foods.
First use May 18, 1961.

SN 126,545. Sarah E. Veneziano, Kensington, Conn. Filed Aug. 23, 1961.

SAMARA

For Eggplant Preparation Containing Salt, Pepper, Celery, Garlic, Vinegar, Oil, and Flavoring and Sold in Bottles.
First use Aug. 21, 1961.

SN 126,648. V. & G. Garcia Company, Bridgeport, Conn. Filed Aug. 25, 1961.

BORICUA

For Coffee.
First use Aug. 1, 1959.

SN 126,709. D. E. Winebrenner Co., Inc., Hanover, Pa. Filed Aug. 25, 1961.

BE
BREAKFAST ENERGY

For Canned Blended Fruit Juice Drink.
First use May 15, 1961.

SN 126,774. The E. H. Koester Bakery Co., Baltimore, Md. Filed Aug. 28, 1961.



The portraits shown in the drawing do not represent any particular living individuals. Owner of Reg. Nos. 316,417 and 569,090.
For Bread.
First use Aug. 14, 1961.

SN 127,719. Ocean Garden Products, Inc., San Diego, Calif. Filed Sept. 12, 1961.

OCEAN GLO

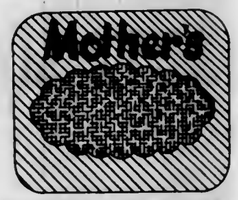
Owner of Reg. No. 667,830.
For Frozen Fresh Shrimp.
First use June 26, 1961.

SN 128,994. Gem Canning Co., Emmett, Idaho. Filed Oct. 2, 1961.

Indian Gem
CHEROKEE PUNCH

No rights are claimed in the word "Punch" as the name of the goods set forth in this application. Owner of Reg. Nos. 543,574 and 560,217.
For Fruit Punch.
First use June 27, 1960; July 12, 1948, as to "Indian Gem."

SN 129,027. Mother's Food Products, Inc., Newark, N.J. Filed Oct. 2, 1961.



The center scalloped edge medallion is lined for yellow and the background is lined for green in the drawing. Owner of Reg. Nos. 540,298, 560,717, and others.
For Pickles, Sliced Pickles, Gherkins, Pickled Tomatoes, and Sweet Mixed Pickles.
First use on or about Apr. 25, 1952.

SN 129,981. Rice Growers Association of California, Sacramento, Calif. Filed Oct. 16, 1961.

EL CAPITAN

"El Capitan" is the Spanish equivalent for the English words "the captain."
For Rice.
First use March 1934.

SN 130,857. A.D.S. Food Products Company, San Jose, Calif. Filed Oct. 30, 1961.

CARRIAGE HOUSE

For Jams, Jellies, and Preserves.
First use Sept. 8, 1961.

SN 132,017. B.E.D., Inc., Rayne, La. Filed Nov. 15, 1961.

EL TORERO

The word "bullfighter" is the English equivalent of the Spanish term "El Torero."
For Milled Rice.
First use Sept. 1, 1961.

SN 132,251. Möre Preserving Co. A/S, Aalesund, Norway. Filed Nov. 17, 1961.



The representation of a fish is disclaimed apart from the mark as shown.
For Canned Fish Balls and Canned Fish Cakes.
First use Apr. 2, 1924; in commerce Oct. 7, 1934.

SN 132,252. Möre Preserving Co. A/S, Aalesund, Norway. Filed Nov. 17, 1961.

RANDI

For Canned Fish.
First use Nov. 18, 1946; in commerce Oct. 3, 1949.

SN 132,641. Colonial Beef Co., d.b.a. Colonial Beef Company, Philadelphia, Pa. Filed Nov. 24, 1961.

MINUTE MAN

For Fresh and Frozen Ready Cut and Ground Meats; Fresh Primal Cuts of the Edible Portions of Cows, Calves, Hogs, Sheep, Steer and Poultry; and Fresh and Frozen Stew Beef, Stew Veal and Stew Lamb.
First use on or about July 1, 1947.

SN 132,726. Real Gold Company, Redlands, Calif. Filed Nov. 24, 1961.

GILT EDGE

Owner of Reg. No. 257,832.
For Fruit Juices for Food Beverage Purposes.
First use July 25, 1961.

SN 133,046. Paul F. Beich Company, Bloomington, Ill. Filed Nov. 30, 1961.

CHANGEMAKERS

For Candy.
First use Oct. 26, 1961.

SN 134,084. Astoria Fish Factors, Inc., Astoria, Oreg. Filed Dec. 15, 1961.

SEA PANTRY

For Fresh Frozen Fish.
First use Oct. 3, 1961.

SN 134,316. Golden Grain Macaroni Co., San Leandro, Calif. Filed Dec. 19, 1961.

TWIST-A-RONI AND CHICKEN

Applicant disclaims the descriptive word "Chicken" apart from the mark as shown. Owner of Reg. Nos. 684,132, 684,133, and 722,889.
For Partly Prepared Packaged Egg Noodle Dinner Consisting of Egg Noodles and Chicken Sauce Mix.
First use Oct. 30, 1961.

SN 134,741. Lamb-Weston, Inc., Weston, Oreg. Filed Dec. 27, 1961.



The drawing is lined for blue.
For Vacuum Frozen Vegetables.
First use January 1961.

SN 134,742. Lamb-Weston, Inc., Weston, Oreg. Filed Dec. 27, 1961.



For Dehydro-Frozen Vegetables.
First use January 1961.

SN 134,743. Lamb-Weston, Inc., Weston, Oreg. Filed Dec. 27, 1961.



For Freeze Dried Vegetables.
First use January 1961.

SN 135,836. J. R. Simplot Company, Boise, Idaho. Filed Jan. 15, 1962.



The applicant disclaims the right to the exclusive use of the term "Idaho" apart from the mark as shown. Owner of Reg. No. 627,936.
For Fresh Potatoes, Dehydrated Potatoes and Frozen Potatoes in All Forms.
First use Oct. 1, 1954.

SN 135,974. General Grocer Company, Brentwood, Mo. Filed Jan. 17, 1962.

TOPMOST

Owner of Reg. Nos. 137,068, 719,733, and others.
For Frozen Fruit Juice Concentrates, Frozen Fruits, and Frozen Vegetables.
First use June 1953.

SN 136,264. S. E. Mighton Co., Bedford, Ohio. Filed Jan. 22, 1962.

ABC

For Canned Dog Food.
First use 1937.

SN 136,290. Rockingham Poultry Marketing Co-Operative, Inc., Broadway, Va. Filed Jan. 22, 1962.

GOLDEN SUPREME

For Fresh and Frozen Dressed Poultry.
First use Nov. 4, 1961.

SN 136,646. Floro Inc., Vineland, N.J. Filed Jan. 26, 1962.

FAYGILS FEAST

For Wild Bird Food.
First use on or about Jan. 3, 1962.

SN 136,866. Arnold Bakers, Inc., Port Chester, N.Y. Filed Jan. 30, 1962.

COOKIE POPS

Applicant makes no claim to the word "Cookie" apart from the complete mark shown in the drawing.
For Cookies.
First use Jan. 16, 1962.

SN 137,259. Meat Industry Suppliers, Inc., Northfield, Ill. Filed Feb. 5, 1962.

FLAVAROMA

Owner of Reg. Nos. 507,774, 645,834, and others.
For Coffee.
First use on or about Dec. 15, 1961.

SN 137,374. The Quaker Oats Company, Chicago, Ill. Filed Feb. 6, 1962.

NORTHERN PRIDE

For Flour.
First use at least as early as Dec. 24, 1959.

SN 137,470. Standard Products Company, Inc., White Stone, Va. Filed Feb. 7, 1962.



For Cat Food.
First use Jan. 26, 1962.

SN 138,342. Jos. A. Zaloom & Co. Inc., New York, N.Y. Filed Feb. 20, 1962.

ZALOOM

For Prepared, Roasted, Salted and Otherwise Processed Edible Nuts and Seeds.
First use about Jan. 1, 1906; 1956 as to seeds.

SN 139,642. Leaf Brands, Inc., Chicago, Ill. Filed Mar. 12, 1962.

PLAYBOY

For Candy.
First use Jan. 22, 1962.

SN 140,219. Andomia Products Limited, Bradford, England. Filed Mar. 20, 1962.

TEASOL

Owner of British Reg. No. 706,370, dated Apr. 10, 1952.
For Tablets Made Principally of Tea for Making a Beverage.

SN 140,422. Bartee, Inc., San Francisco, Calif. Filed Mar. 22, 1962.

MoonGlow

For Canned Fruits.
First use Jan. 26, 1962.

SN 141,090. E. B. Millar & Company, Chicao, Ill. Filed Mar. 29, 1962.

CHARM

Owner of Reg. No. 153,800.
For Coffee.
First use on or about Apr. 1, 1893.

Class 47 — Wines

SN 119,834. Barton & Guestier, S.A., Bordeaux, France. Filed May 12, 1961.

ROYAL PURPLE

Owner of U.S. Reg. No. 321,162.
For Wine.
First use August 1933; in commerce August 1933.

SN 131,362. Franzia Brothers Winery, d.b.a. Old Chateau Wine Co., Ripon, Calif. Filed Nov. 6, 1961.

NORTH MOUNTAIN

No claim is made to the word "Mountain" alone as applied to wines.
For Wines.
First use Oct. 26, 1961.

Class 48 — Malt Beverages and Liquors

SN 125,148. Richard Lohofer, Bad Sassendorf, Westphalia, Germany. Filed Aug. 1, 1961.

MOLLY

Priority claimed under Sec. 44(d) on German application filed May 3, 1961; Reg. No. 752,057, dated Aug. 19, 1961.
For Beer.

Class 49 — Distilled Alcoholic Liquors

SN 132,808. R. P. Brindley & Co. Limited, Leeds, England. Filed Nov. 27, 1961.

PIBROCH

Owner of British Reg. No. 819,052, dated Apr. 5, 1961.
For Whisky.

SN 136,260. E. Martinoni Co., San Francisco, Calif. Filed Jan. 22, 1962.

TROPHY

For Whiskey.
First use Dec. 1, 1961.

SN 136,267. Mr. Boston Distiller Inc., Boston, Mass. Filed Jan. 22, 1962.

SLIM JIM

For Whiskey.
First use Jan. 5, 1962.

SN 136,268. Mr. Boston Distiller Inc., Boston, Mass. Filed Jan. 22, 1962.

SLIM FELLOW

For Whiskey.
First use Jan. 5, 1962.

Class 50—Merchandise Not Otherwise Classified

SN 128,547. Griffith Rubber Mills, Portland, Oreg. Filed Sept. 25, 1961.

MARBLITE

For Roll Covering Used on Pulp and Paper Mill Machinery.
First use Mar. 10, 1959.

SN 128,548. Griffith Rubber Mills, Portland, Oreg. Filed Sept. 25, 1961.

TRED-ROC

For Roll Covering Used on Pulp and Paper Mill Machinery.
First use Apr. 15, 1958.

SN 128,549. Griffith Rubber Mills, Portland, Oreg. Filed Sept. 25, 1961.

WATERSHED

For Roll Covering Used on Pulp and Paper Mill Machinery.
First use Dec. 11, 1959.

SN 128,550. Griffith Rubber Mills, Portland, Oreg. Filed Sept. 25, 1961.

BLUE COUCH

For Roll Covering Used on Pulp and Paper Mill Machinery.
First use June 2, 1960.

SN 128,552. Griffith Rubber Mills, Portland, Oreg. Filed Sept. 25, 1961.

TANSTONE

For Roll Covering Used on Pulp and Paper Mill Machinery.
First use Apr. 14, 1959.

Class 51—Cosmetics and Toilet Preparations

SN 36,217. Nethercutt Laboratories (new partnership), Los Angeles, Calif., assignee of Nethercutt Laboratories (partnership), Los Angeles, Calif. Filed Aug. 26, 1957.

IMPACT

For Perfume and Cologne.
First use on or about July 25, 1957.

SN 109,882. Lanvin-Parfums, Inc., New York, N.Y. Filed Dec. 8, 1960.

SPANISH GERANIUM

Owner of Reg. Nos. 546,467 and 655,379.
For Toilet Water, Dusting Powder, Talcum Powder, and Bath Oil.
First use Jan. 5, 1938, on toilet water.

SN 119,919. Beauty Counselors, Inc., Grosse Pointe, Mich. Filed May 15, 1961.

JUPITER

For Men's Toilet Lotions.
First use Oct. 25, 1958.

SN 122,509. Curtis L. Bryant, Norphlet, Ark. Filed June 21, 1961.

SALAMENTO

Owner of Reg. No. 578,253.
For Tooth Powder.
First use Aug. 22, 1951.

SN 123,054. Yardley & Company Limited, London, England. Filed June 28, 1961.

FOAMINE

Owner of British Reg. No. 244,597, dated Mar. 1, 1902.
For Shampoos, Cosmetic Creams, Lotions, and Powders.

SN 125,264. Yardley & Company Limited, London, England. Filed Aug. 2, 1961.

LAVENDO MEAL

Owner of British Reg. No. 783,575, dated Nov. 4, 1958.
For Cosmetics and Toilet Preparations—Namely, Lavender-Scented Water Softening Agent for Use in the Bath.

SN 126,415. Annabel B. Zilles, d.b.a. Z-Ann Cosmetics Company, Toledo, Ohio. Filed Aug. 21, 1961.

ELUTRA

For Cosmetic Preparation Used as a Facial Cleaner Consisting of a Neutral, Water Soluble Liquid.
First use July 5, 1961.

SN 129,625. Nethercutt Laboratories, d.b.a. Cosgenic Laboratories, Hollywood, Calif. Filed Oct. 10, 1961.

Cosgenic

For Toilet and Cosmetic Preparations—Namely, Face Powder, Hand Cream, Face Creams, Body Lotions, Shampoo, and Lipstick.
First use Sept. 29, 1961.

SN 132,182. Jacques Norval, Paris, France. Filed Nov. 16, 1961.

CHALOM

Priority claimed under Sec. 44(d) on French Reg. No. 498,852, dated Sept. 21, 1961 (Seine); Natl. Inst. No. 170,980.
For Perfumes.

SN 132,560. Lanvin-Parfums, Inc., New York, N.Y. Filed Nov. 22, 1961.

CRESCENDO

Owner of Reg. No. 372,516.
For Toilet Water, Dusting Powder, Talcum Powder, and Bath Oil.
First use Nov. 10, 1960, on toilet water.

SN 132,580. M. Pier Company, Inc., d.b.a. Tiz-Products, Inc., Pompano Beach, Fla. Filed Nov. 22, 1961.



The words "Beautifully Gray" are disclaimed apart from the mark as shown. Owner of Reg. No. 596,889.
For Hair Creme and Color Rinse.
First use on Aug. 16, 1961.

SN 132,750. Sears, Roebuck and Co., d.b.a. Lyric Distributors, Chicago, Ill. Filed Nov. 24, 1961.

STIMU-LIFT

For Skin Lotion.
First use on or about June 8, 1960.

SN 133,288. The Lorvic Corporation, St. Louis, Mo. Filed Dec. 4, 1961.

L. D. C.

For Denture Cleanser Tablets.
First use June 21, 1961.

SN 133,465. Goodman Chemical New York Corp., Brooklyn, N.Y. Filed Dec. 6, 1961.

PERO-CREME

Owner of Reg. No. 378,527.
For Hair Color Developer.
First use Aug. 17, 1961.

SN 133,694. The Nestle Le Mur Company, New York, N.Y. Filed Dec. 8, 1961.

DJER-KISS

For Lipstick, Sachet, Talcum Powder, Sachet Mist, Dusting Powder, Perfume and Cologne.
First use Nov. 1, 1903.

SN 133,932. Clairol Incorporated, New York, N.Y. Filed Dec. 13, 1961.



Owner of Reg. Nos. 553,548 and 556,892.
For Hair Tinting, Dyeing and Coloring Preparation.
First use Aug. 6, 1961.

SN 134,027. Hazel Bishop Inc., Newark, N.J., assignee of Lanolin Plus, Inc., Newark, N.J. Filed Dec. 14, 1961.

SOUTHERN EXPOSURE

For Suntan Preparation.
First use Nov. 29, 1961.

SN 134,629. Herbert Finley, d.b.a. Jeneá, Rosemead, Calif. Filed Dec. 26, 1961.

Deep south

For Perfume.
First use Oct. 1, 1961.

SN 136,030. Colgate-Palmolive Company, New York, N.Y. Filed Jan. 18, 1962.

APPLAUD

For Hand Lotion.
First use Nov. 6, 1961.

SN 136,957. Clark Cleveland Incorporated, Binghamton, N.Y. Filed Jan. 31, 1962.

KLEENITE

Owner of Reg. No. 317,695.
For Cleaning Compound for Dentures.
First use Feb. 27, 1934.

SN 140,339. Dome Chemicals, Inc., New York, N.Y. Filed Mar. 21, 1962.

DELAVAN

For Medicated Hand Conditioning Cream.
First use in or before January 1962.

Class 52—Detergents and Soaps

SN 98,437. Colgate-Palmolive Company, New York, N.Y. Filed June 6, 1960.



For Sudsing Cleaner, Cleanser and Detergent.
First use October 1958.

SN 101,910. Western Chemical Company, St. Joseph, Mo. Filed Aug. 2, 1960.

HERCULITE

For Liquid General Purpose Cleaner Sold Wholesale to Institutions.
First use Mar. 26, 1957.

SN 104,814. Cornell Chemical & Equipment Co., Inc., Baltimore, Md. Filed Sept. 20, 1960.

GOSSIP

For Cleansing Preparation for General Household Use.
First use Sept. 14, 1960.

SN 109,415. S. C. Johnson & Son, Inc., Racine, Wis. Filed Dec. 1, 1960.

MINIDRUM

For Preparations for Cleaning All Washable Surfaces and Machine Cleaners, Both of Which Are Packaged in Drums.
First use during August 1960.

SN 119,920. Beauty Counselors, Inc., Grosse Pointe, Mich. Filed May 15, 1961.

JUPITER

For Men's Fragrant Soap.
First use Oct. 25, 1958.

SN 123,270. Bonne Bell Inc., d.b.a. Bonne Bell, Lakewood, Ohio. Filed July 3, 1961.

TEN-O-SIX

Owner of Reg. No. 382,124.
For Hair Shampoo.
First use Sept. 15, 1960.

SN 135,101. Chicopee Manufacturing Corporation, d.b.a. Refined Products Company, New Brunswick, N.J. Filed Jan. 3, 1962.

KARAMINE

For Detergent Base and Emulsifier.
First use Jan. 7, 1957.

SN 135,113. Chicopee Manufacturing Corporation, d.b.a. Refined Products Company, New Brunswick, N.J. Filed Jan. 3, 1962.

KARASIST

For Textile Agent for Cleaning, Scouring and Dyeing.
First use Apr. 12, 1961.

SN 135,907. Parachem Corporation, Newark, N.J. Filed Jan. 16, 1962.

Cleaf.

Owner of Reg. No. 691,810.
For Hand or Skin Cleansing Leaves or Leaflets.
First use on or about Sept. 29, 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 97,060. Humble Oil & Refining Company, Houston, Tex. Filed May 13, 1960.

HAPPY CRUISING

Owner of Reg. No. 654,558.
For Services to Boatmen—Namely, Furnishing Information as to Routing, Navigation, Federal and State Regulations on Navigation, Safety Precautions, Maintenance of Boat and Engine, Furnishing Navigation Maps, Navigation Tools, Log and Guidebooks, Recommendations as to Marinas for Docking, Fueling, Eating and Lodging.
First use as early as January 1937.

SN 104,046. The Pure Oil Company, Chicago, Ill. Filed Sept. 7, 1960.

TOURest STATION

No claim to the word "Station" is made apart from its use as shown in the accompanying drawing.
For Furnishing Automobile Tourists With Travel Help, Such as Maps and Booklets or Pamphlets Listing Restaurants, Motels and Hotels; Furnishing Such Tourists With Light Refreshments, Restroom, Relaxation and Recreation Facilities; Battery, Tire and Emergency Automotive Mechanical Service.
First use July 14, 1960.

SN 107,264. Horizon House, Inc., Philadelphia, Pa. Filed Oct. 27, 1960.

HORIZON HOUSE

For Social and Vocational Rehabilitation of Former Mental Patients.
First use Jan. 27, 1960.

SN 116,607. Vacudyne Corporation, Chicago, Ill. Filed Mar. 27, 1961.

Vacudyne



For Engineering, Design and Construction Services Rendered to Industry, Institutions and Government.
First use June 30, 1957.

SN 126,128. Starlite Root Beer Co., Coldwater, Mich. Filed Aug. 16, 1961.

STARLITE DRIVE-IN

No claim is made to the term "Drive-In" apart from the mark. Owner of Reg. No. 666,692.
For Drive-In Restaurant Services.
First use 1949.

Class 101 — Advertising and Business

SN 99,552. Richard W. Conway, Washington, D.C. Filed June 20, 1960.



The lining on the drawing merely denotes shading and does not signify the color gray.
For Employment Services Rendered Restaurant Personnel.
First use Feb. 23, 1960.

SN 124,262. Drug Store Council, Inc., New York, N.Y. Filed July 19, 1961. COLLECTIVE MARK.



Applicant disclaims the words "Toy Centers." Owner of Reg. No. 723,984.
For Retail Toy Store Services.
First use Apr. 1, 1961.

SN 131,454. American Society of Tool and Manufacturing Engineers, Detroit, Mich. Filed Sept. 11, 1961.



Owner of Reg. Nos. 508,265, 568,638, and 672,304.
For Educational Exhibitions and Exhibits in the Field of Tool and Manufacturing Engineering Displayed in Various Cities of the United States.
First use Jan. 19, 1960.

SN 131,572. Hardware Wholesalers, Inc., Fort Wayne, Ind. Filed Nov. 8, 1961. COLLECTIVE MARK.



The drawing is lined for yellow, but color is not claimed as a part of the mark. The words "Values" and "Local Member" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 709,910, 711,418, and others.
For Hardware Store Services.
First use Feb. 1, 1959.

SN 132,612. Hardware Wholesalers, Inc., Fort Wayne, Ind. Filed Nov. 8, 1961. COLLECTIVE MARK.

ROYAL VALUES

The word "Values" is disclaimed. Owner of Reg. Nos. 709,910, 711,418, and others.
For Retail Hardware Store Services.
First use Feb. 1, 1959.

Class 102 — Insurance and Financial

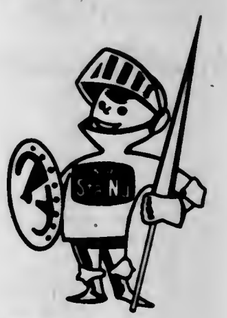
SN 135,423. C.I.T. Financial Corporation, New York, N.Y. Filed Jan. 9, 1962.



For Financial Services—Namely, the Making of Loans and the Extension of Instalment Credit in Connection With Financing Education for Students of Associated Independent Schools and Private Colleges and Universities.
First use December 1956.

Class 103 — Construction and Repair

SN 95,530. Sta-Nu Corporation, Chicago, Ill. Filed Apr. 21, 1960.



For Dry Cleaning Service.
First use Oct. 22, 1956.

SN 110,507. Water Refining Company, Inc., Middletown, Ohio. Filed Dec. 19, 1960.

MIRACLE WATER

Owner of Reg. No. 636,804.
For Inspection, Maintenance and Repair Service for Water Treatment Equipment—Namely, Water Conditioners, Softeners, Filters, Chemical Feeders and Aerators.
First use on or about Sept. 16, 1938.

SN 131,230. Redd Pest Control Company, Inc., Jackson, Miss. Filed Nov. 2, 1961.

Redd PEST CONTROL COMPANY, INC.

For Pest and Termite Control.
First use on or about Sept. 1, 1958.

Class 104 — Communication

SN 134,536. Finley Broadcasting Company, d.b.a. Radio Station KSRO, Santa Rosa, Calif. Filed Dec. 22, 1961.

THE VOICE OF THE REDWOOD EMPIRE

For Radio Broadcasting Services.
First use in or about September 1937.

Class 105 — Transportation and Storage

SN 6,126. Nationwide Trailer Rental System, Inc. (Delaware corporation), Wichita, Kans., assignee of Nationwide Trailer Rental System (Michigan corporation), Wichita, Kans. Filed Apr. 10, 1956.

Nationwide

Applicant hereby disclaims any exclusive rights in the slogan "Rent Here—Leave There" apart from its use in connection with the remainder of the mark. Owner of Reg. No. 678,655.
For Providing to Independent Operators of Trailer Rental Stations Affiliated With Applicant Promotional and Advertising Material and Information Such as Directories To Facilitate the Transfer of Trailers Among the Affiliated Stations.
First use Mar. 23, 1956; Dec. 10, 1950, as to "Nationwide."

SN 105,621. Caravan Tours, Inc., Chicago, Ill. Filed Oct. 3, 1960.

CARAVAN

Owner of Reg. No. 624,203.
For Personally Escorted Travel Tours.
First use Aug. 1, 1958.

SN 117,671. Leisure Tours, Glendale, Calif. Filed Mar. 30, 1961. COLLECTIVE MARK.

Leisure Tours

No claim is made to the word "Tours" apart from the other features of the mark.
For Travel Tours Arranged and Conducted by the Members of the Applicant Association.
First use November 1956.

SN 120,499. Continental Air Lines, Inc., Denver, Colo. Filed May 22, 1961.

CONTINENTAL AIRLINES

No claim is made to the notation "Airlines" apart from its use in the present mark. Owner of Reg. No. 562,047.
For Air Transportation of Persons, Goods, Mail, and Freight.
First use on or about Aug. 25, 1941.

SN 120,502. Continental Air Lines, Inc., Denver, Colo. Filed May 22, 1961.

CONTINENTAL

Owner of Reg. No. 562,047.
For Air Transportation of Persons, Goods, Mail, and Freight.
First use on or about July 1, 1937.

SN 131,235. Stephen J. Sanders, Inc., Jackson, Miss. Filed Nov. 2, 1961.

For Export and Import Services as a Combination Export Management Firm.
First use June 15, 1961.

Class 107 — Education and Entertainment

SN 104,428. Bryant & Stratton Business Institute, Inc., Buffalo, N.Y. Filed Sept. 14, 1960.

BRYANT & STRATTON AIM HIGH BUSINESS INSTITUTE

Applicant disclaims the use of the words "Business Institute" separate and apart from the mark as shown.
For Educational Services—Namely, Vocational Guidance and Instruction in Business Education and Allied Subjects by Means of Lectures and Correspondence.
First use Feb. 10, 1937.

SN 121,131. Scott Paper Company, Philadelphia, Pa. Filed May 31, 1961.

SCOTT'S HI-Q

For Title of a Radio Program.
First use October 1948.

SN 132,243. John A. Krancus, d.b.a. National Institute of Tax Accounting, Long Beach, Calif. Filed Nov. 17, 1961.

NATIONAL INSTITUTE NITA of TAX ACCOUNTING

For Conducting Correspondence Courses in Tax Accounting.
First use June 1, 1960.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 122,145. Ancient Mystic Order of Samaritans, Inc., Geneva, Ohio. Filed June 5, 1961.

WE NEVER DIE

For Indicating Membership in Applicant.
First use Aug. 6, 1936.

SN 131,598. National Field Archery Association of the United States, Inc., Redlands, Calif. Filed Nov. 8, 1961.

NATIONAL FIELD ARCHERY ASSOCIATION

The drawing is lined for red.
For Indicating Membership in Applicant.
First use in 1941.

CERTIFICATION MARKS

Class B—Services

SN 121,303. The National Association of Insurance Agents, Inc., New York, N.Y. Filed June 2, 1961.

YOUR Independent Insurance AGENT "SERVES YOU FIRST" INSUROR

The mark certifies that the services performed by the members are according to standards established by applicant. Owner of Reg. Nos. 655,102 and 724,339.
For Services as Insurance Agents.
First use Nov. 8, 1956.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

735,099. PERX. Dakota Salt and Chemical Company. SN 115,445. Pub. 5–15–62. Filed 3–13–61.

735,100. ESTERCELL. Canadian International Paper Company. SN 115,580. Pub. 5–15–62. Filed 3–14–61.

735,101. TAYLORON. Taylor Fibre Co. SN 115,640. Pub. 5–15–62. Filed 3–14–61.

735,102. BLACK KNIGHT. C. K. Williams & Co. SN 120,053. Pub. 5–15–62. Filed 5–15–61.

735,103. GENALITE. General Foam Plastics Corp. SN 124,355. Pub. 5–15–62. Filed 7–20–61.

735,104. HAVESTOS. Haveg Industries, Inc. SN 127,009. Pub. 5–15–62. Filed 8–31–61.

735,105. KM. Kerr-McGee Oil Industries, Inc. SN 130,363. Pub. 5–15–62. Filed 10–20–61.

735,106. MOUSSBRYL. Achille Bayart & Co. (Societe Anonyme). SN 131,468. Pub. 5–15–62. Filed 11–7–61.

735,107. NORTHERN PRIDE. Co-Operative Rose Growers, Inc. SN 132,897. Pub. 5–15–62. Filed 11–28–61.

Class 2 — Receptades

735,108. E-Z. Gulf States Paper Corporation. SN 101,489. Pub. 5–15–62. Filed 7–26–60.

735,109. E-Z OPEN. Gulf States Paper Corporation. SN 104,609. Pub. 5–15–62. Filed 9–16–60.

735,110. PARAGLAS. Air Logistics Corporation. SN 111,948. Pub. 5–15–62. Filed 1–17–61.

735,111. MERRYGRO. Alexander Raab. SN 114,641. Pub. 5–15–62. Filed 2–28–61.

735,112. AIR-FORMED. Air-Formed Products Corporation. SN 115,873. Pub. 5–15–62. Filed 3–17–61.

735,113. PIONEER PRODUCTS ETC. AND REPRESENTATION OF A TOTEM POLE. Pioneer Products, Inc. SN 116,153. Pub. 4–3–62. Filed 3–21–61.

735,114. SNO POPS. Quality Tool & Die. SN 127,138. Pub. 5–15–62. Filed 9–1–61.

735,115. RUBBERMAID AND DESIGN. Rubbermaid Incorporated. SN 127,654. Pub. 5–15–62. Filed 9–11–61.

735,116. SUPER KING. Genesco Inc. SN 127,769. Pub. 5–15–62. Filed 9–13–61.

735,117. KAN-KLEEN. Lakewood Manufacturing Co. SN 127,935. Pub. 5–15–62. Filed 9–15–61.

735,118. STYNETTES. Southern California Plastic Company. SN 128,113. Pub. 5–15–62. Filed 9–18–61.

735,119. ZARCO. Neely Manufacturing Co. Inc. SN 129,280. Pub. 5–15–62. Filed 10–5–61.

735,120. TROPICAL BOAT. Van Brode Milling Co., Inc. SN 129,314. Pub. 5–15–62. Filed 10–5–61.

735,121. ASTRO-FLOAT. Wonder Products Company. SN 129,318. Pub. 5–15–62. Filed 10–5–61.

735,122. CUSTOM OAK. Gulf States Paper Corporation. SN 129,487. Pub. 5–15–62. Filed 10–9–61.

735,123. SECURITAINER. The Marine Securitainer Corp. SN 129,874. Pub. 5–15–62. Filed 10–13–61.

735,124. DUPLEX. Duplex Straw Dispenser Co. SN 129,931. Pub. 5–15–62. Filed 10–16–61.

735,125. SLIM-SELL. The Dow Chemical Company. SN 130,190. Pub. 5–15–62. Filed 10–18–61.

735,126. ULTRA-SEAL. KVP Sutherland Paper Company. SN 130,912. Pub. 5–15–62. Filed 10–30–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

735,127. "BARK"-LY. Lea J. Ollstein, d.b.a. "Bark"-ly Products Co. SN 127,491. Pub. 5–15–62. Filed 9–8–61.

Class 4 — Abrasives and Polishing Materials

735,128. "BUFFY" AND DESIGN. The Wilson Supply Company. SN 111,709. Pub. 6–6–61. Filed 1–11–61.

Class 5 — Adhesives

735,129. GRACE AND DESIGN. W. R. Grace & Co. SN 126,761. Pub. 5–15–62. Filed 8–28–61.

Class 6 — Chemicals and Chemical Compositions

735,130. REYN-O-SOL. Stubnitz Greene Corporation. SN 5,136. Pub. 12–16–58. Filed 3–23–56.

735,131. FLEXICHEM. Swift & Company. SN 103,223. Pub. 5–15–62. Filed 8–22–60.

735,132. K9–KOP. Lynwood Laboratories, Inc. SN 105,905. Pub. 5–15–62. Filed 10–6–60.

735,133. PEST-"KO." Wilmor Corporation. SN 105,940. Pub. 5–15–62. Filed 10–6–60.

735,134. ZN–77. The Diversey Corporation. SN 105,966. Pub. 5–15–62. Filed 10–7–60.

735,135. AQUAZINE. Moretex Chemical Products, Inc. SN 109,612. Pub. 1–2–62. Filed 12–5–60.

735,136. PRIMAFLOC. Rohm & Haas Company. SN 111,813. Pub. 1–2–62. Filed 1–13–61.

735,137. CAT. Hodag Chemical Corporation. SN 112,724. Pub. 1–16–62. Filed 1–30–61.

735,138. SNAP. Hagan Chemicals & Controls, Inc. SN 117,103. Pub. 5–15–62. Filed 4–4–61.

735,139. PYROCAT. Mackenzie Chemical Works, Inc. SN 117,284. Pub. 5–15–62. Filed 4–6–61.

735,140. BENZOTEK. Heyden Newport Chemical Corporation. SN 117,633. Pub. 5–15–62. Filed 4–11–61.

735,141. PRE-VENT. J. & L. Adikes, Inc. SN 117,760. Pub. 5–15–62. Filed 4–13–61.

735,142. MOLDOTEK. Pfaltz & Bauer, Inc. SN 118,168. Pub. 5–15–62. Filed 4–19–61.

735,143. B-SAFE. Hygienic Aerosol Company, Inc. SN 118,351. Pub. 5–15–62. Filed 4–21–61.

735,144. FORAY. Ansul Chemical Company. SN 118,544. Pub. 5–15–62. Filed 4–25–61.

735,145. DPA. S. C. Johnson & Son, Inc. SN 124,552. Pub. 5–15–62. Filed 7–24–61.

735,146. ELFO. Azoplate Corporation. SN 126,002. Pub. 5–15–62. Filed 8–15–61.

735,147. TERMITE-BAN. Darworth Incorporated. SN 126,511. Pub. 3–27–62. Filed 8–23–61.

735,148. R RATH. The Rath Packing Company. SN 126,799. Pub. 5–15–62. Filed 8–28–61.

735,149. PROMETRYNE. Geigy Chemical Corporation. SN 129,589. Pub. 5–15–62. Filed 10–10–61.

735,150. SIMETRYNE. Geigy Chemical Corporation. SN 129,590. Pub. 5–15–62. Filed 10–10–61.

Class 7 — Cordage

735,151. AAA GOLDEN. Frank W. Winne & Son Incorporated. SN 129,071. Pub. 5–15–62. Filed 10–2–61.

735,152. BIG VALUE. Anco Corporation. SN 129,831. Pub. 5–15–62. Filed 10–13–61.

735,153. ANCO. Anco Corporation. SN 129,832. Pub. 5–15–62. Filed 10–13–61.

735,154. GLADIATOR AND DESIGN. Berkley & Company, Inc. SN 130,168. Pub. 5–15–62. Filed 10–18–61.

735,155. MARDI GRAS. New England Printed Tape Co. SN 131,389. Pub. 5–15–62. Filed 11–6–61.

Class 8 — Smokers' Artides, Not Including Tobacco Products

735,156. GUESTRAY. Lewis F. Phillips, d.b.a. C.P. Plastic Engineering Company. SN 116,422. Pub. 5–15–62. Filed 3–24–61.

735,157. SYNTEX-FILTER. Paul Adolf Müller. SN 120,649. Pub. 5–15–62. Filed 5–23–61.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

735,158. BRUSHMASTER. Remington Arms Company, Inc. SN 119,422. Pub. 5–15–62. Filed 5–5–61.

735,159. TORPEDO-JET. Jet Research Center, Inc. SN 128,563. Pub. 5–15–62. Filed 9–25–61.

735,160. ARCHER. Atlantic Research Corporation. SN 128,778. Pub. 5–15–62. Filed 9–28–61.

Class 10 — Fertilizers

735,161. TETON PEAT. Teton Peat, Inc. SN 111,362. Pub. 5–15–62. Filed 1–5–61.

Class 11 — Inks and Inking Materials

735,162. PLASTOGRAPH. Pegasus Prima Products Limited. SN 86,322. Pub. 8–2–60. Filed 11–30–59.

Class 12 — Construction Materials

735,163. CHASEWRAP. Chase and Sons, Inc. SN 86,929. Pub. 5–15–62. Filed 12–9–59.

735,164. CHASEKOTE. Chase and Sons, Inc. SN 88,647. Pub. 5–15–62. Filed 1–8–60.

735,165. ASTRO-LITE. Jenn Air Products Company, Inc. SN 98,098. Pub. 10–17–61. Filed 5–31–60.

735,166. LAUAN 1–11. Douglas Fir Plywood Association. SN 101,381. COLLECTIVE MARK. Pub. 5–15–62. Filed 7–25–60.

735,167. POLYTHANE. Coast Pro-Seal & Mfg. Co. SN 114,187. Pub. 2–27–62. Filed 2–23–61.

735,168. NALUR. National Lead Company. SN 116,056. Pub. 5–15–62. Filed 3–20–61.

735,169. FIRE-SHIELD. National Gypsum Company. SN 117,644. Pub. 5–15–62. Filed 4–11–61.

735,170. DESIGN OF LETTERS. Timberline, Inc. of Oregon. SN 104,343. Pub. 5–29–62. Filed 9–12–60.

735,171. CATO CURB AND DESIGN. Ernest E. Cato. SN 121,173. Pub. 5–15–62. Filed 6–1–61.

735,172. ATLAS. Atlas Roofing Mfg. Company, Inc. SN 121,253. Pub. 4–3–62. Filed 6–2–61.

735,173. HI-MAG. Kaiser Aluminum & Chemical Corporation. SN 127,018. Pub. 12–26–61. Filed 8–31–61.

735,174. TILE PASTE. Schaik Chemical Company. SN 129,049. Pub. 5–15–62. Filed 10–2–61.

735,175. FIREBLOC. American Gypsum Company. SN 130,021. Pub. 5–15–62. Filed 10–17–61.

735,176. NU-KLAD. Nukem Products Corporation. SN 130,234. Pub. 5–15–62. Filed 10–18–61.

735,177. ESCO AND DESIGN. Emergency Shelter Company. SN 130,439. Pub. 5–15–62. Filed 10–23–61.

735,178. SHELL-LOK. Lally Bros. Company. SN 130,919. Pub. 5–15–62. Filed 10–30–61.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

735,179. STEELMASTER. Thomas E. Young, d.b.a. Steelmaster Enterprises. SN 103,749. Pub. 5–15–62. Filed 8–31–60.

735,180. DESIGN OF TWO CIRCUMFERENTIAL STRIPES. United States Pipe and Foundry Company. SN 106,859. Pub. 2–27–62. Filed 10–20–60.

735,181. DC. Spotnails, Inc. SN 112,326. Pub. 11–28–61. Filed 1–23–61.

735,182. ALUMANNEALED. Keystone Steel & Wire Company. SN 116,534. Pub. 5–15–62. Filed 3–27–61.

735,183. POLY PAN. Beeline Products Corporation. SN 120,852. Pub. 5–15–62. Filed 5–26–61.

735,184. ROLL 'N REEL. Melnor Industries, Inc. SN 123,908. Pub. 5–15–62. Filed 7–13–61.

735,185. BELCO. Miller Manufacturing Company. SN 127,943. Pub. 5–15–62. Filed 9–15–61.

735,186. BEACH AND DESIGN. Beach Manufacturing Company. SN 128,387. Pub. 5–15–62. Filed 9–22–61.

735,187. PUFFY. Foto-Field, Inc. SN 128,425. Pub. 5–15–62. Filed 9–22–61.

735,188. ARROW DESIGN. Hills-McCanna Company. SN 128,439. Pub. 5–15–62. Filed 9–22–61.

735,189. SAFEGUARD AND DESIGN. Aluminum Fence Company of America. SN 128,637. Pub. 5–15–62. Filed 9–26–61.

735,190. FIBRETROL. Process & Steam Specialties Inc. SN 128,758. Pub. 5–15–62. Filed 9–27–61.

735,191. AVIA MARINE. Avia Marine Company. SN 128,780. Pub. 5–15–62. Filed 9–28–61.

735,192. STAB–38. Dresser Industries, Inc. SN 129,196. Pub. 5–15–62. Filed 10–4–61.

735,193. STAB–39. Dresser Industries, Inc. SN 129,197. Pub. 5–15–62. Filed 10–4–61.

735,194. PERMATURN. Rockwell Manufacturing Company. SN 129,635. Pub. 5–15–62. Filed 10–10–61.

735,195. TITE-AIR. Westinghouse Air Brake Company. SN 129,709. Pub. 5–15–62. Filed 10–11–61.

Class 14 — Metals and Metal Castings and Forgings

735,196. TENNALLOY. Tennessee Products & Chemical Corporation. SN 118,300. Pub. 5–15–62. Filed 4–20–61.

Class 15 — Oils and Greases

735,197. PICTORIAL REPRESENTATION OF FLASK WITH LETTER C. John Steen, d.b.a. Steen Lubricants and as Steen Lubricants Co. SN 105,315. Pub. 5–15–62. Filed 9–27–60.

735,198. STEEN. John Steen, d.b.a. Steen Lubricants and as Steen Lubricants Co. SN 105,316. Pub. 5–15–62. Filed 9–27–60.

735,199. KLEEN-LUBE AND DESIGN. Kleen-Lube, Inc. SN 106,607. Pub. 5–15–62. Filed 10–18–60.

735,200. TWIN. Twin Specialty Oil Company. SN 114,892. Pub. 5–15–62. Filed 3–3–61.

735,201. DE WITT ETC. AND DESIGN. De Witt Headden, d.b.a. De Witt Custom Lubricants. SN 124,907. Pub. 5–15–62. Filed 7–28–61.

735,202. KLEEN-KOOL. The DoAll Company. SN 128,890. Pub. 5–15–62. Filed 9–29–61.

Class 16—Protective and Decorative Coatings

735,203. PERMA LINE. Veon-West Corporation, assignee of Veon Chemical Corp. SN 51,833. Pub. 3–24–59. Filed 5–16–58.

735,204. WIEDERHOLD AND DESIGN. Hermann Wiederhold. SN 104,973. Pub. 5–15–62. Filed 9–21–60.

735,205. MAYCONATE. Otto B. May, Inc. SN 112,391. Pub. 5–15–62. Filed 1–24–61.

735,206. BOSTIK. United Shoe Machinery Corporation, assignee of B.B. Chemical Co. SN 124,251. Pub. 5–15–62. Filed 7–19–61.

735,207. WOODCREST. Rinshed-Mass Company. SN 128,592. Pub. 5–15–62. Filed 9–25–61.

735,208. FARM AND HOME. Davis Paint Company, d.b.a. Farm and Home Paint Company. SN 128,966. Pub. 5–15–62. Filed 10–2–61.

735,209. SHIVASTRA. Laketine Corporation. SN 129,159. Pub. 5–15–62. Filed 10–3–61.

Class 17—Tobacco Products

735,210. PRINCETON. Martin Brinkmann. SN 126,311. Pub. 4–3–62. Filed 8–21–61.

Class 18—Medicines and Pharmaceutical Preparations

735,211. VIGENE. Vigene Product Corporation. SN 101,714. Pub. 6–20–61. Filed 7–29–60.

735,212. SOR-OT. Ravensberg G.m.b.H. Chemische Fabrik. SN 104,663. Pub. 5–15–62. Filed 9–12–60.

735,213. THERAPADS. Fuller Pharmaceutical Company. SN 105,073. Pub. 5–15–62. Filed 9–23–60.

735,214. ELEPHANT BRAND AND ELEPHANT DESIGN. The Consolidated Mining and Smelting Company of Canada Limited. SN 122,164. Pub. 5–15–62. Filed 6–16–61.

735,215. R RATH. The Rath Packing Company. SN 126,800. Pub. 5–15–62. Filed 8–28–61.

735,216. SNUBS. The Snubs Product Corporation, assignee of Ford, Kling & Wilson. SN 128,160. Pub. 5–8–62. Filed 9–19–61.

735,217. INGELAX. C. H. Boehringer Sohn. SN 129,727. Pub. 3–27–62. Filed 10–12–61.

735,218. G–63. Gaby, Inc., d.b.a. Gaby Company. SN 130,447. Pub. 5–15–62. Filed 10–23–61.

735,219. 4 WAY. Grove Laboratories Incorporated. SN 134,814. Pub. 5–15–62. Filed 12–28–61.

735,220. PEDIACOF. Sterling Drug Inc. SN 135,639. Pub. 5–15–62. Filed 1–11–62.

735,221. FERRO-MANDETS. American Cyanamid Company. SN 135,740. Pub. 5–15–62. Filed 1–15–62.

735,222. OMNINATAL. Delta Drug Corporation. SN 135,885. Pub. 5–15–62. Filed 2–15–62.

735,223. OMNIHEMIN. Delta Drug Corporation. SN 135,886. Pub. 5–15–62. Filed 2–15–62.

Class 19—Vehicles

735,224. BEDFORD. Vauxhall Motors Limited. SN 50,944. Pub. 11–11–58. Filed 5–2–58.

735,225. BEDFORD AND DESIGN. Vauxhall Motors Limited. SN 50,945. Pub. 12–16–58. Filed 5–2–58.

735,226. LOADLIFTER. Air Lift Company. SN 83,683. Pub. 7–5–60. Filed 10–21–59.

735,227. DRIFTER. Kop-Ron Machine Corporation, d.b.a. Kop-Ron. SN 102,249. Pub. 1–10–61. Filed 8–8–60.

735,228. M.A.F.A.C. Léon Pierre Robert Mazen, Jean Pierre Henri Mazen, Jacques Jean Auguste Mazen, Catherine Simone Jeanne Mazen (joint owners). SN 107,027. Pub. 5–15–62. Filed 10–24–60.

Class 20—Linoleum and Oiled Cloth

735,229. GUARD. Columbus Coated Fabrics Corporation. SN 129,917. Pub. 5–15–62. Filed 10–16–61.

Class 21—Electrical Apparatus, Machines, and Supplies

735,230. SCOTSMAN. H. H. Scott, Inc. SN 77,854. Pub. 12–12–61. Filed 7–16–59.

735,231. INVERTED IONOSPHERE DECO AND DESIGN. Developmental Engineering Corporation. SN 98,348. Pub. 5–15–62. Filed 6–3–60.

735,232. ROTOCON. Rototest Laboratories, Inc. SN 103,415. Pub. 5–15–62. Filed 8–25–60.

735,233. REVERBA-SOUND. Rock-Ola Manufacturing Corporation. SN 106,534. Pub. 10–24–61. Filed 10–17–60.

735,234. SCOTTKIT. H. H. Scott, Inc. SN 107,375. Pub. 12–12–61. Filed 10–28–60.

735,235. SELECT-A-SWITCH. Perfect-Line Manufacturing Corp. SN 108,662. Pub. 5–15–62. Filed 11–17–60.

735,236. UNIMATION. Consolidated Controls Corporation. SN 113,503. Pub. 5–15–62. Filed 2–13–61.

735,237. JOSLOCK. Joslyn Mfg. and Supply Co. SN 116,890. Pub. 5–15–62. Filed 3–31–61.

735,238. HEXAGONAL DESIGN. Texas Instruments Incorporated. SN 117,557. Pub. 5–15–62. Filed 4–10–61.

735,239. AIR-SENTRY. The Seamless Rubber Company. SN 123,567. Pub. 5–15–62. Filed 7–7–61.

735,240. TIARA. Day-Brite Lighting, Inc. SN 125,014. Pub. 5–15–62. Filed 7–31–61.

735,241. FLEX-RAY. The Kerite Company. SN 125,054. Pub. 5–15–62. Filed 7–31–61.

735,242. MAGNALUX. The Magnavox Company. SN 125,676. Pub. 5–15–62. Filed 8–9–61.

735,243. HYTIP. Burndy Corporation. SN 126,736. Pub. 5–15–62. Filed 8–28–61.

735,244. SERVOJUST. The Pacific Industrial Controls, Inc. SN 126,790. Pub. 5–15–62. Filed 8–28–61.

735,245. RANTEC AND DIAMOND DESIGN. Rantec Corporation. SN 127,141. Pub. 5–15–62. Filed 9–1–61.

735,246. KENWOOD. American Commercial Incorporated. SN 127,989. Pub. 5–15–62. Filed 9–18–61.

735,247. DORANIC. Douglas Randall, Inc. SN 128,019. Pub. 5–15–62. Filed 9–18–61.

735,248. ENERJET. Fam Corp. SN 128,028. Pub. 5–15–62. Filed 9–18–61.

735,249. JAVA. Swiveller Company, Inc. SN 128,306. Pub. 5–15–62. Filed 9–20–61.

735,250. JANETTE. Holtzer-Cabot Corporation, by change of name from National Pneumatic Co., Inc. SN 128,749. Pub. 5–15–62. Filed 9–27–61.

Class 22—Games, Toys, and Sporting Goods

735,251. SWINGIN' SUEDE. Inter-American Industrial Services Corporation. SN 115,476. Pub. 5–15–62. Filed 3–13–61.

735,252. SUEDE KING. Inter-American Industrial Services Corporation. SN 115,478. Pub. 5–15–62. Filed 3–13–61.

735,253. LITTLE SCHOLAR AND DESIGN. Bar Zim Toy Mfg. Co., Inc. SN 117,443. Pub. 5–15–62. Filed 4–10–61.

735,254. PLINKY. Alvin L. Breen, d.b.a. Playchem Co. SN 117,605. Pub. 5–15–62. Filed 4–11–61.

735,255. TAKE-A-BREAK. The Liberty Steel Chest Corporation. SN 124,918. Pub. 5–15–62. Filed 7–28–61.

735,256. LIONEL. The Lionel Corporation. SN 125,394. Pub. 5–15–62. Filed 8–4–61.

735,257. WFF 'N PROOF. Layman E. Allen. SN 125,455. Pub. 5–15–62. Filed 8–7–61.

735,258. DIRECTOR. A. G. Spalding & Bros., Inc. SN 125,626. Pub. 5–15–62. Filed 8–8–61.

735,259. CW. Lester M. Davis, d.b.a. Les Davis Fishing Tackle Co. SN 125,896. Pub. 5–15–62. Filed 8–14–61.

735,260. VERDICT-II. The Avalon Hill Company. SN 125,998. Pub. 5–15–62. Filed 8–15–61.

735,261. ACE BLUE STAR. Amerace Corporation. SN 130,165. Pub. 5–15–62. Filed 10–18–61.

735,262. POLVONITE. Protection Equipment Company. SN 130,243. Pub. 5–15–62. Filed 10–18–61.

735,263. CHAMBERLIN. Chamberlin Metal Products Co. SN 130,755. Pub. 5–15–62. Filed 10–27–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

735,264. FULGHUM. Fulghum Industries, Inc. SN 108,768. Pub. 5–15–62. Filed 11–21–60.

735,265. WM CO. AND DESIGN. Wilcox Manufacturing Company. SN 111,304. Pub. 5–15–62. Filed 1–4–61.

735,266. STRIPPER. General Foundry Service Corporation. SN 112,098. Pub. 5–15–62. Filed 12–27–60.

735,267. VALIANT. Brother International Corporation, assignee of Western Sewing Machine Distributors, Inc. SN 115,746. Pub. 5–15–62. Filed 3–15–61.

735,268. NML AND DESIGN. Nordischer Maschinenbau Rud. Baader. SN 120,652. Pub. 5–15–62. Filed 5–23–61.

735,269. MONIKA. Olympia Werke Aktiengesellschaft. SN 122,106. Pub. 5–15–62. Filed 6–15–61.

735,270. SAFE GARD. The Aro Corporation, by change of name from The Aro Equipment Corporation. SN 122,256. Pub. 2–13–62. Filed 6–19–61.

735,271. LIQUID BALL BEARINGS. Philip Morris Incorporated. SN 123,216. Pub. 5–15–62. Filed 6–30–61.

735,272. COLOR KING AND DESIGN. Fairchild Camera and Instrument Corporation. SN 123,634. Pub. 5–15–62. Filed 7–10–61.

735,273. MANDALAY. Van Schaack Premium Corporation. SN 124,146. Pub. 5–15–62. Filed 7–17–61.

735,274. WIEDEMANN. Wiedemann Machine Company. SN 124,613. Pub. 5–15–62. Filed 7–24–61.

735,275. X3. Draper Corporation. SN 125,657. Pub. 5–15–62. Filed 8–9–61.

735,276. ELGEE. Elgee Mfg. Co. SN 126,859. Pub. 4–3–62. Filed 8–29–61.

735,277. FORAY. Ansul Chemical Company. SN 128,142. Pub. 5–15–62. Filed 9–19–61.

735,278. KROP-MASTER. Racine Hydraulics & Machinery, Inc. SN 128,293. Pub. 5–15–62. Filed 9–20–61.

735,279. RATAMP. Racine Hydraulics & Machinery, Inc. SN 128,294. Pub. 5–15–62. Filed 9–20–61.

735,280. TEXT'R MAK'R. Joe Lowe Corporation. SN 128,451. Pub. 5–15–62. Filed 9–22–61.

735,281. SAFE-T-POST. Sawhill Tubular Products, Inc. SN 128,469. Pub. 5–15–62. Filed 9–22–61.

735,282. PROVENAIR. Modernair Corporation (Ohio corporation), assignee of Modernair Corporation (California corporation). SN 128,579. Pub. 5–15–62. Filed 9–25–61.

735,283. ECONOMAIR. Modernair Corporation (Ohio corporation), assignee of Modernair Corporation (California corporation). SN 128,580. Pub. 5–15–62. Filed 9–25–61.

735,284. "WEEDLIX." Andrew C. Popivalo. SN 128,585. Pub. 5–15–62. Filed 9–25–61.

735,285. MONO-CURE. Super Mold Corporation of California, assignee of Trutred Tire Molds. SN 128,621. Pub. 5–15–62. Filed 9–25–61.

735,286. CRUMPAC ORBIT WOUND AND DESIGN. Wirecrafters, Inc. SN 128,630. Pub. 5–15–62. Filed 9–25–61.

735,287. SELDON. James S. Baker (Imports) Co., Inc. SN 128,646. Pub. 5–15–62. Filed 9–26–61.

735,288. JANETTE. Holtzer-Cabot Corporation, by change of name from National Pneumatic Co., Inc. SN 128,748. Pub. 5–15–62. Filed 9–27–61.

735,289. ELECTROMAGIC. Morse Sewing Machine and Supply Corp. SN 128,836. Pub. 5–15–62. Filed 9–28–61.

735,290. ZIP-FIT. ACF Industries, Incorporated. SN 128,879. Pub. 5–15–62. Filed 9–29–61.

735,291. VOX. B. M. Lawrence & Co. SN 129,076. Pub. 5–15–62. Filed 9–26–61.

735,292. MOON ROCKET. The Northwestern Corporation. SN 129,283. Pub. 5–15–62. Filed 10–5–61.

735,293. CONDESCO ETC. AND DESIGN. Alphonse D. De Shano, d.b.a. Condesco. SN 129,346. Pub. 5–15–62. Filed 10–6–61.

735,294. SIRIUS. Comet Industries, Inc. SN 129,744. Pub. 5–15–62. Filed 10–12–61.

Class 24—Laundry Appliances and Machines

735,295. AIRFOLDMATIC. Bishop Freeman Co. SN 116,621. Pub. 5–15–62. Filed 3–28–61.

735,296. FRIGECO. Frigeco S.A. SN 122,185. Pub. 5–15–62. Filed 6–16–61.

Class 26—Measuring and Scientific Appliances

735,297. DYNAMATIC. Voigtlander A.G. SN 79,733. Pub. 2–2–60. Filed 8–17–59.

735,298. DYNAREX. Voigtlander A.G. SN 79,737. Pub. 2–2–60. Filed 8–17–59.

735,299. TELERAD. Telerad Manufacturing Corporation. SN 82,369. Pub. 5–15–62. Filed 9–29–59.

735,300. SPOTFINDER. Cresenzo A. Signore and Virgil Signore (joint owners). SN 94,831. Pub. 5–15–62. Filed 4–11–60.

735,301. TELE-CHECK. I.H. Manufacturing Co., Inc. SN 102,319. Pub. 5–15–62. Filed 8–9–60.

735,302. VARIZOOM. Sears, Roebuck and Co. SN 105,388. Pub. 12–13–60. Filed 9–28–60.

735,303. INST-O-MATIC. Harry Earl Lantery. SN 106,814. Pub. 5–15–62. Filed 10–20–60.

735,304. SYNCHRO-MAT. Synchro-Mat Equipment Corporation. SN 107,073. Pub. 5–15–62. Filed 10–24–60.

735,305. SCIENCE KIT. Science Kit, Inc. SN 107,592. Pub. 5–15–62. Filed 11–1–60.

735,306. SPHEROELLIPSOCON. Continental Contact Lenses. SN 108,028. Pub. 5–15–62. Filed 11–8–60.

735,307. THERM. Therm, Incorporated. SN 109,275. Pub. 5–15–62. Filed 11–29–60.

735,308. TEMPTRON. Temptron, Inc. SN 112,085. Pub. 5–15–62. Filed 1–18–61.

735,309. EAR. Polarad Electronics Corporation. SN 112,310. Pub. 5–15–62. Filed 1–23–61.

735,310. SHANDON AND DESIGN. Shandon Scientific Company Limited. SN 112,781. Pub. 5–15–62. Filed 1–30–61.

735,311. MULTI-ZONER. Multi-Zoner, Inc. SN 115,936. Pub. 5–15–62. Filed 3–17–61.

735,312. NATIONAL GEOGRAPHIC. National Geographic Society. SN 117,124. Pub. 5–15–62. Filed 4–4–61.

735,313. DIAL-O-MAT. Payne Metal Enterprises Limited. SN 117,297. Pub. 5–15–62. Filed 4–6–61.

735,314. NATIONAL GEOGRAPHIC SOCIETY AND HEMISPHERE DESIGN. National Geographic Society. SN 118,197. Pub. 5–15–62. Filed 4–12–61.

735,315. TUDOR. Quick-Set, Incorporated. SN 118,285. Pub. 5–15–62. Filed 4–20–61.

735,316. MOISTURE MONITOR BUTLER AND DESIGN. Butler Bin Company. SN 119,928. Pub. 3–27–62. Filed 5–15–61.

735,317. FRONTIER ELECTRONICS. Frontier Electronics. SN 121,281. Pub. 5–15–62. Filed 6–2–61.

735,318. POSITYPE. General Aniline & Film Corporation. SN 121,557. Pub. 5–15–62. Filed 6–7–61.

735,319. SCROLLFILM AND DESIGN. Scroll Film Industries Inc. SN 121,864. Pub. 5–15–62. Filed 6–12–61.

735,320. AUTOHYDRADYNE. Consolidated Diesel Electric Corporation. SN 125,129. Pub. 5–15–62. Filed 8–1–61.

735,321. MITUTOYO. Mitutoyo Mfg. Co., Ltd. SN 125,155. Pub. 5–15–62. Filed 8–1–61.

735,322. LINEMASTER. Azoplate Corporation. SN 126,000. Pub. 5–15–62. Filed 8–15–61.

735,323. ELFO. Azoplate Corporation. SN 126,001. Pub. 5–15–62. Filed 8–15–61.

735,324. AMCHEM. Amchem Products, Inc. SN 126,291. Pub. 5–15–62. Filed 8–21–61.

735,325. MICRO-AID. Gradex, Inc. SN 126,650. Pub. 5–15–62. Filed 8–25–61.

735,326. JAMI AND DESIGN. J. A. Maurer, Inc. SN 126,666. Pub. 5–15–62. Filed 8–25–61.

735,327. GRACE AND DESIGN. W. R. Grace & Co. SN 126,759. Pub. 5–15–62. Filed 8–28–61.

735,328. GEOCHECK. The Geolograph Company. SN 126,864. Pub. 5–15–62. Filed 8–29–61.

735,329. ESSEX. Ilford Limited. SN 126,869. Pub. 5–15–62. Filed 8–29–61.

735,330. PARALENS. WRS Contact Lens Laboratories, Inc. SN 126,894. Pub. 5–15–62. Filed 8–29–61.

735,331. RANTEC AND DIAMOND DESIGN. Rantec Corporation. SN 127,140. Pub. 5–15–62. Filed 9–1–61.

735,332. METRECYCLE. Exercycle Corporation. SN 127,216. Pub. 5–15–62. Filed 9–5–61.

735,333. TACOMAT. Agfa Aktiengesellschaft. SN 127,305. Pub. 5–15–62. Filed 9–6–61.

735,334. PANADEX. General Aniline & Film Corporation. SN 127,338. Pub. 5–15–62. Filed 9–6–61.

735,335. RUSKA. Ruska Instrument Corporation. SN 127,426. Pub. 5–15–62. Filed 9–7–61.

735,336. RECORDAFLUX. Maxwell Pevar, assignee of The Budd Company. SN 127,749. Pub. 5–15–62. Filed 9–13–61.

735,337. COMPUMATIC. The Plastic Contact Lens Company. SN 127,792. Pub. 5–15–62. Filed 9–13–61.

735,338. BIODE. Biocom, Inc. SN 127,835. Pub. 5–15–62. Filed 9–14–61.

735,339. IDENTI-PETTE. Richard-Allan Company, Inc. SN 128,100. Pub. 5–15–62. Filed 9–18–61.

735,340. COLOR-PETTE. Richard-Allan Company, Inc. SN 128,101. Pub. 5–15–62. Filed 9–18–61.

735,341. MEASUREFIL. Polytech Research, Inc. SN 128,208. Pub. 5–15–62. Filed 9–19–61.

735,342. NIPTRONIC. Stowe-Woodward, Inc. SN 128,611. Pub. 5–15–62. Filed 9–25–61.

735,343. ATOMASTERS. Atomasters-Buntaine Corp. SN 128,882. Pub. 5–15–62. Filed 9–29–61.

735,344. NOVATHERM. Radio Shack Corporation. SN 129,050. Pub. 5–15–62. Filed 10–2–61.

735,345. CON-O-CLAD AND DESIGN. Conax Corporation. SN 129,921. Pub. 5–15–62. Filed 10–16–61.

735,346. CON-O-CLAD. Conax Corporation. SN 129,922. Pub. 5–15–62. Filed 10–16–61.

735,347. CARI-IT-STIK. Milton Brickman, d.b.a. Cari-It-Stik. SN 130,420. Pub. 5–15–62. Filed 10–24–61.

735,348. VISCOTESTER. Gebrüder Haake K.G. SN 130,548. Pub. 5–15–62. Filed 10–24–61.

Class 28 — Jewelry and Precious-Metal Ware

735,349. FLEUR DE MER. Joseph H. Meyer Bros. SN 117,795. Pub. 5–15–62. Filed 4–13–61.

Class 31 — Filters and Refrigerators

735,350. GRASSO. Grasso's Koninklijke Machinefabrieken N.V. SN 105,886. Pub. 5–15–62. Filed 10–6–60.

Class 32 — Furniture and Upholstery

735,351. TUXEDO. The Lane Company, Inc. SN 125,229. Pub. 5–15–62. Filed 8–2–61.

735,352. BONWITZ. The Basic-Witz Furniture Industries, Inc. SN 126,430. Pub. 5–15–62. Filed 8–22–61.

735,353. REVCO. Revco, Inc. SN 128,099. Pub. 5–15–62. Filed 9–18–61.

735,354. AIS. The Allen Iron & Steel Company. SN 129,258. Pub. 5–15–62. Filed 10–5–61.

735,355. PTI AND DESIGN. Plastic Tops, Inc. SN 129,631. Pub. 5–15–62. Filed 10–10–61.

735,356. HANDY SUSAN. Danforce Enterprises. SN 130,149. Pub. 5–15–62. Filed 10–16–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

735,357. ASTRO-VENT. Jenn Air Products Company, Inc. SN 98,099. Pub. 1–9–62. Filed 5–31–60.

735,358. BENCO. Bench Scale Equipment Co., Inc. SN 118,043. Pub. 5–15–62. Filed 4–18–61.

735,359. EI. Embassy Industries, Inc. SN 121,552. Pub. 5–15–62. Filed 6–7–61.

735,360. PYROFAX. Pyrofax Gas Corporation. SN 122,025. Pub. 5–15–62. Filed 6–14–61.

735,361. ALUMIN-ARMOR. Republic-Transcon Industries, Inc. SN 124,124. Pub. 5–15–62. Filed 7–17–61.

735,362. TIME-D-FY. Republic-Transcon Industries, Inc. SN 124,126. Pub. 5–15–62. Filed 7–17–61.

735,363. ALUMIN-GUARD. Republic-Transcon Industries, Inc. SN 124,127. Pub. 5–15–62. Filed 7–17–61.

Class 36 — Musical Instruments and Supplies

735,364. BURGESS AND DESIGN. Servel, Inc. SN 115,186. Pub. 5–15–62. Filed 3–8–61.

735,365. MOPPET RECORDS AND DESIGN. Loren International Corp. SN 123,330. Pub. 5–15–62. Filed 7–3–61.

735,366. COVENANT AND DESIGN. Columbia Research Group. SN 123,409. Pub. 5–15–62. Filed 7–5–61.

735,367. DIAL. Tree Publishing Co., Inc. SN 124,307. Pub. 5–15–62. Filed 7–19–61.

Class 37 — Paper and Stationery

735,368. POGO POINT. Frank T. Johmann. SN 88,610. Pub. 5–15–62. Filed 1–7–60.

735,369. RYTEX-MADE TO ORDER FOR THE OCCASION. The Rytex Company. SN 93,364. Pub. 5–15–62. Filed 3–21–60.

735,370. HAWID. Hans Widmaier. SN 95,861. Pub. 5–15–62. Filed 4–26–60.

735,371. BANCOTE KRAFT. Joseph Bancroft & Sons Company, by merger from Albert D. Smith & Co. Inc. SN 116,164. Pub. 5–15–62. Filed 3–21–61.

735,372. DU-O-VUE. New England Business Service, Inc. SN 137,933. Pub. 5–15–62. Filed 2–14–62.

Class 38 — Prints and Publications

735,373. THE DAKOTA FARMER ETC. AND DESIGN. The Dakota Farmer Company. SN 105,344. Pub. 5–15–62. Filed 9–28–60.

735,374. TASTE OF TORAH. Samuel H. Berkowitz. SN 114,746. Pub. 5–15–62. Filed 3–2–61.

735,375. LETTER M, SHIELD DESIGN ETC. Malaker Laboratories, Inc. SN 120,734. Pub. 5–15–62. Filed 5–24–61.

735,376. APT AND DESIGN. K. Lyman Ames. SN 123,798. Pub. 5–15–62. Filed 7–12–61.

Class 39 — Clothing

735,377. KOZEE KOMFORT. Jack Turk & Co. Inc. SN 113,383. Pub. 5–15–62. Filed 2–9–61.

735,378. KENNEBEC FLANNEL. C. F. Hathaway Company. SN 114,327. Pub. 5–15–62. Filed 2–24–61.

735,379. DEBWOOD BY ANCY. Anstendig and Snyder, Inc., d.b.a. Ancy. SN 116,862. Pub. 5–15–62. Filed 3–31–61.

735,380. HATTERS GUILD. Pantke-Harpke Co. SN 116,906. Pub. 5–15–62. Filed 3–31–61.

735,381. FRILLIKINS. The McKay Products Corporation. SN 118,265. Pub. 5–15–62. Filed 4–20–61.

735,382. MOLDIKINS. The McKay Products Corporation. SN 118,266. Pub. 5–15–62. Filed 4–20–61.

735,383. RINARDO. Rinardo Knits, Inc. SN 122,218. Pub. 5–15–62. Filed 6–16–61.

735,384. TOPSALL. F. W. Woolworth Co. SN 123,788. Pub. 4–24–62. Filed 7–11–61.

735,385. GOLD TOWNE. Goldblatt Bros. Inc. SN 124,543. Pub. 5–15–62. Filed 7–24–61.

735,386. BRAGELONNE. Racine, Société à Responsabilité Limitée. SN 124,841. Pub. 5–15–62. Filed 7–27–61.

735,387. SECRET HEART. The Lovable Brassiere Co. SN 125,611. Pub. 5–15–62. Filed 8–8–61.

735,388. SUNTAMER. Haggar Company. SN 126,520. Pub. 3–20–62. Filed 8–23–61.

735,389. COALTONE. Palm Beach Company. SN 126,947. Pub. 5–15–62. Filed 8–30–61.

735,390. CABARRA. H. Rosenstock & Sons, Inc. SN 128,297. Pub. 5–15–62. Filed 9–20–61.

735,391. TMM TEEN MAN'S MOOD. Jaymar-Ruby, Inc., d.b.a. Jaymar. SN 128,357. Pub. 5–15–62. Filed 9–21–61.

735,392. VITALIZER. Cooper's, Incorporated. SN 128,524. Pub. 5–15–62. Filed 9–25–61.

735,393. HAREM SCARUMS. Alan Shirek, d.b.a. Harem Scarums, assignee of Simon Cohen, d.b.a. Whistle Stop Footwear. SN 128,635. Pub. 5–15–62. Filed 9–25–61.

735,394. LITTLE NIPPER. Audlain of Hyattsville, Inc. SN 128,643. Pub. 5–15–62. Filed 9–26–61.

735,395. PROVOCATIVES. Audlain of Hyattsville, Inc. SN 128,645. Pub. 5–15–62. Filed 9–26–61.

735,396. WELLSCRAFT AND DESIGN. Unishops, Inc., by change of name from United Shirt Shops, Inc. SN 128,691. Pub. 5–15–62. Filed 9–26–61.

735,397. COURTELLE. Courtaulds, Limited. SN 129,469. Pub. 5–15–62. Filed 10–9–61.

Class 40 — Fancy Goods, Furnishings, and Notions

735,398. BERNAT NO-FRAME RUG PATTERN. Emile Bernat & Sons Company. SN 112,589. Pub. 5–15–62. Filed 1–27–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

735,399. LINCOLN. Spartan Mills, assignee of William L. Barrell Company of New York, Inc. SN 82,320. Pub. 5–15–62. Filed 9–29–59.

735,400. M QUIDAM VIGILAT AND DESIGN. McCall Brothers Limited. SN 94,903. Pub. 12–6–60. Filed 4–12–60.

735,401. GALON. Aktiebolaget Fannyudde. SN 103,243. Pub. 5–15–62. Filed 8–23–60.

735,402. K-S BONDAIRE. Kimberly-Stevens Corporation. SN 115,492. Pub. 12–19–61. Filed 3–13–61.

735,403. LISETTA. Deering Milliken, Inc. SN 117,173. Pub. 5–15–62. Filed 4–5–61.

735,404. REPTOIRE. Deering Milliken, Inc. SN 117,174. Pub. 5–15–62. Filed 4–5–61.

735,405. COTERIE. Deering Milliken, Inc. SN 117,175. Pub. 5–15–62. Filed 4–5–61.

735,406. CUMULOFT. Monsanto Chemical Company, by merger from The Chemstrand Corporation. SN 118,412. Pub. 5–15–62. Filed 4–24–61.

735,407. CONCORD-I-KNITS. Concord Textile Co., Inc. SN 122,773. Pub. 5–15–62. Filed 6–26–61.

735,408. KNITFABS. Knitfabs Corporation. SN 123,429. Pub. 5–15–62. Filed 7–5–61.

735,409. HELIODOR. Societe de la Viscose Suisse. SN 124,471. Pub. 5–15–62. Filed 7–21–61.

735,410. DANSGAARD. Nye-Wait Company, Inc. SN 126,672. Pub. 2–27–62. Filed 8–25–61.

735,411. SENE-TISTE. United Merchants and Manufacturers, Inc. SN 128,225. Pub. 5–15–62. Filed 9–19–61.

735,412. BEE DESIGN. Schweizerische Gesellschaft fur Tullindustrie AG. SN 129,809. Pub. 5–15–62. Filed 10–12–61.

735,413. ELIZABETH SPRAGUE. Morgan-Jones, Inc. SN 131,698. Pub. 5–15–62. Filed 11–9–61.

735,414. "YOUNG SET." Shapiro and Son Curtain Corp. SN 131,887. Pub. 5–15–62. Filed 11–13–61.

735,415. POLYGLAS. J. P. Stevens & Co., Inc. SN 132,090. Pub. 5–15–62. Filed 11–15–61.

735,416. NUB-HO. J. P. Stevens & Co., Inc. SN 132,092. Pub. 5–15–62. Filed 11–15–61.

735,417. OPERATION 1460. J. P. Stevens & Co., Inc. SN 132,095. Pub. 5–15–62. Filed 11–15–61.

Class 43 — Thread and Yarn

735,418. ICICLE. Columbia-Minerva Corporation. SN 130,180. Pub. 5–15–62. Filed 10–18–61.

735,419. MOUSSBRYL. Achille Bayart & Co. (Societe Anonyme). SN 131,467. Pub. 5–15–62. Filed 11–7–61.

735,420. CHEMSTRAND. Monsanto Chemical Company, by merger from The Chemstrand Corporation. SN 131,810. Pub. 5–8–62. Filed 11–13–61.

Class 44 — Dental, Medical, and Surgical Appliances

735,421. 3P AND DESIGN. Davol Rubber Company. SN 108,754. Pub. 5–15–62. Filed 11–21–60.

735,422. PINKIES. National Sanitary Laboratories, Inc. SN 110,877. Pub. 9–5–61. Filed 12–27–60.

735,423. LITE-GRIP. Clay-Adams, Inc. SN 117,691. Pub. 5–15–62. Filed 4–12–61.

735,424. DELTA WITHIN A TRIANGLE DESIGN. Precision Medical Instrument, Inc., by change of name from Omega Precision Medical Instrument Co., Inc. SN 119,144. Pub. 5–15–62. Filed 5–2–61.

735,425. VISCOUNT. The W. E. Bassett Company. SN 129,189. Pub. 5–15–62. Filed 10–4–61.

735,426. INCA. Sorenson Investment Co., Inc. SN 129,300. Pub. 5–15–62. Filed 10–5–61.

735,427. VINCA. Sorenson Investment Co., Inc. SN 129,301. Pub. 5–15–62. Filed 10–5–61.

735,428. SANI-SET. Double D Plastics Co. SN 129,472. Pub. 5–15–62. Filed 10–9–61.

735,429. ZOECAL. Mizzy, Inc. SN 131,148. Pub. 5–15–62. Filed 11–1–61.

735,430. MERCURY. Air Reduction Company, Incorporated. SN 131,177. Pub. 5–15–62. Filed 11–2–61.

735,431. "EVENWET." The J. Bird Moyer Company, Inc. SN 131,264. Pub. 5–15–62. Filed 11–3–61.

735,432. STERI-DISP. Mizzy, Inc. SN 131,384. Pub. 5–15–62. Filed 11–6–61.

735,433. ZOCAL. Mizzy, Inc. SN 132,059. Pub. 5–15–62. Filed 11–15–61.

Class 45 — Soft Drinks and Carbonated Waters

735,434. MIX MATES AND DESIGN. Tasty Mates Company. SN 106,758. Pub. 5–15–62. Filed 10–19–60.

735,435. SLIM MATES AND DESIGN. Tasty Mates Company. SN 106,759. Pub. 5–15–62. Filed 10–19–60.

735,436. DATE. Dr. Pepper Company. SN 115,313. Pub. 5–15–62. Filed 3–10–61.

735,437. FIGURE CONTROL. Duffy-Mott Company, Inc. SN 126,911. Pub. 5–15–62. Filed 8–30–61.

Class 46 — Foods and Ingredients of Foods

735,438. BIG B AND REPRESENTATION OF A BEE. Jack T. Baillie Co., Inc., d.b.a. Jack T. Baillie Co. SN 91,331. Pub. 5–15–62. Filed 2–23–60.

735,439. SWISSBAR. The Wander Company, d.b.a. Ovaltine Food Products. SN 102,075. Pub. 1–10–61. Filed 8–4–60.

735,440. COPPELIA AND DESIGN. L'Allobroge. SN 103,461. Pub. 5–15–62. Filed 8–26–60.

735,441. KOOLER. Eskimo Pie Corporation. SN 106,249. Pub. 5–15–62. Filed S.R. 10–12–60; Am. P.R. 1–29–62.

735,442. QBA LABORATORY SPECIFIED AND DESIGN. Quality Bakers of America Cooperative, Inc. SN 109,813. Pub. 5–15–62. Filed 12–7–60.

735,443. LITTLE DEBBIE. McKee Baking Company, by change of name from King's Bakery, Inc., d.b.a. McKee Baking Company. SN 113,925. Pub. 4–17–62. Filed 2–17–61.

735,444. GPS. International Refining and Packaging Corp. SN 117,374. Pub. 5–15–62. Filed 4–7–61.

735,445. WHISPERING HEARTS. E. J. Brach & Sons. SN 124,884. Pub. 5–15–62. Filed 7–28–61.

735,446. KNOTT'S BERRY FARM AND DESIGN. Knott's Berry Farm. SN 124,910. Pub. 5–15–62. Filed 7–28–61.

735,447. DUBL-WHAMMY. Good Humor Corporation. SN 125,487. Pub. 5–15–62. Filed 8–7–61.

735,448. SEALTEST. National Dairy Products Corporation. SN 125,683. Pub. 5–15–62. Filed 8–9–61.

735,449. SAHARA. The Pillsbury Company, d.b.a. Consumer Research Associates. SN 125,763. Pub. 5–15–62. Filed 8–10–61.

735,450. LAPHAM. Seven Keys Co. of Florida. SN 126,049. Pub. 5–15–62. Filed 8–15–61.

735,451. KENTUCKY BEAUTY. Owensboro Canning Co. SN 126,249. Pub. 5–15–62. Filed 8–18–61.

735,452. REXFORD. Owensboro Canning Co. SN 126,250. Pub. 5–15–62. Filed 8–18–61.

735,453. MONTCHANIN AND M DESIGN. Montchanin Products, Inc. SN 133,574. Pub. 5–8–62. Filed 12–7–61.

Class 47 — Wines

735,454. ALMOG. Agudat Hakorrnim Hacooperativit Shel Yekvei Richon Le Zion V'Zichron Yaakov, B.M., d.b.a. Carmel Wine Growers Cooperative—Richon Le Zion—Zichron Jacob. SN 126,980. Pub. 5–15–62. Filed 8–31–61.

Class 49 — Distilled Alcoholic Liquors

735,455. C.O.C. Senior & Co., Inc. SN 106,850. Pub. 5–15–62. Filed 10–20–60.

735,456. RIO CLUB RUM AND DESIGN. Bebidas Merino, S.A. SN 117,897. Pub. 5–15–62. Filed 4–14–61.

735,457. KING JAMES. The American Distilling Company. SN 125,788. Pub. 5–15–62. Filed 8–11–61.

735,458. BOURBON FAIR. Continental Distilling Corporation, d.b.a. W. A. Haller Company. SN 127,094. Pub. 5–15–62. Filed 9–1–61.

Class 50 — Merchandise Not Otherwise Classified

735,459. MOVITEX. Movitex, Ltd. SN 122,451. Pub. 5–15–62. Filed 6–20–61.

Class 51 — Cosmetics and Toilet Preparations

735,460. DISTRA. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 88,284. Pub. 11–22–60. Filed 12–31–59.

735,461. DUAL. Middlebrooke-Lancaster, Inc. SN 103,348. Pub. 3–20–62. Filed 8–24–60.

735,462. SPRAY 'N STAY. Paula Payne Products Company. SN 114,135. Pub. 3–27–62. Filed 2–21–61.

735,463. ST. JOHNS. West Indies Bay Company. SN 115,745. Pub. 5–15–62. Filed 3–15–61.

Class 52 — Detergents and Soaps

735,464. MARAZZO. Oil Specialties & Refining Co., Inc. SN 108,202. Pub. 5–15–62. Filed 11–10–60.

735,465. SEA CHANGE. Haircare, Inc. SN 125,304. Pub. 5–15–62. Filed 8–3–61.

735,466. BAR-ILLIA. Barco Chemicals Division, Inc. SN 126,902. Pub. 5–15–62. Filed 8–30–61.

735,467. REALISTIC. The Realistic Company. SN 131,398. Pub. 5–15–62. Filed 11–6–61.

Service Marks

Class 100 — Miscellaneous

735,468. ACTIVITY VECTOR ANALYSIS. Walter V. Clarke. SN 35,851. Pub. 5–15–62. Filed 8–20–57.

735,469. BBN. Bolt, Beranek & Newman, Inc. SN 95,553. Pub. 3–13–62. Filed 4–22–60.

735,470. VIBROSEIS. Continental Oil Company. SN 117,417. Pub. 5–15–62. Filed 4–7–61.

Class 101 — Advertising and Business

735,471. PIC-WAY. Epko Shoes, Inc. SN 83,493. Pub. 5–15–62. Filed 10–19–59.

735,472. CARICATURE OF MAN'S HEAD AND HAND. Cavanaugh Morris Advertising, Inc., d.b.a. United Breweries of America. SN 103,097. Pub. 5–15–62. Filed 8–22–60.

735,473. GW ETC. AND DESIGN. IADA Services, Inc. SN 104,925. Pub. 5–15–62. Filed 9–21–60.

735,474. THE THIRD MAN. David T. Barry. SN 118,644. Pub. 5–15–62. Filed 4–26–61.

Class 102 — Insurance and Financial

735,475. FORD. Ford Motor Company. SN 80,525. Pub. 5–15–62. Filed 8–31–59.

735,476. A AND DESIGN OF DOME OF A BUILDING. American Capital Life Insurance Company. SN 125,123. Pub. 5–15–62. Filed 8–1–61.

Class 103 — Construction and Repair

735,477. WHITE CLOUD. The Robert A. Cloud Company. SN 105,796. Pub. 5–15–62. Filed 10–5–60.

735,478. AEC AND DESIGN. Rolf Von Hall, d.b.a. Acoustic Engineering Company. SN 116,094. Pub. 5–15–62. Filed 3–20–61.

735,479. MANHATTAN. Manhattan Auto, Inc. SN 118,795. Pub. 5–15–62. Filed 4–27–61.

Class 106 — Material Treatment

735,480. PRIMEX. Prime Plating Works, Inc. SN 103,298. Pub. 5–15–62. Filed 8–23–60.

Class 107 — Education and Entertainment

735,481. ACTIVITY VECTOR ANALYSIS. Walter V. Clarke. SN 35,852. Pub. 5–15–62. Filed 8–20–57.

735,482. READING DYNAMICS INSTITUTE. Evelyn Wood Reading Dynamics Institutes of America, Inc., assignee of Evelyn Wood Reading Dynamics Corporation. SN 105,405. Pub. 5–15–62. Filed 9–28–60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

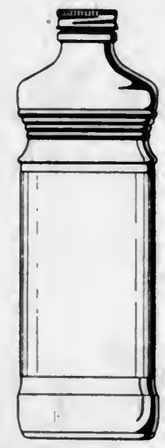
Class 6 — Chemicals and Chemical Compositions

735,483. Hy-Genic Products, Inc., Lyons, Ill. SN 105,646. Filed P.R. 10–3–60; Am. S.R. 6–4–62.

HY-GENIC AIRE

For Composition of Chemicals Adapted for Use as Room Deodorants and as Sanitizing Agents, and as Air Purifiers.
First use Aug. 8, 1960.

735,484. Texize Chemicals, Inc., Greenville, S.C. SN 120,036. Filed P.R. 5–15–61; Am. S.R. 5–18–62.



For Laundry Softener Rinse, Pine Oil Disinfectant, Plastic Starch and Transparent Starch.
First use Oct. 1, 1955, on transparent starch.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

735,485. Atlantic Playing Card & Match Co., Inc., New York, N.Y. SN 119,833. Filed P.R. 5–12–61; Am. S.R. 6–4–62.

/PULL-MATCHES/

For Matches.
First use Dec. 15, 1960.

Class 22 — Games, Toys, and Sporting Goods

735,486. The Absorene Manufacturing Co., St. Louis, Mo. SN 121,247. Filed P.R. 6–2–61; Am. S.R. 6–4–62.

COLOR≈ DOUGH

For Toy Modeling Compound Consisting Principally of Flour and Water.
First use May 19, 1961.

Class 37 — Paper and Stationery

735,487. National Blank Book Company, Holyoke, Mass. SN 94,906. Filed P.R. 4–12–60; Am. S.R. 6–11–62.

CABLE-POST

For Loose Leaf Binders for Holding Form Sheets Having Marginal Perforations for Business Machine Tracking Purposes.
First use Sept. 28, 1959.

Class 38 — Prints and Publications

735,488. Atlanta Chamber of Commerce, Atlanta, Ga. SN 119,464. Filed P.R. 5-8-61; Am. S.R. 5-28-62.

ATLANTA MAGAZINE

Applicant disclaims the word "Magazine" apart from the mark as shown.

For Magazine, the Purpose of Which Is To Promote Civic and Industrial Interest in the City of Atlanta.

First use May 1, 1961.

735,489. Newsweek, Inc., New York, N.Y. SN 121,415. Filed P.R. 6-5-61; Am. S.R. 4-27-62.

WASHINGTON TRENDS

For Department of a Weekly Magazine.

First use Apr. 6, 1942.

735,490. Newsweek, Inc., New York, N.Y. SN 121,750. Filed P.R. 6-9-61; Am. S.R. 4-27-62.

BUSINESS TRENDS

For Department of a Weekly Publication.

First use June 12, 1950.

735,491. Poertner Lithographing Co., Denver, Colo. SN 124,673. Filed P.R. 7-25-61; Am. S.R. 5-31-62.



For Picture Postal Cards and Picture Books.

First use Sept. 1, 1960.

Class 45 — Soft Drinks and Carbonated Waters

735,492. Tasty Mates Company, Camden, N.J. SN 106,760. Filed P.R. 10-19-60; Am. S.R. 6-4-62.



The drawing has been lined for green; however, the color green is not claimed as an integral part of the trademark.

For Soft Drinks and Syrups for Making Same.

First use Oct. 7, 1960.

Class 46 — Foods and Ingredients of Foods

735,493. Maigu Company, Inc., d.b.a. Maigu, Tehran, Iran. SN 112,968. Filed 2-2-61.

PERSIA

For Frozen Shrimp.

First use Sept. 17, 1958; in commerce Sept. 17, 1958.

735,494. The James G. Gill Company, Inc., Norfolk, Va. SN 125,032. Filed P.R. 7-31-61; Am. S.R. 5-10-62.

GILL'S INSTANT



For Coffee.

First use Apr. 1, 1961.

Class 47 — Wines

735,495. United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. SN 113,874. Filed P.R. 2-16-61; Am. S.R. 2-2-62.

PorTokay

For Blend of Port and Tokay Wines.

First use Jan. 25, 1961.

Class 49 — Distilled Alcoholic Liquors

735,496. Societe des Produits Marnier-Lapostolle, d.b.a. Ste Marnier Lapostolle, Paris, France. SN 108,676. Filed P.R. 11-17-60; Am. S.R. 4-19-62.



Owner of U.S. Reg. Nos. 312,050, 312,051, and 315,733.

For Cognac.

First use Oct. 6, 1960; in commerce Oct. 25, 1960.

735,497. The American Distilling Company, New York, N.Y. SN 109,547. Filed P.R. 12-5-60; Am. S.R. 5-1-62.

CAFÉ NOIR

The English translation of "Café Noir" is "black coffee."

For Alcoholic Coffee Liqueurs.

First use Apr. 23, 1959.

735,498. The Black Prince Company, Inc., d.b.a. Hathaway Ltd., Nutley, N.J. SN 119,176. Filed P.R. 5-3-61; Am. S.R. 5-31-62.

Hathaway

For Blended Scotch Whisky.

First use Mar. 17, 1961.

Class 51 — Cosmetics and Toilet Preparations

735,499. Clairol Incorporated, New York, N.Y. SN 128,520. Filed P.R. 9-25-61; Am. S.R. 6-7-62.

NICE N' PRETTY

For Hair Tinting, Dyeing and Coloring Preparations.

First use Mar. 14, 1961.

735,500. Roux Laboratories, Inc., New York, N.Y. SN 128,924. Filed P.R. 9-29-61; Am. S.R. 6-6-62.

BARELY PINK

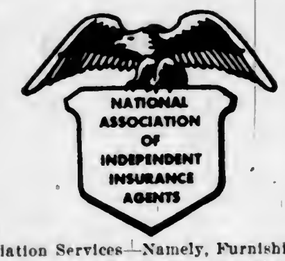
For Hair Coloring Preparations.

First use May 18, 1961.

Service Marks

Class 100 — Miscellaneous

735,501. The National Association of Insurance Agents, Inc., New York, N.Y. SN 71,407. Filed P.R. 4-13-59; Am. S.R. 5-28-62.



For Association Services—Namely, Furnishing Information Through Pamphlets and Publications in All Matters Pertaining to the Operation of an Insurance Agency, Representing Its Members in Proposed Legislation Before the Various State and Federal Legislatures and Serving Its Members in Matters Relating to the Registration of Insurance Agencies in the Various States.

First use Mar. 20, 1959.

Class 101 — Advertising and Business

735,502. Tele-Ticker, New York, N.Y. SN 117,725. Filed P.R. 4-12-61; Am. S.R. 4-6-62.

TELE-TICKER

For Transmitting Stock Quotations and Financial and Other Information by Television.

First use Mar. 30, 1961.

Class 103 — Construction and Repair

735,503. Finegrade Furniture Refinishers, Inc., Brooklyn, N.Y. SN 102,752. Filed P.R. 8-16-60; Am. S.R. 6-11-62.

FINEGRADE

For Furniture Refinishing Service.

First use May 1, 1956.

TRADEMARK REGISTRATIONS RENEWED

155,001. ORIOLA AND DESIGN. Cl. 45. 5-16-22.
155,192. AMERICAN. Cl. 24. 5-23-22.
155,225. ECONOMY. Cl. 27. 5-23-22.
155,669. NELLY DON. Cl. 39. 6-6-22.
155,927. JEWEL. Cl. 1. 6-13-22.
156,686. HENDLERS. Cl. 46. 7-11-22.
156,687. CHOCALMOND. Cl. 46. 7-11-22.
156,907. ORIGINAL E. M. TODD CO. Cl. 46. 7-18-22.
157,120. SANTALETTE. Cl. 39. 7-25-22.
157,517. HECOWA. Cl. 42. 8-8-22.
158,116. TOLHURST. Cl. 23. 8-22-22.
158,862. ANCHOR BRAND AND DESIGN. Cl. 16. 9-12-22.
159,030. MAYFLOWER. Cl. 42. 9-12-22.
159,540. OMEGA. Cl. 37. 9-26-22.
159,568. VELTEX. Cl. 37. 9-26-22.
159,675. FIREFRAX. Cl. 12. 10-3-22.
159,901. H-O. Cl. 46. 10-10-22.
160,323. CUTEX. Cl. 44. 10-17-22.
160,939. CAPSOLIN. Cl. 18. 10-31-22.
161,062. WHITEHALL AND DESIGN. Cl. 39. 11-7-22.
161,102. LINIT. Cl. 6. 11-7-22.
161,262. FLEXATOR. Cl. 39. 11-7-22.
161,457. QUEEN-O-CREPE. Cl. 42. 11-14-22.
161,566. IMPERVO AND DESIGN. Cl. 16. 11-14-22.
394,175. GAUCHO. Cl. 17. 3-24-42.
395,402. CHAS. MACINTOSH & CO. LTD. AND DESIGN. Cl. 39. 5-26-42.
395,404. LET'S GO AMERICA AND DESIGN. Cl. 39. 5-26-42.
395,544. INDIAN HEAD DESIGN. Cl. 14. 6-2-42.
395,556. CAROLINA GOLD. Cl. 46. 6-2-42.
395,627. GF AND DESIGN. Cl. 47. 6-2-42.
395,637. SAVAGE AND DESIGN. Cl. 37. 6-2-42.
395,643. TINTITE. Cl. 14. 6-2-42.
395,724. SOUND CELL. Cl. 21. 6-9-42.
395,731. FORD. Cl. 21. 6-9-42.
395,811. KRASDALE. Cl. 46. 6-16-42.
395,815. KEMILON. Cl. 39. 6-16-42.
395,886. DUC D'ORLEANS. Cl. 47. 6-16-42.
395,897. CELLUFLEX. Cl. 6. 6-16-42.
396,304. DAVIS CUP AND DESIGN. Cl. 22. 7-7-42.
396,417. MUTUAL. Cl. 46. 7-14-42.
396,486. MARLON. Cl. 46. 7-21-42.
396,505. CLEANLINER. Cl. 26. 7-21-42.
396,617. AIRCO. Cl. 26. 7-28-42.
397,592. PALETTE AND DESIGN. Cl. 39. 9-8-42.
397,687. FLAMINGO AND DESIGN. Cl. 1. 9-15-42.
397,752. AMSCO AND ELK DESIGN. Cl. 1. 9-22-42.
397,753. AMSCO AND LION DESIGN. Cl. 1. 9-22-42.
397,880. KERRY LINKS. Cl. 39. 9-29-42.
397,993. COLONIAL HOUSE AND DESIGN. Cl. 51. 10-6-42.
398,146. ITALIAN SWISS COLONY AND DESIGN. Cl. 47. 10-13-42.
398,236. CRESTKNIT. Cl. 39. 10-20-42.
398,365. BANTAM. Cl. 12. 10-27-42.
398,395. EAGLE BRAND AND DESIGN. Cl. 50. 10-27-42.
398,396. LION BRAND AND DESIGN. Cl. 50. 10-27-42.
398,445. MORRISON. Cl. 23. 10-27-42.
398,512. ORO AND DESIGN. Cl. 14. 11-3-42.
398,585. RESPROID. Cls. 1, 12 and 42. 11-10-42.
398,640. PRIORITY. Cl. 46. 11-10-42.
398,678. PENTACOLS. Cl. 18. 11-17-42.
398,726. AERO LUBE. Cl. 6. 11-17-42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

329,274. KING'S CROWN. Cl. 46. 10–22–35.
380,392. TOWN HALL. Cl. 27. 8–20–40.
406,254. SAFETY POWER AND DESIGN. Cl. 19. 3–21–44.
441,274. STARDUST. Cl. 26. 11–9–48.
597,491. BIANCO ORIGINALS AND DESIGN. Cl. 39. 10–26–54.
628,361. MOL-AC. Cl. 44. 6–5–56.

The following registrations issued June 12, 1956

628,472. SHADOWLITE. Cl. 1.
628,473. MODERN INDUSTRIES INC. MI. Cl. 1.
628,476. MIN-A-PLEX ETC. Cl. 1.
628,478. THE ROSARY. Cl. 1.
628,481. COSMIC CALF. Cl. 1.
628,485. USI AND DESIGN. Cl. 2.
628,495. MINUTE LUSTO. Cl. 4.
628,503. ACCO. Cl. 6.
628,514. HI-CHEM. Cl. 6.
628,515. HIDALGO HI-CHEM ETC. AND DESIGN. Cl. 6.
628,520. TRIPLE TREAT. Cl. 10.
628,521. "SLIKWAY." Cl. 12.
628,529. SOLAR QUEEN. Cl. 13.
628,531. MINE-LINE. Cl. 13.
628,534. SAF-T-EST. Cl. 13.
628,535. PIPCO. Cl. 13.
628,544. "67." Cl. 14.
628,551. CACTUS SILVER-SEAL. Cl. 15.
628,555. POLYMOIL. Cl. 15.
628,560. A-P-N FOR PAIN. Cl. 18.
628,563. DEQUADIN. Cl. 18.
628,564. TEOQUIL. Cl. 18.
628,566. HYDROBASE. Cl. 18.
628,567. HYDROPTIC. Cl. 18.
628,568. ROXINOID. Cl. 18.
628,570. MI-PO AND DESIGN. Cl. 18.
628,583. BICO AND DESIGN. Cl. 21.
628,587. DECORE. Cl. 21.
628,594. MUSIC-MAID. Cl. 21.
628,596. STROMBERG CARLSON SOUND AND DESIGN. Cl. 21.
628,599. GOO-GOO. Cl. 22.
628,600. HANS BRINKER. Cl. 22.
628,602. BALLOON FACE. Cl. 22.
628,604. KELLER TOOLS AND K DESIGN. Cl. 23.
628,606. PERFUME-A-SPRAY. Cl. 23.
628,611. BUFFLE. Cl. 23.
628,620. MEX-GRIND. Cl. 23.
628,633. RELEASALLOY. Cl. 23.
628,638. SAFFIRE. Cl. 23.
628,652. INTEGRAL. Cl. 23.
628,658. WILPRINT. Cl. 23.
628,659. ARTEX. Cl. 23.
628,664. STRATA-LOG. Cl. 26.
628,669. TRITAL. Cl. 26.
628,670. ROTOBLOC. Cl. 27.
628,671. GALA. Cl. 28.
628,673. CONTEMPRA HOUSE. Cl. 28.
628,674. TROPICAL SPLENDOR. Cl. 28.
628,675. LG. Cl. 28.
628,676. LIND-GAL. Cl. 28.
628,677. COL-FLAKE. Cl. 31.
628,684. TRUNDLE PAD. Cl. 32.
628,685. CASCADE OF COLOR. Cl. 32.
628,689. OUTRIGGER. Cl. 32.
628,690. EXTRON. Cl. 23.
628,691. SAV-A-CHAIN. Cl. 23.
628,693. LUMINA. Cl. 34.
628,696. MUSTEE. Cl. 34.
628,703. MICRO-JET. Cl. 34.
628,710. TIMELIGHT. Cl. 36.
628,721. DINNER-WINNER. Cl. 38.
628,722. CHOOSING SIDES. Cl. 38.
628,729. PANTERIA. Cl. 39.
628,730. PANT-TREE. Cl. 39.
628,731. BETSY JAMES AND DESIGN. Cl. 39.
628,732. OOPSIES AND DESIGN. Cl. 39.
628,743. VIPASHA. Cl. 39.
628,745. PICCOLINO. Cl. 39.
628,746. ROBIN HOOD. Cl. 39.
628,752. IDALEE. Cl. 39.
628,765. BEAU BRUMMEL. Cl. 29.
628,769. DESIGN OF SHEEP AND FLOWER. Cl. 42.
628,770. DESIGN OF SHEEP'S HEAD AND FLOWER. Cl. 42.
628,777. LANCER. Cl. 42.
628,778. PETTIPERM. Cl. 42.
628,781. ALVA. Cl. 45.
628,783. SAMBA. Cl. 45.
628,785. DYCO. Cl. 46.
628,786. E-Z POP. Cl. 46.
628,787. BILLY-BOBS. Cl. 46.
628,789. BOWMAN PARTY MOLD. Cl. 46.
628,791. GOLDEN LOAF ETC. AND DESIGN. Cl. 46.
628,793. MAC'S BEST. Cl. 46.
628,794. PEPPY PEPPERS. Cl. 46.
628,795. HITEST MEAT SCRAP AND DESIGN. Cl. 46.
628,800. FLAVOR-DATED AND DESIGN. Cl. 46.
628,801. RED DRAGON. Cl. 46.
628,805. MORSE'S. Cl. 46.
628,823. WIDJITS. Cl. 50.
628,844. KITCHEN-EASE. Cl. 52.
628,847. CROFT CATTLE CONTROL. Cl. 103.
628,848. TINKER'S WORKSHOP AND DESIGN. Cl. 107.
628,850. REPRESENTATION OF A LUMP OF COAL WITH IRIDESCENT COATING. Cl. 1.
628,851. THE STANDARD FOR BETTER WIRING ETC. AND DESIGN. Cl. 21.
628,852. AMERICAN PRINTED CIRCUITS CO. ETC. AND DESIGN. Cl. 21.
628,857. RICE BITS. Cl. 46.
628,858. ADAMS MINT AND DESIGN. Cl. 46.

Erratum

In the OFFICIAL GAZETTE, issue of April 4, 1961, at page TM 40, under heading "Trademark Registrations Canceled, Section 18" Reg. No. 672,986 for the trademark FRESH-AID in Class 45 was inadvertently canceled. The cancellation has been vacated.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

426,130. PLASTISCOPE. Cl. 38. 12–17–46. Modern Plastics, Inc. Breskin Publications Inc., New York, N.Y. Amended: In the statement, column 1, line 9, "weekly" is deleted and *monthly* is inserted.

517,319. BLACK & DECKER. Cl. 21. 11–8–49. The Black and Decker Manufacturing Company, Towson, Md. Amended: In the statement, column 1, lines 19 and 20, "electric fans," is deleted and the drawing is amended to appear:

BLACK & DECKER

517,319. BLACK & DECKER. Cl. 21. 11–8–49. The Black and Decker Manufacturing Company, Towson, Md. Corrected: In the statement, column 1, lines 37 and 38, "February 1, 1941" should be deleted and *March 19, 1915* should be inserted and in column 2, line 2, "on February 1, 1941" should be deleted and *in the year 1915* should be inserted.

535,933. BLACK & DECKER. Cl. 23. 1–9–51. The Black and Decker Manufacturing Company, Towson, Md. Amended: In the statement, column 1, lines 20 and 21, "air pumps and air compressors," is deleted, and the drawing is amended to appear:

BLACK & DECKER

535,933. BLACK & DECKER. Cl. 23. 1–9–51. The Black and Decker Manufacturing Company, Towson, Md. Corrected: In the statement, column 2, line 13, "May 15, 1940" should be deleted and *March 19, 1915* should be inserted and in line 16, "on May 15, 1940" should be deleted and *in the year 1915* should be inserted.

610,008. OLD VIRGINIA. Cl. 46. 8–2–55. Old Virginia Packing Co., Inc., Front Royal, Va. Amended: In the statement, column 2, lines 9 and 10 are deleted, and the drawing is amended to appear:

OLD VIRGINIA

726,170. PROXSEAL. Cl. 16. 1–9–62. Pyroxylin Products, Inc., Chicago, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted and in line 2, "4821" should be deleted and *4851* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

385,466. JELFLAKE. Cl. 12. Dowell Incorporated. 3–4–41. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

516,220. DOWELL AND DESIGN. Cl. 6. Dowell Incorporated, assignor to Dowell Incorporated. 10–11–49. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

542,155. DOWELL AND DESIGN. Cl. 103. Dowell Incorporated, assignor to Dowell Incorporated. 5–8–51. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

566,744. CORBAN. Cl. 6. Dowell Incorporated. 11–11–52. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

584,015. SAND-FRAC. Cl. 103. Dowell Incorporated. 12–22–53. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

589,235. FIXAFRAC. Cl. 103. Dowell Incorporated. 4–27–54. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

592,302. STRATA-FRAC. Cl. 103. Dowell Incorporated. 7–6–54. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

593,399. SANDTROL. Cl. 103. Dowell Incorporated. 8–3–54. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

601,449. PROTECTOJEL. Cl. 103. Dowell Incorporated. 1–25–55. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

602,237. PETROFRAC. Cl. 103. Dowell Incorporated. 2–15–55. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

650,273. RIVERFRAC. Cl. 103. Dowell Incorporated. 8–13–57. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

651,305. DEXET. Cl. 103. Dowell Incorporated. 9–3–57. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

651,306. SANDLOCK. Cl. 103. Dowell Incorporated. 9–3–57. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

651,856. CEALMENT. Cl. 103. Dowell Incorporated. 9–17–57. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

651,927. DEXET. Cl. 12. Dowell Incorporated. 9–24–57. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

652,857. PETROJEL. Cl. 103. Dowell, Incorporated. 10–8–57. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

653,618. FREFLO. Cl. 6. Dowell Incorporated. 10–29–57. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

658,659. DETERGER. Cl. 6. Dowell Incorporated. 2–25–58. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

661,681. THE VIRGINIA GAZETTE. Cl. 38. The Virginia Gazette. 5–13–58. New Cert. Sec. 7(c) to The Virginia Gazette, Inc., Williamsburg, Va.

729,347. SIMPSON ETC. AND DESIGN. Cl. 15. Simpson Oil Company, Inc. 4–3–62. New Cert. Sec. 7(c) to Sinclair Refining Company, New York, N.Y.

729,558. SIMPSON ETC. AND DESIGN. Cl. 100. Simpson Oil Company, Inc. 4–3–62. New Cert. Sec. 7(c) to Sinclair Refining Company, New York, N.Y.

INDEX OF REGISTRANTS

JULY 31, 1962

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

ACF Industries, Inc., St. Louis, Mo. 735,290, pub. 5–15–62. Cl. 23.
Absorene Mfg. Co., The, St. Louis, Mo. 735,486. Cl. 22.
Acme Steel Co. : *See*—
Harris-Seybold-Potter Co.
Acoustic Engineering Co. : *See*—
Hall, Rolf von.
Adikes, J. & L., Inc., Jamaica, N.Y. 735,141, pub. 5–15–62. Cl. 6.
Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, 735,333, pub. 5–15–62. Cl. 26.
Agudat Hakormim Hacooperativit Shel Yekvei Richon Le Zion V'Zichron Yaakov B.M., d.b.a. Carmel Wine Growers Co-operative-Richon Le Zion-Zichron Jacob, Richon Le Zion, Israel. 735,454, pub. 5–15–62. Cl. 47.
Aiello, Peter F., & Co., San Jose, Calif. 329,274, canc. Cl. 46.
Air-Formed Products Corp., Nashua, N.H. 735,112, pub. 5–15–62. Cl. 2.
Air Lift Co., Lansing, Mich. 735,226, pub. 7–5–60. Cl. 19.
Air Logistics Corp., Pasadena, Calif. 735,110, pub. 5–15–62. Cl. 2.
Air Reduction Co., Inc. : *See*—
Air Reduction Sales Co.
Air Reduction Co., Inc., New York, N.Y. 735,430, pub. 5–15–62. Cl. 44.
Air Reduction Sales Co., to Air Reduction Co., Inc., New York, N.Y. 396,617, ren. 7–31–62. Cl. 26.
Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. 735,460, pub. 11–22–60. Cl. 51.
Aktiebolaget Fannyudde, Stockholm, Sweden. 735,401, pub. 5–15–62. Cl. 42.
Albright Co., The, Chicago, Ill. 628,677, canc. Cl. 31.
Allen & Hanburys, Ltd., London, England. 628,563–4, canc. Cl. 18.
Allen Iron & Steel Co., The, Norristown, Pa. 735,354, pub. 5–15–62. Cl. 32.
Allen, Layman E., New Haven, Conn. 735,257, pub. 5–15–62. Cl. 22.
Aluminum Fence Co. of America, Cleveland, Ohio. 735,189, pub. 5–15–62. Cl. 13.
Amchem Products, Inc., Ambler, Pa. 735,324, pub. 5–15–62. Cl. 26.
Amerace Corp., New York, N.Y. 735,261, pub. 5–15–62. Cl. 22.
American Capital Life Insurance Co., Washington, D.C. 735,476, pub. 5–15–62. Cl. 102.
American Chicle Co., Long Island City, N.Y. 628,858, canc. Cl. 46.
American Commercial Inc., Los Angeles, Calif. 735,246, pub. 5–15–62. Cl. 21.
American Cyanamid & Chemical Corp., New York, N.Y., to American Cyanamid Co., Wayne, N.J. 398,726, ren. 7–31–62. Cl. 6.
American Cyanamid Co. : *See*—
American Cyanamid & Chemical Co.
American Cyanamid Co., New York, N.Y. 628,503, canc. Cl. 6.
American Cyanamid Co., New York, N.Y. 735,221, pub. 5–15–62. Cl. 18.
American Distilling Co., The, New York, N.Y. 735,457, pub. 5–15–62. Cl. 49.
American Distilling Co., The, New York, N.Y. 735,497. Cl. 49.
American Gypsum Co., Albuquerque, N. Mex. 735,175, pub. 5–15–62. Cl. 12.
American Laundry Machinery Co., The, Norwood, Ohio, to McGraw-Edison Co., Elgin, Ill. 155,192, ren. 7–31–62. Cl. 24.
American Printed Circuits Co., Inc., Metuchen, N.J. 628,852, canc. Cl. 21.
American Sponge and Chamois Co., Inc., Long Island City, N.Y. 397,752–3, ren. 7–31–62. Cl. 1.
Ames, K. Lyman, Winnetka, Ill. 735,376, pub. 5–15–62. Cl. 38.
Ametek, Inc. : *See*—
Tolhurst Machine Works.
Ampac Metal Die Co., Inc., La Mesa, Calif. 628,472, canc. Cl. 1.
Anco Corp., Pittsburgh, Pa. 735,152–3, pub. 5–15–62. Cl. 7.
Ancy : *See*—
Anstendig and Snyder, Inc.
Anstendig and Snyder, Inc., d.b.a. Ancy, New York, N.Y. 735,379, pub. 5–15–62. Cl. 39.
Ansul Chemical Co., Marinette, Wis. 735,144, pub. 5–15–62. Cl. 6.
Ansul Chemical Co., Marinette, Wis. 735,277, pub. 5–15–62. Cl. 23.
Appleton Electric Co., Chicago, Ill. 628,851, canc. Cl. 21.
Arkansas Rice Growers Co-operative Association, Stuttgart, Ark. 628,857, canc. Cl. 46.
Aro Corp., The, from The Aro Equipment Corp., Bryan, Ohio. 735,270, pub. 2–13–62. Cl. 23.
Aro Equipment Corp., The : *See*—
Aro Corp., The.
Art Craft Sales Co. : *See*—
Budd-Jack, Joseph T.
Ateliers & Chantiers de la Manche, Dieppe, France. 628,611, canc. Cl. 23.
Atlanta Chamber of Commerce, Atlanta, Ga. 735,488. Cl. 38.
Atlantic Playing Card & Match Co., Inc., New York, N.Y. 735,485. Cl. 9.
Atlantic Research Corp., Alexandria, Va. 735,160, pub. 5–15–62. Cl. 9.
Atlas Roofing Mfg. Co., Inc., Jackson, Miss. 735,172, pub. 4–3–62. Cl. 12.
Atomasters-Buntaine Corp., St. Louis, Mo. 735,343, pub. 5–15–62. Cl. 26.
Audlain of Hyattsville, Inc., Hyattsville, Md. 735,394–5, pub. 5–15–62. Cl. 39.
Avalon Hill Co., The, Baltimore, Md. 735,260, pub. 5–15–62. Cl. 22.
Avia Marine Co., Seattle, Wash. 735,191, pub. 5–15–62. Cl. 13.
Azoplate Corp., Murray Hill, N.J. 735,146, pub. 5–15–62. Cl. 6.
Azoplate Corp., Murray Hill, N.J. 735,322–3, pub. 5–15–62. Cl. 26.
B.B. Chemical Co. : *See*—
United Shoe Machinery Corp.
Baillie, Jack T., Co. : *See*—
Baillie, Jack T., Co., Inc.
Baillie, Jack T., Co., Inc., d.b.a. Jack T. Baillie Co., Salinas, Calif. 735,438, pub. 5–15–62. Cl. 46.
Baker, James S., (Imports) Co., Inc., San Francisco, Calif. 735,287, pub. 5–15–62. Cl. 23.
Bancroft, Joseph & Sons Co., Wilmington, Del., from Albert D. Smith & Co. Inc., New York, N.Y. 735,371, pub. 5–15–62. Cl. 37.
Bar Zim Toy Mfg. Co., Inc., Jersey City, N.J. 735,253, pub. 5–15–62. Cl. 22.
Barco Chemicals Division, Inc., Miami, Fla. 735,466, pub. 5–15–62. Cl. 52.
"Bark"-ly Products Co. : *See*—
Ollstein, Lea J.
Barrell, William L., Co. of New York, Inc. : *See*—
Spartan Mills.
Barry, David T., Wellesley, Mass. 735,474, pub. 5–15–62. Cl. 101.
Basic-Witz Furniture Industries, Inc., The, Waynesboro, Va. 735,352, pub. 5–15–62. Cl. 32.
Bassett, W. E., Co., The, Derby, Conn. 735,425, pub. 5–15–62. Cl. 44.
Bayart, Achille, & Co., Roubaix, France. 735,106. Cl. 1.
Bayart, Achille, & Co. (Societe Anonyme), Roubaix, Nord, France. 735,419, pub. 5–15–62. Cl. 43.
Beach Mfg. Co., Charlotte, Mich. 735,186, pub. 5–15–62. Cl. 13.
Beatty Coal Co., Kansas City, Mo., to Jewell Ridge Coal Sales Co., Inc., Cincinnati, Ohio. 155,927, ren. 7–31–62. Cl. 1.
Beeline Products Corp., Portland, Oreg. 735,183, pub. 5–15–62. Cl. 13.
Beich Bros. Candy Co., Chicago, Ill. 628,787, canc. Cl. 46.
Belock Instrument Corp., College Point, N.Y. 628,583, canc. Cl. 21.
Bench Scale Equipment Co., Inc., Westfield, N.J. 735,358, pub. 5–15–62. Cl. 34.
Berkley & Co., Inc., Spirit Lake, Iowa. 735,154, pub. 5–15–62. Cl. 7.
Berkowitz, Samuel H., Philadelphia, Pa. 735,374, pub. 5–15–62. Cl. 38.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 735,398, pub. 5–15–62. Cl. 40.
Best & Co., Inc., to F. Jacobson & Sons, Inc., New York, N.Y. 161,062, ren. 7–31–62. Cl. 39.
Blocom, Inc., Woodland Hills, Calif. 735,338, pub. 5–15–62. Cl. 26.
Black and Decker Mfg. Co., The, Towson, Md. 517,319. Am. 7(d). Cl. 21.
Black and Decker Mfg. Co., The, Towson, Md. 517,319, cor. Cl. 21.
Black and Decker Mfg. Co., The, Towson, Md. 535,933. Am. 7(d). Cl. 23.
Black and Decker Mfg. Co., The, Towson, Md. 535,933, cor. Cl. 23.
Black Prince Co., Inc., The, d.b.a. Hathaway Ltd., Nutley, N.J. 735,498. Cl. 49.
Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 735,217, pub. 3–27–62. Cl. 18.
Bolt, Beranek & Newman, Inc., Cambridge, Mass. 735,469, pub. 3–13–62. Cl. 100.
Borden Co., The : *See*—
Hendler Creamery Co., The.
Bowman Dairy Co., Chicago, Ill. 628,789, canc. Cl. 46.
Brach, E. J., & Sons, Chicago, Ill. 735,445, pub. 5–15–62. Cl. 46.
Brador, Daniel, d.b.a. Timelight Melodies, Chicago, Ill. 628,710, canc. Cl. 36.
Breen, Alvin L., d.b.a. Playchem Co., Wilmington, Del. 735,254, pub. 5–15–62. Cl. 22.
Breskin Publications Inc. : *See*—
Modern Plastics, Inc.
Brickman, Milton, d.b.a. Carl-It-Stik, Chicago, Ill. 735,347, pub. 5–15–62. Cl. 26.
Brinker, Hans, Inc., New York, N.Y. 628,600, canc. Cl. 22.

Brinkmann, Martin, Bremen, Germany. 735,210, pub. 4–3–62. Cl. 17.
Brother International Corp., Long Island City, N.Y., from Western Sewing Machine Distributors, Inc., St. Louis, Mo. 735,267, pub. 5–15–62. Cl. 23.
Brush Development Co., The, to Clevite Corp., Cleveland, Ohio. 395,724, ren. 7–31–62. Cl. 21.
Budd-Jack, Joseph T., d.b.a. Art Craft Sales Co., Detroit, Mich. 628,476, canc. Cl. 1.
Burndy Corp., Norwalk, Conn. 735,243, pub. 5–15–62. Cl. 21.
Butler Bin Co., Waukesha, Wis. 735,316, pub. 3–27–62. Cl. 26.
C.P. Plastic Engineering Co.: *See*—
Phillips, Lewis F.
California Marine Curing & Packing Co., Terminal Island, Calif. 398,640, ren. 7–31–62. Cl. 46.
Canadian International Paper Co., Montreal, Quebec, Canada. 735,100, pub. 5–15–62. Cl. 1.
Carborundum Co., The, to The Carborundum Co., Niagara Falls, N.Y. 159,675, ren. 7–31–62. Cl. 12.
Carl-It-Stik: *See*—
Brickman, Milton.
Carmel Wine Growers Cooperative—Richon Le Zion—Zichron Jacob: *See*—
Agudat Hakormim Hacooperativit Shel Yekvei Richon Le Zion V'Zichron Yaakov B.M.
Cato, Ernest E., Dallas, Tex. 735,171, pub. 5–15–62. Cl. 12.
Celanese Corp. of America, New York, N.Y. 395,897, ren. 7–31–62. Cl. 6.
Chamberlin Metal Products Co., Frankfort, Mich. 735,263, pub. 5–15–62. Cl. 22.
Chase and Sons, Inc., North Quincy, Mass. 735,163–4, pub. 5–15–62. Cl. 42.
Chemstrand Corp., The: *See*—
Monsanto Chemical Co.
Chesebrough Pond's Inc: *See*
Warren, Northam, Corp.
Chicken Products Co., Provo, Utah. 628,794, canc. Cl. 46.
Chicopee Mills, Inc., New York, N.Y. 628,746, canc. Cl. 39.
Clairol Inc., New York, N.Y. 735,499. Cl. 51.
Clarke, Walter V., Barrington, R.I. 735,468, pub. 5–15–62. Cl. 100.
Clarke, Walter V., Barrington, R.I. 735,481, pub. 5–15–62. Cl. 107.
Clay-Adams, Inc., New York, N.Y. 735,423, pub. 5–15–62. Cl. 44.
Clevite Corp.: *See*—
Brush Development Co., The.
Cloud, Robert A., Co., The, Cincinnati, Ohio. 735,477, pub. 5–15–62. Cl. 103.
Coast Pro-Seal & Mfg. Co., Los Angeles, Calif. 735,167, pub. 2–27–62. Cl. 12.
Cohen, Simon: *See*—
Shirek, Alan.
Colonial Dames Co., Ltd.: *See*—
York, Willard D.
Columbia Minerva Corp., New York, N.Y. 735,418, pub. 5–15–62. Cl. 43.
Columbia Research Group, Salt Lake City, Utah. 735,366, pub. 5–15–62. Cl. 36.
Columbus Coated Fabrics Corp., Columbus, Ohio. 735,229, pub. 5–15–62. Cl. 20.
Comet Industries, Inc., Franklin Park, Ill. 735,294, pub. 5–15–62. Cl. 23.
Conax Corp., Buffalo, N.Y. 735,345–6, pub. 5–15–62. Cl. 26.
Concord Textile Co., Inc., New York, N.Y. 735,407, pub. 5–15–62. Cl. 42.
Conde Nast Publications Inc., The, New York, N.Y. 628,722, canc. Cl. 38.
Condesco: *See*—
De Shano, Alphonse D.
Consolidated Controls Corp., Bethel, Conn. 735,236, pub. 5–15–62. Cl. 21.
Consolidated Diesel Electric Corp., Stamford, Conn. 735,320, pub 5–15–62. Cl. 26.
Consolidated Expanded Metal Companies, The, to Wheeling Corrugating Co., Wheeling, W. Va 398,365, ren. 7–31–62. Cl. 12.
Consolidated Mining and Smelting Co. of Canada Ltd., The, Montreal, Quebec, Canada. 735,214, pub. 5–15–62. Cl. 18.
Consumer Research Associates: *See*—
Pillsbury Co., The.
Consumers Cooperative Association, The, Kansas City, Mo. 628,520, canc. Cl. 10.
Continental Contact Lenses, Elmhurst, N.Y. 735,306, pub. 5–15–62. Cl. 26.
Continental Distilling Corp., d.b.a. W. A. Haller Co., Philadelphia, Pa. 735,458, pub. 5–15–62. Cl. 49.
Continental Oil Co., Ponca City, Okla. 735,470, pub. 5–15–62. Cl. 100.
Cooper's Inc., Kenosha, Wis. 735,392, pub. 5–15–62. Cl. 39.
Co-operative Rose Growers, Inc., Tyler, Tex. 735,107, pub. 5–15–62. Cl. 1.
Corn Products Co.: *See*—
Corn Products Refining Co.
H-O Cereal Co., Inc., The.
Corn Products Refining Co., to Corn Products Co., New York, N.Y. 161,102, ren. 7–31–62. Cl. 6.
Costello, Weber, Co.: *See*—
Standard Crayon Mfg. Co.
Courtaulds, Ltd., London, England. 735,397, pub. 5–15–62. Cl. 39.
Croft, James O., Java Village, N.Y. 628,847, canc. Cl. 103.
Crowell-Collier Publishing Co., The, New York, N.Y. 628,721, canc. Cl. 38.
Dakota Farmer Co., The, Aberdeen, S. Dak. 735,373, pub. 5–15–62. Cl. 38.
Dakota Salt and Chemical Co., Williston, N. Dak. 735,099, pub. 5–15–62. Cl. 1.
Danforce Enterprises, Vancouver, British Columbia, Canada. 735,356, pub. 5–15–62. Cl. 32.
Darworth Inc., Simsbury, Conn. 735,147, pub. 3–27–62. Cl. 6.
Davis, Les, Fishing Tackle Co.: *See*—
Davis, Lester M.
Davis, Lester M., d.b.a. Les Davis Fishing Tackle Co., Tacoma, Wash. 735,259, pub. 5–15–62. Cl. 22.
Davis Paint Co., d.b.a. Farm and Home Paint Co., North Kansas City, Mo. 735,208, pub. 5–15–62. Cl. 16.
Davol Rubber Co., Providence, R.I. 735,421, pub. 5–15–62. Cl. 44.
Day-Brite Lighting, Inc., St. Louis, Mo. 735,240, pub. 5–15–62. Cl. 21.
Deering Milliken, Inc., New York, N.Y. 735,403–5, pub. 5–15–62. Cl. 42.
Delta Drug Corp., Jacksonville, Fla. 735,222–3, pub. 5–15–62. Cl. 18.
De Nobili Cigar Co., Scranton, Pa. 394,175, ren. 7–31–62. Cl. 17.
De Shano, Alphonse D., d.b.a. Condesco, Hamilton, Ohio. 735,293, pub. 5–15–62. Cl. 23.
Developmental Engineering Corp., Washington, D.C. 735,231, pub 5–15–62. Cl. 21.
De Witt Custom Lubricants: *See*—
Headden, De Witt.
Diversey Corp., The, Chicago, Ill. 735,134, pub. 5–15–62. Cl. 6.
DoAll Co., The, Des Plaines, Ill. 735,202, pub. 5–15–62. Cl. 15.
Dr. Pepper Co., Dallas, Tex. 735,436, pub. 5–15–62. Cl. 45.
Doniger, David D., & Co. Inc., New York, N.Y. 628,745, canc. Cl. 39.
Donnelly Garment Co., to Nelly Don, Inc., Kansas City, Mo. 153,669, ren. 7–31–62. Cl. 39.
Double D Plastics Co., Los Angeles, Calif. 735,428, pub. 5–15–62. Cl. 44.
Douglas Fir Plywood Association, Tacoma, Wash. 735,166, pub. 5–15–62. Cl. 12.
Dow Chemical Co.: *See*—
Dowell Inc.
Dow Chemical Co., The, Midland, Mich. 735,125, pub. 5–15–62. Cl. 2.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 385,466, new cert. Cl. 12.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 568,744, new cert. Cl. 6.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 584,015, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 589,235, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 592,302, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 593,399, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 601,449, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 602,237, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 650,273, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 651,305–6, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 651,856–7, new cert. Cl. 103.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 651,927, new cert. Cl. 12.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 653,618, new cert. Cl. 6.
Dowell Inc., to The Dow Chemical Co., Midland, Mich. 658,659, new cert. Cl. 6.
Dowell Inc. to Dowell Inc., to The Dow Chemical Co., Midland, Mich. 516,220, new cert. Cl. 6.
Dowell Inc., to Dowell Inc., to The Dow Chemical Co., Midland, Mich. 542,155, new cert. Cl. 103.
Draper Corp., Hopedale, Mass. 735,275, pub. 5–15–62. Cl. 23.
Dresser Industries, Inc., Dallas, Tex. 735,192–3, pub. 5–15–62. Cl. 13.
Duffy-Mott Co., Inc., New York, N.Y. 735,437, pub. 5–15–62. Cl. 45.
Duplex Straw Dispenser Co., Los Angeles, Calif. 735,124, pub. 5–15–62. Cl. 2.
Dyer, J. E., & Co., Washington, D.C. 628,785, canc. Cl. 46.
Eisendrath, B. D., Tanning Co., Chicago, Ill. 628,481, canc. Cl. 1.
Ekco Products Co., Chicago, Ill. 628,495, canc. Cl. 4.
Elgee Mfg. Co., Chatham, N.J. 735,276, pub. 4–3–62. Cl. 23.
Elgin National Watch Co., Elgin, Ill. 155,225, ren. 7–31–62. Cl. 27.
Embassy Industries, Inc., Brooklyn, N.Y. 735,359, pub. 5–15–62. Cl. 34.
Emergency Shelter Co., Bryan, Tex. 735,177, pub. 5–15–62. Cl. 12.
Empire Silk Co., Wilmington, Del., and New York, N.Y., to William Skinner & Sons, New York, N.Y. 161,457, ren. 7–31–62. Cl. 42.
Endo Laboratories Inc.: *See*—
Endo Products, Inc.
Endo Products, Inc., New York, N.Y., to Endo Laboratories Inc., Richmond Hill, N.Y. 398,678, ren. 7–31–62. Cl. 18.
Epko Shoes, Inc., Toledo, Ohio. 735,471, pub. 5–15–62. Cl. 101.
Eskimo Pie Corp., Richmond, Va. 735,441, pub. 5–15–62. Cl. 46.
Exercycle Corp., New York, N.Y. 735,332, pub. 5–15–62. Cl. 26.
Fairchild Camera and Instrument Corp., Syosset, N.Y. 735,272, pub. 5–15–62. Cl. 23.
Fairview Collieries Corp., to Fairview Collieries Corp., Indianapolis, Ind. 397,687, ren. 7–31–62. Cl. 1.
Fam Corp., Portland, Oreg. 735,248, pub. 5–15–62. Cl. 21.
Farm and Home Paint Co.: *See*—
Davis Paint Co.

Ferry-Morse Seed Co., San Juan Bautista, Calif. 628,805, canc. Cl. 46.
Finegrade Furniture Refinishers, Inc., Brooklyn, N.Y. 735,503. Cl. 103.
Firth Sterling, Inc., Pittsburgh, Pa. 628,620, canc. Cl. 23.
Ford, Kling & Wilson: *See*—
Snubs Product Corp., The.
Ford Motor Co., Dearborn, Mich. 395,731, ren. 7–31–62. Cl. 21.
Ford Motor Co., Dearborn, Mich. 735,475, pub. 5–15–62. Cl. 102.
Foto-Field, Inc., Morton Grove, Ill. 735,187, pub. 5–15–62. Cl. 13.
Freeman, Bishop, Co., Evanston, Ill. 735,295, pub. 5–15–62. Cl. 24.
Freeman, R. E., Tampa, Fla. 628,800, canc. Cl. 46.
Frigeco S.A., Courbevoie, Seine, France. 735,296, pub. 5–15–62. Cl. 24.
Frontier Electronics, Phoenix, Ariz. 735,317, pub. 5–15–62. Cl. 26.
Fulghum Industries, Inc., Wadley, Ga. 735,264, pub. 5–15–62. Cl. 23.
Fuller Pharmaceutical Co., Minneapolis, Minn. 735,213, pub. 5–15–62. Cl. 18.
Gaby Co.: *See*—
Gaby, Inc.
Gaby, Inc., d.b.a. Gaby Co., Philadelphia, Pa. 735,218, pub. 5–15–62. Cl. 18.
Gardner-Denver Co.: *See*—
Keller Tool Co.
Gay Tool Co., Inc., Providence, R.I. 628,671, canc. Cl. 28.
Gebruder Haake K.G., Berlin-Steglitz, Germany. 735,348, pub. 5–15–62. Cl. 26.
Geeting & Fromm, Inc., Chicago, Ill. 395,627, ren. 7–31–62. Cl. 47.
Geeting & Fromm, Inc., Chicago, Ill. 395,886, ren. 7–31–62. Cl. 47.
Geigy Chemical Corp., Ardsley, N.Y. 735,149–50, pub. 5–15–62. Cl. 6.
General Aniline & Film Corp., New York, N.Y. 735,318, pub. 5–15–62. Cl. 26.
General Aniline & Film Corp., New York, N.Y. 735,334, pub. 5–15–62. Cl. 26.
General Dynamics Corp., Rochester, N.Y. 628,596, canc. Cl. 21.
General Foam Plastics Corp., Portsmouth, Va. 735,103, pub. 5–15–62. Cl. 1.
General Foundry Service Corp., Oakland, Calif. 735,266, pub. 5–15–62. Cl. 23.
General Tire & Rubber Co., The: *See*—
Respro Inc.
Genesco Inc., Nashville, Tenn. 735,116, pub. 5–15–62. Cl. 2.
Geolograph Co., The, Oklahoma City, Okla. 735,328, pub. 5–15–62. Cl. 26.
Gill, James G., Co., Inc., The, Norfolk, Va. 735,494. Cl. 46.
Gluck, S., & Co., Inc., Philadelphia, Pa. 628,587, canc. Cl. 21.
Goldblatt Bros. Inc., Chicago, Ill. 735,385, pub. 5–15–62. Cl. 39.
Goldsmith, M. H., and Co., d.b.a. Milford Lingerie Co., New York, N.Y. 628,729, canc. Cl. 39.
Good Humor Corp., Brooklyn, N.Y. 735,447, pub. 5–15–62. Cl. 46.
Grace, W. R., & Co., New York, N.Y. 735,129, pub. 5–15–62. Cl. 5.
Grace, W. R., & Co., New York, N.Y. 735,327, pub. 5–15–62. Cl. 26.
Graflex, Inc., Rochester, N.Y. 735,325, pub. 5–15–62. Cl. 26.
Grasso's Koninklijke Machinefabrieken N.V., Parallelweg, Hertogenbosch, Netherlands. 735,350, pub. 5–15–62. Cl. 31.
Greenspoon Clothing Co., Inc., to The Greenspoon Co., St. Louis, Mo. 398,236, ren. 7–31–62. Cl. 39.
Greenspoon Co., The: *See*—
Greenspoon Clothing Co., Inc.
Griffin, Olive M., Findlay, Ohio. 628,732, canc. Cl. 39.
Grove Laboratories Inc., St. Louis, Mo. 735,219, pub. 5–15–62. Cl. 18.
Guild Radio and Television Co., Inglewood, Calif. 628,594, canc. Cl. 21.
Gulf States Paper Corp., Tuscaloosa, Ala. 735,108–9, pub. 5–15–62. Cl. 2.
Gulf States Paper Corp., Tuscaloosa, Ala. 735,122, pub. 5–15–62. Cl. 2.
Gurvich, Max A., d.b.a. Pacific Chemical Mfg. Co., Seattle, Wash. 628,844, canc. Cl. 52.
H-O Cereal Co., Inc., The, Buffalo, N.Y., to Corn Products Co., New York, N.Y. 159,901, ren. 7–31–62. Cl. 46.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 735,138, pub. 5–15–62. Cl. 6.
Haggar Co., Dallas, Tex. 735,388, pub. 3–20–62. Cl. 39.
Haircare, Inc., New York, N.Y. 735,465, pub. 5–15–62. Cl. 52.
Hall, Rolf von, d.b.a. Acoustic Engineering Co., Long Island City, N.Y. 735,478, pub. 5–15–62. Cl. 103.
Haller, W. A., Co.: *See*—
Continental Distilling Corp.
Harem Scarums: *See*—
Shirek, Alan.
Harris-Seybold-Potter Co., Cleveland, Ohio, to Acme Steel Co., Chicago, Ill. 398,445, ren. 7–31–62. Cl. 23.
Hathaway, C. F., Co., Waterville, Me. 735,378, pub. 5–15–62. Cl. 39.
Hathaway Ltd.: *See*—
Black Prince Co., Inc., The.
Haveg Industries, Inc., Wilmington, Del. 735,104, pub. 5–15–62. Cl. 1.
Headden, De Witt, d.b.a. De Witt Custom Lubricants, Glendale, Calif. 735,201, pub. 5–15–62. Cl. 15.
Heberlein & Co. A.G., Wattwil, Switzerland. 157,517, ren. 7–31–62. Cl. 42.
Holtzer-Cabot Corp., from National Pneumatic Co., Inc., Boston, Mass. 735,250, pub. 5–15–62. Cl. 21.
Hendler Creamery Co., The, Baltimore, Md., to The Borden Co., New York, N.Y. 156,686–7, ren. 7–31–62. Cl. 46.
Heyden Newport Chemical Corp., New York, N.Y. 735,140, pub. 5–15–62. Cl. 6.
Hidalgo Chemical Co., Tulsa, Okla. 628,514–5, canc. Cl. 6.
Hills-McCanna Co., Carpentersville, Ill. 735,188, pub. 5–15–62. Cl. 13.
Hodag Chemical Corp., Chicago, Ill. 735,137, pub. 1–16–62. Cl. 6.
Holtzer-Cabot Corp., from National Pneumatic Co., Inc., Boston, Mass. 735,288, pub. 5–15–62. Cl. 23.
Hudson Coal Co., The, Scranton, Pa. 628,850, canc. Cl. 1.
Hy-Genic Products, Inc., Lyons, Ill. 735,483. Cl. 6.
Hygienic Aerosol Co., Inc., New York, N.Y. 735,143, pub. 5–15–62. Cl. 6.
IADA Services, Inc., Des Moines, Iowa. 735,473, pub. 5–15–62. Cl. 101.
I.H. Mfg. Co., Inc., New York, N.Y. 735,301, pub. 5–15–62. Cl. 26.
Ilford Ltd., Ilford, Essex, England. 735,329, pub. 5–15–62. Cl. 26.
Inter-American Industrial Services Corp., Boston, Mass. 735,251–2, pub. 5–15–62. Cl. 22.
International Nickel Co., Inc., The, New York, N.Y. 628,544, canc. Cl. 14.
International Refining and Packaging Corp., Paterson, N.J. 735,444, pub. 5–15–62. Cl. 46.
International Shoe Co.: *See*—
Plant, Thomas G., Co.
Isaacs, Herman, Inc., Bridgeport, Conn. 628,795, canc. Cl. 46.
Italian Swiss Colony: *See*—
United Vintners, Inc.
Italian Swiss Colony, to United Vintners, Inc., San Francisco, Calif. 398,146, ren. 7–31–62. Cl. 47.
Jacobson, F., & Sons, Inc.: *See*—
Best & Co., Inc.
James, Betsy, Ltd., New York, N.Y. 628,731, canc. Cl. 39.
Jaymar: *See*—
Jaymar-Ruby, Inc.
Jaymar-Ruby, Inc., d.b.a. Jaymar, Michigan City, Ind. 735,391, pub. 5–15–62. Cl. 39.
Jenn Air Products Co., Inc., Indianapolis, Ind. 735,165, pub. 10–17–61. Cl. 12.
Jenn Air Products Co., Inc., Indianapolis, Ind. 735,357, pub. 1–9–62. Cl. 34.
Jet Research Center, Inc., Arlington, Tex. 735,159, pub. 5–15–62. Cl. 9.
Jewell Ridge Coal Sales Co., Inc.: *See*—
Beatty Coal Co.
Johmann, Frank T., Berkeley Heights, N.J. 735,368, pub. 5–15–62. Cl. 37.
Johnson, S. C., & Son, Inc., Racine, Wis. 735,145, pub. 5–15–62. Cl. 6.
Jonaitis, Alfred S., d.b.a. Mercury Products, Brooklyn, N.Y. 628,802, canc. Cl. 22.
Joslyn Mfg. and Supply Co., Chicago, Ill. 735,237, pub. 5–15–62. Cl. 21.
Just Born Inc.: *See*—
Marlon Confections Corp.
KVP Sutherland Paper Co., Kalamazoo, Mich. 735,126, pub. 5–15–62. Cl. 2.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. 735,173, pub. 12–26–61. Cl. 12.
Kayser-Roth Corp.: *See*—
Roth, Chester H., Co., Inc.
Keeshan, Robert J., West Islip, N.Y. 628,848, canc. Cl. 107.
Keller Tool Co., Grand Haven, Mich., to Gardner-Denver Co., Quincy, Ill. 628,604, canc. Cl. 23.
Kensington Steel Co., to Poor & Co., Chicago, Ill. 398,512, ren. 7–31–62. Cl. 14.
Kerr–McGee Oil Industries, Inc., Oklahoma City, Okla. 735,105, pub. 5–15–62. Cl. 1.
Keystone Steel & Wire Co., Peoria, Ill. 735,182, pub. 5–15–62. Cl. 13.
Kimberly-Stevens Corp., New York, N.Y. 735,402, pub. 12–19–61. Cl. 42.
King's Bakery, Inc.: *See*—
McKee Baking Co.
Kleen-Lube, Inc., Jersey City, N.J. 735,199, pub. 5–15–62. Cl. 15.
Kleinert, I. B., Rubber Co., New York, N.Y. 157,120, ren. 7–31–62. Cl. 39.
Knitfabs Corp., Long Island City, N.Y. 735,408, pub. 5–15–62. Cl. 42.
Knott's Berry Farm, Buena Park, Calif. 735,446, pub. 5–15–62. Cl. 46.
Kono Mfg. Co., The, Woodside, N.Y. 441,274, canc. Cl. 26.
Kop-Ron: *See*—
Kop-Ron Machine Corp.
Kop-Ron Machine Corp., d.b.a. Kop-Ron, Gallatin, Tenn. 735,227, pub. 1–10–61. Cl. 19.
Krasdale Foods, Inc.: *See*—
Krasne, A., Inc.
Krasne, A., Inc., to Krasdale Foods, Inc., to Krasdale Foods, Inc., New York, N.Y. 395,811, ren. 7–31–62. Cl. 46.
Kress, S. H., and Co., New York, N.Y. 628,765, canc. Cl. 39.
Laketine Corp., Chicago, Ill. 735,209, pub. 5–15–62. Cl. 16.
Lakewood Mfg. Co., Westlake, Ohio. 735,117, pub. 5–15–62. Cl. 2.
L'Allobroge, Chambery, Savoie, France. 735,440, pub. 5–15–62. Cl. 46.
Lally Bros. Co., Chicago, Ill. 735,178, pub. 5–15–62. Cl. 12.
Lane Co., Inc., The, Altavista, Va. 735,351, pub. 5–15–62. Cl. 32.
Lantery, Harry E., Wollaston, Mass. 735,303, pub. 5–15–62. Cl. 26.
Larsen, William H.: *See*—
Wil-lar, Inc.
Lawrence, B. M., & Co., San Francisco, Calif. 735,291, pub. 5–15–62. Cl. 23.

Liberty Steel Chest Corp., The, Rochester, N.Y. 735,255, pub. 5–15–62. Cl. 22.
Lind-Gal, Inc., New York, N.Y. 628,675–6, canc. Cl. 28.
Lionel Corp., The, New York, N.Y. 735,256, pub. 5–15–62. Cl. 22.
Loren International Corp., New York, N.Y. 735,365, pub. 5–15–62. Cl. 36.
Lovable Brassiere Co., The, Atlanta, Ga. 735,387, pub. 5–15–62. Cl. 39.
Lowe, Joe, Corp., New York, N.Y. 735,280, pub. 5–15–62. Cl. 23.
Lux Clock Mfg. Co., The, Waterbury, Conn. 380,392, canc. Cl. 27.
Lynwood Laboratories, Inc., Norwood, Mass. 735,132, pub. 5–15–62. Cl. 6.
Macintosh, Chas., & Co., Ltd., Manchester, England, to Chas. Macintosh & Co. Ltd., Edmonton, London, England. 395,402, ren. 7–31–62. Cl. 39.
MacKenzie Chemical Works, Inc., Long Island, N.Y. 735,139, pub. 5–15–62. Cl. 6.
Macy, R. H., & Co., Inc., New York, N.Y. 159,030, ren. 7–31–62. Cl. 42.
Magnavox Co., The, Fort Wayne, Ind. 735,242, pub. 5–15–62. Cl. 21.
Maigu Co., Inc., Tehran, Iran. 735,493. Cl. 46.
Malaker Laboratories, Inc., Mountainside, N.J. 735,375, pub. 5–15–62. Cl. 38.
Manhattan Auto, Inc., Washington, D.C. 735,479, pub. 5–15–62. Cl. 103.
Manufacturers Corp. of Mansfield, Ohio. 628,531, canc. Cl. 13.
Marion Confections Corp., New York, N.Y., to Just Born Inc., Bethlehem, Pa. 396,486, ren. 7–31–62. Cl. 46.
Marine Securitainer Corp., The, New York, N.Y. 735,123, pub. 5–15–62. Cl. 2.
Martin-Marietta Corp.: *See*—
Metals Disintegrating Co., Inc.
Mauer, J. A., Inc., Long Island City, N.Y. 735,326, pub. 5–15–62. Cl. 26.
May, Otto B., Inc., Newark, N.J. 735,205, pub. 5–15–62. Cl. 16.
Mazen, Leon Pierre Robert, Jean Pierre Henri Mazen, Jacques Jean Auguste Mazen, Catherine Simone Jeanne Mazen, Pont du Chateau, Puy-de-Dome, France. 735,228, pub. 5–15–62. Cl. 19.
McCall Brothers Ltd., Trowbridge, England. 735,400, pub. 12–6–60. Cl. 42.
McCormick & Co., Inc., Baltimore, Md. 155,001, ren. 7–31–62. Cl. 45.
McGraw-Edison Co.: *See*—
American Laundry Machinery Co., The.
McKay Products Corp., The, New York, N.Y. 735,381–2, pub. 5–15–62. Cl. 39.
McKee Baking Co., from King's Bakery, Inc., d.b.a. McKee Baking Co., Collegedale, Tenn. 735,443, pub. 4–17–62. Cl. 46.
Meinor Industries, Inc., Moonachie, N.J. 735,184, pub. 5–15–62. Cl. 13.
Merck & Co., Inc., Rahway, N.J. 628,566–8, canc. Cl. 18.
Mercury Products: *See*—
Jonaitis, Alfred S.
Merino, Bebidas, S.A., Rio de Janeiro, Brazil. 735,456, pub. 5–15–62. Cl. 49.
Metals Disintegrating Co., Inc., Union, N.J., to Martin-Marietta Corp., Chicago, Ill. 395,544, ren. 7–31–62. Cl. 14.
Meyer, Joseph H., Bros., Brooklyn, N.Y. 735,349, pub. 5–15–62. Cl. 28.
Middlebrooke-Lancaster, Inc., Brooklyn, N.Y. 735,461, pub. 3–20–62. Cl. 51.
Midland Steel Products Co., The, Cleveland, Ohio. 406,254, canc. Cl. 19.
Miles Laboratories, Inc., Elkhart, Ind. 628,560, canc. Cl. 18.
Milford Lingerie Co.: *See*—
Goldsmith, M. H., and Co.
Miller & Bergmann, Inc., New York, N.Y. 597,491, canc. Cl. 39.
Miller, E. M., Mfg. Co.: *See*—
Miller, Elbert M.
Miller, Elbert M., d.b.a. E. M. Miller Mfg. Co., Prairie Village, Kans. 628,570, canc. Cl. 18.
Miller Mfg. Co., Detroit, Mich. 735,185, pub. 5–15–62. Cl. 13.
Mitutoyo Mfg. Co., Ltd., Kawasaki City, Japan. 735,321, pub. 5–15–62. Cl. 26.
Mizzy, Inc., New York, N.Y. 735,429, pub. 5–15–62. Cl. 44.
Mizzy, Inc., New York, N.Y. 735,432–3, pub. 5–15–62. Cl. 44.
Modern Industries, Inc., Kansas City, Mo. 628,473, canc. Cl. 1.
Modern Plastics, Inc. Breskin Publications Inc., New York, N.Y. 426,130. Am. 7(d). Cl. 38.
Modernair Corp., Bryan, Ohio, from Modernair Corp., San Leandro, Calif. 735,282–3, pub. 5–15–62. Cl. 23.
Monarch Rug Mills, Dalton, Ga. 628,777, canc. Cl. 42.
Monsanto Chemical Co., St. Louis, Mo., from The Chemstrand Corp., Decatur, Ala. 735,406, pub. 5–15–62. Cl. 42.
Monsanto Chemical Co., St. Louis, Mo., from The Chemstrand Corp., Decatur, Ala. 735,420, pub. 5–8–62. Cl. 43.
Montchanin Products, Inc., Montchanin, Del. 735,453, pub. 5–8–62. Cl. 46.
Moore, Benjamin, & Co., New York, N.Y. 161,566, ren. 7–31–62. Cl. 16.
Moreland Corp., Willow Grove, Pa. 628,659, canc. Cl. 23.
Moreland Corp., Willow Grove, Pa. 628,690, canc. Cl. 23.
Moretex Chemical Products, Inc., Spartanburg, S.C. 735,135, pub. 1–2–62. Cl. 6.
Morgan Jones, Inc., New York, N.Y. 735,413, pub. 5–15–62. Cl. 42.
Morris, Cavanaugh, Advertising, Inc., d.b.a. United Breweries of America, Pittsburgh, Pa. 735,472, pub. 5–15–62. Cl. 101.
Morris, Philip, Inc., New York, N.Y. 735,271, pub. 5–15–62. Cl. 23.
Morse Sewing Machine and Supply Corp., New York, N.Y. 735,289, pub. 5–15–62. Cl. 23.
Movitex, Ltd., Wembly, Middlesex, England. 735,459, pub. 5–15–62. Cl. 50.
Moyer, J. Bird, Co., Inc., The, Philadelphia, Pa. 735,431, pub. 5–15–62. Cl. 44.
Muller, Paul A., Triesenberg, Liechtenstein. 735,157, pub. 5–15–62. Cl. 8.
Multi-Zoner, Inc., Lynchburg, Va. 735,311, pub. 5–15–62. Cl. 26.
Murphy, Brill & Sahner, Inc., New York, N.Y. 397,880, ren. 7–31–62. Cl. 39.
Mustee Heater Co., Cleveland, Ohio. 628,696, canc. Cl. 34.
Mutual Products Co., to Mutual Products Co., d.b.a. Mutual Products Co., Minneapolis, Minn. 396,417, ren. 7–31–62. Cl. 46.
National Artist Materials Co., Inc., to Savage Universal Corp., New York, N.Y. 395,637, ren. 7–31–62. Cl. 37.
National Association of Insurance Agents, Inc., The, New York, N.Y. 735,501. Cl. 100.
National Blank Book Co., Holyoke, Mass. 735,487. Cl. 37.
National Dairy Products Corp., New York, N.Y. 735,448, pub. 5–15–62. Cl. 46.
National Geographic Society, Washington, D.C. 735,312, pub. 5–15–62. Cl. 26.
National Geographic Society, Washington, D.C. 735,314, pub. 5–15–62. Cl. 26.
National Gypsum Co., Buffalo, N.Y. 735,169, pub. 5–15–62. Cl. 12.
National Lead Co., New York, N.Y. 735,168, pub. 5–15–62. Cl. 12.
National Pneumatic Co., Inc.: *See*—
Holtzer-Cabot Corp.
National Sanitary Laboratories, Inc., Chicago, Ill. 735,422, pub. 9–5–61. Cl. 44.
National Sea Products, Ltd., Halifax, Nova Scotia, Canada. 628,793, canc. Cl. 46.
Neely Mfg. Co., Inc., Corydon, Iowa. 735,119, pub. 5–15–62. Cl. 2.
Nelly Don, Inc.: *See*—
Donnelly Garment Co.
New England Business Service, Inc., Townsend, Mass. 735,372, pub. 5–15–62. Cl. 37.
New England Printed Tape Co., Pawtucket, R.I. 735,155, pub. 5–15–62. Cl. 7.
New Jersey Foundry & Machine Co., Garwood, N.J. 628,521, canc. Cl. 12.
Newsweek, Inc., New York, N.Y. 735,489–90. Cl. 38.
Nordischer Maschinenbau Rud. Baader, Lubeck, Germany. 735,268, pub. 5–15–62. Cl. 23.
North Shore Mfg. Co., Duluth, Minn. 628,684, canc. Cl. 32.
Northwestern Corp., The, Morris, Ill. 735,292, pub. 5–15–62. Cl. 23.
Norwich Knitting Co., to Norwich Mills Inc., Norwich, N.Y. 395,404, ren. 7–31–62. Cl. 39.
Norwich Mills Inc.: *See*—
Norwich Knitting Co.
Nukem Products Corp., Buffalo, N.Y. 735,176, pub. 5–15–62. Cl. 12.
Nye-Walt Co., Inc., Auburn, N.Y. 735,410, pub. 2–27–62. Cl. 42.
Oil Specialties & Refining Co., Inc., Brooklyn, N.Y. 735,464, pub. 5–15–62. Cl. 52.
O'Keeffe, Ida L., West Newton, Mass. 628,752, canc. Cl. 39.
Old Virginia Packing Co., Inc., Front Royal, Va. 610,008. Am. 7(d). Cl. 46.
Olin, R. R., Laboratories, Inc., Akron, Ohio. 628,823, canc. Cl. 50.
Ollstein, Lea J., d.b.a. "Hark"-ly Products Co., New York, N.Y. 735,127, pub. 5–15–62. Cl. 3.
Olympia Werke Aktiengesellschaft, Wilhelmshaven, Germany. 735,269, pub. 5–15–62. Cl. 23.
Omega Precision Medical Instrument Co., Inc.: *See*—
Precision Medical Instrument, Inc.
Ovaltine Food Products: *See*—
Wander Co., The.
Owensboro Canning Co., Owensboro, Ky. 735,451–2, pub. 5–15–62. Cl. 46.
Pacific Chemical Mfg. Co.: *See*—
Gurvich, Max A.
Pacific Industrial Controls, Inc., The, Berkeley, Calif. 735,244, pub. 5–15–62. Cl. 21.
Palm Beach Co., Portland, Maine. 735,389, pub. 5–15–62. Cl. 39.
Pantke-Harpke Co., Milwaukee, Wis. 735,380, pub. 5–15–62. Cl. 39.
Parke, Davis & Co., Detroit, Mich. 160,939, ren. 7–31–62. Cl. 18.
Patterson & Sons Welding & Machine Co., The, Ashland, Ohio. 628,691, canc. Cl. 23.
Payne Metal Enterprises Ltd., Toronto, Ontario, Canada. 735,313, pub. 5–15–62. Cl. 26.
Payne, Paula, Products Co., Charlotte, N.C. 735,462, pub. 3–27–62. Cl. 51.
Pegasus Prima Products Ltd., London, England. 735,162, pub. 8–2–60. Cl. 11.
Perfect-Line Mfg. Corp., Hicksville, N.Y. 735,235, pub. 5–15–62. Cl. 21.
Perfume-A-Spray Products Inc., Maple Shade, N.J. 628,606, canc. Cl. 23.
Pevar, Maxwell, from The Budd Co., Philadelphia, Pa. 735,336, pub. 5–15–62. Cl. 26.
Pfaltz & Bauer, Inc., New York, N.Y. 735,142, pub. 5–15–62. Cl. 6.
Phillips, Lewis F., d.b.a. C.P. Plastic Engineering Co., Chicago, Ill. 735,156, pub. 5–15–62. Cl. 8.

Phoenix Glass Co., The, Monaca, Pa. 628,693, canc. Cl. 34.
Pillsbury Co., The, d.b.a. Consumer Research Associates, Minneapolis, Minn. 735,449, pub. 5–15–62. Cl. 46.
Pioneer Products, Inc., Tucson, Ariz. 735,113, pub. 4–3–62. Cl. 2.
Piquerez, Ervin, S.A., Bassecourt, Bern, Switzerlond. 628,670, canc. Cl. 27.
Plant, Thomas G., Co., Boston, Mass., to International Shoe Co., St. Louis, Mo. 161,262, ren. 7–31–62. Cl. 39.
Plas-Kem Corp., Burbank, Calif. 628,555, canc. Cl. 15.
Plastic Contact Lens Co., The, Chicago, Ill. 735,337, pub. 5–15–62. Cl. 26.
Plastic Irrigation Products Co., Santa Paula, Calif. 628,535, canc. Cl. 13.
Plastic Tops, Inc., Detroit, Mich. 735,355, pub. 5–15–62. Cl. 32.
Plastiplate Co., Inc., South River, N.J. 628,633, canc. Cl. 23.
Playchem Co.: *See*—
Breen, Alvin L.
Poertner Lithographing Co., Denver, Colo. 735,491. Cl. 38.
Polarad Electronics Corp., Long Island City, N.Y. 735,309, pub. 5–15–62. Cl. 26.
Polytech Research, Inc., Winter Park, Fla. 735,341, pub. 5–15–62. Cl. 26.
Poor & Co.: *See*—
Kensington Steel Co.
Popivalo, Andrew C., Sanger, Calif. 735,284, pub. 5–15–62. Cl. 23.
Precision Medical Instrument, Inc., from Omega Precision Medical Instrument Co., Inc., Passaic, N.J. 735,424, pub. 5–15–62. Cl. 44.
Prime Plating Works, Inc., Brooklyn, N.Y. 735,480, pub. 5–15–62. Cl. 106.
Process & Steam Specialties Inc., Montreal, Quebec, Canada. 735,190, pub. 5–15–62. Cl. 13.
Protection Equipment Co. Sunbury, Pa. 735,262, pub. 5–15–62. Cl. 22.
Pyrofax Gas Corp., New York, N.Y. 735,360, pub. 5–15–62. Cl. 34.
Pyroxylin Products, Inc., Chicago, Ill. 726,170, cor. Cl. 16.
Quality Bakers of America Cooperative, Inc., New York, N.Y. 735,442, pub. 5–15–62. Cl. 46.
Quality Tool & Die, Long Beach, Calif. 735,114, pub. 5–15–62. Cl. 2.
Quick-Set, Inc., Skokie, Ill. 735,315, pub. 5–15–62. Cl. 26.
Raab, Alexander, Unionville, Ontario, Canada. 735,111, pub. 5–15–62. Cl. 2.
Racine Hydraulics & Machinery, Inc., Racine, Wis. 735,278–9, pub. 5–15–62. Cl. 23.
Racine, Societe a Responsabilite Limitee, Nice, Alpes-Maritimes, France. 735,386, pub. 5–15–62. Cl. 39.
Radio Shack Corp., Boston, Mass. 735,344, pub. 5–15–62. Cl. 26.
Randall, Douglas, Inc., Westerly, R.I. 735,247, pub. 5–15–62. Cl. 21.
Rantec Corp., Calabasas, Calif. 735,245, pub. 5–15–62. Cl. 21.
Rantec Corp., Calabasas, Calif. 735,331, pub. 5–15–62. Cl. 26.
Rath Packing Co., The, Waterloo, Iowa. 735,148, pub. 5–15–62. Cl. 6.
Rath Packing Co., The, Waterloo, Iowa. 735,215, pub. 5–15–62. Cl. 18.
Ravensberg G.m.b.H. Chemische Fabrik, Konstanz, Germany. 735,212, pub. 5–15–62. Cl. 18.
Ray Brokerage Co.: *See*—
Ray, Herbert S.
Ray, Herbert S., d.b.a. Ray Brokerage Co., San Francisco, Calif. 628,801, canc. Cl. 46.
Realemon-Puritan Co., Chicago, Ill. 628,783, canc. Cl. 45.
Realistic Co., The, Cincinnati, Ohio. 735,467, pub. 5–15–62. Cl. 52.
Reinholz, William H., Pasadena, Calif. 628,689, canc. Cl. 32.
Reiter, Reuben, Leonia, N.J. 628,361, canc. Cl. 44.
Remington Arms Co., Inc., Bridgeport, Conn. 735,158, pub. 5–15–62. Cl. 9.
Republic-Transcon Industries, Inc., Beverly Hills, Calif. 735,361–3, pub. 5–15–62. Cl. 34.
Respro Inc., Cranston, R.I., to The General Tire & Rubber Co., Akron, Ohio. 398,585, ren. 7–31–62. Cl. 1–12 & 42. (Consolidated certificate, Classes 1–12 & 42).
Revco, Inc., Deerfield, Mich. 735,353, pub. 5–15–62. Cl. 32.
Richard-Allan Co., Inc., Evanston, Ill. 735,339–40, pub. 5–15–62. Cl. 26.
Rinardo Knits, Inc., Port Ewen, N.Y. 735,383, pub. 5–15–62. Cl. 39.
Rinshed-Mass Co., Detroit, Mich. 735,207, pub. 5–15–62. Cl. 16.
Rock-Ola Mfg. Corp., Chicago, Ill. 735,233, pub. 10–24–61. Cl. 21.
Rockwell Mfg. Co., Pittsburgh, Pa. 735,194, pub. 5–15–62. Cl. 13.
Rohm & Haas Co., Philadelphia, Pa. 735,136, pub. 1–2–62. Cl. 6.
Rosary Flower Co., The, New York, N.Y. 628,478, canc. Cl. 1.
Rosenstock, H., & Sons, Inc., Ellenville, N.Y. 735,390, pub. 5–15–62. Cl. 39.
Roth, Chester H., Co., Inc., to Kayser-Roth Corp., New York, N.Y. 395,815, ren. 7–31–62. Cl. 39.
Rototest Laboratories, Inc., Lynwood, Calif. 735,232, pub. 5–15–62. Cl. 21.
Roux Laboratories, Inc., New York, N.Y. 735,500. Cl. 51.
Rubbermaid Inc., Wooster, Ohio. 735,115, pub. 5–15–62. Cl. 2.
Ruska Instrument Corp., Bellaire, Tex. 735,335, pub. 5–15–62. Cl. 26.
Rytex Co., The, Indianapolis, Ind. 735,369, pub. 5–15–62. Cl. 37.
Saffire Saw & Mfg. Co., San Francisco, Calif. 628,638, canc. Cl. 23.
Saftest Bracket Co., Englewood, Colo. 628,534, canc. Cl. 13.
St. Marys Woolen Mfg. Co., St. Marys, Ohio. 628,769–70, canc. Cl. 42.
Samette Mfg. Co., Inc.: *See*—
Samette Mfg. Co.
Samette Mfg. Co., to Samette Mfg. Co., Inc., Allentown, Pa. 397,592, ren. 7–31–62. Cl. 39.
Savage Universal Corp.: *See*—
National Artist Materials Co., Inc.
Sawhill Tubular Products, Inc., Sharon, Pa. 735,281, pub. 5–15–62. Cl. 23.
Schaffner, Hart, & Marx, Chicago, Ill. 628,743, canc. Cl. 39.
Schalk Chemical Co., Los Angeles, Calif. 735,174, pub. 5–15–62. Cl. 12.
Schweizerische Gesellschaft fur Tullindustrie AG., Munchwilen, Switzerland. 735,412, pub. 5–15–62. Cl. 42.
Science Kit, Inc., Tonawanda, N.Y. 735,305, pub. 5–15–62. Cl. 26.
Scivally, Herschell R., Shreveport, La. 628,664, canc. Cl. 26.
Scorsone Baking Co.: *See*—
Scorsone, Francis P.
Scorsone, Francis P., d.b.a. Scorsone Baking Co., New York, N.Y. 628,791, canc. Cl. 46.
Scott, H. H., Inc., Maynard, Mass. 735,230, pub. 12–12–61. Cl. 21.
Scott, H. H., Inc., Maynard, Mass. 735,234, pub. 12–12–61. Cl. 21.
Scroll Film Industries Inc., New York, N.Y. 735,319, pub. 5–15–62. Cl. 26.
Seamless Rubber Co., The, New Haven, Conn. 735,239, pub. 5–15–62. Cl. 21.
Sears, Roebuck and Co., Chicago, Ill. 735,302, pub. 12–13–60. Cl. 26.
Senior & Co., Inc., Zonstraat, Netherlands Antilles. 735,455, pub. 5–15–62. Cl. 49.
Servel, Inc., Freeport, Ill. 735,364, pub. 5–15–62. Cl. 36.
Seven Keys Co. of Florida, Pompano Beach, Fla. 735,450, pub. 5–15–62. Cl. 46.
Shandon Scientific Co. Ltd., London, England. 735,310, pub. 5–15–62. Cl. 26.
Shapiro and Son Curtain Corp., New York, N.Y. 735,414, pub. 5–15–62. Cl. 42.
Sherwin-Williams Co., The, Cleveland, Ohio. 628,685, canc. Cl. 32.
Shirek, Alan, d.b.a. Harem Scarums, Pasadena, Calif., from Simon Cohen, d.b.a. Whistle Stop Footwear, Pomona, Calif. 735,393, pub. 5–15–62. Cl. 39.
Signore, Cresenzo A., and Virgil Signore, Stamford Conn. 735,300, pub. 5–15–62. Cl. 26.
Simpson Oil Co., Inc., to Sinclair Refining Co., New York, N.Y. 729,347, new cert. Cl. 15.
Simpson Oil Co., Inc., to Sinclair Refining Co., New York, N.Y. 729,558, new cert. Cl. 100.
Sinclair Refining Co.: *See*—
Simpson Oil Co., Inc.
Sircom Knitting Co., Inc., New York, N.Y. 628,730, canc. Cl. 39.
Skinner, William, & Sons: *See*—
Empire Silk Co.
Smith, Albert D. & Co. Inc.: *See*—
Bancroft, Joseph, & Sons Co.
Smith, T. L., Co., The, Milwaukee, Wis. 628,652, canc. Cl. 23.
Snubs Product Corp., The, Clearwater, Fla., from Ford, Kling & Wilson, St. Petersburg Beach, Fla. 735,216, pub. 5–8–62. Cl. 18.
Societe de la Viscose Suisse, Emmenbrucke, Switzerland. 735,409, pub. 5–15–62. Cl. 42.
Societe Des Produits Marnier-Lapostolle, d.b.a. STE Marnier Lapostolle, Paris, France. 735,496. Cl. 49.
Sorenson Investment Co., Inc., Salt Lake City, Utah. 735,426–7, pub. 5–15–62. Cl. 44.
South Carolina Peach Growers Association, Spartanburg, S.C. 395,556, ren. 7–31–62. Cl. 46.
Southern California Plastic Co., Glendale, Calif. 735,118, pub. 5–15–62. Cl. 2.
Southwestern Petroleum Co., Inc., Fort Worth, Tex. 628,551, canc. Cl. 15.
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Spartan Mills, Spartanburg, S.C., from William L. Barrell Co. of New York, Inc., New York, N.Y. 735,399, pub. 5–15–62. Cl. 42.
Spotnails, Inc., Evanston, Ill. 735,181, pub. 11–28–61. Cl. 13.
Standard Crayon Mfg. Co., Danvers, Mass., to Weber Costello Co., Chicago Heights, Ill. 159,540, ren. 7–31–62. Cl. 37.
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Societe Des Produits Marnier-Lapostolle.
Steelmaster Enterprises: *See*—
Young, Thomas E.
Steen, John, d.b.a. Steen Lubricants and as Steen Lubricants Co., Alhambra, Calif. 735,197–8, pub. 5–15–62. Cl. 15.
Steen Lubricants: *See*—
Steen, John.
Steen Lubricants Co.: *See*—
Steen, John.
Sterling Drug Inc., New York, N.Y. 735,220, pub. 5–15–62. Cl. 18.
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Swift & Co., Chicago, Ill. 735,131, pub. 5–15–62. Cl. 6.

Swiveller Co., Inc., Nanuet, N.Y. 735,249, pub. 5–15–62. Cl. 21.
Synchro-Mat Equipment Corp., Jackson, Mich. 735,304, pub. 5–15–62. Cl. 26.
Tasty Mates Co., Camden, N.J. 735,434–5, pub. 5–15–62. Cl. 45.
Tasty Mates Co., Camden, N.J. 735,492. Cl. 45.
Taylor Fibre Co., Norristown, Pa. 735,101, pub. 5–15–62. Cl. 1.
Taylor Instrument Companies, Rochester, N.Y. 396,505, ren. 7–31–62. Cl. 26.
Taylor, Taylor & Hobson Ltd., Leicester, England. 628,669, canc. Cl. 26.
Telerad Mfg. Corp., New York, N.Y. 735,299, pub. 5–15–62. Cl. 26.
Tele-Ticker, New York, N.Y. 735,502. Cl. 101.
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Therm, Inc., Ithaca, N.Y. 735,307, pub. 5–15–62. Cl. 26.
Timberline, Inc. of Oregon, Portland, Oreg. 735,170, pub. 5–29–62. Cl. 12.
Timelight Melodies: *See*—
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Travers, Mabel W., New York, N.Y. 628,658, canc. Cl. 23.
Tree Publishing Co., Inc., Nashville, Tenn. 735,367, pub. 5–15–62. Cl. 36.
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Turk, Jack, & Co. Inc., Long Island City, N.Y. 735,377, pub. 5–15–62. Cl. 39.
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United American Metals Corp., Chicago, Ill. 395,643, ren. 7–31–62. Cl. 14.
United Breweries of America: *See*—
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United Merchants and Manufacturers, Inc., New York, N.Y. 735,411, pub. 5–15–62. Cl. 42.
United Shirt Shops, Inc.: *See*—
Unishops, Inc.
United Shoe Machinery Corp., from B. B. Chemical Co., Boston, Mass. 735,206, pub. 5–15–62. Cl. 16.
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Van Schaack Premium Corp., Chicago, Ill. 735,273, pub. 5–15–62. Cl. 23.
Vauxhall Motors Ltd., Luton, England. 735,224, pub. 11–11–58. Cl. 19.
Vauxhall Motors Ltd., Luton, England. 735,225, pub. 12–16–58. Cl. 19.
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Veon-West Corp.
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Virginia Gazette, Inc., The: *See*—
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Voigtlander A.G., Braunschweig, Germany. 735,297–8, pub. 2–2–60. Cl. 26.
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Wander Co., The, d.b.a. Ovaltine Food Products, Chicago, Ill. 735,439, pub. 1–10–61. Cl. 46.
Warren, Northam, Corp., to Chesebrough-Pond's Inc., New York, N.Y. 160,323, ren. 7–31–62. Cl. 44.
Wenzel, H., Tent & Duck Co., to H. Wenzel Tent & Duck Co., St. Louis, Mo. 398,395–6, ren. 7–31–62. Cl. 50.
West Indies Bay Co., Minneapolis, Minn. 735,463, pub. 5–15–62. Cl. 51.
Western Sewing Machine Distributors, Inc.: *See*—
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Western Stove Co., Inc., Culver City, Calif. 628,703, canc. Cl. 34.
Westinghouse Air Brake Co., Wilmerding, Pa. 735,195, pub. 5–15–62. Cl. 13.
Whistle Stop Footwear: *See*—
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Wheeling Corrugating Co.: *See*—
Consolidated Expanded Metal Companies, The.
Wildmaier, Hans, Berlin-Reinickendorf, Germany. 735,370, pub. 5–15–62. Cl. 37.
Wiedemann Machine Co., King of Prussia, Pa. 735,274, 5–15–62. Cl. 23.
Wiederhold, Hermann, Hilden, Germany. 735,204, pub. 5–15–62. Cl. 16.
Wilcox Mfg. Co., Raleigh, W. Va. 735,265, pub. 5–15–62. Cl. 23.
Wilar, Inc., to William H. Larsen, Racine, Wis. 628,599, canc. Cl. 22.
Williams, C. K., & Co., East St. Louis, Ill. 735,102, pub. 5–15–62. Cl. 1.
Williams, C. K., & Co., Easton, Pa., to C. K. Williams & Co., East St. Louis, Ill. 158,862, ren. 7–31–62. Cl. 16.
Wilmore Corp., Fort Wayne, Ind. 735,133, pub. 5–15–62. Cl. 6.
Wilson Supply Co., The, Cleveland, Ohio. 735,128, pub. 6–6–61. Cl. 4.
Winne, Frank W., & Son Inc., Philadelphia, Pa. 735,151, pub. 5–15–62. Cl. 7.
Wirecrafters, Inc., Towson, Md. 735,286, pub. 5–15–62. Cl. 23.
Wonder Products Co., Collierville, Tenn. 735,121, pub. 5–15–62. Cl. 2.
Wood, Evelyn, Reading Dynamics Corp.: *See*—
Wood, Evelyn, Reading Dynamics Institutes of America, Inc.
Wood, Evelyn, Reading Dynamics Institutes of America, Inc., Arlington, Va., from Evelyn Wood Reading Dynamics Corp., Washington, D.C. 735,482, pub. 5–15–62. Cl. 107.
Woolworth, F. W., Co., New York, N.Y. 735,384, pub. 4–24–62. Cl. 39.
York, Willard D., Rolling Hills, Calif., to Colonial Dames Co., Ltd., Montebello, Calif. 397,993, ren. 7–31–62. Cl. 31.
Young, Patrick, Co., to E. M. Todd Co., Inc., Richmond, Va. 156,907, ren. 7–31–62. Cl. 46.
Young, Thomas E., d.b.a. Steelmaster Enterprises, Findlay, Ohio. 735,179, pub. 5–15–62. Cl. 13.

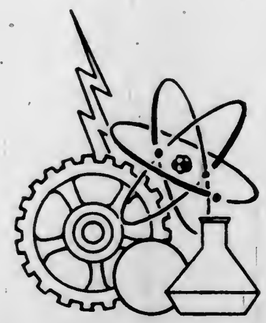
U.S. GOVERNMENT PRINTING OFFICE 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

August 7, 1962 • Volume 781 • Number 1



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 7, 1962 Volume 781 Number 1

PATENTS

NOTICES

New Examining Procedures

"Compact" Prosecution—Special Status

Despite the unexpected increase in the number of new applications received during fiscal 1962, the Patent Office succeeded in reducing the total workload of cases by 3,537.

A large part of this improvement appears due to the success of two new examining procedures tested during the year. The first involved setting a shortened statutory period for reply and special status for every case which came up for a third or later action by the Office. This procedure was successfully applied throughout the Office, and will be continued.

The second new procedure, based on suggestions by a number of attorneys and Examiners, has been pilot-tested in a part of the examining operation.

It involves, first, greater emphasis upon more uniform high quality of prosecution and of patents issued.

Second, wherever feasible, there is an all-out effort to cut total hours of both prosecution and examination. The first action by the Office in every case is made thorough, clear and complete. Every possible means is then used to encourage the applicant to make his first response so complete as to put the case in condition for immediate disposal. This includes developing all claims of any desired scope and wording either on filing or on the *first* response.

Thereupon, wherever feasible, the second Office action is made final, either by allowance, or by outright final rejection of some or all claims, or by final rejection with suggestions for amendment under Rule 116.

This compact procedure, while not always possible, has been found feasible in 60 to 80% of all cases. It has received the full cooperation of most applicants and attorneys. To the few attorneys who take more than their fair share of Examiner time by delaying prosecution until after final rejection, during or after appeal, or after allowance, Rule 112 and Rule 116(b) are rigorously applied.

A test program based upon this more complete action by both Office and applicant has resulted in a sharp decrease in hours needed per case. In a limited test operation, it has reduced backlog, cut in half the number of completed appeals, sharply reduced the number of older cases, and brought other incidental benefits.

This program will now be extended throughout the Office.

This notice is issued in order that all attorneys and applicants may be fully aware of the urgency under this improved procedure of consolidating the planning and prosecution of all claims of any desired wording and scope *into the original application and the first response.*

EDWIN L. REYNOLDS,
Acting Commissioner of Patents.

July 26, 1962.

Board of Appeals Decisions Rendered in the Month of June 1962

Examiner affirmed	367
Examiner affirmed in part	38
Examiner reversed	81
Total	486

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Patent No. 2,765,685, W. C. Stratman, R. E. Jones, and F. I. Regnier, Wire stripper, decided Mar. 7, 1962, Interference No. 91,154, claims 2, 4, 5, 7, and 8.

Patent No. 2,776,380, F. T. Andrews, Jr., Electrical circuits employing magnetic cores, decided July 2, 1962, Interference No. 89,692, claims 1 and 14.

Patent No. 2,792,506, R. D. Torrey, Resettable delay flop, decided June 11, 1962, Interference No. 89,898, claims 2, 4, and 12.

Patent No. 2,834,928, M. A. Carter, Electronic device for controlling record tapes, decided Apr. 9, 1962, Interference No. 91,302, claims 1, 2, and 11.

Patent No. 2,843,914, F. Koury, Method of producing a photoconductive device, decided July 12, 1962, Interference No. 91,560, claims 1 and 2.

Patent No. 2,868,624, K. J. Shaver and R. Perry, Jr., Stabilization of sulfur trioxide, decided July 2, 1962, Interference No. 90,766, claim 1.

Patent No. 2,910,370, A. B. Rogers, R. W. Kline, and R. L. Niblack, Frozen poultry product and preparation, decided June 22, 1962, Interference No. 91,364, claims 1 through 8.

Patent No. 2,915,790, J. M. Rice, Device and method for exfoliating and blending asbestos fiber, decided June 29, 1962, Interference No. 91,776, claims 5, 8, 9, and 10.

Patent No. 2,952,855, R. J. Zutl, Foot rest for hospital beds, decided June 15, 1962, Interference No. 91,736, claims 1, 2, and 3.

Patent No. 2,946,987, S. E. Townsend, Reversible magnetic shift register, decided July 12, 1962, Interference No. 91,927, claims 1 and 2.

New Applications Received During June 1962

Patents	7,294
Designs	371
Plant Patents	10
Reissues	26
Total	7,701

Issue

Patents	976	No. 3,047,873	to No. 3,048,848,	incl.
Designs	56	No. 193,324	to No. 193,379,	incl.
Plant Patents	2	No. 2,160	to No. 2,161,	incl.
Reissues	7	No. 25,215	to No. 25,221,	incl.
Total	1041			

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 5, 1962.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

July 16, 1962.

Service by Publication

Walter Peglow

In accordance with Rule 47 of the Rules of Practice of the United States Patent Office in Patent Cases, notice is hereby given of the filing on June 7, 1961, of an application for patent entitled "Dishwasher With Controls In Door," on behalf of Walter Peglow, whose last known address is 295 B Ortega Ridge Road, Santa Barbara, California. The application was made in compliance with Rule 47(a) and 35 U.S.C. 116 by joint inventor Bertram Given without execution by the said Walter Peglow. Notice of the filing directed to the above noted address has been returned undelivered.

Any action to be taken by the said Walter Peglow in connection with the said application must be taken within thirty days of the publication of this notice.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

Disclaimer

2,747,098.—*William D. Myers*, Los Altos, and *Howard M. Zeidler*, Palo Alto, Calif. HIGH FREQUENCY OSCILLATOR AND RESONATOR. Patent dated May 22, 1956. Disclaimer filed June 27, 1962, by the assignee, *Hewlett-Packard Company*.

Hereby enters this disclaimer to claims 1 and 6 of said patent.

Patents Available for Licensing or Sale

3,000,273. Worktable. Karl Emil Witzig, Stuttgart, and Rudolf Frank, Ludwigsburg, Germany. Correspondence to Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,011,746. Control Holder for Electric Blankets. Genevieve C. Zangger, 22833 Dolores St., Wilmington, Calif.

3,022,919. Apparatus for Determining Composition and Price of a Dispensed Mixture. Attilio Chiantelassa, Turin, Italy. Correspondence to Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,036,749. Can Holder. John Frank Evans, 373 Nevada Ave., Ely, Nev.

3,039,784. Skate Seat Coaster. Mike B. Davis, 22 Shepherd Road, Malvern, Pa.

3,040,170. Plug-In Fluorescent Light Ballast. Thomas J. Chwan, 149 E. 9th St., Clifton, N.J.

Des. 192,868. Garden Weeder or the Like. Albert E. Bruneau, 309 W. Front St., Aberdeen, Wash.

The following 2 patents are offered by D. H. Dave Associates, 1298 E. 22nd St., Brooklyn 10, N.Y.

2,966,718. Method for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

3,037,259. Apparatus for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

General Electric Company is prepared to grant non-exclusive licenses under the following 17 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 14 patents may be addressed to: General Electric Company, Transformer Div., 100 Woodlawn Ave., Pittsfield, Mass., Attn. Patent Counsel.

2,820,867. Enclosed Cutout Having a Load Break Device.

2,820,869. Circuit Interrupter.

2,824,928. Circuit Interrupter.

2,836,788. Induction Apparatus.

2,837,724. Transformer With Improved Dielectric Liquid.

2,872,651. Transformer Cooling System.

2,913,361. Silicon Steel With Improved Magnetic Anistropy and Method of Making the Same.

2,916,723. Low Voltage Outlet Bushing.

2,941,143. Voltage Responsive Apparatus.

3,000,733. Bronze Alloys Containing Iron.

3,028,568. Potential Transformer.

3,028,569. Open Core Potential Transformer.

3,034,056. Synchronized Resetting for a Plurality of Demand Meters.

3,034,203. Method of Making Magnetic Cores.

Applications for license under the following 2 patents may be addressed to: Patent Counsel, Heavy Military Electronics Dept., General Electric Company, Legal Section, Bldg. 1, Room 36, Court Street Plant, Syracuse, N.Y.

2,873,090. Strap-Tightening Tool.

2,874,216. Automatic Signal Control System.

Applications for license under the following patent may be addressed to: General Electric Company, Specialty Control Dept., Waynesboro, Va.

3,033,957. Electromagnetic Relay.

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1962

Total number of pending applications (excluding Designs)	191,614
Total number of pending Design applications	5,955
Total number of applications awaiting action (excluding Designs)	100,841
Total number of Design applications awaiting action	2,048
Date of oldest new application	Feb. 1, 1961
Date of oldest amended application	Jan. 6, 1961

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 33, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) Manlan, J. A. (acting), AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	8-23-61	9-8-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-6-61	11-13-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	6-2-61	6-1-61
4. (VI) FALLER, E. A., Material or Article Handling	7-13-61	8-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-4-61	8-2-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	4-7-61	5-8-61
7. (IV) ANDERSON, E. G., Optics	6-27-61	7-7-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	7-10-61	7-18-61
9. (VI) BRANSON, J. H., Pumps; Fans	9-7-61	9-1-61
10. (VI) BOYD, S. Firearms; Ordnance; Ammunition; Explosive Charge Making	8-18-61	7-18-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	7-24-61	7-18-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	6-6-61	5-3-61
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	5-4-61	4-4-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	3-27-61	3-31-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	8-14-61	8-31-61
16. (II) ROSE, R. H. (acting), Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	5-29-61	5-19-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	7-3-61	7-20-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	7-5-61	6-23-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	7-5-61	5-24-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	8-15-61	8-30-61
21. (III) MADER, R. C., Textiles	6-1-61	6-12-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	7-26-61	7-7-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	10-2-61	8-1-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	6-28-61	7-24-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	5-1-61	6-5-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5-17-61	5-4-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6-27-61	7-3-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	6-26-61	7-7-61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	6-28-61	7-3-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6-5-61	7-14-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	7-3-61	7-3-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	6-2-61	6-12-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	7-3-61	6-5-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-17-61	2-13-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	8-8-61	8-3-61
36. (V) EVANS, R. L., Measuring and Testing (part)	5-15-61	6-2-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-31-61	4-7-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-16-61	6-12-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	6-28-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-22-61	6-21-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-31-61	4-20-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-2-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-20-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	2-13-61	2-8-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting); Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-4-61	10-30-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-3-61	4-13-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	7-26-61	7-10-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-24-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	5-23-61	5-17-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-19-61	7-24-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	6-1-61	5-11-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	10-10-61	10-2-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	9-1-61	9-5-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-6-61	4-2-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	4-7-61	5-1-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-16-61	6-26-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-22-61	6-26-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	9-5-61	9-14-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	3-6-61	5-31-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	2-1-61	1-6-61
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-9-61	11-1-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus	6-8-61	6-16-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-24-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	4-3-61	3-15-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	3-6-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	6-2-61	4-27-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	6-1-61	6-1-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	8-14-61	8-28-61
81. (III) HANNAH, A. B., Industrial Arts	3-8-62	3-12-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-1-62	3-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	4-5-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-24-61	6-21-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	1-30-62
95. ANGEL, C. D., Metallic Building Structures	7-11-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	9-18-61	7-6-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents ..... Numbers 2,380,913 to 2,383,930 inclusive
Plant Patent ..... Number 659

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE JOHN M. HARDY, WILLIAM B. TAYLOR AND WILBER H. GRIFFIN
IN RE WILLIAM B. TAYLOR, JOHN M. HARDY AND WILBER H. GRIFFIN

Nos. 6765, 6766. Decided May 18, 1962

[49 CCPA—; —F.2d—; —USPQ—]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—REMAND—MOTION FOR REMAND AFTER DECISION BY COURT.

In connection with a motion by appellants that their cases be remanded to the Patent Office for "determination of whether or not Mulard (French) 1,078,733, can be used as a legal reference," *Held* that, "Noting that appellants are seeking, after final decision on appeal to this court, to raise an issue not raised at an appropriate time, we find no basis for remanding the case."

On Motions. Serial Nos. 435,308 and 589,122.

Motion to remand DENIED.

Motion to extend time for filing Petition for Rehearing GRANTED.

James F. Weiler for appellants.

Clarence W. Moore (*Jere W. Sears*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, and SMITH, *Associate Judges*

PER CURIAM:

Subsequent to our opinion of April 11, 1962, affirming the decision of the Board of Appeals, appellants have moved that the cases be remanded to the Patent Office for "determination of whether or not Mulard (French) 1,078,733, can be used as a legal reference." Suggestion is made in a supporting memorandum that the "Délivré" date of Mulard, which is earlier than the filing date of the earlier of appellants' two involved applications, may not be the effective date of that patent as a reference. The motion is also accompanied by papers purporting to overcome the "Délivré" date of Mulard under the provisions of Rule 131 of the Rules of Practice of the Patent Office.

[1] Noting that appellants are seeking, after final decision on appeal to this court, to raise an issue not raised at an appropriate time, we find no basis for remanding the case. The motion is denied.

Appellants have also moved to extend the time for bringing a petition for rehearing under Rule 7 of this court. This motion is granted to the extent that the time is extended to expire twenty days from the date of this order.

Motion to remand DENIED.

Motion to extend time for filing Petition for Rehearing GRANTED.

U.S. Court of Customs and Patent Appeals

IN RE FOLSOM E. DRUMMOND

No. 6781. Decided May 18 1962

[49 CCPA—; —F.2d—; 133 USPQ 534]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"COMPOSITION FOR TREATING BURNS."

Certain claims in an application entitled "Composition for Treating Burns," *Held* unpatentable over the prior art.

APPEAL from the Patent Office. Serial No. 366,860.

AFFIRMED.

Toulmin & Toulmin, Harry A. Toulmin, Jr., and *Folsom E. Drummond* for appellant.

Clarence W. Moore (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from the Patent Office Board of Appeals which affirmed the Examiner in his rejection of claims 22 through 25, all of claims of appellant's application for a patent on "Composition for Treating Burns." No claims have been allowed:

The appealed claims are as follows:

22. A bandage for use as an occlusive compression dressing for burned areas of animal skin tissue, said bandage comprising fibers of pure dextran.

23. A bandage for use as an occlusive compression dressing for burned areas of animal skin tissue, said bandage being fabricated from fibers of pure dextran.

24. A bandage for use as an occlusive compression dressing for burned areas of animal skin tissue, said bandage comprising fibers of pure dextran and being impregnated with dextran.

25. A bandage for use as an occlusive compression dressing for burned areas of animal skin tissue, said bandage comprising fibers of pure dextran and carrying an ointment comprising pure dextran.

The references relied on by the Examiner and the Board are:

Owen et al., 2,392,258, January 1, 1946.
Curtis et al., 2,579,367, December 18, 1951.
Gronwall (Sweden), 117,452, October 22, 1946.
Thulin (Sweden), 121,751, May 25, 1948.
Pollock, J.A.M.A., "Dried Plasma Sheets for Burns and War Wounds," August 5, 1944, page 998.
Sweden, "Dextran," J.A.M.A., January 19, 1946, page 169.

The application relates to the use of dextran[1] as a covering for burned areas of animal skin tissue, including the skin of humans. Appellant teaches treating burns by spraying with aqueous dextran solutions or dispersions, by application of salves or ointments containing dextran, or by covering with an "occlusive compression dressing" comprising a gauze fabric or bandage saturated with a dextran solution or carrying a dextran-containing salve or ointment.

Preferred embodiments of appellant's invention involve the use of dextran fibers. For example, dextran fibers may be knitted or woven into a compression dressing or bandage which is applied directly to the burned area and which may also be presaturated with a dextran

[1] According to the record, dextran is a solid high molecular weight polysaccharide known to be obtainable by the action of certain bacteria on sucrose in the presence of "an aqueous nutrient medium."

solution or carry a dextran ointment. Alternatively, dextran fibers may be *part* of a dressing or bandage. For example, appellant teaches use of a mat of short intermingled dextran fibers bonded together by treatment with an aqueous dextran solution in place of a layer of absorbent cotton.

Dextran is said to be useful as a protective covering for burns not only because it "functions in the manner of a natural eschar to stop the flow of plasma" but also because part of the dextran is absorbed into the body it "acts as a blood plasma extender to offset the symptoms of shock and remove the state of shock by compensating for plasma loss." In particular regard to the use of dextran gauze, the application states:

> • • • no harm is done if fragments from the [dextran] gauze ahere to the tissue and remain in the body as the wound heals.

It will be noted that each of the appealed claims recite "fibers of pure dextran" either as a material from which a bandage is fabricated (claim 23) or present as fibers in the bandage (claims 22, 24 and 25). Appellant does not urge that distinctions should be made among the appealed claims in determining their patentability. Accordingly, we will treat them as a group.

The appealed claims stand rejected as being unpatentable over the cited prior art. The claims also stand rejected for "lack of utility" because clinical evidence was not submitted to substantiate the allegations that appeallant's claimed dextran bandages actually alleviate shock by partial absorption through burned surfaces. The Board has also suggested that the specification should be "regarded as fatally defective since it does not disclose how to make this [dextran] fiber or [dextran] fabric."

The Curtis et al. patent discloses treatment of a skin burn by coating it first with a proteinaceous paste followed by covering with a layer of surgical gauze impregnated with a heavy metal salt. The salt is intended to coagulate the protein in the paste, thereby transforming the paste into an eschar with desirable properties.

The Owen et al. patent discloses that dextran is generally useful as a stiffening agent for a variety of material, including textiles.

Both of the Swedish patents disclose the advantages of using dextran as a component of emulsions, salves, creams and the like intended for use on skin and wounds and in body cavities. For example, the Swedish patent to Gronwall states:

> Because of the fact, that the dextran is constructed of neutral glycose units alone, it is physiologically indifferent and entirely harmless to the skin or in wounds and causes no irritation. Through its low surface tension and its hydrophilic properties dextran or dextran mucus contained in salves, pastes, etc. give to these a high adsorptive and diffusive capacity, which is important, e.g., in applying to wounded surfaces, which most often discharge liquid. • • •

The Pollock reference reads in pertinent part as follows:

> Dried Plasma Sheets for Burns and War Wounds.—Pollock introduces a new method of treating burns which apparently overcomes many of the objections found with tannic acid, triple dye and other coagulants. The ideal coagulum should be durable, noncontractile, indefinitely pliable, nontoxic, nonirritant, resistant to trauma, bactericidal, painless and not unsightly and should contain fibrin. Dried plasma *sheets* apparently come closer to fulfilling these criteria than any other coagulum introduced. • • • It was felt that second degree burns should have layers of tissue paper thickness, and deeper wounds should have thicker layers. The plasma sheets tend to curl at the edges. This curling can be overcome by moistening the sheet with water before applying. Within

a few moments the plasma sheet becomes adherent, and within a few hours strands of fibrin can be seen securing the plasma sheet to the burn. Plasma loss is stopped immediately. Dressings may be used but are not essential. * * * [Emphasis added.]

The Sweden "Dextran" article discloses the use and advantage of dextran in place of blood plasma as a blood substitute, particularly in cases of severe burns. A relevant portion of this article states:

* * * Dextran is a blood substitute which was developed two years ago in Uppsala and for fourteen months has been tried out clinically in hospitals in the cities of Stockholm and Orebro. Used in place of blood plasma at St. Göran's Hospital in Stockholm, it has been chiefly beneficial in cases of severe burns. Although the Swedish physicians have not yet dared to replace plasma with dextran entirely, it is hoped that the results of present experiments will warrant this shortly. In severe cases they have generally used equal parts of plasma and dextran and have been able to cure several patients whose entire bodies were covered with burns. During July and August alone, 6 patients with one-fourth of their bodies severely burned by denatured alcohol were completely healed. In cases of shock, dextran has also shown excellent results. It is hoped that this new preparation will shortly be released to hospitals throughout the country.

The Examiner rejected the appealed claims as being "unpatentable over Curtis in view of Pollock and Sweden [i.e., the Sweden "Dextran" article]." The Examiner stated:

* * * To substitute the dextran of Sweden for the plasma of Pollock, and to form the fabric bandage of Curtis from this dextran would be well within the ability of one skilled in the art, but not invention. No unexpected results are apparent in such a procedure. Furthermore, to impregnate this dextran bandage with dextran itself would not impart patentability to the procedure, for this use of dextran as an impregnant is well-known, as evidenced by the Owen, Gronwall and Thulin patents.

The Board affirmed this rejection, stating in relevant part:

Appellant's principal argument is that the references fail to disclose appellant's use of dextran fibers or a gauze made thereof. It is true that no reference discloses this; but on the other hand there is nothing in the record to indicate that this is anything but the obvious equivalent of the ointments, sprays, films, or sheets of equivalent materials or of dextran itself disclosed by the prior art, e.g., the Swedish patents. Appellant's specification merely confirms this.

Considering Pollock, for example, it would not be unobvious to make a sheet from dextran instead of plasma for application to burns, especially when, as admitted, the Sweden article discloses the equivalence of these materials for treating burns. Application of a film of dextran to gauze must be considered as obvious in view of Curtis et al. employing equivalent material to impregnate gauze.

It is our view that appellant's claims are so worded that they can be interpreted to mean that the dressing consists solely of dextran fibers or that the dextran fibers are used as a surface medicament on another material such as cotton gauze. The specification discloses both embodiments.

In either situation we are of the opinion that the claims are unpatentable because of obviousness. It seems to us that it would be obvious to one of ordinary skill in this art to combine the teachings of the Sweden article and the Swedish patents with those of Pollock to produce the same results obtained by appellant. Although the version of appellant's claims which envisions the bandage being made solely of fibers of pure dextran is ostensibly different than Pollock's sheet, we fail to comprehend any significant distinction between the two constructions in view of the fact that all of appellant's claims call for an "occlusive [2] compression dressing." Obviously, Pollock's sheet and appellant's dressing have the same function, i.e., prevention of fluid or plasma loss.

Appellant's other version, a cotton gauze with a surface of dextran fibers, is also obvious. As to this embodiment, not only do the above mentioned references suggest using dextran to treat burns but, in addition, Curtis et al. show that a substance which is part of a medicament can be impregnated on surgical gauze and applied to a burned area. Furthermore, cotton gauze either impregnated with or having one surface covered with a medicament has been on the market for years.

Appellant argues that the "piecemeal reconstruction of the prior art disclosures," in the light of applicant's disclosures, by the Board to substantiate its holding of obviousness is unwarranted. We do not agree with this contention. The cited references merely show the use that has been made of dextran and a comparable method of application of another medicament in the treatment of burns. We believe these references to be pertinent and their combination a reasonable one to demonstrate the obviousness of appellant's invention.

In view of our holding with reference to obviousness, it is unnecessary for us to discuss the other reasons given by the Board for rejecting the claims. [1] We therefore affirm the rejection of claims 22, 23, 24 and 25.

AFFIRMED.

[2] The following definitions from Webster's New International Dictionary, 2d Ed. (1949) are relevant:

Occlusive * * * 1. Tending to occlude * * *.
Occlude * * * 1. To shut up; to close or obstruct. 2. To shut in or out by or as by closing a passage; * * *

See also Gould's Medical Dictionary, 5th Ed. (1941), where it states:

Occlusive. Closing or shutting up, as an *occlusive* surgical dressing.

U.S. Court of Customs and Patent Appeals

ALPHA J. JOHNSON AND JOHN A. MOORE
v.
HARRY RIENER

No. 6793. Decided May 18, 1962

[49 CCPA—; —F.2d—; 133 USPQ 545]

1. INTERFERENCE—PATENT AND APPLICATION—CONSTRUCTION OF COUNT—RIGHT TO MAKE—BURDEN ON APPLICANT.

"Although the count must be given the broadest interpretation it will reasonably support, appellants, who have copied this count from an issued patent, have the burden of showing their applications disclose clearly the features in controversy. * * * It is also well established that any doubt which may arise about such disclosure must be resolved against appellants who copied the claim."

2. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—CROSS APPEAL—INTERFERENCE—RIGHT TO MAKE.

In connection with a limitation of the count, as to which the Board of Patent Interferences found adversely to appellee and appellee did not cross appeal. *Held* that "* * * we believe this matter should be considered by us without such cross appeal having been filed since it was adjudicated by the Board in connection with the question of appellants' right to the benefit of the filing date of the parent application."

3. WORDS AND PHRASES—"JUST BEYOND."

With respect to the phrase "just beyond," *Held* that "There is an element of indefiniteness in the phrase per se, but when considered in relationship

with fixed points in space, * * *, it has a very definite meaning"; and that "It connotes a relative position which is much closer to a designated reference point than to another point."

4. INTERFERENCE—PATENT AND APPLICATION—RIGHT TO MAKE—BURDEN ON APPLICANT.

Held that appellants in copying the count from appellee's patent "accepted the responsibility of proving their application discloses each limitation in the copied claim and they cannot avoid this responsibility by alleging the insignificance of the limitations not disclosed in their application."

5. SAME—RIGHT TO MAKE—RELIANCE ON DRAWINGS TO SUPPORT COUNT—*Else* v. *McCormack* CONSTRUED.

"Appellants cite *Else* v. *McCormack*, 27 CCPA 1278, 112 F.2d 782, 46 USPQ 79, to support their position that drawings are sufficient to support a count. That may be so if there are no contradictory disclosures in the specification and the drawings are unambiguous as was the situation in the *Else* case. However, we know of no legal basis for holding that one possible interpretation of ambiguous drawings shall prevail over language of a specification which conflicts with that interpretation."

6. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—RECORD—PRINTING COSTS—ALLOCATION OF PRINTING COSTS.

"After certain papers omitted from the designation of the record by appellants were specified for inclusion by appellee, appellants brought a motion that the costs of preparing so much of the printed record as includes the added material be taxed against appellee. At the suggestion of the parties, action on the motion was deferred until final decision. We find that certain of the papers, accounting for one-third of the cost of printing the added material, were properly included in the record while the remainder was unnecessary. The printing costs being the only costs handled through the court, the motion is granted to the extent that two-thirds of the cost of printing the added material is assessed against appellee and the remainder of said cost is assessed against appellant."

APPEAL from the Patent Office. Interference No. 89,107.

AFFIRMED.

Edward B. Beale, George R. Jones, Beale & Jones (*James E. Toomey* and *John S. Rhoades*, of counsel) for appellants.

Robertson and Youtie, and *Robert K. Youtie*, for appellee.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Patent Interferences of the United States Patent Office awarding priority of invention of the subject matter of Interference No. 89,107 to the junior party Riener, appellee here.

The single count of the interference corresponds to the sole claim of appellee's Patent No. 2,802,411, issued August 13, 1957 on an application filed on February 5, 1952. Appellants are involved in the proceeding on the basis of their application Serial No. 339,222, filed on February 27, 1953. They became senior party as the result of the Primary Examiner granting their motion to shift the burden of proof upon finding them entitled to the benefit of the filing date of their copending application, Serial No. 197,276, filed on November 24, 1950. At the same time he granted the motion to shift the burden of proof, the Examiner denied a motion by appellee to dissolve the interference on the ground that appellants cannot make the count in their involved application.

Appellee, being restricted by reason of his preliminary statement to a date subsequent to the filing date of appellants' earlier application, took no priority testimony, and the Board's consideration of the case

was limited to the matter of support for the count in appellants' applications. The award of priority to appellee was based on the Board's finding that neither of appellants' applications discloses structure which supports the count.

As before the Board, the sole issue here is whether these applications support the count.

The subject matter of the interference is a metal pie plate formed of very thin material, defined in the single count as follows:

1. In a thin metallic pie plate having a thickness in the nature of four one-thousandths of an inch, a circular, central depressed main body portion, an outwardly flared conical wall integrally joined to said main body portion, said conical wall being formed with a series of spaced apart radially extending upraised ribs, and an annular rim integrally joined to the upper, outer edge of said conical wall, said ribs in the said conical wall being continued over into said rim and terminating just beyond the inner edge of said rim leaving a flat annular track for accommodating a pie rimmer.

Although appellants obviously disclose some of the elements of the count, appellee contends appellants' applications fail to meet three of the limitations and that, therefore, appellants cannot make the count.

These limitations are (1) the recitation of a series of spaced apart radially extending upraised ribs, (2) the statement that the ribs terminate just beyond the inner edge of the rim, and (3) the reference to a flat annular track for accommodating a pie rimmer. Since appellee's filing date is prior to the filing date of appellants' later application involved directly in the interference, appellants can prevail only if features meeting all the limitations are found in both of their applications.

[1] Although the count must be given the broadest interpretation it will reasonably support, appellants, who have copied this count from an issued patent, have the burden of showing their applications disclose clearly the features in controversy. *Bierly* v. *Happoldt*, 40 CCPA 774, 201 F.2d 955, 96 USPQ 406; *Brand* v. *Thomas*, 25 CCPA 1053, 96 F.2d 301, 37 USPQ 505. It is also well established that any doubt which may arise about such disclosure must be resolved against appellants who copied the claim.

[2] Coming first to the limitation of a series of spaced apart radially extending upraised ribs, even though the Board found adversely to appellee concerning this matter and appellee did not cross appeal, we believe this matter should be considered by us without such cross appeal having been filed since it was adjudicated by the Board in connection with the question of appellants' right to the benefit of the filing date of the parent application. *Klemperer* v. *Price*, 47 CCPA 729, 271 F.2d 743, 123 USPQ 539.

The parent application does disclose a structure which contains a series of ribs of a sort, i.e., if one can call the results of the metal crimping process used by appellants, ribs. However, the question of whether these ribs are "spaced apart" as required by the count is a different matter. The specification does not call them such a structure nor does the drawing show such a structure. The results of crimping metal are just what one would expect—irregular elevations and depressions falling into more or less of a pattern. Certainly these elevations or ribs are not spaced apart in any sense of that phrase. As a matter of fact, the "ribs" as shown by the drawing are as close to one another as possible if the identity of the ribs is to be maintained. Just "ribs" or "adjacent ribs" would describe appellants' "ribs." "Spaced apart" requires more than appellants show. According to

Webster's Third New International Dictionary, 1961, "space" means "to place at intervals" and "to arrange with spaces between"; "apart" is defined as "separately in space or time." In our opinion, neither the specification nor drawing of appellants' parent application shows a structure which fits those definitions.

With reference to the next feature of the count, that the ribs terminate just beyond the inner edge of the rim, we find that neither of appellants' applications discloses the recited structure. The specification of the later application precludes such a structure in stating:

> The formation of a full-rolled bead in the rim 2 of the utensil is difficult in view of the presence of the corrugations therein as shown in FIGURE 4 which, if rolled or curled by existing methods, will fracture or split. The method employed in this invention consists in progressively smoothing the outer marginal edge of the rim portion 2 as is shown in FIGURE 5. Thereafter, the smooth edge may be progressively curled to form a full-rolled reinforcing bead. The beginning of this edge rolling operation is shown in FIGURE 6 and the rolling is continued until a full-rolled bead is formed. The finished bead, therefore, consists of a closely wound spiral wherein a plurality of layers, each in contact with the adjacent layer, form the full-rolled reinforcing bead. The laterally-extending rim 2, when completely formed, includes a full-rolled reinforcing bead at the peripheral edge of the rim 2 *and the remainder of the rim contains reinforcing work-hardened corrugations as shown in FIGURE 1.* • • •[Emphasis ours.]

Also, appellants' brief before the Board of Appeals in connection with the ex parte prosecution of their parent application states:

> • • • Such beads are old but there is no evidence to show a bead of smooth foil in a rim *the balance of which is corrugated.* The references fail completely to show appellants' contribution to this field. [Emphasis ours.]

[3] Appellants argue that "just beyond" is so indefinite that it is meaningless and without significance in this count. There is an element of indefiniteness in the phrase per se, but when considered in relationship with fixed points in space, as in this situation, it has a very definite meaning. It connotes a relative position which is much closer to a designated reference point than to another point. To appellee the existence of the feature was important and critical. He referred to it at least three different times in his specification. In our opinion the applications do not meet this limitation of the count.

Appellants, being unable to prove that the two features we have just discussed are disclosed in the specifications or drawings of their applications, apparently are endeavoring to support their position by alleging these features are not critical. We do not believe that this approach will avail the appellants anything. [4] In copying the claim they accepted the responsibility of proving their application discloses each limitation in the copied claim and they cannot avoid this responsibility by alleging the insignificance of the limitations not disclosed in their application. In *Segall* v. *Sims et al.*, 47 CCPA 886, 276 F.2d 661, 125 USPQ 394, we said:

> When an applicant copies a claim from a patent, he must show that he is entitled to make the claim. All limitations in the copied claim will be considered material in determining applicant's right to make the claim, and doubts arising as to applicant's right to make the claim must be resolved against him. *In re Hollman*, 41 CCPA 937, 213 F.2d 323, 102 USPQ 87; *Crome* v. *Morrogh*, 44 CCPA 704, 239 F.2d 390, 112 USPQ 49.

Coming now to the feature defined as "a flat annular track for accommodating a pie rimmer," it could be argued that FIGURE 2 of appellants' applications shows a flat edge. However, we do not know if that edge could serve as a track to accommodate a pie rimmer since appellants do not refer to a pie rimmer at all in their specifications.

The only reason given in the later application for providing a smooth portion at all is to create an area which could be curved "to form a full-rolled reinforcing bead" which "consists of a closely wound spiral" having "a plurality of layers, each in contact with the adjacent layer." If there is a flat edge but it cannot accommodate a pie rimmer, we do not believe the claimed feature can be considered disclosed by appellants. However, we think the matter of whether there is support for the recitation of the "track" feature can be determined without further consideration of the recitation of the function of the track.

Appellants' FIGURE 1 does not show a flat surface at all on the outer surfaces of the rim. It may show a smooth surface, but certainly the surface is not shown to be flat as the draftsman has included a shade line which we think can only be interpreted as indicating a curved surface. Therefore, there is at least a doubt whether FIGURE 1 meets this limitation. All of the other figures of the drawings show various stages of the formation of the rim. The last figure in this series shows a completely rolled one layer bead and a flat surface adjacent thereto on the outer edge of the rim, but an arrow indicates the rolling of the bead is to continue so that it will have a "plurality of layers," as recited in the later application. That interpretation of the drawing is in accord with the further statement in the application that the "laterally-extending rim 2, when completely formed, includes a full-rolled reinforcing bead * * * *and the remainder of the rim contains reinforcing work-hardened corrugations* * * *." There are no statements in either application which would indicate that appellants intended a flat area at the outer edge of the rim of the finished pie plate which could be used for any purpose.

As a further indication that no flat portion at the outer edge of the rim was intended, we refer again to that argument in appellants' brief before the Board of Appeals in the parent application which is quoted hereinabove.

It is argued that the flat surface could exist on the top of the bead itself. But we cannot ascertain from the applications whether the surface on top of the bead is flat, or is rounded as indicated by the shading line in FIGURE 1. Also, if one follows the language of the specification, he could conclude that the bead is so rolled that corrugations are present on top of the bead, leaving no smooth area at all. However, all of this is mere speculation, and demonstrates that the applications do not meet the requirement that in a controversy of this nature the limitations of the count must be *clearly* disclosed.

[5] Appellants cite *Else* v. *McCormack*, 27 CCPA 1278, 112 F.2d 782, 46 USPQ 79, to support their position that drawings are sufficient to support a count. That may be so if there are no contradictory disclosures in the specification and the drawings are unambiguous as was the situation in the *Else* case. However, we know of no legal basis for holding that one possible interpretation of ambiguous drawings shall prevail over language of a specification which conflicts with that interpretation.

In conclusion, it seems to us that appellants' applications definitely do not disclose two of the limitations in issue and certainly there is a doubt whether their specifications disclose a "flat annular track" at the outer edge of the rim. Since it is well established that all

doubts shall be resolved against the one who copies a claim from a patent, we must hold that appellants cannot prevail.

[6] After certain papers omitted from the designation of the record by appellants were specified for inclusion by appellee, appellants brought a motion that the costs of preparing so much of the printed record as includes the added material be taxed against appellee. At the suggestion of the parties, action on the motion was deferred until final decision. We find that certain of the papers, accounting for one-third of the cost of printing the added material, were properly included in the record while the remainder was unnecessary. The printing costs being the only costs handled through the court, the motion is granted to the extent that two-thirds of the cost of printing the added material is assessed against appellee and the remainder of said cost is assessed against appellant.

For the foregoing reasons we affirm the decision of the Board of Patent Interferences.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE LEO PRICE

No. 6775. Decided May 18, 1962

[49 CCPA—; —F.2d—; 133 USPQ 527]

1. REISSUE—BROADENED CLAIMS—35 U.S.C. 251.

"Since the application for reissue was filed more than two years after the issuance of the patent, the following prohibition of 35 U.S.C. 251 applies: 'No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.'"

2. SAME—SAME.

Held that a claim is broader under 35 U.S.C. 251 "if it is broader in any respect, though it be narrower in some other respect."

APPEAL from the Patent Office. Serial No. 759,833.

AFFIRMED.

Ely, Pearne & Gordon, and *Albert L. Ely, Jr.*, for appellant.

Clarence W. Moore (*George C. Roeming*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the rejection of claim 7 in application Ser. No. 759,833, filed September 8, 1958, for the reissue of appellant's Patent No. 2,709,854, granted June 7, 1955, for "Gauge Mounting."

[1] Since the application for reissue was filed more than two years after the issuance of the patent, the following prohibition of 35 U.S.C. 251 applies:

No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.

The sole ground of rejection of claim 7 is that it is broader than any claim of the patent.

[2] For the purposes of the issue here, a claim is broader under section 251 if it is broader in any respect, though it be narrower in some other respect. *In re Rogoff*, 46 CCPA 733, 261 F.2d 601, 120 USPQ 185, and cases there cited.

Appellant and the Patent Office have argued the case on the apparent assumption that if claim 7 is broader than claim 6 of the patent, then the "scope of the claims of the original patent" has been enlarged.[1] We shall proceed on the same assumption.

A brief description of the invention will facilitate understanding of the ensuing discussion. It relates to a device for gauging manufactured parts of complex shapes, exemplified in the application by a turbine bucket or blade which is tapered from base to top, concave on one side, and convex on the other. By means of the gauge it can be determined whether the part has the dimensions it is supposed to have. To accomplish this, the blade is accurately mounted centrally in the device in a vertical position relative to an imaginary reference line and a plurality of "guillotine gauge blades" having ends shaped to match the desired article surfaces at different levels are moved horizontally into contact with the article from opposite sides. The gauge blades must be accurately and slidably supported and accurately dimensioned in length. As aforesaid, the inner ends are shaped to engage the article, and their outer ends are provided with two end surfaces for plus and minus gauging, which is done by comparing their final positions with a "reference plane" when the gauge blade is in firm engagement with the object being gauged. On either side of the center of the gauging device, mounted on the base, there are stacks of alternating spacer blocks and gauge blocks, each stack being positioned on a pair of fixed vertical posts and bolted in place. As shown in the drawings, the spacer blocks and gauge blocks have corresponding outlines so that the stack has a uniform outer surface. That part of the surface which is adjacent to the outer ends of the gauge blades is a plane surface and serves as the reference plane, above mentioned. Each guide block has a shallow groove centrally disposed in its upper face which closely fits and guides the gauge blade which slides in it. On either side of the groove are the openings which position the block on the posts. As shown, the spacer blocks have identical openings though it is apparent that one could have an operative device even if they had no openings at all. The spacer blocks could be positioned between the posts so as to space the guide blocks and so as to provide the flat surfaces which hold the gauge blades in place in the guide block grooves which are bridged by plane spacer block surfaces.

Claim 6 of the patent, with which comparison is being made to determine whether the rejected claim is broader, reads as follows, critical words, hereinafter discussed, being italicized for convenience:

6. The combination of a base member, guide blocks and spacer blocks for mounting a plurality of guillotine gauge blades reciprocal in said guide blocks

[1] The patent appears to have had six claims. It was sued on in *Winslow Mfg. Co. v. Peerless Gage* in the United States District Court for the Northern District of Ohio, Eastern Division (Civil Action 81,944, unreported), and on June 11, 1958, claim 6 was held invalid as indefinite and incomplete. Appellant tells us claim 6 is the broadest claim of the patent. This reissue application was held, claim 6 augmented, and claim 7 added. Claims 1–6 stand allowed and are included in the record. We have compared claim 7 only with claim 6 of the patent, however.

relative to an article to be gauged, said base member having a centrally located primary reference line vertically disposed and at right angles to the horizontal plane of the base member, means for securing an article orienting mechanism to said base member to orient an article relative to said primary reference line, said base member having openings on opposite sides of, and disposed on secondary reference lines equidistantly from, said primary reference line, said guide blocks and spacer blocks being stacked over said base member adjacent its opposite ends, *said blocks* having openings therethrough axially aligned with each other and with openings in said base member, said guide blocks each having a side disposed away from said primary reference line and positioned equidistantly from said secondary reference lines, said sides *forming* reference planes for comparison with the positions of said gauge blades in the guide blocks, said reference planes being equidistantly spaced from, and on opposite sides of, said primary reference line.

The rejected claim reads, with similar added emphasis:

7. The combination of a base member defining a horizontal plane and having a centrally located primary reference line disposed vertically and at right angles to said horizontal plane, means for securing an article orienting mechanism to said base member to orient an article relative to said primary reference line, guide blocks and spacer blocks for mounting a plurality of guillotine gauge blades in said guide blocks for movement toward and away from an article to be gauged while the article is oriented by said orienting mechanism, said base member having openings on opposite sides of, and disposed on secondary reference lines equidistantly from, said primary reference lines, said guide blocks and spacer blocks being stacked over said base member adjacent its opposite ends, *said guide blocks* having openings therethrough axially aligned with openings in other guide blocks in a stack and with a corresponding opening in said base member, said guide blocks each having a side disposed away from said primary reference line and positioned equidistantly from said secondary reference lines, said sides *locating* reference planes from which the positions of said gauge blades in the guide blocks may be compared, said reference planes being equidistantly spaced from, and on opposite sides of, said primary reference line, and means, including means secured in said openings in said base member and extending vertically through said aligned openings in stacks of guide blocks, to secure each guide block above said base member in a fixed position relative to said reference lines.

The Patent Office contends that claim 7 is broader than claim 6 of the patent in two respects: (*a*) a change in the claim language with respect to the openings in the guide and spacer blocks, and (*b*) a change in the language with respect to the reference planes. If claim 7 is broader in either of these respects, rejection of the claim was proper. For the sake of completeness, however, we shall consider both.

(*a*) *Block Openings*

On this point the corresponding language of claim 6 and rejected claim 7 read as follows:

Claim 6:

> * * * *said guide blocks and spacer blocks* being stacked over said base member adjacent its opposite ends, *said blocks* having openings therethrough axially aligned with each other and with openings in said base member, * * *. [Emphasis ours.]

Claim 7:

> * * * *said guide blocks and spacer blocks* being stacked over said base member adjacent its opposite ends, *said guide blocks* having openings therethrough *axially aligned with openings in other guide blocks in a stack and with a corresponding opening* in said base member, * * *. [Emphasis ours.]

The Examiner's position was that the normal meaning of the claim 6 language would be that *all* of the blocks had openings as defined

but added that, even if this were not so, the antecedent of "said blocks" was both guide blocks and spacer blocks, saying:

> We see therefore by inserting the word guide before "blocks" in the term "said blocks" that the claim now requires only that the guide blocks have openings therethrough while claim 6 requires that both the guide and spacer blocks have holes therethrough.

In affirming, the Board held that, as a minimum, claim 6 required that "at least one guide block and at least one spacer block * * * have openings, as recited."

Appellant would have us hold that the insertion of the word "guide" in claim 7 is a "narrowing statement." Whatever it may be, it certainly is not narrowing since it *removes a limitation in claim 6* requiring, by a most liberal view, that at least one spacer block has to have the defined opening. Appellant's argument disputes the holding that claim 6 does contain that limitation and is the equivalent of asking us to read into claim 6 the meaning that only *some of* "said blocks" have openings. We are asked to hold further that, as so read, the claim would be satisfied by two or more *guide* blocks having aligned openings. This argument further proposes that claim 7 should be restricted in its meaning to require that *all* the guide blocks have aligned openings, though the claim does not say so. All of this, says appellant, leads to the conclusion that, with respect to this point (*a*) under consideration, claim 7 is narrower than claim 6.

Having carefully considered these arguments, pro and con, we think there is no question but that, with respect to block openings, claim 7 is broader than claim 6. Claim 7 makes it crystal clear that there need be no openings at all in the spacer blocks. A normal reading of claim 6 leads one to the conclusion that the antecedent for the "said blocks" which have the aligned openings can be nothing other than "said guide blocks and spacer blocks." It seems as unreasonable to contend that all of them do not have openings, under claim 6, as it would be to contend that that claim does not require that all of those blocks do not have to be stacked over the base member. On an issue of this kind we think the board was more than liberal in going as far as it did in saying that the claim would be satisfied by openings in one guide block and one spacer block, so as to include one of each category. We certainly cannot find ground for reversing its decision on point (*a*).

(*b*) *The Reference Planes*

The phrases in question on this point are as follows:

Claim 6:

> * * * *said guide blocks each having a side* disposed away from said primary reference line and positioned equidistantly from said secondary reference lines, said sides *forming* reference planes for comparison with the positions of said gauge blades in the guide blocks, * * *.

Claim 7:

> * * * *said guide blocks each having a side* disposed away from said primary reference line and positioned equidistantly from said secondary reference lines, said sides *locating* reference planes *from which the positions of said guage blades in the guide blocks may be compared*, * * *.

The difference here is between the outside faces of guide blocks *forming* reference planes, against which, for example, one can feel the end surfaces of the guillotine gauge blades to see how far in or

out of alignment they may be with respect to the planes, and *locating* such reference planes.

Appellant presents this change of language to us as something which "improves, by more precise and accurate terminology, an inapt designation and description of appellant's invention." We have given careful attention to the supporting arguments but feel that the Examiner takes the more tenable position in saying:

> The term "locating" has not appeared previously in this case in this context. • • • The terms such as "constitute" and "form" used in the case heretofore indicate that the surfaces involved are part of the reference plane. The word locate is not defined in the specification but it does mean something else than what is meant by the terms previously used. This term (locate) merely requires that the surfaces in question act as a reference point from which point the reference plane can be found. Thus as defined in claim 7 there is no longer a requirement that the surfaces be part of the reference plane. This is considered broader than the language of claim 6.

We think that the requirement of claim 6 that the guide block sides must *form* reference planes means that the sides must be flat and lie in planes. Considering that a plane can be *located* geometrically by three points, or a straight line and one point, the language of claim 7 gets away from the claim 6 requirement and necessarily is broader. We therefore affirm the holding below on point (*b*).

The decision of the Board is affirmed.

AFFIRMED.

MARTIN, *J.*, sat but did not participate in decision because of illness.

U.S. Court of Customs and Patent Appeals

ARNOLD, SCHWINN & CO. *v.* EVANS PRODUCTS COMPANY

No. 6796. Decided May 18, 1962

[49 CCPA—; 302 F.2d 765; 133 USPQ 548]

1. TRADEMARK—CONFUSING SIMILARITY—MARKS MUST BE CONSIDERED IN THEIR ENTIRETIES.

   "In determining the issue here, whether the appelle's mark when applied to its goods is likely to cause confusion or mistake or deception of purchasers because of its similarity to the appellant's mark, the respective marks must be considered in their entireties."

2. SAME—SAME—COMPOSITE MARKS—DESIGNS SIMILAR AND WORDS DISSIMILAR.

   Held that "• • • when comparing composite marks involving designs and words, with the designs similar and the words dissimilar, the matter of which of the two features dominates the marks is usually controlling in the determination of the question of likelihood of confusion."

APPEAL from the Patent Office. Opposition No. 38,096.

AFFIRMED.

Horton, Davis & McCaleb, Marshall W. Sutker and *L. W. Brugman* (*James A. Davis* of counsel) for appellant.

Harness, Dickey & Pierce, Robert L. Boynton and *Neal A. Waldrop*, for appellee.

Before RICH, *Acting Chief Judge*, and MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

KIRKPATRICK, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Trademark Trial and Appeal Board of the United States Patent Office, 128 USPQ 10, dismissing an opposition by the appellant to the appellee's application Serial No. 39,208, filed October 21, 1957, for registration, for wheeled toys—namely, tricycles and trailers, of the following mark:



The opposition is predicated on the appellant's prior registration and use, for bicycles, of the trademark [1] shown below:



The drawing of the trademark is lined for red and gold and the words "QUALITY" and "CHICAGO" are disclaimed apart from the mark.

The competing marks are composite trademarks, each consisting of a word incorporated in a design. The differences in the words "SCHWINN" and "EVANS" are apparent. The designs are similar in that, in both, the letters constituting the words are displayed in cruciform arrangement within concentric circles. They are different, however, in that the circle portion of the appellant's mark is somewhat more elaborate than that of the appellee, having the words "QUALITY" and "CHICAGO" within it and having a serrated outline giving the appearance of a seal.

The appellant took the testimony of four witnesses, two of its vice presidents and two of its dealers. The appellee took no testimony but introduced into the record a number of third party registrations, relied on to show that "displaying word trademarks in cruciform arrangement is very old and widely used."

The appellant is the prior user here, its mark, designated the "Schwinn Seal of Quality" by the witnesses, having been used since 1921 and having been affixed to every bicycle manufactured by it since 1939. Sales of the appellant's bicycles exceeded two hundred and fifty million dollars in the period from 1921 through 1958 and the appellant spent over four million dollars in advertising from 1949 through 1958.

[1] Registration No. 407,574, issued June 13, 1944, 1905 Act.

The goods of the parties are closely related and normally move through the same trade outlets to the same class of purchasers. Both marks display the word portions in a cruciform arrangement within a circle, but the Board held such arrangement to be "insufficient, in and of itself, to cause purchaser confusion," citing *Skram Co.* v. *Bayer Co., Inc.*, 23 CCPA 1049, 82 F.2d 615, 29 USPQ 142, modified and rehearing denied, 23 CCPA 1286, 84 F.2d 392, 29 USPQ 612.

In taking the view that the opposition should be sustained, the dissenting board member found it significant that only the appellant and the appellee use a symbol comprising a cross form within concentric circles as a mark or part of a mark for bicycles or tricycles. He also indicated that his opinion was influenced by the appellant's "use of such a symbol for nearly forty years" and its extensive advertising.

Conceding that there are some differences in the marks, the appellant contends, however, that "the resemblance between and similarities in the two marks cause them to create the same overall impression upon the viewer."

[1] In determining the issue here, whether the appellee's mark when applied to its goods is likely to cause confusion or mistake or deception of purchasers because of its similarity to the appellant's mark, the respective marks must be considered in their entireties. *Appollo Shirt Company* v. *Enro Shirt Company, Inc.*, 35 CCPA 849, 165 F.2d 469, 76 USPQ 329; *Kitchen-Quip, Inc.* v. *Sunbeam Corporation*, 42 CCPA 869, 222 F.2d 265, 105 USPQ 430. [2] However, when comparing composite marks involving designs and words, with the designs similar and the words dissimilar, the matter of which of the two features dominates the marks is usually controlling in the determination of the question of likelihood of confusion.

It seems to us that since bicycles, at least, are usually bought by name, the designs serve primarily as the background for display of the words. Indeed, the cruciform arrangement itself, in spelling out the words both vertically and horizontally with the middle letter common to both, draws attention to the words and encourages the viewer to take particular notice of their spelling and the number of letters in them. The lesser number of letters in "EVANS" undoubtedly results in particular emphasis attaching to that word in the appellee's mark.

In *Skram Co.* v. *Bayer Co., Inc.*, supra, this court noted that the display of words in the same cruciform arrangement was not new in trademark practice and ruled that marks displaying the words "SKRAM" and "BAYER" in that fashion within circles were not likely to result in confusion when used on related goods, thus indicating that such arrangement is less likely to be dominant then if it were new.

A case, cited by the dissenting board member, in which this court decided that composite marks consisting of dissimilar words and similar designs were likely to cause confusion as to origin is *Columbia Steel Tank Company* v. *Union Tank and Supply Company*, 47 CCPA 898, 277 F.2d 192, 125 USPQ 406. The opposer's symbol in that case was a terrestrial globe used in conjunction with the slogan "Tanks For the World" and we held that appellant's use of a pair of terrestrial hemispheres on tanks would be likely to confuse, notwithstanding certain associated words. We see no similarity of those facts to the facts of the present case.

We are not impressed by an argument, made by the appellant, that the design portions of the marks assume greater importance in this case because the users of goods of the type involved are children, many of whom cannot read. It seems obvious that, in the case where children too young to read are to use the goods, a parent or other older person would be the purchaser.

For the foregoing reasons, we think the majority of the Trademark Trial and Appeal Board correctly found that use of the appellee's mark on the goods designated is not likely to cause confusion, mistake or deception of purchasers. Its decision is, therefore, affirmed.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

1,617,923, H. J. O'Neill, Surgical bakers, **filed** July 31, 1958, D.C., S.D.N.Y., Doc. 136/175, *Deering Milliken & Co., Inc. et al.* v. *Cheralaine Sportswear, Inc. et al.* Stipulation and consent judgment; injunction granted Nov. 18, 1959.

2,406,736, G. W. Ashlock, Jr., Pitting machine, suit for declaratory judgment, **filed** May 29, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40786, *Atlas-Pacific Engineering Co.* v. *Geo. W. Ashlock Company.*

2,474,796, Van Campen, Jr. and Tilford, Alkylaminoalkyl esters of allcyclyl-allcyclic carboxylic acids, **filed** June 8, 1962, D.C., N.D. Iowa (Cedar Rapids), Doc. 746, *Richardson-Merrell, Inc.* v. *Kenyon Drug Company.*

2,488,823, J. C. Miller, Filler retaining device for binder covers, **filed** Apr. 4, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39042, *Coast Envelope Company* v. *Ardes Company.* Judgment for defendant June 15, 1962.

2,491,925, A. Lazaro, Apparatus for electroplating, **filed** May 29, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1084, *Hardwood Line Mfg. Co.* v. *Clinton Supply Co.* **Same, filed** June 4, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62c598, *Harwood Line Manufacturing Co.* v. *Nu Life Pleating Equipment Co., Inc.*

2,530,110, J. R. Woodyard, Non-linear circuit device utilizing germanium, **filed** Sept. 18, 1959, D.C., N.D. Tex., (Dallas), Doc. 8279, *Sperry Rand Corporation* v. *Texas Instruments Incorporated.* Patent held invalid and not infringed; plaintiff's action dismissed June 8, 1962.

2,541,002, L. Wells, Nursing bottle container and support, **filed** May 22, 1962, D.C., S.D.N.Y., Doc. 62/1847, *Fashioncraft-Excello* v. *Bonnyter Co., Inc.*

2,516,038, B. D McIntyre et al., Shock absorber construction; **Re. 23,421**, R. H. Whisler, Jr., Shock absorber; **Reg. No. 526,842** (MONROE), Monroe Auto Equipment Company, Shock absorbers for automobiles, trucks, busses, railway cars and truck seats, **filed** Mar. 12, 1962, D.C. Ariz. (Phoenix), Doc. 4090–Phx. *Monroe Auto Equipment Company* v. *Cushion Incorporated.* Cause dismissed May 3, 1962.

2,551,759, F. M Pence, Kitchen range, **filed** July 26, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 865/60-K, *Norris-Thermador Corporation* v. *Philco Corporation.* Stipulation and order dismissing complaint without prejudice (notice May 29, 1962).

2,561,947, E. J. Premo, Golf ball marker; **Reg. No. 539,511** ("PRO"), United Metal Products Corporation, Mechanical golf ball markers for engraving names, numbers and other legends on golf balls, **filed** May 23, 1958, D.C., E.D. Pa. (Philadelphia), Doc. 24715, *United Metal Products Corporation et al.* v. *Healthways, Inc.* Order dismissing complaint Apr. 11, 1962.

2,565,346, C. H. Braselton, Cosmetic applicator, **filed** Jan. 16, 1962, D.C., S.D.N.Y., Doc. 60/549, *Revlon, Inc.* v. *Gemorama, Inc.* Consent judgment; defendant enjoined June 15, 1962. **Same, filed** Mar. 26, 1959, same, Doc. 144/248, *The International Silver Company* v. *Revlon, Inc.* Consent order; complaint and counterclaim dismissed Dec. 13, 1960.

2,612,342, J. E. Terry, Throttle valve for pneumatic tools, **filed** May 29, 1962, D.C., E.D. Mo. (St. Louis), Doc. 62–C–208(1), *Superior Pneumatic & Mfg., Inc.* v. *Foster Mfg. Co., Inc. et al.*

2,646,911, L. O. Holmberg, Container carrier, **filed** May 28, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40784, *Lawrence O. Holmberg* v. *Rex L. Brunsing.*

2,650,028, R. D. Grayson, Universal safety temperature control, **filed** Feb. 3, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 125/61-T, *General Controls Company* v. *Deutsch Controls Corporation.* Patent 2,650,028 and claims 1, 4, 5, and 6 thereof held valid and infringed; counterclaim dismissed with prejudice; defendants enjoined (notice May 29, 1962).

2,670,176, F. W. Coffing, Hoist, **filed** May 23, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40769, *Duff-Norton Company* v. *Ralph A. Ratcliff.*

2,671,515, J. E. Hall, Well bore cleaning scratcher; **2,731,816**, same, Process for conditioning wells for cementing, **filed** Oct. 30, 1957, D.C. Kans. (Kansas City), Doc. KC–475, *Jesse E. Hall, Sr.* v. *Robinson Oil Field Specialties Company et al.* Stipulation and order of dismissal of amended complaint and counterclaims without prejudice May 29, 1962.

2,679,133, A. O. Soderholm, Nut harvesting machine, **filed** May 29, 1962, D.C. Oreg. (Portland), Doc. 62/209, *Axel O. Soderholm et al.* v. *Weathers Farm Service.*

2,729,124, D. Farandatos, Cork extractor with gas pressure generating means, **filed** June 6, 1962, D.C., S.D.N.Y., Doc. 62/2013, *Denis Farandatos* v. *Donald Spencer et al.* **Same, filed** June 8, 1962, same, Doc. 62/2050, *Berkshire Farms et al.* v. *Denis Farandatos et al.*

2,769,265, R. N. Page, Metal foil appliques and method of making same, **filed** May 21, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/704–WB, *The Boeing Company et al.* v. *Nelson Name Plate Company.*

2,794,422, A. J. Piel, Liquid applicator for animal usage; **2,813,510**, same, Animal actuated liquid applicator for hide; **Reg. No. 679,190** (CURRYTROL AND DESIGN), Piel Manufacturing Company, Stationary automatically operated livestock oiler and insecticide applicator, **filed** Apr. 16, 1962, D.C., S.D. Iowa (Des Moines), Doc. 5/1250, *Piel Manufacturing Company, Incorporated et al.* v. *George A. Rolfes Co. et al.*

2,807,197, J. B. Rodman, Apparatus for cutting flattened containers, suit for declaratory judgment, **filed** Oct. 31, 1958, D.C., N.D. Calif. (San Francisco), Doc. 37786, *H & C Engineering Corporation et al.* v. *Weyerhauser Timber Company.* Complaint and counterclaim dismissed with prejudice June 4, 1962.

2,813,510. (See 2,794,422.)

2,819,720, H. Burbig, Cigarette or cigar with filter, **filed** June 7, 1962, D.C., S.D.N.Y., Doc. 62/2036, *Henry Burbig* v. *American Tobacco Company.*

2,829,580, D. J. Bauer, Support bracket for cover board, **filed** Jan. 25, 1960, D.C., S.D. Ill. (Peoria), Doc. P–2288, *Donald J. Bauer et al.* v. *Yetter Manufacturing Co., Inc.* Complaint dismissed June 4, 1962.

2,852,727, J. S. Barnett, Mechanical memory, filed June 13, 1962, D.C., S.D. Calif. (Los Angeles); Doc. 62-804-WM, *Precision Controls Corporation v. Even-Flo Company.*

2,887,688, M. G. Kyle, Petticoat construction, filed Jan. 8, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62-15-MC, *Beverly Vogue Company, Inc. v. Pembrooke Lingerie Co., Inc. et al.* Stipulation and order of dismissal without prejudice (notice June 7, 1962).

2,892,463, C. P. Frommelt et al., Loading dock shield, filed May 24, 1962, D.C., E.D. Wis. (Milwaukee), Doc. 62-C-141, *Dubuque Awning & Tent Company v. Canvas Products Corporation.*

2,896,901, Levy and Sharp, Universal bracket, filed June 8, 1962, D.C., S.D.N.Y., Doc. 62/2045, *Ling-Zemco-Vought, Inc. v. Racon Loudspeaker Co., Inc. et al.*

2,919,693, H. M. Ross, Mouthpiece, filed May 2, 1962, D.C., W.D. Wis. (Madison), Doc. 3554, *Harold M. Ross v. Madison Dental Company.*

2,923,406, O. J. Poupitch, Container carrier, filed May 28, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40783, *Illinois Tool Works, Inc. v. Rex L. Brunsing.*

2,934,452, A. G. Sternberg, Resurfaced concrete structure, filed June 15, 1962, D.C., S.D. Tex. (Corpus Christi), Doc. 2124, *Steelcote Manufacturing Co. v. Pittsburgh Plate Glass Company.*

2,943,558, M. Cordell, Disposable filter bag, filed Mar. 28, 1962, D.C., S.D.N.Y., Doc. 62/1299, *Studley Paper Co., Inc. v. Western Vacuum Bag Manufacturing Corporation et al.* Stipulation and order of discontinuance June 4, 1962.

2,940,408, J. T. Andreadis, Dihydroxyacetone compositions for tanning the human epidermis, filed Aug. 16, 1960, D.C., S.D.N.Y., Doc. 60-C-3217, *John T. Andreadis et al. v. Milly B. Sales Corporation.* Order of dismissal for lack of prosecution June 5, 1962.

2,962,778, Peak and Wade, Pouring control for aluminum ingots, filed July 26, 1961, D.C., E.D. Wash. (Spokane), Doc. 2144, *James Wade et al. v. Kaiser Aluminum and Chemical Corporation.* Order of dismissal with prejudice May 24, 1962.

2,966,960, M. Rochlin, Air filter, filed May 24, 1962, D.C., E.D. Mich. (Detroit), Doc. 22608, *Foamade Industries, Inc. v. General Motors Corporation.*

2,974,836, G. B. Gersten, Gasoline and oil containers, filed June 8, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62c632, *Gerald B. Gersten et al. v. John Licht.*

2,990,094, R. F. Reifers, Molded pulp egg carton, filed May 25, 1962, D.C. Oreg. (Portland), Doc. 62/201, *Diamond National Corporation v. Molded Container Corporation.*

Re. 23,421. (See 2,546,038.)

Des. 187,269, J. F. Laskowitz, Chair, filed June 7, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62-777-TC, *Contour Chair-Lounge Company v. Comfort Recliner, Inc. et al.*

Des. 184,163, D. Bloomfield, Rack for holding sugar bags, filed May 22, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1041, *Bloomfield Industries, Inc. v. A. C. McClurg & Co. et al.*

REISSUES

AUGUST 7, 1962

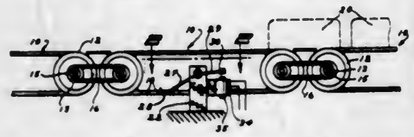
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,215
AUTOMATIC PROTECTIVE DEVICE

Glen S. James, Excelsior, Minn.

Original No. 2,932,382, dated Apr. 12, 1960, Ser. No. 719,546, Mar. 6, 1958. Application for reissue Sept. 26, 1960, Ser. No. 58,588

6 Claims. (Cl. 198—232)



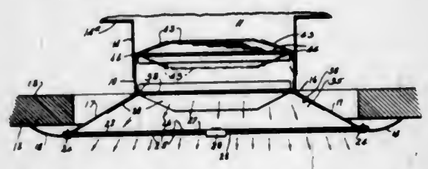
1. An automatic equipment protective device having in combination, a belt, a supporting member adjacent said belt, an arm bearing member journaled in said supporting member having one arm adapted to be engaged by said belt and oscillated thereby, a second arm adapted to be oscillated by said first arm, a magnet carried at the free end of said second arm, an electrical coil having a core therein mounted on said supporting member in an operative relationship to said magnet, a rectifier connected to said coil, a capacitor connected to said rectifier to provide a level flow of current, a variable resistor placed across said capacitor to adjust the timing interval of said capacitor whereby a control circuit is provided producing a [single] *signal* voltage when said belt is in operation.

25,216
AIR DISTRIBUTION OUTLET

Walter W. Kennedy, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Original No. 2,821,898, dated Feb. 4, 1958, Ser. No. 528,670, Aug. 16, 1955. Application for reissue Jan. 14, 1960, Ser. No. 2,557

17 Claims. (Cl. 98—40)



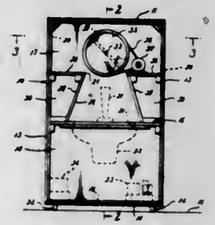
19. An air distribution outlet having in combination, a tubular casing having an inlet at one end and flaring axially toward and terminating at the other end in an alined outlet of an area substantially larger than the smallest cross-section of said inlet, a thin plate covering said outlet and perforated by closely spaced holes and a shallow deflector smaller in area than said inlet and having an outer peripheral edge lying substantially against the inner surface of said plate and having a top surface forming an imperforate mask which intercepts a corresponding part of the air stream flowing through said inlet and acts to deflect all of such intercepted air outwardly and laterally across the area of said plate surrounding said deflector edge and thereby cause the air discharged through the uncovered holes of said plate to be diverted outwardly in a diverging pattern, the total area of said uncovered holes surrounding said deflector being larger than the area of said inlet.

25,217
ACOUSTICAL ENCLOSURE TO SIMULATE ORGAN TONES

Harris H. Santi, La Porte, Tex., assignor to Rototone, Inc., a corporation of Texas

Original No. 2,847,081, dated Aug. 12, 1958, Ser. No. 503,609, Apr. 25, 1955. Application for reissue Aug. 19, 1959, Ser. No. 73,153

9 Claims. (Cl. 181—31)



1. An acoustical enclosure [for] *with* a speaker *having a speaker cone*, comprising a cabinet having an imperforate top, a bottom and side walls and a partition extending between the side walls to divide the cabinet into upper and lower chambers, said cabinet being closed except for an outlet from the upper chamber and an inlet to the lower chamber which comprises a choke through the bottom wall, the partition being provided with an opening for receiving [a] *the* speaker cone suspended within the lower chamber above the choke, the outlet from the upper chamber comprising outlet openings through opposite side walls of the cabinet of a size to produce a loading effect upon the front of the speaker cone, the bottom wall of the cabinet provided with runners extending longitudinally of the side walls through which the outlet openings are provided and at opposite sides of the choke, said runners being imperforate for lengthening the travel of sound waves between each of the outlet openings and choke.

25,218
PROCESS FOR CARRYING OUT ENDOTHERMIC REACTIONS AT HIGH TEMPERATURES

Erich Schallus and Armin Götz, Knapsack, near Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

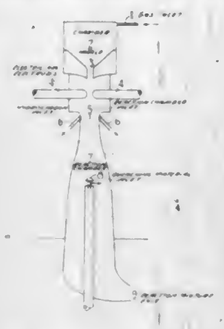
Original No. 2,916,534, dated Dec. 8, 1959, Ser. No. 558,357, Jan. 10, 1956. Application for reissue Dec. 5, 1960, Ser. No. 73,944

Claims priority, application Germany Jan. 15, 1955

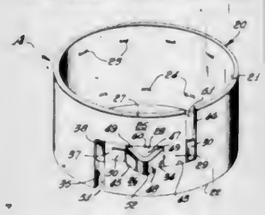
1 Claim. (Cl. 260—679)

The process of preparing extremely high yields of an unsaturated organic compound containing at least one triple bond and at most two carbon atoms and consisting of carbon and at most two atoms of at least one element selected from the group consisting of hydrogen and nitrogen, said process comprising the steps of thermally dissociating the molecules of a gas selected from the group consisting of hydrogen, nitrogen, and mixtures thereof into atoms by passage in direct contact with an electric arc, admixing thermally dissociated gas with a carbon-containing substance selected from the group consisting of finely divided carbon, aliphatic amines and hydrocarbons

[within] *up to* a time of [from] about [0.1 to about] 1.0 second from the time of dissociation and in a zone removed from said electric arc, the ratio of thermally dissociated gas to selected substance being from about 0.2 to about 2.0 mols of dissociated gas per gram atom of carbon in said selected substance, the flow rate of thermally dissociated gas from the electric arc to the zone removed from the electric arc being at least about 400 meters per second, the heat liberated by reassociation of said thermally dissociated atoms causing an endothermic reaction and forming said unsaturated organic compound, and immediately thereafter rapidly cooling the resulting reaction mixture.



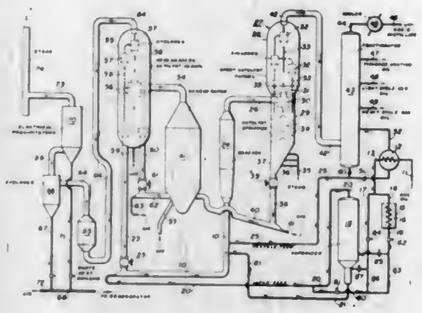
25,219
STOP DEVICES FOR WELL CONDUIT
Robert O. Park, Lakewood, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Original No. 2,986,415, dated May 30, 1961, Ser. No. 754,329, Aug. 11, 1958. Application for reissue Sept. 28, 1961, Ser. No. 142,457
21 Claims. (Cl. 287—52)



1. In a stop device adapted to be mounted on a running-in string to be disposed in a well bore: a split annular member adapted to be disposed on the running-in string, said member having overlapping portions at its split, *said portions being in substantial longitudinal alignment with each other when disposed on the running-in string*; and means having portions engaging said overlapping portions and movable in opposite directions away from each other circumferentially of said member to force said overlapping portions away from each other to constrict said member into gripping engagement with the running-in string.

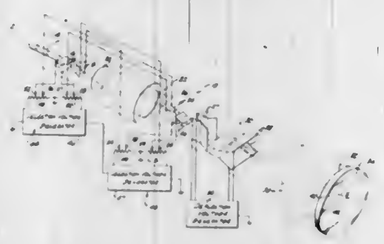
25,220
CRACKING OF HYDROCARBONS
Jack M. Andrews, Highland Park, N.J., and Hampton G. Cornell, Nick P. Peet, and William K. Roquemore, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Original No. 2,881,129, dated Apr. 7, 1959, Ser. No. 355,022, May 14, 1953. Application for reissue Oct. 12, 1960, Ser. No. 62,315
15 Claims. (Cl. 208—120)

1. A method of cracking hydrocarbons which comprises forming a suspension of a finely divided cracking catalyst having a specific gravity in the range between about 1.6 and about 2.73 in a vaporized hydrocarbon feed at a temperature in the range between 800° and 1100° F., flowing said suspension at said temperature at a gas velocity in the range between about 8 and about 50 feet per second through said vertical elongated reaction



zone having a length to diameter ratio in the range from about 4 to 1 to about 20 to 1, maintaining a sufficient amount of catalyst in said suspension to provide in said reaction zone a weight ratio of feed per hour to catalyst in the range from about 20 to 1 to about 300 to 1 to crack said hydrocarbon feed to desirable products, and recovering said products.

25,221
DEFLECTION SYSTEM FOR CATHODE RAY TYPE STORAGE TUBES
Nobuo J. Koda, Culver City, and Henry M. Smith, Pacific Palisades, Calif., and Charles L. Corderman, Winchester, and Franklin A. Rodgers, Concord, Mass.; said Koda and said Smith assignors to Hughes Aircraft Company, a corporation of Delaware, and said Corderman and said Rodgers assignors, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Original No. 2,769,116, dated Oct. 30, 1956, Ser. No. 472,664, Dec. 2, 1954. Application for reissue Dec. 6, 1957, Ser. No. 701,695
10 Claims. (Cl. 315—24)



1. In a cathode-ray [type storage] tube having a writing beam gun for producing a writing beam of electrons, a writing beam deflection system comprising a character matrix spaced from the writing beam gun, means for directing the writing beam from the writing beam gun toward said character matrix, two pairs of character selection plates disposed about the path of the beam in quadrature with each other for directing the beam to a selected area on said character matrix, means for producing a magnetic lens adjacent said character matrix for focusing the portion of the beam penetrating through said character matrix on a predetermined plane spaced a substantial distance therefrom, two pairs of compensation plates disposed about the path of the beam at an angle with respect to that of said selection plates equal to the amount of rotation imparted to the beam by said magnetic lens, means for applying a difference of potential between said selection plates, and means for applying a difference of potential between said compensation plates proportional to the difference of potential applied between said selection plates.

PLANT PATENTS

GRANTED AUGUST 7, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,160
SETCREASEA PURPUREA
George Baham Barstow, Torrance, Calif.
Filed May 5, 1959, Ser. No. 811,241
1 Claim. (Cl. 47—59)

The new and distinct variety of *Setcreasea purpurea* plant substantially as herein described and illustrated.

2,161
WATER LILY PLANT
Charles Brosius Thomas, Lilypons, Md.
Filed Oct. 4, 1961, Ser. No. 142,993
1 Claim. (Cl. 47—60)

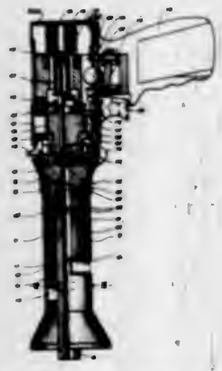
A new and distinct variety of water lily plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of ease of growth, good blooming habits, double flower form, and an attractive and distinct Dark Red general color tonality of the flowers.

PATENTS

GRANTED AUGUST 7, 1962

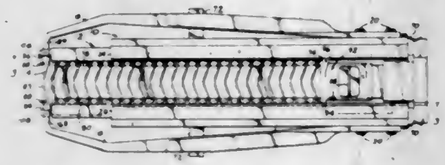
GENERAL AND MECHANICAL

3,047,873
EXPLOSIVELY ACTUATED DRIVING TOOL
Walter E. Schulz, 44 Goethestrasse, Wulfrath, Germany
Filed June 26, 1955, Ser. No. 516,721
Claims priority, application Germany June 25, 1953
5 Claims. (Cl. 1—106)



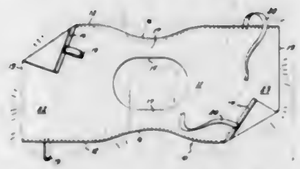
1. In an explosively actuated stud driving tool having a barrel with a bore through which a stud is expelled and a cartridge chamber for an explosive cartridge at the breech end of said barrel, the improvement which comprises said cartridge chamber being defined by a cartridge block positioned adjacent to the breech end of said barrel, said block and barrel being adjustable separably in an axial direction with respect to each other, said barrel and cartridge block being provided with correspondingly engaging annular steps each having an axial and a radially transverse face at their abutting portions to define therebetween, when moved apart, a hollow annular step-shaped expansion chamber of variable volume for freely expanding into said barrel gases from a cartridge exploded in said chamber.

3,047,874
MAGAZINE-TYPE CLIP FORCEPS
Walter L. Kelsey, 3205 SW. Patton Road, Portland, Oreg., assignor of forty-five percent to W. D. Dalley, Portland, Oreg.
Filed Oct. 17, 1960, Ser. No. 63,121
9 Claims. (Cl. 1—349)



1. In an applicator for clips, said applicator having an applicator body with means for clinching clips, a clip holder removably mounted on said applicator body with walls defining an elongated magazine for clips and with a clip-discharging end adjacent said means for clinching clips, a plunger slidably mounted on said clip holder for movement toward and away from said clip-discharging end, spring means mounted on the applicator adjacent said clip holder, releasable hold means for holding said spring means in an energized condition, means interposed between said spring means and plunger whereby said plunger is urged toward said clip-discharging end on release of said releasable hold means and means on said clip holder for releasing said releasable hold means when said clip holder is moved into operative position on said applicator body.

3,047,875
SAFETY VEST
Thomas A. Patterson, Jr., Levittown, N.J., assignor to Industrial Products Company, Philadelphia, Pa.
Filed Jan. 14, 1960, Ser. No. 2,421
2 Claims. (Cl. 2—1)



1. A safety vest comprising a single flat integral sheet of flexible luminescent material, said sheet being of elongate generally rectangular configuration, there being a central through opening for receiving a wearer's head, the sheet region on opposite sides of said opening defining shoulder straps for extension over respective shoulders of the wearer, the longitudinal edges of said sheet each being smoothly arcuately cut out adjacent to said opening to narrow said shoulder straps, the opposite end regions of said sheet serving to respectively cover the front and back of a wearer, and cooperating fastener means extending from each side of said sheet adjacent to opposite ends thereof for releasably securing said end regions in position covering the front and back of the wearer, said fastener means comprising an elastic loop on each side edge adjacent to one end of said sheet, and a strap extending from each side edge adjacent to the other end of said sheet for respective engagement through the adjacent loop.

3,047,876
ADJUSTABLE HEAD PIECE
Robert Malcom, Jr., Chicago, Ill., assignor to Chicago Eye Shield Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 8, 1958, Ser. No. 778,968
15 Claims. (Cl. 2—9)



1. An adjustable head piece, for supporting on the head of a wearer a protective face piece or the like, com-

prising, an elongated molded synthetic plastic strip having a longitudinal axis, an elongated central section which is upwardly curved with respect to said axis, and elongated end sections which are downwardly curved with respect to said axis and which are offset downwardly from the central section, said strip being bent into a substantially circular head band with the downwardly offset end sections overlapping in parallel relation, the central section of the strip forming side portions of the head band and a front portion of the head band which slants rearwardly to fit against the forehead of the wearer, the parallel overlapping end sections of the strip forming a downwardly offset rear portion of the head band which slants rearwardly to fit against the lower rear of the head of the wearer, adjusting means interconnecting the parallel overlapping end sections of the strip for adjusting the circumference of the head band with respect to the head of the wearer, and means on the side portions of the head band for supporting the protective face piece or the like.

3,047,877
TRAVEL POCKET
Anthony Palazzo, Newark, N.J., assignor to Samuel Pelosi, Jr., Union, N.J., and Joseph Pelosi, Florham Park, N.J.
Filed Dec. 7, 1960, Ser. No. 74,333
1 Claim. (Cl. 2—94)



In combination, a coat and a multiple pocket therefore, said multiple pocket comprising an inner pocket defined by the inner surface of the coat material and a first pocket wall secured thereto along the sides and bottom thereof, a second pocket wall of greater width and depth than said first pocket wall secured in overlying relation to the first pocket wall and also secured along its sides and bottom edges to the inner surface of the coat material, a flap on said second pocket wall extending above said inner pocket, means securing said flap to the inner surface of the coat to form an inside closure for both of said pockets, and an opening in the outer material of the coat disposed in part above the upper edge of the first pocket wall to provide hand access to both of said pockets.

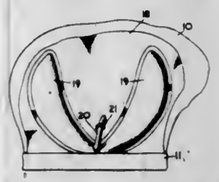
3,047,878
GARMENT CONSTRUCTION
Benjamin Brownstein, 7041 Stockton Drive, Knoxville, Tenn.
Filed Nov. 5, 1958, Ser. No. 772,076
5 Claims. (Cl. 2—97)

1. The process of assembling a coat body, sleeve and sleeve lining whereby the sleeve lining may be sewn by machine to the coat and sleeve, the elements assembled with the coat turned inside out, the head of the sleeve extending up through the inside of the armhole of the coat and the armhole of the sleeve lining extending around the outside of the armhole of the coat, the steps comprising stitching the armholes of the sleeve, the coat and the sleeve lining together, pulling the sleeve inside out through the armhole of the coat and placing it side-by-side with the sleeve lining, tacking the sleeve lining to the sleeve, pulling the coat through the sleeve lining so that the sleeve lining envelops the sleeve, sewing the



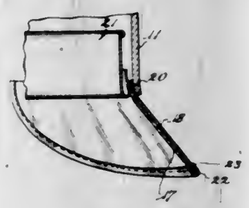
cuff of the sleeve lining to the cuff of the sleeve, turning the coat, sleeve lining and sleeve rightside out so that the parts are in position for use.

3,047,879
HEADWEAR
Jacques Spreiregen, London, England (12 Ave. Leon-Gaud, Geneva, Switzerland)
Filed Oct. 15, 1959, Ser. No. 846,756
1 Claim. (Cl. 2—181)



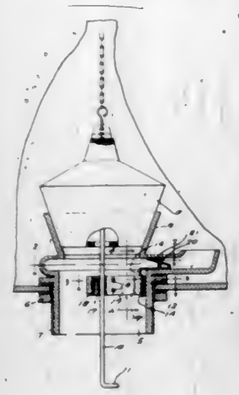
An article of headwear, comprising a crown portion, a lining of air-impervious weldable soft sheet material inside said crown portion, a piece of air-impervious weldable soft sheet material marginally welded to the rear part of said lining, said piece of sheet material having a shape such that marginal welding of said piece of sheet material to said lining creates two interconnected crescent-shaped inflatable cushions to engage the head of a person wearing the article of headwear, and a closable flexible tube in connection with said cushions.

3,047,880
CAP VISOR CONSTRUCTION
Harry Lev, 4900 Marine Drive, Chicago, Ill.
Filed Mar. 23, 1959, Ser. No. 801,074
3 Claims. (Cl. 2—200)



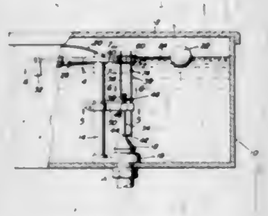
1. In a uniform cap having a head band, a visor comprising: a base sheet of high alpha cellulose wood pulp material secured along one edge to the front portion of said head band; and a cover sheet of plastic material of the same size and shape as said base sheet over said base sheet and secured thereto around the periphery thereof, the central portion of said cover sheet being free to move and flex independently of said base sheet.

3,047,881
GUIDE FIXTURE FOR FLUSH TANKS
Lester S. Coffelt, 1814 Capitol Ave., Sacramento, Calif.
Filed Nov. 28, 1960, Ser. No. 72,225
2 Claims. (Cl. 4—57)



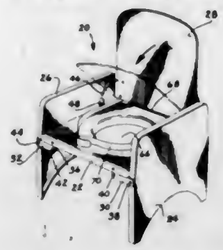
1. The combination with the overflow passage of a flush tank fitting having a vertical wall portion, embodying a valve member operated by a lift rod, of a lift rod guide comprising a vertical leaf spring member having a lateral extension positioned within said overflow passage, terminating in an inverted spring and contacting with the wall of said overflow passage, a pair of wide horizontal spring arms secured to and extending laterally from said vertical spring member, said spring arms being secured together intermediate its free ends with the vertical wall portion of said flush tank fitting and having confronting recesses adjacent said free ends providing a circular valve guide rod opening, and the free ends of said connecting spring arms being curved laterally for guiding a valve lift rod through said guide lift rod opening.

3,047,882
TOILET FLUSH CONTROL
Charles M. Goodwin, Rte. 2, Mount Vernon, Ohio
Filed Feb. 3, 1960, Ser. No. 6,390
7 Claims. (Cl. 4—67)



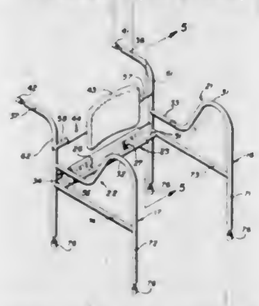
1. In a flush mechanism which has a lift lever and a stem and an outflow valve provided with a stem engaged with the first-mentioned stem, the improvement comprising a flush quantity control means which includes a third stem, means slidingly connecting the third stem with the outflow valve stem, and lost motion connection means slidably attaching said first-mentioned stem and said third stem to one end portion of said lever for limited sliding movement, said lost motion connection means including a bracket connected with said lever and having apertures, said first and third stems passed through said apertures, and stops connected with said first and third stems respectively and adapted to be engaged by said bracket.

3,047,883
FOLDING TRAINING CHAIR
Auburn G. Van Syoc, Sr., and Merl M. Almy, Belding, and Thomas K. Sydow, Greenville, Mich., assignors to Lu-Van, Inc., Belding, Mich., a corporation of Michigan
Filed Feb. 25, 1960, Ser. No. 11,074
3 Claims. (Cl. 4—134)



1. A collapsible chair having a seat, a back, and a pair of side panels, said back and said side panels being hinged to said seat for folding movement between erected and storage positions, said side panels each having a forwardly and rearwardly arcuate slot formed extending therein, said slots each having an enlarged eye at the forward end thereof, and wedge-shaped flange means on said panels extending lengthwise of said slots; locking fingers on said back each having a head portion wider than said slots, and head portions being insertable through said eyes and cooperating with said flange means to draw said back and said side panels together as said back panel is moved to erected position and to hold said back and side panels together when said back panel is erected, said head portions being aligned with said eyes only when said back panel is in storage position for disengaging said side panels from said back panel, said side panels when said fingers are disengaged therefrom being foldable over said back panel.

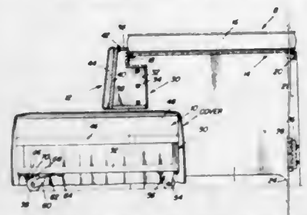
3,047,884
BODY ASSIST FOR TOILET SEAT
John L. Grondona, 11076 San Pablo Ave., El Cerrito, Calif.
Filed Nov. 24, 1959, Ser. No. 855,147
2 Claims. (Cl. 4—254)



1. A body assist for a toilet having a bowl and seat mounted thereon by a stud comprising, a pair of vertical side frames adapted for resting on the floor on opposite sides of said bowl and having top fore and aft extending hand engaging bars relatively elevated forwardly and lower rearwardly of said side frames and being dimensioned for sliding embrace by the hands of the user for aiding and guiding the user in moving to and from said seat, said side frames having rearwardly extending arms for abutting a wall behind said seat, a transversely extending inter-connecting frame member secured to said side frames and having an opening for receiving therethrough said stud for anchoring said frame member in place, and a back rest and transverse mounting means

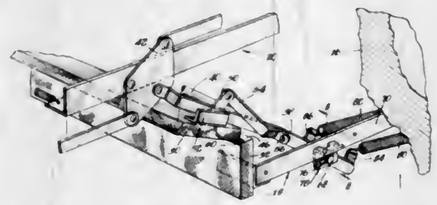
therefor connected to said side frames, said transverse frame member and said mounting means being composed of a plurality of slidably attached sections permitting transverse adjustment of the spacing between said side frames.

3,047,885
DUAL BED AND CONVERTIBLE COUCH COMBINED
Donald B. Bolinger, Bloomington, Ill.
(305 Normal Ave., Normal, Ill.)
Filed Apr. 5, 1961, Ser. No. 100,943
4 Claims. (Cl. 5—9)



2. In combination, a first floor-supported high-level bed unit embodying a horizontal elevated bed spring for reception and retention of a mattress, a pair of longitudinally spaced parallel vertical end panels having upper end portions fixed to and depending from the opposite transverse ends of the bed spring and serving as supporting legs and having feet at lower ends to rest firmly on a room floor and permitting vertical edges of said end panels to be stationed against a vertical room wall with the result that the panels and elevated bed spring, in conjunction with the wall and floor define an enclosed open-front storage space for a trundle bed, limited upper end portions of said end panels projecting above the top of said bed spring, a trundle bed of a size and shape capable of being completely stored away during the day in said space, and also capable of being bodily slid along the floor through the open front and stationed wholly beyond the open front to provide an independently usable low-level bed, an elongated horizontal bolster extending across the lengthwise front edge of the elevated bed spring between the end panels and having ends projecting into the space between and fixed to and supported at its ends on the respective end panels, an upper lengthwise portion of said bolster being in a plane above the level of the bed spring and flush with the projecting upper ends of said end panels and the lower surface terminating in a plane above and being cooperative with the top of the trundle bed, whereby when the trundle bed is caused to project part-way through said open front the projecting portion and said bolster cooperate in providing a couch.

3,047,886
CONVERTIBLE SOFA
Ervin H. Thierfelder, Wheaton, Ill., and Earl N. Fleming, Michigan City, Ind., assignors to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Apr. 22, 1959, Ser. No. 803,180
2 Claims. (Cl. 5—13)



2. A sofa convertible to form a bed and comprising, in combination, a low level kick board extending longitudinally across the front of the sofa, a stationary sofa frame including peripheral frame elements with at least one mounted on said kick board to support the frame in a correspondingly low level position, a longitudinal deck board pivotally connected along one edge to the upper edge of said kick board to swing between a normal position projecting vertically above the kick board and a normal position, a foldable mattress frame mounted on said stationary frame for movement between a folded position for seating and an extended bed position projecting forwardly of said sofa frame in closely overlying relation to said kick board, linkage means supporting said mattress frame on said support frame for movement between a retracted position for seating and an extended position projecting forwardly of said support frame, said linkage means including a pair of swingable activating links connected to the mattress frame and located at opposite ends of said support frame, a pair of trunnions, one carried by each of said activating links above the inner end of each said link, bracket means carried by said support frame and in which said trunnions are mounted with the inner end of said activating links connected to rearwardly extending spring means, additional rearwardly extending spring means fixed to said activating links on the opposite side of said trunnions, and a deck board actuating linkage connected to one of said activating links and pivoted to said deck board to move the later between its normal position and a forwardly extending position as an incident to movement of the mattress frame between the folded and extended positions thereof.

3,047,887
BED COVER
Anna Koch, N. 43 Farview Ave., Paramus, N.J.
Filed Oct. 9, 1957, Ser. No. 689,070
3 Claims. (Cl. 5—334)



1. A detachable bed cover including the combination of a top sheet, a bottom sheet coextensive therewith and marginally secured to the top sheet, an eyelet in each of the opposite sides and at one end at least of the top sheet, corresponding eyelets in the sides and end of the bottom sheet, an elastic band of limited length secured between and to the top and bottom sheets a short distance inward from each side of the cover and between and to both sheets a short distance from said one end of said cover, and eye secured to the end of each of the several elastic bands normally lying between both of the sheets and capable of being drawn through either of the respectively adjacent eyelets of the top and bottom sheets upon manually elongating the elastic bands individually involved for attaching the eyes upon the bands to corresponding hooks upon the sides and end of a bed.

3,047,888
CUSHIONING STRUCTURE
George O. Shecter, 621 N. Elm Drive, Beverly Hills, Calif., and Irwin L. Hirsch, 6850 N. Teesdale, North Hollywood, Calif.
Continuation of application Ser. No. 732,620, May 2, 1958. This application Dec. 5, 1960, Ser. No. 73,948
9 Claims. (Cl. 5—361)

1. A cushioning construction for mattresses and the like comprising top and bottom layers of low hysteresis-high

resiliency foamed material having 50–100% the recovery rate of foam rubber and an intermediate layer consisting



of high hysteresis-low resiliency foamed urethane polymer having 5–20% the recovery rate of foam rubber; said foam rubber having a Yerzley resiliency of 50–75%.

3,047,889
PROVISION OF BUOYANCY FOR GARMENTS AND THE LIKE
Mark Shaw, Morecambe, England, assignor to Marksway Wear, Ltd., Blackpool, England, a corporation of Great Britain
Filed Apr. 10, 1959, Ser. No. 805,537
Claims priority, application Great Britain Apr. 21, 1958
8 Claims. (Cl. 9—329)



1. A flexible buoyancy compartment comprising flexible wall means of waterproof and air-tight material secured to define a casing encompassing sufficient internal volume for buoyant purposes, at least one wall having at least one opening therein of an area that is small in relation to the area of said wall, a flexible panel means secured to said wall and overlying and covering said opening, said panel means comprising textile material possessing the characteristic of being permeable to ambient air when dry so that air can enter the casing and when wet preventing egress of air and ingress of water so as to entrap the air within the casing, said wall means including opposed walls and at least one spacer body within the casing for preventing adherence of said opposed walls to one another when said casing is folded and in addition preventing complete expulsion of air from within the casing during such folding.

3,047,890
METHOD OF MAKING MACHINE-MADE PLATFORM-STYLE SHOES
George H. Bingham, Jr., Westminster, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland
Filed Aug. 30, 1960, Ser. No. 52,899
7 Claims. (Cl. 12—142)



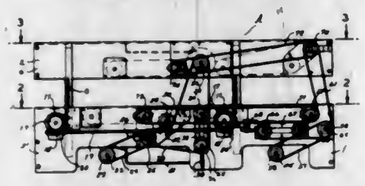
1. That method of making footwear of the kind wherein an outer sole of elastomeric material is united by the application of heat and pressure to the lower margin of a lasted upper, said method comprising as steps: providing an incompletely cured outer sole blank; providing a ribbon of a material which is substantially unaffected by the heat to which the outer sole blank is subjected in bonding the latter to the margin of the upper, but which is so porous that, in response to pressure applied to the ribbon during the operation of bonding together the upper and outer sole, some of the material of the outer sole blank enters the pores of the ribbon and permanently unites it to the outer sole; applying said ribbon to the peripheral edge of the outer sole blank; and subjecting the ribbon and blank to such a temperature and pressure as to cause material of the blank to permeate the ribbon while completing the curing of the blank.

3,047,891
EMBARKATION GANGWAY
Dimitri Golde, Woluwe-St.-Pierre, and Pierre Vierendeel, Brussels, Belgium, assignors to Le Chassis Metallique Belge "Chamebel" S.A., Brussels, Belgium, a Belgian company
Filed June 23, 1959, Ser. No. 822,269
Claims priority, application Belgium Oct. 14, 1958
5 Claims. (Cl. 14—71)



1. An extensible and collapsible gangway having opposite ends, one of which is supported, the gangway comprising: bars pivotally connected together to constitute vertically disposed first and second lazy tongs, transverse bars disposed in a horizontal plane and pivotally connected to both said lazy tongs to connect the same in spaced relation, wind bracing cross members pivotally connected together to constitute a horizontal lazy tongs bracing coplanar with said transverse bars, the latter lazy tongs bracing being pivotally connected in symmetrical relation to said transverse bars so that all of said lazy tongs are extendible and collapsible together while the transverse bars maintain the spacing of the first and second lazy tongs, and a telescopic walkway connected to said bars and adapted to telescope with said lazy tongs extended and collapsed.

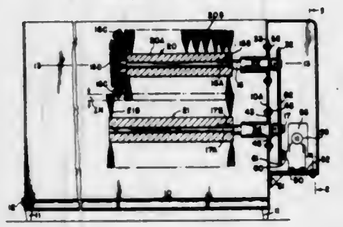
3,047,892
MEAT CLEANING MACHINE
Guy B. McRoberts, 6963 Winona, and Neal H. Blackford, 6652 Mardel, both of St. Louis, Mo.
Filed Nov. 30, 1959, Ser. No. 856,199
1 Claim. (Cl. 15—3.17)



A meat-cleaning machine adapted for ready portability comprising a rectangular base frame, a rectangular upper frame in vertically registering relationship with said base frame, rack and gear means interconnecting said upper and base frames by operation of which said frames may be disposed in mutually abutting relation for compact storage or transportability, or in pre-selected spaced relationship for accommodating therebetween cuts of meat of varying thickness, control means associated with said rack and gear means for operation thereto, at least two conveyor sections carried by each of said base and upper frames, a brush element rotatably mounted on each of said upper and base frames, being adapted to rotate about an axis extending transversely of the associated frames,

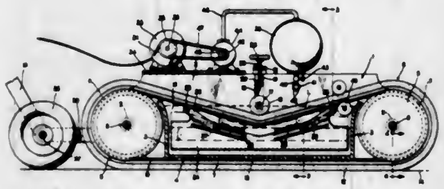
said brushes being disposed between the conveyor sections of the related frame, said brushes being mutually offset with respect to each other so that during operation of the machine the meat cut passing therethrough will be sequentially engaged by the brushes on its corresponding opposite faces, the meat-contacting portions of said brushes being substantially aligned with the meat-engaging surfaces of the conveyors whereby during machine operation a meat cut in traveling across the brush of the base frame will be supported thereon, a first drive means for driving said conveyor sections for advancing a cut of meat through the machine, and a second drive means for rotation of said brush elements in a direction opposite to the direction of travel of the conveyor sections, one of the base conveyor sections being opposite the brush of the upper frame, one of the upper conveyor sections being opposite the brush of the base frame.

3,047,893
CAN WASHER
Glenn V. Anderson, Welch, Minn., assignor to Tonna Engineering Company, Inc., Owatonna, Minn., a corporation of Minnesota
Filed Oct. 6, 1959, Ser. No. 844,665
9 Claims. (Cl. 15—71)



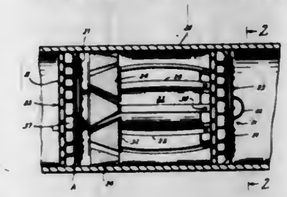
8. Apparatus for washing a can comprising a vertical frame member, a pair of cylindrical brushes, means for mounting said brushes on the frame member to rotate about fixed parallel horizontal axes with one brush substantially aligned with the other brush above the other and the brushes spaced to have the path of movement of the tips of the bristles of one brush intersect the path of movement of the tips of the bristles of the other brush, said mounting means supporting the upper brush only at one end so as to permit a can to be slipped onto it for brushing, the diameter of the upper brush being greater than the inside diameter of the can, and drive means for rotating said brushes in the same direction, the bristles of said brushes being sufficiently densely set about a substantial portion of the periphery of the brush so that they will substantially support and rotate the can relative to the bristles of each of the brushes when the can is on the upper brush and the bristles are in a deflected condition.

3,047,894
FLOOR SCRUBBING MACHINE
George O. Sprang, near Lakeville, Ohio
Filed May 16, 1961, Ser. No. 110,459
6 Claims. (Cl. 15—99)



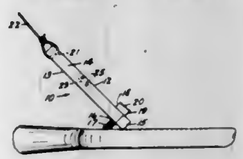
1. A floor scrubbing machine including a frame, a cleaning liquid tank in said frame, a roller journalled at each end of the frame, an endless belt located around said rollers, the bottom wall of the tank pressing the lower flight of the belt against the floor, means guiding the upper flight of the belt into the tank, a vertically movable float member in the tank for raising the liquid level to wet the upper flight of the belt, and means for rotating one of said rollers for moving the machine over a floor.

3,047,895
PIPELINE SCRAPING AND BATCHING DEVICE
Burton Ver Nooy, Tulsa, Okla., assignor to T. D. Williamson, Inc., Tulsa, Okla.
Filed Mar. 19, 1957, Ser. No. 647,035
13 Claims. (Cl. 15—104.06)



6. A pipeline scraper, comprising a body adapted to be moved longitudinally through a pipeline, a cup about the body for peripheral engagement with the wall of the pipeline, a plurality of scraping elements carried from the body by leaf springs for resilient engagement with the pipeline wall, piston means on the body having a pressure responsive face confined for communication with fluid behind the cup and arranged to urge the piston means in one direction due to the pressure of such fluid, and means connecting the scraping elements to the piston means for retraction from the pipeline wall upon movement of the piston means in said one direction.

3,047,896
GOLFER'S TOOL
Arthur M. Gunderson, 4117 Wayzata Blvd., Minneapolis, Minn.
Filed Apr. 25, 1960, Ser. No. 24,573
1 Claim. (Cl. 15—111)



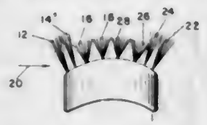
A golfer's tool for use in cleaning golf clubs and the like, said tool comprising an elongate substantially flat handle adapted to be grasped by a user and having substantially flat parallel upper and lower surfaces and having opposed side edges converging at one end thereof to define a wedge-shaped cleaning element, a brush member including a plurality of bristles affixed to one of said surfaces adjacent said one end only and in close proximity to said cleaning element, a bladed scraper element having a serrated scraping edge and being fixedly connected to the other of said surfaces adjacent said one end only and in close proximity to said cleaning element whereby said wedge-shaped cleaning element may be simultaneously used with said brush member for cleaning a groove surface such as the head of a golf club when said handle is disposed in angulated relation with respect to a golf club with said one surface disposed downwardly and said wedge-shaped cleaning element may be used simultaneously with said bladed scraper element when said tool is disposd in angulated relation with respect to a grooved surface such as the head of a golf club with said other surface disposed downwardly.

3,047,897
FLOOR TREATING DEVICES
John Bartos, Byram, Leon P. Borkoski, Stamford, Ferman C. Doughman, Darien, John T. Ferraris, Stamford, and John J. Moughty, Old Greenwich, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed Feb. 13, 1959, Ser. No. 793,141
5 Claims. (Cl. 15—114)



1. In a floor treating machine, a disc, means for imparting rotary motion to said disc, brush bristles extending outwardly from a face of said disc and disposed in a zone the outer boundary of which is adjacent to the periphery of said disc and the inner boundary of which is non-circular and spaced from the center of the disc, and a pad of metallic wool disposed in the non-circular space bounded by said bristles and not extending beyond the ends of said bristles when the machine is in operative position on the floor or the like.

3,047,898
MULTI-USE HAIRBRUSH
Robert C. Levite, Ashby Road, Ashburnham, Mass.
Filed June 12, 1961, Ser. No. 116,518
2 Claims. (Cl. 15—159)



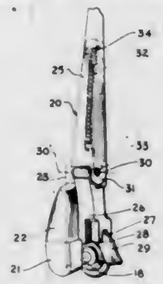
1. A hairdresser's brush comprising a head and several rows of bristles arranged thereon longitudinally thereof, one of the rows of bristles being located adjacent one edge of the brush head, said one row of bristles being relatively stiff and coarse, a row of bristles adjacent the opposite edge of the brush head spaced from the first-named row of bristles, said second row of bristles being relatively fine, soft, and flexible, and a plurality of intermediate rows of bristles which are shorter than the rows of bristles at the edges of the brush head, the shorter row of bristles next to the coarse bristles, and the coarse bristles, being synthetic and the fine flexible bristles being natural.

3,047,899
APPLICATOR FOR BOWLING ALLEY COATING MATERIALS
Arnold T. Riedi, Des Plaines, Ill., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Oct. 15, 1958, Ser. No. 767,336
8 Claims. (Cl. 15—210)



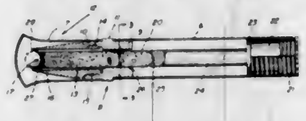
1. An applicator for applying coating material to a surface comprising a head having an upper portion, a substantially planar bottom portion, and end portions, said end portions including transverse extensions projecting outwardly from said head at an angle thereto for retaining a quantity of coating material therebetween for application to said surface, said head having a recess formed in one side thereof between one of said extensions and a point spaced from the other of said extensions operative to confine said coating material therein for application to selected limited portions only of said surface aligned with said recess, and means attached to said head for moving it over said surface to be coated.

3,047,900
WIPER ARM
Anthony C. Scinta, Hamburg, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed May 9, 1958, Ser. No. 734,350
7 Claims. (Cl. 15—250.21)



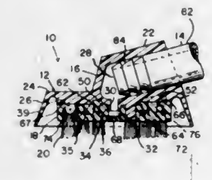
1. A windshield wiper arm construction comprising an arm portion having first and second parts, said first part adapted to be coupled to a rockshaft and said second part mounted on said first part for pivotal movement relative thereto, an extended elongated arm portion having its longitudinal axis extending substantially parallel to the axis of said pivotal movement and offset therefrom, and a member coupling said extended arm portion to said second part of said arm portion.

3,047,901
BALL-TYPE APPLICATOR DEVICE
Robert L. Hubbard, Florham Park, N.J., assignor to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware
Filed Jan. 26, 1960, Ser. No. 4,755
3 Claims. (Cl. 15—505)



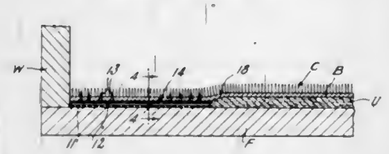
1. In a ball-point applicator structure having a spring-biased piston adapted to engage one end of a rod of a semi-solid substance and maintain it in contact with a rotatably mounted ball held in a ball retaining means whereby rotation of said ball when stroked in contact with a surface causes a film of said substance to be applied thereto, the improvement which comprises providing a passageway for said rod and spring-biased piston leading to said ball and means for contacting and guiding said rod and piston on longitudinal spring-pressed movement thereof comprising a plurality of circumferentially disposed splines on the inner surface of a portion of said passageway, said portion comprising a ferrule having the ball retaining means separably mounted therein, said ball retaining means comprising a hollow member of substantially uniform internal diameter, said diameter being larger than the diameter of said ball, said member being provided adjacent to one end thereof with a plurality of internally extending spaced studs below said ball to form seats adapted to prevent said ball from being forced into said member when being stroked and a plurality of internally extending spaced indentations at the tip of said member which contact said ball and prevent it from being forced out of said member under the pressure exerted by said spring, the diameters of circles drawn through the innermost projections of said studs and said indentations being less than the diameter of said ball, said ball being held between said studs and said indentations within said hollow member in a freely rotatable condition, the diameter of said circle drawn through the innermost projections of said studs being not less than the diameter of said rod.

3,047,902
FOUNTAIN BRUSH
Robert F. Laitner, Grosse Pointe Park, Mich., assignor to Laitner Brush Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 19, 1959, Ser. No. 787,583
8 Claims. (Cl. 15—515)



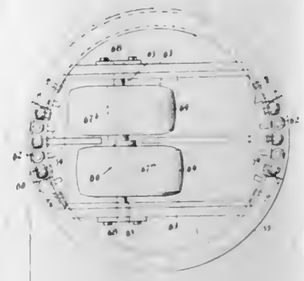
1. A fountain brush comprising a head including a cap member and a base member having a longitudinal axis secured together, a plurality of bristles attached to said base member, and a coupling tube inserted in said cap member, one of said members including a centrally located substantially linear channel in its interior face extending along said longitudinal axis, the other member including a complementary raised rib, the channel and rib by themselves forming a substantially leak-proof fluid reservoir therebetween within the assembled brush head communicating with said coupling tube and into which fluid from said coupling tube may be directed prior to being discharged from the fountain brush, said head having discharge orifices from said reservoir, said channel and rib being positioned inwardly of the outer periphery of said base member, said bristles being positioned between said channel and rib and the outer periphery of said base member.

3,047,903
RUG ANCHORING TAPE
Walter J. Reinhard, P.O. Box 662, Crystal River, Fla.
Filed Dec. 22, 1959, Ser. No. 861,327
4 Claims. (Cl. 16—16)



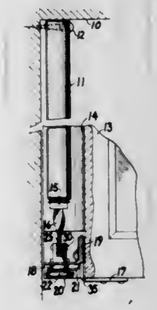
1. A carpet anchoring tape comprising a strip of adhesive material adapted to be adhered to the floor surface, a series of relatively flat anchoring plates overlying said adhesive material, said plates having a plurality of upwardly projecting prongs for penetrating and securely engaging the backing of carpeting disposed over said tape, and a strip of open-mesh fabric overlying said plates and extending along said adhesive material, said fabric being adapted to permit the upper surface of said adhesive material in between said plates to contact the carpet backing, whereby the carpet will be maintained in snug engagement with said upwardly projecting prongs.

3,047,904
MEANS FOR LOADING TRAILERS ONTO RAILWAY CARS
John G. Macdonald, P.O. Box 476, Goderich, Ontario, Canada
Filed Oct. 18, 1960, Ser. No. 63,383
Claims priority, application Canada, Oct. 29, 1959
5 Claims. (Cl. 16—48)



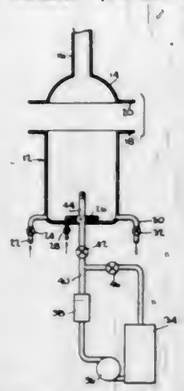
1. A caster for a wheeled vehicle comprising a support ring, an axle support structure mounted in said ring for rotation about a substantially vertical axis, a horizontal axle carried by said axle support structure, said axle being turnable about a horizontal axis and having a pair of offset wheel supporting portions, and a pair of wheels journalled on said offset wheel supporting portions.

3,047,905
ADJUSTABLE CONNECTOR FOR SASH BALANCE
William Douglas Nobes, Rochester, N.Y., assignor to The Caldwell Manufacturing Company, Monroe, N.Y., a corporation of New York
Filed Oct. 9, 1958, Ser. No. 766,296
4 Claims. (Cl. 16—197)



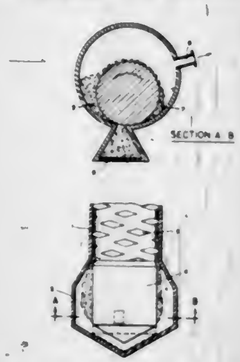
1. Means for detachably connecting a sash balance having a torsion spring to a removable sash in a window frame comprising a bracket secured to the sash, a supporting plate detachably secured to said bracket, said supporting plate having a central aperture, a rotatable adjusting member extending through said aperture and carried by said supporting plate, said adjusting member having one end connected to the sash balance, a spring plate carried by said supporting plate and having a portion underlying said supporting plate, said underlying portion having an aperture through which the adjusting member extends, a ratchet and pawl mechanism interacting between the spring plate and adjusting member to lock the adjusting member against rotation in one direction, said adjusting member having a slot in its other end for engagement by a suitable tool to rotate the adjusting member and thereby adjust the tension of the sash balance spring.

3,047,906
WET SPINNING APPARATUS AND START UP PROCESS
John W. Soehngen, Berkley Heights, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Dec. 11, 1959, Ser. No. 858,944
17 Claims. (Cl. 18—8)



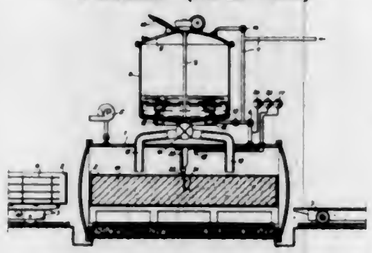
1. In the wet spinning of a dope of filament-forming material through a spinnerette into a spin bath exerting a swelling action on said material, the improvement which comprises commencing said wet spinning into a coagulant of lesser swelling action than said spin bath and withdrawing the formed filaments at a speed below the desired spinning speed, changing the composition of the coagulating medium from that of said coagulant to that of said spin bath, and increasing the withdrawal speed to the desired spinning speed when said spinnerette is surrounded by said spin bath.

3,047,907
APPARATUS FOR PROCESSING THERMOPLASTIC SYNTHETIC MATERIALS IN SCREW EXTRUDERS AND KO-KNEADERS
Fritz Hanusch and August Rettig, Ludwigshafen, Rhine-Gartenstadt, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen am Rhine, Germany
Filed Aug. 29, 1960, Ser. No. 52,660
4 Claims. (Cl. 18—12)



1. Apparatus for processing thermoplastic synthetic materials in screw extruders and ko-kneaders characterized by a chamber provided at the outlet end of the injection cylinder of a screw extruder, said chamber being eccentric to the cylinder and having an internal diameter larger than that of the cylinder, an extension of the screw of the screw-extruder which projects freely into said eccentric chamber, and an outlet nozzle from said chamber, the eccentricity of said chamber and the position of said outlet nozzle being such that a constriction between said extension and the chamber wall is formed immediately behind said outlet nozzle with respect to the direction of rotation of said extension.

3,047,908
METHOD FOR THE MANUFACTURE OF STEAM-CURED LIGHT-WEIGHT CONCRETE PRODUCTS
Bengt Arne Richard Lundgren, Saltsjobaden, and Sven Johan Borellus, Sollentuna, Sweden, assignors to Casius Corporation Limited, Montreal, Quebec, Canada
Filed June 16, 1960, Ser. No. 36,509
4 Claims. (Cl. 18—47.5)



3. A method in the manufacture of steam-hardened cellular concrete products comprising the steps of placing a mold in a chamber, preparing a foamed light weight concrete mass by incorporating gas bubbles therein, casting said foamed concrete mass in said mold, lowering the pressure in said chamber to a value sufficient to cause said gas bubbles in said concrete mass to expand without disappearing from the mass, maintaining a negative pressure in said chamber until said expanded mass has solidified sufficiently to be self-supporting, then admitting steam into said chamber to cure said solidified mass, the mold remaining stationary during the whole process, and finally taking out the hardened cellular concrete body formed by said expanded mass from said chamber and mold.

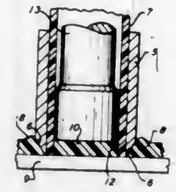
3,047,909
PROCESS FOR TREATING ELASTIC FIBERS
Clarence Boyer, Swarthmore, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 4, 1959, Ser. No. 810,583
12 Claims. (Cl. 18—48)

1. The process of improving the tenacity, stress decay, and tensile recovery of an undrawn elastomeric shaped article having a substantially linear segmented polymeric structure which comprises heating said shaped article while substantially free of applied stretch at a temperature between 105° C. and 150° C. for a period of at least five minutes, said structure being comprised essentially of first and second segments alternating in the polymer chain, said first segment containing the residue after removal of terminal active hydrogen from a linear polymer melting below 50° C., having a molecular weight above about 600, and containing terminal radicals possessing active hydrogen, said second segment comprising at least one repeating unit of a linear crystalline polymer having a melting point above about 200° C. in its fiber-forming molecular weight range.

3,047,910
METHOD OF MAKING THERMOPLASTIC TUBULAR CONTAINER
Myron H. Downs, Caldwell, N.J., assignor to Plastomer Development Corporation, Caldwell, N.J., a corporation of New Jersey
Filed Nov. 24, 1959, Ser. No. 855,128
5 Claims. (Cl. 18—59)

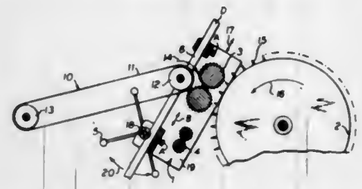
1. The method of fabricating a thermoplastic tubular container comprising introducing a tubular thermoplastic

member into a forming collar, cutting a disc from molten thermoplastic material, forcing the cut disc of molten thermoplastic material into the open end of said tubular member while retained by said forming collar, and al-



lowing the latent heat of the molten disc to weld the peripheral edge of said disc to the inner circumferential wall of said tubular member and form an end closure for the tubular container.

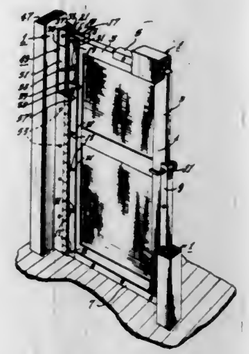
3,047,911
MEANS FOR PROCESSING LONG AND SHORT STAPLED FIBROUS MATERIAL
Gerold Fleissner, Wolfsgartenstr. 6, Egelsbach, Germany
Filed Oct. 31, 1958, Ser. No. 771,105
Claims priority, application Germany Mar. 19, 1958
7 Claims. (Cl. 19—96)



4. Apparatus for processing fibrous material of short-stapled length or long-stapled length comprising, in combination, opening means, feeding means spaced from said opening means for feeding said material along a predetermined path to said opening means; first means, including a pair of cooperating feed rollers, operable to grip and feed long-stapled material from said feeding means to said opening means; second means, including a pair of cooperating feed rollers, operable to grip and feed short-stapled material from said feeding means to said opening means; and a movable support operatively associated with both said first means and said second means and selectively positionable to place either said first means or said second means in feeding position between said feeding means and said opening means.

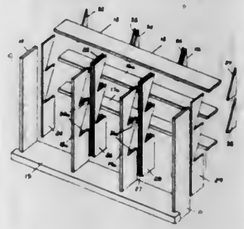
3,047,912
BUILDING STRUCTURES
Edward J. Sobolewski, 159 Haines Drive, Moorestown, N.J.
Filed Aug. 18, 1959, Ser. No. 834,519
4 Claims. (Cl. 20—16)

1. In a combined structural member and hinge, the combination of an elongated, hollow member having a corner longitudinally thereof, a web integral with said member extending outwardly from said corner at an obtuse angle with one side of said hollow member along the length thereof, said web having hinge socket means spaced from said corner along its outer, longitudinal edge for reception of a pintle, said web and an adjacent portion of said member comprising a first leaf of a leaf-type hinge, a second leaf member comprising another leaf of said hinge, said second leaf member having hinge socket means cooperative with said first named socket means for also receiving said pintle whereby to join said leaves in cooperative relation, and stop means on said second leaf member adapted to be engaged by said hollow member when it is swung into closed relation with said second leaf member, said web being adapted to maintain said adjacent portion of said first leaf spaced from said



second leaf member whereby to prevent binding of said first leaf against said second leaf member when said hollow member is in said closed relation with said second leaf member.

3,047,913
WINDOW CONSTRUCTION
Frank Cooks, 1358 E. 92nd St., Cleveland, Ohio
Filed Jan. 28, 1959, Ser. No. 789,558
2 Claims. (Cl. 20—52)

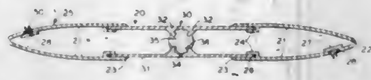


1. A window structure comprising, a substantially vertical frame including a top header and a bottom sill member joined by a pair of side jambs to form a closed boundary, a plurality of interfitting horizontal and vertical stiles disposed within the frame and forming openings containing panes of light-transmitting material, vertical guide strips secured to the sides of the vertical stiles and to the inner sides of the side jambs and having recesses for receiving said panes of light-transmitting material in assembled position in the openings, whereby the lower edges of such panes are disposed outwardly of the upper edges thereof, and triangular retainers detachably secured in predetermined position on the sides of the vertical stiles and on the inner sides of the side jambs and coacting with the guide strips to retain the panes of material in said recesses in assembled position therein.

3,047,914
DAMPER ASSEMBLY
Elliot Kahn, New Rochelle, and Alex Bobrowich, Bronx, N.Y., assignors to Arrow Louver and Damper Corp., Brooklyn, N.Y., a corporation of New York
Filed Sept. 16, 1960, Ser. No. 56,470
8 Claims. (Cl. 20—62)

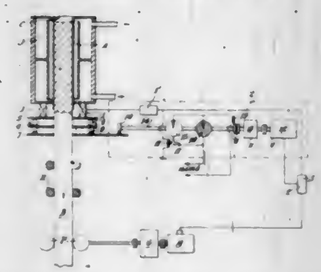
1. A louver or damper blade comprising, in combination, a pair of identical air foil shape edge members cut to length from a single air foil shape section having a relatively narrow V shape and including relatively deep side walls extending from a sharply curved bight; a pair

of identical flat wall center members cut to length from a single flat wall section and substantially rectangular in plan, said center members being in facing opposed spaced relation; each edge of a center member being secured in merging relation to a wall of a different one of said edge sections; and a shaft cut to length from a single shaft section and extending longitudinally between



and substantially centrally of said center sections; said shaft and the inner surfaces of said center sections having slidably interfitting rib and slot formations; said blade being adjustable as to width by trimming the edges of said center sections to conform to a preselected width; there being a pair of ribs on each center member converging at an angle of substantially 90°; said shaft having four radial slots at 90° spacings.

3,047,915
APPARATUS FOR CONTINUOUS CASTING OF STEEL
Dennis Arthur Barnard and Alfred Nossiter, Stockton-on-Tees, England, assignors to Head, Wrightson & Company Limited, Thornaby-on-Tees, England, a company of the United Kingdom
Filed June 9, 1960, Ser. No. 34,994
Claims priority, application Great Britain June 11, 1959
4 Claims. (Cl. 22—57.2)



1. Apparatus for continuously casting metal billets comprising a bottomless mould into which the metal is poured; means supporting said mould and maintaining it against substantial vertical movement; variable speed operating means for continuously and uninterruptedly pulling the billet metal through said mould and out through the bottom end thereof; means for measuring the frictional drag between said mould and the billet being drawn through said mould; and means controlled by said measuring means for maintaining substantially constant speed operation of said operating means when said measuring means measures a predetermined frictional drag and for decreasing and increasing the speed of operation of said operating means respectively in response to increasing and decreasing the frictional drag from said predetermined frictional drag.

3,047,916
CONTAINER-TILTING RIGGING
John F. O'Brien, Midlothian, Ill., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Aug. 19, 1960, Ser. No. 50,717
6 Claims. (Cl. 22—82)

5. A container-tilting rigging comprising, in combination with a container having side trunnions providing for its tilting movement, and a crane hoist hook positioned alongside said container for vertical movement relative thereto, a pair of laterally spaced and vertically extending parallel bracket plates secured to the side of said container and respectively having upwardly facing upper edges, a supporting pin arranged transversely of said plates with opposite end portions supported on said plate upper edges, a link parallel to said plates and having a centrally disposed supporting connection with said pin, said link being pivotal about said pin and normally occupying a horizontal position in the space above and between said plates, a shackle pivotally connected to one end of said link and extending downwardly therefrom into the space between said plates, a link chain having a supporting connection at one end with said shackle and

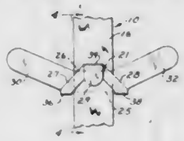


a connection at its other end with the bottom of said container at a point centrally thereof, said chain having a length such that when said pin end portions are supported on said plate upper edges it extends downwardly over the side of said container and inwardly over the bottom thereof, a lifting shackle pivotally connected with and extending downwardly from the other end of said link, and means comprising a counterbalanced hook and a shackle pivotally supporting and suspending it from said crane hoist hook for engaging and elevating said lifting shackle to apply an upward pulling force to said chain for tilting said container upon upward movement of said crane hoist hook.

3,047,917
SILICONE MOLD COATING
Donald C. McCarter, Fredonia, N.Y., and Sundaresan Ramachandran and James M. Heid, Natrona Heights, Pa., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
No Drawing. Filed June 29, 1959, Ser. No. 823,286
4 Claims. (Cl. 22—192)

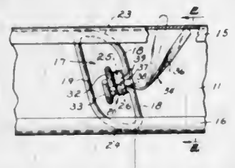
1. In the process of pouring molten metal into ingot molds the improvement of applying to the inside surface of said molds a substantially continuous coating of at least one material selected from the group consisting of polymers of at least one of the basic units having the general formulae $RSiO_{1.5}$, R_2SiO, $R_3SiO_{0.5}$, wherein R is an organic radical containing no more than about 24 carbon atoms and the salts of siliconic acids prior to said pouring.

3,047,918
PRE-TIED NECKTIE
Sidney C. Pulitzer, New Orleans, La., assignor to Wembley, Inc., New Orleans, La., a corporation of Louisiana
Filed Apr. 4, 1960, Ser. No. 19,675
1 Claim. (Cl. 24—65)



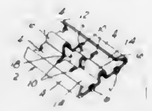
A combined support and clip for a pre-tied bow tie comprising a member of sheet material having upwardly and outwardly extending side arms adapted to be received beneath the collar of a wearer, said member having a central tie supporting part having laterally spaced side edges integrally joined to the inner ends of said side arms and having vertically spaced upper and lower edges, a downwardly open hook spaced behind said central part, hook-supporting means having a center part integrally connected to said hook and including parts extending laterally in opposite directions away from said hook towards the side edges of said central part, said laterally extending parts having outer end parts, and means connecting the outer end parts to said member at laterally spaced positions on opposite sides of said central part, whereby said hook is connected to said member entirely clear of the vertically spaced upper and lower edges of said central part.

3,047,919
MOLDING RETAINER
Robert E. Scott, Bloomfield Township, Oakland County, Mich., assignor to Gagnier Fibre Products Company, Oak Park, Mich., a corporation of Michigan
Filed June 14, 1957, Ser. No. 665,731
1 Claim. (Cl. 24—73)



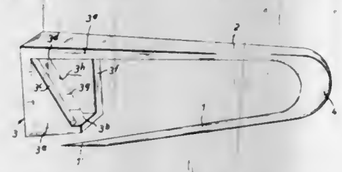
In a retainer assembly for securing a molding upon an apertured support, a head structure formed from a single length of metal into a generally oblong loop lying generally in a plane and formed with opposed arcuate end surfaces adapting the head to fit snugly within molding sections of different widths, a snap fastener stud projecting at right angles from approximately the center of said head and comprising spaced spring legs each of which is an integral extension of an opposite end of said length of metal, and a lateral spring arm flexible in the plane of said head rigid at one end with said head and projecting angularly therefrom to terminate in a molding engaging portion in the assembly, said head structure having spaced integral short arms at the upper ends of said legs, and said spring arm comprising a flexible length of metal having one end fixed upon said short arms so that the spring arm is anchored and prevented from rotation out of the plane of the head, and said spring arm projecting angularly from said anchorage.

3,047,920
FASTENER
Louis G. Bobrowski, Berlin, Conn., assignor to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed Apr. 18, 1960, Ser. No. 22,937
4 Claims. (Cl. 24—73)



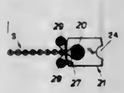
1. An integrally formed metal clip for securing moldings and the like to a supporting panel comprising a metal plate having means for engaging moldings and the like, said metal plate having a pair of laterally spaced cutouts of substantially equal length and with their termini in substantial alignment to provide a fastening strap therebetween and continuous bridge portions along the sides of the metal plate, said fastening strap being disposed generally below the remainder of said metal plate and having a generally W-shaped configuration, the continuous bridge portions of said metal plate being ridged transversely intermediate the ends thereof to reduce the longitudinal distance between the ends of the cut-outs, said fastening strap being adapted to be inserted in an aperture of a supporting panel and to be deformed longitudinally outwardly into engagement with the panel by depression of the ridge portion thereof.

3,047,921
SAFETY PIN
Kurt Lorber, Aichelberg, Kreis Esslingen, Wurttemberg, Germany
Filed Sept. 6, 1960, Ser. No. 54,320
Claims priority, application Germany Sept. 4, 1959
5 Claims. (Cl. 24—161)



1. An integral safety pin made from plastic material and comprising, in combination, a head member having a pair of spaced side walls connected to each other by substantially triangular connecting walls extending spaced from each other transverse to the side walls to define a pocket therebetween, said triangular connecting walls being offset with respect to each other in longitudinal direction of said side walls, each of said triangular walls having a base portion and an edge face extending at an acute angle to said base portion, the base portion of one of said triangular connecting walls being integral with one of said side walls and the base portion of the other of said triangular walls being integral with the other of side walls with the edge faces of said triangular walls facing in opposite directions; and a U-shaped leg member having one leg portion integral with and extending from one end of one side wall in direction of the latter and another flexible leg portion having a free pointed end extending into said pocket and being adapted to be flexed past the edge face of one of said triangular walls out of said pocket, whereby due to the specific arrangement of said triangular connecting walls said safety pin may be integrally molded without the use of movable core members.

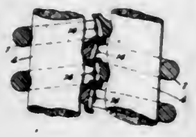
3,047,922
SLIDE FASTENER
Otto Schwendt, Wuppertal-Barmen, and Julius Meimberg, Munster, Westphalia, Germany, assignors to Ri-Ri Werke A.G., Mendrisio, Switzerland
Filed Apr. 8, 1959, Ser. No. 805,061
Claims priority, application Germany Apr. 12, 1958
3 Claims. (Cl. 24—205.1)



1. A slide fastener comprising a pair of supporting cords, one of said cords extending along one side of the fastener and another cord extending along the opposite fastener side, fastener elements directly moulded in spaced relationship on said cords, said elements each having a base portion annularly enclosing the cord to which it is associated and a T-shaped head portion having its front

face slotted in longitudinal direction with respect to the fastener, the said slots receiving, when the fastener is closed, portions of the opposite supporting cord between adjacent fastener elements on said cord so as to provide a lateral locking of the engagement of the fastener elements, said T-shaped head portions of said fastener elements having interengaging planar side surfaces which by themselves alone enable relative movement of said elements normal to the plane of the fastener and which potential relative movement is limited by said slotted front face lateral locking for said elements, and the supporting cord of each fastener side being woven to a stringer with the inclusion of at least a covering cord extending at the rear of and above said base portions of the fastener elements.

3,047,923
HELICAL THREAD SLIDING CLASP FASTENERS
Hugo Wilcken, Curau, Kreis Eutin, Holstein, Germany, assignor to Walter Erich Heilmann, Essen-Bredeney, Germany
Filed Mar. 12, 1959, Ser. No. 798,939
Claims priority, application Germany Mar. 12, 1958
12 Claims. (Cl. 24—205.13)



1. A slide fastener structure, comprising a pair of fastener members each formed by a helically wound continuous thread of plastic material; coupling means on each convolution of each of said fastener members formed by integral transverse deformations inside of the convolution and extending laterally beyond both sides of the thread axially of the member; a first filler cord extending axially through one fastener member; a second filler cord extending axially through the other fastener member, the filler cords being made of longitudinally inextensible transversely deformable material, the filler cords being enveloped firmly by the convolutions of the respective fastener members with the deformations thereof facing the respective cords; the deformations of the convolutions of the one member engaging with the deformations of the convolutions of the other member inside of the convolutions of both members when the members are engaged with each other; the first filler cord being then compressed by outer portions of the convolutions of the other fastener member opposite the deformations thereat; the second filler cord being then compressed by outer portions of the convolutions of the one fastener member opposite the deformations thereat; the compressed cords preventing axial and transverse displacements of the convolutions of the engaged fastener members.

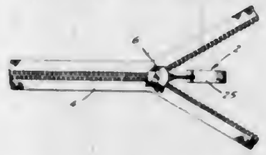
3,047,924
SLIDING CLASP FASTENERS
Hugo Wilcken, Curau, Kreis Eutin, Holstein, Germany, assignor to Walter Erich Heilmann, Essen-Bredeney, Germany
Filed Oct. 20, 1959, Ser. No. 847,602
Claims priority, application Germany Oct. 24, 1958
3 Claims. (Cl. 24—205.13)

1. A slide fastener structure, comprising a stringer tape, a fastener member joined to the stringer tape, said member being formed as a series of integrally interconnected helical turns from a single filament of flexible plastic material, each of said turns having a channel integrally formed inside the turn, each channel having a bottom extending parallel to the axis of the turn and projecting outwardly from the turn, each of the channels having straight ribs projecting outwardly of opposite edges of the channel, each of said turns being formed with walls at opposite ends of the channel, said walls having planes extending



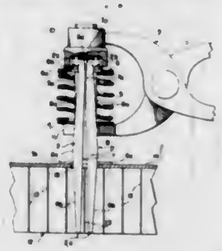
perpendicular to the ribs and bottom of the channel, and a yieldable core extending longitudinally through the turns of said fastener member substantially filling the turns.

3,047,925
REVERSIBLE ZIPPER
Peter J. Merino, 1744 SW. 4th St., Miami, Fla.
Filed Nov. 30, 1960, Ser. No. 72,653
3 Claims. (Cl. 24—205.14)



1. A reversible zipper comprising in combination a slider having two opposite broad sides defining substantially parallel planes, said slider having a lug intermediate said two planes and extending outwardly therefrom in the direction of zipper closing, a tab, a link pivoted at its respective ends to said tab and said lug, said link being of sufficient length to permit said tab to be pivoted to engage in substantially parallel relation said opposite broad sides of said slider, and means on said tab for locking said slider against movement when said tab is engaging either of said opposite broad sides of said slider.

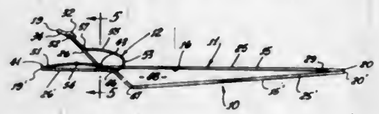
3,047,926
HONEYCOMB FASTENER
David D. MacKenzie, Atlanta, Ga., assignor to Lockheed Aircraft Corporation, Los Angeles, Calif.
Filed Aug. 19, 1960, Ser. No. 50,711
5 Claims. (Cl. 24—251)



1. A clamp type fastener assembly comprising, a pair of elongate jaw members each having two parallel sides for substantially constant thickness and a first and second elongate edge, a strap means shaped to provide containment of both said jaw members along a portion of said opposite parallel sides and one end thereof, said containment of the jaw members having their said first elongate edges in abutting confrontation, a first and second washer means encircling said strap means and the jaw members, a spring encircling the strap means and the jaw members and located between said first and second washer means

to bias the first and second washer means away from each other, said second elongate edge having an indentation adjacent the end contained by the strap means and thereafter tapering divergingly relative to said first elongate edge toward the other end to a point where the combined width of both jaw members is greater than the opening in said first washer means, and a pair of retaining tabs extending from the surface of the opening in the second washer means which are deflected to seat in the second elongate edge indentations when the fastener is assembled, said assembly coacting to open the uncontained ends of the jaw members by moving the first washer means toward the second washer means and move the uncontained ends of the jaw members into clamping closure upon release of the first washer for movement away from the second washer means by the spring to the position where the combined distance between said second elongate edges is equal to the opening size of the first washer.

3,047,927
SPRING CLIP
Armand Braga, South Pasadena, Calif., assignor, by mesne assignments, to Reiner Industries, Inc., a corporation of California
Filed Nov. 28, 1958, Ser. No. 777,013
5 Claims. (Cl. 24—252)



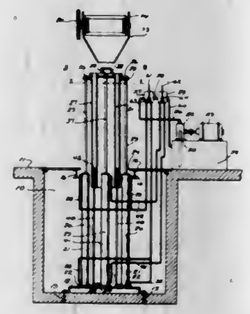
1. A spring clip comprising two elongate members, each having an inside surface and an outside surface and each comprising a jaw and a grip, one member having a transversely extending bend formed therein along which the grip of said one member extends at an angle from the jaw of said one member, the members being arranged with their inside surfaces toward each other and with said bend bearing against the other member to provide a lever fulcrum, laterally extending means securing the members to each other at the fulcrum, and a spring member having a bight portion and two end portions, the end portions of the spring member being in engagement with the inside surfaces of the grips respectively and the bight portion of the spring member being disposed on that side of said securing means which is opposite the grips, said means for securing the members to each other comprises a pair of tongues struck to extend from the inside surface of one member, the other member having a pair of apertures formed therein and in alignment with said tongues respectively, the tongues extending through the apertures respectively and being bent laterally over the outside surface of the other member.

3,047,928
APPARATUS FOR FORMING OBJECTS
Robert D. Carr, P.O. Box 53, Victoria, Tex.
Filed Oct. 13, 1960, Ser. No. 62,404
1 Claim. (Cl. 25—41)



In an apparatus for making precast concrete articles with longitudinally extending central holes therein, a form including a bottom wall, spaced apart side walls and spaced apart end walls; a movable mandrel including a tubular body member, a guide beam affixed to the leading end of said body member, said guide beam including a vertically disposed wall portion and horizontally disposed spaced parallel upper and lower flanges, said upper flange being cut away adjacent said body member, one of said end walls of the form having an aperture therein, a winch arranged externally of said form and said winch including a cable extending through said aperture and said cable being connected to the leading end of the beam; a plurality of spaced apart removable trolleys each including a horizontally disposed crosspiece extending transversely across the upper edges of said side walls, a pair of spaced apart elements depending from said crosspiece, wheels connected to said elements for engaging the lower surfaces of the upper flange of the beam, a pair of blocks secured to opposite sides of the beam contiguous to the junction of the lower flange and the body member, a horizontally disposed plate portion affixed to the beam adjacent the junction of the vertically disposed wall portion of the beam with the body member, and inclined wall sections on opposite sides of the wall portion of the beam, and said inclined wall sections defining ramps which extend between the plate portion and the upper surfaces of the blocks.

3,047,929
CONCRETE PIPE MAKING APPARATUS
Harry Steiro, Madison, Wis., assignor to Steiro Engineering Co., Inc., Madison, Wis., a corporation of Wisconsin
Filed Mar. 5, 1958, Ser. No. 719,253
3 Claims. (Cl. 25—30)

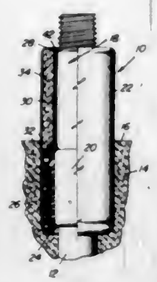


3. A method of making a concrete pipe at the level of a floor comprising, vertically shifting concentric inner and outer molds upwardly to the level of said floor and around the fixed support ring, pouring a no-slump concrete mix into the space formed between said concentric molds, vibrating said mix to form a compact pipe on said ring, immediately thereafter stripping both of said molds downwardly beneath said floor level to thereby completely expose said pipe, and then immediately removing said pipe.

3,047,930
MEANS AND METHOD FOR PROVIDING ACCESS TO PIPE COUPLINGS IN CONCRETE SLABS
Robert C. Doyle, 3815 S. 11th St., Tacoma, Wash.
Filed June 9, 1961, Ser. No. 116,050
8 Claims. (Cl. 25—118)

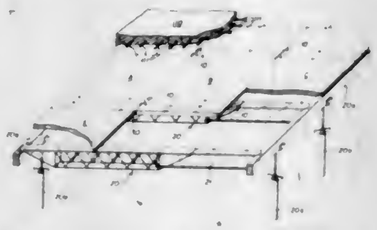
1. A spacing form for providing access to a conduit means embedded in concrete, comprising, severable continuous outer sleeve means, said sleeve means adapted to encompass a conduit means below a contemplated upper surface of the concrete and extend upward therefrom to a point sufficiently above said upper surface so as to allow some variation in the level of the finished floor without completely embedding said sleeve, conduit spacer means connected to the inner surface of the lower portion of the sleeve means and adapted to space said sleeve

means from said conduit means, protective liner means spaced inwardly from the inner surface of the upper portion of the sleeve means and adapted to surround conduit means extending above the upper surface of the concrete, said liner means connected to the upper end



of the sleeve means, a filler disposed between said sleeve means and liner means and bonded only to said liner means so as to allow ready removal of the upper portion of the sleeve means and associated liner means and filler by mere severance of the outer sleeve at the level of the finished floor.

3,047,931
FORMS FOR CONCRETE CONSTRUCTION
Joseph L. Boettner, Denver, Colo., assignor to K.C. Construction Supply Co., Denver, Colo., a corporation of Colorado
Filed Apr. 21, 1961, Ser. No. 104,676
25 Claims. (Cl. 25—131)



22. The combination of at least two panels disposed in edgewise abutment for making a concrete mold form, each panel being a planar rectangular body having at least one surface for containing concrete thereagainst, there being at least one raceway on two peripheral edges of each panel in position to adjoin with the similar raceway on the abutting panel cooperatively forming an outwardly opening groove therebetween and including a projecting portion disposed on the edge adjacent the concrete containing surface and arranged to mate with and seal against the similar projection on the adjacent panel, key means in said mating raceways for holding the adjacent panels together, and means cooperative with said key for securing the same to at least one supporting member.

3,047,932
APPARATUS FOR INTERMITTENTLY EDGE-CRIMPING YARN
Edgar Henry Pittman and Edgar Dare Bolinger, Spartanburg, S.C., assignors to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed Aug. 18, 1959, Ser. No. 834,517
13 Claims. (Cl. 28—1)

1. Intermittent yarn-crimping means and means for advancing yarns through said intermittent yarn-crimping means, said intermittent yarn-crimping means comprising an edge-crimping element having a crimping edge engageable by yarn passing thereby and means for intermittently rendering said element ineffective on yarn passing thereby, including a member other than said edge-



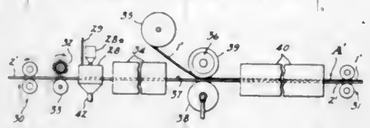
crimping element and movably engageable with yarn passing by said edge-crimping element, said member being movable along a path intersecting transversely the path of yarn passing by said element.

3,047,933
CRYSTAL DIODE ASSEMBLY MACHINE AND METHOD THEREFOR
Russell W. Chick, Beverly, and James Christofferson, West Newbury, Mass., and George F. Vigneau, Hampton Falls, N.H., assignors to Columbia Broadcasting System, Inc., Danvers, Mass., a corporation of New York
Filed Jan. 17, 1958, Ser. No. 709,544
5 Claims. (Cl. 29—25.3)



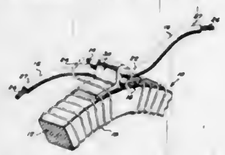
1. Apparatus for forming a rectifying junction in a semiconductor device having a semiconductor wafer and a whisker therein comprising an upper and a lower chuck, said upper and said lower chuck being movably mounted opposing each other, means for moving said chucks in unison for transverse movement, said semiconductor wafer being held in said lower chuck and said whisker being held in said upper chuck, means for moving said upper chuck and said whisker toward said lower chuck and said semiconductor wafer in response to transverse movement until said whisker contacts said semiconductor wafer, means for then moving said lower chuck and said semiconductor wafer toward said upper chuck and said whisker in response to further transverse movement to generate a predetermined pressure between said whisker and said semiconductor wafer, and means for then passing a pulse of electrical current through said upper chuck and said whisker to said semiconductor wafer and said lower chuck to weld said whisker to said semiconductor wafer.

3,047,934
BONDING NYLON TO STEEL
Philip G. Magner, Jr., Marion, Ind., assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 4, 1959, Ser. No. 791,236
7 Claims. (Cl. 29—149.5)



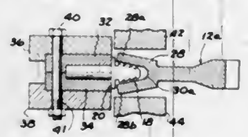
1. A process of bonding an iron sheet to a layer of polycaprolactam comprising cleaning said sheet and roughening the surface thereof, heating said sheet to a temperature of about 330° to 370° F., pressing said layer directly against the roughened surface of said sheet while said surface is free of oxides and other foreign material and while said sheet is at said temperature to adhere the layer to the sheet and form a laminated sheet, discontinuing said pressing and heating the laminated sheet to a temperature of about 380° to 400° F. for about 3 to 8 minutes to strengthen the bond between said sheet and said layer without melting said layer.

3,047,935
METHOD OF MAKING TOROIDAL COILS
Lester O. Reichelt, Downers Grove, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 27, 1956, Ser. No. 624,567
3 Claims. (Cl. 29—155.57)



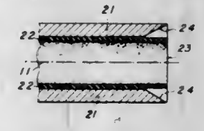
1. The method of making an electrical coil which comprises bonding a pair of flexible insulated conductor leads to the outer periphery of a toroidal magnetic core so that the leads extend across the core in a direction parallel to the core axis and in side by side relation to each other, winding insulated wire around the core to form a toroidal coil thereon, and connecting the ends of the coil to said insulated leads.

3,047,936
GAS TURBINE ROTOR
Douglas W. Knowles, Grosse Pointe Park, Mich., assignor to Curtiss-Wright Corporation, Utica, Mich., a corporation of Delaware
Filed Mar. 11, 1959, Ser. No. 798,729
1 Claim. (Cl. 29—156.8)



The method of assembling a plurality of separate airfoil bladed members directly to a receptive rotor disc, comprising; forming said bladed members to include a root section having radially disposed side faces and a locking configuration provided on each axially disposed face thereof, clamping said bladed members together with root sections thereof in radial face engaging relation with next adjacent bladed members for providing an arcuate segment of bladed members with root sections forming a contiguous axial face, forming said rotor disc to include an annular groove having inwardly converging plane surfaced walls within the blade receptive periphery thereof and of sufficient width to readily receive the root sections of said bladed members therein, disposing a plurality of said clamped arcuate segments in a closed circular arrangement, moving the root sections of said arcuate segments radially into said groove, closing said groove about the root sections of said circularly arranged arcuate segments and simultaneous therewith reforming said plane walled groove into mating and locking engagement with the locking configuration provided on said root sections.

3,047,937
METHOD OF MAKING LINED PIPE CONNECTIONS
Paul de Vecchi, Riehen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm
Filed Oct. 25, 1956, Ser. No. 618,338
Claims priority, application Switzerland Oct. 28, 1955
7 Claims. (Cl. 29—157)



1. A method of making a tight connection between a pipe which is made of hard material and has a protective lining of softer permanently deformable plastic material and another element having a hollow end with the use of a clamping device suitable for pressing the end of the pipe against the other element, which comprises removing by machining a portion of the hard material at the end of the lined pipe from the outer peripheral surface of said protective lining outwardly to form a conical surface while leaving at least a portion of the softer protective lining, expanding and permanently deforming the said portion of the softer protective lining to cover the conical surface while leaving the end of the pipe undeformed, placing a packing member having a surface mating with the covered conical surface and having another surface mating with the surface of the element to which the pipe is to be connected in mating relationship with said covered conical surface, and clamping the assembled parts together.

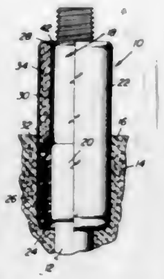
3,047,938
HIGH TEMPERATURE BOND AND METHOD OF FORMING SAME
Robert L. Dega, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,893
9 Claims. (Cl. 29—182.3)

8. A multilayer high temperature composite sealing member comprising a solid metal base member, a first layer contiguous said base member of a boron nitride-free briquetted sintered powdered metal base material, said layer being at least about 0.030 inch in thickness and a second layer over said first layer of a briquetted sintered powdered metal base material containing about 2% to 6% boron nitride by weight of the powdered metal.

3,047,939
COMPOSITE ELECTROPLATE
Henry Brown, Huntington Woods, Mich., assignor to The Udylite Research Corporation, Detroit, Mich., a corporation of Michigan
No Drawing. Filed Feb. 24, 1959, Ser. No. 794,794
16 Claims. (Cl. 29—183.5)

1. A laminated corrosion protective final coating on a metal base susceptible to atmospheric corrosion com-

means from said conduit means, protective liner means spaced inwardly from the inner surface of the upper portion of the sleeve means and adapted to surround conduit means extending above the upper surface of the concrete, said liner means connected to the upper end

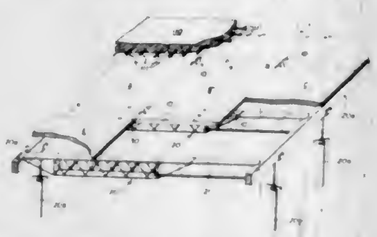


of the sleeve means, a filler disposed between said sleeve means and liner means and bonded only to said liner means so as to allow ready removal of the upper portion of the sleeve means and associated liner means and filler by mere severance of the outer sleeve at the level of the finished floor.

3,047,931
FORMS FOR CONCRETE CONSTRUCTION

Joseph L. Boettner, Denver, Colo., assignor to K.C. Construction Supply Co., Denver, Colo., a corporation of Colorado

Filed Apr. 21, 1961, Ser. No. 104,676
25 Claims. (Cl. 25—131)



22. The combination of at least two panels disposed in edgewise abutment for making a concrete mold form, each panel being a planar rectangular body having at least one surface for containing concrete thereagainst, there being at least one raceway on two peripheral edges of each panel in position to adjoin with the similar raceway on the abutting panel cooperatively forming an outwardly opening groove therebetween and including a projecting portion disposed on the edge adjacent the concrete containing surface and arranged to mate with and seal against the similar projection on the adjacent panel, key means in said mating raceways for holding the adjacent panels together, and means cooperative with said key for securing the same to at least one supporting member.

3,047,932
APPARATUS FOR INTERMITTENTLY EDGE-CRIMPING YARN

Edgar Henry Pittman and Edgar Dare Bolinger, Spartanburg, S.C., assignors to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware

Filed Aug. 18, 1959, Ser. No. 834,517
13 Claims. (Cl. 28—1)

1. Intermittent yarn-crimping means and means for advancing yarns through said intermittent yarn-crimping means, said intermittent yarn-crimping means comprising an edge-crimping element having a crimping edge engageable by yarn passing thereby and means for intermittently rendering said element ineffective on yarn passing thereby including a member other than said edge-



crimping element and movably engageable with yarn passing by said edge-crimping element, said member being movable along a path intersecting transversely the path of yarn passing by said element.

3,047,933
CRYSTAL DIODE ASSEMBLY MACHINE AND METHOD THEREFOR

Russell W. Chick, Beverly, and James Christofferson, West Newbury, Mass., and George F. Vigneau, Hampton Falls, N.H., assignors to Columbia Broadcasting System, Inc., Danvers, Mass., a corporation of New York

Filed Jan. 17, 1958, Ser. No. 709,544
5 Claims. (Cl. 29—25.3)

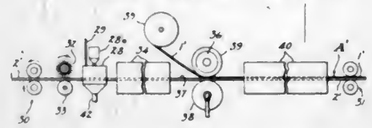


1. Apparatus for forming a rectifying junction in a semiconductor device having a semiconductor wafer and a whisker therein comprising an upper and a lower chuck, said upper and said lower chuck being movably mounted opposing each other, means for moving said chucks in unison for transverse movement, said semiconductor wafer being held in said lower chuck and said whisker being held in said upper chuck, means for moving said upper chuck and said whisker toward said lower chuck and said semiconductor wafer in response to transverse movement until said whisker contacts said semiconductor wafer, means for then moving said lower chuck and said semiconductor wafer toward said upper chuck and said whisker in response to further transverse movement to generate a predetermined pressure between said whisker and said semiconductor wafer, and means for then passing a pulse of electrical current through said upper chuck and said whisker to said semiconductor wafer and said lower chuck to weld said whisker to said semiconductor wafer.

3,047,934
BONDING NYLON TO STEEL

Philip G. Magner, Jr., Marion, Ind., assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Feb. 4, 1959, Ser. No. 791,236
7 Claims. (Cl. 29—149.5)

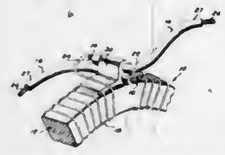


1. A process of bonding an iron sheet to a layer of polycaprolactam comprising cleaning said sheet and roughening the surface thereof, heating said sheet to a temperature of about 330° to 370° F., pressing said layer directly against the roughened surface of said sheet while said surface is free of oxides and other foreign material and while said sheet is at said temperature to adhere the layer to the sheet and form a laminated sheet, discontinuing said pressing and heating the laminated sheet to a temperature of about 380° to 400° F. for about 3 to 8 minutes to strengthen the bond between said sheet and said layer without melting said layer.

3,047,935
METHOD OF MAKING TOROIDAL COILS

Lester O. Reichelt, Downers Grove, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 27, 1956, Ser. No. 624,567
3 Claims. (Cl. 29—155.57)

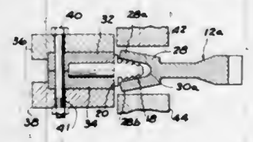


1. The method of making an electrical coil which comprises bonding a pair of flexible insulated conductor leads to the outer periphery of a toroidal magnetic core so that the leads extend across the core in a direction parallel to the core axis and in side by side relation to each other, winding insulated wire around the core to form a toroidal coil thereon, and connecting the ends of the coil to said insulated leads.

3,047,936
GAS TURBINE ROTOR

Douglas W. Knowles, Grosse Pointe Park, Mich., assignor to Curtiss-Wright Corporation, Utica, Mich., a corporation of Delaware

Filed Mar. 11, 1959, Ser. No. 798,729
1 Claim. (Cl. 29—156.8)

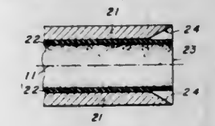


The method of assembling a plurality of separate airfoil bladed members directly to a receptive rotor disc, comprising; forming said bladed members to include a root section having radially disposed side faces and a locking configuration provided on each axially disposed face thereof, clamping said bladed members together with root sections thereof in radial face engaging relation with next adjacent bladed members for providing an arcuate segment of bladed members with root sections forming a contiguous axial face, forming said rotor disc to include an annular groove having inwardly converging plane surfaced walls within the blade receptive periphery thereof and of sufficient width to readily receive the root sections of said bladed members therein, disposing a plurality of said clamped arcuate segments in a closed circular arrangement, moving the root sections of said arcuate segments radially into said groove, closing said groove about the root sections of said circularly arranged arcuate segments and simultaneous therewith reforming said plane walled groove into mating and locking engagement with the locking configuration provided on said root sections.

3,047,937
METHOD OF MAKING LINED PIPE CONNECTIONS

Paul de Vecchi, Riehen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

Filed Oct. 25, 1956, Ser. No. 618,338
Claims priority, application Switzerland Oct. 28, 1955
7 Claims. (Cl. 29—157)



1. A method of making a tight connection between a pipe which is made of hard material and has a protective lining of softer permanently deformable plastic material and another element having a hollow end with the use of a clamping device suitable for pressing the end of the pipe against the other element, which comprises removing by machining a portion of the hard material at the end of the lined pipe from the outer peripheral surface of said protective lining outwardly to form a conical surface while leaving at least a portion of the softer protective lining, expanding and permanently deforming the said portion of the softer protective lining to cover the conical surface while leaving the end of the pipe undeformed, placing a packing member having a surface mating with the covered conical surface and having another surface mating with the surface of the element to which the pipe is to be connected in mating relationship with said covered conical surface, and clamping the assembled parts together.

3,047,938
HIGH TEMPERATURE BOND AND METHOD OF FORMING SAME

Robert L. Dega, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,893
9 Claims. (Cl. 29—182.3)

8. A multilayer high temperature composite sealing member comprising a solid metal base member, a first layer contiguous said base member of a boron nitride-free briquetted sintered powdered metal base material, said layer being at least about 0.030 inch in thickness and a second layer over said first layer of a briquetted sintered powdered metal base material containing about 2% to 6% boron nitride by weight of the powdered metal.

3,047,939
COMPOSITE ELECTROPLATE

Henry Brown, Huntington Woods, Mich., assignor to The Udylite Research Corporation, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Feb. 24, 1959, Ser. No. 794,794
16 Claims. (Cl. 29—183.5)

1. A laminated corrosion protective final coating on a metal base susceptible to atmospheric corrosion com-

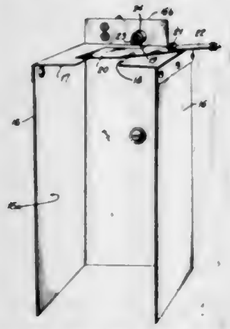
prising a first layer of chromium having a thickness in the range of about 0.01 to about 0.2 mil chromium, an adherent strike plate overlaying said chromium layer of a metal selected from the class consisting of cobalt, nickel and alloys thereof and having a thickness less than about 0.1 mil, said strike plate overlaid by plated metal selected from the class consisting of nickel and cobalt and alloys thereof containing at least 50% nickel, said plated metal being at least partially said nickel cobalt alloy when said strike plate is nickel, the sum of the thicknesses of said strike plate and said plated metal being in the range of about 0.2 mil to 2 mils, and a second chromium plate overlaying said plated metal and adherent thereto in a thickness of about 0.01 to about 0.1 mil.

3,047,940

RELAMPING TOOL FOR SEARCHLIGHTS

Sidney Feldman, New York, Sylvester A. Gregory, Brooklyn, and Alfred J. Lawes, Flushing, N.Y., assignors to the United States of America as represented by the Secretary of the Navy

Filed June 25, 1959, Ser. No. 822,980
16 Claims. (Cl. 29—203)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A relamping tool for searchlights of the type in which the lamp is detachably mounted in the searchlight housing on an elongated bar that at one end is detachably coupled to a support in the searchlight housing and between the lamp and the coupled end has an aperture from face to face therethrough in the direction of access to the housing interior when it is desired to insert or remove a lamp, which comprises a somewhat U-shaped shield of a length and width somewhat greater than the length and width respectively of the assembly of a lamp to be removed from or inserted into said housing and its mounting bar, a pin extending from that wall of the shield which forms the base of the U, adjacent one end thereof toward the opposite open face of the U, and in a position, of a length, and of a shape and size of its free end, to enter and pass through said aperture in said bar when said shield is passed into the housing and encloses said lamp and bar between its sides, whereby said lamp and bar may be supported by said pin within the shield while the bar is coupled to or uncoupled from its support.

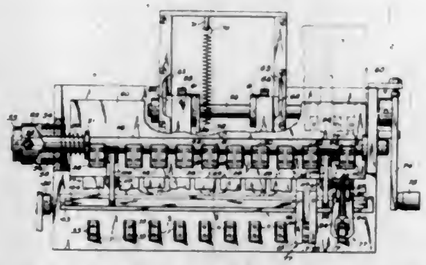
3,047,941

PILE-UP ASSEMBLY FIXTURE

Henry W. Schaufelberger, Union, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed May 23, 1960, Ser. No. 30,806
10 Claims. (Cl. 29—203)

1. A pile-up assembly fixture comprising a frame having vertical members and a horizontal member fixed to certain of the vertical members, a holder having spaced parallel apertures therein mounted at a feeding station on the horizontal member, removable guide pins disposed in the apertures of the holder and having reduced upper ends to enter spaced apertures of insulators of different sizes and spaced apertures of parts of an article to be assembled on the holder, separate hoppers for the insulators of different sizes disposed adjacent a loading station spaced from the holder, a feeding unit supported by the frame for movement between the loading station, where the unit will receive an insulator from the hopper disposed in the loading station, and the feeding station



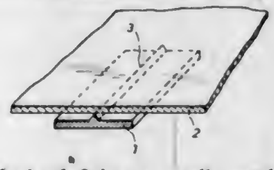
where the unit will align the apertures of the insulator carried thereby with the pins and drop the insulator on the pins, means to support the hoppers for movement relative to the loading station, and means actuable to move the hoppers to selectively align the hoppers singly with the loading station so that the insulators thereof may be received singly by the feeding unit and deposited thereby on the pins where they will be guided to the holder.

3,047,942

METHOD OF FIXING METALLIC RELIEF HOROLOGICAL FIGURES TO A METALLIC WATCH DIAL PLATE

Hans Schneider, 23a Eplat-Jaune, La Chaux-de-Fonds, Switzerland, and Gilbert Feller, Le Locle, Switzerland; said Feller assignor to Metalem S.A., Le Locle (Neuchatel), Switzerland

Filed Apr. 11, 1960, Ser. No. 21,297
Claims priority, application Switzerland Apr. 13, 1959
3 Claims. (Cl. 29—470)



1. A method of fixing a small metal symbol to a lacquer enamel coated watch dial plate, comprising the steps of placing the metal symbol over the coating on the watch dial plate, placing an inert mass against the back of the watch dial plate, pressing the symbol against the watch dial plate and vibrating the symbol on the watch dial at an ultrasonic frequency to firmly secure it to the dial plate through the lacquer enamel coating.

3,047,943

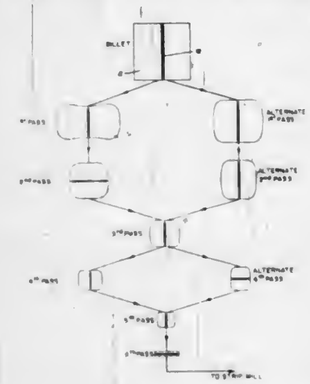
MANUFACTURE OF INTERNALLY SLITTED STRIPS

Richard A. Wilkins, Rome, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland

Filed July 31, 1958, Ser. No. 752,223
4 Claims. (Cl. 29—528)

1. The method of making an elongated internally singly slitted relatively thin and wholly uniform gauge one homogeneous metal strip suitable for use as stock for making a tubular body by expanding the slit, which method comprises forming a cast metal billet containing a singly body extending longitudinally thereof of pul-

verizable or pulverized weld preventing material stable and compatible with the billet metal at pouring and at hot rolling temperatures, said billet being of substantially rectangular, such as square, transverse cross-section, and relatively thick in the directions of each side of such rectangle, said body of weld preventing material being of relatively thin, substantially oblong, transverse cross-section and positioned substantially coaxially of the billet in direct contact with the metal thereof with its faces and edges parallel to the adjacent faces of the billet, and with the width of such body greater than the distances its edges are spaced from the adjacent faces of the billet with the width of such body in a high ratio of as much as 90% of the corresponding dimension of the billet; hot plastically rolling said billet to reduce it and said body of weld preventing material to form a bar of oblong transverse cross-section much narrower and thinner than the original billet, in which bar the thinned body of weld preventing material widthwise thereof is positioned widthwise of the bar with its width relative to that of the bar and the spacing of its edges from those of the bar directly and linearly proportional to the corresponding dimensions



of the original billet; such rolling being effected by passing the hot plastic billet successively through a plurality of reducing passes each formed by mating grooves of grooved axially parallel rolls in such wise that in each pass the metal entirely fills it and that at all passes said directly and linearly proportional spacing of the weld-preventing-body edges as in the original billet is maintained, the billet in the first pass and predominantly in the remaining passes being so positioned that the body of weld preventing material widthwise thereof is positioned normal to the axes of the rolls and in the last pass being so positioned that said body widthwise thereof is positioned parallel to such axes; cleaning and pickling the bar so formed by the hot plastic rolling, and afterward thinning it without materially increasing its width by cold rolling it flatwise to form a relatively thin gauge strip in which the opposite faces of the passage containing the body of weld preventing material of the original billet has been moved substantially into contact to provide said strip with its internal slit and said thin gauge of the strip being uniform throughout and not substantially more than equal to twice the wall thickness for the tubular body to be made by expanding the slit.

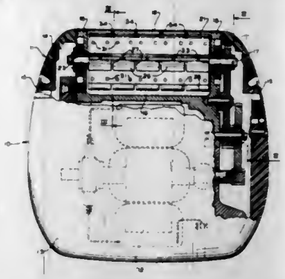
3,047,944

HEAD CONSTRUCTION FOR ELECTRIC RAZORS

Ardé Bulova, New York, and Carl Punzmann, Rego Park, N.Y., assignors to Bulova Watch Company, Inc., Flushing, N.Y., a corporation of New York

Filed Mar. 13, 1957, Ser. No. 645,758
10 Claims. (Cl. 30—43)

1. Head construction for electric razors comprising a grill having a portion thereof constituted as a segment of a cylinder providing longitudinally of the axis of said segment a plurality of arched perforate cylindrical segment shaving areas, and longitudinally of said axis providing a series of individual blades each individually en-



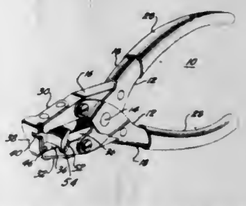
gageable with a respective one of said perforate cylindrical segment shaving areas, and each individually mounted to be individually slidable in a direction radial to said axis.

3,047,945

DEVICE FOR TENSIONING BUNDLING STRAPS

Maurus C. Logan, Elizabeth, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey

Filed Aug. 31, 1959, Ser. No. 837,089
5 Claims. (Cl. 30—134)



1. A hand tool for tensioning and subsequently cutting a plastic strap when looped about a plurality of bunched articles, comprising a pair of jaw members connected for movement toward and away from each other, a first and second complementary angle plate each having one leg thereof secured to said jaw members with the remaining leg thereof extending therefrom in opposite directions at right angles to the opposing faces of said jaw members across the nose end thereof in overlapping sliding engagement with each other upon movement of said jaw members toward and away from each other, the extended leg of said first angle plate being provided with a transverse, open ended slot along one side edge thereof adapted to freely receive said strap therethrough, the extended leg of said second angle plate being partly reduced in width to provide a narrow upstanding arm adapted to overlap the open end portion of said slot not occupied by said strap upon movement of said jaw members toward each other to reduce the length of said slot to substantially the width of said strap to hold said strap in said slot against relative movement.

3,047,946

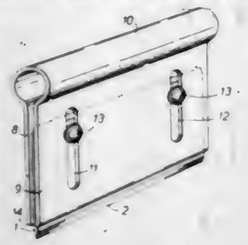
PAINT STRIPPER FOR USE ON WINDOWS AND THE LIKE

Paul Lins, 57 Ribble St., Island Bay, Wellington, New Zealand

Filed Aug. 25, 1960, Ser. No. 51,859
Claims priority, application New Zealand Nov. 23, 1959
2 Claims. (Cl. 30—162)

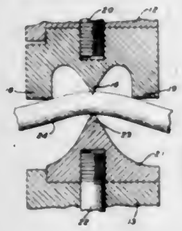
1. An improved stripper for paint and the like comprising a holder for a scraper blade of a rectangular shape having opposite sharpened edges, said holder comprising a pair of flat plates of a rectangular shape, said

plates being joined together along one of their edges to form an oval enlargement and to provide a handle parallel with the opposite edges of said plates, said opposite edges of the plates being unjoined, said plates each having a pair of slots spaced apart and parallel with each other



and perpendicular to said handle and to the unjoined edges to receive adjusting bolts passing through holes in the blade and to provide a dual clamping of the two plates against the blade and to provide a sliding rectilinear adjustment for said blade.

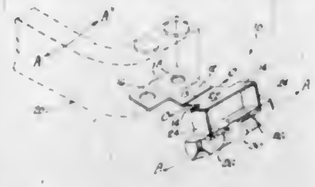
3,047,947
WIRE CUTTING PLIERS
William R. Spenninger, Florham Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,396
2 Claims. (Cl. 30—186)



1. A wire cutting tool comprising a pair of handles, a stud disposed in said handles to provide a pivot therefor, jaws on each of said handles adjacent said stud, each of said jaw members provided with an elongated recess extending to the marginal edges thereof and terminating some distance from the end of each jaw, a centrally disposed first blade member, having a cutting edge thereon, removably secured in the recess of one of said jaws and having on each side thereof, in spaced relation, longitudinally extending bosses which project beyond the cutting edge of said first blade member, a second blade member removably secured in the other of said recesses and having a raised longitudinally extending central portion in alignment with said first blade member and adapted to register therewith when said jaws are closed by said handles.

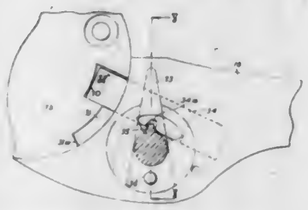
3,047,948
DRIVE FINGER FOR VIBRATING MOTOR
John F. Wahl, Sterling, Ill., assignor to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois
Filed Apr. 8, 1959, Ser. No. 804,940
3 Claims. (Cl. 30—210)

1. In a hair cutting instrument having a fixed blade, a cooperating movable blade and a motor including a vibratory armature having a free end spaced from said movable blade; a drive finger of resilient sheet material extending between said armature free end and said movable blade and connected rigidly to said free end and to means rigidly engaging said movable blade, the portion of said drive finger adjacent said armature free end having its width dimension parallel to the plane of armature vibration whereby said portion is rigid to forces parallel to said plane and resilient to forces normal to said plane, said former characteristic effective to prevent blade whipping and said latter characteristic effective to provide cutting bias between said blades, the portion of said drive finger adjacent said movable blade extending from said first portion and having a width dimension



lying in a plane generally perpendicular to said first portion and to the path of said movable blade whereby said last portion is rigid to forces tending to twist same and resilient to forces parallel to said path, said former characteristic further effective to prevent blade whipping and said latter characteristic effective to prevent motor stall when the instrument is subjected to heavy mechanical load.

3,047,949
MEANS CONTROLLING THE OPENING OF PRUNING SHEARS AND THE LIKE
Francis Leslie Golightly, London, England, assignor to Wilkinson Sword Limited, London, England, a British company
Filed Dec. 29, 1960, Ser. No. 79,273
Claims priority, application Great Britain Dec. 30, 1959
9 Claims. (Cl. 30—271)

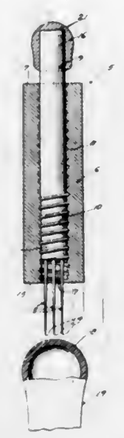


1. The combination which comprises a pair of members, means pivotally interconnecting said members for relative movement about an axis passing through said members, and means for varying the angle of permissible relative movement of said members, comprising means defining a slot in one of said members, the depth of said slot varying in steps along its length, an elongate retaining device in the other of said members, means mounting said retaining device for movement into and out of said slot, and means for controlling the depth to which said retaining device extends into said slot, said controlling means comprising an operating device, means mounting said operating device for pivotal movement in said other member, means connecting said operating device to said retaining device to translate rotational movement of the operating device into longitudinal movement of the retaining device, and spring-urged means positively holding said operating device in any one of a plurality of predetermined rotational positions.

3,047,950
NIPPLE PIERCING TOOL
Mitchell D. Stasiuk, 1649 Belle Ave., Lakewood, Ohio
Filed Apr. 12, 1961, Ser. No. 102,410
1 Claim. (Cl. 30—368)

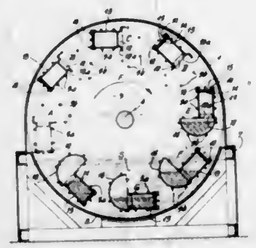
A nipple piercing tool consisting of an elongated stem having a forward end, a plurality of steel needles fixed to

said stem in equally spaced apart relation to one another and to the axis of the stem and projecting longitudinally from said forward end, a tubular member detachably supported on the stem and in which the forward end of the stem is disposed, said tubular member having a forward end from which portions of the needles project, said needles having pointed outer ends and being tapered uniformly from the forward end of the stem to said pointed ends thereof, said tubular member being longer than the needles and shorter than the stem and having



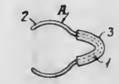
a threaded bore of uniform diameter extending from end-to-end thereof, and said stem including a threaded forward portion threadedly engaging in said bore for adjustably mounting the tubular member on the stem to vary the distance that the forward end of the tubular member is located beyond the forward end of the stem to vary the lengths and diameters of the portions of the needles which are disposed beyond the forward end of the tubular member or for positioning the needles in a sheathed position within the tubular member.

3,047,951
DEVICE FOR MOULDING CHEESE
Bernard P. Le Boeuf, Avranches, Manche, France
Filed Mar. 9, 1960, Ser. No. 13,892
Claims priority, application France Mar. 16, 1959
6 Claims. (Cl. 31—45)



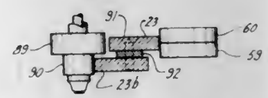
1. A machine for molding cheeses comprising in combination a frame, a drum mounted on said frame for rotation about a horizontal axis and comprising a pair of end plates and a plurality of supporting assemblies secured between said plates in parallelism with said axis, each said assembly comprising means for supporting a row of open molds and means for supporting an elongated open container with the openings of said molds held against the opening of said container, whereby when said drum is rotated milk curds contained in said containers is progressively fed into said molds.

3,047,952
CLASP FOR REMOVABLE FALSE TEETH
Kansuke Yamamoto, 489 1-chome Higashi-Okubo, Shinjuku-ku, Tokyo, Japan
Filed June 25, 1959, Ser. No. 822,861
2 Claims. (Cl. 32—5)



1. A clasp for attaching removable false teeth to a basic supporting tooth, said clasp comprising a wire having a V-shaped supporting portion and clasping portions at the ends of the V-shaped portion symmetrically bent to engage between them a basic supporting tooth, said V-shaped portion and said clasping portion being inclined toward each other at an obtuse angle, a wrapping tube surrounding the V-shaped supporting portion of said wire at all points coaxial therewith, said wrapping tube having a slightly larger inner diameter than that of said wire leaving a clearance space of constant dimension between the supporting portion of said wire and the inner wall surface of said wrapping tube, and a soft plastic body filling the space between said wrapping tube and the supporting portion of said wire to provide a cushioning effect between said wire and said wrapping tube, said wrapping tube being adapted to be embedded in a false tooth base and fixed thereto, whereby the clasping portions of said wire have limited resilient movability with respect to the false tooth base.

3,047,953
AUTOMOTIVE GLASS CUTTING MACHINES
William F. Billinger, Grandview Blvd., Zelienople, Pa.
Filed Dec. 3, 1958, Ser. No. 777,970
6 Claims. (Cl. 33—27)

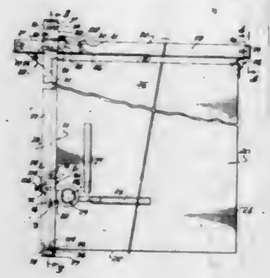


1. Glass cutting apparatus having a support for sheet glass, a template of the shape of the glass to be cut spaced above said support, a swinging arm above said sheet glass support and template having a cutting unit suspended therefrom with rollers contacting said template to follow the contour thereof in its cutting movement, said cutting unit being pivotally mounted on said swinging arm and having a swivel pin for supporting a cutting head at one end and a piston at the other, said cutting head having a guide roller for engaging one side of said template and said piston communicating with a source of fluid pressure, said cutting unit including a drive motor mounted to be yieldingly biased in the direction of the template and having a drive spindle with a friction wheel engaging the side of said template opposite the guide roller for propelling the cutting unit around the template, said drive motor having a fluid driven rotor geared to said drive spindle.

3,047,954
TRACK TYPE DRAFTING MACHINE
John A. Hislop, Costa Mesa, Calif., assignor to Vard Products Inc., Costa Mesa, Calif., a corporation of California
Filed Dec. 8, 1958, Ser. No. 778,946
2 Claims. (Cl. 33—76)

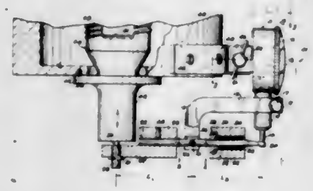
1. In a drafting machine, the combination of track means adapted to be mounted on a drawing board or the like parallel to a horizontal edge thereof, a generally tubular member movable along the track means and ex-

tending perpendicularly thereto in parallel spaced relation to the working surface of the drawing board or the like, said member substantially enclosing an elongated chamber and having a longitudinal slot providing access to the chamber, structure forming a first plurality of mutually opposed longitudinal guide surfaces within the chamber adjacent the slot, carriage means movable longitudinally of the tubular member and comprising bearing means mounted on the carriage means and engaging the guide surfaces within the chamber, structure forming a



second plurality of longitudinal guide surfaces facing inwardly within the chamber, counterweight means mounted within the chamber in guided relation to the last mentioned guide surfaces and freely movable along the inner side of the chamber past the bearing means, pulley means rotatably mounted on transverse axes adjacent the respective ends of the tubular member, and flexible cable means passing over the respective pulley means between the carriage means and the counterweight means, both flights of the cable means lying substantially within the chamber.

3,047,955
AMPLITUDE INDICATORS
Lewis Balamuth, New York, and Claus Kleesattel, Forest Hills, N.Y., assignors to Cavitron Ultrasonics Inc., Long Island City, N.Y., a corporation of New York
Filed Aug. 15, 1960, Ser. No. 49,504
9 Claims. (Cl. 33—172)



1. A mechanical device for indicating the amplitude of the high frequency vibrations of a surface, comprising mechanical indicating means having a housing and an actuating member projecting from said housing and being movable relative to the latter, a lever mounted for pivotal movement about an axis which is fixed relative to said housing and being engageable with said actuating member to displace the latter in response to pivotal movement of said lever, means on said lever engageable by the vibrated surface so that the lever is pivotally moved in response to the vibrations, and mass defining means on said lever providing the latter with a sufficient inertia to prevent oscillation of the lever in accordance with the vibrations and including damping means effective to prevent the transmission of flexural vibrations along said lever from the vibrated surface to said actuating member, whereby said mechanical indicating means gives a steady indication proportional to the amplitude of the vibration of the surface.

3,047,956
INCLINATION AND FLATNESS GAUGE
George R. German, 9 Northfield Road, Rochester, N.Y.
Filed Feb. 19, 1960, Ser. No. 9,871
8 Claims. (Cl. 33—174)



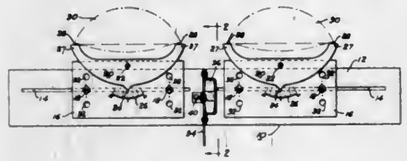
2. An instrument for measuring the inclination and flatness of surfaces comprising, in combination, a supporting frame, a universally movable joint on said frame, an elongated member having a longitudinal track associated therewith and having one end attached to said universally movable joint, said member having openings adjacent the free end thereof, rotatable adjusting members journaled in said frame and having eccentric portions in said slots engaging the inner walls thereof for precisely adjusting the position of the free end of said elongated member, and a runner longitudinally movable along said elongated member.

3,047,957
STERNOCLAVICULAR JOINT MEASURING INSTRUMENT
Anna M. Conway, Janesville, Wis.
(455 S. Park Ave., Webster Grove, Mo.)
Filed Dec. 4, 1958, Ser. No. 778,236
2 Claims. (Cl. 33—174)



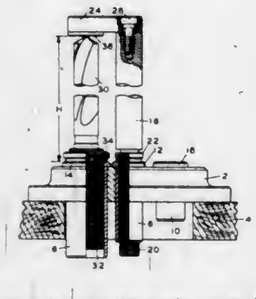
1. A sternoclavicular joint measuring instrument comprising a transparent block-like base having a spirit level embodied therein and conveniently visible for use in holding the base at a given starting position, said base having a flat top surface, a permanent magnet plugged into the central top of said base with a portion projecting above said top surface and providing a hub and also having a truncated conical portion with an apical recess providing a socket, a magnetizable ball removably but adjustably mounted in said socket, said ball being provided in one side with a screw threaded socket, a rod having a screw threaded end screwed into said socket, said rod constituting an angle indicating and measuring lever, a first dial mounted for rotation about said hub, cooperable with said magnet, and provided with graduations which when read are indicative of movements in a horizontal plane, and a second dial carried by the first dial and disposed at right angles thereto and provided with graduations which are usable for recording a reading of degrees in a coronal plane, said first dial being cooperable with an index provided therefor on said base and said rod having a median portion thereof cooperable with the graduations provided therefor on said second dial.

3,047,958
HEADLITE ADJUSTING DEVICE
Merl A. Durbin, 709 26th St., South Bend, Ind.
Filed Dec. 10, 1959, Ser. No. 858,628
1 Claim. (Cl. 33—180)



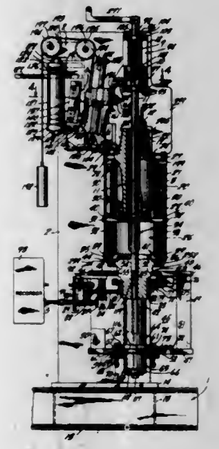
An instrument operative to facilitate the correction of alignment of a bank, that is plurality, of juxtaposed sealed beam lamps of an automotive vehicle, each lamp being angularly and adjustably movable horizontally about a vertically extending axis which axis lies in the juncture of two planes, one parallel to a vertically extending plane through which passes the longitudinal axis of the vehicle, and the other normal to the latter plane; and each lamp being angularly and adjustably movable, as a unit and in a vertically extending plane, about a horizontally extending axis which lies in said other plane; said instrument including an elongated base member and a plurality of spaced apart lamp encompassing indicator parts each part being pivotally mounted on one of a plurality of indicator parts adjustably secured to the base member the latter lying, when the instrument is being used, contiguous to the aforementioned bank of lamps and in a plane which is normal to the aforementioned vertically extending plane, said indicator parts of the base member being adjustably mounted for lateral movement on a relatively long and narrow portion of the base member and each of said indicator parts having means establishing selective distances therefor in the fore and aft direction from an axis of said base member parallel to said lateral movement.

3,047,959
GAGING DEVICE
Warren F. Seibert, Chenoa, Ill.
Filed Mar. 24, 1959, Ser. No. 801,472
8 Claims. (Cl. 33—185)



2. A gaging device for pre-set tools comprising a horizontal plate having a first opening and a second opening, bushings in the openings, a gage bar having a threaded end adapted to enter the bushing in the first opening, an adjustable stop on the threaded end in abutting engagement with the upper surface of the bushing to locate the height of the gage bar above the bushing and a gage head cooperable with the gage bar at the end opposite the threaded end, said head being adapted to check a cutting tool disposed in the bushing of the second opening.

3,047,960
METHOD AND APPARATUS FOR INSPECTING THREADS AND CYLINDERS
Alexander Arthur Mittenbergs and William Frederick Scharenberg, Jr., Columbus, Ohio, assignors, by mesne assignments, to American Iron and Machine Works Company, Inc., Oklahoma City, Okla., a corporation of Delaware
Filed Oct. 30, 1959, Ser. No. 849,976
21 Claims. (Cl. 33—199)



4. A method of measuring simultaneously the deviations from nominal of the pitch cone radius and the lead of a taper-threaded member continuously along the entire length of the thread, which comprises in combination the steps of establishing a thread reference axis independently of the geometry of the other elements of the member, aligning the thread reference axis parallel to the axis of a lead screw having the nominal lead of the thread being measured, locking the thread and the lead screw in fixed angular relation with their axes in fixed relation to a slide mounting a carriage and being in oblique position for nominal taper relative to the axis of the thread, rotating the thread and the lead screw synchronously, continuously tracing the thread groove with a resiliently biased stylus mounted on the carriage and normal to and in a fixed axial plane of the thread axis, driving the carriage on the slide by means of the stylus, tracking the lead screw during rotation thereof by means of a member fixed against rotation and having a flat surface square to the lead screw axis, sensing the flat surface with a resiliently biased stylus mounted on said carriage and normal to the surface, and obtaining simultaneous continuous indications of the relative displacements of the styluses with respect to the carriage.

17. A thread testing apparatus comprising a frame, means carried by said frame to rotatably mount a threaded body to undergo test for rotation about the thread axis without axial displacement, a reference screw having the accurate lead of the thread to be tested and being rotatably mounted on said frame and fixed against axial displacement, said reference screw and said threaded body being mounted axially parallel to one another, means for rotating the threaded body and reference screw synchronously, means for tracking the body thread in a

fixed axial plane of the thread axis upon rotation of the threaded body, means for tracking the reference screw in a fixed axial plane thereof upon rotation of the screw, and means for continuously indicating the relative axial displacements of the body thread and reference screw tracking means upon synchronous rotation of said body and screw.

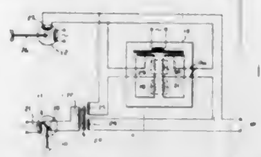
3,047,961
HIGH ANGLE INCLINATION INSTRUMENT
Oswald Suter, Los Angeles, Calif., assignor to Technical Oil Tool Corporation, Ltd., Los Angeles, Calif., a corporation of California
Filed Oct. 9, 1956, Ser. No. 614,920
5 Claims. (Cl. 33—205.5)



2. A high angle well bore inclination measuring instrument which comprises: a cylindrical housing; a spindle positioned on the axis of said housing, and rotatable on said axis; an eccentric weight carried by said spindle; a suspension member affixed to the upper end of said spindle and rotatable therewith comprising an annular base of less diameter than said housing and a pair of upwardly extending axially parallel posts affixed to said base; means defining a pair of transversely aligned holes extending through said posts; a pair of jewelled bearings spring mounted in each of said holes so as to be yieldable in a transverse direction; a wheel axle having pointed ends, rotatably and transversely mounted between said spring mounted jewelled bearings; an indicator wheel affixed to said wheel axle between the said ends thereof, the plane of the wheel lying parallel to the plane formed by the point center of mass and the axis of the housing and passing through the axis of the said instrument; an indicator drum affixed to the periphery of said wheel and parallel to the said wheel axle; an eccentric weight operatively attached to said wheel to cause said wheel to rotate; a flexible strip graduated in degrees removably mounted on the outer surface of said drum, the zero point of the said graduations lying in the axis of the housing when said instrument is vertical; an axially aligned pin-marking element slidably positioned above the said wheel; and an actuating mechanism actuating said marking element to engage said strip on said indicator drum to make a mark thereon indicating the angle of inclination of the bore hole.

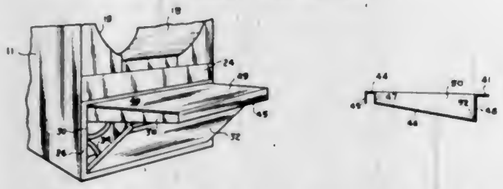
3,047,962
ACCELERATION COMPENSATED PENDULUM
Paul S. Jorgensen, Westbury, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed May 28, 1959, Ser. No. 816,624
5 Claims. (Cl. 33—215)

1. In a device of the character described, a viscously damped pendulum mounted on a vehicle, pickoff means actuated by said pendulum and having an output, means for determining the velocity of said vehicle and producing a signal proportional thereto, signal delay means hav-



ing an input and an output, said pickoff means output and said velocity signal being connected to said input, means combining said signal delay means output and said velocity signal.

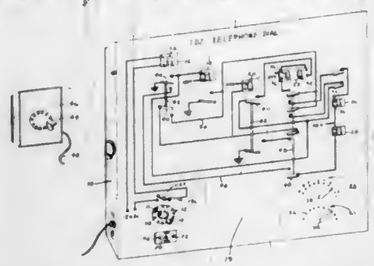
3,047,963
LINT COLLECTOR
Frank H. Richterkessing, Louisville, Ky., assignor to W. M. Cissell Manufacturing Company, Louisville, Ky., a corporation of Kentucky
Filed Sept. 21, 1959, Ser. No. 841,311
6 Claims. (Cl. 34—82)



1. In a clothes dryer, a casing having a basket compartment and an air plenum compartment in communication with each other, an air discharge duct leading from said air plenum compartment, means including a blower disposed at the rear of said air plenum compartment for effecting flow of air through said compartments and thence into said duct, a lint collector mounted in said air plenum compartment upstream of said blower and through which air moving from said basket compartment is required to pass, a movable access door pivotally mounted on said casing at the front thereof and serving as a wall of said air plenum compartment, and means including a rigid support interiorly of said casing and slidably supporting said collector for withdrawal of the same with a generally horizontal movement from said casing upon opening of said door, said collector having an inclined floor extending downwardly from a front edge adjacent said door to a rear edge adjacent the intake of said blower thereby to provide on said collector a deeper collection of earlier deposited lint in the region adjacent said blower intake and a gradually decreasing thickness of subsequently deposited lint in the direction of said door.

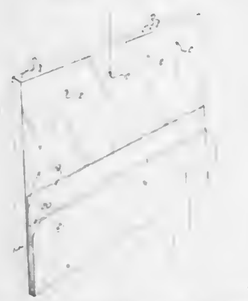
3,047,964
SIMULATED FUNCTIONAL-SYSTEM DEMONSTRATOR
Walter Fried, Huntington, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 16, 1959, Ser. No. 799,826
3 Claims. (Cl. 35—10)

1. A device for visually demonstrating the operation of a dial-operated, frequency-channel selector system for a TDZ-type radio transmitter comprising, in combination: support means formed with at least one flat, visible area; a plurality of elements affixed upon said visible area representing the different components of said selector system, said elements comprising a fabricated simulation of a telephone dial, simulations of the relays of said selector system, and a simulation of the contacts and contact arm of a stepping relay, said fabricated simulation of a telephone dial having a finger-stop dial-locking device and switch means operatively associated therewith, said relay simulations having coils delineated upon said visible area and armatures represented by movable rods, said contacts of said stepping relay being represented by markings upon said visible area and said contact arm being represented by a fabricated movable pointer; markings upon said visible area delineating the interconnections between the electrical contacts of said telephone dial and said relay simulations; and means affixed to said



support means for automatically operating the moving parts of said elements, said last-named means including switch means, relays and motive means, said motive means adapted to move said armatures of said relay simulations, said pointer and said telephone-dial switch means and further adapted to actuate and deactuate said switch means, said relays and switch means arranged in electrical circuits adapted to automatically operate the moving parts of said elements in proper duplication of the operation of said components in said selector system, but at a slower rate, so that the sequence of operation may be observed.

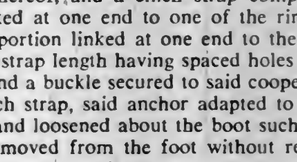
3,047,965
SEISMIC MODEL METHOD AND APPARATUS
Hugh O. Walker, Jr., Houston, Tex., Frank Press, Altadena, Calif., and Burton D. Lee, Houston, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 14, 1960, Ser. No. 62,714
7 Claims. (Cl. 35—10)



1. A thin sheet model for use in seismic laboratory investigations and the like comprising a sheet of material having in contact therewith at least one seismic energy transducer, said sheet including a plurality of materials across the thickness thereof but extending only partially over one of the longitudinal dimensions of said sheet, each of said materials having a different seismic velocity characteristic.

3,047,966
WINDOW DISPLAY APPARATUS
George M. Greenspan, % Jack Dover, 1970 E. 18th St., Brooklyn, N.Y.
Filed June 30, 1961, Ser. No. 120,996
10 Claims. (Cl. 35—58)

10. Store window display apparatus comprising: support means for supporting a plurality of spectacle frames; a mirror positioned in alignment with the path taken by said spectacles when said support means is moved; motor means for moving said support means so that each of said



spectacles can be sequentially positioned in front of said mirror; and switch means for turning said motor means on and off, said switch means being operable by a person from the outside of said store window.

3,047,967
RUBBER BOOT ANCHOR
Lewis Owen Hoyt, P.O. Box 548, and Lloyd R. Hale, P.O. Box 568, both of Canyonville, Oreg.
Filed Aug. 25, 1961, Ser. No. 133,942
1 Claim. (Cl. 36—58.5)

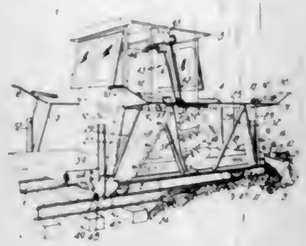


A boot anchor for securing rubber boots to the feet, and comprising, a flexible heel strap adapted to engage behind the heel, a ring linked to each end of the heel strap, a shank chain linked at each end to the rings and adapted to extend beneath the shank portion of the boot adjacent the heel thereof, and a cinch strap comprising a strap length linked at one end to one of the rings, and a cooperating portion linked at one end to the other of said rings, said strap length having spaced holes formed therethrough, and a buckle secured to said cooperating portion of the cinch strap, said anchor adapted to be selectively tightened and loosened about the boot such that the boot may be removed from the foot without removal of the anchor.

3,047,968
BALLAST DISTRIBUTING MACHINE FOR RAILROADS
Ralph E. Keller and Calvin L. Coy, Kalamazoo, Mich., assignors to Kalamazoo Manufacturing Company, Kalamazoo, Mich.
Filed Dec. 3, 1959, Ser. No. 857,134
5 Claims. (Cl. 37—104)

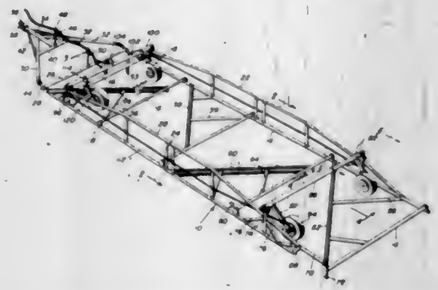
1. A ballast distributing machine for railroads comprising a self propelled carriage for movement along the rails of a railway, a forwardly convex and rearwardly concave double faced V-plow mounted across the end of said carriage, pairs of vertically spaced parallel arms pivoted between said carriage and said plow to guide movement of the plow vertically, first hydraulic cylinders connected to said arms to raise and lower said plow, side distributor boxes having their inner sides pivotally connected to the sides of said carriage, cable means connected between the outer sides of said boxes and elevated points on said car-

riage to raise and lower the outer sides of the boxes, said boxes having outwardly converging scraper blades hinged to and depending below the end walls of said boxes, means forming stops on said boxes limiting outward swinging motion of said scraper blades, support arms pivotally mounted on the inner sides of said boxes and extending laterally thereacross to slideways provided therefor at



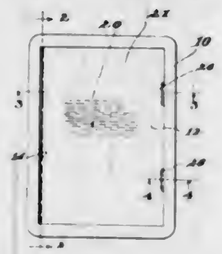
the outer side walls of the boxes, upright disk scrapers carried below said last arms and swingable therewith to forwardly and rearwardly inclined positions relative to said carriage, and means for raising and lowering the pivotal connections to the inner sides of said boxes including second fluid actuated cylinders mounted in upright position and having pivot pins connected to vertically adjustable parts thereof engaged with the sides of said boxes.

3,047,969
LAND LEVELER
George W. Purdy, 601 S. Jefferson St., De Witt, Ark.
Filed Nov. 27, 1959, Ser. No. 855,923
7 Claims. (Cl. 37—150)



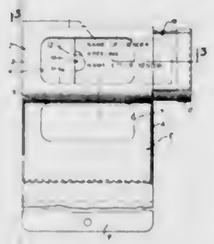
1. A land leveling device comprising an elongated frame including a pair of parallel side frame rails and a plurality of transverse frame rails rigidly interconnected with the side rails thereby forming an elongated rigid frame, said transverse frame rails being disposed above the plane of the side rails whereby the side rails form runners for the frame, a transverse rear axle mounted on the frame for rotational movement about its longitudinal axis, a transverse front axle mounted on the frame for rotational movement about its longitudinal axis, means interconnecting the axles for simultaneous rotational movement thereof, means interconnecting the front axle and the frame for rotating the front axle about its longitudinal axis, a pair of supporting arms on the rear axle, rear wheels mounted on the supporting arms on the rear axle for movement in vertical planes about the rear axle when the rear axle is rotated, a pair of upright sleeves rigidly mounted on the front axle, supporting arms freely pivotally mounted in said sleeves for rotation about generally vertical axes, each supporting arm having a front wheel mounted on the end thereof remote from the sleeve, said supporting arms being received in the sleeves for pivotal movement independently of each other and freely in relation to the sleeve and front axle whereby rotation of the front axle will cause vertical swinging of all of the wheels and change in inclination of the angle of pivotal movement of the supporting arms for the front wheels, a plurality of blades mounted on the frame, alternate blades having one end thereof attached to the side rails and the opposite ends thereof spaced laterally inwardly from the side rails, the longitudinal axes of the blades being inclined rearwardly in relation to the side rails, the rearmost blade extending completely between the side rails, the portion of the side rail adjacent the rear end of the rearmost blade being offset upwardly to permit exit of material from in front of the rearmost blade.

3,047,970
PLASTIC PAPERWEIGHT AND CARD HOLDER
Carl Bleiberg, 8500 16th St., Silver Spring, Md.
Filed Nov. 14, 1960, Ser. No. 69,065
3 Claims. (Cl. 40—10)



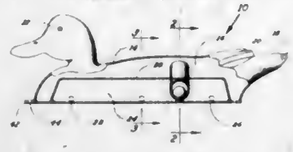
1. In an article of the class described, a transparent plastic paperweight having a card receiving recessed area with a longitudinal channel formed therein on one side thereof, a card bearing enscribed matter on its lower face and having a short right angular flange on an edge thereof, said flange being adapted to be retained in said channel with the major portion adapted to be received in the recessed area with the card edge opposite from said flange being positioned in abutting relation with a wall of the recessed area, and said recessed area being of a depth whereby said card when positioned tightly therein will lie in the approximate plane as the bottom edges of said paperweight.

3,047,971
HANDLE AND CARD CARRIER
Paul J. Howard, 458 N. Barrington Ave., Los Angeles 49, Calif.
Filed Jan. 17, 1961, Ser. No. 83,301
4 Claims. (Cl. 40—10)



1. A handle and card carrier, comprising: a handle structure including means for attachment to a container and an open-ended tubular grip member of essentially triangular cross section having upwardly converging sides and windows in said sides; and a card holder of essentially triangular cross section including upwardly converging sides and means for mounting cards on said sides, said card holder dimensioned for insertion in said tubular grip member.

3,047,972
WATER-FOWL DECOY
Benjamin H. Taylor, 2120 W. 98th St., Bloomington 20, Minn.
Filed May 17, 1960, Ser. No. 30,710
7 Claims. (Cl. 43—3)



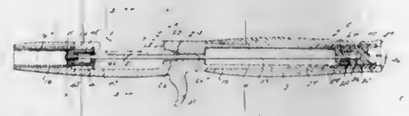
1. A water-fowl decoy, comprising a buoyant body formed with an interior chamber in the lower portion thereof, which is closed on its lower extremity, said body being formed with at least one relatively narrow passage in each side of the body above the lower extremity forming communication between said chamber and the exterior of the body, said passages being adapted to admit water into one side of the chamber and permit the exhaustion of air from the opposite side when the body is laterally tilted in water, an arcuate tube which is closed at its opposite ends disposed within said body and extending transversely of the longitudinal center of said body, and a mobile weight carried within the interior of said tube which is adapted to move on one side of the longitudinal center of said body when the body is tilted in water to regulate the admission of water into said chamber, and to stabilize said body in water when said chamber is substantially filled with water.

3,047,973
POWER-OPERATED NET-HANDLING DEVICE
Mario J. Puretic, 3514 Avenida Corona, San Pedro, Calif.
Filed July 14, 1958, Ser. No. 748,212
9 Claims. (Cl. 43—8)



1. A power driven device adapted to be disposed on the deck of a boat and to haul in a gill net provided with a lead line and a cork line from the operating position thereof in the sea to the said deck of said boat, including: a first spool provided with enlarged end portions and an intermediately positioned cylindrical portion; a second spool of substantially the same dimensions and configuration as said first spool and disposed at an inboard location apart from said first spool, two laterally separated base members affixed to portions of said boat, each of said base members including an upwardly disposed longitudinally extending flange which has a plurality of slots transversely aligned with similar slots provided in the other of said flanges, a first shaft; a pair of brackets supporting said first shaft transversely relatively to said base members, said first spool being rotatably supported on said first shaft and said brackets being affixed to said base members; a second transversely disposed shaft rotatably supporting said second spool; two elongated supporting members; a transversely positioned rod extending between the lower ends of said supporting members, said second shaft extending between the upper extremities of said elongated supporting members, said rod being removably insertable in any pair of said oppositely aligned slots and adapted to adjustably hold said second shaft and said second spool at a desired elevation relative to said boat; power means adapted to drive said second spool; and an endless belt having substantially the same width as the length of said cylindrical portion, extending between said first and second spools and operatively supported thereon.

3,047,974
FISHING ROD HANDLE AND REEL CLAMP
Charles D. Stephens, San Antonio, Tex., assignor to Fredric P. Schwab, San Antonio, Tex.
Filed Nov. 18, 1959, Ser. No. 853,724
5 Claims. (Cl. 43—22)



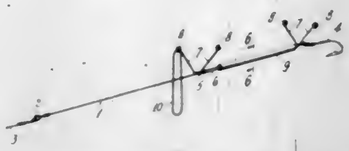
1. A locking device for fishing reels comprising, in combination, with a fishing pole handle having a cut away portion forming a reel seat, there being a recess at one end of said cut away portion adapted to receive one foot of a fishing reel, and there being a bore extending through said handle and recess into said cut away portion, an elongated rigid clamping rod extending through said bore and recess into said cut away portion adjacent the top of said cutaway portion and adapted to engage against the underside of the reel foot, a handle member fixed to one end of said rod exteriorly of said handle, a threaded end portion on the other end of said rod, a tubular reel foot clamping cup having a base and a threaded bore in said base threadedly engaging said threaded end portion, and an open mouth, an annular flange surrounding said open mouth and slidably seating on the bottom of said cut away portion, said handle having an opposed cylindrical recess therein at the end opposite said recess at one end for the reception of said cup, said cylindrical recess having a shoulder therein for the reception of said flange to serve as a limit stop for movement of said cup rotation of said handle member causing rotation of said rod and through the engagement of said threaded end in said threaded bore causing linear movement of said clamping cup, said cup being adapted to clampingly engage the other reel foot of the reel to hold the same securely on said reel seat.

3,047,975
BAIT FOR FISHING
Yarl Pretorius, 4400 E. 175th St., Cleveland, Ohio
Filed May 20, 1960, Ser. No. 30,585
2 Claims. (Cl. 43—42.06)



1. A bait for fishing comprising a flexible generally cylindrical casing, a series of openings therethrough, a fish hook impaled in said casing, an eye at one end of said casing, a fish line extending from the fish hook through the eye, and a bait composition filling said casing.

3,047,976
LIVE BAIT HOLDER
William E. Gourlay, Amenia Union, Dutchess County, Wassaic, N.Y.
Filed Apr. 18, 1961, Ser. No. 103,933
4 Claims. (Cl. 43—44.4)



1. A live bait holder comprising: a foundation wire one end of which is adapted for attachment to a fishing line while its opposite end is adapted for attachment to a barbed fish hook, an elongated tube loosely embracing said foundation wire intermediate the ends of said foundation wire, a pair of substantially U-shaped saddle members the bases of which are straight and pass loosely through said tube in juxtaposed side by side relation with one another and the portion of the foundation wire within the tube, said saddle members being otherwise free from attachment to one another or to the hook or to the foundation wire and being wholly free for bodily pivotal movement with respect to the tube and the foundation wire and to each other, and a harness, the free ends of said saddle members being curled for engagement with said harness which is adapted to overlie and attach a live bait supported by the saddle members.

3,047,977
FISH HOOKS
Nishan Der-Hagopian, P.O. Box 75779, Station S, Los Angeles, Calif.
Filed Feb. 29, 1956, Ser. No. 568,509
1 Claim. (Cl. 43—44.8)



A fish hook comprising a substantially straight shank having a hook offset from one side thereof near one end and a pair of spaced apart impaling prongs offset from the opposite side thereof adjacent to the offset of said hook, means at the opposite end of said shank for attachment to a fish line, a substantially S-shaped spring arm secured at one end to said shank adjacent to said line attaching means and having its free end disposed over the shank of said hook and movable toward or away from said impaling prongs, and having prongs projecting from the free end of said spring arm toward said shank and so positioned upon the arm as to move between said prongs when the free end of the arm is moved toward said shank.

3,047,978
ADJUSTABLE TROTLINE HOLDER
Jessie Wilbure Glover, P.O. Box 1, Clarksville, Tex.
Filed Nov. 14, 1961, Ser. No. 152,207
2 Claims. (Cl. 43—54.5)

1. An adjustable trotline holder comprising:
(*a*) an elongated substantially tubular body portion having a forward holding portion and a handle portion;
(*b*) the forward holding portion having an elongated, substantially rectangular slot therein having an open outer end;
(*c*) an internal, substantially tubular hook support rod disposed within the forward holding portion;
(*d*) adjustable screw means securing the hook support rod within the forward body portion; and



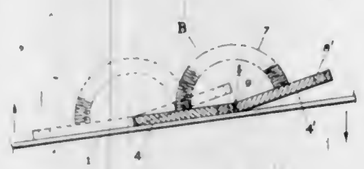
(*e*) the adjustable screw means comprising a plurality of threaded screws, the screws being received in threaded apertures formed in the hook support rod, and said thread screws being in fixed relation to said body portion whereby rotation of the screws is effective to change the location of the hook support rod with respect to the body portion.

3,047,979
PROSPECTOR TOY
Paul Hrucz, 132 Brookside Ave., Irvington, N.J.
Filed Sept. 18, 1961, Ser. No. 138,987
5 Claims. (Cl. 46—1)



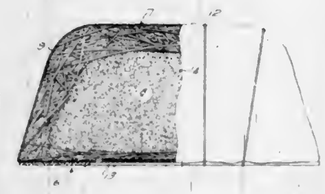
1. A prospector toy comprising, in combination, a shovel having a handle, a head mounted on one end of said handle, said handle having an opening therethrough adjacent said head, a pick axe having a crescent shaped axe head, a threaded bolt integral with the center of said axe head, an axe handle having a threaded cavity in one end to receive the threaded bolt for joining the axe head to the axe handle, said axe handle having a recess near its one end and an orifice near its other end, said threaded bolt extending through the orifice and being received in the opening in the shovel handle to join the axe and the shovel, one end of said axe head being disposed in the recess when the axe and the shovel are joined and the other end of the axe head with the shovel head defining a space therebetween, and a poke and pan disposed in the space between the shovel head and said other end of the axe head.

3,047,980
AMUSEMENT DEVICE
Gustav H. Bischoff, 7489 Drexel Drive, University City, Mo.
Filed Nov. 23, 1959, Ser. No. 854,727
4 Claims. (Cl. 46—1)



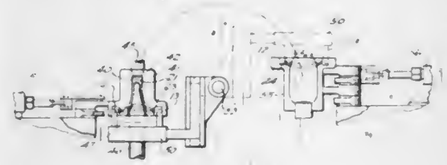
1. An amusement device comprising a surface-forming member adapted for rockable movement about horizontal axes, and a playing piece for disposition on said surface-forming member for movement thereon, said playing piece comprising a pair of members having flat, bottom surface portions and being arranged in substantially side-by-side relationship, each of said playing piece members being eccentrically weighted, and a spring extending between, and secured at its end to, said playing piece members at corresponding points on their respective vertical axes, said spring being of such length and tension as to bias one of said members into tilted relationship with respect to the other, whereby confronting edge portions of said playing piece members are in contact.

3,047,981
FLORAL PIECE FOUNDATION
Marvin Shupe and Robert W. Boles, both % Needl-Pak Co., P.O. Box 52, Hathaway Pines, Calif.
Filed July 8, 1957, Ser. No. 670,501
6 Claims. (Cl. 47—41)



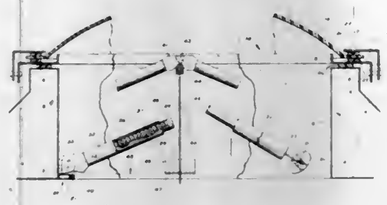
1. A floral piece foundation comprising a generally flat base plate, a body of stuffing material the individual elements of which are relatively flexible, have a general needle-like shape, are of a length of at least 1 inch, have a diameter between 1/64 and 1/8 inch and possess a relatively hard, smooth, glazed surface and may be broken upon insertion of a flower stem into said body, a core of water retentive and absorbent material positioned substantially entirely within said body and capable of receiving a flower stem inserted therethrough, a perforable wrapping enclosing said body, and means securing said body to said base plate.

3,047,982
METHOD OF CONTROLLING THE WALL THICKNESS OF BLOWN GLASS ARTICLES
Ralph H. Olson, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Aug. 7, 1958, Ser. No. 753,760
6 Claims. (Cl. 49—83)



6. In a method of controlling the distribution of glass in blown hollow articles wherein a parison is formed in a mold from a heated material in plastic condition by the application of a differential pressure, said parison being disengaged from said parison mold and exposed to the atmosphere for transferring it to a blow mold, said method including transferring the parison from the parison mold to the blow mold, applying a cooling medium to said parison at the time of parison exposure from diametrically opposite sides of said parison in a circumferentially encompassing pattern extending over a selected vertically defined external surface area of said parison, said application being concomitant with said transfer manipulation, and enclosing and expanding said cooled parison in said blow mold.

3,047,983
VENTIBLE SKYLIGHT CONSTRUCTION
Max Wasserman, Brookline, Mass., assignor, by mesne assignments, to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Apr. 23, 1959, Ser. No. 808,472
3 Claims. (Cl. 50—50)



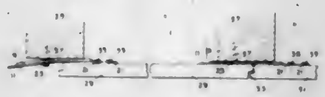
1. A skylight construction comprising a curb formed of vertical walls secured together around a skylight opening and including a rear wall and an opposite front wall and a cover fitting over the top edges of said curb,
said cover having a rear side hinged to the rear wall of the curb and both an opening means and a closing means attached to the central portion of its opposite front side,
the opening means comprising a pair of compressed helical expansion springs extending outwardly and downwardly from said central portion to brackets on said curb and the closing means comprising a releasably anchored tension member adjacent said springs,
whereby when the cover is closed the tension member carries the full force of the springs and prevents distortion of the cover.

3,047,984
STRUCTURAL GRILLE UNIT
Joseph N. De Lauro, 19992 Strathmore, Detroit, Mich.
Filed May 18, 1959, Ser. No. 813,761
1 Claim. (Cl. 50—262)



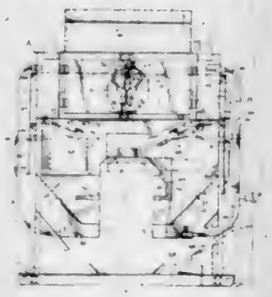
A symmetrical grille unit of the class described, comprising: two sets of feet, each set consisting of a pair of feet disposed at right angles to each other; a bow-shaped connecting member disposed in a vertical plane and connecting said sets of feet and connected thereto at opposite ends of said bow-shaped connecting member; said feet extending laterally and inwardly from the ends of said bow-shaped connecting member; the upper and lower faces of said feet being planar; said feet being disposed in a common horizontal plane which is at right angles to the vertical plane of said bow-shaped connecting member; said bow-shaped connecting member extending upwardly in said vertical plane from the horizontal plane of said feet; there being a triangular notch between each pair of feet aligned to the median line of the bow-shaped connecting member; said notch comprising a right angle; and, the inner ends of the feet of each set of feet on the ends of the bow-shaped connecting member being right angularly disposed to the length of each set of feet.

3,047,985
PANEL TIE
Cornelius L. Murphy, 76 Florida St., Dorchester, Mass., assignor of twenty-five percent to Jean C. Chognard, Wellesley Hills, Mass.
Filed May 6, 1957, Ser. No. 657,338
1 Claim. (Cl. 50—395)



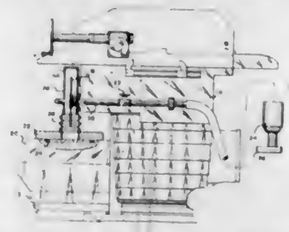
In a building construction, an assembly comprising first and second studs, a first panel, a resilient plate overlapping said first stud on at least one side thereof, said plate having a ridge therein which is perpendicular to said first stud, said plate being bent slightly about an axis perpendicular to said ridge, said axis being so positioned that said ridge extends on both sides of said axis, means located on one side of said axis attaching said plate to said first stud so that the ridge faces said first stud and that the portion of said plate on the other side of said axis tends to move away from said first stud, means attaching one end of said first panel to the last-named portion of said plate whereby the other end of said first panel is floating and tends to move away from said second stud, and means to restrain the motion of the floating end of the first panel away from said second stud, said last-named means comprising a second panel having one end affixed to said second stud, the end of said second panel forming a shiplapped joint overlapping the floating end of said first panel.

3,047,986
ABRASIVE BLASTING APPARATUS
George W. McKulla, Jr., Baltimore, Md., assignor, by mesne assignments, to Thos. Somerville Co., Washington, D.C., a corporation of Delaware
Filed Sept. 1, 1961, Ser. No. 135,476
15 Claims. (Cl. 51—8)



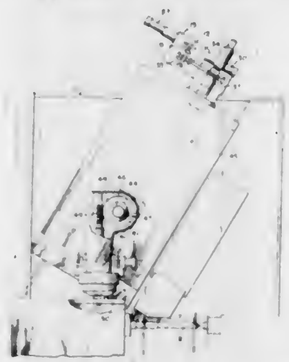
1. In an abrasive blasting apparatus of the type embodying a plurality of abrasive guns mounted in a normally closed cabinet for directing air-borne streams of abrasive material against exposed surfaces of articles within the cabinet which are to be abraded, each of said guns including a passageway through which abrasive particles are aspirated from a supply line by a jet of air under pressure, a chamber in which said particles are mixed with the air to form an air-borne abrasive stream, and a blast nozzle having an orifice from which the abrasive stream is discharged, and wherein the abrasive material tends to clog up and form obstructions in said passageway during operation of the apparatus; the combination with said apparatus of means for clearing said nozzles when clogged comprising a member movably mounted on each of said abrasive guns for closing the discharge orifice of the nozzle thereof, means for normally retaining each of said members out of the path of the abrasive stream issuing from said nozzle, and means operable from a position remote from said guns for selectively moving each of said members into a position wherein it closes the discharge orifice of the associated nozzle and thereby causes the air to flow back into the abrasive supply line through said passageway and clear whatever obstruction may exist therein.

3,047,987
APPARATUS FOR SUBMERGED GRINDING
William G. Baldenhofer and Frederick G. Krafft, Springfield, Ohio, assignors to The Thompson Grinder Company, Springfield, Ohio, a corporation of Ohio
Filed Jan. 23, 1961, Ser. No. 84,328
9 Claims. (Cl. 51—92)



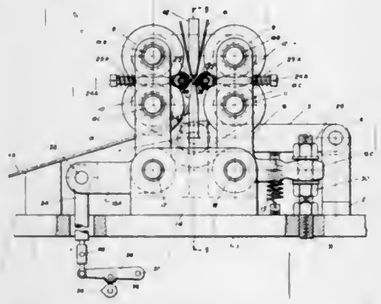
1. In an apparatus for grinding; a workpiece support, a grinding wheel mounted for movement relative to said workpiece support, casing means carried with the wheel substantially surrounding the wheel and open on the side toward the workpiece support, means for sealingly connecting said casing means to said workpiece support, and means for supplying a body of coolant to the inside of said casing and a workpiece on said workpiece support, said coolant remaining in said casing during a grinding operation by said grinding wheel, said body of coolant completely submerging at least the workpiece.

3,047,988
FEED MECHANISMS FOR GRINDING MACHINES
Ralph E. Price, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.
Filed Feb. 6, 1959, Ser. No. 791,684
9 Claims. (Cl. 51—165)



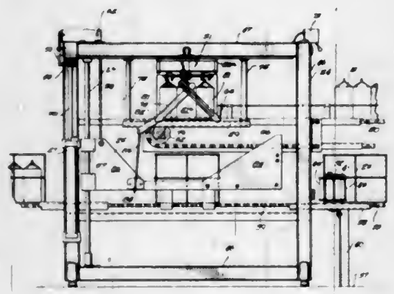
1. In a grinding machine, a bed, a work support on said bed, a grinding wheel support mounted slidably on said bed for movement toward and from said work support, a grinding wheel rotatably mounted on said grinding wheel support, means for feeding said grinding wheel support including a feed screw and screw-engaging means on said wheel support, drive means for effecting movement of said grinding wheel support relative to said feed screw comprising a hand wheel mechanism on said grinding wheel support at a point remote from said feed screw, continuously moving means for rotating said hand wheel mechanism to move the said grinding wheel support relative to said feed screw for a preliminary grinding operation, connections between said hand wheel mechanism and said feed screw, independent means for rotating said feed screw including a pawl and reversible ratchet mechanism mounted on the bed of the grinding machine adjacent said feed screw, and operating connections between said pawl and ratchet mechanism and said feed screw which are remote from said connections between said hand wheel mechanism and said feed screw.

3,047,989
PINCH ROLL DRIVE FOR HONING CYLINDRICAL BODIES
Theodore H. Sloan, P.O. Box 58, Charleroi, Pa., assignor of one-fourth to William B. Jaspert, Upper St. Clair Township, Allegheny County, Pa.
Filed July 7, 1960, Ser. No. 41,325
6 Claims. (Cl. 51—236)



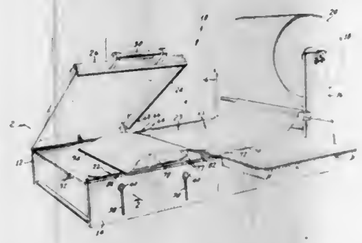
1. Apparatus for honing annular bodies comprising a support for said bodies in alignment with an abrasive honing material, a pair of pinch rolls engaging the sides of said annular bodies for rotating the same and a plurality of backup rolls for supporting and driving said pinch rolls, said pinch rolls and backup rolls being mounted on a plurality of levers pivoted on a bearing block, means for driving said backup rolls, means for adjusting the position of one of said pinch rolls relative to the annular bodies being honed and means for displacing the other of said pinch rolls at intervals to release the finished annular bodies.

3,047,990
CASER FOR CARTONS
Warren Du Broff, Chicago, Ill.
(350 Carol Court, Highland Park, Ill.)
Filed May 23, 1960, Ser. No. 30,797
13 Claims. (Cl. 53—166)



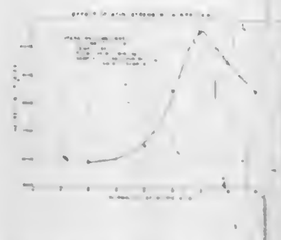
1. In apparatus for simultaneously loading cases with a plurality of cartons each having an upstanding rib, a frame, means for positioning a case within said frame and for elevating the same, a rib-gripping head removably mounted in said frame aligned with a case positioned by said positioning means, said gripping head comprising a plate having a plurality of depending, elongated flanges secured thereto in spaced-apart, parallel relation, a plurality of rods extending through said flanges and slidably mounted therein, a jaw member for each flange anchored to said rods, abutment means extending between said rods and secured thereto, an inflatable member positioned between said abutment means and one of said flanges and operative to move said jaw elements and flanges into clamping relation, means extending between one of said flanges and one of said jaw elements operative to move said jaw elements and flanges out of clamping relation, means for internally pressurizing said inflatable member to overcome the means urging said flanges and jaw elements out of clamping relation, and means for positioning a plurality of cartons under said gripping head in a regular arrangement for clamping engagement by said flanges and jaw elements.

3,047,991
IMPULSE SEALING APPARATUS
Martin Siegel, Roslyn, N.Y., and Seymour Zelnick, Toms River, N.J., assignors to Weldotron Corporation, Newark, N.J., a corporation of New Jersey
Filed May 2, 1961, Ser. No. 114,588
6 Claims. (Cl. 53—182)



1. Heat-sealing apparatus of the heat pulse type for sealing and simultaneously cutting heat-sealable sheet material, comprising a heat-sealing and cutting ribbon of high temperature and high resistance metal adapted to be pulse-heated by an electrical current passed therethrough, means for supporting said ribbon with a side edge positioned to engage the heat-sealable material for both the sealing and cutting operation when said ribbon is pulse-heated, said supporting means having provision for the longitudinal expansion of said ribbon when it is pulse-heated and for the longitudinal contraction of the ribbon between heating pulses, said supporting means having a groove with spaced side walls between which said ribbon is mounted for movement longitudinally of said groove when said ribbon expands and contracts, electrical insulation in said groove for electrically insulating said ribbon from said supporting means and holding said ribbon against movement transversely of said groove, the opposite sides of said ribbon being in sliding engagement with said insulation longitudinally of the ribbon, means operatively connected to said ribbon for maintaining said ribbon in taut condition longitudinally thereof during its expansion and contraction on said supporting means in said slidable engagement with said insulation, said supporting means having a large thermal mass in relation to the thermal mass of said ribbon for rapid cooling of the ribbon between heat pulses, and a pressure member cooperating with said heat-sealing and cutting ribbon for effecting the heat-sealing and cutting operation when said ribbon is pulse heated by the intermittent passage of electric current therethrough.

3,047,992
CHROMATOGRAPHIC ANALYSIS
William C. Jones, Jr., Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,686
3 Claims. (Cl. 55—67)



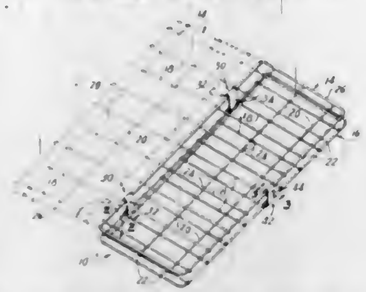
1. In a chromatographic separation, the improvement which comprises utilizing as a substrate support a firebrick material having been treated with nitric acid having a strength of about 12 N and utilizing dimethyl formamide as a substrate.

3,047,993
HERMETICALLY SEALED CARTRIDGE WITH LEAK DETECTION MEANS
Hugh C. Robbins, Inglewood, Calif., assignor to Robbins Aviation, Inc., Vernon, Calif., a corporation of California
Filed Feb. 3, 1960, Ser. No. 6,414
1 Claim. (Cl. 55—274)



A replacement cartridge for a replaceable cartridge-type fluid purifying system, comprising: a cylindrical canister including opposite end walls and a nipple extending from one end wall having a central passage communicating to the interior of the canister, a cap fitted on said nipple to hermetically seal said passage, the cylindrical wall of said canister having a circumferential row of holes adjacent the other end wall, a strip of adhesive tape applied over said row of holes to hermetically seal the latter, a desiccant within the canister between said ends thereof for removing entrained liquid from fluid passing through the cartridge, and the interior of the

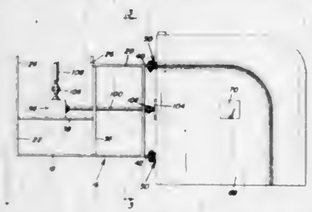
3,047,994
FILTER
George K. Le Brun, Bethesda, Md., assignor to National Refill Company, Inc., Brandywine, Md., a corporation of Maryland
Filed Dec. 4, 1959, Ser. No. 857,305
1 Claim. (Cl. 55—493)



A filter media supporting device including a pair of generally rectangular relatively rigid perforated frame members of substantially like configuration which define a pair of filter media supporting surfaces of substantially equal area and extent, each of said frame members including generally laterally and longitudinally extending elongated wire sections and an endless wire connecting the end portions of the elongated wire sections together to define the lateral and longitudinal marginal extent of the respective filter media supporting surface, pivot-spacer means including a plurality of generally C-shaped clip elements disposed in spaced relationship relative to each other along only one longitudinal edge portion of the supporting device, each of said C-shaped clip elements having a substantially flat portion disposed intermediate substantially cylindrical end portions with one of the cylindrical end portions of each C-shaped clip element being pivotally connected to the endless wire of one of the frame members to define pivot means which enables pivotal movement of the one frame member relative to the other frame member between a first position wherein the frame members are disposed in respective planes which are substantially parallel to freely support a filter media therebetween and a second position wherein the frame members are disposed in positions relative to each other to permit such filter media to be readily removed therefrom, securing means for rigidly connecting each of the other cylindrical end portions of the C-shaped clip elements to the endless wire of the other frame member for continuously maintaining the flat intermediate portions of the C-shaped clip elements disposed generally perpendicular relative to the respective planes of each frame member when in the first position during pivotal movement of the one frame member, said flat intermediate portions of the C-shaped clip elements defining spacer means for continuously spacing the frame members a given distance apart along the one edge portion of the supporting device during pivotal movement of the one frame member and for confining such filter media between the supporting surfaces of the frame members within the lateral and longitudinal marginal extent thereof, and a single latch means disposed along an edge portion of the supporting device that is opposed to the one edge portion thereof and pivotally mounted on said other frame member for releasably securing the endless wires of the frame members together when the frame members are in the first position.

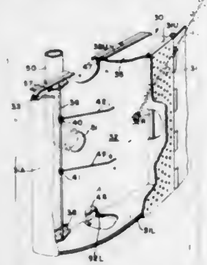
3,047,995
WEED SHREDDER

lift frame adapted to the rear of a tractor and provided with a pair of forwardly extending arms including means on their forward ends adapted for pivotal securement to the lift arms of said tractor for rotation about axes extending transversely of said arms, a cutter housing, means pivotally securing said cutter housing to said lift frame along one side thereof for free swinging movement about a horizontally disposed axis paralleling said arms between a first horizontally disposed position projecting laterally from said one side of said lift frame and a second upstanding position along said one side of said lift frame, a rotary cutter having a vertical axis journaled in said cutter frame, drive means operatively connected to said rotary cutter and adapted for engagement with the power take-



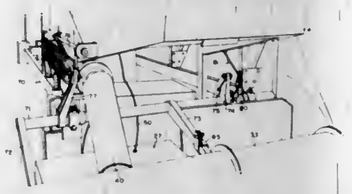
off of the tractor to which the weed shredder is attached, said cutter housing and lift frame including coacting rigid stop means limiting upward and downward swinging movement of the free edge of said cutter housing, said drive means including a plurality of interconnected drive shafts, two of said drive shafts being disposed at right angles to the axis of rotation of the cutter housing and disposed on opposite sides of said last mentioned axis, a universal joint secured between the adjacent ends of said two drive shafts, the axis of rotation of said cutter housing passing through said universal joint, and a pair of depending longitudinally extending skids secured to opposite sides of said cutter housing adapted to engage the ground over which the shredder passes when in said first position.

3,047,996
COTTON HARVESTER
Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 9, 1960, Ser. No. 54,894
8 Claims. (Cl. 56—41)



1. In a cotton harvester having housing structure defining a fore and aft extending plant passage which successively receives cotton plants as the harvester advances, and a cotton harvesting mechanism supported by the housing structure on one side of the passage and having a plurality of vertically spaced and laterally extending harvesting spindles which extend into the passage and pick the cotton bolls from the plants, the improve-

3,047,997
MOISTENER MECHANISM FOR COTTON HARVESTER
Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 4, 1959, Ser. No. 838,197
12 Claims. (Cl. 56—44)



1. A cotton harvester comprising: a main frame; a rockable member mounted on the frame; a picker casing; a picking drum mounted in the casing including a series of vertically spaced picking spindles; a vertically disposed moistener assembly within the casing having vertically spaced moistener pads spaced on the order of the spindles; mounting means between the moistener assembly and casing permitting movement of the pads between a first position in contact with the spindles and a second position out of contact with the spindles; a fluid container mounted on the main frame; fluid conduit means extending between the container and moistener assembly for effecting movement of fluid to the assembly; a shut-off valve in said conduit means; connecting means between the casing and the rockable member whereby the casing will move in response to movement of the rockable member between a relatively low harvesting position and a relatively high transport position; connecting means between the rockable member and the shut-off valve for automatically shutting off flow of fluid in response to the rockable member moving the casing in harvesting position and automatically opening said valve upon the rockable member moving the casing in transport position; and a linkage extending from the rockable member to the moistener assembly automatically responsive to movement of the rockable member to move the pads to said first position upon the rockable member moving the casing to transport position and to said second position upon the rockable member moving the casing to the harvesting position.

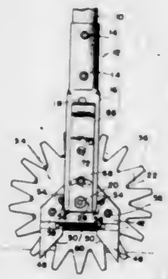
3,047,998
BAGGING ATTACHMENT FOR ROTARY LAWN MOWERS
Harold Leader, 3100 Rhode Island Ave. S.; Joseph S. Leader, 2116 Xerxes Ave. N.; Solomon Leader, 1114 Russell Ave. N.; and Victor Leader, 2339 Sheridan Ave. N., all of Minneapolis, Minn.
Filed June 27, 1960, Ser. No. 38,951
6 Claims. (Cl. 56—202)



through the wall whereby trash loosely attached to the plants and cotton will be drawn to the wall to impinge against the wall as the spindles harvest the cotton from the plants.

discharge opening upon which a post member is attached to its upper side, said frame comprising: a collar adapted to have opening defining portions of a grass catching bag secured thereto and adapted to register with the discharge opening of such mower; a slotted member attached to the upper side of said collar member and adapted to overly the upper side of the discharge opening defining portions of such mower and to receive such a post member within its slot, said slotted member having up-turned portions adapted to engage the complementary post member on such mower, said slotted member having a socket with an outwardly facing opening; and a bag support detachably engaged in said socket.

3,047,999
ROTO-EDGER TOOL
Earl L. Chadwick, Portland, Oreg., assignor to McDonough Company, Parkersburg, W. Va., a corporation
Filed Jan. 21, 1960, Ser. No. 3,909
4 Claims. (Cl. 56—256)



1. A lawn and garden edging tool comprising: a handle; a bracket secured to one end of said handle and having a leg extending generally parallel to said handle; a transverse axle carried by said bracket; a rotatable ground-engaging wheel mounted on said axle; a shearing disc coaxially mounted on said axle between said bracket leg and said wheel and fixed to the latter for rotation therewith, said disc having a plurality of peripheral shearing teeth; a plate mounted between said disc and leg for pivotal adjustment about the axis of said axle; detent means associated with said bracket and plate for retaining the latter in its adjusted positions; a pair of shearing blades pivotally mounted on said plate for cooperation with said shearing disc, said blades being alternatively operable depending upon the direction of movement of said tool; spring means cooperating with said bracket and plate to urge said blades into operative engagement with said disc; and additional spring means connected to and between said blades to maintain the latter in a normal operative position but allow each to yield and pivot rearwardly relative to the direction of movement of said tool on encountering an obstruction.

3,048,000
METHOD AND APPARATUS FOR TWISTING AND PLYING YARN
Constantine A. Brutko, Shelby, N.C., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 1, 1960, Ser. No. 46,746
11 Claims. (Cl. 57—90)

1. A method of twisting and plying a plurality of ends of yarn comprising combining the ends of yarn, passing the combined ends around and between two coacting and engaging feed rollers, moving the ends in changing paths across the surfaces of the feed rollers as they pass



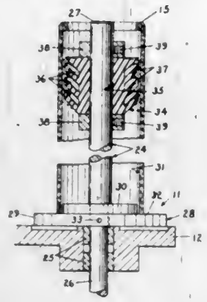
around and between the rollers and feeding the ends all at the same speed to a twisting station.

3,048,001
SPINDLE HOLDER AND METHOD OF MAKING SAME
Arturo Carniti, 12 Viale della Vittoria, Oggiono, Italy
Filed Nov. 24, 1959, Ser. No. 855,224
5 Claims. (Cl. 57—112)



5. An integral spindle holder comprising a tubular hard-metal component having at one end means for holding a spindle bearing and on the other end outwardly projecting anchoring means transversely projecting therefrom, said hard-metal component being provided with a machined inner bore having a cylindrical inner surface; and an integral die-cast component having an end portion over-lapping said other end of said hard-metal component with said anchoring means fully embedded in said end portion of said die-cast component for permanently preventing relative movement of said components, and an elongated other end portion extending from said hard-metal component and being formed with an inner cavity exactly aligned with said machined inner bore of said hard metal component, said inner cavity being provided with an inner cylindrical surface having the same diameter as said cylindrical inner surface of said bore so as to form a continuation of the same.

3,048,002
LIVE SPINDLE ADAPTOR
Harold R. Jost, Toledo, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,769
14 Claims. (Cl. 57—129)



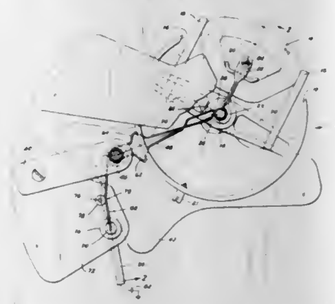
1. In combination, a spindle including an annular adaptor made of a resilient material rotatable as a unit about a vertical axis, said adaptor defining a plurality of lips extending angularly from said axis, a replaceable cylindrical bobbin in spaced, substantially concentric proximity to the periphery of said adaptor, said adaptor having an outside diameter, when in a non-rotating position, less than the inside diameter of said bobbin, and means for rotating said spindle and adaptor to coaxially expand the lips of said adaptor into clutching engagement with said bobbin.

3,048,003
METHOD OF FORMING DEAD ENDS FOR CABLES
Rodolphe Leo Payer, R.R. 1, Waterdown, Ontario, Canada
Filed Apr. 15, 1959, Ser. No. 806,585
Claims priority, application Canada May 21, 1958
2 Claims. (Cl. 57—160)



1. The method of dead-ending a stranded cable and the like which comprises forming a half-lay of helically-preformed elements, said elements having a common pitch length less than, and a direction of lay corresponding to, the strands of said cable, and being of an internal diameter less than the external diameter of said cable; passing said cable through a receiving eye; leading said cable back upon itself to form a dead-end; placing and maintaining said cable in tension by suitable releasable tensioning means; wrapping approximately a half portion of said half-lay coaxially about the lead back section of the cable forming said dead-end in a direction away from said dead-end; wrapping substantially the remaining portion of said half-lay coaxially about the other section of the cable forming said dead-end in the same direction as said half portion; and releasing said tensioning means whereby to transfer the tensional load on said cable to said half-lay.

3,048,004
ELECTRIC WATCH
Harry S. Detwiler, deceased, late of Lancaster County, Pa., by Delma A. Detwiler, administratrix, Lancaster County, Pa., and Carl A. Nelson, Lancaster County, Pa., assignors to The Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1959, Ser. No. 805,312
7 Claims. (Cl. 58—28)

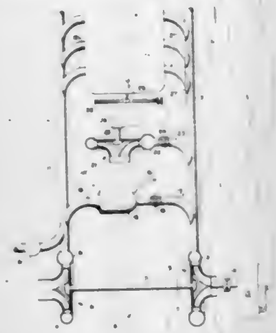


1. In an electric watch operated by a battery, an oscillating balance staff, a coil carried by said balance staff for oscillation through a magnetic field, means for periodically connecting said coil to said battery comprising a first electrical contact carried by said coil for oscillation therewith, a freely rotatable shaft mounted parallel to said balance staff, a hub mounted on said freely rotatable shaft for rotation therewith, a second electrical spring contact member fixedly mounted at one end to said hub and engageable with said first electrical contact, said hub being provided with a flat surface, a third electrical spring contact member constantly engaging said flat surface on said hub for positioning said second electrical spring contact member in an initial position out of the path of oscillation of said first electrical contact, cam means driven by said balance staff to cause said spring contact member to engage said first electrical contact as said first electrical contact oscillates in a first direction, said cam means being operable only during a portion of the oscillation of said first electrical contact in said first direction, and said third electrical spring contact member being operable through engagement with said flat surface on said hub when said cam means is inoperable to return said second electrical spring contact member to said initial position.

3,048,005
STARTING SYSTEM FOR ENGINES
Hans Egli, Santa Monica, and Wilton E. Parker, Encino, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed June 25, 1959, Ser. No. 822,819
5 Claims. (Cl. 60—13)

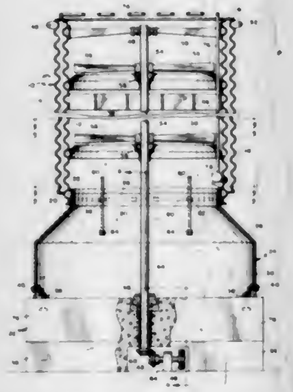
1. An apparatus for starting an internal combustion engine having a manifold system including an intake manifold and an exhaust manifold, a crankshaft, and requiring a high cranking torque, said apparatus comprising: compressor means for supplying oxidant bearing gas to said intake manifold; turbine means for actuating said compressor means, said turbine means being operatively connected with said exhaust manifold so as to receive gas from said exhaust manifold and being operatively connected to said compressor means; pneumatic motor means for rotating said crankshaft in order to start said engine; conduit means branching from said manifold system and extending to said pneumatic motor means for supplying gas thereto to cause its actuation; combustion means connected to the intake manifold so as to receive therefrom oxidant bearing gas for combustion, said combustion means being connected to said exhaust manifold so as to

supply exhaust gases to said exhaust manifold, starting means for actuating said compressor means in order to start said engine; first valve means for controlling the flow of gas passing through said conduit means branching from said manifold system to said pneumatic motor means; and second valve means for controlling the pressure of exhaust



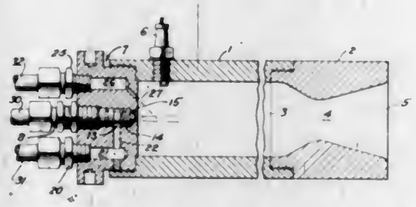
gas within said exhaust manifold means; said first valve means, when opened to admit gas to said pneumatic motor means, causing said pneumatic motor means to impose a cranking torque on said crankshaft without imposing an increase in torque load on said operatively connected compressor means and turbine means.

3,048,006
THERMAL CURRENT DRIVEN POWER GENERATING APPARATUS
Guy H. Goodman, 1242 N. Riviera, Anaheim, Calif., assignor of forty-nine percent to Alexander J. E. Beard, Anaheim, Calif.
Filed Dec. 27, 1960, Ser. No. 78,573
9 Claims. (Cl. 60—26)



1. Thermal current driven power generating apparatus, comprising: an upright tower open at both ends; said tower being double walled and having an inner sleeve and an outer sleeve concentrically disposed and spaced to define an annular chamber; a shaft axially disposed and rotatably mounted in said tower; a plurality of fans fixed to and vertically spaced on said shaft; heat exchanger means operatively coupled to said annular chamber; means to circulate a heat conducting fluid medium through said chamber and said heat exchanger; said heat exchanger being disposed across said tower to add to the heating of air in the internal and upper portions of the tower, whereby the resultant thermal current in the tower causes said fans to rotate; and power take-off means connected to said shaft.

3,048,007
DECOMPOSITION OF NITRO-PARAFFINS IN JET PROPULSION MOTOR OPERATION
Fritz Zwicky, Pasadena, and Frederick J. Ewing, Altadena, Calif., assignors, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 31, 1944, Ser. No. 528,893
5 Claims. (Cl. 60—35.4)



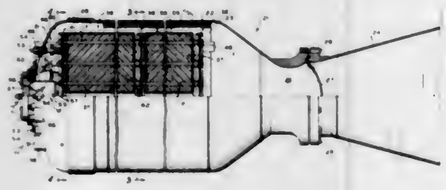
1. The method of opearting a jet motor having a combustion chamber and an exhaust nozzle from the chamber, which comprises injecting into the combustion chamber nitromethane and a catalyst selected from the group consisting of iron oxide, chromium oxide, chromium hydroxide, cerium oxide, and mixtures thereof and igniting the nitromethane in the chamber, thereby producing gases under pressure which are ejected out the exhaust nozzle.

3,048,008
ROCKET WITH LARGE PROPELLANT CHARGE UNITS
Joseph H. Murphey, Jr., McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 21, 1955, Ser. No. 523,582
18 Claims. (Cl. 60—35.6)



7. A rocket comprising an elongated cylindrical shell having an exhaust nozzle at one end; a propellant charge supported in said shell comprising a series of structurally rigid units including a frame axially aligned therein, each of said units comprising a pair of parallel retiform end plates between which are held a plurality of laterally spaced-apart propellant grains having rods extending therethrough to which the grains are bonded and the ends of which extend through and are rigidly supported by said end plates, and stringers rigidly connecting said end plates; and means for holding said units rigidly in said shell.

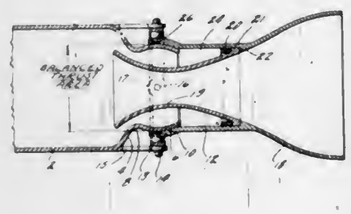
3,048,009
ROCKET MOTOR
Elton E. Rush, McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 21, 1956, Ser. No. 592,989
9 Claims. (Cl. 60—35.6)



1. A rocket motor comprising a generally cylindrical casing having a central longitudinal axis, said casing de-

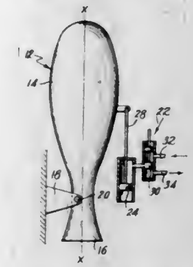
fining a cylindrical combustion chamber having a rearwardly disposed axial opening and a forward end closed by a head closure member, a nozzle member coaxially aligned with said axial opening and defining a constricted axial exhaust passage, a propellant charge suspended within said chamber and comprising a plurality of charge units of substantially the same propellant mass arranged in a tandem manner and coaxial with said chamber, each of said charge units in turn comprising a plurality of propellant grains disposed in axially spaced relationship with one another and said casing, each of said grains fabricated from composite type propellant, each grain being parallelpiped in configuration and having two oppositely disposed exposed burning surfaces of the double-web type, each of said grains having at least one support rod passing therethrough with protruding ends, stationary perforate support plates defining each end of said charge unit, said support rod ends secured to said plates, the latter lying in a plane perpendicular to said longitudinal axis and being of a smaller diametrical dimension than said chamber, a plurality of charge unit support rails secured to the inner wall of said casing and substantially extending the length of said chamber, means attached to the peripheries of said plates and adapted to articulate with said support rails whereby each of said charge units can be slidably loaded into said chamber, said support rails and said last-mentioned means adapted so as to transmit lateral forces operating upon said charge units during flight of said rocket motor directly to said casing, coupling means connecting the adjacent ends of axially aligned support rods of adjacent charge units, tension members connecting one of said support plates adjacent said head closure member to the latter whereby inertia forces operating upon said charge are directed to said casing, and ignition means disposed in said chamber to ignite said propellant grains upon their said exposed surfaces.

3,048,010
SWIVELING NOZZLE FOR SOLID ROCKET
Walter A. Ledwith, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 299
5 Claims. (Cl. 60—35.55)



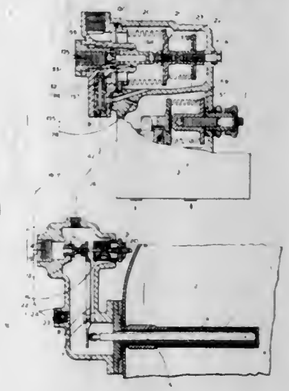
1. A nozzle mounting for a rocket including a combustion chamber, a nozzle having a convergent-divergent throat portion having inner and outer walls exposed to combustion chamber pressure and a divergent portion downstream of the throat, a supporting structure for said nozzle, a sleeve extending forwardly from and supporting the divergent portion of the nozzle, said sleeve being in surrounding spaced relation to the throat portion, said sleeve having at its forward end a part-spherical seat, a cooperating spherical surface on said structure, said seat and spherical surface surrounding and being spaced from the throat portion outer wall of said nozzle to form a chamber therebetween having a continuous opening proximate to said combustion chamber.

3,048,011
DIRIGIBLE REACTION MOTOR
Julius W. Tumavicus, Old Saybrook, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Apr. 22, 1960, Ser. No. 24,142
13 Claims. (Cl. 60—35.55)



1. A dirigible reaction propulsion motor, including: a combustion chamber and a coaxial reaction nozzle; a pivotal support attached to a body to be propelled by said motor, said pivotal support having an axis extending normal with reference to the axis of said motor, said support being connected with said motor at a point laterally offset to one side of the thrust axis of said motor; and an actuating means, attached to said body and connected with said motor at a point laterally offset to the other side of said motor thrust axis, to shift said motor axis to vary the direction of thrust relative to the propelled body.

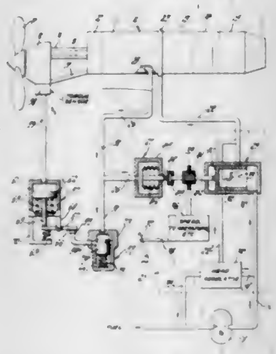
3,048,012
CONTROL SYSTEMS FOR GAS TURBINE ENGINES
Brian H. Slatter, Coventry, England, assignor to Bristol Siddeley Engines Limited, Bristol, England
Filed Mar. 7, 1960, Ser. No. 13,265
2 Claims. (Cl. 60—39.28)



1. A control system, for a gas turbine engine, comprising an air/fuel ratio control unit, calibrated to provide a fuel delivery according to a predetermined relation between fuel delivery and compressor delivery pressure, and a trimming device operable on the air/fuel ratio control unit at a predetermined engine condition to reduce the calibration of the air/fuel ratio control unit to provide a lower relation between fuel delivery and compressor delivery pressure, the device including a housing arranged to receive air from a delivery duct from a compressor of the engine; duct means connecting said housing to said air/fuel ratio control unit; a probe comprising a perforated tube extending from said housing into said delivery duct, a rod positioned within said perforated tube, one end of the rod being secured to the end of the tube remote from said housing, and a shrouding tube

positioned around said perforated tube along the whole length thereof, there being annular clearance between said shrouding tube and said perforated tube, to allow the passage of air to said perforated tube, the coefficient of expansion of said perforated tube being considerably greater than that of said rod, the device also including a lever, mounted in the housing and arranged to be engaged by the other end of said rod, a valve controlling the flow of air from said housing through said duct means and arranged to be actuated by said lever, a restricted outlet from said housing and further duct means connecting said restricted outlet to said air/fuel ratio control unit, said restricted outlet thereby providing a by-pass around said valve.

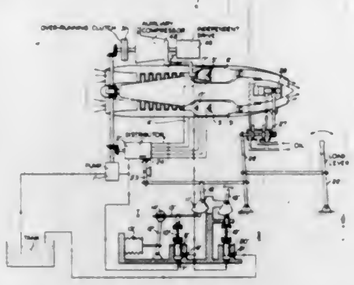
3,048,013
TORQUE LIMITER
Eugene J. Bevers and Robert J. Wente, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,352
3 Claims. (Cl. 60—39.28)



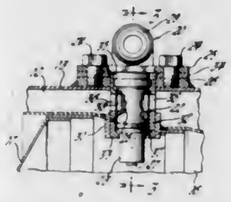
2. A fuel system for a gas turbine engine having a power output shaft comprising, in combination, means for supplying fuel under pressure, fuel metering means responsive to manual control and to conditions indicative of operation of the engine, conduit means connecting the supplying means through the metering means to the engine; means deriving a pressure indicative of an engine operating condition, means responsive to the said pressure coupled to the metering means so as to increase fuel flow in response to increase in the said pressure, means including a restricted conduit connecting the deriving means to the pressure responsive means; a meter indicative of power transmitted through the output shaft; bleed valve means opened by the meter above a predetermined torque level, a conduit connecting the bleed valve means to the pressure responsive means so as to reduce the pressure therein upon opening of the bleed valve; and a safety valve in the said conduit opening in response to pressure in the pressure responsive means only when the said pressure is above a predetermined level.

3,048,014
COMBUSTION CHAMBER FOR JETS AND SIMILAR ENGINES
Fritz A. F. Schmidt, Dr. Seitz-Str. 33K, Murnau, Upper Bavaria, Germany
Filed Dec. 12, 1958, Ser. No. 780,021
Claims priority, application Germany July 7, 1955
28 Claims. (Cl. 60—39.23)

1. A combustion chamber for jet and similar engines comprising a primary section and a rearwardly positioned secondary section, means for passing fuel into said primary section, means for passing air at a predetermined minimum pressure into said primary section and for combustion with the fuel passed therein, means for intermittently injecting fuel into said secondary section, means for controlling the duration of said individual intermittent injections, means for independently passing a substantially larger quantity of air into said secondary section for combustion of the fuel injected therein, and means for passing the hot combustion gases from said primary section into said secondary section to preheat the combustion air therein.

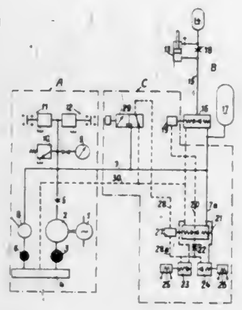


3,048,015
COMBUSTION CHAMBER SUPPORT AND IGNITER
Roland J. Barrelle and Charles F. Hayes, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 8, 1959, Ser. No. 825,832
1 Claim. (Cl. 60—39.82)



A combustion apparatus comprising, in combination, wall means defining an air duct, a flame tube mounted in the duct having a side wall defining an opening therein and a ferrule fixed to the wall bounding the opening, the wall means having a mounting pad thereon with an opening through the pad aligned with the ferrule, a generally cylindrical hollow flame tube support having a flange detachably mounted on the pad, the support being piloted in the ferrule, the support having two air inlet holes in the side thereof between the wall means and the wall aligned with the direction of air flow through the air duct and an air discharge hole in the end thereof within the flame tube, and a generally cylindrical igniter slidably mounted within the support and spaced therefrom to provide an air flow path between the support and the igniter from the inlet holes to the discharge hole, the igniter having an outer shell with a flange detachably mounted over the flange of the pad, an electrode within and spaced from the outer shell to provide an air flow path therebetween, and having two air inlet holes through the outer shell aligned with the air inlet holes in the support, the igniter projecting from the support into the flame tube.

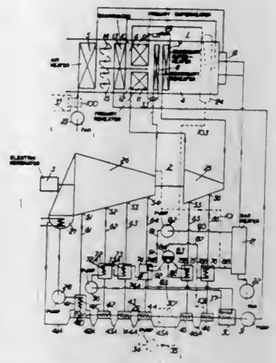
3,048,016
HYDRAULIC DRIVE FOR ELECTRIC SWITCHGEAR
Gerhard Buechner, Zurich, Switzerland, assignor to Oerlikon Engineering Company, Zurich, Switzerland, a corporation of Switzerland
Filed Feb. 21, 1961, Ser. No. 90,789
Claims priority, application Switzerland Mar. 1, 1960
7 Claims. (Cl. 60—51)



1. In a hydraulic drive for electric switchgear:
A pressure circuit including pumping means and a manifold for supplying hydraulic fluid at a working pressure, and a reservoir and a return pipe containing hydraulic fluid at an exhaust pressure below said working pressure;
A working circuit including a working cylinder having a differential piston in it, said piston having one face larger than the other, a cutting-out accumulator communicating with the smaller face of said piston, a cutting-in accumulator communicating through a working valve with the larger face of said piston, the larger face of said piston also communicating through a first check valve with said return pipe, and the larger and smaller faces of said piston communicating with each other through a choke; and
A control circuit including a first hydraulic control element for controlling the operation of said working valve, said first control element communicating through a control valve with said manifold and communicating through a second check valve with said return pipe, a second hydraulic control element for controlling the operation of said control valve, said second control element communicating through a first pilot valve with said manifold and communicating through a second pilot valve with said return pipe.

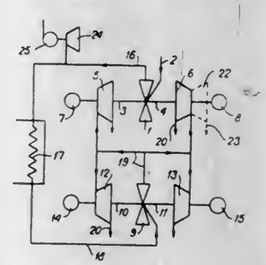
3,048,017
STEAM TURBINE POWER PLANT
Francis J. Mary, Paris, France, assignor to Babcock & Wilcox Limited, London, England, a British company
Filed Dec. 21, 1959, Ser. No. 860,958
Claims priority, application France Dec. 26, 1958
8 Claims. (Cl. 60—67)

1. In a steam turbine power plant of the kind in which superheated steam from a steam generator is expanded through a steam turbine and feed water for the steam generator is heated in a plurality of exchangers arranged for the condensation of steam led thereto in steam bleed lines from steam turbine bleed points, a boiler having steam generating surfaces and steam superheating surfaces arranged in the steam bleed lines and means for



conducting to a stage of the turbine superheated steam generated in said boiler.

3,048,018
TURBINE POWER PLANT
Curt René Nicolin, Finspang, Sweden, assignor to Turbin Aktiebolaget de Laval Ljungström, Finspang, Sweden, a Swedish corporation
Filed Mar. 9, 1961, Ser. No. 94,599
Claims priority, application Sweden Mar. 20, 1960
6 Claims. (Cl. 60—70)

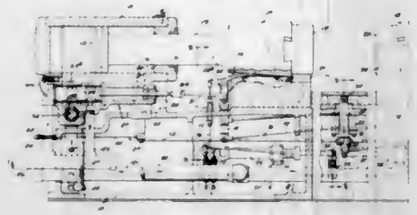


1. A turbine power plant comprising, a heat exchanger, at least two turbine sets, each of said sets comprising a radial-flow turbine having turbine halves rotating in opposite directions, each of said halves being directly coupled to an axial-flow turbine section, each of said axial-flow turbine sections having at least one exhaust and directly connected to an electric generator, said turbines and turbine sections being so connected as to cause their operating fluid to flow first sequentially through one of the radial-flow turbines; through the heat exchanger to super-heat said operating fluid; through the second radial-flow turbine and then in parallel through the axial-flow turbine sections.

3,048,019
RAM CONTROL SYSTEM
Eugene C. Clarke and Henry A. Weyer, Chambersburg, Pa., assignors to Chambersburg Engineering Company, Chambersburg, Pa., a corporation of Pennsylvania
Filed June 23, 1960, Ser. No. 38,298
18 Claims. (Cl. 60—97)

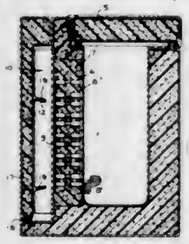
1. A control system for a mechanical fabricating ram device having a ram movable relative to a fixed frame under the urging of a fluid actuating system comprising a control valve for controlling the fluid actuating the ram, said control valve having a piston whose position in the valve determines whether the ram remains stationary or moves and in which direction it moves, a position sensing

element on the frame and cooperating with the ram for sensing the position of the ram relative to the frame to cause said sensing element to assume a specific position representative of each ram position relative to the frame, coupling means connecting together the piston of the control valve and the sensing element so that as the sens-



ing element moves it moves the piston so that the piston assumes a specific position corresponding to each specific position of the sensing element, and means for adjusting the position of the position sensing element relative to the frame, adjustment being effective to change the specific position of the piston for given ram positions.

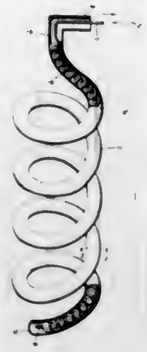
3,048,020
THERMOELECTRIC FOOD KEEPER
Gary D. Jones, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed June 2, 1961, Ser. No. 114,447
3 Claims. (Cl. 62—3)



1. A portable heating and cooling appliance comprising insulated walls defining a storage compartment, a plurality of thermoelectric elements arranged in one of said walls to provide a plurality of inner junctions in heat exchange relationship with said compartment and a plurality of outer junctions in heat exchange relationship with the outer surface of said one wall, means for connecting said elements to a direct current power source, and a removable insulating cover for insulating said outer junctions from the ambient temperature conditions when said appliance is disconnected from said power source.

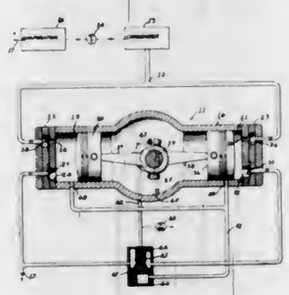
3,048,021
JOULE-THOMSON EFFECT GAS LIQUEFIER
Donald K. Coles and Wayne R. Frame, Fort Wayne, Ind., assignors to International Telephone and Telegraph Corporation
Filed Feb. 17, 1959, Ser. No. 793,863
11 Claims. (Cl. 62—36)

1. A Joule-Thomson gas liquefier comprising: a first elongated convolute tube having a closed end and a low pressure gas discharge opening adjacent its other end; and a second elongated convolute tube positioned in said first tube in contact therewith and having a gas discharge opening at one end thereof adjacent said closed end of said first tube, the direction of curvature of said second convolute tube being angularly disposed to the direction of curvature of said first convolute tube, said second tube having its other end extending out of said first tube



adjacent said other end thereof and adapted to be connected to a supply of high pressure gas.

3,048,022
COMPRESSOR CONTROL IN AUTOMOTIVE AIR CONDITIONING SYSTEM
Harry E. Clary, Chesterland, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 15, 1959, Ser. No. 827,203
13 Claims. (Cl. 62—116)

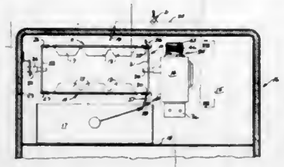


7. The method of controlling the output of a compressor in an air conditioning system having a lubricating pump with an intake at the pressure of the compressor intake by reducing compressor output to reduce the power requirements at higher speeds which comprises, generating a first pressure signal which is a function of lubricating pump output pressure, generating a second signal which is a function of intake pressure of the compressor, and relieving the discharge of the pump in response to an increase in the difference between said first and second signals with an increase in said first signal.

3,048,023
ICE MAKING APPARATUS AND CONTROL MECHANISM THEREFOR
Wesley L. Taylor, Glenview, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Sept. 16, 1959, Ser. No. 840,346
5 Claims. (Cl. 62—135)

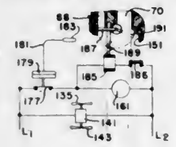
1. An automatic ice making apparatus comprising a support, an ice tray assembly rotatably mounted on said support and disposed within a freezing compartment, a plurality of flexible ice trays for containing liquid to be frozen into ice blocks mounted on said assembly and

facing outwardly in different directions from the rotational axis thereof, a rectilinearly movable element mounted on said support, electrically energizable means for moving said element as a function of the rate of freezing of liquid



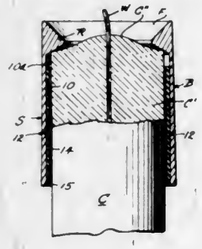
disposed within said freezing compartment, motion translation means interconnecting said element with at least one of said trays to apply torsion to said one of said trays to effect the ejection of ice blocks therefrom, and independent means for rotating said assembly.

3,048,024
REFRIGERATING APPARATUS
James W. Jacobs, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 6, 1959, Ser. No. 825,132
6 Claims. (Cl. 62—156)



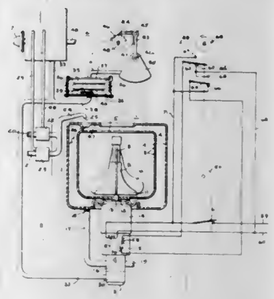
6. A refrigerator including a cabinet provided with insulated walls enclosing a compartment to be cooled, a refrigerating system including liquefying means and evaporating means, means for circulating air in heat transfer relation with said evaporating means and said compartment to be cooled, means for stopping said refrigerating system and causing said evaporating means to rise above freezing temperatures, and means for preventing the circulation of air between said evaporating means and said compartment as long as said evaporating means is above a predetermined temperature.

3,048,025
CANDLE BURNERS
Alan I. Root, Medina, Ohio, assignor to The A. I. Root Company, Medina, Ohio, a corporation of Ohio
Filed June 28, 1960, Ser. No. 39,269
2 Claims. (Cl. 67—21)



1. A burner for a cylindrical candle, comprising a tubular metal body having an internal annular rib portion for sealing contact with wax at the top of the candle and an integral skirt portion depending therebelow and having a cylindrical interior, an imperforate internally smooth cylindrical liner in the skirt portion having an inner diameter selected according to the diameter of the candle for guiding contact therewith, while maintaining the burner substantially coaxial with the candle, the liner comprising a dense, non-wax-absorptive, low-heat-conductive, non-flammable organic plastic material tightly fitting the skirt portion, the hardness of the liner material being approximately R116 to R120 on the Rockwell R scale.

3,048,026
ARTICLE TREATING MACHINE WITH FLUID OPERATED SEQUENCE CONTROL MECHANISM
John Bochan and Philip H. Houser, Louisville, Ky., assignors to General Electric Company, a corporation of New York
Filed Aug. 7, 1961, Ser. No. 129,613
5 Claims. (Cl. 68—12)

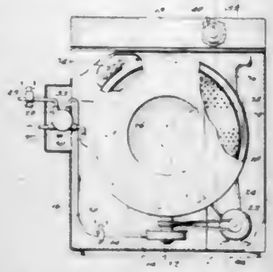


1. An article treating machine comprising: means for providing a first function within said machine; means for providing a second function within said machine; a reversible electric induction-type single-phase motor including main and start windings connected in parallel, and speed responsive means for disconnecting said start winding as said motor comes up to speed; transmission means and fluid compressor means driven by said motor, said transmission means operating said first function providing means upon motor operation in one direction and operating said second function providing means upon motor operation in the other direction, said compressor having an inlet and an outlet and being formed to pass fluid from said inlet to said outlet upon motor rotation in either direction; an energizing circuit for said motor including first switch means movable to open and closed positions to control circuit completion, and second switch means having first and second positions respectively connecting said windings for rotation in said one direction and in said other direction; sequence control means including a fluid operated motor, and means operated by said fluid motor controlling said switch means to provide electric motor operation and pauses in such operation in a pre-determined sequence; means connecting said fluid motor to said compressor outlet; an expansible chamber biased to a contracted position; and means connecting said chamber to said compressor and to said fluid motor; said chamber expanding during compressor operation and having a capacity sufficient to maintain said fluid motor in operation during pauses in said electric motor operation.

3,048,027
AUTOMATIC DRY CONTROL FOR COMBINATION WASHER-DRIER
John C. Mellinger, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Sept. 11, 1958, Ser. No. 760,447
10 Claims. (Cl. 68—12)

9. In a laundering apparatus for the wasing and drying of clothes, the combination comprising a control

means for controlling the length of the drying period, means for measuring the ingress of water into the apparatus, means for measuring the egress of water from the



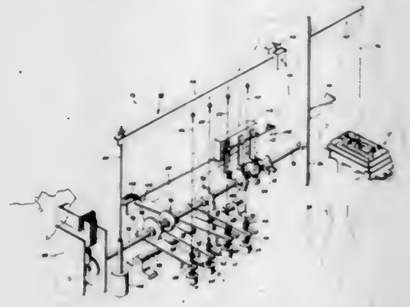
apparatus, and means for controlling the operation of said control means commensurate with the difference in quantities between the ingress and egress.

3,048,028

SWITCH CALIBRATION APPARATUS

Charles W. Slocum, 501 S. Elizabeth, Angola, Ind., assignor, by mesne assignments, to Charles W. Slocum and Richard D. Bauer

Filed Dec. 27, 1960, Ser. No. 78,543
6 Claims. (Cl. 73—1)



3. The method of calibrating a thermal switch having two resilient arms carrying engageable contacts and a bimetallic member operatively associated with one of said arms to open said contacts comprising the steps of flexing said bimetallic member a given amount and adjusting said one arm to a point just short of engagement with said member, and flexing said member an additional given amount to deflect said one arm by a corresponding amount and adjusting the other arm to a point at which said contacts just touch.

3,048,029

GAS CHROMATOGRAPHIC ANALYSIS OF INORGANIC MATERIALS

Richard S. Juvet, Jr., 532 Fairlawn Drive, Urbana, Ill., and Francis M. Wachi, 127 La Verne Ave., Long Beach, Calif.

No Drawing. Filed Mar. 19, 1959, Ser. No. 800,361
7 Claims. (Cl. 73—23)

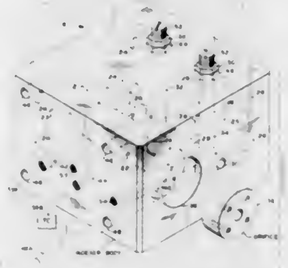
1. The method of separating by partition chromatography the constituents of a sample mixture comprising volatile metallic inorganic compounds which method comprises establishing a stream of a heated inert carrier gas through an elongated partition column packed with solid particles at an elevated temperature, said particles having a surface coating of a partition liquid comprising a molten eutectic mixture of a plurality of nonvolatile inorganic metal salts, said molten mixture being unreactive with the constituents of the mixture being separated, injecting said sample mixture into the stream of carrier gas entering said column, and detecting the appearance of volatilized constituents of said sample mixture in the effluent from said column.

3,048,030

MELT INDEX APPARATUS

Clark G. De Haven, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 29, 1958, Ser. No. 738,684
13 Claims. (Cl. 73—56)



1. Apparatus comprising in combination and in series an extruder discharging flowing polymer into a conduit, said conduit in open communication with a positive displacement pump and containing a flow restriction means downstream from said pump; flow control means disposed so as to control the flow rate through said conduit; temperature sensing means disposed in said conduit; heating means disposed so as to heat said conduit; temperature control means operably connected to said temperature sensing means and said heating means for maintaining said conduit at a substantially constant temperature; pressure sensing means disposed in said conduit upstream of said flow restriction means and means for indicating the pressure of the flowing polymer calibrated to read in melt index operably connected to said pressure sensing means.

3,048,031

DEVICE FOR AUTOMATICALLY CORRECTING THE VARIABLES IN THE ULTRASONIC TESTING OF MATERIALS

Louis Beaujard, Saint Germain-en-Laye, Charles René Maeder, Paris, and Jacques André Pinard, Saint Germain-en-Laye, France, assignors to Institut de Recherches de la Siderurgie, Saint Germain-en-Laye, France, a professional institution of France

Filed Feb. 14, 1957, Ser. No. 640,140
Claims priority, application France Feb. 17, 1956
8 Claims. (Cl. 73—67.8)



1. An apparatus for automatically correcting variable conditions during testing of a test piece by ultrasonic

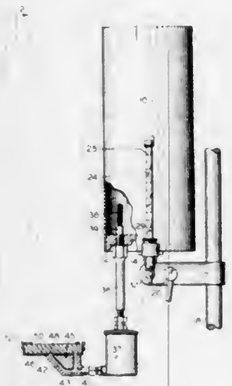
echoes, comprising means for generating electrical pulses, a timing device for triggering said generating means, electro-mechanical transducer means connected to said generating means for transmitting ultrasonic pulses into the test piece and receiving echoes thereof including background echoes of the test piece and the echoes from the defects thereof, and converting said echoes into input voltages, timing means connected to said timing device and transducer for time selecting said background echo voltage, and electronic means connected to said timing means for producing a memory voltage which instantaneously reaches and remains equal to the peak voltage produced by a background echo during the interval between two successive background echo pulses, an adjustable electric source for producing a reference voltage, means connected to said source and memory voltage producing means for comparing said membory voltage with said reference voltage for obtaining a resultant error voltage corresponding to the difference between said voltages, and means, connected to said comparing means and said transducer for varying the magnitude of the voltages derived from said transducer in accordance with said error voltage for maintaining said memory voltage at a substantially constant value and for producing output voltages varying in magnitude according to said error voltage.

3,048,032

IRRIGATION INDICATOR

Eric J. Winter, % The National Vegetable Research Station, Wellesbourne, England

Filed Feb. 11, 1959, Ser. No. 792,609
3 Claims. (Cl. 73—73)



1. An irrigation indicator for designating moisture loss from soil comprising a liquid reservoir, a porous pad receiving liquid from said reservoir and having an upper surface open to atmosphere, said pad being arranged to present liquid to its said upper surface for evaporation, the rate of evaporation of the liquid from the upper surface of said pad being related to the rate of moisture loss of the soil whereby the extent of change of liquid level in said reservoir resulting from said evaporation indicates the extent of moisture deficiency of the soil, and rain catching means communicating with the interior of the reservoir for automatically raising the liquid level in said reservoir to the extent of rainfall.

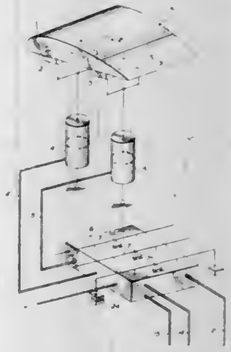
3,048,033

HYDRAULIC LOAD-TESTING APPARATUS

Manfred Melzer, Bremen, Germany, assignor to Losenhausenwerk, Dusseldorfer Maschinenbau A.G., Dusseldorf-Grafenberg, Germany

Filed Nov. 12, 1959, Ser. No. 852,461
Claims priority, application Germany Nov. 14, 1958
4 Claims. (Cl. 73—88)

1. A load-testing apparatus for use with fluid supply means, said apparatus including in combination: a plu-



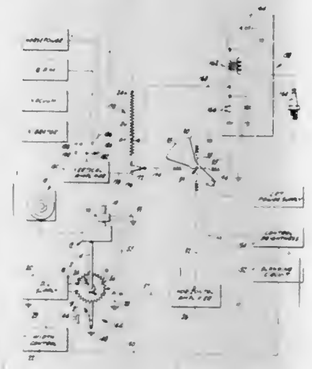
rality of testing cylinder means; a fluid pressure-balance means for each cylinder means, each said balance having two fluid devices acting thereon in opposition, each balance means being connected to said supply means and to the respective cylinder means to supply fluid to said cylinder means and one of said devices at a pressure which is a function of the setting of the balance means, each balance means including an adjustment to initially preset the relative strength of the devices as they act in opposition to each other; and a fluid control conduit connected to the other fluid device of each pressure-balance means; and means connected to said supply means and to said conduit to regulate the fluid pressure in said conduit to thereby simultaneously regulate the fluid pressure at each cylinder means.

3,048,034

ENGINE ANALYZER

Henry J. Schultz, Hayward, Calif., assignor to Brooks Walker, San Francisco, Calif.

Filed Mar. 10, 1958, Ser. No. 720,113
8 Claims. (Cl. 73—116)



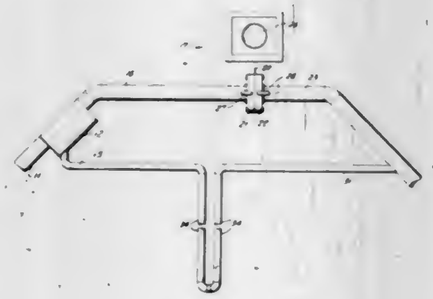
2. In combination with a machine to be tested having a take-off synchronous with its operation, an analyzer comprising a rotatable shaft adapted for operative connection to said take-off to be driven thereby so as to rotate synchronously therewith, a potentiometer com-

prising a circular resistor and a relatively movable contact carried by said shaft for synchronous rotation therewith, said resistor having a constant potential terminal, a source connected to apply a voltage across said resistor, connections to said movable contact and to said constant potential terminal of said resistor across which sawtooth waves of invariable length are developed upon rotation of said shaft, a cathode-ray tube having a screen and a horizontal and a vertical deflection means, means connecting said potentiometer at said movable contact and constant potential terminal to one of said deflection means to provide a sweep on the screen of said cathode-ray tube as a primary datum line synchronous with the operation of said machine, phase control means for selectively applying variable increments of rotation to said movable contact so as to insert a secondary variable phase difference to modify the initial fixed phase relationship between sawtooth waves from said potentiometer and the rotational output cycle of said machine, a source of impulses derived from the operation of said machine connected to drive said other deflection means, whereby a display is provided on said screen showing the timing of various events occurring during the operation of said machine relative to said datum line.

3,048,035
METHOD AND APPARATUS FOR METERING WET GAS

Thomas S. Richards and Forrest C. Howard, El Campo, Tex., assignors to Texaco Inc., a corporation of Delaware

Filed Dec. 31, 1958, Ser. No. 784,108
3 Claims. (Cl. 73—200)



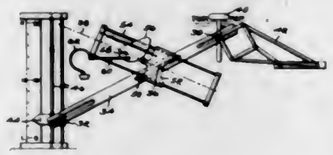
1. Apparatus for metering a gas containing a liquid therein, comprising means for reducing the velocity of flow of said gas to separate out said liquid having an outlet for the dry gas, means for draining said separated liquid off from said velocity reducing means, U-tube means for maintaining a liquid seal to force said dry gas to all flow through said outlet, meter means connected to said outlet for metering the flow of said dry gas, and means for connecting said U-tube means to said outlet on the down stream side of said meter means to allow recombination of the liquid with the gas.

3,048,036
LIQUID LEVEL BOILER GAGE WITH IDENTICAL LEVEL RESPONSE AT ALL TEMPERATURES

Ernest E. van Ham, Somerville, Mass., assignor to Jerguson Gage & Valve Co., Somerville, Mass., a corporation of Massachusetts

Filed July 24, 1956, Ser. No. 599,839
12 Claims. (Cl. 73—290)

12. A liquid level measuring device for high pressure boilers comprising a differential manometer, means for imposing on one side of the manometer a constant head of a column of liquid of fixed height having an average density definitely related to the density of the boiler water and subject to the boiler pressure, means connecting the other side of the manometer to the water-containing space of the boiler to receive the variable head of a column of the same height, likewise subject to the boiler pressure and composed of relatively variable fractions of water and steam, a driven manifesting element taking motion from the manometer which movement tends to move the element proportionately to the varied values of such differential pressure, means responsive to the internal temperature of the boiler and compensating means controlled thereby and operatively associated with said element for modifying the motion which



would otherwise be transmitted from the manometer to the element substantially in accordance with the following equation:

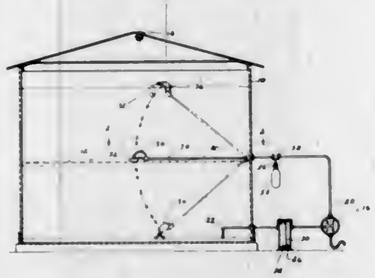
$$W = L - [H - kL(1 - SpGW)]\left[\frac{1}{SpGW - SpGS}\right]$$

where W is the actual water level in the boiler in inches, L is the range of water level fluctuation expressed in inches, H is the impressed differential in inches of cold water, k is a constant expressive of any fraction of the liquid column of fixed height which is composed of cold water, SpGW is the specific gravity of water and SpGS the specific gravity of steam, both at the boiler temperature, whereby the scalar manifestation for a given water level is the same for any such temperature.

3,048,037
TANK GAUGING DEVICE

Frederick C. Melchior, 258 Riverside Drive, New York, N.Y.

Filed Apr. 25, 1960, Ser. No. 24,283
4 Claims. (Cl. 73—299)

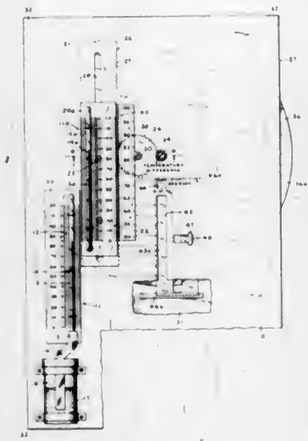


1. A gauging system for determining the hydrostatic pressure exerted by a fluid column alone when the fluid is contained in a tank in which the pressure on the surface of the fluid may vary, which comprises a first pressure pick-up mounted at the bottom of said fluid column, a second pressure pick-up floating on the surface of said fluid, and a differential pressure sensor coupled to said first and second pressure pick-ups, said differential pressure sensor adapted to measure the difference in pressure between said first and second pressure pick-ups.

3,048,038
TEMPERATURE-HUMIDITY INDEX INDICATOR

Herman H. Johnson, 730 Riverside Drive, New York, N.Y.

Filed Feb. 17, 1960, Ser. No. 9,351
10 Claims. (Cl. 73—338)



9. An instrument for indicating temperature-humidity conditions of the ambient atmosphere in terms of a temperature-humidity index number which comprises a base member; a wet-bulb thermometer having a temperature scale calibrated in equal increments of temperature degrees, said wet-bulb thermometer having a zero mark; a dry-bulb thermometer having a temperature scale calibrated in equal increments of temperature degrees, said dry-bulb thermometer having a zero mark one of said thermometers with its scale being fixedly mounted on said base member and the other of said thermometers with its scale being mounted for linear movement parallel to said fixed thermometer on said base member so that said movable thermometer with its scale may be moved in a linear direction alongside said fixed thermometer with its scale may be moved in a linear direction alongside said fixed thermometer and its scale and in a path of sufficient amplitude to permit the zero mark of said movable thermometer scale to be placed opposite the thermometer reading on said fixed thermometer scale; a temperature-humidity index scale fixedly mounted on said base member adjacent said movable thermometer scale and calibrated to indicate the temperature-humidity conditions in terms of a temperature-humidity index number; the temperature-humidity index number for the then existing conditions of the ambient atmosphere appearing on the temperature-humidity index scale opposite said movable thermometer temperature reading when the zero mark of said movable thermometer scale is moved to a position opposite the fixed thermometer temperature reading.

3,048,039
MERCURY SAVER AND OIL TRAP FOR ORIFICE METERS

Lester Le Roy Hackler, Odessa, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed June 9, 1958, Ser. No. 740,715
8 Claims. (Cl. 73—395)

1. For use in an orifice meter comprising a manometer tube containing a liquid, a low pressure conduit connected to one end of the tube and a high pressure conduit connected to the other end of the tube, apparatus comprising a substantially cylindrical case, with closed top and bottom ends and conduit means of smaller diameter than that of said case in each of said ends, positioned at an angle of about 15 to 30 degrees from vertical; the conduit means in the bottom end being in communication with said low pressure conduit; the conduit means in the top end being for communication with a source of low pressure; and a plurality of deflection plates arranged in two groups in said case, each group

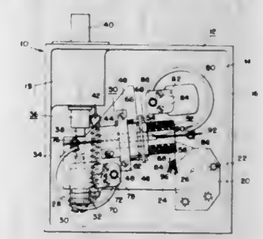


comprising a plurality of spaced apart parallel plates projecting inwardly and downwardly and obstructing more than one half of the cross-sectional area of said case, each group of plates being in contact with opposite walls of said case and being in overhanging relationship with the other group of plates.

3,048,040
PRESSURE RESPONSIVE DEVICE

William B. Pegram, Swarthmore, Pa., assignor to International Resistance Company, Philadelphia, Pa.

Filed May 5, 1959, Ser. No. 811,125
5 Claims. (Cl. 73—412)



1. A pressure responsive device comprising a base, a plate pivotably mounted at one end on said base, an electrical differential transformer mounted on said plate, a core movably disposed within said differential transformer, a pressure sensitive device mounted on said plate adjacent one end of said differential transformer, said pressure sensitive device being connected to one end of said core, a second pressure sensitive device mounted on said base adjacent the other end of said differential transformer, said second pressure sensitive device being connected to the other end of the core, and means for pivoting said plate to a selective position with respect to said base.
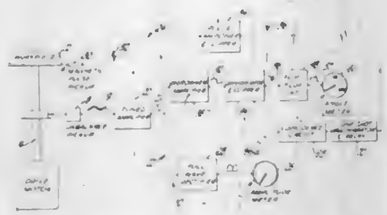
3,048,041
UNBALANCE INDICATOR

Philip K. Trimble, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 6, 1957, Ser. No. 638,517
5 Claims. (Cl. 73—462)

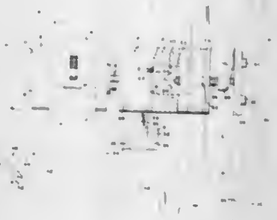
1. A measuring device for determining the dynamic unbalance in a work piece, said device comprising means for rotating said work piece, a reference pick-up adapted to produce a reference signal indicative of the angular disposition of said work piece, an unbalance pick-up adapted to produce a signal characteristic of the unbalance of said work piece, electronic switching means operatively interconnected with said pick-ups adapted to be activated in

response to one of said signals and deactivated in response to another of said signals, a coincidence circuit interconnected with said pick-ups and said switching means for controlling the activation of said switching means when said signals substantially coincide, said coincidence circuit comprising means responsive to substantial coincidence of



said signals and operative to render both said unbalance and said reference signals ineffective to control said switching means and to simultaneously render said switching means continuously activated, and an indicator operatively interconnected with said switching means adapted to indicate the duration of activation of said switching means.

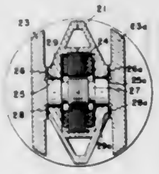
3,048,042
ACCELEROMETER
Kenneth E. Pope, Albuquerque, N. Mex., assignor to Globe Industries, Inc., Dayton, Ohio, a corporation of Ohio
Filed Apr. 22, 1959, Ser. No. 808,074
5 Claims. (Cl. 73—516)



1. A digitally operating acceleration responsive device comprising a rotatably mounted acceleration sensor housing; motor means interconnected to rotate said housing; said housing being provided with a chamber; an electrically conductive fluid within said chamber and adapted to be forced into a vortex upon rotation of said housing; said fluid vortex evidencing dimensional changes upon the device being subjected to acceleration forces; a motor power switching means; triggering means including said fluid vortex and a portion of said housing responsive to dimensional changes of said vortex to intermittently activate said power switching means to dither said motor and vortex and tending to maintain said vortex constant; and an electrical pulse generator means mounted on said housing and adapted to generate a train of pulses constituting a digital representation of the acceleration acting upon said vortex.

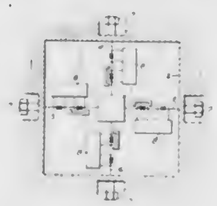
3,048,043
GAS BEARING GYROSCOPE
John M. Slater, Fullerton, and Joseph S. Acterman, Long Beach, Calif., assignors to North American Aviation, Inc.
Filed Sept. 1, 1954, Ser. No. 453,566
4 Claims. (Cl. 74—5)

1. A high speed gyroscope comprising a rotor shaft having radial bearing surfaces on the periphery thereof located adjacent to each end of said shaft, symmetrical discs spaced on ends of said shaft exteriorly of said radial bearing surfaces to form an H-shape rotor, said discs having thrust bearing surfaces at right angles and adjacent to said radial bearing surfaces, an annular stator frame surrounding said shaft between said discs and having spaced radial bearing surfaces on the inner periphery thereof and having thrust bearing surfaces on the external faces thereof at right angles to and adjacent to said last-mentioned radial bearing surfaces, said radial bearing surfaces on said rotor shaft and said frame being contiguous so as to form an autolubricated radial gas spin bearing in a gap between said radial surfaces, said



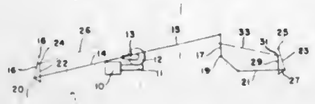
thrust bearing surfaces on said rotor discs being contiguous to said thrust bearing surfaces on said external faces of said stator frame to form a thrust bearing on each side of said rotor and said frame, and at least one of said thrust bearing surfaces in each thrust bearing having alternate helically formed wedge-shaped depressions and flat plane surfaces, said depressions tapering in the direction of the rotation of said rotor and providing a gas layer in a gap between each of said contiguous thrust bearing surfaces, in which centrifugal force and Poisson distortion cause the clearances between the contiguous bearing surfaces to decrease at high speeds so as to create stiff bearing operation which substantially reduces the deflection for a given load.

3,048,044
SYSTEM FOR SUPPORTING AND/OR CONTROLLING BODIES
Paul R. Adams, Northridge, Calif., and Etienne C. L. de Faymoreau, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Jan. 28, 1958, Ser. No. 711,740
11 Claims. (Cl. 74—5.47)



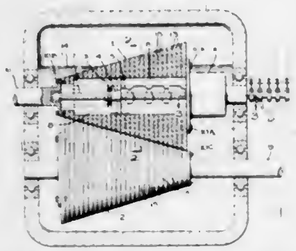
1. A system for detecting and controlling tension in an electro-mechanical transducer coupling two bodies together comprising first electrical means coupled to said transducer producing a signal indicative of the tension in said transducer, means coupled to said first electrical means for producing an electrical signal in response to said signal output of said first electrical means, second electrical means coupled to said transducer and responsive to said electrical signal for causing at least one dimension of said transducer to change so that said dimension changes are controlled by said electrical signal in response to said signal indicative of tension in a manner to counteract any change in the tension of said transducer.

3,048,045
LINKAGE DRIVE FOR WINDSHIELD WIPERS
Francis M. Ryck and Harry W. Schmitz, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 13, 1957, Ser. No. 702,688
16 Claims. (Cl. 74—75)



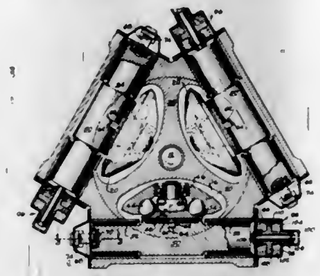
1. A linkage drive for imparting asymmetrical oscillation to a pair of spaced wiper shafts from a rotary drive member having crank means on only one side of the axis thereof, including, a pair of connecting links having their inner ends rotatably connected to said crank means, a pair of spaced wiper shafts, a drive arm attached to each wiper shaft, the outer end of one of said connecting links being operatively connected with one of said drive arms, a motion reversing link having a fixed intermediate pivotal support, the outer end of the other connecting link being rotatably connected to one end of said reversing link, and an arm operatively interconnecting the other end of said reversing link and said other drive arm whereby rotation of said crank means will impart asymmetrical oscillation to said wiper shafts.

3,048,046
POWER TRANSMISSION FOR VARIABLE SPEED AND TORQUE
Algar H. Cosby, Alexandria, Va.
(Box 204A, R.F.D. 1, Chantilly, Va.)
Filed Apr. 11, 1960, Ser. No. 21,512
3 Claims. (Cl. 74—191)



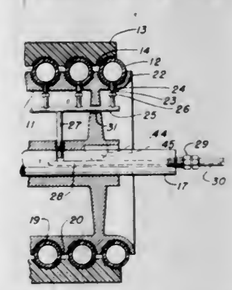
1. A device for the transmission of power and variation of torque and speed consisting of a pair of cooperating paramagnetic truncated cones arranged with interacting surfaces thereof disposed in closely spaced relation throughout the length of said cones to provide therebetween a clearance, each cone comprising adjacent laminations of paramagnetic material separated by semidielectric material, one of said cones being a driven cone and the other of said cones being a drive cone, said drive cone having an axial bore therein, an electrically energized, variably positioned, field generating component non-rotatably mounted within and axially movable along said bore, means for supplying electric current to said field generating component for generating a magnetic field when excited by said current to induce a magnetic field in the laminations of the drive cone adjacent said field generating component, and thence to the corresponding adjacent laminations of the driven cone, causing the driven cone to follow the driving cone, and which field generating component determines by its position axially within the bore of the drive cone the desired ratio of input speed to output speed, and a paramagnetic fluid in which the interacting surfaces of the cooperating cones are immersed in order to provide a solid flux path within the clearance between said interacting surfaces.

3,048,047
TOROIDAL TRANSMISSION DAMPING MECHANISM
Harry L. Richardson, River Edge, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Mar. 8, 1961, Ser. No. 94,289
10 Claims. (Cl. 74—200)



1. A variable speed transmission comprising co-axial input and output members having facing toric surfaces; a plurality of circumferentially-spaced rollers disposed between and in driving contact with said surfaces for transmitting torque from the input member to the output member; support means for each roller including pivot means providing for speed-ratio-changing pivotal movement of said roller across said toric surfaces; each roller support means also including means providing for movement of its roller in a second mode in response to changes in the traction forces between said roller and said toric surfaces such that in response to movement in said second mode said speed-ratio changing pivotal movement of the roller is initiated; means including a source of controllable fluid pressure operatively connected to each roller to subject each roller to a control force opposing said traction forces such that each roller automatically moves to a speed-ratio position in which the forces thereon are in balance; and a plurality of sealed, individual, fluid damping devices, there being one such damping device for and operatively connected to each roller for damping movements of said roller in said second mode.

3,048,048
INFLATABLE RIM PULLEY
Lawrence P. Weston, Gibbon, Nebr.
Filed July 10, 1959, Ser. No. 826,165
1 Claim. (Cl. 74—230.7)



The combination of a pulley having annular spaced grooves in the periphery thereof and a plurality of juxtapositioned endless inflatable elements with an inflatable element in each groove of the pulley, said inflatable elements having continuous longitudinally disposed cavities therein, means in said inflatable elements for admitting a fluid into said inflatable elements for the inflation thereof, said pulley having openings in the grooves to receive said means, an air supply tube mounted in the pulley, nipples mounted on said air supply tube for connection to the said means, a hollow shaft for mounting said pul-

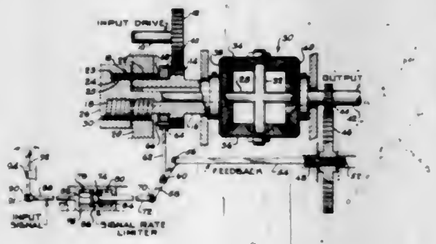
ley, means for connecting said air supply tube to said hollow shaft, and a coupling for connecting a tube connected to a source of fluid supply connected to said coupling so that said inflatable elements may be inflated during the rotation of said pulley to vary the speed ratio of said pulley.

3,048,049
CONVEYER CHAIN
Lester E. Oberholtz, Independence, Mo., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Mar. 4, 1960, Ser. No. 12,770
3 Claims. (Cl. 74—248)



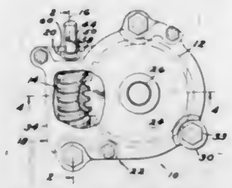
1. The combination of a first and a second chain link each having side bars, a pintle bar and an end bar connecting said side bars, and a curved end section extending from said end bar and presenting a free edge in spaced relation thereto so as to provide an open bearing; the pintle bar of said first link being pivoted in said open bearing of said second link; and a plate member extending between and secured to said side bars of said first link, said plate member having a pair of prongs in straddling relation to said curved end section of said second link.

3,048,050
OSCILLATING SERVOMOTOR
John S. Perryman, Fayson Lakes, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 23, 1959, Ser. No. 788,625
5 Claims. (Cl. 74—388)



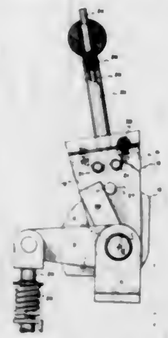
1. A servomotor comprising a power input member, a first member continuously driven in one direction by the power input member, a second member, spring clutch and brake means operable to drivably connect said second member to the first member or to secure the second member in a fixed position, an output member, means connecting the first and second members with the output member for causing the output member to be driven in one direction or another according to whether the second member is connected to the first member or is secured in a fixed position, and a feedback connection between the output member and spring clutch and brake means responsive to output motion in one direction or another to operate the clutch and brake means so as to bring about reversals in the direction of motion of the output member and thereby provide an oscillating output motion.

3,048,051
GEAR BOX
Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan
Filed Aug. 10, 1959, Ser. No. 832,606
1 Claim. (Cl. 74—425)



A meshed worm and worm gear which gears have axes of generation extending at an oblique angle to each other, a gear box closely surrounding said worm and worm gear, said gear box including a base and a cap all portions of each of which have at least a minimum draft angle with respect to a predetermined transverse direction, said base and cap having dish-shaped portions receiving the worm gear for rotation therein and cylindrical portions extending at the same oblique angle to the plane of the dish-shaped portions as the axes of generation of the worm and worm gear make with each other, said cylindrical portions including end walls having non-circular openings therethrough, a bearing sleeve coaxial with the cylindrical portions of the gear box secured within each of the non-circular openings and having a similar non-circular exterior surface, each bearing sleeve including a radially extending flange within the interior of the cylindrical portion of the base and cap, the axially inner surface of each flange being tapered to engage in surface-to-surface contact with the inner surface of the end wall of the cylindrical portions of the base and cap and making the same angle with the axially outer surface of the radial flange as the axes of generation of the worm and worm gear make with each other, and a shaft rotatably mounted in the bearing sleeves, said worm gear being mounted on said shaft between the axially outer surfaces of the bearing sleeves within the cylindrical portion of the gear box in mesh with the worm gear.

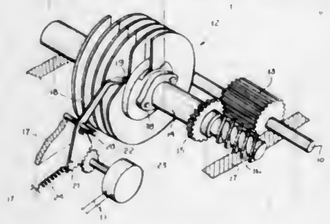
3,048,052
LOCKABLE ACTUATING LEVER
Harry V. Chapman, Salt Lake City, Utah, assignor to The Eimco Corporation, Salt Lake City, Utah, a corporation of Delaware
Filed Feb. 6, 1961, Ser. No. 87,318
1 Claim. (Cl. 74—531)



In a movement control device of the type including a lever assembly and linkage interconnecting said lever assembly with the member to be moved, the improved construction enabling selective locking of said member

in any of an infinite number of positions, said construction comprising a base, a fixed member mounted on said base and having an arcuate surface sector defined by a radius rotating about a first center located on said base, means mounting said lever for pivotal movement about said first center, a pair of movable clutch members each of which has an arcuate surface sector defined by a radius rotating about a second center located on said clutch member, a pair of pivotal mounting means spaced apart and separately mounting each of said clutch members on said lever for rotational movement about a third center on each clutch member offset from said center of said clutch member to enable movement of said second center and said arcuate surface sector of each of said clutch members about said third center toward and away from said arcuate surface sector of said fixed member, separate resilient means independently engaging each of said clutch members on opposite sides of said pivotal mounting means to normally pivotally urge said arcuate surface of each of said clutch members toward and into engagement with said arcuate surface of said fixed member, said clutch members being in overlapping face-to-face relationship in at least a portion of the space between said spaced apart pivotal mounting means, and a single push rod associated with said lever and mounted to simultaneously engage the overlapping portions of both of said clutch members to rotate said clutch members simultaneously in a direction opposite to and against the urging of said separate resilient means.

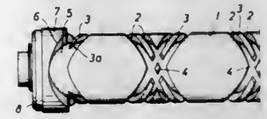
3,048,053
HELICAL CAM
Edwin W. Howe, North Baldwin, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Mar. 9, 1960, Ser. No. 13,765
4 Claims. (Cl. 74—567)



1. A helical cam comprising a plurality of hub members, each of said hub members having a helical groove, a plurality of cam plates, each plate comprising a split annular disc having a cam contour formed at the outer periphery, one of said cam plates being secured in each of said helical grooves, means for securing said hub members in stacked relation so that a split edge of each cam plate coincides with a split edge of the adjacent cam plate whereby a continuous cam contour is formed.

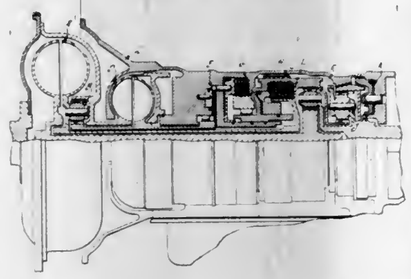
3,048,054
GROOVED GUIDE ROLLER FOR TEXTILE MACHINES
Richard Heim, 147 Raderthaler Strasse, Koln-Zollstock, Germany
Filed Mar. 15, 1960, Ser. No. 15,139
Claims priority, application Germany Mar. 16, 1959
5 Claims. (Cl. 74—567)

1. A drive unit for use in textile machines for reciprocating a thread guide at a constant linear rate, said drive unit comprising a guide roller and a follower, said guide roller having a constant angle spiral groove having crossing intermediate portions and reversing end portions, said spiral groove being in the form of twin groove portions separated by a central guide rib, and said follower having spaced parallel runners engaged in said groove portions and a longitudinal groove between said runners receiving said rib, said rib being interrupted at each of said crossing portions and there being a rhomb-shaped central rib member at the center of each crossing portion in alignment with adjacent portions of



said rib, said rib terminating short of said reversing end portions to facilitate the reversal of direction of movement of said follower longitudinally of said guide roller, each of said reversing end portions having an outside curved guide surface of a greater height than the height of said groove portions.

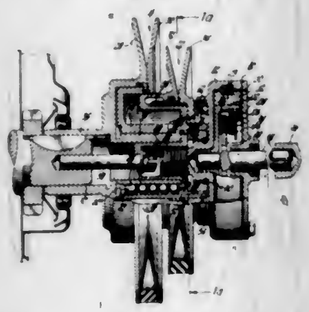
3,048,055
CONTROLLED COUPLING AUTOMATIC TRANSMISSIONS
August H. Borman, Jr., and Forrest R. Cheek, Detroit, Milton H. Scheiter, Dearborn, and Walter B. Herndon, Ann Arbor, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 27, 1954, Ser. No. 477,832
16 Claims. (Cl. 74—645)



1. A transmission for a throttle controlled engine, said transmission comprising a plurality of planetary gear units providing a plurality of forward drive ratios and reverse drive, two of said planetary gear units being in series drive relation for said plurality of forward drive ratios, one of said two planetary units having a driving element, a reaction element and a driven element, a fluid coupling having the pump thereof connected to rotate with said driving element and the turbine thereof to rotate with another of said elements, said coupling when filled with fluid transmitting torque to cause rotation of said elements at substantially the same speed, means for preventing rotation of said reaction element in one direction when said coupling is empty, said coupling being filled to complete the transmission of torque through said transmission at a relatively low speed ratio and a relatively high speed ratio, said coupling being emptied during the transmission of torque through said transmission at a speed ratio intermediate said relatively low speed ratio and relatively high speed ratio, a valve for controlling the filling and emptying of said coupling, a source of fluid under pressure connected to said valve, said valve being subject to fluid pressure varying in accordance with the speed of the output of said transmission, said valve being subject to fluid pressure varying in accordance with the throttle position for said engine, said last mentioned pressures acting in opposition one to the other whereby movement of said valve to cause filling of said coupling with fluid from said source for the completion of said relatively low speed ratio is under the joint control of transmission output

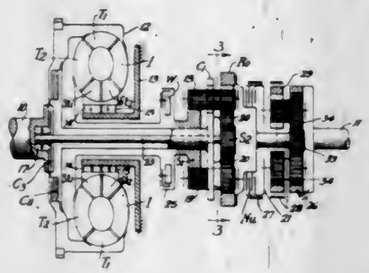
speed and throttle opening, means for interrupting supply of fluid pressure, varying in accordance with the speed of the output of the transmission, to said valve during the transmission of torque through said transmission at a speed ratio intermediate said relatively low speed ratio and relatively high speed ratio and means for causing said control valve to be subject to the pressure from said source to move it for filling of said coupling to complete said relatively high speed ratio.

3,048,056
DRIVE SYSTEM
William S. Wolfram, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 10, 1958, Ser. No. 727,674
20 Claims. (Cl. 74—665)



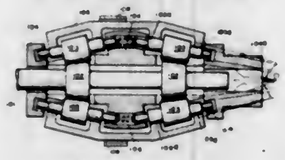
1. In a drive system, the combination of drive transferring means operative to transmit torque for overcoming a load at a plurality of drive ratios, a source of resistance torque separate from the load and also separate from the drive transferring means, and speed responsive means for controlling the introduction of the resistance torque into the drive system in opposition to the transmitted torque so as to cause the drive transferring means to be conditioned for the different drive ratios.

3,048,057
TRANSMISSION
Adiel Y. Dodge, % A. Y. Dodge Co., 206 S. Main St., Rockford, Ill.
Filed Oct. 26, 1959, Ser. No. 848,780
6 Claims. (Cl. 74—677)



1. A transmission comprising a hydraulic torque converter having driving means, driven means and reaction means, a differential gear set including four relatively rotatable elements interconnected by gearing, means to connect a load to be driven to a first of said elements, means to connect the torque converter driving means to a source of power to be driven therefrom, clutch means to connect the source of power to a second element of the gear set, and means to connect the remaining two elements of the gear set to the torque converter driven means to be driven thereby, the gearing being so constructed and arranged that one of said remaining two elements acts therethrough with one of said remaining two elements is connected to the driven means and said clutch means is engaged to drive said first and second elements in a forward direction to produce a regenerative drive and when both of said remaining two elements are connected to the driven means said two remaining elements act through the gearing when said clutch means is disengaged to produce a hydraulic drive and when said clutch means is engaged to produce a two-path mechanical and hydraulic non-regenerative drive, the clutch means including a one-way clutch to prevent the second element from overrunning the source of power in a forward direction and a controllable clutch to drive the second element in a forward direction from the source of power.

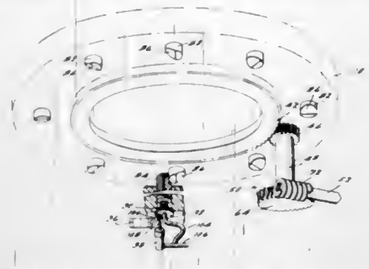
3,048,058
TRANSMISSION
Walter Valdemar Chery, 908 Fairview Ave., Meadville, Pa.
Filed Apr. 27, 1960, Ser. No. 24,925
6 Claims. (Cl. 74—798)



1. A planetary transmission comprising first and second planetary rolls, a ring housing having an internal ring surface for said first planetary rolls and an internal ring surface for said second planetary rolls, a shaft, said ring surface for said first rolls inclined toward the output end and toward said shaft and said ring surface for said second rolls inclined toward the input end and toward said shaft, said shaft having spaced frustoconical shaped sun rolls fixed to said shaft with the large ends of said sun rolls toward each other, said planetary rolls having an outside surface in rolling contact with said sun rolls, said planetary rolls being in rolling contact with said ring surfaces, a planetary cage carrying said planetary rolls, a drive shaft fixed to said planetary cage, and a compression spring disposed between each said first planetary roll and each said second planetary roll and urging said first planetary rolls away from said second planetary rolls, urging said planetary rolls symmetrically into engagement with said ring surfaces and the surfaces of said sun rolls.

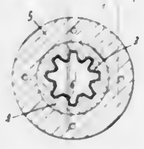
3,048,059
INDEX TABLE FOR MACHINE TOOLS
Ralph E. Cross, Grosse Pointe Shores, Mich., assignor to The Cross Company, Fraser, Mich., a corporation of Michigan
Filed Jan. 11, 1960, Ser. No. 1,613
9 Claims. (Cl. 74—819)

1. In a machine tool, an indexable table having a plurality of index stops spaced in accordance with the indexing movement of said table, a reversible drive for advancing and retracting said table, a reciprocable locating pin positioned to be contacted successively by said index stops during advancement of said table, cam means cooperating between said index stops and said locating pin for slidably actuating the latter as each stop advances against said pin whereby each stop overrides the pin and actuates the latter as a result thereof, said drive including switch means actuable to one switch position by said locating pin upon overriding movement thereof by one of said index stops to retract said table whereby to return the overriding stop into a butting engagement with said



pin, and means rendered operative by retractive butting engagement of each index stop with said pin to move said switch to another switch position.

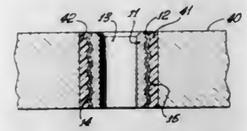
3,048,060
METHOD OF MAKING ARTICLES HAVING INTERNAL SURFACE OF DESIRED CONTOUR AND ARTICLES PRODUCED THEREBY
Robert G. Rudness, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed Mar. 25, 1957, Ser. No. 648,265
2 Claims. (Cl. 76—107)



1. Method of fabricating metal articles having an internal surface of built-up deposited layer material consisting essentially of refractory hard surfacing material comprising providing a temporary male master having an external surface of metal having a melting point over 600° F. and complementary in contour to the desired internal surface, detonating a body of gas containing particles consisting essentially of said refractory hard facing material therein, directing the products of said detonation against said external metal surface of said master, thereby applying a coating of such deposited essentially refractory hard surfaced layer material to said external surface of said temporary male master, covering said coating of deposited essentially refractory hard surfaced layer material with a suitable back-up material coating to the desired thickness to form an assembly, and removing said temporary male master from said assembly to produce an article having an internal surface of built-up deposited essentially refractory hard surfacing layer material.

3,048,061
CERAMIC COATED BUSHINGS AND ALLIED PRODUCTS
Joseph J. Mele, North Bellmore, N.Y., assignor, by mesne assignments, to American Drill Bushing Co., a corporation of Maryland
Original application Dec. 15, 1958, Ser. No. 780,528. Divided and this application Jan. 9, 1961, Ser. No. 93,827
3 Claims. (Cl. 77—62)

1. A drill bushing comprising an inside generally cylindrical metal bushing having a drill passage therethrough and opposed circular end surfaces defining the end openings of the drill passage, said metal bushing having a circumferentially continuous side wall extending to and between said end surfaces and having a pattern of configurations on the exterior surface of said side wall, and a coating of ceramic material completely enveloping said exterior side surface, said coating being flame sprayed on said exterior surface and having on the outside area of the coating a modified replica of the exterior surface of



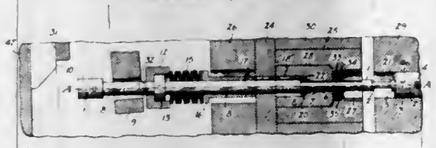
the metal bushing wherein configurations are rounded to a greater degree than on said exterior surface and said end surfaces being uncoated.

3,048,062
LOCK INSTALLING TOOL
Ira C. Bass, % L. K. Jones, Rte. 1, Newberry, Fla.
Filed Sept. 23, 1959, Ser. No. 841,737
12 Claims. (Cl. 77—62)



1. A tool to facilitate drilling openings in a door to accept a conventional door latch, said tool including a pair of plates adapted to fit flush against side faces of the door, guide means for a first drill bit connected with one of said plates, guide means for a second drill bit, a wall attached to one of said plates and to which the guide means for the second drill bit are secured with the longitudinal axes of said guide means at right angles to each other, and space adjusting means rigidly interconnecting said plates at spaced locations for adjusting the spacing of said plates in front of a front edge of the door and also at the same time squaring and clamping the plates on the opposing side faces of the door.

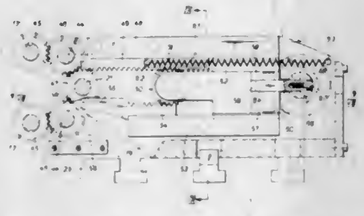
3,048,063
DOUBLE BLOW HEADER
Henry B. Chatfield, % Metaflo Research, 2683 Halladay St., Santa Ana, Calif.
Filed Mar. 9, 1960, Ser. No. 13,824
5 Claims. (Cl. 78—9)



1. In combination, a frame, a die assembly and an ejector rod mounted on the frame, and punch means adapted to sequentially engage work-pieces in said die assembly, an ejector pin on the die assembly end of the ejector rod with a smaller diameter than the ejector rod, an ejector sleeve fitting over said ejector pin with a slip-fit, a back-up block adapted to engage and disengage the other end of said ejector rod, a collar on the ejector rod between the ejector sleeve and back-up end of said ejector rod, a cap fitting over said collar with portions projecting forward therefrom toward the die assembly, a knockout bar adapted to strike said cap, spring means on said ejector rod which engage said cap and are located between said cap and the die assembly, and means spacing

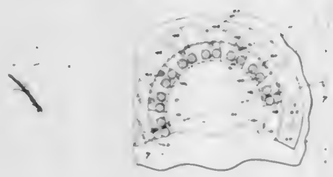
the forward end of said spring means from said ejector sleeve and being reciprocable along the axis of the ejector rod, said cap being spaced from said collar by said spring means in the normal position and being adapted to engage said collar only at the end of the stroke of the knock-out bar.

3,048,064
THREAD ROLLING METHOD AND APPARATUS
Jean Pierre Hofer, 11 Bedford Gardens, Hornchurch, England
Filed Dec. 11, 1959, Ser. No. 858,952
Claims priority, application Switzerland Dec. 17, 1958
2 Claims. (Cl. 80—6)



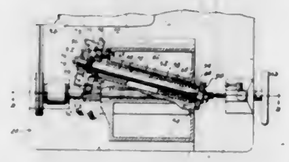
F. A thread rolling apparatus comprising a pair of threading rolls disposed diametrically opposite each other relatively to the axis of rotation of a workpiece placed therebetween, a pair of eccentrics each rotatably carrying one of said threading rolls, a pair of shafts extending parallel to said axis of rotation, each shaft carrying one of said eccentrics for rotation therewith, a pair of double-armed levers, a common journal pin carrying said levers and extending parallel with said axis of rotation, one end of each lever carrying one of said eccentric shafts, a gear wheel fixed to each of said eccentric shafts, a gear wheel loose on said common journal pin and connected with both said gear wheels on the eccentric shafts to make said eccentric shafts rotate together in the same direction, means interconnecting said threading rolls for preventing relative movement of the rolls on their eccentrics, a longitudinally slidable gear rack meshing with said gear wheel on the common journal pin of said levers, a second longitudinally slidable gear rack extending parallel to said first mentioned gear rack and abutting against one of said levers, a gear wheel meshing with both racks, and a power operated slide rotatably carrying said gear wheel meshing with both racks.

3,048,065
MACHINE FOR THREAD ROLLING
Daniel H. Prutton, Cuyahoga, Ohio
(Rte. 1, Box 263A, Valley City, Medina County, Ohio)
Original application Oct. 21, 1953, Ser. No. 387,378. Divided and this application May 21, 1958, Ser. No. 736,798
6 Claims. (Cl. 80—7)



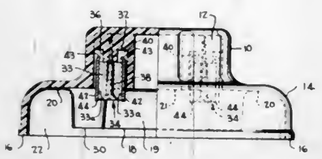
6. In a machine for rolling forms on workpieces with generally cylindrical surfaces, comprising two stationary members with the first having a peripheral generally arcuate surface and the second having a more generally arcuate surface, one of said generally arcuate surfaces being located generally equidistant from a central axis and being a form rolling surface on which each workpiece rolls, a carrier rotatably mounted on said members for rotation about the central axis of the arcuate form rolling surface, means for rotatably driving said carrier about said axis, a slide slidably mounted on said carrier for generally radial reciprocation relative to said one arcuate surface and relative to said carrier, two generally cylindrical form rolling dies arcuately spaced apart about said axis and freely rotatably secured to said slide for rotation about die axes generally parallel to said central axis for rolling a form on the generally cylindrical surface of a workpiece held between said two dies and said one form rolling surface, said dies and said one surface being constructed so that said workpiece is located between said dies and said generally arcuate form rolling surface and is carried with said slide and carrier about said central axis, said dies and said generally arcuate form rolling surface forming a workpiece carrier maintaining the axis of said workpiece generally fixed relative to said slide during said rotation and generally parallel to said central axis, the other of said arcuate surfaces forming a stationary cam fixed against movement relative to said one arcuate surface, and a coacting cam follower on said slide, said cam extending in an arc around said central axis and located to urge said dies by said follower toward said one generally arcuate form rolling surface during rotation of said carrier about said central axis for gradually rolling the form deeper on the generally cylindrical surface of the workpiece.

3,048,066
GEAR ROLLING APPARATUS
Benjamin F. Bregi, Grosse Pointe, and Thomas S. Gates, Grosse Pointe Woods, Mich., assignors to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Nov. 3, 1958, Ser. No. 771,596
4 Claims. (Cl. 80—16)



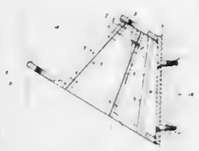
3. Rolling apparatus comprising a base, a work support on said base, a work supporting shaft carried by said work support, means for supporting a master gear in axial alignment with and in spaced relation to said work supporting shaft, means for removably securing a work gear to one end of said shaft, a carriage coaxial with said work supporting shaft positioned between a work gear secured to said shaft and said master gear, means for producing relative movement between said shaft and carriage axially of said shaft, a plurality of independently rotatable roll supporting shafts journaled to said carriage, the axes of said roll supporting shafts being inclined in crossing relation to the axis of rotation of the work supporting shaft, said roll supporting shafts being disposed at uniform circumferential spacing about the axis of said work supporting shaft, means at one end of said roll supporting shafts for removably supporting and axially positioning work forming rolls in relation to the work gear, conical involute gears, means angularly adjustably securing said conical involute gears to the other end of the roll supporting shafts in mesh with the master gear for directly driving said roll supporting shafts on relative rotation between said master gear and carriage, and means for producing relative rotation between said master gear and carriage.

3,048,067
RADIATOR CAP TOOL
Leroy E. Miles and Joseph P. Miles, both of P.O. Box 92, Lumberton, Miss.
Filed Feb. 14, 1961, Ser. No. 89,253
3 Claims. (Cl. 81—3.1)



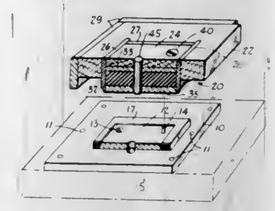
1. A radiator cap removing and holding tool comprising a generally bell shaped circular shield defining a downwardly opening recess of substantially greater lateral extent than a conventional radiator pressure cap, relatively circumferentially spaced pairs of abutments fixed to the shield and depending into said recess from said shield, said pairs of abtuments being relatively spaced diametrically of the recess sufficiently to receive between them the circular portion of such a pressure cap, said spaced abutments of each said pair being positioned to receive between them the usual radial gripping lugs of the cap, to thereby interlock the cap and lugs together for rotary movement, and magnetic means disposed in said recess, said means including a magnetic body fixedly secured to said tool with its poles in the form of flat surfaces facing generally diametrically of the said recess and shield, in combination with plates of magnetic material magnetically attracted to and in slidable engagement with the said respective flat pole surfaces, the lower ends of said plates projecting downwardly into said recess and functioning as extensible and retractible magnetic poles for operative holding engagement with said cap.

3,048,068
CLOSURE REMOVER DEVICE
Lyman L. Griffiths, 1130 Mission Ave., San Rafael, Calif.
Filed Jan. 13, 1961, Ser. No. 82,576
1 Claim. (Cl. 81—3.3)



A device for loosening closures on containers comprising a bottom ring and a top ring of smaller diameter than the bottom ring, a plurality of circumferentially spaced gripping bars connecting said rings and converging toward said top ring to grip closures of various sizes, friction means on the portions of said bars facing inwardly of the space included by said converging bars, and a mounting member between said rings for mounting said device on a surface and converging toward said top ring so as to hold the bottom ring at an incline away from the surface on which said mounting member is mounted, the spacing between at least two adjacent bars being of a width to provide turning space for a projection extending from a container.

3,048,069
STRIPPER FOR RULE DIE SETS
Milton Berlin, Forest Hills, and Lawrence M. Rheingold, Baldwin, N.Y., assignors to Templet Industries, Incorporated, Brooklyn, N.Y., a corporation of New York
Filed Apr. 3, 1957, Ser. No. 650,485
4 Claims. (Cl. 83—123)

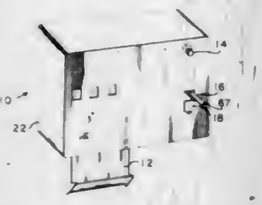


1. In a die set for stamping a shape from sheet metal: a male punch member having a certain shape, a female die member, means mounting said male punch member and said female die member in mutual alignment and for relative reciprocatable translatory movement toward and away from one another from spaced into operative telescopic engagement, said female die member including an outer compressible die block having a through opening therein of a closed shape congruous to and larger than the shape of the male punch member and an inner compressible die block within said opening, said opening and the outer periphery of said inner die block having complemental edge surfaces, plural rule die blades defining a constrictable closed shape the inner periphery of which is congruous to the shape of the opening in the outer die block and is adjustable by constriction to a shape matching the shape of the male punch member, said rule die blades being located between said complemental surfaces and being in contact therewith over the entire length of said surfaces, said rule die blades having longitudinal edge portions protruding beyond said die blocks and toward the male punch member, means pressing inwardly against substantially the entire outer periphery of the outer die block and placing the die blocks and shape defined by the rule die blades under compression to compress said die blocks against the entire surfaces on the opposite sides of the rule die blades so as to align the shape defined by the rule die blades with the male punch member and reduce the shape defined by the rule die blades to that of the male punch member, and a stripper assembly associated with the female die member and located within the closed shape defined by the rule die blades, said stripper assembly including a rigid member having an outer periphery coextensive with and complementary to the inner periphery of the closed shape defined by the rule die blades, said outer periphery matching the shape of the male punch member, said rigid member being adjacent the inner die block and adjacent the protruding portion of the rule die blades and limiting reduction of the shape defined by the rule die blades under compression to a shape matching the shape of the male punch member, said shaped rigid member being free of the rule die blades except for compression of said blades therearound, whereby the female die member may be decompressed and disassembled and subsequently reassembled with the shape defined by the rule die blades matching the shape of the male punch member by virtue of the sizing action of the rigid member.

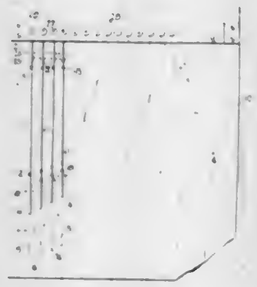
3,048,070
METHOD AND APPARATUS FOR DISPENSING
Robert C. Groves, 335 Aberdeen Ave., Dayton, Ohio
Filed July 13, 1956, Ser. No. 597,738
5 Claims. (Cl. 83—231)

1. In a dispensing device; a frame, a plurality of compartments in the frame in side by side relation for receiv-

ing elongated perforated strips to be dispensed, a plurality of coaxial drive sprockets in the frame which engage the perforations of said strips, a shaft fixed to each drive sprocket, said shafts being arranged in coaxial telescoping relation and being independently rotatable, a drive element connected with each shaft, an actuating member carried by the device for operation from externally of the device, said actuating member having an actuating element pivotally mounted thereon movable by movement of said actuating member into position to engage the drive elements on said shafts and to drive the drive elements and shafts and therefore said drive sprockets in one direction of movement only of said actuating member, control means operable for moving at least some of said drive elements selectively into position to be engaged by said actuating element or out of said position thereby to provide for selective actuation of said drive elements, a discharge passage in said frame into which said strips are fed at the top by said drive sprockets and which passage opens to the outside of said dispensing device at the bottom, a movable cutoff blade in said passage extending transversely thereon between the top and bottom thereof, and means drivingly connecting said cutoff blade with said actuating member for actuation of the cutoff blade in response to movement of said actuating member.

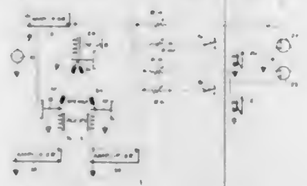


3,048,071
ELECTRICAL MUSICAL INSTRUMENT HAVING MECHANICALLY VIBRATABLE TONE GENERATORS
Jacob T. Kunz, Collegeville, Pa., assignor to Schulmerich Electronics, Inc., Sellersville, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 733,101, May 5, 1958. This application Apr. 27, 1960, Ser. No. 25,104
3 Claims. (Cl. 84—1.11)



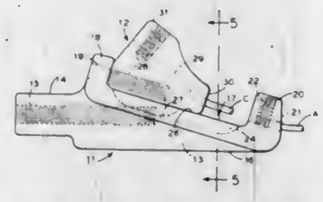
1. In an electrical music instrument for producing a plurality of resultant notes of a scale, the combination including first and second mechanically vibratable tone generators for each note of the scale, the first tone generator being so constructed that at least the first three partials are in octave relationship, striker means for striking said first tone generator at a location relative to the nodes of the first four partials thereof so that the first and second partials will be emphasized to thereby produce a harp-like tone, second striker means for striking said first tone generator at a location relative to the nodes of the first four partials so that the third and fourth partials will be emphasized to thereby produce a celesta-like tone, third striker means for striking said first tone generator at a location relative to the nodes of the first four partials to produce a tone different from that produced by said first tone generator when struck by said first two striker means, fourth striker means for striking said second tone generator, said second tone generator providing partials a predetermined interval above the tones produced by said first tone generator, means for energizing each of said striker means, and means for simultaneously operating said third and fourth striker means, so that when operated simultaneously, a resultant bell tone will be produced.

3,048,072
APPARATUS FOR PRODUCING PSEUDO-STEREOPHONIC EFFECTS
John M. Hanert, Des Plaines, Ill., assignor to Hammond Organ Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 24,944
4 Claims. (Cl. 84—1.24)



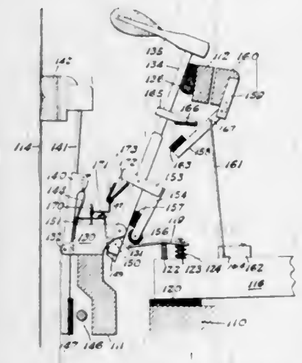
1. In an apparatus for improving the music as heard by the listener in which the source is a single audio frequency electrical signal, an electroacoustic driver having input terminals connected to the source, the driver having a movable element which moves in response to said audio frequency signal, a pair of solid delay introducing sound transmission springs having input and output ends, means connecting the input ends of said devices to the movable element of the driver, a pair of mechanico-electric pickup devices having movable parts connected separately, one to each of the other ends of said springs, a pair of electroacoustic translating means and means coupling the pickup devices separately, one to each of the electroacoustic translating means.

3,048,073
MUSICAL STRING TUNING DEVICE
Warren Herman Farr, Grosse Pointe Farms, Mich., assignor to Winter & Company, Inc., Bronx, N.Y., a corporation of New York
Filed Oct. 16, 1959, Ser. No. 846,979
2 Claims. (Cl. 84—205)



1. Piano string adjusting means comprising a primary slide member and a pair of laterally related secondary slide members slidably arranged on said primary slide member, said primary slide member including a flat surface for slidably receiving said secondary slide members, cooperating means on said primary slide member and each of said secondary slide members for guiding the independent movement of said secondary slide members relative to said primary slide member, an upstanding forward portion and an upstanding rear portion, said forward portion being formed with a string passage and a threaded recess intersecting said passage for receiving a lock screw, each of said secondary slide members being formed with a threaded recess extending rearwardly thereof, a string passage and a second threaded recess intersecting said last mentioned string passage for receiving a lock screw, the upstanding rear portion of said primary slide member being formed with a through opening in alignment with the first threaded recess in said secondary slide member, a screw passing through said through opening and threaded into the first threaded recess of said secondary slide member for advancing and retracting said secondary slide member relative to said primary slide member.

3,048,074
PIANO ACTION
Walter J. Quednau, 321 Vandervoort St., North Tonawanda, N.Y.
Filed Mar. 25, 1959, Ser. No. 801,805
14 Claims. (Cl. 84—240)



1. In a piano, a key and a generally upright piano string disposed behind the same, a relatively fixed support, a generally upright hammer shank between said key and string having a hammer head at its upper end and having pivotal mounting adjacent to its lower end on said support, a jack having pivotal connection to said hammer shank at a point substantially above the pivotal mounting of and lying along the hammer shank, said jack depending therefrom at the keyboard side of said hammer shank, the depending portion of said jack being movable toward and away from the hammer shank about its pivotal connection therewith, said jack depending portion and said hammer shank having portions lying between said hammer shank pivotal mounting and said jack pivotal connection adapted to abut laterally when the parts are in rest position, and plate means operable by depression of said key to move upwardly against said depending portion of the jack to pivot the hammer shank toward string striking position, said jack depending portion being adapted to move away from said hammer shank by overcenter movement of the lower end thereof on said plate means just prior to string impact to permit free rebound of said hammer head from the piano string.

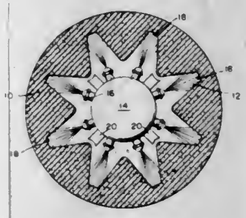
3,048,075
VISUAL SOUND REPRESENTATION
Gilbert M. Wright, 21642 Rambla Vista, Malibu, Calif.
Filed Aug. 8, 1960, Ser. No. 48,144
19 Claims. (Cl. 84—464)

1. A simple, inexpensive system which synchronizes the movement of a visual pattern with audible sound adapted for use which aids research and education into the nature of sound, promotes advertising displays and increases entertainment, said system comprising: a sound representation unit including a flexibly-supported container at least partially filled with a liquid having therein a multiplicity of freely movable fine particles and shaped bodies, said fine particles and shaped bodies differing at least in one of the characteristics of density, color and transparency, and at least one electromechanical transducer operatively associated with said container, said transducer being adapted to convert its oscillating electrical current input into



mechanical vibrations of the container and into movements of the freely movable fine particles and shaped bodies; means for generating an oscillating electrical current correlated to sound; at least one speaker for converting its oscillating electrical current input into audible sound; and means for transmitting said oscillating electrical current to said transducer and speaker to produce audible sound accompanied by a varying color pattern caused by the synchronized movement of the freely movable fine particles and shaped bodies with said sound.

3,048,076
METHOD OF INHIBITING PROPELLENT GRAIN CRACKING
Erwin L. Capener, Ridgecrest, and Douglas D. Ordahl and Sydney Shefler, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 9, 1958, Ser. No. 779,260
12 Claims. (Cl. 86—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The method of inhibiting a propellent grain of internal star perforation cross-section from cracking due to thermal stresses comprising applying a coating of inhibiting material composed of a polymeric material in solvent solution to the bottom wall portions of the grooves of the internal perforation of the propellent grain where stresses are most concentrated.

3,048,077
CRIMPING DEVICE FOR SHOTGUN SHELLS
Clarence R. Shelton, 5534 Clark, Turner, Kans.
Filed Feb. 1, 1960, Ser. No. 5,966
2 Claims. (Cl. 86—40)

1. A crimping device for folding the forward end portion of the casing of a generally cylindrical shotgun shell inwardly to close said shell and to indent the folded-in portion of said casing circularly to a diameter less than that of the shell, whereby to provide a raised lip surrounding said indentation, said device comprising gen-

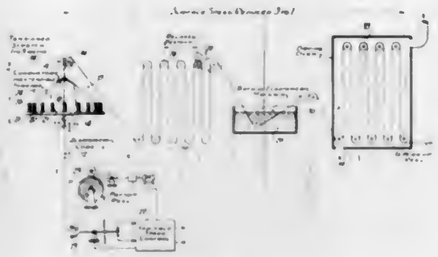
erally parallel and planar first and second press plates, means for moving said plates relatively closer together, a tubular sleeve adapted to be positioned between said plates with its axis parallel to the direction of relative movement thereof, whereby to limit the movement of said plates toward each other by engagement of its respective ends with said plates, said sleeve having a bore formed axially therethrough, one end portion of said bore forming a chamber conforming to the desired exterior size and shape of a finished shell, and being adapted to receive an open shell forward end first therein, and the other end portion of said bore being cylindrical and of reduced diameter, and constituting a die guide, the guide and chamber portions of said bore being separated by a curved shoulder facing toward the chamber end of the sleeve, a cylindrical forming die affixed to said first plate and projecting at right angles therefrom toward said second plate to a distance substantially equal to the axial length of said die guide, and being of a diameter to fit slidably in said guide, said forming die having a conical depression formed in the outer end



thereof coaxially therewith, said second plate having a circular, flat-bottomed recess formed in the surface thereof, facing said first plate, and in axial alignment with said forming die, said recess having a depth substantially equal to the depth of the indentation to be formed in the shell casing, and having a diameter greater than that of the base of said shell but less than the external diameter of said sleeve, and a generally cylindrical finishing die also fixed in said first plate, in spaced apart relation from said forming die, and extending at right angles therefrom toward said second plate to a distance substantially equal to the axial length of said guide plus the depth of the indentation to be formed in the end of said shell, and being of a diameter to engage slidably in said guide, the outer end of said finishing die being planar and at right angles to the axis thereof, and corresponding in diameter to the desired diameter of said indentation, said sleeve being adapted to be moved on said second plate to receive said forming and finishing dies successively in the guide portion thereof, said first and second plates being uniformly spaced apart at all points except at the recess in said second plate.

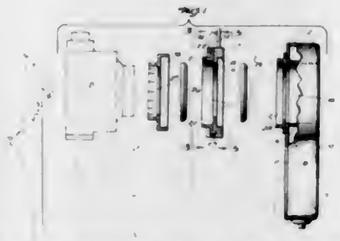
3,048,078
METHOD OF PRODUCING EXTENSIBLE ELECTRIC CABLES
Michael L. Kaplan, deceased, late of New Rochelle, N.Y., by Philip Kaplan, 28 Vaughn Ave., New Rochelle, N.Y., and National Bank of Westchester, White Plains, P.O. Box 1072, White Plains, N.Y., executors
Filed Apr. 29, 1960, Ser. No. 25,646
7 Claims. (Cl. 87—1)

1. A method of producing extensible cable which comprises continuously feeding a stretchable neoprene core, placing said core under tension to stretch it to a predetermined extent within the range of from at least 50% of its length in the relaxed state to below the elastic limit of said core, while stretched to said predetermined extent braiding a sheath constituted of conductors and inextensible threads in side by side interlocking relation on said core, releasing the tension on said core to cause



it to return to substantially the relaxed state and to contract the braided sheath, and passing the sheathed core through a neoprene coagulating bath and a neoprene latex bath to provide an insulating neoprene coating atop said sheathed core.

3,048,079
COMBINATION LIGHT AND LENS MOUNT FOR CAMERAS
Lester A. Dine, 88 State Lane, and Edgar S. Lemmey, 17 Hollow Lane, both of Levittown, N.Y.
Filed Oct. 30, 1957, Ser. No. 693,449
5 Claims. (Cl. 88—1)



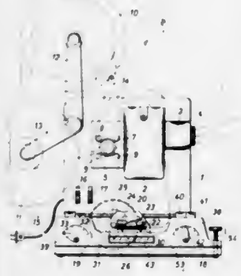
1. A quick-change auxiliary lens mount for fast detachable securement to cameras comprising, an adapter detachably securable to the lens mount of a camera, and a two-part auxiliary lens holder detachably securable to said adapter for forming an auxiliary lens holding chamber therewith and including a pair of coaxial end-abutting sleeves pivotally secured adjacent their peripheries to provide relative swinging motion therebetween in the plane of end-abutment, a first one of said sleeves being flanged outwardly at its abutting end, the second of said sleeves having an apertured wall at its abutting end cross-axially oriented relative to the sleeve axis and having a peripherally extending grooved rib adapted to receive the flange of said first sleeve when said sleeves are pivoted into coaxial end-abutting relation, and means associated with said adapter and one of said pair of coaxial sleeves for detachably securing the same together so that the axis of said secured sleeve becomes substantially coaxial with the focal axis of the lens of a camera to which said adapter may be secured and so that the said apertured wall of said second sleeve is disposed forwardly of and spaced apart from the adapter to thereby form an auxiliary lens holding chamber therebetween, said chamber being openable for inserting or withdrawing an auxiliary lens by pivoting said sleeves out of coaxial end-abutting relation and said chamber being closable for retaining a lens therewithin by pivoting said sleeves back into coaxial end-abutting relation.

3,048,080
SPECTROSCOPIC DEVICE
John U. White, Darien, Conn. (% The White Development Corp., 80 Lincoln Ave., Stamford, Conn.)
Filed Nov. 2, 1959, Ser. No. 850,124
20 Claims. (Cl. 88—14)



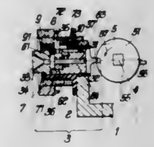
1. In an apparatus for producing a portion of a spectrum, in combination, means for admitting light from a source and directing the same along a path, a collimating mirror positioned along said path with its optical axis at an oblique angle with respect thereto, a dispersing element and light receiving means disposed along said path, said collimating mirror and said dispersing element being adapted to form at said receiving means a dispersed image of the light from said source, said collimating mirror tending to produce aberrations in said dispersed image, and mirror means for improving the definition of said dispersed image, said mirror means including a curved reflecting surface angularly positioned in the path of said light in a manner such that the angle of incidence of the light thereat is substantially greater than that of the light at said collimating mirror, said last-mentioned means introducing controlled aberrations in said dispersed image of a sense opposite to the aberrations produced in said image by said collimating mirror, whereby the net aberrations in said image which result from said collimating mirror are reduced.

3,048,081
DEVICE FOR THE REPRODUCTION OF SOUND MOTION PICTURE FILMS
Friedrich Biedermann, Unterhaching, Munich, and Hans Pregl, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Aug. 18, 1958, Ser. No. 755,449
Claims priority, application Germany Aug. 28, 1957
5 Claims. (Cl. 88—16.2)



1. A device for reproducing sound motion picture film comprising a film projection unit, a combination sound-recording and reproducing unit through which motion picture film having a sound track applied thereto is passed, said film projection and said combination sound-recording and reproducing units being incorporated within separate structural units to permit said film projection unit to be independently used as a silent film projector, film-projecting means mounted upon the side of said film projection unit, said units including detachable coupling means for connecting them together with said film projection unit mounted upon said sound unit for the reproduction of sound motion picture film, said sound unit being constructed and arranged in a relatively flat lectern-shaped casing, a recording roller and sound heads mounted upon the side of said casing, said recording roller being mounted upon the outer end of a shaft having a horizontal axis of rotation, the side of said casing including an indentation within which said sound heads and recording roller are receved for disposing them under and in line with said film projecting means when said film projection and sound units are connected together, said shaft being rotatably mounted adjacent the top of said casing, a flywheel having a diameter greater than the height of said casing mounted upon an extension of said shaft within said casing and protruding a substantial distance above the upper surface of said casing of said sound unit, and a recess being provided within the bottom of said film projection unit within which said flywheel is received when said units are coupled together whereby said units are compactly assembled with said recording roller and said sound heads disposed at the standard film distance from said film projecting means.

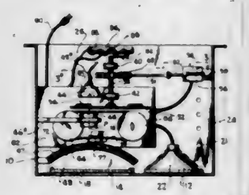
3,048,082
TRANSMISSION CONTROL FOR MOTION PICTURE CAMERAS
Alfredo Ferrari and Adolf Gasser, Mauren, Liechtenstein, assignors to Contina Bureaux- und Rechenmaschinenfabrik, Aktiengesellschaft, Mauren, Liechtenstein
Filed Sept. 8, 1959, Ser. No. 838,758
Claims priority, application Austria Sept. 13, 1958
8 Claims. (Cl. 88—18)



1. A control arrangement for the transmission for moving the film and operating the shutter in motion picture cameras, said transmission control arrangement comprising, in combination, a release member for the transmission, said release member being adapted to release the operation of the transmission in one end position and to block the operation of the transmission in the other end position, one end of said release member consisting of a forked part, the prongs of said forked part being relatively spaced in the direction of displacement of said release member and transversely thereto, said prongs being long and short owing to their spacing in the direction of displacement, a transmission part associated with the release member, said transmission part consisting of a disc, projections carried by said disc at the rim thereof on both end faces, said projections being peripherally spaced from each other, said forked part embracing the rim of said disc, a preselector for serial exposures, stills with instantaneous and time exposures, self-shots and a locked position, said projections being so related to each other that in the locked position of the preselector one projection of the disc engages a projection formed by said long prong in the direction of rotation of the disc, that in the still position of the release member the projection formed by the long prong lies outside of the orbit of said end face projection of the disc and the projection formed by the short prong lies after one turn in the path of the other end face pro-

jection of the disc, and that in the serial exposure position of the preselector the projections formed by the long and short prongs lie outside the orbit of the end face projections of the disc, a preselector said preselector being adapted to move the release member and its forked part to said positions in which either the short prong or the long one or neither of them lies in the path of one or the other of the two end face projections of the disc.

3,048,083
AUDITORY AND VISUAL ADVERTISING DEVICE
Alan S. Rosenbaum, 1605 Oriental Blvd., Brooklyn, N.Y.
Filed Sept. 18, 1959, Ser. No. 840,841
1 Claim. (Cl. 88—28)



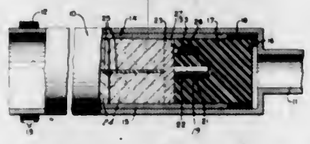
An apparatus of the kind described, comprising a rotatable disk carrying a plurality of circumferentially spaced pictorial elements, optical means for displaying each of said elements on a screen, mechanical means for rotating said disk intermittently to position each of said elements in turn for display by said optical means, switch means having a plurality of fixed contacts and a rotatable arm, said arm being rotated by said mechanical means in coordination with said disk to each of said contacts in turn, an endless belt having a sound track and sound head for each pictorial element, and having means for actuating said mechanical means to rotate said disk and to advance successive elements for display by said optical means, said tracks being disposed parallel to each other on the belt, said tracks having spaced opposite ends, said sound heads being disposed on the belt in the space between said ends of the tracks, said screen being a translucent, curved optical member for displaying said elements in three dimensions, said mechanical means including a ratchet wheel mounted on a shaft carrying said disk, said control means including a solenoid in circuit with magnetic control head and a plunger operatively connected to engage and advance said ratchet wheel when the solenoid is energized, whereby said arm is rotated to each of said contacts in turn.

3,048,084
AUXILIARY MIRROR
Henry J. Iannuzzi, 53 Frederick Ave., Medford, Mass., assignor of ten percent to John Gallo, Sr., Boston, Mass.
Filed Nov. 7, 1960, Ser. No. 67,744
2 Claims. (Cl. 88—87)



1. An auxiliary rear view mirror for mounting on a conventional rear view mirror having a frusto-conical stub rod at the center and a hollow exteriorly threaded boss surrounding said stub rod, a closed end receptacle threaded on its exterior and having a lengthwise positioned slot in its side wall, a clamping nut securing the closed end receptacle onto the hollow threaded boss, a rod extending through the lengthwise positioned slot and having a ball on its end positioned against the frusto-conical stub rod, a coiled compression spring between said ball and the closed end of said receptacle, and a bracket for mounting said auxiliary rear view mirror on the conventional rear view mirror comprised by a loop surrounding the other end of the rod, parallel straps integrally formed with the ends of said loop, oppositely disposed arms on said straps for engaging the frame of the conventional mirror, and a clamping member engaging said parallel straps for holding the loop on the rod and the oppositely extending arms onto the frame of the conventional mirror.

3,048,085
FLARE CANDLE
Paul J. Dickey, Sunland, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 23, 1956, Ser. No. 580,148
1 Claim. (Cl. 89—1)



In a gun for projecting a flare device, said gun having means for setting up a magnetic field adjacent to the muzzle thereof of predetermined flux density through which the flare device must pass, in combination, a flare device comprising a tube within which is disposed a plurality of flare candles in abutting end-to-end relation, an igniter train in each of said candles, a plug element closing the rear end of the tube and having an induction pickup coil disposed peripherally thereabout, an electrical primer carried by said plug element and operatively connected to said coil in such manner as to be operated thereby as the coil moves through said magnetic field, a normally closed inertia actuated switch connected across said primer thereby to provide a short circuit thereacross, said switch comprising a pair of contact elements and a spherical conducting mass movably disposed within a bore within said plug element parallel to the axis thereof, and a coiled spring for normally maintaining the conducting mass in a forward position in engagement with said contact elements until the mass is moved rearwardly therefrom by inertia in response to the setback force acting thereon as the device is fired from the gun, means connecting said switch to the plug element in a manner to cause the switch to be opened by setback force while the coil is passing through said field as the device is fired from the gun whereby the primer is actuated by a current induced in said coil, a pyrotechnic delay element carried by said plug element and adapted to be actuated by said primer, and a propellant charge ignitable by said delay element and disposed between said plug element and said igniter train in the rearmost of said candles for igniting the candles and causing the candles to be ejected from the device during free flight of the device through the air in predetermined time delayed relation with respect to the actuation of said primer.

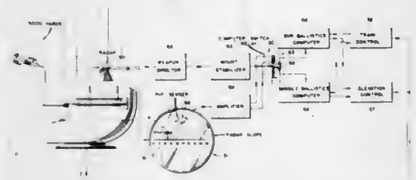
3,048,086
ROCKET-BOMB FIRING APPARATUS
Roger Aimé Robert, 33 Blvd. d'Angleterre, Le Vesinet, France, and Pierre Paul Matge, 32 Rue de la Somme, Cachan, France
Filed June 14, 1960, Ser. No. 36,074
Claims priority, application France June 17, 1959
1 Claim. (Cl. 89—1.7)

An armament device adapted to be launched from a carrier aircraft, said device comprising: a container having an axis of symmetry, a plurality of rockets, means supporting said rockets in said container, a propulsion unit in said container for propelling said container from said aircraft along a trajectory, said propulsion unit being fixedly secured in said container along the axis of symmetry to provide thrust for said container only in an axial direction, an empennage rearwardly supported on said container for stabilizing the same, the rockets being adapted for being launched from the container while the



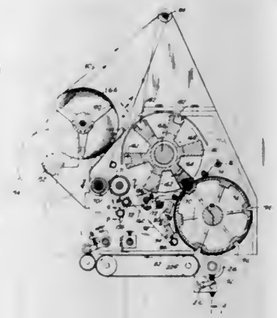
latter is being propelled by the propulsion unit, and deflector members positioned rearwardly of the means supporting said rockets and forwardly of the propulsion unit to guide exhaust gases of the rockets, a plurality of frangible portions symmetrically positioned on said container and adjacent said deflector members for permitting symmetrical discharge of said gases from the container, said empennage providing stability for said container with said rockets being launched to insure accuracy of said rockets.

3,048,087
WEAPON MOUNT
Ernest F. Campbell, Springfield, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 29, 1955, Ser. No. 525,403
4 Claims. (Cl. 89—41)
(Granted under Title 35, U.S. Code (1952), sec. 266)



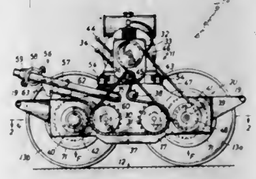
1. A missile handling apparatus for a multirange target destroying weapon comprising, a weapon mount movable in azimuth and elevation, a plurality of missile receiving and launching devices disposed on said weapon mount, a missile storage chamber positioned generally below and to one side of said weapon mount, said missile storage chamber having an upper pivoted door in that portion of the chamber nearest the weapon mount, a missile carrier located within said chamber for engaging and moving a missile from the chamber to one of said missile receiving and launching devices, a pivoted guide rail within the chamber adjacent the pivoted door for directing said missile carrier to said door, and means for elevating said pivoted guide rail to an elevated missile ejection position, whereby when said weapon mount is moved in azimuth and elevation to a position such that one of said missile receiving and launching devices is aligned with said pivoted guide rail in its elevated position, said missile carrier with a missile thereon may be advanced along said guide rail until said missile is engaged with the aligned missile receiving and launching device and secured thereon.

3,048,088
WINDOW APPLYING MACHINE FOR CONTAINERS
Paul E. Fischer, Cedar Grove, William A. Heatley, Jr., North Haledon, and Morris Sorkin, Bergenfield, N.J., assignors to Champlain Company, Inc., Roseland, N.J., a corporation of New York
Filed May 13, 1960, Ser. No. 28,998
13 Claims. (Cl. 93—36)



6. Apparatus for feeding a sheet to a delivery station, said apparatus comprising a moving carrier, and means for applying a high D.C. voltage to the sheet at the carrier in order to charge it electrostatically so that it adheres to the carrier, said means comprising a bar of suitable length extending in a direction transverse to the direction of movement of the carrier, said bar carrying pointed electrodes extending transversely of the bar, and a bus bar to which all of the electrodes are connected.
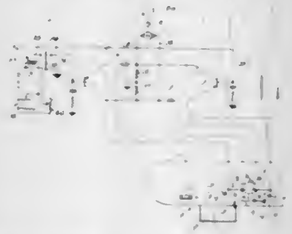
3,048,089
LAND ROLLER FOR ROLLING ROAD SURFACES AND THE LIKE
Benno Kaltenegger, Siegburg-Buisdorf, Germany, assignor to Bomag Boppardер Machinenbau-gesellschaft m.b.H., Boppard, Germany, a firm
Filed Aug. 18, 1959, Ser. No. 834,469
Claims priority, application Germany Sept. 12, 1958
5 Claims. (Cl. 94—50)



1. In a vehicular compaction device, a support frame, a pair of ground-engaging rollers journaled in tandem relation on parallel axes of rotation on said frame, each roller including vibration creating means reacting in out-of-phase relation with respect to each other on the axis of rotation of the respective rollers to alternately cause a downward thrust on the rollers urging them toward a support surface, said vibration means comprising a shaft journaled on said support frame in said rollers on the axis of rotation of said rollers, each of said shafts including weight means thereon in radially disposed eccentric relation with respect to the axis of rotation of said shafts for alternate vertical vibration of said rollers, said weight means being oriented on said shafts in 180° out-of-phase relation with respect to each other with both of said weight means being vertical relative to their centers of rotation at the same time, first drive means on said support frame and drivingly connected to said rollers for

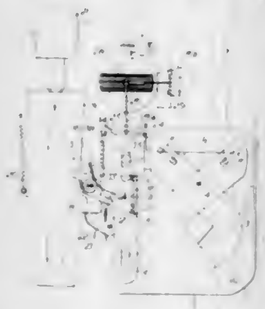
rotating the same in a common direction at the same angular velocity, and second drive means drivingly connected to said shafts for rotating the same independently of said first drive means and at a common angular velocity and in the same direction.

3,048,090
PHOTOGRAPHIC CAMERA
Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany
Filed Feb. 18, 1959, Ser. No. 794,193
Claims priority, application Germany Feb. 20, 1958
6 Claims. (Cl. 95—10)



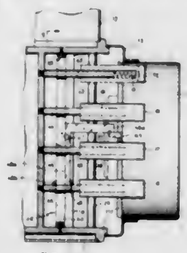
1. In a photographic camera, in combination, an exposure-setting device; an electric motor for actuating said device; an electronic amplifier means for energizing the motor, said means having an input circuit and an energizing output circuit, and having an exhaustible current source connected to the energizing output circuit; contact means in the said input circuit; a moving coil relay controlling said contact means; a photo-element for energizing said relay; a circuit breaker device in said energizing output circuit, for switching the same open and closed; and an operational part movably mounted on the camera and arranged to require actuation prior to effecting setting of the camera, connected with said breaker device to effect closing of the energizing circuit in response to the said actuation, said breaker device otherwise maintaining the output circuit open to prevent wasting of the said current source, said operable part comprising a movable cover for said photo-element; and a transmission mechanism effecting the connection between the breaker device and said operational part, said energizing circuit being switched closed when the cover is open and vice versa.

3,048,091
PHOTO-ELECTRIC EXPOSURE METER DEVICE
Horst Strehle, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Sept. 16, 1960, Ser. No. 56,570
4 Claims. (Cl. 95—10)



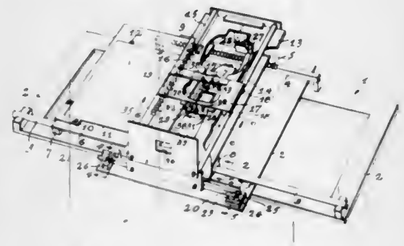
1. In a photographic camera having a housing, a shutter device including an apperture diaphragm mounted on the housing, a shutter operating mechanism, a photo-electric moving coil exposure meter, and an indicating pointer attached to the moving-coil, which pointer moves over a scale provided on the housing; the provision of a meter stop connected to the moving-coil, exposure factor setting means operatively connected to the aperture diaphragm and slidably mounted in the housing so as to be substantially rectilinearly movable towards the meter stop, which means is provided with a stepped cam to abut against the meter stop when the setting means is moved toward said meter stop, the setting means position when abutting against the meter stop depending upon the position of the latter, a drive spring connected between the housing and the setting means for urging the latter towards the meter stop, a camera release member operably connected to the shutter operating mechanism, a return spring connected to the camera release member to oppose operation of the release member, a transmission member coupled between the camera release member and the setting means in such a manner that the return spring is able to overcome the drive spring and to urge the setting means away from the meter stop when the camera release member is unoperated, while allowing the setting means to move toward the meter stop, under the action of the drive spring, upon operation of the camera release member, a clamping jaw slidably mounted on the setting means, said jaw being spring urged in the direction towards the meter stop, said jaw being disposed to clamp the meter stop on movement of the setting means towards the meter stop before the stepped cam abuts the meter stop, said jaw clamping the meter stop under the action of its spring on further movement of the setting means towards the meter stop to abut the stepped cam against the meter stop.

3,048,092
CAMERA
Johannes Gottschalk, Reutlingen, Germany, assignor to Dangelmaier & Co., Reutlingen, Germany
Filed Nov. 21, 1960, Ser. No. 70,668
Claims priority, application Germany Nov. 21, 1959
8 Claims. (Cl. 95—45)



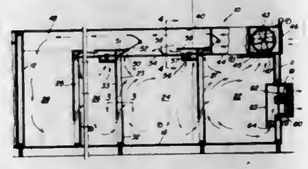
1. In a camera, in combination, support means; adjustable objective means carried by said support means; adjusting means operatively connected with said objective means for setting the latter; a plurality of manually operable members supported by said support means for respective movement along a plurality of given paths through a given distance along each path; a plurality of transmission means equal to the number of said manually operable members and all being operatively connected with said adjusting means for actuating the latter when any one of said plurality of transmission means is operated, said plurality of transmission means respectively providing said objective through said adjusting means with a plurality of different settings; means connecting said plurality of transmission means respectively with said pluraltiy of manually operable members for respective actuation by the latter only during a predetermined first fraction of the distance through which each of said manually operable members moves and for stopping the actuation of said plurality of transmission means by said plurality of manually operable members during the continued movement of each of the latter through the remainder of said distance; shutter release means carried by said support means; and an additional transmission means cooperating with said shutter release means for actuating the latter to release the shutter, said additional transmission means being located in the path of movement of all of said manually operable members when each of the latter moves through said remainder of said distance so that the operator may select one of said manually operable members to provide said objective with a selected setting during the initial part of the movement of said one manually operable member and for releasing the shutter during the continued movement of said one manually operable member through said remainder of said distance through which said member moves.

3,048,093
APPARATUS FOR MULTIPLE REGISTRATION OF A MASTER PATTERN
Alberto Loro, Ville Lemoyne, Quebec, Canada, assignor to Northern Electric Company Limited, a corporation of Canada
Filed June 15, 1960, Ser. No. 36,385
2 Claims. (Cl. 95—77)



1. In a contact printing machine, in combination:
(*a*) a base frame,
(*b*) a cylindrical rod and a rectangular register bar spaced transversely and positioned parallel to each other mounted in said frame, the register bar having cut in its upper surface a plurality of equally spaced 90 degree V shape grooves at 90 degrees to the length of the bar,
(*c*) a plate carrier mounted to travel in the longitudinal direction on said rod and bar, each location of said plate carrier being accurately reproducible through direct contact between said plate carrier and said frame at six points of restraint,
(*d*) a rigid bridge, mounted at 90 degrees to said frame and located above said plate carrier, removable from the frame and which can be replaced on the frame in a unique position by providing six restraints thereto consisting of three steel spheres rigidly mounted on the under surface of said bridge and arranged to respectively engage a cluster of three steel spheres, a V block and a plane surface rigidly mounted on the upper surface of the frame,
(*e*) a second cylindrical rod and rectangular register bar spaced longitudinally and positioned parallel to each other mounted on said bridge, the register bar having cut in its upper surface a plurality of equally spaced 90 degree V shape grooves at 90 degrees to the length of the bar,
(*f*) a negative carrier mounted to travel in the transverse direction on said second rod and bar, each location of said negative carrier being accurately reproducible through direct contact between said negative carrier and said bridge at six points of restraint,
(*g*) a negative mounting plate attached to the underside of said negative carrier such that a negative mounted thereon can move close to the upper surface of a photographic plate mounted on said plate carrier.

3,048,094
VENTILATING POULTRY HOUSE
William A. Bailey, 6910 Furman Parkway, Riverdale, Md., assignor to himself and George B. Sweet, Montgomery County, Md., as tenants by the entirety
Filed Sept. 23, 1959, Ser. No. 841,742
16 Claims. (Cl. 98—33)

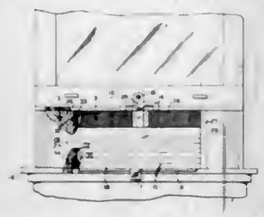


1. A ventilated poultry house or the like comprising a building having a pair of side walls, a pair of end walls, a floor and a ceiling, partition walls extending across said building between the side walls thereof and dividing said building into a series of pens, there being at least two end pens and an intermediate pen, an air duct extending above said pens longitudinally of said building, said air duct having an intake end at one end wall of said building and communicating with an atmosphere through an aperture in said one end wall, a push fan in said duct at said one end for forcing air through said duct from said one end to the opposite discharge end thereof, an aperture in said duct upstream of said fan and communicating with the end pen therebelow, thermostatically controlled motorized louver means in said apertures for modulating the temperature of the air forced by said fan, said duct having the discharge end thereof in unobstructed communication with the other end pen, the pens other than said other end pen each communicating with said duct through an opening in the ceiling thereof that is adjacent the partition wall of each said pen that is closest to the said other end pen, each said opening having a control vane associated therewith the said vanes being inclined towards said push fan to thereby direct air from said duct downwardly along the partition wall to which each said opening is adjacent, at least one intermediate pen having an auxiliary fan in the ceiling thereof communicating with an auxiliary duct positioned to discharge air into said air duct and to move air into said air duct in the same general direction as the air moves therein, said auxiliary fan being positioned adjacent the partition wall that is closest to the said push fan, said partition walls comprising spaced upright frame members, a sheathing on the side of the frame members closest to the push fan extending upwardly from the floor of the building to an intermediate level and a sheathing on the other side of the frame members extending downwardly from the ceiling to a level slightly below the level of said first mentioned sheathing, and a pull fan communicating with said one end pen for exhausting air therefrom to atmosphere whereby fresh temperate air may be supplied to each of said pens and air of proper temperature may be circulated into and through each of said pens to maintain proper temperature therein.

3,048,095
MOUNTING ARRANGEMENT FOR AIR CONDITIONERS
David Earle MacLeod, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,522
6 Claims. (Cl. 98—99)

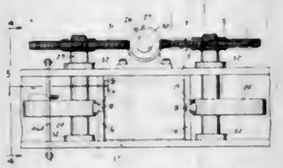
1. In combination with an air conditioning unit of the type adapted to be positioned in a window in a plu-

rality of positions and having a pair of opposite sides each with a plurality of pairs of vertically spaced means, each of said spaced means being adapted to engage one of a pair of hook-like clips, said plurality of pairs of spaced means being spaced along the width of said sides of the air conditioning unit to permit positioning of a side gasket in a corresponding plurality of positions along one of said sides of said unit, a mounting arrangement comprising a side panel fitted between the side of the



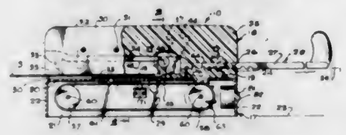
window and said one side of said air conditioning unit, said gasket being resilient and substantially coextensive with the height of said one side of said air conditioning unit and secured in sealing relation with said one side and in sealing engagement with said side panel, and said pair of hook-like clips each having a portion receiving said gasket adjacent an end thereof and a portion receiving one of said spaced means of a pair thereof on said one side of the air conditioning unit.

3,048,096
APPARATUS FOR FLATTENING CONTAINERS
Arthur R. Guedel, 5661 Laurel St., Indianapolis, Ind.
Filed Nov. 2, 1959, Ser. No. 850,217
2 Claims. (Cl. 100—215)



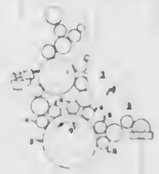
2. An apparatus for flattening cylindrical containers which comprises a horizontal base plate, a pair of parallel vertical pressure plates mounted for horizontal linear reciprocation toward and away from one another upon said base plate, a pair of annular members, a wheel mounted coaxially within each annular member for rotation about the axis of the wheel with respect to the respective annular member, each of said annular members being connected to a respective one of said pressure plates, a pair of vertical shafts each rotatably mounted on said base plate and each fixed to a respective one of said wheels at equally spaced locations from the axes of said wheels, a pair of identical side-by-side worm gears fixed coaxially of respective ones of said shafts, a worm positioned between and in driving engagement with each of said worm gears, said pressure plates and worm gears being operatively connected in such a manner that each pressure plate moves the farthest toward the other pressure plate at the same instant and as a result moves the farthest from the other pressure plate at the same instant, means for rotating said worm, an inclined guideway leading to said base plate for channeling containers between said pressure plates, said inclined guideway intersecting the path of reciprocation of said pressure plates so that the axis of a cylindrical container rolling thereon and therefrom onto said base plate is parallel to said direction of reciprocation, said base plate having an aperture therethrough only sufficiently large enough to allow containers compressed by said pressure plates to drop through said aperture, said aperture being located below the path of reciprocation of said pressure plates, and means including a cam on one of said wheels for releasing a container for gravity feed between said pressure plates each time said pressure plates are reciprocated.

3,048,097
CARD RECORDING AND SCANNING APPARATUS
Wendell S. Miller, 1341 Comstock Ave., Los Angeles, Calif.
Filed May 23, 1960, Ser. No. 30,954
21 Claims. (Cl. 101—47)



1. Apparatus for use with a series of cards or the like having information thereon including different identifying indicia on the different cards, said apparatus being adapted to receive and simultaneously support an individual one of said cards and also a sheet carrying indicia representing a predetermined group of said cards but not all of them, means for making a record of at least some of the information on said one card while it is supported by said apparatus, means for advancing said sheet along a predetermined path, scanning means for comparing said indicia on said sheet with the indicia on said one card as the sheet advances and including means for indicating to an operator when the indicia on said sheet includes indicia representing said one card, and a common actuating mechanism for simultaneously actuating said record making means and said sheet advancing means.

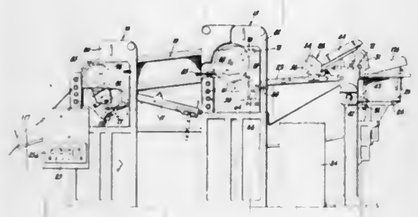
3,048,098
PRINTING PRESS AND METHOD
Carl O. Siebke, Allison Park, Pa., assignor to Miller Printing Machinery Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 12, 1960, Ser. No. 2,077
9 Claims. (Cl. 101—148)



1. In a printing press, a form cylinder, a form on the cylinder extending throughout less than the full circumference of the cylinder, means including roller means engaging the form for applying ink to the form, means for applying water to the form and means cooperating with the means for applying water to the form insuring applying water to the form by such roller means at a fixed rate of speed during operation of the press.

7. A method of improving the printing quality of a printing press of the type having a form cylinder with a form thereon extending throughout less than the full circumference of the cylinder and in which ink is applied to the form and water is applied to the form by rollers engaging the form for admixture with the ink comprising at all times when water is being applied to the form applying the water to the form by such rollers at a fixed rate of feed.

3,048,099
PRINTING PRESS
William W. Davidson, Jr., Port Washington, N.Y., Edward F. Dell, Stratford, Conn., and David E. Dykaar, Bayside, and William Ross Marlin, Wantagh, N.Y., assignors, by mesne assignments, to Mergenthaler Linotype Company, Brooklyn, N.Y., a corporation of New York
Filed July 16, 1959, Ser. No. 827,583
4 Claims. (Cl. 101—233)

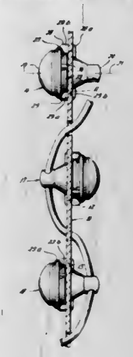


1. Apparatus for printing and assembling a pack of checking account forms including personalized checks and deposit slips, said apparatus comprising a first printing unit for imprinting the depositors identification mark on the forms that make up the aforesaid pack, a conveyor board for feeding forms to said first printing unit, a suction feed mechanism for delivering check blanks to said conveyor board, a friction feed mechanism for delivering deposit slip blanks to said conveyor board, means settable in accordance with the number of check blanks desired to be fed by said suction feed mechanism to said conveyor board, additional means settable in accordance with the number of deposit slips desired to be fed by said friction feed mechanism to said conveyor board, first counting means to count the number of check blanks fed by said suction feed mechanism, second counting means to count the number of deposit slips fed by said friction feed mechanism, means responsive to the feed of the desired number of forms by one of said feed mechanisms for arresting further feed of forms by said mechanism and initiating the feed of forms by the other of said feed mechanisms, means responsive to the feed of the desired number of forms by said other of said feed mechanisms for arresting further feed of forms therefrom, a second printing unit connected in tandem with said first printing unit and having a numbering head for numbering the check blanks fed thereto, a cam for indexing the numbering head so that the blank checks are numbered sequentially, a solenoid for moving said cam into and out of indexing position, means for determining when deposit slips are being fed to said second printing unit, means for controlling said solenoid so that said cam is out of indexing position when deposit slips are being printed, and a delivery mechanism for delivering forms from said second printing unit to an assembly station where a pack of checking account forms is assembled.

3,048,100
METHOD OF PRODUCING A WATERMARK DESIGN ON PAPER
Ian Mackenzie Livingstone, Lymington Road, London 6, England
No Drawing. Filed May 25, 1961, Ser. No. 112,537
5 Claims. (Cl. 101—426)

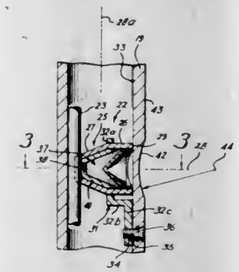
1. A process for watermarking paper which comprises printing on already manufactured paper a watermark design with a fluid essentially consisting of a cyclohexanone resin dissolved in a volatile solvent.

3,048,101
PERFORATING APPARATUS
Maurice P. Lebourg, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Feb. 23, 1960, Ser. No. 10,433
10 Claims. (Cl. 102—20)



9. Perforating apparatus for use in a well bore comprising a plurality of capsulated shaped charges having spaced radial projections and a slotted rear end, blasting cord sized for retention in the slotted rear ends of said charges, and an integral strip of ductile material having openings spaced along its length to receive said charges with the projections thereof spaced to engage on either side of said strip and having edgewise slots spaced intermediate and laterally of said first openings for receiving said blasting cord along said strip in a generally helical path including said slotted rear ends, said charges being restrained from rotation in said strip solely by said blasting cord.

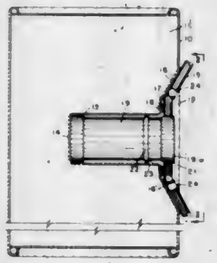
3,048,102
PERFORATING APPARATUS
Maurice P. Lebourg, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Jan. 30, 1959, Ser. No. 790,215
11 Claims. (Cl. 102—20)



1. A shaped charge perforating apparatus sized to be lowered and raised through a string of small-diametered tubing between the ground surface and a level desired to be perforated and adapted to retrieve the debris from the shaped charges therein comprising: an elongated, functionally integral tubular housing including inner and outer cylindrical wall surfaces, a portion of said housing having a bore of uniform diameter defined by said inner wall surface and having at least one indentation therein which extends inwardly from said outer wall surface towards said inner wall surface thereby forming a wall portion of reduced thickness, said wall portion of reduced thickness having sufficient strength to resist the effects of borehole pressures encountered, and being

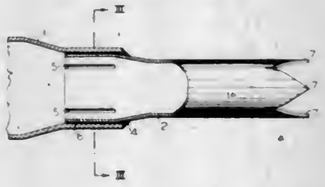
spaced inwardly from said outer wall surface a sufficient distance to contain the major portion of a burr formed within the cylindrical confines of said outer wall surface when the wall portion is penetrated, and perforating means disposed within said housing and sized to extend across substantially the diameter of said bore, said perforating means including an explosive material having a forward, hollowed-out end portion positioned adjacent to said wall portion of reduced thickness.

3,048,103
BLASTING ASSEMBLY
David R. Blair, Jr., Lyman G. Bonner, Homer W. Coleman, and John R. Ryan, Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 13, 1956, Ser. No. 621,607
9 Claims. (Cl. 102—22)



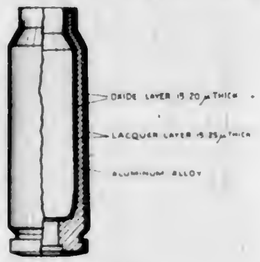
1. A blasting assembly comprising an elongated watertight blasting cartridge, and a side wall portion of said cartridge recessed toward the interior thereof; a detonatable explosive, as the sole explosive charge, within said cartridge insensitive to detonating action of a commercial blasting cap but sensitive to detonating action of a booster charge; as a booster well, a conduit closed at one end and open at the other end and extending, closed end first, from within said recess through the said recessed wall portion, into said main charge, and terminating therein; said booster well being adapted to contain a booster charge secured therein as a solid unitary body, in detonating relation with said main charge; and means for securing a detonator in spaced position from the open end of said well, and within the recess formed by said recessed wall portion.

3,048,104
AMMUNITION
Burd Joy Riggs, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Mar. 29, 1960, Ser. No. 18,418
4 Claims. (Cl. 102—39)



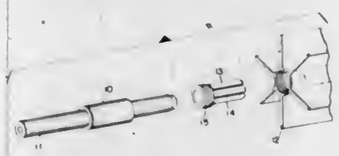
1. A round of blank ammunition comprising a primed cartridge case, a propellant charge within the case, a substantially tubular bullet jacket, a plurality of spaced protuberances in the wall of the jacket adjacent one end thereof, that end of the jacket being positioned within the mouth of the case with the protuberances and the case forming a frictional fit, an interrupted annular space between the mouth of the case and the jacket in the area of the protuberances, the space being occupied by a layer of solder adhering both to the case and to the jacket, and a ring of solder about the jacket external to the case, the opposite end of the jacket being scalloped and formed into a substantially hemispherical nose portion.

3,048,105
ALUMINUM ALLOY CARTRIDGE CASE
Walter Schlatter, Vaduz, Liechtenstein, assignor to Press- & Stanzwerk A.G., Eschen, Liechtenstein
Filed Aug. 27, 1958, Ser. No. 763,414
Claims priority, application Germany Sept. 2, 1957
4 Claims. (Cl. 102—43)



1. A cartridge case comprising in combination, an aluminum alloy case proper with a mouth at one end adapted to be closed by a projectile, and means for protecting said mouth from the detrimental effects of the hot combustion gases when firing, said means comprising an anodic oxide layer having a thickness of about 15μ to about 20μ, and a layer of resin having good sliding properties baked on the surface of said oxide layer, said layers covering at least the outside of said cartridge case and the inside of said mouth.

3,048,106
PLUG-IN DEVICE (QUICK RELEASE)
Angelo R. Yannuzzi, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 2, 1960, Ser. No. 53,851
4 Claims. (Cl. 102—45)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with a cartridge, and a propellant transmission line, the improvement for facilitating quick connect and disconnect therebetween, said improvement comprising: a first connector element for connection to a propellant transmission line, a second connector element for attachment to a cartridge, said first connector element having connecting means for effecting connection to a transmission line, a hollow cylindrical member having a smooth outer surface with an abutment shoulder at one end, means for connecting said connecting means with said hollow cylindrical member, a collar slidably surrounding substantially all but a small longitudinal portion of said hollow cylindrical portion and having an outside diameter larger than the diameters of said abutment shoulder, said second connector element having at a rear

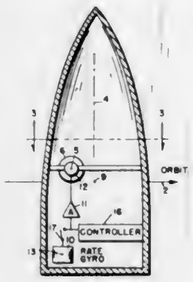
end means for effecting connection to a cartridge and at its forward end forwardly extending tine like segments, said segments having inwardly extending portions at their forwardmost portions, said inwardly extending portions having a thickness substantially equal to said small longitudinal portion of said hollow cylindrical portion not surrounded by said collar.

3,048,107
AIR FRAME CENTER SUPPORT
Adolphus Samms, Yuma Test Station, Ariz.
Filed Sept. 27, 1961, Ser. No. 141,219
8 Claims. (Cl. 102—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)



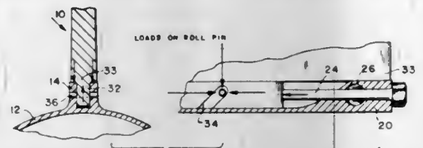
1. An air frame construction for a multiple stage missile comprising, a warhead containing a source of electrical energy, a pair of parallel shafts connected at one of their corresponding ends to said warhead, a rocket motor slidably mounted on said shafts, a series of adjacent propellant tanks releasably secured on said shafts between said rocket motor and said warhead, passage means for feeding propellant from a proximate tank to said rocket motor, explosive means carried by said shafts and fired by electrical energy from said electrical energy from said warhead for sequentially jettisoning said tanks as they become depleted of propellant, whereby said rocket motor will travel up said shafts under its own power and becomes connected to the succeeding tank for replenishment of propellant to said rocket motor.

3,048,108
SATELLITE STABILIZER
Robert E. Roberson, Fullerton, Kenneth H. Rogers, Long Beach, and Benjamin P. Martin, Pacoima, Calif., assignors to North American Aviation, Inc.
Filed Sept. 7, 1956, Ser. No. 610,878
2 Claims. (Cl. 102—50)



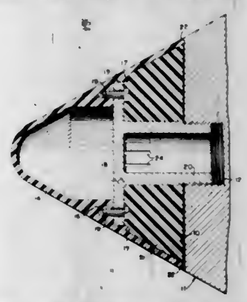
1. Means for stabilizing a satellite vehicle wherein said vehicle orbits around a celestial body in an orbital plane at a speed sufficient to create a centrifugal force substantially equal to the gravitational pull between said vehicle and said celestial body, said stabilizing means including a rotatable wheel attached to said body, the plane of rotation of said wheel being oriented with respect to said body so as to be parallel with said orbital plane of said body, means for controlling the speed of said rotating wheel according to the pitch agular velocity of said body.

3,048,109
WING ASSEMBLY
John R. Feemster, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 12, 1958, Ser. No. 773,524
5 Claims. (Cl. 102—50)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A readily-attachable high strength joint structure for rigidly attaching two structural members, said joint structure comprising a first structural member formed with a pair of spaced longitudinally extending parallel walls defining a groove, a plurality of cross-members disposed at spaced intervals in said groove transverse thereof and having ends fixed to said walls, a second structural member including an elongated base having a root portion rigid therewith, said root portion being of a width substantially equal to the width of the spacing of said walls and formed with a plurality of spaced slots in the lower portions thereof, each of said slots having a straight inclined wall at one side thereof, the spacing of said slots corresponding to the spacing of said cross-members, said root portion being received in said groove with said slot walls disposed adjacent said cross-members respectively, and means carried by said first structural member at one end of said groove in contact with said root portion and operable to push the root portion in one direction with predetermined force for forcing each of said slot walls against its respective cross-member and holding the root portion tightly in said groove, said last-named means comprising a cylindrical nut disposed in an aperture formed in said first structural member and a bolt threaded through the nut, said bolt having one end thereof disposed in said groove and in engagement with one end of said root portion.

3,048,110
FRANGIBLE NOSE CONE
Stanley E. West, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Sept. 15, 1959, Ser. No. 840,208
2 Claims. (Cl. 102—53)
(Granted under Title 35, U.S. Code (1952), sec. 266)



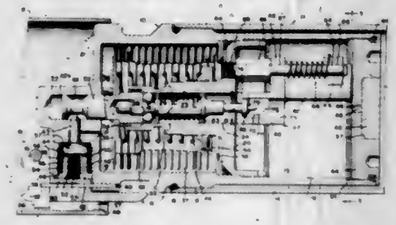
1. A frangible nose assembly in combination with a water entry body having an aerodynamic configuration and a flat surface and an interiorly threaded hole at said surface, which nose assembly comprises: a hollow frangible shell forming a smooth continuation of said body and abutting said flat surface, said shell being composed of a heat insulating material and having an internal shoulder formed therein, a nose insert having a plate portion mounted on said shoulder, a cylindrical portion

integral with said plate portion and having a threaded end disposed within said internally threaded hole and projecting slightly from said flat surface, a plastic foam material disposed within said nose shell between the plate portion of said nose insert and the flat surface on said body, said foam being displaced slightly from said flat surface to expose at least a portion of the projecting threaded end on the cylindrical portion of said nose insert, whereby the water entry shock encountered by said nose assembly is concentrated at the exposed root of the threaded end to break said insert cleanly at the flat surface of said body.

3,048,111
SUBMARINE SIGNAL FUZE

Kenneth L. Baker, College Park, Md., and Thomas C. Smith, Poughkeepsie, and Louis A. Pechmann, Millbrook, N.Y., assignors, by direct and mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Feb. 10, 1953, Ser. No. 336,144
7 Claims. (Cl. 102—70)

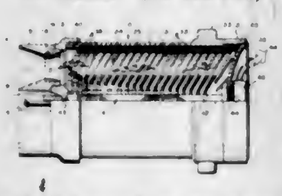


1. A device for firing a pyrotechnic charge comprising a casing having a pressure chamber therein, normally locked firing means axially arranged within said casing, arming means axially arranged within said casing releasably secured to said firing means for rotation from an initial safe axial position to an armed axial position when released, means on said firing means for releasing the arming means for rotation from said initial safe position to said armed position when the firing means has been moved a predetermined amount, means secured to the firing means and disposed within said pressure chamber for moving the firing means said predetermined amount in response to a predetermined pressure applied thereto, pressure controlled valve means on said casing for admitting the pressure into said chamber, pyrotechnic initiating means arranged within said arming means and movable into alignment with the firing means as the arming means is moved to said armed position, means on the firing means for forcibly driving the firing means into firing engagement with said initiating means as the firing means is released thereby to fire the pyrotechnic charge, and means for releasing the firing means when the pressure in the chamber has been reduced to a predetermined value.

3,048,112
GAS GENERATOR

Claude A. Shope, McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 6, 1959, Ser. No. 791,772
11 Claims. (Cl. 102—98)

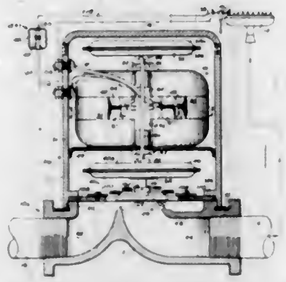


1. A grain of solid propellant, said grain having a hollow, frusto conical, annular configuration, said grain having a circular opening in the apex thereof and two exposed conical surfaces with a plurality of radial slots therein.

3,048,113
FLUID CONDUCTOR MOTORS AND CONTROL DEVICES EMPLOYING THE SAME

Adolph J. Hilgert, Milwaukee, Wis., assignor, by mesne assignments, to Penn Controls, Inc., Goshen, Ind., a corporation of Indiana

Filed July 2, 1956, Ser. No. 595,195
4 Claims. (Cl. 103—1)

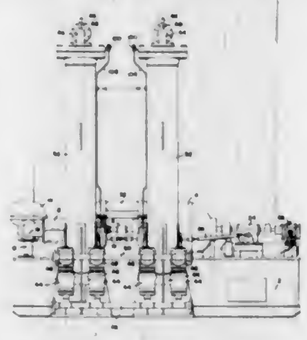


1. A fluid conductor pump comprising means defining a circular fluid passageway, an electrically conductive fluid in said passageway, means affording magnetic flux flow through said fluid at spaced intervals along and in a direction normal to the plane of said circular passageway comprising a pair of coaxial cup-shaped magnetic members having open ends parallel with and facing said circular passageway and formed with poles, the poles of one member being aligned with those of the other on opposite sides of said passageway at said spaced intervals to form magnetic gaps across said passageway, and a separate pair of electrodes at each of said spaced intervals in circuit with said fluid on opposite sides of said passageway, said opposing electrodes being aligned radially with respect to the curvature of said circular passageway, and said pairs of electrodes being serially connected such that current flow serially through said pairs of electrodes also flows through said fluid from one of said opposing electrodes to the other in the same transverse direction at each of said spaced intervals.

3,048,114
PUMPS

Lindsay H. Browne, Westport, Conn., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts

Filed Nov. 19, 1957, Ser. No. 697,343
10 Claims. (Cl. 103—44)



1. A pump comprising a cylinder having its axis extending upwardly, longitudinally extending ribs projecting radially inwardly from circumferentially spaced cylinder

wall areas, an elastic cylindrical pulsator within said cylinder providing in its interior a driving liquid space and at its exterior an annular pumped liquid space, means effecting intermittent introduction of driving liquid into said driving liquid space and discharge of driving liquid therefrom, and check valved inlet and outlet conduit means connected to the lowermost terminal portion of said cylinder and communicating with the annular pumped liquid space therein, said pulsator being in the form of a plurality of cylindrical sheets of rubber material bonded together to form an integral laminated structure having sufficient stiffness to collapse of its own resiliency to a definite cylindrical shape upon removal of driving liquid pressure from its interior and despite the existence of a vacuum at its exterior, said stiffness and the radial extent of said ribs being sufficient to prevent sealing of said pulsator against the wall of said cylinder.

3,048,115
DOUBLE ACTION PUMP AND ENGINE

C Walton Musser, 66 McKay St., Beverly, Mass.

Filed Apr. 20, 1960, Ser. No. 23,584
7 Claims. (Cl. 103—48)
(Granted under Title 35, U.S. Code (1952), sec. 266)



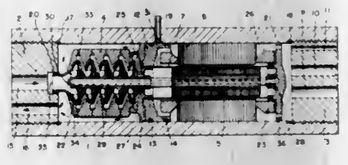
1. The combination of a cylinder having at its rear end a closure with a plurality of interior annular grooves and a duct constituting a path into said cylinder, a piston reciprocable within said cylinder, said piston being hollow and having at its forward end a closure with an opening therethrough, a tube fixed to said piston, a valve arranged between said tube and said piston to form an annular passageway constituting with said opening a path into the forward end of said cylinder, said valve being movable to admit driving fluid to the opposite ends of said piston through said paths, resilient means connected between said piston and said valve so as to be relaxed at the midpoint in the travel of said piston, coupling means between said valve and said piston for releasing said valve to control by said resilient means only when said piston is near an end of its travel, and means for driving a pumped liquid through said tube in response to movement of said piston said pumped liquid driving means including a valve element moved through frictional contact with the exterior periphery of said piston.

3,048,116
MOTOR PUMP UNIT

Otto Konrad, Schriesheim an der Bergstrasse, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed Apr. 6, 1960, Ser. No. 20,493
Claims priority, application Germany Apr. 7, 1959
3 Claims. (Cl. 103—87)

1. In a motor pump unit hermetically sealed in a housing and comprising a motor having a rotor and a stator, and a pump embodying a frame and an impeller connected with the rotor, wherein the rotor of the motor is in fluid connection with the pump and said rotor is separated from the stator of said motor by an enclosing non-magnetic partition forming a fluid seal between said rotor and stator, the improvement which comprises the provision of piston means connected between said partition and said pump, whereby the pump may deliver work fluid under pressure within the partition and within the housing on the partition remote side of the piston means, said piston means being movable within the

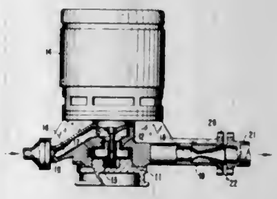


housing together with said rotor, partition and pump in the axial direction of the rotor and impeller, said housing serving to retain stator submerging fluid therein, on the rotor remote side of the partition and on the pump remote side of the piston means, said piston means being slidably sealed to the inner surface of said housing which acts as the cylinder for said piston means, whereby said piston means forms a fluid seal between said pump and said stator, so that pressure may be developed in said stator submerging fluid substantially equal to the pressure at which work fluid is delivered by the pump upon the partition remote side of said piston means.

3,048,117
PUMP WITH FLOW-RESTRICTIVE ORIFICE

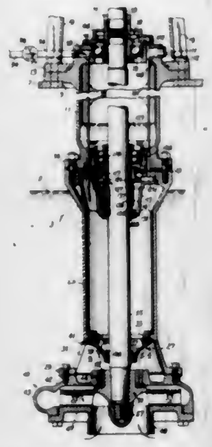
Earl P. Franzen, Houston, and Victor F. Anderson, Pasadena, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Aug. 5, 1960, Ser. No. 47,874
5 Claims. (Cl. 103—87)



1. A pump installation including: a centrifugal pump including a volute casing with intake and discharge passages, and an impeller within said casing, said discharge passage having a section of substantially uniform diameter extending outward from said impeller; an electric motor drivingly connected to said impeller, said motor having a power rating less than that necessary to operate the pump at full capacity against a preselected head when said discharge passage is unrestricted; and means for protecting said motor against overload, said means including a removable, fixed flow-restrictive device situated in said discharge passage at the downstream end of said section of uniform diameter and displaced outwardly from the pump impeller by a distance at least as great as the diameter of said section for producing a desired pump performance characteristic, said removable, fixed flow-restricted device reducing the discharge capacity of the pump whereby said means protects said motor against overload at said preselected head.

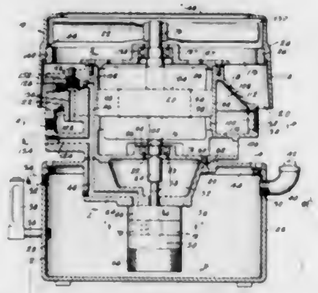
3,048,118
PUMP
Charles J. Erd, St. Louis, Mo., assignor to Chas. S. Lewis & Company, Incorporated, St. Louis, Mo., a corporation of Missouri
Filed Feb. 10, 1961, Ser. No. 88,477
13 Claims. (Cl. 103—87)



1. A pump assembly for use in a liquid sump comprising an imperforate barrel adapted for upright location in the liquid, a shaft extending through said barrel, rotary sealing means between the shaft and an upper portion connected to said barrel, driving means for said shaft above said sealing means, a centrifugal pump having an impeller attached to said shaft below said barrel and also having a casing around the impeller, connecting means between said barrel and said casing, said connecting means having at least one opening exposed to movement therethrough of fluid in said sump, said barrel having lower end outlet means in communication with the sump through said opening, a second barrel extending upward from said first-named barrel and having an upper bearing for said shaft and a lower bearing therefor, said upper barrel being adapted to form an oil sump, means located at the upper end of the first-named barrel and forming a pressure chamber around said rotary seal for the shaft, and shaft-driven oil pump means having an inlet connection with the upper barrel and an outlet in said pressure chamber and adapted to produce a pressure differential across the seal from said pressure chamber to said first-named barrel.

3,048,119
AIR-COOLED PUMP ASSEMBLY FOR HYDRAULIC FLUID AND THE LIKE
Clarence W. Tydeman, Timnath, Colo., assignor to Tydeman Machine Works, Inc., Redwood City, Calif., a corporation of California
Filed June 2, 1961, Ser. No. 114,386
11 Claims. (Cl. 103—118)

1. An air-cooled pump for hydraulic fluid and the like which comprises: an open-topped reservoir having an opening in a wall portion thereof adapted for connection to an exhaust line returning fluid thereto from an operating unit; a coverplate secured to the open top of the reservoir in fluid-tight sealed relation, said coverplate including a fluid delivery passage and an overflow passage; a pump supported on the underside of the coverplate within the reservoir in position to draw fluid therefrom and deliver same under pressure to the delivery passage; a radiator mounted atop the coverplate in fluid-tight sealed relation thereto and including a centrally-located open-topped hollow cylindrical wall portion defining a motor housing, a continuous annular cooling chamber surrounding the motor housing, a boss located within the annular cooling chamber, said boss containing a valve socket connected to receive fluid from the delivery passage in the coverplate, a branch outlet passage connected to receive fluid from the delivery passage upstream of the valve socket for delivery to the operating unit, and a passage interconnecting the annular cooling chamber with the valve socket downstream of the latter's connection into the delivery passage, and exhaust ports in the base of the motor housing; a motor mounted in the hollow cylindrical wall portion of the radiator and operatively connected to the pump through the coverplate; a fan operatively connected to the motor for rotation above the radiator in a direction to circulate air downwardly across both the inside and outside walls of the annular cooling chamber to cool the fluid contained therein, said fan also directing air over the motor and out the exhaust ports in the motor housing; support-forming means attached to the

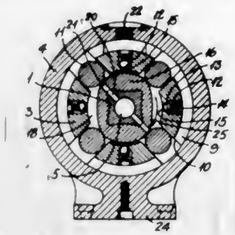


top of the radiator underneath the fan journalling the motor shaft; a cap attached to the support-forming means in position to cover the fan, said cap having an open top adapted to admit air to the fan and an annular skirt encircling the radiator in spaced relation to the annular cooling chamber therein; and, pressure-responsive valve means located in the valve socket between the outlet of the delivery passage and the inlet of the passage connecting said valve socket into the annular cooling chamber of the radiator, said valve means being operative to open at a predetermined pressure in excess of that required to actuate the operating unit connected to receive fluid from the branch passage and deliver same to the annular cooling chamber where it is cooled before entering the overflow passage for return to the reservoir, and said valve means being operative to close shutting off the supply of fluid to the cooling chamber when the operating unit is receiving fluid from the pump through the branch passage.

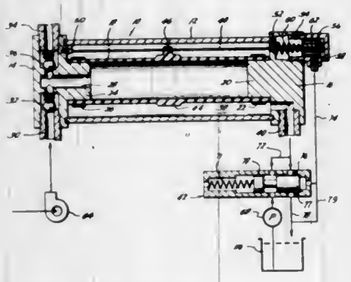
3,048,120
ROTARY PUMP
Koji Ohyagi, 236 Shimohirama, Kawasaki, Japan
Filed Jan. 4, 1961, Ser. No. 80,690
Claims priority, application Japan Jan. 21, 1960
10 Claims. (Cl. 103—123)

1. A rotary pump for a working fluid comprising, in combination, a cylindrical housing; substantially cylindrical cage means fixed in said housing and defining therewith a substantially arcuate discharge chamber, said cage means being formed with plural first radial passages therethrough equiangularly spaced from each other; plural pumping follower elements each slidably mounted in a respective first passage for radial reciprocation therein; a rotatable shaft coaxially mounted through said housing and said cage means; a cam fixed on said shaft to rotate therewith and having n lobes equiangularly spaced from each other to form, with said cage means and pairs of angularly adjacent follower elements, $2n$ pumping chambers; said cam being formed with n second radial passages each opening into a pumping chamber; said

shaft having n radial suction inlets each in radially aligned communication with a respective second passage; the number of first radial passages through said cage means being $2n$ to form $2n$ segments of said cage means separated by said first radial passages, each segment having a discharge passage formed radially therethrough; each second radial passage being angularly displaced from a maximum radius of said cam, in a trailing direction, by an angle equal to 360° divided by $4n$; and means maintaining said follower elements continuously engaged with said cam for radial reciprocation thereby.



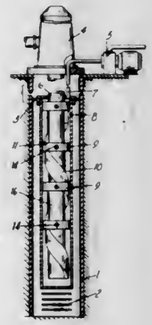
3,048,121
HYDRAULIC ACTUATED PUMP
John M. Sheesley, P.O. Box 9011, Houston, Tex.
Filed Apr. 14, 1960, Ser. No. 22,233
3 Claims. (Cl. 103—152)



1. A hydraulic fluid actuated pump comprising an enclosed housing, a tubular diaphragm in said housing dividing the enclosure into an actuating fluid space and a pumped fluid space, conduit means in communication with said pumped fluid space for supplying and exhausting pumped fluid, conduit means in communication with said actuating fluid space for supplying and exhausting actuating fluid, whereby said diaphragm is caused to flex and to admit and discharge pumped fluid, a pilot fluid operated fluid control valve in the actuating fluid conduit actuable to control the flow of actuating fluid to and from the actuating fluid space, a pilot fluid valve operably connected to said fluid control valve to supply actuating fluid thereto, a flexible non-elastic member in said housing extending longitudinally of said diaphragm and having an end fixed, an intermediate portion attached to said diaphragm, and the other end attached to said pilot valve, and means biasing said pilot valve to a position causing a tension to be imposed on said flexible member and preventing flow of actuating fluid to said fluid control valve.

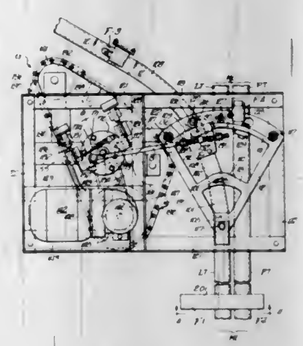
3,048,122
GAS SEPARATORS FOR WELLS
Alfred E. Hansen, Michigan Theatre Bldg., Muskegon, Mich.
Filed Dec. 31, 1959, Ser. No. 863,266
10 Claims. (Cl. 103—203)

1. Gas separating apparatus for liquid wells comprising a sleeve closed at the bottom and having a pump column projecting thereinto to adjacent the bottom of the sleeve, a gas suction connection to the upper end of said sleeve, a plurality of annular collector rings of upwardly opening U-shaped cross section positioned around the inside of said sleeve at vertically spaced intervals and each having an overflow notch formed in its inner wall, a delivery trough of upwardly opening U-shaped cross section arranged spirally around said pump column and passing successively through said collector rings in angularly spaced relation to said notches where the trough passes through the top of the ring, delivery pipes extending into said collector rings in angularly displaced diametrically



opposite positions to the notches therein and projecting through the outer walls of said rings and said sleeve to open into the well, said delivery pipes having outlet openings formed therein and opening downwardly in said collector rings and positioned below the level of the notch in its associated ring, and triangular baffle plates extending between the lower edges of said rings below said notches and the upper outer edge of said spiral trough with radially inwardly turned flanges extending across the trough to the pump column in general vertical alignment with the edge of the notch in the superimposed collector ring.

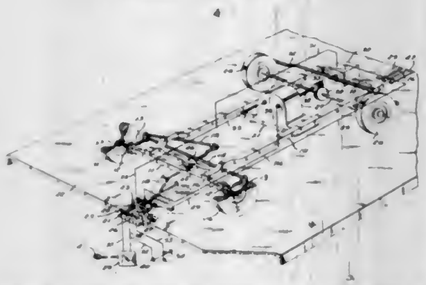
3,048,123
AUTOMATIC DISPATCH CONVEYOR SYSTEMS
Albert J. Burmeister, Willard D. Brown, Jr., and Del J. Heidinger, Aurora, Ill., assignors to Richards-Wilcox Manufacturing Company, Aurora, Ill., a corporation of Illinois
Filed June 20, 1957, Ser. No. 666,896
3 Claims. (Cl. 104—88)



1. In an overhead conveyor system, a main load track and a power track disposed side by side in a common horizontal plane, load carriers travelling on said main load track, a pusher chain travelling along said power track; cooperating means carried by said carriers and said chain effective for propelling said carriers along said load track,

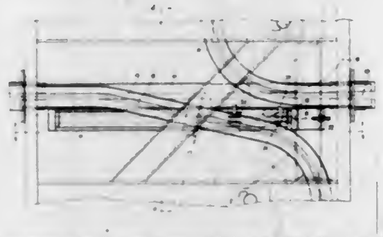
a branch track, a track switch for switching said carriers from said main load track to said branch track, said switch comprising tongue means movable between switching and non-switching positions and normally in non-switching position aligned with said load track, switch operating power means disposed approximately in the plane of said tracks and operable independently of said pusher chain effective for moving said tongue means from its said normal position to switching position and moving a carrier from said main track onto said branch track and thereafter returning said tongue means to normal position, control means responsive to a carrier on said main load track approaching said switch and intended for entering said branch track and effective for actuating said switch operating power means for moving said tongue means to switching position and moving the approaching carrier from said main track onto said branch track and thereafter returning said tongue means to normal position, said switch operating power means comprising a rotatable crank member, a normally stationary closed loop drive chain operable independently of said pusher chain, and a single normally deenergized electric motor operatively connected to drive said rotatable crank member and to propel said drive chain, said motor being energized responsive to actuation of said carrier responsive control means, means responsive to one-half of a revolution of said rotatable crank member to shift said tongue means to switching position and responsive to the other half revolution to return said tongue means back to normal position, and means responsive to operation of said drive chain effective to propel load carriers through said track switch.

3,048,124
TOY VEHICLE
Jack Lovell, Chagrin Falls, Ohio
(2105 Chelsea Road, Palos Verdes, Calif.)
Filed Sept. 27, 1957, Ser. No. 686,651
4 Claims. (Cl. 104—149)



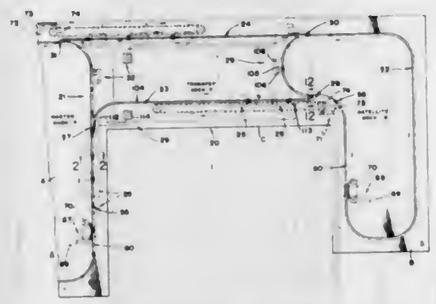
1. An amusement device comprising a roadway having a guiding groove including a curved portion, a vehicle having rear wheels and dirigible front wheels resting upon said roadway and supporting the vehicle, said front wheels being pivoted to said vehicle to steer said vehicle, the upper surface of said roadway being substantially smooth and unobstructed through a lateral width substantially exceeding the width of said vehicle, a steering arm pivotally connected to said vehicle about a substantially vertical pivotal axis, linkage means connecting said steering arm and said front wheels operable to steer said front wheels under the influence of rotation of said steering arm about its pivot axis through an angle greater than the angle of rotation of said steering arm, means on the free end of said steering arm engaging in said guiding groove with freedom for relative pivotal movement between said steering arm and said guiding groove about a substantially vertical pivotal axis, power means connected to drive at least some of said wheels and impart forward motion to said vehicle at a speed producing skidding of all of said wheels when said vehicle follows said curved portion, said vehicle being substantially free of other guiding restraints whereby its path of travel on said roadway is determined by its inertia and the friction of said wheels on the roadway.

3,048,125
CONVEYOR SYSTEMS
Arthur Thomas Charles Burrows, Stevenage, England, assignor to Geo. W. King Limited, Stevenage, England, a British company
Filed Nov. 4, 1960, Ser. No. 67,241
Claims priority, application Great Britain Nov. 5, 1959
7 Claims. (Cl. 104—172)



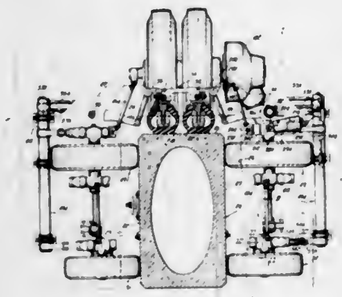
1. A conveyor system comprising a track, a trolley on said track and movable therealong, first means for driving the trolley along a portion of the track and second means for driving the trolley along a further portion of the track and means for effecting transfer between the trolley and the first and second said means comprising transfer means engaging said trolley with the same in driving relation with the first said means, the transfer means being advanced to a position wherein it is engaged by the second means in driving relation, the trolley being disconnected from the first means with said transfer means in said position, the second means driving said transfer means and the trolley engaged therewith to a further position, and means at said further position for moving said transfer means out of driving engagement with the trolley, the trolley at said further position being engaged by said second means in driving relation for advancement along said track.

3,048,126
CONVEYOR INSTALLATION FOR WHEELED CARTS
James N. Salapatas, Akron, Ohio, assignor to Consolidated Freightways Corporation of Delaware, Menlo Park, Calif., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 97,023
16 Claims. (Cl. 104—178)



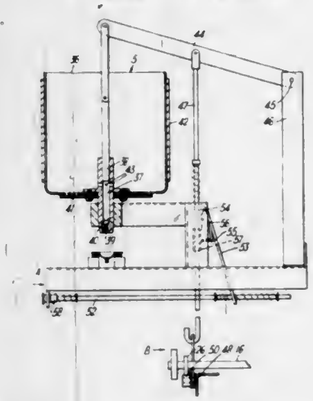
1. A conveyor installation for wheeled carts actuated by floor located drive means, comprising, an independently operating master drive means, an independently operating satellite drive means, an intermittently operating delivery drive means between said master and satellite drive means, a normally-open switch means for shunting carts from said master drive means onto said delivery drive means, a permanently open first intersection between said delivery drive means and said satellite drive means, an intermittently operating return drive means between said satellite and master drive means, a normally-open switch means for bypassing carts from said satellite drive means onto said return drive means, and a permanently open second intersection between said return drive means and said master drive means.

3,048,127
VEHICLE RUNNING GEAR
Franz X. Oberpaul, Koln, Germany, assignor to Alweg-Forschung, Gesellschaft mit beschränkter Haftung, Koln, Germany, a corporation of Germany
Filed Aug. 10, 1956, Ser. No. 603,389
Claims priority, application Germany Sept. 25, 1954
14 Claims. (Cl. 105—145)



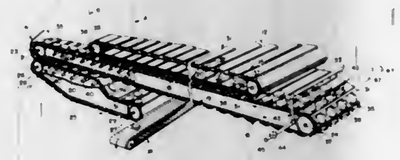
13. Running gear for supporting a body for passage along a monobeam having top and side running surfaces comprising, at least one load carrying wheel adapted to ride along said top running surface; means connected directly to said body spring mounting said load carrying wheel on said vehicle body; side wheels adapted to ride along said side running surfaces; means connected directly to said body spring suspending said side wheels for movement laterally of said monobeam; and rigid links connecting said side wheels to said load carrying wheel to prevent relative vertical movement of said side wheels with respect to said load carrying wheel.

3,048,128
METHOD FOR MAKING SWEETS
Christopher John Lewis Warren, 20 Oakdene Road, and John William Milross, 27 Clyston Road, Holywell Estates, both of Watford, England
Filed Mar. 10, 1955, Ser. No. 493,347
2 Claims. (Cl. 107—54)



1. The method of depositing pre-determined measured quantities of viscous toffee confectionery syrup of the butter-scotch or like type in which the syrup has to be boiled to a temperature of at least 280° F. to take it beyond at least the small crack degree, wherein after such boiling the boiled syrup is charged into a container communicating with a measuring chamber by way of at least one opening submerged in a quantity of the hot syrup in the container, a vacuum is created in the said chamber and thereafter the hot syrup is caused suddenly to flow into and fill the chamber from the container, the hot syrup is then steadily extruded past a valve from the said chamber by a pressure member working out of contact with the wall of the said chamber but so that the syrup itself at the requisite temperature below 280° F. seals the gap between the pressure member and the said wall and enables the desired evacuation to take place and a measured quantity to be delivered, and the syrup in the container is maintained at the said requisite temperature by thermostatically controlled heating.

3,048,129
PROCESS FOR CONTINUOUS PROOFING AND GRILLING AND APPARATUS THEREFOR
Eugene M. Noel, 238 Main St., Cambridge 42, Mass.
Filed Oct. 26, 1959, Ser. No. 848,785
12 Claims. (Cl. 107—54)

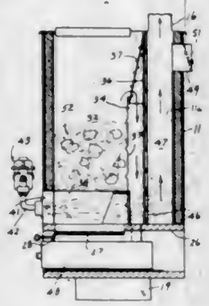


8. A process for proofing and grilling an unproofed English muffin dough ball having an initial temperature of 65 to 90° F., comprising the steps of forming a dough ball from newly fermented dough, depositing said dough ball in a mold cup, said mold cup having a temperature between 135 and 190° F., depositing a cover on said cup to close said cup for restricting exposure of said dough ball to the atmosphere, heating said mold cup to increase the temperature of said cup at a uniform rate of between 7 and 14° F. per minute for a period of from 9 to 20 minutes to proof said dough ball, increasing the heating rate when said cup reaches a temperature of about 260° F. to commence grilling said proofed dough ball to produce a finished muffin, removing said cover from the cup to permit formation of a dry skin on the exposed surface of the dough ball, and then inverting the dough ball onto a grill and grilling the dry skin side thereof.

3,048,130
INCINERATOR
Claude A. Morgan, Huntington, Ind., assignor to The Majestic Company, Inc., Huntington, Ind., a corporation
Filed June 1, 1959, Ser. No. 817,242
3 Claims. (Cl. 110—8)

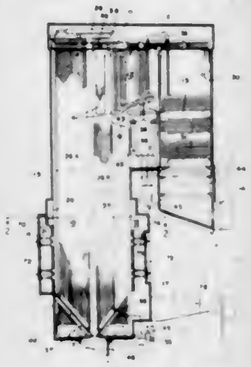
2. In an incinerator of the type having a refractory side wall defining a charge receiving primary combustion chamber and a flue for disposing of combustion gases, an open-ended flame carrier tube mounted to extend transversely through the primary combustion chamber, means for introducing flame into one end of said carrier tube, said carrier tube being thereby heated sufficiently to ignite the charge in said combustion chamber, a first plate extending across said primary combustion chamber but terminating short of the upper margin thereof, a second plate disposed in spaced parallel relation to said first plate and extending to the upper margin of said primary combustion chamber, elements spaced inwardly from the

side margins of said first plate and spanning the space between said plates, said elements terminating short of the upper margin of said first plate, said plates and elements defining a generally vertical secondary chamber, means for introducing air into the space outboard of said elements, the flame exit end of said flame carrier tube communicating with the space between said plates, an aperture at the base of said second plate aligned with said flame carrier tube, said second plate being spaced from said refractory side wall to define therebetween a final combustion chamber communicating with said flue, the flame propagated through said carrier tube impinging



on said refractory wall to raise it to incandescent temperature, whereby products of combustion are drawn by convection into said secondary chamber to be mixed with air moving across the upper margins of said elements, the aerated products of combustion moving through said secondary chamber to enter said final combustion chamber through said second plate aperture and flow through said final combustion chamber into said flue, the intersection of the flame and the aerated products of combustion at said second plate aperture and their movement along the incandescent refractory wall serving to consume smoke, odor-bearing vapors and particles entrained in the products of combustion.

3,048,131
METHOD FOR BURNING FUEL
Ralph M. Hardgrove, North Canton, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed June 18, 1959, Ser. No. 821,214
2 Claims. (Cl. 110—72)



1. The method of burning a fuel in suspension in a furnace having fluid cooled boundary walls with a minimum amount of nitrogen oxides in the combustion gases leaving the furnace which comprises introducing the fuel into the furnace through a burner port in a furnace boundary wall, introducing a major portion of the combustion air into said furnace at said burner port in furnace-mixing relationship with said fuel, regulating the amount of air supplied through said burner port to an amount within the range of 80 to 95% of the theoretical combustion air requirements for the corresponding fuel to delay the complete combustion of the corresponding fuel steam and thereby reduce the maximum flame temperature in the furnace and the formation of nitrogen oxides below the values which would occur if all of the air required for complete combustion were introduced with the fuel, and supplying the remaining amount of air required to insure complete combustion of the fuel through a furnace boundary wall at a position spaced from said burner port so as to direct the stream of the remaining amount of air in mixing relation with the burning fuel stream beyond the normal maximum flame temperature zone of the furnace to complete combustion of the fuel within the furnace with a minimum formation of nitrogen oxides in the combustion gases.

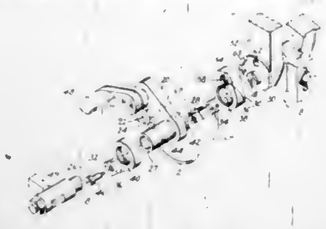
3,048,132
SEED PELLET DISPENSER AND PLANTER
John F. Morgan, 5508 W. Monterosa, Glendale, Ariz., and Charles E. Gray, 9406 W. Polk, Tolleson, Ariz.
Filed Oct. 12, 1959, Ser. No. 845,790
5 Claims. (Cl. 111—77)



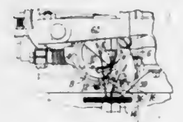
1. A dispenser device for pellets and the like comprising a frame housing having an inner circular cylindrical surface portion interrupted by first and second openings, said first opening adapted for feeding pellets into said housing, said second opening providing a dispensing edge, a plurality of parallel guide grooves formed in a portion of said surface between said first and second openings and terminating at said dispensing edge; a pellet wheel rotatably mounted within the curvature of said inner housing surface and having outer circular cylindrical surface portions complementary thereto, said outer surface portions being separated by a plurality of grooves formed in the periphery of said wheel, each of said grooves being spaced apart angularly around said wheel, extending crosswise in the peripheral face thereof and adapted for receiving a line of pellets therein; said dispensing edge and said angularly spaced grooves being complementally inclined to one another to provide a controlled pellet dispensing action from said guide grooves which exposes and dispenses a single pellet at a time from a given line of pellets; and means for rotating said wheel.

3,048,133
NEEDLE GUIDE FOR SHOE SEWING MACHINES
Lloyd G. Miller, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Mar. 21, 1960, Ser. No. 16,427
7 Claims. (Cl. 112—35)

1. A shoe sewing machine having a curved hook needle and other stitch forming and work feeding devices and a shaft for rotatably supporting the needle for oscillation about its center of curvature including a segment in which the needle is clamped, in combination with a needle guide having bearing surfaces on both sides of the needle segment to support the needle guide for oscillating movement relative to the segment about the center of curvature for the needle.

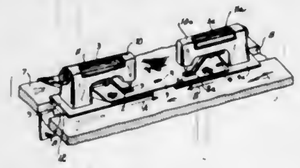


3,048,134
SHUTTLE DRIVE MECHANISMS
Charles F. Fitzgerald, Beverly, and Arthur J. Murphy, Saugus, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Original application Feb. 8, 1957, Ser. No. 638,986, now Patent No. 2,979,001, dated Apr. 11, 1961. Divided and this application Dec. 23, 1959, Ser. No. 861,669
3 Claims. (Cl. 112—38)



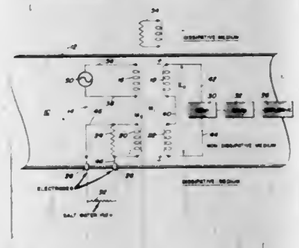
1. A lockstitch shoe sewing machine having a rotatably mounted shoe entering horn, stitch-forming and setting devices including a straight hook needle, a discoidal shuttle rotating a plurality of revolutions for each reciprocation of the needle with the rotary path of its beak defining a plane inclined to the needle to bring the beak while in the lower portion of its path closer to the needle than while in the upper portion of its path, said shuttle being formed with a throat recess within its beak, and a locking thread case about which the shuttle carries each loop of needle thread and from the side of which facing the needle the locking thread is led, in combination with a driver projecting through the throat recess beyond the shuttle plane at the side facing the needle to deflect the locking thread leading from the thread case away from the shuttle beak.

3,048,135
METHOD AND MEANS FOR MAKING BUTTONHOLES IN SERIES FORMATION
Willi Heimann, Kaiserslautern, Pfalz, Germany, assignor to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany
Filed Sept. 5, 1958, Ser. No. 759,314
Claims priority, application Germany Sept. 9, 1957
4 Claims. (Cl. 112—155)



4. An arrangement for sewing machines having means for sewing stitches along buttonhole edges which are defined in a garment, said machines including feeding and overhanging frame, a needle reciprocatably mounted at one end of said frame, and feeding means acting to feed the garment in a direction out from said frame to sew one side of said buttonhole and a direction beneath said frame to sew the opposite side of said buttonhole, comprising a supporting base having a longitudinal centering groove, means on said base for supporting two sewing machines aligned in said groove, said machines being disposed on said base and centered in said groove with the needle end of said frame disposed in facing relationship but spaced apart to receive a garment therebetween whereby when a garment is positioned between the needles of the two spaced machines the feed means is effective to feed the garment from a taut position in directions outwardly from each machine to cause the material to bunch up therebetween and is thereafter effective to feed the material in opposite directions to sew the opposite side of the buttonhole and to cause the material to then assume a taut position between the machines.

3,048,136
ANTENNA COMPENSATING ELECTRODES FOR USE IN DISSIPATIVE MEDIUM
Elmond A. Holmes, Fullerton, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 24, 1957, Ser. No. 654,974
4 Claims. (Cl. 114—20)

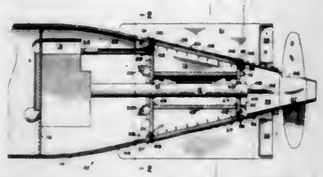


1. In combination with a torpedo influence exploder; an antenna compensating electrode system for use in a dissipative medium, comprising, a torpedo casing, a transmitter-detector system located in said casing in a non-dissipative medium, said system including means having a first coil for transmitting a signal, a bucking coil detector including second and third coils connected in opposition, means including a fourth coil having a variable resistance means connected in shunt to compensate for changes in the conductivity of said dissipative medium, said first coil being coupled to said second coil and said third coil and said third coil being coupled to said fourth coil, said fourth coil maintaining the turns-ratio balance of said second and third coils at zero, a receiver connected to the output terminals of said second and third coils, and explosive means connected to the output of said receiver.

3,048,137
DISCHARGING EXHAUST PRODUCTS FROM A TORPEDO
Girard L. Calehuff, Covington, Va., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 17, 1957, Ser. No. 659,445
6 Claims. (Cl. 114—20)

1. In exhaust means for a torpedo having a turbine propulsion motor and a propulsion shaft mounting a propeller for propelling the torpedo the combination comprising: an expansion chamber disposed between the propeller and the turbine, said expansion chamber comprising a forward wall, a rearward wall and a longitudinally disposed annular inner wall integral with and supported by said forward and rearward walls and ac-

cessible at both ends to freely receive said propulsion shaft; conduit means for directing the exhaust gases of said turbine into said expansion chamber; and a porous expansion chamber outer wall disposed away from and enclosing said annular inner wall whereby the gases ex-



hausted into said expansion chamber will be exhausted through said outer wall, said outer wall having an area and porosity whereby said gases will be substantially circumferentially exhausted through said wall at a low velocity and at a rate sufficient to prevent a substantial back pressure on said turbine.

3,048,138
ANCHOR LINE HOLDERS
Stanley Ryan, 3203 Ladoga Ave., Long Beach, Calif.
Filed Sept. 8, 1959, Ser. No. 838,566
1 Claim. (Cl. 114—210)



An anchor line holder which includes: a boat hull having a water line; shank means rigidly secured to said boat hull adjacent to said water line; a curved hook-like end pivotally mounted on said shank means on the exterior of said hull; retainer means rigidly attached to said shank means on the exterior of said hull, said retainer means normally forming a substantially continuous, closed loop with said end; co-acting detent means formed on said shank and said curved end, said detent means serving to position said curved end so as to form said substantially continuous closed loop; and spring means urging said shank and said curved end toward one another, said spring means serving to hold said co-acting detent means together.

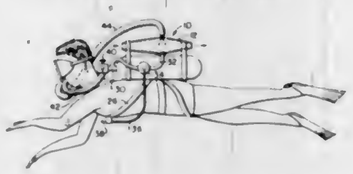
3,048,139
BOAT HOOK AND DOCKER
John W. Duckett, Tiburon, Calif.
Filed Feb. 28, 1961, Ser. No. 92,351
4 Claims. (Cl. 114—221)

1. A boat hook and docking device which comprises a shaft and a head secured to an outer end of said shaft, said head having spaced outwardly extending prongs thereon ending in surface engaging tips and defining a yoke opening in an outward direction from said shaft and in the same general direction as the axis of said shaft, the configuration of said yoke being such as to accept a right angle while said surface engaging tips contact the sides of said right angle without contact between said yoke and the apex of said right angle as long as the angle between a line along the axis of said shaft and a line bisecting said right angle is between zero and about thirty degrees on either side of zero, and an inwardly extending prong on said head defining a hook opening in an inward direction along said shaft, the depth of said hook opening along a line parallel to the axis of said shaft being more than one-half the width of said opening taken along a line from the tip of said



inwardly extending prong perpendicular to the axis of said shaft.

3,048,140
UNDERWATER PROPULSION DEVICE
Eugene R. Davis, Sr., Jay, N.Y., assignor to Newell N. Davis, Marblehead, Mass.
Filed June 22, 1960, Ser. No. 37,923
5 Claims. (Cl. 115—6.1)



1. An underwater propulsion apparatus for skin divers, comprising a tubular engine having an elongated body provided with a forwardly positioned inlet and a rearwardly positioned outlet of generally equal size, a passage in the body of said engine and connecting with said inlet and said outlet, the mid-portion of said passage being larger in cross section than said inlet and said outlet, the widest portion of said passage constituting a duct station corresponding to the maximum static water pressure within the duct when said engine is propelled forwardly under water pressure within the duct, conduit means for injecting air into said engine at said duct station, means for mounting said engine on a diver, underwater breathing apparatus including a portable tank of compressed air adapted to be secured to a diver, a conduit from said tank to said duct station, and means for controlling the flow of air to said station.

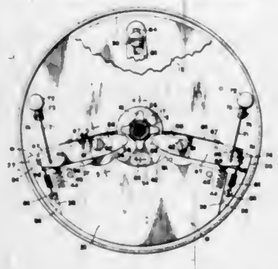
3,048,141
PROPULSION DEVICE FOR CRAFT IN FLUIDS
John Edwin Fisk, 1408 Golden Gate Blvd., Mayfield Heights, Ohio
Filed Dec. 23, 1960, Ser. No. 78,183
8 Claims. (Cl. 115—22.2)



1. A device for the propulsion of craft in fluids, said device consisting of a flexuous sheet held suspended from

the craft, and means for oscillating one end of the said sheet to cause a natural flow of undulations in the sheet from the said one end and means at the opposite end to loosen or tauten the said sheet to lessen or increase the undulations in the said sheet.

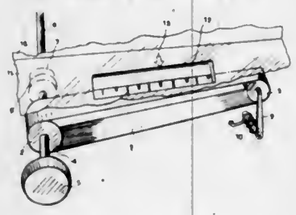
3,048,142
SAFETY ALARM SIGNAL FOR ROTATING BODIES
Arthur M. Warn, P.O. Box 6064 Riverton Branch, Seattle 88, Wash.
Filed Apr. 11, 1961, Ser. No. 102,264
5 Claims. (Cl. 116—60)



1. A rotating body signal alarm for sounding a continuous audible warning of body rotation in either direction of rotation, comprising:

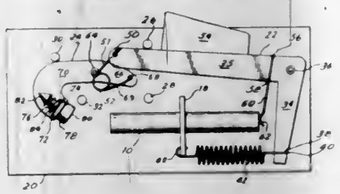
(*a*) a shaft mounted on a body for coaxial rotation with said body;
(*b*) a bell fixedly mounted on said shaft for rotation therewith;
(*c*) a weight freely pivoted on said shaft within said bell and depending from said shaft in a relatively stationary position under the force of gravity;
(*d*) a cam having lobes fixedly secured to said shaft for rotation therewith;
(*e*) cam follower means pivotally mounted on said weight below and to one side of said cam;
(*f*) striker head means connected to said follower means in striking relation to said bell;
(*g*) spring means biasing said follower means to a neutral position in which one end of said follower means is slightly spaced from said cam but adapted to be engaged by the lobes on said cam as said cam rotates, whereby said follower means pivots and on disengaging said cam snaps back to its neutral position to move said striker head means into contact with said bell.

3,048,143
TRANSLATION INDICATOR OF THE RECORDING AREAS ON A MAGNETIC TAPE
Giovanni Geloso and Adolfo Castelli, both of Viale Brenta 29, Milan, Italy
Filed Oct. 24, 1960, Ser. No. 64,449
5 Claims. (Cl. 116—135)



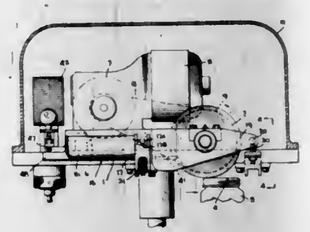
1. An indicator structure for magnetic tape recorders comprising a casing, an elongated slot in the top of said casing, a pair of pulleys at opposite sides of said slot, an endless belt passing over said pulleys, the upper surface of said belt being visible through said slot, indicia on said upper surface, a pointer on the top of said casing at the edge of said slot adjacent to said indicia, one of said pulleys being a driver, manual means for driving said pulley, a drive shaft for said pulley, and friction coupling means between said shaft and said driver.

3,048,144
MECHANICAL VIBRATOR SIGNALLING DEVICE
James E. Vistain, Jr., Skokie, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 9, 1961, Ser. No. 81,382
5 Claims. (Cl. 116—137)



1. In combination with a mechanical vibrational wave generator element for generating a vibrational wave of predetermined frequency and high initial amplitude responsive to impact by a hammer, exciter means including: a hammer carrier mounted for rotational movement; a hammer mounted to said hammer carrier for percussive engagement with said generator element; means, including a coil spring resiliently mounting said hammer on said hammer carrier, said spring normally maintaining said hammer in a first position relative to said hammer carrier; an operating lever having an actuated and a rest position; an over-center spring coupled between said operating lever and said hammer carrier; means normally biasing said operating lever to said rest position; said over-center spring being effective to rotationally accelerate said hammer carrier toward said generator element upon said operating lever being moved from said rest to said actuated position; and stop means abruptly stopping the movement of said hammer carrier near said generator element, said hammer rapidly moving into percussive engagement with said generator element and rebounding therefrom; said coil spring being effective to retract said hammer to said first position, whereby a single percussive contact between said hammer and said generator element is obtained.

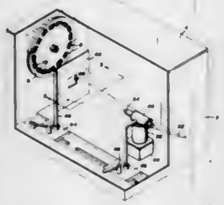
3,048,145
ADHESIVE APPLYING MECHANISM
Harry E. Stover, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed June 8, 1960, Ser. No. 34,683
6 Claims. (Cl. 118—258)



1. An adhesive applying mechanism comprising a frame, an upstanding bearing member mounted on said frame, a reservoir of adhesive having bottom, side and rear walls and having an open front end, said reservoir resting on said upstanding bearing member to permit the reservoir universal movement, an adhesive applying roller rotationally mounted in said open front end of the reservoir and communicating with the interior of the reser-

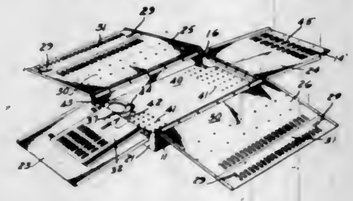
voir to permit it to receive adhesive from said reservoir, a leveling device on said frame, said reservoir being adapted to bear against the leveling device after being pivoted to permit the reservoir to return to its original position.

3,048,146
APPARATUS FOR SPRAYING CATHODES
Patrick P. Coppola, Fayetteville, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 27, 1959, Ser. No. 829,678
3 Claims. (Cl. 118—301)



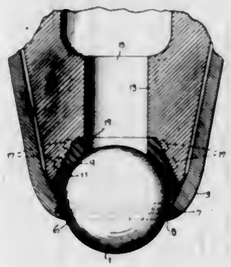
1. Apparatus for making thermionic emitters by spray coating a desired area of an emitter substrate member comprising a sprayer for expelling a slurry of particulate emission material in a conical spray locus having a reference axis, a holder movable to and from a spray position on the axis of said spray locus and no more than 6" from said spray orifice, means for supporting the emitter substrate member on said holder with said desired area to be coated arranged generally normal to the spray locus axis in said spray position, said holder having an opening provided with a peripheral radially extending lip masking from said sprayer the portion of said substrate area surrounding said desired area, the surface of said lip facing away from said sprayer being spaced from the plane of said desired area a distance slightly greater than the desired thickness of the spray coating to be formed on said desired area, and a spray shield between the sprayer and holder having an aperture substantially centered on the spray locus axis, said aperture being from 3" to 5" from said sprayer and having a size such as to permit only the central core portion of the spray to pass through said shield to said substrate member, whereby the coarser particles of said spray are collected by said shield and prevented from landing on said substrate member.

3,048,147
PORTABLE COLLAPSIBLE SHIPPING KENNEL FOR ANIMALS
James D. McKean, Los Angeles, Calif., assignor to Premere Manufacturing Corp., Los Angeles, Calif., a corporation of California
Filed Sept. 8, 1959, Ser. No. 838,643
6 Claims. (Cl. 119—19)



1. A portable collapsible shipping kennel, comprising: a bottom section having upturned side and end flanges; side panels and end panels of greater height than the width of said bottom section respectively having hinged connection with the outer extremities of said flanges for selective movement into collapsed folded relation into the bottom section, and into upstanding extended relation, each of said side panels having interconnected upper and lower sections foldable to a vertical height dimension in a direction extending from its hinge connection which is less than the horizontal dimension of the bottom in a direction extending from said hinge connection; means for releasably connecting the adjacent edges of the end panels and unfolded side panels so as to retain them in extended upstanding relation; a cover section having downturned side and end flanges arranged to extend over the side and end flanges of the bottom section, said cover and bottom sections cooperating to form a closure for the folded side and end panels therein, and said cover being positionable over the upper edge extremities of said side and end panels in their upstanding extended relation to form a container; means for releasably connecting said cover section and bottom section with said panels in folded position, and for connecting said cover section and at least two of said panels in their extended position; and a removable auxiliary bottom panel contained in said bottom section, said panel being raised above the bottom to provide space for absorbing material thereunder, and having an imperforate central portion and ventilating openings in its ends portion.

3,048,148
BALL POINT PEN
Salvatore P. Sirianni, 408 W. 54th St., New York 19, N.Y.
Filed Mar. 18, 1959, Ser. No. 800,124
4 Claims. (Cl. 120—42.4)

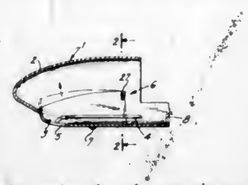


1. A ball point pen comprising means providing a socket, and a ball disposed in said socket for rotation of said ball in said socket when in rolling contact with a writing surface, at least a portion of said socket means being formed of a plastic comprising a perhalogenated polyethylene in which at least one of the halogen atoms is fluorine and providing a surface for slipping engagement with the surface of said ball in said socket in said rolling movement of said ball on said writing surface, said surface of said plastic being substantially non-adhesive to the ink so that the ink is carried on the surface of the ball substantially without adhering to said surface of said socket.

3,048,149
FINGER STYLUS
Joseph M. Guttman, 5118 14th Ave., Brooklyn, N.Y.
Filed Dec. 10, 1959, Ser. No. 858,669
6 Claims. (Cl. 120—42.4)

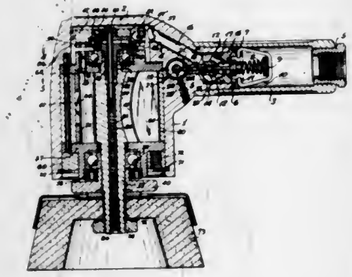
1. A finger pen adapted to fit on the end of a finger comprising a shell having a slotted portion and a writing point within said shell movable relative to said portion whereby said point may alternatively project from said portion and withdraw within said portion, said portion being pivotally mounted on said shell (at a pivot point), said portion substantially enclosing said point when in a carrying position and allowing said point to project

when in a writing position, spring means comprising a torsion bar, said portion affixed to said bar at least one torsion hole of substantially the same cross-section as said bar on said shell, an end of said bar in said torsion hole



and gripped thereby, whereby the turning of said bar relative to said shell is prevented and said portion is urged toward said carrying position, and means for urging said portion toward said writing position.

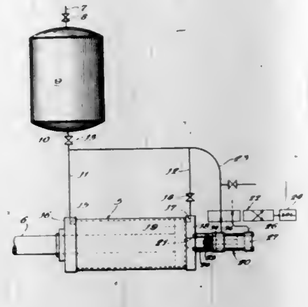
3,048,150
PNEUMATICALLY OPERATED TOOL
Charles H. Young, Cleveland, Ohio, assignor to Herschal Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 23, 1960, Ser. No. 57,982
11 Claims. (Cl. 121—33)



1. In a pneumatically operated tool, a housing, a liner in the housing, a rotor rotatable in the liner, means for communicating fluid pressure to the rotor, governor means rotatable with the rotor and operable in response to the rate of rotation of the rotor to vary the volume of air to the rotor, a governor carrier body secured to the rotor, said governor means including a pair of relatively movable governor plates arranged in axially spaced relation, an intermediate plate loosely disposed between said spaced plates, and centrifugally responsive means on one of said paired plates for pressing said intermediate plate into facial contact with the other of said paired plates, and means for exhausting spent fluid pressure from the tool.

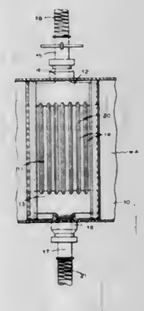
3,048,151
REMOTE CONTROL FOR A PISTON AND CYLINDER DEVICE
Walter J. Kudlaty, Elmhurst, Ill., assignor to Flick-Reedy Corporation, a corporation of Illinois
Filed May 12, 1960, Ser. No. 28,755
10 Claims. (Cl. 121—38)

1. A control for exhausting a pneumatic cylinder at supersonic flow rates, comprising in combination: a pneumatic cylinder having a cap at one end provided with a realtively large port axially aligned with the cylinder; a relatively small control piston and cylinder device having a piston rod extending toward said pneumatic cylinder cap; a closure on said control cylinder piston rod realingly engaging said cap to close said large port and retractable from said sealing engagement with the cap; a source of pneumatic fluid for charging said pneumatic cylinder to a predetermined position; means for charging said control cylinder to hold said closure against the cap of said pneumatic cylinder to close said port; and electrical control means for reversing the charge in said



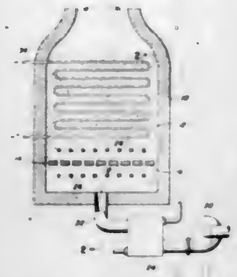
control cylinder to move said closure rapidly away from the pneumatic cylinder cap to allow discharge of the pneumatic fluid therein through said port at a supersonic flow rate.

3,048,152
ROTATABLE STEAM COIL AIR HEATER
Günter Hellwig, Oberhausen, Rhineland, Germany, assignor to Babcock & Wilcox Limited, London, England, a company of Great Britain
Filed Jan. 9, 1959, Ser. No. 785,864
Claims priority, application Germany Jan. 16, 1958
3 Claims. (Cl. 122—1)



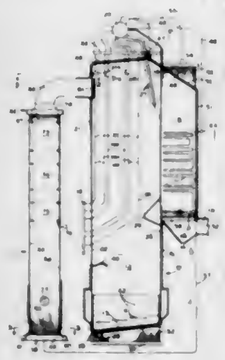
1. In an air heater having means defining a relatively cold air inlet, a preheater having a broad face with openings therethrough and narrow edge disposed in said inlet for preheating said incoming cold air to a predetermined temperature so as to avoid condensation of any moisture in the heating gases flowing through said air heater in indirect heat exchange relation to said air, means for rotating said preheater in said inlet about an axis of revolution which prevents movement of said preheater in a direction transversely of said axis so that in operative position said preheater has its broad face presented transversely to the flow of relatively cool air entering said inlet whereby said air flows through the openings in said face and in inoperative position said preheater has its narrow edge portion presented to the flow of air through said inlet, means for circulating a heating fluid through said preheater in heat transfer relationship to the air flowing through said inlet, and streamlining means connected to the narrow edge of said preheater for decreasing the resistance to air flow thereover when in the inoperative position.

3,048,153
VAPOR GENERATOR
Roy F. Abrahamsen, Chattanooga, Tenn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed July 11, 1956, Ser. No. 597,121
4 Claims. (Cl. 122—4)



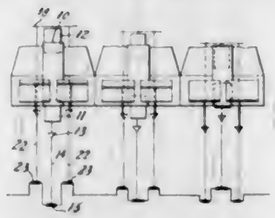
1. In a vapor generator the combination for an upright housing, a bed of discrete material disposed within said housing, a generally horizontally disposed support for said bed of discrete material extending across said housing and including elongated members in parallel spaced relation with the spacing of adjacent members being sufficiently close as to prevent the passage of the discrete material therebetween while permitting the passage of air upwardly therethrough into the bed, the outer surface of said members being comprised of a material that is an active oxidation catalyst having an activation temperature well below the minimum bed temperature that is required to oxidize a fuel-air mixture, means for heating the catalyst to its activation temperature, means for forcing air upwardly through the housing support and the bed of material at a rate to fluidize the material, means for introducing a fuel into the housing in a manner to contact the outer surface of the support members, means for introducing a fuel into the housing above the support, and a heat exchanger through which a fluid may be conveyed disposed in said bed.

3,048,154
APPARATUS FOR SUPERHEATING VAPOR
De Carr C. Braddy, Bath, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed July 1, 1960, Ser. No. 40,414
3 Claims. (Cl. 122—240)



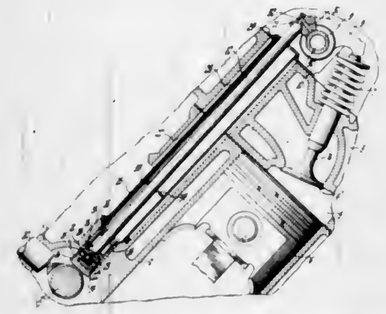
1. In combination, walls defining a chemical recovery furnace having a hearth in the lower portion and a combustion gas outlet in an upper side wall portion thereof, said furnace walls each including a row of steam generating tubes, means for incinerating residual liquor in the lower portion of said furnace with the discharge of inorganic chemicals in smelt form from said hearth and the discharge of hot gaseous combustion products through said furnace toward said combustion gas outlet, a convection gas-pass adjoining said furnace and having a gas inlet opening to said combustion gas outlet, convection heat exchange tubes in said convection gas-pass, wall means forming a separate furnace having a combustion gas outlet adjacent one end and with an upright row of tubes in the walls and a plurality of rows of tubes transversely disposed across the gas outlet end portion thereof, means for burning a fuel in the opposite end of said separate furnace and passing the resulting gases through said separate furnace and over said transversely disposed tubes, means for directing steam generated in the wall tubes of said chemical recovery furnace to the tubes in the walls of said separate furnace for flow of steam through the separate furnace wall tubes and thereafter through the transversely disposed tubes to superheat said steam, means defining a gas inlet positioned in a side wall of said chemical recovery furnace substantially at the level of and directly opposite said chemical recovery furnace gas outlet, and means for discharging the gases from said separate furnace through said gas inlet and transversely across said chemical recovery furnace whereby the gases from said separate furnace blend with the hot gaseous combustion products from said chemical recovery furnace for combined flow through said convection gas-pass.

3,048,155
OPPOSED PISTON, TWO-STROKE CYCLE, DIESEL ENGINES
Percy Jackson and Ernest Taylor, Sunderland, England, assignors to William Doxford & Sons (Engineers) Limited, Sunderland, England, a British company
Filed June 4, 1959, Ser. No. 818,112
Claims priority, application Great Britain June 4, 1958
3 Claims. (Cl. 123—51)



1. In a multi-cylinder opposed piston two-stroke cycle diesel engine comprising
(*a*) a plurality of upright cylinders,
(*b*) an entablature supporting said cylinders in spaced apart relation in a row lengthwise of the engine,
(*c*) a crankshaft having a center throw and an outer throw on each side of the center throw for each cylinder,
(*d*) two opposed pistons working in each of said cylinders,
(*e*) one piston of each cylinder being connected to the center throw,
(*f*) means including two side connecting rods, one for each of the outer throws and located on the lengthwise center line of the row of cylinders and parallel to the axis of the said cylinder, one on each side of said cylinder for connecting the other piston to each of the outer throws,
(*g*) two reciprocating air pumps each comprising an upright pump cylinder,
(*h*) a pump piston working in said pump cylinder,
(*i*) a pump piston rod having one end attached to said pump piston and the other end projecting from the pump cylinder,
(*j*) said two pumps being located both on the same side of the row of engine cylinders with at least one of the pump cylinders between a pair of engine cylinders as viewed transversely of the row and, as viewed in plan, projecting into the space between the cylinders,
(*k*) the pump cylinders being each substantially opposite its side connecting rod,
(*l*) and a bracket on each side connecting rod extending radially therefrom and attached at its outer end to the projecting end of the piston rod of the pump cylinder opposite that rod.

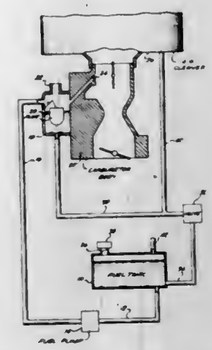
3,048,156
SUBMERGED TYPE HYDRAULIC VALVE LIFTER
Louis J. Van Slooten, West Olive, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 17, 1961, Ser. No. 103,297
5 Claims. (Cl. 123—90)



1. In an internal combustion engine of the overhead valve type having a cylinder head, a valve operating rocker mounted on the head, an engine crankcase having a rocker driving camshaft therein spaced below the driven end of the rocker, a hydraulic valve lifter including a cup-shaped body having its end wall abutting the camshaft and a plunger reciprocably slidable in said body, a shelf extending laterally from the crankcase and provided with a bore slidably guiding said body for reciprocation by the camshaft, a push rod thrustably connecting the plunger to the driven end of the rocker, said plunger having a one-way passage for introducing oil into the body below the plunger for thrustably supporting the plunger therein, means for conducting oil to the push rod at the driven end of the rocker, a removable standpipe defining an oil storage chamber surrounding the push rod above said lifter guiding bore, said standpipe having sealing means connecting it to the shelf adjacent said bore, and a standpipe supporting bracket fixed to the upper end of the standpipe and to the cylinder head below the rocker, said standpipe having an internal baffle surrounding the push rod and spaced above said shelf.

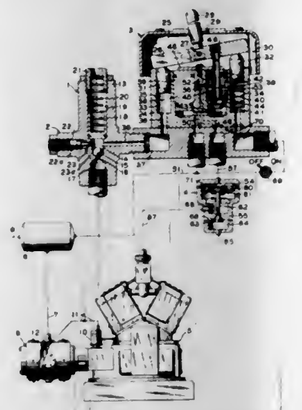
3,048,157
AIR POLLUTION ABATEMENT SYSTEM
James B. Gregory, Charles C. Moore, and Howard D. Emerson, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed June 30, 1959, Ser. No. 823,914
25 Claims. (Cl. 123—136)

1. In combination with an internal combustion engine, an improved liquid fuel delivery and conservation system adapted to minimize evaporative fuel losses, comprising in combination a remote fuel storage tank, a fuel induction device associated with said engine, an induction system fuel reservoir chamber located near said engine, said chamber having a supernatant vapor space and having at least one vent to the atmosphere from said supernatant vapor space, fuel delivery means for delivering fuel from said storage tank to said fuel reservoir chamber, means for transferring fuel from said reservoir chamber to said



fuel induction device, and a fluid drain conduit opening from said fuel reservoir chamber and communicating with the interior of said storage tank, said drain conduit being adapted to return fuel to said storage tank, and to empty said reservoir chamber when said fuel delivery means is inoperative.

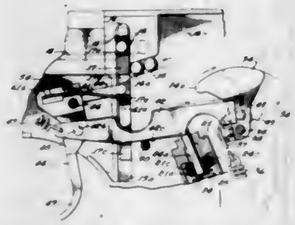
3,048,158
LOW OIL PRESSURE PROTECTION APPARATUS
Paul E. Olson, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Feb. 8, 1960, Ser. No. 7,399
8 Claims. (Cl. 123—196)



1. Low oil pressure protection apparatus for an oil lubrication system of an engine-driven machine when the oil pressure in the system decreases from a normal pressure to below a chosen low value, said apparatus comprising a source of fluid under pressure, a fluid pressure controlled shut-off means for effecting stopping of the engine, valve means for controlling the supply of fluid under pressure from said source to and release of fluid under pressure from said shut-off means, actuating means for said valve means including means operatively connected to and communicating with said lubrication system so as to be responsive to a force corresponding to said oil pressure in said lubrication system and means for applying opposingly to said oil pressure force a biasing force corresponding to the said predetermined chosen low value of oil pressure, said oil pressure responsive means and said predetermined biasing force means being operative to actuate

said valve means for controlling the supply of fluid under pressure to and release of fluid under pressure from said shut-off means so as to effect stopping of said engine when said oil pressure in said lubrication system decreases from said normal pressure to below said chosen low value, and timing means between said lubrication system and said actuating means for delaying for a selected interval of time the actuation of said valve means when said oil pressure in said system decreases below said chosen low value of oil pressure.

3,048,159
COMPRESSED FLUID-OPERATED SMALL ARMS WEAPONS
Richard M. Kline, 9413 Sawyer St., Los Angeles, Calif., and Kenneth R. Pitcher, 13805 Burbank Blvd., Van Nuys, Calif.
Continuation of application Ser. No. 538,858, Oct. 6, 1955. This application June 27, 1958, Ser. No. 744,968
6 Claims. (Cl. 124—51)



1. In a small arms weapon: a body having a barrel, said body having a recess extending transversely of the barrel; a member slidable in the recess for feeding missiles to the barrel; a movable trigger member; one of said members having means forming a recess, and the other of said members having a projection received in the recess to form a lost motion connection between the members; resilient means acting between the members for urging the projection and one end of the recess toward each other and urging the slidable member toward the barrel; and means limiting movement of the slidable member toward the barrel and effective to cause the projection and the said end of said recess to move away from each other upon movement of the trigger member in one direction, the trigger movement in said one direction imposing increasing force on said limiting means.

3,048,160
ATTACHMENT OF CUTTING ELEMENTS TO WEAR RESISTANT BLADES
George O. Griffin, Newport Beach, and Ellsworth S. Hanshaw, Baldwin Park, Calif., assignors to Trurun, Inc., Huntington Beach, Calif.
Filed Sept. 26, 1960, Ser. No. 58,252
15 Claims. (Cl. 125—15)



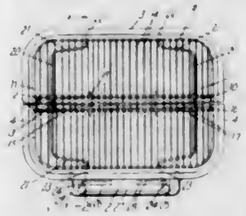
15. An abrasive cutting blade comprising a steel core having sides, a peripheral rim portion on the core, a reduced portion of the core defining a depression in each of the sides inwardly from the rim portion, a body of wear resistant metal alloy welded in each of said depressions and cooperating with the respective core sides to define wear resistant side surfaces, said core defining a plurality of slots spaced along and extending inwardly from the core periphery, and a plurality of abrasive cutting elements welded to the core rim portion, each of said abrasive cutting elements being disposed between a pair of adjacent slots, and each of the abrasive cutting elements having projections welded to and imbedded in said core rim portion.

3,048,161
PNEUMATIC FIREMAN'S TOOL FOR BREAKING GLASS BLOCKS AND OTHER WALL BUILDING MATERIALS
Harold E. Roeder, 6 Churchill Lane, Lexington, Mass.
Filed July 27, 1960, Ser. No. 45,675
3 Claims. (Cl. 125—40)



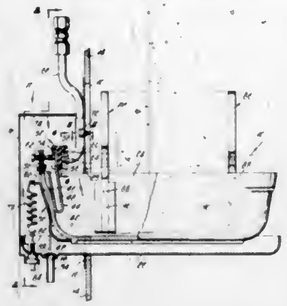
1. A fireman's tool for breaking through a building wall of the type constructed from glass block material, said tool comprising in combination an elongated shaft, pneumatic means for reciprocating said shaft, a percussion head mounted at one end of the shaft, said percussion head including a tapered broaching tip for piercing a hole in the glass block material, a plurality of conical reaming surfaces located rearwardly of the tip and extending outwardly in a radially increasing dimension to enlarge the size of the hole, each of said conical reaming surfaces being separated from one another by annular shouldered portions projecting outwardly at right angles to the axis of the shaft to provide a series of impact surfaces of progressively larger radial dimension whereby the breaking forces may be exerted against both edges of the hole and exposed outer surfaces of glass block material immediately surrounding the hole.

3,048,162
PORTABLE BARBECUE
Allen W. Gauss, Albion, Mich., assignor to Union Steel Products Company, Albion, Mich.
Filed Feb. 10, 1960, Ser. No. 7,785
6 Claims. (Cl. 126—25)



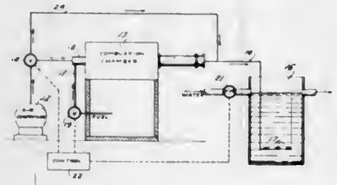
2. An outdoor grill comprising a fire pan including a bottom, front, rear and side walls, a grid having a central transverse opening therein defined by laterally spaced parallel grid crossbars, an elongated auxiliary grid unit complementing said main grid unit and having supporting lugs supportingly and releasably engageable with said main grid unit, means for supporting said grid journaled in said fire pan comprising support members having laterally offset journals journaled in said fire pan walls, the front journals being extended through the fire pan walls in which they are journaled and terminating in projecting actuating arms, and keeper members mounted on said fire pan wall to coact with said arms and having a plurality of keepers therein with which said arms are selectively engageable.

3,048,163
COUNTERBALANCED HUMIDIFIER
Milton A. Powers, Grosse Pointe, Mich., assignor to Skuttle Manufacturing Co., Milford, Mich., a corporation of Michigan
Filed Sept. 16, 1958, Ser. No. 761,314
16 Claims. (Cl. 126—113)



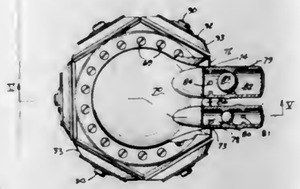
1. A humidifier assembly for mounting in a wall aperture of a plenum chamber or a duct comprising an adaptor plate adapted to be secured to the wall of said plenum chamber or duct, said plate having an aperture to be positioned opposite said wall aperture when the plate is mounted on the wall of said plenum chamber or duct, a substantially horizontally disposed overflow pan rigid with said plate and extending through the aperture therein, a substantially vertically disposed support bracket, means in said overflow pan tiltably mounting said support bracket, a liquid receptacle secured on one side of said support bracket and over said overflow pan, a tensioned balance spring operably connected to the opposite side of said support bracket for biasing said support bracket in a direction opposite from that in which it is urged by the weight of said receptacle and its contents, a liquid supply nozzle mounted on said adaptor plate over said reservoir pan and directed toward said support bracket, and a valve seat mounted on said support bracket adjacent but opposite said nozzle, said valve seat being movable directly with said bracket and adapted to close said nozzle when water in the pan attains a predetermined level.

3,048,164
AIR-ACTIVATED CARBONATION
James Donald Walker, Aurora, Ill., assignor to Walker Process Equipment, Inc., Aurora, Ill., a corporation of Illinois
Filed Mar. 1, 1957, Ser. No. 643,460
5 Claims. (Cl. 126—360)



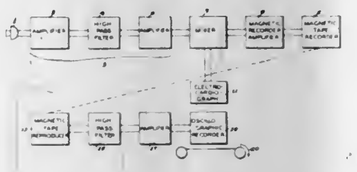
1. Apparatus for carbonating liquid including a tank having inflow and outflow connections adapted to maintain a deep body of liquid in the tank, a burner, a pump and conduit for supplying air under pressure to the burner, a conduit for supplying fuel under pressure to the burner, an exhaust conduit in sealed communication with the burner and having orifice type outlet means deep in the tank and adapted to release gas in the liquid to be carbonated, and a by-pass conduit receiving air from said pump and discharging it into the exhaust conduit.

3,048,165
PUMP FOR AN ARTIFICIAL HEART
Samuel H. Norton, University Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Apr. 17, 1959, Ser. No. 807,192
8 Claims. (Cl. 128—1)



2. A pump for an artificial heart comprising first and second plastic sacks corresponding to the right and left ventricles of the human heart, an inlet for said first sack having a check valve therein corresponding to the tricuspid valve of the right ventricle in the human heart, an inlet for said second sack having a check valve therein corresponding to the mitral valve of the left ventricle in the human heart, separate outlets for each of said first and second sacks each having a valve therein corresponding to the semilunar valves of the human heart for controlling the outward flow of fluid from the sacks, means forming a variable volume chamber confining said first and second sacks and said chamber being charged with a liquid to surround said sacks therewith, said variable volume chamber means including movable wall means temporarily reducing the volume of said chamber to contract said sacks under liquid pressure and forcing fluid within said sacks outwardly under increased pressure through said valves corresponding to the semilunar valves of the human heart, and conduit means connected to said inlets and to said outlets for joining the pump to the blood vessels of a human being.

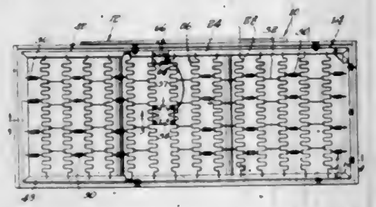
3,048,166
PHONOCARDIOGRAPHIC METHOD AND APPARATUS
Simon Rodbard, % Department of Cardiovascular Research, Michael Reese Hospital, Chicago, Ill.
Filed Mar. 29, 1955, Ser. No. 497,580
3 Claims. (Cl. 128—2.06)



1. A method of diagnosing the functioning of the heart that comprises transducing the sounds associated with cardiac activity into electrical signals having a relatively low intensity high frequency component of frequencies above substantially 500 cycles per second and including frequencies in the range of from substantially 800 to substantially 1800 cycles per second and a relatively high intensity low frequency component of frequencies below 500 cycles per second masking the low intensity high frequency component, filtering said electrical signals to remove said high intensity low frequency component and retain said low intensity high frequency component, thereby unmasking said low intensity high frequency component, and producing an output corresponding to the retained unmasked low intensity high frequency component as an

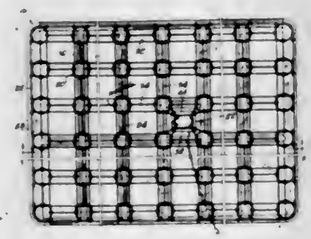
amplitude-versus-time transient wave having sufficient resolution to separate each of the portions thereof corresponding to the first and second heart sounds, for normal heart function, into first and second separated bursts of transient oscillations.

3,048,167
VIBRATING SPRING STRUCTURE FOR MASSAGE LOUNGE
Ewald A. Kamp, Chicago, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Mar. 18, 1958, Ser. No. 722,215
5 Claims. (Cl. 128—33)



4. A spring structure having a spring frame, a plurality of zig zag spring units mounted within the spring frame substantially parallel to each other, connecting means including a plurality of coil springs and a plurality of wire links alternately connecting adjacent zig zag spring units, a vibrator mounted between two juxtaposed zig zag spring units, whereby the vibrator transmits vibratory energy to said juxtaposed spring units which units transmit the vibratory energy to other spring units through said connecting means with said coil springs operating to dampen the vibratory energy prior to transmission thereof to the spring frame.

3,048,168
VIBRATING SPRING STRUCTURE
Ewald A. Kamp, Chicago, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 731,518
5 Claims. (Cl. 128—33)



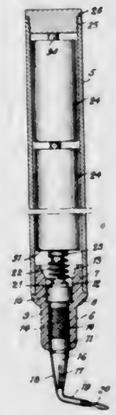
2. A spring structure for use in a bed having a mattress supported thereon and comprising: a spring frame, a plurality of longitudinal and lateral rows of upstanding spaced apart coil spring units mounted on said spring frame, a wire network including a plurality of rows of longitudinally and laterally extending wires with the wires of each row connected to the coils of the spring units in corresponding rows, and a vibrator within the periphery of said wire network and attached to certain of said longitudinally and laterally extending wires in substantially coplanar relationship with the top ends of adjacent spring units for vibrating the network of wires and transmitting the vibratory energy to the juxtaposed mattress.

3,048,169
METHOD OF FORMING CASTS MADE WITH PLASTIC FOAM MATERIAL
Harry Feltus Pierce, Toronto, Ontario, Canada, assignor to Dura-Design Plastics Limited, Toronto, Ontario, Canada
Filed Oct. 15, 1959, Ser. No. 846,590
16 Claims. (Cl. 128—90)



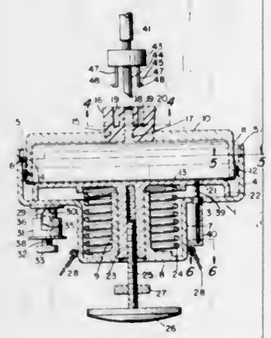
2. A sheet material for making casts, splints and the like comprising a flexible envelope sealed along its edges with the exception of one edge to form a mouth, said envelope being impermeable to reacting plastic resins to be introduced therein, a plastic sheet formed by the reaction of a prepolymer and catalyst confined within the envelope, said envelope and sheet being transparent to X-rays of an intensity used in medical radiology on a bare living body and being mouldable to shape on a living body at temperatures which are not harmful to said body, and at least one flexible re-inforcing sheet embedded in the plastic sheet.

3,048,170
ELECTRICAL DEVICES FOR THE APPLICATION OF FLUID TO THE GUMS
Albano Lemos, 6404 SW. 16th St., West Hollywood, Fla.
Filed Nov. 8, 1960, Ser. No. 67,986
3 Claims. (Cl. 128—172.1)



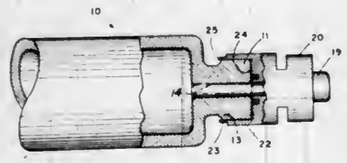
1. An electrical device for the application of a fluid to the dentine and cementum comprising, a tubular metallic casing, a plurality of batteries placed end-to-end in the casing, the rearmost battery therein having its positive electrode in electrical contact with the casing, the foremost battery in the casing having its positive electrode in contact with the negative electrode of the rearmost battery, a plug of insulating material fitted in the front end of the casing and having a tubular extension projecting forwardly of the casing, the plug having a larger-diameter rear portion fitting within the casing, the plug having an axial passage extending through it, said passage having a seat provided in its larger-diameter portion, a shaft extending through the passage, said shaft having a head at one end disposed against the seat, the foremost battery having a negative electrode extending toward the head, a contact spring disposed between the negative electrode of the foremost battery and the head and establishing electrical contact between the said electrode and the head, the shaft having a tapered forward end extending beyond the plug, said tapered end being split, a sleeve provided with a brush at one end and a conical cup at its other end, said cup being adapted for removable fitment over the split end of the shaft.

3,048,171
INTRAVENOUS INJECTION DEVICE
Harry R. Grau, Cleveland, Ohio, assignor to Bio-Physical Research, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 3, 1958, Ser. No. 771,606
2 Claims. (Cl. 128—214)



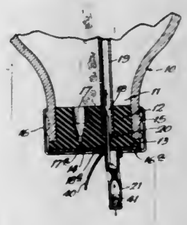
1. In a device of the character described, a housing, a container removably secured to said housing and comprising a hollow, transparent, rigid portion, and a flexible diaphragm secured to said rigid portion, said rigid portion having an axial opening in which a socket is frictionally secured, said socket having an axial passageway therethrough, which is closed at one end by a frangible seal, spring means disposed within said housing, means responsive to said spring means for distending said diaphragm to expel the contents of said container, said last-named means comprising a piston bearing against said diaphragm, and an assembly associated with said device, said assembly comprising a needle, a plug, and a flexible conduit interconnecting said needle and plug, said plug adapted for connection to said socket and provided with means for breaking said seal to permit flow of fluid from said container through said conduit and needle.

3,048,172
HYPODERMIC SYRINGE
Nicholas Krueger, Woodridge, N.J., assignor to East Rutherford Syringes, Inc., Rutherford, N.J., a corporation of New Jersey
Filed May 20, 1960, Ser. No. 30,588
8 Claims. (Cl. 128—218)



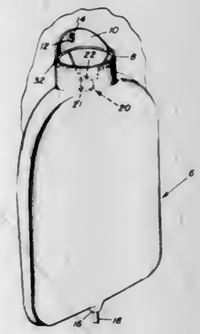
1. In a syringe, a syringe barrel, an integral tip extending from one end of said barrel, said tip being bored to provide a passage communicating with the interior of said barrel, needle mounting means on said tip, said needle mounting means comprising a tubular metal sleeve telescopically mounted on said tip, said sleeve comprising a forwardly extending cylindrical wall portion of uniform thickness and a cylindrical skirt portion of a uniform thickness less than the thickness of said forwardly extending wall portion extending rearwardly from said forwardly extending wall portion.

3,048,173
AIRWAY CANNULA
Alexander O. Kompelien, Palatine, and Cyrus R. Broman, Evanston, Ill., assignors to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Feb. 17, 1958, Ser. No. 715,796
3 Claims. (Cl. 128—221)



1. An airway cannula comprising an elongated tubular metal body having walls defining the forward end of said cannula, mating at one end in a sharp point, said body having at the other end a flat manipulating portion having a width at least as great as the outer circumference of the said tubular body and lying in a plane including said sharp point, said flat portion provided with an inwardly-directed transverse shoulder, the said shoulder providing thereby a rearmost part of said flat portion offset from said plane and adjacent the side of said body opposite the side having said sharp point.

3,048,174
HOLDER FOR MEDICATED CARTRIDGE FOR DOUCHE BAG
Frank E. Charles, 390 S. 6th St., Blythe, Calif.
Filed Jan. 7, 1960, Ser. No. 1,079
4 Claims. (Cl. 128—227)



2. For use in the upper end of the mouth portion of a douche bag or the like, a one-piece openwork readily insertable and removable suspension rack embodying a frame adapted to be positioned horizontally and retained in operative position in said mouth portion, an upstanding vertically disposed post the vertical axis of which is in axial alignment with the axis of said frame, said frame being provided with independent circumferentially spaced depending spokes having lower ends thereof cooperable with and supporting said post, and a readily attachable and detachable medicated sleeve removably mounted on said post and constantly accessible by way of said frame.

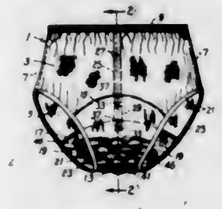
3,048,175
CERVIX RETAINING INJECTION NOZZLE
Goran Olof Uddenberg, Rangeltorpsgatan 49, Goteborg, Sweden
Filed Mar. 30, 1959, Ser. No. 802,714
Claims priority, application Sweden Jan. 28, 1959
2 Claims. (Cl. 128—245)



2. An instrument for facilitating the examination of and insertion into the human uterus and Fallopian tubes, comprising an outer tube, a suction cup operably connected to one end of said outer tube with such suction cup being adapted to envelop and retain the cervix, a cannula tube of lesser diameter than the outer tube coaxially disposed within and fractionally retained with respect to the outer tube and having an end portion positioned within said suction cup, a head on said end portion adapted to open the cervix and permit injection of fluid into the uterus, means defining a passageway between said suction cup and said outer tube so that air may be exhausted from the interior of the suction cup into the space between the outer tube and the cannula tube thereby sealing the entry of air through such cup against the cervix, means for displacing said cannular tube and head axially respecting said outer tube and said suction cup for opening the cervix and allowing the injection of fluid through said cannula tube and head into the cervix, handle means including front and rear sections, said front section having a bore in each end thereof, said outer tube being anchored in one of the bores in the front section, the rear section being secured in the other of the bores of the front section, said rear section having an axially threaded recess in its other end, a retainer having a bore threaded into said recess and including means allowing said retainer to be turned externally with respect to said handle means, and said retainer being operably connected with the end of said cannula tube remote from the head for effecting axial displacement of the cannula tube respecting said suction cup, and a connection tube extending longitudinally in the bore of said retainer and communicating with the end of said cannula tube remote from the head for allowing fluids to be injected into the uterus through said connection tube, cannula tube and head.

3,048,176
SANITARY GARMENT
Irvin S. De Woskin, St. Louis, Mo., assignor to Beltx Corporation, St. Louis, Mo., a corporation of Missouri
Filed Mar. 9, 1960, Ser. No. 13,768
1 Claim. (Cl. 128—288)

In a sanitary panty garment having a body portion of thin heat-sealable plastic fabric material consisting of front and back sections joined at stitched side seams and a crotch section, the body portion and crotch sections being shaped to provide leg openings, the crotch section having side margins extending along the leg openings and front and back margins extending from one leg opening of the garment to the other, the front and back margins of the crotch section being seamed by stitching to the body portion throughout their extent, and elastic bands encircling the leg openings stitched to the margins of the body portion at the leg openings and the side margins of the crotch section, said crotch section comprising an outside layer of the same material as the body portion, an intermediate layer of impervious heat-sealable sheet plastic material, and an inside layer



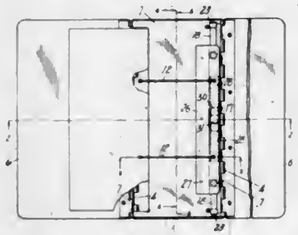
of open-mesh heat-sealable plastic net material, the meshes of said net material being large in relation to the thickness of the yarn from which said net material is made, said crotch section layers being seat-sealed together at intervals around the edges of the crotch section and being stitched together all around the edges of the crotch section by the stitching which secures the front and back margins of the crotch section to the body portion and the stitching which secures the elastic bands to the side margins of the crotch section.

3,048,177
BLOOD VESSEL COUPLING DEVICE
Timothy Takaro, Asheville, N.C., assignor to the United States of America as represented by the Secretary of the Army
Filed June 23, 1959, Ser. No. 822,396
5 Claims. (Cl. 128—334)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A clamping device for joining hollow members in abutting end relation to provide a continuous path through the hollow members, comprising a plurality of pairs of clamping members for peripherally engaging the external surface of the hollow members to be joined, each pair of clamping members including longitudinally separable body portions, each said body portion having a pair of oppositely disposed arms projecting from the exterior surface of said body portion and provided with apertures adjacent to the terminal ends thereof, the terminal ends of the arms of one body portion interdigitating with the terminal ends of the arms of another body portion and having the apertures of the corresponding ends of said arms thereof in registering position, the clamping edge of each of said separable body portions parallel to the direction of projection of said arms being serrated and fastening and releasing means slidably passing longitudinally through the aligned apertures of a first pair of clamping members and threadably engaging the aligned apertures of a second pair of clamping members for maintaining said arms of adjacent longitudinally aligned pairs of said clamping members in interdigitating position and axial alignment and said pairs of clamping members in clamping engagement.

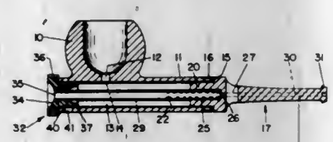
3,048,178
LOOSE SHEET BINDER
Russell Charles Fitzgerald, Kalamazoo, Mich., assignor to Master-Craft Corporation, Kalamazoo, Mich.
Filed Aug. 5, 1960, Ser. No. 47,733
11 Claims. (Cl. 129—24)



1. A loose sheet holder comprising a back member having forwardly projecting flanges on its side edges, cover members hingedly mounted on the inner edges of said flanges, a post bar having longitudinally spaced holes therein hingedly mounted on one of said flanges at the inner side of the cover hinge thereon, a post member comprising a pair of outwardly curved resiliently bendable posts disposed through said openings in said post bar and provided with a connecting reach at their inner ends disposed on the inner side of the post bar, post retaining members swingably mounted on the inner side of said post bar in retaining and end thrust sustaining relation to the inner ends of said posts, stop members on said back member limiting the inward swinging movement of said post bar, post clutch means disposed on the inner side of the other back member flange and comprising outer and intermediate clutch members disposed in aligned relation with their adjacent ends coacting to provide post clutch jaws, blade springs overlapping and connected to adjacent ends of said outer and intermediate clutch members and provided with post receiving holes aligned with said coacting clutch jaws thereof, retaining members mounted on said back member at the outer ends of the outer clutch members in end thrust and overhanging relation thereto, a member of upwardly facing channel section disposed on the underside of said intermediate clutch member with its ends in overlapping relation to the inner ends of said outer clutch members, a retaining member secured to said back member at the inner side of said clutch members and having a laterally projecting flange overhanging the clutch members and provided with post receiving openings aligned with said clutch member jaws and with a central opening, and coil springs disposed between said back member and the outer clutch members and acting to yieldingly urge the clutch members outwardly, the intermediate clutch member being engageable through said central opening for disengaging said clutch members, said clutch members automatically engaging said posts when they are inserted therein.

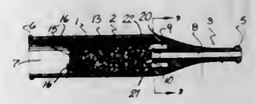
3,048,179
SMOKING PIPE
Philip J. Stieger, 785 Armstrong Ave., St. Paul, Minn.
Filed July 24, 1958, Ser. No. 750,731
3 Claims. (Cl. 131—195)

1. A smoking pipe including a barrel, a bowl secured to said barrel intermediate its ends and communicating with the interior of said barrel, said barrel having open ends, a mouthpiece detachably secured in one end of said barrel, said mouthpiece having an air flue extending therethrough between opposite sides thereof, a socket in said mouthpiece communicating with said flue, a cooling tube engaged in said socket and extending longitudinally in said barrel, a plug extending into the other end of said barrel and having a passage therethrough into which said cooling tube may extend, spaced projections on said mouthpiece on opposite sides of said cooling tube, said projections being integral with said mouthpiece, and passages



extending longitudinally through said projections and through said mouthpiece from end to end thereof, said projections having opposed arcuate surfaces having a common axis, and said arcuate surfaces being spaced apart a distance substantially equal to the external diameter of said tube, said plug holding said cooling tube axially aligned with said barrel and sealing the interior of said barrel outwardly of the cooling tube from atmosphere.

3,048,180
FILTER TIP
Herman L. Shaw, Newton, Mass., assignor to Aquafilter Corporation, Newton Center, Mass., a corporation of Massachusetts
Filed May 4, 1959, Ser. No. 810,714
2 Claims. (Cl. 131—207)

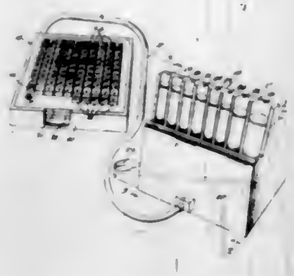


1. A cigarette holder of plastic material comprising an elongated tubular open ended casing having in series a forward end with a longitudinally extending cylindrical opening therethrough terminating in a pair of inwardly directed shelves and a solid mouthpiece section having a passage narrower than said cylindrical opening therethrough communicating with said opening, means forming an annular recess in said solid section defined by inner and outer walls thereby forming a liquid trap in said mouthpiece section extending rearwardly from said shelves and coaxial with said opening and with the outer wall of said recess at least in part contiguous with said shelves, said annular recess having a forward end coplanar with said shelves and also coaxial with said opening and with the inner wall of said annular recess and defining a portion of said passage adjacent said opening, means forming radially extending slots in said inner wall adjacent the forward end thereof for passage of smoke therethrough, and a quantity of filter material positioned within said opening and extending forwardly from a point immediately adjacent said trap, said shelves and forward end coacting to maintain said filter material in a position covering the open end of said recess.

3,048,181
CONTROL FOR COIN DISPENSING APPARATUS
James L. Quinn, Chicago, Ill., assignor to Cummins-Chicago Corp., Chicago, Ill., a corporation of Illinois
Filed Oct. 30, 1959, Ser. No. 849,881
14 Claims. (Cl. 133—2)

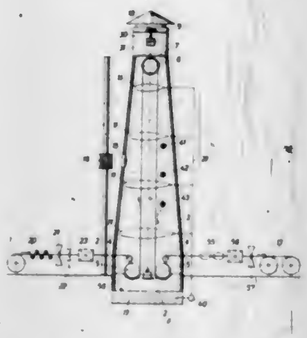
1. In a coin dispensing mechanism having a plurality of coin-holding magazines, the combination comprising a plurality of selector members movable between operative and inoperative positions, a plurality of electric actuators

for selectively moving said selector members to operative positions, means for shifting said selector members in unison to cause those which are operatively positioned to eject coins from the associated magazines, means electrically connected to and responsive to the energization of any one or combination of said actuators to initially ener-



gize said shifting means, means independent of said last-named means for holding said shifting means energized, means for disabling said holding means and for deenergizing said shifting means after one ejection cycle, and means to prevent a second energization of said shifting means unless all of said actuators are first deenergized after the completion of one ejection cycle.

3,048,182
APPARATUS FOR PICKLING WIRE OR STRIP STOCK
Othmar Ruthner, 12 Salmgasse, Vienna, Austria
Filed Apr. 21, 1958, Ser. No. 729,892
Claims priority, application Austria Jan. 10, 1958
4 Claims. (Cl. 134—63)



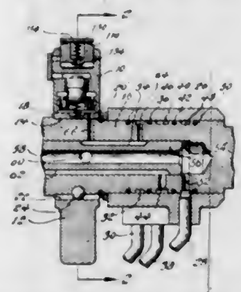
1. Apparatus for pickling wire and strip stock, comprising a vertically elongated substantially gastight housing having an acid-resisting inside wall, upper and lower reversing rollers for guiding the stock to be pickled in a path vertically up and down through said housing, said upper reversing roller being temporarily movable out of an operable position in which the stock is engaged to an inoperable position out of the path of the stock, nozzles for spraying a pickling liquor on the stock, said housing being provided with entry and exit openings for the stock, said openings and said lower reversing rollers being so arranged that upon initial feeding of stock through the housing it extends effectively horizontally therethrough, and means on said housing for pulling the effectively horizontally extending stock vertically with respect to the housing to form a loop of sufficient length to reach the upper reversing roller to facilitate the threading of stock over the upper reversing roller.

3,048,183
RAIN OR WEATHER COVER FOR SHIP'S HATCHES, OPEN RAILWAY TRUCK AND THE LIKE
Odd Gründseth, Skoyen, near Oslo, Norway, assignor of one-half to Fred Olsen Aviation Maintenance Norsk Flyindustri A/S, Fornebu, near Oslo, Norway, a company of Norway, and one-half to International Macgregor Organization, Casablanca, Morocco, a company of Morocco
Filed May 20, 1959, Ser. No. 814,614
Claims priority, application Norway May 27, 1958
2 Claims. (Cl. 135—5)



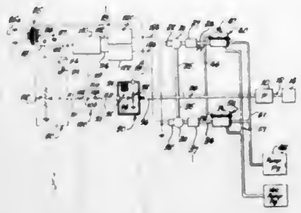
1. Protective apparatus for a substantially horizontal surface having an opening therethrough, said apparatus comprising a pair of sections detachably supported on said surface, each section being hollow, means pivotally connecting said sections together to form a frame having an aperture coincident at least in part with said opening, a canopy hoop for each said section pivotally supported on the respective section adjacent said means for movement between retracted and extended positions, said canopy hoop being of the same shape as a respective section for being enclosed in the same in said retracted position, a flexible cover operatively coupled to each said canopy hoop and covering said aperture with said canopy hoops in the extended position, said cover being enclosed in said sections with said canopy hoops retracted, said means enabling pivotal movement of said sections with the latter detached from said surface to form a closed casing with the canopy hoops and flexible cover enclosed in said sections.

3,048,184
FLUID PRESSURE GOVERNOR MECHANISM
James J. Duffy, Scottsdale, Ariz., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 13, 1960, Ser. No. 35,708
8 Claims. (Cl. 137—51)



1. A fluid pressure governor capable of establishing a fluid pressure signal that is proportional in magnitude to the speed of rotation of a rotary member, a valve body carried by said rotary member, a control pressure passage and a governor pressure passage formed in said valve body, first valve means carried by said valve body for modulating said control pressure to establish in said governor pressure passage a speed signal, and second valve means carried by said valve body for inhibiting the modulating action of said first valve means when said rotary member is rotating at a speed less than a predetermined design value, said first valve means being insensitive to said second valve means when said rotary member is rotating at speeds greater than said predetermined design value.

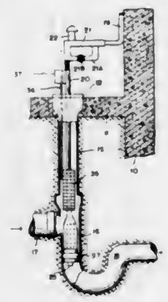
3,048,185
VARIABLE INCREMENT PRESSURE REGULATOR
Robert Charles Howard, Costa Mesa, Calif., assignor to Giannini Controls Corporation, Pasadena, Calif., a corporation of New York
Filed Aug. 3, 1959, Ser. No. 831,197
4 Claims. (Cl. 137—103)



1. A system for developing in a chamber a gas pressure which has a predetermined relationship to a continuously variable electrical input command signal, said system comprising:

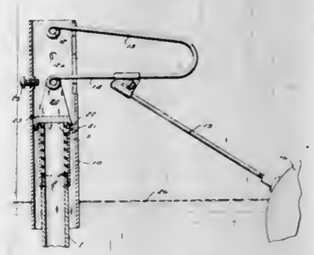
means adapted to be connected to a chamber containing a body of gas under a variable pressure and responsive to the variable gas pressure and acting to produce an electrical comparison signal to which the existing gas pressure has the said relationship,
means for receiving an input command signal,
means for comparing said comparison signal with the command signal and developing a control signal corresponding to their difference,
first and second conduit means having connections adapted to connect with said variable gas pressure,
first and second gas pressure regulating means responsive to the variable gas pressure and acting to provide the respective conduit means with pressures that differ from the variable pressure by approximately equal amounts in opposite directions,
first and second valve means connected in series with the respective conduit means between the connections and the pressure regulating means,
and means for actuating the valve means selectively under control of the of the control signal to effect a return of the variable pressure to a value as determined by the command signal.

3,048,186
AUTOMATIC FLOOD CONTROL MEANS
Charles G. Roberts, 23861 Verne Ave., Detroit 19, Mich.
Filed Apr. 22, 1959, Ser. No. 808,124
7 Claims. (Cl. 137—111)



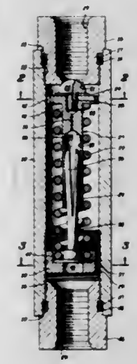
1. A flood control system comprising a substantially vertical drain cleanout pipe, a seepage inlet pipe openly connected with the lower end portion of said cleanout pipe, a trap openly connected to the lower end of said pipe and disposed below said seepage inlet pipe, a plug element disposed in said trap and having a passage therethrough open at all times to provide water drainage from said cleanout pipe through said trap, and a pump means connected with a supplemental source of water under pressure and disposed in said trap and selectively operable to force-pump water from said cleanout and seepage inlet pipes through said plug passage, said supplementary source of water being independent of water normally present in said cleanout pipe.

3,048,187
VALVE WITH TUBULAR RESILIENT SEAL
Harry F. Smith, Lexington, Ohio, assignor to Mansfield Sanitary Inc., Perrysville, Ohio, a corporation of Ohio
Filed Dec. 4, 1959, Ser. No. 857,406
9 Claims. (Cl. 137—437)



1. A valve for controlling fluids comprising a rigid pipe having an abutment therein and an open discharge end, a movable closure engageable with the said open end, and a resilient, pressure-deformable, non-compressible tube in said pipe, engaging said abutment in the pipe and having a discharge end in the pipe closely adjacent to the open end of the pipe, said tube being deformable lengthwise into sealing engagement with said closure when subjected to the pressure of fluid therewithin.

3,048,188
RELIEF VALVE
Frank B. Hunter, Van Nuys, Calif.
(5667 Lubao St., Los Angeles, Calif.)
Filed Oct. 29, 1957, Ser. No. 693,052
1 Claim. (Cl. 137—469)



A hydraulic relief valve comprising a cylindrical body, an internally threaded fitting screwed into one end of the body, a circular valve seat adjacent the inner end of the internal thread of the fitting, a valve provided with a surface of spherical curvature for seating in the valve seat, a circular flange transversely disposed in the body and loosely carrying the valve for radical movement and self alignment thereof in the seat, the flange being provided with hydraulic fluid channels for restricting fluid flow therethrough and providing a secondary pressure

drop between the valve and the interior of the body, a tubular stem axially disposed in the body and connected to the circular flange, a coaxially disposed stem provided with prongs extending into the tubular portion of the tubular stem and adapted to frictionally engage the inside walls of the tubular stem for damping the opening and closing movements of the valve, screw-threaded means adapted for threading into the end of the valve adjacent the second-mentioned stem and limiting the outward movement of said stem, a loaded coil spring disposed coaxially around the two stems for urging the valve into seating engagement with the valve seat, and means for withdrawihg exhaust fluid from the interior of the body.

3,048,189
VACUUM SAFETY DEVICE FOR TANKS AND THE LIKE

Arthur E. Chandler, 1010 W. Bremer Ave., Waverly, Iowa

Filed Dec. 14, 1959, Ser. No. 859,318
5 Claims. (Cl. 137—586)



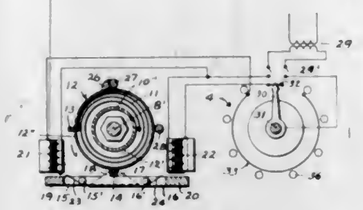
1. In combination, a tank adapted to contain fluid, an access opening in the top of said tank, a manhole structure on said tank around said access opening, a lid comprising a part of said manhole structure and adapted to pivot therewith to seal said opening at times, a valve on said tank, actuating means on said valve to selectively open said valve and to remove fluid from said tank at times, an aperture in said actuating means, a bar on said tank adjacent said valve, an aperture on said bar capable of registering with the aperture in said actuating means at times, a cable movably secured to said tank and having one of its ends terminating adjacent the aperture in said bar, a locking pin on the end of said cable adapted to penetrate the aperture in said bar at times, the other end of said cable terminating adjacent said manhole structure, a resilient means secured to said tank and said cable to yieldingly restrain the displacement of said cable toward said valve and away from said manhole structure, a fork element movably secured to the end of said cable and normally abutting said manhole structure immediately adjacent said access opening, said fork element normally compressing said resilient means, said lid engaging said fork element while in a closed condition to releasably hold said fork element in abutting relationship with said manhole structure, said cable being of such length that said locking pin can penetrate the registering apertures in said bar and said actuating means when said fork element is abutting said manhole structure.

3,048,190
OXYGEN DISPENSING APPARATUS

Richard Carling, Richmond, Calif. (20 E. 74th St., New York, N.Y.)

Filed Aug. 24, 1959, Ser. No. 835,607
3 Claims. (Cl. 137—624.11)

1. In a device for intermittently releasing charges of fluid from a source of fluid under pressure; a valve, means biasing said valve to closed position, manual operating means for moving said valve to open position, first biased latch means for normally preventing manual actuation of said valve from closed to open position, second biased latch means for locking the valve in open position, first unlocking means for said first latch means, second unlocking means for said second latch means, timer means of the type having actuator means manually settable from a position where the timer means is inoperative to a desired operative position where the timer means will operate for a desired predetermined time, circuit means coacting with the timer means and the first and second unlocking means in such a manner that when the timer actuator means is moved from inoperative

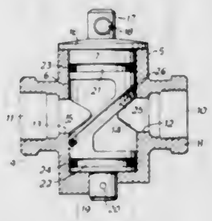


position to a desired operative position said first unlocking means is operated to thereby free the valve to be manually actuated from closed to open position and when the timer means has operated for said predetermined time said second unlocking means will be operated to unlatch said valve from open position so that said valve biasing means will reclose the valve.

3,048,191
ROTARY COCKS AND VALVES

Terence F. Crang, Cowes, Isle of Wight, England, assignor to Kinematics Limited, London, England, a British company

Filed Sept. 12, 1960, Ser. No. 55,546
4 Claims. (Cl. 137—625.32)

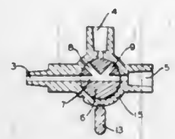


1. A rotary cock or valve in which a plug is arranged in a bore formed in a body having aligned, or substantially aligned, inlet and outlet ports, so as to be rotatable between a shut position and an open position and in which the working clearances between the plug and the body are sealed by resilient sealing rings, characterised in that the plug is formed firstly with two circumferential annular grooves located in planes substantially normal to the axis of rotation of the plug and on opposite sides respectively of the inlet and outlet ports each containing a gland sealing ring, secondly with an additional circumferential annular groove containing a bore sealing ring and located in a plane which is inclined to the said axis of rotation at an angle such that, in the "shut position" of the plug, the part of the bore sealing ring which is most nearly adjacent a particular gland sealing ring being situated on the same side of the inlet and outlet ports as such particular gland sealing ring, and thirdly with recesses in opposite sides thereof providing channels for connecting the inlet and outlet ports when the plug is in the "open position," said recesses being formed in opposite sides of the plug between the bore sealing ring on the one hand and those parts of the gland sealing rings which are most widely separated from the bore sealing ring on the other hand, and the walls of said recesses being spaced from the walls of the grooves containing said sealing rings.

3,048,192
SURGICAL VALVE

William P. Murphy, Jr., Miami, Fla., assignor, by direct and mesne assignments, of one-half to Cordis Corporation, Miami, Fla., and one-half to Don Baxter, Inc., Glendale, Calif., a corporation of Nevada

Filed Aug. 14, 1957, Ser. No. 678,163
6 Claims. (Cl. 137—625.42)

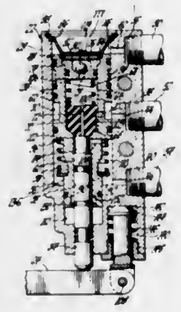


1. A valve comprising a body having a socket in one side and ducts leading from the periphery of the socket to the periphery of the body, and a plug rotatably fitted in the socket with a passageway interconnecting a plurality of said ducts in one angular position of the plug, said socket having a tapered portion tapering from its mouth to a generally cylindrical circumferential zone adjacent said ducts and the plug being formed of resilient material with a diameter slightly greater than that of the socket at said zone and a diameter smaller than that of the tapered portion of the socket so as to form a seal with minimum friction and without a sealing ring.

3,048,193
AIR SUSPENSION CONTROL APPARATUS

Casimer J. Cislo, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 14, 1959, Ser. No. 859,167
11 Claims. (Cl. 137—627.5)

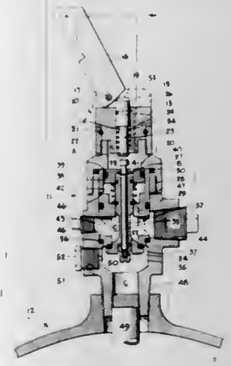


1. In combination, a three-stage leveling valve comprising a housing having an axially movable member slidably disposed therein, inlet and exhaust valve means mounted in said member, a plunger reciprocable in said housing to alternately engage and retract from said valve means, plunger actuating means hinged on said housing, remotely controlled means effective to displace said axially movable member from a first predetermined axial position in said housing, a resilient stop defining a second predetermined axial position for said axially movable member and a fixed abutment defining a third axial position for said axially movable member whereby opening and closing of said intake valve and exhaust results from swinging movement of said plunger actuating means through three predetermined ranges of angular movement.

3,048,194
FIRE EXTINGUISHER HEAD ASSEMBLY

Charles K. Huthsing, Sr., Culver City, and Don F. Preston, Pacific Palisades, Calif., assignors to General Fire Extinguisher Corporation, a corporation of California

Filed Nov. 26, 1958, Ser. No. 776,567
1 Claim. (Cl. 137—630.15)



A valve assembly having inlet passage means designed for communication with a source of pressurized gas, said valve assembly comprising: primary valve means interposed in said passage means and normally urged to a seated position in said valve assembly by said pressurized gas; an actuating chamber defined by said valve assembly; actuating passage means through said primary valve means communicating between said pressurized gas and said actuating chamber; secondary valve means extending through said actuating passage means in said primary valve means, said secondary valve means having an end portion thereof urged by said pressurized gas to a seated position sealing off said actuating passage means; piston means defining a part of said actuating chamber, said piston means being adaptable to movement to a first position engaging and unseating said secondary valve means and thereafter to a secondary position engaging and unseating said primary valve means; said piston means having a larger gas pressure acting area than said primary valve means whereby upon movement of said piston means to said first position said pressurized gas will flow into said actuating chamber through said actuating passage means and thereafter force said piston means to said second position unseating said primary valve means; actuating means for directly unseating said secondary valve means, said actuating means comprises a force transmitting means in said valve assembly spaced from said secondary valve means; and lever means coupled to said valve assembly and adapted to actuate said force transmitting means to a position engaging and unseating said secondary valve means, whereby said pressurized gas urges said piston means to said first position to retain said secondary valve means unseated.

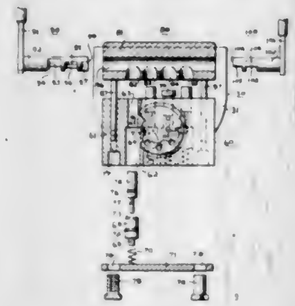
3,048,195
CARBONATED BEVERAGE DISPENSING APPARATUS

Louis Gottlieb, 1505–07 Stillman St., Philadelphia, Pa.

Filed July 7, 1959, Ser. No. 825,544
7 Claims. (Cl. 137—637)

1. A valved fluid mixing apparatus comprising, a plurality of individual conduit lines including a separate valve in each of said conduit lines, each valve permitting fluid flow through its associated conduit from an inlet end to an outlet end when actuated and preventing such fluid flow when deactuated, control means operable for selectively actuating the valves in said conduit lines, a first valve being always actuated whenever said control means is operated, independently of whether any other

of said valves is also actuated, and a mixing nozzle assembly coupled to said conduit lines comprising a nose block disposed within a removable mixing nozzle and discharge spout, said nose block having a plurality of fluid flow passages extending therethrough from rear to front, each of said passages having an inlet end at the rear of the nose block and an outlet end, the inlet ends of said nose block passages being coupled respectively to the outlet ends of said conduit lines and hydraulically isolated from one another, the nose block passage coupled to the conduit line in which is located said first valve extending forward and upward through the nose block and terminating at an outlet end opening through the side of the nose block proximate the top thereof, the

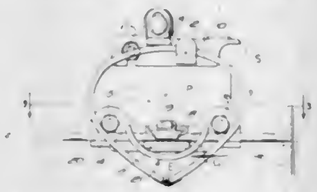


remaining nose block passages extending forward through the nose block and terminating at outlet ends on the front thereof, said mixing nozzle and discharge spout surrounding said nose block in closely spaced relation to the nose block sides to provide a space of small volumetric capacity into which the side opening nose block passage discharges, and being spaced forward of the nose block front to provide a space of substantially larger volumetric capacity into which the front opening nose block passages discharge, said small and larger volumetric capacity spaces being interconnected so that fluid flow from the side opening nose block passage also discharges through the larger volumetric space and washes the sides and front of the nose block.

3,048,196
PICKER CHECK ASSEMBLY FOR LOOMS

Adelard J. Arcand, Biddeford, Maine, assignor to Pepperell Manufacturing Company, Boston, Mass., a corporation of Massachusetts

Filed Aug. 17, 1960, Ser. No. 50,178
11 Claims. (Cl. 139—165)

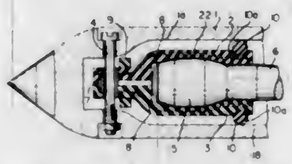


1. In a picker check assembly of the kind wherein a check strap, of single thickness at those portions of its length which are encountered by the picker stick and which is of a flexibility such as to conform to the slope of the picker stick when contacted by the latter, has frictional engagement with elements carried by lay-supported brackets located at opposite sides, respectively, of the picker stick path, one of said elements being a simple rectilinear length of rigid rod of uniform diameter from end-to-end, means normally fixedly connecting the center part of said rod to its supporting bracket, the central portion of the check strap engaging the friction elements carried by the other bracket, means directly connecting the free ends of the strap, the latter having holes of a diameter but slightly greater than that of the rod, spaced from its respective free ends and through which the rod passes, and guard means fixed to the bracket which supports the rod and which is operative to prevent contact of the check strap with the latter bracket as the check strap is moved in response to the picker stick blow, the ends of said rod being freely movable through the openings in the strap in assembling the parts without necessitating the prior removal of any part of the assembly.

3,048,197
SHUTTLE WITH A BOBBIN CLAMPING DEVICE

Armin Fink, Franzosenstrasse, Diessenhofen, Switzerland

Filed May 8, 1959, Ser. No. 811,945
Claims priority, application Switzerland Aug. 27, 1958
4 Claims. (Cl. 139—207)

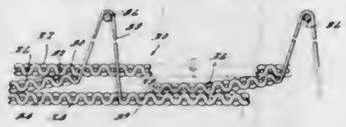


1. In a hollow shuttle for a loom, a pair of jaws mounted within said shuttle and extending along walls of the shuttle, a bobbin having a head held by said jaws and tending to spread the jaws apart, said head comprising a cylindrical and an adjacent shorter conical portion, each jaw having arched transverse cavities cooperating with the cylindrical and conical portion of the head, connecting means for connecting said jaws to said shuttle passing through one end of both jaws at the ends thereof opposite the bobbin, resilient means spaced from each other and urging said jaws toward each other, each of said jaws being provided with a leading surface extending along the longitudinal edge of the respective jaw, said leading surfaces of a pair of jaws forming an acute angle for facilitating the exchange of bobbins, said resilient means comprising first means located adjacent the ends of the said jaws opposite the bobbin and second means located between the jaws and the shuttle wall at the bobbin end of the jaws.

3,048,198
METHODS OF MAKING STRUCTURAL PANELS HAVING DIAGONAL REINFORCING RIBS AND PRODUCTS THEREOF

Edward Koppelman, Huntington Park, and Arthur R. Campman, Los Angeles, Calif., assignors, by direct and mesne assignments, to 3-D Weaving Company, Huntington Park, Calif., a partnership

Filed Sept. 16, 1959, Ser. No. 840,399
10 Claims. (Cl. 139—384)



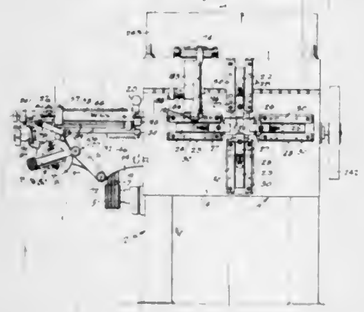
1. A plural ply fabric comprising a pair of superimposed and substantially coextensive woven fabric facing portions, and rib portions extending between said facing portions, each one of said rib portions including warp threads that extend through both of said facing portions and are woven at intervals into at least one of said facing portions, selected ones of said rib portions extending diagonally between said facing portions when said facing portions are at their maximum spacing from each other as defined by said rib portions, said rib portions being composed of warp portions common to and integral with the warps of the woven plies, said warp portions being disposed upon the outside of one of the woven plies in the flattened condition of the fabric.

7. Method of producing a two-ply fabric with intervening rib portions extendible between the plies to space the plies apart, comprising weaving pairs of warps with wefts to produce the plies in woven condition and passing warps of one of said pairs to the outside of its companion ply in the form of floated unwoven warp portions such that said floated warp portions can be pulled through said companion ply upon extension of the two woven plies to form intervening unwoven rib portions integral with the warps of the woven plies.

3,048,199
VERTICAL FOUR SLIDE WIRE OR RIBBON METAL FORMING MACHINE

Leslie W. Barnes, Trumbull, Conn., assignor to The A. H. Nilson Machine Company, Shelton, Conn., a corporation of Connecticut

Filed Mar. 29, 1956, Ser. No. 574,812
8 Claims. (Cl. 140—71)



1. In a wire or ribbon metal forming machine, a bed having an upright front wall, a work station on said wall including means for performing operations on a work piece, a plurality of tool slides mounted on the front wall for movement in an upright plane at substantially right angles to each other toward and from the work station, drive shafts located to the rear of said wall, an individual barrel cam located to the rear of said wall for operating each tool slide, an independent separate bearing pin for each cam mounted at the rear of said wall, a driving connection from a drive shaft to each cam including a gear secured to one end of each cam and a pinion meshing therewith mounted on the shaft, each pinion including means for clamping it to the shaft in different angular positions about the axis of the shaft, a driving connection from each cam to its respective slide arranged to shift the slide in a direction parallel to the axis of the cam, and means for driving the drive shafts.

3,048,200
PROCESS OF TREATING COILED ARTICLES

Francis M. de Britz, Brooklyn, N.Y., and Alvin A. Wisco, Kinnelon, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 12, 1958, Ser. No. 720,919
6 Claims. (Cl. 140—71)

1. In the manufacture of coiled articles wound from refractory wire and having leg portions at each end which extend transversely from the coiled body portions of said articles, the process of orienting said leg portions in a desired alignment with respect to each other and the longitudinal bisectional plane of the respective ones of said articles, which process comprises initially positioning said leg portions during the formation thereof at angles such that the spacing therebetween and from said plane differs from that desired and the differential is in a direction such that the resultant angular displacement of said leg portions from the desired alignment is in the

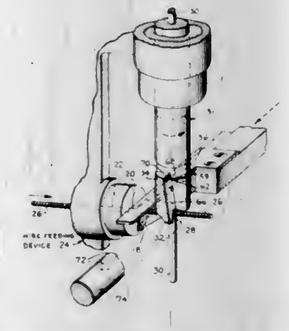


same direction as would normally occur if the coiled body portions of said articles were twisted in the direction in which they were wound, completing the fabrication of said articles, and then heating the finished articles en masse under controlled time and temperature conditions to relieve the residual torsional stresses in the coiled body portions thereof by an amount sufficient to cause said leg portions to swing into the desired alignment.

3,048,201
ARTICLE-FORMING DEVICE

David M. Johnson, Ocean Grove, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

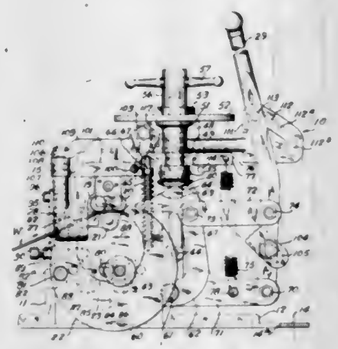
Filed Dec. 29, 1959, Ser. No. 862,542
5 Claims. (Cl. 140—71.5)



1. In combination with a coiling machine having a rotatable coiling die and a feeding device, an elongated coiled article wrapped about a mandrel and fed by and retained by said feeding device, and a free end of said article extending from said feeding device and intended to be formed into a leg of a coiled-coil member, the improvement which comprises, an anvil on said coiling die, guide means on said coiling die adjacent said anvil for guiding said free end toward said anvil during the forming thereof into said leg, biasing means on said guide means adjacent said anvil and defining with said anvil and said guide means a leg-receiving means, a resilient leg-forming device adjacent said free end and operable to move along said free end and to force successive portions of said free end against said anvil thereby forming said leg, said leg-forming device being further operable during the leg-forming operation to retain the already formed portion of said free end along said guide means and to move the remaining portion of said free end into engagement with said biasing means, said biasing means being adapted upon engagement thereof with said re-
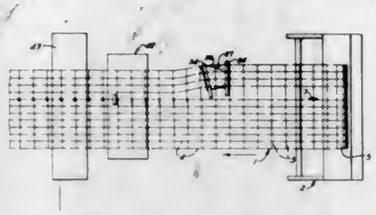
maining portion to cause movement of said remaining portion away from said guide means so that, as said remaining portion is forced against said anvil by said leg-forming device to complete said leg, said remaining portion is moved out of engagement with said biasing means thereby permitting the spring back induced in said remaining portion by said biasing means to cause said remaining portion to snap into said leg-receiving means, the spring back induced in said leg by said leg-forming device then being operable when said leg-forming device releases said leg to seat it in said leg-receiving means.

3,048,202
RING ROLLING MACHINE
Foster F. Hillix, Lakewood, Ohio, assignor to Wedge Protectors, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 24, 1958, Ser. No. 775,863
5 Claims. (Cl. 140—88)



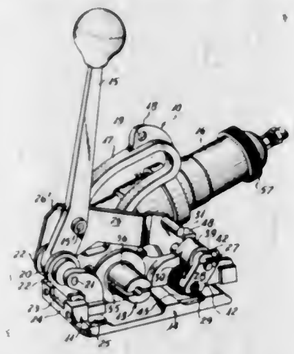
1. A ring rolling apparatus having a frame including a fixed portion and a swingable portion, a roll cluster having a pair of rolls rotatably mounted on said fixed portion and a shiftable roll rotatably mounted on said swingable portion for motion therewith toward and away from said pair of rolls into and out of closed and open positions, said roll cluster being adapted to advance and bend strip stock, a first cam on said swingable portion of said frame and having a convex circular surface adapted to reverse bend said stock and to guide said stock to said roll cluster for re-entry and subsequent bending thereby, a second cam pivoted on said frame and having a ramp portion, a draw rod pivotally connected to said swingable portion of said frame, a flanged member adjustably positioned on said draw rod and engaging said ramp portion, biasing means urging said swingable portion to said open position, a lever secured to said second cam and adapted to pivot said cam to cause said ramp portion to move said flange and draw rod to bring said swingable portion and said shiftable roll to said closed position against the action of said biasing means, a retractable guide movably supported on said frame and arranged in a guiding position to maintain said stock in alignment with said surface and said roll cluster with said shiftable roll in said closed position, a ring ejector movably mounted on said frame and adapted to move from an idle position to eject a ring from said roll cluster when said shiftable roll is in said open position, a first connecting means between said lever and said retractable guide and a second connecting means between said lever and said ejector whereby during movement of said lever to move said shiftable roll to said open position said guide is retracted from said guiding position and said ejector is moved to eject a ring.

3,048,203
MANUFACTURE OF FOLDING CONCRETE-REINFORCING WIRE MATS
Everett C. Hunter, Belle Vernon, Pa., assignor to Pittsburgh Steel Company, a corporation of Pennsylvania
Filed Sept. 26, 1960, Ser. No. 58,463
16 Claims. (Cl. 140—107)



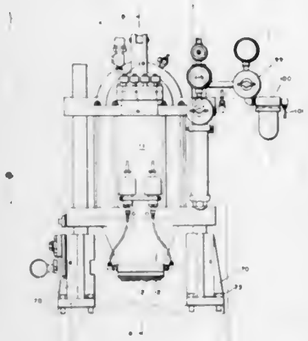
1. Apparatus for making hinged concrete-reinforcing wire mats, comprising means for feeding ahead side by side two strips of wire fabric having parallel cross wires secured to parallel longitudinal strand wires and with the cross wires of one strip projecting laterally from its inner strand wire and overlapping the inner strand wire of the other strip, a normally stationary twister head provided with a notch extending upward from its center for receiving said overlapped wire, means for successively arresting each cross wire of said other strip a short distance from said head, the twister head being provided with a shoulder for successively engaging the top of each said projecting cross wire between said overlapped wire and the next strand wire in the same strip as said overlapped wire, means for rotating the head periodically to cause said shoulder to wrap an engaged cross wire around said overlapped wire to connect the two strips together, means for stopping the head with its notch opening upward, and means for releasing said other strip from the notch and said arresting means to permit the wrapped cross wire to pass over the head so that the following projecting cross wire can engage the head beneath its shoulder.

3,048,204
STRAPPING DEVICE
Harrison C. Lingle, Wilmette, Ill., assignor to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware
Filed June 20, 1958, Ser. No. 743,448
19 Claims. (Cl. 140—123.6)



6. In a hand tool for stretching strap, the improvement comprising a support, stretching means mounted on said support, a gripper wheel rotatably mounted on said support and releasable means cooperatively arranged with said gripper wheel to prevent rotation of said gripper wheel when said tool is stretching strap and to release said gripper wheel for rotation thereof at other times.

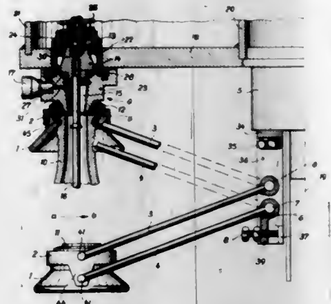
3,048,205
CEMENT DISPENSING APPARATUS
Chester O. Merchant, Harborcreek Township, Erie County, Pa., assignor to Swanson-Erie Corporation, Erie, Pa., a corporation of Pennsylvania
Substitute for abandoned application Ser. No. 537,968, Oct. 3, 1955. This application June 9, 1958, Ser. No. 740,967
6 Claims. (Cl. 141—141)



1. A machine for handling cup shaped bases and depositing a quantity of cement in each said base comprising a vibratory base feeder having means for orienting said bases, means to deposit bases in said vibratory base feeder, means for depositing said cement in said bases, means for transferring said bases to said cement depositing means, said vibratory feeder being operatively connected to said means for depositing said bases, a control means for limiting the quantity of bases in said feeder connecting said means to deposit said bases to said cement depositing means to start and stop said means to deposit bases to said vibratory feeder when the supply of bases in said feeder changes above or below certain limits whereby the quantity of bases in said feeder is limited, said means for limiting the quantity of bases in said feeder comprising a lever swingably attached to an actuating means for said control means, said lever having means on the distal end from said actuating means adapted to be engaged by bases in said vibratory feeder when said bases deposited therein are above a predetermined depth whereby said lever is swung to shut off said means to deposit bases, and means to stop said means for transferring said bases to said cement dispensing means when a said base is missing from said transferring means.

3,048,206
FILLING DEVICE FOR BOTTLE- AND CONTAINER-FILLING MACHINES
Richard Keller, Dortmund-Aplerbeck, Karl Quest, Dortmund-Korne, Werner Schroer, Dortmund, and Franz Lochschmidt, Dortmund-Korne, Germany, assignors to Dr. Bruno Kaiser, Hamburg, and Dr. Emil Pauls, Hamburg-Eidelstedt, Germany
Filed June 25, 1958, Ser. No. 744,406
Claims priority, application Germany June 26, 1957
6 Claims. (Cl. 141—371)

1. A device for filling bottle-like receptacles with liquid fluid from a vessel having in combination, a valve structure connected to said vessel and having a controlled outlet opening, a circumferentially closed centering member adapted to be reciprocated with respect to said outlet opening for centering a filling mouth of said receptacle with respect to said outlet opening, a ring member encompassing said centering member, connecting means for detachably connecting said ring member to said centering member, guiding means for guiding said centering member during the reciprocating movement thereof including two pairs of parallel arm members, means for pivotally supporting the one ends of said pairs of arm members on diametrically opposite sides of said ring member, and means for pivotally supporting the other



ends of said pairs of arm members adjacent said valve structure the pivot point of the arm members on a common side of said centering member being arranged to form a parallelogram linkage.

3,048,207
CARBIDE TIPS FOR SAWS
Ernest R. Ferrari, P.O. Box 788, Vancouver, Wash., assignor of 33⅓ percent to Howard G. Jacobsen and 33⅓ percent to Vera I. La Fountaine, both of Portland, Oreg.
Filed Oct. 5, 1959, Ser. No. 844,443
1 Claim. (Cl. 143—133)

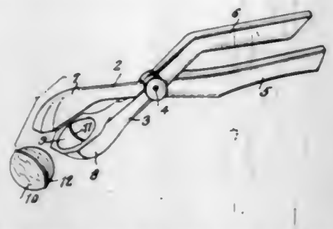


In a saw, the combination of a saw tooth having a back edge, a forward edge and a forward outer end and a preformed tip of carbide and the like secured to said forward outer end in fixed position thereon, said tip having a face at the front thereof that leads the tooth on movement of the saw, a slot at the rear thereof extending inwardly into the tip that receives the end of the saw tooth, a top that joins smoothly with the back of the saw tooth, and sides that partially overlie the side faces of the saw tooth, said slot being approximately midway between said sides, said saw tooth having a notch formed therein in the forward edge at the forward outer end of the tooth receiving the tip and enabling the tip to be set on the saw tooth with said front face substantially flush with the forward edge of the saw tooth.

3,048,208
NUT-SHELL REMOVING DEVICE
Martin Umanoff, Huntington, N.Y., assignor, by mesne assignments, to R. A. MacPlum Industries, Inc., a corporation of New Jersey
Filed May 26, 1960, Ser. No. 31,864
3 Claims. (Cl. 146—13)

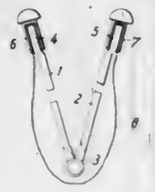
1. A nut-shell remover comprising a pair of pivotally connected jaws, each of the jaws having a head at one end, each head having a concavity, the first of the concavities having a grove to receive the rib-like joint between the halves of a walnut, the second concavity having groves into which a pair of crossed blades is fitted, one of said last-mentioned grooves being parallel to the

groove in said first concavity, the blades having free knife edges facing the first concavity, the edge on the blade in the parallel groove being disposed in advance of the edge



of the other blade, whereby said advanced edge will split the shell of the nut along the joint between its halves and the other blade will thereafter divide the shell into approximate quarter sections.

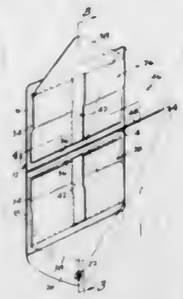
3,048,209
CLOSURE FRAME FOR HAND BAGS AND THE LIKE
Jakob Kemmer, Offenbach (Main), Germany, assignor to Mosbach, Gruber & Co., GmbH., Offenbach (Main), Germany
Filed May 19, 1960, Ser. No. 30,293
Claims priority, application Germany June 5, 1959
3 Claims. (Cl. 150—29)



1. A closing frame for ladies' hand bags, pouches, purses and the like having two half frames each consisting of two side members and a substantially straight top member connecting said side members, the lower ends of the side members of one half frame being pivoted to the lower ends of the side members of the other half frame, a bag member of flexible material having its upper open end folded over said top members of each half frame, a pair of clamping members of channel-like cross section one clasped over and clamped on each of said half frame top members with said folded bag portion between said top members and said clamping members, thereby fixing said bag member to said half frame excluding any other fixing means.

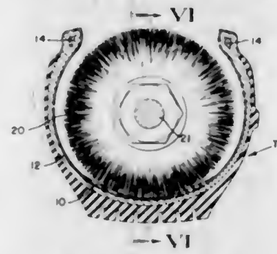
3,048,210
WALLET
Cha Fook, Fall River, Mass.
(77 Oak St., Boston 11, Mass.)
Filed Apr. 8, 1960, Ser. No. 20,875
3 Claims. (Cl. 150—38)

1. A wallet comprising an elongated cover panel having a transverse median fold line dividing said panel into first and second cover flaps having inner sides, said cover flaps being adapted to be folded to superimposed closed position, a flat pocket interposed between the inner sides of said flaps, said pocket being composed of inner and outer walls which have side edges and longitudinally-inward and outward edges, the walls of said pocket being connected together at one of said longitudinally-inward and outward edges and being separated at the other of said longitudinally-inward and outward edges, the separated other of said longitudinally-inward and outward edges forming therebetween an access opening to the interior of the pocket for receiving folded money, and means closing each of the adjacent side edges of the outer and inner walls of the pocket, said pocket being connected to one of said flaps along one of the longitudinally-



inward edges of the inner and outer walls thereof, there being a longitudinal slot formed in the outer wall of said pocket and extending between the longitudinal inward and outward edges of the outer wall for providing controlled access to the bills in said pocket.

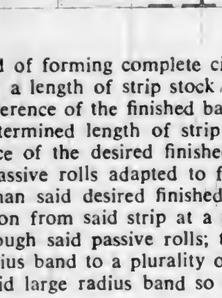
3,048,211
METHOD FOR BALANCING PNEUMATIC TIRES AND THE ARTICLE PRODUCED THEREBY
George R. Cuthbertson, Ridgewood, N.J., and Carl F. Engstrom, Detroit, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 10, 1957, Ser. No. 689,398
8 Claims. (Cl. 152—330)



1. In a method of balancing unbalanced tires the steps comprising, joining a balancing strip to the inner crown area of the tire throughout the circumference thereof, integrating said balancing strip and tire during vulcanization of the latter, locating are area causing the inbalance, and buffing off a portion of said balancing strip and said area to bring the tire into correct balance while leaving the remainder of the balancing strip intact.

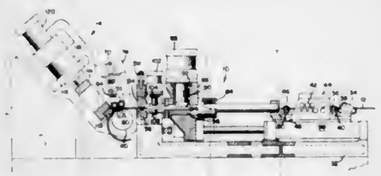
3,048,212
HOSE COUPLING APPARATUS
Marks O. Morrison, Lyman, Nebr.
Filed Nov. 2, 1959, Ser. No. 850,227
2 Claims. (Cl. 153—1)

1. A hydraulic hose coupling apparatus comprising;
I. A vertically inclined frame consisting of spaced parallel support members positioned between and connected to an upper housing and a base portion containing;
   A. A horizontally extending vertically slidable housing member positioned between and slidably mounted on said parallel support members,
   B. Said base portion having a downwardly tapered die receiving aperture therein,
II. A vertically inclined reciprocal motor means affixed to said upper housing and, positioned parallel with respect to said parallel support members and having the reciprocal portion of said motor means affixed to said slidable connecting bar,
III. A pusher assembly connected to the under side of said connecting bar and slidable therewith,
IV. Removable sized split dies normally gravity retained in said aperture and having:
   A. An outer surface taper corresponding to the taper of said die receiving aperture and positioned in said aperture,
   B. An opening axially aligned with said pusher assembly defined by said assembled dies, presenting inner surfaces having an upper portion



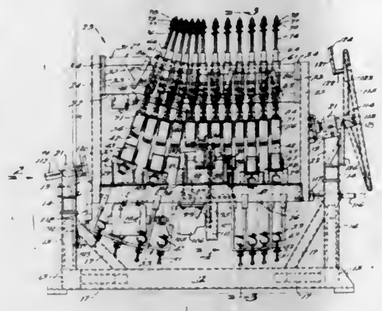
of greater circumference than the lower portion and having an inwardly beveled connecting portion between said upper and lower portions,
   C. Said opening sized to accommodate a flexible tube in the lower portion thereof and a spud and ferrule arrangement and extreme tube end in the upper portion thereof and,
   D. The inner surfaces of said dies forming swedging surfaces for compressing said spud and ferrule upon said tube end when sufficient pressure is applied axially by said motor means through said pusher assembly and,
V. Said apparatus operable for various sized tubing and ferrules by reason of said removable sized dies being variable in axial opening cross section.

3,048,213
MACHINE AND METHOD OF FORMING BANDS
Richard Distel, 714 Grand Marais, Detroit, Mich., and Charles F. Hautau, 302 N. Bishop St., Oxford, Ohio
Filed July 6, 1959, Ser. No. 829,479
2 Claims. (Cl. 153—2)



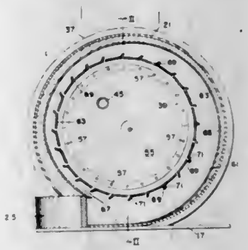
1. The method of forming complete circular bands of metal strip from a length of strip stock which is longer than the circumference of the finished band, comprising: passing a predetermined length of strip stock equal to the circumference of the desired finished band through a plurality of passive rolls adapted to form a circle of greater radius than said desired finished band; severing said rolled portion from said strip at a point which has been passed through said passive rolls; transferring said cut off large radius band to a plurality of powered rolls; and rerolling said large radius band so as to reduce its radius.

3,048,214
GLASS ROLLING APPARATUS
Joseph G. Madge, Dearborn, and Arthur D. Walker, Plymouth, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,794
13 Claims. (Cl. 156—443)



6. In an apparatus for applying pressure to curved glass sheets to be laminated, a substantially rectangular frame having spaced longitudinally extending structural members, means supporting said frame for tilting movement about an axis extending longitudinally of said frame between said structural members, a plurality of rollers arranged in two opposing rows adapted to receive a glass sheet therebetween, said rollers in one row each being independently supported by respective shaft means independently slidably journaled on structural members at one side of said frame tilting axis, selected ones of the rollers in the other row being supported on support arms fulcrumed on structural members at the other side of said frame tilting axis, and means biasing said shaft members and support arms to urge the rollers supported thereon toward each other.

3,048,215
BURNER FOR BOILERS AND THE LIKE
Luther H. Huckabee, 1096 Terry Circle, Memphis, Tenn.
Filed Oct. 29, 1958, Ser. No. 770,554
3 Claims. (Cl. 158—113)



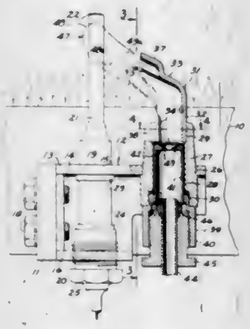
1. Burner means comprising a firing head assembly adapted to be mounted at one end of and disposed transversely to a longitudinally extending unit in heating communication with said unit, said assembly including a housing, a spiral duct having a substantially circular inner wall contained in the forward portion of said housing, a substantially circular refractory body mounted in the rear of said housing, said duct inner wall being positioned closely adjacent to the periphery of said body and extending forwardly from said body, said spiral duct including a spiral outer wall extending around said inner wall from a maximum spacing away from said inner wall at the beginning end of said spiral wall to a minimum spacing from said inner wall at the terminal end of said spiral wall, the cross sectional area of said duct gradu-

ally reducing from end to end of said duct, air impeller means communicated with said duct adjacent said beginning end to create air flow through said duct from end to end, air flowing beyond said terminal end re-entering said duct adjacent to said beginning end, a plurality of slot-like fore-and-aft extending air discharge openings through said inner wall, a like plurality of deflectors projecting away from said inner wall into said duct respectively adjacent and coextensive in fore-and-aft length with said openings, said openings and deflectors being respectively positioned to discharge deflected air around and forwardly of the periphery of said body, a burner ring mounted in said body adjacent the periphery of said body and including a plurality of closely spaced, forwardly directed burner ports, positioned respectively adjacent the rearward ends of said air discharge openings, said body including a forwardly bulging convex face forming the forward part of said body and extending throughout the limits of the periphery of said body, said face extending forwardly beyond said burner ports and at its forwardmost central extent extending substantially forwardly beyond the rearward ends of said openings, and projecting into the spiral path of said deflected air, said deflected air discharged within said inner wall passing closely adjacent said burner ports and impinging against said face and being confined by said face to flow closely against the inner periphery of said housing means and produce a substantially spiral air flow path within said housing, said reducing cross sectional area of said duct maintaining substantially uniform pressure and velocity in said air flow from end to end of said duct.

3,048,216
GAS BURNER

Stephen L. Kile, White Fish Bay, Wis., and Arthur M. O'Quinn, Levittown, Pa., assignors to Baso Inc., Milwaukee, Wis., a corporation of Wisconsin

Continuation of application Ser. No. 500,210, Apr. 8, 1955. This application July 20, 1959, Ser. No. 828,412
5 Claims. (Cl. 158—113)

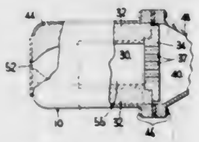


1. A burner comprising, a burner body formed with a tubular wall portion having a substantially cylindrical inner surface defining a throat portion having a fuel inlet portion at its inner end and having an open outer end terminating in a flame port, fuel inlet means closing said fuel inlet end of said throat portion and having fuel metering orifice means having a cross-sectional area substantially less than one-sixth the cross-sectional area of said throat portion for directing a stream of fuel into said burner body from said inlet toward said flame port, said tubular wall being formed at one side with a longitudinal slot therethrough extending outwardly from an inner end adjacent said fuel inlet to an open outer end at said flame port, said slot having a width at its inner end which is less than the inside diameter of said throat portion and affording with said flame port the only means of a substantial access of said fuel stream to the ambient atmosphere, said slot permitting entrainment of air substantially throughout the travel of said fuel stream from adjacent the inner end of said slot to said flame port to provide a fuel-air mixture for burning at said flame port, said burner body terminating adjacent said flame port in a laterally extending deflector portion formed on said tubular wall and extending from the portion of said wall opposite said slot at least substantially to the side of said wall having the longitudinal slot formed therein, said deflector having a deflecting surface portion extending obliquely across the outer end of said throat portion and positioned for impingement thereagainst of the burning mixture for direction of the flame laterally from the side of the burner body in which the slot is formed.

3,048,217
COMBUSTION CHAMBER BURNER FOR PRODUCING GLASS FIBERS

Donald W. Denniston, Ross Township, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Filed Nov. 21, 1956, Ser. No. 623,561
3 Claims. (Cl. 158—116)



1. A combustion chamber burner comprising a refractory combustion chamber with an inlet end and a discharge end, a grid plate at the inlet end of the chamber containing a plurality of small orifices therein for introducing a combustible mixture of gases into the chamber for combustion within the chamber, a single, unobstructed, long, narrow, continuous opening at the discharge end of the chamber, an inlet manifold connected to the chamber at its inlet end for supplying a combustible mixture of gases to the chamber through the orifices in the grid plate and at least one smooth surface, dividing wall mounted in the chamber in a plane which is substantially perpendicular to the length of the discharge opening and parallel to the general flow of burning gases through the chamber, said dividing wall extending from the grid plate along the length of the chamber to a point short of the discharge opening so as to permit the discharge of a single, uniform, high temperature, high velocity blast of burned gases through the unobstructed, discharge opening of the chamber.

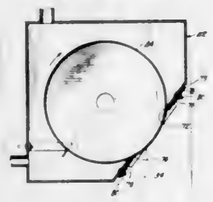
3,048,218
DRUM DRIER FOR EVAPORATING SOLVENT FROM A SOLUTION OF UNVULCANIZED RUBBER

Arnold Gunther, Newark, N.J., assignor, by mesne assignments, to Rubber & Fibre Chemical Corp., Brooklyn, N.Y., a corporation of New York

Filed Sept. 23, 1958, Ser. No. 762,769
3 Claims. (Cl. 159—12)

1. A drying device for evaporating solvent from a solution of unvulcanized scrap rubber compound, comprising in combination a housing, a drum horizontally mounted for rotation in said housing, a reservoir for rubber compound solution, said drum being mounted to dip into said reservoir during a portion of its rotation, means heating the interior of said drum to thereby evaporate solvent from the film of dissolved rubber compound, an opening

in said housing, said drum being mounted so that a portion of the periphery thereof extends therethrough, flexible strips bearing against the cylindrical surface of the drum along arcs defined by the portions of the cylindrical surface of the drum that protrude from the housing, and substantially rigid members which press said strips against said cylindrical surface of said drum, said flexible strips consisting of a first substantially flexible strip, a first portion of which is clamped to the housing portion which forms the lower edge of the said opening in the housing, and a second portion of which is urged against the adja-

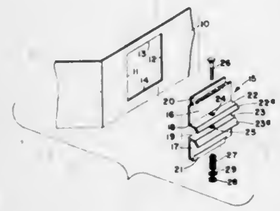


cent portion of the cylindrical surface of the drum by forces originating from the bending of said second strip portion by said cylindrical surface and a second substantially flexible strip, a first portion of which is clamped to the external portion of the housing forming the upper edge of the opening in the housing and a second portion of which is urged against the adjacent portion of the cylindrical surface of the drum by forces originating from the bending of the second portion of said strip, said flexible strips thereby sealing the opening to retain the evaporated solvent within said housing.

3,048,219
CLOSURE DEVICE

Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware

Filed July 13, 1960, Ser. No. 42,633
4 Claims. (Cl. 160—217)

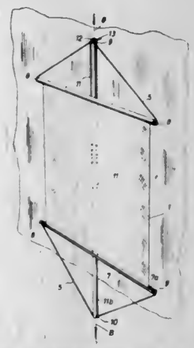


1. A closure device for a rectangular-shaped opening in a wall having inner and outer surfaces, comprising: a pair of panels disposed in a plane substantially parallel to the wall and having abutting edges and edges opposite the abutting edges flared inwardly and resting behind the wall adjacent one pair of parallel edges of the rectangular opening, said panels further having portions thereof extending beyond the other pair of parallel edges of the rectangular opening and resting against the outer surface of the wall; a pair of flange portions integral with the panels extending in a normal direction outwardly from the abutting edges of the panels; and means connecting the flange portions yieldably resisting separation of the flanges whereby said panels may yield away from the aforesaid plane to permit at least one of said flared edges to be moved to and from behind the wall.

3,048,220
SUSPENSION ARRANGEMENT

Ferdinand Wagner, Hans-Ado Brandt, and Hermann Müller, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany

Filed Jan. 20, 1960, Ser. No. 3,569
Claims priority, application Germany Jan. 22, 1959
9 Claims. (Cl. 160—328)

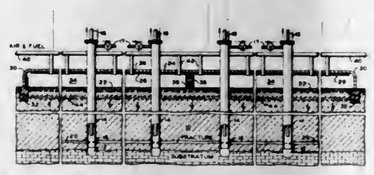


6. A suspension arrangement for a projection screen which has tubular pockets along opposite edges, said suspension arrangement comprising, in combination: two pairs of elongated support rods, the two rods of each pair passing through one corresponding pocket, said screen being attached to each of the four rods only in the region of the outer end portions thereof; two tubular members each encompassing one corresponding pocket and the two rods arranged therein with but little clearance, each tubular member being longer than the sum of the length of the two rods arranged in the pocket which each respective tubular member encompasses and being formed with an elongated slot through which the screen passes, said slot being but slightly wider than the thickness of said screen; and means for applying an outwardly directed axial force to each of the four rods and for applying a force to said tubular members which urges them apart, thereby tensioning the screen, said means comprising an elongated support which extends in the direction of the length of the screen and has end portions that project beyond said pockets, and two cables each having two ends which pass freely through the ends of one of said tubular members and are attached to the outer ends of the rods arranged therein and a mid portion attached to said elongated support at a point beyond the corresponding pocket.

3,048,221
HYDROCARBON RECOVERY BY THERMAL DRIVE

Mehmet Rasin Tek, Ann Arbor, Mich., assignor to Phillips Petroleum Company, a corporation of Delaware

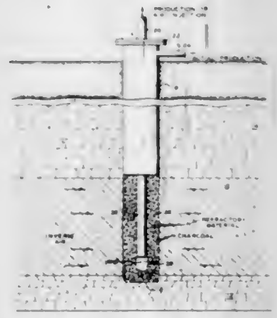
Filed May 12, 1958, Ser. No. 734,724
10 Claims. (Cl. 166—11)



1. A process for recovering hydrocarbons from a carbonaceous stratum adjacent the surface of the ground which comprises enclosing a substantial area of said surface to provide an enclosed heating chamber; heating said surface from a heat source within said chamber so

that the adjacent stratum is heated and hydrocarbons therein are rendered more fluid; draining the resulting more fluid hydrocarbons from said stratum into at least one borehole penetrating same; and recovering more fluid hydrocarbons from said borehole.

3,048,222
IGNITION METHOD FOR COUNTERCURRENT IN SITU COMBUSTION
Charles G. Cruzan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 5, 1959, Ser. No. 784,903
12 Claims. (Cl. 166—11)



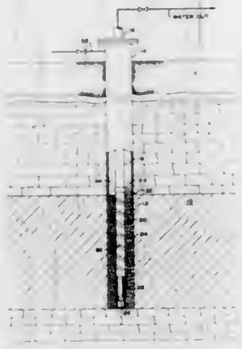
1. A process for initiating combustion in an ignition well within a carbonaceous stratum which comprises introducing into said well an elongated upright combustible fuel pack comprising coarse particulate solids containing combustible material; igniting said fuel pack in the bottom section thereof; and passing combustion-supporting gas upwardly thru the resulting combustion zone so as to drive same rapidly by direct drive to the top of the pack and effect simultaneous combustion throughout the pack.

3,048,223
IGNITION AND PRODUCTION OF CARBONACEOUS STRATA
Carl J. Helmers, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Dec. 29, 1958, Ser. No. 783,206
10 Claims. (Cl. 166—11)

1. A process for igniting a carbonaceous stratum adjacent an ignition borehole therein and reducing borehole caving and spalling while producing hydrocarbons therefrom, which comprises positioning in said borehole a mass of porous refractory solids saturated with a heavy liquid fuel; burning said liquid fuel in said ignition borehole by igniting same and passing combustion-supporting gas consisting essentially of a mixture of air and fuel gas, said fuel gas being in the range of 1 to 3 volume percent of the mixture thru said stratum to said ignition borehole from at least one offset injection borehole, thereby igniting said stratum and establishing a fire front therein; thereafter continuing the injection of said gas so as to advance the resulting fire front thru said stratum countercurrently to the flow of said gas; and recovering thru said ignition borehole hydrocarbons produced by the combustion.

3,048,224
APPARATUS AND PROCESS FOR IGNITING A STRATUM AROUND A WELL
Harry W. Parker, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 10, 1959, Ser. No. 826,209
14 Claims. (Cl. 166—11)

10. A process for igniting a combustible carbonaceous stratum around an ignition well therein in which water collects at the bottom of the well comprising setting a tubing string to the bottom of said well, the lower end of said string within said stratum being readily combustible and the remainder being non-combustible; placing a combustible fuel pack around the lower combustible end of said string adjacent said stratum; forcing air thru said stratum into said ignition well from at least one offset well so as to force water from the bottom of said



ignition well out thru said tubing string; thereafter igniting said fuel pack and burning same along with said combustible lower end of said string so as to heat the adjacent surrounding stratum to ignition temperature; injecting combustion-supporting gas into the hot stratum so as to ignite same; and withdrawing produced and combustion gases thru the non-combustible section of said string.

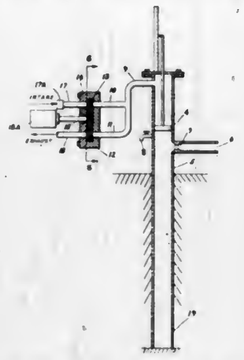
3,048,225
CATALYTIC IN SITU COMBUSTION
Alfred D. Reichle, Baton Rouge, La., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Aug. 28, 1959, Ser. No. 836,596
7 Claims. (Cl. 166—11)

1. A process for producing a permeable stratum containing hydrocarbons by in situ combustion comprising igniting a section of said stratum around an ignition well therein to establish a combustion zone; feeding a combustion-supporting gas to the ignited section thru said stratum from an injection area radially spaced from said well so as to burn a portion of the hydrocarbons and drive another portion therefrom; simultaneously feeding iron carbonyl dispersed in said gas into said section whereby said carbonyl decomposes to Fe and CO and said Fe catalyzes the combustion reaction; and recovering hydrocarbons produced by the combustion.

3,048,226
USE OF PULSATING PRESSURES FOR INCREASING THE PERMEABILITY OF UNDERGROUND STRUCTURES
Edward W. Smith, 47 Lovell Road, Melrose Highlands, Mass.
Filed Apr. 4, 1955, Ser. No. 498,836
9 Claims. (Cl. 166—42)

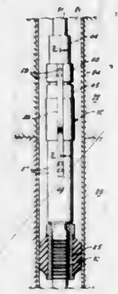
2. A method of increasing the permeability of an underground formation adjacent the bottom of a well casing for the flow of liquids into the well casing from such formation which comprises filling the well casing with a fluid to establish a fluid column, applying intermittent pressure at the top of said fluid column for establishing said column as a resonant column having standing waves longitudinal of the casing having a frequency equal to the frequency at which said column has a length of one-quarter of a wave length or half wave length additions thereof with a pressure nodal point and an amplitude antinodal

point at the top of said column for greatly amplifying the pressure at the base of said column compared to the pressure at the top of the said column whereby the per-



meability of the formation in the vicinity of the base of said column will be greatly increased for the flow of liquids therethrough.

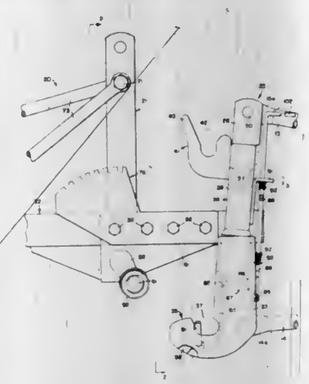
3,048,227
RELEASABLE BUMPER BLOCK
Lloyd D. Cason and Kennedy J. Dugas, Erath, La., assignors to Texaco Inc., a corporation of Delaware
Filed July 24, 1958, Ser. No. 750,791
11 Claims. (Cl. 166—114)



1. For use in a well bore having an internal packer fixedly mounted therein, a tubing string adapted to pass freely through the packer, and said tubing string being provided with a seal nipple engageable with the packer in sealing relationship; means for selectively holding the seal nipple in the packer comprising a bumper block about the tubing string above the packer and adapted to rest thereon; a tubing support connected into said tubing string, and means controlled from the well head for latching said tubing support to said bumper block when said seal nipple is engaged in said packer to hold said seal nipple therein, said latching means being selectively releasable to permit downward movement of the tubing string in the well.

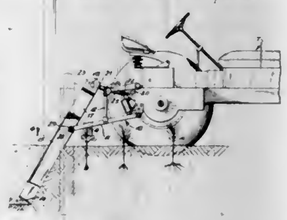
3,048,228
HITCH DEVICE
Christian H. Hess and David C. Horney, Waterloo, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed May 18, 1960, Ser. No. 29,959
7 Claims. (Cl. 172—272)

1. In a hitch device for connecting an implement to a tractor that includes power operated elevatable lifting means, the combination of a pair of frames, one attachable to said lifting means and the other to the implement, each of said frames including a vertical transverse frame means and said other frame including laterally and upwardly converging side portions and said one frame including an upwardly facing generally rearwardly extending hook on the upper portion of said one frame and adapted to be passed rearwardly, as by backing the tractor, into position between said laterally spaced apart converging portions, whereby, when said litfing means is raised, said converging portions and said hook means act together to shift one or the other of said frames into proper



position laterally as a result of said lifting motion, a pair of upwardly facing lower hook means on the lower portion of said one frame, a pair of laterally outwardly extending parts on the lower portion of said other frame and adapted to be engaged by said lower hook means when the frame connected with the lifting means is elevated, and locking means carried by said one frame for holding said lower parts in said lower hook means, whereby said frames are retained in interlocked relation.

3,048,229
CULTIVATOR
Stuart C. Simpson, P.O. Box 178, Monticello, Fla.
Filed May 9, 1960, Ser. No. 27,693
1 Claim. (Cl. 172—698)



A cultivator for attachment to a tractor having a 3-point hitch including a pair of lift arms, said cultivator comprising;

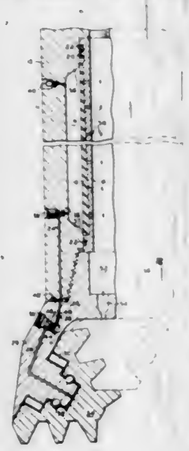
a one-piece, hollow, polygonal frame of relatively thin metal strip including a pair of parallel facing side portions laterally spaced in vertically disposed relation, the forward edges of said side portions being inclined toward each other for simultaneously loosening and deflecting the soil, a straight, flat, narrow cutter bar connecting the lower ends of said side portions and being sharpened at its forward edge, the upper ends of said side portions converging inwardly and terminating in a pair of parallel ears;

a transverse bar extending across and through said spaced, parallel side portions and provided at each end with pivot portions for direct attachment to the lift arms of the tractor;

a quick adjustable coupling link having one end se-

cured to said vertical ears and with its other end fitted for attachment to the tractor, means embodied in said link for adjusting its length to thereby rotate the cultivator frame about said pivot portions to various fixed angular positions whereby the inclination of the flat cutter bar with respect to the ground is varied to thereby regulate both the depth of cut and the amount of cultivation beneath a row of plants.

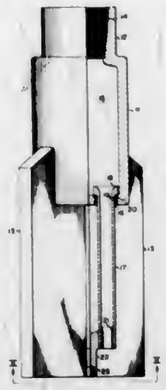
3,048,230
LUBRICATOR FOR ROCK BIT
Richard R. Angel, Houston, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,608
1 Claim. (Cl. 175—228)



A drill collar sub comprising in combination a generally cylindrical member having an axial bore, means at one end for attaching to a drill string, and means at the other end for attaching to a drill head; an elongated annular recess in the wall of said bore intermediate its ends; a perforate rigid radially inner sleeve and an imperforate elastic radially outer sleeve covering said recess, the ends of said sleeves being sealed to said member to form a sealed lubricant chamber with the wall of said recess, said elastic sleeve being displaceable by fluid pressure in said bore toward the wall of said recess to expel lubricant from said chamber; a lubricant duct extending from said chamber to the drill head end of said member adapted to connect with a lubricant duct in a drill head, said duct extending radially from said chamber into the inner end of an expanded hole drilled radially into the outer wall of said sub from its periphery and said duct continuing from an intermediate section of said drilled hole longitudinally of said sub to the end thereof; a ball-spring check valve in the inner end of said drilled hole closing the section of duct leading from said chamber to flow into said chamber from said duct; a porous, flow control plug in said hole covering the entrance to the outgoing section of duct and providing a biasing surface for the spring of said valve; and means for filling said chamber with lubricant.

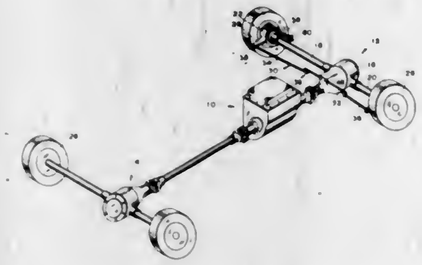
3,048,231
DRAG BIT PROVIDED WITH CONSTANT JET NOZZLE STANDOFF
Robert W. Beck, Caracas, Venezuela, assignor to Jersey Production Research Company, a corporation of Delaware
Filed Feb. 11, 1959, Ser. No. 792,613
3 Claims. (Cl. 175—393)

1. A rotary drill bit which comprises a hollow body section attachable to the lower end of a drill string; blades connected to and depending from said body section; a shoe engaging said blades beneath said body section, said shoe being restrained from lateral movement by said blades and being slidable with respect to said



blades and body section; means for limiting downward movement of said shoe with respect to said blades and body section; a nozzle supported by said shoe and movable therewith; and means for transmitting fluid from within said body section to said nozzle.

3,048,232
THREE PIECE TIE ROD ASSEMBLY FOR STEERING DRIVEN WHEELS
Loren J. O'Brien, R.R. 1, Grabill, Ind.
Filed Jan. 29, 1960, Ser. No. 5,542
8 Claims. (Cl. 180—43)

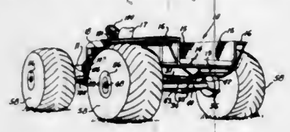


5. In a vehicle the combination comprising a differential case having axle shafts extending therefrom, a three piece tie rod for a steering assembly including a center member having end members pivotally connected thereto, said three piece tie rod being positioned to the rear of said axle shafts, said differential case restraining movement of said center member whereby said center member is movable in a lateral direction only.

3,048,233
MARSH BUGGY
John P. Crain and Albert Crain, both % General Delivery, Grand Chenier, La.
Filed May 23, 1961, Ser. No. 112,091
1 Claim. (Cl. 180—49)

In a marsh buggy, the combination of a frame, an internal combustion engine carried thereby, a transmission driven by said engine, said transmission including a driving chain sprocket, a driven chain gear in spaced vertical alignment with said chain sprocket, a chain drivingly connecting said chain sprocket and said chain gear, a driven shaft extending through said chain gear, a front drive shaft, a universal joint connecting one end of said

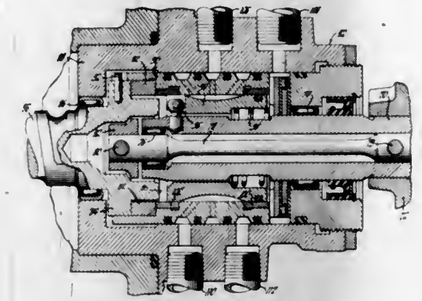
drive shaft to said driven shaft, a bearing assembly swivelably mounted to said frame at the forward end thereof, said bearing assembly including a bearing having a normally disposed longitudinal axis, longitudinally spaced plates secured to opposite sides thereof, an integral ear at the top of each plate and having aligned openings therein, a bearing boss, a vertically disposed stub shaft mounting said bearing boss to said frame, said stub shaft having a flange thereon in spaced parallel relation to said bearing boss, a thrust bearing surrounding said stub shaft and disposed between the flange thereon and said bearing boss, said stub shaft extending between said integral ears on said plates and having an opening therethrough in alignment with the openings in said ears, a pin extending through said aligned openings and having an axis disposed normal to the axis of the stub shaft and parallel to the axis of said bearing, said plates having portions defining openings in alignment with said bearing, a front differential spaced from said bearing assembly, a driven shaft extending from said front differential, through said



plates and bearing and rotatably supported thereby, a universal coupling connecting the free end of said front drive shaft to said driven shaft, front drive axles extending transversely from said front differential and having sprockets fixed at the free ends thereof, carrier axles extending transversely from said bearing assembly in spaced parallel relation to said front drive axles, wheels rotatably mounted on the free ends of said carrier axles, sprockets on said wheels in alignment with the sprockets on said front drive axles, chains drivingly connecting said sprockets, a rear carrier axle having wheels at each end thereof, a rear differential having rear drive axles in spaced parallel relation to said carrier axle, said rear drive axles including means to drive said wheels, a rear drive shaft connecting said rear differential to said transmission, said front drive axles and front carrier axles mounted as a unit, and a power steering mechanism driven by said engine connected to said front drive axles-front carrier axles unit to steer said buggy about the axis of said stub shaft.

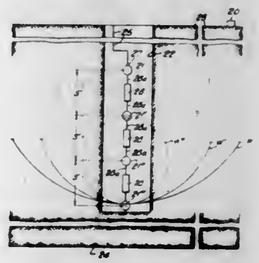
3,048,234
LINKAGE BOOSTER WITH ROTARY VALVE
Philip B. Zeigler, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 4, 1958, Ser. No. 778,103
1 Claim. (Cl. 180—79.2)

In an automotive vehicle having a pair of steerable road wheels actuated through a pair of steering knuckles and a corresponding pair of tie rods, a fluid power steering gear comprising a manually rotatable shaft, reduction gearing beyond said shaft including a rotatable input member and a rock shaft having a pitman arm secured thereto providing a static load, a control valve assembly, said manually rotatable shaft extending within said valve assembly in a concentric relationship, and having a terminal end near said input member, a torsion rod concentrically disposed within said manually rotatable shaft and interconnecting said manually rotatable shaft and said input member to provide a lost motion connection between said shaft and said input member, said control valve assembly comprising inner and outer sleeve members, said inner valve sleeve member comprising a slot receiving a pin mounted in the terminal end of said manually rotatable shaft so as to be rotated thereby, said outer valve sleeve member having a slot receiving a pin mounted in said input member and rotatable therewith, said inner and outer valve sleeves being displaced relative to one another immediately upon rotation of said shaft because of said lost motion connection provided by said torsion rod when said shaft initially moves said inner valve sleeve,



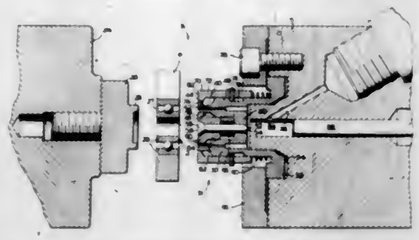
a source of fluid pressure, fluid conduits between said source and said valve, and a fluid motor in fluid circuit with said valve and comprising a piston connected to the frame of the vehicle and a cylinder through which said tie rods are interconnected, said fluid motor being supplied with pressure fluid as said valve sleeves are displaced to always afford a power-assist while steering a vehicle.

3,048,235
GEOPHYSICAL EXPLORATION
Oswald A. Itria, Bellaire, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed July 20, 1954, Ser. No. 444,591
5 Claims. (Cl. 181—.5)



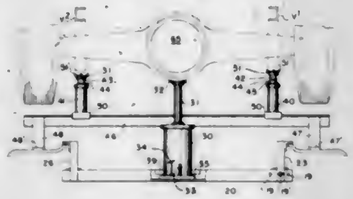
1. In seismic surveying wherein explosive charges are detonated in a bore hole to generate seismic waves in the earth, in combination with at least three explosive charges spaced apart vertically in said bore hole, means operatively associated with said explosive charges for detonating said charges in time sequence at a velocity substantially equal to the seismic velocity of the medium surrounding said bore hole, in order to produce a reinforced seismic wave moving in the direction as determined by said sequential detonation and a plurality of lesser seismic waves moving in the opposite direction, and means spacing said explosive charges a distance apart such that said lesser seismic waves will pass a given point in substantially complete phase opposition each with respect to the preceding wave so as to cancel the effects thereof traveling in said opposite direction, the improvement comprising the first and last only of said explosive charges having reduced strength relative to the remainder of said charges in order to lessen the uncancelled end effects of the total seismic energy moving in said opposite direction.

3,048,236
ANTI-FRICTION BEARING GREASE DISPENSER
Victor W. Larke, Kokomo, Ind., and Eugene V. Spanski, Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,358
9 Claims. (Cl. 184—1)



1. A grease dispenser comprising a nozzle having a flat end surface and cylindrical inner and outer surfaces, wiper means to bring grease on said inner and outer surfaces to said end surface and means to remove said grease from said end surface.

3,048,237
MOTOR VEHICLE SUPPORT
Harry T. Rutherford, Baltimore, Md., assignor to Nathan J. Blaker, Baltimore, Md.
Filed Oct. 14, 1959, Ser. No. 846,311
1 Claim. (Cl. 187—8.43)



A vehicle support for use with a wheel vehicle lift equipped with a pair of elevatable tracks, a jack supporting member including a bottom and two side portions extending between and supported upon the inner edge of said tracks, a fluid operated jack including a rectangular base slidable along and resting upon the bottom of said jack supporting member adapted to engage the under-portion of the vehicle for lifting the same from the tracks, means carried by the two side portions of the jack support in the form of ribs adapted to extend over the opposite side edges of the slidable jack base for retaining the jack in the upright position at least at the center of the jack supporting member.

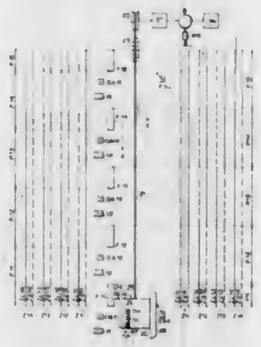
3,048,238
AUTOMATIC JACK FOR A VEHICLE HOIST
George A. Wallace, Philadelphia, Pa., assignor to Globe Hoist Company, Philadelphia, Pa., a corporation of Maryland
Filed July 11, 1961, Ser. No. 123,152
15 Claims. (Cl. 187—8.74)

1. A jack arrangement which automatically flips between upright and horizontal positions upon a vehicle hoist superstructure comprising a horizontal supporting plate mounted upon said superstructure, offset pivot means mounting said jack upon said plate for movement from said horizontal position folded flat against said plate to said upright position in which a lower surface is supported upon said plate, a plunger inserted to slide up and down within a vertical well in a lower portion of said superstructure, said plunger extending below said superstructure for contacting said ground whereby it is pushed upwardly into said well, the upper end of said jack in said upright position having a surface for engaging a lower portion of a vehicle, an extension of said jack past its axis of rotation extending below said superstructure in said upright position, a finger bar rotatably connected below said superstructure upon a horizontal axis of rotation and extending past said plunger with an outer end disposed adjacent said jack extension, projection and slot means connecting said finger bar to said plunger to cause upward movement of said plunger to rotate said finger bar upwardly and move said outer end of said finger bar



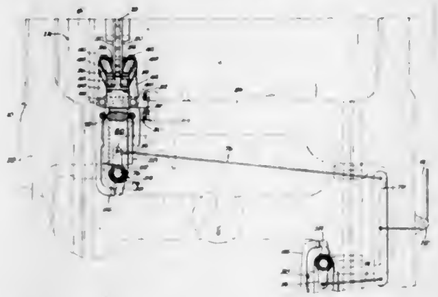
toward said jack extension, a cam surface upon said outer end of said finger bar which engages the end of said jack extension, resilient means reacting between said jack and said superstructure in a direction to urge said jack into said upright position and said finger bar and plunger urged downwardly, stop means retaining said plunger within said well, and said cam surface bearing against the end of said jack extension throughout its angular movement for flipping it into and maintaining it urged into said flat horizontal position when said plunger is moved upwardly into said well by forceful contact with said ground.

3,048,239
ELEVATOR CONTROL SYSTEM
Marcel Schibli, Zurich, and Marcel Leroux, Geneva, Switzerland, assignors to Schweizerische Wagons- und Aufzugefabrik A.G., Schlieren-Zurich, Schlieren, Zurich, Switzerland
Filed Sept. 27, 1960, Ser. No. 58,832
Claims priority, application Switzerland Sept. 28, 1959
4 Claims. (Cl. 187—29)



1. An elevator control system comprising a cabin adapted for moving between floors, call responsive memory elements, a control member adapted to indicate the position of the cabin, and first and second groups of floor elements operatively associated with the floors for controlling the direction of travel of the cabin, said memory elements and said control member being coupled to the floor elements whereby the latter can determine the direction of travel of the cabin, said control member comprising a step-by-step switching device including a plurality of zone units each corresponding to a respective one of said floors, each said zone unit having one output for acting on the floor element associated with the respective floor of one of said groups for controlling the downward direction of travel of the cabin, and a second output for acting on the floor element associated with the respective floor of the other of said groups for controlling the upward direction of travel of the cabin, all of said elements being statical elements.

3,048,240
HANDBRAKE LINKAGE FOR ROTOR BRAKE
Wesley A. Heisten, Chicago, Ill., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed July 24, 1959, Ser. No. 829,364
3 Claims. (Cl. 188—46)

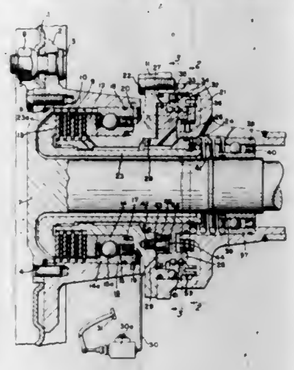


1. In a handbrake arrangement for a railway car truck having a truck frame provided with side frame members supported at their ends upon two wheel and axle assemblies having friction members rotatable therewith,

individual brake means provided for said assemblies,
each brake means comprising a brake support mounted on the truck frame,
a brake lever pivotally mounted intermediate its ends on the brake support,
a brake shoe connected to one end of the brake lever for engagement against a friction member,
bearing brackets mounted on the truck frame,
a vertical shaft journaled in said bearing brackets,
upper and lower arms secured to said shaft, the lower arm engaging the other end of the brake lever to effect the engagement of the brakeshoe and the friction member,
common means to actuate the individual brake means comprising,
an equalizer bar,
cables connecting the upper arms to opposite ends of the equalizer bar,
and an actuating cable connected to the medial portion of the equalizer bar.

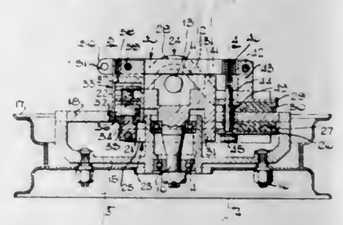
3,048,241
DISC BRAKE ACTUATING AND ADJUSTING MECHANISM
Oliver K. Kelley and Gilbert K. Hause, Bloomfield Hills, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Nov. 10, 1958, Ser. No. 772,977, now Patent No. 2,995,215, dated Aug. 8, 1961. Divided and this application June 23, 1960, Ser. No. 38,336
6 Claims. (Cl. 188—72)

6. In a vehicle brake comprising in combination, a stationary member, at least one stationary brake disc connected to said stationary member, a rotating member rotatably mounted on said stationary member, at least one rotating brake disc mounted on said rotating member for frictionally engaging the stationary brake disc when said vehicle brakes are actuated, a hydraulic wheel cylinder, a hydraulic wheel piston received within said hydraulic wheel cylinder and connected with a force applying member effecting actuating engagement of said brake discs, an automatic clearance adjustment means including a stud member affixed to said stationary member, said stud member having a cylindrical shank portion extending from said stationary member and terminating in a head portion, a sleeve member loosely fitted about the outer periphery of



said cylindrical shank portion of said stud member and having a frictional retaining fit in an opening in said force applying member, said sleeve member being of a predetermined shorter length than the shank portion of said stud member controlling thereby the clearance between the brake discs in their retracted position, said head portion of said stud member engaging the end of said sleeve member to move said sleeve relative to said force applying member when said vehicle brakes are actuated for maintaining the clearance of said brake discs in the retracted position.

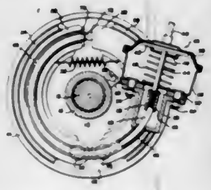
3,048,242
DISC BRAKE
Arthur Thomas Perks, 37 The Green, Castle Bromwich, Birmingham, England
Filed Apr. 28, 1960, Ser. No. 25,471
Claims priority, application Great Britain Apr. 28, 1959
4 Claims. (Cl. 188—73)



1. A friction disc brake arrangement including in combination a rotatable disc, driving means connected to the outer peripheral part of the disc so as positively to rotate the disc, a non-rotatable member extending through the bore of the annular disc, a pair of friction pad carrier arms pivotally mounted on the non-rotatable member about an axis parallel with the effective plane of the disc and on one side of the axis of rotation of the disc and extending to the opposite side of the axis of the disc at which position the free end of one arm is disposed on one side of the disc and the free end of the other arm is disposed on the other side of the disc, a pair of friction pads of which one is associated with the free end of one arm and the other is associated with the free end of the other arm so as to be co-operable with the disc, fluid-pressure operated means associated with the friction pad

carrier arms to urge the free ends of the arms towards the disc and thus the friction pads into frictional engagement with the disc and each friction pad carrier arm at a position between its pivoted and free end bearing against the non-rotatable member extending through the bore of the disc so that each arm and thus each friction pad is supported against rotary movement with the disc in both directions of rotation thereof when the friction pads engage the disc.

3,048,243
BRAKE ACTUATOR MECHANISM
Leonard Troy, Corner Glenn and Meylert, Scranton, Pa.
Filed Feb. 8, 1960, Ser. No. 7,267
16 Claims. (Cl. 188—78)



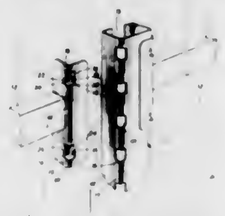
1. A vehicle braking mechanism comprising in combination a brake drum, curved brake shoes for said drum, means for actuating said brake shoes comprising a coaxial tube-and-rod linkage lying partly alongside and partly within one of said brake shoes, the rod of said tube-and-rod linkage being directly connected to said other brake shoe, the tube of said tube-and-rod linkage being arranged to operate said first-mentioned brake shoe, and fluid pressure means for supplying power to said brake actuator, said fluid pressure means comprising a plunger connected to the other end of said rod and a casing fixedly connected to said tube, said fluid pressure casing being pivotally connected to a fixed part of said vehicle, so that said casing may pivot in response to actions and reactions in the application of the brakes.

3,048,244
INTERLOCKING WALL SYSTEM
William R. Callahan, Louisville, Ky., and Charles M. Ragsdale, New Albany, Ind., assignors, by mesne assignments, to Butler Manufacturing Corporation, a corporation of Missouri
Filed Apr. 10, 1957, Ser. No. 652,005
4 Claims. (Cl. 189—34)



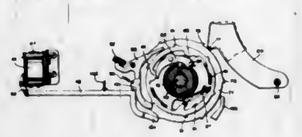
1. A prefabricated box-like wall forming unit capable of being interfitted with like units in edge abutting relationship to form a multiple unit, continuous wall comprising: a pair of cooperating unit forming panels, each of which is composed of a continuous sheet of material of substantially uniform thickness formed to provide a self-sustaining web having an inner face, an outer face adapted to form an exposed wall surface, opposite side edges and opposite first and second end-edge-portions terminating in first and second end edges; said first end-edge-portion being bent to form a relatively long and narrow first marginal flange which extends longitudinally in a direction proceeding from one side edge of said web toward the other side edge and transversely in one lateral direction proceeding away from said faces and is offset inwardly from said inner face; the second end-edge-portion of said web being bent to form an elongate U-shaped channel which extends longitudinally in a direction proceeding from one side edge of said web toward the other side edge and opens in a second lateral direction proceeding away from said faces; said channel including an inner leg, a bight and an outer leg with said inner leg connected with the face portion of the web by an inward extension and extending from the inner edge of said extension along the inner face in a direction substantially opposite to said second lateral direction and proceeding to one edge of the channel bight, and said outer leg projecting from the opposite edge of said bight in a direction substantially the same as said second lateral direction and proceeding to said second end edge of said web, said inner and outer legs offset from the inner face distances respectively less than and greater than the offset of said first marginal flange, the distance between said legs being greater than twice the combined thicknesses of said outer leg and first marginal flange and the length of said outer leg in said second lateral direction greater than the corresponding dimension of said inner leg whereby said second end edge of said web is spaced beyond said extension in said second lateral direction; said panels being arranged with their inner faces in spaced face-to-face relationship with each other and with the first marginal flange of one panel extending adjacent the outer portion of the outer channel leg of the other panel on the outside of the channel; heat insulating means connected with and forming a part of the unit and disposed between said adjacent flanges and outer portions of said outer legs and also on the exterior of said flanges and outer legs and operable to provide an insulating seal between said flange and outer leg and between the flange and outer leg and the adjacent surfaces of a channel of a like wall forming unit when the flange and outer leg are interfitted therein; and means securing the first marginal flange of each web to the outer channel leg of the other web.

3,048,245
LOCKING MECHANISM
Earl W. Shewell, Hamilton, Ontario, Canada, assignor to Arean Eastern Limited, Hamilton, Ontario, Canada, a company of Ontario
Filed Feb. 29, 1960, Ser. No. 11,600
3 Claims. (Cl. 189—36)



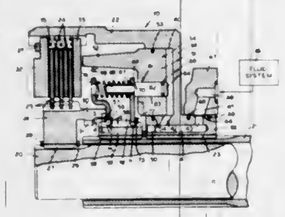
1. An interconnecting, disengageable structure which comprises a vertical, rectangular shaped hollow post member and a horizontal load supporting member, slots formed at intervals along at least one corner of said vertical post member, means for detachably securing said load supporting member to said post member which comprises a plate of the shape of the corner structure of the vertical hollow post member, said plate being secured to an end of said load supporting member, said plate being L-shaped forming two wings and having one wing portion thereof secured to said load supporting member at the end portion of said load supporting member and at right angles thereto, the other wing portion of the L-shaped plate member being in a plane parallel to that of the load supporting member, downwardly extending projections struck inwardly from the material of the plate at the center thereof where the two wings of the L-shaped plate meet, said projections being of the shape to enter the slots formed in the vertical rectangular post member.

3,048,246
INTERMITTENT STEP DRIVEN CLUTCH MECHANISM
Walter Griffin Paige, Norwalk, Conn., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Original application Dec. 21, 1954, Ser. No. 476,803, now Patent No. 2,869,457, dated Jan. 20, 1959. Divided and this application Jan. 15, 1959, Ser. No. 791,786
4 Claims. (Cl. 192—33)



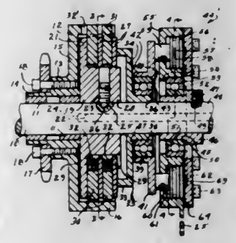
1. In a machine of the class described having continuously rotating driving means and a member to be rotatably driven momentarily at selected times by said driving means, a clutch mechanism operatively connecting said driving means with said member and comprising a toothed wheel integrally secured to said driving means and disposed within the plane of and coaxially with respect to said driven member to provide a bearing support for said driven member, means pivotally mounted on said driven member and engageable with a tooth of said wheel for transmitting the driving force of said wheel to said member, means supported by said driven member for camming said pivotally mounted means into and out of effective driving engagement with said wheel, said camming means being yieldably urged relative to said driven member in a direction to render said pivotally mounted means effective, and blocking means disposed for engagement with said camming means and effective for displacing said camming means in the opposite direction with respect to said driven member, the said camming means when so displaced by said blocking means operating to cam said pivotally mounted means out of effective driving engagement.

3,048,247
FRICTION CLUTCH WITH POSITIVE LOCK
Charles A. Cook and Walter H. Freitag, Jackson, Mich., assignors to Clark Equipment Company, a corporation of Michigan
Filed Dec. 12, 1957, Ser. No. 702,421
14 Claims. (Cl. 192—53)



1. A clutch construction comprising a first shaft, a second shaft telescoping said first shaft, at least one of said shafts being driven, a clutch drum secured for rotation with said second shaft and including means defining a piston chamber, a clutch plate support secured for rotation with the first shaft and carrying a plurality of clutch plates interleaved with plates carried by the drum, a piston disposed within said chamber and movable between operative and inoperative positions, means selectively operable to supply fluid under pressure to said chamber to move said piston from its inoperative position to its operative position in order to force the interleaved clutch plates into frictional engagement and provide a drive between said shafts, and also operable to release the fluid pressure in said chamber, biasing means acting in opposition to the fluid pressure and functioning when the fluid pressure is released to return the piston to its inoperative position wherein the interleaved plates are disengaged, at least one plunger mounted in said piston and having a head portion exposed to the fluid pressure in said chamber, said plunger being movable from an inoperative position to an operative position in response to the fluid pressure in said chamber, a sleeve slidably mounted for axial movement on said second shaft, means operably connecting said sleeve and said plunger in order to slide said sleeve along said second shaft when said plunger is moved to its operative position, a synchronizer plate carried by said sleeve, biasing means effective upon said synchronizer plate and said plunger to seat the synchronizer plate against said support and to urge the plunger in a direction tending to return it to its inoperative position, said sleeve having a first externally toothed portion and a second externally toothed portion of larger size than the first portion, a shoulder on said sleeve connecting said first and second toothed portions, internal teeth on said synchronizer plate normally engaging the first toothed portion of the sleeve when the plunger is in its inoperative position, said synchronizer plate being seated against said shoulder as said plunger is moved from its inoperative position toward its operative position, thereby to block axial movement of the sleeve, said synchronizer plate also being effective when the rotations of said shafts are substantially synchronized to move its teeth into engagement with said second toothed portion in order to permit further axial movement of the sleeve by said plunger, and projections on said support for engaging said first toothed portion of said sleeve in order to provide a positive drive between said shafts even though the input torque to the driven shaft exceeds the holding capacity of the interleaved plates.

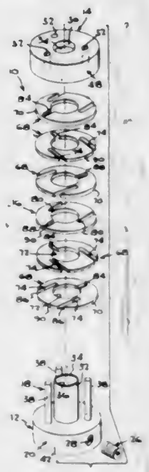
3,048,248
FRICTION CLUTCHES
Raleigh Becknell, Cincinnati, Ohio, assignor to The Conway Clutch Company, Cincinnati, Ohio, a corporation of Ohio
Filed June 19, 1958, Ser. No. 743,202
3 Claims. (Cl. 192—85)



1. In a friction disc clutch for transmitting motion between a prime mover and a shaft, the combination with said shaft, of a driving clutch member rotatably mounted on said shaft and including a cup-like receptacle, a driven clutch member within the driving clutch member cup-like receptacle with said driven clutch member including a body portion and a thrust flange at one end of the body portion, a separate friction clutch disc respectively connected with the driving clutch member and the driven clutch member, said friction clutch discs being adapted to be actuated relative to one another and shifted into engagement with one another and the driven clutch member thrust flange, a clutch disc shifter member secured to one of said shaft and driven clutch member for rotation therewith but independent axial movement relative thereto,

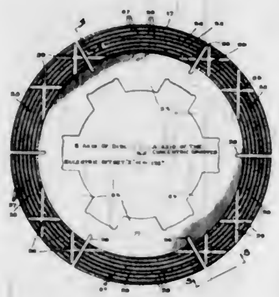
said shifter member including a body portion with means projecting from one side thereof into frictional contact with said friction discs and said shifter member body portion having a sleeve projecting from its other side, an actuator including a sleeve concentric with and outwardly spaced from the shifter member sleeve, an anti-friction ball bearing between said shifter member and actuator concentric sleeves with the inner race of said ball bearing secured to the shifter member sleeve and the outer race of said ball bearing secured to the actuator sleeve, and pressure medium actuated means connected with the actuator for actuating the same and shifting the clutch discs into engagement with one another and the driven clutch member thrust flange, comprising a plurality of piston rods equally spaced circumferentially of the actuator, a piston carried by each piston rod, a pistons cylinder housing in the form of a ring having a body portion between an external diameter and a concentric central aperture and said body portion having parallel side faces, a piston cavity for each piston formed in the body portion through one side face toward the other side face but stopping short of said other side face to form a base for each piston cavity, each piston cavity having a bore from its base through the piston cylinder housing other side face and through which bore projects the piston's rod, said piston cavities being located, radially of the pistons cylinder housing, between the housing external diameter and central aperture, means closing the piston cavities after the insertion therein of the pistons, and means securing said pistons cylinder housing concentric with and relative to the shaft in such manner that the said cylinder housing is held against rotation and axial movement with respect to the shaft.

3,048,249
CENTRIFUGAL SPINDLE CLUTCH
Jules L. Laquerre, 913 Social St., and Amato F. Rosati, 63 Rutland St., both of Woonsocket, R.I.
Filed Jan. 22, 1960, Ser. No. 4,069
6 Claims. (Cl. 192—105)



1. A centrifugal clutch comprising a base, a cap spaced from the base, mounting means extending between and fixed to the base and the cap, and a centrifugal jaw assembly mounted on said mounting means, said jaw assembly comprising a stack of flat jaw elements circumposed on the mounting means between the base and the cap, said jaw elements having eccentric principal mass portions having gripping edges which are spaced from each other around the clutch, said base, said cap, and said jaw elements having aligned axial openings therethrough for receiving a spindle, and spindle engaging locking means on said clutch, said mounting means comprising circumferentially spaced rods extending between the base and the cap, said jaw elements have chordal slots severally engaged with the rods, the slots of adjacent jaw elements being angularly displaced relative to each other.

3,048,250
FRICTION DISC FOR BRAKES, CLUTCHES AND THE LIKE
Osborn A. Kershner, St. Joseph, Mich., assignor, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan
Filed Oct. 26, 1959, Ser. No. 848,712
4 Claims. (Cl. 192—107)

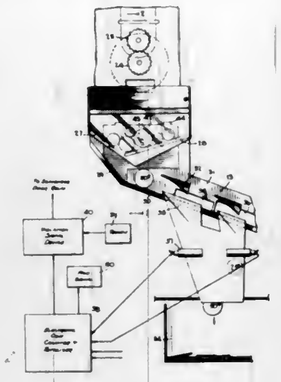


1. A friction disc of the class described, comprising annular disc body means having an annular friction surface on at least one side thereof, said friction surface being provided with a plurality of generally annular fluid coolant-flow grooves spaced substantially entirely thereacross and disposed eccentrically with respect to the axis of the disc so that certain of said grooves intersect radially inner and outer margins of the annular friction surface, said grooves defining at opposite radial sides thereof concentric lands which are also disposed eccentrically with respect to the axis of the disc, whereby said lands when disposed against an adjacent friction surface are adapted to sweep an eccentric wipe path thereover responsive to relative rotation of the friction surfaces when frictionally interengaged, said disc body means having a plurality of radially extending and circumferentially spaced combined stress relief and fluid coolant-flow slots therethrough, each of said slots intersecting a plurality of said grooves and lands and opening at only one radial margin of the disc body means, and said disc body means including a plurality of sets of circumferentially spaced generally chordally disposed fluid coolant-flow grooves substantially traversing said annular friction surface and intersecting said first mentioned grooves and said lands.

3,048,251
COIN COLLECTOR INCLUDING CLEARANCE MEANS
Clyde S. Bower, Yeadon, Pa., assignor to Shoup Toll Collection Devices, Inc., New York, N.Y., a corporation of New York
Filed Jan. 21, 1959, Ser. No. 788,073
6 Claims. (Cl. 194—9)

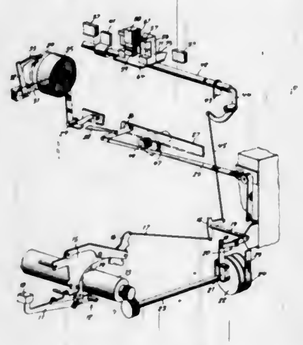
1. A coin collector comprising means to receive coins of different denomination, means to sort coins according to their size, means to totalize the amount of sorted coins, means coupled to said totalizing means to produce a signal actuated by the counting means if the coin amount

totalized is less than a prescribed value, a channel coupling said receiving means to said sorting means, and



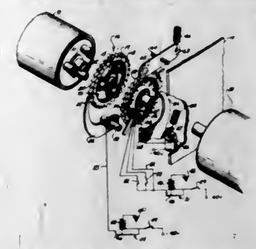
means responsive to said signal to clear said channel of coins caught therein.

3,048,252
CARRIAGE RETURN CONTROL MEANS
Arthur G. Chamberlain, Cos Cob, and Raymond E. Seymour, Norwalk, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,500
9 Claims. (Cl. 197—66)



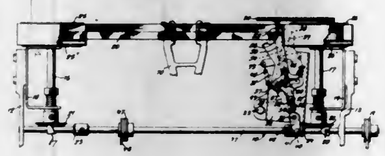
1. In a data recording machine of the character described having a carriage mounted platen movable in one direction relative to the frame of the machine for letter spacing of a recording medium supported against said platen and movable in the opposite direction for return of the carriage to a margin setting, means mounted on said carriage for line spacing said platen, a dual function member operable for returning the carriage and for actuating said line spacing means, an abutment member supported on said machine frame for limiting carriage return movement, and means mounted on said carriage and cooperating with said abutment member when the carriage has letter spaced to a predetermined carriage escapement position to prevent carriage return from said predetermined escapement position, whereby operation of said dual function member results only in line spacing said platen when the carriage is in said predetermined position.

3,048,253
INTERMITTENT STRIP FEEDING MECHANISM
Kenneth F. Oldenburg, Monterey Park, and Fred N. Schwend, El Monte, Calif., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed May 5, 1960, Ser. No. 27,173
10 Claims. (Cl. 197—133)



1. In a machine for feeding a record strip, said strip comprising forms arranged in end-to-end relation, a drive means, a feeding means for said strip, a clutch interposed between said drive means and said feeding means, an electromagnetic means for controlling said clutch, a commutator having insulated spots thereon, means for rotating said commutator and said feeding means in synchronism, stationary brushes having wiping engagement with said commutator, a self locking circuit comprising means for selecting desired line spacing, and a second self locking circuit comprising means for causing said feeding means to advance said strip to the next form, said locking circuits being connected to said electromagnetic means through said brushes and said commutator for engaging and disengaging said clutch.

3,048,254
RIBBON MECHANISM FOR TYPEWRITER
John C. Morris, East Norwalk, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,303
14 Claims. (Cl. 197—151)

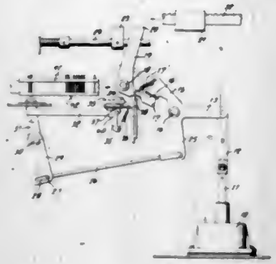


1. In a typewriter, the combination with ribbon carrier means, a drive shaft, gears for transmitting drive from said shaft to said carrier means and means controlled by said carrier means for automatically shifting the shaft a full distance in opposite directions to alternately drive said carrier means; of auxiliary means for fully shifting said shaft in opposite directions to drive said carrier means alternately, detent means for holding said auxiliary means to adjust the shaft to non-driving position, and means for operating said detent means to free said auxiliary means for full shifting movement of said shaft in opposite directions.

3,048,255
MEANS FOR CUSHIONING CARRIAGE RETURN AND TABULATION
Evert G. Israelson, Rowayton, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed June 3, 1959, Ser. No. 817,825
9 Claims. (Cl. 197—183)

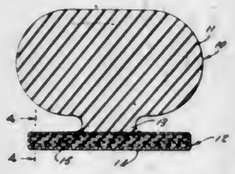
1. In a typewriter having a tabulator rack, an adjustable stop on said rack, a permanent stop related to and

in the path of the adjustable stop, a carriage rack with an adjustable stop thereon, and a permanent stop related to and in the path of the last mentioned adjustable stop, the invention which comprises check elements between the respective permanent and adjustable stops and yieldably movable into lateral alignment with said permanent



stops by said adjustable stops, a braking member, and connections between the check elements and the braking member whereby the operation of either check element will operate the braking member until either check element is moved into lateral alignment with its corresponding permanent stop by its respective adjustable stop.

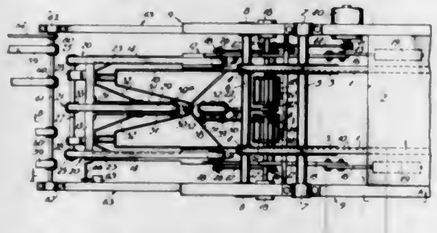
3,048,256
MOVING HANDRAIL
Clayton H. Skinner, Kenmore, N.Y., assignor to Hewitt-Robins Incorporated, New York, N.Y., a corporation of New York
Filed July 31, 1958, Ser. No. 752,338
6 Claims. (Cl. 198—16)



1. A moving handrail for use in conjunction with a moving passenger conveyor which comprises a hand supporting member which is flexible in both horizontal and vertical planes; a flat transmission belt incorporating at least one reinforcing ply of a woven fabric, said belt being capable of being bent around curves in a vertical plane and in a horizontal plane; an anti-friction covering of woven fabric surrounding said drive belt; and a web of flexible material integrally connecting the hand supporting member to the covered transmission belt, said web being located at the center of the top surface of the covered transmission belt.

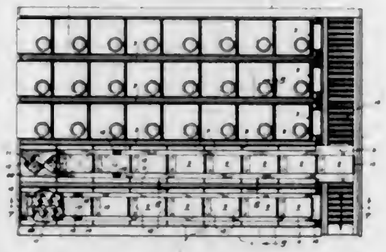
3,048,257
CONVEYOR CLEARING DEVICE
Janos Schuster, 6 Geake St., Coburg, Victoria, Australia
Filed Feb. 23, 1960, Ser. No. 10,467
9 Claims. (Cl. 198—20)

1. A conveyor clearing device for use in association with a main substantially horizontal sheet conveyor having a plurality of parallel endless chains passing around front and rear sprockets or rollers so that the top chain lengths move toward the rear sprockets, said chains having affixed thereto and standing up therefrom a plurality of conveyor forks between which a succession of sheets may be interleaved and by which said sheets may be carried to the rear of the main conveyor, said conveyor clearing device comprising a beam-frame, at least one minor endless belt conveyor mounted on and in line with said beam-frame, said minor conveyor having a length not less than substantially half of the fork length, a drive assembly connected to said minor conveyor and operable independently of said main conveyor, a pivotal mounting situated forwardly of said minor conveyor on which said beam-frame is pivotally supported about a transverse axis, at least one balance weight arranged on the forward end of the beam-frame on the opposite side of said axis from said minor conveyor so that said beam-frame and minor conveyor are balanced about said axis and so that the minor conveyor is normally maintained in a substantially horizontal position, and a trip-switch mounted adjacent said beam-frame so as to be operated by a predetermined downward movement of said beam-frame and minor conveyor from the normal position and being adapted to be connected to the main conveyor drive to disconnect the main conveyor drive to stop the main



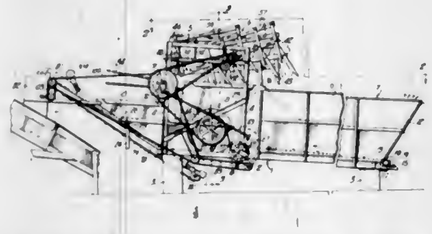
conveyor when said trip switch is tripped, the beam-frame and minor conveyor being in line with said main conveyor and immediately to the rear thereof, whereby each sheet conveyed by the main conveyor is laid by its associated fork on the minor conveyor which moves it rearwardly so that it is clear of the main conveyor fork path before the next succeeding fork lays its associated sheet thereon, the minor conveyor being arranged so that the forks may continue their normal motion about the rear sprockets but so that the sheets are caught thereby and cleared, said minor conveyor retaining its normal horizontal position during normal operation and being swung downwardly about said axis so that the trip-switch is tripped should said minor conveyor fail to clear a sheet before the next succeeding fork or forks descend thereon, the swinging movement being caused by the pressure of the next succeeding fork or forks on the previous uncleared sheet.

3,048,258
MULTIPLE CONVEYOR
John F. Skold, 4650 N. Oak Park Ave., Chicago, Ill.
Filed May 31, 1961, Ser. No. 120,114
4 Claims. (Cl. 198—75)



1. A multiple conveyor for storing, transporting and sequentially discharging therefrom each of a plurality of like articles comprising means forming a frame, means in said frame forming a plurality of parallel planar positioned runways for retaining said articles in a like plurality of linear rows, each of said runways having a predetermined number of equi-spaced fixed oblique steps oppositely disposed at each side thereof adapted to permit movement of said articles in one direction in each of said runways, a slide member retained for reciprocating movement in each of said runways, a plurality of pawls corresponding in number and position to said steps projecting upward from each said slide member, each of said pawls adapted to yield downwardly by the gravitation of each of said articles resting upon each opposite pair of said steps, a transmission means for sequentially reciprocating each said slide a distance substantially equal to the length of each of said steps when driven, power means for driving said transmission when energized whereby the sequential reciprocation of each said slide will move each of its said pawls and engage each said article in each corresponding said row and move the latter in said direction over a next successive pair of said steps and discharge the foremost of each said articles in each said row from each said runway when said power means is energized.

3,048,259
VINE FEEDING MACHINE
Virgil N. Jarrell, Viola, Del.
Filed Aug. 1, 1960, Ser. No. 46,661
12 Claims. (Cl. 198—160)



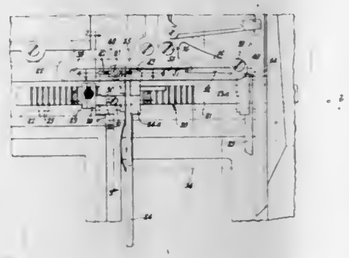
1. A vine feeding machine comprising, a frame, a delivery conveyor mounted on the frame, a discharge conveyor mounted on the frame, a feed cylinder having an unbroken cylindrical surface rotatably mounted on the frame intermediate the delivery and discharge conveyors to pick up vines from the delivery conveyor and transfer them to the discharge conveyor, the cylinder being mounted for vertical floating movement and counterbalanced to occupy a predetermined vertical position within the frame under a predetermined vine load, a plurality of shafts spaced equidistant from one another around the cylinder with the shafts extending longitudinally of the cylinder and mounted for rocking movement about their axes, a plurality of vine-engaging fingers on each shaft with the fingers spaced apart longitudinally of the shaft, whereby the fingers may project generally radially outward of the cylinder and lie close to the cylindrical surface when the shafts are rocked to two positions, a cam mounted concentrically to the cylinder at one end of the cylinder for bodily movement with the cylinder and held against rotation, actuating arms at the ends of the shafts for cooperative engagement with the cam to move the shaft to position the fingers in their outwardly projected position, the cam being oriented relative to the cylinder to hold the teeth projected over an arc of cylinder rotation sufficient to lift vines from the delivery means and carry them to the top of the cylinder, a ratchet and pawl drive connected to the delivery conveyor for advancing the delivery conveyor, means for oscillating the pawl over a predetermined arc of the ratchet, means movable intermediate the ratchet and pawl to occlude a selected portion of the ratchet surface within the arc of pawl oscillation, and means intercoupling the cylinder and the ratchet occluding means so that the occluding means will move into the arc of pawl oscillation as the cylinder moves vertically downward.

3,048,260
VIBRATOR FOR MATERIAL CONVEYING APPARATUS
Grant N. Willis, Bristol, Conn., assignor to Arthur G. Russell Company, Inc., Forestville, Conn., a corporation of Connecticut
Filed July 15, 1959, Ser. No. 827,362
21 Claims. (Cl. 198—220)



1. A combination supporting and vibrator unit for use with a material conveying structure comprising a pair of end plates arranged in spaced apart parallel relationship, normally parallel leaf springs in spaced apart relationship fixed to and supporting the end plates for relative oscillating movement in a parallel direction, means for oscillating the end plates relative to each other, means for mounting one end plate on a supporting structure, and a flexible spring strap attached at one end to other end plate and extending generally parallel thereto in spaced relationship and having means at its outer end for forming a supporting connection to a structure to be vibrated.

3,048,261
DELIVERY SLIDE FOR LINECASTING MACHINES
Paul Hilpman, Garden City, and Gerald Post, Bronx, N.Y., assignors to Mergenthaler Linotype Company, a corporation of New York
Filed Dec. 30, 1958, Ser. No. 783,757
5 Claims. (Cl. 199—26)



1. In a typographical composing machine, a line transfer carriage movable between a line receiving position and a line delivery position, said carriage having two fingers which engage a line of matrices, one of said fingers being fixed to said carriage so as to push said line of matrices when said carriage moves from its line receiving to its line delivery position, the other of said fingers being freely slidable on said carriage so as to engage and support the leading matrix as the line of matrices is transferred, and means for setting the line receiving position of said other finger in any adjustably fixed relationship to said one of said fingers, said means comprising a clamp block fixable in any one of a plurality of spaced-apart positions on said transfer carriage, a member movably attached to said other finger and means for locking said movable member in an adjusted position engaging said clamp block after said other finger is spaced the desired distance from said one of said fingers.

3,048,262
MUSICAL INSTRUMENT CASE
Vito Pascucci, Kenosha, Wis., assignor to G. Le Blanc Corporation, Kenosha, Wis., a corporation of Wisconsin
Filed July 7, 1959, Ser. No. 825,580
6 Claims. (Cl. 206—13)



3. A musical instrument case carrying both a saxophone and a clarinet and of substantially the size and configuration normally used to carry only a saxophone; said case being relatively long and narrow with a predetermined longitudinal dimension, a transverse dimension substantially less than said predetermined longitudinal dimension, and a height less than the said transverse dimension; said case comprising a relatively deep upwardly open box-like bottom having dividers therein defining storage compartments for components of the saxophone with one compartment having a portion of its width substantially coextensive with the transverse dimension of the case receiving the bell-and-joint component of the saxophone, a relatively shallow downwardly opening lid complementary to said bottom and hinged to the bottom along mutually confronting adjacent edges of the lid and bottom, interlocking latch means on the lid and bottom along mutually confronting adjacent edges, and a relatively shallow clarinet supporting tray connected to said case along an upper edge thereof and disposed in its position of clarinet support at least partially within said bottom and overlying only a portion of said one compartment and leaving a substantial portion of the bottom uncovered by the tray and lying closer to the underface of the lid than to the upper surface of the bottom permitting the smaller cross-sectioned portions of the bell-and-joint component to underlie the said tray, said tray having depressions therein receiving components of the clarinet, and the interior of said top and bottom and the top of said tray being padded to protect the saxophone and clarinet.

3,048,263
FOG RESISTANT POLYOLEFIN FILMS
William Sacks, Chicago Heights, and William F. Underwood, Oak Park, Ill., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 29, 1961, Ser. No. 99,056
18 Claims. (Cl. 206—45.33)

18. A package which contains a water-emitting material and is formed of a polyolefin wrapping film selected from the group consisting of high density polyethylene and polypropylene having homogeneously dispersed therein a member selected from the group consisting of monoglycerides of fat-forming fatty acids and mixtures of monoglycerides and diglycerides of fat-forming fatty acids, said monoglycerides being present in an amount from about 0.5 percent to 4.0 percent by weight of polyolefin to impart to said polyolefin film resistance to moisture fogging.

3,048,264
CONTAINER AND METHOD OF FORMING
Victor B. Krause, Hollis, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed June 30, 1959, Ser. No. 824,029
2 Claims. (Cl. 206—45.33)

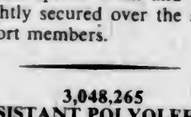
1. A package comprising a substantially rigid hollow article having a base, side walls and a top, a rectangular support member of resilient plastic for each of the said article top and base, each of said members having an internal recess in which said article is tightly retained by a press fit and each being provided with flat end walls extending in planes substantially beyond those of the said



article side walls, said members being arranged in substantial alignment and parallel to each other, and a transparent flexible film spaced from and enclosing the said article, being tightly secured over the said flat end walls to the said support members.

3,048,265
FOG RESISTANT POLYOLEFIN FILMS
Robert H. Hackhel, Berwyn, and William Sacks, Park Forest, Ill., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 29, 1961, Ser. No. 99,042
21 Claims. (Cl. 206—45.34)

16. A package which contains a water emitting material and is formed of a polyolefin wrapping film selected from the group consisting of low density polyethylene, high density polyethylene and polypropylene, and having homogeneously dispersed therein an anti-fog agent imparting to said film resistance to moisture fogging having the formula:



wherein the sum of x and y has a value from 2 to 5 inclusive, and R is a member selected from the group consisting of an acyl radical derived from a fat-forming fatty acid having from 12 to 22 carbon atoms inclusive and a monovalent aliphatic radical having from 12 to 22 carbon atoms inclusive, said anti-fog agent being present in an amount from about 0.05 percent to 1.0 percent by weight of polyolefin in the instance of low density polyethylene and from about 0.5 to 4.0 percent in the instance of high density polyethylene and polypropylene.

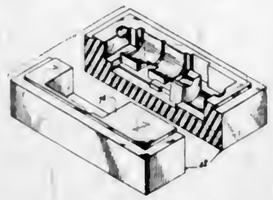
3,048,266
FOG RESISTANT POLYOLEFIN FILMS
Robert H. Hackhel, Berwyn, and William Sacks, Park Forest, Ill., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Mar. 29, 1961, Ser. No. 99,058
20 Claims. (Cl. 206—45.34)

17. A package which contains a water emitting material and is formed of a polyolefin wrapping film having homogeneously dispersed therein as an anti-fog agent an ethylene oxide derivative having the formula

$$R'O[CH_2CH_2O]_xR$$

wherein x has a value of 1 to 23 inclusive; R is selected from the class consisting of an acyl radical derived from a fat-forming fatty acid having from 12 to 22 carbon atoms inclusive and a monovalent aliphatic radical having from 12 to 22 carbon atoms inclusive; and R′ is selected from the group consisting of hydrogen and an $R[OCH_2CH_2]_x$ group wherein R and x have the above-identified meaning, said anti-fog agent being present in an amount to impart resistance to moisture fogging and less than that which imparts tackiness to said film.

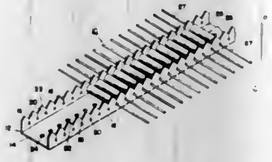
3,048,267
RELAY STABILIZER
Stanley J. Starzec, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., Northlake, Ill., a corporation of Delaware
Filed Aug. 19, 1960, Ser. No. 50,626
1 Claim. (Cl. 206—46)



The combination with a relay including a coil, a plurality of coil spoolheads having a diameter which is larger than that of the coil, coil connected terminals mounted on one spoolhead, a heelpiece mounted on the coil, a spring pileup mounted on the heelpiece, and armature yoke mounted near one end of the heelpiece, and an armature pivotally mounted on the armature yoke and engaged with the contact members on the spring pileup for operation thereof responsive to operation of the coil, of a shipping package formed of molded foam polystyrene comprising: a first section intagliated in substantially the shape of one-half of said relay, said first section including an armature cavity all dimensions of which are greater than the corresponding dimensions of said armature, a plurality of spoolhead slots the bottom walls of which are built up to provide a vertical bearing for said spoolheads, a coil cavity relieved between said spoolhead slots, a heelpiece cavity the bottom wall of which is built up to provide a vertical bearing surface for said heelpiece, a relieved section adjacent said heelpiece cavity for positioning said coil connectors, and a spring pileup cavity adjacent the bearing surface of said heelpiece cavity the dimensions of the spring pileup cavity being larger than the corresponding dimensions of said spring pileup; a second section intagliated in a mirror image of said first section; and means comprising projections and indentations in the adjacent surfaces of said sections, registering when the sections are placed together for positioning said first section with said second section in a fixed position to cause the slots of both sections to fit snugly over said spoolheads and said surfaces to support a relay by pressure applied only by said vertical bearing surfaces and slots to the spoolheads and heelpiece thereof to prevent endwise or sidewise movement of said relay and the remainder of the relay including said armature and spring pileup is held in suspension so that said armature and spring pileup can not engage any portion of said polystyrene package.

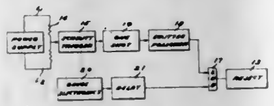
3,048,268
PACKAGE FOR ELECTRICAL COMPONENTS
Ferdinand A. Rocchi, Wappingers Falls, N.Y., and Frank F. Surowiec, Huntingdon Valley, Pa., assignors to International Resistance Company, Philadelphia, Pa.
Continuation of application Ser. No. 660,130, May 20, 1957. This application Feb. 12, 1962, Ser. No. 172,828
11 Claims. (Cl. 206—65)

1. A holder for electrical components of the type having a body portion with a wire lead extending from each end thereof comprising the combination of an elongated substantially U-shaped channel-like strip of flexible material, a plurality of longitudinally spaced slits in each side arm of the channel extending from the edge of the arms, the slits in one side arm being in alignment with those in the other side arm, the arms being spaced apart a distance sufficient to receive therebetween the body portions of the electrical components with the leads of the components extending through the slits, and a plurality of longitudinally spaced aligned holes in the base of said strip between the arms of said strip, the number of said holes in the base



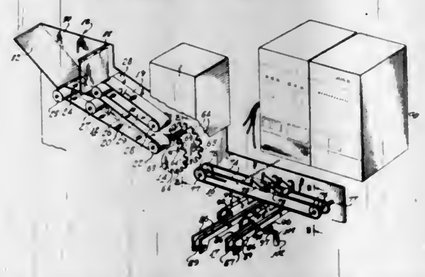
of said strip per unit length of the strip being equal to the number of slits in each side arm per unit length of said strip with the spacing between the centers of adjacent holes being equal to the spacing between said slits.

3,048,269
INHIBITING FALSE SIGNALS IN ELECTRONIC GAUGING
Ellsworth M. Murley, Jr., Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Dec. 23, 1960, Ser. No. 78,063
4 Claims. (Cl. 209—74)



4. An apparatus for inhibiting a false pulse signal due to variations in line voltage from passing through a pulse type electronic article gauging apparatus which comprises an "and" gate which is normally "on," a pulse type electronic article gauging apparatus including an electronic gauging device reject mechanism, said "and" gate being interposed electrically between said electronic gauging device and said reject mechanism, first circuit means forming a pulse due to variation in line voltage and applying said pulse to said "and" gate to disable said "and" gate, and circuit means associated with said "and" gate for receiving a pulse from said electronic gauge apparatus whereby said "and" gate is disabled by a false pulse signal from said first circuit means and prevented from passing the false pulse signal from the gauging device to the reject mechanism which passes through the electronic gauging apparatus.

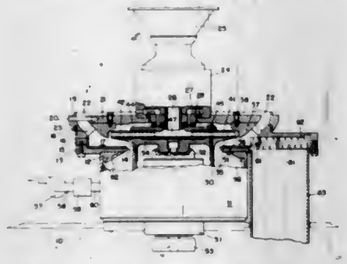
3,048,270
METHOD OF AND APPARATUS FOR COLOR CLASSIFICATION
William D. Green, Jr., Concord, and Robert P. Bartlett, Belmont, Mass., assignors to Consolidated Cigar Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 8, 1960, Ser. No. 67,936
25 Claims. (Cl. 209—111.5)



1. An improved color classifying apparatus, comprising means for producing three first signals X, Y and Z vary-

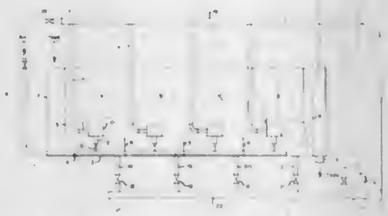
ing in accordance with the tristimulus values of said color, means responsive to said first signals producing digital signals corresponding to the functions Y, X/Y and Z/Y and classifying means responsive to said digital signals.

3,048,271
PARTICLE CLASSIFICATION
Thomas D. Sharples, Plymouth Meeting, Pa., assignor to The Sharples Corporation, a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,762
11 Claims. (Cl. 209—144)



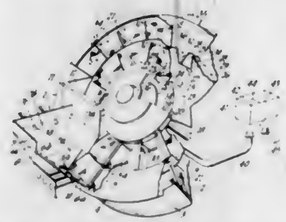
6. A classifier for finely divided material comprising boundary means including first and second opposing wall structures forming between them an annular classifying zone, inlet means including fluid directing means surrounding the outer boundary of said zone for producing within said zone an inwardly spiralling vortex, an annular inlet for said finely divided material positioned between the inner and outer limits of said classifying zone, said annular inlet being bounded inwardly by rotating means for feeding said finely divided material outwardly to said annular inlet and outwardly by a stationary surface surrounding and spaced from the outer limit of said last-mentioned rotating means, said surface being positioned to intercept said material projected outwardly by said rotating means and being of a character to facilitate relative rotation of said material with respect thereto, outlet means communicating with the inner boundary of said classifying zone, means for producing a differential in pressure between said first-mentioned inlet means and said outlet means for the flow of fluid into said classifying zone directed by said fluid directing means and out of said classifying zone together with a fine fraction through said outlet means, and outlet means for a coarse fraction communicating with the outer boundary of said classifying zone.

3,048,272
FROTH FLOTATION PROCESS
Francis G. Miller, Monroeville, Pa., assignor to Heyl & Patterson, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 18, 1961, Ser. No. 76,516
12 Claims. (Cl. 209—166)



1. A froth flotation process comprising progressively advancing slurry generally along a predetermined path, impelling into the slurry below the surface of the slurry at intervals along its path agitating liquid and gas causing agitation and froth formation, the agitating liquid being delivered from a common source through operatively parallel conduits into the slurry, separating froth from the slurry, withdrawing a portion of the remaining slurry from said path, at least part of the withdrawn slurry being recirculated to constitute at least part of the aforementioned agitating liquid, and delivering a tails fraction at the end of said path.

3,048,273
COAL OR ORE WASHING
James E. Chick, Gatley, and Robert Symington, Bramhall, England, assignors to Simon-Carves Limited, Stockport, England, a British company
Filed July 13, 1959, Ser. No. 826,602
Claims priority, application Great Britain July 25, 1958
13 Claims. (Cl. 209—172.5)

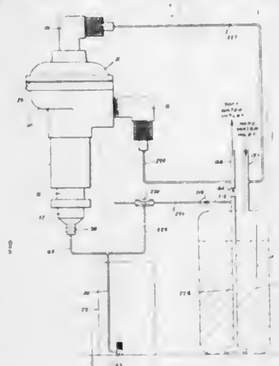


3. Apparatus for separating solids into a fraction of greatest density, a fraction of intermediate density and a fraction of least density which comprises a container having a partition extending downwardly and terminating in a lower edge above the bottom of said container to divide the upper part of the container into a solids separating compartment and a solids receiving compartment, means to supply a first liquid medium of a density between that of the fractions of greatest and intermediate densities to the side of said container opposite said partition and below the edge of said partition to provide a body of higher density below said partition said container having an overflow from the side of said solids receiving compartment opposite said partition, means to supply a second liquid medium of a density above that of said fraction of least density and below that of said intermediate fraction to a side of said solids separating compartment transverse to said partition above the lower edge of said partition to provide a body of second liquid medium on said body of first liquid medium supplied below said partition, said container having an overflow from said solids separating compartment opposite the side to which said second liquid medium is supplied to said solids separating compartment for liquid and solids floating on the surface thereof said separating compartment being adapted to receive solids supplied thereto to be fractionated, and means to pick up and remove separately the intermediate fraction from the solids receiving compartment and the fraction of greatest density from the bottom of said container.

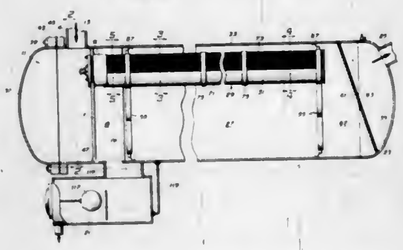
3,048,274
METERING VALVE
Stanley A. Lundeen, 2946 Stinson Blvd., Minneapolis 18, Minn.
Filed Aug. 7, 1957, Ser. No. 676,777
11 Claims. (Cl. 210—101)

1. Valve means for metering a predetermined proportional amount of fluid from a pressurized fluid flow line in response to variation of pressure in that line, said valve means comprising a valve body, a cavity in said body, a resilient diaphragm dividing said cavity into two fluid

pressure chambers, said diaphragm being movable responsive to changes in fluid pressure in said chambers, fitting means in communication with the first of said chambers and adapted to connect said first chamber to a flow line at a point of constant high fluid pressure, fitting means in communication with the second of said chambers and adapted to connect said second chamber to the same flow line at a point of variable fluid pressure, an outlet port from said second chamber, a valving element positioned in and adapted to control flow from said port, said valving element being connected to said diaphragm for movement therewith responsive to variations in fluid pressure upon said diaphragm, a third chamber in communication with said port from said second chamber, a second outlet port from said third chamber, said second outlet port being aligned axially with said first named port, a variable flow valving element in said second outlet port in communication with said third chamber, said variable flow valving element being aligned axially with said first named valving element and closely spaced therefrom whereby said variable flow valving element is movable responsive to movement of said first named valving element, and adjusting means for varying the spacing between said valving elements for regulating the rate of flow from said chamber to set the predetermined proportional amount of fluid to be metered.

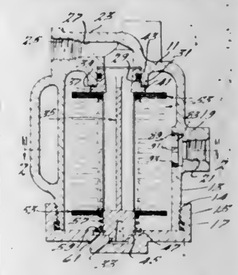


3,048,275
FILTER-WATER SEPARATOR
Richard T. Headrick, Fort Wayne, Ind., assignor to Bowser, Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Aug. 13, 1957, Ser. No. 677,923
6 Claims. (Cl. 210—247)



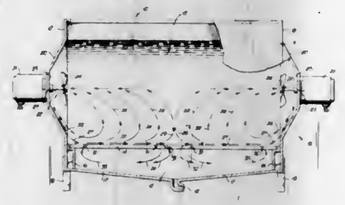
1. In combination: a horizontal tank provided with an inlet and an outlet, a support disposed in the tank and forming therewith an entrance chamber for receiving through the inlet a liquid containing water, a partition disposed in the tank and forming with the tank and support a water receiving chamber and an adjacent circulating chamber with the water receiving chamber arranged between the entrance and circulating chambers, a container having its longitudinal axis horizontally disposed and communicating with the entrance chamber and extending into the circulating chamber, a filter disposed in the container on an axis substantially parallel to the axis of said container for coalescing the water in the liquid and depositing it in the container, and said container comprising a part provided with apertures through which the filtrate may flow into the circulating chamber and into the outlet and a non-perforated channel part disposed beneath said filter for directing the water back into the receiving chamber.

3,048,276
STACK TYPE FILTER CONSTRUCTION
Rex C. Darnell, Dexter, Mich., assignor to Dynamic Filters Inc., Detroit, Mich., a corporation of Michigan
Filed July 11, 1958, Ser. No. 748,034
2 Claims. (Cl. 210—304)



1. A filtering device for liquid including a housing having a generally cylindrical enclosing side wall provided with an inlet opening, a stack of spaced filtering media disposed in said housing and having a longitudinal axis disposed coaxially with respect to said side wall, said filtering media being arranged perpendicularly to said side wall and having their outer peripheries adjacent to and spaced from said side wall to provide an annular space between said stack and said side wall, means associated with said inlet opening providing a plurality of restricted orifices disposed in the planes of the spaces between at least some of said filtering media to direct incoming liquid in high velocity streams across portions of the faces of the adjacent ones of said filtering media, said orifices being arranged to direct said streams in paths offset from the axis of said stack and spaced from said side wall to both directly scour contaminant from the filtering media surfaces in alignment therewith and to impart a high degree of rotation to liquid in said annular space.

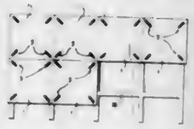
3,048,277
GRID FOR DIRT TRAP SUMP
Marshall R. Bland, La Habra, Calif.
Filed Mar. 10, 1959, Ser. No. 798,353
4 Claims. (Cl. 210—523)



1. Apparatus for separating particulate matter from an agitated liquid, which comprises a main cleaning tank, a sump chamber positioned below said cleaning

tank, a grid mounted in a substantially horizontal plane at the lower end of said main tank and separating said main tank from said sump chamber, an agitator positioned in said main tank above said grid, a first series of perforations in said grid, located adjacent said agitator, the axes of said perforations being inclined at an angle to the horizontal plane of said grid, the extension of said axes above said grid having a horizontal component parallel to and in the direction of flow of fluid in said main tank adjacent said grid, produced during actuation of said agitator, and a second series of perforations in said grid, spaced from said first series of perforations and at a distance from said agitator further than said first perforations, the axes of said second series of perforations being inclined at an angle to the horizontal plane of said grid, the extension of said axes above said grid having a horizontal component parallel to and in a direction opposite to the flow of fluid in said main tank adjacent said grid, produced during actuation of said agitator, the total area of said perforations being substantially less than the solid area of said grid.

3,048,278
MOUNTING BOARD FOR SHEET MATERIAL
Anthony T. Zaia, 2730 Wisconsin Ave. NW., Washington, D.C.
Filed June 12, 1961, Ser. No. 116,437.
3 Claims. (Cl. 211—45)



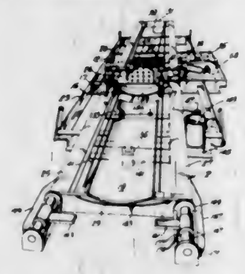
3. In combination, a supporting frame having mounted thereto and adjacent to each other a series of mounting boards, said mounting boards having positioned diagonally at each corner thereof a mounting device comprising an elongated housing having a bore, a slot communicating with said bore, said bore being provided with an elongated spring and a gavel, the head of said gavel being slidably positioned in said bore to rest on the top end of said elongated spring and the arm of said gavel protruding vertically through said slot, said mounting device being countersunk into said board so that the surface of the device containing said slot is substantially on an equal plane with said board.

3,048,279
WALL BRACKET AND SHELF COMBINATION
Neal E. Mann, 1886 Jeri Drive, Bountiful, Utah
Filed Apr. 4, 1960, Ser. No. 19,770
3 Claims. (Cl. 211—90)



1. A shelf and bracket combination comprising a wall bracket adapted to reside flatwise against a wall or an equivalent support surface, retaining studs having stop means fixed thereto and adapted to be anchored in said wall in a manner to project laterally beyond the surface, said bracket having holes therein, the studs extending through and beyond the holes, the bracket mounted and suspended on the studs in contact with said stop means while at the same time adapted to be firmly urged against the surface by said stop means, and a shelf having an inner lengthwise edge to about the surface, and sockets opening through said edge receiving the studs, said edge also having keeper notches at the open ends of said sockets, said notches receiving and seating coacting portions of said bracket, other portions of said bracket extending below said shelf and having an inner surface coplanar with said edge for engaging the wall whereby the bracket may assist in supporting said shelf on the wall.

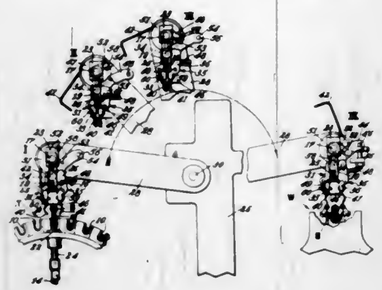
3,048,280
APPARATUS FOR REMOVING HEAT EXCHANGER TUBE BUNDLES
O. C. Huff and Norman C. Stanley, Port Arthur, Tex., assignors to Texaco Inc., a corporation of Delaware
Filed May 9, 1958, Ser. No. 734,337
11 Claims. (Cl. 214—1)



1. Apparatus for moving a tube bundle out of or into a horizontal heat exchanger shell comprising, in combination, a portable support bed including a pair of parallel spaced beams; a cradle adjacent the forward end of said support bed for receiving the rear end portion of a tube bundle; means for raising and lowering said cradle at will; a movable carriage for receiving the front end of a tube bundle, said carriage lying between said beams and being movable along said beams lengthwise thereof, said carriage and said cradle so cooperating with one another than when said cradle is in lowered position said carriage passes over said cradle to a position adjacent said end of said support bed; a motor driven rotatable cable drive mounted on said support bed and operatively connected to said carriage for moving said carriage along said beams, said cable drive comprising a drum located intermediate the ends of said support bed, a pair of cables wound in opposite directions on longitudinally spaced areas of said drum, separate sheave means on said carriage, and sheaves on said support bed spaced longitudinally thereof on opposite sides of said drum, said cables each passing through one of said sheave means and one of said sheaves and being secured to said support bed at opposite ends thereof; and means carried by said support bed adjacent said end for securing said support bed to a heat exchanger shell.

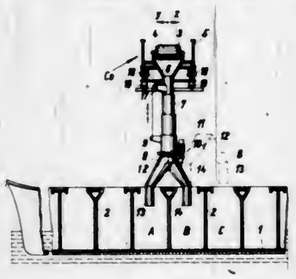
3,048,281
TRANSFER FOR CIGAR MACHINES
Thomas A. Godfrey, Elmont, N.Y., assignor to International Cigar Machinery Company, a corporation of New Jersey
Filed June 25, 1959, Ser. No. 822,813
11 Claims. (Cl. 214—1)

1. In a cigar machine, a clamping mechanism mounted on a shaft to which there is imparted a parallel motion, said clamping mechanism comprising, in combination, a main jaw having an upper end pivotally mounted on said shaft and having a clamping portion at its lower end, a second jaw pivotally attached to said main jaw between the ends of said main jaw, said second jaw having a lower end clamping portion which may be moved adjacent to the clamping portion of said main jaw when said jaws are pivoted towards each other, a pin projecting forwardly from said second jaw below the point of attachment of said second jaw to said main jaw, a restraining arm fixed



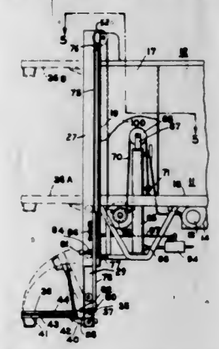
to said shaft with a vertical slot in said restraining arm engaging said pin, means urging the clamping portions of said jaws together, and at least one lateral extension of said second jaw pivoting said jaws apart when said lateral extension is urged upwards.

3,048,282
ARRANGEMENT FOR LOADING BULK MATERIAL INTO COMPARTMENTS ARRANGED ALONGSIDE EACH OTHER
Wilhelm Reiff, Rheinhausen, and Hans Pelzer, Krefeld, Germany, assignors to Beteiligungs- und Patentverwaltungsgesellschaft mit beschränkter Haftung, Essen, Germany
Filed Dec. 7, 1959, Ser. No. 857,732
Claims priority, application Germany Dec. 8, 1958
1 Claim. (Cl. 214—16)



In combination in an arrangement for loading bulk material into a plurality of compartments arranged one behind the other when looking in a certain direction: conveying means for receiving and conveying bulk material into said compartments, distributor means arranged to receive material to be loaded from said conveying means and adapted to discharge said material into said compartments, frame means carrying the discharging end of said conveying means and said distributor means and movable in said certain direction, said distributor means comprising two discharge sections spaced from each other by a distance at least approximately equalling the distance between the major central planes of two adjacent compartments to be loaded, said discharge sections being rotatable about a common vertical axis, each of said discharge sections being adapted in cooperation with the movement of said frame means in said certain direction to rotate about the other discharge section whereby one of said discharge sections is movable from a position above a first compartment directly preceding the compartment above which the other discharge section is located to a position above a third compartment directly succeeding said last mentioned compartment while said other discharge section remains over its respective compartment between said first and said third compartment, said distributor means comprising a chute having its upper end arranged below one end of said conveying means and having its lower end provided with two branches forming said two discharge sections, and gate means near the lower end of said chute and said branches and operable selectively alternately to close one of said branches.

3,048,283
TRUCK ELEVATOR
William H. Phillips, 3395 W. 63rd St., Cleveland 2, Ohio
Filed Aug. 19, 1959, Ser. No. 834,856
8 Claims. (Cl. 214—75)



7. A truck elevator mechanism for a truck body comprising, vertical guide means fixed to said body, a vertically movable support member vertically guided by said guide means, a vertically movable elevator fastened to said support member, power means to raise and lower said elevator, vertical pivot means on said body, a control shaft journalled on said vertical pivot means approximately coextensive with said vertical guide means, a control sleeve circumscribing more than 180° of the periphery of said control shaft for vertical sliding telescoping movements and for concurrent arcuate movements therewith, a peripheral opening less than 180° in said control sleeve to longitudinally pass said vertical pivot means, a yoke on said support member, a horizontal plate fixed to said control sleeve and disposed in said yoke to maintain said control sleeve vertically fixed relative to said support member and permitting arcuate movement of said control sleeve and control shaft, said vertical guide means and said control shaft terminating a distance above the top of said truck body so that said support member extends above said guide means and said control sleeve extends above said control shaft with said elevator at the level of the top of said truck body, a manual handle on said control bar, and means to actuate said power means connected for actuation by arcuate movement of said control shaft, whereby actuation of said manual handle arcuately moves said control sleeve to arcuately move said control shaft to actuate said power means to vertically move said elevator with said handle being maintained in a fixed condition relative to said elevator.

3,048,284
STABILIZER FOR LOAD HANDLING EQUIPMENT
David H. Cissna and Clayton K. Cole, Kalamazoo, Mich., assignors, by mesne assignments, to The Heil Co., Milwaukee, Wis.
Filed Aug. 28, 1958, Ser. No. 757,784
2 Claims. (Cl. 214—77)

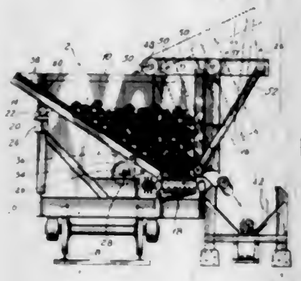
1. In a load handling vehicle wherein a load is swung over one end of the vehicle substantially in the direction

of the longitudinal center line of the vehicle by a hoisting unit pivotally mounted adjacent one end portion of the vehicle, said vehicle having a chassis with an outwardly downwardly directed extension at said end, a retractable folding support for the load handling vehicle comprising, a support arm, and means hingedly connecting the inner end portion of said support arm to the outer end portion of the chassis extension whereby the arm may be swung from a retracted position to an out-stretched position



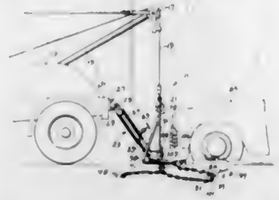
forming a downwardly outwardly directed continuation of the chassis extension, the adjacent end portions of the support arm and the chassis extension having faces which abut, when the support arm is extended, in a plane tilted outwardly at an acute angle from vertical, the hinge connection for the adjacent ends of the support arm and chassis extension having its axis parallel to the plane of said abutting faces of said arm and chassis extension.

3,048,285
LOG FEEDING MACHINE
Georges A. Bilocq, Plessisville, Quebec, Canada, assignor to Forano Limited, Plessisville, Quebec, Canada
Filed Apr. 17, 1961, Ser. No. 103,500
3 Claims. (Cl. 214—83.18)



1. A log feeding machine comprising: a hopper section, adapted to receive logs horizontally and in the longitudinal direction, and having two opposite lateral walls, the planes of which extend transversely of said direction; a bottom conveyor part to which said walls lead; said hopper section further including upstanding front and rear walls; a supporting member extending along the top of each of said front and rear walls and having one end pivotally connected thereto inwardly of said lateral walls; one of said lateral walls being removably secured to said supporting members at a distance from said pivoting ends; each supporting member having a series of supporting means disposed along an arc of circle whose center is along the bottom edge of said second lateral wall; said arc of circle extending away from said pivoted end of said supporting member; said supporting means serving to secure said lateral wall to said supporting member in selective positions.

3,048,286
TOWING MECHANISM
Wesley C. Sprague, Memphis, Tenn., assignor to Sprague's E-Z-Lift Towbar, Inc., Memphis, Tenn.
Filed Dec. 29, 1958, Ser. No. 783,540
8 Claims. (Cl. 214—86)

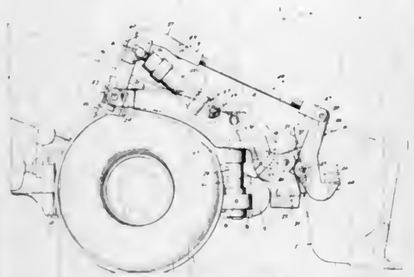


1. In a towing wrecker having a supporting member adjacent the rearward end thereof and a lifting mechanism including a lifting cable, a towing mechanism comprising a rigid frame pivotally mounted on said supporting member for pivot between raised and lowered positions about a substantially horizontal axis, said frame including a rearwardly opening pipe, an arm telescopically and rotatably mounted in said pipe for movement between rearwardly extended and forwardly retracted positions relative to said frame, said arm being provided with a plurality of annular grooves spaced along the length thereof, a plunger movably mounted on said pipe for movement between a retracted position in which the plunger is out of said grooves and an extended position in which the plunger extends into one of the grooves and holds the arm against lengthwise movement relative to said pipe, resilient means urging said plunger into said extended position for retraction by hand so that the distance of said arm from said supporting means may be varied, said arm including a ball adjacent the rearward end thereof, said ball being provided with a bore extending therethrough, a tray including a substantially vertical flange and a substantially horizontal flange integrally formed with the lower edge of said vertical flange and extending rearwardly therefrom whereby the tray is adapted to carry a towed vehicle with the bumper of said towed vehicle resting on said horizontal flange, a hanger rigidly mounted on said tray and upwardly extending therefrom, means for coupling said lifting cable and said hanger together so that said tray may be raised and lowered by said lifting mechanism, a projection rigidly mounted on said tray and forwardly extending therefrom, said projection being provided with a forwardly opening socket, said ball being rotatably received in said socket and supported by said projection, a vertical pin carried by said projection and extending through said bore whereby said tray is coupled to said arm and movable from side to side about a substantially vertical axis, said bore being provided with flared portions respectively adjacent the upper and lower ends thereof so that said arm is adapted to pivot relative to said tray to permit the horizontal flange of said tray to remain substantially horizontal when the tray is being raised and lowered, said tray being movable in an arcuate path of movement from a position adjacent the ground surface upwardly and at the same time rearwardly relative to said wrecker, whereby said tray is adapted to scoop up a vehicle to be towed with said wrecker remaining stationary.

3,048,287
ROCK LOADING MACHINE
Anthony R. Biedess, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed June 15, 1961, Ser. No. 117,389
5 Claims. (Cl. 214—90)

1. In a rock loading machine, a mobile main frame, a conveyor extending along said main frame from the

forward end thereof and having a hopper extending along opposite sides thereof and across the forward end thereof, a boom transversely pivoted to said frame and extending forwardly of the forward end thereof, a digger bucket transversely pivoted to the forward end of said boom and extending in advance thereof and depending therefrom into engagement with the ground, extensible power means, and a link and leverage connection between said extensible power means and said digger bucket for pivotally moving said digger bucket upwardly to a loading



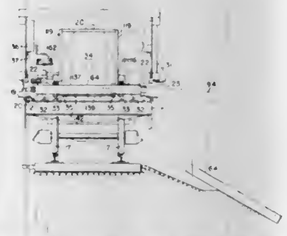
position with its discharge end movable within said hopper, other extensible power means for moving said boom about its axis of connection to said frame, said last mentioned extensible power means having a floating connection with said boom, moving said boom upwardly by the compressive forces between said extensible power means and said boom, accommodating free upward movement of said boom independently of said extensible power means, effected by engagement of said digger bucket with said hopper as it moves to a discharge position, and selecting the gathering position of said digger bucket.

3,048,288
MATERIAL HANDLING MEANS
Paul M. Dwyer, Bartlett, Nebr.
Filed June 13, 1960, Ser. No. 35,578
1 Claim. (Cl. 214—147)



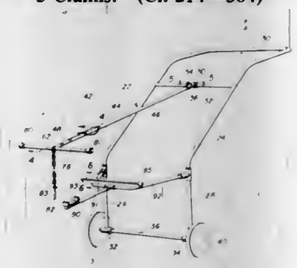
In a grapple, a pair of inverted, V-shaped side members in spaced apart parallel relationship, said side members comprising tubular elements flattened at their meeting ends, a support for said grapple comprising a stick member extending perpendicularly to a line joining the apices of said side members, a brace on and extending transversely of said stick member and between said apices, said brace having downturned end portions adjacent said apices, means extending through said downturned end portions of said brace and the flattened portions of said tubular elements, shaft supporting means carried by said side members for supporting shafts in spaced parallel relationship, shafts in said shaft supporting means, a hydraulic cylinder extending transversely of said side members, means operatively connecting said hydraulic cylinder to said shafts for effecting opposite rotational movement of said shafts upon actuation of said hydraulic cylinder, and a plurality of spring tongs carried by each said shaft, each said tong extending downwardly from the shaft to which it is connected and comprising an integral spring loop for increasing the resiliency thereof.

3,048,289
METHOD AND APPARATUS FOR UNLOADING TIES AND THE LIKE
Richard E. Franklin, Chevy Chase, Md., and Herbert C. Fox, Atlanta, Ga., assignors to Railway Maintenance Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 17, 1957, Ser. No. 653,315
10 Claims. (Cl. 214—152)



1. A method of unloading railway ties from a movable track-mounted railway car into which the ties have been loaded and stacked in a plurality of vertical stacks with the ties extending transversely of the car, comprising exerting a horizontal endwise force on one end of the lowermost tie in the end vertical stack of said plurality of vertical stacks, said horizontal endwise force being of sufficient magnitude to move said lowermost tie clear of said end vertical stack, restraining the ties above said lowermost tie in said end vertical stack against horizontal endwise movement, increasing the speed of movement of said tie near the end of its movement from the stack so as to provide sufficient momentum to cause the tie to be thrown clear of the railway car in a substantially horizontal position, repeating said operation on other ties in said end vertical stack until all of said ties in said end vertical stack have been unloaded from the car, and thereafter repeating said cycle of operation on said ties in additional vertical stacks.

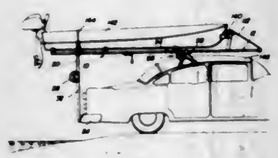
3,048,290
LAUNDRY MACHINE CART
Amos H. Terrell, 2977 Main St., Durango, Colo.
Filed Aug. 5, 1959, Ser. No. 831,814
5 Claims. (Cl. 214—384)



1. A cart for elevating and supporting loads comprising, frame means, ground supporting wheel means rotatably mounted by the frame means about a support axis fixedly spaced above the ground, base support means fixedly mounted on the frame means in spaced relation above the support axis, first and second load receiving means mounted on said base support means forwardly of

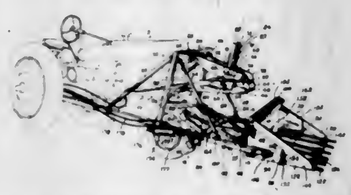
the support axis for supporting vertically directed loads at spaced locations on the base support means and retractible tension means operatively connected to said frame means for engaging and displacing a load with respect to said first load receiving means in response to rearward displacement of the frame means to support the load in raised position above the ground between said first load receiving means and the tension means, said second load receiving means supporting the load when the frame means is positioned forwardly about the support axis with said first load receiving means in engagement with the ground.

3,048,291
AUTOMOBILE BOAT CARRIER
Harry H. Mabry, 1104 N. 4th, Vandalia, Ill.
Filed Mar. 12, 1959, Ser. No. 798,868
8 Claims. (Cl. 214—450)



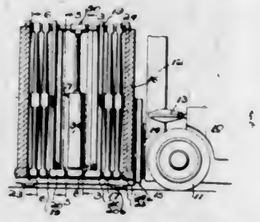
1. In combination with an automobile having a rear bumper, a load carrier particularly adapted for carrying small boats comprising a hollow elongated member, a cross bar perpendicularly fixed to said member, a pair of legs perpendicularly and terminally fixed to said cross bar and extending perpendicular to said member, a pair of arms pivotally and terminally fixed to said cross bar, a brace connected between said arms parallel to and spaced from said cross bar, said arms terminally and pivotally attached to said rear bumper, winch means supported on the roof of said automobile, said winch means including a crank and a cable adapted to be drawn by said crank, a pawl and ratchet operatively connected between said crank and said cable, means connecting said cable to said hollow elongated member whereby said hollow elongated member may be drawn onto said roof, said means including a first aperture defined in the surface of said member, a first pulley rotatably supported proximate said first aperture, a second aperture defined in the surface of said member, a second pulley rotatably and terminally supported on said member.

3,048,292
SCOOP AND LOADER ATTACHMENT FOR TRACTORS
Joseph Kohorst and Vernon Joseph Kohorst, both of Rte. 1, Arcadia, Iowa
Filed Oct. 14, 1957, Ser. No. 690,028
3 Claims. (Cl. 214—510)



1. A loader attachment for a tractor, comprising, a frame designed to straddle a tractor engine so as to project forwardly thereof and be pivotally secured to the rear axle thereof, an upstanding yoke on said frame, hoist means operably connected between said yoke and said tractor, said hoist means including a pair of elongated lifting arms pivotally secured together at one respective end, the other end of one arm pivotally secured to said yoke, the other end of the other arm pivotally secured to said tractor frame, a saddle projecting perpendicularly from one arm, a hydraulic jack pivotally connected at one end to said saddle and similarly connected at the other end to the other arm, said arms forming a scissors type hoist with said hydraulic jack disposed transversely of the longitudinal axis thereof when in closed position, and said hydraulic jack designed to connect to a source of hydraulic power on said tractor, a scoop on the projecting end of said frame, a pusher plate slidably disposed within said scoop, and means on said frame operably connected to said pusher plate for moving the same relative to said scoop.

3,048,293
SIDE-LOADING COUNTERBALANCED INDUSTRIAL LIFT TRUCK
Walton W. Cushman, Washington, D.C.
Filed Sept. 16, 1960, Ser. No. 56,606
4 Claims. (Cl. 214—730)
(Granted under Title 35, U.S. Code (1952), sec. 266)



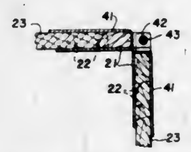
1. A side-loading industrial truck having an upright mast and a slidably mounted upwardly and downwardly movable load-supporting lifting carriage assembly in association with the mast, a generally horizontal load-supporting means associated with the carriage assembly and being projectable only in a path laterally of the truck and outward from said assembly beyond a longitudinal side of the truck, said load-supporting means being retractable only laterally in the opposite direction, said carriage assembly including an upright L-shaped frame disposed at two sides of said mast, a pantograph assembly interconnecting the carriage assembly and said load-supporting means, means for operating the carriage assembly for raising and lowering the same, means for operating the pantograph assembly to project and retract said load-supporting means, and lateral counterweight means associated with said carriage assembly and carried by one portion of said upright L-shaped frame for counterbalancing a load on the load-supporting means when the latter is in projected position.

3,048,294
INSULATED BOTTLE
Wilford F. Osborn and Norma R. Osborn, Ashland, Oreg. (P.O. Box 4646, Sacramento, Calif.)
Filed May 1, 1959, Ser. No. 810,320
1 Claim. (Cl. 215—13)



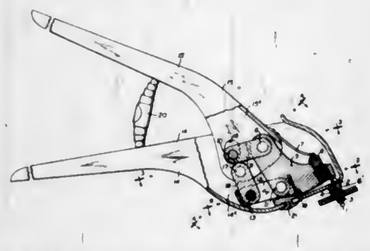
In an insulated container, the combination of an inner liner of plastic material, an outer jacket of plastic material enclosing said liner in spaced relation therefrom, a layer of radiation reflecting metallic material provided on the inner surface of said jacket, a layer of radiation reflective metallic material provided on the outer surface of said liner, a set of ribs provided on the outer surface of said liner and maintaining the adjacent layer of reflective material spaced therefrom to provide dead air spaces between the liner and the last mentioned layer, and a filler of insulating material provided between said layers of reflective material.

3,048,295
CONTAINER OF THE BOX TYPE
Oscar F. Arthur, Silver Spring, Md., assignor to Flow Products, Inc., Washington, D.C., a corporation of the District of Columbia
Filed Jan. 22, 1960, Ser. No. 4,106
7 Claims. (Cl. 217—12)



6. A container that comprises a plurality of vertical walls arranged in end-to-end relationship at angles with respect to each other to form an enclosure, facing sheets of metal disposed adjacent the inner and outer surfaces of said walls at the opposite ends thereof, a vertical edge portion of each outer sheet being bent at right angles and covering one of the vertical edges of its associated wall, certain of the facing sheets having tangs struck therefrom and extending through the walls and welded to the oppositely-disposed sheets, ears struck to horizontal planes from said vertical edge portions which cover the vertical edges of said walls, and hinge pins extending through the ears of adjacent edges and connecting the walls together at the corners of the container.

3,048,296
HAND-OPERATED TOOL FOR RIVETING BY MEANS OF TUBULAR RIVETS RECEIVING A SHANK
Hermann Heidenwolf, Bad Sodenerstrasse 29, Salmunster, Germany, assignor of one-half to Hans-Georg Biermann, Frankfurt am Main, Germany
Filed Jan. 15, 1957, Ser. No. 634,192
Claims priority, application Germany Jan. 17, 1956
5 Claims. (Cl. 218—42)



1. A manually operated riveting tool for performing a riveting operation on a tubular rivet having a shank received therein and extending beyond one end thereof, said tool comprising:

two tool arms angularly movable relative to each other, one of said tool arms being provided with spaced walls to define a housing formed at one end thereof,

a load arm carrying a clamping jaw to form jointly therewith a chuck,

said chuck being adapted to engage the free end of said shank,

said load arm being disposed within said housing and having a lower pivot means and an upper pivot means,

said upper pivot means mounting said load arm pivotally on the other of said tool arms,

and both of said pivot means being freely movable in said housing,

two pivot bolts spaced apart from each other and extending crosswise through said spaced walls of said housing,

a lower cross link connecting said lower pivot means with one of said pivot bolts,

and an upper cross link connecting said upper pivot means with the other of said pivot bolts,

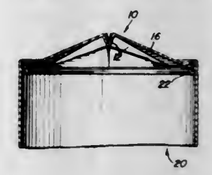
and a connecting link,

one end of the latter being pivotally securd to said one of said pivot bolts and the other end of said connecting link pivotally secured to said other of said tool arms,

said load arm together with said lower and upper cross links and with said connecting link forming a parallelogram,

and said lower and upper cross links and said connecting link being pivotable about said pivot bolts, to provide the pulling stroke of said chuck within said housing.

3,048,297
CONTAINER CLOSURE
George D. Elliott, P.O. Box 64, and John J. Wilkinson, P.O. Drawer "Y," both of Alamogordo, N. Mex.
Filed Mar. 10, 1961, Ser. No. 94,749
9 Claims. (Cl. 220—24.5)

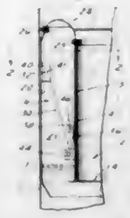


1. A lid for a container comprising a piece of resilient sheet material, a plurality of ribs of V-shaped cross section formed in said piece and radiating from the center thereof, the side walls of each of said ribs being substantially normal to said piece and resiliently urged apart so as to force said piece into a generally conical shape with its peripheral edges lying in the same plane, said lid being adapted to be snapped into a substantially flat overcenter position for expanding its periphery into sealing engagement with the inner surface of the container, the side walls of each groove abutting one another when the lid is snapped to said overcenter position for retaining the lid in substantially flat position.

3,048,298
SEAL AND CENTRALIZING MEANS FOR FLOATING TANK COVERS
John D. Lessing, Palos Verdes, Richard J. Atkinson, Glendale, and Ralph K. Cadwell, Los Angeles, Calif., assignors to Lacy Manufacturing Company, Los Angeles, Calif., a corporation of California
Filed May 16, 1960, Ser. No. 29,504
4 Claims. (Cl. 220—26)

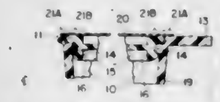
1. In combination in a storage tank having a vertical side wall, and a floating cover adapted to float on the liquid in said tank: a plurality of contact shoes in slidable engagement with said side wall of said tank; sealing

means between said shoes and said cover; centralizing means for said cover operable between said shoes and said cover, said centralizing means including a pair of spaced arms each having one end rotatably connected to one of said shoes; a torsion member having one end thereof connected to the other end of one of said arms and a second torsion member having one end thereof connected to the other end of the other of said arms,



said torsion members extending toward each other, each of said torsion members being rotatably connected to said cover; and a U-shaped lever having the end of each leg thereof connected to a respective other end of said torsion members, said lever being engaged with said cover whereby lateral movement of said cover towards said side wall will carry said lever to place a torsion in said torsion members.

3,048,299
RE-USABLE PLASTIC CONTAINERS
Herman R. Hutchinson, Wyncote, Pa., assignor to Plastomatic Corporation, Malvern, Pa., a corporation of Pennsylvania
Filed Dec. 30, 1959, Ser. No. 863,023
9 Claims. (Cl. 220—54)



9. A sealed container comprising a plastic body having an integral tear-off bead extending upwardly and outwardly from and coextensive with the periphery of the open end of said body and having below said open end an inwardly extending locking bead; a preformed snap-in cover having a recessed upper face, a peripheral flange of thickness substantially equal to the height of said tear-off bead and a groove for mating with said locking bead; and a plastic film cover applied over said preformed cover and peripherally heat-sealed both to said tear-off bead of the body and said flange of said preformed cover to provide a dual seal isolating the container contents from the atmosphere and from the space between said film cover and the recessed upper face of said preformed cover; the tear-off of said bead effecting concurrent removal of said film cover and said preformed cover from the container body for initial access to its contents; said tear-off bead thereafter remaining sealed to said inner cover and said film cover to provide a reusable snap-in cover unit retained in position by engagement between said groove and said locking bead.

3,048,300
REINFORCED SIDE SEAM CONSTRUCTION FOR LARGE CAPACITY CANS
Thomas P. Gardner, Port Arthur, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed July 2, 1958, Ser. No. 746,218
1 Claim. (Cl. 220—77)

In a container, a body having the opposing edges of the blank from which it is formed joined together in a side seam of interlocked, reversely bent hooks extending between lapped edges at the ends of said side seam where said hooks are cut away, the wall of the can body adjacent said seam having a pair of reinforcing corrugations deformed therefrom into contact with each of the bases of said hooks and extending from lapped edge to lapped edge of said seam thereby to impart columnar rigidity thereto, said side seam throughout the extent of said



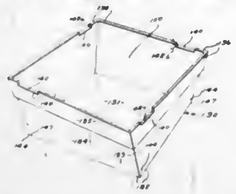
hooks having a plurality of relatively widely spaced indentations normal to said corrugations spaced equally along the length of said seam to limit columnar length therein and at the ends of the hook portion thereof separating said lapped edges from the hooked portion of said seam, said indentations being restricted in length to extend from one reinforcing corrugation to the other reinforcing corrugation.

3,048,301
COVER STRUCTURE
John W. Arpin, Bainbridge, N.Y., assignor to American Plastics Corporation, New York, N.Y., a corporation of New York
Filed May 22, 1929, Ser. No. 815,027
3 Claims. (Cl. 220—82)



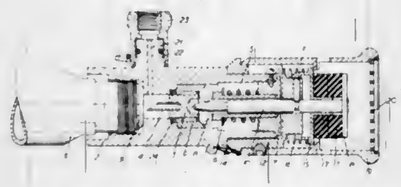
1. A plastic cover structure comprising a plastic cover member of one color of plastic, said cover member having a central lens portion and a continuous depending wall portion extending downwardly from the peripheral edge of the lens portion, and a case of different color plastic extending about the periphery of the cover member and including an upright wall portion having an inner surface in contact with an outer surface of said depending wall portion, said upright wall portion terminating at its upper edge portion in an inwardly extending rib portion overlying said depending wall portion, a rib portion on one of said wall portions extending into and being received in a recess in the other wall portions, said ribs together preventing upward and downward movement of the case relative to the cover member, an upper rib and a lower rib each located on one of said wall portions and being received in a correspondingly shaped recess in the other of said wall portions, said upper rib and said lower rib each including a vertically extending, terminal portion and thereby preventing horizontal separation of the contacting surfaces of said wall portions.

3,048,302
NESTING AND STACKING CONTAINERS
Warren H. Lockwood, Downey, Calif.
(1329 Granvis Altamira, Palos Verdes Estates, Calif.)
Filed Mar. 18, 1960, Ser. No. 16,006
12 Claims. (Cl. 220—97)



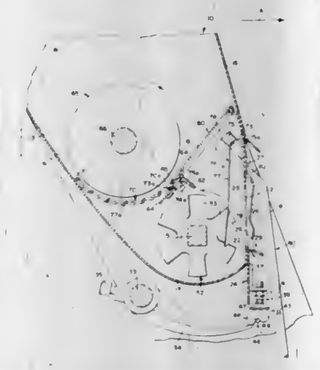
1. A receptacle adapted for tiering and nesting with other like receptacles and having a bottom portion, means defining upper edges lying generally in a plane parallel to and spaced above said bottom portion, side wall portions rigidly connecting said bottom portion and upper edges, a plurality of upper tiering support portions rigid with said upper edges, a plurality of lower tiering support portions rigid with said bottom portion, corresponding lower tiering support portions being substantially vertically beneath corresponding upper tiering support portions, the dimensions of the upper edges and bottom portion of said receptacle permitting the bottom portion of an upper receptacle to enter into a lower like receptacle, in tiered position said lower tiering support portions of an upper receptacle being positioned to rest vertically upon said upper tiering support portions of a lower like receptacle with the perimeter of said upper receptacle substantially vertically aligned above the lower receptacle, and after shifting movement from said tiered position there being a clearway from the level of each of said upper tiering support portions down to that nesting level in the receptacle occupied by the lower tiering support portions of a like receptacle when two like receptacles are in nesting position, said side wall portions being so constructed and arranged that two like receptacles will nest one within another, at least two lower tiering support portions and their corresponding two upper tiering support portions forming two pairs of tiering support portions with a substantially vertically aligned upper and lower portion in each pair, the corresponding upper portion and lower portion in each pair extending non-parallel.

3,048,303
GAS RELEASE DEVICES
Alexander Ronald Spidy, Greenford, and Joseph Silverstone, Marple, England, assignors to The Walter Kidde Company Limited, Greenford, England, a British company, and P. Frankenstein & Sons (Manchester) Limited, Manchester, England, a British company
Filed Mar. 23, 1959, Ser. No. 801,380
Claims priority, application Great Britain Apr. 2, 1958
3 Claims. (Cl. 222—5)



3. A device for the release of gas from a closed gas container secured thereto, comprising a body having a bore therein, a plunger member for opening the container on longitudinal movement thereof in one direction, said plunger member being slidably mounted in the bore in said body, said body having an abutment thereon, spring means arranged between said abutment on said body and said plunger member, said spring means urging said member in said one direction, locking means for holding said plunger member in a cocked position and against movement in said one direction, a release spindle longitudinally moveable in relation to the plunger member for releasing said locking means on movement in one direction, a body of material capable of substantially increasing its volume without change of state on immersion in water for controlling the position of said release spindle, an abutment on said release spindle, a securing member axially movable in said body of said device, said body of expansible material being arranged between said abutment on said release spindle and said securing member, said securing member being spring biased against movement in said body in the direction opposite to the releasing direction of said release spindle, further locking means acting on said release spindle in the cocked position to prevent endwise movement of said spindle, said release spindle locking means being released to permit movement of said spindle in said plunger member releasing direction on movement of said securing member in said opposite direction on expansion of said body of expansible material.

3,048,304
FERTILIZER DISTRIBUTOR WITH LEVEL RESPONSIVE FLOW ADJUSTMENT
Donald H. Polzin, Horicon, Wis., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,376
7 Claims. (Cl. 222—162)



7. A fertilizer distributor comprising a hopper having side walls and a bottom wall, there being a discharge opening in one of said side walls above the bottom wall, means for feeding fertilizer into the bottom portion of the hopper so as to maintain a quantity of the fertilizer above the level of said discharge opening, whereby fertilizer is in a position to flow by gravity from said discharge opening, fertilizer feeding rotors in the lower portion of the hopper to direct fertilizer out through said opening, a generally vertical vane shiftable to different positions between said rotors and said opening and acting to divert varying quantities of fertilizer away from said opening, and a swingable weight member fixedly connected with said vane to shift the latter toward or away from said rotors.

3,048,305
METHOD OF PACKING PRODUCTS AND CONTAINER THEREFOR
William Jacques Herter, Paris, France, assignor to S.E.B. Establishment, Vaduz, Liechtenstein
Filed May 22, 1959, Ser. No. 815,076
Claims priority, application Switzerland May 23, 1958
1 Claim. (Cl. 222—215)

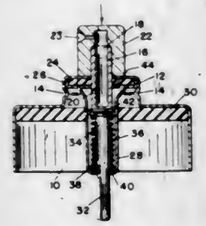
A flexible container tube comprising a tubular body portion having side walls made of a flexible material de-

fining a space for containing fluent contents, said body portion having a discharge opening at one end and at an opposite end a flexible membrane forming a bottom of said container, said membrane having an annular outer marginal portion made of a flexible material integrally joined to the body portion, said membrane having an area greater than the cross-sectional area of the container so that it is displaceable into a first position in which it is cupped axially outwardly of the body portion for filling the container and subsequent to filling is displaceable into a second position in which it is cupped into said space enclosed by said body portion of the tube container in a stable position in which said annular marginal portion of the membrane is reversibly folded and extends internally into the space defined by the side walls of said



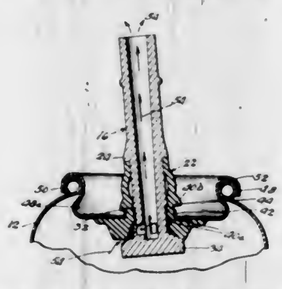
body portion conforming to the inner surfaces of said side walls, said membrane having a central portion extending transversely of said body portion disposed and held in a fixed position by said marginal portion of said membrane when said membrane is in said second position, and said central portion having greater rigidity than said outer marginal portion, whereby when the tube container is filled with the bottom membrane cupped outwardly of the body portion and said bottom membrane is displaced into said second position, said central portion cooperates with said marginal portion to hold said bottom membrane in said second stable position and the tube contents rigidly maintain the body portion walls in a non-collapsible condition while said contents with which the tube container is filled are in said tube and said discharge opening is closed.

3,048,306
VALVE FOR AEROSOLS
William J. Boegly, East Greenbush, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,937
1 Claim. (Cl. 222—394)



A metering valve for controlling the discharge of fluid under pressure from a container, and a cap for the container, said valve comprising a generally cylindrical tubular valve housing including a relatively restricted portion having an open end communicating with the inside of the container, said housing also including another portion, a first resilient rubber-like diaphragm mounted on said housing in the said other portion thereof, means holding the diaphragm and the adjacent end of the housing in fixed position with respect to the cap, a second diaphragm spaced below the first diaphragm and fixed to the housing and mounting the housing on the container, said second diaphragm holding the housing against lateral motion therein, a valve stem mounted in said valve housing for sliding motion axially thereof, said valve stem having a cylindrical portion slidable in the first-named diaphragm and projecting from the container through the cap, said first-named diaphragm gripping the exterior of the valve stem and forming a sliding seal therewith, said valve stem having an enlarged portion intermediate the ends thereof, an inwardly directed flange on the housing at the open end thereof, a spring on the valve stem engaging the enlarged portion of the stem and the flange, said spring tending to maintain the valve stem in outward closed position relative to the valve housing and the first-named diaphragm, and a flat washer located in the said other portion of the valve housing and under said first-named diaphragm and surrounding the valve stem, said washer forming an abutment interposed between said enlarged portion and said first-named diaphragm and being effective to maintain the latter undistorted and leak-proof even under conditions of excesfirst-named diaphragm, said washer having a diameter substantially greater than that of the valve stem and covering a substantial area of said first-named diaphragm.

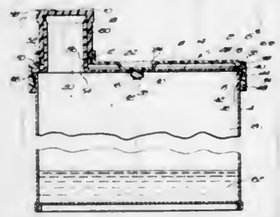
3,048,307
DEVICE FOR DISPENSING AERATED PRODUCTS
David Daniel Michel, 39 S. La Salle St., Chicago, Ill.
Filed Aug. 24, 1959, Ser. No. 835,628
8 Claims. (Cl. 222—394)



8. A device for dispensing aerated products from a container comprising a mounting cup disposed in a wall of the container, a flange defining an aperture through said cup, a resilient sleeve extending through the aperture, said sleeve having a first shoulder engaging portion outside the container and a valve seat inside the container, an adjutage extending through the sleeve and having a first shoulder disposed upon the first shoulder engaging portion of the sleeve and a valve plug positioned against the valve seat, said sleeve being longitudinally compressed against the first shoulder to form an outwardly bulged portion of the sleeve intermediate the first shoulder and the flange for maintaining releasable sealing engagement of the valve plug against the valve seat, a plurality of annular blades having sharp edges independent from one another at their outer extremities disposed within the sleeve and about the adjutage to provide flexible sealing engagement between the adjutage and the sleeve intermediate the valve plug and said bulged portion, and an adjutage second shoulder wedged into the inner wall of the sleeve intermediate the blades and the first shoulder engaging portion and proximately arranged with respect to the flange to radially compress the sleeve therebetween in opposition to movement of the adjutage along the

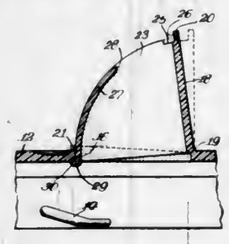
longitudinal axis thereof toward the valve seat, said second shoulder having an annular face opposite the valve plug and an inclined face sloped divergently from the longitudinal axis of the adjutage in a direction toward the valve plug to abruptly intersect said annular face and forming therewith a sharp outer extremity on said second shoulder.

3,048,308
SELF-CONTAINED COMBINED CLOSURE AND LIQUID DISPENSING UNIT
Boris Kleid, 216 Woodcliff Road, Newton, Mass.
Filed Mar. 23, 1960, Ser. No. 17,182
10 Claims. (Cl. 222—484)



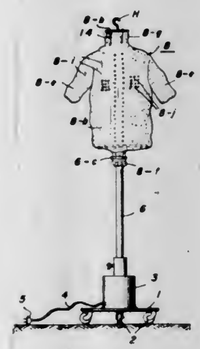
1. A self-contained, combined closure and liquid dispensing unit for a wide-mouth container, said unit comprising a top cover disc having an opening therein closely adjacent to the periphery thereof, a vent disc spaced below said cover disc, means detachably attaching said discs together in said spaced relationship with each other to form a vent space therebetween, said space being defined by opposed surfaces of said discs, said vent disc having an opening therein underlying said opening in said cover disc and a pouring spout extending upwardly from and above said opening in said vent disc through and beyond said opening in said cover disc, said spout being spaced inwardly from said opening in said cover disc to provide an escape passage providing communication between the said vent space between said discs and the atmosphere, said vent disc having a vent hole oppositely disposed from said spout and providing communication between the interior of said container and the space between said discs, a cap adapted to be placed over the end of said spout to close said spout and said escape passage, said cover disc having a peripheral depending flange extending downwardly below said vent disc, said flange having means for detachably attaching said unit onto the mouth of said container, the surfaces of said discs defining said vent space being exposed for cleaning by detaching said discs from each other.

3,048,309
DISPENSING CLOSURE
Lido Albiani, Cicero, Ill., assignor to Korris Products, Inc., a corporation of Illinois
Filed Jan. 19, 1959, Ser. No. 787,518
6 Claims. (Cl. 222—517)



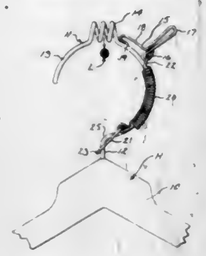
1. A dispensing closure comprising: a wall member having an opening therethrough; a generally tubular closure member for selectively closing said opening, said closure member including a flat outer wall having an attaching end and a distal end, a pair of spaced side walls extending from opposite sides of said outer wall, each side wall defining a 90° circular sector having an outer arcuate edge concentric of the attaching end of the closure wall, a segmentally cylindrical inner wall extending between said arcuate edges of the side walls and having a first end spaced from the distal end of the closure wall to define therebetween a restricted pouring opening and an opposite end disposed approximately 90° from said distal end of the closure wall to define between said opposite end and the attaching end of said outer wall a large admittance opening for delivery of material to be dispensed to within the tubular closure; and a hinge connecting said attaching portion of the outer wall to the wall member at one end of the wall member opening and yieldingly positioning the tubular closure member with the closure wall extending outwardly for the wall member to space the pouring opening outwardly from the wall member opening with its transverse extent generally parallel thereto, and dispose the admittance opening generally coincident with the wall member opening.

3,048,310
APPARATUS FOR PRESSING GARMENTS
Martin Roberto Dosal, P.O. Box 53–62, Miami Shores, Fla.
Filed Dec. 31, 1959, Ser. No. 863,172
1 Claim. (Cl. 223—70)



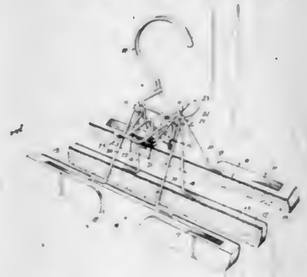
In an apparatus for pressing a dampened shirt, the combination of a base having a casing provided with a blower; a tube removably mounted on said casing; a frame mounted on said tube and provided with a plurality of electric heating elements; a form configured to simulate the torso, neck and arms of the wearer of the shirt, said form being removably mounted on said frame, and comprising a front portion and a back portion, having means for connecting said portions; a rubber gasket mounted on said tube on which are gathered tthe lower ends of said portions of said form; a ring clamp removably disposed about said lower ends and adapted to form an air-tight joint between said ends and said tube, said tube, frame and form being so related that heated air under pressure supplied by said blower inflates said form; and means adapted to so closely confine a dampened shirt on said form that the body, sleeves and collar of the shirt are conformed to the simulated torso, neck and arms of said form.

3,048,311
GARMENT HANGER LOCK
Albert R. Neuenfeldt, Grafton, Wis.
Filed Mar. 1, 1961, Ser. No. 92,587
7 Claims. (Cl. 223—85)



1. A garment hanger designed for association with a clothesline including a body for receiving a garment and an open suspension hook carried by the body, said hook being coiled intermediate its ends and adjacent to the upper portion thereof to provide a series of spaced resilient convolutions, adjacent convolutions being adapted to receive and grip a clothesline therebetween, and a releasable latch insertable longitudinally through the convolutions and below the line placed between the convolutions to close the space between the convolutions for holding the line in said convolutions against displacement.

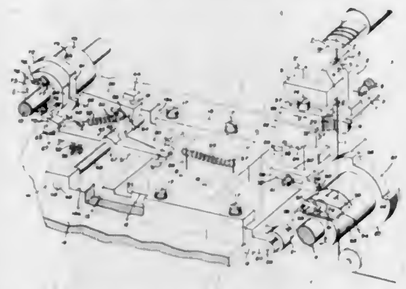
3,048,312
TROUSERS HANGER
Charles N. Birnbaum, New York, N.Y., assignor to C. Birnbaum Ltd., New York, N.Y., a corporation of New York
Filed Apr. 12, 1960, Ser. No. 21,636
4 Claims. (Cl. 223—96)



1. In a trouser hanger, a hook providing spaced horizontally-aligned loops, wire bails suspended from said loops, a central clip member suspended by one of said wire bails, slide members flanking said central clip member and pivotally suspended from said loops by other of said bails and swingable toward said clip member, said slide members being provided at their outer sides with trouser-supporting slots apertured for receiving trousers, said slide members, when loaded with trousers, swinging inwardly to urge the inner surfaces thereof toward said central clip member for confining trousers therebetween.

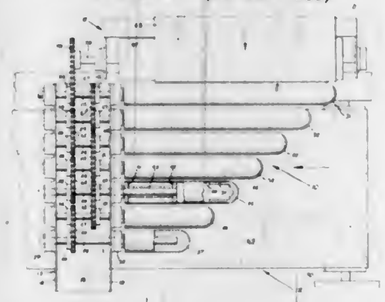
3,048,313
AUTOMATIC WIRE-BREAKING DEVICE
Junius B. Neale, Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed June 20, 1958, Ser. No. 743,440
6 Claims. (Cl. 225—106)

1. A wire-breaking device, comprising a first arm and a second arm movable into wire-clamping cooperation therewith, the wire to be broken being drawn through the space between said arms and to be broken in tension when said arms cooperate to clamp said wire; means for moving said second arm into said wire-clamping cooperation at predetermined intervals, comprising; a slide member, means for supporting said slide member for movement toward a first position to actuate said second arm into said wire-clamping cooperation and toward a second non-



clamping position, means biasing said slide member toward said first position, means driven to selectively limit movement of said slide member toward said first position, means for returning said slide member from said first position to said second position, and latching means operable to selectively retain said slide member in said second position.

3,048,314
DOUGH TURNING APPARATUS
Francis R. Reid, Louisville, Ky., assignor to The Pillsbury Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,375
14 Claims. (Cl. 226—108)

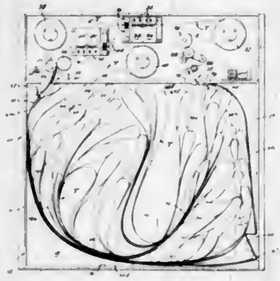


1. Transfer apparatus for transferring flexible web material from one conveyor means to another while simultaneously changing the direction of travel of the web material, said apparatus comprising a frame, a plurality of parallel shafts journalled for rotation in said frame, one end of each of said shafts extending beyond one side of said frame, a plurality of cantilevered rolls each supported by one of said shafts for rotation therewith, said cantilevered rolls varying in length, and means for rotating said shafts and rolls in the same direction.

3,048,315
ENDLESS TAPE SYSTEM
A. J. Pankratz, La Canada, Robert M. Shoemaker, Whittier, and Eugene S. Steen, Lakeview Terrace, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed Oct. 22, 1959, Ser. No. 848,016
3 Claims. (Cl. 226—118)

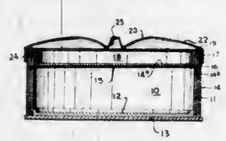
1. In apparatus wherein the major portion of a travelling endless tape is stored in serpentine folds in a storage

space with the tape travelling from the storage space to a transducing station and back to the storage space, the combination of: means including first, second, third and fourth side walls and a bottom plate which cooperate to form a shallow box constituting a storage space for the edgewise support of the endless tape; said first side wall having spaced openings therein respectively forming an entrance zone and an exit zone for said storage space; a curved metallic band positioned in said storage space adjacent said side walls, the portion of said band adjacent said second and third side walls having an inwardly extending gradual arcuate curvature to militate against any tendency for the tape to buckle away from said portion of the band, and said metallic band defining a sharp acute-angled bend adjacent the junction of said fourth wall



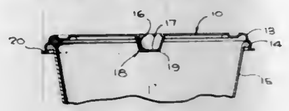
with said third wall to form an obstacle directly across the path of advance of successive folds of the tape to form an arrested fold of the tape adjacent said arcuate portion of said curved band, said sharp acute-angled bend in said band causing the tape to buckle at said entrance zone to permit a new fold of the tape to advance along said arcuate portion of said curved band; tape-driving means positioned adjacent said first wall on the side thereof remote from said storage space to withdraw the tape from said storage space at said exit zone and to propel the tape longitudinally back into said storage space at said entrance zone; and guide means at said entrance zone for directing the in-going tape along a path into face-to-face relationship with said arcuate portion of said curved band to cause the in-going tape to slide along said arcuate portion with minimum resistance to buckling.

3,048,316
FACE POWDER CONTAINERS
Jacob F. Roos, Liverpool, and Albert Smith, Heston, England, assignors to Coty, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 8, 1960, Ser. No. 54,795
3 Claims. (Cl. 229—5.5)



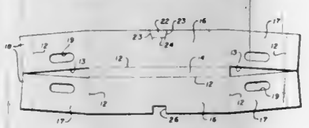
1. A container comprising a body having a vertical wall and a base closure, a cover for said body, said cover comprising a skirt which slidably embraces said vertical wall along substantially the full length of said vertical wall, a central tray connected to and around the entire top edge of said skirt and forming a central depression, an inverted U-shaped channel around the top edge of said skirt, and said channel receiving and securely embracing the top edge of said vertical wall so as to seal said body.

3,048,317
CLOSURE CAP FOR CUPS AND LIKE CONTAINERS
Hugh M. Cochrane, 256 Dawlish Ave., Rexdale, Ontario, Canada, and Gerald E. Quesnel, 24 Haas Road, Weston, Ontario, Canada
Filed Dec. 27, 1961, Ser. No. 162,541
Claims priority, application Canada Dec. 27, 1960
4 Claims. (Cl. 229—7)



1. A closure cap for cups and like containers comprising a disc of resilient thermoplastic material, a dependent flange at the periphery of said disc for securing the cap to the container, a dependent tube formed in said disc and a hinged flap closing off the lower end of the dependent tube and defined by a complete severance line around the major portion of the periphery of the flap leaving an integral connecting portion which normally resiliently retains the flap in a closed position while permitting the flap to pivot under pressure exerted by the end of a straw without substantial deformation of the end of the straw.

3,048,318
PACKAGE, PACKAGING METHOD AND DIVIDER CONSTRUCTION THEREFOR
John U. Sabin, Fresno, Calif., assignor to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,302
1 Claim. (Cl. 229—15)

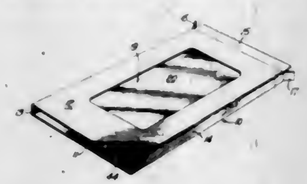


A precut and prescored carton divider formed from a single blank of paperboard comprising a top forming a panel of generally elongated rectangular shape, a side panel hingedly connected to each side edge of said top forming panel, a lock tab cut out from one side panel adjacent the bottom edge thereof and hingedly connected thereto for interlocking with a notch in the bottom edge of the other side panel to hold the bottom edges of the side panels together and thus provide a hollow divider wall substantially wedge shaped in cross section, a retaining panel hingedly connected to each end of said side panels and extending outwardly therefrom, adjacent retaining panels on different side panels converging to the extended longitudinal center line of said top panel.

3,048,319
BACON PACKAGE AND LOADER FOR SAME
John M. Lowe, Ottumwa, Iowa, assignor to John Morrell & Co., Ottumwa, Iowa, a corporation of Maine
Filed Dec. 30, 1959, Ser. No. 862,980
1 Claim. (Cl. 229—20)

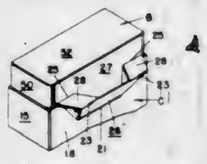
The combination of a paperboard loader positioned in a sleeve type carton to be used for holding sliced material comprising, a sleeve type carton having a roof, a floor, and at least two sides, said sides being of small height compared to said roof whereby said top will bow downwardly in unsupported condition, a main platform panel on the loader having side edges and end edges, lateral riser panels joined to said platform panel along

lines of fold at either side edge of said platform panel, said riser panels having tapered portions adjacent a first end edge to facilitate entry of said platform panel into said carton and to help maintain said carton in an upright position, said tapered portions serving as camming means to move said roof upwardly upon insertion of the panel in the carton, a reclosure end panel extending transversely of said platform panel and joined thereto along a line of fold at a second end edge of said platform panel, a protector panel joined to said reclosure end panel along a protector panel fold line spaced outwardly from said line of fold extending along said end edge of said platform and having free edges thereon, a dust flap panel hingedly connected to each of the ends of the lateral riser



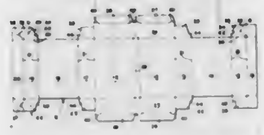
panels adjacent the protector panel, said protector panel having an integrally connected folding tab panel therewithin, said tab panel having free edges parallel to and adjacent the free edges of said protector panel and first and second areas on the under side separated by a fold line parallel to the end edges of said platform panel, said first area being remote from said protector panel fold line, said second area having adhesive thereon to adhere to the roof of said carton, the construction and arrangement being such that said first area forms a freely grabbable portion and said second area releasably holds said platform panel within said carton until pulled away by an opening force directed on said first area of the tab.

3,048,320
DISPENSING CARTON
Howard N. Hovland and Merle A. Wichman, Appleton, Wis., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 27, 1960, Ser. No. 25,102
3 Claims. (Cl. 229—20)



1. A dispensing carton comprising a slidable rectangular receptacle portion formed of a blank cut and scored to provide rear and side walls, end flaps hinged to said walls and forming a bottom wall; a lid hinged to the upper edge of said rear wall, said lid comprising lid rear and top walls and side flanges; said receptacle being slidably received in a tubular sleeve, said sleeve comprising front, rear and side walls, and integral lid-actuating means hingedly connected to the rear wall intermediate the top and bottom edges of said sleeve only along a score line including a first panel intermediate the hinge connection to the sleeve rear wall and the upper edge of the rear wall, connecting elements hingedly connected along score lines to the upper edge of the first panel adjacent the side edges thereof, a second panel hingedly connected along score lines adjacent the side edges thereof to the edges of the connecting elements opposite the first panel and to the upper marginal surface of said lid rear wall with the upper edges of the panel and the lid rear wall essentially coinciding, the perpendicular distance between the score lines connecting said connecting elements to said first and second panels being essentially equal to the perpendicular distance between the score lines connecting said second panel to the connecting elements and the upper edge thereof; said lid upon movement of said receptacle portion out of the tubular sleeve being hinged open, and upon retracting said receptacle portion within said sleeve being returned to closed position with the lid-actuating means infolded to position the connecting elements and second panel internally of the tubular sleeve.

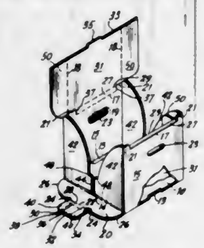
3,048,321
CARTON AND CLOSURE MEANS THEREFOR
Stuart P. Sanford, West Orange, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 24, 1960, Ser. No. 51,743
8 Claims. (Cl. 229—27)



1. A carton comprising four side walls and a bottom wall, a separable two-ply partition connected to opposed side walls dividing said carbon into two compartments, an end flap hingedly connected to one of said opposed side walls for closing both compartments of said carton, a pair of tuck flaps hingedly connected to said end flaps and insertable into the adjacent ones of said compartments, locking panels hinged to each of the plys of said partition and to the proximate intermediate portions of said end flap, said locking panels being swingable toward the respective compartments when said end flap is swung toward the end of said carton, each of said locking panels having a shoulder at one edge adapted to interlock with a slit located at the end of the hinged juncture between said tuck flaps with said end flap when said tuck flaps are inserted into the carton, said end flap and bottom wall together with said opposed side walls being weakened along lines that define a cleavage plane which passes between the plys of said partition thereby rendering said carton conveniently separable along said plane into two self-contained units the severed sides whereof are closed by the separated plys of said partition, said end flaps by virtue of the interlocking of the slits therein and the shoulder portions of said locking panels being anchored in closed position at points located proximate to and on opposite sides of said cleavage plane.

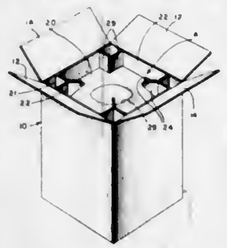
3,048,322
CONTAINER AND BLANK THEREFOR
Edwin F. Babel, Jr., Manchester, N.H., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed Nov. 14, 1960, Ser. No. 69,004
12 Claims. (Cl. 229—34)

7. A box produced from a flat, substantially rectangular blank unit comprising a rectangular bottom panel, outer end panels, end ledge panels, end liner panels, outer side panels, intermediate side panels, inner side panels, side ledge panels, side liner panels, side wing panels, and side ear panels and in which the bottom panel has each of its centrally-slotted ends hingedly connected to one end of an outer end panel and each of its centrally-slotted sides hingedly connected to one side of an outer side panel, the outer end panels are perpendicular to the bottom panel and have each of their other ends hingedly connected to an end ledge panel and each of their sides connected to a side of an intermediate side panel, the intermediate side panels are parallel to the outer side panels inwardly thereof and have rabbets along their other sides a distance from one of their ends not greater than the widths of the outer side panels, the end ledge panels are perpendicular to the outer end panels and have each of their other ends hingedly connected to an end of an end liner panel, the end liner panels are parallel to the outer end panels inwardly thereof and have each of their sides hingedly connected to a side of an inner side panel, the inner side panels are perpendicular to the end liner panels inwardly of the intermediate side panels, the outer



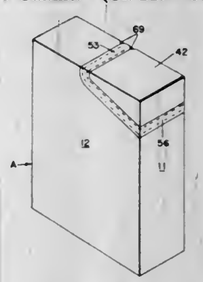
side panels are perpendicular to the bottom panel and have each of their other sides hingedly connected to a side of a side ledge panel, the side ledge panels are perpendicular to the outer side panels, positioned at their ends in the rabbets, and have each of their other sides hingedly connected to a side of a side liner panel, the side liner panels are parallel to the outer side panels inwardly of the intermediate side panels and have each of their ends hingedly connected to an end of a side wing panel, the side wing panels are parallel to the outer side panels inwardly of the intermediate side panels and have a side hingedly connected to a side of a side ear panel, and the side ear panels are parallel to the outer side panels inwardly of the intermediate side panels.

3,048,323
PACKAGING INSERT
Robert J. Stauffer, Cranford, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 2, 1959, Ser. No. 796,504
5 Claims. (Cl. 229—39)



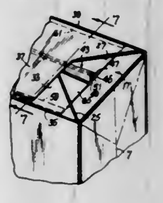
1. A protective and buttressing insert for the end of a shipping container comprising a body member of substantially rigid sheet material shaped to nest within the open end of said container, a pair of flanges hingedly connected to the sides of said body member, said flanges being spaced from each other and swingable into upstanding position, and an erectable web assembly hingedly attached to the adjacent ends of said flanges and normally located at the periphery of said body member, said web assembly comprising a pair of bridge panels and a pair of gusset-forming panels hinged to each other and arranged to swing inwardly of said body member when said flanges are erected and, when thus actuated, to form a rigid inwardly-protruding and upstanding truss structure that is seated against said body member and spans a considerable portion thereof, said web assembly and flanges being collapsible into a common plane with said body member.

3,048,324
RECLOSING CARTON
Carl E. Anderson, St. Paul, Minn., assignor, by mesne assignments, to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed Apr. 23, 1959, Ser. No. 808,386
6 Claims. (Cl. 229—51)



1. A reclosing carton containing a product and including rectangularly arranged paperboard side and end walls, liner panels inwardly of at least a portion of one end wall and the adjoining side walls at one end thereof, closure flaps secured to said one end of said walls folded into substantially right angular relation to their respective walls and secured together in face contact with one closure flap of one of said side walls outermost, a removable continuous tear strip encircling a corner of said one end of said walls including a portion of said one closure flap, a portion of both side walls, and a portion of said one end wall, said corner lying outwardly of said liner panels, said tear strip being defined by spaced weakened lines of separation and extending from the free end of said one closure flap transversely across the same, diagonally across a portion of said one side wall, across said one end wall, and diagonally across a portion of the other side wall to terminate adjacent the end of the tear strip at the free end of said one closure flap.

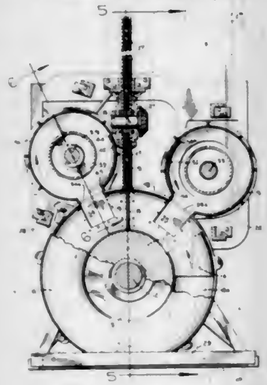
3,048,325
BAG
Charles S. O'Brien, Palos Verdes Estates, Calif., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Apr. 13, 1959, Ser. No. 805,899
10 Claims. (Cl. 229—66)



1. In a bag made of paper or the like having a pasted closure at one end, said closure comprising inwardly directed end flaps and first and second side flaps, the first side flap being folded over on the end flaps, and the second side flap being folded over on the first side flap, a strip extending inward from one corner of the bag between the respective end flap and the first side flap, said

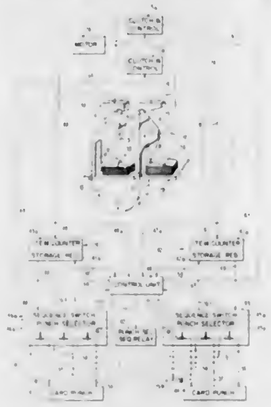
strip being secured to the inside of the first side flap and extending lengthwise of the first side flap inward from said corner, and a tearing member constituted by a single straight length of cord secured to said strip on the inside thereof extending lengthwise of said strip, said strip and cord having an end portion at said corner projecting from underneath the side flaps which is accessible for grasping to pull said cord to rip through said strip and both said side flaps.

3,048,326
PROPULSION MACHINE
Lorin D. McCleary, 5741 Indianola Ave., Indianapolis, Ind.
Filed Aug. 14, 1959, Ser. No. 833,801
2 Claims. (Cl. 230—150)



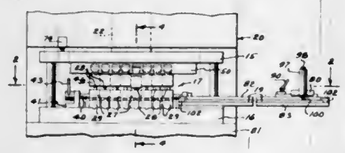
1. In an air moving device,
an annular piston chamber;
a rotating piston traversing said chamber;
an abutment rotating transversely through said chamber on an axis perpendicular to the axis of rotation of said piston;
said abutment having an opening permitting said piston to pass therethrough;
said piston chamber having an inlet opening on one side and an outlet opening on the other side of said rotating abutment;
a cylindrical inlet valve chamber closed across one end and open at the other end, and having a side opening adjacent said closed end communicating with said piston chamber inlet opening;
an inlet rotating valve in said inlet valve chamber rotating on the longitudinal axis of the valve chamber, and having a generally conical body with its apex pointed toward the valve chamber open end and overhanging the chamber side opening, and having a cylindrical wall section extending from the base end of said body intermittently opening and closing off said valve chamber side opening;
an outlet cylindrical discharge valve chamber closed across one end and open at the other end, the open end being oppositely directed from the open end of said inlet valve chamber, and having a side opening adjacent said closed end communicating with said piston chamber outlet opening;
an outlet rotary valve rotating within said outlet valve chamber rotating on the longitudinal axis thereof, having a generally conical body with its apex directed toward the outlet valve chamber opening and overhanging the valve chamber side opening, and having a cylindrical wall section extending from the base of said body intermittently opening and closing off said outlet valve chamber side opening;
means rotating said piston, said abutment, and said inlet and outlet valves in timed relation;
the rotating elements rotating in the sequence of the abutment allowing the piston to pass through the abutment opening while both inlet and outlet valves are in closed positions, the abutment turning to close off the piston chamber behind the piston, the inlet and outlet valves opening upon the piston passing the piston chamber inlet opening, sweeping out gases ahead of the piston through said outlet valve and tending to induce a vacuum between the inlet valve opening, the abutment and the piston;
said valve axes being approximately parallel; and
air entering said intake valve chamber and being smoothly directed from longitudinal travel around the intake valve conical body and radially into said piston chamber, circumferentially traversing the piston chamber, and discharged radially into said outlet valve chamber and directed by the conical body of the outlet valve longitudinally from the outlet valve chamber in a direction opposite to end parallel with the air intake direction.

3,048,327
INFORMATION REPRODUCING SYSTEM
Frank I. Gewickey, Fishkill, Robert K. Golden, Peekskill, and Bernard M. Muenzer, Hyde Park, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 12, 1960, Ser. No. 42,247
14 Claims. (Cl. 234—16)



1. An information reproducing system comprising: means for moving a record which includes a plurality of order forms joined in end-to-end relation, each containing on the front and rear therof indicia conjointly representative of a single order and indicia representative of the end of the front of that form and the rear thereof; first means for scanning the indicia on the front of the moving forms and deriving therefrom a first series of effects representative of a first portion of that order and a first effect representative of the end of the front of a form; second means for concurrently scanning, one order form displaced from said first scanning means, the indicia on the rear of the moving forms and deriving therefrom a second series of effects representative of the remainder of that order and a second effect representative of the end of the rear of the form; first and second means for utilizing said series of effects to reproduce said orders; and means, for translating said first series of effects to said first utilizing means and said second series of effects to said second utilizing means, responsive to said first and second effects for recurrently shifting the translation of said first series of effects to said second utilizing means and said second series of effects to said first utilizing means, whereby each utilizing means reproduces a complete order.

3,048,328
APPARATUS FOR WORKING SELECTED PORTIONS OF ARTICLES
Edward J. Bohaboy, Berwyn, Frank A. Klasek, La Grange Park, and Orville H. Mannisto, Brookfield, Ill., assignors to Western Electric Company, Incorporated, a corporation of New York
Filed Sept. 2, 1960, Ser. No. 53,838
5 Claims. (Cl. 234—87)



1. In an apparatus having a supporting member, a plurality of movable tools arranged in a row for working on an article, and means including control elements individual to said tools for effecting the selective actuation of said tools, the combination therewith of a carriage mounted on said supporting member for moving the article in a first direction longitudinally of the row of tools and into the paths of movement of the tools, means on said carriage for supporting said control elements in a row disposed transversely of said first direction, a slide mounted on said carriage for movement therewith and for movement relative thereto in a second direction parallel to said row of control elements and adjacent thereto, a gage plate mounted on said supporting member adjacent the path of movement of said carriage and having recesses therein in predetermined spaced relation to one another in said first and said second directions, a feeler mounted on said slide for movement therewith and for movement relative thereto into the recesses of said gage plate, means for moving said slide and said carriage to align the feeler with successive recesses in said gage plate, and means movable with said feeler along said second direction into alignment with individual ones of said control elements as the feeler is aligned with said recesses and for selectively actuating said control elements in response to movement of said feeler selectively into said recesses.

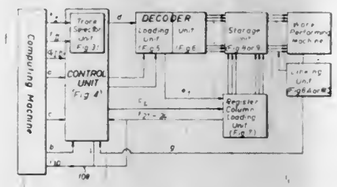
3,048,329
AIRCRAFT INSTRUMENTS
Lloyd E. Berggren, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 17, 1958, Ser. No. 722,062
27 Claims. (Cl. 235—151)

1. An aircraft take-off monitor comprising: first adjustable means having a first portion for computing a first acceleration signal and a second portion for computing a first velocity signal, said signals being representative of an aircraft runway acceleration and aircraft runway velocity scheduled as a function of a first set of predetermined conditions; second adjustable means for computing a second aircraft runway velocity signal representative of a braking velocity scheduled as a function of a second set of predetermined conditions; third means including indicating means connected to said second portion of said first adjustable means and second adjustable means having third adjustable means for changing the magnitude of said first and second velocity signals in accordance with runway distance until said signals are equal in magnitude; fourth means including second indicator means, said fourth means being connected to said third adjustable means so that said second indicator is adjusted simultaneously with said third adjustable means to represent a maximum take-off distance from the origin of the runway to a point of no return when said first and second velocity signals are equal in magnitude; fifth means including means driven by said aircraft connected to said second indicator means and said first portion of said first adjustable means to adjust said named means in accordance with the distance traveled by said aircraft



from said runway origin; and sixth means including accelerometer means connected to said fifth means and thus to said first portion of said first adjustable means and said fourth means to provide a second acceleration signal representative of the actual acceleration of said aircraft, said sixth means supplying an abort signal when said actual acceleration becomes lower in magnitude than said computed acceleration as long as said second indicator means displays a distance greater than zero.

3,048,330
ELECTRONIC COMMAND AND INFORMATION TRANSFER SYSTEM IN INDUSTRIAL AUTOMATION PROCESSES
Theo Hense, Tom Brokstrasse 61, Wilhelmshaven, Germany
Filed Nov. 21, 1958, Ser. No. 775,533
44 Claims. (Cl. 235—151)



1. A method of printing coded information from high speed computing devices, comprising the steps of gating coded information pulses from a track of the recording section of a computing device, depending on the arrival of a track scanning command from the program control section of said computing device, through to a gate stage prior to decoding said information; gating a track starting pulse from said recording section through to a successively ignited and extinguished plurality of counter stages, depending upon the simultaneous presence of a message from a printing device that the latter is ready for printing, and a command from the computing device that a calculation is terminated and the result is to be stored; applying clock pulses from said program control section successively to said counter stages, said clock pulses where coinciding with said track starting pulse in one of said counter stages causing emission of a pulse which, where coincid-

ing in said gate stage with said coded information pulse, causes said coded information pulse to operate a flip-flop arrangement and a plurality of "and" circuits, upon simultaneous arrival, in the latter, of a delayed decode control pulse from the output side of the last of said counter stages, said coded information pulse thereby becoming decoded to a decadic pulse; applying said decadic pulse to the lines of a matrix register for storage therein, resetting said flip-flop arrangement by applying thereto a delayed reset pulse derived from the output side of said last counter stage; preparing a ring counter assembly, for triggering by applying to the first stage thereof said track starting pulse; triggering said ring counter assembly by applying thereto a delayed register column loading pulse equally derived from said last counter stage output side, thereby generating a coincidence pulse for charging a column of said matrix register, and storing said decoded decadic pulse at the intersection of the latter with said coincidence pulse by demagnetizing a magnetic means at said intersection; automatically extinguishing said ring counter arrangement and said counter stages upon storing of decoded information in the last register column concurrently with emitting a command that storage has been completed, directed from the output side of said ring counter arrangement to said computing device, while concurrently therewith interrupting temporarily passage of said coded information pulse and said track starting pulse, until the stored decoded information has been printed.

3,048,331
OPTIMIZING APPARATUS AND METHOD

Robert I. Van Nice, Glenshaw, and William G. Evans, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

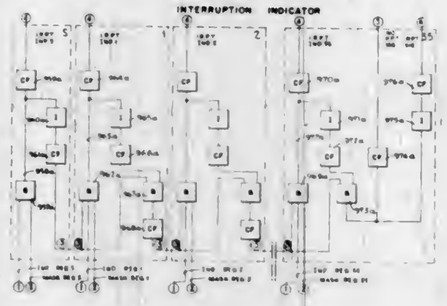
Filed Jan. 29, 1959, Ser. No. 789,922
2 Claims. (Cl. 235—151)

1. Apparatus for optimizing a predetermined factor of the operation of a system which produces a product by processing material, the output of said product varying as an unknown function of a plurality of variable quantitative parameters each of which constitutes a magnitude of a property of said product, of said material or of said processing, each variable parameter being settable over a predetermined range, said factor being a function of said output and other parameters, the said apparatus comprising means to be connected to said system for changing the setting of said variable parameters during successive moves by predetermined increments, each said move being capable of producing an improvement or no improvement of said factor, means connected to said changing means and to be connected to said system for deriving from said system during each of said moves a first signal dependent on said output following said last-named move, a computer connected to said deriving means responsive to said first signal for computing said factor in terms of said output and said other parameters and for producing a second signal dependent on said factor, memory means connected to said changing means and to said computer for retaining any signals dependent on said factor produced by any move in the succession of moves which produces an improvement in said factor and for rejecting all said signals dependent on said factor produced by moves which do not produce an improvement in said factor, and means connected to said changing means and to said memory means for setting the polarity of said increments responsive to the success or failure of a move so as to optimize said factor.

3,048,332
PROGRAM INTERRUPT SYSTEM

Frederick P. Brooks, Jr., Poughkeepsie, and Dura W. Sweeney, Salt Pointe, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 9, 1957, Ser. No. 701,372
41 Claims. (Cl. 235—157)

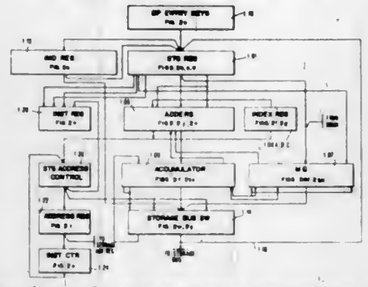


41. In a program controlled data processing machine having a memory for storing a program of instructions including means for normally selecting the instructions of said program from sequentially numbered addresses in said memory and utilizing said instructions, one by one, to control said machine, means for detecting the occurrence of each of a plurality of conditions, during the operation of the machine under control of one of said instructions, and producing indications thereof, means for monitoring said indications during said one instruction, means controlled by said monitoring means for producing an automatic interruption of the normal sequency of said program under control of one condition selected by said monitoring means, a plurality of curative programs stored in said memory, means rendered effective by said monitoring means to render effective the particular curative program associated with the selected condition, means rendering said monitoring means inoperative to produce an automatic interruption even upon the occurrence of certain of said conditions, but at least one of said occurring conditions remaining effective to select its curative program, said indication producing means comprising a number of two-state devices, one for each such condition and said monitoring means including an equal number of two-state devices, means for setting said monitoring two-state devices into a pattern, means effective upon similarity of condition between the two-state devices of said pattern and of said indication producing means, for causing an interrupt upon the occurrence of each such condition, and means for setting chosen ones of said monitoring, two-state devices into a condition, contrary to corresponding ones of the two-state devices of said indicating means whereby said respective conditions, corresponding to said contrary set two-state devices, are ineffective to produce interrupt even upon occurrence of said conditions, respectively.

3,048,333
FAST MULTIPLY APPARATUS IN AN ELECTRONIC DIGITAL COMPUTER

Joseph L. Brown, Jordan M. Taylor, and Philip N. Stoughton, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 26, 1957, Ser. No. 705,442
9 Claims. (Cl. 235—164)

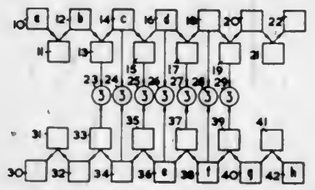


1. In an electronic data processing machine for producing high speed parallel multiplication of binary values including an adding device comprising a plurality of full binary adders, an accumulator register comprising a plurality of accumulator orders for corresponding orders of said adding device, a second register coupled to said accumulator register, a multiplier stored in said second register and means storing a multiplicand, apparatus, comprising, in combination, means producing an intermittent shifting of said accumulator register and said second register and means operative in the alternative to produce a continuous shifting, means testing the lowest order of said second register for a binary value stored therein, means testing another order of said second register for a binary value, means operable upon ascertaining that a binary "one" exists in said lowest order to cause addition of said multiplicand and the contents of said accumulator in said adding device, for causing said registers to store the partial product and to render effective said intermittent shifting means to jointly shift the contents, and said operable means effective upon ascertainment that a binary "zero" exists in said lowest order to render effective said intermittent shifting means to cause said registers to jointly shift the contents thereof, and means operable in response to said testing means for rendering said intermittent shifting means operative regardless of the individual values, respectively of said one tested order values, and operable in dependence upon the joint values of said two tested orders, to render either said intermittent or said continuous shifting means operative.

3,048,334
ELECTRICAL DIGITAL COMPUTING ENGINES

Edward Arthur Newman, Oxshot, and John Bentley Stringer, Hanworth, England, assignors to National Research Development Corporation, London, England, a British corporation

Filed Aug. 10, 1959, Ser. No. 832,582
Claims priority, application Great Britain Aug. 18, 1958
9 Claims. (Cl. 235—164)

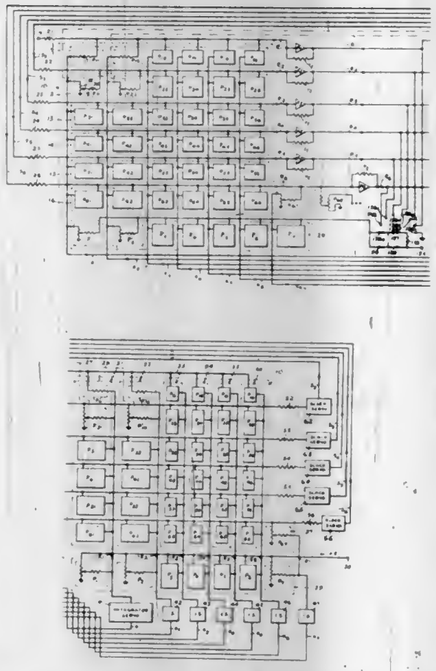


1. A multiplier for an electrical digital computing engine including a first store in which signals representing digits of a first word are stored in alternate digit positions and a second store in which signals representing digits of a second word are stored in alternate digit positions, a plurality of multiplier means each connected between a consecutive digit position of the said first store and a consecutive digit position of the said second store, means for shifting the said signals in the said first store in a direction in which the said signal representing the most significant digit of the said first word leads, means for shifting the said signals in the said second store in a direction in which the said signal representing the least significant digit of the said second word leads and a separate output from each said multiplier means, each said separate output carrying signals representing products of separate significance.

3,048,335
SIMULTANEOUS EQUATION OPTIMAL SOLUTION COMPUTER

Ralph W. Burhans, Chagrin Falls, Warren Jackson, Jr., Lyndhurst, and Phillip J. Stevko, Euclid, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

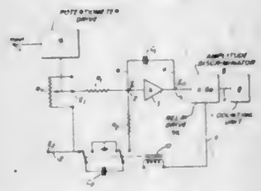
Filed May 28, 1957, Ser. No. 662,053
16 Claims. (Cl. 235—180)



1. An analog computer adapted to automatically converge to an optimal solution for a problem having a number of variables and a lesser number of restrictions, said computer comprising, an equation matrix of potentiometers and a plurality of summing amplifiers connected to said matrix, said matrix and summing amplifiers being responsive to inputs to said matrix of analog signals simulating said variables to respectively provide as outputs from said summing amplifiers a plurality of simple error signals which are continuous functions of said inputs and which are respective measures of the degree to which said restrictions are unsatisfied as the computer seeks said solution, a plurality of signal sources connected to said equation matrix to each supply to a respective summing amplifier a signal simulative of a term occurring in the restriction corresponding to such amplifier

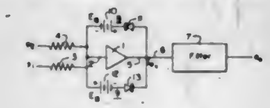
and determining the value of such restriction when all said variables equal zero, a transpose matrix of potentiometers connected while said problem is being solved to continuously receive said simple error signals from said summing amplifiers and adapted to translate said simple error signals into a plurality of aggregate error signals respectively corresponding to said analog signals, a plurality of integrator means respectively responsive to said aggregate error signals to provide outputs representing the integrals of said last-named signals as a function of analog time, the outputs of said integrator means being supplied to said equation matrix as said analog signal inputs, the circuits of said computer accordingly forming a closed loop system, and source means of forcing signal connected in circuit with said closed loop system between said summing amplifiers and said plurality of integrator means and in parallel relation with said transpose matrix to superpose on each aggregate error signal therefrom a respective amount of forcing signal which serves to urge said system in operation towards a stable condition representing said optimal solution.

3,048,336
ELECTRONIC INTEGRATOR
Bruce A. Ritzenthaler, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Sept. 23, 1958, Ser. No. 762,893
5 Claims. (Cl. 235—183)



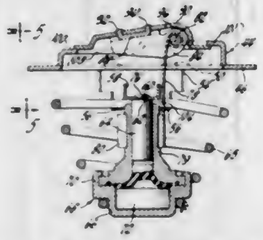
1. A circuit for integrating a varying voltage with respect to time which comprises: drive means controlling a potentiometer, means for applying said varying voltage to said drive means, means for applying a power voltage to said potentiometer, an electronic integrator including an operational amplifier, an input resistance, and a feedback capacitance for integrating the variable output of said potentiometer, means including an amplitude discriminator for detecting a preselected output of said electronic integrator, capacitor means responsive to said means including an amplitude discriminator for applying an inverse resetting voltage to said electronic integrator, said capacitor means being charged from the same voltage source as applies power voltage to said potentiometer, and means for counting the number of inverse resetting voltages applied during a measuring period as a measure of the integration.

3,048,337
ELECTRON MEANS FOR GENERATING TRIGONOMETRIC FUNCTIONS
Richard T. Byerly, Wilkins Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 2, 1957, Ser. No. 669,549
3 Claims. (Cl. 235—186)



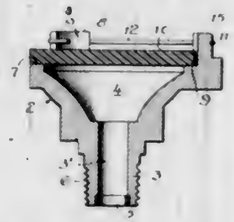
1. An electronic circuit for generating trigonometric functions comprising amplifier means having an input circuit and an output circuit; means for connecting a control voltage to said input circuit; and feedback means connecting said output circuit to said amplifier means to limit any output of said amplifier means to a value established by said feedback means; said feedback means comprising a feedback amplifier operably connected to amplify the output from said output circuit and reverse the phase thereof, means for connecting a varying reference voltage to said feedback amplifier, and filter means for connecting the output from said feedback amplifier to said amplifier means; said input circuit including circuit means for feeding the control voltage directly to said amplifier means, and input amplifier means in parallel circuit relationship with said circuit means for amplifying the control voltage twice upon said control voltage exceeding a predetermined value and reversing the phase of said amplified control voltage to oppose the application of the control voltage to said amplifier means.

3,048,338
THERMOSTATIC VALVE STRUCTURES
Charles J. O'Brien, Lockport, and Lynn E. Waite, Gasport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 22, 1959, Ser. No. 828,894
10 Claims. (Cl. 236—34)



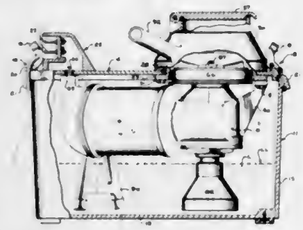
4. A thermostatic valve structure including a frame defining a port, a valve arranged to control said port, a thermosensitive pellet type motor having two relatively movable and telescopic parts with their major lengths extending away from said frame, one of said motor parts being fixed at one end to said frame, resilient means connecting the other of said motor parts to said frame urging said other motor part and frame toward each other, and means connecting the said other motor part to said valve to impart opening and closing movements to the latter when said motor is subjected to changes in temperature.

3,048,339
DIFFUSER
John A. Tapleshay, Sandy Springs, Ga., assignor to FMC Corporation, a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,191
13 Claims. (Cl. 239—571)



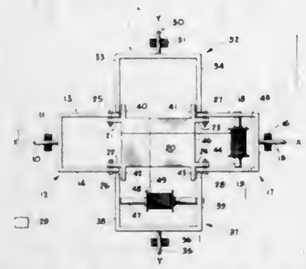
1. A diffuser adapted to aerate a medium in which it is immersed, said diffuser comprising a fitting provided with means at one end for connection to a source of air under pressure, said fitting having an air chamber having an outer end and a flat rim surrounding the outer end of said air chamber, a flat disc seated on said rim, said disc being adapted to form a seal with said rim, projections extending from said rim and engageable with said disc to limit its lateral movement, and a retaining member having a flat surface extending from said projections over said rim in a plane parallel to the plane of said rim at a distance from said rim greater than the thickness of said disc, said retaining member being engageable with said disc for limiting the movement of said disc in a direction perpendicular to the plane of said rim.

3,048,340
PORTABLE WASTE FOOD GRINDER
Richard L. Vernon, 1916 W. Mountain St., Glendale 1, Calif.
Filed Oct. 5, 1959, Ser. No. 844,265
3 Claims. (Cl. 241—46)



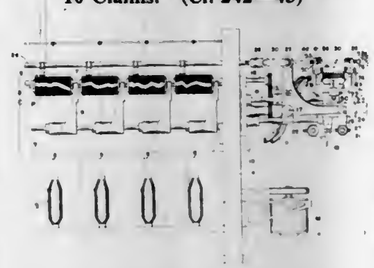
1. A portable waste food shredding and grinding device, comprising a housing forming a container for water and for finely divided particles of waste food produced by the device, a food grinder-shredder unit in said housing extending above the normal operating level of liquid in the housing, a motor operatively connected to said food grinder-shredder unit and having a watertight casing, said motor being disposed above the normal operating liquid level in the housing, and means forming a part of said food grinder-shredder unit for impelling liquid drawn from the lower portion of the housing over said motor casing to cool the motor.

3,048,341
MACHINE FOR WINDING WIRE OR THE LIKE
Helmut A. Freyholdt, 2385 Roscomare Road, Los Angeles 24, Calif.
Filed Oct. 13, 1958, Ser. No. 766,804
9 Claims. (Cl. 242—1)



1. A machine for winding a first flexible member and a second flexible member onto a frame in a generally rectangular configuration, said machine comprising: first driven means mounted for rotation in axial alignment with one center line of said frame; second driven means mounted for rotation in axial alignment with the other co-planar center line of said frame; coupling means for effecting separate connection of said frame to said first and second driven means, respectively; driving means for effecting separate rotation of said first driven means and said second driven means; first dispensing means journaled in said first driven means and retaining said first flexible member; second dispensing means journaled on said second driven means and retaining said second flexible member, whereby said frame may be drivingly coupled to said first driven means and said second flexible member may be wound on said frame perpendicular to said one center line while maintaining said second driven means stationary, and whereby said frame may be drivingly coupled to said second driven means and said first flexible member wound on said frame perpendicular to said other center line while maintaining said first driven means stationary.

3,048,342
HIGH SPEED TRAVERSE MECHANISM
Raymond V. Tata, Warwick, R.I., assignor to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts
Filed Apr. 25, 1960, Ser. No. 24,305
10 Claims. (Cl. 242—43)



1. In a winding machine having means for rotatably supporting a package core to wind yarn thereon, means for rotating said core, a traverse bar reciprocable longitudinally of the axis of said core, yarn guide means movable by said traverse bar for distributing yarn on said core, mechanical means for reciprocating said traverse bar, resilient means stressed by the movement of said bar near each end of each stroke thereof to assist said reciprocating means in decelerating said bar and imparting initial acceleration thereto in the opposite direction and means for varying in response to changes in the speed of the traverse bar the extent to which said resilient means is stressed whereby the assistance afforded by said resilient means varies in accordance with the speed of reciprocation of the traverse bar.

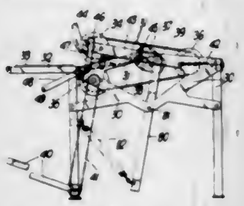
3,048,343
TEXTILE WINDING MACHINE
John V. Keith, Warwick, R.I., assignor to Leesona Corporation, a corporation of Massachusetts
Filed July 1, 1959, Ser. No. 824,262
10 Claims. (Cl. 242—45)



1. A winding machine for winding a continuously advancing strand of yarn comprising a rotatable spindle, means for traversing a winding strand of yarn longitudinally of said spindle, a variable speed electric motor for

rotating said spindle and actuating said traversing means, an electrical circuit operative to connect said motor to a source of electrical power, said circuit when operative constantly supplying power to said motor and including means for varying the amount of electric power supplied to said motor, said last mentioned means comprising impedance means requiring a combination of at least two electrical signals for varying the power supplied to said motor and connected in series with said motor, first signal means for applying a first electrical signal to said impedance means, first control means for controlling said signal according to the growth of a winding package to reduce the power supplied to said motor, second signal means for supplying a second electrical signal to said impedance means, and second control means for controlling one of said signal means to reduce the power supplied to said motor when the tension of the strand exceeds a predetermined value and to increase the power supplied to said motor when the yarn tension is less than a predetermined value.

3,048,344
APPARATUS FOR USE IN CONJUNCTION WITH AN EXTRUDER
John Harold Barwell and Donald James Lanham, Cambridge, England, assignors to Barwell Rubber Company Limited, Cambridge, England, a British company
Filed Aug. 9, 1960, Ser. No. 48,458
Claims priority, application Great Britain Aug. 27, 1959
3 Claims. (Cl. 242—55)



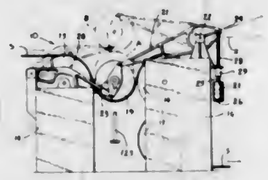
1. For use in conjunction with an extruder operating on plastic material stock in the form of sheets or ribbon, apparatus for forming the stock sheets or ribbon into compact cylindrical rolls for charging into the barrel of the extruder, the material of each roll being tightly wound helically upon itself from a center, comprising an endless belt arranged for traversing over a guide track, a track-defining roller assembly including two front rollers one above the other, a back roller spaced horizontally from the front rollers, and intermediate rollers between the front and back rollers, said track-defining rollers being arranged to constrain the belt to provide upper and lower laps disposed to form a V-shaped horizontally extending pocket affording at the front rollers an entry mouth for the reception of the stock and in the region of the intermediate rollers a constriction, and means for so driving the belt that the upper and lower laps extending between the front and intermediate rollers move in opposite directions.

3,048,345
COLLAPSIBLE SHAFTS
Robert P. Willard, Durham, N.H., assignor to Kidder Press Company, Inc., Dover, N.H., a corporation of Delaware
Filed Feb. 4, 1960, Ser. No. 6,705
1 Claim. (Cl. 242—72)



A collapsible shaft assembly of the class described and as particularly adapted for the rotatable support of heavy rolls of newsprint or similar cored loads, said assembly comprising, in combination, a tubular cylindrical body member having gudgeons at each end for mounting the shaft assembly for rotation, a plurality of circumferentially spaced rigid floating leaf elements extending generally longitudinally within said body member and arranged for radial bodily movement toward the inner surface of the wall of said body member, a series of longitudinally spaced and aligned slits in said wall adjacent the position of each of said leaf elements, a series of lugs associated with each of said leaf elements, each lug disposed in one of said slits and movable radially therein to project therefrom and to be retracted from a projected position, a slot formed in the outward surface of each of said leaf elements facing said series of slits and extending the full length of said element, the radially inner ends of the lugs of each series being seated in the slot of one of the leaf elements and secured therein, and at least one pre-stressed bent leaf spring seated in portions of each of said slots not occupied by said lugs, said spring being compressed between the bottom of said slot and the adjacent unbroken inner surface of the wall of said body member, and fluid pressure means for urging said leaf elements and said attached lugs outwardly of the axis of said body member to project said lugs through said slits against the urging of said springs; the several series of slits in the wall of the body member, and the leaf elements with their series of lugs all being multiplied throughout the length of the shaft assembly and arranged in separate circumferential groups, said groups comprising two end groups and an intermediately disposed group, the leaf elements and series of slits and lugs of adjacent groups being displaced angularly from each other about the periphery of said body member.

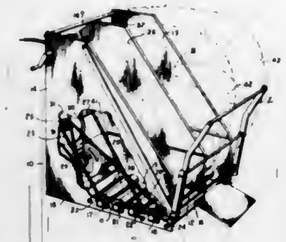
3,048,346
TENSIONING APPARATUS FOR TENUOUS MATERIAL
Leonard A. Karber, Sharon, Pa., assignor to Herr Equipment Corporation
Filed Apr. 6, 1959, Ser. No. 804,339
8 Claims. (Cl. 242—75.3)



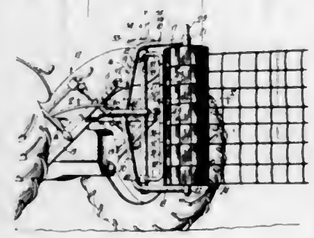
1. Apparatus for maintaining a predetermined tension on longitudinally moving tenuous material, comprising a plurality of rotatably mounted rolls over which the material passes in the form of a loop and one of said rolls riding in said loop and being movable transversely of its axis in a rectilinear path as said loop changes in size and exerting a force tending to enlarge said loop and thus tension said material, and a plurality of pivotally interconnected link members connected to said one roll and constraining the latter to movement along said rectilinear path with minimum frictional resistance.

3,048,347
COIL CRADLE ROLLS
John R. Edmonds, Dallas, Tex., assignor to Rowe Machinery & Mfg. Co., Inc., Dallas, Tex., a corporation of Texas
Filed Aug. 26, 1957, Ser. No. 680,233
8 Claims. (Cl. 242—78.7)

5. A cradle for supporting and rotating a coil of strip material for uncoiling said strip, said cradle including: a pair of side frame plates; a plurality of driver rollers extending between and rotatably carried by said side frame plates for supporting and rotating a coil of strip; and means for rotating said driver rollers, the rearmost and foremost of said driver rollers having a rigid core non-circular in cross-sectional shape and having longitudinally extending external flat surfaces exceeding four in number and a resilient sheath disposed about said core, the noncircular cross-sectional shape of the core and the resilient sheath providing for maintaining the outer convolutions of the coil supported on said driver rollers in a tightly wound condition.

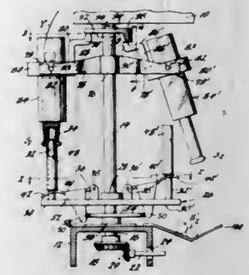


3,048,348
WIRE FENCING STRINGING AND STRETCHING IMPLEMENT
Theron W. Griffin, Rte. 1, Box 102, New London, N.C.
Filed May 21, 1959, Ser. No. 814,930
12 Claims. (Cl. 242—86.5)



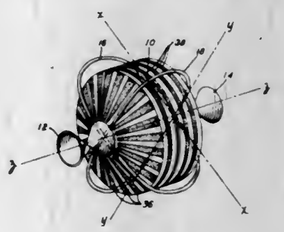
1. An implement adapted to be coupled to a conveyance and be moved thereby along a line of fence posts for stringing and stretching woven wire fencing comprising a main frame, an elongated spindle shaft, means on said main frame for removably supporting said spindle shaft in upright relation to extend through the center of a roll of woven wire fencing and support the same for unreeling rotation about the axis of the shaft to permit fencing to be drawn off of the fencing roll upon movement of the conveyance away from an anchored part of the fencing secured to a fence post, means for supporting said main frame in a position maintaining the axis of said spindle shaft in a substantially vertical position, releasable holding means supported on said main frame for selectively holding the wire fencing against paying-out movement including strain-receiving portions to enter into holding engagement with exposed portions of the wire fencing at a preselected position relative to the main frame and continually hold the engaged wire fencing portions fixed at said preselected position relative to the main frame during movement of the conveyance and main frame away from said anchored part, and means connecting said strain-receiving portions to the main frame to transfer directly to the main frame the pulling force exerted by the payed-out fencing on said strain-receiving portions during such movement of the conveyance and implement away from the anchored part so that the roll of wire fencing is relieved of unreeling strains during such movement and stretching of the payed-out fencing is effected.

3,048,349
EJECTOR FOR SUPPLY PACKAGE INDEXING MECHANISM
Thomas E. Pitts, Cranston, and Carlton A. Steele, Norwood, R.I., assignors to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts
Filed May 19, 1960, Ser. No. 30,221
5 Claims. (Cl. 242—130)



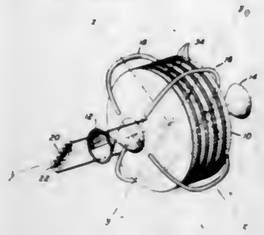
1. In a winding machine having a yarn carrier mounted for rotation about a vertical axis and adapted to support at least two yarn holders at circumferentially spaced points therearound, said carrier including at each of said points a member disposed on a vertical axis fixed with respect to said carrier, said member mating with an end of said holder to support the holder vertically on said carrier, and means operable from time to time for revolving the carrier through an arc equal to the circumferential spacing of said yarn holders on said carriers to successively bring said holders from and to a reserve position to and from an active unwinding position, the improvement which comprises means for effecting relative axial movement between each supporting member and the holder associated therewith upon movement thereof from active to reserve position to unseat the holder and means adapted to engage an unseated holder and forceably displace the same laterally of said vertical axis.

3,048,350
STABILIZATION OF EARTH SATELLITE REPEATERS
Cassius C. Cutler, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 27, 1959, Ser. No. 829,817
9 Claims. (Cl. 244—1)



1. In a space satellite to be launched with an initial spin about the axis of greatest moment of inertia and with said axis normal to the plane of a desired orbit, means for maintaining the spin despite damping influences, comprising means producing a magnetic moment in the satellite rotating about the spin axis thereof and in a plane normal to said spin axis with an angular velocity approximately equal to the desired velocity of rotation of the satellite about the spin axis, and means for producing a damping force tending to resist motion of the satellite about any axis other than said spin axis.

3,048,351
SPIN STABILIZATION OF EARTH SATELLITES
Paul L. Donoho, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 11, 1959, Ser. No. 833,040
10 Claims. (Cl. 244—1)



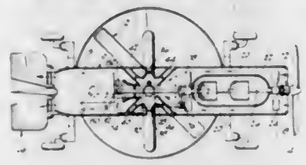
1. In a space satellite to be launched with an initial spin about the axis of greatest moment of inertia and with said axis normal to the plane of a desired orbit, means for maintaining the spin of said satellite despite damping influences comprising a pair of current-carrying loops mounted on said satellite in planes which intersect in a line parallel to said spin axis, means for sensing variations in the earth's magnetic field experienced by said spinning satellite and generating a current proportional thereto, and means for applying said current to said loops to produce a torque about said spin axis.

3,048,352
AUTOMATIC CELESTIAL NAVIGATION AND GUIDANCE SYSTEM
Siegfried Hansen, Los Angeles, Calif., assignor, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware
Filed Jan. 4, 1954, Ser. No. 402,187
18 Claims. (Cl. 244—14)



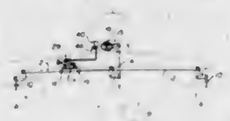
3. A system for automatic unattended navigation and guidance of airborne craft from one terrestrial location to a sequence of other destination positions comprising: a present-position computing means including space stabilized means; accelerometer means having its orientation controlled by said space stabilized means to develop latitude and longitude acceleration signals; correction means coupled for adding and subtracting to said acceleration signals to compensate for centrifugal and coriolis forces of the earth's motion and for the earth's shape; and integrator means for generating signals representing velocity and present position of the aircraft in latitude and longitude co-ordinates; manually-settable means adapted for generating signals representative of the latitude and longitude of said destination positions; and a navigation-computing means coupled to said present-position computing means and said destination-position signal generating means and adapted for generating a signal representative of a course from said present position to the respective destination position and for producing error signals representative of any difference between said computed course and the actual course of the aircraft, said navigation computer including a first means adapted for generating a first electrical course signal representative of the course from the present position of the aircraft to a first destination position; second means responsive to said first electrical course signal and adapted to generate a second electrical course signal when said first destination position has been reached, said second electrical course signal being representative of the course from the current position of the aircraft to a second destination position; and an automatic pilot coupled to said navigation-computing means and to the control surfaces of the aircraft and adapted for guiding the aircraft on the correct flight courses.

3,048,353
MEANS OF FLIGHT CONTROL OF A HELICOPTER
Gene C. Holmes, 5708 Briarcliff Road, Los Angeles, Calif.
Filed July 12, 1957, Ser. No. 671,630
5 Claims. (Cl. 244—23)



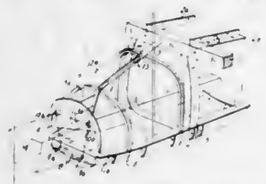
1. A device for flight control of a vertically ascending and descending aircraft comprising: an air passage through said aircraft, means for forcing air through said passage, discharge means for discharging air from said passage, rudder means on said aircraft in the path of air issuing from said discharge means, additional discharge means fixed on said aircraft, communicating with said passage, and being angularly disposed with respect to said first mentioned discharge means, and valves for selectively controlling air flow through said discharge means, said additional discharge means being laterally directed to direct air in a fixed horizontal direction to thereby displace said aircraft without tilting the same.

3,048,354
AILERON CONTROL SYSTEM FOR AIRCRAFT
Kingsley A. Doutt, Alpena, Mich., assignor, by mesne assignments, to Westinghouse Air Brake Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 21, 1959, Ser. No. 841,209
1 Claim. (Cl. 244—90)



An aileron trim control device for an aircraft having ailerons and a movable control member interconnecting the same, said device comprising in combination a single acting spring loaded hydraulic piston and cylinder assembly having a rod extending longitudinally thereof through an end of said cylinder for moving said piston, means on said cylinder and rod for securing said rod in desired position relative to said cylinder, a secondary single acting spring loaded hydraulic piston and cylinder assembly and tubular means establishing communication between said first mentioned and said second mentioned hydraulic piston and cylinder assemblies, said piston in said secondary hydraulic piston and said cylinder assembly having a piston rod extending outwardly of one end of said secondary hydraulic piston and cylinder assembly and structure on the opposite end of said secondary hydraulic piston and cylinder assembly securing the same to said aircraft, an enlongated member secured at its ends to said control member of said aircraft and a tubular body through which said elongated member is positioned, movable structures in the ends of said tubular body engaging enlarged end portions on said elongated member and a coil spring disposed around said elongated member within said tubular body and engaged against said movable structures, structural members in the ends of said tubular body limiting the outward movement of said movable structures and a structural extension of said tubular body pivotally secured to said piston rod of said secondary hydraulic piston and cylinder.

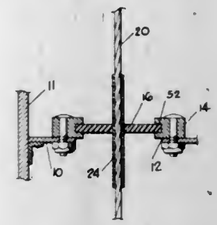
3,048,355
FUSELAGE FRAME
Claudius Dornier, Jr., Grafelfing, Germany, assignor to Firma Dornier-Werke G.m.b.H., Friedrichshafen, Germany
Filed Oct. 29, 1958, Ser. No. 770,510
Claims priority, application Germany May 12, 1958
7 Claims. (Cl. 244—119)



1. In a fuselage frame having a vertical plane of symmetry, in combination, a pair of lower longerons each having a forward end; a nose plate connected to said ends of said lower longerons and having an upper portion spaced a predetermined distance from said lower longerons; a supporting frame rearwardly spaced from said nose plate and connected to said lower longerons and having an upper portion spaced from said lower longerons a distance greater than that of said portion of said nose plate; a pair of upper longerons, each having a forward end ending at and being connected to said supporting frame; an inclined strut extending substantially in said plane of symmetry between said upper portion of said nose plate and said upper portion of said supporting frame, said nose plate and said supporting frame together with the portions of said lower longerons extending therebetween and said strut defining a cabin space, leaving the space between said inclined strut and said lower longerons unobstructed; and transparent window means partly enclosing said cabin space and being movably supported by said strut and extending from opposite sides thereof substantially to said lower longerons so that upon movement thereof said unobstructed space between said strut and at least one of said lower longerons might serve as exit and entrance.

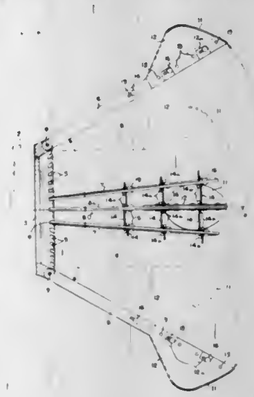
3,048,356
BULKHEAD SEAL FOR MOVABLE CONTROL ELEMENT
Harold S. Curtis, Long Beach, Jimmie C. Curtis, Costa Mesa, John M. Divola, Calabasas, Leonard H. Maletz, Downey, and Glen W. Morris and Richard P. Schiltz, Long Beach, Calif., assignors to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed Aug. 11, 1960, Ser. No. 49,004
11 Claims. (Cl. 244—129)

1. Means for dislodging ice from a sealed aperture in a partition through which reciprocates an elongate control-element, comprising: a partition having a reciprocatable control element-receiving aperture therein; a planar flexible retainer diaphragm fixed facewise to one face of said partition and having an aperture therein for receiving an apertured grommet; and a flexible grommet mounted in the aperture in the retainer diaphragm substantially coplanarly with the retainer, the retainer diaphragm being



axially flexural by movements of the elongate element to dislodge ice lying between the retainer diaphragm and the grommet so as to enable a certain amount of axial movement of the elongate control element with respect to the seal even if the grommet should tend to jam in the retainer-diaphragm and if the control element should ice-jam in the grommet.

3,048,357
WINGLET DROGUE FOR AERIAL REFUELING
Alfred C. Loedding, Williamsburg, Va., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 23, 1961, Ser. No. 97,975
10 Claims. (Cl. 244—135)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An aerodynamic drogue device for stabilizing the terminal portion of an aerial refueling conduit comprising an annular body member secured to the terminal portion of the conduit and concentric therewith and having a central opening therein, a plurality of separate individual airfoil members equiangularly disposed about said body member, said airfoil members each having an aspect ratio of the order of about one, each airfoil member being individually movable from a retracted position to an outward limiting radial position, the angle of attack of each airfoil member when in its outward position with respect to the resultant ambient airflow being substantially one half of the angle between the angle of zero lift and the stalling angle, said airfoil members producing a stabilizing drag on said refueling conduit, and means connecting the individual airfoil members for limiting outward movement thereof to said outward position, and means interconnecting said airfoil members and

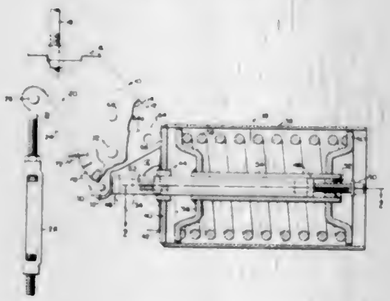
said body member to permit movement of the airfoil members from the retracted position to the outward limiting position.

3,048,358
WELL TOOLS
George Max Raulins, Dallas, and Shelby J. Graves, Irving, Tex., assignors, by mesne assignments, to Otis Engineering Corporation, Dallas County, Tex., a corporation of Delaware
Filed July 20, 1959, Ser. No. 828,309
16 Claims. (Cl. 248—49)



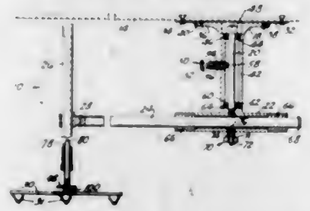
1. A securing and supporting device for securing a flexible insulated electrical wire to the exterior of a string of well pipe including: a substantially annular upper securing and supporting member; a lower clamping and retaining member; longitudinally extending connecting means connecting said upper and lower members; and wire retaining means on said connecting means disposed outwardly of said upper and lower means and disposed to engage a flexible resiliently insulated electrical conductor wire to retain and support said wire thereon externally of the upper and lower members.

3,048,359
CONSTANT SUPPORT PIPE HANGER
John Kohler, Clifton, N.J., assignor to Carpenter and Paterson, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Sept. 14, 1959, Ser. No. 839,843
6 Claims. (Cl. 248—54)



1. A constant support for pipes comprising a frame, a spring mounted on the frame with its line of action being fixed relative to t e frame, a load lever having means at one end for pivotally supporting a load on a first axis extending at right angles to said line of action, said load lever being pivotally mounted on said frame for limited movement about a second axis extending parallel to said first axis, said load lever being movable from a start position in which the lever arm of said load lever defines a first acute angle with said line of action to a maximum position in which said lever arm defines a substantially smaller second acute angle with respect to said line of action, said lever arm being inclined in opposite directions relative to said line of action in said start and maximum positions respectively, a second lever mounted for movement with said load lever about said second axis and having a lever arm substantially less than that of said first lever, and means providing a rolling contact driving connection between said second lever and said spring to urge said load lever toward said start position, the lever arm of said second lever extending at a third acute angle to a reference line extending at right angles to said line of action and through said second axis when said load lever is in said start position, said third angle being greater than said second angle but less than said first angle, the lever arm of said second lever being inclined in opposite directions relative to said reference line when said second lever is in the positions corresponding to said start and maximum positions of said load lever, said spring being preloaded a predetermined amount when said load lever is in said start position.

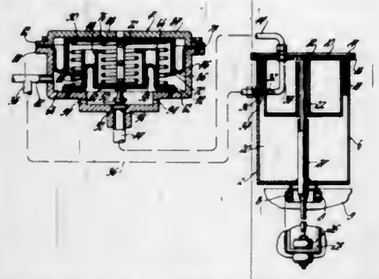
3,048,360
SUSPENSION DEVICE FOR INTRAVENOUS FLUID SUPPLY CONTAINERS
Frederic E. B. Foley, St. Paul, Minn., assignor to United Medical Products Co., Inc., Hopkins, Minn., a corporation of Minnesota
Filed July 14, 1959, Ser. No. 826,943
5 Claims. (Cl. 248—337)



1. A device for positioning an intravenous feeding container anywhere over the bed of a patient to be intravenously fed and maintaining the container in such position comprising a base having means for attaching the same to a ceiling, a horizontally disposed tubular bracket, means rotatably attaching said bracket to said base, a horizontally extending member carried by said tubular bracket for movement of at least one end toward and away from said bracket, a vertically extending extensible member having an intravenous feeding container holder at the lower end thereof, clamping means on said one end of said horizontally extending member adjustably attaching said vertically extending extensible member to said one end, said container holder being positionable in any selected vertically adjusted position in the circular area formed between the outermost and innermost paths traveled by said vertical member as said horizontally extending member is swung about said base in its respective positions most remote from and most proximate to said tubular bracket whereby said container holder can be positioned in any position transversely or longitudinally of a bed.

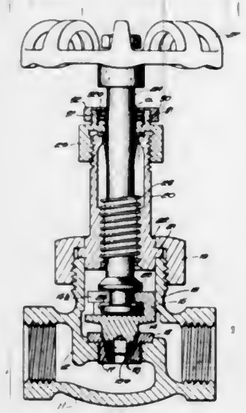
3,048,361
VACUUM SPRING CONTROL APPARATUS
Philip L. Francis, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 14, 1960, Ser. No. 62,742
7 Claims. (Cl. 251—61)

1. A vacuum modulated flow control device comprising, a housing having a port connected to a source of vacuum, a pair of pistons in said housing arranged in axially spaced relation, one of said pistons having a valve member movable therewith, means in said housing defining a flow passage, a valve seat in said flow passage axially aligned with and engageable by said valve member, a pair of diaphragms connected between said housing



and said pistons so as to define a closed cavity communicating with said port, first resilient means biasing said one piston in the direction of said valve seat, second resilient means biasing said other piston in the opposite direction, and means connected between said pistons effective to positively limit opposite movement thereof.

3,048,362
CRYOGENIC VALVE
Collin W. Scarborough, Egypt, Mass., assignor to Walworth Company, New York, N.Y., a corporation of Massachusetts
Filed Feb. 11, 1960, Ser. No. 8,040
2 Claims. (Cl. 251—214)



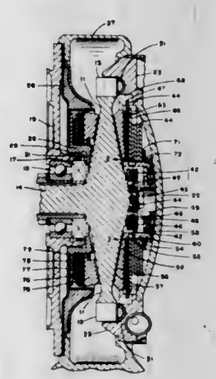
1. In a valve to be exposed to low temperatures, a valve body having an upwardly-extending exteriorly screw-threaded portion, a cooperating valve member and valve stem, a stem sleeve cap screwed onto said threaded portion of said valve body and having an exteriorly screw-threaded tubular extension, a compressible gas seal in said upwardly-extending portion of said body and engaging the valve stem, said stem sleeve cap having a flange portion at the base of said extension projecting inwardly toward the valve stem and resting on the gas seal and compressing it into contact with the upwardly-extending portion of the body when the stem sleeve cap is screwed down, at least one compressible moisture seal ring in the tubular extension of the stem sleeve cap engaging the stem, and a screw-threaded stuffing box cap on said screw-threaded extension of the stem sleeve cap having an integral annular end the inner peripheral edge of which extends into approximate contact with the valve stem and is very thin so that it confronts the stem with very little surface, said peripheral edge of said stuffing box cap resting directly on said moisture seal ring and having sufficient strength to compress it into sealing contact with the valve stem when the stuffing box cap is screwed down, whereby ice bridging is restricted to said edge of said cap from which it may readily be broken by rotation of said stem and whereby moisture and ice chips cannot reach said gas seal.

3,048,363
BUTTERFLY VALVE
Helen Garrigan, 1086 Greenlawn Drive, Pittsburgh, Pa.
Filed Feb. 21, 1957, Ser. No. 641,519
2 Claims. (Cl. 251—307)



1. A butterfly valve comprising a cylindrical housing divided centrally in a plane which contains the flow axis and into two complementary parts detachably fastened together, a closure disc pivotally mounted in said housing, two semi-circular resilient seats arranged in a circular path on the inner peripheral wall of the housing, said inner wall having an undercut groove into which said seats are fitted, said seats being provided with metal reinforcing strips of substantial thickness and of such width that the sides of the strips extend underneath the overhanging portions of said groove and sufficiently rigid so as to require said seats to be relatively longitudinally slid into said grooves, whereby resistance to dislodgement from the grooves by fluid pressure is increased.

3,048,364
TURBINE BRAKE
Henry Troeger, Cooperstown, and Edward J. Clinton, Jr., New Hartford, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed May 27, 1957, Ser. No. 661,659
9 Claims. (Cl. 253—59)



1. In a turbine assembly having a turbine wheel and a housing surrounding the wheel, an emergency braking system comprised of brake means within the housing for braking said turbine wheel by contact therewith, spacing means connected to the housing rigidly spacing said brake means away from said turbine wheel, means carried by said turbine wheel arranged to release said spacing means when said turbine wheel is rotated at excessive speed,

spring means confined by said spacing means and said housing and arranged to urge said brake means against said turbine wheel when said spacing means is released.

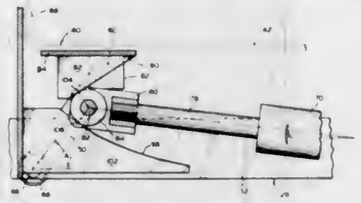
3,048,365
ROTOR BLADE SHROUD AND VIBRATION DAMPING STRUCTURE
Tom Foster, Ridgewood, N.J., Richard F. Jaklitsch, Maspeth, N.Y., and Henry B. Mayr, Ridgefield Park, and Chapman J. Walker, Saddle River, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Dec. 22, 1959, Ser. No. 861,311
10 Claims. (Cl. 253—77)



1. A bladed rotor structure for compressors, turbines or like fluid apparatus; said rotor structure comprising a rotor member; a plurality of circumferentially-spaced blades secured to said rotor member and extending radially outwardly therefrom for co-action with the apparatus fluid; and an annular shroud comprising a plurality of arcuate shroud elements disposed in end-to-end relation across and carried by the outer ends of said blades to form the outer boundary of the flow path for said fluid, each of said blades having a portion secured thereto with a radially-inwardly facing surface and each said shroud element having portions with radially-outwardly facing surfaces engageable with the inwardly facing blade portion surfaces of a group of blades to restrain said shroud element against radially outward movement in response to centrifugal forces thereon during rotor member rotation and to connect the outer ends of said group of blades together to damp blade vibrations of the type causing lateral vibratory motion of the blade outer ends, said radially inwardly facing surface on each blade portion and the radially outwardly surface on the shroud element engaged thereby having a loose-fitting ball and socket configuration such that said surfaces are arranged for relative frictional movement in response to torsional vibrations of a blade to damp said torsional vibrations and in response to bending vibrations of a blade which produce angular motion between the blade outer end and the associated shroud element to damp such bending vibrations.

3,048,366
LIFT LINKAGE FOR LOW PLATFORM HAND TRUCKS
William A. Williamson, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Sept. 29, 1958, Ser. No. 764,043
4 Claims. (Cl. 254—5)

1. In an industrial truck of the character described, the combination of a longitudinally extending load supporting frame, a longitudinally extending and vertically movable load receiving platform overlying said frame and abutting the upper surface thereof when the platform is lowered, a first pair of transversely spaced parallel links pivotally connected at opposite ends thereof to said platform and to said frame at the forward ends of said platform and frame, respectively, a second pair of transversely spaced parallel links pivotally connected at the opposite ends thereof to said platform and to said frame at the rearward ends of said platform and frame, respectively, said first and second pairs of links together forming a parallelogram linkage means for permitting vertical movement of the platform in a plane parallel to the frame, first cam means secured in depending relationship to said platform transversely centrally thereof, second cam means secured to said frame in upstanding closely spaced transverse re-



lationship to said first cam means, said first and second cam means having oppositely inclined surfaces, the surface of one of said cam means curving along a predetermined contour, hydraulic extensible ram means pivotally mounted upon said frame at one end thereof and extending longitudinally and generally centrally of said frame, a relatively short cross-shaft secured to the opposite end of said ram means, and first and second closely transversely spaced roller means rotatably mounted upon said cross-shaft, said first and second roller means engaging and wedging vertically apart said first and second cam means, respectively, during extending movement of said ram means whereby to actuate said platform vertically and parallel relative to said frame.

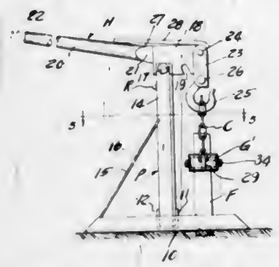
3,048,367
LOAD HANDLING APPARATUS HAVING OPTIMUM EFFICIENCY
Lee A. McCarty, Pleasant Hill, Calif., assignor to H. S. Watson Company, Emeryville, Calif., a corporation of California
Filed Aug. 26, 1959, Ser. No. 836,237
10 Claims. (Cl. 254—124)



1. In a load handling apparatus for lifting a load from a first position to a second position which is in vertical alignment with said first position, said apparatus comprising a frame, a rigid arm adapted to be connected to said load and pivoted about a first axis connected to said frame, an extendible arm pivoted about a second axis connected to said frame and having an extendible portion pivotally connected about a linking axis on said rigid arm whereby said linking axis describes a circular arc when said load is moved from said first position to said second position, and means for applying force to said extendible portion of said extendible arm to change the length of said extendible arm, the improvement comprising said load handling apparatus, as herein structurally and operationally defined, in which said first axis lies on

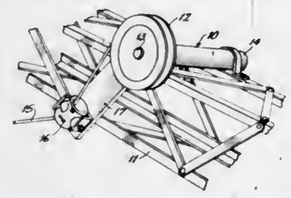
the horizontal plane bisecting said circular arc, and said first and second axes lie on a cylinder whose axis lies at the intersection of said horizontal plane and the perpendicular bisector of the plane surface connecting said first axis and a position of said linking axis of maximum remoteness from said horizontal plane.

3,048,368
PULLING DEVICE
Linferd G. Linabery, Sr., Gladwin, Mich.
Filed Oct. 1, 1958, Ser. No. 764,551
2 Claims. (Cl. 254—130)



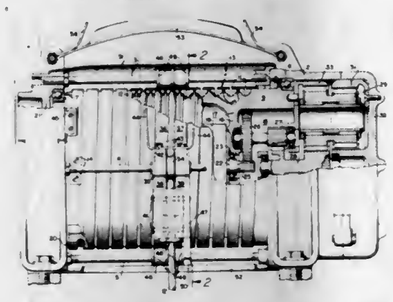
1. A post pulling implement of the class described comprising, a base having a substantially H-shaped bearing surface; a centrally disposed, vertical post secured to said base; a removable handle on the upper end of the post and horizontally adjustable thereon; chain connected gripping members releasably connected to said handle; each gripping member comprising a U-shaped section having a horizontally extending bar handle welded thereto and forming an extension thereof, with the ends of the chain connected to the free ends of said bar handles; laterally projecting pins mounted adjacent the free ends of the legs of one of the U-shaped members and projecting laterally a predetermined distance beyond the side walls thereof with a head on the projecting end of each pin; braces spaced laterally from the legs of said U-shaped section and connected to said pins and to the horizontally extending bar handle at a point adjacent the outer end thereof, and open passages provided in the legs of the companion U-shaped section for releasable engagement with the pins, and sharpened and hardened edges formed integral with the upper, inner edges of the U-shaped members for gripping the posts to be pulled when the handle is actuated.

3,048,369
TAGLINE FAIRLEAD CONSTRUCTION
Leonard L. Hanson, 1405 Thatcher Ave., River Forest, Ill.
Filed Aug. 24, 1959, Ser. No. 835,676
6 Claims. (Cl. 254—139)



1. A tagline assembly for a crane consisting essentially of a vertical reel mounted upon the boom of a crane, a support arm extending along a substantially vertical plane adjacent said reel, a tagline extending between said reel and a lifting device suspended from said boom, and a fairlead structure comprising a guide member providing a passage extending therethrough, said member having a smooth, curved and uninterrupted passage-defining inner surface slidably engaging said tagline and flaring outwardly at opposite ends of said member to provide enlarged mouths, the curvature of said passage-defining inner surface being gradual throughout the entire extent of said passage, said guide member being secured to the free end of said support arm with the passage extending along the vertical plane of said reel for guiding the winding and unwinding of said tagline extending from said reel to a lifting device.

3,048,370
HOIST
Blair S. Kratzer, Torrance, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Aug. 14, 1959, Ser. No. 833,853
10 Claims. (Cl. 254—150)

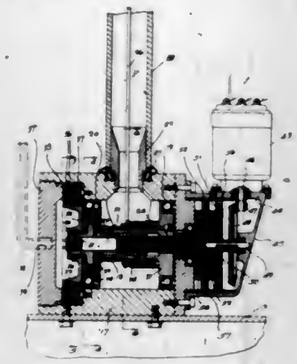


1. In a hoist, a cable drum adapted to have a cable wound thereon, a cable retainer wound about said drum, said retainer normally having a pitch substantially the same as the pitch of the cable on the drum, the space between adjacent turns of said retainer being disposed substantially radially outwardly of the cable turns, means for securing the opposite ends of said retainer on said drum, cable feeding means including a portion adapted to project into the space between two adjacent turns of said retainer to spread said adjacent turns to permit free passage of the cable therebetween, shaft means disposed parallel to the axis of said drum for slidingly supporting said cable feeding means, restraining means disposed to engage and hold said two adjacent turns of said retainer at said normal pitch at peripherally spaced points located on opposite sides of said cable feeding means, and means for supporting said restraining means for movement parallel to the axis of said drum.

3,048,371
ELECTRICALLY OPERATED WINCH FOR A CRANE
Marcel Klimek, Jr., Rte. 1, Box 235, Talent, Oreg.
Filed Oct. 2, 1959, Ser. No. 844,124
1 Claim. (Cl. 254—187)

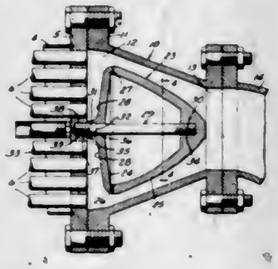
In a crane assembly, a support, a winch reel journaled horizontally on said support, a reversible electric motor mounted on said support, adjustable brake means on the support, an over-running clutch assembly mounted between said winch reel and said brake means, said clutch assembly comprising means coupling the winch reel to said brake means responsive to rotation of the reel in one direction and means to release the winch reel from the brake means responsive to rotation of the reel in the opposite direction, said brake means comprising annular friction disc means slidably and non-rotatably connected to the clutch assembly, cooperating friction disc means slidably and non-rotatably connected to the support, and an adjusting disc member threadedly engaged at its periphery with the support coaxially with said friction disc means and being movable axially against the friction disc

means responsive to rotation thereof to regulate the degree of frictional engagement thereof, said friction disc means interengaging to retard rotation of the clutch as-



sembly relative to said support during rotation of the reel in said one direction, means drivingly coupling said motor to said reel, and a cable wound on said winch reel.

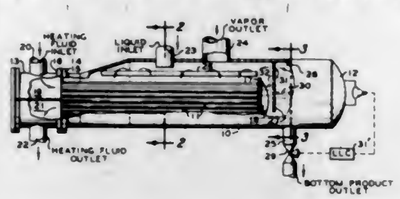
3,048,372
WASTE WATER HEAT RECLAIMER
Robert P. Newton, Jr., 1120 Moss Ave., Orangeburg, S.C.
Filed Mar. 25, 1958, Ser. No. 723,721
5 Claims. (Cl. 257—236)



3. A reducer for interposition between a heat exchanger unit including a shell and a tube bundle within the shell and a pipe member having a cross-sectional area equal to the combined cross-sectional area of the tubes of the bundle comprising, a tapered tubular member having an end of large cross-section for connection to a heat exchanger shell and an end of smaller cross-section for connection to a pipe member, and a vane means mounted centrally of the reducer and concentric thereto so shaped and proportioned as to convert the tapered passageway through the tubular member to a single unobstructed annular passageway of cross-sectional area substantially equal to the cross-sectional area of the tube bundle and substantially equal to the cross-sectional area of the pipe at all points therealong.

3,048,373
HEAT EXCHANGE APPARATUS AND METHOD
Robert D. Bauer, Bartlesville, Okla., and Carnot E. Bellinger, Sweeny, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 30, 1957, Ser. No. 681,404
5 Claims. (Cl. 257—239)

4. A heat exchange method comprising continuously introducing liquid feed into the top of a horiozntally disposed heat exchange zone the bottom portion of which is provided with a bundle of heat exchange tubes substantially immersed in said liquid, distributing said introduced liquid feed in the form of a downwardly descending curtain above said bundle, evaporating only a portion of said introduced liquid feed, allowing evolved vapor to contact said curtain, continuously withdrawing the resulting contacted vapor from said heat exchange zone, flowing liquid feed from the bottom of said heat exchange



zone to a horizontally disposed adjacent liquid collecting zone, allowing vapor to pass in a free and unobstructed manner from the upper portion of said liquid collecting zone into the upper portion of said heat exchange zone, and continuously withdrawing liquid product from the bottom of said liquid collecting zone so as to control the level of liquid in said zones.

3,048,374
COOLED MOUNTING PLATE FOR ELECTRONIC EQUIPMENT
Paul R. Hughes, Englewood, Ohio, assignor to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed Nov. 10, 1958, Ser. No. 772,768
3 Claims. (Cl. 257—256)

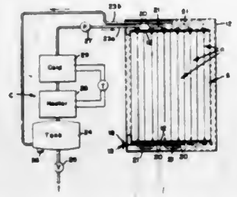


3. A plate to mount electronic and like equipment, including a pair of heat conducting plate elements in parallel spaced apart relation and serving as a duct for flowing fluid therebetween, said plates having a plurality of aligned openings, a button installed in each pair of aligned openings having ends to fit closely in respective openings in non-projecting relation to outer surfaces of said plates, said button having a bore opening through one end thereof and through the plate receiving said one end, said bore extending through the intermediate portion of the button or that portion intermediate said plates and defining relatively thin walls in such portion, said intermediate portion of the button being formed with spaced apart radial flanges for contact with respective inner plate surfaces, said flanges being made thin to expose a major part of the intermediate portion of the button to contact with the flowing fluid, and means providing extended heat transfer surface intermediate said plates and around said buttons, said means including fin strips having openings to pass said buttons therethrough, said openings providing for a spaced relation of said fin strips and said buttons.

3,048,375
MEANS FOR CONTROLLING RADIANT HEAT LOSS OR GAIN
William N. Walker, Belmont, Calif., assignor to Radiant Ceilings, Inc., Burlingame, Calif.
Filed Dec. 19, 1960, Ser. No. 76,938
9 Claims. (Cl. 257—296)

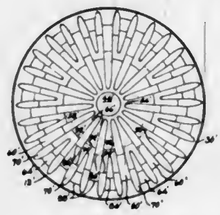
1. Means for controlling temperature of a room space area comprising in combination: a heat transfer panel; a room space area located to one side of said panel; and a combination adjustable heat baffle and heat exchanger disposed between said panel and said space area; said baffle

and exchanger comprising adjustable shutters movable from a closed position, defining a substantially solid heat baffle area between said panel and space, to an open position, defining relatively large areas of open passageways through said baffle and exchanger; the surfaces of said shutters facing said panel when in closed position



defining relatively reflective surfaces; the surfaces of said shutters facing said space when in closed position defining relatively non-reflective surfaces; at least some of said shutters being tubular and connected to a source of heat exchange fluid operable to be circulated therethrough.

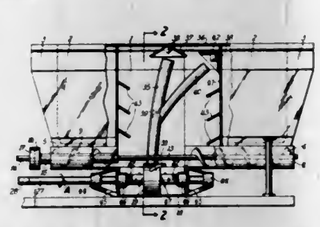
3,048,376
FLUID MIXING APPARATUS
Werner E. Howald, Ridgewood, and Angelo De Feo, Totowa Boro, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Apr. 9, 1958, Ser. No. 727,471
6 Claims. (Cl. 259—4)



1. Apparatus for mixing two fluids; said apparatus comprising first and second annular fluid passageways having a common cylindrical wall structure separating the two passageways; a third annular fluid passageway co-axial with said first and second annular passageways and into which fluid from said first and second passageways is to discharge and mix; flow dividing means disposed between said first and second passageways and said third passageway; said flow dividing means comprising an annular wall member having a cylindrical upstream end forming a continuation of said common cylindrical wall structure, said annular wall member having a plurality of circumferentially-spaced corrugations running axially from adjacent its upstream end to its downstream end with the radial depth of said corrugations progressively increasing toward the downstream end of said wall member, certain of the radially-inward corrugations having a radial depth which is substantially less than that of other radially inward corrugations.

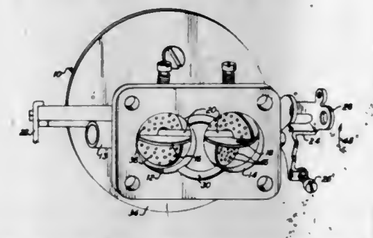
3,048,377
CONCRETE OR MORTAR MIXER
Eugen Braitsch, Rotebuhlstrasse 66, Stuttgart, Germany
Filed May 6, 1959, Ser. No. 811,390
Claims priority, application Germany May 13, 1958
18 Claims. (Cl. 259—161)

1. In a concrete or mortar mixer having a mixing chamber, a plurality of separate containers having open lower ends forming two groups disposed at opposite sides of said mixing chamber for receiving and dispensing separately from each other the individual components of the final material to be produced, the containers of each group being directly adjacent to each other, each of said groups comprising an aggregate container directly adjacent to respective opposite sides of said mixing chamber for receiving and dispensing the aggregates of said material, each of said groups further comprising a binder container adjacent to said agggregate containers respectively and for receiving and dispensing the binder of said material, a respective receiving chamber connecting the open lower ends of said containers of each group with each other and with said mixing chamber, a drive shaft extending through both of said receiving chambers



and through said mixing chamber, means for driving said shaft, a separate conveyer worm in each of said receiving chambers, means for releasably connecting at least one of said conveyer worms to said drive shaft to selectively permit the components from the containers of only one group as well as the components from the containers of both groups to be conveyed into said mixing chamber, means for supplying water into said mixing chamber, and at least one pump underneath said drive shaft within said mixing chamber near the bottom thereof for circulating said material within said mixing chamber, and means for driving said pump.

3,048,378
VANED VALVE
Ivan V. Newman, Sr., 53 E. 60th St., Hialeah, Fla.
Filed July 14, 1959, Ser. No. 827,100
11 Claims. (Cl. 261—23)

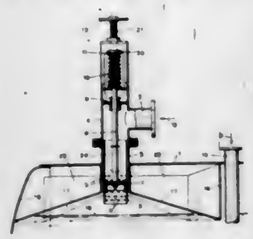


8. A dual throat carburetor comprising parallel gaseous passageways, a pair of throttle vanes supported for rotation in each throat and a pair of semi-circular disc-like adapter plates, each mounted normal to and on opposite surfaces of a vane, each adapter plate being mounted to the vane surface at an angle to the axis of rotation with the angle of each adapter plate opposite to the angle of the mating adapter plate of the pair.

3,048,379
APPARATUS FOR DEGASIFYING WATER, PARTICULARLY BOILER FEED WATER
Jacob J. Kolthof and Cornelis J. Caron, Hengelo, Netherlands, assignors to Koninklijke Machinefabriek Gebr. Stork & Co. N.V., Hengelo, Netherlands
Filed Oct. 19, 1960, Ser. No. 63,688
Claims priority, application Netherlands Nov. 23, 1959
1 Claim. (Cl. 261—127)

In an apparatus for degasifying water, particularly boiler feed water, and including a vessel for containing liquid at a predetermined level and provided in its upper

part with a spraying device formed as a cylinder having spray holes in its circumferential wall, the flow area of said holes being controlled by a slide valve arranged in the cylinder and unmasking in its uppermost position the smallest flow area of the spray holes, said cylinder having an inlet for the water to be degasified and said vessel having at least one gas outlet in its wall near the spraying device and means for supplying heating steam below the water level in the vessel, the improvements comprising arrangement of said spray holes in two opposed segments

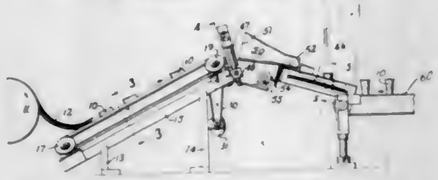


of the cylindrical wall of the spraying device separated by two unperforated segments, a sector-shaped plate joined to each of said unperforated cylinder segments and extending downwardly in the vessel to a level below the liquid level, said plates being laterally bounded by vertical plates, which are radially directed along the outermost spray jets issuing from said spray holes, and the remaining outer boundary of the sector-shaped plates being constituted by walls extending to below the liquid level and joined at their upper ends to the circumferential wall of the vessel.

3,048,380
FLAME TREATING APPARATUS

Kenneth O. Burke and Richard G. Schafer, San Leandro, Calif., assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed Aug. 16, 1960, Ser. No. 49,923
6 Claims. (Cl. 263—2)



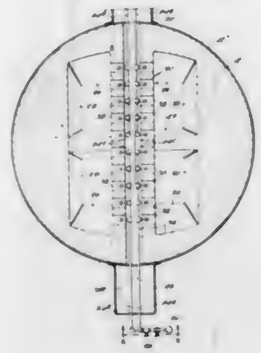
1. Flame treating apparatus for flame treating the exterior surfaces of plastic containers, comprising two parallel, inclined endless belt conveyors, said conveyors transversely inclined relative to each other so as to provide a channel-like guide to support a container between the upper reaches of their belts, means for driving said conveyors in unison so as to convey said containers upwardly and eject the containers along an arcuate path, flame treating means near the upper end of the guide providing a circular ring of high intensity gas flames positioned concentric and normal to a portion of said arcuate path, whereby said containers are flame treated as they move along said path, and means for receiving and uprighting said containers after they have been flame treated.

3,048,381
SHAFT KILN WITH ORIFICE CONTROLLED COMBUSTION

Bolton L. Corson, Plymouth Meeting, Pa.

Filed Nov. 10, 1960, Ser. No. 68,455
8 Claims. (Cl. 263—29)

1. In a shaft kiln and the like for burning of limestone, a refractory liner defining a vertical material treating shaft of generally rectangular interior cross-section configuration having opposed end and side walls, the refractory liner being substantially thicker at the middle sections of said side walls and thinning as it approaches the end walls, a material burner assembly extending substantially across

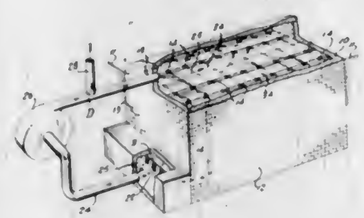


the interior horizontal length of said shaft between the end walls, and means operatively associated with said burner assembly for increasingly concentrating heat therefrom from the end walls toward the center for maximum heat at the shaft center.

3,048,382
FIRE TUBE FURNACE AND METHOD FOR BAKING ARTICLES

Richard L. Mansfield, Youngstown, N.Y., assignor to Union Carbide Corporation, a corporation of New York

Filed Apr. 17, 1958, Ser. No. 728,953
11 Claims. (Cl. 263—41)

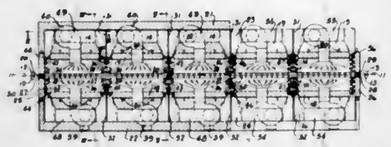


1. In a furnace for baking carbon articles which comprises a single chamber having side walls, a top, end walls, a floor with the inside faces of the side walls and end walls defining the perimeter of said floor and means for introducing a combustible fuel-air mixture to said furnace, the combination of a false bottom, having at least one aperture therein, supported by piers mounted on the furnace floor, said aperture being unobstructed by said piers, and at least one fire tube disposed on said bottom communicating with an aperture therein and extending upwardly from said bottom and spaced from said wall to provide a path for hot products of combustion of said fuel-air mixture, said fire tube adapted to communicate with the volatile products of said baked carbon articles and being so constructed as to permit the diffusion therethrough of said volatile products, said fire tube defining zones in said single chamber for said articles to be baked.

3,048,383
FURNACE OR LIKE SYSTEM FOR GAS-SUPPORTING AND TREATING FLAT WORK

John Raymond Champlin, Fox Chapel, Pa., assignor to Swindell-Dressler Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 18, 1958, Ser. No. 761,873
7 Claims. (Cl. 266—5)

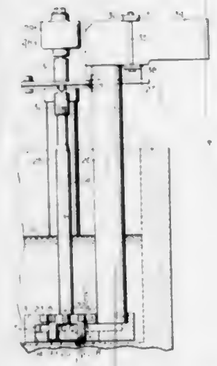


4. In an enclosed furnace or like system for gas-supporting and treating flat work, apparatus comprising, in combination, a heating chamber having a work space defined by upper and lower horizontal hearths in spaced relation defining the top and bottom of said work space, said hearths comprising orifice plates with discharge orifices only therethrough distributed over said work space, means for supplying gas to each orifice plate for discharge through said orifices at a predetermined direction and pressure sufficient to suspend work in said work space at predetermined location and height between said orifice plates, indirect heater means for said gas positioned in said heating chamber outside said work space, horizontally aligned work inlet and outlet openings in said chamber at opposite ends of said work space, said orifice plates being gently sloped downwardly in a rearward direction to cause work like plates and sheet to move toward the back of said heating chamber.

3,048,384
PUMP FOR MOLTEN METAL

Victor D. Sweeney, Merion Station, Pa., and Walter U. Kaji, Chagrin Falls, Ohio, assignors to Metal Pumping Services, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Dec. 8, 1959, Ser. No. 858,283
4 Claims. (Cl. 266—38)

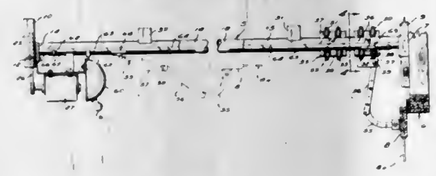


1. In a pump for molten metal, comprising the combination of (*a*) an upper frame, (*b*) a lower foot body, in the form of a refractory slab having upper and lower faces, suspended from the frame for immersion in molten metal to be pumped and defining a pump chamber therein and coaxial, upper and lower, vertical bores extending into the pump chamber through said upper and lower faces of the slab, respectively, (*c*) a refractory centrifugal impeller body having a periphery of cylindrical contour and an inlet that opens axially into one end only thereof, said impeller body projecting into said pump chamber with its cylindrical axis vertical for rotation therein about said axis, and (*d*) a vertically disposed refractory pump shaft depending from said frame and connected in coaxial driving relationship with said impeller body; the improvement in said combination wherein said coaxial upper and lower bores into said pump chamber are of the same diameter and said impeller body extends, in one of two relatively inverted positions, upwardly and downwardly into said bores and is journaled in both with a free running fit exposed for lubrication by molten metal surrounding said slab while drawing molten metal axially into the impeller body at its inlet end for discharge radially into said pump chamber, whereby said molten metal will be drawn by the impeller body from above or below said foot body according to whether the impeller body is mounted therein with its inlet end facing upwardly or downwardly.

3,048,385
DOOR OPERATOR MECHANISM

Wylee M. Reynolds, Garrettsville, Ohio, assignor to Graham Industries, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Mar. 4, 1960, Ser. No. 12,818
2 Claims. (Cl. 268—59)

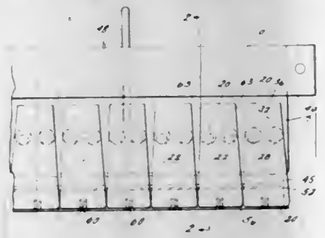


1. Door operator means comprising a rotatable shaft mounted for rotation and limited axial movement from a normal position, a carriage engaging said shaft and adapted to be reciprocated therealong by rotation of said shaft, a motor for rotating said shaft, a control circuit for said motor including a switch mounted adjacent said shaft, said shaft having a pair of axially spaced cam members projecting from the surface thereof the peripheral extent of said cam being less than 360°, said switch being mounted in a position axially between said cam members in the normal axial position of said shaft and, said switch being engaged and operated between opened and closed positions by one of said cam members during each rotation of said shaft when said shaft is shifted axially in either direction from its normal axial position.

3,048,386
FLEXIBLE CLAMP FOR PAPER CUTTERS

Carl Thumim, Westbury, N.Y., assignor, by mesne assignments, to Miehle-Goss-Dexter, Inc., Chicago, Ill., a corporation of Delaware

Filed Aug. 15, 1958, Ser. No. 755,161
5 Claims. (Cl. 269—22)



1. In a clamp for a paper cutter, a bar, a plurality of presser feet carried by said bar, and means for actuating said feet with respect to said bar comprising an elongated pressure bag extending through a plurality of said feet and disposed intermediate said bar and said feet, and

means for effecting pressure throughout said bag to expand said bag for actuating said feet, said feet being generally channel-like in section, and having opposed flanges and an internal bottom wall therebetween, said bar having a guide section extending between the opposed flanges of said feet; said opposed flanges being slidable relative said guide section, said guide section being foreshortened with respect to said internal bottom wall of each of said pressure feet, said foreshortened section having a bottom edge and said flexible bag being disposed between the bottom edge of said foreshortened section and the internal bottom wall of said feet, including means for retaining said feet on said guide section comprising pins extending between the flanges of individual feet, said guide section having bores of larger diameter than the diameters of said pins, said pins extending through respective bores, whereby play is afforded between said pins and said bores to permit relative motion between said feet and said guide section.
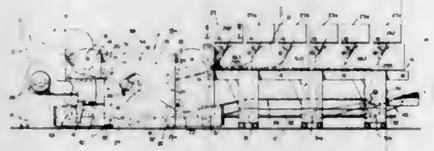
3,048,387
HOLDING FIXTURE FOR CYLINDER HEADS
Thomas J. Waggoner, 124 W. Bell St., Pharr, Tex.
Filed Mar. 17, 1960, Ser. No. 15,702
2 Claims. (Cl. 269—51)



1. A cylinder head holder comprising a horizontal base, means for securing said base on a support, an essentially solid cylindrical post of a material diameter fixed on said base and having a bore extending diametrically through its upper portion, a cylindrical, horizontal rod reversibly mounted for rotary and sliding adjustment in the bore, a set bolt threadedly mounted in the upper end portion of the post and engageable with the rod for securing same in adjusted position, a bar, means for mounting said bar for swinging adjustment on the rod, and means for mounting a workpiece on said bar, the second-named means including a segmental plate integral with one end of the rod, said plate having an inner opening therein and further having circumferentially spaced marginal openings therein, a bifurcated arm on an intermediate portion of the bar straddling the plate and having an opening therein aligned with the inner opening, a bolt in the aligned openings pivotally connecting the arm to the plate, said arm further having an opening therein selectively registrable with the marginal openings, and a bolt in the registering openings securing the arm in adjusted position.

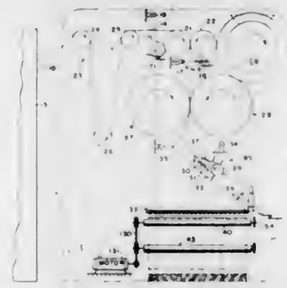
3,048,388
NEWSPAPER STUFFING MACHINE
Edwin K. Smith, Jr., Tarrytown, N.Y., and Frank J. Anastasio, Bergenfield, N.J., assignors to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed July 17, 1959, Ser. No. 827,737
20 Claims. (Cl. 270—57)

1. A newspaper stuffing machine comprising a plurality of compartments radially spaced about a common axis and rotatable through a vertical orbit, a plurality of newspaper section handling means operatively positioned in spaced relation about said orbital path, said handling means comprising means to feed a first newspaper section into each compartment during travel, means to feed a second newspaper section into each compartment during travel, and means to receive said first and second newspaper sections when the same are simultaneously discharged from each compartment, means to open the first newspaper section in each compartment and to retain the same in opened position as it approaches the feeding means for said second newspaper section whereby said second section is inserted within said first section, means to close the first section upon the second section as the same approaches said discharge receiving means, means in each compartment to discharge the newspaper



sections contained therein, and means to actuate said discharge means for each compartment as each is operatively aligned with said discharge receiving means, an alternate discharge station positioned beyond said first-mentioned discharge station, means to detect the proper feeding of said first and second sections, means responsive to the actuation of said detecting means to retain said misfed sections in the compartments past said first-mentioned discharge station and operative at said alternate discharge station to discharge the sections so retained in the compartments.

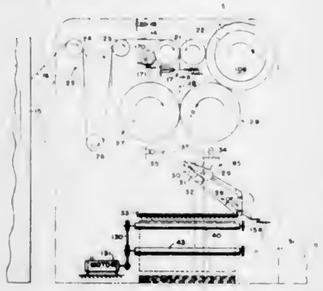
3,048,389
BLUEPRINT FOLDING MACHINE
David F. Salmon, Nashville, Tenn., and Joe T. Zinn, Oklahoma City, Okla., assignors to Avco Corporation, Nashville, Tenn., a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,360
5 Claims. (Cl. 270—63)



1. A machine for forming a sheet of blueprint into an accordion, comprising: a tray, first and second creasing roller means located vertically above said tray for creasing said sheet while feeding it in loose accordion form into said tray, one of said roller means being formed with a first longitudinal depression and a first diametrically opposed longitudinal projection, the other of said roller means being formed with a second longitudinal projection and a second diametrically opposed longitudinal depression, the sheet being compressed between the first projection and second depression to make the first alternate folds of the accordion form, each of which folds converges in one direction, and the sheet being compressed between the second projection and the first depression to make the second alternate folds of said accordion form, each of which folds converges in the opposite direction; first and second spaced stacking roller means, said stacking roller means being located on opposite sides of said tray and formed with first and second

groups of resilient wipers; means for driving the stacking roller means so that the groups of wipers bend and wipe over opposite folds of the accordion form as the sheet is deposited on the tray; and deflecting means for leading the leading edge of said sheet under the first group of wipers, which first group secures said edge while the second group secures the first fold of the accordion, following which the groups of wipers alternate in securing the alternate folds of the accordion form in a defined stack, the deflecting means comprising a spaced pair of pivotally mounted rods counterbalanced to extend diagonally upwardly and across the tray in the same general direction as the first longitudinal projection, the rods being forced by the sheet toward and into parallelism with the tray and under said edge as said edge is led under the first group of wipers.

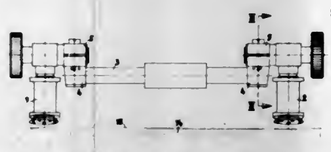
3,048,390
BLUEPRINT FOLDING MACHINE
David F. Salmon, Nashville, Tenn., and Joe T. Zinn, Oklahoma City, Okla., assignors to Avco Corporation, Nashville, Tenn., a corporation of Delaware
Original application Dec. 14, 1959, Ser. No. 859,360. Divided and this application Aug. 1, 1960, Ser. No. 49,812
1 Claim. (Cl. 270—73)



In combination with a blueprint supply machine and a blueprint folding machine having periodically arrested feeding means, a slack take-up device for maintaining the supply from the supply machine to the folding machine in tension when the feeding means is arrested, comprising: a plurality of idler rollers across which the supply is threaded, a gravitationally-positioned slack take-up roller weighing down the slack intermediate the idler rollers, said take-up roller being mounted on a shaft, means formed with slots slidably receiving said shaft for guiding the slack take-up roller in its vertical displacements, means for driving the feeding means, continuous governor means comprising an electrical control element having a rotatably mounted gear and a single swinging arm actuated by the slack take-up roller shaft for turning the gear and controlling the speed of the driving means in such a manner as to increase such speed in proportion to the amount of slack taken up, a stop switch positioned to be actuated by said arm to stop the driving means when said take-up roller is in an upper vertical position, and a start switch positioned to be actuated by said arm to start the driving means when said take-up roller is in a lower vertical position.

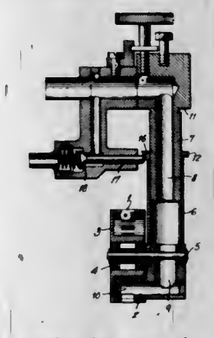
3,048,391
SHEET FEED APPARATUS
Georg Spiess, 9 Possartstrasse, Munich, Germany
Filed Dec. 15, 1959, Ser. No. 859,807
Claims priority, application Germany Dec. 15, 1958
1 Claim. (Cl. 271—26)

A device for use in a sheet feeder for lifting successive sheets from a pile of sheets, comprising a vacuum tube support extending transversely of said pile, a bracket mounted on either end of said support and an elongated socket having a passage therein connected to each of said brackets and rotatable therein and adapted to engage a pipe, said pipe being rotatable with the bracket and connected to said vacuum tube through said bracket, a suc-



tion gripper depending from the end of each of said pipes, said suction grippers adapted to be moved from a normal vertical position towards each other, and a pin and stop assembly mounted on each of said brackets for limiting the movement thereof, and screw means connected to the socket for locking said suction grippers in the adjusted position.

3,048,392
PNEUMATIC DEVICE FOR SEPARATING THE UPPERMOST SHEET FROM A PILE IN SHEET FEEDING APPARATUS
Georg Spiess, 9 Possartstrasse, Munich, Germany
Filed Oct. 14, 1959, Ser. No. 846,500
Claims priority, application Germany Oct. 15, 1958
1 Claim. (Cl. 271—27)

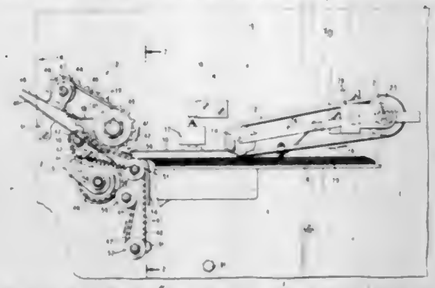


A pneumatic device for separating the topmost sheet from a stack of sheets, comprising a support; a stack of sheets on said support; a suction idler roller rotatable on said support about an axis and formed with a plurality of circumferentially spaced suction orifices; lifting means for moving said roller on said support in a vertically extending radial direction toward and away from a position of engagement of said orifices with the topmost sheet of said stack for raising said sheet; a suction operated transport roller horizontally spaced from said suction roller and spaced from said stack in a direction parallel to said radial direction for engagement by said raised sheet; and drive means for actuating rotation of said transport roller for drawing the engaged sheet away from said suction roller.

3,048,393
SHEET SEPARATING APPARATUS
Robert J. Furr, Poughkeepsie, and Emil M. Valehrach, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 28, 1958, Ser. No. 777,058
9 Claims. (Cl. 271—34)

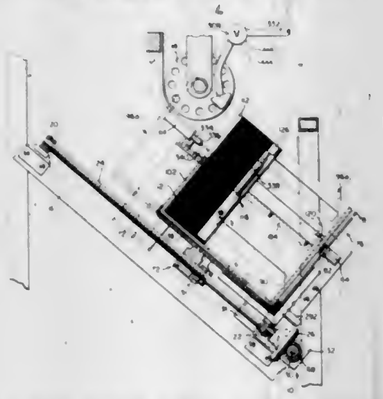
1. Sheet separating apparatus comprising a first moving endless belt passing over a pulley for engaging one side of each of a succession of sheets and advancing the sheets,

and a second endless belt moving oppositely to the direction of motion of said first belt for engaging the other side of each of a succession of sheets being advanced by said first belt and restraining advancement thereof, whereby the one of two adjacent sheets positioned between said first belt and said second belt engaging said first belt will



be advanced and the other sheet will be restrained from advancing until said one sheet has been advanced therefrom, said second belt extending around and cooperating along an obtuse angle with an extended portion of the length of said first belt passing over said pulley, said belts having surface discontinuities spaced therealong.

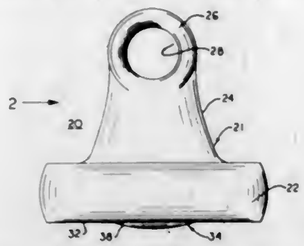
3,048,394
SHEET FEEDING SYSTEM
Robert S. Bradshaw, Broomall, and Roland Lessig, Philadelphia, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 4, 1959, Ser. No. 838,324
11 Claims. (Cl. 271—62)



1. In a sheet feeding system, the combination comprising, a container for holding a supply of sheet items, means for removably supporting said container, means for advancing said support means and said container to a sheet separation station, means for driving said advancing means, electrically actuated coupling means for coupling the driving means to the advancing means, and means for controlling said electrically actuated coupling means, said last means including first and second normally open switches, said first switch being closed by said container when the latter is placed in said supporting means, and said coupling means being electrically actuated when both of said first and second switches are closed.

3,048,395
WATERSPORTS FLOAT
Frank S. Hobbs, 202 Palm Ave., National City, Calif.
Filed Mar. 7, 1960, Ser. No. 13,239
2 Claims. (Cl. 272—1)

1. An article for use in water sports, said article comprising an inflatable, integral structure formed of flexible material, the mass having a specific gravity less than water, said structure including an inflatable and flexible main body portion and a projecting portion of smaller circumference than the main body portion, said projecting portion being inflatable and flexible and having an opening providing a hand grip; an inflating valve for said integral structure and stationary weight means in the bottom of the main body portion.



3,048,396
EXERCISING DEVICE
George Hjelte, 4468 Dundee Drive, Los Angeles, Calif.
Filed Mar. 8, 1961, Ser. No. 94,314
5 Claims. (Cl. 272—56.5)

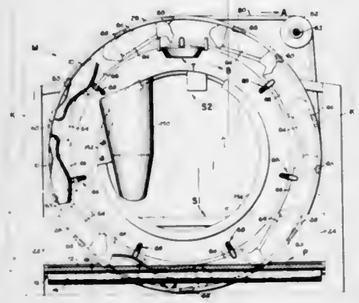


1. An exercising device comprising: a pair of rails extending in one direction in a downwardly inclined path for sliding support of a body from an apex point to a first lower base support; and skirt means secured to said pair of inclined rails and positioned to extend outwardly and downwardly on each side of the pair of rails to provide stabilizing support of the body; said pair of rails extending in another direction from said apex point to a second lower base support to provide an ascension path for a body.

3,048,397
BOWLING PIN ELEVATING MECHANISM
Robert L. Holloway, Snyder, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Feb. 27, 1958, Ser. No. 717,894
9 Claims. (Cl. 273—43)

1. In a bowling pin spotting machine for use in a bowling alley installation having a pit, the combination of
a framework rigidly secured adjacent to said pit;
a rotary, annular channel member mounted on said framework for rotation about the axis of said channel member and in a vertical plane located adjacent to said framework, said channel member having
a plurality of peripherally extending pockets each adapted to receive a bowling pin for elevation thereof, and
a central aperture having a diameter such that the periphery of the aperture is closer to the external diameter than to the axis of said channel member, said diameter of said aperture being sufficiently great to

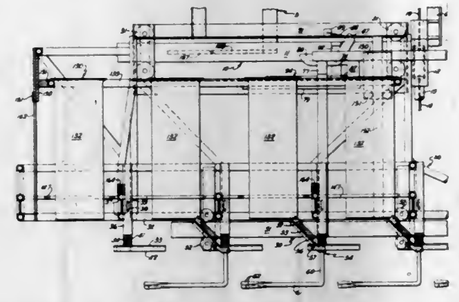
afford access through said framework and said channel member into said pit;
said framework being arranged to afford access to said aperture;
driving means for rotating said channel member;
a plurality of pin retaining members each pivotally mounted on said channel member adjacent to a different one of said pockets for pivotal movement in a plane which extends transversely of the one of said pockets associated therewith,
each of said pin retaining members being movable between a plurality of positions including a first position engageable with a pin in the one of said pockets associated therewith for retaining such pin in said pocket during elevation thereof and a second position in which such pin is released for discharge; and



mechanism for actuating said pin retaining members, comprising
a plurality of cam followers mounted on said channel member for movement therewith, each of said cam followers being spaced from the axis of rotation of said channel member a distance approximating the internal radius of said channel member and each being operatively connected to actuate a different one of said pin retaining members,
and cam means mounted on said framework adjacent to said channel member for actuating said cam followers,
said actuating mechanism, said pin retaining members and said driving means being constructed and arranged to permit access through said framework and said channel member into said pit.

3,048,398
BOWLING PIN HANDLING MACHINE
Adolphe W. Kalbfleisch, Jeannette, Pa., assignor to Duff Devices, Inc., Irwin, Pa., a corporation of Pennsylvania
Filed Jan. 9, 1959, Ser. No. 785,844
16 Claims. (Cl. 273—43)

1. Bowling pin handling apparatus for use in connection with a bowling alley, said apparatus comprising a vertically movable main carriage, a plurality of vertically yieldable clamping pads mounted on the main carriage and adapted upon the lowering of that carriage to a first predetermined level to engage initially the heads of on and off-spot unfelled pins on the alley and adapted on continued downward movement of the carriage to a lowermost position to clamp the engaged pins to the alley, a pin lifting carriage mounted for forward and backward movement on the main carriage and for vertical movement with that carriage, a plurality of pin lifters each of which is provided with a pair of spaced horizontally extending fingers having a pin receiving portion in which the fingers are spaced apart a distance greater than the width of a pin neck but less than the maximum width of a pin head, means for movably supporting each pin lifter on the pin lifting carriage for free and independent lateral movement with respect to said carriage when the pin lifter is unencumbered by the full weight of a pin, said means supporting each pin lifter at such a height relative to the main carriage that its fingers will receive the neck of an unfelled pin when the main carriage is in its lowermost position and the pin lifting carriage is advanced relative to the main carriage and will liftingly engage the head of said pin only after the main carriage has



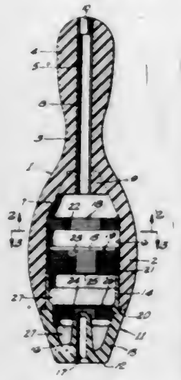
been raised to a second predetermined level above said first predetermined level, means for moving the pin lifting carriage horizontally relative to the main carriage when the latter is in its lowermost position, and means for elevating the main carriage thereby to disengage the clamping pads from the heads of unfelled pins before the pin lifters engage the heads of those pins and lift them from the alley, the clamping pads remaining disengaged from the pins during the lifting operation.

3,048,399
BASEBALL PRACTICE FIELDING BAT
Louis F. Breitbach, 2608 A Ave. NE., Cedar Rapids, Iowa
Filed Apr. 26, 1961, Ser. No. 105,599
1 Claim. (Cl. 273—72)



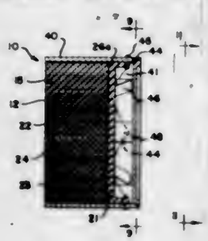
A baseball fielding practice bat for hitting a baseball to a fielder with great accuracy in placement, said practice fielding bat comprising: a substantially rigid member having a handle portion and a substantially loop-shaped portion at one end of said handle portion and enclosing an area greater in cross section than a baseball, said loop-shaped portion having a front wall surface, a side wall surface and other surfaces comprising a back wall surface and an inner wall surface; a resilient springy membrane having an area greater than the area enclosed by said loop-shaped portion, said membrane having a periphery, a central portion that extends across said enclosed area, and a portion between said periphery and said central portion that engages said front wall surface and said side wall surface of said loop-shaped portion; and membrane fastening means engaging the periphery of said membrane and one of said other wall surfaces of said loop-shaped portion for securely fastening said membrane in place.

3,048,400
BOWLING PIN
Mark M. Friedman, Inglewood, Calif., assignor to Pacific Molded Pulley Company, Inc., Gardena, Calif., a corporation of California
Filed Dec. 6, 1957, Ser. No. 701,057
1 Claim. (Cl. 273—82)



A bowling pin formed of molded plastic material, comprising: a body member defining externally the belly, neck, and head of a bowling pin, said member having a longitudinal bore enlarged within said belly portion and continuing upwardly therefrom into said neck portion; reinforcing means in said neck portion; a bottom member including a tubular portion arranged initially to telescope within the enlarged portion of said bore and be bonded to the walls thereof, said bottom member also including side walls converging from the lower end of said body member and a bottom wall completing the external contour of the bowling pin, said body and bottom members defining a closed chamber; sound and bounce control means within said chamber including a plurality of annular disks formed of wood and transversely disposed in said chamber, the lower of said disks covered with a membrane to form an upper and a lower compartment; and a mobile material divided between said compartments.

3,048,401
ARCHERY TARGET MAT
Alonzo Dishon, 3249 Biddle Ave., Wyandotte, Mich.
Filed May 19, 1960, Ser. No. 30,205
3 Claims. (Cl. 273—102)



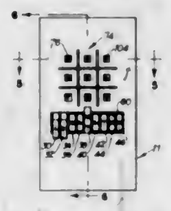
1. An archery target mat for supporting and backing a target, comprising a cylindrically shaped roll of fluted cardboard formed of an elongated, narrow strip of thin, flat cardboard having a second sheet of uniformly corrugated cardboard adhered to and covering the face of the strip. with the corrugation arranged transverse to the strip and thus axially of the cylindrical shape of the roll, and the strip being tightly and spirally wound into a roll, with the side edges of the strip and second sheet forming flat front and rear faces of the mat transverse to the axis of the roll, said mat being surrounded by and snugly fitted within a rigid open ended cylinder, with the flat front face of the mat being exposed at one open end of the cylinder and the mat rear flat face being within the cylinder and spaced a distance from the opposite open end of the cylinder, a relatively thick, resilient sheet formed with corners, arranged in face to face contact with the rear face of the mat and spaced a distance from said opposite open end of the cylinder, but with its corners bent at right angles to the sheet and secured to the wall of the cylinder between the mat rear face and the said opposite open end, the sheet portion between its corners being moveable, under impact of an arrow, towards said opposite open end of the cylinder and away from the rear face of the mat.

3,048,402
GAME APPARATUS
William H. Schaper, Minneapolis, Minn., assignor to Schaper Manufacturing Company, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed May 11, 1961, Ser. No. 109,350
11 Claims. (Cl. 273—119)



1. Game apparatus comprising an upper deck having an opening therein and having an elongate runway communicating with said opening, a player-concealed lower deck secured to said upper deck spaced therebelow, a plurality of runways arranged in side-by-side relation on the upper surface of said lower deck and extending outwardly to one side thereof, a ball-directing mechanism interposed between said decks including a pair of interengaging ball-directing members arranged in upper and lower relation and being mounted for relative shifting movement therebetween, one of said members having a plurality of openings therein arranged in staggered relation with respect to each other and each opening communicating with one of said plurality of runways, the other of said members cooperating with said one member upon relative shifting movement of said members to cause a ball moved along the runway of said upper deck and impelled through the opening in the latter to be directed through a preselected one of said openings in said one member and into its associated lower deck runway.

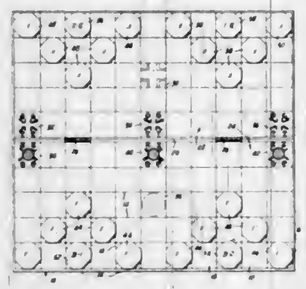
3,048,403
INSTRUCTIONAL AMUSEMENT DEVICE
Clayton Du Bosque, Jr., Canoe Hill Road, New Canaan, Conn.
Filed Oct. 12, 1959, Ser. No. 845,723
6 Claims. (Cl. 273—130)



1. An instructional game device comprising a housing having a front face and a rear face, said front face having

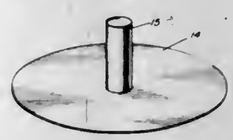
a plurality of windows disposed in a predetermined play arrangement, a plurality of individually movable members contained in said housing, each of said members having a plurality of selective indicia viewable only through a selected window and at least one opening through which play instruction indicia may be viewed, means for moving selected members progressively selected distances within said housing relative to other members in making plays to expose selected indicia on said movable members in windows corresponding to the position of said movable members, play instruction viewing windows also formed in said housing, instructional indicia defining play information carried within said housing, whereby after each play specific instructional indicia are exposed through overlying openings in said members and one of said last-named windows providing information instructing the player of a member to be moved in making the next preferred play.

3,048,404
GAME
George S. Tebbs, 1365 Corona St., Denver, Colo.
Filed Aug. 13, 1959, Ser. No. 833,572
1 Claim. (Cl. 273—131)



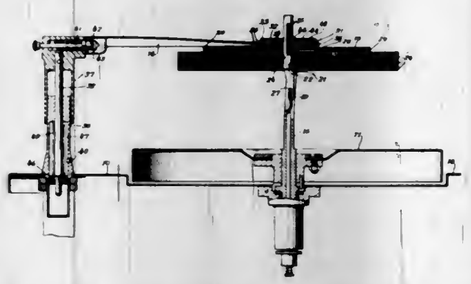
An air warfare game comprising in combination, a flat game board of rectangular shape having a grid of orthogonal lines marked on one surface thereof and arranged to define orthogonl columns and rows or square spaces, with ten spaces in each column and eleven spaces in each row, said board being separated into two parts, a pair of hinges connecting one board part with the other board part, the hinged portion of the board forming a medial line dividing said spaces into two political areas, each of said areas having a centrally located space characteristiclly marked to identify a distinguishable target zone, each of said areas having a space at the center and at each end of the row contiguous to said medial line characteristically marked to identify anti-aircraft zones, each of said areas having spaces marked to define a triangular formation of six spaces on each side of the target zone with the base of each formation located in the row most remote from said medial line and with the apex of each formation in the same row as the target zone, a plurality of playing pieces, each of said formation spaces being occupied by a playing piece at the start of the game, five of the pieces in each formation having indicia representing fighter aircraft and being arranged to define the sides of the associated formation, the sixth piece in each formation having indicia representing a bomber aircraft and being located centrally of the base of the associated formation, said aircraft indicia being distinguishably characterized in accordance with the associated political area, said playing pieces being octagonal in shape so that the aircraft indicia heading may be changed in intervals of 45° relative to the square space occupied by the playing piece, the bomber pieces of each political area being movable from space to space to the target zone of the other political area to score points, the bomber and fighter pieces of each political area being removed from the game board upon occupying the anti-aircraft zones of the other political area, and the fighter and bomber pieces of one political area being removed from the game when a piece of the other political area has its aircraft indicia heading aimed at the aircraft indicia of the piece of said one political area either directly from the rear or 45° from the rear.

3,048,405
GOLF PUTTING TARGET
Verne J. McCaul, 1458 Merritt Drive, El Cajon, Calif.
Filed Feb. 17, 1959, Ser. No. 793,888
5 Claims. (Cl. 273—177)



1. A golf hole-simulating putting practice target providing aiming points optically simulating the habitually relied upon cup rim and adjacent flag pin portion providing aiming points of an actual golf hole, and which aiming points are viewable from a putting stance at all putting distances, said target consisting solely of a wholly plane topped disk-form and substantially non-deformable golf cup-simulating plate, a centrally located and fixedly supported upstanding and cylindrical flag pin-simulating post carried by the top surface of said plate, the diameters of the plate and post approximately corresponding to the usual diameters of golf cups and flag pins, respectively; and the plate edge and the post portion which is immediately adjacent the plate being simultaneously viewable from a putting stance at all putting distances, whereby the plate edge and immediately adjacent post portion optically simulate the cup rim and lower flag pin portion, respectively, which as aforenoted are the putt lining up or aiming reference points of actual play and frequently combine to indicate the actual aiming point.

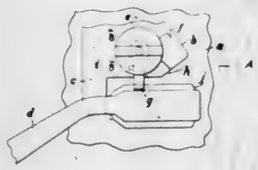
3,048,406
SOUND REPRODUCING MACHINES
Richard Henry Mallard, London, England, assignor to Foster-Mailard Limited, London, England
Filed Sept. 28, 1959, Ser. No. 842,912
4 Claims. (Cl. 274—10)



1. A sound reproducing machine comprising a turntable, a spindle extending upwardly from said turntable and being rotatable therewith, means on said spindle for supporting a plurality of records co-axially above said turntable, means for releasing said records one-by-one to fall onto said turntable, a pick-up adapted to be brought alternately into playing engagement with the underside of the lowermost record supported on said spindle and with the top side of a record on said turntable, an upper turntable adapted to rest on the uppermost of said records supported on said spindle, interengaging means on said spindle and on said upper turntable to transmit rotation from said spindle to said upper

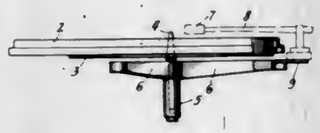
turntable, and supporting means independent of said spindle for holding said upper turntable in a plane perpendicular to the axis of said spindle, said upper turntable being rotatably mounted on said supporting means.

3,048,407
DISC-RECORD PLAYING APPARATUS
James Alexander Lee, Highworth, England, assignor to The Plessey Company Limited, London, England, a British company
Filed July 1, 1960, Ser. No. 40,485
3 Claims. (Cl. 274—23)



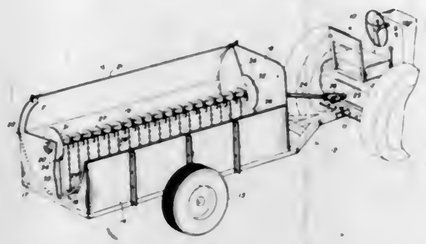
1. In an electrically driven disc-record playing apparatus having a record turntable, rotatable about an axis for receiving a disc record, a motor drive operatively connected with the turntable, a pickup arm movable for co-operation with such disc record from a position clear of said turntable, a pickup-arm rest on which said tone arm can rest when in such position clear of the turntable, cycling means driven by said motor drive to lift, at the beginning of a record-playing operation, the pickup arm from said rest and move it for co-operation with such disc record, and an on-off switch device controlling said motor drive and having an "on" position in which the motor drive is energised and an "off" position in which the motor drive is arranged to be de-energized, the combination comprising a pickup-arm locking device having a locking position preventing the pickup-arm when deposited on the pickup arm rest, from leaving said rest and moving into co-operation with such record and a non-locking position permitting free movement, and unidirectional coupling means on said locking device and switch device operative when the locking device is in its locking position and the switch device is moved to its "on" position to move the locking device to its non-locking position.

3,048,408
TURNTABLES OF RECORD PLAYERS
George Leonard Morgan, 3 Ballater St., Essendon, near Melbourne, Victoria, Australia
Filed Aug. 28, 1959, Ser. No. 836,746
Claims priority, application Australia Sept. 1, 1958
8 Claims. (Cl. 274—39)



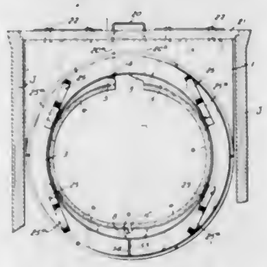
1. A record player unit effectively isolated from a support except through a single connection, said unit comprising a mounting adapted to make said single connection to a support, a turntable for carrying a record rotatably journaled on said mounting, a pick-up also supported by said mounting adjacent the periphery of the turntable for operatively engaging such record, and energizing means to rotate the turntable entirely free of contact with said support.

3,048,409
MATERIAL UNLOADING APPARATUS
Keith D. Elwick, Vinton, Iowa, assignor to Hawk Bilt Mfg. Corp., Vinton, Iowa, a corporation of Iowa
Filed Jan. 31, 1961, Ser. No. 86,086
13 Claims. (Cl. 275—3)



1. A device for unloading and spreading material, comprising: a wheeled container having end walls and wall means connecting said end walls; a shaft in the upper portion of said container and having its ends supported by said end walls; means for rotating said shaft; a plurality of flail members spaced longitudinally along said shaft, said flail members being radially extensible relative to the shaft; and separate rigid starter means on said shaft and extending radially only a short distance from the shaft, said starter means comprising helical auger means extending along the shaft, said auger means being adapted, upon rotation of the shaft when the container is filled with material which may be engaged by the starter means, to move said material longitudinally relative to the shaft and thereby free the flails to fling the material from the container.

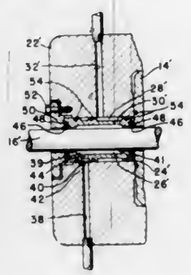
3,048,410
SNAP-ON DUSTGUARD OIL SEALS
Donald D. Bryant, 1960 Military Road, Huntington, W. Va.
Filed Jan. 20, 1959, Ser. No. 787,868
1 Claim. (Cl. 277—10)



A dustguard unit comprising a front plate, a cover plate secured thereto in parallel spaced relation; a split dustguard band making a sliding fit between said front and cover plates; means for yieldably contracting the band; said front plate having on its exterior face a gasket; means adapted in one position to hold the split end of the band apart; other means for pressing the gasket carrying face of the front plate whereby when the said first means is shifted into another position the split end of the band will be contracted, while the other means will shift the said gasket; said dustguard band being formed of sections allel relation, each section carrying on its inner face a comprising spaced arcuate plates secured together in parresilient shoe means except at the split for articulating the sections together; and said contracting means comprising an endless resilient member under tension disposed around the said sections for normally contracting the band; a pin on the section opposite the split engaging

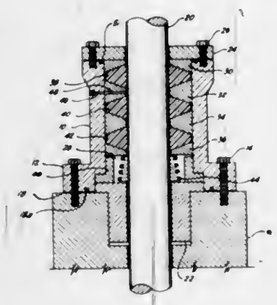
a radial slot in the cover plate for preventing rotation of the band within the front and cover plates while permitting limited vertical and lateral movements thereof.

3,048,411
COMPRESSOR PISTON COOLING SYSTEM
Anthony J. Waibel, Painted Post, N.Y., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 25, 1958, Ser. No. 776,311
1 Claim. (Cl. 277—74)



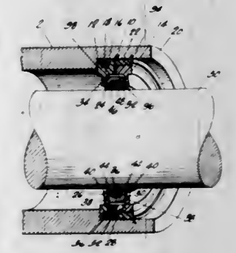
A cooling ring for admitting coolant fluid to a piston reciprocating within a casing and having a rod for reciprocating the piston and said casing having an inlet for coolant fluid, said cooling ring comprising, a central bore through the ring for receiving said piston rod, an outer annular groove about the outer periphery of said ring for receiving coolant fluid from said inlet, an inner annular groove about the inner periphery of said ring, said inner annular groove being longitudinally larger than said outer annular groove, a plurality of passageways communicating between one end of said outer annular groove and one end of said inner annular groove to conduct coolant fluid against said piston rod, an exhaust port in the other end of said inner annular groove, through which the fluid in said inner annular groove may be exhausted, a second outer peripheral groove communicating with said exhaust port for exhausting said inner annular groove, and undercuts located in the opposite ends of said ring for housing seals thereby limiting leakage along said rod.

3,048,412
SHAFT SEAL
William J. Baker, Anaheim, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Apr. 27, 1959, Ser. No. 809,031
5 Claims. (Cl. 277—75)



1. A shaft sealing assembly comprising, in combination with a reciprocating shaft: a cylindrical housing surrounding said shaft and provided at its opposite ends with end closures through which said shaft extends, the inside diameter of said housing being substantially larger than the diameter of said shaft whereby said housing and end closures enclose an elongated annular chamber surrounding said shaft; at least two rigid non-resilient packing rings surrounding said shaft and spaced axially from each other, each of said packing rings having a packing ring outer periphery abutting against said housing and tapering inwardly from said packing ring outer periphery to a packing ring inner periphery spaced radially outwardly from said shaft, said packing ring inner periphery having a shorter axial length than said packing ring outer periphery; a resilient sealing ring fitting closely around said shaft and interposed between and in direct contact with adjacent spaced packing rings, said sealing ring having opposed radial faces tapered uniformly outwardly from a sealing ring inner periphery to a sealing ring outer periphery to mate with said adjacent packing rings, said sealing ring outer periphery being spaced radially inwardly from said housing and said sealing ring outer periphery having a shorter axial length than said sealing ring inner periphery; and compressive means positioned between at least one of said end closures and the packing ring adjacent thereto so as to apply a compressive force on said spaced packing rings and said interposed sealing ring to force said sealing ring inner periphery tightly against said shaft.

3,048,413
ROTATING SHAFT SEAL
Lorin A. Wood, Los Angeles, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed Oct. 15, 1959, Ser. No. 846,707
8 Claims. (Cl. 277—95)

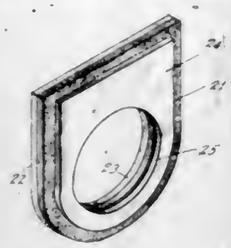


1. A seal for a rotating shaft within a housing comprising: a first annular member having a base portion and a pair of flexible lips extending inwardly therefrom and defining a channel; a second annular member nested within the channel and including sloping sides converging toward the base portion of the first member, said sloping sides respectively making sliding line contact with the flexible lips, the portions of the sloping sides which contact the flexible lips being formed of material having a low coefficient of friction, said second member being movable radially within the channel of the first member to compensate for any eccentricity of the shaft with respect to the housing.

3,048,414
JOURNAL BOX DUST GUARD
Edwin S. Pearce, Leslie G. Taylor, and Thomas R. Booth, Indianapolis, Ind., assignors to Railway Service and Supply Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Apr. 13, 1959, Ser. No. 805,751
6 Claims. (Cl. 277—130)

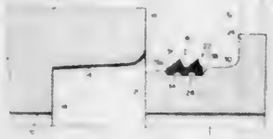
1. In combination with a railway-car journal and its associated journal box, said box having a dust-guard cavity in its inner wall and said journal having a collar in the plane of said cavity, a dust-guard located in said cavity, said dust-guard comprising a compressible pad having a central opening snugly receiving said collar, said

pad comprising two layers of differentially compressible material compressed axially of the journal by confinement



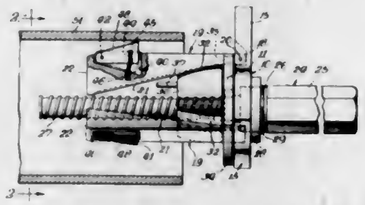
of the dust-guard within its cavity, the layer of lesser compressibility lying toward the interior of the journal box with respect to the other layer.

3,048,415
PIPE JOINT ASSEMBLY
Adam M. Shook, Fort Wayne, Ind., assignor to Press Seal Gasket Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Dec. 5, 1960, Ser. No. 73,626
6 Claims. (Cl. 277—170)



1. A pipe joint assembly comprising: cooperable male and female pipe members, said male member having an outer annular surface, said female member having an inner annular surface defining an annular space with said annular surface of said male member when said joint is assembled, said annular surface of said male member having a relatively wide and shallow annular groove formed therein with its bottom surface being substantially flat; and a preformed annular self-supporting gasket of flexible resilient material having a solid cross-section, said gasket comprising an annular base portion with a radial height generally the same as the depth of said groove, said base portion having a flat bottom surface and sides respectively joining said bottom surface and perpendicular thereto, and two substantially identical annular wedge portions each having a generally triangular cross-section integrally joined to said base portion and extending radially outwardly therefrom, said wedge portions being axially joined end-to-end extending axially across said base portion and respectively joining said sides thereof each wedge portion having one side facing the front end of said male member and inclined outwardly and rearwardly and its other side facing the rear end of said male member and inclined outwardly and forwardly, said one and other sides of each of said wedge portions joining to define a point, the one sides of said wedge portions being longer than the other sides, said wedge portions having a radial height substantially greater than the height of said base portion and the radial thickness of said annular space, the radial heights of said wedge portions being substantially equal; said base portion of said gasket being seated in said groove with its inner annular surface sealingly engaging said bottom surface thereof, said wedge portions engaging said inner annular surface of said female member and resiliently deforming downwardly when assembly of said joint is initiated, said wedge portions and base portion being compressed between said inner surface of said female member and said bottom surface of said groove as assembly of said joint is continued causing said resilient material to cold-flow and said gasket substantially to fill said groove and the annular section of said space concentric with said groove and placing said gasket in compression over its entire axial length when said joint is completely assembled to provide a tight seal for said joint.

3,048,416
EXPANDABLE PIPE MANDREL
Harry F. Rogers, Rte. 2, Box 77, Antioch, Ill.
Filed Apr. 24, 1961, Ser. No. 105,221
11 Claims. (Cl. 279—2)



1. A mandrel for supporting one end of a tube, comprising: a body; a plurality of first pivot members pivotally mounted on said body for pivotal movement radially outwardly therefrom; a plurality of second members movably mounted one on each of said first pivot members for movement radially outwardly of said body; resilient means biasing said second members outwardly from said first said pivot members; and means for pivoting said first pivot members radially outward from said body to urge said second members into gripping contact with the internal surface of the tube.

3,048,417
TOY VEHICLE WITH ADJUSTABLE SEAT AND LEG PROTECTOR
Thomas M. Breen, 140 Sheridan Road, Winnetka, Ill.
Filed Apr. 12, 1961, Ser. No. 102,501
1 Claim. (Cl. 280—1.1)



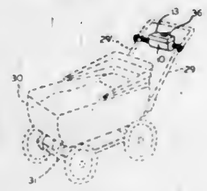
A toy automobile or the like vehicle which comprises a platform, a pair of rear wheels rotatably mounted on the rear end of the platform, a front wheel assembly pivotally mounted on the front end of the platform, a tow rope secured to said front wheel assembly for pulling and steering the vehicle, a dashboard assembly mounted on the platform between the front wheel assembly and the rear wheels, said dashboard assembly including forwardly inclined uprights on the sides of the platform and a forwardly inclined cross bar coacting with the uprights to define a leg-receiving opening between said uprights, a simulated steering column extending rearwardly from the cross bar, a simulated steering wheel on said column adjacent the cross bar, impervious material on said platform rearwardly of said dashboard assembly, a baby seat having a plurality of suction cups on the bottom thereof adapted to detachably secure the seat to said material in variably spaced relation from the steering wheel, harness means on said seat to retain a baby therein, said forwardly inclined cross bar facilitating positioning of the legs of a baby harnessed in said seat through the leg-receiving opening of said dashboard assembly when said seat is lowered onto said material, said seat being positioned in selected spaced relation behind said dashboard assembly to place the steering wheel within reach of a baby harnessed in the seat and to position the legs of the baby between said uprights, and said uprights forming guards for the legs of the baby.

3,048,418
SKI-STOPPING DEVICE
Ernst Gertsch, Wengen, Switzerland
Filed Feb. 10, 1958, Ser. No. 714,399
Claims priority, application Switzerland Feb. 14, 1957
6 Claims. (Cl. 280—11.13)



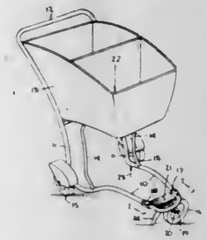
5. In combination with a ski having conventional side edges and a conventional upper boot face and safety release boot attachment means, a ski stopping device effective to be projected into an operative position to brake the forward movement of a ski when the ski is freed from the skier's boot comprising a brake member secured to the upper boot face and normally retained in a non-braking position, said brake member having a boot engaging portion engageable with a boot secured in position on the upper boot face of the ski by the safety release boot attaching means to retain said brake member in non-braking position, an axle shaft means overlying the upper boot face of the ski and a braking portion adapted to be projected downwardly at one side of the ski and below the sliding surface of the ski; means for rotatably mounting said axle shaft means on the upper boot face of the ski to dispose the boot engaging portion in overlying relation to the upper boot face in position to be engaged by the skier's boot when secured in the safety release boot attachment means; and resilient means operatively connected to said brake member and to said mounting means for forcefully rotating said axle to dispose said brake member in its operative position with said braking portion below the sliding surface of the ski upon release of the boot engaging portion when the ski becomes disassociated from the skier's boot.

3,048,419
ROCKING DEVICE FOR BABY CARRIAGES AND THE LIKE
Martha Fredman, 3948 N. Murray Ave., Milwaukee, Wis.
Filed Dec. 8, 1960, Ser. No. 74,567
11 Claims. (Cl. 280—31)



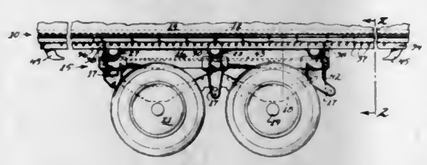
1. In combination with a baby carriage having a wheel-equipped frame, a body resiliently mounted upon said frame and a handle structure connected with said frame for manipulating the carriage, a longitudinally extending shaft secured to said handle structure, a mass member mounted upon said shaft for reciprocable movement along the longitudinal axis thereof, resilient cushion structure mounted upon said shaft in engagement with said mass member and tending to bias the same toward a predetermined position along said shaft, and motor means energizing reciprocatory movement of said mass member along said shaft, whereby reciprocatory movement of said mass member imparts a vibratory motion to said handle structure and frame which delivers a rocking motion to said body.

3,048,420
THREE-WHEELED SHOPPING CART
Martin Umanoff, Huntington, N.Y., assignor to R. A. MacPlum Industries, Inc., New York, N.Y., a corporation of New York
Filed Aug. 12, 1960, Ser. No. 49,322
5 Claims. (Cl. 280—62)



1. In a three-wheeled shopping cart, a wheel-supporting frame which narrows toward one end thereof, and a swiveled wheel assembly carried by the narrower end, said wheel assembly comprising a yoke pivoted to said frame on a vertical axis and having downwardly extending arms, a wheel whose axle is supported by the free ends of said arms, said arms being so shaped that the wheel axis is laterally offset from the yoke axis, and a prop carried by said yoke and extending downwardly in an oppositely offset direction, said prop having a lower end normally above the floor level and spaced from the yoke axis a distance at least as great as the spacing of the wheel axis from the yoke axis.

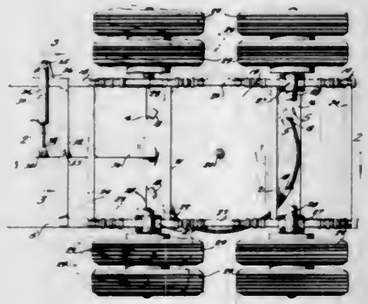
3,048,421
LONGITUDINALLY ADJUSTABLE RUNNING GEAR MOUNTING FOR VEHICLES
Roy L. Matlock, % Matlock & Cope, 151 Fairfield Ave., Nashville 10, Tenn.
Filed July 21, 1960, Ser. No. 44,512
3 Claims. (Cl. 280—81)



1. An adjustable wheel mounting for a trailer comprising a main frame having side edges, a sub-frame comprising an axle carrying ground-engaging wheels at opposite ends thereof, and a roller support frame extending upward from said axle and between said wheels, parallel longitudinal tracks mounted on and beneath said main frame spaced substantially inside the side edges of said main frame and outside said roller support frame, a transverse beam rigidly fixed to said roller support frame and spanning the distance between said tracks, an annular race formed in and adjacent each end of said transverse beam in vertical alignment with each track, a roller bearing for each track comprising a loosely fitted ring surrounding and adapted to rotate within each race, means

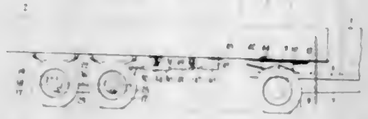
for lubricating the space between each race and its corresponding bearing, means for guiding each roller bearing in constant longitudinal rolling engagement with its corresponding track to provide a permanent longitudinally adjustable support for said trailer, and means for locking said sub-frame to said main frame in various relative longitudinally adjusted positions.

3,048,422
STEERABLE TRAILER
Dick Payne, Box 174, and George M. Amthor, Box 387, both of Gatesville, Tex.
Filed Dec. 15, 1960, Ser. No. 76,056
3 Claims. (Cl. 280—81.5)



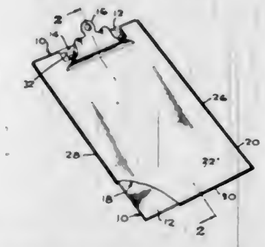
1. A trailer comprising a main body portion, a pair of spaced parallel horizontally disposed longitudinally extending beams mounted below said main body portion, a pair of horizontally disposed spaced parallel cross pieces extending between said beams and secured thereto, a horizontally disposed support member secured to the lower portions of said cross pieces, spaced apart guide lugs depending from said support member, a horizontally disposed circular plate rotatably mounted below said support member and said plate being rotatable in said lugs; a pair of spaced parallel horizontally disposed braces secured to the lower surface of said plate, a rectangular frame including a pair of spaced parallel channel members secured to the ends of the braces, said frame further including a pair of spaced parallel end pieces extending between said channel members and secured thereto, spring members mounted below said channel members, bearings connected to said spring members, rear axles engaging said bearings, wheels connected to said axles, and means for selectively rotating said plate to turn said wheels.

3,048,423
TRACTOR-TRAILER STEERING COMBINATION
Michael A. Carmody, 5 Scheu Park, Buffalo, N.Y.
Filed Jan. 31, 1961, Ser. No. 86,100
3 Claims. (Cl. 280—426)



1. In a tractor-trailer combination having a connection therebetween enabling turning movements of said tractor relative to said trailer, said trailer having a ground-engaging supporting wheel, means mounting said wheel on said trailer for steering movements relative thereto, and means automatically steering said wheel in a direction opposite to that assumed by said tractor upon turning movement of the latter relative to said trailer, said last-named means including lever means pivotally supported on said trailer for lateral movement relative thereto, said lever means being connected to said wheel for steering the same upon such lateral pivoting movement of said lever means, means connecting said lever means to said tractor for lateral pivoting movement of said lever means upon turning movement of said tractor relative to said trailer, said connecting means including means translating arcuate turning movement of said tractor into rectilinear movement of an end of said lever means laterally of said trailer.

3,048,424
CLIP BOARD CARRIER DEVICE
Earl F. Mitchell, Jr., 2420 Hyperion Ave., Los Angeles, Calif.
Filed Jan. 20, 1958, Ser. No. 710,101
3 Claims. (Cl. 281—44)



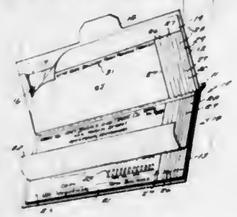
1. A composite package for assorted papers comprising a sheath of flexible sheet material having a front side portion and a rear side portion longer than the front side portion joined at bottom and side edges forming a pocket having an open top, said rear side portion having an extension at the edge adjacent the open top and folded rearwardly in the form of a flap, a clip board assembly comprising a rigid substantially rectangular board member having a width slightly less than the width of said pocket and a length longer than said front side portion and comparable in length to said rear side portion, said board member having an assembled position slidably received within said pocket and having a margin of said board member exposed, a hinged spring loaded clip including a mounting member anchored by application of the mounting member to the board member at said margin, said spring loaded clip including a movable portion overlying and spring pressed against a portion of said front side portion adjacent said open top whereby simultaneously to retain said clip board assembly in the pocket and to retain papers attached thereto both inside and outside said pocket.

3,048,425
CARBON PAPER PACK
Lester K. Fleischmann, 333 W. Lake St., Chicago, Ill.
Filed Jan. 18, 1961, Ser. No. 83,455
4 Claims. (Cl. 282—19)



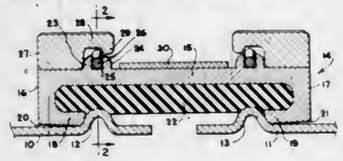
4. A manifolding flat pack of transfer material comprising: a carrier member having opposite ends and base and cover flaps hingedly connected at one end of said opposite ends, the other of said opposite ends being open; a strip of transfer material zig-zag folded with folds offset in the same direction to provide exposed portions of the strip adjacent each fold, said strip being received on said base flap with said exposed portions at the connected flap ends and facing outwardly of said base flap; a plurality of spaced apart tapes secured to said base flap, each tape having a pressure sensitive adhesive surface facing said base flap and detachably secured to said exposed portions of the strip adjacent each fold; and a leading portion of said strip extending between said base flap and the remainder of said strip, said leading portion having a free end adjacent the open flap ends for pulling said strip from said carrier member between said open flap ends and progressively detaching said exposed portions from said tape and exposing the portion of the tape previously secured to the transfer material to adhesion only with said base of the carrier member.

3,048,426
CHECK BOOK
Joseph M. Rodriguez, 439 W. Overbrook St., Largo, Fla., and Walter Calvin Chase, 210 S. Corona Ave., Clearwater, Fla.
Filed Oct. 16, 1959, Ser. No. 846,965
5 Claims. (Cl. 282—23)



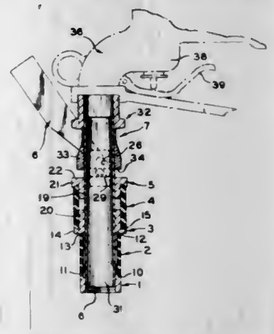
1. A checkbook comprising a front record sheet and a plurality of pairs of superposed check sheets and duplicate copy sheets bound together, a binder containing said checkbook including front and back panels and means cooperating with the inner wall of said front panel and defining a pocket for carbon slips for interposition between said check and copy sheets, the face of each of said check sheets adjacent the right hand end thereof being provided with parallel lines extending substantially from the top to the bottom thereof for reception of numerals therebetween, and the corresponding ends of the copy sheets being likewise provided at the same end, on both the front and back thereof, with parallel lines registering with those on the face of said check sheets, the lower edge portion of each of said copy sheets extending below the edge of its mating check sheet sufficiently to expose numerals written thereon indicating balance, said copy sheets being treated to facilitate folding under of said portion, whereby said balance will be exposed in proper relation to said parallel lines when the book is opened to write another check.

3,048,427
QUICK DISCONNECT SEGMENTAL TUBE COUPLING
George A. Mahoff, 1834 Old Orchard Road, and Leonard L. Rice, 5608 Valley Glen, both of Los Angeles, Calif.
Filed June 4, 1958, Ser. No. 739,789
4 Claims. (Cl. 285—81)



1. A flexible coupling for connecting a first tubular member having an increased diameter bead portion adjacent one end thereof and a second opposing tubular member, said coupling comprising: segmental annular retainer means dimensioned to be received over said bead portion in spaced relationship therewith, said retainer means including a reduced diameter end portion for pivotably contacting said first tubular member on the axially outer side of said bead portion, annular sealing means on the radially inner side of said retainer means for making sealing contact with said bead portion, said retainer means having on its outer circumference a spring holding means disposed axially inwardly of the outer end of said end portion, an annular spring disposed in said holding means for resiliently radially inwardly urging said retainer means and protruding radially outwardly of said holding means at a plurality of circumferential points, an annulus coaxially movable relative to said retaining means on and off over the axially outer end of the so resiliently urged retainer means for holding the retainer means in radially inwardly urged position, said annulus having a radially inwardly depending rounded nose spaced from said retainer means for cooperating with said spring at said points to effect releasable latching of the annulus around said retainer means, and means for sealingly coupling said retainer means to said second tubular member.

3,048,428
HOSE NOZZLE END WITH RADIALLY EXPANSIBLE SLEEVES
George M. Ransom, Toledo, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 29, 1960, Ser. No. 5,420
7 Claims. (Cl. 285—139)

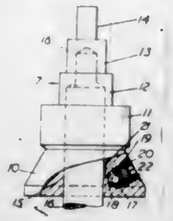


1. An end construction for fuel delivery nozzles and the like comprising a tubular shank having an external shoulder thereon adjacent the proximal end thereof, a plurality of axially compressible relatively thin wall sleeves of varying external diameters mounted on said shank, sleeve retaining means secured to said shank at the distal end thereof securing the distal end of the sleeve farthest from said shoulder to said shank, an axially sliding separating sleeve retainer mounted on said shank interconnecting said sleeves whereby said sleeves are in compression series, cam means bearing against said sholder and against one of said sleeves axially to compress said sleeves, and means to actuate said cam means compressing a U-shape handle, said cam means being secured to the legs of said handle, said sleeves being flexed outwardly away from said shank by such compression thus created to form respective peripheral bulges of different diameters about said shank.

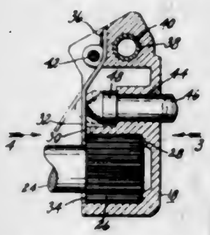
3,048,429
DRIVING MECHANISMS FOR SOUND REPRODUCING APPARATUS
Edward Thomas Humby, Hornchurch, England, assignor to Collaro Limited
Filed July 1, 1960, Ser. No. 40,316
Claims priority, application Great Britain Aug. 6, 1959
6 Claims. (Cl. 287—52.08)

1. In sound reproducing apparatus including a constant speed electric driving motor, a driving shaft forming part

of said motor, a stepped driving pulley having an internal annular wall defining a central socket in said pulley, said shaft having a close fit in said socket, the improved means for holding said shaft in said socket which comprises a screw-threaded blind bore in said pulley, the blind end of said bore being adjacent said wall, a hard ball in the blind end of said bore and a screw screwed tightly into said bore and pressing said ball against said blind end to distort said wall inwards to grip said shaft.



3,048,430
WINDSHIELD WIPER ARMS AND LOCKING DEVICES THEREFOR
Elmer E. Reese, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 29, 1959, Ser. No. 843,157
1 Claim. (Cl. 287—53)



A windshield wiper arm including, an inner section having a socket recess, leaf spring locking means movably carried by said inner arm section and extendible into the socket recess, said leaf spring locking means being rigidly attached to said inner arm section, and wiper arm carried external means accessible from the top of said inner section and engageable with said locking means for retracting said locking means from said socket recess, said external means comprising a reciprocable button supported for movement in an opening parallel to and spaced from the socket recess and being held in assembled relation with said wiper arm by said leaf spring locking means.

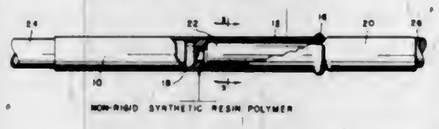
3,048,431
DRILL ROD COUPLING
Samuel J. Shores, 2033 Mason St., San Pablo 10, Calif.
Filed Feb. 6, 1961, Ser. No. 87,451
2 Claims. (Cl. 287—103)

1. In a mechanical coupling for lengths of drill rod, the combination of a length of drill rod having a central spline forming socket of square cross-section extending inwardly from the end thereof, oppositely disposed spring like fingers extending in spaced relation outwardly from the end of said length of drill rod, said spring like fingers having laterally extending shouldered portions at the ends thereof, a second length of drill rod having a tongue portion of square cross-section extending into the spline forming socket of said first length of drill rod, and said second length of drill rod being milled away on opposite sides to provide recesses corresponding with the outline provide abutments against which the shouldered portions of the spring like fingers carried by said first length of drill



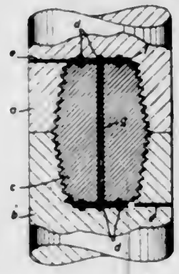
rod will abut and lock said lengths of drill rod together as a unit when said lengths of drill rod are moved axially into fully coupled relation.

3,048,432
FISHING ROD JOINT
Clair M. Harter, 13505 Interurban Ave. S., Seattle, Wash.
Filed Sept. 29, 1958, Ser. No. 764,045
4 Claims. (Cl. 287—126)



1. A rod joint for sectional fishing rods, comprising: a cylindriform metallic male ferrule adapted to receive and be attached to a first rod section; an elongated tubular ferrule sleeve to receive and be attached to a second rod section to be joined in extension of said first rod section and having a mouth to loosely receive said male ferrule in mating relation; and a resilient, low-friction, non-metallic socket sleeve securely disposed within said sleeve inward of its mouth, said socket sleeve having an internal diameter less than the external diameter of said male member.

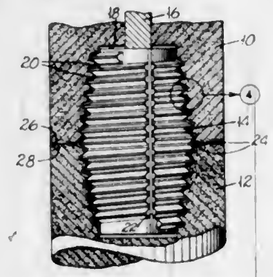
3,048,433
SCREW NIPPLE CONNECTION FOR ELECTRODES
Ernst Doetsch, Thornerstrasse 21, Nurnberg, Germany
Filed July 20, 1959, Ser. No. 828,301
Claims priority, application Germany July 25, 1958
8 Claims. (Cl. 287—127)



1. In combination: a first electrode, a second electrode having one end portion in engagement with an end portion of said first electrode, each of said end portions of

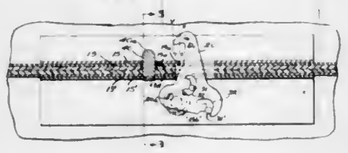
and interconnecting said end portions of said electrodes, the end faces of said nipple and also the electrode surfaces respectively facing said end faces of said nipple being provided with depressions, and a self-hardening cement filling said depressions in said nipple and said electrodes, thereby anchoring said electrodes and said nipples relative to each other and preventing rotation of said electrodes and said nipples with regard to each other.

3,048,434
ELECTRODE JOINT
Harry V. Johnson, Niagara Falls, and Fred P. Kirkhart, Sanborn, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed July 27, 1959, Ser. No. 829,762
7 Claims. (Cl. 287—127)



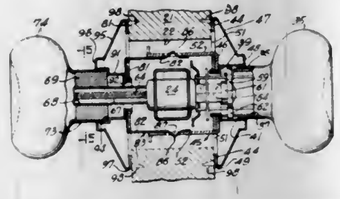
1. A carbon electrode joint comprising an upper electrode section, a lower electrode section, a nipple therebetween, and conductive molten metal in substantially all of the available space between said nipple and said electrode sections, said nipple and said electrode sections all being in physical contact with each other.

3,048,435
CATCH CONSTRUCTION
Louis De Marco, Cleveland, Ohio, assignor to The Langenau Mfg. Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 4, 1959, Ser. No. 838,137
5 Claims. (Cl. 292—111)



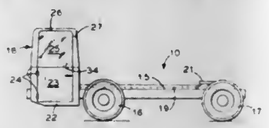
1. A catch construction adapted to detachably connect separable wall portions movable between open and closed relationships, comprising a mounting portion adapted to be carried by one of said wall portions, a latch movable between latching and unlatching positions and having a hook-like engaging portion engageable with a hook engager on the other of said wall portions to hold said wall portions in said closed relationship in said latching position, a latch controller member for moving said latch between said positions, an eccentric pivotally connecting said controller member and latch, and latch movement guide means operatively connecting said latch and mounting portion spaced from said controller member, said guide means including two guide structures; each guide structure including a coacting pin element and slot element, one of said elements being carried by said latch and the other of said elements controlling one portion and the other pin element controlling the remaining portion of the path of latch movement between said positions.

3,048,436
SNAP ACTION LOCKSET ASSEMBLIES
Hyman A. Schiowitz, Brooklyn, N.Y., assignor to Arrow Lock Corporation, Brooklyn, N.Y., a corporation of New York
Filed Nov. 4, 1959, Ser. No. 850,909
3 Claims. (Cl. 292—337)



1. A lockset for a door having an opening to receive a lock bolt and a bolt operating spindle comprising a first back plate positionable over one end of said opening on one surface of said door, a second back plate positionable over the other end of said opening on the opposite surface of said door, a pair of spaced apart apertures in said first back plate, a pair of spaced apart apertures in said second back plate, a U-shaped girder mounted on said first back plate, spaced apart substantially parallel legs on said girder extending through the apertures in said first back plate and inwardly into said opening, a transverse slot in each of said legs, a U-shaped spring member mounted on said second back plate, a pair of spaced apart blades on said spring member extending through the apertures of said second plate and inwardly into said opening, the free ends of said blades being biased outwardly from each other, a bight in each of said blades, said bights engaging respective slots in said girders by snap action when said two plates are moved toward each other securing them in their respective positions against said door, said bights becoming disengaged from their respective slots when said two plates are urged apart from each other.

3,048,437
TRACTOR-SEMITRAILER COMBINATION
Peter J. Linder, 320 Burd St., Pennington, N.J.
Filed Mar. 17, 1961, Ser. No. 96,405
9 Claims. (Cl. 296—1)

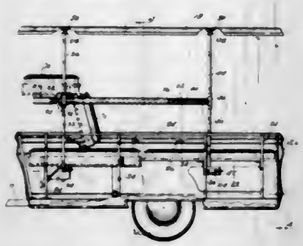


1. In combination, a carrier tractor and a first flat bed trailer connected thereto, second and third tractors and respectively associated trailers in superposed relation to each other and carried as cargo on said first trailer, each of said second and third tractors having a driver's compartment normally projecting substanially above the bed of the associated trailer, said compartment comprising a fixed lower portion and an upper portion movable to a depressed portion, said fixed compartment portion having a top peripheral edge defining a horizontal plane only slightly above the bed of the associated trailer and being free of any projections extending above said horizontal

3,048,438
TRAILER CONSTRUCTION

Fred C. Koch, Robert W. Veazey, Roland P. Gibbs, and Ranie H. Love, Wichita, Kans., assignors to Koch Engineering Company, Inc., Wichita, Kans., a corporation of Kansas

Filed Oct. 28, 1960, Ser. No. 65,675
12 Claims. (Cl. 296—27)

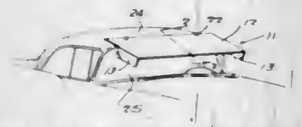


1. In a trailer construction a reciprocally movable roof, a collapsible support of pivotally movable lifting elements movable into elevated and lowered positions supporting said roof when in the elevated position, and at least one torque-storing means having one end portion fixedly anchored and an opposite end portion connected to and pivotally movable with one of said pivotally movable lifting elements whereby collapse of said support twists said torque-storing means and stores torque therein releasable when said collapsible support moves into said elevated position.

3,048,439
PORTABLE CANOPY

Paul L. Brigmon, 3965 Ardmore Ave., Cincinnati, Ohio

Filed Mar. 10, 1961, Ser. No. 94,820
1 Claim. (Cl. 296—95)



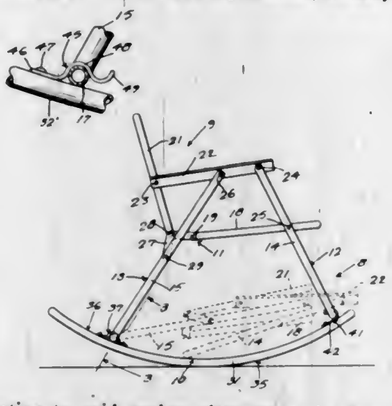
A rain visor for automobiles comprising a generally rectangular flat body of rigid cardboard coated with waterproofing material, said body being adapted to be disposed over a vehicle windshield with the rear marginal portion thereof extending over the forward portion of the vehicle roof, said body being formed at the forward portions of its side margins with flaps having rear outer corner portions and being provided with transverse crease lines defining the inside edges of said flaps, whereby the flaps are foldable downwardly to a depending position substantially perpendicular to the main portion of the body, the lower rear corner portions of the depending flaps being formed with diagonal crease lines to define triangular corner flaps, said corner flaps being foldable inwardly to positions substantially parallel to the vehicle windshield, respective suction cups secured to the rear marginal portions of said body adjacent the opposite rear corners of the body and adapted to be engaged on the vehicle roof, and respective additional suction cups secured to said triangular corner flaps and arranged to engage on the vehicle windshield.

3,048,440
FOLDING ROCKING CHAIR

David M. McPherson, Arcadia, Calif. (2616 W. El Segundo Blvd., Gardena, Calif.), and Ola D. Walker, 1419 S. Pleasant Ave., Ontario, Calif.

Filed Dec. 27, 1960, Ser. No. 78,354
1 Claim. (Cl. 297—33)

A rocker unit for use with a folding chair of the type having a rear cross member connecting lower portions of the rear legs and a front cross member connecting lower portions of the front legs of the chair, comprising an elongated rigid rectangular frame having corresponding transversely spaced sides forming rocker elements, said frame being bowed longitudinally from end-to-end thereof to provide a concave upper side and a convex underside, a pair of transversely aligned rear hook members secured to upper sides of the rocker elements adjacent a rear end of the frame and including forwardly extending resilient hook portions yieldably disposed relative to said rocker elements and adapted to yieldably engage over said rear cross member, between said rear legs, for connecting said rear cross member pivotally and detachably to the frame, and a pair of transversely aligned front connecting members secured to the upper sides of said rocker elements adjacent a forward end of the frame and comprising rearwardly opening rigid hooks in which said front cross member engages, between said front legs, and from which said front cross member is detachable rearwardly by movement of the chair to a folded position.



3,048,441
DECORATIVE SIDE PANEL ACCESSORY FOR A CHAIR

Fred G. Rose, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey

Filed May 19, 1961, Ser. No. 111,220
3 Claims. (Cl. 297—463)

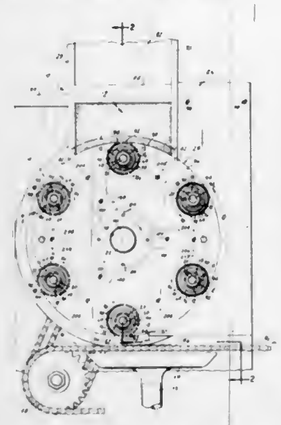


1. A detachable decorative side panel accessory for a chair having at one side thereof divergent front and rear legs, said accessory comprising: a side panel having a decorative outer surface; and a pair of elongated brackets mounted on the inner surface of said side panel in divergent disposition conforming to the divergence of said front and rear chair legs, said brackets being detachably engageable with said chair legs respectively for mounting the side panel on the chair.

3,048,442
TRANSFER MECHANISM FOR BRUSH FIBERS OR THE LIKE

Alfred F. Anderson, East Hartford, Conn., assignor to The Fuller Brush Company, East Hartford, Conn., a corporation of Connecticut

Filed Mar. 6, 1961, Ser. No. 93,545
18 Claims. (Cl. 300—7)

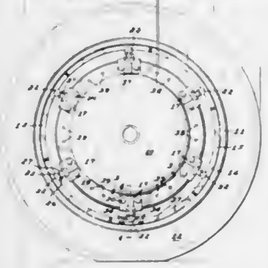


1. In a brush making machine, the combination of an open-bottom hopper adapted to receive a mass of transversely disposed brush fibers, a fiber receiving device, a plurality of similar fiber transfer wheels each rotatable about a transverse axis and each having an arcuately extending series of fiber receiving notches along a peripheral portion thereof, means for bodily moving said wheels in succession from a loading zone adjacent the bottom of a mass of fibers in said hopper to an unloading zone adjacent said receiving device, means for rotating each transfer wheel at said loading zone, means operable at said loading zone to load the notches of each transfer wheel with fibers from the bottom of said mass of fibers, vertical support means for holding fibers in said hopper which are not acted upon by said loading means, and means operable to retain fibers in the notches of said transfer wheels during movement of the wheels from said loading zone to said unloading zone.

3,048,443
ADJUSTABLE TREAD WHEEL

John F. O'Donnell, Rochester, and Clarence B. Richey, Royal Oak, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Feb. 24, 1961, Ser. No. 91,485
4 Claims. (Cl. 301—9)

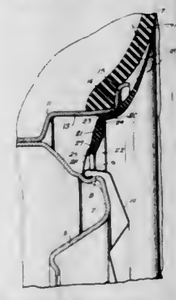


1. In an axially adjustable wheel tread structure, a rim having a plurality of circumferentially spaced, helically extending rails on the inner circumference thereof, a wheel disc having a peripheral portion, brackets engaged one with each rail and secured to the disc at intervals along the circumference thereof to support the rim from the disc, each bracket having a disc-engaging portion and a rail-engaging portion offset substantially axially of the wheel disc from the disc-engaging portion, the disc having a first series of holes in its peripheral portion adapted to receive the brackets with the rail-engaging portions extending from a common side of the disc, and a second series of bracket mounting holes in the peripheral portion of the disc intermediate the first series of holes and so located with respect to the rails as to receive the brackets with the rail-engaging portions extending from the opposite side of the disc and engaged with the rails without displacement of the rim relative to the disc.

3,048,444
WHEEL COVER

George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Filed Nov. 22, 1957, Ser. No. 698,215
5 Claims. (Cl. 301—37)



1. In a wheel structure including a tire rim having an intermediate generally radially inwardly facing flange joining at its axially outer end a terminal flange with a shoulder that faces generally radially inwardly and axially outwardly at juncture of the flanges, the tire rim being adapted for supporting a pneumatic tire having an outer sidewall, a circular trim structure for disposition over the outer side of the wheel including a non-metallic annular tire sidewall simulating flexible ring member dimensioned to overlie the tire sidewall and the terminal flange and having an inner marginal portion seating on the rim shoulder and projecting generally telescopically axially inwardly in engagement with the axially outer portion of the intermediate flange and having projecting from the telescoped portion a generally radially inwardly extending portion, a substantially rigid circular retaining member having a radially outer edge of a diameter to engage in opposed relation to said axially outer portion of the intermediate flange and offset axially inwardly substantially relative to said shoulder and in a gap relation to the intermediate flange slightly less than the thickness of the telescoped portion of the ring member so as to maintain the inner portion of the ring member in snug engagement with the rim shoulder and the portion of the intermediate flange telescoped thereby, said circular member having means thereon supplementing said edge and engaging the inwardly projecting inner portion of the ring member to interlock it against escape from said circular member and from said axially outer portion of the intermediate flange and said shoulder, and means for detachably securing said circular member to the wheel.

3,048,445
WHEEL COVER

John V. Shoemaker, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Filed Mar. 24, 1958, Ser. No. 723,346
13 Claims. (Cl. 301—37)

7. A wheel cover member for overlying disposition upon a wheel, the cover member having an outer mar-

ginal cover area provided with circumferentially spaced retaining portions disposed radially outwardly of the outer marginal area with the retaining portions having a diameter slightly smaller than the inside diameter of the terminal rim flange of a tire rim so as to lie in radially spaced relation when the cover member is applied



against the wheel, and a non-metallic tire side wall ring simulating member having means for engaging the outer marginal area of the cover and the retaining portions, the retaining portions being adapted to coact with the ring simulating member for sustaining both the cover and the ring members in assembly with the wheel.

3,048,446

WHEEL COVER

John V. Shoemaker, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Filed Apr. 15, 1958, Ser. No. 728,682
17 Claims. (Cl. 301—37)



1. In a wheel structure including a tire rim having a terminal rim flange and a pneumatic tire mounted on the tire rim, a wheel cover structure for concealing the wheel including a non-metallic tire side wall ring simulating member spaced from and bridged over the terminal rim flange with its outer margin adapted for engagement against the tire and with its inner annular stepped margin adapted for abutment against the tire rim, said inner stepped margin having means for discharging water and dirt during the rotation of the wheel structure which tends to collect on an axially outer side of the tire rim comprising circumferentially spaced generally axially and radially outwardly extending grooved areas on the axially inner side of the annular stepped margin defining drain grooves for allowing water to be discharged radially of the wheel structure, and a cover structure having means for retaining itself upon the wheel and with a portion of the cover structure bearing against the annular stepped margin clamping the tire side wall ring simulating member in assembly upon the wheel.

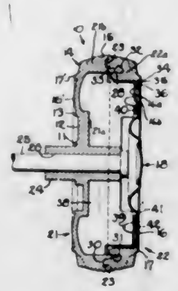
3,048,447

TOY WHITE SIDE WALL TIRE

Bernard C. Klint, Rockford, Ill., assignor to Ny-Lint Tool & Mfg. Co., Rockford, Ill., a corporation of Illinois

Filed Aug. 5, 1960, Ser. No. 47,731
8 Claims. (Cl. 301—63)

7. A wheel for a toy vehicle comprising an inner member having a cylindrical peripheral wall and an inner end wall extending radially inwardly from one end of said cylindrical wall, said cylindrical wall terminating at the other end in a radial face, an outer member having a cylindrical peripheral wall terminating at one end in a radial face abutting against said first-mentioned face, a ring telescoped into said outer member and having inner and outer radial walls, a disc telescoped into said ring,



means for holding said disc against shifting axially outwardly relative to said ring and said ring against shifting axially relative to said outer member, means acting between said inner member and said disc to block movement of the latter axially inwardly when said faces are in contact, and means on said members for holding said faces together.

3,048,448

RAILWAY HOPPER CARS

Edmund R. Aller, Gary, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed Aug. 8, 1960, Ser. No. 48,192
14 Claims. (Cl. 302—52)



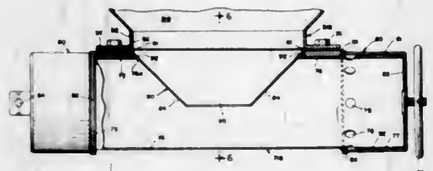
1. In a railway car, a longitudinally extending body including hopper structure adapted to contain granular material and provided with a pair of laterally spaced-apart bottom discharge openings, a pair of laterally spaced-apart valve casings carried by said hopper structure and respectively disposed below said bottom discharge openings, each of said valve casings having a tubular passage extending laterally therethrough and a top inlet port therein communicating between said passage and the adjacent one of said bottom discharge openings, said passages being arranged in substantial lateral alignment with each other, a connecting conduit extending laterally between said valve casings and communicating at the opposite ends thereof with the adjacent inner ends of said passages, a pair of laterally extending valve sleeves independent of said connecting conduit and respectively arranged in said passages and respectively independently rotatably mounted upon said valve casings, each one of said valve sleeves including an intermediate portion having a valve port therein that is adapted to be rotated selectively into and out of registry with the adjacent one of said top inlet ports, whereby each one of said valve sleeves has open and closed positions with respect to the adjacent one of said top inlet ports, the inner ends of said valve sleeves being arranged in laterally spaced-apart relation and respectively communicating with the adjacent end portions of said connecting conduit and the outer ends of said valve sleeves respectively projecting laterally outwardly from the adjacent ones of said valve casings and constituting a pair of air tubes, whereby a suction conduit may be connected to either one of said air tubes and the other of said air tubes may serve to admit conveying air thereinto, and a pair of handle structures respectively carried by said valve sleeves and respectively disposed laterally outwardly of the adjacent ones of said valve casings, thereby to facilitate independent rotation of each one of said valve sleeves between its open and closed positions, whereby the granular material in said hopper structure may be selectively unloaded therefrom through both of said bottom discharge openings or through either one of said bottom discharge openings as desired.

3,048,449

RAILWAY HOPPER CARS

Edmund R. Aller, Gary, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed Aug. 8, 1960, Ser. No. 48,302
6 Claims. (Cl. 302—52)



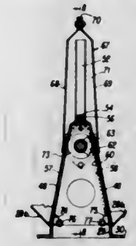
1. A railway car comprising hopper structure adapted to contain granular material and provided with a bottom discharge outlet, a first outwardly directed collar carried by said hopper structure in surrounding relation with said bottom discharge outlet, a second outwardly directed collar arranged below said first collar and detachably secured thereto, a tubular casing carried by said second collar and disposed below said bottom discharge outlet, said casing having an air inlet port in one end thereof and an air outlet port in the other end thereof, said casing also having an opening in the top intermediate portion thereof and disposed below said bottom discharge outlet, and a funnel carried by said second collar and arranged in said opening and projecting downwardly into the interior of the intermediate portion of said casing, said funnel converging downwardly from an open top end communicating with said bottom discharge outlet to an open bottom end communicating with the lower part of the intermediate portion of said casing, whereby the granular material in said hopper structure falls through said bottom discharge outlet and through said funnel into the lower part of the intermediate portion of said casing and is transported therefrom when a current of air is passed through said casing from said air inlet port into said air outlet port so as to effect unloading of the granular material from said hopper structure, the open bottom end of said funnel being disposed above the bottom wall of the intermediate portion of said casing and below the top wall of the intermediate portion of said casing, whereby the granular material in said hopper structure falls through said bottom discharge outlet and through said funnel onto the bottom wall of the intermediate portion of said casing and piles up in the lower part of the intermediate portion of said casing and submerges the open bottom end of said funnel and stoppers said funnel when no current of air is passed through said casing from said air inlet port into said air outlet port so as to prevent spilling of the granular material from the ends of said casing through said air inlet port and said air outlet port.

3,048,450

HOPPER CAR FOR GRANULAR MATERIALS

Edmund R. Aller, Gary, Ind., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed June 22, 1959, Ser. No. 822,093
26 Claims. (Cl. 302—52)



1. In combination, a pair of hopper bodies each adapted to contain granular material and each being provided with bottom outlet structure through which such material is discharged, each of said bottom outlet structures having a gravity discharge opening in the lower portion thereof equipped with a closure to prevent unloading of such material by gravity action from the hopper body associated therewith when said gravity discharge opening is closed, a pair of pneumatic discharge conduits respectively connected at the inner ends thereof with the lower portions of said bottom outlet structures in communication with the interiors thereof and each of said pneumatic discharge conduits having at its outer end a suction connection to facilitate pneumatic unloading of such material from the hopper bodies respectively associated therewith, a pair of valve elements respectively arranged in the upper portions of said bottom outlet structures and selectively movable relative to the respective bottom outlet structures between closed and open positions so that such material in said hopper bodies may be selectively unloaded therefrom through the corresponding bottom outlet structures by either gravity action or pneumatic action when the corresponding valve elements are open but cannot be unloaded from the respective hopper bodies through the respective bottom outlet structures by either gravity action or pneumatic action when the corresponding valve elements are closed, a pair of mechanisms for respectively moving said valve elements selectively between their closed and open positions, and a connector conduit arranged at the opposite ends thereof with the respective discharge outlet structures in communication with the interiors thereof, whereby both of said hopper bodies can be unloaded by pneumatic action through either of said pneumatic discharge conduits.

3,048,451

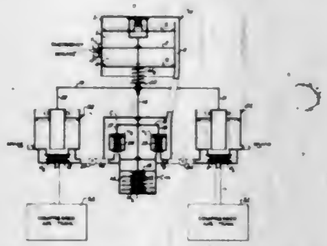
AUTOMATIC BRAKE SYSTEM INCLUDING SAFETY CUT-OFF VALVES FOR EACH BRAKE SECTION

Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, an Italian company

Filed Mar. 5, 1959, Ser. No. 797,400
Claims priority, application Italy Mar. 18, 1958
8 Claims. (Cl. 303—29)

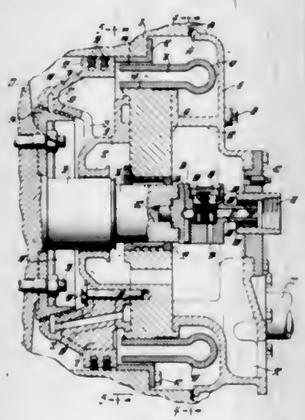
1. A control for a pneumatic medium adapted to operate brakes, said control being operative in association with a first source of a medium under constant pressure and a second source of a medium under variable pressure, said control comprising means provided with first and second chambers respectively coupled to said sources, a piston in said second chamber, a rod coupled to said piston and displaceable therewith in response to a varying pres-

sure in said second chamber, a resilient member operatively associated with said rod to oppose movement thereof, a rocker connected to said rod and movable therewith, valve control members on said rocker, means provided with a further chamber coupled to the first chamber for receiving the medium from said first chamber, valves in said further chamber controlling the flow of medium therefrom, said valves being adjacent said valve control members and being controlled by movement of said valve control members, sources of braking media, further valves between the latter said sources of braking media and said



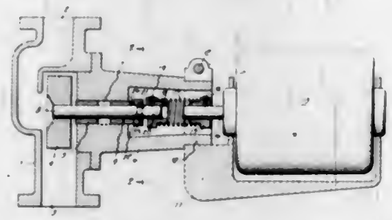
brakes for controlling the flow of medium from said latter sources to said brakes, conduit means for establishing fluid communication between said further chamber and said further valves so that said further valves are urged to a closed position by pressure controlled by the first said valves, said conduit means coupling said source of braking media via said further chamber to said first chamber, a second rocker pivotally coupled to said rod and movable therewith to engage said further valves to open the same, and resilient means between said piston and said second rocker.

3,048,452
TURBINE
Albert N. Addie, La Grange Park, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,345
9 Claims. (Cl. 308—26)



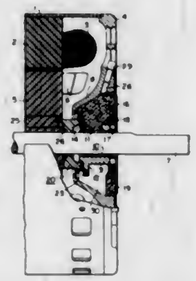
1. In a turbomachine comprising a case and a rotor within the case; a bearing for the rotor; a support for the bearing mounted in the case comprising an outer ring connected to the case, and inner ring mounting the bearing, and a plurality of hairpin springs spaced around the rings fixed to and between the rings; a labyrinth seal adjacent the bearing comprising a part of the rotor and a stationary part mounted on the inner ring; means for supplying compressed air to a zone of the seal intermediate the ends thereof; and means for conducting the air leaking from the seal past the hairpin springs to cool the springs.

3,048,453
BEARING AND SEAL ASSEMBLY
Martin Scott, Valhalla, N.Y., assignor to Metallized Carbon Co., Inc., Ossining, N.Y., a corporation of New York
Filed Feb. 1, 1961, Ser. No. 86,406
7 Claims. (Cl. 308—36.2)



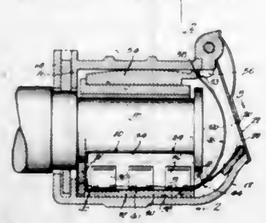
1. A bearing and seal assembly comprising a housing a rotatable element therein, a support secured to said housing, a shaft for said element in said support and extending through said housing, a bearing for said shaft in said support adjacent to said housing, the end of said bearing remote from said housing extending beyond said support, said end being undercut adjacent to said shaft, a seal collar on said shaft abutting said end, an elastic annulus interposed between said collar and shaft to provide frictional engagement thereof, rotating means for said shaft flexibly connected thereto, and a compression spring biasing said shaft and collar against said bearing.

3,048,454
BEARING ASSEMBLY FOR DYNAMOELECTRIC MACHINES
Charles F. Irvin, Lima, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 5, 1960, Ser. No. 20,111
5 Claims. (Cl. 308—36.4)



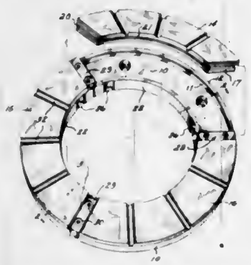
1. A bearing assembly for a rotatable shaft comprising a sleeve bearing member for supporting the shaft, support means for said bearing member including a radial shoulder extending circumferentially at least part way around the bearing member intermediate the ends thereof, a stationary annular thrust member supported against said shoulder and having a radial bearing surface, means for supplying lubricant to the bearing member, and a flinger member rotatable with the shaft adjacent the end of the bearing member, said flinger member having a radial surface thereon engaging the radial bearing surface of said thrust member.

3,048,455
ACCURATE JOURNAL LUBRICATORS
Edward C. Jeffers, 2610 Eastwood Ave., Chicago 25, Ill.
Filed Dec. 21, 1959, Ser. No. 860,889
5 Claims. (Cl. 308—88)



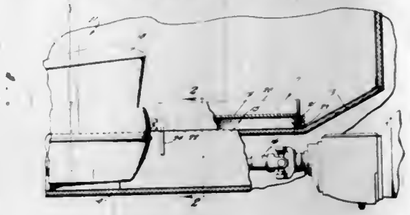
1. A journal lubricating device adapted to be mounted in a journal box through the inner end wall of which extends a journal which has a well below the journal for holding a liquid lubricant, an access opening opposite the end wall, and a lid closing the opening, comprising, a sheet of porous, fibrous material having a base segment locatable in the journal well and an angularly upwardly extending lubricating segment pressable against the journal, a mounting strip overlying said base segment, and a spring wire retainer secured to said mounting strip at the outer end of said base segment, the ends of said wire retainer being engageable with a fixed part of the journal box adjacent its upper end and urging the mounting strip downwardly and inwardly, thereby securely holding said lubricating device in a journal lubricating position.

3,048,456
WATER LUBRICATED THRUST BEARINGS
Jerome M. Gruber, Waukesha, Wis., assignor to Waukesha Bearings Corporation, Waukesha, Wis., a corporation of Wisconsin
Filed Nov. 15, 1960, Ser. No. 69,502
5 Claims. (Cl. 308—160)



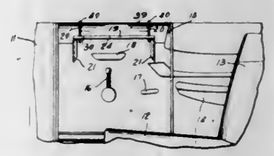
1. In a thrust bearing, a base ring having an upstanding permanent external peripheral rim with an inwardly projecting circular tongue, at least three arcuate pad sections having a total circumferential length of somewhat less than 360 degrees positioned on top of said base ring and each having a lower portion of decreased width in cross section and each having an external peripheral groove above said portion of decreased width which interlockingly receives the circular tongue of the base ring rim, which rim fits against the pad portions of decreased width and provides a substantially flush outer periphery for the bearing, and each pad section having an internal peripheral groove, radially extending separator blocks detachably secured to said base ring between the ends of said arcuate sections, and a plurality of arcuate retainer band sections separate from said separator blocks detachably connected to the inner periphery of said base ring and each having an upwardly projecting portion forming an inner rim positioned against the inner periphery of the pad section portions which are of decreased width, each of said inner rim portions having an inwardly flanged tongue engaging the internal peripheral groove of a pad section to maintain the latter in assembled position.

3,048,457
AUTOMOBILE TRAY DEVICE
Rudolf G. Haase, 576 Plymouth Road, Hillside, N.J.
Filed July 14, 1961, Ser. No. 124,180
3 Claims. (Cl. 311—21)



1. An automobile tray device comprising a horizontal tray member comprising a flat bottom wall and peripheral walls surrounding same, the front and rear portions of the peripheral walls dependings below said flat bottom wall, and respective pairs of opposed depending flat, plate-like support members adjustably secured to the inside of said front and rear portions and having bottom edges contoured to conformably engage transversely on the hump of an automobile floor above the automobile drive shaft and top edges abutting said flat bottom wall to prevent rotation of said support members.

3,048,458
DISPOSABLE CAR TRAY
Robert J. Thomas, 3451 Academy, Dearborn 8, Mich.
Filed Aug. 8, 1961, Ser. No. 130,091
2 Claims. (Cl. 311—22)



1. A disposable tray for an automobile comprising a unitary piece of cardboard cut and scored whereby to form a rectangular main section which serves as the bottom of said tray, said main section having score lines defining side and end elements which serve as the side and end walls of said tray, when bent upwardly along said score lines, each of said end elements having an angular extension thereon which is downwardly bendable along a score line to form a support member for said tray, and each of said end elements having a perforated tab thereon bendable along another score line to form elements which overlie said side walls, there being perforations in said side walls in alignment with the said tab perforations, and wire hook members having a portion extending beneath said tray and having elements thereon received in the said perforations, said last named elements serving to prevent the displacement of said side and end walls when the tray is in use.

3,048,459
CONVERTIBLE TABLE STRUCTURE
James J. Moore, 5725 Roscoe St., Chicago, Ill., assignor of thirty-three and one-half percent to Leslie J. Bajak, Chicago, Ill.
Filed Mar. 8, 1960, Ser. No. 13,561
3 Claims. (Cl. 311—108)

3. A convertible table comprising a generally rectangular horizontal bed, supporting legs depending from said

bed, an endless, generally rectangular upstanding wall on the marginal portions of the bed defining a generally rectangular game field, said wall having a flat top and including end and side portions, said side portions having longitudinally spaced recesses therein, elongated metallic plates secured longitudinally on the side portions of the wall, said plates overlying the recesses and having longitudinal slots therein communicating with said recesses, elongated longitudinally grooved guides recessed longitudinally into the side portions of the wall between the end portions thereof and the recesses, said guides com-



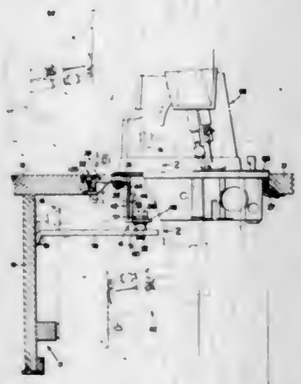
municating with the slots, a removable top mounted on the wall for covering the game field, said top including inner end-abutting sections slidable longitudinally on the wall, oppositely facing inclined tongues on the undersides of the sections operable in the guides and engageable from opposite directions in the slots and beneath the plates for securing the sections on the wall against lateral and vertical movement, and means for releasably securing the sections against outward longitudinal movement on the wall for preventing withdrawal of the tongues from the slots.

3,048,460

SUPPORT MEANS FOR SEWING MACHINES

Edward J. Herbst, South Plainfield, and Griffen R. Muller, New Brunswick, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed May 26, 1959, Ser. No. 815,902
5 Claims. (Cl. 312—30)



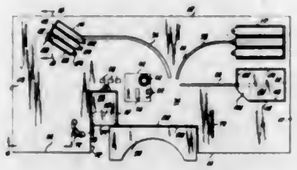
1. A cradle adapted to support a sewing machine in a cabinet, said cradle comprising a bar, means for hinging said bar to said cabinet, a locking member carried on said cradle, said locking member being operable to secure said sewing machine to said bar, and a lock actuating handle located below said bar and having one end secured to said locking member and the other end constructed and arranged as to engage a portion of said cabinet and thereby support said cradle when said locking means is in unlocked position.

3,048,461

AUTOMATIC DESK FOR THE DISABLED

Gordon W. Peterson, 6600 Luzon Ave., Washington 12, D.C.

Filed Feb. 18, 1959, Ser. No. 793,992
8 Claims. (Cl. 312—196)



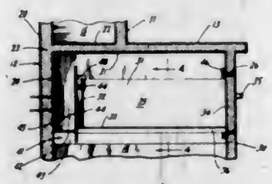
1. A combination comprising: a desk having a top; at least one desk tray situated on said desk top; means for moving each said desk tray from a position on said desk top remote from the front portion thereof to a second position adjacent said front portion; said means including guide means in the form of a through-slot in said desk top, said through-slot being formed to provide a predetermined path of movement for said tray from said remote position towards said second position, said through-slot being arcuate at least for a portion of its length; slide means on the underside of said desk top having thereon a slide member adapted to slide freely along said slide means, said slide member being provided with a member having an elongated slot extending at a substantial angle to said slide means, said desk tray having a projection attached thereto which passes through said through-slot and rides in said elongated slot of said member, said slide means being so situated relative to said through slot in the desk top that when said slide member is moved along the length of said slide means, said projection remains in said longitudinally slotted member and follows the path of said through slot substantially throughout its length.

3,048,462

CABINET STRUCTURE

William G. Fisher, Wilmington, Del., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Sept. 24, 1959, Ser. No. 842,160
10 Claims. (Cl. 312—214)



5. In cabinet structure including a wall having an opening therein communicating with a compartment defined in part by said wall, storage bin means normally positioned within said compartment and including an outer wall portion closing said wall opening, means mounting said storage bin means for movements into and out of said cabinet structure through said wall opening, a panel spaced transversely from the wall portion of said bin means and magnetically mounted upon said storage bin means, and sealing strip means disposed along the periphery of said cabinet wall opening and magnetically engageable with said panel mounted upon said storage bin means to seal said opening upon movement of said storage bin means to its fully extended position.
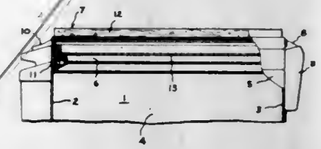
3,048,463

WOODEN TOP STRUCTURE FOR A WASHING VAT AND THE LIKE

Melvin R. Kauffman, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed June 23, 1960, Ser. No. 38,243
5 Claims. (Cl. 312—237)

1. A wood top structure comprising a relatively flat substantially rectangular top section formed of wood with the grain of the wood running in a predetermined direction parallel to a pair of opposed sides of said section, a substantially rectangular support frame formed on its four sides with flanges, four brackets adjacent the four edges respectively of said top section to fit against said flanges respectively, means securing said brackets to said flanges to secure said top section to said support frame, said brackets each being provided with elongated slots running substantially at right angles to the direction of said grain and headed pins extending through said slots and attached to said top section to secure the top section to said brackets.



CHEMICAL

3,048,464

WATER SOLUBLE DYE FORM AND METHOD OF MAKING

Carl E. Fisher, 945 Coolidge, Clawson, Mich.

Filed Apr. 7, 1959, Ser. No. 804,838
6 Claims. (Cl. 8—79)

1. A dye marker for gradually releasing a dye into salt water, said marker being stable under conditions of relatively high humidity and relatively great ranges in atmospheric temperature, said marker comprising a block of solid mannitol having a water soluble dye dissolved uniformly therein, said mannitol comprising the major constituent of said block.

3,048,465

POLYOLEFIN WET SPINNING PROCESS

Wolfgang Jurgeleit, Coraopolis, Pa., assignor to Vereinigte Glanzstoff-Fabriken A.G., Wuppertal-Elberfeld, Germany

Filed Sept. 7, 1960, Ser. No. 54,406
Claims priority, application Germany June 16, 1956
15 Claims. (Cl. 18—54)

1. In a process for the production of a polyolefin filament in which the polyolefin has a molecular weight of at least 60,000 and is spun from an organic solvent spinning solution, the solvent extracted from the filament and the filament stretched for fiber orientation, the steps which comprise: extruding the polyolefin spinning solution containing from about 10 to not more than 18% by weight of said polyolefin through an air space of at least five centimeters into a solidifying bath containing a liquid medium inert to both the polyolefin and its solvent; cooling and solidifying the spun filament substantially without solvent extraction in said liquid medium which is maintained at a temperature of about 0° C. to 30° C.; extracting the solvent from the filament in a second bath containing a liquid which is inert to the polyolefin but which is miscible with the organic solvent; and stretching the solvent-extracted filament.

3,048,466

TREATMENT FOR GLASS BODIES IN FILAMENT FORMING OPERATION

Ralph L. Tiede, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Continuation of application Ser. No. 782,171, Dec. 22, 1958. This application Dec. 7, 1960, Ser. No. 74,430
10 Claims. (Cl. 18—54)

1. In a method for producing glass filaments which includes the steps of heating glass structures to provide a glass melt and attenuating the glass melt into filaments, the improvement comprising coating vitrified glass structures with a material capable of exerting a fluxing effect upon the revitrification of said vitrified structures, prior to melting the glass structures.



3,048,467

TEXTILE FIBERS OF POLYOLEFINS

John S. Roberts, South Charleston, and Andrew T. Walter, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

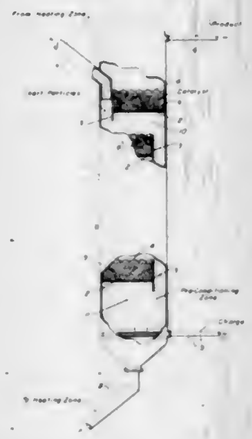
Filed Sept. 15, 1959, Ser. No. 840,499
4 Claims. (Cl. 18—54)



1. A process for producing multifilament low denier per filament polyethylene yarns which comprises the steps of sequentially melting polyethylene resin characterized by having a density of at least about 0.945 g./cc., a melt index of from about 6 to about 20 d.g.m./min., and a flow rate to melt index ratio of from about 15:1 to about 20:1; extruding said resin through a multi-orifice spinnerette at a temperature of from about 200° C. to about 320° C.;

melt drawing the extruded filamentous resin from about 15 fold to about 250 fold at a temperature above the first order transition temperature of the resin while simultaneously cooling the molten filamentous extrudate; and finally stretching the solidified melt drawn multifilament yarn in a steam atmosphere at a temperature below the first order transition temperature of the resin to an extent of from about 500 percent to about 1500 percent at a steam temperature of from about 100° C. to about 125° C.; said multifilament low denier per filament polyethylene yarns having a tenacity of at least 3 g.p.d., a stiffness of from about 30 to 100 g.p.d., an elongation at break of from about 10 percent to about 40 percent, and the individual filaments thereof each measuring from about 1 to about 15 denier.

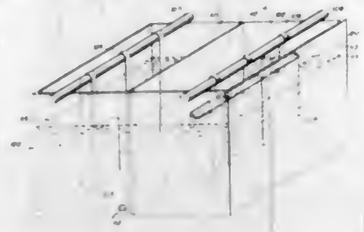
3,048,468
METHOD FOR EFFECTING CATALYZED REACTIONS
Charles H. Watkins, Arlington Heights, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Dec. 20, 1956, Ser. No. 629,671
3 Claims. (Cl. 23—1)



1. The method for effecting a catalyzed reaction which comprises introducing reactant material into the lower portion of a vertically elongated reaction zone, passing said reactant material upwardly through a series of vertically spaced horizontal catalyst beds in said zone, introducing a stream of inert heat retentive particles into the upper portion of said reaction zone in sufficient quantity and at a temperature to maintain the desired reaction temperature within said reaction zone, passing said stream of particles in a generally downward direction through said zone countercurrent to said reactant material and laterally across the reaction zone between said catalyst beds, removing heat retentive particles from the lower portion of said reaction zone and recovering product from the upper portion of said reaction zone.

3,048,469
METHOD OF MANUFACTURING SOLUBLE SILVER SALTS
Kenneth N. Brown, Teaneck, N.J., assignor to Yardney International Corp., New York, N.Y., a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,102
3 Claims. (Cl. 23—50)

1. The process for preparing substantially pure soluble silver salts which comprises electrolyzing a silver anode against an inert cathode through an interposed electrolyte permeable separator in a liquid electrolyte comprising an alkaline solution of a salt having an anion which forms soluble salts with silver, maintaining at said cathode a hydrostatic pressure greater than that at said anode whereby said silver oxide is precipitated, forming a slurry of



said silver oxide, reacting said slurry with an acid capable of forming the desired silver salt, and recovering said silver salt, said acid and said silver oxide being employed in substantially stoichiometric proportions.

3,048,470
FREE-FLOWING AMMONIUM CHLORIDE
Adolf Leber, Mannheim, and Guenter Hansen, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Mar. 9, 1959, Ser. No. 797,872
Claims priority, application Germany Mar. 12, 1958
7 Claims. (Cl. 23—100)

1. A new composition of matter which comprises finely-divided solid ammonium chloride having a normal residual moisture content after drying admixed with an amount of boron trioxide in the range of about 0.001% to 0.8% by weight based on anhydrous ammonium chloride.

3,048,471
ALKALI METAL POLYPHOSPHATOSULFATES AND PREPARATION THEREOF
Kenneth J. Shaver, Stoneham, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Nov. 15, 1956, Ser. No. 622,261
20 Claims. (Cl. 23—106)

1. A composition of matter comprising the alkali metal polyphosphatosulfates defined by the formula

$$xM_2O{:}yP_2O_5{:}zSO_3$$

wherein M is an alkali metal selected from the group consisting of sodium and potassium, and x, y and z are positive integers, wherein the ratio of x to the sum of y plus z is at least about 0.4 but less than one and characterized by the predominately repeating structural unit



wherein n is a positive integer and m is a number greater than one.

3,048,472
PROCESS FOR THE CONVERSION OF ACID SLUDGE INTO SULFUR DIOXIDE AND HYDROCARBONS
Bela Karsay, Flushing, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,949
Claims priority, application Germany May 5, 1958
3 Claims. (Cl. 23—177)

1. A process for the regeneration of sulfuric acid sludge having a sulfuric acid concentration of at least 70% to about 90% H_2SO_4 and contaminated by organic matter to produce concentrated sulfur dioxide gas and concomitantly converting naphthenic hydrocarbons into valuable aromatic hydrocarbons which comprises heating a separate stream of concentrated sulfuric acid sludge to a temperature of 572–842° F., heating another separate stream of hydrocarbons containing at least about 45% by weight naphthenic hydrocarbons selected from the group consisting of naphthene hydrocarbons and naphtheno-aromatic hydrocarbons to a temperature of 572–842 ° F., the total naphthene and naphtheno-aromatic hydrocarbons in said stream being at least about 10% in excess of that required for quantitative decomposition of the sulfuric acid content of the sludge, commingling and discharging the two separate heated streams of concentrated sulfuric acid sludge and naphthenic hydrocarbons into an enlarged reaction zone, maintaining the vaporized mixture of concentrated acid sludge and naphthenic hydrocarbons in said reaction zone to convert the sulfuric acid by substantially only reaction with the naphthenic hydrocarbons to sulfur dioxide while simultaneously converting at least 85% of the naphthenic hydrocarbons to unsulfonated aromatic hydrocarbons, withdrawing from the reaction zone the vaporized organic impurities of the sludge and the reaction products containing sulfur dioxide, water vapor and aromatic hydrocarbons, cooling in a first cooling zone to condense the organic impurities of the sludge, further cooling in a second cooling zone to condense the water vapor and aromatic hydrocarbons as liquid bodies, releasing the non-condensed sulfur dioxide from the liquid bodies of water and aromatic hydrocarbons, and discharging the aromatic hydrocarbons.

3,048,473
PROCESS FOR THE DECOMPOSITION OF ACID SLUDGE INTO SULFUR DIOXIDE, HYDROGEN SULFIDE, AND HYDROCARBONS
Bela Karsay, Flushing, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Nov. 13, 1958, Ser. No. 773,588
Claims priority, application Germany Nov. 13, 1957
1 Claim. (Cl. 23—177)

A continuous process for the decomposition of acid sludge obtained from the sulfuric acid treatment of petroleum products which comprises maintaining a body of acid sludge and decomposer liquid composed of liquid hydrocarbons containing sufficient polycyclic naphtheno-aromatic hydrocarbons to convert the free sulfuric acid content of the acid sludge to sulfur dioxide in an enclosed zone to prevent the introduction of extraneous gas at a temperature within the range of about 180–230° C., the proportion of acid sludge to decomposer liquid in the zone being within the range of 1:1 to 1:4 by weight, continuously introducing acid sludge having less than about 75% free sulfuric acid into said body, continuously introducing heated decomposer liquid into the body of acid sludge and decomposer liquid to maintain said body at a temperature within the range of 180°–230° C. to convert sulfonic acids and free sulfuric acid in the acid sludge to sulfur dioxide and water while converting naphtheno-aromatic hydrocarbons to aromatic hydrocarbons, continuously discharging the liquid mixture of decomposer liquid and acid sludge substantially free of sulfonic acids and free sulfuric acid from the first zone, continuously releasing a gas stream containing primarily sulfur dioxide and water from the first zone, heating in a second zone said mixture of decomposer and liquid acid sludge discharged from said first enclosed zone to a temperature within the range of about 260° C. to 400° C., to convert at said temperature residual sulfur compounds in the mixture into hydrogen sulfide, separating the hydrogen sulfide from the mixture, discharging from the second zone the liquid mixture of acid sludge and decomposer liquid substantially free of sulfur compounds, heating the liquid mixture discharged from the second zone to a temperature above 400° C. to 450° C. whereby the high molecular weight polycyclic compounds in the acid sludge are converted to lower molecular weight volatile compounds, separating the volatile constituents from the mixture leaving as a residue a tar, discharging the tar from the system, withdrawing from the system low molecular weight aromatic compounds containing aromatic compounds selected from the group consisting of one and two ring aromatic compounds, and recirculating polycyclic naphtheno-aromatic hydrocarbons of the volatile constituents as decomposer liquid to the first enclosed zone.

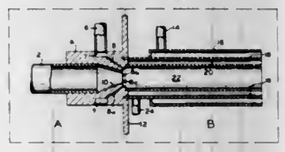
3,048,474
CATALYTIC RECOMBINATION OF RADIOLYTIC GASES IN THORIUM OXIDE SLURRIES
Leon E. Morse, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Continuation of application Ser. No. 701,938, Dec. 10, 1957. This application Dec. 7, 1961, Ser. No. 158,160
6 Claims. (Cl. 23—204)

1. A method of combining hydrogen and oxygen in an aqueous slurry containing a major proportion of thorium oxide and a minor proportion of uranium trioxide which comprises providing a small amount of molybdenum trioxide in said slurry under superatmospheric pressure.

3,048,475
METHOD AND DIAGNOSTIC COMPOSITION OF DETECTING PHENYLKETONES
Chauncey O. Rupe, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed June 16, 1958, Ser. No. 741,993
6 Claims. (Cl. 23—230)

6. A method of detecting phenylketones in a body fluid which comprises introducing into said liquid a diagnostic composition consisting of a bibulous carrier which has been impregnated upon at least a portion thereof with a solution which consists essentially of about 5.8 wt. percent of ferric ammonium sulfate, about 4.3 wt. percent of cyclohexylsulfamic acid and about 13.3 wt. percent of magnesium sulfate, said solution having a pH of 1.8.

3,048,476
CONVERSION OF HYDROCARBONS AND CARBONACEOUS MATERIALS
John B. Dwyer, Baldwin, N.Y., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Filed Apr. 27, 1955, Ser. No. 504,229
6 Claims. (Cl. 23—284)



1. A nozzle comprising a mixing section of constant flow path having walls disposed about an axis of revolution, conduit means for introducing a first gasiform material into said mixing section along a flow path having an axis common to said axis of revolution, plural conduit means for introducing a second gasiform material disposed tangentially to said mixing section walls and peripherally about said first-named conduit means and having a cross sectional area which is small in comparison

therewith and means for circulating the fluid coolant in indirect heat exchange relationship with said mixing section.

3,048,477
PRODUCTION OF ZINC HYDROSULFITE CRYSTALS

Thomas E. Rogers, Ho-Ho-Kus, N.J., assignor to Jacques Wolf & Co., Newark, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 17, 1961, Ser. No. 96,345
14 Claims. (Cl. 23—300)

1. A process for the production of zinc hydrosulfite crystals comprising dividing an aqueous solution of zinc hydrosulfite containing at least about 25 percent by weight of water based on the total weight of the solution into two approximately equal portions, introducing into the first portion at least about 2% by weight of glycerine, based on the weight of said zinc hydrosulfite in said first portion, and from about 0.2% to about 0.8% by weight of a zinc containing pH stabilizer, based on the weight of said zinc hydrosulfite in said first portion and removing water from the said first portion at a rate of from about ½% to 1½% by volume per minute, based on the original volume of said first portion, by heating said portion at temperatures of from about 55° C. to about 75° C. at subatmospheric pressures until the volume of said first portion is equal to approximately 80% of the original volume of said first portion, adding the second portion to the resulting concentrated first portion at a rate equal to about 1½% to 1⅓% by volume per minute based on the original volume of said second portion while simultaneously removing water from the resulting admixture at a rate equal to the rate of addition of said second portion to said concentrated first portion, by heating said mixture at temperatures of from about 55° C. to about 75° C. at subatmospheric pressures, separating zinc hydrosulfite crystals contained in the resulting concentrated solution and drying said crystals.

3,048,478
METHOD FOR PRODUCING GRANULAR MURIATE OF POTASH

Randal E. Smith, Carlsbad, N. Mex., assignor to Potash Company of America

No Drawing. Filed July 29, 1957, Ser. No. 674,590
3 Claims. (Cl. 23—313)

1. The method of treating a composition consisting of muriate of potash to produce densified particles having reduced tendencies to break, dust and cake during handling and storage, comprising initially agglomerating finely divided size of muriate of potash into larger particles of low density and a high percent of voids, sizing the resultant agglomerated salt to produce a uniformly sized agglomerated product in a narrow size classification range, heating such uniformly sized particles to their incipient fusion temperature within the range of 1350°–1440° F. which is less than their melting point until such particles soften without melting to thereby form coalesced, substantially uniformly fused and densified particles having glazed and rounded surfaces, and hardening the treated particles by a cooling action to form particles hardened throughout and having substantially reduced voids.

3,048,479
ETHYLENE-VINYL ESTER POUR DEPRESSANT FOR MIDDLE DISTILLATES

Stephan Ilnyckyj and Charles B. Rupar, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 3, 1959, Ser. No. 831,244
6 Claims. (Cl. 44—62)

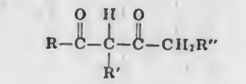
1. A petroleum distillate fuel composition having an improved pour which comprises essentially a petroleum distillate fuel having a boiling range between about 250° F. and about 750° F. which has been improved with respect to pour point by the incorporation therein of a pour depressing effective amount in the range from about .001 to .5% by weight of an oil soluble copolymer of ethylene and a vinyl fatty acid ester having from about 3 to about 5 carbon atoms in the ester, said copolymer having a molecular weight in the range from about 1000 to 3000, said coplymer being further characterized by containing from about 15 to 25% by weight of said vinyl fatty acid ester.

3,048,480
AVIATION TURBINE FUELS

Arthur V. Churchill, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed June 9, 1959, Ser. No. 819,015
5 Claims. (Cl. 44—73)

1. A combustion gas turbine fuel composition comprising a major amount of a normally thermally unstable, liquid hydrocarbon aviation turbine fuel and a small amount, sufficient to improve the thermal stability of said fuel of a combination of (*a*) an N,N′-di(orthohydroxyarylmethylidene)alkylenepolyamine containing 2 to 3 amino nitrogen atoms and whose alkylene groups contain 2 to 6 carbon atoms each, and (*b*) a beta-diketone having the general formula:

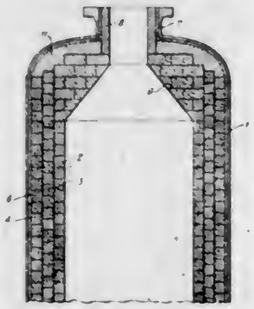


where R is an aromatic hydrocarbon group having a nuclear carbon atom thereof connected directly to the adjacent carbonyl carbon atom and containing 6 to 22 carbon atoms, and R′ and R″ are acyclic aliphatic hydrocarbon radicals that contain 8 to 22 carbon atoms, said small amount comprising at least about five pounds of each member of said combination per thousand barrels of fuel.

3,048,481
METHOD OF FORMING GAS TIGHT SEAL BETWEEN VESSEL WALL AND REFRACTORY LINING OF A SYNTHESIS GAS GENERATOR

Du Bois Eastman, Whittier, Calif., assignor to Texaco Inc., a corporation of Delaware

Filed June 18, 1958, Ser. No. 742,810
1 Claim. (Cl. 48—206)



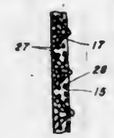
In a partial combustion furnace wherein high temperature gases comprising carbon monoxide and hydrogen are produced at an elevated temperature above about 2000° F. and an elevated pressure above about 100 pounds per square inch gauge in a reactor comprising a

reaction zone of generally cylindrical form contained within a pressure vessel comprising a steel shell provided with a refractory brick liner spaced about ½ to about 1 inch from the inner wall of said shell, the method of forming a gas-tight seal between the outermost surface of said refractory brick liner and the inner wall of said pressure vessel shell which comprises applying a water-wet mixture of air-setting high temperature insulating cement to the inner wall of said pressure vessel and permitting said wet cement to set and dry to form a continuous layer of compressible cement filling the space between said liner and said shell, and preconditioning said reactor prior to the production of carbon monoxide and hydrogen under pressure within said reaction zone by heating said refractory to an elevated temperature within the range of normal operating temperatures at substantially atmospheric pressure by substantially complete combustion of hydrocarbon with air effecting expansion of said refractory and compression of said cement between said refractory and said shell of said vessel while said shell is at a temperature below normal operating temperature by an amount sufficient to force the dry cement into joints between the refractory brick and form a gas-tight seal between the brickwork and the vessel wall.

3,048,482
ABRASIVE ARTICLES AND METHODS OF MAKING THE SAME

Edward Hurst, Duxbury, Mass., assignor to Rexall Drug Co., Los Angeles, Calif., a corporation of Delaware

Filed Oct. 22, 1958, Ser. No. 769,010
4 Claims. (Cl. 51—298)



1. An abrasive article consisting essentially of a multiplicity of small, individual bonded abrasive bodies, each of said bodies being roughly pyramidal in shape and composed of discrete abrasive granules and a rigid heat-hardened organic bond selected from the group consisting of heat-hardened phenolic resins and vulcanized hard rubbers, each of said small bonded abrasive bodies being held within a cavity conforming in shape to the small bonded abrasive body, the cavities for said bonded abrasive shapes being provided in a permanently flexible matrix composed of a fibrous material containing individual abrasive particles disposed throughout the fibrous material and a permanently resilient, thermoplastic resin bond.

3,048,483
SYNERGISTIC HERBICIDAL COMPOSITION

Edward D. Weil, Lewiston, Edwin Dorfman, Grand Island, and Jack S. Newcomer, Wilson, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Apr. 3, 1959, Ser. No. 803,833
6 Claims. (Cl. 71—2.6)

1. A herbicidal composition comprising a phytotoxic amount of a compound selected from the group consisting of 2,3,6-trichlorophenylacetic acid and its alkali metal salts, and a phytotoxic amount of a compound selected from the group consisting of trichloroacetic acid, alpha, alpha-dichloropropionic acid, and alpha,alpha,beta-trichloropropionic acid and their alkali metal salts.

3,048,484
PRODUCTION OF COLUMBIUM AND TANTALUM

James H. Downing and Nelson B. Colton, Buffalo, and Cecil G. Chadwick, Lewiston, N.Y., assignors to Union Carbide Corporation, a corporation of New York

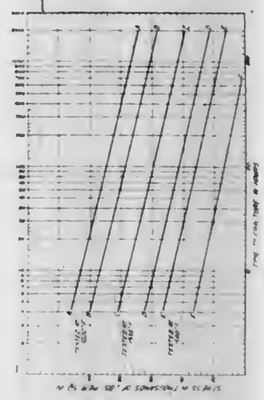
No Drawing. Filed Aug. 7, 1958, Ser. No. 753,645
5 Claims. (Cl. 75—84)

1. A process for the production of massive shaped metal aggregates of at least one refractory metal selected from the group consisting of columbium and tantalum comprising, preparing a mixture of carbonaceous reducing agent with an oxide of said selected refractory metal, said oxide of said refractory metal being present in stoichiometric excess up to about 15 percent over stoichiometric proportions of the carbonaceous reducing agent employed, said oxide of said refractory metal and said carbonaceous reducing agent having particle sizes within the range of between about 1 and 40 microns, compacting said mixture to a massive shape at a pressure of up to about 1500 pounds per square inch; heating said mixture, under vacuum conditions, at a rate up to about 300° C. per hour to a temperature between about 2000° C. and the melting point of the metal being produced until substantial evolution of gas ceases to produce said pure massive shaped metal aggregate; and cooling said metal under non-contaminating conditions.

3,048,485
HIGH STRENGTH CREEP RESISTING ALLOY

Clarence G. Bieber, Bayonne, N.J., assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 14, 1955, Ser. No. 493,923
6 Claims. (Cl. 75—128)



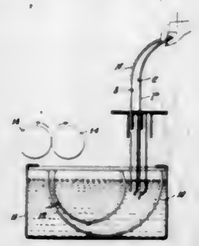
1. A heat-resisting, age-hardenable alloy suitable for use in the form of notched and unnotched gas turbine structures at temperatures ranging up to about 1500° F. under high stress which contains about 34% to about 45% nickel, about 12% to about 16% chromium, about 2% to about 3% titanium, about 5% to about 7% molybdenum, about 0.03% to about 0.15% boron, up to about 0.75% aluminum, up to about 0.2% carbon, up to about 1% manganese, up to about 0.5% silicon, up to about 3% copper and the balance essentially iron and characterized in the heat treated condition resulting from aging from the solution treated condition of about one-half to about 80 hours at a temperature of about 1100° F. to about 1500° F. by a life-to-rupture at least in excess of about 100 hours when tested at 1200° F. under a stress of 70,000 pounds per square inch and a life-to-rupture at least in excess of 25 hours when tested at 1200° F. under a stress of 80,000 pounds per square inch.

3,048,486

PHOTOGRAPHIC POSITIVE PRINTING SYSTEM

Reinhold E. Basch, Rocky Point, N.Y., assignor to Peerless Photo Products, Inc., Shoreham, N.Y., a corporation of New York

Continuation of application Serial No. 444,815, July 21, 1954. This application Feb. 1, 1960, Ser. No. 5,774
3 Claims. (Cl. 96—29)



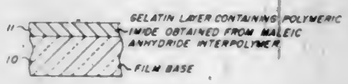
3. A diffusion transfer reversal photocopying process which comprises wetting a photographic negative sheet and a photographic positive sheet with a developing solution containing a silver halide fixer and a silver halide developer, one face of said photographic negative sheet having a gelatinous coating embodying an exposed undeveloped silver halide prior to said wetting and one face of said photographic positive sheet having a gelatinous coating embodying colloidal silver nucleii and 2-amino-5-mercapto-1,3,4-thiadiazole, pressing said wetted sheets together in face to face relationship so that the surfaces of said individual coatings are in intimate contact, thereby producing a fully developed image on said coating of said photographic positive sheet, and separating said sheets.

3,048,487

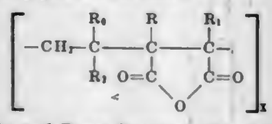
BASIC MORDANTS DERIVED FROM THE REACTION BETWEEN MALEIC ANHYDRIDE INTERPOLYMERS AND DISUBSTITUTED DIAMINES

Louis M. Minsk and Hyman L. Cohen, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

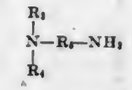
Filed June 5, 1957, Ser. No. 663,810
3 Claims. (Cl. 96—84)



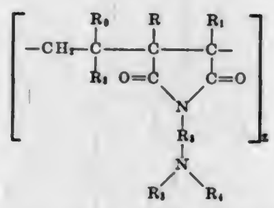
1. A light-sensitive photographic element comprising a flexible sheet support having integral therewith at least two gelatin layers, at least one of said gelatin layers being a silver halide emulsion layer and at least one of said gelatin layers having uniformly distributed therethrough an acid addition salt of an interpolymer A, said interpolymer A being obtained by reacting (1) at least 75 percent of the anhydride groups of an interpolymer B represented by the following general formula:



wherein R, R_0 and R_1 each represents a member selected from the class consisting of a hydrogen atom and a lower alkyl group, R_2 represents a member selected from the class consisting of a hydrogen atom, a lower alkyl group, a monocyclic aromatic hydrocarbon radical and a carbalkoxyl group, and x represents a large whole number greater than about 10, with (2) the primary amino group of a compound represented by the following general formula:



wherein R_3 and R_4 each represents a member selected from the class consisting of a lower alkyl group, together represent a piperidine ring and together represent a morpholine ring and R_5 represents an alkylene group, to form an imide ring and thereby produce an interpolymer A comprising units represented by the following general formula:



wherein R, R_0, R_1, R_2, R_3, R_4 and R_5 each have the values indicated above and z represents a large whole number greater than about 10, from 50 to 100 percent of interpolymer units A in said acid addition salt being present in the form of an acid addition salt with an acid selected from the class consisting of lactic acid, glycolic acid, an alkanesulfonic acid, hydrochloric acid and a saturated aliphatic carboxylic acid.

3,048,488

SYNTHETIC ORGANIC CHEMICAL PRESERVATIVE FOR BEER

Frede B. Strandskov, Verona, and John B. Bockelmann, Tenafly, N.J., and Vincent J. Carroll, Williston Park, N.Y., assignors to The F. & M. Shaefer Brewing Company, Brooklyn, N.Y.

No Drawing. Filed Nov. 30, 1959, Ser. No. 856,025
16 Claims. (Cl. 99—48)

1. A method which comprises admixing with finished beer a micro-biological growth inhibiting amount of 2-(1′-oxy-2′-pyridylthio)-imidazoline hydrobromide.

3,048,489

BREWING PROCESS

Peter Blum, Chicago, Ill., assignor, by mesne assignments, to Falstaff Brewing Corporation, a corporation of Delaware

No Drawing. Filed Apr. 22, 1960, Ser. No. 23,913
5 Claims. (Cl. 99—51)

1. A process for producing a boiled malt wort adapted for use in making beer, malt liquor or malt extract, comprising the steps of: preparing a malt mash using a finely ground malt flour capable of passing through a 60 mesh screen, adding an adjunct mash, boiling said mixed mashes, said boiling taking place without any prior filtration; and separating the liquid and extractable solids from the grain residual by suitable means.

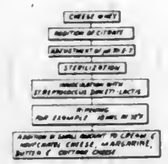
3,048,490

AROMA PROCESS FOR DAIRY PRODUCTS AND THE RESULTING PRODUCT

Erik Lundstedt, Needham, Mass., assignor to H. P. Hood & Sons, Inc., Charlestown, Mass., a corporation of Massachusetts

Filed Apr. 6, 1961, Ser. No. 101,287
19 Claims. (Cl. 99—116)

1. The method of making a flavor and aroma additive for dairy products, which comprises providing a sterile citrate-enriched cheese whey at a pH of 5 to 7, thereafter



inoculating the medium with citrate-fermenting *Streptococcus diacetilactis* and ripening to ferment the citrate.

3,048,491

WINTERIZATION PROCESS

Chester M. Gooding, Westfield, N.J., assignor to Corn Products Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 8, 1960, Ser. No. 13,438
10 Claims. (Cl. 99—118)

1. A process for the combined winterization of refined oils which comprises first mixing together at least two oils selected from the group consisting of cottonseed, soya, corn, peanut and milo in a ratio of 30:70 to 70:30, then subjecting said mixture of oils to winterization and recovering the blend of winterized oils.

3,048,492

PROCESS FOR FLAVOR ENHANCEMENT FOR LEGUMINOUS FOODS

Richard R. Barton, Clifton, N.J., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed June 9, 1960, Ser. No. 34,884
3 Claims. (Cl. 99—140)

1. A process for the enhancement of the flavor of leguminous food materials which comprises treating said materials with from about 0.02 to about 0.08% by weight of an oxidative enzyme selected from the group consisting of microbial and vegetative origin to produce maximum carbonyl content in said treated food materials.

3,048,493

HARD ABRASIVE MATERIAL AND METHOD OF MAKING

Norman P. Robie, Hamburg, N.Y., assignor to Electro Refractories & Abrasives Corporation, Buffalo, N.Y.

Filed May 19, 1959, Ser. No. 814,225
8 Claims. (Cl. 106—55)

1. As a new composition of matter, a fused mass consisting of 27 to 65 parts by weight of boron, 12 to 45 parts by weight of silicon and such proportion of a metal selected from the group consisting of Zr and Ti as to make its composition fall within the area ABCDE of the drawing.

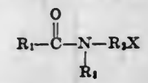
3,048,494

JOINT SEALING COMPOSITIONS

Edgar W. Sawyer, Jr., Metuchen, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed June 2, 1959, Ser. No. 817,496
15 Claims. (Cl. 106—278)

1. A composition for filling joints, which is substantially free from sag at elevated temperatures consisting essentially of from about 15 percent to about 40 percent by weight of comminuted gilsonite suspended in from about 40 percent to about 60 percent by weight of paraffin oil; from about 5 percent to about 20 percent by weight of a naturally occurring colloidal clay having a surface area of at least 50 square meters per gram, colloidally dispersed therein; and from about 10 percent to about 50 percent, based on the weight of said clay, of a fatty acid amide of the following structural formula:



wherein: R_1 is selected from the group consisting of alkyl and alkenyl groups having from 7 to 17 carbon atoms; R_2 is an alkylene group having from 2 to 4 carbon atoms; R_3 is selected from the group consisting of H, alkyl and alkanol groups having from 2 to 4 carbon atoms; and X is selected from the group consisting of OH and H.

3,048,495

TEMPORARY OXIDATION-PREVENTIVE COATING FOR METAL

John J. Petkus, Whiting, and James F. Wygant, Gary, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed July 2, 1959, Ser. No. 824,451
6 Claims. (Cl. 117—6)

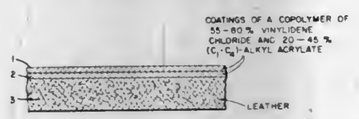
1. The method of protecting metal surfaces from oxidation during exposure to elevated temperatures which comprises applying to said surfaces a composition consisting essentially of a plasitc clay and from about 1 to about 100 parts of boric acid per part of said clay, said composition being characterized by its water solubility after exposure at temperatures in excess of 1100° F.

3,048,496

FINISHED LEATHERS HAVING COATINGS OF A POLYMER OF 55–80 PERCENT VINYLIDENE CHLORIDE AND 20–45 PERCENT (C_1–C_4)-ALKYL ACRYLATE, AND PRODUCTION THEREOF

Peter R. Buechler, Langhorne, and Benjamin B. Kine, Elkins Park, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

Filed Dec. 9, 1959, Ser. No. 858,314
6 Claims. (Cl. 117—11)



1. A method of producing a finished leather having a durable, water-resistant, washable, abrasion-resistant finish, and having outstanding wet-molding properties which consists of the application of film-forming materials in the form of emulsion polymers exclusively and comprises the steps of applying an aqueous dispersion containing 1 to 30% by weight of a crystalline copolymer of 55 to 80% by weight of vinylidene chloride with 20 to 45% by weight of an ester of acrylic acid with a lower alkanol having 1 to 4 carbon atoms, drying said coated leather at a temperature of 50° to 110° C. in a period of 10 seconds to 10 minutes, thereafter applying a second coating of an aqueous dispersion containing 10 to 40% by weight of a crystalline copolymer of 55 to 80% by weight of vinylidene chloride with 20 to 45% by weight of an ester of acrylic acid with a lower alkanol having 1 to 4 carbon atoms.

3,048,497

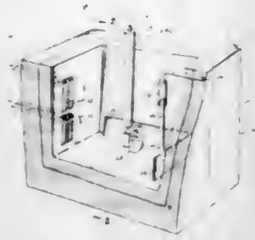
PROCESS OF COATING BASE METALS WITH ALUMINUM

Göran August Möller, Gotene, Sweden (% Consulate General of the United States of America, Cape Town, Union of South Africa)

Filed Feb. 18, 1958, Ser. No. 716,257
21 Claims. (Cl. 117—52)

1. The process of coating base metals with a metal selected from the group consisting of aluminum and alu-

minum alloys which comprises: electrolytically pickling said base metal in a molten salt bath wherein said base metal is made anodic and said salt bath is made cathodic;



and immersing said base metal into the coating metal, without atmospheric contact, said base metal being coated thereby.

3,048,498
ELECTROSTATIC SPRAY COATING SYSTEM
James W. Juvinall and James C. Marsh, Indianapolis, Ind., assignors to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana
Filed Jan. 8, 1959, Ser. No. 785,754
27 Claims. (Cl. 117—93)



19. A method of electrostatically spray coating articles in an electrostatic field created by a unidirectional high potential between a charging electrode and another electrode comprising at least one of the articles and wherein the distance between said charging electrode and said other electrode being subject to variations which could in a conventional electrostatic spray coating system cause an objectionable change in potential gradient, comprising flowing a stream of liquid coating material to an atomizing device and atomizing spray particles into said field, whereby said particles are charged to affect their deposition on the articles, and automatically continuously changing the voltage between the electrodes, by means including a high resistance, by and as a function of changes in space current across said distance to materially minimize variations in the average field gradient which would otherwise accompany such variation in distance, while maintaining the energy level of a discharge from the charging electrode below that which would be provided by a metal sphere of a radius of about three centimeters in the same electrostatic system.

3,048,499
PROCESS FOR RENDERING STRUCTURAL MATERIALS WATER REPELLENT
Maurice H. Jellinek, Williamsville, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Jan. 18, 1956, Ser. No. 559,796
7 Claims. (Cl. 117—123)

1. The method of rendering masonry-type structural material water repellent, which method consists essentially of:

(1) contacting said structural material with an aqueous solution:

(*a*) that is free of any organic solvent;

(*b*) that contains a resin-forming compound corresponding to the general formula:

$$\{R_nR_m'Si[(OC_2H_4)_xOR'']_{4-(m+n+z)}\}_yO_z$$

wherein R is a monovalent hydrocarbon radical containing from 1 to about 5 carbon atoms, R′ is a constituent selected from the group consisting of a methyl group and a hydrogen atom, R″ is a hydrocarbon radical selected from the group consisting of methyl and ethyl hydrocarbon radicals, *n* is an integer from 1 to 2 inclusive, *m* is selected from the group consisting of 0 and 1, the sum of *m* and *n* is an integer from 1 to 2 inclusive, *z* is selected from the group of 0 and 1, *y* is *z* plus 1, and *x* is an integer of from 1 to about 7, said resin-forming compound being present in an amount sufficient to produce from 1 to 5 parts by weight of a siloxane resin per 100 parts by weight of the water in the aqueous solution; and,

(*c*) that contains a non-neutral compound selected from the group consisting of acids and bases in an amount which is sufficient to impart a pH other than 7 to the solution and which is sufficient to catalyze the cure of the resin-forming compound to produce a siloxane resin on the structural material; and

(2) drying the structural material which has been contacted with said aqueous solution to produce a siloxane coating on the structural material, said structural material being insufficiently alkaline to cure the resin-forming compound to produce a siloxane resin.

3,048,500
TEXTILE MATERIAL AND PROCESS OF TREATING THE SAME
David M. Musser, Fair Lawn, and John H. Vellekamp, Tenafly, N.J., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts
No Drawing. Filed July 29, 1959, Ser. No. 830,194
5 Claims. (Cl. 117—139.4)

1. A method of improving the properties of a porous, foraminous textile material which comprises preparing a textile-treating composition by mixing a hydrophilic, water-soluble formaldehyde-binding material with an aqueous alkaline solution of a N,N′-dimethyloluron dialkyl ether in proportions, respectively, of from about 1:1 to about 5⅓:1, said aqueous alkaline solution of N,N′-dimethyloluron dialkyl ether containing at least about 12% free uncombined formaldehyde to react with said hydrophilic, water soluble formaldehyde-binding material and, before any substantial polymerization takes place in said textile-treating composition, applying the same to a textile material in an amount sufficient to provide from about 0.5% by weight to about 20% by weight dry add-on after heating and curing, and heating and curing said textile-treating composition in situ on said textile material whereby the same is rendered substantially non-dusting and possesses a soft hand and drape along with enhanced wrinkle- and crease-resistance.

3,048,501
PAPER PRODUCTS HAVING A COATING OF MINERAL PIGMENT IN A BINDER OF AMMONIUM OR AMINE SALT OF A COPOLYMER OF ACRYLIC ACID OR METHACRYLIC ACID, ACRYLAMIDE OR METHACRYLAMIDE, AND A (C_1–C_4)-ALKYL ACRYLATE OR METHACRYLATE, AND PRODUCTION THEREOF
Edgar W. Miller, Levittown, and Walter W. Toy, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
Filed June 23, 1959, Ser. No. 822,197
11 Claims. (Cl. 117—155)

1. A mineral-coated paper product comprising a paper sheet carrying on a surface thereof a dried coating of a composition comprising (1) a finely-divided pigmentary material and (2) from 8 to 25 parts by weight of a binder per 100 parts by weight of the pigment, the binder consisting of at least one member selected from the group consisting of casein, soya-protein, starch, chlorinated starch, ethers of starch, polyacrylate esters, butadiene-styrene copolymers, and salts of a member selected from the group consisting of ammonium and water-soluble volatile amines with a copolymer of 6 to 10% by weight of at least one acid having the formula



$$CH_2=C(COOH)-(CH_2)_{n-1}H$$

in which *n* is an integer having a value of 1 to 2, 6 to 30% by weight of an amide of an acid of the formula, and 60 to 84% by weight of at least one lower alkyl ester of an acid of said formula in which the alkyl group has from 1 to 4 carbon atoms, at least one-fifth of the ester content of the copolymer being selected from the group consisting of (C_1–C_2)-alkyl esters of an acid of the formula the binder containing 25 to 100% by weight of at least one of the aforesaid salts.

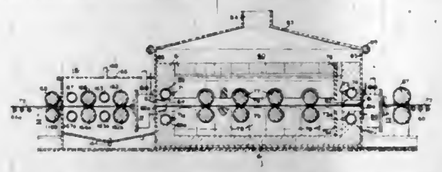
3,048,502
METHOD OF MAKING A PHOTOCONDUCTIVE TARGET
James F. Nicholson, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 22, 1959, Ser. No. 815,057
8 Claims. (Cl. 117—211)



1. The method of making a light sensitive target for an electron discharge device which comprises, coating a light transparent support member with a transparent electrically conductive film, heating a quantity of a mixture of antimony trisulfide and cadmium sulfide in an inert atmosphere to evaporate a porous light sensitive layer on said electrically conductive film, and then heating a quantity of a mixture of antimony trisulfide and cadmium sulfide in a high vacuum to evaporate a light sensitive layer having a greater bulk density than said porous layer onto said porous layer.

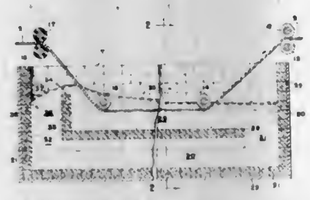
3,048,503
PICKLING APPARATUS AND METHOD
Donald S. Foote and Ab Flowers, Beaver, Pa., and John P. Hubbell, Garden City, N.Y., assignors to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey
Filed June 19, 1958, Ser. No. 743,036
18 Claims. (Cl. 134—9)

15. A process for pickling elongated metallic sections comprising advancing a section through an enclosed pickling zone, circulating a stream of acidic pickling fluid at a predetermined rate from an enclosed storage zone through said pickling zone countercurrently to the travel of said section, said stream being introduced at points above and below the pathway of travel of said section, said fluid comprising a solvent and a volatile solute, collecting gaseous portions of said fluid volatilized within



said zones, forming reconstituted fluid by absorbing said gaseous portions in dilute solvent, maintaining the temperature of said fluid substantially constant, and maintaining the composition of said fluid substantially constant by continuously removing therefrom dissolved metallic values and by continuously adding thereto necessary amounts of acid, solvent and said reconstituted fluid.

3,048,504
METHOD AND APPARATUS FOR TREATING STRIP MATERIAL
Walter W. Kompart, Conneaut, Ohio, assignor to National Steel Corporation, a corporation of Delaware
Continuation of abandoned application Ser. No. 271,529, Feb. 14, 1952. This application Jan. 23, 1958, Ser. No. 710,730
11 Claims. (Cl. 134—15)



1. In the treating of continuous strip material, in which treatment the strip material is moved at high speed along a continuous path across a bath of treating liquid contained in a tank from the entry end of the tank to the exit end of the tank; the continuous path including a first portion extending into the tank adjacent its entry end to a level below the upper edge of the tank, a second portion located in the bath of liquid and extending longitudinally of the tank and a third portion extending upwardly and out of the bath in a direction toward the exit end of the tank to a level above the upper edge of the tank; the strip material moving at high speed along the continuous path pulling liquid in the direction of strip travel and raising the liquid at the exit end of the tank to a level above the level of the liquid at the entry end of the tank, the liquid being pulled upwardly and toward the exit end of the tank along the third portion of the continuous path, the method of conducting raised liquid at the exit end of the tank to the bath upstream of the exit end of the tank comprising the steps of diverting liquid pulled by the strip material along the third portion of the continuous path in a substantially downwardly direction, conducting the diverted liquid downwardly to a region at a level below the second portion of the continuous path and then through a confined path to a second region located upstream of the exit end of the tank and below the level of the second portion of the continuous path, the confined path being located below the level of the second portion of the continuous path and extending from the first region to the second region, and introducing the diverted liquid into the bath at said second region.

3,048,505
PROCESS OF PREHARDENING AUSTENITIC MANGANESE STEEL

Herbert C. Doepken, Narberth, Pa., assignor to Manganese Steel Forge Company, a corporation of Pennsylvania

Filed Aug. 12, 1959, Ser. No. 833,344
12 Claims. (Cl. 148—137)

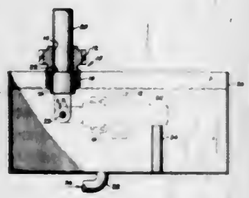


1. A process of prehardening austenitic manganese steel to form a steel of superior hardness and ductility, comprising heating austenitic manganese steel to a temperature above that at which ferrite goes into solution in the austenitic matrix and below the temperature at which carbide fully dissolves into the austenitic matrix, in order to precipitate carbide needles within the grains of the steel, allowing the steel to cool to ambient temperature, heating the steel to a higher temperature than that in the first said heating step but within the first said heating range, in order to diminish the size and round off the sharp points of said carbide needles, and quenching the steel.

3,048,506
METHOD OF QUENCHING GEARS

Albert J. Belli, Clifton, N.J., and Harvey S. Horn, Bronx, N.Y., assignors to Curtiss-Wright Corporation, a corporation of Delaware

Filed Aug. 30, 1956, Ser. No. 607,115
2 Claims. (Cl. 148—143)



1. A process for quenching a heated gear having a coaxial bore therethrough and having gear teeth with the sides of said teeth being disposed parallel to the gear axis; said process comprising the steps of supporting the gear on a post of circular cross-section extending into said bore and having substantially the desired dimension of said bore such that said post is effective to maintain the desired internal bore dimensions of said gear during the subsequent immersion step; and then, while mounted on said post, immersing all of said gear in a liquid with the gear axis disposed parallel to the level of the liquid as, relative to the gear, the liquid level rises over the gear.

3,048,507
MATCHHEAD IGNITERS AND COMPOSITIONS AND METHOD FOR THEIR MANUFACTURE

David Thomas Zebree, Kingston, N.Y., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 31, 1956, Ser. No. 631,932
15 Claims. (Cl. 149—64)



1. In an electric blasting cap assembly containing a bound ignition mixture, as a matchhead, around the bridgewire, the improvement comprising, on a weight basis, as said matchhead, from 9–70 percent of a primary initiating explosive capable of flash combustion in response to heat developed by passage of electric current through said bridgewire, from 10–75 percent of an inorganic solid oxidizer capable of decomposition to liberate free oxygen for support of said flash combustion in response to said heat developed as above described, from 1.5–15 percent of a binder material and from 3–55 percent of a siliceous material selected from the group consisting of natural occurring, and synthetic, silicas and silicates, having a particle size within the range of 0.020–4 microns.

3,048,508
RESINOUS COMPOSITIONS AND COMPOSITE LAMINATED MEMBERS PRODUCED THEREWITH

Joseph F. Boiney, Hampton, and Earl L. Schulman, Walterboro, S.C., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 11, 1958, Ser. No. 741,352
2 Claims. (Cl. 154—43)



2. An electrical grade composite laminated member having cold punching characteristics comprising a core stock of a plurality of sheets of kraft paper faced with a sheet of highly purified cotton cellulose, the sheets of kraft paper and highly purified cotton cellulose being impregnated first with a thermosettable water soluble phenolic resin and secondly with a thermosettable resinous varnish composition comprising:

(A) one part by weight of the resinous product derived by condensing

(*a*) one mol of a mixture of phenols consisting essentially of

(i) from 0.83 to 0.5 mol percent of a phenol selected from at least one of the group consisting of phenol, cresol and xylenols and

(ii) from 0.17 to 0.5 mol percent of a blend of substituted phenols comprising from about 85% to 90% by weight of ethyl phenols and isopropyl phenols, and the balance being other substituted phenols, about 90% of the ethyl phenols and the isopropyl phenols being the para isomer

and for each part by weight of the isopropyl phenol present there is present from about 1.3 to 1.6 parts by weight of the ethyl phenols, with

(*b*) from about 0.7 mol to 1.5 mols of an aldehyde selected from the group consisting of formaldehyde and polymers of formaldehyde, the reaction being effected under reflux conditions in the presence of an alkaline catalyst and then dehydrated until substantially all the water is removed,

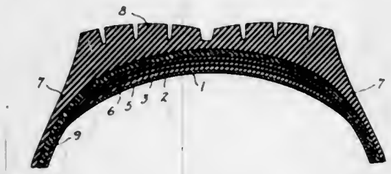
(B) from 0.25 to 0.50 part by weight of a drying oil, and,

(C) from 0.05 to 0.17 part by weight of tall oil.

3,048,509
PUNCTURE SEALING MEANS FOR PNEUMATIC TIRES

Donald L. Sweet and Stavros A. Kyriakides, Cuyahoga Falls, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Dec. 22, 1959, Ser. No. 861,245
10 Claims. (Cl. 154—43.5)



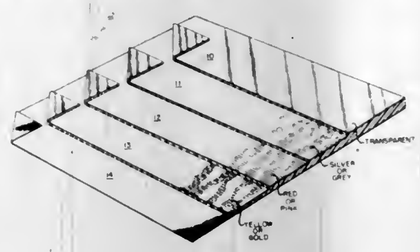
1. A laminated puncture sealing strip for pneumatic tires comprising a plurality of superposed sealing sheets that are not more than about one-tenth inch or less than about one-twentieth inch in thickness and that are composed of a soft sticky unvulcanized synthetic rubber sealing composition comprising a copolymer of butadiene 1.3 and styrene which contains at least 50% by weight of the diene combined with 35 to 115 parts by weight of softening and tackifying agents per 100 parts of the copolymer and with from 35 to 65 parts by weight of a pigment per 100 parts of the copolymer, said softening and tackifying agents and pigments being so proportioned that said sealing composition has a plasticity of from 20 to 35 measured on a Neodoptifa-Hoekstra plastometer, and means for restricting flow of the sealing composition and for protecting the same against deterioration comprising separating and covering sheets alternating with the sealing sheets, said separating and covering sheets being thinner than said sealing sheets and being composed mainly of a vulcanized rubber compound the principal rubbery component of which is selected from the group consisting of a polymer of chloroprene and styrene-butadiene rubbers that contain at least 50% by weight of the diene, said rubber compound being substantially free from sulfur and migratory curing agents.

3,048,510
LAMINATED FLOOR AND WALL COVERING

Reuben Wisotzky, Natick, Mass., assignor to American Biltrite Rubber Co., Inc., Chelsea, Mass., a corporation of Delaware

Filed Dec. 2, 1957, Ser. No. 700,136
1 Claim. (Cl. 154—49)

A composite laminated floor or wall covering comprising an outer transparent wear-resisting ply of a synthetic vinyl resin, a plurality of thin intermediate plies of differently colored translucent synthetic vinyl resins each being of uniform thickness throughout and having surface decorations formed by areas of vinyl ink visible through the transparent outer ply, a substantially opaque vinyl ply underlying several translucent intermediate plies and having also surface decorations in areas of vinyl ink, all of said plies, including the areas of vinyl ink, being bonded into an integral relatively thick sheet and the



outer transparent ply transmitting to the observer a three-dimensional ornamental effect in which is combined the different colors of all the translucent intermediate plies and the reflection of the surface decorations of the substantially opaque ply which underlies them.

3,048,511
POLYVINYL ALCOHOL COMPLEX FILM

Jay F. Strawinski, 1814 Dunwoody Circle, Baltimore 34, Md.

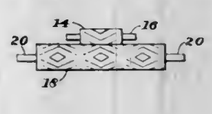
No Drawing. Filed Jan. 5, 1959, Ser. No. 784,862
16 Claims. (Cl. 154—50)

7. Laminated sheet material comprising an integral web of polyvinyl alcohol film which has been stretched a plurality of times its original dimensions in at least one direction in an aqueous solution containing small quantities of a metallic lactate and glycerine and in which the integrity of the web is retained having in direct adherent engagement with at least one face theerof a paper lamination, said material being capable of folding creasing and handling without rupture of the film and loss of its barrier characteristics.

3,048,512
METHOD OF MAKING MATCHED EMBOSSING ROLLS

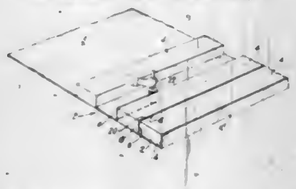
Robert F. Nelson, Plainfield, N.J., assignor to Modern Engraving and Machine Company, Hillside, N.J., a corporation of New Jersey

Filed June 27, 1957, Ser. No. 668,377
1 Claim. (Cl. 156—14)



In the method of producing hardened, matched metallic embossing rolls, the steps comprising; hardening a pair of coextensive rolls throughout substantially the entire metallic mass thereof, applying an acid resist coating to the entire cylindrical exterior surface of the first of said rolls, rolling a master pattern roller of the same axial length as said rolls and of a diameter related by a whole member to the diameter of said first roll in contact with the acid resist coating of said first roll to remove portions of said coating in regions predetermined by the pattern on said roller, etching the first roll to remove metal therefrom in said regions, removing the acid resist coating from the first roll, applying an acid resist coating to the entire external cylindrical surface of the second of said rolls, rolling the now embossed first roll in contact with the coating on said second roll to remove portions of said coating in predetermined regions, and etching the second roll to remove metal therefrom in said regions.

3,048,513
REINFORCED FIBROUS BATT
Thomas A. Hughes, Whitehouse, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Aug. 25, 1954, Ser. No. 452,065
3 Claims. (Cl. 156—31)



3. A method of forming a thermal insulating batt comprising forming a felt of fibrous material with the majority of the fibers of the felt lying generally parallel to a face thereof, said fibrous insulating material when not reinforced being normally compactible in directions perpendicular to the face thereof by flooding with water, cutting said felt in planes substantially at right angles to said face to form elongated strips having lateral edges, coating at least one lateral edge of each of said strips with an adhesive material, and joining the cut lateral edges of said strips to form a thermal insulating batt having said cut lateral edges joined by relatively rigid sheet-like ribs of adhesive to reinforce said fibrous material against compacting.

3,048,514
METHODS AND APPARATUS FOR MAKING INFLATABLE CUSHIONS
Gerard O. Bentele, South Bend, Ind., and Charles M. McClure, Niles, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 17, 1958, Ser. No. 761,554
19 Claims. (Cl. 156—145)



1. The method of producing an inflatable cushion, comprising the steps of forming a plurality of side-by-side, spaced folds on one face of a first sheet of plastic material, and bonding a second sheet of plastic material to the unfolded remainder of the other face of said first sheet along the marginal areas thereof as well as at a plurality of spaced and isolated inner areas thereof while bonding the adjacent inwardly facing surfaces of each of said folds to each other at their lateral edges, whereby said folds are transformed into hollow lobes open at the edges thereof adjacent said second sheet.

3,048,515
PLURAL-PLY PAPER AND METHOD OF MANUFACTURE WITH ONE OR MORE CONDUCTIVE PLIES
Harold R. Dalton, Jenkintown, Pa., assignor to Timefax Corporation, New York, N.Y., a corporation of New York
Filed Jan. 11, 1960, Ser. No. 1,681
14 Claims. (Cl. 162—126)

1. The method of making a duplex paper of precisely controlled transverse conductivity having superposed plies one of which is of non-conductive fibrous composition and the other of which is conductive fibrous composition, which comprises preparing two paper pulp slurries in at least semi-liquid form one of which includes a predetermined quantity of powdered electrically conductive material to impart a precisely controlled electric conductivity, forming the slurries while in said semi-liquid form



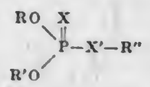
into superposed mated passes, and drying the mated passes to form a single plural-ply paper sheet having one of its plies non-conductive and whitish hue on its exposed face and another ply of accurately controlled electric conductivity and of a hue contrasting with that of said exposed face, both said plies being intimately mated to form a unitized single sheet.

3,048,516
ALUMINIUM FUNGICIDE
Americo Mosca, 27 Via Carlo Boggio, Cuneo, Italy
No Drawing. Filed Sept. 15, 1953, Ser. No. 380,347
2 Claims. (Cl. 167—14)

1. A fungicidal aqueous solution containing aluminum ions and consisting essentially of water, about 0.5–1.5% of aluminum sulfate, about 0.5–1.5% of an adhesive selected from the group consisting of kaolin, bentonite, talc and calcium sulfate, and a trace of a dyestuff, all percentages being by weight of the total solution.

3,048,517
2-NITROALKYL PHOSPHOROTHIOATES
John P. Chupp, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 12, 1960, Ser. No. 28,518
3 Claims. (Cl. 167—22)

1. The method of destroying parasitic worm life in nematode infested agricultural soils which comprises contacting the said worm life in the soil with an amount toxic to same of at least one 2-nitroalkyl phosphorothioate of the structure



wherein R and R′ are selected from the group consisting of lower alkyl radicals and lower alkoxyalkyl radicals, wherein X and X′ are chalkogens of atomic weight less than 40 but wherein at least one of X and X′ is sulfur, and wherein R″ is a 2-nitroalkyl radical containing from 2 to 6 carbon atoms.

3,048,518
N-(4-SULFONAMIDOPHENYL)-BUTANE SULTAME
Burckhardt Helferich, Bonn, Robert Behnisch, Wuppertal-Vohwinkel, and Wolfgang Wirth, Wuppertal-Elberfeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Mar. 24, 1960, Ser. No. 17,254
Claims priority, application Germany Mar. 28, 1959
4 Claims. (Cl. 167—51.5)

1. N-(4-sulfonamidophenyl)-butane sultame.

3. A method for treating epilepsy which comprises adminstering to the subject suffering from such disease a therapeutic amount of N-(4-sulfonamidophenyl)-butane sultame.

3,048,519
BENZENESULFONAMIDO-HALO-PYRIMIDINES: ANTIBACTERIALS
James L. Fedrick, Pearl River, and Gunnar S. Redin, New City, N.Y., and Robert G. Shepherd, Ridgewood, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Feb. 20, 1961, Ser. No. 90,245
5 Claims. (Cl. 167—51.5)

1. A method of maintaining persistence of activity useful in the treatment of anitbacterial infections which comprises administering in dosage unit form from 1 mg. to 500 mg./kg. of body weight of a sulfa drug selected from the group consisting of 2-sulfanilamido-5-iodopyrimidine, 2-(p-acetamidobenzenesulfonamido)-5-iodopyrimidine and 2-(p-nitrobenzenesulfonamido)-5-iodopyrimidine and an edible carrier.

3,048,520
ANTISPASMODIC
Herbert McKennis, Jr., and Edward R. Bowman, Richmond, Va., assignors to Medical College of Virginia Foundation, Richmond, Va., a corporation of Virginia
No Drawing. Filed June 6, 1960, Ser. No. 33,929
9 Claims. (Cl. 167—65)

9. The method of tranquillizing a living host comprising treating the host with a derivative of cotinine formed from the reaction of cotinine and a compound selected from the group consisting of organic and inorganic acids.

3,048,521
METHOD OF MANUFACTURING NUTRITIOUS ELEMENTS AND NUTRITIVE PREPARATIONS
Buheiji Fujimoto, 115 2-Chome, Kami-Ogikubo, Suginami-ku, Tokyo, Japan
No Drawing. Filed May 5, 1958, Ser. No. 732,800
Claims priority, application Japan May 17, 1957
6 Claims. (Cl. 167—74)

1. A method of manufacturing nutritious preparations which comprise heating untreated fresh bones containing marrow of warm-blooded animals in an autoclave with steam thereby removing fats and collagen from said bones, drying the bones thus treated as perfectly as possible to render them easily crushable, pulverizing the dried bones into a fine powder, agitating the bone powder with water to extract water-soluble ingredients therefrom, evaporating the water from the extract to obtain a dry mixture of muco-polysaccharide and nucleic acid, and mixing a portion of said fine bone powder with said muco-polysaccharide and nucleic acid.

3,048,522
PROCESS FOR SEPARATING ENDOCELLULAR COMPONENTS AND A COMPOSITION PRODUCED THEREBY
Georges C. Velley, Paris, France, assignor to Laboratoires Millot, Paris, France, a company of France
Filed Aug. 4, 1959, Ser. No. 831,659
Claims priority, application France Aug. 13, 1958
2 Claims. (Cl. 167—74.6)

1. Process for segregating endocellular components of biological cells, said cells being derived from animal fetus liver, which comprises confining the cells between fine mesh screens, axially revolving said screens at high speed in opposed directions, while urging such screens toward each other, with resultant mild disintegration of the cells frictionally, into substantially their whole components, filtering the disintegrated cells to transmit the whole endocellular components and to intercept the cytoplasmic residue of the cells and collecting the endocellular components thus passed, said endocellular components being dispersed as they are collected, in pharmacologically acceptable liquid, and said liquid being selected from the group consisting of parenterally injectable aqueous liquids and gastrointestinally absorbable aqueous liquids, and said liquid including 5% by weight of saccharose.

3,048,523
LIVE POLIOMYELITIS VIRUS COMPOSITION AND PROCESS
Gerald E. Underwood, Charleston Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Mar. 28, 1960, Ser. No. 17,766
14 Claims. (Cl. 167—78)

1. The process which comprises incubating a suspension of artificially propagated, live poliomyelitis virus with an antiviral α-oxoaldehyde in concentration effective to inactivate adventitious virus.

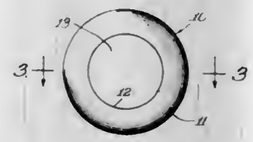
3,048,524
PROCESS OF PRODUCING INFECTIOUS BOVINE RHINOTRACHEITIS VACCINE AND PRODUCT THEREOF
Edmund P. Bass, White Hall, Ill., assignor to Affiliated Laboratories Corporation, White Hall, Ill., a corporation of Illinois
No Drawing. Filed Mar. 6, 1961, Ser. No. 93,354
7 Claims. (Cl. 167—78)

1. The process of producing an attenuated vaccine for immunizing bovines against infectious bovine rhinotracheitis which comprises introducing an inoculum of infectious bovine rhinotracheitis virus into a nontoxic fluid tissue culture medium containing viable cells of bovine kidney tissue, incubating said tissue culture medium until multiplication of the virus has begun, thereafter separating an inoculum of said virus and serially passing the virus through bovine kidney cultures for at least about 20 passages, and then serially passing the resulting virus through canine kidney cultures for at least about 10 passages to attenuate the virus.

3,048,525
SALT COMPOSITION AND PROCESS FOR MAKING SAME
Charles Baugh, 493 W. Crystal Lake Ave., Crystal Lake, Ill.
Filed Jan. 20, 1958, Ser. No. 709,959
17 Claims. (Cl. 167—82)

1. A process for producing an anticaking antimalarial granular salt composition which comprises forming an aqueous suspension of an alkaline earth metal silicate, mixing a substance containing an antimalarial into the slurry, mixing the resultant slurry into a quantity of salt, and subsequently removing the water from the mixture by drying whereby the antimalarial and alkaline earth metal silicate are coated upon the granular salt.

3,048,526
MEDICINAL TABLET
Charles L. Boswell, Lincoln, Nebr., assignor to The Wander Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 752,768
4 Claims. (Cl. 167—82)



2. An oral dosage tablet form comprising; a compressed tablet inlay portion of a finely divided medicinal ingredient portion with said compressed tablet inlay portion having smaller dimensions than the desired fin-

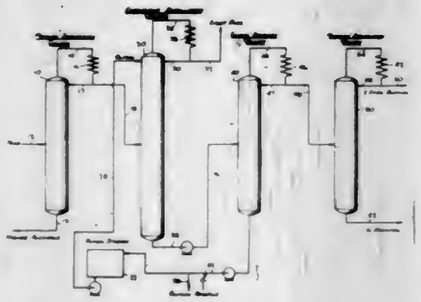
ished tablet, and a compressed main body portion comprising a second medicinal ingredient portion compressed about only a part of said tablet inlay portion with only a single surface of said compressed tablet inlay portion exposed on the outer surface of the finished tablet form and said single surface lying substantially in a common plane with contiguous portions of said compressed main body portion, and said oral dosage tablet form being made by compressing the first mentioned said finely divided medicinal ingredient portion to form said compressed tablet inlay portion, positioning said compressed tablet inlay portion in contact with said second finely divided medicinal ingredient portion, compressing said second medicinal ingredient portion about only a part of said compressed tablet inlay portion to form said compressed main body portion and expose only said single surface of said compressed tablet inlay portion on the outer surface of the finished tablet form with said single surface lying in substantially a common plane with contiguous portions of said main body portion.

3,048,527

EXTRACTIVE DISTILLATION OF HEXANOL WITH A POLYHYDRIC ALCOHOL AS A SOLVENT

Tibor Gyoerkoes, New Martinsville, W. Va., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

Filed Oct. 10, 1958, Ser. No. 766,522
13 Claims. (Cl. 202—39.5)



1. A process for recovering hexanol from a crude mixture of high boiling alcohols which comprises fractionating said mixture to recover therefrom an overhead containing the bulk of the hexanol together with butanol and acetals and a bottoms product containing only minor quantities of hexanol but substantially all of the still higher alcohols in the initial mixture, thereafter extractively distilling the hexanol containing overhead in the presence of a substantially anhydrous liquid polyhydric alcohols as extractant to recover therefrom an overhead containing the bulk of the non-alcoholic impurities and of the lower alcoholic impurities and a bottoms product containing primarily hexanol and extractant, then fractionating the hexanol bottoms product into extractant and hexanol, and recycling the recovered extractant to the extractive distillation.

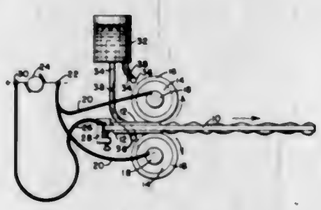
3,048,528

DESCALING TITANIUM AND TITANIUM ALLOY ARTICLES

Loren C. Covington, Las Vegas, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Filed Nov. 23, 1959, Ser. No. 854,697
2 Claims. (Cl. 204—141)

1. In a method for loosening scale from a surface of an article of metal selected from the group consisting of titanium and titanium base alloys which comprises connecting said article to the positive pole of a source of direct electric current, connecting an electrode having a pervious and insulating padding to the negative pole of said source of electric current and rolling said electrode over a scaled surface of said article with said padding in contact with said scaled surface, meanwhile maintaining said padding wet with an electrolyte and meanwhile passing direct electric current between said article and said electrode, the improvements which comprise



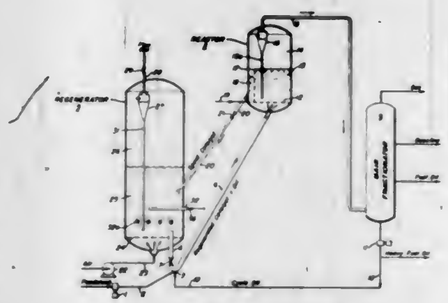
employing as said electrolyte a solution consisting essentially of 50 to 200 grams per liter of ammonium fluoride (NH_4F) and 50 to 200 grams per liter of sodium ammonium hydrogen phosphate ($NaNH_4HPO_4.4H_2O$) with the balance substantially all water, and the said direct electric current is passed in amount to provide a current density over the pad contact area of between about 300 and 10,000 amperes per square foot and is applied for a period of between about 1 second and 10 minutes.

3,048,529

FLUIDIZED CATALYST REGENERATION

John W. Mohlman, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed July 30, 1958, Ser. No. 751,969
7 Claims. (Cl. 204—154)



1. In a process for the catalytic conversion of hydrocarbons wherein said hydrocarbons, in gaseous form, are intimately contacted with a fluidized particulate solid hydrocarbon conversion catalyst in a reaction zone, and during said contact the catalyst becomes coated with carbonaceous deposits and wherein the activity of said catalyst is maintained by withdrawing catalyst from said reaction zone and cycling said catalyst to a regeneration zone in which the catalyst is contacted with an oxygen-containing gas under combustion conditions to remove said deposits, the improvement whereby the rate of combustion of said carbonaceous deposits is increased which comprises maintaining in said regeneration zone high energy ionizing radiation of an intensity sufficient to increase the combustion rate of said carbonaceous deposits, said intensity being effective to provide a dosage of at least about 10,000 roentgens per hour throughout a major portion of said zone.

3,048,530

POLYVINYL ACETATE PAINT

Hisao Miyahara and Hideo Suzumura, Kurashiki City, Japan, assignors to Kurashiki Rayon Co., Ltd., Okayama, Japan, a corporation of Japan

No Drawing. Filed Sept. 15, 1959, Ser. No. 840,023
Claims priority, application Japan Sept. 20, 1958
7 Claims. (Cl. 204—158)

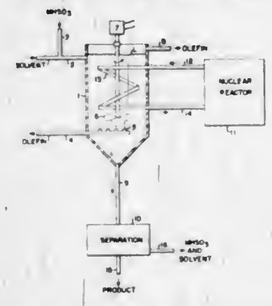
1. A process for manufacturing a stabilized polyvinyl acetate paint which comprises emulsifying vinyl acetate in an aqueous dispersion consisting essentially of water and titanium dioxide and hydrogen peroxide while irradiating the resultant emulsion with ultraviolet light, thereby polymerizing the emulsified vinyl acetate and forming a stabilized polyvinyl acetate latex paint.

3,048,531

RADIOCHEMICAL SULFONATION REACTION

Eugene L. Stogryn, Fords, and Perry A. Argabright, Nixon, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 13, 1958, Ser. No. 708,587
6 Claims. (Cl. 204—162)



1. A radiochemical process which comprises forming a mixture containing at least 5 weight percent of an olefin having the formula $RHC{=}CH_2$, wherein R is an alkyl group having 1 to 30 carbon atoms, and a bisulfite having the formula $M(HSO_3)_x$ wherein M is a radical selected from the group consisting of alkali metal, alkaline earth metal and ammonium radicals, and x is the valence of M, the molar ratio of said bisulfite to said olefin being in the range of 1 to 10, irradiating said mixture with an artificially produced electromagnetic radiation having a wave length in the range of 10^{-3} to 10^2 A. until about 1 to 50 megaroentgens have been absorbed, the irradiation being carried out at a temperature in the range of 0 to 90° C. and at a dose rate in the range of 0.1 to 10 megaroentgens per hour, and obtaining a sulfonate addition product having the formula $(RCH_2CH_2SO_3)_xM$ in a yield of at least 20 mole percent, based on said olefin.

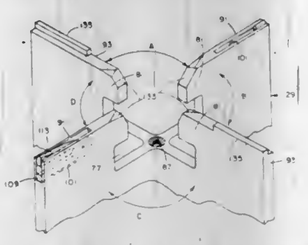
3,048,532

CRUCIFORM CONTROL ROD JOINT

Arthur G. Thorp II, Pittsburgh, Pa., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed May 24, 1961, Ser. No. 112,478
5 Claims. (Cl. 204—193.2)

1. In a nuclear reactor having a cruciform control rod member and a cruciform control rod follower member adapted to move in a cruciform channel in said reactor, a joint for connecting said members in abutting relation, comprising a longitudinally extending cross-shaped control-rod member having first and second crossed arms and tapered receiving means at one end of at least one of said arms and crossed T-shaped sections extending longitudinally from said control-rod member adjacent said receiving means with the base of the T's at the center of the cross formed by said member, a control rod follower member having longitudinally extending third and fourth crossed arms formed with end slots that correspond in shape with and are adapted to mate with said T-shaped sections, means interposed between the center of the cross-arms of said T-shaped sections and the center of said slots at the center of the cross of said follower for rotatably centering the said members relative to each other so that said T-shaped sections rotate in said slots, said tapered receiving means being in the ends of said follower member adjacent



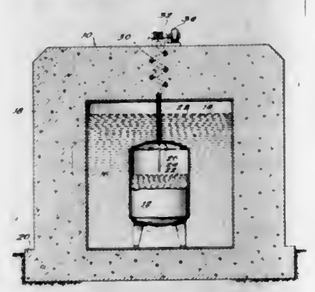
said third arm, and means in said third arm having resilient V-shaped keys that are selectively adapted to be interposed under compression in said receiving means whereby the crosses of said members are selectively aligned in abutting relation with each other, said members are selectively stopped from relative opposite rotation, and mating portions of said T-shaped sections and said control rod forming said slots will selectively cause said follower to hang securely from said control-rod member and to move freely in the cruciform control rod channel in said reactor.

3,048,533

NEUTRONIC REACTOR MANIPULATING DEVICE

Leo A. Ohlinger, Los Angeles, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed July 17, 1950, Ser. No. 174,284
5 Claims. (Cl. 204—193.2)



1. A neutronic reactor comprising a neutron reacting system, a shield surrounding said system to absorb penetrating radiations, at least one conduit passing through said shield from the interior to the exterior, and a cable extending through the conduit, said conduit having a substantially helical path, the helix having an inner diameter greater than that of the conduit.

3,048,534

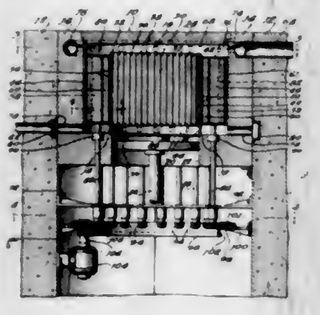
CONTROL MEANS FOR NEUTRONIC REACTORS

Lewi Tonks, Schenectady, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Mar. 28, 1952, Ser. No. 278,996
9 Claims. (Cl. 204—193.2)

1. A neutronic reactor comprising an active portion, and a control device comprising a plurality of contiguous cylinders around said active portion, each cylinder being partially filled with a neutron absorbing material and partially filled with a neutron reflecting material, each

cylinder having a longitudinal re-entrant surface into which a portion of an adjacent cylinder extends, one of said cylinders having a second re-entrant surface substantially oppositely disposed, and means for rotating suc-



cessively the cylinders about their longitudinal axes, whereby the sides of the cylinders having material of similar neutron characteristics can be placed against said active portion.

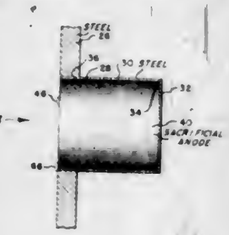
3,048,535

ELECTROLYTIC SYSTEM

Rolland C. Sabins, 522 Catalina Blvd., San Diego, Calif.

Filed Mar. 22, 1960, Ser. No. 18,218

4 Claims. (Cl. 204—197)



1. In combination, a steel ship hull having an opening therein below the water line; an impervious steel casing having an opening, said casing extending into the hull, the walls of the casing, adjacent the open end, being hermetically sealed and electrically connected to the hull at said opening in the hull to thereby close the latter opening; an anode of sacrificial metal disposed within and substantially filling the steel casing, said anode does not extend beyond the outer surface of the hull, said anode having a steel supporting rod embedded therein, said rod having an end projecting slightly outwardly from the casing, the projecting end of the rod being attached to the hull.

3,048,536

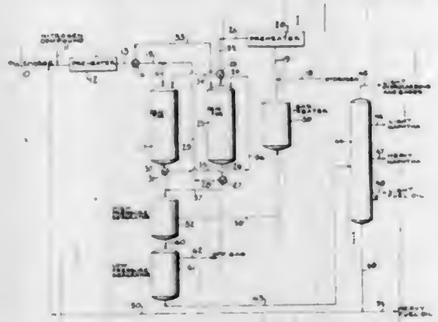
HYDROCRACKING PROCESS WITH REDUCTION IN AGING OF CATALYST BY INTERMITTENT TREATMENT WITH HYDROGEN

Harry L. Coonradt, Woodbury, and Wilbur K. Leaman, Medford Lakes, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed July 21, 1958, Ser. No. 750,004

6 Claims. (Cl. 208—110)

1. A hydrocracking process which comprises adding to a hydrocracking charge stock a sufficient amount of a compound, selected from the group consisting of ammonia and a nitrogen compound decomposable to ammonia, under the process temperature conditions to adjust the nitrogen content of said charge stock within the approximate range of 0.15 to 1 percent by weight, contacting said nitrogen-containing charge stock with a catalyst consisting essentially of a minor proportion of a metal of the platinum series deposited on an acidic refractory oxide support in the presence of hydrogen under conditions of temperature and pressure capable of effecting, under continuous conditions of contact, rapid aging of said catalyst with reduction in activity thereof and periodically inter-



rupting contact between said catalyst and said charge stock at intervals of from about 1 minute to about 45 minutes while maintaining continuous contact of said catalyst with hydrogen whereby a substantial decrease in the rate of aging of said catalyst is achieved.

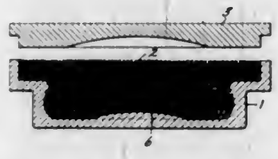
3,048,537

POROUS ARTICLES OF POLYETHYLENE POLYMERS AND PROCESS OF MAKING THE SAME

David B. Pall, Roslyn Heights, and Sidney Krakauer, Franklin Square, N.Y., assignors to Pall Corporation, Glen Cove, N.Y., a corporation of New York

Filed Jan. 6, 1958, Ser. No. 707,288

13 Claims. (Cl. 210—510)



1. A fluid-permeable article of low density polyethylene comprising interconnected aggregates of sintered polyethylene particles, the aggregates defining open spaces intercommunicating to define pores of microscopic dimensions extending from surface to surface and uniformly distributed from surface to surface of the article for flow therethrough of fluid, the article thereby constituting a mass uniform in porosity from surface to surface and having a high tensile strength and flow capacity relative to its voids content and pore size.

3,048,538

WATER-BASED DRILLING FLUID HAVING ENHANCED LUBRICATING PROPERTIES

Milton Rosenberg and Paul William Schaub, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed May 8, 1959, Ser. No. 811,805

8 Claims. (Cl. 252—8.5)

1. A water-base drilling fluid having extreme pressure lubricating properties consisting essentially of water and an extreme pressure lubricant additive selected from the group consisting of fatty acids having at least 8 carbon atoms per molecule, sulfurized fatty acids having at least 8 carbon atoms per molecule, alkali metal soaps of fatty acids and alkali metal soaps of sulfurized fatty acids, available

calcium ions in a concentration above about 150 parts per million high enough to form insoluble curds of calcium soap, and a non-ionic surface active agent selected from the group consisting of polyoxyethylene derivatives of alkyl phenols, polyoxyethylene derivatives of alkyl glycols, and polyoxyethylene derivatives of anhydroalkitol esters in a concentration adequate to disperse the calcium soap in the drilling fluid.

3,048,539

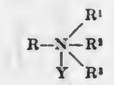
ANTISTATIC TEXTILE LUBRICANT FINISHES

Witold R. Kocay and Derek J. Brady, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 29, 1959, Ser. No. 823,339

6 Claims. (Cl. 252—8.8)

1. A water-soluble antistatic textile finish composition consisting essentially of a mixture of about one part by weight of a water-soluble castor oil-ethylene oxide condensation product containing at least about 25 mols of combined ethylene oxide, and from about 2 to 10 parts of a quaternary ammonium cationic surface-active antistatic agent represented by the general formula



wherein R is an organic radical containing a hydrophobic group, R^1, R^2 and R^3 are each radicals selected from the group consisting of hydroxyalkyl, alkoxyalkyl and ethenoxy radicals, and alkyl radicals containing from 1 to not more than 3 carbon atoms, and Y is an anion.

3,048,540

CARBON BLACK THICKENED GREASES

Du Bois Eastman and Roger M. Dille, Whittier, Calif., Wesley V. Taylor, Jr., Beacon, and Fred C. Toettcher and Terence B. Jordan, Fishkill, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 28, 1959, Ser. No. 816,362

4 Claims. (Cl. 252—29)

1. A water stable lubricating grease consisting essentially of a mineral lubricating oil as the chief component thickened to a grease consistency with a finely divided hydrophilic carbon black as the sole thickening agent therein, said carbon black having an uncompressed bulk density below about 1 pound of cubic foot, a mean ultimate particle diameter of about 25–45 millimicrons, an ash content above 1.0 percent by weight, a pH in the range 4–6, and a surface area of about 175–750 square meters per gram, and characterized also by the property of settling in water to a maximum concentration from about 0.5 to 1.0 percent by weight.

3,048,541

GREASES THICKENED WITH SODIUM SALTS OF ALKYL MERCAPTO FATTY ACIDS

Johan C. D. Oosterhout, Port Arthur, Tex., assignor to Texaco Inc., a corporation of Delaware

No Drawing. Filed Apr. 29, 1957, Ser. No. 655,465

6 Claims. (Cl. 252—33.6)

1. A lubricating grease consisting essentially of a lubricating oil thickened to a grease consistency with a sodium alkyl mercapto fatty acid salt having the formula RSR_1COONa, wherein R is a substantially straight chain alkyl group containing about 8 to 20 carbon atoms and R_1 is a straight chain alkylene group containing from 1 to 5 carbon atoms, and wherein R and R_1 together contain about aliphatic 11–30 aliphatic carbon atoms.

3,048,542

LUBRICATING COMPOSITIONS

Raymond B. Tierney, Wappingers Falls, and Robert H. Krug, Cornwall, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,037

13 Claims. (Cl. 252—47.5)

1. A synthetic lubricant composition comprising a major portion of an aliphatic carboxylic acid ester having lubricating properties, selected from the group consisting of diesters and polyesters, and a minor amount sufficient to improve the extreme pressure property of the composition of a fatty material consisting essentially of a compound selected from the group consisting of dimers and trimers of linoleic acid and mixtures thereof.

4. A synthetic lubricant composition comprising a major portion of a dialkyl ester of an aliphatic dicarboxylic acid having an alkyl portion ranging from 6 to 18 carbon atoms and an aliphatic acid portion ranging from 6 to 12 carbon atoms, from 0.01 to 1 percent by weight of a fatty material consisting essentially of a compound selected from the group consisting of dimers and trimers of linoleic acid and mixtures thereof, a viscosity index improving amount of a methacrylate polymer, an oxidation inhibiting amount of phenothiazine, and di(o-chlorophenyl)phenyl phosphate in an amount sufficient to improve the anti-wear properties of the lubricant.

3,048,543

COLOR STABILIZED LUBRICATING OIL

Charles L. Thomas, Swarthmore, Archibald P. Stuart, Media, and Habet M. Khelghatlan, Springfield, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Apr. 3, 1958, Ser. No. 726,058

9 Claims. (Cl. 252—51.5)

1. A new composition of matter consisting essentially of a petroleum lubricating oil and 0.005 to 1 weight percent of a material having the formula RNHN(R')R'' where R, R' and R'' are each selected from the group consisting of hydrogen, alkyl radicals having not more than 5 carbon atoms and hydroxyalkyl radicals having not more than 5 carbon atoms.

3,048,544

LUBRICANT COMPOSITION

William T. Stewart, El Cerrito, Frank A. Stuart, Orinda, and Warren Lowe, San Francisco, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed June 10, 1959, Ser. No. 819,223

8 Claims. (Cl. 252—51.5)

1. A lubricant composition comprising a major portion of a mineral lubricating oil and a minor portion, sufficient to enhance the detergent characteristics of the composition, of a polymer of (A) polymerizable oil-solubilizing compounds selected from the group consisting of alkyl esters of α,β-unsaturated monocarboxylic acids of from 3 to 6 carbon atoms and fatty acid esters of unsaturated alcohols of from 2 to 6 carbon atoms having a single ethylenic linkage and containing an alkyl group of from 4 to 30 carbon atoms, and (B) the imide of maleic anhydride and tetraethylene pentamine, said polymer having a molecular weight from about 100,000 to about 1,000,000, and said monomers being present in the polymer in the ratio of from about 1 to 20 monomer units of the oil-solubilizing monomer (A) for each monomer unit of the imide monomer (B).

3,048,545
HYDRAULIC FLUID COMPOSITIONS

Stuart Walter Critchley, Hale Barns, and Frank Lamb, Chadderton, Oldham, England, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Filed Oct. 19, 1960, Ser. No. 63,470
Claims priority, application Great Britain Oct. 20, 1959
20 Claims. (Cl. 252—78)

1. A hydraulic fluid composition consisting essentially of a blend of (1) at least one liquid phosphonate of the general formula:

$$R_1P(O)(OR_2)_2$$

wherein R_1 is an alkyl radical containing 1 to 16 carbon atoms, R_2 is an alkyl radical containing 1 to 16 carbon atoms, and (2) at least one end-stopped alkyl aryl siloxane polymer having a plurality of halogen atoms as substituents in the aryl nuclei, the proportion of such halogenated siloxane polymer being from 5 to 95 percent by weight of the composition.

20. A hydraulic fluid composition as defined in claim 1 in which the siloxane polymer is trimethyl polychlorophenyl methyl siloxane.

3,048,546
BLEACHING COMPOSITIONS

Donald B. Lake, Wilmington, Del., and Peter T. B. Shaffer, Niagara Falls, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 20, 1960, Ser. No. 44,018
6 Claims. (Cl. 252—95)

1. A solid bleaching composition consisting essentially of an alkali metal chloride salt in combination with an alkali metal monopersulfate salt, the ratio of said chloride salt to said monopersulfate salt being about 0.1–40/1, respectively.

3,048,547
COMPOSITION AND PROCESS FOR CLEANING ALUMINUM SURFACES

Tro J. Vosbigian, Los Angeles, Calif., assignor, by mesne assignments, to Purex Corporation, Ltd., a corporation of California

No Drawing. Filed June 23, 1958, Ser. No. 750,057
9 Claims. (Cl. 252—102)

1. A composition for cleaning aluminum surfaces in the form of a hydrocarbon-free aqueous solution consisting essentially by weight of 3 to 25 parts of a water soluble, aliphatic amine of pH of at least 12.5 when dissolved by weight of the solution at a concentration of 25% in water; a chromate ion supplied by a member of the class consisting of water soluble chromate and dichromate, and chromic acid, in the range of 1 part of chromate ion to 5 parts of amine to 1 part of chromate ion to 50 parts of amine; and a major portion of water; based on 100 parts by weight of the composition.

3,048,548
DEFOAMING DETERGENT COMPOSITION

Arthur T. Martin, St. Paul, and Norman S. Temple, Newport, Minn., assignors to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware

Filed May 26, 1959, Ser. No. 815,897
5 Claims. (Cl. 252—135)

1. A machine dishwashing composition consisting essentially of an inorganic alkali metal detergent salt and a small amount sufficient to maintain wash pressure of a polyoxyalkylene glycol mixture consisting of a product which statistically represented has a plurality of alternating hydrophobic and hydrophilic polyoxyalkylene chains, the hydrophilic chains consisting of oxyethylene radicals linked one to the other and the hydrophobic chains consisting of oxypropylene radicals linked one to the other, said statistically represented product having five such chains comprising three hydrophobic chains linked by two hydrophilic chains, the central hydrophobic chain constituting 30% to 34% by weight of the product, the terminal hydrophobic chains together constituting 31% to 39% by weight of the product, the linking hydrophilic chains together constituting 31% to 35% by weight of the product, the intrinsic viscosity of the product being from about 0.06 to 0.09 and the molecular weight of the product being from about 3000 to 5000.

3,048,549
ELECTRODE JELLY

Carsbie C. Adams, 41 Peachtree Place NE., Atlanta 9, Ga.

No Drawing. Filed May 27, 1957, Ser. No. 661,862
1 Claim. (Cl. 252—518)

Electrode jelly consisting of the following in approximately the following proportions:

	Percent
Aqueous saturated sodium chloride solution	87.6
Mineral oil	8.76
Sodium carboxymethylcellulose	3.50
Sodium benzoate	.1

3,048,550
VISCOUS SOLUTIONS COMPRISING SULFONATED ALKENYL AROMATIC RESINS AND GALACTOMANNAN GUM

Harold H. Roth, Bay City, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 15, 1960, Ser. No. 49,419
7 Claims. (Cl. 260—17.4)

1. A thickened aqueous solution comprising a synergistic mixture of water-soluble, sulfonated alkenyl aromatic resin and polysaccharide, galactomannan gum.

3,048,551
POLYETHYLENE-WAX COMPOSITIONS

Robert G. Lutz, Houston, Tex., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Nov. 19, 1959, Ser. No. 854,013
4 Claims. (Cl. 260—28.5)

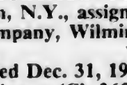
1. A composition of matter comprising at least 90% by weight of petroleum wax having a melting point between 125 and 145° F., 0.25–5% by weight of a lower density polyalkene having a density between about 0.870 and about 0.910 at 20° C. and 0.05–0.75% by weight of a higher density polyalkene having a density between about 0.915 and about 0.960, at 20° C., the monomeric alkenes from which the polyalkenes are prepared having 2–3 carbon atoms per molecule, each of the polyalkenes having average molecular weights between about 1,000 and about 12,000.

3,048,552
COATING COMPOSITION COMPRISING AN EPOXY RESIN, AN ACRYLATE TRIPOLYMER AND A LATENT CURING CATALYST, AND METHOD OF PREPARATION

James Chen-Shang Fang, Springfield, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,939
19 Claims. (Cl. 260—28.5)

1. A liquid coating composition comprising, as the essential organic film-forming components, a compatible mixture of an acidic copolymer (I) of a plurality of polymerizable alpha,beta monoethylenically-unsaturated monomers, at least ternary in composition, consisting essentially of (*a*) an alpha-beta monoethylenically-unsaturated alkenyl-substituted aryl hydrocarbon, (*b*) at least one C_1 to C_{12} alkanol ester of an alpha,beta monoethylenically-unsaturated monocarboxylic acid, and (*c*) a copolymerizable alpha,beta monoethylenically-unsaturated carboxylic acid monomer having from one to two —COOH moieties per molecule in a proportion sufficient to provide said acidic copolymer (I) with a carboxylic acid number in the range of 10 to 150, and a resinous vic-epoxy condensate (II) having an average of more than one



1,2-oxirane moiety per molecule and a 1,2-oxirane equivalent weight up to about 1500, reactive functional groups in said vic-epoxy condensate (II) being limited to said 1,2-oxirane moieties and hydroxyl moieties, the relative proportions of said acidic copolymer (I) and said vic-epoxy condensate (II) being such that the molar ratio of

$$\frac{\text{1,2-oxirane oxygen}}{\text{—COOH}}$$

is in the range of 0.25 to 10, said film-forming components being compatibly in solution in a volatile liquid comprising an organic solvent therefor, and, as a latent curing agent for said film-forming components, (III) at least one substantially water-insoluble quaternary ammonium salt in a proportion in the range of 0.05 to 5 parts per 100 parts total weight of organic film-forming components in said composition, said quaternary ammonium salt having the general formula

wherein R^1—, R^2—, R^3, and R^4— of the indicated monovalent quaternary ammonium cation are monovalent C_1 to C_{20} hydrocarbon radicals, two to four of said hydrocarbon radicals being C_1 to C_4 alkyl radicals, the total number of carbon atoms in said cation being from 4 to 48, the inorganic anion A^{-n} is composed of at least five atoms including at least one atom of an electropositive chemical element having joined covalently thereto a plurality of at least four atoms of at least one electronegative chemical element selected from the group consisting of oxygen and fluorine, the plurality of said electronegative atoms being sufficient to provide said inorganic anion with electronegative valence of $-n$, where n is an integer having a value of from 1 to 4.

3,048,553
BLENDING WAX WITH AN ETHYLENE-VINYL ACETATE COPOLYMER

John Moss, Lewiston, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,117
3 Claims. (Cl. 260—28.5)

1. The process of blending a petroleum wax and an ethylene/vinyl acetate copolymer comprising adding said wax in molten form to a substantially anhydrous reaction mixture comprising said copolymer and unreacted ethylene and vinyl acetate, prior to letdown of the pressure of said reaction mixture below 250 atmospheres.

3,048,554
NON-CORROSIVE TEXTILE SIZING COMPOSITION COMPRISING AN ACRYLIC POLYMER AND AN AMINE SALT

Robert R. Dreisbach and John F. Mulloy, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 13, 1956, Ser. No. 609,546
4 Claims. (Cl. 260—29.6)

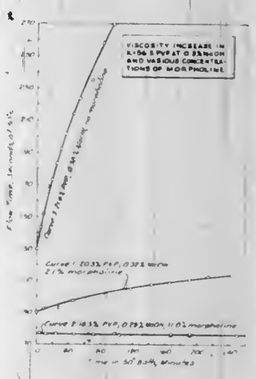
1. A composition of matter consisting essentially of 10 to 25 percent by weight aqueous solution of (1) a water

soluble polymer composed predominantly of a polymerized form of an acid from the group consisting of acrylic and methacrylic acids, neutralized to a pH which is from 0.5 to 2.0 pH units away from the neutral point; with (2) a water soluble amine salt of (*a*) a water soluble polyalkylene polyamine wherein the alkylene group is selected from ethylene and propylene, and (*b*) a stoichiometric amount based on the amine groups of said polyalkylene polyamine of an acid selected from the group consisting of boric acid, phosphoric acid, and mixtures thereof.

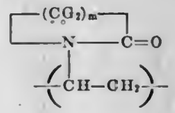
3,048,555
METHOD FOR STABILIZING AQUEOUS SOLUTIONS OF WATER-SOLUBLE N-VINYL HETEROCYCLIC POLYMERS AND COPOLYMERS BY ADDING WATER-SOLUBLE AMINES

Teddy G. Traylor and John F. Voeks, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 14, 1959, Ser. No. 786,845
7 Claims. (Cl. 260—29.6)

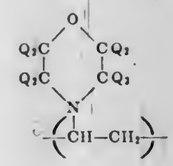


1. Method for the stabilization against cross-linking and gel formation of aqueous, alkaline solutions of water-soluble, cross-linkable N-vinyl heterocyclic polymers, which method comprises adding to and incorporating in (*a*) an aqueous, alkaline solution of a water-soluble polymer containing at least about 50 weight percent of recurring N-vinyl heterocyclic units selected from the group consisting of those, and their mixtures, of the formulae:



(C)

and



(D)

wherein both G and Q are each selected independently from the group consisting of hydrogen and methyl and m is an integer from 3 to 5, and up to 50 weight percent of another polymerized recurring unit of another monoethylenically unsaturated monomeric material that is copolymerizable with the monomeric precursors of said N-

vinyl heterocyclic polymers; a (*b*) minor proportion of at least one nucleophilic, amide-forming, water-soluble amine selected from the group consisting of those of the formulae:

$$R_xNH_y \quad (A)$$

and



(B)

wherein each R is independently selected from the group consisting of alkyl radicals containing from 1 to about 10 carbon atoms, monohydric alkanol radicals containing from 1 to about 10 carbon atoms, and aralkyl radicals containing from 7 to about 15 carbon atoms; *x* is an integer from 1 to 2 and *y* is an integer from 1 to 2 with the limitation that when *x* is 1, *y* is 2 and when *x* is 2, *y* is 1; and Z is a radical selected from the group consisting of a bivalent 3 to 10 carbon atom alkylene radical biterminally affixed to the nitrogen atom and of which not more than 6 carbon atoms are in the ring formed with the nitrogen atom, and a bivalent radical from a 3 to 10 carbon atom alkyl ether obtained by removing the terminal hydrogens therefrom, which radical is biterminally affixed to the nitrogen atom and of which not more than 6 carbon atoms are in the ring formed with the nitrogen atom.

3,048,556

ION EXCHANGE TREATMENT OF BUTYL RUBBER LATEX AND PRODUCT THEREOF

Alfred L. Miller, Cranford, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 21, 1959, Ser. No. 807,765

9 Claims. (Cl. 260—29.7)

1. A process for increasing the viscosity of C_4 to C_8 isoolefin-C_4 to C_{12} multiolefin butyl rubber latices which comprises contacting said latex at a temperature level of between about 10° and 90° C. with between about 1 and 20 parts by weight of a synthetic sulfonated styrene divinyl benzene cation exchange resin per 100 parts by weight of latex and separating the cation exchange resin treated latex from the resin.

3,048,557

PROCESS OF BLENDING A PLASTICIZER WITH A VINYL RESIN

Don F. Siddall, Akron, Ohio, assignor to The United States Stonewear Co., Tallmadge, Ohio, a corporation of Ohio

Filed Jan. 25, 1960, Ser. No. 4,424

4 Claims. (Cl. 260—30.6)

1. The process of blending a plasticizer with a finely divided resin, the plasticizer being soluble in the resin, which comprises spraying the plasticizer on to the resin in a flexible container with a gas-pervious wall fabricated of smooth material and absorbing the plasticizer into the resin while it remains in particulate form while agitating the particulate material, while passing heated gas through the wall of the container into direct contact with the plasticizer and resin therein to heat them, and flexing the container wall to prevent the permanent adherence of particulate material thereto, and simultaneously blowing a heated gas into contact with the particulate material in the container and thereby heating it to a temperature below the minimum temperature detrimental to the resin-plasticizer mixture.

3,048,558

VINYL CHLORIDE POLYMERS PLASTICIZED WITH ADDUCTS OF FUMARATE ESTERS AND ALKENYL-SUBSTITUTED AROMATIC COMPOUNDS

Joachim Dazzi, Basel, Switzerland, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Apr. 20, 1956, Ser. No. 579,452, now Patent No. 2,913,482, dated Nov. 17, 1959. Divided and this application May 21, 1959, Ser. No. 814,688

10 Claims. (Cl. 260—31.8)

10. A resinous composition comprising a polymer selected from the class consisting of polyvinyl chloride and copolymers of at least 70% by weight of vinyl chloride and up to 30% by weight of an unsaturated monomer selected from the class consisting of vinyl acetate and vinylidene chloride, said polymer being plasticized with an adduct of the formula

$$R-\left[\begin{matrix}CHCOOY\\ |\\ CH_2COOY'\end{matrix}\right]_n$$

in which R is selected from the class consisting of the styrene, ar-vinyltoluene, α-methylstyrene and dimeric α-methylstyrene residues, Y and Y' are selected from the class consisting of alkyl radicals of from 1 to 8 carbon atoms and alkoxyalkyl radicals of from 3 to 8 carbon atoms, and *n* is an integer of 1 to 3, said adduct being present in the resinous composition in a quantity of from 5% to 50% by weight.

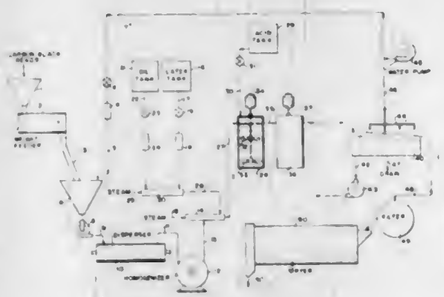
3,048,559

METHOD OF COMPOUNDING CARBON BLACK AND RUBBER

George L. Heller, Monroe, and James Wilfred White, West Monroe, La., assignors to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

Filed Dec. 10, 1958, Ser. No. 779,470

6 Claims. (Cl. 260—33.6)



1. In the process of producing dispersions of carbon black in rubber in which the black is mixed with water to form a slurry, the slurry is mixed with the rubber in latex form and the carbon-black latex mixture thereafter coagulated, the improvement comprising the following steps in sequence, continuously charging the carbon black and water, in uniform predetermined proportions, to and through a mixing zone, subjecting the black-water mixture in said zone to violent hydraulic turbulence and impact thereby forming a continuous, flowing, confined stream of aqueous carbon black slurry of uniform composition, but containing residual agglomerates of carbon black particles, continuously homogenizing the resultant slurry stream, as formed, to disintegrate and disperse the residual carbon black agglomerates in the slurry, continuously uniformly mixing a stream of the latex in uniform predetermined proportions with the resultant stream of homogenized slurry under conditions of violent hydraulic turbulence and impact and directly thereafter coagulating the resultant mixture continuously by maintaining a substantially constant volume of the mixture, not exceeding about 800 gallons and not exceeding 5 feet in diameter, maintaining the entire body of the mixture in a state of violent swirling such as to produce a definite vortex, continuously charging the stream of latex-carbon black mixture to the body, continuously adding a coagulant thereto, and thereby dispersing it uniformly throughout the body of liquid, continuously passing the mixture in which coagulation has been initiated from said body to a separate body and therein completing coagulation, while continuing agitation separating the serum from the coagulated carbon black-rubber mixture and washing and drying the latter.

2. The process of claim 1 in which a stream of oil is uniformly mixed with the latex stream prior to mixing the latex with the homogenized carbon black slurry stream.

3,048,560

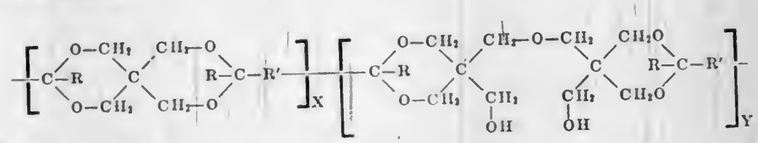
POLYSPIRANE RESIN CURED IN THE PRESENCE OF AN ACID CATALYST, MIXTURES THEREOF WITH OTHER RESINOUS MATERIALS, PROCESS FOR PREPARING SAME, AND ELECTRICAL CONDUCTOR COATED THEREWITH

Albert H. Markhart, Wilbraham, and Charles F. Hunt and Saul M. Cohen, Springfield, Mass., assignors to Shawinigan Resins Corporation, Springfield, Mass., a corporation of Massachusetts

No Drawing. Filed Aug. 7, 1958, Ser. No. 753,622

10 Claims. (Cl. 260—42)

1. A composition of matter comprising a crosslinked insoluble product of a polyspirane resin, having the general formula



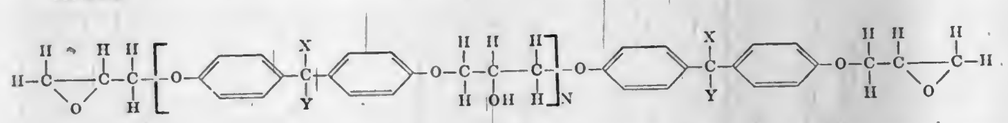
where R is taken from the group consisting of H and CH_3, R' is taken from the group consisting of aliphatic hydrocarbons defined by $(CH_2)_S$, where S is an integer from 0–8 and alicyclic and aromatic hydrocarbons of 5–6 carbon atoms, and methyl and ethyl substituted products thereof, *X* plus *Y* is equal to an integer from 2–100 and *Y* is equal to no more than 50% of *X* plus *Y*, cured at a temperature greater than 240° C. but not greater than about 400° C. in the presence of 0.05–1.0%, based on the weight of the polyspirane resin, of a non-volatile acid possessing an ionization constant greater than 3.8×10^{-2}.

4. A composition of matter as in claim 1 wherein the cured resin contains, for every 100 parts by weight of the polyspirane component, another component selected from the group consisting of:

(*a*) about 0.5–5 parts of a compound selected from the group consisting of the polymers of ethylene and halogenated derivatives thereof;

(*b*) 1 to 50 parts of a polyisocyanate ecompound;

(*c*) 4 to 25 parts of an epoxy resin having the general formula



where X and Y are taken from the group consisting of hydrogen, methyl groups, aliphatic and aromatic hydrocarbons, and N is an integer from 0 to 10; and

(*d*) 1 to 25 parts of a phenolic aldehyde resin.

3,048,561

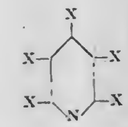
COMPOSITIONS CONSISTING ESSENTIALLY OF GRAFT COPOLYMERS OF VINYL PYRIDINE MONOMERS ON ACRYLONITRILE POLYMERS AND METHOD OF PREPARING SAME

George W. Stanton, Walnut Creek, and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 29, 1958, Ser. No. 711,933

8 Claims. (Cl. 260—45.5)

1. Dye-receptive graft copolymer composition consisting essentially of (1) a completely homopolymerized, orientable polyacrylonitrile substrate having chemically attached directly to carbon atoms in its chain, as graft copolymerized substituents thereon, a minor proportion of (2) a polymerized vinyl pyridine monomer of the formula:



(I)

wherein one X is a vinyl (—CH=CH_2) radical and the remainder are independently selected from the group consisting of hydrogen and lower alkyl groups that contain from 1 to 4 carbon atoms.

3,048,562

PROCESS FOR OXIDIZING POLYMERIC BUTADIENE DRYING OIL IN THE PRESENCE OF STEAM-CRACKED PETROLEUM RESIN, AND RESULTING PRODUCT

Neville Leverne Cull, Baker, and Edward Allen Hunter, Terrace George Verbois, and Richard Louia Ray, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,598

4 Claims. (Cl. 260—45.5)

1. In a process for oxidizing a polymeric drying oil chosen from the group consisting of homopolybutadiene and a copolymer of butadiene and styrene containing up to 40% styrene by blowing the said oil in an aromatic hydrocarbon solvent with oxygen at a temperature between 20° and 150° C., the improvement which comprises incorporating in said drying oil prior to carrying out the oxidation process 10 to 50%, based on polymeric drying oil, of a resin obtained by polymerizing a steam-cracked petroleum distillate stream boiling 18° to 85° C. with a Friedel-Crafts catalyst at a temperature between −18° and +66° C.

3,048,563
COMPOSITION COMPRISING RUBBER AND 2,6-DI-TERTIARY-BUTYL-3-METHYLPHENOL

Robert Seydel, Koln-Dellbruck, Theo Kempermann, Koln-Lindenthal, Willi Hahn, Koln-Stammheim, and Rüdolf Stroh, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschatt, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed May 5, 1959, Ser. No. 810,994
Claims priority, application Germany May 13, 1958
1 Claim. (Cl. 260—45.95)

As a new composition of matter rubber containing as antioxidant 2,6-di-tert.-butyl-3-methylphenol.

3,048,564
PROCESS FOR PREPARING POLYETHYLENE TEREPHTHALATE

Carl J. Heffelfinger, Circleville, Ohio, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 26, 1957, Ser. No. 680,436
12 Claims. (Cl. 260—75)

1. In a process of making highly polymeric polyethylene terephthalate having an intrinsic viscosity of at least 0.55 wherein an alkyl ester of terephthalic acid having 1–7 carbon atoms in the alkyl group is reacted with a polymethylene glycol having from 2–10 carbon atoms in the presence of an ester interchange catalyst to effect ester interchange and the resulting bis glycol ester is subsequently polymerized, the improvement which comprises polymerizing said bis glycol ester until a film-forming polymer is produced in the presence of a catalyst system comprising catalytic amounts of (1) an alkaline metal from the group consisting of lithium, sodium, calcium and magnesium and their hydrides, alcoholates, chlorides and glycol-soluble salts of monocarboxylic acids; (2) a glycol-soluble salt of a monocarboxylic acid and a metal from the group consisting of zinc, manganese and cadmium; (3) an antimony compound from the group consisting of antimony trioxide, antimonyl potassium tartrate, antimonous oxychloride, antimony trifluoride and sodium antimonyl hydroxy acetate; and (4) at least 0.05%, based on the weight of the alkyl ester of terephthalic acid, of a phosphorus compound from the group consisting of monoammonium phosphate, diammonium phosphate and monoammonium phosphite.

3,048,565
POLYESTER HAVING BASIC DYE SITES

Walter G. Gall and Ivan Maxwell Robinson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 21, 1959, Ser. No. 860,729
9 Claims. (Cl. 260—75)

1. A linear carbonyl-oxy copolyester consisting essentially of alternating repeating units defined by the formulae:

(*a*) $(\text{—OGOOCACO—})_m$

(*b*) $\text{—OGOOC—R(COOH)—CO—}$

wherein G and A correspond respectively to the organic radicals in the initial glycol, $G(OH)_2$, and in the initial dicarboxylic acid, $A(COOH)_2$, employed in forming the polyester radical (*a*), wherein G and A are hydrocarbon radicals and R is selected from the group consisting of hydrocarbon and halohydrocarbon radicals and *m* is a number sufficiently large that the polyester formed by hydroxyl termination of radical (*a*) has an inherent viscosity of at least about 0.3 in a mixture of 58.8 parts by weight of phenol and 41.2 parts by weight of trichlorophenol, and wherein the four valence bonds of the radical

—R(COOH)—

emanate from different carbon atoms of the said radical

—R(COOH)—

the said copolyester containing from 0.25 to 10 mol percent of radical component (*b*), based on the

—OGOOCACO—

radical component, with at least 75% of said

—OGOOCACO—

radicals containing a carboxylic ring.

3,048,566
POLYMERS FROM POLYISOCYANATES AND PROCESS FOR PRODUCING THEM

Ralph G. Beaman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

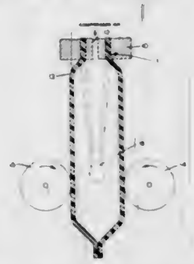
No Drawing. Filed Aug. 18, 1958, Ser. No. 755,427
14 Claims. (Cl. 260—77.5)

1. A synthetic linear polymer prepared from an organic polyisocyanate having at least two vicinal isocyanate groups, said polyisocyanate being otherwise free of substituents reactive with an isocyanate group, said polymer having a molecular weight of at least 2000 and consisting essentially of repeating structural units containing five-membered rings, said rings containing two nitrogen atoms joined to a carbon atom of a carbonyl group common to said nitrogen atoms and two interconnected carbon atoms each of which is attached to one of said nitrogen atoms, said interconnected carbon atoms being the carbon atoms which joined the vicinal isocyanate groups in said polyisocyanate, said repeating units being interconnected in the polymer chain by carbonyl groups attached to nitrogens of said rings.

3,048,567
METHOD FOR PREPARATION OF SUPERPOLYAMIDES SUITABLE FOR FORMING HOLLOW PRODUCTS AND THE HOLLOW PRODUCTS SO PRODUCED

Johann Friedrich Kohlwey, Velp (Gld.), Arnhem, Netherlands, assignor to N.V. Onderzoekingsinstituut Research, Arnhem, Netherlands, a corporation of the Netherlands

Filed Sept. 4, 1958, Ser. No. 759,040
Claims priority, application Netherlands July 9, 1954
4 Claims. (Cl. 260—78)



1. A method for the preparation of a superpolyamide suitable for forming hollow articles therefrom, which comprises polymerizing caprolactam in the presence of a stabilizer selected from the group consisting of phosphoric acid and acetic acid to a superpolyamide having an intrinsic viscosity from 1.8 to 3.5 by heating the caprolactam to about 260° C. for a sufficient time in a polymerization zone, increasing the temperature in a discharge zone to above 280° C. to stabilize the intrinsic viscosity

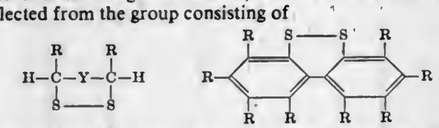
at above 1.7, passing the polymer through a temperature-regulating zone for several hours at a temperature of about 240° C., and finally washing the product until it contains less than 4.0% by weight of water-soluble content, whereby the polymer may be melted, extruded, and blow-molded in free space to form hollow articles therefrom.

3,048,568
CURING OF ALKALI TERMINATED POLYMERS

James W. Cleary, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 13, 1959, Ser. No. 826,392
20 Claims. (Cl. 260—79)

1. A process for the preparation of a self-curing polymer which comprises reacting a terminally reactive polymer having the formula PT_x wherein P comprises a polymer of polymerizable vinylidene compounds, said polymer having carbon to carbon unsaturation in the main polymer chain, T is a terminally positioned alkali metal, and x is an integer of 1 to 4, with a reactant material selected from the group consisting of



wherein R is selected from the group consisting of hydrogen and alkyl radicals containing 1 to 3 carbon atoms, Y is a divalent organic radical containing from 1 to 12 chain members selected from the group consisting of alkylene radicals, alkenylene radicals and radicals containing groups selected from the group consisting of



O, N, and S

said groups being linked between carbon atoms, with each R′ being an alkyl radical containing 1 to 3 carbon atoms, and replacing the alkali metals in the polymer product with hydrogens.

3,048,569
VINYL PERFLUOROALKYLSULFIDES AND POLYMERS

John F. Harris, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 28, 1960, Ser. No. 58,910
24 Claims. (Cl. 260—79.7)

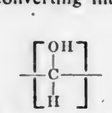
1. Vinyl perfluoroalkyl sulfides.

3,048,570
POLYMERIC SECONDARY ALCOHOLS HAVING RECURRING ALPHA-HYDROXY AMIDE GROUPS

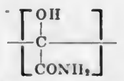
Howard Ensign Simmons, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 26, 1959, Ser. No. 848,541
14 Claims. (Cl. 260—87.3)

1. A process for converting intralinear secondary alcohol groups,



of a polymer which is essentially free of primary alcohol groups to intralinear



groups, comprising admixing said polymer, in an aqueous alkaline medium, with an alkali metal cyanide and a halogen selected from the class consisting of chlorine and bromine while maintaining a temperature of from —25° C. to 50° C.

3,048,571
POLYMERIZATION OF ETHYLENICALLY UNSATURATED COMPOUNDS USING MONOVALENT MAGNESIUM HALIDE CATALYSTS

Rudolf Stroh and Karl Nützel, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 10, 1959, Ser. No. 792,268
Claims priority, application Germany Feb. 14, 1958
18 Claims. (Cl. 260—88.7)

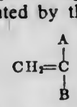
3. A process of polymerizing ethylenically unsaturated compounds having at least one terminal $CH_2{=}C<$ group which comprises contacting said ethylenically unsaturated compounds in an inert substantially anhydrous medium at a temperature of 0 to 350° C. and at a pressure of 1–300 atm. with a catalytic amount of a monovalent magnesium halide, thereby causing said ethylenically unsaturated compound to polymerize.

3,048,572
POLYMERIZATION OF ALPHA-BETA-UNSATURATED MONOMERS

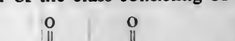
Frank Joseph Welch, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Sept. 11, 1959, Ser. No. 839,279
9 Claims. (Cl. 260—88.7)

1. A process for polymerizing an alpha,beta-unsaturated monomer represented by the general formula:



wherein A designates a member of the class consisting of hydrogen and halogen atoms and the alkyl radicals containing from 1 to 4 carbon atoms, and B designates a member of the class consisting of the —CN,



radicals wherein R designates an alkyl radical containing from 1 to 4 carbon atoms, which process comprises contacting said monomer at a temperature of from about —20° C. to about 150° C., in the presence of an inert organic diluent, with a catalytic amount, sufficient to catalyze said polymerization, of an inorganic alkaline earth metal amide of the formula $H_2N\text{—}M\text{—}NH_2$ wherein M is an alkaline earth metal atom having an atomic number of from 4 to 56, for a period of time sufficient to polymerize the monomer.

3,048,573
CRYSTALLINE POLY(CIS-PROPENYL ALKYL ETHERS)

Richard F. Heck, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,971
4 Claims. (Cl. 260—91.1)

1. As a new composition of matter a crystalline poly (cis-propenyl alkyl ether) having an RSV of at least about 0.5, as determined in toluene at a temperature of 50° C., wherein the alkyl group contains from 1 to 5 carbon atoms, said polymer having been produced by polymerization of the monomer in contact at —50 to 100° C. with a catalyst obtained by reacting a substance of the group consisting of metal alkyl and metal alkoxide with a substance of the group consisting of sulfuric acid and aluminum sulfate, said metal being selected from the group consisting of aluminum and titanium.

3,048,574
PROCESS FOR POLYMERIZING LOWER OLEFINS

Egon Wiberg and Robert Hartwimmer, Munich, and Albert Gustav Martin Gumboldt, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed July 14, 1958, Ser. No. 748,136

Claims priority, application Germany July 12, 1957

16 Claims. (Cl. 260—93.7)

3. In a process for the preparation of a linear high molecular weight olefin polymer by the low pressure polymerization of an α-monoolefin of 2–12 carbon atoms, the step of employing as the catalyst the reaction product of a compound of the metals selected from subgroups IV*a*–V*a* of the Mendeleef periodic table with a silane containing a silicon-to-hydrogen bond and also containing substituents selected from the group consisting of oxygen, alkoxy, amine and halogen substituents, these two ingredients being the sole components of the catalyst.

3,048,575
PROCESS FOR THE MANUFACTURE OF ETHYLENE POLYMERS

Jacobus P. Schuhmacher, Sittard, and Hendrik Hendriks, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed June 25, 1956, Ser. No. 593,347

Claims priority, application Netherlands June 28, 1955

4 Claims. (Cl. 260—94.9)

1. A catalyst for polymerizing ethylene comprising the reaction product formed by dissolving in an inorganic solvent titanium tetrachloride and a cadmium dialkyl, said alkyl radical being selected from the group consisting of those having 2 to 4 carbon atoms, there being used 0.2 to 0.4 mol of cadmium dialkyl per mol of the titanium compound, the reaction being conducted in the temperature range of 20–35° C.

3,048,576
CONTINUOUS ACIDULATION AND COAGULATION OF LIGNIN IN BLACK LIQUOR

Frank J. Ball, Charleston, and William G. Vardell, Summerville, S.C., assignors to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed Nov. 4, 1958, Ser. No. 771,784

7 Claims. (Cl. 260—124)

1. In the method of recovering sodium lignate from black liquor having a solids content in excess of 30% and a pH in excess of 10.4, the steps which consist in:

(*a*) continuously adding concentrated sulfuric acid to black liquor which has a temperature sufficient to yield a precipitation temperature in excess of the temperature of lignin coagulation of around 180° F., said acid being added in an amount to effect a substantial precipitation of sodium lignate,

(*b*) thoroughly and continuously mixing said heated black liquor and said acid to bring about the precipitation of sodium lignate with commencement of substantially simultaneous coagulation thereof,

(*c*) maintaining the coagulating black liquor in a dwell stage at the precipitation temperature for a period of from 20 seconds to 10 minutes to complete the coagulation thereof, and,

(*d*) continuously separating the coagulated lignate from the mother liquor.

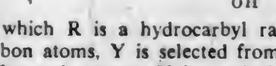
3,048,577
SUGAR ETHERS

Van R. Gaertner, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 5, 1958, Ser. No. 778,276

14 Claims. (Cl. 260—209)

1. An ether of the formula



in which R is a hydrocarbyl radical of from 8 to 24 carbon atoms, Y is selected from the class consisting of sulfur and oxygen, X is a trivalent paraffinic hydrocarbon radical of from 3 to 5 carbon atoms carrying —OH at the 2-position thereof with respect to —OZ and OZ is the residue of a polyol selected from the class consisting of non-reducing sugars and sugar alcohols which is linked to X through the oxygen atom of one of the hydroxy groups of said polyol.

3,048,578
PYRIMIDO-[4:5-b]-QUINOXALINES AND A PROCESS FOR THEIR MANUFACTURE

Hans Erlenmeyer and Silvio Fallab, Basel, Switzerland, and Peter Hemmerich, Loerrach, Germany, assignors to Ciba Corporation, a corporation of Delaware

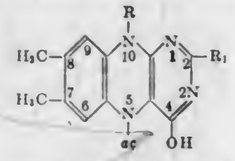
No Drawing. Filed Dec. 13, 1957, Ser. No. 702,542

Claims priority, application Switzerland Dec. 18, 1956

10 Claims. (Cl. 260—211.3)

1. 7:8-dimethyl-10-ribityl-5-acetyl-2:4-dihydroxy-5:10-dihydro-pyrimido-[4:5-b]-quinoxaline.

7. A member selected from the group consisting of 4-hydroxy - 5 - lower alkanoyl-7:8-dimethyl-5:10-dihydro-pyrimido-[4:5-b]-quinoxaline of the formula



wherein R represents a member selected from the group consisting of lower alkyl and ribityl, R_1 a member selected from the group consisting of hydroxy, mercapto and amino and *ac* stands for lower alkanoyl, and its tautomeric forms.

3,048,579
PROCESS FOR TREATING VISCOSE

Barton L. Hinkle, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 29, 1959, Ser. No. 849,531

1 Claim. (Cl. 260—218)

A process for continuously ripening viscose which comprises feeding the viscose at a temperature for ripening and at a predetermined linear velocity through an enclosure wherein said viscose ripens to the predetermined degree of ripeness and scraping the walls of said enclosure at a rate equal to 15–50 times the average linear velocity of the viscose through the enclosure.

3,048,580
PREPARATION OF α-AMINOLACTAMS BY CATALYTIC HYDROGENATION OF α-NITROLACTAMS

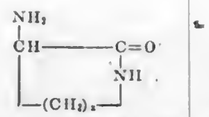
Johannes H. Ottenheym, Sittard, and Pieter L. Kerkhoffs, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

No Drawing. Filed Sept. 10, 1959, Ser. No. 839,076

Claims priority, application Netherlands Oct. 15, 1958

9 Claims. (Cl. 260—239.3)

1. A process for the preparation of an α-aminolactam containing up to 12 carbon atoms in the ring having the formula:



wherein *x* is a whole number up to 10, which comprises contacting the corresponding α-nitrolactam with hydrogen at superatmospheric pressure and a temperature of up to 150° C., whereby said nitrolactam is reduced.

3,048,581
ACETALS AND KETALS OF 16,17-DIHYDROXY STEROIDS

Josef Fried, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,230

37 Claims. (Cl. 260—239.55)

1. A compound selected from the group consisting of the 16,17-cyclic ketals of ketones and 16,17-cyclic acetals of aldehydes of at least two carbon atoms and steroids of the 16α,17α-dihydroxy-3,20-diketo-Δ^4-pregnene series containing a substituent selected from the group consisting of β-hydroxy and keto in the 11-position.

3,048,582
6α-FLUORO-PREGNANES AND INTERMEDIATES IN THE PREPARATION THEREOF

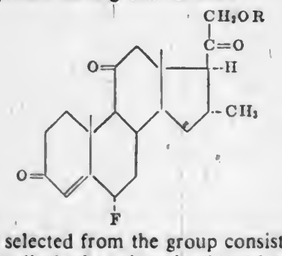
Robert Joly, Montmorency, Julien Warnant, Neuilly-sur-Seine, and Bernard Goffinet, Paris, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Aug. 30, 1961, Ser. No. 134,836

Claims priority, application France Sept. 6, 1960

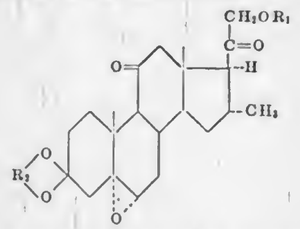
9 Claims. (Cl. 260—239.55)

1. A compound having the formula



wherein R is selected from the group consisting of hydrogen, an acyl radical of a mineral acid and an acyl radical of an organic carboxylic acid having 1 to 18 carbon atoms.

6. A compound having the formula



wherein R_1 is an acyl radical of an organic carboxylic acid having 1 to 18 carbon atoms and R_2 is a lower alkylene radical.

3,048,583
SYNTHESIS OF $\Delta^{1,4}$-PREGNADIENE-17α,21-DIOL-3,20-DIONE

Bruno Camerino, Milan, Bianca Patelli, Stradella, and Domenico Cattapan, Milan, Italy, assignors to Società Farmaceutici Italia, Milan, Italy, a corporation of Italy

No Drawing. Filed Mar. 16, 1959, Ser. No. 799,418

Claims priority, application Great Britain Mar. 21, 1958

7 Claims. (Cl. 260—239.55)

3. 16 - alpha,17 - alpha-epoxy-delta^5-pregnen-1-beta,21-diol-3,20-dione-1,21-diacetate.

6. A process of making the compound delta-1,4-pregnadien-17-alpha,21-diol-3,20 - dione - acetate, which comprises oxidizing 16 - alpha,17 - alpha-epoxy-delta-5-pregnen-1-beta,3-beta,21-triol-20-one-1,21-diacetate, dissolved in acetone with chromic and sulfuric acids and treating the 16-alpha,17-alpha-epoxy-delta-5-pregnen-1-beta,21-diol-3,20-dione-1,21-diacetate, thus obtained, in acetic acid with hydrobromic acid and treating the 16-bromo-delta-1,4-pregnadien-17-alpha-21-diol-3,20 - dione-21-acetate thus obtained in ethanol at the boiling point with Raney-nickel, which nickel has been pretreated with acetone, said treating with Raney-nickel being carried out in the presence of a small amount of acetic acid.

3,048,584
HYDROPHILIC OPTICAL WHITENING AGENTS OF THE STILBYL TRIAZOLE TYPE

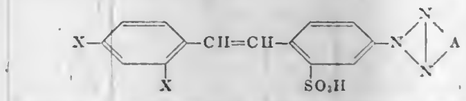
Dennis Arthur William Adams, Leeds, and Asim Kumar Sarkar, Adel, England, assignors to Hickson & Welch Limited, Castleford, England, a British company

No Drawing. Filed Apr. 15, 1960, Ser. No. 22,410

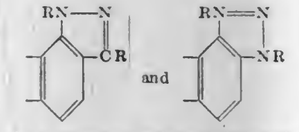
Claims priority, application Great Britain Sept. 18, 1956

9 Claims. (Cl. 260—240)

1. A compound selected from the group consisting of compounds of the formula:



in which X is a member selected from the group consisting of a hydrogen atom, a halogen atom and a lower alkoxy group and A is a group selected from the group consisting of:



in which R is a member selected from the group consisting of a hydrogen atom and a lower alkyl group; and alkali-metal salts thereof.

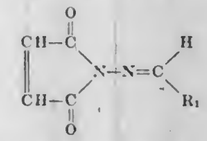
3,048,585
N-ARALKYLIDENEAMINOMALEIMIDES

John H. Billman, Bloomington, Ind., and Donald B. Borders, Urbana, Ill.

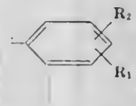
No Drawing. Filed Oct. 25, 1960, Ser. No. 64,700

6 Claims. (Cl. 260—240)

1. A chemical compound of the fundamental formula:



in which R_1 is a member selected from the group consisting of styryl and



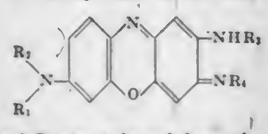
and R_2 and R_3 are members selected from the group consisting of hydrogen, hydroxy, acetoxy, lower alkoxy, lower alkyl, halo having an atomic weight of less than 80, amino, lower alkylamino, di-lower alkylamino, nitro and, when on adjacent carbon atoms and taken together, methylenedioxy, said lower alkyl and lower alkoxy moieties having 1–4 carbon atoms.

3,048,586
NOVEL DERIVATIVES OF PHENOXAZINE AND PROCESSES FOR THEIR PREPARATION

André Girard, Paris, France, assignor, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Mar. 16, 1960, Ser. No. 15,266
15 Claims. (Cl. 260—244)

1. Phenoxazine-2 derivatives selected from the group consisting of (1) compounds of the formula:



wherein R_1 and R_2 are selected from the group consisting of alkyl having from 2 to 4 carbon atoms and, when taken together, pentamethylene, alkyl-substituted pentamethylene, tetramethylene and alkyl-substituted tetramethylene, said alkyl substituents having from 1 to 4 carbon atoms, and R_3 and R_4 are selected from the group consisting of alkyl having from 2 to 4 carbon atoms, with the proviso that the total number of carbon atoms contained in R_1, R_2, R_3 and R_4 is between 11 and 13, and (2) non-toxic acid addition salts thereof.

3,048,587
2-ALKYLAMINO-4-AMINOPYRIMIDINE

William Oroshnik, Plainfield, N.J., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey

No Drawing. Filed Oct. 17, 1960, Ser. No. 62,869
6 Claims. (Cl. 260—256.4)

1. A member selected from the group consisting of 2-R-amino-4-aminopyrimidine wherein R is an alkyl chain having from eight to thirteen carbon atoms, and therapeutically active acid addition salts thereof.

3,048,588
BARBITURIC ACID DERIVATIVES

Cornelius Kennady Cain, Flourtown, Pa., assignor to McNeil Laboratories, Incorporated, a corporation of Pennsylvania

No Drawing. Filed Mar. 1, 1961, Ser. No. 92,461
4 Claims. (Cl. 260—256.4)

1. 2-benzylimino-5-ethyl-5-isopentylbarbituric acid.

3,048,589
5-URACILSULFONIC ACID DERIVATIVES

Ross R. Herr, Wheaton, and Takashi Enkoji and Thomas J. Bardos, Chicago, Ill., assignors, by mesne assignments, to Armour Pharmaceutical Company, a corporation of Delaware

No Drawing. Filed Mar. 23, 1955, Ser. No. 496,346
5 Claims. (Cl. 260—256.5)

1. 5-uracilsulfonyl chloride.

2. The method which comprises condensing a compound selected from the group consisting of uracil and 6-aminouracil with a halosulfonic acid to obtain the corresponding 5-sulfonylhalide.

3,048,590
NEW DERIVATIVES OF TRIOXO-2,4,6-PIPERIDINE AND THE PROCESS OF PREPARING SAME

Joseph Redel, Paris, France, assignor to Chimie et Atomistique, Paris, France, a corporation of France

Filed Apr. 21, 1959, Ser. No. 807,918
Claims priority, application France Apr. 23, 1958
2 Claims. (Cl. 260—281)

1. 1,5,5-tri-lower alkyl-3-phenyl-3-lower alkyl-2,4,6-trioxo-piperidine.

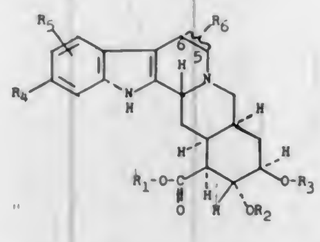
2. 1 - (beta - dimethyl - aminoethyl) - 3 - phenyl - 3-lower alkyl-5,5-di-lower alkyl-2,4,6-trioxo-piperidine.

3,048,591
18-O-HETERO-RESERPATES

Robert Armistead Lucas, Mendham, N.J., assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Jan. 7, 1960, Ser. No. 931
15 Claims. (Cl. 260—287)

1. A member of the group consisting of a compound of the formula:



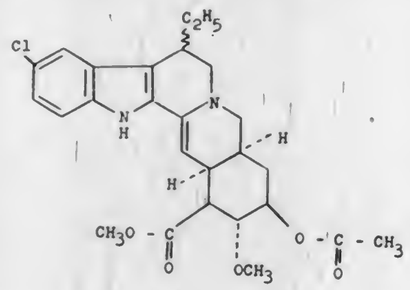
in which R_1 represents a member of the group consisting of lower alkyl, lower alkoxy-lower alkyl, in which lower alkyl separates lower alkoxy from the carboxy group by from two to three carbon atoms, and N,N-di-lower alkyl-amino-lower alkyl, in which lower alkyl, separates N,N-di-lower alkyl-amino from the carboxy group by from two to three carbon atoms, R_2 represents lower alkyl, R_3 stands for a member of the group consisting of 2-cyclo-oxa-alkyl having from five to seven atoms as ring members, lower alkyl-substituted 2-cyclo-oxa-alkyl having from five to seven atoms as ring members, and halogeno-substituted 2-cyclo-oxa-alkyl having from five to seven atoms as ring members, each of the groups R_4 and R_5 represents a member of the group consisting of hydrogen, lower alkyl, lower alkoxy, lower alkyl-mercapto and halogeno, and R_6, attached to one of the positions 5 and 6, stands for a member of the group consisting of hydrogen and lower alkyl, an N-oxide thereof and a therapeutically acceptable mineral acid addition salt of said compound.

3,048,592
6-ETHYL-10-CHLORO-DESERPIDINE AND INTERMEDIATES AND PROCESSES FOR THEIR PRODUCTION

Georges Muller, Nogent-sur-Marne, and André Allais and Léon Velluz, Paris, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Apr. 20, 1960, Ser. No. 23,374
Claims priority, application France Apr. 20, 1959
7 Claims. (Cl. 260—287)

3. 18β-acetoxy-6-ethyl-10-chloro - 17α - methoxy-16β-carbomethoxy-$\Delta^{3(14)}$-20α-yohimbene having the formula:



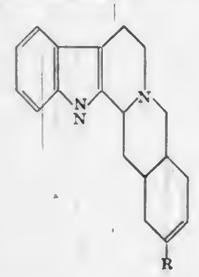
selected from the group consisting of the 6a-stereoisomer, the 6b-stereoisomer, and mixtures thereof.

3,048,593
17-SUBSTITUTED YOHIMBENES AND PROCESS THEREFOR

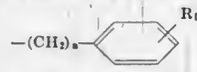
John Shavel, Jr., Mendham, and George Bobowski, East Orange, N.J., assignors to Warner-Lambert Pharmaceutical Company, Morris Plains, N.J., a corporation of Delaware

No Drawing. Filed June 15, 1960, Ser. No. 36,129
5 Claims. (Cl. 260—288)

1. A member selected from the group consisting of 17-yohimbenes of the formula:



wherein R is a member selected from the group consisting of an alkyl group of the formula C_nH_{2n+1} where n is 1 to 18, an alkenyl group of the formula C_mH_{2m-1} where m is 2 to 18, an alkynyl group of the formula C_mH_{2m-3}, an unsubstituted cycloalkyl group having 5 to 7 carbon atoms, naphthyl and radicals of the formula:



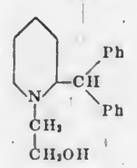
wherein n is 0 to 2 and R_1 is a member selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogen, phenyl and di-lower alkylamino and the pharmaceutically acceptable non-toxic acid addition and quaternary ammonium salts thereof.

3,048,594
1-ETHYL-2-DIPHENYLMETHYL-PIPERIDINES

Karl Hoffmann, Binningen, and Ernst Sury, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware

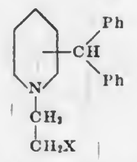
No Drawing. Filed Mar. 14, 1960, Ser. No. 14,528
Claims priority, application Switzerland Mar. 22, 1957
9 Claims. (Cl. 260—293)

1. 1 - (β - hydroxyethyl)-diphenylmethyl-piperidines of the formula



wherein Ph represents a member of the group consisting of unsubstituted phenyl, lower alkyl-phenyl, lower alkoxy-phenyl and halogeno-phenyl.

4. Diphenylmethyl-piperidines of the formula



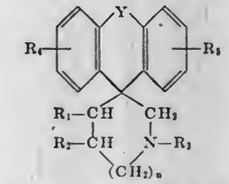
wherein X stands for halogen and Ph represents a member of the group consisting of unsubstituted phenyl, lower alkyl-phenyl, lower alkoxy-phenyl and halogeno-phenyl.

3,048,595
SPIRO DERIVATIVES OF THIAXANTHENES AND XANTHENES

Charles L. Zirkle, Berwyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 14, 1960, Ser. No. 68,625
9 Claims. (Cl. 260—293.4)

1. A chemical compound of the class consisting of a free base, its nontoxic, pharmaceutically acceptable acid addition salts and its nontoxic, pharmaceutically acceptable quaternary ammonium halide, p-toluene sulfonate, benzene sulfonate and lower alkyl sulfonate salts, the free base having the structural formula:



in which Y is a member selected from the group consisting of sulfur and oxygen, R_1 and R_2 are members selected from the group consisting of hydrogen and lower alkyl, R_3 is a member selected from the group consisting of hydrogen, lower alkyl, and lower alkenyl; R_4 and R_5 are members selected from the group consisting of hydrogen, halogen having an atomic weight of less than 80, trifluoromethyl, lower alkyl, lower alkoxy and lower alkylthio; and n is an integer selected from the group consisting of 0 and 1.

7. 1-methyl-spiro[piperidine-3,10′-thiaxanthene].

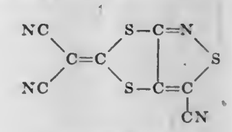
3,048,596
3 - CYANO - [1,3] - DITHIOLO - [4,5-c] - ISOTHIAZOLE - $\Delta^{5,a}$ - MALONONITRILE AND PROCESS

William R. Hatchard, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 31, 1960, Ser. No. 53,038
2 Claims. (Cl. 260—302)

1. A process which comprises heating at a temperature of at least 50° C. 4,5-dicyano-1,3-dithiole-$\Delta^{2,a}$-malononitrile with elemental sulfur in an alcoholic solution containing from about 0.005 to 0.2 mole of an alkali metal alkoxide per mole of said malononitrile.

2. The compound 3 - cyano-[1,3]-dithiolo-[4,5-c]-isothiazole-$\Delta^{5,a}$-malononitrile, said compound being of the formula

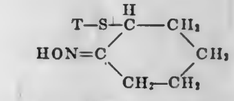


3,048,597
THIAZOLYLTHIOCYCLOHEXANONE OXIMES

John J. D'Amico, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 19, 1960, Ser. No. 63,480
8 Claims. (Cl. 260—302)

1. A 2-(2-thiazolylthio)cyclohexanone oxime of the formula

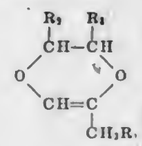


where T is a member of the group consisting of 4-(lower alkyl)-2-thiazolyl, 4(lower alkyl)-5-(lower carboalkoxy)-2-thiazolyl, 4,5-di-(lower alkyl) - 2 - thiazolyl, 4-(lower carboalkoxy) - 2 - thiazolyl, 4-(lower alkyl)-5-carbamyl-

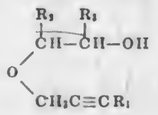
2-thiazolyl, 4-(lower alkyl) - 5 - (phenylcarbamyl)-2-thiazolyl, 2-benzothiazolyl, monochloro - 2 - benzothiazolyl, mono- and di-(lower alkyl) - 2 - benzothiazolyl, mono-(lower alkyl)monochloro - 2 - benzothiazolyl, phenyl - 2 - benzothiazolyl, di-(lower alkyl)monochlorobenzothiazolyl and di-(lower alkyl)dichloro-2-benzothiazolyl.

3,048,598
PROCESS FOR PRODUCING 2-HYDROCARBON-2-DIOXENES
Willard J. Croxall and Norman D. Dawson, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Feb. 23, 1960, Ser. No. 10,025
2 Claims. (Cl. 260—340.6)

1. The method of producing a substituted heterocyclic compound having the formula



wherein R_1 is a member selected from the group consisting of hydrogen, lower alkyl, lower alkenyl and phenyl groups and R_2 and R_3 are members selected from the group consisting of hydrogen, lower alkyl and phenyl groups, which comprises heating at a temperature of from 100 to 200° C. a compound of the formula



with potassium hydroxide in an organic solvent and taking off overhead the desired product.

3,048,599
METHOD FOR THE PRODUCTION OF LACTONES OF SATURATED DELTA-HYDROXYMONO- OR DICARBOXYLIC ACIDS WITH MORE THAN 5 CARBON ATOMS
Karl Wilhelm Rosenmund, 11 Caprivistrasse, and Hartwig Bach, 22 Kleiststrasse, both of Kiel, Germany
No Drawing. Filed Aug. 21, 1959, Ser. No. 835,173
Claims priority, application Germany Aug. 27, 1958
6 Claims. (Cl. 260—343.5)

1. A process for the production of lactones of saturated delta-hydroxycarboxylic acids having more than 5 carbon atoms, which comprises treating a substance selected from the class consisting of cyclohexane-1,3-dione, 4-propylcyclohexane-1,3-dione, 4-allylcyclohexane-1,3-dione, 4-crotylcyclohexane-1,3-dione and bis-(2,6-diketocyclohexanyl)-methane in solution in strong aqueous alkali with hydrogen under pressure in the presence of a hydrogenation catalyst, acidifying the resulting solution having an alkali-metal salt of the hydroxycarboxylic acid to liberate said acid, and heating the liberated acid to form the corresponding lactone therefrom.

3,048,600
ETHERS AND ESTERS OF 2-METHYLNAPHTHALENE AS RESIN PLASTICIZERS
John J. Jaruzelski, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
No Drawing. Filed Sept. 15, 1959, Ser. No. 840,002
4 Claims. (Cl. 260—348)

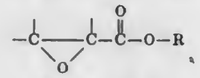
1. The compound 2-methylnaphthylmethyl-9,10-epoxystearate.

3. The compound 1-(2,5-dioxanonyl)-2-methylnaphthalene.

4. The compound 1-(7-acetoxy-2,5-dioxaheptyl)-2-methylnaphthalene.

3,048,601
TRANSESTERIFICATION OF 2,3-EPOXYALKANOATES
Frederick C. Frostick, Jr., and Benjamin Phillips, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Apr. 21, 1961, Ser. No. 104,520
3 Claims. (Cl. 260—348)

1. A transesterification process which comprises contacting alkyl 2,3-epoxyalkanoate having the following formula:



wherein R is selected from the group consisting of methyl and ethyl, and wherein each valence, individually, of the epoxy carbon atoms is satisfied by a member selected from the group consisting of hydrogen, methyl, ethyl and propyl; with allyl alcohol; in the presence of a catalyst selected from the group consisting of sodium methoxide, potassium methoxide, sodium allyloxide, and potassium allyloxide; at a temperature in the range of from about 0° C. to about 125° C.; and for a period of time sufficient to produce the corresponding 2,3-epoxyalkanoate ester of said allyl alcohol.

3,048,602
16,16-DIFLUOROESTRATRIENES AND INTERMEDIATES RELATING THERETO
Cecil H. Robinson, Cedar Grove, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey
No Drawing. Filed Feb. 5, 1962, Ser. No. 171,275
1 Claim. (Cl. 260—397.1)

3 - methoxy - 16 - (1' - hydroxy - 1' - carbethoxy)methylene - 1,3,5(10) - estratriene - 17 - one.

3,048,603
PURIFICATION OF 1-DEHYDRO-17α-METHYL-TESTOSTERONE CONTAMINATED BY SELENIUM
Alfred Hunger, Basel, Switzerland, and John Benjamin Ziegler, Summit, N.J., assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed Dec. 3, 1959, Ser. No. 856,901
8 Claims. (Cl. 260—397.4)

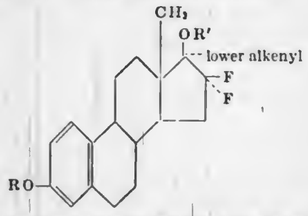
1. Process for the removal of selenium impurities contaminating 1-dehydro-17α-methyl-testosterone obtained by dehydrating 17α-methyl-testosterone with a member of the group consisting of selenium oxide and selenious acid, which comprises treating a solution of the crude 1-dehydro-17α-methyl-testosterone in a lower alkane carboxylic acid with hydrogen peroxide, separating the resulting acidic fraction from the neutral fraction, treating said neutral fraction with an adsorbent, and recovering the purified 1-dehydro-17α-methyl-testosterone from the neutral fraction.

3,048,604
DESELENATION OF DEHYDROSTEROIDS CONTAINING SELENIUM
Max Oberlin, Basel, and Hugo Frey, Olten, Switzerland, assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed June 28, 1961, Ser. No. 120,162
Claims priority, application Switzerland July 1, 1960
8 Claims. (Cl. 260—397.4)

1. Process for the manufacture of $\Delta^{1,4}$-dehydro-steroids by deselenation of a compound obtained by dehydrogenation of a 3-keto-steroid saturated at least in one of the positions 1:2 and 4:5 with a selenium compound having a dehydrogenating action, with a metal in the presence of an organic solvent, wherein copper is used as the metal.

3,048,605
16,16-DIFLUOROESTRATRIENES
Cecil H. Robinson, Glen Ridge, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey
No Drawing. Filed Feb. 8, 1960, Ser. No. 7,124
2 Claims. (Cl. 260—397.5)

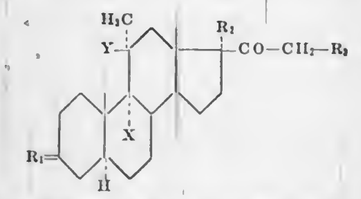
2. A compound of the structural formula



wherein R is a member selected from the group consisting of hydrogen, lower alkyl, and an acyl radical of the group consisting of carboxylic acids containing up to eight carbon atoms, sulfate and phosphate; and R' is a member selected from the group consisting of hydrogen and an acyl radical of an acid of the group consisting of carboxylic acids containing up to eight carbon atoms, sulfate and phosphate.

3,048,606
NEW 11-ALKYLATED STEROIDS AND PROCESS FOR PREPARING SAME
Albert Wettstein and Georg Anner, Basel, Switzerland, assignors to Ciba Corporation, a corporation of Delaware
No Drawing. Filed July 3, 1958, Ser. No. 746,344
Claims priority, application Switzerland July 5, 1957
6 Claims. (Cl. 260—397.45)

1. An 11α-methyl allopregnane compound of the formula



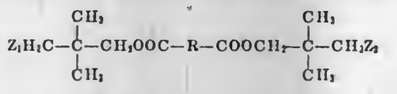
wherein X represents a hydrogen atom, Y a member selected from the group consisting of a β-hydroxy group and a hydrogen atom, X and Y taken together a member selected from the group consisting of a double bond and an oxido group, R_1 a member selected from the group consisting of a free oxo group, an oxo group ketalized with ethylene glycol, a free hydroxy group, an esterified hydroxy group, a hydrocarbon ether, R_2 a member selected from the group consisting of hydrogen and a free hydroxyl group and R_3 a member selected from the group consisting of hydrogen, a free and an esterified hydroxyl group.

3,048,607
OIL SOLUBLE AMINE SALTS OF LONG CHAIN ALPHA-SULFOCARBOXYLIC ACIDS
Elizabeth L. Fareri and John P. Pellegrini, Jr., Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Dec. 22, 1958, Ser. No. 781,907
8 Claims. (Cl. 260—401)

1. A sulfonate salt of (1) an oil-soluble amine selected from the group consisting of primary, secondary, and tertiary mono- and di-amines that contain a total of at least 7 carbon atoms and that contain at least one N-substituent selected from the group consisting of (*a*) open-chain aliphatic hydrocarbon radicals containing 3 to 22 carbon atoms, and (*b*) aralkyl radicals containing 7 to 24 carbon atoms, and (II) a partial ester of an aliphatic monohydric alcohol that contains 8 to 22 carbon atoms per molecule and an alpha-sulfo fatty acid that contains 12 to 22 carbon atoms per molecule.

3,048,608
NEOPENTYL GLYCOL ESTERS
Theodore A. Girard, Wayne Township, Passaic County, N.J., and Edgar C. Slaght, New Rochelle, N.Y., assignors to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 18, 1959, Ser. No. 800,086
4 Claims. (Cl. 260—404.8)

1. An ester represented by the structural formula



wherein Z_1 and Z_2 each represents a member selected from the group consisting of a saturated aliphatic monocarboxylic acid radical containing from 2 to 22 carbon atoms and a mononuclear aromatic monocarboxylic acid radical; and R represents a member selected from the group consisting of the residue of a saturated aliphatic dicarboxylic acid containing from 2 to 36 carbon atoms and the residue of an aromatic dicarboxylic acid.

3,048,609
SECONDARY AND TERTIARY BIS-POLYFLUOROORGANIC MERCURY COMPOUNDS
William T. Miller, Ithaca, N.Y., and William J. Middleton, Claymont, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 12, 1958, Ser. No. 773,175
11 Claims. (Cl. 260—431)

1. Bis-polyfluoroorganic mercury compounds in which the valences of said mercury are satisfied solely by two singly bonded carbon atoms, said carbon atoms being otherwise bonded to at most one fluorine, at least one trifluoromethyl group and at least one open chain saturated polyhalogenated hydrocarbon group in which the alpha-carbon of said hydrocarbon group is bonded only to a member selected from the group consisting of carbon and fluorine, any additional halogens are members selected from the group consisting of fluorine and chlorine, and each of said two carbon atoms and their respective substituents totalling from 3 to 12 carbon atoms.

3,048,610
PROCESS FOR MAKING TETRAMETHYL LEAD
John M. S. Jarvie, Eastwood, New South Wales, Australia, and Mathias J. Schuler, Pitman, and John D. Sterling, Jr., Wenonah, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 19, 1960, Ser. No. 50,605
16 Claims. (Cl. 260—437)

1. The process for making tetramethyl lead which comprises mixing at a temperature below 50° C. a sodium lead alloy, at least about 0.25 mole per mole of sodium of an alkylating agent which consists of a methyl halide in which the halogen has an atomic number in the range of 17 to 53, from about 0.05% to about 5% by weight, based on said alloy, of an aluminum halide in which the halogen has an atomic number in the range of 17 to 53, and from about 0.1 to about 100 parts per part of alumi-

num halide of an organolead compound of the class consisting of hydrocarbon leads and hydrocarbon lead halides in which the halogen has an atomic number in the range of 17 to 53 and the hydrocarbon groups contain 1 to 10 carbon atoms and are selected from alkyl, alkenyl and aryl radicals, heating the mixture to a temperature of from 50° C. to about 70° C. to initiate the methylation reaction, and then heating the mixture to a temperature of from about 70° C. to about 130° C. and maintaining it at such temperature until the methylation reaction is substantially complete while gradually adding such quantities of said methyl-halide as may be required to provide a total of at least one mole thereof for each mole of sodium.

3,048,611

MAKING TETRAETHYL LEAD

Laszlo F. Biritz, Chicago, Ill., assignor, by mesne assignments, to Houston Chemical Corporation, New York, N.Y., a corporation of Texas

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,817
6 Claims. (Cl. 260—437)

1. A process of preparing tetraethyl lead comprising reacting a lead-sodium alloy and ethyl chloride in the presence of a trialkyl phosphate having 1 to 4 carbon atoms in the alkyl groups as a catalyst.

3,048,612

TRANSALKYLATION OF ALUMINUM ALKYLS

Robert A. Walde, Pittsburgh, Pa., assignor to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed May 22, 1958, Ser. No. 736,952
18 Claims. (Cl. 260—448)

1. A transalkylation process which comprises reacting an alkyl aluminum-tertiary amine complex with a hydrocarbon containing only olefinic unsaturation at a temperature of about 150° to about 220° C.

3,048,613

ORGANO-PHOSPHORUS COMPOUNDS AND PROCESS OF MAKING SAME

Elbert C. Ladd and Merlin P. Harvey, Passaic, N.J., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Original application Mar. 17, 1953, Ser. No. 351,494, now Patent No. 2,971,019, dated Feb. 7, 1961. Divided and this application May 24, 1960, Ser. No. 31,263
8 Claims. (Cl. 260—461)

1. The process which comprises effecting addition-reaction of a diester of phosphorous acid and an aryl isocyanate in the presence of a basic catalyst.

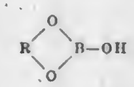
3,048,614

PREPARATION OF ALKALI METAL SALTS OF GLYCOL MONOBORATES

Howard Steinberg, Fullerton, and Don L. Hunter, Long Beach, Calif., Maurice H. Pickard, Long Island, N.Y., and Lowell L. Petterson, Whittier, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Mar. 8, 1961, Ser. No. 94,167
4 Claims. (Cl. 260—462)

1. The method of making alkali metal salts of glycol monoborates which comprises reacting an alkali metal with an excess of absolute methanol, reacting the resultant metal methoxide with a glycol monoborate in the presence of methanol, said glycol monoborate having about a 1:1 mole ratio of boron to glycol and having the general formula



where R is an alkylene radical of 2 to 3 carbon atoms in length and containing from 6 to 10 carbon atoms, and recovering substantially pure salt from the resultant reaction mass.

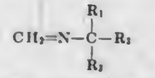
3,048,615

TERTIARY ALKYL AZOMETHINE COPOLYMERS

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

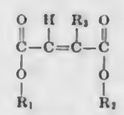
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,751
12 Claims. (Cl. 260—471)

2. An oil-soluble copolymer having a molecular weight in the range of from about 10,000 to about 125,000, the monomeric units of which copolymer consist essentially of a tertiary alkyl azomethine having a total of from 5 to 30 carbon atoms and corresponding to the formula:



wherein R_1, R_2 and R_3 represent alkyl, and a substituted-hydrocarbon monomer having terminal ethylenic unsaturation and having as the substituent a negative group selected from the class consisting of aryl, acyloxy, alkoxy, aroyloxy, aryloxy, carbaloxy, halogen and cyano, said substituent being bonded to the unsaturated carbon of said terminal ethylenic unsaturation and said substituted-hydrocarbon monomer having from 10 to 24 carbon atoms, the mole ratio of said azomethine to said substituted-hydrocarbon monomer being in the range of from about 1:100 to about 10:1, said copolymer being produced by copolymerization of said azomethine with said substituted-hydrocarbon monomer at a temperature in the range of from about 80° C. to about 120° C.

7. The copolymer of claim 2 which has as a monomeric unit a diester of butenedioic acid, said diester having the formula:



wherein R_1 and R_2 represent alkyl having from about 4 to about 22 carbon atoms and R_3 is selected from the class consisting of hydrogen and methyl, the mole ratio of said substituted-hydrocarbon monomer to said diester being within the range of from about 1:2 to about 4:1, said copolymer being formed by said copolymerization with said diester in admixture with said azomethine and said substituted-hydrocarbon monomer at said copolymerization temperature.

12. The copolymer of claim 7 in which said substituted-hydrocarbon monomer is styrene.

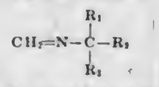
3,048,616

TERTIARY ALKYL AZOMETHINE COPOLYMERS

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

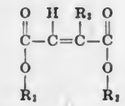
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,755
10 Claims. (Cl. 260—471)

2. An oil-soluble product obtained by reacting, at a temperature in the range of from about 60° C. to about 200° C. from about 1% to about 40% by weight of tertiary alkyl azomethine having from 9 to about 16 carbon atoms and having the formula:



wherein R_1, R_2 and R_3 are alkyl, and from about 60% to about 99% by weight of a malonate-containing copolymer having a molecular weight within the range of from about 10,000 to about 125,000 said malonate-containing copolymer being prepared by the copolymerization at a temperature in the range of 80° C. to 170° C. of dialkyl p-hydroxybenzal malonate and a substituted-hydrocarbon comonomer and having a mole ratio of malonate:substituted-hydrocarbon comonomer in the range of from about 1:100 to about 1:1, said malonate containing from 1 to about 20 carbon atoms in each ester group and said substituted-hydrocarbon comonomer having terminal ethylenic unsaturation and from 10 to 24 carbon atoms and having as the substituent a negative group selected from the class consisting of aryl, acyloxy, alkoxy, aroyloxy, aryloxy and carbalkoxy, said substituent being bonded to the unsaturated carbon of said terminal ethylenic unsaturation.

6. The copolymer of claim 2 which has as a monomeric unit a diester of butenedioic acid, said diester having the formula:



wherein R_1 and R_2 represent alkyl having from about 4 to about 22 carbon atoms and R_3 is selected from the class consisting of hydrogen and methyl, the mole ratio of said substituted-hydrocarbon comonomer to said diester being within the range of from about 1:2 to about 4:1, said copolymer being formed by said copolymerization with said diester in admixture with said malonate and said substituted-hydrocarbon comonomer at said copolymerization temperature.

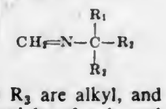
3,048,617

TERTIARY ALKYL AZOMETHINE COPOLYMERS

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

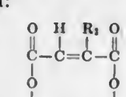
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,756
10 Claims. (Cl. 260—471)

2. An oil-soluble product obtained by reacting, at a temperature in the range of from about 80° C. to about 200° C., from about 1% to about 40% by weight of tertiary alkyl azomethine having from 9 to about 16 carbon atoms and having the formula:



wherein R_1, R_2 and R_3 are alkyl, and from about 60% to about 99% by weight of a benzalacetone-containing copolymer having a molecular weight within the range of from about 10,000 to about 125,000 said benzalacetone-containing copolymer being prepared by the copolymerization at a temperature in the range of 80° C. to 150° C. of benzalacetone and a substituted-hydrocarbon comonomer and having a mole ratio of benzalacetone:substituted-hydrocarbon comonomer in the range of from about 1:100 to about 1:1, said substituted-hydrocarbon comonomer having from 8 to 30 carbon atoms and terminal ethylenic unsaturation and having as the substituent a negative group selected from the class consisting of aryl, acyloxy, alkoxy, aroyloxy, aryloxy and carbalkoxy, said substituent being bonded to the unsaturated carbon of said terminal ethylenic unsaturation.

6. The copolymer of claim 2 which has as a monomeric unit a diester of butenedioic acid, said diester having the formula:



wherein R_1 and R_2 represent alkyl having from about 4 to about 22 carbon atoms and R_3 is selected from the class consisting of hydrogen and methyl, the mole ratio of said substituted-hydrocarbon comonomer to said diester being within the range of from about 1:2 to about 4:1, said copolymer being formed by said copolymerization with said diester in admixture with said benzalacetone and said substituted-hydrocarbon comonomer at said copolymerization temperature.

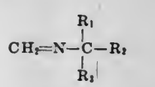
3,048,618

TERTIARY ALKYL AZOMETHINE COPOLYMERS

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

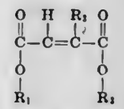
No Drawing. Filed Dec. 30, 1957, Ser. No. 705,785
10 Claims. (Cl. 260—471)

5. An oil-soluble product obtained by reacting, at a temperature in the range of from about 60° C. to about 150° C., from about 1% to about 40% by weight of tertiary alkyl azomethine having from 5 to about 30 carbon atoms and having the formula:



wherein R_1, R_2 and R_3 are alkyl, and from about 60% to about 99% by weight of an isopropenyl acetoacetate-containing copolymer having a molecular weight within the range of from about 10,000 to about 125,000 said isopropenyl acetoacetate-containing copolymer being prepared by the copolymerization at a temperature in the range of 80° C. to 150° C. of isopropenyl acetoacetate and a substituted-hydrocarbon comonomer and having a mole ratio of isopropenyl acetoacetate:substituted-hydrocarbon comonomer in the range of from about 1:100 to about 1:1, said substituted-hydrocarbon comonomer having terminal ethylenic unsaturation and from 10 to 24 carbon atoms and having as the substituent a negative group selected from the class consisting of aryl, acyloxy, alkoxy, aroyloxy, aryloxy and carbalkoxy, said substituent being attached to the unsaturated carbon of said terminal ethylenic unsaturation.

6. The copolymer of claim 5 which has as a monomeric unit a diester of butenedioic acid, said diester having the formula:



wherein R_1 and R_2 represent alkyl having from about 4 to about 22 carbon atoms and R_3 is selected from the class consisting of hydrogen and methyl, the mole ratio of said substituted-hydrocarbon comonomer to said diester being within the range of from about 1:2 to about 4:1, said copolymer being formed by said copolymerization with said

9. The product of claim 6 in which said substituted-hydrocarbon comonomer is styrene.

3,048,619

N-ALKENYL-N-PHENYL CARBAMATES

Blaine O. Pray, Wadsworth, Ohio, assignor, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed Nov. 14, 1958, Ser. No. 773,848
6 Claims. (Cl. 260—471)

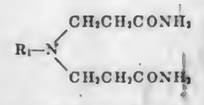
1. An ester of N-alkenyl N-phenylcarbamic acid and a monohydric aliphatic alcohol having 2 to 10 carbon atoms, said alkenyl group being a hydrocarbon chain having 2 to 10 carbon atoms.

3,048,620
TERTIARY AMINO ALKYLATED AMIDES

John D. Spivack, Spring Valley, N.Y., assignor to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 3, 1959, Ser. No. 831,019
8 Claims. (Cl. 260—471)

4. A tertiary-amino alkylated compound of the formula



wherein R_1 is lower carbalkoxyphenyl.

3,048,621
PRODUCTION OF ACRYLIC ACID ESTERS

Robert Stadler and Friedrich Becke, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Dec. 18, 1957, Ser. No. 703,506
Claims priority, application Germany Dec. 18, 1956
8 Claims. (Cl. 260—479)

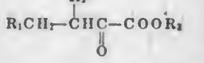
1. In a process for the production of acrylic acid esters by the interaction of acetylene, carbon monoxide and an alcohol selected from the group consisting of a lower alkanol and phenol at a temperature of between about 100° C. to 250° C. and a pressure of more than 5 atmospheres and in the presence of minor amounts of nickel and an halogen ion selected from the group consisting of chlorine, bromine and iodine ions as catalysts and in the presence of a heavy metal selected from the group consisting of copper and mercury as activator, the improvement which comprises carrying out the reaction substantially in the absence of an inert organic solvent but in the presence of from about 1% to about 14.5% by weight with reference to the amount of said alcohol of a compound selected from the group consisting of a lower hydrocarbyl carboxylic acid and a lower hydrocarbyl dicarboxylic acid.

3,048,622
PREPARATION OF ALPHA-KETOESTERS

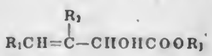
Harry A. Stansbury, Jr., South Charleston, and Howard R. Guest, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 16, 1960, Ser. No. 76,149
18 Claims. (Cl. 260—483)

1. A process for the preparation of alpha-ketoesters having the general formula:



wherein R_1 and R_2 are members of the group consisting of hydrogen and lower alkyl radicals and wherein R_3 is a lower alkyl radical, which comprises vaporizing an alpha-hydroxy unsaturated ester of the general formula:

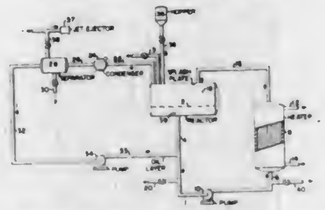


wherein R_1, R_2 and R_3 have the same significance as above; heating said vaporized hydroxy ester to a temperature within the range of from about 150° C. to about 380° C.; maintaining the said hydroxy ester within the above temperature range for a period of time sufficient to at least partially isomerize said hydroxy ester to an alpha-ketoester; and recovering the alpha-ketoester from the product vapors.

3,048,623
PREPARATION OF COMPLEX DIESTER SYNTHETIC LUBRICANTS

Alfred H. Matuszak, Westfield, Daniel S. Maisel, Union, and E. Wendell Carrier, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 1, 1957, Ser. No. 693,913
3 Claims. (Cl. 260—485)



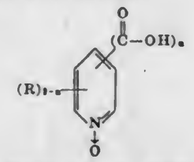
1. In a process for preparing complex esters from one molar proportion of glycol of from 2–60 carbon atoms per molecule, two molar proportions of an aliphatic dicarboxylic acid of 2–12 carbon atoms per molecule and 2 to 3 molar proportions of an aliphatic alcohol of from 4–20 carbon atoms per molecule, the improvement which comprises first forming a circulating system comprising a reaction zone and a heating zone, adding to the circulating system glycol, a water entrainer and an esterification catalyst, then heating the circulating mixture to reflux temperature, then adding the dicarboxylic acid at a controlled rate of from 0.2 to 1.0 molar proportion of acid/hour to the system, removing water from the system until substantially all the acid has reacted with the glycol, then adding said alcohol at a controlled rate of 0.25 to 1.2 molar proportions of alcohol/hour, removing water from the system and recovering said complex ester.

3,048,624
STABILIZATION OF PERACIDS

Jesse T. Dunn, Charleston, and Donald L. Heywood, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application Aug. 25, 1958, Ser. No. 757,089, now Patent No. 2,953,572, dated Sept. 20, 1960. Divided and this application June 16, 1960, Ser. No. 36,488
5 Claims. (Cl. 260—502)

1. A process of inhibiting a peracid from decomposition which comprises admixing with said peracid an inhibiting amount sufficent to inhibit said peracid from decomposition of a compound of the formula:



wherein (n) is a whole positive integer of from 2 to 4 and R is selected from the group consisting of hydrogen, lower alkyl, and nitro groups.

3,048,625
PRODUCTION OF WATER-SOLUBLE SALTS OF ALPHA,BETA-ETHYLENICALLY UNSATURATED SULFONIC ACIDS

Harry Distler and Karlhugo Kuespert, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Dec. 29, 1959, Ser. No. 862,448
Claims priority, application Germany Jan. 7, 1959
7 Claims. (Cl. 260—513)

1. A process for the production of water-soluble salts of vinylsulfonic acid which comprises reacting beta-chlorethane sulfochloride in an aqueous solution at a temperature of between 0° and 100° C. and at a pH value of less than 8 with 3 to 6 mols with reference to one mol of said beta-chlorethane sulfochloride of a compound capable of forming a chloride, said compound being selected from the group consisting of oxides, hydroxides and carbonates of alkali metals, alkaline earth metals and ammonium.

3,048,626
N-(2,4,6-TRIIODOPHENYL)ACETURIC ACID AND SODIUM SALT

Vernon H. Wallingford, Ferguson, Mo., assignor to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri

No Drawing. Filed Dec. 5, 1960, Ser. No. 73,500
2 Claims. (Cl. 260—518)

1. N-(2,4,6-triiodophenyl)aceturic acid.

3,048,627
DECOLORIZATION OF AMINO ACID MIXTURES OBTAINED FROM BLOOD PROTEIN HYDROLYSIS

Havard L. Keil, Clarendon Hills, and Edward F. Cavanaugh, Wilmette, Ill., assignors, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 3, 1957, Ser. No. 700,272
4 Claims. (Cl. 260—534)

1. The method of decolorizing mixed amino acids formed in a hydrolysate solution consisting of blood and sulfuric acid comprising adding only sufficient ammonia to said solution to raise the pH thereof to within the pH range of from about 4 to about 6.5, separating the precipitate and the supernatant solution, said precipitate containing undesirable colored materials and ammonium sulfate, drying the supernatant obtained to obtain a decolorized mixture of amino acids and ammonium sulfate.

3,048,628
OXIDATION PROCESS

John W. Lynn, Charleston, and Richard L. Roberts, Milton, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 22, 1959, Ser. No. 814,989
3 Claims. (Cl. 260—537)

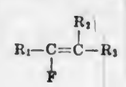
1. A process for producing 1,2,4-butanetricarboxylic acid which comprises reacting with nitric acid of a concentration of 40 percent to 90 percent by weight, at a temperature of 40° C. to 80° C., 3-cyclohexenylmethyl 3-cyclohexene-1-carboxylate, the mole ratio of nitric acid to ester being within the range of 5 to 20 moles of nitric acid to one mole of ester; said reaction taking place in the presence of between 0.01 and 1.0 weight percent, based on the total weight of nitric acid and ester, of a catalyst selected from the group consisting of ammonium vanadate, alkali metal vanadates, ammonium molybdate and alkali metal molybdates.

3,048,629
PREPARATION OF FLUOROSULFUR COMPOUNDS

Kenneth Vincent Martin, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,598
5 Claims. (Cl. 260—544)

1. A process for the preparation of fluorothiocarbonyl compounds which comprises contacting at a temperature of 250° C. to 750° C., a mixture of vaporized sulfur and a non-aromatic fluoroolefin having the general formula



wherein R_1 and R_3 are radicals selected from the class consisting of fluorine, fluorocarbon radicals and divalent fluorocarbon radicals formed from the combination of R_1 and R_3, and R_2 is a radical selected from the class consisting of hydrogen, fluorine, chlorine, and fluorocarbon radicals, with active carbon.

3,048,630
AMINO DERIVATIVES OF PYROPHOSPHORIC ACID AND PROCESS OF MAKING THE SAME

Margot Becke, Heidelberg, Germany, assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Feb. 15, 1957, Ser. No. 640,312
Claims priority, application Germany Feb. 21, 1956
7 Claims. (Cl. 260—545)

2. In a process for the production of tetra-amides of pyrophosphoric acid, the steps of adding dropwise pyrophosphoric acid tetrachloride to an excess of a member selected from the group consisting of liquid ammonia and dialkylamines at a temperature not exceeding the boiling point of liquified ammonia and reacting the mixture under anhydrous conditions.

3,048,631
NOVEL PHOSPHONITRILIC ISOTHIOCYANATE DERIVATIVES

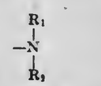
Ludwig F. Audrieth, Urbana, Ill., and Rigobert J. A. Otto, Leverkusen-Koln, Germany, assignors to University of Illinois Foundation, Urbana, Ill., a corporation of Illinois

No Drawing. Filed June 23, 1959, Ser. No. 822,173
11 Claims. (Cl. 260—551)

1. Adducts of phosphonitrilic isothiocyanate having at least three repeating $[NP(Q_1)(Q_2)]$ groups wherein

(a) 

and X thereof is a member selected from the group consisting of



$-NH-NH_2$, $-NH\phi_1$, $-NH_2$, $NH-R_3$,

$-NH-NH\phi_2$,

$-NH-R_4-NH-R_4-NH_2$, $-NH-R_5-NH_2$,

$-O-R_6$, $O-R_7$, $-S-R_8$, wherein R_1 is a member of the group consisting of hydrogen and a lower alkyl, R_2 is a member of the group consisting of a lower alkyl and a lower alkylamino, ϕ_1 is phenyl, R_3 is lower alkyl, ϕ_2 is phenyl, R_4 is a lower alkylene, R_5 is a lower alkylene, R_6 is a lower alkyl, R_7 is a lower alkyl alcohol, and R_8 is a lower alkyl, and (b) Q_2 is a member of the group consisting of Q_1 and $(-N=C=S)$.

3,048,632
AMINODIBORON COMPOUNDS AND METHOD OF MAKING SAME

Robert J. Brotherton, Fullerton, and Lowell L. Petterson, Whittier, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Sept. 13, 1960, Ser. No. 55,706
14 Claims. (Cl. 260—551)

1. The method of producing aminodiboron compounds which comprises the reaction of a first compound having the formula $B_2(NR_2)_4$ with a second compound selected from the group consisting of R'_2NH and $R''NH_2$ where; R is selected from the class consisting of alkyl groups of from 1–18 carbon atoms having at least one hydrogen on their α carbon atoms and cycloalkyl groups having

from 3–7 carbon atoms in the ring and having a hydrogen on their α carbon atoms; R′ is selected from the class consisting of alkyl groups of from 1–18 carbon atoms having at least one hydrogen on their α carbon atoms, cycloalkyl groups having from 3–7 carbon atoms in the ring and having a hydrogen on their α carbon atom, phenyl and substituted phenyls having hydrogen in the ortho positions, said substituents selected from the group consisting of phenyl, alkyl groups having from 1–18 carbon atoms, alkoxy groups having from 1–18 carbon atoms, chlorine, bromine and fluorine; R″ is selected from the class consisting of alkyl groups having from 1–18 carbon atoms, phenyl, and substituted phenyls, said substituents selected from the class consisting of phenyl, alkyl groups having from 1–18 carbon atoms, alkoxy groups having from 1–18 carbon atoms, chlorine, bromine and fluorine; and the alkylamino group of said first component having a lower boiling point than said second component.

11. A composition selected from the class consisting of $B_2(NHR)_4$ and $B_2(NR'_2)_4$ where; R is selected from the class consisting of alkyl groups having from 1–18 carbon atoms, phenyl and substituted phenyls said substituents selected from the class consisting of phenyl, alkyl groups having from 1–18 carbon atoms, alkoxy groups having from 1–18 carbon atoms, chlorine, bromine and fluorine; and R′ is selected from the class consisting of phenyl and substituted phenyls said substituents selected from the class consisting of phenyl, alkyl groups having from 1–18 carbon atoms, alkoxy groups having from 1–18 carbon atoms, chlorine, bromine and fluorine.

3,048,633
N-LOWER ALKYL-2-(BENZYLOXATEDPHENYL)-GLYCOLAMIDE
Peter B. Russell, Villanova, and Scott J. Childress, Newtown Square, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 2, 1960, Ser. No. 73,449
5 Claims. (Cl. 260—559)

1. An N-lower alkyl mandelamide substituted in the aromatic ring by from one to two benzyloxy radicals, and having no other substitution in the aromatic ring.

3. N-methyl-3,4-bis-benzyloxymandelic acid amide.

3,048,634
PRODUCTION OF KETOXIMES
Eugen Mueller, 9 Denzenberghalde, Horst Metzger, 7 Ulrichstrasse, and Dorla Fries, 8 Muehlstrasse, all of Tubingen, Germany
No Drawing. Filed Mar. 25, 1955, Ser. No. 496,946
Claims priority, application Germany Mar. 30, 1954
21 Claims. (Cl. 260—566)

17. A process for the production of ketoximes which comprises introducing a mixture of nitric oxide and chlorine, said nitric oxide being present in a ratio of about two mols to about 15 mols per mol of chlorine, into a liquid hydrocarbon selected from the group consisting of alkanes and cycloalkanes having from 5 to 12 carbon atoms at from about −10° C. to about +40° C., irradiating the resulting reaction mixture with light of a wave length from about 350 to 700 millimicrons, washing the reaction mixture with a dilute caustic alkali solution, adsorbing the reaction products including a bis-nitrosohydrocarbon main product and a geminal chloro-nitrosohydrocarbon by-product on an adsorbent, eluating said reaction products from the adsorbent with an inert polar solvent, reacting the geminal chloro-nitrosohydrocarbon in the eluate with a reducing agent to form its corresponding ketoxime, and heating the bis-nitrosohydrocarbon in the eluate to form its corresponding ketoxime.

3,048,635
PROCESS FOR THE PRODUCTION OF HEXAMETHYLENE DIAMINE
Heinz Indest, Erlenbach (Main), and Gerhard Meyer, Obernburg (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken A.G., Wuppertal-Elberfeld, Germany
No Drawing. Filed Dec. 17, 1957, Ser. No. 703,264
Claims priority, application Germany Dec. 17, 1956
6 Claims. (Cl. 260—583)

1. A continuous process for the production of hexamethylene diamine which comprises a two-stage process of first subjecting a distilled adiponitrile to repeated alternate treatment with a strongly basic anion exchange resin and a strongly acidic cation exchange resin to remove catalyst-contaminating impurities from said adiponitrile, and subsequently hydrogenating the deionized adiponitrile in a liquid ammoniac solvent and in intimate contact with an activated nickel-aluminum alloy catalyst wherein the alloy has a nickel content of 40 to 60% at a temperature of 20° C. to 80° C. and a pressure of 100 to 500 atmospheres.

3,048,636
OXIDATION OF OLEFINS BY THALLIUM (III)
Robert R. Grinstead, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 20, 1959, Ser. No. 814,369
9 Claims. (Cl. 260—586)

1. A process for oxidizing an olefinic hydrocarbon to produce at least one product of the class consisting of glycols, aldehydes and ketones, said process comprising contacting the olefin with at least about an equimolecular amount of an acidic solution of a thallic salt in a solvent selected from the group consisting of water, acetic acid, propionic acid, tetrahydrofuran, methanol and ethanol.

3,048,637
2′-HYDROXY-3′-NITRO-5′-PHENYLPROPIOPHENONE
Carl B. Havens, Midland, and Ronald G. Brookens, Auburn, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 30, 1959, Ser. No. 856,019
1 Claim. (Cl. 260—592)

2′-hydroxy-3′-nitro-5′-phenylpropiophenone.

3,048,638
VINYL PHOSPHINES
Donald J. Foster, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Sept. 4, 1958, Ser. No. 758,898
2 Claims. (Cl. 260—606.5)

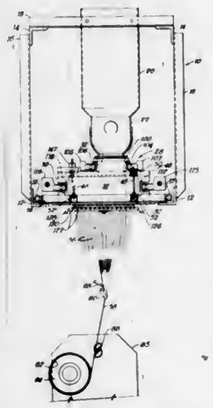
2. A process for producing vinylphosphines which comprises reacting a halo phosphine having the general formula $X_nPR_{(3-n)}$ wherein X is a halogen, R is a monovalent hydrocarbon radical and n is an integer from 1 to 3 with a vinyl organometallic compound having the general formula $CH_2{=}CHM$ wherein M is a monovalent organometallic forming element.

3,048,639
PROCESS FOR STABILIZING CHLOROPRENE
Wilhelm Vogt, Knapsack, near Koln, Klaus Gehrmann, Efferen, near Koln, and Kurt Sennewald, Knapsack, near Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany
No Drawing. Filed Dec. 20, 1960, Ser. No. 77,029
Claims priority, application Germany Dec. 23, 1959
10 Claims. (Cl. 260—652.5)

1. A process for simultaneously stabilizing chloroprene against α-polymerization and ω-polymerization comprising adding phenothiazine to said chloroprene, and blowing air into the chloroprene-phenothiazine mixture.

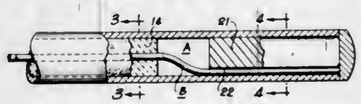
ELECTRICAL

3,048,640
METHOD AND APPARATUS FOR MELTING AND FEEDING HEAT-SOFTENABLE MATERIALS
Hellmut I. Glaser, Anderson, S.C., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,170
10 Claims. (Cl. 13—6)



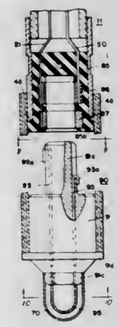
1. Apparatus for processing heat-softenable mineral material including, in combination, a walled melting chamber positioned to receive pieces of the mineral material from a supply, a walled feeder chamber, a restricted walled passage connecting the melting and feeder chambers, the walls forming the restricted passage being joined with the walls of the melting and feeder chambers providing a substantially unvented feeder chamber, a bottom wall of the feeder chamber being formed with a plurality of orifices through which molten material flows from the feeder chamber in a plurality of streams, a first circuit for supplying electric current to the melting chamber to provide heat for melting the pieces of material, a second circuit for supplying electric current to the feeder chamber, and means responsive to variations in the level of the molten material in the feeder chamber for varying the current flow to the melting chamber to control the rate of melting the material in the melting chamber, and means disposed at the entrance zone of the melting chamber in heat transferring relation with the chamber for controlling the temperature at the region of delivery of the pieces of material into the melting chamber.

3,048,641
THERMOCOUPLES
Gunther Erlebacher, Morton Grove, Ill., assignor to Aero Research Instrument Co., Inc., Chicago, Ill.
Filed Aug. 21, 1961, Ser. No. 134,044
8 Claims. (Cl. 136—4)



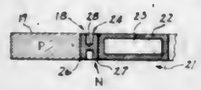
1. A thermocouple comprising a cylindrical sheath, a plurality of wires comprising metals constituting a thermoelectric junction at the working end of the thermocouple located in said sheath, electrically-insulating, refractory material interposed between said wires and between said wires and sheath to establish non-conducting relation therebetween, said material terminating at the junction end of the thermocouple short of the end of said sheath and the wires continuing at least to the said end, and a plug positioned within said sheath beyond the said termination of said material, said plug having the form of a longitudinally truncated cylinder of a diameter snugly fitting the internal diameter of the sheath, the plane of truncation together with the interior of the sheath defining a space corresponding to a longitudinal segment of a cylinder, said wires being confined in said space in contiguous relation with each other for thermoelectric effect.

3,048,642
IMMERSION PYROMETER WITH EXPENDABLE PLUG-IN TEMPERATURE SENSING UNIT
Kenneth B. Parker, Jr., Norristown, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 1, 1959, Ser. No. 837,464
17 Claims. (Cl. 136—4)



1. An immersion pyrometer device for measuring the temperature of a bath of molten material comprising (*a*) a manipulator section having a pair of leadwires extending therethrough to the lower end thereof, (*b*) a first pair of spaced electrical contacts of substantially dead soft metal connected to said leadwires and supported by first body structure carried by said lower end of said manipulator section, (*c*) an expendable plug-in temperature-sensing section including second body structure of electrical and heat-insulating material which will withstand immersion in the bath of molten material the temperature of which is to be measured, (*d*) a thin-walled sheath of electrically insulating and heat-transmitting refractory material supported at one end of said second body structure and cooperating therewith to form an enclosure for heat-responsive means, (*e*) heat-responsive means located within said enclosure, (*f*) a second pair of spaced electrical contacts of substantially dead soft metal supported by said second body structure at the other end thereof and connected to said heat-responsive means and engaging said first pair of contacts, and (*g*) one of said body structures in the region of its pair of electrical contacts of substantially dead soft metal being comprised of resilient material providing resilient back-up structure for its pair of contacts to produce a coupling force maintaining positive engagement between said pairs of contacts.

3,048,643
THERMOELECTRIC GENERATOR UNIT
Gunnar A. F. Winckler, Milford, and Richard C. Evans, Hamden, Conn., assignors, by mesne assignments, to United Nuclear Corporation, New Haven, Conn., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,911
3 Claims. (Cl. 136—4)

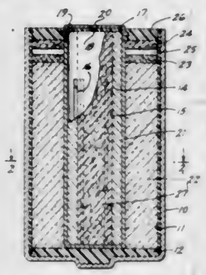


1. A thermoelectric generator unit consisting of a first thermoelectric element, a cooling means spaced from said first element, a second thermoelectric element disposed in the space between the first element and the cooling means, said second element being in physical contact with said first element and with said cooling means and said second element being formed in at least two main sections connected by at least one neck portion.

3,048,644
CADMIUM ELECTRODES FOR GALVANIC CELLS
Joachim Euler, Frankfurt am Main, Germany, assignor to Pertrix-Union Gesellschaft mit Beschraenkter Haftung, Ellwangen, Jagst, Germany, a company of Germany
No Drawing. Filed Nov. 20, 1959, Ser. No. 854,235
Claims priority, application Germany Dec. 4, 1958
12 Claims. (Cl. 136—83)

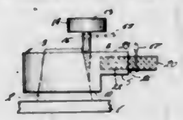
1. A method of manufacturing galvanic cell electrodes comprising the steps of mixing cadmium powder with 0.1% to 5.0%, by weight of the cadmium, of zinc powder and heat treating the mixture under pressure and at a temperature of about 250° C. and 300° C. to form an electrode wherein the particles of the cadmium powder and of the zinc powder retain their identity.

3,048,645
PRIMARY DRY CELL
Samuel Ruben, 271 North Ave., New Rochelle, N.Y.
Filed Jan. 17, 1961, Ser. No. 83,333
16 Claims. (Cl. 136—100)



1. A primary dry cell in condition ready for the instantaneous delivery of an electric current to a load comprising a container open at one end, a magnesium anode in said container having a porous spacer layer thereabout, cathode depolarizer mix compacted in and substantially completely filling out the interspace between said spacer layer and the inner surface of said container with one end of the anode extending therefrom, an electrolyte absorbed in said spacer layer and in said mix, closure means for the open end of said container, and electrical terminal means for said anode and for said cathode depolarizer mix, said anode having a venting channel extending longitudinally therethrough and through said closure means into the atmosphere and also having apertures connecting said channel to the electrochemically active spacer-carrying surface of the anode whereby gas produced at the active anode surface may be vented into the atmosphere through said apertures and said channel.

3,048,646
BATTERY TERMINAL
Hugo O. England, 1752 Arthur St., Regina, Saskatchewan, Canada
Filed Nov. 28, 1958, Ser. No. 777,079
3 Claims. (Cl. 136—135)

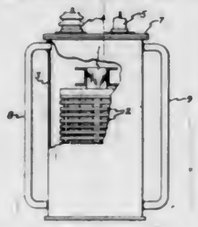


1. A battery post clamp for storage batteries used on cars, trucks and the like, which include an upstanding cylindrical battery post; said post clamp comprising in combination a body portion centrally apertured to fit over said post, and a cable connector integral therewith and extending from one side thereof, means to detachably secure said post clamp to said post consisting of a tapered screw threaded drilling through said body portion substantially parallel to said aperture, said drilling breaking through to said aperture from top to bottom of said drilling, and a correspondingly tapered screw adapted to engage said screw threaded drilling whereby part of the side of said screw engages the side of said post.

3,048,647
SEPARATOR MEDIA FOR ALUMINUM CELLS
Margaret P. Korver, Brecksville, and Nelson C. Cahoon, Fairview Park, Ohio, assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Feb. 28, 1958, Ser. No. 718,141
5 Claims. (Cl. 136—146)

1. In a cell having an anode consisting of aluminum and alloys thereof, a depolarizer and an electrolyte selected from the group consisting of aluminum chloride, ammonium chromate, aluminum chloride hexahydrate, sodium chromate and potassium chromate, an ionically permeable separator medium between said anode and said depolarizer, said separator medium comprising a colloid bibulous in said electrolyte and resistant to hydrolysis in said electrolyte, said colloid being selected from the group consisting of locust bean gum, gum karaya and polyacrylamide resins.

3,048,648
ELECTRICAL APPARATUS AND GASEOUS DIELECTRIC MATERIAL THEREFOR COMPRISING PERFLUOROALKYLNITRILE
Ralph E. Plump, Pittsfield, Mass., and John C. Devins, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 25, 1959, Ser. No. 835,990
2 Claims. (Cl. 174—17)



1. An electrical apparatus comprising, in combination, a closed container and an electrical device within said container including spaced conducting parts which during operation are at unequal potential, and a gaseous electrical insulating medium in said container between said parts containing as an essential ingredient a perfluoroalkylnitrile having the formula $C_nF_{2n+1}CN$, in which n is an integer from 1 to 3.

3,048,649
CABLE MOTION DAMPER
Sanford A. McGavern, Indianapolis, Ind., assignor to Schwitzer Corporation, Indianapolis, Ind., a corporation
Filed June 8, 1959, Ser. No. 818,751
2 Claims. (Cl. 174—42)



1. An assembly for damping vibration in a cable or the like supported at spaced points, said assembly including a generally rectangular sheath formed of a flexible, resilient material such as rubber, said sheath being relatively short in length as compared to distance between the cable support points and having a width dimension appreciably greater than its thickness, means for clamping said sheath on the cable with its longitudinal axis parallel to the cable axis, two elongated weights each solely supported by said sheath adjacent respective major side margins of said sheath, said weights being disposed on opposite sides of a vertical plane through the longitudinal axis of said sheath, said weights being thereby parallel to the cable axis and spaced therefrom, said weights and said sheath serving to transform vibratory wave motion traversing said cable into thermal energy by the flexing of said sheath.

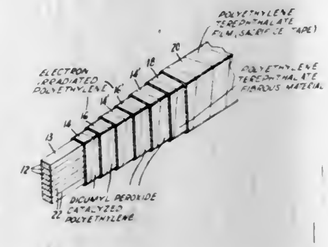
3,048,650
ELECTRICAL CONNECTIONS
John W. Allen, Donald P. Lerch, and George W. Ziegler, Jr., Carlisle, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed Oct. 17, 1958, Ser. No. 767,878
5 Claims. (Cl. 174—90)



4. A crimped electrical connection between a ferrule of an electrical connector and an electrical conductor lying within the ferrule, the connection being substantially D-shaped and substantially voidless in cross section, in which the curved part of the ferrule has a longitudinal seam in which is held one end of a strip of a linear polyester, the strip surrounding the ferrule and stuck to said ferrule, and the other end of said strip overlapping said one end and sticking to said one end, said ferrule having been formed from a circular blank and the edges of the curved part of said ferrule tapering towards said seam.

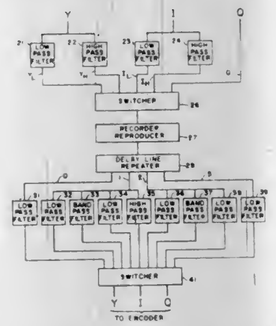
3,048,651
INSULATED COIL AND METHOD OF MAKING SAME
Charles F. Howard, Scotia, and John J. Keane, Guilderland, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 2, 1957, Ser. No. 675,983
3 Claims. (Cl. 174—120)

3. An insulated conductor comprising a bar of current conductive material having a base layer of dicumyl peroxide catalyzed polyethylene uniformly distributed on its outer surface, an overlayer of irradiated polyethylene followed successively by a homogeneous second layer of catalyzed polyethylene and irradiated polyethylene, a layer of dicumyl peroxide catalyzed polyethylene on said irradiated polyethylene and an outer grid-like armor of fibrous polyethylene terephthalate, said catalyzed polyethylene filling all the voids and indentations on said conductor and being uniformly disposed between said layers



of irradiated polyethylene and firmly bonded to the conductor and said layers of irradiated polyethylene as a result of being converted to a viscous state when subjected to heat and pressure during the insulating cycle, said catalyzed polyethylene further being disposed in the openings provided by said fibrous polyethylene terephthalate thereby to provide a combined sheathing of armor and insulation effective in preventing the passage therethrough of a liquid and providing protection to the layers of insulation therebeneath.

3,048,652
COLOR TELEVISION RECORDING SYSTEM AND METHOD
Chester W. Newell, Sunnyvale, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Feb. 24, 1958, Ser. No. 717,019
14 Claims. (Cl. 178—5.2)



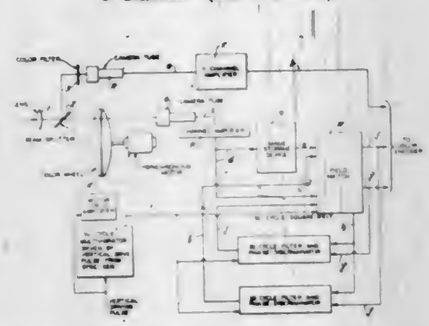
12. A signal processing system comprising a plurality of parallel filter means for separating incoming signals having relatively wide bandwidths into a plurality of signals occupying narrower bandwidths, at least two of said filter means having overlapping bandpasses, switching means comprising a plurality of gates and binaries serving to control said gates, said separated signals being applied individually to the gates, said binaries serving to control the opening and closing of the gates whereby the signals are selectively passed, combining means serving to receive said selectively passed signals and combine same to form a composite signal, and means for recording said composite signal.

3,048,653

FIELD SEQUENTIAL COLOR SIGNAL COMBINED WITH CONTINUOUS BRIGHTNESS SIGNAL

William L. Hughes, Ames, Iowa, assignor to Iowa State College Research Foundation, Inc., Ames, Iowa, a corporation of Iowa

Filed Jan. 13, 1959, Ser. No. 786,514
5 Claims. (Cl. 178—5.4)



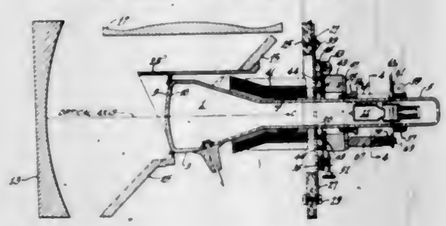
1. In apparatus for generating and transmitting color television signals, means including two filter-equipped camera tubes for generating at the same field rate two field sequences of signals, one sequence consisting of the Y luminance characteristic of an object being swept by said tubes and the other sequence consisting of an alternating arrangement of two chrominance characteristics of said object, means for receiving said other sequence including a storage device for retarding signals received thereby for a time equal to that necessary to develop one field, means including a switch for receiving said other sequence simultaneously with the reception thereof by said storage-including means, and for receiving retarded signals from said storage device with said switch-including means switching signals at said field rate to develop two field sequences of chrominance signals, all of the signals in one of the last-mentioned sequences being of one of said chrominance characteristics while the signals in the other of said last-mentioned sequences all being of the other of said chrominance characteristics, each of said last-mentioned sequences comprising a series of duplicate fields.

3,048,654

TELEVISION PROJECTION TUBE ALIGNMENT

Otto H. Schade, Sr., West Caldwell, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed May 28, 1959, Ser. No. 816,604
6 Claims. (Cl. 178—7.81)



1. An image projection tube assembly comprising a cathode ray tube having a spherical tube lens faceplate and a phosphor screen thereon and a cylindrical neck such that the center of curvature of said screen is located within said neck, a ball shaped plastic sleeve attached to and surrounding said neck so that the center of said sleeve coincides with said center of curvature, and a deflection yoke fixed with relation to said tube so that said yoke having an inner cylindrical wall concentrically contacting and encircling said sleeve thereby providing pivotal means for tilting said tube.

3,048,655

OPTICAL LIGHT VALVE

George W. Ellis, Liverpool, N.Y., assignor to General Electric Company, a corporation of New York

Filed May 31, 1960, Ser. No. 32,964
7 Claims. (Cl. 178—7.86)



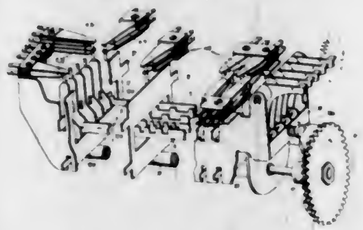
4. In combination with an optical light valve including a deformable control medium, electric signal control means to deform said media and a mask around which light is diffracted in the presence of deformation; color filter means disposed externally of and adjacent to a locus parallel to the edge of said mask, whereby upon deformation of the control medium, a colored image is formed.

3,048,656

CONTROL ATTACHMENT FOR ELECTRO-MECHANICALLY OPERATED COMMUNICATION APPARATUS USED IN PULSE-CODE SYSTEMS

Otto Heinrich August Holstein and Erich Gross, Pforzheim, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 22, 1960, Ser. No. 16,791
Claims priority, application Germany Mar. 24, 1959
4 Claims. (Cl. 178—27)



1. A control attachment for telegraph apparatus for receiving pulse code signals and for providing an output indication thereof comprising a plurality of code bars selectively positionable in accordance with received pulse code signals, with said bars, excepting at least one, having a plurality of permutably arranged slots therein, a plurality of spaced actuating cards extending transversely to said slotted bars, and arranged for individual operation responsive to an alignment of said slots of said slotted bars when said bars are selectively positioned, means associated with each said operated card for providing an output indication of two separate and distinct codes, and means associated with an unslotted bar for selecting one of said codes according to the selective positioning of said unslotted bar.

3,048,657

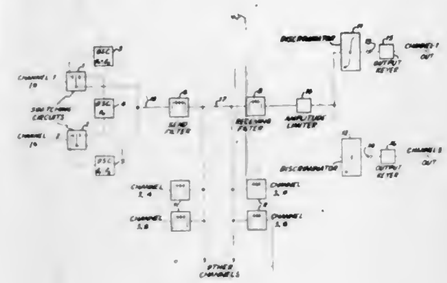
DIPLEX TELEGRAPH SYSTEM USING FREQUENCY MODULATION

Christopher Buff, Massapequa, N.Y., assignor, by mesne assignments, to American Cable & Radio Corporation, New York, N.Y., a corporation of Delaware

Filed May 19, 1961, Ser. No. 111,337
3 Claims. (Cl. 178—61)

1. A multi-channel frequency-modulated telegraph sys-

channels, a pair of frequency sources spaced in frequency above and below said center frequency, a common output line, means for selectively switching one of said pair of spaced frequency sources and said center frequency source responsive to "mark" and "space" information over one of said pair of channels to said common output line, means



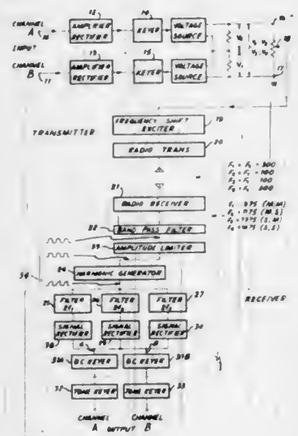
for selectively switching the other of said spaced frequency sources and said center frequency source responsive to "mark" and "space" information over the other of said pair of channels to said common output line, and receiving means comprising means for discriminating the three frequencies according to their respective channels.

3,048,658

TWINPLEX TELEGRAPH TRANSMISSION

Christopher Buff, Massapequa, N.Y., assignor to Mackay Radio & Telegraph Company

Filed Jan. 28, 1960, Ser. No. 5,257
12 Claims. (Cl. 178—88)



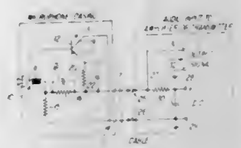
1. A telegraph system of the kind wherein simultaneous mark and space combinations from two separate signal sources are represented by respective spaced frequencies, comprising means to receive and detect said frequencies, means to derive other frequencies from said detected frequencies, said other frequencies having an integrally higher ratio with respect to the detected frequencies, a plurality of telegraph signal receiving channels to be controlled by said derived frequencies, and keying means for said receiving channels controlled by said derived frequencies to key said channels simultaneously in response to a respective one of said derived

3,048,659

MICROPHONE PREAMPLIFIER

Robert P. Crow, Park Ridge, and Gilbert J. Vollink, Villa Park, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Continuation of abandoned application Ser. No. 472,672, Dec. 2, 1954. This application Mar. 30, 1959, Ser. No. 803,045
2 Claims. (Cl. 179—1)



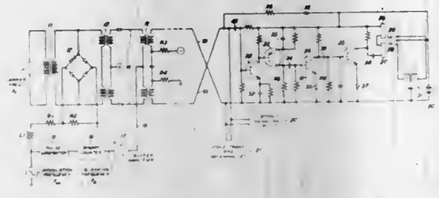
2. An amplifier and microphone system including in combination, a dynamic microphone having an inductive winding and an enclosing casing, first amplifier circuit means included within said casing and having a transistor with base, emitter and collector electrodes, first capacitor means coupling said microphone between said base and emitter electrodes, a cable coupled to said system and including a first cable conductor directly connected to said collector electrode and establishing a ground reference for said system, an emitter bias resistor, said cable including a second cable conductor connected through said bias resistor to said emitter electrode, a voltage divider connected between said first and second cable conductors and having an intermediate tap connected through said dynamic microphone to said base electrode to provide bias therefor, second amplifier circuit means external to, and remote from, said casing of said dynamic microphone and including interconnection thereto by said first and second cable conductors, said second amplifier circuit means including a resistive output load impedance for said first amplifier circuit means and second capacitor means series connected across said cable conductors with said second capacitor means connected to said first cable conductor, and direct current power supply means connected across said second capacitor means whereby quiescent energization for, and output signal coupling from, said first amplifier circuit means is provided solely by said first and second cable conductors.

3,048,660

TELEPHONE PAY STATION SYSTEM

Ernest R. Andregg, Newark, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

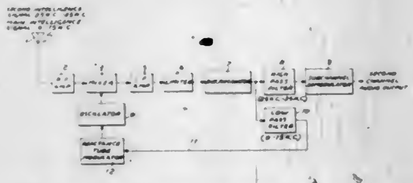
Filed July 31, 1958, Ser. No. 752,371
4 Claims. (Cl. 179—6.3)



1. A telephone system having a pay station connected by a line to a central office comprising signal means at said central office for producing and transmitting control signals over said line to said pay stations, said control signals comprising a carrier frequency, modulated by substantially sinusoidal current and pulses of predetermined frequencies, detection means at said pay station for de-
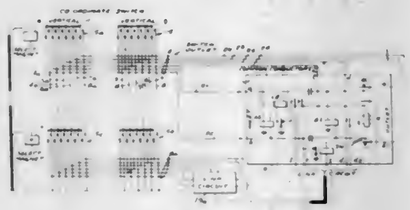
frequency, coin disposal means at said pay station, and means controlled by said detection means for operating said coin disposal means in accordance with the particular modulation present.

3,048,661
MULTIPLEX COMMUNICATION RECEIVER
Raymond O. Schildknecht, Clifton, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Dec. 11, 1958, Ser. No. 779,743
11 Claims. (Cl. 179—15)



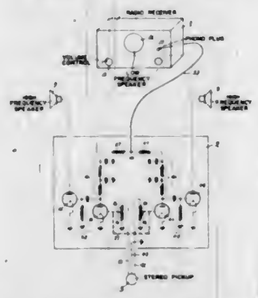
10. A multiplex communication receiver comprising a source of multiplex signals including a radio frequency carrier angularly modulated by a first intelligence signal and at least one radio frequency sub-carrier modulated by a second intelligence signal, a mixer circuit coupled to said source, a variable frequency oscillator coupled to said mixer circuit to produce an intermediate frequency signal, means coupled to the output of said mixer to recover said second intelligence signal, means coupled to the output of said mixer to detect said first intelligence signal and a feedback path coupled between said detector means and said variable frequency oscillator, said feedback means responding to said first intelligence signal to adjust the frequency of said variable frequency oscillator to reduce the angular modulation of said carrier by said first intelligence signal with respect to the angular modulation of said carrier by said sub-carrier.

3,048,662
PABX SWITCHING SYSTEM
Leslie B. Haigh, West Orange, N.J., Michael Bisk, New York, N.Y., and Thomas W. Tuttle, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed May 17, 1957, Ser. No. 659,790
7 Claims. (Cl. 179—22)



1. In a switching system, a coordinate switch comprising a vertical having six vertical conductors, a hold magnet, in and out switching means and a plurality of select means each having a horizontal outlet with six horizontal conductors, a double-ended link circuit having four individual conductors and two common conductors connected to the horizontal conductors of one of said horizontal outlets, four of said vertical conductors being connectable through four of said horizontal conductors to said four individual conductors and being connected to said in and out switching means, and the other two of said vertical conductors being connectable through the other two of said horizontal conductors to said common conductors with at least one of said two vertical conductors connected to said hold magnet.

3,048,663
STEREOPHONIC AMPLIFIER AND LOUDSPEAKER SYSTEM
Werner Kausch, Hannover, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Aug. 3, 1959, Ser. No. 831,122
Claims priority, application Germany Aug. 9, 1958
1 Claim. (Cl. 179—100.1)



For use with a monaural radio receiver means having a speaker capable of reproducing at least the lower audio frequencies, a sound input connector, and an amplifier between said speaker and said connector, an auxiliary apparatus for enabling said monaural radio receiver means to be used as a part of a stereo sound reproduction system, said auxiliary apparatus comprising circuit means forming two channels connectable, respectively, to two outputs of a stereo scanning device, said circuit means including, for each channel, a first amplifier, a high-pass filter connected to the output of the corresponding first amplifier, and a second amplifier connected to the output of the corresponding high-pass filter, the output of said second amplifiers being connectable to reproduction means for reproducing the higher audio frequencies, said circuit means further including two low-pass filters branching from said channels and connected to a common output which itself is connectable directly to the sound input connector of the monaural radio receiver means with which the auxiliary apparatus is used, and said circuit means further including two volume controlling means in said two channels, respectively, said two volume controlling means being mechanically coupled to each other, whereby the higher frequencies are amplified by components incorporated in the auxiliary apparatus whereas the amplificaiton of the lower frequencies is left to a component pertaining to the radio receiver means.

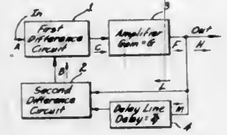
3,048,664
COMPENSATION NETWORK
Donald L. Drukey, Manhattan Beach, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 7, 1957, Ser. No. 688,515
8 Claims. (Cl. 179—100.2)

1. In combination with magnetic transducing means having reproducing head means with an effective gap equal to x, having magnetic recording means movable at a velocity v with respect to said gap, and having a transfer function substantially equal to

$$1-e^{\frac{-x}{v}\frac{d}{dt}}$$

where e is the Napierian logarithm base and d/dt is the derivative operator; a compensation network comprising:

first and second difference means each adapted to receive a pair of input signals thereto and to provide a respective output proportional to the difference between its input signals, said first difference means being connected to receive as one input signal thereto a signal from said magnetic transducing means; means connecting the output of said first difference means to said second difference

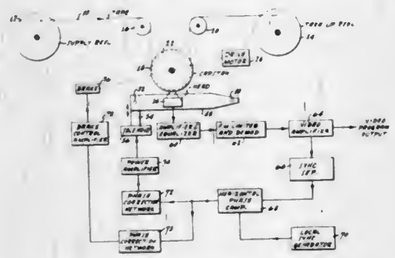


means; and delay means, providing a delay substantially equal to

$$\frac{x}{v}$$

also connected between the output from said first difference means and said second difference means, the output from said second difference means being connected to said first difference means.

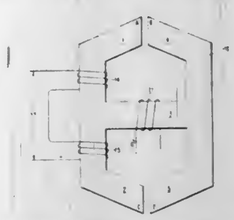
3,048,665
MAGNETIC RECORD REPRODUCING APPARATUS
Roy C. Wilcox, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 2, 1959, Ser. No. 784,787
6 Claims. (Cl. 179—100.2)



6. A system for reproducing a control signal recorded on a recording medium comprising a capstan having a groove therein, means for reeling said medium around said capstan with said medium bridging said groove, reproducing means for scanning said medium to reproduce said control signal, said reproducing means being disposed to engage said medium at said groove with varying pressure, means coupled to said reproducing means responsive to said reproduced control signal providing an output signal in accordance with variations of said control signal, and means responsive to said output signal for varying the pressure of said reproducing means upon said medium.

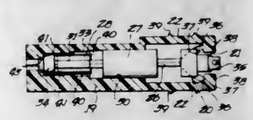
3,048,666
TRANSDUCER WITH LOW MICROPHONICS
Richard G. Neville, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 5, 1959, Ser. No. 791,370
4 Claims. (Cl. 179—100.2)

1. An electromagnetic reading head comprising a figure eight shaped core with a non-magnetic gap at the top and bottom thereof, a bias winding on the cross bar of said core, a unidirectional source for energizing said bias winding, a winding disposed in series above and below said cross bar and means for effecting a change in mag-



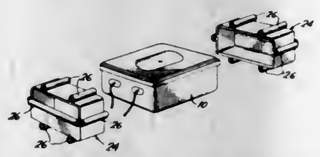
netic induction within said core due to mechanical stress said change being overcome by said series winding.

3,048,667
CARTRIDGE FOR PHONOGRAPH PICKUP
Clarence F. Jensen, Lombard, Ill., assignor to Jensen Industries, Inc., Forest Park, Ill., a corporation of Illinois
Filed Aug. 28, 1959, Ser. No. 836,811
6 Claims. (Cl. 179—100.41)



1. In a cartridge for a phonograph pickup, the combination of an elongated hollow housing having an opening at one end defined by two extensions tapering outwardly along the housing and spaced apart transversely of the longitudinal axis of the housing, an elongated transducer and stylus supporting member supported within said housing and along said axis thereof with one end portion disposed between said housing extensions and supporting at least one stylus for engagement with a phonograph record externally of the housing, said end portion of said member having at least one shoulder spaced from the adjacent stylus supporting end of the member and facing along said axis toward such end and the exterior of the housing, and means on the inner side of at least one of said extensions defining a shoulder facing inwardly toward said shoulder on said member and projecting from the extension toward said axis far enough to engage the shoulder on the member and block movement of the member along said axis and out of said housing, and at least one rib projecting radially and outwardly from and extending circumferentially around each of said extensions to facilitate grasping of said housing adjacent said one end for removal of the housing from a supporting structure.

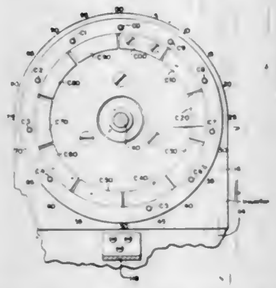
3,048,668
TRANSDUCER SUSPENSION SYSTEM
Erwin M. Weiss, Chicago, Ill., assignor to Beltone Hearing Aid Company, a corporation of Illinois
Filed Apr. 17, 1961, Ser. No. 103,637
11 Claims. (Cl. 179—179)



1. The improvement of a transducer suspension system for attenuating mechanical vibratory transmission from a rigid casing to an electro-acoustical transducer

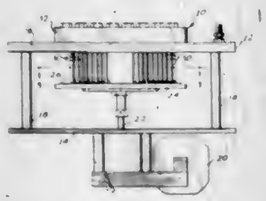
comprising a rigid casing having a plurality of walls defining a cavity shaped to receive a transducer in operative position therewithin, a plurality of hollow tubular members disposed around said transducer to space said transducer from the walls of said cavity, said hollow tubular members having non-linear compliance and non-linear damping characteristics for effective damping of large amplitude and low frequency vibrations arising from casing movement and shock, and sheath means for said hollow tubular members positioned around said transducer between said members and said transducer, said sheath means being formed of relatively inert material having low internal damping characteristics.

3,048,669
ELECTRICAL APPARATUS
John E. Mikkola, Ferndale, and Stanley F. Newman, Troy, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 15, 1959, Ser. No. 827,345
5 Claims. (Cl. 200—11)



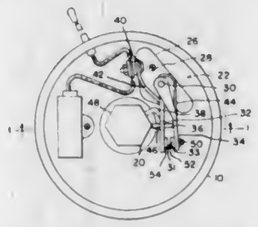
3. A rotary contact device including a first means having an axis and having a selected number greater than two of small contacts in a series located equally spaced and symmetrically located in a circle concentric about said axis, a second means having a first series of uniformly spaced small contacts equal in number to said selected number arranged in a continuous series in a circle concentric about said axis spaced slightly closer together than the contacts of said first means by a difference greater than the width of one contact, said first and second means being mounted for relative rotation about said axis, said contacts of said first and second means being located so as to contact each other individually upon relative rotation about said axis.

3,048,670
ELECTRICAL SWITCH
David W. Jackson, Forrest Park, Ga.
(% Scripto, Inc., P.O. Box 4847, Atlanta 2, Ga.)
Filed Aug. 31, 1960, Ser. No. 53,301
1 Claim. (Cl. 200—24)



An electrical switch comprising a constant speed motor having an output shaft, an insulated platen mounted on said output shaft, a conductor template removably disposed on said insulated platen and electrically connected to one side of an electrical potential source, said conductor template being a disc formed with a plurality of arcuate portions of varying length disposed between its center and outer periphery at different points along the radius of said disc, and an electrical plug-in terminal removably positioned in spaced relation to said conductor template and carrying a plurality of stationary resilient contact fingers arranged to provide contact between a given contact finger and a given portion of said conductor template upon rotation thereof to complete a given circuit, the duration of said given circuit being dependent upon the length of the arcuate portion of the conductor template that is in contact with a depending contact finger and the sequence of said given circuit with respect to said other circuits being dependent upon the selective arrangement of said contact fingers with varied portions of said conductor template.

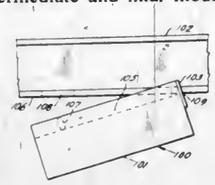
3,048,671
IGNITION CONTACT SET
William O. Manning, Jr., Birmingham, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Aug. 31, 1960, Ser. No. 53,278
6 Claims. (Cl. 200—30)



1. An ignition contact set for use in a distributor having a timing cam comprising a pair of pivotally mounted arms which are movable relative to each other, oppositely facing contact points on said arms, rubbing blocks on said arms which are adapted to engage the timing cam, one of the rubbing blocks having a longer lever arm than the other rubbing block, resilient means for maintaining the contact points continually adjusted to a predetermined setting by controlling the wear of the rubbing blocks due to the timing cam, said means including springs for said arms for biasing said arms in a direction to hold said rubbing blocks in contact with the timing cam, the spring acting on the arm which has the longest lever arm being stronger than the spring acting on the other arm, said arms during the operating cycle of the distributor being responsive solely to the rotation of the timing cam.

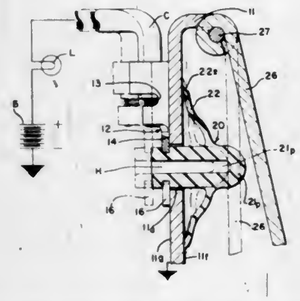
3,048,672
SAFETY BUS DUCT PLUG
John B. Cataldo, Birmingham, Robert W. Thomas, St. Clair Shores, Michael L. Mead, Detroit, and Norman Shackman, Oak Park, Mich., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 9, 1959, Ser. No. 851,776
16 Claims. (Cl. 200—50)

1. A plug for tapping power from an enclosed electric distribution duct; said plug comprising a case, a plurality of contact fingers mounted to said case in insulating relationship and positioned to operatively engage the bus bars of a duct when said plug is mounted to a duct in final mounting position; said case having a first means projecting therefrom and adapted to engage a cooperating formation of a duct housing and thereby support said plug in an intermediate mounting position; said first means defining an axis about which said plug is pivotable between said intermediate and final mounting positions;



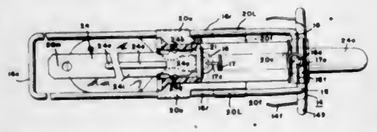
said first means comprising a hook-like member projecting from said case near a first end thereof.

3,048,673
SWITCHING DEVICE
Robert E. Kirk, Warren, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 12, 1960, Ser. No. 55,303
5 Claims. (Cl. 200—51)



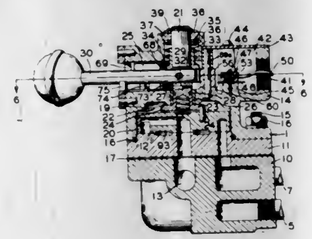
1. A two-part switching device for an apertured support comprising, button means of insulating material including a stem portion to fit and be shiftable through the apertured support, and a bifurcated terminal means to straddle said stem portion on one side of the support so as to maintain assembly of said button means and terminal means on the support, said button means being substantially mushroom-shaped and resiliently biased in itself without metal spring means so that said bifurcated terminal means is normally in electric contact with one side of the apertured support.

3,048,674
ARTICLE OF MANUFACTURE
Joseph H. Hopkins, Warren, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 5, 1960, Ser. No. 47,642
8 Claims. (Cl. 200—61.7)



1. A lamp-retainer and switch assembly adapted to fit through a mounting aperture of a panel on one side of a compartment subject to closure by a cover, door and the like, comprising, a centrally apertured plug-like mounting button peripherally engageable per se in the mounting aperture, a radially outwardly flanged sleeve retained only by said button in a location concentrically inside said button and spaced from the panel, a wire-like guide means having a pair of substantially parallel and laterally separated rail portions provided as part of a closed loop configuration, the opposite ends of which are wrapped specifically around said sleeve though one such end is left to project radially outward therefrom in a location freely spaced from the panel, a body portion of insulating material formed to have a socket in which electrical connector means can hold a lamp energizable for illumination, a plunger means extending from said socket of said body portion through said sleeve, means on said body portion for complementary sliding engagement along said side rail portions in response to force against plunger means at one end thereof, and spring means secured at one end to said body portion and at an opposite end to said radially projecting free end of said wire-like guide means for biasing said plunger means and body portion normally in one direction to effect electrical engagement between said sleeve and said electrical connector means.

3,048,675
MULTI-POSITION MANUAL CONTROL VALVE WITH STEP-BY-STEP INSURING FEATURE
Paul E. Olson, Pittsburgh, and Ellis E. Hewitt, Ruffsdale, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Sept. 29, 1959, Ser. No. 843,173
17 Claims. (Cl. 200—61.86)

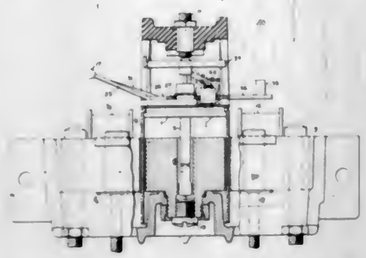


3. A multi-position manually operated control valve device, comprising, in combination, casing means having a rotary valve seat, a rotary valve element rotatably shiftable on said seat to any one of a plurality of angularly spaced operating positions, a rotatable shaft for rotating said rotary valve element on said rotary valve seat, an operating handle pivotally mounted on said shaft for rotating said shaft, and guide means providing a generally arcuate zigzag path through which said handle may be moved only in response to successive rockings of said handle about said pivot means in opposite directions and subsequent arcuate movement of said handle through a distance corresponding to the angular spacing between one of said positions of said rotary valve element and an adjacent position.

3,048,676
CONTACT MAKING DEVICES
Karl Palmer, West Orange, and Walter L. Hinman, New Providence, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 12, 1960, Ser. No. 55,463
9 Claims. (Cl. 200—87)

1. In a relay device for controlling an electrical circuit, a stator structure including a fixed electrical contact, a rotor structure mounted for rotation relative to the stator structure about an axis, a movable contact, a mounting structure mounting the movable contact on the rotor structure for actuation by the rotor structure into and out of engagement with the fixed contact, said mounting structure being rotatable relative to the rotor struc-

ture, and an energy-absorbing stop secured to one of said rotor and mounting structures for rotation therewith, said stop being adapted to engage the other of said rotor and mounting structures for actuating said movable con-



tact as the rotor structure rotates about said axis in contact-engaging direction and to disengage said other structure as the rotor structure rotates about said axis in contact disengaging direction.

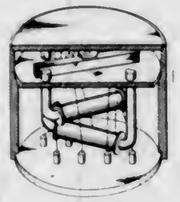
3,048,677
SWITCHING DEVICE
Edward C. Hellstrom, North Bergen, and Charles E. Pollard, Jr., Hohokus, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 31, 1961, Ser. No. 99,924
12 Claims. (Cl. 200—87)



1. An electrical switching device comprising an enclosing vessel, a pair of elongated contact members sealed in one end wall of said vessel having portions extending within said vessel to form opposed stationary contacts and portions extending outside said vessel to form spaced pole-pieces, an armature mounted within said vessel movable between said stationary contacts, means outside of said vessel attached to each of said spaced pole-pieces for establishing at each of said stationary contacts respectively opposite magnetic poles, and addiitonal means mounted outside of said vessel for controlling movement of said armature from one of said contacts to the other, said additional means comprising a pair of magnetic cores magnetically joined to each other at their ends, a control coil on each core and an elongated magnetic member attached to said cores at one of the joined ends thereof and extending into the area adjacent to and between said spaced pole-pieces whereby to extend the magnetizing effect in said cores to said area.

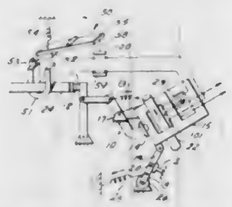
3,048,678
MAGNETIC RELAYS
Stanley F. Reed, McLean, Va., Donald E. Reed, Kensington, Md., and Emmett F. Deady, Arlington, Va., assignors, by mesne assignments, to Space Components Inc., Washington, D.C., a corporation of the District of Columbia
Filed June 10, 1960, Ser. No. 31,509
20 Claims. (Cl. 200—93)

1. In an arrangement of the character described; a housing; two electromagnets supported within said housing, each of said electromagnets having an energizing coil adapted to be connected to a difference of potential and a pole piece having two terminal portions, said terminal portions forming magnetic poles of opposite polarity only whenever a difference of potential of a predetermined magnitude is applied to said coils; an armature pivotally mounted within said housing for movement between first and second operative positions, said armature comprising a central portion and at least two operative end portions, said central portion being permanently magnetized and said end portions consisting of magnetically responsive material integrally secured in fixed relation to said central portion, said end portions



of said armature and said terminal portions of said pole pieces so oriented that said armature assumes the first of said operative positions whenever a difference of potential of a first polarity is applied to said coils and assumes the second of said operative positions whenever a difference of potential of polarity opposite to said first polarity is applied to said coils; at least one contact supported within said housing; a portion of an electrical circuit within said housing including said contact; a contact member operatively associated with said armature to close said portion of said circuit including said contact whenever said armature assumes one of said operative positions, whereby the conductivity of said circuit is controllable by the energization and polarity of said coils.

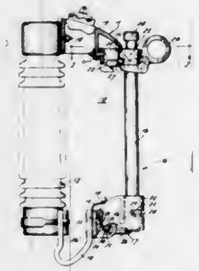
3,048,679
TRIP SYSTEM FOR HIGH SPEED CIRCUIT BREAKERS
Challiss I. Clausing, Collingswood, N.J., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 9, 1959, Ser. No. 851,736
10 Claims. (Cl. 200—93)



1. In a high speed circuit breaker; said high speed circuit breaker including a movable contact movable between an engaged position and a disengaged position, an operating mechanism for said movable contact and a magnetic latch; said magnetic latch including a magnet and an armature movable between a sealed and unsealed position with respect to said magnet; said operating mechanism being operatively connected to said movable contact through said magnetic latch when said armature is in said sealed position and being disconnected from said movable contact when said armature is in said unsealed position; said magnet having a polarizing coil, a main current winding and an auxiliary winding connected thereto; said main current winding normally carrying at least

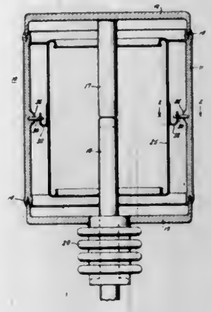
a portion of the current carried by said movable contact; said polarizing winding and said main current winding normally generating magnetomotive force in said magnet to maintain said armature in said sealed position; a change in said current in a first direction through said main current winding decreasing said magnetomotive force in said magnet to a value insufficient to maintain said armature in said sealed position; an auxiliary trip means; said auxiliary trip means being energized by current change in a direction opposite to said first direction; said auxiliary trip means including energizing means for initiating energization of said auxiliary winding responsive to energization of said auxiliary trip means; said auxiliary winding generating magnetomotive force in opposition to the magnetomotive force generated by said polarizing coil responsive to energization thereof.

3,048,680
FUSE CUTOUT
George R. McCloud, South Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Oct. 7, 1960, Ser. No. 61,187
9 Claims. (Cl. 200—114)



1. A fuse cutout comprising, in combination, a lower stationary contact, upper spaced apart inwardly biased stationary contacts, a lower fuseholder support, a fuseholder including a gas evolving fuse tube having a rupturable fuse link therewithin electrically bridging said upper and lower contacts, said fuseholder having offset projecting contacts integral therewith which are normally engaged between said upper spaced apart stationary contacts, latching means engaging said fuseholder for normally maintaining said fuseholder in circuit bridging position, a first sleeve member rigidly affixed to said fuse tube, said first sleeve member having at least one projecting lug and a transversely extending arm portion, a second sleeve member surrounding said first sleeve, said second sleeve having means thereon for receiving said projecting lug so that said second sleeve is supported by said lug on said first sleeve and said first sleeve and said fuse tube are rotationally movable with respect to said second sleeve, said second sleeve having trunnion means thereon for pivotally engaging said lower fuseholder support, and spring biased fuse link flip out means pivotally mounted on said second sleeve and normally engaging a portion of said fuse link so as to exert a tensile force on said link, said flip out means having leg portions which normally straddle said transversely extending arm portion on said first sleeve to prevent rotation thereof with respect to said second sleeve, whereby upon rupture of said fuse link said flip out means pivots with respect to said second sleeve allowing said fuse tube to subsequently rotate about its axis under the force exerted by said inwardly biased stationary contacts on said off-set projecting contacts thereby disengaging said latching means and allowing said fuseholder to pivot out of circuit bridging position.

3,048,681
SHIELD MOUNTING ARRANGEMENT FOR A VACUUM CIRCUIT INTERRUPTER
George Polinko, Jr., Levittown, Pa., assignor to General Electric Company, a corporation of New York
Filed Aug. 11, 1960, Ser. No. 48,907
1 Claim. (Cl. 200—144)

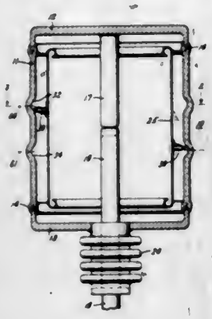


A vacuum-type circuit interrupter comprising an evacuated tubular casing of insulating material, a pair of electrodes disposed within said casing and having a spaced-apart position defining an arcing gap therebetween, a generally tubular metallic shield surrounding said arcing gap and extending along the length of said casing for substantial distances on opposite sides of said arcing gap, said metallic shield being electrically isolated from said electrodes and having its end portions radially spaced from said casing, a plurality of metallic pins embedded in said casing in circumferentially spaced-apart relationship and bonded thereto, said pins extending in a generally radial direction relative to said casing and extending only partially through said casing, a plurality of circumferentially spaced generally U-shaped tabs each having spaced-apart inner and outer legs, the inner of said legs being attached to the outer periphery of said shield and the outer of said legs being located radially outward from said other leg, said tabs being secured to the outer periphery of said shield in circumferential alignment with certain of said radially extending pins, and means for supporting said tabs on said pins comprising apertures in said outer legs receiving said pins, said apertures being appreciably larger than said pins to permit free movement of said tabs relative to said pins in response to thermally induced expansion and contraction of said metallic shield.

3,048,682
SHIELD MOUNTING ARRANGEMENT FOR A VACUUM CIRCUIT INTERRUPTER
Democritos J. Veras, Media, Pa., assignor to General Electric Company, a corporation of New York
Filed Apr. 11, 1961, Ser. No. 102,204
6 Claims. (Cl. 200—144)

1. A vacuum switch comprising a tubular envelope of insulating material, said envelope having a pair of longitudinally-spaced annular recesses of concave cross-sectional configuration formed in its internal surface, a tubular metallic shield disposed internally of said envelope in generally concentric relationship with respect to said envelope for protecting said envelope from being coated with metallic particles, a first series of annularly-spaced deformable tabs projecting radially outward from the external surface of said shield in longitudinal alignment with one of said recesses, a second series of angularly-spaced deformable tabs projecting radially outward from the external surface of said shield in longitudinal alignment with the other of said recesses, each of said tabs being a generally U-shaped metallic member comprising a pair of legs joined together by a bight portion, means

for securing one leg of each of said tabs to said shield, the other leg being free to move relative to said shield longitudinally thereof when said legs are forced together, aligned openings one of which is threaded provided in the legs of each tab for receiving a screw for forcing said legs together, at least one weakened region provided in



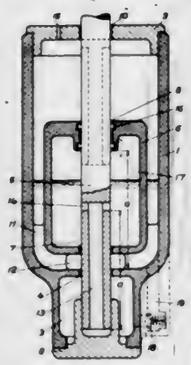
each of said tabs for causing its bight portion to be shifted radially outward into its aligned recess when said legs are forced together, the material of each of said tabs being of such a nature that said tab is permanently set when said bight portion enters said recess whereby said bight portion remains in its aligned recess when said screw is removed.

3,048,683

EXTINGUISHING CHAMBER FOR OIL CIRCUIT BREAKER

Haakon Forwald, Grottvagen 31, Ludvika, Sweden

Filed Sept. 16, 1959, Ser. No. 840,333
Claims priority, application Sweden Oct. 4, 1958
7 Claims. (Cl. 200—150)



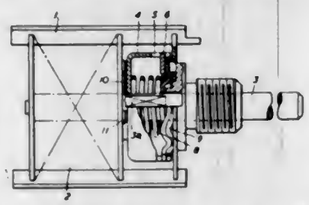
1. Oil circuit breaker comprising a container, a body of oil partially filling the container, means forming a pressure generating chamber having a fixed upper wall in the bottom of the container, said wall having a single opening therethrough, a stationary contact within said generating chamber spaced from the fixed upper wall, means forming a constant-volume pressure accumulating chamber in the container above and having a bottom wall spaced from the upper wall of the generating chamber, said accumulating chamber forming means having openings in its top and bottom walls aligned with the opening in the upper wall of the generating chamber, said body of oil only partially filling the accumulating chamber, and a movable contact slidable through all said openings to engage the stationary contact, said movable contact having a passage leading from the lower end thereof to an opening on the side thereof, the distance from the lower end of the movable contact to the lowest point of the opening therein being less than the distance between the uppermost contact area of the stationary contact and the top wall of the accumulating chamber, whereby said passage connects said chambers during the first part of the movement of the movable contact as it breaks contact with the stationary contact said container including a space on the outside of the accumulating chamber, oil only partly filing said space, said space communicating with the space between the upper wall of the generating chamber and the bottom wall of the accumulating chamber.

3,048,684

ELECTRIC ROTARY SWITCH INDEXING MEANS

Leonard William Descarrieres Sharp, Loughton, and Dennis Jack Blight, Woodford Green, England, assignors to The Plessey Company Limited, London, England, a British company

Filed Dec. 1, 1958, Ser. No. 777,527
Claims priority, application Great Britain Dec. 2, 1957
1 Claim. (Cl. 200—166)



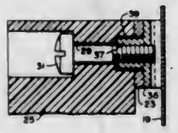
A combined indexing and drive device for an electric switch, comprising a cup-shaped drum mountable on the drive shaft of the switch, such that the drum is constrained to rotate with the drive shaft, the drum having a base through which the shaft passes and a wall axially directed transversely of the base, an indexing ring located within the drum and free to slide axially of the shaft, an indexing plate located within the drum, the plate having means whereby it can be constrained against rotation with the drum, a spring arranged within the drum, the spring bearing on the base of the drum and serving to press the indexing ring against the indexing plate, a driving connection between the wall of the drum and the indexing ring, the connection between the drum and the ring being at a greater radial distance from the axis of rotation of the shaft than is the distance from the axis at which the ring indexes with the plate.

3,048,685

BREAKER SUPPORT

Stephen A. Mrenna, Beaver, and John N. Groves, Monaca, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 20, 1958, Ser. No. 768,344
10 Claims. (Cl. 200—168)



1. In combination, an enclosure for an electrical device, said electrical device including a housing of molded insulating material having openings therein for receiving securing means, mounting means on said enclosure having openings therein for receiving the securing means, and support members on said mounting means for supporting said electrical device, each of said support members having a portion disposed to be positioned in one of said openings

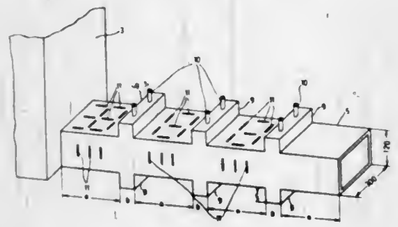
in said electrical device to facilitate alignment of said openings in said electrical device with said openings in said mounting means for receiving said securing means.

3,048,686

TUNNEL FURNACE WITH VERY HIGH FREQUENCIES TO HEAT SUBSTANCES, FOR EXAMPLE, FOODSTUFFS

Wolfgang Schmidt, Hamburg-Othmarschen, Germany, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 14, 1959, Ser. No. 846,462
Claims priority, application Germany Oct. 16, 1958
10 Claims. (Cl. 219—10.55)



1. A microwave heating system comprising means for providing therein an electromagnetic field for heating substances located therein, and access means disposed from the exterior of said system to said field adapted for passage of said substances, said access means comprising at least one waveguide member having a hollow cross-section with one inner dimension thereof greater than the operational wavelength of said system to provide said passage, and a plurality of substantially aligned quarter-wavelength enclosures having substantially a predetermined integral multiple of half-wavelength spacings therebetween associated with said waveguide member, said quarter-wavelength enclosures being disposed on each of two predetermined opposing surfaces of said waveguide member, the quarter-wavelength enclosures of one of said opposing surfaces being substantially aligned with the quarter-wavelength enclosures of the other of said opposing surfaces.

3,048,687

ELECTRIC SOLDERING IRON

Alvis R. Knowles, Manhattan Beach, Calif., assignor to Eldon Industries, Inc., Hawthorne, Calif., a corporation of California

Filed Sept. 26, 1960, Ser. No. 58,494
9 Claims. (Cl. 219—26)



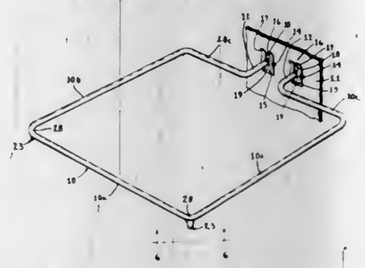
4. In an electric soldering iron assembly, the combination of: a central tube having an enlarged forward end joined thereto by an external shoulder, an electrical resistance heating element mounted in said enlarged forward end of said tube, electrical leads within said tube connected to said heating element, a tapered metal sleeve encircling said tube and provided with a forward flaring heat reflecting section at one end and encircling said shoulder, a spacer element encircling said tube and contacting said shoulder and said flaring section and acting to hold the tube concentric within said sleeve, the other end of said sleeve providing a support for sliding reception of said tube, a tapered non-metallic body encircling said sleeve and having a flared end centered by said flaring section of said sleeve, said body having a bore at the other end thereof slidably receiving a portion of said sleeve, and retainer means removably mounted upon the sleeve and engaging said body to prevent axial separation of said sleeve and said body, said retainer means also contacting a portion of said central tube to hold the tube and sleeve against axial separation.

3,048,688

ELECTRIC HEATING ELEMENTS

Lester D. Drugmand, Pittsburgh, Pa., assignor to Edwin L. Wiegand Company

Filed Aug. 22, 1958, Ser. No. 756,582
6 Claims. (Cl. 219—37)



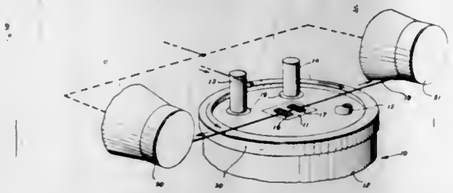
6. A mounting assembly for a sheathed electric heating element, comprising a pin connected crosswise of and to a terminal portion of said element, a support having an elongated opening freely passing the end of said terminal portion and permitting swinging movement of said end within said opening, and a furcated bracket secured to said support, the furcations defining a slot opening at a margin of said bracket and providing spaced spring fingers for receiving said pin between them and the adjacent surface of said support, said spring fingers being normally biased toward said support to confine said pin but being retractable from said support to provide for assembly and disassembly of said pin.

3,048,689

HEATING AND CONDUCTIVE-LEAD-CUTTING MEANS FOR SEMICONDUCTOR DEVICES

Sidney S. Charschan, Levittown, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed June 29, 1960, Ser. No. 39,670
13 Claims. (Cl. 219—68)



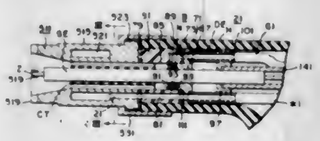
1. Heating and conductive-lead-cutting means for a semiconductor device having a metallic header portion, comprising an electrode adapted to be fitted on said header, means including said electrode for selectively passing heating current through said header, means for positioning conductive lead across said electrode with at least one outer portion of said lead extending beyond an extremity of said electrode, and means including said electrode for selectively passing cutting current having a value greater than the current-carrying capacity of said lead through only said outer portion of said lead.

3,048,690
BONDING APPARATUS
Peter A. Byrnes, Jr., Somerville, Thomas E. Davis, Metuchen, and Edward C. Mener, Somerville, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 2, 1960, Ser. No. 66,792
18 Claims. (Cl. 219—85)



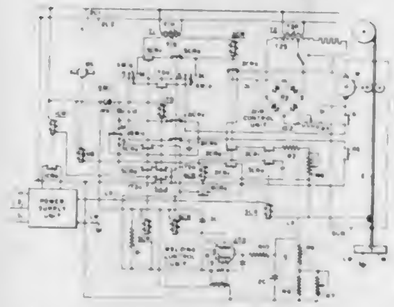
1. A bonding apparatus comprising a pair of cantilever spring hinged bonding tools, the longitudinal axes of which lie along a common axis and the unsecured portions of which are spaced one from the other, are pretensioned downward, and include a bonding edge, a conductive lead underlying the bonding tools and extending along the common longitudinal axis thereof, a parting wire underlying the conductive lead and extending at right angles thereto and between the spaced ends of the bonding tools, means for receiving a semiconductive device and heating it to a preselected temperature, means for orienting the semiconductive device so that the contact areas thereof respectively underlie the conductive lead and the bonding edges of the bonding tools, and means for lowering the unsecured portions of the bonding tools, the bonding edges thereof moving the conductive lead into contact with the contact areas and the pretension in the unsecured portions exerting a preselected force that bonds the lead to the contact areas, and means for lifting the parting wire while the bonding tools are in the bonding position thereby parting the conductive lead between the bonds.

3,048,691
WELDING GUN
Scott S. Longstreth, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1960, Ser. No. 18,904
7 Claims. (Cl. 219—130)



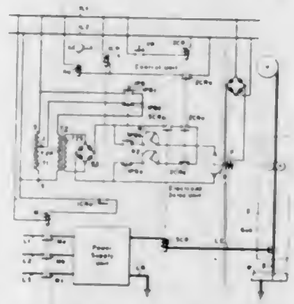
1. An arc welding gun for welding with a consumable electrode having a barrel terminating in a gas nozzle, said nozzle having a gas transmitting opening terminating at its tip, said nozzle including a cavity terminating a predetermined distance from said tip and said barrel including fluid channels for transmitting cooling fluid to and away from said cavity, said gun including an electrode guide tube extending through said barrel and nozzle to a position near said tip for transmitting said electrode to said tip, and a centering tube in engagement with the internal surface of at least a portion of said barrel and restrictively encasing said electrode guide tube to center said electrode guide tube, said centering tube having indentations along the external surface thereof providing spaces between said external surface and said internal surface, said barrel including gas supply means in communication with said spaces for transmitting gas through said spaces to said tip of said nozzle, said centering tube extending at least to the terminal of said cavity nearest said tip.

3,048,692
WELDING APPARATUS
Harry J. Bichsel, East Aurora, and Floyd E. Adamson, Kenmore, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 4, 1959, Ser. No. 838,256
13 Claims. (Cl. 219—131)



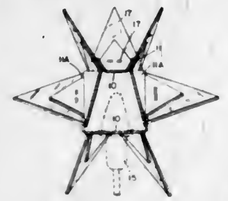
1. The method of producing an arc between a pair of electrodes during a predetermined time interval comprising contacting said electrodes to fire an arc and responsive only to the presence of said fired arc as distinct from the contact of said electrodes timing out said interval, said timing out starting only after said contacting of said electrode.

3,048,693
ARC WELDING APPARATUS
Floyd E. Adamson, Kenmore, N.Y., and Harry J. Bichsel, Geneva, Switzerland, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 27, 1959, Ser. No. 855,635
5 Claims. (Cl. 219—131)



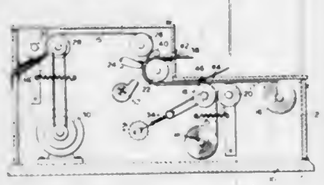
1. In arc welding apparatus in which work is welded with a consumable electrode by an arc between said electrode and work, a drive for said electrode including a motor having an armature, means connected to said armature for connecting said armature in driving relationship with said electrode, and power-supply means for said motor including variable transformer means having input and output terminals and including means connected to said output terminals for connecting said output terminals to impress an energizing potential across said armature which is substantially independent of the arc potential between said electrode and work, the potential across said armature being variable only by varying the output of said transformer, said motor having a relatively flat speed-torque curve and a load rating such that in the absence of compensation the variation in the loading on said motor by the driving of said electrode has substantially no effect on the speed of said electrode.

3,048,694
ILLUMINATED POLYHEDRIC FORMS
Raymond B. Faulk, 8501 Williams St., Dearborn, Mich.
Filed Feb. 24, 1958, Ser. No. 717,179
9 Claims. (Cl. 240—10)



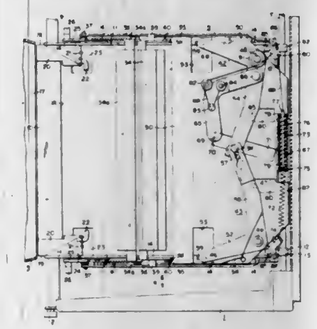
1. An illuminated polyhedral assembly comprising a plurality of separate complementary structures each comprising a flat polygonal non-transparent base portion and flanges extending outwardly from each edge of said base portion at an angle to the plane thereof, said structures being assembled to form a hollow polyhedral casing having faces defined by the base portions of said structures, and the flanges of adjacent structures being secured together and forming wings extending outwardly in a multiplicity of planes, means illuminating the interior of said casing, at least a portion of each of said wings comprising a layer of light conducting material having an edge exposed to the interior of said casing and outer exposed edges exteriorly of said casing.

3,048,695
COPY METHOD AND APPARATUS
Robert B. Russell, Newton, Mass., assignor to S. D. Warren Company, Boston, Mass., a corporation of Massachusetts
Filed June 22, 1959, Ser. No. 821,943
7 Claims. (Cl. 250—65)



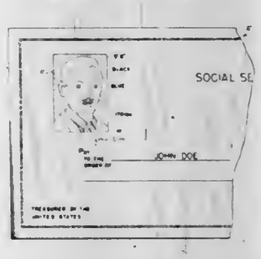
1. A process for copying radiant energy absorbing indicia on an indicia bearing sheet comprising: placing said indicia bearing sheet on a curved surface; placing a copy sheet over said indicia; placing a transfer sheet having a thermoplastic coating thereon over said copy sheet; drawing said transfer sheet into intimate contact with said copy sheet and pressing the same against said indicia bearing sheet by maintaining said transfer sheet under tension; both heating said transfer and copy sheets and causing heat from said indicia to cross the gap between said indicia and said copy sheet, to pass through said copy sheet, to cross the gap between said copy sheet and said transfer sheet and additionally to heat up said transfer sheet by directing incident radiation through said transfer and copy sheets to the surface of said indicia; and continuing said incident radiation only until the combined effect of it and said heat from said indicia melts said coating on said transfer sheet, whereby said coating transfers from said transfer sheet to said copy sheet in areas corresponding only to said indicia.

3,048,696
SPOTFILM DEVICE
Harry E. Koerner and Lawrence E. McCanna, Catonsville, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1959, Ser. No. 849,644
6 Claims. (Cl. 250—66)



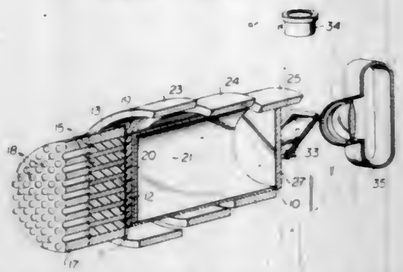
1. In a spotfilm device, the combination of a housing having a wall with a cassette loading aperture opening therethrough, cassette carriage means within said housing movable to and from a cassette loading position in proximity of said loading aperture, cassette actuating means operable to dislodge a film cassette from said carriage means and to advance same longitudinally outward into said loading aperture, and means including a manually-operated control member secured for retainment on said device and disposed in proximity to said loading aperture to effect operation of said cassette actuating means whereby the film cassette will be moved into the operator's hand when positioned to operate said member.

3,048,697
METHOD OF IDENTIFYING A PERSON
William J. Cavanaugh, 105 N. State St., Dover, Del., and Traugott Tschudi, Flushing, N.Y.; said Tschudi assignor to said Cavanaugh
Filed Oct. 20, 1958, Ser. No. 768,481
3 Claims. (Cl. 250—71)



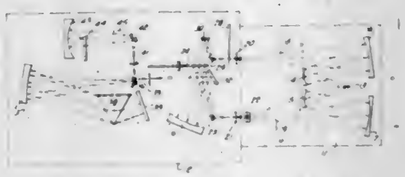
1. A method of identifying a person whose name appears on a valuable instrument, comprising the steps of imprinting a negative likeness of the face of the named person on the instrument in invisible ink which becomes visible when exposed to ultraviolet radiation and exposing the negative imprint to said radiation to produce a visible, positive likeness of the face on the instrument.

3,048,698
SCINTILLATION CAMERA
Roland W. Carlson, East Cleveland, Ohio, assignor to Picker X-Ray Corporation, Waite Mfg. Div., Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 11, 1959, Ser. No. 798,632
8 Claims. (Cl. 250—71.5)



1. A scintillation camera comprising, a collimating head having a plurality of longitudinally extending unobstructed apertures therethrough, a light impervious scintillation grid in juxtaposed relation to said head, said grid having a through passage in alignment with each of said apertures, a phosphor crystal transversely filling each of said passages, an image amplification means including an amplifier tube in juxtaposed relationship with said grid to transmit and amplify the output of said tube, and visually observable light responsive means disposed to receive the output of said tube.

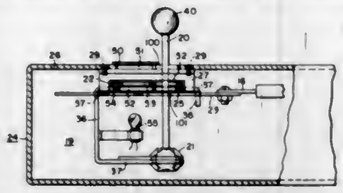
3,048,699
METHOD AND APPARATUS FOR MEASURING ABSORPTION SPECTRA
Stanley A. Francis, Fishkill, N.Y., assignor to Texaco Inc., a corporation of Delaware
Filed May 15, 1958, Ser. No. 735,550
5 Claims. (Cl. 250—83.3)



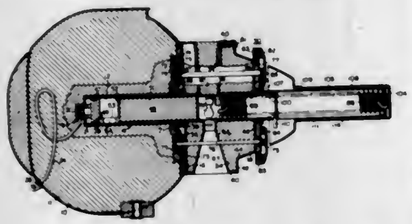
1. A method of measuring the infrared absorption spectrum of a very thin film of one substance on the surface of another substance, comprising the steps of taking two separate samples of said other substance, one sample having said film of said one substance thereon, reflecting a first beam of infrared energy at an acute angle of incidence relative to the surface of said other substance of said one sample, said beam passing through said film of the one substance while being reflected from the surface of said other substance, reflecting a second beam of infrared energy from the same source at an equal angle of incidence relative to a surface of said other sample containing said other substance alone, and polarizing said beams with an orientation to substantially reject the perpendicular component of said infrared energy.

3,048,700
X-RAY SHUTTER APPARATUS
Harry E. Koerner, Catonsville, and Everett W. Vaughn, Ellicott City, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 24, 1959, Ser. No. 842,003
7 Claims. (Cl. 250—105)

1. In X-ray apparatus, the combination of X-ray shutter means adjustable bidirectionally to control the mutually-transverse dimensions of an X-ray beam-defining aperture, an operator's control member mounted for movement with multi-directional freedom, and means operatively connecting said control member to said shutter means for selectively adjusting one or the other of said transverse dimensions according to the direction of movement of said control member.

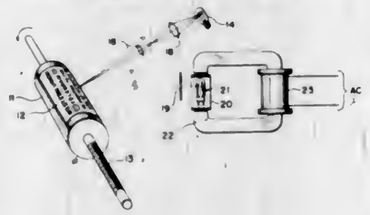


3,048,701
RADIOACTIVE SOURCE HOLDER
Eugene P. Thomas, Catonsville, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 12, 1958, Ser. No. 760,791
7 Claims. (Cl. 250—106)



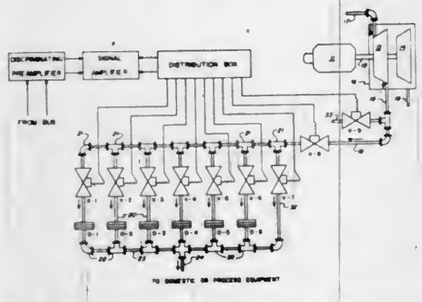
1. In a radiation source material holder, the combination of means defining a cylindrical guideway, a fluid pressure actuated piston assemblage slidably mounted in said guideway for conveying a radioactive source material from a fully-shielded position to an active position for emission of radiation from such holder, spring means biasing said piston means toward its fully shielded position, said piston assemblage having radial clearance with respect to the wall of said guideway whereby fluid under pressure will leak past said piston assemblage at a controlled rate to permit said spring means to automatically return same to its fully shielded position in the event fluid under pressure ahead of said piston assemblage cannot be released in a normal manner.

3,048,702
PHOTOELECTRIC BALANCED MODULATOR
George B. Worthen, New York, N.Y., and Charles Jelinek, Jr., Verona, N.J., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Filed Dec. 11, 1959, Ser. No. 858,994
3 Claims. (Cl. 250—211)



1. In a photoelectric pickup for facsimile transmission, a phototriode comprising a hermetic envelope, a photoemissive planar cathode and a pair of electrically mutually independent photoelectron receiving anodes spaced therefrom and located in spaced apart regions of said envelope, said cathode being narrower than the distance between said anodes; electromagnet means for applying across the path of photoelectron stream travel from said photocathode a modulating frequency magnetic flux field having sufficient intensity to bend the stream completely away from either and onto the other of the said anodes, polarizing means for said anodes, means to illuminate said photoemissive cathode with variable quantity of exciting radiation, comprising an input signal, metallic shield means surrounding said envelope for photoelectron stream stabilization against adventitious ambient deflecting influences, and circuit means for extracting a balanced modulated signal output from said anodes.

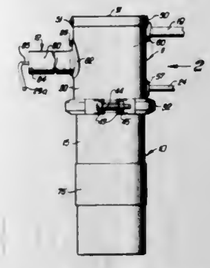
3,048,703
POWER REGULATING SYSTEM
Peer Dudahl Nielsen, Bellefonte, Pa., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Apr. 3, 1959, Ser. No. 803,904
3 Claims. (Cl. 290—2)



3. A power system comprising in combination an electrical generator subject to a variable electrical load, a steam-operated turbine in driving relation to said generator and having a plurality of stages in series, auxiliary steam-operated equipment, conduit means for extracting a portion of the operating steam from said turbine between the first and last stages in said series, a plurality of valves disposed in parallel in said conduit means, electrical means providing a voltage signal from said electrical load varying directly with variation in said load, and switching means responsive to said variable signal and adapted to selectively operate said valves in relation to the strength of said signal, whereby steam is progressively cut off from said auxiliary equipment with increase in said load and channeled to the last stage of said turbine.

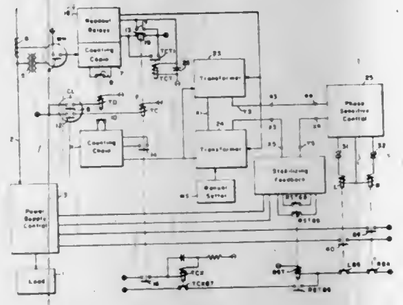
3,048,704
COIL SHIELD
Stanley E. Estes, Inglewood, Calif., assignor to Hallett Manufacturing Company, Los Angeles, Calif., a corporation of California
Filed June 9, 1960, Ser. No. 35,064
11 Claims. (Cl. 307—10)

1. The combination of: an ignition coil for an internal combustion engine comprising an elongated electrically conductive casing having a flange at one end, a non-conductive end structure encompassed by said flange, primary terminals and a secondary terminal supported on said end structure, an electrically conductive cup-shaped housing having an open end and a closed end, the open end being provided with a flare seating on said flange, a conductive channel clamp contracted upon said flange and said flare to retain the conductive housing on the coil casing, and in electrically conductive relation thereto, the housing enclosing the primary and secondary coil terminals, openings through said housing for accommodation of primary and secondary cables, a primary lead cable extending through one of said openings and connected to one of the primary terminals, filter means interposed in said primary lead cable, said filter means including an electrically conductive shell conductively mounted



to said housing, a conductively sheathed primary outlet cable extending through a second of said openings and connected to a second primary terminal, a conductively sheathed secondary cable extending through a third of said openings and connected to the secondary terminal, and ground connections from the sheathing of the primary outlet cable and from the secondary cable to the housing.

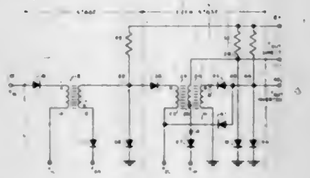
3,048,705
AUTOMATIC DEMAND CONTROL COMPUTER
Myron J. Brown, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 28, 1959, Ser. No. 816,635
8 Claims. (Cl. 307—35)



8. A demand control system for a load power supply comprising a power input line, a demand detector means connected to provide a first output in response to the demand on said power input line, first adjustable means for establishing a second output in response to the desired rate of power consumption by said load, power supply control means for adjusting the supply of power to said load and computer means connected to compare said first output with said second output to adjust said control means, said computer means comprising a first tap changing transformer group and a first tap changing control means therefor, a second tap changing transformer group and a second tap changing control means therefor, a phase sensitive control means connected to receive outputs from said first and second tap changing transformer groups to respond to the algebraic sum of the outputs of said transformer groups, said phase sensitive control means providing an output to said power supply control means for proper adjustment of said supply of power to said load, and feedback means connected to respond to said power supply control means to provide a balancing feedback control signal to said phase sensitive control

means, said feedback means comprising a tap changing potentiometer capable to varying its tap output voltage to a value above or below a reference level while maintaining a constant overall end-to-end impedance, and counting relays responsive to said phase sensitive control means for controlling said tap changes to provide a neutralizing feedback voltage opposing said algebraically summed outputs.

3,048,706
MAGNETIC AMPLIFIERS
Harvey Rubinstein, Lynnfield Center, and Lorin Knight, Watertown, Mass., assignors, by mesne assignments, to Laboratory For Electronics, Inc., Boston, Mass, a corporation of Delaware
Filed June 14, 1957, Ser. No. 665,828
8 Claims. (Cl. 307—88)



8. A magnetic amplifier for simultaneously providing both direct and inverted output signals at separate output terminals in response to an input signal comprising:

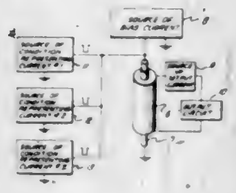
a bistable magnetic core having an input winding and first and second output windings, the first output winding being arranged to provide a signal in phase with the signal applied to the input winding, the second output winding being arranged to provide a signal in anti-phase with the signal applied to the input winding;

means for applying a train of alternately positive and negative pulses to the input winding;

means for applying a train of alternately negative and positive pulses to the second output winding;

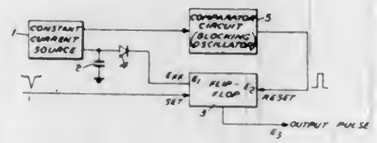
and means coupling one end of the first output winding to the out of phase end of the input winding, the coupling means comprising a diode arranged to conduct when the potential at the one end of the first output winding exceeds the potential at the out of phase end of the input winding.

3,048,707
SUPERCONDUCTIVE SWITCHING ELEMENTS
James J. Nyberg, Torrance, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 7, 1958, Ser. No. 707,605
7 Claims. (Cl. 307—88.5)



1. A circuit element including the combination of a control wire constructed of a first material which is superconductive for current flow therethrough up to a critical current value, a tubular conductor coaxially disposed with respect to the control wire and constructed of a second material which is capable of being switched between a superconductive and a resistive state in response to a magnetic field surrounding the control wire, said control wire and said tubular conductor exhibiting different values of critical magnetic field at which they may be switched between superconductive and normally resistive states at a given temperature, and means for varying the current flow through the control wire over a range of values less than said critical current value to vary the surrounding magnetic field whereby the tubular conductor is selectively switched between a superconductive state and a resistive state.

3,048,708
PULSE TIMING CONTROL CIRCUIT
Norman Raver, East Orange, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed June 25, 1958, Ser. No. 744,360
6 Claims. (Cl. 307—88.5)



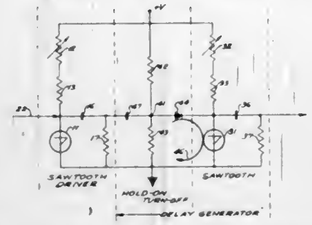
1. A pulse delay circuit comprising a constant current source, a condenser coupled to said source to be linearly charged thereby, circuit means for discharging said condenser including a bistable multivibrator and means connected to said multivibrator to form a discharge path therethrough in the first of its stable states, a source of triggering pulses, means coupling said source of triggering pulses to said bistable multivibrator circuit to flip it from its first to its second stable state to block said discharge path and permit the potential of said condenser to gradually rise, a comparator circuit coupled to said condenser and adapted to produce an output when the voltage on said condenser reaches a predetermined level, means coupling the output of said comparator circuit to said bistable circuit to restore said bistable circuit to its first stable state and discharge said condenser, and output circuit means coupled to said bistable multivibrator to derive therefrom an output pulse having a duration corresponding to the time said bistable circuit is in its second stable state.

3,048,709
TRANSISTOR-CORE PULSE GENERATOR
Kendall Preston, Jr., Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 25, 1958, Ser. No. 763,230
8 Claims. (Cl. 307—88.5)



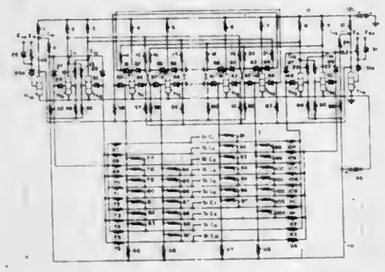
1. A two-phase pulse generator for driving close tolerance magnetic core circuitry having feedback paths interconnecting opposite phases comprising a magnetic core having set and reset conditions, a transistor multivibrator having oppositely wound windings on said core for applying set and reset pulses to said core, two transistor switches, each of said switches having an input terminal and an output terminal, two oppositely wound output windings on said core connected individually to said input terminals for operating one of said transistor switches when said core is set by said multivibrator and the other of said switches when said core is reset by said multivibrator, and means for applying an output potential at said output terminal of either operated one of said switches.

3,048,710
REVERSE-BREAKDOWN DIODE PULSE GENERATOR
William Shockley, 23466 Corta Via, Los Altos, Calif.
Filed Oct. 10, 1958, Ser. No. 766,470
5 Claims. (Cl. 307—88.5)



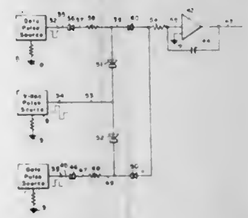
5. A pulse generator comprising a bistable semiconductive device having two stable states: a low conductance and a high conductance state, said device being switched to the high conductance state in response to a predetermined voltage and to the low conductance state when the current is reduced below a predetermined value, means serially connected to said bistable device for supplying a current which is less than the said predetermined value to said bistable device, said last named means and said device defining a series current path, a non-linear device connected to said series current path, the connection of the non-linear device to said series current path being external of the bistable semiconductive device, means for applying a voltage to said non-linear device which maintains the current through the bistable device above said predetermined value, and means for supplying a voltage pulse to said non-linear device to switch the bistable device from the high conductance to the low conductance state.

3,048,711
TRANSISTOR REVERSIBLE COUNTING CIRCUIT WITH RESISTIVE COUPLING BETWEEN STAGES
Viktor Hofmann, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed Nov. 28, 1958, Ser. No. 777,061
Claims priority, application Germany Dec. 5, 1957
3 Claims. (Cl. 307—88.5)



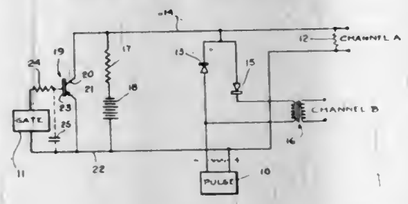
1. In a device for counting both forward and backward count input electrical signals, a plurality of counting stages each including a controllable semiconductor, a resistance network, with each of said semiconductors being connected for the purpose of permitting forward as well as backward counts through said resistance network to each of the other such semiconductors to form a feedback loop such that the arrangement has as many stable operative states as there are stages in said counting device, and at least one gate coupling circuit including at least a diode and a resistor member being operatively connected to at least one of said counting stages for receiving one of the forward and backward count input signals, with each of said semiconductors including a collector element and a base element, a plurality of diodes, with each collector element being connected to the base element of an adjacent semiconductor through a pair of said diodes connected in opposition, and with a circuit connection including a resistor being made between the collector element of each of the semiconductors and the base element of all other semiconductors except the two next adjacent semiconductors.

3,048,712
PULSE TIME DISCRIMINATOR APPARATUS
Benjamin C. Alm, Jr., Severna Park, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 28, 1959, Ser. No. 789,692
7 Claims. (Cl. 307—88.5)



1. In pulse time discriminator apparatus, in combination, output circuit means, first and second hyperconductive diodes, a source of positive and negative video pulses, operatively connected to said first and second hyperconductive diodes, circuit means operatively connected to said first hyperconductive diode for triggering said first hyperconductive diode into its hyperconductive region, while a negative gating pulse is applied to the first hyperconductive diode whereby a positive video pulse applied coincident with said negative gating pulse is passed through the first hyperconductive diode to said output circuit means, and other circuit means operatively connected to said second hyperconductive diode whereby a positive gating pulse triggers said second hyperconductive diode into its hyperconductive region and a negative video pulse coincident with said positive gating pulse is passed through the second hyperconductive diode to said output circuit means.

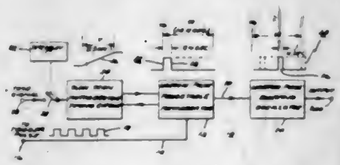
3,048,713
"AND" AMPLIFIER WITH COMPLEMENTARY OUTPUTS
Jacob Tellerman and Albert Zaretsky, Brooklyn, N.Y., assignors to American Bosch Arma Corporation, a corporation of New York
Filed Feb. 8, 1960, Ser. No. 7,382
7 Claims. (Cl. 307—88.5)



7. In a device of the character described, a source of pulses, a control signal source, a first and second output

channel, a transistor, said control signal source being connected across the base and emitter electrodes of said transistor, said first output channel being connected across the emitter and collector electrodes of said transistor, a voltage source connected across the emitter and collector of said transistor, a first diode connected between one side of said pulse source and the collector of said transistor, a second diode and the second output channel being connected in series between said collector and said one side of said pulse source, the other side of said pulse source being connected to the said emitter of said transistor.

3,048,714
VARIABLE PULSE WIDTH GENERATING SYSTEM
Ronald E. Poole, Caldwell Township, N.J., assignor to International Telephone and Telegraph Corporation
Filed June 24, 1960, Ser. No. 38,641
11 Claims. (Cl. 307—88.5)



3. A system for generating a train of pulses having successively greater widths comprising: a source of first pulses of uniform width and repetition frequency; means coupled to said first pulses source and triggered by said first pulses for generating second pulses of variable width, said second pulses generating means having a time constant circuit including impedance means for determining the width of said second pulses; and a variable impedance circuit for linearly varying the impedance thereof thereby to increase the width of said second pulses, said variable impedance circuit comprising fixed impedance means and variable impedance means coupled in parallel across said time constant circuit, the impedance of said variable impedance means being variable from a low extreme value in which said fixed impedance means is essentially short circuited to a high extreme value in which the impedance of said variable impedance circuit is essentially that of said fixed impedance means, and sawtooth generating means coupled to said variable impedance means for varying the impedance thereof from one extreme value to the other extreme value in sawtooth fashion over a predetermined period during which a plurality of said first pulses occur thereby linearly increasing the impedance of said time constant circuit and the width of said second pulses over said period.

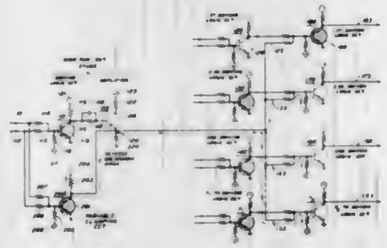
3,048,715
BISTABLE MULTIAR
Rodney L. Horton, Langhorne, Pa., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 27, 1960, Ser. No. 39,100
8 Claims. (Cl. 307—88.5)

1. A bistable multiar conditioned to one stable state by an input voltage which is more positive than a positive reference voltage and conditioned to a second stable state by an input voltage which is more negative than a negative reference voltage comprising first and second transistors of opposite conductivity types, the collector of said first transistor being coupled to the emitter of said second transistor and the collector of said second transistor being coupled to the emitter of said first transistor so that only one transistor can conduct at a time, said input voltage being connected to the bases of said first and said second transistors, a source of positive reference voltage, a source of negative reference voltage, said source of positive reference voltage being coupled to the base of said first transistor simultaneously as said source of negative reference voltage is coupled to the base of said second transistor, said first transistor being biased by said positive reference voltage so that said first transistor is



turned off when said input voltage is more positive than said positive reference voltage, and said second transistor being biased by said negative reference voltage so that said second transistor is turned off when said input voltage is more negative than said negative reference voltage.

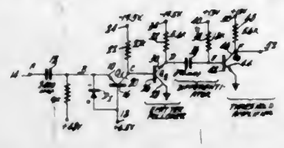
3,048,716
LOGIC SYSTEM INCLUDING HIGH FAN-OUT STAGE HAVING VARIABLE CLAMPING MEANS
Eldon L. Seley, Berkeley Heights, and Richard C. Stone, Jr., Chatham Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 31, 1960, Ser. No. 53,304
3 Claims. (Cl. 307—88.5)



2. In combination in a transistor resistor logic system, a high fan-out amplifier having an output terminal, driving logic circuit means for causing said amplifier to assume a nonconducting condition whenever said logic circuit means is in a conducting condition and for causing said amplifier to assume a conducting condition whenever said logic circuit means is in a nonconducting condition, first means for clamping said output terminal only during the nonconducting condition of said amplifier, and second means for clamping said output terminal only during the conducting condition of said amplifier.

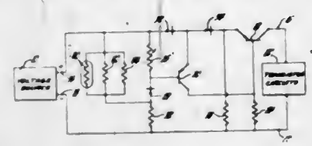
3,048,717
PEAK TIME DETECTING CIRCUIT
Robert H. Jenkins, Camden, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 16, 1960, Ser. No. 76,249
11 Claims. (Cl. 307—88.5)

11. A peak time detecting circuit comprising a first transistor having emitter, base and collector electrodes biased for common base operation, means including a coupling capacitor for applying an input wave to said emitter, whereby said coupling capacitor and the input impedance of said first transistor constitutes a differentiating circuit so that the wave applied to the emitter is a differentiated version of the input wave, a second transistor having emitter, base and collector electrodes biased for emitter follower operation, a connection from the collector of said first transistor and the base of said second transistor, a connection from the collector electrode of said second transistor to a point of reference potential, whereby the base-collector junction of said second transistor prevents said first transistor from saturating when



the input signal voltage increases in the forward direction, a diode connected between the emitter and base of the first transistor to limit emitter voltage excursions in the reverse direction, a differentiator circuit coupled to the emitter of said second transistor, and a threshold amplifier coupled to the output of said differentiator circuit, whereby said threshold amplifier provides an output pulse having a leading edge coinciding in time with the peak of said input wave.

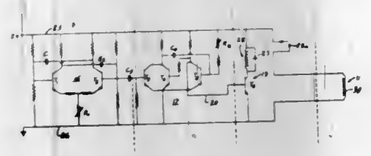
3,048,718
TRANSIENT RESPONSIVE PROTECTION CIRCUIT
Francis J. Starzec, Fullerton, Calif., and Joseph E. Murphy, Cudahy, Wis., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 13, 1959, Ser. No. 786,625
6 Claims. (Cl. 307—93)



1. A transient responsive circuit having a pair of input terminals for connection with a voltage source and a pair of output terminals for connection with a load, a controlled transistor having its output circuit connected between one input terminal and one output terminal and its input circuit connected across the input terminals so that the controlled transistor is normally forwardly biased when a voltage is applied across the input terminals, a semiconductor diode connected in said output circuit between said one input terminal and the controlled transistor, a voltage dividing resistor connected in series with said diode across the source a voltage reference device and a resistor connected in series therewith across the input terminals, a control transistor having an output circuit connected across the input circuit of the controlled transistor and an input circuit connected across said resistor and said diode to normally reversely bias the control transistor, said voltage reference device being adapted to become conductive at a predetermined voltage whereby the control transistor is forwardly biased and the controlled transistor is reversely biased to disconnect the voltage source from the load.

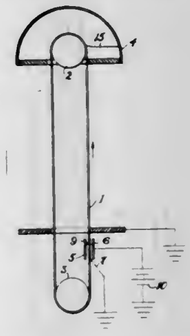
3,048,719
ELECTRICAL DUTY CYCLE CONTROL
John D. Grigsby, Willoughby, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 3, 1959, Ser. No. 857,130
3 Claims. (Cl. 307—132)

3. An artificial heart control device comprising electrically energizable heart driving means for actuating an artificial heart, power source means for supplying electric power to said heart driving means, power switch means connected between said power source means and said heart driving means and shiftable between a conducting and a non-conducting condition for controlling supply of power from said power source means to said heart driving means, astable multivibrator means for producing a periodic output signal and having means for adjusting the repetition rate of the periodic output signal, and monostable multivibrator means connected between said



astable multivibrator means and said power switch means and responsive to said periodic output signal in each cycle thereof to transmit an output pulse to said power switch means, said monostable multivibrator means having means for adjusting the duration of said output pulses, and said power switch means being responsive to said output pulses to shift from one of its conditions to the other of its conditions and being operative to maintain said other condition for a time proportional to the duration of said output pulses.

3,048,720
CHARGING SYSTEM FOR ELECTROSTATIC GENERATORS
Robert W. Cloud, Lexington, Mass., assignor to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts
Filed Sept. 15, 1958, Ser. No. 761,255
3 Claims. (Cl. 310—5)



1. An electrostatic generator comprising in combination a hollow electrode and an insulating traveling belt having conductive zones of which the dimensions are short in the direction of travel of said belt but extending substantially the width of the belt transverse thereto insulated from one another along the length of said belt, charging means for producing a net charge on said conductive zones at the grounded end of said electrostatic generator, and means within said hollow electrode for transferring said charges from each conductive zone to said hollow electrode when such conductive zone is electrically completely enclosed by said hollow electrode, said charging means comprising a pair of inducing plates flanking said belt and a contact maintained at a fixed potential with respect to said inducing plates and adapted to make temporary electrical contact with said conducting zones at their exposed positions during travel of said conducting zones between said inducing plates.

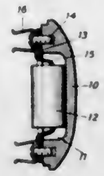
3,048,721
HOUSING FOR APPLIANCES
John F. Wahl, Sterling, Ill., assignor to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois
Filed May 23, 1958, Ser. No. 737,383
3 Claims. (Cl. 310—29)



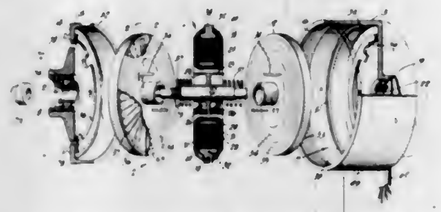
1. An electric shaver of the class described comprising in combination a housing composed of a first molded section and a second molded section, said molded sections formed from nylon and adapted to be connected together to provide an inner space, at least four nylon bosses projecting into said inner space in spaced relation to each other and integrally molded with said first section, three of said bosses disposed adjacent one end of said first section and a fourth boss disposed adjacent the other end, each boss circular in cross section and long in comparison to its diameter, and an electric shaver motor, said motor including a core and an armature assembly, said core having a plurality of boss receiving openings extending therethrough, said boss receiving openings in said core spaced to receive said four bosses formed with said first section, said core mounted in said inner space of said housing with said bosses extending through said boss receiving openings to hold said core in a predetermined position in said housing, the ends of at least the three bosses adjacent one end of said first section provided with an axial bore extending from their free ends, said axial bores adapted to receive screws, said armature assembly having screw receiving openings formed therein which are spaced to be aligned with said bores in at least some of said bosses in said first section, screws extending through said crew receiving openings in said armature assembly and in threaded engagement with the bores in said bosses to simultaneously and removably secure said armature assembly to said core and said core in substantially fixed position in said housing, at least one boss formed with said second section and projecting into said inner space with its free end abutting the free end of one of said three bosses adjacent one end of said first section, a screw receiving axially extending opening extending through said one boss in said second section and communicating with the outer surface thereof, said opening substantially coaxial with said bore in the free end of one of said three bosses whereby the housing sections can be connected together and the core locked to the housing by a screw extending through said abutting bosses in both sections, the openings extending through the core sized to permit a close fit with the bosses whereby screws inserted in the bores of said bosses cause them to expand into gripping engagement with the core, and the restraint on the expansion of the bosses imposed by engagement of the bosses with the inner surfaces of the openings in the core cause the bosses to grip the screws to prevent same from loosening due to motor vibration.

3,048,722
INTERFERENCE SUPPRESSOR FOR ELECTRICAL APPARATUS
Raoul Marie Amédée Baron, Paris, France, assignor to Outillage Electrique Silex, Bagnolet, France
Filed Aug. 3, 1959, Ser. No. 831,360
Claims priority, application France Aug. 29, 1958
8 Claims. (Cl. 310—72)

1. Electrical apparatus comprising, in combination, a housing having an aperture in the wall thereof, an electric motor disposed in said housing, a pair of brush-holders disposed in said housing in predetermined relationship to said motor and said aperture, a cover plate detachably carried on said housing to close said aperture, an interference suppressor having two terminals and being supported on said cover plate, a pair of contact members electrically connected to said terminals of said suppressor, respectively, and supported on said cover plate in positions enabling said contact members to engage conductively said brush-holders, respectively, when said cover plate is attached to said housing so as to close said aperture.



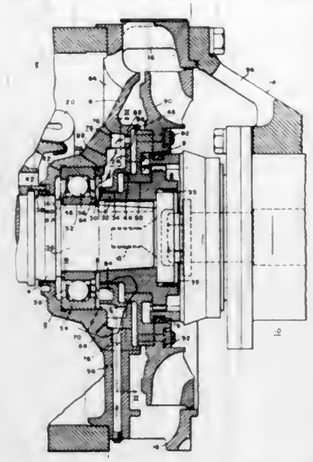
3,048,723
ELECTRIC BRAKED MOTOR
Jack H. Watson, Los Angeles, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed Dec. 29, 1958, Ser. No. 783,462
9 Claims. (Cl. 310—77)



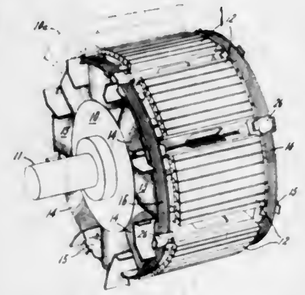
1. An electric motor comprising: a parallel faced non-rotatable stator having a plurality of radially wound magnetic force producing coils, each of said coils having first parts directed radially along opposite faces of said stator, second parts directed across the periphery of said stator, and third parts constituting axially directed loops near the center of the stator; a pair of rotatable rotors respectively coaxially adjacent the opposite faces of said stator; means on said rotors for developing rotation thereof; a rotation transmitting means coupled coaxially to said dual rotors to transmit externally of said motor the rotation of the said rotors; and a source of electrical energy connected to said coils to develop a magnetic coupling with said rotor whereby said rotor is caused to rotate.

3,048,724
BEARING ASSEMBLY FOR DYNAMOELECTRIC MACHINES
Erich Otto Mueller, Irwin, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 31, 1958, Ser. No. 752,341
7 Claims. (Cl. 310—90)

1. A bearing assembly including a shaft and an end bracket, said shaft passing through the end bracket, a coupling-half secured to said shaft, a bearing cap secured to the outer portion of the end bracket, a bearing housing formed by the end bracket, coupling-half and bearing cap, means for effectively sealing said bearing housing against lubricant leakage, a bearing member within said housing rotatably supporting said shaft, said bearing member having an open face, a lubricant inlet opening in said housing, means adjacent said open face for directing lubricant from said inlet opening towards said face and between said face and said housing, said housing having an overflow sump displaced radially outward from said coupling member between said face and said bearing cap, overflow ports connecting said open bearing face to said overflow sump, said means adjacent said face effective to prevent lubricant from moving directly from said inlet opening to said sump.



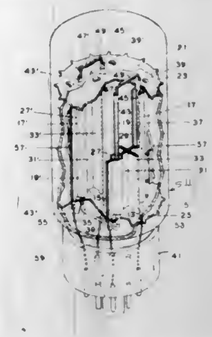
3,048,725
ROTOR CONSTRUCTION
Adolph J. Wesolowski, Erie, Pa., assignor to General Electric Company, a corporation of New York
Filed Apr. 29, 1958, Ser. No. 731,655
7 Claims. (Cl. 310—271)



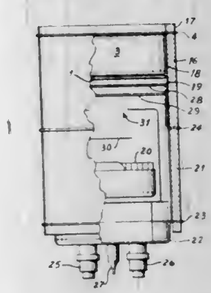
4. In a rotating member of a dynamoelectric machine having salient poles extending radially from the axis of rotation of said member and having electrical coils about the poles, the end turns of the windings extending beyond at least one end of the poles; a reinforcing band about the end turns coaxial with the axis of the rotating member to retain the end turns upon rotation of the member at high speeds of rotation and high operating temperatures of the machine comprising an annular metallic strip overlying the end turns, there being insulating material between said strip and the end turns, a plurality of turns of precipitation hardened steel wire tensioned about said strip and brazed together, the brazing material having a flow point less than the solution temperature of the wire.

3,048,726
ELECTRON DISCHARGE RECTIFIER
Walter T. Millis, Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 14, 1959, Ser. No. 839,794
11 Claims. (Cl. 313—3)

1. An electron discharge device comprising a cathode and an anode, each comprising a pair of hollow tubular members, the cathode members having portions of high-resistivity material and coaxially disposed within respective anode members, and relatively low-resistance means interconnecting the cathode members for conducting electric current therethrough.

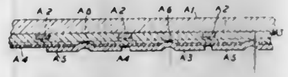


3,048,727
ANODE STRUCTURE
Hermann E. Krefft, East Orange, N.J., assignor to Kuthe Laboratories, Incorporated
Filed Sept. 17, 1959, Ser. No. 840,772
9 Claims. (Cl. 313—39)



1. An electron discharge device comprising an envelope, a cathode, and an anode plate, means for mounting said cathode and said anode plate in spaced relation, and heat conducting means in contact with said anode plate for conducting heat away from said plate, said heat conducting means comprising a plurality of symmetrically spaced blocks on the opposite side of said plate from said cathode for preventing deformation due to thermal distortion of said heat conducting means.

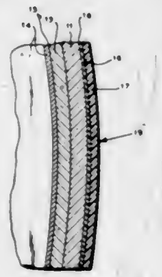
3,048,728
TELEVISION AND LIKE CAMERA TUBES
Raymond Louis Beurle, Great Baddow, England, assignor to English Electric Valve Company Limited, London, England, a company of Great Britain
Filed Aug. 31, 1959, Ser. No. 837,190
Claims priority, application Great Britain Sept. 9, 1958
9 Claims. (Cl. 313—65)



1. A television camera tube comprising a transparent conductive electrode; a photoconductive layer of low specific resistivity connected to said conductive electrode at a plurality of space areas and positioned and adapted to receive, through said conductive electrode, an optical image to be televised; a plurality of photoemissive elements spaced from said photoconductive layer on the side

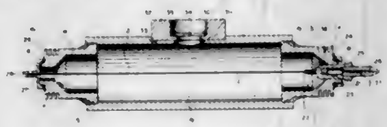
thereof remote from said conductive electrode and positioned and arranged to be substantially uniformly illuminated, said elements being connected to said photoconductive layer at areas none of which is opposite any one of said first-mentioned areas, all of said areas being so positioned that the current paths from one side of the photoconductive layer to the other extend mainly in the plane of the layer and are of substantial length; a control electrode spaced from said elements on the side thereof remote from the photoconductive layer; means including a connection to said control electrode for applying a potential thereto; a charge storage target spaced from said control electrode on the side thereof remote from said elements and positioned and arranged to receive electrons from said elements thereby to produce an electrical charge image corresponding to the original optical image and an electron gun adapted to scan said storage target to develop picture signals.

3,048,729
CATHODE RAY SCREEN STRUCTURE
William R. Perry, 325 Warminster St., Hatboro, Pa.
Filed Jan. 19, 1961, Ser. No. 83,851
6 Claims. (Cl. 313—92)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A screen for a cathode ray tube, comprising: a non-light diffusing layer of fluorescent material having a specularly reflecting surface on one side thereof, a polarizing filter, a quarter wavelength filter, said quarter wavelength filter being interposed between said polarizing filter and the other side of said layer.

3,048,730
COUNTER TUBE
Talbot A. Chubb, 319 Onondaga Drive, Forest Heights, Md.
Filed Dec. 15, 1958, Ser. No. 780,641
5 Claims. (Cl. 313—93)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A photon counter tube comprising in combination a metal envelope with a window therein capable of transmitting radiation in a first selected Angstrom range, said envelope enclosing therein a gaseous filling consisting of about 2 mm. Hg of xylene, which is responsive to radiation in a second selected Angstrom range, a portion of said second selected Angstrom range overlapping a portion of said first selected Angstrom range, 10 mm. Hg of hydrogen and 400 mm. Hg of an inert gas, plus means for producing a unidirectional electric field across said gaseous filling.

3,048,731
ELECTROLUMINESCENT CELL AND METHOD
Willi Lehmann, East Orange, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 22, 1956, Ser. No. 573,063
9 Claims. (Cl. 313—108)



1. The method of rendering responsive to an applied alternating electric field a finely-divided luminescent material which is normally not electroluminescent responsive to an applied alternating electric field and which has a relaxation time which is greater than one-half the period for one cycle of said alternating field, comprising physically admixing in contacting relationship with said luminescent material an additive material of at least one of the group consisting of finely-divided metallic material and finely-divided semi-conductive material, said finely-divided additive material having sharp edges and a relaxation time which is no greater than one-half the period for one cycle of said alternating field.

3,048,732
ELECTROLUMINESCENT CELL
Willi Lehmann and Claus H. Haake, Livingston, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 24, 1958, Ser. No. 711,095
4 Claims. (Cl. 313—108)

1. An electrical-breakdown-protected electroluminescent cell adapted to be energized to light emission by an alternating electric potential and comprising, a first electrode layer, a second electrode layer spaced slightly apart from said first electrode layer, said electrode layers adapted to have an alternating potential applied thereto, at least one layer comprising electroluminescent phosphor included between said electrode layers, and an additional layer comprising poor insulating material also included between said electrode layers, at least one of said electrode layers being light transmitting and in the case said layer of poor insulating material is opaque, the electrode layer positioned adjacent said layer comprising electroluminescent phosphor being light transmitting, the respective properties of said poor-insulating material layer and said layer comprising electroluminescent phosphor being selected according to the following formula:

$$\rho = 1.\ 8 \cdot 10^{10} \cdot \frac{S_2\sqrt{2\epsilon}}{f \cdot K \cdot S_1}$$

where:

ρ=resistivity in ohm-cm. of said poor-insulating-material layer,
S_1=thickness in cm. of said poor-insulating-material layer, where S_1 is at least twice S_2,
S_2=total thickness in cm. of said layer comprising electroluminescent phosphor,

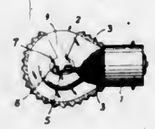
K=dielectric constant of said layer comprising electroluminescent phosphor,
f=frequency in c.p.s. of alternating potential adapted to be applied to said electrode layers,
ϵ=from about 0.001 to about 0.1.

3,048,733
ELECTROLUMINESCENT DEVICE
Robert J. Blazek, Mendham, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 9, 1960, Ser. No. 55,035
13 Claims. (Cl. 313—108)



1. An electroluminescent device comprising: spaced electrodes; electrically insulating and non-electroluminescent dielectric material and electroluminescent phosphor included between said spaced electrodes; and said non-electroluminescent dielectric material comprising, a light-transmitting organic dielectric medium having a boiling point of at least 200° C. at atmospheric pressure and which dielectric medium is a solvent for at least one material of the group consisting of aromatic nitro-substituted benzene compound and aromatic nitrile-substituted benzene compound, additive dielectric compound having a different composition from said organic dielectric medium and dissolved in said organic dielectric medium in amount of from 5% to 35% by weight of said organic dielectric medium, said additive compound having a boiling point of at least 200° C. at atmospheric pressure and selected from at least one material of the group consisting of light-transmitting aromatic nitro-substituted benzene compound and light-transmitting aromatic nitrile-substituted benzene compound.

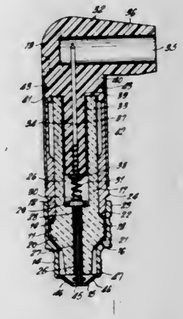
3,048,734
NON-GLARING HEAD LAMPS
Hermann Linnes, Walter-Flex-Strasse 1, Hannover, Germany
Filed Apr. 29, 1960, Ser. No. 25,717
2 Claims. (Cl. 313—116)



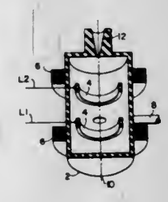
1. A non-glaring head lamp comprising a filament, a clear glass bulb having a smooth interior enclosing said filament, said bulb being coated with a continuous layer of transparent light reflecting particles of pyramidal configuration having their bases overlying the external surface of the bulb and their apices pointing outwardly, except for an area above the filament comprising a diamond-shaped segment having its lower points terminating at each side of the bulb approximately level with the horizontal plane through said filament.

3,048,735
SPARK PLUG
Maxwell Ingram, Dumont, N.J., assignor to Leonard Spark Plug Co., Inc., a corporation of New Jersey
Filed Jan. 28, 1960, Ser. No. 5,243
2 Claims. (Cl. 313—143)

1. In a spark plug having a body shell, an insulator disposed within said shell, said insulator being provided with an axial bore having an enlarged portion, an intermediate body shield carried by said shell and in clamping engagement with said insulator, a center electrode disposed within said insulator having a portion extending into a portion of the enlarged portion of the bore thereof, a shielding cover for said spark plug adapted to be disengageably mounted on said intermediate body shield, said cover assembly comprising an elbow shaped body of insulating material having a horizontal portion adapted to receive an ignition cable and a vertical arm, said vertical arm being provided with a transition portion and an elongated central boss of reduced diameter depending therefrom adapted to be received in the enlarged portion of said insulated bore when the cover is in mounted position, a contact screw extending through said vertical arm for electrical contacting engagement with said center electrode, said screw having a portion extending into the bore of the horizontal arm for electrical contact with an ignition cable when disposed thereon, a cylindrical metal skirt secured to said transition portion within which said intermediate shield is slidably received when said cover is disposed thereon.



3,048,736
ARC CHAMBER
Werner S. Emmerich, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 4, 1960, Ser. No. 19,528
10 Claims. (Cl. 313—161)



1. A chamber for increasing the enthalpy of a gas by electrical energy comprising, a plurality of ring electrodes coaxially disposed within said chamber parallel to each other and spaced apart to form a spark gap; means for connecting an ionizing potential across said electrodes of sufficient magnitude to sustain an arc thereacross; means for admitting gas to said chamber; magnetic means for subjecting said arc to a magnetic field transverse to said arc; and discharge means coaxially disposed to said ring electrodes for removing from said chamber that portion of the gas axially located with respect to said ring electrodes.

3,048,737

GASEOUS DISCHARGE DEVICE AND METHOD

Henry W. Rimbach, Cedar Grove, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 23, 1960, Ser. No. 10,185
9 Claims. (Cl. 313—174)



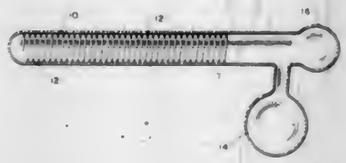
1. A low-pressure discharge device comprising, a sealed elongated and radiation-transmitting envelope enclosing electrodes operatively disposed proximate the ends thereof and containing a predetermined pressure of inert ionizable starting gas and a small charge of mercury, selected material having a predetermined surface area and an affinity for mercury positioned within said envelope and proximate at least one end thereof, and said selected material spaced from the electrodes of said device.

3,048,738

MICROWAVE EXCITED SPECTRUM TUBE WITH INTERNAL HEATER

Edward Paul, Jr., Corona, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 22, 1960, Ser. No. 16,898
10 Claims. (Cl. 313—202)
(Granted under Title 35, U.S. Code (1952), sec. 266)



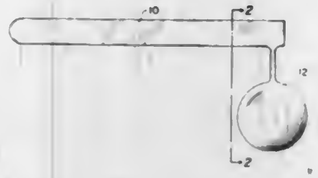
1. A spectrum tube for microwave energy excitation comprising a section of transparent tubing made of glass-like material, a coil of heating element wire completely within said transparent tube operable to be heated to at least 1200° C. by induced eddy currents when in a suitable field of microwave energy radiation, a source material to be vaporized by said heating element and microwave excited contained within said tube, the interior of said tube being completely sealed off from the outside atmosphere and filled with an inert carrier gas, whereby when the spectrum tube is within a suitable field of microwave energy radiation said carrier gas first becomes excited and as the wire and tube become heated the source material will vaporize and become excited to show its spectrum.

3,048,739

ELECTRONIC DISCHARGE TUBE

Edward Paul, Jr., Corona, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 27, 1960, Ser. No. 65,551
12 Claims. (Cl. 313—220)
(Granted under Title 35, U.S. Code (1952), sec. 266)



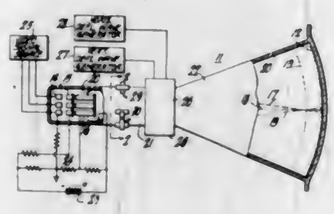
1. An electric discharge light source comprising a hollow transparent glass body having a very narrow interior chamber of very thin slit-like cross-section, the configuration of said very narrow chamber being substantially like that of said glass body for providing a thin line of light at one narrow end thereof, said chamber containing a gas to be excited by electrodeless exterior excitation, means for sealing said gas within said glass body and means completely outside said glass body for exciting the gas within said narrow chamber, excitation of high energy states from 20 to 40 fold improvement in intensity being available for spectrometry and the emission of a rich spectrum being provided at the narrow end of said chamber for end-on viewing.

3,048,740

ELECTRON BEAM CONVERGENCE APPARATUS

Morris D. Nelson, New York, N.Y., assignor to Radio Corporation of America, a corporation of Delaware

Filed Aug. 30, 1954, Ser. No. 452,954
26 Claims. (Cl. 315—22)



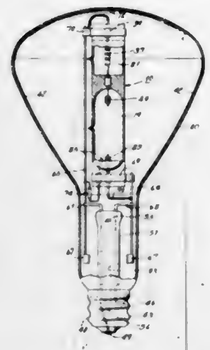
1. In a cathode ray tube image-reproducing system wherein a plurality of electron beams, which traverse pre-deflection paths that are spaced respectively about the longitudinal axis of the tube, are angularly deflected both horizontally and vertically by horizontal and vertical beam deflection apparatus to scan a raster at a target electrode structure, the combination including: a plurality of beam convergence electromagnets respectively mounted adjacent to said pre-deflection beam paths and having respective windings individually energizable to produce respective beam convergence fields transverse to said beam paths; means coupled to said beam deflection apparatus for developing a substantially parabolic voltage wave; and wave conversion means including said beam convergence electromagnet windings and responsive to said parabolic voltage wave for causing substantially non-linear current waves to traverse said windings.

3,048,741

ARC LAMP WITH SELF-BALLASTED ARC TUBE AND IMPROVED LUMEN MAINTENANCE

Wolfgang Emery Thouret, North Bergen, N.J., assignor to Duro-Test Corporation, North Bergen, N.J., a corporation of New York

Filed Aug. 24, 1960, Ser. No. 51,597
10 Claims. (Cl. 315—49)



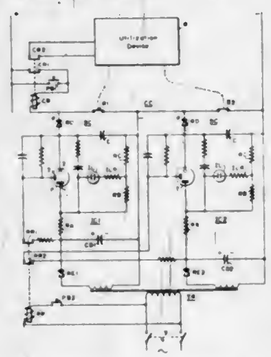
1. In a self-ballasted arc lamp the combination comprising a first chamber, said first chamber having mounted therein arc electrodes for producing a light of relatively high intensity, a second chamber, said second chamber having mounted therein an incandescent filament for operation as a ballast element for said arc electrodes, said first and second chambers being sealed-off from each other to prevent interaction between the materials forming the elements in the respective chambers and a quantity of a halogen element within said second chamber to prevent blackening of its inner wall by the incandescent filament material thereby producing a lamp having improved lumen maintenance.

3,048,742

AUTOMATIC FAULT FINDER SYSTEM

Hugh S. Fegely and Robert D. Till, Buffalo, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 11, 1959, Ser. No. 859,025
9 Claims. (Cl. 315—205)



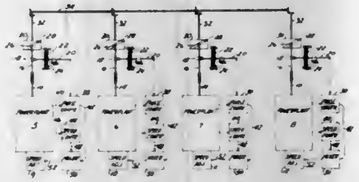
1. A monitoring system for a switch comprising, in combination; a pair of terminals adapted to be connected across said switch; voltage means connected to said terminal for causing direct current flow through said switch when connected to said terminals; capacitive means connected across said terminals; indicating means responsive to said direct current being less than a predetermined magnitude operably connected to said capacitive means and said terminals for indicating when an open circuit occurs across said terminals; said capacitive means adapted to charge with a charging current exceeding said predetermined magnitude for a selected time delay after an open circuit occurs across said terminals.

3,048,743

MULTI-POWER PLANT SYNCHRONIZING SYSTEM

Charles W. Chillson, Packanack Lake, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Mar. 6, 1957, Ser. No. 644,315
10 Claims. (Cl. 317—6)



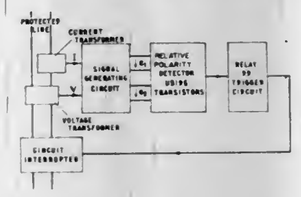
1. A speed equalizing system for a plurality of substantially similar, independently operable power plants, each having a speed regulating mechanism, comprising a differential for each power plant, each differential having a first input element driven by its associated power plant, each differential having another input element and an output element, means coupling said other input elements together for joint rotation, each first input element being variable in phase relation to the others, elastic means operatively connected with each differential and exerting a control effect upon differential movement of the input and output elements of the associated differential for transmission through the coupling means to the other differentials, and means connecting the output element of each differential to the speed regulating mechanism of the corresponding power plant.

3,048,744

ELECTRICAL PROTECTIVE RELAY SYSTEMS

Albert Russell van Cortlandt Warrington, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company

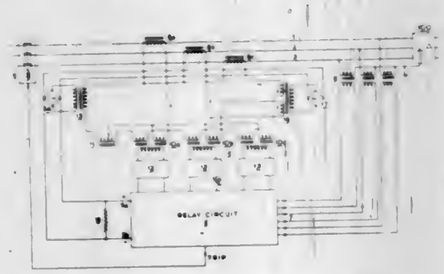
Filed July 11, 1957, Ser. No. 671,193
Claims priority, application Great Britain Aug. 25, 1953
4 Claims. (Cl. 317—27)



1. An electrical protective relay system comprising, in combination, a protected circuit, means for deriving two electrical signals from said circuit which are respectively proportional to a current condition and a voltage condition of said circuit, a signal generating circuit responsive to these electrical signals and adapted to generate two control signals having polarities which are different functions of the condition of said circuit and at least one of which is a function of both said current condition and said voltage condition, a relative polarity detector responsive to both said generated signals and comprising two transistors having series connected collector-emitter circuits one of which has its base potential controlled in accordance with the polarity of one generated signal and the other of which has its base potential controlled in accordance with the polarity of the other generated sig-

nal, relay means responsive to a conductive condition of said relative polarity detector corresponding to a particular combination of signal polarities as between said generated signals, circuit interrupter means connected in said protected circuit and operative in response to the operation of said relay means to interrupt the protected circuit and so perform a protection operation when said combination of signal polarities occurs, and time delay means connected between the relative polarity detector and the relay means and operative to ensure that the system will only operate to open the circuit interrupter means provided the said combination of polarities as between the generated signals is sustained for a period determined by the character of said time delay means.

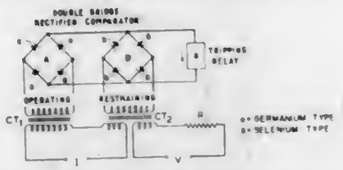
3,048,745
POWER ENERGIZATION SUPPLY MEANS FOR ELECTRICAL PROTECTIVE RELAY SYSTEMS
Albert Russell van Cortlandt Warrington, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company
Filed Oct. 16, 1958, Ser. No. 767,608
Claims priority, application Great Britain Oct. 24, 1957
9 Claims. (Cl. 317—27)



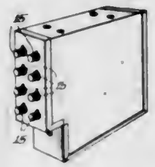
1. In combination, in an electrical protective relay system for a three-phase power circuit having a local ground connection, a relay of the kind having an energizing power supply independent of a relay operating signal, a circuit network connected to be eenrgized by said power circuit and operative to derive and supply to the relay said relay operating signal, and apparatus for relay energization comprising first circuit means connected to respond to the currents in two of the phases of the power circuit and produce an alternating signal proportional to the vector difference between these two currents, second circuit means connected to respond to the currents in all three of the phases of the power circuit and produce an alternating signal proportional to the vector sum of these three currents, rectifier means responsive to said alternating signals for rectifying each of these signals independently, and further circuit means connected to combine these rectified signals to produce an energizing signal for the relay.

3,048,746
ELECTRICAL PROTECTIVE RELAYS USING DOUBLE RECTIFIED BRIDGE COMPARATORS
Eugeniusz Antoszewski and Eric Paddison, Stafford, England, assignors to The English Electric Company Limited, London, England, a British company
Filed Mar. 2, 1959, Ser. No. 796,695
Claims priority, application Great Britain Mar. 4, 1958
14 Claims. (Cl. 317—32)

1. An electrical protective relay comprising a double bridge rectifier comparator including a first full-wave rectifier bridge including arms containing half-wave rectifier elements, a second full-wave rectifier bridge including arms containing half-wave rectifier elements connected to said first bridge so that the output from the comparator is the difference of the outputs from the bridges, a polarized auxiliary tripping relay connected to respond to a condition wherein the output from said first bridge exceeds the output from said second bridge, means for supplying said first bridge with an operating input dependent on a variable electrical quantity of a circuit to be protected by said relay and means for supplying said second bridge with an electrical reference quantity, the arms of said first bridge having a forward resistance which is lower than the forward resistance of the arms of said second bridge.

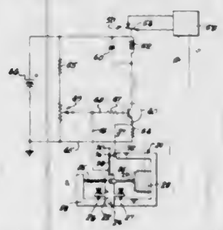


3,048,747
HOUSING FOR ELECTRONIC EQUIPMENT
Dominic Errichiello, Melrose Park, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 4, 1959, Ser. No. 797,265
9 Claims. (Cl. 317—101)



1. A housing for electronic equipment including in combination, a base having a bottom portion, a back portion and a front portion, said bottom and back portions having grooved side edges and said back portion having a grooved top edge, a removable envelope having a top panel with an opening for access therein, two spaced side panels and a front control panel, said side panels and said top panel of said envelope having edges shaped to provide a sliding fit in the grooved edges of said base, a removable top cover, and first and second fastening means, said first fastening means providing secure engagement between said front control panel of said envelope and said front portion of said base for removably holding said envelope in said grooved edges of said base to thereby hold said housing in assembled relation, said second fastening means providing secure engagement between said top panel and said top cover.

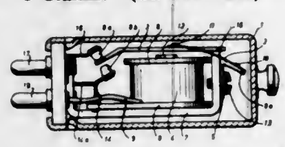
3,048,748
PROXIMITY SWITCH INTERPRETER
Stuart Carey, Garden Grove, Calif., assignor to Giannini Controls Corporation, Pasadena, Calif., a corporation of New York
Filed Nov. 12, 1959, Ser. No. 852,433
3 Claims. (Cl. 317—157)



1. Output mechanism for a computing system that comprises a member that is movable through a critical

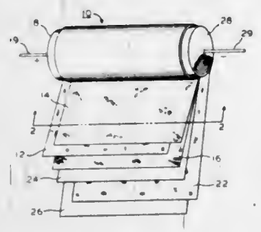
position under input variable control, said member being subject to superposed vibratory movement; said output mechanism comprising electrical switch means actuable in response to movement of the member past said critical position, circuit means for producing a current of predetermined limited magnitude in response to switch actuation, filter means for averaging variations of said current that result from said vibratory movement of the member, output switching means actuable in response to the averaged current exceeding a predetermined magnitude, and means for adjustably controlling the limited magnitude of the first said current to cause actuation of the output switching means when the member position, averaged over its vibratory movement, substantially corresponds to said critical position.

3,048,749
ELECTRIC RELAY
Gérard Noel Koehler, Saint-Cloud, France, assignor to Compagnie des Machines Bull (Societe Anonyme), Paris, France
Filed Mar. 2, 1959, Ser. No. 796,693
Claims priority, application France Mar. 6, 1958
5 Claims. (Cl. 317—165)



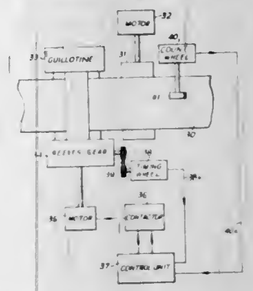
1. In an electro-mechanical relay having an energization winding, a magnetic yoke, and an armature, an extremity of which lies by a fulcrum line on a part of said yoke extending laterally to said winding, the improvement consisting of a bracket laterally fixed on said part and presenting a surface oblique with respect to said armature, and a single leaf-spring which is initially plane, for mechanically linking said armature and said surface, said armature and spring having reciprocal forms such that the spring is curved without permanent deformation after an extremity thereof is secured to said bracket, in such a manner that the curved profile of said spring substantially lies in the prolongation of said fulcrum line.

3,048,750
ELECTROSTATIC CAPACITOR
Paul H. Netherwood and Livingston L. Rice, Williamstown, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Feb. 13, 1959, Ser. No. 793,185
4 Claims. (Cl. 317—258)



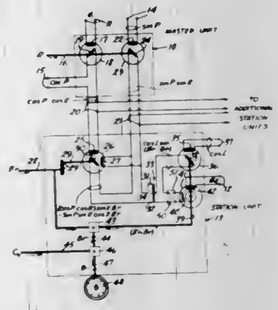
1. A convolutely wound capacitance section comprising oppositely polarized anode and cathode electrodes separated throughout said section by a composite dielectric, said composite dielectric having one outer layer of an insulator material having a volume resistivity at least five times the volume resistivity of the insulator material of the other outer layer, said capacitance section so constructed and arranged that the opposed surfaces of said anode are contacted by said other outer layer, and the opposed surfaces of said cathode are contacted by said outer layer.

3,048,751
ARRANGEMENTS FOR CONTROLLING THE LENGTHS INTO WHICH FED MATERIAL IS CUT
Ronald William Taylor, Stevenage, England, assignor to A. C. Cossor Limited, London, England, a British company
Filed Dec. 24, 1958, Ser. No. 782,847
Claims priority, application Great Britain Jan. 1, 1958
12 Claims. (Cl. 318—11)



1. Apparatus for maintaining the movement of a first member in a predetermined relation to the movement of a second member, said apparatus comprising means for generating two trains of pulses including means for determining the durations of the pulses of said two trains in proportion to the rates of movement of said two members respectively, the pulses of said two trains having one of their edges substantially coincident, control pulse generating means controlled by said two trains to generate control pulses in response to changes in relative duration of the pulses in said two trains of pulses, speed control means controlling the relative speed between said first and second member, and means controlling the operation of said speed control means by said control pulses to vary the said relative speed in a sense tending to maintain said predetermined relation.

3,048,752
INSTRUMENT STABILIZING SYSTEM
Charles D. Bock, New York, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Oct. 15, 1949, Ser. No. 121,560
20 Claims. (Cl. 318—19)



1. In a stabilizing system for gun fire control instruments mounted on an unstable support having a stable element providing relative angles of pitch and roll of said support and level and cross-level angles, the combination of electrical means having an energized stator winding and a rotor winding rotated in accordance with one of said angles, a second electrical means having a
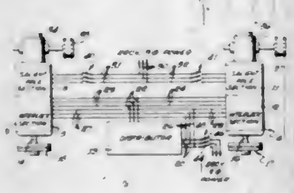
stator winding energized in accordance with another of said angles and a rotor winding driven in accordance with said one angle, a third electrical means having a pair of stator windings severally energized by the output voltages of said first and second electrical means and a rotor winding, a member driven in accordance with the target position, operative connections between said member and the rotor winding of said third electrical means for rotating the same, a fourth electrical means having a stator winding energized in accordance with a third of said angles and a rotor winding, means for combining at least part of the voltage induced in the rotor winding of said third electrical means with the voltage induced in the rotor winding of said fourth electrical means, motive means energized by the said combined voltages, and operative connections between the motive means and the rotor winding of said fourth electrical means for driving the same toward zero combined voltage position to provide a stabilizing angle for at least one of said gun fire control instruments.

3,048,753
SERVO SYSTEM
Ovide G. Morin, Nashua, N.H., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed May 16, 1960, Ser. No. 29,316
9 Claims. (Cl. 318—28)



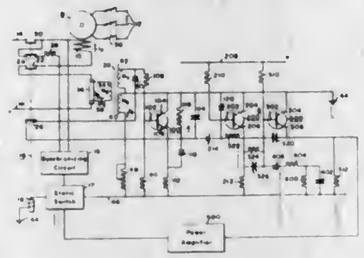
9. A servo system comprising: a servo motor having a first input and a second input; means for applying a first signal having a first frequency of oscillation to said first input; means for supplying a second signal having a second frequency of oscillation to said second input; means responsive to an external condition for determining the amount of said second signal applied to said second input; and means connected to said motor for balancing the effect of said external condition to reduce the second signal at said second input to substantially zero.

3,048,754
COMBINATION MOTOR CONTROL SYSTEM
Carl E. Hittle, North Hollywood, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 30, 1959, Ser. No. 824,020
7 Claims. (Cl. 318—42)



1. A multiple motor control system comprising a plurality of motor units, each of said units having a synchronous motor section rotor and an interlock motor section rotor on the same shaft, a distributor connected to the interlock sections of said plurality of motor units, means for separately supplying power to each of the synchronous sections of said motor units for operating each of said units as synchronous motors, means for simultaneously supplying power to said distributor and said interlock sections of said plurality of motor units, and separate means connected to the rotor shafts of each of said plurality of motor units for controlling the acceleration and deceleration of said units when operated as synchronous motors and for substantially unaffecting the single phase lock-up operation of said plurality of motor units when the interlock sections of said plurality of motor units are energized.

3,048,755
SYNCHRONOUS MOTOR CONTROL
Werner Leonhard, Stuttgart-Cannstatt, Germany, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 7, 1959, Ser. No. 811,664
12 Claims. (Cl. 318—170)



1. In a pull-out protection circuit for a synchronous alternating current motor having a field winding adapted to be connected to an excitation source, means responsive to a trip signal for disconnecting the field winding from the excitation source, pulse generating means operably connected to compare the instantaneous value of field current in the field winding to a reference value and produce a signal pulse upon each occurrence of a predetermined difference, means responsive to a predetermined number of signal pulses for providing a trigger pulse, monostable trigger means responsive to said trigger pulse for providing a trip signal to said first mentioned means.

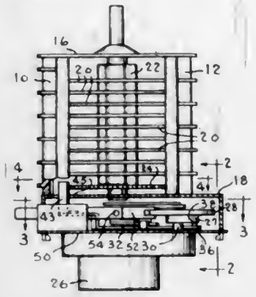
3,048,756
CONTROL CIRCUITS
Max Voege, Dayton, Ohio, assignor to Everett P. Larsh, Dayton, Ohio
Filed Oct. 5, 1959, Ser. No. 844,255
10 Claims. (Cl. 318—207)



1. In a single-phase motor provided with a main winding and a starting winding, a source of electrical energy, means connecting the main winding to the source of electrical energy, means responsive to a predetermined value of current flow through said main winding connecting said starting winding to the source of electrical energy, switch means for changing the current flow in said main winding with respect to said starting winding, and actuator means connected to said switch means and to the source of electrical energy, the actuator means being operable in response to a predetermined value of current flow therethrough from the source of electrical energy,

and circuit closing means operable by the actuator means and in series with the switch means for connecting the main winding to the source of electrical energy.

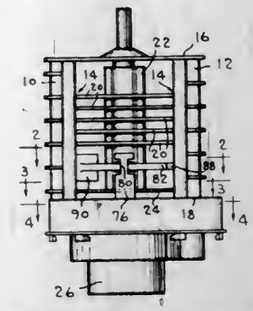
3,048,757
MOTOR REVERSING CONTROL
William Henry Comerford, Jr., Bellwood, Ill., assignor to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,661
7 Claims. (Cl. 318—285)



1. The combination with a washing machine having a drive motor and a timer of the type having a cam bank driven by a timing motor through a drive mechanism including an impulse cam molded on a member rotating at a speed greater than timing speed, the impulse cam advancing the cam bank in a step-by-step manner at predetermined intervals to sequence the function switches through a program cycle, said drive motor being connected in circuit with one of said function switches for unidirectional rotation when the switch is closed, of means for periodically reversing the direction of rotation of the drive motor during specific intervals in the timer program comprising, a cam surface provided on the periphery of the rotating member, a single pole double throw switch biased in one direction to a closed position on one of its contacts and moved by the cam to close on its other contact, reversing circuit means connecting the double throw switch to the drive motor to periodically change the direction of rotation of the drive motor, said drive motor function switch being moveable from the drive motor function switch circuit to the reversing circuit means so that the direction of rotation of the drive motor is controlled by the position of the double throw switch.

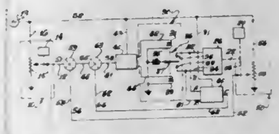
3,048,758
INVERSER TIMER MOTOR CONTROL
William Henry Comerford, Jr., Bellwood, and Harry Stuart Tice, Jr., Des Plaines, Ill., assignors to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,662
17 Claims. (Cl. 318—285)

1. The combination with a sequence timer of the type having a plurality of function controlling switches operated by a cam bank driven at timing speed by a motor through a drive mechanism, including a member rotating at a speed greater than timing speed, the timing speed of the cam bank causing sequential operation of the switches at predetermined intervals, of means for providing additional functions during each interval comprising, a cam rotating with said member at a speed greater than the timing speed, oscillating means operated by and movable in a plane parallel to the plane of the cam, secondary switches operated by the oscillating means, and circuit means connecting certain of the switches controlled by the cam bank with the switches operated by the oscillating means so that the sequence of the switches operated by the oscillating means may be employed within



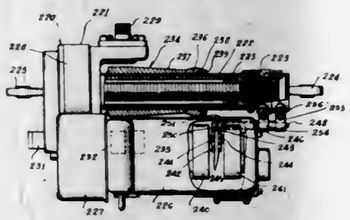
an interval of the cam bank to provide additional functions during an interval.

3,048,759
STABILIZED SERVOMECHANISM
Robert Charles Howard, Costa Mesa, Calif., assignor to Giannini Controls Corporation, Duarte, Calif., a corporation of New York
Filed Aug. 29, 1960, Ser. No. 52,649
7 Claims. (Cl. 318—448)



1. In combination with servo control means comprising reversible driving means and switching means actuable under control of an input signal to two alternative operating conditions to energize the driving means in respective driving directions, the switching means being normally responsive to a definite threshold value of the input signal; means for developing respective stabilizing signals in response to drive energization in the two directions, and means acting under control of each of the stabilizing signals to increase said threshold value for drive in the direction of the drive energization, and to decrease said threshold value for drive in the direction opposite to the drive energization.

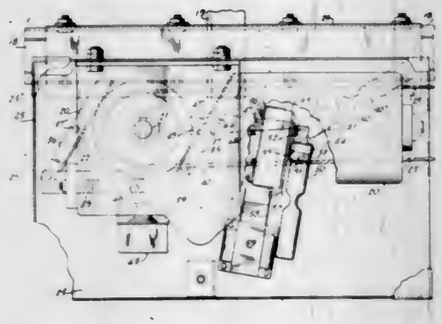
3,048,760
MOTOR CONTROL BY MECHANICAL ACTUATOR WITH INTERMEDIATE POSITION CAM ARRANGEMENT
Vaino A. Hoover, Los Angeles, Calif.
(1433 San Vicente Blvd., Santa Monica, Calif.)
Original application Apr. 14, 1953, Ser. No. 348,741. Divided and this application Aug. 12, 1957, Ser. No. 677,737
10 Claims. (Cl. 318—467)



4. In a linear actuator, the combination of: a pair of angularly movable crank arms; a pair of coaxial shafts,

each adapted for independent angular movement in response to angular movement of a respective one of said crank arms; cam apparatus; means to move said cam apparatus along a line parallel to the axis of said shafts and effect angular movement of said crank arms; a drive motor for the actuator; a control network for said motor having switches with plungers to be actuated at different positions of said cam apparatus on said line; and switch actuating means coupled to and operable through said shafts in response to angular movement of said crank arms to actuate the plungers, and thereby control operation of said motor.

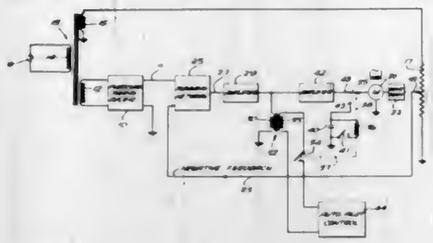
3,048,761
DOOR-OPERATORS
Frederick A. Purdy, Scarsdale, N.Y.
(300 E. 51st St., New York 22, N.Y.)
Filed Oct. 1, 1957, Ser. No. 687,509
9 Claims. (Cl. 318—480)



1. A door-operator comprising a motor for driving a door between closed and open positions, a circuit for the motor and a switch in the circuit arranged to energize the motor when the switch is closed, a two chambered gravity timer for applying a switch-throwing force to the switch, a restricted opening interconnecting said chambers, means in one of said chambers flowable through said restricted opening into the other of said chambers, signal responsive means providing a flow of electric current when activated by signals, electromagnetic means having its coil in series with said signal responsive means and a member operated upon energizing of said coil for positioning said timer with said one chamber containing said flowable means elevated to provide switch-throwing energy and to cause flow of said flowable means from said one chamber to the other, and for freeing said timer and its stored energy to close said switch upon withdrawal of the signal from said signal responsive means while a substantial portion of said flowable means remains in said one chamber.

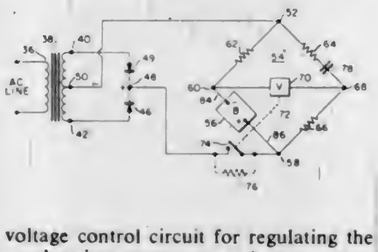
3,048,762
ALTITUDE INDICATING OR CONTROL SERVOSYSTEM
Frederick Marsh, Anaheim, Calif., assignor, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,923
5 Claims. (Cl. 318—489)

1. In an altitude controlling system, a pressure transducer producing a voltage representative of pressure, a servo loop, said servo loop comprising a network developing a feedback voltage representative of the previously mentioned voltage, means for effecting a comparison between said voltages, a potentiometer resistance having a tap adjusted in accordance with the algebraic sum of the two voltages, an output device coupled to said servo loop and developing an output voltage which is representative of the algebraic sum of said two voltages, an auto pilot control, and means simultaneously effective for applying said output voltage to said auto pilot con-



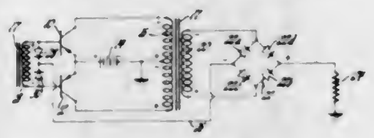
trol and for rendering said servo loop ineffective to vary said feedback voltage.

3,048,763
BATTERY CHARGING APPARATUS
Charles A. Cady, 42 Shaw Drive, Wayland, Mass.
Filed Sept. 8, 1959, Ser. No. 838,626
6 Claims. (Cl. 320—39)



6. A voltage control circuit for regulating the application of a charging current to a battery comprising, a bridge circuit including four bridge terminals, means for connecting said battery between first and second ones of said bridge terminals, a current limiting resistor connected between first and third ones of said bridge terminals, first and second balancing resistors connected between second and fourth bridge terminals and third and fourth bridge terminals respectively, the resistance of said first balancing resistor being relatively small with respect to that of said second balancing resistor, a charging control switch and a source of D.C. voltage having a ripple voltage component connected in series between said second and third terminals, and means responsive only to the voltage between said first and fourth terminals for opening said switch when said voltage is above a predetermined value.

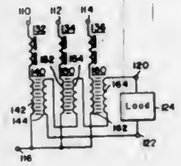
3,048,764
TRANSISTOR CONVERTER CIRCUIT
Joseph E. Murphy, Cudahy, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 20, 1960, Ser. No. 77,085
13 Claims. (Cl. 321—2)



8. A converter circuit comprising a pair of transistors each having input, output and common electrodes, a transformer having a primary winding with an intermediate tap, a feedback winding, and a secondary winding, an output circuit for the transistors including the primary winding connected between the output electrodes and a

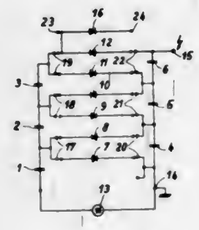
direct voltage source connected between the intermediate tap of the primary winding and the common electrodes, an input circuit for the transistors for switching the transistors alternately on and off whereby an alternating voltage is induced in the secondary winding, a full wave rectifier circuit having its input terminals connected across the secondary winding; said input circuit including the feedback winding connected between the input electrodes, a pair of diodes connected back-to-back across the feedback winding, a load device, one output terminal of the rectifier being connected through the load device to the intermediate tap of the primary winding and the other output terminal of the rectifier circuit being connected to the junction of said diodes.

3,048,765
FREQUENCY MULTIPLIER SYSTEM
Rudolf Weppler, Nurnberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed Aug. 13, 1958, Ser. No. 754,842
Claims priority, application Germany Aug. 23, 1957
11 Claims. (Cl. 321—7)



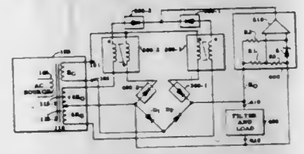
1. In a frequency multiplier system for providing an increased frequency from a polyphase source of alternating current to a load circuit, the combination comprising, a plurality of saturable transformers each having a primary winding, a secondary winding and a magnetic core formed from a magnetic material having a substantially rectangular core loop, and a plurality of substantially linear reactances, each of said reactances being connected between one phase of said source and a primary winding of one of said saturable transformers, the secondary windings of said transformers being connected in series with said load circuit to provide an alternating current output having a substantially rectangular waveform and having an increased frequency to said load circuit.

3,048,766
HIGH DIRECT VOLTAGE GENERATING UNITS
Siegfried Panzer, Heidenheim, Germany, assignor to Carl Zeiss, Heidenheim on the Brenz, Wuerttemberg, Germany
Filed Mar. 7, 1960, Ser. No. 12,983
Claims priority, application Germany Mar. 6, 1959
13 Claims. (Cl. 321—15)



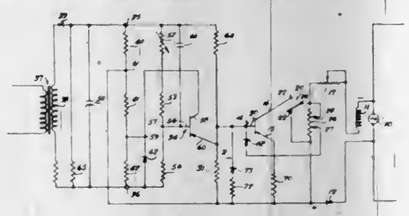
1. A voltage multiplier for the conversion of an alternating input voltage into a direct voltage of high amplitude by a cascaded network of n doubler stages including rectifiers and condensers, comprising $2n+1$ rectifiers arranged in an array of alternately poled rectifiers, means for coupling a first $2n$ adjacent rectifiers to said condensers to form said cascade network, and means for selectively coupling a second $2n$ adjacent rectifiers to said condensers to reverse the polarity of said direct voltage, said second $2n$ adjacent rectifiers including the rectifier in said array which is not included in said first $2n$ adjacent rectifiers.

3,048,767
SATURABLE REACTOR POWER SUPPLY
Jack C. Smeltzer, Torrance, Calif., assignor to Thompson Ramo Wooldridge Inc., Los Angeles, Calif., a corporation of Ohio
Filed Nov. 19, 1958, Ser. No. 774,895
3 Claims. (Cl. 321—25)



1. A regulated power supply comprising: an input transformer for receiving an unregulated alternating current signal, said transformer including first and second secondary windings, said first secondary winding having first and second terminals and developing a first signal proportional to said unregulated signal therebetween, said second secondary winding having first and second terminals and a tap thereon and developing a first correction signal proportional to said unregulated signal between said first terminal and said tap and developing a second correction signal between said second terminal and said tap; a first saturable reactor including a core and first and second windings thereover; a second saturable reactor including a core and first and second windings thereover; load means connecting the first windings of said first and second reactors; a direct-current signal source for developing a direct-current control signal connected between the second windings of said first and second reactors and said load; means connected to said first secondary winding for applying said first signal to said first winding of said first reactor to drive it to a state of saturation; means connected to said first secondary winding for applying said first signal to said first winding of said second reactor to drive it to a state of saturation; means connected to said second secondary winding for applying said first correction signal in series with said direct-current control signal to reset said second reactor; and means connected to said second secondary winding for applying said second correction signal in series with said direct-current control signal to reset said first reactor.

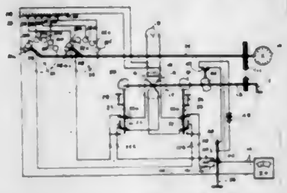
3,048,768
REGULATOR FOR GENERATORS
Channing C. Conger, Olmsted Falls, Ohio, assignor to The Controllix Corporation, Bedford, Ohio, a corporation of Ohio
Filed Mar. 6, 1958, Ser. No. 719,571
10 Claims. (Cl. 322—28)



1. In a regulator for regulating current flow in a series circuit including a unidirectional current source and a

coil and subject to inductive voltage surges when the current in the series circuit is suddenly diminished, a transistor having a collector-emitter path connected in series with said coil and said source to control the current in said coil in accordance with the conductivity of the collector-emitter path, said transistor further having a base-emitter path the current in which controls the conductivity of the collector-emitter path, means for establishing an input current in said base-emitter path to control the conductivity of the collector-emitter path, an electrical breakdown device having a predetermined breakdown voltage at which it becomes conductive, means connecting said breakdown device between the base of said transistor and a point in said series circuit negative during inductive current surges with respect to the emtter of said transistor, said breakdown device having a breakdown voltage above the maximum voltage drop between said emitter and point in the absence of inductive surges.

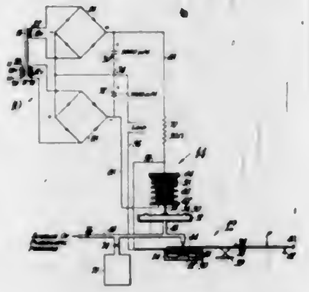
3,048,769
PRECISION MULTIPLIER
Frederick W. Cunningham, Stamford, Conn., and Richard Y. Miner, Port Washington, and Quentin J. Evans, Long Island City, N.Y., assignors to American Bosch Arma Corporation, a corporation of New York
Filed Jan. 7, 1953, Ser. No. 329,944
15 Claims. (Cl. 323—43.5)



12. An electrical apparatus, which comprises a series of terminals, one of which is a reference terminal, means for maintaining a reference voltage on the reference terminal and voltages of predetermined values relative to the reference voltage on the respective other terminals along the series, and means for deriving voltages intermediate those on the terminals, said means including a first inductive element connected across two of said terminals, second and third inductive elements positioned in magnetic flux relation with said first inductive element and in quadrature relation with each other, means for rotatably varying the magnetic flux relation of said second and third inductive elements with respect to said first inductive element, and means operably connected with said last-named means for connecting said second and third inductive elements to alternate terminals along said series, said means being synchronized to effect said connections during the respective linear ranges of the potentials induced in said second and third inductive elements.

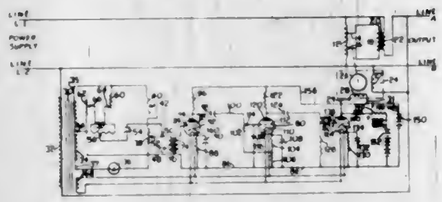
3,048,770
FORCE TO DIRECT CURRENT TRANSDUCER
Dudley D. Nye, Jenkintown, Pa., and Ronald Y. Paradise, Passaic, N.J., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Feb. 20, 1956, Ser. No. 566,457
2 Claims. (Cl. 323—64)

1. An electropneumatic apparatus for providing an electrical quantity proportional to the magnitude of a variable force including a fluid pressure supply and a source of electrical power, the combination comprising a nozzle, a conduit connecting said nozzle with the fluid pressure supply, means defining a contractible and expansible chamber having a movable end wall, means connecting said chamber to said conduit at a point intermediate the fluid pressure supply and said nozzle, a pivoted lever movable in response to the variable force having one end portion positioned adjacent said nozzle so that movement of said lever controls the flow from said nozzle to cause a pressure variation within said chamber which is effective to cause movement of said movable end wall, means connected to said conduit intermediate said chamber and the fluid pressure supply for reducing the rate of change of pressure in said conduit, an impedance element variable



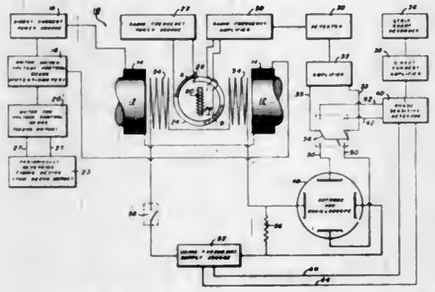
in response to pressure, means operatively connecting said end wall to said element to exert pressure on said element in accordance with movement of said end wall, an electrical circuit connected to the source of electrical power having an output which varies with said variation of said impedance element, and electromagnetic means connected to said output and in operative association with said lever to exert a force thereon in proportion to said output to balance the force exerted on said lever by the variable force.

3,048,771
REGULATOR
Stanley R. Jordan, Dayton, Ohio, assignor to Standard Electrical Products Company, a corporation of Ohio
Filed Apr. 25, 1957, Ser. No. 696,009
5 Claims. (Cl. 323—75)



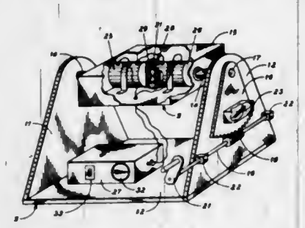
1. A voltage sensitive bridge comprising an input transformer having a primary winding and a secondary winding a metallic filament lamp connected in series with one end of the secondary winding, a first resistor connected in series with the lamp, the first resistor having an adjustment finger electrically movable along the resistor, an adjustable resistor connected in series with the first resistor, an adjustable resistor also being connected to the end of the secondary winding opposite the lamp, the secondary winding of the transformer also having a tap electrically connected thereto intermediate the ends thereof, a first output lead, the first output lead being connected to the tap of the secondary winding, a resistor connected between the tap of the secondary winding and the said end of the secondary winding opposite the lamp, an adjustable tap electrically connected to the last said resistor, a condenser connected to the tap and to the adjustment finger of the first resistor, a second output lead, the second output lead being connected to the adjustment finger.

3,048,772
PROCESS FOR CONDUCTING QUANTITATIVE ANALYSES
Rhoderick K. Saunders and Rollie B. Williams, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed May 31, 1955, Ser. No. 512,115
1 Claim. (Cl. 324—.5)



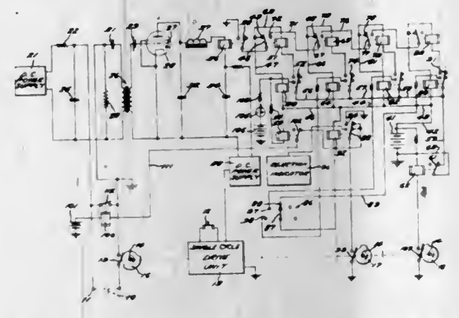
In a distillation method conducted in a distillation zone controllable by a distillation variable wherein there is obtained, as a distillate fraction, a freely flowable single phase liquid containing nuclei of a nonparamagnetic nuclear species, the improvement which comprises polarizing a sample of said distillate in a nuclear magnetic resonance spectrometer in a primary magnetic field of polarization modulated with an audio-frequency magnetic field crossed at right angles by a radio-frequency magnetic field of predetermined frequency, scanning the resonance band of said nuclei of said nuclear species, the period of said audio-frequency magnetic field being less than the spin-lattice relaxation time of said nuclear species and the period of time of scan being greater than the spin-lattice relaxation time of said nuclear species, and inductively detecting the maximum intensity of the dispersion component to obtain a signal, whereby said signal will constitute a direct measure of the quantity of said nuclear species in said sample and regulating said distillation process in response to said signal.

3,048,773
FLUID REMNANT MAGNETIZATION TESTER
Robert J. S. Brown, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,287
9 Claims. (Cl. 324—.5)



1. Apparatus for testing certain magnetic characteristics of a sample of unknown material comprising a frame including a pair of legs, a shaft rotatably supported in said legs, and a nuclear magnetism test apparatus supported on said shaft, said test apparatus including a hollow cylinder-like annulus having an annular cross-section for containing a test material having a known nuclear magnetic precessional signal in a known uniform precessional field, a measured quantity of said unknown material uniformly suspended within the interior perimeter of said hollow portion of said annulus, means for creating a substantially uniform magnetic field through said annulus to polarize atomic particles within said test material and to magnetize said unknown material, and means for measuring the nuclear magnetic precessional signal of said nuclear particles in said test material in the resultant field of said known uniform precession field and any magnetic field produced by said unknown material, whereby said certain magnetic characteristics of said unknown material may be determined by the existence of changes in the nuclear magnetic precessional signals derived of said test sample.

3,048,774
ELECTRICAL BREAKDOWN COUNT TEST SET
Harry R. Shillington, Glen Ellyn, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 7, 1959, Ser. No. 804,734
7 Claims. (Cl. 324—54)

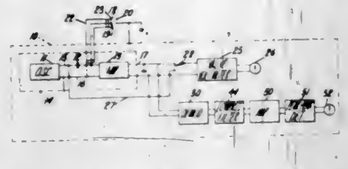


1. In a testing system for testing a succession of devices, said system including programming means serving sequentially to condition the system for testing, to apply a test signal to the system and to restore the system to normal condition at the end of a test cycle, apparatus for indicating the reception of a selected number of discrete signals comprising test results resulting from the testing of one of said devices, said apparatus comprising a counter actuatable by reception of said discrete signals, first indicator means actuatable by actuation of said counter by reception of a first discrete signal, second indicator means for indicating actuation of said counter a selected number of times by reception of a corresponding number of said discrete signals, and means for confirming system operability, said confirming means including a translating device responsive to a test signal produced by the programming means for applying a discrete test signal to said counter independently of any device being tested to actuate said first indicator means.

3,048,775
APPARATUS FOR MEASURING SMALL DISTANCES
Raymond Calvert, Chessington, England, assignor to The Wayne Kerr Laboratories Limited, Surrey, England, a British company
Filed Jan. 9, 1959, Ser. No. 785,846
Claims priority, application Great Britain Jan. 10, 1958
6 Claims. (Cl. 324—61)

1. Apparatus for measuring the amplitude of vibration of one plate of a capacitor with respect to the other plate comprising an amplifier having an input circuit and an output circuit, a constant current source of alternating current coupled to said input circuit, a feedback circuit for said amplifier including said capacitor in the feedback path, which feedback circuit is coupled between said output and said input circuit to feed part of the amplifier

output into the input circuit in opposition to the signal from said source of alternating current, a rectifier circuit coupled to said amplifier output to detect the voltage variations appearing as a modulation of the alternating output of the amplifier, indicating means coupled to said rectifier circuit to indicate the amplitude of the detected



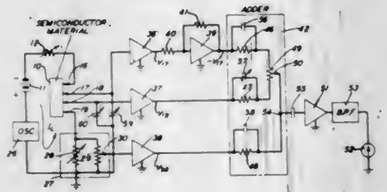
voltage variations, said rectifier circuit comprising a Zener diode, biasing means for maintaining the Zener diode at the break point, means for applying the amplifier output voltage to said diode and an output circuit in shunt across the diode, which output circuit includes a filter for removing signals of the frequency of said alternating current.

3,048,776

RESISTIVITY MEASURING CIRCUIT

Mason A. Logan, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 8, 1959, Ser. No. 818,620
14 Claims. (Cl. 324—64)



1. A circuit for measuring with a high degree of precision the resistivity of a body of semiconductor material, said circuit comprising a source of electrical oscillations having one terminal thereof grounded, said body of semiconductor material, a calibrated adjustable resistor having one terminal thereof grounded, means connecting said material and said resistor in series between the terminals of said source, a voltage comparator, grounded coupling means with an input impedance substantially higher than said resistivity of coupling the voltage difference across at least a portion of said material to said comparator, grounded means for coupling the voltage difference across said calibrated resistor to said comparator, and a grounded indicator in said voltage comparator for continuously indicating whether or not voltages applied to said comparator from said coupling means are of equal magnitudes.

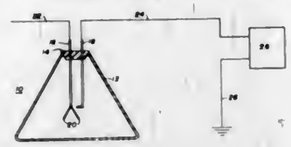
3,048,777

APPARATUS FOR MEASURING THE RATE OF ACCUMULATION OF STATIC ELECTRICAL POTENTIAL

Edward Schaschl, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Sept. 10, 1959, Ser. No. 839,226
3 Claims. (Cl. 324—72)

1. An apparatus for measuring the rate of accumulation of static electricity comprising an electroscope including a first electrode, a thin, movable, metallic plate depending therefrom and adapted for movement under the influence of a static potential applied only to said electrode; a second electrode supported adjacent to said plate and adapted to be contacted by said plate when it moves under the influence of an applied potential, a first conductor means for connecting said first electrode to a source of static potential under study, and a second conductor means for



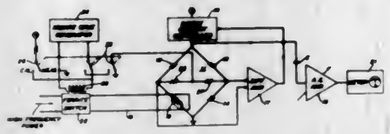
connecting said second electrode to ground and including pulse-counting means responsive to the electrostatic discharge when said plate contacts said second electrode.

3,048,778

HIGH FREQUENCY POWER METER

Carl H. Rumpel, Bedminster, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed July 21, 1959, Ser. No. 828,668
7 Claims. (Cl. 324—95)



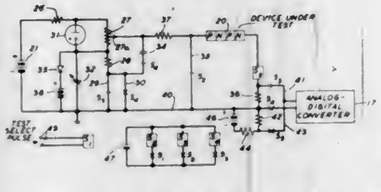
1. A high frequency power measuring device comprising a bridge network having four arms, one of which arms includes a thermally sensitive resistor, means for applying the high frequency power to be measured to said sensitive resistor to tend to change its temperature and consequently its resistance, means connected to said bridge for automatically supplying variable power thereto to maintain it in substantial balance irrespective of the conditions tending to change the temperature and resistance of said sensitive resistor, means for on-off modulating the high frequency power at a predetermined rate prior to its application to said sensitive resistor, and means coupled to said power supplying means for indicating only those variations in said supplied power which occur at said predetermined rate.

3,048,779

DIODE IMPEDANCE TESTER

Thomas E. Davis, Metuchen, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 9, 1959, Ser. No. 805,233
11 Claims. (Cl. 324—158)



11. A circuit for testing the impedance of semiconductor crosspoint diodes which are characterized by an electric-conduction-sustaining voltage and by a substantially larger breakdown voltage which must be exceeded before conduction can begin, said circuit comprising means for applying to a diode under test a direct potential of a magnitude which is less than said breakdown voltage but greater than said sustaining voltage, said applying means comprising a battery and a potential

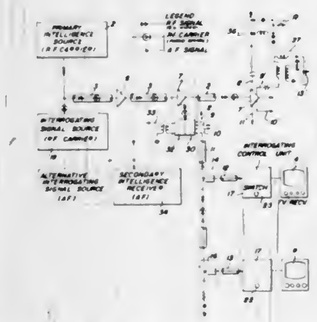
divider connected between the terminals of said battery, pulse-responsive switching means having contacts connected in series with said potential divider, means for superimposing upon said direct potential a simulated noise voltage pulse having a predetermined magnitude, the total magnitude of said direct potential and said simulated noise voltage pulse being less than said breakdown voltage, the last-mentioned means comprising said contacts, a capacitor, means for connecting said capacitor in parallel with said contacts and a portion of said potential divider, and means connected between the terminals of said capacitor for limiting the potential across said capacitor to a magnitude which is equal to said noise pulse magnitude, means connecting said diode in a circuit which shunts said portion, said contacts, and an additional portion of said potential divider, means for applying a pulse to said switching means for operating said contacts to open-circuit said potential divider for a predetermined portion of the duration of the last-mentioned pulse, and means in the last-mentioned circuit for indicating the impedance of said diode in response to the current flowing therein.

3,048,780

REMOTE INTELLIGENCE SAMPLING MEANS

Henry M. Diambra, Silver Spring, and Heinz E. Blum, Hyattsville, Md., assignors to Entron, Inc., Bladensburg, Md., a corporation of Delaware

Filed Apr. 2, 1959, Ser. No. 803,771
11 Claims. (Cl. 325—31)



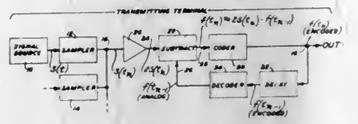
1. In a coaxial cable system comprising a primary radio-frequency intelligence source, a coaxial cable transmission network including branch coaxial cable lines for delivering signals from said source to a plurality of individual radio-frequency feeder coaxial lines, individual receivers connected to said feeder lines, a radio-frequency interrogating signal source for transmitting interrogation signals along said network to said individual receivers, and means for producing audio-frequency secondary signals from said receivers in their respective branch coaxial lines in response to said interrogating signals; coaxial cable tap-off and attenuator means for connecting individual feeder lines to branch lines with high radio-frequency attenuation and low audio-frequency attenuation, said tap-off means comprising inner and outer tap means respectively for directly engaging the inner and outer conductors respectively of a coaxial cable, insulating means mechanically supporting said inner and outer tap means in spaced and insulated relation to each other, branch line connector means for engaging a branch coaxial line, and attenuator means between said branch line connector means and at least one of said tap means, said attenuator means comprising an inductive winding on a high-frequency magnetic core wound to provide a desired high value of radio-frequency attenuation and a negligibly low value of audio-frequency attenuation.

3,048,781

REDUCTION OF QUANTIZING ERROR IN QUANTIZED TRANSMISSION SYSTEMS

John L. Glaser, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 26, 1957, Ser. No. 705,434
18 Claims. (Cl. 325—41)



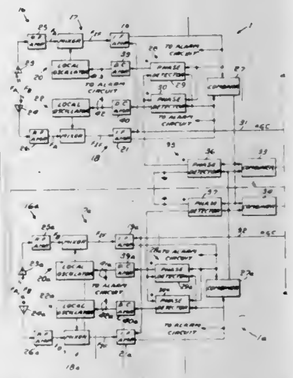
9. In a quantized transmission system, means at a transmitter station for sampling a signal to obtain successive signal samples at periodic intervals, means for substantially doubling the value of each of said samples, subtractor means having a pair of inputs and an output for producing a difference signal at said output equal to the difference between signals applied simultaneously to said pair of inputs, means for supplying said substantially doubled signal samples to one of said subtractor inputs, coding means for coding said difference signal into a binary pulse code group representing a particular one of a number of discrete values, means for transmitting said pulse code group to a receiver station, and means for feeding back an analog equivalent of said pulse code group to the other of said subtractor inputs, said feedback means including decoding means and delay means having a delay period equal to one of said periodic sampling intervals.

3,048,782

SIGNAL RECEIVING SYSTEM

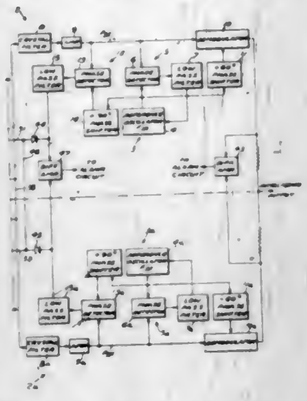
Frederick J. Altman, Ridgewood, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Nov. 9, 1959, Ser. No. 851,921
20 Claims. (Cl. 325—305)



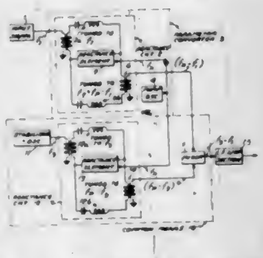
1. A single sideband suppressed carrier receiver comprising a source of signals, said signals including a signal proportional to a single sideband suppressed carrier signal and a pilot signal having a frequency related to the frequency of said suppressed carrier, a source of reference signal having a frequency substantially equal to the frequency of said pilot signal, means responsive to said pilot signal and said reference signal to produce a control signal having an amplitude proportional to the phase difference between said pilot signal and said reference signal, means to couple said control signal to said source of reference signal to lock said reference signal in a predetermined phase relationship with respect to said pilot signal, a

demodulator coupled to said source of signals and means coupled to said source of reference signal to couple said



reference signal to said demodulator to produce at the output of said demodulator the intelligence of said sideband signal.

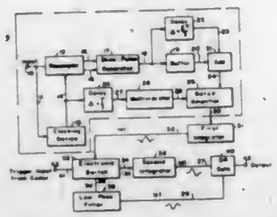
3,048,783
SIGNAL RECEIVING SYSTEM
Thomas B. Warren, New York, N.Y., and Jack B. Harvey, Clifton, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Apr. 28, 1959, Ser. No. 809,483
9 Claims. (Cl. 325—445)



1. In a signal receiving system, a low noise amplifier comprising a parametric converter including a first reactance circuit and a pump oscillator, a first source of signals having a predetermined frequency coupled to said first reactance circuit, a second reactance circuit coupled to the output of said pump oscillator, a second source of signals having a selected frequency coupled to the input of said second reactance circuit, and a heterodyning means coupled to the output of said first reactance circuit and the output of said second reactance circuit to provide an output signal having a given frequency and a low noise level.

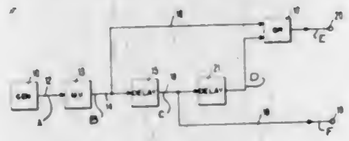
3,048,784
BINARY INPUT-A.C. WAVE OUTPUT SELECTOR USING BIPOLAR GENERATOR, INTEGRATOR, AND LOW PASS FILTER
Erich H. Scherer, Silver Spring, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1959, Ser. No. 845,518
4 Claims. (Cl. 328—27)

1. Apparatus for producing a bipolar waveform comprising means for producing a bipolar waveform having a first, second, third and fourth portion, said portions being of uniform time width and rectangular in shape, said first and fourth portions being of opposite polarity, said second and third portions being of opposite polarity and approximately three times the magnitude of said first and third portions, means for integrating said waveform



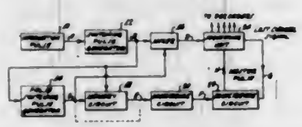
and means for removing the high frequency component from said waveform after being integrated.

3,048,785
PULSE GENERATING AND TIMING CIRCUIT FOR GENERATING PAIRED PULSES, ONE MORE NARROW THAN THE OTHER
Philip P. Cartier, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 21, 1959, Ser. No. 861,056
5 Claims. (Cl. 328—62)



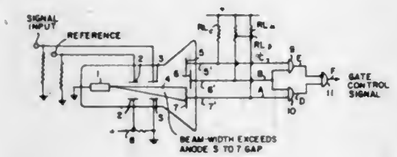
1. Apparatus for generating a wide and a narrow pulse, the narrow pulse being accurately centered relative to both the leading and trailing edges of the wider pulse, comprising, in combination, a single-shot multivibrator, a signal source for driving said multivibrator, first and second signal delay elements, said elements having identical delay intervals, an OR circuit having a pair of inputs and an output for providing said wide pulse, circuit means connecting an output of said multivibrator to one of said OR circuit inputs, and also connecting said multivibrator output through said two delay units in series to the other input of said OR circuit, said narrow pulse being generated at the junction between said two serially connected delay units.

3,048,786
SYNCHRONIZING SIGNAL GENERATOR FOR DEMULTIPLEXING SYSTEM
Neil Berinson, Philadelphia, Pa., and Leonard Finkel, Haddonfield, N.J., assignors, by mesne assignments, to American Bosch Arma Corporation, Hempstead, N.Y., a corporation of New York
Filed Nov. 19, 1958, Ser. No. 774,896
6 Claims. (Cl. 328—110)



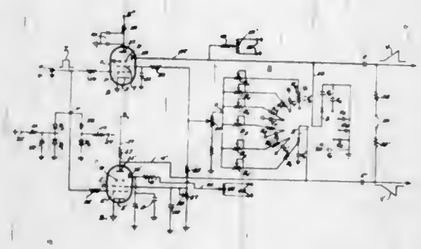
1. In a multiplexing system including means for deriving interchannel switching pulses from information pulses in an information pulse signal train and from a false switch pulse generator in the absence of said information pulses with said signal train including a master pulse time interval, the combination comprising a sequencing unit for generating a signal when the last pulse in said information pulse signal train has been received, means for generating a signal during said master pulse interval, a coincidence circuit for generating synchronization signals when a signal from said sequencing unit and a signal generated during said master pulse interval are applied thereto.

3,048,787
AMPLITUDE DISCRIMINATOR DEVICE
Joseph R. Pachuta, Endicott, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Feb. 12, 1960, Ser. No. 8,472
6 Claims. (Cl. 328—150)



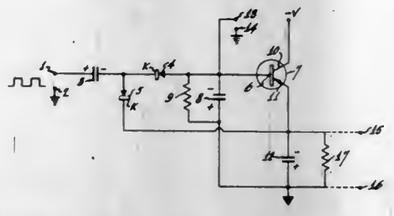
1. A signal amplitude discriminator comprising a cathode-ray tube having an electron gun for producing a beam, a first pair of deflection plates, a second pair of deflection plates operating in the same direction as the said first deflection plates, and a plurality of target electrodes situated in the plane of the beam, means for applying an adjustable reference voltage to said first pair of deflection plates, means for applying an input signal to said second pair of deflection plates, an output circuit, means connecting said output circuit to said plurality of target electrodes for producing an output signal when said beam impinges on one group of target electrodes and for preventing the production of an output signal when the beam impinges on another group of electrodes.

3,048,788
SWEEP SIGNAL GENERATING SYSTEM
Douglas Oliver Cochrane, Dorchester, Mass., assignor to Edgerton, Germeshausen and Grier, Inc., Boston, Mass., a corporation of Massachusetts
Filed Aug. 15, 1958, Ser. No. 755,261
10 Claims. (Cl. 328—180)



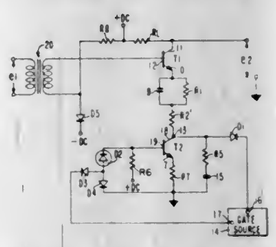
1. A sweep circuit having, in combination, a multielectrode electron tube having a control grid, a cathode, and a pair of electrodes serving as an anode and a secondary-electron-emitting electrode, an input circuit connected across the control grid and the cathode for applying input pulses to the tube to cause the tube to conduct, biasing means connected across said control grid and said cathode to permit conduction within the tube only during the application of said input pulses, sweep capacitor means connected in a circuit to one of the said pair of electrodes, and means for holding the other electrode of the said pair at substantially constant potential during the passage of current through the tube and in the said circuit including the capacitor means and the said one electrode of the pair.

3,048,789
PULSE COUNTER TYPE FREQUENCY DETECTOR
Gerald B. Herzog, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 13, 1959, Ser. No. 805,938
8 Claims. (Cl. 329—107)



1. A pulse counter type frequency detector, comprising, a capacitor to one side of which is applied a pulse train, first and second diodes each having a cathode and an anode, means to connect the other side of said capacitor to the anode of said first diode and to the cathode of said second diode, a transistor having first, second and third electrodes, means to connect the anode of said second diode to said first electrode, a second capacitor larger than said first capacitor connected between said first electrode and a point of reference potential, a resistor connected across said second capacitor and of a value to permit said second capacitor to discharge therethrough, means to connect said second electrode to a source of unidirectional potential, a third capacitor, means to connect said third electrode through said third capacitor to said point of reference potential, means to connect the cathode of said first diode to the junction of said third electrode and said third capacitor, and means connected across said second capacitor for deriving a direct current output voltage from said second capacitor which is linear with the frequency of said pulse train even when said output voltage exceeds the amplitude of said pulses.

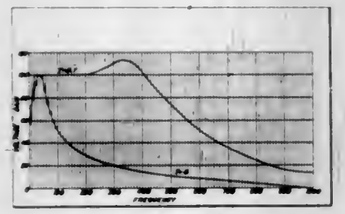
3,048,790
ELECTRONIC AMPLIFIER
Albert W. Vinal, Owego, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 16, 1959, Ser. No. 806,871
5 Claims. (Cl. 330—29)



1. A sampling amplifier having two levels of A.C. voltage gain comprising a transistor having a collector base and emitter circuit connected in a common emitter configuration including a variable A.C. impedance means in its emitter circuit, said transistor having an input and output terminal, said A.C. voltage gain between said input and output terminal being dependent upon the magnitude of said variable A.C. impedance, said variable A.C. impedance means including first and second direct current paths, an electronic gating means having a first and second terminal, said first path comprising a diode connected to said first terminal of said electronic gating means, said second path comprising the collector emitter circuit of

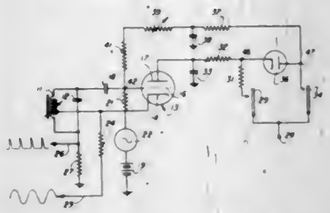
a control transistor connected to said terminal of said electronic gating means, said electronic gating means acting to forward bias said diode while maintaining said control transistor in a nonconducting condition during one mode of operation of said amplifier and selectively driving said control transistor to conduction while maintaining said diode reversibly biased during the other mode of operation of said amplifier, and means for maintaining the direct current through said control transistor during said other mode equal to the direct current through said diode during one mode so that the D.C. operating point of said transistor connected between said input and output terminals remains the same during each mode.

3,048,791
AMPLIFIER WHICH CHANGES ITS FREQUENCY RESPONSE WITH TIME
Sheldon H. Dike, Ventnor, N.J., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 22, 1943, Ser. No. 491,837
4 Claims. (Cl. 330—185)



1. A compensating amplifier system for a proximity fuze comprising an amplifier circuit and an auxiliary circuit connected to the input end of said amplifier circuit, said auxiliary circuit comprising a capacitor and a thermistor in series therewith, and means for heating said thermistor to decrease its resistance with elapsed time, whereby the impedance of said auxiliary circuit of relatively high frequency decreases with elapsed time, thus progressively decreasing the peak frequency response of the amplifier.

3,048,792
TONE GENERATOR WITH SELECTIVE SWITCHING MEANS
Serge L. Krauss, Elkhart, Ind., assignor to C. G. Conn, Ltd., Elkhart, Ind., a corporation of Indiana
Filed July 8, 1958, Ser. No. 747,168
8 Claims. (Cl. 331—61)



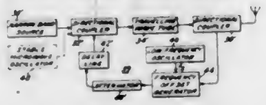
1. An oscillator circuit for an electrical musical instrument including in combination, a tuned tank circuit, an amplifier device having a cathode, a grid and a plate and being connected to said tank circuit, input means for connection to a direct current potential source, a first current carrying path between said plate and said input means for applying energizing potential to said amplifier device for sustaining oscillations in said tank circuit, first switch means connected in said first path, a second direct current carrying path between said grid and said input means for applying a direct current bias potential to said grid to increase the frequency of oscillations, second switch means in said second path, and unidirectional current conducting means connected between said first and second paths so that current flows selectively through said first path upon closing of said first switch means and through said first and second paths simultaneously upon closing of said second switch means.

3,048,793
VOLTAGE CONTROLLED OSCILLATOR WITH SWITCHING CIRCUIT COUPLED THERETO
Richard F. Blake, Mountain Lakes, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed May 22, 1958, Ser. No. 737,094
7 Claims. (Cl. 331—75)



1. In a relay for controlling the current flow in one circuit in response to a condition in another circuit, the combination of an oscillator having terminals for connection to the controlling circuit and being constructed and arranged to be powered solely by electrical energy drawn from the controlling circuit and including means for preventing the oscillation of said oscillator when the voltage impressed thereon is within a predetermined range; and a switching circuit coupled to said oscillator and having terminals for connection to the controlled circuit to control the flow of current in the controlled circuit in response to the operation of said oscillator.

3,048,794
MICROWAVE AMPLIFYING SYSTEM
Manuel Ares, Ithaca, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 23, 1959, Ser. No. 861,712
3 Claims. (Cl. 331—78)

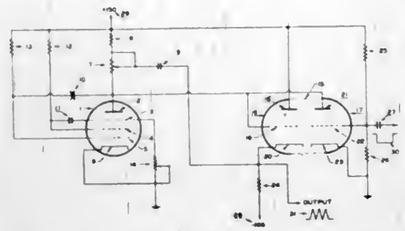


1. A microwave frequency spectrum expander comprising a travelling wave tube having input and output coupling means, means for applying a microwave frequency signal to the input coupling means, recirculating means coupled to the input and output coupling means of said travelling wave tube for feeding back a portion of the output signal from said travelling wave tube, said recirculating means comprising a frequency offset generator.

3,048,795
TRIANGULAR WAVE GENERATOR
Elliott A. Henry, Newtown, Conn., assignor to Branson Instruments, Inc., Stamford, Conn.
Original application June 9, 1959, Ser. No. 819,042. Divided and this application Dec. 6, 1960, Ser. No. 74,122
6 Claims. (Cl. 331—152)

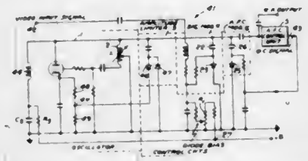
1. An electronic generator for generating a pyramid wave form comprising, in combination, a pentode electron control device connected in a feedback circuit as a free-running phantastron relaxation oscillator, a cathode follower having its control element connected to the anode

of said pentode and its cathode connected through a first capacitance and resistance to said anode, whereby the anode potential of said pentode is caused to rise at a constant rate to a critical value at which anode current



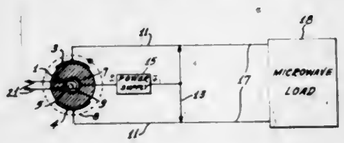
commences to flow through said pentode and the anode potential thereof decreases, and a second capacitance connected between said anode of said pentode and the control grid of said pentode, whereby the decrease in anode potential is maintained at a constant rate.

3,048,796
BROADBAND DIODE FM MODULATOR
Harold A. Snow, West Orange, and Hans W. Kettmann, Cedar Grove, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed May 21, 1959, Ser. No. 814,865
6 Claims. (Cl. 332—19)



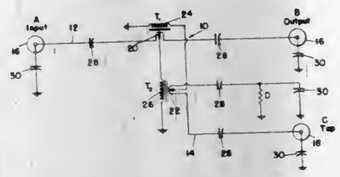
1. A frequency modulation system comprising an oscillator having a resonance circuit, a source of signals, a first frequency modulating diode responsive to said signals for varying the frequency of said oscillator in accordance with said signals, means coupled to said oscillator for producing a control voltage responsive to deviations of the mean frequency of said oscillator from a given center frequency, a second frequency modulating diode responsive to said control voltage for maintaining the center frequency of said oscillator substantially fixed, and means for independently coupling each of said diode modulators in parallel across said resonance circuit with the respective diodes poled alike.

3,048,797
SEMICONDUCTOR MODULATOR
Ernest G. Linder, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 30, 1957, Ser. No. 656,003
11 Claims. (Cl. 332—31)



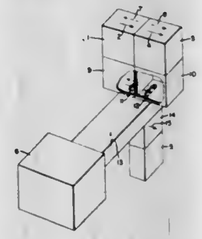
3. A semiconductor device comprising in combination a semiconductor body, a tunable microwave resonant structure coupled to said body, means for generating free charge carriers in said body, means for imparting spiral motion to said charge carriers, microwave transmission means coupled to said body, and a microwave load coupled to said transmission means and means for modulating the output of said device.

3,048,798
DIRECTIONAL COUPLER
Keneth A. Simons, Bryn Athyn, Pa., assignor to Jerrold Electronics Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 24, 1959, Ser. No. 862,005
7 Claims. (Cl. 333—10)



1. In combination with a main and a branch transmission line, a means to divert a minor portion of the energy passing in the main line to the branch line, said means having directional properties and consisting essentially of a pair of input terminals and a first and a second pair of output terminals for coupling to said main and branch transmission lines, and a circuit consisting only of bidirectional circuit elements coupling said input terminals to said first and second output terminals, said circuit including first and second substantially identical transformers each having primary and secondary windings, and means coupling said windings to transmit signals from said input terminals to said output terminals and to minimize transmission of signals from said first pair of output terminals to said second pair of output terminals, said coupling means including means connecting said windings to insert impedances both in series and in shunt with said branch and main transmission lines for impedance matching throughout the circuit, the primary winding of said first transformer being connected in a path between one of said input terminals and one of said first output terminals, the secondary winding of said first transformer and part of the secondary winding of said second transformer being connected in series between said second output terminals, and the primary winding of said second transformer being connected to the primary winding of said first transformer and in shunt with said path between said input and first output terminals.

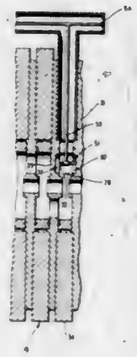
3,048,799
DIELECTRIC WAVEGUIDE COUPLING ARRANGEMENT FOR USE IN TWO-WAY SIGNALING SYSTEMS
William T. Whistler, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 28, 1959, Ser. No. 849,260
2 Claims. (Cl. 333—11)



2. In combination, in a wave transmission system, a first and a second waveguide of rectangular cross-section

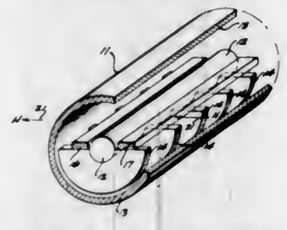
extending in mutually perpendicular first and second directions respectively from a common junction point, the broad walls of said first waveguide being parallel to said second direction, the broad walls of said second waveguide being perpendicular to said first direction, one end of said first waveguide abutting one broad wall of said second waveguide, said one broad wall of said second waveguide containing an opening for communicating applied waves to said one end of said first waveguide, a pair of parallel spaced-apart slots formed in the other broad wall of said second waveguide and positioned parallel to said second direction, first and second square waveguides abutting one another in their longitudinal directions and adapted to propagate first and second applied waves respectively, one end of said third and said fourth waveguide abutting said other broad wall of said second waveguide, means for coupling the waves from said first and second square waveguides with given relative polarizations to respective ones of said slots, means coupled to one of said first and second rectangular waveguides for extracting the sum value of said applied first and second waves, and means coupled to the other of said first and second rectangular waveguides for extracting the difference value of said first and second waves.

3,048,800
COUPLING ARRANGEMENT FOR SLOW-WAVE STRUCTURE
Kenneth P. Grabowski, Manhattan Beach, and Samuel Sensiper, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,766
6 Claims. (Cl. 333—31)



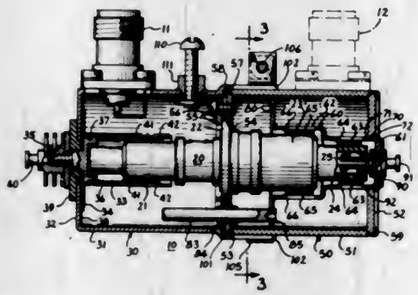
1. An arrangement for coupling a coupled-cavity-type of traveling wave tube slow-wave structure to a microwave transmission line to minimize reflection of energy; the slow-wave structure including an end cavity partially defined by two adjacent walls disposed transversely to a central axis, one of the adjacent walls having a coupling aperture disposed between the axis and a portion of the perimeter thereof and communicating between the end cavity and the adjacent preceding cavity for coupling energy between the cavities when a wave is propagated along the slow-wave structure, the arrangement comprising a microwave impedance element electrically coupled in series between the slow-wave structure and the transmission line for increasing the effective inductance in series with the slow-wave structure, the impedance element being defined by a pair of facing depressions in the adjacent walls of the end cavity disposed oppositely from the coupling aperture with respect to the axis, the configuration of the depressions being such as to simulate coupling apertures, and a microwave transmission line coupled into the end cavity between the two adjacent walls on the side of the axis farthest from the coupling aperture, the transmission line including microwave impedance elements for matching the impedance of the transmission line to the changed effective impedance of the slow-wave structure to minimize reflection of energy.

3,048,801
NON-RECIPROCAL PHASE SHIFTER AND ATTENUATOR
Robert L. Fogel, Torrance, and Herbert T. Suyematsu, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 8, 1959, Ser. No. 818,919
3 Claims. (Cl. 333—31)



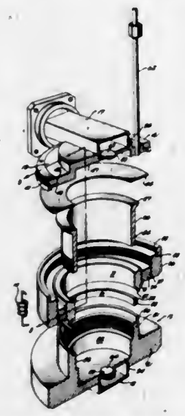
1. A non-reciprocal wave transmission device comprising: a coaxial type waveguide supporting radio frequency energy in the TEM mode, said waveguide having an inner conductor and an outer conductor; slow-wave means disposed within said waveguide, said means including a plurality of spaced-apart conductive half-discs mounted on one of said conductors and spaced from the other conductor, said half-discs being similarly mounted in parallel relation to provide two regions in said waveguide having different velocities of propagation; a pair of elongated ferrite strips mounted on said half-discs parallel to said inner conductor along the boundary between said regions with one strip on either side of said inner conductor; said waveguide being operative in a transverse static magnetic field paralleling the broad surfaces of said ferrite strips.

3,048,802
MICROWAVE CAVITY
Edward J. Jurcy, Western Springs, Ill., assignor, by mesne assignments, to Fidelitone Microwave Incorporated, Chicago, Ill., a corporation of Illinois
Filed Feb. 8, 1961, Ser. No. 87,892
4 Claims. (Cl. 333—83)



1. In a cavity for use with a tube of the lighthouse type having a central grid flange with a cylindrical anode electrode at one end thereof and cylindrical cathode and filament electrodes at the other end thereof, the combination comprising a cup-shaped anode member, a cup-shaped cathode member of substantially the same diameter as the anode member, an annular barrier plate permanently joined to the lip of the cathode member and having means for securing the grid flange thereto, the lip portion of the anode member being resilient and dimensioned to snugly telescope over the lip of the cathode member, an insulated pedestal axially arranged in said anode member and seated on the bottom thereof for making contact with the anode electrode of the tube, said cup-shaped cathode member having a cylindrical pedestal axially secured therein having portions of unlike diameter, each portion including a series of integral fingers struck inwardly from the wall of the pedestal and lying generally parallel to it for engagement with the cathode and filament electrodes respectively when the tube is inserted and with the grid flange secured to the barrier plate, said cathode pedestal member having an integral outwardly extending flange thereon, a plurality of rods secured to the flange and extending through the barrier member for providing coupling with the anode cavity, and means providing coupling to said anode cavity for feeding an output signal therefrom.

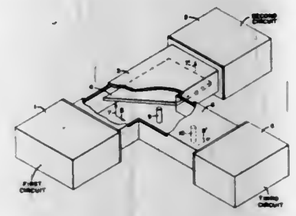
3,048,803
TEMPERATURE COMPENSATED RESONANT CAVITY
William A. Schanbacher, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,773
9 Claims. (Cl. 333—83)



1. Temperature compensation structure for a resonant cavity having a cylinder and a pair of parallel end walls separated by a predetermined length, said structure comprising at least one ring element disposed normal to the axis of said cylinder and having a first coefficient of thermal expansion, at least one annular element having a surface thereof in sliding contact with a surface on said ring element and having a second coefficient of thermal expansion differing from that of said ring element, at least one of said surfaces having a conical shape with the angle thereof being proportional to the ratio of diametrical thermal expansion and axial movement between said ring and cone elements with said expansion and movement being linearly related.

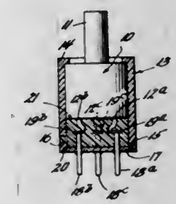
3,048,804
WAVE GUIDING SYSTEM AND METHOD
John J. Drum, Fayetteville, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 27, 1959, Ser. No. 829,825
3 Claims. (Cl. 333—98)

1. A source of waves of desired and undesired mode, a first output circuit, a second output circuit, a first waveguide for coupling said waves of desired and undesired mode from said source to said first output circuit, a second waveguide connecting with said first waveguide section at a junction, said second waveguide having a longitudinal axis extending perpendicularly to the longitudinal axis of said first waveguide, an electrically conductive septum positioned at the junction of said first and second waveguides, said septum positioned at said junction perpendicular to the electric field vector associated with



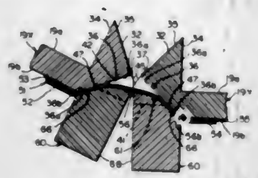
the waves of said desired mode such that said waves of desired mode are coupled to said first output circuit, said waves of second mode having component electric fields parallel to said septum, said septum oriented in a plane parallel to the longitudinal axis of said second waveguide, the leading edge of said septum being oriented at such an angle that said waves of second mode are reflected into said second output circuit.

3,048,805
PLUG-IN POTENTIOMETERS
Louis W. Berni, East Boston, Mass., assignor to Ace Electronics Associates, Inc., a corporation of Massachusetts
Filed Oct. 4, 1960, Ser. No. 60,406
3 Claims. (Cl. 338—221)



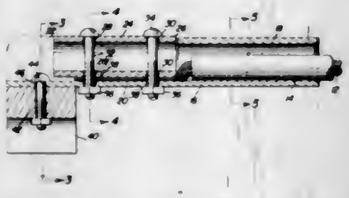
1. In a potentiometer assembly including a complete potentiometer unit having a potentiometer casing entirely enclosing a resistance element and a variable tap member and mechanically supporting said element and member for relative movement therebetween, and supporting a variable control means extending exteriorly of the casing for effecting said relative movement, and supporting electrical connection terminals also extending exteriorly of said casing; the improvement comprising in combination therewith a plug-in terminal adapter for said potentiometer unit, comprising an adapter casing overlying said potentiometer casing and extending beyond the confines thereof in the area of said terminals forming a housing about and spaced from said terminals, a plurality of plug pins extending through a wall of said adapter casing, projecting to the exterior of said adapter casing and accessible for electrical connection on the interior side of said adapter casing, and being anchored in said wall, means electrically coupling said pins with respective ones of said terminals, the interior of said adapter casing between said wall and said potentiometer casing being substantially filled with a filler material, and means anchoring said adapter casing to said potentiometer casing, whereby said pins projecting exteriorly of said adapter casing provide a plug-in base for the potentiometer assembly.

3,048,806
HINGE STRUCTURE
Glen R. Heidler, Paoli, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 18, 1959, Ser. No. 860,449
12 Claims. (Cl. 339—4)



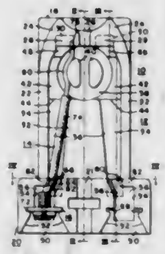
1. A hinge structure comprising: a pair of members positioned adjacent each other and having edge portions with abutting edge faces; means securing said edge portions together in a manner permitting said members to be moved about said abutting edge faces and relative to each other from one position to another; said securing means comprising a flexible hinge leaf having opposite end portions and opposite faces, one end portion of said hinge leaf being fixed to one of said members at a point spaced away from said abutting edge faces of said members, and an opposite end portion fixed to the other of said members at a point also spaced away from said abutting edge faces of said members, and with a free intermediate portion of said hinge leaf extending between the said end portions; said abutting edge faces of said members being so formed as to cooperate during folding of said members to maintain the free distance between said end portions of said hinge leaf substantially equal to the free portion of said hinge leaf; first means on the edge portions of each of said members and opposing one of the faces of said hinge leaf cooperating to back-up said hinge leaf when said members are in one of said positions; and second means opposing the other face of said hinge leaf and cooperating to back-up said hinge leaf when said members are in the other of said positions.

3,048,807
ELECTRIC WELDING GROUND PAD
John A. Robinson, Warm Springs, Mont.
(1011 Wilder Ave., Helena, Mont.)
Filed Oct. 28, 1959, Ser. No. 849,373
3 Claims. (Cl. 339—12)



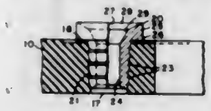
1. A portable electric welding ground pad comprising, in combination, a cylindrical metallic tube for longitudinally receiving an insulated electric conductor, a metallic trough of generally U-shaped cross section integral with one end of said tube in longitudinal alignment and communicating therewith for longitudinally receiving a bare end portion of the conductor therefrom, means securing said bare conductor end portion in the trough, a permanent horseshoe magnet, and means securing said magnet beneath the free end portion of the trough, said trough having a series of longitudinally spaced openings in its bottom, the first-named means including a cylindrical tubular clamp of uniform diameter from end to end removably mounted longitudinally in the trough within the confines thereof and resting on the bare conductor end portion, said clamp having diametrically opposite openings therein at longitudinally spaced points aligned with the innermost of the first-named openings, and nutted bolts in the aligned openings passing through the bare conductor end portion for tightening the clamp thereon.

3,048,808
WIRING DEVICE
George C. Lennox, Southbury, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut
Filed May 5, 1959, Ser. No. 811,200
3 Claims. (Cl. 339—53)



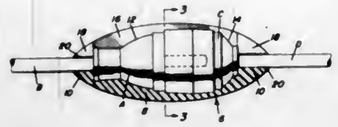
1. A holder for a lamp, said holder comprising an integral housing of insulating material adapted for supporting said lamp, said housing having an elongated recess extending inwardly of one side thereof, contact means formed from resilient wire, terminal means engaging one end of said wire contact means, said terminal and contact means being jointly positioned in said recess, means for supporting said terminal and contact means including a portion of said housing extending laterally into said recess and over an intermediate portion of said wire contact means so as to hold the latter inwardly of said recess and to bias the free end of said wire contact means against an adjacent section of said housing, and including another portion of said housing extending laterally into said recess to hold the free end of said wire contact means inwardly of said recess yet to enable the same to be deflected from its biased position.

3,048,809
TUBE SOCKET
Edgar K. Ralston, Wheeler, and Harold C. McGill, Bath, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 10, 1959, Ser. No. 852,000
3 Claims. (Cl. 339—65)



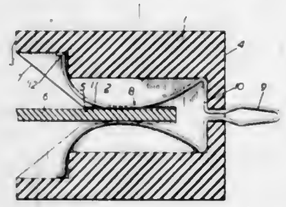
1. An electron tube socket comprising a body of insulating material having pinholes therein located for the reception of the pin leads of an electron tube, a contact member disposed in alignment with each of said pinholes to make conductive contact to pin leads extending through said pinholes and to connect said pin leads into a test circuit, each of said pinholes having an insert comprising an apertured shank portion within said pinhole and an apertured head portion external to and concentric with said pinhole, said shank portion having an outer wall with a plurality of ridges thereon mechanically engaging the wall of said pinhole in a self-locking manner, said head portion having one or more beveled surfaces for the deflection of bent pin leads toward the center of said pinholes to simultaneously straighten the pin leads of a tube upon insertion of the tube into a test circuit.

3,048,810
COUPLING FOR CONDUCTOR CORD PLUGS
Charles L. Steen, 1530 Downing St., Denver, Colo.
Filed Dec. 31, 1959, Ser. No. 863,210
3 Claims. (Cl. 339—75)



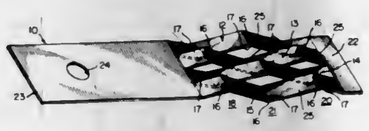
1. A readily applicable and removable coupling adapted to render separably interconnected male and female terminal plugs self-anchoring within the confines of said coupling comprising an elongated one-piece egg-shaped hollow body of insulation material, the hollow portion of which constitutes a retaining and insulation pocket for said plugs after they have been intentionally and cooperatively connected together by hand, said body having axially bored reduced neck portions whose bores serve to accommodate and permit passage of cords carried by said plugs and also communicate with the respective end portions of said pocket, said body having a lengthwise slot in one side commensurate in length with the length of said one side and opening radially into the pocket and bores respectively, said slot being relatively wide and constantly open and serving to uncover and expose portions of the plugs and cords at all times and also serving to facilitate carrying out the steps of readily applying the coupling to the interconnected plugs, subsequently removing the coupling, the end portions only of the slot being narrow and in relative proportion to the cross-sectional dimension of the neck portions.

3,048,811
SOCKET CONNECTOR FOR PRINTED CIRCUIT BOARD
Tom Lock, Kingsthorpe, Northampton, England, assignor to Painton & Company Limited, Kingsthorpe, England, a British company
Filed Sept. 26, 1958, Ser. No. 763,608
Claims priority, application Great Britain Sept. 26, 1957
5 Claims. (Cl. 339—176)



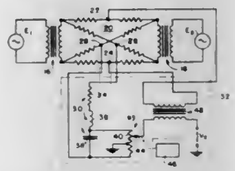
5. An electrical connector comprising a plate, a plug contact extending transversely to an edge of said plate, a body part, a slot formed in said body part to receive said plate edge-on, a slit-like recess formed in said body part and extending transversely of said slot on either side thereof, a wall of such recess at one side of said slot co-operating with an opposed wall of such recess at the other side of said slot and with said slot to provide a channel extending through said body part, and a bifurcated socket contact in said channel adapted to embrace said plate when inserted in said slot and to mate with said plug contact, such socket contact being formed from a single length of spring wire of smooth cross-sectional form by bending of such wire to provide two resilient inwardly bowed contact portions, said contact portions being adapted to be resiliently deformed into engagement with said plate upon insertion of said plate into said slot, said bowed portions of said socket contact sliding away from one another during such deformation while being laterally supported in the channel in which they are disposed, and having their front ends bearing against and sliding on said opposite walls of said channel.

3,048,812
ELECTRICAL CONNECTOR
Glen R. Heidler, Paoli, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed July 16, 1959, Ser. No. 827,602
2 Claims. (Cl. 339—252)



1. An electrical connector comprising, a thin generally flat flexible metallic body member having opposite first and second surfaces and a plurality of integral ribbon-like strips formed therein by substantially parallel slits extending through the thickness of and across said member but terminating short of its edges, said strips being formed in successive oppositely undulating patterns with contact forming peaks extending from said opposite surfaces, alternate strips having at least two peaks extending from said first opposite surface and at least one peak extending from said second opposite surface, the remaining strips having at least two peaks extending from said second opposite surface and at least one peak extending from said first opposite surface, said peaks being transversely aligned in a plane transversely across said body member at right angles thereto, said one peak of each of said strips being intermediate the said two peaks of said strip to provide self-centering of said connector, and said intermediate peaks of adjacent strips extending outwardly in opposite directions normal to said generally flat body member a greater distance than other peaks.

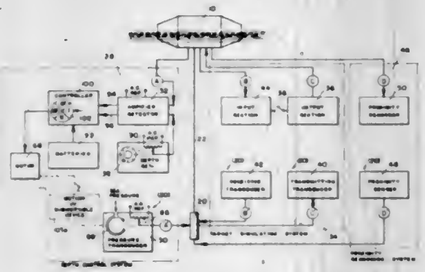
3,048,813
ACOUSTIC HOMING TORPEDO SCANNING SYSTEM
William Altar and Carl W. Helstrom, Pittsburgh, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 11, 1955, Ser. No. 487,722
7 Claims. (Cl. 340—3)



7. A pulsed active-acoustic underwater target detection system having, in combination: transmitting means including a transmitting transducer for projecting a pulse of acoustic energy at repetitive reference instants and in a directive pattern extending along a reference axis; receiving means including a segmented receiving transducer for detecting target-reflected acoustic energy at corresponding reception instants, said receiving transducer having a directive detection pattern extending along an acoustic axis, and said receiving means operating to convert resultant target-reflected energy to a pair of signals differing in phase substantially in accordance with target direction relative to said acoustic axis at said reception

instants; means for rotating said transducers at like angular velocity to effect scanning of an underwater region by said patterns; means for combining said pair of signals to provide a sum signal and a difference signal corresponding, respectively, to vectorial addition and subtraction of said pair of signals; and means for modifying and combining said sum and difference signals to provide a resultant signal substantially corresponding to that which would be obtained by trailing said acoustic axis relative to said reference axis to position said receiving transducer pattern in substantial alignment with the direction of the target at the time reflected acoustic energy is received therefrom; said last mentioned means comprising a phase-shifter to convert said difference signal to one which is in-phase with said sum signal, and means for varying the magnitude of said difference signal as a direct function of said angular velocity and of the time interval between corresponding reference and reception instants.

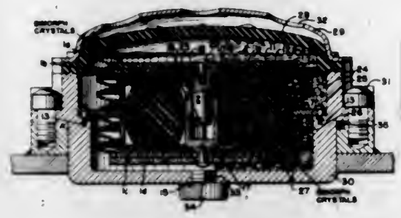
3,048,814
UNDERWATER TARGET SIMULATOR
Robert E. François, Mountlake Terrace, Wash., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 25, 1959, Ser. No. 801,979
5 Claims. (Cl. 340—4)



1. Underwater target simulator apparatus comprising; a floating buoy having a generally horizontal axis about which it may rotate on the water and a cable reel forming part of said buoy and rotatable therewith, a submersible device adapted to be suspended a desired distance below the surface of the water and above the bottom of the body of water and adapted to simulate a target and sense the miss distance of a missile directed thereat, a cable wound about said reel having one end affixed to the buoy and its other end affixed to said submersible device, pendulous means within the buoy rotatable relative thereto and about said axis including motor means carried thereby for applying torque to the buoy in either of opposite directions of rotation, whereby said submersible device may be raised or lowered in the water.

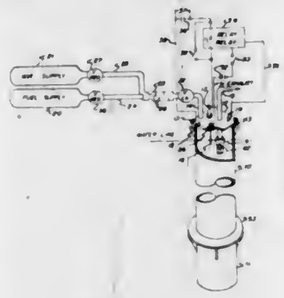
3,048,815
LOW FREQUENCY TRANSDUCER
Edward G. Thurston, Columbus, Ohio, and Donald W. Kuester, Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 5, 1952, Ser. No. 318,968
4 Claims. (Cl. 340—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A crystal hydrophone comprising a pair of circular parallel supported Bimorph ceramic crystal elements, a yieldable loading means extending transversely therebetween and axially thereof which is substantially rigid to signal energy effects, an axially expansible compliant peripheral supporting-and-masking means for said crystals and having a transverse cross-sectional area substantially coextensive therewith and connected therebetween in coaxial relationship with said loading means, and crystal bottoming suspension means disposed interiorly of said crystal supporting-and-masking means for preventing crystal damage under extereme signal load energy conditions,



and a helical spring element encircling said yieldable loading means for restoring the crystal elements to an initial position when the extreme signal load energy has subsided.

3,048,816
LOW FREQUENCY UNDERWATER SOUND GENERATION
Harold A. Lubnow, 1918 Dewitt, Panama City, Fla.
Filed Oct. 28, 1955, Ser. No. 543,637
5 Claims. (Cl. 340—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)

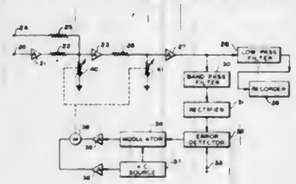


1. Apparatus for generating underwater low frequency compressional waves which utilizes successive explosions of a combustible fuel to resonate a column of water, comprising when in use an elongated tubular housing open at its bottom and defining and containing a column of water within a body of water, a plate covering the top end of the tubular housing to form a combustion zone, a pressure operated intake valve communicating with the combustion zone for admitting fuel thereto, an exhaust pipe extending into the combustion zone and having its distal end provided with a water-buoyant check valve for determining the height the water column rises in the tubular housing, an electric circuit, probe means positioned to be contacted by the rising column of water for completing the electric circuit, and means controlled by the electric circuit for intermittently igniting fuel in the combustion zone in timed relation with the rise of the water in the tubular housing, whereby the column of water oscillates at its natural period.

3,048,817
GAIN CONTROL AMPLIFIER
John P. Greening, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 16, 1958, Ser. No. 709,282
4 Claims. (Cl. 340—15.5)

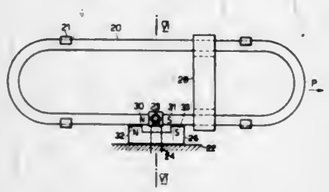
1. A seismic signal recording system comprising a seismometer to establish a first electrical signal representative

of vibrations incident thereon; an amplifier; a recorder; means to generate an alternating second electrical signal of amplitude which varies in a preselected manner and which is of a frequency different from the output signal of said seismometer when said seismometer is subjected to seismic vibrations; means to combine said first and second signals and to apply the combined signal to the input of said amplifier; first filter means connected between the output of said amplifier and said recorder to block signals of the frequency of said second signal and to transmit signals of the frequency of said first signal to actuate said recorder; means to adjust the gain of said amplifier comprising a source of reference direct potential, means to rectify an alternating signal, means to compare



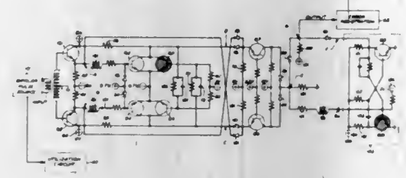
said direct potential with the output of said means to rectify, a multi-contact relay, a resistance network connected to said amplifier so that the gain thereof is a function of the resistance of said network, means connecting said network to said relay so that the resistance of said network is a function of the number of contacts of said relay which are open, and means responsive to said means to compare to adjust the number of said contacts which are open; and second filter means connected between the output of said amplifier and the input of said means to rectify to block signals of the frequency of said first signal and to transmit signals of the frequency of said second signal to energize said means to adjust, whereby the gain of said amplifier is a function of the amplitude of said second signal.

3,048,818
POSITION INDICATOR
Christof Burckhardt, Geneva, Richard Moser, Schlieren, and Josef Baumann, Zurich, Switzerland, assignors to Schweizerische Wagons- und Aufzugefabrik A.-G., Schlieren-Zurich, Schlieren, Switzerland
Filed July 16, 1958, Ser. No. 748,993
Claims priority, application Switzerland July 22, 1957
11 Claims. (Cl. 340—21)



1. A position indicator for controlling moved objects with only one degree of liberty, comprising magnetic storage elements having two remanent steady, polarization states, magnetic actuating elements movable with respect to said storage elements and operatively disposed with respect to said storage elements to produce, when passing a storage element in one direction, one of said remanent, steady, polarization states and, when passing in the opposite direction, the other of said remanent, steady, polarization states, and means to indicate at least one of said states as an electrical signal.

3,048,819
DETECTION AND MEASUREMENT OF ERRORS IN PULSE CODE TRAINS
George K. Helder, Plainfield, and John S. Mayo, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 5, 1960, Ser. No. 73,872
9 Claims. (Cl. 340—146.1)

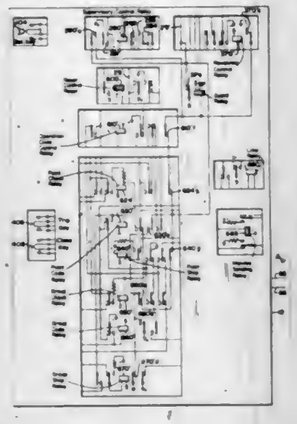


7. Apparatus for detecting the presence of errors in a pseudo-ternary train of pulses delimited in frames by periodically recurring framing pulses, each message pulse of which is of polarity opposite to that of the next preceding message pulse and each framing pulse of which is of the same polarity as the next preceding message pulse, comprising a bistable circuit having a pair of inputs for changing the state of equilibrium thereof and a pair of outputs, a pair of AND gates each having a pair of inputs and an output, means for conveying the negative pulses of said train to an associated input of one of said pair of AND gates and an associated input of said bistable circuit, means for conveying the positive pulses of said train to an associated input of the other of said AND gates and the other input of said bistable circuit, said means for conveying said pulses to said bistable circuit inputs each including a delay circuit postponing the arrival of said pulses by a period substantially equal to the duration of one of said pulses, means interconnecting the outputs of said bistable circuit with the remaining inputs of said AND gates, an OR gate having a pair of inputs connected to the outputs of said AND gates and having an output, means for registering said errors, and means interconnecting said register means and said output of said OR gate for preventing the registration of said framing pulses as errors.

3,048,820
SUPERVISORY CONTROL APPARATUS
Willard A. Derr, Pittsburgh, and William F. Cruess, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 31, 1957, Ser. No. 675,305
3 Claims. (Cl. 340—163)

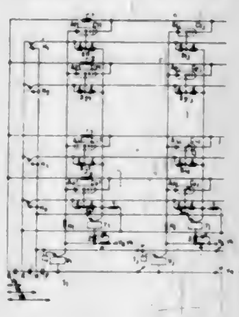
2. In a supervisory system adapted for remote control purposes having at least a first and second station, each of said stations including equipment for transmitting and receiving coded signal impulses over an interconnecting signal channel to selectively operate controlled units disposed at each station, each selective operation including the transmission by the initiating one of the stations of a group of impulses which identify the presently operable one of the units, the return by the other station of a group of check-back impulses which indicate the unit identified, the transmission by the initiating station of an operating signal, and the return of a signal indicating the operation has been performed, reset control means operable to restore the equipment to a normal reset condition, a guard relay operable after a predetermined time to effect operation of the reset control means, supervisory control relays operable only at the end of the selection and con-

trol codes to effect operation of the guard relay, and supervisory means operated by the receipt of selection-



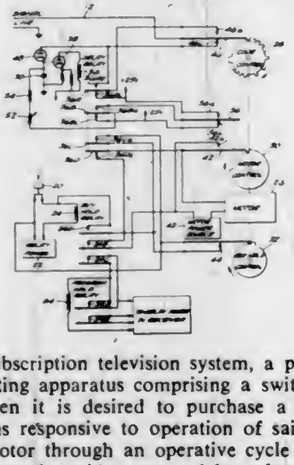
check and supervision signals within said predetermined time to prevent operation of the guard relay.

3,048,821
ELECTRONICALLY LOCKING SELECTION DEVICE
Pierre Burstow, Paris, and Claude Monin, Villennes-sur-Seine, France, assignors to Compagnie Industrielle des Telephones, Paris, France, a French corporation
Filed Mar. 21, 1958, Ser. No. 722,981
Claims priority, application France Apr. 4, 1957
13 Claims. (Cl. 340—166)



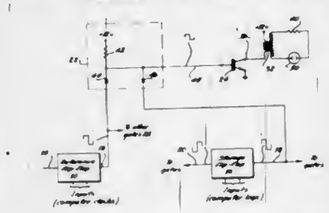
11. A selecting apparatus comprising a matrix of gaseous discharge tubes disposed in horizontal and vertical rows, each tube being provided with a plurality of electrodes including two main electrodes connected in a discharge circuit and an auxiliary firing electrode, the tubes situated in each common vertical row having one of their respective main electrodes connected to a common load circuit, and the tubes situated in a common horizontal row having their respective grids connected each to two resistance elements, first circuit means operatively connected to all the free ends of one of the two resistance elements associated with the grids of the tubes in a respective horizontal row, second circuit means operatively connected to all the free ends of the other of the two resistance elements associated with the grids of the tubes in a respective vertical row, first switch means in each first circuit means for selectively applying thereto, on the one hand, a first voltage which prevents firing of any tubes in the corresponding horizontal row and, on the other, a second voltage which enables firing of a preselected one of the tubes thereof, second switch means including a transistor in each common load circuit for selectively applying to the one main electrode of the tubes in a corresponding vertical row a firing voltage enabling firing of the tube to the grid resistance element of which is also applied said second voltage by a respective first switch means, third switch means including a transistor in each second circuit means for selectively applying thereto on the one hand, a first voltage which enables firing of a tube associated with its circuit upon application to its grid circuit of said second voltage by said first switch means and upon application to the one main electrode thereof of said firing voltage by said second switch means and, on the other, a second voltage which effectively provides a blocking voltage at the grid of a tube associated with its circuit, to the grid circuit of which is also applied said first voltage by a corresponding first switch means, means operatively connected with the discharge circuit of a respective tube for changing the first switch means associated therewith to apply to a corresponding first circuit means said first voltage upon firing of said tube, first control means for selectively energizing a preselected second switch means, second control means for selectively changing a preselected first switch means to apply to a corresponding first circuit means said second voltage, and connecting means operatively connecting the second switch means with the third switch means of a respective vertical row to change the associated third switching means to apply to said second circuit means said second voltage upon energization of the corresponding second switch means by said first control means to thereby effectively provide a blocking voltage at the grid of each tube in the vertical row associated with said third switch means, each transistor including a base, a collector and an emitter, each transistor of said second switch means being normally non-conducting and each transistor of said third switch means being normally conducting, and said connecting means operatively connecting the collector of the transistor in said second switch means with the base of the transistor in said third switch means in such a manner that upon actuation of a respective control means the transistor of the second switch means is rendered conductive and the transistor of the third means is rendered non-conductive.

3,048,822
MULTIPLE STATION RECORDING SYSTEM
Karl R. Wendt, Santa Monica, Calif., assignor, by mesne assignments, to Paramount Pictures Corporation, New York, N.Y., a corporation of New York
Filed Apr. 28, 1958, Ser. No. 731,288
3 Claims. (Cl. 340—167)



1. In a subscription television system, a program-purchase indicating apparatus comprising a switch which is operated when it is desired to purchase a program, a motor, means responsive to operation of said switch to drive said motor through an operative cycle including a source of power for said motor, a delay relay, a normally closed pair of contacts for said delay relay, a buy relay having a normally open pair of contacts connected between said motor source of power and said normally closed pair of contacts, said normally closed pair of contacts being connected to said motor, means responsive to said switch being operated to close said normally open pair of contacts whereby said motor commences to rotate, a cam-operated switch having normally open contacts connected between said motor power source and said motor, disc means mounted to be rotated by said motor, the periphery of said disc being shaped and positioned to close said cam-operated switch contacts during an operative cycle once said motor has rotated a predetermined amount, a code disc coupled to be driven by said motor, a source of potential, said delay relay having a further pair of normally closed contacts one of which is connected to said source of potential, a signal output terminal, a diode, switch means responsive to said code disc to connect the other of said delay relay contacts or said diode to said signal output terminal, a capacitor connected in series with said diode, an amplifier connected to the junction of said diode and capacitor, means for coupling said amplifier to said delay relay to operate said relay when said amplifier is enabled, and a variable resistance coupled across said capacitor for establishing the discharge time of said capacitor.

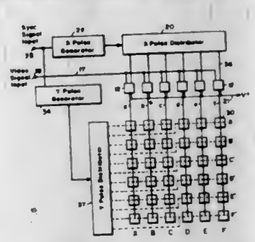
3,048,823
TRANSISTOR FLIP-FLOP INDICATOR CIRCUIT
Jack C. Smeltzer, Torrance, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 13, 1957, Ser. No. 678,015
4 Claims. (Cl. 340—173)



1. Circuit means for indicating the phase relationship between the outputs of a pair of synchronized phase bistable flip-flops, comprising: a pair of crystal diode rectifiers having anode and cathode elements, the cathode elements being connected one to each flip-flop output and the anode elements being connected to a common line; a source of positive potential; a resistor connected between said positive potential source and the common line; a current multiplication transistor having a base electrode connected to the common line, an emitter electrode connected to ground, and a collector electrode; a step-up transformer having a primary winding and a secondary winding, the primary winding being connected between said positive potential source and the collector electrode of said transistor; and an ionizable lamp indicator and protective resistor therefor connected serially across the secondary winding of said transformer.

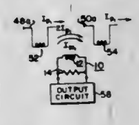
3,048,824
SIGNAL DISTRIBUTION SYSTEM FOR DISTRIBUTING INTELLIGENCE SIGNALS FROM A SINGLE SOURCE TO A PLURALITY OF UTILIZATION CHANNELS
Francis T. Thompson, Penn Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 10, 1958, Ser. No. 747,799
8 Claims. (Cl. 340—173)

3. In a system for time sequentially distributing an information-bearing signal to a plurality of channels, a plurality of signal storage elements, each having first and second terminals, with the first terminal of each storage element being connected to a separate one of said channels, pulse means for applying time spaced switching pulses successively to the second terminals of said storage elements, means for supplying information-bearing signals, a plurality of unilaterally conductive devices, each of said devices being connected between said means for supplying signals and the first terminal of a different one of said signal storage elements, bias means for applying



a bias potential to each of said devices to normally maintain said devices nonconductive, said storage elements being arranged to present a relatively low impedance to said switching pulses so that said pulses are applied therethrough to said unilaterally conductive devices for unblocking said devices to pass information representative charge to said storage elements, each of said channels comprising signal utilization means for continuously producing an output effect indicative of the charge stored by the corresponding storage element without dissipating said charge.

3,048,825
COMPUTER OPERATING METHOD AND APPARATUS
Fred W. Schmidlin, Redondo Beach, John N. Cooper, Carmel, and Eugene C. Crittenden, Jr., Monterey, Calif., assignors to Space Technology Laboratories, Inc., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,322
9 Claims. (Cl. 340—173.1)



4. In a method of operating an array of superconductive memory cells, each arranged to be interrogated upon the coincidence of signals from a plurality of interrogating circuits, and wherein each cell comprises a circuit loop capable of sustaining therein a circulating memory current and including a superconductive switching portion and a superconductive inductance portion, and wherein the switching portion is associated with a fast switching current characteristic and a threshold current characteristic that are each a function of the temperature of said switching portion, with the fast switching current characteristic having a current level at any given temperature that is greater than the current level associated with the threshold current characteristic at the given temperature, the improvement which comprises the steps of: maintaining the memory cell array at a temperature at which the ratio of said threshold current level to said fast switching current level is defined by the relationship:

$$\frac{I_t}{I_s} \geq \frac{2N-1}{2N+1}$$

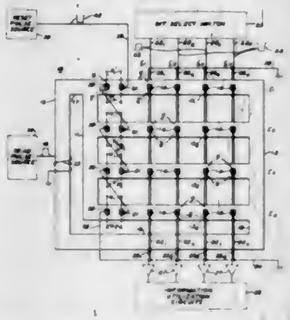
where I_t is the threshold current level, I_s is the fast switching current level, and N is the number of coincident interrogating circuits associated with each of said memory

cells; establishing in one of the cells to be interrogated a persisting circulating memory current; and subjecting each of the cells to be interrogated to a coincidence of interrogating pulses of equal magnitude, as received by the interrogated cell, and where each pulse magnitude received by the interrogated cell is defined by the simultaneous inequalities:

$$Np+m>I_s$$
$$p+m<I_s$$
$$Np-m<I_s$$

where p is equal to the magnitude of each interrogating pulse as received by the interrogated cell, and m is equal to the magnitude of the memory current in the interrogated cell.

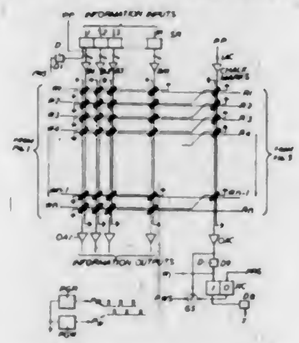
3,048,826
MAGNETIC MEMORY ARRAY
Robert M. Averill, Jr., Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1960, Ser. No. 79,686
15 Claims. (Cl. 340—174)



3. A magnetic memory array comprising a rectangular plate of a magnetic material having substantially rectangular hysteresis characteristics, said plate being apertured to present a pair of side rails having a plurality of transverse cross legs arranged therebetween, said cross legs having a plurality of coordinately arranged information bit apertures therein, said plate being further apertured to present a flux drive leg; a plurality of bit select conductors threading, respectively, corresponding bit apertures of said plurality of cross legs; inductive control means coupled to each of said plurality of cross legs for simultaneously and selectively controlling flux switchings in said cross legs, inductive drive means for inducing a read drive flux in said flux drive leg, and a plurality of sensing conductors threading, respectively, corresponding bit apertures of said plurality of cross legs.

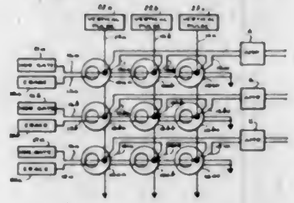
3,048,827
INTELLIGENCE STORAGE EQUIPMENT WITH INDEPENDENT RECORDING AND READING FACILITIES
Esmond Philip Goodwin Wright, Desmond Sydney Ridler, and Robert Grimmond, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Jan. 11, 1956, Ser. No. 558,563
Claims priority, application Great Britain Jan. 14, 1955
12 Claims. (Cl. 340—174)

1. Data processing equipment which comprises a number of groups of storage elements, each element having two stable electrical states, a set of control wires, there being one individual to each group, a set of input wires, there being one for each plurality of corresponding elements in the several groups, whereby a word presented to all of said groups in parallel over said input wires can be recorded by energizing the control wire individual to the group in which said recording is to be effected to shift the storage elements of that group to a state characteristic of one of the digits of the word to be recorded, a distributor comprising a plurality of units, one of each group of storage elements, each said unit being connected to a respective one of said control wires and adapted when operated to energize said control wire, means responsive to reception of a word over said input wires to cause said



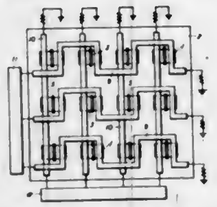
distributor to energize the control wire corresponding to the group of storage elements in which said word is to be recorded, and means also responsive to reception of a word over said input wires simultaneously to transfer the operated condition in said distributor to the unit thereof corresponding to the group of storage elements in which the next word is to be recorded.

3,048,828
MEMORY DEVICE
Ottavio C. Cataldo, Suffolk, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Oct. 12, 1959, Ser. No. 846,034
4 Claims. (Cl. 340—174)



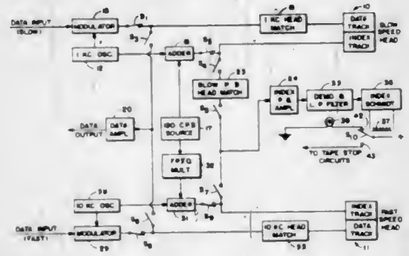
2. The method of storing information in a magnetic memory device having a ferrite core having at least first and second aperture therein, said apertures creating a first leg in said core between the outer edge of said core and said first aperture, a second leg between the outer edge of said core and said second aperture and a third leg between said first and second apertures, a first electrical conductor threaded through said first aperture, a second electrical conductor threaded through said second aperture and a third electrical conductor threaded through both of said apertures, means for setting up selected flux patterns in said core, said means including signal sources connected to each of said wires in specific sequence, said method including the step of erasing the existing magnetic state of said core by a current pulse in said first conductor to establish a continuous magnetic flux around said first aperture in one direction through said first leg and in the same direction in said second and third legs, and the step of reversing the direction of magnetic flux in all three three legs by simultaneous current pulses in said second and third conductors, the magnetic effects of said second and third electrical conductors cancelling each other around said second aperture.

3,048,829
MAGNETIC DATA STORAGE DEVICES
Edward Michael Bradley, Stevenage, England, assignor to International Computers and Tabulators Limited
Filed Nov. 17, 1959, Ser. No. 853,520
Claims priority, application Great Britain Dec. 24, 1958
8 Claims. (Cl. 340—174)



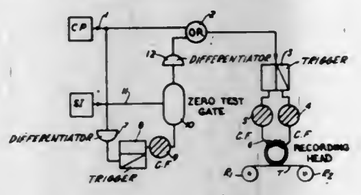
1. A bistable device including a pair of spaced apart areas of thin ferromagnetic film lying in the same plane, each area being effective when magnetised to produce a magnetic field in the space between the areas; means for driving each of said spaced apart areas independently to a selected one of two opposite states of magnetic saturation; a magnetic element comprising an area of thin ferromagnetic film having two opposite states of magnetic remanence positioned between said spaced apart areas and linked with the magnetic fields produced by both spaced apart areas, said magnetic fields being effective to switch said magnetic element to a corresponding remanent state from the opposite remanent state only if both areas are concurrently in like states of saturation and the magnetic fields being ineffective to switch said magnetic element if said spaced apart areas are concurrently in unlike states of saturation; and means coupled to said magnetic element and responsive to switching of the magnetic element to produce an output signal.

3,048,830
TAPE RECORDING SYSTEM AND METHOD
Maurice B. Haslam, Waltham, and Oliver C. Miles, Needham Heights, Mass., assignors to Avco Corporation, a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 17,831
11 Claims. (Cl. 340—174.1)



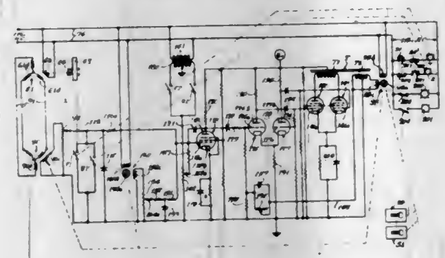
1. In a recording system requiring playback of an index signal applied to a recording medium at a given speed at playback speeds ranging between predetermined upper and lower limits, the combination comprising: a first source of index signals and a second source of index signals, the ratio of frequency of said first source of index signals to said second source of index signals being related to the ratio of said upper limit of playback speed to said lower limit of playback speed; means for algebraically adding said first and second index signals; transducing means for recording said added index signals on said medium at said given speed; and playback means for said index signals, said playback means having a bandwidth sufficient to pass at least one of said index signals over the entire range of playback speeds between said upper and lower limits.

3,048,831
MAGNETIC READING AND RECORDING
John Joshua Sharp, Stevenage, England, assignor to International Computers and Tabulators Limited, London, England, a British company
Filed Jan. 25, 1957, Ser. No. 636,393
Claims priority, application Great Britain Feb. 6, 1956
7 Claims. (Cl. 340—174.1)



2. Apparatus for recording binary signals in discrete areas of a magnetizable record including a magnetic recording head positioned adjacent the record; an arrangement of bridge connected diodes; a fixed voltage source connected across one diagonal of the bridge; a winding on the recording head and a variable voltage source connected in series across the other diagonal of the bridge; a bistable trigger circuit controlling said variable voltage source and having applied thereto a first pulse corresponding to each binary signal to be recorded and a second pulse, delayed relatively to said first pulse, corresponding to each binary signal of one kind, said pulses each causing switching of said trigger circuit and said variable voltage assuming one or other of two values dependent upon the state of the trigger such that current flows through said winding in one direction or the opposite direction to cause the head to subject the record to a magnetic flux of substantially constant magnitude, the direction of which is dependent on the state of the trigger circuit; and means to produce relative motion between the head and the record to bring said discrete areas in turn under the influence of the flux whereby binary signals of one kind are recorded by two reversals of magnetic state and binary signals of the other kind are recorded by one reversal of magnetic state within a discrete area.

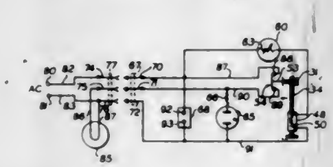
3,048,832
POSITION INDICATING MEANS FOR MACHINE TOOLS
Arthur O. Fitzner, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Filed Dec. 12, 1957, Ser. No. 702,337
11 Claims. (Cl. 340—187)



9. In apparatus for indicating at a remote location th position of a machine tool element movable in opposit directions, the combination comprising, a reversibl motor, a numerical indicator driven by said motor, mean for producing an alternating current error signal havin one phase or a second phase displaced 180° accordin to the direction of, and proportional in amplitude to th difference between the position of the tool element an

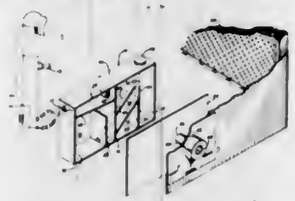
the reading of said indicator within a given range, means connected to receive said error signal for controlling the direction and speed of said motor according to the phase and amplitude, respectively, of said error signal so that the reading of said indicator is changed in correspondence with displacements of said tool element; and means for selectively setting said indicator to a desired reading independently of the position of said tool element, said last-named means including a center tapped transformer having a primary winding excited with alternating current and having a center tapped secondary winding with two output terminals, and means for simultaneously disconnecting said error signal from said controlling means and connecting the alternating current signal appearing on a selected one of said output terminals to said controlling means so that an artificial error signal of one phase or displaced 180° in phase is supplied to said controlling means to energize said motor and thereby drive said indicator to a desired reference reading.

3,048,833
PHOTOELECTRIC CONTROL DEVICE FOR STREET LIGHTS
George W. Bernheim, Bronx, N.Y.
(% Vericontrol Associates, 72 Main St., Yonkers, N.Y.)
Filed May 13, 1960, Ser. No. 28,961
2 Claims. (Cl. 340—228)



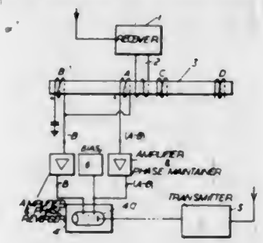
1. A photoelectric controlled device for a street light assembly having a terminal socket for power supply and illuminating lamp circuits, comprising a base, a translucent canopy mounted over said base, a stopper removably mounted in an aperture in said canopy, and switching means on said base comprising in combination: a plurality of prongs extending from said base for engaging in said socket, one of said prongs providing a first terminal of the illuminating lamp circuit, two others of said prongs providing second and third other terminals of the power supply circuit, a switch having two fixed contacts connected respectively to the first and second terminals, said switch having a movable contact normally bridging the fixed contacts to close the switch, a pushbutton connected to the movable contact for moving the same to open the switch, a neon indicator lamp connected between the first and third terminals and supported adjacent the canopy, said indicator lamp being energized in a circuit including the fixed and movable contacts; a bendable bimetallic element, an adjustable screw carried at one end of said bimetallic element in axial alignment with said stopper and aperture, said screw having one end abutting said pushbutton and controlling movement thereof when the bimetallic element bends, a resistance heater electrically insulated from said bimetallic element and mounted thereon for bending the bimetallic element when the heater is energized, said heater having one end connected to said third terminal, and a photoconductive cell supported adjacent to the canopy, said cell having an internal resistance responsive to impingement of ambient light thereon passing through the canopy, said cell being connected to the other end of the resistance heater and to the said second terminal, whereby adjustment of said screw by a tool inserted through said aperture while the canopy is on the base to turn said indicator lamp on or off determines the intensity of light required to pass through the canopy to the cell for effecting closing or opening of the switch and said illuminating lamp circuit.

3,048,834
SIGNAL DEVICE
William L. McGrath, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed June 2, 1958, Ser. No. 739,150
6 Claims. (Cl. 340—240)



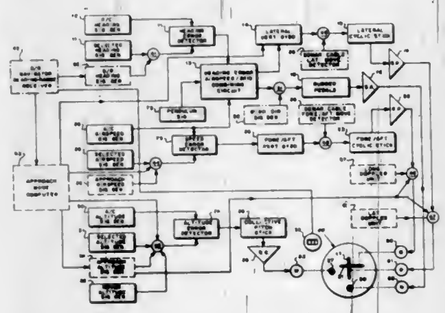
1. Apparatus for indicating the presence of a pressure drop of a predetermined magnitude through a filter interposed in a gas stream for the purpose of accumulating solid material carried by the gas stream, comprising signal means; and signal actuation means including a shiftable housing, a fluid system in said housing, means positioned within said housing providing a path of flow for said fluid system by virtue of siphon action, and means sensing a change in pressure of the gas stream flowing through the filter, said last-mentioned means being operative in response to a predetermined pressure change to effect, in conjunction with said flow path means, transfer of substantially the entire body of fluid in said fluid system by siphon action within the housing to shift the housing and actuate the signal means.

3,048,835
TRANSPONDER DEVICES FOR USE IN SECONDARY RADAR SYSTEMS
Leonard Perkins, Twickenham, England, assignor to A. C. Cossor Limited, London, England
Filed Jan. 20, 1958, Ser. No. 710,031
Claims priority, application Great Britain Nov. 12, 1957
7 Claims. (Cl. 343—6.8)



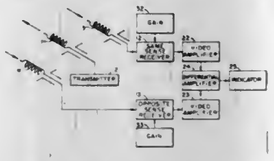
1. In a gating system to be controlled by a pair of control pulses spaced apart by a fixed time interval, the combination of a delay-line, means applying said control pulses to an input point on said line, means deriving a pair of uni-directional output pulses from said line at first and second take-off points spaced apart a distance corresponding to said time interval, said output pulses being of opposite polarity means combining said output pulses to produce a resultant uni-directional pulse of an amplitude proportional to the difference between the amplitudes of said output pulses, and a polarity determined by the output pulse of greater amplitude, an electron valve biased to cut-off and having a control circuit, and means applying said resultant pulse to said control circuit.

3,048,836
HELICOPTER INTEGRATED DIRECTOR EQUIPMENT
Louis S. Guarino, Hatboro, and William M. Ogden, Newtown Square, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Apr. 26, 1961, Ser. No. 105,000
12 Claims. (Cl. 343—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



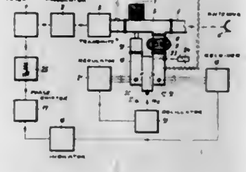
1. A helicopter integrated flight command system for presenting flight directions to a helicopter pilot for maintaining the helicopter on a programed flight pattern from takeoff to a final hover position, comprising in combination: a centrally located flight director, said centrally located director comprising, vertical pointer means, horizontal pointer means, altitude bug means, rudder bug means, and range indicator means; first means generating a signal proportional to distance from a hover position connected to said range indicator means whereby said range indicator means indicates said distance from a hover position; second means providing a signal proportional to deviation from a desired altitude connected to said altitude bug means whereby said altitude bug means indicates said altitude deviation; third means generating a signal proportional to deviation from a desired airspeed connected to said horizontal pointer means whereby said horizontal pointer means indicates said airspeed deviation; combining circuit means; input means connected to said combining circuit means providing an input to said combining circuit means proportional to airspeed of the helicopter; said combining circuit means including first means providing a first signal and a second signal representative of deviation from a desired heading of the helicopter wherein said first signal of said combining circuit decreases as said airspeed increases and said second signal of said combining circuit increases as said airspeed increases, said combining circuit including second means providing a third signal and a fourth signal representative of skid of the helicopter wherein said third signal of said combining circuit decreases as said airspeed increases and said fourth signal of said combining circuit increases as said airspeed increases, first circuit means connected in said combining circuit means providing a first output signal proportional to the algebraic sum of said first and fourth signals of said combining circuit means, second circuit means connected in said combining circuit means providing a second output signal proportional to the algebraic sum of said second and third signals of said combining circuit; conductor means connecting said first output signal to said rudder bug means and said second output signal to said vertical pointer means whereby said heading deviation and said skid of the helicopter are indicated as interrelated functions of airspeed.

3,048,837
SIGNAL DISPLAY SYSTEM
Gerald E. Hart, Forest Heights, Md.
Filed Oct. 4, 1950, Ser. No. 188,459
8 Claims. (Cl. 343—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a rotationally polarized radiation energy receiver, a pair of antenna means respectively sensitive to rotationally polarized radiation energy of one sense and of opposite sense, means connected to said pair of antenna means for deriving a voltage having an amplitude and polarity proportional to the difference between received signal energy having a first rotational sense of polarization and received signal energy having a second rotational sense of polarization opposite to the first, and received signal display means controlled by the amplitude and polarity of said voltage to produce an indication characteristic of said received signal.

3,048,838
PULSE RADAR SYSTEM WITH ZERO DISTANCE CALIBRATION
Max Bretscher, Zurich, Switzerland, assignor to Albiswerk Zurich A.G., Zurich, Switzerland, a corporation of Switzerland
Filed Dec. 11, 1958, Ser. No. 779,730
Claims priority, application Switzerland Jan. 9, 1958
7 Claims. (Cl. 343—17.7)



1. A pulse radar system, comprising a radar antenna, a pulse transmitter having an exit connected with said antenna, a receiver having an entrance connected to said antenna at a location between said transmitter exit and said antenna, a TR-switch having a spark gap bridging said receiver entrance in response to pulses passing from said transmitter exit to said antenna, and zero-distance calibrating means for instantaneously passing a portion of the transmitter energy to said receiver to serve as a zero-distance reference signal, said means including a pulse transmitting line extending between said transmitter exit and said receiver in circumventing relation to said spark gap.

3,048,839
SURVIVOR LOCATOR SYSTEM
Frank A. Hignutt, Robert F. Hignutt, and Henry L. Dequasie, Millville, N.J., assignors to Delaware Valley Electronics Corporation, Millville, N.J., a corporation of New Jersey
Filed Apr. 1, 1955, Ser. No. 498,612
6 Claims. (Cl. 343—100)

1. A system for determining the bearing and range of a plurality of substations with reference to a locator station comprising

a plurality of transceiver units each of which is located at one of said substations,

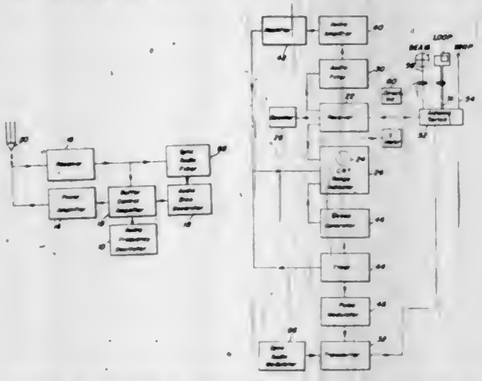
a locator station spaced from said substations,

each of said transceiver units including a first transmitter adapted to broadcast a first signal pattern and a second signal pattern both said first and said second signal patterns being a train of signals having a first carrier frequency, said first signal pattern being substantially different than said second signal pattern,

said locator station including a second transmitter adapted to broadcast a third signal pattern and a fourth signal pattern, both of said third and said fourth signal patterns having a second carrier frequency different from said first carrier frequency, said third signal pattern being a train of signals having a repetition rate equal to that of said second signal pattern broadcast by said first transmitter, said fourth signal pattern being a second carrier frequency signal, each of said transceiver units including a first receiver adapted to receive signals having said second carrier frequency,

said locator station including a second receiver adapted to receive signals having said first carrier frequency,

antenna means at said locator station responsive to said first signal pattern broadcast by said first transmitter to provide a determination of the bearing of each of said substations with respect to said locator station,



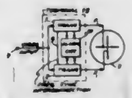
coupling means at each of said transceivers for responsively coupling said first transmitter to said first receiver whereby each signal of said third signal pattern broadcast by said second transmitter when received by said first receiver will cause said first transmitter to broadcast a corresponding return signal thereby forming said second signal pattern,

range means at said locator station responsive to the elapsed time between the broadcast by said second transmitter of one of said signals of said third signal pattern and the receipt at said second receiver of the corresponding one of said signals of said second signal pattern to provide an indication of the distance between said locator unit and each of said substations,

and synchronizing means to provide said fourth signal pattern broadcast by said second transmitter at said locator station and to cause said fourth signal to substantially synchronize the phase of said first signal patterns at each of said substations.

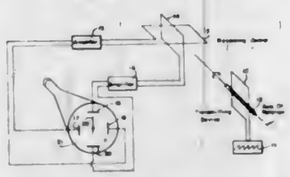
3,048,840
COMMUNICATION SYSTEM
Robert C. Ferrar, Plainfield, and Heyward A. French, Ridgewood, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Mar. 6, 1956, Ser. No. 569,806
19 Claims. (Cl. 343—100)

6. A communication system providing reliable and uninterrupted service comprising a source of intelligence, a pair of full-time operating transmitters each having a carrier signal of the same frequency, means coupling said source to each of said transmitters to simultaneously modulate each of said carrier signals with said intelligence, a pair of full-time operating receivers, means to establish a first signal wave path between one of said transmitters and one of said receivers, means to establish a second signal wave path between the other of said transmitters



and the other of said receivers, said transmitters exciting said first and second paths simultaneously and inphase with said modulated carrier signals, and an output means coupled to each of said receivers to provide an output signal having a given amplitude when the transmitters and the receivers coupled to said paths operate independently of each other and an output signal having a given gain over said given amplitude when the transmitters and receivers coupled to said paths operate simultaneously.

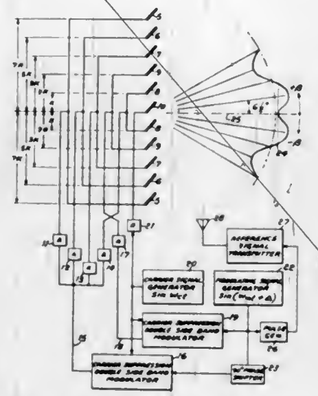
3,048,841
REMOTE POSITION INDICATOR AND AIRCRAFT GUIDANCE SYSTEM
Louis W. Parker, 28 Polo Road, Great Neck, N.Y.
Filed Jan. 13, 1958, Ser. No. 708,516
5 Claims. (Cl. 343—101)



1. A telemetering device comprising transmitting coil means, receiving coil means located at a position remote from and in substantially axial alignment with said transmitting coil means, the remote relative position of said transmitting and receiving coil means being linearally variable along said axis, a substantially sawtooth energization source coupled to said transmitting coil means whereby said transmitting coil means produces a magnetic field which periodically changes relatively slowly in one direction away from a datum field level and thereafter returns relatively rapidly to said datum field level in an opposite direction, said receiving coil means being located in said field whereby said field, periodically changing in opposite directions at different rates, induces a relatively small magnitude pulse of one polarity and a larger magnitude pulse of opposite polarity in said receiving coil means, means for selectively shifting the relative angular positions of said transmitting coil means and receiving coil means in accordance with a parameter being monitored, and indicator means coupled to said receiving coil means, said indicator means including means responsive to at least said larger magnitude pulse for giving a characteristic indication of said parameter being monitored.

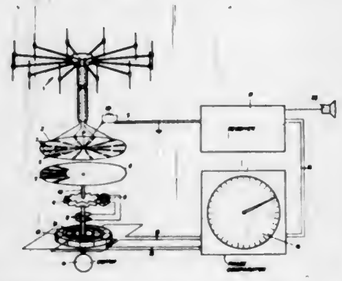
3,048,842
INSTRUMENT LANDING SYSTEM
Ernest G. Parker, Morristown, Mark A. Karpeles, West Orange, and Richard W. Craine, Passaic, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Jan. 8, 1959, Ser. No. 785,667
6 Claims. (Cl. 343—108)

4. In glide path apparatus for an instrument landing system, a beacon comprising a plurality of pairs of antennas symmetrically disposed about a horizontal plane, each pair energized by a single sideband of modulated carrier signals and an antenna element energized by carrier signals and located in said horizontal plane between the



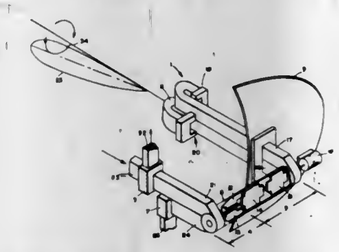
antennas of at least one of said pairs, the beacon producing a radiation pattern of modulated carrier frequency signal in which modulation phase at angles above and below said horizontal plane vary in the same manner with the absolute value of said angles.

3,048,843
CIRCULAR ANTENNA ARRAY SYSTEM SCANNING SWITCH
Fritz Steiner, Pforzheim, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 18, 1959, Ser. No. 794,014
Claims priority, application Germany Feb. 22, 1958
11 Claims. (Cl. 343—113)



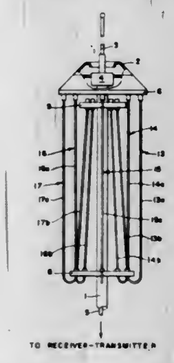
1. A scanning switch comprising a stator having an outer portion and an inner portion, a first group of segments radially positioned about said outer portion and spaced from each other, a second group of segments corresponding in number to the segments of said first group and aligned therewith, one of said group of segments having their segments interconnected, said second group of segments radially positioned about said inner portion and spaced from said first group of segments and from each other, a plurality of input lines equal in number to the number of segments in a group, means to connect said input lines with the corresponding segment of one of said groups, an output line, means to connect an output line with all of the segments of the other group, a rotor having a radially positioned rotor segment adapted to be aligned progressively with said segments of said first and second groups as the rotor is rotated and positioned in a coupling relation thereto, said rotor segment bridging the space between said segments of said first and second groups to provide coupling therebetween, and means for rotating said rotor to provide successive and retrogressive coupling of said input lines to said output line.

3,048,844
RADIANT ENERGY SCANNER
Robert M. Ashby, Pasadena, Calif., assignor to North American Aviation, Inc.
Filed Aug. 29, 1956, Ser. No. 606,909
16 Claims. (Cl. 343—777)



9. In a radiant energy scanner, a waveguide for receiving a linearly polarized wave, a fixed 90° phase shifter located in said waveguide and oriented at 45° with respect to said linearly polarized wave, a rotatable 90° phase shifter located in said waveguide, two waveguide takeoffs orthogonally located with respect to each other and connected to receive the outputs of said rotatable 90° phase shifter, a first feedhorn connected to receive the output of one of said takeoffs, a second feedhorn connected to receive the output of the other of said takeoffs, a reflector, said feedhorns being located laterally and vertically apart substantially at the focal point of said reflector.

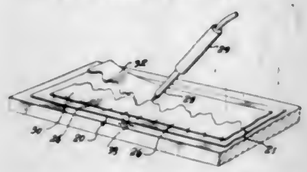
3,048,845
MECHANICALLY RIGID COUNTERPOISE STRUCTURE
Rudolf Becker, Berlin-Zehlendorf, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Apr. 13, 1960, Ser. No. 22,008
Claims priority, application Germany Apr. 21, 1959
4 Claims. (Cl. 343—830)



1. A broad band electrical blocking device for a broad band vehicle antenna having an elongated conductor, comprising: a conductive disk supported by said conductor; a plurality of hairpin-shaped wires each having first and second ends and a bend located substantially centrally with respect to said ends, said conductive disk supporting the first end of every wire in symmetrical circular relationship to said conductor and the wire portions between said bends and said second ends of said wires being arranged in frusto-conical configuration with decreasing diameter toward said second ends; an insulating disk positioned below said conductive disk, and means for

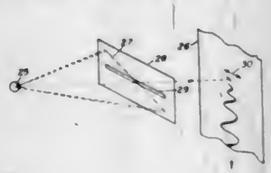
attaching said second ends of said wires to said insulating disk in symmetrical relationship with respect to said conductor and said first ends supported by said conductive disk.

3,048,846
METHOD FOR PROCESSING SEISMOGRAMS
Lincoln A. Martin, 1305 Rubio, Altadena, Calif.
Filed May 9, 1960, Ser. No. 27,703
8 Claims. (Cl. 346—1)



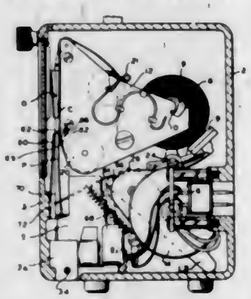
1. The method of converting a graphical trace seismogram into a variable area seismogram with corrected time base, said method comprising superposing a sheet of meltable plastic material and the graphical trace seismogram, moving a heated stylus in contact with said sheet along a path that corresponds to the graphical trace to divide the sheet into respective positive and negative variable area records, relatively moving the sheet longitudinally of the graphical trace during said movement of the stylus, and controlling the magnitude of said relative movement to correct the time base of the records so produced.

3,048,847
NONSYMMETRICAL SEISMIC RECORDING
Holloway H. Frost and Stanley N. Heaps, Dallas, Tex., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Aug. 24, 1959, Ser. No. 835,483
10 Claims. (Cl. 346—1)



1. A system for recording a time variable function which comprises means for moving a record receiving chart at substantially uniform speed past a recording point, and recording means at the recording point having connections for application thereto of said time variable function and being responsive thereto for producing a line indication on said chart at quiescent points corresponding to quiescent portions of said function and for producing line indications of excursions from said quiescent points which are of different widths for slopes of one sense than for slopes of the opposite sense.

3,048,848
METHOD AND APPARATUS FOR CHART RECORDING
Richard W. May, Lexington, Mass., assignor to The Rust Industrial Company, Inc., Manchester, N.H., a corporation of New Hampshire
Filed Jan. 8, 1959, Ser. No. 785,709
3 Claims. (Cl. 346—78)



1. An improved chart recording apparatus including a metering device, a pointer pivotally mounted in the metering device and responsive to a change in values observed by the metering device to move through a circular arc of travel, said pointer being displaceable in all positions of arcuate travel along planes passing through and coinciding with the axis of circular travel, a pressure sensitive strip recording chart mounted in the recording apparatus, means for continuously moving the chart in close proximity to the pointer, said moving means including take-up and take-off reels and a curved member arranged therebetween extending across said chart and supporting said chart substantially along a line only which is perpendicular to said chart, a striker mechanism including an edge arranged substantially parallel to said curved supporting member, with said pointer being arranged between said edge and said chart, said striker mechanism being constructed and arranged to periodically displace the edge against the pointer and the pointer against the chart with a percussive force thereby to produce a non-perforating, point-shaped mark only on that portion of said chart which is in linear contact with said curved supporting member.

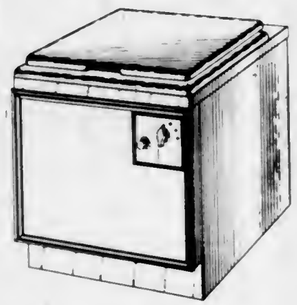
DESIGNS

AUGUST 7, 1962

193,324
SWIM SUIT
Mortimer J. Solomon, 1370 Broadway, New York, N.Y.
Filed Jan. 29, 1962, Ser. No. 68,560
Term of patent 3½ years
(Cl. D3—17)



193,325
INCINERATING TOILET
Donald P. Frankel, Walworth, Wis., assignor to La Mere Industries, Incorporated, Walworth, Wis., a corporation of Delaware
Filed Oct. 18, 1961, Ser. No. 67,150
Term of patent 14 years
(Cl. D4—5)



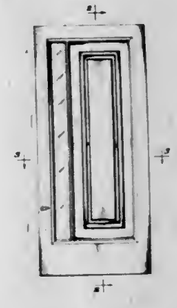
193,326
CONVERTIBLE CRIB
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Continuation of applications Ser. No. 59,030, Jan. 13, 1960, and Ser. No. 59,031, Jan. 13, 1960. This application June 22, 1961, Ser. No. 65,688
Term of patent 14 years
(Cl. D5—5)



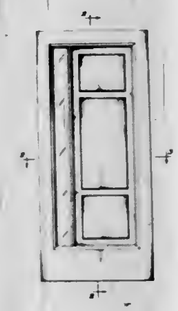
193,327
MODULAR UNIT FOR GRILLE PANELS
Richard Harvey, 66 Denton Ave., Lynbrook, N.Y.
Filed May 15, 1961, Ser. No. 65,156
Term of patent 14 years
(Cl. D13—1)



193,328
DOOR
Robert F. Thompson, Bothell, Wash., assignor to Simpson Timber Co., Seattle, Wash., a corporation of Washington
Filed Mar. 12, 1962, Ser. No. 69,203
Term of patent 14 years
(Cl. D13—1)



193,329
DOOR
Robert F. Thompson, 19105 107th Place NE., Bothell, Wash.
Filed Mar. 13, 1962, Ser. No. 69,243
Term of patent 14 years
(Cl. D13—1)



193,330
TRUCK
Ralph G. Rutman, Allentown, Pa., assignor to Mack Trucks, Inc., Plainfield, N.J., a corporation of New York
Filed June 9, 1961, Ser. No. 65,537
Term of patent 14 years
(Cl. D14—3)



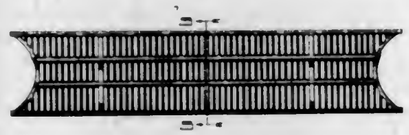
193,331
AUTOMOBILE BUMPER GUARD
Eli L. Tarazi, 4436 Franklin Ave., Hollywood, Calif.
Filed July 10, 1961, Ser. No. 65,866
Term of patent 7 years
(Cl. D14—6)



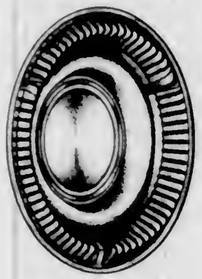
193,332
STEP FOR A TRUCK
Lee J. Crain, Bakersfield, Calif., assignor to Superior Industries, Inc., North Hollywood, Calif., a corporation of California
Filed July 10, 1961, Ser. No. 65,870
Term of patent 14 years
(Cl. D14—6)



193,333
AUTOMOBILE GRILLE
Eugene Bordinat, Jr., Bloomfield Hills, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Jan. 31, 1962, Ser. No. 68,586
Term of patent 7 years
(Cl. D14—18)



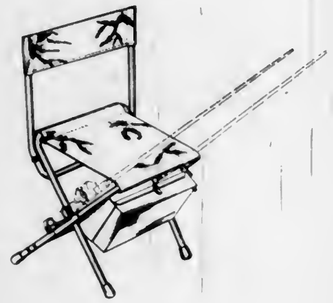
193,334
WHEEL COVER
Irvin W. Rybicki, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 13, 1962, Ser. No. 68,807
Term of patent 7 years
(Cl. D14—30)



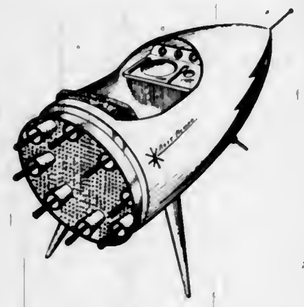
193,335
WHEEL COVER
Irvin W. Rybicki, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 13, 1962, Ser. No. 68,808
Term of patent 7 years
(Cl. D14—30)



193,336
FISHERMAN'S CHAIR
Glenn L. Batie, Orient, Edmond C. Fuerst, Sr., Lenox, and Virgil U. Speed, Orient, Iowa
Filed Aug. 28, 1959, Ser. No. 57,354
Term of patent 14 years
(Cl. D15—1)



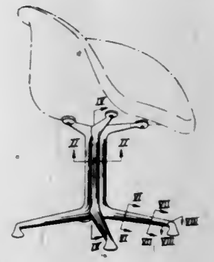
193,337
CHILD'S CHAIR
Nina A. Lebidine, 21 Randolph Road, Woodbury, N.J.
Filed Jan. 22, 1960, Ser. No. 59,140
Term of patent 3½ years
(Cl. D15—1)



193,338
CHAIR
Gene S. Tepper, San Francisco, Calif., assignor to Michael Saphier Associates Inc., New York, N.Y., a corporation of New York
Filed Sept. 12, 1960, Ser. No. 62,104
Term of patent 3½ years
(Cl. D15—1)



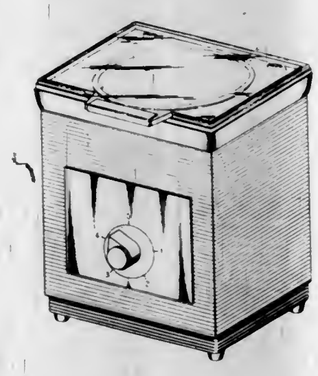
193,339
FURNITURE BASE
Charles Eames, Venice, Calif., assignor to Herman Miller, Inc., Zeeland, Mich., a corporation of Michigan
Filed May 23, 1961, Ser. No. 65,286
Term of patent 14 years
(Cl. D15—1)



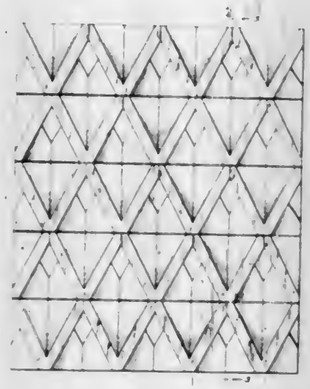
193,340
STACKING CHAIR
Carl W. Sundberg and Montgomery Ferar, Southfield, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed Mar. 5, 1962, Ser. No. 69,088
Term of patent 14 years
(Cl. D15—1)



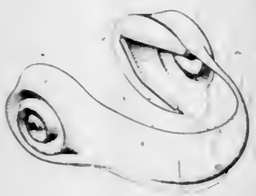
193,341
CENTRIFUGE
Frank I. Fuller, Menlo Park, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed Aug. 30, 1960, Ser. No. 61,955
Term of patent 14 years
(Cl. D16—2)



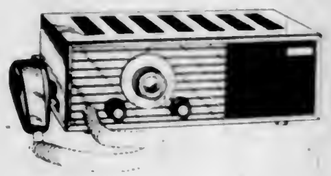
193,342
BUILDING WALL
George V. R. Dunan, Miami, Fla., assignor to Dunan Brick Yards, Incorporated, Miami, Fla., a corporation of Florida
Filed Oct. 25, 1960, Ser. No. 62,612
Term of patent 14 years
(Cl. D18—2)



193,343
VOICE REFLECTOR
Carolyn H. MacFarlane, 2926 Avalon Ave., Berkeley, Calif.
Filed Feb. 28, 1962, Ser. No. 69,024
Term of patent 14 years
(Cl. D25—1)



193,344
RADIO-TELEPHONE
Marcus S. Lessner, Chicago, Ill., assignor to Utica Communications Corp., Chicago, Ill., a corporation of Illinois
Filed Jan. 24, 1961, Ser. No. 63,667
Term of patent 7 years
(Cl. D26—14)



193,345
TAPE CONSOLE
Kail R. Peterson, Phoenix, Ariz., assignor to General Electric Company, a corporation of New York
Filed July 21, 1961, Ser. No. 66,013
Term of patent 14 years
(Cl. D26—14)



193,346
CASTING REEL FOR FISHING TACKLE
Rudolph W. Cantu, 2605 E. Rose, Orange, Calif.
Filed Nov. 8, 1960, Ser. No. 62,771
Term of patent 3½ years
(Cl. D31—4)



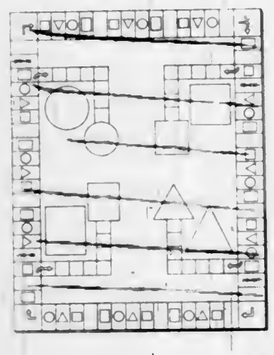
193,347
COMBINED TABLE, FLOWER STAND, AND LAMP
Irene Garcia, Dallas, Tex.
(1601 Stewart, Las Vegas, Nev.)
Filed Dec. 29, 1958, Ser. No. 53,967
Term of patent 7 years
(Cl. D33—14)



193,348
GAME TABLE
Gene S. Tepper, San Francisco, Calif., assignor to Michael Saphier Associates Inc., New York, N.Y., a corporation of New York
Filed Sept. 12, 1960, Ser. No. 62,106
Term of patent 3½ years
(Cl. D33—14)



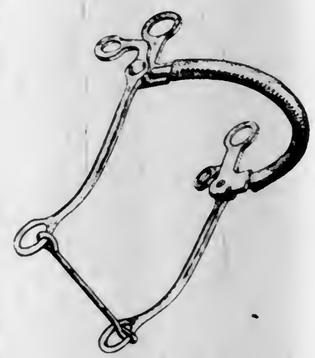
193,349
EDUCATIONAL GAME BOARD OR SIMILAR ARTICLE
James T. Kenney, 827 Richmond Ave., and Charles J. O'Loughlin, 2004 Dayton St., both of Silver Spring, Md., assignors of thirty-three and one-third percent to John E. Becker, Takoma Park, Md.
Filed Sept. 15, 1960, Ser. No. 62,155
Term of patent 14 years
(Cl. D34—5)



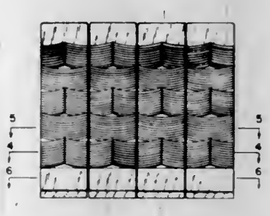
193,350
HOBBYHORSE
Roger A. Del Mar, Los Angeles, and Arthur G. Monroy, Sunland, Calif., assignors to Aeroplastics Corporation, Venice, Calif., a corporation of California
Filed May 24, 1961, Ser. No. 65,326
Term of patent 14 years
(Cl. D34—15)



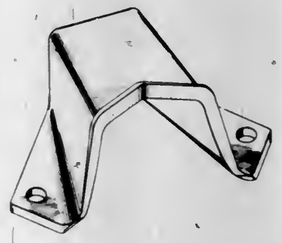
193,351
BRIDLE BIT
Pascal M. Kelly, El Paso, Tex., assignor to P. M. Kelly & Sons, Manufacturers, El Paso, Tex., a company of Texas
Filed May 29, 1961, Ser. No. 65,375
Term of patent 14 years
(Cl. D38—2)



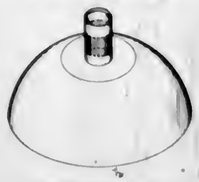
193,352
EXPANSIBLE LINK CHAIN FOR A BRACELET OR THE LIKE
Stanley Meyerson, 1350 Ocean Parkway, Brooklyn, N.Y.
Filed Mar. 15, 1961, Ser. No. 64,300
Term of patent 14 years
(Cl. D45—4)



193,353
COVER FOR ANCHOR NUTS ON THE BASE OF AN OUTDOOR STANDARD
Gordon E. Daniels, Bear Road, Nashville, Tenn.
Filed June 15, 1961, Ser. No. 65,599
Term of patent 7 years
(Cl. D48—4)



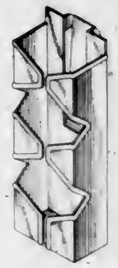
193,354
LAMP SHADE
Gerald E. Thurston, Cranford, N.J., assignor to Lightolier Incorporated, a corporation of New York
Filed Mar. 30, 1961, Ser. No. 64,555
Term of patent 7 years
(Cl. D48—16)



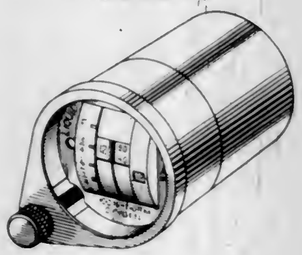
193,355
CLAMP FOR CONCRETE FORMS OR THE LIKE
Jesse J. Lambert, Los Angeles, Calif., assignor to Irwin A. Moon, Jr., and Philipp B. Martin
Filed Dec. 16, 1960, Ser. No. 63,241
Term of patent 14 years
(Cl. D51—1)



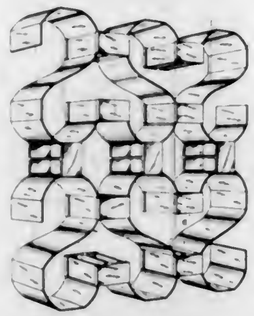
193,356
COMBINED STORAGE AND DISPENSING HOLDER FOR PACKAGED ARTICLES
Thomas D. Canakes, P.O. Box 2257, Dallas, Tex.
Filed Sept. 1, 1961, Ser. No. 65,570
Term of patent 14 years
(Cl. D52—2)



193,357
AIRCRAFT FLIGHT INSTRUMENT
Raymond W. Sargent, Burlington, Vt., assignor to Simmonds Precision Products, Inc., a corporation of New York
Filed Oct. 28, 1960, Ser. No. 62,656
Term of patent 7 years
(Cl. D52—6)



193,358
GRILLE UNIT
Edward C. Hallock, 86 Woodland Ave., Summit, N.J.
Filed Jan. 10, 1962, Ser. No. 68,245
Term of patent 14 years
(Cl. D54—2)



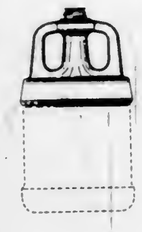
193,359
WHEEL WEIGHT TOOL
Paul W. Nethercot, 108 Fay St., Hutchinson, Kans.
Filed Apr. 14, 1961, Ser. No. 64,748
Term of patent 3½ years
(Cl. D54—13)



193,360
HARP
Samuel O. Pratt, New York, N.Y., assignor to Lyon & Healy, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 20, 1961, Ser. No. 67,997
Term of patent 14 years
(Cl. D56—1)



193,361
JUG
Clifford G. Baker and Carl E. Guldberg, Ann Arbor, Mich., assignors to Plas-Tainer Inc., Saline, Mich., a corporation of Michigan
Filed May 19, 1961, Ser. No. 65,247
Term of patent 14 years
(Cl. D58—5)



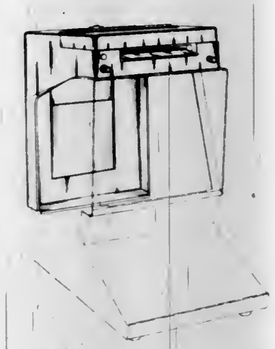
193,362
COMBINED PACKAGE AND SERVING CONTAINER
Emory L. Groff, Jr., Bethesda, Md., assignor to Frank A. Buonauro, Union City, N.J.
Filed Apr. 26, 1961, Ser. No. 64,903
Term of patent 14 years
(Cl. D58—25)



193,363
CLOSURE CAP
George J. Foss and Daniel D. Acton, Lancaster, Ohio, assignors to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Dec. 1, 1960, Ser. No. 63,065
Term of patent 14 years
(Cl. D58—26)



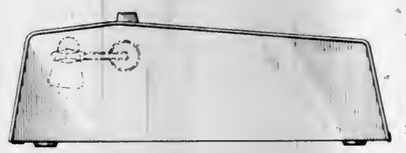
193,364
PRINTER ACCESSORY FOR A FILM READER
Norman J. Rosenburgh and Ralph M. Vigna, both of 400 Plymouth Ave. N., Rochester, N.Y.
Filed Dec. 18, 1961, Ser. No. 67,931
Term of patent 14 years
(Cl. D61—1)



193,365
SPRAY DISPENSING PUMP HEAD
Douglas F. Corsette, Los Angeles, Calif., assignor to The Drackett Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 21, 1961, Ser. No. 66,019
Term of patent 14 years
(Cl. D62—2)



193,366
AUTOGRAPHIC REGISTER
Dana W. Mox, Glenview, Ill., assignor to Uarco Incorporated, Chicago, Ill., a corporation of Illinois
Filed Sept. 20, 1960, Ser. No. 62,211
Term of patent 14 years
(Cl. D64—11)



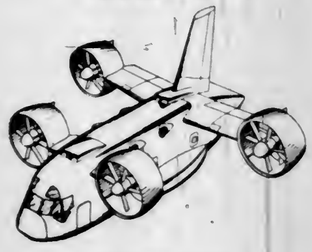
193,367
HAND HOLD
Everard C. Mersereau, 775 Hyslip Ave., Westfield, N.J.
Filed Nov. 22, 1961, Ser. No. 67,644
Term of patent 14 years
(Cl. D66—2)



193,368
AIRPLANE
William Herbert Statler, Northridge, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Dec. 16, 1959, Ser. No. 58,692
Term of patent 14 years
(Cl. D71—1)



193,369
AIRPLANE
Howell L. Walker and Raymond A. Young, Los Angeles, Calif., assignors to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed Mar. 29, 1961, Ser. No. 64,598
Term of patent 14 years
(Cl. D71—1)



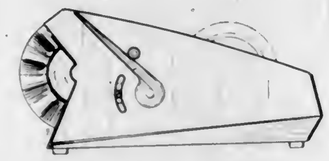
193,370
AIRCRAFT
John R. Mertens, Dallas, Tex., assignor to Bell Aerospace Corporation, Wheatfield, N.Y.
Filed Apr. 18, 1961, Ser. No. 64,809
Term of patent 14 years
(Cl. D71—1)



193,371
STAPLING MACHINE
Erwin Mueller, Breslauer Strasse 34–38, Lingen (Ems), Germany
Filed Sept. 28, 1961, Ser. No. 66,896
Term of patent 14 years
(Cl. D74—1)



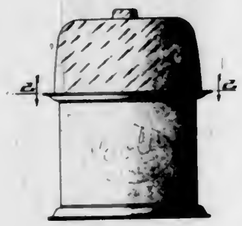
193,372
TAPE DISPENSER
Jean O. Reinecke, Chicago, Ill., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Feb. 9, 1962, Ser. No. 68,746
Term of patent 14 years
(Cl. D74—1)



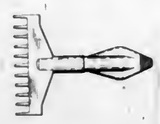
193,373
WRITING INSTRUMENT
Nolan K. Rhoades, Beloit, Wis., assignor to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Filed Apr. 7, 1961, Ser. No. 64,654
Term of patent 14 years
(Cl. D74—17)



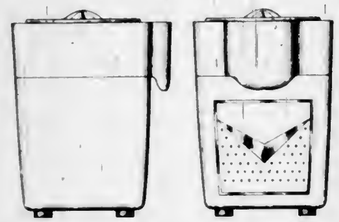
193,374
ILLUMINABLE DISPLAY STAND FOR CAKES OR THE LIKE
Walter L. Hempfling, 2611 Pancoast Ave., Cincinnati, Ohio
Filed Mar. 31, 1961, Ser. No. 64,568
Term of patent 14 years
(Cl. D80—9)



193,375
HAIR TREATING APPLICATOR
Albert Safianoff, 6142 N. Avers, Chicago, Ill.
Filed July 27, 1961, Ser. No. 66,094
Term of patent 14 years
(Cl. D86—10)



193,376
ELECTRIC FRUIT JUICER
Henry J. Talge, Kansas City, Mo., assignor to John C. Hockery, trustee, Independence, Mo.
Filed Feb. 23, 1962, Ser. No. 68,928
Term of patent 14 years
(Cl. D89—1)



193,377
LUGGAGE CARRIER FOR A BICYCLE
John A. Amberg, Westfield, Mass., assignor to The Columbia Manufacturing Co., Inc., Westfield, Mass., a corporation of Massachusetts
Filed Feb. 15, 1961, Ser. No. 63,943
Term of patent 7 years
(Cl. D90—3)



193,378
TIRE
Michael Tiborcz, 714 W. Market St., Akron, Ohio
Filed Mar. 14, 1961, Ser. No. 64,272
Term of patent 7 years
(Cl. D90—20)



193,379
TIRE
Robert L. French, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Jan 31, 1962, Ser. No. 68,597
Term of patent 14 years
(Cl. D90—20)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 7TH DAY OF AUGUST, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Andrews, Jack M., H. G. Cornell, N. P. Peet, and W. K. Roquemore, to Esso Research and Engineering Co. Cracking of hydrocarbons. Re. 25,220, 8-7-62, Cl. 208—120.

Baker Oil Tools, Inc.: *See*—
Park, Robert O. Re. 25,219.

Barber-Colman Co.: *See*—
Kennedy, Walter W. Re. 25,216.

Cornell, Hampton G.: *See*—
Andrews, Jack M., Cornell, Peet, and Roquemore. Re. 25,220.

Corderman, Charles L.: *See*—
Koda, Nobuo J., Smith, Corderman, and Rodgers. Re. 25,221.

Esso Research and Engineering Co.: *See*—
Andrews, Jack M., Cornell, Peet, and Roquemore. Re. 25,220.

Götz, Armin: *See*—
Schallus, Erich, and Götz. Re. 25,218.

Hughes Aircraft Co.: *See*—
Koda, Nobuo J., Smith, Corderman, and Rodgers. Re. 25,221.

James, Glen S. Automatic protective device. Re. 25,215, 8-7-62, Cl. 198—232.

Kennedy, Walter W., to Barber-Colman Co. Air distribution outlet. Re. 25,216, 8-7-62, Cl. 98—40.

Knapsack-Griesheim Aktiengesellschaft: *See*—
Schallus, Erich, and Götz. Re. 25,218.

Koda, Nobuo J., H. M. Smith, C. L. Corderman, and F. A. Rodgers; said Koda and said Smith assors. to Hughes Aircraft Co. and said Corderman and said Rodgers assors. to Research Corp. Deflection system for cathode ray type storage tubes. Re. 25,221, 8-7-62, Cl. 315—24.

Park, Robert O., to Baker Oil Tools, Inc. Stop devices for well conduit. Re. 25,219, 8-7-62, Cl. 287—52.

Peet, Nick P.: *See*—
Andrews, Jack M., Cornell, Peet, and Roquemore. Re. 25,220.

Research Corp.: *See*—
Koda, Kobuo J., Smith, Corderman, and Rodgers. Re. 25,221.

Rodgers, Franklin A.: *See*—.
Koda, Nobuo J., Smith, Corderman, and Rodgers. Re. 25,221.

Roquemore, William K.: *See*—
Andrews, Jack M., Cornell, Peet, and Roquemore. Re. 25,220.

Rototone, Inc.: *See*—
Santi, Harris H. Re. 25,217.

Santi, Harris H., to Rototone, Inc. Acoustical enclosure to simulate organ tones. Re. 25,217, 8-7-62, Cl. 181—31.

Schallus, Erich, and A. Götz, to Knapsack-Griesheim Aktiengesellschaft. Process for carrying out endothermic reactions at high temperatures. Re. 25,218, 8-7-62, Cl. 260—679.

Smith, Henry M.: *See*—
Koda, Nobuo J., Smith, Corderman, and Rodgers. Re. 25,221.

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Barstow, George B. Setcreasea puppurea. 2,160, 8-7-62, Cl. 47—59.

Thomas, Charles B. Water lily plant. 2,161, 8-7-62, Cl. 47—60.

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Acton, Daniel D.: *See*—
Foss, George J., and Acton. 193,363.

Aeroplastics Corp.: *See*—
Del Mar, Roger A., and Monroy. 193,350.

Amberg, John A., to The Columbia Mfg. Co., Inc. Luggage carrier for a bicycle. 193,377, 8-7-62, Cl. D90—3.

American Sealing Co.: *See*—
Sundberg, Carl W., and Ferar. 193,340.

Anchor Hocking Glass Corp.: *See*—
Foss, George J., and Acton. 193,363.

Baker, Clifford G., and C. E. Guldberg, to Plas-Tainer Inc. Jug. 193,361, 8-7-62, Cl. D58—5.

Batle, Glenn L., E. C. Fuerst, Sr., and V. U. Speed. Fisherman's chair. 193,336, 8-7-62, Cl. D15—1.

Becker, John E.: *See*—
Kenney, James T., and O'Loughlin. 193,349.

Beckman Instruments, Inc.: *See*—
Fuller, Frank I. 193,341.

Bell Aerospace Corp.: *See*—
Mertens, John R. 193,370.

Bordinat, Eugene, Jr., to Ford Motor Co. Automobile grille. 193,333, 8-7-62, Cl. D14—18.

Buonauro, Frank A.: *See*—
Groff, Emory L., Jr. 193,362.

Canakes, Thomas D. Combined storage and dispensing holder for packaged articles. 193,356, 8-7-62, Cl. D52—2.

Cantu, Rudolph W. Casting reel for fishing tackle. 193,346, 8-7-62, Cl. D31—4.

Columbia Mfg. Co., Inc., The: *See*—
Amberg, John A. 193,377.

Corsette, Douglas F., to The Drackett Co. Spray dispensing pump head. 193,365, 8-7-62, Cl. D62—2.

Crain, Lee J., to Superior Industries, Inc. Step for a truck. 193,332, 8-7-62, Cl. D14—6.

Daniels, Gordon E. Cover for anchor nuts on the base of an outdoor standard. 193,353, 8-7-62, Cl. D48—4.

Del Mar, Roger A., and A. G. Monroy, to Aeroplastics Corp. Hobbyhorse. 193,350, 8-7-62, Cl. D34—15.

Douglas Aircraft Co., Inc.: *See*—
Walker, Howell L., and Young. 193,369.

Drackett Co., The: *See*—
Corsette, Douglas F. 193,365.

Dunan Brick Yards, Inc.: *See*—
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Eames, Charles, to Herman Miller Inc. Furniture base. 193,339, 8-7-62, Cl. D15—1.

Ferar, Montgomery: *See*—
Sundberg, Carl W., and Ferar. 193,340.

Ford Motor Co.: *See*—
Bordinat, Eugene, Jr. 193,333.

Foss, George J., and D. D. Acton, to Anchor Hocking Glass Corp. Closure cap. 193,363, 8-7-62, Cl. D58—26.

Frankel, Donald P., to La Mere Industries, Inc. Incinerating toilet. 193,325, 8-7-62, Cl. D4—5.

French, Robert L., to The Goodyear Tire & Rubber Co. Tire. 193,379, 8-7-62, Cl. D90—20.

Fuerst, Edmond C., Sr.: *See*—
Batle, Glenn L., Fuerst, and Speed. 193,336.

Fuller, Frank I., to Beckman Instruments, Inc. Centrifuge. 193,341, 8-7-62, Cl. 16—2.

Garcia, Irene. Combined table, flower stand, and lamp. 193,347, 8-7-62, Cl. D33—14.

General Electric Co.: *See*—
Peterson, Kail R. 193,345.

General Motors Corp.: *See*—
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Rybicki, Irvin W. 193,335.

Goodyear Tire & Rubber Co., The: *See*—
French, Robert L. 193,379.

Groff, Emory L., Jr., to F. A. Buonauro. Combined package and serving container. 193,362, 8-7-62, Cl. D58—25.

Guldberg, Carl E.: *See*—
Baker, Clifford G., and Guldberg. 193,361.

Hallock, Edward C. Grille unit. 193,358, 8-7-62, Cl. D54—2.

Hamilton Cosco, Inc.: *See*—
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Harvey, Richard. Modular unit for grille panels. 193,327, 8-7-62, Cl. D13—1.

Hempfling, Walter L. Illuminable display stand for cakes or the like. 193,374, 8-7-62, Cl. D80—9.

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Kelly, P. M., & Sons, Manufacturers: *See*—
Kelly, Pascal M. 193,351.

Kelly, Pascal M., to P. M. Kelly & Sons, Manufacturers. Bridle bit. 193,351, 8-7-62, Cl. D38—2.

Kenney, James T., and C. J. O'Loughlin, 33⅓ to J. E. Becker. Educational game board or similar article. 193,349, 8-7-62, Cl. D34—5.

Lambert, Jesse J., to I. A. Moon, Jr., and P. B. Martin. Clamp for concrete forms or the like. 193,355, 8-7-62, Cl. D51—1.

La Mere Industries, Inc.: *See*—
Frankel, Donald P. 193,325.
Lebidine, Nina A. Child's chair. 193,337, 8–7–62, Cl. D15—1.
Lessner, Marcus S., to Utica Communications Corp. Radio-telephone. 193,344, 8–7–62, Cl. D26—14.
Lightoller Inc.: *See*—
Thurston, Gerald E. 193,354.
Lockheed Aircraft Corp.: *See*—
Statler, William H. 193,368.
Lyon & Healy, Inc.: *See*—
Pratt, Samuel O. 193,360.
MacFarlane, Carolyn H. Voice reflector. 193,343, 8–7–62, Cl. D25—1.
Mack Truck, Inc.: *See*—
Rutman, Ralph G. 193,330.
Martin, Philipp B.: *See*—
Lambert, Jesse J. 193,355.
Mersereau, Everard C. Hand hold. 193,367, 8–7–62, Cl. D66—2.
Mertens, John R., to Bell Aerospace Corp. Aircraft. 193,370, 8–7–62, Cl. D71—1.
Meyerson, Stanley. Expansible link chain for a bracelet or the like. 193,352, 8–7–62, Cl. D45—4.
Miller, Herman, Inc.: *See*—
Eames, Charles. 193,339.
Minnesota Mining and Mfg. Co.: *See*—
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Monroy, Arthur G.: *See*—
Del Mar, Roger A., and Monroy. 193,350.
Moon, Irwin A., Jr.: *See*—
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Mox, Dana W., to Uarco Inc. Autographic register. 193,366, 8–7–62, Cl. D64—11.
Mueller, Erwin. Stapling machine. 193,371, 8–7–62, Cl. D74—1.
Nethercot, Paul W. Wheel weight tool. 193,359, 8–7–62, Cl. D54—13.
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Rhoades, Nolan K. 193,373.
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Baker, Clifford G., and Guldberg. 193,361.
Pratt, Samuel O., to Lyon & Healy, Inc. Harp. 193,360, 8–7–62, Cl. D56—1.
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Rhoades, Nolan K., to The Parker Pen Co. Writing instrument. 193,373, 8–7–62, Cl. D74—17.
Rosenburgh, Norman J., and R. M. Vigna. Printer accessory for a film reader. 193,364, 8–7–62, Cl. D61—1.
Rutman, Ralph G., to Mack Truck, Inc. Truck. 193,330, 8–7–62, Cl. D14—3.
Rybicki, Irvin W., to General Motors Corp. Wheel cover. 193,334, 8–7–62, Cl. D14—30.
Rybicki, Irvin W., to General Motors Corp. Wheel cover. 193,335, 8–7–62, Cl. D14—30.
Safianoff, Albert. Hair treating applicator. 193,375, 8–7–62, Cl. D86—10.
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Tepper, Gene S. 193,348.
Sargent, Raymond W., to Simmonds Precision Products, Inc. Aircraft flight instrument. 193,357, 8–7–62, Cl. D52—6.
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Sargent, Raymond W. 193,357.
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Speed, Virgil U.: *See*—
Batie, Glenn L., Fuerst, and Speed. 193,336.
Statler, William H., to Lockheed Aircraft Corp. Airplane. 193,368, 8–7–62, Cl. D71—1.
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Tarazi, Eli L. Automobile bumper guard. 193,331, 8–7–62, Cl. D14—6.
Tepper, Gene S., to Michael Saphier Associates Inc. Chair. 193,338, 8–7–62, Cl. D15—1.
Tepper, Gene S., to Michael Saphier Associates Inc. Game table. 193,348, 8–7–62, Cl. D33—14.
Thompson, Robert F., to Simpson Timber Co. Door. 193,328, 8–7–62, Cl. D13—1.
Thompson, Robert F. Door. 193,329, 8–7–62, Cl. D13—1.
Thurston, Gerald E., to Lightoller Inc. Lamp shade. 193,354, 8–7–62, Cl. D48—16.
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TO WHOM

PATENTS WERE ISSUED ON THE 7TH DAY OF AUGUST, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AMP Inc.: *See*—
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Adams, Dennis A. W., and A. K. Sarkar, to Hickson & Welch Ltd. Hydrophilic optical whitening agents of the stilbyl triazole type. 3,048,584, 8–7–62, Cl. 260—240.
Adams, Paul R., and E. C. L. de Faymoreau, to International Telephone and Telegraph Corp. System for supporting and/or controlling bodies. 3,048,044, 8–7–62, Cl. 74—5.47.
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Aller, Edmund R., to General American Transportation Corp. Railway hopper cars. 3,048,448, 8–7–62, Cl. 302—52.
Aller, Edmund R., to General American Transportation Corp. Railway hopper cars. 3,048,449, 8–7–62, Cl. 302—52.
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Alm, Benjamin C., Jr., to Westinghouse Electric Corp. Pulse time discriminator apparatus. 3,048,712, 8–7–62, Cl. 307—88.5.
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Altar, William, and C. W. Helstrom, to United States of America, Navy. Acoustic homing torpedo scanning system. 3,048,813, 8–7–62, Cl. 340—3.
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Baker, William J., to Union Oil Co. of California. Shaft seal. 3,048,412, 8-7-62, Cl. 277—75.

Balamuth, Lewis, and C. Kleesattel, to Cavitron Ultransonics Inc. Amplitude indicators. 3,047,955, 8-7-62, Cl. 33—172.

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Biedermann, Friedrich, and H. Pregl, to Agfa Aktiengesellschaft. Device for the reproduction of sound motion picture films. 3,048,081, 8-7-62, Cl. 88—16.2.

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Breen, Thomas M. Toy vehicle with adjustable seat and leg protector. 3,048,417, 8-7-62, Cl. 280—1.

Bregi, Benjamin F., and T. S. Gates, to National Broach & Machine Co. Gear rolling apparatus. 3,048,066, 8-7-62, Cl. 80—16.

Breitbach, Louis F. Baseball practice fielding bat. 3,048,399, 8-7-62, Cl. 273—72.

Bretscher, Max, to Albiswerk Zurich A.G. Pulse radar system with zero distance calibration. 3,048,838, 8-7-62, Cl. 343—17.7.

Brigmon, Paul L. Portable canopy. 3,048,439, 8-7-62, Cl. 296—95.

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Broman, Cyrus R.: *See*—
Kompelien, Alexander O., and Broman. 3,048,173.

Brookens, Ronald G.: *See*—
Havens, Carl B., and Brookens. 3,048,637.

Brooks, Frederick P., Jr., and D. W. Sweeney, to International Business Machines Corp. Program interrupt system. 3,048,332, 8-7-62, Cl. 235—157.

Brotherton, Robert J., and L. L. Petterson, to United States Borax & Chemical Corp. Aminodiboron compounds and method of making same. 3,048,632, 8-7-62, Cl. 260—551.

Brown, Henry, to The Udylite Research Corp. Composite electroplate. 3,047,939, 8-7-62, Cl. 29—183.5.

Brown, Joseph L., J. M. Taylor, and P. N. Stoughton, to International Business Machines Corp. Fast multiply apparatus in an electronic digital computer. 3,048,333, 8-7-62, Cl. 235—164.

Brown, Kenneth N., to Yardney International Corp. Method of manufacturing soluble silver salts. 3,048,469, 8-7-62, Cl. 23—50.

Brown, Myron J., to Westinghouse Electric Corp. Automatic demand control computer. 3,048,705, 8-7-62, Cl. 307—35.

Brown, Robert J. S., to California Research Corp. Fluid remnant magnetization tester. 3,048,773, 8-7-62, Cl. 324—.5.

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Brownstein, Benjamin. Garment construction. 3,047,878, 8-7-62, Cl. 2—97.

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Buechler, Peter R., and B. B. Kine, to Rohm & Haas Co. Finished leathers having coatings of a polymer of 55–80% vinylidene chloride and 20–45% (C–C$_4$)-alkyl acrylate, and production thereof. 3,048,496, 8-7-62, Cl. 117—11.

Buechner, Gerhard, to Oerlikon Engineering Co. Hydraulic drive for electric switchgear. 3,048,016, 8-7-62, Cl. 60—51.

Buff, Christopher, to American Cable & Radio Corp. Diplex telegraph system using frequency modulation. 3,048,657, 8-7-62, Cl. 178—61.

Buff, Christopher, to Mackay Radio & Telegraph Co. Twinplex telegraph transmission. 3,048,658, 8-7-62, Cl. 178—88.

Bulova, Ardé, and C. Punzmann, to Bulova Watch Co., Inc. Head construction for electric razors. 3,047,944, 8-7-62, Cl. 30—43.

Bulova Watch Co., Inc.: *See*—
Bulova, Ardé, and Punzmann. 3,047,944.

Burckhardt, Christof, R. Moser, and J. Baumann, to Schweizerische Wagons- und Aufzugefabrik A.-G. Schlieren Zurich. Position indicator. 3,048,818, 8-7-62, Cl. 340—21.

Burhans, Ralph W., W. Jackson, Jr., and P. J. Stevko, to The Standard Oil Co. Simultaneous equation optimal solution computer. 3,048,335, 8-7-62, Cl. 235—180.

Burke, Kenneth O., and R. G. Schafer, to Owens-Illinois Glass Co. Flame treating apparatus. 3,048,380, 8-7-62, Cl. 263—2.

Burmeister, Albert J., W. D. Brown, Jr., and D. J. Heidinger, to Richards-Wilcox Mfg. Co. Automatic dispatch conveyor systems. 3,048,123, 8-7-62, Cl. 104—88.

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Heidler, Glen R. 3,048,806.
Heidler, Glen R. 3,048,812.

Burrows, Arthur T. C., to Geo. W. King, Ltd. Conveyor systems. 3,048,125, 8-7-62, Cl. 104—172.

Burstow, Pierre, and C. Monin, to Compagnie Industrielle des Telephones. Electronically locking selection device. 3,048,821, 8-7-62, Cl. 340—166.

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Cain, Cornelius K., to McNeil Laboratories, Inc. Barbituric acid derivatives. 3,048,588, 8-7-62, Cl. 260—256.4.

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Stewart, William T., Stuart, and Lowe. 3,048,544.

Callahan, William R., and C. M. Ragsdale, to Butler Mfg. Corp. Interlocking wall system. 3,048,244, 8-7-62, Cl. 189—34.

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Carling, Richard. Oxygen dispensing apparatus. 3,048,190, 8-7-62, Cl. 137—624.11.

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McGrath, William L. 3,048,834.
Carrier, E. Wendell: *See*—
Matuszak, Alfred H., Maisel, and Carrier. 3,048,623.
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Strandskov, Frede B., Bockelmann, and Carroll. 3,048,488.
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Fischer, Paul E., Heatley, and Sorkin. 3,048,088.
Champlin, John R., to Swindell-Dressler Corp. Furnace or like system for gas-supporting and treating flat work. 3,048,383, 8–7–62, Cl. 266—5.
Chandler, Arthur E. Vacuum safety device for tanks and the like. 3,048,189, 8–7–62, Cl. 137—580.
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Charles, Frank E. Holder for medicated cartridge for douche bag. 3,048,174, 8–7–62, Cl. 128—227.
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Golde, Dimitri, and Vierendeel. 3,047,891.
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Chick, James E., and R. Symington, to Simon-Carves Ltd. Coal or ore washing. 3,048,273, 8–7–62, Cl. 209—172.5.
Chick, Russell W., J. Christofferson, and G. F. Vigneau, to Columbia Broadcasting System, Inc. Crystal diode assembly machine and method therefor. 3,047,933, 8–7–62, Cl. 29—25.3.
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Der-Hagopian, Nishan. Fish hooks. 3,047,977, 8–7–62, Cl. 43—44.8.
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DeVecchi, Paul, to Ciba Ltd. Method of making lined pipe connections. 3,047,937, 8–7–62, Cl. 29—157.
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Plump, Ralph E., and Devins. 3,048,648.
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Diambra, Henry M., and H. E. Blum, to Entron, Inc. Remote intelligence sampling means. 3,048,780, 8–7–62, Cl. 325—31.
Dickey, Paul J., to United States of America, Navy. Flare candle. 3,048,085, 8–7–62, Cl. 89—1.
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Fields, Ellis K., to Standard Oil Co. Tertiary alkyl azomethine copolymers. 3,048,616, 8–7–62, Cl. 260—471.

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Aller, Edmund R. 3,048,449.

General Electric Co.: *See*—
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Sweet, Donald L., and Kyriakides. 3,048,509.

German, George R. Inclination and flatness gauge. 3,047,956, 8–7–62, Cl. 33—174.

Gertsch, Ernst. Ski-stopping device. 3,048,418, 8–7–62, Cl. 280—11.

Gewickey, Frank I., R. K. Golden, and B. M. Muenzer, to International Business Machines Corp. Information reproducing system. 3,048,327, 8–7–62, Cl. 234—16.

Giannini Controls Corp.: *See*—
Carey, Stuart. 3,048,748.
Howard, Robert C. 3,048,185.
Howard, Robert C. 3,048,759.

Gibbs, Roland P.: *See*—
Koch, Fred C., Beazey, Gibbs, and Love. 3,048,438.

Giddings & Lewis Machine Tool Co.: *See*—
Fitzner, Arthur O. 3,048,832.

Girard, André, to Roussel-UCLAF, S.A. Novel derivatives of phenoxazine and processes for their preparation. 3,048,586, 8–7–62, Cl. 260—244.

Girard, Theodore A., and E. C. Slaght, to Heyden Newport Chemical Corp. Neopentyl glycol esters. 3,048,608, 8–7–62, Cl. 260—404.8.

Glaser, Hellmut I., to Owens-Corning Fiberglas Corp. Method and apparatus for melting and feeding heat-softenable materials. 3,048,040, 8–7–62, Cl. 13—6.

Glaser, John L., to Bell Telephone Laboratories, Inc. Reduction of quantizing error in quantized transmission systems. 3,048,781, 8–7–62, Cl. 178—43.5.

Globe Hoist Co.: *See*—
Wallace, George A. 3,048,238.

Globe Industries, Inc.: *See*—
Pope, Kenneth E. 3,048,042.

Glover, Jessie W. Adjustable trotline holder. 3,047,978, 8–7–62, Cl. 43—54.5.

Godfrey, Thomas A., to International Cigar Machinery Co. Transfer for cigar machines. 3,048,281, 8-7-62, Cl. 214—1.

Goffinet, Bernard: *See*—
Joly, Robert, Warnant, and Goffinet. 3,048,582.

Golde, Dimitri, and P. Vierendeel, to Chassis Metallique Belge "Chamebel" S.A., Le. Embarkation gangway. 3,047,891, 8-7-62, Cl. 14—71.

Golden, Robert K.: *See*—
Gewickey, Frank I., Golden, and Muenzer. 3,048,327.

Golightly, Francis L., to Wilkinson Sword Ltd. Means controlling the opening of pruning shears and the like. 3,047,949, 8-7-62, Cl. 30—271.

Gooding, Chester M., to Corn Products Co. Winterization process. 3,048,491, 8-7-62, Cl. 99—118.

Goodman, Guy H., 49% to A. J. E. Beard. Thermal current driven power generating apparatus. 3,048,006, 8-7-62, Cl. 60—26.

Goodman Mfg. Co.: *See*—
Bledess, Anthony R. 3,048,287.

Goodrich-Gulf Chemicals, Inc.: *See*—
Walde, Robert A. 3,048,612.

Goodwin, Charles M. Toilet flush control. 3,047,882, 8-7-62, Cl. 4—67.

Gottlieb, Louis. Carbonated beverage dispensing apparatus. 3,048,193, 8-7-62, Cl. 137—637.

Gottschalk, Johannes, to Dangelmaier & Co. Camera. 3,048,092, 8-7-62, Cl. 95—45.

Gourlay, William E. Live bait holder. 3,047,976, 8-7-62, Cl. 43—44.4.

Grabowski, Kenneth P., and S. Sensiper, to Hughes Aircraft Co. Coupling arrangement for slow-wave structure. 3,048,800, 8-7-62, Cl. 333—31.

Graham Industries, Inc.: *See*—
Reynolds, Wylee M. 3,048,385.

Grau, Harry R., to Bio-Physical Research, Inc. Intravenous injection device. 3,048,171, 8-7-62, Cl. 128—214.

Graves, Shelby J.: *See*—
Raulins, George M., and Graves. 3,048,358.

Gray, Charles E.: *See*—
Morgan, John F.; and Gray. 3,048,132.

Green, William D., Jr., and R. P. Bartlett, to Consolidated Cigar Corp. Method of and apparatus for color classification. 3,048,270, 8-7-62, Cl. 209—111.5.

Greening, John P., to Phillips Petroleum Co. Gain control amplifier. 3,048,817, 8-7-62, Cl. 340—15.5.

Greenspan, George M. Window display apparatus. 3,047,966, 8-7-62, Cl. 35—58.

Gregory, James B., C. C. Moore, and H. D. Emerson, to Union Oil Co. of California. Air pollution abatement system. 3,048,157, 8-7-62, Cl. 123—136.

Gregory, Sylvester A.: *See*—
Feldman, Sidney, Gregory, and Lawes. 3,047,940.

Griffin, George O., and E. S. Hanshaw, to Trurin, Inc. Attachment of cutting elements to wear resistant blades. 3,048,160, 8-7-62, Cl. 125—15.

Griffin, Theron W. Wire fencing stringing and stretching implement. 3,048,348, 8-7-62, Cl. 242—86.5.

Griffiths, Lyman L. Closure remover device. 3,048,068, 8-7-62, Cl. 81—3.3.

Grigsby, John D., to Thompson Ramo Wooldridge Inc. Electrical duty cycle control. 3,048,719, 8-7-62, Cl. 307—132.

Grimmond, Robert: *See*—
Wright, Esmond P. G., Ridler, and Grimmond. 3,048,827.

Grinstead, Robert R., to The Dow Chemical Co. Oxidation of olefins by thallium (III). 3,048,636, 8-7-62, Cl. 260—586.

Grondona, John L. Body assist for toilet seat. 3,047,884, 8-7-62, Cl. 4—254.

Gross, Erich: *See*—
Holstein, Otto H. A., and Gross. 3,048,656.

Groves, John N.: *See*—
Mrenna, Stephen A., and Groves. 3,048,685.

Groves, Robert C. Method and apparatus for dispensing. 3,048,070, 8-7-62, Cl. 83—231.

Grundseth, Odd, ½ to Fred Olsen Aviation Maintenance Norsk Flyindustri A/S and ½ to International Macgregor Organization. Rain or weather cover for ship's hatches, open railway truck and the like. 3,048,183, 8-7-62, Cl. 135—5.

Gruber, Jerome M., to Waukesha Bearings Corp. Water lubricated thrust bearings. 3,048,456, 8-7-62, Cl. 308—160.

Guarino, Louis S., and W. M. Ogden, to United States of America, Navy. Helicopter integrated director equipment. 3,048,836, 8-7-62, Cl. 343—7.

Guedel, Arthur R. Apparatus for flattening containers. 3,048,096, 8-7-62, Cl. 100—215.

Guest, Howard R.: *See*—
Stansbury, Harry A., Jr., and Guest. 3,048,622.

Gulf Research & Development Co.: *See*—
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Fareri, Elizabeth L., and Pellegrini. 3,048,607.
Rosenberg, Milton, and Schaub. 3,048,538.

Gumboldt, Albert G. M.: *See*—
Wiberg, Egon, Hartwimmer, and Gumboldt. 3,048,574.

Gunderson, Arthur M. Golfer's tool. 3,047,896, 8-7-62, Cl. 15—111.

Gunther, Arnold, to Rubber & Fibre Chemical Corp. Drum drier for evaporating solvent from a solution of unvulcanized rubber. 3,048,218, 8-7-62, Cl. 159—12.

Guttman, Joseph M. Finger stylus. 3,048,149, 8-7-62, Cl. 120—42.4.

Gyoerkoes, Tibor, to Celanese Corp. of America. Extractive distillation of hexanol with a polyhydric alcohol as a solvent. 3,048,527, 8-7-62, Cl. 202—39.5.

Haake, Claus H.: *See*—
Lehmann, Willi, and Haake. 3,048,732.

Haase, Rudolf G. Automobile tray device. 3,048,457, 8-7-62, Cl. 311—21.

Hackhel, Robert H., and W. Sacks, to Union Carbide Corp. Fog resistant polyolefin films. 3,048,265, 8-7-62, Cl. 206—45.34.

Hackhel, Robert H., and W. Sacks, to Union Carbide Corp. Fog resistant polyolefin films. 3,048,266, 8-7-62, Cl. 206—45.34.

Hackler, Lester L., to Phillips Petroleum Co. Mercury saver and oil trap for orifice meters. 3,048,039, 8-7-62, Cl. 73—395.

Hahn, Willi: *See*—
Seydel, Robert, Kempermann, Hahn, and Stroh. 3,048,563.

Haigh, Leslie B., M. Bisk, and T. W. Tuttle, to International Telephone and Telegraph Corp. PABX switching system. 3,048,662, 8-7-62, Cl. 179—22.

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Hallett Mfg. Co.: *See*—
Estes, Stanley E. 3,048,704.

Hamilton Watch Co., The: *See*—
Detwiler, Harry S., and Nelson. 3,048,004.

Hammond Organ Co.: *See*—
Hanert, John M. 3,048,072.

Hanert, John M., to Hammond Organ Co. Apparatus for producing pseudo-stereophonic effects. 3,048,072, 8-7-62, Cl. 84—1.24.

Hansen, Alfred E. Gas separators for wells. 3,048,122, 8-7-62, Cl. 103—203.

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Hansen, Siegfried, to Hughes Aircraft Co. Automatic celestial navigation and guidance system. 3,048,352, 8-7-62, Cl. 244—14.

Hanshaw, Ellsworth S.: *See*—
Griffin, George O., and Hanshaw. 3,048,160.

Hanson, Leonard L. Tagline fairlead construction. 3,048,369, 8-7-62, Cl. 254—139.

Hanusch, Fritz, and A. Rettig, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Apparatus for processing thermoplastic synthetic materials in screw extruders and kokneaders. 3,047,907, 8-7-62, Cl. 18—12.

Hardgrove, Ralph M., to The Babcock & Wilcox Co. Method for burning fuel. 3,048,131, 8-7-62, Cl. 110—72.

Harris, John F., Jr., to E. I. du Pont de Nemours and Co. Vinyl perfluoroalkylsulfides and polymers. 3,048,569, 8-7-62, Cl. 260—79.7.

Hart, Gerald E. Signal display system. 3,048,837, 8-7-62, Cl. 343—16.

Harter, Clair M. Fishing rod joint. 3,048,432, 8-7-62, Cl. 287—126.

Hartwimmer, Robert: *See*—
Wiberg, Egon, Hartwimmer, and Gumboldt. 3,048,574.

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Warren, Thomas B., and Harvey. 3,048,783.

Harvey, Merlin P.: *See*—
Ladd, Elbert C., and Harvey. 3,048,613.

Haslam, Maurice B., and O. C. Miles, to Avco Corp. Tape recording system and method. 3,048,830, 8-7-62, Cl. 340—174.1.

Hatchard, William R., to E. I. du Pont de Nemours and Co. 3 - cyano - [1,3] - dithiolo - [4,5-c] - isothiazole - Δ^{4a} - malononitrile and process. 3,048,596, 8-7-62, Cl. 260—302.

Hause, Gilbert K.: *See*—
Kelley, Oliver K., and Hause. 3,048,241.

Hautau, Charles F.: *See*—
Distel, Richard, and Hautau. 3,048,213.

Havens, Carl B., R. G. Brookens, to The Dow Chemical Co. 2'-hydroxy-3'-nitro-5'-phenylpropiophenone. 3,048,637, 8-7-62, Cl. 260—592.

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Elwick, Keith D. 3,048,409.

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Barrelle, Roland J., and Hayes. 3,048,015.

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Barnard, Dennis A., and Nossiter. 3,047,915.

Headrick, Richard T., to Bowser, Inc. Filter-water separator. 3,048,275, 8-7-62, Cl. 210—247.

Heaps, Stanley N.: *See*—
Frost, Holloway H., and Heaps. 3,048,847.

Heatley, William A., Jr.: *See*—
Fischer, Paul E., Heatley, and Sorkin. 3,048,088.

Heck, Richard F., to Hercules Powder Co. Crystalline poly-(cis-propenyl alkyl ethers). 3,048,573, 8-7-62, Cl. 260—91.1.

Heffelfinger, Carl J., to E. I. du Pont de Nemours and Co. Process for preparing polyethylene terephthalate. 3,048,564, 8-7-62, Cl. 260—75.

Heid, James M.: *See*—
McCarter, Donald C., Ramachandran, and Heid. 3,047,917.

Heidenwolf, Hermann, ½ to H.-G. Biermann. Hand-operated tool for riveting by means of tubular rivets receiving a shank. 3,048 296, 8-7-62, Cl. 218—42.

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Heidler, Glen R., to Burroughs Corp. Electrical connector. 3,048,812, 8-7-62, Cl. 339—252.

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Cissna, David H., and Cole. 3,048,284.

Heilmann, Walter E.: *See*—
Wilcken, Hugo. 3,047,923.
Wilcken, Hugo. 3,047,924.

Heim, Richard. Grooved guide roller for textile machines. 3,048,054, 8-7-62, Cl. 74—567.

Heimann, Willi, to G. M. Pfaff, A.G. Method and means for making buttonholes in series formation. 3,048,135, 8-7-62, Cl. 112—155.

Helder, George K., and J. S. Mayo, to Bell Telephone Laboratories, Inc. Detection and measurement of errors in pulse code trains. 3,048,819, 8-7-62, Cl. 340—146.1.

Helferich, Burckhardt, R. Behnisch, and W. Wirth, to Bayer Aktiengesellschaft, Farbenfabriken. N-(4-sulfonamidophenyl)-butane sultame. 3,048,518, 8-7-62, Cl. 167—51.5.

Heller, George L., and J. W. White, to Columbian Carbon Co. Method of compounding carbon black and rubber. 3,048,559, 8-7-62, Cl. 260—33.6.

Hellstrom, Edward C., and C. E. Pollard, Jr., to Bell Telephone Laboratories, Inc. Switching device. 3,048,677, 8-7-62, Cl. 200—87.

Hellwig, Günter, to Babcock & Wilcox Ltd. Rotatable steam coil air heater. 3,048,152, 8-7-62, Cl. 122—1.

Helmers, Carl J., to Phillips Petroleum Co. Ignition and production of carbonaceous strata. 3,048,223, 8-7-62, Cl. 166—11.

Helsten, Wesley A., to Amsted Industries Inc. Handbrake linkage for rotor brake. 3,048,240, 8-7-62, Cl. 188—46.

Helstrom, Carl W.: *See*—
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Erlenmeyer, Hans, Fallab, and Hemmerich. 3,048,578.

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Schuhmacher, Jacobus P., and Hendriks. 3,048,575.

Henry, Elliott A., to Branson Instruments Inc. Triangular wave generator. 3,048,705, 8-7-62, Cl. 331—152.

Hense, Theo. Electronic command and information transfer system in industrial automation processes. 3,048,330, 8-7-62, Cl. 235—151.

Herbst, Edward J., and G. R. Muller, to The Singer Mfg. Co. Support means for sewing machines. 3,048,460, 8-7-62, Cl. 312—30.

Hercules Powder Co.: *See*—
Blair, David R., Jr., Bonner, Coleman, and Ryan. 3,048,103.
Heck, Richard F. 3,048,573.
Zebree, David T. 3,048,507.

Herndon, Walter B.: *See*—
Borman, August H., Jr., Cheek, Schelter, and Herndon. 3,048,055.

Herr Equipment Corp.: *See*—
Karber, Leonard A. 3,048,346.

Herr, Ross R., T. Enkoji, and T. J. Bardos, to Armour Pharmaceutical Co. 5-uracilsulfonic acid derivatives. 3,048,589, 8-7-62, Cl. 260—256.5.

Herschal Products, Inc.: *See*—
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Herter, William J., to S.E.B. Establishment. Method of packing products and container therefor. 3,048,305, 8-7-62, Cl. 222—215.

Herzog, Gerald B., to Radio Corp. of America. Pulse counter type frequency detector. 3,048,789, 8-7-62, Cl. 329—107.

Hess, Christian H., and D. C. Horney, to Deere & Co. Hitch device. 3,048,228, 87-62, Cl. 172—272.

Hewitt, Ellis E.: *See*—.
Olson, Paul E., and Hewitt. 3,048,675.

Hewitt-Robins Inc.: *See*—
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Heyden Newport Chemical Corp.: *See*—
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Heyl & Patterson, Inc.: *See*—
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Heywood, Donald L.: *See*—
Dunn, Jesse T., and Heywood. 3,048,624.

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High Voltage Engineering Corp.: *See*—
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Hignutt, Frank A. and R. F., and H. L. Dequasle, to Delaware Valley Electronics Corp. Survivor locator system. 3,048,839, 8-7-62, Cl. 343—100.

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Hignutt, Frank A. and R. F., and Dequasle. 3,048,839.

Hilgert, Adolph J., to Penn Controls, Inc. Fluid conductor motors and control devices employing the same. 3,048,113, 8-7-62, Cl. 103—1.

Hillix, Foster F., to Wedge Protectors, Inc. Ring rolling machine. 3,048,202, 8-7-62, Cl. 140—88.

Hilpman, Paul, and G. Post, to Mergenthaler Linotype Co. Delivery slide for linecasting machines. 3,048,261, 8-7-62, Cl. 199—26.

Hinkle, Barton L., to E. I. du Pont de Nemours and Co. Process for treating viscose. 3,048,579, 8-7-62, Cl. 260—218.

Hinman, Walter L.: *See*—
Palmer, Karl, and Hinman. 3,048,676.

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Shecter, George O., and Hirsch. 3,047,888.

Hislop, John A., to Vard Products Inc. Track type drafting machine. 3,047,954, 8-7-62, Cl. 33—76.

Hittle, Carl E., to Radio Corp. of America. Combination motor control system. 3,048,754, 8-7-62, Cl. 318—42.

Hjelte, George. Exercising device. 3,048,396, 8-7-62, Cl. 272—56.

Hobbs, Frank S. Watersports float. 3,048,395, 8-7-62, Cl. 272—1.

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Hoffmann, Karl, and E. Sury, to Ciba Corp. 1-ethyl-2-diphenylmethyl-piperidines. 3,048,594, 8-7-62, Cl. 260—293.

Hofmann, Viktor, to Siemens-Schuckertwerke Aktiengesellschaft. Transistor reversible counting circuit with resistive coupling between stages. 3,048,711, 8-7-62, Cl. 307—88.5.

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Manning, William O., Jr. 3,048,671.

Holloway, Robert L., to American Machine & Foundry Co. Bowling pin elevating mechanism. 3,048,397, 8-7-62, Cl. 273—43.

Holmes, Elmond A., to United States of America, Navy. Antenna compensating electrodes for use in dissipative medium. 3,048,136, 8-7-62, Cl. 114—20.

Holmes, Gene C. Means of flight control of a helicopter. 3,048,353, 8-7-62, Cl. 244—23.

Holstein, Otto H. A., and E. Gross, to International Standard Electric Corp. Control attachment for electro-mechanically operated communication apparatus used in pulse-code systems. 3,048,656, 8-7-62, Cl. 178—27.

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Lundstedt, Erik. 3,048,490.

Hooker Chemical Corp.: *See*—
Weil, Edward D., Dorfman, and Newcomer. 3,048,483.

Hoover, Vaino A. Motor control by mechanical actuator with intermediate position cam arrangement. 3,048,760, 8-7-62, Cl. 318—467.

Hopkins, Joseph H., to General Motors Corp. Article of Manufacture. 3,048,674, 8-7-62, Cl. 200—61.7.

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Hovland, Howard N., and M. A. Wichman, to American Can Co. Dispensing carton. 3,048,320, 8-7-62, Cl. 229—20.

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Howard, Charles F., and J. J. Keane, to General Electric Co. Insulated coil and method of making same. 3,048,651, 8-7-62, Cl. 174—120.

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Howard, Robert C., to Giannini Controls Corp. Stabilized servomechanism. 3,048,759, 8-7-62, Cl. 318—448.

Howe, Edwin W., to American Bosch Arma Corp. Helical cam. 3,048,053, 8-7-62, Cl. 74—467.

Hoyt, Lewis O., and L. R. Hale. Rubber boot anchor. 3,047,967, 8-7-62, Cl. 36—58.5.

Hrucz, Paul. Prospector toy. 3,047,979, 8-7-62, Cl. 46—1.

Hubbard, Arthur L., to Deere & Co. Cotton harvester. 3,047,996, 8-7-62, Cl. 56—41.

Hubbard, Arthur L., to Deere & Co. Moistener mechanism for cotton harvester. 3,047,997, 8-7-62, Cl. 56—44.

Hubbard, Arthur L., to Deere & Co. Closure device. 3,048,219, 8-7-62, Cl. 160—217.

Hubbard, Robert L., to Warner-Lambert Pharmaceutical Co. Ball-type applicator device. 3,047,901, 8-7-62, Cl. 15—505.

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Huckabee, Luther H. Burner for boilers and the like. 3,048,215, 8-7-62, Cl. 158—113.

Huff, O. C., and N. C. Stanley, to Texaco Inc. Apparatus for removing heat exchanger tube bundles. 3,048,280, 8-7-62, Cl. 214—1.

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Grabowski, Kenneth P., and Sensiper. 3,048,800.
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Hughes, Paul R., to United Aircraft Products, Inc. Cooled mounting plate for electronic equipment. 3,048,374, 8-7-62, Cl. 257—256.

Hughes, Thomas A., to Johns-Manville Corp. Reinforced fibrous batt. 3,048,513, 8-7-62, Cl. 156—31.

Hughes, William L., to Iowa State College Research Foundation, Inc. Field sequential color signal combined with continuous brightness signal. 3,048,653, 8-7-62, Cl. 178—5.4.

Humby, Edward T., to Collaro Ltd. Driving mechanisms for sound reproducing apparatus. 3,048,429, 8-7-62, Cl. 287—52.08.

Hunger, Alfred, and J. B. Ziegler, to Ciba Corp. Purification of 1-dehydro-17a-methyltestosterone contaminated by selenium. 3,048,603, 8-7-62, Cl. 260—397.4.

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Markhart, Albert H., Hunt, and Cohen. 3,048,560.

Hunter, Don L.: *See*—
Steinberg, Howard, Hunter, Pickard, and Petterson. 3,048,614.

Hunter, Edward A.: *See*—
Cull, Neville L., Hunter, Verbois, and Ray. 3,048,562.

Hunter, Everett C., to Pittsburgh Steel Co. Manufacture of folding concrete-reinforcing wire mats. 3,048,203, 8-7-62, Cl. 140—107.

Hunter, Frank B. Relief valve. 3,048,188, 8-7-62, Cl. 137—469.

Hurst, Edward, to Rexall Drug Co. Abrasive articles and methods of making the same. 3,048,482, 8-7-62, Cl. 51—298.

Hutchinson, Herman R., to Plastomatic Corp. Re-usable plastic containers. 3,048,299, 8-7-62, Cl. 220—54.

Huthsing, Charles K., Sr., and D. F. Preston, to General Fire Extinguisher Corp. Fire extinguisher head assembly. 3,048,194, 8-7-62, Cl. 137—630.15.

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Clausing, Challiss I. 3,048,679.
Iannuzzi, Henry J., 10% to J. Gallo, Sr. Auxiliary mirror. 3,048,084, 8–7–62, Cl. 88—87.
Ilnycky, Stephan, and C. B. Rupar, to Esso Research and Engineering Co. Ethylene-vinyl ester pour depressant for middle distillates. 3,048,479, 8–7–62, Cl. 44—62.
Indest, Heinz, and G. Meyer, to Vereinigte Glanzstoff-Fabriken AG. Process for the production of hexamethylene diamine. 3,048,635, 8–7–62, Cl. 260—583.
Industrial Products Co.: *See*—
Patterson, Thomas A., Jr. 3,047,875.
Ingersoll-Rand Co.: *See*—
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Ingram, Maxwell, to Leonard Spark Plug Co., Inc. Spark plug. 3,048,735, 8–7–62, Cl. 313—143.
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Brown, Joseph L., Taylor, and Stoughton. 3,048,333.
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Lucas, Robert A., to Ciba Corp. 18-O-hetero-reserpates. 3,048,591, 8–7–62, Cl. 260—287.
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Lundgren, Bengt A. R., and S. J. Borelius, to Casius Corp. Ltd. Method for the manufacture of steam-cured lightweight concrete products. 3,047,908, 8–7–62, Cl. 18—47.5.
Lundstedt, Erik, to H. P. Hood & Sons, Inc. Aroma process for dairy products and the resulting product. 3,048,490, 8–7–62, Cl. 99—116.
Lutz, Robert G., to Shell Oil Co. Polyethylene-wax compositions. 3,048,551, 8–7–62, Cl. 260—28.5.
Lu-Van, Inc.: *See*—
Van Syoc, Auburn G., Sr., Almy, and Sydow. 3,047,883.
Lynn, John W., and R. L. Roberts, to Union Carbide Corp. Oxidation process. 3,048,628, 8–7–62, Cl. 260—537.
Lyon, George A., to Lyon Inc. Wheel cover. 3,048,444, 8–7–62, Cl. 301—37.
Lyon Inc.: *See*—
Lyon, George A. 3,048,444.
Shoemaker, John V. 3,048,445.
Shoemaker, John V. 3,048,446.
Mabry, Harry H. Automobile boat carrier. 3,048,291, 8–7–62, Cl. 214—450.
Macdonald, John G. Means for loading trailers onto railway cars. 3,047,904, 8–7–62, Cl. 16—48.
Machines Bull (Societe Anonyme), Compagnie des: *See*—
Koehler, Gerard N. 3,048,749.
Mackay Radio & Telegraph Co.: *See*—
Buff, Christopher. 3,048,658.
MacKenzie, David D., to Lockheed Aircraft Corp. Honeycomb fastener. 3,047,926, 8–7–62, Cl. 24—251.
MacLeod, David E., to Carrier Corp. Mounting arrangement for air conditioners. 3,048,095, 8–7–62, Cl. 98—99.
MacPlum, R. A., Industries, Inc.: *See*—
Umanoff, Martin. 3,048,208.
Umanoff, Martin. 3,048,420.
Madge, Joseph G., and A. D. Walker, to Ford Motor Co. Glass rolling apparatus. 3,048,214, 8–7–62, Cl. 156—443.
Maeder, Charles R.: *See*—
Beaujard, Louis, Maeder, and Pinard. 3,048,031.
Magner, Philip G., Jr., to The General Tire & Rubber Co. Bonding nylon to steel. 3,047,934, 8–7–62, Cl. 29—149.5.
Maboff, George A., and L. L. Rice. Quick disconnect segmental tube coupling. 3,048,427, 8–7–62, Cl. 285—81.
Maisel, Daniel S.: *See*—
Matuszak, Alfred H., Maisel, and Carrier. 3,048,623.
Majestic Co., Inc., The: *See*—
Morgan, Claude A. 3,048,130.
Malcom, Robert, Jr., to Chicago Eye Shield Co. Adjustable head piece. 3,047,876, 8–7–62, Cl. 2—9.
Maletz, Leonard H.: *See*—
Curtis, Harold S., Curtis, Divola, Maletz, Morris, and Schiltz. 3,048,356.
Mallard, Richard H., to Foster-Mallard Ltd. Sound reproducing machines. 3,048,406, 8–7–62, Cl. 274—10.
Mallenckrodt Chemical Works: *See*—
Wallingford, Vernon H. 3,048,626.
Manganese Steel Forge Co.: *See*—
Doepken, Herbert C. 3,048,505.
Mann, Neal E. Wall bracket and shelf combination. 3,048,279, 8–7–62, Cl. 211—90.
Manning, William O., Jr., to Holley Carburetor Co. Ignition contact set. 3,048,671, 8–7–62, Cl. 200—30.
Mannisto, Orville H.: *See*—
Bohaboy, Edward J., Klasek, and Mannisto. 3,048,328.
Mansfield, Richard L., to Union Carbide Corp. Fire tube furnace and method for baking articles. 3,048,382, 8–7–62, Cl. 263—41.
Mansfield Sanitary Inc.: *See*—
Smith, Harry F. 3,048,187.
Marelli S.p.A., Fabbrica Italiana Magneti: *See*—
Alfieri, Giuseppe. 3,048,451.
Markhart, Albert H., C. F. Hunt, and S. M. Cohen, to Shawinigan Resins Corp. Polyspirane resin cured in the presence of an acid catalyst, mixtures thereof with other resinous materials, process for preparing same, and electrical conductor coated therewith. 3,048,560, 8–7–62, Cl. 260—42.
Marksway Wear, Ltd.: *See*—
Shaw, Mark. 3,047,889.
Marlin, William R.: *See*—
Davidson, William W., Jr., Dell, Dykaar, and Marlin. 3,048,099.
Marsh, Frederick, to Litton Industries, Inc. Altitude indicating or control servosystem. 3,048,762, 8–7–62, Cl. 318—489.
Marsh, James C.: *See*—
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Martin, Arthur T., and N. S. Temple, to Economics Laboratory, Inc. Defoaming detergent composition. 3,048,548, 8–7–62, Cl. 252—135
Martin, Kenneth V., to E. I. du Pont de Nemours and Co. Preparation of fluorosulfur compounds. 3,048,629, 8–7–62, Cl. 260—544.
Martin, Lincoln A. Method for processing seismograms. 3,048,846, 8–7–62, Cl. 346—1.
Mary, Francis J., to Babcock & Wilcox Ltd. Steam turbine power plant. 3,048,017, 8–7–62, Cl. 60—67.
Master-Craft Corp.: *See*—
Fitzgerald, Russell C. 3,048,178.
Matge, Pierre P.: *See*—
Robert, Roger A., and Matge. 3,048,086.
Matlock, Roy L. Longitudinally adjustable running gear mounting for vehicles. 3,048,421, 8–7–62, Cl. 280—81.
Matuszak, Alfred H., D. S. Maisel, and E. W. Carrier, to Esso Research and Engineering Co. Preparation of complex diester synthetic lubricants. 3,048,623, 8–7–62, Cl. 260—485.
May, Richard W., to The Rust Industrial Co., Inc. Method and apparatus for chart recording. 3,048,848, 8–7–62, Cl. 346—78.
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Helder, George K., and Mayo. 3,048,819.
Mayr, Henry B.: *See*—
Foster, Tom, Jaklitsch, Mayr, and Walter. 3,048,365.
Maytag Co., The: *See*—
Mellinger, John C. 3,048,027.
McCanna, Lawrence E.: *See*—
Koerner, Harry E., and McCanna. 3,048,696.
McCarter, Donald C., S. Ramachandran, and J. M. Held, to Allegheny Ludlum Steel Corp. Silicone mold coating. 3,047,917, 8–7–62, Cl. 22—192.
McCarty, Lee A., to H. S. Watson Co. Load handling apparatus having optimum efficiency. 3,048,367, 8–7–62, Cl. 254—124.
McCaul, Verne J. Golf putting target. 3,048,405, 8–7–62, Cl. 273—177.
McCleary, Lorin D. Propulsion machine. 3,048,326, 8–7–62, Cl. 230—150.
McCloud, George R., to McGraw-Edison Co. Fuse cutout. 3,048,680, 8–7–62, Cl. 200—114.
McClure, Charles M.: *See*—
Bentele, Gerard O., and McClure. 3,048,514.
McDonough Co.: *See*—
Chadwick, Earl L. 3,047,999.
McGavern, Sanford A., to Schwitzer Corp. Cable motion damper. 3,048,649, 8–7–62, Cl. 174—42.
McGill, Harold C.: *See*—
Ralston, Edgar K., and McGill. 3,048,809.
McGrath, William L., to Carrier Corp. Signal device. 3,048,834, 8–7–62, Cl. 340—240.
McGraw-Edison Co.: *See*—
McCloud, George R. 3,048,680.
McKean, James D., to Premere Mfg. Corp. Portable collapsible shipping kennel for animals. 3,048,147, 8–7–62, Cl. 119—19.
McKennis, Herbert, Jr., and E. R. Bowman, to Medical College of Virginia Foundation. Antispasmodic. 3,048,520, 8–7–62, Cl. 167—65.

McKulla, George W., Jr., to Thos. Sommerville Co. Abrasive blasting apparatus. 3,047,986, 8–7–62, Cl. 51—8.
McNeil Laboratories, Inc.: *See*—
Cain, Cornelius K. 3,048,588.
McPherson, David M., and O. D. Walker. Folding rocking chair. 3,048,440, 8–7–62, Cl. 297—33.
McRoberts, Guy B., and N. H. Blackford. Meat cleaning machine. 3,047,892, 8–7–62, Cl. 15—3.17.
Mead, Michael L.: *See*—
Cataldo, John B., Thomas, Mead, and Shackman. 3,048,672.
Medical College of Virginia Foundation: *See*—
McKennis, Herbert, Jr., and Bowman. 3,048,520.
Meimberg, Julius: *See*—
Schwendt, Otto, and Meimberg. 3,047,922.
Melchior, Frederick C. Tank gauging device. 3,048,037, 8–7–62, Cl. 73—299.
Mele, Joseph J., to American Drill Bushing Co. Ceramic coated bushings and allied products. 3,048,061, 8–7–62, Cl. 77—62.
Mellinger, John C., to The Maytag Co. Automatic dry control for combination washer-drier. 3,048,027, 8–7–62, Cl. 68—12.
Melzer, Manfred, to Losenhausenwerk, Dusseldorfer Maschinenbau A.G. Hydraulic load-testing apparatus. 3,048,033, 8–7–62, Cl. 73—88.
Mener, Edward C.: *See*—
Byrnes, Peter A., Jr., Davis, and Mener. 3,048,690.
Merchant, Chester O., to Swanson-Erie Corp. Cement dispensing apparatus. 3,048,205, 8–7–62, Cl. 141—141.
Mergenthaler Linotype Co.: *See*—
Davidson, William W., Jr., Dell, Dykaar, and Marlin. 3,048,099.
Hilpman, Paul, and Post. 3,048,261.
Merino, Peter J. Reversible zipper. 3,047,925, 8–7–62, Cl. 24—205.14.
Metal Pumping Services, Inc.: *See*—
Sweeney, Victor D., and Kaji. 3,048,384.
Metalem S.A.: *See*—
Schneider, Hans, and Feller. 3,047,942.
Metallized Carbon Co., Inc.: *See*—
Scott, Martin. 3,048,453.
Metzger, Horst: *See*—
Mueller, Eugen, Metzger, and Fries. 3,048,634.
Meyer, Gerhard: *See*—
Indest, Heinz, and Meyer. 8,048,635.
Michel, David D. Device for dispensing aerated products. 3,048,307, 8–7–62, Cl. 222—394.
Middleton, William J.: *See*—
Miller, William T., and Middleton. 3,048,609.
Miehle-Goss-Dexter, Inc.: *See*—
Smith, Edwin K., Jr., and Anastasio. 3,048,388.
Thumin, Carl. 3,048,386.
Mikkola, John E., and S. F. Newman, to General Motors Corp. Electrical apparatus. 3,048,669, 8–7–62, Cl. 200—11.
Mileler, Francis G., to Heyl & Patterson, Inc. Froth flotation process. 3,048,272, 8–7–62, Cl. 209—166.
Miles, Joseph P.: *See*—
Miles, Leroy E. and J. P. 3,048,067.
Miles Laboratories, Inc.: *See*—
Barton, Richard R. 3,048,492.
Crozall, Willard J., and Dawson. 3,048,598.
Rupe, Chauncey O. 3,048,475.
Miles, Leroy E. and J. P. Radiator cap tool. 3,048,067, 8–7–62, Cl. 81—3.1.
Miles, Oliver C.: *See*—
Haslam, Maurice B., and Miles. 3,048,830.
Miller, Alfred L., to Esso Research and Engineering Co. Ion exchange treatment of butyl rubber latex and product thereof. 3,048,556, 8–7–62, Cl. 260—29.7.
Miller, Edgard W., and W. W. Toy, to Rohm & Haas Co. Paper products having a coating of mineral pigment in a binder of ammonium or amine salt of a copolymer of acrylic acid or methacrylic acid, acrylamide or methacrylamide, and a (C_1—C_4)-alkyl acrylate or methacrylate, and production thereof. 3,048,501, 8–7–62, Cl. 117—155.
Miller, Lloyd G., to United Shoe Machinery Corp. Needle guide for shoe sewing machines. 3,048,133, 8–7–62, Cl. 112—33.
Miller Printing Machinery Co.: *See*—
Siebke, Carl O. 3,048,098.
Miller, Wendell S. Card recording and scanning apparatus. 3,048,097, 8–7–62, Cl. 101—47.
Miller, William T., and W. J. Middleton, to E. I. du Pont de Nemours and Co. Secondary and tertiary bis-polyfluoroorganic mercury compounds. 3,048,609, 8–7–62, Cl. 260—431.
Millis, Walter T., to General Electric Co. Electron discharge rectifier. 3,048,726, 8–7–62, Cl. 313—3.
Milross, John W.: *See*—
Warren, Christopher J. L., and Milross. 3,048,128.
Miner, Richard Y.: *See*—
Cunningham, Frederick W., Miner, and Evans. 3,048,769.
Minerals & Chemicals Philipp Corp.: *See*—
Sawyer, Edgar W., Jr. 3,048,494.
Minneapolis-Honeywell Regulator Co.: *See*—
Berggren, Lloyd E. 3,048,329.
Minsk, Louis M., and H. L. Cohen, to Eastman Kodak Co. Basic mordants derived from the reaction between maleic anhydride interpolymers and disubstituted diamines. 3,048,487, 8–7–62, Cl. 96—84.
Mittenbergs, Alexander A., and W. F. Scharenberg, Jr., to American Iron and Machine Works Co., Inc. Method and apparatus for inspecting threads and cylinders. 3,047,960, 8–7–62, Cl. 33—199.
Miyahara, Hisao, and H. Suzumura, to Kurashiki Rayon Co., Ltd. Polyvinyl acetate paint. 3,048,530, 8–7–62, Cl. 204—158.
Modern Engraving and Machine Co.: *See*—
Nelson, Robert F. 3,048,512.
Mohlman, John W., to Standard Oil Co. Fluidized catalyst regeneration. 3,048,529, 8–7–62, Cl. 204—154.
Möller, Göran A. Process of coating base metals with aluminum. 3,048,497, 8–7–62, Cl. 117—52.
Monin, Claude: *See*—
Burstow, Pierre, and Monin. 3,048,821.
Monsanto Chemical Co.: *See*—
Chupp, John P. 3,048,517.
D'Amico, John J. 3,048,397.
Dazzi, Joachim. 3,048,558.
Gaertner, Van R. 3,048,577.
Shaver, Kenneth J. 3,048,471.
Moore, Charles C.: *See*—
Gregory, James B., Moore, and Emerson. 3,048,157.
Moore, James J., 33⅓% to L. J. Bajak. Convertible table structure. 3,048,459, 8–7–62, Cl. 311—108.
Morgan, Claude A., to The Majestic Co., Inc. Incinerator. 3,048,130, 8–7–62, Cl. 110—8.
Morgan, George L. Turntables of record players. 3,048,408, 8–7–62, Cl. 274—39.
Morgan, John F., and C. E. Gray. Seed pellet dispenser and planter. 3,048,132, 8–7–62, Cl. 111—77.
Morin, Ovide G., to Avco Corp. Servo system. 3,048,753, 8–7–62, Cl. 318—28.
Morrell, John, & Co.: *See*—
Lowe, John M. 3,048,319.
Morris, Glen W.: *See*—
Curtis, Harold S., Curtis, Divola, Maletz, Morris, and Schiltz. 3,048,356.
Morris, John C., to Sperry Rand Corp. Ribbon mechanism for typewriter. 3,048,254, 8–7–62, Cl. 197—151.
Morrison, Marks O. Hose coupling apparatus. 3,048,212, 8–7–62, Cl. 153—1.
Morse, Leon E., to United States of America, Atomic Energy Commission. Catalytic recombination of radiolytic gases in thorium oxide slurries. 3,048,474, 8–7–62, Cl. 23—204.
Mosbach, Gruber & Co., G.m.b.H.: *See*—
Komnier, Jakob. 3,048,209.
Mosca, Americo. Aluminum fungicide. 3,048,516, 8–7–62, Cl. 167—14.
Moser, Richard: *See*—
Burckhardt, Christof, Moser, and Baumann. 3,048,818.
Moss, John, to E. I. du Pont de Nemours and Co. Blending wax with an ethylenevinyl acetate copolymer. 3,048,553, 8–7–62, Cl. 260—28.5.
Motorola, Inc.: *See*—
Crow, Robert P., and Vollink. 3,048,659.
Errichiello, Dominic. 3,048,747.
Moughty, John J.: *See*—
Bartos, John B., Doughman, Ferraris, and Moughty. 3,047,897.
Mrenna, Stephen A., and J. N. Groves, to Westinghouse Electric Corp. Breaker support. 3,048,685, 8–7–62, Cl. 200—108.
Mueller, Erich O., to Westinghouse Electric Corp. Bearing assembly for dynamoelectric machines. 3,048,724, 8–7–62, Cl. 310—90.
Mueller, Eugen, H. Metzger, and D. Fries. Production of ketoximes. 3,048,634, 8–7–62, Cl. 260—566.
Muenzer, Bernard M.: *See*—
Gewickey, Frank I., Golden, and Muenzer. 3,048,327.
Muller, Georges, A. Allais, and L. Vellus, to Roussel-UCLAF, S.A. 6-ethyl-10-chloro-deserpidine and intermediates and processes for their production. 3,048,592, 8–7–62, Cl. 260—287.
Muller, Griffen R.: *See*—
Herbst, Edward J., and Muller. 3,048,460.
Müller, Hermann: *See*—
Wagner, Ferdinand, Brandt, and Müller. 3,048,220.
Mulloy John F.: *See*—
Dreisbach, Robert R., and Mulloy. 3,048,554.
Murley, Ellsworth M., Jr., to Owens-Illinois Glass Co. Inhibiting false signals in electronic gauging. 3,048,269, 8–7–62, Cl. 209—74.
Murphey, Joseph H., Jr., to Phillips Petroleum Co. Rocket with large propellant charge units. 3,048,008, 8–7–62, Cl. 60—35.6.
Murphy, Arthur J.: *See*—
Fitzgerald, Charles F., and Murphy. 3,048,134.
Murphy, Cornelius L., 25% to J. C. Chognard. Panel tie. 3,047,985, 8–7–62, Cl. 50—395.
Murphy, Joseph E.: *See*—
Starzec, Francis J., and Murphy. 3,048,718.
Murphy, Joseph E., to General Motors Corp. Transistor converter circuit. 3,048,764, 8–7–62, Cl. 321—2.
Murphy, William P., Jr., ½ to Cordis Corp. and ½ to Don Baxter Inc. Surgical valve. 3,048,192, 8–7–62, Cl. 137—625.42.
Musser, C Walton. Double action pump and engine. 3,048,115, 8–7–62, Cl. 103—48.
Musser, David M., and J. H. Vellekamp, to Chicopee Mfg. Corp. Textile material and process of treating the same. 3,048,500, 8–7–62, Cl. 117—139.4.
National Bank of Westchester, White Plains, executor: *See*—
Kaplan, Philip. 3,048,078.
National Broach & Machine Co.: *See*—
Bregi, Benjamin F., and Gates. 3,048,066.
National Refill Co., Inc.: *See*—
Le Brun, George K. 3,047,994.
National Research Development Corp.: *See*—
Newman, Edward A., and Stringer. 3,048,334.
National Steel Corp.: *See*—
Kompart, Walter W. 3,048,504.
Neale, Junius B., to General Electric Co. Automatic wire-breaking device. 3,048,313, 8–7–62, Cl. 225—106.
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Detwiler, Harry S., and Nelson. 3,048,004.

Nelson, Morris D., to Radio Corp. of America. Electron beam convergence apparatus. 3,048,740, 8–7–62, Cl. 315—22.

Nelson, Robert F., to Modern Engraving and Machine Co. Method of making matched embossing rolls. 3,048,512, 8–7–62, Cl. 156—14.

Netherwood, Paul H., and L. L. Rice, to Sprague Electric Co. Electrostatic capacitor. 3,048,750, 8–7–62, Cl. 317—258.

Neuenfeldt, Albert R. Garment hanger lock. 3,048,311, 8–7–62, Cl. 223—85.

Neville, Richard G., to International Business Machines Corp. Transducer with low microphonics. 3,048,666, 8–7–62, Cl. 179—100.2.

Newcomer, Jack S.: *See*—
Well, Edward D., Dorfman, and Newcomer. 3,048,483.

Newell, Chester W., to Ampex Corp. Color television recording system and method. 3,048,652, 8–7–62, Cl. 178—5.2.

Newman, Edward A., and J. B. Stringer, to National Research Development Corp. Electrical digital computing engines. 3,048,334, 8–7–62, Cl. 235—164.

Newman, Ivan V., Sr. Vaned valve. 3,048,378, 8–7–62, Cl. 261—23.

Newman, Stanley F.: *See*—
Mikkola, John E., and Newman. 3,048,669.

Newton, Robert P., Jr. Waste water heat reclaimer. 3,048,372, 8–7–62, Cl. 257—236.

Nicholson, James F., to Westinghouse Electric Corp. Method of making a photoconductive target. 3,048,502, 8–7–62, Cl. 117—211.

Nicolin, Curt R., to Turbin Aktiebolaget de Laval Ljungstrom. Turbine power plant. 3,048,018, 8–7–62, Cl. 60—70.

Nielsen, Peer D., to Curtiss-Wright Corp. Power regulating system. 3,048,703, 8–7–62, Cl. 290—2.

Nilson, A. H., Machine Co., The: *See*—
Barnes, Leslie W. 3,048,199.

Nobes, William D., to The Caldwell Mfg. Co. Adjustable connector for sash balance. 3,047,905, 8–7–62, Cl. 16—197.

Noel, Eugene M. Process for continuous proofing and grilling and apparatus therefor. 3,048,129, 8–7–62, Cl. 107—54.

North American Aviation, Inc.: *See*—
Ashby, Robert M. 3,048,844.
Roberson, Robert E., Rogers, and Martin. 3,048,108.
Slater, John M., and Acterman. 3,048,043.

North American Philips Co., Inc.: *See*—
Schmidt, Wolfgang. 3,048,686.

Northern Electric Co. Ltd.: *See*—
Loro, Alberto. 3,048,093.

Norton, Samuel H., to Thompson Ramo Wooldridge Inc. Pump for an artificial heart. 3,048,165, 8–7–62, Cl. 128—1.

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Barnard, Dennis A., and Nossiter. 3,047,915.

Nützel, Karl: *See*—
Stroh, Rudolf, and Nützel. 3,048,571.

Nyberg, James J., to Thompson Ramo Wooldridge Inc. Superconductive switching elements. 3,048,707, 8–7–62, Cl. 307—88.5.

Nye, Dudley D., and R. Y. Paradise, to Robertshaw-Fulton Controls Co. Force to direct current transducer. 3,048,770, 8–7–62, Cl. 323—64.

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Klint, Bernard C. 3,048,447.

Oberholtz, Lester E., to Allis-Chalmers Mfg. Co. Conveyer chain. 3,048,049, 8–7–62, Cl. 74—248.

Oberlin, Max, and H. Frey, to Ciba Corp. Deselenation of dehydrosteroids containing selenium. 3,048,604, 8–7–62, Cl. 260—397.4.

Oberpaul, Franz X., to Alweg-Forschung, Gesellschaft mit beschrankter Haftung. Vehicle running gear. 3,048,127, 8–7–62, Cl. 105—145.

O'Brien, Charles J., and L. E. Waite, to General Motors Corp. Thermostatic valve structures. 3,048,338, 8–7–62, Cl. 236—34.

O'Brien, Charles S., to Bemis Bro. Bag Co. Bag. 3,048,325 8–7–62, Cl. 229—66.

O'Brien, John F., to United States Steel Corp. Container-tilting rigging. 3,047,916, 8–7–62, Cl. 22—82.

O'Brien, Loren J. Three piece tie rod assembly for steering driven wheels. 3,048,232, 8–7–62 Cl. 180—43.

O'Donnell, John F., and C. B. Richey, to Ford Motor Co. Adjustable tread wheel. 3,048,443, 8–7–62, Cl. 301—9.

Oerlikon Engineering Co.: *See*—
Duechner, Gerhard. 3,048,016.

Ogden, William M.: *See*—
Guarino, Louis S., and Ogden. 3,048,836.

Ohlinger, Leo A., to United States of America, Atomic Energy Commission. Neutronic reactor manipulating device. 3,048,533, 8–7–62, Cl. 204—193.2.

Ohyagi, Koji. Rotary pump. 3,048,120, 8–7–62, Cl. 103—123.

Oldenburg, Kenneth F., and F. N. Schwend, to Clary Corp. Intermittent strip feeding mechanism. 3,048,253, 8–7–62, Cl. 197—133.

Olin Mathieson Chemical Corp.: *See*—
Becke, Margot. 3,048,630.
Fried, Josef. 3,048,581.
Krause, Victor B. 3,048,264.
Riggs, Burd J. 3,048,104.

Olsen, Fred Aviation Maintenance Norsk Flyindustri A/S: *See*—
Grundseth, Odd. 3,048,183.

Olson, Paul E., to Westinghouse Air Brake Co. Low oil pressure protection apparatus. 3,048,158, 8–7–62, Cl. 123—196.

Olson, Paul E., and E. E. Hewitt, to Westinghouse Air Brake Co. Multi-position manual control valve with step-by-step insuring feature. 3,048,675, 8–7–62, Cl. 200—61.86.

Olson, Ralph H., to Owens-Illinois Glass Co. Method of controlling the wall thickness of blown glass articles. 3,047,982, 8–7–62, Cl. 49—83.

Onderzoekingsinstituut Research, N.V.: *See*—
Kobiwey, Johann F. 3,048,567.

Oosterhout, Johan C. D., to Texaco Inc. Greases thickened with sodium salts of alkyl mercapto fatty acids. 3,048,541, 8–7–62, Cl. 252—33.6.

O'Quinn, Arthur M.: *See*—
Kile, Stephen L., and O'Quinn. 3,048,216.

Ordahl, Douglas D.: *See*—
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Oroshnik, William, to Ortho Pharmaceutical Corp. 2-alkylamino-4-aminopyrimidine. 3,048,587, 8–7–62, Cl. 260—256.4.

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Oroshnik, William. 3,048,587.

Osborn, Norma R.: *See*—
Osborn, Wilford F. and N. R. 3,048,294.

Osborn, Wilford F., and N. R. Osborn. Insulated bottle. 3,048,294, 8–7–62, Cl. 215—13.

Otis Engineering Corp.: *See*—
Raulins, George M., and Graves. 3,048,358.

Ottenheym, Johannes H., and P. L. Kerkhoffs, to Stamicarbon N.V. Preparation of α-aminolactams by catalytic hydrogenation of α-nitro lactams. 3,048,580, 8–7–62, Cl. 260—239.3.

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Pachuta, Joseph R., to United States of America, Air Force. Amplitude discriminator device. 3,048,787, 8–7–62, Cl. 328—150.

Pacific Molded Pulley Co., Inc.: *See*—
Friedman Mark M. 3,048,400.

Paddison, Eric: *See*—
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Pall, David B., and S. Krakauer, to Pall Corp. Porous articles of polyethylene polymers and process of making the same. 3,048,537, 8–7–62, Cl. 210—510.

Palmer, Karl, and W. L. Hinman, to Westinghouse Electric Corp. Contact making devices. 3,048,676, 8–7–62, Cl. 200—87.

Pankratz, A. J., R. M. Shoemaker, and E. S. Steen, to General Precision, Inc. Endless tape system. 3,048,315, 8–7–62, Cl. 226—118.

Panzer, Siegfried, to Carl Zeiss. High direct voltage generating units. 3,048,766, 8–7–62, Cl. 321—15.

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Nye, Dudley D., and Paradise. 3,048,770.

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Parker, Harry W., to Phillips Petroleum Co. Apparatus and process for igniting a stratum around a well. 3,048,224, 8–7–62, Cl. 166—11.

Parker, Kenneth B., Jr., to Leeds and Northrup Co. Immersion pyrometer with expendable plug-in temperature sensing unit. 3,048,642, 8–7–62, Cl. 136—4.

Parker, Louis W. Remote position indicator and aircraft guidance system. 3,048,841, 8–7–62, Cl. 343—101.

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Paul, Edward, Jr., to United States of America, Navy. Microwave excited spectrum tube with internal heater. 3,048,738, 8–7–62, Cl 313—202.

Paul, Edward, Jr. to United States of America, Navy. Electronic discharge tube. 3,048,739, 8–7–62, Cl. 313—220.

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Payer, Rodolphe L. Method of forming dead ends for cables. 3,048,003, 8–7–62, Cl. 57—160.

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Pearce, Edwin S., L. G. Taylor, and T. R. Booth, to Railway Service and Supply Corp. Journal box dust guard. 3,048,414, 8–7–62 Cl. 277—180.

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Perks, Arthur T. Disc brake. 3,048,242, 8–7–62, Cl. 188—73.

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Preston, Kendall, Jr., to Bell Telephone Laboratories, Inc. Transistor-core pulse generator. 3,048,709, 8–7–62, Cl. 307—88.5.

Pretorius, Yarl. Bait for fishing. 3,047,975, 8–7–62, Cl. 43—42.06.

Price, Ralph E., to Landis Tool Co. Feed mechanisms for grinding machines. 3,047,988, 8–7–62, Cl. 51—165.

Prutton, Daniel H. Machine for thread rolling. 3,048,065, 8–7–62, Cl. 80—7.

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Reed, Stanley E. and D. F., and E. F. Deady, to Space Components Inc. Magnetic relays. 3,048,678, 8–7–62, Cl. 200—93.

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Robbins, Hugh C., to Robbins Aviation, Inc. Hermetically sealed cartridge with leak detection means. 3,047,993, 8–7–62, Cl. 55—274.

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Roberts, John S., and A. T. Walter, to Union Carbide Corp. Textile fibers of polyolefins. 3,048,467, 8–7–62, Cl. 18—54.

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Robinson, Cecil H., to Schering Corp. 16,16-difluoroestratrienes. 3,048,605, 8–7–62, Cl. 260—397.5.

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Rosenberg, Milton, and P. W. Schaub, to Gulf Research & Development Co. Water-base drilling fluid having enhanced lubricating properties. 3,048,538, 8–7–62, Cl. 252—8.5.

Rosenmund, Karl W., and H. Bach. Method for the production of lactones of saturated delta-hydroxymono- or dicarboxylic acids with more than 5 carbon atoms. 3,048,599, 8–7–62, Cl. 260—343.5.

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Sabins, Rolland C. Electrolytic system. 3,048,535, 8–7–62, Cl. 204—197.

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Hackbel, Robert H., and Sacks. 3,048,266.

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Salmon, David F., and J. T. Zinn, to Avco Corp. Blueprint folding machine. 3,048,390, 8–7–62, Cl. 270—73.

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Schade, Otto H., Sr., to Radio Corp. of America. Television projection tube alignment. 3,048,654, 8–7–62, Cl. 178—7.81.

Schaefer, F. & M., Brewing Co., The: *See*—
Strandskov, Frede B., Bockelmann, and Carroll. 3,048,488.

Schafer, Richard G.: *See*—
Burke, Kenneth O., and Schafer. 3,048,380.

Schanbacher, William A., to Hughes Aircraft Co. Temperature compensated resonant cavity. 3,048,803, 8–7–62, Cl. 333—83.

Schaper Mfg. Co., Inc.: *See*—
Schaper, William H. 3,048,402.

Schaper, William H., to Schaper Mfg. Co., Inc. Game apparatus. 3,048,402, 8–7–62, Cl. 273—119.

Scharenberg, William F., Jr.: *See*—
Mittenbergs, Alexander A., and Scharenberg. 3,047,960.

Schaschl, Edward, to The Pure Oil Co. Apparatus for measuring the rate of accumulation of static electrical potential. 3,048,777, 8–7–62, Cl. 327—72.

Schaub, Paul W.: *See*—
Rosenberg, Milton, and Schaub. 3,048,538.

Schaufelberger, Henry W., to Western Electric Co., Inc. Pile-up assembly fixture. 3,047,941, 8–7–62, Cl. 29—203.

Schelter, Milton H.: *See*—
Borman, August H., Jr., Cheek, and Schelter. 3,048,055.

Scherer, Erich H., to Westinghouse Electric Corp. Binary input-A.C. wave output selector using bipolar generator, integrator, and low pass filter. 3,048,784, 8–7–62, Cl. 328—27.

Schering Corp.: *See*—
Robinson, Cecil H. 3,048,602.
Robinson, Cecil H. 3,048,605.

Schibli, Marcel, and M. Leroux, to Schweizerische Wagons-und Aufzugefabrik A.G. Schlieren-Zurich. Elevator control system. 3,048,239, 8–7–62, Cl. 187—29.

Schildknecht, Raymond O., to International Telephone and Telegraph Corp. Multiplex communication receiver. 3,048,661, 8–7–62, Cl. 179—15.

Schlitz, Richard P.: *See*—
Curtis, Harold S. and J. C., and Divola, Maletz, Morris, and Schlitz. 3,048,356.

Schlowitz, Hyman A., to Arrow Lock Corp. Snap action lock-set assemblies. 3,048,436, 8–7–62, Cl. 292—337.

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Lebourg, Maurice P. 3,048,102.

Schmidlin, Fred W., J. N. Cooper, and E. C. Crittenden, Jr., to Space Technology Laboratories, Inc. Computer operating method and apparatus. 3,048,825, 8–7–62, Cl. 340—173.1.

Schmidt, Fritz A. F. Combustion chamber for jets and similar engines. 3,048,014, 8–7–62, Cl. 60—39.23.

Schmidt, Wolfgang, to North American Philips Co., Inc. Tunnel furnace with very high frequencies to heat substances, for example, foodstuffs. 3,048,686, 8–7–62, Cl. 219—10.55.

Schmitz, Harry W.: *See*—
Ryck, Francis M., and Schmitz. 3,048,045.

Schneider, Hans, and G. Feller; said Feller assor. to Metalem S.A. Method of fixing metallic relief horological figures to a metallic watch dial plate. 3,047,942, 8–7–62, Cl. 29—470.

Schroer, Werner: *See*—
Keller, Richard, Quest, Schroer, and Lochschmidt. 3,048,206.

Schuhmacher, Jacobus P., and H. Hendriks, to Stamicarbon N.V. Process for the manufacture of ethylene polymers. 3,048,575, 8–7–62, Cl. 260—94.9.

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Jarvie, John M. S., Schuler, and Sterling. 3,048,610.

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Bolney, Joseph F., and Schulman. 3,048,508.

Schulmerich Electronics, Inc.: *See*—
Kunz, Jacob T. 3,048,071.

Schultz, Henry J., to B. Walker. Engine analyzer. 3,048,034, 8–7–62, Cl. 73—116.

Schulz, Walter E. Explosively actuated driving tool. 3,047,873, 8–7–62, Cl. 1—106.

Schuster, Janos. Conveyor clearing device. 3,048,257, 8–7–62, Cl. 198—20.

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Schweizerische Wagons-und Aufzugefabrik A.G. Schlieren-Zurich: *See*—
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Schibli, Marcel, and Leroux. 3,048,239.

Schwend, Fred N.: *See*—
Oldenburg, Kenneth F., and Schwend. 3,048,253.

Schwendt, Otto, and J. Meimberg, to Ri-Ri Werke A.G. Slide fastener. 3,047,922, 8–7–62, Cl. 24—205.1.

Schwitzer Corp.: *See*—
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Scinta, Anthony C., to Trico Products Corp. Wiper arm. 3,047,900, 8–7–62, Cl. 15—250.21.

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Scott, Robert E., to Gaynler Fibre Products Co. Molding retainer. 3,047,919, 8–7–62, Cl. 24—73.

Scott & Williams, Inc.: *See*—
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Seibert, Warren F. Gaging device. 3,047,959, 8–7–62, Cl. 33—185.

Seley, Eldon L., and R. C. Stone, Jr., to Bell Telephone Laboratories, Inc. Logic system including high fan-out stage having variable clamping means. 3,048,716, 8–7–62, Cl. 307—88.5.

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Seydel, Robert, T. Kempermann, W. Hahn, and R. Stroh, to Bayer Aktiengesellschaft, Farbenfabriken. Composition comprising rubber and 2,6-di-tertiary-butyl-3-methylphenol. 3,048,563, 8–7–62, Cl. 260—45.95.

Seymour, Raymond E.: *See*—
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Cataldo, John B., Thomas, Mead, and Shackman. 3,048,672.

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Sharp, John J., to International Computers and Tabulators Ltd. Magnetic reading and recording. 3,048,831, 8–7–62, Cl. 340—174.1.

Sharp, Leonard W. D., and D. J. Blight, to The Plessey Co. Ltd. Electric rotary switch indexing means. 3,048,684, 8–7–62, Cl. 200—166.

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Sharples, Thomas D., to The Sharples Corp. Particle classification. 3,048,271, 8–7–62, Cl. 209—144.

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Shaver, Kenneth J., to Monsanto Chemical Co. Alkali metal polyphosphatosulfates and preparation thereof. 3,048,471, 8–7–62, Cl. 23—106.

Shaw, Herman L., to Aquafilter Corp. Filter tip. 3,048,180, 8–7–62, Cl. 131—207.

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Markhart, Albert H., Hunt, and Cohen. 3,048,560.

Shecter, George O., and I. L. Hirsch. Cushioning structure. 3,047,888, 8–7–62, Cl. 5—361.

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Lutz, Robert G. 3,048,551.

Shelton, Clarence R. Crimping device for shotgun shells. 3,048,077, 8–7–62, Cl. 86—40.

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Shewell, Earl W., to Arean Eastern Ltd. Locking mechanism. 3,048,245, 8–7–62, Cl. 189—36.

Shillington, Harry R., to Western Electric Co., Inc. Electrical breakdown count test set. 3,048,774, 8–7–62, Cl. 324—54.

Shockley, William. Reverse-breakdown diode pulse generator. 3,048,710, 8–7–62, Cl. 307—88.5.

Shoemaker, John V., to Lyon Inc. Wheel cover. 3,048,445, 8–7–62, Cl. 301—37.

Shoemaker, John V., to Lyon Inc. Wheel cover. 3,048,446, 8–7–62, Cl. 301—37.

Shoemaker, Robert M.: *See*—
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Shook, Adam M., to Press Seal Gasket Corp. Pipe joint assembly. 3,048,415, 8–7–62, Cl. 277—170.

Shope, Claude A., to Phillips Petroleum Co. Gas generator. 3,048,112, 8–7–62, Cl. 102—98.

Shores, Samuel J. Drill rod coupling. 3,048,431, 8–7–62, Cl. 287—103.

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Bower, Clyde S. 3,048,251.

Shupe, Marvin, and R. W. Boies. Floral piece foundation. 3,047,981, 8–7–62, Cl. 47—41.

Siddall, Don F., to The United States Stoneware Co. Process of blending a plasticizer with a vinyl resin. 3,048,557, 8–7–62, Cl. 260—30.6.

Siebke, Carl O., to Miller Printing Machinery Co. Printing press and method. 3,048,098, 8–7–62, Cl. 101—148.

Siegel, Martin, and S. Zelnick, to Weldotron Corp. Impulse sealing apparatus. 3,047,991, 8–7–62, Cl. 53—182.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
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Signode Steel Strapping Co.: *See*—
Lingle, Harrison C. 3,048,204.

Silverstone, Joseph: *See*—
Spidy, Alexander R., and Silverstone. 3,048,303.

Simmons, Howard E., Jr., to E. I. du Pont de Nemours and Co. Polymeric secondary alcohols having recurring alpha-hydroxy amide groups. 3,048,570, 8–7–62, Cl. 260—87.3.

Simon-Carves Ltd.: *See*—
Chick, James E., and Symington. 3,048,273.

Simons, Keneth A., to Jerrold Electronics Corp. Directional coupler. 3,048,798, 8–7–62, Cl. 333—10.

Simpson, Stuart C. Cultivator. 3,048,229, 8–7–62, Cl. 172—698.

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Herbst, Edward J., and Muller. 3,048,460.

Sirianni, Salvatore P. Ball point pen. 3,048,148, 8–7–62, Cl. 120—42.4.

Skinner, Clayton H., to Hewitt-Robins Inc. Moving handrail. 3,048,256, 8–7–62, Cl. 198—16.

Skold, John F. Multiple conveyor. 3,048,258, 8–7–62, Cl. 198—75.

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Slater, John M., and J. S. Acterman, to North American Aviation, Inc. Gas bearing gyroscope. 3,048,043, 8–7–62, Cl. 74—5.

Slatter, Brian H., to Bristol Siddeley Engines Ltd. Control systems for gas turbine engines. 3,048,012, 8–7–62, Cl. 60—39.28.

Sloan, Theodore H., ¼ to W. B. Jaspert. Pinch roll drive for honing cylindrical bodies. 3,047,989, 8–7–62, Cl. 51—236.

Slocum, Charles W., to C. W. Slocum and R. D. Bauer. Switch calibration apparatus. 3,048,028, 8–7–62, Cl. 73—1.

Smeltzer, Jack C., to Thompson Ramo Wooldridge Inc. Saturable reactor power supply. 3,048,767, 8–7–62, Cl. 321—25.

Smeltzer, Jack C., to Thompson Ramo Wooldridge Inc. Transistor flip-flop indicator circuit. 3,048,823, 8–7–62, Cl. 340—173.

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Smith, Edwin K., Jr., and F. J. Anastasio, to Miehle-Goss-Dexter, Inc. Newspaper stuffing machine. 3,048,388, 8–7–62, Cl. 270—57.

Smith, Harry F., to Mansfield Sanitary Inc. Valve with tubular resilient seal. 3,048,187, 8–7–62, Cl. 137—437.

Smith Kline & French Laboratories: *See*—
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Socony Mobil Oil Co., Inc.: *See*—
Coonradt, Harry L., and Leaman. 3,048,536.
Frost, Holloway H., and Heaps. 3,048,847.

Soehngen, John W., to Celanese Corp. of America. Wet spinning apparatus and start up process. 3,047,906, 8–7–62, Cl. 18—8.

Sommerville, Thos., Co.: *See*—
McKulla, George W., Jr. 3,047,986.

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Spanski, Eugene V.: *See*—
Larke, Victor W., and Spanski. 3,048,236.

Specialties Development Corp.: *See*—
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Spiess, Georg. Sheet feed apparatus. 3,048,391, 8–7–62, Cl. 271—26.

Spiess, Georg. Pneumatic device for separating the uppermost sheet from a pile in sheet feeding apparatus. 3,048,392, 8–7–62, Cl. 271—27.

Spivack, John D., to Geigy Chemical Corp. Tertiary amino alkylated amides. 3,048,620, 8–7–62, Cl. 260—471.

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Sprague's E-Z-Lift Towbar, Inc.: *See*—
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Sprang, George O. Floor scrubbing machine. 3,047,894, 8–7–62, Cl. 15—99.

Spreiregen, Jacques. Headwear. 3,047,879, 8–7–62, Cl. 2—181.

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Standard Electrical Products Co.: *See*—
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Standard Oil Co., Indiana: *See*—
Fields, Ellis K. 3,048,615.
Fields, Ellis K. 3,048,616.
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Petkus, John J., and Wygant. 3,048,495.
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Standard Oil Co., Ohio, The: *See*—
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Stanton, George W., and T. G. Traylor, to The Dow Chemical Co. Compositions consisting essentially of graft copolymers of vinyl pyridine monomers on acrylonitrile polymers and method of preparing same. 3,048,561, 8–7–62, Cl. 260—45.5.

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Starzec, Stanley J., to Automatic Electric Laboratories, Inc. Relay stabilizer. 3,048,267, 8–7–62, Cl. 206—46.

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Steiro, Harry, to Steiro Engineering Co., Inc. Concrete pipe making apparatus. 3,047,929, 8–7–62, Cl. 25—30.

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Sterling, John D., Jr.: *See*—
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Itria, Oswald A. 3,048,235.
Oosterhout, Johan C. D. 3,048,541.
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Thomas, Charles L., A. P. Stuart, and H. M. Kheighatian, to Sun Oil Co. Color stabilized lubricating oil. 3,048,543, 8–7–62, Cl. 252—51.5.

Thomas, Eugene P., to Westinghouse Electric Corp. Radioactive source holder. 3,048,701, 8–7–62, Cl. 250—106.

Thomas, Robert J. Disposable car tray. 3,048,458, 8–7–62, Cl. 311—22.

Thomas, Robert W.: *See*—
Cataldo, John B., Thomas, Mead, and Shackman. 3,048,672.

Thompson, Francis T., to Westinghouse Electric Corp. Signal distribution system for distributing intelligence signals from a single source to a plurality of utilization channels. 3,048,824, 8–7–62, Cl. 340—173.

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Thompson Ramo Wooldridge Inc.: *See*—
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Norton, Samuel H. 3,048,165.
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Smeltzer, Jack C. 3,048,767.
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Thorp, Arthur G., II, to United States of America, Atomic Energy Commission. Cruciform control rod joint. 3,048,532, 8–7–62, Cl. 204—193.2.

Thouret, Wolfgang E., to Duro-Test Corp. Arc lamp with self-ballasted arc tube and improved lumen maintenance. 3,048,741, 8–7–62, Cl. 315—49.

3-D Weaving Co.: *See*—
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Thumlin, Carl, to Miehle-Goss-Dexter, Inc. Flexible clamp for paper cutters. 3,048,386, 8–7–62, Cl. 269—22.

Thurston, Edward G., and D. W. Kuester, to United States of America, Navy. Low frequency transducer. 3,048,815, 8–7–62, Cl. 340—10.

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Tiede, Ralph L., to Owens-Corning Fiberglas Corp. Treatment for glass bodies in filament forming operation. 3,048,466, 8–7–62, Cl. 18—54.

Tierney, Raymond B., and R. H. Krug, to Texaco Inc. Lubricating compositions. 3,048,542, 8–7–62, Cl. 252—47.5.

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Titanium Metals Corp. of America: *See*—
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Toettcher, Fred C.: *See*—
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Tonks, Lewi, to United States of America, Atomic Energy Commission. Control means for neutronic reactors. 3,048,534, 8–7–62, Cl. 204—193.2.

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Toy, Walter W.: *See*—
Miller, Edgard W., and Toy. 3,048,501.

Traylor, Teddy G.: *See*—
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Troeger, Henry, and E. J. Clinton, Jr., to The Bendix Corp. Turbine brake. 3,048,364, 8–7–62, Cl. 253—59.

Troy, Leonard. Brake actuator mechanism. 3,048,243, 8–7–62, Cl. 188—78.

Trurin, Inc.: *See*—
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Tuttle, Thomas W.: *See*—
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Van Nice, Robert I., and W. G. Evans, to Westinghouse Electric Corp. Optimizing apparatus and method. 3,048,331, 8–7–62. Cl. 235—151.

Van Slooten, Louis J., to General Motors Corp. Submerged type hydraulic valve lifter. 3,048,156, 8–7–62. Cl. 123—90.

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Warrington, Albert R. van C., to The English Electric Co. Ltd. Power energization supply means for electrical protective relay systems. 3,048,745, 8–7–62, Cl. 317—27.

Wasserman, Max, to American Cyanamid Co. Ventible skylight construction. 3,047,983, 8–7–62, Cl. 50—50.

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Wesolowski, Adolph J., to General Electric Co. Rotor construction. 3,048,725, 8–7–62, Cl. 310—271.

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Wilcken, Hugo, to W. E. Heilmann. Sliding clasp fasteners. 3,047,924, 8–7–62, Cl. 24—205.13.

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NOTE.—First number=class, second number=subclass, third number=patent number

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 7, 1962 Volume 781 Number 1

TRADEMARKS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 5, 1962.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

July 16, 1962.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 235,066 (RENAULT), Societe Anonyme des Usines Renault, Internal combustion or explosion motors and parts thereof and agricultural tractors, and other named cutlery, machinery and tool articles, **filed** July 22, 1959, D.C., S.D.N.Y., Doc. 148/286, *Renault, Inc.* v. *Strans Auto Sales Corporation.* Order discontinuing action, without prejudice, for lack of prosecution June 5, 1962.

Reg. No. 236,578 (IMPERIAL), M. Epstein, doing business as The Midwest Cap Works, Men's hats and caps, **filed** June 27, 1960, D.C., S.D.N.Y., Doc. 60/2542, *Maurice Epstein et al.* v. *Bond Stores, Inc.* Stipulation and order dismissing action, including counterclaims, with prejudice June 6, 1962.

Reg. No. 503,840 (BARBARA CAROL), Joseph Guttman & Bros., Ladies' and misses' knitted dresses, blouses, skirts, jackets and sweaters, **filed** Oct. 3, 1960, D.C., S.D.N.Y., Doc. 60/3803, *Joseph Guttman & Bros.* v. *Barbara Carol Inc.* Order of discontinuance June 13, 1962.

Reg. No. 524,725 (LITTLE LEAGUE), Lubin-Weeker Co., Inc., Pajamas; **Reg. No. 568,635** (LITTLE LEAGUE BASEBALL AND DESIGN), Little League Baseball, Inc., Promoting and developing sportsmanship, team play and athletic ability through the medium of organized juvenile basketball

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,300
Date of oldest new application	Oct. 6, 1961
Date of oldest amended application	Oct. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	10-6-61	10-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-2-62	1-2-62
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Sec. 12 (c) Publications (All Classes)	6-11-62	

Applications filed during the month of June 1962—2,204

Registrations Issued	318—No. 735,504 to No. 735,821
Renewals Issued	62

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

teams; **Reg. No. 590,251**, same, Young boys' T-shirts and sweat-shirts; **Reg. No. 606,748** (LITTLE LEAGUER), same, Magazines; **Reg. No. 621,335** (LITTLE LEAGUE), same, Pen and pencil sets; **Reg. No. 642,433** (LITTLE LEAGUE BASEBALL), same, Services in connection with the development of sportsmanship, clean play and athletic ability, etc., **filed** May 24, 1962, D.C.N.J. (Newark), Doc. 428/62, *Little League Baseball, Inc.* v. *Richard McGinnis et al.*

Reg. No. 526,842 (MONROE), Monroe Auto Equipment Company, Shock absorbers for automobiles, busses, trucks, railway cars and truck seats; **2,546,842**, B. D. McIntyre et al., Shock absorber construction; **Re. 23,421**, R. H. Whisler, Jr., Shock absorber, **filed** Mar. 12, 1962, D.C., Ariz. (Phoenix), Doc. 4090–Phx., *Monroe Auto Equipment Company* v. *Cushion Incorporated*. Cause dismissed May 3, 1962.

Reg. No. 539,541 ("PRO"), United Metal Products Corporation, Mechanical golf ball markers for engraving names, numbers and other legends on golf balls; **2,561,947**, E. J. Premo, Golf ball marker, **filed** May 1, 1962, D.C., E.D. Pa. (Philadelphia), Doc. 24715, *United Metal Products Corporation et al.* v. *Healthways, Inc.* Order dismissing complaint Apr. 11, 1962.

Reg. No. 568,635. (See Reg. No. 524,725.)

Reg. No. 590,251. (See Reg. No. 524,725.)

Reg. No. 594,136 (E AND DESIGN), Electrical Fittings Corporation, Electrical wiring, supplies and accessories therefor used in the construction of commercial and residential buildings, etc.; **Reg. No. 696,351**, same, Electrical Fittings Corporation, Electrical switch boxes, outlet boxes, concrete box rings, bar hangers and box assemblies, etc., **filed** June 13, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62–C–648, *Electrical Fittings Corporation* v. *Steel Electric Products Co., Inc.*

Reg. No. 606,748. (See Reg. No. 524,725.)

Reg. No. 609,202 (ARNEL), Celanese Corporation of America, Yarns; **Reg. No. 612,392**, same, Staple fibers made wholly or partially of cellulose derivatives; **Reg. No. 651,867** (ARNEL, ETC.), same, Staple fibers; **Reg. No. 686,511** (ARNEL AND DESIGN), same, Textile fibers, including staple fibers and continuous filaments; **Reg. No. 698,755**, same; **Reg. No. 696,790**, same, Fabric sold in finished apparel, **filed** May 28, 1962, D.C., S.D.N.Y., Doc. 62/1922, *Celanese Corporation of America* v. *Freydell Fobrics Corporation*.

Reg. No. 612,392. (See Reg. No. 609,202.)

Reg. No. 620,023 (NESBITT'S), Nesbitt Fruit Products Inc., Non-alcoholic, non-cereal, maltless beverages sold as soft drinks, etc.; **Reg. No. 632,812**, same, Crushed fruits in containers and chocolate syrup, **filed** Mar. 14, 1962, D.C. Colo. (Denver), Doc. 7486, *The Nesbitt Fruit Products, Inc.* v. *The Trinidad Coca Cola Company*. Stipulation and order restraining defendant June 4, 1962.

Reg. No. 621,335. (See Reg. No. 524,725.)

Reg. No. 627,902 ("SLIMTITE"), Irving H. Elfenbein Co., Inc., Women's and misses' pantie girdles and girdles, **filed** Mar. 9, 1960, D.C., S.D.N.Y., Doc. 60/974, *I. H. Elfenbein, Inc.* v. *Avian Lingerie Corporation et al.* Affidavit, stipulation and consent judgment permanently enjoining defendant Avian Lingerie Corporation and dismissing action against defendant Rainbow Shops, Inc. May 28, 1962.

Reg. No. 632,812. (See Reg. No. 620,023.)

Reg. No. 638,364 (PAR-BEAM-LITE), Swivelier Company, Adjustable recessed electric lighting units, **filed** Mar. 27, 1962, D.C., S.D.N.Y., Doc. 62/12/89, *Swivelier Company, Inc.* v. *Crouse-Hinds Company, Inc.* Consent judgment; defendant enjoined June 13, 1962.

Reg. No. 642,433. (See Reg. No. 524,725.)

Reg. No. 651,867. (See Reg. No. 609,202.)

Reg. No. 661,610 (MAGNUM), Pacific Laminates, Incorporated, Fishing rods; **Reg. No. 728,822**, same, Sila-Flex, Skipoles and component parts thereof, **filed** Apr. 4, 1962, D.C., S.D. Ill. (Peoria), Doc. P–2515, *Sila-Flex* v. *The Magnum Sports Products Corporation*. Defendant enjoined (notice May 21, 1962).

Reg. No. 673,776 (HONCO AND DESIGN), Enzyme Process Company, Inc., Food supplements containing vitamins, **filed** Aug. 29, 1961, D.C., W.D.N.C. (Charlotte), Doc. 1635, *Enzyme Process Company, Inc.* v. *Floyd I. Harper & Associates et al.* Consent judgment; cause dismissed with prejudice (notice June 14, 1962).

Reg. No. 674,535 (ASTRO-POWER), International Rectifier Corporation, Solar batteries and solar-powered auxiliary power supply devices, **filed** Jan. 19, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62–79–TC, *International Rectifier Corporation* v. *Douglas Aircraft Co., Inc. et al.* Stipulation and order of dismissal with prejudice (notice May 29, 1962).

Reg. No. 679,190 (CURRYTROL AND DESIGN), Piel Manufacturing Company, Stationary automatically operated livestock oiler and insecticide applicator; **2,794,422**, A. J. Piel, Liquid applicator for animal usage; **2,813,510**, same, Animal actuated liquid applicator for hide, **filed** Apr. 16, 1962, D.C., S.D. Iowa (Des Moines), Doc. 5/1250, *Piel Manufacturing Company, Incorporated et al.* v. *George A. Rolfes Co. et al.*

Reg. No. 686,511. (See Reg. No. 609,302.)

Reg. No. 694,155 (KIDDY KAPS AND DESIGN), Republic Drug Company, Inc., Multiple vitamin preparation for children, **filed** June 8, 1962, D.C., E.D. Mich. (Detroit), Doc. 22660, *Republic Drug Company, Inc.* v. *North American Pharmacal, Inc.*

Reg. No. 696,351. (See Reg. No. 594,136.)

Reg. No. 696,790. (See Reg. No. 609,202.)

Reg. No. 698,755. (See Reg. No. 609,202.)

Reg. No. 708,531 (WELLS FARGO), Wells Fargo & Company, Transportation of money and valuables; **Reg. No. 708,532** (THE PONY EXPRESS AND DESIGN), same, **filed** May 26, 1962, D.C., W.D. Pa. (Pittsburgh), Doc. 62/389, *Wells Fargo & Company* v. *J. Halpern Company*.

Reg. No. 708,532. (See Reg. No. 708,531.)

Reg. No. 728,822. (See Reg. No. 661,610.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 4 — Abrasives and Polishing Materials

SN 119,017. Frederick W. Lindblad, d.b.a. U.S. Diamond Wheel Co., Aurora, Ill. Filed May 1, 1961.

TURBO-GRIND

For Abrading Wheels.
First use about Mar. 1, 1961.

SN 128,796. Chemex Industries, Inc., d.b.a. Universal Laboratories, Tampa, Fla. Filed Sept. 28, 1961.

WEAR-EVER

For Resilient Floor Dressing for Asphalt Tile, Etc., Floors.
First use Oct. 21, 1952.

SN 129,086. Norton Company, Worcester, Mass. Filed Sept. 27, 1961.

CUT-N-SAUCER

For Portable Grinding Wheels.
First use on or about July 26, 1961.

SN 129,459. Brillo Manufacturing Company, Inc., Brooklyn, N.Y. Filed Oct. 9, 1961.

PADDY

For Cleaning, Scouring and Polishing Wads.
First use Oct. 2, 1961.

Class 5 — Adhesives

SN 129,847. The Dow Chemical Company, Midland, Mich. Filed Oct. 13, 1961.

STYROTAC

Owner of Reg. Nos. 362,877, 698,819, and others.
For Bonding Cement.
First use July 3, 1961.

SN 130,370. Mo Och Domsjö Aktiebolag, Ornskoldsvik, Sweden. Filed Oct. 20, 1961.

MODO-HEC

Owner of Swedish Reg. No. 91,049, dated Dec. 23, 1960.
For Cellulose; Cellulose Derivatives Used as Adhesives, Pasting Agents, Sizing Agents, Thickening Agents, Stabilizers, Dispersing Agents, and Emulsifying Agents.

SN 130,709. Magic Iron Cement Co., Inc., Cleveland, Ohio. Filed Oct. 26, 1961.



For Crystal Clear Cement, White Glue, Epoxy Glue, and Contact Cement.
First use 1948.

Class 6 — Chemicals and Chemical Compositions

SN 116,192. American-Marietta Company, Chicago, Ill. Filed Mar. 22, 1961.



Owner of Reg. No. 99,163.
For Chemical Additive Compositions for Improving Concretes and Mortars, Including Increasing the Workability, Reducing the Water Requirements, and Controlling the Rate of Setting of Concrete and Mortar Mixes; and Increasing the Density, Strength, Durability and the Impact and Wear Resistance of Concretes and Mortars.
First use Mar. 6, 1961.

SN 129,800. Radiant Color Company, Oakland, Calif. Filed Oct. 12, 1961.

SUN TESTED

Owner of Reg. Nos. 636,281 and 662,721.
For Pigments for Use in Inks, Molding Plastics and Coating Compositions, Including Paints.
First use July 15, 1955.

Class 8 — Smokers' Artides, Not Induding Tobacco Products

SN 136,068. Poul Nielsen, d.b.a. Stanwell Briar Pipes v/Poul Nielsen, Kyringe, near Ringsted, Denmark. Filed Jan. 18, 1962.

GOLDEN KING

Owner of Danish Reg. No. 1720/60, dated July 23, 1960.
For Tobacco-Pipes.

SN 136,069. Poul Nielsen, d.b.a. Stanwell Briar Pipes v/Poul Nielsen, Kyringe, near Ringsted, Denmark. Filed Jan. 18, 1962.

BALTIC

Owner of Danish Reg. No. 51/61, dated Apr. 8, 1961.
For Smokers' Articles—Namely, Tobacco-Pipes, Pipe Cleaners, and Lighters.

Class 10 — Fertilizers

SN 126,007. Lloyd Herley Bowen, d.b.a. The Garden Mart, Bellaire, Tex. Filed Aug. 15, 1961.

TERRA TONIC

For Liquid Fertilizer.
First use Jan. 30, 1959.

SN 131,963. Hydrocarbon Products Company, Inc., New York, N.Y. Filed Nov. 14, 1961.

Mustang



For Agricultural Ammonium Sulfate.
First use Aug. 18, 1961.

SN 132,711. Lee Patten Seed Company, Jersey City, N.J. Filed Nov. 24, 1961.

Patco's ALLGANIC

For Chemical Plant Food.
First use Nov. 13, 1961.

Class 11 — Inks and Inking Materials

SN 129,801. Radiant Color Company, Oakland, Calif. Filed Oct. 12, 1961.

SUN TESTED

Owner of Reg. Nos. 636,281 and 662,721.
For Inks—Namely, Silk Screen, Letter Press, and Rotogravure Inks.
First use July 15, 1955, on silk screen inks.

Class 12 — Construction Materials

SN 106,171. The Zippertubing Co., Los Angeles, Calif. Filed Oct. 10, 1960.

THERMAZIP

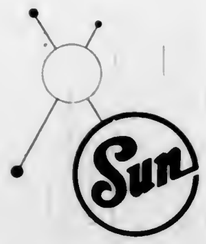
For Temperature Resistant Flexible Covering for Wire Pipe and Tubing Conduits.
First use first part of October 1957.

SN 115,545. Texas Industries, Inc., Dallas, Tex. Filed Mar. 13, 1961.



The drawing is lined to indicate the color orange.
For Portland and Masonry Cement.
First use Oct. 5, 1960.

SN 116,441. Sun Chemical Corporation, New York, N.Y. Filed Mar. 24, 1961.



Owner of Reg. No. 515,941.
For Construction Materials—Namely, Floor Resurfacing Materials; Fillers; Sealants; Caulking Compounds; Grouting Material; Patching Compounds; Bonding Agents for Concrete, Plaster, Stucco, and the Like; Floor Toppings, Masonry Toppings, and the Like.
First use March 1957.

SN 121,252. Aluminum Manufacturing Corporation, d.b.a. Bee Safe Bomb Shelter Co., Carlisle, Ohio. Filed June 2, 1961.



For Prefabricated Steel Underground Fall-Out Shelters.
First use July 1960.

SN 121,582. National Gypsum Company, Buffalo, N.Y. Filed June 7, 1961.

MULTI-FLEX

For Metal Tape Bead.
First use Jan. 18, 1961.

SN 122,365. Plastering Development Center, Inc., Chicago, Ill. Filed June 19, 1961.

TUFCON

Owner of Reg. No. 713,763.
For Reinforcing Tape for Wall Joints.
First use Feb. 16, 1961.

SN 122,540. Johns-Manville Corporation, New York, N.Y. Filed June 21, 1961.

CERAFIBER

Owner of Reg. No. 626,762.
For Refractory Fiber for Use as Thermal Insulation.
First use 1957.

SN 127,368. Simpson Timber Company, Seattle, Wash. Filed Sept. 6, 1961.

CANDLE GLOW

For Lumber.
First use Aug. 21, 1961.

SN 127,457. Robert Connor, Carlstadt, N.J. Filed Sept. 8, 1961.



No claim is made to wording "Atomic Age Safety Structures" apart from the mark shown.
For Building Frame Structures.
First use June 22, 1961.

SN 128,574. The Medart Engineering and Equipment Co., St. Louis, Mo. Filed Sept. 25, 1961.

DYCOUSTIC

For Aluminum Suspended Grid System and Ceiling Panels for Forming Ceilings for Buildings.
First use July 10, 1961.

SN 130,226. Moulins Yamaska Mills Inc., St-Pie, Quebec, Canada. Filed Oct. 18, 1961.

ACOUSTICORE

Owner of Canadian Reg. No. 123,696, dated Sept. 22, 1961.
For Wood Pulp Insulation Board.

SN 130,710. Magic Iron Cement Co., Inc., Cleveland, Ohio. Filed Oct. 26, 1961.



For Porcelain Glaze, Waterproof Tile Cement, Wood Putty, Liquid Metallic Solder, Pipe Joint Compound, Stick Type Crack Filler, Tub and Tile Sealer, Aluminum in Paste Form, Rubber in Paste Form, Heatproof Porcelain Repair, Cold Solder, Vinyl Cement for Plastic, Muffler Sealer, Plastic Solder and Filler, and Steel in Paste Form.

SN 131,327. The Alumiline Corporation, Pawtucket, R.I. Filed Nov. 6, 1961.

PHANTOM WALL

The word "Wall" is disclaimed apart from the mark as shown.
For Sliding Glass and Metal Partitions.
First use on or about Oct. 23, 1961.

SN 132,324. Globe Roofing Products Co. Inc., Whiting, Ind. Filed Nov. 20, 1961.

UNI-TAB

For Asphalt Shingles.
First use Nov. 7, 1961.

SN 132,475. Macklanburg-Duncan Company, Oklahoma City, Okla. Filed Nov. 21, 1961.

CEIL-LITE

For Acoustical Ceiling Tile.
First use Aug. 30, 1961.

SN 132,669. General Homes, Inc., Cleveland, Ohio. Filed Nov. 24, 1961.

GENERAL HOMES

For the purposes of registration no claim is made to the exclusive right to use "Homes," but the applicant waives none of its common law rights therein.
For Pre-Fabricated Houses.
First use Mar. 1, 1961.

SN 133,293. Miratile Manufacturing Company, Inc., Chicago, Ill. Filed Dec. 4, 1961.

MIRAPLY

Owner of Reg. No. 728,137.
For Prefinished Plywood Paneling.
First use on or about June 6, 1957.

SN 135,400. Southern Wire Mesh Company, Memphis, Tenn. Filed Jan. 8, 1962.

CURE-COTE

For Curing Compound for Concrete.
First use Nov. 28, 1961.

SN 136,368. Georgia-Pacific Corporation, Portland, Oreg. Filed Jan. 23, 1962.

HACIENDA

Owner of Reg. Nos. 552,517 and 708,914.
For Redwood Siding.
First use Aug. 22, 1961.

SN 136,584. The Pneumacast Corp., Falls Church, Va. Filed Jan. 25, 1962.

PNEUMACAST

For Dry Ready-Mixed Concrete.
First use Jan. 5, 1956.

SN 136,983. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed Jan. 31, 1962.

KLADLINED

For Structural Sheathing Materials, Gutters and Accessories Therefor.
First use on or about Oct. 30, 1959, on gutters and accessories therefor.

SN 136,985. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed Jan. 31, 1962.

PERMA-PIER

For Refractory Blocks Used in the Construction and Repair of Industrial Furnaces.
First use on or about Jan. 15, 1962.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 118,237. Grant Pulley & Hardware Corporation, West Nyack, N.Y. Filed Apr. 20, 1961.

MICRO-SLIDE

For Track and Slide Movements for Drawer, Shelf, Cabinet and Chassis Apparatus.
First use on or about Apr. 13, 1961.

SN 118,589. Kingsley Manufacturing Company, Detroit, Mich. Filed Apr. 25, 1961.

SLIM/LINE

For Door Closers.
First use on or about June 21, 1960.

SN 118,744. Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Braunau am Inn, Upper Austria, Austria. Filed Apr. 26, 1961.

NICRO

Owner of Austrian Reg. No. 16,167, dated June 1, 1934.
For Receptacles and Hollow Ware—Namely, Pitchers, Dishes, Pots and Other Table Utensils Made of Chrome, Nickel, Steel.

SN 120,424. Le Creuset, Fresnoy-le-Grand, Aisne, France. Filed May 19, 1961.

ROYAL CHAMBORD

Priority claimed under Sec. 44(d) on French Reg. No. 1,362, dated Nov. 25, 1960 (Saint-Quentin); Natl. Inst. No. 155,242.
For Household Cooking and Serving Ware, Household Cooking and Serving Iron Ware and Household Enameled Cooking and Serving Iron Ware.
First use in November 1960; in commerce January 1961.

SN 120,957. National Distillers and Chemical Corporation, New York, N.Y., by merger from Bridgeport Brass Company, Bridgeport, Conn. Filed May 29, 1961.

H·D

The lining for the drawing is for shading purposes only.
Owner of Reg. Nos. 546,377, 700,037, and others.
For Hardware Components for Awnings.
First use May 2, 1961.

SN 125,341. Richards Industries, Inc., Cincinnati, Ohio, assignee of Dover Corporation, Cincinnati, Ohio. Filed July 27, 1961.

SLIDING GATE

For Regulator and Control Valves.
First use about Oct. 8, 1956.

SN 127,546. Armco Steel Corporation, Middletown, Ohio. Filed Sept. 11, 1961.

STAB-JOINT

For Special Bell and Spigot Pipe.
First use July 23, 1961.

SN 131,475. Dover Corporation, Washington, D.C. Filed Nov. 7, 1961.

KAMLOK

Owner of Reg. No. 581,406.
For Hose and Faucet Adapters and Couplers.
First use June 1, 1951.

SN 131,983. Pan-American Metal Products Co. Inc., Miami, Fla. Filed Nov. 14, 1961.

PAMPCO

For Hardware Including Furniture Hardware and Trim, Insecticide Sprayers, Spirit Candles, Aluminum Awning Windows and Window Operators.
First use Nov. 10, 1945.

SN 132,080. Shepherd Casters, Inc., Benton Harbor, Mich. Filed Nov. 15, 1961.

SATELLITE

For Casters.
First use Oct. 17, 1961.

SN 132,081. Shepherd Casters, Inc., Benton Harbor, Mich. Filed Nov. 15, 1961.

PLANET

For Casters.
First use Oct. 18, 1961.

SN 132,133. Cryogenics Corporation, Meadville, Pa. Filed Nov. 16, 1961.

DIA-PLUG

For Valves.
First use Oct. 7, 1959.

SN 132,335. James H. Lamont & Co. Limited, Edinburgh, Scotland. Filed Nov. 20, 1961.

LAMONTITE

Owner of British Reg. No. 813,510, dated Nov. 17, 1960.
For Metal Pipe Couplings and Tubular Hot Water Circulating Apparatus and Parts Thereof.

SN 132,351. Markwell Manufacturing Co., Inc., New York, N.Y. Filed Nov. 20, 1961.

DESK MATE

For Staples.
First use July 15, 1961.

SN 132,376. Roanoid Limited, Paisley, Renfrewshire, Scotland. Filed Nov. 20, 1961.

ROANOID

Owner of British Reg. No. 536,123, dated Oct. 27, 1932.
For Cabin Fittings, Door Furniture, Hat Hooks, Bathroom Fittings All Being Made of Synthetic Resin or of Condensation Products of Phenol and Formaldehyde or Like Compositions.

SN 132,452. The Ebco Manufacturing Company, Columbus, Ohio. Filed Nov. 21, 1961.

OASIS

Owner of Reg. Nos. 416,771, 564,464, and others.
For Drinking Fountains and Accessories Therefor—Namely, Bubbler Valves, Pressure Regulator Valves, Faucets, Drinking Glass Filler Pipes, Drain Traps and Pipe Line Strainers.
First use Aug. 4, 1941.

SN 132,529. Conmar Products Corporation, Newark, N.J. Filed Nov. 22, 1961.

NYLAIRE

For Slide Fasteners.
First use Oct. 5, 1961.

SN 132,703. National Lock Co., Rockford, Ill. Filed Nov. 24, 1961.

GALAXIE

For Hardware—Namely, Pulls, Handles, and Hinges.
First use Sept. 27, 1961.

SN 132,760. Frank Edward Swain, Leicester, England. Filed Nov. 24, 1961.

TANSPHERE

Owner of British Reg. No. 759,908, dated Nov. 24, 1956.
For Manually Operated Valves Made of Metal for Use in Controlling the Flow of Fluid in Pipe Systems.

SN 136,846. Townsend Company, Santa Ana, Calif. Filed Jan. 29, 1962.

CHERRYLOCK

Owner of Reg. Nos. 403,659, 434,641, and 514,742.
For Rivets; Pulling Heads.
First use at least as early as September 1960 on rivets.

Class 14—Metals and Metal Castings and Forgings

SN 128,735. Harsco Corporation, Harrisburg, Pa. Filed Sept. 27, 1961.

TIMALLOY

For Welding Electrodes.
First use June 1958.

SN 129,010. Jones & Laughlin Steel Corporation, Pittsburgh, Pa. Filed Oct. 2, 1961.

surfa glaze

For Cold Rolled Steel Sheets.
First use on or about Aug. 22, 1961.

Class 15—Oils and Greases

SN 122,569. Seaboard Oil Company, Inc., Doraville, Ga. Filed June 21, 1961.

TRANS FLUID

Applicant hereby disclaims the word "Fluid" apart from the mark as shown.
For Automatic Transmission Fluid.
First use May 22, 1961.

SN 126,279. Union Oil Company of California, Los Angeles, Calif. Filed Aug. 18, 1961.

76 UNION

The drawing is lined for orange and blue. Owner of Reg. Nos. 521,424 and 566,785.
For Gasoline, Kerosene, Diesel Fuel, Lubricating Oil, Lubricating Grease and Paraffin Wax.
First use April 1946; Jan. 2, 1932, as to "76"; October 1910 as to "Union."

SN 132,575. The Ohio Oil Company, Findlay, Ohio. Filed Nov. 22, 1961.

M MARATHON

Owner of Reg. Nos. 97,301, 717,751, and others.
For Lubricating Oil, Road Oil, Fuel Oil, Gasoline, Kerosene, Diesel Fuel, Greases of All Kinds, Transmission Fluid, and Lighter Fluid.
First use Nov. 8, 1961.

SN 133,171. Sea-Way Oil Refining Company, Weston, Ohio. Filed Dec. 1, 1961.

SEA-WAY

For Petroleum Products—Namely, Lubricating Oils, Gear Lubricants, Grease, Motor Fuels, Additives, Concentrates, and the Like.
First use Nov. 12, 1959.

SN 133,317. Radiator Specialty Company, Charlotte, N.C. Filed Dec. 4, 1961.

SHIFT - EZE

For Automotive Transmission Additive.
First use Nov. 24, 1961.

Class 16—Protective and Decorative Coatings

SN 107,994. Art-Brite Color & Chemical Mfrs., d.b.a. Art Brite Color Manufacturers, Brooklyn, N.Y. Filed Nov. 7, 1960.

Art Brite

For Paints, Colors and Varnishes for House, Industry and Graphic Arts.
First use Sept. 1, 1953.

SN 126,045. Roneo Laboratories, Inc., Pittsburgh, Pa. Filed Aug. 15, 1961.

FERRO-gard

For Chemically-Fortified Oil Coating for Protection of All Types of Ferrous Metals and Metal Products Against Rusting and Corrosion.
First use Nov. 22, 1955.

SN 129,802. Radiant Color Company, Oakland, Calif. Filed Oct. 12, 1961.

SUN TESTED

Owner of Reg. Nos. 636,281 and 662,721.
For Fluorescent Paints.
First use July 15, 1955.

Class 17—Tobacco Products

SN 115,205. Walliser Tabakfabriken A.G. (Vereinigte Tabakfabriken Vonder Mühli und Monthey), Sitten, Switzerland. Filed Mar. 8, 1961.



The name "Major Thompson" and portrait of Major Thompson do not comprise the name or portrait of any person, living or dead. The exclusive use of the word "Mixture" as shown in applicant's mark is disclaimed apart from the mark as a whole.
For Tobacco, Cigars, Cigarettes.
First use May 15, 1959; in commerce Mar. 31, 1960.

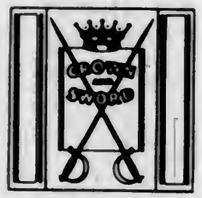
SN 122,441. Max Guttmann, d.b.a. M.G.T. Tobacco Company, Forest Hills, N.Y. Filed June 20, 1961.

MGT

BLEND
THIRTY-ONE

For Tobacco Products—Namely, Smoking Tobacco.
First use May 2, 1961.

SN 124,170. Carreras Limited, Basildon, England. Filed July 18, 1961.



Owner of British Reg. No. 507,481, dated Nov. 5, 1929.
For Cigarettes.

SN 133,490. Philip Morris Incorporated, New York, N.Y. Filed Dec. 6, 1961.

DUPLEX

For Filters Incorporated in Cigarettes.
First use Dec. 1, 1961.

SN 134,090. The Bloch Brothers Tobacco Co., Wheeling, W. Va. Filed Dec. 15, 1961.

TREAT YOURSELF TO THE BEST

For Chewing Tobacco.
First use September 1928.

SN 136,568. Larus & Brother Company, Richmond, Va. Filed Jan. 25, 1962.

Hi Plane

Owner of Reg. Nos. 291,854, 397,270, and 572,574.
For Smoking Tobacco.
First use Oct. 3, 1931.

Class 19—Vehicles

SN 120,229. Deer-Mobile Mfg. Co., Parkers Prairie, Minn. Filed May 17, 1961.

DEER-MOBILE

For Crawler-Type, Single Track Vehicles for Hauling Game, Such as Deer, and Wounded or Ill Hunters.
First use Nov. 14, 1960.

SN 128,324. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Sept. 20, 1961.

GOLDEN PRINCE

For Motorcycles, Bicycles, and Their Parts.
Use in commerce Jan. 10, 1961.

SN 128,325. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Sept. 20, 1961.

GOLDEN PRINCESS

For Motorcycles, Bicycles, and Their Parts.
Use in commerce Jan. 10, 1961.

SN 128,348. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Sept. 21, 1961.

MET-L-LOY

For Brake Blocks.
First use Aug. 8, 1961.

SN 130,721. Lyle L. Nifong, d.b.a. Taggin-Waggin Mobile Homes, Houston, Tex. Filed Oct. 26, 1961.

TAGGIN-WAGGIN

For Trailers.
First use at least as early as July 13, 1957.

SN 130,938. John A. Nelson, Castro Valley, Calif., assignee of John A. Nelson and William H. Hart, Oakland, Calif. Filed Oct. 30, 1961.

SIESTA CRUISER

For Demountable Camper Sleeper Unit for Pick-Up Trucks.
First use Sept. 21, 1961.

Class 20—Linoleum and Oiled Cloth

SN 108,110. American Biltrite Rubber Co., Inc., Trenton, N.J. Filed Nov. 9, 1960.

Amtico
COLORS UNLIMITED

No claim is made to the wording "Colors Unlimited" apart from the mark. Owner of Reg. No. 599,268.
For Vinyl Tile Flooring.
First use Sept. 20, 1960.

SN 130,801. Hicks & Otis Prints, Inc., Norwalk, Conn. Filed Oct. 27, 1961.

acous-decor

For Flexible Multicellular Plastic Wall and Ceiling Coverings.
First use July 1, 1961.

SN 132,229. Ever-Tex, Inc., Cranston, R.I. Filed Nov. 17, 1961.

EVER-NEW

For Vinyl Fabric Wall Coverings.
First use Aug. 15, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 60,798. Burndy Corporation, Norwalk, Conn. Filed Oct. 17, 1958.



For Electrical Connectors.
First use Aug. 1, 1958.

SN 118,962. C. P. Clare & Company, Chicago, Ill. Filed May 1, 1961.

CLARE

For Electrical Apparatus and Supplies—Namely, Electromagnetically and Magnetically Operated Relays and Switching Assemblies, Semiconductor Devices, Printed Circuits, Rectifiers, Manually Operated Switches, Keys and Switching Assemblies, Windings, and Mounting Strips, Bases and Covers for Relays.
First use 1937.

SN 121,124. Rowenta Metallwarenfabrik G.m.b.H., Offenbach am Main, Germany. Filed May 31, 1961.

ROWENTA ELECTRONIC

Owner of U.S. Reg. No. 638,353.
For Machine for Brewing Coffee.
First use Jan. 29, 1960; in commerce Mar. 1, 1960.

SN 123,086. Wilbur B. Driver Company, Newark, N.J. Filed June 29, 1961.

CUPRONEL

Owner of Reg. No. 393,283.
For Alloy of Nickel and Copper Used for the Negative Leg of Type "K" Thermocouples.
First use February 1949.

SN 124,595. Southern Instruments Limited, Camberley, England. Filed July 24, 1961.

ANSAFON

Owner of British Reg. No. 770,358, dated Oct. 22, 1957.
For Automatic Telephone Answering and Recording Equipment.

SN 126,873. Korry Manufacturing Co., Seattle, Wash. Filed Aug. 29, 1961.

KORRY

For Illuminated Indicators—Namely, Press-to-Test Indicators, Fixed Indicators, Switch Operation Indicators, Flush-Mounted Panel Indicators, Edge Light Indicators and Multiple Panel Indicators, Illuminated Interlocking Keyboards, Illuminated Switches and Panel Assemblies of and Parts and Components for All Such Indicators, Keyboards and Switches.
First use in or about March 1953 on press-to-test and fixed indicators.

SN 128,659. Electro-Sonic Laboratories, Inc., New York, N.Y. Filed Sept. 26, 1961.

RED HEAD

For Turnable Phonograph Pickups.
First use July 27, 1961.

SN 130,756. Charles Engineering, Inc., Hollywood, Calif. Filed Oct. 27, 1961.

TRANSCEPTOR

For Antenna Couplers for TV and FM Receivers.
First use Sept. 24, 1961.

SN 130,953. Rixon Electronics, Inc., Silver Spring, Md. Filed Oct. 30, 1961.

RIXON

For Electrical Apparatus—Namely, Binary Wave Signal Modulator-Demodulators, Multiplexers, Transmitters, Receivers, Frequency Dividers, and Parts Thereof.
First use in or about June 1954.

SN 131,100. Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Filed Nov. 1, 1961.

REGULEX

Owner of Reg. No. 691,837.
For Dynamoelectric Machines, and Particularly Electric Generators Provided With Auxiliary Control Field Windings.
First use Sept. 17, 1940.

SN 131,182. Bell Electric Company, Chicago, Ill. Filed Nov. 2, 1961.

MOTOR-GARD

For Fuse Holder Covers.
First use Sept. 19, 1961.

SN 131,618. Radio Shack Corporation, Boston, Mass. Filed Nov. 8, 1961.

NOVA

For Loud Speakers.
First use about Aug. 1, 1961.

SN 132,877. Stafco, Inc., San Antonio, Tex. Filed Nov. 27, 1961.

Stafco

The drawing is lined for red. Owner of Reg. No. 718,797.
For Electric Floor Polishers, Office and Home Intercommunication Equipment Comprising a Combined Sound Transmitter and Receivers With Amplifiers and Speakers and Electric Floor and Table Lamps.
First use Nov. 19, 1960.

SN 134,075. Allied Stores Corporation, New York, N.Y. Filed Dec. 15, 1961.

AMBASSADOR

Owner of Reg. Nos. 430,272, 681,765, and others.
For Electric Appliances—Namely, Skillets, Percolators, Automatic Toasters, Steam Irons, Dry Irons, Hand Mixers, Coffee Makers, Broilers, Roasters, Waffle Bakers, Sandwich Grills, Room Heaters, Portable and Window Fans, Hot Plates, and Can Openers.
First use Oct. 16, 1960.

SN 134,256. Munston Electronic Manufacturing Corp., Islip, N.Y. Filed Dec. 18, 1961.

HAMPTON

For Radio Transmitters and Receivers.
First use July 13, 1961.

SN 134,613. C. P. Clare & Company, Chicago, Ill. Filed Dec. 26, 1961.

CLARE

For Electrical Apparatus and Supplies—Namely, Electromagnetically and Magnetically Operated Relays and Switching Assemblies, Semiconductor Devices, Printed Circuits, Logic and Control Circuits and Systems, Manually Operated Switches, Keys and Switching Assemblies, Windings, and Mounting Strips, Bases and Covers for Relays.
First use September 1959.

SN 134,723. Consolidated Electronics Industrial Corp., Alliance, Ohio. Filed Dec. 27, 1961.

For Electric Motors and Parts.
First use on or about Dec. 8, 1961.

SN 144,554. AMP Incorporated, Harrisburg, Pa. Filed May 18, 1962.

FASTON

For Electrical Connectors.
First use 1953.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 102,929. Leesona Corporation, Cranston, R.I. Filed Aug. 18, 1960.



For Textile Machinery and Parts Thereof, and Machinery for Winding Electrical Coils and Parts Thereof.
First use Apr. 20, 1960, on textile machinery.

SN 113,005. Edco Tool Company, Taylor, Mich. Filed Feb. 3, 1961.

TURBOMIL

For Metal Cutting Tools Operable as a Mill.
First use Jan. 18, 1961.

SN 113,671. H. A. Waldrich G.m.b.H., Siegen, Westphalia, Germany. Filed Feb. 14, 1961.

NUMEROMAT

Owner of German Reg. No. 740,839, dated Oct. 3, 1960.
For Machine Tools, Drives for Machine Tools, and Parts for Such Machine Tools and Drives.

SN 114,134. Outboard Marine Corporation, Waukegan, Ill. Filed Feb. 21, 1961.



The lightning flash in the drawing is lined for the color red.
For Outboard Motors and Repair Parts Therefor.
First use Nov. 16, 1960.

SN 116,497. Fr. Hesser Maschinenfabrik Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany. Filed June 11, 1962.

HESSER

Owner of German Reg. No. 713,498, dated Apr. 30, 1958.
For Automatic Weighing and Packaging Machines for Packaging Solid Materials in Boxes, Bags and the Like, Partially- and Fully-Automatic Packing Machines; Rotary Presses and Automatic High-Pressure Stamping and Pressing Apparatus.
First use in or about 1860; in commerce 1908.

SN 118,743. Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Braunau am Inn, Upper Austria, Austria. Filed Apr. 26, 1961.

NICRO

Owner of Austrian Reg. No. 16,167, dated June 1, 1934.
For House and Kitchen Implements Made of Chrome-Nickel Steel—Namely, Knives, Forks and Spoons.

SN 122,060. Jack K. Canine, d.b.a. Terra-Knife Sales & Service, Crawfordsville, Ind. Filed June 15, 1961.

TERRA-KNIFE

For Applicator Knives Used for Injecting Liquid Fertilizer or Anhydrous Ammonia Into the Soil.
First use on or about Oct. 1, 1959.

SN 122,081. H-P Tool Mfg. Corp., d.b.a. H-P Tool Manufacturing Corporation and H. P. Tool Manufacturing Corp., Philadelphia, Pa. Filed June 15, 1961.

BLUE LINE

The drawing is lined for the color blue.
For Small Hand Tools—Namely, Chisels, Punches, Screw Drivers, Bull Points, Stone Cutter Tools, Star Drills, Rivet Busters, Caulking Tools, and Brake Adjusting Tools.
First use May 17, 1961.

SN 122,818. Jas. H. Matthews & Co., Pittsburgh, Pa. Filed June 26, 1961.

Matth-a-matic

Owner of Reg. No. 532,646.
For Machines for Impressing Markings on Metal Objects.
First use on or about Apr. 28, 1961.

SN 122,963. Sunset Equipment Co., St. Paul, Minn. Filed June 27, 1961.

SUNSET
MILK CONVEYOR

For Vacuum Equipment for Moving Milk.
First use Mar. 14, 1961.

SN 123,082. Danly Machine Specialties, Inc., Chicago, Ill. Filed June 29, 1961.

Q.D.C.

For Power Presses.
First use June 7, 1961.

SN 123,158. Aktiebolaget Gense, Eskilstuna, Sweden. Filed June 30, 1961.



For Carving Knives, Carving Forks, Table Knives, Table Forks and Table Spoons of All Kinds, Made of Stainless Steel.
First use Aug. 8, 1959; in commerce Jan. 15, 1961.

SN 123,584. Wallace Supplies Manufacturing Co., Chicago, Ill. Filed July 7, 1961.

"CUT-MACHINING"

For Cut-Off Blades for Saws.
First use Oct. 24, 1960.

SN 123,822. Lull Engineering Company, Inc., St. Paul, Minn. Filed July 12, 1961.

DYNA LUGGER

The word "Lugger" is disclaimed apart from the mark as shown.
For Self-Powered Front End Loader Vehicle.
First use Apr. 15, 1961.

SN 124,244. Westmont Automotive Parts Co., Chicago, Ill. Filed July 18, 1961.

Tru Test

For Rebuilt Torque Converters, Transmission Parts, Rebuilt Power Steering Pumps, and Remanufactured Engines, All for Automobiles.
First use Mar. 14, 1960.

SN 124,416. Cardinal Engineering Corporation, Philadelphia, Pa. Filed July 21, 1961.

BLOKMASTER

For Masonry Saws.
First use May 6, 1960.

SN 126,124. John H. Roper, Baltimore, Md. Filed Aug. 16, 1961.

DOG HOUSE

For Air Scrubbing Apparatus for Extracting Moisture and Other Contaminants From Air Before It Enters the Air Compressor of a Truck.
First use Mar. 27, 1961.

SN 126,689. Clay Smith Engineering, Long Beach, Calif. Filed Aug. 25, 1961.



Mr. Horsepower

For Cam Shafts for Use in Internal Combustion Engines.
First use Sept. 30, 1959.

SN 126,822. Universal Oil Products Company, Des Plaines, Ill. Filed Aug. 28, 1961.

LOMAX

Owner of Reg. No. 729,594.
For Apparatus, in the Nature of a Plant, for the Refining of Hydrocarbons.
First use Aug. 8, 1961.

SN 127,181. B-M-B Company, Inc., Holton, Kans. Filed Sept. 5, 1961.

HAY SAVOR

For Rotary Mowers.
First use October 1960.

SN 127,270. John Roper and Company, Inc., Baltimore, Md., assignee of John H. Roper, Baltimore, Md. Filed Sept. 5, 1961.

RAT TRAP

For Apparatus for Removing Contaminants From the Crankcase of an Internal Combustion Engine During Operation Thereof.
First use Oct. 17, 1960.

SN 128,512. The Cessna Aircraft Company, Wichita, Kans. Filed Sept. 25, 1961.

CESSNA

Owner of Reg. No. 576,100.
For Hydraulic Actuators and Component Parts Thereof for Machinery, Farm Vehicles, Earthworking Machines, Road Building Machines, and the Like.
First use Mar. 6, 1950.

SN 128,559. Heidenbrand-Sanders Surb-O-Build, Inc., Houma, La. Filed Sept. 25, 1961.

SURB-O-BUILD

For Drill Pipe Having Rebuilt Tool Joints.
First use Oct. 1, 1960.

SN 129,439. Wausau Iron Works, Inc., Wausau, Wis. Filed Oct. 6, 1961.

SNO-THRO

For Mechanical Snow Blowing Equipment.
First use prior to Jan. 1, 1952.

SN 129,526. Production Machinery, Inc., Chicago, Ill. Filed Oct. 9, 1961.

PROMAFEED

For Control and Feed Unit for Cutting Tool Blades and Machinery Parts.
First use Mar. 30, 1960.

SN 129,527. Production Machinery, Inc., Chicago, Ill. Filed Oct. 9, 1961.

PROMACUT

For Cutting Tools and Cutting Machinery.
First use Mar. 30, 1960.

SN 129,742. Comet Industries, Inc., Franklin Park, Ill. Filed Oct. 12, 1961.

STAR

For Vacuum Forming and Thermo Forming Machines for Sheet Plastic Adapted for Heavy Gage and Deep Draw Operations.
First use Dec. 6, 1956.

SN 129,743. Comet Industries, Inc., Franklin Park, Ill. Filed Oct. 12, 1961.

SATURN

For Rotary Vacuum Forming Machines for Forming and for Deep Drawing Sheet Plastic.
First use Nov. 3, 1956.

SN 129,747. Comet Industries, Inc., Franklin Park, Ill. Filed Oct. 12, 1961.

METEOR

For Vacuum Forming and Thermo Forming Machines for Sheet Plastic Adapted for Packaging and for Other Uses.
First use Sept. 2, 1955.

SN 129,871. Lovell Manufacturing Co., Erie, Pa. Filed Oct. 13, 1961.

LOVELLEX

For Flexible Couplings for Machinery.
First use July 28, 1961.

SN 131,416. Southwestern Industries, Inc., Los Angeles, Calif. Filed Nov. 6, 1961.

SWI

For Pressure Switches, Gear Trains and Gear Boxes, Linear and Rotary Actuators, Control Assemblies and Pumps, Industrial Measuring Apparatus, and Accessories Therefor.
First use in or about June 1958.

SN 132,015. AMP Incorporated, Harrisburg, Pa. Filed Nov. 15, 1961.

CERTI-LOK

Owner of Reg. Nos. 523,448 and 663,089.
For Hand Tools for Applying and/or Extracting Electrical Connectors.
First use 3rd quarter of 1956.

SN 132,031. Daffin Corporation, Hopkins, Minn. Filed Nov. 15, 1961.

ROLLERMOBILE

For Vehicle Mounted Feed Mixers.
First use Sept. 5, 1961.

SN 132,070. Power Specialty Co., Houston, Tex. Filed Nov. 15, 1961.

Hyjet

For High Pressure Fluid Pumping Systems for Use in Industrial Cleaning and High Pressure Testing.
First use Oct. 10, 1961.

SN 132,159. Hamac-Hansella Maschinen GmbH Dusseldorf, Dusseldorf, Germany. Filed Nov. 16, 1961.

HANSAMAC

Owner of German Reg. No. 746,620, dated Mar. 10, 1961.
For Packaging Machines, Wrapping Machines, Machines for Use in the Confectionery Industry, and Parts for These Machines.

SN 132,350. Markwell Manufacturing Co., Inc., New York, N.Y. Filed Nov. 20, 1961.

DESK MATE

For Stapling Machines.
First use July 15, 1961.

SN 132,369. William H. Ransone, Inc., Chicago, Ill. Filed Nov. 20, 1961.

QUAD-O-MATIC

For Hydro-Pneumatic Pressure Flush Guns.
First use Oct. 24, 1961.

SN 132,517. Beauchaine and Sons, Inc., Lakeport, N.H. Filed Nov. 22, 1961.

BEAU-TECH

For Electron Tube Pin Straightening Tools, Wire Manipulating Tools, Electron Tube Lifting Tools, Tweezers, Wrenches, Screwdrivers, and Threading Taps.
First use June 23, 1961.

SN 132,585. Ronson Corporation, Woodbridge, N.J. Filed Nov. 22, 1961.

BIG DADDY

For Electric Razors.
First use June 7, 1961.

SN 132,603. J. Wiss & Sons Co., Newark, N.J. Filed Nov. 22, 1961.

HY POWER

For Garden Tools.
First use in or about 1937.

SN 132,805. The Black-Clawson Company, Hamilton, Ohio. Filed Nov. 27, 1961.

AIREVAC

For Apparatus for Removing Gases From Liquids.
First use May 31, 1960.

SN 132,884. Jervis B. Webb Company, Detroit, Mich. Filed Nov. 27, 1961.

DOG MAGIC

For Trolleys for Conveyors.
First use Nov. 6, 1961.

SN 132,899. Harry E. Davis, Akron, Ohio. Filed Nov. 28, 1961.

HOLE STIRS

For Beverage Stirrers.
First use Aug. 1, 1961.

SN 132,946. Sier-Bath Gear and Pump Co., Inc., North Bergen, N.J. Filed Nov. 28, 1961.

SIER-BATH

For Gear Pumps and Screw Pumps.
First use 1907.

SN 133,685. Liquid Drive Corporation, Holly, Mich. Filed Dec. 8, 1961.

FLOW MATE

For Hydrokinetic Drives.
First use Nov. 14, 1961.

SN 134,080. American Iron & Machine Works Company, Inc., Oklahoma City, Okla. Filed Dec. 15, 1961.

PAC

For Tool Joints.
First use at least as early as Jan. 23, 1961.

SN 134,081. American Iron & Machine Works Company, Inc., Oklahoma City, Okla. Filed Dec. 15, 1961.

MT

For Tool Joints.
First use at least as early as June 25, 1961.

SN 134,082. American Iron & Machine Works Company, Inc., Oklahoma City, Okla. Filed Dec. 15, 1961.

AMERICAN IRON & MACHINE WORKS CO. INC. A

Owner of Reg. Nos. 216,830, 695,990, and others.
For Oil Field Equipment Including: Cat-Heads; Drill Collars and Subs; Fishing Tools; Kelleys and Subs; Mud Line Fittings; Mud Pump Pistons; Mud Pump Parts; Mud Pump Rods and Liners; Packer Hold Downs; Paper Taps; Portable Tool Houses; Overshots; Reciprocating Surface Installation Pump Valves and Parts and Accessories; Tool Joints; and Well Packers and Accessories.
First use about or before Jan. 1, 1924, on oil field equipment.

SN 134,161. Scovill Manufacturing Company, Waterbury, Conn. Filed Dec. 15, 1961.

POW-AIR-PAC

For Air Cylinder and Valve Assemblies.
First use Oct. 27, 1961.

SN 136,585. The Pneumacast Corp., Falls Church, Va. Filed Jan. 25, 1962.

PNEUMACASTER

For Machine for Use in Spraying a Cement Sand Water Mixture.
First use Nov. 1, 1961.

Class 24 — Laundry Appliances and Machines

SN 129,812. Southern Mills, Inc., Atlanta, Ga. Filed Oct. 12, 1961.

RED LINE

For Aprons, Padding and Cover Cloths for Flatwork Ironers and for Aprons and Cover Cloths for Laundry and Dry Cleaning Presses.
First use on or about Aug. 21, 1961.

Class 26 — Measuring and Scientific Appliances

SN 95,154. Durant Manufacturing Company, Milwaukee, Wis. Filed Apr. 15, 1960.

DURANT

For Counting Instruments Employing Rotary Side-by-Side Numeral Wheels Coupled To Provide a Counting Operation and a Visual Indication Thereof.
First use Sept. 25, 1959.

SN 122,471. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

h.h. Scott

For Audio-Frequency, Video-Frequency, Carrier-Frequency, Noise and Radio-Frequency Signal Generators; Sound-Level Meters; Sound Analyzers; Meters Including Voltmeters, Ammeters, Wattmeters and Differential Voltmeters; Electron-Beam or Cathode-Ray Devices and Indicators; Electro-Optical Indicators; Electrical Signal-Level Indicators; Sound and Radio Detecting Apparatus; and Stroboscopic Devices.
First use in or about the fall of 1955.

SN 123,776. Société Genevoise d'Instruments de Physique, Geneva, Switzerland. Filed July 11, 1961.

TRIOPTIC

Priority claimed under Sec. 44(d) on Swiss Reg. No. 185,064, dated Mar. 18, 1961. Owner of U.S. Reg. Nos. 437,453, 705,939, and others.
For Machines for Making Micrometric Measurements of Lengths, Angles, Polar Coordinates, Diameters, Cylindricity, Tapers, Threads, Profiles, Profile Angles, Etc., Including Parts for and Accessories to Such Machines.

SN 124,063. Coleman Instruments, Inc., Maywood, Ill. Filed July 17, 1961.

TITRION

For Automatic Titration Instruments and Control Assemblies Therefor.
First use Nov. 12, 1959.

SN 124,358. Glowall Corporation, Glenside, Pa. Filed July 20, 1961.

CHROMALAB

For Chromatography Instruments, Devices, Apparatus, Components and Supplies, e.g. Glass Columns.
First use Apr. 27, 1961.

SN 124,726. Dorate, Inc., Sayre, Okla. Filed July 26, 1961.

DORATE

For Equipment Used in the Installation and Testing of Television Cable Systems—Namely, Pre-Amplifiers, Antennae, Modulators, and Line-Tap-Off Units.
First use Feb. 26, 1959.

SN 130,583. Samuel O. Raymond, d.b.a. Raymond Development Company, Watertown, Mass. Filed Oct. 24, 1961.

HYDRO PROBE

For Underwater, Distance Measuring Devices and Equipment.
First use in or about August 1961.

SN 133,205. Charles Beseler Company, East Orange, N.J. Filed Dec. 4, 1961.

BESE-LAB

Owner of Reg. No. 659,785.
For Color Photograph Processing Apparatus.
First use Mar. 20, 1960.

SN 134,269. Projects Unlimited Inc., Dayton, Ohio. Filed Dec. 18, 1961.

SEA VUE HOOD

No claim is made to exclusive rights in the word "Hood" apart from the mark as shown.
For Optical Viewing Hoods for Shielding Light From Instrument Faces and the Like.
First use July 28, 1961.

SN 136,344. Chadwick-Helmuth Company, Monrovia, Calif. Filed Jan. 23, 1962.

SLIP-SYNC

For Stroboscopic Light Synchronizers.
First use Mar. 31, 1954.

SN 136,350. Cybernetics, Inc., Paterson, N.J. Filed Jan. 23, 1962.

RHINDICATOR

For Psychrometer.
First use Mar. 1, 1961.

SN 137,004. Raytheon Company, Waltham, Mass. Filed Jan. 31, 1962.

DataRay

For Electrical Apparatus—Namely, Peripheral Data Processing Equipment, Including Automatic Card Readers, Translators, Tape Readers, Punches, Magnetic Tape Units, and the Like.
First use Nov. 7, 1961.

SN 137,009. S.B. Manufacturing Corp., Brooklyn, N.Y. Filed Jan. 31, 1962.

THUNDERBIRD

For Cameras, Projectors, and Parts Thereof.
First use June 1957.

Class 29 — Brooms, Brushes, and Dusters

SN 129,150. Ideal Rubber Products Co., Inc., Brooklyn, N.Y. Filed Oct. 3, 1961.

MR. Big

For Sponge Mops.
First use June 28, 1961.

SN 129,219. N.V. Borstelfabriek Vermunt, Roosendaal, Netherlands. Filed Oct. 4, 1961.

VERO

For All Kinds of Brooms and Brushes for Domestic Use, Brushware for Toilet Purposes, Shaving Brushes, and All Kinds of Paint Brushes.
First use in March 1957; in commerce in March 1957.

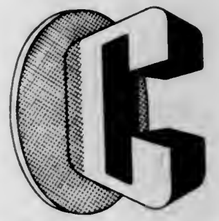
Class 31 — Filters and Refrigerators

SN 125,870. American Manufacturing Company, Inc., New York, N.Y. Filed Aug. 14, 1961.

ARCTIC TRAVELER

For Refrigeration Equipment for Trucks and Trailers.
First use Jan. 2, 1948.

SN 127,570. The Cellulo Company, Sandusky, Ohio. Filed Sept. 11, 1961.



The lining on the drawing is a part of the mark and does not indicate color.
For Filter Pads.
First use June 1, 1961.

Class 32 — Furniture and Upholstery

SN 120,569. Record Tree, Inc., Philadelphia, Pa. Filed May 22, 1961.

RECORD TREE

Applicant disclaims the word "Record" alone and apart from the mark as shown.
For Phonograph Record Racks.
First use on or about Feb. 23, 1961.

SN 124,026. Baby Lift Inc., Bellerose, N.Y. Filed July 17, 1961.

BABY LIFT

For Portable Baby Beds.
First use December 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 120,399. Faustel, Inc., Butler, Wis. Filed May 19, 1961.

THERMO-MATIC

For Web Dryers.
First use Nov. 15, 1960.

SN 127,720. Orr & Sembower, Inc., Reading, Pa. Filed Sept. 12, 1961.

"300" SP

For Apparatus for Generating Steam and/or Hot Water and Components Thereof.
First use Aug. 14, 1961.

SN 132,451. The Ebco Manufacturing Company, Columbus, Ohio. Filed Nov. 21, 1961.

OASIS

Owner of Reg. Nos. 416,771, 564,464, and others.
For Electrically-Actuated Dehumidifiers for Removing Moisture From the Air by Condensation.
First use Aug. 2, 1949.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 129,137. Garlock Inc., Palmyra, N.Y. Filed Oct. 3, 1961.
Owner of Reg. Nos. 439,630 and 613,490.

CHEMISEAL

For Mechanical Packings; Expansion Joints; Sealing Devices—Namely, Oil and Grease Seals, Mechanical Seals and Accessory Parts Thereof; Gaskets and Gasket Materials Including Gasket Jackets and Envelopes; and Other Sealing Materials.
First use Oct. 10, 1946, as to gaskets.

SN 129,416. Sears, Roebuck and Co., Chicago, Ill. Filed Oct. 6, 1961.

GOLD LINE

For Garden Hose.
First use on or about Apr. 22, 1960.

SN 130,619. Fre-Mar Industries, Inc., East Butler, Pa. Filed Oct. 25, 1961.

Fre Mar INDUSTRIES

For Tubeless Tire Puncture Repair Kits and Bonding Compound.
First use May 15, 1960.

Class 36 — Musical Instruments and Supplies

SN 111,007. Organaire, Inc., Syracuse, N.Y. Filed Dec. 29, 1960.

ORGANAIRE

For Accordions and Reed Organs, Specifically, Reed Organs of the Type Having Both Melody and Chord Reeds Operated by a Blower Driven by an Electric Motor.
First use Oct. 11, 1960, on accordions.

Class 37 — Paper and Stationery

SN 129,803. Radiant Color Company, Oakland, Calif. Filed Oct. 12, 1961.

SUN TESTED

Owner of Reg. Nos. 636,281 and 662,721.
For Fluorescent Paper.
First use Sept. 7, 1956.

Class 39 — Clothing

SN 113,669. Tandy Corporation, New York, N.Y. Filed Feb. 14, 1961.



No claim is made to the representation of the shoes apart from the mark as shown. Owner of Reg. No. 391,862.
For Shoes and Slippers.
First use Jan. 3, 1961.

SN 114,079. Aris Gloves, Incorporated, New York, N.Y. Filed Feb. 21, 1961.

SLIM-FIT BY ARIS

Applicant disclaims the expression "Slim-Fit" apart from the mark as shown. Owner of Reg. Nos. 158,107 and 566,485.
For Ladies' Leather and Fabric Gloves.
First use Nov. 15, 1960.

SN 118,409. Carlyle Shirt Company, Inc., New York, N.Y. Filed Apr. 24, 1961.

Club 333

For Shirts.
First use Mar. 25, 1961.

SN 119,158. Paul Sargent Ltd., New York, N.Y. Filed May 2, 1961.



"for that feeling of insolence"

For Men's Suits, Sport Jackets, Trousers, Slacks, Shirts, Raincoats, Ties, Socks and Sweaters.
First use June 25, 1959.

SN 122,396. Toyo Rayon Kabushiki Kaisha, d.b.a. Toyo Rayon Co. Ltd., Chuo-ku, Tokyo-to, Japan. Filed June 19, 1961.

PYLEN

Owner of Japanese Reg. No. 559,898, dated Oct. 27, 1960.
For Women's and Misses' Silk Lounge Suits, Jackets, Vests, Slacks, Rain Coats, Blouses, Pajamas, Negligees, Dresses, Jumpers, Skirts, Aprons, Lingerie, Hosiery, Scarves, and Men's and Boys' Silk Suits, Trousers, Slacks, Rain Coats, Dress Shirts, Sport Shirts, Pajamas, Underwear, Scarves, Neckties, and Hosiery.

SN 122,639. Peters Sportswear Co., Inc., Philadelphia, Pa. Filed June 22, 1961.

ALL WEATHER PETERS SPORTSWEAR

The applicant disclaims the phrase "All Weather Sportswear" alone and apart from the mark as shown. Owner of Reg. No. 591,494.
For Men's Sportswear—Namely, Slacks, Sweaters, and Coats.
First use on or about June 4, 1951.

SN 123,102. Hickey-Freeman Company, Rochester, N.Y. Filed June 29, 1961.

X-TENSIBLE

For Men's Suits Featuring a Specifically Designed Shoulder Construction.
First use on or about Feb. 10, 1961.

SN 123,545. Hutchens Hosiery Mills, Inc., Newton, N.C. Filed July 7, 1961.

COMFORT MASTER

For Men's, Boys' and Misses' Seamless Hosiery.
First use Apr. 25, 1961.

SN 123,835. Peters Sportswear Co., Inc., Philadelphia, Pa. Filed July 12, 1961.

All Weather PETERS Sportswear

The applicant disclaims the phrase "All Weather Sportswear" alone and apart from the mark as shown. Owner of Reg. No. 591,494.
For Men's Sportswear—Namely, Slacks, Sweaters, and Coats.
First use on or about June 4, 1951.

SN 124,762. Nettie Rosenstein, Inc., New York, N.Y. Filed July 26, 1961.

Odalisque

For Ladies' Hosiery.
First use Feb. 1, 1949.

SN 127,862. Arthur R. Lewis, Inc., New York, N.Y. Filed Sept. 14, 1961.

ARLI

For Girdles.
First use Aug. 21, 1961.

SN 127,909. Compagnie Francaise de Bonneterie, Societe Anonyme, Paris, France. Filed Sept. 15, 1961.

Welcomme Moro

Priority claimed under Sec. 44(d) on French Reg. No. 496,198, dated May 12, 1961 (Seine); Natl. Inst. No. 164,188.
For Outer and Under Clothing—Namely, Coats, Overcoats, Suits, Frocks, Dresses, Skirts, Waistcoats, Hats, Bodices, Shirts, Underwear, Neckties, Stockings, Socks, Gloves, Bathing Suits, Corsets, and Girdles.

SN 128,313. Wellco Ro-Search Industries, Inc., Waynesville, N.C., by change of name from Wellco Shoe Corporation, Waynesville, N.C. Filed Sept. 20, 1961.

MOON-BASE

For Shoes, Boots, and Sandals for Men, Women, and Children.
First use June 2, 1961.

SN 128,367. Pringle of Scotland, Limited, Walter's Wynd, Hawick, Scotland. Filed Sept. 21, 1961.

SCOTSDOON

Owner of British Reg. No. 814,608, dated Dec. 14, 1960.
For Knitted Outer Wear Garments—Namely, Pullovers, Cardigans, and Sweaters for Men and Women, and Skirts for Women.

SN 129,792. Preston Shirt Co., Inc., New York, N.Y. Filed Oct. 12, 1961.

BEWITCHABLE SWITCHABLES

For Women's Blouses.
First use June 19, 1961.

SN 130,918. Lady Ester Lingerie Corporation, New York, N.Y. Filed Oct. 30, 1961.



The term "Karen Lisa" is a fanciful name, not intended to identify any particular living individual.
For Women's, Misses', and Children's Lingerie—Namely, Slips, Petticoats, Gowns, Panties, Pajamas, Chemises, Step-Ins, and Bloomers.
First use July 1959.

SN 132,168. Lincoln Manufacturing Company, Fayetteville, Tenn. Filed Nov. 16, 1961.

ROXBURY

For Women's, Misses', and Juniors' Dresses, Blouses, and Sportswear.
First use July 11, 1935.

SN 132,185. Lester Pincus Shoe Corporation, New York, N.Y. Filed Nov. 16, 1961.

GAMBINI

For Shoes, Slippers, and Boots.
First use Oct. 6, 1960.

SN 132,489. Red Kap Garment Company, Nashville, Tenn. Filed Nov. 21, 1961.

RENT-L-TUFF

For Rental Clothing Including Trousers, Shirts, and Jackets.
First use Jan. 9, 1959.

SN 132,519. Stanley Blacker, Inc., Philadelphia, Pa. Filed Nov. 22, 1961.

STANLEY BLACKER

For Men's Sportscoats.
First use April 1960.

SN 133,054. Cole of California, Inc., San Francisco, Calif. Filed Nov. 30, 1961.

COLE OF CALIFORNIA

No claim is made to the words "Of California" apart from the mark as shown.
For Bathing Suits, Swimming Suits, Dresses, Play Suits, and Sun Suits.
First use Jan. 1, 1939.

SN 133,248. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Dec. 4, 1961.

RAMBL '62

Owner of Reg. Nos. 724,244 and 732,185.
For Men's and Boys' Slacks and Boys' Shorts.
First use Oct. 25, 1961.

SN 133,309. Pauker Brothers, New York, N.Y. Filed Dec. 4, 1961.

TOWNBROOK

For Men's Knitted Sweaters, Sport Shirts, Polo Shirts, Trunks, and Walking Shorts.
First use Sept. 15, 1961.

SN 133,824. Alfred Shapiro, Inc., New York, N.Y. Filed Dec. 11, 1961.

FROSTED SHERBERT

For Men's Shirts.
First use Sept. 1, 1961.

SN 133,830. Morris L. Slimovitz, d.b.a. Morris Manufacturing Co., Newburn, Tenn. Filed Dec. 11, 1961.

MORRIS DUAL FEEL

Owner of Reg. No. 555,769.
For Gloves.
First use Sept. 11, 1961.

SN 134,022. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Dec. 14, 1961.

FLEECIES

For Sweat Shirts for Children, Girls, and Women.
First use Nov. 16, 1961.

SN 134,220. Good Luck Glove Company, Carbondale, Ill. Filed Dec. 18, 1961.



Owner of Reg. No. 236,946.
For Work Gloves and Mittens.
First use Aug. 24, 1961; Mar. 16, 1927, in another design.

SN 134,281. T. M. Spencer, Inc., Cromwell, Ind. Filed Dec. 18, 1961.

TMS

For Men's, Women's, Children's, and Infants' Underwear—Namely, Shirts, Shorts, Panties, Hose, and the Like.
First use October 1961.

SN 134,570. Simley Corp., Angola, Ind. Filed Dec. 22, 1961.

SIMLEY

For Women's Hosiery.
First use Oct. 31, 1961.

SN 134,789. Converse Rubber Corporation, Malden, Mass. Filed Dec. 28, 1961.

TYCON

For Footwear—Namely, Industrial Boots and Shoes.
First use during April 1961.

SN 134,951. Debby Dare, Inc., Kansas City, Mo. Filed Jan. 2, 1962.

DEBBY DARE

The name "Debby Dare" is the name of a fictitious person and is not the name of any particular living individual.
Owner of Reg. Nos. 591,702, 633,209, and 662,277.
For Girlswear for Infants, Toddlers, and Girls—Namely, Smock Tops, Blouses, Dresses, Overalls, Coveralls, Sun Suits, Sweaters, Blue Jeans, Pedal Pushers, Pants, Skirts, Slacks, Shorts, Swimwear, Suits, Raincoats, Jackets, Coats, Caps, and Hats.
First use Dec. 14, 1951.

SN 135,117. Continental Manufacturing Co., Oskaloosa, Iowa. Filed Jan. 3, 1962.



Applicant disclaims any exclusive rights in the words "Union Made."
For Cotton Slacks.
First use Oct. 31, 1961.

SN 135,135. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Jan. 3, 1962.

VULCA VINYL

The word "Vinyl" is disclaimed apart from the mark as shown.
For Shoe Soles.
First use May 12, 1961.

SN 135,367. S. S. Kresge Company, Detroit, Mich. Filed Jan. 8, 1962.

WEDGEFIELD

Owner of Reg. Nos. 383,100 and 565,603.
For Boys' and Men's Wearing Apparel—Namely, Hosiery, Dress Shirts, Sport Shirts, Gloves, Jackets, Handkerchiefs, Coats, Underwear, Neckties, Hats and Caps, and Trousers.
First use 1929.

SN 135,560. Bud Berman Sportswear Inc., New York, N.Y. Filed Jan. 11, 1962.

PRINCE YORK

For Shirts.
First use Dec. 19, 1961.

SN 135,561. Bud Berman Sportswear Inc., New York, N.Y. Filed Jan. 11, 1962.

CUSTOM KING

For Shirts.
First use Dec. 19, 1961.

SN 135,614. Sheldon Lasky Co. Inc., d.b.a. S & Q Clothiers, Dallas, Tex. Filed Jan. 11, 1962.

CRESTBROOK

For Men's Suits, Topcoats, Sport Coats, and Slacks.
First use Sept. 1, 1961.

SN 135,759. Campus Sweater & Sportswear Company, d.b.a. Campus Sweater & Sportswear Co., Campus Sweater Company and The Campus Sweater Company, Cleveland, Ohio. Filed Jan. 15, 1962.

CAMPUS

Owner of Reg. No. 189,503.
For Sweaters, Cloth and Leather Jackets, Sport Coats, Dress Shirts, Sport Shirts, Knit Shirts, T Shirts, Slacks, Walk Shorts, Bathing Trunks and Gym Trunks.
First use on or about Sept. 1, 1922, on "Campus"; on or about Jan. 18, 1924, on "Campus" and design.

SN 135,760. Campus Sweater & Sportswear Company, d.b.a. Campus Sweater & Sportswear Co., Campus Sweater Company and The Campus Sweater Company, Cleveland, Ohio. Filed Jan. 15, 1962.

For Sweaters, Cloth and Leather Jackets, Sport Coats, Dress Shirts, Sport Shirts, Knit Shirts, T Shirts, Slacks, Walk Shorts, Bathing Trunks and Gym Trunks.
First use on or about Jan. 18, 1924.

SN 135,763. Charleston Rubber Company, Charleston, S.C. Filed Jan. 15, 1962.

FIRE-GLO

For Fluorescent Safety Vests and Sleeves.
First use Oct. 16, 1961.

SN 135,939. Imperial Shirt Corp., New York, N.Y. Filed Jan. 16, 1962.

ARTIC CIRCLE

For Men's Dress Shirts, Men's Sport Shirts, Men's Collars.
First use Oct. 12, 1961.

SN 135,941. Blue Ridge Manufacturers, Incorporated, New York, N.Y. Filed Jan. 16, 1962.

GOLD O'FARRELL

For Men's and Boys' Overalls, Dungarees, and Trousers.
First use Oct. 27, 1961.

SN 136,052. K.N.M. Sportswear, Inc., New York, N.Y. Filed Jan. 18, 1962.

MR. SNOW

For Men's and Boys' Jackets.
First use Oct. 2, 1961.

SN 137,112. Campus Sweater & Sportswear Company, d.b.a. Campus Sweater & Sportswear Co., Campus Sweater Company, and The Campus Sweater Company, Cleveland, Ohio. Filed Feb. 2, 1962.

CAMPUS

For Sweaters, Cloth and Leather Jackets, Sport Coats, Dress Shirts, Sport Shirts, Knit Shirts, T Shirts, Slacks, Walk Shorts, Bathing Trunks and Gym Trunks.
First use on or about Sept. 1, 1922, on "Campus"; on or about Jan. 18, 1924, on "Campus" and design.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 124,208. Minette Mills, Incorporated, Grover, N.C. Filed July 18, 1961.

TUFLOC

For Bedspreads.
First use July 1, 1961.

SN 129,804. Radiant Color Company, Oakland, Calif. Filed Oct. 12, 1961.

SUN TESTED

Owner of Reg. Nos. 636,281 and 662,721.
For Fabrics and Plastics Coated or Impregnated With Fluorescent Materials.
First use Sept. 7, 1956, on coated fabrics.

SN 133,386. Kolcraft Products, Inc., Chicago, Ill. Filed Dec. 5, 1961.

PERMA-DRI

For Crib Mattress Fabrics.
First use June 1, 1961.

SN 134,875. Dansk Designs, Inc., Great Neck, N.Y. Filed Dec. 29, 1961.

FINNISH ACCENT

For Napkins, Tablecloths, and Table Mats.
First use Nov. 19, 1961.

SN 135,955. Bartmann & Bixer, Inc., New York, N.Y. Filed Jan. 17, 1962.

GRANDEUR

For Curtains, Draperies, and Bedspreads, and Fabrics Adapted To Be Made Up Into Curtains, Draperies, and Bedspreads.
First use on or about Nov. 30, 1935.

SN 136,013. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Jan. 17, 1962.

ACROCEL

For Polyester Fiber Fabrics.
First use on or about Dec. 15, 1961.

Class 43 — Thread and Yarn

SN 127,908. Compagnie Francaise de Bonneterie, Societe Anonyme, Paris, France. Filed Sept. 15, 1961.

Welcomme Moro

Priority claimed under Sec. 44(d) on French Reg. No. 496,198, dated May 12, 1961 (Seine); Natl. Inst. No. 164,188.
For Yarns and Thread.

SN 136,016. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Jan. 17, 1962.

ACROCEL

For Polyester Fiber Yarns.
First use Dec. 15, 1961.

Class 44 — Dental, Medical, and Surgical Appliances

SN 103,638. American Massage Sales & Mfg. Corp., Silver Creek, N.Y. Filed Aug. 30, 1960.

American

For Motor Vibrated Massage Apparatus Including Chairs, Cushions and Pads, Appliable to a Person's Body, and Manual Massage Devices.
First use on or about July 29, 1960.

SN 111,471. The W. E. Bassett Company, Derby, Conn. Filed Jan. 9, 1961.

KLIPPER KING

The word "Klipper" is disclaimed apart from the mark as shown.
For Finger and Toenail Clippers.
First use Mar. 20, 1959.

SN 124,122. Poor and Logan Manufacturing Co., Inc., North Hollywood, Calif. Filed July 17, 1961.

VASO-PNEUMATIC

For Medical Machine Designed To Increase the Flow of Blood and Tissue Fluids in the Extremities.
First use September 1949.

SN 130,669. Berthe Zambaldi, d.b.a. Di Oderzo, Brussels, Belgium. Filed Oct. 17, 1961.

CAPILUSTRO

Priority claimed under Sec. 44(d) on Belgian Reg. No. 92,012, dated Apr. 20, 1961.
For Device for Treating, Regenerating, and Setting the Hair.

SN 132,934. Peter, Strong & Co., Inc., New York, N.Y. Filed Nov. 28, 1961.

For Dental Bite Wax and Impression Trays.
First use June 10, 1957.

SN 133,102. Theratron Corporation, St. Paul, Minn. Filed Nov. 30, 1961.

For Physiological Therapeutic Diagnostic and Patient Care Devices and Including an Electronic Muscle Stimulator Applied to the Patient's Body, a Mat or Pad for Therapeutic Exercises or for a Litter and a Mat or Pad for Wheel Chairs, an Electrolytic Solution for Use With Electrical or Electronic Devices in Contact With a Patient's Body, a Therapeutic Bath for Treatment of Body Extremities Such as Hands, Feet, or Elbow and Knee Joints, and a Solution of Paraffin and Other Additives for Use in a Therapeutic Bath.
First use Mar. 1, 1961.

SN 134,413. Swivlstool Inc., Warsaw, Ind. Filed Dec. 20, 1961.

W-S WORK SIMPLIFICATION UNIT

No claim is made to the wording "Work Simplification Unit" apart from the mark.
For Dentists' Work Bench.
First use Aug. 1, 1961.

Class 50 — Merchandise Not Otherwise Classified

SN 92,447. Commercial Plastics Limited, Wallsend-on-Tyne, Northumberland, England. Filed Mar. 9, 1960.

FABLON

Owner of British Reg. No. 674,747, dated Nov. 22, 1948.
For Self-Adhesive Flexible Plastic Sheet Material for General Use as a Decorative and Protective Covering.

SN 116,203. The H. O. Canfield Company, Inc., New York, N.Y. Filed Mar. 22, 1961.

CANBLOC

For Rubber Mountings.
First use Feb. 13, 1961.

SN 126,021. W. R. Grace & Co., Cambridge, Mass. Filed Aug. 15, 1961.

POLYFIBRON

Owner of Reg. No. 706,404.
For Polymer Impregnated Fibrous Sheet Material for Use as Packing Blanket or Cushioning Element in Letter Press Printing.
First use May 4, 1960.

SN 127,328. Ekco Products Company, Chicago, Ill. Filed Sept. 6, 1961.

GLIDE-MATIC

For Garment Hangers.
First use Sept. 5, 1961.

SN 129,092. Packaging Products and Design Corp., Newark, N.J. Filed Sept. 28, 1961.

PROTEX-PRUF

For Protective Blankets for Lumber Comprising a Lamination of Paper and Burlap.
First use Mar. 23, 1961.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

735,504. EMERALD BEAUTY ETC. AND DESIGN. The Charles C. Hart Seed Company. SN 97,488. Pub. 5–22–62. Filed 5–19–60.

735,505. LUBE-FLOW. Standard Gilsonite Company, d.b.a. Southwest Chemical Co. SN 97,885. Pub. 5–22–62. Filed 5–25–60.

735,506. REPRESENTATION OF A HUMAN MALE. Spencer Chemical Company. SN 114,144. Pub. 5–22–62. Filed 2–21–61.

735,507. PAN X TROL. Whitehead Brothers Company. SN 121,615. Pub. 5–22–62. Filed 6–7–61.

735,508. HELIODOR. Societe de la Viscose Suisse. SN 124,470. Pub. 5–22–62. Filed 7–21–61.

735,509. NYLCOR. Societe de la Viscose Suisse. SN 124,475. Pub. 5–22–62. Filed 7–21–61.

735,510. PARISCRAFT. Johnson & Johnson. SN 127,229. Pub. 5–22–62. Filed 9–5–61.

735,511. WOODLAND CALF. Hermann Loewenstein, Inc. SN 127,613. Pub. 5–22–62. Filed 9–11–61.

735,512. ANILSOFT. Swift & Company, d.b.a. A. C. Lawrence Leather Co. SN 131,424. Pub. 5–22–62. Filed 11–6–61.

735,513. SWITZA. Swift & Company, d.b.a. A. C. Lawrence Leather Co. SN 131,426. Pub. 5–22–62. Filed 11–6–61.

735,514. SOFTISIDE. Armour and Company. SN 131,540. Pub. 5–22–62. Filed 11–8–61.

735,515. PUSSY-FOOT CORRALS ODORS AND DESIGN. Andrew Goetz's Sons, Inc. SN 131,671. Pub. 5–22–62. Filed 11–9–61.

735,516. RUECO. Fred Rueping Leather Company. SN 131,771. Pub. 5–22–62. Filed 11–10–61.

735,517. CHEMSTRAND. Monsanto Chemical Company, by merger from The Chemstrand Corporation. SN 131,809. Pub. 5–22–62. Filed 11–13–61.

735,518. VERSALON. General Mills, Inc. SN 132,670. Pub. 5–22–62. Filed 11–24–61.

735,519. KYTREL. Pennsalt Chemicals Corporation. SN 132,712. Pub. 5–22–62. Filed 11–24–61.

735,520. INDIAN HEAD DESIGN. M. Milton Hoffman, d.b.a. The Hoffman Seed & Grain Co. SN 133,268. Pub. 5–22–62. Filed 12–4–61.

Class 2—Receptades

735,521. KP. Korris Products, Inc. SN 87,359. Pub. 5–22–62. Filed 12–15–59.

735,522. EASY-USE. Allstate Paper Products, Inc. SN 122,412. Pub. 5–22–62. Filed 6–20–61.

Class 6—Chemicals and Chemical Compositions

735,523. LUTOX. Chemagro Corporation. SN 75,542. Pub. 5–22–62. Filed 6–11–59.

735,524. BARCOLENE'S CLOUD 9 AND DESIGN. The Barcolene Co. SN 117,680. Pub. 5–22–62. Filed 4–12–61.

735,525. V VICTOR AND DESIGN. Stauffer Chemical Company. SN 117,921. Pub. 5–22–62. Filed 4–14–61.

735,526. UNICOR RS. Universal Oil Products Company. SN 119,082. Pub. 5–22–62. Filed 5–1–61.

735,527. UNICOR WD. Universal Oil Products Company. SN 119,083. Pub. 5–22–62. Filed 5–1–61.

735,528. BENAX. The Dow Chemical Company. SN 121,366. Pub. 1–2–62. Filed 6–5–61.

735,529. PLANTABBS ETC. AND DESIGN. Plantabbs Corporation. SN 122,361. Pub. 5–22–62. Filed 6–19–61.

735,530. PLASTIC WOOD. American Home Products Corporation, d.b.a. Boyle-Midway. SN 122,743. Pub. 5–22–62. Filed 6–26–61.

735,531. AMAZON. Trio Chemical Works, Inc. SN 123,708. Pub. 5–22–62. Filed 7–10–61.

735,532. SAYFOS. Plant Protection Limited. SN 126,120. Pub. 5–22–62. Filed 8–16–61.

735,533. SGL. Pittsburgh Chemical Company. SN 128,844. Pub. 5–22–62. Filed 9–28–61.

735,534. MC–74–BD. Sid Richardson Carbon Co. SN 129,392. Pub. 5–22–62. Filed 10–6–61.

735,535. MC–74–UN. Sid Richardson Carbon Co. SN 129,393. Pub. 5–22–62. Filed 10–6–61.

735,536. MC–74–VP. Sid Richardson Carbon Co. SN 129,394. Pub. 5–22–62. Filed 10–6–61.

Class 9—Explosives, Firearms, Equipments, and Projectiles

735,537. REVELATION. Western Auto Supply Company (Delaware corporation), assignee, by mesne assignments, of Western Auto Supply Company (Missouri corporation). SN 116,276. Pub. 5–22–62. Filed 3–22–61.

735,538. BOLKOW AND DESIGN. Bolkow-Entwicklungen Kommanditgesellschaft. SN 123,517. Pub. 5–22–62. Filed 7–7–61.

Class 10—Fertilizers

735,539. PLANTABBS AND DESIGN. Plantabbs Corporation. SN 122,362. Pub. 5–22–62. Filed 6–19–61.

735,540. PLANTABBS ETC. AND DESIGN. Plantabbs Corporation. SN 122,363. Pub. 5–22–62. Filed 6–19–61.

Class 11—Inks and Inking Materials

735,541. VARMEL. Central Compounding Company. SN 118,411. Pub. 5–22–62. Filed 4–24–61.

Class 12—Construction Materials

735,542. CHASEFIL. Chase and Sons, Inc. SN 86,930. Pub. 5–22–62. Filed 12–9–59.

735,543. VENT-A-STRIP. Home Comfort Products Co. SN 115,471. Pub. 5–22–62. Filed 3–13–61.

735,544. FORM-A-SEAL. Martin-Marietta Corporation, assignee of American-Marietta Company. SN 115,986. Pub. 5–22–62. Filed 3–20–61.

735,545. SEAL-MASTER. Tucker Aluminum Products Inc. SN 118,831. Pub. 5–22–62. Filed 4–27–61.

735,546. HYDRO NAIL. Hydro-Air Engineering, Inc. SN 123,424. Pub. 5–22–62. Filed 7–5–61.

735,547. SPRAY-TITE. Pilbrico Company. SN 123,920. Pub. 5–22–62. Filed 7–13–61.

735,548. OLD SOUTH. Southern Venetian Blind Co. SN 130,388. Pub. 5-22-62. Filed 10-20-61.

735,549. PERMAFIL. Great Lakes Carbon Corporation. SN 130,452. Pub. 5-22-62. Filed 10-23-61.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

735,550. POLY-CLIP. Niedecker-Verschlusstechnik GmbH. SN 112,159. Pub. 5-22-62. Filed 3-21-62.

735,551. ELECTRO-BONDED. Ekco Products Company. SN 124,181. Pub. 5-22-62. Filed 7-18-61.

735,552. THERM-O-PRUF. Hays Manufacturing Company. SN 129,863. Pub. 5-22-62. Filed 10-13-61.

Class 14 — Metals and Metal Castings and Forgings

735,553. JMP WITHIN A C AND DESIGN. Blackstone Corporation. SN 120,692. Pub. 5-22-62. Filed 5-24-61.

Class 15 — Oils and Greases

735,554. M.O.S.-12. Fuels Research Corporation. SN 115,330. Pub. 5-22-62. Filed 3-10-61.

735,555. POOL 'N PATIO. Barton Manufacturing Company. SN 116,965. Pub. 5-22-62. Filed 4-3-61.

Class 16 — Protective and Decorative Coatings

735,556. EPOXAMINE. Bee Chemical Company. SN 112,211. Pub. 5-22-62. Filed 1-23-61.

735,557. MAYPOXY. Otto B. May, Inc. SN 112,390. Pub. 5-22-62. Filed 1-24-61.

735,558. MARK AND DESIGN. Mark Auto Company, Inc. SN 123,214. Pub. 5-22-62. Filed 6-30-61.

Class 17 — Tobacco Products

735,559. CLOUD CLUB. Jersey City Tobacco Co. SN 112,152. Pub. 5-22-62. Filed 1-19-61.

735,560. SWISHER SWEETS AND DESIGN. Jno. H. Swisher & Son, Inc. SN 117,554. Pub. 5-22-62. Filed 4-10-61.

Class 18 — Medicines and Pharmaceutical Preparations

735,561. FUNDAMYCIN. Beecham Research Laboratories Limited. SN 93,135. Pub. 5-22-62. Filed 3-18-60.

735,562. NCP NUTRITION CONTROL PRODUCTS AND DESIGN. Max Derfler, d.b.a. Nutrition Control Products. SN 99,576. Pub. 5-22-62. Filed 6-23-60.

735,563. NELSON-BOYER COMPANY AND DESIGN. Nelson Boyer Company, Inc. SN 103,588. Pub. 5-22-62. Filed 8-29-60.

735,564. ABRAC. A. Boake, Roberts & Company Limited. SN 110,658. Pub. 11-7-61. Filed 12-22-60.

735,565. BAXEN. E. Griffiths Hughes Limited. SN 114,767. Pub. 5-22-62. Filed 3-2-61.

735,566. LLL AND DESIGN. Leo Linden Laboratories, Inc. SN 120,103. Pub. 5-22-62. Filed 5-16-61.

735,567. TRANSPHARM. Transpharm G.m.b.H. SN 122,139. Pub. 5-22-62. Filed 6-15-61.

735,568. EARTH IRON. Specifide, Inc. (Delaware corporation), assignee, by mesne assignments, of Specifide, Inc. (Indiana corporation). SN 123,242. Pub. 5-22-62. Filed 6-30-61.

735,569. MINTIC. Imperial Chemical Industries Limited. SN 127,776. Pub. 5-22-62. Filed 9-13-61.

735,570. PHENOTURIC. Ethical Pharmaceutical Company, Inc. SN 128,985. Pub. 5-22-62. Filed 10-2-61.

735,571. DOLITRONE. Richardson-Merrell Inc. SN 130,382. Pub. 5-22-62. Filed 10-20-61.

735,572. DOME. Dome Chemicals, Inc. SN 130,687. Pub. 5-22-62. Filed 10-26-61.

735,573. QUIBRON. Mead Johnson & Company. SN 130,809. Pub. 5-22-62. Filed 10-27-61.

735,574. ORGAMETRIL. N.V. Organon. SN 136,066. Pub. 5-22-62. Filed 1-18-62.

735,575. STRON-BRELLA AND DESIGN. Robert E. Sonntag, d.b.a. Robert Evans Co. SN 136,084. Pub. 5-22-62. Filed 1-18-62.

735,576. RYNALERT. Irwin, Neisler & Co. SN 136,130. Pub. 5-22-62. Filed 1-19-62.

Class 21 — Electrical Apparatus, Machines, and Supplies

735,577. BBN. Bolt, Beranek & Newman, Inc. CONSOLIDATED CERTIFICATE. SN 95,555, pub. 1-23-62, filed 4-22-60, Cl. 21; SN 95,554, pub. 1-23-62, filed 4-22-60, Cl. 26.

735,578. STEMAG AND FANCIFUL COMBINATION OF LETTERS S AND M. Steatit-Magnesia Aktiengesellschaft. SN 99,547. Pub. 5-22-62. Filed 6-22-60.

735,579. FANCIFUL COMBINATION OF LETTERS S AND M. Steatit-Magnesia Aktiengesellschaft. SN 99,548. Pub. 5-22-62. Filed 6-22-60.

735,580. DYNEX. Applied Power Industries, Inc., assignee of Dynex, Inc. SN 112,138. Pub. 5-22-62. Filed 1-19-61.

735,581. CINDERELLA. International Telephone and Telegraph Corporation. SN 116,309. Pub. 5-22-62. Filed 3-23-61.

735,582. FIXED CAPACITOR SYMBOL IN HEXAGONAL DESIGN. Texas Instruments Incorporated. SN 117,565. Pub. 5-22-62. Filed 4-10-61.

735,583. CALOR. "Calor" Apparells Electro-Domestiques, Societe Anonyme. SN 118,329. Pub. 5-22-62. Filed 4-21-61.

735,584. KINGLITE. Kingbird Products, Inc. SN 120,536. Pub. 5-22-62. Filed 5-22-61.

735,585. A. Ampex Corporation. SN 121,528. Pub. 5-22-62. Filed 6-7-61.

735,586. PERMION. Radiation Applications, Incorporated. SN 124,943. Pub. 5-22-62. Filed 7-28-61.

735,587. SNO-PAD. Radiant Electric Heat Company. SN 125,767. Pub. 5-22-62. Filed 8-10-61.

735,588. VARI-REG. NJE Corporation. SN 125,936. Pub. 5-22-62. Filed 8-14-61.

735,589. SPIR-O-FOAM. Prodelin Inc. SN 125,939. Pub. 5-22-62. Filed 8-14-61.

735,590. GO-POWER AND DESIGN. Rayco Mfg. Co. SN 125,943. Pub. 5-22-62. Filed 8-14-61.

735,591. DYNAFLITE. Toledo Scale Corporation. SN 126,059. Pub. 5-22-62. Filed 8-15-61.

735,592. POWER-TWIST. Duro-Test Corporation. SN 126,512. Pub. 5-22-62. Filed 8-23-61.

735,593. LECTRO-PLATE. Seven Hills Distributing Corp. SN 127,659. Pub. 5-22-62. Filed 9-11-61.

735,594. SELECTRODE. Berkeley-Davis, Inc. SN 128,330. Pub. 5-22-62. Filed 9-21-61.

735,595. ADCOLITE. Adco Sign Co. SN 128,495. Pub. 5-22-62. Filed 9-25-61.

735,596. RFI AND DESIGN. RF Interonics, Inc. SN 128,852. Pub. 5-22-62. Filed 9-28-61.

Class 22 — Games, Toys, and Sporting Goods

735,597. SKY CROQUET. Copar. SN 112,442. Pub. 5-22-62. Filed 1-25-61.

735,598. GYMPORT. Nissen Corporation, by change of name from Nissen Trampoline Company. SN 116,744. Pub. 5-22-62. Filed 3-29-61.

735,599. CIRCLE 5 AND DESIGN. Bradfute Corporation. SN 119,668. Pub. 5-22-62. Filed 5-10-61.

735,600. FUN IN THE SUN. Fun in the Sun of Florida, Inc. SN 122,300. Pub. 5-22-62. Filed 6-19-61.

735,601. MISS MARIE. F. W. Woolworth Co. SN 125,451. Pub. 5-22-62. Filed 8-4-61.

735,602. WITZY. Witzy Toy Manufacturing Corporation. SN 126,410. Pub. 5-22-62. Filed 8-21-61.

735,603. ASTRO ANTICS. Gameland, Inc. SN 127,219. Pub. 5-22-62. Filed 9-5-61.

735,604. CLICK-A-WORD. Clicker, Incorporated. SN 127,702. Pub. 5-22-62. Filed 9-12-61.

735,605. COMMAND DECISION. Milton Bradley Company. SN 127,747. Pub. 5-22-62. Filed 9-13-61.

735,606. REPRESENTATION OF HONEYCOMB AND BEES WITHIN A SPADE (PLAYING CARD). The United States Playing Card Company. SN 130,844. Pub. 5-22-62. Filed 10-27-61.

735,607. NO. 77. The United States Playing Card Company. SN 130,845. Pub. 5-22-62. Filed 10-27-61.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

735,608. ELECTRO-SHEAVE. Warner Electric Brake & Clutch Company. SN 71,926. Pub. 5-22-62. Filed 4-20-59.

735,609. SEA GULP. Peters & Russell, Inc. SN 108,814. Pub. 5-22-62. Filed 11-21-60.

735,610. DYNEX. Applied Power Industries, Inc., assignee of Dynex, Inc. SN 112,137. Pub. 5-22-62. Filed 1-19-61.

735,611. ALPMA AND DESIGN. Alpma Alpenland-Maschinenbaugesellschaft Hain & Co. K.G. SN 115,109. Pub. 5-22-62. Filed 3-8-61.

735,612. LUMBER JACK AND DESIGN. Root Manufacturing Company, Inc. SN 117,048. Pub. 5-22-62. Filed 4-3-61.

735,613. CALOR. "Calor" Apparells Electro-Domestiques, Societe Anonyme. SN 118,328. Pub. 5-22-62. Filed 4-21-61.

735,614. TENION. Tenion Cutlery Company. SN 120,918. Pub. 5-22-62. Filed 5-26-61.

735,615. ACTION HOT FORGED TOOLS AND DESIGN. Thorsen Manufacturing Company. SN 121,041. Pub. 5-22-62. Filed 5-29-61.

735,616. AMERTROL. Whitin Machine Works. SN 121,052. Pub. 5-22-62. Filed 5-29-61.

735,617. BLUKOLD. Firma Ferdinand Bernhard Schmetz. SN 121,723. Pub. 5-22-62. Filed 6-9-61.

735,618. OMBIAC. Per Gunnar Brundell. SN 123,462. Pub. 5-22-62. Filed 7-6-61.

735,619. PRONTO PRICER. Paramount Paper Products Co. SN 123,676. Pub. 5-22-62. Filed 7-10-61.

735,620. SS ALLEY-SKAT AND DESIGN. Southern States, Inc., by change of name from Southern States Equipment Corporation. SN 124,596. Pub. 5-22-62. Filed 7-24-61.

735,621. GROOVE-LOC. True Temper Corporation. SN 128,620. Pub. 5-22-62. Filed 9-25-61.

735,622. AMP EMBLEM. AMP Incorporated. SN 128,636. Pub. 5-22-62. Filed 9-26-61.

735,623. KING TUK AND DESIGN. Cal-Crown Corporation. SN 129,337. Pub. 5-22-62. Filed 10-6-61.

735,624. BALAC. The Gleason Works. SN 129,361. Pub. 5-22-62. Filed 10-6-61.

735,625. ROTO-DIE. Tu-Bar Corporation. SN 129,704. Pub. 5-22-62. Filed 10-11-61.

735,626. PORTER BOY. Musser, Inc. SN 129,965. Pub. 5-22-62. Filed 10-16-61.

735,627. MOTOMATIC. The Thew Shovel Company. SN 130,005. Pub. 5-22-62. Filed 10-16-61.

735,628. PRES-PAK. Atlas General Industries, Inc. SN 130,025. Pub. 5-22-62. Filed 10-17-61.

735,629. MORDRAW. Morgan Construction Company. SN 130,092. Pub. 5-22-62. Filed 10-17-61.

735,630. ACCO. Natser Corporation, d.b.a. Acco Products. SN 134,486. Pub. 5-22-62. Filed 12-21-61.

Class 26 — Measuring and Scientific Appliances

735,577. CONSOLIDATED CERTIFICATE. See Class 21.

735,631. MEASURE-MASTER. United-Greenfield Corporation. SN 118,116. Pub. 5-22-62. Filed 4-18-61.

735,632. SYL-A-SCOPE. Robins Industries Corp. SN 118,607. Pub. 5-22-62. Filed 4-25-61.

735,633. VISUCOM. Tecnifax Corporation. SN 119,437. Pub. 5-22-62. Filed 5-5-61.

735,634. LUXRAY. General Controls Co. SN 120,984. Pub. 5-22-62. Filed 5-29-61.

735,635. MICROCAPS. Drummond Scientific Company. SN 121,084. Pub. 5-22-62. Filed 5-31-61.

735,636. BOLKOW AND DESIGN. Bolkon-Entwicklungen Kommanditgesellschaft. SN 123,518. Pub. 5-22-62. Filed 7-7-61.

735,637. VERBUS. Bauer & Schaurte. SN 123,958. Pub. 5-22-62. Filed 7-14-61.

735,638. OPTIKIT. Hello Mirror Company. SN 125,667. Pub. 5-22-62. Filed 8-8-61.

735,639. BETAPOT. Duncan Electronics, Inc. SN 126,089. Pub. 5-15-62. Filed 8-16-61.

735,640. PRM. Erie Resistor Corporation. SN 126,215. Pub. 5-22-62. Filed 8-18-61.

735,641. JUPITER. Robertson Photo-Mechanix, Inc. SN 126,476. Pub. 5-22-62. Filed 8-22-61.

735,642. W & C AND DESIGN. Weighing & Controls, Inc. SN 127,065. Pub. 5-22-62. Filed 8-31-61.

735,643. LST. Keuffel & Esser Company. SN 127,113. Pub. 5-22-62. Filed 9-1-61.

735,644. GEOMETRIC DESIGN. P. Gossen & Co. Gesellschaft mit beschraenkter Haftung. SN 127,771. Pub. 5-22-62. Filed 9-13-61.

735,645. GEOMETRIC DESIGN. P. Gossen & Co. Gesellschaft mit beschraenkter Haftung. SN 127,772. Pub. 5-22-62. Filed 9-13-61.

735,646. EMBLEM DESIGN. MHD Research, Inc. SN 128,178. Pub. 5-22-62. Filed 9-19-61.

735,647. THERMOMATIC. Rotolite Corporation. SN 128,465. Pub. 5-22-62. Filed 9-22-61.

735,648. ISD. Imperial Industries, Inc. SN 129,008. Pub. 5-22-62. Filed 10-2-61.

735,649. CC. Conax Corporation. SN 129,919. Pub. 5-22-62. Filed 10-16-61.

735,650. DISCON. MacLeod Instrument Corp. SN 130,085. Pub. 5-22-62. Filed 10-17-61.

735,651. OLFACTRON. American Systems Incorporated. SN 130,407. Pub. 5-22-62. Filed 10-23-61.

735,652. ISO-DISC. Case Laboratories, Inc. SN 130,423. Pub. 5-22-62. Filed 10-23-61.

Class 28 — Jewelry and Precious-Metal Ware

735,653. MARVELIQUE. Marvella, Inc. SN 128,184. Pub. 5-22-62. Filed 9-19-61.

735,654. PAKULA. Pakula and Company. SN 128,842. Pub. 5-22-62. Filed 9-28-61.

735,655. COMMAND. Medicated Products Company. SN 129,686. Pub. 5-22-62. Filed 10-11-61.

735,656. MADRIGAL. Rogers, Lunt & Bowlen Company, d.b.a. Lunt Sterling. SN 129,983. Pub. 5–22–62. Filed 10–16–61.

735,657. AIR CUSHIONED. George C. Bingham, d.b.a. Automated Plastic Products Co. SN 130,029. Pub. 5–22–62. Filed 10–17–61.

735,658. MADEMOISELLE DE PARIS. Henry Jonas. SN 130,076. Pub. 5–22–62. Filed 10–17–61.

Class 29 — Brooms, Brushes, and Dusters

735,659. KP. Korris Products, Inc. SN 87,360. Pub. 5–22–62. Filed 12–15–59.

Class 30 — Crockery, Earthenware, and Porcelain

735,660. HAL. Harold J. Maloney. SN 120,209. Pub. 5–22–62. Filed 5–17–61.

Class 32 — Furniture and Upholstery

735,661. REST-O-MATIC. American Seating Company. SN 113,067. Pub. 5–22–62. Filed 2–6–61.

735,662. COLONIAL PREMIER. Colonial-Premier Company. SN 114,754. Pub. 5–22–62. Filed 3–2–61.

Class 33 — Glassware

735,663. GEOMETRICAL DESIGN. Virginia Glass Products Corporation. SN 96,378. Pub. 5–22–62. Filed 5–3–60.

735,664. MUG AND DESIGN. American-Wheaton Glass Corporation. SN 122,148. Pub. 5–22–62. Filed 6–16–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

735,665. RESIST-O-SHIELD. Republic-Transcon Industries, Inc. SN 124,125. Pub. 5–22–62. Filed 7–17–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

735,666. SCHENUIT S AND DESIGN. The Frank G. Schenuit Rubber Company. SN 116,578. Pub. 12–26–61. Filed 3–27–61.

Class 36 — Musical Instruments and Supplies

735,667. BRAHMS. Walter J. Sarad. SN 118,496. Pub. 5–22–62. Filed 4–24–61.

735,668. UNITED ARTISTS. United Artists Records, Inc. SN 121,045. Pub. 5–22–62. Filed 5–29–61.

735,669. ML MITCHELL LURIE. Mitchell Lurie, d.b.a. Mitchell Lurie Enterprises. SN 127,239. Pub. 5–22–62. Filed 9–5–61.

735,670. MAC-NETIC. Mac/Netic Tape Company. SN 127,344. Pub. 5–22–62. Filed 9–6–61.

Class 37 — Paper and Stationery

735,671. OXFORD. Oxford Paper Company. SN 88,797. Pub. 5–22–62. Filed 1–11–60.

735,672. KLEENEX. Kimberly-Clark Corporation. SN 108,180. Pub. 5–22–62. Filed 11–10–60.

735,673. TAX TAB. Thomas F. Hagan, d.b.a. Hagan & Company. SN 112,455. Pub. 5–22–62. Filed 1–25–61.

735,674. HAMMERMILL MICR CHECK-MATE. Hammermill Paper Company. SN 117,704. Pub. 5–22–62. Filed 4–12–61.

735,675. KWIK-TAB. Goldsmith Bros. SN 118,235. Pub. 5–22–62. Filed 4–20–61.

735,676. TELE-PAD. Tele-Pad Corporation. SN 119,248. Pub. 5–22–62. Filed 5–3–61.

735,677. KOH-I-QUICK. L. & C. Hardtmuth, Inc. SN 120,205. Pub. 5–22–62. Filed 5–17–61.

735,678. DICTAFAX. Dictaphone Corporation. SN 130,186. Pub. 5–22–62. Filed 10–18–61.

735,679. CIMSCO. Marc A. Frederick, Sr. SN 130,446. Pub. 5–22–62. Filed 10–23–61.

735,680. EVER READY AND DESIGN. Ever Ready Calendar Manufacturing Company. SN 130,790. Pub. 5–22–62. Filed 10–27–61.

735,681. BUG-BAN. Standard Packaging Corporation. SN 131,418. Pub. 5–22–62. Filed 11–6–61.

735,682. TROWBRIDGE. Hamilton Paper Company. SN 132,466. Pub 5–22–62. Filed 11–21–61.

735,683. SWANK. Swank, Inc. SN 132,595. Pub. 5–22–62. Filed 11–22–61.

735,684. ACCO. Natser Corporation, d.b.a. Acco Products. SN 134,485. Pub. 5–22–62. Filed 12–21–61.

735,685. EASY-FLO. Bonnar-Vawter, Incorporated. SN 136,437. Pub. 5–22–62. Filed 1–24–62.

735,686. KIMLARK. Kimberly-Clark Corporation. SN 136,665. Pub. 5–22–62. Filed 1–26–62.

735,687. SCHEHERAZADE. Ringmaster Inc. SN 137,799. Pub. 5–22–62. Filed 2–12–62.

735,688. BROOKSHIRE. Brown Company. SN 137,839. Pub. 5–22–62. Filed 2–13–62.

735,689. AL AND DESIGN. Modern Mold and Tool Corp. SN 138,039. Pub. 5–22–62. Filed 2–15–62.

735,690. FLEXITIP. Harry L. Morrill, Jr. SN 138,416. Pub. 5–22–62. Filed 2–21–62.

Class 38 — Prints and Publications

735,691. REPRESENTATION OF MALE HEAD AND HAND. Cavanaugh Morris Advertising, Inc., d.b.a. United Breweries of America. SN 109,242. Pub. 5–22–62. Filed 11–29–60.

735,692. INTERNATIONAL SCIENCE AND TECHNOLOGY. Conover-Mast Publications, Inc. SN 110,036. Pub. 5–22–62. Filed 12–12–60.

735,693. THE CHARIOTEER. Parnassos, Greek Cultural Society of New York, Inc. SN 121,586. Pub. 5–22–62. Filed 6–7–61.

735,694. PRACTICE A NEW KIND OF MEDICAL JOURNALISM. Paul Williamson, M.D. SN 123,946. Pub. 5–22–62. Filed 7–13–61.

735,695. HOUGHTON MIFFLIN COMPANY TESTS AND DESIGN. Houghton Mifflin Company. SN 125,986. Pub. 5–22–62. Filed 8–10–61.

735,696. REACH AND DESIGN. Neis Gordon, Inc. SN 126,649. Pub. 5–22–62. Filed 8–25–61.

Class 39 — Clothing

735,697. THE REGISTERED SHIRT. The Registered Shirt Laundry Association, Inc., by change of name from The Registered Shirt Corp. SN 67,827. Pub. 5–22–62. Filed 2–16–59.

735,698. BUBBLE BIB. Dominic J. Agostini, d.b.a. Regina Products. SN 102,290. Pub. 5–22–62. Filed 8–9–60.

735,699. KIDDIE KUFFS AND DESIGN. Robert Hosiery Mills, Inc. SN 104,116. Pub. 5–22–62. Filed 9–8–60.

735,700. CASTRO & CO. C. I. Castro & Co., Inc. SN 104,985. Pub. 5–22–62. Filed 9–22–60.

735,701. GERALD PAUL. Rhody Knit, Inc. SN 115,081. Pub. 5–22–62. Filed 3–7–61.

735,702. KAMPUS KISS AND DESIGN. Fine Spun Knitting Mills Inc. SN 115,322. Pub. 5–22–62. Filed 3–10–61.

735,703. HAGGAR AND DESIGN. Haggar Company. SN 115,605. Pub. 5–22–62. Filed 3–14–61.

735,704. JOSEPH. Joseph Salon Shoes, Inc. SN 116,035. Pub. 5–22–62. Filed 3–20–61.

735,705. DEL BENE. Lin-Mac Hat Co. Inc. SN 118,258. Pub. 5–22–62. Filed 4–20–61.

735,706. SLEEPY-TIME AND DESIGN. S. Goldberg & Co. Inc. SN 123,302. Pub. 5–22–62. Filed 7–3–61.

735,707. PIC 'N PAY. Pic 'N Pay Stores, Inc. SN 124,004. Pub. 5–22–62. Filed 7–14–61.

735,708. CARTIER. Joseph H. Cohen & Sons, Inc. SN 129,918. Pub. 5–22–62. Filed 10–16–61.

735,709. MR GRAND. The Grand Union Company. SN 129,936. Pub. 5–22–62. Filed 10–16–61.

Class 40 — Fancy Goods, Furnishings, and Notions

735,710. SALON SET. Scolding Locks Corporation. SN 112,322. Pub. 5–22–62. Filed 1–23–61.

735,711. "HY-TEX." Hyde Leather Co., Inc. SN 122,931. Pub. 5–22–62. Filed 6–27–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

735,712. BRAGELONNE. Racine, Société à Responsabilité Limitée. SN 124,842. Pub. 5–22–62. Filed 7–27–61.

735,713. SUDDENLY IT'S SPRING! Payne & Company, Inc. SN 132,064. Pub. 5–22–62. Filed 11–15–61.

735,714. STEVELON. J. P. Stevens & Co., Inc. SN 132,086. Pub. 5–22–62. Filed 11–15–61.

735,715. RUFFLE-TRIQUE. J. P. Stevens & Co., Inc. SN 132,089. Pub. 5–22–62. Filed 11–15–61.

735,716. NSC. J. P. Stevens & Co., Inc. SN 132,091. Pub. 5–22–62. Filed 11–15–61.

735,717. SASHAY. J. P. Stevens & Co., Inc. SN 132,093. Pub. 5–22–62. Filed 11–15–61.

735,718. PRO-PELL. Shulman Fabrics, Inc. SN 132,196. Pub. 5–22–62. Filed 11–16–61.

735,719. COVER-EASE. The Rubenstein Company. SN 132,586. Pub. 5–22–62. Filed 11–22–61.

Class 43 — Thread and Yarn

735,720. HELIODOR. Societe de la Viscose Suisse. SN 124,472. Pub. 5–22–62. Filed 7–21–61.

Class 44 — Dental, Medical, and Surgical Appliances

735,721. CALOR. "Calor" Appareils Electro-Domestiques, Societe Anonyme. SN 118,330. Pub. 5–22–62. Filed 4–21–61.

735,722. SELEKTRONIC. Hoffman Electrolysis Institute, Inc. SN 126,230. Pub. 5–22–62. Filed 8–18–61.

735,723. CUSTOM-EAR. S. K. Foster and Associates, Inc. SN 130,278. Pub. 5–15–62. Filed 10–19–61.

735,724. CELEBRITY. Maico Electronics, Inc. SN 130,565. Pub. 5–22–62. Filed 10–24–61.

735,725. SCOTT HI-LO PAK AND DESIGN. Scott Aviation Corporation. SN 131,403. Pub. 5–22–62. Filed 11–6–61.

735,726. SCOTT COM PAK AIR-PAK AND DESIGN. Scott Aviation Corporation. SN 131,404. Pub. 5–22–62. Filed 11–6–61.

735,727. COM PAK AND DESIGN. Scott Aviation Corporation. SN 131,405. Pub. 5–22–62. Filed 11–6–61.

735,728. SCOTT COM PAK AND DESIGN. Scott Aviation Corporation. SN 131,406. Pub. 5–22–62. Filed 11–6–61.

735,729. METALUX. Irving Fischer, d.b.a. Metalux Products. SN 131,482. Pub. 5–22–62. Filed 11–7–61.

735,730. SPEED-CLIP. Johnson & Johnson. SN 131,579. Pub. 5–22–62. Filed 11–8–61.

735,731. FIGURE CYCLE. Techni Electronics, Inc. SN 132,393. Pub. 5–22–62. Filed 11–20–61.

735,732. SENSITOL. London Rubber Company Limited. SN 132,416. Pub. 5–22–62. Filed 11–20–61.

735,733. PAN AND DESIGN. John I. Harris, d.b.a. National Latex Co. SN 132,674. Pub. 5–22–62. Filed 11–24–61.

Class 46 — Foods and Ingredients of Foods

735,734. PARTY PUFFS. Taste, Incorporated. SN 103,225. Pub. 5–22–62. Filed 8–22–60.

735,735. CRACKIT-PACKIT. Gold Medal Candy Corporation. SN 105,639. Pub. 5–22–62. Filed 10–3–60.

735,736. DEB. Armour and Company (Delaware corporation) assignee of Armour and Company (Illinois corporation), d.b.a. Armour Creameries. SN 105,943. Pub. 5–22–62. Filed 10–7–60.

735,737. SORRENTO SUBITO. Frigo Brothers Cheese Corporation. SN 111,794. Pub. 5–22–62. Filed 1–13–61.

735,738. BEECH-NUT AND DESIGN. Beech-Nut Life Savers, Inc., d.b.a. Beech-Nut. SN 112,941. Pub. 5–22–62. Filed 2–2–61.

735,739. ADAMS YOGI BREAD—IT PULLS APART AND DESIGN. Thomas J. Adams, d.b.a. Adams Bakeries. SN 116,282. Pub. 5–22–62. Filed 3–23–61.

735,740. HOLY SMOKE! Parmelee Party Line, Inc., d.b.a. Parmelee's Party-Line, assignee of David M. Parmelee. SN 116,339. Pub. 5–22–62. Filed 3–23–61.

735,741. HEAVENLY DAY! Parmelee Party Line, Inc., d.b.a. Parmelee's Party-Line, assignee of David M. Parmelee. SN 116,340. Pub. 5–22–62. Filed 3–23–61.

735,742. DESIGN OF A WOMAN'S HEAD. Anderson, Clayton & Co., d.b.a. Paymaster Farms and Paymaster Feed Mills. SN 116,695. Pub. 5–22–62. Filed 3–29–61.

735,743. ROGERS QUICK AND DESIGN. Rogers Brothers Company. SN 116,755. Pub. 5–22–62. Filed 3–29–61.

735,744. GOLDEN HEARTH. National Baking Company. SN 117,210. Pub. 5–22–62. Filed 4–5–61.

735,745. RON'S ETC. AND DESIGN. Specialty Food Co., Inc. SN 117,310. Pub. 5–22–62. Filed 4–6–61.

735,746. HI-R-BLEND. International Refining and Packaging Corp. SN 117,375. Pub. 5–22–62. Filed 4–7–61.

735,747. QUEENTEX. International Refining and Packaging Corp. SN 117,376. Pub. 5–22–62. Filed 4–7–61.

735,748. WESTERN HARVEST. Purity Stores, Inc. SN 118,101. Pub. 5–22–62. Filed 4–18–61.

735,749. TROPICANA. Tropicana Products, Inc. SN 121,772. Pub. 5–22–62. Filed 6–9–61.

735,750. FIESTA. Hygrade Food Products Corporation. SN 122,198. Pub. 5–22–62. Filed 6–16–61.

735,751. CLUB DES BILLIONNAIRES. Anton Friele, trustee in bankruptcy of A/S Bergen Preserving Co. SN 122,435. Pub. 5–22–62. Filed 6–20–61.

735,752. CLUB DES MILLIONNAIRES. Anton Friele, trustee in bankruptcy of A/S Bergen Preserving Co. SN 122,436. Pub. 5–22–62. Filed 6–20–61.

735,753. GOLDEN TASTE. The East Asiatic Company, Inc. SN 126,747. Pub. 5-22-62. Filed 8-28-61.

735,754. OVALCOLA. The Wander Company, d.b.a. Ovaltine Food Products. SN 126,824. Pub. 5-22-62. Filed 8-28-61.

735,755. GLAMOUR. The Great Atlantic & Pacific Tea Company, Inc. SN 127,922. Pub. 5-22-62. Filed 9-15-61.

735,756. HOLE 'N' ONE. Joe Lowe Corporation. SN 128,061. Pub. 5-22-62. Filed 9-18-61.

735,757. RARIN'. R. L. Siebert, Inc. SN 128,217. Pub. 5-22-62. Filed 9-19-61.

735,758. DELTATE. The Griffith Laboratories, Inc. SN 128,430. Pub. 5-22-62. Filed 9-22-61.

735,759. VEGE BASE. Vogue Cuisine, Inc. SN 128,492. Pub. 5-22-62. Filed 9-22-61.

735,760. DAITCH AND DESIGN. Daitch Crystal Dairies, Inc. SN 128,720. Pub. 5-22-62. Filed 9-27-61.

735,761. BENCH & FIELD. Martin's Feed Mills, Inc. SN 129,023. Pub. 5-22-62. Filed 10-2-61.

735,762. RED OX. The Griffith Laboratories, Inc., d.b.a. Griffith Laboratories. SN 130,210. Pub. 5-22-62. Filed 10-18-61.

735,763. STEPHEN WHITMAN. Stephen F. Whitman & Son, Inc. SN 130,854. Pub. 5-22-62. Filed 10-27-61.

735,764. OPEN SESAME AND DESIGN. Sani-Products of Texas, Inc., d.b.a. Sani-Products, Inc. SN 131,310. Pub. 5-22-62. Filed 11-3-61.

735,765. SOLU-RATED. Consolidated Foods Corporation. SN 131,346. Pub. 5-22-62. Filed 11-6-61.

735,766. SOUTHERN BELLE. J. Aron & Company, Inc., d.b.a. Supreme Sugar Refinery. SN 131,929. Pub. 5-22-62. Filed 11-14-61.

735,767. ECONOMY. J. Aron & Company, Inc., d.b.a. Supreme Sugar Refinery. SN 131,930. Pub. 5-22-62. Filed 11-14-61.

735,768. LITE DIET. Bakers Franchise Corporation. SN 132,118. Pub. 5-22-62. Filed 11-16-61.

735,769. BUTTERKIST. Dude Ranch Foods. SN 132,309. Pub. 5-22-62. Filed 11-20-61.

735,770. SESA-BURGER. Sesa-Kraft, Inc. SN 134,044. Pub. 5-22-62. Filed 12-14-61.

735,771. SESA-BREAD. Sesa-Kraft, Inc. SN 134,045. Pub. 5-22-62. Filed 12-14-61.

735,772. SESA-WHEAT. Sesa-Kraft, Inc. SN 134,046. Pub. 5-22-62. Filed 12-14-61.

735,773. SESA-FRANK. Sesa-Kraft, Inc. SN 134,047. Pub. 5-22-62. Filed 12-14-61.

735,774. SESA-RYE. Sesa-Kraft, Inc. SN 134,048. Pub. 5-22-62. Filed 12-14-61.

735,775. FIRST PRIZE. Blue Ribbon Growers, Inc. SN 134,936. Pub. 5-22-62. Filed 1-2-62.

735,776. DAPTIL. American Home Products Corporation, d.b.a. Wyeth Laboratories. SN 136,513. Pub. 5-22-62. Filed 1-26-62.

Class 47 — Wines

735,777. NORTH RIDGE. Franzia Brothers Winery, d.b.a. Old Chateau Wine Co. SN 131,363. Pub. 5-22-62. Filed 11-6-61.

Class 48 — Malt Beverages and Liquors

735,778. REPRESENTATION OF A DANCING COUPLE WITHIN A CIRCLE. Rolimpex Centrala Handlu Zagranicznego. SN 125,785. Pub. 5-22-62. Filed 8-9-61.

Class 49 — Distilled Alcoholic Liquors

735,779. LIXY. Martini & Rossi Corporation. SN 131,055. Pub. 5-22-62. Filed 10-31-61.

Class 50 — Merchandise Not Otherwise Classified

735,780. ROLAMAT. Sir W. G. Armstrong Whitworth Aircraft Limited. SN 124,245. Pub. 5-22-62. Filed 7-18-61.

735,781. SAFE T BATH. Orris Whitacre. SN 125,636. Pub. 5-22-62. Filed 8-8-61.

735,782. COMAT. Certified Dry Mat Corporation. SN 125,887. Pub. 5-22-62. Filed 8-14-61.

Class 51 — Cosmetics and Toilet Preparations

735,783. VANI-STAIN. Albert J. Kaplan, d.b.a. Alkap Laboratories. SN 110,859. Pub. 5-22-62. Filed 12-27-60.

735,784. NOTRE NUIT. John H. Breck, Inc. SN 113,798. Pub. 5-22-62. Filed 2-16-61.

735,785. BURBON. C. H. Boehringer Sohn. SN 114,300. Pub. 5-22-62. Filed 2-23-61.

735,786. TOTAL. The Mennen Company. SN 115,369. Pub. 5-22-62. Filed 3-10-61.

735,787. SHAVETTE. Julie Marie, Inc. SN 115,606. Pub. 5-22-62. Filed 3-14-61.

735,788. ROCOCO. Chemway Corporation. SN 119,104. Pub. 5-22-62. Filed 5-2-61.

735,789. POCA-DOT AND DESIGN. George J. Kopstain, d.b.a. Effankay Perfumers. SN 119,390. Pub. 5-22-62. Filed 5-5-61.

735,790. TENDER TOUCH. Helene Curtis Industries, Inc. SN 122,918. Pub. 5-22-62. Filed 6-27-61.

735,791. PYGMALION. Evirpure Processors Corp. SN 129,756. Pub. 5-22-62. Filed 10-12-61.

735,792. TAPESTRY. Mary Chess, Incorporated. SN 130,038. Pub. 5-22-62. Filed 10-17-61.

Class 52 — Detergents and Soaps

735,793. FELS NAPTHA. Fels and Company. SN 118,877. Pub. 5-22-62. Filed 4-28-61.

735,794. SPREAN. Enthone, Incorporated. SN 120,511. Pub. 5-22-62. Filed 5-22-61.

735,795. PUR-GEE. Radio Corporation of America, d.b.a. RCA Service Company. SN 122,371. Pub. 5-22-62. Filed 6-19-61.

735,796. FLUROCLENE. Stamford Chemical Industries Inc. SN 123,504. Pub. 5-22-62. Filed 7-6-61.

735,797. FAB AND DESIGN. Colgate-Palmolive Company. SN 126,149. Pub. 5-22-62. Filed 8-17-61.

735,798. LAMB-O-KIN. John T. Stanley Co. Inc. SN 127,884. Pub. 5-22-62. Filed 9-14-61.

735,799. TAPESTRY. Mary Chess, Incorporated. SN 130,039. Pub. 5-22-62. Filed 10-17-61.

735,800. NU SINK. Colgate-Palmolive Company. SN 130,179. Pub. 5-22-62. Filed 10-18-61.

735,801. CRAZY CLEAN. Sprayway, Inc. SN 130,836. Pub. 5-22-62. Filed 10-27-61.

735,802. JIFFY. Curley Company, Inc. SN 131,274. Pub. 5-22-62. Filed 11-3-61.

Service Marks

Class 100 — Miscellaneous

735,803. DYNEX. Applied Power Industries, Inc., assignee of Dynex, Inc. SN 112,139. Pub. 5-22-62. Filed 1-19-61.

735,804. REPRESENTATION OF WINGED ACORN. Arthur D. Little, Inc. SN 134,890. Pub. 5-22-62. Filed 12-29-61.

Class 101 — Advertising and Business

735,805. WELCOME WAGON INTERNATIONAL AND DESIGN. Welcome Wagon International, Inc. SN 109,367. Pub. 5-22-62. Filed 11-30-60.

735,806. KRATTER AND DESIGN. The Kratter Corporation. SN 112,052. Pub. 5-22-62. Filed 1-18-61.

Class 102 — Insurance and Financial

735,807. IDF. Bank of America National Trust and Savings Association. SN 121,794. Pub. 5-22-62. Filed 6-12-61.

735,808. HELP AND DESIGN. Republic National Bank of Dallas. SN 123,361. Pub. 5-22-62. Filed 7-3-61.

735,809. UCB AND DESIGN. United California Bank. SN 127,159. Pub. 5-22-62. Filed 9-1-61.

Class 106 — Material Treatment

735,810. BLEN-DE-LUXE. The Kenyon Piece Dyeworks, Inc. SN 109,072. Pub. 5-22-62. Filed 11-25-60.

735,811. SPE CORP. AND DESIGN. Southern Plastics Engineering Corp. SN 111,454. Pub. 5-22-62. Filed 1-6-61.

735,812. FSC AND DESIGN. Film Service Centers, Inc. SN 125,022. Pub. 5-22-62. Filed 7-31-61.

Class 107 — Education and Entertainment

735,813. SATELLITES. Rasberry Enterprises. SN 115,523. Pub. 5-22-62. Filed 3-13-61.

735,814. MAYOR ART'S ALMANAC. Arthur I. Finger, d.b.a. Art Finley. SN 125,023. Pub. 5-22-62. Filed 7-31-61.

Collective Membership Mark

Class 200

735,815. MONOGRAM OR LOGO DESIGN OF THE LOWER CASE LETTERS DAVI. National Education Association of the United States, d.b.a. Department of Audiovisual Instruction, NEA. SN 130,643. Pub. 5-22-62. Filed 10-25-61.

Certification Marks

Class A — Goods

735,816. UNION LABEL OF THE AMALGAMATED CLOTHING WORKERS OF AMERICA. Amalgamated Clothing Workers of America. SN 126,554. Pub. 5-22-62. Filed 8-24-61.

Class B — Services

735,817. PEET PHOTOFACT-EQUIPPED ELECTRONIC TECHNICIAN. Howard W. Sams & Co., Inc. SN 96,145. Pub. 5-22-62. Filed 4-29-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1 — Raw or Partly Prepared Materials

735,818. Milwhite Mud Sales Company, Houston, Tex. SN 74,440. Filed P.R. 5-25-59; Am. S.R. 6-13-62.

SALT WATER GEL

For Attapulgite Clay, a Suspending Agent in the Presence of High Salt Concentration.
First use on or about July 1, 1950.

Class 37 — Paper and Stationery

735,819. Marvin B. Davidson, d.b.a. Davidsons, North Plainfield, N.J. SN 131,940. Filed P.R. 11-14-61; Am. S.R. 6-12-62.

KAMP KARD

For Partially Printed Correspondence Cards for Campers.
First use June 4, 1961.

Class 45 — Soft Drinks and Carbonated Waters

735,820. A. Schapiro, Oakland, Calif. SN 132,381. Filed 11-20-61.

GRAPE MAID

For Grape-Flavored Beverage Base for Making Soft Drinks.
First use Nov. 25, 1953.

Class 51 — Cosmetics and Toilet Preparations

735,821. Nethercutt Laboratories (new partnership), Los Angeles, Calif., assignee of Nethercutt Laboratories, Los Angeles, Calif. SN 36,213. Filed P.R. 8-26-57; Am. S.R. 5-18-62.

IT'S PINK

For Nail Enamel.
First use on or about July 26, 1957.

TRADEMARK REGISTRATIONS RENEWED

21,318. HUDOR. Cl. 45. 6-21-1892.
151,319. CALCOT. Cl. 7. 1-31-22.
151,320. IMPERI AND DESIGN. Cl. 7. 1-31-22.
152,703. CARTIER. Cl. 8. 3-7-22.
152,711. CHEMCO AND DESIGN. Cl. 37. 3-7-22.
152,772. CHEMCO. Cl. 37. 3-7-22.
152,713. MYRIAD. Cl. 37. 3-7-22.
154,740. AUNTY MAY'S. Cl. 46. 4-18-22.
155,416. DR. PETER'S NOVORO. Cl. 18. 5-30-22.
155,620. KREMOLA. Cl. 51. 6-6-22.
155,717. DAY & NIGHT WEAR AND DESIGN. Cl. 39. 6-6-22.
155,752. EVEREST. Cl. 32. 6-6-22.
155,866. RECTIGON. Cl. 21. 6-6-22.
156,032. OLD MISSION PORTLAND CEMENT CO. AND DESIGN. Cl. 12. 6-13-22.

156,049. RUST IN A TRIANGLE. Cl. 12. 6–13–22.
156,235. FOOT-FITTER. Cl. 39. 6–20–22.
157,310. BISODOL. Cl. 18. 8–1–22.
157,369. NEO-SILVOL. Cl. 18. 8–1–22.
157,642. OPENKOTE. Cl. 4. 8–15–22.
157,706. LOTTMAN'S SOUTHERN QUEEN. Cl. 32. 8–15–22.
157,981. COLEMAN'S. Cl. 45. 8–22–22.
159,081. LUCKY. Cl. 28. 9–19–22.
159,082. THE HOUSE OF LUCKY WEDDING RINGS. Cl. 28. 9–19–22.
159,456. SILK FINISH. Cl. 46. 9–26–22.
159,463. NOONAN'S. Cl. 51. 9–26–22.
160,368. LETTER A ETC. WITHIN A CIRCLE. Cl. 35. 10–24–22.
160,399. PERFECTION. Cl. 35. 10–24–22.
160,454. MOTT'S. Cl. 45. 10–24–22.
161,052. TRET-O-LITE. Cl. 6. 11–7–22.
161,064. AGOCHOLAN. Cl. 18. 11–7–22.
161,781. WHITE TANG AND DESIGN. Cl. 23. 11–21–22.
161,954. SUPERIOR. Cl. 23. 11–28–22.
390,048. WANAKAH CLUB. Cl. 45. 9–2–41.
394,552. Q. B. OITICICA. Cl. 16. 4–14–42.
394,666. DOUBLE AND DESIGN. Cl. 45. 4–21–42.
394,932. DI-ACRO. Cl. 23. 5–5–42.
395,555. FLEXI-CAP. Cl. 50. 6–2–42.
395,653. W AND DESIGN. Cl. 34. 6–2–42.
396,079. SILENE. Cl. 6. 6–30–42.
396,400. DORICON. Cl. 6. 7–14–42.
396,477. FASHION GUILD AND DESIGN. Cl. 28. 7–21–42.
396,528. MILKPLUS. Cl. 46. 7–21–42.
396,691. TREMGARD. Cl. 6. 7–28–42.
396,779. AS. Cl. 28. 8–4–42.
397,049. ACE. Cl. 48. 8–18–42.
397,084. MALLOSIL. Cl. 23. 8–18–42.
397,112. MALLOTRON. Cl. 21. 8–18–42.
397,169. BOND-TITE. Cl. 13. 8–25–42.
397,529. VULKOL. Cl. 35. 9–8–42.
397,533. LILTS. Cl. 39. 9–8–42.
397,553. OSMALLOY. Cl. 37. 9–8–42.
397,673. CHRISTINE. Cl. 39. 9–15–42.
397,785. RECTOSTARTER. Cl. 21. 9–22–42.
398,062. MICRO-MASTER. Cl. 26. 10–6–42.
398,130. HAPPIE-EASTER. Cl. 37. 10–13–42.
398,235. STEP-MASTER. Cl. 39. 10–20–42.
398,237. A MINUTE TO PIN IT. Cl. 40. 10–20–42.
398,250. STATION WAGON. Cl. 39. 10–20–42.
398,380. SORBOCAST. Cl. 13. 10–27–42.
398,590. TIE-LON. Cl. 39. 11–10–42.
398,761. TROPHY. Cl. 39. 11–24–42.
398,821. BELSTER. Cl. 39. 11–24–42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

14,985. HINDS HONEY & ALMOND. Cl. 51. 11–29–1887.
54,660. HONEY & ALMOND. Cl. 51. 6–26–06.
101,388. HINDS. Cl. 51. 12–8–14.
200,147. HINDS HONEY & ALMOND. Cl. 51. 6–23–25.
200,833. PORTRAIT OF A LADY. Cl. 6. 7–14–25.
201,586. HINDS CREAM. Cl. 6. 8–4–25.
310,545. "HINDS" AND REPRESENTATION OF LABEL LINED FOR RED. Cl. 51. 2–27–34.

Section 8

605,265. SHELL-CRAFT. Cl. 22. 4–26–55.
607,054. MINNEHAHA. Cl. 39. 6–7–55.
609,306. LEXINGTON. Cl. 12. 7–19–55.
613,019. DESCO. Cl. 23. 9–27–55.
614,161. AQUA-ZYME BIO-CATALYTIC SOIL CONDITIONER AND DESIGN. Cl. 10. 10–18–55.
614,695. ESE-KAY BRAND CORDAGE AND DESIGN. Cl. 7. 10–25–55.
616,242. COACH & FOUR. Cl. 39. 11–15–55.

The following registrations issued June 19, 1956

628,860. KIRBY AND DESIGN. Cl. 1.
628,862. FARLITE. Cl. 1.
628,866. ROYAL GOLD. Cl. 1.
628,869. MAUSO-LAWN. Cl. 2.
628,876. WIPE-EASY. Cl. 4.
628,880. REPRESENTATION OF HEAD AND SHOULDERS OF A SCOTSMAN. Cl. 6.
628,881. THRIFTY SPRAY SHINE. Cl. 6.
628,884. FLY CHARMER SOLUTION AND DESIGN. Cl. 6.
628,897. METHANITE. Cl. 9.
628,898. CHEMCO AND DESIGN. Cl. 10.
628,902. OLKABIMOLIO AND DESIGN. Cl. 10.
628,904. BOURGES SOLOTONE. Cl. 11.
628,911. CHANNEL-LAP. Cl. 12.
628,916. SQUARE AND DESIGN. Cl. 12.
628,918. GLAZ-KALK. Cl. 12.
628,919. KWIK ANKR AND DESIGN. Cl. 13.
628,924. KUT-BAR. Cl. 13.
628,925. EVERLEVEL. Cl. 13.
628,926. WOBBLE STOPPER. Cl. 13.
628,934. SELECT-A-TINT. Cl. 16.
628,935. LIQUI-GLAS AND DESIGN. Cl. 16.
628,939. KRIL-TEX. Cl. 16.
628,941. LACOA. Cl. 16.
628,946. LANDA. Cl. 18.
628,948. REM. Cl. 18.
628,949. ACTOID. Cl. 18.
628,952. STELADONE. Cl. 18.
628,957. SINTHROM. Cl. 18.
628,963. ROMPER. Cl. 18.
628,970. PLOVAC. Cl. 18.
628,977. TRIONINE. Cl. 18.
628,989. RHINO AND DESIGN. Cl. 19.
628,998. VP. Cl. 21.
629,001. COLLAMATIC AND DESIGN. Cl. 21.
629,002. BUOY. Cl. 21.
629,010. CAT-O-RAY. Cl. 21.
629,011. CAT-O-RAY. Cl. 21.
629,017. DEEP BLUE. Cl. 22.
629,019. GARYLEE. Cl. 22.
629,020. A LA BOARD RUMMY. Cl. 22.
629,025. MOTOR-PAL. Cl. 23.
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629,299. NEW ENGLAND (ORIGINAL) "HAYLOFT JAMBOREE." Cl. 107.
629,300. RADIO SCRAMBO. Cl. 107.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

143,554. B & D AND DESIGN. Cl. 23. 6–7–21. The Black & Decker Manufacturing Co. The Black and Decker Manufacturing Company, Towson, Md. Amended: In the statement, column 2, lines 3 through 5, "air-pumps and air-compressors, portable augers and post-grinders," is deleted, and the drawing is amended to appear:



159,479. OLYMPIC AND DESIGN. Cl. 46. 9–26–22. The Portland Flouring Mills Co. General Mills, Inc., Minneapolis, Minn. Amended: In the statement, column 1, line 16 through column 2, line 2, "buttermilk" is deleted.

165,861. MOTT'S. Cl. 46. 3–20–23. Duffy-Mott Company, Inc., New York, N.Y. Amended: In the statement, column 2, line 6, "Mott" is deleted and *Mott's* is inserted, and the drawing is amended to appear:

MOTT'S

593,675. GOLD MEDAL. Cl. 46. 8–10–54. General Mills, Inc., Minneapolis, Minn. Amended: In the statement, column 2, lines 1 and 2, the description of goods is deleted and *mill feeds* is inserted.

629,575. MARINA DEL MAR AND DESIGN. Cl. 39. 6–26–56. Western Miss, Los Angeles, Calif. Corrected: In the statement, column 1, line 1, ", Inc." should be deleted.

639,526. FRONTIER. Cl. 6. 1–8–57. Union Chemical & Materials Corporation, doing business as Frontier Chemical Company, Division of Union Chemical & Materials Corporation. Frontier Chemical Company, Division of Vulcan Materials Company, Wichita, Kans. Amended to appear:

FRONTIER

642,390. TRIM. Cl. 45. 3–5–57. Rock Creek Ginger Ale Co., Inc., Washington, D.C. Corrected: In the statement, column 1, line 1 and in the heading of the certificate of correction of April 23, 1957, after "Co." , *Inc.* should be inserted.

645,830. SPERRY. Cl. 46. 5–21–57. General Mills, Inc., Minneapolis, Minn. Amended: In the statement, column 2, lines 4 and 5, "and cereal grains for animal feed purposes" is deleted.

647,196. SIOUX BEE AND DESIGN. Cl. 46. 6–18–57. Sioux Honey Association, Cooperative, Sioux City, Iowa. Amended to appear:



670,704. GENERAL MILLS AND DESIGN. Cl. 46. 12–2–58. General Mills, Inc., Minneapolis, Minn. Amended: In the statement, column 2, lines 5 and 6, "and feeds for livestock and poultry" is deleted.

719,738. LICKITY-SPLIT. Cl. 46. 8–8–61. Marlan Company, Chicago, Ill. Amended to appear:

LICKITY-SPLIT

732,577. BOYS' CLUBS OF AMERICA ETC. AND DESIGN. Cl. 200. 6–5–62. Boys' Clubs of America, New York, N.Y. Corrected: In the certificate, column 2, line 2, after "applicant" , *said organization being formed to organize and encourage clubs of boys throughout the United States in order to promote health, social, educational, vocational and character development* should be inserted.

732,578. BOYS' CLUBS OF AMERICA ETC. AND DESIGN Cl. 200. 6–5–62. Boys' Clubs of America, New York, N.Y. Corrected: In the statement, column 2, line 2, after "applicant" , *said organization being formed to organize and encourage clubs of boys throughout the United States in order to promote health, social, educational, vocational and character development* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 1 — Raw or Partly Prepared Materials

175,472. Nov. 6, 1923. Anderson, Clayton & Co., Houston, Tex. Pub. by registrant.

ACCO

For Raw Cotton.

Class 2 — Receptacles

158,643. Sept. 12, 1922. The Container Company, Toledo, Ohio. Pub. by Continental Can Company, Inc., New York, N.Y.

STAPAK

For Fiber Pails, Drums, and Cheese Boxes and Containers for Shipping Commodities.

Class 6 — Chemicals and Chemical Compositions

419,787. Mar. 5, 1946. Uregas Service, Inc., Moberly, Mo. Pub. by registrant.

Uregas
(YOUR GAS)

For Bottled Gas Used for Fuel and Illuminating Purposes.

Class 14 — Metals and Metal Castings and Forgings

394,557. Apr. 14, 1942. Firth-Sterling Steel Company, McKeesport, Pa. Pub. by Firth Sterling, Inc., Pittsburgh, Pa.

★ STAR-MO

For High Speed Steel.

Class 22 — Games, Toys, and Sporting Goods

157,597. Aug. 8, 1922. Orley Clayton Tuttle, Old Forge, N.Y. Pub. by Edith Tuttle Morcy, d.b.a. O. C. Tuttle Devil Bug Company, Old Forge, N.Y.

DEVIL
BUGS

For Artificial Bait.

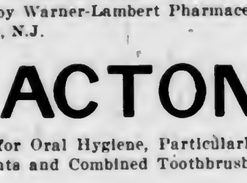
Class 26 — Measuring and Scientific Appliances

26,342. Apr. 2, 1895. Buffalo Meter Company, Buffalo, N.Y. Pub. by Buffalo Meter Company, Inc., Buffalo, N.Y.

NIAGARA

For Meters for Measuring Water, Gas, or Other Fluids.

206,252. Nov. 24, 1925. Buffalo Meter Company, Buffalo, N.Y. Pub. by Buffalo Meter Company, Inc., Buffalo, N.Y.



For Quantity Meters for Measuring Water, Oil, Gasoline, and Other Liquids.

Class 28 — Jewelry and Precious-Metal Ware

395,460. May 26, 1942. Dieges & Clust, New York, N.Y. Pub. by registrant.



For Medals and Badges, Rings; Service, Club, School and Fraternity Pins; Fraternity Keys, Charms and Jewelry, and Prize and Loving Cups, All Made of or Plated With Precious-Metal.

Class 29 — Brooms, Brushes, and Dusters

367,740. May 30, 1939. Lactona, Incorporated, St. Paul, Minn. Pub. by Warner-Lambert Pharmaceutical Company, Morris Plains, N.J.

Tooth-Tip

For Devices for Oral Hygiene, Particularly Toothbrushes, Massage Elements for Oral Hygiene, and Combined Toothbrushes and Massage Elements.

368,316. June 13, 1939. Lactona, Incorporated, St. Paul, Minn. Pub. by Warner-Lambert Pharmaceutical Company, Morris Plains, N.J.

LACTONA

For Devices for Oral Hygiene, Particularly Toothbrushes, Massage Elements and Combined Toothbrushes and Massage Elements.

383,888. Dec. 24, 1940. Lactona, Incorporated, St. Paul, Minn. Pub. by Warner-Lambert Pharmaceutical Company, Morris Plains, N.J.

INSTRUCTOR

For Devices for Oral Hygiene, Particularly Toothbrushes, Massage Elements and Combined Toothbrushes and Massage Elements.

Class 32 — Furniture and Upholstery

337,968. Aug. 25, 1936. Arrow Upholstery Co., Inc., New York, N.Y. Pub. by Salvatore F. Apicella, d.b.a. The Arrow Upholstery Company, New York, N.Y.



For Furniture and Upholstery—Namely, Sofas, Pillows, Tailored Chair, Lounge and Sofa Covers, Beds, Divans, Couches, Settees, Lounges, Tables and Chairs for Household Use, Cabinets, Cupboards, and Desks.

Class 34 — Heating, Lighting, and Ventilating Apparatus

368,847. July 4, 1939. Cherry-Burrell Corporation, Cedar Rapids, Iowa. Pub. by registrant.

Superplate

For Liquid Heat Exchangers of the Type Comprising a Plurality of Heat Transfer Elements Movably Mounted in Juxtaposed Relation in a Supporting Frame.

Class 36 — Musical Instruments and Supplies

158,295. Aug. 29, 1922. Jacob Schwartz, New York, N.Y. Pub. by Micro Musical Products Corp., New York, N.Y.

MICRO

For Clarinet Reeds and Pads.

402,166. July 6, 1943. Whittle Music Company, Dallas, Tex. Pub. by registrant.

ZENITH

For Band and Orchestra Instruments—Namely, Saxophones, Clarinets, Trumpets, Cornets, French Horns, Trombones, Sousaphones, Baritone Horns, and Alto Horns.

402,684. Aug. 10, 1943. Whittle Music Company, Dallas, Tex. Pub. by registrant.

"BULL-DOG"

For Drum Heads.

Class 38 — Prints and Publications

243,081. June 12, 1928. Motor Registration News of California, Oakland, Calif. Pub. by registrant.

MOTOR
Registration
NEWS

For Periodical.

395,312. May 19, 1942. Shaw-Barton, Inc., Coshocton, Ohio. Pub. by registrant.

HOME-MAKER'S

For Wall Calendars.

395,313. May 19, 1942. Shaw-Barton, Inc., Coshocton, Ohio. Pub. by registrant.

ROD AND GUN

For Wall Calendars.

Class 39 — Clothing

149,256. Dec. 6, 1921. Tailored Silk Undergarment Co., New York, N.Y. Pub. by Trillium Lingerie, Inc., New York, N.Y.

TRILLIUM
SILK UNDERTHINGS

For Underwear—Namely, Chemises, Bloomers, Camisoles, Petticoats, Vests, Nightgowns, Pajamas, Shirts and Drawers.

346,290. May 18, 1937. I. Miller & Sons, Inc., Long Island City, N.Y. Pub. by Genesco, Inc., Nashville, Tenn.

Mademoiselle

For Ladies' Shoes Made of Leather, Fabric, and Combinations of These Materials.

418,722. Jan. 8, 1946. Edison Brothers Stores, Inc., St. Louis, Mo. Pub. by registrant.

Captivators

For Ladies' Shoes Made of Leather, Rubber, Fabrics, Plastic, and Combinations Thereof.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

154,015. Apr. 4, 1922. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

VENTUBE

For Air-Tight Fabrics, Water-Tight Fabrics, Acid-Resistant Fabrics, and Heat-Resistant Fabrics.

Class 43—Thread and Yarn

159,848. Oct. 10, 1922. The Clark Thread Company, Newark, N.J. Pub. by Coats & Clark Inc., New York, N.Y.

CHADWICK'S

For Thread and Yarn.

391,971. Dec. 2, 1941. National Rayon Dyeing Company, Inc., Newark, N.J. Pub. by registrant.

Colorplus

For Crochet Yarn.

396,182. June 30, 1942. Courtaulds, Limited, Coventry, England. Pub. by registrant.

COURTELLE

For Yarns Composed of Man-Made Filaments or Man-Made Fibers.

Class 44—Dental, Medical, and Surgical Appliances

438,661. May 11, 1948. Consolidated Engineering Corporation, Pasadena, Calif. Pub. by Unitek Corporation, Monrovia, Calif.

UNITEK

For Orthodontic Appliances—Namely, Pliers, Braces, Lugs, Wires, Chin Caps, Pins, and Brackets.

Class 45—Soft Drinks and Carbonated Waters

395,298. May 19, 1942. Cock'n Bull Products, Los Angeles, Calif. Pub. by registrant.

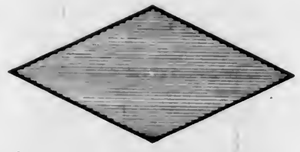
Cock'n Bull



For Ginger Beer.

Class 46—Foods and Ingredients of Foods

159,300. Sept. 26, 1922. California Almond Growers Exchange, Sacramento, Calif. Pub. by registrant.



For Almond Meats and Certain Named Almond Food Products.

159,301. Sept. 26, 1922. California Almond Growers Exchange, Sacramento, Calif. Pub. by registrant.

BLUE DIAMOND

For Almonds and Almond Meats and Certain Named Almond Food Products.

253,610. Mar. 5, 1929. J. A. Medina Company, New York, N.Y. Pub. by Anderson, Clayton & Co., Houston, Tex.

L C

For Green Coffee.

397,797. Sept. 22, 1942. La Choy Food Products, Inc., Archbold, Ohio. Pub. by Beatrice Foods Co., Chicago, Ill.

La Choy
FLAVOR SECRET

For Food Seasoning Preparation in Powdered Form Composed of Wheat, Sugar Beets, Soy Beans With Salt Added.

397,904. Sept. 29, 1942. La Choy Food Products, Inc., Archbold, Ohio. Pub. by Beatrice Foods Co., Chicago, Ill.

La Choy

For Bean Sprouts, Mixed Vegetables, Chow Mein Noodles, Water Chestnuts, Bamboo Shoots, Soy Sauce, All of Which Are Packed in Tins and/or in Glass, Brown Sauce, Soy Beans, Seasoning Powder Composed of Wheat, Sugar Beets, Soy Beans, With Salt Added, and Flavoring Compound Composed of Soy Beans, Wheat, Oats, Corn, With Spices Added, Chop Suey or Chow Mein Both With and Without Meat; and Chinese Dinner Composed of Chop Suey or Chow Mein, With or Without Meat, and Chow Mein Noodles and Soy Sauce.

Class 51—Cosmetics and Toilet Preparations

394,964. May 5, 1942. Helena Rubinstein, Inc., New York, N.Y. Pub. by registrant.

CONCEAL

For Face Creams.

396,179. June 30, 1942. Peggy Sage, Inc., New York, N.Y. Pub. by registrant.

CONFECTION

For Liquid Nail Polishes.

397,966. Sept. 29, 1942. Northam Warren Corporation, Stamford, Conn. Pub. by Chesebrough-Pond's Inc., New York, N.Y.

YOUNG RED

For Nail Polish.

Class 52—Detergents and Soaps

147,762. Nov. 1, 1921. The Chemical Utilities Company, Cincinnati, Ohio. Pub. by Peck's Products Company, St. Louis, Mo.

GREASE-OFF
"IT CLEANS EVERYTHING"
Keep in a dry place!

For Cleanser.

INDEX OF REGISTRANTS

AUGUST 7, 1962

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AMP Inc., Harrisburg, Pa. 735,622, pub. 5–22–62. Cl. 23.
Acco Products : *See*—
Natser Corp.
Adams Bakeries : *See*—
Adams, Thomas J.
Adams, Thomas J., d.b.a. Adams Bakeries, Jackson, Ohio. 735,739, pub. 5–22–62. Cl. 46.
Adco Sign Co., Portland, Oreg. 735,595, pub. 5–22–62. Cl. 21.
Agostini, Dominic J., d.b.a. Regina Products, Pawtucket, R.I. 735,698, pub. 5–22–62. Cl 39.
Alkap Laboratories : *See*—
Kaplan, Albert J.
Allen-Edmonds Shoe Corp. : *See*—
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Allen, Frank, New York, N.Y. 629,214, canc. Cl. 44.
Allstate Paper Products, Inc., Woodhaven, N.Y. 735,522, pub. 5–22–62. Cl. 2.
Alpma Alpenland-Maschinenbaugesellschaft Hain & Co. K.G., Lehen over Wasserburg am Inn, Upper Bavaria, Germany. 735,611, pub. 5–22–62. Cl. 23.
Amalgamated Clothing Workers of America, New York, N.Y. 735,816, pub. 5–22–62. Cl. A.
American Biltrite Rubber Co., Inc. : *See*—
Boston Woven Hose & Rubber Co.
American Home Products Corp. : *See*—
Bisodol Co., Inc.
American Home Products Corp., d.b.a. Boyle-Midway, New York, N.Y. 735,530, pub. 5–22–62. Cl. 6.
American Home Products Corp., d.b.a. Wyeth Laboratories, New York, N.Y. 735,776, pub. 5–22–62. Cl. 46.
American-Marietta Co. : *See*—
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American Seating Co., Grand Rapids, Mich. 735,661, pub. 5–22–62. Cl. 32.
American Systems Inc., Hawthorne, Calif. 735,651, pub. 5–22–62. Cl. 26.
American Thread Co., The, New York, N.Y. 629,211, canc. Cl. 43.
American-Wheaton Glass Corp., Millville, N.J. 735,664, pub. 5–22–62. Cl. 33.
Ampex Corp., Redwood City, Calif. 735,585, pub. 5–22–62. Cl. 21.
Anchor Packing Co., The, Philadelphia, Pa. 160,368, ren. 8–7–62. Cl. 35.
Anderson, Clayton & Co. : *See*—
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Anderson, Clayton & Co., Houston, Tex. 175,472, 12(c) pub. 8–7–62. Cl. 1.
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Anzarut & Co., New York, N.Y. 629,187, canc. Cl. 42.
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Applied Power Industries, Inc., West Allis, Wis., from Dynex, Inc., Pewaukee, Wis. 735,610, pub. 5–22–62. Cl. 23.
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Aron, J., & Co., Inc., New Orleans, La. 735,767, pub. 5–22–62. Cl. 46.
Aron, J., & Co., Inc., d.b.a. Supreme Sugar Refinery, New Orleans, La. 735,766, pub. 5–22–62. Cl. 46.
Arrow Upholstery Co., Inc., by Salvatore F. Apicella, d.b.a. The Arrow Upholstery Co., New York, N.Y. 337,968, 12(c) pub. 8–7–62. Cl. 32.
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Bakers Franchise Corp., New York, N.Y. 735,768, pub. 5–22–62. Cl. 46.
Bank of America National Trust and Savings Association, San Francisco, Calif. 735,807, pub. 5–22–62. Cl. 102.
Barcolene Co., The, Boston, Mass. 735,524, pub. 5–22–62. Cl. 6.
Barnickel, William S., & Co., to Petrolite Corp., St. Louis, Mo. 161,052, ren. 8–7–62. Cl. 6.
Barton Mfg. Co., St. Louis, Mo. 735,555, pub. 5–22–62. Cl. 15.
Bauer & Schaurte, Neuss (Rhine), Germany. 735,637, pub. 5–22–62. Cl. 26.
Beatrice Foods Co. : *See*—
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Bee Chemical Co., Lansing, Ill. 735,556, pub. 5–22–62. Cl. 16.
Beech-Nut : *See*—
Beech-Nut Life Savers, Inc.
Beech-Nut Life Savers, Inc., d.b.a. Beech-Nut, Canajoharie, N.Y. 735,738, pub. 5–22–62. Cl. 46.
Beecham Research Laboratories Ltd., Brentford, England. 735,561, pub. 5–22–62. Cl. 18.
Behr, Herman & Co., Inc., Brooklyn, N.Y., to Norton Co., Troy, N.Y. 157,642, ren. 8–7–62. Cl. 4.
Belco Industries, Inc., St. Louis, Mo. 629,081, canc. Cl. 34.
Bell Punch Co. Ltd., London, England. 629,056, canc. Cl. 26.
Belmont Garment Co., Cambridge, Mass. 398,821, ren. 8–7–62. Cl. 39.
Berger Jewelry Mfg. Co., to Berger Jewelry Mfg. Co., St. Louis, Mo. 396,477, ren. 8–7–62. Cl. 28.
Berkeley-Davis, Inc., Danville, Ill. 735,594, pub. 5–22–62. Cl. 21.
Berry, Dr. C. H., Chemical Co., Chicago, Ill., to Roberts Drug Co., Brooklyn, N.Y. 155,620, ren. 8–7–62. Cl. 51.
Bigelow-Sanford Carpet Co., Inc., Thompsonville, Conn., to Collins & Aikman Corp., New York, N.Y. 629,185, canc. Cl. 42.
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Bingham, George C., d.b.a. Automated Plastic Products Co., Roosevelt, N.Y. 735,657, pub. 5–22–62. Cl. 28.
Bisodol Co., Inc., to American Home Products Corp., New York, N.Y. 157,310, ren. 8–7–62. Cl. 18.
Black & Decker Mfg. Co., The The Black and Decker Mfg. Co., Towson, Md. 143,554. Am. 7(d). Cl. 23.
Blackstone Corp., Jamestown, N.Y. 735,553, pub. 5–22–62. Cl. 14.
Bloom-Ease, Inc., Minneapolis, Minn. 607,054, canc. Cl. 39.
Blue Ribbon Growers, Inc., Yakima, Wash. 735,775, pub. 5–22–62. Cl. 46.
Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 735,785, pub. 5–22–62. Cl. 51.
Bolkon-Entwicklungen Kommanditgesellschaft, near Munich, Germany. 735,636, pub. 5–22–62. Cl. 26.
Bolkow-Entwicklungen Kommanditgesellschaft, near Munich, Germany. 735,538, pub. 5–22–62. Cl. 9.
Bolt, Beranek & Newman, Inc., Cambridge, Mass. 735,577. Pub. 1–23–62, Cl. 21, Cl. 26. (Consolidated certificate, Classes 21 and 26.)
Bonnar-Vawter, Inc., Keene, N.H. 735,685, pub. 5–22–62. Cl. 37.
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Boyle-Midway : *See*—
American Home Products Corp.
Boys' Clubs of America, New York, N.Y. 732,577–8, cor. Cl. 200.
Bradfute Corp., New York, N.Y. 735,599, pub. 5–22–62. Cl. 22.
Bradley, Milton, Co., Springfield, Mass. 735,605, pub. 5–22–62. Cl. 22.
Brangolmore Chemical Co. : *See*—
Klein, Rafael.
Breck, John H., Inc., Springfield, Mass. 735,784, pub. 5–22–62. Cl. 51.
British Glues & Chemicals Ltd., Welwyn Garden City, England, to B. Young & Co. of America, Ltd., New York, N.Y. 629,239, canc. Cl. 46.
Brown Co., Berlin, N.H. 735,688, pub. 5–22–62. Cl. 37.
Brundell, Per G., Gavle, Sweden. 735,618, pub. 5–22–62. Cl. 23.
Buckeye Stamping Co., The, Columbus, Ohio. 629,002, canc. Cl. 21.
Buffalo Meter Co., by Buffalo Meter Co., Inc., Buffalo, N.Y. 206,252, 12(c) pub. 8–7–62. Cl. 26.
Buffalo Meter Co., by Buffalo Meter Co., Inc., Buffalo, N.Y. 26,342, 12(c) pub. 8–7–62. Cl. 26.
Buffalo Meter Co., Inc. : *See*—
Buffalo Meter Co.
Calavo Growers of California : *See*—
Calavo, Inc.
Calavo, Inc., to Calavo Growers of California, Los Angeles, Calif. 629,255, canc. Cl. 46.
Cal-Crown Corp., Gardena, Calif. 735,623, pub. 5–22–62. Cl. 23.
California Almond Growers Exchange, Sacramento, Calif. 159,300–1, 12(c) pub. 8–7–62. Cl. 46.
California Cotton Mills Co., to California Cotton Mills Co., Oakland, Calif. 151,319–20, ren. 8–7–62. Cl. 7.
"Calor" Appareils Electro-Domestiques, Societe Anonyme, Lyon, France. 735,583, pub. 5–22–62. Cl. 21.
"Calor" Appareils Electro-Domestiques, Societe Anonyme, Lyon, France. 735,613, pub. 5–22–62. Cl. 23.
"Calor" Appareils Electro-Domestiques, Societe Anonyme, Lyon, France. 735,721, pub. 5–22–62. Cl. 44.
Canadian Ace Brewing Co. : *See*—
Manhattan Brewing Co.
Cartier, Inc., New York, N.Y. 152,703, ren. 8–7–62. Cl. 8.
Case Laboratories, Inc., Chicago, Ill. 735,652, pub. 5–22–62. Cl. 26.

Castro, C. I., & Co., Inc., New York, N.Y. 735,700, pub. 5–22–62. Cl. 39.
Cavanaugh Morris Advertising, Inc., d.b.a. United Breweries of America, Pittsburgh, Pa. 735,691, pub. 5–22–62. Cl. 38.
Celotex Corp., The, Chicago, Ill. 628,911, canc. Cl. 12.
Central Circle Airport Corp.: *See*—
Nelson, R. S.
Central Compounding Co., Chicago, Ill. 735,541, pub. 5–22–62. Cl. 11.
Certified Dry Mat Corp., New York, N.Y. 735,782, pub. 5–22–62. Cl. 50.
Champion Togs, Inc., New York, N.Y. 629,218, canc. Cl. 44.
Chase and Sons, Inc., North Quincy, Mass. 735,542, pub. 5–22–62. Cl. 12.
Chemagro Corp., New York, N.Y. 735,523, pub. 5–22–62. Cl. 6.
Chemco, Audubon, Iowa. 628,898, canc. Cl. 10.
Chemical Paper Mfg. Co., Holyoke, Mass., to Standard Packaging Corp., New York, N.Y. 152,711–13, ren. 8–7–62. Cl. 37.
Chemical Utilities Co., The, Cincinnati, Ohio, by Peck's Products Co., St. Louis, Mo. 147,762, 12(c) pub. 8–7–62. Cl. 32.
Chemstrand Corp., The: *See*—
Monsanto Chemical Co.
Chemway Corp., Wayne, N.J. 735,788, pub. 5–22–62. Cl. 51.
Cherry-Burrell Corp., Cedar Rapids, Iowa. 368,847, 12(c) pub. 8–7–62. Cl. 34.
Chesebrough-Pond's Inc.: *See*—
Warren, Northam, Corp.
Chess, Mary, Inc., New York, N.Y. 735,792, pub. 5–22–62. Cl. 51.
Chess, Mary, Inc., New York, N.Y. 735,799, pub. 5–22–62. Cl. 52.
Chocolate Products Co., Chicago, Ill. 396,528, ren. 8–7–62. Cl. 46.
Ciba Ltd., Basel, Switzerland. 628,952, canc. Cl. 18.
Circle Publishing Co., The, Philadelphia, Pa. 629,117, canc. Cl. 38.
Clark Thread Co., The, Newark, N.J., by Coats & Clark Inc., New York, N.Y. 159,848, 12(c) pub. 8–7–62. Cl. 43.
Clicker, Inc., Brockton, Mass. 735,604, pub. 5–22–62. Cl. 22.
Coats & Clark Inc.: *See*—
Clark Thread Co., The.
Cock 'N Bull Products, by Cock 'N Bull Products, Los Angeles, Calif. 395,298, 12(c) pub. 8–7–62. Cl. 45.
Cohen, Joseph H., & Sons, Inc., New York, N.Y. 735,708, pub. 5–22–62. Cl. 39.
Colgate-Palmolive Co., New York, N.Y. 735,797, pub. 5–22–62. Cl. 52.
Colgate-Palmolive Co., New York, N.Y. 735,800, pub. 5–22–62. Cl. 52.
Colonial-Premier Co., Chicago, Ill. 735,662, pub. 5–22–62. Cl. 32.
Collamatic, Wayne, N.J. 629,001, canc. Cl. 21.
Collins & Aikman Corp.: *See*—
Bigelow-Sanford Carpet Co., Inc.
Conax Corp., Buffalo, N.Y. 735,649, pub. 5–22–62. Cl. 26.
Conover-Mast Publications, Inc., New York, N.Y. 735,692, pub. 5–22–62. Cl. 38.
Consolidated Engineering Corp., Pasedena, Calif., by Unitek Corp., Monrovia, Calif. 438,661, 12(c) pub. 8–7–62. Cl. 44.
Consolidated Foods Corp., Glendale, Calif. 735,765, pub. 5–22–62. Cl. 46.
Container Co., The, Toledo, Ohio, by Continental Can Co., Inc., New York, N.Y. 158,643, 12(c) pub. 8–7–62. Cl. 2.
Continental Can Co., Inc.: *See*—
Container Co., The.
Continental Elastic Corp., New Bedford, Mass. 629,017, canc. Cl. 22.
Continental Ventures, Inc., Detroit, Mich. 628,880–1, canc. Cl. 6.
Coon, W. B., Co., Rochester, N.Y. 629,138, canc. Cl. 39.
Copar, Chicago, Ill. 735,597, pub. 5–22–62. Cl. 22.
Courtaulds, Ltd., Coventry, England. 396,182, 12(c) pub. 8–7–62. Cl. 43.
Cover, A., & Co. Ltd., Manchester, England. 629,195, canc. Cl. 42.
Crystal City Canneries, Inc., Crystal City, Tex. 629,254, canc. Cl. 46.
Curley Co., Inc., Camden, N.J. 735,802, pub. 5–22–62. Cl. 52.
Curtis, Helene, Industries, Inc., Chicago, Ill. 735,790, pub. 5–22–62. Cl. 51.
Daitch Crystal Dairies, Inc., New York, N.Y. 735,760, pub. 5–22–62. Cl. 46.
Davey, Kingsley, d.b.a. Desco Engineering Co., Clayton, Mo. 613,019, canc. Cl. 23.
Davidson, Marvin B., d.b.a. Davidsons, North Plainfield, N.J. 735,819. Cl. 37.
Davidsons: *See*—
Davidson, Marvin B.
Dayton, F. E.: *See*—
Dayton Foundry, Inc.
Dayton Foundry, Inc., Hollydale, Calif., to F. E. Dayton, South Gate, Calif. 398,380, ren. 8–7–62. Cl. 13.
Department of Audiovisual Instruction, NEA: *See*—
National Education Association of the United States.
Derfler, Max, d.b.a. Nutrition Control Products, New York, N.Y. 735,562, pub. 5–22–62. Cl. 18.
Desco Engineering Co.: *See*—
Davey, Kingsley.
Di-Acro Corp.: *See*—
O'Neil, Albert T.
Di Betta, A. J., d.b.a. A. J. Ranch, Moreno, Calif. 628,866, canc. Cl. 1.
Dictaphone Corp., Bridgeport, Conn. 735,678, pub. 5–22–62. Cl. 37.
Dieges & Clust, New York, N.Y. 395,460, 12(c) pub. 8–7–62. Cl. 28.
Dome Chemicals, Inc., New York, N.Y. 735,572, pub. 5–22–62. Cl. 18.
Double Duty Products, Inc., to Products Packaging, Inc., Cleveland, Ohio. 395,555, ren. 8–7–62. Cl. 50.
Dow Chemical Co., The, Midland, Mich. 735,528, pub. 1–2–62. Cl. 6.
Drummond Scientific Co., Philadelphia, Pa. 735,635, pub. 5–22–62. Cl. 26.
Dude Ranch Foods, Los Angeles, Calif. 735,769, pub. 5–22–62. Cl. 46.
Duffy-Mott Co., Inc., New York, N.Y. 160,454, ren. 8–7–62. Cl. 45.
Duffy-Mott Co., Inc., New York, N.Y. 165,861. Am. 7(d). Cl. 46.
Duncan Electronics, Inc., Costa Mesa, Calif. 735,639, pub. 5–15–62. Cl. 26.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 154,015, 12(c) pub. 8–7–62. Cl. 42.
Duro-Test Corp., North Bergen, N.J. 735,592, pub. 5–22–62. Cl. 21.
Dynex, Inc.: *See*—
Applied Power Industries, Inc.
East Asiatic Co., Inc., The, Los Angeles, Calif. 735,753, pub. 5–22–62. Cl. 46.
Eastern Shell-Craft Co., Palisades Park, N.J. 605,265, canc. Cl. 22.
Edison Brothers Stores Inc., St. Louis, Mo. 418,722, 12(c) pub. 8–7–62. Cl. 39.
Edmonds Shoe Co., Milwaukee, to Allen-Edmonds Shoe Corp., Belgium, Wis. 156,235, ren. 8–7–62. Cl. 39.
Effankay Perfumers: *See*—
Kopstain, George J.
Ekco Products Co., Chicago, Ill. 735,551, pub. 5–22–62. Cl. 13.
8 in 1 Pet products, Inc., New York, N.Y. 629,248, canc. Cl. 46.
Elliott-Rallo Co.: *See*—
Rallo, Angelo J.
Elsa Originals, New York, N.Y. 629,146, canc. Cl. 39.
Enthone, Inc., New Haven, Conn. 735,794, pub. 5–22–62. Cl. 52.
Erie Resistor Corp., Erie, Pa. 735,640, pub. 5–22–62. Cl. 26.
Ethical Pharmaceutical Co., Inc., Dallas, Tex. 735,570, pub. 5–22–62. Cl. 18.
Ettelbrick Shoe Co., to Step Master Shoes Inc., to Step Master Shoes, Inc., Greenup, Ill. 398,235. Am. 7(d). Cl. 39.
Evans, Robert, Co.: *See*—
Sonntag, Robert E.
Ever-Level Glides, Inc., Brooklyn, N.Y. 628,925–6, canc. Cl. 13.
Ever Ready Calendar Mfg. Co., Jersey City, N.J. 735,680, pub. 5–22–62. Cl. 37.
Evirpure Processors Corp., New York, N.Y. 735,791, pub. 5–22–62. Cl. 51.
Fahrney, Dr. Peter, & Sons Co., to Dr. Peter Fahrney & Sons Co., New York, N.Y. 155,416, ren. 8–7–62. Cl. 18.
Fairchild, Olsen G., Orlando, Fla. 629,250, canc. Cl. 46.
Farley & Loetscher Mfg. Co., Dubuque, Iowa. 628,862, canc. Cl. 1.
Fear, Fred, & Co., Brooklyn, N.Y. 398,130, ren. 8–7–62. Cl. 37.
Fels and Co., Philadelphia, Pa. 735,793, pub. 5–22–62. Cl. 52.
Field, Marshall, & Co., Chicago, Ill. 629,167, canc. Cl. 39.
Film Service Centers, Inc., Rochester, N.Y. 735,812, pub. 5–22–62. Cl. 106.
Fine Spun Knitting Mills Inc., Brooklyn, N.Y. 735,702, pub. 5–22–62. Cl. 39.
Finger, Arthur I., d.b.a. Art Finley, San Francisco, Calif. 735,814, pub. 5–22–62. Cl. 107.
Finley, Art: *See*—
Finger, Arthur I.
Firma Ferdinand Bernhard Schmetz, Herzogenrath, near Aschen, Germany. 735,617, pub. 5–22–62. Cl. 23.
Firth Sterling, Inc.: *See*—
Firth-Sterling Steel Co.
Firth-Sterling Steel Co., McKeesport, Pa., by Firth Sterling, Inc., Pittsburgh, Pa. 394,557, 12(c) pub. 8–7–62. Cl. 14.
Fischer, Irving, d.b.a. Metalux Products, Brooklyn, N.Y. 735,729, pub. 5–22–62. Cl. 44.
Flocker, John, and Co., Pittsburgh, Pa. 629,206, canc. Cl. 42.
Foster, S. K., and Associates, Inc., Cincinnati, Ohio. 735,723, pub. 5–15–62. Cl. 44.
Four Wheel Drive Auto Co., The, Clintonville, Wis. 628,989, canc. Cl. 19.
Franzia Brothers Winery, d.b.a. Old Chateau Wine Co., Ripon, Calif. 735,777, pub. 5–22–62. Cl. 47.
Frederick, Marc A., Sr., Long Beach, Calif. 735,679, pub. 5–22–62. Cl. 37.
Free, R. G., d.b.a. Washington Foods, Washington Court House, Ohio. 629,246, canc. Cl. 46.
Friden Calculating Machine Co., Inc., San Leandro, Calif. 629,061, canc. Cl. 26.
Frontier Chemical Co., Division of Union Chemical & Materials Corp.: *See*—
Union Chemical & Materials Corp.
Frontier Chemical Co., Division of Vulcan Materials Co.: *See*—
Union Chemical & Materials Corp.
Friele, Anton, trustee in bankruptcy of A/S Bergen Preserving Co., Bergen, Norway. 735,751–2, pub. 5–22–62. Cl. 46.
Frigo Brothers Cheese Corp., Iron Mountain, Mich. 735,737, pub. 5–22–62. Cl. 46.
Fuels Research Corp., Denver, Colo. 735,554, pub. 5–22–62. Cl. 15.
Fuller, D. B., & Co., Inc., New York, N.Y. 629,202, canc. Cl. 42.
Fun in the Sun of Florida, Inc., Miami, Fla. 735,600, pub. 5–22–62. Cl. 22.
Gadgeteers, Inc., The, Lakeside, Mich. 629,220, canc. Cl. 44.

Gameland, Inc., St. Louis, Mo. 735,603, pub. 5–22–62. Cl. 22.
Gardner-Denver Co.: *See*—
Keller Tool Co.
Garylee, Inc., Miami, Fla. 629,019, canc. Cl. 22.
Geigy Chemical Corp., New York, N.Y. 628,957, canc. Cl. 18.
General Controls Co., Glendale, Calif. 735,634, pub. 5–22–62. Cl. 26.
General Features Corp., New York, N.Y. 629,130, canc. Cl. 38.
General Mills, Inc.: *See*—
Portland Flouring Mills Co., The.
General Mills, Inc., Minneapolis, Minn. 593,675. Am. 7(d). Cl. 46.
General Mills, Inc., Minneapolis, Minn. 645,830. Am. 7(d). Cl. 46.
General Mills, Inc., Minneapolis, Minn. 670,704. Am. 7(d). Cl. 46.
General Mills, Inc., Minneapolis, Minn. 635,518, pub. 5–22–62. Cl. 1.
Genesco, Inc.: *See*—
Miller, I., & Sons, Inc.
Gleason Works, The, Rochester, N.Y. 735,624, pub. 5–22–62. Cl 23.
Goetz's, Andrew, Sons, Inc., Brooklyn, N.Y. 735,515, pub. 5–22–62. Cl. 1.
Gold Metal Candy Corp., Brooklyn, N.Y. 735,735, pub. 5–22–62. Cl. 46.
Goldberg, S., & Co. Inc., Hackensack, N.J. 735,706, pub. 5–22–62. Cl. 39.
Goldsmith Bros., New York, N.Y. 735,675, pub. 5–22–62. Cl. 37.
Goldsmith, M. H., and Co., d.b.a. Milford Lingerie Co., New York, N.Y. 629,149, canc. Cl. 39.
Gordon, Nels, Inc., Akron, Ohio. 735,696, pub. 5–22–62. Cl. 38.
Gossen, P., & Co., Gesellschaft mit beschraenkter Haftung, Erlangen, Bavaria, Germany. 735,644–5, pub. 5–22–62. Cl. 26.
Grand Rapids Store Equipment Co., Grand Rapids, Mich. 629,072, canc. Cl. 32.
Grand Union Co., The, East Paterson, N.J. 735,709, pub. 5–22–62. Cl. 39.
Great Atlantic & Pacific Tea Co., Inc., The, New York, N.Y. 735,755, pub. 5–22–62. Cl. 46.
Great Lakes Carbon Corp., New York, N.Y. 735,549, pub. 5–22–62. Cl. 12.
Griffith Laboratories: *See*—
Griffith Laboratories, Inc., The.
Griffith Laboratories, Inc., The, Chicago, Ill. 735,758, pub. 5–22–62. Cl. 46.
Griffith Laboratories, Inc., The, d.b.a. Griffith Laboratories, Chicago, Ill. 735,762, pub. 5–22–62. Cl. 46.
H. & D. Laboratories, Inc., Cleveland, Ohio. 628,963, canc. Cl. 18.
Hagan & Co.: *See*—
Hagan, Thomas F.
Hagan, Thomas F., d.b.a. Hagan & Co., Washington, D.C. 735,673, pub. 5–22–62. Cl. 37.
Haggar Co., Dallas, Tex. 735,703, pub. 5–22–62. Cl. 39.
Halley, James L., San Francisco, Calif. 628,869, canc. Cl. 2.
Halstead Milling and Elevator Co.: *See*—
International Milling Co.
Hamilton Paper Co., Miquon, Pa. 735,682, pub. 5–22–62. Cl. 37.
Hammermill Paper Co., Erie, Pa. 735,674, pub. 5–22–62. Cl. 37.
Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 735,677, pub. 5–22–62. Cl. 37.
Harris, John I., d.b.a. National Latex Co., Nashville, Tenn. 735,733, pub. 5–22–62 Cl. 44.
Hart, Charles C., Seed Co., The, Wethersfield, Conn. 735,504, pub. 5–22–62. Cl. 1.
Hays Mfg. Co., Erie, Pa. 735,552, pub. 5–22–62. Cl. 13.
Hello Mirror Co., Belvedere, Kent, England. 735,638, pub. 5–22–62. Cl. 26.
Heller Brothers Co., Newark, N.J., to Heller Tool Co., Newcomerstown, Mass. 161,781, ren. 8–7–62. Cl. 23.
Heller Tool Co.: *See*—
Heller Brothers Co.
Hercules Powder Co., Wilmington, Del. 628,897, canc. Cl. 9.
Hinds, Aurelius S., Portland, Maine. 14,985, canc. Cl. 51.
Hinds, Aurelius S., Portland, Maine. 54,660, canc. Cl. 51.
Hinds, Aurelius S., Portland, Maine. 101,388, canc. Cl. 51.
Hinds, A. S., Co., Portland, Maine. 200,147, canc. Cl. 51.
Hinds, A. S., Co., Portland, Maine. 200,833, canc. Cl. 6.
Hinds, A. S., Co., Portland, Maine. 201,586, canc. Cl. 6.
Hinds, A. S., Co., Bloomfield, N.J. 310,545, canc. Cl. 51.
Hoffman Electrolysis Institute, Inc., New York, N.Y. 735,722, pub. 5–22–62. Cl. 44.
Hoffmann-La Roche Inc., Nutley, N.J. 628,977, canc. Cl. 18.
Hoffman, M. Milton, d.b.a. The Hoffman Seed & Grain Co., Muncy, Pa. 735,520, pub. 5–22–62. Cl. 1.
Hoffman Seed & Grain Co., The: *See*—
Hoffman, M. Milton.
Hollingshead, R. M., Corp., Camden, N.J. 629,291, canc. Cl. 52.
Hollins, William, & Co., Ltd., Nottingham, England. 155,717, ren. 8–7–62. Cl. 39
Home Comfort Products Co., Princeville, Ill. 735,543, pub. 5–22–62. Cl. 12.
Hoover, Roy E., d.b.a. Hoover Soil Service, Gilman, Ill. 614,161, canc. Cl. 10.
Hoover Soil Service: *See*—
Hoover, Roy E.
Houghton Mifflin Co., Boston, Mass. 735,695, pub. 5–22–62. Cl. 38.
Hudor Co., The, to Hudor Water Co., Inc., Buffalo, N.Y. 157,981, ren. 8–7–62. Cl. 45.
Hudor Water Co., Inc.: *See*—
Hudor Co., The.
Rogers, Samuel C., & James S. Pearson.
Hughes, E. Griffiths, Ltd., Manchester, England. 735,565, pub. 5–22–62. Cl. 18.
Hutchins, Leslie W.: *See*—
Stone, Clarence H.
Hyde Leather Co., Inc., New York, N.Y. 735,711, pub. 5–22–62. Cl. 40.
Hydro-Air Engineering, Inc., St. Louis, Mo. 735,546, pub. 5–22–62. Cl. 12.
Hygrade Food Products Corp., Detroit, Mich. 735,750, pub. 5–22–62. Cl. 46.
Ideal Cement Co.: *See*—
Old Mission Portland Cement Co.
Imperial Chemical Industries Ltd., London, England. 735,569, pub. 5–22–62. Cl. 18.
Imperial Industries, Inc., Stillwater, Okla. 735,648, pub. 5–22–62. Cl. 26.
Independence Specialties Co., Inc., Charlotte, N.C. 629,043, canc. Cl. 23.
Indianapolis Brush & Broom Mfg. Co., Indianapolis, Ind. 629,283, canc. Cl. 52.
International Milling Co., d.b.a. Halstead Milling and Elevator Co., Minneapolis, Minn. 629,240, canc. Cl. 46.
International Paint Co., Inc., New York, N.Y. 628,934, canc. Cl. 16.
International Refining and Packaging Corp., Paterson, N.J. 735,746–7, pub. 5–22–62. Cl. 46.
International Telephone and Telegraph Corp., Chicago, Ill. 735,581, pub. 5–22–62. Cl. 21.
Irwin, Neisler & Co., Decatur, Ill. 735,576, pub. 5–22–62. Cl. 18.
Isle of View Co., Los Angeles, Calif. 629,057, canc. Cl. 26.
Jersey City Tobacco Co., Jersey City, N.J. 735,559, pub. 5–22–62. Cl. 17.
Johnson & Johnson, New Brunswick, N.J. 735,510, pub. 5–22–62. Cl. 1.
Johnson & Johnson, New Brunswick, N.J. 735,730, pub. 5–22–62. Cl. 44.
Jonas, Henry, New York, N.Y. 735,658, pub. 5–22–62. Cl. 28.
Jones Superior Machine Co., Chicago, Ill. 161,954, ren. 8–7–62. Cl. 23.
Joseph Salon Shoes, Inc., Evanston, Ill. 735,704, pub. 5–22–62. Cl. 39.
Julie Marie, Inc., Northfield, Ill. 735,787, pub. 5–22–62. Cl. 51.
Justrite Mfg. Co., Chicago, Ill. 629,047, canc. Cl. 23.
Juva-Tex., Inc., Chicago, Ill. 629,066, canc. Cl. 29.
Kapian, Albert J., d.b.a. Alkap Laboratories, Chicago, Ill. 735,783, pub. 5–22–62. Cl. 51.
Keller Tool Co., Grand Haven, Mich., to Gardner-Denver Co., Denver, Colo. 629,069, canc. Cl. 31.
Kenyon Piece Dyeworks, Inc., The, Kenyon, R.I. 735,810, pub. 5–22–62. Cl. 106.
Keuffel & Esser Co., Hoboken, N.J. 735,643, pub. 5–22–62. Cl. 26.
Kimberly-Clark Corp., Neenah, Wis. 735,686, pub. 5–22–62. Cl. 37.
Kimberly-Clark Corp., Neenah, Wis. 735,672, pub. 5–22–62. Cl. 37.
Kingbird Products, Inc., El Monte, Calif. 735,584, pub. 5–22–62. Cl. 21.
Klear-Vu Corp., New York, N.Y. 629,199, canc. Cl. 42.
Klein, Rafael, d.b.a. Brangolmore Chemical Co., New York, N.Y. 628,902, canc. Cl. 10.
Kleinert, I. B., Rubber Co., New York, N.Y. 398,237, ren. 8–7–62. Cl. 40.
Klenzade Products, Inc., Beloit, Wis. 629,289, canc. Cl. 52.
Knoll Pharmaceutical Co.: *See*—
Bilhuber, E., Inc.
Kolmes, Louis, & Son: *See*—
Kolmes, Nathaniel H.
Kolmes, Nathaniel H., d.b.a. Louis Kolmes & Son, New York, N.Y. 614,695, canc. Cl. 7.
Kopstain, George J., d.b.a. Effankay Perfumers, Des Plaines, Ill. 735,789, pub. 5–22–62. Cl. 51.
Korris Products, Inc., Lyons, Ill. 735,521, pub. 5–22–62. Cl. 2.
Korris Products, Inc., Lyons, Ill. 735,659, pub. 5–22–62. Cl. 29.
Kraft, Hyman D., New York, N.Y. 628,919, canc. Cl. 13.
Kratter Corp., The, New York, N.Y. 735,806, pub. 5–22–62. Cl. 101.
Kyoritu Noki Co. Ltd., Mitaka, Tokyo, Japan. 629,038, canc. Cl. 23.
La Choy Food Products, Inc., Archbold, Ohio, by Beatrice Foods Co., Chicago, Ill. 397,797, 12(c) pub. 8–7–62. Cl. 46.
La Choy Food Products, Inc., Archbold, Ohio, by Beatrice Foods Co., Chicago, Ill. 397,904, 12(c) pub. 8–7–62. Cl. 46.
Lacquer Corp. of America, Brooklyn, N.Y. 628,941, canc. Cl. 16.
Lactona, Inc., St. Paul, Minn., by Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 367,740, 12(c) pub. 8–7–62. Cl. 29.
Lactona, Inc., St. Paul, Minn., by Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 368,316, 12(c) pub. 8–7–62. Cl. 29.
Lactona, Inc., St. Paul, Minn., by Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 383,888, 12(c) pub. 8–7–62. Cl. 29.
Landreth, D., Seed Co., Philadelphia, Pa. 628,860, canc. Cl. 1.
Lawrence, A. C., Leather Co.: *See*—
Swift & Co.
Lexington Lumber Co., Chadds Ford, Pa. 609,306, canc. Cl. 12.
Liga Fabrieken N.V., Roosendaal, Netherlands. 629,235, canc. Cl. 46.
Lincoln Mills of Alabama, Huntsville, Ala. 629,203, canc. Cl. 42.

Linden, Leo, Laboratories, Inc., Culver City, Calif. 735,566, pub. 5–22–62. Cl. 18.
Linden Spencer Co., The, Spencer, Mass. 629,158, canc. Cl. 39.
Lin-Mac Hat Co. Inc., New York, N.Y. 735,705, pub. 5–22–62. Cl. 39.
Little, Arthur D., Inc., Cambridge, Mass. 735,804, pub. 5–22–62. Cl. 100.
Loewenstein, Hermann, Inc., New York, N.Y. 735,511, pub. 5–22–62. Cl. 1.
London Rubber Co. Ltd., London, England. 735,732, pub. 5–22–62. Cl. 44.
Lottman, C. F., & Sons, Houston, Tex. 155,752, ren. 8–7–62. Cl. 32.
Lottman, C. F., & Sons, Houston, Tex. 157,706, ren. 8–7–62. Cl. 32.
Lowe, Joe, Corp., New York, N.Y. 735,756, pub. 5–22–62. Cl. 46.
Lunt Sterling: *See*—
Rogers, Lunt & Bowlen Co.
Lurie, Mitchell, Enterprises: *See*—
Lurie, Mitchell.
Lurie, Mitchell, d.b.a. Mitchell Lurie Entreprises, Los Angeles, Calif. 735,669, pub. 5–22–62. Cl. 36.
MHD Research, Inc., Newport Beach, Calif. 735,646, pub. 5–22–62. Cl. 26.
MacLeod Instrument Corp., Fort Lauderdale, Fla. 735,650, pub. 5–22–62. Cl. 26.
Mac/Netic Tape Co., High Point, N.C. 735,670, pub. 5–22–62. Cl. 36.
Maico Electronics, Inc., Minneapolis, Minn. 735,724, pub. 5–22–62. Cl. 44.
Mallory, P. R., & Co. Inc., Indianapolis, Ind. 397,084, ren. 8–7–62. Cl. 23.
Mallory, P. R., & Co. Inc., Indianapolis, Ind. 397,112, ren. 8–7–62. Cl. 21.
Mallory, P. R., & Co. Inc., Indianapolis, Ind. 397,785, ren. 8–7–62. Cl. 21.
Maloney, Harold J., Kalamazoo, Mich. 735,660, pub. 5–22–62. Cl. 30.
Manhattan Brewing Co., to Canadian Ace Brewing Co., Chicago, Ill. 397,040, ren. 8–7–62. Cl. 48.
Mark Auto Co., Inc., Layton, N.J. 735,558, pub. 5–22–62. Cl. 16.
Marian Co., Chicago, Ill. 719,738. Am. 7(d). Cl. 46.
Martini & Rossi Corp., New York, N.Y. 735,779, pub. 5–22–62. Cl. 49.
Martin-Marietta, from American-Marietta Co., Chicago, Ill. 735,544, pub. 5–22–62. Cl. 12.
Martin's Feed Mills, Inc., New Paris, Ind. 735,761, pub. 5–22–62. Cl. 46.
Marvella, Inc., New York, N.Y. 735,653, pub. 5–22–62. Cl. 28.
Maryland Pharmaceutical Co., The, Baltimore, Md. 628,948, canc. Cl. 18.
May, Otto B., Inc., Newark, N.J. 735,557, pub. 5–22–62. Cl. 16.
Mead Johnson & Co., Evansville, Ind. 735,573, pub. 5–22–62. Cl. 18.
Medicated Products Co., Chicago, Ill. 735,655, pub. 5–22–62. Cl. 28.
Medina, J. A., Co., New York, N.Y., by Anderson, Clayton & Co., Houston, Tex. 253,610, 12(c) pub. 8–7–62. Cl. 46.
Mennen Co., The, Morristown, N.J. 735,786, pub. 5–22–62. Cl. 51.
Metalux Products: *See*—
Fischer, Irving.
Michael, John L., Inc., Orlando, Fla. 629,282, canc. Cl. 51.
Micro-Master Co., The, Chicago, Ill. 398,062, ren. 8–7–62. Cl. 26.
Micro Musical Products Corp.: *See*—
Schwartz, Jacob.
Milford Lingerie Co.: *See*—
Goldsmith, M. H., and Co.
Miller, I., & Sons, Inc., Long Island City, N.Y., by Genesco, Inc., Nashville, Tenn. 346,290, 12(c) pub. 8–7–62. Cl. 39.
Milwhite Mud Sales Co., Houston, Tex. 735,818. Cl. 1.
Minnesota Mutual Life Insurance Co., The, St. Paul, Minn. 629,293, canc. Cl. 102.
Modern Mold and Tool Corp., New York, N.Y. 735,689, pub. 5–22–62. Cl. 37.
Monsanto Chemical Co., St. Louis, Mo., from The Chemstrand Corp., Decatur, Ala. 735,517, pub. 5–22–62. Cl. 1.
Moore Co., The, Charleston, W. Va. 629,080, canc. Cl. 34.
Morcy, Edith T.: *See*—
Tuttle, Orley C.
Morgan Construction Co., Worcester, Mass. 735,629, pub. 5–22–62. Cl. 23.
Morgan-Jones, Inc., New York, N.Y. 629,192, canc. Cl. 42.
Morrill, Harry L., Jr., Marietta, Ga. 735,690, pub. 5–22–62. Cl. 37.
Motor Registration News of California, Oakland, Calif. 243,-081, 12(c) pub. 8–7–62. Cl. 38.
Musser, Inc., Graham, Tex. 735,626, pub. 5–22–62. Cl. 23.
NJE Corp., Kenilworth, N.J. 735,588, pub. 5–22–62. Cl. 21.
N.V. Organon, Oss, Netherlands. 735,574, pub. 5–22–62. Cl. 18.
Natale, Frank, Watertown, Mass. 629,216, canc. Cl. 44.
National Baking Co., Chicago, Ill. 735,744, pub. 5–22–62. Cl. 46.
National Education Association of the United States, d.b.a. Department of Audiovisual Instruction, NEA, Washington, D.C. 735,815, pub. 5–22–62. Cl. 200.
National Latex Co.: *See*—
Harris, John I.
National Rayon Dyeing Co., Inc., Newark, N.J. 391,971, 12(c) pub. 8–7–62. Cl. 43.
Natser Corp., d.b.a. Acco Products, Ogdensburg, N.Y. 735,630, pub. 5–22–62. Cl. 23.
Natser Corp., d.b.a. Acco Products, Ogdensburg, N.Y. 735,684, pub. 5–22–62. Cl. 37.
Nebraska Consolidated Mills Co., Omaha, Nebr. 159,456, ren. 8–7–62. Cl. 46.
Nelson-Boyer Co., Inc., Glendale, Calif. 735,563, pub. 5–22–62. Cl. 18.
Nelson, R. S., to Central Circle Airport Corp., Miami, Fla. 629,115, canc. Cl. 38.
Nethercutt Laboratories, from Nethercutt Laboratories, Los Angeles, Calif. 735,821. Cl. 51.
Niedecker-Verschlusstechnik GmbH, Frankfurt am Main-Rodelheim, Germany. 735,550, pub. 5–22–62. Cl. 13.
Nissen Corp., from Nissen Trampoline Co., Cedar Rapids, Iowa. 735,598, pub. 5–22–62. Cl. 22.
Nissen Trampoline Co.: *See*—
Nissen Corp.
Noonan, T., & Sons Co., Boston, Mass., to T. Noonan Sons Co., South Boston, Mass. 159,463, ren. 8–7–62. Cl. 51.
Norcross, Inc., New York, N.Y. 629,120, canc. Cl. 38.
North American Aviation, Inc., Los Angeles, Calif. 629,041, canc. Cl. 23.
Norton Co.: *See*—
Behr, Herman & Co., Inc.
Nutrition Control Products: *See*—
Derfler, Max.
O'Brien, Wilmer J., New York, N.Y. 629,299, canc. Cl. 107.
Ogus, Rabinovich & Ogus, Inc., New York, N.Y. 397,673, ren. 8–7–62. Cl. 39.
Old Chateau Wine Co.: *See*—
Franzia Brothers Winery.
Old Mission Portland Cement Co., San Francisco, Calif., to Ideal Cement Co., Denver, Colo. 156,032, ren. 8–7–62. Cl. 12.
O'Neil, Albert T., d.b.a. O'Neil-Irwin Mfg. Co., Minneapolis, Minn., to Di-Acro Corp., Lake City, Minn. 394,932, ren. 8–7–62. Cl. 23.
O'Neil-Irwin Mfg. Co.: *See*—
O'Neil, Albert T.
Ovaltine Food Products: *See*—
Wander Co., The.
Oxford Paper Co., New York, N.Y. 735,671, pub. 5–22–62. Cl. 37.
Pakula and Co., Chicago, Ill. 735,654, pub. 5–22–62. Cl. 28.
Paint Products Corp., Elgin, Ill. 628,939, canc. Cl. 16.
Paramount Paper Products Co., Omaha, Nebr. 735,619, pub. 5–22–62. Cl. 23.
Parke, Davis & Co., Detroit, Mich. 157,369, ren. 8–7–62. Cl. 18.
Parmelee, David M.: *See*—
Parmelee Party Line, Inc.
Parmelee Party Line, Inc., d.b.a. Parmelee's Party-Line, Grand Rapids, Mich., from David M. Parmelee, Morganton, N.C. 735,740–1, pub. 5–22–62. Cl. 46.
Parmelee's Party-Line: *See*—
Parmelee Party Line, Inc.
Parnassos, Greek Cultural Society of New York, Inc., New York, N.Y. 735,693, pub. 5–22–62. Cl. 38.
Parsons Pharmaceuticals, Inc., Washington, D.C. 628,970, canc. Cl. 18.
Paymaster Farms: *See*—
Anderson, Clayton & Co.
Paymaster Feed Mills: *See*—
Anderson, Clayton & Co.
Payne & Co., Inc., Dayton, Ohio. 735,713, pub. 5–22–62. Cl. 42.
Pearl-Pressman Liberty Printing and Lithographing Co., Philadelphia, Pa. 628,935, canc. Cl. 16.
Pearson, James S.: *See*—
Rogers, Samuel C., and James S. Pearson.
Peck's Products Co.: *See*—
Chemical Utilities Co., The.
Penfield Saw Works, Inc., The, Thomaston, Conn. 629,050, canc. Cl. 23.
Pennsalt Chemicals Corp., Philadelphia, Pa. 735,519, pub. 5–22–62. Cl. 1.
Pentype Corp., St. Paul, Minn. 629,222, canc. Cl. 44.
Peters & Russell, Inc., Springfield, Ohio. 735,609, pub. 5–22–62. Cl. 23.
Petrolite Corp.: *See*—
Barnickel, William S., & Co.
Pic 'N Pay Stores, Inc., Charlotte, N.C. 735,707, pub. 5–22–62. Cl. 39.
Pittsburgh Chemical Co., Pittsburgh, Pa. 735,533, pub. 5–22–62. Cl. 6.
Pittsburgh Coke & Chemical Co., Pittsburgh, Pa. 628,884, canc. Cl. 6.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 396,079, ren. 8–7–62. Cl. 6.
Plant Protection Ltd., Yalding, Kent, England. 735,532, pub. 5–22–62. Cl. 6.
Plantabbs Corp., Baltimore, Md. 735,529, pub. 5–22–62. Cl. 6.
Plantabbs Corp., Baltimore, Md. 735,539–40, pub. 5–22–62. Cl. 10.
Plibrico Co., Chicago, Ill. 735,547, pub. 5–22–62. Cl. 12.
Portland Flouring Mills Co., The, General Mills, Inc., Minneapolis, Minn. 159,479. Am. 7(d). Cl. 46.
Precision-Bilt Products Co., Brooklyn, N.Y. 629,259, canc. Cl. 46.
Prentice, G. E., Mfg. Co., The, Kensington, Conn. 628,924, canc. Cl. 13.
Prodelin Inc., Kearny, N.J. 735,589, pub. 5–22–62. Cl. 21.
Products Packaging, Inc.: *See*—
Double Duty Products, Inc.
Purity Stores, Inc., Burlingame, Calif. 735,748, pub. 5–22–62. Cl. 46.
RCA Service Co.: *See*—
Radio Corp. of America.
RF Interonics, Inc., Oceanside, N.Y. 735,596, pub. 5–22–62. Cl. 21.
Racine, Societe a Responsabilite Limitee, Nice, Alpes-Maritimes, France. 735,712, pub. 5–22–62. Cl. 42.

Radiant Electric Heat Co., Centerville, Iowa. 735,587, pub. 5–22–62. Cl. 21.
Radiation Applications, Inc., Long Island City, N.Y. 735,586, pub. 5–22–62. Cl. 21.
Radio Columbus, Inc., Columbus, Ohio. 629,300, canc. Cl. 107.
Radio Corp. of America, d.b.a. RCA Service Co., New York, N.Y. 735,795, pub. 5–22–62. Cl. 52.
Rallo, Angelo J., d.b.a. Elliott-Rallo Co., Hollywood, Calif. 629,020, canc. Cl. 22.
Ranch, A. J.: *See*—
Di Betta, A. J.
Rasberry Enterprises, Grand Rapids, Mich. 735,813, pub. 5–22–62. Cl. 107.
Rayco Mfg. Co., Paramus, N.J. 735,590, pub. 5–22–62. Cl. 21.
Record Guild of America, Inc., The, New York, N.Y. 629,098, canc. Cl. 36.
Regina Products: *See*—
Agostini, Dominic J.
Registered Shirt Corp., The: *See*—
Registered Shirt Laundry Association, Inc., The.
Registered Shirt Laundry Association, Inc., The, from The Registered Shirt Corp., New York, N.Y. 735,697, pub. 5–22–62. Cl. 39.
Republic National Bank of Dallas, Dallas, Tex. 735,808, pub. 5–22–62. Cl. 102.
Republic-Transcon Industries, Inc., Beverly Hills, Calif. 735,665, pub. 5–22–62. Cl. 34.
Rhody Knit, Inc., Pawtucket, R.I. 735,701, pub. 5–22–62. Cl. 39.
Richardson, Sid, Carbon Co., Ft. Worth, Tex. 735,534–6, pub. 5–22–62. Cl. 6.
Richardson-Merrell Inc., Cincinnati, Ohio. 735,571, pub. 5–22–62. Cl. 18.
Ringmaster Inc., St. Louis, Mo. 735,687, pub. 5–22–62. Cl. 37.
Robert Hosiery Mills, Inc., Collegeville, Pa. 735,699, pub. 5–22–62. Cl. 39.
Roberts, A. Boake, & Co. Ltd., London, England. 735,564, pub. 11–7–61. Cl. 18.
Roberts Drug Co.: *See*—
Berry, Dr. C. H., Chemical Co.
Roberts Pivot & Needle, Inc., Chicago, Ill. 629,094, canc. Cl. 36.
Robertshaw-Fulton Controls Co., Greensburg, Pa. 629,060, canc. Cl. 26.
Robertson Photo-Mechanix, Inc., Chicago, Ill. 735,641, pub. 5–22–62. Cl. 26.
Robins Industries Corp., Flushing, N.Y. 735,632, pub. 5–22–62. Cl. 26.
Rock Creek Ginger Ale Co., Inc., Washington, D.C. 642,390, cor. Cl. 45.
Rogers Brothers Co., Idaho Falls, Idaho. 735,743, pub. 5–22–62. Cl. 46.
Rogers, Lunt & Bowlen Co., d.b.a. Lunt Sterling, Greenfield, Mass. 735,656, pub. 5–22–62. Cl. 28.
Rogers, Samuel C., & James S. Pearson, to Hudor Water Co., Inc., Buffalo, N.Y. 21,318, ren. 8–7–62. Cl. 45.
Rolimpex Centrala Handlu Zagranicznego, Warsaw, Poland. 735,778, pub. 5–22–62. Cl. 48.
Root Mfg. Co., Inc., Baxter Springs, Kans. 735,612, pub. 5–22–62. Cl. 23.
Rotolite Corp., Stirling, N.J. 735,647, pub. 5–22–62. Cl. 26.
Rubenstein Co., The, Chicago, Ill. 735,719, pub. 5–22–62. Cl. 42.
Rubinstein, Helena, Inc., New York, N.Y. 394,964, 12(c) pub. 8–7–62. Cl. 51.
Rueping, Fred, Leather Co., Fond Du Lac, Wis. 735,516, pub. 5–22–62. Cl. 1.
Russell Brothers, Fort Fairfield, Maine. 629,253, canc. Cl. 46.
Rust Engineering Co., The: *See*—
Rust Engineering Co., The.
Rust Engineering Co., The, Baltimore, Md. and Washington, D.C., to The Rust Engineering Co., Pittsburgh, Pa. 156,049, ren. 8–7–62. Cl. 12.
Rydell, A. B., Co., Inc., New York, N.Y. 629,201, canc. Cl. 42.
S. & S. Vent-O, Inc., San Angelo, Tex. 629,089, canc. Cl. 34.
Sage, Peggy, Inc., New York, N.Y. 396,179, 12(c) pub. 8–7–62. Cl. 51.
Saks & Co., New York, N.Y. 397,533, ren. 8–7–62. Cl. 39.
Sams, Howard W., & Co., Inc., Indianapolis, Ind. 735,817, pub. 5–22–62. Cl. B.
Samuels, Albert S., Co.: *See*—
Samuels, Albert S., Co., The.
Samuels, Albert S., Co., The, to Albert S. Samuels Co., San Francisco, Calif. 159,081–2. ren. 8–7–62. Cl. 28.
Samuels, Albert S., Co., San Francisco, Calif. 396,779, ren. 8–7–62. Cl. 28.
Sani-Products, Inc.: *See*—
Sani-Products of Texas, Inc.
Sani-Products of Texas, Inc., d.b.a. Sani-Products, Inc., Austin, Tex. 735,764, pub. 5–22–62. Cl. 46.
Sarad, Walter J., Denver, Colo. 735,667, pub. 5–22–62. Cl. 36.
Schapiro, A., Oakland, Calif. 735,820. Cl. 45.
Schenley Laboratories, Inc., New York, N.Y. 628,949, canc. Cl. 18.
Schenuit, Frank G., Rubber Co., The, Baltimore, Md. 735,-666, pub. 12–26–61. Cl. 35.
Schrafft, W. F., & Sons Corp., Boston, Mass. 629,263, canc. Cl. 46.
Schwartz, Jacob, by Micro Musical Products Corp., New York, N.Y. 158,295, 12(c) pub. 8–7–62. Cl. 36.
Schueler & Co., New York, N.Y. 629,059, canc. Cl. 26.
Scientific Oil Compounding Co. (1952), The: *See*—
Scientific Oil Compounding Co., The.
Scientific Oil Compounding Co., The, to The Scientific Oil Compounding Co. (1952), Chicago, Ill. 394,552, ren. 8–7–62. Cl. 16.
Scolding Locks Corp., Appleton, Wis. 735,710, pub. 5–22–62. Cl. 40.
Scott Aviation Corp., Lancaster, N.Y. 735,725–8, pub. 5–22–62. Cl. 44.
Scott Enterprises: *See*—
Scott, Patricia, Inc.
Scott, Patricia, Inc., d.b.a. Scott Enterprises, New York, N.Y. 629,142, canc. Cl. 39.
Selby Shoe Co., The, Portsmouth, Ohio. 616,242, canc. Cl. 39.
Seminole Flavor Co., Chattanooga, Tenn. 394,666, ren. 8–7–62. Cl. 45.
Sesa-Kraft, Inc., Paris, Tex. 735,770–4, pub. 5–22–62. Cl. 46.
Seven Hills Distributing Corp., San Francisco, Calif. 735,593, pub. 5–22–62. Cl. 21.
Shaw-Barton, Inc., Coshocton, Ohio. 395,312–3, 12(c) pub. 8–7–62. Cl. 38.
Sheaffer, W. A., Pen Co., Fort Madison, Iowa. 397,553, ren. 8–7–62. Cl. 37.
Sheffield Corp., The, Dayton, Ohio. 629,034, canc. Cl. 23.
Sherwin-Williams Co., The, Cleveland, Ohio. 628,918, canc. Cl. 12.
Shulman Fabrics, Inc., Paterson, N.J. 735,718, pub. 5–22–62. Cl. 42.
Siebert, R. L., Inc., Jamaica, N.J. 735,757, pub. 5–22–62. Cl. 46.
Sioux Honey Association, Cooperative, Sioux City, Iowa. 647,196. Am. 7(d). Cl. 46.
Societe de la Viscose Suisse, Emmenbrucke, Switzerland. 735,-508–9, pub. 5–22–62. Cl. 1.
Societe de la Viscose Suisse, Emmenbrucke, Switzerland. 735,-720, pub. 5–22–62. Cl. 43.
Sonntag, Robert E., d.b.a. Robert Evans Co., Jacksonville, Fla. 735,575, pub. 5–22–62. Cl. 18.
Southern Plastics Engineering Corp., Greensboro, N.C. 735,-811, pub. 5–22–62. Cl. 106.
Southern States Equipment Corp.: *See*—
Southern States, Inc.
Southern States, Inc., from Southern States Equipment Corp., Hampton, Ga. 735,620, pub. 5–22–62. Cl. 23.
Southern Venetian Blind Co., North Miami, Fla. 735,548, pub. 5–22–62. Cl. 12.
Southwest Chemical Co.: *See*—
Standard Gilsonite Co.
Spatz Bros., Inc., New York, N.Y. 398,250, ren. 8–7–62. Cl. 39.
Specialty Food Co., Inc., Reynoldsburg, Ohio. 735,745, pub. 5–22–62. Cl. 46.
Specifide, Inc., from Specifide, Inc., Indianapolis, Ind. 735,-568, pub. 5–22–62. Cl. 18.
Spencer Chemical Co., Kansas City, Mo. 735,506, pub. 5–22–62. Cl. 1.
Spivack, Leo H., Inc., New York, N.Y. 629,074, canc. Cl. 32.
Sprayway, Inc., Chicago, Ill. 735,801, pub. 5–22–62. Cl. 52.
Staedtler, J. S., Nurnberg, Germany. 629,099, canc. Cl. 37.
Stamford Chemical Industries Inc., Stamford, Conn. 735,796, pub. 5–22–62. Cl. 52.
Standard Gilsonite Co., d.b.a. Southwest Chemical Co., Salt Lake City, Utah. 735,505, pub. 5–22–62. Cl. 1.
Standard Packaging Corp.: *See*—
Chemical Paper Mfg. Co.
Standard Packaging Corp., New York, N.Y. 735,681, pub. 5–22–62. Cl. 37.
Stanley, John T., Co. Inc., New York, N.Y. 735,798, pub. 5–22–62. Cl. 52.
Stan-Way Pharmaceutical Laboratory, Chicopee Falls, Mass. 628,946, canc. Cl. 18.
Stauffer Chemical Co., New York, N.Y. 735,525, pub. 5–22–62. Cl. 6.
Steatit-Magnesia Aktiengesellschaft, Lauf/Pegnitz, Germany. 735,578–9, pub. 5–22–62. Cl. 21.
Step Master Shoes, Inc.: *See*—
Ettelbrick Shoe Co.
Stevens, J. P., & Co., Inc., New York, N.Y. 735,714–7, pub. 5–22–62. Cl. 42.
Stitch Brothers Mfg. Co., Los Angeles, Calif. 629,274, canc. Cl. 50.
Stone, C. H., Co.: *See*—
Stone, Clarence H.
Stone, Clarence H., d.b.a. C. H. Stone Co., Lynnfield Center, Mass., to Leslie W. Hutchins, Newton, Mass. 396,400, ren. 8–7–62. Cl. 6.
Straight Engineering Co., Adel, Iowa. 629,048, canc. Cl. 23.
Strauss, Reda R., Des Moines, Iowa. 629,181. canc. Cl. 40.
Superba Cravats, to Superba Cravats, Inc., Rochester, N.Y. 398,590, ren. 8–7–62. Cl. 39.
Supreme Sugar Refinery: *See*—
Aron, J., & Co., Inc.
Swank, Inc., Attleboro, Mass. 735,683, pub. 5–22–62. Cl. 37.
Swift & Co., d.b.a. A. C. Lawrence Leather Co., Chicago, Ill. 735,512–3, pub. 5–22–62. Cl. 1.
Swisher, Jno. H., & Son, Inc., Jacksonville, Fla. 735,560, pub. 5–22–62. Cl. 17.
Tailored Silk Undergarment Co., by Trillium Lingerie, Inc., New York, N.Y. 149,256, 12(c) pub. 8–7–62. Cl. 39.
Taste, Inc., Seattle, Wash. 735,734, pub. 5–22–62. Cl. 46.
Techni Electronics, Inc., Orange, N.J. 735,731, pub. 5–22–62. Cl. 44.
Tecnifax Corp., Holyoke, Mass. 735,633, pub. 5–22–62. Cl. 26.
Tele-Pad Corp., Silver Spring, Md. 735,676, pub. 5–22–62. Cl. 37.
Tension Cutlery Co., St. Paul, Minn. 735,614, pub. 5–22–62. Cl. 23.
Texas Instruments Inc., Dallas, Tex. 735,582, pub. 5–22–62. Cl. 21.
Thew Shovel Co., The, Lorain, Ohio. 735,627, pub. 5–22–62. Cl. 23.
Thorsen Mfg. Co., Oakland, Calif. 735,615, pub. 5–22–62. Cl. 23.

Toledo Scale Corp., Toledo, Ohio. 735,591, pub. 5–22–62. Cl. 21.
Trale Corp., Newtown, Ohio. 629,028–9, canc. Cl. 23.
Telet, Inc., Louisville, Ky. 629,010–11, canc. Cl. 21.
Taxey, Paul J., Chicago, Ill. 628,916, canc. Cl. 12.
Tuttle, Orelev Clayton, by Edith Tuttle Morcy, d.b.a. O. C. Tuttle Devil Bug Co., Old Forge, N.Y. 157,597, 12(c) pub. 8–7–62. Cl. 22.
Transpharm G.m.b.H., Ludwigshafen (Rhine), Germany. 735,567, pub. 5–22–62. Cl. 18.
Tremco Mfg. Co., The, Cleveland, Ohio. 396,691, ren. 8–7–62. Cl. 6.
Trillium Lingerie, Inc.: *See*—
Tailored Silk Undergarment Co.
Trio Chemical Works, Inc., Brooklyn, N.Y. 735,531, pub. 5–22–62. Cl. 6.
Tropicana Products, Inc., Bradenton, Fla. 735,749, pub. 5–22–62. Cl. 46.
True Temper Corp., Cleveland, Ohio. 735,621, pub. 5–22–62. Cl. 23.
Try-It Bottling Co. Inc., to Wanakah Club Beverages Corp., Lackawanna, N.Y. 390,048, ren. 8–7–62. Cl. 45.
Tu-Bar Corp., Cleveland, Ohio. 735,625, pub. 5–22–62. Cl. 23.
Tucker Aluminum Products Inc., Hialeah, Fla. 735,545, pub. 5–22–62. Cl. 12.
Tuttle, O. C., Devil Bug Co.: *See*—
Tuttle, Orley C.
Tyler, W. S., Co., The, Cleveland, Ohio. 397,169, ren. 8–7–62. Cl. 13.
Underwood Corp., New York, N.Y. 629,062, canc. Cl. 26.
Union Chemical & Materials Corp., d.b.a. Frontier Chemical Co., Division of Union Chemical & Materials Corp., Frontier Chemical Co., Division of Vulcan Materials Co., Wichita, Kans. 639,526. Am. 7(d). Cl. 6.
United Artists Records, Inc., New York, N.Y. 735,668, pub. 5–22–62. Cl. 36.
United Breweries of America: *See*—
Cavanaugh Morris Advertising, Inc.
United California Bank, Los Angeles, Calif. 735,809, pub. 5–22–62. Cl. 102.
United Feature Syndicate, Inc., New York, N.Y. 629,119, canc. Cl. 38.
United Mills Corp., Mount Gilead, N.C. 629,161, canc. Cl. 39.
United Mills Corp., Mount Gilead, N.C. 629,171, canc. Cl. 39.
United States Playing Card Co., The, Cincinnati, Ohio. 735,606–7, pub. 5–22–62. Cl. 22.
United States Rubber Co., New York, N.Y. 629,162, canc. Cl. 39.
United-Greenfield Corp., Chicago, Ill. 735,631, pub. 5–22–62. Cl. 26.
Unitek Corp.: *See*—
Consolidated Engineering Corp.
Universal Oil Products Co., Des Plaines, Ill. 735,526–7, pub. 5–22–62. Cl. 6.
Urecas Service, Inc., Moberly, Mo. 419,787, 12(c) pub. 8–7–62. Cl. 6.
Varsity Pajamas, Inc.: *See*—
Varsity Underwear Co.
Varsity Underwear Co., Baltimore, Md., to Varsity Pajamas, Inc., New York, N.Y. 398,761, ren. 8–7–62. Cl. 39.
Versailles Products Co., Versailles, Ky. 628,998, canc. Cl. 21.
Virginia Glass Products Corp., Martinsville, Va. 735,663, pub. 5–22–62. Cl. 33.
Vogue Cuisine, Inc., New York, N.Y. 735,759, pub. 5–22–62. Cl. 46.
Wagner, Marcel, Gloves, Inc., New York, N.Y. 629,163, canc. Cl. 39.
Wanakah Club Beverages Corp.: *See*—
Try-It Bottling Co. Inc.
Wander Co., The, d.b.a. Ovaltine Food Products, Chicago, Ill. 735,754, pub. 5–22–62. Cl. 46.
Warner Electric Brake & Clutch Co., South Beloit, Ill. 735,608, pub. 5–22–62. Cl. 23.
Warner-Lambert Pharmaceutical Co.: *See*—
Lactona, Inc.
Warren, Northam, Corp., Stamford, Conn., by Chesebrough-Pond's Inc., New York, N.Y. 397,966, 12(c) pub. 8–7–62. Cl. 51.
Washington Foods: *See*—
Free, R. G.
Wehrlin & Co., Inc., Paterson, N.J. 629,208, canc. Cl. 43.
Weighing & Controls, Inc., King of Prussia, Pa. 735,642, pub. 5–22–62. Cl. 26.
Weigle, Albert W., Newberry, S.C. 629,067, canc. Cl. 29.
Welcome Wagon International, Inc., Memphis, Tenn. 735,805, pub. 5–22–62. Cl. 101.
Western Auto Supply Co., from Western Auto Supply Co., Kansas City, Mo. 735,537, pub. 5–22–62. Cl. 9.
Western Miss, Los Angeles, Calif. 629,575, cor. Cl. 39.
Westinghouse Electric Corp.: *See*—
Westinghouse Electric & Mfg. Co.
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., to Westinghouse Electric Corp., Pittsburgh, Pa. 155,866, ren. 8–7–62. Cl. 21.
Whitacre, Orris, Woodland, Calif. 735,781, pub. 5–22–62. Cl. 50.
White Sewing Machine Corp., Lakewood, Ohio. 629,039, canc. Cl. 23.
Whitehead Brothers Co., New York, N.Y. 735,507, pub. 5–22–62. Cl. 1.
Whitin Machine Works, Whitinsville, Mass. 735,616, pub. 5–22–62. Cl. 23.
Whitman, Stephen F., & Son, Inc., Bala-Cynwyd, Pa. 735,763, pub. 5–22–62. Cl. 46.
Whittle Music Co., Dallas, Tex. 402,166, 12(c) pub. 8–7–62. Cl. 36.
Whittle Music Co., Dallas, Tex. 402,684, 12(c) pub. 8–7–62. Cl. 36.
Whitworth, W. G. Armstrong, Sir, Aircraft Ltd., Baginton, near Coventry, England. 735,780, pub. 5–22–62. Cl. 50.
Wilder Mfg. Co., The, Niles, Ohio. 395,653, ren. 8–7–62. Cl. 34.
Williams, Harold F., New Bedford, Mass. 629,285, canc. Cl. 52.
Williamson Candy Co., Chicago, Ill. 154,740, ren. 8–7–62. Cl. 46.
Williamson Candy Co., Chicago, Ill. 629,258, canc. Cl. 46.
Williamson, Paul M. D., Bellaire, Tex. 735,694, pub. 5–22–62. Cl. 38.
Witzy Toy Mfg. Corp., Santa Ana, Calif. 735,602, pub. 5–22–62. Cl. 22.
Wolverine Fabricating & Mfg. Co., Inc., Inkster, Mich. 397,529, ren. 8–7–62. Cl. 35.
Woolworth, F. W., Co., New York, N.Y. 735,601, pub. 5–22–62. Cl. 22.
Wright, William E., & Sons Co., West Warren, Mass. 629,180, canc. Cl. 40.
Wyeth Laboratories: *See*—
American Home Products Corp.
Young, B., & Co. of America, Ltd.: *See*—
British Glues & Chemicals Ltd.

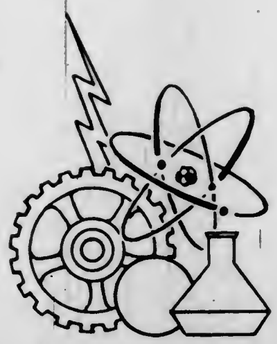
U. S. GOVERNMENT PRINTING OFFICE: 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

August 14, 1962 • Volume 781 • Number 2



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 14, 1962 Volume 781 Number 2

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of June 1962

Examiner affirmed	367
Examiner affirmed in part	38
Examiner reversed	81
Total	486

Patents Available for Licensing or Sale

2,930,511. Leak Detecting Apparatus. Rodman H. Vanerstrom, P.O. Box 548, Chehalis, Wash.

3,041,938. Gun Rest With Magnetic Holding Means. John T. Seabrook, 5401 Park Road, Falls Church, Va.

The following 2 patents are offered by D. H. Dave Associates, 1298 E. 22nd St., Brooklyn 10, N.Y.

2,966,718. Method for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

3,037,259. Apparatus for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

General Electric Company is prepared to grant non-exclusive licenses under the following 9 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 6 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,996,894. Method and Apparatus for the Recovery of the Latent Heat of Fusion.

3,019,614. Dual Temperature Refrigeration.

3,021,696. Vent and Exhaust Arrangement for Air Conditioning Unit.

3,022,049. Heat Exchange Tubing.

3,022,360. Thermoelectric Assembly.

3,034,312. Automatic Ice Maker Control Means.

Applications for license under the following 3 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,967,160. Silyl Compounds.

2,986,548. Organopolysiloxane Resins

3,031,366. Degraded Organopolysiloxane as Adhesives.

Disclaimer

3,023,951.—*Byron A. Runde*, Farmington, and *Irvin William Borutzke*, Detroit, Mich. CONTROL APPARATUS FOR ACCOUNTING MACHINES. Patent dated Mar. 6, 1962. Disclaimer filed July 11, 1962, by the assignee, *Burroughs Corporation*.

Hereby enters this disclaimer to claims 1 and 2 of said patent.

Decisions of the Commissioner of Patents

The 1961 edition of the Decisions of the Commissioner of Patents has been released from the printer and available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: $3.50.

Adjudicated Patents

(D.C. Ill.) Biro Patent No. 2,390,636 (120—42.4), for writing instrument. Claims 1 to 3 and 6 to 11 *Held* valid and infringed. *Eversharp, Inc.* v. *Fisher Pen Co.*, 204 F. Supp. 649; 132 USPQ 423.

(D.C. Ill.) Biro Patent No. 2,397,229 (120—42.4), for writing instrument. Claims 12 to 21 *Held* valid and infringed. *Id.*

(D.C. Ill.) Biro Patent No. 2,416,896 (130—42.4), for writing instrument. Claims 4 and 11 to 14 *Held* valid and infringed. *Id.*

(D.C. Wis.) Yonkers and Lathrop Patent No. 2,975,462 (15—532), for apparatus for applying detergent to rugs and the like. Claims 3, 8, 13 and 15 *Held* valid and infringed. *Bissell Inc.* v. *E. R. Wagner Manufacturing Company et al.*, 204 F. Supp. 801; 133 USPQ 469.

(D.C. Wis.) Yonkers and Lathrop Patent No. 2,976,559 (15—532), for apparatus for applying detergent to rugs and the like. Claims 8 and 11 *Held* invalid. *Id.*

Erratum

In the OFFICIAL GAZETTE, July 3, 1962, vol. 780, p. 1, under the heading "Adjudicated Patents," column 2, line 16, "invalid" should read *valid*.

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 5, 1962.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
July 16, 1962. *Chairman, Committee on Enrollment.*

New Applications Received During June 1962

Patents	7,294
Designs	371
Plant Patents	10
Reissues	26
Total	7,701

Issue

Patents	863—No.	3,048,849 to No.	3,049,711, incl.
Designs	38—No.	193,380 to No.	193,417, incl.
Plant Patents	5—No.	2,162 to No.	2,166, incl.
Reissues	5—No.	25,222 to No.	25,226, incl.
Total	911		

New Examining Procedures

"Compact" Prosecution—Special Status

Despite the unexpected increase in the number of new applications received during fiscal 1962, the Patent Office succeeded in reducing the total workload of cases by 3,537.

A large part of this improvement appears due to the success of two new examining procedures tested during the year. The first involved setting a shortened statutory period for reply and special status for every case which came up for a third or later action by the Office. This procedure was successfully applied throughout the Office, and will be continued.

The second new procedure, based on suggestions by a number of attorneys and Examiners, has been pilot-tested in a part of the examining operation.

It involves, first, greater emphasis upon more uniform high quality of prosecution and of patents issued.

Second, wherever feasible, there is an all-out effort to cut total hours of both prosecution and examination. The first action by the Office in every case is made thorough, clear and complete. Every possible means is then used to encourage the applicant to make his first response so complete as to put the case in condition for immediate disposal. This includes developing all claims of any desired scope and wording either on filing or on the *first* response.

Thereupon, wherever feasible, the second Office action is made final, either by allowance, or by outright final rejection of some or all claims, or by final rejection with suggestions for amendment under Rule 116.

This compact procedure, while not always possible, has been found feasible in 60 to 80% of all cases. It has received the full cooperation of most applicants and attorneys. To the few attorneys who take more than their fair share of Examiner time by delaying prosecution until after final rejection, during or after appeal, or after allowance, Rule 112 and Rule 116(b) are rigorously applied.

A test program based upon this more complete action by both Office and applicant has resulted in a sharp decrease in hours needed per case. In a limited test operation, it has reduced backlog, cut in half the number of completed appeals, sharply reduced the number of older cases, and brought other incidental benefits.

This program will now be extended throughout the Office.

This notice is issued in order that all attorneys and applicants may be fully aware of the urgency under this improved procedure of consolidating the planning and prosecution of all claims of any desired wording and scope *into the original application and the first response.*

EDWIN L. REYNOLDS,
July 26, 1962. *Acting Commissioner of Patents.*

Classification Order No. 335

The following transfers are hereby ordered to take effect on Friday, July 13, 1962:

From Division 5 to Division 44
Class 181, ACOUSTICS
Subclass 0.5

From Division 23 to Division 44
Class 35, EDUCATION
Subclass 10.4

From Division 26 to Division 48
Class 307, ELECTRICAL TRANSMISSION OR INTERCONNECTION SYSTEMS
Subclasses 9 thru 87, 89 thru 108, 111 thru 157

From Division 41 to Division 26
Class 310, ELECTRICAL GENERATOR OR MOTOR STRUCTURE
Subclasses 8 thru 9.8

From Division 42 to Division 44
Class 340, COMMUNICATIONS, ELECTRICAL
Subclasses 7 and 15 thru 18

M. C. ROSA,
Director, Patent Examining Operation.

Classification Order No. 336

The following transfers are hereby ordered to take effect on Friday, July 13, 1962:

From Division 5 to Division 51
Class 84, MUSIC
Subclasses 1.01–1.28

From Division 41 to Division 65
Class 178, TELEGRAPHY
Subclasses 45 and 46.

From Division 48 to Division 51
Class 317, ELECTRICITY
Subclasses 230–241

From Division 51 to Division 65
Class 334, TUNERS
Class 343, COMMUNICATIONS, RADIO WAVE
Subclasses 700–916

From Division 54 to Division 51
Class 313, ELECTRIC LAMP AND DISCHARGE DEVICES

M. C. ROSA,
Director, Patent Examining Operation.

Classification Order No. 337

The following transfers are hereby ordered to take effect on Monday, July 16, 1962:

From Division 16 to Division 42
Class 179, TELEPHONY
Subclass 6

From Division 26 to Division 42
Class 307, ELECTRICAL TRANSMISSION OR INTERCONNECTION SYSTEMS
Subclasses 109, 110.
Class 320, ELECTRICITY, BATTERY AND CONDENSER CHARGING AND DISCHARGING
Subclass 1

From Division 37 to Division 54
Class 250, RADIANT ENERGY
Subclasses 200–239

From Division 41 to Division 42
Class 179, TELEPHONY
Subclasses 100.1–100.41
Class 346, RECORDERS
Subclass 74

From Division 54 to Division 51
Class 315, ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS
Subclasses 1–9, 32–363

H. B. WHITMORE,
Acting Superintendent of the Examining Corps.

Classification Order No. 338

The following transfer is hereby ordered to take effect on Monday, July 16, 1962:

From Division 41 to Division 5
Class 274, SOUND RECORDING AND REPRODUCING

H. B. WHITMORE,
Acting Superintendent of the Examining Corps.

Classification Order No. 339

The following transfers are hereby ordered to take effect on Friday, July 20, 1962:

From Division 23 to Division 68
Class 35, EDUCATION
Subclass 10.2

From Division 41 to Division 68
Class 178, TELEGRAPHY
Subclasses 23 and 26

From Division 42 to Division 68
Class 340, COMMUNICATIONS, ELECTRICAL
Subclasses 146.1–146.3, 172.5, 347
From Division 41 to Division 7

Class 346, RECORDERS
Except subclass 74

H. B. WHITMORE,
Acting Superintendent of the Examining Corps.

Classification Order No. 340

The following transfers are hereby ordered to take effect on Monday, July 23, 1962:

From Division 54 to Division 41
Class 315, ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS
Subclasses 10–31

From Division 41 to Division 16
Class 178, TELEGRAPHY
Subclasses 1–4.1, 15–22, 24, 25, 27–43, 62–65, 69, 70–87, 89–115

From Division 65 to Division 16
Class 340, COMMUNICATIONS, ELECTRICAL
Subclasses 19–146, 213–285, 366, 371–407

From Division 42 to Division 16
Class 340, COMMUNICATIONS, ELECTRICAL
Subclasses 147–172, 175, 176, 286–365

From Division 51 to Division 16
Class 343, COMMUNICATIONS, RADIO WAVE
Subclasses 225–228

H. B. WHITMORE,
Acting Superintendent of the Examining Corps.

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1962

Total number of pending applications (excluding Designs)	191, 614
Total number of pending Design applications	5, 955
Total number of applications awaiting action (excluding Designs)	100, 841
Total number of Design applications awaiting action	2, 048
Date of oldest new application	Feb. 1, 1961
Date of oldest amended application	Jan. 6, 1961

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) Manian, J. A. (acting), AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	8-23-61	9-8-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-6-61	11-13-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	6-2-61	6-1-61
4. (VI) FALLER, E. A., Material or Article Handling	7-13-61	8-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-4-61	8-2-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	4-7-61	5-8-61
7. (IV) ANDERSON, E. G., Optics	6-27-61	7-7-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	7-10-61	7-18-61
9. (VI) BRANSON, J. H., Pumps; Fans	9-7-61	9-1-61
10. (VI) BOYD, S. Firearms; Ordnance; Ammunition; Explosive Charge Making	8-18-61	7-18-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	7-24-61	7-18-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	6-6-61	5-3-61
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	5-4-61	4-4-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	3-27-61	3-31-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	8-14-61	8-31-61
16. (II) ROSE, R. H. (acting), Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	5-29-61	5-19-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	7-3-61	7-20-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	7-5-61	6-23-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	7-5-61	5-24-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	8-15-61	8-30-61
21. (III) MADER, R. C., Textiles	6-1-61	6-12-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	7-26-61	7-7-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	10-2-61	8-1-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	6-28-61	7-24-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	5-1-61	6-5-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5-17-61	5-4-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6-27-61	7-3-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	6-26-61	7-7-61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	6-28-61	7-3-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6-5-61	7-14-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	7-3-61	7-3-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	6-2-61	6-12-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	7-3-61	6-5-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-17-61	2-13-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	8-8-61	8-3-61
36. (V) EVANS, R. L., Measuring and Testing (part)	5-15-61	6-2-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-31-61	4-7-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-16-61	6-12-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	6-28-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-22-61	6-21-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-31-61	4-20-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-2-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-20-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	2-13-61	2-8-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-4-61	10-30-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-3-61	4-13-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	7-26-61	7-10-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-24-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	5-23-61	5-17-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-19-61	7-24-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	6-1-61	5-11-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	10-10-61	10-2-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	9-1-61	9-5-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-6-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	4-7-61	5-1-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-16-61	6-26-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-22-61	6-26-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	9-5-61	9-14-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	3-6-61	5-31-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	2-1-61	1-6-61
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-9-61	11-1-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-8-61	6-16-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-24-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	4-3-61	3-15-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	3-6-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	6-2-61	4-27-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	6-1-61	6-1-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	8-14-61	8-28-61
81. (III) HANNAH, A. B., Industrial Arts	3-8-62	3-12-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-1-62	3-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	4-5-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-24-61	6-21-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	1-30-62
95. ANGEL, C. D., Metallic Building Structures	7-11-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	9-18-61	7-6-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1965*.

Patents	Numbers 2,380,913 to 2,383,930 inclusive
Plant Patent	Number 659

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE HUBERT CECIL WYNNE

No. 6746. Decided May 18, 1962.

[49 CCPA—; —F.2d—: 133 USPQ 517]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—"MANUFACTURE OF FLAT GLASS IN CONTINUOUS RIBBON FORM."

Claims in an application entitled "Manufacture of Flat Glass in Continuous Ribbon Form" *Held* patentable over the cited prior art.

APPEAL from the Patent Office. Serial No. 359,547.

REVERSED.

Morrison, Kennedy & Campbell (*Luther E. Morrison* and *S. Augustus Demma*, of counsel) for appellant.

Clarence W. Moore (*S. Wm. Cochran*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Associate Judge JOSEPH R. JACKSON, retired

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of method claim 9 and apparatus claim 10 in application Ser. No. 359,547, filed June 4, 1953, for "Manufacture of Flat Glass in Continuous Ribbon Form." Method claims 3, 7 and 11 and apparatus claim 12 stand allowed. The sole issue is patentability over the following references:

De Bay, 972,166, October 11, 1910.
Clark, 1,424,155, August 1, 1922.

Appellant's invention relates to the obtaining of a "fire finish" on flat glass produced in continuous ribbon form. As to the nature of a "fire finish," appellant's specification states:

> In the manufacture of glass objects such as drinking goblets the surfaces are brilliant because the surfaces set as a result of heat losses achieved solely by radiation, and by heat exchange with a gaseous medium. This result is referred to by glass makers as "fire finish."

In simple terms, fire finish occurs when melted glass is allowed to cool out of contact with another surface.

Appellant's glass sheet is produced in the following manner. Molten glass from a melting tank passes through a spout which directs the glass between a pair of water-cooled casting rolls spaced apart by a distance equal to the desired thickness of the glass ribbon which emerges therefrom. During this operation the glass ribbon rapidly loses heat by conduction to the metal rolls, whereupon the ribbon surfaces in engagement therewith solidify quickly with a dull finish, or at least lacking in the degree of polish desired. The ribbon then passes along a flat supporting surface and beneath a refractory hood in which burners are located which "produce a sheet of flame which sweeps the whole upper surface of the ribbon [under the hood] * * * in the direction of the moving ribbon. * * * the flame from each of the burners * * * moves in substantial parallelism with the ribbon, the flame from each burner being in nature a sheet of flame which progressively sweeps the surface of the moving ribbon as it passes

through the heating chamber." During this operation, the top surface [1] of the ribbon is remelted. Finally, appellant states in his specification that "after the ribbon * * * leaves the heating chamber * * * it is exposed to atmosphere and the remelted * * * surface sets solely by loss of heat due to radiation and to heat exchange with a gaseous medium, hence a fire finish is obtained." It is noted that appellant gets all the polish he wants from the flame and subsequent cooling alone, without any other operation on the glass.

The claims on appeal are:

> 9. Method of manufacturing flat glass in continuous ribbon form characterized by forming the ribbon as it is flowed from a glass melting furnace under conditions to cause a surface of the ribbon to lose substantial heat by conduction, advancing the formed ribbon lengthwise and continuously, *forming a sheet of flame and directing it along said surface of the ribbon in substantial parallelism therewith and in the direction of movement of the ribbon to sweep progressively said surface of the advancing ribbon with the sheet of flame*, and to impart thereby heat to said surface to an extent at least to compensate for that heat in the surface lost during the forming of the ribbon, and then allowing the remelted surface to set solely due to radiation and to the cooling action of a gaseous medium in contact with said surface while maintaining said surface free from mechanical disturbing influences.
>
> 10. An apparatus for manufacturing flat glass in continuous ribbon form, comprising means for continuously forming glass in ribbon form from a glass melting furnace including a casting member on which the ribbon is cast, said casting member causing the surface of the ribbon in contact therewith to lose substantial heat by conduction therewith, means for advancing the formed ribbon lengthwise and continuously away from said forming means, *means for forming a sheet of flame and for directing it along said surface substantially parallel thereto and in the direction of movement of the ribbon to sweep progressively said surface during the movement of the ribbon* and to cause said surface to be remelted, and means for continuously advancing the ribbon with the remelted surface through a setting zone in which the only medium in contact with said surface is a gaseous medium to cause said surface to set solely due to radiation and to the cooling action of said gaseous medium. [Emphasis ours.]

As appellant states, claim 10 is directed to the apparatus for carrying out the method of claim 9. The above italicized passages are the aspect of the invention relied on to patentably distinguish over the references.

De Bay generally describes his invention and its purpose as follows:

> This invention relates to apparatus for making polished plate glass in an expeditious and economical manner and so as to dispense with the grinding or polishing usually employed in making this character of glass.
>
> The essential feature of the apparatus comprises means for forming a plate of glass, together with means for *fire finishing or polishing* both surfaces of the plate, and means for afterward supporting and conveying the plate to prevent clouding, marring or injuring the glazed or polished surfaces. [Our emphasis.]

The De Bay apparatus and method for producing glass ribbon differ from those disclosed by appellant primarily in three respects. First, three sets of rolls are used to size the ribbon coming from the furnace. The first two sets of rolls are cooled and longitudinally fluted. The third set of rolls is heated and these rolls "smooth out the corrugations or ridges formed in the plastic sheet by the first two pairs of rolls." Secondly, while De Bay, as does appellant, next passes the glass ribbon or "plate" beneath a heating chamber or "furnace," De Bay, contrary to appellant, states, "It is not intended that the flame shall strike the plate." De Bay also states that the heat of the heating chamber or furnace, which is suspended with its open bottom adjacent the top surface of the ribbon,

[1] Appellant's disclosure includes apparatus for placing a "fire finish" on both the top and bottom surfaces of the glass ribbon. This structure is not before us on appeal.

> • • • quickly melts a skin on the top surface of the plate, which when it cools forms the smooth glazed surface known as fire polish. The melting of the surface of the plate is liable to leave the same slightly waved or undulating, or the surface may be irregular from other causes • • •. To take out any waves, undulations or other irregularities, *the surface of the plate while still plastic is subjected to a smoothing action by means of a rubbing block 16* which is caused to rub very lightly over the surface, sufficient to smooth out the irregularities and undulations, but without disturbing the molten surface or in any way destroying or marring the glaze. [Emphasis ours.]

No such smoothing operation is included in appellant's process or apparatus.

Clark also is concerned with the production of a glass ribbon which is "pimple" free. The Clark ribbon is drawn vertically from a glass "bath" and then bent through a right angle over a roll to move horizontally. Immediately after passing over this roll, the ribbon passes over a "distributor" or slotted pipe from which "heated fluid is directed into contact with the under surface of the glass sheet." This "heated fluid" and its action are thus described by Clark:

> The action of such means is substantially a "fire-flashing" which is sufficient to fuse, or partially fuse, the immediate surface of the sheet to an extent *which will obliterate the objectionable pimpling of such surface.* This fire-flashing can be accomplished either by air preheated to the necessary temperature and directed against the surface of the glass or by gas or oil fumes directed against such surface. In the drawing I have illustrated a distributor 5 for preheated air or gas. [Our emphasis.]

The Clark "distributor" appears to be coextensive with the width of the glass ribbon, as it obviously would have to be to accomplish its stated purpose. This "distributor" is formed "either with a continuous jet opening • • • or a plurality of staggered jet openings."

It is clear to us that Clark discloses contacting a glass ribbon with either a sheet or a series of jets of "heated fluid," which may be preheated air or "gas or oil fumes." The Clark drawing, however, discloses that the "distributor" jet or jets direct the flow of "fluid" against the glass ribbon in a direction to some extent *opposite* to the direction of movement of the ribbon and at an angle thereto. A cooling jet is also employed by Clark in "back of" the "distributor," i.e., away from the "distributor" in the direction of movement of the glass ribbon, "to solidify the softened surface, when found necessary." It is pointed in the same somewhat counterflow direction as the distributor.

The Patent Office rejection of claims 9 and 10 was on De Bay in view of Clark, it being the view of both the Examiner and the Board "that it would be obvious to a person of ordinary skill in this art to substitute Clark's flame for the radiant heating means of De Bay."

Appellant objects to this combination of references on several grounds. First, it is stated that De Bay specifically teaches that his flame should not strike the surface of the glass. Accordingly, it is argued, in effect, that the combined teachings of De Bay and Clark would not suggest use of the impinging heated fluid of Clark in the De Bay device because they are mutually inconsistent. Secondly, in appellant's September 3, 1957, amendment after final rejection, the undesirability of the Clark structure when considered alone was raised when appellant contended, inter alia, that Clark's stream of heated fluid "impinging on the surface of the ribbon at high velocity and almost at right angles thereto, creates an impact resulting in the ploughing of the remelted surface of the glass." This is not supported by any proofs and is mere speculation so far as the record before us is concerned.

Appellant argues that Clark does not disclose "flames" contacting the surface of the glass ribbon. Clark, however, clearly discloses a wide choice of media which may be used to "fire flash" a surface of the glass ribbon, including "preheated" "air" and "gas or oil fumes" as all being suitable for his "fire flashing" operation. It is our opinion that one skilled in the art would consider it obvious to cause the emanation of "flames" from the Clark "distributor" if such is not, indeed, expressly disclosed in Clark's reference to gas and oil "fumes" as an alternative to preheated air. It surely would be obvious to use fire for fire flashing, though the term may not so require.

The main point for our consideration, however, is the obviousness of appellant's claimed feature of *directing his flames along the surface of his ribbon in substantial parallelism thereto and in the direction of movement thereof.* Neither De Bay nor Clark shows this feature.

Appellant alleges that the location and direction of his sheet of flame are important and unobvious for several reasons. In his September 3, 1957 amendment, previously noted, appellant listed four advantageous effects attributable to his particular flame direction. They are:

> (1) It sweeps over the surface to be remelted, so that the heat has little penetrative action and is localized mainly on the surface where it is required, while the integrity and physical form of the body of the glass is maintained with little or no disturbance.
>
> (2) It creates a heating zone of substantial length along the ribbon according to the length of the flame, thereby permitting the ribbon to move at a much faster rate than is permitted by Clark with his restricted heating zone.
>
> (3) It moves over the surface of the ribbon gently and with minimum of impact, and whatever impact there is, is transmitted in a sweeping direction tending to smooth out the surface rather than plough it.
>
> (4) It directs the heat away from the casting or sizing members or rolls where the ribbon is formed. The remelting zone must be located as close to these rolls as possible in order to conserve heat.

The position of the Patent Office Solicitor is that there is an ample basis for finding the claimed invention to be obvious in view of De Bay and Clark. With this we cannot agree. While we disagree with the view of appellant that Clark does not teach the use of a flame impinging on the glass to fire finish it, the flame which would be present in Clark's apparatus would impinge on the glass at an angle, rather than parallel to its surface, and in a direction opposite to the direction of movement, rather than in the same direction. Therefore, if this, the only relevant disclosure of Clark, were to be substituted for De Bay's radiant heating furnace, the claimed invention would not be produced. Furthermore, when De Bay's teaching is taken at face value it amounts to an instruction that flame impinging on the glass surface should not be used at all. We are therefore of the opinion that there is no suggestion in the references for such a combination of features. All these references amount to is two disclosures of different fire polishing methods which are contradictory and neither of which suggests doing it in the manner or with the apparatus disclosed and claimed by appellant.

[1] For the above reasons, the decision of the Board is reversed.

REVERSED.

MARTIN, *J.*, sat but did not participate because of illness.

U.S. Court of Customs and Patent Appeals

IN RE STEPHEN A. SZUMSKI

No. 6808. Decided May 18, 1962.

[49 CCPA—; —F.2d—; 133 USPQ 551]

1. PATENTABILITY—COMBINING REFERENCES—PROPER COMBINATION OF REFERENCES.
"Whether a combination of references is proper depends upon what they would reasonably teach a person of ordinary skill in the art."

2. SAME—SAME—VARIATIONS IN PROPORTIONS TO IMPROVE RESULTS.
"It is true, of course, that the references here would not teach exactly how effective the substituted grain meals would prove to be or what would be the optimum quantity to be used. However, a substitution of such meals for the starch which supplies carbon in Duggar on substantially a weight for weight basis would seem particularly obvious, although common sense would dictate that one should not overlook the possibility that the results might be improved with variations of that ratio."

3. SAME—INVENTION—OBVIOUSNESS—UNEXPECTED RESULTS—35 U.S.C. 103.
"Where the change over the prior art is obvious • • • 35 U.S.C. 103 prohibits the grant of a patent. The mere fact that the results attained may be unexpectedly good is not controlling."

4. SAME—PARTICULAR SUBJECT MATTER—"METHOD FOR PRODUCING ANTIBIOTICS."
The decision of the Board of Appeals refusing certain claims in an application entitled "Method for Producing Antibiotics" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 446,967.

AFFIRMED.

Norton S. Johnson (*William P. Spielman*, of counsel) for appellant.

Clarence W. Moore (*Jack E. Armore*, of counsel) for the Commissioner of Patents.

Before RICH, *Acting Chief Judge*, and MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

KIRKPATRICK, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office affirming the Examiner's rejection of claims 1 through 9 of the appellant's application Serial No. 446,967, filed July 30, 1954, for "Method for Producing Antibiotics." At the hearing, the appellant withdrew the appeal as to claim 1, leaving claims 2 through 9 for our consideration.

Claim 2, which is taken as illustrative, reads as follows:

2. An improved process for producing tetracycline antibiotics which comprises propagating a microorganism of the genus *Streptomyces* in a medium comprising a source of organic nitrogen, trace amounts of inorganic ions and a quantity from about 1% to about 10% grain meal containing from about 65% to 75% starch replacing an equivalent quantity of refined carbohydrate on a weight per weight basis.

The references relied on are:

Moyer, 2,443,989, June 22, 1948.
Duggar, 2,482,055, September 13, 1949.

A publication entitled "The Actinomycetes," by Waksman, published by Chronica Botanica, pages 100 through 105 and 191, is also reproduced in the record.

As is apparent from the illustrative claim, the application is directed to a process for propagating the appropriate microorganisms in a specified medium to produce tetracycline antibiotics. The appellant states that prior processes for producing chlortetracycline, tetracycline and oxytetracycline by the propagation of their respective

organisms requires three general classes of materials for maximum production; namely, a source of organic nitrogen such as corn steep liquor, fish, meat extracts and like substances; a source of carbohydrates such as starch or sugar; and a supplement containing inorganic ions such as ammonium, iron, magnesium, manganese, potassium, zinc, phosphate, and sulfate. He further states that the usual sources of carbohydrates have been starch or sugar.

The appellant's discovery is referred to in the application as follows:

I have now discovered that the grain meals such as corn, wheat, barley, rye and rice can be used as carbohydrate sources in fermentation media for the production of tetracycline antibiotics. The total substitution of grain meal for starch as a carbohydrate source on a weight per weight basis without a corresponding decrease in antibiotic yield is a most surprising and unexpected feature of my invention. Since corn flour constitutes approximately 65% to 75% carbohydrate, the total substitution of this ingredient in place of starch without a corresponding decrease in antibiotic yield is most unforeseeable. Inasmuch as the carbohydrate availability in grain meal is only about ¾ of that which is available in starch, under normal circumstances, one skilled in the art would expect that in order to get an equivalent yield of chlortetracycline, oxytetracycline, or tetracycline one would necessarily have to increase the grain meal level to the same carbohydrate level as that of starch. I have discovered that this increase is not at all necessary. In fact, the replacement of grain meal for starch on a weight per weight basis not only results in equivalent yields of antibiotic but, in some instances, results in considerably higher yields.

The Duggar patent discloses a process for the production of aureomycin, identified by the Examiner as chlortetracycline. It describes the use of a nutrient medium containing, "in common with media in which other fungi are grown for the production of antibiotic substances," a source of carbon such as a soluble carbohydrate, a source of nitrogen, certain mineral salts such as phosphates, and traces of various metals usually found as impurities in the other constituents. It specifically discloses that the carbon source may be ordinary starch, the soluble starches, or various sugars. It also discloses that corn steep liquor may be used as a source of nitrogen.

The Moyer patent relates to the production of the antibiotic penicillin by culturing or fermenting penicillin producing fungus organisms in a nutrient medium. Among the materials disclosed by the patent as suitable carbohydrate sources in the nutrient medium are modified and unmodified starch and grain mashes. Concerning the latter, the patent states:

Grain mashes, such as corn, wheat, or barley mash, either malted or unmalted, may also be used. Such mashes are particularly suitable because they provide at a low cost not only starch and dextrins, but also an appreciable quantity of minerals, growth factors, and proteinaceous material which are favorable to penicillin production and stabilization in the fermentation medium. Some of the grain mashes, as well as some whey concentrates, are sufficiently rich in protein that extra proteinaceous adjuncts need not be added to the medium. Various mixtures and combinations of the above carbon sources may be used.

The Waksman publication was referred to by the Examiner in making the statement that the cultures employed in the appellant's process had been shown to be capable of utilizing whole grain meals. Although the Board apparently took note of that statement in summarizing the Examiner's position, the Board's decision does not mention the publication by name.

The Board held the appealed claims to be unpatentable over Duggar in view of Moyer. It regarded Moyer as including a clear teaching that grain meals may be used in place of pure starch in nutrient media

for the cultivation of an antibiotic substance. In view of that teaching, it held it would be obvious to those skilled in the art that grain meals could be used in place of starch as the source of carbon in the nutrient media used by Duggar for producing aureomycin.

The appellant urges that his process is patentable "because it eliminates from the prior art the step of refining the carbohydrate without eliminating its function." He also contends that his process provides an unexpected result which demonstrates that it amounts to patentable advance in the art. In support of those contentions, the appellant refers to an affidavit which he provided reporting tests wherein use of corn flour in place of an equal weight of starch in nutrient for producing chlortetracycline resulted in approximately 15% greater yield.

It is clear that the Board correctly regarded the issue to be whether it was obvious to substitute grain meals for the starch of Duggar as a source of carbon in Duggar's process for producing a tetracycline antibiotic. The fact that the substituted material has not been refined while the material it replaces has, does not justify the appellant's strained analysis of his procedure as eliminating a step in the prior art process.

The facts here contrast sharply with those in *Lawther* v. *Hamilton*, 124 U.S. 1, discussed at length by the appellant. In that case, the prior art taught extraction of oil from oil seeds by crushing the seeds between revolving rollers and then passing them under heavy stones or mullers with the addition of water. As stated by the court, the inventor found that "by altogether omitting one of the steps of the former process—the grinding and mixing under the muller-stones—and mixing in the mixing-machine by means of steam, a great improvement was effected in the result." In the present case, the steps in the manufacture of the food selected for the microorganism are no more a part of the process sought to be patented than are the steps in the manufacture of the steel used in the machine intended to carry out the process of the *Lawther* case. The use of meal grain instead of starch can hardly be regarded as constituting a part of the process claimed.

The appellant, in referring to Moyer's disclosure of the use of grain meals in making penicillin, suggests that "much more than the inclusion of the words 'grain meals' in a long list of nutrients would be needed" to teach the substitution of grain meals in the production of other antibiotics. However, in referring to grain mashes as "particularly suitable because they provide at a low cost not only starch and dextrins, but also an appreciable quantity of minerals, growth factors, and proteinaceous material which are favorable to penicillin production and stabilization in the fermentation medium," Moyer has clearly done much more than merely include the words "grain meals" in a long list of nutrients. He has pointed out advantageous features of grain mashes which would hardly be ignored by one working in the art.

[1] Whether a combination of references is proper depends upon what they would reasonably teach a person of ordinary skill in the art. *In re Krogman*, 42 CCPA 1037, 223 F.2d 497, 106 USPQ 276. We are convinced that Moyer's disclosure would make it obvious to such person to employ grain meals in place of starch in Duggar's process for culturing aureomycin. Certainly, nothing has been pointed out in the record which would demonstrate that a person of ordinary skill would have reason to believe that the substitution would not work.

In re Shaffer, Jr., 43 CCPA 758, 229 F.2d 476, 108 USPQ 326, cited by the appellant, merits little comment here. In that case, a rejection on a combination of references was found improper on the basis that the applicant had attained a different result by discovering and solving a problem which was wholly unrecognized by the prior art.

[2] It is true, of course, that the references here would not teach exactly how effective the substituted grain meals would prove to be or what would be the optimum quantity to be used. However, a substitution of such meals for the starch which supplies carbon in Duggar on substantially a weight for weight basis would seem particularly obvious, although common sense would dictate that one should not overlook the possibility that the results might be improved with variations of that ratio.

[3] Where the change over the prior art is obvious, as here, 35 U.S.C. 103 prohibits the grant of a patent. The mere fact that the results attained may be unexpectedly good is not controlling. *In re Rau*, 45 CCPA 852, 253 F.2d 437, 117 USPQ 215; *In re Libby*, 45 CCPA 944, 255 F.2d 412, 118 USPQ 94; *In re Paul*, 45 CCPA 793, 252 F.2d 306, 116 USPQ 581, and cases cited therein. We, therefore, think the Board correctly found that the appellant's affidavit was not persuasive of patentability.

[4] For the foregoing reasons we affirm the decision of the Board of Appeals.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

U.S. Court of Customs and Patent Appeals

IN RE ROBERT B. GORDON AND WALTER J. HURFORD

No. 6810. Decided May 18, 1962.

[49 CCPA—; —F.2d—; 133 USPQ 553]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE THE COURT—EFFECT OF GENERAL AFFIRMANCE BY BOARD OF APPEALS—REASONS OF APPEAL.

"While the Board did not specifically refer to the Examiner's second rejection, it did affirm the Examiner generally and hence affirmed this rejection as well. Appellants have assigned as error the Board's refusal to reverse this rejection, thereby bringing it before us for consideration."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—"METHOD OF PRODUCING SOUND AND HOMOGENEOUS INGOTS."

The refusal of certain claims by the Board of Appeals in an application entitled "Method of Producing Sound and Homogeneous Ingots," as unpatentable over the prior art, is reversed.

APPEAL from the Patent Office. Serial No. 367,524.

REVERSED.

Frederick Shapoe for appellants.

Clarence W. Moore (*Raymond E. Martin*, of counsel) for the Commissioner of Patents.

Before RICH, *Acting Chief Judge*, and MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 1, 2, 4, 5, 6, 9 and 10 in the

application of Robert B. Gordon and Walter J. Hurford, Ser. No. 367,524, filed July 13, 1953, entitled "Method of Producing Sound and Homogeneous Ingots." The sole issue is patentability over the following references:

Rohn, 1,555,313, September 29, 1925.
Herres et al., 2,541,764, February 13, 1951.
Herres, 2,640,860, June 2, 1953.

Appellants' specification discusses the background of their invention as follows:

> Considerable difficulties have been encountered in producing sound, clean and homogeneous ingots from the refractory and easily oxidizable metals and alloys thereof, such, for example, as titanium zirconium, uranium and vanadium, and various alloys thereof. These metals in particular react readily with oxygen and nitrogen to form compounds which are extremely difficult to decompose in order to remove the anion component thereof. In the process of preparing ingots from these elements and their alloys by the most meticulous procedures known to the art, there are inevitably produced ingots whose surfaces are thickly contaminated with oxides and other impurities, such, for example, as the salts that may have been employed in producing the metals. The interior of the ingots is usually porous and contains much entrapped gases. The alloys of these elements show considerable variations in composition from point to point along the ingots. At the present time, for subsequent processing, the accepted procedures involve the removal of a large portion of the cast ingots, particularly at the surfaces, which portions are discarded. The core of such ingots is often rolled or worked into bars or rods in order to homogenize the composition and to reduce the porosity. Such bars or rods are then cut or otherwise reduced to small particles and remelted in an arc melting furnace into a useable ingot of reasonably sound structure. However, these ingots, though more homogeneous that the first ingots, are contaminated from gases picked up during fabrication for remelting and the products made therefrom vary considerably in their properties.

As to their own invention, appellants state:

> The object of this invention is to provide a process whereby sound, clean ingots of a high degree of homogeneity are produced by a simple process involving two successive arc melting operations with substantially no waste of the metal being made into the final ingot.
>
> * * * * * * *
>
> We have discovered a simple process for producing sound, clean and highly homogeneous ingots from refractory and easily oxidizable metals, which are usually in the form of powder or sponge as a result of reduction from the oxide or other compound thereof, by arc melting the metals as a consumable electrode in an inert atmosphere or vacuum to produce an initial ingot, and then employing said initial ingot as a consumable electrode in a second arc melting operation also in an inert atmosphere or under vacuum, whereupon the second arc melting produces a final ingot having the desired properties. * * * All intermediate processing with attendant waste and scrap as required heretofore, is completely eliminated.

Appellants disclose that their consumable electrode is prepared from sponge or other crude form of the refractory metal to be melted. The sponge metal is "pressed into compacts at pressures of the order of 40,000 p.s.i. * * *." Appellants state that the compacts produced from such sponge metals "usually contain a substantial proportion of salts, such as magnesium chloride, magnesium, and metal oxides, such as zirconium oxide, present along with small amounts of entrapped nitrogen and other gases." These compacts are then "assembled together by tack welding them at several points while in an inert atmosphere, such, for example, as argon. By such welding procedures, a composite electrode member may be prepared which may be 4 feet long by 4 inches by 4 inches in cross-section."

Claim 1 is exemplary and reads as follows:

> 1. In the process of preparing sound and highly homogeneous ingots from easily oxidized refractory metals, the steps comprising preparing an electrode of the refractory metal, placing an end of the prepared electrode within a cooled mold, passing an electrical current between the electrode and the mold whereby the electrode is progressively melted from said end and is deposited in the bottom of the mold, the molten metal deposited in the mold progressively solidifying to build up an ingot, the melting of the electrode being carried out in the absence of a reactive gas, the resulting solidified ingot characterized by a relatively poor, contaminated surface and inhomogeneity, thereafter employing the entire resulting ingot as a second electrode and remelting only such ingot into a second ingot under similar conditions to the preparation of the first ingot whereupon the second ingot is characterized by a clean surface relatively free from contaminations and the metal in the ingot is highly homogeneous.

The Rohn reference discloses a process of "degasifying metals," by repeatedly melting them in a "furnace," specifically an induction furnace, under critical temperatures and reduced pressures, which are *different* for each melt. Referring to the effect that such remelting has on the chemical composition of the metals treated, Rohn states, "before and after the melting the chemical composition *differed but immaterially*." [Emphasis added.] In particular we note that Rohn nowhere discloses that it is an aim of his process to remove oxide and salt impurities from his melted metal. Nor does he suggest arc melting.

The Herres et al. disclosure pertains to a "method and apparatus for melting refractory metal, and more particularly to a method and apparatus for reducing powdered metals to ingot or casting form in which the melting and casting are performed concurrently." The Herres et al. ingots are formed in the following manner: powdered metal is fed in a continuous stream to a cylindrical chamber; in this chamber the metal is melted by an arc between one end of a consumable cylindrical electrode and the powdered metal. The Herres et al. electrode material is replenished by introducing powdered metal at the other end of the electrode and arc melting this metal by means of an arc between a non-consumable electrode and the powdered metal. The Herres et al. consumable electrode, accordingly, is consumed at one end and simultaneously built up at the other. It can be seen, therefore, that the Herres et al. ingots are formed in part by metal arc melted twice and in part by metal arc melted only once. As in appellants' invention, the Herres et al. arc welding steps preferably "take place in an atmosphere filled with inert gas such, for example, as argon or helium, or in a vacuum * * *." Herres et al. also disclose that melting of refractory metals in crucible-type furnaces is extremely difficult and generally unsatisfactory because of the tendency of the metals to react with the ceramic and contaminate the metal. By various means, including water cooling their ingot-containing chamber walls, Herres et al. obviate this problem. We note, however, that the Herres et al. disclosure does not allege that any mechanical, physical, or chemical property of the original powdered metal is improved by the arc melting procedure disclosed. Particularly, no disclosure exists in Herres et al. indicating that oxide and salt impurities might be removed from a metal by arc melting.

Herres discloses a process for converting, by arc-melting, a consumable electrode of a refractory metal such as titanium, of a given cross-section, into an ingot of substantially larger cross-section. The consumable Herres electrode "is made by pre-forming titanium powder or titanium sponge metal up to one inch in particle size at a pressure of approximately 15 tons per sq. in. to form sticks of convenient length and cross section." A mechanism is provided for successively flash welding these "sticks" and feeding them toward the furnace in

which the electrode metal is being melted. The Herres ingots may be made either by continuously arc melting the electrode material alone, or by introducing into the ingot-forming, metal-melting chamber additional "alloying metals or elements" thereby forming an ingot composed in part of electrode material and in part of these additional metals or elements. As in the Herres et al. disclosure, Herres discloses that:

> An ambient atmosphere is maintained about the titanium-base sticks, as well as within the furnace and about a delivery end thereof that is non-contaminating of the titanium. Gases which are inert to titanium, such as argon, helium and neon, or a vacuum may be employed for this purpose.

As is the case with Rohn and Herres et al., Herres does not disclose that oxide and salt impurities might be removed from a metal by arc melting.

The appealed claims stand rejected as unpatentable over (1) Rohn in view of Herres et al. and Herres, or (2) Herres et al. in view of Rohn and Herres.

As to the first rejection, the Examiner stated:

> It is considered non-inventive to modify the double melting process of Rohn by a double arc melting technique of the type shown by Herres et al. (1). In Rohn the reasons for and results obtained by the double melting are disclosed to the extent that only ordinary skill would be necessary to modify the process in accordance with Herres et al. (1). Use of consumable electrodes in melting processes is old and well known, and it is also well known that consumable product metal briquette-type electrodes may be used to produce molten refractory metal as shown by Herres (2). Utilization of the well known techniques of Herres et al. (1) and Herres (2) would produce nothing unexpected.

In affirming this rejection of the Examiner, the Board stated in part that "we regard the teaching in Rohn as constituting the essential principles upon which the present process is based."

We cannot sustain this rejection as we find both the Examiner and the Board fundamentally in error as to what are "the reasons for and results obtained by" and the "essential principles" of appellants' process.

The main result obtained by appellants' invention is, as we see it, that an ingot of refractory metal may be produced thereby with "substantially no waste of the metal being made into the final ingot." The "attendant waste and scrap as required heretofore, is completely eliminated" by appellants' process. This point is repeatedly made by appellants in their specification and in their objection to the Patent Office's combination of references. Commenting on the pertinence of the Herres et al. reference, for example, appellants, in their brief before this court, state that "as long as fresh metal powder from tank 41 flows into the second arc melting region in Herres et al. (1) *it introduces impurities, non-homogeneity and leads to a defective ingot structure.*" [Emphasis added.]

We note that the Board itself recognized the deficiency of the prior art, particularly with reference to Rohn, when it said:

> Since the Rohn patent is limited to the treatment of metals which are not refractory in their nature, the problems referred to by appellants would not exist.

Accordingly, in view of our understanding of what appellants' invention is, we find the reasoning behind this rejection untenable.

[1] While the Board did not specifically refer to the Examiner's second rejection, it did affirm the Examiner generally and hence affirmed this rejection as well. Appellants have assigned as error the Board's refusal to reverse this rejection, thereby bringing it before us for consideration.

The Examiner succinctly stated his second rejection as follows:

> Furthermore, Herres et al. (1) could be modified without invention in accordance with Rohn by omitting the powder metal from hopper 41 [the second source of powdered metal in the Herres et al. disclosure] and utilizing electrode 31 as the sole source of metal for the final ingot.

We are unable to find in Rohn any suggestion or reason for so modifying Herres et al., as assumed by the Examiner, even if the results obtained by appellants in their invention were being sought after. It is not altogether clear to us, moreover, how one would modify Herres et al. "in accordance with Rohn." Rohn melts over differing periods with varying pressure and temperature conditions in an induction furnace for the sole purpose of degasifying thoroughly. We do not find anything in Rohn which would suggest any modification of the Herres et al. structure, or its operation. We believe these references would not suggest to one skilled in the art that *double arc melting* of a refractory metal would result in the allegedly unexpected removal of oxides and other contaminants from the metal.

[2] For the above reasons the decision of the Board is reversed.

REVERSED.

MARTIN, *J.*, sat but did not participate because of illness.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,255,313, C. Ellis, Ethylenic-alpha-beta synthetic resins, **filed** Mar. 18, 1960, D.C., S.D.N.Y., Doc. 60/1118, *Ellis-Foster Company* v. *Archer-Daniels-Midland Company*. Action dismissed for lack of prosecution Jan. 3, 1962. **Same, filed** June 24, 1960, same, Doc. 60/2526, *Ellis-Foster Company* v. *Atlas Powder Company*. Stipulation and order dismissing action under Rule 41(a) Apr. 12, 1961.

2,455,330, W. C. Denison, Jr., Hydraulic apparatus; **2,502,546**, C. E. Adams, same; **Re. 24,048**, F. J. Wright, same, **filed** June 11, 1962, D.C. Colo. (Denver), Doc. 7596, *American Brake Shoe Company* v. *Sundstrand Corporation*. **Same, filed** June 12, 1962, D.C. Md. (Baltimore), Doc. 13872, *American Brake Shoe Company* v. *Warner-Fruehauf Trailer et al.* **Same, filed** July 3, 1962, D.C. N.D. Ill. (Chicago), Doc. 62c1291, *Sundstrand Corporation* v. *American Brake Shoe Company*.

2,457,310, D. N. Judelshon, Cutting machine, **filed** Dec. 12, 1958, D.C., S.D.N.Y., Doc. 140/371, *Oscar I. Judelshon, Inc.* v. *G. & W. Leather Goods Supply Co., Inc.* Order of discontinuance Dec. 8, 1960.

2,461,464, R. Aronstein, Filter for fluorescent screens, **filed** Mar. 7, 1956, D.C., S.D.N.Y., Doc. 107/346, *Transmirra Products Corporation et al.* v. *Celanese Corporation of America*. Stipulation and order of dismissal Nov. 14, 1956.

2,470,990, F. H. Kennedy, Method of making inflated articles, **filed** Feb. 10, 1959, D.C., S.D.N.Y., Doc. 143/2, *Duopac Inc. et al.* v. *San-I-Toy Co. etc.* Order of dismissal for lack of prosecution Dec. 9, 1960.

2,498,251, E. S. Creel, Drill bit; **2,978,049**, Skidmore and Crook, Stabilizer for drill bit, **filed** June 25, 1962, D.C., N.D. Tex. (San Angelo), Doc. 904, *Skidmore-Crook Machine Tool Manufacturing Co.* v. *Economy Bit and Supply Co.*

2,502,546. (See 2,455,330.)

2,519,846. (See 2,679,214.)

2,679,214, S. M. Nampa, Freight loading; **2,519,846** (added by amended complaint Mar. 21, 1961), same, **filed** June 23, 1960, D.C., E.D. Mich. (Detroit), Doc. 20250, *Evans Products Company* v. *Sparton Corporation*. Complaint dismissed June 7, 1962.

2,713,690, C. Schneider, Bed or divan spring arrangement; **2,878,490**, same, Foldable sofa bed, **filed** June 4, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/746–WM, *Charles Schneider et al.* v. *Metalcraft Products Co., Inc.*

2,733,647, D. J. Bauer, Plow attachment, **filed** Jan. 29, 1959, D.C., S.D. Ill. (Peoria), Doc. P–2201, *Donald J. Bauer et al.* v. *Yetter Manufacturing Co., Inc.* Order dismissing complaint June 4, 1962.

2,765,737, J. R. Thomas, Stencil holding hand stamp, **filed** June 12, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/794–WB, *Weber Marking Systems, Inc.* v. *Alco Distributors, Inc. et al.*

2,801,630, A. R. Moore, Cervical collar; **2,911,970**, W. L. Bartels, same, **filed** June 8, 1962, D.C. Oreg. (Portland), Doc. 62/222, *Florida Brace Corporation et al.* v. *William L. Bartels et al.*

2,819,558, S. Freimauer, Self locking reed sounding unit, **filed** June 8, 1962, D.C., S.D.N.Y., Doc. 62/2049, *Frey Fastener Corporation et al.* v. *Paul E. Sernau, Inc. et al.*

2,820,918, R. Aronstein, Optical device for therapeutic and other purposes, **filed** Aug. 20, 1959, D.C., S.D.N.Y., Doc. 149/362, *Transmirra Products Corporation* v. *Koppers Company, Inc.* Order dismissing action with prejudice Jan. 24, 1962. **Same, filed** June 20, 1960, same, Doc. 60/2416, *Transmirra Products* v. *Monsanto Chemical Company*. Consent order of dismissal with prejudice Jan. 24, 1962.

2,828,194, Hopkins and Easley, Etching, **filed** June 11, 1962, D.C., N.D. Fla. (Pensacola), Doc. 1236–P, *The Dow Chemical Company* v. *Pensacola Engraving Company, Inc. et al.*

2,837,227, M. J. Lugash, Load elevator for motor trucks; **2,989,196**, same, Hydraulic hoist for vehicles, **filed** June 6, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/757–WB, *Max J. Lugash* v. *Santa Anita Manufacturing Corporation*.

2,878,490. (See 2,713,690.)

2,899,874, W. O. Normandin, Manufacture of gusset type envelopes; **2,945,616**, same; **2,945,617**, same, **filed** June 25, 1962, D.C., W.D.N.Y. (Buffalo), Doc. 9768, *Canada Envelope Company* v. *Rochester Envelope Co., Inc.*

2,911,970. (See 2,801,630.)

2,913,046, Sharp and Frymire, Sliding closure construction; **2,917,789**, C. B. Le Bon, Protective barrier means for door frame construction; **2,918,708**, Sharp and Frymire, Corner joint structure, **filed** Oct. 12, 1960, D.C., N.D. Ohio (Toledo), Doc. 8511, *Arcadia Metal Products* v. *The Toledo Plate & Window Glass Co.* Stipulation and order dismissing cause without prejudice June 5, 1962.

2,917,789. (See 2,913,046.)

2,918,708. (See 2,913,046.)

2,943,289, Colten and Watson, Heating structure; **2,997,568**, Leopold and Evancich, same, **filed** June 12, 1962, D.C., S.D. Ind. (Indianapolis), Doc. 62-C-233, *Easy-Heat, Inc.* v. *Heated Concrete Products, Inc. et al.*

2,945,616. (See 2,899,874.)

2,945,617. (See 2,889,974.)

2,950,016, A. J. Thomas, Crane boom guard attachment; **2,989,194**, same, **filed** Apr. 6, 1962, D.C., E.D. Ark. (Little Rock), Doc. LR-62-C-66, *Saf-T-Boom Corporation* v. *Crane-Boom Guard Co., Inc. et al.* Consent decree: defendants enjoined May 21, 1962.

2,978,049. (See 2,408,251.)

2,981,086, S. Ludwig, Shaped knitted collars and methods of manufacture thereof, **filed** June 15, 1962, D.C., E.D. Pa. (Philadelphia), Doc. 31584, *Colnit, Inc.* v. *Clas Trims, Inc.* Same, **filed** June 8, 1962, D.C., S.D.N.Y., Doc. 62/2043, *Colnit, Inc.* v. *Hilton Knitting Ltd.*

2,989,194. (See 2,950,016.)

2,989,196. (See 2,837,227.)

2,995,915, E. I. Klein, Table lighter, **filed** May 29, 1962, D.C., S.D.N.Y., Doc. 62/1943, *E. M. Stevens Corporation* v. *Henry Wedemeyer, Inc.*

2,997,568. (See 2,943,289.)

3,000,527, W. C. Jennings et al., Handle for containers, **filed** Dec. 11, 1961, D.C., N.D. Okla. (Tulsa), Doc. 5307, *Sun Industries, Inc.* v. *Plastic Molding Company, Inc. et al.* Consent decree; patent held valid; defendant's counterclaim dismissed (notice June 1, 1962). Same, **filed** June 7, 1962, D.C. Md. (Baltimore), Doc. 13/868, *Sun Industries, Inc.* v. *George W. Walker.*

3,009,129, C. E. Kirk, Multiform stain-absorbing cable-connector assembly, **filed** May 31, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/735-TC, *Glenair, Inc.* v. *Sunbank Electronics, Inc. et al.*

3,016,909, L. A. Schrock, Hair curlers, **filed** May 28, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1077, *Louise Aby Schrock* v. *Gaylord Products, Inc.*

3,019,678, C. K. Le Fiell, Tube tapering machine, **filed** May 29, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/732-Y, *Cecil K. Le Fiell et al.* v. *Hewitt Manufacturing Co., Inc.* Same, **filed** May 31, 1962, Ct. Cls., Doc. 182/62, *Cecil K. Le Fiell et al.* v. *The United States.* Same, **filed** Apr. 16, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/553-Y, *Cecil K. Le Fiell et al.* v. *Mark V. Water Ski Company.* Consent decree; patent held valid and infringed; defendant enjoined (notice June 7, 1962).

3,021,695, R. C. Voigtmann, High density polyethylene ice mold; **Des. 190,839**, same, Ice tray or similar device, **filed** June 6, 1962, D.C. Minn. (Minneapolis), Doc. 4/62/166, *The Dole Valve Company* v. *Sperzel Company.*

3,022,204, Muller and Albrecht, Process for nitriding metals, **filed** Apr. 30, 1962, D.C., E.D. Mich. (Detroit), Doc. 22527, *Kolene Corporation* v. *Commercial Steel Treating Corporation.* Same, **filed** May 31, 1962, D.C., E.D. Mich. (Detroit), Doc. 22628, *Kolene Corporation* v. *H. John Sheppard et al.*

Re. 24,048. (See 2,455,330.)

Des. 190,839. (See 3,021,695.)

Erratum

In the OFFICIAL GAZETTE, Issue of June 19, 1962, vol. 779, p. 571, under the heading "Patent Suits," column 2, line 40, strike out "2,889,650(*a*), C. P. Hankus, Artificial tree"; same column, line 41, for "same" insert *Artificial tree.*

REISSUES

AUGUST 14, 1962

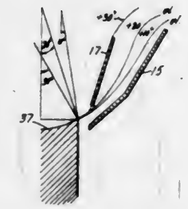
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,222
VARIABLE BEAM ELECTRON GUN

Arie L. Eichenbaum, Levittown, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Original No. 2,996,640, dated Aug. 15, 1961, Ser. No. 775,195, Nov. 20, 1958. Application for reissue Feb. 26, 1962, Ser. No. 176,500

9 Claims. (Cl. 315—15)



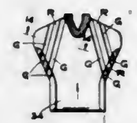
1. An electron gun for producing and shaping an electron beam comprising a cathode having an electron emitting surface with a predetermined width, a beam-forming electrode and a beam-focusing electrode, said electrodes each having a single aperture in a plane located adjacent to said emitting surface at a distance from said surface less than one half of said width, and terminal means for applying different variable voltages to said electrodes to vary the convergence-divergence angle of the beam.

25,223
SLIDE FASTENERS

William Mikulas, Staten Island, N.Y., assignor to Conmar Products Corporation, Newark, N.J., a corporation of New Jersey

Original No. 2,810,174, dated Oct. 22, 1957, Ser. No. 380,786, Sept. 17, 1953. Application for reissue July 18, 1958, Ser. No. 755,823

31 Claims. (Cl. 24—205.15)



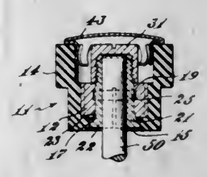
28. A slidable fastener member to connect and disconnect adjacent rows of stationary fastener elements, said member comprising a front and a back section connected by a neck at one end, each section having a laterally extending projection at each side adjacent said neck, and having flanges along both sides, the flanges of each section being presented to the other section and extending from the opposite end of the sections towards said projections and terminating short of the same, to guide said elements into engagement with one another, each projection of one section having a groove in its inner face, said grooves converging towards said neck.

25,224
CONTROL KNOB

Ralph Abrams, Sharon, Mass., and Warren H. West, Seabrook Beach, N.H., assignors to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts

Original No. 2,861,825, dated Nov. 25, 1958, Ser. No. 442,812, July 12, 1954. Application for reissue May 31, 1960, Ser. No. 33,068

8 Claims. (Cl. 287—52.06)



3. A control knob assembly comprising: a sleeve which is longitudinally split at one end for radial resiliency at that end, which has a smooth bore throughout its length adapted to accommodate a shaft, and which has an outside threaded end portion, the remainder of the outside being smooth; a knob body having an axial bore throughout which on one side engages said smooth portion of said sleeve, [and] which has on the other side an axial recess surrounding said threaded end portion of said sleeve, clearing it with an annular space between sleeve and knob body *and which has a transverse face at the bottom of said axial recess*; a nut having tool engaging means and a thread fitting said threaded end portion of said sleeve *and said nut, oppositely to the tool engaging means, bearing against said transverse face at the bottom of said axial recess of the knob body*, the outer surface of said nut being with radial clearance accommodated by said recess of said knob and [being] *said recess being at least substantially as high as said nut, so that said nut is* substantially confined therein when engaging said end portion of the sleeve *and bearing against said transverse face of the knob body*; and wedging means including tapered surfaces surrounding said split end of said sleeve for radially compressing said sleeve at said split end by tightening said nut; whereby the shaft is engaged upon relative axial movement of sleeve, nut and wedging means and the nut is when tightened protected by the knob body against loosening and accidental disengagement of shaft and knob.

25,225
SHORE ATTACHMENT COMBINATION

Donald B. Moritz, Deerfield, Ill., and Hugh J. Ferguson, San Francisco, Calif., assignors to Waco-Porter Corporation, a corporation of Minnesota

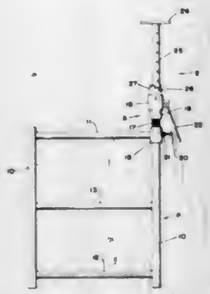
Original No. 2,988,318, dated June 13, 1961, Ser. No. 846,020, Oct. 12, 1959. Application for reissue Sept. 29, 1961, Ser. No. 173,596

(Filed under Rule 47(a) and 35 U.S.C. 116)

7 Claims. (Cl. 248—354)

5. The combination of a longitudinally extended shore staff and a removable device for attaching said staff in adjustably telescoped relation to a tubular leg of a shore panel, said panel including a ledger extending radially of said leg near one end of said leg, said device includ-

ing: first and second body portions of generally cylindrical form each with one end threadably engaged in axial alignment, the first body portion having its other end formed with an inward slot and adapted to receive socket-wise the said end of the tubular leg with said ledger engaged in said slot, and radial clamping bolt means threaded through the first body portion into engagement with said leg diametrically from said slot for securing the device on the end of the leg, the other end



of said second body portion being adapted to provide a reaction surface engageable by stop means on the said shore staff for supporting the latter against inward telescoping motion relative to the said leg; and stop means on the staff engaging said reaction surface, said stop means being selectively longitudinally positionable on said staff for determining a telescoped relation of the staff to said device and thereby to said tubular leg.

25,226

VOLTAGE-REGULATOR CIRCUIT

William J. Heacock, Jr., Levittown, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois

Original No. 2,826,735, dated Mar. 11, 1958, Ser. No. 530,384, Aug. 24, 1955. Application for reissue Jan. 28, 1960, Ser. No. 5,327

8 Claims. (Cl. 323—22)



1. A voltage-regulator circuit for supplying a constant magnitude direct-current voltage to a load and normally having circuit capacitance coupled across the output terminals thereof which tends to cause the voltage-regulator circuit to oscillate, the voltage-regulator circuit comprising: supply circuit means for supplying a direct-current voltage; an electron-discharge device for adjusting the magnitude of the direct-current voltage supplied to the load; amplifier circuit means responsive to variations in the magnitude of the voltage supplied to the load for controlling the operation of the electron-discharge device to compensate for such voltage variations; first impedance means for isolating the closed loop feed-back circuit formed by the electron-discharge device and the amplifier circuit means from the circuit-capacitance for minimizing undesired high-frequency phase shift introduced thereby which tends to cause this closed loop feed-back circuit to undergo high-frequency oscillations; and second impedance means for by-passing the first impedance means for enabling normal operation of the voltage-regulator circuit for the lower frequency components of the load current variations.

PLANT PATENTS

GRANTED AUGUST 14, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,162

ROSE PLANT

Gordon J. Von Abrams, Portland, Oreg., assignor to Eldon Pinkeney Dering, Scappoose, Oreg.

Filed Aug. 3, 1961, Ser. No. 129,193

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the "hybrid tea" class, substantially as shown and described, characterized particularly by its tall vigorous growth habit and its large flowers, the petals of which are red on their inside face and yellow on their outside face.

2,163

PEACH TREE

John B. Robison, Rte. 1, Greer, S.C.

Filed Sept. 19, 1961, Ser. No. 139,322

1 Claim. (Cl. 47—62)

A new and distinct variety of peach tree substantially as shown and described characterized particularly as to novelty by fruit having the combination of a late ripening season after the J. H. Hale peach and a few days before the Rio Oso Gem peach, a most attractive form being slightly elongated from apex to cavity, having a bright red cheek and bright golden ground color diffused with red, and a smooth suture line, a most delicious flavor subacid with slight indication of soluble tannin tending to lend full bodied flavor, and tendency to non-browning of the flesh.

2,164

ROSE PLANT

Robert G. Jelly, Richmond, Ind., assignor to E. G. Hill Co., Inc., Richmond, Ind., a corporation of Indiana

Filed Sept. 29, 1961, Ser. No. 141,923

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of good length of its flower stems and their consequent suitability for cut flowers, attractive and well formed buds of large and commercially usable size, a distinctive and attractive pink general color tonality of the flowers, and good keeping qualities of the flowers.

2,165

ROSE PLANT

Robert G. Jelly, Richmond, Ind., assignor to E. G. Hill Co., Inc., Richmond, Ind., a corporation of Indiana

Filed Sept. 29, 1961, Ser. No. 141,924

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an upright habit of plant growth, extremely attractive and glossy foliage, good flower productivity, a high-centered and substantially perfect bud form, a distinctive and attractive white general color tonality of the flowers, good texture of the flower petals, and good keeping qualities of the flowers.

2,166

PEACH TREE

Robert A. Callison, 6808 Ave. 404, Dinuba, Calif.

Filed Oct. 10, 1961, Ser. No. 144,275

1 Claim. (Cl. 47—62)

A new and distinct variety of peach tree, as illustrated and described, which is hardy, vigorous, and productive, the tree being a consistently good bearer, both after mild and cold winters, of uniformly large and symmetrical freestone fruit having yellow skin overspread to a substantial extent with a bright red blush, and yellow flesh without red fibers; the variety being characterized—in comparison to the Redtop peach—by generally the same harvest season but having a brighter exterior color; and further characterized by sub-acid, distinctly delicately flavored, fruit having medium firm and melting flesh which ripens evenly and skin which has no astringent flavor, the skin being tenacious to the flesh when the fruit is hard-ripe but frees when soft-ripe.

PATENTS

GRANTED AUGUST 14, 1962

GENERAL AND MECHANICAL

3,048,849
EXPLOSIVELY POWERED APPARATUS

Charles J. De Caro, Cleveland, and Rowland J. Kopf, Rocky River, Ohio, assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Jan. 31, 1956, Ser. No. 562,444
10 Claims. (Cl. 1—44.5)

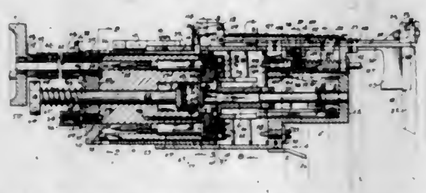


1. An explosive cartridge to be received in a chamber of an explosively powered device having a barrel through the bore of which a driven element is propelled by a fluid force released upon ignition of said cartridge, said cartridge being adapted for extraction and comprising an explosive charge and a ductile pliable plastic body member having a socket closed at the front end by a base integral with said body and at the other end by an inserted rimmed primer member seated in a countersink, said body extending outwardly of said countersink in substantially flush relationship for safe mounting of said primer member on said body, said explosive charge being in said socket, and expandible means adapted to seal the fluid force behind said driven element upon detonation of said explosive charge, said means comprising substantially the entire portion of said body member adjacent the base of said socket and including said base.

3,048,850
UNIVERSAL STUD DRIVER

Arden L. Schilling, 2722 S. Castle Drive, Tucson, Ariz.

Filed Mar. 17, 1959, Ser. No. 799,886
6 Claims. (Cl. 1—44.5)

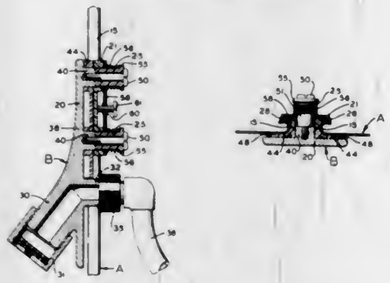


1. An automatic tool for driving pointed studs comprising, in combination, a rear cylindrical casing open at its forward end and closed at its rear end, a front cylindrical casing slidably and telescopically received within the forward open end of said rear casing, the rear end of said front casing being open and the forward end thereof closed, releasable means mounted upon said rear casing for limiting the longitudinal travel of said rear casing on said front casing, a magazine rotatably mounted in said front casing, said magazine having a plurality of angularly spaced longitudinally extending bores for receiving pointed studs therein, each of said bores having an enlarged rear end portion for receiving cartridges therewithin, said releasable means being manually operable to release and permit removal of said front casing from within said rear casing for loading the pointed studs and cartridges in said bores of said magazine, a bushing rigidly assembled within a bore at the forward closed end of said front casing having a longitudinal bore in communication with the interior of said front casing, a barrel having an enlarged contact member at its forward end and a longitudinal bore therein movably assembled within said bushing for longitudinal movement therein whereby the rear end of said barrel will register with one of said bores in said magazine and adapted to receive the studs forced therethrough, spring operated locking means to prevent movement of said barrel relative to said front casing, means to open said locking means when said contact member of said barrel is in contact with an object and allow movement of said barrel rearwardly relative to said front casing, index means for rotating said magazine to bring one of its bores into axial alignment with said bore of said barrel operable upon the telescoping movement of said casings toward and relative to each other, handle means carried by the rear casing, and manually operable firing pin means associated with said handle for discharging cartridges within the said magazine bore aligned with the bore of said barrel whereby the explosive gases of said discharged cartridge will force a pointed stud outwardly from the said bore of said magazine through the said bore of said barrel when the contact plate of said barrel is in contact with an object and said barrel is in its rearmost location relative to said casing.

3,048,851
MOVABLE SHOWER HEAD

Walter S. Bickford, 2116 Lone Oak Ave., Napa, Calif.

Filed Aug. 17, 1961, Ser. No. 132,071
7 Claims. (Cl. 4—145)



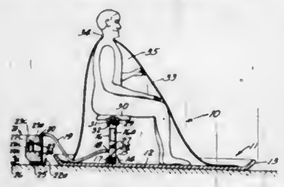
1. In a shower head and track combination of the type having a shower head fitting being vertically movable between two spaced apart parallel rails formed by a front face piece and having a flexible hose connected to the shower fitting on the rear thereof and a shower nozzle on the front of the fitting the improvement comprising said fitting having a front member mounted on the front of said face piece and a rear member mounted on the rear of said face piece, means on said front member to mount the hose and the shower head fitting on the respective front and the rear of the front member, bearing surfaces carried by the rear of said front member engaging the front and side walls of the two spaced apart rails, bearing surfaces carried by the front of said rear member engaging the rear and side walls of the rails, said rails being of sufficient thickness to maintain

said front and rear members in spaced apart relation, a pair of shafts mounted on said front member and projecting rearwardly between said tracks through apertures formed in said rear member, and a compression spring mounted about each said shaft and engaged with the rear wall of said rear member to force said front and rear members together to tension the bearing surfaces against the rails.

3,048,852
PORTABLE STEAM BATH

Ernest Schoneberg, Rolla, N. Dak.

Filed May 13, 1959, Ser. No. 813,026
2 Claims. (Cl. 4—164)

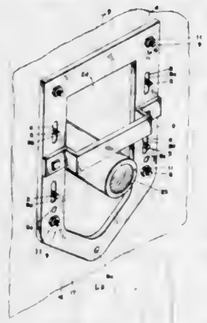


1. In a portable steam bath apparatus, the combination of a relatively shallow tray-like base having a flat bottom and an upturned marginal rim, an upstanding boss provided on the flat bottom of said base and formed with an upwardly opening screw-threaded bore blind at its lower end, a vertical tube having screw-threaded upper and lower end portions, the lower end portion of said tube being screw-threadedly received in said bore of said upstanding boss, an occupant's seat supported by said tube, said seat being provided at the underside thereof with a depending boss formed with a downwardly opening screw-threaded bore blind at its upper end, the upper end portion of said tube being screw-threadedly received in said bore of said depending boss, a laterally projecting nipple provided intermediate the ends of said tube and communicating with the interior thereof, a steam generator disposed exteriorly of said base, a flexible hose extending from said steam generator to said nipple for delivering steam into said tube, the intermediate portion of said tube being provided with a plurality of openings for discharging steam therefrom, and a cover of flexible material for an occupant of said seat, said cover being provided at a point above said seat with a neck opening and the marginal edge portion of the cover lying on said base.

3,048,853
SPACER FOR PLUMBING FIXTURES

Otto J. Litzkow, Chippewa Falls, Wis.

Filed Apr. 28, 1961, Ser. No. 106,379
11 Claims. (Cl. 4—252)

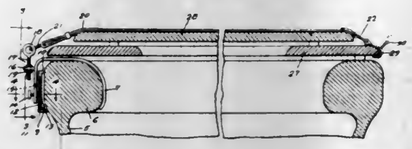


1. A spacer for a wall supported closet bowl comprising, a rigid frame having an inner face and a center opening adapted to allow the waste pipe for said closet bowl to extend therethrough, a plurality of adjustment holes located at spaced intervals in said frame, a plurality of spacer bolts having spacing heads which extend a substantially equal distance beyond said inner face of said frame.

3,048,854
TOILET SEAT COVERING DEVICE

Donald A. Miller, 145 Manor Lane, Dayton 29, Ohio

Filed Apr. 4, 1961, Ser. No. 100,641
3 Claims. (Cl. 4—253)

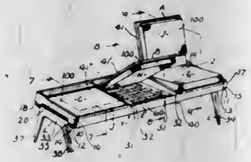


1. A device for securing the cover of a toilet seat in a closed position, comprising a pair of clamps clamped over the side edges of the rim of a toilet seat directly under the seat cover, adaptor plates secured to said clamps for adapting said clamps to toilet bowl rims of various curvatures, an elastic strap pivotally connected with one of said clamps, a fastening rod secured to the end of said elastic strap, a keeper plate extending laterally from one of said clamps, said keeper plate having a notch in which said fastening rod is adapted to be positioned, securing the elastic strap in a stretched position in contact with the cover of the toilet seat normally holding the seat cover in a closed position.

3,048,855
CONVERTIBLE COUCH

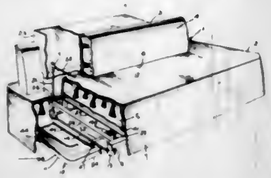
Edward Frank, 2400 American Ave., Long Beach, Calif.

Filed Nov. 2, 1959, Ser. No. 850,367
3 Claims. (Cl. 5—7)



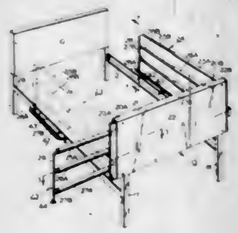
2. A convertible couch that may be converted into a bench, comprising: a frame; a plurality of backrests that normally extend upwardly but which may be folded forwardly to a horizontally extending position when said couch is converted to a bench; a back cushion on the front of each of said backrests; a cushion support for each of said backrests that normally serves to receive the weight of a user, the front end of said cushion support normally resting on a horizontal surface of said frame so as to maintain the front end of said cushion support higher than the rear end thereof; and means that automatically lower the front end of said cushion supports relative to said frame as said backrests are folded forwardly whereby clearance is provided for said back cushions within the confines of said frame, said means including an attachment plate fixed to said frame and formed with a horizontally extending slot and a bore, a hinge plate fixed to the lower portion of each of said backrests and having a hinge pin that extends into the bore of said attachment plate, said hinge plate also being formed with a camming aperture, and a bracket fixed to the rear portion of each of said cushion supports and formed with a follower pin that is received by the camming aperture of said hinge plate.

3,048,856
SOFA BED
Chester C. Andes, R.R. 2, Box 198–1, Blue Springs, Mo.
Filed June 20, 1960, Ser. No. 37,215
5 Claims. (Cl. 5—17)



4. A combination sofa and bed comprising, a stationary frame adapted to rest on a floor, a bed frame, means including a pivotal connection of the bed frame and stationary frame for supporting one end of said bed frame for pivotal movement about a vertical axis adjacent said one end, a mattress carried by said bed frame, means movably supporting the other end of the bed frame for swinging movement of the bed frame about said vertical axis, an auxiliary frame hingedly mounted on the bed frame adjacent one side and swingable up and down whereby the side remote from said one side is movable upwardly from a horizontal position to a position downwardly inclined toward said one side when in sofa-forming position, spaced arms on said bed frame and operatively engaged with said auxiliary frame for effecting said up and down swinging movement of the auxiliary frame, a rigid link connecting said arms for simultaneous movement thereof, a lever arm having one end portion pivotally mounted on the bed frame adjacent said one side, means connecting the other end of said lever arm to said link, stop means on the bed frame for limiting movement of said arms in sofa-forming position whereby weight of the mattress and auxiliary frame cooperate with the stop means to normally retain the auxiliary frame in inclined position when in sofa-forming position, and cooperative means on the lever arm and stationary frame engageable during a portion of the movement of the bed frame from bed-forming position to sofa-forming position for effecting relative movement of the lever arm and bed frame to move the link and said arms for raising and lowering said auxiliary frame in response to swinging movement of the bed frame to and from sofa-forming position.

3,048,857
BED WITH ADJUSTABLE SIDE RAIL ASSEMBLY
Clyde B. Hutt, 601 E. 22nd, Vancouver, Wash.
Filed May 1, 1961, Ser. No. 106,732
8 Claims. (Cl. 5—331)



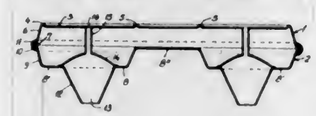
1. In combination with a bed frame having a footboard portion and side rails, a hollow headboard, a side rail assembly adapted to be housed in said headboard, horizontal rails in said assembly, bearing sockets mounted in the end of said hollow headboard for said horizontal rails, inner end extensions hinged on said horizontal rails and slidable also in said sockets, an upright end rail connected with said horizontal rails, and cooperating means on a side rail of the bed frame and on said end rail for removably securing said end rail to said side rail of the bed frame.

3,048,858
METAL BOAT CONSTRUCTION
Frederic A. Leisen, 50 Moross Road, Grosse Pointe Farms, Mich.
Filed Apr. 7, 1960, Ser. No. 20,641
2 Claims. (Cl. 9—2)



1. Metal boat construction, comprising a pair of separate metal sections forming the bow of the boat, two different metal sections and a transom section forming the stern of the boat construction which sections are joined along the boat keel longitudinally and along reinforcing members transversely, each of said metal sections having edge portions overlapping edge portions of other metal sections, and means rigidly securing said edge portions together in overlapped position to form a complete water tight boat construction including a hollow metal reinforcing member positioned against the overlapped edge portions and expanding rivets the expanding portion of which extend through the overlapped edge portions and terminate within the hollow reinforcing members.

3,048,859
RAFT
Roger Maillot, Richelieu, Quebec, Canada, assignor to Norman Perlman, Montreal, Quebec, Canada
Filed Oct. 5, 1960, Ser. No. 60,652
3 Claims. (Cl. 9—11)



1. A raft comprising a body member defining a hollow water tight compartment having a bottom wall and a top wall, and a stabilizing assembly consisting of a downwardly extending inverted frusto-conical member depending from the bottom wall and open at its lower smaller end for entrance of water therein, a bell-shaped cap member closing the upper larger end of said frusto-conical member, said upper larger end having a much smaller area than the area of said bottom wall so as to be inwardly spaced from the edges of said bottom wall and a venting tube establishing communication between the top of said cap member and the atmosphere above said top wall, the space defined by said frusto-conical member, cap member and venting tube being separate from said hollow compartment.

3,048,860
LIFE PRESERVER
Andrew J. Richardson, 227 Ave. Q, Lubbock, Tex.; Eava May Richardson, independent executrix of said Andrew J. Richardson, deceased, assignor of one-third to Wendell Coffee
Filed Sept. 25, 1959, Ser. No. 842,319
3 Claims. (Cl. 9—314)

1. A valve for a hollow container comprising:
(*a*) said container having an area with a double wall designated as an outside wall and inside wall,

(*b*) a tube extending from the outside wall and entering into the space between the outside wall and inside wall,
(*c*) the inside wall having a plurality of perforations therethrough, and
(*d*) a ball valve between the two walls,



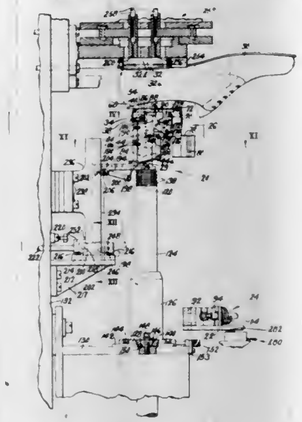
(*e*) the inside wall being attached to the outside wall around the ball,
(*f*) the elasticity of the material of one of the walls normally pressing the ball valve against the inside opening of the tube, thus forming a valve seal for the ball valve, and
(*g*) the outside wall being attached to the normal wall of the remainder of the container.

3,048,861
APPARATUS FOR FORMING HOLLOW RIVETS FROM AN ANNULAR BLANK
Roy G. Neighorn and Toivo A. Olson, Portland, Oreg., assignors to Omark Industries, Inc., Portland, Oreg., a corporation of Oregon
Filed June 2, 1958, Ser. No. 739,157
1 Claim. (Cl. 10—11)



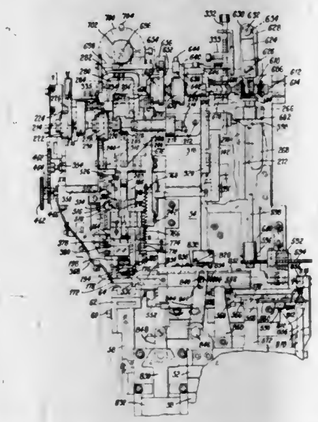
Apparatus for making rivets having a shank with a head at one end and a bore extending therethrough, said apparatus comprising a die member having a cylindrical recess therein, said recess having an internal diameter equal to the diameter of said head and an end wall, a die member having a cylindrical plunger fitting said recess and having an end wall, a central die element extending concentrically of said recess from said end wall of one of said die members and having an external surface conforming to the internal surface of said bore, a cylindrical passage extending concentrically through said end wall of the other of said die members in alignment with said element and having an internal diameter equal to the external diameter of said shank, feeding means to position an annular blank of extrudable metal on said central element, first hydraulic fluid means to force said one member toward said other member to position said central element in said passage to provide an annular passage surrounding said central element to compress said blank by said plunger in said recess and extrude metal from said blank into said annular passage, adjustable stop means to limit the travel of said one member toward the other, a forming member having an annular portion positioned in and fitting said annular passage at a position spaced for said recess to engage the metal being extruded, said central element having a reduced portion at said position, second hydraulic fluid means for moving said forming member toward said one member to cause the extruded metal to conform to said reduced portion of said element, retractible stop means for limiting the movement of said forming member toward said one member, said one member being retractible by said first hydraulic means, and means to selectively retract said retractible stop means to enable said second hydraulic fluid means to move said forming member toward said first member to discharge the extruded rivet from said passage.

3,048,862
HEEL ATTACHING MACHINES
Adolph S. Dorosz, Beverly, and Leo F. Stanton, Newburyport, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Continuation of application Ser. No. 28,801, May 12, 1960. This application May 8, 1961, Ser. No. 110,299
18 Claims. (Cl. 12—1)



1. In a machine for operating upon shoes, operating instrumentalities, a jack adapted to receive identical pallets each carrying a right or a left shoe, each shoe irrespective of whether it is a right or a left being secured to its pallet with one end portion of the shoe in the same fixed angular relation to the pallet, and means on the jack for rotating each pallet upon the jack to position, irrespective of whether it is a right or a left, the other end portion of the shoe to be operated upon in a predetermined angular relation to the operating instrumentalities of the machine.

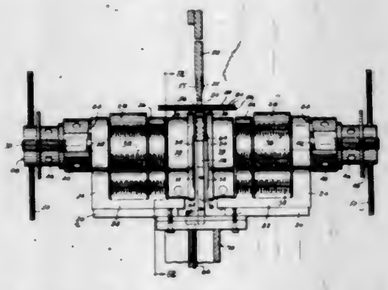
3,048,863
MACHINES FOR ATTACHING STRIP MATERIAL TO INSOLES
Milton H. Roske, Boxford, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed July 2, 1959, Ser. No. 824,585
28 Claims. (Cl. 12—20)



1. In a machine for adhesively attaching to an uncoated insole a strip having a rib portion and uncoated oppositely

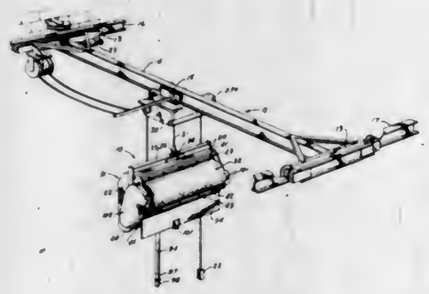
extending attaching flanges, a support for the insole, a foot for pressing the strip against the insole margin to bond it thereto and for feeding the combined insole and attached strip, power driven means for imparting to the foot movement in an orbital path with components of movement in one direction to press the strip against the insole and in another direction to feed the insole and attached strip, means for supporting a supply of ribbed strip material, means operated intermittently by the power driven means in timed relation to the feeding movements of the pressing and feed foot to feed successive portions of strip material into engagement with the insole, strip guiding means including a nozzle along which the strip is moved toward the insole, means for holding a supply of adhesive for coating the strip flanges as the strip is moved along said nozzle, means operated intermittently by the power driven means in timed relation to the feeding movements of the foot to feed adhesive from the source of supply to the nozzle and cause adhesive to be extruded through openings therein to coat the insole engaging surfaces of the strip flanges, an edge gage engageable with the edge face of the supported insole to guide the insole during an attaching cycle, means operated intermittently by the power driven means in timed relation to the feeding movements of the foot to cause the edge gage to shift the insole laterally of the support to vary the location of the strip along the insole margin, means actuated by said edge gage operating means for automatically stopping the operation of the foot, of the strip feeding means and of the adhesive feeding means at a predetermined point on the insole independently of the power driven foot operating means, a knife for severing the strip at the end of an attaching operation, and means actuated by the means for stopping the feeding movement of the foot to operate the knife.

3,048,864
VAMP CRIMPER
Robert K. Broadbent, Lakeville, Mass., assignor to Geo. Knight & Co., Inc., Brockton, Mass., a corporation of Massachusetts
Filed Jan. 3, 1961, Ser. No. 80,113
10 Claims. (Cl. 12—54.4)



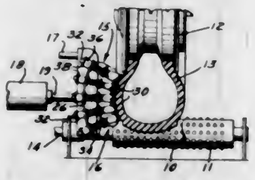
1. A vamp crimper comprising a pair of spaced jaws in the form of parallel plates having convex curved upper edges, a depressible clamping shoe between said plates having a convex curved upper edge which is normally positioned above the said jaws, a crimping blade positioned above said jaws and clamping shoe, said blade having a concave curved lower edge of substantially the same curvature as the upper convex curved edge of said clamping shoe, means for causing the descent of said crimping blade to first clamp a shoe upper and underlying boot between said blade and said clamping shoe and thereafter for causing further downward movement of said clamping shoe, shoe upper, boot and blade between said jaws, whereby the leather of said shoe upper as it is dragged downwardly by the blade along with said boot over the curved upper edges of said jaws to a vertical position between said blade and jaws is progressively and symmetrically stretched in a direction parallel to the line of clamping of said shoe upper between said blade and clamping shoe.

3,048,865
POWER DRIVEN BRUSHING UNIT FOR WASHING TRUCKS
Howard C. Stevens, Jr., Muskegon, Mich., assignor to Manning, Maxwell & Moore, Incorporated, Muskegon, Mich., a corporation of New Jersey
Filed Nov. 21, 1958, Ser. No. 775,608
3 Claims. (Cl. 15—21)



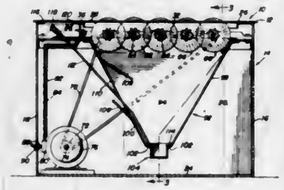
1. In a power driven washer unit, the combination comprising, a one piece, generally semi-cylindrical shroud plate having opposite open ends, a pair of end plates, said end plates being respectively secured directly to said shroud plate across the opposite ends thereof a cylindrical washing brush journaled on and between said end plates so as to partially extend from the enclosing shroud plate, said shroud plate having a skirt portion extending at an angle from one of the straight edges of the generally semi-cylindrical shroud plate in a direction away from said brush, one of said end plates have an integral tail portion extending alongside of said skirt portion at an angle thereto, and a motor mounted on said tail portion so as to lie in the angle between the outer surface of said shroud plate and its skirt portion, said motor being drivingly coupled to said brush.

3,048,866
VEHICLE WHEEL WASHER AND BRUSH STRUCTURE
Max C. Thompson, Arcadia, Calif., assignor to Chem-Therm Mfg. Co., Inc., Monrovia, Calif., a corporation of California
Filed Sept. 21, 1959, Ser. No. 841,138
4 Claims. (Cl. 15—21)



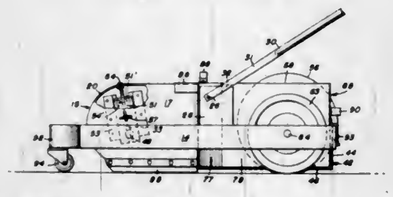
1. A washer mechanism for vehicle wheels having tires thereon, comprising the combination of: a brush engageable with a side of a tire on at least one of said wheels, said brush having a plurality of individually sprung tuft carrying sections successively positioned generally in a radial direction outwardly from the wheel axis and extending generally transversely to a wheel radius, said sections respectively being biased in a direction towards said tire, the tufts of said sections coacting to form a substantially continuous curved tire engaging brushing surface adapted to substantially conform to the adjacent engaged surface of the tire; and means for relatively moving said tire and brush means.

3,048,867
SHOE CLEANER
Paul Counts, R.F.D. 4, Box 62, Jonesboro, Ark.
Filed Oct. 3, 1960, Ser. No. 60,164
8 Claims. (Cl. 15—36)



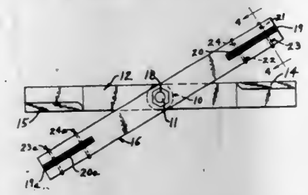
8. A shoe cleaner comprising a grillwork, a brush assembly supported beneath said grillwork and including bristles projecting upwardly through open areas of said grillwork, receptacle means including a lower end, means supporting said receptacle means beneath said brush assembly for catching foreign material removed from footwear by the bristles on said brush assembly, said receptacle means including an opening formed in its lower end a receptacle, means about said opening for removably supporting said receptacle therein, said receptacle means including a plurality of upstanding side walls, an opening formed in one of said side walls, an elongated handle secured to said receptacle and extending upwardly through said side wall opening and to a point spaced slightly below the medial plane of said grillwork wherein access to said handle may be readily achieved and said receptacle may be removed from said cleaner through said opening formed in said one of said side walls for emptying.

3,048,868
INDUSTRIAL SWEEPER
Paul D. Clark, 1330 27th St., Marion, Iowa
Filed Oct. 17, 1958, Ser. No. 767,860
2 Claims. (Cl. 15—79)



1. A sweeper comprising in combination, a frame having a front end and a rear end, a brush hood having openings at its bottom and rear mounted on the front end of said frame, a generally rectangular removably mounted hopper disposed within the rear of said frame and having a front opening adapted to mate with the rear opening of said hood, said hopper having a vertically indented side wall in one rear corner thereof, a small wheel journaled inside said frame and positioned in the spaced provided by said indented wall, a large drive wheel journaled on the outside of said frame, directly opposite said small wheel, and on the opposite side of the hopper from said small wheel, a brush shaft and rotatable brush rotatably mounted in said hood, and means operatively connecting the drive wheel to the brush shaft.

3,048,869
SWEEPER BRUSH ATTACHMENT FOR ROTARY MOWERS
Milton R. Beatty, Detroit, Mich., assignor to David G. Carty and Steve J. Ternyak, Wayne County, Mich.
Filed Feb. 24, 1961, Ser. No. 91,418
3 Claims. (Cl. 15—79)



1. In combination with a rotary lawn mower having a vertically disposed cutter blade drive shaft, a sweeper brush attachment comprising: an elongated bar having a centrally disposed, longitudinally extended slot formed in each end thereof; said bar being provided with a centrally disposed hole for mounting the bar on the cutter blade drive shaft; a vertically disposed sweeper brush member fixedly mounted in each of said slots; and sweeper brush members being formed from a resilient continuous surfaced material and extended downwardly from said bar.

3,048,870
SEWER CLEANING DEVICE
James M. Criscuolo, 1938 Wallace Ave., Bronx, N.Y.
Filed Feb. 19, 1960, Ser. No. 9,846
11 Claims. (Cl. 15—104.3)

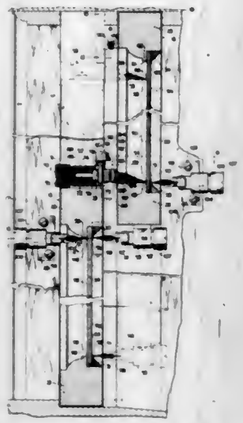


1. A sewer pipe cleaning device comprising a drum for receiving flexible cables and wires annularly coiled therein, a curved cable conduit one end of which is rotatably mounted at one end of said drum adjacent the axial line thereof with the other end of said conduit disposed within said drum and extending outwardly from said axial line, a support member having a pair of spaced-apart feet at one end and a handle at the other end of said support member, said drum being mounted upon said support member intermediate the ends thereof for rotation about an axis perpendicular thereto, a base for said support member, means on the upper surface of said base defining a pair of spaced-apart open seats to receive said support member feet, detachable fastening means on said base for holding said support member upright upon said base, and drive means on said base for rotating said drum.

3,048,871
WINDOW CLEANING APPARATUS
Leiser Presser, 1367 46th St., Brooklyn, N.Y.
Filed Apr. 20, 1961, Ser. No. 104,408
8 Claims. (Cl. 15—250.19)

1. In a window cleaning apparatus for operative use with a window structure comprising a framework and inner and outer window sections slidably movable vertically relative to the sides of said framework, said sections each having peripheral sash members supporting a pane of glass, the combination of a retractible wiping member having a wiper element positioned for slidable engagement with the pane of one of said window sections between its upper and lower regions, means for

bringing said last-mentioned pane and wiper element into slidable engagement, means engageable with said wiping member at a predetermined position thereof in the upper region of said last-mentioned window section for retracting said wiping member to a position out of engage-



ment with said pane, and releasing means at another position of said wiping member relative to said last-mentioned window section in said upper region thereof for returning said wiping member to a position in engagement with said pane.

3,048,872
WINDSHIELD WIPER
James C. Kerrigan, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Apr. 7, 1959, Ser. No. 804,837
3 Claims. (Cl. 15—250.36)



1. In a window wiper, a blade having a wiping edge extending therealong, pressure means operatively associated with said blade and adapted to exert a uniform pressure on said wiping edge as said edge is brought into wiping contact with an irregular surface, said pressure means comprising a shell movably secured to said blade and containing resilient material, said material bearing against said blade to urge it away from said shell, and centering means flexible in one direction and operatively connected to said blade and bearing against portions of said resilient material inwardly from the sides thereof to prevent frictional engagement of said blade and said centering means with said shell as said centering means and said blade are urged further into said shell.

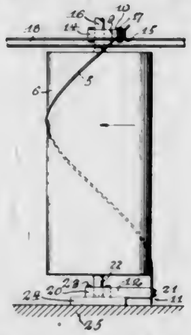
3,048,873
WINDSHIELD WIPER BLADE
Louis P. Garvey, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 24, 1956, Ser. No. 611,434
9 Claims. (Cl. 15—250.42)

9. A wiper for curved windshields including, a flexible, resilient, elongated wiping element, and an elongated resiliently flexible surface conforming support for the wiping element extending longitudinally thereof and having an arm-attaching part, said support including twist



imparting means operable to impart a normalizing twist to the inner and outer end portions of the wiping elements to maintain the wiping element substantially normal to the surface to be wiped.

3,048,874
DOCTORING DEVICES
Ian J. MacDonald, Montreal, Quebec, Canada, assignor to Dominion Engineering Works Limited, Montreal, Quebec, Canada
Filed Jan. 6, 1960, Ser. No. 735
8 Claims. (Cl. 15—256.51)

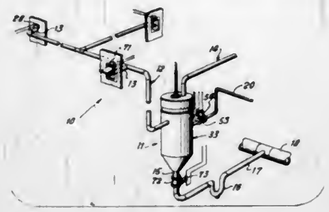


1. The combination with a drum or cylinder of a flexible doctoring device extending substantially helically around the drum or cylinder in scraping contact therewith, means for effecting relative rotary movement between the doctoring device and the drum or cylinder whereby material adhering to the surface of the drum is doctored off, means for tensioning opposite ends of the doctoring device to cause the latter to engage firmly and continuously the drum or cylinder along the entire helical line of contact between the doctoring device and the drum or cylinder, a clamping means located outwardly of opposite ends of the drum and adapted to secure opposite ends of the doctoring device when the latter is under tension, said clamping means comprising a bracket having a clamping surface disposed to lie in a plane substantially tangential to the curved surface of the drum at the nearest point of contact of the doctoring device with the drum surface, a clamping bar mounted on the clamping surface of said bracket to straddle the doctoring device at right angles to the longitudinal direction of the doctoring device between the bracket and the first point of contact with the drum, and clamping bolts extending through said clamping bar and into said bracket at either side of the doctoring device.

3,048,875
PNEUMATIC SYSTEMS
Norman E. Bottinelli, Dallas, Tex., and Harry M. Rovenger, 4727 Homer St., Apt. 102, Dallas, Tex.; said Bottinelli assignor to Joseph P. Rossi, Dallas, Tex.
Filed June 2, 1960, Ser. No. 33,439
7 Claims. (Cl. 15—301)

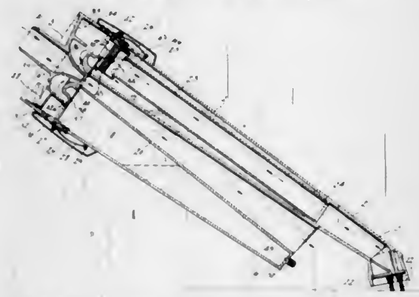
1. A pneumatic system including: means providing a closed chamber; conduit means providing an outlet from the upper end of said chamber; blower means communicating with the upper end of said chamber for moving air from the upper portion of the chamber outwardly

thereof through said outlet conduit means; inlet means opening into the interior of said chamber intermediate the upper and lower ends thereof; drain means providing a drain opening at the lower end of said chamber; water inlet means providing for the introduction of water into said chamber intermediate the upper and lower ends thereof; and electrically operable control means opera-



tively associated with said water inlet means, said drain means and said blower means for closing said drain means and opening said water inlet means upon the initiation of operation of said device; and means responsive to the level of water in said chamber for maintaining the level of the water in said chamber at a predetermined height above said inlet means.

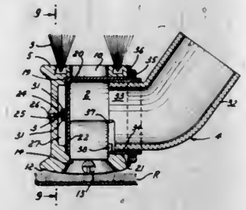
3,048,876
FLOOR CLEANING APPARATUS
Warren N. Kemnitz, Willoughby, Ohio, assignor to General Electric Company, a corporation of New York
Filed Sept. 8, 1960, Ser. No. 54,794
9 Claims. (Cl. 15—321)



1. A floor cleaning appliance comprising a housing forming a liquid reservoir, a suction nozzle secured to said housing, floor scrubbing means secured to said suction nozzle arranged to rest on a floor surface during operation, a tube communicating with said nozzle secured to said housing, said tube having an opening within said reservoir, air ejector means secured to said housing, said ejector means including an ejector nozzle, a discharge tube in axial alignment with said ejector nozzle, and a low pressure chamber communicating with said reservoir, said discharge tube being positioned so as to direct a stream of air against a portion of said floor surface adjacent said scrubbing means, and means for supplying compressed air to said ejector nozzle.

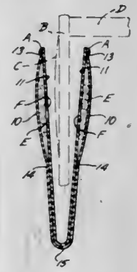
3,048,877
MULTI-PURPOSE SUCTION CLEANER NOZZLE
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Oct. 16, 1959, Ser. No. 846,912
13 Claims. (Cl. 15—417)

2. In a multi-purpose suction cleaner nozzle of the type having a hollow nozzle body structure provided with two different work-engaging portions each associated with a different air inlet, the combination of a rotary valve member of sleeve form journaled within said body structure and mounted for movement between two rotational positions in each of which said valve member communicates with a different one of said air inlets, manually operable means connected with said rotary valve member and effective to rotate the same with respect to said body structure away from either of said positions, said manually operable



means comprising an air outlet member rotatably mounted on said body structure and means providing a lost motion connection between said air outlet member and said valve member, and actuating means operable responsive to rotation of said rotary valve member for rotating said valve member to the other of said positions after said manually operable means has been initially operated to rotate said valve member away from one of said positions.

3,048,878
EYEGLASS LIQUID APPLICATOR DEVICE
Robert A. Gray, Franklin Lamb, and Louis Mandel, Allenhurst, N.J., assignors to Kleer-Site Corporation, Allenhurst, N.J., a corporation of New Jersey
Filed July 15, 1959, Ser. No. 827,273
4 Claims. (Cl. 15—512)



1. An applicator for centrally applying silicone liquid in metered quantities and in predetermined areas to opposite sides of an eyeglass lens comprising a flexible liquid impenetrable folded member having end enclosure members and connected in a folded bridge, each end closure member having an outer wall without openings and an inner wall with a relatively small central metering opening, said wall being peripherally joined in liquid tight fashion and an absorbent pad positioned between said walls to release the silicone liquid when the two enclosure members are pressed together against the lens impressing the absorbent pad to release liquid only through the metering opening while the rest of the absorbent pad is held against the outer and inner walls and cannot release silicone liquid.

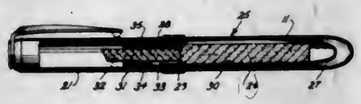
3,048,879
FOUNTAIN PEN
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed Aug. 3, 1959, Ser. No. 831,193
1 Claim. (Cl. 15—563)

A pen having
a uniform diameter one piece tubular sheet metal barrel having a closed end and an open end;

a one piece tubular sheet metal casing therein having a closed end, an open end, a reduced diameter neck at such open end, and a body portion of uniform diameter closely fitted into the uniform diameter barrel with its reduced neck open end at the open end of the barrel, and a shoulder at the intersection of the neck and body of the casing;

a uniform diameter felt rod pack in the casing having its inner end abutting and stopped by the closed end of the casing and its outer end tightly fitted in the reduced diameter neck at the open end of the casing and its body portion laterally spaced from the body portion of the casing;

a tubular sheet metal nib holder having a reduced diameter body portion having a nib therein, and

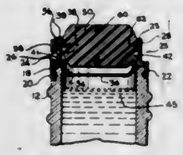


an enlarged diameter neck at the inner end of the nib holder fitted into the annular space between the open end of the barrel and the reduced diameter neck of the casing, with the nib in contact with the felt rod pack and the inner edge of the enlarged diameter neck of the nib holder in stopping contact with the shoulder at the inner end of the reduced diameter neck of the casing;

the outer diameter of the nib holder enlarged diameter inner end being equal to the outer diameter of the body portion of the casing and the inner diameter of the barrel;

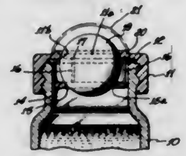
and a cap fitting over the barrel with its open end adjacent the reduced diameter neck of the casing and the enlarged diameter part of the nib holder.

3,048,880
SELF-STARTER ADHESIVE AND GLUE APPLICATOR
Ira I. Slomon, 36 E. 36th St., New York, N.Y.
Filed Apr. 14, 1960, Ser. No. 22,313
3 Claims. (Cl. 15—571)



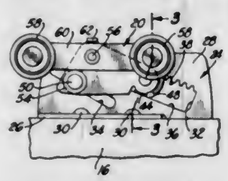
1. An applicator for adhesive, comprising a resilient, plastic seat including a cylindrical skirt adapted to fit on the open top of a container of said adhesive, said seat having a circular top wall, said skirt being integral with the top and depending peripherally therefrom, and a neck extending upwardly from said wall opposite to said skirt, said neck having upstanding side and end walls, one of said end walls having spaced recesses, and a cylindrically curved partition extending across the neck, said partition having an aperture for passing said adhesive therethrough when the applicator is inverted; and a roller seated in said neck, said roller being generally cylindrical in form and contacting said side and end walls of the neck for rotation therebetween and for receiving adhesive passing through said aperture, said roller having a threaded axial recess in one end and having a tip at the other end for releasably journalling in one of the recesses in said one end wall of the neck; and a shaft having a threaded end removably seated in the recess in the roller for loosening said roller in the neck to enable rotation thereof when stuck by dried adhesive, the other end wall of said neck having an outwardly opening slot with alternate spaced pairs of constrictions and recesses for receiving said shaft the recesses of the pair of recesses being disposed varying distances from the partition whereby the shaft and roller are adapted to be supported in selective distances from said partition.

3,048,881
LIQUID DISPENSER AND APPLICATOR
Dolletta M. Ackerman, 720 N. Orange Grove, Los Angeles, Calif.
Filed Oct. 3, 1958, Ser. No. 765,151
2 Claims. (Cl. 15—572)



1. A liquid dispenser comprising a receptacle having a vertically extending neck portion leading to an opening having a lip, a first planar horizontal member positioned within said neck portion and having an opening therein adapted to form a ball seat, a ball seated in said opening, a second planar horizontal member having an opening therein through which said ball projects, said second member having an outer diameter greater than the opening in said neck portion, the outer edge of said second member being seated on said lip, a plurality of prongs each having a length which is less than the diameter of said ball, said prongs being connected between said first and second members to thereby suspend said first member and a portion of said ball within said neck portion, and a cap member engaging the neck portion of said receptacle and having an opening therein through which said ball protrudes, said opening in said cap having a diameter less than the diameter of said ball whereby said ball is rotatably positioned between the opening in the cap member and the seat of the said first horizontal member, said second horizontal member being clamped to said neck portion by the inner surface of said cap.

3,048,882
VERTICALLY ADJUSTABLE SLIDING DOOR HANGER
Council A. Tucker, Glendale, and Robert Brydolf, Pasadena, Calif., assignors to Acme Appliance Manufacturing Company, Monrovia, Calif., a corporation of California
Filed Jan. 23, 1961, Ser. No. 84,091
5 Claims. (Cl. 16—105)



1. In a vertically adjustable sliding door hanger, the combination of:

(*a*) a mounting member having means for attachment to a door;

(*b*) a hanger member having means for engagement with a track;

(*c*) one of said members having an inclined main slot therein;

(*d*) one edge of said main slot being provided with teeth constituting a rack;

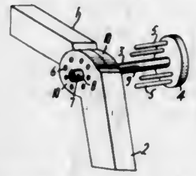
(*e*) a pinion rotatably mounted on the other of said members and disposed in said main slot and meshed with said rack;

(*f*) inclined, interengageable guide means on said members for guiding said members for relative movement along an inclined path generally parallel to said rack;

(*g*) said guide means including an inclined guide slot in one of said members spaced from and generally parallel to said main slot and including a guide element on the other of said members movable in and engageable with the edges of said guide slot; and

(*h*) said guide means further including the edge of said main slot which is opposite said rack and further including another guide element engageable with and movable along said opposite edge of said main slot and carried by that one of said members other than the one in which said main slot is formed.

3,048,883
HINGE LOCKING DEVICE
Angelo A. Rizzuto, Box 325, General Post Office, New York, N.Y.
Filed Feb. 19, 1959, Ser. No. 794,469
2 Claims. (Cl. 16—144)



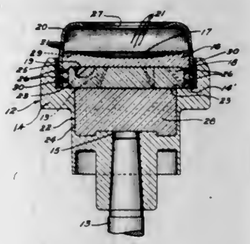
1. A hinge comprise a pair of leaves, each of said leaves having an integral disk-shaped knuckle extending at a forty-five degree angle from one edge thereof, said knuckles being each one half the width of said leaves, said knuckles being provided each with a bore therein and being superimposed one upon the other with said bores in alignment thereby forming a jointed central portion of said hinge, said central portion being equal in width to said hinge leaves and in longitudinal alignment therewith, an elongated pivot pin slidably engageable in said aligned bores and being substantially twice the length of said bores combined, said pin having a head on one end, said head being provided with prongs extending inwardly in a spaced apart relation to and parallel to said pin, said prongs having a length substantially one half the length of said pin, said disk-shaped knuckles being provided with spaced perforations adapted to register when the hinge leaves are angularly disposed, said prongs being releasably engageable in said registering perforations to secure the hinge leaves in a locked angular position, an L-shaped groove formed in said pin the longitudinal portion of said groove extending approximately one half the length of the pin from the free end thereof and terminating in a base portion constituting a peripheral segment, said free end of the pin being solidly intact, and a collar slidably disposed on the grooved portion of the pin having a pin-retaining stud extending from the wall of the bore thereof, said stud being engageable in the longitudinal portion of said groove when the pin is withdrawn to an inoperative position thereby permitting said collar to serve as a retaining means to prevent a disengagement of the pin from the knuckles of the hinge leaves and said stud being engageable in the base portion of said groove when the pin is in a locking position thereby permitting a limited rotary movement of the collar to a position wherein said pin is releasably secured against a withdrawal thereof from said locking position.

3,048,884
FISH SCALER
Arthur L. Robichaux, 1402 Bordeaux St., New Orleans, La.
Filed Apr. 5, 1960, Ser. No. 20,169
7 Claims. (Cl. 17—7)



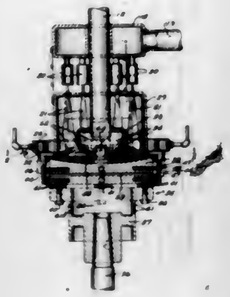
1. A fish scaler comprising a handle having forward and rear ends, a head having a forward end and fixed on the forward end of the handle, said head being wider than the handle, said head having a transversely concaved undersurface spaced downwardly from the handle, said head having an upper surface which declines to the forward end of the head and meets the undersurface of the head to define a fish scale removing edge at the forward end of the head, and transversely spaced fish scale loosening teeth extending along the rear end of said undersurface and extending rearwardly from the head.

3,048,885
ROTORS FOR USE IN APPARATUS FOR MANUFACTURING MINERAL WOOL
Miles S. Firnhaber, Pewaukee, Wis., assignor to Sealtite Insulation Mfg. Corp., Waukesha, Wis., a corporation of Wisconsin
Filed Mar. 24, 1959, Ser. No. 801,533
9 Claims. (Cl. 18—2.6)



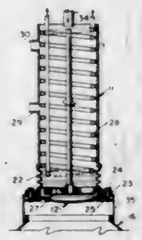
6. A fiberizing rotor having a rotatable material-receiving member with an outer material-receiving surface on one side and having a peripheral wall, there being a rotatable support projecting from one side of said member, an annular metal rim positioned around said peripheral wall of said material-receiving member and having an annular portion projecting from said peripheral wall beyond said material-receiving surface and having an open outer molten-material-receiving end spaced a substantial distance outwardly from said material-receiving surface, which annular portion has a multiplicity of small apertures positioned to allow discharge therethrough of centrifugally thrown material from said material-receiving surface, means adjacent said peripheral wall of the material-receiving member forming a seat for removably supporting said annular rim with which the latter is engageable by movement axially of the rotor, and means for detachably securing the rim in position in said seat.

3,048,886
APPARATUS FOR MANUFACTURING MINERAL WOOL FIBERS
Miles S. Firnhaber, Pewaukee, Joseph R. Miller, Merton, and Michael J. Kovach, Hartland, Wis., assignors to Sealtite Insulation Mfg. Corp., Waukesha, Wis., a corporation of Wisconsin
Filed Apr. 1, 1960, Ser. No. 19,209
10 Claims. (Cl. 18—2.6)



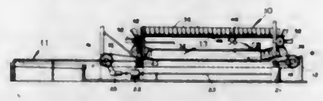
1. A metal rotor for use in a fiberizing apparatus, comprising: a rotatably mounted base; a rotor head mounted on and spaced above said base and having a peripheral wall of substantial depth, said rotor head having interior cooling channels extending to said peripheral wall; a rim surrounding said peripheral wall of the rotor head and rotatable therewith, there being an annular space therebetween; and fan means on said rim in said annular space for drawing air through said rotor head cooling channels into said annular space.

3,048,887
METHOD AND APPARATUS FOR PRILLING FERTILIZER COMPOSITIONS
Henry J. Weiland, Birmingham, Ala., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 31, 1959, Ser. No. 863,274
16 Claims. (Cl. 18—2.7)



9. Apparatus for the granulation of chemical substances from molten material thereof, which comprises a substantially vertical, elongated granulation tower, at least one molten material dispensing means positioned at the top of the tower for releasing drops of molten material into said tower, said dispensing means having in combination a head tank with the lower body portion thereof vertically resilient and the bottom thereof supporting an orifice plate associated with vertical impulse means, and a granular material outlet at the bottom of the tower.

3,048,888
APPARATUS FOR THE PRODUCTION OF ARTIFICIAL SPONGE
Alvin Shockley, Berea, and James Teng, Parma, Ohio, assignors to Nylonge Corporation, a corporation of Ohio
Filed Feb. 5, 1960, Ser. No. 6,931
11 Claims. (Cl. 18—5)



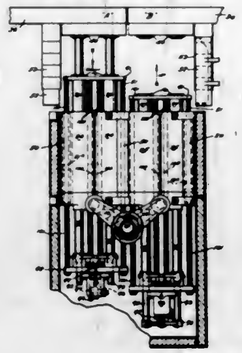
1. An apparatus for the continuous coagulation of a viscose sponge forming mass comprising a longitudinally substantially horizontally extending trough having a lead end and a discharge end, an endless belt conveyor having an upper run extending along the base of said trough, means adapted to advance said belt conveyor along said upper run from said feed end toward said discharge end, a pair of mutually insulated sets of electrodes disposed along opposite sides of said trough, electrode advancing means adapted to advance said electrodes in the direction of advance of said belt conveyor, and means for depositing a sponge forming mass in said trough and upon said belt conveyor adjacent to the feed end thereof.

3,048,889
PROCESS AND APPARATUS FOR FORMING HOLLOW OBJECTS
Stefan Fischer and Rainer Fischer, both of Lohmar, near Koln, Germany
Filed Mar. 8, 1960, Ser. No. 13,469
Claims priority, application Germany Mar. 10, 1959
7 Claims. (Cl. 18—5)



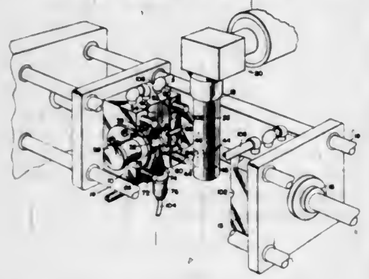
1. A device for blowing hollow objects comprising, means for continuous extrusion of hollow tubing, and a separable mold to receive the said tubing, means to inflate the said tubing within the said mold to form the said hollow object, and gripping means to first cool the warmest end of said tubing and then to sever and transfer the said tubing to a point intermediate the said separated mold parts, said gripper means including separable jaws which, when closed, will grasp the said warmest section of said tube around its entire periphery, each of said jaws having channels for the circulation of a cooling medium therein, and a mandrel within a portion of said tube whereby when said jaws close about said tube they will compress a portion of the tube between said mandrel and said jaws, thereby forming a portion of the said hollow object, said mandrel having a second set of channels for the circulation of a cooling medium whereby a portion of the interior of the said hollow object may be cooled.

3,048,890
METHOD AND APPARATUS FOR FORMING PLASTIC ARTICLES
Leonard D. Soubier, 2542 Beaufort Road, Toledo 13, Ohio; Olive M. Soubier, executrix of said Leonard D. Soubier, deceased
Filed July 6, 1960, Ser. No. 41,135
15 Claims. (Cl. 18—5)



13. In an apparatus for making a plastic article by blowing a tube extruded through an orifice, means defining a chamber of variable volume in communication with an extrusion orifice, said chamber containing a body of heated material in predetermined initial volume, an injection mold having a molding cavity arranged to seat upon and register with said orifice, means within said body arranged to inject material from said chamber into said cavity, means for linearly displacing said orifice with respect to said mold to reduce the volume of said chamber and to extrude said material simultaneously therefrom under displacement pressure and in tubular form integral with said injected material, the rate of said extrusion being coincident with the rate of application of said displacement pressure, means to continuously supply material under plasticizing pressure to said chamber and means to open and close said orifice.

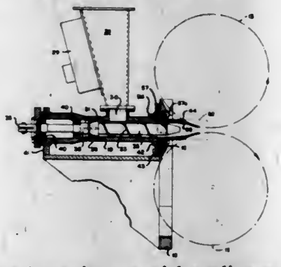
3,048,891
BLOW MOLDING MACHINE AND PROCESS
Edward W. Maass, 114 Park St., Manchester, Conn.
Filed Aug. 26, 1960, Ser. No. 52,179
6 Claims. (Cl. 18—5)



1. Blow molding apparatus for forming hollow articles from organic plastic material, said apparatus including a base, a sectional mold block mounted on said base, means for controlling the movement of each section of said block, means for depositing a plastic extrusion within a cavity of said mold sections, means on said sections for sealing one end of said plastic extrusion, means for deforming inwardly mid-sections of opposed end portions of said plastic extrusion so they meet in abutting relationship, means for blowing fluid under pressure into said extrusion to form a shape conforming to the configuration of a cavity of said mold sections means for circulating a coolant through said mold to cure the article therein, and means for removing the article from said sectional mold block.

4. A method of blow molding articles from organic plastic material comprising the steps of, forming a thin walled convex shell of the said material, severing and sealing the edges of a portion thereof by pinching together to form a bubble within a mold cavity, forcing at least one elongated member through the mid section of one end of said bubble to form a hollow reinforcing core, introducing fluid under pressure into the interior of said bubble to deform it outwardly against the cavity mold, curing said molded article, withdrawing said elongated member from the molded article and ejecting the article from the mold.

3,048,892
POWDER APPLICATOR
Dexter C. Davis, Jr., Muskegon, Mich., John F. Freeman, Sacramento, Calif., and John G. Kura, Columbus, Ohio, assignors, by mesne assignments, to Copperweld Steel Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 12, 1959, Ser. No. 820,044
8 Claims. (Cl. 18—13)

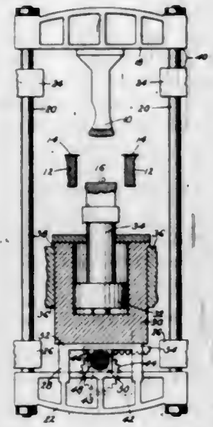


2. In a metal powder material applicator for a metal rod or wire core moving along a substantially horizontal pass line, apparatus comprising, in combination, a plurality of rolls each having a peripheral groove together defining a closed pass in the nip of said rolls coaxial with said pass line, a substantially horizontal helical screw feeder for said powder material for cladding coaxial with said pass line, said feeder having a casing with a smooth cylindrical interior surface, a substantially cylindrical arbor in said feeder having a longitudinal passage for said core therethrough coaxial with said pass line, a helical flight on the exterior of said arbor, said flight being substantially cylindrical and having a substantially uniform pitch, a smooth substantially cylindrical tapered tip at the front end of said arbor having a passage coaxial with the passage through said arbor and a nozzle forming the inner end of said feeder and having a smooth conical interior surface converging gradually in the direction of movement of said pass line, the space within said nozzle being correlated substantially to avoid compaction of and gaps in said powder material during feeding thereof, said nozzle extending between the end of said flight and the nip of said rolls to provide a substantially continuous passageway of gradually narrowing diameter around said core between said flight and said closed pass.

3,048,893
MOLDING MACHINES FOR PRESSING AND VULCANIZING PLASTIC MATERIALS
Frank Coleman Cholce, Leicester, England, assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Oct. 4, 1960, Ser. No. 60,390
3 Claims. (Cl. 18—17)

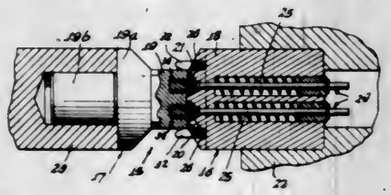
1. In a molding machine the combination with a shoe support, side mold members and a bottom mold member,

of a carriage for mounting the shoe support, a first fixture for positively supporting the carriage, a pressure fluid operated piston for imparting upward movement to the bottom mold member, a cylinder in which the piston operates, a second fixture in which the cylinder is slidably mounted and on which the cylinder is supported in its rest position, extensions depending from the cylinder, and an



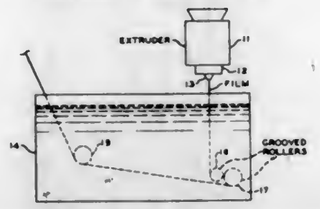
actuator having a central shaft journaled in said extensions and having an eccentric shaft journaled in said carriage, said actuator operating first to move the carriage downwardly into a position in which it is supported upon the first fixture and thereafter to elevate the cylinder from the second fixture thereby to transfer the support of the cylinder from the second fixture to the carriage.

3,048,894
MOLD FOR MOLDING ARTICLES
Henry Z. Gora, Stratford, Conn., assignor to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 25, 1959, Ser. No. 842,453
8 Claims. (Cl. 18—36)



1. A die member for use with a cooperating companion die to blank out of plasticizable strip stock and mold articles, said die member having a body provided with at least one longitudinal recess extending to and opening at opposite ends of the body, a pair of longitudinal grooves in the face of the die parallel with said recess, each groove being located between an adjacent edge of a recess and the adjacent end of the body and substantially coextensive with the recess, a plurality of parallel grooves in the body extending transversely across and intersecting said recess and extending to and opening at opposite sides of the body, a flat elongate metal strip fitting in and bottoming in each of said transversely extending grooves and forming with said recess a molding cavity, and other elongate strips, fitting in and bottoming one in each of said parallel grooves, adapted to engage the ends of said transverse strips and lock the latter against longitudinal movement in the grooves, said strips being immobile in the body except for removal and replacement.

3,048,895
PROCESS FOR PRODUCING BIAXIALLY ORIENTED PLASTIC FILM
Anthony Bottomley, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 20, 1959, Ser. No. 835,080
3 Claims. (Cl. 18—57)



1. A process of producing biaxially oriented thin plastic film comprising extruding a melt of the plastic through a slot die to form a film; passing the film into a quench bath, the distance from the die orifice to the surface of the quench bath being not over ¼ inch; passing the film while in the quench bath over at least one roller having helical grooves on the surface thereof extending outwardly from a point approximately at the center of the film passing thereover, said roller rotating at a rate such that the peripheral speed of the roller is substantially greater than the linear speed of the film passing thereover; and removing the film from the quench bath, said film being biaxially oriented.

3,048,896
CENTRIFUGAL ROTATIONAL MOLDING METHOD
Arvid Marlo, 1150 Lake Shore Drive, Chicago, Ill.
Filed May 26, 1959, Ser. No. 815,974
5 Claims. (Cl. 18—58.3)

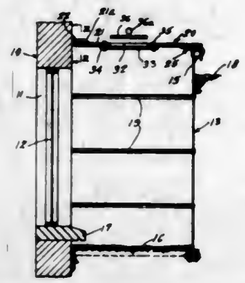


1. In the method of centrifugal rotational molding of a hollow article from a thermo-setting plastic, the steps of introducing a measured amount of liquid thermo-setting plastic into a mold, heating the mold to a temperature capable of curing the plastic, quickly rotating the mold about a horizontal axis during heating thereof through 180° revolutions at a speed such that substantially all of the plastic in the liquid state will by centrifugal force remain substantially stationary during each rotational movement of the mold, maintaining the mold quiescent for a period of time between said revolutions sufficient to permit substantially all of the plastic in a fluid state to run to the bottom of the mold, and repeating said rotation and quiescent steps until all of the plastic is cured on the walls of the mold.

3,048,897
WINDOW WELL COVER
Herbert J. Slade, 106 E. Olive St., Prospect Heights, Ill.
Filed Apr. 7, 1959, Ser. No. 804,697
5 Claims. (Cl. 20—1)

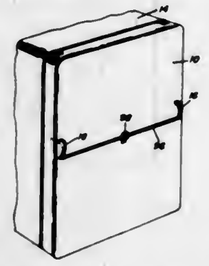
1. A cover for semi-cylindrical window well casings that are mounted on the outer faces of building foundation walls to span window openings through said walls which comprises a rigid slab of light transmitting material in the form of a half disk, a rigidifying metal insert adjacent the diameter of the half disk embedded in the material of the disk and extending beyond the circular peripheral edge of the disk, the extending portions

of said rigidifying means being deformable to engage the top of the window well casing, and at least one clip extending from the bottom face of the half disk to engage



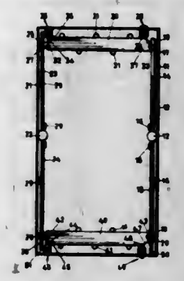
the window well casing in spaced relation from the foundation wall for cooperating with the bent ends of the rigidifying means to retain the half disk in fixed position on top of the casing.

3,048,898
DOOR ASSEMBLY
Wilbur A. Davis, Mahomet, Ill., assignor of ten percent to Rivard Brothers Inc., Glenview, Ill., a corporation of Illinois, and assignor of five percent to Harley W. Trinkle and Margaret B. Trinkle, jointly, Rantoul, Ill.
Filed Jan. 13, 1960, Ser. No. 2,279
4 Claims. (Cl. 20—16)



1. A door assembly comprising an enclosure with an opening defined by a peripheral edge, a pair of vertically spaced and aligned latch elements mounted adjacent each edge of the opening, a closure door panel, a combined hinge and latch rod mounted vertically adjacent each edge of the door for detachable and hinged engagement with the latch elements, and a handle connected to each rod for vertically moving the rod for enabling detachment of the rod from the latch elements when the door is in closed position, said rods and latch elements including structural means interconnecting the rods and the latch elements to prevent detachment of the rod from the latch elements when such rod is forming a hinge when the door is opened from the opposite edge, said means including a slot-like notch in the outer end of each latch element, the inner end of the notch including an opening circular in configuration for hingedly receiving the rod, said rod including reduced areas defined by parallel side walls adapted to be slidably received in the notch only when the door is closing said opening and rotatably received within the opening at the inner end of the notch whereby the rod may be disconnected from the latch elements when the side walls of the rod are parallel with the side edges of the notch for movement therethrough and prevented from being disconnected from the latch elements when the side walls of the rod are misaligned with the side walls of the notch whereby the circular opening at the inner end of the notch will rotatably receive the rod, means interconnecting the rod and the door for permitting axial sliding movement of the rod in relation to the door and preventing rotation thereof in relation to the door.

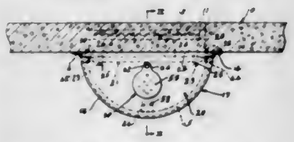
3,048,899
DOUBLE ACTION PIVOTING DOOR
Donald E. Vincent, % Canadian Research and Development Foundation, 1434 Queen St. W., Toronto, Ontario, Canada
Filed Nov. 28, 1960, Ser. No. 71,948
2 Claims. (Cl. 20—16)



1. A double action pivoting door comprising a door member having contained therein two handle assemblies each comprising a cylindrical connecting member, said connecting member having located at the extreme ends thereof two handle members, said connecting members having at substantially the midpoints thereof a V-shaped groove formed circumferentially, two upper vertical members one left and one right, two lower vertical members one left and one right, said upper vertical members having located in the lower ends thereof hemispherical indentations, said lower vertical members having located in the upper ends thereof hemispherical indentations, four spherical balls partially located within said indentations, said spherical balls also partially locatable within said circumferential V-shaped grooves, said upper vertical members having located in one side substantially toward the upper ends thereof indented portions and raised portions, spherical balls alternatively locatable on said raised portions, or on said indented portions of said upper vertical members, an upper transverse member located between said upper vertical members and adapted to slide horizontally within suitable guides, said upper transverse member being provided at each end with a hemispherical indentation for retaining said spherical ball, said transverse member having located on the upper edge substantially towards the ends thereof a raised portion and an indented portion, two hinge pins located substantially above said upper vertical members and movable vertically within guide means, said hinge pins having located at the lower ends thereof a hemispherical indentation, spherical balls located within said spherical indentations on the bottom of said hinge pins, said spherical balls also being alternatively loctatable on said raised portions and within said indented portions located at said ends of said upper transverse member, said lower vertical members having located on one side substantially toward the lower ends thereof a raised portion and an indented portion, a spherical ball alternatively locatable on said raised portion and within said indented portion, a lower transverse member located substantially between said lower vertical members and having guide means to allow horizontal movement, said lower transverse member having located at the ends adjacent to said lower vertical members a hemispherical indentation, spherical balls located within said indentation in the ends of said lower horizontal member, said spherical ball being alternatively loctatable within said indentations and on said raised portions of said lower vertical members, said horizontal member having located

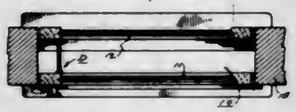
at the ends on the lower surface thereof a raised portion and an indented portion, two lower hinge pins located substantially below said lower vertical members and movable vertically by guide means, said hinge pins having located at the upper ends thereof a hemispherical indentation, spherical balls located within said hemispherical indentations in said lower hinge pins, said spherical balls also being alternatively locatable within said indented portion and said raised portion of said lower transverse member, and spring means adapted to support vertically said lower vertical members.

3,048,900
WINDOW WELL COVER
Herbert J. Slade, 106 E. Olive St., Prospect Heights, Ill.
Filed Mar. 3, 1960, Ser. No. 12,567
7 Claims. (Cl. 20—40)



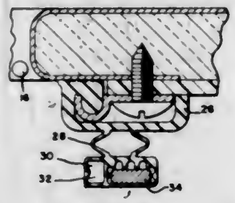
5. A window well cover comprising a slab of light transmitting material shaped to overlie the top of a window well casing, fastener means carried by said slab for detachably mounting said slab to the window well casing and means for pivotally connecting said slab to said fastener means, said means for pivotally connecting said slab to said fastener means being extensible to provide shifting of said fastener means relative to said slab to accommodate varying dimensions of window well casings.

3,048,901
DOUBLE-SASH CASEMENT WINDOWS
Agnew W. Nicholson, 133 Lawton Blvd., Toronto, Ontario, Canada
Filed May 4, 1956, Ser. No. 582,751
3 Claims. (Cl. 20—55)



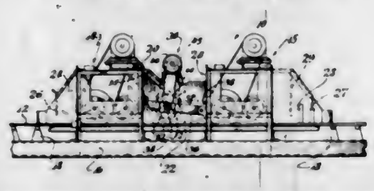
2. For use in combination with a double sash casement window assembly including a rectangular window frame, an inner window sash mounted for pivotal movement about a first axis extending along the inner edge of one side of said frame, an outer window sash mounted for pivotal movement about a second axis extending along the outer edge of said one side of said frame in spaced parallel relationship to said first axis, means on said frame defining closed positions of both window sashes wherein said window sashes are in spaced parallel relationship with each other, said window sashes being movable in the same direction about their respective axes from their respective closed positions, and means for latching inner window sash in its closed position; means coupling said window sashes to each other comprising an elongate coupling member, said member being longitudinally and laterally resilient to resiliently resist both longitudinal and lateral deformation from a relaxed condition, first means securing one end of said coupling member to said inner sash on the side of said inner sash remote from said first axis and holding said one end of said coupling member in fixed relationship to said inner sash to resiliently resist both longitudinal and lateral movement of the other end of said coupling member relative to said inner sash, second means securing said other end of said coupling member to said outer sash at a location wherein said coupling member is deformed only longitudinally when said window sashes are in said closed position and holding said other end of said coupling member in fixed relationship to said outer sash to resiliently resist both longitudinal and lateral movement of said one end of said coupling member relative to said outer sash, the longitudinal deformation of said member being such as to resiliently bias said outer window sash to its closed position when said inner window sash is latched in its closed position.

3,048,902
REFRIGERATING APPARATUS
Franklin G. Hastings, Robert Mueller, and John J. Preotle, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 26, 1960, Ser. No. 52,137
7 Claims. (Cl. 20—69)



5. A door seal for use on a door which is pivotally supported on a cabinet adjacent one edge of the door, comprising in combination, means forming a bulb portion extending around the four edges of said door for sealing the joint between said door and said cabinet, and magnetic means disposed within said bulb, said magnetic means adjacent the pivoted edge of said door being smaller than the magnetic means located adjacent another edge thereof.

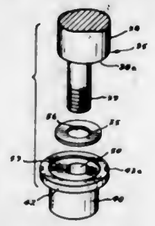
3,048,903
CONDITIONER FOR PULVERULENT MATERIAL
Jules T. Parisi, La Grange Park, Ill., assignor to Pekay Machine & Engineering Co., Inc., Chicago, Ill., a corporation of Illinois
Filed July 1, 1957, Ser. No. 668,965
4 Claims. (Cl. 22—89)



1. In a system which has a plurality of structures intermittently spaced apart along a conveyor reach to condition granular foundry material carried through the structures on the conveyor reach; a substantially enclosed muller device for installation between a pair of adjacent structures to operate in consort therewith, said device including a muller drum having shaft ends protruding outwardly of the end walls thereof, a mounting bracket and bearing block removably secured on the bracket for journalling each of the shaft ends, rocker members mounting said brackets between said pair of structures for limited pivotal movement vertically relative to the conveyor reach, a pair of plate members supported vertically between said pair of structures with the muller drum between the plate members, each plate member having an elongate arcuate slot aligned one relative to the other, each slot opening at one end thereof to the upper edge of a plate member and having a closed end adjacent the bottom edge of the plate

member to provide a bearing seat for a shaft end, said shaft ends extending through the slots for journalling thereof on the bearing blocks exterior of the plate members, the open end of each slot being spaced from each of said pair of adjacent structures, the upper edge of each plate member having a portion thereof slanted upwardly from the open end of a slot to one of said adjacent structures, a flexible baffle member secured upon said slanted edges to close off the upper end of the muller device between said portions, said shaft and drum being removable as a unit through the remaining open portion of the upper end of the device in a movement backing said shaft ends out through said open ends of the slots between the baffle member and the second of said adjacent structures.

3,048,904
ADJUSTING PIN
William G. Kloster, 2839 11th Ave. S., Minneapolis, Minn.
Filed Mar. 16, 1960, Ser. No. 15,315
2 Claims. (Cl. 22—110)



1. An adjusting pin of the class indicated comprising
a bushing having an eccentric bore therethrough,
an annular collar about one end of said bushing having a counter-bore therein concentric with the axis of said bushing,
a pin having an upper shaft portion of the diameter of said counter-bore and a lower shank portion of the diameter of said bore, and
said shank being eccentric to said shaft in the same degree that said bore is eccentric to said bushing with said pin being disposed through said bushing and said shaft being received within said counter-bore and locked therein against rotative movement concentric with said bushing.

2. The structure set forth in claim 1, including
a washer disposed in said counter-bore flush with the surface thereof and underlying said shaft and having a bore in alignment with said bore of said bushing whereby said shaft and said bushing are respectively movable through separate eccentric paths relative to one another for a doubled eccentric action relative to one another.

3,048,905
MAKING REFRACTORY SHELL MOLDS
Charles L. Benson, Goshen, N.Y., and Stanley C. Tingquist, Sparta, N.J., assignors to Howe Sound Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 11, 1959, Ser. No. 819,578
15 Claims. (Cl. 22—193)

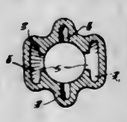
1. The method of making a refractory casting mold which comprises forming a pair of mating half-mold shells by applying a coating of a hardenable liquid refractory composition to a match plate pattern and embedding in the surface of such coating while it is still fluid a layer of granular refractory particles, hardening the resulting coating on the match plate at about room temperature, and similarly applying successive coatings of hardenable refractory until a refractory shell of substantial thickness has been built up on the match plate, stripping the half-mold shell thus formed from the match plate, and heating the shell to a temperature high enough to fully set the refractory composition.

3,048,906
TYING AND FASTENING DEVICE
Herman W. Patterson, 7209 W. 65th St., Overland Park, Kans.
Filed May 12, 1960, Ser. No. 28,603
1 Claim. (Cl. 24—16)



A tying and fastening device comprising a strand of elastic material forming a loop having a bight portion, an enlarged head formed integrally with and secured exteriorly to said loop, said head being planar and being no thicker than the strand forming said loop, measured at right angles to the plane of said loop, said head also defining a pair of notches disposed respectively at opposite sides of the point of attachment of said strand and opening toward said loop, whereby said loop may be passed about an object and secured thereabout by passing said head through the bight portion of said loop, whereupon said bight portion is disposed in said notches, and a pair of pull tabs formed integrally with and extending outwardly from said loop, said tabs being disposed in spaced apart relation at opposite sides of a central point of said strand directly opposite the point of attachment of said head thereto, and substantially closer to said central point than to said head, whereby when said loop is secured about an object as described, at least one of said tabs will be disposed in spaced apart relation from said head, and whereby when said last named tab is pulled, the tension in the bight portion of said strand will twist said head to align the plane thereof with the opening of said loop, thereby to affect easy release of the fastener.

3,048,907
MEANS FOR SECURING WIRES OR RODS IN THE STRESSED CONDITION
John Terence Crawford Harvey, Frimley, near Aldershot, England, assignor to Intercontinental Equipment Co., Incorporated, New York, N.Y.
Filed Jan. 23, 1959, Ser. No. 788,610
Claims priority, application Great Britain Feb. 7, 1958
6 Claims. (Cl. 24—122.6)



1. An anchoring device for securing the free ends of generally parallel bunched wires comprising a generally tubular guide member having a main bore therethrough proportioned for free simultaneous reception of all of the free ends, said guide member being formed with a plurality of subsidiary bores angularly intersecting said main bore medially of its length and diverging from said main bore toward one end of said guide member, each said subsidiary bore communicating throughout its entire length with said main bore whereby certain of the wires initially disposed in said main bore may be displaced radially outwardly from the main bore into said respective subsidiary bores, internally tapered bushings respectively disposed in abutment with said member at

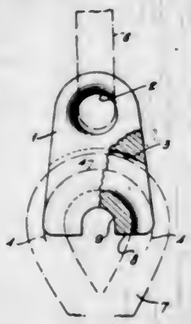
the diverging ends of the respective subsidiary bores, the interior taper of each said bushing converging toward said guide member, and wedge means in each said tapered bushing for operative engagement with a wire extending through said bushing and its respectively associated subsidiary bore.

3,048,908
ELECTRIC WIRE GRIP
Robert E. Bryan, 513 Morgan Ave., Chattahoochee, Fla.
Filed Sept. 18, 1959, Ser. No. 840,957
3 Claims. (Cl. 24—122.6)



1. The combination of an electrical conductor having stripped wire ends, and a gripping device for pulling said conductor through a conduit, said gripping device comprising a hollow conical inner member disposed axially between said stripped wire ends of said conductor with its base adjacent the conductor and its apex oriented longitudinally outwardly therefrom, a pulling cable extending through an axial passage in the apex portion of said inner member into the hollow interior of the latter, solder-like means provided in the hollow interior of said inner member and securing said pulling cable therein, and a hollow frusto-conical outer member movably positioned on said inner member, said stripped wire ends of the conductor extending between said inner member and the inner surface of said outer member and being grippingly engaged thereby, said stripped wire ends of said conductor being provided with outturned and reversely bent terminal portions superposed on the outer surface of said outer member.

3,048,909
COUPLING FOR ROPE OR CABLE ENDS
Leo J. Sheehan, 173 High St., Reading, Mass.
Filed May 20, 1959, Ser. No. 814,654
2 Claims. (Cl. 24—123)
(Granted under Title 35, U.S. Code (1952), sec. 266)



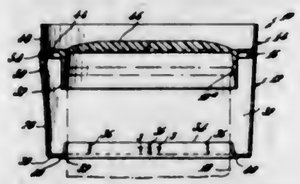
1. A device for coupling rope ends to one another, which comprises a unitary, strong, rigid coupling block having one end portion of lesser thickness from face to face than the other end portion, and having the opposite faces of said other portion wider than those of said one end portion, said one end portion having a closed eye from face to face therethrough, with the margin of the eye rounded, unbroken and continuous from face to face of the block along its outer peripheral half nearest the end of the block in which the eye is formed, convex and approximately semicircular, said other end portion having an arcuately extending passage therethrough from side edge to side edge, in transverse cross-section peripherally continuous and unbroken and also opening through the adjacent end wall of said block, the center line of said arcuate passage being in a plane that is approximately perpendicular to a plane containing therein the center axis of said eye, said end wall of said block having a notch therein extending toward said arcuate passage and terminating at its inner end in an arcuate surface which has a center axis of curvature that is approximately coincident with the center axis of curvature of said center line of said arcuate passage and parallel to the center axis of said eye, said one end portion of said block being aligned centrally with the said arcuate passage.

3,048,910
SNAP-ON CLIP STRUCTURE
Mark J. Sturtevant, Grosse Pointe, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 29, 1960, Ser. No. 39,512
3 Claims. (Cl. 24—215)



1. In the combination of a snap-on wire-shaped clip and a work piece, said clip comprising a resilient snap over loop portion with its legs forming parallel extensions extending to either side of the plane of said loop portion, an intermediate resilient portion forming a pivot means on each of said extensions at a significant distance from said plane, bearing means on said work piece receiving said pivot means to provide pivot points for said extensions as said loop portion is forcibly altered in width, and locking means formed on said extensions engaging said work piece to resist rotation of said pivot means but to allow said pivot means to rotate within said bearing means by torsional twisting of said pivot means.

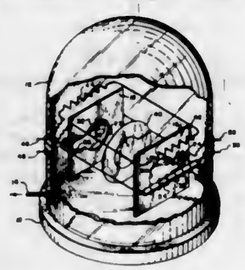
3,048,911
EMPLACEMENT FORMER
William H. Almon, 27 Beechwood St., Quincy, Mass.
Filed Apr. 13, 1959, Ser. No. 806,081
1 Claim. (Cl. 25—118)



An emplacement former comprising a plastic tubular casing having an end wall, said casing tapering inwardly from said end wall, a first circular flange extending from the end wall toward the smaller end of the tubular casing and spaced inwardly of said casing and increasing in diameter outwardly from the end wall and adapted to receive the end of a pipe inserted within the former, a second circular flange integral with the smaller end of the casing and being spaced interiorly therefrom and decreasing in diameter toward the end wall, said second circular flange including means thereon permitting the expansion thereof to fit the wall of a pipe insertable within the former whereby the first and second flanges will align the former

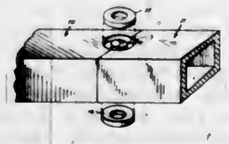
on a pipe and the scond flange will effect a seal between the former and the pipe, said end wall having radially disposed reinforcing ribs at its outer side, the extremities of which terminate substantially on a projection of the first flange on the outer side of the wall, leaving the end wall outwardly of said projections unreinforced.

3,048,912
METHOD OF FORMING A STABLE ALUMINUM PLATED QUARTZ RESONATOR
Richard B. Belser, Atlanta, and Walter H. Hicklin, Fulton, Ga., assignors to the United States of America as represented by the Secretary of the Army
Filed June 3, 1960, Ser. No. 33,870
2 Claims. (Cl. 29—25.35)



1. The method of forming a highly stable quartz crystal resonator comprising the steps of preheating a quartz crystal to a temperature in the range of 400° C. to 500° C. at a pressure lower than 5×10^{-5} millimeters of mercury, cooling said crystal to a temperature of between about 175° C. and about 300° C., then vapor depositing aluminum on same, removing the coated crystal from said vacuum atmosphere, mounting said coated crystal in a container having an open seal-off tube, subjecting said container to the aforesaid vacuum pressure, baking said coated crystal in said container at a temperature substantially within the range from 150° C. to 250° C. for a period up to three hours, and thereafter sealing said container to maintain said vacuum pressure therein.

3,048,913
METHOD OF PRECISELY JOINING WAVEGUIDE CROSS-SECTIONS
Arthur G. Ball, Jr., 9212 Adelaide Drive, Bethesda, Md.
Filed Oct. 10, 1958, Ser. No. 766,629
4 Claims. (Cl. 29—155.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An improved method of joining the ends of abutting waveguide sections having substantially identical cross-sections at said ends so that the waveguide cross-sections will be in precise alignment, said method comprising: sliding each waveguide cross-section over opposite ends of an aligning block having a slightly smaller cross-section than the cross-sections of the waveguide so that the waveguide cross-sections are precisely aligned with their ends in abutting relationship, cutting an annular groove into the outer surface of said waveguide sections adjacent the abutting ends thereof while they are so positioned, said groove being cut so that the waveguide material surrounded by said groove is comprised of a portion of each of said waveguide sections, separating the sections so that said aligning block can be removed, approximately realigning the waveguides in abutting relationship, and contacting more than one-half of the inner cylindrical surface of said annular groove with a rigid member so as to realign and hold said cross-sections in precise alignment.

3,048,914
PROCESS FOR MAKING RESISTORS
Wilbur M. Kohring, 3318 W. 159th St., Cleveland 11, Ohio
Filed Sept. 21, 1959, Ser. No. 841,317
1 Claim. (Cl. 29—155.63)

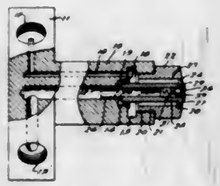


The process of providing a protective casing on the surface of a resistor element comprising a non-conductive element having a current conductive film thereon with hollow terminal end-caps surrounding and electrically connected to the film on the ends of said element, said end-caps having a larger external diameter than that of the film between said end caps, said process comprising the steps of providing a phenyl-methyl-silicone resin, spraying said silicone resin on said film between said end-caps to provide a coating thereon, then baking said resistor element with said coating thereon at approximately 400° F. for about one-half hour to cure said coating, providing a tubular casing having an internal diameter slightly larger than the external diameter of said end-caps and sliding said casing over said end-caps with the open end portions of said casing extending beyond said end-caps and with said end-caps fitting closely within the internal surface of said casing and concentrically supporting said internal surface of said casing around said film at a circumferential clearance space therefrom, sealing the open end portions of said casing to enclose said resistor element therein, the steps of sealing including the following method, providing a powder glass material, a polysiloxane resin, and a silicone varnish, mixing about fifty percent by volume of powder glass with about same amount of polysiloxane resin to obtain a glass-silicone mixture, mixing in 20 percent by volume of said silicone varnish with about 80 percent by volume of said glass-silicone mixture to obtain a sealing material, applying said sealing material in said open end portions of said casing against said closely fitting end-caps so as to block said sealing material from contacting said film to enclose said resistor element therein, air setting said sealing material for about twenty-four hours and then baking said sealing material in said end portions at approximately 400° F., for approximately one hour to seal said resistor element in said casing.

3,048,915
FUEL INJECTION NOZZLE FOR A GAS TURBINE ENGINE
Richard Chute, Huntington Woods, and Ernest J. Bunning, Farmington, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Original application May 12, 1958, Ser. No. 734,637, now Patent No. 2,945,629, dated July 19, 1960. Divided and this application Nov. 13, 1959, Ser. No. 852,821
5 Claims. (Cl. 29—157)

1. In the method of manufacturing a fuel-air nozzle, the steps of providing a distributor element having a forward end, forming in one process a forwardly opening chamber in said forward end having a forwardly diverging conical rear wall, forming endwise extending fluid

passage grooves in the exterior of said forward end to intersect said chamber adjacent said wall and provide branch passages defined in part by said wall and opening from said chamber into said grooves, providing a spray plate with a forwardly diverging inner surface blocking



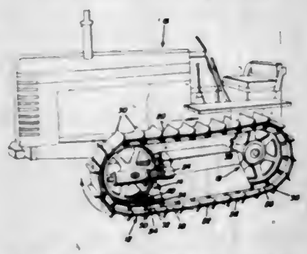
said grooves at locations forwardly of said wall and closing the forward opening of said chamber, and securing said plate in fixed position with respect to said element with said surface spaced from said wall to define in part said branch passages.

3,048,916
METHOD OF MAKING PASSAGEWAY PANEL FROM FOLDED METAL SHEET
Clarence J. Gahlinger, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed July 22, 1957, Ser. No. 673,459
4 Claims. (Cl. 29—157.3)



1. In the art of making a pressure welded passageway panel, an improved method of preparing a metal sheet assembly for pressure welding, comprising: providing a foreshortened ductile metal sheet with a weakened hinge line to divide it into a pair of connected sheet portions presenting adjacent inner faces; printing a wet foreshortened weld resist pattern on the inner face of one of said sheet portions; and, while the pattern is wet, partially folding said sheet along said hinge line in the direction required and to the extent required to cause their inner faces to oppose each other across an acute angle of substantially less than 90° and substantially more than 1°.

3,048,917
TOOL FOR APPLYING CRAWLER TREADS
James B. Slaughter, 422 Reservoir Ave., Central City, Ky.
Filed June 9, 1959, Ser. No. 819,178
8 Claims. (Cl. 29—200)



1. A tool for rerailing crawler treads comprising a wedge block adapted to be positioned between the sprocket and idler wheels of a crawler vehicle adjacent the derailed wheel thereof on the upper surface of the tread pads in the lower reach of the crawler tread and in cooperating engagement with said derailed wheel, a narrow elongated bar secured to said wedge block and extending transversely thereof and having one end adapted to engage the derailed wheel and the other end adapted to engage the adjacent guide rail of the crawler tread with the mid portion of said bar extending beneath said wheel and over said guide rail, said bar retaining that portion of said rail adjacent the derailed wheel in contacting relation with the latter, said wedge block with said bar being of sufficient height so as to be adapted to raise the guiding circumferential flange of the idler wheel or the sprocket teeth of the sprocket wheel above the upper edge of the adjacent rail upon movement of the wheel over said block and retaining means whereby as the derailed wheel is rotated and said tool rotates therewith said wheel will roll over said wedge block and the derailed wheel will be lifted above the adjacent tread rail and positioned between the latter and the other tread rail.

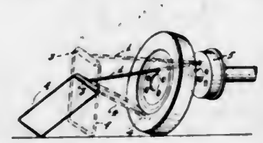
3,048,918
PISTON RING APPLYING AND REMOVING DEVICE
Harry W. Kulp, Lancaster, Pa., assignor to K-D Manufacturing Company, Lancaster, Pa.
Filed Aug. 28, 1959, Ser. No. 836,660
4 Claims. (Cl. 29—224)



1. As a new product of manufacture, a device for applying or removing a split sealing ring to or from an engine piston or the like, comprising a supporting member with a pair of laterally spaced projecting lugs at the top; a split annular angle-section resilient holder component for reception of a piston ring, said holder having its ends formed with lugs to detachably interlock respectively with the lugs on the supporting member so as to be so held in place by the resiliency of the holder component; a normally retracted slide associated with the supporting member and constrained for adjustment in a plane radially of the holder medially between the lugs of said member; a pair of actuating grasp handles fulcrumed respectively about transversely spaced studs on the slide, said handles being provided with finger projections for reaching into the split interval of the piston ring when in the holder, and with arms of equal length respectively extending laterally inward from said handles into overlapping relation from the fulcra of said handles, the arm of one of said handles having a slotted connection with pivot pins secured in the arm of the other handle; means influential upon the handles for normally maintaining the finger ends thereof yieldingly in contact with each other in readiness to be entered into or withdrawn from the split interval of the held piston ring; and means for adjusting the slide relative to the supporting member.

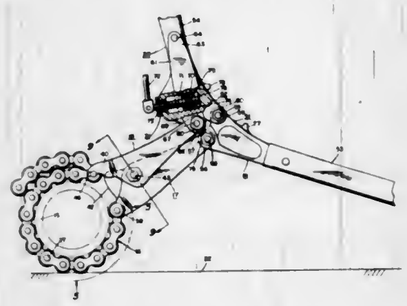
3,048,919
WHEEL MOUNTING TOOL
Warren L. Bald, 704 W. California Ave., Glendale 3, Calif.
Filed Sept. 6, 1960, Ser. No. 54,192
1 Claim. (Cl. 29—273)

A wheel mounting tool comprising a lifting rod lever, a handle to which the lever is attached centrally thereof so that the handle extends to the sides of the rod, and a supporting and stabilizing member carried by the handle and adapted to swing relatively thereto, and adapted for rotation on the handle for contact with a wheel held by the lifting rod lever by passage through an aperture in the wheel and into engagement with a wheel receiving hub drum, said supporting and stabilizing member comprising a strong metal rod formed into generally U-shape



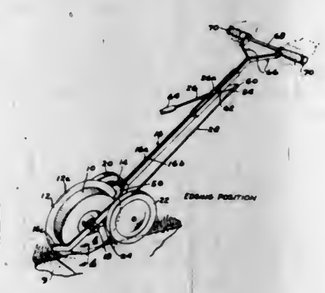
with a relatively long section connecting the legs of the said U-shape and having the ends of its legs extended toward each other and received in holes provided at the ends of the handle, said stabilizing member being adapted to support the lifting rod lever by contact with a ground surface, and being adapted to be swung into contact with the wheel for stabilizing its position on said lifting rod lever, the said lever having a greater length than said supporting and stabilizing member.

3,048,920
TOOL FOR PARTING ELONGATED FRACTURABLE MEMBERS
Charles J. Wheeler, R.D. 4, Box 310, Chardon, Ohio
Filed July 9, 1959, Ser. No. 825,907
2 Claims. (Cl. 30—92)



1. A cutting tool for parting an elongated fracturable member, said tool comprising a flexible and substantially non-extensible chain adapted to be wrapped around and tension-squeezed against said fracturable member to fracture and part same without substantial relative rotation or oscillation thereabout, said chain comprising a plurality of link means, transverse pin means spaced apart from each other in a direction lengthwise of said chain and interconnecting said link means, rotary cutting means mounted on said transverse pin means and disposed between said link means, said rotary cutting means each having converging sides terminating in a cutting edge, said transverse pin means having a length greater than the lateral width of the link means and having oppositely disposed pin-end portions extending outwardly from said link means, first clamp means having first chain-engaging means thereon to engage said pin-end portions of a first transverse pin means of said chain at a first location, second clamp means having second chain-engaging means thereon to engaged said pin-end portions of a second selectable transverse pin means at a second location of said chain wrapped around said fracturable member, said link means on said first and second transverse pin means constituting respectively first and second terminal link means, said rotary cutting means associated with said first and second terminal link means constituting respectively first and second terminal rotary cutting means, one of said chain-engaging means comprising oppositely disposed spaced portions for engaging said pin-end portions, actuating means connected to said clamp means to draw said chain-engaging means to at least a minimum clamp operating position, said first and said second selectable transverse pin means engaged by said chain-engaging means being positioned apart from each other in said at least minimum clamp operating position for a distance less than the diameter of said rotary cutting means, said oppositely disposed spaced portions of said one of said chain-engaging means being laterally spaced apart for a distance greater than the lateral width of said one of said terminal link means by an amount at least equal to one-half the lateral width of a rotary cutting means and allowing said one of said terminal link means and the terminal rotary cutting means associated therewith to move laterally with respect to said other terminal link means and the terminal rotary cutting means associated therewith in said at least minimum clamp operating position, whereby adjacent converging sides of said first and second terminal rotary cutting means may overlap each other.

3,048,921
LAWN EDGER
Carl A. Johnson, P.O. Box 248, Okemos, Mich.
Filed Apr. 7, 1961, Ser. No. 101,501
12 Claims. (Cl. 30—292)



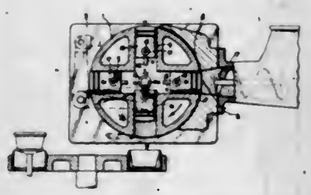
1. A lawn edger including in combination, a handle frame extending rearwardly and upwardly at an angle to the ground in an operative position of the lawn edger, a weighted sod cutting wheel rotatably mounted on said handle frame near the lower, forward end thereof, a pair of transport wheels, frame means pivoted on said handle frame and rotatably supporting said transport wheels in spaced apart positions with said cutting wheel disposed therebetween, said transport wheels being pivotable with said frame means in an arc spaced from the axis of rotation of said cutting wheel, a spring coupled between said frame means and said handle frame for pivotably raising and holding said transport wheels spaced from the ground during the cutting operation of said edger, and releasable support means connected between said handle frame and said frame means for locking said frame means with said transport wheels thereon in a lowered position wherein said frame means supports said cutting wheel free from contact with the ground for carriage by said transport wheels.

3,048,922

APPARATUS FOR DOSING, FORMING AND PACKING OF PLASTIC FOODS AS BUTTER, MARGARINE AND THE LIKE

Bernhard Steinkemper, Dusseldorf-Unterrath, Franz Weidenhaupt, Dusseldorf-Oberkassel, and Hans Bongartz, Dusseldorf-Unterrath, Germany, assignors to Fa. Benz & Hilders, Maschinenfabrik, Dusseldorf, Germany, a corporation of Germany

Filed Apr. 28, 1960, Ser. No. 25,457
Claims priority, application Germany May 2, 1959
5 Claims. (Cl. 31—44)



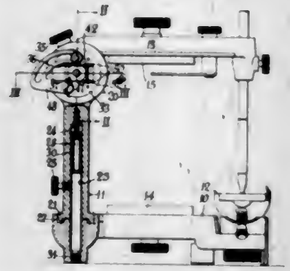
1. An apparatus for dosing, forming and packing of plastic foods or the like, comprising a rotating dosing cylinder defining a plurality of radially disposed dosing chambers and having two oppositely disposed cylinder walls, a piston reciprocating in each of said dosing chambers, a wedge-shaped stud projecting radially inwardly from the inner end face of each of said pistons, an axially movable cone disposed coaxially with the rotating axis and in the center of said dosing cylinder, said cone constituting abutment means for said wedge-shaped stud of all of said pistons and adjustable selectively to different abutment positions by its axial movement, each of said pistons moving successively inwardly in the corresponding of said dosing cylinders by force loading, an ejection lever pivoted to one of said cylinder walls and moving outwardly successively each of said pistons in the corresponding of said dosing chambers upon reaching the ejection position, and a control means coordinated to and provided for each of said pistons for forced engagement of said wedge-shaped stud with said central cone effective upon termination of the material loading stroke of said piston to the start of the material ejecting stroke of said piston.

3,048,923

CONDYLAR BEARING SUPPORT AND ADJUSTING MEANS FOR DENTAL ARTICULATORS

Edmond J. Franwick, Buffalo, N.Y., assignor to Hanau Engineering Co., Inc., Buffalo, N.Y.

Filed Aug. 4, 1959, Ser. No. 831,523
8 Claims. (Cl. 32—32)



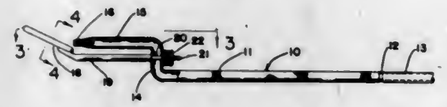
1. In a dental articulator, a base member and a pair of spaced condylar posts extending upwardly therefrom, vertically disposed condylar discs rotatably mounted at the upper ends of said posts each having a radial slot extending inwardly from an edge thereof, a bearing member slidably guided in each of said radial slots and a condylar shaft mounted at its ends in said bearing members, an adjustable abutment for each of said bearing members having a shank portion threaded into said disc in alignment with said slot at the inner end thereof and a head portion disposed within said slot, whereby the outer radial end surface of said head portion is adapted to be abutted by the bearing member in said radial slot to limit movement of the bearing member inwardly of said radial slot, said head portion being of a diameter substantially equal to the width of said disc so as to expose diametrically opposed peripheral portions thereof for manual engagement.

3,048,924

DENTAL MIRROR HANDLE

Edwin J. Whitman, 3703 Riedham Road, and Loren F. Weiss, 3660 Riedham Road, both of Cleveland, Ohio

Filed May 4, 1960, Ser. No. 26,769
3 Claims. (Cl. 32—69)



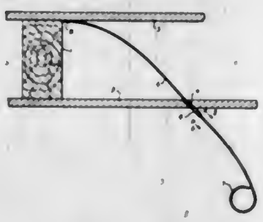
3. An anti-fogging dental mirror comprising a reflecting surface, a frame for said reflecting surface supporting the same, a shank portion connected to said frame having a reduced end portion, a tubular conduit having a first bend and a second bend in substantially a Z shape which acts as a cheek retracting tool to provide increased working area in the mouth, the end of said tubular conduit defining a spray nozzle and being parallel to the shank and terminating directly in front of the reflecting surface at an angle with respect to said surface, aperture means through the tubular conduit surrounding said reduced end portion of the shank, fastening means in connection with said reduced end portion of the shank tightly securing the mirror in alignment with the nozzle end of the tubular conduit, and integral handle means on said tubular conduit for gripping the dental mirror.

3,048,925

METHOD FOR LOCATING HIDDEN WALL STUDS

Sidney D. Klaus, Westbury, N.Y.
(88—06 Parsons Blvd., Jamaica, N.Y.)

Filed Aug. 5, 1959, Ser. No. 831,791
1 Claim. (Cl. 33—169)



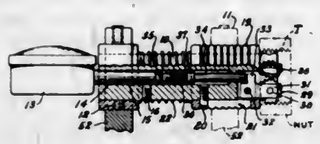
The method of locating the approximate center of a vertical stud concealed between an inner and an outer wall, comprising the steps of: drilling a horizontal hole in said inner wall at an acute angle thereto, inserting a relatively flexible, curved probe through said hole in a horizontal plane and causing the tip of said probe to ride against said outer wall until it is stopped by said stud, marking said probe at a point adjacent said hole, withdrawing the probe and placing said probe flat against said inner wall in said horizontal plane with said marked point adjacent said hole, the tip of the probe pointing in the general direction of said stud, said tip indicating the approximate center of the stud.

3,048,926

WHEEL GAGE

Paul W. Johnson, Bloomfield, Conn., assignor to The Johnson Gage Development Company, Bloomfield, Conn., a corporation of Connecticut

Filed Aug. 20, 1958, Ser. No. 756,187
22 Claims. (Cl. 33—178)



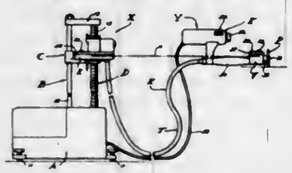
1. A wheel gage to test a surface comprising a frame member having a longitudinal axis, gaging wheel means including at least one gaging wheel and an axle rotatably mounting said gaging wheel on the frame member, said gaging wheel having at least a portion of a generally circular periphery, a cooperating gaging wheel having at least a portion of a generally circular periphery, the peripheries of the gaging wheels being formed to gage the surface, a push pin slidably mounted in the frame member, mounting and connecting means mounting the cooperating gaging wheel oppositely from the gaging wheel means for rotation and for movement towards and away from the gaging wheel means and connecting the cooperating gaging wheel with the push pin to be actuated by the movement of this gaging wheel towards and away from the gaging wheel means, including an axle, and means carried by the frame member to receive an indicator in a position to be actuated by the push pin.

3,048,927

HEIGHT INDICATING APPARATUS

Ralph P. Maloof, Los Angeles, Calif.
(5847 Country Club Drive, Rialto, Calif.)

Filed Apr. 25, 1958, Ser. No. 731,051
8 Claims. (Cl. 33—209)



1. A height indicating apparatus of the character described including, an operating unit with a vertically shiftable carriage and means elevating said carriage, a probe unit with a feeler adapted to engage with an object to be measured for height, a coupler joining the two units, means actuated by the coupler and controlling operation of the elevating means to shift the carriage in response to positioning of the probe unit, and a position indicator adapted to indicate the elevation of the carriage.

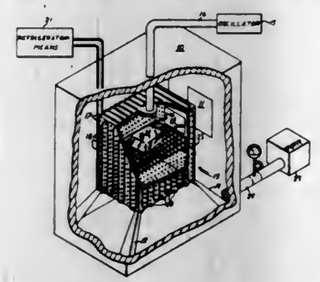
3,048,928

FREEZE-DRYING APPARATUS

David A. Copson, Waltham, and Edward Z. Krajewski, Dorchester, Mass., assignors to Raytheon Company, a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,304
3 Claims. (Cl. 34—1)

1. Apparatus for removing a vaporizable component by sublimation from material including a solid and said vaporizable component in the solid state comprising: first container means for providing an atmosphere at a pressure substantially lower than atmospheric pressure; pump means communicating with said first container means for maintaining said lower pressure; second container means disposed in said first container means enclosing said material to be treated, a substantial portion of said second container means containing a plurality of passages forming a microwave energy choke for preventing the propagation of microwave energy from the interior of said second container means to the interior of said first container means while permitting substantial atmospheric communication therebetween; a microwave electrical energy generator; a propagated electromagnetic wave-guiding structure coupled to said generator and communicating with said second container means for applying propagated electromagnetic microwave energy



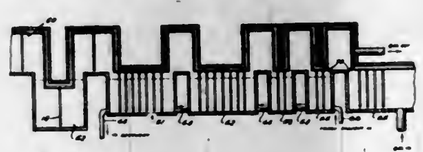
to said material to supply the heat of sublimation to sublimate a substantial portion of said component; condenser means having a substantial area substantially enclosing and adjacent said portion of said second container means forming a microwave energy choke for at least assisting in causing said sublimed component to pass outwardly through said choke portion and thereafter to condense on said condenser means; and means for maintaining said condenser means at a temperature substantially lower than freezing whereby there is provided a short substantially unimpeded vapor path between said material and said condenser means and said sublimed component is efficiently condensed on said condenser means.

3,048,929

METHOD OF DEHYDRATING HIDES

Seymour S. Kremen and Robert Lee Southwood, Cincinnati, Ohio, assignors to Leather Research Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 15, 1959, Ser. No. 859,656
7 Claims. (Cl. 34—9)

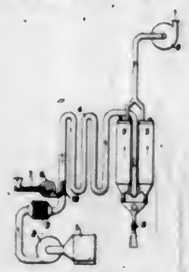


1. The method of dehydrating water-wet hides and skins which comprises extracting water therefrom with a water-miscible organic liquid solvent selected from the class consisting of acetone and methanol, continuing the extraction and producing a solvent-water mixture about the hides until the solvent to water ratio within the hides is at least 90 to 10, removing the mixture thus produced from the hides, passing a heated stream of gas about the hides to vaporize solvent and water from the hides, recirculating the gas stream about the hides until the solvent vapor concentration in the gas is at least 25 mol percent, removing a portion of the solvent and water vapor from the recirculating gas stream while maintaining its solvent vapor concentration at at least 25 mol percent, until at least 75% of the solvent has been removed from the hides, and thereafter vaporizing the balance of the solvent from the hides.

3,048,930
DRYING OF WET POWDERY MATERIALS

Hermann Holzrichter, Kurt Falk, and Theodor König, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Oct. 22, 1957, Ser. No. 691,628
Claims priority, application Germany Oct. 26, 1956
8 Claims. (Cl. 34—10)

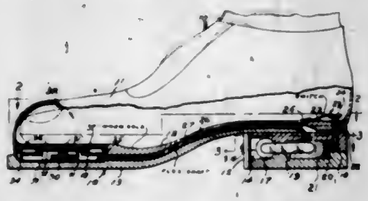


1. A process of drying powdery synthetic polymers containing water which comprises introducing said polymer by means of an air stream into a cylindrical stream of hot air externally confined by the walls of a tube of constant diameter in such a manner that both streams flow concurrently and have substantially the same speed when they join, and the air stream carrying the powdery polymers is surrounded by the cylindrical stream of hot air, whereby the powdery polymers are entrained by the combined cylindrical air stream, keeping the powdery polymers in the combined air stream until the water has been substantially evaporated, and thereafter removing the powdery polymers from the combined air stream, said cylindrical stream of hot air having a temperature of from 40 to 200° C. at the beginning of the drying process, said polymer-entraining air stream having a temperature of about 5 to 60° C. at the point where it joins said cylindrical stream of hot air, said combined streams at the end of the drying process having a temperature of about 20 to 100° C., said synthetic polymer containing reactive groups selected from the class consisting of olefinically unsaturated groups, nitrile, carboxyl, carbonamide, aldehyde, keto, methylol, methylol ether, dioxolane, and ureido groups.

3,048,931
AIR SHOES

Anthony S. Farinello, 3281 S. Edgefield, Dallas, Tex.

Filed Oct. 2, 1961, Ser. No. 142,103
6 Claims. (Cl. 36—3)



1. In a shoe including an upper, a heel, an inner sole and an outer sole; the improvements consisting and providing a means for aerating said shoe, said means comprising a chamber in said heel, an electrical circuit including a battery in said chamber, contacts connected to said battery, a motor mounted in said heel and electrically connected to said battery, a switch in the lower rear portion of the shoe for engagement by the foot of the wearer, there being a longitudinally extending passageway in said shoe, a flexible shaft extending through said passageway and having one end connected to said motor, there being an air inlet communicating with said passageway and said air inlet being arranged adjacent said heel, a hollow housing arranged in the lower front portion of said shoe, a rotary fan arranged in said housing, a gear connected to said fan, a worm on said flexible shaft meshing with said gear, a cover on said housing having a plurality of spaced apart apertures therein, and the front portion of the inner sole having a plurality of spaced apart openings therein which register with the apertures in said cover.

3,048,932
REINFORCED COMPOSITE HEEL AND REMOVABLE TAP

Fernando M. Ronci, Providence, R.I.
(2 Atlantic Blvd., Centredale, R.I.)

Filed Apr. 29, 1960, Ser. No. 25,617
4 Claims. (Cl. 36—34)

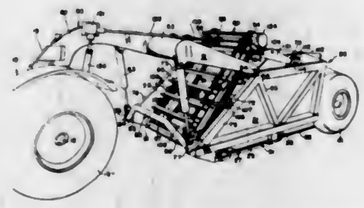


1. A composite high heel for a woman's shoe comprising an upper plastic portion having a broad top tapering downwardly to a narrow bottom, said upper portion having a central vertical opening, a lower narrow heel portion of tougher material than said upper portion, said lower portion tapering upwardly in register with said upper portion, an integral shank extending from the upper end of said lower portion into said upper opening, said shank having vertical ribs engaging the walls of said upper opening, said lower portion and shank having a central vertical opening extending therethrough, a reinforcing core in said lower opening, said reinforcing core comprising an elongated annular tubular hardened steel member having a longitudinal gap, the outside diameter of said core being slightly greater than the diameter of said lower opening prior to assembly, means for locking said shank in said upper opening, and a tap removably mounted on the bottom of said heel, said shank locking means including a diagonal slot splitting said shank into halves, said core forcing said shank halves apart to grip the wall of said upper opening.

3,048,933
CARRY TYPE SCRAPER

Clarence T. Rasmussen, Moline, Ill., and John H. Creighton, Davenport, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Oct. 16, 1959, Ser. No. 847,007
7 Claims. (Cl. 37—129)

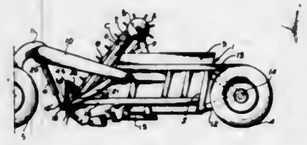


7. In a material carrying scraper, the combination of an elongated horizontally disposed floor having front and rear sections; upright side walls running lengthwise of the sides of the floor rigid with opposite edges of the rear section of the floor to define with the floor a material-carrying body open at its forward end for receiving material; a rigid transverse yoke beam having opposite leg portions connected to the respective side walls and extending forwardly; each side wall having an upper edge comprising a substantially horizontal portion extending from rear to front a major part of the length of a side wall to a point short of the front end of the body and a continuing downwardly inclined portion terminating at a forward end proximate the surface of the floor and a substantial distance forward of the rear section; means interconnecting the forward section of the floor with the rear section and sidewalls whereby the forward section may move from a position forwardly of the rear section to a position whereby the sections overlie one another; a transverse arch secured to the body adjacent the forward end thereof having a bight bridging the open end of the body and depending legs, each leg having its lower end fixed to the body adjacent a forward end of an inclined edge portion of a side wall, said arch effecting transverse support to the open end of the body; and a transversely disposed cutting blade carried on the body adjacent the forward end of the floor and beneath the arch whereby material moving over the cutting blade will pass between the arch and blade.

3,048,934
CONVEYOR MOUNTING FOR ELEVATING SCRAPER

James E. Hancock, % Hancock Manufacturing Company, P.O. Box 1359, Lubbock, Tex.

Filed Sept. 12, 1960, Ser. No. 55,386
9 Claims. (Cl. 37—129)



1. In earth handling apparatus having a frame with an open front earth-collecting box on said frame and a scraper blade mounted on said frame in advance of said earth-collecting box, an endless conveyor structure having a lower run for moving earth from said scraper blade into said earth-collecting box, said conveyor extending upwardly and rearwardly with respect to said frame, means mounting the upper portion of the conveyor structure on the frame for forward and rearward movement of said upper portion of the conveyor structure relative to said frame, guide members on and extending outwardly at sides of the lower end of the conveyor structure, arms having lower portions pivoted relative to said frame at sides of the lower portion of said conveyor structure and having elongate slots in which said guide members are slidably received, said slots extending upwardly relative to the frame, resilient means having engagement with said frame and arms and yieldably resisting forward swinging movement of said arms, and means operatively connected with said conveyor for driving same and moving the lower run rearwardly whereby on engagement of the conveyor with a large hard-to-move object said engagement of the conveyor will apply a force swinging the arms forwardly with the resilient means cushioning the shock and said guide members moving in said slots to effect an upward and forward movement of the lower end of the conveyor.

3,048,935
DISPLAY DEVICE

William Apatoff and Ernest C. Glasser, both of 6344 N. Western Ave., Chicago, Ill.

Filed June 12, 1959, Ser. No. 819,891
7 Claims. (Cl. 40—106.53)

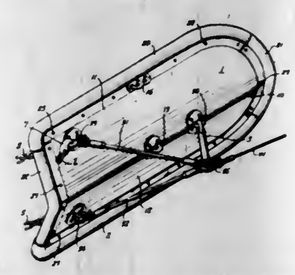


1. A display device for creating the illusion of the pouring of a fluid in flow stream areas over an object simultaneously accompanied by the splashing of the fluid in splash areas on the object, comprising a housing, a lens member fixedly mounted on said housing and having flow stream areas and splash areas in a position to be seen by a viewer, a reflector member mounted in said housing behind said lens member to be seen therethrough in said flow stream areas and said splash areas, means for shining light upon said reflector member to reflect the light therefrom through said lens member in said flow stream areas and said splash areas, means for moving said reflector member continuously in the same direction past said lens member, and lens facets on said lens member in said splash areas for reversing the apparent direction movement of said reflector member therepast as compared to the direction of movement of said reflector member past said flow stream areas, whereby upon movement of said reflector member continuously past said lens member to create the illusion simultaneously of one direction of flow continuously in said flow stream areas and of a reversed direction of flow continuously in said splash areas.

3,048,936
V-DOOR FOR TRAWLING AND BRIDLE THEREFOR

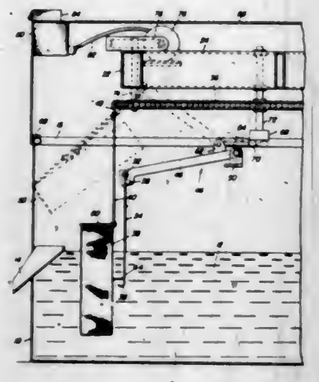
Frank J. Luketa, 5567 Greenwood Ave., Seattle, Wash.

Filed June 29, 1961, Ser. No. 120,549
16 Claims. (Cl. 43—9)



1. A trawl door comprising a panel V-shaped in cross-section, and intended for disposition generally uprightly in use, with the apex line of the V horizontal, a bridle for dragging said door including a single forward leg secured to the panel ahead of the midpoint of but substantially in the apex line, a pair of rear legs secured to the panel rearwardly of the midpoint of the apex line, one above and one below such line, and means joining the outer ends of said three legs, the two rear legs being of generally equal length, exceeding the length of the forward leg by sufficient to incline the forward leg rearwardly and outwardly from its securement to the panel, and to locate the joining means for the three legs outwardly of but approximately in a line extended through the midpoint of and perpendicular to the apex line.

3,048,937
LIVE BAIT DISPENSER
Grant L. Hustad, P.O. Box 26, Glenwood, Minn.
Filed June 23, 1960, Ser. No. 38,167
10 Claims. (Cl. 43—55)



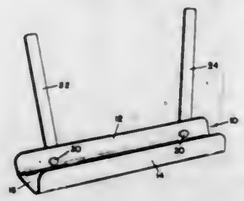
1. A live bait dispensing apparatus comprising, circulating water tank means, conveying means mounted above said tank means, a plurality of basket means containing live bait, suspension means operatively connected to said basket means at an upper open end thereof and pivotally connected to said conveying means for displaceable suspension of the basket means within said water tank means below water level thereof for passage of water through the basket means, delivery means connected to said tank means at one end thereof and disposed above the water level, dumping means mounted on said tank means and operatively connected to said conveying means for operation in timed relation thereto to engage each basket means as it is moved into proximity with said delivery means for constrained displacement of the basket means relative to said conveying means and delivery means so as to dump and impel its contents into the delivery means.

3,048,938
SUPPORT FOR SOAP BARS
Portia A. Mears, Bloomington, Ind.
(39 Chickering Road, Dedham, Mass.)
Filed Jan. 31, 1961, Ser. No. 86,094
3 Claims. (Cl. 45—28)



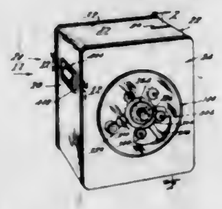
1. A flexible support for holding and drying wet bars of soap on a wash basin, etc. without drainage of water or soap thereon comprising, in combination, an envelope including a lower supporting layer of material having a non-slip surface, an upper soap-bar-receiving layer of absorbent material for absorbing moisture and soap drippings from a soap bar to effect drying of the bar, and an intermediate layer of absorbent material to receive unabsorbed moisture and drippings from said upper layer, the adjacent material of said intermediate and upper layers having a wick action returning the absorbed moisture for evaporation to the upper surface of the support to effect drying thereof, the edges of said upper and lower layers being united to confine said intermediate layer within the envelope, the material of each of said layers being flexible and washable to enable the removal of dried dirt and soap therefrom.

3,048,939
PAPER SUPPORT
Raymond L. Hoye, 238 Marshall, Apt. 17, St. Paul, Minn.
Filed Dec. 27, 1960, Ser. No. 78,635
2 Claims. (Cl. 45—85)



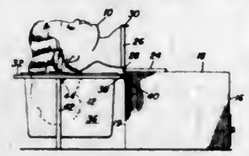
1. A support for use in supporting sheets of printed matter in an upright position, the support including a channel-shaped elongated base having a pair of opposed sides connected together by a connecting web, one of said sides being at an obtuse angle relative to said web, a pair of generally L-shaped brackets connected to said one side, said brackets including one portion in face contact with said one side, and an angular portion coplanar with said web, a pair of arms pivotally connected to said one side and said one portion of said brackets, and a pivot extending through said one side, said one portion of each said bracket, and through each said arm to connect the same.

3,048,940
TOY BANK VAULT CONSTRUCTION
James E. Thomson, Munith, Mich., assignor to Western Stamping Company, Jackson, Mich., a corporation of Michigan
Filed Nov. 14, 1961, Ser. No. 152,218
6 Claims. (Cl. 46—3)



1. A toy bank vault comprising a relatively thin-walled generally rectangular enclosure having
a front wall with a circular aperture therein to provide access into the vault,
a realistic circular vault door of relatively large axial dimension for closing the aperture in said enclosure comprising an opaque radially extending back wall and an axially outwardly extending annular side wall,
latch means on said door movable radially outwardly relative to the central axis of said door for engagement with the front wall of said enclosure to latch said door in the closed condition and movable radially inwardly relative to the central axis of said door for conditioning said door for movement to an open position,
a combination lock disposed centrally of said door including means conditionable to preclude radially inward movement of said latch means and conditionable to permit radially inward movement of said latch means, selectively, and
a manual operator having combination indicia thereon rotatable about the central axis of said door and overlying the conditionable means of said combination lock,
manually operable means for moving said latch means radially inwardly when the conditionable means of said lock is conditioned to permit such radially inward movement,
a transparent cover forming a substantialy part of a front wall for said vault door and overlying and visibly exposing a portion of said latch means, and
hinge means secured to said door and enclosure for supporting said door for rotation between the open and closed conditions with respect to the aperture in said enclosure.

3,048,941
DOLL DEVICE
Prudence Shaw, R.F.D. 1, Lyons, Ohio, assignor of one-third to Fred C. Philpitt
Filed Jan. 26, 1959, Ser. No. 789,069
3 Claims. (Cl. 46—116)



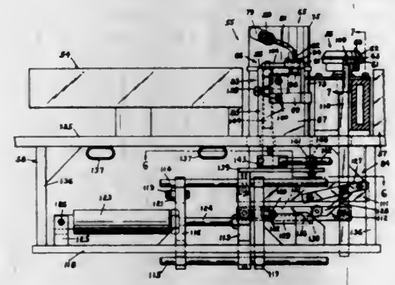
3. A novel toy for children comprising in combination:
(*a*) a doll head section resembling only the neck and head of a human female, said head containing a washable material resembling hair,
(*b*) a stationary elevated base portion having an upper substantially flat surface upon which only said head section is adapted to be supported in a vertical position, said stationary base portion being adapted to support said doll head section in any position in which the doll head section may be disposed, and
(*c*) means for hingedly attaching said doll head section to said substantially flat upper surface of the base portion in such a manner that the entire doll head section can be tilted from a normally vertical position backwardly to a substantially horizontal position,
(*d*) the doll head section in its backwardly tilted substantially horizontal position being disposed so that said washable material resembling hair on said doll head section will extend downwardly.

3,048,942
CONTAINER FOR FLOWERS AND THE LIKE
Audrey L. Boetticher and Albert A. Boetticher, both of 2665 Sheldon Place, Oceanside, N.Y.
Filed Sept. 3, 1958, Ser. No. 758,761
2 Claims. (Cl. 47—41)



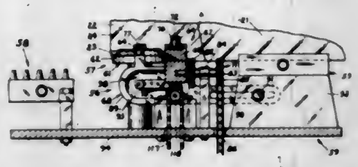
1. A container for flowers and the like, comprising a body formed from a moldable material and having a bottom and a wall surrounding and extending upwardly from said bottom to an upper margin of said wall, and a plurality of pin members formed from the same moldable material as said body and suitable for impaling the stems of flowers thereon, said pin members being unitary with said body and projecting within said body upwardly from said bottom and inwardly and upwardly from said wall to locations below said wall upper margin.

3,048,943
APPARATUS FOR PRODUCING ALL-GLASS MULTIPLE SHEET GLAZING UNITS
Donald A. Davis and Charles H. Cowley, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Apr. 6, 1959, Ser. No. 804,355
3 Claims. (Cl. 49—1)



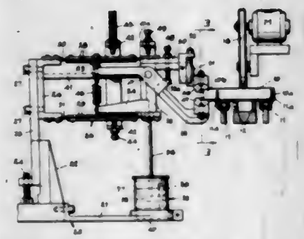
1. Apparatus for placing a hollow insert in an edge wall of an all-glass multiple sheet glazing unit in order to provide an access opening to an enclosed space therein, said glazing unit being produced by moving a pair of spaced glass sheets along a definite horizontal path past heat sources for raising the temperature of the marginal edge portions thereof and subsequently past forming means for urging the edge portions into fusion contact with each other to provide a sealed edge wall, said apparatus comprising an insert supply means adjacent said path in advance of said forming means, a vertically maintained support movable along said path between a first position adjacent said supply means and a second position adjacent said forming means and laterally of said path toward and away from said glass sheets, said support having its upper extremities adapted to receive a hollow insert thereon, a reciprocal motion mechanism operable to move said support upwardly adjacent said first position, thereby to bring said insert into position between the marginal edges of the glass sheets and then horizontally along said path to maintain the insert in a fixed position relative to the glass sheets to said second position adjacent said forming means, thereafter to move downwardly away from said marginal edges and backwardly to said first position, said mechanism comprising a frame, a vertical wall member guided on said frame for movement back and forth along a horizontal path parallel to said definite path, an upper support bar pivoted at one end to said wall and at the other end to said vertical support, a lower support bar disposed parallel to and below said upper bar and pivotally connected at its opposite ends to said wall and said vertical support, a first guide bar fixed to said upper support bar, a second guide bar pivoted on said lower support bar, cam surfaces formed on said first and second guide bars, a positioning pin fixed to said frame and coacting with said cam surfaces to raise and lower said vertical support as said wall moves back and forth along said path relative to said positioning pin, and actuator means sliding said wall along said path in timed relationship to the movement of said glass sheets.

3,048,944
APPARATUS FOR PRODUCING MULTIPLE SHEET GLAZING UNITS
Charles H. Cowley, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Original application Oct. 24, 1957, Ser. No. 692,181, now Patent No. 2,995,869, dated Aug. 15, 1961. Divided and this application Feb. 12, 1960, Ser. No. 13,976
11 Claims. (Cl. 49—1)



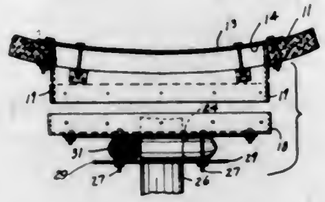
1. Apparatus for producing multiple sheet glazing units, comprising means for supporting sheets of glass in spaced face-to-face relation with respect to one another, heating means for raising the temperature of the marginal edge portions of said sheets to substantially the fusion point of the glass, conveyor means for effecting relative movement between said heating means and said glass sheets, forming means for urging the heated edge portions of said sheets into fusion contact with one another to form a sealed edge wall, and insertion means for disposing a hollow insert in the edge wall of said unit, said insertion means including a body portion, a projection carried by said body portion for receiving an insert, a loading means for bringing said insert into operative engagement with said projection, and reciprocatory moving means for moving said body portion so as to dispose said insert between the heated edge portions of said spaced sheets and then move said body portion away from the fused edge wall after the insert is in said edge wall.

3,048,945
APPARATUS FOR SHAPING MOUTH PORTIONS OF GLASS ARTICLES
Philip A. Modelle, Vineland, N.J., assignor to Kimble Glass Company, a corporation of Ohio
Filed July 16, 1957, Ser. No. 672,253
5 Claims. (Cl. 49—7)



1. Apparatus for exteriorly shaping open end portions of hollow glass articles such as vials during their conveyance, the said open end portions being in workable condition, said apparatus comprising a base member an upright rigid leg member attached to said base member, a pair of cantilevered resilient arm members disposed in vertical array each having one end attached to said rigid leg member, a second rigid leg member connecting the cantilevered free ends of said pair of resilient arm members adapted to limited vertical movement, a pivotally mounted arm attached to said second leg member, a pair of projecting vertically-spaced oppositely-disposed shaping jaws, one attached to a resilient arm member and the other attached to said pivotally mounted arm, said shaping jaws having working surfaces disposed in substantially horizontal parallel relation, the said jaws being movable vertically with respect to each other for self-centering contact with a conveyed individual glass article for its shaping thereby.

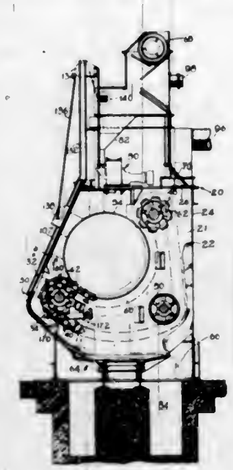
3,048,946
DOOR STRUCTURE FOR AUGER FEED SILOS
Thomas F. Hawk, New Palestine, Ind., and Edward L. Springer, 827 Board of Trade Bldg., Indianapolis, Ind.
Filed Apr. 24, 1959, Ser. No. 808,724
3 Claims. (Cl. 50—112)



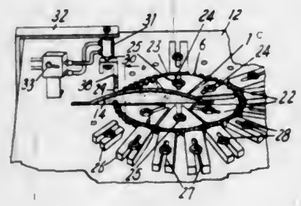
1. An entry door structure for silos having an opening therein, said structure comprising a plate-like frame for attachment to the interior surface of the wall of said silo, said frame having an opening of a size corresponding to that of said silo opening, an outwardly directed tubular section surrounding the opening defining said frame opening and coextensive therewith and adapted for attachment to the exterior surface of the silo, fastening means interconnecting said plate-like frame and said tubular section, a closure plate attached to the outer end of said tubular section, said closure plate having a central opening therein smaller than said frame opening, a flat annular pressure plate disposed in substantially spaced parallel relationship with said closure plate, said pressure plate having laterally disposed spaced apart slots near its periphery in parallelism with one another, clamping members projecting from said closure plate through said slots whereby to permit shifting of said pressure plate transversely of said wall opening, and an annular compressible member interposed between said closure and pressure plates with its openings concentric with the openings in said plates and whose outer periphery is disposed inwardly of said clamping members, the opening in said compressible member adapted to receive a tube for an auger, whereupon insertion of said tube within said openings and compression of said compressible member by said clamping members said tube will be held and sealed in said openings by said compressible member.

3,048,947
ABRASIVE BLASTING APPARATUS
Maxwell E. Fahrney and George W. Powell, Hagerstown, Md., assignors to Pangborn Corporation, Hagerstown, Md., a corporation of Maryland
Filed July 23, 1959, Ser. No. 829,078
10 Claims. (Cl. 51—13)

1. In an apparatus for tumbling a batch of work pieces in a trough-shaped conveyor enclosed in a housing having a loading and unloading doorway, and projecting a blast of abrasive particles against the tumbling work pieces and at the same time keep the particles from leaking out through the doorway, the improvement according to which the upper portion of the doorway is inclined position facing upwardly and has a sliding door with a door track that extends along the inclined sides of the doorway and vertically upwardly from the top of the doorway, the door being a single rigid panel slidably fitted in the track, the track at its intermediate portion being open to allow the intermediate portion of the door to lift out of the track, the door sides as well as the inclined section of the track having cooperating labyrinth seal elements, and the upper portion of the door having securing elements cooperating with the upper portion of the door to seal against the inclined track when the door is lowered.

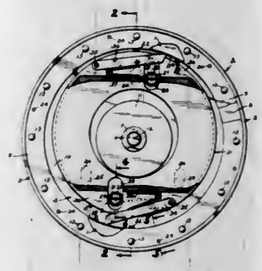


3,048,948
MACHINE FOR SIZING COMBINED EXPANDER AND SPACER
Hugo F. Anderson, Hastings, Mich., assignor to Hastings Manufacturing Company, Hastings, Mich.
Filed July 5, 1960, Ser. No. 40,823
10 Claims. (Cl. 51—98)



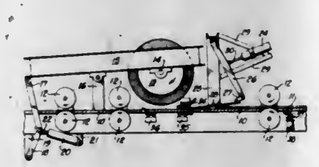
1. A machine of the class described comprising a bed member having a planar work supporting surface having a slot therethrough, a driven cutter having parallel sides and having peripheral and side grinding surfaces, said bed member having a bracket on its underside, a support member for said cutter pivotally mounted on said bracket and provided with a journal at its swinging end, manually controlled means for adjusting said support member to project said cutter through and retract it from said slot, a plurality of outwardly facing inner workholder members disposed in an annular series relation to each other, a plurality of inwardly facing outer workholder members disposed in an annular series to each other and in opposed relation to said inner workholder members to receive and axially support an annular workpiece therebetween, each of said inner and outer workholder members being provided with radial slots, said bed member having bolts projecting through said radial slots and provided with workholder member clamping nuts, a bracket disposed in overhanging relation to said bed member, a work clamp mounted on said bracket for vertical adjustment relative to the workpiece and having a downwardly facing slot therein adapted to receive said cutter when projected above said bed member, and manually controlled means for actuating said clamp.

3,048,949
AUTOMATIC INDEXING BASE FOR CHUCKS AND THE LIKE
Stanley A. Johnson, 5540 15th Ave. S., Minneapolis, Minn.
Filed Oct. 14, 1959, Ser. No. 846,307
5 Claims. (Cl. 51—216)



1. An indexing device for surface grinders and including, a base adapted to be mounted on the reciprocatory bed of a surface grinder for common reciprocatory movements therewith, a work piece holding chuck rotatably mounted on said base and having portions axially spaced therefrom, a freely shiftable weight mounted on said base about the axis of rotation of the chuck within said space for common reciprocatory movements with the base and for independent limited linear reciprocatory movement relative to said base and generally in the direction of said reciprocatory movements of said base, said weight being unconnected to any driving mechanism therefor, and driving connections between said weight and chuck for imparting limited rotary movements to the chuck, said weight being responsive to its own inertia to continue to move in one direction, when the direction of movement of said base and chuck is reversed, to impart said limited rotary movement to said chuck in one direction through said driving connections.

3,048,950
EDGE GUARD FOR ABRASIVE POLISHING MACHINES
Robert M. Nelson, Los Angeles, Calif., assignor to Merit Products, Inc., Los Angeles, Calif., a corporation of California
Filed Aug. 4, 1960, Ser. No. 47,401
21 Claims. (Cl. 51—274)



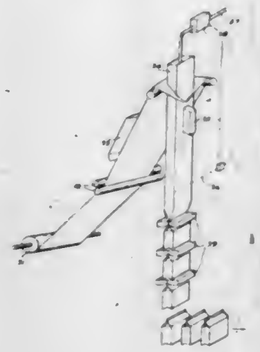
1. In an abrasive drum assembly having a bed across which a sheet is adapted to be moved, an abrasive drum extending substantially transversely across said bed and means for rotating said abrasive drum with respect to said sheet, a guard plate having a width substantially corresponding to the width of said sheet, and means for moving said guard plate into substantially abutting relationship with one of the transverse edges of said sheet before it reaches said abrasive drum to protect said edge of said sheet from being damaged by said abrasive drum, said means for moving said guard plate comprising a solenoid controlled valve and means connecting said solenoid controlled valve to said guard plate.

3,048,951

PROCEDURE FOR CONTINUOUS MANUFACTURE AND FILLING OF CONTAINERS

Ernst Bertil Olér, Bofors, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a Swedish corporation

Filed June 6, 1960, Ser. No. 34,068
Claims priority, application Sweden June 12, 1959
2 Claims. (Cl. 53—28)



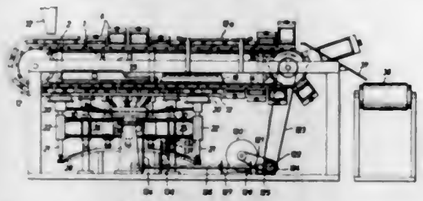
1. A method of continuously forming closed containers filled with a flowable material, said method comprising the steps of providing a blank in the form of a web of sheet material including arrays of lengthwise extending parallel fold lines, longitudinally spaced transverse fold lines and slanted fold lines extending between said lengthwise fold lines and intersecting said transverse fold lines, the fold lines of each array defining side and end walls of one of the containers to be formed, said slanted fold lines being arranged between two alternate side walls of each container to be formed and further between the lower end of the side walls of each container to be formed and the upper end of the side walls of the succeeding container to be formed, each said arrangement of slanted fold lines including an upwardly peaked pair extending above the transverse fold lines forming said lower end of the side walls of each container, folding the web along the longitudinal fold lines to form a continuous tube of polygonal cross-section, joining abutting side edges of said web, moving said tube downwardly along a substantially perpendicular path, filling said tube while moving from above with said flowable material and maintaining the material at a predetermined level within the tube, applying lateral pressure to opposite slanted line sides of said tube above said flowable material therein and spaced from a succeeding unfilled tube to fold said two sides inwardly along said slanted fold lines to the central portion thereof to form a deflected end wall of said succeeding tube and a base flap and simultaneously folding said base flap along a transverse fold line by applying pressure thereto to close the top end of said filled tube and to close said base flap at said deflected end wall, and severing said adjacent tubes at the closed base flap to divide the tube into individual closed and filled containers, and continuing to fold said two sides inwardly until said sides fold upwardly into the body portion of the container along said peaked pairs of slanted lines so as to present a peaked indentation in the bottom of each said container including said base flap, the severed end of the base flap lying inside the plane which lines the end of the base of the container to have said container rest on the peripheral ends of the container.

3,048,952

MACHINE FOR THE PRODUCTION OF FILLED PACKAGES

Hans Paal, Waiblingen, Wurttemberg, Germany, assignor to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany

Filed Aug. 1, 1960, Ser. No. 46,700
Claims priority, application Germany Aug. 3, 1959
8 Claims. (Cl. 53—184)



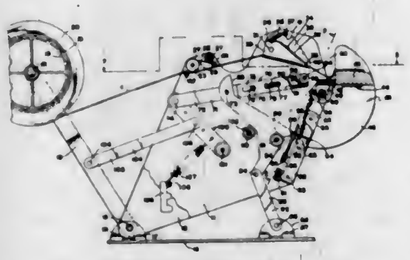
1. A machine for producing a filled closed package from a blank, the machine comprising endless conveyor means, means coupled to the conveyor means for moving the same along a path having spaced runs, clamping frames supported on said conveyor means for being moved therewith, means operatively associated with said endless conveyor means for feeding a blank to the clamping frames along one of said runs, further conveyor means extending parallel and coextensive with at least part of said one run of the path of the first said conveyor means, means on said further conveyor means for cooperating with said clamping frames with the further conveyor means coextensive with said one run to form the blank in dish shape, means operatively positioned relative to the other run of said path to fill the formed blank as the latter traverses said other run, means positioned adjacent the other run of the path and operatively associated with said conveyor means for feeding a cover to said clamping frames for the filled blank, means adjacent the latter said means for cooperating with said clamping frames to effect sealing of the cover to the blank to form a filled, closed package and means operatively positioned relative to said clamping frames for removing the package from the clamping frames to complete a cycle of operation.

3,048,953

TAPE WRAPPING MACHINES

James H. Casey, Roseville, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed June 8, 1959, Ser. No. 818,909
3 Claims. (Cl. 53—198)



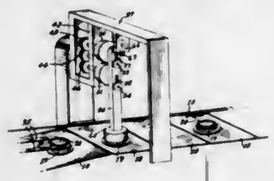
1. In a tape wrapping machine having a base, a supporting structure movable toward said base and a recess into which an article is pressed downwardly for wrapping; a rotatable jaw having a rest position and a release position, said jaw in its rest position defining a portion of said recess, said jaw being mounted on said supporting structure to move from its rest position toward said base and to its release position upon application of downward pressure to said article, said movement of said jaw permitting further downward movement of said article out of said machine, a latch normally in engagement with said jaw to prevent rotation thereof during movement from its rest position to its release position, and means for disengaging said latch from said jaw to permit rotation thereof, said last-mentioned means being actuated only after a predetermined degree of movement of said supporting structure toward said base, means being provided to urge said jaw to its rest position.

3,048,954

CONTAINER CLOSING APPARATUS

William J. Abel, Anchorage, Ky., assignor to Anaconda Aluminum Company, a corporation of Montana

Filed Apr. 20, 1960, Ser. No. 23,537
7 Claims. (Cl. 53—329)



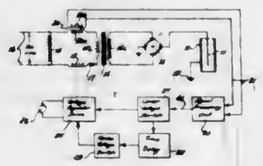
1. Forming apparatus comprising a rotatably mounted actuating element, driving means for rotating said actuating element, a working station spaced from said actuating element, a forming die at least partially supported by said actuating element and normally being revolvable thereby closely past said station, said forming die being radially displaceable relative to the axis of rotation of said actuating element toward and away from said station, an arm extending from and being movable with said forming die, and cam means associated with said arm for displacing it and said die toward said station when said die is closest to said station.

3,048,955

AUTOMATIC CONTROL FOR ENERGIZING ELECTRICAL PRECIPITATORS AND METHOD THEREOF

Larry L. Little, Los Angeles, Calif., assignor, by mesne assignments, to Joy Manufacturing Company, a corporation of Pennsylvania

Filed June 11, 1956, Ser. No. 590,450
15 Claims. (Cl. 55—2)



1. An automatic control device for use in combination with an energizing circuit for maintaining a high voltage field between opposed electrodes of a precipitator and including variable voltage regulating means for varying said inter-electrode voltage, comprising: reversible motor means driving the variable voltage regulating means to raise or lower the voltage between opposed electrodes; circuit means energizing the motor means in a direction to lower the inter-electrode voltage in response to excessive sparking between opposed electrodes of the precipitator; timer means connected to the circuit means to initiate a cycle of operation after the lapse of a predetermined time interval following energization of the circuit means to lower the inter-electrode voltage; and circuit means actuated by the timer means at the beginning of said operating cycle to energize the motor means in a direction to raise the inter-electrode voltage.

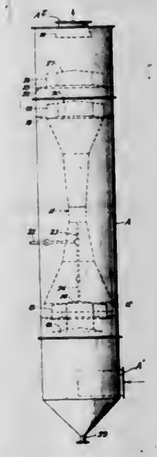
8. The method of controlling the voltage applied to the electrodes of an electrical precipitator by an energizing circuit that includes the following steps: deriving an electrical signal proportional to the inter-electrode current which signal has a basic frequency component corresponding to inter-electrode current caused by corona discharge and a modulation component corresponding to inter-electrode current caused by sparking; deriving from said signal an electrical control signal that varies in magnitude with variations of the modulation component only; varying in one manner the magnitude of the voltage impressed by the energizing circuit between the electrodes, and utilizing said control signal to vary the voltage impressed by the energizing circuit between the electrodes in a manner other than said one manner.

3,048,956

PARTICLE AND FLUID COLLECTOR

Alvin S. Lundy, Bloomfield Hills, and George C. Schreiber, Birmingham, Mich., assignors to Claude B. Schneible Co., Detroit, Mich., a corporation of Michigan

Filed Mar. 3, 1959, Ser. No. 796,961
10 Claims. (Cl. 55—235)



1. In a column for the intimate contact of gas with a liquid, a casing providing a generally vertical chamber provided at one end with an outlet and near its other end with a tangential inlet for rotating the incoming gas, means for passing gases through the chamber from the inlet to the outlet, an inner casing within said first-mentioned casing and spaced from said inlet and outlet, said inner casing having flared end portions and a constricted intermediate portion providing a venturi passage, a liquid conduit within said constricted portion adapted to discharge liquid within said venturi passage, and means at the flared inlet to said inner casing for continuing the rotation of the gases entering said inner casing.

3,048,957

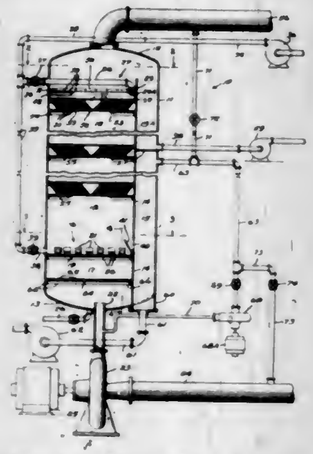
APPARATUS FOR EFFECTING COUNTER-CURRENT CONTACT BETWEEN LIQUID AND VAPOR STREAMS

John F. Middleton, New York, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York

Filed Sept. 4, 1958, Ser. No. 759,006
13 Claims. (Cl. 55—257)

1. A vapor-liquid contact apparatus for effecting counter-current contact between vapor and liquid streams, com-

prising a vessel forming a fluid-tight enclosure, first means for introducing a vapor into the lower portion of said vessel, second means for introducing feed liquid into the upper portion of the vessel, outlet means in the upper portion of the vessel to pass vapor from the latter, a baffle means extending from the bottom of the vessel to a point in spaced relationship to the outlet means and secured to the inner surfaces of said vessel to divide the interior of said vessel into a liquid-vapor contact chamber and discharge passageway, a tray disposed across said liquid-vapor contact chamber and secured to said vessel and said baffle means, said tray being adapted to receive liquid thereon and to pass vapor from said first means into said liquid to aerate the latter, said baffle means cooperating with said tray to provide a bed of aerated liquid in said liquid-vapor contact chamber extending above the tray to a height necessary to provide a predetermined thermal and/or composition transfer between the vapor and liquid over a predetermined wide range of vapor and liquid flow



rates so that the vapor flowing through said outlet means of the vessel is of predetermined temperature and/or composition, partition means disposed in said discharge passageway to divide the latter into an overflow passageway and a downcomer passageway, a discharge means in said baffle means adjacent said tray to pass aerated liquid from the latter into said downcomer passageway, said overflow passageway communicating with the liquid-vapor contact chamber to receive aerated liquid from the latter to prevent flooding of the apparatus, a first outlet line connected adjacent the lower end of said overflow passageway to receive and withdraw substantially unaerated liquid from said overflow passageway, a second outlet line connected adjacent the bottom of said downcomer passageway to receive the substantially unaerated liquid from said downcomer passageway, and a third line communicating with the upper part of the downcomer passageway to receive and withdraw vapor disentrained from the liquid in the downcomer passageway.

3,048,958
VACUUM BREAKER DEVICE FOR TANK CARS
Lester H. Barnes, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed July 13, 1960, Ser. No. 42,537
1 Claim. (Cl. 55—316)

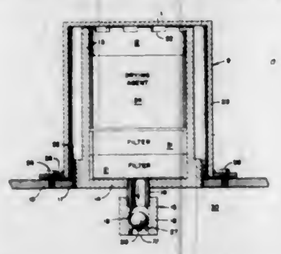
A vacuum breaker and air drying apparatus for a movable storage tank car having a liquid confined therein and having an opening therethrough above the level of said liquid, comprising:

(*a*) an inner cylindrical container having a side wall and a bottom;

(*b*) means for attaching the bottom portion of said inner cylindrical container over the opening in the tank on said tank car;

(*c*) a vacuum breaker and spillage prevention valve attached to the outside of the bottom of said inner cylindrical container and extending therefrom and having a communicating passage therethrough and into said cylindrical container, a ball valve within said communicating passage adapted to permit air to pass therethrough when said tank car is properly oriented, and to prevent spillage of fluid through said communicating passage when said tank car is overturned;

(*d*) a drying agent and a filter means confined within the side walls of said inner cylindrical container, said filter adapted to remove contaminating particles from the air flowing into said tank and said drying



agent adapted to remove moisture from the air flowing into said tank;

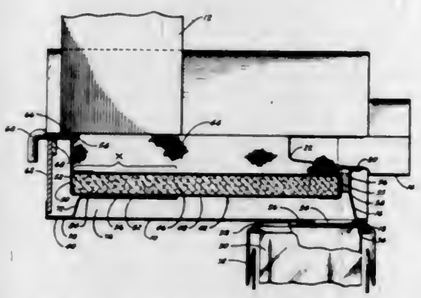
(*e*) an outer cylindrical container surrounding said inner cylindrical container and having side walls and a top;

(*f*) mounting means for attaching said outer cylindrical container securely around said inner container; and

(*g*) means for passing air through the bottom of said outer cylindrical container and through the top of said inner cylindrical container;

whereby liquid within a tank will be prevented from contamination by dirt and moisture-laden air entering said tank when a sudden vacuum is created within said tank by rain or large temperature change by permitting the air to enter through the bottom of said outer container, the top of said inner container, and by cleaning and drying before entering said tank to relieve the vacuum therein.

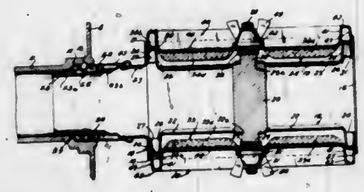
3,048,959
AIR CLEANING DEVICE AND METHOD
Wilfred W. Lowther, Chicago, Ill., assignor to Novo Industrial Corporation, a corporation of New York
Filed Oct. 27, 1959, Ser. No. 849,056
8 Claims. (Cl. 55—320)



1. In an air cleaning assembly, a generally cylindrical housing having an inlet at one end for dirty air

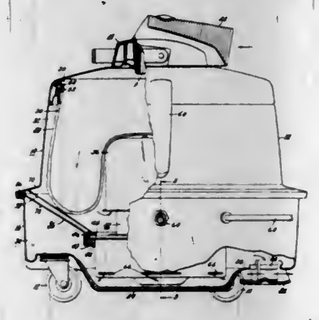
constructed to set up a helical swirling motion of the air in the housing to centrifuge the dust to the outside, a generally cylindrical annular filter element centrally disposed in the housing and of a diameter substantially less than the diameter of the housing so that a helical swirl zone for air and dust is provided between the outside of the filter element and the inside of the housing, a dust port in the housing at the other end thereof for tangentially discharging dust, a centrally arranged clean air outlet in the housing communicating with the interior of the annular filter element, a shield in the housing extending from the said one end and masking the inlet, the shield extending no more than half the length of the housing and terminating in substantial spaced relation to the other end of the housing, the shield being disposed between the filter element and the inside of the housing and spaced from each so that dirty inlet air will be deflected from direct contact with the filter element at the inlet, and at the same time, the portion of the filter element masked by the shield will be usable, the filter element being axially removable through the end of the housing opposite the clean air outlet and further including a pilot mounted on the clean air outlet and projecting into the interior of the housing and constructed to project into the inside of the annular filter element when the filter element is fully mounted in the housing so that the pilot serves to position the inner end of the filter element, an annular sealing surface around the pilot, a seal ring between the annular sealing surface and the inner end of the filter element, and manually operable means at the other end of the housing for clamping the filter element in place and for applying an axial thrust thereto to provide a tight seal between the filter element and the annular sealing surface at the clean air outlet.

3,048,960
AIR FILTER
Bengt Erik Ohlson, Montreal West, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Oct. 24, 1958, Ser. No. 769,326
3 Claims. (Cl. 55—372)



1. In apparatus of the type described, the combination of a suction cleaner having a casing provided with an inlet and an outlet, a fan for moving air through said casing and discharging the air through said outlet, a motor for driving said fan, and a dust bag disposed in said casing upstream of said fan, motor and outlet for removing foreign particles from air passing through said casing; and an auxiliary filter comprising a box-like casing having walls constructed from sheet material, said box-like casing having open opposed side walls, a first pair of plates spaced from each other and affixed about their peripheries to said box-like casing to define a chamber, an inlet nipple detachably supported in said outlet for detachably mounting said auxiliary filter upon said casing of said cleaner and communicating with said chamber, said plates being perforated, all air discharged from said outlet flowing through the perforations and said open side walls, a pair of mats of fibrous filtering material disposed in contact with said plates for removing from the air foreign particles which pass through said dust bag, a second pair of perforated plates overlying said mats, means for clamping said plates and said mats together, said clamping means comprising a spacing member bridging the space between said first pair of plates, said spacing member having end portions which extend through said plates and said mats, and means attached to said end portions and abutting said second pair of plates for clamping said mats between said plates.

3,048,961
CASING CONSTRUCTION FOR VACUUM CLEANERS AND THE LIKE
Warren N. Kennitz, Willoughby, Ohio, assignor to General Electric Company, a corporation of New York
Filed Oct. 14, 1958, Ser. No. 767,202
1 Claim. (Cl. 55—471)



A vacuum cleaner comprising:

(*a*) a body having an air inlet and an air outlet and comprising:

(*aa*) a generally cylindrical member having a flat annular peripheral mounting flange,

(*bb*) a cup-shaped member having a flat annular peripheral mounting flange, and

(*cc*) a wall member disposed between said cylindrical member and said cup-shaped member and having a flat annular peripheral mounting flange,

(*dd*) said mounting flanges being of substantially the same dimensions and in juxtaposed relation with each other,

(*ee*) one of said flanges having a deformed portion rolled over said other flanges to fasten said members together,

(*b*) air filtering means mounted within said body,

(*c*) air flow producing means mounted within said body,

(*d*) means secured to said wall member for supporting said air flow producing means,

(*e*) a socket-like recess in said wall member being formed in part by a wall portion of said wall member in closely spaced generally parallel relation to a portion of said cup-shaped member,

(*f*) first and second openings in said wall portion,

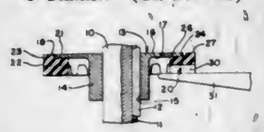
(*g*) first and second openings in said cup-shaped member respectively aligned with said first and second openings in said wall portion,

(*h*) a power cord extending through said first opening in said wall portion and said first opening in said cup-shaped member,

(*i*) a resilient bushing surrounding said cord to seal said cord to said wall portion and said cup-shaped member, and

(*j*) an electrical switch mounted in said recess having an actuating portion extending through said second opening in said wall portion and said second opening in said cup-shaped member in sealed relation therewith.

3,048,962
DOFFER PLATE
Arthur L. Hubbard, Des Moines, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 69,191
8 Claims. (Cl. 56—41)



1. A doffer construction comprising: a rigid laterally disposed plate having a central portion adapted for connection to an upright rotatable shaft and upper and lower surfaces extending from the central portion to an outer and upright circular peripheral edge; an annular doffer ring of resilient composition having an inner portion inwardly of the peripheral edge of the plate, an outer portion outwardly of the peripheral edge with an outer annular edge spaced substantially from the peripheral edge, and an annular upright shoulder engaging the peripheral edge of the plate, said doffer ring further having an upper surface on its inner portion extending to the shoulder and lying adjacent to the lower surface of the plate and an upper surface on its outer portion extending from the shoulder to the outer annular edge and generally defining a lateral continuation of the upper surface of the plate, said ring further having an underside with radially extending and angularly spaced depending lug portions extending radially from beneath the plate to a point beneath the outer annular edge of the outer portion; and means fixing the inner portion of the doffer ring to the plate whereby the outer portion of the ring and the lug portions will be supported in cantilever fashion by the plate and be capable of yielding axially.

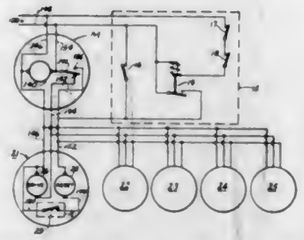
3,048,963
STABILIZATION OF NYLON ROPE
David Himmelfarb, 117 Beaumont Ave., Newtonville, Mass., and William J. Kaes, 192 Union St., Randolph, Mass.
Filed Nov. 25, 1960, Ser. No. 71,841
15 Claims. (Cl. 57—140)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The method of making a shrinkage-stabilized nylon rope which comprises twisting a plurality of filaments of predrawn, high tenacity nylon into yarns, twisting a plurality of such yarns into a structurally balanced cord, twisting a plurality of such cords into a strand with transverse compression and compacting during such twisting, twisting a plurality of such strands into a rope, and during the twistings, wetting with an unheated aqueous liquid, at least one of said filaments, yarns, cords and strands to render them somewhat plastic and continuing the subsequent twistings while the wetted components are still somewhat plastic.

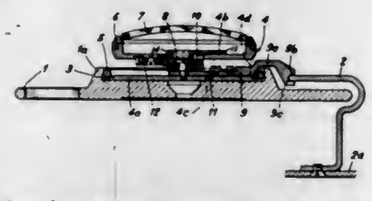
3,048,964
TWELVE HOUR SCATTER CORRECTIVE MECHANISM FOR ELECTRIC CLOCK SYSTEMS
Alfred I. Biorge, Salt Lake City, Utah, assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 21, 1959, Ser. No. 788,080
16 Claims. (Cl. 58—24)

1. In a master clock system including a master clock and at least one secondary clock connected thereto and synchronized thereby, each secondary clock including a drive motor which when energized drives its secondary clock at a rate to normally maintain proper time indication, each secondary clock also including a re-set motor which when energized drives its secondary clock at a fast rate until a predetermined minute indication is attained, the master clock including means for energizing the re-set motors and de-energizing the drive motors periodically to correct the minute indications of the secondary clocks: the improvement comprising, in combination;



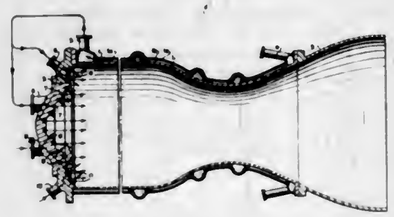
means at said master clock for periodically energizing the re-set motors for an extended period of time while the drive motors are energized, means at each secondary clock for preventing the re-set motor from driving its secondary clock during said extended period when said secondary clock indicates a predetermined time prior to the beginning of said extended period, said extended period being less than the period of time between minute indication correction cycles of the system and terminating prior to the commencement of the next following minute indication correction.

3,048,965
WATCH FOR TELEPHONE SETS WITH CALLING DIAL
Fritz Grimm-Jeannerat, Schmelzistrasse 37, Grenchen, Switzerland
Filed Nov. 12, 1957, Ser. No. 695,934
Claims priority, application Switzerland Nov. 16, 1956
5 Claims. (Cl. 58—46)



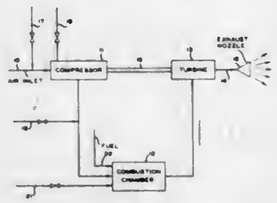
3. A timepiece assembly comprising, in combination, a circular plate; an arm; pivot means of a diameter which is only a small fraction of the diameter of said plate connecting said arm to the plate for turning movement of said plate with respect to said arm about an axis perpendicular to and passing through the center of the plate, said arm extending radially beyond the plate and having an outer free end formed with a cutout; a timepiece fixedly carried by said plate and defining with said plate a free space extending between said timepiece and plate across the central portion of said plate; and winding means carried by and operatively connected with said arm and timepiece for participating in the winding of the latter during relative rotation of said plate and timepiece, on the one hand, with respect to said arm on the other hand, said winding means including a gear located in said free space over said central portion of said plate, said plate being adapted to fit into the front recess of a conventional telephone dialing member to be fixed to the latter for rotation therewith and said cutout of said arm being adapted to receive a free end of a conventional finger stop of a telephone so that said arm remains stationary while the plate and timepiece turn with the dialing member, whereby after the plate is fixed in the recess of the dialing member and the finger stop extends into the cutout of said arm, the assembly is ready for use.

3,048,966
ROCKET PROPULSION METHOD
Roger Adrien Feraud, Epinay-sur-Orge, and Robert Oscar Alder, Saint-Mande, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company
Filed Apr. 23, 1959, Ser. No. 808,332
Claims priority, application France Dec. 15, 1958
6 Claims. (Cl. 60—35.4)



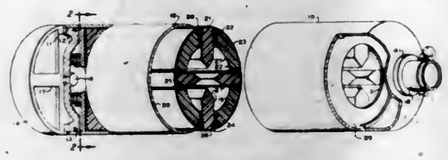
1. A method of carrying out combustion in a rocket propulsion chamber of generally circular cross section, comprising the concurrent steps of:
supplying at least one oxidizer to said chamber,
injecting into a central portion of said chamber a metal in liquid state selected from the group consisting of beryllium, lithium, boron, aluminum and magnesium, to perform a combustion of said metal with said oxidizer of such nature as might subject the rocket chamber wall to excessive thermal stress, and injecting into a peripheral portion of said chamber, around said central portion thereof, a fuel of substantially lower calorific value than that of the metal of least calorific value belonging to said group, to perform a combustion of said fuel with said oxidizer of such nature as will protect said rocket chamber wall from said excessive thermal stress.

3,048,967
SMOKE SUPPRESSION AND THRUST AUGMENTATION BY A MIXTURE OF TERTIARY BUTYL ALCOHOL AND WATER
Donald E. Carr, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 3, 1959, Ser. No. 850,637
12 Claims. (Cl. 60—35.4)



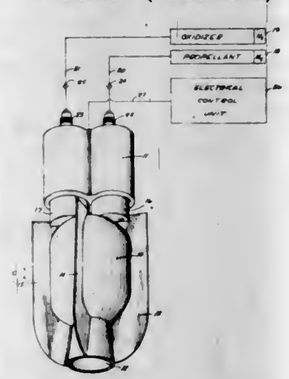
1. In the method of operating an aircraft turbo engine wherein air and a liquid hydrocarbon fuel are introduced into and burned in a combustion zone of said engine and resulting gases are exhausted from said engine so as to impart thrust thereto, the step of also introducing into said combustion zone an aqueous mixture comprising from 10 to 50 volume percent of tertiary butanol and from 90 to 50 volume percent of water.

3,048,968
ROCKET MOTOR
William M. Hutchinson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 2, 1958, Ser. No. 706,860
11 Claims. (Cl. 60—35.6)



1. A rocket motor comprising: a case defining a combustion chamber, said case being closed at its forward end and having nozzle means for exhausting combustion gases disposed in its after end; a plurality of propellant grains disposed around the inner wall of said case with one side thereof adjacent said inner wall; said grains adjoining each other along a portion of at least one other side of each; a rigid sheath of essentially non-combustible material covering said side of each said grain which is adjacent said inner wall; and a plurality of bar members, each attached at one edge thereof to and extending longitudinally along said inner wall of said case and each having at least two surfaces thereof adapted to coact with the sheathed portion of said grains so as to hold said grains adjacent said inner wall.

3,048,969
IMPULSE ROCKET FOR ATTITUDE CONTROL
John W. Horner, Whittier, Calif., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 8, 1958, Ser. No. 759,519
5 Claims. (Cl. 60—35.6)



5. A rocket engine adapted for controlled cyclic operation to produce upon command a predetermined quantity of thrust for each operating cycle which comprises a fixed support, a rocket unit slidable by recoil in said fixed support whenever the unit is discharging thrust gases, fuel and oxidizer metering cavities in said support, piston means on said rocket unit slidable in each of said cavities and effective to discharge fuel and oxidizer therefrom into the rocket unit, spring means moving the piston means outwardly from the cavities to accommodate filling of the cavities with fuel and oxidizer, remote control valves controlling flow from the cavities to the rocket unit, means for closing said remote control valves whenever the pistons are substantially fully retracted into the cavities, and command means to open said remote control valves whereby fuel and oxidizer will flow from the cavities to the rocket

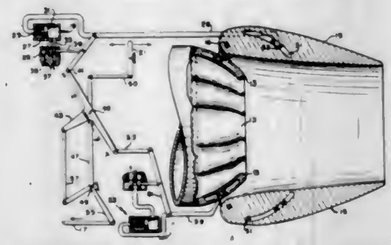
unit to react therein and develop thrust gases causing the unit to recoil and move the pistons into the cavities for discharging a charge of fuel and oxidizer therefrom, and said spring means being loaded by the recoil movement for moving the pistons outwardly of the cavities for accommodating refilling of the cavities for the next cycle of operation.

3,048,970
PLASTIC NOZZLE PLATE FOR MISSILE MOTORS
Stephen H. Herzog, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 24, 1958, Ser. No. 769,517
3 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



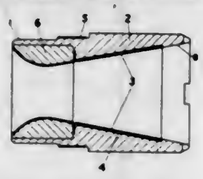
3. A nozzle plate assembly for rocket motors comprising a steel plate having a circumferential steel skirt and a plurality of exit ports therein each of which has a beveled surface, a heat-resistant resin disk positioned within said skirt, said disk having a plurality of exit openings in alignment with the exit ports of the steel plate and each opening being provided with a beveled surface, and a tubular erosion-resistant insert embedded within the walls of each of the exit openings of said disk, each insert being insulated from said steel plate by the resin of said disk and having a beveled surface, and the beveled surface of each exit opening of said disk merging with the beveled surfaces of its associated insert and exit port to provide a smooth continuous surface.

3,048,971
VARIABLE AREA NOZZLE CONTROL MECHANISM
Joseph S. Alford, Cincinnati, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Dec. 10, 1958, Ser. No. 779,510
5 Claims. (Cl. 60—35.6)



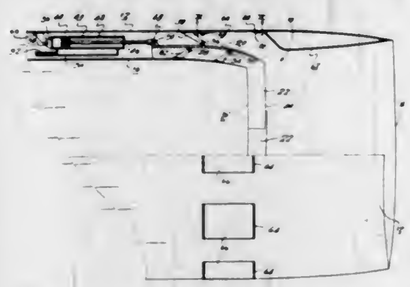
1. A geometrically variable ejector for controlling the propulsive thrust of an aircraft power plant having an exhaust duct through which spent gases discharge, said ejector comprising a first array of pivotal adjustable flaps which form the primary upstream nozzle thereof and a second array of pivotal adjustable flaps which form the secondary downstream nozzle thereof, said flaps being provided with cam slots therein for receiving camming members, means for independently controlling the relative rate of opening of said primary and secondary outlet portions including a pair of hydraulic servomechanisms each having a piston therein, piston rods attached to each of said pistons and to said camming members disposed in the cam slots of said flaps, lateral movement of said piston rods causing said camming members to slide in said cam slots and pivot said flaps, the pivotal motion of said flaps resulting in a corresponding variation in the shape of the outlet openings, and means including at least one floating linkage member for connecting the piston rod of each hydraulic servomechanism with the pilot valve of the other in such a manner that the array of flaps comprising the primary nozzle operate in a proportionally controlled rate of movement as compared to the movement of the array of flaps comprising the secondary nozzle.

3,048,972
ROCKET MOTOR CONSTRUCTION
Peers Ronald Barlow, Kidderminster, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Dec. 31, 1958, Ser. No. 784,392
Claims priority, application Great Britain Jan. 7, 1958
5 Claims. (Cl. 60—35.6)



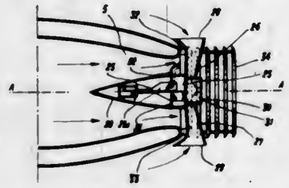
1. A rocket motor nozzle expansion cone of thermal resistant synthetic resinous material susceptible to erosion by hot gases, a protective internal metal liner for said nozzle, said liner having a melting point of at least 2500° C., and an intermediate layer between said liner and said cone, said layer being of a thermoplastic material which becomes molten during operation of the rocket motor, and the construction of said expansion cone being such that after said thermoplastic layer becomes molten said thermoplastic layer can escape rearwardly therefrom along the wall of said nozzle, thereby providing a leakage path for volatile materials in the synthetic resin whereby deformation of said liner is substantially prevented.

3,048,973
EXHAUST NOZZLE
Marcus C. Benedict, Glastonbury, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 29, 1959, Ser. No. 849,697
1 Claim. (Cl. 60—35.6)



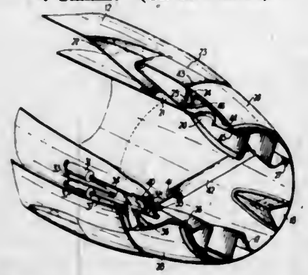
A propelling nozzle for a jet engine or the like comprising a tubular shroud, an exhaust duct carried within said shroud and having an outlet end terminating within said shroud for conducting combusted gas therethrough, convergent nozzle means carried within said shroud and being movable between a plurality of flow controlling positions relative to the outlet end of said exhaust duct, said shroud and said convergent nozzle means defining between them a passageway for the admission of secondary air, ejector means carried within said shroud defining a divergent nozzle for the passage therethrough of gases from said convergent nozzle and air from said passageway, said ejector means having the form of a diverging nozzle fairing of predetermined length, throat diameter and exit diameter and being connected to said shroud means, said shroud means having a plurality of circumferentially arranged ports for admitting ambient air into said passageway, and closure means for closing said ports operable by the pressure differential between the secondary air and ambient air for admitting ambient air into said passageway when the pressure of said secondary air drops below a predetermined value, said closure means being separate doors arranged to cover said ports and hinged to said shroud at their forward end for opening inwardly of said shroud.

3,048,974
JET DEFLECTING DEVICE FOR JET PROPULSION UNITS
Jean H. Bertin, Neuilly-sur-Seine, and Marcel Kadosch, Henri Turinetti, and Raymond H. Marchal, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company
Filed Apr. 21, 1953, Ser. No. 350,171
Claims priority, application France Apr. 23, 1952
3 Claims. (Cl. 60—35.54)



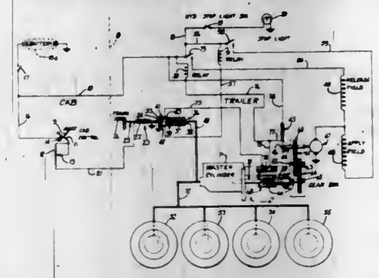
1. In a jet propulsion unit having a propulsive nozzle designed to form a thrust-providing jet parallel to the axis of said nozzle, a jet deflecting device comprising the combination of controllable means for temporarily projecting a partial obstacle crosswise of said nozzle thereby deflecting said jet from said axis, and of means for leading ambient air to the rear of said obstacle in the midst of said jet.

3,048,975
JET PROPULSION ENGINES
John Michael Storer Keen, Allestree, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Nov. 14, 1960, Ser. No. 68,711
Claims priority, application Great Britain Nov. 19, 1959
4 Claims. (Cl. 60—35.54)



1. In a jet propulsion engine: a jet pipe, a silencer carried by said jet pipe, said silencer comprising an annular plenum chamber surrounding said jet pipe upstream of the jet pipe discharge end, said plenum chamber having air inlet means opening peripherally of and extending angularly around the engine for supplying ambient air to the plenum chamber, said plenum chamber having a plurality of angularly spaced air outlet means, said air inlet means having a greater total effective area than said air outlet means so that when the engine is moving forwardly the pressure within said plenum chamber is greater than atmospheric pressure, a plurality of angularly spaced air ducts provided on the interior of said jet pipe at the downstream end thereof and projecting inwardly of said jet pipe, said air ducts receiving air from said air outlet means and having a discharge opening in a downstream direction whereby air flow from the discharge opening of each of said air ducts is substantially uniform regardless of attitude of the jet propulsion engine.

3,048,976
BRAKE CONTROL SYSTEM
John D. Grigsby, Willoughby, and James R. Jeromson, Jr., Willoughby Hill, Ohio
Filed Aug. 25, 1958, Ser. No. 756,881
12 Claims. (Cl. 60—54.5)

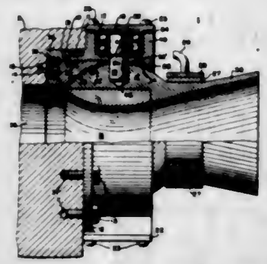


3. Electrically operated means to variably control the range of pressures in an hydraulic actuating system to any selected value comprising, electrically actuated means to rapidly increase or decrease said hydraulic pressure, feedback means connected to sense said hydraulic pressure, first electrical circuit means connected to be controlled in accordance with the magnitude of the hydraulic pressure sensed by said feedback means, second electrical circuit means variably and remotely adjustable to correspond to any one of a number of predetermined and desired selected electrical values for said hydraulic pressure, and said first and second electrical means co-acting and connected to control said electrically actuated means to increase or decrease said hydraulic pressure to match said desired selected value.

3,048,977
SWIVEL NOZZLE
Joseph F. Geary, Jr., Everett, Mass., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 16, 1959, Ser. No. 847,024
3 Claims. (Cl. 60—35.55)
(Granted under Title 35, U.S. Code (1952), sec. 266)

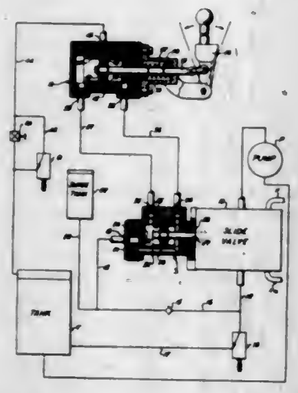
1. A high temperature, high pressure, variable position nozzle assembly for directing the flow of high temperature and high pressure fluids comprising; annular bearing housing means having an internal surface defining a spherical cavity, a discharge nozzle having a partly spherical external surface portion positioned within said spherical cavity, bearing means positioned in said bearing housing means externally of said nozzle, supporting shaft means journaled at one end in said bearing means and connected at the other end to said nozzle whereby said nozzle is supported for pivotal oscillation in one plane, means for compensating for unequal thermal growth of said surfaces comprising a thermal expansion gap positioned between said spherical surfaces on one side of said supporting shaft means to absorb the unequal thermal expansion

of said surfaces, a first seal means located within said gap and partially sealing said surfaces against high temperature and high pressure fluid leakage, a second seal means



located between the mating spherical surfaces on the other side of said supporting shaft means, whereby the first and second seal means cooperate to form an effective seal to all high temperature and high pressure fluids.

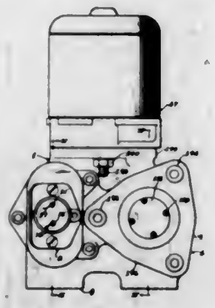
3,048,978
HYDRAULIC CONTROL SYSTEM
Richard C. Hare, Milwaukee, Wis., assignor, by mesne assignments, to Applied Power Industries, Inc., a corporation of Wisconsin
Filed Aug. 2, 1960, Ser. No. 46,986
4 Claims. (Cl. 60—54.5)



1. A hydraulic system comprising, a master cylinder unit including a cylinder having a head end and a rod end, means including an annular groove around an intermediate portion of said cylinder and between said ends for continually bleeding fluid from said master unit, a slave cylinder unit adapted to actuate a control member, said slave unit having a head end and a rod end in fluid communication with their respective ends of said master unit whereby said slave unit is indexable by said master unit, fluid source means in fluid delivering communication with each end of said slave unit, and a check valve between said source means and each of said slave unit ends.

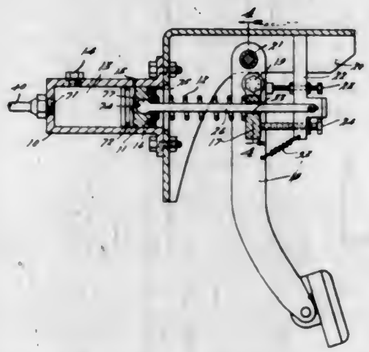
3,048,979
BRAKE SYSTEM WITH ELECTRO-HYDRAULIC UNIT
John D. Grigsby, Willoughby, and James R. Jeromson, Jr., Willoughby Hills, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed June 30, 1960, Ser. No. 39,843
9 Claims. (Cl. 60—54.6)

1. A unitary and compact electro-hydraulic device to supply hydraulic pressures to brakes comprising an electric motor having a shaft, an adjacent coaxial worm driven thereby and engaging a worm gear having an axial opening therethrough, a screw and slippable planetary type linear actuator at least partly in said opening, driven by said worm gear and coaxially connected to a piston in an hydraulic brake pressure supplying cylinder mounted



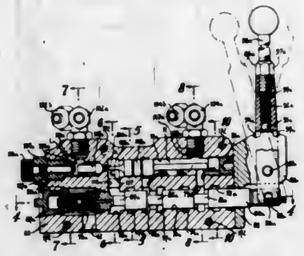
transverse to said shaft, and electric motor control means including switch means adjacent to and connected to said piston to have a part thereof movable in response to said hydraulic pressures, said control means also including means to relatively move a part of said switch means in response to values of the motor current.

3,048,980
BRAKE MASTER CYLINDER
Walter P. Cousino, St. Clair Shores, and Berthold L. Palmer, Warren, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 26, 1961, Ser. No. 119,567
10 Claims. (Cl. 60—54.6)



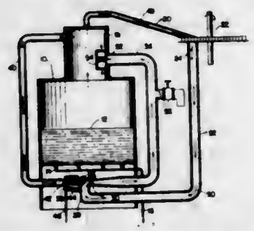
1. A pressure fluid brake applying master cylinder comprising a support, a cylinder mounted on said support having a port connectible to a pressure fluid operated brake applying means, a piston axially reciprocable in the cylinder bore, a push rod at one end of said cylinder engaged with said piston to transmit thrust thereto in the direction of the cylinder axis, a brake applying pedal pivotally mounted on said support having portions arranged for movement towards and away from said cylinder one end, a locking means pivotally mounted on said support having means to lockingly engage a portion of said push rod, and a compressed resilient means extending between said piston and said support acting to apply a continuous force to the piston to effect axial movement thereof in a direction away from said pedal, movement of said pedal portions towards said cylinder one end causing said locking means to lockingly engage said push rod and transmit the movement of the pedal to said piston.

3,048,981
CONTROL MECHANISM FOR TRACTOR HYDRAULIC SYSTEMS
Alexander Hing Mark, Livonia, and Lawrence Au, Detroit, Mich., assignors to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed May 21, 1959, Ser. No. 814,816
13 Claims. (Cl. 60—97)



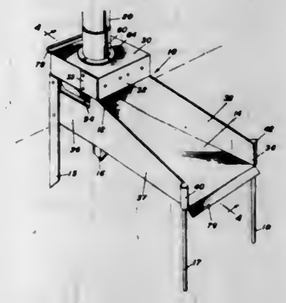
1. Auxiliary valve means for use with a tractor hydraulic system including a main actuator, a fluid supply conduit extending to the actuator, a source of fluid pressure, and main valve means shiftable to alternative positions to effect in one position the delivery of fluid from said source through said conduit to said main actuator and to effect in the other position exhaust of fluid from the actuator through said conduit, said auxiliary valve means having ports by which it may be interposed in said fluid supply conduit, said auxiliary valve having other ports and passages and a valve member movable to positions to block the flow of pressure fluid to or from said main actuator, to permit fluid flow to or from the main actuator under control of said main valve means, and to divert the fluid from said source to exhaust while blocking discharge of fluid from the main actuator.

3,048,982
CLOSED CYCLE GASEOUS MEDIUM SYSTEM AND METHOD
John H. Geiger, San Francisco, Calif. (770 Sir Francis Drake Blvd., Apt. 7, San Anselmo, Calif.)
Filed Oct. 31, 1960, Ser. No. 66,092
10 Claims. (Cl. 60—108)



1. A closed cycle steam system comprising: a boiler for generating steam; steam utilizing means of the type which has a drop in steam pressure between its inlet and exhaust; a high pressure steam line connecting said boiler to the inlet of said utilizing means for supplying high pressure steam thereto, an exhaust steam line connecting the exhaust of said utilizing means to said boiler for returning low pressure exhaust steam thereto; exhaust steam injector means in said exhaust steam line including another high pressure steam line connected to said boiler and having a portion extending into said exhaust steam line for injecting high pressure steam from said boiler into the stream of exhaust steam from said utilizing means to said boiler; check valve means in said exhaust steam line between said injector means and said boiler for preventing flow of steam from said boiler into said exhaust steam line; and means for applying heat to said other steam line exteriorly of said injector means thereby to increase the velocity and kinetic energy of the steam injected into said exhaust line whereby said injected steam at said check valve has a pressure higher than the steam pressure in said boiler thereof opening said check valve; said other steam line portion forming an aspirator with said exhaust steam line thereby producing a partial vacuum at the exhaust of said utilizing means whereby said exhaust steam is drawn from said utilizing means and united with and forced into the boiler by said injected steam.

3,048,983
DOWNSPOUT DRAINAGE SYSTEM
Fred J. Crummel, 422 N. 7th St., Beatrice, Nebr.
Filed Aug. 13, 1959, Ser. No. 833,551
2 Claims. (Cl. 61—15)

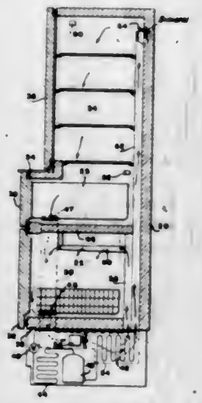


1. A downspout device comprising a basin of water impervious material, said basin including an elongated bottom wall having a pair of upstanding opposite side walls projecting upwardly therefrom and a rear wall interconnecting the rear marginal edge portions of said bottom and opposite side walls, the rear portion of said side walls including extensions projecting upwardly above the forward portion of said side walls, the forward ends of said extensions terminating in partial inturned upper forward wall portions extending across an intermediate portion of said basin, a plurality of ground anchors connected to said basin and depending downwardly therefrom, below said bottom wall for securement in the ground beneath the lower end of the downspout, a cover portion for said basin including an upper wall portion of the size and shape corresponding to the area defined by and overlying the upper edges of said extensions, partial forward wall portions and said rear wall, the opposite sides of said upper wall portion including a pair of depending side skirts and the forward end of said upper wall portion including a depending front skirt, the rear of said cover portion being open between said side skirts and engageable with said basin upon rearward movement of said cover portion rearwardly of said basin from the forward end of the latter with said side skirts embracing said extensions and said front skirt disposed immediately forward of and adjacent the forward surfaces of said partial forward wall portions, retaining means carried by and depending slightly from the rear marginal edge portion of said upper wall portion for releasable engagement with the upper marginal portion of the rear surface of said rear wall thereby releasably retaining said cover portion in position over the rear portion of said basin against forward movement relative thereto, said upper wall portion having an aperture formed therein, an upwardly projecting collar disposed about said opening, secured to said upper wall portion at its lower end and adapted at its upper end for telescopic engagement with the lower end of a downspout.

3,048,984
METHOD OF DETERMINING THE PRESENCE OF LIQUIDS IN PRESSURE VESSELS
Pritchard P. Ells, Baytown, and Wilburn C. Bullard, Jr., Wooster, Tex., assignors to United Rubber & Chemical Company, Baytown, Tex., a corporation of Delaware
No Drawing. Filed Mar. 3, 1960, Ser. No. 12,505
4 Claims. (Cl. 62—49)

1. In removing the liquid contents of a pressure vessel containing a liquefied hydrocarbon gas in which said hydrocarbon is removed by applying a pressure thereto causing it to flow from the vessel as a liquid, the method of confirming the apparent substantially complete removal of liquid from said vessel when said flow substantially stops, which comprises: reducing the vapor pressure within said vessel, said reduction being adequate to cause the vaporization of sufficient liquid hydrocarbon, if it is present, to create a vapor temperature differential between the upper and lower vapor areas of said vessel; and measuring the vapor temperatures in said upper and lower vapor areas of said vessel the degree of temperature differential being a measure of the presence of liquid.

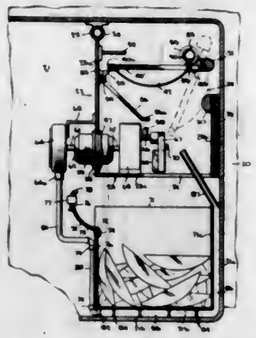
3,048,985
REFRIGERATING APPARATUS
George B. Long, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 13, 1960, Ser. No. 75,628
2 Claims. (Cl. 62—186)



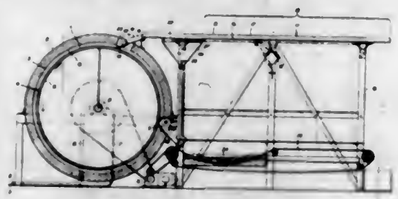
1. Refrigerating apparatus including an undivided insulated storage enclosure containing a fluid, means for removing the fluid from the enclosure and cooling the fluid and returning the fluid to the enclosure, an electrically operable modulating damper means for controlling the return of said fluid to the enclosure, and a plurality of temperature responsive resistors located in different parts of said storage enclosure and connected in parallel electrical circuit with each other and in series with said electrically operable modulating damper means for controlling the position of said damper means according to the temperatures of said resistors.

3,048,986
AUTOMATIC ICE MAKING DEVICES
Erling B. Archer, 33—74 191st St., Flushing, N.Y.
Filed Nov. 19, 1959, Ser. No. 854,138
19 Claims. (Cl. 62—345)

1. In an automatic ice cube freezing and harvesting apparatus; ice mold means adapted to contain water to be frozen into ice cubes, means mounting said ice mold means for pivotal movement between a substantially horizontal position and a downwardly slanted position, air flow means for effecting a forced flow of cold air over said ice mold means and comprising duct means adapted to discharge said cold air at a location adjacent one of said positions of said ice mold means, and means operable to retain said ice mold means in said horizontal position for an initial portion of the freezing period for the water therein and to release said ice mold means to swing under the weight of the partially frozen water therein to said downwardly slanted position for a final portion of the freezing period.



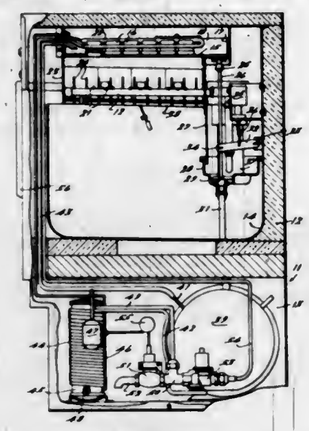
3,048,987
QUICK FREEZING APPARATUS
Amaziah F. Wentworth, 411 Albion Ave., Fairmont, Minn.
Filed July 23, 1959, Ser. No. 829,076
5 Claims. (Cl. 62—346)



1. Apparatus for individually freezing comestibles comprising an insulated casing, a rotatable drum within said casing, an internally refrigerated surface on a side of said drum, a feed opening in an upper portion of said casing and open to atmosphere, a feed chute projecting through said opening and inclined downwardly toward and at least partially overlying said surface, flexible transition means forming a discharge end portion of said chute and slidingly contacting said surface, a feed conveyor for positively feeding individual comestibles from a loading station onto said chute, said comestibles sliding down said chute directly onto said surface and without pressure bonding thereto substantially on contact by freezing of moisture on undersides thereof presented to said surface, and means associated with said feed conveyor for moistening said undersides of comestibles thereon in advance of feeding thereof onto said chute.

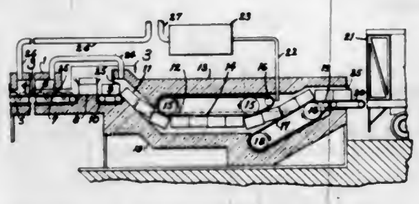
3,048,988
ICE MAKING APPARATUS
Marcus L. Nelson, Albert Lea, Minn., assignor to King-Seeley Thermos Co., a corporation of Michigan
Filed Oct. 1, 1959, Ser. No. 843,813
10 Claims. (Cl. 62—347)

8. In an ice-forming apparatus, a form for receiving water to be frozen, a refrigerating system including an evaporator adjacent said form, means for retaining thawing water adjacent said form, holding means for said thawing water having an inlet, an outlet conduit leading from said holding means to said thawing water retaining means adjacent the ice form, and a condenser



in said refrigerating system in direct heat-conducting relation with said holding means, the rate of heat loss from said condenser being proportional to the rate of water flow through said holding means.

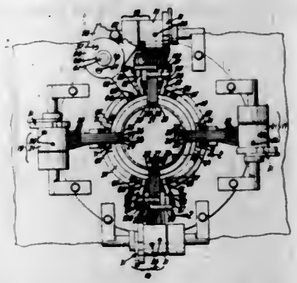
3,048,989
APPARATUS FOR FREEZING FOOD
Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York
Original application Jan. 14, 1960, Ser. No. 2,481. Divided and this application Jan. 24, 1961, Ser. No. 84,642
2 Claims. (Cl. 62—375)



1. Food freezing means comprising an insulated housing, a bath chamber therein containing liquid nitrogen at atmospheric pressure, means for supplying liquid nitrogen thereto, means for withdrawing the gas therefrom and reliquefying it, a chamber having an intake port with a gravity ramp leading therefrom downwardly below the level of the bath, a discharge port with a conveyor leading upwardly thereto, a belt conveyor in the bath having its lower run only below the level of the liquid between the gravity ramp and the discharge belt, means for propelling the belt to simultaneously hold food packages below the level of the liquid and urge them through the bath toward discharge.

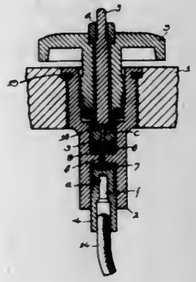
3,048,990
YARN FEED CONTROL MEANS FOR KNITTING MACHINES
James D. Moyer, Wyomissing, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Dec. 24, 1959, Ser. No. 861,842
10 Claims. (Cl. 66—138)

9. A circular knitting machine having a plurality of knitting stations and adapted to reciprocatorily knit at said stations, a plurality of yarn feeding fingers at each of said stations, pattern means to selectively move said fingers into and out of feeding positions at each of said stations, an intermittently movable member associated with and adapted to move fingers out of yarn feeding position as each of said stations which have been moved into feeding



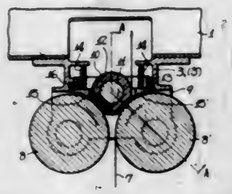
position by said pattern means, and means cooperating with said member to move a leading one of said fingers out of feeding position at one of said stations and to move a trailing one of said fingers out of feeding position at another of said stations during each movement of said member.

3,048,991
MECHANISM FOR CONTROL OF FLOW RATE OF GASEOUS FUEL IN GAS-FUELED CIGARETTE LIGHTER
Taisho Iketani, Nogata-cho, Nakano-ku, Tokyo, Japan
Filed Sept. 29, 1960, Ser. No. 59,405
Claims priority, application Japan May 25, 1960
1 Claim. (Cl. 67—7.1)



In a gas lighter, means for controlling the flow rate of gaseous fuel, said means comprising a container having a bore, a hollow skirt member removably secured in said bore of said container and having a dividing wall to define an upper chamber and a lower chamber in said skirt member, said dividing wall having a connecting passage therethrough in order to provide communication between said chambers, a first fibrous sheet engaging said dividing wall in said lower chamber, a retaining member receiving a wick fitted in said lower chamber to feed fuel from said container through said passage in said dividing wall into said upper chamber, a non-perforated resilient member disposed at the bottom of said upper chamber, a rod disposed at the bottom of said upper chamber across the exit of said connecting passage and substantially embedded in said resilient member, adjustable means for exerting pressure upon said resilient member towards said dividing wall, said resilient member defining with said rod and the face of said dividing wall narrow gaps, the volume of said gaps being responsive to the pressure exerted on said resilient member, thereby controlling the flow rate of said gaseous fuel through said skirt member.

3,048,992
APPARATUS FOR AIR-TIGHTLY LEADING TEXTILE FABRICS INTO OR OUT OF A PRESSURE CHAMBER
Koichi Nakaguchi, 30 Shichiku Shimo-Umenokicho, Kita-ku, Kyoto, Japan
Filed Jan. 17, 1961, Ser. No. 83,280
Claims priority, application Japan June 13, 1960
3 Claims. (Cl. 68—5)



1. In an apparatus for treating a textile fabric web under pressure including a pressure chamber having a pair of spaced orifices therein for passage of such web into and out of said chamber, the improvement which consists essentially in a pair of devices for air-tightly passing such web into and out of said chamber each of said devices comprising:

a pair of spaced bearing plates secured to the lower surface of said orifice; a pair of hard-surfaced rollers mounted parallel to each other, between said bearing plates, for rotation in the same direction; an air-tight frame fitting said orifice; gasketing means interposed between portions of the peripheral surfaces of said hard-surfaced rollers and the lower surfaces of said frame; means resiliently urging said frame at said gasketing means, against said portions of the peripheral surfaces of said hard-surfaced rollers; a bearingless soft roller disposed within said frame above and parallel to and in peripheral contact with said hard rollers, the peripheral surface of said soft roller being formed of readily yielding elastic material and having the peripheral edges of both of its end surfaces formed of readily yielding elastic material, said soft roller having such a length that its end surfaces are in contact with opposite inside surfaces of said frame,

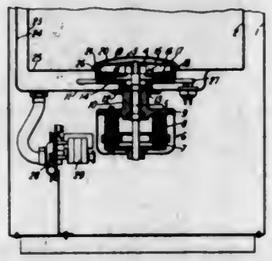
said soft roller being adapted in use to be pressed air-tightly, by superatmospheric pressure maintained within said chamber, against said frame surfaces and said hard-surfaced rollers and to be driven by frictional engagement with said hard-surfaced rollers at a peripheral speed equal to the peripheral speeds of said hard-surfaced rollers whereby a textile fabric web may be held between one of the hard-surfaced rollers and said soft roller and be air-tightly led through said orifice.

3,048,993
DETERGENT DISPENSER FOR AUTOMATIC CLOTHES-WASHING MACHINE
Malcolm B. Lucas and Charles W. Hurst, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 11, 1960, Ser. No. 61,949
8 Claims. (Cl. 68—17)



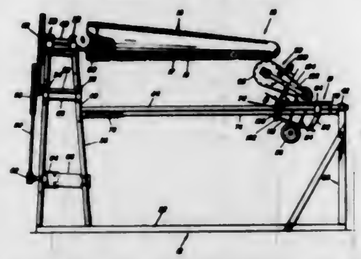
1. A dispenser for a dual cycle automatic washing machine having a washer basket and an agitator post comprising the combination of a granules receptacle, said receptacle having means for permitting the entrance and exit of liquid substances, means for holding the receptacle in the upper portion of the washer basket during the first wash cycle, said holding means comprising a first means for holding the receptacle while the agitator is in the oscillating portion of the first wash cycle and a second means for receiving the receptacle after it becomes disengaged from the first means, said second means holding the receptacle while the agitator is in the spin-dry portion of the first wash cycle so that the receptacle will fall into the washer basket by gravity at the end of the first wash cycle.

3,048,994
WASHING MACHINES
Otto Welter, Casa Montebello, Orselina, Ticino, Switzerland
Filed Jan. 16, 1959, Ser. No. 787,172
Claims priority, application Great Britain Jan. 20, 1958
12 Claims. (Cl. 68—184)



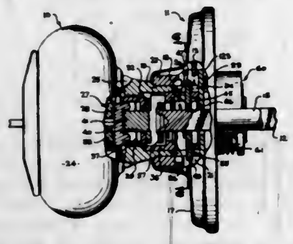
1. A washing machine comprising a liquid container, a centrifugal impeller mounted for rotation in said container and designed to vibrate at at least one ultrasonic frequency at the normal impeller speed and an annular housing surrounding said impeller and formed with at least one aperture in its periphery closely adjacent the periphery of said impeller.

3,048,995
PELT FLESHING MACHINE
Clarence E. Browning, 209 E. Colonial Drive, Hanford, Calif.
Filed July 25, 1961, Ser. No. 126,694
14 Claims. (Cl. 69—46)



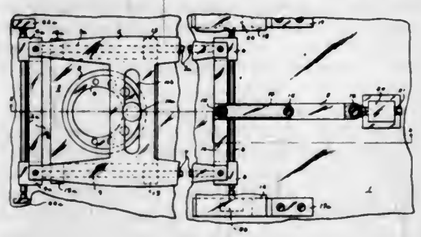
1. A pelt fleshing apparatus comprising, frame means, pelt holder means movably mounted by the frame means, and flesh scraper means movably mounted on the frame means in relation to the holder means and yieldably biased toward said holder means for uniform removal of excess flesh from a pelt carried on the holder means by engagement of the pelt with a variable pressure commensurate with the thickness thereof in response to movement of the holder means and scraper means, said pelt holder means comprising an elongated holder member rotatably mounted in offset relation to a geometrical axis through the holder member and power means operatively connected to the holder member for imparting rotational movement thereto.

3,048,996
ROSE BLOCKING KNOB
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif., and George B. Solovieff, South Gate, Calif.; said Solovieff assignor to said Russell
Filed Sept. 19, 1960, Ser. No. 56,780
3 Claims. (Cl. 70—216)



1. A door lock device comprising a mounting rose assembly adapted to be secured upon a door in a relatively stationary position and having a bearing aperture therethrough, an operating assembly including a mounting portion thereof rotatably mounted in said aperture, said rose assembly having an annular recess therein and a lock-slot extending axially from said annular recess, a spindle, and a lock-bar having a non-rotatable and axially movble mounting on said spindle, said operating assembly mounting portion having an axially extending passage and said lock-bar being located in said passage, said spindle having an non-rotatable connection with said operating assembly, means for moving said lock-bar into one position whereby a portion of said lock-bar extends into said annular recess thereby to permit rotation of said operating assembly relative to said rose and means for moving said lock-bar into another position whereby a portion of said lock-bar extends into said lock-slot thereby to connect said operating assembly in non-rotatable engagement with said rose.

3,048,997
ANGULAR ACCELEROMETER CALIBRATOR
Wallace G. Rork, Springfield, and James I. Garner, Blanchester, Ohio, assignors to the United States of America as represented by the Secretary of the Air Force
Filed Feb. 12, 1960, Ser. No. 8,467
9 Claims. (Cl. 73—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



6. Mechanism for accurately calibrating angular accelerometers adapted for positioning on a rotatably mounted member, main shaft means adapted to mount the rotatably mounted member in fixed relation thereon, and rotary drive means for continuously oscillating said main shaft means at a uniform, symmetrical rate comprising a first slidably mounted member restrained for straight-line movement, a second slidably mounted member restrained for stragiht-line movement at right angles to said first member, first interconnecting means between said first and second slidably mounted members, second interconnecting means between said first interconnecting means and said main shaft means and eccentric drive means incorporated in said second slidably mounted member for eccentrically rotating said second slidably mounted member and reciprocating said first slidably mounted member in a straight-line direction to actuate said second interconnecting means and the main shaft means interconnected therewith.

3,048,998
METHOD AND APPARATUS FOR TESTING CASING
Lafayette E. Gilreath, Houston, Tex., assignor to B. M. Craig and McClelland Wallace, both of Houston, Tex.
Filed Apr. 14, 1958, Ser. No. 728,395
19 Claims. (Cl. 73—40.5)



1. Apparatus for testing pipe suspended in a well comprising, a body, means for anchoring the body against downward movement in a pipe to permit temporary suspension of the apparatus, spaced seal means on the body for sealing between the body and a pipe in which the apparatus is suspended, a portion of said body providing a pump cylinder, a port in the upper section of the pump cylinder providing communication between the interior of the pump cylinder and the annulus defined by said seals, a piston positioned within and having a sliding seal with said pump cylinder, a rod extending from the piston upwardly through the body, and a sliding seal between the body and rod whereby test pressure may be applied to the pipe by an upward pull on the rod forcing fluid in the pump cylinder into said annulus defined by said seals.

3,048,999
METHOD AND DEVICE FOR MEASURING SURFACE TENSIONS AND VISCOSITIES
André Pélissier Robert Pochan, 29 Rue de Houilles, Montesson, France
Filed Apr. 17, 1959, Ser. No. 807,143
Claims priority, application France Nov. 21, 1952
9 Claims. (Cl. 73—54)



1. The method of measuring the surface tension of a liquid contained in a vertically displaceable container using a vertical substantially straight capillary tube having a conically tapered lower end which consists in bringing into precise contact the lower end of said tube and the surface of the liquid, aspirating the upper end of the tube to draw liquid from said container up into the tube, then admitting air at the upper end of the tube and allowing

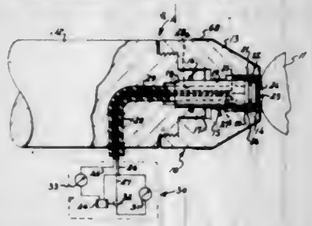
the liquid in the tube to drop to an equilibrium position, and measuring the height of the column of liquid in the tube above the surface of the liquid in the container.

3,049,000
APPARATUS FOR DETERMINING THE SEDIMENT IN COLD MILK
Erle V. Painter, La Grange, and Robert C. Shepherd, Oak Lawn, Ill., assignors to Johnson & Johnson, a corporation of New Jersey
Filed June 6, 1960, Ser. No. 34,335
20 Claims. (Cl. 73—61)



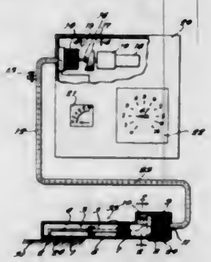
1. Apparatus for determining the amount of sediment in a vessel of cold milk comprising means defining a continuous fluid path between a region within said vessel and a receptacle, said means including rigid conduit means for insertion in said vessel, flexible conduit means in fluid communication therewith, an elongated cylindrical heating means in communication with said flexible conduit means, outlet means in fluid communication with said heating means, filter means transversely disposed in said continuous path intermediate said heating means and said outlet means, and fluid pumping means in said path intermediate said flexible conduit means and said outlet means, said filter means including a porous filter transversely disposed in said path and having interstices which pass moderately heated milk while entrapping sediment.

3,049,001
TONOMETER
Ralph S. Mackay, San Francisco, and Elwin Marg, Berkeley, Calif., assignors to The Regents of the University of California, Berkeley, Calif.
Filed June 18, 1959, Ser. No. 821,255
8 Claims. (Cl. 73—80)



4. A device for measuring the intraocular pressure of a human eyeball comprising: a probe having a body portion and an end portion adapted to contact an eyeball, said end portion having a central cylindrical bore adapted to receive a pressure transducing core member; said core member consisting of a plurality of layers of material including inner and outer flat rigid conducting plates, substantially parallel to each other, a first layer of flexible, pressure sensitive material between said conducting plates, a second layer of pressure sensitive material on the outer side of said outer conducting plate, and a thin film of conductive metal covering said second layer of pressure sensitive material, lead wires attached to said inner and outer plates and said film and extending from said probe member, the lead wires from said inner and outer plates comprising a first circuit and the lead wires from said outer plate and said film forming a second circuit; switching means in said first circuit responsive to a predetermined value of current, adapted to close said second circuit, and indicating means in said first and second circuits wherein the circuit through said first layer of pressure-sensitive material will indicate the total force being exerted to flatten the eyeball while the circuit through said second layer of pressure-sensitive material will simultaneously provide an indication in resistance proportional to the amount of eyeball area flattened, said indications being combinable to obtain the internal eyeball pressure.

3,049,002
DEVICE FOR MEASURING THE ROUGHNESS OF SURFACES
Hermann Hediger, 10 Hermannstrasse, Winterthur, Switzerland
Filed Feb. 24, 1959, Ser. No. 795,205
4 Claims. (Cl. 73—105)

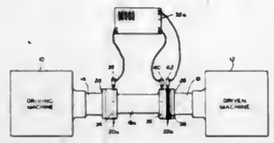


1. A device for measuring the roughness of surfaces comprising a tracer unit adapted to be placed on the surface the roughness of which is to be measured, and remotely located drive mechanism therefor, said tracer unit comprising a housing and a tracer element mounted within said housing for reciprocating movement, said tracer element having a tracer point extending through the housing for contact with said surface, and including crystal means for producing electric impulses responsive to the roughness of said surface as said tracer point moves over said surface, hydraulic transmission means connecting said drive mechanism and said tracer unit whereby the reciprocating motion of said drive mechanism may be transmitted to said tracer element, said hydraulic transmission means including flexible tubing extending between said tracer unit and said drive mechanism to facilitate the location of said tracer unit on said surface and to isolate said tracer unit from mechanical interference, and means for amplifying and indicating said electric impulses.

3,049,003
TORQUE MEASUREMENT APPARATUS
Howard B. Felder, Berrien Springs, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Original application Sept. 5, 1956, Ser. No. 608,146, now Patent No. 2,978,902, dated Apr. 11, 1961. Divided and this application July 8, 1960, Ser. No. 41,538
6 Claims. (Cl. 73—136)

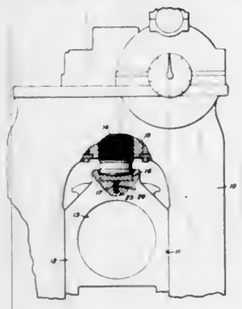
1. A torque measurement apparatus comprising an elongated torsionally resilient rotatable member arranged

to be connected between a driving and a driven machine, two circular indicia carrying portions located in coaxial spaced-apart relation on the said resilient member, means for deriving signals from the said indicia carrying portions, and indicia counting means responsive to said



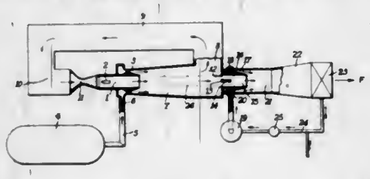
signals for determining the quantity of indicia on one said indicia carrying portion passing a reference point adjacent thereto during an interval determined by the torsional displacement of one of the said indicia carrying portions with respect to the other.

3,049,004
MILL-ROLL CHOCK WITH LOAD-RESPONSIVE ELEMENT
James E. McNamara, Churchill Borough, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 16, 1958, Ser. No. 767,603
5 Claims. (Cl. 73—141)



1. A roll-bearing chock for a rolling mill having a seat for a mill screw on the top thereof and a main bore therethrough adapted to receive a roll-neck bearing, said chock also having a second bore in the portion thereof between said screw seat and said main bore, said second bore being normal to said main bore, and a load-responsive element mounted in said second bore so as to be subject to the deformation of said portion under rolling forces.

3,049,005
WIND TUNNELS
Otto Frenzl, Dammarie-les-Lys, France, assignor to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France
Filed July 21, 1959, Ser. No. 828,663
Claims priority, application France July 30, 1958
6 Claims. (Cl. 73—147)

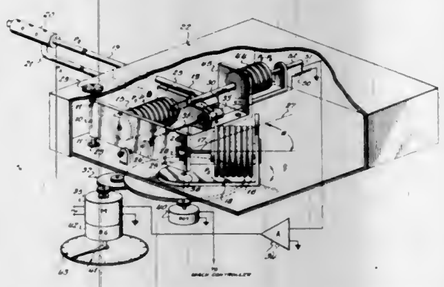


1. A wind tunnel comprising a test chamber, an ejector located in the downstream side of said test chamber, and comprising a nozzle which forms part of said test chamber and an annular chamber surrounding said chamber with an inlet introduction conduit connected to said annular chamber, a return circuit connecting the downstream side of said ejector to the upstream side of said test chamber, said return circuit being provided with a discharge nozzle by means of which said fluid may be evacuated, a pump arranged at said discharge nozzle for sucking the fluid from said wind tunnel through said discharge nozzle, means for regulating said pump whereby the quantity of fluid sucked by said pump during the steady state of the wind tunnel is substantially equal to the quantity of fluid introduced into the wind tunnel through said ejector.

3,049,006
METHOD OF ANALYSING CEREALS AND OTHER STARCH-CONTAINING SUBSTANCES AND PRODUCTS THEREOF
Carl Sven Oscar Hagberg, Bergbacken 2, Saltsjo-Duvnas, Sweden
No Drawing. Filed Sept. 29, 1958, Ser. No. 763,802
11 Claims. (Cl. 73—169)

1. In a method of determining the suitability of a starch-containing substance for baking, the steps of heating a suspension of a finely divided starch-containing substance in water to a temperature sufficiently high to cause gelatinization of said starch-containing substance in said water, thereby converting said suspension into a gelatinous mass; and maintaining said gelatinous mass at a temperature above the gelatinization temperature of said starch-containing substance until said gelatinous mass becomes transformed into a viscous liquid, the relationship between the concentration of said starch-containing substance and the time required for the transformation from gelatinized condition into a viscous liquid being an indication of the diastatic condition of said starch-containing substance which in turn is an indication of the suitability of said starch-containing substance for baking.

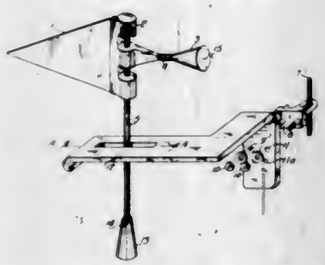
3,049,007
FORCE-RATIO MEASURING DEVICE
Everett S. Joline, Huntington Station, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Dec. 6, 1956, Ser. No. 627,723
5 Claims. (Cl. 73—182)



1. A force-ratio measuring device comprising a lever, a fulcrum therefor, a first force applying means including means responsive to the difference between total pressure and static pressure for applying a force proportional to said differential pressure to said lever, second force applying means including means responsive to static pressure for applying a force proportional to said static pressure to said lever, means responsive to the position of said lever for varying the effectiveness of said second force applying means, additional means responsive to the difference between total pressure and static pressure for providing movement thereof in accordance with this difference, and means responsive to said movement for compensating

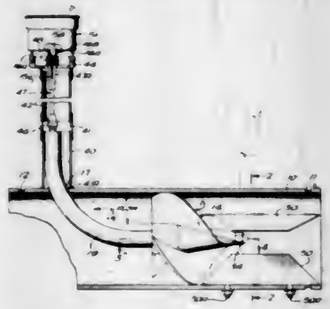
for variations in the force ratio due to variations of altitude and air speed whereby said device establishes a force-ratio when said lever is maintained in a predetermined position.

3,049,008
WIND INDICATORS FOR VESSELS
Morton Arnold Polster, 96 Wildmere Road, Rochester, N.Y.
Filed Feb. 2, 1959, Ser. No. 790,741
7 Claims. (Cl. 73—188)



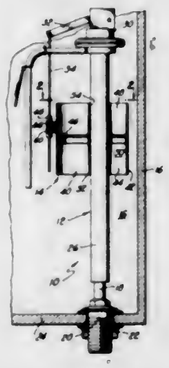
1. A relative wind indicator comprising, a vane, a support bracket adapted to be secured to a fixed support, said support bracket having a bearing, a weight, and a pendulum shaft having said weight pivotally attached to one end thereof to permit said weight to swing freely in at least one plane and having a bearing adapted to receive said vane and to permit said vane to rotate freely about said weighted pendulum shaft, said weighted pendulum shaft being pivoted in said bearing of said support bracket to permit said weighted pendulum shaft to assume a vertical position when at rest and to permit movement of said weighted pendulum shaft in at least one plane normal to the plane of rotation of said vane.

3,049,009
FLOW METER
Floyd McCall, Rte. 1, Box 188, and Lloyd McCall, Rte. 1, Box 91, both of Romoland, Calif.
Filed Nov. 10, 1958, Ser. No. 772,756
1 Claim. (Cl. 73—231)



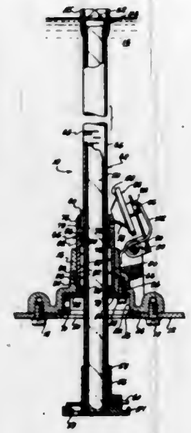
A flow meter arrangement comprising, a circular conduit through which fluid flows, an impeller having an outside diameter substantially equal to the inner diameter of said conduit and having a projected area in a plane corresponding to the diameter of the impeller which is substantially equal to the cross-sectional area of said conduit, said impeller being rotatably mounted in said conduit with its axis extending generally parallel to the axis of said conduit, a sole support for said impeller comprising a right-angle tubular elbow having a first portion within said conduit and extending parallel with said axis, said tubular elbow having a second portion extending through the wall of said conduit, a collar mounted in said first portion, a cable assembly comprising a flexible cable and a sheath, said sheath having one of its ends secured to said collar with said cable extending through said collar, said cable assembly being within said tubular elbow, bearing-retaining means comprising first and second interthreaded bushings mounted on said first portion, each of said bushings including bearing means, a first impeller shaft mounting said impeller and extending axially therefrom and being rotatably supported in said bearing means in said first bushing, a first annular magnet being mounted coaxially on one end of said impeller shaft within said first bushing, first fastening means releasably securing said first magnet on said end of said impeller shaft, releasable means on the other end of said impeller shaft securing said impeller on said impeller shaft, a second shaft rotatably supported in said bearing means in said second bushing, means on one end of said second shaft for releasably coupling the same to one end of said cable, a second annular magnet mounted coaxially on said second shaft within said second bushing, second releasable fastening means securing said second magnet on the other end of said second shaft, said first and second magnets cooperating magnetically to provide a magnetic drive between said second shaft and said first impeller shaft, washer means mounted on one of said shafts between one of said magnets and one of said bushings for establishing the spacing between said magnets, said first and second bushings being interthreaded near said spacing such that when one of said bushings is threaded out of the other bushing access is had to said first and second fastening means, a meter having a driving shaft, and means releasably securing the other end of said cable to said meter driving shaft.

3,049,010
FLOAT CONSTRUCTION
Anton Holderith, Anaheim, Calif., assignor to Fluidmaster, Inc., Anaheim, Calif., a corporation of California
Filed Sept. 11, 1959, Ser. No. 839,366
4 Claims. (Cl. 73—322.5)



1. A valve controlling float including a cylindrical external wall defining an internal chamber open at its upper and lower extremities and having an integral, centrally located partition disposed transversely of said chamber, said partition having a tubular wall formed integrally therewith and extending upwardly and downwardly therefrom and adapted to receive a guide member, said tubular wall being coterminus with said cylindrical wall and the perimeter of said partition terminating at the inner surface of said cylindrical wall, said partition in conjunction with said cylindrical wall defining a liquid receiving chamber in the upper portion of said float and a flotation chamber in the lower portion thereof.

3,049,011
OPTICAL LIQUID-LEVEL GAGE
Rodney B. Campbell, Glendale, Calif., assignor to Idaho Maryland Mines Corporation, Glendale, Calif., a corporation of Nevada
Filed Dec. 12, 1960, Ser. No. 75,158
5 Claims. (Cl. 73—327)



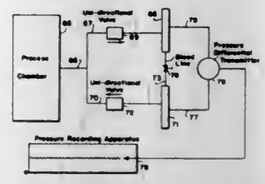
1. An optical liquid-level gage comprising: a housing adapted to be fastened to the lower wall of a vessel containing a body of liquid; a passageway with an inner wall extending through said housing; an elongated indicating member mounted in said passageway for limited axial movement relative to the housing, said indicating member including a rod of clear plastic material which transmits light therethrough and which contains an upper end adapted to extend above the housing in the liquid and a lower end adapted to extend below the housing for viewing by an operator; liquid-level indicating means associated with the rod for measuring the amount of liquid in the vessel; and sealing means between the indicating member and the inner wall of passageway to prevent the escape of fluid through said passageway during the axial movement of the indicating member.

3,049,012
RADIATION COMPENSATING THERMOELECTRIC DEVICE
Glenn E. Daniels, Bisbee, Ariz., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 4, 1960, Ser. No. 12,883
10 Claims. (Cl. 73—359)
(Granted under Title 35, U.S. Code (1952), sec. 266)



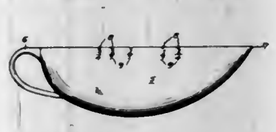
7. In a temperature measuring device a compound thermocouple unit comprising first and second thermojunctions each having preselected inherent radiation errors, a third thermojunction having a preselected inherent radiation error equal to the sum of the errors of said first and second junctions, and means for connecting said third junction in series opposition to said first and second junctions.

3,049,013
PRESSURE CONTROL SYSTEM
Jean M. Bourguet, Woodbury, and Robert D. Drew, Wenonah, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Oct. 20, 1958, Ser. No. 768,310
7 Claims. (Cl. 73—388)



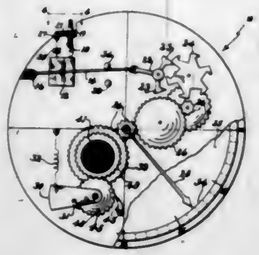
1. Apparatus for measuring the amplitude of pressure fluctuation in a chamber which comprises a first detecting vessel, a second detecting vessel, a conduit connected between the first and second vessel, conduit means connecting at least one of the detecting vessels with said chamber, means located in the conduit between said first and second detecting vessels adapted to maintain a substantially constant pressure in at least one of the detecting vessels, bleed means associated with each constant pressure vessel adapted to prevent pressure lock while substantially preventing pressure change in said constant pressure vessel for a period longer than that required for a complete wave length of the fluctuating pressures and a differential pressure indicating means attached to both the first and second detecting vessels, adapted to indicate the pressure differential between the first detecting vessel and the second detecting vessel.

3,049,014
KITCHEN UTENSIL
Florence L. Aue, 6071 Martin Road, Muskegon, Mich.
Filed Sept. 18, 1958, Ser. No. 761,853
1 Claim. (Cl. 73—426)



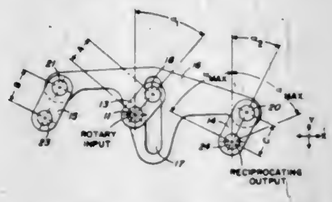
A measuring scoop having a handle, adapted for dipping into solid shortening, having an exact predetermined capacity when full and levelled off, comprising a bowl which is basically oval in shape throughout the entire length, said bowl having a bottom rounded throughout its entire length and width, and being wider at the rear end and tapered to a modified point at the tip end, lines of spaced notches formed in the marginal side edges only of said bowl at opposite sides of said bowl, said bowl having identifying indicia on the outer surface thereof opposite to said notches, the spaces between the indicia being graduated from the tip of the bowl towards the handle thereof, the notches at one side edge of the bowl aligning with corresponding notches in the other side edge of the bowl directly opposite thereto, said notches and indicia at opposite sides of said bowl indicating the locations of imaginary transverse lines along which divisions of the contents of the scoop can be made to obtain desired accurate fractions of one cupfull, and said handle having a wide flat upper surface flush with the marginal edge of said scoop, forming a continuation of said marginal edge of said scoop, a division indicating character on said upper surface of said handle intermediate the side edges of the handle and in line with the longitudinal axis of said bowl, indicating a measurement with the tip end of the bowl.

3,049,015
UNITIZED STATISTICAL ACCELEROMETER
Herbert C. Johnson, Minneapolis, Minn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 18, 1958, Ser. No. 722,361
1 Claim. (Cl. 73—489)



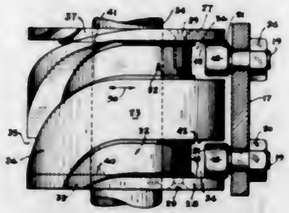
In a recording statistical accelerometer, a seismic mass, means pivotally supporting said seismic mass, a spiral spring means to hold said mass in initial position, an external means for positioning said spring to a predetermined acceleration level, a dial means to indicate the magnitude of the predetermined acceleration set by the said external means, a magnetic damping means, connecting means from said mass to said magnetic damping means for damping spurious vibrations, escapement means, means connecting said mass to said escapement means, a spring driven motor, a train of gears connecting said spring motor to the said escapement means, and a pointer connected in the said train of gears and movable to indicate each movement of the escapement means.

3,049,016
LINKAGE MECHANISM FOR A RECIPROCATING SYMMETRICAL OUTPUT MOTION
William B. Stuhler, Garland, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Apr. 10, 1961, Ser. No. 101,735
3 Claims. (Cl. 74—43)



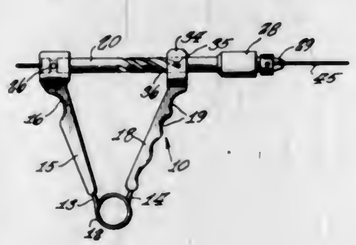
1. A rocker and crank mechanical linkage for providing symmetrical reciprocating output motion for each quadrant of rotary input motion comprising, a rotary driving crank to which the input is applied, a reciprocating output follower crank, first and second parallel shafts spaced a moderate distance apart, each of said cranks being rotatably mounted on a respective one of said shafts, a connecting member having a transverse slot, said driving crank having a crankpin slidingly engaging said slot of said connecting member, said output follower crank having a crankpin rotatably coupled to said connecting member, the effective length of said driving crank being less than that of said output follower crank, guiding means coupled to said connecting member, said guiding means cooperating with said output follower crank to define the locus of reciprocating rotation of said connecting member for maintaining the direction of said connecting member constant at corresponding positions of said follower crank during different quadratures of rotation of said driving crank.

3,049,017
INDEXING CAM STRUCTURE
James A. McDonald, Oak Lawn, and Howard H. Evans, La Grange Park, Ill., assignors to Commercial Cam & Machine Co., Chicago, Ill., a corporation of Illinois
Original application Feb. 4, 1959, Ser. No. 791,121, now Patent No. 2,999,311, dated Sept. 12, 1961. Divided and this application Nov. 4, 1960, Ser. No. 67,202
5 Claims. (Cl. 74—84)



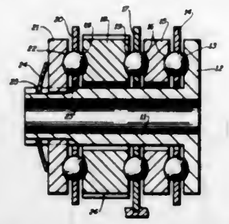
1. An indexing cam of cylindrical configuration having a cam track means thereabout with a pair of dwell portions positioned side by side about the outer surface of the cylinder, said track means having a pair of track walls facing in opposite directions, said cam being characterized by being made in at least two pieces having abutting faces normal to the cylindrical axis and positioned between the track walls at said dwell portions, and means releasably connecting said pieces whereby the distance between the furthermost cam walls may be reduced by the removal of material from one of said faces.

3,049,018
HAND TOOL
Harold Lusskin, Lillian S. Lusskin, and Ralph Lusskin, all of 41 W. 70th St., New York, N.Y.
Filed Feb. 3, 1959, Ser. No. 790,879
1 Claim. (Cl. 74—89)



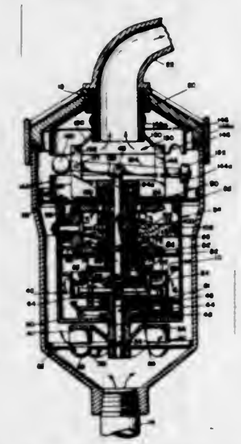
A hand tool comprising a base arm and a finger arm normally diverging from each other, a spring connection between corresponding lower ends of said arms for relative inward movement against spring pressure on application of finger pressure, a cylindrical shaft having spiral grooving intermediate the ends, a bearing ring carried by the upper end of said base arm for one end of said shaft and means between said ring and shaft to prevent axial sliding of said shaft therein, said finger arm at the upper end thereof having follower means engagable with said spiral grooving to effect rotation of the shaft in response to relative movement in either direction of the base arm and finger arm, and chuck means secured to the other end of said shaft for clampingly supporting a working tool for rotation with said shaft, said shaft having a longitudinal bore therethrough and communicating with the axial opening in the chuck means.

3,049,019
DRIVE UNIT
Lloyd J. Lapointe, West Hartford, and Ralph L. Parker, Jr., Rockville, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed July 7, 1961, Ser. No. 122,486
4 Claims. (Cl. 74—202)



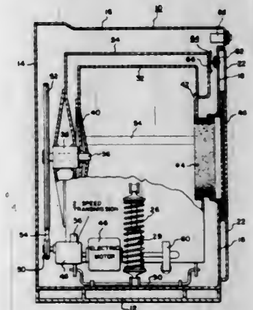
1. A drive unit comprising an annular thrust bearing, said thrust bearing having an annular retainer and ball bearings mounted therein, and axially disposed races on either side of said retainer, means constantly maintaining an axial pressure on said races whereby said bearings are in interference contact with said races, said races constituting respectively a drive and a driven member, and means operative at will to restrain rotation of said retainer whereby said driven member is positively coupled to said drive member.

3,049,020
ROTARY REVERSING MECHANISM
Brodie E. Ahlport, 905 Buena Vista, South Pasadena, Calif.
Filed Aug. 10, 1959, Ser. No. 832,608
13 Claims. (Cl. 74—319)



1. A rotary reversing mechanism comprising a unidirectional rotary driving shaft, a rotary, axially movable driven shaft, a coupling between said shafts which drivably couples said shafts for unidirectional rotation of said driven shaft by said driving shaft when said driven shaft is restrained against axial movement and which restrainably reciprocates said driven shaft when said driven shaft is released for free axial movement, a reversible rotary driven member, a rotary reversing clutch mechanism including a reversible rotary driven clutch means connected to said driven member for rotation of the latter by said driven clutch means, rotary driving clutch means mounted on said driven shaft for rotation with the latter and axially movable with the driven shaft between a first position of driving engagement with said driven clutch means wherein said driven member is driven in one direction of rotation by said driven clutch means and a second position of driving engagement with said driven clutch means wherein said driven member is driven in the opposite direction of rotation by said driven clutch means, and means for restraining said driven shaft against axial movement with said driving clutch means in either of said positions to cause rotation of said driven member through a given arc and releasing said driven shaft for axial movement to shift said driving clutch means to the other of said positions at the ends of said arc, whereby to cause said driven member to oscillate through said arc.

3,049,021
POWER DRIVE APPARATUS
George A. Neyhouse and Jack W. Savage, Dayton, and Ralph K. Shewmon, Centerville, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,345
11 Claims. (Cl. 74—472)

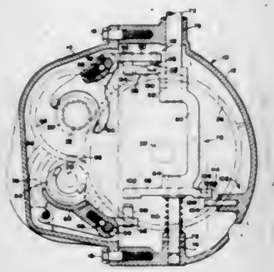


1. In combination, a machine having a part adapted to be driven at a low speed and at a higher speed, an electric motor having a predetermined output speed, a source of electrical power, a variable output speed transmission means connected between said electric motor and said part having a low output speed and a higher output speed, means for causing said part to be driven at said low speed including means for connecting said motor to said power source to cause said motor to accelerate to its predetermined output speed, means maintaining said transmission means in its low output speed setting when the motor is operating at its predetermined output speed, and means for causing said part to be driven at said higher speed, said last named means including means for causing said transmission means to be shifted to its higher speed output, and means for connecting the motor to the power source for reducing the torque output of said motor to a value less than full torque output but greater than zero torque output while said transmission means is shifted for its higher speed output.

3,049,022
TRANSMISSION CONTROL MECHANISM
Mahlon L. Love, Osco, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Feb. 14, 1961, Ser. No. 89,276
16 Claims. (Cl. 74—475)

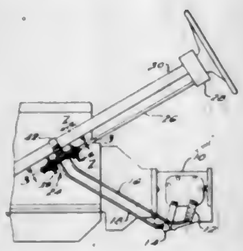
1. In a transmission including a support and a shifter member carried thereby for back and forth shifting along a straight-line path between first and second positions, the improvement comprising: a control element rockable on the support on an axis offset from and normal to said path and having a radial arm member in overlapping relation to and having a connection with the shifter member for back and forth swinging about said axis between first and second positions respectively incurring the first and second positions of said shifter mem-

ber; a first lock part on one member, including a recess spaced radially from said axis and facing the other member; a second lock part on the other member, including a lug facing and dimensioned to be received by the recess and disposed in such radially spaced relation to said axis and recess as to be out of register with the recess when said shifter member and control element are in their first positions and to register with the recess when said ele-



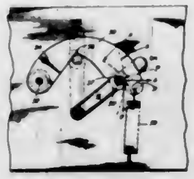
ment and shifter member are in their second position; and means mounting the element on the support for axial shifting in one direction to engage the registered lug and recess for holding the element and shifter member in their second positions and for axial shifting in the opposite direction to disengage said lug and recess for enabling return of said element and shifter member to their first positions.

3,049,023
TRANSMISSION GEAR SELECTOR MECHANISM
James R. McCordic, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,411
7 Claims. (Cl. 74—484)



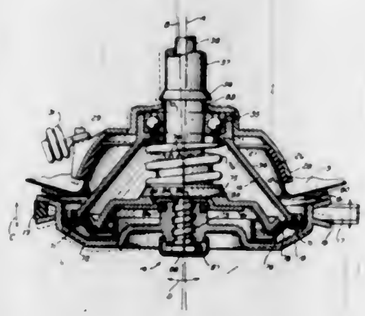
4. A gear shifting device comprising: a manually operable shifting member rotatably and longitudinally movably mounted on a vehicle steering column; first and second spaced selectively operable gear train selector means adapted for connection to different gear trains; shifting finger means carried by said shifting member for rotation therewith and slidable movement thereon positioned between said first and second selector means; means associated with said shifting member for moving said finger means into operative engagement with said first selector means upon longitudinal movement of said shifting member in one direction; means for maintaining said finger means in operative engagement with said first selector means after said shifting member has been rotated and returned to its original longitudinal position; and means urging said shifting finger toward said second selector means whereby at a predetermined relative angular position of each of said selector means said finger means will disengage said first selector means and operatively engage said second selector means.

3,049,024
SWITCH OPERATING MECHANISM WITH HANDLE POSITIONING MEANS
Daniel F. Daly, Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut
Filed Sept. 9, 1959, Ser. No. 838,880
5 Claims. (Cl. 74—534)



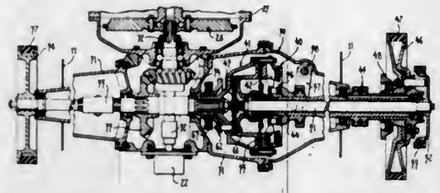
4. The combination of a box with electric switch operating mechanism comprising a contact operating member pivotally mounted in the box for movement between two at-rest positions about a first pivotal axis, an arcuate pivotally mounted positioning lever supported from said box for movement about a second pivotal axis, said first pivotal axis being on the concave side of said arcuate lever, anti-friction means on said operating member engaging with the concave side of said arcuate lever, said concave side having a hill portion between said two at-rest positions for engagement with said anti-friction means causing over-center movement of said operating member into said at-rest positions, said anti-friction means engaging said arcuate lever at a certain point in one at-rest position, the arc of said point about said first axis intersecting the arc of said point about said second axis in said one at-rest position, spring means holding said arcuate lever in engagement with said anti-friction means, the intersection of said arcs and said spring bias preventing movement past said one at-rest position by said operating member.

3,049,025
ENERGY ABSORPTION STOP
James W. Lannert, St. Joseph, Mich., assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,850
6 Claims. (Cl. 74—574)



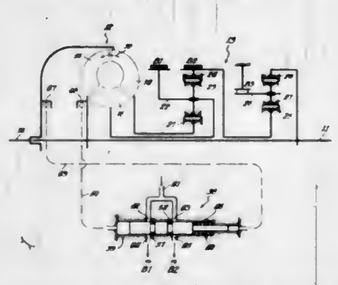
1. In a washing machine, a supporting member, a receptable, a rotatable shaft connected to said receptacle for rotation thereof, said shaft mounted on said supporting member for nutational movements caused by unbalance conditions in said receptacle, a rotatable friction face member on said shaft for rotation therewith, and a stationary friction face member on said supporting member for frictional engagement with said rotatable friction face member during conditions of unbalance.

3,049,026
DRIVE ASSEMBLY FOR SELF-PROPELLED COMBINE
Donald S. Horne, Robert Ashton, and Leslie L. Kepkay, Toronto, Ontario, Canada, assignors to Massey-Ferguson Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed July 6, 1960, Ser. No. 41,154
4 Claims. (Cl. 74—665)



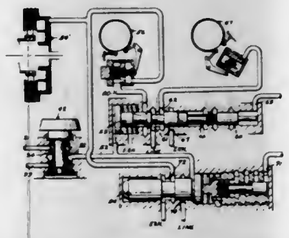
1. In a self-propelled combine, the combination comprising an engine having a flywheel, a housing secured to said engine adjacent said flywheel and extending transversely of the engine, a stub shaft journalled in said housing and coupled to said flywheel, a drive shaft journalled longitudinally in said housing at substantially right angles to said stub shaft, meshing gears on said stub and drive shafts rotatably coupling the shafts, one end of said drive shaft being extended from said housing and carrying a drive device, the other end of said drive shaft being coupled to the driving element of a dual clutch disposed in said housing, said dual clutch having two driven elements and means for selectively coupling said driven elements to said driving element, one of said driven elements being coupled to a sleeve journalled in said housing coaxially with said drive shaft, said sleeve extending from said housing and carrying a drive device, and the other of said clutch driven elements being coupled to a shaft journalled in said sleeve, said shaft being extended from said sleeve and carrying a drive device.

3,049,027
TRANSMISSION
Anthony C. Mamo, Detroit, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 5, 1957, Ser. No. 638,332
46 Claims. (Cl. 74—677)



1. In combination; a drive shaft; a driven shaft; a hydraulic torque converter having a plurality of vaned elements together defining a substantially toroidal fluid circuit; all of said elements being relatively rotatable about a common axis and said elements including vaned impeller means drivingly connected with said drive shaft, vaned turbine means drivingly connected with said driven shaft, and vaned reaction means; gearing directly interconnected in driving relation between said impeller means and certain of said other elements of said hydraulic torque converter, said gearing being effective to receive an infinitely variable portion of the torque on one of said elements and to vary said portion of torque and, in turn, deliver the varied torque to another of said elements; and control means for said gearing respectively effective to change the variation of said portion of torque and, in turn, provide different infinitely variable operating characteristics of the combined torque converter and gearing throughout driven to driving shaft speed ratios from zero-to-one to substantially one-to-one.

3,049,028
GOVERNOR CONTROL FOR AUTOMATIC TRANSMISSION
Herdis G. English, Birmingham, and George W. Schulz, Detroit, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 25, 1955, Ser. No. 496,702
13 Claims. (Cl. 74—752)

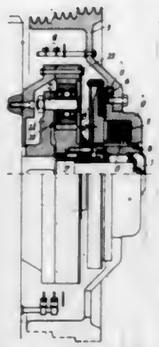


13. In a transmission mechanism, the combination of a drive shaft, a driven shaft, means for providing low and intermediate and high speed power trains between said shafts, a control element for causing a shift from the low speed power train to the intermediate speed power train and having a low speed position and an intermediate drive position, a second control element for causing a shift from said intermediate speed power train to said high speed power train and having an intermediate drive position and a high speed position, and a hydraulic governor driven by one of said shafts for providing a fluid governor pressure on each of said control elements tending to move the control element from its relatively low speed position to its relatively high speed position, said governor comprising a valve substantially radially disposed with respect to and carried by said one shaft, said valve having a land uncovering a port to thereby transmit fluid pressure through the valve to said two control elements and having another land subject to the fluid pressure applied to said control elements tending to move said land across said first-named port to close the latter, a weight carried by said valve, and a spring effectively disposed between said valve and weight and allowing radially outward movement of said weight under the action of centrifugal force with respect to said valve and transmitting centrifugal force on the weight to the valve to move it to uncover said port.

3,049,029
PRESSES
Guillaume Schaming, Le Perreux, France, assignor to Societe Anonyme Schostal, Vaduz, Liechtenstein, a society of Liechtenstein
Filed Sept. 9, 1958, Ser. No. 759,878
Claims priority, application France Sept. 13, 1957
5 Claims. (Cl. 74—785)

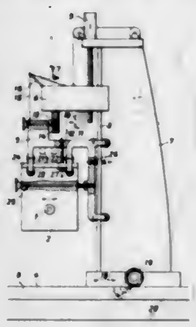
1. A mechanically operated press comprising, in combination, a press frame; a slide reciprocable in said press frame; a drive shaft turnably mounted in said press frame; means operatively connected to said shaft and said slide for reciprocating said slide upon turning of said shaft; a combined pulley and flywheel member turnably mounted on said shaft; a sun gear turnably mounted on said shaft; a plurality of planet gears uniformly distributed about said sun gear and in meshing engagement therewith;

support means for supporting said planet gears and being fixed to said shaft for rotation therewith; an outer gear ring surrounding said planet gears in meshing engagement with the latter, said outer gear ring being fixedly carried



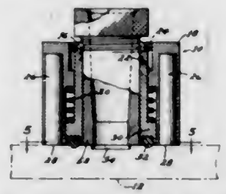
by said press frame; and clutch means interposed between said combined pulley and flywheel member and said sun gear for connecting and disconnecting said member to and from said sun gear.

3,049,030
DEVICE FOR SETTING A MACHINE TOOL
Bruno Meier, Winterthur-Toss, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Oct. 31, 1958, Ser. No. 771,099
Claims priority, application Switzerland Nov. 2, 1957
4 Claims. (Cl. 77—5)



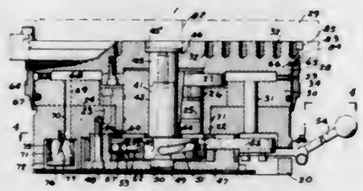
1. A machine tool comprising a tool spindle, a machine bed, a column horizontally movably mounted on said machine bed, first support means, means for vertically movably supporting said first support means by said column, a first motor operatively connected to said column and to said first support means for vertically moving said first support means relatively to said column, second support means supporting said tool spindle, means for vertically movably supporting said second support means by said first support means, manually operable means connected to said first and to said second support means for vertically moving said second support means relatively to said first support means, said second support means including manually operable means affording horizontal movement of said second support means relative to said first support means, drive means connected to said machine bed, and to said column for horizontally moving said column on said machine bed, a second motor connected to said drive means for driving the latter, and automatic control means operatively connected to said second support means and being responsive to the horizontal relative movements of said first and second support means effected by the respective manually operable means, said control means being operatively connected to said second motor for driving said drive means to horizontally move said column on said machine bed according to the horizontal relative movements of said first and said second support means.

3,049,031
LOCATING AND GUIDE DEVICE
Robert W. Carstens, 17203 Faulman, Fraser, Mich.
Filed Mar. 29, 1961, Ser. No. 99,295
4 Claims. (Cl. 77—62)



1. A device for placement on a surface of a part to guide a center point marker or drill comprising an inner open-ended sleeve to receive and guide the center point marker or drill and having one end to seat on the part, an open-ended outer sleeve slidably received on said inner sleeve and having one end corresponding to and facing in the same direction as the said one end of said inner sleeve, spring means interposed between and urging said inner and outer sleeves in opposite directions, cooperating stop means on said inner and outer sleeves limiting axial movement of said inner and outer sleeves to space the said one end of said outer sleeve a predetermined distance from the corresponding one end of said inner sleeve, magnetic means in said outer sleeve having its positive pole exposed at the said one end of said outer sleeve, said magnetic means having a force to overcome said spring means and hold said inner sleeve to the plate following manually moving said outer sleeve down to the plate, and a resilient friction member carried by the said one end of said inner sleeve and displaceable by the magnetic force of said magnets to oppose lateral movement by forces acting transversely to the magnetic flux.

3,049,032
ROTARY PRECISION WORK HOLDER
Bernard W. Schabot, Royal Oak, Mich.
(350 Fair St., Ferndale Station, Detroit, Mich.)
Filed Aug. 20, 1959, Ser. No. 834,969
12 Claims. (Cl. 77—64)



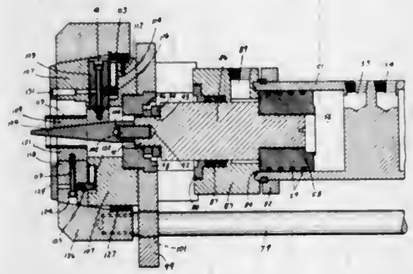
1. In a rotary precision work holder, the combination comprising a base, a ring, means for fixing said ring on said base, a table having an upper flat work-supporting surface, a trunnion fixed on the lower surface of said table and extending axially through said ring into an opening in said base, said table and ring having juxtaposed surfaces with a plurality of radially extending teeth thereon, said teeth being accurately finished and equally angularly spaced and being generally wedge shaped in cross section, and means for moving said trunnion axially thereby moving said table toward and away from said ring and locking said teeth in engagement, the entire weight of said table being supported by said teeth, said means for moving said plate axially and locking said teeth comprising a post extending through said trunnion, means for fixing said post against axial movement relative to said table, means for fixing said post against rotational movement relative to said base, said post having an enlarged lower portion with a plurality of helical grooves therein, said grooves having a substantially identical lead angle, a ring surrounding said enlarged lower portion and rotatably mounted in said base, a plurality of pins mounted on said ring and extending radially inwardly into said grooves, and means for rotating said ring.

3,049,033
SPADE DRILL AND GRINDING FIXTURE THEREFOR
Milton L. Benjamin, Shaker Heights, and Elmer L. J. Syrene, Mentor, Ohio, assignors to Erickson Tool Company, Solon, Ohio, a corporation of Ohio
Filed May 20, 1959, Ser. No. 814,522
7 Claims. (Cl. 77—68)



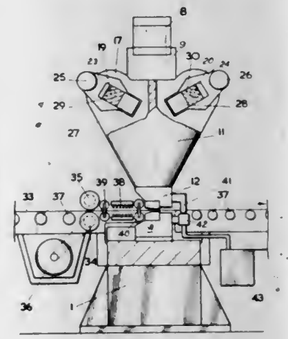
1. A spade drill comprising a holder formed with an axial slot diametrically across one end; and a blade secured in said slot to provide a pair of cutting edges axially beyond the end of said holder, and parallel side faces to guide said drill in the hole formed by said cutting edges as said drill and a workpiece are relatively rotated and fed axially, said holder being formed with a coolant supply passage leading to the bottom of said slot, respective opposite side faces of said slot being formed with relatively shallow, generally fan-shaped channels that, at their narrow ends intersect such passage and that, at their wide ends open toward the respective cutting edges whereby to define with the juxtaposed faces of said blade a pair of fan-shaped passages wherefrom coolant is adapted to emerge as thin and wide streams to effectively cool said cutting edges.

3,049,034
TUBE STOCK SIZING APPARATUS
Irvin C. Resener, Indianapolis, Ind., assignor to Resener Machine & Tool Co., Inc., Indianapolis, Ind., a corporation
Filed Sept. 30, 1959, Ser. No. 843,512
5 Claims. (Cl. 78—14)



1. A tube stock sizing apparatus comprising a stationary annular member, a plurality of spaced finger members supported by said annular member for movement toward and away from the central axis of the annular member and spring biased toward said axis, said finger members extending parallel to the annular member axis with their outer surfaces being adapted to engage the inner bore of a section of tube stock to be sized, the inner surfaces of said finger members being inclined, a tapered spindle extending centrally through said finger members and engaging the inclined inner surfaces thereof, said spindle being movable along the axis of said annular member to displace said finger elements outwardly therefrom and into engagement with the tube stock, a plurality of spaced die elements supported by said annular member for movement toward and away from the central axis of the annular member and spring biased away from said axis, the inner surfaces of said die elements being adapted to engage the outer surface of a section of tube stock to be sized, the outer surfaces of said die elements being inclined, a ring member encircling said annular member and having an inclined inner surface engaging the inclined outer surfaces of said die elements, said ring member being movable along the axis of said annular member to displace said die elements inwardly toward said axis and into engagement with the tube stock, and means for moving said spindle and said ring member independently of each other, said means comprising a hydraulic cylinder centrally divided into a first and second working chamber and mounted coaxially with said stationary annular member, a piston in said first chamber having an operative connection to said spindle, a piston in said second chamber having an operative connection to said ring member, and hydraulic control means for sequentially pressuring said chambers for positioning said finger members and die elements.

3,049,035
APPARATUS FOR THE REDUCTION OF METALS OR ALLOYS
Stanley Hirst, Sutton Coldfield, and William Charles Aston, Quinton, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Nov. 12, 1958, Ser. No. 773,449
Claims priority, application Great Britain Nov. 13, 1957
5 Claims. (Cl. 78—36)

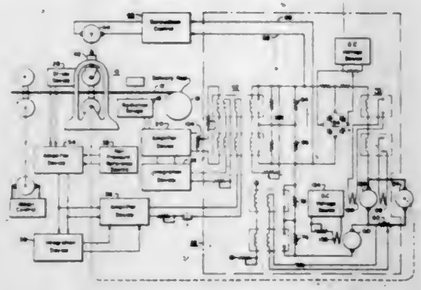


1. An apparatus for reducing the thickness of metal strip comprising: a pair of conforming tools; means for feeding the strip through a gap formed by the conforming tools; a reciprocable member joined to one of said tools; means for effecting reciprocation of said member to move said tools towards and away from the other, including a prime mover, a shaft continuously rotatable by said prime mover, a first mass eccentrically mounted fixedly upon said shaft, a second mass eccentrically mounted fixedly upon said shaft, a second mass eccentrically mounted upon said shaft diametrically opposite said first mass and variable in its eccentricity by movement along a radius to adjustably control the total unbalance of said masses, and means for transmitting components of the forces developed in said shaft along a diameter thereof to said reciprocable member.

3,049,036
AUTOMATIC STRIP THICKNESS CONTROL APPARATUS

John W. Wallace, Orchard Park, and Robert E. Hull, Amherst, N.Y., and Raymond W. Moore, Whitehall, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 8, 1957, Ser. No. 651,512
15 Claims. (Cl. 80—32)

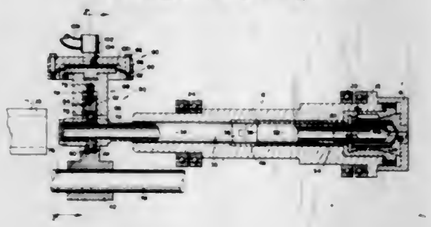


1. In control apparatus for a first device having a pair of roller members between which a strip of material may be positioned for performing a predetermined operation relative to said strip and a second device for pulling on the strip in a direction away from said first device, the combination of a motor member operatively connected to one of said first and second devices for controlling the tension of said strip between the first device and the second device, a strip thickness sensing device for providing a first control signal which varies as a predetermined function of the thickness of said strip, a roller pressure sensing device for providing a second control signal that varies as a predetermined function of the pressure between said pair of roller members, a signal integration device responsive to at least one of said first control signal and said second control signal for providing a third control signal which varies as a function of the integral of said one control signal, and a motor control device responsive to a predetermined combination of said first control signal, said second control signal and said third control signal and said second control signal and being operatively connected to said motor member for controlling the tension of said strip between said first device and said second device in accordance with the variations of said predetermined combination of said first control signal, said second control signal and said third control signal.

3,049,037
ADAPTER FOR BAR WORKING MACHINE

Franklin D. Lakins and Gerald B. Lanphere, Syracuse, N.Y., assignors to Lipe-Rollway Corporation, Syracuse, N.Y., a corporation of New York

Filed Sept. 16, 1959, Ser. No. 840,460
6 Claims. (Cl. 82—30)

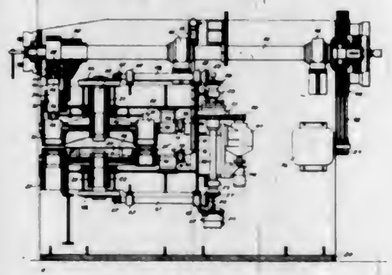


6. A bar working machine attachment for preventing bar hang-up during the feed-out cycle of high speed bar working machines having a continuously rotating spindle and collet, comprising a spindle liner journalled in said spindle, the collet end of said liner being formed with a bore slightly larger than the bar stock diameter to be fed through said bar working machine and brake means provided adjacent the rearward end of said liner and being operable upon operation to momentarily halt the rotation of said spindle liner to permit said bar stock to be fed through said liner.

3,049,038
TURRET PUNCH PRESS

Martin Friedland, Philadelphia, Pa., assignor to Wiedemann Machine Company, King of Prussia, Pa., a corporation of Pennsylvania

Filed Nov. 19, 1958, Ser. No. 775,026
1 Claim. (Cl. 83—552)



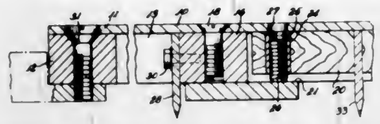
In a turret punch press, a punch turret turning on a vertical axis and having punches thereon which act vertically downward, an upwardly extending punch turret shaft supporting and rotating the punch turret on its vertical axis, downwardly acting ram means operatively engaging one of the punches in operating relation at a particular position of the punch turret, a die turret rotating on a vertical axis coaxial with the axis of the punch turret, located below the punch turret and cooperating with the punch turret, a downwardly extending die turret shaft supporting and rotating the die turret on the coaxis of the punch turret and the die turret, a horizontally extending punch turret cross shaft extending above the punch turret toward the rear of the press, bevelled gearing interconnecting the punch turret shaft with the punch turret cross shaft, a die turret cross shaft extending horizontally below the die turret toward the rear of the machine and having the same length as the punch turret cross shaft, bevelled gearing interconnecting the die turret shaft with the die turret cross shaft, a vertically extending back shaft at the back of the press turning on an axis parallel to the coaxis of the punch turret shaft and the die turret shaft, bevelled gearing interconnecting the back shaft at the top with the punch turret cross shaft, bevelled gearing interconnecting the back shaft at the bottom with the die turret cross shaft, drive means, and gearing interconnecting the drive means with the back shaft the distance of the gearing interconnecting the drive means with the back shaft from the ends of the back shaft being inversely proportional to the relative weights of the punch turret and the die turret.

3,049,039
CUTTING DIE SUPPORT

David C. Wright, Cuyahoga Falls, Ohio, assignor to The Falls Engineering & Machine Company, Cuyahoga Falls, Ohio, a corporation of Ohio

Filed Aug. 26, 1959, Ser. No. 836,197
2 Claims. (Cl. 83—652)

1. In combination, a cutting die board and a cutting die support comprising a cover plate of hardened steel, at least two marginal frame elements rigidly secured to the lower face of said cover plate to surround margins of said die board, said marginal frame elements having inwardly directed flanges spaced from said cover plate a distance greater than the thickness of said die board, said frame elements being mounted to underlie said die board, a plurality of vertically extending internally threaded sleeves carried by said die board vertically above each of said flanges, clearance openings being provided through said

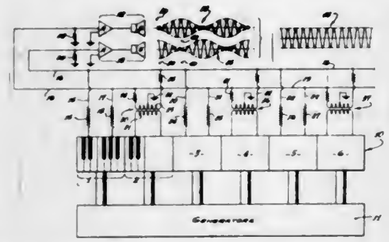


cover plate in alignment with said threaded sleeves to provide access thereto, and socket head type set screws engaged in said threaded sleeves and vertically adjustable therein to abut said flanges and force said die board against the lower surface of said cover plate whereby said die board is held tightly in place and the upper surface of said cover plate has no members protruding therefrom.

3,049,040
APPARATUS FOR MINIMIZING BEAT EFFECTS

Donald J. Leslie, % Electro Music, 313 South Fair Oaks Ave., Pasadena, Calif.

Filed Jan. 26, 1959, Ser. No. 788,812
11 Claims. (Cl. 84—1.22)



1. In an electronic organ system or the like: a set of musical tone generators for producing impulses corresponding to different notes in a musical range; a pair of electrical channels; means substantially equally coupling one of the generators of the set to both channels in one fixed relative phase relationship; and means substantially equally coupling another generator of the set to both of said channels in a second different relative fixed phase relationship; and separate transducer means for the respective channels.

3,049,041
ANCHORING DEVICE WITH RESILIENT TIE MEANS FOR AUTOMATIC PRE-ANCHORING

André Durget, Saverne, France, assignor to Anciens Etablissements Goldenberg & Cie, Zornhoff, France, a French body corporate

Filed Mar. 9, 1960, Ser. No. 13,788
Claims priority, application France Mar. 17, 1959
3 Claims. (Cl. 85—2.4)

1. An anchoring device comprising shells constituting a segmented tube adapted to be inserted into a bore provided in a wall and defining an internal chamber, said shells having leading and trailing edges, a unit including a traction rod mounted in a longitudinally movable relationship within the chamber in said tube and at least one group of cams on said rod, at least one group of ramps on said shells internally thereof for cooperating with said group of cams, traction means at the outer end of said rod to displace the latter axially relative to said tube and to cause said tube to expand, resilient means holding the shells in assembled relation, a resilient tie extending diametrally through said unit via an aperture provided in the latter and spaced from said cams, and a lug on each shell spaced radially inwards of the outer periphery thereof and spaced from the leading edge toward the trailing edge thereof for engaging said tie and supporting the



same substantially within said chamber, said tie connecting said shells with one another and with said traction rod whereby, when the anchoring device is inserted into the bore by a force exerted on said traction rod, said resilient tie is tensioned to effect an automatic pre-anchoring of said anchoring device upon release of said rod.

3,049,042
GANGED ANCHORING NAIL DEVICE

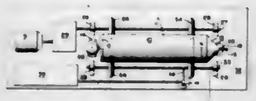
Victor E. De Lynn, 81 Ellwood Ave., Mount Vernon, N.Y.

Filed July 24, 1959, Ser. No. 829,298
4 Claims. (Cl. 85—13)



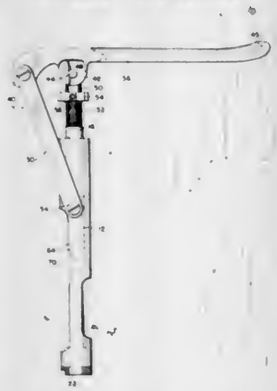
1. A ganged anchoring nail device for concealed securement of two members to each other, said device comprising a generally channel shape metal member having a substantially flat base apertured to receive securing means for attaching said base to one member, and side flanges having longitudinally continuous portions extending along the sides of said base and having portions spaced from said base subdivided into individual tabs having generally pointed outer ends and arranged in laterally spaced pairs, longitudinally adjacent tabs on each side of the base being bent in opposite directions out of general plane perpendicular to the base, of the associated flange, the outer ends of said tabs being bevelled to a chisel edge on the side toward such plane; whereby, upon securement of said base flat against one of the members and impacting of the other member onto said tabs, said tabs will enter said other member and will follow curved paths therethrough which are convex in the direction of the chisel edges and, due to the chisel edges being alternately on opposite sides of adjacent tabs, adjacent tabs will curve in opposite directions in the second member; said tabs having lugs struck from the surfaces thereof opposite the surfaces having the chiseled edges, the lugs being inwardly of such outer ends and projecting toward the tab inner ends, the lugs further projecting from the inside of such curved paths to enhance resistance to withdrawal of the device from the second member.

3,049,043
METHOD OF CASTING AN EXPLOSIVE CHARGE
Virgil I. Milani, Russell C. McGill, and Leland E. Starr, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 21, 1958, Ser. No. 736,933
6 Claims. (Cl. 86—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



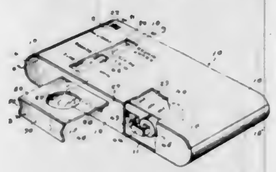
1. The method of molding a heated explosive slurry having a quantity of relatively heavy finely divided solid particles in suspension therein which comprises the steps of preheating an open ended cylindrical mold to a temperature in excess of the melting temperature of the slurry, filling the mold with said heated slurry by a single operation and sealing the slurry therein by a flexible diaphragm secured to the open end portion of said mold, slowly rotating said mold about a horizontal axis until the slurry has congealed sufficiently to prevent settling of said particles therein, and applying pressure from an outside source to said flexible diaphragm continuously until the slurry has congealed.

3,049,044
CARTRIDGE LOADING TOOL
William H. English, 4411 SW. 100th, Seattle, Wash.
Filed May 11, 1959, Ser. No. 812,231
2 Claims. (Cl. 86—24)



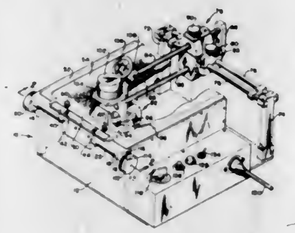
1. A hand held cartridge loading tool comprising: a main enclosing generally cylindrically shaped tube; said tube having a plunger receiving first bore at its upper end and a second bore axially aligned with said first bore adapted to receive the cartridge case to be reloaded; said second bore having cutaway portions, diametrically opposed to facilitate entry to said bore and interiorly threaded at its lower end portion; a reciprocating plunger having an upper end and an interiorly threaded end operatively disposed in said first bore; an operating handle pivotally secured at a point intermediate its length to said upper end of said plunger, thereby providing a handle portion at one side of said plunger and an overhanging end portion at the other side of said plunger; said handle portion having a U-shaped cross-section to receive the exterior of said tube; a parallel pair of toggle bars pivotally secured one to each side of said main enclosing tube at a point intermediate the length thereof and on a plane passing through the longitudinal axis of said tube and pivotally secured to the overhanging end portion of said operating handle; the distance between pivots on said bars being proportioned with respect to the distance between the pivots of said handle so that when said handle is in engagement with said tube the upper and lower pivots of said toggle bars and the pivot between said plunger and said operating handle are all in alignment with the longitudinal axis of said tube, and a plurality of coacting pairs of cartridge loading tool parts of which one of each pair is operatively secured in the threaded end of said plunger and the other of the coacting pair is secured in the threaded end of said main enclosing tube.

3,049,045
COIN CATALOG AND RECORD KEEPER
George E. Miller, 7756 E. Sparta Ave. SE., Magnolia, Ohio, and Kenneth Myron Carlisle, Canton, Ohio; said Kenneth M. Carlisle assignor to said George E. Miller
Filed Apr. 7, 1960, Ser. No. 20,735
2 Claims. (Cl. 88—14)



1. In a coin record keeper, the combination which comprises a flat elongated case having a window in the face, rollers rotatably mounted in ends of the case, a band having indicia thereon wound on the rollers, means for rotating the rollers to actuate the band to display indicia through the window thereof, a slide having a magnifying glass therein for examining a coin and slidably mounted in one side of the case, a light bulb in the slide, a contact on said slide, a battery mounted in said case, a contact element extended from said battery and positioned in the path of travel of the contact on said slide, and the engagement of the contact on said slide and the contact element on said battery completing a circuit to the light bulb as the slide is withdrawn from the case.

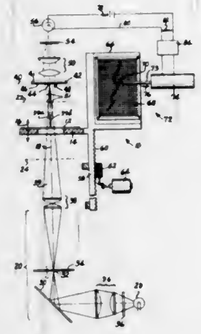
3,049,046
LINEAMENT ANALYZER
Homer W. Patnode, Hampton Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Original application Dec. 22, 1958, Ser. No. 782,052, now Patent No. 3,019,693, dated Feb. 6, 1962. Divided and this application May 17, 1960, Ser. No. 29,636
9 Claims. (Cl. 88—14)



1. Apparatus comprising means for holding a pair of sheets in superimposed relation, a light source for illuminating one side of the pair of superimposed sheets, and means comprising two parallel kinematically identical

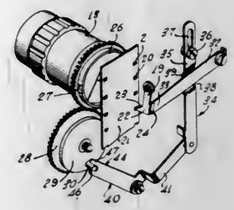
synchronized eccentrics connected to said holding means for moving one of the pair of superimposed sheets so that each point thereof moves along an arc of a circle of constant radius relative to the other sheet without disturbing the azimuthal orientations of the sheets.

3,049,047
METHOD FOR ANALYZING MICROSCOPIC PARTICLES AND THE LIKE
Michael L. Polanyi, Webster, and James E. Johnston, Southbridge, Mass., and Morden G. Brown, Woodstock, Conn., assignors to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Original application Apr. 3, 1957, Ser. No. 650,518, now Patent No. 2,969,708, dated Jan. 31, 1961. Divided and this application Dec. 5, 1960, Ser. No. 73,741
4 Claims. (Cl. 88—14)



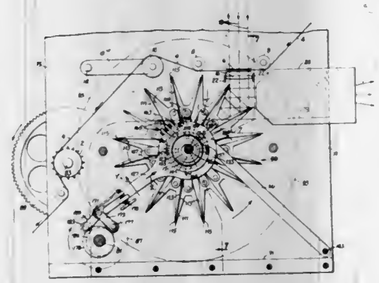
1. The method of determining the average size and the refractive index of a relatively large number of microscopic particles of varying sizes distributed at random in a light-transmitting fluid medium of known refractive index, said method comprising forming said medium into a relatively thin layer having an appreciable exposed area and with the microscopic particles therein dispersed so that no appreciable overlapping of particles occurs, passing monochromatic light of a preselected wavelength through said layer so as to illuminate the particles therein and produce a pattern of scattered light, separately collecting and measuring substantially all of the light scattered at each different preselected angle of scattering, and plotting on a record sheet a curve indicative of the total intensity of the collected light at each different angle of scattering, said curve indicating the amount of deviation and the intensity at which a first maximum and a first minimum in brightness in said scattered light pattern on said plotted curve occur, forming a calibrated graph having two families of intersecting curves thereon, the coordinate scales of said graph and the positioning of said families of curves thereon being so controlled relative to the range of particle sizes, relative to the range of refractive index differences between said medium and the particles therein and relative to the range of first maximum and first minimum for said particles that mean particle size may be read directly on a first one of said scales on said graph and mean refractive index difference may be read directly on a second one of the scales thereon in accordance with the locations indicated by said first maximum location and by said first minimum location on said record sheet when disposed in registry therewith, and positioning said graph in registry with said record sheet so that said locations on said record sheet will be indicated on said graph.

3,049,048
FADING MECHANISM FOR CAMERA
Hideo Miyauchi, Okaya-shi, Nagano-ken, Japan, assignor to Yashica Co., Ltd., Tokyo, Japan, a corporation of Japan
Filed Nov. 12, 1959, Ser. No. 852,521
Claims priority, application Japan Dec. 19, 1958
10 Claims. (Cl. 88—16)



1. A motion picture camera comprising a variable aperture diaphragm movable between an open and closed position, a film advancing pawl alternatively reciprocable along a first operative film advancing path and a second inoperative path, and a control mechanism coupling said pawl to said diaphragm to restrict the movement of said pawl to said second path when said diaphragm is in said closed position and to release said pawl for movement along said first path when said diaphragm is in said open position.

3,049,049
MOTION PICTURE APPARATUS
Joseph Katona, Clintonville, Wis. (% Paradynamics, Incorporated, 9621 Manchester Road, St. Louis, Mo.)
Filed Oct. 28, 1959, Ser. No. 849,357
22 Claims. (Cl. 88—16.8)



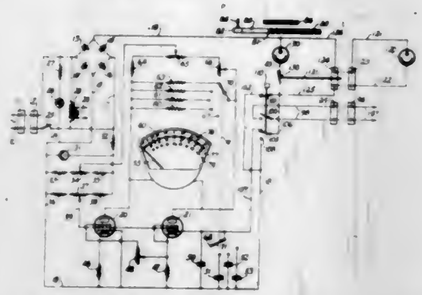
1. Motion picture apparatus comprising a series of angle mirrors, each angle mirror having a dihedral line, means individually pivotally supporting the mirrors, and rotary means adapted to move the pivoted mirrors sequentially over a path wherein their dihedral lines progress continuously through positions along a curve and along a substantially straight line, whereby the mirrors during traverse along said straight line will reflect one branch of a light beam into another branch thereof, means adapted to pivot said mirrors as their dihedral lines under rotation traverse said curve and said straight line, a film gate located transverse to one branch, lens means having an axis located on the other branch, means adapted to move a strip of film continuously through the gate, and means adapted to maintain substantially constant the ratio of the speed of said dihedral lines along said substantially straight line and of the film through the gate.

3,049,050

EXPOSURE METER FOR PHOTOGRAPHY

Frederick A. Thomas, 1118 1st Ave., New York, N.Y.

Filed Dec. 15, 1958, Ser. No. 780,438
16 Claims. (Cl. 88—23)



1. In an integrating photographic exposure meter device for measuring the quantity of light produced by a light flash and for indicating such measurements directly in terms of photographic exposure data individually applicable to photographic films of different light sensitivity values, the combination which comprises a photocell for producing a modulated electric current proportional to the quantity of said light impinging thereon, an integrating circuit operatively connected to said photocell and including a plurality of different integrating condensers for integrating said modulated electric current from said photocell for producing different electric potentials on said condensers proportional to different quantities of light impinging on said photocell, each of said condensers having a different capacitance value representing a different one of said different light sensitivity values of said photographic films whereby said potentials produced on said different condensers are different for the same quantity of light impinging on said photocell and are directly related to different ones of said photographic film light sensitivity values, a high input impedance vacuum tube electrometer circuit operatively connected to said integrating circuit for measuring said different electric potentials on said condensers after an integration thereby, meter means in said electrometer circuit and calibrated in terms of said photographic exposure data for visibly indicating measurements by said electrometer circuit of said potentials on said condensers, and means for selectively and individually connecting each of said different condensers into said integrating circuit for producing selectively different electric potentials thereon for the same quantity of light to indicate said photographic exposure data selectively differently for each of said different photographic film light sensitivity values.

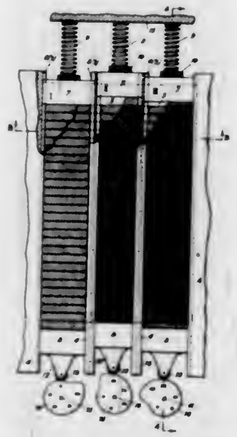
3,049,051

ARRANGEMENT WITH POLARIZING GRATING FOR THE PHOTOGRAPHIC ESTABLISHMENT OF FILTERS WITH BLACK AND WHITE NETWORKS

André Victor Léon Clément Debrie, 111 Rue Saint Maur, Paris, France

Filed Nov. 5, 1956, Ser. No. 620,368
Claims priority, application France Jan. 28, 1956
6 Claims. (Cl. 88—24)

1. In an apparatus for producing a mask having a network of black and white areas and adapted to be used subsequently as a filter in the printing of photographic film, in combination, a photographic camera having an optical axis extending forwardly from the objective thereof; a light source located forwardly of the camera adjacent said optical axis for directing light toward the camera; a pair of elongated sheet portions of polarizing material located closely adjacent to each other in parallel planes, respectively, which are normal to said axis, said elongated sheet portions being substantially parallel to each other and substantially coextensive and being arranged between said light source and camera so that the light reaching the camera must pass through said sheet portions, each of said elongated sheet portions being of substantially rectangular configuration and being made up of a series of polarizing sections each having a width which is a small fraction of the length of said elongated sheet portion, each extending transversely across the sheet portion and said series of polarizing sections being arranged in a row along said sheet portion from one end to the other end thereof, the polarizing sections of both sheet portions having the same widths, respectively, and each polarizing section of both sheet portions having a plane of polarization at right angles to the plane of polarization of the next preceding and the next following section; guide means guiding one of said elongated sheet portions for longitudinal movement with respect to the other of said sheet



portions between one end position where the sections of both sheet portions and their planes of polarization are in complete registry providing minimum obstruction to light passing from said light source to said camera and an opposite end position where the sections of said one sheet portion are located in their entirety directly opposite those sections of the other sheet portion which have perpendicular planes of polarization, respectively, so that substantially no light reaches the camera when said one sheet portion is in its opposite end position; and manually operable moving means cooperating with said one sheet portion for longitudinally moving the latter between its end positions and for locating said one sheet portion in a desired longitudinal position where the polarizing sections of said sheet portions overlap each other to a preselected degree to provide from film in the camera exposed to light passing through said sheet portions a photograph having preselected black and white areas capable of being used subsequently as a filter in the printing of photographs of predetermined subjects.

3,049,052

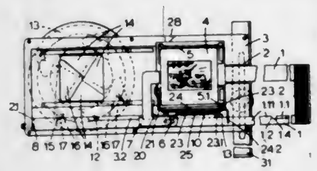
PICTURE PROJECTOR

Erich Korf, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany

Filed Oct. 26, 1959, Ser. No. 848,837
6 Claims. (Cl. 88—28)

1. In a slide projector having a housing, a lamp and condenser system mounted within the housing, a shutter device arranged in the housing on the axis of said system

comprising a plurality of blades movable by a blade driving ring, a slide receiving channel situated between the lamp and the shutter device, and a carrier attached to the housing and adapted to receive a slide magazine which is movable in a direction parallel to the axis of said lamp and condenser system and which is provided with a series of teeth along one edge, the provision of a slide transporting member slidably mounted on the carrier for movement at right angles to said axis from a fully withdrawn position to a fully pushed-in position and back, for moving each slide in turn from the magazine into the slide receiving channel and back into the magazine, a resilient magazine transporting lever pivotally mounted on the carrier on a vertical axis parallel to the plane of the slide receiving channel, which plane includes the plane of that slide which is adjacent said slide receiving channel, a driving element connected to said transporting lever engageable with the teeth on said magazine, a cam follower rigidly connected to said transporting lever, a cam engaged by said cam follower carried by said slide transporting member, having a first inclined surface contained in a plane at right angles to the plane of the slide receiving channel and parallel to the direction of move-



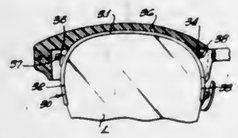
ment of the magazine, which first inclined surface of the final movement of the slide transporting member into its fully pushed-in position pivots the transporting lever which positions the driving element adjacent a space between two teeth on the magazine, a second inclined surface contained in a plane at right angles to the plane containing said first inclined surface, which second inclined surface on the commencement of the withdrawing stroke of the slide transporting member moves the transporting lever against its resilience which positions the driving element between said two teeth of the magazine, and a third inclined surface contained in a plane parallel to the plane containing said first inclined surface, which third inclined surface on the final movement of the slide transporting member into its fully withdrawn position pivots the transporting lever which moves the magazine along one step by means of the driving element engaged between said two teeth, and a pin on said slide transporting lever which engages a recess provided on the blade driving ring towards the end of the movement of the slide transporting element into its fully pushed-in position to rotate said blade driving ring whereby the shutter is opened.

3,049,053

SPECTACLE FRAME MOUNT

Walter F. Morrison, 15414 Fairgrove St., La Puente, Calif.

Filed July 13, 1959, Ser. No. 826,551
1 Claim. (Cl. 88—41)



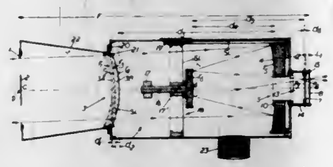
A spectacle frame comprising eye wires connected to each other by a bridge, said eye wires being formed of resilient material and having top portions and downwardly convergent side portions adapted to resiliently grip against downwardly convergent side edges of lenses placed therein, each eye wire having holding means near the ends of the top portion of the eye wire, said holding means presenting surfaces which diverge upwardly from each other, each of said convergent side portions being adapted to be flexed to decrease the spacing between said upwardly diverging surfaces on said holding means and a top rim for each eye wire having retaining means adjacent the ends thereof engageable with the holding means, respectively, each top rim being resilient and being adapted to be flexed to increase the spacing of the retaining means so that they may be passed over the most divergent portions of the surfaces of the holding means, and then on release of the holding means and the retaining means, said holding means expanding and said retaining means contracting to retain the top rims on the eye wires.

3,049,054

ASTRONOMICAL CAMERAS AND OPTICAL SYSTEMS THEREFOR

Robert Louis Waland, Orlington, Priestden Place, St. Andrews, Scotland

Filed Nov. 24, 1958, Ser. No. 776,068
Claims priority, application Great Britain Nov. 26, 1957
11 Claims. (Cl. 88—57)



1. Optical image-forming lens and mirror system, the components of which lie on a common axis, comprising an achromatic and monocentric meniscus lens in which the internal surface thereof is curved and through which incident light first passes, a substantially spherical concave primary mirror spaced from said meniscus lens having an aperture in the optical axis of the system and on which incident light from said meniscus lens is reflected, a substantially spherical convex secondary mirror disposed intermediate said meniscus lens and primary mirror and on which reflected light from said primary mirror is reflected, a field flattening lens arranged intermediate said primary mirror and focal plane opposite said aperture of said primary mirror and through which reflected light from said secondary mirror is passed, and a tubular casing in which the above optical and mirror system is mounted as a closed structure.

3,049,055

MULTIPLE PURPOSE SOLAR REFLECTOR

William Henry Tubbs, 377 Nye St., Marion, Ohio

Filed Nov. 27, 1959, Ser. No. 855,650
1 Claim. (Cl. 88—105)

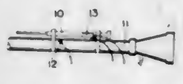
A solar reflector including a reflective facing of metallic foil, a thick backing of pre-stressed artificial stone formed as a concave segment of a sphere of artificial stone of at least fifty times the thickness of the facing of metallic foil and covered over its concave surface by the latter, reinforcing members in the backing at its mid-section and

curved on the same radius of curvature as the latter at its mid-section, and an intermediate layer of cementitious



material adhering the facing of metallic foil to the backing of artificial stone.

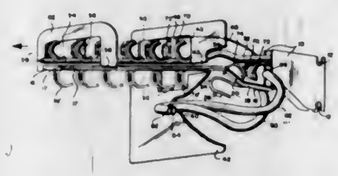
3,049,056
WEAPON CONTROL SYSTEM
Paul I. Evans, Livermore, and Maurice R. Ransom, Torrance, Calif., assignors to the United States of America as represented by the Secretary of the Army
Filed June 9, 1960, Ser. No. 35,099
5 Claims. (Cl. 89—1)



1. In a system for controlling the firing of a plurality of major and spotter weapons each having a firing circuit, the combination therewith of major and spotter weapon trigger switches interlocked so that each is operable to complete a circuit only when the other is open, means including a control switching unit operable to deliver a transient pulse for firing said spotting weapons upon the closure of said spotting weapon trigger circuit and to deliver said pulse for firing said major weapons upon the closure of said major weapon trigger circuit, a three-position switch operable to a first position to connect said major weapon firing circuits so that they may be energized successively, operable to a second position to connect said major weapon firing circuits so that they may be energized manually and operable to a third position to connect said major weapon firing circuits so that they may be energized successively in pairs, a stepping relay operable by successive closures of said major weapon trigger switch and successive repetitions of said transient pulse to complete a connection in successive ones of said major firing circuits when they are connected to be fired successively one after the other or to be fired successively in pairs, and manually operated switching means for operating said stepping relay to select said firing circuits when they are connected to be fired manually.

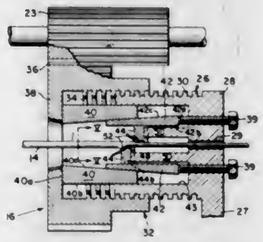
3,049,057
CARTRIDGE BELT DELINKER AND EJECTOR
William W. Brothers, Jr., Eglin Air Force Base, Fla., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Feb. 2, 1960, Ser. No. 6,331
8 Claims. (Cl. 89—33)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In combination with an aircraft a device for delinking and ejecting from the aircraft attached links of a cartridge belt, each of said links comprising an inverted lead cradle and an adjacently attached inverted rear cradle, the lead cradle of each pair having underlapping relationship with an overlapping cradle of a preceding link, the rear cradle of each link having overlapping relationship with the lead cradle of the adjacently succeeding link, said device comprising a channel member positioned in said aircraft and adapted to receive into and deliver therefrom the attached links of a cartridge belt, means attached to said channel member for separating the attachment of the links and delivering the links in separated condition a distance outside of said aircraft, said means comprising track means and guide means attached



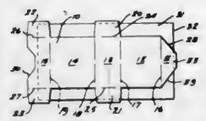
to said channel member and extending through the surface skin of the aircraft, a system of cams on said track means and said guide means constructed to pivot each link to lift the overlapping cradle thereof from the underlapping cradle of the succeeding link to effect its separation therefrom and orient the detached link to a position having its cradles opening in the direction of flight of the aircraft, said track and guide means extending in spaced and parallel relationship through and outside the skin of the aircraft and a distance therefrom for guiding the separated links in threaded condition thereon, and delivering them into the air stream outside said aircraft while in said position.

3,049,058
MACHINE FOR TAPERING WIRE
Chester B. Sadtler, 410 E. Cedar St., Oxnard, Calif.
Filed Dec. 14, 1959, Ser. No. 859,540
7 Claims. (Cl. 90—24)
(Granted under Title 35, U.S. Code (1952), sec. 266)



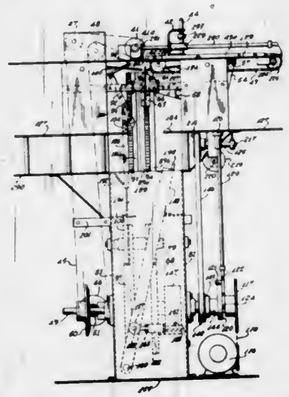
1. A cutting machine for gradually tapering a long length of wire into a polygonal cross-section with adjacent sides of the wire having the same angular relation throughout the tapered length comprising a rotatable housing having a central opening along a longitudinal axis through which the wire is threaded, a plurality of sets of cutters arranged within the housing in parallel planes transverse to the longitudinal axis, said cutters having straight cutting edges, the cutters in each set being circumferentially spaced apart and movable in a radial direction to bear against the wire, each of said sets of cutters being longitudinally spaced along said longitudinal axis with respect to the adjacent set of cutters so as to engage distinctly different portions of the wire periphery, all of said cutters uniformly spaced entirely around the wire, and means supported in the housing for gradually and simultaneously moving said cutters radially inwardly as the wire passes through the machine, said last mentioned means being actuated by the rotatable housing.

3,049,059
METHOD OF FORMING COLLAPSED CARTON BLANK
Robert V. Burt, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed June 22, 1960, Ser. No. 37,963
5 Claims. (Cl. 93—36.6)



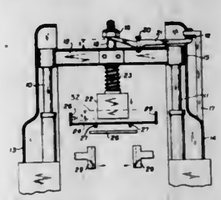
1. A method of forming a package blank which comprises providing a flat substantially rectangular outer wrapper, overlaying an inner liner blank composed of a plurality of panels separated by score lines and including a tear tab panel having an opening tab at one end, laying the inner liner on the outer wrapper so that the opening tab extends beyond an edge of the outer wrapper, folding over the liner and superposed portion of the wrapper at one of the score lines separating adjoining panels and without covering the tear tab panel, folding over the liner and superposed portion of the wrapper at a second score line located two score lines over from the first fold so that the corner portions of the outer wrapper are overlapped and the tear tab is exposed, thereafter sealing the outer wrapper at said overlapped corners to form a collapsed package blank.

3,049,060
CARTON DISPENSER
Raymond Vahle, Tappan, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 18, 1960, Ser. No. 3,048
45 Claims. (Cl. 93—37)



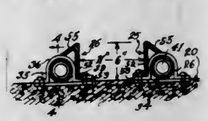
1. In a machine for erecting a flat folded carton of the form which includes inner side walls extending from a center fold line to intermediate fold lines, outer side walls extending from the intermediate fold lines over the inner side walls, the inner and outer side walls containing registering transverse slots, and cross partitions hinged in the slots of the inner side walls and lying flat between the inner and outer side walls the combination including means for separating the inner side walls of the carton through engagement with said inner side walls, means for folding the outer side walls outwardly about the intermediate fold lines, means for urging the carton against said separating means, means for holding the outer side walls inwardly, and means for supporting the carton through engagement with the cross partitions while said separating means is withdrawn.

3,049,061
ATTACHMENT FOR AUTOMATIC QUADRUPLE STAYING MACHINE
Edwin F. Repp, Elmhurst, N.Y., assignor to M. D. Knowlton Company, Rochester, N.Y., a corporation of New York
Filed Oct. 10, 1961, Ser. No. 144,093
3 Claims. (Cl. 93—41)



1. In a box-making machine employing a parallelepiped form against which a blank is folded to make a shell, a vertically reciprocating member for moving the form up and down, a rod vertically movable through a sleeve provided in the member and carrying the form at its lower end, and means for bringing the form nearer the member when the latter is in its uppermost position and for moving the form farther away from the member when the latter is in its lowermost position, the upper end of the rod above the member being provided with a head, a lever pivoted on the member with one end between the member and the head and the other end engaging a fixed detent on the machine for rocking the lever to raise the head when the member approaches its uppermost position, and a compression spring surrounding the rod beneath the member and above the form for lowering the rod when the member moves away from its uppermost position.

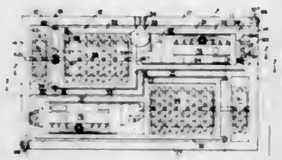
3,049,062
SAFETY CONSTRUCTION FOR VEHICULAR TRAFFIC
Harry W. Irwin, 115 S. Marshall St., Lancaster, Pa.
Filed May 9, 1961, Ser. No. 108,783
4 Claims. (Cl. 94—1)



1. In a traffic safety structure, for a road surface and wherein the road surface includes a straight portion and a curved portion, a pair of spaced parallel barriers on the intermediate portion of said road surface, each of said barriers of said pair of barriers including a tubular member, an elongated guard assembly adjacent to and on the side of each of said tubular members contiguous to the other barrier of said pair of barriers, each of said guard assemblies including a vertically disposed wall portion abutting the adjacent tubular member and having the upper end thereof extending above said tubular member, an inclined wall section extending downwardly from the upper end of said vertical wall portion and partially overlying said tubular member, and clamps and spacer units operatively connected to said pairs of barriers, said pairs of barriers coacting to define a trough adapted to

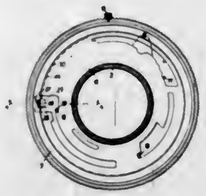
receive therein a wheel of a vehicle which jumps one barrier of said pair of barriers, there being offset staggered spaces between adjacent pairs of barriers.

3,049,063
SELF PROPELLED EARTH COMPACTOR
Lawrence L. Tinnin, deceased, late of 2440 E. Harding Way, Stockton, Calif., by Alice C. Tinnin, administratrix, Stockton, Calif.
Filed Feb. 28, 1958, Ser. No. 718,310
2 Claims. (Cl. 94—50)



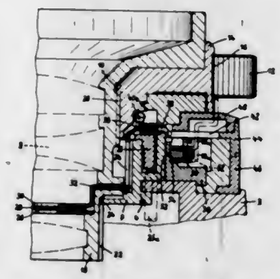
1. A self-propelled earth compactor comprising a substantially rectangular main frame including fore and aft girders and front and rear transverse girders, transverse girder members extending between the opposite sides of said main frame and dividing the interior of said main frame into a transversely extending forward compartment and a transversely extending rearward compartment, a first fixed bar extending parallel to but spaced from the adjacent fore and aft girder and between said front girder and said girder member, a first compaction wheel shaft rotatably mounted on said first bar and the adjacent fore and aft girder, a first compaction wheel fixed on said first shaft, a first movable framework in said forward compartment, means for pivotally connecting said first movable framework to said front transverse girder and to said transverse girder member for pivotal movement about a first horizontal longitudinal axis, means for pivoting said first movable framework between a first position coplanar with said main frame and a second position inclined thereto, a first compaction drum shaft rotatably mounted in said first movable framework, a first universal joint on said first horizontal longitudinal axis and connected to said first compaction wheel shaft and to said first compaction drum shaft, a first compaction drum fixed on said first compaction drum shaft, a first prime mover mounted on said first movable framework, means for connecting said first prime mover to said first compaction drum shaft, a second fixed bar extending parallel to but spaced from the adjacent fore and aft girder and between said rear girder and said girder member, a second compaction wheel shaft rotatably mounted on said second bar and the adjacent fore and aft girder, a second compaction wheel fixed on said second shaft, a second movable framework in said rearward compartment, means for pivotally connecting said second movable framework to said rear transverse girder and to said transverse girder member for pivotal movement about a second horizontal longitudinal axis, means for pivoting said second movable framework between a first position coplanar with said main frame and a second position inclined thereto, a second compaction drum shaft rotatably mounted in said second movable framework, a second universal joint on said second horizontal longitudinal axis and connected to said second compaction wheel shaft and to said second compaction drum shaft, a second compaction drum fixed on said second compaction drum shaft, a second prime mover mounted on said second movable framework, means for connecting said second prime mover to said second compaction drum shaft, and means on said main frame for controlling said framework pivoting means.

3,049,064
PHOTOGRAPHIC SHUTTER
Paul Fahlenberg, Baierbrunn, near Munich, Germany, assignor, by mesne assignments, to Compur-Werk Friedrich Deckel oHG, Munich, Germany, a firm of Germany
Filed Nov. 21, 1957, Ser. No. 697,995
Claims priority, application Germany Nov. 24, 1956
1 Claim. (Cl. 95—53)



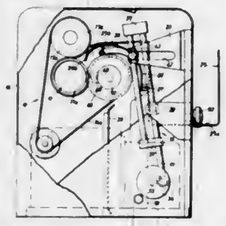
A photographic shutter comprising walls forming a closed annular casing having a central axis, a shutter speed setting cam ring enclosed within said casing and mounted for rotation about said axis, a shutter speed scale ring also mounted for rotation about said axis and having a flange enclosed within said casing and a rim extending circumferentially around said casing externally thereof and accessible for manual grasping and turning, and releasable automatically operating coupling means enclosed within said casing for coupling said cam ring to said scale ring to turn therewith during part of the range of rotary movement of said scale ring and for uncoupling said two rings so that said scale ring may move independently of said cam ring during another part of the range of rotary movement of said scale ring, said coupling means including a resilient tongue on said cam ring, a notch on said scale ring into which said tongue engages during a part only of the range of rotary movement of said scale ring, and stop means for limiting movement of said cam ring so that further rotary movement of said scale ring will force said resilient tongue out of said notch.

3,049,065
DEPTH OF FIELD INDICATING MECHANISM FOR CAMERAS WITH INTERCHANGEABLE OBJECTIVES
Kurt Gebele, Munich, Germany, assignor to Compur-Werk Friedrich Deckel oHG, Munich, Germany, a firm of Germany
Filed Sept. 22, 1959, Ser. No. 845,038
Claims priority, application Germany Sept. 26, 1958
6 Claims. (Cl. 95—64)



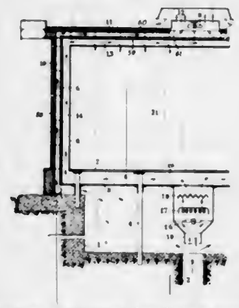
1. A photographic camera assembly of the type including a camera unit, an interchangeable objective unit detachably and replaceably mounted on the camera unit, depth of field indicating mechanism including a circumferentially movable pointer adapted to cooperate with a circumferentially extending distance scale, and a diaphragm having an adjustable aperture, characterized by the fact that said diaphragm is part of said interchangeable objective unit and is removed bodily therewith when said objective unit is removed from the camera unit, said depth of field indicating mechanism is part of said camera unit and remains therewith when said objective unit is removed from said camera unit, and there is a detachable coupling operatively connecting said diaphragm and said depth of field indicating mechanism to vary the position of one in accordance with changes in the position of the other.

3,049,066
PHOTO-COPYING MACHINES
Harold Horsfall, Oldham, England, assignor to Horsfall Engineering Company Limited, a corporation of Great Britain
Filed Jan. 6, 1960, Ser. No. 911
Claims priority, application Great Britain Jan. 8, 1959
3 Claims. (Cl. 95—77.5)



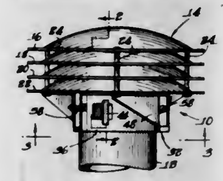
1. A continuous photo-copying machine consisting of an extended light source, a freely rotatable transparent sleeve about said source, a plurality of endless belts contacting said sleeve over the greater part of its periphery, means for holding said belts in such contact with said sleeve, and means for intermittently advancing said belts around said light source whereby a sensitive paper and document to be copied located between said belts and said sleeve will be advanced intermittently about said light source, said advancing means comprising a roller about which said belts are trained, a constant speed motor, and an intermittent driving means between said roller and motor for moving said roller and hence said belts, during any one of said intermittent movements, a linear distance less than the dimension of said document in the direction of travel of the document through the machine.

3,049,067
SOUND-ABSORBING AND HEAT-RESISTING WALL CONSTRUCTION
Janine Lysiane Claude, 129 Rue Lecourbe, Paris, France
Filed Nov. 14, 1958, Ser. No. 773,940
6 Claims. (Cl. 98—31)



1. In a building structure having sound-absorbing and heat insulated side walls above grade, a ceiling structure jointly with said side walls defining at least one room, and means supporting said walls, each of said side walls comprising, an outer wall and an inner wall spaced from each other and a partition between said outer and inner walls spaced therefrom and jointly therewith defining an inner and an outer passageway, said inner wall terminating above said supporting means, said inner and outer passageways being without communication with each other, said ceiling structure comprising an inner partition, an outer partition spaced from said inner partition and another partition between said inner and outer partitions jointly defining two passageways without communication with each other and each in communication with a respective one of said inner and outer passageways of each of said side walls, means to define an air inlet for each side wall outer passageway at the lower end of its respective partition, means to define an air inlet for each inner passageway at the lower end of the respective inner wall defining said inner passageway, means to supply air at a substantially constant moderate temperature to each outer passageway of each side wall through its respective last-mentioned air inlet, said outer partition of said ceiling structure having an opening for allowing said air supplied to the outer passageways of the side walls to flow out of said opening, means to exhaust said air supplied to said outer passageways out of said opening, said ceiling inner partition having openings for allowing air to flow out of said inner passageways of the side walls into said room, heat transfer means to provide conditioned air under at least some pressure into said inner passageways through the respective air inlet at the lower end of the inner walls thereby to provide conditioned air entering said room through said ceiling inner partition openings, and means to at least selectively exhaust to atmosphere the air out of said room at a lower level out through an inner and outer wall of a side wall and the partition therebetween.

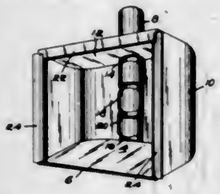
3,049,068
ADJUSTABLE FLUE COVER
Donald L. Rousey, Des Plaines, Ill., assignor to Leslie Welding Co., Inc., Chicago, Ill., a corporation of Delaware
Filed Apr. 2, 1959, Ser. No. 803,709
8 Claims. (Cl. 98—84)



7. An adjustable flue cover comprising, in combination, a weather deflecting head, an adjustable support collar formed in at least three segments disposed in an annular series in circumferentially adjustable relation to each other to fit around flues of different sizes, a plurality of at least three swingable support arms circumferentially spaced around said collar; said respective arms being individually connected to said head at circumferentially spaced locations on the head, which are stationary with respect to said head and located radially outward of said collar, and being connected to said respective collar segments, at locations on the respective collar segments which are stationary with respect to the respective collar segments, for generally horizontal swinging movement in relation to said collar to accommodate expansion and contraction of said collar by circumferential adjustment of said collar segments in relation to each other while at the same time continuously supporting said head on said collar, and means on the collar end of each of said arms defining an adjusting flange constituting a first adjusting flange on the collar segment to which the arm is connected, means on each collar

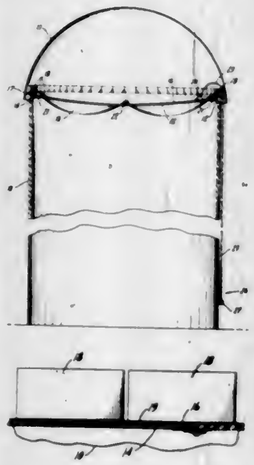
segment defining a second adjusting flange located in adjacent spaced relation to the first adjusting flange of an adjacent collar segment to constitute a pair of adjusting flanges whereby a pair of flanges is provided for each two adjacent collar segments, and means for connecting together the first and second flanges of each pair to hold said collar in an adjusted position against expansion.

3,049,069
FUME HOOD
Donald Whiston, Box 10, Wapping Road, Kingston, Mass., and Mark J. Dondero, 38 North St., Lexington, Mass.
Filed Dec. 16, 1959, Ser. No. 860,019
14 Claims. (Cl. 98—115)



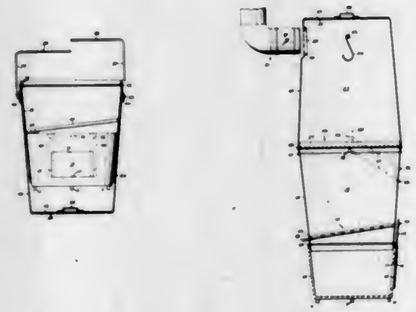
12. In a fume hood having top, bottom, side and rear walls enclosing a hood space which has a prescribed open frontal area surrounded by edges of said top, bottom and side walls, exhaust conduit means of substantially uniform cross-sectional area extending between the bottom and top walls at the rear of said hood, opening means through said conduit means in communication with the interior of said hood, the cross-sectional area of said conduit means being between approximately one-twelfth and one-twentieth of said frontal area and the cross-sectional dimensions of said conduit means being a minor fraction of any horizontal boundary dimension of said frontal area.

3,049,070
SILO SEAL STRUCTURE
Thomas F. Hawk, New Palestine, Ind., assignor of one-third each to Robert H. Hill, Cumberland, and Charles J. Hoover, Greenfield, Ind.
Filed June 8, 1961, Ser. No. 115,672
5 Claims. (Cl. 99—235)



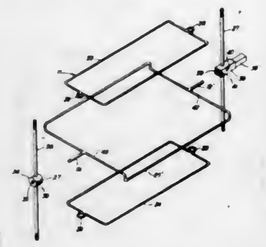
1. A structure providing an expansion chamber for a sealed storage type silo, said structure comprising in combination a silo having concrete side walls and a roof enclosing the upper end thereof, a strip of sponge rubber disposed along the upper edge area of the silo wall, a sheet of relatively thin flexible polyethylene covering the upper end of the silo and extending so that the margin of the sheet is outboard of the outer margin of said strip and the sheet overlies the upper face of the strip, a series of closely spaced blocks having substantial weight placed over the marginal area of said sheet overlying said strip, and rigid elements extending across the space between adjacent blocks and disposed between the blocks and the upper face of said sheet, whereby the weight of said blocks seals the marginal area of said sheet against said strip and said rigid elements provide continuity of the seal between the blocks, the flexible sheet being thus free to move upwardly toward the silo roof and to recede therefrom upon increase or decrease respectively of the pressure acting on the lower face of said sheet.

3,049,071
UNIVERSAL COOKER
Archibald W. Diack, 3386 SW. Fairmount Blvd., Portland, Oreg.
Filed Apr. 18, 1960, Ser. No. 22,874
3 Claims. (Cl. 99—340)



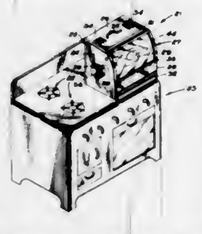
3. A portable knockdown type of cooking enclosure including means therein by which food as selected may be selectively hung or supported and appropriately cooked in an atmosphere of the combustion products of selected wood charcoal as desired, said enclosure including in a vertical sequential separable arrangement open one to the other, means forming an upwardly expanding firepot, means forming an upwardly expanding combustion chamber and means forming an upwardly contracting cooking chamber, said firepot means being formed with a hole through one side thereof for the admission of fire supporting fuel elements and said cooking chamber means being formed with an outlet near its top for permitting the escape therefrom of the products of combustion, said combustion chamber near its top including an open grill thereacross for supporting foodstuff to be cooked in a prone position transversely of the direction of movement of the heating atmosphere therepast, said open grill including an encircling band extending downwardly from said grill overlappingly to engage the top of the side wall of said combustion chamber and upwardly from said grill to engage the bottom of the side wall of said cooking chamber, whereby said cooking enclosure without said cooking chamber but with said grill becomes a cooking means of the outdoor grill or barbecue type and by the addition thereto of the cooking chamber becomes a cooking means of the Chinese oven type which by longer operation with a reduced air fuel ratio becomes a wood charcoal flavoring baking oven.

3,049,072
ROTARY ROAST RACK
Mahlon J. Smith, Niles, Mich., assignor to The Washburn Company, Worcester, Mass., a corporation of Massachusetts
Filed July 17, 1958, Ser. No. 749,223
4 Claims. (Cl. 99—427)



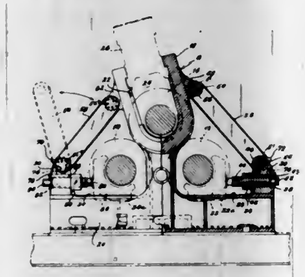
1. A rotary roast rack comprising a substantially flat, generally rectangular, open main frame of wire construction, a pair of coaxially arranged supporting shafts rigid with and extending from the opposite ends of said frame on the longitudinal center line thereof for its rotary support, a pair of collars having axial holes provided therein by means of which they are removably mounted on said shafts, said collars being held against turning relative to said shafts when assembled thereon, threaded studs fixed on and projecting in aligned relation from opposite sides of said collars and disposed in substantially right angle relationship to said frame when said collars are disposed on said shafts in assembled relationship to said frame, manually adjustable nuts threaded on said studs, said studs on each side of said frame being resilient and flexible toward each other, and a pair of substantially flat, generally rectangular, open meat caging and clamping frames of flexible and resilient wire construction having stud receiving loops extending from the opposite ends thereof on their longitudinal center lines loosely slidably received on the studs on opposite sides of said main frame and adjustable inwardly on the studs toward each other by the tightening of said nuts, said meat caging and clamping frames, when removed from said studs, being adapted to be laid on and in close parallelism with said main frame, and said collars, when removed from said shafts, permitting the laying of the studs on and in close parallelism to said main frame and said meat caging and clamping frames for compact packaging of all of these parts in shipment and storage.

3,049,073
BROILERS
Murray G. Edelston, Chicago, Ill.; Thomas J. Downs, administrator of said Murray G. Edelston, deceased
Filed July 22, 1959, Ser. No. 828,900
2 Claims. (Cl. 99—446)



1. A flame diffuser comprising an elongated loop member having parallel, spaced-apart sides connected by curved ends, said loop member having generally parallel upper and lower edges, a plurality of spaced-apart vane members extending across the interior of the loop member and transverse to the sides thereof, said vane members having upper ends terminating substantially in the plane of the upper edge of the loop member, said vane members having lower ends projecting downwardly below the plane of the lower edge of the loop member, and the spacing between adjacent vane members and the length of the downwardly projecting portion of each vane member decreasing from the curved ends toward the medial portion of the loop member, whereby the heat from a conically shaped flame impinging on the lower portion of the diffuser is distributed throughout the length of the diffuser in a substantially uniform manner.

3,049,074
MILL HOUSING
Bror G. Mellin, University City, Mo., assignor to Fulton Iron Works Co., St. Louis, Mo., a corporation of Missouri
Filed Apr. 20, 1959, Ser. No. 807,631
2 Claims. (Cl. 100—162)

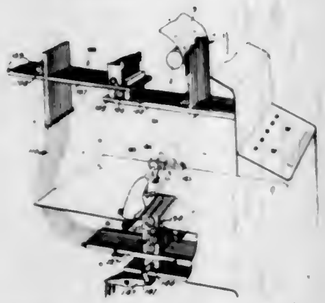


1. A three roll crushing mill comprising a pair of similar spaced roll housings each having two spaced horizontal platforms for supporting lower roll assemblies and an upright column positioned therebetween for supporting an upper roll assembly, bearing means on each end of each of said lower roll assemblies, said bearing means respectively being slidably supported on one of said platforms for movement thereon toward or away from the column, threaded means on each of said housings cooperatively engaging each of said lower roll bearing means for moving the associated lower roll assemblies into closer operative position to the upper roll assembly, a slot formed in the top of the upright columns on each of said housings and extending angularly downwardly relative to the platforms, an upper roll assembly having bearing means thereon slidably positioned in the said slots, pressure means positioned in said slots above the said upper roll bearing means for exerting downward but yieldable force on the said upper roll assemblies in a direction to apply unequal crushing force between the upper roll assembly and the said two lower roll assemblies, and girder means on each of said housings having one end connected to the column and extending therefrom over an associated one of said lower bearing means for connection at the opposite end to the housing on the opposite side of the associated bearing means from said column, said girder means including eccentric connection means for connection to the associated housings at one end thereof, said girder means being releasable at one end for hinged movement about the other end to a position opening up a space above the said associated lower roll bearing means, the threaded means for said lower roll bearing assemblies being retractable in the housing away from the column so that the associated lower roll assemblies can be lifted off of their associated platforms and clear the upper roll assembly by substantially a vertical lifting operation only.

3,049,075
SETTABLE TYPE WHEEL PRINTING MECHANISM

Ivo Spiazzi, Milan, Italy, assignor to Fabbrica Italiana Macchine Aziendali, Milan, Italy, a company of Italy

Filed July 7, 1958, Ser. No. 746,907
Claims priority, application Italy July 24, 1957
7 Claims. (Cl. 101—93)

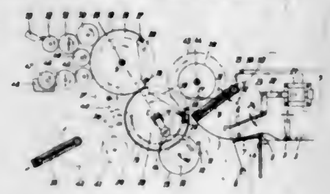


1. A printing assembly operable from an outside source, comprising a plurality of spaced supporting plates mounted side by side between the teeth of suitable guiding and supporting combs, a type wheel rotatably mounted on each of said supporting plates with a portion of its peripheral surface projecting above its associated plate, a pressing pad operably mounted above said type wheels, an inking ribbon mounted between said pressing pad and said type wheels, means for moving sheet material between said inking ribbon and the pressing pad, a plurality of variable stroke racks operable from said outside source, each of which is mounted between two adjacent plates, a plurality of intermeshed gear wheels mounted on each of said plates, one of said gear wheels on each of said plates being in constant engagement with one of said racks and operatively connecting said one rack to the type wheel mounted on that plate whereby said racks position said type wheels angularly to a position controlled by said outside source, means connected to each of said plates for lifting said plates rectilinearly and independently of the other plates, between the teeth of said combs to lift said type wheels from a lower, non-printing position to a raised printing position, and means for moving said pressing pad against sheet material to press said sheet material against said inking ribbon and the lifted type wheels when the letters are in their raised, printing positions.

3,049,076
ROTARY LITHOGRAPHIC MULTICOLOR PRINTING MACHINE

Wilhelm Ritzerfeld, Schorlemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Franzensbader Str. 21, Berlin-Grunewald, Germany

Filed Nov. 17, 1959, Ser. No. 853,541
Claims priority, application Germany Nov. 18, 1958
5 Claims. (Cl. 101—137)



2. In a lithographic printing machine, in combination, at least one rotary printing roll means having a peripheral surface including a cylindrical surface portion and a non-cylindrical surface portion, and including means for holding a lithographic printing form on said cylindrical surface portion; a rotary pressure roll means having a peripheral surface including a cylindrical surface portion and a non-cylindrical surface portion, the radii of said cylindrical surface portion being different, said pressure roll means cooperating with said printing roll means along a printing line defined by said cylindrical surface portions; holding means secured to said pressure roll means for holding a copy sheet on said peripheral surface of the same so that the printing form produces an imprint on the copy sheet passing through the printing line; and transmission means connecting said printing roll means and said pressure roll means for rotation in timed relation and rotationally phased so that said cylindrical surface portions cooperate with each other when passing through said printing line, and so that said non-cylindrical surface portions pass simultaneously through said printing line, said transmission means including means for rotating one of said roll means at a different rotary speed when said cylindrical surface portions pass through said printing line than when said non-cylindrical surface portions pass through said printing line to compensate for the different diameters of said cylindrical surface portions so that said printing and pressure roll means complete one revolution in the same time with said cylindrical surface portions moving at the same peripheral speed, and said non-cylindrical surface portions moving at different peripheral speeds.

3,049,077
MULTIPLE COLORED PRINTING INKS AND PIGMENTS

Eugene P. Damm, Jr., Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,175
11 Claims. (Cl. 101—211)

1. A dry free-flowing printing ink capable of producing printing in more than one color, which comprises a mixture of individual particles each comprising a plurality of dyes, two or more of which are of different colors, with one of the dyes being preferentially soluble in one solvent and another dye being preferentially soluble in another solvent.

4. A method of printing in more than one color from the same printing ink, which comprises producing on at least one substrate images of loosely deposited dry free-flowing printing ink comprising a mixture of a plurality of dyes, two or more of which are of different colors and one of which is preferentially soluble in a solvent, forming permanent images on the substrate by subjecting some of said loosely deposited images of printing ink to the action of a solvent in which one of the dyes is preferentially soluble and subjecting some of said loosely deposited images of printing ink to the action of another solvent in which another of the dyes is preferentially soluble, and removing the unabsorbed ink from the substrate.

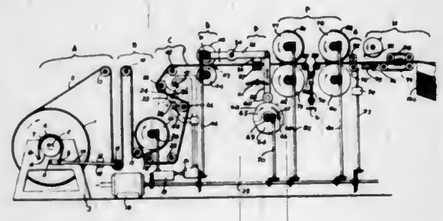
3,049,078
ROTARY PRESS

Roy R. Smith, Jr., Kansas City, Mo., assignor to Econo-Pak Register Co., Inc., Kansas City, Mo., a corporation of Missouri

Filed Mar. 31, 1960, Ser. No. 18,961
6 Claims. (Cl. 101—228)

2. In a rotary printing press of the type adapted to selectively control the distance between impressions on the

web and having a mechanism for storing a varying length of web during each printing cycle, the improvement comprising; an infeed roller having a circumferential surface, at least one guide roller for holding the web in contact with a substantial portion of said circumferential surface, variable speed rotary drive means operatively connected to said infeed roller for driving said infeed roller, and control means operatively associated with and actuated



by said storage mechanism for decreasing the output speed of said drive means in response to an increase over a predetermined maximum length of web in said storage mechanism during a printing cycle and increasing the output speed of said drive means in response to a decrease under a predetermined minimum length of web in said storage mechanism during a printing cycle whereby the infeed speed of web is automatically adjusted to press demand.

3,049,079
WATERPROOF CONTAINER AND CLOSURE THEREFOR

Clyde W. Ello, Kenvil, N.J., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Filed Nov. 18, 1957, Ser. No. 696,994
17 Claims. (Cl. 102—24)

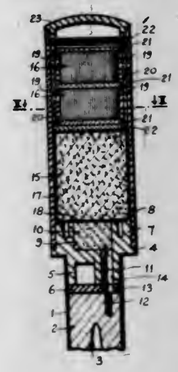


1. An explosive assembly comprising a bag formed from a flexible water-impervious material; a body of a hygroscopic explosive material within said bag; a mass of a material in said bag, water swellable to form a gel, intermediate said body of explosive and the open end portion of said bag; the walls of said bag being gathered to substantially close said bag in an area intermediate said body of explosive and said mass of water swellable material, and also in an area intermediate said mass of water swellable material and the open end of said bag; and tie means around each said gathered wall portion of said bag to support each substantially closed.

3,049,080
ROCKETS AND ROCKET-BORNE DISTRESS SIGNALS

Alfred James Schermuly, Dorking, England, assignor to The Schermuly Pistol Rocket Apparatus Limited, Dorking, England, a British company

Filed Apr. 17, 1959, Ser. No. 807,125
2 Claims. (Cl. 102—34.4)



1. In a rocket-borne distress signal comprising a cylindrical casing having an axis, a rocket unit on one end thereof and a closure plug on the other end thereof, said rocket unit including a rocket propellant composition; a first cylindrical sleeve having an axis colinear with that of the casing and slidably disposed therein, and a second cylindrical sleeve within the first cylindrical sleeve having an axis also colinear with that of the casing and housing a bundle of radar reflecting filaments which filaments are disposed within the second cylindrical sleeve with their longitudinal axes colinear with the axes of the first and second cylindrical sleeves, said sleeves being rigid enough to prevent compaction of the filaments by and upon explosive ejection of the sleeves and filaments therein from the casing by usual means; the first cylindrical sleeve comprising a plurality of arcuate portions with top and bottom disc portions resting thereon, the second cylindrical sleeve comprising within the first sleeve a plurality of arcuate portions with top and bottom disc portions resting thereon, and the length of the arcuate portions forming the said second sleeve being slightly greater than the length of the filaments therein, but the combined length of the arcuate and disc portions of the second sleeve being less than the length of the first sleeve portions; whereby upon explosive ejection of the first and second sleeves and the filaments therein, the longitudinal force required to blow the closure plug out of the casing is transmitted directly to the closure plug through the said first sleeve without compressing the filaments into a wad, which said first sleeve in conjunction with the top and bottom disc portions of said second sleeve also prevents transmission to the filaments of any circumferential compressive force, the filaments thus being ejected from the casing in a loosely associated state, to freely fall and widely disperse after the sleeve and disc portions have fallen away therefrom.

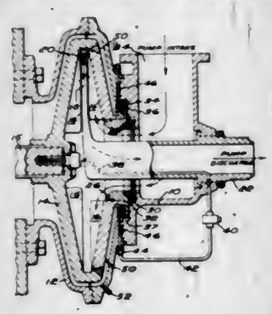
3,049,081
PUMP SEAL

Dietrich E. Singelmann, Buffalo, N.Y., assignor, by mesne assignments, to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware

Filed Apr. 27, 1959, Ser. No. 809,586
3 Claims. (Cl. 103—101)

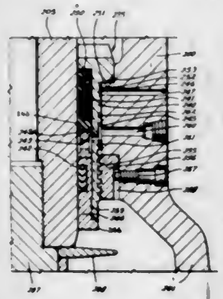
1. In a pump having a housing member, an impeller casing member disposed within said housing and having a clearance space between the housing and the casing,

a drive shaft connected to said impeller casing for rotating the same, said impeller casing having an inlet opening and said housing having an inlet conduit leading into said impeller casing through said inlet opening, a combination static-dynamic pressure seal interposed between said housing member and said impeller casing member around the inlet passage sealing the clearance space from the inlet opening, said seal comprising a contact seal annulus rigid with one of said members, a sylphon bellows fixed at one end to the other of said members, a seal contact ring fixed to the other end of said bellows and normally urged thereby into face-to-face contact with said contact seal annulus to provide a static seal thereat, said impeller casing having an impeller flange rigid therewith, said housing having a chamber receiving said impeller flange,



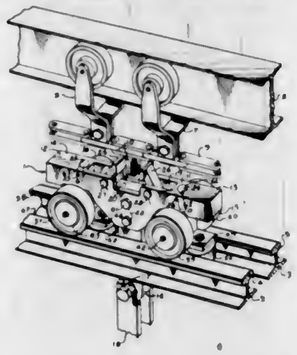
said impeller flange having radial vanes on that side thereof opposite the interface between said contact seal annulus and said seal contact ring and said chamber being in communication with such interface, said housing having a passageway leading to said chamber in the region of said vanes, conduit means connecting the interior of said impeller casing with said passageway to circulate fluid from the impeller casing to said chamber and thence to said interface to separate said contact seal annulus and said seal contact ring allowing fluid to bleed through the clearance space at this point to said inlet of the pump to provide a dynamic seal when the impeller casing is operatively rotated, and said clearance space communicating said chamber with the interior of said housing radially inwardly of said passageway to provide an air bleed-off.

3,049,082
RECIPROCATING PUMP
William R. Barry, Wichita, Kans., assignor to John W. Mecom, doing business as Cardwell Manufacturing Company, Houston, Tex.
Filed May 26, 1958, Ser. No. 737,610
2 Claims. (Cl. 103—216)



1. In a single acting pump having a cylinder with a power end and a fluid end and a reciprocating plunger within said cylinder, the combination of an opening at said fluid end of said cylinder, a removable plug sealing said opening, a removable packing housing carried within said cylinder, said packing housing being of lesser external dimension than said opening at said fluid end of said cylinder for passage therethrough when said plug is removed, packing means within said packing housing around said plunger to maintain a sealed relationship therebetween, a countersunk bore extending into said cylinder at the power end thereof, a packing housing retaining nut within said bore releasably engaging the external periphery of said packing housing, and releasable locking means attached to said cylinder and contacting said retaining nut to secure said nut in said bore.

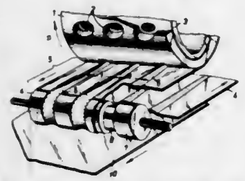
3,049,083
CONVEYOR TROLLEY
Omer R. Potter, Kansas City, Kans., and Alge T. Peterson, Jr., Kansas City, Mo., assignors to Midwest Conveyor Company, Inc., Kansas City, Kans., a corporation of Kansas
Filed July 3, 1961, Ser. No. 121,727
7 Claims. (Cl. 105—156)



1. In a load-carrying trolley, a trolley frame, a support bar fixed to said frame and extending therefrom, an upwardly extending bore in said support bar, a pair of track wheels, a horizontal axle normally extending laterally of said frame and rotatably supporting said wheels at opposite ends thereof, a kingpin fixed to said axle and extending upwardly therefrom and into said bore, said kingpin being tapered inwardly from a dimension substantially equal to said bore to a dimension substantially smaller than said bore as it extends downwardly, a spherically concave upwardly facing load-bearing boss on said kingpin and surrounding said kingpin, a spherically convex downwardly facing load-bearing boss on said support bar and surrounding said bore, said bosses presenting mated contacting spherical bearing surfaces located above said axle and adjacent a lower portion of said kingpin, whereby said track wheels are adapted to move horizontally in a rocking motion with respect to said support bar.

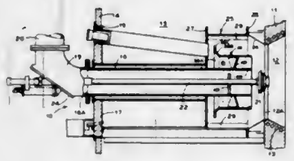
3,049,084
ROTARY DOUGH KNEADING MACHINE
Werner Knecht, Korntal, near Stuttgart, and Maximilian Stüdlein, Stuttgart, Germany, assignors, by mesne assignments, to Werner & Pfleiderer G.m.b.H., Zug, Switzerland, a firm of Switzerland
Filed Apr. 26, 1960, Ser. No. 24,844
Claims priority, application Germany June 13, 1959
4 Claims. (Cl. 107—9)

1. In a device for subjecting dough to a rotary kneading action of the kind including an outer rotary drum having in its wall rows of circumferentially and transversely spaced apertures constituting kneading cells, an inner rotary drum disposed coaxially with the outer drum and coacting with the same to subject portions of dough placed in said cells to a rotary kneading action and a conveyor encompassing a lower part of the circumference of the outer drum to cover cells in said part of the circumference and continued in a transport path to receive for transport kneaded dough portions falling out of cells uncovered by the conveyor as the same separates from the outer drum, said dough portions being discharged from the conveyor at the end of said transport path, the improvement of the conveyor comprising a flexible flat con-



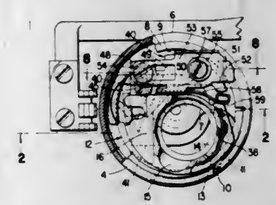
veyor band, guide and support means for the conveyor band to guide the same under tension along a plane transport path located beneath the drum and to form longitudinal grooves in the conveyor band portion traveling in said plane transport path, each of said grooves being located in a common vertical plane with a row of cells to receive kneaded dough portions falling out of the cells, the conveyor band due to its flexibility gradually recovering its initial flat configuration after leaving said plane path.

3,049,085
METHOD AND APPARATUS FOR BURNING PULVERIZED COAL
George Musat, Canton, Ohio, and Arthur J. Poole, Belleville, N.J., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed June 30, 1959, Ser. No. 823,955
6 Claims. (Cl. 110—28)



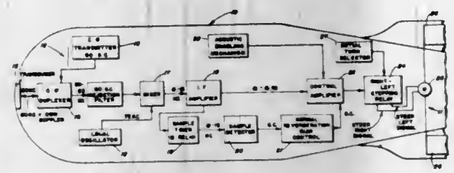
1. An improved fuel burner means adapted for burning either high or low volatile pulverized coal with equal facility when burning said coal only comprising an air register for receiving secondary combustion air, said register having an axial outlet, means for imparting a whirling movement to the combustion air flowing through said register to said register outlet, a burner nozzle disposed within and extending axially of said register, said burner nozzle having a discharge end portion opening adjacent said register outlet for ejecting a fuel mixture of pulverized coal and primary air into the air discharging from said register, a cylindrical sleeve having an outwardly flaring inlet and circular outlet concentrically disposed in spaced relationship about the burner nozzle adjacent the discharge end portion thereof and within said register whereby said sleeve divides the combustion air within said register into an inner and an outer band of whirling air, said sleeve directing the inner band of air toward the discharge end of said nozzle, vanes disposed within said sleeve at an intermediate point between the flared inlet and circular outlet end thereof, said vanes being disposed so as to enhance the whirling motion of the inner band of air to retard the forward velocity of said inner air band relative to that of the outer air band and enhance turbulence at the discharge end of said nozzle so as to effect intimate mixing of the fuel with secondary air and retention of the fuel mixture in an ignition zone long enough to properly stabilize ignition over the load range of the burner means.

3,049,086
LOOP TAKER FOR SEWING MACHINES
Ralph E. Johnson, Mountainside, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Jan. 25, 1960, Ser. No. 4,387
9 Claims. (Cl. 112—193)



1. In a sewing machine having a frame, an oscillating loop-taker journaled in said frame and including a ring, a semi-circularly shaped thread carrier disposed eccentrically internally of said ring and defining an open space between said thread carrier and said ring, cooperating bearing surfaces on said ring and said thread carrier for supporting said thread carrier and providing for angular movement of said ring relatively to said thread carrier, and means for holding said thread carrier against turning with said ring and against movement relative to said ring to separate said bearing surfaces comprising a stationary bracket secured in said frame and extending upwardly internally of said ring and in the open space between said thread carrier and said ring, an abutment member, means mounting said abutment member on said bracket for swinging about an axis parallel to the axis of oscillation of said loop taker from an operative position wherein said thread carrier is held against turning with said ring and with said bearing surfaces in engagement and a release position in which said thread carrier is free to be moved relatively to said ring to disengage said bearing surfaces and thereby to permit removal of said thread carrier from said ring and means for releasably holding said abutment member in operative position.

3,049,087
WAKE RESPONSIVE TORPEDO GUIDANCE SYSTEM
Charles P. Conley and Arthur Nelkin, Pittsburgh, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 27, 1952, Ser. No. 295,884
7 Claims. (Cl. 114—23)



1. An automatic wake-sensing and torpedo-steering system for directing a torpedo, having steering gear, along a sinuous wake-crossing course toward a moving waterborne target, comprising electro-acoustic means for detecting passage of the torpedo into the wake, steering gear control means operative in response to said detection of wake entry to cause the torpedo to execute a turn in response to initial wake entry and to cause the turn direc-

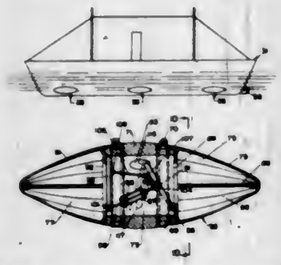
tion of said torpedo to be reversed in response to each subsequent entry into the wake, said turns being of radius to carry the torpedo through and back toward said wake, and means for presetting said steering gear control means to cause the torpedo to turn toward the target on initial wake entry.

3,049,088
DRAIN FOR BOATS
Gerald J. Curtis, 8806 Glen Loch, Houston, Tex.
Filed Oct. 31, 1960, Ser. No. 66,231
4 Claims. (Cl. 114—197)



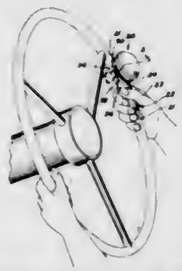
1. In a boat drain a tubular body shaped to be extended through and outwardly beyond a drain opening, in a boat and having externally enlarged portions positioned for engagement with the boat at the inner and outer ends of the opening to close the opening against the flow of fluid therethrough exterally of the body, said body having spaced apart wall portions formed of flexible material located outwardly beyond the opening and formed with body also having wall portions located outwardly beyond external longitudinally outwardly tapering ribs, said body also having wall portions located outwardly beyond said spaced apart wall portions whose inner faces are in contact to close the body against the inflow of fluid therethrough and movable apart to open the body under the influence of the pressure of fluid in the body when said pressure exceeds the pressure of fluid on said wall portions externally of the body.

3,049,089
MARINE PROPULSION SYSTEM AND ENGINE
Abraham G. Bastiaanse, 162 Main St., Unionville, Conn.
Filed July 5, 1956, Ser. No. 596,091
25 Claims. (Cl. 115—14)



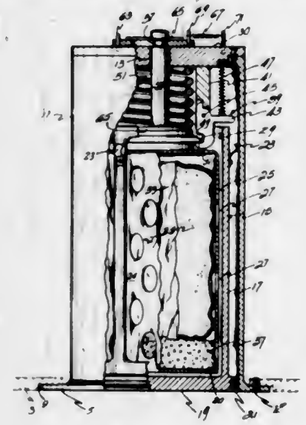
21. A marine propulsion system adapted for use with a ship; said system including at least one propulsion unit, a closed propulsion circuit including a portion of said unit, and a control system; each of said propulsion units comprising a rigid framework, a forward and a rearward propulsion chamber, a control chamber disposed between said propulsion chambers, valving means for selectively opening and closing said chambers, an elastic motion-transmitting covering for at least a portion of each of said propulsion chambers; a mount for said unit upon which it is disposed in contact with the water in which the ship floats with said elastic coverings in line with the longitudinal axis of the ship; said closed propulsion circuit including said propulsion and control chambers, a susbtantially incompressible liquid being disposed within said propulsion circuit, engine means for maintaining said propulsion liquid under minimum pressure at least equal to substantially that of the water in which the ship floats and for intermittently and suddenly subjecting said propulsion liquid to relatively great momentary increase in pressure, said increase in pressure during its duration expanding one of said elastic coverings of said propulsion unit and transmitting motion and thereby causing the ship to move, the maintenance of said minimum pressure between said intermittent impulses protecting said coverings from shock when said pressure is later increased, and a connection between said engine means and said control chamber; and said control system including a hydraulic control circuit, said circuit including a control cylinder and a piston disposed therewithin, a connection between said piston and said valving means for selectively opening and closing said chambers by movement of said piston, said control circuit having two branches one upon each side of said piston joining at a common point relatively remote from said piston, a reservoir disposed in each of said branches between said common point and said piston, a substantially incompressible control liquid disposed in each branch and disposable in each reservoir and engaging each side of said piston respectively and leaving a portion of each branch relatively near said common point unoccupied thereby, a source of gas under pressure, and a gas-control valve operatively engaging each of said branches at said common point, inputs for said gas to said gas control valve, said gas-control valve including instrumentalities for first opening one branch of said control circuit to release gas pressure therein and instrumentalities for thereafter connecting the other of said branches to said source of gas thereby placing the control liquid under pressure and moving said piston in a manner desired selectively to open and close said chambers.

3,049,090
SLEEP-PREVENTING ALARM FOR A MOTOR VEHICLE DRIVER
William J. Bergen, 8035 Hemet Place, Los Angeles 46, Calif.
Filed Dec. 19, 1960, Ser. No. 76,949
6 Claims. (Cl. 116—67)



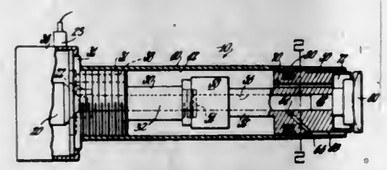
1. A sleep-preventing alarm for a motor vehicle driver, comprising: perceptible signal means; manually operable means for controllably inactivating said perceptible signal means only when manually operated; said perceptible signal means comprises a spring motor provided with and drivingly coupled to a rotatable element, said rotatable element being provided with engaging means for engagement with said inactivating means whereby to rotatively immobilize said rotatable element when engaged by said inactivating means and whereby said spring motor will rotate said rotatable element when said inactivating means is manually disengaged from said engaging means, said rotatable element being provided with means for converting rotary movement thereof into intermittent movement and being provided with and coupled to hammer means for intermittently operating same in response to rotation of said rotatable element, and sound-producing means adapted to be intermittently struck by said hammer means in response to rotation of said rotatable element whereby to produce an audible signal and mounting means for mounting said inactivating means on a portion of a steering wheel of a motor vehicle in a position such as to be adapted to be manually gripped, together with said steering wheel, by a driver of the motor vehicle whereby to normally inactivate the perceptible signal means as a result of said driver gripping said steering wheel and inactivating means during the driving of the motor vehicle, and whereby relaxation of said manual gripping of said steering wheel and inactivating means, when said driver inadvertently falls asleep while driving the vehicle, will result in activation of said perceptible signal means for the purpose of awakening the driver before an accident occurs.

3,049,091
RELEASE AND EJECTION MECHANISM FOR AUTOMATIC DYE MARKER SYSTEM
Robert J. Carroll, Newtown Square, Pa., and Franklin T. Perry, Stratford, N.J.; said Carroll assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 11, 1960, Ser. No. 62,060
3 Claims. (Cl. 116—124)
(Granted under Title 35, U.S. Code (1952), sec. 266)



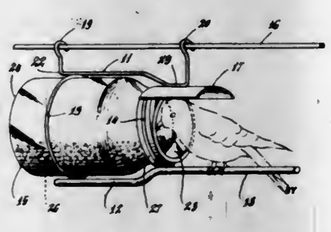
1. A crash marker device for marking the area in which an aircraft has submerged itself in a body of water, said device comprising a first cylindrical housing which is suitably mounted on the aircraft; a closure member removably mounted to one end of said first housing, said closure member being formed with an aperture therein; a second cylindrical housing having an integral base member at one end thereof, said second housing being slidably mounted inside of the first housing whereby its base member is positioned inside of the first housing at one end of the said first housing opposite the closure member; sealing means attached to said base member for forming a fluid seal between said base member and said first housing; a canister having an integral bottom, a wall member having perforations therein, and an open top, disposed within the said second housing so that the bottom of the canister rests upon the said base member of the second cylindrical housing; a cap, being formed with a lip around the periphery thereof, removably fitted in the open top of the canister; buoyant means placed on the bottom of the canister; a sack of suitable marking dye placed in the canister on top of the buoyant means; three triggering means permanently affixed to the said closure member and spaced equidistant from one another, said triggering means being adaptable to engage the lip on the cap of the canister whereby the canister is locked inside of the said first housing; a spring centered between the three triggering means and normally held compressed between the cap attached to the canister and the said closure member whereby when the aircraft plunges into a body of water, the water presses against the said base member on the second cylindrical housing and pushes the said housing along with the canister toward the closure member causing the triggering means to be disengaged from the lip of the cap on the canister whereby the compressed spring ejects both the said second cylindrical housing and canister into the water whereupon the canister floats in the water as the dye leaches out through the sack and passes through the perforations in the wall of the canister so as to color the water.

3,049,092
APPARATUS FOR THE ELECTROSTATIC COATING OF ARTICLES
John Sedlacsik and John Sedlacsik, Jr., Garfield, N.J., assignors to Interplanetary Research & Development Corp., Garfield, N.J., a corporation of New Jersey
Filed July 24, 1959, Ser. No. 829,373
5 Claims. (Cl. 118—629)



1. An electrostatic spraying system employing a conveyor for carrying articles to be coated along a predetermined path having at least a portion thereof defining an arcuate configuration, a pressure operated atomizer having a peripheral discharge edge and disposed relative to said conveyor adjacent the arcuate configuration path for projecting a 360° spray pattern radially from said atomizer by pneumatic force, means for adjustably positioning the atomizer so that the plane of the atomizing edge may be set adjustably at different relative angles for establishing the vertical height of the spray pattern on the article carried along the arcuate configuration of the predetermined path, and means for establishing an electrostatic field between the atomizer and the articles to be coated to electrostatically charge particles of coating material to be sprayed from the pressure operated atomizer onto said articles.

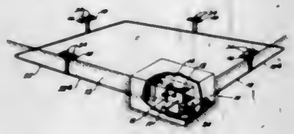
3,049,093
FEEDER
Ruth F. Oliver, 83 Rogers Road, Hamden, Conn.
Filed Oct. 25, 1961, Ser. No. 147,694
6 Claims. (Cl. 119—51)



1. In an aerial line feeder, a transparent container having an open end; a surrounding frame supporting said container comprising; a longitudinal first member; a longitudinal second member; a plurality of peripheral transverse members uniting said first and second members in spaced relation; means for supporting said container to

said frame; means for attaching said feeder to said line and a perch secured to said frame adjacent said open end.

3,049,094
PADDLE-ACTUATED ANIMAL DRINKING DEVICE
Erwin L. Smith, Cedar Falls, Iowa, assignor to Clay Equipment Corporation, a corporation of Iowa
Filed Aug. 21, 1961, Ser. No. 132,739
5 Claims. (Cl. 119—75)



1. A livestock watering device for use in a continuously circulating water system for supplying livestock with fresh water upon demand by the livestock, said watering device comprising, in combination, means defining a drinking chamber into which water may be selectively discharged from said circulating system and to which an animal has access for drinking the water discharged into said chamber, chamber means for continuously circulating the water from said circulating system around the periphery of said drinking chamber to effect heat transfer from the circulating water to any water in said chamber, to prevent freezing of the water in said drinking chamber in winter and to cool the water in the drinking chamber in the summer, a valve normally biased into a closed position located between said drinking chamber and said chamber means and adapted to be selectively operated by an animal for supplying water into said drinking chamber, and a paddle for actuating said valve positioned in said drinking chamber.

3,049,095
ERASER HOLDER
Malcolm G. Murray, 737 Clover Ave., Ellwood City, Pa.
Filed Feb. 24, 1961, Ser. No. 91,347
12 Claims. (Cl. 120—40)



1. An eraser holder comprising in combination a housing containing an entrance channel and an exit channel each adapted to slidably receive an elongated eraser and between the two channels an opening extending transversely to said housing, a roller mounted on said housing and positioned in said opening, an elongated eraser in said channels and so mounted with respect to said roller that one surface of the eraser is approximately tangent to the periphery of the roller and another surface of the eraser projects outside of the housing for an appreciable distance opposite said open space.

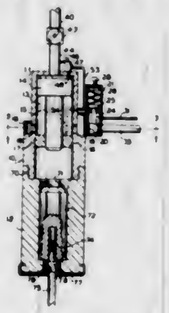
3,049,096
SHARPENER FOR PENCILS
Hugh H. Hampton, 2908 17th St., Sacramento, Calif.
Filed Aug. 3, 1959, Ser. No. 831,182
11 Claims. (Cl. 120—96)

1. Apparatus for sharpening pencils, including a tubular housing having therein a cylindrical chamber adjacent to one end portion, a pencil tip guide rotatable and axially slidable in said cylindrical chamber and having an inverted conical axial bore therethrough providing an opening at the inverted apex of the bore, a resilient cutter blade assembly mounted in the opposite end portion of the housing, said cutter blade assembly including a pair of elongated substantially U-shaped members one of which is telescoped in the other, and one of said U-shaped members being a cutter blade carrier having a pair of spring arms tensioned outward relatively and having free terminal ends adjacently spaced from the tip guide, at least one of said arms having a cutter blade at the free terminal end thereof, and means responsive to the axial



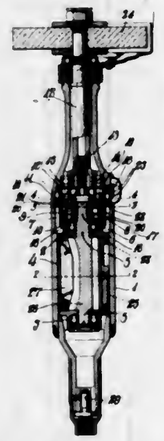
reciprocation of the tip guide for resiliently urging said free terminal ends of the arms toward each other adjacently to the said opening of the conical bore of the tip guide whereby the lead point of a pencil extending through the said inverted opening of the tip guide may be engaged between said free terminal ends and the cutter blade carried thereby.

3,049,097
HYDRAULIC PNEUMATIC DRIVING TOOL
John Knox Kershaw, 140½ Stockton St., Jacksonville, Fla.
Filed Sept. 29, 1959, Ser. No. 843,095
11 Claims. (Cl. 121—23)



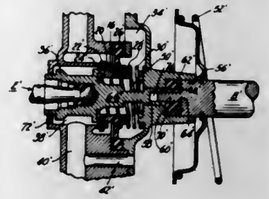
1. An impact driving tool comprising a casing having a chamber and port means at one end communicating with said chamber, a piston within said chamber, means connected to the other end of said casing and communicating with said chamber for introducing gas under pressure against one side of said piston, a manifold connected to said casing and communicating with said port means, valve means connected to said manifold means, a high pressure liquid supply conduit connected to said valve means for introducing when said valve means is in one position, liquid under pressure through said valve means into said manifold and thence through said port means and into said chamber to act against the other side of said piston for moving said piston in one direction against the pressure exerted by said gas, a liquid return conduit connected to said valve means for rapidly releasing said fluid from acting against said other side of said piston when said valve means is in another position to permit said gas to urge said piston in the other direction, means actuated by the position of said piston for actuating said valve means to impart continuous reciprocating motion to said piston by the successive introducing into and releasing of liquid from said chamber and momentum transfer means for transferring the momentum of movement of said piston in said other direction to an object of work as an impact.

3,049,098
ROTATING SPEED ADJUSTING DEVICE
Katashi Inoue, 738 Moto-Machi-1-Chome, Naniwa-ku, Osaka City, Japan
Filed Nov. 27, 1959, Ser. No. 855,573
Claims priority, application Japan Dec. 16, 1958
3 Claims. (Cl. 121—33)



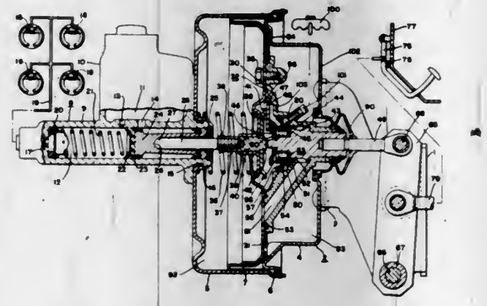
1. A device for adjusting the rotational speed of a rotating tool or the like mounted on a shaft and driven by an air driving means, said device comprising a spur gear driven by said air driving means, a coupling around said gear and having an internal gear meshing with said spur gear and a helical gear on the outside thereof, a hollow shaft end around said coupling and connected to the shaft on which the tool is mounted and having an internal helical gear meshing with the helical gear on said coupling, spring means engaged with said coupling urging it away from the shaft on which said tool is mounted, a cylindrical exhaust valve member on said coupling, said exhaust valve member having at least one air exhaust conduit along a portion of the length of the outer surface thereof, a housing around said exhaust valve member and having a cylindrical inner wall within which said exhaust valve member slides, said housing having an inlet chamber therein into which air from the air driving means is vented and having an outlet chamber vented to the atmosphere, said cylindrical wall having apertures therein opening out of said inlet chamber and with which said exhaust conduit along said exhaust valve member is aligned, and said cylindrical wall having at least a first further aperture and at least one second further aperture therein opening into said exhaust chamber and with which said exhaust conduit is aligned, said second further aperture being spaced from said first further aperture and normally being out of communication with said exhaust conduit, whereby when a load is applied to the tool and the rotational speed thereof decreases, said coupling is moved toward said hollow shaft and said exhaust valve member moves to bring said exhaust conduit and said second further aperature into register to permit more air to pass through said air driving means.

3,049,099
REACTION PRODUCING STRUCTURE
Earl R. Price, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 30, 1959, Ser. No. 824,069
6 Claims. (Cl. 121—41)



1. In a reaction producing device: a body structure having large and small diameter axially aligned chambers with a shoulder at their juncture, an annular block of rubber-like deformable material in said large diameter chamber adjacent said shoulder, said annular block having a generally axially extending central opening therein, a force transmitting member closing off said large diameter chamber for abutting said annular block, a reaction member closing off said small diameter chamber and having an end face for abutting said deformable material, the end face of one of said members having an axially extending projection extending at least part way through the central opening of said annular block for transmitting abutment force to the other of said members.

3,049,100
BRAKE BOOSTER
Richard C. Rike, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,691
1 Claim. (Cl. 121—41)



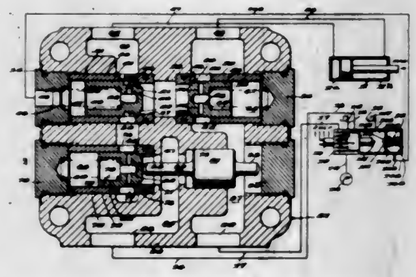
In a device of the character described comprising in combination, a brake booster unit including, a housing means, a power wall comprising a rigid portion of substantially smaller diameter than the inner periphery of the housing means, a diaphragm sealed on its inner periphery by said rigid portion of said power wall, an outer periphery of said diaphragm sealed by said housing means, a cylindrical member mounted concentrically on the forward end of said housing means, a mating annular member received within said cylindrical member maintaining axial alignment with said cylindrical member, a central support portion extending forwardly from said power wall, a hemispherical head on the forward said end of said forward extending portion of said power wall, a central opening extending forwardly from the rearward end of said mating annular member, a hemispherical socket in said opening receiving said head of said forwardly extending portion of said power wall, a central rearwardly extending means from said power wall, said central rear-

wardly extending means pivotally connected to a lever, a support means supporting said housing means, said lever pivotally supported on said support means, means for pivoting said lever on said support means thereby moving the rearward end of said power wall in an arcuate manner and pivoting of the forward end of said power wall when said booster unit is operated.

3,049,101
HYDRAULIC MECHANISM

Charles A. L. Ruhl, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey

Filed Apr. 3, 1961, Ser. No. 100,257
3 Claims. (Cl. 121—46.5)

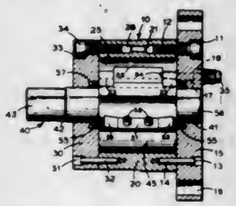


1. In combination, a double-acting differential area piston motor; a four-position control valve including a housing provided with first and second motor ports and a movable control element having "hold" and "float" positions; a first conduit connecting said first motor port with the piston end of said piston motor; a second conduit connecting said second motor port with the rod end of said piston motor; a transverse conduit connecting said first and second conduits; a check valve in that portion of said first conduit between said transverse conduit and said first motor port and arranged to prevent fluid flow from said piston end to said first motor port; pressure-responsive means for opening said check valve when the pressure in said second conduit is greater than the pressure in that portion of said first conduit between the check valve and said first motor port; auxiliary valve means normally closing said transverse conduit; and means responsive to the position of said control element for opening said auxiliary valve means when said control element is in its "float" position.

3,049,102
ROTARY ACTUATOR

Frederick Reimer, Wantagh, and George Hirschberger, Syosset, N.Y., assignors to Parameters, Inc., New Hyde Park, N.Y., a corporation

Filed Mar. 5, 1959, Ser. No. 797,510
2 Claims. (Cl. 121—97)

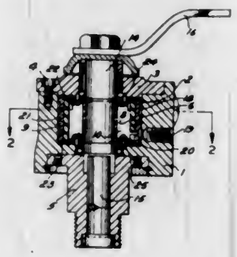


1. A pressure fluid operated rotary actuator, for direct drive of a positionable component, comprising, in combination, a substantially cylindrical housing having coaxially apertured end walls; a shaft rotatably mounted in said end walls and projecting outwardly of at least one end wall for direct securement of a positionable component thereto; a radially extending vane, having a truncated sector shape radial section, secured to said shaft within said housing; said vane having an axial length substantially equal to the distance between said end walls and an outer radius substantially equal to the radius of the inner cylindrical surface of said housing; a radially extending stop, having a truncated sector shape radial section, secured to project inwardly from such inner cylindrical surface, said stop having an axial length substantially equal to the distance between said end walls and a radial extent substantially equal to that of said vane; means for introducing fluid under pressure between a selected one of the radial edges of said stop and radial edge of said vane; said vane extending from a tubular sleeve, telescopically secured on said shaft and having an axial length substantially equal to the distance between said end walls; means forming a fluid tight seal between the ends of said sleeve and said end walls; each radial edge of said stop having an elongated recess therein less than the axial length of the stop, the inner surface of each recess lying in a plane substantially parallel to a radial plane of said shaft and the side surfaces of each recess lying in planes perpendicular to the axis of said shaft; said fluid introducing means comprising a pair of substantially rectilinear passages each extending longitudinally through one end wall, substantially parallel to the shaft axis, and through the substantially rectangular abutments defining one end of each recess.

3,049,103
PRESSURE ACTUATED VALVE CONTROL

Robert P. Dumm, Long Beach, Calif., assignor to Pacific Valves, Inc., Long Beach, Calif., a corporation of California

Filed May 1, 1961, Ser. No. 106,675
3 Claims. (Cl. 121—99)

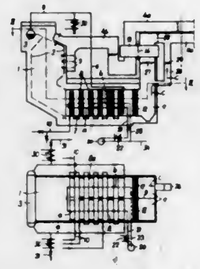


1. A pressure actuated valve control comprising a body, said body having a cavity formed therein, a cylinder nonrotatably mounted in said cavity, said cylinder comprising an outer metallic sleeve and an inner nonmetallic shell bonded to said sleeve; an impeller formed of nonmetallic material rotatably mounted in said shell, an actuating shaft extending into the body and into said cylinder, said impeller being fixedly attached to the actuating shaft, a pair of inwardly extending walls projecting from the shell, the innermost faces of said walls slidably engaging the central portion of said impeller, said cylinder having a pair of chambers therein, one on each side of said walls, said outer sleeve having a pair of annular grooves formed in the outer face thereof, an O-ring in the sleeve arranged between said grooves, and a pair of pneumatic intake ports in the body, one port extending into each of said annular grooves and into each of the chambers.

3,049,104
STEAM GENERATING AND SUPERHEATING UNITS

Uno O. Blomquist, Edmansgatan 5, Vasteras, Sweden

Filed June 6, 1958, Ser. No. 740,455
Claims priority, application Sweden June 18, 1957
1 Claim. (Cl. 122—1)



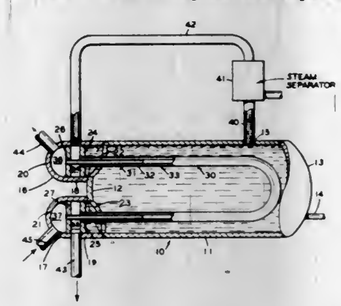
In a high temperature and high pressure steam generating and superheating system, in combination, a steam generator, a superheater, steam conduit means having a connection with said generator with said superheater; means for preventing precipitation of condensate in the superheater during stand-still periods and maintaining said superheater in condition of readiness, said means comprising water-condensing and collecting means connected in said steam conduit means between said generator and said superheater, means for removing water collected by said water-condensing and collecting means; said superheater having a gas passage, a partition wall in said superheater extending from one end of said superheater toward but not as far as the other end thereof, said superheater having two parallel banks of steam conduits located respectively on opposite sides of said partition, said connection of said steam conduit means with said superheater comprising connections with said banks of steam conduits, a gas conduit connected with said superheater gas passage toward the end thereof from which said partition extends, a return gas conduit connected with said superheater gas passage toward the same end as said first-mentioned gas conduit on the opposite side of said partition, said return gas conduit being connected with said first-mentioned gas conduit, thereby forming, with said superheater gas passage, a circuit for recirculation of gas, means in said first-mentioned gas conduit for introducing a stream of gas into said gas passage, means within said first-mentioned gas conduit for heating the introduced gas stream sufficiently to impart to the superheater a temperature above the temperature of saturation of the steam generator.

3,049,105
METHOD AND APPARATUS FOR GENERATING AND SUPERHEATING VAPOR

Stoddard S. Waldron, Lynchburg, Va., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 2, 1957, Ser. No. 700,072
5 Claims. (Cl. 122—483)

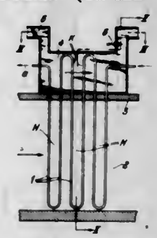
1. A vapor generating and superheating unit comprising a pressure vessel containing a vaporizable fluid, wall means forming a plurality of separate nozzles opening to and disposed exteriorly of said vessel, partitions dividing each of said nozzles into a heated liquid metal space and a vapor space, an inner tube having a portion thereof located within said vessel for the flow therethrough of a heated liquid metal and having its ends opening to said heated liquid metal spaces, an outer tube concentrically arranged about said inner tube to form an annular flow space therebetween and having its ends opening to said vapor spaces, said outer tube submerged in said vaporizable fluid throughout its length within said pressure vessel, means for passing fluid vaporized in said vessel to one of said vapor spaces for the flow of vaporized fluid through said outer tube in interposed and separating relationship to transfer heat from the heated liquid metal to the fluid to be vaporized within said vessel while superheating the vaporized fluid for subsequent delivery to a point of use.



3,049,106
SUPERHEAT TEMPERATURE CONTROLLING STEAM SUPERHEATER

Wolfgang Kalide, Neuss (Rhine), Germany, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland, a corporation of Switzerland

Filed July 28, 1958, Ser. No. 751,499
Claims priority, application Germany Aug. 3, 1957
3 Claims. (Cl. 122—459)



1. A steam generator comprising a first duct conducting hot combustion gas, a second duct juxtaposed and adjacent to said first duct and conducting a coolant, and a final steam superheater through which the steam flows last prior to being discharged from the steam generator, said final superheater including a plurality of individual superheater tubes, said tubes being disposed in heat exchange relation to said first and second ducts to conduct steam through parallel flow paths last prior to being discharged from the steam generator, each of said tubes having a plurality of first portions located within said first duct for heating by the combustion gas flowing through said first duct, each of said tubes having a plurality of second portions interposed between said first portions with respect to the flow of steam through said tubes and located within said second duct to be cooled by the coolant flowing through said second duct, said portions of each of said tubes being connected in series relation, and means for controling coolant flow through said second duct.

3,049,107
LIGHT HEAT EXCHANGERS FOR USE IN NUCLEAR ENERGY INSTALLATIONS

André Huet, 48 Ave. du President Wilson, Paris, France

Filed Dec. 9, 1957, Ser. No. 701,507
Claims priority, application France Dec. 13, 1956
4 Claims. (Cl. 122—510)

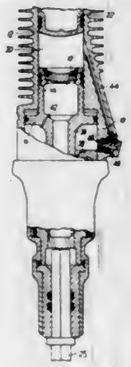
1. A heat exchanger particularly adapted for nuclear energy installations, comprising, in combination, a cylin-

drical vertical elongated duct-jacket having a length substantially greater than its diameter and adapted to be traversed from one end to the other by hot fluid coming from a nuclear reactor, a plurality of vertically-spaced heat-exchange assemblies disposed interiorly of said duct-jacket and adapted to receive a second fluid flowing in at the bottom of the lowermost of said assemblies and flowing out at the top of the uppermost of said assemblies, said fluid being adapted to absorb the heat of the inflowing hot fluid, each of said assemblies consisting of a plurality of different heat-exchange elements, conduit means interconnecting said plurality of elements for continuous flow



of fluid therethrough, first suspending means connecting together by suspension said plurality of elements independently of said conduits, said elements being mutually suspended from each other, and second means for suspending the uppermost element from the upper portion of the duct-jacket, said first suspending means lying along the longitudinal axis of said duct-jacket and the longitudinal axis of symmetry of each of said elements substantially coinciding with said duct-jacket axis, said plurality of inter-suspended assemblies receiving suspension from said duct-jacket only at the uppermost portion thereof.

3,049,108
CLEANING DEVICE FOR GAS PASSAGES IN PERCUSSION MACHINES
Gustav Albert Bergman, Baldersvagen 20, Danderyd, Sweden
Filed Mar. 9, 1961, Ser. No. 94,505
Claims priority, application Sweden Mar. 21, 1960
4 Claims. (Cl. 123—7)



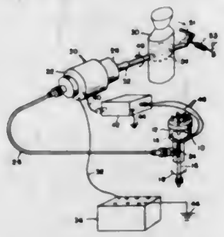
1. In a combustion engine driven percussion machine a cleaning device for a downwardly directed passage passed by combustion gases, comprising a rod having one end enlarged and strengthened and being loosely arranged in the passage, said rod being adapted to be maintained in movement in said passage during the operation of the engine as a result of the shaking of the machine during its operation.

3,049,109
FREE PISTON ENGINES
Friedrich Schley, Villa Lehmann, Herzogenaurach, near Nurnberg, Germany
Filed Sept. 28, 1959, Ser. No. 842,909
9 Claims. (Cl. 123—7)



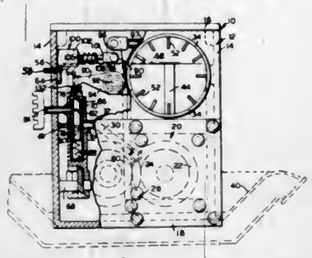
1. A free piston expansible chamber motor having a piston, first and second spring means, said piston being reciprocable freely in one direction against the action of said first spring means and in the opposite direction against the action of said second spring means, characterized in that said first and second spring means act in the to-and-fro directions respectively to limit the upper and lower movements of the piston, and to vibrate the piston in inoperative position between its upper and lower positions upon lack of the expanding medium.

3,049,110
ELECTRIC SPEED GOVERNOR
Fred S. Kerr, Oak Park, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Sept. 29, 1958, Ser. No. 764,144
10 Claims. (Cl. 123—102)



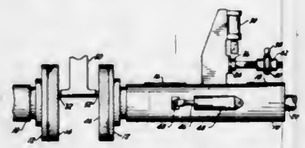
1. In combination with an engine having throttle means biased toward the open position, rotatable means operable to bias said throttle means toward a closed position on being coupled to said throttle means, and means for coupling said rotatable means to said throttle means only at a predetermined engine speed with a variable force the initial value of which is substantial and is determined by the particular predetermined engine speed.

3,049,111
FUEL DISTRIBUTION SYSTEM FOR INTERNAL COMBUSTION ENGINES
Frank Bogle, 3365 Peachtree Road, Atlanta, Ga.
Filed Sept. 2, 1958, Ser. No. 758,183
11 Claims. (Cl. 123—119)



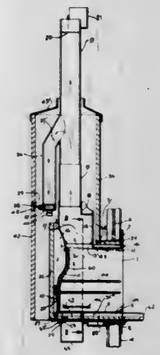
1. In a fuel distribution system for an internal combustion engine wherein there are a number of cylinders with individual fuel delivery ports associated therewith, a central fuel metering and control unit having an air intake therein connected with said fuel delivery ports, means in said air intake responsive to the movement of air to change position therein, a fuel metering element on said central fuel metering unit having a fuel inlet therein, a fuel outlet associated with said metering unit for delivering fuel to said engine delivery ports, fuel control means in said metering element controlling the amount of fuel delivered to said fuel outlet, and control means on said metering and control unit operable by said means in said air intake to control said fuel control means in said metering unit in response to the change of air in said air intake, a balancing unit with said metering unit, a balancing valve in said balancing unit and connected in one position thereof with the vacuum from said engine to unbalance said metering unit pressure, said valve being operable to the outside pressure in another position thereof to continue said imbalance when said vacuum approaches ineffectiveness, and said suction from said engine continuing to unbalance the pressure.

3,049,112
GRINDER CONTROL MEANS
James D. Busey, South Beloit, Ill., assignor to Besly-Welles Corporation, South Beloit, Ill., a corporation of Illinois
Filed June 6, 1960, Ser. No. 34,092
8 Claims. (Cl. 125—11)



1. A method of dressing a pair of coaxially disposed grinding wheels having abrasive grinding faces and positioned to move coaxially between a grinding position and a dressing position including the steps of moving said wheels coaxially in opposite directions to said dressing position, moving each of said wheels an incremental distance in the opposite direction, dressing said abrasive grinding faces, while holding them axially stationary, by passing a dresser first from the outside of the wheels to the center, and then from the center to the outside and then repeating the successive steps of incrementally moving said grinding wheels back towards grinding position and dressing said abrasive faces for a predetermined number of said cycles, thereafter performing additional dressing operations on said abrasive grinding faces.

3,049,113
FIREPLACE
John V. Northwood and John W. Rosher, Lee's Summit, Mo.; said Northwood assignor to Sadie Miriam Northwood, Lee's Summit, Mo.
Filed Apr. 18, 1960, Ser. No. 22,832
1 Claim. (Cl. 126—120)

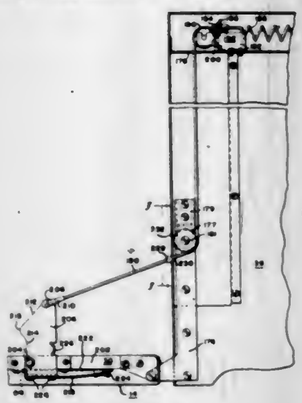


A solid fuel burning fireplace structure having a forward portion and a rear portion and adapted to be mounted in a building having a window opening therein for receiving said structure, said structure comprising side walls and a bottom plate and a back wall and a top wall all of sheet metal and forming a fire box, said top wall being spaced from said back wall and forming therewith a draft opening in the rear portion of said fire box, a chimney communicating with said fire box through the draft opening and extending upwardly therefrom, a booster pipe spaced from said chimney and extending substantially parallel therewith, said booster pipe at the upper end hereof communicating with said chimney, a motor driven fan secured to the lower end of said booster pipe and communicating therewith, said fan having an exhaust opening therein, said fan being adapted to pull air and combustion gases from said fire box through said chimney and booster pipe and exhaust same through said exhaust opening, a false chimney having an upper portion and a lower portion and walls surrounding said chimney and booster pipe, said false chimney walls being spaced outwardly from said back wall and side walls of said fire box forming passageways therebetween, said false chimney having an opening adapted to be outside of the building at said upper portion and said lower portion thereof and communicating with said passageways, a bracket adapted to support said fireplace structure in the window opening adjacent said forward portion of said structure with said rear portion adapted to extend out of the building whereby outside air is permitted to freely flow upwardly into said lower false chimney opening and out said upper false chimney opening to cool said fire box walls and booster pipe and chimney.

3,049,114
OVEN DOOR MOUNTING MEANS
Leonard L. Carnahan, Millard E. Fry, and George C. Pearce, Dayton, and Jesse L. Evans, Tipp City, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Dec. 9, 1957, Ser. No. 701,395. Divided and this application Mar. 14, 1960, Ser. No. 14,681
3 Claims. (Cl. 126—191)

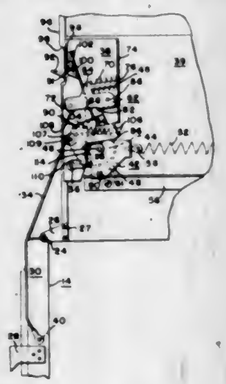
1. In combination, a frame defining an oven compartment having a peripheral front wall, said front wall having an oblong opening, a door for closing said oven compartment, means for unobstructingly supporting said door for pivotal movement between an upstanding vertically closed

position, a partly open broil position, a generally horizontal support position and a depending generally vertical open position, a support bracket connected to said frame, a catch roller pivotally fixed on said bracket, a latch plate having a hump portion pivotally mounted to said door in juxtaposition to said catch roller when said door is in said closed position and said broil position, said hump portion having a door closed surface on one side of said hump and a broil stop cam surface on the other side of said hump, and spring means having one end connected to



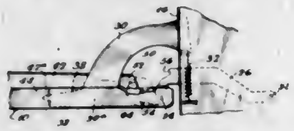
said door and the other end to said latch plate in closer proximity to said door closed surface than said cam surface for biasing said door closed surface into engagement with said catch roller when said door is in said closed position and for biasing said broil stop cam surface into engagement with said catch roller when said door is in said broil position and a retractable flexible bond guided by said catch roller and having one end connected to said latch plate in closer proximity to said cam surface than said door closed surface and having its other end resiliently connected to said frame.

3,049,115
OVEN DOOR MOUNTING MEANS
Leonard L. Carnahan, Millard E. Fry, and George C. Pearce, Dayton, and Jesse L. Evans, Tipp City, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 9, 1957, Ser. No. 701,395
12 Claims. (Cl. 126—191)



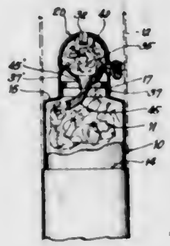
2. In combination, an oven having a frame; a door on said frame; a striker on said door; means for supporting said door for pivotal movement throughout substantially 180° including a flexible bond connected to said door and carrying an enlarged portion; means for selectively latching said door comprising a support plate, a spring biased keeper pivotally mounted on said plate for engaging said striker in a first position to close said door and in a second position to hold said door slightly open, a stop bracket pivotally mounted on said plate for cooperating with said enlarged portion to limit the pivotal movement of said door at a third position, and a release lever connected to said stop bracket to prevent said bracket from cooperating with said enlarged portion thereby to release said door for pivotal movement beyond said third position; said stop bracket having a portion in the path of said striker when said door is closed, thereby to adapt said stop bracket for automatic return to a cooperating relationship with said enlarged portion.

3,049,116
REMOVABLE OVEN DROP DOOR
Earl D. Hillebrand, Kankakee, Ill., assignor to Geo. D. Roper Corporation
Filed Jan. 31, 1956, Ser. No. 562,418
2 Claims. (Cl. 126—194)



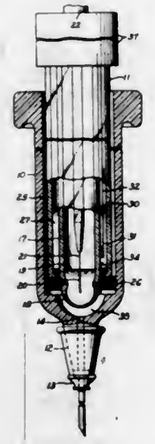
1. In a range, the combination comprising a frame defining an opening for an oven or the like, a door for normally closing said opening and having an elongated slot adjacent its edge, a bracket secured to said frame and extending outwardly therefrom, horizontal pivot means disposed on the outward portion of said bracket, a door supporting member extensibly connected at one end to the frame and pivoted at the other end to said pivot means, said door supporting member being of flat, elongated construction arranged for movement through the slot in said door, said door including means releasably engageable by said supporting member and carrying stop means thereon, and means independent of said pivot means including a manually disengageable locking member mounted on said door supporting member and operative to releasably engage said stop means for locking the latter two members together while providing for disengagement thereof to permit bodily removal of the door from the range for cleaning or the like.

3,049,117
POCKET HAND WARMER AND BURNER UNIT THEREFOR
Kyozo Matoba, Nishinomiya, Japan, assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed May 5, 1961, Ser. No. 108,176
4 Claims. (Cl. 126—208)



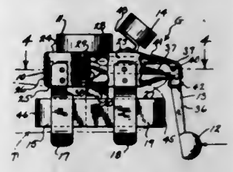
1. A pocket hand warmer comprising a hollow container serving as a fuel reservoir with an opening at the top thereof, an upstanding collar surrounding said opening, a burner unit fitting on said collar comprising a shell-like housing with catalytic material disposed therein adapted to overlie said opening, said housing having a substantially continuous wall open at its top and with an open bottom surrounded by a depending flange for frictionally embracing said upstanding collar, a wick extending transversely through said wall with a portion exposed on the outside thereof, a sparker mounted on said container in proximity to the exposed end of said wick on the outside of said housing so as to be ignitable thereby, another portion of said wick being mounted in said housing adjacent to said catalytic material with the free end of said wick extending into the fuel reservoir of said hollow container.

3,049,118
ION ELECTRODE ASSEMBLY
Edwin P. Arthur and John E. Leonard, Fullerton, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Feb. 3, 1961, Ser. No. 86,887
5 Claims. (Cl. 128—2)



1. In an electrode assembly for measuring ion potential in small samples of blood or the like, the combination of:
an elongate syringe body adapted to receive a hypodermic needle at one end;
and a piston axially slidable in said body for drawing a sample into the body through the needle, said piston including:
a tubular case;
an indicating electrode having an ion sensitive end;
a first conductor for connecting said indicating electrode to a measuring circuit;
seal means for sealingly supporting said indicating electrode within said case along the axis thereof to provide an electrolyte space, with said ion sensitive end adjacent an end of said case and exposed to the needle end of said body;
a liquid junction providing ionic communication between said electrolyte space and the exterior of said piston adjacent said sensitive end;
a reference electrode comprising an electrolyte in said electrolyte space, a half cell contacting said electrolyte, and a second conductor for connecting said half cell to the measuring circuit;
and a cable projecting axially from the other end of said tubular case and containing said first and second conductors.

3,049,119
SUBLUXATION GAUGE FOR CHIROPRACTIC USE
Irwing N. Toftness, Cumberland, Wis.
Filed Aug. 15, 1960, Ser. No. 49,724
2 Claims. (Cl. 128—69)



1. An instrument adapted to be held on the thumb of the hand for indicating force and pressure applied to a surface as well as indicating the angle of application comprising, a substantially rectangular-shaped longitudinally extending body having top, bottom, side and end walls, said body having a substantially hollow interior, an indicating needle dial mechanism mounted on said top wall, a depending worm shaft extending into said hollow interior and mounted for rotation with respect to said body, said worm shaft being in operative connection with said indicating needle, a depending probe pivotedly secured to the forward end of said body, an inwardly extending leg secured at one end to said probe, gear teeth on the other end of said leg operatively connected to said worm shaft, whereby pressure on said probe in one direction will cause said needle to move across said dial, a wire spring mounted on said probe and said body exerting force on said probe in a direction opposite of said pressure force, a pair of rigid spaced plates secured to one side of said body, said plates conforming to the shape of the outside of the thumb and adapted to receive the thumb joint therebetween, a longitudinally extending plate conforming to the shape of the inside of the thumb, a depending spring clamp secured to said body and to said longitudinally extending plate on the side opposite from rigid depending plates, and a level mounted at a known angle to the upper wall of said body adjacent said needle dial mechanism.

3,049,120
TOE STRAIGHTENING DEVICE
Edith Marcus, New York, N.Y.
(P.O. Box 202, Santa Monica, Calif.)
Filed Sept. 24, 1959, Ser. No. 841,989
11 Claims. (Cl. 128—81)

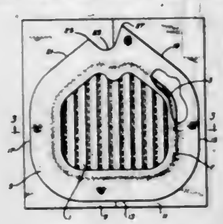


1. A toe straightener comprising a rigid ring having an outwardly flared end, said ring being of a size to fit loosely about the first phalanx of the great toe with the flared end thereof supported by the flaring inner rim end of said phalanx and closely but closely embracing the main body portion of the great toe, and fastening means engageable with the foot and effective to hold said ring seated against the flaring rim at the inner end of said first phalanx with the axis of the latter shifted laterally into general alignment with the axis of the metatarsal bone without subjecting the main body of the great toe to longitudinal pressure.

3,049,121
ORONASAL MASK

Richard S. Brumfield, Edgewood, Ella Bickley Dwaayer, Magnolia, Frank Shanty, Baltimore, and Charles J. Shoemaker, Towson, Md., assignors to the United States of America as represented by the Secretary of the Army

Filed Jan. 20, 1959, Ser. No. 788,025
5 Claims. (Cl. 128—146)
(Granted under Title 35, U.S. Code (1952), sec. 266)

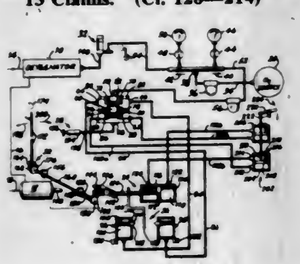


1. An oronasal mask comprising a flat sheet of pleated filter material, stitching about the outer periphery of said pleated filter material for maintaining said pleats in an overlapping relationship, adhesive tape provided with a central opening adhesively secured to said pleated filter material at its outer periphery and having a remaining portion clear of said filter material so that it may be adhesively secured to the face of the wearer.

3,049,122
EXTRACORPOREAL BLOOD CIRCULATION SYSTEM AND A SAFETY FEATURE THEREFOR

Hazen F. Everett, Hillsdale, N.J., assignor to The Foregger Company, Inc., Roslyn Heights, N.Y.

Filed Nov. 3, 1959, Ser. No. 850,720
13 Claims. (Cl. 128—214)



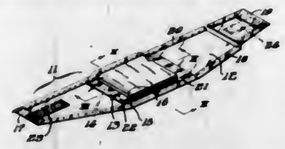
1. An extracorporeal blood circulation system comprising an oxygenator adapted to oxygenate the blood, ventricle means coupled to said oxygenator to receive blood therefrom and simulate a pulse, a drive coupled to and actuating said ventricle means, a power source coupled to said drive for operation of the latter, and an auxiliary manually-operated means selectively connectable to said drive to substitute for said power source in the event of failure of the latter.

3,049,123
COLOSTOMY BELTS

Florence T. McCloskey, 7126 Germantown Ave., Philadelphia, Pa.

Filed Feb. 11, 1960, Ser. No. 8,054
4 Claims. (Cl. 128—283)

1. A fully disposable colostomy belt comprising
(1) a one-piece elongated flexible body circling member having complementary fastening means at each end thereof,
(2) a sanitary absorbent member integrally affixed to said body circling member medially of the ends thereof, and covering a minor portion thereof, said absorbent member having an internal pocket formed therein,
(3) a flexible liquid impermeable sheet disposed within the pocket of said absorbent member whereby mis-



alignment of said sheet with respect to said absorbent member is prevented,
whereby in the applied position said minor covered portion of the body circling member, said absorbent member and said impermeable sheet form an integral colostomy protector.

3,049,124
DISPOSABLE DIAPER AND RUBBER PANTY

Olive Thompson, 1261 Stanton St., Sharon, Pa.

Filed Sept. 20, 1960, Ser. No. 57,269
1 Claim. (Cl. 128—287)

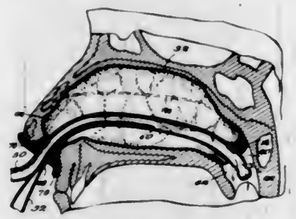


A refillable diaper comprising, in combination, an outer cover having tie means for securing the diaper to the body of a wearer, a disposable filler to be connected to the cover, the cover and filler each having an absorbent inner layer and a water impervious outer layer, a plurality of fastener members connected to the inner absorbent layer of the cover, and a plurality of fastener members connected to the outer water impervious layer of the filler releasably engaging the fastener elements of the inner cover layer to releasably connect the filler to the cover.

3,049,125
NOSE PACKING DEVICE

George Kriwkowitsch, 933 W. 59th St., Chicago, Ill.

Filed Mar. 28, 1960, Ser. No. 18,040
2 Claims. (Cl. 128—325)

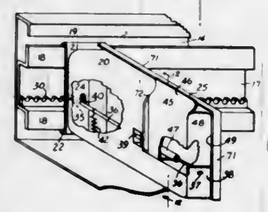


1. A nose pack device adapted to be inserted into a nasal cavity and thereafter expanded for halting nasal hemorrhaging comprising, an expansible bag having first and second transverse end walls, the second transverse end wall adapted to be located within the nasal cavity, a single flexible tube extending entirely through the bag and having an extension protruding past said second end wall, said tube being divided into a pair of conduit portions each having a passageway therethrough, the passageway of one conduit portion having a discharge end in the interior of the bag and an inlet end exterior of the first end wall for introducing a fluid to expand the bag in the nasal cavity, the passageway of the second conduit portion having an inlet exterior of said first end wall and an outlet exterior of the second end wall and formed in said extension, the second end wall being thickened simultaneously to support said extension spaced from the walls of the nasal cavity and seal the interior of the nasal cavity whereby respiratory activity is permitted only through the second conduit portion in the expanded condition of the device in said nasal cavity, said flexible tube having a multi-branched end portion exterior of the first end wall, one branch being a part of said first conduit portion and the second branch being a part of the second conduit portion, said one branch comprising the inlet end of the first conduit portion and the second branch comprising the inlet end of the second conduit portion.

3,049,126
CARD FILE TRAY AND COMPRESSOR

Raymond L. Myers, Vestal, N.Y., assignor to Ray Myers Corporation, Endicott, N.Y., a corporation of New York

Continuation of application Ser. No. 617,176, Oct. 19, 1956. This application Aug. 17, 1959, Ser. No. 837,314
2 Claims. (Cl. 129—28)

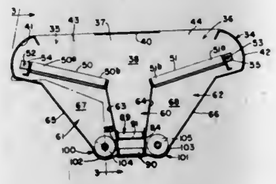


1. A card file tray comprising rigidly connected walls forming a substantially smooth bottom, two opposed front and rear end walls, a high side wall having a height substantially that of the end walls for supporting cards thereon, a low side wall opposed to and materially lower than said high side wall which is high enough to engage the lower side edges of the cards and hold them against an accidental lateral movement and to support cards thereon in an angularly raised and laterally displaced position but which provides for ready lateral access to and removal of the cards in the tray, whereby the tray is substantially open opposite to the high side wall, said walls providing a space for cards having their horizontal edges mounted on the bottom and arranged for removal of the cards both vertically and laterally relative to the bottom, a horizontal U-shaped compressor track secured at its medial web portion to the high side wall and having arms projecting inwardly of the inner side of the said high wall, said arms terminating in laterally extending oppositely directed flanges parallel to and spaced inwardly from the high side wall and having their exposed faces lying in a plane, said high side wall having a narrow continuous flange projecting inwardly and downwardly over the bottom, and the innermost portions of said side wall flange and the outer faces of the track flanges lying in a common plane for supporting cards edgewise thereagainst and out of edge contact with the side wall, a vertical substantially U-shaped slide movably mounted to interfit with and slide horizontally on the flanges of the track and suspended therefrom, a standard rigidly mounted at one end only on said slide and supported as a cantilever above the tray bottom, a compressor plate having a vertical card engaging face substantially perpendicular to said track flanges, said plate being supported only by said standard and overhanging the tray bottom throughout substantially the horizontal width thereof, the inner face of the front end wall and said compressor plate face being substantially parallel and arranged to compress cards therebetween, a horizontal locking rack separate from the compressor track which is mounted on the high side wall, and a lock on the standard which releasably engages said locking rack for securing the compressor plate rigidly in a card compressing position when the lock is held fixed by said locking rack.

3,049,127
CORN HUSKER

Howard C. Hadley, Des Moines, Iowa, assignor, by mesne assignments, to Deere & Company, Moline, Ill., a corporation of Delaware

Continuation of application Ser. No. 683,302, Sept. 11, 1957. This application Nov. 19, 1959, Ser. No. 854,199
6 Claims. (Cl. 130—5)



1. A corn husking unit including a pair of elongated husking mechanisms alined longitudinally and operative to remove husks from corn ears, each of the husking mechanisms having respective discharge ends in proximate and spacial relation to the discharge end of the other husking mechanism, and each of the husking mechanisms being operative to feed the ears to its discharge end; a corn elevator transverse to the husking mechanism and positioned beneath the discharge ends for receiving ears from the husking mechanisms and including therein an elongated elevator housing structure with a corn discharge end spaced from the husking mechanisms; a pair of conveyor housings transverse to the husking mechanisms rigid with and positioned alongside and on opposite sides respectively of the elevator housing structure and having discharge outlets remote from the husking mechanisms and terminating short of the elevator discharge end; conveyor means within the conveyor housings operative to move material transversely relative to the husking mechanisms; and hopper means beneath each of the respective pair of husking mechanisms receiving husks from the husking mechanisms and feeding them to the respective conveyor means.

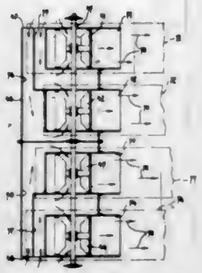
3,049,128
STRAW WALKERS HAVING INCLINED PLATES

Alexander Hing Mark, Livonia, Mich., and Jerzy M. Brzustowski, Toronto, Ontario, and Joseph Coleman, Downsview, Ontario, Canada, assignors to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland

Filed June 5, 1959, Ser. No. 818,402
4 Claims. (Cl. 130—26)

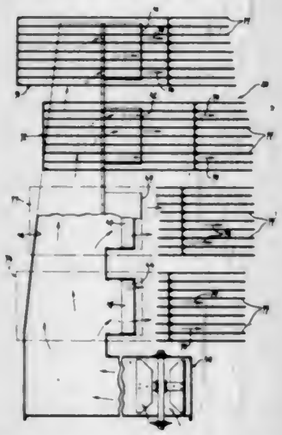
3. In a combine having means for threshing harvested grain and throwing it generally horizontally after threshing, a straw walker for receiving the thrown grain comprising, in combination, an elongated, oscillatable frame disposed in the path of the grain thrown from the threshing means, a series of inclined plates secured transversely along the top of said frame, an adjacent group of said plates being generally parallel to one another and inclined with respect to said horizontal direction so as to deflect impinging grain kernels downwardly between ad-

jacent plates, and the remaining plates on said frame being angled to face the thrown material as it is thrown in said



horizontal direction so as to ride the straw and trash portions of the harvested material along the top of said frame.

3,049,129
STRAW WALKERS HAVING CLOSELY SPACED SAW-TOOTHED PLATES
Alexander Hing Mark, Livonia, Mich., and Geoffrey F. Cooper, Toronto, Ontario, and Joseph Coleman, Downsview, Ontario, Canada, assignors to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed June 8, 1959, Ser. No. 818,767
1 Claim. (Cl. 130—26)



In a combine, the combination comprising, a thresher assembly for operating on harvested material and adapted to throw the threshed material in a generally horizontal direction, a plurality of adjacent, relatively oscillatable straw walkers positioned to receive the thrown material, each of said straw walkers being formed of closely spaced, vertically disposed plates having saw-toothed upper edges running in the direction of the thrown material, a shaker shoe assembly for receiving the separated grain, an air blast generating fan assembly having discharge ducts positioned above said shaker shoe assembly and beneath said straw walkers so as to direct blasts of air upwardly through the spaced straw walker plates so as to fluff the harvested material and keep it loose and porous.

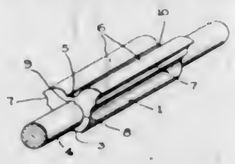
3,049,130
ARM SUPPORT
Raymond C. Fuschetti, Hingham, Mass. (107 Harrington Ave., Greenville, S.C.)
Filed Apr. 6, 1959, Ser. No. 804,308
4 Claims. (Cl. 132—1)

1. An article of manufacture for supporting the upper arms in a generally horizontal position comprising, a substantially rigid member formed with a central portion which normally rests against the rear of the neck and upon the shoulders of a person wearing said article, and end portions connected to and separated by said central portion, said end portions including a generally horizontal portion or pressing upward on the underside of said upper arms whereby generally horizontal and upward forces are applied from the back of said neck and said shoulders respectively to said central portion and trans-



mitted by said article to said end portions for imparting upward supporting forces to said upper arms, said end portions being substantially rigid and fixed with respect to said central portion, the horizontal projection of said central portion in the horizontal plane being generally U-shaped opening to the forward side of said person when wearing said article, the projections of said end portions in the horizontal plane being generally U-shaped opening to the rear side of said person when wearing said article.

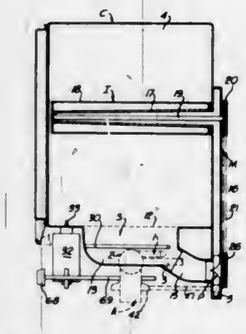
3,049,131
HEATED SLEEVE FOR HAIR CURLS
Jean Leclabart, 53 Ave. Raymond Poincare, Paris, France
Filed Mar. 18, 1960, Ser. No. 16,037
Claims priority, application France Dec. 30, 1959
2 Claims. (Cl. 132—36)



2. A heating sleeve for receiving heat from a heating bar for heating a curl of hair having an elongated single piece tubular heat absorbing, heat destructible rubber body provided with a longitudinal slot extending the length thereof opening into a substantially cylindrical surface and dividing the body two lateral portions having finger engaging projections for rotating the lateral portions away from each other about the hinge portion extending the length of the body opposite the slot comprising a cooling channel formed in and extending the length of the hinge portion of the body adjacent to and in communication with the cylindrical surface whereby, when said sleeve is mounted upon a heating bar with the cylindrical surface in engagement with the bar, cooling air will be drawn through the channel to prevent overheating of the hinge portion.

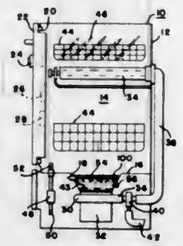
3,049,132
WASHING MACHINE
Robert John Gilson, New Malden, England, assignor to Charles Colston Limited, a corporation of the United Kingdom
Filed Apr. 4, 1958, Ser. No. 726,394
Claims priority, application Great Britain Apr. 5, 1957
13 Claims. (Cl. 134—57)

1. A washing machine comprising a washing chamber; an inlet to said washing chamber for connection with a washing liquid supply and provided with an inlet valve biased normally to its closed position to control admission of liquid to said washing chamber; a liquid discharge outlet; a valve for controlling the discharge of liquid through said outlet; a spraying device within the washing chamber; power operated means for operating the spraying device; mechanical means operative on starting the power operated means for opening the inlet valve to admit liquid to the washing chamber; a latch device for holding said mechanical means in its inlet valve opening position; means providing a first pressure chamber subjected to the static head pressure of liquid in said washing chamber; means within said first pressure chamber for maintaining a division between the washing liquid therein and another fluid entrapped within said first pressure chamber; means providing a second pressure chamber separate from and remotely situated relatively to said first pressure chamber and having a pres-



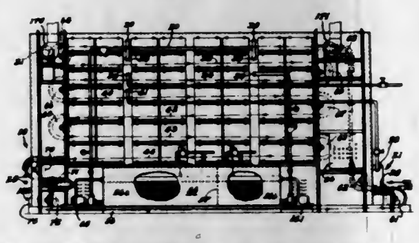
sure operable element movable in response to pressure in said second pressure chamber; a fluid pressure transmission tube connecting said first and second pressure chambers for transmitting pressure through a column of said other fluid extending from the entrapped other fluid containing divided portion of said first pressure chamber to said second pressure chamber; an actuator operable by said pressure operable element for releasing said latch device in response to attainment of a predetermined liquid level in said washing chamber and consequent predetermined static pressure of said other fluid in said first pressure chamber, said tube and said second pressure chamber; and a quick release restraining device for restraining displacement of said actuator until attainment of said predetermined static pressure, whereby to effect sudden and certain releasing of said latch device.

3,049,133
DISHWASHER
James W. Jacobs, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 31, 1959, Ser. No. 837,159
3 Claims. (Cl. 134—57)



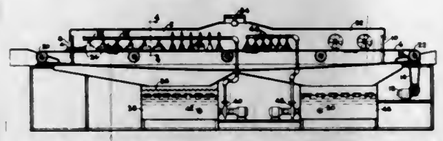
2. In combination in a washing apparatus, a casing defining a washing chamber and a fluid receptacle at the bottom of said chamber, means for supporting utensils to be washed in said chamber, means for supplying a wash fluid and a rinse fluid to said receptacle, means for distributing said fluids in said chamber in periods of wash and rinse, heating means in said receptacle below the surface of said fluids supplied, means for retaining the rinse fluid in said receptacle after said rinse period, and timer means for controlling said distributing means, said retaining means and said heating means, whereby after said rinse period said distributing means is deenergized and said heating means is energized to vaporize a portion of said retained rinse fluid to bathe said utensils extensively with the distilled condensate from said vaporized rinse fluid.

3,049,134
MULTI-FLIGHT WASHER OR DEGREASER
John B. Jacobsen and Edwin B. Christian, Bowling Green, Ky., and Earl J. McNamara, Trenton, Mich., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Sept. 27, 1961, Ser. No. 141,144
5 Claims. (Cl. 134—72)



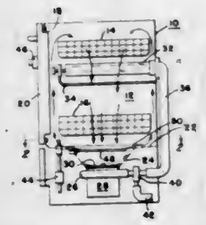
1. A multi-flight multi-stage washer-degreaser machine for cylindrical metal containers, said machine comprising: a hot spray wash section and means for supplying a hot water wash solution thereto; a hot spray rinse section and means for supplying a hot water rinse solution thereto; a cold fresh water rinse section and means for supplying cold fresh water thereto; a de-ionized water rinse section and means for supplying de-ionized water thereto; a pressure blow-off section and means for supplying cold air thereto; a hot air blow-off section and means for supplying hot air thereto; conveyor means for rolling cylindrical metal containers through the said sections of said machine in the order given, said conveyor means having a plurality of flights and a serpentine configuration as viewed in elevation; and drive means for said conveyor at a plurality of alternate flight levels, each of said drive means including a torque-limiter device.

3,049,135
EGG CLEANER
Henry Y. Kuhl and Paul R. Kuhl, both of Copper Hill-Reaville Road, Flemington, N.J.
Filed May 26, 1959, Ser. No. 815,841
2 Claims. (Cl. 134—72)



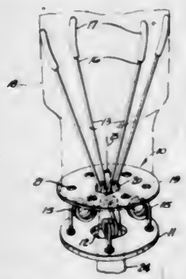
1. Egg cleaning equipment comprising a chamber, a conveyor, means for moving said conveyor longitudinally in said chamber, an egg tray separable from the conveyor and provided with spaced egg receiving recesses projecting downwardly from the tray, said conveyor having portions thereof positioned in the spaces between the downwardly projecting recesses on the trays and operable to prevent lateral displacement of the trays with respect to the conveyor during movement of the trays through said chamber, and means in said chamber for passing washing liquid into contact with eggs supported by a tray located on the conveyor.

3,049,136
DISHWASHING MACHINE
Howard E. Van Scoyk, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 21, 1960, Ser. No. 57,500
12 Claims. (Cl. 134—95)



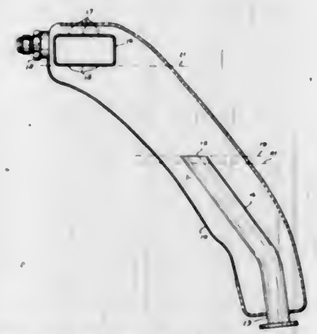
2. In combination with a casing forming a dishwashing chamber, means in said chamber for supporting dishes or the like during a dishwashing cycle including periods of washing, rinsing, steam bathing and drying, means for distributing a liquid in said chamber during said periods of washing and rinsing, means for heating in said chamber during said period of steam bathing and drying, and trough means in nested heat exchange relationship with said heating means for catching a portion of said liquid during one of said washing and rinsing periods for subsequent release in the form of distilled water vapor during said steam bathing period, said trough means being defined partially by a sloping flange overlying and extending beyond said heating means for dissipating the heat from said heating means and creating a thermal distribution of air in said chamber during said drying period.

3,049,137
CONTAINER-HOLDING DEVICE
Manny E. Cole, 110—35 72nd Road, Forest Hills, N.Y.
Filed June 26, 1959, Ser. No. 823,143
2 Claims. (Cl. 134—152)



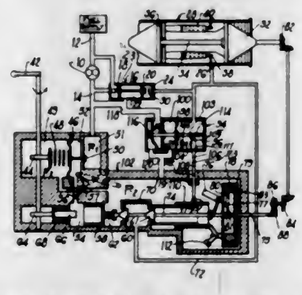
1. A device for centering a container relatively to a jet of liquid for internally washing the container, said device comprising a disc-shaped base having a central opening for the passage of said jet, a plurality of container-holding elements, each of said container-holding elements having a base portion, an elongated straight arm, a spring portion between one end of said arm and said base portion and a container-engaging portion at the other end of said arm; the base portions of said container-holding elements being connected to said base and being equidistantly circumferentially disposed relatively to said central opening, said arms when pressed toward each other being adapted to extend parallel to each other and parallel to and uniformly disposed about an axis extending through the center of said central opening perpendicularly to said base, said spring portions pressing said arms outwardly to extend at acute angles to said axis, said container-engaging portions being curved for engagement with the inner walls of a container placed over said arms, and a restraining disc having a central opening co-axial with the first-mentioned central opening, and a plurality of liquid-draining holes, said arms extending through the last-mentioned central opening and engaging the edges thereof, said restraining disc being adapted to support the mouth of a container and being slidable from a postion adjacent said container-engaging portions to a position adjacent said spring portions and vice versa, said arms extending substantially parallel to each other when said restraining disc is adjacent said container-engaging portions and said arms flaring outwardly away from each other when said restraining disc is adjacent said spring portions.

3,049,138
LIQUID STORAGE TANK
Walter C. Klank, Jr., Dayton, Ohio, assignor to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed Apr. 27, 1961, Ser. No. 106,119
9 Claims. (Cl. 137—38)



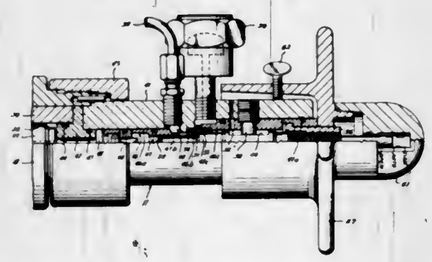
1. A liquid storage tank which in use assumes different attitudes relative to the earth's surface and may be subject to negative gravity forces, including means defining an interior chamber in said tank having normal upper and lower portions, said tank having an intermediate normal liquid level, a liquid outlet communicating with a fixed intermediate location in said chamber, and means in the normal upper portion of said chamber effectively isolating a portion of said chamber from the chamber proper during an inverted attitude and under negative gravity conditions for a predetermined time interval only.

3,049,139
CONTROL APPARATUS
Thomas J. Thompson, Dearborn, Mich., and Billy S. Hegg, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Nov. 8, 1956, Ser. No. 621,142
3 Claims. (Cl. 137—48)



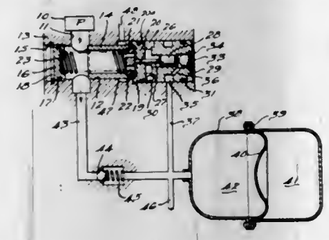
1. Governor apparatus for an engine comprising: a fuel supply valve, a governor flyweight device connected to said fuel valve to apply a force thereto tending to close said fuel valve, a fluid chamber, a movable piston member slidably disposed in said chamber to define a movable wall thereof, connecting means interconnecting said piston means and said fuel valve to transmit a force to said fuel valve tending to move said fuel valve in an open direction, passage means connected to said chamber for supplying a pressurized control fluid thereto, a movable throttle member, a control valve member operative with said passage means to control fluid pressure supplied to said fluid chamber, a fluid pressure responsive member having two sides connected to said control valve for controlling the position thereof, a spring member operatively connected to said fluid pressure responsive member and said throttle member to produce a force acting on said pressure responsive member that varies with the position of said throttle member, and means fluidly interconnecting one side of said fluid pressure responsive member to said fluid chamber to apply a fluid pressure force thereto that opposes the force produced by said spring member.

3,049,140
AUTOMATIC HIGH-LOW PRESSURE CUT-OFF VALVE
Charles W. Thornhill, George D. Hall, and Obert L. Nordin, Houston, Tex., assignors to Thornhill-Craver Company, Houston, Tex., a corporation of Texas
Filed May 18, 1959, Ser. No. 814,093
9 Claims. (Cl. 137—68)



1. In a pressure control apparatus having a main valve having a valve seat and valve member adapted to be connected in a line on the high pressure side of a choke, means for moving the valve member between open and closed position including a motor body member having therein two expansible chambers and opposed movable walls connected to each other and to the valve member, said wall of the first chamber being of smaller area than said wall of the second chamber, means conducting pressure from upstream of the valve seat to the first chamber, and passage means opening to the second chamber and adapted to receive pressure from downstream of the choke; the improvement comprising, a slide valve body; a bore in the slide valve body; a first opening in the bore adapted to communicate with the first chamber; a second opening in the bore adapted to communicate with the second chamber; a third opening in the bore in communication with pressure relief means which opens at a predetermined pressure; a fourth opening in the bore communicating with the exterior of the slide valve body and providing a vent; valve means movable axially in the bore; said valve means in a first position closing the third and fourth opening and establishing communication between the first and second openings whereby fluid pressure in the first chamber may flow into the second chamber to open the main valve; said valve means in a second position closing the first and fourth and establishing communication between the second and third openings whereby the pressure relief means will open upon the second chamber pressure exceeding a predetermined amount to effect closing of the main valve; said valve means when moving from the first to the second position closing the first opening before establishing communication between the second and third openings; said valve means in a third position closing the first opening and establishing communication between the second and fourth openings to vent the second chamber and effect closing of the main valve; and means for reciprocating the valve means between said three positions said reciprocating means including means providing a sufficient time delay between closing of the first opening and establishing communication between the second and third openings when moving the valve means from the first to the second position to permit pressure fluid within the second chamber to escape through the means for conducting downstream pressure to the second chamber and reduce the second chamber pressure to a value below that at which said pressure relief means will open.

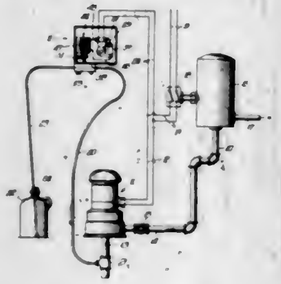
3,049,141
ACCUMULATOR CHARGING MECHANISM
Howard W. Beatty, Jr., Royal Oak, and Charles E. Brady, Oak Park, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,971
6 Claims. (Cl. 137—108)



1. In an accumulator charging valve means defining a chamber having an inlet and an accumulator charging outlet in communication with said chamber, said valve means also having a valve seat therein and an exhaust port, a slide valve element reciprocal in said chamber between seated and open positions by movement in seating and opening directions respectively, said valve element having a head seating at said seat when at said seated position and being shiftable to an intermediate position between said seated and open positions upon being unseated from said seat, valve biasing means yieldingly urging said valve element in said seating direction, said valve element having a first portion responsive to the pressure in said chamber to urge said valve element in said seating direction, said valve element and seat cooperating at said seated position to partition a second portion of said valve element from the pressure in said chamber and to establish communication between said chamber and second portion when said head is unseated from said seat, means blocking communication between said second portion and exhaust port when said head is at said seated and intermediate positions, said second portion being responsive to said fluid pressure thereon to urge said valve element in said opening direction, a fluid pressure actuated motor having valve actuating means operatively connected with said valve element, said motor having a supply conduit adapted to be connected with the pressure of an accumulator and being responsive to a predetermined value of the latter pressure to urge said valve element in said opening direction to unseat the same and establish communication between said second portion and chamber, thereby to apply additional force assisting said motor to urge said valve element in said opening direction, said valve actuating means being responsive to the fluid pressure in said chamber to oppose movement of said valve element in

said opening direction, said valve element being effective at said open position to connect said chamber and exhaust port, thereby to decrease the pressure in said chamber and the force on said actuating means opposing movement of said valve element toward said open position.

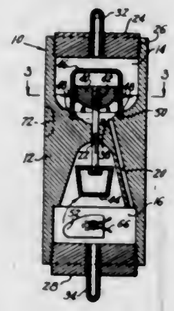
3,049,142
DOSING MEANS
Chauncey B. Oliver, Blue Diamond, Nev., assignor to Everpure, Inc., a corporation of Nevada
Filed Oct. 20, 1954, Ser. No. 463,427
7 Claims. (Cl. 137—114)



1. A dosage control unit adapted to accurately control the release of accurate doses of a treating liquid, comprising, a housing, an electric timing motor having a rotor shaft and mounted within said housing, disk means mounted on the rotor shaft of said timing motor having at least one irregularity of predetermined length in the periphery thereof, an electric switch mounted in said housing having an actuating finger engaging the periphery of said disk means whereby said switch is closed during the periods said finger engages said irregularity, a solenoid unit having a movable member and mounted in said housing, a pair of electrical conductors connecting the coil of said solenoid unit in parallel circuit relationship with said timing motor with said switch being connected in series relationship in one of said conductors whereby said solenoid is energized only when said switch is closed, a plunger carried on the movable member of said solenoid unit, a valve member in the form of a length of flexible tubing, support means mounted on said housing for positioning and supporting said valve member, an aperture in said support means through which a portion of one side of said valve member is exposed, said aperture being aligned with the end of said plunger so that the end of the plunger is movable into said opening to engage and pinch off said exposed portion of said valve member against an opposed rigid portion of said support means, and spring means normally holding said plunger in said pinch-off position when said solenoid is de-energized, said solenoid when energized acting to withdraw said plunger from said pinch-off engagement with said valve member.

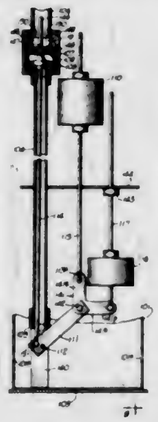
3,049,143
SAFETY VALVE FOR PULSATING LIQUID PRESSURE SYSTEMS
Elmer J. Hellems, Quinwood, and Edward O'Dell, Crichton, W. Va.
Filed May 12, 1960, Ser. No. 28,652
1 Claim. (Cl. 137—390)

A safety valve device for liquid pressure systems of the pulsating type comprising a body having an open upper liquid chamber therein, said upper chamber having a concave floor, a valve seat recessed into said concave floor, an open lower liquid chamber spaced below said upper chamber, said lower chamber having a deeply concave roof, each said chamber having a ported closure plug, a stem bore extending vertically between said chambers through said valve seat and said concave roof, a valve stem slidably extending through said stem bore, a valve fixedly secured on the upper end of said stem in said upper chamber and a float fixedly secured on the lower end of said stem in said lower chamber, said float normally floating within the deep concavity of said lower chamber roof when said chambers are full of liquid, a straight line liquid passage separate from said stem bore connecting said upper chamber through said valve seat



to an entrance in said lower chamber below the floating position of float, said float in floating position maintaining said valve above said valve seat and permitting said valve to drop on said valve seat and close said connecting liquid passage when said lower chamber is emptied of liquid, a surge reducing umbrella, open at its bottom edge, secured to said upper chamber concave floor enveloping said valve when in open position, and a manually controllable cam below and in the path of said float for lifting said float to reopen said valve after it has been closed.

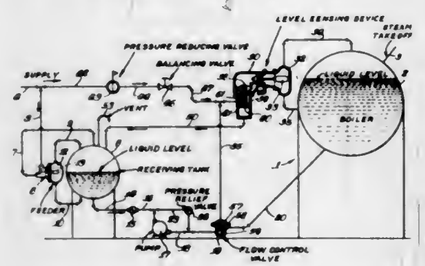
3,049,144
CONTROL VALVE FOR WATER SOFTENERS
Mathew Oleskow, 5453 Canfield Road, Chicago, Ill.
Filed Sept. 10, 1959, Ser. No. 839,203
1 Claim. (Cl. 137—391)



Apparatus for controlling the flow of brine solution from a tank during the regeneration of the ion exchange material of a water softening system, said apparatus comprising a conduit in said tank communicating at its lower end with the brine solution in said tank, a pair of confronting vertically spaced upper and lower valve seats in said conduit, a valve in said conduit between said seats and cooperating alternately with said seats, a pivotally mounted actuating lever, valve actuating means pivotally secured to said lever and operatively associated with said valve for actuating said valve selectively against said

valve seats, said valve actuating means being connected to said lever at a pivot point whereby said pivot point is near dead-center with respect to the pivot point of said pivotally mounted lever and the valve when said valve is against said upper valve seat and whereby said pivot point of said valve actuating means with respect to said lever moves away from dead-center with respect to the pivot point of said lever and the valve when said valve moves away from said upper seat, a first float means in said tank, means connecting said first float means and said lever to raise said valve against said upper seat when said first float means is in a fully lowered position and to lower said valve against said lower seat when said first float means is in a raised position, and second float means operatively associated with said first float means in said tank and connected to prevent the full downward movement of said first float means until the fluid in the tank reaches a selected low level.

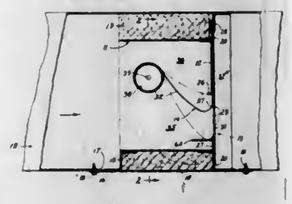
3,049,145
BOILER CONTROL SYSTEM
Leopold J. Kmiecik and Leo W. Kaczmarek, Chicago, Ill., assignors to McDonnell & Miller, Inc., Chicago, Ill., a corporation of Delaware
Filed Aug. 7, 1959, Ser. No. 832,184
3 Claims. (Cl. 137—414)



1. A control system for a boiler comprising level sensing means including a float chamber having fluid connection with the boiler; a float in said float chamber movable in response to the liquid level in the boiler; a supply line having connection with a source of liquid under pressure; valve means including a valve housing connected in said supply line and in fluid sealed relation with respect to said float chamber; said valve means including a valve seat and a cooperating valve member movable relative to said valve seat for modulating the rate of liquid flow therethrough in accordance with movement of said valve member toward and away from said valve seat; pressure operated control valve means having an inlet, an outlet, and servo operating means between said inlet and said outlet for controlling flow of liquid under pressure therethrough; a boiler feed line extending between the outlet of said control valve means and said boiler for conducting liquid to said boiler; a fluid pressure line connecting said supply line with said servo operating means of said control valve means; a receiving tank having an inlet and an outlet; said supply line down stream of said valve in said supply line having connection with the inlet of said receiving tank; outlet means for said receiving tank connecting the outlet of the same with the inlet of said control valve means; and means connecting said float with said valve member providing for conjoint movement of said valve member with said float so that as said valve member moves away from said valve seat upon lowering of the liquid level in the boiler, the pressure in said supply line is reduced, and as said valve member moves toward said valve seat upon raising of the liquid level in the boiler, the pressure in said supply line is increased; whereby changes in pressure in said supply line through said fluid pressure line effects actuation of said servo operating means of said control valve means to control flow of liquid from said receiving tank and through said boiler feed line to the boiler to maintain the liquid level in the boiler at a substantially constant predetermined level.

2. The control system of claim 1 characterized by the provision of by-pass means associated with said outlet means of said receiving tank for maintaining liquid from said receiving tank in continuous movement ahead of the inlet of said control valve means.

3,049,146
REGULATOR FOR CONSTANT VOLUME CONTROL OF GAS FLOW
Harold L. Hayes, Winnebago, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Dec. 22, 1958, Ser. No. 782,184
5 Claims. (Cl. 137—517)

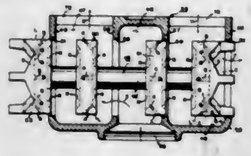


1. The combination, of a duct of rectangular cross-section adapted for the forced flow of air therethrough in one direction, a shaft disposed within and extending across said duct, means supporting said shaft to turn about its longitudinal axis, an elongated rectangular and flexible curtain substantially equal in width to said duct and having one end portion wound around said shaft, an intermediate unwound length of said curtain extending downstream along the duct, means securing the downstream end of said curtain to the duct along a straight line paralleling said shaft and laterally spaced inwardly from one side wall of the duct, said side wall cooperating with the opposed side surface of said curtain to form a chamber opening upstream and downstream while being substantially closed around its sides by virtue of the narrow clearance between the side edges of the curtain and the walls of the duct, means cooperating with the other side surface of said curtain to define a second chamber opening upstream but closed at its downstream end adjacent said line to create a drop between the static pressures in said second and first chambers during the forced flow of air through said duct, a perforated partition extending across the downstream end of said first chamber and providing a backing for rolling of the curtain toward and away from said line to vary the area of the outlet from the first chamber, said intermediate portion of said curtain bulging laterally under said pressure drop, and yieldable means continuously acting on said shaft and tending to wind up the curtain thereon with a force which balances said static pressure drop between said second and first chambers while allowing winding and unwinding of the curtain in accordance with decreases and increases in such pressure drop due to changes in the pressure of the air delivered into said duct.

3,049,147
RECIPROCATING SYSTEM AND VALVE THEREFOR
Jay C. Neilson, Salt Lake City, Utah, assignor to Gardner Machines, Inc., Salt Lake City, Utah, a corporation of Utah
Filed July 24, 1961, Ser. No. 126—142
3 Claims. (Cl. 137—622)

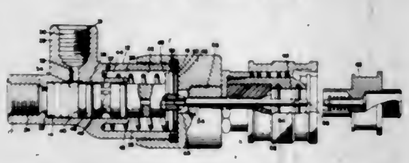
1. A valve including, in combination, valve body structure defining: side chambers having respective outlet ports, outer gateways disposed outwardly of and contiguous with respective ones of said side chambers, and inner gateway

means disposed between said side chambers and having an inlet port; and an axially translatable, reciprocable spool means comprising a stem, plural, mutually spaced, valve gate protuberance means extending transversely from said stem, guide means integral with outer ones of said valve gate protuberance means and cooperable with said outer gateways for maintaining axial alignment of said valve spool means for all translations thereof, outer ones of said valve gate protuberance means slideably cooperating with respective ones of said outer gateways, inner ones of said valve gate protuberance means slideably



cooperating with said inner gateway means, said plural valve gate protuberance means impeding communication between said side chambers and said inlet port when said valve spool is in its central, neutral position, and a respective one of said inner valve gate protuberance means, when said valve spool means is translated to an extremity position of its travel, withdrawing from its gateway means to provide communication between said inlet port and a respective one of said outlet ports while the remaining inner valve gate protuberance means continues to impede communication between said inlet port and the remaining one of said outlet ports.

3,049,148
CALIBRATION VALVE
John R. Richardson, Athens, Ala., assignor to the United States of America as represented by the Secretary of the Army
Continuation of application Ser. No. 862,733, Dec. 29, 1959. This application Mar. 20, 1962, Ser. No. 181,845
3 Claims. (Cl. 137—625.4)



1. A calibration valve for handling fluid pressures of the magnitude of at least 3000 pounds per square inch comprising:

(*a*) a housing having a longitudinal bore opening through opposite ends thereof;

(*b*) a passageway disposed in said housing in angular relation thereto and opening at one end into said bore and having its other end opening through said housing;

(*c*) a hollow power piston closed at one end and having an enlarged head at the other end,

(*d*) said power piston having at least one exit port therein and disposed within said bore for longitudinal movement with respect to said bore;

(*e*) resilient means carried by said housing for urging said piston to move in one direction;

(*f*) a piston limiting means carried by said housing to limit the movement of said piston in said one direction,

(*g*) said piston limiting means having a longitudinal passage therein opening into said bore;

(*h*) a female coupling part of a quick-disconnect device carried by said piston limiting means and adapted for attachment to and disconnection from a male coupling member,

(*i*) said female coupling part having a longitudinal passage which is in axial alignment with the passage through said piston limiting means;

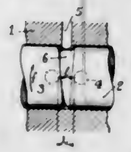
(*j*) a hollow piston rod having an entrance port therein carried by said piston to have its interior in communication with the interior of said piston and extending longitudinally from said piston through said passages,

(*k*) said rod being disposed for engagement by the male coupling member which causes the rod to be displaced longitudinally and also permits an external fluid pressure to flow through the passages surrounding the rod to impinge upon the piston head,

(*l*) whereby the movement of said rod and the pressure impinging upon said power piston head causes said piston to be displaced from a first position where communication between the interior of said piston and said passageway is blocked to a second position where communication is established between the interior of said piston and said passageway through said entrance and exit ports while communication between said bore and said passageway is blocked; and

(*m*) upon the disconnecting of said male coupling member, said resilient means being operative to return said piston to said first position.

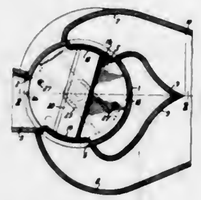
3,049,149
THREE-WAY SLIDE VALVE WITH ADJUSTABLE OVERLAP
Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France
Filed Dec. 20, 1960, Ser. No. 77,115
Claims priority, application France Dec. 22, 1959
4 Claims. (Cl. 137—625.17)



1. An improved three-way slide valve with adjustable overlap comprising: a valve body defining a cylindrical bore having a longitudinal axis and three ports opening into said bore, said ports being spaced axially and arranged with one port intermediate the other two ports, said one port being a load port, and the other ports being respectively a pressure port and an exhaust port defining similar apertures; a slide-valve member mounted in said cylindrical bore of the valve body and axially slidable and angularly adjustable therein on said longitudinal axis, said member having passageway means with boundaries defining relative distances from said pressure and exhaust ports that vary with the angular adjustment of said member in said body, said passageway means being in constant communication with said load port and slidable axially to communicate with one of the other two ports.

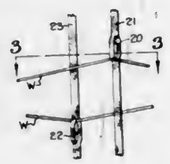
3,049,150
FLUID FLOW CONTROL DEVICE
Bertram J. Milleville, Wadsworth, Ohio, assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed May 4, 1959, Ser. No. 810,915
1 Claim. (Cl. 137—625.32)

In a fluid flow control device, a body having a fluid inlet and a fluid outlet with their fluid flow axes in substantially the same plane and in substantial alignment with the longitudinal axis of said body, a cylindrical housing arranged within said body with its axis substantially perpendicular to said plane and having an inlet opening communicating with said fluid inlet and a pair of outlet ports diametrically oppositely disposed transversely of and diagonally with respect to said longitudinal axis and communicating through said body with said fluid outlet, a rotary fluid flow control element having axial bearings in said body and being confined within said housing axially thereof, the outside diameter of said control element being less than the inside diameter of said housing to thus avoid rotational contact between the control element and housing, said control element having an open interior in communication with said fluid inlet to permit flow of the controlled fluid within the control element and housing at all times and being provided with a pair of diametrically oppositely disposed gate elements for simultaneous fluid flow control cooperation with said outlet ports, the diagonal arrangement



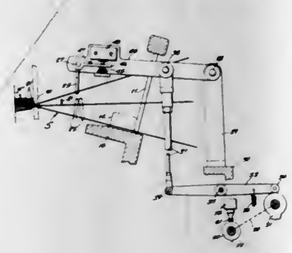
of said outlet ports serving to provide an area of the wall of said cylindrical housing adjacent to said inlet opening to accommodate one of said gate elements in open position, and means for imparting limited rotary motion to said control element whereby when said control element is rotated to move said gate elements into position to close said outlet ports the flow of fluid will be substantially arrested and will maintain the open interior of the control element filled, and when the gate elements are moved into position to open said outlet ports the fluid flow through said interior and through said ports will be unobstructed, the device thereby being adapted to function as a throttling valve rather than an on-off valve, with total avoidance of contact of the control element with the body and housing except at said bearings, to thereby prevent any friction between the control element and the body and housing from interfering with low torque imposed on said motion imparting means to rotate the control element.

3,049,151
ANTI-FRICTION INSTRUMENTALITIES FOR A LOOM
George A. McFetters, Greensboro, N.C., assignor to Greensboro Loom Reed Company, Inc., Greensboro, N.C., a corporation of North Carolina
Filed June 1, 1960, Ser. No. 33,283
8 Claims. (Cl. 139—93)



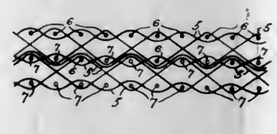
1. Improved loom instrumentalities such as drop wires and heddles formed of flat elongate metallic strip material and having an opening through a medial portion thereof through which a warp thread is adapted to be guided, the improvement comprising each instrumentality having a non-specular, irregular, smoothly pitted, satin metallic finish on at least the proximal surfaces surrounding the opening through which the warp thread is guided.

3,049,152
WEFT DETECTOR MECHANISM
Harry A. Batty, Lexington, Arthur J. Eisler, Glasgow, and John W. Ellington, Greenlee, Va., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Mar. 22, 1960, Ser. No. 16,780
1 Claim. (Cl. 139—370)



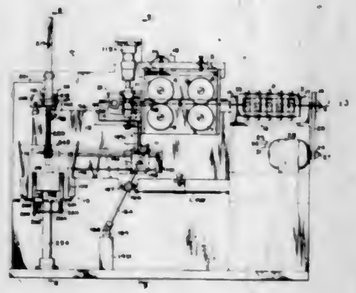
In a transverse wire pile fabric loom, having a plurality of pile wires successively inserted into warp sheds, an oscillating lay, a shuttle on said lay for throwing weft shots transversely through said sheds, a reed on the lay for beating up the pile wires and the weft shots against the fell of the fabric being woven, a rocker arm pivotally mounted at a position spaced transversely at one side of the sheds, a weft detecting finger pivotally mounted on said rocker arm, means for moving the rocker arm in timed relation to the operation of the lay to dip the detecting finger to a position spaced transversely beyond one side of the sheds and between a normal filling shot and the line of the fell extended transversely beyond one selvedge, a switch mounted on the rocker arm having an actuator operatively associated with the finger, and means connected with said switch for stopping the loom in the event the finger is not displaced by a normal filling shot substantially before the reed beats up against the fell.

3,049,153
DRYER FELTS
Idris W. Jones, Lachute, Quebec, Canada, assignor to Ayers Limited, Lachute Mills, Quebec, Canada
Filed Oct. 12, 1959, Ser. No. 845,876
Claims priority, application Canada Sept. 15, 1959
3 Claims. (Cl. 139—426)



1. An improved woven dryer felt for use in the manufacture of pulp and paper products comprising weft yarns including a core of shrink resistant polyethylene terephthalic filaments with a protective covering of staple fibers wound thereover and warp yarns including a core of polyethylene terephthalic shrinkable filaments and a protective covering of staple fibers whereby shrinkage is minimized in the weftwise direction and shrinkage and expansion in the warpwise direction is permitted.

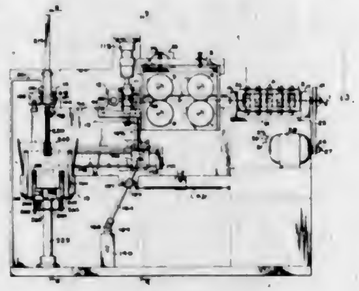
3,049,154
MACHINE AND METHOD FOR FORMING WIRE UNITS
Charles Stuart Livermore, Fair Lawn, N.J., assignor to Eclipse Sleep Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed Apr. 18, 1958, Ser. No. 729,278
5 Claims. (Cl. 140—71)



1. In a machine for forming from spring wire predetermined bent endless spring wire units, the combination of positively driven feed rollers for initially gripping the wire and advancing it, a second feed roller engaged and rotatably actuated by the wire so drawn by said driven feed rollers, a deflecting die position to engage only the face of the wire which constitutes the outer face of the unit being formed until the advanced end of the wire of the unit being formed laps over a succeeding portion of the wire of the unit being formed, a first cam, a cutter, means for operatively connecting said first cam to said cutter to enable actuation of said cutter by said first cam to cut a unit after said advanced end of the wire of the unit being formed has been advanced beyond the end of said succeeding portion of the wire of the unit being formed, a twisting mechanism, means for transferring the unit so cut to said twisting mechanism, a second arm, means for operatively connecting said second cam to said transferring means, said twisting mechanism having grippers for holding the two free end portions of the unit adjacent to one another, said twisting mechanism having a rotor having external teeth and a radial slot extending downwardly and outwardly to receive the two free end portions of the unit intermediate said grippers, a third cam, means operatively connecting said slotted rotor to said third cam to rotate and twist the two free end portions about one another, said operative connecting means having a fixedly mounted gear disposed above said rotor, said gear and rotor having the same diameter with the teeth of said rotor corresponding in position to similar teeth on said gear, two vertically extending racks meshing with opposite faces of said rotor and gear, and means for drivingly connecting said first, second and third cams to said second feed roller.

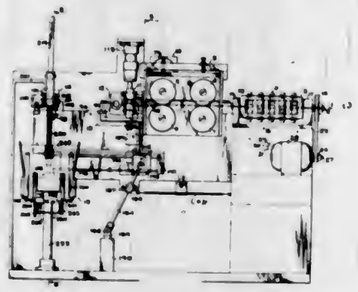
3,049,155
MACHINE AND METHOD FOR FORMING WIRE UNITS
Charles Stuart Livermore, Fair Lawn, N.J., assignor to Eclipse Sleep Products, Inc., New York, N.Y., a corporation of New York
Filed Mar. 25, 1959, Ser. No. 801,881
3 Claims. (Cl. 140—71)

1. In a machine for forming from spring wire, predetermined bent border stabilizer spring wire units, the combination of means for feeding the wire having a free end and advancing it, a deflecting die, cam means including a first cam and a second cam drivingly connected to said feeding means and actuating said die to determine the position of said die, said cams having short duration defining conformations, and means operatively connecting said cams to said die to position said die in the path of movement of the wire as it leaves said feeding means to form predetermined short angles between successive portions in the wire corresponding to the short duration defining conformations on said cams, said means including an electric circuit comprising a relay, a normally closed switch, when closed advancing the die into wire engaging position, and a normally open switch when opened withdrawing the die from wire engaging position, said first
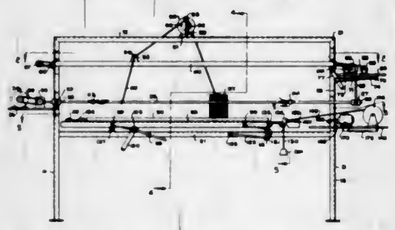


cam operatively connected to control said normally closed switch and said second cam operatively connected to control said normally open switch, said first cam having depressions constituting the short duration defining conformations and said second cam having projections constituting the short duration defining conformations, the timing of said cams enabling said first cam to close the circuit shortly before said second cam opens the circuit after the completion of the engagement of the die by the wire.

3,049,156
MACHINE AND METHOD FOR FORMING WIRE UNITS
Charles Stuart Livermore, Fair Lawn, N.J., assignor to Eclipse Sleep Products, Inc., New York, N.Y., a corporation of New York
Filed Mar. 31, 1959, Ser. No. 803,128
1 Claim. (Cl. 140—71)



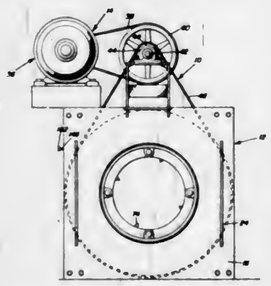
The method of forming from a single length of spring wire endless border stabilizer spring wire units each having two looped angles at their longitudinally outwardly extending outer ends and short obtuse angles between each two looped angles extending laterally in opposite directions consisting in uninterruptedly advancing the wire, intermittently frictionally engaging one face only of the wire while being so advanced and deflecting the wire for short intervals to form said short obtuse angles, intermittently frictionally engaging said one face of the wire while being advanced for longer intervals and twirling the wire at least 360° into said looped angles and simultaneously deflecting the wire laterally in the same direction from a predetermined plane when forming each looped angle to enable the looped angles to extend in opposite directions to one another but parallel to preceding wire portions, cutting the wire into predetermined units after having been so bent, forming the initial and final straight free end portions in each unit adjacent, parallel and extending in opposite directions to one another, and finally connecting the adjacent parallel free end portions of each unit upon one another.

3,049,157
GARLAND MAKING APPARATUS
Gordon E. Elderton, 4341 Hoskins St., North Vancouver, British Columbia, Canada
Filed Sept. 8, 1959, Ser. No. 838,693
12 Claims. (Cl. 140—149)



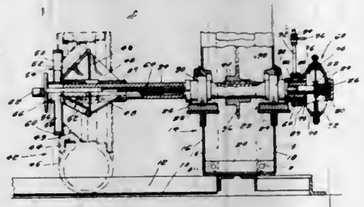
1. Apparatus for making garlands of fine filaments, comprising a tray adapted to receive a first flexible wire extending longitudinally along the bottom thereof, means above the tray for forming short substantially parallel filaments and depositing a layer of said filaments over the bottom of the tray and across the wire thereon, after which a second flexible wire is laid over the filaments in the tray, means connected to ends of the wires at one end of the tray for subjecting said wires to a twisting action to twist the wires spirally around the filaments, and means connected to the opposite ends of the wires to prevent the latter ends from turning in the direction of said twisting action, said twisting action forming the spiralled wires into a stem with the filaments gripped in pockets formed therein and causing the filaments to radiate in all directions from said stem.

3,049,158
DEBARKER
Franklin D. Marble, Medford, Oreg. (652 W. 10th Ave., Eugene, Oreg.), and Lawrence E. Juniper, 1020 S. Peach St., and James L. De Armond, 16 N. Groveland, both of Medford, Oreg.
Filed Mar. 30, 1960, Ser. No. 18,573
5 Claims. (Cl. 144—208)



1. In a log debarking machine, the combination of a housing, a barker ring rotatable in said housing, a projectable and retractable debarking tool holder carried by said ring, a fluid operator carried by the ring and operatively connected to said tool holder, a reservoir for fluid under pressure carried by the ring, valve means carried by said ring for communicating said fluid operator selectively with said reservoir and with the atmosphere, and means provided on said housing for actuating said valve means during rotation of the latter with said ring, said valve means including a rocker arm movable between a first position wherein the valve means communicate the fluid operator with said reservoir and a second position wherein the valve means communicate the fluid operator with the atmosphere, said actuating means including a control handle movably mounted on said housing, and a pair of detents operatively connected to said handle, said detents being selectively engageable with the rocker arm of said valve means during rotation of said ring for selectively moving the rocker arm between its first and second positions.

3,049,159
WHEEL SUPPORT AND LOCK FOR TIRE DEMOUNTING APPARATUS
Carmine J. Gambardella, Warwick, R.I., assignor to Lee Engineering Company, Pawtucket, R.I., a corporation of Rhode Island
Filed Dec. 10, 1959, Ser. No. 858,761
3 Claims. (Cl. 144—288)

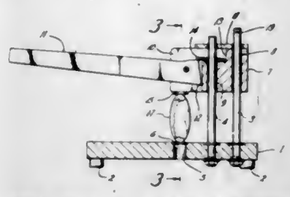


1. In apparatus for demounting a tire from a wheel assembly, a base, a power frame assembly mounted on said base and including a tubular elongated power shaft, a wheel receiving member fixed on said power shaft, a removable locking member including a central hub slidably mounted on the outer end of said power shaft and an annular ring that is adapted to engage said wheel assembly in the demounting position thereof, and means for moving said locking member into firm engagement with said wheel assembly to lock said wheel assembly in position for the demounting of the tire therefrom, said moving means including a tubular spindle extending interiorly of said locking member and tubular power shaft in coaxial relation ttherewith, said tubular spindle having a threaded portion formed therein, an actuating rod positioned coaxially within said tubular power shaft and threadably engaging the threaded portion of said tubular spindle, wherein said tubular spindle is initially adjusted on said actuating rod by rotation relative thereto, said spindle being longitudinally movable by said actuating rod to move said locking member into engagement with said wheel assembly, and means operatively engaging said actuating rod for imparting longitudinal movement thereto for effecting a firm locking action of said locking member on said wheel assembly.

3,049,160
NUT CRACKER
Evander A. Smith, Houston, Tex., assignor to Charles F. Phelps and W. T. Spigener, Houston, Tex.
Filed Sept. 14, 1960, Ser. No. 55,937
2 Claims. (Cl. 146—15)

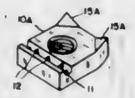
1. In a nut cracking device, a base member, upstanding posts mounted on said base member, said base member having a vertical port therethrough and a rigid cutter mounted in the upper end of said port, said cutter having an axial passageway therethrough, the side walls of

said passageway being tapered upwardly and inwardly, a traveling block mounted on said posts, a rigid traveling plate loosely mounted on one of said posts, a lever pivotally mounted on said block, one end of said lever extending beneath one end of said plate, a rigid cutter



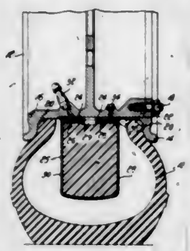
mounted on said block in vertical alignment with said cutter mounted on said base member, said cutter mounted on said block having a passageway therethrough, the side walls of said passageway being tapered downwardly and inwardly.

3,049,161
SPECIAL NUTS
Charles W. Attwood, 4118 S. Wayne Road, Wayne, Mich.
Filed Mar. 23, 1959, Ser. No. 801,136
5 Claims. (Cl. 151—37)



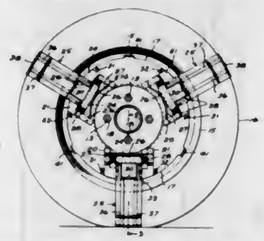
1. A nut comprising a rectangular body of hardened metal having a centrally located threaded screw receiving opening, said body being provided in one face with a groove across said adjacent one end and having sharpened teeth at its other end projecting upwardly from the grooved face, said grooved face being provided with a plurality of spaced sharpened teeth extending from the bottom of and across said groove.

3,049,162
EMERGENCY SUPPORT
Kurt Rosenbaum, Essen, Walter Bell, Dusseldorf, and Friedrich Ost, Gross-Konigsdorf, near Koln, Germany, assignors to Alweg-Forschung G.m.b.H., Koln, Germany, a corporation of Germany
Filed Mar. 18, 1957, Ser. No. 646,763
3 Claims. (Cl. 152—158)



1. Apparatus for forming an emergency support assembly within a beaded pneumatic tire casing in which a thin walled annulus having an essentially cylindrical outer peripheral wall and essentially flat radial walls is mounted to define an annular space for said support within said tire, said annulus being open along its inner diameter in the region between the beads of said casing, comprising a pair of cylinders having an outer diameter substantially equal to the inner diameter of the tire beads, means for supporting said cylinders in aligned relation with their adjacent ends spaced apart to form an annular gap, means on the cylinders for supporting the beads of said tire in spaced relation at opposite sides of said gap, means for rotating said cylinders to thereby rotate said tire, and relatively fixed means for introducing a liquid air-hardening plastic through the space between said cylinders into said annular gap within said annulus.

3,049,163
TRACTION DEVICE
Dennis J. Ryan, 157—11 Sanford Ave., Flushing, N.Y.
Filed May 31, 1961, Ser. No. 113,722
2 Claims. (Cl. 152—216)



1. A traction device mounted on a vehicle wheel provided with a tire in its rim, said traction device comprising a plate member permanently attached to said wheel, a plurality of traction arms pivotally mounted on said plate member, each of said traction arms being sufficient in length to extend beyond the axis of the wheel when selectively disposed in inoperative position so that the traction arms are nested in this position and a traction member secured to the free end of each of said traction arms and extending outwardly from the tire when the arm is selectively disposed in operative position, each of said traction arms being radially displaceable and biased from the axis of said wheel.

3,049,164
PUNCTURE REPAIR MATERIAL
Robert E. Humphreys and Ivan L. Marra, both of R.F.D. 7, Butler, Pa.
Filed Nov. 9, 1961, Ser. No. 151,211
7 Claims. (Cl. 152—370)

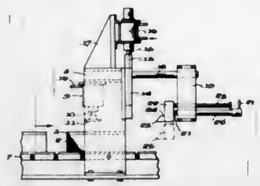


1. A puncture sealing material comprised of an elongated strand comprising a loosely knitted sleeve of non-fibrous impervious material completely embedded in an inner and outer coating of non-fibrous impervious permanently malleable material.

3,049,165
BRICK HANGER TAB BENDING APPARATUS
Walter S. Leeper, Calumet City, Ill., assignor to Harbison-Walker Refractories Company, a corporation of Pennsylvania
Filed June 22, 1960, Ser. No. 37,985
4 Claims. (Cl. 153—25)

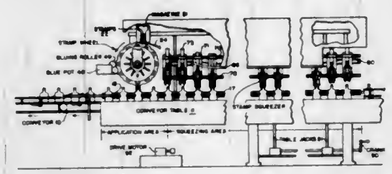
1. Apparatus for bending sheet metal hanger tabs away from the ends of metal-cased refractory brick movable

forward through the apparatus, comprising means for supporting each successive cased brick on its side with its tab at its front end, means for temporarily clamping each successive cased brick in fixed position, a hammer disposed in front of said clamping means and normally out of the path of any bricks movable forward through



said apparatus, means for moving the hammer into a position directly in front of the position occupied by a clamped brick, and means for driving the hammer rearwardly to strike the central portion of a hanger tab on a clamped brick, the hammer being shaped to cause the free end of such a tab to bend forward toward the hammer when the tab is struck by the hammer.

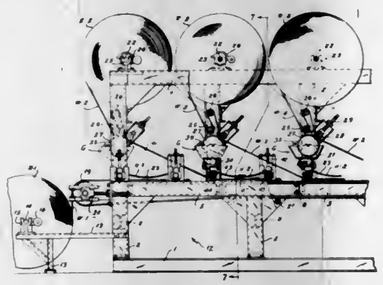
3,049,166
STRIP STAMP APPLYING AND SQUEEZING MECHANISM
Robert A. Clark, Owensboro, Ky., assignor to Glenmore Distilleries Company, Owensboro, Ky., a corporation of Delaware
Filed Mar. 18, 1960, Ser. No. 16,103
23 Claims. (Cl. 156—489)



1. An apparatus for applying a strip stamp over the top of a bottle, as it is carried by a bottle line conveyor through an applicating area, comprising: a frame; a shaft mounted on said frame; a gluing wheel structure mounted on said shaft to receive a strip stamp at a receiving area, convey it arcuately through a stamp gluing area, and release it at an applicating area where it is to be applied to the top of a bottle, said wheel rotating in a plane through which the long axis of the bottle travels in passing through said applicating area; and stamp affixing means including a stamp affixer mounted on the gluing wheel for relative radial extension-retraction movement and means for so extending the affixer at the applicating area, said affixer being operative, at the applicating area, to move the mid-portion of a stamp radially and press it upon the top of the bottle and to swing the end portions of said stamp radially and press them upon the neck of said bottle.

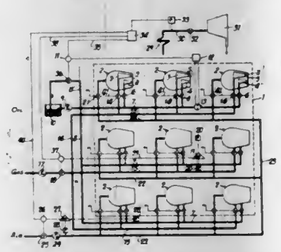
3,049,167
MACHINE FOR MAKING GLUED CELL FORMERS
Joseph Vesak, Richmond, British Columbia, Canada, assignor to Crown Zellerbach Canada Limited, a corporation of Canada
Filed Feb. 29, 1960, Ser. No. 11,577
3 Claims. (Cl. 156—548)

1. A machine for making glued cell formers, said machine having a frame with a continuous main driven belt thereon extending over a major portion of the machine, common power means for moving said belt and hold down means and cut off means, means at one end of the conveyor belt for supporting a roll of web material having its web adapted to extend longitudinally over said belt in flat contacting relation therewith to form a bottom web, means for supporting a series of elevated rolls of web material, said means being longitudinally spaced along and above said belt and in spaced vertical relationship therewith, glue applicating means spaced below and cooperating with the elevated web material rolls for applying a thin line of glue longitudinally to each of the webs parallel and in spaced relation to their edges, web hold down means positioned longitudinally along said machine between said glue applying means and above said main belt, each of the elevated webs being directed beneath said hold down means at spaced intervals longitudinally of said moving belt against the web immediately therebelow to glue the two together, said hold down means comprising an endless chain com-



posed of a plurality of heavy links pivotally joined together and each link having a flat outer web contacting surface, said hold down means each constructed and arranged to frictionally contact the upper surface of each web over a substantial longitudinal distance and over substantially its entire width so as to be moved at the same linear velocity as the web, and independent power driven hold down means positioned over said belt at a point beyond that point where all of said webs have been joined one above the other, said power driven hold down means comprising an endless chain frictionally engaging the top web and urging the glued webs against said main belt to allow the glued webs to become fixedly secured to each other, said power driven hold down means being driven at the same linear velocity as said main belt.

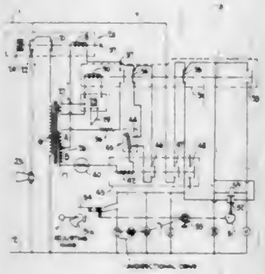
3,049,168
METHOD AND MEANS FOR CONTROLLING A COMBUSTION APPARATUS OPERATED BY AT LEAST TWO DIFFERENT FUELS
Richard Litwinoff, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Oct. 15, 1958, Ser. No. 767,437
Claims priority, application Switzerland Oct. 25, 1957
8 Claims. (Cl. 158—11)



5. In a combustion apparatus for simultaneously burning different kinds of fuel which fuels require substantial-

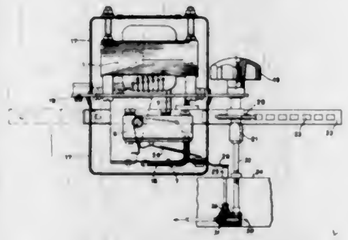
ly the same amount of combustion air for producing substantially the same heat of combustion: a plurality of fuel burning devices individually including at least one fuel burner for each kind of fuel, separate fuel supply means for the different kinds of fuel, said supply means being individually connected to all burners burning the same kind of fuel, means for supplying combustion air to all of said burners, means individually connected to said burners for stopping the supply of fuel and combustion air to the individual burners, whereby the number of burners in operation for one kind of fuel relative to the number of burners in operation for a different kind of fuel can be adjusted corresponding to the desired ratio between the different kinds of fuel to be fired, and means responsive to a value corresponding to the total heat output demanded from the apparatus and connected to said fuel and combustion air supply means for individually controlling the amounts of different fuels and of air supplied to the burners which are in operation.

3,049,169
SAFETY COMBUSTION CONTROL SYSTEM
Philip N. Bredesen, 4865 Oster Road, Lorain, Ohio, and George G. Outterson, 30905 Carlton Drive, Bay Village, Ohio
Filed June 9, 1958, Ser. No. 740,887
10 Claims. (Cl. 158—28)



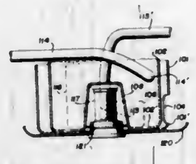
1. In a combustion control system of the type having separately electrically controlled air supply means, fuel supply means, and ignition means, and having terminal means across which an A.C. potential may be impressed, a first switch, a transformer having a primary winding connected through said first switch across said terminal means and having a low voltage secondary winding, a thermostat switch, a master relay having a coil connected in series with said thermostat switch and at least a portion of said secondary winding and having at least one normally open contact, a flame relay having a coil arranged to be energized responsive to flame detection and having at least one normally open contact and at least one normally closed contact, means including connections for energizing the air supply means through the normally open contact of said master relay, means including connections for energizing the fuel supply means through the normally open contact of said master relay and electrically coupled in series circuit through the normally open contact of said flame relay, and means including connections for energizing the ignition means and including at least the normally open contact of said master relay, the combination of a timer motor which overheats if stalled, means including reduction gearing driven by the timer motor and through which the motor cannot be driven, means including an electric clutch driven by the gearing when the motor is energized, a cam shaft and a cam carried thereby, means operably coupling the cam shaft to be driven by the clutch from an initial position when the motor and clutch are energized, spring means for returning the cam to the initial position when the clutch is de-energized, normally open cam-operated switch means arranged to be closed and to be opened by the cam when it is driven unidirectionally by the motor, a limit switch on the cam shaft and electrically connected in series with the timer motor to prevent cam overtravel, means including connections and at least the normally open contact of said master relay for energizing the series circuit of the motor and the limit switch, means including connections and at least the normally open contact of the master relay for energizing the clutch, and means including connections through said cam operated switch means for energizing the ignition means independent of the flame relay and in timed sequence with respect to the energization of the air supply means.

3,049,170
DEVICE FOR THE COMBINED REGULATION OF THE TEMPERATURE OF AN OIL-BURNER
Gerrit Blokhuis, Rijksstraatweg, Laag Keppen, Netherlands
Filed Sept. 2, 1959, Ser. No. 837,691
Claims priority, application Netherlands Sept. 5, 1958
1 Claim. (Cl. 158—28)



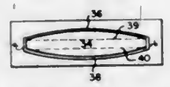
An oil space heating device, comprising in combination: a motor-driven ventilating fan for movement of combustion air, an autotransformer with primary and secondary winding, a supply circuit connected to said primary winding, a closed housing for receiving said autotransformer, said autotransformer primary winding having a plurality of taps thereon, and said autotransformer having a plate projecting therefrom, a contact track, a plurality of contacts on said contact track, said plurality of taps on said primary winding connected to said plurality of contacts on said contact track, a micro-switch in the primary circuit with an operating lever thereon, said microswitch adapted to control the motor-driven fan, a bimetallic strip with winding thereon connected in circuit with and energized by said secondary winding of said autotransformer, a room thermostat connected between said bi-metallic strip winding and said secondary winding, one end of said bi-metalic strip acting on said lever on said microswitch, an oil supply device, means including a metering pin for the oil supply device normally maintaining the oil flow at a minimum rate, means responsive to the movement of said end of said bi-metallic strip effecting gradual movement of said metering pin to a maximum flow position, a rotatable knob, said rotatable knob mounted on said plate projecting from said housing, a toothed wheel on said knob, a sliding rack, said sliding rack having holes meshed with said wheel, a sliding contact on said rack adapted to slide on said transformer taps, a coupling member carried by said rotatable knob, a regulating valve for the oil control device, said coupling member being adapted for cooperation with said regulating valve whereby the supply of oil is dependent on the rotary speed of the motor-driven fan controlled by the autotransformer.

3,049,171
FUEL TANK CONSTRUCTION
Willi Neuerburg, Stuttgart-Unterturkheim, Arthur Maehler, Fellbach, near Stuttgart, and Horst Fiedler, Stuttgart-Bad Cannstatt, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Apr. 14, 1959, Ser. No. 806,347
Claims priority, application Germany Apr. 18, 1958
22 Claims. (Cl. 158—46)



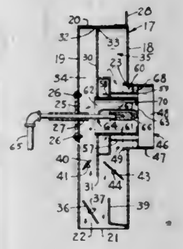
1. A fuel intake arrangement located in the fuel tank for an internal combustion engine of a vehicle supplied with fuel from said fuel tank through a fuel supply line, which arrangement is for damming-up and collecting a quantity of fuel sufficient for the supply of said engine during the occurrence of accelerating forces acting on the vehicle, comprising intake means for leading to said fuel supply line and extending into said fuel tank in proximity to the tank bottom thereof, and housing means attached to said tank bottom and arranged about said intake means including two essentially pot-shaped separate housings of different size, each of said housings having a wall extending upwardly from said tank bottom, the smaller of said two housings being disposed within the larger one to effectively form a communicating passage between the walls thereof in the form of an essentially annular channel, the walls of said two separate housings being connected together at one place, and said channel terminating near one end thereof in the inside of said smaller housing means within the inner space thereat, and the wall of said larger housing means effectively being provided with inlet means in communication with said annular channel and being located laterally near said one place of connection.

3,049,172
GAS BURNER
Dominick Labino, Toledo, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Filed Oct. 22, 1953, Ser. No. 387,770
3 Claims. (Cl. 158—99)



2. A gas burner, capable of emitting hot products of combustion in planar form and having wall portions which are in direct contact with said products of combustion, comprising a refractory wall portion having a pair of opposed lips and a pair of opposed lateral sides transverse to and joining said lips, said lips and said sides defining an elongated outlet for discharging said products of combustion, said lips in the cold inoperative condition of the burner being each arcuate in form, substantially greater in length than said sides, and defining a spacing at their greatest point of separation larger than the length of one of said sides, said refractory being susceptible to deformation when subjected to elevated temperatures of a predetermined order, said spacing between said lips and the length of each lip being of predetermined magnitudes interrelated with the degree of deformation of said refractory so that each of said lips will assume a substantially rectilineal shape upon subjection to elevated temperatures of said predetermined order, and said lateral sides being of sufficient length to maintain a sharp area of blast when said burner is in operation.

3,049,173
BURNER
George T. Costello, St. Paul, William O. Dickinson and Peter J. Dreher, Minneapolis, and James H. Nicklas, St. Paul, Minn., assignors to National Heater Company, Inc., St. Paul, Minn., a corporation of Minnesota
Filed Aug. 31, 1959, Ser. No. 837,255
5 Claims. (Cl. 158—110)

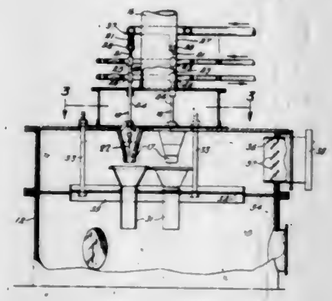


1. A burner comprising a housing formed of sheet metal and having a front wall, a rear wall and a peripheral wall disposed between said front and rear walls, a baffle sheet positioned between said front and rear walls and having its top and side edges secured against the inner face of the peripheral wall to define a primary air chamber with the rear wall which is open at the bottom and a secondary air chamber with the front wall which is also open at the bottom, said peripheral wall having an air inlet communicating with both of said chambers through their said open bottoms, a ring shield mounted on said front wall and communicating with the secondary air chamber, an open-ended sheet tube mounted on said baffle and extending forwardly and terminating coaxially within said ring shield, said sheet tube communicating with the primary air chamber, a bladed air spinner annularly mounted within said ring shield in a plane substantially including the outer terminus of said open-ended sheet tube and adapted to swirl secondary combustion air, a relatively smaller annular bladed air spinner mounted within said sheet tube in substantially the same plane with the first mentioned air spinner, and a gas passageway terminating in an annular discharge opening between the annular bladed air spinners and substantially in the same plane therewith, the innermost ends of the blades of said first-mentioned air spinner terminating adjacent said annular discharge opening.

3,049,174
SPRAY DRYING APPARATUS
William R. Marshall, Jr., Madison, Wis., assignor, by mesne assignments, to Proctor & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Original application May 14, 1953, Ser. No. 354,913, now Patent No. 2,880,794, dated Dec. 3, 1958. Divided and this application Feb. 10, 1958, Ser. No. 717,291
10 Claims. (Cl. 159—4)

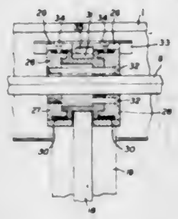
8. In spray drying apparatus for spray drying material; an injector for the liquid material to be dried, means defining a passageway through said injector terminating in a straight section of uniform diameter through which the liquid material to be dried is adapted to pass, means to supply the liquid material to said injector and force the same through said injector continuously and discharge the said material at a predetermined velocity from the injector in the form of a thin continuous stream, a nozzle

surrounding said injector having a generally circular outlet opening, means defining a passageway through said nozzle, said passageway having a straight section immediately upstream of the outlet opening of the nozzle of uniform diameter corresponding to the diameter of said outlet opening and of substantially greater diameter than the diameter of said injector passageway, said straight section of said nozzle passageway surrounding the straight section of said injector passageway and extending axially of said injector passageway for a substantial portion of its length with the straight section of said nozzle passageway terminating downstream of said straight section of said injector passageway, means to



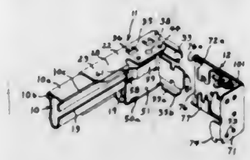
supply a primary drying gas to said nozzle in sufficient quantity to complete a substantial portion of the drying of said liquid material and force the primary drying gas through the straight section of said nozzle passageway at a predetermined velocity greater than the velocity of the liquid material discharged from said injector and in the same direction of travel as that of the said liquid material so that said primary drying gas is caused to atomize the said liquid material in said nozzle by virtue of the difference in velocity between said primary drying gas and said liquid material and simultaneously complete a substantial portion of the drying of said atomized liquid material in and adjacent to said nozzle.

3,049,175
COMBINATION VENETIAN BLIND TILTER-LIFTER DEVICE
Isamu Fukuoka, Kamakura, Kanagawa-ken, Japan, assignor to Nichibei Blind Mfg. Co., Ltd., Tokyo, Japan
Filed Sept. 14, 1959, Ser. No. 839,891
3 Claims. (Cl. 160—177)



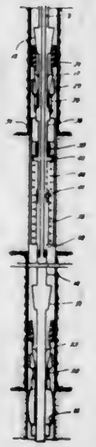
1. A Venetian blind tilter-lifter device comprising a rotation source, a rotatable shaft actuated by said rotation source, rims fixed on said shaft, a tape winding drum joined to said rims, a slat lifting tape adapted to be wound on said drum, cover tubes enclosing said rims, spring rings frictionally coupling said cover tubes with said rims, a slat tilter plate attached to said cover tubes, slat suspender tapes attached to said slat tilter plate and stops for limiting the movement of said slat tilter plate.

3,049,176
DRAPERY ROD FIXTURE
Joseph V. Graber and Ferdinand F. Salzmann, Madison, Wis., assignors to Graber Manufacturing Company, Inc., Middleton, Wis., a corporation of Wisconsin
Filed Mar. 25, 1960, Ser. No. 17,517
14 Claims. (Cl. 160—346)



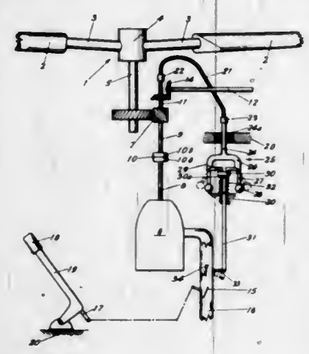
1. A rod bracket for supporting a drapery traverse rod, said rod bracket including a pulley case and means fixed to said pulley case for supporting a traverse rod adjacent one end of the pulley case, said case including a front plate, at least one cord pulley, said pulley case also including means rotatably mounting said pulley solely on said front plate with the pulley extending rearwardly therefrom, said pulley case being open at the rear side thereof to facilitate threading of a traverse cord over the pulley, and a cover plate removably attached to said pulley case to extend generally parallel to said front plate and overlying the rear end of the pulley to retain the traverse cord on the pulley.

3,049,177
SHEAR PIN TYPE RELEASABLE LOCK FOR HOOKWALL PACKERS
James W. Bonner, Houston, Tex., assignor to American Iron & Machine Works Company, Inc., Oklahoma City, Okla., a corporation of Delaware
Filed Jan. 8, 1957, Ser. No. 633,059
4 Claims. (Cl. 166—119)



1. Apparatus for use in wells comprising an upper well packer and a lower well packer, each packer including a tubular body and packing means to seal between the tubular body and a well pipe when the apparatus is disposed in such well pipe, each said well packer further including wedge means on said body and slip means to engage with the wedge means and with said well pipe to support the packer in the well pipe against downward axial movement, each of said packers further including locking means for holding said slip means and wedge means in a position in which the slip means cannot engage the well pipe to hold the packer against axial motion, pipe connected to said body of the lower packer extending upwardly therefrom, a pipe connected to said body of the upper packer extending downwardly therefrom, a telescopic joint connecting the two last said pipes, stop means limiting the extension of said joint, spring means urging said joint to full extension, said locking means for said lower packer being unlockable by manipulation of the apparatus within the well pipe, and means for unlocking said locking means for the upper packer in response to contraction of said joint.

3,049,178
HELICOPTER GOVERNOR
John B. Nichols, Atherton, and Joseph Stuart III, Palo Alto, Calif., assignors, by mesne assignments, to Hiller Aircraft Corp., Palo Alto, Calif., a corporation of California
Filed July 20, 1959, Ser. No. 828,364
6 Claims. (Cl. 170—135.7)



1. In a helicopter including a main rotor, an internal combustion engine for driving said rotor, drive means including a free wheeling unit for driving said rotor from said engine, an air-gas intake conduit for said engine, a throttle valve in said conduit, and pilot controlled means for operating said throttle valve, the combination therewith of a

governor mechanically connected to said rotor on the output side of said free wheeling unit to be rotated in synchronism therewith and including a control member movable in response to excessive speed of said rotor,

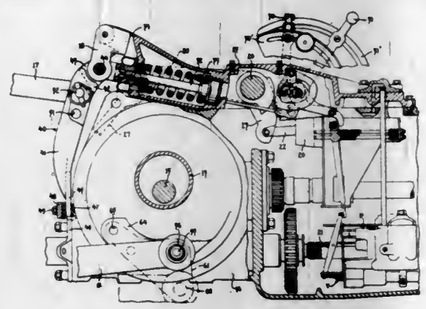
a second throttle valve in said air-gas intake conduit,

means connecting said second throttle valve to said control member for movement therewith toward a closed position in said intake conduit as said governor reflects excessive speed of said rotor, and

means normally biasing said second throttle valve to a fully open position.

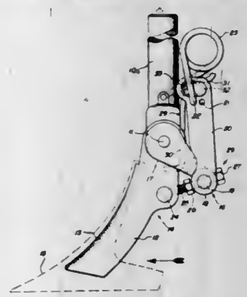
3,049,179
IMPLEMENT HITCH LINKAGE FOR TRACTORS
Ernest V. Bunting, Detroit, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed Nov. 3, 1958, Ser. No. 771,453
6 Claims. (Cl. 172—10)

1. The combination with a tractor having a spring loaded control plunger and an implement hitch linkage including draft links and a control link, means for connecting the control link with the plunger comprising an elongated beam pivotally connected at one end to the plunger, a resilient sleeve mounted on the other end of said beam, and means to clamp said sleeve against the body of the tractor to provide a fulcrum about which the beam may swing upon application thereto of either compression or tension forces, and means for connecting the



control link to said beam at any one of a plurality of longitudinally spaced points.

3,049,180
CULTIVATOR SPRING TRIP
Benjamin A. Shader, Hinsdale, and Marvin D. Jennings, Naperville, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed June 29, 1960, Ser. No. 39,631
8 Claims. (Cl. 172—268)

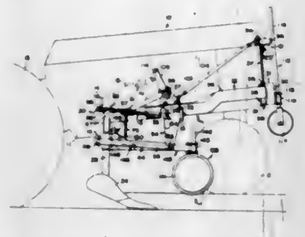


1. A spring trip for a cultivator having a tool-carrying shank and a shovel pivotally mounted on the shank for pivoting with respect thereto between an operating and a non-operating tripped position, comprising link means having a connection at one end to the shovel and having pivotal movement relative thereto, spring means yieldably connecting the other end of the link means to said shank, the said other end of said link means being movable relative to the shank against the action of said spring when the shovel is tripped, a leaf spring affixed at one end to the shank and having its other end bent to form an abutment, and a pin carried by said other end of the link means and engageable with said abutment in the operating position of the shovel to prevent tripping of the shovel in the normal operation thereof.

3,049,181
FRONT MOUNTED BEDDER
Orey W. Oerman, Moline, and James F. Sullivan, East Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Apr. 28, 1960, Ser. No. 25,467
13 Claims. (Cl. 172—298)

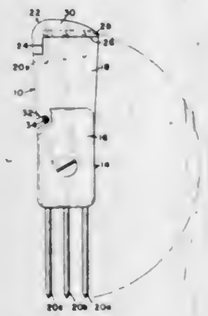
1. The combination with a tractor mounted implement including detachable frame means comprising a center section and outer sections swingably connected at their laterally inner portions to said center section and shiftable relative to the center section about generally vertical axes from a position substantially against the sides of the tractor to a position laterally outwardly thereof, and ground working means connected with said outer frame

sections and normally swingable generally vertically relative to the associated outer frame section between a ground working position and a position out of engagement with the ground, of frame supporting means for said frame means to facilitate connecting said frame means to and disconnecting it from the tractor, comprising ground engaging supporting means connected with said center section to support the latter when disconnected from the



tractor, a pair of ground engaging gauge wheel means, means connecting each of the latter with the associated outer frame section in such a manner that the ground working means may be disposed out of engagement with the ground and means associated with the gauge wheel means to permit the axis of rotation of the gauge wheel means to extend substantially through the vertical axis of swinging of the outer frame section.

3,049,182
TURF REPAIR TOOL
William E. Pelow, 248 Bellevue Ave., Syracuse, N.Y.
Filed Mar. 2, 1961, Ser. No. 92,792
3 Claims. (Cl. 172—378)



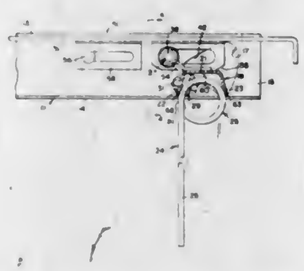
1. A hand manipulated turf working tool comprising handle means including a substantially planar member, a blade abutment element positioned at one end thereof, said blade abutment element having a first surface; and a blade assembly including a blade support portion pivotally connected to the end of the said planar member, remote from the end accommodating the abutment element, a plurality of spaced turf-penetrating tines connected at one end to and projecting longitudinally of said blade support portion, said turf-penetrating tines each having a curvilinear cross-section, said turf-penetrating tines being arranged coplanar and arranged relative to one another so that the space between adjacent tines exceeds the width of the tine, said first surface having a height above the planar member at least as great as that of the blade support portion, said blade assembly from said pivotal connection to the free ends of said tines being of such length that the blade assembly has a first operating position wherein said blade assembly forms an axial extension of said handle means and a second storage position wherein said blade assembly overlies the planar member with one of said turf-penetrating tines engaging said first surface and the ends of said tines disposed below the upper vertical limit of said first surface.

3,049,183
PEG HARROW-WELDED TOOTH BAR
Eugene J. Birkenbach, Des Plaines, Bernard E. Brown, Chicago, Thomas Vendl, Lombard, and George J. Pfeiffer, Sr., Berwyn, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 18, 1957, Ser. No. 646,655
1 Claim. (Cl. 172—691)



In a peg tooth harrow, a generally horizontal transverse tooth-supporting bar comprising a pair of opposed generally horizontal angle beams disposed side by side in a diamond-shape arrangement providing top, bottom, front and rear apices, each beam having top and bottom flanges diverging toward the other beam, upright peg teeth between said beams and having portions extending above and below the same, said flanges and teeth disposed at acute angles to each other, and a projection weld connection between the top and bottom flanges of each beam and the adjacent sides of the teeth and said flanges having portions embracing said teeth and having a wide area of weldment therewith, said connections of the top flanges and bottom flanges being respectively aligned transversely of the related tooth and extending above and below the bar, and pintle means projection welded to the teeth at the ends of the bar and projecting outwardly of said bar through the space defined between said beams, said pintle means disposed in the region of connection of the tooth with the angle beams.

3,049,184
SPRING TOOTH AND TOOTH BAR CONSTRUCTION
William V. Lohrman, Davenport, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Original application June 30, 1958, Ser. No. 745,571, now Patent No. 3,016,958, dated Jan. 16, 1962. Divided and this application May 13, 1960, Ser. No. 29,053
5 Claims. (Cl. 172—707)



1. In a spring tooth harrow, a tooth bar comprising a channel-like member having a central web and two

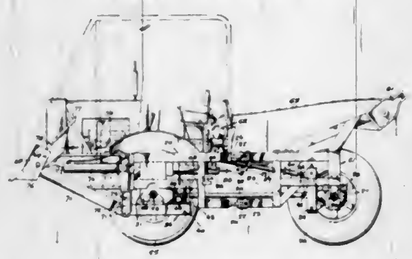
outwardly divergent flanges, a spring tooth comprising a generally straight tine portion and a coil portion comprising a plurality of turns, the external diameter of which is such that when the coil portion is disposed against the inner faces of both said divergent flanges, said coil portion is spaced from the inner face of said web section and the space being open and unobstructed, said tine portion extending generally tangentially from said coil portion at a point spaced from the adjacent point of contact of said coil portion with the adjacent flange, the angle between said flanges being appreciably less than a right angle, and means fixing said tooth to said tooth bar so that generally opposite sides of said coil portion are held wedgingly against said flanges.

3,049,185
METHOD FOR OSCILLATING DRILLING
Wolfgang Konrad Jacob Herbold, Kierdorf, Post Lechenich, Germany, assignor of one-half to Paul O. Tobeler, doing business under the name of Trans-Oceanic, Los Angeles, Calif.
Filed Dec. 26, 1956, Ser. No. 630,495
9 Claims. (Cl. 175—19)



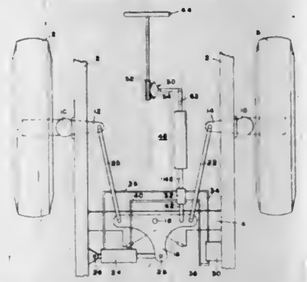
1. A method for drilling comprising introducing combined protective and drill tubing into the material being drilled, inserting means within said tubing adapted to rotate on the interior surface of said tubing to provide rotating centrifugal forces across the longitudinal axis of said tubing, rotating said means to create said forces, and rotating said tubing in said hole being drilled against the surface thereof.

3,049,186
ARTICULATING-FRAME LOGGING TRACTOR
Dwight A. Garrett, 711 Highway 410, Enumclaw, Wash.
Filed Mar. 8, 1960, Ser. No. 13,580
4 Claims. (Cl. 180—51)



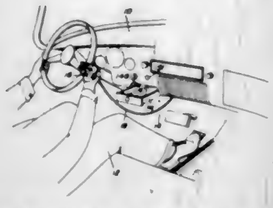
3. A vehicle comprising front and rear frame sections articulating for swing motion, one in relation to the other, in a common horizontal plane about a vertical axis, and having an internal combustion engine and an engine-driven transmission supported by the front section, said transmission providing a rearwardly pointing main power output shaft, a cradle underlying and giving support to said front section and mounted for rocker motion relative thereto about a horizontal axis extending longitudinally of the section, means for swinging said rear frame section relative to the front frame section about said axis of articulation for steering the vehicle, a set of two ground wheels carried by the cradle one at each of the two sides of the cradle, a set of two ground wheels carried by the rear frame section one at each of the two sides of the rear frame section, respective live axles for each of said sets of ground wheels, respective differentials for said front and rear axles having driving connection therewith and presenting, respectively, a rearwardly pointing and a forwardly pointing input shaft, a transfer case carried by the rear frame section located to the front of said rear differential and having a forwardly pointing upper level input shaft and both forwardly and rearwardly pointing lower level output shafts, said transfer case being rigid with the housing for said rear differential and passing the drive from its input shaft to said output shafts at a fixed speed ratio, said rearwardly pointing output shaft of the transfer case connecting directly with the input shaft of said rear differential, a torque-rod comprising spline-connected sections connecting by a respective universal fore and aft of said axis of articulation with the forwardly pointing output shaft of the transfer case and the input shaft of the front differential, and a torque-rod comprising spline-connected sections connecting by a respective universal fore and aft of said axis of articulation with said main power output shaft and with the input shaft of the transfer case.

3,049,187
STEERING MECHANISM
Jackson C. Medley, East Peoria, and Dale E. Pflederer, Tremont, Ill., assignors to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Filed Feb. 1, 1960, Ser. No. 5,830
5 Claims. (Cl. 180—79.2)



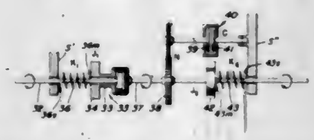
3. A power steering system for a vehicle having a dirigible wheel and operator-operable means to control steering of the wheel, said system comprising a motor, an actuator connecting the motor with the dirigible wheel whereby movement of the motor effects steering movement of the dirigible wheel, a source of energy for the motor, means controlling the flow of energy from the source to the motor to determine the direction of steering and having at least two parts relatively movable to a limited extent in response to a force less than a predetermined force, and means connecting the operator-operable means with the dirigible wheel and including two elements connected in series, one of the two elements being the energy flow controlling means through the medium of said two relatively movable parts and the other element being a compressible and extensible link rigid when subjected to forces less than said predetermined force and having means to yield when subjected to a force at least as great as the predetermined force.

3,049,188
AUTOMATIC STOPPING DEVICE FOR AUTOMOBILES
Anthony Giannetti, 36 Highland St., Paterson, N.J.
Filed July 22, 1959, Ser. No. 828,793
11 Claims. (Cl. 180—82)



1. A safety device for a motor vehicle having a steering wheel adapted to be grasped by a vehicle driver, comprising vehicle control means operative when actuated and adapted to interrupt engine operation, energize signal warnings and apply vehicle brakes, detecting means operatively connected to said vehicle control means and responsive to relaxation of the vehicle driver to actuate said vehicle control means, receptacle means mounted in the vehicle for displacement between detector exposing and storing positions and disabling means operatively interconnected with said vehicle control means and receptacle means to disable said vehicle control means in response to displacement of the receptacle means to said detector storing position.

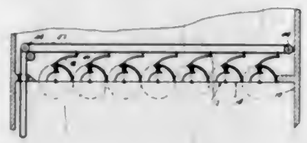
3,049,189
MECHANICAL FILTER
Hugh E. Riordan, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 9, 1956, Ser. No. 564,597
6 Claims. (Cl. 181—.5)



4. A mechanical oscillation filter comprising, a differential including a first input shaft, a second input shaft, and an output shaft operatively associated with each of said input shafts, one of said input shafts receiving mechanical oscillations to be filtered, a torsion pendulum operatively connected to the other of said input shafts for establishing the oscillation frequencies to be filtered out by said filter, said pendulum including a mass and a resilient means, said mass being coupled to said other input shaft and said resilient means being secured at one end thereof to said mass and at the other end thereof to a point removed from said mass, said mass being rotatable with respect to said point, said differential acting to compare the motion of said pendulum with the motion of said shaft receiving the mechanical oscillations and to transmit the resultant difference between said motions to said output shaft, and damping means operatively connected with one of said shafts.

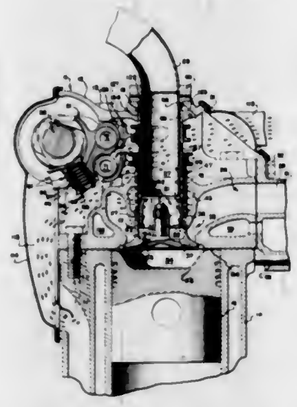
3,049,190
ACOUSTIC CONTROL UNIT
Moody L. Coffman, Oklahoma City, Okla., assignor to Acoustic Controls, Inc., Abilene, Tex.
Filed July 15, 1960, Ser. No. 43,237
5 Claims. (Cl. 181—33)

1. A sound controlling unit comprising a frame adapted to cover a wall surface and having an inner face and an outer face, and a plurality of members each in the form of a sector of a cylinder arranged in side by side abutting relation and supported in said frame, each cylinder sector including a wall shaped to an arc of said cylinder and having a leg projecting perpendicularly from one side edge of said wall and extending from one end to the other end of said wall, the cylinder sectors being disposed in pairs with each pair of cylinder sectors having the legs abutting each other with the open sides facing



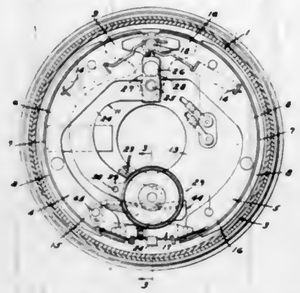
away from the outer face of said frame, and means connecting the pairs of said cylinder sectors for movement from the positions in which the legs abut each other with the open sides facing away from the outer face of said frame to either positions in which the arcuate walls abut each other with the legs diverging from each other and the open sides partially facing each other or positions in which the legs are co-planar and the arcuate walls are in side by side relation and close the open sides.

3,049,191
CONCENTRIC VALVE INTERNAL COMBUSTION ENGINE
Theron E. Neir, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application Feb. 10, 1958, Ser. No. 714,165, now Patent No. 2,988,071, dated June 13, 1961, which is a division of application Ser. No. 536,614, Sept. 26, 1955. Divided and this application Apr. 11, 1960, Ser. No. 21,311
2 Claims. (Cl. 184—6)



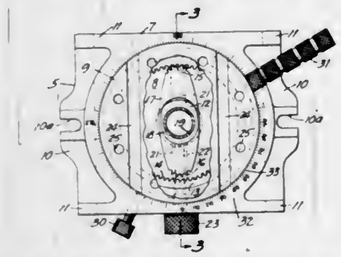
1. A valve actuating mechanism for an internal combustion engine comprising an air valve having a stem, guide means for said stem in part forming an air path leading away from said stem, means to cause air flow along said path, a rocker arm mounted proximate said valve in said path and operatively connected directly to the stem, means for rocking said arm, said arm including a bifurcated member engaging a portion of the circumference of the valve stem, means for lubricating said mechanism, and baffle means on said bifurcated member in said path for limiting the flow of lubricating oil to the valve stem, air flow along said path further inhibiting flow of lubricating oil to said stem.

3,049,192
AUTOMATIC BRAKE ADJUSTER
Joseph A. Klavon, Jr., Jackson, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,554
10 Claims. (Cl. 188—79.5)



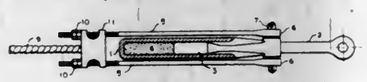
1. A brake comprising a brake drum, a pair of shoes within and engageable with said drum and having adjacent ends, a longitudinally adjustable device connecting said adjacent ends of said shoes, said device including a peripherally notched wheel rotatable in one direction to elongate said device and thereby adjust said shoes to compensate for wear, means for applying the brake including a pivoted arm having means for spreading said shoes into engagement with said drum upon pivotal movement of said arm in either direction, means for pivoting said arm in one direction during forward rotation of said drum and in the opposite direction during reverse rotation thereof including an armature carried by said drum and an electro-magnet carried by said arm in position to contact said armature, and an adjuster pivoted on one of said shoes and having a part engageable with the periphery of said wheel and swingable in an operating direction to rotate said wheel in said one direction to elongate said device, said arm having a part engageable with said adjuster to swing it in said operating direction upon pivotal movement of said arm in said opposite direction only.

3,049,193
ROTARY WORK POSITIONING AND INDEXING TABLE
Ward H. Ingersoll, 2444 Beverly Road, St. Paul, Minn.
Filed May 21, 1959, Ser. No. 814,733
4 Claims. (Cl. 188—69)



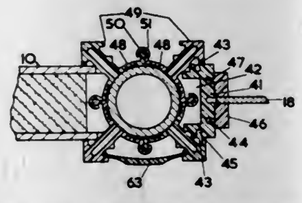
1. For an indexing table of the type having a hollow base defining an annular chamber and a rotary table supported on said base and projecting into said chamber for carrying a work holder, improved indexing means comprising an internal ring gear fixed on said table coaxially to the axis of rotation thereof within said chamber and having a multiplicity of teeth of equal pitch defining a pitch angle, a member movably supported on said base within said chamber and held from circumferential movement with respect thereto, said member including a first pawl formed with a tooth disposed to interlock with teeth of said ring gear in a number of different positions corresponding to the number of teeth on said ring gear in one position of said member, said member also including a second pawl formed with a tooth disposed to interlock with teeth of said ring gear in positions differing from the locking positions of the first pawl by one-half of said pitch angle in another position of said member, said member being movable between said positions, and means extending to the exterior of said base for selectively actuating said member to lock said table in any of said angular positions and for releasing the table for rotation relative to the base.

3,049,194
APPARATUS FOR MAINTAINING CONSTANT TENSION IN GUYS
Armin G. Brendel, 42 Bayard Lane, Suffern, N.Y.
Filed Feb. 24, 1960, Ser. No. 10,796
2 Claims. (Cl. 189—31.5)



1. A new and improved guy which comprises in conjunction with a guy wire, an imperforate cylinder having a closed end and open end, a column of flowable material in said cylinder, said flowable material having a coefficient of expansion markedly greater than the coefficient of expansion of the guy wire, the quantity of said flowable material being selected such that the expansion and contraction of said flowable material in a longitudinal direction is approximately equal to the longitudinal expansion and contraction of the guy at any temperature, thereby maintaining a constant tension in said guy, said open end of the cylinder terminating in a pair of arms forming a yoke, means at the end of the yoke to attach the yoke and cylinder to one section of the guy wire, a piston within said cylinder and having an arm external of the cylinder and being positioned between the arms of the yoke, a pair of tie rods attached to the end of piston arm and disposed in a direction opposite to the yoke arms, said tie rods being attached to another section of the guy wire.

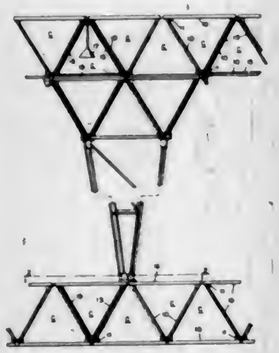
3,049,195
DEMOUNTABLE PARTITIONS
James Harrison Leat, Epsom, Hugh Wallace Robarts, Surbiton, and Thomas Henry Gibbs, London, England, assignors to National Research Development Corporation, London, England, a corporation of Great Britain
Filed Jan. 8, 1960, Ser. No. 1,371
Claims priority, application Great Britain Jan. 9, 1959
8 Claims. (Cl. 189—34)



1. Demountable partitioning for erection between a pair of parallel surfaces comprising extensible stanchions supported by endwise pressure between the parallel surfaces; panel grips each consisting of a plurality of prefabricated strips extending longitudinally of a stanchion in contact with its surface, a rib along one edge of each strip in the other edge of which is formed a groove, the rib of each strip being interlocked with the groove of an

adjacent strip to form a jacket around the stanchion, and longitudinal wing flanges extending radially outward from the strips forming panel receiving grooves therebetween; and wall panels seated in said panel receiving grooves and extending between the stanchions.

3,049,196
ROOF OR FLOOR SUPPORT
Charles W. Attwood, 4118 S. Wayne Road, Wayne, Mich.
Filed Dec. 8, 1960, Ser. No. 75,076
7 Claims. (Cl. 189—34)



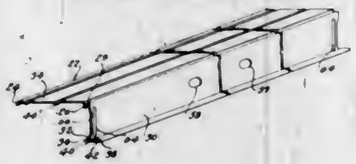
1. In a building structure a portion consisting of rectangular pyramid forms, erect and inverted, produced by fixing identical metallic strut members to junction plates located at the apices of the pyramid forms, said erect pyramid forms each having slanting edges in common with the four adjacent inverted forms, each of said metallic strut members forming an edge of two adjacent pyramid forms, said pyramid forms having their rectangular bases in two parallel planes, panels of sheet material secured to the inner sides of said strut members within a row of said pyramid forms and extending through a plurality thereof whereby to form a conduit, the planes of the panels forming said conduit intersecting at acute dihedral angles whereby said panels coact to restrain each other from being displaced inwardly with respect to the conduit through said building structure portion.

3,049,197
FLUSH SINGLE-LINE PARTITIONS
Oskar R. Ludwig, 64—25 72nd St., Middle Village, N.Y.
Filed Mar. 22, 1961, Ser. No. 97,605
4 Claims. (Cl. 189—34)



1. Collapsible partition assembly comprising a plurality of panels for erection into a vertical partition wall in side-by-side succession, each said panel having a front face and a rear face and first and second sides and having outwardly opening panel pockets in the sides thereof extending the full height thereof, a plurality of vertically spaced U-shaped locking frames wholly within each panel pocket, each locking frame having a web and opposing frame flanges connected to said web, means mounting each said locking frame in said panel pocket with said web opposing the inner face of said panel pocket, said frame flanges being parallel to the front and rear faces of said panel and being respectively proximate to and spaced from the front and rear faces of said panel pocket, a plurality of lock bars, each lock bar having opposing faces and having a plurality of spaced bar interlock means on one of its faces, said frame flanges each having interlock-receiving means which are identical for all said frame flanges, the interlock-receiving means of the front frame flanges at the first side of said panel and of the rear frame flanges at the second side of said panel and said bar interlock means being respectively cooperatively shaped and positioned for reception of a lock bar in releasably mounted position on each of said first side front frame flanges and second side rear frame flanges with each said bar positioned between its associated frame flanges and the proximate face of its associated pocket and with said lock bar in a first vertical position relative to said panel, the interlock receiving means of adjacent frame flanges of side-by-side panels and the interlock means of a lock bar previously mounted on one of said adjacent frame flanges being respectively cooperatively shaped and positioned to permit movement of said previously mounted lock bar to a second vertical position in which it locks said adjacent frame flanges together, and means releasably maintaining said lock bar in its second vertical position.

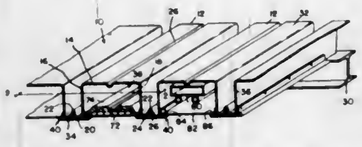
3,049,198
BUILDING STRUCTURES
Mark Dobbins, Detroit, Mich., Joseph J. Gruber, Depew, N.Y., and Robert Repp, Detroit, and Bert E. Rockhoff, Grosse Pointe, Mich., assignors to Fenestra, Incorporated, Detroit, Mich., a corporation of Michigan
Filed Oct. 27, 1958, Ser. No. 769,809
1 Claim. (Cl. 189—34)



A building panel comprising a horizontal plate portion, a vertical web portion extending downwardly from one edge of said plate portion, a foot extending laterally from the lower edge of said web portion, the material of said web portion directly adjacent the ends thereof being shaped to form elongated vertical indented ribs extending substantially the full height of said web portion, but having upper and lower ends spaced respectively slightly below and above the upper and lower edges of said web portion, said ribs being sufficiently close to the ends of said web so that the material of the web between said ribs and the ends of said web is displaced inwardly and the material of said ribs thereby being of the same thickness as the remainder of said web.

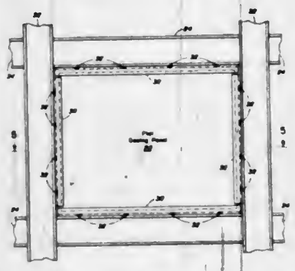
3,049,199
JOINT CONCEALER AND SHELF T
Joseph J. Gruber, Depew, and Joseph J. De Falco, Buffalo, N.Y., assignors to Fenestra, Incorporated, Detroit, Mich., a corporation of Michigan
Filed Dec. 8, 1958, Ser. No. 778,835
4 Claims. (Cl. 189—34)

1. In combination with a composite floor and ceiling construction including a plurality of elongated generally channel shaped building panels in side by side relation wherein said panels have horizontal web portions, downwardly extending flange portions at each longitudinal edge of said web portions, and horizontal flange portions extending laterally outwardly from said downwardly extending flange portions, said composite floor and ceiling construction also including means forming joints along the length of the building panels connecting the edge of said horizontal flange portions of the adjacent building panels whereby the adjacent horizontal and downwardly extending flange portions form joists, said joists defining longitudinal ducts therebetween; a joint concealer and



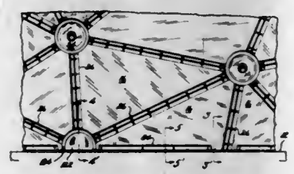
shelf T distinct from the last mentioned means comprising a substantially flat elongated rectangular member having both longitudinal edge portions returned along the same surface thereof at an angle of 180°, said edge portions terminating in leg portions extending substantially perpendicularly to said member to form shelves between the terminal edge of said member and said leg portions, said leg portions being flat and substantially further apart than the width of said shelves whereby said joint concealer and shelf T is adapted to fit snugly over the lower portion of a joist, said leg portions also including openings through which fastening means for said joint concealer and shelf T may extend.

3,049,200
PANEL MOUNTING FOR STEEL CASED FURNACES
Charles W. Gordon, Glen Ellyn, Ill., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 6, 1959, Ser. No. 797,737
4 Claims. (Cl. 189—34)



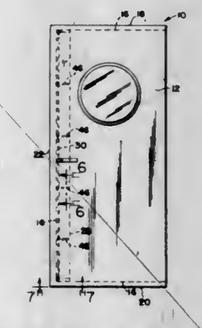
1. A furnace wall casing of sheet metal construction comprising, in combination, generally vertical buckstays which lie in the plane of said casing and which are horizontally spaced one from another, generally horizontal buckstays likewise lying in the plane of said casing and being vertically spaced one from another and extending between said vertical buckstays to form openings each of which is framed by horizontal buckstays along its top and bottom and by vertical buckstays along its left and right sides, a casing panel of flat sheet metal for each of said buckstay-framed openings cut to a size slightly smaller than the dimensions of that opening, channel strips of U cross section respectively provided for and slipped in snug relation over the four edges of each of said panels with each assemblage thus formed being insertable into the aforesaid opening for that panel and with all four of said panel-edge-engaging U channels then being drivable outwardly into contact with their adjoining buckstays, and means in the form of welds for securing each of said outwardly-driven U channels to its contacting buckstay whereby each of said casing panels whose edges are engaged by those so secured U channels is firmly held within and serves to close the aforesaid buckstay-framed opening therefor in the casing structure.

3,049,201
BASE DETAILS
Thomas F. King, Burlington, Lee P. Farnsworth, Lancaster, and Mitchell M. Hannoosh, Wakefield, Mass., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Feb. 3, 1959, Ser. No. 790,989
3 Claims. (Cl. 189—36)



1. Anchoring means for a structural assembly of metallic links, metallic junction hubs, and non-metallic membranes, said anchoring means including a flat-surfaced foundation, against which foundation said links and junction hubs terminate in oblique angular relationship thereto, triangular metallic gusset means having horizontal and oblique edges abutting said foundation and hub surfaces, respectively, rectangular metallic gusset means integrated with said foundation and having interlocking joinder with slotted sections of said links, and metallic angle bar means securing said membranes to said foundation.

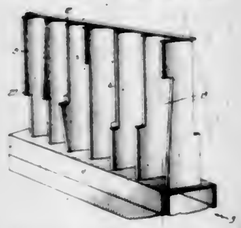
3,049,202
DOOR CONSTRUCTION
Vernon R. Sailor, 1258 Rivershores Lane, and Romer G. Weyant, 81 Edgewater Drive, both of Elkhart, Ind.
Filed May 11, 1960, Ser. No. 28,357
4 Claims. (Cl. 189—46)



1. A door construction having front and rear sheet metal panels in spaced relation, three of the corresponding edges, including the top, bottom and one side edge, being shaped and fastened together to form a continuous marginal recess for fitting into a door frame, said one side edge being cambered to provide a concave face toward its rear panel, a relatively rigid resilient frame member mounted between said panels and extending vertically between said top and bottom edges and adjacent said side edge and operable to urge said side edge toward a straight position, and an adjustable tension element extending longitudinally through and operably connected to opposite ends of said frame member, said tension element being operable on being tensioned to camber said

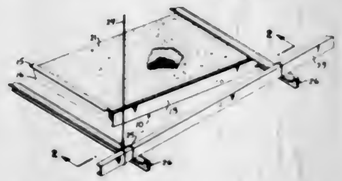
frame member and thereby said side edge, said frame member having a plurality of relatively deep horizontal grooves facing said rear panel so as to facilitate cambering said frame member on tensioning said tension element, said door construction having an access opening for adjusting the tension of said tension element.

3,049,203
MULTIPLE PANEL SPACE DIVIDER STRUCTURE
Herbert Bayer, Aspen, Colo.
Filed Apr. 13, 1959, Ser. No. 806,141
2 Claims. (Cl. 189—62)



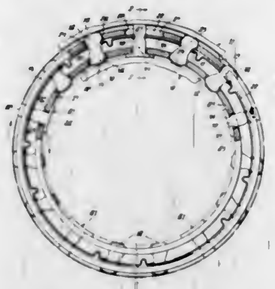
1. A space divider comprising frame means, a plurality of louver members mounted on said frame means, each of said louver members being mounted for pivotal movement about an axis of rotation, said axes of rotation extending generally parallel to each other, each of said axes of rotation lying substantially in a single plane, each of said louver members having a periphery which is geometrically irregular in the plane of said louver member, the adjacent peripheries of adjoining louver members having complementary irregular peripheries such that a continuous, substantially solid wall is formed by said louver members when all of said louvers members lie in said one plane, said louver members also extending generally parallel to each other when they do not lie in said one plane, the interlocking adjacent peripheries of adjoining louver members cooperating, when said louver members lie in said one plane, to present an irregular boundary pattern between said louver members and tend to prevent deformation of said divider in said one plane, and means for rotating said louver members about their corresponding axes.

3,049,204
ACOUSTICAL SUSPENSION SYSTEM INCLUDING ACOUSTICAL PAN
Stanley E. Sorenson, 14745 25th NE., Seattle, Wash.
Filed Apr. 20, 1959, Ser. No. 807,372
4 Claims. (Cl. 189—85)



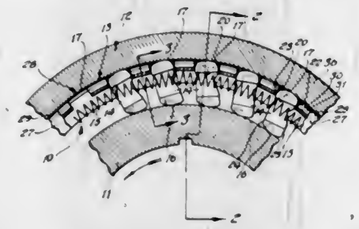
1. In a ceiling suspension system, a pan having a panel with an upstanding front hanger flange, a pair of upstanding longitudinal side flanges, and an upstanding back flange, said hanger flange having a forwardly projecting hanger tab, and said side flanges having respective forwardly extending kerfs in the rear end thereof at a level above the top of said back flange thereby providing lips above said kerfs, said hanger tab being located above the level of the upper extremity of said lips, and said lips terminating at their rear ends forwardly of the rear end of said panel.

3,049,205
ONE-WAY CLUTCH AND BEARING
Ernest A. Ferris, Elmhurst, and Daniel M. Wade, River Forest, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed June 21, 1954, Ser. No. 438,056
2 Claims. (Cl. 192—45.1)



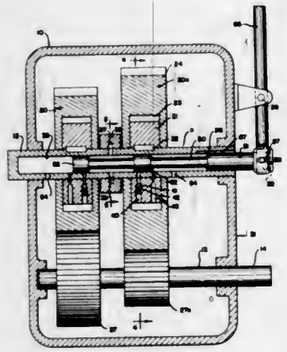
1. In a combined one-way sprag clutch and bearing for use between inner and outer races together providing radially inner and outer annular surfaces; the combination comprising a plurality of circumferentially spaced sprags adapted to tilt into and out of wedging engagement with the race surfaces; means adapted to effect substantially uniform tilting of said sprags throughout their normal degree of tilt whereby said sprags are maintained in phase with each other throughout their tilting range; and a plurality of circumferentially spaced roller bearing means disposed between the race surfaces in circumferential alignment with said sprags adapted to engage both the race surfaces simultaneously to maintain the concentricity thereof and the desired spacing therebetween.

3,049,206
SPRAG AND RETAINER ASSEMBLY
Thaddeus F. Zlotek, Detroit, Mich., assignor to Formsprag Company, Warren, Mich., a corporation of Michigan
Filed Oct. 12, 1959, Ser. No. 845,834
6 Claims. (Cl. 192—45.1)



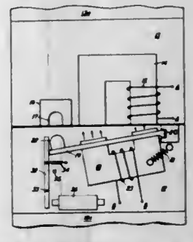
1. A clutch sprag and retainer assembly, comprising an annular series of like circumferentially spaced sprags each having radially opposed, inner and outer race-engaging surfaces and a rounded bearing surface on either circumferential side of said outer surface outwardly intersecting the latter, said bearing surfaces being convex and of closely similar arcuate contour and converging toward one another in a zone spaced radially inwardly of the outer race-engaging surface, an annular retainer to hold said sprags in assembly, comprising end ring members adjacent opposite axial ends of the sprags, and radially inwardly offset cross members extending between corresponding outer peripheral zones of said ring members in circumferentially spaced transverse zones between each of the successive sprags of the series, said sprags each having axially inwardly recessed formations at opposite axial ends thereof, said cross members defining therebetween sprag-receiving spaces which open substantially radially of the retainer, said cross members having their axial midpoints only sufficiently offset radially inwardly relative to said peripheral zones to take bearing engagement with said side bearing surfaces of the sprags, and spring means engaging said axial end formations of said sprags directly axially inwardly of said ring members, thus to bias the sprags for wedging engagement with the races without engagement of said spring means with said retainer cross members.

3,049,207
CLUTCH
Richard J. Maier, 16924 Muirland, Detroit 21, Mich., assignor of fifty percent to George Simon, Detroit, Mich.
Filed Oct. 14, 1959, Ser. No. 846,398
1 Claim. (Cl. 192—58)



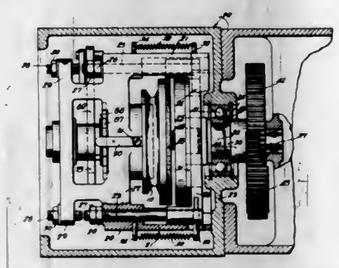
A clutch comprising a housing having an internal chamber, a rotor rotatably fitted in said chamber and having a peripheral wall spaced from the internal wall defining the chamber, said internal wall being curved so that at certain places it is close to and at certain places it is remote from said peripheral wall, a radially directed vane pocket formed in the rotor and opening outwardly at the peripheral wall thereof, a vane slidably fitted into the pocket for retracting into the pocket and for radially sliding outwardly of the pocket so that its free end may contact the chamber internal wall; with the vane being of a cross-section corresponding to the pocket cross-section for closing off the pocket opening; the pocket being radially longer than the length of the vane to form a space between the bottom of the vane and the bottom of the pocket the space being closed off relative to the chamber; a pressure applying detent arranged within the rotor to press against a side of the vane to frictionally hold the vane against movement; a feed passageway formed in the rotor remote from said pocket and opening into said chamber and through which pressurized fluid may be delivered to the chamber; and a vane passageway also formed in the rotor and connecting said space at the bottom of the vane to the feed passageway, whereby pressurized fluid is delivered to the chamber through the feed passageway to fill the chamber and simultaneously a portion of the fluid is diverted through the vane passageway to said space to push radially outwardly on the bottom of the vane and thus overcome the detent pressure and press the vane outwardly against the frictional drag of the detent so that its free end contacts the chamber wall, and to tightly press the vane into said contact until the pressurized fluid is drained from the space.

3,049,208
LOCKING MECHANISMS
Gregory Wilson Parkes, 129 Davies Road, West Bridgford, England
Filed Dec. 29, 1958, Ser. No. 783,237
Claims priority, application Great Britain Dec. 31, 1957
22 Claims. (Cl. 192—135)



1. A safety device for use with a machine having a stationary member and a guard member movable relative to said stationary member between a closed position in which access to at least a part of the machine is prevented and an open position permitting such access, and having also an electrical control circuit so arranged that the machine can be put into operation only when the electrical control circuit is electrically energised, said safety device comprising a first transformer core portion adapted to be carried by said stationary member of the machine, a second transformer core portion adapted to move together with the movable guard member and adapted to move into close flux-carrying relationship with said first transformer core portion to form a substantially closed magnetic circuit only when said movable guard member is in its closed position, a transformer primary winding wound upon one of said transformer core portions, an A.C. supply connectable to said transformer primary winding, a transformer secondary winding wound upon one of said transformer core portions and so arranged that an alternating voltage of prescribed magnitude is induced in that winding from said transformer primary winding only when said transformer core portions are in said close flux-carrying relationship, and energization means connected to said transformer secondary winding and adapted to electrically energize said electrical control circuit to put said machine into operation only when said alternating voltage of prescribed magnitude is induced in said transformer secondary winding.

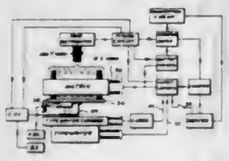
3,049,209
STOP MOTION
Franklin A. Reece, Chestnut Hill, Mass., assignor to The Reece Corporation, Boston, Mass., a corporation of Massachusetts
Continuation of application Ser. No. 417,009, Mar. 18, 1954. This application Oct. 14, 1960, Ser. No. 62,801
1 Claim. (Cl. 192—144)



In combination with a driven member forming part of a machine to be driven and stopped, a rotatable driving

member, a clutch member forming part of the machine to be stopped, a non-rotatable member mounted to yield lengthwise of the axis of rotation of the rotatable driving member, said clutch member being mounted between the rotatable driving member and the non-rotatable yielding member, means limiting the yielding movement of the non-rotatable member toward and away from the driving member, said clutch member being movable into and out of alternate locked frictional engagement with the non-rotatable yielding member and the driving member, an means causing the clutch member to move by its own momentum out of engagement with the driving member and into engagement with the non-rotatable yielding member and thereby slowing the clutch member and the machine during the yielding movement and locking the clutch member and the non-rotatable yielding member against further relative angular movement with respect to each other when the yielding member is prevented from further movement by contact with the limiting means.

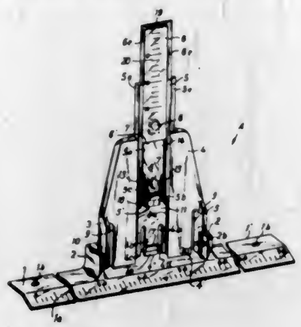
3,049,210
TYPE COMPOSING APPARATUS
Louis M. Moyroud, West Medford, Mass. (% Graphic Arts Research Foundation Inc., 58 Charles St., Cambridge 41, Mass.), assignor, by mesne assignments, to Rene A. Higonnet and Louis M. Moyroud
Filed Apr. 15, 1960, Ser. No. 64,690
Claims priority, application Great Britain Apr. 17, 1959
9 Claims. (Cl. 197—19)



1. In type composing apparatus, the combination of a memory matrix having two coordinate wire systems each consisting of a plurality of wires, each wire of one system being associated with each wire of the other system in an intersection, bistable means at each intersection for actuation upon the coincident arrival of pulses on both wires therein, a pulse source, and writing means for connection of the source to the wires of one coordinate system singly and consecutively and for simultaneous selection of combinations of the wires of the other coordinate system corresponding to the characters selected.

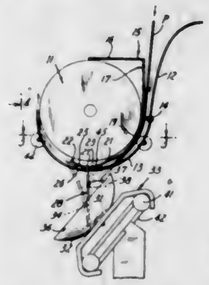
3,049,211
EDGE SETTING AND SHEET SUPPORTING ATTACHMENT FOR TYPEWRITERS AND THE LIKE
Anton Demmel and Günter Kernchen, Wilhelmshaven, Germany, assignors to Olympia Werke A.G., Wilhelmshaven, Germany
Filed July 12, 1960, Ser. No. 42,313
Claims priority, application Germany July 27, 1959
14 Claims. (Cl. 197—140)

1. An edge setting and sheet supporting attachment for typewriters and the like, said attachment comprising, in combination, an elongated edge setting first component having scale means for facilitating the setting of the edges of a paper or like sheet; a sheet supporting second component comprising at least two slidably interconnected members; and pivot bearing means for connecting said second component with said first component in such a way that the members of said second component are substantially perpendicular to the longitudinal direction of said first component and said second component is pivotable about an axis substantially parallel with the longitudinal extension of said first component, said bearing means comprising aligned pivot axle means connected with one



of said components and seats for said axle means formed in the other component.

3,049,212
PAGE-END SIGNAL DEVICE
Robert Fondiller, 33 W. 63rd St., New York 23, N.Y.
Filed Mar. 15, 1960, Ser. No. 15,155
6 Claims. (Cl. 197—189)

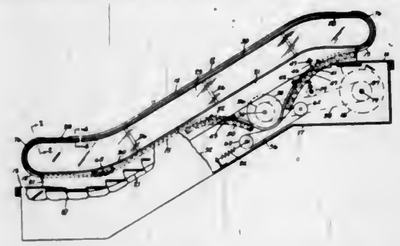


1. In a typewriter or similar device having a platen, a paper table, a paper pan and a slidably mounted carriage base carrying the same, a page-end signal device comprising a resilient sensing finger affixed at one end to said carriage base and rising therefrom, said paper pan having an aperture through which the free end of said finger protrudes, said free end of said finger being adapted to be engaged by the leading edge of a page positioned between the platen and the paper pan, to be deflected by such page as the latter is advanced by rotation of the platen, and means controlled by the return of said resilient finger from its deflected position, when the trailing edge of the page has passed the latter, to effect an indication.

3,049,213
MOVING STAIRWAY
Andrew Fabula, Hoboken, N.J., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 22, 1960, Ser. No. 23,932
4 Claims. (Cl. 198—16)

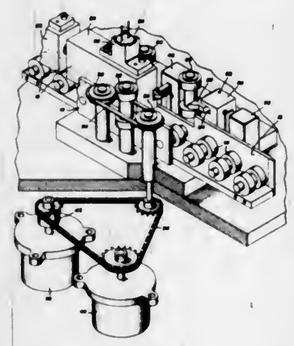
1. A moving stairway for carrying passengers from one landing to another, said stairway having an upper and a lower landing section and an intervening inclined portion supported on a structural truss, said stairway comprising; an endless series of step positioned on said truss for movement between said landings; a vertically disposed balustrade positioned along a side edge of said steps, said balustrade terminating in a semicircular newel

section at each of said landings and consisting of a handrail guide portion forming its periphery, a skirt panel section mounted closely adjacent the side edge of said steps and extending at substantially step height from one of said semicircular newel sections to the other, and a side panel section of transparent material intermediate said skirt panel section and said handrail guide portion; an endless moving handrail supported on said guide portion for its exposed run; mechanism for driving said steps and handrail in synchronism, said mechanism including a handrail drive sheave rotably mounted in the inclined portion of said truss beneath the lowermost edge of said transparent side panel section in tractional engagement



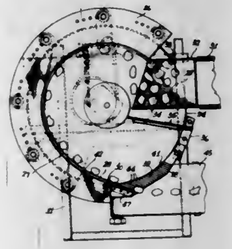
with the inner surface of said handrail, handrail tensioning devices mounted on said truss in said inclined portion, one on each side of said drive sheave in position to engage the outer surface of said handrail and support it in contact with the drive sheave immediately before and after its engagement with said drive sheave, the tensioning means on one side being movable for effecting an adjustment of the tension in the handrail and the angle of wrap between the handrail and its drive sheave; and mechanism mounted on said truss in engagement with the inner surface of said handrail on its return run for maintaining the return run of said handrail at a level beneath the lowermost edge of said transparent side panel section.

3,049,214
ELECTRON TUBE ASSEMBLY APPARATUS
Keith C. Cormia and Alanson D. Aird, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 22, 1959, Ser. No. 841,509
13 Claims. (Cl. 198—19)



6. Apparatus for arresting and accurately positioning a moving workpiece-carrier fixture comprising a stop mounted in the longitudinal path of the fixture for engagement therewith, fixture-locating surfaces adjacent the stop engageable with the side and bottom of an arrested fixture for precision location thereof in directions orthogonal to the longitudinal direction, continuously operating drive means mounted for friction clutching engagement with a fixture approaching the stop, means for operating the drive means to drive a fixture engaged thereby toward the stop, and means for disengaging the stop from an arrested fixture responsive to a control signal whereby the arrested fixture is expelled from its precisely located position by the drive means.

3,049,215
SINGLE ROW FEEDER
James F. Hutter and Leonard Kelly, Bancroft, Ontario, Canada, assignors to K & H Equipment Limited, Toronto, Ontario, Canada
Filed Mar. 28, 1960, Ser. No. 17,975
6 Claims. (Cl. 198—30)



3. A feeding device for a single row feeder having a member mounted for rotation about a substantially vertical axis and having an upper surface for reception of objects to be fed in a single row, said surface being of inverted conical configuration, and a band stationarily mounted above said member and having a spirally curved surface disposed in close proximity and in angular relation to said rotatable surface, said stationary surface describing the major portion of but less than one complete convolution about the axis of said rotatable surface and having a discharge end disposed directly above the periphery of said rotatable surface, which comprises a stationary discharge trough having an upright wall, said upright wall having an object-receiving surface having an inner end edge adjoining said discharge end of said stationary surface and constituting a continuation thereof, and a bottom wall having an inner arcuate edge adjoining and conforming to the periphery of said rotatable surface, said bottom wall having an object-receiving surface extending downwardly from said edge, said object-receiving surfaces terminating in a discharge lip, said object-receiving surfaces of said trough having a plurality of ridges therein extending from said inner edges to said lip.

3,049,216
HOPPER FED CONVEYOR
Milford A. Campbell, 17225 MacArthur, Detroit, Mich.
Original application Feb. 7, 1957, Ser. No. 638,805, now Patent No. 2,930,473, dated Mar. 29, 1960. Divided and this application Feb. 23, 1960, Ser. No. 10,180
7 Claims. (Cl. 198—33)

1. In a mechanism for continuously upwardly delivering substantially identical elongated workpieces from a supply source, the combination with a hopper forming said supply source and having a fill opening and a rear wall and a bottom inclined downwardly toward such wall, of an elongated flexible endless conveyor having an upwardly traveling span adjoined and substantially parallel to and upwardly extending beyond said wall, a revoluble upper mounting for the conveyor, a revoluble lower mounting for the conveyor, drive means for the conveyor, a plurality of workpiece pick-up devices mounted upon

the conveyor, each such device comprising a shelf elongated transversely to the direction of conveyor travel, and

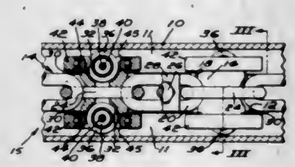


a plurality of laterally spaced lugs forwardly projecting from the conveyor and upwardly spaced from said shelf.

3,049,217
CONVEYOR GUIDE MEANS

Humphrey F. Parker, Buffalo, and Erford E. Robins, North Tonawanda, N.Y., assignors to Columbus McKinnon Corporation, a corporation of New York

Filed Apr. 3, 1959, Ser. No. 803,859
2 Claims. (Cl. 198—177)



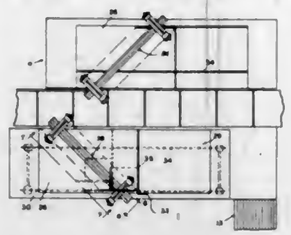
1. In a conveyor assembly, a guide wheel carriage comprising an elongate body, a pair of oppositely directed, lateral stub axle portions at each end of said body, a vertical guide wheel mounted on each stub axle portion, the intermediate portion of said body between said pairs of stub axle portions being of reduced height to define a saddle between the body ends, a length of conveyor chain, means fixing one horizontal link of said chain within said saddle, said body being provided with a vertical slot extending longitudinally thereof between each pair of stub axle portions and intersecting said saddle to accommodate the two adjacent vertical links of said chain on either side of said one horizontal link.

3,049,218
SORTING SYSTEM FOR POST OFFICES AND THE LIKE

Leonard J. Bishop, Birmingham, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan

Original application Feb. 4, 1957, Ser. No. 637,999. Divided and this application Nov. 23, 1959, Ser. No. 854,731
7 Claims. (Cl. 198—188)

1. In parcel and like sorting equipment, a continuously driven main traveling conveyor, and a loading unit adapted to be positioned adjacent the path of said main traveling conveyor to feed parcels thereto, said unit comprising a continuously traveling loading conveyor acting to forward a parcel longitudinally in the general direction of main conveyor travel and at a speed coordinated with that of the latter, a transfer device acting in conjunction with said loading conveyor and at an acute angle to said direction to feed a parcel to said main conveyor, said transfer device including a transfer member engageable with a side of said parcel, and means to continuously move said member diagonally toward said main conveyor at a speed of the longitudinal vector com-

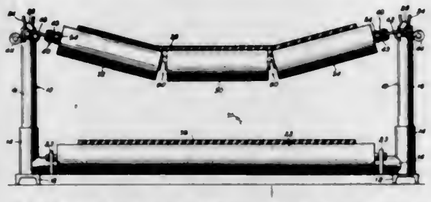


ponent of said member equaling substantially the longitudinal speed of said loading conveyor.

3,049,219
IMPROVEMENTS IN FLEXIBLE TROUGHING IDLER ASSEMBLIES

Charles J. Arndt, Harvey, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Sept. 9, 1958, Ser. No. 760,006
4 Claims. (Cl. 198—192)

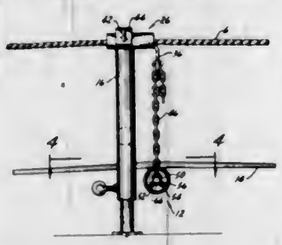


1. In a troughing idler assembly for a belt conveyor, a plurality of roller supporting shafts disposed in generally end-to-end relationship, each shaft having a roller rotatably mounted thereon and a connection between adjacent shafts, the connection including pivot means offset longitudinally of the shafts with respect to the midpoint between the rollers in an unloaded condition, said offset pivot means causing the upper edge of the roller towards which the pivot means is offset to duck below the opposed upper edge of the adjacent roller when the idler assembly troughs in a loaded condition.

3,049,220
FREELY SUSPENDED RETURN ROLLER ASSEMBLY FOR ROPE SIDE FRAME CONVEYORS

Roy F. Lo Presti, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Apr. 18, 1960, Ser. No. 23,089
1 Claim. (Cl. 198—192)

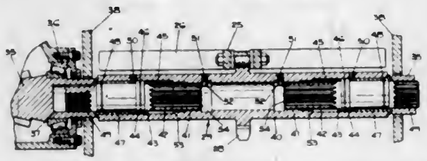


In combination with a belt conveyor of the type in which a plurality of troughing idler assemblies for supporting the conveying reach of a flexible conveyor belt are suspended at intervals from a pair of wire ropes which are trained in generally parallel relationship to one another along a conveying course, said wire ropes being supported at spaced locations from ground engaging support stands, the improvement comprising means for suspending a return roller from a support location which enables the return roller to hang freely and cant as needed to provide a training effect for the return reach of the conveyor belt, said return roller assembly suspending means including a pair of rope seats, each one of said pair being secured to a pair of oppositely positioned support stands, each one of said rope seats having a wire rope receiving bight portion and means for forcing a wire rope into snug engagement with each bight portion, each rope seat having a flange extending in a direction parallel to the longitudinal axis of the conveyor in a direction away from its associated support stand, each of said flanges terminating, at its remotest end, in a generally vertically oriented ear, each ear having a keyhole slot therein, a return roller, and a bodily flexible suspending member such as a chain secured, at its lower end, to an end of the return roller, the upper end of the suspending member being received in the keyhole slot.

3,049,221
SHAFT STRUCTURE

James Kilbourne, Columbus, Ohio, assignor, by mesne assignments, to The Jeffrey Galion Manufacturing Company, a corporation of Ohio

Filed Sept. 11, 1959, Ser. No. 839,502
5 Claims. (Cl. 198—203)



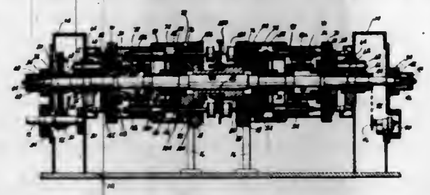
1. In a conveyor having a driving chain extending along the run of the conveyor, conveying flights secured to the chain and driven thereby to move material along the run of the conveyor, a main shaft including a sprocket engaging the chain for driving the latter, a shaft core in the main shaft, said main shaft including a cylinder portion and said shaft core including an annular piston portion disposed in the cylinder portion for reciprocation relatively thereto, said core shaft including a drive engaging portion extending beyond the main shaft for engagement with drive means and a drive transmitting portion disposed within the main shaft and engaged therewith, said annular piston portion being disposed intermediate the drive engaging portion and the drive transmitting portion of the shaft core, and means for applying hydraulic fluid under pressure to the piston portion to reciprocate the shaft core relatively to the main shaft and to remove the drive engaging portion of the shaft core from engagement with the drive means.

3,049,222
WORK HOLDER FOR METAL WORKING MACHINES

Guy O. Conner, Cleveland, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey

Application Mar. 25, 1958, Ser. No. 723,879, which is a division of application Ser. No. 215,131, Mar. 12, 1951. Divided and this application May 31, 1961, Ser. No. 113,898
3 Claims. (Cl. 198—210)

1. In a forming machine, a rotatable work holder rotatably driven by said machine including a plurality of wrenches disposed at regularly spaced intervals about said work holder, said wrenches having jaws at the periphery of said rotatable work holder adapted to hold a workpiece during a forming operation, said wrenches and said work holder being formed to provide a continuous passage therethrough extending from immediately adjacent said jaws to an outlet at the periphery of said rotatable work holder adjacent to and at the trailing side of said wrenches, an injector means driven in timed relation to said work holder adapted to insert a work-

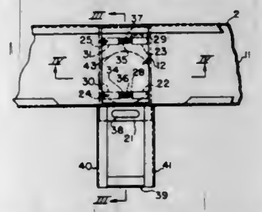


piece into said jaws, an ejector means driven in timed relation to said work holder and adapted to engage a workpiece held in said jaws to force the same into said passage thereby moving previously injected workpieces through said passage to the discharge end thereof, and detent means adjacent said discharge end of said passage adapted to retain the workpiece nearest said end until forced out by said ejector means.

3,049,223
SLIDE GATE FOR VIBRATORY CONVEYORS

Alvin G. Westerman, Louisville, Ky., assignor, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin

Filed Oct. 21, 1959, Ser. No. 847,787
9 Claims. (Cl. 198—220)



1. In a vibratory conveyor, in combination, a conveyor conduit, means for vibrating said conveyor conduit in a direction to convey material along said conveyor conduit, said conveyor conduit having a substantially flat bottom with a discharge opening therein, a flat gate body, means for mounting said gate body to be slid into closed, open or partly open position, said means comprising a pair of parallel rails carried by said conduit in spaced relation to its lower surface and parallel to the path of said body, shoes having beveled surfaces carried by said gate body and engaging the rails to urge the body against said flat bottom, and resilient means acting parallel to the surface of the gate and normal to its path for maintaining pressure between the beveled surfaces of said shoes and said rails carried by said conduit when said gate body is in closed, open or partly open position whereby said gate body in all positions thereof is pressed against said substantially flat bottom of said conveyor conduit.

3,049,224
CONTAINER

Joseph Henry Fredette, New York, N.Y., William Edward Taylor, Fairfield, Conn., and Richard Joseph White, New York, N.Y., assignors to American Can Company, New York, N.Y., a corporation of New Jersey

Filed June 3, 1959, Ser. No. 817,781
4 Claims. (Cl. 206—42)

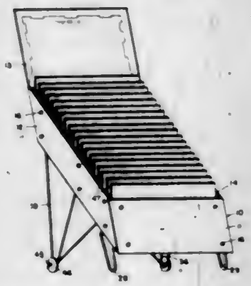
1. A slip cover dispensing container, comprising a rectangular body including opposed side and end walls de-

fining a shallow rectangular recess for the container contents, the upper ends of said side walls terminating in a pair of upstanding parallel rails, a flat horizontal peripheral ledge on said body surrounding said recess inwardly of said rails, a flexible diaphragm overlying said recess and sealingly engaging said peripheral body ledge, said diaphragm including an outer flat impervious sheet pressure sealed to said ledge and an inner flat masking sheet adhesively secured to said outer sheet substantially filling said rectangular body recess to protect the container contents, whereby said diaphragm may be pressed into and pulled out of adhesively secured contact with said peripheral ledge respectively to conceal the container contents and to partially expose the same for dispensing at a corner of the container, and a sliding cover for said body,



said cover including a flat top panel overlying said body rails and having depending side walls provided with inturned portions disposed beneath said body side walls to thereby slidably mount said cover on said body with said cover panel spaced above said diaphragm, and means on said top panel engaging against the front ends of said body rails when said cover is in closed position to prevent inadvertent sliding of the cover to open position, said means riding up and over said body rail front ends into overlying engagement with the top of said rails when the cover is slidably shifted to open position to thereby tension the cover side walls and their inturned portions whereby frictional engagement between said cover and container is increased to prevent inadvertent removal of the cover from the container.

3,049,225
DISPLAY RACK AND SHIPPING CASE
Peter C. Fancher, Wayne, Pa., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware
Filed Dec. 27, 1960, Ser. No. 78,641
2 Claims. (Cl. 206—45.24)



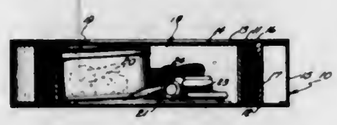
1. A carpet sample shipping container comprising a metallic framework assembly having side frame members formed of rodlike material, a plurality of transverse connecting members secured to the bottom and ends of said side frame members, a grid secured transversely to the top of said side frame members, a plurality of hinged legs swingably connected to the bottom of the side frame members, a brace for each of said legs one end of each brace being swingably connected to the bottom of opposite side frame members, a length of sheetlike material festooned over said grid to form a series of pockets between the bars of the grid, a fastener for the sheetlike material securing adjacent folds to each other under each of the bars of the grid, and a plurality of carpet samples in said pockets.

3,049,226
MOTION LABILE LIQUID PACKAGE
Paul E. Schurr, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
Filed June 10, 1959, Ser. No. 819,433
5 Claims. (Cl. 206—46)



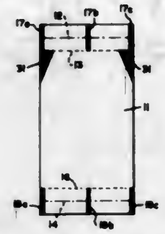
1. A motion labile liquid package which comprises: a container having a plug-type closure, an expansion tube supported in and extending downwardly from said closure to provide a submerged vapor space, said tube being closed at its upper end and terminating at its lower end approximately adjacent the bottom of said container in an orifice, said container volume outside said tube being completely filled with said motion labile liquid.

3,049,227
LOST AID PACK
Rno P. Reinemer, Circle, Mont.
Filed Mar. 17, 1959, Ser. No. 800,023
2 Claims. (Cl. 206—47)



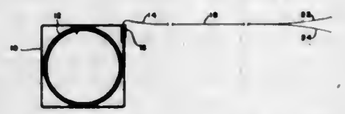
1. In a lost aid pack, a container including spaced parallel circular wall members only one of which is provided with a central opening, a transparent sheet extending across said opening and secured to the inner surface of the contiguous wall member, a cylindrical transparent wall section extending between the outer edges of said wall members and secured thereto, a circular wall portion extending between said wall members, said wall portion having its interior hollow and defining a space for holding miscellaneous items to be used by a person who becomes lost, a roll of strip material trained over said wall portion, said strip material being brightly colored, said strip material including a plurality of perforated sections having indicia thereon, said sections being easily manually separated, the indicia on said sections consisting of numerals that are arranged in chronological order in order to permit the sections to be readily torn off so that by using each section in numerical order and placing these sections in conspicuous places, searchers can more readily locate an individual after finding one section, and wherein the numerical sections also make it easier to determine what direction the lost person is traveling in order to get to the lost person in a quicker and easier manner.

3,049,228
DISPOSABLE BABY PANTS
Edward N. Burnett, Fremont, Mich., assignor to Gerber Products Company, Fremont, Mich.
Filed Jan. 8, 1960, Ser. No. 1,321
6 Claims. (Cl. 206—58)



1. A blank for baby pants of substantially rectangular shape formed of absorbent paper stock coated on the rear face with a substantially moisture resistant coating porous to air and capable of "breathing," having a first patch of self-adhering adhesive on the front face of each of two corners of the blank and a second patch of self-adhering adhesive on the rear face of each of the other two corners of the blank, each said patch being substantially in the shape of a right triangle having its shortest side extending parallel to one transverse edge of said blank, and its next longest side along one longitudinal edge of said blank.

3,049,229
FOIL ROLL SYSTEM
Garrett S. Nagle, Jackson Heights, N.Y., and Joe E. Roberson, Richmond, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed June 18, 1958, Ser. No. 742,847
5 Claims. (Cl. 206—59)



1. Wrapping material for household and related uses, comprising a composite aluminum strip having plural superimposed individual layers of annealed foil of generally rectangular plan form, said layers being coterminous but not integrally joined along their peripheral edges and adjacent layers being in intimate surface contact substantially over the interface therebetween, the exterior surfaces of said strip being bright finished and the interior contacting surfaces of the foil layers of the strip being matte finished, said strip being wound into a compact roll from which adjacent convolutions may be freely unwound, the individual foil layers of the strip tending to cling and remain together so that the strip may be readily cut into separate composite sheets without the layers becoming disengaged.

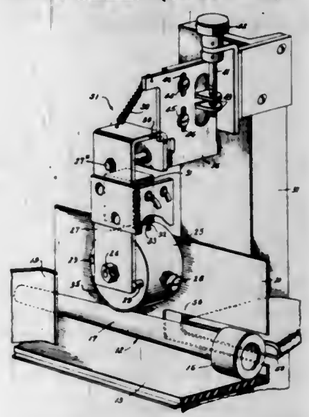
3,049,230
YARN PACKAGE
Victor S. Van Scoy, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 4, 1959, Ser. No. 857,436
4 Claims. (Cl. 206—64)

1. A flat, unsupported single end yarn package consisting of a length of yarn formed into a plurality of successive elongated loops disposed in stacked, abutting, indistinguishable sections with each section consisting of a number of superimposed loops, the terminal loop in each section leading directly to an inner loop of the succeeding section, said sections being dimensionally uniform,



said package having substantially flat and co-planar outer surfaces.

3,049,231
BOBBIN SORTER
Charles B. Crandall, Loves Park, and Ralph W. Andres, Rockford, Ill., assignors to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Sept. 14, 1960, Ser. No. 55,944
6 Claims. (Cl. 209—74)

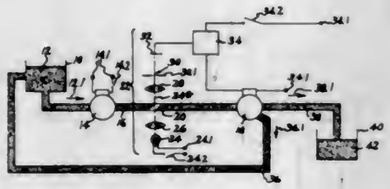


1. In a bobbin handling machine having a conveyor which carries empty bobbins and bobbins containing usable lengths of thread, a bobbin sorter for separating the thread carrying bobbins from the empty bobbins comprising, in combination, a vertically adjustable bracket suspended above said conveyor, an arm pivoted on said bracket for swinging movement from a rest position in the direction of conveyor travel, a roller journalled on said arm so that its periphery may be engaged and the roller oscillated from a rest position by a bobbin passing on said conveyor, means for urging said roller into its said rest position on said arm, means for urging said arm toward its said rest position on said bracket, said roller having a grainy peripheral surface creating little friction with smooth surfaces under the force of both said means but sufficient friction with layers of thread to easily oscillate said roller against the force of said roller urging means, means positioned adjacent said roller for discharging a bobbin laterally from said conveyor, a switch coupled to said roller so as to be operated upon oscillation of said roller from its said rest position, and means coupling said switch and said discharge means so that the latter is actuated only when said switch is operated and held operated for a short time interval.

3,049,232
METHOD AND APPARATUS FOR RECLAIMING PARTICLES FROM A MIXTURE
James E. Johnston, Southbridge, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Apr. 19, 1960, Ser. No. 23,229
3 Claims. (Cl. 209—111.5)

3. The continuous process of reclaiming particles of a particular index of refraction from mixture with particles

having a different index of refraction, said process comprising as steps: providing a liquid having an index of refraction substantially corresponding to that of the particles other than those to be reclaimed; combining the liquid and particle mixture for forming a quantity of a slurry; establishing a feeding zone, a pumping zone and a series of extracting zones in sequence, each extracting zone having a light measuring station and a segregating station; continuously feeding the slurry from the feeding zone through the pumping zone and the series of extracting zones; directing light through successive portions of the



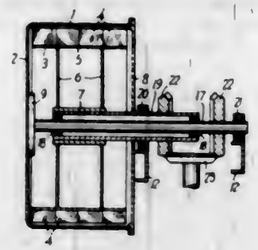
slurry passing the light measuring station in each extracting zone and measuring the extent of light diffusion resultant therefrom; at each segregating station, segregating those portions of the slurry indicated by the measuring previous thereto to cause light diffusion to the extent most nearly corresponding to that which would result from directing said light through particles of the type to be reclaimed; permitting said segregated portions of the slurry to pass to the next extracting zone in sequence and returning other portions of the slurry to the feeding zone for reprocessing; and removing the liquid from the quantity of slurry segregated in the final extracting zone.

3,049,233
PROCESS FOR SEPARATION OF SCHOENITE FROM SODIUM CHLORIDE BY MEANS OF FLOTATION
Geriando Marullo and Giovanni Perri, Novara, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy
No Drawing. Filed Feb. 2, 1960, Ser. No. 6,115
Claims priority, application Italy May 17, 1956
6 Claims. (Cl. 209—166)

1. Process for separation by flotation of schoenite, consisting of the double hydrated salt of potassium and magnesium sulfate, from natural or artificially prepared mixtures of schoenite and sodium chloride, comprising the steps of adding to a 25 to 35% suspension of said mixture 100 to 300 grams per ton of a first flotation agent selected from the group consisting of straight-chain aliphatic acids having 7 to 20 carbon atoms and salts of said acids, 100 to 300 grams per ton of a second flotation agent selected from the group consisting of primary aliphatic amines having 6 to 20 carbon atoms and salts of said primary aliphatic amines, and 80 to 100 grams per ton of an alcohol frother.

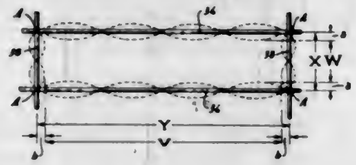
3,049,234
MAGNETIC DRUM SEPARATOR
Erkki Aukusti Laurila, Helsinki, Finland, assignor to Sala Maskinfabriks Aktiebolag, Sala, Sweden, a corporation of Sweden
Filed Feb. 9, 1960, Ser. No. 7,670
Claims priority, application Germany Feb. 11, 1959
8 Claims. (Cl. 209—219)

1. A magnetic drum separator having a rotatable drum provided with end walls, a rotatable magnet carrier located within the drum, one of said rotatable members being mounted on a hollow axle, the second rotatable member being mounted on an inner axle located within the hollow



axle, and gearing for driving both of the axles, said inner axle being secured to one end wall only of the drum.

3,049,235
SCREENING PROCESS FOR VIBRATORY SCREENS
Charles F. Newburg, Chicago, Ill., assignor to Novo Industrial Corporation, a corporation of New York
Filed May 27, 1958, Ser. No. 738,169
7 Claims. (Cl. 209—346)

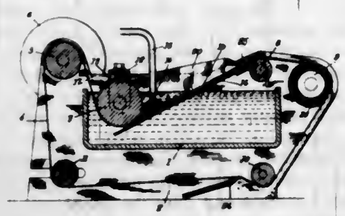


1. A method of constructing and operating a screening device having a screen deck with a frame and a screening medium consisting of a plurality of generally parallel lateral wires interwoven with a plurality of generally parallel longitudinal wires therein intersecting and contacting each other at spaced intervals to define generally rectangular screen openings, including the steps of spacing the lateral wires longitudinally and the longitudinal wires laterally to provide a predetermined lateral and longitudinal free length of each wire between adjacent points of contact, tensioning both the lateral and longitudinal wires a predetermined amount respectively relative to the size and free length of the wires, and producing a resonant condition in the tensioned free length of the wire between adjacent points of contact by vibrating the screening medium at a frequency relative to the tensioning, size and free length of the wires to vibrate both at right angles to and in the plane of the screening medium.

3,049,236
METHODS FOR SEPARATING A GRANULAR MATERIAL FROM A LIQUID
Georges Cohen de Lara and Michel Louis Delachanal, Grenoble, and Roger Platzer, Chatillon-sous-Bagneux, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a state administration
Filed Apr. 9, 1958, Ser. No. 727,309
Claims priority, application France Apr. 12, 1957
2 Claims. (Cl. 210—68)

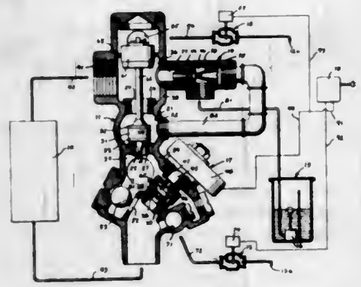
1. A method of removing a granular material consisting of an ion-exchange resin from a liquid of a density lower than that of said resin with which it is mixed which comprises feeding a mixture of the granular material and liquid to a conveyor belt partially immersed in a stationary bath of liquid below the surface of the liquid in said bath, accumulating the grains of said granular material in a heap on said conveyor belt below said liquid

surface, moving the separated granular material on said conveyor belt in a single layer formation to the outside of said bath by advancing said conveyor belt upwardly through said bath at an angle slightly smaller than the angle of repose of said heap of granular material in the liquid bath, and partially supporting said single layer by the heap of grains continuously accumulating on said



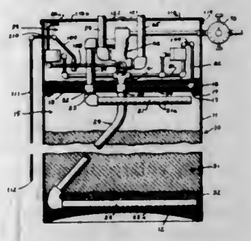
conveyor belt where said mixture is fed upon the belt, said conveyor belt being advanced at a rate maintaining said single layer formation on the belt when it emerges from inside the bath to the outside.

3,049,237
CONTROL SYSTEM FOR WATER TREATMENT APPARATUS
Robert A. Whitlock and Thomas W. Johnson, Rockford, Ill., assignors to AquaMatic Inc., Rockford, Ill., a corporation of Illinois
Filed Aug. 8, 1958, Ser. No. 754,072
21 Claims. (Cl. 210—136)



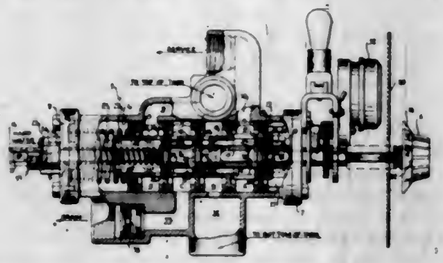
3. A control system for a water treatment apparatus having a treatment tank with a bed of exchange material therein, said control system comprising a two-position control valve including casing means defining an inlet chamber and first and second outlet chambers, said casing means having an inlet passage communicating with said inlet chamber and upper and lower valve ports respectively communicating said inlet chamber with said first and second outlet chambers, said control valve having a control valve member disposed within said inlet chamber and movable between a lower position blocking flow through said lower valve port and an upper position blocking flow through said upper valve port and adapted to be held in said upper position closing said upper valve port in response to a pressure differential between said inlet chamber and said first outlet chamber, an upper passage means communicating with said first outlet chamber and adapted for communication with the upper end of the treatment tank above the bed of exchange material therein, a lower passage means adapted for communication with the lower end of the treatment tank below the bed of exchange material therein, a first drain passage communicating with said upper passage means for passing fluid to drain from the upper end of said tank, a first drain valve movable independent of said control valve member for controlling flow through said first drain passage, fluid operated means connected to said control valve member and disposed in the path of flow of fluid to said first drain passage for moving said control valve member to its raised position closing said upper valve port and opening said lower valve port when said first drain valve is opened, a second drain passage communicating with said lower passage means for passing liquid to drain from the lower end of the tank, a second drain valve movable independent of said control valve member for controlling flow through said second drain passage, said lower drain valve being operative when open to pass fluid from the lower end of the treatment tank to drain, first and second operating means for respectively operating said first and second drain valves, and means for sequentially actuating said first and second operating means, a regenerant feed ejector having a raw water inlet and an outlet, said casing means defining an auxiliary valve port between said second outlet chamber and said lower flow passage, said casing means also defining a regenerant control port communicating said second outlet chamber and said raw water inlet of the ejector, an auxiliary valve member movable independent of said control valve member between a first position blocking flow through said auxiliary port and a second position blocking flow through said regenerant control port, fluid operated means connected to said auxiliary valve member and disposed in the path of flow of fluid to said second drain passage for moving said auxiliary valve member to said first position closing said auxiliary port when said second drain valve is open.

3,049,238
WATER TREATMENT APPARATUS
Robert A. Whitlock, Rockford, Ill., assignor to AquaMatic Inc., Rockford, Ill., a corporation of Illinois
Filed Dec. 19, 1958, Ser. No. 781,502
9 Claims. (Cl. 210—191)



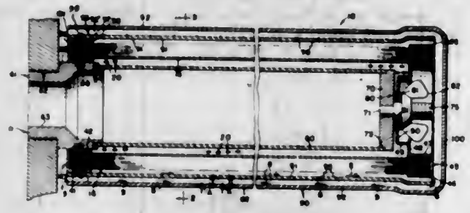
1. In a water treatment apparatus, the combination of an upstanding tank, a partition removably attached to the tank intermediate its ends separating the tank into an upper regenerant compartment and a lower treatment compartment, first and second conduits attached to said partition for removal therewith and extending into said treatment compartment to communicate therewith adjacent opposite ends thereof, an ejector supported on said partition for removal therewith and having a raw water inlet, an outlet communicating with said first conduit, and a suction chamber intermediate said inlet and outlet, means including a regenerant supply conduit communicating said suction chamber with said regeneration chamber adjacent said partition, a flow reversing valve disposed in said regenerant compartment and connected to said second conduit and to said ejector, said flow reversing valve having an inlet and a valve member movable from a first position in which water is directed from the inlet to said second conduit to a second position in which raw water from the inlet is directed to the inlet of the ejector, and means disposed externally of said tank for operating said flow reversing valve.

3,049,239
FLUID FLOW CONTROL SYSTEM
John Rudelick, Milwaukee, Wis., assignor to Bruner Corporation, Milwaukee, Wis., a corporation of Wisconsin
Original application Mar. 17, 1958, Ser. No. 722,093, now Patent No. 2,989,988, dated June 27, 1961. Divided and this application Mar. 4, 1960, Ser. No. 12,795
1 Claim. (Cl. 210—275)



In a water softening system including a softener tank containing an ion exchange medium and having top and bottom flow ports therein, a cover at its top that can be removed to enable salt to be charged into the tank for regeneration of the ion exchange medium in the tank, and a control valve to govern service and regenerating operation of the system, characterized by: a body for the valve having a source water inlet connectible with a supply of water to be softened, and an elongated bore with a series of five axially spaced ports opening substantially radially thereinto; the center port constituting a drain port which is in communication with a drain passage in the body from which waste water issues during regeneration of the system; the two ports at axially opposite sides of the drain port constituting first and second tank ports respectively connecting with the top and bottom flow ports of the tank through first and second tank passages in the body; one of the end ports constituting a service port that leads to a service passage in the body, from which softened water may flow to a point of use; and the other end port constituting a restricted alternate port communicating with said first tank passage; passage means in the body having branches communicating the source water inlet with the bore at locations spaced axially from each end of the series of valve ports; a spool shiftable axially back and forth in the body bore and having a number of axially spaced circumferentially enlarged lands thereon which are cooperable with the wall of the bore and said valve ports in different axial positions of the spool to control the flow of fluid to and from the softener tank, said lands and ports being so arranged that service operation of the system is produced in a normal position of the spool at which its lands cooperate to close off communication between the drain and tank ports and their respective passages, to communicate the source water inlet with said first tank passage, and to communicate the second tank passage with the service passage so that source water will be directed downwardly through the softener tank and softened water issuing therefrom will be discharged through the service port and its passage for delivery to a point of use; that in a first operating position most remote from its normal position the lands on the spool cooperate to close off communication between both tank passages and the source water inlet and to communicate said second tank passage with the drain passage to effect venting of the softener tank and thereby enable its cover to be removed and salt to be charged into the top of the tank for regeneration of the ion exchange medium in the tank; that in a second operating position less remote from normal the lands on the spool cooperate to establish communication between the drain and second tank passages and to communicate the first tank passage with the source water inlet only through said alternate port so that source water is caused to enter the top of the softener tank for restricted flow through the salt charged into the softener tank to form a brine solution therewith that is carried downwardly through the ion exchange material in the tank, while the brine effluent discharging from the bottom of the tank is led through the second tank passage to the drain passage for discharge to a sewer or the like; and that in a third operating position intermediate normal and said second operating position the lands on the spool cooperate to communicate said second tank passage with the source water inlet and to establish communication between said first tank port and the drain passage so as to effect backwash flow of source water upwardly through the softener tank and delivery of the backwash effluent issuing from the top of the tank to the drain passage in the valve body; means for moving the spool in a return direction from its first operating position to its normal operating position; and means connected with the body and with the spool to arrest return movement of the spool at said second and said third operating positions thereof, respectively.

3,049,240
FILTRATION EQUIPMENT
Paul A. Smith, Tarzana, Calif., assignor to Permanent Filter Corporation, Los Angeles, Calif., a corporation of California
Filed July 20, 1959, Ser. No. 828,149
9 Claims. (Cl. 210—295)

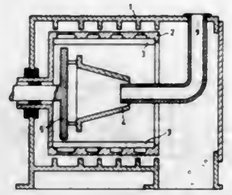


5. Filtration equipment comprising coalescer means including a plurality of layers of fibrous material disposed substantially concentrically to one another, a hollow porous hydrophobic matrix disposed within said coalescer means and spaced therefrom, tortuous path means disposed in surrounding spaced relationship to said coalescer means and adjacent thereto, said tortuous path means including a first tubular portion and a second tubular portion disposed in surrounding relationship to the first tubular portion, each of said tubular portions being formed of porous hydrophobic material which resists the passage of water therethrough, said first tubular portion being secured to the coalescer means and sealed with respect thereto at the upstream end of the tubular portion, the downstream end of said first tubular portion being open, the adjacent end of said second tubular portion being closed, and the opposite end of said second tubular portion being open, each of said tubular portions including a plurality of integral rib portions projecting inwardly therefrom, the inner portions of the rib portions on the outer tubular portion being secured to the inner tubular portion.

3,049,241
SCREEN LINING FOR A PUSH-TYPE CENTRIFUGE
Ernst Ruegg, Kusnacht, Switzerland, assignor to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland
Filed Aug. 13, 1959, Ser. No. 833,534
Claims priority, application Switzerland Sept. 19, 1958
6 Claims. (Cl. 210—376)

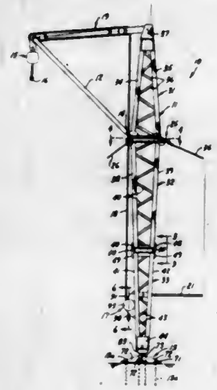
1. In a push-type centrifuge having a rotary foraminous drum, a screen lining comprising bar-shaped members extending in the direction of the drum axis and spaced circumferentially over at least a portion of their lengths

to define radial openings through which separated liquid may pass, the members having glide surfaces along which the material being centrifuged is pushed through the drum; and means for retaining a pool of liquid on each of said



bar-shaped members comprising a longitudinal groove in the inner surface thereof extending over a substantial portion of said glide surface, whereby wear of the bar-shaped members and damage to the material being processed are reduced.

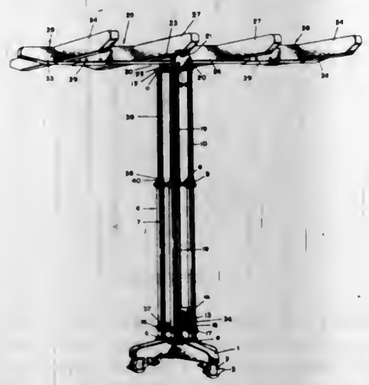
3,049,242
PORTABLE JIB CRANE
Howard C. Stevens, Jr., Muskegon, and Walter A. Paulssen, Spring Lake, Mich., assignors to Manning, Maxwell & Moore, Incorporated, Muskegon, Mich., a corporation of New Jersey
Filed Feb. 6, 1959, Ser. No. 791,649
9 Claims. (Cl. 212—58)



7. A portable jib crane comprising, in combination, a plurality of pairs of opposed channel members rigidly joined by cross braces, said pairs being alined and releasably secured to one another to define a tower, a support member fixed transversely of said tower between two of said pairs of members, said support member defining a cylindrical surface surrounding the tower and an annular surface extending outwardly from the lower portion of said cylindrical surface, blocks of bearing material secured to both said cylindrical surface and said annular surface, a swivel ring surrounding said member and having surfaces in abutting engagement with said blocks of bearing material so that the member is smoothly rotatable within said ring, and guy wires coupled to said ring for supporting said tower in an erect position extending upwardly from said base plate.

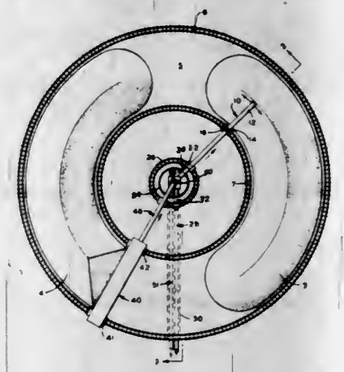
3,049,243
WALLBOARD LIFT
Horace L. Buice, Rte. 1, Signal Mountain, Tenn.
Filed Oct. 26, 1959, Ser. No. 848,707
2 Claims. (Cl. 214—1)

1. A wallboard lift comprising a base, several spaced first pipes attached to and extending vertically from the base, a jack base having sleeves encircling said pipes and set screws for releasably clamping said sleeves onto said pipes, a hydraulic jack and a jack cylinder attached to said jack base, an equal number of second pipes smaller than and telescoped within said first pipes and



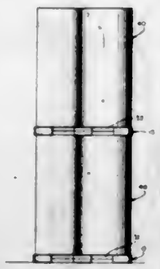
attached to a bearing plate, a piston within said cylinder having its free end in contact with the bearing plate, a bearing attached to the bearing plate and a platform journaled in said bearing.

3,049,244
STACKING AND RECLAIMING MATERIAL
Walter P. Hansen, San Leandro, Calif., assignor to Henry J. Kaiser Company, Oakland, Calif., a corporation of Nevada
Filed Aug. 25, 1958, Ser. No. 756,873
2 Claims. (Cl. 214—10)



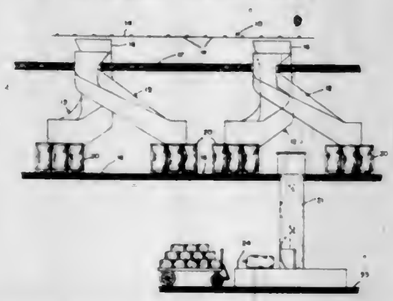
1. An apparatus for stacking and reclaiming material comprising a plurality of material-conveying structures extending radially from a common point, one of said material-conveying structures including means for stacking material along a curved elongated circular path, another of said material-conveying structures including means for reclaiming previously stacked material, said radially extending, material-conveying structures being adapted to operate and revolve independently about said common point, additional radially extending, material-conveying structures for supplying material to and withdrawing material from said common point, said last mentioned means for supplying and withdrawing material being independent of said material-conveying structures for stacking and reclaiming, all of said radially extending structures converging at said common point, and means associated with said radially extending structures to enable the simultaneous supplying, stacking, reclaiming, and withdrawing of material.

3,049,245
MAT FOR SEPARATING STACKED ROLLS
Whitman H. Nelson, 712 5th Ave. SE., Decatur, Ala.
Filed May 18, 1960, Ser. No. 29,838
1 Claim. (Cl. 214—10.5)



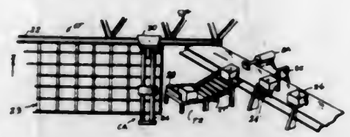
A support mat for an upended roll of paper comprising at least three horizontally disposed wood pieces arranged in lateral spaced relation, a pair of channel members arranged in longitudinal, nested, telescopic relation and positioned below said pieces, means embodying a transversely arranged angle iron on one end of each of said members securing said member to the adjacent one of the outer two of said pieces, and means embodying a bolt and a wing nut on said bolt extending through the middle one of said pieces and said members releasably securing said members to said middle piece, the spaces above said channel members on each side of the middle piece forming a slot for a lift fork.

3,049,246
SORTING SYSTEM FOR POST OFFICES AND THE LIKE
Leonard J. Bishop, Birmingham, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed Feb. 4, 1957, Ser. No. 637,999
11 Claims. (Cl. 214—11)



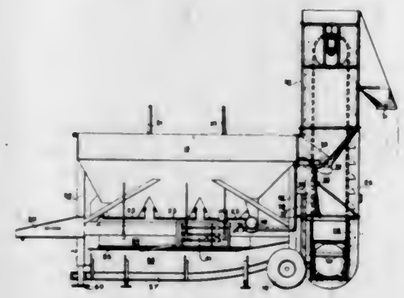
1. A sorting system of the class described, comprising an endless conveyor having parcel transporting members articulated thereon to one another, said members being individually pivoted to said conveyor for selective bodily tilting toward either side thereof and traveling in a horizontal plane, means providing a plurality of receiving stations spaced in succession along and to either side of the path of travel of said conveyor, a control device to cause selective tilting of said members about the respective pivots thereof to discharge parcels at said respective stations, and means providing at least one sorting station in advance of said receiving stations, said sorting station being provided with a selective, manually actuable memory device operatively connected with said receiving stations to actuate said control device in variably delayed response to the selective manual actuation of the memory device.

3,049,247
AUTOMATED STORAGE
Jerome H. Lemelson, 289 High St., Metuchen, N.J.
Filed Apr. 10, 1956, Ser. No. 577,415
6 Claims. (Cl. 214—16.4)



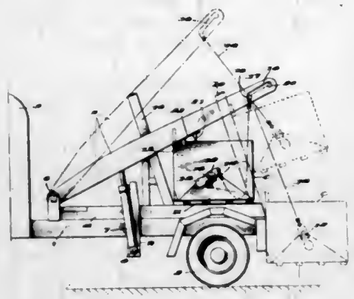
1. In a conveying apparatus of the type described, a conveying system including a self-propelled work carrier, means guiding said carrier along a path opposite a storage rack, shelving for holding work deposited thereon by said carrier, selective control means for controlling the motion of said carrier from a first position opposite said storage rack to a selected position there opposite, and remote control means for presetting said selective control means to control the motion of said carrier from a first position in its travel to a second position therein, said remote control means including a signal transmitter remote from said carrier, a receiver on said carrier, means transmitting a coded command signal from said remote transmitter to said carrier receiver, signal storage means on said carrier for storing said coded command signal, signal readout means for deriving from said signal storage means a command sequence for controlling the motion of said carrier.

3,049,248
PORTABLE BATCHING PLANT
Carl J. Heltzel and Ernest A. Gardner, Warren, and William J. Kirchner, Youngstown, Ohio, assignors to The Heltzel Steel Form and Iron Co., Warren, Ohio, a corporation of Ohio
Filed Jan. 8, 1959, Ser. No. 785,662
2 Claims. (Cl. 214—17)



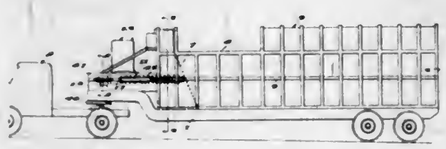
1. In a portable batching plant, a mobile aggregate unit comprising means for storing and matching materials, an elevator for receiving and elevating the batched material to truck delivery height, said elevator having a head section normally extending above the road clearance level, a boot section movably mounted to said unit for up and down movement, said head section being pivoted to the unit, cam means fixed to pivot with said head section, elevating means connected to said boot section and to said cam means for elevating said boot section when the head section is lowered and to lower the boot section when the head section is raised, said boot section serving as a counterbalance for the head section.

3,049,249
TRANSPORTING AND DUMPING EQUIPMENT
George R. Dempster and William A. Herpich, Knoxville, Tenn.; said Herpich assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed Oct. 21, 1957, Ser. No. 691,259
9 Claims. (Cl. 214—77)



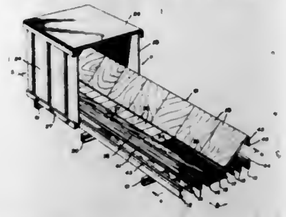
2. In transporting equipment, the combination with a vehicle chassis, of a hoisting unit mounted on the chassis and having a bucket rest thereon adapted to receive a container, a boom mounted on the hoisting unit and having means connected therewith for engaging the container to lift the container to a seated position on the bucket rest, and anchor means connected with the boom in position to overlap rearwardly a portion of the container to hold the container in place on the bucket rest during transportation.

3,049,250
COMPACTION BODIES
George R. Dempster and William A. Herpich, Knoxville, Tenn., assignors to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed Sept. 4, 1959, Ser. No. 838,178
11 Claims. (Cl. 214—82)



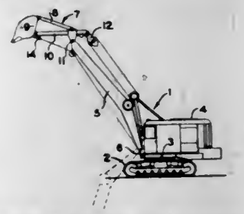
1. In a compaction body for a vehicle having a body portion with upstanding side walls and adapted to receive refuse therein, the combination with a compaction head mounted in the body for movement lengthwise thereof, of a substantially horizontal hydraulic cylinder connected to said compaction head, said cylinder having a plurality of telescoping sections, a support member extending in crossed relation with the hydraulic cylinder and offset therefrom, means carried by the support member and extending laterally therefrom for securing the support member to one of said telescoping sections intermediate the ends of said cylinder, said support member being movable with said intermediate section relative to the opposite end sections of the cylinder and supporting the intermediate portion of the cylinder, and longitudinal guide means located on said side walls, said support member having means at opposite ends thereof for engagement with said longitudinal guide means, and means for supplying fluid under pressure to said hydraulic cylinder whereby said compaction head, said telescoping sections, and said support member are caused to move lengthwise with respect to said compaction body.

3,049,251
COMMERCIAL CARRIER BULK UNLOADING DEVICE
John A. Glew, Presque Isle, Maine (1001 3rd St. SW., Washington 24, D.C.)
Filed Nov. 17, 1960, Ser. No. 70,002
1 Claim. (Cl. 214—83.36)



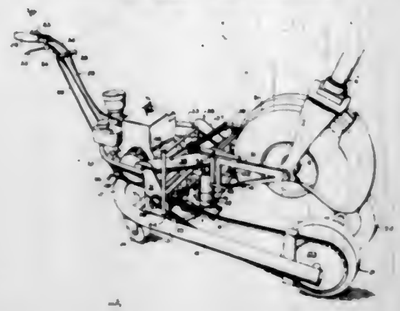
An unloading device for trucks and rail cars for removing bulk vegetables or fruit therefrom comprising a central conveyor running longitudinally through the truck or car body in the floor thereof, inclined supports extending respectively upwardly from the opposite sides of the conveyor to the sides of the truck or car body and from which the vegetables and fruits may fall by gravity onto the conveyor, conveyor cover plate supports removably placed along the conveyor and between the lower edges of the inclined supports and which may be removed one at a time to expose the conveyor to unload the bulk vegetables or fruit, said conveyor cover plate supports being telescopically fitted into one another and adapted to be extended the total length of the conveyor and to be telescopically collapsed as the unloading operation is effected, an electrical motor drive means connected to the conveyor to operate the same, cable drive means adapted to be operated by the same electric motor drive means connected to the rearmost cover plate support simultaneously with the operation of the motor to telescope the conveyor cover plate supports whereby the entire bulk load may be automatically discharged, said inclined side supports also being telescopically fitted into one another and collapsible into one end of the truck or rail car, said cable drive means being detachably connected to the rearmost cover plate conveyor support and to the rearmost of the inclined side supports whereby the same cable means may be used either for collapsing the conveyor cover plate supports or the inclined side supports.

3,049,252
UNIVERSAL HOE STICK
George C. Noll, North Ridgeville, Ohio, assignor to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Filed Aug. 3, 1959, Ser. No. 831,183
14 Claims. (Cl. 214—145)



1. In a universal hoe stick, the combination of a pair of elongated members, means pivotally interconnecting said members for relative movement, said members having laterally spaced apart ends adapted for connection with a dipper, and means adjustably rigidly connecting said members together laterally to vary the distance between such spaced apart ends thus relatively pivoting said members for connection with dippers of different widths.

3,049,253
AIRPLANE TOW TRACTOR
Walter M. Cabral, Santa Clara, Calif., assignor to Yuba Consolidated Industries, Inc., a corporation
Filed June 9, 1959, Ser. No. 819,183
1 Claim. (Cl. 214—147)



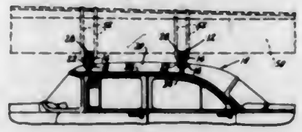
An airplane tow tractor comprising a main frame U-shape in plan and including a pair of forwardly extending side beams, ground-engaging non-dirigible wheels mounted respectively at the forward end of said side beams, ground-engaging caster wheels mounted at the rearward end of said main frame, a handle, means for connecting said handle to the rearward portion of said main frame for pivotal movement relative thereto about a horizontal axis only, side plates upstanding from said side beams adjacent the rearward portion of said main frame, a transverse shaft engaging the upper portion of said side plates, a forwardly converging lift frame at its rearward end engaging said transverse shaft for swinging movement about said shaft relative to said main frame, a vertically and transversely extending mounting plate mounted on the forward central portion of said lift frame, a cross member connected to said side beams, a hydraulic jack abutting said cross member and said lift frame, a vertically and transversely extending pivot plate abutting said mounting plate, a longitudinally extending pivot pin connecting said pivot plate to said mounting plate, grip arms, means including vertically extending pivot pins for mounting said grip arms on said pivot plate and for free transverse swinging movement of said grip arms relative to said main frame, means extending between and engaging said grip arms through vertical pivot connections for moving said grip arms toward and away from each other, and an operating handle for and movable with said moving means.

3,049,254
FRONT END LOADERS
George R. Dempster and William A. Herpich, Knoxville, Tenn.; said Herpich assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed Mar. 10, 1958, Ser. No. 720,441
9 Claims. (Cl. 214—302)



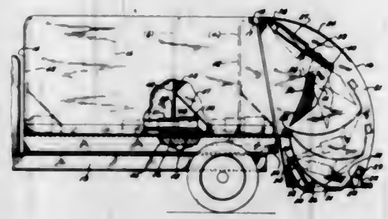
2. In a front end loader of the character described, the combination with a motor vehicle having a loader unit mounted thereon including a pair of fork arms, of a container having end connections in positions for engagement with the fork arms for lifting the container to an elevated position relative to the motor vehicle, a door hinged to an end of the container at an edge of the door toward the motor vehicle, and means on the fork arms for closing the door when the fork arms are moved into engagement with the end connections.

3,049,255
CAR CARRIER BOAT LOADING ATTACHMENT
Harold A. Rendle, Tupper Lake, N.Y., assignor to Gustave Miller, Washington, D.C.
Filed June 3, 1960, Ser. No. 33,798
2 Claims. (Cl. 214—450)



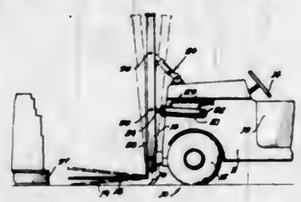
1. For use in a conventional car top attachment including a pair of spaced apart parallel carrier bars and means for securing said bars transversely of the top of a car; a boat loading attachment consisting of a single boat gunwale cooperating carriage for each said bar, said carriage comprising a gunwale receiving saddle having spaced apart upwardly extending end lips, downwardly extending plate members depending from opposite sides of said saddle between said end lips, roller means journaled through both said plate members rollably supporting each said carriage on one said bar, means spaced below said roller means a distance slightly greater than the thickness of said bar removably secured through both said plate members for removably retaining said carriage on said bar, whereby a boat may be loaded on said bars by supporting one boat gunwale on both said carriages on the near side of the car top to carry said one boat gunwale to the far side of the car top to thus load the boat on said carrier rods.

3,049,256
REFUSE BODY LOADING AND PACKING MECHANISMS
George E. Urban, South Milwaukee, Wis., assignor to The Heil Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 23, 1960, Ser. No. 17,004
11 Claims. (Cl. 214—518)



1. In a device for loading refuse into a truck body having a rear opening, said device being of the type having a pivotally mounted bucket and having a pivotally mounted packer plate for transferring refuse from the bucket into said rear opening when the bucket has been swung to elevated position on its pivot, said bucket and packer plate being in the tailgate, the first part of said bucket movement being simultaneous with the final part of retraction movement of said packer plate during the cycle of operation, a fluid pressure operated cylinder having a ram and pivotally connected at one end to said tailgate and at the other end to said packer plate for actuating the latter, a fluid pressure operated cylinder having a ram and pivotally connected at one end to said tailgate and at its other end to said bucket for operating the bucket, a source of fluid under pressure, an hydraulic circuit connected with said source and with both cylinders and means in said hydraulic circuit for causing exhausted fluid from the packer cylinder to flow directly to said bucket operating cylinder only during that part of the cycle of operation when the bucket is moving simultaneously with the packer plate to furnish the sole motive power for said bucket operating cylinder during said part of the cycle.

3,049,257
LEVEL INDICATOR FOR FORK TYPE LIFT TRUCKS
Allen E. Bertenshaw, Markham, and Francis J. Bazata, Chicago, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 23, 1959, Ser. No. 854,689
1 Claim. (Cl. 214—674)



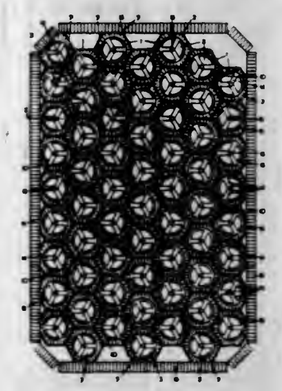
A position indicating device for a lift truck having a body, a vertical lifting frame connected to said body, a vertically movable normally horizontal lifting platform connected to said lifting frame, and fluid extensible means connected to said body and said vertical frame for tilting said frame forwardly and rearwardly of said body whereby said platform is tilted from a horizontal position to an upwardly inclined or downwardly inclined position; comprising a bracket connected to said body, a tubular member hingedly connected to said bracket, said tubular member having an elongated slot disposed in a position within sight of an operator on said truck, an indicating member disposed within said tubular member in relative sliding relation, said indicating member having a first indicating means thereon visible through said slot, a second indicating means on said tubular member disposed adjacent said slot, and means hingedly connecting said indicating member to said vertical frame whereby on tilting of said frame said first indicating means is moved relative to said second indicating means to a position denoting a horizontal or tilted position of said platform.

3,049,258
NURSING BOTTLE HOLDER
André Fullum, 15 Pinsonnault St., St.-Jean, Quebec, Canada
Filed Jan. 2, 1962, Ser. No. 163,765
2 Claims. (Cl. 215—11)



1. A nursing bottle holder comprising a hollow body of frusto-conical shape having a transverse wall closing the larger diameter end and opened at its smaller diameter end, a flange upstanding from said transverse wall inside said body and coaxial with said opening to receive the bottom portion of a bottle inserted within said holder through said opening, the marginal open end portion of said body engaging the portion of the bottle adjacent the mouth of the latter when said bottle is disposed within said holder.

3,049,259
CUPPED TRAY FOR HOLDING FRUITS AND THE LIKE
Angelo Mazzi and Tullio Mazzi, both of 58 Via Caprera, Verona, Italy
Filed June 29, 1960, Ser. No. 39,566
6 Claims. (Cl. 217—26.5)



1. A tray for holding fruits and the like said tray being made of thin foil material, and formed with a plurality of cups for receiving fruits and the like, each said cup having an upper part of polygonal cross section, said cups being arranged close to one another in staggered rows, adjacently disposed cups being separated from one another only by fold edges in the foil, said rows of cups extending diagonally across said tray in two directions, the fold edges extending in one direction in a zig-zag line being at the level of the tray and serving as stiffeners therefor while the fold edges extending in the other direction are recessed so that they do not similarly stiffen the tray, each of satid cups having longitudinally extending grooves in its wall, a circular bottom wall having a centrally disposed air inlet aperture, an annular duct around its periphery communicating with said longitudinally extending grooves, and radial ducts, extending between said air inlet and said annular duct, whereby air entering through said inlet can pass along said radial ducts to said annular duct and from said annular duct to said longitudinally extending grooves and thus circulate uniformly around the fruit or the like in said cup.

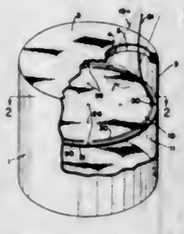
3,049,260
CUSHIONING MATERIAL
Alton H. Stone, Box 55, Westboro, Mass.
Filed July 13, 1960, Ser. No. 42,719
1 Claim. (Cl. 217—53)



A protective packaging device comprising a pair of flat arms of expanded cellular plastic material, said arms being joined at corresponding ends in a one-piece unitary device in the form of a right angle providing an exterior surface and an interior surface, and a series of integral, spaced ridges of the expanded cellular plastic material extending out from the exterior surface of each arm, the ridges providing a corrugated effect, and one ridge being located at and along the juncture of the exterior surfaces of the arms, all said ridges being parallel to the ridge at the

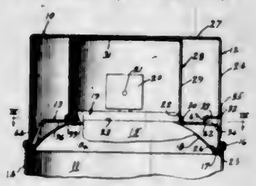
juncture of the exterior surfaces of the arms and extending transversely of the surfaces across the respective arms.

3,049,261
FLOATING BLANKET
Harry D. Wade, Cleveland, and Albert E. Scheible, Bay Village, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed May 22, 1959, Ser. No. 815,118
1 Claim. (Cl. 220—26)



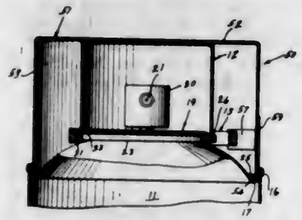
A device comprising a liquid storage tank having a man-hole therein, an evaporation-inhibiting blanket having a peripheral portion positioned within said tank and being sufficiently buoyant to float on liquid in the tank, the size and shape of said blanket substantially conforming to the horizontal cross-sectional area of the tank, said blanket having a plurality of peripherally arranged arcuate sleeves extending substantially completely around said peripheral portion, a stiffening member slidably mounted within each of said sleeves and completely housed therein, said blanket being formed of sufficiently thin and sufficiently flexible material to permit the blanket to be rolled into an elongated substantially cylindrical package having a transverse cross-section smaller than the transverse cross-section of said man-hole to enable passage therethrough, grappling means affixed to said blanket to enable manipulation thereof from outside of the man-hole in the tank to facilitate insertion of the stiffening members into said sleeves after said blanket has been inserted through said man-hole.

3,049,262
SNAP-ON CONTAINER CAP LOCK
Sigmund E. Edelstone, Chicago, Wirt V. Dunlop, Park Ridge, and Herman E. Schlotthauer, Des Plaines, Ill., assignors, by mesne assignments, to Spra-Lok Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 1, 1960, Ser. No. 5,971
11 Claims. (Cl. 220—55)



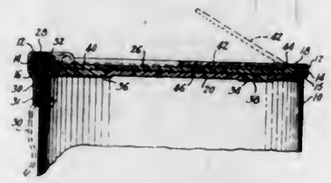
1. In a can and cap assembly including a can with a domed end having a downwardly-facing shoulder at the apex thereof and a cap well at the base thereof and a cup shaped cap overlying the domed end and bottomed in said well, the improvements of an internal upwardly facing shoulder in said cap adjacent said well, a hole in said cap aligned radially with said downwardly facing shoulder, a puncturable cover overlying said hole, a cap lock ring surrounding said apex of the domed end, internal dogs on said ring underlying said downwardly facing shoulder, spring legs on said ring bottomed on said internal cap shoulder, a tang on said ring adjacent said hole, and said tang providing an abutment to receive a prod inserted through said hole for laterally shifting the ring to move a dog beyond said downwardly facing shoulder and thereby accommodate removal of the cap and ring from the can.

3,049,263
SNAP-ON CONTAINER CAP LOCK
Sigmund E. Edelstone, Chicago, and Manley K. Hardison, Glenview, Ill., assignors, by mesne assignments, to Spra-Lok Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 6, 1959, Ser. No. 851,332
11 Claims. (Cl. 220—55)



1. In combination with a can having a domed end head providing an upstanding rim, a depressed annular well inside of said rim, and an upstanding skirt portion with an undercut abutment shoulder, a cover assembly for said can comprising an inner cap engaging said skirt, a surrounding over cap secured to said inner cap and having a side wall extending into said well, an opening in said side wall of the over cap aligned with said skirt, a locking ring surrounding the inner cap having an inturned flange engaging the abutment shoulder of the skirt and a second inturned flange engaging the outturned lip of the inner cap, said locking ring being split and having the split portion aligned with said opening in the side wall, and means on said locking ring engageable through said opening in the side wall for spreading the ring to unseat the flanges thereof from either the inner cap or the shoulder of the end head.

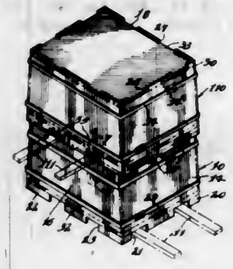
3,049,264
SANITARY REMOVABLE COVERS FOR CONTAINERS
Zbigniew K. Morawski, Fontenet, Charente-Maritime, France
Filed June 1, 1959, Ser. No. 817,115
2 Claims. (Cl. 220—60)



1. In combination, a container of substantially rigid material having at least one open end, an external bead provided on the rim of said open end, said bead comprising a peripheral cover holder means of flexible plastic material overlying said open end and a peripheral edge of said cover holder means rolled together with said rim, said cover holder means having an inner extending portion within said open end, said inner portion having a peripheral, undercut recess defining a rib extending inwardly thereover, a substantially flat cover, a hinge integrally linking said cover to said cover holder means at one side thereof, a thickened peripheral rib on said cover complementary to said cover means holder undercut recess and resiliently and detachably held in closed

sealing position therein by said cover holder means peripheral rib, a pull tab integrally secured to said cover on the side opposite from said hinge side for withdrawing said cover from said closed sealing position, said cover holder means having at least one pour aperture therethrough, and a plug means depending from the underside of said cover complementary to said pour aperture and sealingly engaged therein when said cover is held in said closed sealing position.

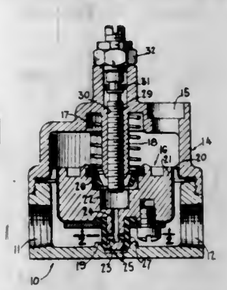
3,049,265
CONTAINER FOR USE WITH FORK LIFT EQUIPMENT
John H. Van Moss, Jr., Highland Park, and Percy H. Waller, Wilmette, Ill.; said Percy H. Waller assignor to Starwood Industries, Inc., a corporation of Illinois
Filed Dec. 8, 1959, Ser. No. 858,238
5 Claims. (Cl. 220—97)



1. A plywood container arranged for handling by conventional fork lift means, comprising: a rectangular horizontal bottom wall having peripheral projections; and a plurality of side wall panels having openings receiving said projections to retain the panels in secured association with the periphery of the bottom wall and to enclose laterally the space above the bottom wall, opposed portions of said side wall panels converging upwardly, a lower portion of each panel extending downwardly to below the bottom wall a distance at least equal to the height of a fork lift means and having a pair of downwardly opening recesses extending upwardly from the lower edge of the panel to at least the plane of the bottom surface of the bottom wall for extension of fork lift means therethrough for engaging the bottom wall to carry the container, the upper end of each side wall panel being provided with a pair of upwardly opening recesses vertically aligned with the corresponding recesses in the lower portion for registry with the recesses of the lower portion of a superposed such container having its bottom wall resting on the upper edge of the side wall panels of the subjacent container for extension of the fork lift means therethrough for engaging the bottom surface of the bottom wall of the superposed container to carry independently the superposed container.

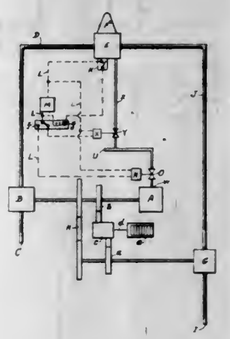
3,049,266
LIQUID MIXING DEVICES
John A. Werry, Cedar Grove, N.J., assignor to Kidde Manufacturing Co., Inc., Bloomfield, N.J., a corporation of New Jersey
Filed Sept. 29, 1959, Ser. No. 843,190
8 Claims. (Cl. 222—133)

1. A liquid mixing device comprising a casing, diaphragm means movably mounted in said casing and dividing said casing into an upper chamber and a lower chamber, said lower chamber having an inlet and an outlet for connection in a valve controlled stream of unidirectional flowing liquid under pressure adapted to move said diaphragm means upwardly when flowing from said inlet to said outlet and said upper chamber having an opening for introducing another liquid to be mixed with the flowing stream of liquid, said diaphragm means having a well communicating with said upper chamber and being provided with outlet means communicating with said lower chamber, check valve means for said outlet



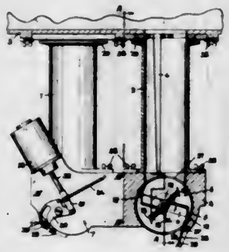
means, a stationary plunger in said upper chamber adapted to extend into said well upon upward movement of said diaphragm means to force liquid from said well through said outlet means to said lower chamber, and a spring for urging said diaphragm means downwardly in the absence of flow of the stream.

3,049,267
MULTIPLE-FEED SPRAY GUNS
Harry Edwards and John Alexander Partridge, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Aug. 31, 1959, Ser. No. 837,243
Claims priority, application Great Britain Sept. 2, 1958
2 Claims. (Cl. 222—134)



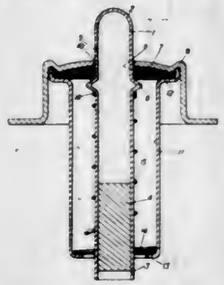
1. Metering apparatus for separately supplying proportioned quantities of liquid to a dispensing device comprising: a mixing and dispensing head having a mixing chamber therein; separate conduits connected to said head for supplying separate liquids thereto; pump connected to each of said conduits for moving the liquid to said head; means for driving said pumps at proportionate speeds; valve means for controlling said pump drive means; electrical switch means operatively connected to said valve means to control the latter and thereby actuate said pump drive means; and means for passing a current of air through said mixing chamber, an air valve controlling said current of air; and electric control means responsive to the stopping of said pumps and operatively connected to said air valve to open said valve and thereby flush said mixing chamber on stopping said pumps at the end of a mixing cycle.

3,049,268
APPARATUS FOR DISCHARGING BULK MATERIAL IN GRANULAR OR POWDERY STATE
Adolf Stambera, Stuttgart-Bad Cannstatt, Germany, assignor to Firma Fr. Hesser, Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Feb. 14, 1958, Ser. No. 715,473
6 Claims. (Cl. 222—227)



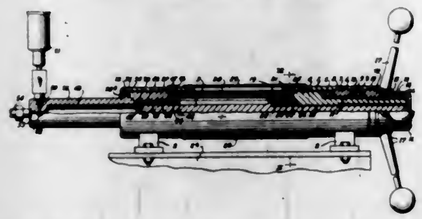
1. An apparatus for use in automatic metrological devices comprising a wall constituting a horizontally disposed cylindrical canal and including a relatively thin portion provided with a discharge outlet, a wall constituting a vertically disposed cylindrical discharge canal leading to said horizontally disposed canal, and revolvable stirring and scraping means operatively arranged within each of said canals, the axis of said horizontal canal being perpendicularly disposed relative to the axis of said vertical canal, the revolvable stirring and scraping means in the horizontal canal comprising a driving shaft, and a plurality of axially parallel knife-like scrapers connected to said driving shaft, said knife-like scrapers having front longitudinal edges elastically engaging the wall of said canal.

3,049,269
DISPENSING DEVICES
Alan Gawthrop, Birstall, Leicester, England, assignor to Rexall Drug and Chemical Company (U.K.) Limited, a British company
Filed Mar. 24, 1958, Ser. No. 723,455
Claims priority, application Great Britain Mar. 26, 1957
4 Claims. (Cl. 222—307)



1. A metered dosage valve device for dispensing accurately measured doses of liquid under pressure from a container comprising a hollow cylindrical member, closed at each end to form a liquid measuring chamber of predetermined volume, a side wall of said hollow cylindrical member being formed with a single orifice at a point adjacent one end thereof, said orifice being the only opening in said hollow cylindrical member, said hollow cylindrical member being mounted to reciprocate through a resilient sealing member clamped in a closure member for a container and having an abutment thereon for engagement with the inner surface of said sealing member and so disposed that said orifice is uncovered in the outermost position of said hollow cylindrical member, the extent of reciprocation being at least sufficient to allow said orifice to pass through and beyond said sealing member, said sealing member being clamped in position in the closure member by means of an open cylindrical member of a diameter greater than said hollow closed cylindrical member providing a passage for liquid therebetween which open cylindrical member is of reduced diameter to form an inwardly directed flange at the end remote from the sealing member to constitute a guide for said hollow cylindrical member and a coil spring enclosed within said open cylindrical member to engage with said inwardly directed flange and with the abutment on said hollow cylindrical member to urge it to its outermost position.

3,049,270
DISPLACEMENT PUMP
Henry A. Maeder, 1112 Hartsdale Drive, Dallas, Tex.
Filed Sept. 19, 1958, Ser. No. 762,109
6 Claims. (Cl. 222—390)

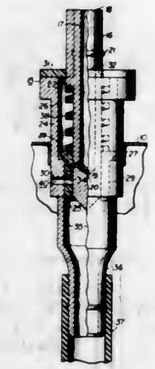


1. In a device of the class described, a tubular housing; an elongated piston slidably disposed in the housing; a drive nut rotatably disposed in one end of the housing and being threadedly engaged about one end of the piston; means to hold the drive nut against longitudinal movement in the housing; co-engageable means between the housing and piston to prevent rotation between the housing and piston; means for rotating the drive nut on the exterior of the housing; a hollow cylinder attached to the other end of the housing having a fluid reservoir therein, the outer end of said piston being slidably extended into the cylinder and being in communication with the fluid reservoir; and seal means between the piston and the inner wall of the cylinder.

3,049,271
VALVE MECHANISM FOR PRESSURIZED CANS
Max Earl Whitmore, 3899 Kingswood Drive, Dayton, Ohio
Filed Feb. 2, 1960, Ser. No. 6,172
8 Claims. (Cl. 222—394)

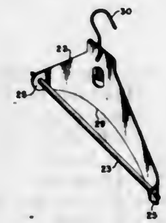
1. In a liquid dispensing device including a container for containing a liquid and a gaseous pressurizing agent, the combination with said container of a valve mechanism comprising, a valve body extending into said container, said body having a through axial bore terminating at a first inlet duct in communication with the bottom portion of said container, a second inlet duct in communication with said axial bore and extending through said body transverse to said axial bore, said second inlet duct being in open communication with the top portion of said container, an annular resilient packing ring disposed in said bore, said packing ring having a first opening in communication with said first inlet duct and a second opening in communication with said second inlet duct, a valve stem reciprocally disposed in said packing ring and having a substantially fluid tight running fit therewith, said valve stem having an outlet passage therein, said stem having an inlet port in communication with said outlet passage and

said bore, said valve stem having a first position wherein said inlet port is positioned away from said openings of said ring, a second position wherein said inlet port is in



communication with said first opening and a third position wherein said inlet port is in communication with said second opening.

3,049,272
GARMENT HANGER
William F. Tufts, 2116 Peachtree Road NW., Atlanta, Ga.
Filed Dec. 20, 1956, Ser. No. 629,591
1 Claim. (Cl. 223—88)



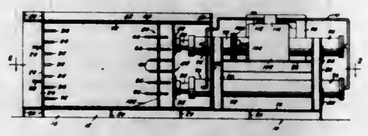
A garment hanger comprising a substantially triangular, relatively rigid sheet-like body, supporting means attached to said body at the apical portion thereof, said body having integral portions at the ends of the base offset laterally from the body, openings provided in said integral portions, and a strut received in said openings.

3,049,273
LUGGAGE RACK
Walter K. Crane, Inglewood, Calif. (% Steven M. Martin, Esq., 110 Pine Ave., Long Beach 2, Calif.)
Filed Apr. 6, 1959, Ser. No. 804,226
3 Claims. (Cl. 224—42.1)



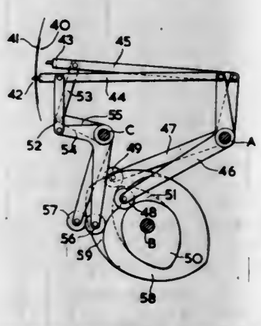
2. In a luggage rack having four mounting brackets arranged in pairs in rectangular arrangement and having a rack unit with projected retractable trunnions engaged with the brackets and supported in luggage-holding position thereby, the rack unit spanning between the pairs or brackets and being adapted to swing downwardly on one pair of trunnions, selectively, as the other pair is released, the improvement, that comprises a flexible element extending from each bracket to the rack inward of the connections between the brackets and rack, and means to draw slack in said elements into interior portions of the rack as said slack tends to form during swinging movement of the rack upwardly to luggage-holding position, said flexible elements constituting supports for the lowered end of the rack unit.

3,049,274
METAL SEVERING DEVICE
Fred E. Mosley, P.O. Box 1552, Waco, Tex.
Continuation of applications Ser. No. 582,781, May 4, 1956, and Ser. No. 643,346, Mar. 1, 1957. This application June 22, 1959, Ser. No. 822,152
7 Claims. (Cl. 225—97)



1. A metal severing device for cutting large metal structures such as automobile bodies including, a supporting frame, a pair of spaced fixed cutter jaws, a pair of spaced movable cutter jaws carried by the frame for reciprocal movement thereon, and means for reciprocating the movable jaws toward and away from the fixed jaws, each jaw of each pair of jaws including a plurality of spaced pointed spike-like teeth extending toward the other pair of jaws.

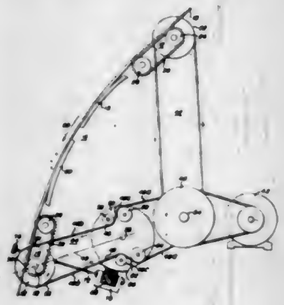
3,049,275
FILM TRANSPORT MECHANISM
Thomas Cayton Nuttall, Croydon, England, assignor to Bush and Rank Cintel Limited
Filed Feb. 25, 1960, Ser. No. 10,945
Claims priority, application Great Britain Mar. 10, 1959
9 Claims. (Cl. 226—63)



1. A film transport apparatus comprising in combination: means for guiding a film along a predetermined path, first and second claw levers bearing respectively first and second claws for engaging perforations in said film, a camshaft, first and second engagement cams mounted for rotation with said camshaft, first and second engagement levers, first and second engagement follower members carried on said respective engagement levers, and each cooperating with a respective engagement cam, pivot means connecting said first and second claw levers to said first and second engagement levers respectively so that rotation of said camshaft causes said claws to enter and withdraw from perforations in said film, first and second transport cams mounted for rotation with said camshaft,

first and second transport levers, first and second transport follower members carried on respective transport levers, and each cooperating with a respective transport cam, first and second transport links pivotally connecting said first and second claw levers to respective first and second transport levers so that rotation of said transport cams produces movement of said claws in the direction of said film path, so that by the combination of said movements each of said claws is caused in turn to enter first said perforation with its driving surface initially rearwardly displaced from an edge thereof, to move so as to lessen the distance of its driving edge from that of said precedingly operative transport member, so that the driving edge of first said transport member engages said edge of first said perforation and until the driving edge of said precedingly operative driving member is disengaged from the edge of said preceding perforation, and to cause said precedingly operative driving member thereafter to be withdrawn from engagement in said preceding perforation and to return to engage a succeeding perforation in said row.

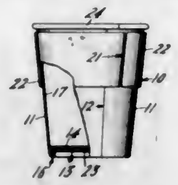
3,049,276
PAPER FEED MECHANISM
Robert E. Wilkins, Wollaston, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,030
12 Claims. (Cl. 226—74)



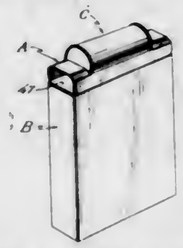
1. In a web feed mechanism for a high-speed printer including first and second spaced web advancing means and means for driving said web advancing means in synchronism with each other, at least one of said driving means including a belt linkage having a pair of opposite belt sections, means for adjusting the tension of said web comprising, means disposed on a common support to effect substantially opposite, intermediate deflections of the path of each of said belt sections, and means for selectively positioning said common support to produce opposite changes of the lengths of said paths to vary the relative phase of said web advancing means.

3,049,277
INSULATED CONTAINER
Richard L. Shappell, Easton, Pa., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 22, 1959, Ser. No. 861,269
5 Claims. (Cl. 229—1.5)

1. A disposable tapered nestable container comprising a fibre side wall, a coating on the inside surfaces of said side wall consisting essentially of a polymer of an ethylenically unsaturated monomer, and a circumferential band of a cellular plastic insulating material adhesively attached to the outer surface of said side wall, said band being substantially narrower in width than the height of said side wall but covering at least an area sufficient to permit the container to be grasped thereon between the thumb and forefinger of the user whereby the heat transfer between the contents of the container and the surfaces of the hand of the user in grasping contact with said side wall is minimized.

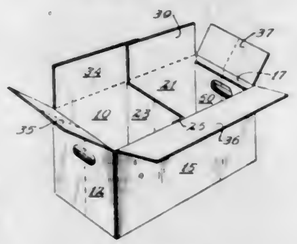


3,049,278
CAN CONTAINING CARTON
Russell J. Hennessey, St. Paul, Minn., assignor to Waldorf Paper Products Co., St. Paul, Minn., a corporation of Minnesota
Filed Feb. 15, 1960, Ser. No. 8,841
8 Claims. (Cl. 229—16)



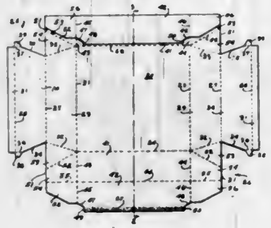
3. A can sleeve including a bottom panel, side wall panels extending upwardly from two opposed side edges of said bottom panel, a pair of spaced top panels connecting the upper edges of said side wall panels at opposite ends thereof to provide a can receiving recess therebetween, panels foldably connected to the upper edges of said side walls between said top panels and adapted to fold beneath a can in said recess.

3,049,279
EGG CASES
Thomas G. Mairs, St. Paul, and Frank W. Locke, Minneapolis, Minn., assignors to Waldorf Paper Products Co., St. Paul, Minn., a corporation of Minnesota
Filed Aug. 26, 1960, Ser. No. 52,289
5 Claims. (Cl. 229—27)



1. A two part case for eggs and the like including a rectangular body including side and end walls, bottom flaps hinged to the lower end of said side walls, said bottom flaps being of a length less than one-half the width of said end walls, and a separate bottom panel marginally secured to said bottom flaps to extend therebetween, and end wall panels hinged to the ends of said bottom panel and swingable from a position overlying said bottom flaps to a position inwardly of said end walls of said body.

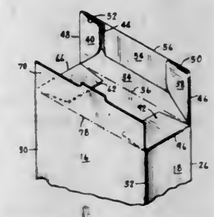
3,049,280
BOXES OR CARTONS
William P. Frankenstein, 7260 Eastlawn Drive, Cincinnati, Ohio
Filed June 8, 1959, Ser. No. 818,918
4 Claims. (Cl. 229—31)



1. In a carton of the class described comprising a substantially rectangular main panel, side walls upstanding from two opposed edges of said main panel and each side wall including an inner and an outer wall member with each of said wall members substantially rectangular in area, an end wall upstanding from each of the remaining edges of the main panel each including an inner and an outer wall member, said end walls outer wall members each having its lateral edges converging whereby said end walls outer wall members have their upper edges of less length than their lower edges, a corner piece integrally, hingedly connected with adjacent lateral edges of the side and end walls outer wall members, said corner pieces each having therein a diagonal score line thereby providing in each corner piece a pair of portions respectively, integrally, hingedly connected with adjacent end wall outer wall member and side wall outer wall member and which corner piece portions are folded on themselves and disposed parallel to the end walls and with said corner piece portion of each corner piece between the diagonal score line and the side wall outer wall member of a generally triangular configuration and of an area to span the space between the adjacent lateral edges of the end wall outer wall members and side wall outer wall members, an edge finishing flap integrally, hingedly connected with said space spanning portion of each corner piece of a configuration to be within the configuration and an area no greater than the area of said space spanning cover piece portion to depend interiorly of the carton and provide a finished appearance to the exposed edge of said space spanning corner piece portion, and means carried by the side and end walls inner wall members for locking the walls in their erected positions comprising notches at the lower corners of the side walls inner wall members and locking lugs on the lower corners of the end walls inner wall members disposed in said side walls inner wall members notches.

3,049,281
FLAP SEAL BOX
Oscar L. Vines, Providence, R.I., assignor to Continental Paper Company, Ridgefield Park, N.J., a corporation of New Jersey
Filed Sept. 22, 1959, Ser. No. 841,505
3 Claims. (Cl. 229—37)

1. A tubular box having a face panel, a back panel and a pair of side panels connected to said face panel and said back panel, a reuse closure top formed in an extension at the upper end of said back panel rotated inwardly into closing position over the end of said box, said closure top comprising a top panel overlying the entire open end of said box and having joined thereto by a fold line at the outer extremity thereof a front wall and a pair of side walls joined thereto by a fold line at the lateral extremities of said top panel, a connection between the lateral edges of said front wall and the adjacent forward edges of said respective side walls whereby said walls comprise a flange structure adapted to engage the outer faces of said face panel and said side panels, a pair



of diagonal fold lines in said flange structure adjacent said connections defining triangular areas at the free edge of said flange structure, said connections being limited to said triangular areas and said walls comprising said flange structure being infolded on said fold lines whereby said walls lie flat against the inner face of said top panel, and a glue flap formed in the upper end of said face panel adhesively attached to the outer face of said inwardly rotated closure top.

3,049,282
CAN CARTON WITH REINFORCED CORNERS
Francis A. Childsey, Jr., Wayne, and William C. Hasselo, Berwyn, Pa., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Mar. 28, 1961, Ser. No. 98,879
4 Claims. (Cl. 229—40)

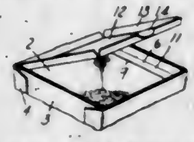


1. An open-ended tubular carton, formed of foldable paperboard, having a corner construction, comprising:
(*a*) a pair of generally flat panels hingedly attached to each other to form therebetween a corner;
(*b*) said panels having free edges defining an end of the carton; and
(*c*) a flap cut from at least one of said panels and hingedly attached to said one panel on a fold line;
(*d*) said flap fold line and said panel hinge line converging;
(*e*) said flap being divided into separate sections by a transverse score line;
(*f*) said flap being folded back inside of the carton with its score line contiguous to the panel hinge line and with its sections disposed in full face abutting engagement with portions of respective carton panels at said ends of the carton on opposite sides of said panel hinge line to reinforce said corner.

3,049,283
DISPENSING CARTON OR RECEPTACLE
Kenneth T. Buttery and Curtis D. Rice, Kalamazoo, Mich., assignors to KVP-Sutherland Paper Company, Kalamazoo, Mich., a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,294
2 Claims. (Cl. 229—43)

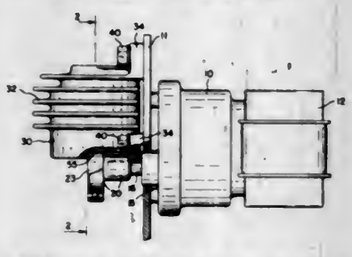
1. A receptacle comprising a rectangular body member having outwardly inclined side walls, an inner cover member fittingly supported within said side walls in

downwardly spaced relation to the upper edges thereof and having upwardly projecting flanges on its edges of a length corresponding to the width of the side walls and fixedly and sealingly secured to the inner sides thereof, said inner cover member having a rectangular fracturing zone disposed adjacent to but in inwardly spaced relation relative to the receptacle side walls defining a removable section, and an outer cover member dimensioned to be fittingly and retainingly engaged within the flanges of said inner cover member and having upwardly projecting flanges on all edges thereof springably connected thereto and of a length corresponding to the width thereof and disposed within and in frictionally retaining releasable engagement with said flanges on said inner cover member, the portions of said inner cover member at the outer side



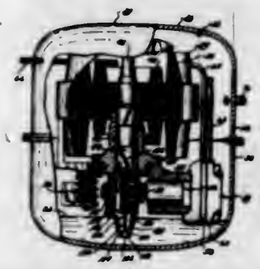
of said fracturing zone thereof when said removable section is removed projecting inwardly from the receptacle side walls and constituting a continuous inwardly projecting flange on the side walls with which said outer cover member is supportedly engageable when said outer cover member is inserted after the break out portion of said inner cover member has been removed with the flanges of said outer cover member in springably yielding frictional engagement with the flanges of said cover member, opposed flanges of said outer cover member having tabs projecting from their outer edges constituting finger pieces, said tabs being foldable over the upper edges of the adjacent inner member flanges and side walls with end portions thereof in downwardly projecting overlapping relation to the outer sides of the side walls and detachably secured thereto.

3,049,284
CONTINUOUSLY OPERATED COMPRESSOR
Leo Alamprese, Elmhurst, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 18, 1960, Ser. No. 29,938
8 Claims. (Cl. 230—22)



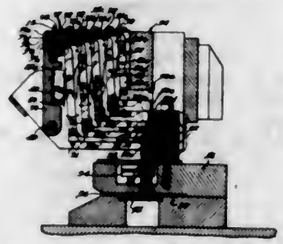
1. In a compressor: a casing having an aperture therein, a movable member positioned in said aperture and forming an air tight seal therein to provide a compression chamber between said casing and said movable member, an inlet passage in said movable member, a filter positioned in said inlet passage, first check valve means positioned in said inlet passage between said filter and said compression chamber and adapted to pass air only into said compression chamber, second check valve means positioned in said inlet passage and operative upon the presence of a predetermined pressure in said compression chamber to bypass said first check valve means to permit the flow of air from said compression chamber back through said filter and said inlet passage to purge said filter, an outlet passage in said casing, a third check valve means positioned in said outlet passage and adapted to pass air from said chamber, and means for reciprocating said member in said casing to vary the volume of said compression chamber to compress air therein.

3,049,285
REFRIGERATING APPARATUS
Ralph W. Doeg, Highland Park, Mich., assignor to American Motors Corporation, Detroit, Mich., a corporation of Maryland
Filed Sept. 22, 1959, Ser. No. 841,546
2 Claims. (Cl. 230—206)



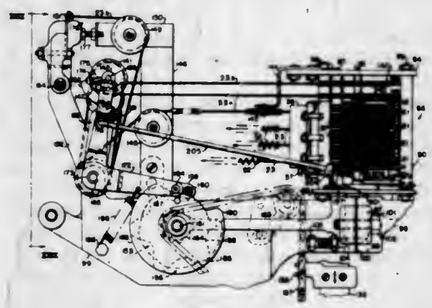
1. Refrigerating apparatus comprising a casing forming a sealed chamber, a body of lubricant stored in the lower portion of said chamber, a compressor including a vertically extending crankshaft within said chamber, said crankshaft terminating a spatial distance from the lubricant, a motor within said chamber operatively connected to drive said crankshaft, a lubricant conducting means secured to said crankshaft for conveying lubricant stored in said chamber to said crankshaft including a body having a passage with an inlet below the level of lubricant and an outlet above the level of the lubricant, said body being secured to said crankshaft for rotation therewith with said passage extending in axial alignment with the axis of said crankshaft, said passage being inclined to diverge from the opposing side thereof as it extends from said inlet opening, said crankshaft having a passage and an opening in said terminated end thereof, and said inclined side terminating in alignment with said opening in said crankshaft to direct thereinto the flow of lubricant from said inclined side, a recess formed in said body, and said recess being extended about within said body and terminating in opposed and open communication with said passage whereby said recess is adapted to receive and trap foreign matter centrifuged from the liquid lubricant as it is conveyed through said body prior to said lubricant entering said crankshaft.

3,049,286
APPARATUS FOR SENSING AND REPRODUCING PERFORATIONS
William H. Dreyer, Skokie, and Heinz W. Schreiter, Chicago, Ill., assignors to Cummins-Chicago Corp., Chicago, Ill., a corporation of Illinois
Filed Sept. 15, 1959, Ser. No. 840,111
7 Claims. (Cl. 234—51)



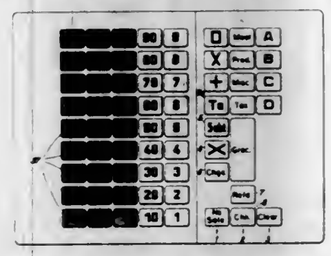
1. In perforation reproducing apparatus, the combination comprising a plurality of probes disposed in a rectangular array of rows and columns, means mounting said probes with their first ends alined but with freedom for each to yieldingly shift in an end-wise direction, the probes in successive rows being of progressively greater length, a plurality of movable relay arms disposed in a rectangular array with each having one end thereof disposed opposite the second end of a corresponding one of said probes, the arms in successive rows being progressively less in length with the arms of greatest length opposite the probes of least length, a plurality of punches disposed in a rectangular array of rows and columns, with the adjacent rows of punches more closely spaced than the adjacent rows of said probes, means mounting said punches with their first ends alined but with freedom for each to yieldingly shift in an end-wise direction, the punches in successive rows being of progressively greater length, a plurality of movable interposers disposed in a rectangular array with each having one end disposed opposite the second end of a corresponding one of said punches, means for shifting each of said interposers away from the second end of the corresponding one of said punches in response to movement by a corresponding one of said arms as a result of shifting of a corresponding one of said probes, and means for moving all of said interposers in a direction parallel to said punches so that those particular punches, corresponding to those ones of said probes which are not shifted, will be moved with an end-wise punching motion.

3,049,287
CHART READING MECHANISM
Lawrence S. Williams, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Nov. 15, 1957, Ser. No. 696,784
4 Claims. (Cl. 235—1)



1. In a reading device having a code-bearing chart positionable by condition responsive mechanism and means for sensing the code, in combination, first and second differential arms, resilient means connected to the arms, a driven element, a first cable, the first arm being operatively connected by means of the first cable to the sensing means and positionable in opposition to the resilient means by the sensing means to indication position in a first denominational order according to the sensed code, an idler pulley engaging the first cable intermediate the connected sensing means and the first arm, first driving means rotatably mounting the pulley for selectively positioning the first arm additionally in opposition to the resilient means to add to its indicating position, a second cable interconnecting the driven element and the second arm, second driving means cooperating with the second cable intermediate the connected driven element and the second arm for selectively positioning the second arm in opposition to the resilient means to indication position in a second denominational order, and a cam carried by the pulley positionable both by the sensing means and by the first driving means for driving the driven element to effect carry transfer from the first order to the second order by positioning the second arm additionally in opposition to the resilient means to add to its indicating position, whereby the arms indicate two denominational orders of the sum of a code sensing and at least one selected increment.

3,049,288
CHANGE COMPUTING APPARATUS IN BUSINESS MACHINES
Gerhard Becker and Ernst Borgmann, Bielefeld, Germany, assignors to Anker-Werke A.G., Bielefeld, Germany, a corporation of Germany
Filed Jan. 23, 1957, Ser. No. 635,713
Claims priority, application Germany Jan. 28, 1956
18 Claims. (Cl. 235—2)

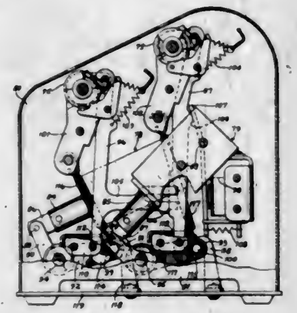


1. In a business machine for registering single and multiple item transactions, totals of such transactions, the amount tendered by the customer to pay for the purchases, and computing and indicating the amount of change due the customer, said amount of change constituting the difference between the amount of the purchases and the amount tendered; the combination of a balance totalizer; amount-posting keys having transfer sliders for transferring amounts posted to said totalizer in an additive and subtractive sense respectively; a plus-minus selector cam rotatable into a plurality of positions including positive selecting, negative selecting, and totalizing selecting positions, feeler lever means engageable with said selector cam for sensing the position thereof, and a totalizer shifting mechanism actuable by said feeler lever means for displacing said totalizer mechanism into respective additive, subtractive and totalizing positions, a plurality of release keys to control the respective positions of said selector cam and including a sub-totalizing key, a payment-received key and a change-registering key; said sub-totalizing key being operably linked to said selector cam and said shifting mechanism so as to release a machine run to draw a sub-total in said totalizer of all items positively and negatively entered previously into said totalizer by said amount-posting keys; said payment-received key being operably linked to said selector cam and said shifting mechanism for causing the amount tendered, after being posted on said posting keys, to be entered into said balance totalizer; and said change-registering key being operably linked with said selector cam and said shifting mechanism to draw in said balance totalizer the difference between said sub-total and said amount tendered, whereby said amount of change is computed.

3,049,289
ITEM COUNTER MECHANISM
Irvin W. Borutzke and Joseph K. Blankenship, Detroit, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Oct. 14, 1959, Ser. No. 846,440
13 Claims. (Cl. 235—60)

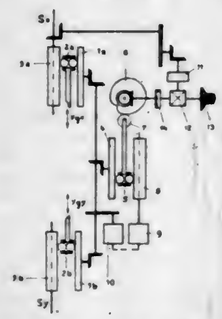
1. In combination, a plurality of banks of links, a like plurality of banks of actuating members each pivotally connected at one end to a different one of said links and having a hooked portion at the other end thereof, means

yieldingly urging said links against movement by said actuating members, a plurality of bails each juxtaposed to said hooked portions of a different bank of said actuating members, a plurality of electromagnetic drive means each coupled to a different one of said bails, electromagnetic selection means including a single bank of coupling control magnets corresponding in number to the number of actuating members of only one bank of actuating



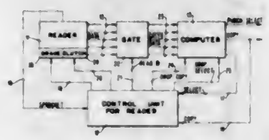
members and selectively operable to couple the hooked portion of a different one of the link actuating members in each of said plurality of banks of actuating members to the bail for each bank of actuating members, switch means in circuit with and affording a selection of any one of said magnets, and additional switch means separate and distinct from said first mentioned switch means in circuit with and affording a selection of any of said electromagnetic drive means.

3,049,290
COMPUTING DEVICE FOR CONSIDERING THE VARIABLE MAP SCALE WHEN INDICATING THE POSITION OF VEHICLES ON A MAP
Karl Heinrich Ramsayer, 54 Hassenbergstrasse, Stuttgart, Germany
Filed Apr. 29, 1959, Ser. No. 809,710
Claims priority, application Germany May 12, 1958
4 Claims. (Cl. 235—61)



1. In a navigational computer for displaying the position of a craft on a map, the combination which comprises: a conformal map, the scale factor of which depends on the X-coordinate of the X,Y-coordinate system of the map, two mechanical friction integrators each with a rotating input shaft and a rotating output shaft and a lengthwise movable friction element for the integration of the X-component respectively the Y-component of the speed of the craft, means to set the friction elements of said integrators according to said speed components, a third mechanical friction integrator, a motor to drive the rotating input shafts of the three integrators, a camplate representing the reciprocal values of the variable scale factor of the map, means to set said camplate according to the rotations of the output shaft of the X-integrator, means to displace the friction element of the third integrator according to the position of said camplate, a speed regulating device running with constant speed, means to govern the speed of said motor in such a way that the rotating input shafts of the three integrators are driven with such a speed that the speed of the rotating output shaft of the third integrator is in agreement with the constant speed of said speed regulating device.

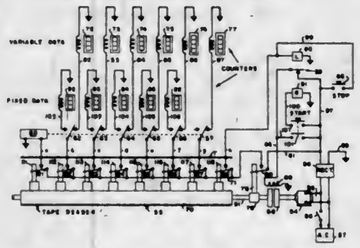
3,049,291
TAPE READER CONTROL
Roger C. Greenhalgh and David E. Norton, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 30, 1959, Ser. No. 843,482
2 Claims. (Cl. 235—61.11)



1. A control unit for operating a reader-transport for coded tapes having groups of data arranged serially for input to a computer operating at a much higher speed than the tape transport, the tape reader being capable of conditioning a plurality of lines in a data channel according to the group of data, and conditioning a sprocket line indicating the presence of the group of data at the read station, the transport having electrically operable clutch and brake devices, and the computer being adapted to command the transmission of a group of data by coincident conditioning of a select line and a copy line, and to decondition said select line and said copy line as a result of appropriate signals from the control unit, which comprises: a two-state stop device, means responsive to the deconditioned state of the sprocket line for setting "on" said two-state stop device, a "stop device on" line conditioned by said stop device, a two-input logical AND device operable on coincident conditioning of the select line and copy line, a four-input logical AND device operable on coincident conditioning of said "stop device on" line and the select line, copy line, and sprocket line, a two-state clutch-brake device for controlling movement of the tape transport responsive to said two-input logical AND device to be set to "clutch," a single-shot read-in device operable by said four-input logical AND device and effective to reset said stop device to "off" to gate data for transmission to the computer and to signal the computer to decondition the copy line, a single-shot disconnect device operable upon the termination of operation of said read-in device, effective to signal the computer to decondition the select line, a single-shot delay decision device responsive to said disconnect device, effective to condition a delay decision line for a standard time duration decision delay during which the computer is normally operable to determine the acceptability of the transmitted group of data preparatory to commanding reread, halt or continue to the tape reader-transport, the "reread" command requiring that said select line remain deconditioned at the termination of the decision delay, after which coincident conditioning of select and copy commands a reread, the "halt" command requiring that said select line remain deconditioned at the termination of the decision delay, and the "continue" command requiring that said select line be conditioned prior to termination

of said decision delay, and logical OR-inverter means jointly responsive to said delay decision line and the select line for setting said stop device to "on."

3,049,292
READ-OUT SYSTEM FOR MULTI-CHANNEL RECORDS
Douglas C. Meyers, Metairie, La., assignor to Shell Oil Company, a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,722
6 Claims. (Cl. 235—61.9)



1. A system for reading out quantitative data from a record which bears machine-sensitive data marks denoting additive elements of different items of data, said data marks pertaining to each item of data being allotted to a particular allocated longitudinal record channel so that all marks in each allocated channel pertain to the allotted items, said record in addition including an end-of-test mark denoting the end of a series of data marks, said system comprising:

a record-reading machine for said record including means for advancing said record parallel to said channels past a reading station and a plurality of two-position circuit-control devices responsive to data marks in corresponding record channels; said advancing means advancing said record intermittently and said circuit-control devices being actuated during the period said record is at rest;

a separate electrically actuated accumulator for each said circuit-control device;

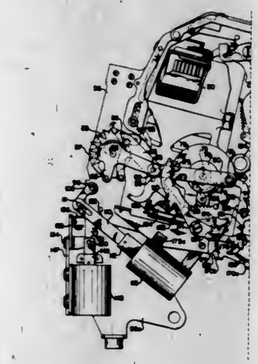
a separate circuit chanel interconecting each said circuit-control device to a corresponding accumulator for advancing the respective accumulator in accordance with the marks in the record channel and electrical circuit control means on each said accumulator for indicating the accumulated data thereon;

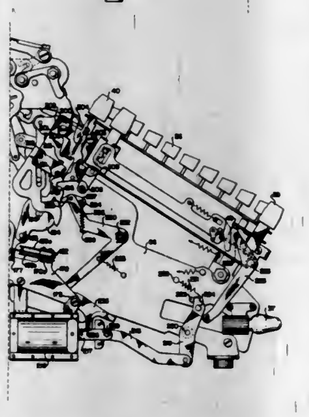
a circuit channel for transmitting signals indicating said accumulated value;

and means responsive to the said presence of said end-of-test mark for sequentially transmitting said data signals from the several accumulators to said circuit channel.

3,049,293
CALCULATING MACHINE ADAPTED FOR NUMBER CHECKING DEVICE
Mark J. Garvey and Walter U. Andrews, Ithaca, N.Y., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed June 24, 1960, Ser. No. 38,506
5 Claims. (Cl. 235—130)

1. In combination with a checking device for receiving and subjecting data to a predetermined rule thereof and having control means positioned according to the conformity of such data with such rule, a machine of the class described for entering data into said device, comprising a cyclically-operable main drive means; first latch means normally positioned for blocking operation of said drive means; second latch means also normally positioned for blocking operation of said drive means; manually-operable trip means for initiating operation of said drive means; means responsive to said trip means for moving said first latch means to a non-blocking position with respect to said drive means; means also responsive to said trip means for moving said second latch means to a non-blocking position with respect to said drive means; data storage mechanism; means for entering data into said storage mechanism during operation of said drive means; control means responsive to operation of said drive means for initiating an operation of said checking device; interlock means also responsive to operation of said drive means for overcoming



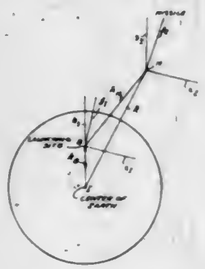


the second latch means moving means, whereupon said second latch means may return to its normal position for blocking further operation of said drive means by said trip means during operation of said checking device; and sensing means responsive to the positioning of said checking device control means, said sensing means being effective for overcoming said interlock means and permitting further operation of said drive means by said trip means when the data entered into the storage mechanism conforms to the checking device predetermined rule, and said sensing means being not so effective when the data entered into the storage mechanism does not conform to the checking device predetermined rule.

3,049,294
VELOCITY AND DISTANCE INDICATING SYSTEM
William H. Newell, Mount Vernon, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Jan. 23, 1957, Ser. No. 635,757
4 Claims. (Cl. 235—151)

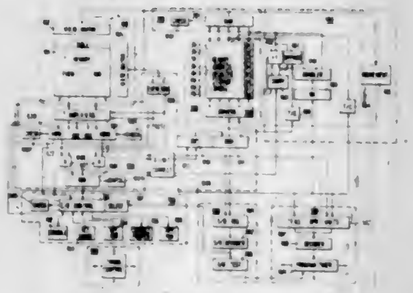
1. A system for measuring the velocity of a vehicle in space from flight quantities determined by means of

accelerometers and angle gyros disposed in the vehicle, said system comprising component vector stabilizing means for generating signals representing direction cosines, means connected to the output of said component vector stabilizing means for converting the components of earth rotation in a base system of components related to the earth system to components of earth rotation in the vehicle's coordinate system, said converting means having input means settable in accordance with said components of earth rotation in the base system, means adapted to receive said flight quantities from said angle gyros for combining said latter flight quantities with the output of said converting means and introducing said combined quantities as inputs to the component vector stabilizing means, means adapted to receive said flight quantities from said angle gyros and said accelerometers



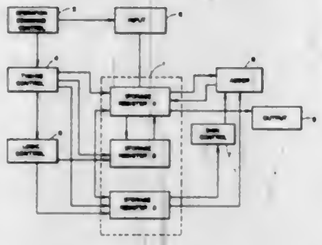
for determining component velocities in the vehicle's coordinate system, means connected to the output of said vector component determining means and to the output of said component vector stabilizing means for transforming the component vectors in the vehicle's coordinate system to component vectors in the base system of coordinates, said transforming means including means for computing distance components, means connected to the distance component computing means and to the component vector stabilizing means for obtaining components of gravity in the base coordinate system and converting said components of gravity to components of gravity in the vehicle's coordinate system, the output of the latter means being connected into the means for determining the component velocities in the vehicle's coordinate system.

3,049,295
MULTIPLYING COMPUTER
William H. Rhodes, Poughkeepsie, James G. Brenza, Lake Carmel, and Wayne D. Winger and Robert C. Jackson, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 20, 1960, Ser. No. 77,120
21 Claims. (Cl. 235—156)



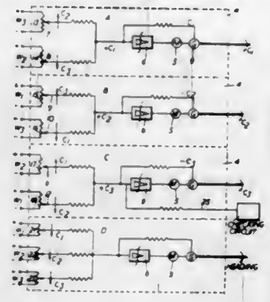
1. A memory centered computer comprising:
(*a*) a memory having a multiplicity of consecutively addressable locations, each even addressed location and its adjacent higher odd addressed location forming a pair, both locations of the pair being available upon any memory reference when either is referenced;
(*b*) a memory address register;
(*c*) means connecting said memory address register with said memory to address the memory location pair identified by the number currently stored in said memory address register;
(*d*) memory address retaining storage means having a plurality of address registers for retaining a plurality of memory addresses and presenting, upon demand, the address content of a particular register to said memory address register;
(*e*) address modification means connecting said memory address register back to said memory address retaining storage means;
(*f*) a single digit multiplier register;
(*g*) a doubler connected to said multiplier register (*f*) to provide a plural digit number corresponding to a multiple of the multiplier digit;
(*h*) means connecting said doubler to said memory address register, whereby said plural digit number provides a plurality of digits of a memory address in said memory address register;
(*i*) multiplicand digit means for entering a single digit multiplicand into said memory address register; and
(*j*) program timing means connected to said other means (*b, c, d, e, f, h, i*) for controlling the sequence of operations to provide a multiply sequence.

3,049,296
BINARY SQUARE ROOT MECHANIZATION
Theodore M. Hertz, Whittier, Calif., and Frederick H. Young, Missoula, Mont., assignors to North American Aviation, Inc.
Filed Jan. 13, 1958, Ser. No. 708,631
10 Claims. (Cl. 235—158)



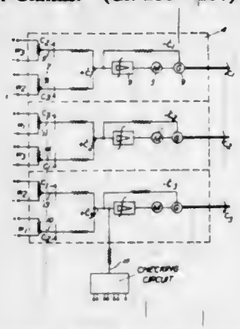
1. In a square root computer of the binary, digital type in which computation takes place in a series of steps characterized by the flowing of a binary number bit by bit from one storage device to another, means for shifting a binary number constituting a first operand to the left two orders for each step of computation so that each bit thereof is successively advanced into an active position of highest order, means for generating a binary number constituting a second operand for each step of operation, means for subtracting said second operand from said first operand for the first step of operation to obtain a first remainder and for subtracting said second operand from said first operand for each subsequent step in which the remainder of the previous step is positive and for adding said second operand to said first operand for each subsequent step in which the remainder of the previous step is negative, and means responsive to the sign of the remainder of each step for storing a binary bit, each said binary bit being a bit of the square root of said binary number.

3,049,297
ANALOG COMPUTERS
Ernest Edward Barber, South Harrow, and Kenneth Henry Simpkin, Aylesbury, England, assignors to General Precision Systems Limited, a corporation of Great Britain
Filed Mar. 26, 1957, Ser. No. 648,565
9 Claims. (Cl. 235—180)



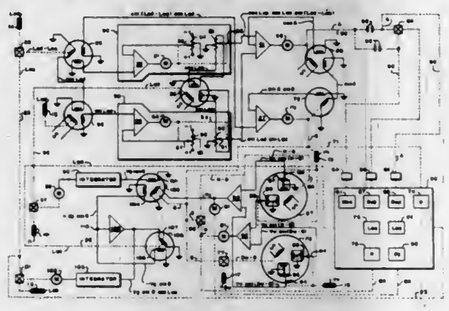
9. An analog computer for continuously representing the angular relationship of a first orthogonal spatial reference system with respect to one or more axes of a second such system comprising a plurality of means tor combining groups of input factors representing angular rates of motion about the axes of a first orthogonal system, means for integrating said combined input factors in each group, a plurality of output elements representing the integrals of said combined input factors of each group, and linear multiplying and adding means for operating upon the input factors of each group by the output elements of other groups in order that said output elements be conditioned in accordance with the cosines of the angles between the axes of said first and second reference systems, said computer having nine output elements conditioned respectively in accordance with the cosines of the nine angles between the three axes of each of two orthogonal reference systems.

3,049,298
ANALOG COMPUTER FOR ANGULAR RELATIONSHIPS OF THREE AXIS REFERENCE SYSTEMS
Ernest Edward Barber, South Harrow, and Kenneth Henry Simpkin, Aylesbury, England, assignors to General Precision Systems Limited, a corporation of Great Britain
Filed Dec. 7, 1954, Ser. No. 473,684
Claims priority, application Great Britain Mar. 3, 1954
4 Claims. (Cl. 235—187)



1. Analog computer apparatus for representing the angular relationship of a first orthogonal spatial reference system having three axes with respect to an axis of a second orthogonal reference system, comprising in combination, means for deriving first, second and third electrical quantities each commensurate with the angular velocity of an individual axis of said first reference system with respect to said axis of said second reference system, three servomechanisms each arranged to provide a respective mechanical output shaft position commensurate with the time integral of its respective resultant applied electrical quantity, six potentiometers, each of said servomechanisms being connected to position an individual respective pair of said six potentiometers; said first, second and third electrical quantities each being applied to excite individual pairs of said potentiometers thereby to provide six voltages; and circuit means combining individual pairs of said six voltages to provide said resultant applied electrical quantities.

3,049,299
GREAT CIRCLE NAVIGATION COMPUTER
Cyrus Beck, 1855 Brentwood Road, Abington, Pa.
Filed June 2, 1959, Ser. No. 817,693
18 Claims. (Cl. 235—188)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A computer for the great circle navigation of an aircraft from a known starting point to a known destination comprising, first mechanical differential means, first shaft means for introducing the destination longitude into said first differential means, second shaft means continuously introducing the present position longitude into said first mechanical differential means, second mechanical differential means, third shaft means for introducing the starting point longitude into said second mechanical differential means, fourth shaft means for continuously introducing into said second mechanical differential means, shaft rotation proportional to the degrees longitude traversed by the aircraft between the starting point and the destination thereof, the output of said second mechanical differential means connected to and driving said second shaft means, first resolver means having a grounded input rotor coil with a rotor therein and a grounded sine pickoff coil and a grounded cosine pickoff coil, fifth shaft means connecting the output of said first mechanical differential means with the rotor of said first resolver means and positioning the rotor to an angle proportional to the difference between the destination longitude and the present position longitude, second resolver means having a rotor input coil connected to a standard power supply and having a rotor in the rotor coil and a grounded sine coil and a grounded cosine coil, sixth shaft means connected to said rotor of said second resolver means for turning the same to an angle proportional to the destination latitude, said rotor coil of said first resolver means being connected to the cosine coil of said second resolver means for having a signal introduced therein proportional to the cosine of the destination latitude, first amplifier means, first motor means connected to and driven by the output of said first amplifier means, first multiplier means, said cosine pickoff coil of said first resolver means connected as an input to said first multiplier means for supplying a signal thereto proportional to the product of the cosine of the destination latitude and the cosine of the difference between the destination and the present position longitudes, third re-

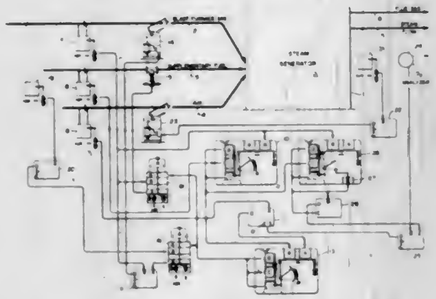
solver means having an input rotor coil energized from a standard power supply and with a rotor therein and a cosine coil and a sine coil, third mechanical differential means, seventh shaft means for introducing a shaft rotation proportional to the starting point latitude into said third mechanical differential means, eighth shaft means connected as an input to said third mechanical differential means, shaft driving means connected as an input to said eighth shaft means providing a shaft rotation proportional to the degrees latitude traversed by the aircraft between the starting point and the present position, ninth shaft means connecting the output of said third mechanical differential means and the rotor of said third resolver means and positioning the rotor to an angle proportional to the present position latitude, said cosine coil of said third resolver means connected as an input to said first multiplier means, the output of said first multiplier means connected as an input to said first amplifier means, second multiplier means, the sine coil of said second resolver means connected as an input to said second multiplier means, the sine coil of said third resolver means connected as an input to said second multiplier means, the output of said second multiplier means connected to the input of said first amplifier means, fourth resolver means having an input rotor coil connected to a standard electrical power supply and having a rotor therein and a grounded sine coil and a grounded cosine coil, said rotor of said fourth resolver means being angularly positioned by said first motor means, the cosine coil of said fourth resolver means being connected as an input to said first amplifier means and in opposition to said inputs from said first and second multiplier means for nulling the output of said amplifier means when the rotor of said fourth resolver means is positioned to an angle proportional to the great circle course distance between the present position and the destination.

3,049,300

COMBUSTION CONTROL FOR A FURNACE FIRED WITH FUELS HAVING DIFFERENT OXYGEN-EXCESS AIR CHARACTERISTICS

Henry P. Lewis, Cleveland, Ohio, and Joseph F. Triolo, Sharon Hill, Pa., assignors to Bailey Meter Company, a corporation of Delaware

Filed Apr. 7, 1960, Ser. No. 20,719
12 Claims. (Cl. 236—15)



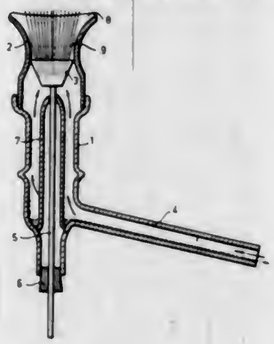
11. In a combustion control system, a furnace, separate means for supplying blast furnace gas fuel, a supplementary fuel and air to the furnace, the combustion of said blast furnace gas fuel with varying amounts of air producing a substantially different oxygen-excess air relationship than the supplementary fuel, constant flow control of the total fuel flow to the furnace having an adjustable set point, means for adjusting said set point in accordance with the rate of air flow to the furnace, means for readjusting said set point to maintain a desired oxygen content in the products of combustion, means for determining the ratio between the rate of flow of blast furnace gas and the total fuel flow to the furnace, and means responsive to said last named means for establishing the desired oxygen content in the flue gas to maintain a desired excess air in the products of combustion regardless of the relative rates of supply of blast furnace gas fuel and supplementary fuel.

3,049,301

ELECTROSTATIC SPRAYING OF ATOMIZED MATERIAL

Hans Heuschkel, Wurttemberg, Germany, assignor to Escher Wyss G.m.b.H., Wurttemberg, Germany, a corporation of Germany

Filed Dec. 9, 1960, Ser. No. 74,811
Claims priority, application Germany Dec. 18, 1959
3 Claims. (Cl. 239—15)



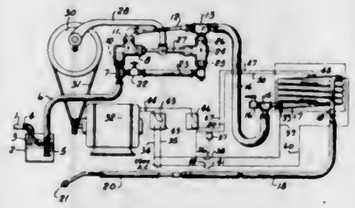
1. Electrostatic spraying apparatus for spraying a mist of atomized material comprising a nozzle having an elongated gap as an outlet, a conduit for supplying mist to the gap and a chamber therebetween constituting a path of flow for the mist from the conduit to the gap; a broom-shaped electrode disposed within the path of flow, the electrode comprising a body and a plurality of laterally-spaced wires extending therefrom in the direction of flow, said wires projecting through the gap and lying on its elongated centerline and means electrically insulated from the nozzle for applying an electric potential to the electrode.

3,049,302

DUAL PHASE SPRAY GENERATOR

Donald M. Simmons, Jr., Osborn, Pa., assignor to Homestead Valve Manufacturing Company, Coraopolis, Pa., a corporation of Pennsylvania

Filed Mar. 18, 1960, Ser. No. 15,997
10 Claims. (Cl. 239—75)



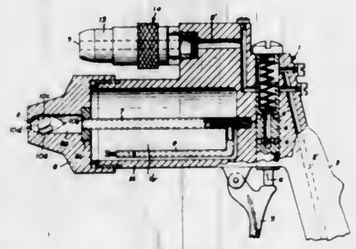
1. A spray generator comprising a spray gun, a heating zone connected to feed fluid to said spray gun, a liquid supply, a motor and pump to feed liquid from said liquid supply to said heating zone, heater means to supply heat to said heating zone correlated with the supply of liquid, a control switch connected to supply current to said motor to operate said pump, a relay having front contacts connected to supply current to said heater when said relay is energized, a thermal switch responsive to the temperature of the liquid in the heating zone, a circuit connecting said relay and said thermal switch in series to the motor side of said control switch, a second pump operated by said motor to feed additional liquid to said heating zone, and a valve to control the flow of liquid to said second pump and thus to said heating zone.

3,049,303

SPRAY GUNS

Gottlieb Kocher, Konizstrasse 298, Koniz, Bern, Switzerland

Filed May 29, 1961, Ser. No. 113,455
4 Claims. (Cl. 239—312)



1. A spray gun for connection to a supply of water under pressure and designed for selectively spraying such water or water enriched with a spray substance from respective separate nozzles which are supplied from a single source of water under pressure through separate supply ducts, one of which ducts is in the form of a tube of relatively narrow cross-section, a suction conduit connected to said tube and projecting into a container for receiving the spray substance, a manually operable control valve provided for selectively connecting the supply of water under pressure to the supply duct of one or other of said nozzles, said tube of relatively narrow cross-section receiving the spray substance opening into a substantially cylindrical chamber which is constricted at one end to form the associated nozzle, an insert member provided with peripheral impelling ducts and having the form of a substantially cylindrical portion merging into a substantially conical portion at one end being arranged in the said chamber spaced from said relatively narrow tube so that the liquid jet leaving said tube strikes the apex of the substantially conical portion from a distance.

3,049,304

PORTABLE HOSE SPRAYING APPARATUS

Vernon R. Sears, Tulsa, Okla.

Filed May 18, 1960, Ser. No. 29,881
12 Claims. (Cl. 239—318)



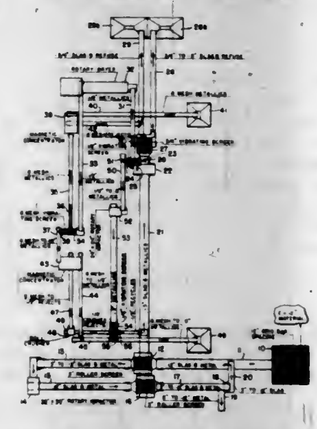
1. Portable hose apparatus for spraying a chemical fluid admixed with a carrier fluid, said hose apparatus comprising first and second hose passageway-forming means for respectively carrying said carrier fluid and chemical fluid and each having an open inlet end and an open outlet end, the open inlet end of said first hose passageway-forming means including coupling means for connecting the same to a source of said carrier fluid under pressure, means holding said first and second hose passageway-forming means immovably together for substantially their full lengths to form a substantially integral hose unit, the outlet end of which can be readily carried about as a unit in one hand and moved to any point to the extent permitted by the length of substantially the entire hose apparatus to spray the fluid mixture where desired without the weight of the chemical fluid being borne by the user, the open inlet end of said second hose passageway-forming means being separated and extendable laterally from the corresponding end of said first hose passageway-forming means where it may be placed into the bottom of a container filled with said chemical fluid, and an eductor nozzle unit for spraying the fluid mixture connected to the ends of said hose passageway-forming means, said nozzle unit having a first open ended passageway forming a reduced throat portion and communicating with said first hose passageway-forming means, and a second open-ended suction passageway connecting said second hose passageway-forming means and said throat portion of said eductor nozzle unit at which a low pressure is developed which sucks said chemical fluid from the inlet end of said latter means into the stream of carrier fluid flowing through said first eductor unit passageway.

3,049,305

PROCESS FOR RECOVERING SUBSTANTIALLY CLEAN MAGNETIC METAL PIECES AND MAGNETIC OXIDES FROM STEEL PLANT DEBRIS

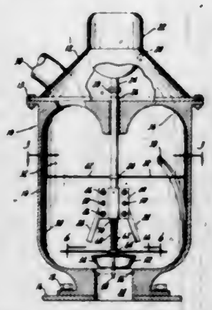
Frank E. Rath, Butler, Pa., assignor to Spang & Company, Butler, Pa., a corporation of Pennsylvania

Filed Feb. 16, 1960, Ser. No. 9,024
10 Claims. (Cl. 241—14)



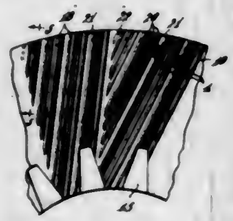
1. A process for recovering substantially clean magnetic metal pieces and magnetic oxides of a selected size range from a burden comprising a mixture of materials such as are found in steel plant debris which includes magnetic metal pieces, friable magnetic material, friable non-magnetic material and non-friable, non-magnetic material, which comprises impacting the burden with sufficient force to break up all of the friable magnetic material therein and some, but not all of the friable non-magnetic material therein to a maximum size which is below the minimum of the selected size range and to render substantially clean the magnetic metal pieces of the selected size range, size separating the impacted burden into a smaller piece size portion containing all of the broken-up friable magnetic material and some, but not all of the friable non-magnetic material therein and a larger piece size portion containing the substantially clean magnetic metal pieces of the selected size range and some friable non-magnetic material, and subjecting the larger piece size portion containing the substantially clean magnetic metal pieces of the selected size range and some friable non-magnetic material to magnetic separation to separate out the substantially clean magnetic metal pieces of the selected size range from the friable non-magnetic material.

3,049,306
SEWAGE GRINDING DEVICE
Aubrey C. Nowlin, 2607 S. Florence Drive, Tulsa, Okla.
Filed June 5, 1961, Ser. No. 114,921
4 Claims. (Cl. 241—46)



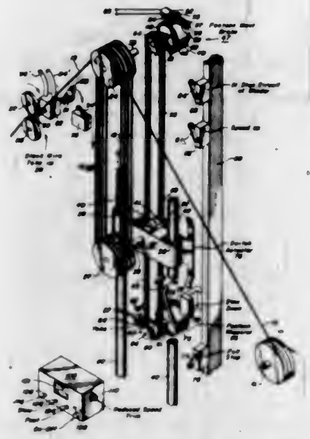
1. A sewage grinding device for use on boats or the like including a generally upright housing defining a sewage grinding chamber, a sewage inlet adjacent the top of the housing and a sewage discharge outlet at the bottom of the housing, both in communication with said chamber, a rotatable drive shaft extending generally centrally within said chamber and toward said discharge outlet, a drive motor for rotating said shaft, a pair of generally parallel plates attached to said shaft and a pair of sewage grinding blades pivoted on said plates, said blades assuming a position generally along said shaft when stationary and moving outwardly from said shaft when rotated, a plug for said discharge outlet, spring means normally urging said plug away from said discharge outlet, said blades having portions thereof which are effective, upon movement of said blades to the grinding position, to urge said plug into the discharge outlet against the action of said spring means, and spiral-like ribs positioned about the inside surface of the housing, said ribs being effective to direct the material in the chamber in a generally upward path.

3,049,307
REFINING DISCS WITH ENLARGED GROOVES
David R. Dalzell, Jr., Pittsfield, Mass., assignor to E. D. Jones Corporation, Pittsfield, Mass., a corporation of Delaware
Filed Oct. 22, 1959, Ser. No. 848,147
4 Claims. (Cl. 241—255)



1. A propelling disc adapted for use in a refining machine having cooperating, relatively rotating discs having blades on their adjacent faces arranged in circumferential segments extending from the interior to the exterior of the working portion thereof, said propelling disc having blades within each segment arranged in clusters extending across the working faces of said segments, the surfaces of the blades of said disc being flat and defining a common plane, the blades within each cluster being separated by narrow grooves between about one-sixteenth and three-sixteenths inches in width, the clusters being separated by enlarged grooves between about one-fourth and three-fourths inches in width.

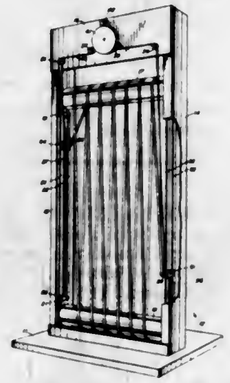
3,049,308
FESTOON CONTROL SYSTEM FOR HAUL-OFF APPARATUS
Ernest U. Lang, Niles, Mich., assignor to National-Standard Company, Niles, Mich., a corporation of Delaware
Filed Jan. 21, 1960, Ser. No. 3,774
11 Claims. (Cl. 242—45)



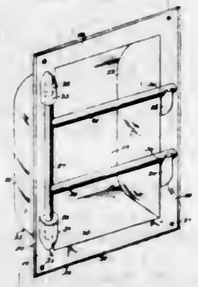
1. A material handling system comprising: a material storage device for storing at least one strand of material including a fixed member and a movable member separated by a distance which is variable between maximum and minimum positions of said movable member relative to said fixed member, the amount of strand material stored thereon being different as the distance between the fixed and movable member is varied; an input means operable to feed material to said material storage device; an output means operable to draw material from said storage device at a variable velocity to satisfy variable load demands, the distance between the fixed and movable members varying whenever the velocity of feed to said storage device is different from the velocity of take-off by said output means; means positioned adjacent said material storage device to initiate an increase in the velocity of feed of said input means at a preassigned interval of movement of said movable member from its maximum position toward its minimum position with respect to said fixed member; first switch means positioned adjacent said material storage device for actuation responsive to movement of said movable member to decrease the velocity of feed on said input means upon movement of said movable member beyond said preassigned interval of movement towards said fixed member; and second switch means positioned adjacent said material storage device for actuation responsive to movement of said movable member to increase the velocity of feed on said input means upon movement of said movable member at a second preassigned interval of movement in advance of the minimum position of said movable member with respect to said fixed member.

3,049,309
CONTINUOUS LOOP TAPE MECHANISM AND METHOD OF TAPE STORAGE THEREFOR
Ansel D. Miller, Chicago, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 5, 1959, Ser. No. 851,204
4 Claims. (Cl. 242—55.01)

1. In a magnetic record-playback apparatus comprising an endless-loop magnetic tape, supporting means, selective-speed impelling means mounted on said supporting means for imparting a selected linear motion to said tape, a record-playback transducer mounted on said supporting means for recording intelligence on or for playing back intelligence from said tape at the operator's option, guide means mounted on said supporting means for causing said tape to engage with said impelling means and for carrying said tape past said transducer in close proximity thereto, said impelling means along with said transducer and said guide means defining an operating zone, the improvement comprising means mounted on said supporting means for storing said tape in an elongated, continuous, progressive winding, which substantially follows an oblongly-helical path and which has a three-dimensional configuration wherein said winding's larger dimension transverse to the longitudinal axis of said winding is many times said winding's smaller dimension transverse to said longitudinal axis, means mounted on said supporting means outside of said operating zone for routing said tape into and out of said winding configuration and means mounted on said supporting means for applying suitable tension components on said tape at the limits of its winding path as said tape respectively leaves and enters said operating zone.

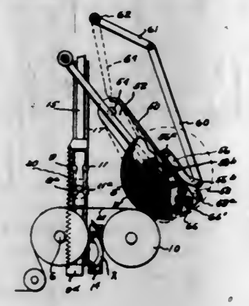


3,049,310
SWING OUT TWIN TISSUE DISPENSER
Merritt W. Wolfe, Mount Carmel Center, Waco, Tex.
Filed Apr. 5, 1960, Ser. No. 20,140
3 Claims. (Cl. 24—55.3)



1. In a device of the character described, a support member including a back wall, spaced parallel vertically disposed side walls, top and bottom sections, a rectangular frame on the outer front portion of said support member, said frame including horizontally disposed spaced parallel top and bottom portions, and vertically disposed first and second side portions; a pair of spaced apart superimposed socket members affixed to the first vertically disposed side portion of said frame, there being opposed openings in said socket members, a vertically movable rod having its ends engaging said openings, a pair of spaced parallel horizontally disposed bars arranged at right angles to said rod and affixed thereto, and a pair of spaced parallel keepers affixed to the second vertically disposed portion of said frame for selectively receiving the free ends of said bars.

3,049,311
APPARATUS FOR WEB WINDING
Clifford W. Birch, Jr., Lexington, Mass., assignor to Birch Brothers, Inc., Middlesex County, Mass., a corporation of Massachusetts
Filed Oct. 22, 1959, Ser. No. 847,942
10 Claims. (Cl. 242—56)

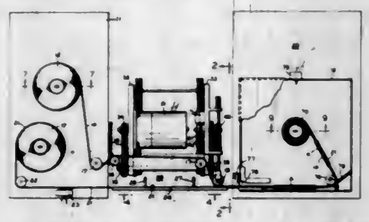


1. A web winding machine comprising a frame, power driving rolls supported in the frame in spaced apart relationship to define a gate aperture therebetween, jaw means for releasably supporting a shell in rolling contact with one of the driving rolls, fluid pressure means for vertically adjusting and opening and closing the jaw means, a second shell supporting means being pivotally supported on said frame, said second shell supporting means including aligned arcuately arranged bearings for receiving the ends of the shell, means rotatably mounting said aligned bearings, a latch mechanism for holding said bearings in position for retaining said shell, a mechanism for transferring a partly wound roll of material on said shell from the first jaw supporting means to the second supporting means, a vertically adjustable gate structure including side walls normally supported within the gate aperture, fluid means for moving said gate in said gate aperture, a sectional web cutting device mounted at the upper portion of said gate for cutting said web when the latter is supported in one position on the rotatable driving rolls, and means for engaging and lapping a cut portion of the web around a shell, said last named means including a plurality of arcuate fingers mounted at their lower end portions and normally positioned between the side walls of said gate when in its lowered position, said fingers having roller engaging elements at their free ends, said spring means normally urging said fingers laterally of said gate for engaging said web, and means for actuating a latch mechanism to release a fully wound roll when the gate is raised and the web is cut.

3,049,312
RECEPTACLE FOR DEPOSITORY APPARATUS
Luther G. Simjian, Greenwich, Conn., assignor to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware
Original application Dec. 22, 1958, Ser. No. 782,177, now Patent No. 2,971,303, dated Feb. 14, 1961. Divided and this application Aug. 15, 1960, Ser. No. 49,499
3 Claims. (Cl. 242—56.1)

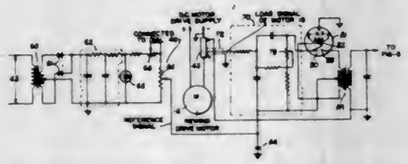
1. A tape receiving receptacle for a depository apparatus comprising: an enclosure which includes a removable lid; a tape storing roller disposed in the enclosure and mounted for rotation about a fixed center; said roller adapted to have tape wound about its circumference in response to the roller being rotated about its center; an aperture in said enclosure through which tape disposed in

part outside of the enclosure is adapted to enter the receptacle on its path to the roller; a movable mounted tension roller disposed in said receptacle and located for engaging said tape along its path from said aperture toward said tape storing roller; resilient means effective upon said tension roller for causing said tape to be taut and forced in the direction toward said receptacle; a cut-



ting means disposed in proximity to said aperture and adapted upon actuation to sever the tape, and said cutting means and tension roller being adjusted relative to one another such that the tension roller when resiliently engaging said tape has sufficient motion to pull upon actuation of the cutting means the severed tape end associated with the tape wound about the tape storing roller through the aperture into the receptacle.

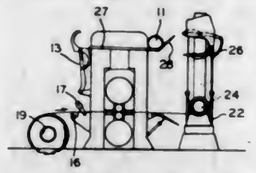
3,049,313
WEB TENSION CONTROL SYSTEM
Charles Edward Jordan, Milwaukee, Wis., and Richard W. Phelps, Fulton, N.Y., assignors to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed July 27, 1959, Ser. No. 829,828
9 Claims. (Cl. 242—75.44)



1. A constant tension regulator for a moving web from an unwind roll onto a motor driven winder roll, comprising a variable brake on said unwind roll for determining the tension in said web, means providing a signal in proportion to the motor load on said winder roll representing the actual tension in said web, means providing a reference signal proportional to a desired motor load representing a desired web tension, means for comparing said motor signal and said reference signal and providing an output signal in response to the difference between the actual and the desired tension, and servo means responsive to said output signal for varying said brake in such a manner as to tend to equalize said motor signal and said reference signal.

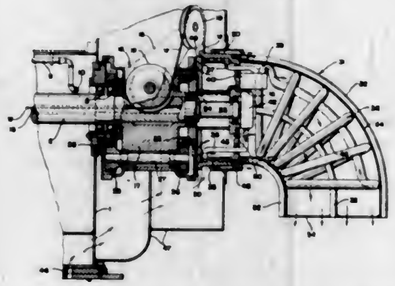
3,049,314
COIL HANDLING DEVICE
Glenn M. Criger, Riverside, Calif., assignor to Aluminum Research Corporation, a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,109
4 Claims. (Cl. 242—79)

1. A method of handling supply reels and take-up reels used to pay off and take up coils of sheet material advancing through a process machine from a supply stand located on one side of the machine to a take-up stand located on the opposite side of the machine where the sheet material is started upon the take-up reel by a wrapper device comprising the steps of continuously winding the sheet material upon the take-up reel until the supply reel is empty and the take-up reel is full, passing the empty supply reel to the opposite side of the machine, depositing the empty reel in a wrapper device, removing the full take-up reel from its stand and utilizing the



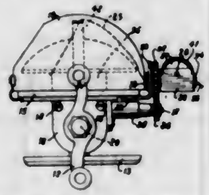
wrapper device as a sling to position the empty reel in the take-up stand, retaining the wrapper device at the take-up stand until the leading edge of a new coil is started upon the empty reel.

3,049,315
WIRE TAKEUP BLOCK
Maurice A. Nye, Cuyahoga Falls, Ohio, assignor to The Vaughn Machinery Company, a corporation of Ohio
Filed Nov. 4, 1960, Ser. No. 67,350
13 Claims. (Cl. 242—82)



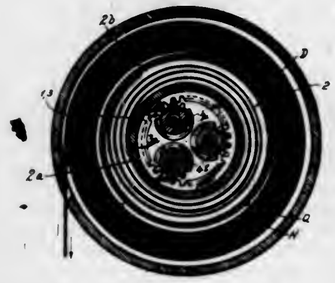
1. Wire handling apparatus comprising a hollow stationary takeup block; a rotatable flyer and drive means therefor operative to rotate said flyer about said block to wrap wire around one end of said block for removal in coil form from the other end of said block, said drive means comprising a shaft to which said flyer is secured adjacent to such one end of said block and which extends through said block; and a fluid circulating and cooling system mounted on said block including a fluid circulating pump driven by said shaft, said system being operative to circulate fluid coolant through said block thereby to extract heat therefrom and from the wire wrapped therearound and to cool the thus heated fluid for recirculation through said block.

3,049,316
LINE TWIST REMOVER FOR SPINNING REELS
Aubrey D. Isbell, 1613 Garfield St., Loveland, Colo.
Filed Dec. 15, 1960, Ser. No. 75,996
6 Claims. (Cl. 242—84.2)



6. The combination with a fishing reel, of the type in which a fish line is unwound over the end of a spool while the latter is stationary and rewound by rotating said spool, of a rotatable line twisting head mounted on said reel, a freely rotatable roller in said head, and means for rotating said head as said line rewinds on said spool, said line passing about said roller and completely through said head.

3,049,317
SPRING LOADED REEL
Friedrich Kessler, 16 Dorotheenstrasse, Dusseldorf, Germany
Filed Mar. 15, 1957, Ser. No. 646,392
8 Claims. (Cl. 242—107.3)



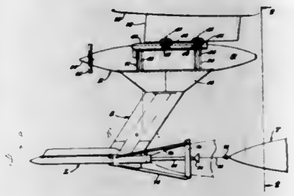
1. In a winding and reeling device, a casing having opposed spaced side walls, a shaft fixed at its ends to and extending between said side walls and defining a first axis, a hub journaled on said shaft for rotation on said first axis, a first gear fixed with said hub coaxially about said first axis, a reel journaled in said casing for rotation on a second axis parallel with and offset from said first axis, an internal gear fixed with said reel coaxially of said second axis and in mesh with said first gear, there being an annular space defined by and between said hub and the periphery of said reel, a spiral spring within said space and having its ends attached to said hub and said reel, respectively, and a flexible elongated member wound exteriorly about said reel and having one end attached thereto and withdrawable from said casing.

3,049,318
BAIL ROD SLEEVE FOR STRAND TENSION DEVICE
Robert L. Carroll, 408 McIver St., Greenville, S.C.
Filed Feb. 26, 1960, Ser. No. 11,194
4 Claims. (Cl. 242—157)



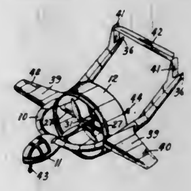
1. A bail rod sleeve comprising a ceramic body having a top surface and a bottom convexly curved surface that is straight endwise and extends transversely of the body, the body having a cylindrical opening therethrough which receives a bail rod, lugs at the ends of the body, top and bottom vertical surfaces defining the lugs, and inclined end surfaces connecting said top and bottom vertical surfaces and extending at an angle of approximately 45° to the longitudinal axis of the opening in the sleeve from a point at approximately the vertical center of said opening to a point below the bottom of said opening in the sleeve, and said inclined end surfaces extending substantial distances above and below the bottom of said opening in the sleeve, the lower inclined surfaces being slightly greater in length than the upper inclined surfaces.

3,049,319
AIRCRAFT TOW TARGET INSTALLATION
Boyd B. Elder, Los Angeles, and Russell A. Wilmot, Redondo Beach, Calif., assignors to Del Mar Engineering Laboratories, Los Angeles, Calif., a corporation of California
Filed Dec. 7, 1959, Ser. No. 857,805
17 Claims. (Cl. 244—2)



1. In an installation on an aircraft for launching a tow target on a tow line, the combination of: a power-actuated reel with said tow line wound thereon; an enclosure for said reel; a launcher separate from said enclosure and positioned laterally thereof, said launcher having a seat for carrying the tow target; a support structure for said launcher extending from said enclosure to the launcher, said support structure being pivotally movable between an upper retracted position placing the launcher close to the aircraft for landing and take-off and a downwardly extended position placing the launcher away from the turbulent slip stream for launching the tow target; actuating means to swing said support structure between its retracted and extended positions; and means to route said tow line from said reel to the outer end of said pivotally movable support structure along a path of constant length to maintain the tension of the tow line substantially constant throughout the swinging movement of the support structure while the tow target is supported by the launcher.

3,049,320
ANNULAR WING AIRCRAFT
Charles J. Fletcher, Sparta, N.J.
Filed July 11, 1958, Ser. No. 747,874
5 Claims. (Cl. 244—12)

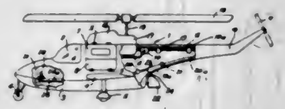


1. An aircraft comprising a substantially U shaped fuselage, a tubular wing pivotally mounted on and centrally located within said fuselage, a thrust generating means housed within said wing for creating a blast of air therethrough, and power means associated with said aircraft for operating said thrust generating means, and means operably interconnecting the fuselage and the wing for moving the chordwise axis of symmetry of said wing from a vertical to a horizontal position.

3,049,321
AMPHIBIOUS AIRCRAFT
John B. Nichols, Atherton, Calif., assignor, by mesne assignments, to Hiller Aircraft Corp., Palo Alto, Calif., a corporation of California
Filed July 20, 1959, Ser. No. 828,365
5 Claims. (Cl. 244—17.19)

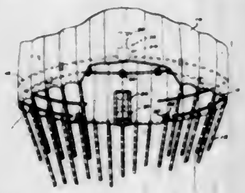
1. An amphibious rotary wing aircraft comprising a fuselage and a tail boom integrally connected with said

fuselage, said fuselage at its bottom consisting of a buoyant contoured water tight hull integral with said fuselage and adapting said aircraft to land upon and be navigable in a body of water, means on said fuselage for stabilizing said aircraft on such body of water, said tail boom extending rearwardly of said fuselage above said hull so as to be positioned above the surface of a body of water when said aircraft is supported thereon, a main rotor structure rotatably mounted above said fuselage, a power source for rotating said main rotor structure, a torque compensating tail rotor rotatably mounted on said tail boom, pilot operable means for controlling the pitch of the blades of said tail rotor, drive means normally operatively connect-



ing said tail rotor with said power source, mechanism for selectively operatively disengaging said tail rotor from said power source interposed in said drive means between said power source and said tail rotor, means to prevent damage to said tail rotor which might otherwise occur should said hull rock while the tail rotor is rotating and strike the water including a pilot operable control member for controlling said mechanism to operatively disengage said tail rotor, and pilot operable rudder means pivotally mounted on said buoyant hull, said rudder means being positionable beneath the surface of a body of water when said aircraft is supported thereon for controlling navigational direction of movement of said aircraft over such body of water.

3,049,322
PARACHUTE MULTIPLE REEFING SYSTEM
Frank R. Vlasic, New Carlisle, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Apr. 29, 1957, Ser. No. 655,924
9 Claims. (Cl. 244—152)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A parachute multiple reefing system comprising a parachute canopy, a plurality of closed circle reefing lines of graded size, means for slidably securing each of said reefing lines to said parachute canopy in the area adjacent the skirt edge and vertically spaced from each other, said means comprising abrasion resistant reefing line loops, a cutter for each reefing line, a trigger for triggering each cutter to cut selected ones of said reefing lines in a predetermined sequence and at predetermined time intervals for controlling the trajectory of said parachute.

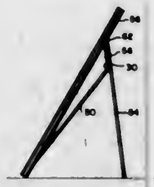
3,049,323
FIXING MEANS FOR FIXING OBJECTS TO A WALL
Henri Peterka, 34 Blvd. Richard-Lenoir, Paris, France
Filed Apr. 18, 1960, Ser. No. 23,051
Claims priority, application France Apr. 21, 1959
6 Claims. (Cl. 248—28)

1. In a fixing means for fixing a mirror to a wall like support, including an externally screw-threaded stem provided with at least one throughway hole adapted to accommodate a fixing element adapted to be driven into said support and thereby secure said stem to the latter in a position where said screw-threaded stem will extend at least partly on one side of said support, and a clamping screw-threaded knob screw-threaded on that latter part of said screw-threaded stem to engage the mirror to be clamped and hold it in position, said stem having two end faces substantially perpendicular to the screw-thread axis and through which extend said throughway hole so that it will bear against the mirror support by one of said end



faces, a lug like projection provided on said latter part of said stem transversely to the screw-thread axis and adjacent said bearing end face in a position where it will be located on the said one side of the support when the stem is secured in said mirror clamping position and thereby provide a rest for the mirror, so that the latter will be clamped between said knob and lug, and a second lug shaped to accommodate a mirror corner provided on said stem adjacent said bearing end face, so that said fixing means may be used as well along a mirror edge as at a mirror corner.

3,049,324
DISPLAY MOUNTS
Don F. Paschal, St. Charles, Ill., assignor to Chronicle Publishing Company, St. Charles, Ill., a corporation of Illinois
Filed May 16, 1961, Ser. No. 110,545
2 Claims. (Cl. 248—35)

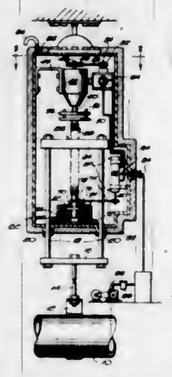


1. A display mount comprising front, intermediate and and rear panels of paperboard or like material secured together in overlying relation, an easel leg cut from the rear panel and connected to said rear panel by a hinge at one end, an easel locking leg cut from said intermediate panel and connected at one end to said easel leg, said easel locking leg having side portions slidably received between said front and rear panels and having a bottom edge portion moved by movement of said easel leg to its erected position into abutting relation with the edge of the opening in said rear panel from which said easel leg is cut to retain said easel leg in erected position.

3,049,325
GAS MOTOR DRIVEN POSITIONER
Philip C. Sherburne, Rumford, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,303
11 Claims. (Cl. 248—58)

1. A motor driven device for positioning fluid handling equipment of a fluid handling system in accordance with changes in a condition of the system caused by changes in the temperature of the system, said device compirsing a frame, a hydraulic jack having a cylinder

mounted on a frame and having within the cylinder a piston from which a piston rod extends through one cylinder end, a fluid pump, a motor of the type which obtains its input energy from compressed gas led to the motor from an independent source of gas under pressure, means connecting said motor to said pump for causing said motor to drive said pump, a conduit connecting the fluid discharge of said pump to said cylinder between said piston and said cylinder end, an additional conduit connecting the fluid intake of said pump to said jack cylinder, a gas-tight casing enclosing said jack, motor and pump, a first gas conduit member leading gas under pressure



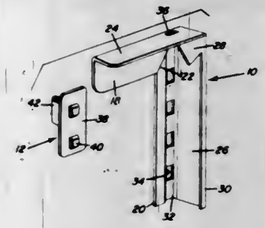
through an opening in said casing to said gas motor, a control valve in said conduit within said casing, an opening in said casing through which said piston rod extends for connection outside said casing to fluid handling equipment, means located at least partially inside said casing for actuating said control valve in response to changes in said system condition, and a vent through said casing, whereby gas leaking or discharged within the casing may escape through said vent, and whereby the jack, motor, pump and control valve and said part of said control valve actuating means are protected from corrosive fluids outside of the casing.

3,049,326
PIPE HANGER
Clifford A. Otterson, 17320 Excelsior Blvd., Hopkins, Minn.
Filed Sept. 12, 1960, Ser. No. 55,276
2 Claims. (Cl. 248—59)



1. A self-tightening pipe hanger for suspending a pipe from a support, said pipe hanger comprising an elongate substantially flat shank having a plurality of longitudinally spaced notches in opposite edges thereof, said notches being arranged in opposed pairs, attachment means cooperating with said notches for attaching one end portion of said shank in depending relation from a support, a pipe-engaging portion integrally formed with the other end portion of said shank and being bendable to define a substantially circular loop for snugly embracing a pipe for support thereof, the terminal portion of said pipe-engaging portion having a pair of tabs integrally formed therewith and extending laterally in opposite direction from the edges thereof, said tabs when bent flat wise to lie against said shank cooperating therewith to define a noose embracing said shank for tightening the pipe-engaging portion against a pipe when said pipe-engaging portion is bent into a pipe-engaging loop.

3,049,327
CURTAIN ROD BRACKET
John J. Caudell, 26 Monroe Terrace, Radford, Va.
Filed Mar. 16, 1960, Ser. No. 15,401
1 Claim. (Cl. 248—222)

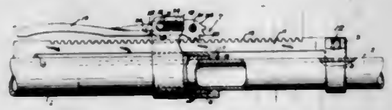


A curtain rod support assembly comprising a bracket adapted to be supported from a window frame, and a supporting member vertically adjustably mounted on said bracket, said bracket including an inverted generally L-shaped member including an upper horizontal leg and a depending vertical leg, said horizontal leg including a top flange adapted to lie against the upper surface of the window frame, and a front flange adapted to lie against the front surface of a window frame, said vertical leg including a side flange and a front flange adapted to engage the corner edge of a side window frame, a depending pointed flange on said bracket at the upper portion of the edge of the side flange remote from the front flange on the vertical leg for insertion behind the upper corner of a window frame, said front flange of the vertical leg being provided with a plurality of equally spaced vertically aligned generally rectangular openings formed therein, the top flange of the horizontal leg having a slot therein adjacent its juncture with the front flange of the horizontal leg and disposed in approximately vertical alignment with the openings in the front flange of the vertical leg, said supporting member including a mounting plate, means projecting from the mounting plate for supporting engagement with a curtain rod or the like, said mounting plate including a pair of rearwardly struck and downwardly extending projections having the lower ends thereof offset rearwardly from the mounting plate and inserted through a pair of openings or one of the openings and the slot for vertically adjustably supporting the mounting plate in position on the bracket.

3,049,328
EXTENSIBLE LOAD OR CARGO BRACING DEVICE
Ray H. Bishop, 1625 16th St., Oakland, Calif.
Filed Jan. 8, 1960, Ser. No. 1,264
1 Claim. (Cl. 248—354)

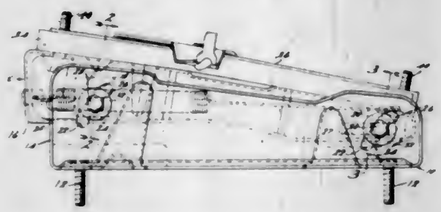
In an extensible load bracing device for engagement with opposite walls of a vehicle, in combination a tubular bracing bar, a second bracing bar slidably telescoped

into an end of said tubular bracing bar, a friction pad on the free end of each bracing bar, said bars being in axial extension of one another, a locking bar secured to said second bar and extended along said second bar in spaced relation to said second bar so as to extend axially over and along the exterior of said tubular bracing bar, a locking head on said tubular bracing bar, a handle pivoted on said locking head adjacent said locking bar, connecting means between said handle and said locking bar for converting the pivotal movement of said handle into relative longitudinal movement of said locking bar and of said telescoping bracing bars, and releasable means to lock said handle in the extended position of said telescoping members, parallel flanges extended from said locking head and straddling said locking bar to guide the same, said locking bar having a series



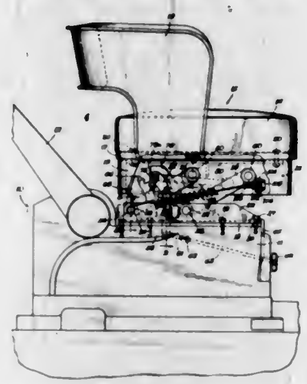
of rack teeth thereon, said handle being pivoted between said flanges and outside of said locking bar, a hub on the pivoted end of said handle, a segment of gear teeth on the periphery of said hub engageable with said rack teeth for shifting said locking bar as the said hub is turned with said handle, the said segment of gear teeth being of such extent as to be completely disengaged from the rack bars when the handle is elevated from its locking position to a completely unlocked position so as to permit free relative adjustment of said telescoping bracing bars, said releasable means to lock said handle including a spring catch projecting from one of said flanges, a projection extended from said handle for engagement by said spring catch, and coacting means on said flange and on said spring catch for releasing said spring catch from said handle projection at will.

3,049,329
SEAT ADJUSTMENT
James W. Eddy, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed July 1, 1959, Ser. No. 824,365
4 Claims. (Cl. 248—394)



1. An adjustable support for a seating structure comprising a pair of substantially vertically disposed plates arranged in face-to-face relationship, the opposite ends of each of said pair of plates each having a slot therein with the pair of slots at each end of said pair of plates comprising an elongated substantially horizontally extending slot in one plate and a slot in the other plate intersecting the horizontally disposed slot and extending at an acute angle thereto, said acutely angled slot having a substantially stepped configuration to provide bolt seating notches at the upper and lower ends of the angled slot and at a location intermediate its ends so as to provide three vertically spaced seats for a horizontally disposed connector bolt extending through the pair of intersecting slots.

3,049,330
ADJUSTABLE SEAT SUSPENSION
Robert R. Coons, Chicago, and Pierce F. Richardson, Hinsdale, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed June 23, 1961, Ser. No. 119,156
10 Claims. (Cl. 248—419)

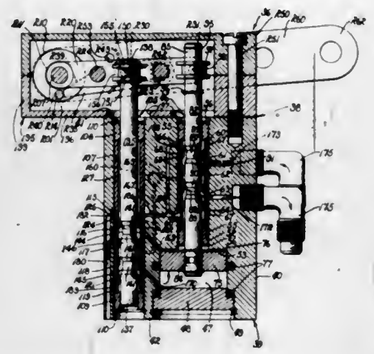


1. In a seat structure having a seat and a support therefor the improvement residing in suspension means for the seat, comprising: fore and aft suspension links mounting the seat on and for movement vertically relative to the support and having a transverse lower pivot to the support and a transverse upper pivot to the seat for each link; biasing means having one end thereof connected to the seat and the opposite end connected to the support and stressed for normally constantly urging the seat upwardly; latching means including a latch member having a lower transverse pivot to the support, and biasing means disposed for constantly urging said latch member rearwardly about said lower pivot thereof; a plural notched sector member pivotally mounted on the transverse lower pivot of the aft link; detent means including a pawl member having an upper transverse pivot to the aft link and including biasing means disposed for constantly urging the pawl normally into engagement with one of the notches of said sector; a manually operative lever connected to said pawl and operative for releasing said pawl from engagement with said notched sector; hold-down means including a member rigidly affixed to said sector member and disposed for locking engagement with said latch member whereby when said latch member and hold-down member are interlocked rotative movement of said notched sector relative to said support is restricted.

3,049,331
FLUID CONTROL MECHANISM
Robert S. Quesinberry, Southgate, Calif., assignor to Flow Equipment Company, Santa Fe Springs, Calif., a corporation of California
Filed July 25, 1960, Ser. No. 45,076
9 Claims. (Cl. 251—14)

7. A fluid control mechanism comprising a support; a main valve mounted in the support and movable between first and second flow control positions; an auxiliary reciprocable ram borne by the support having fluid ports and being connected to the main valve for moving the main valve between its first and second positions upon alternately and oppositely admitting and releasing fluid to and from the auxiliary ram ports; a triggering valve mounted in the support movable between first and second positions alternately and oppositely establishing fluid communication between the auxiliary ram ports and a source of fluid pressure and a sump whereby said main valve is moved between its first and second positions; actuating means carried by the support to move said

triggering valve to and from said first and second positions; interconnecting means joining the triggering valve with said actuating means to permit movement of said triggering valve during a predetermined range of move-



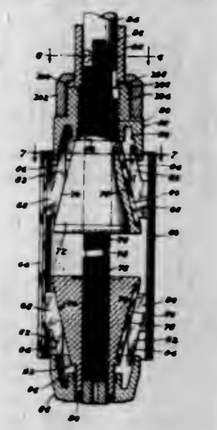
ment of said actuating means; and means connecting said actuating means and said main valve to permit movement of said main valve by said actuating means only upon exceeding said predetermined range of movement.

3,049,332
HIGH PRESSURE VALVE, SHANK AND STEM ASSEMBLY
Charles W. Webster, Hatboro, Pa., assignor to Tri-Kris Company, Inc., Lansdale, Pa., a company of Pennsylvania
Filed Nov. 28, 1961, Ser. No. 155,388
4 Claims. (Cl. 251—88)



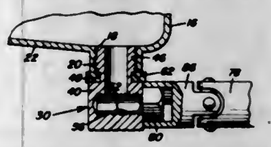
1. In a valve having a body with a flow passage between a fluid inlet and a fluid outlet, and a closure seat in said passage: operating means including a cylindrical sleeve with external threads at the bottom end thereof engaged with internal threads of a packing gland screwed into the valve body, said sleeve protruding upwardly beyond the valve body; a closure stem in the form of a pin with a tapered bottom end adapted to close down against the seat in the transverse passage aforesaid, the upper end of said pin engaging partway into the bottom of the sleeve and being there connected to said sleeve by a ball bearing; a backing pin axially slidable within the sleeve and bearing upon the closure pin from above; a wear take-up plug screw threadedly engaged within the top end of the sleeve; and a locking plug screw similarly engaged within the top end of the sleeve and backing the take-up screw from above, said wear take-up and locking screws being accessible without necessitating disassembling of the valve.

3,049,333
PIPE LINE STOPPER
Paul C. Wright and Orval V. Chambers, both % El Paso Natural Gas Co., El Paso, Tex.
Filed Oct. 9, 1958, Ser. No. 766,335
1 Claim. (Cl. 251—158)



A cylindrical pipe stopper adapted to be inserted into, and having a minimum outer diameter less than, a transverse circular opening through a pipe line and to be expanded into flow-stopping sealing engagement with the edges of the opening, comprising: a longitudinally-split expansible and contractible cylindrical sleeve; a plurality of longitudinal vanes spaced substantially uniformly circumferentially about and secured to the inner side of said sleeve; means carried by said vanes defining a set of inwardly-facing wedging surfaces adjacent each end of said sleeve; means carried by said vanes defining a set of outwardly-facing wedging surfaces adjacent each end of said sleeve; a jack screw disposed coaxially within said sleeve and having two threads of opposite direction; a pair of wedge nut means engaged with said threads for movement selectively away from or toward each other on rotation of said jack screw, each of said nut means having a convexo-frusto-conical surface engageable with a corresponding set of said inwardly-facing wedging surfaces and a concavo-frusto-conical surface engageable with a corresponding set of said outwardly-facing wedging surfaces, whereby engagement of said convexo-conical surfaces with said inwardly-facing wedging surfaces expands said sleeve substantially uniformly about its periphery and engagement of said concavo-conical surfaces with said inwardly facing wedging surfaces positively contracts said sleeve substantially uniformly about its periphery, at least one of said wedge nut means including a cap-like nut member having threaded engagement therewith for adjustment coaxially thereof and carrying the corresponding concavo-conical surface.

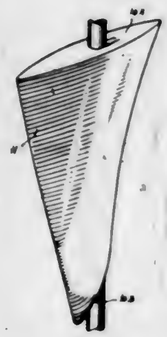
3,049,334
AUTOMATIC CRANKCASE DRAIN ATTACHMENT
Harry Montague, 431 Forrest Hill Drive, San Antonio, Tex.
Filed July 6, 1960, Ser. No. 41,119
5 Claims. (Cl. 251—216)



1. A drain attachment for an engine crankcase comprising a valve body having a tubular externally threaded

neck with a closed axial bore therein and adapted to be seated in a crankcase drain opening as a replacement for the conventional crankcase drain plug, said body having an internally threaded bore therein communicating with the interior of said neck and extending entirely across the axial bore in said neck and terminating in a closed end in the valve body, a valve including an externally threaded open ended stem receivable in said threaded bore and movable into said closed end of said axial bore and controlling flow through said axial and threaded bores, said valve including a passage having continuous communication with said threaded bore and having a discharge port disposed for selective covering and uncovering by the wall of said bore upon turning of said stem in said bore.

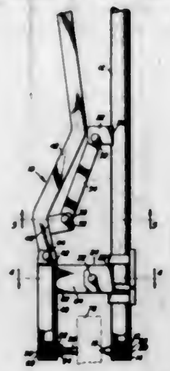
3,049,335
BUTTERFLY GATES
Georges Daumy, Seyssins, Georges Rambaud, Brie et Angonnes, and Marcel Arnoux, Grenoble, France, assignors to Etablissements Bouchayer & Viallet, Grenoble, France, a corporation of France
Filed Aug. 15, 1958, Ser. No. 755,271
Claims priority, application France Aug. 21, 1957
5 Claims. (Cl. 251—305)



1. A butterfly gate valve comprising a fluid conduit having a shuttle plate mounted on a shaft inside said fluid conduit at right angles to the direction of flow of the fluid, said shuttle plate consisting of symmetrical surfaces having a progressive twist corresponding to a torsion of the two extremities with respect to each other.

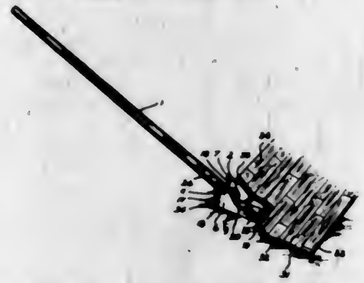
3,049,336
CARPENTER'S TOOL
John D. Proffit, Rte. 1, Clarksville, Tenn.
Filed Feb. 3, 1958, Ser. No. 713,037
3 Claims. (Cl. 254—17)

1. A carpenter's tool comprising an elongated cylindrical handle, a stationary jaw on one end of said handle, a pivoted jaw on the handle cooperable with the stationary jaw for receiving and gripping an elongated support therebetween for mounting said handle for swinging movement thereon, a lever pivotally mounted on the handle and operatively connected to the pivoted jaw, a pressure plate journaled longitudinally on the handle for swinging movement in opposite directions therearound and operatively engageable with an elongated workpiece to be secured to the support at an angle thereto, means for limiting the swinging movement of the plate in one direction for engagement with a workpiece to be secured at a given angle to the support, and means for limiting the swinging movement of the plate in the opposite direction for engagement with a workpiece to be secured at another given angle to the support, said first and said second named means comprising relatively long and short stops mounted



on the plate on opposite sides of the handle and engageable therewith.

3,049,337
PRY BAR
Virgil Griggs, 6201 N. Topping, Kansas City, Mo.
Filed Feb. 29, 1960, Ser. No. 11,772
2 Claims. (Cl. 254—131)



1. A pry bar for prying boards from a flat surface comprising, a pair of laterally spaced plate members, said plate members being located in substantially parallel relation, a cross bar rigidly connected to and between said plate members for maintaining said plate members in said spaced and parallel relation, an elongated handle fixed to said cross bar and extending transversely therefrom in a direction substantially parallel to said plate members, each of said plate members having an upper edge and a lower edge respectively terminating in a forwardly extending point, said points aiming in the same direction and being substantially equally spaced from said cross bar, said upper edges forming prying surfaces, said lower edges forming resting surfaces for resting on the flat surface, each of said upper edges having a similar mutually aligned compound contour including a longitudinally straight portion adjacent a respective point and a longitudinally concave portion located rearwardly of said straight portion and blending thereinto whereby boards pried by said bar are first twisted upwardly from the flat surface in one direction as they contact said straight portions and then are twisted in the opposite direction as they contact said concave portions.

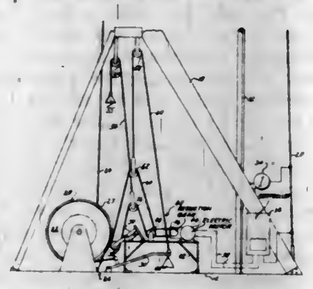
3,049,338
RATCHET HOIST
Dan D. Beebe, Seattle, Wash., assignor to Beebe Bros., a partnership
Filed Apr. 25, 1960, Ser. No. 24,466
8 Claims. (Cl. 254—167)

1. A ratchet hoist comprising a cheek-frame, a winding drum journaled for rotation between the cheeks of the frame and having a ratchet wheel turning in unison therewith, a yoke journaled from the frame for reciprocating forward and return swing motion about an axis coinciding with the rotary axis of the drum, a shaft extending between the arms of said yoke, a feed pawl on said shaft biased into ratcheting engagement with the ratchet wheel, a shaft extending between the cheeks of the frame, a holding pawl carried by the last-named shaft for pivot movement into and out of ratcheting engagement with the ratchet wheel, a wire spring anchored by one end to the frame and attached by its other end to the holding pawl and by its spring action normally urging the holding pawl into said ratcheting engagement, said spring having an arched back so disposed as to be engaged directly by the feed pawl as the latter nears the end limit of its forward travel and by such engagement pressing the holding pawl out of said ratcheting engagement with the ratchet wheel for the working interval necessary to back off said ratchet wheel a single tooth as the yoke

initially swings in its return stroke of reciprocation, the holding pawl having a width appreciably less than the span between the cheeks of the frame and admitting to slide movement along said shaft from a normal operating position closely adjacent one cheek to a spring-assembling position providing a space of substantial width therebetween, means being provided for releasably holding said pawl in said operating position, said spring having its said anchored end bent back upon itself to produce a parallel-sided slot arranged to be slipped over a grooved pin constituting the frame anchor and by such slip fit providing a quick-release mounting for the spring, the other end of the spring presenting a terminal portion bent outwardly normal to the plane occuplied by the spring and being arranged in use to be removably lodged in a mating pocket bored in the working arm of the holding pawl, the spring, during operation of the hoist, occupying a protected position in the narrow space provided between the holding pawl and said cheek to which the holding pawl is closely adjacent.

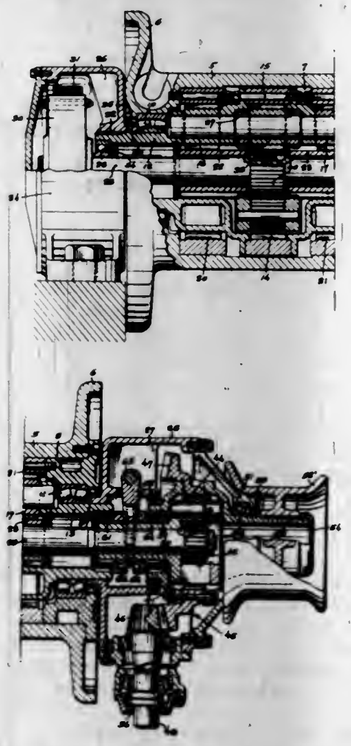
3,049,339
AUTOMATIC ROTARY DRILLING CONTROL
Jerrel Langford, Odessa, Tex., assignor to Drill-O-Matic, Inc., Odessa, Tex., a corporation of Texas
Filed Nov. 29, 1957, Ser. No. 699,583
13 Claims. (Cl. 254—173)

13. In a drilling rig having a derrick frame, a crown block at the top of the derrick, a travelling block within the derrick, a drilling line reeved between the crown block and the travelling block, one end of the drilling line being the dead line which is attached to the foot of the derrick, a windlass drum mounted for rotation on the derrick floor, the other end of the drilling line being the drum line which is wound on the windlass drum, a brake on the windlass drum, and controller means for producing a power output responsive to the tension on the drilling line, the improvement comprising: an endless belt, first drive means for driving the belt from said windlass drum, a motor connected to the power output of said controller means, second drive means connected to the output of the motor, the endless belt passing over said second drive means, and a control pulley mounted for



rotational and translational movement, the control pulley connected to said brake, the endless belt passing over the control pulley, so that differential peripheral movement of the second drive means and windlass drum causes translational movement of the control pulley and hence the brake.

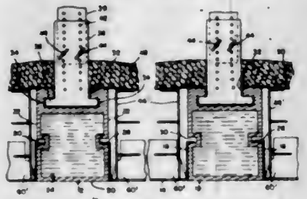
3,049,340
PLANETARY DRIVEN TRUCK WINCH
John E. Magnuson, Seattle, Wash., assignor to Pacific Car and Foundry Company, Seattle, Wash., a corporation of Washington
Filed June 23, 1959, Ser. No. 822,324
12 Claims. (Cl. 254—186)



1. In a reversible winch, a winding drum having a gear chamber in the center open at each of its two ends, fore and aft cheek bitts for the drum each presenting a chamber communicating with a respective end opening of said drum, a respective identical internal gear fixed to the drum

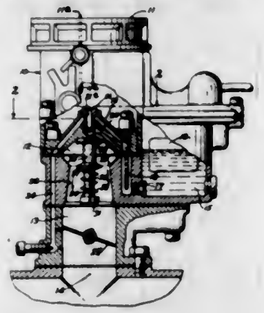
at each end of said gear chamber, respective identical sets of pinions in mesh with said internal gears, a single hollow carrier for both of said sets of pinions received in said gear chamber and presenting at each of its two ends a respective neck projecting through a related end opening of the drum into the head chamber of a related said cheek bitt, the cheek bitts each providing a hub section fitting a related said end of the carrier, said carrier providing a journal mounting for the drum, being secured to at least one of the cheek bitts so as to hold the carrier against rotation, and presenting teeth upon its aft end, an internal gear fixed to the carrier in the hollow center thereof, a set of planetary pinions in mesh with the last-named internal gear, a hollow carrier for said last-named pinions, hollow sun pinions for the first-named pinions connected to the last-named carrier so as to rotate therewith, a center-shaft extending axially through the drum with its ends projecting beyond said necks of the first-named carrier into the head chambers of the two cheek bitts, said center-shaft having a sun pinion thereon for the planetary pinions of said last-named carrier and also having a sun pinion on the aft end, a set of planetary pinions received within the chamber of the aft cheek bitt and meshing with said aft sun pinion, a normally free-turning carrier for the last-named planetary pinions, a motor-driven driver member surrounding the last-named carrier and its planetary pinions, providing an internal gear for the last-named planetary pinions, and presenting a forwardly extending toothed neck spaced from the aft end of said non-rotary carrier, and a manually controlled toothed shuttle-spool received in the space last mentioned and splined to said normally free-turning carrier for fore-and-aft movement from an intermediate neutral position into selective positions whereat its teeth engage either the teeth of the non-rotary carrier or the teeth of said neck of the driver member.

3,049,341
HEAT EXCHANGE STRUCTURE
William G. Kemp, 2275 E. Hammond Lake Drive, Pontiac, Mich.
Filed July 26, 1957, Ser. No. 674,354
1 Claim. (Cl. 257—124)



A wall or ceiling structure comprising a plurality of parallel spaced apart generally rectangular heat exchange tubes adapted to be secured to the structural portion of a building or the like with the surface on one side of each of the tubes being exposed, said surface being substantially flat, that side of each tube opposite said one side having a longitudinally extending groove adapted to cooperate with suspension means therefor, the other sides of each tube being angularly disposed to and integrally connected to said one side and said opposite side, said other sides of each tube having inwardly directed grooves extending longitudinally thereof intermediate said one side and said opposite side, a plurality of panels of heat conductive material extending between said heat exchange tubes, each of said panels being generally U-shaped and having a substantially flat bottom portion, the ends of each of said panels being angularly disposed to said bottom, said ends having tongue portions extending outwardly from said U-shaped panels adapted to fit within the grooves in said other sides of adjacent tubes to support the panels on said tubes, said U-shaped panels being of such size that the bottoms of said panels supported by said tubes by said tongue and groove structure are level with said surface of said tubes producing with said tubes a continuous flat surface of flush panels and tubes, each of said ends being in parallel abutting relation to one of said tubes, heat insulating material extending continuously over said panels and tubes, said insulating material resting on said tubes and in spaced relation to said bottom portions, and means acting between said insulating material and panels to maintain them in spaced relation.

3,049,342
AUTOMATIC ADJUSTING ATOMIZING DEVICES FOR CARBURETORS
Royal E. Hansen, 812 Limerick Lane, Healdsburg, Calif.
Filed Feb. 9, 1961, Ser. No. 88,144
6 Claims. (Cl. 261—69)

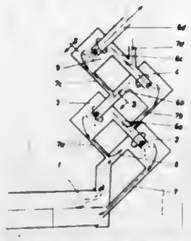


1. In a liquid fuel carburetor having a fuel-mixing chamber communicating at its opposite ends, respectively, with an air intake means, and with a fuel intake manifold for combustion cylinders of an internal combustion engine, the combination therewith of means for feeding combustible liquid fuel to said mixing chamber including an elongated tubular spray nozzle for fuel positioned in said mixing chamber in the path of the airflow through the mixing chamber, said tubular spray nozzle having one end of its tube communicating with the liquid fuel supply, an aspirator at said one end of said tubular nozzle for atomizing said fuel in the nozzle responsive to air drawn through the aspirator simultaneously with the feed of fuel to the nozzle, the opposite free terminal end of the tube being at least partially closed, said nozzle having an imperforate side wall portion adjacent to said aspirator and being provided with orifices through the side wall thereof adjacent said free terminal end portion, and a spring-tensioned sleeve circumferential of the nozzle and slidable longiutdinally thereof, said sleeve having a flange extending radially from the sleeve into the path of the air passing through the mixing chamber, the sleeve being spring-biased to normally overlie the imperforate portion of the nozzle, and being thereby adapted for automatically opening the tube orifices responsive to the expansive tension of the spring, and said sleeve being adapted for automatically closing said orifices by compression of the spring and movement of the sleeve responsive to pressure of the airflow against said flange of the sleeve.

3,049,343
APPARATUS FOR HEATING CEMENT POWDER OR SIMILAR FINE-GRANULAR MATERIALS
Bernd Hermann Helming, Neubeckum, Germany, assignor to Firma Polysius G.m.b.H., Neubeckum, Germany, a corporation of Germany
Filed Aug. 25, 1959, Ser. No. 835,928
4 Claims. (Cl. 263—32)

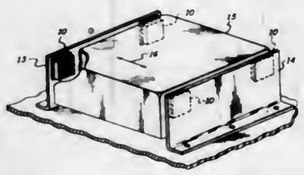
1. An apparatus for heating cement powder or similar fine-granular material by hot kiln gases comprising two

substantially vertical rows of a plurality of cyclones disposed in a single series, each of the latter having an exhaust gas pipe and a dust exhaust pipe, said dust exhaust pipe of each of said cyclones leading into said exhaust gas pipe of the previous of said cyclones in said series with the exception of the lowermost of said cyclones, said cyclones jointly with said exhaust gas pipes forming a single series defining a continuous and upwardly directed



gas flow path, the longitudinal axis of each of said cyclones being disposed at an angle of 45° to the vertical, the longitudinal axes of each pair of adjacent cyclones forming an angle of 90°, the exhaust gas pipes connecting each pair of adjacent cyclones consisting of straight conduits, and an imaginary projection of said dust exhaust pipes except the lowermost of said dust exhaust pipes intersects its adjacent dust exhaust pipe to form an angle of about 90°.

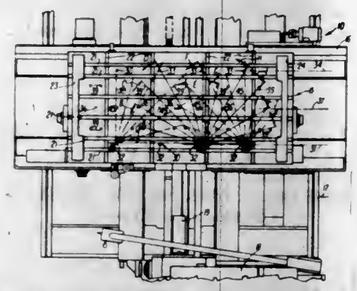
3,049,344
VIBRATION AND SHOCK ISOLATOR
Robert D. Hawkins, Greenlawn, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 120
6 Claims. (Cl. 267—1)



1. A vibration and shock isolator for coupling a vibratory body with a rigid planar surface and a body with a second rigid planar surface adjacent and normally parallel to the planar surface of the vibratory body in a frequency range including resonance comprising a unitary piece of resilient material having an egg crate cell pattern arranged in sandwiched condition between the bodies with the walls of the cells in normally perpendicular relation to the planar surfaces of the bodies buckling under compressive loading with the characteristics of a nonlinear spring.

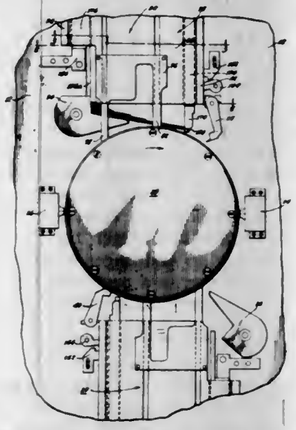
3,049,345
MACHINE TOOL WORK TABLE
Edgar L. McFerren, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Filed May 13, 1960, Ser. No. 28,883
3 Claims. (Cl. 269—9)

1. In a machine tool, a work piece supporting table formed with a plurality of stop pin holes arranged in a pattern, said holes being adapted for removably receiving stop pins against which work pieces can be positioned, said pattern comprising a plurality of evenly spaced holes A alined in a straight line at one side of said table on a base line, a second plurality of evenly spaced holes B disposed directly opposite the holes A on a line parallel to said base line at the other side of said table, said opposite holes A and B being positioned so that lines therebetween are perpendicular to said base line, a third plurality of evenly spaced holes C disposed on a mid-line that is parallel to said base line and mid-way between said base



line and said line of holes B, the spacing of said holes A and C being such that the line between any hole C and one of the nearest holes A meets said base line at an acute angle of 60°, and a fourth plurality of holes D positioned at the midpoints of a series of arcs connecting the holes A, B and C and having a radius equal to the distance between a hole C and one of the nearest holes A.

3,049,346
CARD PROCESSING APPARATUS
Arthur W. Evansen, Los Angeles, Calif., assignor to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed Mar. 14, 1960, Ser. No. 14,863
12 Claims. (Cl. 271—4)



1. In apparatus for processing data on a plurality of information storage elements as represented by signal indications on the elements, the combination of: means for holding information storage elements in the plurality, transfer means positioned relative to the holding means and operative in a first relationship to obtain a sequential and individual transfer of information storage elements in the plurality into the holding means and operative in a second relationship to prevent the sequential transfer of information storage elements in the plurality into the holding means, light-responsive switching means positioned on one side of the holding means, a light source positioned on a second side of the holding means opposite to the first side, means disposed in the holding means and variably positioned in the holding means in accordance with the number of elements in the holding means for establishing an optical path from the light source to

the light-responsive switching means and for obtaining an interruption in the optical path after a particular number of information storage elements have been transferred into the holding means by the transfer means, and control means responsive to the interruption in the optical path to the switching means to produce an operation of the transfer means in the second relationship for preventing the subsequent transfer of elements in the plurality from the transfer means to the holding means.

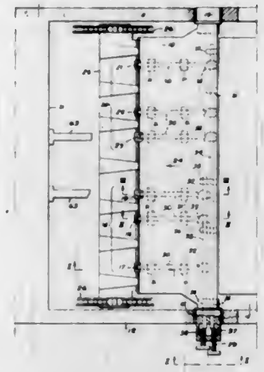
3,049,347
SHEET FEEDING MACHINE
Frederick Lewis Dussart, Oakland, Calif., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 1, 1958, Ser. No. 764,659
7 Claims. (Cl. 271—8)



1. In a machine for feeding sheets having laterally projecting tabs from the top of a stack, the combination of means for maintaining the top of said stack at a substantially predetermined level disposed below the feed line of said machine, lifting means for raising the topmost sheet in said stack to said feed line, delivery means disposed adjacent said feed line for taking the sheet from said lifting means and moving it edgewise and forward horizontally across the top of said stack to deliver the sheet from said stack, and an upwardly arched flapper finger pivotally mounted adjacent its rearward end in said machine below the top of said stack and rearwardly of a said tab of the topmost sheet in said stack with the upwardly arched front end of said finger biased downwardly toward a protective position overlying said tab and with only the forward tip of said finger in contact with said tab, said finger tip being raised by said tab when said topmost sheet is lifted, and said finger returning downwardly into said protective position over and in finger tip contact with the underlying tab of the next topmost sheet when said tab of the topmost sheet is withdrawn horizontally from beneath said finger tip by said delivery means, in which position said finger prevents interference and interlocking between said protected tab and the tabs on said sheet moving horizontally thereover.

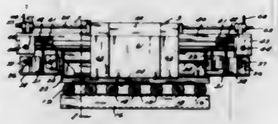
3,049,348
SHEET FEEDING APPARATUS
William Frank Golding, 22 Parry's Close, Stoke Bishop, Bristol, England
Filed Dec. 29, 1959, Ser. No. 862,584
Claims priority, application Great Britain Jan. 2, 1959
14 Claims. (Cl. 271—60)

1. Sheet feeding apparatus comprising a table over which sheets are fed in a determined direction, at least one front lay provided on the table, the table being supported at opposite sides thereof for oscillating motion about an axis at right angles to the direction of sheet feed, a support member situated at one of said sides of the table, a cylindrical bearing member lying concentrically with said axis and connected between the table and the support member and co-operating to support the table on said support member for said oscillating motion, an aperture being provided in said bearing member longitudinally thereof, an operating member situated at a side of the support member remote from said table and supported for movement relative thereto, an intermediary member extending through said aperture and connected between said operating member and said lays, said at least one lay being adjustably supported on the table for movement in the direction of sheet feed thereby to be adjustable for posi-



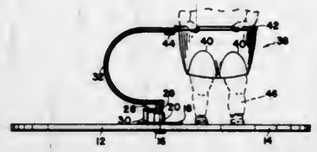
tion, said intermediary member co-operating to transmit said movement of the operating member to the said at least one lay for the position of the lays to be adjusted by movement of said operating member.

3,049,349
SHEET PILER BACK STOP
Thaddeus A. Siglow, New Castle, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Oct. 11, 1960, Ser. No. 62,022
7 Claims. (Cl. 271—89)



1. A stop device for halting advancing sheets to pile them comprising a main stop member having a forwardly facing working face adapted for yielding engagement with the leading edges of advancing sheets, said stop member being movable generally parallel to the direction of travel of said sheets; means for yieldingly urging said stop member toward a position in which it engages said advancing sheets and for yieldingly resisting motion of said stop member in the general direction of travel of said sheets; and an auxiliary stop member having a forwardly facing working face adapted for engagement with the leading edges of said advancing sheets when said stop member is in its sheet-engaging position, said stop member being pivotally supported about an axis which is offset rearwardly from the working face of said stop member and from the center of gravity of said stop member when it is in sheet-engaging position, said auxiliary stop member being capable of being suspended from its pivot axis in a position in which it engages and is urged forwardly in sheet-engaging position by said main stop member while it is in sheet-engaging position and the working faces of said main stop member and said auxiliary stop member form parts of substantially the same surface, said auxiliary stop member also being capable of being swung forwardly and upwardly about its pivot axis to an inoperative position where it cannot engage advancing sheets.

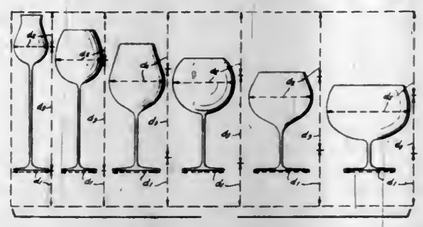
3,049,350
JUMPER WALKER
Ora C. Walker, P.O. Box 24, Council Grove, Kans.
Filed June 20, 1960, Ser. No. 37,202
4 Claims. (Cl. 272—33)



1. A jumper walker for babies comprising, in combination, a circular wooden base member, said base member being constructed of two equal sections, hinge means along abutting edges of said base to make said base foldable and compact for storage, said base having a flat circular plate mounted on the center thereof and concentric therewith, said plate having an upstanding tubular member rigidly secured thereto, said tubular member being concentric with said plate, said plate having a plurality of spaced notches in a circular row formed in the upper surface thereof, said row being concentric with the outer surface of said plate and said tubular member, a post removably mounted in said tubular member for rotation therein, said post having a rod mounted thereon adjacent to said tubular member and extending over said plate, said rod having a curved metallic semi-resilient finger depending therefrom and engageable in said notches in said plate, said notches and said finger being constructed and of size to secure said post against any rotation in one direction when said finger is engaged in any of said notches, said post having one end of a flat narrow metallic spring member rigidly secured thereto and extending upwardly therefrom in a generally semi-circular manner, two spaced transverse slots adjacent the other end of said spring member, a fabric seat structure, said seat structure having four sides and a bottom with leg openings therein, a rectangular metallic frame in the top portion of said seat structure, said metallic frame having a flat shank portion extending from the center of one side thereof, said shank portion being U-shaped in its end portion and of such size relative to said slots in said spring member that said shank portion can mount said seat structure on said spring member by said U-shaped shank portion passing through the outermost one of said slots and received in the other of said slots, said device being constructed and adapted so that said jumper seat is spring mounted on said base by said shank portion being secured in said slots of said spring member, so that a child in said seat can move up and down and around said post, with said metallic finger member engageable with said notches in said plate to allow movement of said seat in one direction only.

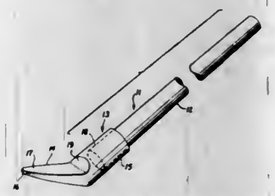
3,049,351
GAME OF SKILL OR THE LIKE
František Chocholatý, Rytirska 22, Prague, Czechoslovakia
Filed July 3, 1959, Ser. No. 825,393
4 Claims. (Cl. 273—86)

1. A game of skill comprising a set of rotational bodies having a circular base face; in each of said bodies the diameter of said base face not substantially exceeding the greatest diameter of the body; and in all bodies the sum of said diameters and of the distance between the planes containing said diameters being substantially identical; said rotational bodies being differently sized and shaped to perform generally similar rotational and pendulating movements differing in magnitude when spun about their inclined rotational axis with the plumb line containing the



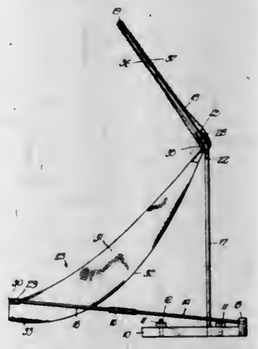
center of gravity of the respective body passing through said circular base face.

3,049,352
BALL TOSSING GAME DEVICES
Wilbert R. Hancock, 83 Bellhaven Road, Toronto 8, Ontario, Canada
Filed Mar. 22, 1961, Ser. No. 97,661
4 Claims. (Cl. 273—96)



1. A game stick for tossing a game device in the form of two balls connected by a cord, said game stick being adapted to engage the game device by the cord thereof and comprising an elongated shank terminating at the lower end thereof in a cord engaging head, said head having a flat undersurface and a pointed, downwardly-tapered, elongated toe for engagement beneath the game device cord, said shank including a rear abutment portion extending in a vertical direction from the upper surface of said toe, said toe being in alignment with said shank and abutment portion and increasing in thickness from the terminal end thereof rearwardly and extending into said rear abutment portion.

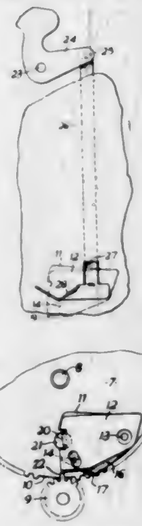
3,049,353
GOLF PRACTICING DEVICE
Charles F. Viator, 2465 W. 46th St., Chicago, Ill.
Filed Sept. 23, 1959, Ser. No. 841,738
6 Claims. (Cl. 273—182)

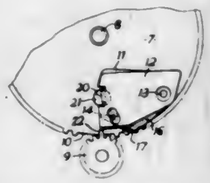


1. A golf practicing device comprising a base adapted for positioning upon a supporting surface, an upright

frame extending from said base, a pair of arms supported by their rear ends upon said base in a mutual spaced relation, said arms being upon an incline gradually diverging in an upward direction from the supporting surface so as to maintain the free front ends of said arms in a spaced relation with the supporting surface, the front ends of said arms being upon a horizontal plane which is in a spaced relation with the horizontal plane extended through the upper end of said frame, an oblong sheet of fabric material, means for affixing the rear end of said sheet to the upper end of said frame, and means for supporting the sides of said sheet adjacent the front end thereof upon the free front ends of said arms, said front end of said sheet being of greater length than the distance between said arms so that the front end of said sheet depends between said arms in a substantially arcuate shape, the center of said arcuate shape being tangential to a horizontal plane between the arms and the supporting surface defining a discharge area for return of golf balls midway of said base, and said arms being limited in movement toward each other by said upright frame.

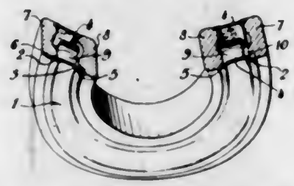
3,049,354
SOUND REPRODUCING APPARATUS
Lawrence Vincent Guest, Powke Lane, Old Hill, England, assignor to Birmingham Sound Reproducers Limited, Old Hill, England
Filed July 19, 1957, Ser. No. 673,008
5 Claims. (Cl. 274—1)





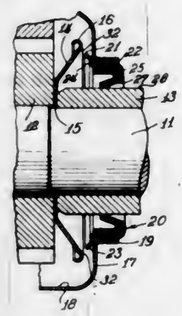
1. In a sound reproducing apparatus for effecting automatically a succession of reproductions from disc records and including a mechanism clutched to a continuously rotating part of the machine upon completion of one sound reproduction for the purpose of executing a cycle of automatic operations as a preliminary to a succeeding sound reproduction, the combination of a first gear wheel having a gap in its teeth, a continuously driven second gear wheel having teeth for meshing engagement with those of the said first gear wheel and positioned opposite said gap when said first gear wheel is in its normal position, a lower flat plate mounted on said first gear wheel for movement between a re-set position and a position toward said second gear wheel, means positively limiting the extent of movement permitted to said lower flat plate in opposite directions relative to said first gear wheel, an upper flat plate mounted on said first gear wheel freely for movement between a re-set position away from said second gear wheel and a position towards said second gear wheel, said upper flat plate being superimposed upon said lower flat plate and carried by frictional surface contact therewith whereby movement of said upper flat plate relative to said lower flat plate between said positions is restricted solely by friction developed by the weight of said upper plate over the surface contacting said lower plate, means positively limiting the extent of movement permitted to said upper flat plate in opposite directions relative to said lower flat plate, means including a control member movable in accordance with movement of the pick-up arm of the reproducing apparatus for engaging said lower flat plate and moving said lower flat plate and said upper flat plate resting thereon in unison in a first direction relative to said first gear wheel toward said second gear wheel, an engaging member on the continuously driven second gear wheel making intermittent engagement with the said upper flat plate and operating to move said upper flat plate with respect to the said lower flat plate intermittently in the direction opposite to said first direction during the normal rate of movement of the pick-up arm, and an abutment on said upper flat plate engaged by the engaging member on the continuously driven second gear wheel upon a movement of the said control member at a speed in excess of the normal speed and operating to move the said upper flat plate, said lower flat plate and the said first gear wheel in unison about the axis of the said first gear wheel to engage the teeth of the said first gear wheel with the teeth of said continuously driven second gear wheel.

3,049,355
SEALS FOR BEARINGS
Kenneth Stanley Vernon, Burtonwood, Warrington, England, assignor to Burtonwood Engineering Company Limited, Burtonwood, Warrington, England
Filed Nov. 30, 1959, Ser. No. 856,068
1 Claim. (Cl. 277—94)



A sealing means adapted to be insertable and removable relative to a pair of substantially concentrically spaced and outer and inner rotatable members being rotative as to each other and each having a suitably configured annular groove and defining in combination the radially inner and outer confines of an annular lubricant chamber closed to prevent lateral egress of lubricant therefrom and ingress of deleterious material thereto at one side of the chamber comprising: a flat one-piece annular elastomeric member including a relatively wide concentric holding part of sufficient rigidity to remain constantly in its own plane adjacent the outer rotatable member and resist deformation under stress and constituting a static unstressed annular zone with its outermost edge configured as a seating edge for demountably engaging in and holding resiliently relative to the complemental annular groove of the outer rotatable member and a relatively narrow annular and concentric sealing-lip part of less rigid consistency adjacent the inner rotatable member with its outermost wiping portion tapering in section to a knife edge for deforming radially and laterally relative to the holding part and a relatively thin annular central part concentric with and disposed intermediate the holding and sealing-lip parts, the sealing-lip and central parts constituting an annular working zone of minimum thickness, the wiping portion of the sealing-lip part extending into laterally-spaced proximity centrally of the annular groove of the inner rotatable member for placing the knife edge in yieldably wiping engagement with the surface thereof and being adapted to be radially compressibly and axially distortable away from the chamber and laterally outwardly of the inner rotatable member, a flat annular metallic reinforcement member concentric and substantially coplanar with the central annular part of said elastomeric member and secured thereto at the lubricant chamber side thereof with the holding and sealing-lip parts of said elastomeric member extending radially beyond the opposite annular edges of said reinforcement member, the central annular part of said elastomeric member permitting the radial and lateral flexing of the wiping edge of the sealing-lip part out of the plane of the holding part to compensate for any radial and lateral misalignment between the inner and outer rotatable members relative to the sealing means.

3,049,356
SHAFT OIL SEAL MEANS WITH DEFLECTOR
John Talamonti, Chicago Heights, Ill., assignor, by mesne assignments, to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed June 2, 1958, Ser. No. 739,042
5 Claims. (Cl. 277—183)



1. The combination of an oil throw element and a rotating shaft seal adapted to be positioned about a rotatable shaft comprising a housing defining an oil sump and having an axially extending outlet formed therein, said outlet positioned to surround said shaft, an oil throw disc having a radially extending central dished portion and having an axially extending frusto-conical shaped portion terminating in a curled back periphery extending into said oil sump, an annular shell of rigid material having an axially extending band portion and having a radially extending portion terminating in an outer flaring frusto-conical flange portion, said outer flaring frusto-conical flange portion being positioned adjacent said curled back periphery to prevent the egress of oil through said outlet, and an elastomer body having said axially extending band embedded therein and having an inclined annular lip in engagement with said shaft.

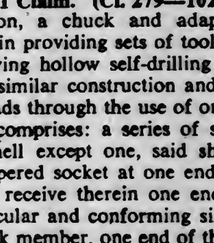
3,049,357
FLUID SEAL
Thomas O. Kosatka, Chicago, Ill., assignor to Victor Manufacturing & Gasket Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 10, 1958, Ser. No. 773,002
1 Claim. (Cl. 277—183)

A device for mounting upon the inner cone of a roller bearing and forming a seal with a bore adjacent the outer cone of the bearing, comprising

a first metallic ring consisting of a cylindrical portion and an annular portion extending radially inwardly from one end of the cylindrical portion;

a second metallic ring consisting of a cylindrical portion and an annular portion extending radially outwardly from one end of the cylindrical portion and terminating on a circle of diameter substantially less than the diameter of the bore;

said rings being fixed together with the cylindrical portions engaged, with the ends of said portions remote from said annuli aligned, and with the annular portion of the second ring offset axially



from the annular portion of the first ring toward said aligned ends;

an elastomer annulus bonded to the face of the annulus of the second ring remote from said aligned ends and to the cylindrical portion of the first ring disposed between said annuli;

a generally cylindrical portion integral with said elastomer annulus and extending across the terminal end of said second annulus and axially beyond a plane through said aligned ends;

and a plurality of spaced apart sealing lips projecting radially outwardly from said generally cylindrical elastomer portion, which lips define radially outwardly opening grooves adapted to receive a lubricant for the lips.

ERRATA

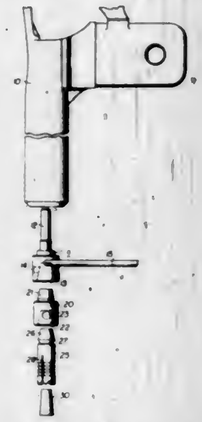
For Class 277—188 see:
Patent No. 3,049,370

For Class 277—212 see:
Patent No. 3,049,385

3,049,358
TOOLING AND METHOD OF INSTALLING EXPANSION SHELLS
Constantine Daniel Polos, Amherst, Ohio, assignor to Gregory Industries, Inc.
Filed Jan. 18, 1960, Ser. No. 3,159
1 Claim. (Cl. 279—102)

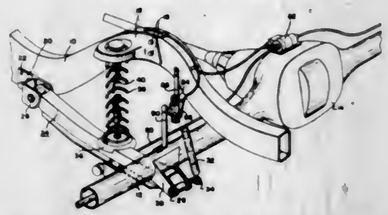
In combination, a chuck and adapter construction adapted for use in providing sets of tool holders for supporting and driving hollow self-drilling expansion shells of substantially similar construction and having different size grasping heads through the use of one size percussive hammer which comprises: a series of shell holders one for each size shell except one, said shell holders each having a first tapered socket at one end thereof adapted telescopically to receive therein one end of one of said shells of a particular and conforming size excepting said one shell, a chuck member, one end of the chuck member having a tapered socket at one end thereof of a size adapted to telescopically receive therein said one size shell for which there is provided no shell holder, said second end of each said shell holders having a tapered stud coupling means for holding same operatively connected in the tapered socket of said chuck but readily separable

therefrom, said chuck having a configuration at the second end thereof adapted complementarily to engage with the tool-holding configuration of a percussive hammer, whereby to enable said particular one hammer and chuck alone to be used to drive said one shell, but the said one



end of said chuck being suitable for identical said operative connection with any selected one of said shell holders for driving other sizes of shells with the same chuck and hammer, thereby providing an adapter system having one less shell holder than the series of shells to be serviced.

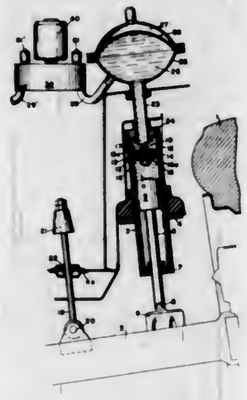
3,049,359
REAR WHEEL SUSPENSION SYSTEM FOR VEHICLES
Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,932
12 Claims. (Cl. 280—124)



1. In a vehicle suspension, an unsprung mass, a sprung mass, a coil spring assembly disposed between the sprung and unsprung masses comprising coaxially arranged compression and tension springs, bearing supported rotatable means for adjusting the load on the tension spring to vary the load on said compression spring and thus control the height between said sprung and unsprung masses, and height responsive means for actuating the load adjusting means for the tension spring so as to maintain a substantially constant height between the sprung and unsprung masses of said vehicle.

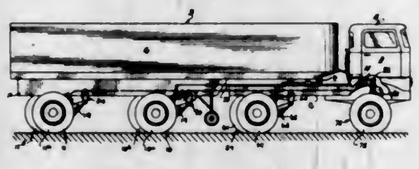
3,049,360
TRIM CORRECTOR DEVICE FOR VEHICLES PROVIDED WITH OLEO-PNEUMATIC SUSPENSION
Fernand Stanislas Allinquant, Paris, France
Filed June 28, 1960, Ser. No. 39,307
Claims priority, application France July 17, 1959
5 Claims. (Cl. 280—124)

1. A device for regulating the oleo-pneumatic suspension of a vehicle having at least two suspension elements and ensuring the correction of the trim of said suspension either by injecting liquid under pressure into cylinders of the suspension elements, or by withdrawing liquid from said elements, said device comprising, in combination in the same unit, a liquid tank, a pump immersed in the liquid of said tank, passage means provided in the interior of the tank and connected to the delivery side of said pump, non-return valves in said passage means for preventing the return of liquid to the pump through said passage means, conduits equal in number to that



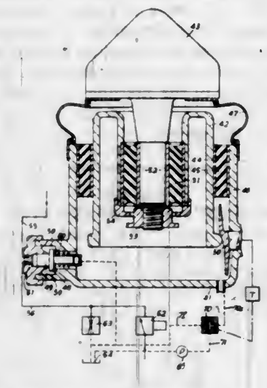
of the suspension elements and each connecting a different one of said suspension elements both to said passage means and to the interior of said tank, and said conduits having electrically operated valves controlling the return of liquid from said conduits into said tank, whereby the said conduits between said tank and said suspension elements are each operative both for injecting liquid under pressure from said pump into a related cylinder of the suspension and for withdrawing liquid from said related cylinder, through said controlled discharge members and into said tank.

3,049,361
MULTI-COMPENSATING WHEEL SUSPENSION
Adolph Ronning, 4826 E. Weldon Ave., Phoenix, Ariz.
Filed Aug. 22, 1958, Ser. No. 756,696
11 Claims. (Cl. 280—124)



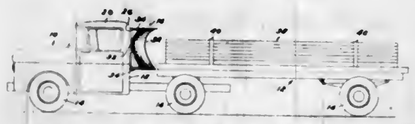
5. A wheel suspension for a vehicle frame, comprising in combination, a pair of wheels and a pair of axles having journals at their rear ends for the respective wheels, differential mechanism swingably connecting the axles for differential up and down movements at their rear ends, a member supportably connecting the said differential mechanism to the frame, a separate drive motor operatively associated with each individual wheel for imparting propulsion torque thereto, and mechanism operative for bypassing the effects of reaction of said propulsion torque past the differential mechanism to the frame.

3,049,362
HYDRAULIC SUSPENSION FOR VEHICLE TANDEM AXLES
Harry D. Chambers, Cuddington, near Northwich, England, assignor to Eaton Axles Limited, Warrington, Lancashire, England, a British company
Filed Feb. 24, 1959, Ser. No. 795,258
Claims priority, application Great Britain Feb. 28, 1958
6 Claims. (Cl. 280—124)



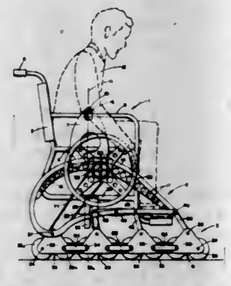
4. In a tandem axle suspension unit for a vehicle frame, in combination a pair of axles, a pair of rigid beam members connecting said axles, an axle support member to which each of said members is pivotally connected intermediate its ends, a pair of upwardly facing, parallel cylinder members secured to each support member, a cooperating ram member for attachment to the frame of a vehicle being in sealed relation with each of said cylinder members for axial movement therein, said ram members and cylinder members being adapted to transfer horizontal forces between said axle supports and the vehicle frame, each ram member comprising a central boss adapted to be secured rigidly to a vehicle frame, a surrounding annular ram portion and a resiliently deformable member of rubbery material connecting said central boss to said ram portion and permitting limited longitudinal movement between said annular ram portion and said central boss, the enclosed space between each such ram member and cylinder member being filled with hydraulic fluid, hydraulic accumulator means, and means connecting each space with said hydraulic accumulator means, a mass of gas being enclosed in said hydraulic accumulator means in substantial pressure balance with the hydraulic fluid, said hydraulic accumulator means being external of said cylinder members.

3,049,363
TRUCK DRIVER PROTECTION SHIELD
Leo A. Marx, 3200 Van Alstyne, Wyandotte, Mich.
Filed Mar. 28, 1960, Ser. No. 18,153
7 Claims. (Cl. 280—150)



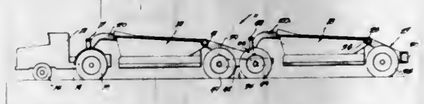
1. In a truck or like vehicle having a driver's cab portion and a load-carrying portion behind said driver's cab portion, a driver's protection shield rigidly mounted on the vehicle adjacent said driver's cab portion, said shield having a pair of generally upright rearwardly facing surfaces which meet in a central rear edge disposed in a vertical plane and flare laterally outwardly from said central rear edge in a forward direction to serve as deflectors for protecting the driver against the hazard of a formwardly shifting load, all horizontal sections through both surfaces being generally in the form of a V with the apex of the V located on said central rear edge and with each leg of the V concave throughout its length and curving laterally outwardly from said apex to its extremity at a substantially uniformly increasing angle with respect to a longitudinal center line through said apex, which angle is always less than 90°.

3,049,364
STAIR CLIMBING WHEEL CHAIR
Eugene O. Clay, 3717 Floresta Way, Los Angeles, Calif.
Filed Apr. 7, 1961, Ser. No. 101,412
20 Claims. (Cl. 280—211)



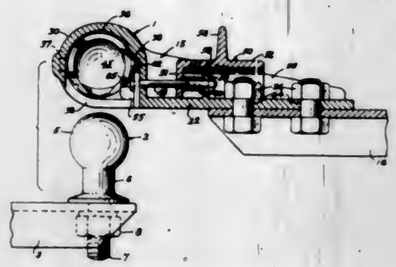
1. A wheel chair comprising a seat unit; a support frame; a suspension means pivotally supporting said seat unit and engaging said support frame for support thereby, said support frame being rotatable relative said suspension means; a drive train supporting said support frame, said drive train including a plurality of trucks each of which is pivotally connected to said support frame, each of said trucks having wheel means; and means for driving said wheel means.

3,049,365
TANDEM WHEEL STRUCTURE FOR CONNECTING EARTH MOVERS
Lewis Kirchler, Skokie, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 30, 1960, Ser. No. 79,590
8 Claims. (Cl. 280—408)



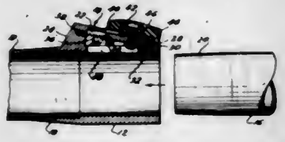
1. In an earthmoving vehicle comprising a four-wheel tractor having a tractor frame, a fifth wheel supported on said frame, a dump body, a gooseneck structure connected to a forward end of said dump body and to said fifth wheel of the tractor, said body including vertical sides, a bottom connected to said sides, said bottom having an upwardly sloping portion adjacent the rear ends of said sides, said sides having arcuate transversely aligned recesses at their rear ends adjacent the upper rear ends of said sides to provide supporting cradles; a rear wheel structure for supporting the rear of said body comprising a pair of laterally spaced frame members, an axle connected to said frame members, ground wheels supported on said axle, a transversely extending tubular member connected to said frame members, and means connecting said tubular member within said supporting cradles including securing means between said sides and said tubular member.

3,049,366
TRAILER HITCH
Rudolph W. Peters, 1724 Market St., Oakland, Calif.
Filed Mar. 22, 1960, Ser. No. 16,701
2 Claims. (Cl. 280—512)



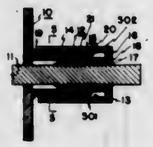
1. A hitch comprising a king pin secured to a draw bar and including a spherical head connected to the draw bar by a flanged stem; and a coupling device including a housing in form of a closed hollow cylinder with closed ends, a pair of concave disks for locking the head therebetween, each disk being arranged at the end of the cylinder, and pivotally connected thereto by a pair of substantially horizontal pivots, said cylinder having an opening in its wall between said disks for introducing the head into said cylinder; spring means for urging said disks in angular positions for admitting said head therebetween; a yoke integral with said cylinder; disk locking means consisting of a slide arranged on said yoke, a pair of disk locking bars extending from the opposite sides of said slide into the cylinder and abutting said disks when the same are in the angular positions, and spring means for pressing said locking bars against said disks, and for pushing said bars between said disks and the ends of the cylinder when the head, upon entering the cylinder, swings the disks into a substantially parallel position.

3,049,367
VACUUM CLEANER CONNECTION HAVING RECIPROCATING COUPLING MEANS
Peter Lashta, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Apr. 1, 1958, Ser. No. 725,737
1 Claim. (Cl. 285—7)



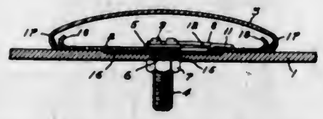
An outer tubular member within which an inner tubular member is fitted telescopically, the outer tubular member having an opening in the wall thereof which overlies the inner tubular member when it is fitted telescopically within said outer tubular member, a housing fixed to the outer tubular member and overlying the opening therein, the housing projecting exteriorly of the outer tubular member, the wall of the housing opposite said opening being inclined at an acute angle to the longitudinal axis of the outer tubular member and having substantially parallel inner and outer surfaces, said wall having a passageway extending lengthwise of the outer tubular member, a slide located in the passageway for longitudinal reciprocation therein and having opposing longitudinally extending edges which are slotted to receive portions of the inner and outer parallel surfaces of said wall which are adjacent said passageway and form a track for said slide, radially inwardly extending engaging means on the under side of the slide for frictionally engaging the inner tubular member, the slide being movable in the passageway between a first position in which the engaging means is spaced radially outward from the inner tubular member and a second position in which the engaging means extends radially inward through the opening into frictional engagement with the inner tubular member, means including a coil spring between the one end of the housing and the slide for resiliently biasing the slide toward its second position at the opposite end of the housing, and a part carried by the slide which is accessible exteriorly of the housing for manually moving the slide toward the one end of the housing against the biasing action of the spring.

3,049,368
CLAMP NUT APPARATUS
Gerhart Jansen, 918 E. South Temple, Salt Lake City, Utah
Original application Dec. 30, 1957, Ser. No. 706,080, now Patent No. 2,935,299, dated May 3, 1960. Divided and this application June 8, 1959, Ser. No. 818,605
2 Claims. (Cl. 287—20.3)



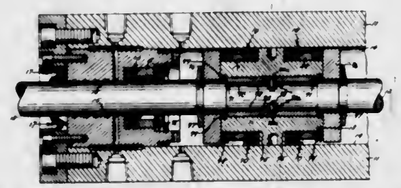
1. Clamp nut apparatus including, in combination, an externally threaded tubular carrier having first and second end portions, said second end portion being provided with an interior, tapered, socket; externally tapered jaw means, for engaging an external elongate member, disposed interiorly of and cooperatively associated with said tapered socket; an internally threaded cap having a sleeve portion means of greater longitudinal dimension than said carrier and a base portion, said sleeve portion means being threaded onto said carrier to advance, simultaneously, said base portion toward said jaw means and itself beyond said first end portion toward of said carrier to butt against an additional external member from which said first mentioned external elongate member protrudes and thereby urge said carrier outwardly from said additional external member; and a compression spring cooperatively disposed between said jaw means and said base portion of said cap.

3,049,369
FASTENING DEVICE
Warren L. Trafton, Grosse Pointe, Mich., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Aug. 28, 1958, Ser. No. 757,721
1 Claim. (Cl. 287—20.5)



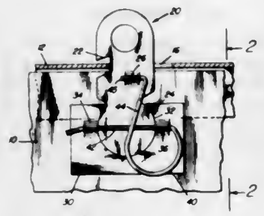
A fastener assembly of the class described comprising a support having an opening therein and a slot connecting to said opening, and a fastening device assembled with said support through said opening, said fastening device having a head and a shank, said head having a portion larger than the width of said slot disposed on, and directly engaging, one side of said support at said slot, and said shank extending through the slot and beyond said support beneath said head and an attaching member fixed directly to one side only of said head and extending from said head laterally over the aperture and over the support opposite said slot and having a fastening device positioning portion engaging the support to hold the device in assembled position and said head having an integral annular groove receiving a portion of said support adjacent to said slot thereby cooperating with a part of said head to hold the fastening device in position against axial displacement, and said groove spaced from said attaching member and formed between said shank and said attaching member.

3,049,370
HIGH TEMPERATURE SEAL ASSEMBLY
Joseph V. Bertrand, 59 Forest Ave., Verona, N.J.
Filed Oct. 9, 1959, Ser. No. 845,456
3 Claims. (Cl. 277—188)



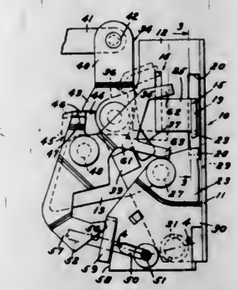
1. A high temperature seal for use in sealing a cylindrical solid with respect to a cylindrical bore comprising: a plurality of thin reeds, each including a planar disc portion having a central opening and defining inner and outer peripheral edges, a frustoconical portion interconnected to at least one of said peripheral edges and having a free edge thereon, a plurality of disc-like spacer elements each corresponding generally to the disc portions of said reeds, said reeds being juxtaposed with their conical portions in direct contact to abut said free edges, said spacer elements being positioned between adjacent reeds, the free edges of said frustoconical portions being lapped to form a continuous surface.

3,049,371
SPRING HELD AND BIASED LATCH
Daniel F. Daly, Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut
Filed Aug. 25, 1959, Ser. No. 835,912
5 Claims. (Cl. 292—128)



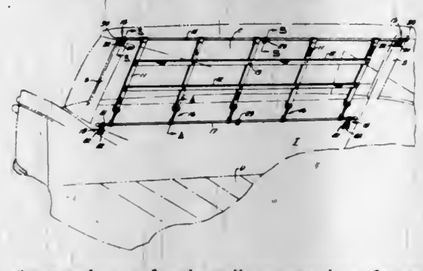
1. In combination with a box wall, a one-piece latch member of stamped sheet material having a latching portion and a flat circular pivot portion, means forming a circular bearing recess on said wall in which said pivot portion is pivotally engaged for movement parallel to said wall, and a spring having a biasing portion engaging and biasing said latch member and having an anchoring portion fixedly positioned to lie across the flat circular portion of said latch member and secure it pivotally and permanently in its mounting.

3,049,372
SAFETY DOOR LOCK
Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 4, 1960, Ser. No. 333
7 Claims. (Cl. 292—216)



1. A lock for an automobile door or the like, comprising a mounting plate having portions extending at a right angle to one another, a latching member mounted on said mounting plate to move transversely of one of said portions in an unlatching action of said member, said portion having a recess to accommodate said member in said action, a locking member mounted on said mounting plate for movement parallel to said other portion and into and out of position in which it blocks said recess and the unlatching action of said latching member accommodated thereby, an operating member mounted on said mounting plate for movement to engage and impart said unlatching action to said latching member, said operating member having means to actuate the same from the inside of said door, a supplemental locking member mounted on said mounting plate for movement into and out of position in which it prevents an operating engagement of said operating member with said latching member, and means actuable from the inside of said door to actuate said supplemental locking member into and out of said engagement-preventing position thereof, said supplemental locking member having a portion directly engaged by said last named means upon actuation of the latter to effect said movement of said supplemental member into said engagement-preventing position thereof.

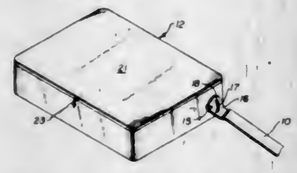
3,049,373
SAFETY GUARD ATTACHMENT FOR THE TAILGATE OPENINGS OF STATION WAGON VEHICLES
William C. Biggers, 134 S. Brinker Ave., Columbus, Ohio
Filed Apr. 3, 1961, Ser. No. 100,376
3 Claims. (Cl. 296—106)



1. An attachment for the tailgate opening of a station wagon vehicle or the like comprising a flexible webbing for covering the opening, an upper rod extending transversely of the opening and a lower rod extending transversely of the opening, both of said rods comprising ex-

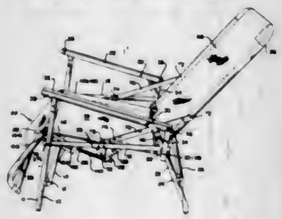
tensible and contractible telescoping sections, said flexible webbing including tapes connected at their upper ends to said upper rod, means for removably and resiliently connecting the lower ends of said tapes to said lower rod, said means comprising hook and spring units, brackets for removably attaching the lower rod to the tailgate, brackets for removably attaching the upper rod to supports adjacent the opening, one of said last-named brackets being provided at each end of the upper rod, each of said last-named brackets comprising a rod-receiving sleeve portion and a mounting portion which are swiveled together for relative movement about a pivot at right angles to the axis of the sleeve portion to permit disposition of the mounting portion at different angles relative to the axis of the rod.

3,049,374
PASSENGER SEAT INSTALLED FOOD CONTAINER
Tommy E. Nance, Denver, Colo., assignor to Continental Air Lines, Inc., Denver, Colo., a corporation of Nevada
Filed June 13, 1960, Ser. No. 35,594
1 Claim. (Cl. 297—146)



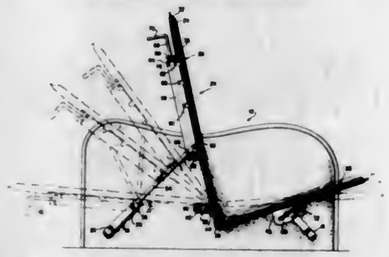
A tray and support means therefor for use with a reclining seat comprising a hollow box type container having opposite sides, ends and a top and bottom, pin means extending from the opposite ends thereof, elongated support arms having their upper ends pivotally connected to said pin means, other pin means secured to the lower end of said arms adapted to be attached to a seat so said arms may be pivoted with respect to the seat, the upper ends of said arms having an arcuate slot therein, stop pin means on the opposite ends of said tray extending into said slots for free movement therein, said slot means being disposed to limit movement of said tray from a horizontal position to a vertical position, and to position said tray in a substantially horizontal position when said stop pin means are disposed adjacent the upper end of said arcuate slot, and to position said tray in a substantially vertical position when said stop pin means are disposed adjacent the lower end of said arcuate slot.

3,049,375
RECLINING CHAIRS
Gustave A. Carlson, 468 NE. 100th St., Miami, Fla.
Filed Mar. 17, 1961, Ser. No. 96,515
4 Claims. (Cl. 297—303)



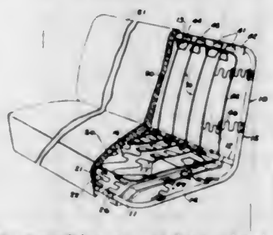
1. In a chair having a support comprising forward legs, rear legs, side members connecting the forward and rear legs, and a front cross bar connecting the forward legs; said chair also having a seat between the side members of the support; pivoting means for said seat comprising a fulcrum cross rod between the forward and rear ends of the seat supported at its ends by the side members of the support; said seat being connected to said fulcrum rod for fulcruming thereon; and spring balance means for the seat comprising rear brackets mounted on the seat behind the fulcrum rod, front links connecting the fulcrum rod and the front cross bar, and compression springs reacting against the rear brackets and said front links, said chair including rear links connecting the fulcrum rod and the rear of the seat, said rear links mounting said rear brackets.

3,049,376
BABY CHAIR BED
Harry Rosenthal, 304 Lake Circle Drive, Portsmouth, Va.
Filed Jan. 16, 1961, Ser. No. 83,013
9 Claims. (Cl. 297—320)



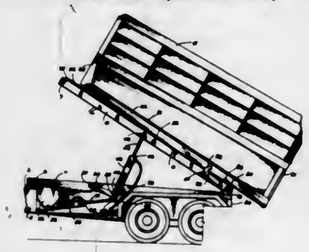
5. A chair bed comprising upstanding side panels, means interconnecting said panels for maintaining the panels in spaced relation, a body supporting means hung between said panels including a back seat and hinged together along an axis extending transversely of said panels so that they can be selectively extended to a bed position in a plane substantially below the upper edges of said side panels and folded to a plurality of chair positions wherein the side panels extend substantially above the seat, a first rod connected to one of said members and pivotally secured to said side panels, a second rod fixed to said side panels and pivotally and slidably secured to said seat, a third and U-shaped rod pivotally attached to said side panels, a latch plate journaled on said back and arranged to slidably receive and selectively lock said third rod in different positions corresponding to said extended bed position and plurality of folded chair positions of the back and seat, and means releasably urging said latch plate to a position in which the third rod is engaged and locked in one of said different positions.

3,049,377
SEAT CONSTRUCTION
Vito Asaro, East Detroit, and Anthony Ciesielski, Detroit, Mich., assignors to Young Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 24, 1959, Ser. No. 835,492
10 Claims. (Cl. 297—456)



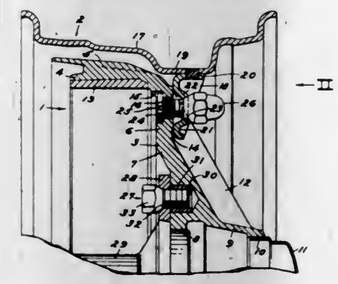
1. A seat comprising a seat frame having a front rail and a rear rail, a plurality of spaced sinuous spring elements, each said spring element comprising a central load bearing portion which is normally arched upwardly, a front supporting portion extending from the front end of said central portion and fastened to said front rail and a rear supporting portion extending from the rear of said central portion and fastened to said rear rail, each said supporting portion being generally V-shaped, each said central load bearing portion comprising a series of connected reversely disposed loops, a back frame positioned adjacent the rear portion of said seat frame, a plurality of straight wire spring elements extending generally vertically, each said spring element having a major portion thereof lying in a single plane, the lower end of each said spring element being pivotally fastened to the central load bearing portion of a sinuous spring element, and a plurality of yieldable spring elements interconnecting the upper ends of said straight spring elements to said back frame, each said yieldable spring element having a V-shaped portion with the apex of the V extending downwardly, each said yieldable spring element supporting the upper ends of two straight spring elements, each said yieldable spring element comprising a horizontal bar to which the upper ends of a pair of straight spring elements are attached, a first set of vertical bars extending downwardly from the ends of said horizontal bar, a first set of horizontal bars extending inwardly from the lower ends of said vertical bars, said horizontal bar, first set of vertical bars, and first set of horizontal bars lying in the same plane, a second set of vertical bars extending upwardly from the inner ends of said first set of horizontal bars at an angle to the said plane, and a second set of horizontal bars extending outwardly from the upper ends of said second set of vertical bars and pivotally connected to said back frame.

3,049,378
SELF-LOADING AND UNLOADING VEHICLE
Floyd E. Nelson, % Sanitary Disposal Service Inc., 110 Osage, Kansas City, Kans.
Filed Aug. 3, 1959, Ser. No. 831,250
6 Claims. (Cl. 298—14)



5. A loading and unloading apparatus for vehicle bodies comprising, a wheel-supported chassis including an elongate frame, a second elongate frame having a pair of track-forming sides, means pivotally mounting the rearward portion of the second elongate frame on the rearward end of the elongate frame of the chassis for vertical swinging movement to and from overlying engagement therewith, extensible means pivotally connected with said chassis frame and said second frame for effecting raising and lowering movement of said second frame, a pair of load-supporting skids adapted to be guided by said spaced track-forming portions of the second frame, a pulley on the forward portion of said second elongate frame, an elongate cable, means adjacent the forward end of said skids adapted to be connected to one end of said cable with the cable extending forwardly over said pulley and then rearwardly relative to the second elongate frame, a pair of hydraulic rams arranged longitudinally of said second elongate frame in parallel relation, means fixing one end of said pair of hydraulic rams relative to said second elongate frame and adjacent the forward end thereof, means connecting the other ends of the hydraulic rams whereby extension of said hydraulic rams moves said connecting means rearwardly relative to said second elongate frame, and spaced pulleys at each end of each hydraulic ram, said cable extending over and engaged with said spaced pulleys and having its other end fixed relative to said one end of said hydraulic rams whereby the length of extensible movement of the pair of hydraulic rams moves said spaced pulleys relative to each other and moves said one end of the cable a multiple of the length of the extension of said hydraulic rams for effecting movement of the skids longitudinally of the second elongate frame.

3,049,379
WHEEL AND BRAKE DRUM ASSEMBLY
Thomas L. Hibbard, Birmingham, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,244
2 Claims. (Cl. 301—6)

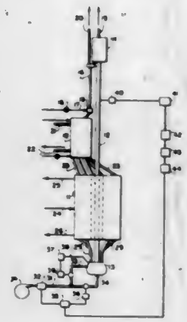


1. In a wheel and brake drum assembly, a brake drum of high heat conductivity material having a generally radial web and an annular flange along the radially outer periphery of said web, a wheel structure including a rim encircling said brake drum and mounting tabs secured to and extending radially inwardly from said rim in overlying relation to the outboard side of the radially outer portion of said web, threaded fastening elements accessible from the outboard side of the assembly extending through registering apertures in said radially outer portion of said web and in the overlying tabs for detachably mounting said wheel structure on said web, and fasteners for detachably clamping said web to a rotatable member, each fastener including cooperating engaging threaded elements one of which is fixed to the inboard side of said web radially inwardly of said tabs, the material of said web covering and concealing said fasteners when said assembly is viewed from the outboard side and rendering said fasteners substantially inaccessible from the outboard side, said web having an integral extension projecting radially inwardly beyond said fasteners provided with means for detachably holding a cover member, said web serving the additional function of a wheel center, the outboard side of said web, including the integral extension thereof and except for the portions thereof overlain by said tabs, being exposed for maximum cooling and to present a wheel body appearance.

3,049,380
PRESSURE CONTROL
William R. Brennan, Stamford, Conn., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Dec. 8, 1959, Ser. No. 858,110
11 Claims. (Cl. 302—53)

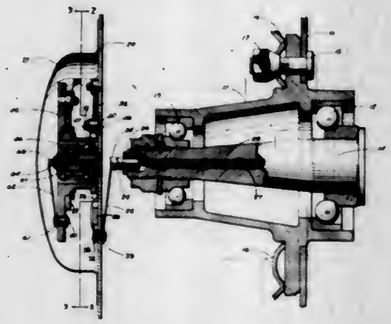
1. Apparatus for measuring pressure fluctuation magnitude comprising in combination: means for converting

pressure fluctuation to a voltage of fluctuating magnitude proportional to the magnitude of pressure fluctuation being measured, a first condenser for retention of maximum voltage, a second condenser for retention of minimum voltage, a unidirectional current controller connected between said first condenser and said voltage of fluctuating magnitude to feed current to said first condenser, a unidirectional current controller connected between said second condenser and said voltage of fluctuating magnitude, to feed current from said second condenser, whereby said first



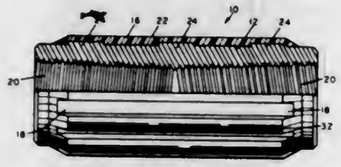
and second condensers act as voltage retaining devices to the maximum and minimum voltage of the voltage of fluctuating magnitude, reistance means connected between said first and second condenser for bleeding minimal current between said condensers, to prevent said condensers from retaining intermittent and unusual peak voltages and means connected between said first and second condensers for reading the voltage between said condensers, said voltage being directly proportional to the magnitude of the pressure fluctuation being measured.

3,049,381
ANTI-SKID MECHANISM
John M. Zeigler, Hamilton, Ohio, assignor, by mesne assignments, to Burtek, Inc., a corporation of Delaware
Filed Sept. 23, 1958, Ser. No. 762,813
7 Claims. (Cl. 303—21)



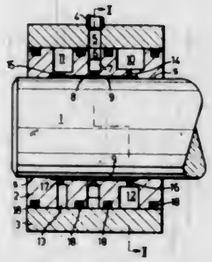
1. An anti-skid system for vehicle wheel brakes comprising, a fluid pressure operated system for actuating said brakes, valve means in said system having a "release" position for releasing said fluid pressure to release said brakes, a solenoid operable when energized to move said valve to "release" position, a power source connected from ground to said solenoid, an electrical conductor passing from said solenoid through a wheel axle to a fixed point, a wheel hub cap, a pair of series connected switches on said hub cap and connected at one side to ground and at the other side to a brush engageable with said conductor fixed point, a wheel speed detector mounted on said hub cap and connected to one of said switches to close one of said switches when wheel speed is below a predetermined amount, vehicle speed detector rotatably mounted on said hub by an overrunning clutch and connected to the other of said switches to close the other of said switches only when the vehicle speed is above a predetermined amount.

3,049,382
ANTI-FRICTION SUCKER ROD COUPLING
George E. Ell, Fort Worth, Tex., assignor to Liberty Manufacturing Company of Texas, Fort Worth, Tex., a corporation of Texas
Filed Dec. 20, 1960, Ser. No. 77,226
2 Claims. (Cl. 308—4)



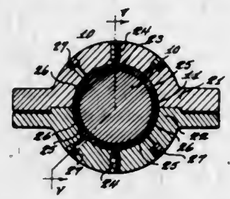
1. A friction reducing sucker rod coupling, comprising, in combination:
- a hollow cylindrical metallic body member having threads formed the full length interiorly thereof, said body member having at least two knurled bonding rings spaced from each other on the exterior cylindrical surface thereof;
- and a jacket of fiber reinforced lubricative saturate thermoplastic material molded to the exterior of said body member, said jacket terminating adjacent each end of said body member, said jacket tapered at each termination toward said body member, said jacket having an external configuration defined by longitudinal flutes extending the full length thereof, each of said aligned flutes to intersect a plane of the cylindrical axis of said body portion at an angle thereto.

3,049,383
DAMPING VIBRATIONS IN A GAS BEARING
Erwin Loch, Zurich, Switzerland, assignor to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland
Filed June 8, 1960, Ser. No. 34,658
Claims priority, application Switzerland June 26, 1959
4 Claims. (Cl. 308—9)



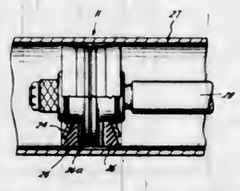
1. In a gas pressure bearing including a bearing member having a supporting surface, a supported member movable relatively to the bearing member and having a surface adjacent said supporting surface but spaced therefrom to define a bearing gap, and means for supplying compressible fluid under pressure to said gap, a vibration damping device comprising at least one resonator consisting of
- (*a*) a closed chamber; and
- (*b*) a channel connecting the chamber with the bearing gap, and containing a gas column capable of oscillating in the longitudinal direction of the channel.

3,049,384
BEARING
Jacques Jean Caubet, 2 Rue de la Reclusiere, Saint-Chamond, France
Filed Oct. 27, 1958, Ser. No. 769,674
3 Claims. (Cl. 308—240)



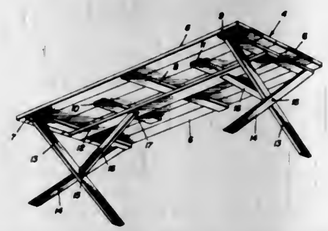
1. A bearing for a shaft rotating slowly under a heavy load comprising a shaft, an annular bushing member disposed round and in spaced relationship to said shaft, a jacket member interposed between said shaft and said annular bushing member, a plurality of channels disposed in and circumferentially arranged around said jacket member, each channel having disposed therein a non-compressible lubricant of pasty consistency on which said shaft rides and is supported, a sealing member disposed at the periphery of each channel to maintain said non-compressible lubricant therein, and filling means disposed in said annular bushing member, said filling means being in communication with each one of said channels to fill said channels with said non-compressible lubricant and to maintain said channels full therewith.

3,049,385
PISTON RUBBERS
Ralph E. Smith, Houston, Tex., assignor to Mission Manufacturing Company, Houston, Tex., a corporation of Texas
Continuation of abandoned application Ser. No. 718,350, Feb. 28, 1958. This application July 21, 1961, Ser. No. 134,796
7 Claims. (Cl. 277—212)



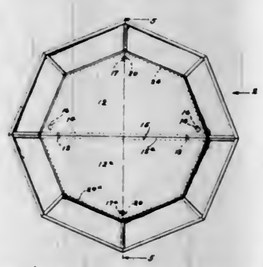
1. A high pressure pump comprising a cylinder, a piston, and a piston rubber mounted on said piston, said piston rubber including an annular body portion having an outer peripheral surface which is subjected to wear when the piston rubber is in use, said body portion formed of rubber and at one end having a plurality of monofilament fibers arranged in layers substantially throughout the thickness of the body and a rubber frictioning material bonding all of staid fibers together, each monofilament layer extending transverse to the axis of the body portion with the extremities of a majority of the fibers so disposed with respect to the outer peripheral surface of the body portion that said fiber extremities are subject to wear in use, said monofilament fibers being of a synthetic material having the property of withstanding molding temperatures, resisting abrasion, being stiff and non-brittle, the property of low liquid absorption, and also the property of good elongation to expand with the frictioning material into engagement with the cylinder on the compression stroke, and the property of recovering with the frictioning material on the suction stroke to a diameter less than the diameter of the cylinder.

3,049,386
PICNIC TABLE OR BENCH WITH TRUSS
Lester L. Prud'homme, P.O. Box 572, Texarkana, Tex.
Filed June 10, 1958, Ser. No. 741,187
3 Claims. (Cl. 311—84)



1. A portable picnic-type bench comprising an elongated top structure embodying a plurality of coplanar side-by-side planks commensurate in length and cross-section, a truss for the underneath side of said top structure embodying a plurality of transversely disposed longitudinally spaced cleats fastened beneath and to the bottom surfaces of said planks, there being five cleats, namely, two end-cleats and one centrally located cleat all of a length equal to the width of the top structure, and two equally spaced auxiliary cleats shorter than said end and central cleats and occupying positions spaced from each other in parallelism with each other between the end-cleats and central cleat, a lengthwise stabilizing member at right angles to and secured to the median bottom portions of all of said cleats, and braced leg frames perpendicular to the top structure and secured to adjacent parts of said truss, each leg frame comprising a pair of legs having cooperating median portions crossed and separably bolted to each other and also bolted to a cooperating lower end of a diagonal brace, the upper end of said brace being separably fastened to an adjacent end portion of said lengthwise stabilizing member.

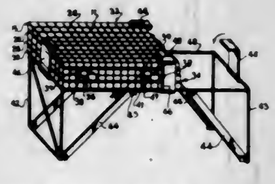
3,049,387
FOLDABLE TABLE
Fred Schlegel, Rte. 1, Box 152A, Ceresco, Mich.
Filed Mar. 3, 1960, Ser. No. 12,525
12 Claims. (Cl. 311—89)



1. A foldable four leg table having a top portion formed of two halves hinged together to allow one half to be folded onto the other half, said other half having

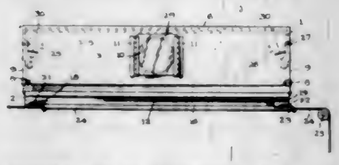
three foldable legs, hinge means connecting said legs to said top portion in position to stably support it in operative position and to stably support it when said one half is folded onto it, said one half having only one foldable leg, and hinge means connecting said leg to said top portion in position to support it in operative position.

3,049,388
PANELED TABLE TOP
Robert Browne, 2420 7th Ave., New York, N.Y.
Filed Sept. 8, 1958, Ser. No. 759,590
1 Claim. (Cl. 311—106)



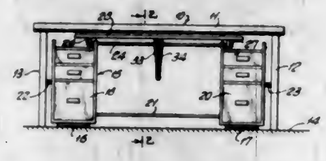
A paneled table top comprising a rectangular-shaped frame, a laminated panel construction supported on the frame, said panel construction including a pair of superimposed panels, each panel consisting of two flat rectangular layers and a cloth sheet therebetween, each of the layers composed of juxtaposed flat rigid plates, the plates of one layer having one side secured to one side of the sheet and the plates of the other layer having one side secured to the other side of the sheet, each plate in said one layer being superimposed on a plate in the other layer with edges of the superposed plates in registration, hinge members mounted on edges of adjacent layers of the superimposed panels, and L-shaped clamps hinged to opposite ends of the frame, hinge pins carried by said hinge members of one panel interlocking with said hinge members of the other of said panels, the other ends of the clamps engaging the outermost layer of plates for clamping the panels onto the frame.

3,049,389
DEVICE FOR DISPENSING EMERGENCY BLANKETS
André Chappellier, Paris, France, assignor to Commissariat a l'Energie Atomique, Paris, France
Filed Mar. 22, 1960, Ser. No. 16,842
Claims priority, application France Apr. 2, 1959
3 Claims. (Cl. 312—324)



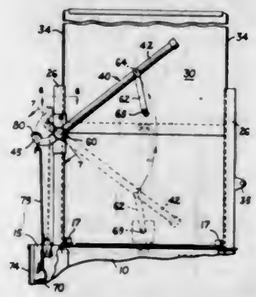
1. A dispenser for an emergency fire and accident blanket comprising a metallic container for the blanket having a rear wall, side walls and a top wall, an upstanding front edge on said top wall, a removable front wall for said container, an upper overturned edge for said front wall receiving said upstanding edge and supporting said front wall, a shutter, pivots for said shutter in said side walls adjacent the lower edge of said rear wall, a second shutter, pivots for said second shutter in said side walls adjacent the lower edge of said front wall, a lip extending the length of said first shutter, a lip extending the length of said second shutter, said lips being in engagement when said shutters close the bottom of said container, spaced locking surfaces on each of said lips extending at right angles thereto, locking elements embracing said lips and engaging said surfaces and flexible cable means connecting said locking elements for rapid manual removal thereof.

3,049,390
UTILITY DESK AND DRAWING BOARD AND THE LIKE
Lester Wolfe, 17 Battery Place, New York, N.Y.
Filed Feb. 3, 1961, Ser. No. 86,883
12 Claims. (Cl. 312—231)



1. In a device of the class described, the combination with a desk having a horizontal top panel and supporting means at the opposite ends of said panel, of a supporting structure nested within said desk so as to be substantially concealed thereby and extendable outwardly from said desk and retractable to its nested position, a drawing board having an edge hinged to said structure to be swung to selected inclined positions, and resilient means operably connected between said board and said structure, to urge said board to a predetermined inclined elevational working position in the extended position of said structure from said desk such as to cause the undersurface of said board to engage the edge of said panel upon partially retracting said structure into said desk, for adjusting said board to varying working angles with said edge acting as a pivot, said board upon collapse to a horizontal position against the action of said resilient means adapted to adjoin the underside of said panel in the nested position of said structure.

3,049,391
DISHWASHING APPARATUS
David A. Meeker and Gerald B. Fox, Troy, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed May 12, 1961, Ser. No. 109,578
13 Claims. (Cl. 312—272)

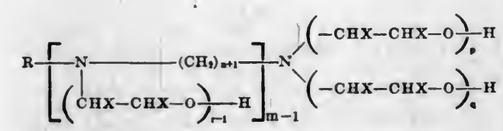


1. In a dishwashing machine having walls defining a closed chamber and means in said chamber for flowing cleansing liquid over articles supported therein together with vertically movable doors providing access to the interior of said chamber, the combination of counterbalance control mechanism for holding said doors in their raised open position comprising an operating lever including control arms extending adjacent said doors, a pivot mounting for said lever secured to said machine and forming an axis about which said control arms can swing, links having pivotal connections at their opposite ends with said door and the adjacent said control arm respectively for accommodating swinging movement of said arms to linear motion of said doors, compensating spring means anchored at one end to a fixed point of said machine, a balance link connected to the other end of said spring means and having a pivotal connection with said lever located above said axis in the closed position of said doors, said balance link being rotatable about its said pivotal connection with said lever in a direction opposite to swinging movement of said lever during opening movement of said doors acting to increase the effective turning moment exerted by said spring means as said doors open by an amount sufficient to hold said doors open without interfering with maintaining said doors closed.

CHEMICAL

3,049,392
PROCESS FOR DYEING NITROGENOUS MATERIAL WITH SULFONATED COPPER PHTHALOCYANINES
Richard Casty, Kaiseraugst, and Heinz Abel, Reinach, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed July 29, 1959, Ser. No. 830,189
Claims priority, application Switzerland Aug. 6, 1958
9 Claims. (Cl. 8—1)

1. A process for dyeing nitrogenous fibrous material, which comprises subjecting said material to treatment in an acid bath containing a sulfonated copper phthalocyanine in the presence of an auxiliary compound of the formula



in which R represents an aliphatic hydrocarbon radical containing at least 12 carbon atoms, in each of the groupings —CHX—CHX—O— at least one of the two X's represents a hydrogen atom and any X not representing hydrogen stands for a methyl group, m and n are integers of at the most 2, and p, q and r are integers, the sum $p+q+(m-1)(r-1)$ amounting to at least 3 and to at most 20, and, after the material has absorbed the required amount of dye, increasing the pH value of the dyebath to above 6.

3,049,393
NITRO PHENYLENEDIAMINE COMPOSITIONS AND METHOD FOR DYEING ANIMAL FIBERS
John Robert Seemuller, Maisons-Laffitte, France, assignor to Société Anonyme dite: L'Oreal, Paris, France, a corporation of France
No Drawing. Filed Apr. 12, 1961, Ser. No. 102,102
Claims priority, application France Nov. 29, 1955
11 Claims. (Cl. 8—10)

1. A composition for dyeing animal fibres which comprises an alkaline solution of a nitro phenylenediamine compound selected from the group consisting of 2-nitro-1,4-phenylenediamine and 4-nitro-1,2-phenylenediamine in which the amino group furthest from the nitro group is a group having the formula

$$—NR_1—(CH_2)_{m-n}—(CO)_n—NR_2R_3$$

in which R_1, R_2, and R_3 each represent a substance selected from the group consisting of hydrogen atoms and alkyl radicals from 1 to 3 carbon atoms, m represents an integer from 2 to 4 and n is equal to 0 or 1.

3,049,394
PROCESS OF DYEING A LINEAR POLYESTER
Leon E. Wolinski, Buffalo, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 5, 1959, Ser. No. 784,886
8 Claims. (Cl. 8—55)

1. The process which comprises exposing a linear terephthalate polyester to an atmosphere containing ozone as an active ingredient, for from about 1 minute to about 3 hours at a temperature below about 230° C., the concentration by volume of the ozone in the said atmosphere being at least equal to that concentration of ozone in an atmosphere at room temperature and atmospheric pressure containing 0.1% ozone by volume.

3,049,395
CONCENTRATED METHYLENE BLUE PASTE
Joseph C. Conger, Sr., Somerville, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 6, 1960, Ser. No. 27,285
3 Claims. (Cl. 8—79)

1. A substantially zinc-free aqueous dye paste which in storage is substantially non-settling, non-separating and non-crystallizing containing, in parts per 100 parts by weight of finished composition;
(*a*) from about 33 to about 45 parts of Methylene Blue hydrochloride;
(*b*) from about 6 to about 14 parts of water, and
(*c*) sufficient glycerine to make up a total of 100 parts.

3,049,396
METHOD OF RINSING YARNS AND FABRICS IN THE FORM OF SKEINS
Robert Ronald Laupman, Wijchen, Netherlands, assignor to Gebr. Stork & Co's Apparatenfabriek N.V., Amsterdam, Netherlands, a corporation of the Netherlands
Filed July 21, 1958, Ser. No. 749,981
Claims priority, application Netherlands July 20, 1957
1 Claim. (Cl. 8—155.2)

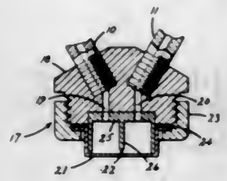
A method of continuously wet treating yarns and fabrics in rope form, comprising passing the rope of material to be treated at a constant velocity downwardly into and upwardly out of a plurality of treating liquids in succession, and superimposing on the movement of the rope of material at the constant velocity a reciprocal motion in the direction of the length of the rope of material, the velocity of which reciprocal motion is sinusoidal, the peak velocity of the reciprocal motion being greater than the constant velocity, and the frequency of said sinusoidal reciprocal motion being such that each point on the rope of material passes each surface of the liquid through which the net movement of the rope is upward more than once in opposite directions.

3,049,397

PROCESS OF MAKING SPACE-DYED YARN

Marion T. O'Shaughnessy, Wallingford, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Apr. 3, 1958, Ser. No. 726,071
1 Claim. (Cl. 18—54)



The method of spinning a constant denier filament having alternating segments of differing characteristics comprising introducing two differently characterized spinnable filament-forming solutions to two different compartments of a conjugate jet which has a septum separating the compartments and a downwardly directed jet opening located directly and closely below the septum, alternately raising the pressure of one of the solutions to a particular level while simultaneously reducing the pressure of the other solution, and maintaining the pressures of the solutions such that the sum of the two pressures remain constant.

3,049,398

METHOD OF PRODUCING ALL SKIN RAYON

Byron A. Thumm, Delaware County, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Original application Dec. 5, 1955, Ser. No. 550,826, now Patent No. 2,932,578, dated Apr. 12, 1960. Divided and this application Sept. 23, 1959, Ser. No. 841,695

11 Claims. (Cl. 18—54)

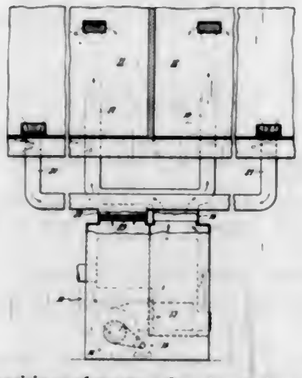
1. In a method of producing shaped bodies of regenerated cellulose consisting substantially entirely of skin, the step which comprises extruding viscose containing a small amount, based on the weight of the cellulose in the viscose, of a modifying agent into an aqueous spinning bath containing from about 10% to about 25% sodium sulfate, from about 3% to about 15% zinc sulfate and sulfuric acid, the sulfuric acid content of the spinning bath exceeding the slubbing point but being below the concentration at which neutralization of the caustic soda of the viscose is sufficiently rapid so as to produce shaped bodies consisting of skin and core, the modifying agent being a di(omega-hydroxy polyoxyalkylene)alpha-pyridyl amine wherein the alkylene oxide is selected from the group consisting of ethylene oxide and propylene oxide and the amine contains from about 4 to 100 alkylene oxide units, said small amount of the modifying agent being a quantity sufficient to impart a smooth, non-crenulated surface and a substantially all skin structure to products formed by spinning the viscose at a sodium chloride salt test of at least 9 into an aqueous bath containing from 15% to 22% sodium sulfate, from 4% to 9% zinc sulfate and sulfuric acid in an amount not exceeding 8%, but the quantity being insufficient to adversely affect the physical properties of such products.

3,049,399

COMPOSITION AND METHOD FOR DEODORIZING AIR

Bernard W. Gamson, Lincolnwood, and Richard L. Kuehner, Roselle, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Dec. 18, 1958, Ser. No. 781,321
16 Claims. (Cl. 21—53)



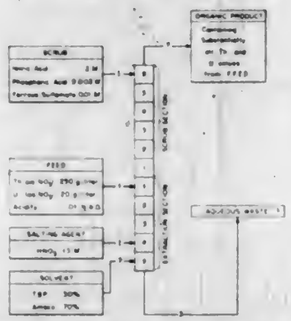
1. A composition of matter for deodorizing air comprising an inorganic activated water adsorbing substrate impregnated with a permanganate.

3,049,400

SOLVENT EXTRACTION PROCESS FOR THE SEPARATION OF URANIUM AND THORIUM FROM PROTACTINIUM AND FISSION PRODUCTS

Robert H. Rainey, Knoxville, and John G. Moore, Clinton, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed May 4, 1960, Ser. No. 26,919
9 Claims. (Cl. 23—14.5)



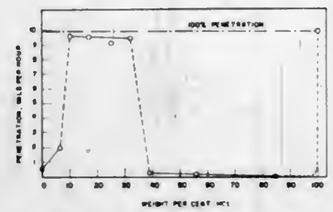
1. In a process for recovering thorium and uranium values from a neutron-irradiated thorium composition by forming a nitrate ion-deficient aqueous solution from said composition and contacting said solution with an aqueous immiscible organic solvent in a liquid-liquid extraction system containing a first end extraction stage for introduction of said aqueous nitrate ion-deficient solution, a second end extraction stage for introduction of said organic solvent into said system and a plurality of intermediate extraction stages, whereby said values are selectively extracted into said organic solvent, the improvement in said process which comprises introducing an aqueous solution of salting nitric acid into any intermediate extraction stage of said system, contacting said nitric acid solution with the solvent in said intermediate and succeeding extraction stages, and thereafter disengaging the thus contacted thorium and uranium containing solvent at a point preceding the first end extraction stage of said system.

3,049,401

PROCESS FOR DISSOLVING BINARY URANIUM-ZIRCONIUM OR ZIRCONIUM-BASE ALLOYS

Albert A. Jonke, Elmhurst, John J. Barghusen, Joliet, and Norman M. Levitz, Bellwood, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Nov. 4, 1960, Ser. No. 67,446
4 Claims. (Cl. 23—14.5)



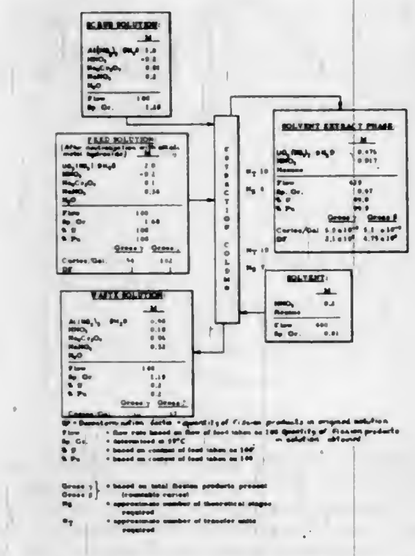
1. A process of dissolving zirconium-base metals selected from the group consisting of binary uranium-zirconium alloys and zirconium-base alloys containing from 1.2 to 1.6 percent by weight of tin, from 0.08 to 0.17 percent by weight of iron, from 0.06 to 0.14 percent by weight of chromium, from 0.03 to 0.07 percent by weight of nickel and less than 0.009 percent by weight of nitrogen, the balance being zirconium, comprising contacting said metal with an anhydrous gaseous mixture of hydrogen fluoride and from 10 to 32% by weight of hydrogen chloride at between 400 and 550° C. whereby solid zirconium fluoride is formed and precipitated.

3,049,402

SOLVENT EXTRACTION PROCESS FOR SEPARATING ACTINIDE AND LANTHANIDE METAL VALUES

Robert A. Hildebrandt, Bellwood, and Herbert H. Hyman and Seymour Vogler, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed July 27, 1953, Ser. No. 376,276
5 Claims. (Cl. 23—14.5)



1. A process for separating actinide metal values from lanthanide rare earth metal values all contained as salts in an aqueous mineral acid solution, which comprises neutralizing the excess acid and a part of the acid from hydrolysis of said salts in said solution, countercurrently contacting the solution with an acidified organic solvent immiscible therewith, said acidified organic solvent containing an introduced mineral acid in amount insufficient to fully replace the acid of hydrolysis of the salts in the aqueous phase; and during said countercurrent contact, transferring acid from the organic solvent to the aqueous phase to thereby increase the tendency of the latter to retain the lanthanide rare earth metal values and preferentially transferring said actinide metal values to said organic solvent.

3,049,403

PROCESS FOR PRECIPITATING READILY FILTERABLE RARE EARTH HYDROXIDES

Pawel Krumholz, Rua Maestro Elias Lobo 241, Sao Paulo, Brazil

No Drawing. Filed Aug. 25, 1958, Ser. No. 758,649
Claims priority, application Brazil Sept. 2, 1957
5 Claims. (Cl. 23—22)

1. In a method of precipitating rare earth hydroxides from a solution of rare earth chlorides, the improvement in the precipitation of more easily filterable precipitates which comprises reacting an aqueous solution of a mixture of rare earth chlorides at a temperature between 25° and 50° C. with an aqueous solution containing an alkaline precipitating agent selected from the group consisting of alkali metal and ammonium hydroxides and also containing in solution an aliphatic carboxylic acid of less than four carbon atoms in an amount equivalent in normality to 5–15% of the concentration of said alkaline precipitating agent in normality, whereby said rare earths are precipitated as hydroxides in the form of a dense, readily filterable precipitate.

3,049,404

METHOD OF MAKING FERROMAGNETIC BARIUM FERRITES

William L. Wade, Jr., Neptune, N.J., assignor to the United States of America as represented by the Secretary of the Army

No Drawing. Filed Feb. 3, 1960, Ser. No. 6,571
7 Claims. (Cl. 23—50)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The method of making ferromagnetic barium ferrite of high structural and compositional purity and having a particle size below 0.1 micron comprising;

dissolving anhydrous ferric chloride in an organic solvent solution of an alcohol the alcohol radical of which contains not over 5 carbon atoms and a cyclic hydrocarbon at room temperature under anhydrous conditions,

stirring the mixture under anhydrous conditions for several hours to dissolve most of the ferric chloride,

treating the solution with anhydrous ammonia gas at room temperature for several hours to precipitate all the chlorides as ammonium chloride,

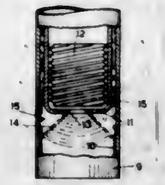
allowing the treated solution to stand for several hours until the precipitate is settled, drawing off the supernatant liquid and filtering it in vacuum under anhydrous conditions,

concentrating the filtered solution by heating under atmospheric pressure to about the boiling point of the cyclic hydrocarbon to remove excess amounts of the solvents,

mixing the ferric alcoholate thus obtained in stoichiometric proportions and in an organic solvent with barium alcoholate the alcohol radical of which contains not over 5 carbon atoms,

heating the solution to dryness to obtain a mixture of barium oxide and ferric oxide in the ratio of 1 mol of barium to 12 mol of iron and firing this mixture at temperatures of between 960 and 1260° C. to obtain ferromagnetic barium ferrite.

3,049,405
PROCESS FOR THE PREPARATION OF ARTIFICIAL CRYOLITE
Roberto Trupiano and Domenico Zanon, Milan, Italy, assignors to I.C.P.M. S.p.A. Industrie Chimiche Porto Marghera, Milan, Italy, a company of Italy
Filed Dec. 31, 1959, Ser. No. 863,284
Claims priority, application Great Britain Jan. 8, 1959
1 Claim. (Cl. 23—88)



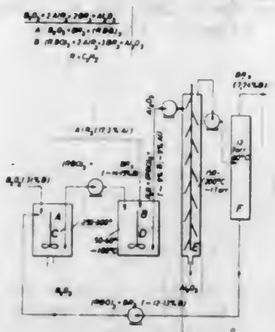
A process for the production of artificial cryolite by reaction between an aqueous solution, which contains the Al and F ions, and an aqueous sodium chloride solution, comprising the steps of spraying one solution continuously onto the other solution while flowing said other solution continuously over a solid surface in a film under streamline flow conditions and while maintaining the temperature at not more than 70° C., of continuously removing the cryolite immediately as precipitated and while in suspension, and of continuously stirring the removed, precipitated cryolite while in suspension for at least one hour at a temperature lower than 60° C., said solid surface being an internal surface of revolution, said other solution being flowed in a generally annular stream over said solid surface during said spraying step, and said one solution being sprayed onto the annular stream of said other solution from a point disposed centrally within said annular stream.

3,049,406
PREPARATION OF ANHYDROUS LITHIUM SALTS
Louis R. Grant and Moddie D. Taylor, Washington, D.C., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed May 12, 1955, Ser. No. 507,999
7 Claims. (Cl. 23—89)

1. A method of preparing anhydrous lithium salts of the class consisting of lithium halides and lithium pseudohalides which comprises reacting lithium hydride with a material selected from the class consisting of halogens and pseudohalogens at about room temperature in an inert anhydrous non-aqueous solvent in which the lithium salt is soluble and selected from the group consisting of ether, tetrahydrofuran and pyridine and recovering the lithium salt thus formed.

3,049,407
PROCESS FOR THE PRODUCTION OF BORON ALKYLS AND OF HIGHLY ACTIVE ALUMINIUM OXIDE
Roland Köster, Mulheim (Ruhr), Germany, assignor to Studiengesellschaft Kohle m.b.H., Mulheim (Ruhr), Germany, a corporation of Germany
Filed Sept. 30, 1958, Ser. No. 764,422
Claims priority, application Germany Oct. 3, 1957
5 Claims. (Cl. 23—143)

1. Process for the continuous production of boron alkyls and active aluminium oxide which comprises substantially continuously passing an alkyl boroxol and a member selected from the group consisting of aluminium trialkyl, aluminum dialkylhydrides and mixtures thereof into a first reaction zone, reacting said alkyl boroxol and said group member in said first reaction zone at a temperature below 100 degrees C. in the presence of a solvent selected from the group consisting of saturated aliphatic hydrocarbons, aromatic hydrocarbons, ethers, amines, and boron alkyls wherein when said solvent is a boron alkyl, the same is initially present in amount sufficient

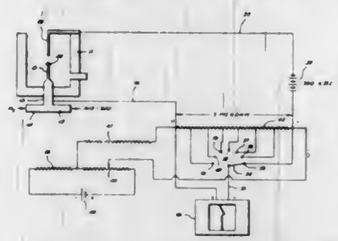


to form a dilute solution of said alkyl boroxal to thereby form a liquid mixture, substantially continuously withdrawing the liquid mixture from said reaction zone, raising the temperature of the liquid mixture to above 100 degrees C. in a second reaction zone to thereby substantially continuously form a boron alkyl and active aluminium oxide.

3,049,408
STABILIZATION OF HYDROGEN CYANIDE
Edward H. Gause, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 12, 1960, Ser. No. 28,551
6 Claims. (Cl. 23—151)

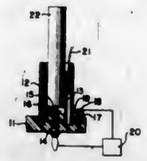
1. In the process of inhibiting the polymerization and decomposition of stored liquid hydrogen cyanide the improvement comprising adding at least one oxide of nitrogen to the hydrogen cyanide.

3,049,409
TESTING FOR GAS IN WELL DRILLING FLUID
Ethell J. Dower, Houston, Tex., assignor to Warren Automatic Tool Company, Houston, Tex., a corporation of Texas
Filed July 27, 1959, Ser. No. 829,763
9 Claims. (Cl. 23—230)



5. A method for testing gas in oil well drilling mud including separating organic gas from drilling mud and utilizing a stream of pressure air as a carrier of the separated organic gas, mixing the steam with hydrogen fuel adjacent a jet burner, burning the mixture at the jet burner, passing electric current across a circuit gap bridged by the burning flame and measuring current variation in the circuit as indicative of characteristics of the organic gas entrained with the carrier air.

3,049,410
NEW CURING TECHNIQUES FOR RESINS
Robert W. Warfield, 1904 Fox St., Hyattsville, Md., and Marcella C. Petree, 13490 Columbia Road, Silver Spring, Md.
Filed Aug. 20, 1959, Ser. No. 835,148
2 Claims. (Cl. 23—230)
(Granted under Title 35, U.S. Code (1952), sec. 266)



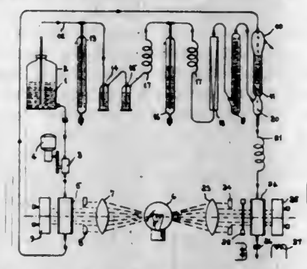
1. The process of indicating the optimum range of curing temperature of resins, polymers, propellant binders and filled solid propellants necessary to obtain a product having good tensile strength in the shortest time by heat treating which includes the steps of placing a series of liquid like samples of the substance to be treated in a series of receptacles comprising a pair of concentrically disposed mutually separated hollow cylindrical capacitor elements having means connected thereto for indicating the resistivity of a sample disposed therein as the sample is heated isothermally to polymerization, and heat responsive means for indicating the heated temperature of the sample, isothermally polymerizing the liquid sample, repeating the last-named step upon additional like samples of the substance to be treated, the curing temperature of each sample being different from the curing temperatures of the remaining samples, plotting the logarithm of resistivity of each of the samples at intervals of time, plotting the logarithm of the maximum rate of change of the logarithm of resistivity of each of the samples against the reciprocal of the absolute temperatures respectively applied thereto, and drawing a curve having an abrupt change of slope connecting the plotted points of the last named step to indicate the optimum range of temperature at which polymerization of the sample should be conducted.

3,049,411
ENZYMATIC METHOD FOR DETECTION OF ANTICHOLINESTERASES
Charles Gelman, Chelsea, Mich., and David N. Kramer, Stevenson, Md., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Filed Feb. 11, 1959, Ser. No. 792,681
8 Claims. (Cl. 23—232)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for the detection of a compound of high anticholinesterase activity which comprises contacting a fluid containing said compound with a porous support impregnated with cholinesterase and buffered to a pH in the range of 6.4 to 8.5 then developing said support with a developer consisting essentially of an aqueous solution buffered to a pH in the range of about 6.4 to 8.5 and comprising a compound selected from the group consisting of acetates of indophenols and indoxyl acetate.

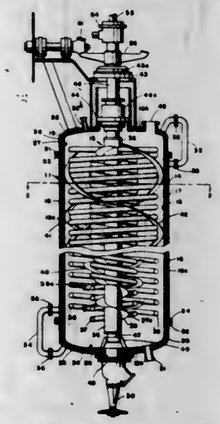
3,049,412
GAS ANALYZER
Mohd Akhtar, Balsall Common, near Coventry, England, assignor to Courtaulds Limited, London, England, a company of Great Britain
Filed Nov. 23, 1959, Ser. No. 854,900
Claims priority, application Great Britain Dec. 9, 1958
7 Claims. (Cl. 23—255)

1. In an automatic analyser for continuously determining the proportion in a gaseous mixture of a gas capable of reacting with a liquid reagent to change the color of that reagent wherein the analyser includes a reference cell through which the reagent flows, a reaction chamber having connections for admission of the reagent and the gaseous mixture and for outlet of the gas-treated reagent, and a cylindrical analytical cell through which the gas-treated reagent passes, the combination comprising a light source, a photoelectric cell, said cylindrical



cell being between the light source and the photoelectric cell, and a lens system between the light source and the cylindrical cell including means to render the light from the light source into a parallel beam, and means to condense said parallel beam perpendicularly onto and along the axis of the cylindrical cell.

3,049,413
POLYMERIZATION APPARATUS
Luther L. Sifford, Hamden, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Jan. 16, 1958, Ser. No. 709,387
5 Claims. (Cl. 23—285)

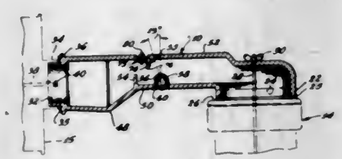


1. A temperature-controllable polymerization reaction vessel comprising a closed, vertically disposed cylindrical jacket and upper and lower jacketed dome closures for said cylindrical jacket, said jacket and dome closures containing interconnected interior spaces for receiving heat transfer fluid in a continuous spiral path of flow therethrough, a material aperture at each of the opposite longitudinal ends of said jacket, an axially aligned, rotatably mounted heat transfer agitator-conveyor extending substantially the full length of the vessel and removable from the top of said jacket, said agitator-conveyor comprising a hollow central cylindrical shaft, a plurality of helicoidal and concentrically disposed helicoidal mixing ribbons, and a plurality of hollow helicoidal coils defining closed passages for receiving heat transfer fluid in alternate concentric arrangement with said ribbons fixed on said shaft, said shaft and said coils defining a continuous passage for the transmission of heat transfer fluid through said hollow shaft and said hollow coils and means for rotating said agitator-conveyor.

3,049,414
COLOR-STABLE GASOLINE
Piet Cornelis Kruyff, P.O. Box 226, Casa Roig, Yauco, Puerto Rico
No Drawing. Filed July 15, 1959, Ser. No. 827,153
7 Claims. (Cl. 44—63)

1. A process for stabilizing the color of gasoline, said gasoline comprising gasoline prepared by catalytic cracking; comprising washing said gasoline with a first liquid capable of dissolving pyridine selected from the group consisting of water, aqueous mineral acid, liquid sulfur dioxide, liquid hydrofluoric acid, dimethyl sulfoxide and furfural, said first liquid being substantially free of members selected from the group consisting of the metals in groups IIIB, IVB, VB, VIB, VIII, IB, IIB, IIIA, IVA, VA, and VIA; then washing said gasoline with a second liquid comprising an alkaline aqueous solution, said second liquid being substantially free of members selected from the group consisting of the metals in groups IIIB, IVB, VB, VIB, VIII, IB, IIB, IIIA, IVA, VA, VIA; then removing substantially all of the free alkali; and then adding a nitrogenous organic base, all of whose carbon-carbon bonds are saturated, to said gasoline as a stabilizer.

3,049,415
APPARATUS FOR MIXING FUEL WITH AIR
Donald J. Hansen, 3937 W. 106th St., Inglewood, Calif.
Filed Dec. 16, 1957, Ser. No. 703,089
3 Claims. (Cl. 48—180)

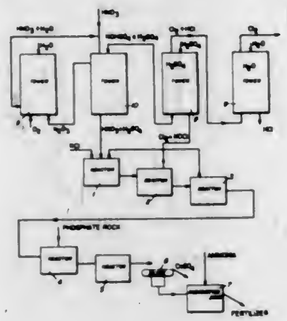


1. In an apparatus for mixing fuel with air to form a combustible mixture for an internal combustion engine or the like, the combination of: means forming a passage for flow of a stream of air therethrough in response to a pressure differential, at least a portion of said passage being of a flattened cross-sectional configuration of a depth that is shallow relative to its width to give the air stream a corresponding flattened configuration and being of restricted cross-sectional area for acceleration of the air stream; means in said portion of the passage presenting surfaces for impingement by the air stream to make a longitudinal portion of the air stream highly turbulent; a series of jet openings distributed across the width of the passage to introduced said fuel into said turbulent portion of the air stream, said passage being susbtantially increased in cross-sectional area downstream from said jet openings to favor diffusion of the fuel in the air stream; and a transverse feed passage means extending across said passage, said transverse passage means having said jet openings therein and the wall of the transverse passage means forming one of said impingement surfaces.

3,049,416
PRODUCTION OF PHOSPHATE FERTILIZERS
Geoffrey George Brown, Woodbridge, and Roy Geoffrey Wilson, Ipswich, England, assignors to Fisons Fertilizers Limited, Felixstowe, England, a British company
No Drawing. Filed June 15, 1960, Ser. No. 36,149
Claims priority, application Great Britain June 24, 1959
13 Claims. (Cl. 71—37)

1. A continuous process for the production of a phosphate fertilizer, which comprises acidulating phosphate rock with from 5 to 15 moles of nitric acid per mole of P_2O_5 contained in the rock, adding potassium sulphate to the acidulated product at such a rate that the soluble sulphate concentration in the liquid phase is maintained within the range of about 0.5 to 4%, maintaining the reaction temperature in the range between about 60° C., and 90° C., and continuously removing the reaction product from the reaction system, whereby the said reaction product is obtained as a calcium sulphate substantially in the form of gypsum.

3,049,417
PROCESS FOR THE PRODUCTION OF FERTILIZER MATERIALS
John K. Bradley, Ipswich, Geoffrey G. Brown, Woodbridge, and William F. Sheldrick, Felixstowe, England, assignors to Fisons Limited, Felixstowe, England, a British company
Filed Mar. 24, 1959, Ser. No. 801,602
Claims priority, application Great Britain Apr. 1, 1958
4 Claims. (Cl. 71—37)

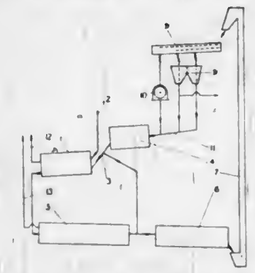


1. In a continuous process for the decomposition of potassium chloride with acids, which process comprises removing the evolved gases containing chlorine and nitrosyl chloride, removing the liquid product of the acid decomposition of potassium chloride from the reaction, treating the same with a phosphoric compound, and recycling nitrogen oxides to the first stage of the process, the improvement comprising
reacting the potassium chloride with a mixture consisting essentially of nitric acid of a concentration of from about 40 to 95% by weight and sulphuric acid of a concentration of from about 70 to 98% by weight, said nitric and sulphuric acids being present in amounts exceeding the amounts thereof stoichiometrically required for reaction with potassium chloride by at least 10%, at a temperature in the range of about 80 to 120° C.;
reacting the resulting evolved gases containing chlorine and nitrosyl chloride with concentrated sulphuric acid;
separating the resulting gaseous products comprising chlorine and hydrogen chloride, and the resulting liquid product comprising sulphuric acid and nitrososulphuric acid from each other;
adding to the latter product a member selected from the group consisting of nitric acid and water, thereby decomposing the nitrososulphuric acid therein to sulphuric acid and an oxide of nitrogen;
and introducing the resulting liquid product containing sulphuric acid and nitric acid into the above reaction with potassium chloride.

3,049,418
FERTILIZERS
Geoffrey George Brown, Woodbridge, and Roy Geoffrey Wilson, Ipswich, England, assignors to Fisons Fertilizers Limited, Felixstowe, England, a British company
No Drawing. Filed June 15, 1960, Ser. No. 36,148
Claims priority, application Great Britain June 24, 1959
13 Claims. (Cl. 71—39)

1. A continuous process for the production of a phosphate fertilizer, which comprises acidulating phosphate rock with from 5 to 15 moles of nitric acid per mole of P_2O_5 contained in the rock, adding potassium sulphate to the acidulated product at such a rate that the soluble sulphate concentration in the liquid phase is maintained within the range of about 0.5 to 8%, maintaining the reaction temperature in the range of above 90° and up to 140° C., and continuously removing the reaction product from the reaction system; whereby said reaction product comprises calcium sulphate preponderantly to substantially entirely in the form of anhydrite.

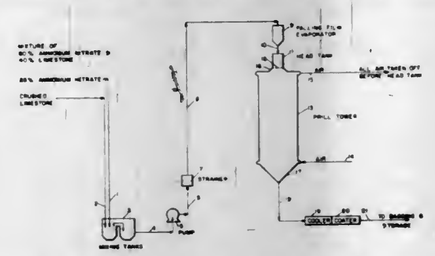
3,049,419
GRANULAR FERTILISERS
Bernard Raistrick and John Stewart Raitt, Edinburgh, Scotland, assignors to Scottish Agricultural Industries Limited, Edinburgh, Scotland, a corporation of Great Britain
Filed May 2, 1960, Ser. No. 26,305
Claims priority, application Great Britain Aug. 1, 1957
8 Claims. (Cl. 71—64)



1. A process of manufacturing, substantially water insoluble granular potassium metaphosphate consisting essentially of completely reacting a potassium salt selected from the group consisting of potassium chloride and potassium sulphate, with a phosphoric acid at a temperature of above 350° C. but below the fusion point of potassium metaphosphate, said reaction being carried out on a mass of moving inert particles unable to react with said reactants to any substantial degree and selected from the group consisting of potassium metaphosphate, potassium chloride and potassium sulphate, as to provide a dry layer of potassium metaphosphate on each of said inert particles thereby yielding the desired granular end product.

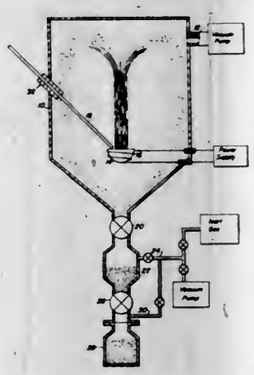
3,049,420
PRILLED NITROGENOUS COMPOSITION
Henry J. Weiland, Birmingham, Ala., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 12, 1959, Ser. No. 852,393
6 Claims. (Cl. 71—64)

1. A process for producing a prilled nitrogenous composition, which comprises in combination the following steps in the order named: preparing a suspension essentially consisting of finely divided calcium carbonate material in aqueous ammonium nitrate solution containing more than 10% water at a temperature above the melting point of said solution but not more than about 250° F., and on an anhydrous weight basis, containing from about 1 percent to about 60 percent of said finely divided calcium carbonate; passing the suspension to a falling film evaporator to convert it to a molten suspension substantially free of water in accordance with the steps of (1) passing said suspension downwardly in said evaporator in form of a continuously moving film over a surface while maintaining the temperature of said surface above the melting point of said ammonium nitrate, (2) passing a stream of inert gas through the said evaporator, at an initial temperature greater than the melting point of said ammonium nitrate, in counter-



current flow contact relation with said film, and (3) regulating the time of contact of said film with said surface and with said inert gas to a value sufficiently low as to substantially avoid decompositon of said ammonium nitrate and said calcium carbonate therein but sufficiently high to substantially completely dehydrate the said film; passing the molten suspension to a prilling tower to form solidified prills thereof; and recovering the solidified prills from the prilling tower in a substantially completely dehydrated state.

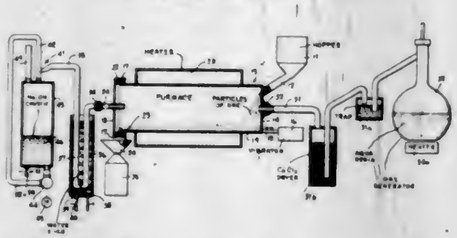
3,049,421
PRODUCTION OF METALS
Lloyd R. Allen, Belmont, Charles A. Baer, Needham, and Philip J. Clough, Reading, Mass., assignors to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Aug. 27, 1958, Ser. No. 757,537
11 Claims. (Cl. 75—.5)



1. The process for the production of high purity, ultrafine metal powders which comprises thermally evaporating a metal selected from the group consisting of aluminum, manganese, silver, chromium, beryllium, copper, boron, silicon, iron, nickel, zinc, magnesium, bismuth, titanium, zirconium and thorium at a pressure below about 500 microns Hg abs., condensing the resultant metal vapors in free space, said free space being maintained at a pressure below about 500 microns, and collecting the resultant spherical, high purity powders of a uniform particle size of less than about 0.1 micron in an inert medium.

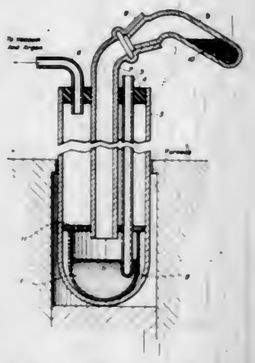
11. Black aluminum powder consisting of spherical particles essentially free of surface oxidation, the powder having a particle size distribution such that substantially all of the particles have diameters less than .1 micron, the powder being pyrophoric and being immersed in a protective non-oxidizing medium.

3,049,422
PROCESS FOR RECOVERING VALUABLE RARE METALS BY VOLATILIZATION
Edson R. Wolcott, 917 Crenshaw Blvd., Los Angeles, Calif.
Filed Dec. 8, 1959, Ser. No. 858,208
5 Claims. (Cl. 75—63)



1. A process for separating and recovering metals of the group composed of gold, platinum, and platinum compounds from finely divided ore containing metals of said group which comprises treating the finely divided ore with a gaseous mixture of nitrosyl chloride and chlorine produced from aqua regia, at a temperature sufficiently high to cause only the metals of said group to form volatile compounds, and separating said volatile compounds from the residue of the ore.

3,049,423
METHOD FOR OBTAINING PLUTONIUM METAL FROM ITS TRICHLORIDE
James G. Reavis, Joseph A. Leary, and William J. Maraman, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 16, 1959, Ser. No. 820,836
13 Claims. (Cl. 75—84.1)

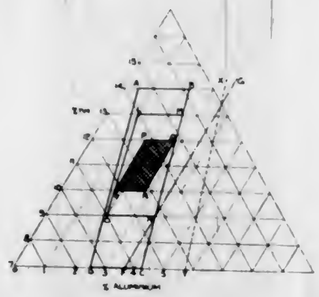


1. A process for obtaining plutonium metal at atmospheric pressure without the use of a booster, comprising melting a reactant salt containing plutonium trichloride in a refractory, non-reactive crucible under an inert gas blanket of large volume maintained during said process at about atmospheric pressure and not more than slightly greater than atmospheric, gradually contacting said melted reactant salt with an excess of a reductant selected from the class consisting of calcium and lanthanum, increasing the temperature of the reactants as necessary to at least a value exceeding the melting points of plutonium metal and the resulting product salt and to such higher value required to permit consolidation of the resulting plutonium metal, maintaining said temperature for a sufficient time to allow said reduction reaction to reach equilibrium, and thereafter discontinuing heating and permitting the contents of said crucible to cool to room temperature.

3,049,424
COPPER-BASE ALLOYS
Ronald James Malcolm Payne, London, and Alfred William Owen Webb, Bromley, England, assignors to J. Stone & Company (Charlton) Limited, London, England
No Drawing. Filed Oct. 14, 1958, Ser. No. 767,098
Claims priority, application Great Britain Oct. 15, 1957
5 Claims. (Cl. 75—161)

1. A single-phase copper-base alloy comprising from about 5% to about 13% manganese, 2% to about 5% aluminum, not more than 6% nickel, and 0.01 to 0.2% of at least one of the elements selected from the group consisting of arsenic and antimony.

3,049,425
ALLOYS
William Percival Fentiman, Birmingham, England, Stuart Leslie Ames, Natrona Heights, Pa., and Peter Harlow Morton and Harry Wilfrid Mead, Birmingham, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Nov. 12, 1959, Ser. No. 852,493
Claims priority, application Great Britain Nov. 14, 1958
10 Claims. (Cl. 75—175.5)



1. Titanium-base alloys consisting essentially of tin and aluminium in the area defined by straight lines connecting the following four compositions in the ternary constitutional diagram of the titanium-tin-aluminium system: 14% tin, 0.5% aluminium; 14% tin, 2.2% aluminium; 7% tin, 4.25% aluminium; 7% tin, 2.5% aluminium, up to 0.5% silicon, 1%–10% zirconium, 1%–5% molybdenum, balance titanium and usual impurities, said percentages being by weight.

3,049,426
METHOD FOR MAKING DEHYDRATED APPLES
William R. Dorsey, Orinda, and Sumner I. Strashun, El Cerrito, Calif., assignors to Vacu-Dry Company, Oakland, Calif., a corporation of California
Filed June 17, 1960, Ser. No. 36,887
3 Claims. (Cl. 99—92)

1. A dehydrated apple segment formed with a plurality of spaced perforations and wherein the cells in ridges of said segment spacing said perforations are retained normally open and uncrushed, said segment being prepared by a dehydration process reducing the moisture content thereof to about 16% to 30% by weight of said segment, followed by a puncturing process to define said plurality of spaced perforations and being further prepared by a second dehydration process subsequent to the puncturing process to reduce the segment moisture content to less than 5% by weight.

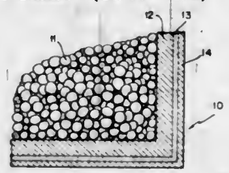
3,049,427
PROCESS FOR THE PREVENTION OF AFTER COOKING GRAY DISCOLORATION IN POTATOES AND OTHER VEGETABLES
John C. Fellers, Bridgeton, and Edward L. Morin, Vineland, N.J., assignors to Seabrook Farms Co., Division of Francis H. Leggett & Co., Seabrook, N.J., a corporation of New York
No Drawing. Filed July 28, 1959, Ser. No. 829,965
12 Claims. (Cl. 99—154)

1. A method of treating vegetables to prevent after-cooking discoloration which comprises the steps of contacting said vegetables no later than the time of their initial subjection to a temperature which is high enough to trigger a substantial discoloring reaction with a solution of a soluble compound of ethylenediamine tetraacetic acid, maintaining the pH of said solution in a range which does not impart an objectionable flavor to said vegetables, maintaining the concentration of said soluble compound by weight in said solution from 0.03% to 0.7% which is high enough to prevent said after-cooking discoloration and low enough to avoid exceeding the permissible residue concentration of said compound allowed in a vegetable, and maintaining the temperature of said vegetables during said contact from 120° F. to 212° F. for a time sufficient to permit heat within said temperature range to penetrate throughout said vegetables.

3,049,428
MEAT PACKAGING PROCESS
Ervin W. Hopkins, Hinsdale, and Leonard J. Zimont, Addison, Ill., assignors, by mesne assignments, to Armour & Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 25, 1959, Ser. No. 801,715
11 Claims. (Cl. 99—174)

1. In a process for reducing pre-cooking fluid loss in packaged cuts of fresh meats, the step which comprises contacting, prior to packaging, the meat with an aqueous solution of from about 10 to about 20% by weight sodium chloride and from about 0.5 to about 5% of the phosphate salt selected from the group consisting of the sodium, potassium and ammonium salts of poly, ortho, meta and pyro phosphoric acids for a period ranging from about 5 seconds to about 15 minutes.

3,049,429
FROZEN FOOD PACKAGE
Robert de S. Couch and Milton Yezek, Battle Creek, Mich., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,180
1 Claim. (Cl. 99—192)

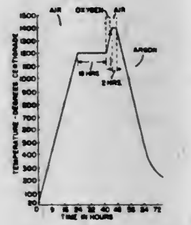


The combination of a package and a high moisture-containing frozen food product positioned within said package, said product tending to emit water vapor therefrom to said package and the ambient atmosphere, said package being fabricated from a sheet of package material erected to form said package, said sheet comprising an inner ply of moisture-absorbent paperboard in contiguous face-to-face contact with said product, an outer ply of paper, and a moisture-resistant flexible laminating adhesive interposed between said plies in a substantially continuous film.

3,049,430
EXTRACTION OF WATER FROM FOODSTUFFS
Martin Anderson, 1–H Gardenway, Greenbelt, Md.
No Drawing. Filed Oct. 11, 1961, Ser. No. 144,310
4 Claims. (Cl. 99—207)

1. A process for the dehydration of frozen and unfrozen foodstuffs of solid consistency, said foodstuffs having an essential structure substantially unaltered by dehydration, said process including the steps of extracting from said foodstuffs the water contained therein with a solvent comprising liquid ammonia, said extraction being performed at temperatures not greater than the boiling point of liquid ammonia under operating conditions, and the separation of said solvent from said foodstuffs, whereby water, and ice as present, are extracted from said foodstuffs in ammoniacal solution.

3,049,431
CERAMIC MATERIAL OF HIGH DIELECTRIC STRENGTH CONTAINING BARIUM TITANATE AND METHOD OF MANUFACTURING
Virginia A. Russell, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 7, 1959, Ser. No. 857,905
10 Claims. (Cl. 106—39)



1. A method of improving the dielectric strength and dielectric constant of a ceramic solid material containing at least 60% barium titanate comprising the steps of firing the solid in an oxygen atmosphere, substantially decreasing the oxygen content of the atmosphere at a predetermined temperature before attaining a maximum heating temperature, said maximum heating temperature being selected at a point where the sintering action is substantially completed so that the material density is made a maximum without causing an appreciable increase in the grain size of the material, finally soaking in said decreased oxygen content atmosphere at said maximum heating temperature, and finally cooling the solid in an inert atmosphere for the removal of excess oxygen.

3,049,432
CRUCIBLE AND REFRACTORY MATERIAL THEREFOR
Berthold C. Weber, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
No Drawing. Filed Mar. 4, 1959, Ser. No. 797,309
4 Claims. (Cl. 106—57)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The composition of matter that consists of zirconia that has a defect lattice structure due to an oxygen deficiency and which zirconia is fully saturated with the addition of a metal selected from the group consisting of zir-

conium, titanium, hafnium, thorium and chromium and said metal being in substitutional solid solution in said zirconia.

3,049,433
STABILIZED CELLULOSE DERIVATIVES AND PROCESS

Robert W. Butler, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,168
7 Claims. (Cl. 106—177)

1. Process of making films of improved resistance to becoming discolored which comprises preparing a solution by dissolving in water (1) a water soluble cellulose ether selected from the group consisting of alkyl, carboxyalkyl, hydroxyalkyl, alkyl hydroxyalkyl and carboxyalkyl hydroxyalkyl ethers and, (2) a water soluble stabilizer selected from the group consisting of monosodium phosphate, disodium phosphate, calcium chloride, magnesium sulfate, potassium citrate, monopotassium phosphate, magnesium p-toluene sulfonate, aluminum sulfate, barium chloride, calcium nitrate and magnesium chloride, the amount of stabilizer being at least 1.0% by weight of the cellulose ether employed, casting films from said solution, and substantially drying the films.

3,049,434
LAUNDRY STARCH AND PROCESS

John R. Harrison, Harbor Beach, Mich., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 29, 1959, Ser. No. 816,689
18 Claims. (Cl. 106—194)

1. Process of making a cold water-dispersible laundry starch which comprises adding a salt of boric acid to a mixture of ungelatinized cereal starch and an inert liquid diluent, drying the resulting mixture without gelatinizing said ungelatinized cereal starch, dry blending with the resulting dry material a water-soluble hydrophilic colloid, the pH of said resulting mixture being at least about 7, the amount of hydrophilic colloid being about 3%–30% based on the combined weight of hydrophilic colloid and ungelatinized cereal starch, the amount of said salt of boric acid being at least about 3% based on the weight of ungelatinized cereal starch.

3,049,435
PROCESS FOR APPLYING TUNGSTEN CARBIDE PARTICLES TO A WORKPIECE SURFACE

Warren M. Shwayder, 684 E. Woodbridge, Detroit, Mich.

No Drawing. Filed Aug. 19, 1957, Ser. No. 679,052
4 Claims. (Cl. 117—22)

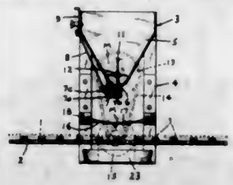
1. A process of applying tungsten carbide particles to a ferrous metal surface to impart thereto hard wearing and cutting properties comprising crushing the tungsten carbide to a particle size in the range of ¼ inch to 325 mesh, coating the particles with a thin continuous film of metallic nickel, and then applying the said particles to the ferrous metal surface with sufficient heat to fuse the nickel coating to the ferrous metal, thereby binding the particles to the surface.

3,049,436
APPARATUS AND METHOD FOR APPLICATION OF PARTICULATE MATERIAL TO SHEET PRODUCTS

Hercules Dorn Stewart, New York, N.Y., and Dorsey J. Morris, Middleburg, and Edward E. Wilson, Lewisburg, Pa., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Dec. 16, 1960, Ser. No. 76,167
5 Claims. (Cl. 117—25)

1. A method of applying solid particulate material onto a moving adhesive-coated sheet product in random pattern distribution which includes the steps of moving the adhesive-coated sheet in a substantially horizontal plane, placing a shield above the moving sheet, said shield being provided with elongated slots and being sloped slightly from its ends which extend in the same general direction



as the slots downwardly toward the middle of the shield, oscillating the shield in a substantially horizontal plane, and dropping the particulate material onto the oscillating shield, whereby the material is shaken through the slots in the shield onto the moving sheet product in random pattern distribution.

3,049,437
METAL PLATING

Melvin F. Rejdak, deceased, late of Cleveland, Ohio, by Hattie Wagner Rejdak, administratrix, Cleveland, Ohio, assignor to Erico Products Inc., a corporation of Ohio

No Drawing. Filed Sept. 2, 1959, Ser. No. 837,569
16 Claims. (Cl. 117—31)

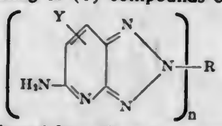
1. The method of plating a mercury alloy on a metal surface which comprises applying a chemically reducible salt of both mercury and a metal to be alloyed therewith and a powdered reducing agent for such salts, all in dry form, directly on such metal surface, dissolving such salts in a common solvent therefor with consequent action by such reducing agent to reduce both salts and produce the plating metals in active form directly at the surface to be plated, whereby such plating metals are immediately alloyed and bonded to such metal surface to form a tenacious coating.

3,049,438
PYRIDOTRIAZOLE BRIGHTENERS

Bennett G. Buell, Somerville, and Robert S. Long, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application Nov. 26, 1957, Ser. No. 698,930. Divided and this application Nov. 3, 1958, Ser. No. 771,175
6 Claims. (Cl. 117—33.5)

1. Organic fibers treated with compounds selected from the group consisting of (1) compounds of the structure:



in which Y is selected from the group consisting of hydrogen, alkyl, halogen, carboxy, carbalkoxy and carboxamide, *n* is a positive integer less than 3, and R is an organic radical having a 6-membered aromatic ring directly bonded to the triazole rings, the said organic radical R being the residue of a diazotizable amine, and (2) quaternary salts of the first group.

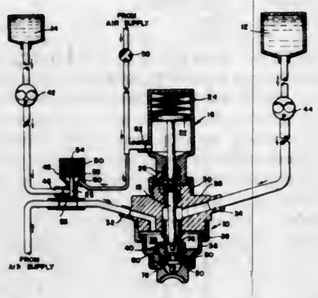
3,049,439
INTERNAL MIX CATALYST TYPE SPRAY GUN AND PROCESS EMPLOYING SAME

Frederick E. Coffman, Huntingdon, Pa., assignor to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania

Filed Apr. 11, 1960, Ser. No. 21,351
10 Claims. (Cl. 117—104)

10. In a method of applying a marker to a surface, comprising the steps of supplying a first stream of resin

paint binder to a spray gun mixing chamber at the top thereof, supplying a second stream of atomizing fluid carrying an accelerator for rapidly curing said resin paint binder to said spray gun, admitting a portion of said second stream to the mixing chamber at the top thereof surrounding said first stream, admitting the balance of

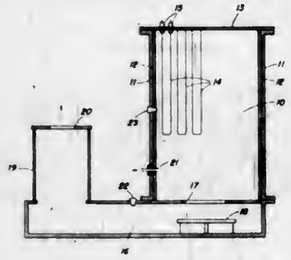


said sceond stream to said mixing chamber at a plurality of points spaced about its upper portion each being directed toward the center of said mixing chamber whereby said first stream and said second stream are uniformly premixed, and spraying said pre-mixed streams out of the bottom portion of said mixing chamber, said binder curing on said surface into a solid.

3,049,440
PROCESS AND APPARATUS FOR THE VAPOR DEPOSITION OF METALS

George H. Kesler, Worthington, Ohio, assignor, by mesne assignments, to Chilean Nitrate Sales Corporation, New York, N.Y., a corporation of New York

Filed July 28, 1959, Ser. No. 830,028
7 Claims. (Cl. 117—107)

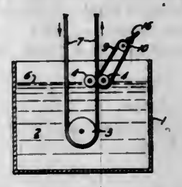


1. Process for the vapor deposition of metals that comprises, reacting a compound of the metal by contacting the same in its vapor state with a heated surface maintained within a closed reaction vessel to promote the continuous formation and deposition of said metal in elemental form on said surface, removing gaseous products of the reaction and unreacted quantities of said metal compound from said vessel through an outlet port positioned in the bottom of the vessel at a point removed from the lowermost portion of said heated deposition surface, and establishing and maintaining uniform velocity distribution of said vapor state metal compound in contact with the heated deposition surface to promote the formation of a uniform, dense deposit of said metal thereon by introducing the metal compound into said reaction vessel in the form of a radial pressure stream at a point intermediate the lowermost portion of said heated deposition surface and said outlet port, and in a direction substantially normal to a plane extending from the lowermost portion of said surface to said outlet port.

3,049,441
METHOD OF AND APPARATUS FOR PREVENTING EDGE BUILD-UP OF COATING MATERIAL ON DIP-COATED STRIP

Paul C. Huang, Gary, Ind., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Oct. 9, 1959, Ser. No. 845,405
5 Claims. (Cl. 117—115)

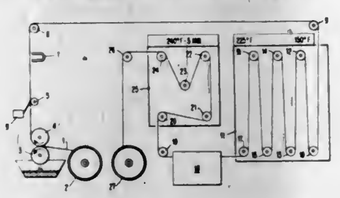


5. A method of preventing edge build-up of coating material applied to strip by movement through a bath of said coating material and withdrawal therefrom through a pass defined by a pair of exit rolls partially submerged in said bath, which comprises inserting a pair of filler straps in said pass in positions having contact with and respectively extending outwardly from opposite edges of the strip moving therethrough to obstruct the flow of coating material from said bath into said exit roll pass in portions thereof outwardly of the edges of said strip, and moving said straps through said pass with and in the direction of the strip moving therethrough whereby the edge build-up of coating material is applied to the outer edges of said straps and not on the said opposite edges of said strip.

3,049,442
PROCESS FOR MANUFACTURING CURED MAGNETIC TAPES UTILIZING AN ISOCYANATE ACCELERATOR

Robert S. Haines and Bernard Leland, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 3, 1959, Ser. No. 837,954
2 Claims. (Cl. 117—119.6)



1. A continuous process for manufacturing cured magnetic tapes having the characteristic of extended wearability, comprising:

(*a*) preparing a coated tape by affixing to a continuously-moving backing web a dispersion in a solvent selected from the group consisting of toluene, methylene chloride, ortho-dichlorobenzene and ethylene chloride of 3000 parts magnetic oxide particles in 1000 parts of a binder consisting of:

(*a*1) 640 parts 3/1 butadiene/acrylonitrile copolymer

(*a*2) 340 parts phenolic resin

(*a*3) 17 parts soya lecithin

(*a*4) 3 parts methyl (poly) siloxane fluid

(*a*5) 100 parts methylene-bis-diphenyl-diisocyanate, a curing accelerator, and

(*a*6) 100 parts volatile proton-donor inhibitor for the curing accelerator selected from the group consisting of acetyl chloride and ortho-chlorobenzoyl chloride;

(*b*) heat-drying the continuously-moving freshly-prepared tape by passing it through a high-air flow oven

at temperatures below 225° F., whereby the inhibitor is driven off with the solvent; and

(c) heat-treating the dried tape for five minutes at 240° F. to effect an accelerated copolymerization cure.

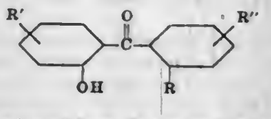
3,049,443

PROCESS OF DYEING SYNTHETIC FIBERS WITH o-HYDROXYBENZOPHENONES

Ralph A. Coleman, Middlesex, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 7, 1959, Ser. No. 785,307
16 Claims. (Cl. 117—138.8)

1. A process of applying ultraviolet light absorbing materials of the structure:



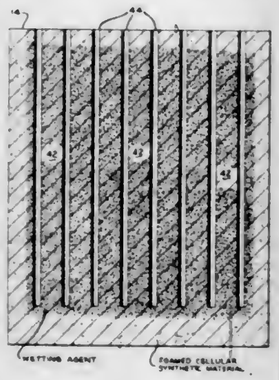
in which R is selected from the group consisting of hydrogen and hydroxyl and R' and R'' are each selected from the group consisting of hydrogen, alkoxy, alkenyloxy, chloro, bromo, alkyl, and hydroxyl, to hydrophobic polymeric materials selected from the group consisting of polyacrylonitriles, superpolyamides, superpolyesters, and cellulose acetate which comprises heating said polymeric material in an aqueous dispersion of said benzophenone above 140° F. while maintaining an agitated relationship between said polymeric material and said dispersion, followed by removing said polymeric material from said dispersion and subjecting said polymeric material to soaping and rinsing.

3,049,444

FOAMED CELLULAR SYNTHETIC MATERIAL IMPREGNATED WITH A WETTING AGENT

Albert M. Palombo, Medford, Mass., assignor to American Metaseal of Massachusetts, Inc., a corporation of Massachusetts

Filed June 24, 1959, Ser. No. 822,594
2 Claims. (Cl. 117—138.8)



1. A water retentive block of frangible foamed cellular synthetic material selected from the group consisting of urea-formaldehyde and a phenolic condensation resin, said mass having exterior surfaces at least one of which is penetrated by small passages extending into the interior of said mass from said one surface substantially to but not all the way to an opposite surface and a wetting agent distributed adjacent said passages substantially entirely within said mass and spaced from said exterior surfaces.

3,049,445

SHRINKPROOFING WOOL-CONTAINING TEXTILES WITH POLYEPOXIDES AND POLYAMIDES IN THE PRESENCE OF A REDUCING AGENT

Harold Palmer Lundgren, Berkeley, Clay E. Pardo, Jr., Albany, and Robert E. Foster, Concord, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Mar. 23, 1961, Ser. No. 97,973
12 Claims. (Cl. 117—141)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process of shrinkproofing a wool-containing textile without significant impairment of its hand which comprises impregnating the textile with a dispersion of a polyepoxide containing at least two epoxy groups per molecule and a polyamide of a polyamine and a polycarboxylic acid, said impregnation being conducted in the presence of a reducing agent which in an aqueous medium provides an ion selected from the group consisting of sulphinate, sulphoxylate, sulphite, bisulphite, thiosulphate and hydrosulphite, said reducing agent being supplied in an amount sufficient to enhance absorption of the polyepoxide and polyamide on the fibers of the textile but insufficient to damage the said fibers.

3,049,446

PROCESS FOR THE MANUFACTURE OF UREA, GLYOXAL AND FORMALDEHYE REACTION PRODUCT USEFUL FOR IMPROVING CELLULOSIC TEXTILE MATERIALS

Herman B. Goldstein, Cranston, and Michael A. Silvestri, Providence, R.I., assignors to Sun Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 5, 1960, Ser. No. 6,880
11 Claims. (Cl. 117—143)

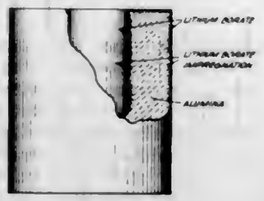
1. A process of preparing novel compositions of matter which comprises forming an aqueous solution of 1 mole of urea, 1 mole of glyoxal, and 2 to 2.5 mols of formaldehyde and thereafter reacting said urea, glyoxal and formaldehyde at a pH of 4.0 to 6.0 and at a temperature of 25° C. to 95° C. for a period of time ranging from 30 minutes to 72 hours.

3,049,447

METHOD OF TREATING AN ALUMINA CERAMIC ARTICLE WITH LITHIUM BORATE

William John Knapp, Los Angeles, Calif., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed June 30, 1959, Ser. No. 823,860
5 Claims. (Cl. 117—169)



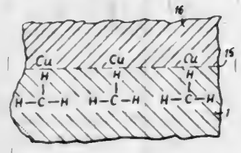
1. A method of fabricating an improved high temperature lithium borate-containing ceramic porduct, which method comprises depositing lithium borate on the surface of an alumina ceramic article, melting said borate at a temperature at least about 800° C. but below 930° C., that is, below the melting point of a fused mixture of alumina and lithium borate, whereby said borate penetrates and fills pores of said alumina article so as to make said alumina substantially impermeable without dimensional distoriton of said article, and thereupon cooling said article to ambient temperature to provide a finished substantially impermeable alumina article having essentially the same shape as before said lithium borate deposition.

3,049,448

METHOD FOR IMPROVING THE FRICTIONAL PROPERTIES OF CARBON BRUSHES BY LOW PRESSURE POLYETHYLENE IMPREGNATION

Jacques Millet, Paris, France, assignor to Societe le Carbone-Lorraine, Paris, France, a French company

Filed Mar. 10, 1959, Ser. No. 798,537
Claims priority, application France Mar. 14, 1958
6 Claims. (Cl. 117—228)



1. In a method for improving the friction properties of absorbent carbon brushes for electrical machines by impregnating a brush with a polymeric substance, the improvement which consists in using low pressure polyethylene as the impregnating polymeric substance.

3,049,449

LIGHTWEIGHT ADSORBENT CLAY PRODUCT AND METHOD OF MAKING SAME

Aldo P. Allegrini, Westfield, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,236
14 Claims. (Cl. 131—17)

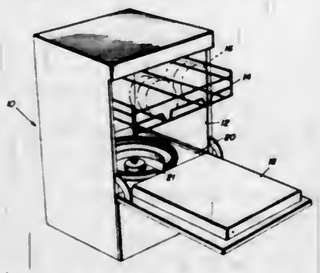
1. A novel adsorbent comprising aggregates of a clay selected from the group consisting of hydrous attapulgite clay and hydrous sepiolite clay, which clay had been colloidally dispersed in water in the presence of a deflocculating agent, said aggregates being further characterized by being in the form of microscopic fibers and having a tamped bulk density of 6 to 10 pounds per cubic foot.

3,049,450

METHOD AND APPARATUS FOR STEAM RINSING DISHES

Frederick L. Koons, El Paso, Tex., and Leslie Drum, Las Cruces, N. Mex., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 9, 1958, Ser. No. 747,539
6 Claims. (Cl. 134—11)



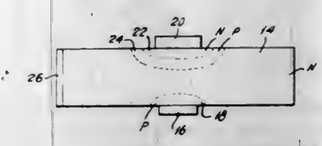
2. The method of steam rinsing dishes in an automatic dishwasher comprising the steps of spray rinsing the dishes by heated tap water, catching a portion of said water during said spray rinsing, allowing surplus water to drain from the dishes, vaporizing said caught portions of said water, and subjecting the dishes to a steam rinsing with the resulting vapor whereby droplets of spray rinse water will be flushed off the dishes by the steam vapor.

3,049,451

MULTIPLE ZONE SEMICONDUCTOR DEVICE AND METHOD OF MAKING THE SAME

Benedict Carlat, Maplewood, and Robert H. Fidler, Jr., Newark, N.J., assignors to Tung-Sol Electric Inc., a corporation of Delaware

Filed Sept. 2, 1959, Ser. No. 837,641
2 Claims. (Cl. 148—1.5)



1. The method of making a four zone semiconductor device which comprises placing a pellet of indium having about ½% by weight of antimony therein in physical contact with one surface of an n-type germanium water, placing a pellet of indium in physical contact with the opposite surface of the wafer, heating the assembly in a furnace to a temperature not over about 600° C. but sufficient to alloy the pellets and the parts of the wafer in contact therewith and then cooling the assembly to room temperature to prevent any substantial diffusion and to cause two zones of opposite conductivity type to resolidify adjacent the first pellet from the multiple alloy of the germanium, indium and antimony, the innermost zone being of p-type conductivity, and to cause a zone of p-type conductivity to resolidify adjacent the other pellet from the alloy of germanium and indium.

3,049,452

RUBBER AND PROPELLANT COMPOSITION CONTAINING THE SAME

Otho D. Ratliff, McGregor, and Wallace T. McMichael, Lake Jackson, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 16, 1957, Ser. No. 678,741
4 Claims. (Cl. 149—19)

1. A rocket propellant composition consisting essentially of a rubbery binder, said binder being a mixture of (1) rubbery polychloroprene and (2) rubbery 1,3-butadiene/2-methyl-5-vinylpyridine copolymer, the amount of (1) being 20 to 100 weight percent of (2), and, based upon 100 parts by weight of (1) and (2), 0 to 60 parts of a filler, 0 to 20 parts of a plasticizer, 0 to 3 parts of an antioxidant, 100 to 900 parts of solid inorganic oxidizing salt, and 0.5 to 10 parts of a complex reaction product of heptaldehyde and aniline, said reaction product being a dark brown, free-flowing liquid having a specific gravity of 0.93, soluble in acetone, benzene, ethylene dichloride, and gasoline and insoluble in water.

3,049,453

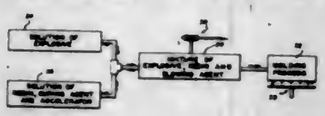
PLASTIC EXPLOSIVE AND METHOD OF MAKING IT

Paul René De Wilde, Geneva, Switzerland, assignor of one-half to Societe Suisse des Explosifs, Gamsen, near Brigue, Valais, Switzerland

No Drawing. Filed Mar. 28, 1960, Ser. No. 17,749
Claims priority, application Switzerland July 13, 1959
3 Claims. (Cl. 149—20)

1. An explosive of plastic consistency, consisting essentially of 20 parts by weight of nitropentaerythrite, 65 parts by weight of ammonium nitrate, 7.5 parts by weight of ethanolamine nitrate, 7.5 parts by weight of water, and 0.5 part by weight of carob bark extract, said nitropentaerythrite being finely dispersed in a pasty mass of said other components.

3,049,454
LOW DENSITY CELLULAR EXPLOSIVE FOAM
Howard J. Stark, 920 N. Lebanon St., Arlington, Va.
Original application Aug. 15, 1955, Ser. No. 528,566, now Patent No. 2,768,072, dated Oct. 23, 1956. Divided and this application Apr. 25, 1956, Ser. No. 580,677
6 Claims. (Cl. 149—92)
(Granted under Title 35, U.S. Code (1952), sec. 266)

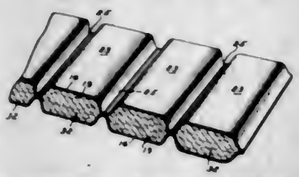


1. An explosive whose density is less than that of water which comprises a foam wherein substantially all the cells are closed and impervious to the passage of fluid, said foam being a homogeneous mixture of about 90 percent to about 70 percent by weight of an explosive from the group consisting of trinitrotoluene, nitrocellulose, pentaerythritol, and cyclo trimethylenetrinitramine and a binder of about 10 percent to about 30 percent by weight of a thermosetting polyester resin.

3,049,455
ADHESIVES FOR BONDING POLY 1-OLEFINS TO METALS
Robert T. Werkman and Peter J. Canterino, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Sept. 27, 1957, Ser. No. 686,604
9 Claims. (Cl. 154—43)

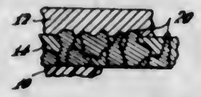
8. A laminated product which consists of a metal base, a sheet of a 1-olefin polymer, and an interposed adhesive layer consisting essentially of a halogenated highly crystalline, high density ethylene polymer containing 20 to 60 weight percent combined halogen selected from the group consisting of chlorine and bromine bonding said sheet to said base, said ethylene polymer having a crystallinity of at least 70 percent and a density of at least 0.94 and having been prepared by polymerizing 1-olefins comprising at least 80 weight percent ethylene, said 1-olefin polymer being produced by polymerizing 1-olefins having from 2 to 8 carbon atoms per molecule.

3,049,456
FIBROUS BATTS AND METHOD OF PRODUCING THE SAME
Edward G. Goldstone, Huntington Woods, Mich., assignor to Allen Industries Incorporated, Detroit, Mich., a corporation of Delaware
Filed Apr. 7, 1955, Ser. No. 500,002
5 Claims. (Cl. 154—46)



1. Batting comprising, a strip of loosely matted nonwoven fibrous material, a lightweight flexible casing for said strip of material, said casing including a thin, flexible, lightweight retaining material having in itself inadequate tensile strength to form said casing, said retaining material having a coating of adhesive material thereon, said adhesive material and said retaining material cooperating to provide said casing with relatively greater tensile strength adequate to effectively retain said strip of fibrous material in its pre-formed shape, said coating of adhesive material also contacting fibers in said fibrous material to secure the same against migrating.

3,049,457
TRANSFER PAPER
John V. Peshin, Islington, and Donald W. Seager, Lynnfield Center, Mass., assignors to The Carter's Ink Company, Cambridge, Mass., a corporation of Massachusetts
Filed June 5, 1958, Ser. No. 740,098
5 Claims. (Cl. 154—46.8)

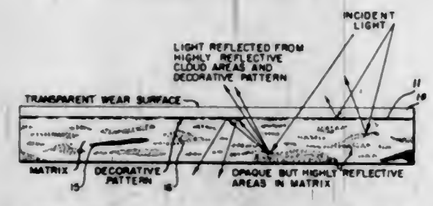


1. A transfer paper comprising a carrier sheet, a transfer coating and a binder layer attaching the transfer coating to the carrier sheet, said binder layer comprising a matrix substantially impervious to migration of the components of the transfer coating and particles having one end embedded in the matrix and the other end projecting into the transfer coating distributed throughout the matrix, said particles being predominantly of larger dimensions than the thickness of the matrix.

3,049,458
DECORATIVE LAMINATES
Paul E. Willard, Baltimore, Md., assignor to FMC Corporation, a corporation of Delaware
No Drawing. Filed July 3, 1959, Ser. No. 824,766
4 Claims. (Cl. 154—47)

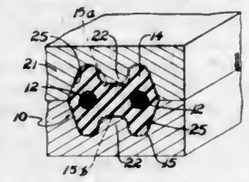
3. Dry, flexible laminating stock which comprises cellulose decorative paper of about 4–6 mils thickness impregnated with 64–68% by weight of diallyl phthalate, 90–98% of said diallyl phthalate being thermoplastic polymer having a molecular weight in the range of 2,500–25,000 and the remaining 2–10% being monomer; a catalytic amount of an organic peroxide and an effective amount of a release agent; said decorative paper containing a residual volatile content less than about 8%, by weight of paper, measured as material volatile after heating the dried paper for 10 minutes at 320° F.

3,049,459
LUMINOUS FLOOR OR WALL COVERING AND METHOD OF MANUFACTURE
Merrill M. Smith and Ernest R. Holmstrom, Morrisville, Pa., and Natalie S. Marcus, Trenton, N.J., assignors to American Biltrite Rubber Co., Inc., Chelsea, Mass., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,707
4 Claims. (Cl. 154—49)



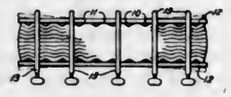
3. A luminous wall covering comprising a thick matrix ply of translucent resinous compound containing scattered clouds of semi-opaque light-reflecting resinous compound separated by light transmitting areas and disposed at different depths within the matrix, united to a thin transparent cover ply carrying a discontinuous opaque ornamental design in contact with the matrix ply, said design being outlined by light transmitted through the said light-transmitting areas of the matrix ply and illuminated by light reflected by the design through the said transparent cover ply, the outer surface of the translucent matrix ply being fully exposed to incident light.

3,049,460
METHOD OF MAKING SIDE DRIVING V-BELTS REINFORCED WITH LATERALLY SPACED CABLED TENSION MEMBERS
Albert J. Garbin and Ralph F. Garner, Cuyahoga Falls, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed May 8, 1957, Ser. No. 657,889
5 Claims. (Cl. 156—140)



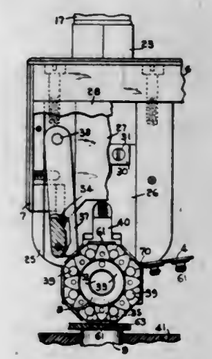
1. The method of making a side-driving belt of the class in which a vulcanizable rubber body is reinforced lengthwise with only two parallel laterally spaced flexible cabled tension members, said method comprising forming a longitudinal groove in an external face of said body with said tension members disposed inside said body and with said body in an unvulcanized state, said groove being formed so that it extends lengthwise of said body and into said body toward a region thereof between the cabled tension members in said body, enclosing said unvulcanized body, including said groove, in a cloth cover, thereafter placing the resulting assembly of said grooved body and tension members and said cover in a mold cavity using said groove under said cover as a guide for positioning the assembly, so that said groove extends lengthwise of the cavity between two opposing molding faces of the cavity and the plane of said tension members has a preselected orientation relative to said molding faces of the cavity, and then confining said assembly in said mold cavity under heat and pressure to vulcanize said rubber body and to mold said assembly to the shape of said cavity.

3,049,461
METHOD OF MAKING ZIGZAG FILTER ELEMENT
Horace C. Beahm, Evans City, and Louis T. Spartis, Clairton, Pa.; said Beahm assignor to M.S.A. Research Corp., Pittsburgh, Pa., and said Spartis assignor to Mine Safety Appliances Company, Pittsburgh, Pa., both corporations of Pennsylvania
Filed May 6, 1959, Ser. No. 811,386
4 Claims. (Cl. 156—197)



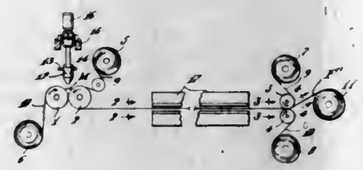
1. In the method of making a zigzag filter element having filter sheets between end panels, the steps comprising transversely folding a long strip of flexible filtering material back and forth upon itself to form a stack of sheets while successively joining each pair of adjoining sheets together along a row of laterally spaced lines that extend lengthwise of the strip, the lines in each row being staggered relative to the lines in the rows at opposite sides of that row, placing a row of laterally spaced rods against each end sheet of the stack opposite said lines at the opposite side of the same sheet, applying pressure to said rods to press them into said stack and thereby form waves in the end sheets and shorten them, joining a pair of panels to the end sheets along the crests of their waves while said pressure is maintained, removing said rods endways from between the panels and end sheets, and then expanding said stack to form filter pockets between the sheets in the areas that are not joined together along said lines.

3,049,462
SNAP FASTENER AND LIKE ATTACHING APPARATUS
Norman M. Barlow, Natick, and Everett Melanson, Wakefield, Mass., assignors to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Oct. 21, 1958, Ser. No. 768,760
17 Claims. (Cl. 156—210)



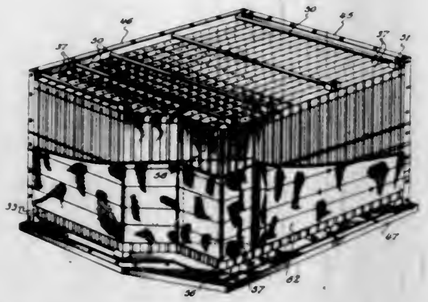
1. Apparatus for attaching a plastic based snap fastener element from a series of pre-united fasteners in a continuous form to a supporting material comprising, in combination, an operative mechanism for feeding the series of united fasteners and separating and placing a said fastener member against the supporting material when inserted into said mechanism, said mechanism including both a fastener feeding means and a fastener applying means and a high frequency electronic generator connected to said fastener applying means for supplying energy to heat seal said plastic based fastener to said supporting material.

3,049,463
DECORATED FOAM AND METHOD OF MAKING THE SAME
Ernest L. Kallander, Southboro, and George R. Nelson, Framingham, Mass., assignors to Dennison Manufacturing Company, Framingham, Mass., a corporation of Massachusetts
Filed Sept. 9, 1959, Ser. No. 839,004
7 Claims. (Cl. 156—230)



1. The method of decorating plastic foam which comprises printing an adhesive, non-self-supporting ink design onto a flexible release sheet, drying the ink, applying an uncured, foamable plastic mixture to said design, foaming and solidifying said plastic between said design and a second cover sheet, the foam being in contact with the design during formation of the foam, and transferring said ink design to the foam by stripping away said release sheet, the ink adhering more strongly to the foam than to the release sheet.

3,049,464
PROCESS OF MANUFACTURING METALIZED PLASTIC MICROWAVE LENS
Stanley J. Klima, Elmhurst, and Frank E. Niechaiedowicz, Brooklyn, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Nov. 28, 1956, Ser. No. 624,880
2 Claims. (Cl. 156—245)



1. The process of manufacturing at least a sector of a metalized plastic multicellular microwave lens comprising the steps of coating the smooth surfaces of a plurality of mandrels with a suspension of thin metallic flakes in a binding vehicle, wherein the flat surfaces of the flakes become aligned substantially parallel with the adjacent smooth surfaces of the mandrels, each mandrel conforming in cross section to the interior shape of a particular lens cell, the lengths of said smooth mandrel surfaces being equal to the lengths of the corresponding lens cells, said binding vehicle containing a binding material and a solvent adapted to evaporate whereby after evaporation of said solvent said flakes and binding material form continuous metallic films conformal with the smooth surfaces of each mandrel, covering the coated surfaces of each mandrel with a thin layer of fluid plastic molding material after evaporation of said solvent, said fluid molding material being adapted to harden substantially void free by polymerization and to adhere to the outside of said metallic films, placing fabric adjacent said thin layer on each mandrel after the thin layers have hardened, assembling the mandrels in a molding box in accordance with the desired design of the lens, filling the interior of said molding box to a predetermined level at least above the top of the highest smooth mandrel surface with additional fluid plastic molding material, disassembling said molding box after said additional molding material has hardened, and withdrawing the mandrel from the interior of each lens cell.

3,049,465
METHOD FOR JOINING PLASTIC ARTICLES
Paul E. Wilkins, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 4, 1957, Ser. No. 694,221
10 Claims. (Cl. 156—272)



1. An improved method for joining together adjacent sections of thermoplastic pipe which comprises securing a length of resistance element to the surface of a single deformable strip of thermoplastic material in a series of adjacent turns in contact with the surface of the strip; placing the sections of pipe to be joined together in contiguous end-to-end relationship; wrapping the strip around the pipes at the junction of the pipes with the resistance element adjacent the junction; connecting the ends of the resistance element to a source of electric potential; applying sufficient potential to said resistance element to raise its temperature above the softening temperature of the thermoplastic material; maintaining the application of potential for a period of time sufficient to soften at least a portion of said strip and said pipes at said junction; and maintaining said strip in contact with said junction until the pipe has cooled to below the softening temperature.

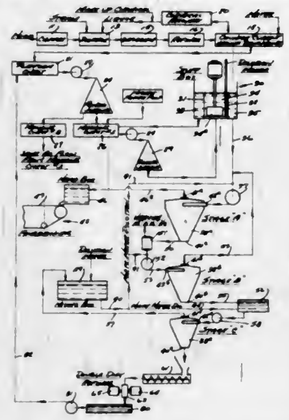
3,049,466
METHOD OF BONDING FIBROUS STRUCTURES MADE FROM FIBERS OR FILAMENTS OF POLYOLEFINE POLYMERS
Victor L. Erlich, New York, N.Y., assignor to Reeves Brothers, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 23, 1957, Ser. No. 654,462
8 Claims. (Cl. 156—334)

7. In a method of joining together a pair of fabrics each made of filamentous strands of a poly-alpha-olefine polymer, wherein the strands of one fabric cross the strands of the other fabric at a plurality of crossing points, and wherein the strands of said fabrics are bonded at said crossing points, the improvement comprising so applying to a surface of each fabric an aqueous dispersion of a bonding agent consisting essentially of a poly-alpha-olefine polymer having its chains different in molecular structure from those of the strand polymer and having a permanent melting point at least 25° C. below that of the polymer of said fabrics, said bonding agent polymer being entirely chemically compatible with the polymer of said fabrics, as to cause a major portion of said dispersion to collect at said crossing points, then imposing one fabric over the other to overlap them and so as to bring said agent-treated surfaces into contact with each other, subjecting the overlapping fabrics to heat treatment at a temperature intermediate that of the melting points of the polymers of said fabrics and of said agent while pressing the fabrics together to maintain contact, said temperature being sufficiently high and maintained for a sufficient length of time to fuse substantially all of the polymer of said agent and to soften or fuse only the surfaces of said strands, whereby said fused agent becomes sufficiently fluid to enable said major portion thereof to coalesce with said strand surfaces at said intercrossings, and cooling the fabrics to harden said fused and softened portions to form bonds between said strands at said crossing points.

3,049,467
MANUFACTURE OF PAPER
Cecil B. Curry, Lynchburg, Va., James W. Haley, Jacksonville, Fla., and Joseph C. Theiler, Big Island, Va., assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed July 27, 1959, Ser. No. 829,788
3 Claims. (Cl. 162—55)

1. A method of processing pulp formed from wood, said pulp characterized by a content of undesirable impurities in the form of wood-bark particles, shives, knots, and the like, which comprises washing said pulp, diluting said pulp stock with water to a consistency ranging from about 0.8 to 1.8% pulp, introducing said diluted stock into a zone of vortical flow, thereby effecting vortical hydraulic separation of a fraction low in impurities content from a fraction higher in impurities content due to the combined effects of gravitational, rotational, and hydraulic forces,

introducing said fraction of higher impurity content into a second zone of vortical flow, thereby forming a second set of fractions of high and low impurity content, returning said last-mentioned fraction to said first zone, directing said other high impurity fraction to a third zone of vortical flow, thereby effecting a third pair of fractions of high and low impurity content, returning the last-



mentioned fraction to said first zone, subjecting said last-mentioned high impurity content fraction to a mechanical refining to reduce the size of said impurities, and reintroducing said refined fraction to said diluted pulp stock, said fraction from said first zone, which is low in impurities content, being continuously removed from said first zone and directed to the paper machine.

3,049,468
MANUFACTURE OF COLOURED PAPER
Anthony John Hinton and Victor Grayson Morgan, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Dec. 15, 1958, Ser. No. 780,266
Claims priority, application Great Britain Dec. 23, 1957
7 Claims. (Cl. 162—162)

1. A process for the preparation of paper colored with water-insoluble pigment which comprises incorporating in the paper during the manufacture thereof said pigment and about 2.5 to 25% by weight of the pigment of an acid salt of a water-soluble condensation product obtained by heating to 70–200° C. under anhydrous conditions, a polyalkylene polyamine having the formula

$$NH_2[-(CH_2)_nNH]_m-(CH_2)_nNH_2$$

in which *n* is a whole number between 1 and 6 and *m* is a whole number greater than zero with a compound selected from the group consisting of cyanamide, phenylcyanamide, guanidine, dicyandiamide, phenyldicyanadiamide, p-chlorophenyldicyanadiamide, hexamethylene-bis-dicyandiamide, ethylene-bis-dicyandiamide, guanylurea, biguanide, phenylbiguanide, and weak acid salts of guanidine, guanylurea and biguanide.

3,049,469
APPLICATION OF COATING OR IMPREGNATING MATERIALS TO FIBROUS MATERIAL
Robert W. Davison, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 7, 1957, Ser. No. 694,909
2 Claims. (Cl. 162—164)

1. A process for impregnating fibrous cellulosic material with a water-soluble, carboxyl-containing material selected from the group consisting of polymers of acrylic acid, copolymers of acrylic acid and compounds copolymerizable therewith selected from the group consisting of acrylamide, methacrylamide, acrylonitrile and methacrylonitrile, polymers of methacrylic acid, and copolymers of methacrylic acid and compounds copolymerizable therewith selected from the group consisting of acrylamide, methacrylamide, acrylontrile and methacrylonitrile, which comprises forming an aqueous suspension of the fibrous cellulosic material at a consistency from about 0.1% to about 5%, adding to such aqueous suspension (1) from about 0.1% to about 5%, based on the dry weight of fibrous cellulosic material, of a cationic thermosetting resin obtained by reacting a polyalkylene polyamine having two primary amine groups and at least one secondary amine group with a C_3–C_{10} saturated aliphatic dicarboxylic acid at a temperature from about 110° C. to about 250° C. and in a mole ratio of polyalkylene polyamine to dicarboxylic acid of from about 0.8:1.0 to about 1.4:1.0 to form a long-chain polyamide having secondary amine groups, and then reacting the polyamide with epichlorohydrin at a temperature from about 45° C. to about 100° C. and in a mole ratio of epichlorohydrin to secondary amine groups of said polyamide from about 0.5:1 to about 1.8:1, and (2) a water-soluble, carboxyl-containing material selected from the indicated group, whereby a substantial portion of said water-soluble, carboxyl-containing material is deposited on and attached to said fibrous material together with said cationic thermosetting resin.

3,049,470
ZINC N-METHYLDITHIOCARBAMATE NEMATOCIDE
Ernst-Albrecht Pieroh, Berlin-Hermsdorf, Horst Werres, Charlottenburg, and Heinz-Eberhard Freund, Berlin-Charlottenburg, Germany, assignors to Schering A.G., Berlin, Germany, a corporation of Germany
No Drawing. Filed Apr. 5, 1960, Ser. No. 19,988
Claims priority, application Germany Apr. 9, 1959
2 Claims. (Cl. 167—22)

1. Method for controlling soil dwelling nematodes which comprises impregnating nematode infested soil with a parasiticidal amount of solid zinc N-methyldithiocarbamate.

3,049,471
PRESERVATIVE COMPOSITION
Eldon A. Behr, Memphis, Tenn., assignor to Chapman Chemical Company, Memphis, Tenn., a corporation of Illinois
No Drawing. Filed Jan. 7, 1959, Ser. No. 785,317
13 Claims. (Cl. 167—38.7)

11. A wood preservative composition comprising at least 2% and up to 30% of pentachlorophenol, 0.5% to 20% of an alkaline inorganic alkali metal salt selected from the class consisting of fluorides, carbonates, bicarbonates and borates, 50% to 95% of an organic liquid carrier for the pentachlorophenol consisting essentially of creosote and an aromatic petroleum oil, and a compound of bentonite and an organic nitrogen base in an amount sufficient to impart a grease-like consistency to the composition, said compound being a compound of bentonite with an organic base of sufficient alkalinity to be titratable with mineral acids, which compound is made by bringing together bentonite and such organic base in the presence of water.

3,049,472
METHOD AND COMPOSITION FOR THE TREATMENT OF SOIL
Arthur W. Swezey, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 7, 1953, Ser. No. 384,789
9 Claims. (Cl. 167—39)

1. A method for the control of soil dwelling nematodes which comprises fumigating soil with a nematocidal

amount of 1,2-dibromo-3-chloropropane as a nematocidal toxicant.

5. A composition for the control of soil dwelling nematodes comprising 1,2-dibromo-3-chloropropane as an active toxic ingredient in intimate association with an inert finely divided carrier, the 1,2-dibromo-3-chloropropane being present in the amount of from 6 to 20 percent by weight.

3,049,473

UDDER-DISPERSIBLE ANTIBIOTIC MASTITIS CREAMS

Eric Peter Beatson and Joseph Collin Floyd, Manchester, England, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

No Drawing. Filed May 2, 1957, Ser. No. 656,509
Claims priority, application Great Britain Aug. 13, 1956
1 Claim. (Cl. 167—53.2)

A process for treating mastitis of the udder which comprises injecting into said udder a cream consisting essentially of an active ingredient selected from the group consisting of penicillin and streptomycin in admixture with a dispersing agent having a hydrophilic-lipophilic balance between 8 and 12 and a liquid paraffin thereby providing an immediate high concentration of said active ingredient in said udder with rapid elimination of said ingredient therefrom during a period of 36–48 hours after injection, the concentration of said dispersing agent being between 0.5% and 10% by weight of said cream.

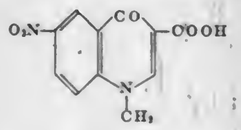
3,049,474

ANTIBACTERIAL COMPOSITIONS CONTAINING 1 - METHYL - 6 - NITRO - 4 - QUINOLONE-3-CARBOXYLIC ACID OR SODIUM SALT THEREOF

Walter Hepworth, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Feb. 6, 1958, Ser. No. 713,545
Claims priority, application Great Britain Feb. 15, 1957
22 Claims. (Cl. 167—65)

1. The process for the treatment of bacterial infections in man and animals which comprises administering to said man and animals an effective amount of a compound selected from the group consisting of 1-methyl-6-nitro-4-quinolone-3-carboxylic acid of the formula:



and the sodium salt thereof.

3,049,475

FERMENTATION PROCESS FOR PRODUCING NOVOBIOCIN

Charles H. Stammer, New Brunswick, and Ian M. Miller, Liberty Corner, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 19, 1956, Ser. No. 579,129
6 Claims. (Cl. 195—80)

1. In the process of producing novobiocin broths of enhanced activity by fermentation, the improvement which comprises cultivating a novobiocin-producing strain of *Streptomyces spheroides* in an aqueous nutrient medium containing a precursor from the group consisting of p-aminosalicylic acid and salts of p-aminosalicylic acid.

3,049,476

FERMENTATION PROCESS FOR PRODUCING NOVOBIOCIN

Ian M. Miller, Liberty Corner, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 19, 1956, Ser. No. 579,133
7 Claims. (Cl. 195—80)

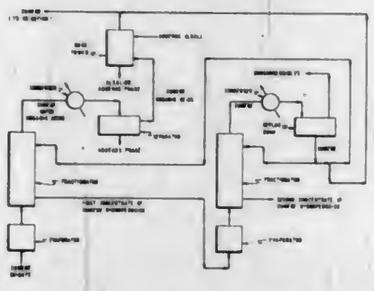
1. In the process of producing novobiocin broths of enhanced activity by fermentation the improvement which comprises cultivating a novobiocin producing strain of *Streptomyces spheroides* in an aqueous nutrient medium containing a precursor from the group consisting of 3-(γ,γ-dimethylallyl)-4-hydroxybenzoic acid, 3-(3-methylbutyl)-4-hydroxybenzoic acid, 3-(3-[γ,γ-dimethylallyl]-4-hydroxybenzamido) - 4,7 - dihydroxy - 8 - methylcoumarin and 3-(3-[3 methylbutyl]-4-hydroxybenzamido)-4,7-dihydroxy-8-methylcoumarin.

3,049,477

PRODUCTION OF CUMENE HYDROPEROXIDE

Maurice Dudley Cooke, Epsom, England, assignor, by mesne assignments, to Hercules Powder Company, a corporation of Delaware

Filed Jan. 12, 1959, Ser. No. 786,029
Claims priority, application Great Britain Jan. 21, 1958
4 Claims. (Cl. 202—40)



1. In the process of producing cumene hydroperoxide by the steps comprising oxidation of cumene in the liquid phase to obtain an oxidation reaction mixture comprising cumene hydroperoxide and unreacted cumene, and fractional distillation of the oxidation reaction mixture in a still to obtain an overhead fraction comprising cumene, water and organic acids and a bottoms product comprising cumene hydroperoxide in a concentration higher than it occurred in the oxidation reaction mixture, the improvement which comprises withdrawing from the still the total overhead fraction comprising cumene, water and organic acids, recycling to the oxidation step at least the cumene contained in said total overhead fraction, and adding to the still as liquid reflux a fresh cumene characterized by being substantially dry and having a pH not substantially less than 5.

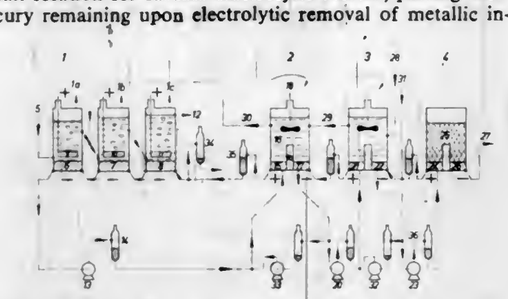
3,049,478

PROCESS FOR THE PRODUCTION OF PURE INDIUM

Wilhelm Morawietz, Duisburg, Germany, assignor to Duisburger Kupferhütte, Duisburg, Germany, a German corporation

Filed June 26, 1961, Ser. No. 119,434
Claims priority, application Germany July 12, 1960
22 Claims. (Cl. 204—64)

1. Process for the continuous electrolytic production of metallic indium of the highest purity from indium salt solution which comprises electrolyzing an impure indium salt solution in a first stage electrolysis using mercury as cathode whereby to form a first amalgam of mercury and electrolytically separated metallic indium, passing said amalgam to an intermediate stage electrolysis for electrolysis therein using an indium salt solution as electrolyte, said amalgam as anode and additional mercury as cathode whereby to dissolve electrolytically said metallic indium from said amalgam into said electrolyte and in turn electrolytically deposit said indium in said additional mercury as cathode to form further amalgam, passing electrolyte from said intermediate stage electrolysis to said first stage electrolysis for combining with said impure salt solution for further electrolysis therein, passing mercury remaining upon electrolytic removal of metallic indium from said first amalgam as anode from said intermediate stage to said first stage for use therein as cathode, passing said further amalgam to a last stage electrolysis using said further amalgam as anode, molten indium salt as electrolyte and molten pure indium metal as cathode for dissolving electrolytically said metallic indium from said further amalgam into said molten indium salt and in turn electrolytically depositing said indium in said molten indium metal as cathode, and recovering pure indium metal from said last stage.

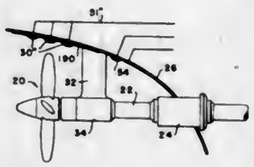


3,049,479

CORROSION-EROSION-CAVITATION PROTECTION FOR MARINE PROPELLERS

Herman S. Preiser, North Springfield, and Frank E. Cook, Arlington, Va., assignors to Chemionics Engineering Laboratories, Inc., a corporation of North Carolina

Filed Nov. 10, 1958, Ser. No. 773,122
5 Claims. (Cl. 204—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)



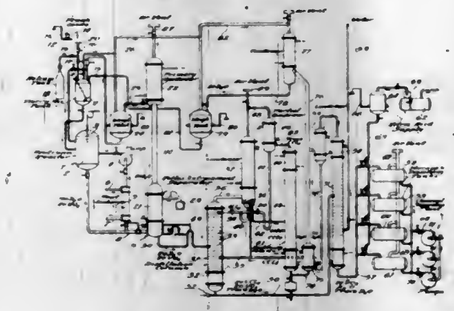
1. A method of electrically protecting a ship's propeller against corrosion and cavitation damage in sea water electrolyte by a hydrogen evolution process, which comprises rendering the propeller the cathode in an electric circuit, locating an anode of the electric circuit in a position relative to the cathode propeller such that a major part of an electric current impressed on the anode flows therefrom through the sea water electrolyte to the propeller, impressing upon the anode an electric current of a relatively high order of current density and in excess of that required for cathodic protection of the propeller against corrosion, the actual current density impressed upon the propeller being in excess of about 10 ma. per sq. ft. of propeller surface and also being at least 30 times the current density of any portion of the cathodic electric current which passes through the surface of the ship's hull, whereby the sea water electrolyte is ionized and hydrogen generated thereby maintains the propeller in a protective cathodic condition while simultaneously providing excess hydrogen in the form of bubbles on the propeller surfaces which hydrogen bubbles cushion cavitation vapor bubbles tending to collapse on the propeller surface.

3,049,480

METHOD OF OPERATING A HEAVY WATER MODERATED REACTOR

Harcourt C. Vernon, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Aug. 29, 1945, Ser. No. 613,358
1 Claim. (Cl. 204—154.2)



In a method of operating a neutronic reactor containing a slurry of solid particles that are fissionable by slow neutrons dispersed in heavy water, in which buildup of fission products in the slurry interferes with operation of the reactor, the improvement comprising introducing said slurry into an intermediate section of a sieve plate distillation column, steam distilling said slurry by introducing carbon tetrachloride into said column while maintaining the temperature in the column at a temperature such that at least a portion of the heavy water and of the carbon tetrachloride is vaporized and at least a portion of the reflux liquid flows to the bottom of the column, removing said vapor from the top of said column, condensing said vapor and separating the heavy water portion of said condensate from the carbon tetrachloride portion thereof, returning the carbon tetrachloride condensate to a plurality of points at different elevations of said column to effect refluxing so as to aid in depositing the slurry particles at the bottom of said column with said carbon tetrachloride reflux, purifying the heavy water portion of the condensate by distilling the carbon tetrachloride therefrom in one distillation column, evaporating the heavy water in another column, condensing the heavy water and returning to the neutronic reactor.

3,049,481

NON-CORROSIVE REACTOR FUEL SYSTEM

Claude C. Herrick, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,625
2 Claims. (Cl. 204—154.2)

1. In a homogeneous nuclear reactor the combination of a tantalum carbide coated tantalum container and a liquid nuclear reactor fuel system contained therein, said reactor fuel system consisting essentially of from 8 to 12 atomic percent iron, about 2 atomic percent carbon, and the balance plutonium, said carbon being present to self heal the tantalum carbide coating.

3,049,482

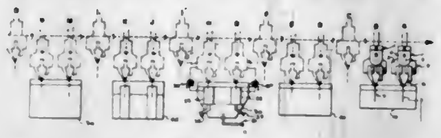
COATING OF SMALL BORE ARTICLES

Arthur W. Dolan, Peabody, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Dec. 29, 1960, Ser. No. 79,375
6 Claims. (Cl. 204—181)

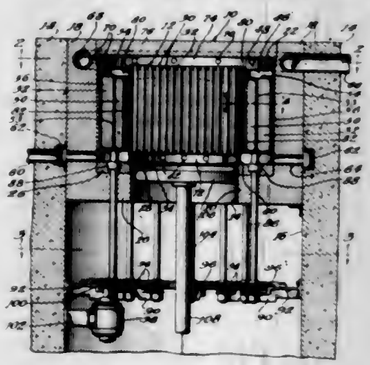
1. The process for coating an elongated tubular article which tends to exhibit capillary action upon being placed in a coating bath, the steps for coating said tubular article

and eliminating said capillary action which comprise: placing said tubular article in a pre-dipping bath of a bore-filling liquid whereby the liquid will fill the bore of said tubular article and remain held therein by capil-



lary action, removing a filled tubular article from said pre-dipping bath and placing said filled tubular article in a coating bath, removing a coated, filled tubular coil from said coating bath.

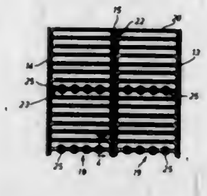
3,049,483
NEUTRONIC REACTORS AND CONTROL MEANS THEREFOR
Kenneth A. Kesselring, Schenectady, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 28, 1952, Ser. No. 279,004
9 Claims. (Cl. 204—193.2)



1. A neutronic reactor comprising an active portion having cylindrical shape, an annular body of neutron reflector material surrounding said portion and having a plurality of equally disposed apertures in the body extending parallel to the axis thereof, a cylindrical body in each aperture, each body having a substantially semi-cylindrical portion of neutron reflector material and also having a substantially semicylindrical portion of neutron absorber material, and means for rotating said bodies so as to present similar portions in adjacent and remote positions with respect to the active portion.

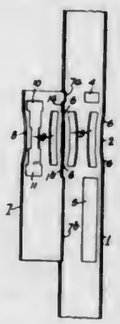
3,049,484
APPARATUS FOR PRODUCTION OF RADIOACTIVE ISOTOPES
Walter H. Zinn, Bellealr, Fla., assignor, by mesne assignments, to Curtiss-Wright Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 1, 1957, Ser. No. 693,920
Claims priority, application Canada Oct. 31, 1957
5 Claims. (Cl. 204—193.2)

1. For use in a reactor, an isotope producing reactor unit comprising: spaced side walls; a plurality of fuel plates rigidly secured to said side walls in a spaced parallel relation for communication of a coolant moderator between said fuel plates, each of said fuel plates containing a mass of fissile material, the total mass of said fissile material contained in said fuel plates being a non-critical mass of said fissile material; and a plurality of absorber plates rigidly secured to said side walls in spaced, parallel relation and interposed between said fuel plates, each of said absorber plates containing a mass of absorber material, the total mass of said absorber material contained in said absorber plates having an absorp-



tion cross-section for neutron capture equivalent to that of a mass of cobalt about twice the mass of said fissile material in said fuel plates.

3,049,485
SUPPORT STRUCTURES
John Tatlock, Culcheth, near Warrington, and John Alexander Forbes Glass, Woolton, Liverpool, England, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 17, 1958, Ser. No. 729,127
7 Claims. (Cl. 204—193.2)

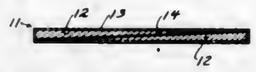


1. In a fast reactor core, end plates, full length open-ended tubes extending in longitudinally parallel spaced-apart relationship between said end plates, short open-ended tubes interposed between each of said full-length tubes and an adjacent full-length tube to form a zone of lateral rigidity intermediate said plates, corresponding hexagonal sections on both said full length tubes and said short tubes, said hexagonal sections being of lesser area than the remainder of the tubes, said hexagonal sections being disposed intermediate the ends of the tubes and at points wherein tube pairs are engaged in face to face contact, one of the tubes of each of said pairs being slotted to accommodate the intersecting portion of the other tube of the pair whereby to support the short tubes in said zone.

3,049,486
NUCLEAR REACTOR FUEL-BREEDER FUEL ELEMENT
Edwin L. Currier, Jr., Silver Spring, and John H. Nicklas, Riverdale, Md., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 9, 1959, Ser. No. 785,862
2 Claims. (Cl. 204—193.2)

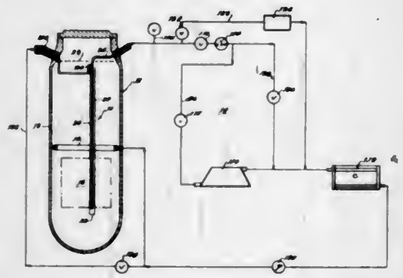
1. A plate type fuel element for nuclear reactors, comprising a pair of elongated fuel plates of wedge-shape section consisting of a matrix of fertile breeder metal and fissionable uranium oxide particles dispersed

throughout said matrix, a tubular housing enclosing said plates, and a layer of powdered beryllium oxide between



said plates urging the latter against opposite sides of said housing.

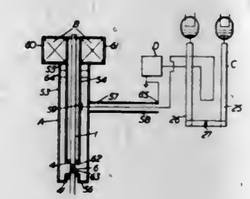
3,049,487
DIRECT-CYCLE, BOILING-WATER NUCLEAR REACTOR
Joseph M. Harrer, Elmhurst, Leonard W. Fromm, Jr., Glen Ellyn, and Verne M. Kolba, Plainfield, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed May 6, 1960, Ser. No. 27,462
3 Claims. (Cl. 204—193.2)



1. A boiling-water reactor comprising a closed vessel containing water; and an array of spaced vertical fuel assemblies positioned in the vessel so as to be immersed in the water for converting the water to saturated steam and for receiving the saturated steam internally to convert it to superheated steam, each fuel assembly comprising a vertical outer tube open at its upper end and closed at its lower end, a vertical inner tube positioned in the outer tube in radially spaced relation thereto so as to form therewith an annular channel, the lower end of the inner tube being open and spaced from the lower closed end of the outer tube so as to provide a path for flow of steam from the channel between the tubes to the interior of the inner tube, a first plurality of vertical nuclear-fuel rods distributed in spaced relation to one another about the annular channel between the tubes, a second plurality of vertical nuclear-fuel rods positioned in the inner tube in spaced relation to one another, means providing an inlet for the saturated steam in the upper region of the closed vessel to the upper end of the channel between the tubes, and means for conducting superheated steam from the upper end of the inner tube to the exterior of the closed vessel.

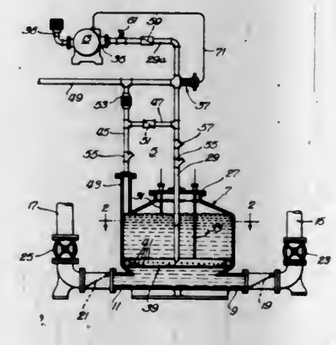
3,049,488
METHOD OF CONDUCTING GASEOUS CHEMICAL REACTIONS
Kenneth Jackson and Martin S. Bloom, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Jan. 11, 1960, Ser. No. 1,548
Claims priority, application Great Britain Jan. 12, 1959
14 Claims. (Cl. 204—312)

1. Apparatus for conducting gaseous chemical reactions comprising a tube, gas inlet means leading into said tube, produot outlet means leading from said tube, said tube having walls of a material which over the operating range has low electrical conductivity, low dielectric loss at radio frequency, good heat transfer, good transparency to radiant heat, and rigidity, a re-entrant coaxial resonator, two conductors external to said tube and operatively connected



to said resonator, a radio frequency generator, means feeding the output of said generator to the resonator, the said conductors creating, when operative, an alternating electric field of radio frequency which affords a discharge within the tube.

3,049,489
METHOD AND APPARATUS FOR HANDLING WASTE MATERIAL
Emil J. Ciabattari, Chicago, Ill., assignor to Yeomans Brothers Company, Melrose Park, Ill., a corporation of Delaware
Filed Oct. 7, 1954, Ser. No. 460,854
4 Claims. (Cl. 210—15)



1. A gas displacement type ejector for handling liquid-borne waste materials while affording aerobic treatment of the waste materials as an incident to the ejection of such materials, comprising a receiver having a fluid inlet, a fluid outlet disposed adjacent the lower level of said receiver, means within said receiver for introducing pressure air into the receiver adjacent the level of said fluid outlet to eject the liquid-borne waste material through said fluid outlet, means operable to vent said receiver to permit the flow of waste material through said fluid inlet into said receiver to thereby fill the latter to a predetermined upper level, and additional vent means in fluid communication with the interior of said receiver above said predetermined upper level to provide continuous venting of said receiver, said additional vent means comprising a restricted orifice adapted to afford controlled escapement of pressure air introduced into said receiver during the ejection cycle at a rate substantially lower than the rate of flow of pressure air into said receiver, thereby bleeding off a portion of the pressure air from the receiver during the ejection cycle and causing a greater amount of pressure air to pass through said waste materials than would be required without said additional vent means and with the same ejection pressure and cycle.

3,049,490
FRESH WATER DRILLING FLUIDS

James E. Donham, Crossett, Ark., assignor to Crossett Chemical Company, a Division of The Crossett Company, Crossett, Ark., a corporation of Arkansas

No Drawing. Filed Aug. 27, 1959, Ser. No. 836,322
4 Claims. (Cl. 252—8.5)

1. The method of drilling wells which comprises circulating into the well, while drilling, a substantially solids-free fresh water containing from about 0.04 to about 0.5% by weight based on the total weight of the drilling fluid of "floating soap," said floating soap being present on a dry basis in a small amount effective to impart extreme pressure lubricating properties to the drilling fluid.

3,049,491
OIL WELL DRILLING FLUIDS

James E. Donham, Crossett, Ark., assignor to Crossett Chemical Company, a Division of The Crossett Company, Crossett, Ark., a corporation of Arkansas

No Drawing. Filed Aug. 27, 1959, Ser. No. 836,324
6 Claims. (Cl. 252—8.5)

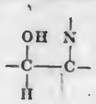
1. A drilling fluid consisting essentially of fresh water, clay and "floating soap," and "floating soap" being present in amounts of from about 0.04 to about 0.25% by weight based on the total weight of the drilling fluid sufficient to impart extreme pressure lubricating qualities to the drilling fluid.

3,049,492
METHOD OF INHIBITING THE GROWTH OF SULFATE REDUCING BACTERIA IN WATER FLOODING PROCESSES

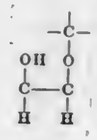
Melvin De Groote, St. Louis, and Jen Pu Cheng, University City, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 5, 1959, Ser. No. 810,993
10 Claims. (Cl. 252—8.55)

1. In a flooding process for the recovery of oil from oil-bearing strata taking place in the presence of anaerobic sulfate-reducing bacteria and soluble ferrous salts, the improvement which comprises flooding the oil-bearing strata with an aqueous liquid containing an amount sufficient to inhibit growth of the anaerobic sulfate-reducing bacteria of the products obtained by reacting at a temperature of about 100° to 300° for from about 1 to 4 hours (A) an oxirane ring containing compound selected from the class consisting of epoxidized higher fatty acids, epoxidized lower alkanol esters of higher fatty acids, epoxidized ammonia and C_1 to C_{12} alkyl primary monoamine amides of higher fatty acids, epoxidized higher fatty alcohols and epoxidized higher fatty acid glycerides, with (B) an oxyalkylation-susceptible nitrogen containing compound selected from the class consisting of hydrazine and monoamino and polyamino compounds composed of carbon, hydrogen, oxygen and nitrogen atoms, having only functional groups selected from the class consisting of hydroxyl groups, primary amino groups and secondary amino groups and having at least one such functional amino group; said reaction between (A) and (B) involving rupture of each oxirane ring and resulting in the formation of at least one of the following groupings



and



3,049,493
LUBRICATING COMPOSITIONS

David W. Young, Homewood, and Jay S. Curtice, Chicago, Ill., assignors, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 6, 1957, Ser. No. 682,282
8 Claims. (Cl. 252—56)

1. A synthetic lubricating oil composition consisting essentially of (1) a diester synthetic oil base having a viscosity of about 35 to 250 SUS at 210° F., said diester being of an aliphatic dibasic acid of up to about 12 carbon atoms and an aliphatic alcohol of up to about 12 carbon atoms and (2) about 5 to 50 weight percent of a polyester prepared by the reaction of an aliphatic dibasic acid containing from about 6 to 11 carbon atoms with a polyoxyalkylene glycol of the formula:

$$HO-(C_3H_6O)_n-(CH_2\underset{\displaystyle CH_3}{\underset{|}{C}}H-O)_m-(C_3H_6O)_n-OH$$

where m has an average value from about 15 to 45, $(C_2H_4O)_{n+n'}$ is about 5 to 20 percent of the total weight of the glycol, in the molar ratio of about 1:0.7 to 1.5, and continuing the reaction until the polyester product has a kinematic viscosity of about 35 to 125 centistokes at 210° F.

3,049,494
POWER TRANSMITTING FLUIDS

Robert C. Palmer, Markham, Ill., and George J. Morris, Baltimore, Md., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 15, 1958, Ser. No. 708,965
11 Claims. (Cl. 252—75)

8. A power transmitting fluid which comprises a major proportion of a mineral oil and on a dry soap basis, about 0.8 weight percent of barium dialkyl dithiophosphate wherein the alkyl group contains from 12 to 18 carbon atoms, about 0.8 weight percent of a detergent basic barium sulfonate material selected from the group consisting of basic barium petroleum mahogany sulfonate and carbonated basic barium petroleum mahogany sulfonate, about 0.001 to 0.003 weight percent of a dimethyl silicone polymer on silica gel, about 2.5 weight percent of sulfurized sperm oil and about 1.5 weight percent of a methacrylate polymer; said basic barium sulfonate material having been prepared with a barium neutralizing agent in an amount of at least about 1.5 times that required to obtain the normal salt.

3,049,495
PEROXYMONOSULFATE-DIETHYLENETRIAMINE PENTAACETIC ACID COMPOSITION

Gordon L. Jenkins and Elbert V. Kring, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 1, 1959, Ser. No. 824,175
3 Claims. (Cl. 252—102)

1. A composition consisting essentially of an alkali metal peroxymonosulfate and a compound selected from the group consisting of diethylenetriamine pentaacetic acid and alkali metal salts thereof, at least 0.01 part by weight of said last named compound being present for each part by weight of said peroxymonosulfate.

3,049,496
PROPARGYL COMPOUNDS AS CORROSION INHIBITORS

Roger F. Monroe and Fred J. Lowes, Midland, Mich., and Gerald L. Foster and Billy D. Oakes, Tulsa, Okla., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 30, 1959, Ser. No. 809,902
3 Claims. (Cl. 252—146)

1. An aqueous solution of a non-oxidizing acid containing as a corrosion inhibitor an effective amount of 1-(2,4,6-trimethyl-3-cyclohexenyl)-3-propyne-1-ol.

3,049,497
THORIUM PHOSPHATE MATRIX LUMINESCENT MATERIALS

Peter Whitten Ranby and Doreen Yvonne Hobbs, London, England, assignors to Thorn Electrical Industries Limited, London, England

No Drawing. Filed Feb. 25, 1957, Ser. No. 641,806
Claims priority, application Great Britain Feb. 22, 1956
5 Claims. (Cl. 252—301.4)

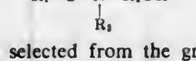
1. An artificial luminescent material characterized in that it consists essentially of a thorium phosphate matrix activated by at least one activator by weight of the matrix selected from the group consisting of 0.005 to 25% copper, 0.1 to 20% cerium, 0.1 to 20% antimony, 4 to 16% lead.

3,049,498
AGENT FOR GELLING ORGANIC LIQUIDS AND ORGANIC LIQUIDS GELLED THEREWITH

Edgar W. Sawyer, Jr., Metuchen, N.J., assignor to Minerals & Chemicals Philipp Corporation, Menlo Park, N.J., a corporation of Maryland

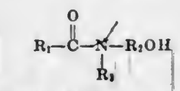
No Drawing. Filed May 16, 1961, Ser. No. 110,350
6 Claims. (Cl. 252—316)

1. An agent for gelling organic liquids consisting essentially of clay selected from the group consisting of colloidal attapulgite clay and colloidal sepiolite clay which has never been dried to a F.M. below about 7%, the particles of said clay being uniformly coated with from about 15% to about 50%, based on the moisture free weight of said clay of at least one water-dispersible fatty acid alkanolamide of the following structural formula:



wherein: R_1 is selected from the group consisting of alkyl and alkenyl groups having from 7 to 17 carbon atoms; R_2 is an alkylene group having from 2 to 4 carbon atoms; and R_3 is selected from the group consisting of hydrogen, alkyl and alkanol groups having from 2 to 4 carbon atoms.

6. An organic liquid having dispersed therein from about 5% to about 20% by weight of a clay selected from the group consisting of colloidal attapulgite clay and colloidal sepiolite, said clay having a F.M. of about 7% to about 25% and never having been dried to a F.M. below about 7%, and from about 15% to about 50%, based on the moisture free weight of said clay, of at least one fatty acid alkanolamide of the following structural formula:



wherein: R_1 is selected from the group consisting of alkyl and alkenyl groups having from 7 to 17 carbon atoms; R_2 is an alkylene group having from 2 to 4 carbon atoms; and R_3 is selected from the group consisting of hydrogen, alkyl and alkanol groups having from 2 to 4 carbon atoms.

3,049,499
ADDITION POLYMER OF CYANOGEN AND A DIAMINE

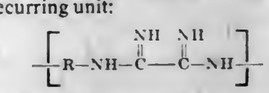
Ken Matsuda, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 19, 1958, Ser. No. 735,974
12 Claims. (Cl. 260—2)

1. An addition polymerization product of cyanogen and a diamine having the formula:

$$H_2N-R-NH_2$$

wherein R is selected from the group consisting of alkylene radicals of 2 to 12 carbon atoms, an arylene radical, an oxyether radical and a thioether radical in molar proportions of from about 0.8:1.0 to 3:1, respectively, wherein said addition polymerization product has the recurring unit:



wherein R is as defined above and is the residue of said diamine.

7. A process for preparing an addition polymerization product of cyanogen and a diamine having the formula:

$$H_2N-R-NH_2$$

wherein R is selected from the group consisting of alkylene radicals of 2–12 carbon atoms, an arylene radical, an oxyether radical and a thioether radical, which comprises reacting cyanogen and said diamine in molar proportions of from about 0.8:1 to about 3:1, respectively in an organic solvent at a temperature not exceeding about 70° C.

3,049,500
PROCESS OF INCREASING THE PARTICLE SIZE OF SYNTHETIC LATEX COMPRISING ADDING POLYVINYL METHYL ETHER TO A LATEX CONTAINING SALT ELECTROLYTE

Louis H. Howland, Watertown, Victor S. Chambers, Naugatuck, and Edmund J. Aleksa, Southbury, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,097
18 Claims. (Cl. 260—17.4)

1. The method of increasing the size of the dispersed polymer particles in a synthetic rubber latex aqueous emulsion polymerizate of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2=C<$ group are copolymerizable with butadienes-1,3 which comprises incorporating in the latex up to 1% of polyvinyl methyl ether having a specific viscosity from 0.015 to 1.1 and 0.2% to 2% of an alkali salt electrolyte selected from the group consisting of sodium, potassium, ammonium and amine salts, said percentages being based on the solids of the latex.

3,049,501
INCREASING THE PARTICLE SIZE OF SYNTHETIC RUBBER LATEX BY LOWERING AND RAISING THE pH IN THE PRESENCE OF POLYVINYL-METHYL ETHER

Louis H. Howland, Watertown, and Victor S. Chambers, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,098
16 Claims. (Cl. 260—17.4)

1. The method of increasing the size of the dispersed polymer particles in a synthetic rubber latex aqueous emulsion polymerizate of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2=C<$ group and are copolymerizable with butadienes-1,3 containing 2 to 10 parts of a water-soluble soap of soap-forming monocarboxylic acid per 100 parts of latex solids and having a pH from 8 to 11 which comprises reducing the pH of the latex to within the range of 5.5 to 7.5 in the presence of 0.001% to 1% of polyvinyl methyl ether based on the weight of the latex solids, said polyvinyl methyl ether having a specific viscosity from 0.015 to 1.1, and thereafter increasing the pH of the latex to within the range of 8 to 11.

3,049,502
PROCESS OF INCREASING THE PARTICLE SIZE OF SYNTHETIC LATEX BY ADDING POLYVINYL METHYL ETHER TO A LATEX CONTAINING SALT ELECTROLYTE AND UNREACTED MONOMER

Louis H. Howland, Watertown, and Victor S. Chambers, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 28, 1960, Ser. No. 5,099
11 Claims. (Cl. 260—17.4)

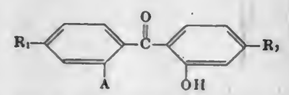
1. The method which comprises treating a synthetic rubber latex which is an aqueous emulsion polymerizate of synthetic rubber forming monomeric material selected from the group consisting of butadiene-1,3, isoprene, 2,3-dimethyl butadiene and piperylene, and mixtures thereof, and mixtures of such butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2{=}C<$ group and are copolymerizable with butadienes-1,3, and which have been polymerized to a latex of 60% to 95% conversion, in the presence of at least 5% of residual unreacted polymerizable monomeric material based on the weight of the solids of the latex with 0.001% to 1% of polyvinyl methyl ether and 0.2% to 2% of alkali salt electrolyte selected from potassium, sodium, ammonium and amine salts based on the weight of the solids of the latex at a temperature from 0° C. to 15° C., said polyvinyl methyl ether having a specific viscosity from 0.015 to 1.1, and then removing unreacted monomeric material from the latex.

3,049,503
VINYLBENZYLOXYBENZOPHENONES

Jerry P. Milionis, South Bound Brook, and Frank J. Arthen, Franklin Township, Somerset County, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 13, 1960, Ser. No. 2,131
16 Claims. (Cl. 260—22)

10. Compositions comprising the polymerization product of monomers having a polymerizably reactive $CH_2{=}C<$ group, including at least 0.01% by weight of a compound of the formula



in which R_1 and R_2 are selected from the group consisting of hydrogen, lower alkyl, phenyl, lower alkoxy, carboxy, sulfo, sulfonamido, halogen, and α-(vinylphenylalkoxy), at least one of R_1 and R_2 being α-(vinylphenyl)alkoxy and A is selected from the group consisting of hydrogen, hydroxyl, carboxy and halogen.

14. Compositions of claim 10 in which the said polymerization product is a styrenated oil modified alkyd resin.

3,049,504
EPOXIDIZED ANIMAL FAT DIACETOGLYCERIDES AS PLASTICIZERS

Daniel Swern, Philadelphia, and Hogan B. Knight, Spring House, Pa., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Original application Apr. 12, 1954, Ser. No. 422,706, now Patent No. 2,898,348, dated Aug. 4, 1959. Divided and this application Jan. 10, 1956, Ser. No. 563,827
2 Claims. (Cl. 260—23)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A plastic composition comprising polymerized vinyl chloride and, as a plasticizer-stabilizer therefor, an epoxidized diacetoglyceride of fatty acids selected from the group consisting of lard fatty acids, tallow fatty acids and mixtures thereof.

3,049,505
MECHANICAL BLEND OF A POLYURETHANE RUBBER WITH BLENDS OF A GRAFT COPOLYMER OF POLYBUTADIENE, STYRENE, AND ACRYLONITRILE

Thomas S. Grabowski, Vienna, W. Va., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 24, 1958, Ser. No. 762,929
9 Claims. (Cl. 260—45.4)

1. A mechanical blend comprising (1) a cross linked, solid elastomeric reaction product of a polyisocyanate with a material selected from the group consisting of polyesters, polyesteramides and polyalkylene ether glycols and (2) a graft copolymer of an aliphatic conjugated diolefine hydrocarbon polymer, a monovinyl monocyclic aromatic hydrocarbon and a compound selected from the group consisting of acrylonitrile, methacrylonitrile and ethacrylonitrile.

3,049,506
LOW MOLECULAR WEIGHT POLYESTERS OF 1,4-CYCLOHEXANEDIMETHANOL AND POLYVINYL CHLORIDE PLASTICIZED THEREWITH

Charles J. Kibler, Alan Bell, and James G. Smith, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 29, 1959, Ser. No. 823,297
18 Claims. (Cl. 260—45.4)

1. Linear chain-terminated condensation polymers of (A) at least one dibasic dicarboxylic acid, (B) at least one bifunctional dihydroxy compound, and (C) at least one member having no amino substituent selected from the group consisting of monobasic monocarboxylic acids and monohydric alcohols, the relative proportions of (A), (B) and (C) constituents being such as to constitute a polymer having a molecular weight of from about 800 to 4,000 in which at least 50 mole percent of said constituent (B) consists of at least one member selected from the group consisting of the cis and transisomers of 1,4-cyclohexanedimethanol.

10. Plasticized polyvinyl chloride containing a polymer as defined by claim 1.

3,049,507
METHOD OF MAKING GRAFT COPOLYMER OF VINYL LACTAM MONOMER ON POLYOLEFIN SUBSTRATE, COMPOSITION CONTAINING SAME, AND ARTICLE THEREOF

George W. Stanton, Walnut Creek, and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 29, 1958, Ser. No. 711,941
9 Claims. (Cl. 260—45.5)

1. Dye-receptive graft copolymer composition comprised of (1) a polyolefin of a 2 to 6 carbon atom nonaromatic, hydrocarbon monoolefin, said polymer substrate having chemically attached to carbon atoms in its chain, as graft copolymerized substituents thereon a minor proportion of up to about 20 percent by weight, based on the weight of the composition, of units of (2) a polymerized N-vinyl lactam monomer.

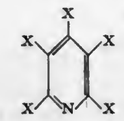
3,049,508
GRAFT COPOLYMER OF AZOTIC MONOMER ON POLYOLEFIN SUBSTRATE, ARTICLE THEREOF, AND METHOD OF MAKING SAME

George W. Stanton, Walnut Creek, and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

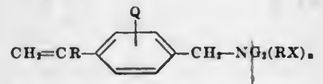
Filed Jan. 29, 1958, Ser. No. 711,943
9 Claims. (Cl. 260—45.5)

1. Dye-receptive graft copolymer composition comprised of (1) a polyolefin of a 2 to 6 carbon atom, nonaromatic, monoolefin, said polyolefin substrate having

chemically attached thereto to carbon atoms in its chain, as graft copolymerized substituents thereon, a minor proportion of up to about 20 percent by weight, based on the weight of the composition, of units consisting of (2) a polymerized azotic monomer selected from the group consisting of cinyl pyridine monomers of the structural formula:



wherein one X is a vinyl ($—CH{=}CH_2$) radical and the remainder are independently selected from the group consisting of hydrogen and lower alkyl radicals that contain from 1 to 4 carbon atoms; aminated alkenyl aromatic monomers of the structural formula:



wherein Q is selected from the group consisting of hydrogen and alkyl radicals containing from 1 to 4 carbon atoms; R is selected from the group consisting of hydrogen and methyl; X is a halogen; *n* has a whole numerical value from 0 to 1; and each G is independently selected from the group consisting of hydrogen, methyl, and hydroxyethyl ($—CH_2CH_2OH$) radicals; and aminated acrylate and methacrylate monomers of the structural formula:

$$CH_2{=}CX—COO—CH_2CH_2NR_2$$

wherein X is selected from the group consisting of hydrogen and methyl radicals and each R is independently selected from the group consisting of hydrogen, methyl and ethyl radicals; and mixtures thereof.

3,049,509
HETEROCYCLIC ULTRAVIOLET ABSORBERS

William B. Hardy, Bound Brook, Warren S. Forster, Basking Ridge, and John F. Hosler, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 11, 1959, Ser. No. 832,906
6 Claims. (Cl. 260—45.8)

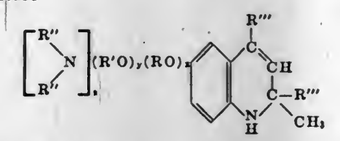
1. A film essentially comprising a polymeric material selected from the group consisting of (*a*) polystyrenes, (*b*) polyvinylidene chlorides, (*c*) copolymers of (*b*), (*d*) polyvinyl chlorides, (*e*) copolymers of (*d*), (*f*) polyesters, (*g*) polyalkylene oxides, (*h*) superpolyamides, (*i*) nitrocellulose, (*j*) cellulose esters, and (*k*) cellulose ethers and having from .1% to 5.0% by weight of an ultraviolet absorbing compound selected from the group consisting of 2-R-benzoxazole, 2-R- benzimidazole and 2-R-benzothiazole wherein R is a member selected from the group consisting of o-hydroxyphenyl and o-hydroxynaphthyl, said compound bearing from 0 to 1 substituent selected from the group consisting of chloro, hydroxy and alkoxy.

3,049,510
6-DIHYDROQUINOLINYL POLYETHERS AND AMINOETHERS

James O. Harris, St. Albans, W. Va.

No Drawing. Filed May 26, 1960, Ser. No. 31,817
16 Claims. (Cl. 260—45.8)

8. A sulfur vulcanizable rubber composition containing a small amount sufficient to inhibit oxidative degradation and atmospheric cracking by ozone of a compound of the structure



where *x* is an integer from 1 to 3 inclusive, *y* and *z* are unlike integers selected from 0 and 1, R is an alkylene radical of 2 to 8 carbon atoms inclusive, R′ is selected from a group consisting of alkyl radicals of 1 to 6 carbon atoms inclusive, phenyl, alkylphenyl and cyclohexyl, R″ is alkyl of 1 to 4 carbon atoms inclusive and R‴ is alkyl of 1 to 4 carbon atoms inclusive.

3,049,511
SULFATED OIL SOLUBLE PHENOL FORMALDEHYDE POLYMERS

Willard H. Kirkpatrick, Sugar Land, and Virgil L. Seale, Houston, Tex., assignors to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed June 15, 1959, Ser. No. 820,108
9 Claims. (Cl. 260—49)

1. The oil soluble product of the reaction of sulfamic acid with an oxyalkylated oil soluble, alkali insoluble, linear polymer of formaldehyde and an alkyl phenol which is at least 75% mono-alkyl difunctional phenol wherein the alkyl group has 4 to 15 carbon atoms, the oxyalkylene groups contain 2 to 3 carbon atoms, and the weight ratio of said oxyalkylene groups to said alkyl phenol-formaldehyde polymer is in the range of 1:2 to 15:1, said alkyl phenol-formaldehyde polymer containing 4 to 15 phenolic nuclei, the quantity of sulfamic acid being sufficient to introduce into said oxyalkylated alkyl phenol-formaldehyde polymer at least one sulfate group in the form of the ammonium salt.

3,049,512
VINYLOXYARYL SULPHONIC ACIDS AND POLYMERS THEREOF

André Fournet and Hubert Lemoine, Lyon, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a body corporate of France

No Drawing. Filed Feb. 9, 1960, Ser. No. 7,541
Claims priority, application France Feb. 11, 1959
7 Claims. (Cl. 260—49)

1. A vinyl derivative of the general formula:

$$CH_2{=}CH—O—Ar(SO_3R)$$

where Ar is a group selected from the class consisting of wholly aromatic unsubstituted hydrocarbon groups, aromatic hydrocarbon groups containing alkyl substituents, aromatic hydrocarbon groups containing cycloalkyl substituents and aromatic hydrocarbon groups containing halogen substituents and R is selected from the class consisting of the hydrogen atom, metal atoms and hydrocarbon groups.

3,049,513
ORDERED ISOCYANATE-TERMINATED POLYETHER-BASED URETHANE COMPOSITIONS

Adolfas Damusis, Detroit, and Kurt C. Frisch, Grosse Ile, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,008
18 Claims. (Cl. 260—77.5)

1. A novel, ordered polyether-based NCO-terminated urethane composition produced by first mixing and reacting about one molar proportion of a polyether polyol (*a*) which is a propylene oxide addition product of a polyhydric lower-aliphatic alcohol having at least three and not more than six hydroxy groups in the molecule,

said polyol having on an average at least one and not more than five propylene oxide units per hydroxy group, with about one molar proportion of an arylene diisocyanate (b) selected from the group consisting of phenylene diisocyanate, tolylene diisocyanate, and diphenylmethane-4,4'-diisocyanate, for each hydroxy group of the polyether polyol (*a*), to produce an isocyanate-terminated polyether-based urethane intermediate adduct, and then mixing and reacting about two molar proportions of the thus-produced isocyanate-terminated adduct with about one molar proportion of a poly-propyleneether glycol (*c*) having a molecular weight between about 134 and 1000.

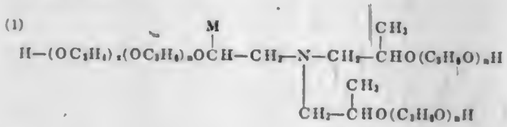
3,049,514
ORDERED HYDROXY-TERMINATED TERTIARY-NITROGEN-CONTAINING POLYETHER-BASED URETHANE COMPOSITIONS

Adolfas Damusis, Detroit, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,015
16 Claims. (Cl. 260—77.5)

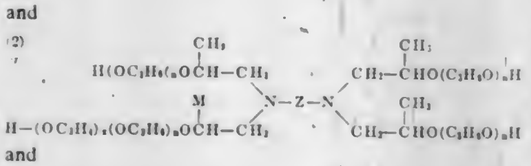
1. An ordered hydroxy-terminated urethane composition produced sequentially by first mixing and reacting together about one molar proportion of polypropyleneether glycol (*a*) with about two molar proportions of arylene diisocyanate (*c*) selected from the group consisting of phenylene diisocyanate, tolylene diisocyanate, and diphenylmethane-4,4'-diisocyanate, to produce an isocyanate-terminated polypropyleneether glycol urethane, and then mixing and reacting about one molar proportion of the thus-formed isocyanate-terminated urethane with about two molar proportions of tertiary-nitrogen-containing polyol (*b*), said tertiary-hitrogen-containing polyol (*b*) being selected from the group consisting of polyols of the formulae:

(1)



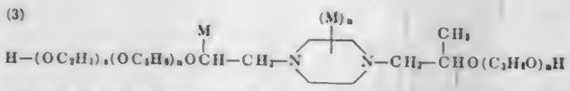
and

(2)



and

(3)



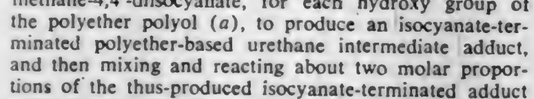
wherein Z is an alkylene radical containing from 2 through 6 carbon atoms, wherein M is selected from H and CH_3, wherein *n* is a number from zero to four, inclusive, and wherein *x* is zero to one, inclusive, to produce the desired ordered hydroxy-terminated urethane composition, the initial reaction temperature in the first step of the reaction being not greater than about sixty degrees centigrade.

3,049,515
HYDROXY-TERMINATED POLYETHER-BASED URETHANE COMPOSITIONS

Adolfas Damusis, Detroit, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,016
16 Claims. (Cl. 260—77.5)

1. A hydroxy-terminated urethane composition prepared by mixing and reacting together about one molar proportion of arylene diisocyanate (*a*) selected from the group consisting of phenylene diisocyanate, tolylene diisocyanate, and diphenylmethane-4,4'-diisocyanate, with about two molar proportions of polyether polyol (*b*), said polyether polyol (*b*) being of the formula:



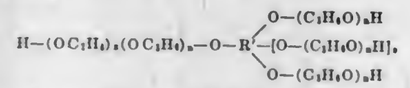
wherein R' with attached oxygen atoms represents the radical of a polyhydric lower-aliphatic alcohol, wherein *n* is a number from one to three, inclusive, and wherein *x* and *z* are individually numbers from zero to one, inclusive, to produce the desired hydroxy-terminated urethane composition, the initial reaction temperature being not greater than about sixty degrees centigrade.

3,049,516
ORDERED HYDROXY-TERMINATED POLYETHER-BASED URETHANE COMPOSITIONS

Adolfas Damusis, Detroit, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,018
18 Claims. (Cl. 260—77.5)

1. An ordered hydroxy-terminated urethane composition prepared sequentially by first mixing and reacting together about one molar proportion of polypropyleneether glycol (*a*) having a molecular weight between about 134 and 1000, with about two molar proportions of arylene diisocyanate (*c*) selected from the group consisting of phenylene diisocyanate, tolylene diisocyanate, and diphenylmethane-4,4'-diisocyanate, to produce an isocyanate-terminated polypropyleneether glycol urethane, and then mixing and reacting about one molar proportion of the thus-formed isocyanate-terminated urethane with about two molar proportions of polyether polyol (*b*) have the formula:



wherein R' with attached oxygen atoms represents a polyhydric lower-aliphatic alcohol radical; *x* is a number from zero to one; *z* is a number from zero to three; and *n* is a number from zero to three, provided that when *z*=0, at least one *n* is at least one; when *z*=1, at least two *n*'s are at least one; when *z*=2, at least three *n*'s are at least one; and when *z*=3, at least four *n*'s are at least one; to produce the desired order hydroxy-terminated urethane composition, the initial reaction temperature in the first step of the reaction being not greater than about sixty degrees centigrade.

3,049,517
COPOLYMERISATION OF TRIALLYL CYANURATE AND METHYL METHACRYLATE

John Antony Caton, Wheathampstead, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 12, 1959, Ser. No. 819,832
Claims priority, application Great Britain June 27, 1958
5 Claims. (Cl. 260—77.5)

1. A process for the production of thermoplastic solid materials which are rigid at ordinary temperatures and capable of being handled and stored without suffering deformation and for the curing of said materials, which

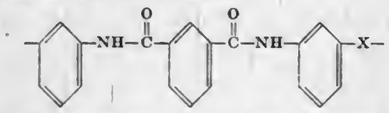
process comprises heating a mixture of monomers consisting essentially of methyl methacrylate and triallyl cyanurate and containing from 15–25% by weight of triallyl cyanurate based on the combined weights of the methyl methacrylate and triallyl cyanurate, in the presence of catalytic amounts of at least two different organic free radical polymerization catalysts, at least one but not all said catalysts being catalytically effective within the temperature range of 30 to 100° C. and being present in sufficient concentration to cause polymerization to proceed at a faster rate within said temperature range of 30 to 100° C. than if said catalyst were absent, and the other or the rest of said catalysts having a high degree of catalytic effectiveness within the temperature range of 140 to 180° C. but being not substantially catalytically effective at temperatures below 100° C. and being present in sufficient concentration to cause polymerization to proceed at a faster rate within said temperature range of 140 to 180° C. than if no catalyst were present, said mixture of monomers being heated within the range of 30 to 100° C. for a time sufficient to convert the mixture to solid rigid polymeric material, shaping the polymeric material and curing the polymeric material by heating it to a temperature of 140–180° C. for about 30–90 minutes to increase mechanical stability at elevated temperatures.

3,049,518
POLYAMIDES FROM N,N'-BIS (3-AMINOPHENYL)-ISOPHTHALAMIDE

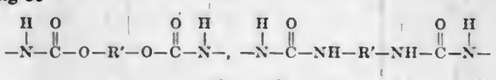
Curtis Wayne Stephens, Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

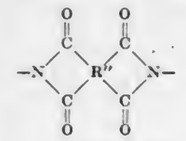
No Drawing. Filed Mar. 31, 1960, Ser. No. 18,876
4 Claims. (Cl. 260—78)

3. An alternating copolymer consisting essentially of recurring units of the formula:

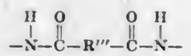


wherein X is a radical selected from the group consisting of





and



wherein R' is a divalent hydrocarbon radical, R'' is a tetravalent hydrocarbon radical, and R''' is a radical selected from the group consisting of tetramethylene, paraphenylene and octamethylene.

3,049,519
EMULSION POLYMERIZATION IN THE PRESENCE OF A CATALYST COMPRISING AN ARYLCYCLOHEXANE HYDROPEROXIDE

William B. Reynolds, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 27, 1949, Ser. No. 101,676
11 Claims. (Cl. 260—84.1)

1. In a process for producing a solid polymeric product by polymerizing a conjugated diolefin in aqueous emulsion in the presence of an organic hydroperoxide as an oxidizing constituent of a polymerization catalyst composition which also comprises a reducing component, the improvement which comprises effecting said polymerization at a reaction temperature below 10° C. using a phenylcyclohexane hydroperoxide prepared by oxidation with free oxygen of phenylcyclohexane as said organic hydroperoxide.

3,049,520
PROCESS FOR THE PREPARATION OF AN AUXILIARY SUSPENDING AGENT TO BE USED FOR OBTAINING, BY A SUSPENSION POLYMERIZATION PROCESS, POLYVINYL CHLORIDE HAVING A HIGH POROSITY AND A NON-GLASSLIKE SURFACE

Giorgio Gatta and Gianni Benetta, Milan, Italy, assignors to Sicedison S.p.A., Milan, Italy, a company of Italy

No Drawing. Filed Aug. 27, 1959, Ser. No. 836,346
Claims priority, application Italy Dec. 17, 1958
3 Claims. (Cl. 260—85.7)

1. The method of preparing an auxiliary suspending agent suitable for employment in the suspension-polymerization of vinyl chloride, comprising refluxing a mixture of from 70 to 97 parts by weight of vinyl acetate and 3 to 30 parts by weight of allyl alcohol in 25 to 400 parts of water containing an organic polymeric suspending agent, said refluxing carried out for a period of from 18 to 48 hours in a temperature range of 40° to 67° C. and at atmospheric pressure, said refluxing carried out in the presence of a polymerization catalyst selected from the group consisting of: hydrogen, lauroyl, benzoyl, tolyl, acetyl, and propionyl peroxide, and of 2-azodiisobutyronitrile and diazoaminobenzene.

3,049,521
POLYMERIZATION OF VINYL CHLORIDE

Ward J. Burkholder, Houston, Tex., assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,676
5 Claims. (Cl. 260—87.1)

1. The method of producing a high quality polymer which comprises mixing about 0.01 to 0.5% by weight of monomer of ammonium bicarbonate in water and dispersing in the resultant aqueous solution a polymerizable monomer selected from the group consisting of vinyl chloride and mixtures of vinyl chloride and vinyl acetate, using a suspending agent selected from the group consisting of gelatin and mixtures of gelatin, and at least one of methyl cellulose, methyl hydroxy isopropyl cellulose, carboxy methyl cellulose, polyvinyl alcohol, and sodium alginate, said suspending agent being present in an amount sufficient to impart to the aqueous reaction mixture the characteristics of a dispersion without emulsification, and suspension polymerizing the monomer while so suspended with the aid of a small amount of a peroxide polymerization catalyst at a temperature within the range of about 90° to 180° F.

3,049,522
FORMATION OF BEAD POLYMERS IN PRESENCE OF CATALYST CONTAINING DICYCLOPENTADIENYLIRON

Arthur I. Lowell, Plainfield, Joseph J. Latimer, Pittstown, and Alio J. Buselli, New Providence, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed May 10, 1957, Ser. No. 658,215
7 Claims. (Cl. 260—89.1)

1. A process for preparing a polymerized ethylenically unsaturated monomer in bead form which comprises admixing an ethylenically unsaturated monomer, water in an amount of 30–800 parts per 100 parts of monomer, a dispersing agent in an amount of 0.005–0.2% by weight of monomer and water, and a catalyst system including

0.005–0.1 part of dicyclopentadienyliron per 100 parts of monomer, 0.01–1.0 part of an organic peroxide per 100 parts of monomer, and 0.005–1.0 part of a water-soluble reducing agent selected from the group consisting of sodium formaldehyde sulfoxylate, sodium salt of p-toluene sulfinic acid, chlorobenzene sulfinic acid, zinc formaldehyde sulfoxylate, sodium bisulfite and sodium thiosulfate per 100 parts of monomer and agitating the resulting mixture to polymerize the monomer, maintaining the polymerization temperature below 50° C. during the progress of the polymerization in the formation of polymer beads, and recovering the resulting beads of polymerized ethylenically unsaturated monomer.

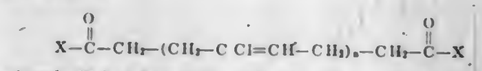
4. A process for preparing polyvinyl acetate in bead form which comprises admixing vinyl acetate, water, a dispersing agent and a catalyst system including dicyclopentadienyliron as a catalyst promoter, an organic peroxide, and a water-soluble reducing agent selected from the group consisting of sodium formaldehyde sulfoxylate, sodium salt of p-toluene sulfinic acid, chlorobenzene sulfinic acid, zinc formaldehyde sulfoxylate, sodium bisulfite and sodium thiosulfate, agitating the resulting mixture to polymerize vinyl acetate, maintaining the polymerization temperature below 50° C. during the progress of the polymerization in the formation of polymer beads and recovering the resulting beads of polyvinyl acetate.

3,049,523
OZONOLYSIS OF POLYCHLOROPRENE

Philip A. Roussel, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 15, 1960, Ser. No. 8,518
3 Claims. (Cl. 260—92.3)

1. A process for the preparation of a polymer having the formula



wherein X is selected from the group consisting of —OH and —Cl, there being an average of one —OH for each —Cl, and n is an integer of from about 20 to 200, which comprises dissolving a high molecular weight polychloroprene in a solvent, introducing ozone into the solution and, after the desired amount of ozone has reacted, removing the solvent and recovering the polymer, the desired amount of ozone being determined by the following ratio

$$\frac{\text{Number average molecular weight of starting material}}{\text{Number average molecular weight of final product}} - 1 = \text{number moles of ozone}$$

3,049,524
POLYMERIZATION OF STYRENE

Sterling E. Voltz, Chester, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Oct. 24, 1958, Ser. No. 769,314
2 Claims. (Cl. 260—93.5)

1. A process for the polymerization of styrene which comprises contacting styrene admixed with an inert diluent with an aluminum alkyl dichloride wherein the alkyl group has from two to four carbon atoms, said aluminum alkyl dichloride being the sole catalyst for the polymerization reaction.

3,049,525
POLYDIVINYLBENZENE

Calvin J. Benning, Kensington, Md., assignor to W. R. Grace & Co., Clarksville, Md., a corporation of Connecticut

No Drawing. Filed June 25, 1959, Ser. No. 822,757
2 Claims. (Cl. 260—93.5)

1. The process of preparing polydivinylbenzene comprising contacting divinylbenzene with a catalyst consisting essentially of $TiCl_3$ in an inert hydrocarbon solvent at a temperature in the range of 25–100° C.

3,049,526
POLYMERIZATION PROCESS

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Mar. 4, 1958, Ser. No. 718,949
23 Claims. (Cl. 260—93.7)

1. The method of polymerizing to a solid polymer an alpha olefin having no less than 2 carbon atoms and no more than 8 carbon atoms per molecule to a solid polymer product that comprises reacting said olefin in an inert solvent containing a catalyst comprising the preformed aluminum halide-metal reaction product obtained by reacting under inert conditions and at a temperature in the range of from room temperature to about 400° C. a mixture consisting essentially of an aluminum halide and a metal selected from the group consisting of cobalt and nickel, said mixture containing 0.01–100 parts by weight of said aluminum halide per part by weight of said metal.

17. A polymerization catalyst comprising the aluminum halide-metal reaction product obtained by the step of reacting, in an inert medium and in an absence of olefin, a mixture consisting essentially of an aluminum halide and a metal selected from the class consisting of cobalt and nickel, said mixture containing 0.01–100 parts by weight of said aluminum halide per part by weight of said metal.

3,049,527
PROCESS AND APPARATUS FOR THE CONTINUOUS REACTION OF GASEOUS REACTANTS

Roger Van Nest Powelson, Ambler, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Dec. 8, 1959, Ser. No. 858,214
5 Claims. (Cl. 260—93.7)

1. A process for conducting chemical reactions which comprises continuously passing a liquid downwardly over a series of foraminous members arranged one above the other while passing a reactive gas upwardly through the liquid at a rate sufficiently high to prevent the liquid from flowing through the foraminous member, exothermically reacting the gas while in contact with said liquid to form a non-gaseous reaction product, adding further reactive gas below each foraminous member in an amount sufficient to replace the gas reacted on the next lower foraminous member, removing heat resulting from the reaction from the liquid above each plate, and recovering a reaction product from the liquid above the lowest foraminous member.

3,049,528
POLYMERIZATION OF BUTADIENE-1,3 HYDROCARBONS

Hugh E. Diem, Wadsworth, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 30, 1958, Ser. No. 783,696
6 Claims. (Cl. 260—94.2)

6. The method of producing a high 1,4 polymer of a conjugated diene hydrocarbon containing up to 5 carbon atoms, which comprises polymerizing said diene hydrocarbon in a hydrocarbon solvent at a temperature of about 0° C. to about 75° C. in the presence of a finely divided metallic catalyst made up of an alloy of lithium and potassium metals in the weight ration between about 5,000:1 and about 20:1, the proportion of said catalyst utilized representing from about 0.03 part to about 0.5 part by weight, as metallic lithium, per about 100 parts by weight of said conjugated diene hydrocarbon, and in the additional presence of methyl aniline to inhibit 1,2 polymerization induced by the potassium content of said catalyst.

3,049,529
PROCESS FOR PRODUCTION OF OLEFIN POLYMERS

John E. Wicklatz and Charles W. Moberly, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 12, 1957, Ser. No. 695,510
9 Claims. (Cl. 260—94.9)

1. In a method for polymerizing ethylene in the presence of a catalyst comprising tetrabutyl titanate and an organometal compound selected from the group consisting of ethylaluminum dichloride, diethylaluminum chloride, and a mixture of ethylaluminum dichloride and diethylaluminum chloride, the improvement which comprises initially contacting said two components at a temperature in the range of 100 to 150° F. for a period of time in the range of 15 to 60 minutes, said contacting occurring under at atmosphere of a fluid which prevents catalyst deactivating materials from coming into contact with said catalyst components, thereafter contacting said components with said ethylene at a temperature in the range of 140 to 250° F. and a pressure in the range of 100 to 1000 p.s.i.g., said initial contacting temperature being at least 30° F. below that at which said components are contacted with ethylene and recovering the polymer so produced.

3,049,530
SOYBEAN TRYPSIN INHIBITORS AND METHOD OF ISOLATING THE SAME

Joseph J. Rackis and Allan K. Smith, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

Filed Aug. 25, 1959, Ser. No. 836,044
2 Claims. (Cl. 260—123.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for obtaining soybean trypsin inhibitor fractions from soybean whey which comprises providing a diethylaminoethyl cellulose chromatography column buffer-equilibrated with 0.01 M phosphate to pH 7.6; passing soybean whey through the column to cause proteins in the whey to be adsorbed on said column; stepwise eluting the column first with 0.034 M sodium chloride in 0.01 M phosphate buffer and then with 0.13 M sodium chloride in said buffer to remove unwanted components of the whey from the column; next eluting with 0.17 M sodium chloride in said buffer, approximately the first half of the corresponding effluent being discarded while retaining the remaining fraction; then eluting the column with 0.25 M sodium chloride in said buffer, approximately the first half of the corresponding effluent being discarded while retaining the remaining fraction; separately dialyzing the said retained fractions against distilled water, and separately lyophilizing the dialyzed fractions to recover soybean trypsin inhibitor fractions.

3,049,531
CATALYZED PROCESS FOR THE MODIFICATION OF OLEFIN POLYMERS

William M. Le Suer, Cleveland, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Filed Feb. 23, 1960, Ser. No. 10,104
9 Claims. (Cl. 260—139)

1. The process of preparing phosphorus- and sulfur-containing compositions which comprises heating at a temperature of above about 140° C. a mixture of an olefin polymer, phosphorus trichloride, sulfur, and an active hydrogen compound selected from the group consisting of water and hydrogen sulfide, the molar ratio of the total amounts of sulfur and the active hydrogen compound used to the amount of phosphorus trichloride used being at least about 1:1, and the molar ratio of the amount of the active hydrogen compound to the amount of sulfur used bearing from about 0.05:1 to about 2:1.

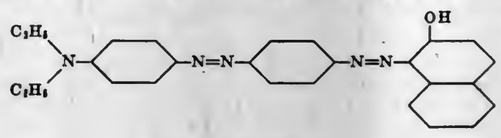
9. The product of the process of claim 1.

3,049,532
DIS AZO DYES

Ermanno Gaetani, Milan, Italy, assignor to Aziende Colori Nazionali Affini ACNA S.p.A., Milan, Italy, a corporation of Italy

No Drawing. Filed Apr. 14, 1960, Ser. No. 22,120
Claims priority, application Italy Apr. 16, 1959
1 Claim. (Cl. 260—191)

A dis azo dye, insoluble in water, having the formula

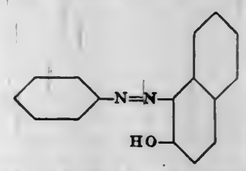


3,049,533
OIL SOLUBLE ORANGE AND YELLOW DYES

Penn F. Spitzer, Jr., Bound Brook, and Fridtjof Aagaard, Rahway, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 18, 1960, Ser. No. 15,795
2 Claims. (Cl. 260—197)

2. In the process of preparing an oil soluble, dustless, non-caking form of the dye of the formula



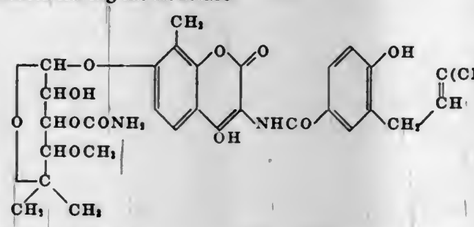
which comprises rotating a drum immersed in a melt of said dye and fracturing into flakes the thin film of solid dye so formed, the improvement of keeping the said melt at a temperature of 130–175° C., keeping the drum surface at a temperature of 70–90° C. and having the said drum in contact with said melt to such a depth that the film of melt picked up is no more than 1 mm. in thickness.

3,049,534
ANTIBIOTIC AND PROCESS OF PRODUCING THE SAME

Hyman Wallick, Elizabeth, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

Filed Mar. 7, 1956, Ser. No. 570,184
13 Claims. (Cl. 260—210)

1. A compound from the group consisting of novobiocin having the structure



and salts thereof.

11. A process for producing novobiocin which comprises cultivating *Streptomyces spheroides* in an aqueous nutrient medium under aerobic conditions until substantial antimicrobial activity is imparted to said medium, and recovering said novobiocin from the resulting fermented broth.

3,049,535
DIHYDRODESOXYSTREPTOMYCINS AND PROCESS FOR PREPARING SAME

Teljiro Yabuta, Hiroshi Ikeda, and Kenji Shiroyanagi, Tokyo, Hatsuko Ikeda, Fujisawa City, and Itsuo Fujimaki, Mitsuhiko Katayama, Keiichi Tsuji, and Tomonori Sato, Tokyo, Japan, assignors to Kabushiki Kaisha Kagoku Kenkyusho, Tokyo, Japan

No Drawing. Filed Oct. 8, 1958, Ser. No. 765,956
Claims priority, application Japan Jan. 9, 1958
9 Claims. (Cl. 260—210)

1. Dihydrodesoxyhydroxystreptomycin in which the third carbon atom of the streptose chain comprises the group



3,049,536
METHOD FOR PRODUCING INOSINE

Ferdinand Reiff, Mannheim-Waldhof, Gerhard Huber, Frankfurt, and Kurt Holle, Mannheim-Waldhof, Germany, assignors to Zellstoff Fabrik Waldhof, Mannheim-Waldhof, Germany

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,716
Claims priority, application Germany June 27, 1956
32 Claims. (Cl. 260—211.5)

16. In a method of producing and recovering inosine, the step of treating a solution of adenosine with nitrous acid in an amount in excess of the amount theoretically necessary to convert all of said adenosine to inosine so as to obtain a reaction solution containing inosine and being substantially free of adenosine.

3,049,537
WATER-SOLUBLE CELLULOSE ETHERS AND PROCESS

Eugene D. Klug, Wilmington, Del., and William D. Roberson, Hopewell, Va., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,135
14 Claims. (Cl. 260—232)

1. In the process of preparing water-soluble hydroxyalkyl cellulose ethers wherein cellulosic material is contacted with a base, the cellulosic material is etherified, and the cellulose ether is purified by neutralizing the base and removing the salts formed and other impurities with a solvent therefor, the improvement in the purification which comprises neutralizing the base with certain acids followed by removing the impurities from the ether with certain solvents, the combination of acids and solvents being selected from the group consisting of (1) propionic acid in combination with a solvent selected from the group consisting of isopropyl alcohol, tertiary butyl alcohol, and secondary butyl alcohol, and (2) benzoic acid, nitric acid, and acetic acid-nitric acid mixture in combination with a solvent selected from the group consisting of isopropyl alcohol, tertiary butyl alcohol, secondary butyl alcohol, acetone, and dioxane, each of said solvents in (1) and (2) above being employed as 70%–90% aqueous solutions thereof, the proportions of acids in said acetic acid-nitric acid mixture being about 98%–80% nitric and about 2%–20% acetic by weight thereof, respectively.

3,049,538
PROCESS FOR THE STABILIZATION OF STARCH ETHERS

Robert A. Brobst, Harbor Beach, Mich., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,193
9 Claims. (Cl. 260—233.3)

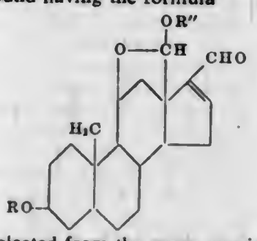
1. In the process of making starch ethers wherein starch is contacted with an alkali, the alkali starch is etherified and the excess alkali is neutralized, the improvement which comprises employing nitric acid as the neutralizing agent whereby a product of substantially increased stability to discoloration is obtained.

3,049,539
INTERMEDIATES AND PROCESSES FOR THE PRODUCTION THEREOF, USED IN THE SYNTHESIS OF ALDOSTERONE

William S. Johnson, Madison, Wis., and William F. Johns, Morton Grove, Ill., assignors to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin

No Drawing. Filed July 29, 1957, Ser. No. 674,565
25 Claims. (Cl. 260—239.55)

1. A compound having the formula



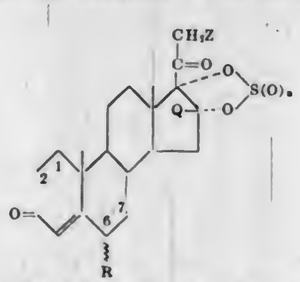
wherein R is selected from the group consisting of hydrogen and hydrocarbon carboxylic acyl radicals having from one to about eight carbon atoms, and R'' is selected from the group consisting of hydrogen and lower-alkyl radicals.

3,049,540
16α,17α-CYCLIC ESTERS OF STEROIDS OF THE PREGNENE SERIES

Josef Fried, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 2, 1960, Ser. No. 25,866
18 Claims. (Cl. 260—239.55)

1. A compound represented by the following general formula:



wherein the 1,2 and 6,7 positions are connected by a linkage selected from the group consisting of a single and a double bond; Q is selected from the group consisting of hydrogen and methyl; R is selected from the group consisting of hydrogen, lower alkyl, fluoro and chloro; *n* is an integer selected from the group consisting of one and two; and Z is a member selected from the group consisting of hydrogen, halogen, hydroxy and the acyloxy radical of a hydrocarbon carboxylic acid of less than ten carbon atoms.

3,049,541
TRANSFORMATION OF CEPHALOSPORIN C

Edward Penley Abraham and Guy Geoffrey Frederick Newton, Oxford, and Clifford William Hale, Clevedon, England, assignors to National Research Development Corporation, London, England, a British corporation

No Drawing. Filed Mar. 12, 1959, Ser. No. 798,855
Claims priority, application Great Britain Mar. 17, 1958
5 Claims. (Cl. 260—243)

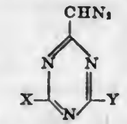
5. The product produced by subjecting an aqueous solution of Cephalosporin C to the action of hydrochloric acid of a normality of from 0.1 to 1 N for a prolonged period of time of about 1 to 6 days, said product being a transformation product of the Cephalosporin C designated as Cephalosporin C_C and having a greater activity against *Staph. aureus* than against *Salm. typhi* and showing maximum absorption in an ultra-violet absorption spectrum at 255 mμ and separating the Cephalosporin C_C thus produced from copresent Cephalosporin C.

3,049,542
DIAZOMETHYLTRIAZINE DERIVATIVES

Francis Leslie Rose and James Allan Hendry, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Oct. 31, 1955, Ser. No. 544,081
Claims priority, application Great Britain Nov. 10, 1954
6 Claims. (Cl. 260—248)

1. New diazomethyltriazine derivatives of the formula:



wherein X and Y are selected from the group consisting of halogen, OR, SR, NHR and NRR′ wherein R and R′ are selected from the group consisting of hydrogen, lower alkyl, carboalkoxy-lower alkyl, dialkylamino lower alkyl, phenyl, halophenyl, nitrophenyl, phenyl substituted with a carboxylic acid group and, where R and R′ are joined together with the adjacent nitrogen atom, ethylene imino, piperidino and morpholino.

2. 2-diazomethyl-4:6-dichloro-1:3:5-triazine.

3,049,543
MANUFACTURE OF CYCLONITE

John A. Ruth, Carterville, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed June 18, 1958, Ser. No. 742,949
3 Claims. (Cl. 260—248)

1. In a process for the preparation of cyclonite by mixing hexamine and nitric acid having a concentration of at least 97.5% at a temperature up to about 30° C., adding ammonium nitrate to the hexamine-acid mixture, permitting the temperature of the reaction mixture to rise to about 85° C., and removing the resultant cyclonite therefrom by distillation and filtration of the spent acid, the improvement comprising distilling the spent acid so as to precipitate substantially all of the resultant cyclonite therefrom, cooling and filtering the spent acid to remove the precipitated cyclonite, completing the distillation of the spent acid to remove substantially all of the water therefrom, the water removal being conducted in the presence of gaseous ammonia and at a temperature at least equivalent to the melting point of ammonium nitrate so as to form molten ammonium nitrate, and adding the molten ammonium nitrate thus obtained with any entrained cyclonite directly to a mixture of hexamine and nitric acid for the preparation of additional cyclonite.

3,049,544
METHOD FOR THE PREPARATION OF 2,4-DIAMINO-5-BENZYL PYRIMIDINES

Paul Stenbuck, Westchester, N.Y., and Harold Malcolm Hood, London, England, assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed July 21, 1960, Ser. No. 44,250
Claims priority, application Great Britain Sept. 3, 1959
5 Claims. (Cl. 260—256.4)

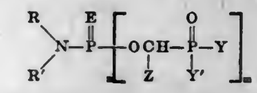
1. The method of preparing 2,4-diamino-5-benzyl pyrimidines which comprises condensing an aromatic aldehyde with a β-lower alkoxy propionitrile in the presence of a basic catalyst to give a mixture of β-alkoxy-α-arylylidene propionitrile and its tautomers and reacting this mixture with guanidine base.

3,049,545
PHOSPHINYLHYDROCARBYLOXY PHOSPHORAMIDATES AND PHOSPHORODIAMIDATES

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,160
7 Claims. (Cl. 260—293.4)

1. A compound of the formula



wherein R is an alkyl of from 1 to 5 carbon atoms; R′ is selected from the group consisting of alkyl of from 1 to 5 carbon atoms, phenyl, tolyl, benzyl, 2,4-dimethylphenyl, and in which R and R′ taken together with the nitrogen atom to which they are attached denote a heterocyclic of the group consisting of pyrrolidyl, and piperidyl; *n* is an integer of from 1 to 2; Z is selected from the group consisting of hydrogen, alkyl of from 1 to 8 carbon atoms, benzyl, phenyl, tolyl, and p-ethylphenyl; Y and Y′ are each selected from the group consisting of alkoxy, chlorinated alkoxy groups of from 1 to 8 carbon atoms, and phenyl; *m* is the integer 1 when *n* is 2, and is the integer 2 when *n* is 1; and E is selected from the group consisting of oxygen and sulfur.

3,049,546
PROCESS FOR THE DECARBALKOXYLATION OF ALKYL ESTERS OF UNSATURATED, NITROGEN-CONTAINING CARBOXYLIC ACIDS

Ulrich Renner, Riehen, near Basel, and Daniel A. Prins, Oberwil, Basel Land, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 4, 1960, Ser. No. 12,697
Claims priority, application Switzerland Mar. 5, 1959
6 Claims. (Cl. 260—294.7)

1. 12,13-dimethoxy ibogamine.

2. Process for the decarbalkoxylation of an indole alkaloid selected from the group consisting of voacangine, isovoacangine, voacristine and 12,13-dimethoxy coronaridine, comprising heating, at reflux temperature, said alkaloid in a solvent selected from the group consisting of lower alkanol, lower alkandiol, lower alkoxy ethanol, diethylene glycol, lower monoalkyl ether of diethylene glycol, lower dialkyl ether of diethylene glycol and dioxan, with a base of the formula

$$R_1—NH_2$$

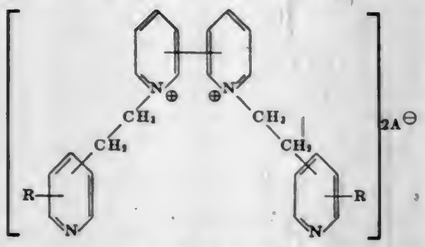
wherein R_1 represents the amino group, lower alkylamino, lower alkyl, lower aminoalkyl, lower hydroxyalkyl, cycloalkyl and benzyl.

3,049,547
DIPYRIDYL QUATERNARY SALTS

Francis E. Cislak, Indianapolis, Ind., assignor to Reilly Tar & Chemical Corporation, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed May 31, 1961, Ser. No. 113,633
6 Claims. (Cl. 260—294.8)

1. The dipyridyl quaternary salts having the formula:



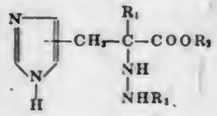
wherein R is a member of the group consisting of hydrogen and lower alkyl and $A^{\ominus}$ represents an inorganic acid anion.

3,049,548
CERTAIN ALPHA-HYDRAZINO-IMIDAZOLE-PROPIONIC ACID DERIVATIVES

Meyer Sletzinger, North Plainfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 23, 1961, Ser. No. 83,885
9 Claims. (Cl. 260—309)

1. A compound selected from the group consisting of (1) compounds of the formula—



in which R_1 and R_2 are selected from the group consisting of hydrogen and lower alkyl, and R_3 is selected from the group consisting of hydrogen and lower alkanoyl, the side chain being attached to one of the two vicinal ring carbons and (2) non-toxic salts of compounds of the group defined in (1).

3,049,549
LIPOIC ACID AND DERIVATIVES

Lester J. Reed, Austin, Tex., and Irwin C. Gunsalus, Urbana, Ill., assignors to Research Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 22, 1954, Ser. No. 417,918
7 Claims. (Cl. 260—327)

1. Compounds of the group consisting of α-lipoic acid; β-lipoic acid, the lower alkyl esters and the water-soluble non-toxic salts thereof.

3,049,550
PROCESS FOR THE PRODUCTION OF 3-AMINO-4,7-DIHYDROXYCOUMARIN HYDROCHLORIDE

Claude Spencer, Chatham, and Edward Walton, Scotch Plains, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Apr. 19, 1956, Ser. No. 579,401. Divided and this application Jan. 13, 1960, Ser. No. 7,504
2 Claims. (Cl. 260—343.2)

1. A process which comprises reacting 4,7-dihydroxycoumarin with nitrous acid to produce 2,4-dioxo-7-hydroxy-3-oximinochroman, and reducing this compound by reaction with hydrogen in the presence of a noble metal catalyst and hydrochloric acid to produce 3-amino-4,7-dihydroxycoumarin hydrochloride.

3,049,551
NOVOBIOCIN INTERMEDIATE AND PROCESS THEREFOR

Edward Walton, Scotch Plains, and Claude Spencer, Chatham, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Dec. 26, 1957, Ser. No. 705,139. Divided and this application Mar. 24, 1960, Ser. No. 21,847
3 Claims. (Cl. 260—343.2)

1. A process which comprises reacting 2-methylresorcinol with a lower alkyl ester to cyanoacetic acid under essentially anhydrous conditions in the presence of zinc chloride and hydrogen chloride to produce 7-hydroxy-4-imino-8-methyl-2-oxochroman, heating this compound with 50% sulfuric acid to produce 4,7-dihydroxy-8-methylcoumarin, treating this compound with nitrous acid to produce 2,4 - dioxo - 7 - hydroxy - 8 - methyl - 3 - oximinochroman, and reducing this compound by reaction with hydrogen in the presence of a noble metal catalyst and hydrochloric acid to produce 3-amino-4,7-dihydroxy-8-methylcoumarin hydrochloride.

3. 2,4 - dioxo - 7 - hydroxy - 8 - methyl - 3 - oximinochroman.

3,049,552
FURFURYL ISOCYANATES

John D. Garber, Westfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 3, 1960, Ser. No. 66,936
4 Claims. (Cl. 260—346.1)

1. 5-isocyanatomethyl-2-furfuryl isocyanate.

3,049,553
PROCESS FOR THE PRODUCTION OF THE REDUCTION PRODUCTS OF THE VITAMIN D_2, VITAMIN D_3, AND THE CORRESPONDING IRRADIATED PROVITAMINS

Friedrich Schenck, Wuppertal-Elberfeld, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 9, 1960, Ser. No. 7,530
Claims priority, application Germany Feb. 11, 1959
10 Claims. (Cl. 260—397.2)

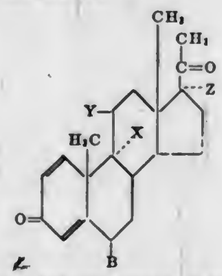
5. A process for producing the reduction product of a member selected from the group consisting of vitamin D_2 and vitamin D_3 which comprises reacting said member with sodium and a compound selected from the group consisting of glacial acetic acid, propionic acid, ethyl malonate, phenol and boroglycerin glycerite.

3,049,554
9,11-DIHALOGENO-3,20-DIKETOPREGNANES AND PROCESSES FOR THEIR MANUFACTURE

David H. Gould, Leonia, and Hans Reimann, Bloomfield, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed June 1, 1959, Ser. No. 817,048
9 Claims. (Cl. 260—397.3)

1. Compounds selected from the group consisting of steroids having the formula:



and the 1,2-dihydro analogs thereof, wherein B is a member of the group consisting of hydrogen and methyl; X

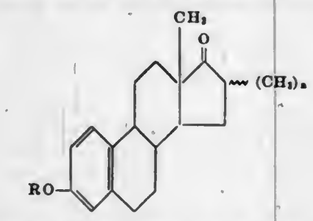
and Y are halogen pairs of the group consisting of (F, F), (F, Cl), (F, Br), and (Cl, Br) respectively; and Z is a member of the group consisting of H, OH, and lower alkanoyloxy.

3,049,555
3-ALKOXY-16-METHYL-1,3,5(10)-ESTRATRIEN-17-ONES

David A. Tyner, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 22, 1959, Ser. No. 861,224
4 Claims. (Cl. 260—397.4)

1. A compound of the structural formula



wherein R is a lower alkyl radical of less than three carbon atoms; *n* is a positive integer less than 3.

3,049,556
IMPROVED PROCESS FOR THE PRODUCTION OF FLUORO HYDROXY STEROIDS

Ralph F. Hirschmann, Scotch Plains, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 12, 1958, Ser. No. 773,173
3 Claims. (Cl. 260—397.45)

1. In a process for preparing a compound selected from the group consisting of 9α-fluoro-11β,17α,21-trihydroxy-20-keto-pregnanes and 12α-fluoro-11β,17α,21-trihydroxy-20-keto-pregnanes by reacting the corresponding oxido steroid selected from the group consisting of 9β,11β-oxido and 11β,12β-oxido steroids with hydrogen fluoride, the improvement which comprises reacting said oxide steroid with a reagent consisting essentially of a mixture of hydrogen fluoride and tetrahydrofuran wherein the ratio of hydrogen fluoride to tetrahydrofuran is in excess of 1:1, maintaining said oxido steroid in contact with said mixture at a temperature of from about −60° C. to 20° C., quenching the resulting reaction mixture with aqueous alkali thereby precipitating the fluorohydroxy steroid, evaporating the tetrahydrofuran, and recovering the precipitated fluorohydroxy steroid.

3,049,557
TELOMERIZATION OF UNSATURATED HYDROCARBONS WITH MONO-ALPHA-SUBSTITUTED CARBOXYLIC ACID ESTERS OF BETA-NEO POLYALCOHOLS AND TELOMERIC PRODUCTS OBTAINED THEREBY

Donald D. Emrick, Shaker Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed May 23, 1960, Ser. No. 30,761
19 Claims. (Cl. 260—410.6)

8. A process for producing a free-flowing liquid olefin telomer composed of carbon, hydrogen, and oxygen having a molecular weight below 2,000 and containing in the molecule a β-neopolyalcohol-organic α-substituted carboxylic acid ester unit, which comprises telomerizing an α-olefin taxogen having from about two to about twelve carbon atoms with a β-neopolyalcohol ester of an organic carboxylic acid in the presence of a free radical initiator capable of initiating the telomerization at a temperature at which an evoluation of free radicals from the initiator is obtained.

3,049,558
MANUFACTURE OF TETRAMETHYLLEAD

Shirl E. Cook and Thomas O. Sistrunk, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,609
6 Claims. (Cl. 260—437)

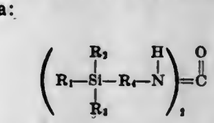
1. In the process of catalytically alkylating a sodium-lead alloy with methyl chloride, the improvement according to which methyl chloride is the only alklating agent used, the alkylation is carried out in a liquid hydrocarbon having an atmospheric boiling point of from about 90 to 150° C., and being in proportions of from at least about 5 parts to 25 parts by weight per 100 parts of lead in the alloy charged, and less than 50 volume percent of the methyl chloride, the methyl chloride being fed in proportions of from about 5 percent excess plus sufficient methyl chloride to occupy as vapor the free space of the reaction system, to about 330 percent excess, the mean reaction temperature being from about 70 to 130° C., the reaction pressure being the autogenous pressure of the reactants and the reaction time being not more than about seven hours.

3,049,559
UREAS

Stewart R. Montgomery, El Dorado, Ark., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 20, 1957, Ser. No. 704,005
10 Claims. (Cl. 260—448.2)

1. As new compositions of matter, ureas represented by the formula:



wherein R_1 represents an aryl radical, R_2 and R_3 represent a radical selected from the group consisting of alkyl and aryl radicals and R_4 represents an alkylene radical and wherein said alkyl and alkylene radicals contain from 1 to 18 carbon atoms.

3,049,560
PROCESS FOR THE PRODUCTION OF BETA-ALKOXY SUBSTITUTED CARBOXYLIC ACID ESTERS

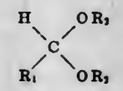
Eduard Enk, Fritz Knörr, and Hellmuth Spes, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany

Filed Aug. 3, 1959, Ser. No. 831,342
Claims priority, application Germany Aug. 4, 1958
12 Claims. (Cl. 260—484)

1. A process for the production of beta alkoxy carboxylic acid esters from a ketene of the formula

$$RCH=C=O$$

in which R is selected from the group consisting of hydrogen and alkyl groups and an acyclic aliphatic acetal of the formula



in which R_1 is selected from the group consisting of hydrogen and alkyl radicals and R_2 is an alkyl radical at a temperature between −50 and +150° C. in the presence of 0.1 to 10% based upon the total weight of the reactants of at least one catalyst selected from the group consisting of arsenic pentafluoride, titanium tetrafluoride, antimony pentafluoride, complex fluoric acids of boron and phosphorus and mixtures of complex fluoric acids of boron and phosphorus with boron trifluoride.

3,049,561
PROCESS FOR HYDROXYNAPHTHALENE-ALKANOIC ACIDS

William B. Hardy, Bound Brook, Frank M. Furman, Somerset, and Delton W. Hein, Basking Ridge, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 27, 1959, Ser. No. 829,558
8 Claims. (Cl. 260—520)

1. A process of producing hydroxynaphthyl alkanoic acids which comprises heating a hydroxy substituted naphthalene in which there is on the same ring with a hydroxyl an unsubstituted position, the said unsubstituted position and the said hydroxyl being adjacent alpha and beta positions, with a mercapto alkanoic acid selected from the group consisting of thioglycolic and β-mercapto-propionic acids to at least 80° under strongly alkaline, substantially anhydrous conditions and acidifying the product thus formed.

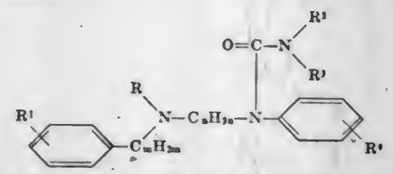
6. The compound, 1-hydroxy-2-naphthaleneacetic acid.

3,049,562
1-(ARALKYL, LOWER ALKYLAMINO LOWER ALKYL), 1-PHENYL, 3,3-DILOWER ALKYL-UREAS

William B. Wright, Jr., Woodcliff Lake, N.J., and Herbert J. Brabander, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 9, 1961, Ser. No. 94,432
7 Claims. (Cl. 260—553)

1. A member of the group consisting of compounds of the formula:



in which R is a lower alkyl radical, R^2 and R^3 are lower alkyl and when taken together with the nitrogen atom are members of the group consisting of pyrrolidino, morpholino, piperidino and hexamethylenimino radicals, R^1 and R^4 are members of the group consisting of hydrogen, halogen, lower alkoxy and lower alkyl radicals, *m* is an integer from 1 to 3, *n* is an integer from 2 to 3 and pharmaceutically acceptable acid addition salts thereof.

3,049,563
UREA SYNTHESIS

Julius H. Bochinski, La Habra, and Arthur L. Kohl and Robert C. Oliver, Whittier, Calif., assignors to The Fluor Corporation, Ltd., Los Angeles, Calif., a corporation of California

Filed Apr. 5, 1957, Ser. No. 650,876
12 Claims. (Cl. 260—555)

1. The process for synthesizing urea that includes feeding ammonia into a stripping zone for upward flow therein into a reaction zone, feeding carbon dioxide into the lower portion of the reaction zone for admixture with ammonia from the stripping zone and flowing the carbon dioxide and ammonia concurrently in an aqueous stream upwardly through the reaction zone and therein reacting the carbon dioxide and ammonia to form ammonium carbamate and urea, passing said aqueous stream including liquid and gaseous components from the reaction zone into a separating zone, passing the separated liquid including ammonium carbamate and urea from said separating zone to said stripping zone, passing a stream of separated carbon dioxide and ammonia from said separating zone through a condensing zone and returning to the reaction zone the cooled condensing zone effluent, heating the stripping zone liquid to supplement the effect of the ammonia in promoting conversion of carbamate to carbon dioxide and ammonia, maintaining the reaction and stripping zones at substantially the same pressure, and withdrawing the urea from the stripping zone.

3,049,564
2-PHENYLBENZAMIDE DERIVATIVES AND PROCEDURES FOR MAKING SAME

Wilson Shaw Waring, Macclesfield, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed July 9, 1959, Ser. No. 825,872
Claims priority, application Great Britain July 23, 1958
3 Claims. (Cl. 260—558)

1. A 2-phenylbenzamide derivative of the formula:

wherein R is selected from the group consisting of hydrogen, the carbamyl radical —$CONH_2$, lower alkyl and alkanoyl of not more than 4 carbon atoms, and X and Y are halogen atoms.

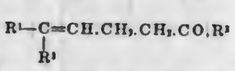
3. The compound 2-(p-bromophenyl)-5-chlorobenzamide.

3,049,565
PRODUCTION OF UNSATURATED KETONES

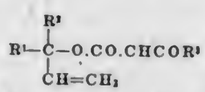
Richard Norman Lacey, Hull, and Peter Nayler, Willerby, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Dec. 17, 1959, Ser. No. 860,083
Claims priority, application Great Britain Feb. 20, 1959
1 Claim. (Cl. 260—595)

A process of producing an unsaturated ketone having the formula



which comprises contacting at a temperature in the range of 100° to 300° C. an allyl acetoacetate representable by the formula

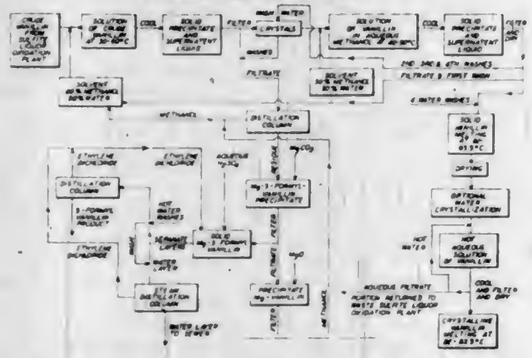


with aluminum tri-(methyl salicylate), wherein R^1 and R^2 are selected from the group consisting of lower alkyl groups and hydrogen atoms and R^3 is a lower alkyl group.

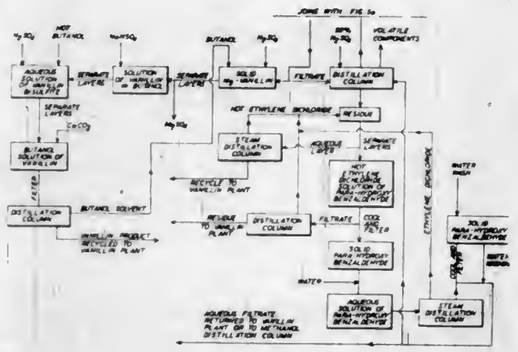
3,049,566
VANILLIN PURIFICATION

Eugene W. Schoeffel, Kronenwetter, Wis., assignor, by mesne assignments, to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Oct. 17, 1958, Ser. No. 767,950
2 Claims. (Cl. 260—600)



1. A process for purifying crude vanillin comprising the steps: dissolving said crude vanillin in an aqueous methanol solvent containing from about 40 to about 60 percent of methanol to form a solution; cooling said solution to form a precipitate; filtering the precipitate; dissolving said precipitate in an aqueous methanol solvent containing from about 40 to about 60 percent methanol to form a second solution; cooling said second solution to form a second precipitate; and, filtering said second precipitate to isolate pure vanillin having a melting range of 82 to 83.5 degrees centigrade.



3,049,567
PURIFICATION OF DODECYL MERCAPTAN

Joseph F. Frantz, El Dorado, Ark., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 3, 1959, Ser. No. 817,717
3 Claims. (Cl. 260—609)

1. A process for the purification of crude dodecyl mercaptan obtained by the reaction of a C_{12} acylic olefin with H_2S in the presence of a catalyst comprising boron trifluoride, which comprises washing the crude dodecyl mercaptan with water to completely remove the boron trifluoride therefrom, subjecting the boron trifluoride-free dodecyl mercaptan to purification by fractionating in a fractionating column wherein all surfaces of contact between the column and the dodecyl mercaptan are composed of a metal containing less than 25% by weight of nickel and wherein the column is operated under a reduced pressure so as to maintain a temperature throughout of below about 210° C., and recovering substantially pure dodecyl mercaptan.

3,049,568
PREPARATION OF BISPHENOLS

Francis N. Apel, Nutley, Louis B. Conte, Jr., Newark, and Howard L. Bender, Sparta, N.J., assignors to Union Carbide Corporation, a corporation of New York

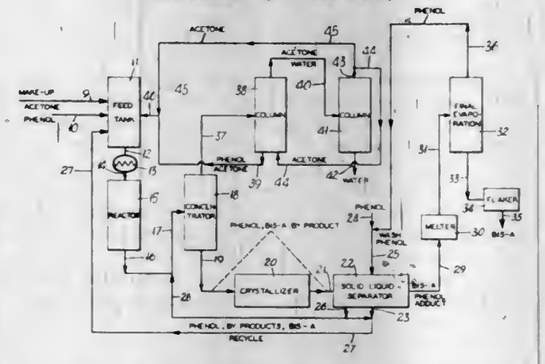
No Drawing. Filed Oct. 20, 1958, Ser. No. 768,050
6 Claims. (Cl. 260—619)

1. A process for the production of bisphenols which includes the steps of contacting a mixture of a phenol having a reactive hydrogen in the para position to the phenolic hydroxyl and a ketone having at least one methyl group connected to the carbonyl at a temperature of at least 40° C., said mixture containing a stoichiometric excess of said phenol with a substantially anhydrous cationic exchanging polymeric resin which is partially esterified with a lower alkyl mercapto alcohol as the sole catalyst for the reaction of the phenol and the ketone, said resin being substantially insoluble in the reaction mixture.

3,049,569
PRODUCTION OF 2,2-BIS(4-HYDROXYPHENYL) PROPANE

Francis N. Apel, Nutley, Petter Farevaag, Princeton, and Howard L. Bender, Sparta, N.J., assignors to Union Carbide Corporation, a corporation of New York

Filed Oct. 20, 1958, Ser. No. 768,409
13 Claims. (Cl. 260—619)



1. A process for the production of 2,2-bis(4-hydroxyphenyl)propane which includes the steps of contacting acetone with a stoichiometric excess of phenol under substantially anhydrous conditions in a reaction zone maintained at a temperature of from about 30° to about 125° C., said reaction zone comprising a substantially insoluble cation exchanging resin, maintaining at least a part of said acetone and said phenol in said reaction zone in the liquid phase for a period of time between that sufficient to initiate interreaction of said acetone with said phenol and that sufficient to substantially complete said interreaction, thereby forming an incompletely reacted reaction mixture containing 2,2-bis(4-hydroxyphenyl)-propane, an adduct of 2,2-bis(4-hydroxyphenyl)propane and phenol, unreacted acetone and unreacted phenol, reaction by-products, and water, withdrawing said incompletely reacted reaction mixture from said reaction zone, separating the withdrawn mixture into an overhead stream comprising acetone, water and phenol and a bottoms stream comprising 2,2-bis(4-hydroxyphenyl)propane, an adduct of 2,2-bis(4-hydroxyphenyl)propane and phenol, phenol and reaction by-products; dehydrating said overhead stream, recycling substantially anhydrous phenol and acetone to said reaction zone; separating from the bottoms stream the adduct of 2,2-bis(4-hydroxyphenyl)propane and phenol, recycling the remainder of the bottoms stream to said reaction zone, separating the 2,2-bis(4-hydroxyphenyl)propane from the adduct thereof with phenol, and recycling the phenol of the adduct.

3,049,570
EXPLOSIVE COMPOSITION

Charles W. Plummer, Norwell, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

No Drawing. Original application Mar. 3, 1957, Ser. No. 643,894. Divided and this application Apr. 16, 1959, Ser. No. 811,771
4 Claims. (Cl. 260—645)

2. A process for the preparation of 1,1,1-trinitro-3-phenylpropane comprising reacting 1,1-dinitro-3-phenylpropane with tetranitromethane in an alkaline solution.

3,049,571
STABILIZED DEGREASING SOLVENT

Winston E. Brown, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 18, 1960, Ser. No. 15,821
19 Claims. (Cl. 260—652.5)

1. A composition of matter comprising methyl chloroform containing a minor amount of 1,4-dioxane and hav-

ing dissolved therein a stabilizing amount of a vicinal monoepoxide having from 4 to 6 carbon atoms.

3,049,572
ISOMERIZATION OF DICHLOROBUTENES
Richard F. Stahl, Madison, and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed May 4, 1960, Ser. No. 26,701
8 Claims. (Cl. 260—654)

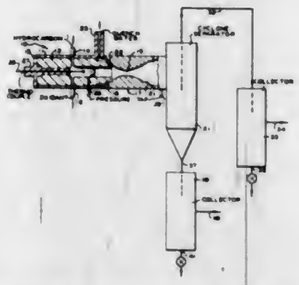
1. The process for converting one of the dichlorobutenes, 1,4-dichlorobutene-2 and 3,4-dichlorobutene-1, to the other isomer which comprises heating said dichlorobutene in the presence of a substantially anhydrous zirconium fluoride catalyst, said catalyst having crystallite size not substantially greater than about 400 Angstrom units radius and having been derived by reaction of substantially anhydrous $ZrCl_4$ and substantially anhydrous HF, at temperature of at least about 120° C. until the boiling point of the mixture has been substantially changed and separating the resulting mixture of dichlorobutenes.

3,049,573
ISOMERIZATION OF DICHLOROBUTENES
Richard F. Stahl, Madison, and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed May 4, 1960, Ser. No. 26,710
8 Claims. (Cl. 260—654)

1. The process for converting one of the dichlorobutenes, 1,4-dichlorobutene-2 and 3,4-dichlorobutene-1, to the other isomer which comprises heating said dichlorobutene in the presence of a susbtantially anhydrous aluminum fluoride catalyst, said catalyst having crystallite size not substantially greater than about 500 Angstrom units radius and having been derived by reaction of $AlCl_3$ and HF, at temperature of at least about 120° C. until the boiling point of the mixture has been substantially changed and separating the resulting mixture of dichlorobutenes.

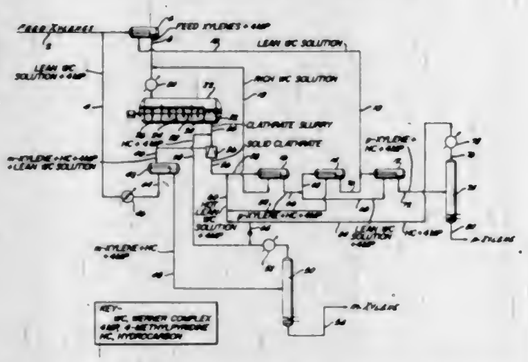
3,049,574
PROCESS AND APPARATUS FOR THE OXIDATIVE DEHYDROGENATION OF ORGANIC COMPOUNDS
Marvin M. Johnson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 15, 1959, Ser. No. 787,053
13 Claims. (Cl. 260—666)

2. A process for preparing olefins by the oxidative dehydrogenation of saturated hydrocarbons which comprises contacting a saturated hydrocarbon with an oxygen-containing gas in a reaction zone under conditions of temperature and pressure and for a contact time suitable for producing reaction products containing an olefin; flowing said reaction products from said reaction zone through a convergent-divergent mixing zone having a constricted section in an intermediate portion thereof; maintaining the ratio of the pressure in said reaction zone to the pressure in the downstream end of said mixing zone at a value such that said reaction products attain sonic velocity in said constricted section and supersonic velocity in the divergent section of said mixing zone; introducing a cooling medium into said reaction products flowing from said reaction zone and through said mixing zone at a location



upstream from said constricted section of said mixing zone; withdrawing from the downstream end of said mixing zone reaction products cooled to a temperature at which they are stable; passing said cooled reaction products into a separation zone; and withdrawing from said separation zone a stream rich in said olefin.

3,049,575
SEPARATION OF ORGANIC COMPOUNDS
William D. Schaeffer, Pomona, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Jan. 18, 1960, Ser. No. 3,058
22 Claims. (Cl. 260—674)

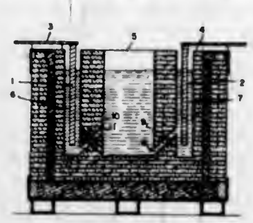


1. A method for recovering an aromatic compound from a clathrate thereof with a Werner complex consisting of a salt of a metal of atomic number above 12 coordinated with at least 2 mole proportions of a heterocyclic nitrogen base, which comprises dissolving said clathrate in an aqueous solution of a lower alkanolamine and separating said organic compound from the resulting solution of Werner complex.

ELECTRICAL

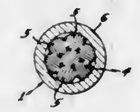
3,049,576
ELECTRIC SALT BATH FURNACE
Richard C. Upton, Mount Clemens, Mich., assignor to Upton Electric Furnace Company, Inc., Roseville, Mich., a corporation of Michigan
Filed May 16, 1960, Ser. No. 29,468
8 Claims. (Cl. 13—23)

1. In a molten salt bath furnace heated by the passage of an electrical current through the molten salt, the combination with an electrode to conduct current into the molten salt of a well or compartment in the salt bath separated by an electrically insulating wall from that portion of the salt bath used for the working space of the furnace in which well the electrode makes contact with the molten salt, and passageways through the said insulating wall, so arranged that the electric current flowing from the electrode passes through these passageways, the said passageways being so arranged that molten salt will circulate between the said working space and



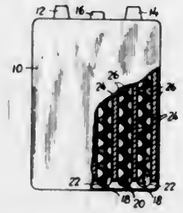
the said electrode well under the influence of the heat generated in the passageways by the passage of the electric currents therethrough.

3,049,577
COMPOSITE MATERIAL AND THERMOCOUPLE MADE THEREFROM
James S. Hill, Cranford, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Aug. 28, 1959, Ser. No. 836,776
11 Claims. (Cl. 136—4)



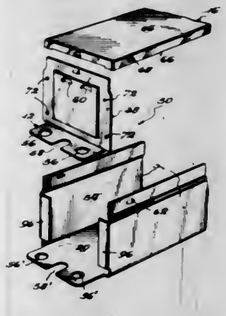
1. A thermocouple comprising a composite negative element composed of a core of a platinum group metal within a sheath composed of a platinum group metal, the core consisting of a plurality of compacted interfused elongated members in direct contact with the sheath, the sheath and core having the same metal composition, and a positive element composed of an alloy of platinum group metals bonded to the composite negative element.

3,049,578
ALKALINE STORAGE BATTERY WITH SEMI-PERMEABLE SEPARATORS
Erik Jönsson and Sven Uno Falk, Oskarshamn, Sweden, assignors to Svenska Ackumulator Aktiebolaget Jungner, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 12, 1956, Ser. No. 570,893
Claims priority, application Sweden Mar. 11, 1955
1 Claim. (Cl. 136—30)



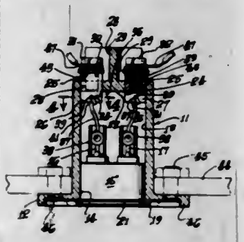
An electric cell of the silver-zinc type with alkaline electrolyte, comprising positive electrodes of thin sheet metal element of silver having a layer of fine grain silver powder secured on to it, negative electrodes containing zinc active material, and a separator between electrodes of opposite polarity, characterized by the combination of the features of the separators being of a semi-permeable character and surrounding the positive electrodes in the shape of closed bags and of the surface of the positive electrodes being provided with elevated parts and with depressed parts, thus providing space for electrolyte between said positive electrodes and said semi-permeable separators in order to make said positive electrodes self-supporting as to electrolyte inside said semi-permeable separator bags.

3,049,579
BALLAST CANISTER CONSTRUCTION
Robert I. Sulzer, Skokie, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Filed Mar. 8, 1960, Ser. No. 13,643
3 Claims. (Cl. 174—52)



1. A canister for use as a container for electrical ballast components and adapted to be mounted on a fluorescent fixture, comprising, a U-shaped channel member with the central leg of said U serving as the bottom wall of said canister during assembly, the ballast components disposed in substantial engagement therewith, said central leg extending beyond the side legs, a right angle bend on one end of each side leg projecting towards the right angle bend on the other side leg, and an L-shaped end wall connected between the right angle bends on opposite legs with one leg of the L in parallel mating alignment with the extended portion of said central leg, means comprising the mating leg and central leg extension for fastening said bottom wall to said fixture with said components in substantial engagement therewith in heat exchange selection to said fixture, heat generated in said canister, being dissipated through said central leg and fixture.

3,049,580
OVERHEAT WARNING ASSEMBLY
Joseph M. Wallace, Los Angeles, Calif. (5617 Corryne Place, Culver City, Calif.)
Filed Apr. 20, 1959, Ser. No. 807,680
8 Claims. (Cl. 174—59)



5. A compact terminal mounting block comprising in combination a hollow insulator housing, a terminal mounted in said housing, the housing having a base open to the interior of the housing for receiving an electrical device to be connected by the terminal, the housing having a transverse enclosure wall across the top of the hollow interior with an opening therein, the terminal substantially filling said wall opening and projecting through the top closure wall, said terminal having a lower end with

a transverse opening therein and an upper end, a conductor having an end extending through said transverse terminal opening to lock the terminal in its housing opening, the terminal having a solder globule on the side thereof above the housing closure wall for holding the terminal in the transverse closure wall of the housing.

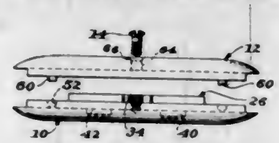
3,049,581
SEALING ENDS FOR HIGH TENSION ELECTRIC CABLES
Nicola Palmieri, Milan, Italy, assignor to Pirelli Societa per Azioni, Milan, Italy, a corporation of Italy
Filed Jan. 25, 1961, Ser. No. 84,931
Claims priority, application Italy Feb. 5, 1960
5 Claims. (Cl. 174—73)



1. A sealing end for the end of a high tension electric cable mounted on a fixed support, said cable comprising a conductor surrounded by insulation which in turn is surrounded by a conductive layer, said sealing end comprising a conductive stress control cone surrounding a portion of said insulation spaced from the end of said cable conductor and engaging a portion of said conductive layer, said stress control cone being spaced from said end of said cable conductor, a unitary insulating sleeve inserted as a unit over the portion of said insulation intermediate said cone and said end of said conductor, said sleeve surrounding said last-mentioned portion of said insulation and engaging said stress control cone at one end and, at the opposite end, being adjacent said end of said conductor, a conductive element embedded in said sleeve and extending around said cable insulation, said element being adjacent said stress control cone, means conductively interconnecting said cone and said element, and means mechanically interconnecting said end of the cable conductor and the portion of said sleeve adjacent thereto and said sleeve being otherwise free of rigid connection with said support whereby said sleeve is free to move with respect to said support.

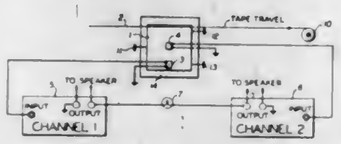
3,049,582
ELECTRICAL CONNECTOR
Kenneth H. K. Shinn, % Smith Wild, Beebe & Cades, Honolulu, Hawaii
Filed Dec. 28, 1959, Ser. No. 862,126
1 Claim. (Cl. 174—92)

An electrical connector comprising an elongated base member having a pair of straight longitudinal side walls extending from opposite sides thereof, a separate elongated cover member having a pair of straight longitudinal side walls extending from opposite sides thereof, said members being movable together into an operative position with the side walls of each member in abutting aligned cooperating relation to the side walls of the other member, each cooperating pair of abutting side walls including longitudinally spaced pairs of interengaging projections and notches extending from and formed in the inner portions thereof respectively, said base member having a boss extending from the central portion thereof between the associated side walls, said boss having an interiorly threaded opening formed therein, a single fastening element extending through said cover member for engagement within said threaded opening to secure said members in said operative position with the side walls in abutting relation and with said projections disposed within said notches to prevent relative turning movement between the members about the axis of said fastening element, said members together in said operative position forming a substantially rectangular longitudinally extending chamber defined on the sides thereof by said cooperating pairs of side walls and having the ends thereof open for the reception therethrough of end portions of a pair of dual lead insulated



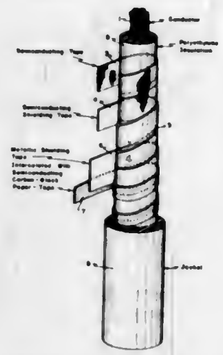
electric cords to be connected together, said base member having first and second straight longitudinal separator walls of a height substantially equal to twice the height of the associated side walls formed therein in parallel relation between the side walls thereof, said first separator wall being disposed between said boss and one end of said chamber on one side of the center longitudinal axis of said chamber and said second separator wall being similarly disposed between said boss and the other end of said chamber on the other side of said center axis dividing said chamber into two equal side chamber compartments, each of said compartments including a first portion of a width sufficient to closely receive one lead of the associated cord and a second portion of a width to receive the uninsulated end of said lead in lapped relation to an uninsulated end of one lead of the other cord, and a single attaching screw disposed within the second portion of each compartment and threadedly engaged with said base member for securing the uninsulated lapped ends of the associated leads in electrical contact with each other.

3,049,583
MAGNETIC RECORDING MEANS
Norman C. Bremer, Box 491, Ithaca, N.Y.
Filed Dec. 30, 1959, Ser. No. 862,972
3 Claims. (Cl. 179—100.2)



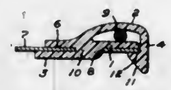
3. The method of aligning a multi-track sterophonic head for magnetic tapes comprising the steps of feeding a standard tape into said head said tape having recorded on it a series of pulses on each of two tracks said pulses having been recorded by a head with standard alignment and measuring the difference output of said pulses on said two tracks, and adjusting the alignment of said pickup head to reduce said difference output to a minimum.

3,049,584
HIGH VOLTAGE SHIELDING COMPOSITION
Ralph Gregory D'Ascoli, Yonkers, N.Y., assignor to Anaconda Wire and Cable Company, a corporation of Delaware
Filed Feb. 10, 1959, Ser. No. 792,309
5 Claims. (Cl. 174—120)



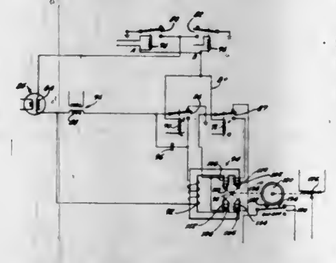
4. A high voltage electric power cable comprising a metallic conductor, a layer of polyethylene insulation of substantial thickness surrounding said conductor, and an ozone-resistant, elastically resilient, electrically conductive tape wrapped helically about said insulation, said tape comprising a cured product of a composite elastomeric mixture containing from about 5 to about 30 percent by weight of a chlorosulfonated polyethylene, from about 30 to about 65 percent by weight of a rubber having a high chemical stability and a low degree of unsaturation, from about 30 to about 65 percent by weight of a finely divided electrical conductor dispersed throughout the elastomeric mixture to impart the characteristics of a high-resistance conductor to the tape, from 0.5 to 5 percent by weight of a wax selected from the group consisting of paraffinic and microcrystalline waxes, and from 0.1 to 3 percent by weight of an N,N'-dialkyl-p-phenylenediamine antiozidant in which the N-alkyl substituents contain at least eight carbon atoms.

3,049,585
WIRING CLIP
Clarence W. Cochran, deceased, late of Belmont, Mass., by Lois F. Cochran, administratrix, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Continuation of application Ser. No. 845,397, Oct. 9, 1959. This application Sept. 22, 1961, Ser. No. 140,976
6 Claims. (Cl. 174—164)



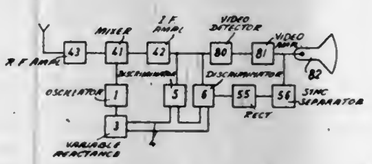
1. A one-piece fastener formed from a single piece of insulation material for retaining wiring, tubing and the like adjacent an edge of a thin, flat support, said fastener comprising a substantially flat base portion having an abutting surface for abutting the surface of the support and an opposite non-abutting surface, a support-entering member extending from said abutting surface of said base portion in one direction, a flexible clamping finger extending in angular relation from the opposite non-abutting surface of said base portion and in the direction of one end of the base portion forming an area therebetween for receiving wiring, tubing and the like therein, a latch portion secured to the free end of said clamping finger, said latch portion when in latched position extending below one end of said base portion and its abutting surface in the direction of extension of said support-entering member therefrom.

3,049,586
SIGNALING SYSTEM
Brian E. Hooper, Sherman Oaks, Calif., assignor to Packard-Bell Electronics Corporation, Los Angeles, Calif., a corporation of California
Filed Mar. 31, 1959, Ser. No. 803,215
13 Claims. (Cl. 178—5.8)



1. In combination for use with a television receiver having a variably positioned control member to control the energizing of the television receiver for the reception of television signals and to control the intensity of sound in the receiver, means disposable at a position away from the receiver for transmitting first and second signals having different characteristics from each other and for particular durations of time, means including first and second energizing members at the receiver and responsive to the first and second signals for energizing the first member upon the reception of the first signals and for energizing the first and second members upon the reception of the second signals, means including a motor coupled to the control member and responsive to the energizing of the first and second energizing members for obtaining an operation of the motor to progressively drive the control member in one direction upon an energizing of only the first member and for obtaining an operation of the motor to progressively drive the control member in the opposite direction upon an energizing of the first and second members, and means operatively coupled to the control member for providing a manual operation of the control member to any desired position.

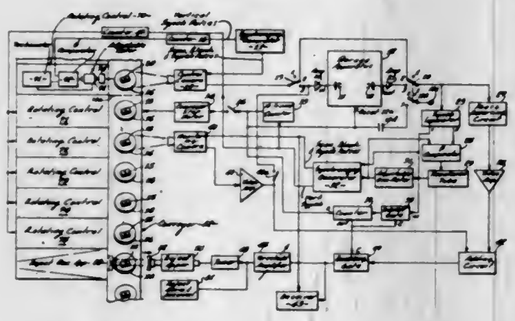
3,049,587
AUTOMATIC FREQUENCY CONTROL SYSTEM
Johannes Backwinkel and Albrecht Altmann, Hildesheim, Niedersachsen, Germany, assignors to Blaupunkt-Werke G.m.b.H., Hildesheim, Niedersachsen, Germany
Filed July 1, 1959, Ser. No. 824,252
Claims priority, application Germany July 12, 1958
4 Claims. (Cl. 178—5.8)



1. In a television receiver of the intercarrier type; means providing transmitted amplitude-modulated radio frequency carrier audio and video signals; a local oscillator tunable to a desired frequency having a predetermined relation to said carriers but apt to deviate there-

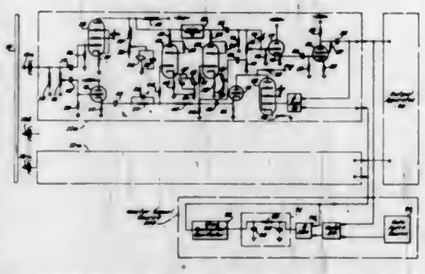
from; a mixer responsive to said carriers and local oscillator producing intermediate frequency sound and picture carriers; a frequency discriminator responsive to said intermediate frequency picture carrier to produce an error signal voltage representative of the deviation of the local oscillator frequency from said desired frequency; a video channel including a video detector and a thereto connected video amplifier for demodulating said intermediate frequency carriers; synchronization pulse separating means for extracting horizontal and vertical synchronization pulses from the demodulated video signal; means for rectifying said horizontal synchronization pulses and providing a second error signal voltage; means for summing up the error signal voltages produced by said first and second discriminators, respectively, and for producing thus a combined error signal voltage and a signal-dependent variable reactance included in the frequency determining network of said oscillator responsive to said combined error signal voltage for causing the local oscillator frequency to approach said desired frequency and said error signals to approach zero.

3,049,588
QUALITY CONTROL SYSTEM
John S. Barnett, Sepulveda, Calif., assignor, by mesne assignments, to Precision Controls Corporation, Newbury Park, Calif., a corporation of California
Filed Aug. 28, 1959, Ser. No. 836,791
12 Claims. (Cl. 178—6)



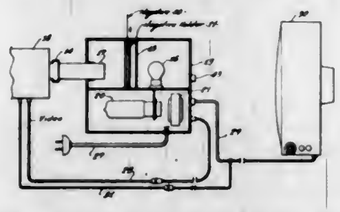
1. Apparatus for inspecting objects and for providing an indication when the physical appearance of an object deviates from the physical appearance of a standard, first means for movably supporting the standard, first means including a first television camera for scanning the standard and for generating line scan video signals in accordance therewith which include synchronizing pulses, first means coupled to said first supporting means and to said camera for moving the standard in synchronism with the line scan video signals, means coupled to said scanning and generating means for separating the synchronizing pulses from the rest of the generated line scan video signals, second means coupled to said separating means and including a second television camera for scanning an object to be inspected and for developing line scan video signals in accordance therewith which are synchronized by the pulses from said separating means with the video signals representing the standard, second means for movably supporting the object to be inspected, second means coupled to said second supporting means and to said separating means for moving the object to be inspected in synchronism with the video signals representing the object, and means coupled to said first and second scanning and developing means for recognizing a predetermined difference between the magnitudes of the video signals representing the object and the video signals representing the standard.

3,049,589
TRANSDUCING SYSTEM USING CONTROLLED DELAY LINES
Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Nov. 10, 1959, Ser. No. 852,039
11 Claims. (Cl. 178—6.6)



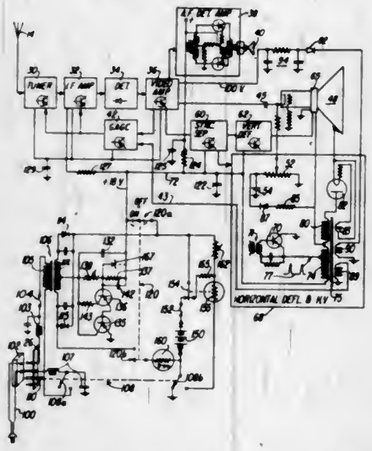
3. In apparatus for reproducing recorded signals including a cyclically recurring reference signal recorded at constant frequency, means for maintaining a constant time relationship between the reproduced reference signal and a comparison signal of like frequency to eliminate the effects of flutter of the reproducing medium including a delay line connected to receive the reproduced signals and variable in delay characteristic in response to a control signal, a discriminator connected for receiving said comparison signal and signals from said delay line for developing an error signal corresponding in sign and magnitude to the difference in time between said delayed reference signal and said comparison signal, means for applying said error signal as a control signal to vary the delay of said delay line in such a sense as to reduce said time differences, a first and a second adjustable impedance means coupled respectively to the input and output terminals of said delay line and responsive to said error signal to match said first and said second impedance means with the characteristic impedance of said delay line, and circuit means for introducing the signals reproduced from the recording medium to said first variable impedance means which is coupled to the input terminal of said delay line so that the impedance presented by said first variable impedance means is controlled by the reproduced signals as well as by the error signal.

3,049,590
NEGATIVE ENLARGER USING CLOSED LOOP TELEVISION
Brian E. Hooper, 3390 Camino De La Cumbre, Sherman Oaks, Calif.
Filed July 17, 1959, Ser. No. 827,949
7 Claims. (Cl. 178—6.8)



1. A viewer for providing an enlarged image of a transparency, including, a housing, means operatively connected to the housing for holding the image in fixed position, means supported by the housing on one side of the image-holding means for illuminating the image, means including an optical system supported by the housing relative to the image-holding means and the light source for projecting the rays representing an image of the transparency in a particular relationship to one another, means disposed relative to said optical system for scanning the projected image and for providing electrical signals representing the successive illumination of portions of the projected image, an amplifier electrically connected to said scanning means for phase reversing said electrical signals to reverse the represented illuminations thereby, a receiver connectable to said amplifier and to said scanning means for providing a visual indication of the electrical signals, and switching means electrically connected to said receiver and to said scanning means and said amplifier for connecting said receiver to either said scanning means or to said amplifier.

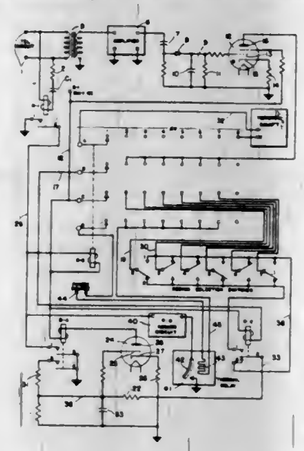
3,049,591
ELECTRONIC SYSTEM
Raymond C. Voige, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 23, 1960, Ser. No. 71,209
16 Claims. (Cl. 178—7.3)



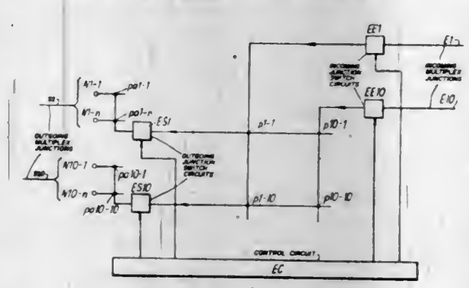
12. A transistorized television receiver, including in combination, a plurality of television receiver stages together comprising an electric load, rectifier circuit means adapted to be connected to a power line to produce a rectified potential, a battery providing an energizing potential for said receiver, an energizing circuit for said receiver including switch means for selectively connecting said battery and said rectifier circuit means to said receiver stages, said energizing circuit including a pair of power conductors and a transistor having input and output electrodes with the output electrodes thereof connected in series with said load and said conductors, voltage responsive means connected between said conductors and connected to said input electrode for varying the conduction of said transistor inversely with respect to voltage variations in said energizing circuit, charging circuit means connecting said battery to said rectifier circuit for charging said battery, and further circuit means connected to said battery and operative upon a given charged condition thereof to open said charging circuit means.

3,049,592
METHOD OF CONTROLLING A TERMINAL CIRCUIT BY REMOTE CONTROL AND REMOTE CONTROL APPARATUS
Herbert Waldman, Brooklyn, N.Y., assignor, by mesne assignments, to Robosonic National Industries Corp., New York, N.Y., a corporation of Delaware
Filed Oct. 23, 1957, Ser. No. 691,831
14 Claims. (Cl. 179—2)

1. A remote control apparatus for controlling a terminal circuit at a controlled station from a control station connected to the controlled station over a signal transmission circuit also used for transmitting signals other than control signals for the terminal circuit, said apparatus comprising a multiple position switching device unidirectionally movable through intermediate positions between a starting switching position and a terminal switching position actuating said terminal circuit, circuit means at the controlled station for connecting said switching device to a source of current in response to a starting signal from the control station over said transmission circuit, and a plurality of control circuit means each controlling movement into one of the intermediate switching positions of said switching device and each energized in response to a signal over the transmission circuit and also in response to a no-signal received for a predetermined period of time over the transmission circuit to activate the switching device for movement through the intermediate positions toward the terminal switching position, a pre-set sequence of said signals and no-signals energizing said control circuit means to effect movement of the switching device into said terminal switching position for actuating the terminal circuit.



3,049,593
SWITCHING SYSTEMS BETWEEN MULTIPLEX COMMUNICATION CHANNELS
Emile Touraton, Paris, and Jean Pierre Le Corre, Verrieres-le-Buisson, France, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Oct. 19, 1959, Ser. No. 847,322
Claims priority, application France Oct. 21, 1958
6 Claims. (Cl. 179—15)



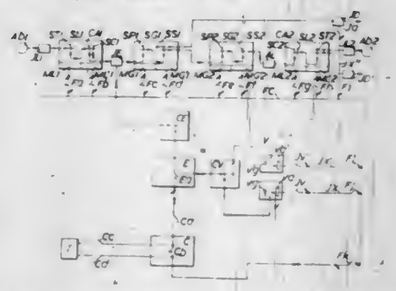
1. A time-division multiplex switching system comprising a set of incoming and a set of outgoing junctions, each said incoming and outgoing junction comprising a plurality of synchronous incoming and outgoing channels respectively, with each channel corresponding to a different time position in a recurrent time cycle, switching

means and associated control means for establishing a connection between any calling incoming channel and an outgoing channel having the same time position on a desired outgoing junction, first means in said control means operable responsive to the last-said channel having the same time position as any other calling incoming channel on the calling incoming junction, for operating the switching means to shift the said connection to a different outgoing channel in the desired outgoing junction, and second means in said control means responsive to the shifted connection to the outgoing channel on the desired outgoing junction being connected with a calling incoming channel on a different calling incoming junction for operating the switching means to invert the last said connections.

3,049,594
TELEPHONE SYSTEMS

Fernand Pierre Gohorel, Antony, France, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed May 2, 1958, Ser. No. 732,530
Claims priority, application France June 27, 1957
12 Claims. (Cl. 179—18)



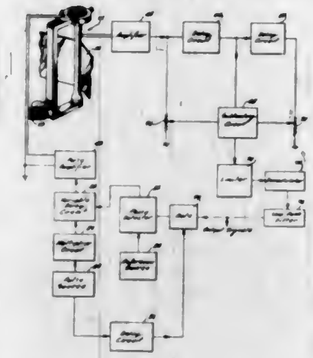
1. In an automatic telephone system serving lines terminated at switching apparatus comprising a series of switching stages through which connections from calling lines to called lines progress successively over idle interstage paths, marker apparatus individual to the switching stages, groups of apparatus common to all said switching stages, each group comprising a plurality of registers and a plurality of translators, first connection means for coupling one of said groups of common apparatus to an idle one of the interstage paths between a first and a second switching stage, groups of multipling circuits between said common equipment and said markers with each group of multipling circuits being accessible by all of said marker apparatus, means for successively and temporarily coupling the said markers to the common apparatus over said multiplying circuits, and means controlled by signals transmitted over the said multipling circuits for operating the common apparatus to transmit signals over the said first connecting means and over the said multipling circuit to control the said connection from a calling line to a called line.

3,049,595
TRANSDUCING SYSTEM

Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Mar. 9, 1959, Ser. No. 798,207
13 Claims. (Cl. 179—100.2)

10. In a reproducing system for reducing cross-talk between adjacent signals in progressive channels on a recording medium movable in a first direction, means coupled to the recording medium for reproducing the signals recorded in the progressive signal channels during the movement of the medium in the first direction, means coupled to said reproducing means for delaying the reproduced signals for a particular interval corresponding to the time between the reproduction of the adjacent signals in the progressive channels, and means coupled to



said reproducing means and to said delaying means for continuously subtracting predetermined reduced magnitudes of the reproduced signals from said reproducing means from the delayed signals from said delaying means.

3,049,596
CARRIER FREQUENCY COMMUNICATION SYSTEM

Willi Sonneborn, Bergisch-Gladbach, Germany, assignor to Felten & Guilleaume Carlswerk A.G., Koln-Mulheim, Germany

Filed Aug. 1, 1960, Ser. No. 46,582
Claims priority, application Germany Aug. 3, 1959
9 Claims. (Cl. 179—175.31)

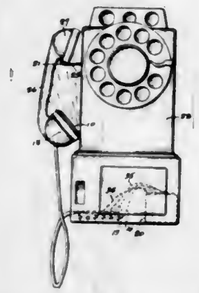


1. In a carrier frequency communication system with two terminal stations and at least two intermediate two-way repeater stations, operating with two separate carrier frequency bands spaced from each other, in combination, two-conductor transmission means connecting in tandem arrangement said terminal and repeater stations for transmitting messages between said terminal stations by means of a higher carrier frequency band in one direction and of a lower carrier frequency band in the opposite direction; each repeater station comprising first and second frequency-selective direction control means connected between respectively adjoining portions of said transmission means for selectively passing said higher and lower frequency bands, respectively, in said respective directions, one-way amplifier means having input and output terminals respectively, and being associated with said direction control means for amplifying said higher and lower frequency bands, respectively, and frequency-selective frequency-multiplier means connected between said output terminal and a junction point between an adjoining portion of said transmission means and that input end of said selective direction control means where said higher carrier frequency band is received, for applying the output frequency of said frequency-multiplier means to at least one of said first and second direction control means, said frequency-multiplier means being capable of selectively multiplying only a discrete test frequency preassigned to and distinctive of the particular repeater station and located within the intermediate frequency range between said higher and lower carrier frequency bands and of delivering an output frequency higher than the lowest frequency of said higher carrier frequency band, whereby two selected auxiliary frequencies transmitted for testing any specific one of said repeater stations from one of said terminal stations toward the other terminal station will form through superposition a test frequency which is distinctive of said specific one of said repeater stations and located within said intermediate frequency range and therefore will be multiplied by the frequency-multiplier means of that specific repeater station and returned to said one terminal station through said transmission means provided that said specific repeater station is operating properly.

3,049,597
TELEPHONE STERILIZER

Brent Koop, 11315 86th Ave., North Surrey, British Columbia, Canada, assignor of one-third to John C. Taplo and one-third to Josephine A. Koop, both of North Surrey, British Columbia, Canada

Filed July 1, 1957, Ser. No. 668,987
6 Claims. (Cl. 179—185)



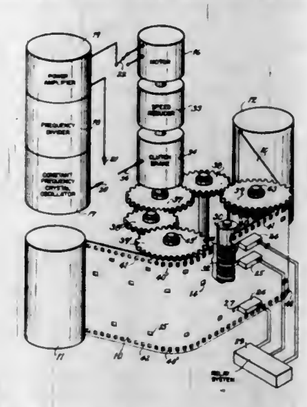
5. In combination with a wall telephone box of the type having a hook on a vertical wall thereof for receiving a handset, a handset having a handle with ear and mouth pieces at its opposite ends, the planes of the mouth of said mouth piece and the receiving face of the ear piece each converging toward said handle and each forming an acute angle with said wall of the telephone box when the handset is hung on the hook, and an electrical sterilizing lamp mounted on one of said pieces in such a position that rays emanating therefrom are projected on both the mouth and said receiving face.

3,049,598
PROGRAM TIMING DEVICE

Patrick E. Lannan, George J. Prusha, and Richard P. Price, all of Parma Heights, Ohio, assignors, by mesne assignments, to International Resistance Company, Philadelphia, Pa., a corporation of Delaware

Filed Sept. 19, 1958, Ser. No. 763,774
13 Claims. (Cl. 200—46)

10. A program timing device comprising in combination a thin resilient tape of a material having a preset condition tending to curl the tape and cause it to coil closely upon itself when unrestricted and having holes therein which are spaced along the tape to provide program timing information, a motor for driving said tape, a relay including circuit controlling contacts, output means comprising a wheel moved by said holes in said tape for deriving said program timing information from said tape and effective upon movements of said wheel to open and close the contacts of said relay in a sequency determined by the positioning of the holes in said tape, a grooved roller on the opposite side of said tape and backing said tape adjacent the point at which said wheel contacts said tape, a groove in said roller being adapted to receive a portion of said wheel when projecting through one of said holes in said tape, and mutually synchronous mechanical driving means engaging the tape at each side of the output means and said roller and being connected with

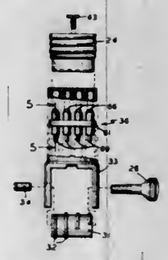


the motor for driving in either direction while exerting a constant tension on the tape between the driving means engaging the tape at each side of the output means.

3,049,599
SOCKET FOR AN ELECTRICAL LAMP

Robert A. Eck, Port Chester, N.Y., and Nathaniel Silver, Stamford, Conn., assignors to Nathaniel Silver, Stamford, Conn.

Filed Oct. 20, 1959, Ser. No. 847,587
9 Claims. (Cl. 200—51.17)



1. An electrical switching means comprising a stationary plate, and a tumbler assembly in electrical contact therewith which includes: a bushing slidably mounted in said plate; resilient biasing means between said plate and the bushing; a pin slidably extending out of the bushing; resilient biasing means between said pin and bushing, and means engaging said pin for raising and lowering it relative to the plate whereby the bushing is urged in concomitant motion relative to the plate.

3,049,600
ELECTRICAL SWITCH

Robert W. Fraser, Framingham, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

Filed July 7, 1960, Ser. No. 41,384
1 Claim. (Cl. 200—67)



An electrical switch comprising a housing provided with an interior recess, at least one fixed contact mounted

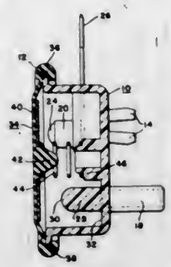
within said recess and having at least two inner walls defining an actuator channel, each of said inner walls having a height substantially equal to the height of said housing, an armature comprising a pair of spaced arms connected at one end thereof by a bight portion, said bight portion having an electrical contact means, an actuator directly connected with said bight portion by a tensioned coil spring, said coil spring having a hook element, said actuator comprising a plunger having a wall forming an internal bore, a compression spring, and an eyelet, said eyelet having a tubular shank and a flange, said hook element of said tension coil spring circumscribing said tubular shank and being held between said flange and said plunger, said switch having a feed contact comprising a pair of legs in spaced relation with each other and with said actuator, said arms of said armature pivoted against said legs of said feed contact, a portion of said coil spring passing between said arms and another portion of said coil spring passing between said legs, said actuator having a compression spring associated therewith to return said actuator to a normal position from a second position and the point of said pivoting engagement forming a part of the switch circuit.

3,049,601
FORCE RESPONSIVE SWITCH
Thomas K. C. Hardesty, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 9, 1960, Ser. No. 27,979
10 Claims. (Cl. 200—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a force responsive switch to be used in a sealed container, the combination which comprises a metal rupture disc, a pair of contacts located on one side of said disc and insulated from each other, a diaphragm contacting the environment exterior to the container, an electrical conducting medium located between the other side of said disc and said diaphragm, and pressure transmitting material located between said disc and said diaphragm, whereby said disc is broken and said medium is forced between said contacts when the pressure exerted by the environment on said diaphragm is of a predetermined magnitude.

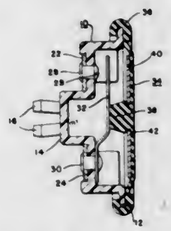
3,049,602
VACUUM SWITCH
James H. Flatt and Kenneth W. Young, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 9, 1959, Ser. No. 838,886
7 Claims. (Cl. 200—83)

1. An electric switch comprising, a casing formed of electrical insulating material, said casing having a circumferentially extending flange, a diaphragm having a circumferentially extending slot receiving said flange and forming a chamber with said casing, a metal contact plate carried by and rotatable with respect to said diaphragm, a pair of fixed contacts supported by said casing, a post integrally formed with said casing, said contacts and said post being spaced at different distances from said contact plate when said contact plate is at rest, and passage means in said casing for connecting said chamber with a source



of vacuum, said post and said contacts causing said contactor to tilt when it engages said contacts and the end of said post.

3,049,603
VACUUM SWITCH
James H. Flatt and Kenneth W. Young, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 9, 1959, Ser. No. 838,942
3 Claims. (Cl. 200—83)



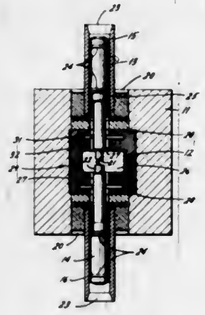
1. A vacuum operated switch comprising, a generally cup-shaped housing formed of a plastic molding material, said housing having first and second integral conduit portions and a lug means extending from one wall thereof, said lug means being adapted to be inserted into an opening to support said switch, a diaphragm formed of elastomeric material having an outer circumferentially extending slot receiving an outer marginal portion of said housing, said diaphragm and housing providing a chamber that is in communication with the interior of said first and second conduit portions, a spring metal contactor capable of being bowed positioned within said chamber, first and second male terminals having flat sides engaging an outer wall of said housing and fitted respectively within open ended slots formed in said outer wall of said housing, said slots and male terminals being located normal to the longitudinal axis of said housing, a first rivet securing said first male terminal in one of said slots and securing an end of said spring metal contactor to an inner wall of said housing whereby said contactor is supported in cantilever fashion, a second rivet securing the second male terminal in the other of said slots and having a portion forming an electrical contact that is engageable with said spring metal contactor, said diaphragm having an integral axially extending portion engaging said spring metal contactor with a point located between said rivets, a groove formed in the axially extending portion of said diaphragm, and a plate member having a central opening the marginal edge of which fits within said groove, said plate member engaging an inner wall of said diaphragm.

3,049,604
COMMUTATOR AND METHOD OF MAKING SAME
Edward W. Showalter, Jr., 51 Vauxhall St., New London, Conn.
Filed July 18, 1958, Ser. No. 749,565
2 Claims. (Cl. 200—166)
(Granted under Title 35, U.S. Code (1952), sec. 266)



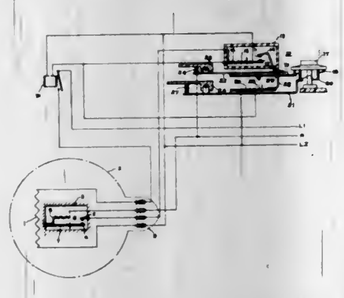
1. A commutator comprising a plate-like core of insulation having a face that is approximately square in outline, a plurality of stretches of insulated wire arranged side by side with one another in a layer abutting flat against said core face, and extending at both ends beyond the opposite core margins adjacent the ends of the wire stretches, a cured, resinous potting material disposed between and completely filling the spaces between adjacent wire stretches in said layer along the core face and bonding the wire stretches together and to said core face with the wire stretches at both ends thereof beyond the core margins unbonded to one another to form individual insulated leads, the wires of the layer over said core face having exposed flat surfaces in the same plane coated with metallic silver and exposed outwardly through the potting material, the exposed flat plated wire surfaces and the outer face of the potting material between the wire stretches being in substantially the same common plane, and the wire stretches being all interrupted along an approximately straight line at approximately the center of the layer and in a direction crosswise of the stretches, with cured potting material between the interrupted ends and having its outer face in said common plane, whereby when the individual ends of the interrupted stretches are connected to individual terminals with time delay means between them and a common brush with spaced individual contact pieces is rotated across said exposed flat plated faces of the wires and potting material in said common plane, one can simulate the effect of different patterns of arrangements of hydrophones and compare the results.

3,049,605
WELDING METHOD
Samuel A. Robinson, Telford, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 1, 1958, Ser. No. 778,048
3 Claims. (Cl. 219—10.41)



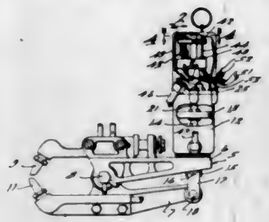
1. In the autogenous welding of metal parts of similar composition and composed of a eutectic forming alloy of non-eutectic composition, the method which comprises: placing surface portions of said parts in abutting relation; and heating the zone of juncture to a temperature lying within the two-phase temperature field of the alloy of which said parts are made and to a value effective to produce distortionless welding of said parts.

3,049,606
HEAT CONTROL SYSTEM FOR COOKING APPARATUS
Walter R. Weeks, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 4, 1957, Ser. No. 700,618
1 Claim. (Cl. 219—20)



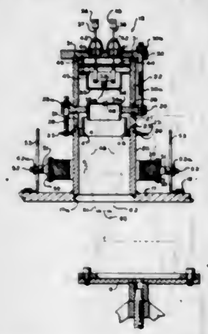
A heat control system for a cooking utensil heated by an electric heating unit comprising: a temperature sensing member in heat transfer relation with the utensil, said sensing member including a first pair of contacts, a first bimetal actuator, a first electric heater, and wall means defining an enclosure therefor, said first bimetal actuator being arranged to open said first pair of contacts in response to an increase in temperature to a predetermined level above the maximum cooking temperature of said utensil and to close said first pair of contacts in response to a decrease in temperature below said predetermined level, said first heater and said first pair of contacts being connected in series in a circuit adapted to be energized by an electric power source; a manually operable temperature selector member including a second pair of contacts for regulating the supply of electric power to said heating unit, a second bimetal actuator arranged to move one of said second pair of contacts toward the other contact in response to a predetermined increase in temperature, a second electric heater in heat transfer relation with said second bimetal actuator, manually operable means for varying the position of one of said second pair of contacts, a third bimetal actuator arranged to open said second pair of contacts in response to a predetermined temperature increase, manually operable means for varying the range of movement of said third bimetal actuator whereby its effectiveness to actuate said second pair of contacts may be limited to a predetermined range of utensil temperatures, a third electric heater in heat transfer relation with said third bimetal actuator; and electric circuit means including means connecting said second heater in series with said first heater, means connecting said third heater in series with said second pair of contacts whereby the energization of said third heater is controlled thereby, and relay means in series with said second pair of contacts, said relay means being connected in circuit with said heating unit so as to control the supply of power thereto, whereby said first and second heaters are energized and de-energized simultaneously and said second pair of contacts are opened and closed in accordance with the temperature of said sensing member and the setting of said manually operable means.

3,049,607
WELD CONTROL UNIT AND METHOD
Frank J. Stuben, 240 Girard, and Joseph H. Stuben, 912 N. Edgeworth Road, both of Royal Oak, Mich., assignors of one-half to Franklin B. Conte, Royal Oak, and Michael Stuben, Detroit, Mich.
Filed Feb. 20, 1961, Ser. No. 90,553
7 Claims. (Cl. 219—89)



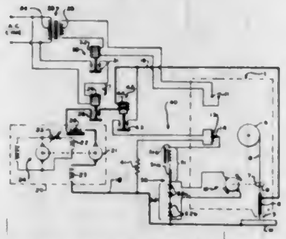
1. In a welding device having movable electrodes, means for moving the electrodes into clamped relation with material to be welded, a rod actuated by said movable means, a plate on said rod, a pair of adjustable studs on said plate, a pair of switches supported in the path of movement of said studs one or both of which are operated when the electrodes are moved into engagement with the material to be welded depending upon the over-all thickness thereof, conductors leading from the switches to current supply sources, and means rendering the supply source through one switch ineffective when both switches are operated.

3,049,608
ELECTRON BEAM WELDING
William John Greene, Scotch Plains, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 24, 1959, Ser. No. 835,726
14 Claims. (Cl. 219—117)



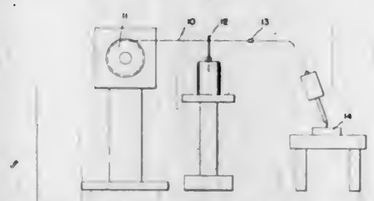
1. An electron gun comprising a cylinder of insulating material open at both ends, a first plate of electrically conductive material, means for holding said first plate across one end of said cylinder in sealing engagement therewith, a cathode electrode mounted on said first plate and within said cylinder, a control electrode mounted on said first plate and within said cylinder, means insulating said cathode electrode from said control electrode, means including said first plate for conducting electricity to one of said electrodes, a second plate of electrically conductive material, means for holding said second plate across the opposite end of said cylinder in sealing engagement therewith, an anode electrode supported on said second plate within said cylinder and in alignment with said other electrodes, means including said second plate for conducting electricity to said anode electrode, said first and second plate holding means including means outside said cylinder holding said plates in alignment and therefore maintaining alignment between said electrodes and comprising electrically non-conducting members engaging both said plates outside of said cylinder.

3,049,609
ARC WELDING SYSTEM
Rawlins E. Purkhiser, Springfield, and William F. Iceland, Metuchen, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 4, 1960, Ser. No. 67,219
2 Claims. (Cl. 219—135)



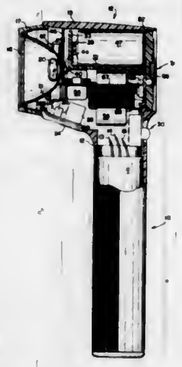
1. In arc welding apparatus of the type which includes a hand-manipulated gun out of which a wire electrode is fed to be projected onto a work electrode in minutely subdivided form in an arc between the electrodes, the combination of a source of current for the arc connectible to the electrodes, said source having an output voltage/current characteristic which droops with increasing current, an electric motor in the gun for feeding the wire electrode, and a circuit placing the motor electrically in shunt relationship to the arc path, said circuit comprising a potentiometric system which is connected in said shunt relationship and which comprises an impedance portion and a zener-diode portion in series with each other, said zener-diode portion comprising a zener diode connected in reverse-current direction and being characterized by a limiting voltage intermediate between the voltages respectively applied to said potentiometric system under open-circuit and under normal arcing conditions in the arc path, and the motor being electrically in parallel with said zener-diode portion.

3,049,610
ELECTRIC ARC WELDING METHOD
Harry J. Addison, Jr., and Kurt Ritthaler, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Oct. 18, 1960, Ser. No. 63,452
2 Claims. (Cl. 219—137)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for depositing a high copper alloy electrode onto a metallic base with an electric arc formed by a unidirectional current with the electrode anodic and the base cathodic, the combination therewith of the improvement for reducing electrode spatter from the arc upon the base, said improvement comprising the step of uniformly applying sodium chloride to said electrode prior to arcing between said base and said electrode in an amount ranging between about 3.9×10^{-5} and 8.8×10^{-5} grams per square inch of copper electrode surface area.

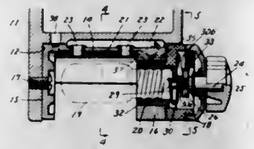
3,049,611
PHOTOGRAPHIC FLASH UNIT
Robert D. Kluge, Westminster, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 22, 1960, Ser. No. 51,060
9 Claims. (Cl. 240—1.3)



1. A single unit electronic photographic flash apparatus of the type using low voltage batteries, comprising; a hollow tubular handle open at the upper end thereof, a tubular high voltage capacitor mounted within said handle, a tubular open end head unit housing mounted on said upper end of said handle such that the axis of said housing is substantially perpendicular to the axis of said handle, a reflector, a high voltage flash tube mounted within said reflector, means mounting said reflector and flash tube within said housing at the forward end thereof to close the forward end of said housing, mounting chassis means mounted within said housing to divide the interior of said housing into a first compartment and a battery compartment, low voltage to high voltage converting means, means mounting said voltage converting means on said chassis means within said head unit housing, a removable wall member removably mounted to close the back end of said housing, a battery tray mounted on the interior side of said wall member and adapted to receive a plurality of low voltage batteries within said battery compartment, said wall member being selectively removable to facilitate replacement of the batteries, and electrical circuit means interconnecting said flash tube, said capacitor, and said voltage converting means with the batteries so that the low battery voltage is converted to a high voltage to charge said capacitor for selective discharge through said flash tube to produce a flash of light for photographic purposes.

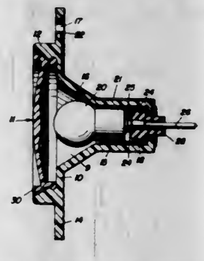
3,049,612
LIGHTING APPARATUS IN SEWING MACHINES
Jutaro Sasaki, Osaka City, Japan, assignor to Sanko Mishin Kogyo Kabushiki Kaisha, Osaka City, Japan
Filed June 29, 1959, Ser. No. 823,392
2 Claims. (Cl. 240—2.14)

1. In combination, a sewing machine head extending longitudinally of a sewing machine, said head having a downwardly opening semicylindrical recess adjacent the end thereof, said recess extending transversely of the longitudinal direction of said head, one end of said recess opening out of one side of said head, said head having a semicircular groove therein around the inside of said recess, a semicylindrical casing fitted into said semicylindrical recess, said casing having a closed end secured to said head at the closed end of said semicylindrical recess, the other end of said casing having an opening therethrough, said semicylindrical casing having a semicylindrical wall defining with said semicircular groove a ventilating chamber extending in a semicircle around said semicylindrical casing and opening out of



said head at the sides of said semicylindrical casing, said semicylindrical wall having at least one aperture therethrough opening into said ventilating chamber, a light socket removably fitted into said opening in the other end of said casing and having switch means thereon, and current conducting means on said socket and current conducting means on said semicylindrical casing engageable with each other.

3,049,613
VEHICLE LIGHT
George D. Baldwin, Jamestown, N.Y., assignor to Truck-Lite Co., Inc., Jamestown, N.Y., a corporation of New York
Filed July 18, 1958, Ser. No. 749,390
5 Claims. (Cl. 240—7.1)

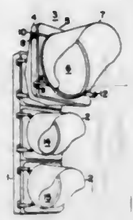


1. A vehicle light for use as a clearance or position light on a vehicle body comprising a casing enclosing a vapor and moisture tight chamber, a light bulb housed within the said chamber, the said casing consisting of two bodies made exclusively of transparent resinous plastic, one of said bodies being a lens body and the other being a light bulb holder, an axial flange on said lens body projecting inwardly and provided with a radially extending collar, a circumferential axial flange on said light bulb holder provided with a radially extending groove on the inner surface thereof, said collar engaging said groove upon elastic deformation of the engaging parts producing elastic tension, securing the parts to each other by a snap action, said circumferential axial flange being provided with a conical inner surface extending from said groove outwardly and said axially extending flange of said lens body being provided with a stepped cylindrical surface forming at least one annular ridge engaging said conical inner surface.

3,049,614
TRAFFIC SIGNAL ADAPTER
Willis M. Eikenberry, Bettendorf, Iowa, assignor, by mesne assignments, to The Gamewell Company, Newton, Mass., a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,706
5 Claims. (Cl. 240—41.3)

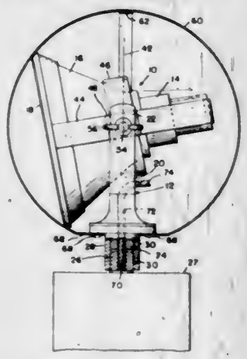
1. A vehicular traffic signal adaptor which may be secured to the door of an existing substantially smaller

traffic signal, including in combination: a traffic signal enclosure comprising a housing having a front face and a back face and an opening formed in each of said faces; said enclosure including walls connecting said front and back faces, said front face opening being substantially larger than said back face opening, one edge of said front face lying in substantially the same horizontal plane with a corresponding edge of said back face; means for attaching said back face to the door of the



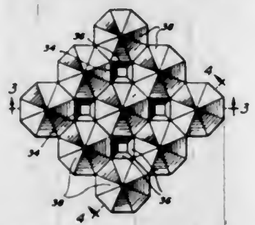
existing smaller traffic signal; lens and sealing means secured to and enclosing the opening in said front face of said enclosure; optic means and light generating means mounted in said enclosure, said light means adapted to illuminate said lens; said lens displaced axially away from, and with the horizontal axis of said lens displaced upwardly from the horizontal axis of said back face opening and, when installed, of said door of said smaller existing traffic signal.

3,049,615
MOTOR DRIVEN LAMP UNIT AND METHOD
Edward C. Sawyer, 9200 River Valley, Brighton, Mich.
Filed Mar. 21, 1960, Ser. No. 16,273
2 Claims. (Cl. 240—49)



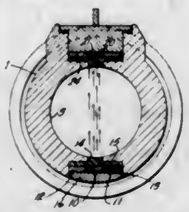
1. Apparatus for illuminating an area, comprising a single lamp unit adapted to emit a single beam of light when energized, a support for said lamp unit, means mounting said support for rotation about a fixed axis through the center of gravity of said support so that said support is in perfect dynamic balance when rotated, means mounting said lamp unit on said support for rotation as a unit therewith and for pivotal movement about a pivot axis at right angles to and intersecting the axis of rotation of said support, said second-mentioned means including spaced, aligned trunnions lying on said pivot axis and respectively located on opposite sides of said lamp unit, means for locking said lamp unit in selected positions of pivotal adjustment, and means for rotating said support continuously at a high rate of speed such that the elapsed time per revolution is on the order of the light retention time of the normal human eye or less, the center of gravity of said lamp unit lying on the intersection of the axis of rotation of said support and said pivot axis so that said lamp unit is in perfect dynamic balance when rotated, said trunnions being spaced equal distances from said intersection of said axes, and a spherical shell having a smooth outer surface completely enclosing and secured to said support for rotation as a unit therewith, the center of gravity of said shell lying on the axis of rotation of said support, said shell being circular in all sections taken at right angles to the axis of rotation and being symmetrical with respect to said axis of rotation, said shell being transparent at least in the region aligned with the beam of light from said lamp unit, said shell being composed of two half-sections removably recured together along their margins, and the plane of said margins containing said axis of rotation.

3,049,616
PERFORATED LIGHTING DIFFUSER
Donald W. Davis, Highland Park, Ill., assignor to Lighting Products, Inc., Highland Park, Ill., a corporation of Illinois
Filed Mar. 6, 1958, Ser. No. 719,642
3 Claims. (Cl. 240—106)



1. A light diffuser plate having a base with square openings therethrough smooth on one side and pyramidal projections entirely surrounding the openings and projecting from the other side of the base, the openings extending and inclined outwardly in the same directions as the surrounding faces of the pyramidal projections but to a less degree, the sides of the opening in the base being tapered outwardly to the base edges of the said pyramidal projections, and the sides of the pyramids being continued therefrom and tapered to a greater extent than the sides of the openings in the base, the sides of the openings in the base being tapered about 15° from the bottom to the top through the plate, and the pyramidal sides being inclined about 134° from a vertical edge at the opening of each corresponding tapered side.

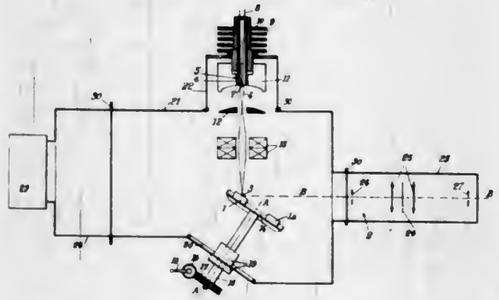
3,049,617
FLUID FLOW METER
Francis G. Fabian, Jr., Bradford, Pa., John P. Mann, Clintonville, Wis., Henry Knippenberg, Columbus, Ohio, and Richard E. Wainerdi, College Station, Tex., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Dec. 9, 1957, Ser. No. 701,506
16 Claims. (Cl. 250—43.5)



1. A fluid flowmeter comprising a passageway for flow of the fluid to be measured, a radioactive emitter associated with the passageway, a receiver positioned to receive radiation from said emitter and comprising a

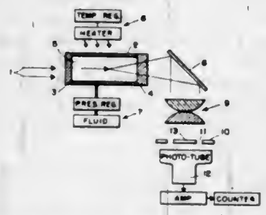
semiconductor, the electrical resistance of which varies in accordance with the cumulative amount of radiation received, and means for varying the radiation received by said receiver in proportion to the rate of flow of fluid through said passageway, whereby the total change in resistance of said semiconductor in a selected period of time is proportional to the total cumulative amount of fluid flowing through said passageway during said period of time.

3,049,618
METHODS AND DEVICES FOR PERFORMING SPECTRUM ANALYSIS, IN PARTICULAR IN THE FAR ULTRAVIOLET REGION
Paul Thomé, Saint-Cloud, France, assignor to Commissariat a l'Energie Atomique, Paris, France, an organization of France
Filed May 4, 1960, Ser. No. 26,778
Claims priority, application France May 13, 1959
8 Claims. (Cl. 250—49.5)



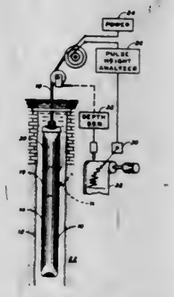
4. A spectrometer operating in the visible and ultraviolet range for locally analyzing the atomic composition of solid samples, comprising, in combination, an evacuated vessel, means for supporting in said vessel at least one sample to be analyzed, an electron gun located in said vessel and including a centrally apertured anode and a cathode negatively biased relatively to said anode and arranged to project through said anode a focalized electron beam, means for directing a spot of said focalized electron beam on a determined minute area of said sample, said beam being of sufficient intensity to locally at least melt the material of said sample in said area and thereby generate radiations comprised in the visible and ultraviolet range, representative of the atomic composition of said sample in said area, and visible and ultraviolet radiations dispersing means mounted in said vessel and directed towards said sample to receive said generated radiations.

3,049,619
DIFFERENTIAL CERENKOV COUNTER
Frank C. Genovese, Jr., Brookline, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 19, 1958, Ser. No. 781,820
13 Claims. (Cl. 250—71.5)



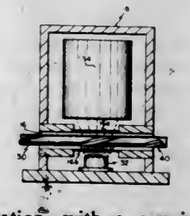
1. In a Cerenkov counter of the type wherein a beam of charged particles is directed into a transparent dielectric so as to produce coherent radiation at a given angle with respect to the direction of motion of those particles whose speeds exceed that of light in said dielectric, the improvement of utilizing as said dielectric a volume of fluid which is bounded by a cylindrical reflective wall surface, the pressure and temperature of said fluid being adjustable for converting said fluid from its gaseous to its liquid phase.

3,049,620
SCINTILLATION DETECTOR COOLING SYSTEM
Wayland D. George, Fullerton, Stanley B. Jones, Whittier, and Herbert P. Yule, Anaheim, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Aug. 20, 1959, Ser. No. 835,129
6 Claims. (Cl. 250—71.5)



1. Apparatus for increasing the counting rate for gamma radiation in a wellbore which comprises a logging sonde adapted to be positioned in a well bore, means forming a presurized reservoir for storing a liquefied gas at a temperature of less than minus 100° F., a scintillation crystal positioned for thermal contact with said liquefied gas in said reservoir, light pipe means for optically coupling said crystal to a photomultiplier tube and thermally isolating said scintillation crystal from said photomultiplier tube, thermal refrigeration means surrounding said photomultiplier tube, said refrigeration means including an expansion coil in thermal conductivity to said photomultiplier tube, an expansion valve interconnecting said storage reservoir for liquefied gas and said expansion coil, and unidirectional port means for releasing gas expanded in said expansion core to the well bore while preventing flow of drilling fluid into said expansion coil.

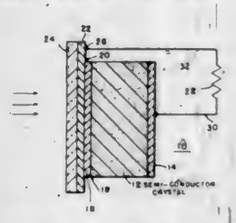
3,049,621
ENERGY MODULATION
David L. Spooner, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Apr. 9, 1958, Ser. No. 727,485
7 Claims. (Cl. 250—83.3)



1. The combination, with a gauging instrument for measuring the mass of a material flow, said instrument including an ionizing radiation source, a radiation detector and guide means between said source and said detector for conducting said material flow therethrough, of means for testing the response of said instrument to mass variations, said testing means including a helix rod modulator

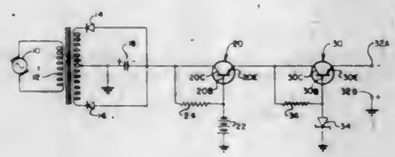
comprising a rod having a cylindrical body portion and a helically formed peripheral portion on said body portion, said body portion and said peripheral portion having different radiation absorption characteristics, means for rotatably mounting said rod in said guide means in substitution for said material flow, means for rotating said rod about the longitudinal axis thereof and means for indicating the response of said gauging instrument to the resulting modulation of the radiation flux from said source on said detector.

3,049,622
SURFACE-BARRIER PHOTOCELLS
Edwin R. Ahlstrom, Neptune, and Ernst J. Schiel, Oakhurst, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 24, 1961, Ser. No. 98,277
1 Claim. (Cl. 250—211)
(Granted under Title 35, U.S. Code (1952), sec. 266)



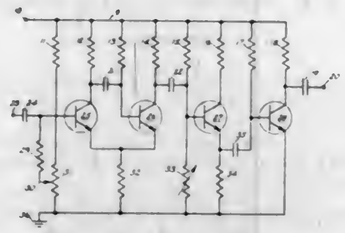
A surface-barrier junction photocell comprising an n-type silicon plate, a light transmitting layer of gold vaporized on one surface of said plate to form a rectifying junction therebetween, an ohmic contact on the other surface of said silicon plate, a transparent glass slab having overall dimensions substantially larger than the surface of said layer of gold, a layer of transparent electroconductive tin oxide vaporized on one surface of said glass slab, said glass slab maintained against said layer of gold so that the layer of tin oxide on said glass slab contacts the whole surface area of said layer of gold.

3,049,623
AUXILIARY POWER SUPPLY
Wilbur E. Du Vall, Gardena, Calif., assignor to The W. W. Henry Company, Huntington Park, Calif., a corporation of California
Filed Mar. 30, 1961, Ser. No. 99,530
5 Claims. (Cl. 307—66)



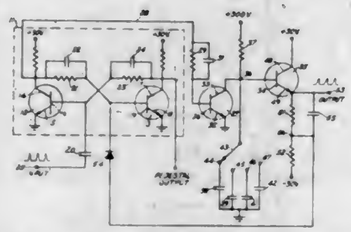
4. A fail-safe power supply comprising a source of direct-current voltage having a positive and negative output terminal, a transistor having a collector, emitter, and base, means connecting said transistor collector to one of said positive and negative output terminals, a pair of load terminals, means connecting said transistor emitter into one of said pair of load terminals, a resistor connected between the collector and base of said transistor, a battery connected between said transistor base and the other of said load terminals, said battery being connected in a manner to bias said transistor in a conducting state, and means connecting said other of said load terminals to the one of said positive and negative output terminals of said power supply to which said transistor is not connected.

3,049,624
RETRIGGERABLE MEMORY
Robert L. Riley, Levittown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 25, 1960, Ser. No. 17,714
11 Claims. (Cl. 307—88.5)



6. A retriggerable memory circuit comprising: a multivibrator circuit coupled to an input for trigger signals to produce pulses having a uniform amplitude and width in response to trigger signals; storage means coupled through coupling circuits to said multivibrator circuit to accumulate a charge during production of said pulse; a storage means discharging circuit coupled to said storage means; means coupled to said storage means and operable by the voltage thereon and coupled across a source of supply and having an output means coupled thereto whereby an output pulse is produced during discharge of said storage means and responsive to the most recent trigger signal regardless of its time of occurrence.

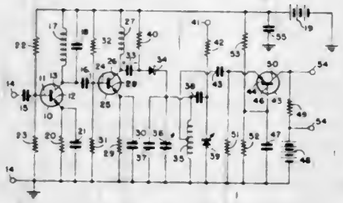
3,049,625
TRANSISTOR CIRCUIT FOR GENERATING CONSTANT AMPLITUDE WAVE SIGNALS
Herbert Philip Brockman, Moorestown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 31, 1960, Ser. No. 66,370
6 Claims. (Cl. 307—88.5)



2. An electrical circuit for selectively generating sawtooth signal waves having different slopes but same amplitudes comprising: first and second transistors each having base, emitter, and collector electrodes; means cross-connecting said base electrodes and said collector electrodes to provide a bistable circuit; a third transistor having base, emitter, and collector electrodes; means connecting said base electrode of said third transistor to said collector electrode of said first transistor; a fourth transistor having base, emitter, and collector electrodes, said base electrode of said fourth transistor being connected to said collector electrode of said third transistor; a timing resistor and a plurality of timing capacitors selectively connectable one each to said collector electrode of said third transistor; an output terminal connected to said emitter electrode of said fourth transistor; and feed-back means connected between said output terminal and said base electrode of said second transistor whereby selectively connecting different timing capacitors to said collector

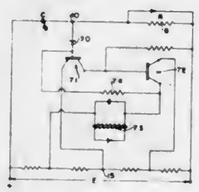
electrode of said third transistor causes a change of slope without a corresponding change in amplitude of said sawtooth signal waves being generated.

3,049,626
SPECTRUM GENERATOR
Raymond M. Shannon, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed May 2, 1961, Ser. No. 107,104
8 Claims. (Cl. 307—88.5)



1. In a system for generating selected frequencies in a broad band of frequncies harmonically related to a given fundamental frequency, the combination comprising: a source of direct currents; an inductor; an electronic valve; means connecting said inductor and said valve in series across said source; a capacitor connected to the junction of said valve and said inductor; a semiconductor diode; a resonant load tuned to a desired harmonic in said band; said semi-conductor diode and said resonant load being connected in series with said capacitor and said inductor across said source; means for forwardly biasing said diode and means for rendering said electronic valve conductive and non-conductive at a rate equal to said fundamental frequency.

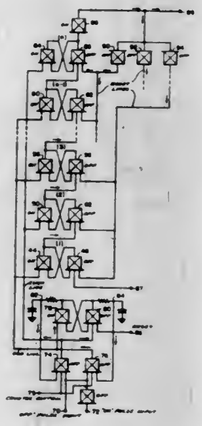
3,049,627
ELECTRICAL TIMING CIRCUIT
John W. Higginbotham, Essex, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed June 17, 1957, Ser. No. 666,136
3 Claims. (Cl. 307—88.5)



1. An electrical switching circuit for activating an output load at a pre-selected time after the application of a voltage to the circuit, comprising:

a. a resistor and a capacitor connected as a series circuit, a first connection point in said series circuit between said resistor and said capacitor;
b. means for applying a voltage across said series circuit whereby there is developed at said first connection point a potential which varies in time as a function of the time constant of said series circuit;
c. a voltage divider network connected across said voltage means and said series circuit, a second connection point in said voltage divider network for tapping a pre-selected constant potential therefrom;
d. first and second transistors;
e. the input circuit of said first transistor comprising the base electrode and one other electrode, a rectifier connected between said base electrode and said first connection point, said rectifier being connected so as to be reverse biased when the voltage at said first connection point is below pre-selected level and to be forward biased when the voltage at said first connection point is above said pre-selected level, said other electrode of said first transistor being connected to said second connection point, whereby when the voltage at said first connection point reaches said pre-selected level, the voltage difference between said first and second connection points is applied across the input circuit of said first transistor, putting said first transistor into conduction;
f. the output circuit of said first transistor being connected to the input circuit of said second transistor so that said second transistor amplifies the current output of said first transistor;
g. an output load in the output circuit of said second transistor;
h. a positive feedback circuit connected between the output circuit of said second transistor and the input circuit of said first transistor;
i. first and second biasing networks corresponding to said first and second transistors, each said biasing network acting to cut off its corresponding transistor when the voltage at said first connection point is below the pre-selected level, each of said biasing networks being substantially independent of the potential at said first connection point when said potential is below said pre-selected level.

3,049,628
DIRECT COUPLED PROGRESSIVE STAGE PULSE COUNTER APPARATUS
William M. Kaufman, Monroeville, Pa., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 17, 1958, Ser. No. 709,542
1 Claim. (Cl. 307—88.5)



In pulse counting apparatus, the combination comprising,

(*a*) a chain of stages, each stage including:
(1) a first NOR element,
(2) a second NOR element,
(3) cross coupling means directly connecting the output of said first NOR element to a first input of said second NOR element and the output of said second NOR element to a first input of said first NOR element;
(*b*) means directly connecting the output of the first NOR element of each stage in the chain to a second

input of the second NOR element of each subsequent stage in the chain;

(*c*) an odd pulse line connected to a second input of each first NOR element of the odd stages in said chain;

(*d*) an even pulse line connected to a second input of each first NOR element of the even stages in said chain;

(*e*) input pulse sequencing means functioning to alternately actuate said odd and even lines in response to a chain of pulses applied to an input thereof; and

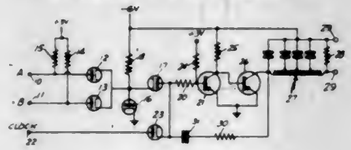
(*f*) a reset means connected to a third input of each of said second NOR elements.

3,049,629

ELECTRICAL PULSE AMPLIFYING AND RESHAPE APPARATUS

Roy W. Reach, Jr., South Sudbury, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Feb. 11, 1958, Ser. No. 714,562
9 Claims. (Cl. 307—88.5)



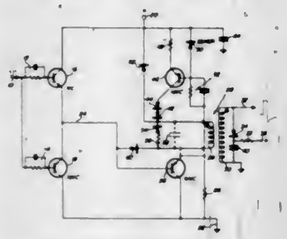
1. A pulse reproducing circuit comprising a pair of directly coupled transistor elements connected in cascade, an input connected to one of said transistor elements, said input comprising an external pulse signal source which has an output pulse to be reproduced and an external clock pulse signal source, an output circuit connected as a direct current connection to the other of said transistor elements, and a feedback connection from said output circuit to said input, said clock pulse signal source being connected to said feedback connection to decouple the feedback signal upon the termination of each clock pulse.

3,049,630

TRANSFORMER-COUPLED PULSE AMPLIFIER

Theodore Sapino, Framingham, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Oct. 23, 1958, Ser. No. 769,212
9 Claims. (Cl. 307—88.5)



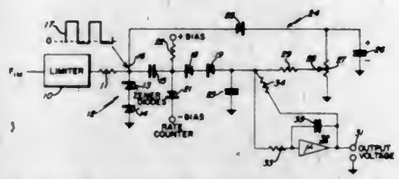
3. An electrical pulse amplifier circuit comprising a transistor emitter-follower circuit, a transformer having a primary winding directly connected as the output of said emitter-follower circuit such that the secondary of said transformer functions as the pulse amplifier output, a pair of power supply terminals connected in series with said circuit, and a current regulating means connected in series with said power supply terminals to the emitter of said transistor to regulate the current in said emitter-follower circuit.

3,049,631

FREQUENCY DIODE-RATE COUNTER CIRCUITS

Hugh P. Taylor, Littleton, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Oct. 24, 1958, Ser. No. 769,368
8 Claims. (Cl. 307—88.5)



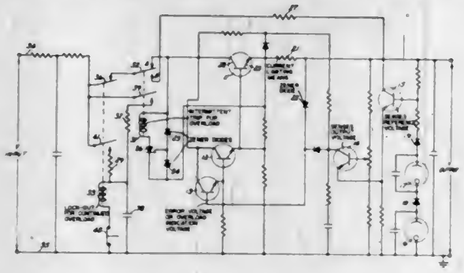
1. An electrical circuit comprising: circuit means operative from an oscillatory input signal for producing an asymmetrical output signal; capacitive means having an input terminal and an output terminal; said input terminal being connected to said circuit means for receiving said asymmetrical output signal; first semiconductor diode means connected to said output terminal to provide a low impedance charge path to said capacitive means; a capacitor having one terminal connected to ground; second semiconductor diode means connected between said first semiconductor diode means and the other terminal of said capacitor for presenting a high impedance from said capacitor to said first semiconductor diode; and second circuit means connected between said first circuit means and said other terminal of said capacitor for supplying a zero reference direct current from said first circuit means to said capacitor.

3,049,632

OVERLOAD PROTECTION CIRCUIT

John P. Staples, Indianapolis, Ind., assignor to the United States of America as represented by the Secretary of the Navy

Filed Dec. 29, 1959, Ser. No. 862,723
3 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



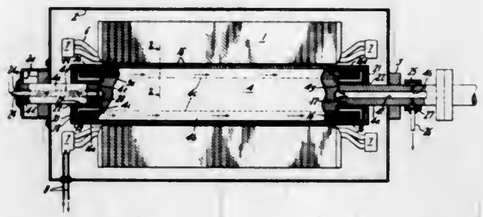
1. In a protective system for transistors; a voltage source; a transistor to be protected from an overload condition having base, collector, and emitter electrodes; switching means connecting said voltage source and said transistor; a zener diode connected between said collector and emitter electrodes for protecting said transistor from an overload condition; a bypass resistor having one end connected to said emitter electrode and another end connected to said switching means; a charging resistor; a charging capacitor having one end connected to said voltage source and the other end connected through said charging resistor to said switching means; and actuating means connected across said zener diode for actuating said switching means to disconnect said voltage source from said transistor and to connect said bypass resistor to said voltage source and to connect said charging capacitor across said voltage source during an overload condition.

3,049,633

LIQUID-COOLED ROTOR FOR DYNAMO-ELECTRIC MACHINE

Bernard M. Cain, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 22, 1960, Ser. No. 51,182
6 Claims. (Cl. 310—54)



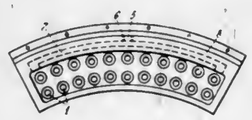
1. A rotor for a dynamoelectric machine comprising a cylindrical rotor body defining circumferentially spaced longitudinal slots, electrical conductor means disposed in said slots and defining cooling ducts for transporting liquid in direct contact with said conductor means, a thin cylindrical member tightly encompassing the outer periphery of the rotor body and sealed thereto at opposite ends thereof to define a liquid-tight enclosure containing the conductor means, means to introduce liquid coolant to said enclosure to cool the conductor means, and a plurality of relatively thick discrete rings of non-magnetic material tightly encompassing the cylindrical member along the entire length thereof and being of a thickness substantially greater than that of the cylindrical member, whereby the rings will support the cylindrical member against the centrifugal forces exerted on the cylindrical member by the liquid coolant.

3,049,634

DYNAMO-ELECTRIC MACHINERY

William D. Horsley, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England

Filed May 5, 1959, Ser. No. 811,192
Claims priority, application Great Britain May 6, 1958
1 Claim. (Cl. 310—64)



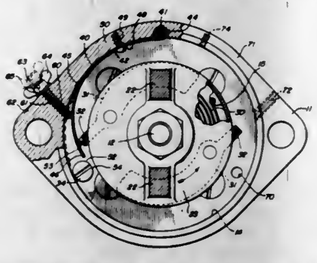
In a stationary winding for a dynamo-electric machine comprising hollow conductors housed in slots in a stator core, end portions of the conductors located outside the core, a plurality of boxes of electrical insulating material located at and supporting the conductor ends, means supplying a cooling liquid to boxes at one end of the conductors and collecting it from boxes at the other end of said conductors after circulation through or over said conductors, the provision in each box of at least one opening in an outer face and at least one opening in an inner face, the latter opening being displaced from the opening in the outer face and providing a passage in the wall of the box interconnecting said openings whereby the length of the electrical leakage path via cooling liquid passing through the wall of the box is substantially greater than the thickness of the box.

3,049,635

CONTROL FOR IMPULSE COUPLING

Thomas A. Hinderer, Beloit, Wis., assignor to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois

Filed May 9, 1960, Ser. No. 27,576
5 Claims. (Cl. 310—84)



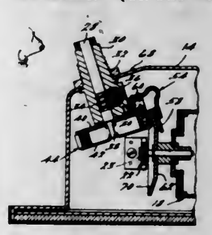
1. The combination with a magneto generator and drive means therefor including an impulse drive coupling for accelerating starting drive of the generator, wherein the generator provides a fixed stop adjacent the drive coupling and the coupling includes a movable centrifugal force responsive pawl for successive abutment with and release from the stop to effect accelerated starting drive of the generator, of a cam element movably carried by the generator, said cam element being movable to and from a camming position relative to the stop, and the element in said camming position serving to cam the pawl away from abutting engagement with the stop.

3,049,636

MAGNETICALLY DRIVEN DEVICES

Joachim P. Stadelmann, Madison Heights, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

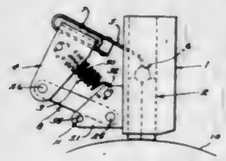
Filed June 22, 1959, Ser. No. 822,104
4 Claims. (Cl. 310—97)



1. In a speed responsive indicator, a ceramic permanent magnet comprising essentially Fe_2O_3 and $BaCO_3$ mounted for angular movement, means having a negative temperature coefficient of electrical resistance and subject to torque as a function of the speed of said magnet for indicating said speed including an eddy current member mounted for angular movement in the path of the magnetic flux of said magnet, a field plate mounted in said path, and compensating means for neutralizing comparatively large temperature induced changes in the torque relationship between said magnet and member in the temperature range from —40° F. to 130° F. to effect a substantially accurate indication of said speed independently of changes in the ambient temperature, said compensating means comprising temperature responsive means for adjusting the distance between said field plate and magnet inversely with changes in ambient temperature, said temperature responsive means being calibrated and arranged with respect to said magnet and member to compensate for thermally induced changes in the torque relationship therebetween to effect a substantially accurate indication of said speed in the temperature range between approximately 65° F. and 130° F. and to effect a negligi-

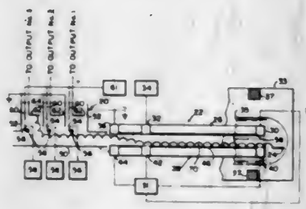
ble compensation for temperature changes below approximately 65° F., said compensating means also including a temperature compensating magnetic shunt having a negative temperature coefficient of magnetic permeability in the tempearture range between approximately 65° F. and —40° F. and cooperable with said magnet and field plate to compensate for thermally induced changes in the torque relationship between said magnet and member to effect a substantially accurate indication of said speed in the latter temperature range, said shunt having a negligible temperature coefficient of magnetic permeability above approximately 65° F.

3,049,637
BRUSH HOLDERS FOR ELECTRICAL MACHINERY
Theodor Gutberlet, Giessen (Hessen), Germany, assignor to Schunk & Ebe G.m.b.H., Giessen (Hessen), Germany, a corporation of Germany
Filed Oct. 30, 1959, Ser. No. 849,790
11 Claims. (Cl. 310—246)



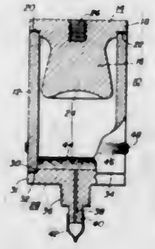
1. A brush holder adapted to urge a brush into engagement with a commutator and the like, and including, a holder to shiftably carry and to guide the brush, a pivotal link freely movable during the initial part of the brush movement, a thrust lever pivotally carried on the link and supporting a thrust member acting on the brush, bias means acting on the thrust lever to move the brush as it wears, and a stop engageable with the link to limit movement thereof whereby the thrust lever and thrust member turn about a stationary fulcrum during the remaining part of the brush movement.

3,049,638
GATING APPARATUS FOR CHARGED PARTICLES
John M. Saari, Oak Park, Donald C. Damoth, Pontiac, and William C. Wiley, Northville, Mich., assignors to The Bendix Corporation, a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,497
12 Claims. (Cl. 313—103)



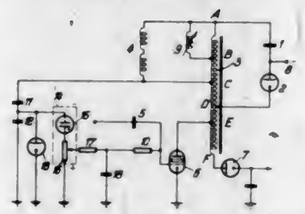
3. A gating apparatus comprising an electron multiplier having a secondary emissive surface means, rail means longitudinally aligned with said emissive surface means, means to maintain said rail means at a predetermined potential, resistive means being interposed between said rail means and said surface means, the voltage difference at the end of said surface means being at one end of said resistive means and the voltage difference at the receiving end of said rail means being at the other end of said resistive means to provide a gradual potential gradient and maintain electron stream definition, longitudinally spaced gating electrode means being laterally spaced from and inclined to said rail means, means for pulsing said gate electrode means to divert the electron stream from the lateral spacing between said electrode means and said rail means to the longitudinal spacing between adjacent inclined gate electrode means, collecting anode means being associated with each gate means to receive electrons diverted thereby.

3,049,639
HIGH POWER SWITCH TUBE
Gilbert H. Reiling and James M. Lafferty, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed June 8, 1959, Ser. No. 818,747
10 Claims. (Cl. 313—166)



3. An apparatus comprising a ceramic envelope having a gas-free refractory metal anode with a portion in sealing engagement with one end of said envelope, another portion of said anode projecting within said envelope and having a concave face exposed to the interior thereof, a gas-free mercury pool cathode disposed within said envelope and a conductive band about the exterior of said envelope in proximity to said cathode, the interior wall of said envelope having a plurality of annular ridges and depressions in alternate order along its length.

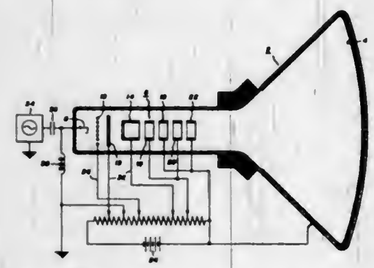
3,049,640
SELF REGULATING DEFLECTION CIRCUITS
Walter Bruch, Hannover, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Nov. 3, 1958, Ser. No. 771,648
Claims priority, application Germany Nov. 6, 1957
4 Claims. (Cl. 315—27)



1. A sweep circuit for generating and delivering sawtooth sweep waves to deflection coils comprising a transformer; diode controlled sweep-generating means connecting said transformer to a source of D.C. power; a driver tube connected with said transformer and controlling the flow of power thereto via the diode means to make up power dissipated in and delivered by the transformer, said driver tube having a reference electrode and a control electrode; rectifier means connected to said transformer and rectifying a portion of the current therein to obtain a bias potential having superimposed thereon variations in the operating level of the transformer, said rectifying means being connected to a relatively high-potential point of the transformer whereat said variations will be large; and a load across said rectifier means comprising gas-filled glow lamp means connected to the rectifier means and a resistance connected

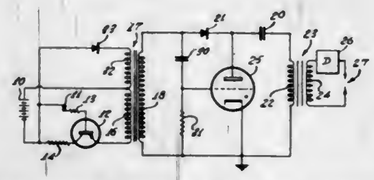
to the glow lamp means and to the reference electrode of the driver tube, and said resistance having a point connected to the control electrode of the tube to apply a component of said variation in potential to the last-mentioned electrode to alter the operating point of the driver tube and cancel out said variations in the transformer, the glow lamp means subtracting a constant voltage from the output of the rectifier means to permit the full variation in potential to appear across the resistance.

3,049,641
HIGH TRANSCONDUCTANCE CATHODE RAY TUBE
Paul Harry Gleichauf, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 8, 1959, Ser. No. 812,000
6 Claims. (Cl. 315—30)



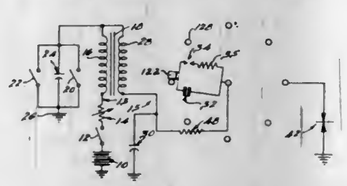
1. Cathode ray tube electron beam generating apparatus comprising a cathode, a first anode forming an opening for passage of the electron beam therethrough, a space charge grid transversely disposed between the cathode and first anode, means for biasing the space charge grid positive with respect to the cathode, a crossover-forming grid comprising a planar conductive member having a single central aperture transversely disposed between the first anode and the space charge grid, means for biasing the crossover-forming grid negative with respect to the cathode, and means for varying the degree of positiveness of the space charge grid relative to the cathode in accordance with an electron beam intensity modulation signal.

3,049,642
FIRING CIRCUIT FOR IGNITION SYSTEMS
Halsey P. Quinn, Whippany, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Aug. 15, 1960, Ser. No. 49,511
3 Claims. (Cl. 315—206)



1. In an ignition system for internal combustion engines which includes a pair of breaker contacts connected in series with a source of direct current and controlled to open and close in synchronism with the movements of the engine's pistons; an inductive winding on a ferromagnetic core coupled to said contacts for storing magnetic energy in the winding's field; a storage capacitor coupled to said inductive winding for storing a charge received from the winding and core when the contacts open; and a discharge circuit which includes the storage capacitor, a controllable discharge device, and the primary winding of an output transformer; the improvement comprising a firing circuit which includes a firing capacitor and a resistor connected in series across a secondary winding coupled to said inductive winding, and a connection between the firing circuit and the discharge device for making said device conductive, said firing circuit having a time constant which is less than the time constant of said discharge circuit.

3,049,643
ROTOR ARM AND ELECTRICAL SYSTEM
Kenneth A. Graham, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Continuation of application Ser. No. 796,530, Mar. 2, 1959. This application May 2, 1960, Ser. No. 26,373
4 Claims. (Cl. 315—219)

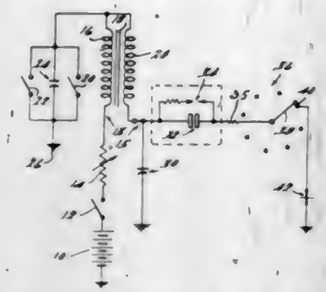


1. In an operative ignition circuit for a multiple cylinder engine, a distributor having an inlet terminal and a plurality of outlet terminals, a plurality of surface gap spark plugs connected with said outlet terminals respectively, said distributor also having a rotatable arm, brush means carried by said arm and arranged to contact each of said outlet terminals successively upon rotation of said arm, spark gap means carried by said arm and requiring a predetermined comparatively high breakdown potential to initiate conduction of electric current and being thereafter susceptible of conducting at a lower conducting potential until the latter potential is subjected to a predetermined interruption, one side of said gap means being electrically connected with said inlet terminal, the other side of said gap means being electrically connected with said brush means, a storage condenser electrically connected with said inlet terminal to discharge through said plug and gap means when the latter is conducting, electrical power supply means for charging said condenser to said breakdown potential to effect a sudden current surge through said gap means and plug upon the discharge of said condenser, and resistance means for retarding the rate of discharge of said condenser sufficiently as the potential of the latter approaches said conducting potential to prevent said predetermined interruption of said conducting potential by damping oscillation of said condenser potential, said power supply means being effective to supply electrical power to said gap means at said conducting potential for an extensive time interval with respect to the duration of said current surge to effect a trailing current of extensive duration across said gap means and plug following said current surge.

3,049,644
IGNITION SYSTEM
Omer E. Bowlus, Orchard Lake, and Kenneth A. Graham, Birmingham, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Continuation of application Ser. No. 796,448, Mar. 2, 1959. This application May 2, 1960, Ser. No. 26,374
8 Claims. (Cl. 315—219)

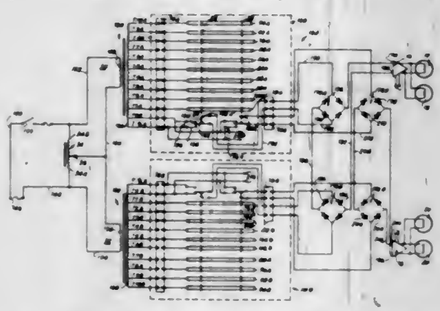
1. In an ignition system for an internal combustion engine, a surface gap spark plug and gap means in an operative electrical circuit, a condenser arranged in said circuit to discharge through said plug and gap means in series when the latter is conductive, said gap means requiring a predetermined comparatively high breakdown

potential to initiate its conduction and being adapted to conduct thereafter at a comparatively low conducting potential until said conducting potential sustains a predetermined interruption, electrical power supply means arranged in said circuit to charge said condenser to said breakdown potential to effect a sudden current surge across said gap means and plug upon the discharge of said condenser, and resistance means in said circuit for



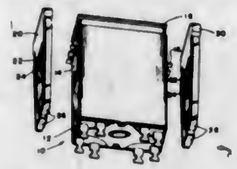
retarding the rate of discharge of said condenser appreciably as the potential of the latter approaches said conduction potential, said power supply means being also effective to supply electrical power to said gap means at said conducting potential for an extensive time interval with respect to the duration of said current surge, thereby to effect a trailing current of extensive duration across said gap means and plug following said initial current surge.

3,049,645
PRESET LIGHTING CONTROL SYSTEM
Stephen James Skirpan, New York, N.Y.
(34—15 Parsons Blvd., Flushing, N.Y.)
Filed June 29, 1959, Ser. No. 823,632
15 Claims. (Cl. 315—316)



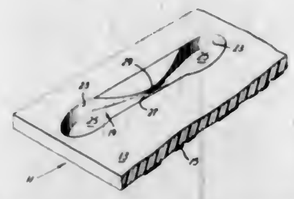
7. A lighting control system comprising fader means, a first and a second control channel energized by said fader means, a control console connected in circuit in each control channel, each console comprising a plurality of voltage busses mounted in stacked relation, said busses being mutually insulated, means defining a plurality of channels extending through said busses, each channel having an inlet opening and an outlet opening, a terminal means at each outlet opening spaced from said stacked busses, and control plug means insertable in said channels through said inlet openings and having provision to electrically connect a predetermined bus with the terminal means of the channel in which the plug is inserted, each control channel having means to apply stepped voltage values to the respective busses of the associated console, and means in circuit with each terminal means to energize a lighting circuit in accordance with the voltage applied to the associated terminal means, said means to apply stepped voltage values being a stepped transformer secondary having equally spaced taps connected to said busses, respectively, and a common tap on a return circuit with the associated lighting circuit energizing means, and means to increase the voltage at each bus by a fraction of a voltage step.

3,049,646
MOUNTING ARRANGEMENT FOR AN ELECTRICAL DEVICE
John A. Cox, Jr., Freeport, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 3, 1959, Ser. No. 803,850
8 Claims. (Cl. 317—99)



1. In a mounting arrangement for an electrical device, the combination comprising: a housing including electrical means associated therewith and having mounting tabs located on opposite side walls thereof; a member proximate to an end surface of and operatively fastened to said housing arranged to be disposed in a complementary opening in and forward of a support member; and a pair of mounting members arranged to be disposed on opposite sides of said housing and each including a first portion arranged to be located forward of and to span the opening in and to engage a surface of the support member and each further including a second portion arranged to be disposed through the opening in and rearward of the support member and having an opening in a side surface thereof arranged to accommodate a mounting tab of said housing; the openings of said mounting members and said mounting tabs being detented with respect to each other so as to provide a unitary structure comprised of said housing and said mounting members; said mounting members having a pair of spring fingers disposed proximate opposite end surfaces of the second portions of said mounting members and so arranged as to engage the opening in the support member with the unitary structure disposed therein to thereby resiliently secure the unitary structure to the support member.

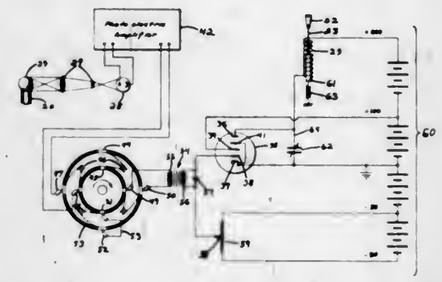
3,049,647
ELECTRICAL CHASSIS
Milan L. Lincoln, Batavia, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,299
1 Claim. (Cl. 317—101)



An electrical chassis comprising an insulating base of a given thickness having opposed major surface, an electrical conductor affixed to at least one of said major surfaces, said base having internal walls defining a slot formed to provide opposed relatively wide end portions interconnected by a curvilinear relatively narrow neck portion, the walls on opposite sides of said neck portion tapering toward the conductor affixed major surface to

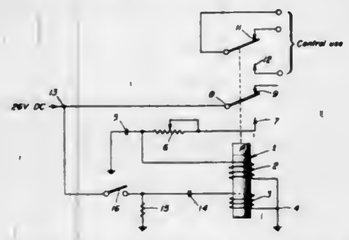
provide terminal sections of smaller thickness than said given thickness, said conductor being affixed to said base and extending to said internal wall at the narrowest part of the curvilinear neck portion and at the smallest terminal section thickness, in combination with an electrical component disposed within said slot and wedge fastened between said terminal wall sections, the component having a body with oppositely disposed layers of conductive material to provide leads for said component, said leads being positioned to press against said conductor and curve away from said insulating base, and a solder connection between the conductor and said leads.

3,049,648
VACUUM TUBE GATE CONTROL CIRCUIT FOR SOLENOID ACTUATED MECHANISM
John R. Nelson, Houston, Tex., assignor to Mandrel Industries, Inc., Houston, Tex., a corporation of Michigan
Filed Mar. 14, 1958, Ser. No. 721,425
6 Claims. (Cl. 317—123)



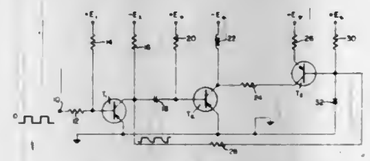
1. A magnetic armature control circuit comprising in combination a high current non-gaseous electronic discharge device whose conductivity is fully controllable by its control grid potential, an actuating solenoid connected in series with said discharge device; a power source connected across said discharge device and solenoid; an energy-storage condenser connected in shunt with said electronic device and thereby in series with said solenoid across said power source; an impulse control voltage source connected to said discharge device and at a predetermined value of its impulse being adapted to make said discharge device highly conductive to an extent such that said condenser will discharge through said device during said impulse; said condenser being recharged by said power source through said solenoid to energize it and actuate its armature.

3,049,649
TIMING CIRCUIT
Thomas J. Burke, Westmont, and Miles C. Johnson, Mount Holly, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 20, 1959, Ser. No. 847,671
2 Claims. (Cl. 317—141)



1. A system for maintaining a relay in a predetermined state for a fixed predetermined time comprising a connection for a source of power, a ground connection, a polarized relay having a set of normally open contacts and a pair of windings wound in opposite directions, each of said windings having one end connected to said ground connection, a grounded resistor, a capacitor coupling a first of said windings to said resistor, an operating switch interposed between said power connection and the junction between the capacitor and resistor, a second capacitor shunting said second winding to ground and the serial combination of a variable resistance and said normally open contacts between said second winding and said power connection.

3,049,650
CIRCUITRY FOR PULL-IN SOLENOIDS
Richard C. Greenblatt, Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 15, 1959, Ser. No. 806,649
4 Claims. (Cl. 317—148.5)

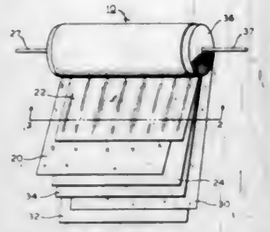


1. A circuit of the type described for utilization in operating a pull-in solenoid relay comprising, first, second and third transistors, each having a base, an emitter and a collector, the first and second transistors being arranged with the emitters at ground potential, means for connecting the solenoid coil between the collector of the first transistor and a source of biasing potential, first and second resistors, means for connecting one end of each of said first and second resistors to biasing potential sources respectively, a condenser serially connected between the other end of each resistor respectively, the connection of said first resistor with said condenser defining a junction point, the connection of said second resistor with said condenser being electrically common with the base of said first transistor, means for connecting the collector of said second transistor with said junction point, means for connecting the base of said second transistor to a source of biasing potential, input means for applying signals to the base of said second transistor, the collector of the third transistor being connected to the collector of said first transistor, a third resistor, means for connecting the emitter of said third transistor to said third resistor in series with a source of biasing potential, a source of D.C. potential having a magnitude greater than that of said latter biasing potential, a diode having an anode and a cathode, the cathode of said diode being connected to the base of said third transistor and to said D.C. potential source, the anode being connected to ground, and a current limiting resistor in a closed loop connecting the base of said third transistor with said junction point.

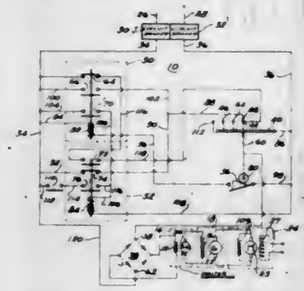
3,049,651
ELECTRICAL CAPACITORS
Leonard Adelson and Ali M. Allmaker, Williamstown, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Oct. 29, 1959, Ser. No. 849,603
5 Claims. (Cl. 317—258)

1. An electrostatic capacitor having a predetermined temperature coefficient of capacitance, said capacitor comprising convolutely wound electrodes separated by resin film dielectric layers, said electrodes and said layers being so arranged that one set of opposed faces of said elec-

trodes is separated solely by polyvinylhydrocarbon film, and the opposite set of faces of said electrodes being separated by linear polyester film and a layer of polyvinylhydrocarbon film.



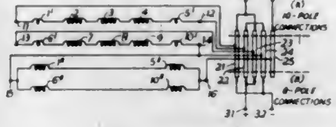
3,049,652
WARD-LEONARD CONTROL AUTOTRANSFORMER CIRCUIT
Wayne P. Stephens, Springfield, Ohio, assignor to The White Motor Company, Cleveland, Ohio, a corporation of Ohio
Filed June 18, 1958, Ser. No. 742,915
12 Claims. (Cl. 318—152)



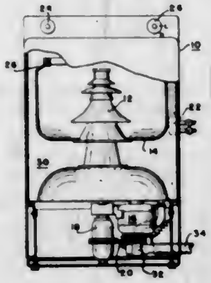
11. In a motor control system including a main generator supplying power to the motor and an exciter generator having a field winding for controlling the power output of the main generator, the combination of, an autotransformer, means energizing said autotransformer, connector arm means positionable along a spaced tap portion of said autotransformer to provide a predetermined first potential, first circuit means connected to said connector arm means and to said field winding for energizing said field winding with said predetermined first potential to cause said motor to run at a predetermined first speed, variable tap means positionable along another portion of said autotransformer to provide a selected second potential, second circuit means connected to said variable tap means and to said field winding for energizing said field winding with said selected second potential in addition to said predetermined first potential to cause said motor to run at a second speed, and no potential being supplied to said field winding when said connector arm means and said variable tap means are positioned mutually adjacent one another on said autotransformer.

3,049,653
ROTARY ELECTRIC MACHINES
Gordon Hindle Rawcliffe, Clifton, Bristol, England, assignor to National Research Development Corporation, London, England
Filed Nov. 23, 1959, Ser. No. 854,653
Claims priority, application Great Britain Dec. 2, 1958
5 Claims. (Cl. 318—173)

1. For a synchronous rotary electric machine of the type having pole-changing A.C. and D.C. windings to provide first and second alternative pole numbers, a D.C. winding comprising two halves, each half extending 180° (mechanical) subtended at machine axis, each half winding being wound to provide an equal number of poles and current supply connections providing, for said first pole number, poles of uniform spacing and uniform amplitude, and providing, for said second pole number, reversal of the direction of current flow in one said half winding relatively to the other said half winding and energisation of the poles at each end of each said half winding at diminished amplitude relatively to the undiminished poles not at the end of either said half winding.



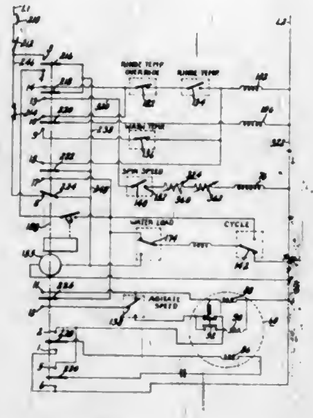
3,049,654
ELECTRIC MOTOR DRIVEN DOMESTIC APPLIANCE
Byron L. Brucken, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 27, 1958, Ser. No. 745,126
8 Claims. (Cl. 318—221)



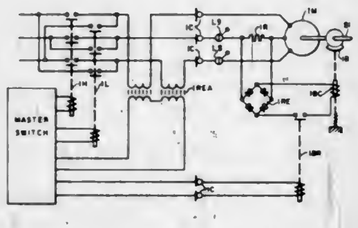
1. In a washing machine having a tub, means for spinning said tub under a plurality of load conditions, said means including a spin mechanism, a two-speed motor connected directly to said mechanism and a control circuit, said circuit including means for initiating a spin cycle by energizing said motor for high speed, high torque operation to bring the spin speed up to a predetermined value for one of said load conditions, and means for automatically selectively shifting said motor for low speed, low torque operation for another of said load conditions at a delayed time after initiation, said last named means including means in power supply relationship to said motor when said motor is in low speed, low torque operation and actuatable with said initiating means in response to power supplied to said motor to reshift said motor for high speed, high torque operation in accordance with said load conditions.

3,049,655
MOTOR CONTROL SYSTEM FOR DOMESTIC APPLIANCE
George B. Long and Norton Q. Sloan, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 19, 1959, Ser. No. 787,763
10 Claims. (Cl. 318—305)

1. A control circuit for a centrifuging appliance having a container comprising, prime moving means for rotating said container at high and low speeds including a primary motor, a blower for directing an air stream in heat exchange relationship to said primary motor, a power supply, a timer including a timer motor and a plurality of timer switch means sequentially operated by said timer motor, a speed selector switch connected to the power supply through one of said timer switch means, a temperature responsive resistor time delay device in series with said speed selector switch and said one of said timer switch means and in the path of said air stream, means in said timer including another of said timer switch means for energizing said prime moving means for low speed rotation, and means in said timer including said one of said timer switch means for energizing said device to delay high speed rotation when said speed selector switch is set for high speed.

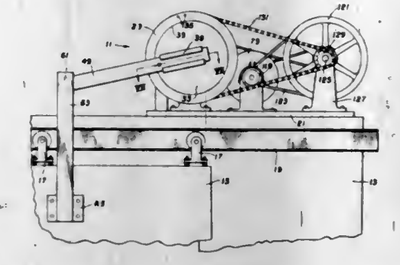


3,049,656
D.C. SERIES BRAKE CONTROL FOR A.C. MOTOR DRIVES
Howard A. Zollinger, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 17, 1960, Ser. No. 70,009
7 Claims. (Cl. 318—367)



1. In an electric system of control for controlling the brake used with equipment operated by a multiphase alternating-current motor, in combination, a multiphase alternating-current motor, input leads for each of the phases of the motor, switching means for connecting the input leads to a suitable multiphase alternating current supply, an impedance connected in series with one of the input leads, rectifying means interconnected with said impedance for rectifying, by reason of the voltage drop across said impedance upon connection of the motor to the supply, a portion of the current flowing in the input lead provided with the impedance, an electromagnetic brake for the equipment, said brake having a coil for releasing the brake, and circuit means connecting the coil to the output of said rectifying means.

3,049,657
POWER OPERATOR FOR ELEVATOR DOORS AND THE LIKE
Gilbert T. Adams, Memphis, Tenn., assignor to Dover Corporation, Washington, D.C.
Filed Apr. 20, 1959, Ser. No. 807,368
8 Claims. (Cl. 318—396)

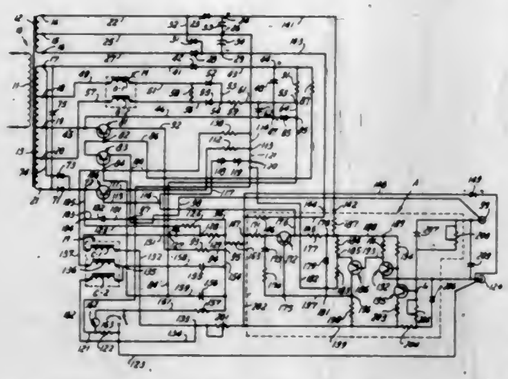


1. In an operating device for a door, drive means for opening and closing said door, said drive means including a reversible motor having an armature, circuit means for supplying current to said motor and the armature thereof, rheostat means interposed in said circuit means for controlling the flow of current to said armature, said rheostat means including a swingably mounted brush and a resistive conductor slidably contacted by said brush, said resistive conductor including a pair of resistive elements and a contact strip having substantially no resistance, said resistive elements being respectively connected to said contact strip adjacent opposite ends of said contact strip and said contact strip being connected to said armature whereby when said brush is positioned on said contact strip the resistance of said rheostat is at a minimum and when said brush is positioned on said resistive elements adjacent the unconnected ends thereof remote from said contact strip the resistance of said rheostat is at a maximum; motion transmission means connected between said motor and said brush for swinging said brush during opening and closing of said door respectively between a position adjacent the unconnected end of one of said resistive elements, across said one of said resistive elements, across said contact strip and across said other resistive element to a position adjacent the unconnected end of said other resistive element; mounting means for rotatably mounting said resistive conductor, coupling means connected between said motor and said mounting means for rotating said mounting means in the opposite direction relative to the direction of the movement of said brush to cause a rapid cut-out of the first of said resistive elements that the brush swings across so that the motor and whereby said door is rapidly accelerated during the initial part of the opening and closing of said door, said coupling means including lost motion means for permitting said mountnig means and said resistive conductor to be stopped from rotating upon restraint of said mounting means while said motor is still running, and stop means for stopping said mounting means after said brush has substantially swung across said first of said resistive elements so that the relative movement of said brush and said resistive conductor is slowed down after the initial part of the opening and closing of said door.

3,049,658
TRANSISTORIZED VOLTAGE REGULATED POWER SUPPLY
Steve Krsna, Rahway, N.J., assignor to NJE Corporation, Kenilworth, N.J., a corporation of New Jersey
Filed Nov. 28, 1960, Ser. No. 72,173
8 Claims. (Cl. 323—22)

1. A transistorized D.C. power supply having an output across which a load may be connected, comprising a voltage regulator adapted to provide an error signal re-

lated to variations in the output voltage from a desired output voltage, a series regulating transistor controlled by said error signal to maintain the output voltage at such desired value by varying the voltage drop across said series regulating transistor, a capacitor in series with said series regulating transistor, defining a source of voltage



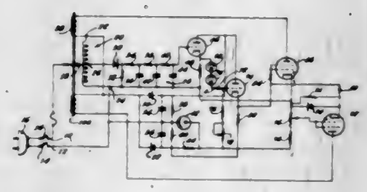
for said output, means to apply unregulated pulsating D.C. to charge said capacitor and means controlled by variations iin the voltage across said series regulating transistor to vary the average value of the charge on said capacitor from said unregulated D.C. source in inverse relation to variations in the voltage across said series regulating transistor.

3,049,659

SINGLE INPUT SERVO SYSTEM

Charles J. Armour, 14801 McCormick, Sherman Oaks, Calif.

Filed May 18, 1959, Ser. No. 813,999
9 Claims. (Cl. 323—22)



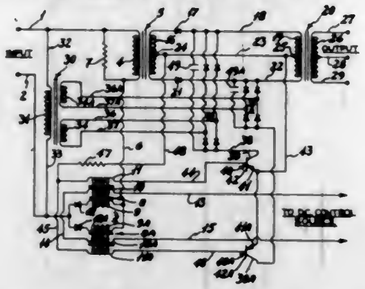
1. In combination, first gas-filled means having a state of nonconductivity and a state of conductivity, second gas-filled means having a state of non-conductivity and a state of conductivity, means for providing an alternating voltage, means responsive to the alternating voltage for converting the alternating voltage into a proportionate direct voltage, means responsive to the direct voltage and coupled to the first and second gas-filled means for biasing the first and second gas-filled means to the state of non-conductivity, means including an amplifier responsive to the direct voltage and coupled to the first and second gas-filled means for producing the state of conductivity in the first gas-filled means upon the introduction of a potential greater than a particular value from the amplifier and for producing the state of conductivity in the second gas-filled means upon the introduction of a potential less than a particular value from the amplifier, and servo means connected in electrical circuitry with the first and second gas-filled means and coupled to the alternating voltage means to regulate the alternating voltage in accordance with the conductivity of the first and second gas-filled means.

3,049,660

PHASE SHIFT CONTROL NETWORK

Michael Albert Roberti, Clark, and Ralph Alben Walter, Fanwood, N.J., assignors to The Bendix Corporation, Eatontown, N.J., a corporation of Delaware

Filed Aug. 29, 1960, Ser. No. 52,704
3 Claims. (Cl. 323—111)



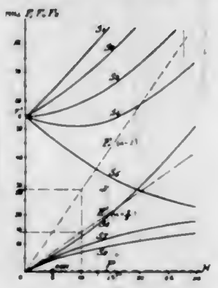
1. A phase shift control circuit comprising a magnetic modulator, a reference square wave connected to the input of said modulator, a control signal connected to vary the output of said modulator in accordance with said control signal, a source of D.C., and means responsive to the voltage drop across said modulator to connect said D.C. source to said output to add a pulse width to the trailing edge of said modulator output pulse.

3,049,661

METHOD AND DEVICE FOR THE MEASUREMENT OF MAGNETIC FIELDS BY MAGNETIC RESONANCE

Anatole Abragam, Gif-sur-Yvette, Jean Combrisson, Montgeron, and Ionel Solomon, Chatillon-sous-Bagneux, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a French state administration

Filed Apr. 1, 1958, Ser. No. 725,746
Claims priority, application France Apr. 6, 1957
22 Claims. (Cl. 324—.5)



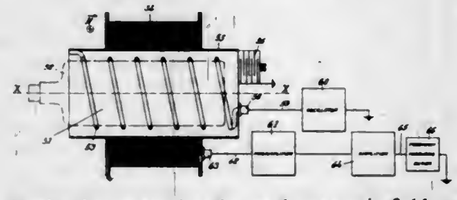
1. Method of precisely measuring the intensity of weak magnetic fields comprising the steps of: locating in the weak magnetic field to be measured a quantity of a solution consisting of a solvent containing atomic nuclei having non-zero angular momentum and magnetic moment, and therefore capable of exchanging energy with electromagnetic radiations at a nuclear resonance frequency proportional to the intensity of the magnetic field in which they are located, and of a paramagnetic free radical of stationary hyperfine structure dissolved and ionized in said solvent, said free radical having in a varying weak magnetic field at least one electronic resonance frequency band around a central frequency which has a non-zero limit when said varying magnetic field approaches zero; applying to said quantity of solution an alternating magnectic field at a frequency comprised in the electronic frequency band for said free radical in said weak magnetic field to be measured and capable of substantially saturating said electronic resonance band, thereby materially enhancing the capacity of exchanging energy at the nuclear resonance frequency of said atomic nuclei in said weak magnetic field to be measured; producing an exchange of energy between said atomic nuclei and an electromagnetic radiations system at said nuclear resonance frequency; and precisely determining the frequency of the energy exchanged by said atomic nuclei in said weak magnetic field to be measured.

3,049,662

METHOD AND DEVICE FOR THE MEASUREMENT OF MAGNETIC FIELDS BY MAGNETIC RESONANCE

Anatole Abragam, Gif-sur-Yvette, Jean Combrisson, Montgeron, and Ionel Solomon, Chatillon-sous-Bagneux, France, assignors to Commissariat a l'Energie Atomique, Paris, France

Filed May 14, 1959, Ser. No. 813,158
Claims priority, application France Apr. 6, 1957
10 Claims. (Cl. 324—.5)



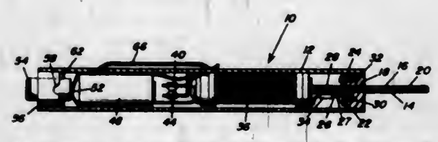
1. Device for measuring the earth magnetic field comprising: a container; a solution in said container, said solution being constituted by a solvent containing atomic nuclei having a non-zero angular momentum and magnetic moment and, dissolved in said solvent, a paramagnetic substance of bound hyperfine structure having in the absence of any magnetic field an electronic resonance frequency line different from zero and in the earth magnetic field at least one electronic resonance line saturable at a given frequency, a saturation of said last mentioned resonance line increasing materially the nuclear polarization of said nuclei; a high frequency circuit including a high-frequency coil surrounding said container and an oscillator generating a frequency equal to said determined frequency; means for stabilizing the oscillator frequency on said determined frequency; a low-frequency circuit of very high Q factor including a low-frequency coil coaxial to said high-frequency coil and surrounding said container; means for sharply tuning said low-frequency circuit on said nuclear resonance frequency; means for shielding said high-frequency coil from said low-frequency coil; and means for measuring the frequency of the energy generated in said low-frequency circuit when said container is located in said magnetic field.

3,049,663

IGNITION AND ELECTRICAL CIRCUIT TESTING DEVICE

John E. B. Sauer, Huntington Park, Calif., assignor of fifty percent to Orville B. Stoltz, Huntington Park, Calif.

Filed Sept. 8, 1959, Ser. No. 838,622
5 Claims. (Cl. 324—15)



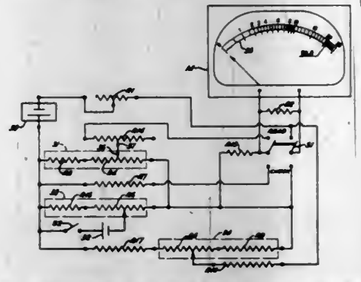
3. A testing device for ignition circuits comprising a pair of flat spaced conductive blades receiving a thin insulative strip therebetween, said blades adapted to be clamped between a set of igintion points, an electromagnetic coil electrically connected to a first of said blades at a first terminal thereof, a first contact electrically connected to said electro-magnetic coil at a second terminal thereof, a second contact, resilient means urging said contacts together, said contacts being urged out of engagement by said coil when it is energized by current conducted through said contacts when the contacts are closed, said second contact electrically connected to said second blade, a capacitor, means for connecting said capacitor across said contacts, a tubular housing, said coil, contacts, and capacitor received in said housing, said blades extending outwardly from said housing, said means for connecting said capacitor including a spring contact, a push button extending from said tubular housing above said contact, said push button adapted to bear against said spring contact for carrying it into connection with said capacitor, and means for maintaining said button in said bearing relationship, said means including a collar in said housing, a keyway in said collar, a lock pin extending from said push button on either side thereof, said button rotatably extending through said collar, whereby said button bears against said spring contact when said lock pin is not received in said keyway.

3,049,664

ELECTROCHEMICAL DETERMINATION OF COMPONENTS IN GAS MIXTURES

Moses G. Jacobson and Frank J. De Luca, Penn Hills, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania

Original application Feb. 27, 1956, Ser. No. 568,111, now Patent No. 2,939,827, dated June 7, 1960. Divided and this application Aug. 5, 1959, Ser. No. 831,867
15 Claims. (Cl. 324—29)



1. In an instrument in which the concentration of a depolarizing component of a gaseous mixture is measured by its effect on a polarizable electrode of a galvanic detector cell in contact with the mixture, an electrical potentiometer circuit including the detector cell, the circuit comprising a compensating circuit loop containing a dry cell in series with the full resistance of a potentiometer rheostat, a compensated circuit loop containing the detector cell in series with an adjustable part of said potentiometer rheostate and with an electric meter and with a variable resistor, the variable resistor being operatively linked with the potentiometer rheostat to change automatically the resistance of the compensated circuit loop in a predetermined way whenever the potentiometer rheostat is operatively adjusted, thereby to maintain a desired curvature of calibration of the meter against variations of electrode characteristics due to substitution of one electrode for another in the detector cell and to aging of the electrode therein.

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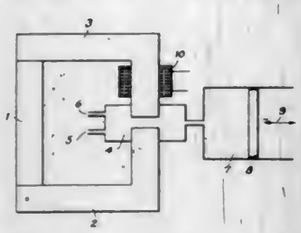
MEASURING INSTRUMENT AND METHOD

Heinz Hummel, Johannesallee 22 W., Frankfurt-Unterliederbach, Germany

Filed July 10, 1958, Ser. No. 747,638
9 Claims. (Cl. 324—36)

4. In an apparatus for analyzing a gas sample exhibiting a magnetic property, the combination of: mag-

netic circuit means including in series a ferromagnetic portion and a gap portion; means inducing a magnetic flux in said circuit; means defining a chamber for containing the sample; inlet and outlet means respectively admitting said sample into said chamber and releasing said sample therefrom; cyclically driven piston means



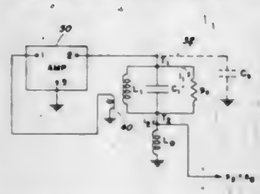
communicating with said chamber for cyclically varying the pressure of said sample in said chamber and cyclically modulating thereby the reluctance of said gap and the magnitude of said flux; and coil means coupled to said magnetic circuit means, said coil means being responsive to the amplitude of said flux modulation and generating an output signal as a measure of said sample.

3,049,666

METHOD AND APPARATUS FOR MEASUREMENT OF DYNAMIC DISSIPATION AND RELATED FACTORS

Norman J. Anderson 152 Fairview Ave., Boonton, N.J.

Filed Jan. 31, 1958, Ser. No. 712,573
22 Claims. (Cl. 324—57)



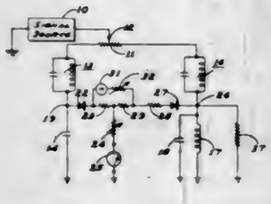
1. A method of measuring dissipation and related factors of electrical impedance comprising the steps of combining said impedance with other impedance means to form a parallel tuned circuit having a resonant frequency, energizing said tuned circuit with a sinusoidal energizing signal of known amplitude at said resonant frequency, and while maintaining said resonance, measuring the response of impedance means to the external sinusoidal resonant current flowing into said tuned circuit.

3,049,667

FILTER CIRCUIT

Samuel L. Broadhead, Jr., Cedar Rapids, and Arthur L. Kemper, Marion, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Jan. 20, 1959, Ser. No. 787,877
7 Claims. (Cl. 324—82)



4. Filter circuit means for separating signal components having different frequencies, comprising an input means having output terminals, first and second circuit means connected in parallel arrangement with respect to said input means, said first circuit means comprising a first parallel tuned circuit tuned to a first frequency, and a capacitor means connected in series arrangement with said first parallel tuned circuit to form a series circuit tuned to a second frequency, said second circuit comprising a second parallel tuned circuit tuned to said second frequency and an inductor means connected in series therewith to form a second series circuit tuned to said first frequency, said capacitor means and said inductor means each being connected between the parallel tuned circuit in series therewith and a common ouput terminal of said input means, means for rectifying and combining the signals appearing across said capacitor means and said inductor means to produce an output signal whose amplitude is indicative of the difference in amplitude of the signals appearing across said capacitor means and said inductor means and whose polarity indicates which of the signals appearing across said inductor means and said capacitor means has the larger amplitude.

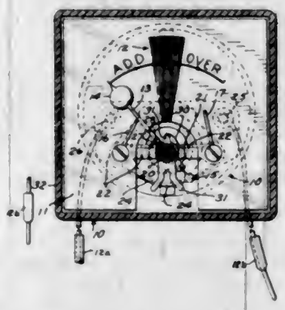
5. Filter circuit means in accordance with claim 4 in which said means for rectifying and combining signals comprises first asymmetrical means, first impedance means, second impedance means, and second asymmetrical means connected in series arrangement in the order recited between the common terminal of said first parallel tuned circuit and said capacitor means and the common terminal of second parallel tuned circuit and said inductor means, said first and second asymmetrical means being connected in similar polarity with respect to each other, and meter means connected between the terminal between said first and second impedance means and the other terminals of said capacitor means and said inductor means.

3,049,668

INDICATOR

George L. Borell, Glen Rock, N.J. (% Almo Laboratories Co., Inc., 424 Madison Ave., New York, N.Y.)

Filed Mar. 30, 1960, Ser. No. 18,532
2 Claims. (Cl. 324—132)



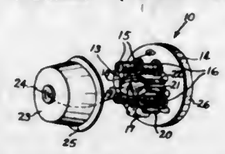
2. An electrical measuring instrument comprising a scale, a moving system gravity biased to a position of rest and which includes a vertically and pivotally mounted pointer extending upwardly from its pivotal axis deflectable over said scale from said rest position in accordance with the amplitude of the electrical quantity to be measured, a weight coupled to said pointer substantially closer to its free end than to its pivotal end and arranged to exert, independently of said electrical quantity, an increased pointer deflecting torque or bias on each side of a given region of pointer positions relative to said scale whereby there is provided relative scale expansion on either side of said given region.

3,049,669

MEANS FOR ADAPTING AUDIO OSCILLATORS TO FLASHLIGHTS

James E. Johnston, 124 Clover St., Southbridge, Mass.

Filed Nov. 7, 1958, Ser. No. 772,619
4 Claims. (Cl. 325—66)



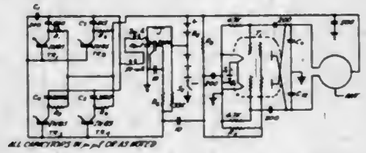
1. An adaptor comprising a self-contained audio oscillator unit embodying electrically interconnected oscillation generating means, elements of a tuned tank circuit and resistances, a supporting plate of electrically conducting material upon which said unit is mounted and to which it is electrically connected, a cover of electrical insulating material enclosing said unit and attached to said plate with a portion of said plate exposed, an electrical contact on said cover having a portion exposed outwardly thereof, said contact and plate being electrically connected together through said oscillator unit, said contact and plate being adapted to provide means to which an operating current may be applied to said unit and jacks carried by said plate and being so connected with said oscillator unit as to receive the electrical output of said oscillator unit and being adapted to further receive connections from equipment intended to utilize said output.

3,049,670

SOLAR ASPECT TELEMETER

Theodore R. Paulson, Abingdon, Md., assignor to the United States of America as represented by the Secretary of the Army

Filed Jan. 16, 1959, Ser. No. 787,311
3 Claims. (Cl. 325—105)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A telemetering device comprising a shaped freely falling body, a low frequency oscillator-modulator circuit to modulate a V.H.F. radio transmitter in said body, said oscillator-modulator circuit including several different size condensers in parallel, each condenser having a phototransistor in series therewith, said phototransistors having a normally high resistance which falls to a low value when the phototransistor is exposed to the sun, whereby the particular condenser in series with said exposed phototransistor is introduced into the oscillator-modulator circuit to alter the frequency thereof, said phototransistors being arranged in positions about said body so that only one phototransistor can be exposed to the sun for any given position of the body in space.

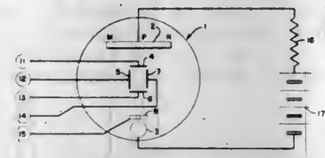
3,049,671

VARIABLE TRANSCONDUCTANCE ELECTRON TUBE

Edward F. Branagan, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 31, 1959, Ser. No. 803,334
6 Claims. (Cl. 328—158)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An electron tube having a non-linear input versus output characteristic comprising a cathode for emitting an electron beam, an anode of resistive material for receiving said electron beam and having a geometrical configuration that provides a non-linear resistance characteristic in three dimensions, a single electrical connection to said anode for applying a potential thereto and receiving the output therefrom, and an accelerating electrode located



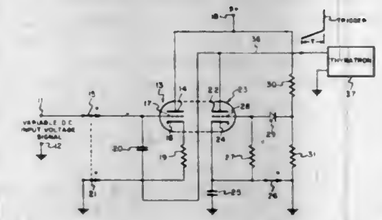
between said cathode and said anode and adjacent to said cathode, four orthogonally arranged electrostatic deflecting plates located between said accelerating electrode and said anode, the oppositely located plates being arranged in pairs whereby deflection of the electron beams causes said tube to have a non-linear output commensurate with the geometrical configuration of said anode.

3,049,672

VOLTAGE GENERATING CIRCUIT HAVING AN OUTPUT TRIGGER VOLTAGE THAT RISES ABRUPTLY AT A PREDETERMINED TIME

Robert L. Zinke, East Northport, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed Oct. 20, 1958, Ser. No. 768,165
12 Claims. (Cl. 328—178)



1. A waveform generating circuit comprising an electron device having an anode, a cathode, and a control electrode, a source of current, means for supplying a desired amount of current from said source to said anode via a resistive element at a desired time, a current receiving means, a capacitor connected between said cathode and said receiving means, a resistor connected between said cathode and said control electrode, a diode having a predetermined voltage less than said source and greater than said receiving means applied to its cathode side, said diode having its anode side connected to said control electrode, and an output terminal connected between said anode and said resistive element.

3,049,673

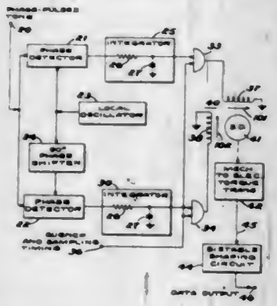
DISK REFERENCE PHASE-PULSE DETECTOR

George H. Barry, North Hollywood, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Apr. 15, 1959, Ser. No. 806,691
8 Claims. (Cl. 329—104)

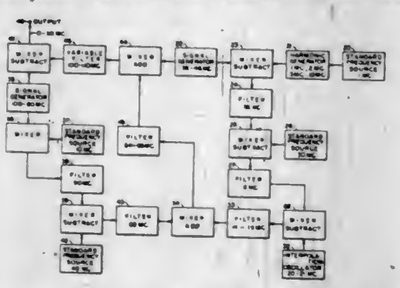
4. A demodulator for a phase-pulsed tone, comprising a pair of phase-detectors, each having a pair of input terminals and an output terminal, one input terminal of each receiving said tone, signal generating means including a local oscillator for providing a pair of output signals separated by 90° and having a frequency approximately equal to said tone, said signal generating output signals being connected respectively to the other input terminals of said phase detectors, a pair of direct-current

integrating circuits having input terminals respectively connected to the output terminals of said phase detectors, a pair of "and" gates each having a pair of input terminals, said "and" gates each having an input terminal connected to one of said integrators, a quenching and sampling timing source connected to the other input terminal of each of said "and" gates, a pair of coils connected to output terminals of the respective "and" gates, said coils being positioned substantially in a common plane and in space quadrature with respect to each other, nonrotatable flexible shaft means positioned substantially



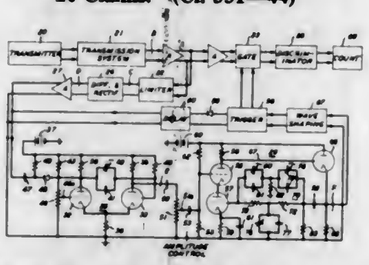
normal to the plane of said coils, a magnetically saturable disk rigidly affixed to said nonrotatable shaft means and located adjacent to said coils, said disk having a remanent magnetic field having a direction determined by the combined magnetic field of said windings, said nonrotatable shaft means comprising mechanical-to-electrical transducer means for providing an output voltage having a polarity dependent upon a direction of force induced in said disk by the magnetic flux produced by said coils when energized, the output signal of said transducer means being a detected output of said demodulator.

3,049,674
FREQUENCY SYNTHESIZER EMPLOYING AT LEAST ONE FREQUENCY DRIFT CANCELLATION LOOP
Robert R. Stone, Jr., Rosecroft Park, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 30, 1959, Ser. No. 810,188
6 Claims. (Cl. 331—39)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a frequency synthesizer, first, second, and third means, each including a filter connected to the output of a mixer, means for connecting the output of said first means to the input of said second means and the output of said second means to the input of said third means, a first mixer, means for connecting said first mixer to the output of said third means, a first signal generator, means for applying the output of said first signal generator to said first mixer and the mixer in said first means, signal generating means for providing a block of frequencies, means for applying the output of said signal generating means to the mixer in said first means, an interpolation oscillator, means for applying the output of said interpolation oscillator to the mixer in said second means, fourth and fifth means, each including a filter connected to the output of a mixer, means for connecting the output of said fourth means to the input of said fifth means and the output of said fifth means to the mixer in said third means, a second mixer, a second signal generator connected between said second mixer and the mixer in said fourth means, a variable filter connected between said first and second mixers, a first standard frequency source, means for applying the output of said first standard frequency source to the mixer in said fourth means, a second standard frequency source, means for applying the output of said second standard frequency source to the mixer in said fifth means, an output terminal, and means for connecting said output terminal to said second mixer.

3,049,675
METHOD AND APPARATUS FOR SYNCHRONIZING OSCILLATORS
David L. Favin, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1960, Ser. No. 79,775
20 Claims. (Cl. 331—44)

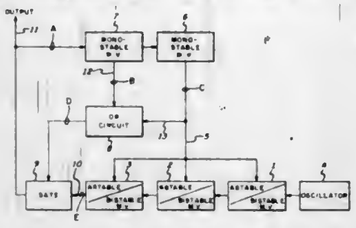


1. A clutched oscillator circuit for generating cyclic oscillations at a predetermined frequency in response to noncyclic synchronizing pulses which do not include said frequency but which are controlled by a clock voltage at said frequency, said circuit comprising first and second electron tubes each having an anode, a cathode, and a control grid, means for connecting the space current paths of said first and second tubes in series between the terminals of a source of operating potential, a source of said noncyclic pulses connected between the cathode of said first tube and the grid of said second tube, a cathode follower circuit, means connecting the anode of said second tube to the input of said cathode follower circuit, and a twin-T network connecting the output of said cathode follower circuit to the control grid of said first tube for supplying regenerative feedback thereto, said network including a low pass filter section and a high pass filter section connected in parallel to provide substantially lower attenuation at a frequency in a range of frequencies including said predetermined frequency than at frequencies higher and lower than the frequencies within said range.

3,049,676
RANDOM PULSE GENERATOR
Robert L. Zinke, East Northport, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,555
6 Claims. (Cl. 331—78)

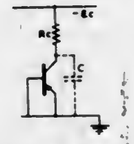
1. Apparatus comprising a plurality of multivibrator circuits selectably connected in cascade, each of said multivibrator circuits being operative at a respective free-running frequency in an independent astable mode in response to a first value of a bivalued control signal and being operative in a triggerable bistable mode in response to the other value of said control signal, a first source of

regularly repetitive triggering pulses connected to the input of the first one of said plurality of multivibrator circuits, a second source for producing said control signal in response to a triggering signal, said control signal having said first value for an approximately fixed but minutely randomly variable length of time following the occurrence of said triggering signal and having said other value



thereafter, said control signal being applied jointly to each of said multivibrator circuits, and individual means for selectably connecting the output of a preceding one of said multivibrator circuits to the input of a succeeding one of said multivibrator circuits susbtantially only during the time that each of said multivibrator circuits is operative in said bistable mode.

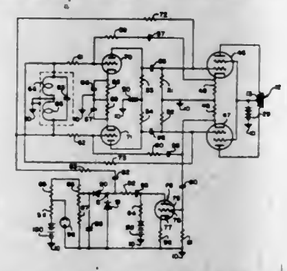
3,049,677
PULSING CIRCUIT USING PUNCH-THROUGH TRANSISTOR
Eric Wolfendale, Tudor Close Smallfield, Horley, England, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 25, 1956, Ser. No. 593,704
Claims priority, application Great Britain June 27, 1955
15 Claims. (Cl. 331—111)



1. A circuit for producing a voltage change having a steeply rising front edge comprising a junction transistor having base, emitter, and collector electrodes, said transistor having a punch-through voltage less than the avalanche breakdown and Zener-voltages, load impedance means serially connected between said collector electrode on the one hand and said emitter and base electrodes on the other, means for applying a voltage between said collector electrode and said base and emitter electrodes and capacitor means between said collector and emitter electrodes, said last-mentioned voltage having a polarity to bias said collector electrode in the reverse direction of conductivity and having a magnitude larger than the punch-through voltage of said transistor but lower than the avalanche breakdown and Zener-voltages, whereby, upon charging of said capacitor means to the punch-through voltage, punch-through breakdown occurs and the collector-emitter voltage of said transistor falls substantially to zero.

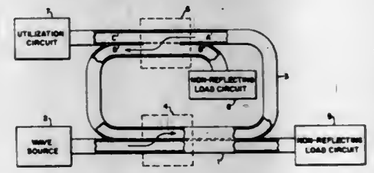
3,049,678
OSCILLATOR
Benjamin L. Snavely, Takoma Park, Md.
Original application Mar. 3, 1948, Ser. No. 12,843, now Patent No. 3,028,757, dated Apr. 10, 1962. Divided and this application June 24, 1957, Ser. No. 673,995
3 Claims. (Cl. 331—168)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An oscillator comprising, in combination, a split inductance tuned circuit having the center point of the inductance maintained at ground potential, a first pair of electron discharge tubes each having an anode, control grid, and cathode, resistive electrical connections between the control grids and the ends of said inductance respectively, circuit means including a source of anode potential connected between both said anodes and both said cathodes and having a point therein maintained at ground potential, a second pair of electron discharge tubes each having an anode, cathode, and control grid, a pair of coupling devices connected between the anodes of said first pair of tubes and the grids of said second pair of



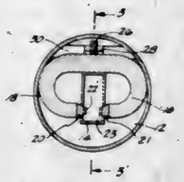
tubes respectively, biasing means for said second pair of tubes, a utilization circuit including a source of anode potential connected to the anodes of said second pair of electron discharge tubes, a pair of decoupling circuit devices connected between the control grids of said first pair of tubes and the cathodes of said second pair of tubes respectively, resistive connections between the control grids of said second pair of tubes and the respective ends of said inductance, and feedback means including a feedback amplifier intercoupling said second pair of electron discharge tubes and said tuned circuit.

3,049,679
MICROWAVE POWER MULTIPLIER
Edward K. Proctor, Jr., Menlo Park, Calif., assignor to General Electric Company, a corporation of New York
Filed Feb. 18, 1960, Ser. No. 9,602
3 Claims. (Cl. 333—13)



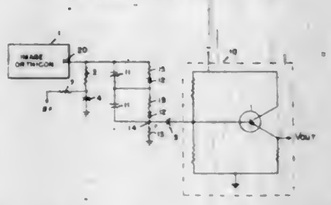
1. In combination, a first waveguide section and a second waveguide section electrically coupled by a directional coupler, a source of electromagnetic waves coupled to one end of said first waveguide section, a first non-reflecting load coupled to the other end of said first waveguide section, said second waveguide section having overlapping end portions with a common side wall, a total coupler in said common side wall providing a closed loop wave energy path in said second waveguide section of an integral number of wavelengths at the frequency of waves from said source, whereby waves coupled into the loop by said directional coupler propagate around said loop as traveling waves, the transmission coefficient of said loop and the coupling coefficient of said directional coupler being proportioned so that the power level of waves propagating in said loop is greater than the power level of waves of said source, a utilization circuit and a second non-reflecting load coupled to opposite ends of said second waveguide section, said total coupler being constructed to ionize at a predetermined value of power level in said loop so as to block wave energy transmission through said closed loop and divert said energy to the utilization circuit.

3,049,680
MICROWAVE LOAD ISOLATORS
Ray A. Krogh, Mountain Lakes, N.J., assignor, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Continuation of application Ser. No. 534,072, Sept. 13, 1955. This application Dec. 28, 1959, Ser. No. 465
3 Claims. (Cl. 333—24)



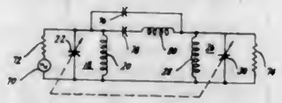
1. A microwave load isolator comprising: a short section of waveguide, a ferrite specimen mounted within said waveguide asymmetrically with respect to the central axis of the waveguide, an elongated magnet disposed along the length of the waveguide, said magnet having a substantially horseshoe shaped configuration in cross-section and circumambiently subscribing an arc about the waveguide encompassing the central axis thereof and surrounding a greater portion of the periphery of the waveguide, whereby a greater portion of the cross-section of said waveguide is disposed substantially inside the magnet horseshoe than extends outside thereof, said magnet having first and second ends positioned opposite the ferrite specimen to bias the specimen, a pair of flanges affixed on the waveguide and spaced apart from one another by a distance slightly greater than the length of the magnet whereby the opposite sides of the magnet are each contiguous to a different one of the flanges, a plurality of adjustable screws supported with respect to the flanges and adjusted to bear against said magnet at a plurality of discrete positions to maintain said magnet in a given location with respect to the flanges, and a protective cover completely surrounding the magnet and sides of the waveguide and affixed to the periphery of the flanges.

3,049,681
HIGH VOLTAGE COUPLING NETWORK
Franz L. Putzrath, Oaklyn, and Elvet E. Moore, Haddon Heights, N.J., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Jan. 18, 1960, Ser. No. 3,209
2 Claims. (Cl. 333—24)



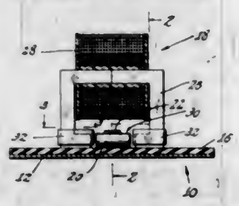
1. A circuit for coupling an alternating current signal from a point of high direct potential to a point of low direct potential as measured relative to a point of reference potential, said circuit comprising: a direct current potential divider comprising a two-terminal network and a resistor connected in series in the order named between said high potential point and said point of low potential, said network consisting of a Zener diode and a filter resistor connected in series between the network terminals and a small filter and impedance stabilizing capacitor connected between said terminals and in shunt to said series-connected diode and filter resistor, and a blocking capacitor connected between said low potential point and a point in said potential divider between said network and the first-mentioned resistor, said diode being poled for conduction in the reverse direction and said first-mentioned resistor having such value that the potential drop across said diode exceeds the Zener breakdown voltage, whereby said diode has a relatively low impedance to said signal.

3,049,682
CONSTANT BANDWIDTH COUPLING SYSTEM
John W. Waring, Palmyra, N.J., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Original application Mar. 7, 1955, Ser. No. 492,603, now Patent No. 2,912,656, dated Nov. 10, 1959. Divided and this application Oct. 26, 1959, Ser. No. 848,635
6 Claims. (Cl. 333—70)



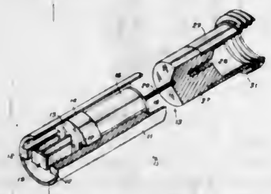
1. A coupling circuit comprising first and second similar synchronously tunable end circuits, means directly coupling a point on said first end circuit to a point on said second end circuit, and a coupling network connecting said two end circuits, said coupling network providing two signal paths, a first one of said signal paths being solely capacitive and the second one of said signal paths exhibiting the characteristic of a series combination of inductors and capacitors, said second path exhibiting a series resonance effect at a frequency lower than the lowest frequency to which said end circuits are to be tuned, and said two paths in combination exhibiting a parallel resonance effect at a frequency higher than the highest frequency to which said two end circuits are to be tuned, the net inductive reactance of said two paths, at a frequency approximately midway between the two extremities to which said end circuits are to be tuned, being approximately equal to that of a single inductor connecting said two end circuits which would give critical coupling, said first path extending directly from a point on said first end circuit at a signal potential other than reference potential to a corresponding point on said second end circuit, said second path extending directly from a selected region of one end circuit to a corresponding region of the other end circuit, all components of both of said paths being electrically isolated from said directly coupled points on said first and second end circuits.

3,049,683
ULTRA HIGH FREQUENCY ATTENUATOR
Harry R. Foster, Montville, and Elmo E. Crump, West Caldwell, N.J., assignors to Ohmega Laboratories, Pine Brook, N.J., a corporation of New Jersey
Filed Oct. 21, 1959, Ser. No. 847,796
5 Claims. (Cl. 333—81)



1. In combination, a high-frequency transmission line comprising an elongated conductor and a ground plane spaced from and associated with the said conductor; and a variable attenuator comprising a flux-conducting member of magnetic material having dielectric properties, disposed between the ground plane and the said conductor adjacent the latter and comprising magnetic means having poles disposed at opposite sides of the conductor for effecting a variable and controlled magnetization of said flux-conducting member where the flux therein determines the amount of electro-magnetic energy passing along the high frequency transmission line, said poles comprising flux-conducting members, said poles being spaced by an air gap from said flux conducting member, said poles having high-frequency shielding means comprising slitted metal rings extending around said poles and into said air gaps.

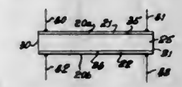
3,049,684
CHOKE TYPE SHORTING PLUNGER
Frank E. Vaccaro, New Brunswick, N.J., and Frank R. Arams, Forest Hills, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 13, 1961, Ser. No. 89,082
6 Claims. (Cl. 333—98)



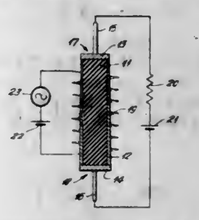
1. The combination of a ridge-type waveguide having a pair of opposed ridges disposed on opposite internal portions thereof and running longitudinally for a substantial distance along said waveguide and a choke-type shorting plunger means slidably mounted within said waveguide so as to be translatingly shiftable along the longitudinal axis of said waveguide for producing a movable short circuit in the rigid portion of said waveguide wherein said choke-type shorting plunger means comprises a choke means interposed between said ridges for substantially short circuiting said ridges without making physical contact therewith; a joint reflecting and supporting-and-guiding means connected to said choke means and slidably mounted in said waveguide for sliding translatory movement along the longitudinal axis of said waveguide, including along the ridged portion thereof, for performing the dual functions of reflecting any electromagnetic energy which gets past said choke means as a short at the operative shorting location of said choke means and of fixedly supporting said choke means in operative shorting position between said waveguide ridges and guiding said choke means for longitudinal travel along the ridged portion of said waveguide; operator-controllable control means slidably mounted in the unridged portion of said waveguide for controlling the longitudinal positioning of said choke means and said joint reflecting and supporting-and-guiding means in said waveguide; and flexible connector means interconnecting said reflecting and supporting-and-guiding means and said control means for imparting to said reflecting and supporting-and-guiding means and to said choke means the operator-controllable translatory movement of said control means, said imparted translation being free of any misalignment in said control means.

3,049,685
ELECTRICAL STRAIN TRANSDUCER
William V. Wright, Jr., San Marino, Calif., assignor to Electro-Optical Systems, Inc., Pasadena, Calif., a corporation of California
Filed May 18, 1960, Ser. No. 29,837
14 Claims. (Cl. 338—2)

1. A strain gauge device comprising a unitary body of semiconductor material, said body having a gauge zone therein, said gauge zone being shallow in comparison to said body and having a length which is many times its thickness, a semiconductor barrier junction electrically isolating said gauge zone from the remainder of said body, and means for connecting said body to external circuitry, said means consisting of first and second spaced ohmic contacts disposed solely on said gauge zone, whereby a change in stress of said gauge zone may be measured as a change in resistance of said gauge zone.

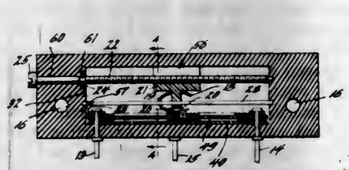


3,049,686
ACTIVE CIRCUIT ELEMENT
Geoffrey K. Walters, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,128
6 Claims. (Cl. 338—32)



1. A circuit element comprising a body of insulating material, a coating on said body, said coating comprising a material which becomes superconducting below a given temperature, the thickness of said coating increasing from one end of said body to the other end of said body, and an electrical winding positioned around the coating on said body.

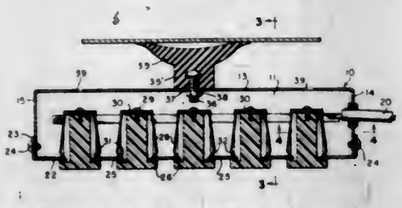
3,049,687
PLUG-IN VARIABLE RESISTOR
Louis W. Berni, East Boston, Mass., assignor to Ace Electronics Associates, Inc., a corporation of Massachusetts
Filed Aug. 26, 1959, Ser. No. 836,153
1 Claim. (Cl. 338—183)



A plug-in rectilinear variable resistor comprising: a housing; an elongate rectilinearly extending resistance element in said housing positioned along one wall thereof; a variable tap mechanism in said housing including a slide contact element engaging said resistance element, a traveler block carrying said contact element, and a lead screw engaging said block for moving said contact element rectilinearly over the length of said resistance element for tapping various resistance values therefrom; a variable tap lead coupled to said contact element and including a terminal portion sandwiched between said resistance element and said one wall of said housing, and a bus rod portion mounted over said resistance element, extending substantially parallel thereto, being connected to said terminal portion, and being slidably engaged by said contact element; a first plug prong projecting ex-

teriorly of said housing and entering said housing through said one wall and having an end portion passing through said terminal portion of said lead, said end portion being deformed to provide a head anchoring said terminal portion between said head and said one wall and making electrical contact therewith; an insulator sandwiched between said terminal portion and resistance element separating said terminal portion and plug prong from said resistance element; second and third plug prongs projecting exteriorly of said housing entering said housing through said one wall and each having end portions passing through respective terminal portions of said resistance element, said end portions of said second and third plug prongs each being deformed to provide a head anchoring the respective terminal portion of said resistance element between such head and said one wall and making electrical contact therewith; and a shoulder on each of said three plug prongs located adjacent the exterior of said one wall; whereby the strains of both insertion and removal of said plug prongs from a socket adapted to receive them is applied to said one wall of said housing, and said plug prongs also serve to anchor and establish electrical contact with said resistance element and said variable tap lead.

3,049,688
PORTABLE ELECTRICAL RECEPTACLE BOX
Frank Sinopoli, 509 N. Eugene St., Greensboro, N.C.
Filed Aug. 31, 1959, Ser. No. 837,056
1 Claim. (Cl. 339—12)



The portable electrical receptacle box comprising a generally rectangular container open along one side, a pair of elongated conductive members in said container, one attached to each side of the container, an electrical conductor extending into said container and attached to said conductive members by means of which electrical energy may be transmitted thereto, an elongated cover on the open side of the container, means detachably securing said cover to said container, said cover having a plurality of spaced openings therein for the reception of electrical outlets, a plurality of electrical outlets fitting said openings and having oppositely disposed flexible members spaced apart a distance greater than the dimension of said openings whereby the outlets will be held fixed when inserted in said openings, a pair of wires connected to each outlet and said conductive members respectively for supply electrical energy to said outlets, and quick attachable and detachable means carried by said container by which the latter may be quickly mounted on a support and removed from said support for quick mounting in another location, said last named means having a stem upon which excess of said electrical conductor can be wrapped.

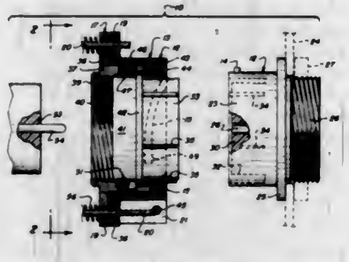
3,049,689
SOCKET
Jack B. Clarkson, Warren, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 13, 1959, Ser. No. 805,932
1 Claim. (Cl. 339—17)

A socket for an electrical device having an external base header with a lead lying along the side thereof adapted to be mounted upon a chassis of a given thickness with an electrical conductor formed thereon comprising an insulating housing having a side wall and an apertured bottom wall defining an internal centrally disposed nest for the electrical device base header, a ledge projecting externally from said side wall, a plurality of lugs projecting externally from said side wall spaced from the ledge at least the distance of said given thickness to allow reception of said chassis therebetween, said ledge and said nest being interconnected by a slot formed in said side wall, and a substantially broad based U-shaped



spring contact clip disposed in the nest with the broad base abutting said bottom wall, said clip being formed to straddle the external base header and contact the lead and having an arm passing through said slot formed to provide a resilient end flap positioned intermediate the planes of said ledge and said lugs for contacting the conductor on said chassis and a bottom tab passing through the aperture in said bottom wall folded to lie upon the external wall thereof to sustain mounting of the spring clip within said nest.

3,049,690
QUICK DISCONNECT ELECTRICAL CONNECTOR
Frederick J. Sparber, Belen, N. Mex., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed June 5, 1961, Ser. No. 115,051
2 Claims. (Cl. 339—45)



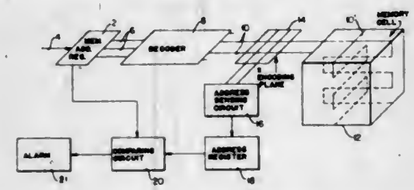
1. A coupling device of the character described comprising the combination of a pair of annular mating portions with one having a pin projecting from an outer surface and the other having a helically disposed groove on an inner surface for receiving said pin to maintain the portions assembled and with one including a slot therein and the other including a projection for reception in said slot to orient said portions, one of said mating portions having a normally stationary section and a relatively rotatable section, said stationary section including a member having a pair of oppositely disposed lugs extending from an outer surface thereof with each lug having an aperture therethrough, said rotatable section having substantially the same outer diameter as said member and disposed in normally abutting relationship with said member and having on an outer surface thereof a pair of oppositely disposed wing-like projections each including an aperture therethrough and each having a segment thereof extending over said member for abutting a particular lug when said wing-like projections have been rotated to a relationship for disassembly of said mating portions, yieldable means operatively intermediate said stationary section and said rotatable sections for urging the latter toward said member, a lanyard extending sequentially and continuously through said apertures of the lugs and the wing-like projections, means affixed to each of opposite ends of said lanyard for retaining said lanyard in said apertures, and compression spring means encircling said lanyard with ends thereof abutting said lugs on said member for continuously urging said wing-like projections toward said lugs on said member to a mating-portion-disassembly direction, said spring means being of length sufficient to facilitate the rotatable section to move the pin through substantially the length of said groove.

3,049,691
INSULATION-CRUSHING TERMINAL ASSEMBLY
Donald E. Cheney, Wheaton, Ill., assignor to Reliable Electric Company, Franklin Park, Ill., an Illinois company
Filed Mar. 20, 1959, Ser. No. 800,882
5 Claims. (Cl. 339—95)



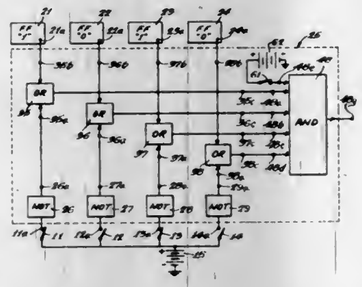
1. An insulation-crushing terminal assembly comprising a plastic-insulated conductor, a first member and a second member relatively movable toward each other, the opposing surfaces of said members being generally flat and parallel to each other, a plurality of spaced unyielding protuberances on the said opposing surface of said first member, the tops of said protuberances lying in and defining a plane spaced from said surface by a distance slightly less than the diameter of said conductor exclusive of insulation, and means forcing said members toward each other with said plastic-insulated conductor therebetween until said second member engages the tops of said protuberances whereby the force applied to said conductor is large enough to crush the insulation from the conductor to establish electrical connection and small enough to avoid significant conductor deformation and consequent loss of mechanical strength.

3,049,692
ERROR DETECTION CIRCUIT
Warren A. Hunt, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 15, 1957, Ser. No. 671,945
2 Claims. (Cl. 340—146.1)



1. An error detector circuit comprising an address register having *n* orders of bistable elements, means for setting each of said bistable elements into either of its two stable states to form a coded instruction providing first binary combinations on 2^n outputs, a decoder having inputs electrically coupled from the outputs of said register and said decoder having 2^n output selector lines, each selector line corresponding to and becoming energized by different combinations of stable states of said elements in said address register, bistable magnetic cores connected to said decoder selector lines wherein each selector line affects a different combination of cores, and further means responsive to the selected magnetic cores to form a reconverter array of second binary combinations to place the decoder back into the same binary code as was directed from the memory address register, a second register of bistable elements for storing such reconverted code, and means coupled to outputs from said second register and the outputs from said address register comparing the equality of said two registers.

3,049,693
COMPARING APPARATUS
Theodore Shapin, Jr., 913 N. Lemon St., Anaheim, Calif.
Original application June 23, 1954, Ser. No. 438,841, now Patent No. 2,923,921, dated Feb. 2, 1960. Divided and this application June 5, 1959, Ser. No. 818,470
6 Claims. (Cl. 340—149)

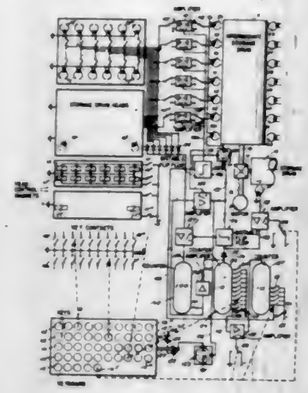


1. Comparing apparatus comprising first means for representing a first plural-place binary word in which each digit place has one of two characteristics designatable "0" or "1," second means for representing a second plural-place binary word in which each digit place has one of two characteristics designatable "0" or "1," third means responsive to said first means for representing the complement word of said first binary word, and fourth means responsive to said second and third means for signaling when at least one of each pair of corresponding digit places in said second word and said complement word is a "1."

3,049,694
STORAGE DEVICES FOR SIGNALS
Gerhard Dirks, 44 Morfelder Landstrasse, Frankfurt am Main, Germany
Filed Oct. 23, 1956, Ser. No. 617,742
Claims priority, application Great Britain Oct. 25, 1955
18 Claims. (Cl. 340—172.5)

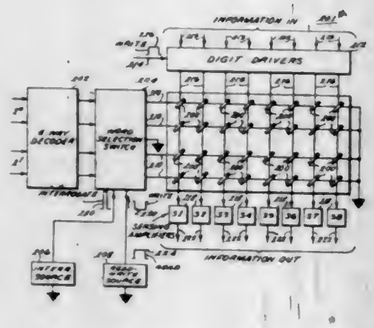
9. Selective signal storage apparatus including at least a pair of rotary storage drums each having a storage surface positioned adjacent each other in side by side relationship, comprising, in combination, at least a pair of sensing and recording means; carrier means supporting a pair of said sensing and recording means in position between adjacent storage surfaces of a pair of said storage drums; and carrier supporting means pivotally mounting said carrier means in a manner whereby in operative position one of said sensing and recording means is positioned in operative proximity with the storage surface

of one of said storage drums and the other of the said sensing and recording means is simultaneously positioned



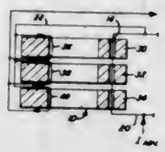
out of operative proximity with the storage surface of the adjacent storage drum.

3,049,695
MEMORY SYSTEMS
Vernon L. Newhouse, Haddonfield, and William L. McMillan, Little Rock, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 31, 1956, Ser. No. 631,797
9 Claims. (Cl. 340—174)



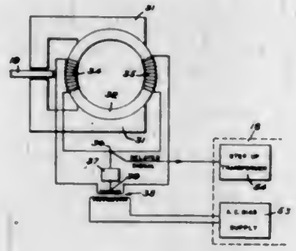
8. In a magnetic memory having a plurality of magnetic cores of substantially rectangular hysteresis loop material arranged in coordinate groupings and having separate coordinate lines for selectively writing information into any desired one of said elements by changing said desired element to either the one or the other of said remanent states, the combination of means for determining the information written into said desired element comprising means for applying to one coordinate line linking said desired element, an interrogation pulse having such an amplitude as to generate a magnetizing force in excess of the coercive force of said elements and having an insufficient time duration to effect a change in the remanent conditions of said elements, whereby another coordinate line linking said desired element has a signal produced therein in accordance with whether said desired element is in the one or the other of said remanent states when said interrogation pulse is applied.

3,049,696
MAGNETIC CORE CIRCUITS PROVIDING FRACTIONAL TURNS
Hewitt D. Crane, Palo Alto, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 3, 1958, Ser. No. 718,887
3 Claims. (Cl. 340—174)



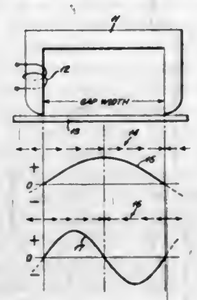
1. A magnetic storage and transfer circuit comprising a magnetic core forming a closed loop magnetic path, a portion of the core defining a plurality of parallel flux paths, a first winding and a second winding linking different portions of the magnetic core, said windings being connected in series with each other across a common current source, the first winding including a single conductor in a single turn linking a portion of the core, and the second winding including a plurality of parallel-connected single conductors, each of the conductors linking a different one of the parallel flux paths of the core in a single turn.

3,049,697
MAGNETIC MEMORY DEVICE
Thomas G. Slattery, Wellesley Hills, and Bradford M. Torrey, Arlington, Mass., assignors to Automation, Inc., Wellesley Hills, Mass., a corporation of Massachusetts
Filed Nov. 26, 1956, Ser. No. 624,454
1 Claim. (Cl. 340—174.1)



In a magnetic memory device, a read head comprising a direct flux detecting means formed of a low reluctance material affording a magnetic path for the flux, a flux loop supported by said means for providing two spaced parallel flux paths and for supply thereto of said flux, said loop formed of an easily saturable ferro-magnetic material of square loop B-H characteristic, first and second windings linking said loop paths, said windings of equal impedance and having the same number and direction of turns and whereby to produce magnetic flux of the same direction and intensity in said loop including said parallel paths, and means connected to said winding for producing an alternating saturating flux in said loop, said saturating flux adding to the direct flux in one of said paths and subtracting from said direct flux in the other of said paths and whereby to produce across one of said windings separate, short, high amplitude voltage pulses whose width and polarity correspond respectively to the magnitude and direction of said direct flux.

3,049,698
READBACK CIRCUIT FOR HIGH-DENSITY MAGNETIC BIT STORAGE
Leonard H. Thompson and John W. Wenner, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 4, 1958, Ser. No. 778,114
1 Claim. (Cl. 340—174.1)



A magnetic recording system for data handling systems comprising a magnetic recording surface on which are recorded bits in accordance with the Ferranti system of recording characterized by the representation of each bit by one of two types of information, each of said bits being sequentially recorded as one of two distinct frequencies, one type of information being recorded at a unit frequency and another type of information being recorded at a double unit frequency, said magnetic recording surface being divided into bit cells, said unit frequency being recorded by magnetizing a bit cell at a positive remanence state throughout said bit cell, said double unit frequency being recorded by magnetizing a bit cell at a positive remanence state throughout the first half of said bit cell and at a negative remanence state throughout the second half of said bit cell, a magnetic transducer for reading said information, said transducer having a gap for positioning in information reading relation to said surface, said gap having a gap width equal to the wave length of said double unit frequency, said transducer producing a maximum output response when positioned in reading relation to a portion of said surface having said unit frequency recorded thereon, said transducer producing a minimum output response when positioned in reading relation to a portion of said surface having said double unit frequency recorded thereon, and means including a bistable device responsive to the output of said transducer for shaping said output, said bistable device being selectively set to one-stable state by a maximum output response of said transducer and being set to the other stable state by a minimum output response of said transducer.

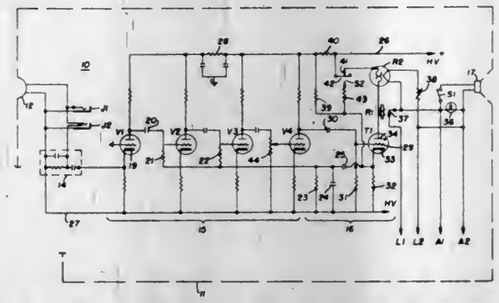
3,049,699
SOUND ACTUATED DETECTION AND ALARM SYSTEM
Howard M. Larrick, 3105 Harvard Ave. NW., Canton, Ohio, and Walter R. Brosch, 2032 Gregg Road, Akron, Ohio
Filed Jan. 26, 1960, Ser. No. 4,791
5 Claims. (Cl. 340—261)

1. In a sound actuated detection and alarm device, an amplification control circuit;

said alarm device having a microphone, an amplifier means having the input thereof connected to the microphone, a signalling device, and an energizing circuit actuated by said amplifier for triggering said signalling device;

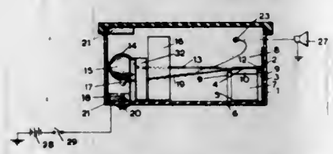
said energizing circuit having a gas tube T1 the cathode 33 of said gas tube T1 connected to the negative side 27 of a direct current source, the plate 34 of said gas tube T1 connected to one side of a thermal time delay relay R2, the other side of said thermal time delay relay R2 connected with the positive side 26 of a direct current source, said thermal time delay relay R2 energized with said signalling device for deactuating said energizing circuit after the lapse of a predetermined interval following the actuation of the alarm;

said amplification control circuit comprising a cathode resistor 32 connected in series with the cathode 33 of



said gas tube T1 and the negative side 26 of said direct current source, one side of a control circuit capacitor 25 connected between said cathode 33 and said cathode resistor 32, the other side of said capacitor 25 connected to said amplifier 15 to supply a negative blocking bias thereto for a predetermined interval following deactivation of the energizing circuit, and means 23, 24 to discharge the charge on the amplifier side of said control circuit capacitor into the negative side of said direct current source.

3,049,700
VIBRATION RESPONSIVE BURGLAR ALARM APPARATUS
Wilhelm A. Du Plooy, Pietersburg, Transvaal, Union of South Africa, assignor of one-half to Max Chaitow, Pietersburg, Transvaal, Union of South Africa
Filed June 8, 1960, Ser. No. 34,738
Claims priority, application Union of South Africa June 15, 1959
4 Claims. (Cl. 340—261)

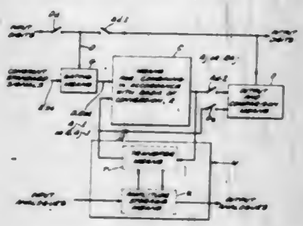


1. Alarm apparatus for connection in an electrical circuit comprising a torsion bar, a cantilever member secured to and projecting radially and in a substantially horizontal direction from said torsion bar such that said cantilever member exerts a force tending to twist said torsion bar about its longitudinal axis, a pair of spaced alarm circuit contacts one of which is connected to said cantilever member and movable therewith, and an enclosure for said apparatus.

3,049,701
CONVERTING DEVICES
Gene Myron Amdahl, Canoga Park, and William Ensign Frady, Palos Verdes Estates, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 15, 1957, Ser. No. 678,357
9 Claims. (Cl. 340—347)

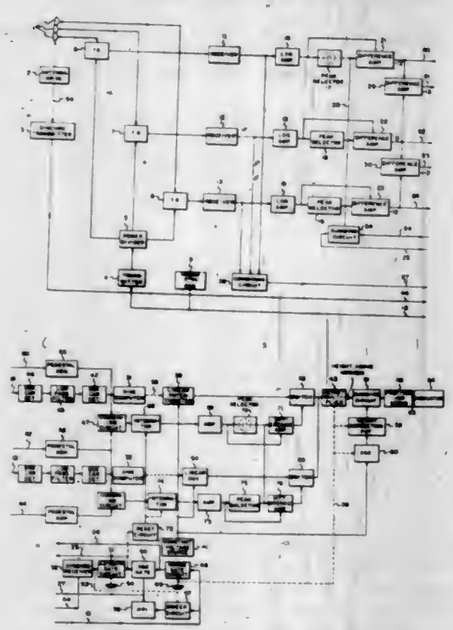
2. An analogue-to-digital converter comprising: first means for generating a digit product signal *D.Est*, where

D is a digit control signal corresponding to the arithmetic weight in a particular digital place, and Est is a standard signal, said first means including a group of circuits for producing signals $D1.Est1+ \ldots Dk.Estk$, respectively, representing a series of digit products, the sum of which constitutes said digit product signal D.Est; second means responsive to signal D.Est and to an applied input signal Aj–1 for producing an analogue signal Aj defined by the function $Aj=Aj-1.R+D.Est$, where R represents a predetermined radix of conversion and Aj–1 a previously formed analogue signal; third means for storing each



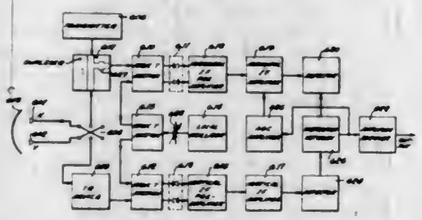
signal Aj as it is formed and for applying the previously formed signal Aj–1 to said second means; fourth means for producing digital control signals D1 . . . Dk, representing said digit D, said fourth means including a comparison circuit for generating each signal D1 . . . Dk, each comparison circuit receiving a signal proportional to each signal Aj at one input circuit and a reference signal applied to the other input circuit, determined as a function of the value of the particular digit D1 . . . Dk; and fifth means for applying signals D1 . . . Dk to the corresponding circuits in said first means.

3,049,702
SINGLE TARGET HEIGHT INDICATOR
Rudolph F. Schreitmueller, Garden City, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed May 15, 1958, Ser. No. 736,658
5 Claims. (Cl. 343—5)



1. A target height indicator comprising a multichannel stacked-beam radar receiver producing a plurality of output signals, each output signal having an amplitude related to the angular deviation of the target from the axis of the beam associated with a respective receiver channel, means for differentially comparing the amplitudes of the output signals of adjacent pairs of receiver channels to produce at least one first signal, each first signal having an amplitude related to the angular deviation of said target as measured from the crossover angle of a respective adjacent beam pair, a sine computer for producing a second signal proportional to the sine of an angle represented by the amplitude of an applied signal, said first signal being applied to said sine computer, means connected to the output of said sine computer for converting said second signal into a third signal, said third signal being proportional to the sine of the angular deviation of said target as measured from the horizon, means for producing a fourth signal proportional to the range to said target, signal multiplying means for receiving said third and fourth signals to produce a product signal proportional to the height of said target, said third and fourth signals being applied to said multiplying means, and means for indicating said product signal.

3,049,703
DUAL POLARIZATION SIGNAL CANCELLATION SYSTEM
Donovan Chester Davis, Pasadena, Calif., assignor to Gillfillan Bros. Inc., Los Angeles, Calif., a corporation of California
Filed Oct. 12, 1959, Ser. No. 846,030
15 Claims. (Cl. 343—5)

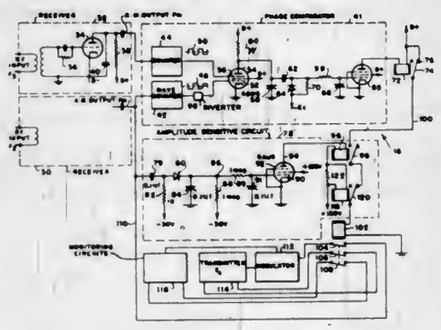


1. A system for discriminating between desired and undesired signals of approximately the same frequency but having different duty cycle comprising the combination of: antenna means adapted to receive radiant energy in first and second angularly separated planes of polarization and to supply first and second antenna outputs corresponding respectively to radiant energy thereby received in said first and second planes of polarization; first and second receiver means connected to said first and second antenna outputs respectively to produce first and second demodulated signals corresponding respectively to said first and second antenna outputs; differencing means responsive to said first and second demodulated signals for developing at least one control signal as a function of the difference in amplitude between said first and second demodulated signals; and means for applying at least said one control signal to one of said receiver means, thereby controlling the gain of at least one of said receiving means in sense tending to produce equality of said demodulated signals.

8. In a radar system operative in a predetermined frequency band which includes pulsed energy transmitting means, an antenna system having first and second antenna channels respectively responsive to electromagnetic energy in a first and second orthogonal planes of polarization in space, and a receiving complex having first and second independent receiver channels at least one of which is gain controllable in response to a gain control signal, the combination comprising: means associated with said antenna system whereby pulses of energy from said transmitting means are directed to said first antenna channel

for radiation of said pulses; means for directing energy received by said first and second antenna channels, at times other than during the times of occurrence of said pulses of energy to be transmitted, to said first and second independent receiver channels respectively; means connected to said receiver channels for comparing signal levels present at the output of said receiver channels to derive a useful output signal as a function of the difference between said outputs of said receiver channels; means responsive to said useful output signal to generate a gain control signal as a function of the time integral of the amplitude of said useful output signal; and means applying said gain control signal to said one of said receiver channels which is gain controllable.

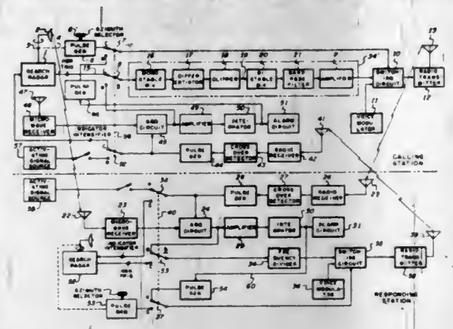
3,049,704
AMPLITUDE SENSITIVE TRANSPONDER
James L. Queen, Bethesda, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Oct. 31, 1958, Ser. No. 770,957
8 Claims. (Cl. 343—6)



1. A transponder system comprising a receiver for receiving a first modulated radio signal, a transmitter for transmitting a second radio signal, a normally open switching circuit connected to said transmitter for rendering said transmitter operative, and a circuit connected between the output of said receiver and said switching circuit and including means responsive to a first predetermined amplitude of said first modulated signal to close said switching circuit and responsive to a second predetermined amplitude of said first modulated signal to open said switching circuit.

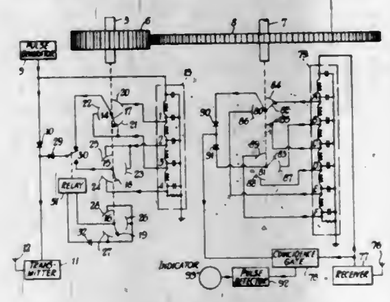
3,049,705
POSITION-SELECTIVE CALL AND IDENTIFICATION SYSTEM
Archibald D. Owen and William L. Lassetter, Charlottesville, Va., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,235
8 Claims. (Cl. 343—6)

1. A position-selective calling and identification system including two separated stations and providing for the selective alerting of one of said stations by transmissions from the other of said stations, said other of said stations comprising a search radar having a continuously scanning directional antenna for radiating microwave pulses at a predetermined repetition rate, means connected to said antenna for producing a control pulse once each scanning cycle when said antenna scans through a predetermined direction, means connected to said radar for generating a modulating signal having a frequency related to said repetition rate of said microwave pulses, transmitting means for the radiation of a modulated carrier signal, and switching means actuated by said control pulse for selectively applying when actuated said modulating signal to said transmitting means to modulate said carrier signal; said one of said stations comprising means for receiving said microwave pulses, means for receiving said modulated carrier signal, and means connected to



both said receiving means for comparing the occurrences of the received microwave pulses and predetermined points on the envelope of the received modulated carrier signal to produce an alarm signal upon the concurrence thereof.

3,049,706
DATA EXCHANGE SYSTEMS
Harold Philip Freedman, Twickenham, England, assignor to Avel Corporation Geneva, Geneva, Switzerland
Filed Apr. 7, 1959, Ser. No. 804,763
Claims priority, application Great Britain Apr. 11, 1958
7 Claims. (Cl. 343—6.5)

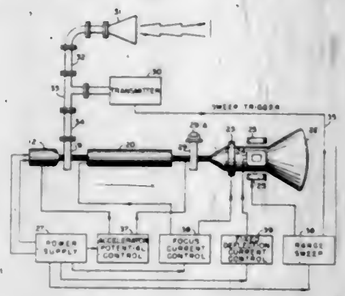


7. Apparatus for transmitting the value of height between an interrogator station and a responder station wherein the height is represented by a two digit code; such apparatus comprising, in the interrogator station, a transmitter to transmit an interrogation signal and means to code said interrogation signal by one of said two digits; at the responder station, means to receive the coded signal, means to determine whether substantial identity exists between the received digit and the corresponding digit for the value of the height of the responding station, means to generate a response signal, means to code such response signal with the other digit of the code for the height of the responder station, transmitting apparatus for said response signal and means to activate such transmitting apparatus in dependence upon finding said substantial identity.

3,049,707
TRAVELING WAVE PRESENTATION DEVICE
Roger E. White, Groveton, Va., Isaac W. Fuller, Forest Heights, Md., and Neil L. Davis, Groveton, Va.
Filed May 1, 1951, Ser. No. 224,018
6 Claims. (Cl. 343—13)
(Granted under Title 35, U.S. Code (1952), sec. 266)

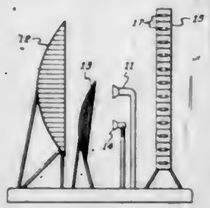
1. In a radar system including a pulse transmitter and an antenna, a receiver-indicator comprising an elongated

evacuated chamber, an electron gun at one end thereof, a fluorescent screen at the other end thereof providing a target for said electron gun, modulation means for imparting velocity modulation to the electron beam between said gun and said screen, said modulation means being disposed between said gun and said screen and having a length of several wavelengths measured at the operating



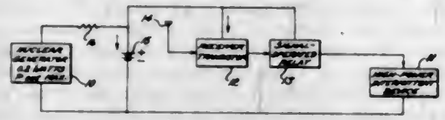
wavelength for a velocity of propagation substantially equal to the velocity of the electron beam, input means at the gun end of said modulation means, means connecting said antenna to said input means, means for changing the velocity modulation of the beam to deflection, a range sweep generator synchronized with said transmitter, and deflection means at the screen end of said modulation means connected to said sweep generator.

3,049,708
POLARIZATION SENSITIVE ANTENNA SYSTEM
Bernard Berkowitz, New Hyde Park, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Nov. 20, 1959, Ser. No. 854,510
12 Claims. (Cl. 343—100)



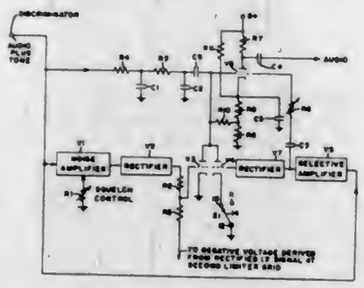
1. An antenna system comprising means for radiating linearly polarized waves, means adjacent said radiating means for receiving linearly polarized waves, first and second spaced wave reflecting means disposed in front of said radiating and receiving means, the first of said reflecting means being polarization selective to reflect only waves having a first linear polarization, a cellular wave transmitting structure comprised of a plurality of wave-guiding cells positioned in the path of both of said radiated and received waves and each cell adapted to transmit orthogonal linearly polarized waves, and non-reciprocal polarization rotating means disposed in each cell of said cellular structure for rotating by 45° the polarization of linearly polarized waves propagating therethrough, thereby to permit waves from said radiating means to pass through said polarization-selective reflecting means with a polarization orthogonal to said first linear polarization and to be reflected by said second reflecting means and radiated into space, and to permit waves reflected from a remotely located object to be incident with said first linear polarization on said polarization-selective reflecting means for reflection therefrom to said receiving means.

3,049,709
REMOTE CONTROL ACTUATED CHEMICAL-NUCLEAR POWERED COMMUNICATION SYSTEM
Lockwood Rianhard, Jr., Millenbeck, Va.
Filed Dec. 27, 1957, Ser. No. 705,722
5 Claims. (Cl. 343—225)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a communcations system, in combination, a device requiring a high level of power input for relatively short time intervals of infrequent occurrence, a nuclear power generator, of relatively low capacity, a storage battery and signal receiver electrically connected with said nuclear power generator, remotely-actuated switching means controlling flow of current between said battery and infrequently operated high-power device, and means including a radio-frequency signal pick-up antenna circuit for feeding an actuating signal to said switching means, by way of said signal receiver.

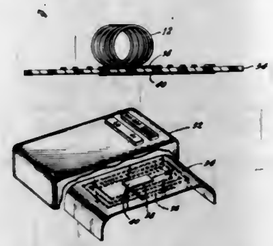
3,049,710
CONTINUOUS TONE-CONTROLLED SQUELCH SYSTEM
Richard T. Buesing, Syracuse, Richard P. Gifford, De Witt, and Neal H. Shepherd, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Filed Jan. 2, 1958, Ser. No. 706,813
4 Claims. (Cl. 343—226)



3. In a radio receiving apparatus including means for detecting a received signal comprising a modulated carrier wave, an audio stage for applying the detected audio modulation to a reproducing means, a squelch system for said receiver for disabling said audio stage in the absence of either said carrier wave or an identifying signal of a predetermined frequency associated with said receiver, said squelch means including means coupled to said audio stage for applying a biasing voltage thereto, first means responsive to noise at said detecting means for producing a unidirectional noise voltage of one polarity, second means responsive to the presence of a carrier signal at said detecting means for producing a unidirectional control voltage of opposite polarity, third means responsive to the presence or absence of said identifying signal for producing a unidirectional voltage of either said one or said other polarity, said third means producing a unidirectional voltage of said one polarity in the absence of said identifying signal and of said opposite polarity in response to the identifying signal, means to control said audio stage in response to the unidirectional voltages from said first, second, and third means to apply a disabling bias voltage to said audio stage if any of the unidirectional voltages is of the opposite polarity whereby said audio stage is enabled to permit transmission of a signal to the reproducing means only upon the simultaneous presence of a received carrier wave and the identifying signal associated with said receiver, and means for disabling said third means to permit monitoring of signals which do not include the identifying signal.

3,049,711
OMNI-DIRECTIONAL PORTABLE ANTENNA
Brian E. Hooper, Sherman Oaks, Calif., assignor to Packard-Bell Electronics Corporation, Los Angeles, Calif., a corporation of California
Filed Nov. 12, 1958, Ser. No. 773,480
9 Claims. (Cl. 343—702)

1. In combination for transmitting signals on an omni-directional basis, a casing made from a dia-magnetic material, a first coil disposed within the casing for the radiation of energy, a first capacitance connected with the coil in a tuned circuit resonant at a particular frequency, a thin sheet of dielectric material having properties of flexure and disposed in a contiguous and transverse relationship to the first coil within the casing, a first printed circuit formed on one side of the thin sheet of dielectric material and disposed in a plurality of turns to form a second coil for the radiation of energy in transverse relationship to the first coil and terminating at one end in a first plate capacitively coupled to the first coil, and a second printed circuit formed on the second side of the thin sheet and including a second plate forming a second



capacitance with the first plate, the second coil and the second capacitance being provided with characteristics to form a tuned circuit resonant at the particular frequency, said first coil having an elongate shape and extending in the direction of its longitudinal axis along said thin sheet of dielectric material proximate to said first printed circuit.

DESIGNS

AUGUST 14, 1962

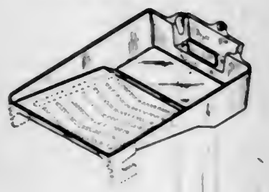
193,380
ADVERTISING SIGN
Claude R. Kirk, 332 Moorland Road, and Samuel B. Meadows, 2846 Montrose Ave., both of Montgomery, Ala.
Filed Feb. 19, 1962, Ser. No. 68,870
Term of patent 14 years
(Cl. D1—12)



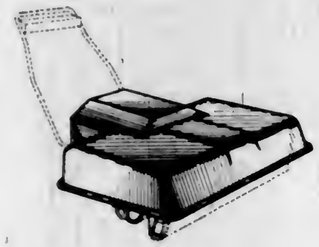
193,381
AUDIO COMMUNICATION HAT
Warren R. Churchill, Franklin, Tenn., assignor to Kusan Incorporated, Nashville, Tenn.
Filed June 29, 1961, Ser. No. 65,765
Term of patent 3½ years
(Cl. D3—13)



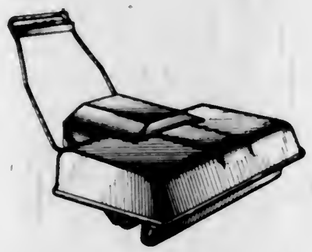
193,382
COMBINED PAINT TRAY AND PAINT BRUSH HOLDER OR SIMILAR ARTICLE
Daniel A. Goetz, Pittsburgh, Pa., assignor, by mesne assignments, of one-half to Stylette Plastics, Inc., Pittsburgh, Pa., a corporation of Pennsylvania, and one-half to The Wooster Brush Company, Wooster, Ohio, a corporation of Ohio
Filed Sept. 15, 1960, Ser. No. 62,159
Term of patent 14 years
(Cl. D9—2)



193,383
BOWLING LANE MAINTENANCE MACHINE
Patrick J. Regan, 12501 W. Bluemound Road, Elm Grove, Wis.
Filed Aug. 7, 1961, Ser. No. 66,215
Term of patent 14 years
(Cl. D9—2)



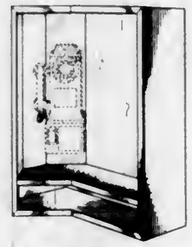
193,384
BOWLING LANE MAINTENANCE MACHINE
Patrick J. Regan, Elm Grove, Wis., assignor to D.B.A. Products Company, Inc., Deerfield, Ill., a corporation of Illinois
Filed Aug. 7, 1961, Ser. No. 66,216
Term of patent 14 years
(Cl. D9—2)



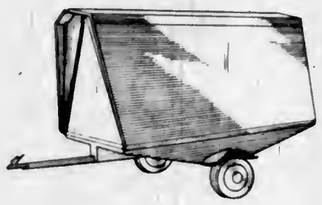
193,385
CABINET KNOB
Bernard Caminker and Newton Leichter, Los Angeles, Calif., assignors to Ajax Hardware Manufacturing Corp., City of Industry, Calif., a corporation of California
Filed May 15, 1961, Ser. No. 65,164
Term of patent 14 years
(Cl. D10—8)



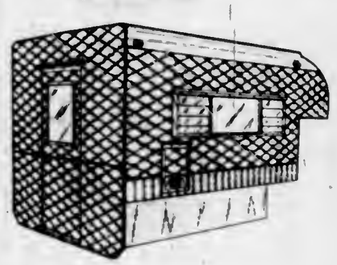
193,386
TELEPHONE BOOTH
Martin B. Schaffer, Park Forest, Ill., assignor to Acoustics Development Corporation, Park Ridge, Ill., a corporation of Illinois
Filed Nov. 8, 1961, Ser. No. 67,427
Term of patent 14 years
(Cl. D13—1)



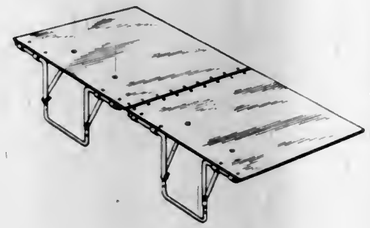
193,387
MOBILE TELEPHONE BOOTH
George H. Phillips, Jr., 802 Highland Terrace NE., Atlanta, Ga.
Filed Sept. 6, 1960, Ser. No. 62,012
Term of patent 7 years
(Cl. D14—3)



193,388
COACH BODY FOR CAMPING OR THE LIKE
Charles Q. Miner, Rte. 4, Box 233, Boise, Idaho
Filed Oct. 10, 1961, Ser. No. 67,036
Term of patent 14 years
(Cl. D14—3)



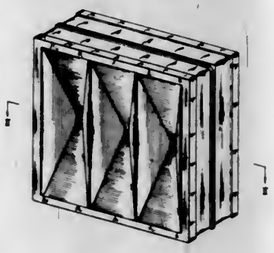
193,389
PLATFORM UNIT FOR THE REAR SEAT OF A CAR
Gerald E. Kardach, 2114 W. Juneau Ave., Milwaukee, Wis.
Filed Aug. 12, 1959, Ser. No. 57,162
Term of patent 14 years
(Cl. D14—6)



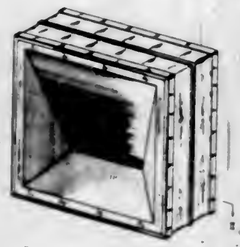
193,390
WHEEL COVER
Duane L. Bohnstedt, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 23, 1962, Ser. No. 68,482
Term of patent 7 years
(Cl. D14—30)



193,391
GLASS BLOCK
Howard F. Kingsbury, Port Allegany, Pa., assignor to Pittsburgh Corning Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1959, Ser. No. 57,873
Term of patent 14 years
(Cl. D18—2)



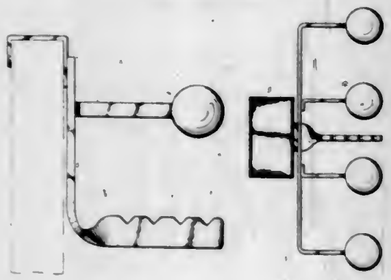
193,392
GLASS BLOCK
Howard F. Kingsbury, Port Allegany, Pa., assignor to Pittsburgh Corning Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1959, Ser. No. 57,875
Term of patent 14 years
(Cl. D18—2)



193,393
COMBINED PORTABLE TELEPHONE ENCLOSURE AND SUPPORT
William E. Whidden, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 18, 1961, Ser. No. 64,807
Term of patent 14 years
(Cl. D26—14)



193,394
CLOTHES RACK
Joseph V. Cummiskey, 416 E. 14th St., Elmira Heights, N.Y.
Filed Dec. 18, 1961, Ser. No. 67,948
Term of patent 3½ years
(Cl. D33—8)



193,395
STUFFED DOLL
Hazel Frances Rebold, 1118 De Vere Drive, Silver Spring, Md.
Filed July 19, 1961, Ser. No. 65,972
Term of patent 3½ years
(Cl. D34—4)



193,396
STUFFED DOLL
Hazel Frances Rebold, 1118 De Vere Drive, Silver Spring, Md.
Filed July 19, 1961, Ser. No. 65,973
Term of patent 3½ years
(Cl. D34—4)



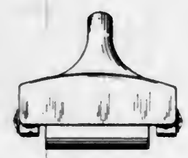
193,397
STUFFED DOLL
Hazel Frances Rebold, 1118 De Vere Drive, Silver Spring, Md.
Filed July 19, 1961, Ser. No. 65,979
Term of patent 3½ years
(Cl. D34—4)



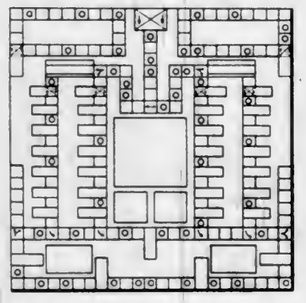
193,398
DOLL
Walter L. Strauss, Scarborough, N.Y., assignor to Frankonia Products Inc., New York, N.Y., a corporation of New York
Filed July 20, 1961, Ser. No. 66,003
Term of patent 14 years
(Cl. D34—4)



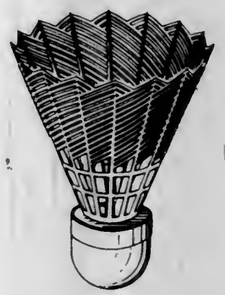
193,399
CLUB HEAD FOR GOLF PUTTER OR THE LIKE
Jerome P. McGranaghan, 1101 Prince St., Alexandria, Va.
Filed June 6, 1961, Ser. No. 65,478
Term of patent 14 years
(Cl. D34—5)



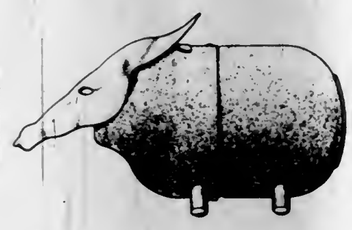
193,400
GAMEBOARD OR SIMILAR ARTICLE
Helen Wegner, 5 Donny Terrace, Kingsville, Md.
Filed Jan. 15, 1962, Ser. No. 68,302
Term of patent 14 years
(Cl. D34—5)



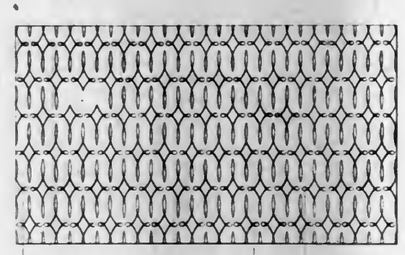
193,401
SHUTTLECOCK
William C. Carlton, 14 Herbert Road, Hornchurch, Essex, England
Filed Feb. 14, 1962, Ser. No. 68,826
Term of patent 14 years
(Cl. D34—5)



193,402
TOY DONKEY BANK
Leonard Florence, Revere Beach Parkway, Chelsea, Mass.
Filed Feb. 2, 1960, Ser. No. 59,241
Term of patent 14 years
(Cl. D34—11)



193,403
GLASS PANEL OR SIMILAR ARTICLE
Melvin Boldt, Chicago, Ill., assignor to Moffats Limited, Weston, Ontario, Canada, a company of Ontario, Canada
Filed Feb. 24, 1961, Ser. No. 64,050
Term of patent 14 years
(Cl. D36—11)



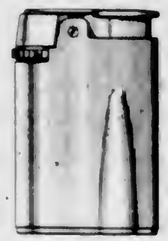
193,404
FINGER RING OR SIMILAR ARTICLE
Grace P. Telford, 1208 "B" W. Balboa Blvd., Balboa, Calif.
Filed Aug. 24, 1959, Ser. No. 57,267
Term of patent 3½ years
(Cl. D45—10)



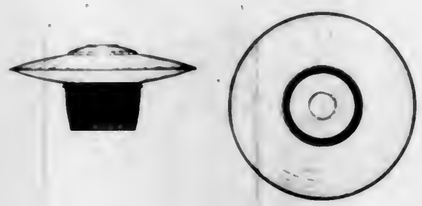
193,405
CEILING LAMP
Maximino Mattei Rivera, 167 O'Neill St., Hato Rey, Puerto Rico
Filed Nov. 9, 1961, Ser. No. 67,450
Term of patent 14 years
(Cl. D48—20)



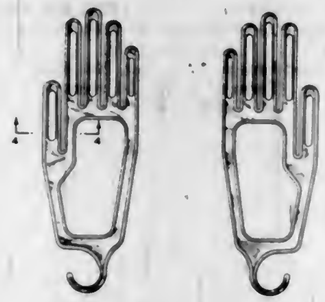
193,406
LIGHTER OR SIMILAR ARTICLE
Seymour Rappoport, Rumson, N.J., assignor to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed July 7, 1961, Ser. No. 65,948
Term of patent 14 years
(Cl. D48—27)



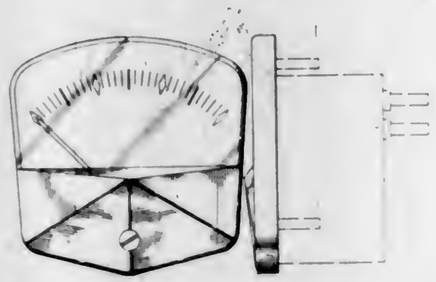
193,407
LUMINAIRE
Myron F. Pettengill, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Filed Nov. 30, 1961, Ser. No. 67,749
Term of patent 14 years
(Cl. D48—31)



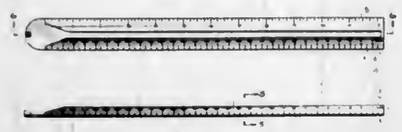
193,408
GLOVE DRYER
Percy Goldman, 411 E. 57th St., New York, N.Y.
Filed Oct. 2, 1961, Ser. No. 66,931
Term of patent 14 years
(Cl. D49—1)



193,409
INSTRUMENT CASING FOR AMMETERS OR SIMILAR ARTICLES
Fred M. Bender, Mount Prospect, Ill., assignor to Sun Electric Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 5, 1960, Ser. No. 63,113
Term of patent 14 years
(Cl. D52—6)



193,410
COMBINED RULER AND PENCIL HOLDER OR SIMILAR ARTICLE
Leonard Reichenthal, 970 E. 173rd St., New York, N.Y.
Filed Mar. 29, 1961, Ser. No. 64,532
Term of patent 14 years
(Cl. D52—6)



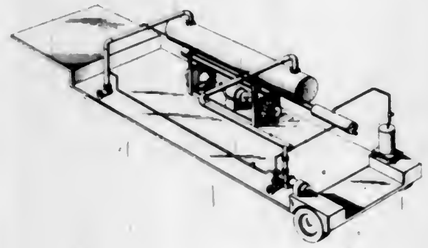
193,411
SLIDE COMPARISON VIEWER
Edward R. Farber, Milwaukee, Wis., assignor to Roloc Incorporated, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 13, 1961, Ser. No. 64,228
Term of patent 7 years
(Cl. D61—1)



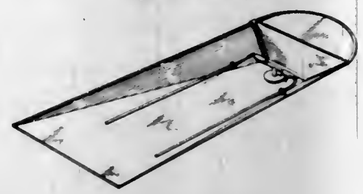
193,412
VENTILATOR
Melvin H. Best, Pasadena, and Clair A. Samhammer, Altadena, Calif., assignors to Williams-Bermuda Corporation, Los Angeles, Calif., a corporation of California
Filed June 15, 1961, Ser. No. 65,600
Term of patent 14 years
(Cl. D62—3)



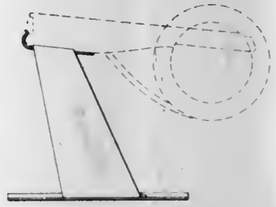
193,413
TRANSPORTABLE REFRIGERATION UNIT
Charles R. Beltz, 500 Lakeland Ave., Grosse Pointe, Mich.
Filed July 13, 1959, Ser. No. 56,750
Term of patent 14 years
(Cl. D67—2)



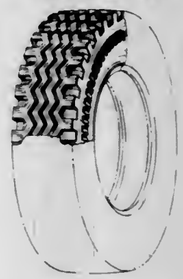
193,414
WATER SLED
Fred L. Churchman, 1331 Colusa, Vallejo, Calif., and Joseph L. Garske, 190 W. I St., Benicia, Calif.
Filed July 24, 1961, Ser. No. 66,022
Term of patent 3½ years
(Cl. D71—1)



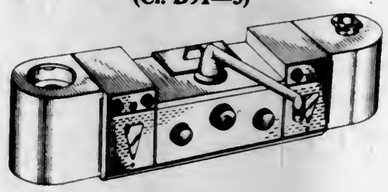
193,415
MOUNTING BASE FOR A TAPE DISPENSER
Edward Waltz, Grand Rapids, Mich., assignor to E. O. Bulman Manufacturing Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Mar. 16, 1961, Ser. No. 64,345
Term of patent 14 years
(Cl. D74—1)



193,416
TIRE
Michael Tiborcz, 714 W. Market St., Akron, Ohio
Filed Mar. 14, 1961, Ser. No. 64,271
Term of patent 14 years
(Cl. D90—20)



193,417
COMBINED FAUCET FIXTURE AND KITCHEN ACCESSORY POWER SOURCE UNIT
Herbert Carvel Moore, Los Angeles, Calif., assignor to Electro-Way Corporation, Los Angeles, Calif., a corporation of California
Filed Feb. 13, 1961, Ser. No. 63,914
Term of patent 14 years
(Cl. D91—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 14TH DAY OF AUGUST, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abrams, Ralph, and W. H. West, to Cambridge Thermionic Corp. Control knob. Re. 25,224, 8–14–62, Cl. 287—52.6.
Cambridge Thermionic Corp.: *See*—
Abrams, Ralph, and West. Re. 25,224.
Conmar Products Corp.: *See*—
Mikulas, William. Re. 25,223.
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Birch Brothers, Inc.: *See*—
Birch, Clifford W., Jr. 3,049,311.
Birkenbach, Eugene J., B. E. Brown, T. Vendl, and G. J. Pfeiffer, Sr., to International Harvester Co. Peg harrow-welded tooth bar. 3,049,183, 8–14–62, Cl. 172—691.
Birmingham Sound Reproducers Ltd.: *See*—
Guest, Lawrence V. 3,049,354.
Birum, Gail H., to Monsanto Chemical Co. Phosphinylhydrocarbyloxy phosphoramidates and phosphorodiamidates. 3,049,545, 8–14–62, Cl. 260—293.4.
Bishop, Leonard J., to Mechanical Handling Systems, Inc. Sorting system for post offices and the like. 3,049,218, 8–14–62, Cl. 198—188.
Bishop, Leonard J., to Mechanical Handling Systems, Inc. Sorting system for post offices and the like. 3,049,246, 8–14–62, Cl. 214—11.
Bishop, Ray H. Extensible load or cargo bracing device. 3,049,328, 8–14–62, Cl. 248—354.
Bickford, Walter S. Movable shower head. 3,048,851, 8–14–62, Cl. 4—145.
Biggers, William C. Safety guard attachment for the tailgate openings of station wagon vehicles. 3,049,373, 8–14–62, Cl. 296—106.
Black-Clawson Co., The: *See*—
Jordan, Charles E., and Phelps. 3,049,313.
Blankenship, Joseph K.: *See*—
Borutzke, Irvin W., and Blankenship. 3,049,289.
Blaupunkt-Werke G.m.b.H.: *See*—
Backwinkel, Johannes, and Altmann. 3,049,587.
Blaw-Knox Co.: *See*—
Siglow, Thaddeus A. 3,049,349.
Blokhuis, Gerrit. Device for the combined regulation of the temperature of an oil-burner. 3,049,170, 8–14–62, Cl. 158—28.
Blomquist, Uno O. Steam generating and superheating units. 3,049,104, 8–14–62, Cl. 122—1.
Bloom, Martin S.: *See*—
Jackson, Kenneth, and Bloom. 3,049,488.
Bochinski, Julius H., A. L. Kohl, and R. C. Oliver, to The Fluor Corp., Ltd. Urea synthesis. 3,049,563, 8–14–62, Cl. 260—555.
Boetticher, Albert A.: *See*—
Boetticher, Audrey L., and A. A. 3,048,942.
Boetticher, Audrey L. and A.A. Container for flowers and the like. 3,048,942, 8–14–62, Cl. 47—41.
Bofors, Aktiebolaget: *See*—
Oler, Ernst B. 3,048,951.
Bogle, Frank. Fuel distribution system for internal combustion engines. 3,049,111, 8–14–62, Cl. 123—119.
Bongartz, Hans: *See*—
Steinkemper, Bernhard, Weidenhaupt, and Bongartz. 3,048,922.
Bonner, James W. to American Iron & Machine Works Co., Inc. Shear pin type releasable lock for hookwall packers. 3,049,177, 8–14–62, Cl. 166—119.
Borell, George L. Indicator. 3,049,668, 8–14–62, Cl. 324—132.
Borgmann, Ernst: *See*—
Becker, Gerhard, and Borgmann. 3,049,288.
Borg-Warner Corp.: *See*—
Ferris, Ernest A., and Wade. 3,049,205.
Gamson, Bernard W., and Kuehner. 3,049,399.
Grabowski Thomas S. 3,049,505.
Mamo, Anthony C. 3,049,027.
Talamonti, John. 3,049,356.
Borutzke, Irvin W., and J. K. Blankenship, to Burroughs Corp. Item counter mechanism. 3,049,289, 8–14–62, Cl. 235—60.
Bottinelli, Norman E., and H. M. Rovenger, said Bottinelli assor. to J. P. Rossi. Pneumatic systems. 3,048,875, 8–14–62, Cl. 15—301.

Bottomley, Anthony, to Phillips Petroleum Co. Process for producing biaxially oriented-plastic film. 3,048,895, 8–14–62, Cl. 18—57.

Bouchayer & Viallet Etablissements: *See*—
Daumy, Georges, Rambaud, and Arnoux. 3,049,333.

Bourguet, Jean M., and R. D. Drew, to Socony Mobil Oil Co., Inc. Pressure control system. 3,049,013, 8–14–62, Cl. 73—388.

Bowlus, Omer E., and K. A. Graham, to Chrysler Corp. Ignition system. 3,049,644, 8–14–62, Cl. 215—219.

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Wright, William B., Jr., and Brabander. 3,049,562.

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Beatty, Howard W., Jr., and Brady. 3,049,141.

Bradley, John K., G. G. Brown, and W. F. Sheldrick, to Fisons Ltd. Process for the production of fertilizer materials. 3,049,417, 8–14–62, Cl. 71—37.

Branagan, Edward F., to United States of America, Navy. Variable transconductance electron tube. 3,049,671, 8–14–62, Cl. 328—158.

Bredesen, Philip N., and G. G. Outterson. Safety combustion control system. 3,049,169, 8–14–62, Cl. 158—28.

Bremmer, Norman C. Magnetic recording means. 3,049,583, 8–14–62, Cl. 179—100.2.

Brendel, Armin G. Apparatus for maintaining constant tension in guys. 3,049,194, 8–14–62, Cl. 189—31.5.

Brennan, William R., to Socony Mobil Oil Co., Inc. Pressure control. 3,049,380, 8–14–62, Cl. 302—53.

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Broadbent, Robert K., to Geo. Knight & Co., Inc. Vamp crimper. 3,048,864, 8–14–62, Cl. 12—54.4.

Broadhead, Samuel L., Jr., and A. L. Kemper, to Collins Radio Co. Filter circuit. 3,049,667, 8–14–62, Cl. 324—82.

Brobst, Robert A., to Hercules Powder Co. Process for the stabilization of starch ethers. 3,049,538, 8–14–62, Cl. 260—233.3.

Brockman, Herbert P., to United States of America, Navy. Translator circuit for generating constant amplitude wave signals. 3,049,625, 8–14–62, Cl. 307—88.5.

Brosch, Walter R.: *See*—
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Brown, Geoffrey G.: *See*—
Bradley, John K., Brown, and Sheldrick. 3,049,417.

Brown, Geoffrey G., and R. G. Wilson, to Fisons Fertilizers Ltd. Production of phosphate fertilizers. 3,049,416, 8–14–62, Cl. 71—37.

Brown, Geoffrey G., and R. G. Wilson, to Fisons Fertilizers Ltd. Fertilizers. 3,049,418, 8–14–62, Cl. 71—39.

Brown, Morden G.: *See*—
Polanyi, Michael L., Johnston, and Brown. 3,049,047.

Brown, Winston E., to The Dow Chemical Co. Stabilized degreasing solvent. 3,049,571, 8–14–62, Cl. 260—652.5.

Browne, Robert. Paneled table top. 3,049,388, 8–14–62, Cl. 311—106.

Browning, Clarence E. Pelt fleshing machine. 3,048,995, 8–14–62, Cl. 69—40.

Bruch, Walter, to Telefunken G.m.b.H. Self regulating deflection circuits. 3,049,640, 8–14–62, Cl. 315—27.

Brucken, Byron L., to General Motors Corp. Electric motor driven domestic appliance. 3,049,654, 8–14–62, Cl. 318—221.

Brueder, Antoine, to Citroen, Andre, Societe Anonyme. Three-way slide valve with adjustable overlap. 3,049,149, 8–14–62, Cl. 137—625.17.

Brumfield, Richard S., E. B. Dwaayer, F. Shanty, and C. J. Shoemaker, to United States of America, Army. Oronasal mask. 3,049,121, 8–14–62, Cl. 128—146.

Bruner Corp.: *See*—
Rudelick, John. 3,049,239.

Bryan, Robert E. Electric wire grip. 3,048,908, 8–14–62, Cl. 24—122.6.

Brydolf, Robert: *See*—
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Buell, Bennett G., and R. S. Long, to American Cyanamid Co. Pyridotriazole brighteners. 3,049,438, 8–14–62, Cl. 117—33.5.

Buesing, Richard T., R. P. Gifford, and N. H. Shepherd, to General Electric Co. Continuous tone-controlled squelch system. 3,049,710, pub. 8–14–62, Cl. 343—226.

Buice, Horace L. Wallboard lift. 3,049,243, 8–14–62, Cl. 214—1.

Bullard, Wilburn C., Jr.: *See*—
Ells, Pritchard P., and Bullard. 3,048,984.

Bunning, Ernest J.: *See*—
Chute, Richard, and Bunning. 3,048,915.

Bunting, Ernest V., to Massey-Ferguson Inc. Implement hitch linkage for tractors. 3,049,179, 8–14–62, Cl. 172—10.

Burke, Thomas J., and M. C. Johnson, to United States of America, Navy. Timing circuit. 3,049,649, 8–14–62, Cl. 317—141.

Burkholder, Ward J., to Diamond Alkali Co. Polymerization of vinyl chloride. 3,049,521, 8–14–62, Cl. 260—87.1.

Burnett, Edward N., to Gerber Products Co. Disposable baby pants. 3,049,228, 8–14–62, Cl. 206—58.

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Greenblatt, Richard C. 3,049,650.

Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
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Burt, Robert V., to The Procter & Gamble Co. Method of forming collapsed carton blank. 3,049,059, 8–14–62, Cl. 93—36.6.

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Burtonwood Engineering Co. Ltd.: *See*—
Vernon, Kenneth S. 3,049,355.

Bush and Rank Cintel Ltd.: *See*—
Nuttall, Thomas C. 3,049,275.

Buselli, Allo J.: *See*—
Lowell, Arthur I., Latimer, and Buselli. 3,049,522.

Busey, James D., to Besly-Welles Corp. Grinder control means. 3,049,112, 8–14–62, Cl. 125—11.

Butler, Robert W., to Hercules Powder Co. Stabilized cellulose derivatives and process. 3,049,433, 8–14–62, Cl. 106—177.

Buttery, Kenneth T., and C. D. Rice, to KVP-Sutherland Paper Co. Dispensing carton or receptacle. 3,049,283, 8–14–62, Cl. 229—43.

Cabral, Walter M., to Yuba Consolidated Industries, Inc. Airplane tow tractor. 3,049,253, 8–14–62, Cl. 214—147.

Cain, Bernard M., to General Electric Co. Liquid-cooled rotor for dynamoelectric machine. 3,049,633, 8–14–62, Cl. 310—54.

California Research Corp.: *See*—
George, Wayland D., Jones, and Yule. 3,049,620.

Callery Chemical Co.: *See*—
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Campbell, Milford A. Hopper fed conveyor. 3,049,216, 8–14–62, Cl. 198—33.

Campbell, Rodney B., to Idaho Maryland Mines Corp. Optical liquid-level gage. 3,049,011, 8–14–62, Cl. 73—327.

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Werkman, Robert T., and Conterino. 3,049,455.

Cardwell Mfg. Co.: *See*—
Barry, William R. 3,049,082.

Carlat, Benedict, and R. H. Fidler, Jr., to Tung-Sol Electric Inc. Multiple zone semiconductor device and method of making the same. 3,049,451, 8–14–62, Cl. 148—1.5.

Carlisle, Kenneth M.: *See*—
Miller, George E., and Carlisle. 3,049,045.

Carlson, Gustave A. Reclining chairs. 3,049,375, 8–14–62, Cl. 297—303.

Carnahan, Leonard L., M. E. Fry, G. C. Pearce, and J. L. Evans, to General Motors Corp. Oven door mounting means. 3,049,114, 8–14–62, Cl. 126—191.

Carnahan, Leonard L., M. E. Fry, G. C. Pearce, and J. L. Evans, to General Motors Corp. Oven door mounting means. 3,049,115, 8–14–62, Cl. 126—191.

Carr, Donald E., to Phillips Petroleum Co. Smoke suppression and thrust augmentation by a mixture of tertiary butyl alcohol and water. 3,048,967, 8–14–62, Cl. 60—35.4.

Carroll, Robert J., and F. T. Perry; said Carroll assor. to United States of America, Navy. Release and ejection mechanism for automatic dye marker system. 3,049,091, 8–14–62, Cl. 116—124.

Carroll, Robert L. Ball rod sleeve for strand tension device. 3,049,318, 8–14–62, Cl. 242—157.

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Peshin, John V., and Seager. 3,049,457.

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Casey, James H., to Minnesota Mining & Mfg. Co. Tape wrapping machines. 3,048,953, 8–14–62, Cl. 53—198.

Casty, Richard, and H. Abel, to Ciba Ltd. Process for dyeing nitrogenous material with sulfonated copper phthalocyanines. 3,049,392, 8–14–62, Cl. 8—1.

Caton, John A., to Imperial Chemical Industries Ltd. Copolymerisation of triallyl cyanurate and methyl methacrylate. 3,049,517, 8–14–62, Cl. 260—77.5.

Caubet, Jacques J. Bearing. 3,049,384, 8–14–62, Cl. 308—240.

Caudell, John J. Curtain rod bracket. 3,049,327, 8–14–62, Cl. 248—222.

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Chaltow, Max: *See*—
Du Plooy, Wilhelm A. 3,049,700.

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Chambers, Orval V.: *See*—
Wright, Paul C., and Chambers. 3,049,333.

Chambers, Victor S.: *See*—
Howland, Louis H., and Chambers. 3,049,501.
Howland, Louis H., and Chambers. 3,049,502.
Howland, Louis H., Chambers, and Aleksa. 3,049,500.

Chapman Chemical Co.: *See*—
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Chappellier, André, to Commissariat a l'Energie Atomique. Device for dispensing emergency blankets. 3,049,389, 8–14–62, Cl. 312—324.

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Chem-Therm Mfg. Co., Inc.: *See*—
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Cheney, Donald E., to Reliable Electric Co. Insulation-crushing terminal assembly. 3,049,691, 8–14–62, Cl. 339—95.

Cheng, Jen Pu: *See*—
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Chidsey, Francis A. Jr., and W. C. Hasselo, to Container Corporation of America. Can carton with reinforced corners. 3,049,282, 8–14–62, Cl. 229—40.

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Chocholaty, Frantisek. Game of skill or the like. 3,049,351, 8–14–62, Cl. 273—86.

Choice, Frank C., to United Shoe Machinery Corp. Molding machines for pressing and vulcanizing plastic materials. 3,048,893, 8–14–62, Cl. 18—17.

Christian, Edwin B.: *See*—
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Chronicle Publishing Co.: *See*—
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Chrysler Corp.: *See*—
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Ciba Ltd.: *See*—
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Asaro, Vito, and Ciesielski. 3,049,377.

Cislak, Francis E., to Reilly Tar & Chemical Corp. Dipyridyl quaternary salts. 3,049,547, 8–14–62, Cl. 260—294.8.

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Clark, Paul D. Industrial sweeper. 3,048,868, 8–14–62, Cl. 15—79.

Clark, Robert A., to Glenmore Distilleries Co. Strip stamp applying and squeezing mechanism. 3,049,166, 8–14–62, Cl. 156—489.

Clarkson, Jack B., to Sylvania Electric Products Inc. Socket. 3,049,689, 8–14–62, Cl. 339—17.

Claude, Janin L. Sound-absorbing and heat-resisting wall construction. 3,049,067, 8–14–62, Cl. 98—31.

Clay Equipment Corp.: *See*—
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Clay, Eugene O. Stair climbing wheel chair. 3,049,364, 8–14–62, Cl. 280—211.

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Coffman, Moody L., to Acoustic Controls, Inc. Acoustic control unit. 3,049,190, 8–14–62, Cl. 181—33.

Cohen De Lara, Georges, M. L. Delachanal, and R. Platzer, to Commissariat a l'Energie Atomique. Methods for separating a granular material from a liquid. 3,049,236, 8–14–62, Cl. 210—68.

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Mark, Alexander H., Cooper, and Coleman. 3,049,129.

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Abragam, Anatole, Combrisson, and Solomon. 3,049,662.

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Abragam, Anatole, Combrisson, and Solomon. 3,049,662.
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Conger, Joseph C., Sr., to American Cyanamid Co. Concentrated methylene blue paste. 3,049,395, 8–14–62, Cl. 8—79.

Conley, Charles P., and A. Nelkin, to United States of America, Navy. Wake responsive torpedo guidance system. 3,049,087, 8–14–62, Cl. 114—23.

Conner, Guy O., to Republic Steel Corp. Work holder for metal working machines. 3,049,222, 8–14–62, Cl. 198—210.

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Stuben, Frank J. and J. H. 3,049,607.

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Continental Can Co., Inc.: *See*—
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Continental Oil Co.: *See*—
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Continental Paper Co.: *See*—
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Cook, Shirl E., and T. O. Sistrunk, to Ethyl Corp. Manufacture of tetramethyllead. 3,049,558, 8–14–62, Cl. 260—437.

Cooke, Maurice D., to Hercules Powder Co. Production of cumene hydroperoxide. 3,049,477, 8–14–62, Cl. 202—40.

Coons, Robert R., and P. F. Richardson, to International Harvester Co. Adjustable seat suspension. 3,049,330, 8–14–62, Cl. 248—419.

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Cormia, Keith C., and A. D. Aird, to General Electric Co. Electron tube assembly apparatus. 3,049,214, 8–14–62, Cl. 198—19.

Costello, George T., W. O. Dickinson, P. J. Dreher, and J. H. Nicklas, to National Heater Co., Inc. Burner. 3,049,173, 8–14–62, Cl. 158—110.

Couch, Robert de S., and M. Yezek, to General Foods Corp. Frozen food package. 3,049,429, 8–14–62, Cl. 99—192.

Counts, Paul. Shoe cleaner. 3,048,867, 8–14–62, Cl. 15—36.

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Cousino, Walter P., and B. L. Palmer, to Chrysler Corp. Brake master cylinder. 3,048,980, 8–14–62, Cl. 60—54.6.

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Cox, John A., Jr., to Minneapolis-Honeywell Regulator Co. Mounting arrangement for an electrical device. 3,049,646, 8–14–62, Cl. 317—99.

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Crandall, Charles B., and R. W. Andres, to Barber-Colman Co. Bobbin sorter. 3,049,231, 8–14–62, Cl. 209—74.

Crane, Hewitt D., to Burroughs Corp. Magnetic core circuits providing fractional turns. 3,049,696, 8–14–62, Cl. 340—174.

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Criger, Glenn M., to Aluminum Research Corp. Coil handling device. 3,049,314, 8–14–62, Cl. 242—79.

Criscuolo, James M. Sewer cleaning device. 3,048,870, 8–14–62, Cl. 15—104.3.

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Donham, James E. 3,049,491.

Crummel, Fred J. Downspout drainage system. 3,048,983, 8–14–62, Cl. 61—15.

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Cummins-Chicago Corp.: *See*—
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Curry, Cecil B., J. W. Haley, and J. C. Theiler, to Owens-Illinois Glass Co. Manufacture of paper. 3,049,467, 8–14–62, Cl. 162—55.

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Curtis, Gerald J. Drain for boats. 3,049,088, 8–14–62, Cl. 114—197.

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Daimler-Benz Aktiengesellschaft: *See*—
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Daly, Daniel F., to The Arrow-Hart & Hegeman Electric Co. Switch operating mechanism with handle positioning means. 3,049,024, 8–14–62, Cl. 74—534.

Daly, Daniel F., to The Arrow-Hart & Hegeman Electric Co. Spring held and biased latch. 3,049,371, 8–14–62, Cl. 292—128.

Dalzell, David R., Jr., to E. D. Jones Corp. Refining discs with enlarged grooves. 3,049,307, 8–14–62, Cl. 241—235.

Damm, Eugene P., Jr., to International Business Machines Corp. Multiple colored printing inks and pigments. 3,049,077, 8–14–62, Cl. 101—211.

Damoth, Donald C.: *See*—
Saari, John M., Damoth, and Wiley. 3,049,638.

Damusis, Adolfas, and K. C. Frisch, to Wyandotte Chemicals Corp. Ordered isocyanate-terminated polyether-based urethane compositions. 3,049,513, 8–14–62, Cl. 260—77.5.

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Damusis, Adolfas, to Wyandotte Chemicals Corp. Hydroxy-terminated polyether-based urethane compositions. 3,049,515, 8–14–62, Cl. 260—77.5.

Damusis, Adolfas, to Wyandotte Chemicals Corp. Ordered hydroxy-terminated polyether-based urethane compositions. 3,049,516, 8–14–62, Cl. 260—77.5.

Daniels, Glenn E., to United States of America, Army. Radiation compensating thermoelectric device. 3,049,012, 8–14–62, Cl. 73—359.

D'Ascoli, Ralph G., to Anaconda Wire and Cable Co. High voltage shielding composition. 3,049,584, 8–14–62, Cl. 174—120.

Daumy, Georges, G. Rambaud, and M. Arnoux, to Bouchayer & Viallet Etablissements. Butterfly gates. 3,049,335, 8–14–62, Cl. 251—305.

Davis, Dexter C., Jr., J. F. Freeman, and J. G. Kura, to Copperweld Steel Co. Powder applicator. 3,048,892, 8–14–62, Cl. 18—13.

Davis, Donald A., and C. H. Cowley, to Libbey-Owens-Ford Glass Co. Apparatus for producing all-glass multiple sheet glazing units. 3,048,943, 8–14–62, Cl. 49—1.

Davis, Donald W., to Lighting Products, Inc. Perforated lighting diffuser. 3,049,616, 8–14–62, Cl. 240—106.

Davis, Donovan C., to Gilfillan Bros. Inc. Dual polorization signal cancellation system. 3,049,703, 8–14–62, Cl. 343—5.

Davis, Neil L.: *See*—
White, Roger E., Fuller, and Davis. 3,049,707.

Davis, Wilbur A., 10% to Rivard Brothers Inc., 5% to H. W. Trinkle, and M. B. Trinkle, jointly. Door assembly. 3,048,898, 8–14–62, Cl. 20—16.

Davison, Robert W., to Hercules Powder Co. Application of coating or impregnating materials to fibrous material. 3,049,469, 8–14–62, Cl. 162—164.

De Armond, James L.: *See*—
Marble, Franklin D., Juniper, and De Armond. 3,049,158.

Debrie, André V. L. C. Arrangement with polarizing grating for the photographic establishment of filters with black and white networks. 3,049,051, 8–14–62, Cl. 88—24.

De Caro, Charles J., and R. J. Kopf, to Olin Mathieson Chemical Corp. Explosively powered apparatus. 3,048,849, 8–14–62, Cl. 1—44.5.

Deere & Co.: *See*—
Hadley, Howard C. 3,049,127.
Hubbard, Arthur L. 3,048,962.
Lohrman, William V. 3,049,184.
Love, Mahlon L. 3,049,022.
Oerman, Orey W., and Sullivan. 3,049,181.
Rasmussen, Clarence T., and Creighton. 3,048,933.

De Falco, Joseph J.: *See*—
Gruber, Joseph J., and De Falco. 3,049,199.

De Groote, Melvin, and J. P. Cheng, to Petrolite Corp. Method of inhibiting the growth of sulfate reducing bacteria in water flooding processes. 3,049,492, 8–14–62, Cl. 252—8.55.

Delachanal, Michel L.: *See*—
Cohen De Lara, Georges, Delachanal, and Platzer. 3,049,236.

Del Mar Engineering Laboratories: *See*—
Elder, Boyd B., and Wilmot. 3,049,319.

De Luca, Frank J.: *See*—
Jacobson, Moses G., and De Luca. 3,049,664.

De Lynn, Victor E. Ganged anchoring nail device. 3,049,042, 8–14–62, Cl. 75—13.

Demmel, Anton, and G. Kernchen, to Olympia Werke A. G. Edge setting and sheet supporting attachment for typewriters and the like. 3,049,211, 8–14–62, Cl. 197—140.

Dempster Brothers, Inc.: *See*—
Dempster, George R., and Herpich. 3,049,249.
Dempster, George R., and Herpich. 3,049,250.
Dempster, George R., and Herpich. 3,049,254.

Dempster, George R., and W. A. Herpich; said Herpich assor. to Dempster Brothers, Inc. Transporting and dumping equipment. 3,049,249, 8–14–62, Cl. 214—77.

Dempster, George R., and W. A. Herpich, to Dempster Brothers, Inc. Compaction bodies. 3,049,250, 8–14–62, Cl. 214—82.

Dempster, George R., and W. A. Herpich; said Herpich assor. to Dempster Brothers, Inc. Front end loaders. 3,049,254, 8–14–62, Cl. 214—302.

Dennison Mfg. Co.: *See*—
Kallander, Ernest L., and Nelson. 3,049,463.

Descarries, Raymond, to Electrolux, Aktiebolaget. Multipurpose suction cleaner nozzle. 3,048,877, 8–14–62, Cl. 15—417.

Detrex Chemical Industries, Inc.: *See*—
Jacobsen, John B., Christian, and McNamara. 3,049,134.

De Wilde, Paul R., ½ to Societe Suisse des Explosifs. Plastic explosive and method of making it. 3,049,453, 8–14–62, Cl. 149—20.

Diack, Archibald W. Universal cooker. 3,049,071, 8–14–62, Cl. 99—340.

Diamond Alkali Co.: *See*—
Burkholder, Ward J. 3,049,521.

Dickinson, William O.: *See*—
Costello, George T., Dickinson, Dreher, and Nicklas. 3,049,173.

Diem, Hugh E., to The B. F. Goodrich Co. Polymerization of butadiene-1,3 hydrocarbons. 3,049,528, 8–14–62, Cl. 260—94.2.

Dirks, Gerhard. Storage devices for signals. 3,049,694, 8–14–62, Cl. 340—172.5.

Distillers Co. Ltd., The: *See*—
Lacey, Richard N., and Nayler. 3,049,565.

Dobbins, Mark, J. J. Gruber, R. Repp, and B. E. Rockhoff, to Fenestra, Inc. Building structures. 3,049,198, 8–14–62, Cl. 189—34.

Doeg, Ralph W., to American Motors Corp. Refrigerating apparatus. 3,049,285, 8–14–62, Cl. 230—206.

Dolan, Arthur W., to Sylvania Electric Products Inc. Coating of small bore articles. 3,049,482, 8–14–62, Cl. 204—181.

Dominion Engineering Works Ltd.: *See*—
MacDonald, Ian J. 3,048,874.

Dondero, Mark J.: *See*—
Whiston, Donald, and Dondero. 3,049,069.

Donham, James E., to The Crossett Chemical Co., a Division of Crossett Co. Oil well drilling fluids. 3,049,491, 8–14–62, 8–14–62, Cl. 252—8.5.

Donham, James E., to The Crossett Chemical Co., a Division of Crossett Co. Oil wel drilling fluids. 3,049,491, 8–14–62, Cl. 252—8.5.

Dorosz, Adolph S., and L. F. Stanton, to United Shoe Machinery Corp. Heel attaching machines. 3,048,862, 8–14–62, Cl. 12—1.

Dorsey, William R., and S. I. Strashun, to Vacu-Dry Co. Method for making dehydrated apples. 3,049,426, 8–14–62, Cl. 99—92.

Dover Corp.: *See*—
Adams, Gilbert T. 3,049,657.

Dow Chemical Co., The: *See*—
Brown, Winston E. 3,049,571.
Monroe, Roger F., Lowes, Foster, and Oakes. 3,049,496.
Stanton, George W., and Traylor. 3,049,507.
Stanton, George W., and Traylor. 3,049,508.
Swesey, Arthur W. 3,049,472.

Dower, Ethell J., to Warren Automatic Tool Co. Testing for gas in well drilling fluid. 3,049,409, 8–14–62, Cl. 23—230.

Downs, Thomas J.: *See*—
Edelston, Murray G., and Downs. 3,049,073.

Dreher, Peter J.: *See*—
Costello, George T., Dickinson, Dreher, and Nicklas. 3,049,173.

Dresser Industries, Inc.: *See*—
Fabian, Francis G., Jr., Mann, Knippenberg, and Wainerdi. 3,049,617.

Drew, Robert D.: *See*—
Bourguet, Jean M., and Drew. 3,049,013.

Dreyer, William H., and H. W. Schreiter, to Cummins-Chicago Corp. Apparatus for sensing and reproducing perforations. 3,049,286, 8–14–62, Cl. 234—51.

Drill-O-Matic, Inc.: *See*—
Langford, Jerrel. 3,049,339.

Drum, Leslie: *See*—
Koons, Frederick L., and Drum. 3,049,450.

Duisburger Kupferhütte: *See*—
Morawietz, Wilhelm. 3,049,478.

Dumm, Robert P., to Pacific Valves, Inc. Pressure actuated valve control. 3,049,103, 8–14–62, Cl. 121—99.

Dunlop, Wirt V.: *See*—
Edelstone, Sigmund E., Dunlop, and Schlotthauer. 3,049,262.

Du Plooy, Wilhelm A., ½ to M. Chaitow. Vibration responsive burglar alarm apparatus. 3,049,700, 8–14–62, Cl. 340—261.

Du Pont de Nemours, E. I., and Co.: *See*—
Jenkins, Gordon I., and Kring. 3,049,495.
Roussel, Philip A. 3,049,523.
Stephens, Curtis W. 3,049,518.
Van Scoy, Victor S. 3,049,230.
Wolinski, Leon E. 3,049,394.

Durget, André, to Anciens Etablissements Goldenberg & Cie. Anchoring device with resilient tie means for automatic pre-anchoring. 3,049,041, 8–14–62, Cl. 85—2.4.

Dussart, Frederick L., to American Can Co. Sheet feeding machine. 3,049,347, 8–14–62, Cl. 271—8.

Du Vall, Wilbur E., to The W. W. Henry Co. Auxiliary power supply. 3,049,623, 8–14–62, Cl. 306—66.

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Gora, Henry Z. 3,048,894.

Eastman Kodak Co.: *See*—
Kibler, Charles J., Bell, and Smith. 3,049,506.

Eaton Axles Ltd.: *See*—
Chambers, Harry D. 3,049,362.

Eck, Robert A., and N. Silver, to N. Silver. Socket for an electrical lamp. 3,049,599, 8–14–62, Cl. 200—51.17.

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Livermore, Charles S. 3,049,155.
Livermore, Charles S. 3,049,156.

Econo-Pak Register Co., Inc.: *See*—
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Eddy, James W., to Chrysler Corp. Seat adjustment. 3,049,329, 8–14–62, Cl. 248—394.

Edelston, Murray G., deceased; T. J. Downs, administrator. Broilers. 3,049,073, 8–14–62, Cl. 99—446.

Edelstone, Sigmund E., W. V. Dunlop, and H. E. Schlotthauer, to Spra-Lok Corp. Snap-on container cap lock. 3,049,262, 8–14–62, Cl. 220—55.

Edelstone, Sigmund E., and M. K. Hardison, to Spra-Lok Corp. Snap-on container cap lock. 3,049,263, 8–14–62, Cl. 220—55.

Edwards, Harry, and J. A. Partridge, to Imperial Chemical Industries Ltd. Multiple-feed spray guns. 3,049,267, 8–14–62, Cl. 222—134.

Eikenberry, Willis M., to The Gamewell Co. Traffic signal adapter. 3,049,614, 8–14–62, Cl. 240—41.3.

Ello, Clyde W., to Hercules Powder Co. Waterproof container and closure therefor. 3,049,079, 8–14–62, Cl. 102—24.

Eisler, Arthur J.: *See*—
Batty, Harry A., Eisler, and Ellington. 3,049,152.

Elder, Boyd B., and R. A. Wilmot, to Del Mar Engineering Laboratories. Aircraft tow target installation. 3,049,319, 8–14–62, Cl. 244—2.

Elderton, Gordon E. Garland making apparatus. 3,049,157, 8–14–62, Cl. 140—149.

Electrolux, Aktiebolaget: *See*—
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Ohlson, Bengt E. 3,048,960.

Electro-Optical Systems, Inc.: *See*—
Wright, William V., Jr. 3,049,685.

Ell, George E., to Liberty Mfg. Co. of Texas. Anti-friction sucker rod coupling. 3,049,382, 8–14–62, Cl. 308—4.

Ellington, John W.: *See*—
Batty, Harry A., Eisler, and Ellington. 3,049,152.

Ellis, Pritchard P., and W. C. Bullard, Jr., to United Rubber & Chemical Co. Method of determining the presence of liquids in pressure vessels. 3,048,984, 8–14–62, Cl. 62—49.

Emrick, Donald D., to The Standard Oil Co. Telomerization of unsaturated hydrocarbons with mono-alpha-substituted carboxylic acid esters of beta-neo polyalcohols and telomeric obtained thereby. 3,049,557, 8–14–62, Cl. 260—410.6.

Engelhard Industries, Inc.: *See*—
Hill, James S. 3,049,577.

English, Herdis G., and G. W. Schulz, to Ford Motor Co. Governor control for automatic transmission. 3,049,028, 8–14–62, Cl. 74—752.

English, William H. Cartridge loading tool. 3,049,044, 8–14–62, Cl. 86—24.

Enk, Eduard, F. Knorr, and H. Spes, to Wacker-Chemie G.m.b.H. Process for the production of beta-alkoxy substituted carboxylic acid esters. 3,049,560, 8–14–62, Cl. 260—484.

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Erlich, Victor L., to Reeves Brothers, Inc. Method of bonding fibrous structures made from fibers or filaments of polyolefine polymers. 3,049,466, 8–14–62, Cl. 156—334.

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McDonald, James A., and Evans. 3,049,017.

Evans, Jesse L.: *See*—
Carnahan, Leonard L., Fry, Pearce, and Evans. 3,049,114.
Carnahan, Leonard L., Fry, Pearce, and Evans. 3,049,115.

Evans, Paul I., and M. R. Ransom, to United States of America, Army. Weapon control system. 3,049,056, 8–14–62, Cl. 89—1.

Evansen, Arthur W., to The Magnavox Co. Card processing apparatus. 3,049,346, 8–14–62, Cl. 271—4.

Everett, Hazen F., to The Foregger Co., Inc. Extracorporeal blood circulation system and a safety feature therefor. 3,049,122, 8–14–62, Cl. 128—214.

Everpure, Inc.: *See*—
Oliver, Chauncey B. 3,049,142.

FMC Corp.: *See*—
Willard, Paul E. 3,049,458.

Fabbrica Italina Macchine Aziendali: *See*—
Spiazzi, Ivo. 3,049,075.

Fabian, Francis G., Jr., J. P. Mann, H. Knippenberg, and R. E. Wainerdi, to Dresser Industries, Inc. Fluid flow meter. 3,049,617, 8–14–62, Cl. 250—43.5.

Fabula, Andrew, to Otis Elevator Co. Moving stairway. 3,049,213, 8–14–62, Cl. 198—16.

Fahlenberg, Paul, to Compur-Werk Friedrich Deckel oHG. Photographic shutter. 3,049,064, 8–14–62, Cl. 95—53.

Fahrney, Maxwell E., and G. W. Powell, to Pangborn Corp. Abrasive blasting apparatus. 3,048,947, 8–14–62, Cl. 51—13.

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Holzrichter, Hermann, Falk, and König. 3,048,930.

Falk, Sven U.: *See*—
Jonsson, Erik, and Falk. 3,049,578.

Falls Engineering & Machine Co., The: *See*—
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Fancher, Peter C., to Lees, James, and Sons Co. Display rack and shipping case. 3,049,225, 8–14–62, Cl. 206—45.24.

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Farinello, Anthony S. Air shoes. 3,048,931, 8–14–62, Cl. 36—3.

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Favin, David L., to Bell Telephone Laboratories, Inc. Method and apparatus for synchronizing oscillators. 3,049,675, 8–14–62, Cl. 331—44.

Felder, Howard B., to Clark Equipment Co. Torque measurement apparatus. 3,049,003, 8–14–62, Cl. 73—136.

Fellers, John C., and E. L. Morin, to Seabrook Farms Co., Division of Francis H. Leggett & Co. Process for the prevention of after cooking gray discoloration in potatoes and other vegetables. 3,049,427, 8–14–62, Cl. 99—154.

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Fenestra, Inc.: *See*—
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Gruber, Joseph J., and De Falco. 3,049,199.

Fentiman, William P., S. L. Ames, P. H. Morton, and H. W. Mead, to Imperial Chemical Industries Ltd. Alloys. 3,049,425, 8–14–62, Cl. 75—175.5.

Fernud, Roger A., and R. O. Alder, to Societe Nationale d' Etude et de Construction de Moteurs d'Aviation. Rocket propulsion method. 3,048,966, 8–14–62, Cl. 60—35.4.

Ferris, Ernest A., and D. M. Wade, to Borg-Warner Corp. One-way clutch and bearing. 3,049,205, 8–14–62, Cl. 192—45.1.

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Fiedler, Horst: *See*—
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Firnhaber, Miles S., to Sealtite Insulation Mfg. Corp. Rotors for use in apparatus for manufacturing mineral wool. 3,048,885, 8–14–62, Cl. 18—2.6.

Firnhaber, Miles S., J. R. Miller, and M. J. Kovach, to Sealtite Insulation Mfg. Corp. Apparatus for manufacturing mineral wool fibers. 3,048,886, 8–14–62, Cl. 18—2.6.

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Fischer, Stefan, and R. 3,048,889.

Fischer, Stefan, and R. Process and apparatus for forming hollow objects. 3,048,889, 8–14–62, Cl. 18—5.

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Brown, Geoffrey G., and Wilson. 3,049,418.

Bradley, John K., Brown, and Sheldrick. 3,049,417.

Flatt, James H., and K. W. Young, to General Motors Corp. Vacuum switch. 3,049,602, 8–14–62, Cl. 200—83.

Flatt, James H., and K. W. Young, to General Motors Corp. Vacuum switch. 3,049,603, 8–14–62, Cl. 200—83.

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Floyd, Joseph C.: *See*—
Beatson, Eric P., and Floyd. 3,049,473.

Fluidmaster, Inc.: *See*—
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Fluor Corp., Ltd., The: *See*—
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Formsprag Co.: *See*—
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Hardy, William B., Forster, and Hosler. 3,049,509.

Foster, Gerald L.: *See*—
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Fournet, Andre, and H. Lemoine, to Usines Chimiques Rhone-Poulenc, Societe des. Vinyloxyaryl sulphonic acids and polymers thereof. 3,049,512, 8–14–62, Cl. 260—49.

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Frank, Edward. Convertible couch. 3,048,855, 8–14–62, Cl. 5—7.

Frankenstein, William P. Boxes or cartons. 3,049,280, 8–14–62, Cl. 229—31.

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Franwick, Edmond J., to Hanau Engineering Co., Inc. Condylar bearing support and adjusting means for dental articulators. 3,048,923, 8–14–62, Cl. 32—32.

Fraser, Robert W., to United-Carr Fastener Corp. Electrical switch. 3,049,600, 8–14–62, Cl. 200—67.

Fredette, Joseph H., W. E. Taylor, and R. J. White, to American Can Co. Container. 3,049,224, 8–14–62, Cl. 206—42.

Freedman, Harold P., to Avel Corp. Geneva. Data exchange systems. 3,049,706, 8–14–62, Cl. 343—6.5.

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Fried, Josef, to Olin Mathieson Chemical Corp. 16α,17α-cyclic esters of steroids of the pregnene series. 3,049,540, 8–14–62, Cl. 260—239.55.

Friedland, Martin, to Wiedemann Machine Co. Turret punch press. 3,049,038, 8–14–62, Cl. 83—552.

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Harrer, Joseph M., Fromm, and Kolba. 3,049,487.

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Carnahan, Leonard L., Fry, Pearce, and Evans. 3,049,115.

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Fukuoka, Isamu, to Nichibei Blind Mfg. Co. Ltd. Combination Venetian blind tilter-lifter device. 3,049,175, 8–14–62, Cl. 160—177.

Fuller, Isaac W.: *See*—
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Fullum, Andre. Nursing bottle holder. 3,049,258, 8–14–62, Cl. 215—11.

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Fuschetti, Raymond C. Arm support. 3,049,130, 8–14–62, Cl. 132—1.

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Gambardella, Carmine J., to Lee Engineering Co. Wheel support and lock for tire demounting apparatus. 3,049,159, 8–14–62, Cl. 144—288.

Gamson, Bernard W., and R. L. Kuehner, to Borg-Warner Corp. Composition and method for deodorizing air. 3,049,399, 8–14–62, Cl. 21—53.

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Garbin, Albert J., and R. F. Garner, to The B. F. Goodrich Co. Method of making side driving V-belts reinforced with laterally spaced cabled tension members. 3,049,460, 8–14–62, Cl. 156—140.

Gardner, Ernest A. : *See*—
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Rork, Wallace G., and Garner. 3,048,997.

Garner, Ralph F. : *See*—
Garbin, Albert J., and Garner. 3,049,460.

Garrett, Dwight A. Articulating-frame logging tractor. 3,049,186, 8–14–62, Cl. 180—51.

Garvey, Louis P., to General Motors Corp. Windshield wiper blade. 3,048,873, 8–14–62, Cl. 15—250.42.

Garvey, Mark J., and W. U. Andrews, to The National Cash Register Co. Calculating machine adapted for number checking device. 3,049,293, 8–14–62, Cl. 235—130.

Gatta, Giorgio, and G. Benetta, to Sicedison S.p.A. Process for the preparation of an auxiliary suspending agent to be used for obtaining, by a suspension polymerization process, polyvinyl chloride having a high porosity and a non-glass-like surface. 3,049,520, 8–14–62, Cl. 260—85.7.

Gause, Edward H., to Monsanto Chemical Co. Stabilization of hydrogen cyanide. 3,049,408, 8–14–62, Cl. 23—151.

Gawthrop, Alan, to Rexall Drug and Chemical Co. (U.K.) Ltd. Dispensing devices. 3,049,269, 8–14–62, Cl. 222—307.

Geary, Joseph F., Jr., to United States of America, Navy. Swivel nozzle. 3,048,977, 8–14–62, Cl. 60—35.55.

Gebele, Kurt, to Compur-Werk Friedrich Deckel oHG. Depth of field indicating mechanism for cameras with interchangeable objectives. 3,049,065, 8–14–62, Cl. 95—64.

Geiger, John H. Closed cycle gaseous medium system and method. 3,048,982, 8–14–62, Cl. 60—108.

Geigy Chemical Corp. : *See*—
Renner, Ulrich, and Prins. 3,049,546.

Gelman, Charles, and D. N. Kramer, to United States of America, Army. Enzymatic method for detection of anticholinesterases. 3,049,411, 8–14–62, Cl. 23—232.

General Dynamics Corp. : *See*—
Knapp, William J. 3,049,447.

General Electric Co. : *See*—
Buesing, Richard T., Gifford, and Shepherd. 3,049,710.
Cain, Bernard M. 3,049,633.
Cormia, Keith C., and Aird. 3,049,214.
Gleichauf, Paul H. 3,049,641.
Kemnitz, Warren N. 3,048,876.
Kemnitz, Warren N. 3,048,961.
Proctor, Edward K., Jr. 3,049,679.
Relling, Gilbert H., and Lafferty. 3,049,639.
Russell, Virginia A. 3,049,431.
Weeks, Walter R. 3,049,606.

General Foods Corp. : *See*—
Couch, Robert de S., and Yezek. 3,049,429.

General Motors Corp. : *See*—
Brucken, Byron L. 3,049,654.
Carnahan, Leonard L., Fry, Pearce, and Evans. 3,049,114.
Carnahan, Leonard L., Fry, Pearce, and Evans. 3,049,115.
Flatt, James H., and Young. 3,049,602.
Flatt, James H., and Young. 3,049,603.
Garvey, Louis P. 3,048,873.
Geyer, Howard M. 3,049,359.
Hastings, Franklin G., Mueller, and Preotle. 3,048,902.
Jacobs, James W. 3,049,133.
Koons, Frederick L., and Drum. 3,049,450.
Long, George B. 3,048,985.
Long, George B., and Sloan. 3,049,655.
Neir, Theron E. 3,049,191.
Neyhouse, George A., Savage, and Shewmon. 3,049,021.
Rike, Richard C. 3,049,100.
Van Scoyk Howard E. 3,049,136.

General Precision Systems Ltd. : *See*—
Barber, Ernest E., and Simpkin. 3,049,297.
Barber, Ernest E., and Simpkin. 3,049,298.

General Time Corp. : *See*—
Biorge, Alfred I. 3,048,964.

Genovese, Frank C., Jr., to United States of America, Navy. Differential cerenkov counter. 3,049,619, 8–14–62, Cl. 250—71.5.

George, Wayland D., S. B. Jones, and H. P. Yule, to California Research Corp. Scintillation detector cooling system. 3,049,620, 8–14–62, Cl. 250—71.5.

Gerber Products Co. : *See*—
Burnett, Edward N. 3,049,228.

Geyer, Howard M., to General Motors Corp. Rear wheel suspension system for vehicles. 3,049,359, 8–14–62, Cl. 280—124.

Giannetti, Anthony. Automatic stopping device for automobiles. 3,049,188, 8–14–62, Cl. 180—82.

Gibbs, Thomas H. : *See*—
Leat, James H., Robarts, and Gibbs. 3,049,195.

Giddings & Lewis Machine Tool Co. : *See*—
McFerren, Edgar L. 3,049,345.

Gifford, Richard P. : *See*—
Buesing, Richard T., Gifford, and Shepherd. 3,049,710.

Gilfillan Bros. Inc. : *See*—
Davis, Donovan C. 3,049,703.

Gilreath, Lafayette E., to B. M. Craig and M. Wallace. Method and apparatus for testing casing. 3,048,998, 8–14–62, Cl. 73—40.5.

Gilson, Robert J., to Charles Colston Ltd. Washing machine. 3,049,132, 8–14–62, Cl. 134—57.

Glass, John A. F. : *See*—
Tatlock, John, and Glass. 3,049,485.

Glasser, Ernest C. : *See*—
Apatoff, William, and Glasser. 3,048,935.

Gleichauf, Paul H., to General Electric Co. High transconductance cathode ray tube. 3,049,641, 8–14–62, Cl. 315—30.

Glenmore Distilleries Co. : *See*—
Clark, Robert A. 3,049,166.

Glew, John A. Commercial carrier bulk unloading device. 3,049,251, 8–14–62, Cl. 214—83.36.

Gohorel, Fernand P., to International Standard Electric Corp. Telephone systems. 3,049,594, 8–14–62, Cl. 179—18.

Golding, William F. Sheet feeding apparatus. 3,049,348, 8–14–62, Cl. 271—60.

Goldstein, Herman B., and M. A. Silvestri, to Sun Chemical Corp. Process for the manufacture of urea, glyoxal and formaldehyde reaction product useful for improving cellulosic textile materials. 3,049,446, 8–14–62, Cl. 117—143.

Goldstone, Edward G., to Allen Industries Inc. Fibrous batts and method of producing the same. 3,049,456, 8–14–62, Cl. 154—46.

Goodman Mfg. Co. : *See*—
Arndt, Charles J. 3,049,219.
Lo Presti, Roy F. 3,049,220.

Goodrich, B. F., Co., The : *See*—
Diem, Hugh E. 3,049,528.
Garbin, Albert J., and Garner. 3,049,460.

Gora, Henry Z., to The Eagle-Picker Co. Mold for molding articles. 3,048,894, 8–14–62, Cl. 18—36.

Gordon, Charles W., to Combustion Engineering, Inc. Panel mounting for steel cased furnaces. 3,049,200, 8–14–62, Cl. 189—34.

Gould, David H., and H. Reimann, to Schering Corp. 9,11-dihalogeno-3,20-diketopregnanes and processes for their manufacture. 3,049,554, 8–14–62, Cl. 260—397.3.

Graber, Joseph V., and F. F. Salzmann, to Graber Mfg. Co., Inc. Drapery rod fixture. 3,049,176, 8–14–62, Cl. 160—346.

Graber Mfg. Co., Inc. : *See*—
Graber, Joseph V., and Salzmann. 3,049,176.

Grabowski, Thomas S., to Borg-Warner Corp. Mechanical blend of a polyurethane rubber with a graft copolymer of polybutadiene, styrene, and acrylonitrile. 3,049,505, 8–14–62, Cl. 260—45.4.

Grace, W. R., & Co. : *See*—
Benning, Calvin J. 3,049,525.

Graham, Kenneth A. : *See*—
Bowlus, Omer E., and Graham. 3,049,644.

Graham, Kenneth A., to Chrysler Corp. Rotor arm and electrical system. 3,049,643, 8–14–62, Cl. 315—219.

Grant, Louis R., and M. D. Taylor, to Callery Chemical Co. Preparation of anhydrous lithium salts. 3,049,406, 8–14–62, Cl. 23—89.

Gray, Robert A., F. Lamb, and L. Mandel, to Kleer-Site Corp. Eyeglass liquid applicator device. 3,048,878, 8–14–62, Cl. 15—512.

Greenblatt, Richard C., to Burroughs Corp. Circuitry for pull-in solenoids. 3,049,650, 8–14–62, Cl. 317—148.5.

Greene, William J., to Air Reduction Co., Inc. Electron beam welding. 3,049,608, 8–14–62, Cl. 219—117.

Greenhalgh, Roger C., and D. E. Norton, to International Business Machines Corp. Tape reader control. 3,049,291, 8–14–62, Cl. 235—61.11.

Greensboro Loom Reed Co., Inc. : *See*—
McFetters, George A. 3,049,151.

Gregory Industries, Inc. : *See*—
Polos, Constantine D. 3,049,358.

Griggs, Virgil. Pry bar. 3,049,337, 8–14–62, Cl. 254—131.

Grigsby, John D., and J. R. Jeromson, Jr. Brake control system. 3,048,976, 8–14–62, Cl. 60—54.5.

Grigsby, John D., and J. R. Jeromson, Jr., to Thompson Ramo Wooldridge Inc. Brake system with electro-hydraulic unit. 3,048,979, 8–14–62, Cl. 60—54.6.

Grimm-Jeannerat, Fritz. Watch for telephone sets with calling dial. 3,048,965, 8–14–62, Cl. 58—46.

Grinnell Corp. : *See*—
Sherburne, Philip C. 3,049,325.

Gruber, Joseph J. : *See*—
Dobbins, Mark, Gruber, Repp, and Rockhoff. 3,049,198.

Gruber, Joseph J., and J. J. De Falco, to Fenestra, Inc. Joint concealer and shelf T. 3,049,199, 8–14–62, Cl. 189—34.

Guest, Lawrence V., to Birmingham Sound Reproducers Ltd. Sound reproducing apparatus. 3,049,354, 8–14–62, Cl. 274—1.

Gulf Research & Development Co. : *See*—
Patnode, Homer W. 3,049,046.

Gunsalus, Irwin C. : *See*—
Reed, Lester J., and Gunsalus. 3,049,549.

Gutberlet, Theodor, to Schunk & Ebe G.m.b.H. Brush holders for electrical machinery. 3,049,637, 8–14–62, Cl. 310—246.

Hadley, Howard C., to Deere & Co. Corn husker. 3,049,127, 8–14–62, Cl. 130—5.

Hagberg, Carl S. O. Method of analysing cereals and other starch-containing substances and products thereof. 3,049,006, 8–14–62, Cl. 73—169.

Haines, Robert S., and B. Leland, to International Business Machines Corp. Process for manufacturing cured magnetic tapes utilizing an isocyanate accelerator. 3,049,442, 8–14–62, Cl. 117—119.6.

Hale, Clifford W. : *See*—
Abraham, Edward P., Newton, and Hale. 3,049,541.

Haley, James W. : *See*—
Curry, Cecil B., Haley, and Theller. 3,049,467.

Hall, George D. : *See*—
Thornhill, Charles W., Hall, and Nordin. 3,049,140.

Hampton, Hugh H. Sharpener for pencils. 3,049,096, 8–14–62, Cl. 120—96.

Hanau Engineering Co., Inc. : *See*—
Franwick, Edmond J. 3,048,923.

Hancock, James E. Conveyor mounting for elevating scraper. 3,048,934, 8–14–62, Cl. 37—129.

Hancock, Wilbert R. Ball tossing game devices. 3,049,352, 8–14–62, Cl. 273—96.

Hannoosh, Mitchell M. : *See*—
King, Thomas F., Farnsworth, and Hannoosh. 3,049,201.

Hansen, Donald J. Apparatus for mixing fuel with air. 3,049,415, 8–14–62, Cl. 48—180.

Hansen, Royal E. Automatic adjusting atomizing devices for carburetors. 3,049,342, 8–14–62, Cl. 261—69.

Hansen, Walter P., to Henry J. Kaiser Co. Stacking and reclaiming material. 3,049,244, 8–14–62, Cl. 214—10.

Harbison-Walker Refractories Co. : *See*—
Leeper, Walter S. 3,049,165.

Hardesty, Thomas K. C., to United States of America, Navy. Force responsive switch. 3,049,601, 8–14–62, Cl. 200—83.

Hardison, Manley K. : *See*—
Edelstone, Sigmund E., and Hardison. 3,049,263.

Hardy, William B., W. S. Forster, and J. F. Hosler, to American Cyanamid Co. Heterocyclic ultraviolet absorbers. 3,049,509, 8–14–62, Cl. 260—45.8.

Hardy, William B., F. M. Furman, and D. W. Hein, to American Cyanamid Co. Process for hydroxynaphthalenealkanoic acids. 3,049,561, 8–14–62, Cl. 260—520.

Hare, Richard C., to Applied Power Industries, Inc. Hydraulic control system. 3,048,978, 8–14–62, Cl. 60—54.5.

Harrer, Joseph M., L. W. Fromm, Jr., and V. M. Kolba, to United States of America, Atomic Energy Commission. Direct-cycle, boiling-water nuclear reactor. 3,049,487, 8–14–62, Cl. 204—193.2.

Harris, James O. 6-dihydroquinolinyl polyethers and aminoethers. 3,049,510, 8–14–62, Cl. 260—45.8.

Harrison, John R., to Hercules Powder Co. Laundry starch and process. 3,049,434, 8–14–62, Cl. 106—194.

Harvey, John T. C., to Intercontinental Equipment Co., Inc. Means for securing wires or rods in the stressed condition. 3,048,907, 8–14–62, Cl. 24—122.6.

Hasselo, William C. : *See*—
Childsey, Francis A., Jr., and Hasselo. 3,049,282.

Hastings, Franklin G., R. Mueller, and J. J. Preotle, to General Motors Corp. Refrigerating apparatus. 3,048,902, 8–14–62, Cl. 20—69.

Hastings Mfg. Co. : *See*—
Anderson, Hugo F. 3,048,948.

Hawk, Thomas F., ½ to R. H. Hill and C. J. Hoover. Silo seal structure. 3,049,070, 8–14–62, Cl. 99—235.

Hawk, Thomas F., and E. L. Springer. Door structure for auger feed silos. 3,048,946, 8–14–62, Cl. 50—112.

Hawkins, Robert D., to Sperry Rand Corp. Vibration and shock isolator. 3,049,344, 8–14–62, Cl. 267—1.

Hayes, Harold L., to Barber-Colman Co. Regulator for constant volume control of gas flow. 3,049,146, 8–14–62, Cl. 137—517.

Hediger, Hermann. Device for measuring the roughness of surfaces. 3,049,002, 8–14–62, Cl. 73—105.

Hegg, Billy S. : *See*—
Thompson, Thomas J., and Hegg. 3,049,139.

Heil Co., The : *See*—
Urban, George E. 3,049,256.

Hein, Delton W. : *See*—
Hardy, William B., Furman, and Hein. 3,049,561.

Hellems, Elmer J., and E. O'Dell. Safety valve for pulsating liquid pressure systems. 3,049,143, 8–14–62, Cl. 137—390.

Helming, Bernd H., to Polysius G.m.b.H., Firma. Apparatus for heating cement powder or similar fine-granular materials. 3,049,343, 8–14–62, Cl. 263—32.

Heltzel, Carl J., E. A. Gardner, and W. J. Kirchner, to The Heltzel Steel Form and Iron Co. Portable batching plant. 3,049,248, 8–14–62, Cl. 214—17.

Heltzel Steel Form and Iron Co., The : *See*—
Heltzel, Carl J., Gardner, and Kirchner. 3,049,248.

Hendry, James A. : *See*—
Rose, Francis L., and Hendry. 3,049,542.

Hennessey, Russell J., to Waldorf Paper Products Co. Can containing carton. 3,049,278, 8–14–62, Cl. 229—16.

Henry, W. W., Co., The : *See*—
Du Vall, Wilbur E. 3,049,623.

Hepworth, Walter, to Imperial Chemical Industries Ltd. Antibacterial compositions containing 1-methyl-6-nitro-4-quinolone-3-carboxylic acid or sodium salt thereof. 3,049,474, 8–14–62, Cl. 167—65.

Herbold, Wolfgang K. J., ½ to P. O. Tobeler, doing business under the name of Trans-Oceanic. Method for oscillating drilling. 3,049,185, 8–14–62, Cl. 175—19.

Hercules Powder Co. : *See*—
Brobst, Robert A. 3,049,538.
Butler, Robert W. 3,049,433.
Cooke, Maurice D. 3,049,477.
Davison, Robert W. 3,049,469.
Ello, Clyde W. 3,049,079.
Harrison, John R. 3,049,434.
Klug, Eugene D., and Roberson. 3,049,537.
Welland, Henry J. 3,048,887.
Welland, Henry J. 3,049,420.

Herrick, Claude C., to United States of America, Atomic Energy Commission. Non-corrosive reactor fuel system. 3,049,481, 8–14–62, Cl. 204—154.2.

Herpich, William A. : *See*—
Dempster, George R., and Herpich. 3,049,249.
Dempster, George R., and Herpich. 3,049,250.
Dempster, George R., and Herpich. 3,049,254.

Hertz, Theodore M., and F. H. Young, to North American Aviation, Inc. Binary square root mechanization. 3,049,296, 8–14–62, Cl. 235—158.

Herzog, Stephen H., to United States of America, Navy. Plastic nozzle plate for missile motors. 3,048,970, 8–14–62, Cl. 60—35.6.

Hesser, Fr., Maschinenfabrik-Aktiengesellschaft, Firma : *See*—
Paal, Hans. 3,048,952.
Stambera, Adolf. 3,049,268.

Heuschkel, Hans, to Escher Wyss G.m.b.H. Electrostatic spraying of atomized material. 3,049,301, 8–14–62, Cl. 239—15.

Hibbard, Thomas L., to Kelsey-Hayes Co. Wheel and brake drum assembly. 3,049,379, 8–14–62, Cl. 301—6.

Hicklin, Walter H. : *See*—
Belser, Richard B., and Hicklin. 3,048,912.

Higginbotham, John W., to Martin-Marietta Corp. Electrical timing circuit. 3,049,627, 8–14–62, Cl. 307—88.5.

Higonnet, Rene A. : *See*—
Moyroud, Louis M. 3,049,210.

Hildebrandt, Robert A., H. H. Hyman, and S. Vogler, to United States of America, Atomic Energy Commission. Solvent extraction process for separating actinide and lanthanide metal values. 3,049,402, 8–14–62, Cl. 23—14.5.

Hill, James S., to Engelhard Industries, Inc. Composite material and thermocouple made therefrom. 3,049,577, 8–14–62, Cl. 136—4.

Hill, Robert H. : *See*—
Hawk, Thomas F. 3,049,070.

Hillebrand, Earl D., to Geo. D. Roper Corp. Removable oven drop door. 3,049,116, 8–14–62, Cl. 126—194.

Hiller Aircraft Corp. : *See*—
Nichols, John B. 3,049,321.
Nichols, John B., and Stuart. 3,049,178.

Himmelfarb, David, and W. J. Kaes. Stabilization of nylon rope. 3,048,963, 8–14–62, Cl. 57—140.

Hinderer, Thomas A., to Fairbanks, Morse & Co. Control for impulse coupling. 3,049,635, 8–14–62, Cl. 310—84.

Hinton, Anthony J., and V. G. Morgan, to Imperial Chemical Industries Ltd. Manufacture of coloured paper. 3,049,468, 8–14–62, Cl. 162—162.

Hirschberger, George : *See*—
Reimer, Frederick, and Hirschberger. 3,049,102.

Hirschmann, Ralph F., to Merck & Co., Inc. Improved process for the production of fluoro hydroxy steroids. 3,049,556, 8–14–62, Cl. 260—397.45.

Hirst, Stanley, and W. C. Aston, to Imperial Chemical Industries Ltd. Apparatus for the reduction of metals or alloys. 3,049,035, 8–14–62, Cl. 78—36.

Hobart Mfg. Co., The : *See*—
Meeker, David A., and Fox. 3,049,391.

Hobbs, Doreen Y. : *See*—
Ranby, Peter W., and Hobbs. 3,049,497.

Holderith, Anton, to Fluidmaster, Inc. Float construction. 3,049,010, 8–14–62, Cl. 73—322.5.

Holle, Kurt : *See*—
Reiff, Ferdinand, Huber, and Holle. 3,049,536.

Holley Carburetor Co. : *See*—
Kerr, Fred S. 3,049,110.

Holmstrom, Ernest R. : *See*—
Smith, Merrill M., Holmstrom, and Marcus. 3,049,459.

Holzrichter, Hermann, K. Falk, and T. König, to Bayer Aktiengesellschaft, Farbenfabriken. Drying of wet powdery materials. 3,048,930, 8–14–62, Cl. 34—10.

Homestead Valve Mfg. Co. : *See*—
Simmons, Donald M., Jr. 3,049,302.

Hood, Harold M. : *See*—
Stenbuck, Paul, and Hood. 3,049,544.

Hooper, Brian E., to Packard-Bell Electronics Corp. Signaling system. 3,049,586, 8–14–62, Cl. 178—5.8.

Hooper, Brian E. Negative enlarger using closed loop television. 3,049,590, 8–14–62, Cl. 178—6.8.

Hooper, Brian E., to Packard-Bell Electronics Corp. Omnidirectional portable antenna. 3,049,711, 8–14–62, Cl. 343—702.

Hoover, Charles J. : *See*—
Hawk, Thomas F. 3,049,070.

Hopkins, Ervin W., and L. J. Zimont, to Armour & Co. Meat packaging process. 3,049,428, 8–14–62, Cl. 99—174.

Horne, Donald S., R. Ashton, and L. L. Kepkay, to Massey-Ferguson Ltd. Drive assembly for self-propelled combine. 3,049,026, 8–14–62, Cl. 77—665.

Horner, John W., to Thompson Ramo Wooldridge Inc. Impulse rocket for attitude control. 3,048,969, 8–14–62, Cl. 60—35.6.

Horsfall Engineering Co. Ltd. : *See*—
Horsfall, Harold. 3,049,066.

Horsfall, Harold, to Horsfall Engineering Co. Ltd. Photocopying machines. 3,049,066, 8–14–62, Cl. 95—77.5.

Horsley, William D., to C. A. Parsons & Co. Ltd. Dynamo-electric machinery. 3,049,634, 8–14–62, Cl. 310—64.

Hosler, John F. : *See*—
Hardy, William B., Forster, and Hosler. 3,049,509.

Howe Sound Co. : *See*—
Benson, Charles L., and Tingquist. 3,048,905.

Howland, Louis H., V. S. Chambers, and E. J. Aleksa, to United States Rubber Co. Process of increasing the particle size of synthetic latex comprising adding polyvinyl methyl ether to a latex containing salt electrolyte. 3,049,500, 8–14–62, Cl. 260—17.4.

Howland, Louis H., and V. S. Chambers, to United States Rubber Co. Increasing the particle size of synthetic rubber latex by lowering and raising the pH in the presence of polyvinylmethyl ether. 3,049,501, 8–14–62, Cl. 260—17.4.

Howland, Louis H., and V. S. Chambers, to United States Rubber Co. Process of increasing the particle size of synthetic latex by adding polyvinyl methyl ether to a latex containing salt electrolyte and unreacted monomer. 3,049,502, 8–14–62, Cl. 260—17.4.

Hoye, Raymond L. Paper support. 3,048,939, 8–14–62, Cl. 45—85.

Huang, Paul C., to United States Steel Corp. Method of and apparatus for preventing edge buildup of coating material on dip-coated strip. 3,049,441, 8–14–62, Cl. 117—115.

Hubbard, Arthur L., to Deere & Co. Doffer plate. 3,048,962, 8–14–62, Cl. 56—41.

Huber, Gerhard: *See*—
Reiff, Ferdinand, Huber, and Holle. 3,049,536.

Huet, André. Light heat exchangers for use in nuclear energy installations. 3,049,107, 8–14–62, Cl. 122—510.

Hull, Robert E.: *See*—
Wallace, John W., Hull, and Moore. 3,049,036.

Hummel, Heinz. Measuring instrument and method. 3,049,665, 8–14–62, Cl. 324—36.

Humphreys, Robert E., and I. L. Marra. Puncture repair material. 3,049,164, 8–14–62, Cl. 152—370.

Hunt, Warren A., to International Business Machines Corp. Error detection circuit. 3,049,692, 8–14–62, Cl. 340—146.1.

Hurst, Charles W.: *See*—
Lucas, Malcolm B., and Hurst. 3,048,993.

Hustad, Grant L. Live bait dispenser. 3,048,937, 8–14–62, Cl. 43—55.

Hutchinson, William M., to Phillips Petroleum Co. Rocket motor. 3,048,968, 8–14–62, Cl. 60—35.6.

Hutt, Clyde B. Bed with adjustable side rail assembly. 3,048,857, 8–14–62, Cl. 5—331.

Hutter, James F., and L. Kelly, to K & H Equipment Ltd. Single row feeder. 3,049,215, 8–14–62, Cl. 198—30.

Hyman, Herbert H.: *See*—
Hildebrandt, Robert A., Hyman, and Vogler. 3,049,402.

Iceland, William F.: *See*—
Purkhiser, Rawlins E., and Iceland. 3,049,609.

Idaho Maryland Mines Corp.: *See*—
Campbell, Rodney B. 3,049,011.

Ikeda, Hatsuko: *See*—
Yabuta, Teijiro, Ikeda (Hatsuko), Shiroyanagi, Ikeda (Hiroshi), Fujimaki, Katayama, Tsuji, and Sato. 3,049,535.

Ikeda, Hiroshi: *See*—
Yabuta, Teijiro, Ikeda (Hatsuko), Shiroyanagi, Ikeda (Hiroshi), Fujimaki, Katayama, Tsuji, and Sato. 3,049,535.

Iketani, Taisho. Mechanism for control of flow rate of gaseous fuel in gas-fueled cigarette lighter. 3,048,991, 8–14–62, Cl. 67—7.1.

Imperial Chemical Industries Ltd.: *See*—
Barlow, Peers R. 3,048,972.
Beatson, Eric P., and Floyd. 3,049,473.
Caton, John A. 3,049,517.
Edwards, Harry, and Partridge. 3,049,267.
Fentiman, William P., Ames, Morton, and Mead. 3,049,425.
Hepworth, Walter. 3,049,474.
Hinton, Anthony J., and Morgan. 3,049,468.
Hirst, Stanley, and Aston. 3,049,035.
Jackson, Kenneth, and Bloom. 3,049,488.
Rose, Francis L., and Hendry. 3,049,542.
Waring, Wilson S. 3,049,564.

Industrial Nucleonics Corp.: *See*—
Spooner, David L. 3,049,621.

Industrie Chimiche Porto Marghera, (I.C.P.M.), S.p.A.: *See*—
Trupiano, Roberto, and Zanon. 3,049,405.

Ingersoll, Ward H. Rotary work positioning and indexing table. 3,049,193, 8–14–62, Cl. 188—69.

Inoue, Katashi. Rotating speed adjusting device. 3,049,098, 8–14–62, Cl. 121—33.

Intercontinental Equipment Co., Inc.: *See*—
Harvey, John T. C. 3,048,907.

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Damm, Eugene P., Jr. 3,049,077.
Greenhalgh, Roger C., and Norton. 3,049,291.
Haines, Robert S., and Leland. 3,049,442.
Hunt, Warren A. 3,049,692.
Rhodes, William H., Brenza, Winger, and Jackson. 3,049,295.
Thompson, Leonard H., and Wenner. 3,049,698.

International Harvester Co.: *See*—
Bertenshaw, Allen E., and Bazata. 3,049,257.
Birkenbach, Eugene J., Brown, Vendl, and Pfeiffer. 3,049,183.
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Shader, Benjamin A., and Jennings. 3,049,180.

International Resistance Co.: *See*—
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International Standard Electric Corp.: *See*—
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Touraton, Emile, and Le Corre. 3,049,593.

Interplanetary Research & Development Corp.: *See*—
Sedlacsik, John and J., Jr. 3,049,092.

Irwin, Harry W. Safety construction for vehicular traffic. 3,049,062, 8–14–62, Cl. 94—1.

Isbell, Aubrey D. Line twist remover for spinning reels. 3,049,316, 8–14–62, Cl. 242—84.2.

Jackson, Kenneth, and M. S. Bloom, to Imperial Chemical Industries Ltd. Method of conducting gaseous chemical reactions. 3,049,488, 8–14–62, Cl. 204—312.

Jackson, Robert C.: *See*—
Rhodes, William H., Brenza, Winger, and Jackson. 3,049,295.

Jacobs, James W., to General Motors Corp. Dishwasher. 3,049,133, 8–14–62, Cl. 134—57.

Jacobsen, John B., E. B. Christian, and E. J. McNamara, to Detrex Chemical Industries, Inc. Multi-flight washer or degreaser. 3,049,134, 8–14–62, Cl. 134—72.

Jacobson, Moses G., and F. J. De Luca, to Mine Safety Appliances Co. Electrochemical determination of components in gas mixtures. 3,049,664, 8–14–62, Cl. 324—29.

Jansen, Gerhart. Clamp nut apparatus. 3,049,368, 8–14–62, Cl. 287—20.3.

Jeffrey Gallion Mfg. Co., The: *See*—
Kilbourne, James. 3,049,221.

Jenkins, Gordon L., and E. V. Kring, to E. I. du Pont de Nemours and Co. Peroxymonosulfate-diethylenetriamine pentaacetic acid composition. 3,049,495, 8–14–62, Cl. 252—102.

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Jeromson, James R., Jr.: *See*—
Grigsby, John D., and Jeromson. 3,048,976.
Grigsby, John D., and Jeromson. 3,048,979.

Johns, William F.: *See*—
Johnson, William S., and Johns. 3,049,539.

Johns-Manville Fiber Glass Inc.: *See*—
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Johnson, Carl A. Lawn edger. 3,048,921, 8–14–62, Cl. 30—292.

Johnson Gage Development Co., The: *See*—
Johnson, Paul W. 3,048,926.

Johnson, Herbert C., to United States of America, Air Force. Unitized statistical accelerometer. 3,049,015, 8–14–62, Cl. 73—489.

Johnson & Johnson: *See*—
Painter, Erle V., and Shepherd. 3,049,000.

Johnson, Marvin M., to Phillips Petroleum Co. Process and apparatus for the oxidative dehydrogenation of organic compounds. 3,049,574, 8–14–62, Cl. 260—666.

Johnson, Miles C.: *See*—
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Johnson, Paul W., to The Johnson Gage Development Co. Wheel gage. 3,048,926, 8–14–62, Cl. 33—178.

Johnson, Ralph E., to Singer Mfg. Co. Loop taker for sewing machines. 3,049,086, 8–14–62, Cl. 112—193.

Johnson, Stanley A. Automatic indexing base for chucks and the like. 3,048,949, 8–14–62, Cl. 51—216.

Johnson, Thomas W.: *See*—
Whitlock, Robert A., and Johnson. 3,049,237.

Johnson, Wayne R., to Minnesota Mining and Mfg. Co. Transducing system using controlled delay lines. 3,049,589, 8–14–62, Cl. 178—6.6.

Johnson, Wayne R., to Minnesota Mining and Mfg. Co. Transducing system. 3,049,595, 8–14–62, Cl. 179—100.2.

Johnson, William S., and W. F. Johns, to Wisconsin Alumni Research Foundation. Intermediates and processes for the production thereof, used in the synthesis of aldosterone. 3,049,539, 8–14–62, Cl. 260—239.55.

Johnston, James E.: *See*—
Polanyi, Michael L., Johnston, and Brown. 3,049,047.

Johnston, James E., to American Optical Co. Method and apparatus for reclaiming particles from a mixture. 3,049,232, 8–14–62, Cl. 209—111.5.

Johnston, James E. Means for adapting audio oscillators to flashlights. 3,049,669, 8–14–62, Cl. 250—16.

Joline, Everett S., to Sperry Rand Corp. Force-ratio measuring device. 3,049,007, 8–14–62, Cl. 73—182.

Jones, E. D., Corp.: *See*—
Dalzell, David R., Jr. 3,049,307.

Jones, Idris W., to Ayers Ltd. Dryer felts. 3,049,153, 8–14–62, Cl. 139—426.

Jones, Stanley B.: *See*—
George, Wayland D., Jones, and Yule. 3,049,620.

Jonke, Albert A., J. J. Barghusen, and N. M. Levitz, to United States of America, Atomic Energy Commission. Process for dissolving binary uranium-zirconium or zirconium-base alloys. 3,049,401, 8–14–62, Cl. 23—14.5.

Jonsson, Erik, and S. U. Falk, to Svenska Ackumulator Aktiebolaget Jungner. Alkaline storage battery with semi-permeable separators. 3,049,578, 8–14–62, Cl. 136—30.

Jordan, Charles E., and R. W. Phelps, to The Black-Clawson Co. Web tension control system. 3,049,313, 8–14–62, Cl. 242—75.44.

Joy Mfg. Co.: *See*—
Little, Larry L. 3,048,955.

Juniper, Lawrence E.: *See*—
Marble, Franklin D., Juniper, and De Armond. 3,049,158.

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K & H Equipment Ltd.: *See*—
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KVP-Sutherland Paper Co.: *See*—
Buttery, Kenneth T., and Rice. 3,049,283.

Kabushiki Kaisha Kagahu Kenkyusho: *See*—
Yabuta, Teijiro, Ikeda (Hatsuko), Shiroyanagi, Ikeda (Hiroshi), Fujimaki, Katayama, Tsuji, and Sato. 3,049,535.

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Kmiecik, Leopold J., and Kaczmarek. 3,049,145.

Kadosch, Marcel: *See*—
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Himmelfarb, David, and Kaes. 3,048,963.

Kaiser, Henry J., Co.: *See*—
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Kallander, Ernest L., and G. R. Nelson, to Dennison Mfg. Co. Decorated foam and method of making the same. 3,049,463, 8–14–62, Cl. 156—230.

Kamera- und Kinowerks Dresden VEB: *See*—
Korf, Erich. 3,049,052.

Katayama, Mitsuhiko: *See*—
Yabuta, Teijiro, Ikeda (Hatsuko), Shiroyanagi, Ikeda (Hiroshi), Fujimaki, Katayama, Tsuji, and Sato. 3,049,535.

Katona, Joseph. Motion picture apparatus. 3,049,049, 8–14–62, Cl. 88—16.8.

Kaufman, William M., to United States of America, Atomic Energy Commission. Direct coupled progressive stage pulse counter apparatus. 3,049,628, 8–14–62, Cl. 307—88.5.

Keen, John M. S., to Rolls-Royce Ltd. Jet propulsion engines. 3,048,975, 8–14–62, Cl. 60—35.54.

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Kemnitz, Warren N., to General Electric Co. Floor cleaning apparatus. 3,048,876, 8–14–62, Cl. 15—321.

Kemnitz, Warren N., to General Electric Co. Casing construction for vacuum cleaners and the like. 3,048,961, 8–14–62, Cl. 55—471.

Kemp, William G. Heat exchange structure. 3,049,341, 8–14–62, Cl. 257—124.

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Kepkay, Leslie L.: *See*—
Horne, Donald S., Ashton, and Kepkay. 3,049,026.

Kernchen, Günter: *See*—
Demmel, Anton, and Kernchen. 3,049,211.

Kerr, Fred S., to Holley Carburetor Co. Electric speed governor. 3,049,110, 8–14–62, Cl. 123—102.

Kerrigan, James C., to Chrysler Corp. Windshield wiper. 3,048,872, 8–14–62, Cl. 15—250.36.

Kershaw, John K. Hydraulic pneumatic driving tool. 3,049,097, 8–14–62, Cl. 121—23.

Kesler, George H., to Chilean Nitrate Sales Corp. Process and apparatus for the vapor deposition of metals. 3,049,440, 8–14–62, Cl. 117—107.

Kesselring, Kenneth A., to United States of America, Atomic Energy Commission. Neutronic reactors and control means therefor. 3,049,483, 8–14–62, Cl. 204—193.2.

Kessler, Friedrich. Spring loaded reel. 3,049,317, 8–14–62, Cl. 242—107.3.

Kibler, Charles J., A. Bell, anl J. G. Smith, to Eastman Kodak Co. Low molecular weight polyesters of 1,4-cyclohexanedimethanol and polyvinyl chloride plasticized therewith. 3,049,506, 8–14–62, Cl. 260—45.4.

Kidde Mfg. Co., Inc.: *See*—
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Kimble Glass Co.: *See*—
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King, Thomas F., L. F. Farnsworth, and M. M. Hannoosh, to United States of America, Air Force. Base details. 3,049,201, 8–14–62, Cl. 189—36.

King-Seeley Thermos Co.: *See*—
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Kirchler, Lewis, to International Harvester Co. Tandem wheel structure for connecting earth movers. 3,049,365, 8–14–62, Cl. 280—408.

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Heitzel, Carl J., Gardner, and Kirchner. 3,049,248.

Kirkpatrick, Willard H., and V. L. Seale, to Nalco Chemical Co. Sulfated oil soluble phenol formaldehyde polymers. 3,049,511, 8–14–62, Cl. 260—49.

Klank, Walter C., Jr., to United Aircraft Products, Inc. Liquid storage tank. 3,049,138, 8–14–62, Cl. 137—38.

Klaus, Sidney D. Method for locating hidden wall studs. 3,048,925, 8–14–62, Cl. 33—169.

Klavon, Joseph A., Jr., to Kelsey-Hayes Co. Automatic brake adjuster. 3,049,192, 8–14–62, Cl. 188—79.5.

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Klima, Stanley J., and F. E. Niechniedowicz, to Sperry Rand Corp. Process of manufacturing metallized plastic microwave lens. 3,049,464, 8–14–62, Cl. 156—245.

Kloster, William G. Adjusting pin. 3,048,904, 8–14–62, Cl. 22—110.

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Kluge, Robert D., to Minneapolis-Honeywell Regulator Co. Photographic flash unit. 3,049,611, 8–14–62, Cl. 240—1.3.

Kmiecik, Leopold J., and L. W. Kaczmarek, to McDonnell & Miller, Inc. Boiler control system. 3,049,145, 8–14–62, Cl. 137—414.

Knapp, William J., to General Dynamics Corp. Method of treating an alumina ceramic article with lithium borate. 3,049,447, 8–14–62, Cl. 117—169.

Knecht, Werner, and M. Studlein, to Werner & Pfleiderer, G.m.b.H. Rotary dough kneading machine. 3,049,084, 8–14–62, Cl. 107—9.

Knight, Geo., & Co., Inc.: *See*—
Broadbent, Robert K. 3,048,864.

Knight Hogan B.: *See*—
Swern, Daniel, and Knight. 3,049,504.

Knippenberg, Henry: *See*—
Fabian, Francis G., Jr., Mann, Knippenberg, and Wainerdi. 3,049,617.

Knorr, Fritz: *See*—
Enk, Eduard, Knorr, and Spes. 3,049,560.

Knowlton, M. D., Co.: *See*—
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Kocher, Gottlieb. Spray guns. 3,049,303, 8–14–62, Cl. 239—312.

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Koons, Frederick L., and L. Drum, to General Motors Corp. Method and apparatus for steam rinsing dishes. 3,049,450, 8–14–62, Cl. 134—11.

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Koop, Josephine A.: *See*—
Koop, Brent. 3,049,597.

Kopf, Rowland J.: *See*—
De Caro, Charles J., and Kopf. 3,048,849.

Korf, Erich, to VEB Kamera- und Kinowerke Dresden. Picture projector. 3,049,052, 8–14–62, Cl. 88—28.

Kosatka, Thomas O., to Victor Mfg. & Gasket Co. Fluid seal. 3,049,357, 8–14–62, Cl. 277—183.

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Kring, Elbert V.: *See*—
Jenkins, Gordon L., and Kring. 3,049,495.

Kriwkowitsch, George. Nose packing device. 3,049,125, 8–14–62, Cl. 128—325.

Krogh, Ray A., to Litton Industries, Inc. Microwave load isolators. 3,049,680, 8–14–62, Cl. 333—24.

Krsna, Steve, to NJE Corp. Transistorized voltage regulated power supply. 3,049,658, 8–14–62, Cl. 323—22.

Krumholz, Pawel. Process for precipitating readily filterable rare earth hydroxides. 3,049,403, 8–14–62, Cl. 23—22.

Kruyff, Piet C. Color-stable gasoline. 3,049,414, 8–14–62, Cl. 44—63.

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Kuhl, Henry Y. and P. R. 3,049,135.

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Davis, Dexter C., Jr., Freeman, and Kura. 3,048,892.

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Lakins, Franklin D., and G. B. Lanphere, to Lipe-Rollway Corp. Adapter for bar working machine. 3,049,037, 8–14–62, Cl. 82—30.

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Langford, Jerrel, to Drill-O-Matic, Inc. Automatic rotary drilling control. 3,049,339, 8–14–62, Cl. 254—173.

Lannan, Patrick E., G. J. Prusha, and R. P. Price, to International Resistance Co. Program timing device. 3,049,598, 8–14–62, Cl. 200—46.

Lannert, James W., to The Maytag Co. Energy absorption stop. 3,049,025 8–14–62, Cl. 74—574.

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Lapointe, Lloyd J., and R. L. Parker, Jr., to Royal McBee Corp. Drive unit. 3,049,019, 8–14–62, Cl. 74—202.

Larrick, Howard M., and W. R. Brosch. Sound actuated detection and alarm system. 3,049,699, 8–14–62, Cl. 340—261.

Lashta, Peter, to Aktiebolaget Electrolux. Vacuum cleaner connection having reciprocating coupling means. 3,049,367, 8–14–62, Cl. 285—7.

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Owen, Archibald D., and Lassetter. 3,049,705.

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Laupman, Robert R., to Stork & Co's Apparatenfabriek N.V. Gebr. Method of rinsing yarns and fabrics in the form of skeins. 3,049,396, 8–14–62, Cl. 8—155.2.

Laurila, Erkki A., to Sala Maskinfabriks Aktiebolag. Magnetic drum separator. 3,049,234, 8–14–62, Cl. 209—219.

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Leisen, Frederic A. Metal boat construction. 3,048,858, 8–14–62, Cl. 9—2.

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Morrison, Willard L. 3,048,989.

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Litzkow, Otto J. Spacer for plumbing fixtures. 3,048,853, 8–14–62, Cl. 4—252.

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Livermore, Charles S., to Eclipse Sleep Products, Inc. Machine and method for forming wire units. 3,049,155, 8–14–62, Cl. 140—71.

Livermore, Charles S., to Eclipse Sleep Products, Inc. Machine and method for forming wire units. 3,049,156, 8–14–62, Cl. 140—11.

Loch, Erwin, to Escher Wyss Aktiengesellschaft. Damping vibrations in a gas bearing. 3,049,383, 8–14–62, Cl. 308—9.

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Long, Robert S.: *See*—
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Lo Presti, Roy F., to Goodman Mfg. Co. Freely suspended return roller assembly for rope side frame conveyors. 3,049,220, 8–14–62, Cl. 198—192.

Love, Mahlon L., to Deere & Co. Transmission control mechanism. 3,049,022, 8–14–62, Cl. 74—475.

Lowell, Arthur I., J. J. Latimer, and A. J. Buselli, to Air Reduction Co., Inc. Formation of bead polymers in presence of catalyst containing dicyclopentadienyliron. 3,049,522, 8–14–62, Cl. 260—89.1.

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Lucas, Malcolm B., and C. W. Hurst, to The Procter & Gamble Co. Detergent dispenser for automatic clothes washing machine. 3,048,993, 8–14–62, Cl. 68—17.

Ludwig, Oskar R. Flush single-line partitions. 3,049,197, 8–14–62, Cl. 189—34.

Luketa, Frank J. V-door for trawling and bridle therefor. 3,048,936, 8–14–62, Cl. 43—9.

Lundgren, Harold P., C. E. Pardo, Jr., and R. E. Foster, to United States of America, Agriculture. Shrinkproofing wool-containing textiles with polyepoxides and polyamides in the presence of reducing agent. 3,049,445, 8–14–62, Cl. 117—141.

Lundy, Alvin S., and G. C. Schreiber, to Claude B. Schneible Co. Particle and fluid collector. 3,048,956, 8–14–62, Cl. 55—235.

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Lusskin, Harold, L. S., and R. 3,049,018.

Lusskin, Ralph: *See*—
Lusskin, Harold, L. S., and R. 3,049,018.

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Beahm, Horace C., and Spartis. 3,049,461.

Maass, Edward W. Blow molding machine and process. 3,048,891, 8–14–62 Cl. 18—5.

MacDonald, Ian J., to Dominion Engineering Works Ltd. Doctoring devices. 3,048,874, 8–14–62, Cl. 15—256.51.

Mackay, Ralph S., and E. Marg, to The Regents of the University of California. Tonometer. 3,049,001, 8–14–62, Cl. 73—80.

Maehler, Arthur: *See*—
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Maloof, Ralph P. Height indicating apparatus. 3,048,927, 8–14–62, Cl. 33—209.

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Mandel, Louis: *See*—
Gray, Robert A., Lamb, and Mandel. 3,048,878.

Mandrel Industries, Inc.: *See*—
Nelson, John R. 3,049,648.

Mann, John P.: *See*—
Fabian, Francis G., Jr., Mann, Knippenberg, and Wainerdi. 3,049,617.

Manning, Maxwell & Moore, Inc.: *See*—
Stevens, Howard C., Jr. 3,048,865.
Stevens, Howard C., Jr., and Paulssen. 3,049,242.

Maraman, William: *See*—
Reavis, James G., Leary, and Maraman. 3,049,423.

Marble, Franklin D., L. E. Juniper, and J. L. De Armond. Debarker. 3,049,158, 8–14–62, Cl. 144—208.

Marchal, Raymond H.: *See*—
Bertin, Jean H., Kadosch, Turinetti, and Marchal. 3,048,974.

Marcus, Edith. Toe straightening device. 3,049,120, 8–14–62, Cl. 128—81.

Marcus, Natalie S.: *See*—
Smith, Merrill M., Holmstrom, and Marcus. 3,049,459.

Marg, Elwin: *See*—
Mackay, Ralph S., and Marg. 3,049,001.

Mark, Alexander H., and L. Au, to Massey-Ferguson Inc. Control mechanism for tractor hydraulic systems. 3,048,981, 8–14–62, Cl. 60—97.

Mark, Alexander H., J. M. Brzustowski, and J. Coleman, to Massey-Ferguson Inc. Straw walkers having inclined plates. 3,049,128, 8–14–62, Cl. 130—26.

Mark, Alexander H., G. F. Cooper, and J. Coleman, to Massey-Ferguson Inc. Straw walkers having closely spaced saw-toothed plates. 3,049,129, 8–14–62, Cl. 130—26.

Marlo, Arvid. Centrifugal rotational molding method. 3,048,896, 8–14–62, Cl. 18—58.3.

Marra, Ivan L.: *See*—
Humphreys, Robert E., and Marra. 3,049,164.

Marshall, William R., Jr., to Proctor & Schwartz, Inc. Spray drying apparatus. 3,049,174, 8–14–62, Cl. 159—4.

Martin-Marietta Corp.: *See*—
Higginbotham, John W. 3,049,627.

Marullo, Gerlando, and G. Perri, to Societa Montecatini Generale per l'Industria Mineraria e Chimica. Process for separation of schoenite from sodium chloride by means of flotation. 3,049,233, 8–14–62, Cl. 209—166.

Marx, Leo A. Truck driver protection shield. 3,049,363, 8–14–62, Cl. 280—150.

Massey-Ferguson Inc.: *See*—
Bunting, Ernest V. 3,049,179.
Mark, Alexander H., and Au. 3,048,981.
Mark, Alexander H., Brzustowski, and Coleman. 3,049,128.
Mark, Alexander H., Cooper, and Coleman. 3,049,129.
Horne, Donald S., Ashton, and Kepkay. 3,049,026.

Matoba, Kyozo, to Sears, Roebuck and Co. Pocket hand warmer and burner unit therefor. 3,049,117, 8–14–62, Cl. 126—208.

Matsude, Ken, to American Cyanamid Co. Addition polymer of cyanogen and a diamine. 3,049,499, 8–14–62, Cl. 260—2.

Maytag Co., The: *See*—
Lannert, James W. 3,049,025.

Mazzi, Angelo and T. Cupped tray for holding fruits and the like. 3,049,259, 8–14–62, Cl. 217—26.5.

Mazzi, Tullio: *See*—
Mazzi, Angelo and T. 3,049,259.

McCall, Floyd and L. Flow meter. 3,049,009, 8–14–62, Cl. 73—231.

McCall, Lloyd: *See*—
McCall, Floyd and L. 3,049,009.

McCloskey, Florence T. Colostomy belts. 3,049,123, 8–14–62, Cl. 128—283.

McCordic, James R., to Chrysler Corp. Transmission gear selector mechanism. 3,049,023, 8–14–62, Cl. 74—484.

McDonald, James A., and H. H. Evans, to Commercial Cam & Machine Co. Indexing cam structure. 3,049,017, 8–14–62, Cl. 74—84.

McDonnell & Miller, Inc.: *See*—
Kmiecik, Leopold J., and Kaczmarek. 3,049,145.

McFerren, Edgar L., to Giddings & Lewis Machine Tool Co. Machine tool work table. 3,049,345, 8–14–62, Cl. 269—9.

McFetters, George A., to Greensboro Loom Reed Co., Inc. Anti-friction instrumentalities for a loom. 3,049,151, 8–14–62, Cl. 139—93.

McGill, Russell C.: *See*—
Milani, Virgil I., McGill, and Starr. 3,049,043.

McMichael, Wallace T.: *See*—
Ratliff, Otho D., and McMichael. 3,049,452.

McMillan, William L.: *See*—
Newhouse, Vernon L., and McMillan. 3,049,695.

McNamara, Earl J.: *See*—
Jacobsen, John B., Christian, and McNamara. 3,049,134.

McNamara, James E., to United States Steel Corp. Mill-roll chock with load-responsive element. 3,049,004, 8–14–62, Cl. 73—141.

Mead, Harry W.: *See*—
Fentiman, William P., Ames, Morton, and Mead. 3,049,425.

Mears, Portia A. Support for soap bars. 3,048,938, 8–14–62, Cl. 45—28.

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Bishop, Leonard J. 3,049,218.
Bishop, Leonard J. 3,049,246.

Mecom, John W.: *See*—
Barry, William R. 3,049,082.

Medley, Jackson C., and D. E. Pfiederer, to Le Tourneau-Westinghouse Co. Steering mechanism. 3,049,187, 8–14–62, Cl. 180—79.2.

Meeker, David A., and G. B. Fox, to The Hobart Mfg. Co. Dishwashing apparatus. 3,049,391, 8–14–62, Cl. 312—272.

Meier, Bruno, to Sulzer Freres, S.A. Device for setting a machine tool. 3,049,030, 8–14–62, Cl. 77—5.

Melanson, Everett: *See*—
Barlow, Norman M., and Melanson. 3,049,462.

Mellin, Bror G., to Fulton Iron Works Co. Mill housing. 3,049,074, 8–14–62, Cl. 100—162.

Merck & Co., Inc.: *See*—
Garber, John D. 3,049,552.
Hirschmann, Ralph F. 3,049,556.
Miller, Ian M. 3,049,476.
Sletzinger, Meyer. 3,049,548.
Spencer, Claude, and Walton. 3,049,550.
Stammer, Charles H., and Miller. 3,049,475.
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Walton, Edward, and Spencer. 3,049,551.

Merit Products, Inc.: *See*—
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Meyers, Douglas C., to Shell Oil Co. Read-out system for multi-channel records. 3,049,292, 8–14–62, Cl. 235—61.9.

Middleton, John F., to Foster Wheeler Corp. Apparatus for effecting countercurrent contact between liquid and vapor streams. 3,048,957, 8–14–62, Cl. 55—257.

Midwest Conveyor Co., Inc.: *See*—
Potter, Omer R., and Peterson. 3,049,083.

Milani, Virgil I., R. C. McGill, and L. E. Starr, to United States of America, Navy. Method of casting an explosive charge. 3,049,043, 8–14–62, Cl. 86—1.

Millionis, Jerry P., and F. J. Arthen, to American Cyanamid Co. Vinylbensyloxybenzophenones. 3,049,503, 8–14–62, Cl. 260—22.

Miller, Ansel D., to United States of America, Navy. Continuous loop tape mechanism and method of tape storage therefor. 3,049,309, 8–14–62, Cl. 242—55.01.

Miller, Donald A. Toilet seat covering device. 3,048,854, 8–14–62, Cl. 4—253.

Miller, George E., and K. M. Carlisle; said Carlisle, assor. to said Miller. Coin catalog and record keeper. 3,049,045, 8–14–62, Cl. 88—14.

Miller, Gustave: *See*—
Rendle, Harold A. 3,049,255.

Miller, Ian M.: *See*—
Stammer, Charles H., and Miller. 3,049,475.

Miller, Ian M., to Merck & Co., Inc. Fermentation process for producing novobiocin. 3,049,476, 8–14–62, Cl. 195—80.

Miller, Joseph R.: *See*—
Firnhaber, Miles S., and Miller, and Kovach. 3,048,886.

Millet, Jacques, to Societe le Carbone-Lorraine. Method for improving the frictional properties of carbon brushes by low pressure polyethylene impregnation. 3,049,448, 8–14–62, Cl. 117—228.

Milleville, Bertram J., to United States of America, Atomic Energy Commission. Fluid flow control device. 3,049,150, 8–14–62, Cl. 137—625.32.

Mine Safety Appliances Co.: *See*—
Beahm, Horace C., and Spartis. 3,049,461.
Jacobson, Moses G., and De Luca. 3,049,664.

Minerals & Chemicals Philipp Corp.: *See*—
Allegrini, Aldo P. 3,049,449.
Sawyer, Edgar W., Jr. 3,049,498.

Minneapolis-Honeywell Regulator Co.: *See*—
Alampresse, Leo. 3,049,284.
Cox, John A., Jr. 3,049,646.
Kluge, Robert D. 3,049,611.
Reach, Roy W., Jr. 3,049,629.
Sapino, Theodore. 3,049,630.
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Minnesota Mining & Mfg. Co.: *See*—
Casey, James H. 3,048,953.
Johnson, Wayne R. 3,049,589.
Johnson, Wayne R. 3,049,595.

Mission Mfg. Co.: *See*—
Smith, Ralph E. 3,049,385.

Miyauchi, Hideo, to Yashica Co., Ltd. Fading mechanism for camera. 3,049,048, 8–14–62, Cl. 88—16.

Moberly, Charles W.: *See*—
Wicklatz, John E., and Moberly. 3,049,529.

Modelle, Philip A., to Kimble Glass Co. Apparatus for shaping mouth portions of glass articles. 3,048,945, 8–14–62, Cl. 49—7.

Monroe, Roger F., F. J. Lowes, G. L. Foster, and B. D. Oakes, to The Dow Chemical Co. Propargyl compounds as corrosion inhibitors. 3,049,496, 8–14–62, Cl. 252—146.

Monsanto Chemical C.: *See*—
Birum, Gail H. 3,049,545.
Frants, Joseph F. 3,049,567.
Gause, Edward H. 3,049,408.
Montgomery, Stewart R. 3,049,559.

Montague, Harry. Automatic crankcase drain attachment. 3,049,334, 8–14–62, Cl. 251—216.

Montgomery, Stewart R., to Monsanto Chemical Co. Ureas. 3,049,559, 8–14–62, Cl. 260—448.2.

Moore, Elvet E.: *See*—
Putzrath, Franz L., and Moore. 3,049,681.

Moore, John G.: *See*—
Rainey, Robert H., and Moore. 3,049,400.

Moore, Raymond W.: *See*—
Wallace, John W., Hull, and Moore. 3,049,036.

Morawietz, Wilhelm, to Duisburger Kupferhütte. Process for the production of pure indium. 3,049,478, 8–14–62, Cl. 204—64.

Morawski, Zbigniew K. Sanitary removable covers for containers. 3,049,264, 8–14–62, Cl. 220—60.

Morgan, Victor G.: *See*—
Hinton, Anthony J., and Morgan. 3,049,468.

Morin, Edward L.: *See*—
Fellers, John C., and Morin. 3,049,427.

Morris, Dorsey J.: *See*—
Stewart, Hercules Dorn, Morris and Wilson. 3,049,436.

Morris, George J.: *See*—
Palmer, Robert C., and Morris. 3,049,494.

Morrison, Walter F. Spectacle frame mount. 3,049,053, 8–14–62, Cl. 88—41.

Morrison, Willard L., to Liquefreeze Co., Inc. Apparatus for freezing food. 3,048,989, 8–14–62, Cl. 62—375.

Morton, Peter H.: *See*—
Fentiman, William P., Ames, Morton, and Mead. 3,049,425.

Mosley, Fred E. Metal severing device. 3,049,274, 8–14–62, Cl. 225—97.

Motorola, Inc.: *See*—
Volge, Raymond C. 3,049,591.

Moyer, James D., to Textile Machine Works. Yarn feed control means for knitting machines. 3,048,990, 8–14–62, Cl. 66—138.

Moyroud, Louis M., to R. A. Higonnet, and L. M. Moyroud. Type composing apparatus. 3,049,210, 8–14–62, Cl. 197—19.

Mueller, Robert: *See*—
Hastings, Franklin G., Mueller, and Preotle. 3,048,902.

Murray, Malcolm G. Eraser holder. 3,049,095, 8–14–62, Cl. 120—40.

Musat, George, and A. J. Poole, to The Babcock & Wilcox Co. Method and apparatus for burning pulverized coal. 3,049,085, 8–14–62, Cl. 110—28.

Myers, Ray, Corp.: *See*—
Myers, Raymond L. 3,049,126.

Myers, Raymond L., to Ray Myers Corp. Card file tray and compressor. 3,049,126, 8–14–62, Cl. 129—28.

NJE Corp.: *See*—
Krana, Steve. 3,049,658.

Nagle, Garrett S., and J. E. Roberson, to Reynolds Metals Co. Foil roll system. 3,049,229, 8–14–62, Cl. 206—59.

Nakaguchi, Koichi. Apparatus for air-tightly leading textile fabrics into or out of a pressure chamber. 3,048,992, 8–14–62, Cl. 68—5.

Nalco Chemical Co.: *See*—
Kirkpatrick, Willard H., and Seale. 3,049,511.

Nance, Tommy E., to Continental Air Lines, Inc. Passenger seat installed food container. 3,049,374, 8–14–62, Cl. 297—146.

National Cash Register Co., The: *See*—
Garvey, Mark J., and Andrews. 3,049,293.

National Heater Co., Inc.: *See*—
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National Research Corp.: *See*—
Allen, Lloyd R., Baer, and Clough. 3,049,421.

National Research Development Corp.: *See*—
Abraham, Edward P., Newton, and Hale. 3,049,541.
Leat, James H., Roharts, and Gibbs. 3,049,195.
Rawcliffe, Gordon H. 3,049,653.

National-Standard Co.: *See*—
Lang, Ernest U. 3,049,308.

Navo Industrial Corp.: *See*—
Lowther, Wilfred W. 3,048,959.

Nayler, Peter: *See*—
Lacey, Richard N., and Nayler. 3,049,565.

Neighorn, Roy G., and T. A. Olson, to Omack Industries, Inc. Apparatus for forming hollow rivets from an annular blank. 3,048,861, 8–14–62, Cl. 10—11.

Nelson, Jay C., to Gardner Machines, Inc. Reciprocating system and valve therefor. 3,049,147, 8–14–62, Cl. 137—622.

Neir, Theron E., to General Motors Corp. Concentric valve internal combustion engine. 3,049,191, 8–14–62, Cl. 184—6.

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Conley, Charles P., and Nelkin. 3,049,087.

Nelson, Floyd E. Self-loading and unloading vehicle. 3,049,378, 8–14–62, Cl. 298—14.

Nelson, George R.: *See*—
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Nelson, John R., to Mandrel Industries, Inc. Vacuum tube gate control circuit for solenoid actuated mechanism. 3,049,648, 8–14–62, Cl. 317—123.

Nelson, Marcus L., to King-Seeley Thermos Co. Ice making apparatus. 3,048,988, 8–14–62, Cl. 62—347.

Nelson, Robert M. to Merit Products, Inc. Edge guard for abrasive polishing machines. 2,048,950, 8–14–62, Cl. 51—274.

Nelson, Whitman H. Mat for separating stacked rolls. 3,049,245, 8–14–62, Cl. 214—10.5.

Neuerburg, Willi, A. Maehler, and H. Fiedler, to Daimler-Benz Aktiengesellschaft. Fuel tank construction. 3,049,171, 8–14–62, Cl. 158—46.

Newburg, Charles F., to Novo Industrial Corp. Screening process for vibratory screens. 3,049,235, 8–14–62, Cl. 209—346.

Newell, William H., to Sperry Rand Corp., Ford Instrument Co. Division. Velocity and distance indicating system. 3,049,294, 8–14–62, Cl. 235—151.

Newhouse, Vernon L., and W. L. McMillan, to Radio Corp. of America. Memory systems. 3,049,695, 8–14–62, Cl. 340—174.

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New York Air Brake Co., The: *See*—
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Neyhouse, George A., J. W. Savage, and R. K. Shewmon, to General Motors Corp. Power drive apparatus. 3,049,021, 8–14–62, Cl. 74—472.

Nichibei Blind Mfg. Co. Ltd.: *See*—
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Nichols, John B., to Hiller Aircraft Corp. Amphibious aircraft. 3,049,321, 8–14–62, Cl. 244—17.19.

Nicholson, Agnew W. Double-sash casement windows. 3,048,901, 8–14–62, Cl. 20—55.

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North American Aviation, Inc.: *See*—
Hertz, Theodore M., and Young. 3,049,296.

North American Philips Co., Inc.: *See*—
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Northwood, John V., and J. W. Rosher; said Northwood assor. to S. M. Northwood. Fireplace. 3,049,113, 8–14–62, Cl. 126—120.

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Northwood, John V., and Rosher. 3,049,113.

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Nye, Maurice A., to The Vaughn Machinery Co. Wire takeup block. 3,049,315, 8–14–62, Cl. 242—82.

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Ohlson, Bengt E., to Electrolux, Aktiebolaget. Air filter. 3,048,960, 8–14–62, Cl. 55—372.

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Ruth, John A. 3,049,543.

Oliver, Chauncey B., to Everpure, Inc. Dosing means. 3,049,142, 8–14–62, Cl. 137—114.

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Bochinski, Julius H., Kohl, and Oliver. 3,049,563.

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Olympia Werke A.G.: *See*—
Demmel, Anton, and Kernchen. 3,049,211.

Omack Industries, Inc.: *See*—
Neighorn, Roy G., and Olson. 3,048,861.

O'Shaughnessy, Marion T., to American Viscose Corp. Process of making space-dyed yarn. 3,049,397, 8–14–62, Cl. 18—54.

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Otis Elevator Co.: *See*—
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Outterson, George G.: *See*—
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Curry, Cecil B., Haley, and Theller. 3,049,467.

Paal, Hans, to Fr. Heuser, Maschinenfabrik-Aktiengesellschaft, Firma. Machine for the production of filled packages. 3,048,952, 8–14–62, Cl. 53—184.

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Pacific Valves, Inc.: *See*—
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Packard-Bell Electronics Corp.: *See*—
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Hooper, Brian E. 3,049,711.

Painter, Erle V., and R. C. Shepherd, to Johnson & Johnson. Apparatus for determining the sediment in cold milk. 3,049,000, 8–14–62, Cl. 73—61.

Palmer, Robert C., and G. J. Morris, to Sinclair Refining Co. Power transmitting fluids. 3,049,494, 8–14–62, Cl. 252—75.

Palmieri, Nicola, to Pirelli Societa per Azioni. Sealing ends for high tension electric cables. 3,049,581, 8–14–62, Cl. 174—73.

Palombo, Albert M., to American Metaseal of Massachusetts, Inc. Foamed cellular synthetic material impregnated with a wetting agent. 3,049,444, 8–14–62, Cl. 117—138.8.

Pangborn Corp.: *See*—
Fahrney, Maxwell E., and Powell. 3,048,947.

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Edwards, Harry, and Partridge. 3,049,267.

Paschal, Don F., to Chronicle Publishing Co. Display mounts. 3,049,324, 8–14–62, Cl. 248—35.

Patnode, Homer W., to Gulf Research & Development Co. Lineament analyzer. 3,049,046, 8–14–62, Cl. 88—14.

Patterson, Herman W. Tying and fastening device. 3,048,906, 8–14–62, Cl. 24—16.

Paulson, Theodore R., to United States of America, Army. Solar aspect telemeter. 3,049,670, 8–14–62, Cl. 325—105.

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Permanent Filter Corp.: *See*—
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Perri, Giovanni: *See*—
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Peterka, Henri. Fixing means for fixing objects to a wall. 3,049,323, 8–14–62, Cl. 248—28.

Peters, Rudolph W. Trailer hitch. 3,049,366, 8–14–62, Cl. 280—512.

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Petrolite Corp.: *See*—
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Pfeiffer, George J., Sr.: *See*—
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Phillips Petroleum Co.: *See*—
Bottomley, Anthony. 3,048,895.
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Plummer, Charles W., to United States of America, Navy. Explosive composition. 3,049,570, 8–14–62, Cl. 260—645.

Pochan, André P. R. Method and device for measuring surface tensions and viscosities. 3,048,999, 8–14–62, Cl. 73—54.

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Polos, Constantine D., to Gregory Industries, Inc. Tooling and method of installing expansion shells. 3,049,358, 8–14–62, Cl. 279—102.

Polster, Morton A. Wind indicators for vessels. 3,049,008, 8–14–62, Cl. 73—188.

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Putsrath, Franz L., and E. E. Moore, to United States of America, Air Force. High voltage coupling network. 3,049,681, 8–14–62, Cl. 333—24.

Queen, James L., to ACF Industries, Inc. Amplitude sensitive transponder. 3,049,704, 8–14–62, Cl. 343—6.

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Rackis, Joseph J., and A. K. Smith, to United States of America, Agriculture. Soybean trypsin inhibitors and method of isolating the same. 3,049,530, 8–14–62, Cl. 260—123.5.

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Reavis, James G., J. A. Leary, and W. J. Maraman, to United States of America, Atomic Energy Commission. Method for obtaining plutonium metal from its trichloride. 3,049,423, 8–14–62, Cl. 75—84.1.

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Rhodes, William H., J. G. Brenza, W. D. Winger, and R. C. Jackson, to International Business Machines Corp. Multiplying computer. 3,049,295, 8–14–62, Cl. 235—156.

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Firnhaber, Miles S., Miller, and Kovach. 3,048,886.

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Barber, Ernest E., and Simpkin. 3,049,298.

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Sinopoli, Frank. Portable electrical receptacle box. 3,049,688, 8–14–62, Cl. 339—12.

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Skirpan, Stephen J. Preset lighting control system. 3,049,645, 8–14–62, Cl. 315—316.

Slade, Herbert J. Window well cover. 3,048,897, 8–14–62, Cl. 20—1.

Slade, Herbert J. Window well cover. 3,048,900, 8–14–62, Cl. 20—40.

Slattery, Thomas G., and B. M. Torrey, to Automation, Inc. Magnetic memory device. 3,049,697, 8–14–62, Cl. 340—174.1.

Slaughter, James B. Tool for applying crawler treads. 3,048,917, 8–14–62, Cl. 29—200.

Sletzinger, Meyer, to Merck & Co., Inc. Certain alpha-hydrazino-imidazole-propionic acid derivatives. 3,049,548, 8–14–62, Cl. 260—309.

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Smith, Roy R., Jr., to Econo-Pak Register Co., Inc. Rotary press. 3,049,078, 8–14–62, Cl. 101—228.

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U.S. DEPARTMENT OF COMMERCE
OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE
August 14, 1962 Volume 781 Number 2

TRADEMARKS

NOTICES

Decisions of the Commissioner of Patents

The 1961 edition of the Decisions of the Commissioner of Patents has been released from the printer and available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.
Price: $3.50.

Erratum

In the Annual Index of Trademarks for 1961, page 3, under AMP Inc. "716,704" should be *715,704*.

Erratum

In the OFFICIAL GAZETTE of June 5, 1962, at page TM 46, under Reg. No. 441,901, "Pub. by registrant" should read *Pub. by Metropolitan Lithograph and Publishing Company, Everett, Mass.*

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 5, 1962.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 16,300
Date of oldest new application ..... Oct. 6, 1961
Date of oldest amended application ..... Oct. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	10-6-61	10-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-2-62	1-2-62
Renewals (All Classes)	6-4-62	6-25-62
Sec. 12 (c) Publications (All Classes)	6-11-62	

Applications filed during the month of June 1962—2,204

Registrations Issued ..... 375—No. 735,822 to No. 736,196
Renewals Issued 60

For the quarter—April 1, 1962 through June 30, 1962

Applications filed 6882
Registrations issued 4301
Renewals issued 796
Cancellations under Section 8 1739

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
July 16, 1962. *Chairman, Committee on Enrollment.*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 72,945 (LA GRISETTE), Strohmeyer & Arpe Company, Olive oil, macaroni, etc.; **Reg. No. 90,907** (CREAMETTES), Mother's Macaroni Company, Macaroni; **Reg. No. 404,624** (SAL-ETS), Quality Macaroni Company, same; **Reg. No. 540,402** (JUNIORETTES), The Creamette Company, Macaroni food for infants and children; **Reg. No. 549,176** (KIDETTES), same; **Reg. No. 549,177** (TOTETTES), same; **Reg. No. 576,129** (CREAMETTE), same, Macaroni shells, ready-cut spaghetti, etc.; **Reg. No. 603,367** (ETTES), same, Macaroni food for infants and children; **Reg. No. 673,575** (EGONETTES), same, Alimentary paste products, such as egg noodles; **Reg. No. 695,101** (DUMPLINGETTES), same, filed Mar. 8, 1961, D.C. Oreg. (Portland), Doc. 61/82, *The Creamette Company* v. *Porter-Scarpelli Macaroni Company*. Order of dismissal with prejudice Nov. 30, 1961.

Reg. No. 90,907. (See Reg. No. 72,945.)

Reg. No. 119,693 (PETER PAN), Henry Glass & Co., Cotton piece goods; **Reg. No. 165,454** (DESIGN OF PETER PAN), same, filed June 22, 1962, D.C., S.D.N.Y., Doc. 62/2217, *Henry Glass & Co.* v. *Peter Pan Foundations, Inc. et al.*

Reg. No. 165,454. (See Reg. No. 119,693.)

Reg. No. 283,974 (POUDRE D'ILLUSION), Elizabeth Arden, Inc., Toilet powder; **Reg. No. 510,952**, same, Elizabeth Arden Sales Corporation, Face powder, filed Nov. 15, 1960, D.C., S.D.N.Y., Doc. 60/4486, *Elizabeth Arden Sales Corporation* v. *Revlon, Inc.* Order of dismissal for lack of prosecution June 14, 1962.

Reg. No. 301,726 (SEAGRAM), Joseph E. Seagram & Sons Limited, Whiskey and potable spirits; **Reg. No. 302,182** (SEAGRAM'S V.O.), same, Whiskey; **Reg. No. 322,731** (SEAGRAMS ETC.), same, Whiskey and gin; **Reg. No. 505,302** (SEAGRAMS SEVEN (7) CROWN), Seagrams Distillers Corporation, Alcoholic beverages—namely, whiskey; **Reg. No. 330,786** (SEAGER'S), Seager, Evans & Co. Ltd., Gin, dry gin and orange gin; **Reg. No. 342,006**, same, filed Mar. 6, 1959, D.C., S.D.N.Y., Doc. 143/346, *Joseph E. Seagram & Sons, Inc. et al.* v. *Seager, Evans & Co., Ltd, et al.* Order dismissing complaint and counterclaim without prejudice May 24, 1962.

Reg. No. 302,182. (See Reg. No. 301,726.)

Reg. No. 304,723 (IRC), International Resistance Company, Resistors such as used in radio apparatus; **Reg. No. 312,722** (IRC AND DESIGN), same, Resistors of the non-inductive type, etc.; **Reg. No. 525,964** (IRC), same, Resistors, resistances, grid leaks, volume controls, etc.; **Reg. No. 525,965** (IRC AND DESIGN), same, filed Sept. 27, 1960, D.C., S.D.N.Y., Doc. 60/3726, *International Resistance Company* v. *International Radiant Corporation*. Order dismissing cause for lack of prosecution June 13, 1962.

Reg. No. 312,722. (See Reg. No. 304,723.)

Reg. No. 322,731. (See Reg. No. 301,726.)

Reg. No. 330,786. (See Reg. No. 301,726.)

Reg. No. 342,006. (See Reg. No. 301,726.)

Reg. No. 404,624. (See Reg. No. 72,945.)

Reg. No. 444,792 (HERITAGE), Heritage Furniture, Inc., Sofas, sofa beds, day beds, etc.; **Reg. No. 509,977**, same, Upholstered wood, plastic and metal furniture, etc., filed June 11, 1962, D.C., N.D. Tex. (Dallas), Doc. 9182, *Drexel Enterprises, Inc.* v. *Heritage House, Inc.*

Reg. No. 501,508 (SOLITE CONCRETE AND DESIGN), Southern Lightweight Aggregate Corp., Lightweight concrete aggregate; **Reg. No. 509,654** (SOLITE), same, Lightweight concrete aggregate, etc., filed May 29, 1962, D.C., District of Columbia, Doc. 1720/62, *Solite Corporation* v. *Solidite Corporation*.

Reg. No. 510,952. (See Reg. No. 283,974.)

Reg. No. 523,074 (THERMO-TAINER), Fashioncraft Cloth Products, Inc., Nursing bottle holder; **Reg. No. 593,169** (THERMO-TRAV'LER), Fashioncraft Products, Insulated formula bags, filed Feb. 21, 1962, D.C., S.D.N.Y., Doc. 62/922, *Morris J. Berry et al.* v. *The Warren Featherbone Company*. Stipulation and order of discontinuance June 13, 1962.

Reg. No. 525,964. (See Reg. No. 304,723.)

Reg. No. 525,965. (See Reg. No. 304,723.)

Reg. No. 540,402. (See Reg. No. 72,945.)

Reg. No. 549,176. (See Reg. No. 72,945.)

Reg. No. 549,177. (See Reg. No. 72,945.)

Reg. No. 576,129. (See Reg. No. 72,945.)

Reg. No. 580,654. (See Reg. No. 501,508.)

Reg. No. 582,329 (ONYX), Keuffel & Esser Company, Sensitized photographic papers and cloths to make reproductions of documents and engineering drawings, etc., filed June 21, 1962, D.C.N.J. (Newark), Doc. 523/62, *Keuffel & Esser Co.* v. *Onyx Chemical Co.*

Reg. No. 591,725 (FIBER TEMP), Samuel Kaplan & Sons, Inc., Lining and interlining fabric for men's, women's and children's garments, comprising fiber glass or a combination of fiber glass and silk, etc.; **Reg. No. 668,404** (TEMP-RESISTO), Temp Resisto Fabrics, Lining fabric of acetate, rayon or cotton or combinations thereof, treated chemically for heat insulation properties; **Reg. No. 699,069** (SUPER TEMP), Super Temp Fabrics, Lining fabric of acetate, rayon, or cotton, or combinations thereof, treated chemically for heat insulation properties, filed Aug. 18, 1960, D.C., S.D.N.Y., Doc. 60/3265, *Super Temp Fabrics et al.* v. *Wonder Fabrics, Inc. et al.* Stipulation and order of discontinuance Sept. 14, 1960.

Reg. No. 593,169. (See Reg. No. 523,074.)

Reg. No. 595,302. (See Reg. No. 301,726.)

Reg. No. 599,977. (See Reg. No. 444,792.)

Reg. No. 603,367. (See Reg. No. 72,945.)

Reg. No. 615,443 (WASH 'N DRI), Unexcelled Chemical Corporation, Solution saturated hand and face cloth treated with astringent emollient and essential oil for freshening purposes, filed Aug. 18, 1960, D.C., S.D.N.Y., Doc. 60/3262, *Unexcelled Chemical Corporation* v. *Lensclean, Inc.* Stipulation and order of dismissal Jan. 31, 1961.

Reg. No. 622,543 (DEVCON), Chemical Development Corporation, Moldable product used for making jigs, fixture forming and drawing dies, etc., filed Mar. 5, 1962, D.C.N.J. (Newark), Doc. 196/62, *Devon Corporation et al.* v. *E. M. Devcon, Incorporated et al.* Consent judgment; injunction granted June 12, 1962.

Reg. No. 673,575. (See Reg. No. 72,945.)

Reg. No. 686,759 (NUTS OFF), Spray Products Corporation, Chemical fluid acting as a fast solvent having penetrating properties for facilitating the removal of nuts from rusted and corroded screw-threads on bolts; **Reg. No. 713,028** (SPRAY AND DESIGN), Spray Products Corporation, Priming fuel for starting diesel and gasoline engines, filed June 7, 1962, D.C., M.D. Pa. (Scranton), Doc. 7734, *Spray Products Corporation* v. *Stokes S. Lazarus et al.*

Reg. No. 688,404. (See Reg. No. 591,725.)

Reg. No. 695,101. (See Reg. No. 72,945.)

Reg. No. 699,069. (See Reg. No. 591,725.)

Reg. No. 704,470 (TUFFTRIDE), Kolene Corporation, Sodium cyanide, filed June 14, 1962, D.C., E.D. Mich. (Detroit), Doc. 22670, *Kolene Corporation* v. *Commercial Steel Treating Company*.

Reg. No. 713,028. (See Reg. No. 686,759.)

Reg. No. 716,803 (BETTI BRENT LTD. AND DESIGN), Betti Brent, Ltd., Ladies' coats and suits, filed June 14, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1195, *Buddy Bates Corporation et al.* v. *Urbanaire, Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 112,346. Clifford E. Wrolstad, Molalla, Oreg. Filed Jan. 23, 1961.

WROLSTAD WHITES

For Live Turkeys.
First use Nov. 1, 1954.

SN 117,527. J. Perrone Associates, Inc., Wooster, Ohio. Filed Apr. 10, 1961.

PER-CAST

For Organic Plastics for Casting, and More Particularly Curable Plastics, Especially Plastics Curable at Room Temperature.
First use Jan. 26, 1960.

SN 131,480. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Nov. 7, 1961.

REEMAY

For Sheets and Laminates of Man-Made Fibers and Filaments for General Use in the Industrial Arts.
First use on or about Oct. 11, 1961.

SN 132,836. International Shoe Company, St. Louis, Mo. Filed Nov. 27, 1961.

CUSH-N-TAN

For Leather.
First use Oct. 31, 1957.

Class 2—Receptades

SN 123,902. Lewyt Corporation, Long Island City, N.Y. Filed July 13, 1961.

TYWEL

For Vacuum Cleaner Dust Bags.
First use on or about May 15, 1961.

SN 123,967. Druk Pak AG., Zurich, Switzerland. Filed July 14, 1961.

PRESTOPLUG

Priority claimed under Sec. 44(d) on Swiss Reg. No. 185,912, dated Feb. 28, 1961.
For Tubes, Bottles and Cans Made of Plastic, Metal, or Glass for Liquid and Paste Material and Closures Thereof.

SN 125,984. Sani-Gard Plastics Co., Santa Clara, Calif. Filed Aug. 11, 1961.

INSULITE

For Foam Plastic Drinking Cups.
First use Aug. 3, 1960.

SN 127,324. Cutler Mail Chute Company, Rochester, N.Y. Filed Sept. 6, 1961.

CUTLER

Owner of Reg. Nos. 57,745, 554,020, and others.
For Mail Chutes, Mail Boxes, and Letter Boxes.
First use at least as early as Oct. 20, 1883, on mail chutes.

SN 131,491. A. C. Martinelli Rogers Plastic Corporation, West Warren, Mass. Filed Nov. 7, 1961.

STAK-A-WAY

For Plastic Bags Used as Containers.
First use July 1, 1961.

SN 132,049. Max Katz Bag Company, Inc., Indianapolis, Ind. Filed Nov. 15, 1961.

Bur Lene

Owner of Reg. No. 678,204.
For Bags Manufactured From Burlap Laminated With Polyethylene or Other Plastics.
First use Aug. 23, 1957.

SN 132,382. Charles Schwartz & Company, Chicago, Ill. Filed Nov. 20, 1961.

EXCELLO

Owner of Reg. No. 722,029.
For Plastic Storage Bag, Plastic Laundry Bag, Plastic Pillow Cover, Plastic Garment Bag, and Plastic Mattress Cover.
First use on or about Dec. 1, 1949.

SN 132,665. Gemco-Ware, Inc., Jamaica, N.Y. Filed Nov. 24, 1961.

GEMCO

Owner of Reg. No. 630,226.
For Sugar Jar Dispensers, Sugar Bowls, Salt, Pepper and Cheese Shakers, Liquid Jar Dispensers With Dripless Servers, Cake Stands and Covers, Mixing Bowls, Napkin Dispensers, Straw and Mustard Jars, Cocktail Shakers, Malted Cups, Cutlery Boxes, Butter Chips, Horseradish Jar Dispensers, Squeeze Bottle Dispensers and Oil and Vinegar Dispensers, Plastic or Glass With Plastic or Non-Precious Metal Tops Such as Stainless Steel or Chrome Plated Metal.
First use Aug. 1, 1954, on sugar dispensers.

SN 133,603. West Virginia Pulp and Paper Company, New York, N.Y. Filed Dec. 7, 1961.

WANDO

For Paper Bags.
First use Nov. 17, 1960.

SN 133,688. Michigan Carton Co., Battle Creek, Mich. Filed Dec. 8, 1961.

SUMMIT

For Egg Cartons and Blanks Therefor.
First use Nov. 28, 1961.

SN 133,919. American Can Company, New York, N.Y. Filed Dec. 13, 1961.



For Fibre Cartons.
First use on or about Aug. 17, 1961.

SN 133,959. Kenics Corporation, Wakefield, Mass. Filed Dec. 13, 1961.

EPOXER

For Dispensers of Viscous Fluid Compositions Such as Synthetic Resins, Adhesives, Potting Compounds, Oils, Greases, and Solvents.
First use July 7, 1961.

SN 134,039. Republic Molding Corporation, Chicago, Ill. Filed Dec. 14, 1961.

Polly Maid

Owner of Reg. No. 623,774.
For Baby Baths, Cutlery Trays, Dish Pans, Pails, Drainboards, Laundry Utility Baskets, and Wastebaskets.
First use on or about Oct. 19, 1961.

SN 134,368. Bo-Mer Manufacturing Company, Inc., Auburn, N.Y. Filed Dec. 20, 1961.

FLORSAVER

For Trays for Boots and the Like.
First use Nov. 2, 1961.

SN 134,394. Malanco, Inc., Blue Island, Ill. Filed Dec. 20, 1961.

KORO-STIX

For Trays Formed of Corrugated Material for Packaging Candy, Bakery Products, and the Like.
First use Nov. 15, 1961.

SN 134,499. Triangle Bag Company, Covington, Ky. Filed Dec. 21, 1961.

RUFFY

For Paper Shopping Bags.
First use Sept. 9, 1950.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 125,576. American Luggage Works, Inc., Warren, R.I. Filed Aug. 8, 1961.

DUETTE

For Garment Carrier.
First use on or about June 30, 1961.

SN 134,111. Harry and David, Medford, Oreg. Filed Dec. 15, 1961.

SOPHISTIGIFT

For Handbags.
First use Oct. 30, 1961.

SN 134,149. William J. Opper, New York, N.Y. Filed Dec. 15, 1961.

PUP-P-PAPER

For Mat for Household Animal Pets.
First use Nov. 10, 1961.

SN 134,418. Morris White Fashions, Inc., New York, N.Y. Filed Dec. 20, 1961.

SCOTCH MIST

For Ladies' Handbags.
First use Dec. 13, 1961.

Class 5 — Adhesives

SN 129,799. Radiant Color Company, Oakland, Calif. Filed Oct. 12, 1961.

SUN TESTED

Owner of Reg. Nos. 636,281 and 662,721.
For Fluorescent Pressure-Sensitive Papers and Protective Coatings Including Plastic Transfer Films Backed With Pressure-Sensitive Adhesive and Supported Between Protective Layers of Release-Coated Paper; a Pressure-Sensitive Adhesive Film supported Between Protective Layers of Release-Coated Paper; and Pressure-Sensitive Adhesives and Release-Coated Protective Papers for Making Said Films.
First use Sept. 7, 1956, on pressure-sensitive papers.

Class 6 — Chemicals and Chemical Compositions

SN 121,983. The Dow Chemical Company, Midland, Mich. Filed June 14, 1961.

SARABOND

For Latex Formulation Used as an Additive for Cement and Mortar.
First use Apr. 13, 1961.

SN 132,054. Medical Chemical Corporation, Santa Monica, Calif. Filed Nov. 15, 1961.

N-K

For Blood Anticoagulant for Laboratory Use.
First use Sept. 19, 1961.

SN 133,045. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Nov. 30, 1961.

FS-11

For Foam Stabilizer for Malt Beverages.
First use Apr. 5, 1961.

SN 133,277. Koeller Air Products, Inc., Clifton, N.J. Filed Dec. 4, 1961.

KAPCO

For Various Gases—Namely, Oxygen, Acetylene, Nitrogen, and Mixtures Thereof, for Use in Welding and Cutting Procedures.
First use Mar. 22, 1960.

SN 136,146. Reliance Varnish Company, Louisville, Ky. Filed Jan. 19, 1962.

REL-BLEACH

For Bleach for Decoloring Cellulosic Matter.
First use Dec. 12, 1960.

SN 136,331. Apex Chemical Co., Inc., Elizabethport, N.J. Filed Jan. 23, 1962.

APEXOMIDE

For Modified Fatty Amide.
First use May 1, 1955.

SN 136,334. Apex Chemical Co., Inc., Elizabethport, N.J. Filed Jan. 23, 1962.

VELVAPEX

For Fatty Amide Derivative.
First use Sept. 1, 1949.

Class 7 — Cordage

SN 127,890. Wire Rope Corporation of America, Inc., St. Joseph, Mo. Filed Sept. 14, 1961.



The drawing is lined to show the color brown. Owner of Reg. No. 722,947.
For Wire Rope.
First use 1937.

Class 8 — Smokers' Artides, Not Including Tobacco Products

SN 121,770. William Steck & Co., Inc., New York, N.Y. Filed June 9, 1961.

STECK

For Cigarette Paper.
First use Mar. 15, 1944.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 130,683. Crosman Arms Company, Inc., Fairport, N.Y. Filed Oct. 26, 1961.

PLINK-O-MATIC

For Air Guns and More Particularly Air-Powered BB Pistols.
First use Sept. 12, 1961.

SN 132,576. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Nov. 22, 1961.

POW-R-SET

Owner of Reg. Nos. 546,647, 727,963, and others.
For Powder Loads.
First use on or about Mar. 16, 1961.

Class 10 — Fertilizers

SN 119,443. Universal Pulp Containers Limited, Milton of Campsie, near Glasgow, Scotland. Filed May 5, 1961.

ROOT-O-POTS

For Hormonised Peat in the Form of Propagating Pots for Plants.
First use November 1947.

SN 132,654. Dorchester Fertilizer Co., Cambridge, Md. Filed Nov. 24, 1961.



For Fertilizers.
First use Mar. 1, 1961.

Class 12 — Construction Materials

SN 130,815. Mississippi Industries, Inc., Jackson, Miss. Filed Oct. 27, 1961.

VIKING

For Asphalt Roofing Materials—Namely, Shingles, Roll Roofing, Siding, Felts, Cements, and Coatings.
First use Sept. 19, 1961.

SN 130,963. Spring Hill Fuel Co., d.b.a. Aluminum Detail Products, Seattle, Wash. Filed Oct. 30, 1961.

BAYVIEW

For Combination Screen and Storm Doors.
First use July 24, 1961.

SN 131,093. Vance Chemical Company, Inc., Weehawken, N.J. Filed Oct. 31, 1961.

van seal

The word "Seal" is disclaimed apart from the mark as shown.
For Kit Consisting of Two Components—Namely, an Epoxy Resin Compound and an Activator for Use To Make Repairs on All Types of Articles Consisting of Metal, Wood, and Concrete.
First use July 27, 1961.

SN 131,094. Vance Chemical Company, Inc., Weehawken, N.J. Filed Oct. 31, 1961.



For Kit Consisting of Two Components—Namely, an Epoxy Resin Compound and an Activator for Use To Make Repairs on All Types of Articles Consisting of Metal, Wood and Concrete.
First use July 27, 1961.

SN 131,279. Fred Easton, Garden Grove, Calif. Filed Nov. 3, 1961.

FLEXLOK

For Plastic Joint Sealer.
First use Mar. 3, 1961.

SN 131,549. E. L. Bruce Co. (Incorporated), Memphis, Tenn. Filed Nov. 8, 1961.

DURA-WOOD

For Wood Flooring.
First use in May 1951.

SN 133,265. Harvey Industries, Inc., Waltham, Mass. Filed Dec. 4, 1961.



The drawing is lined for red.
For Shutters, Gutters and Downspouts, Fascia Materials, Windows, and Sidings.
First use Aug. 14, 1961.

SN 133,821. Republic Steel Corporation, Cleveland, Ohio. Filed Dec. 11, 1961.

TRUS-CO-POST

For Adjustable Floor Levelling and Supporting Posts.
First use Sept. 1, 1961.

SN 133,822. Republic Steel Corporation, Cleveland, Ohio. Filed Dec. 11, 1961.

TRUS-T-POST

For Adjustable Floor Levelling and Supporting Posts.
First use Sept. 1, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 114,059. Imperial-Eastman Corporation, Chicago, Ill. Filed Mar. 20, 1961.

DURA-TITE

For Fittings for Use With Metallic Tubing.
First use in November 1959.

SN 114,720. Rieke Metal Products Corporation, Auburn, Ind. Filed Mar. 1, 1961.

SAFESEAL

For Cap Seal for Steel Drums.
First use Nov. 11, 1960.

SN 114,889. Superflexit Limited, Slough, England. Filed Mar. 3, 1961.

CONFLEX

Owner of British Reg. No. 778,923, dated June 19, 1958.
For Non-Metallic Tubings and Fittings Therefor.

SN 115,455. Elco Tool and Screw Corporation, Rockford, Ill. Filed Mar. 13, 1961.

FAS-N-IT

For Screws, Bolts and Nuts.
First use Jan. 26, 1961.

SN 116,303. Goldmar Sales Corporation, Baltimore, Md. Filed Mar. 23, 1961.

Guard-N-Rail

For Garden Fences and Guard Rails.
First use Jan. 3, 1961.

SN 116,310. Johns-Manville Corporation, New York, N.Y. Filed Mar. 23, 1961.

CHEMTITE

For Asbestos-Reinforced Plastic Pipe and Fittings.
First use Mar. 14, 1961.

SN 119,290. Illinois Tool Works, Inc., Chicago, Ill., by merger from Illinois Tool Works, Chicago, Ill. Filed May 4, 1961.



The drawing is lined for orange, however, the mark is not limited to this specific color.
For Lock Washers, Preassembled Screws and Washers, and Preassembled Nuts and Washers.
First use Jan. 24, 1961.

SN 120,696. Colorguard Corporation, New York, N.Y. Filed May 24, 1961.

COLORBOND

For Chain Link Fence.
First use Apr. 21, 1961.

SN 126,950. Progress Manufacturing Company, Inc., Philadelphia, Pa. Filed Aug. 30, 1961.

READI-PAKT

For Copper and Aluminum Tubing.
First use June 21, 1961.

SN 127,628. Nixdorff-Krein Manufacturing Company, St. Louis, Mo. Filed Sept. 11, 1961.

SwivelTrac

Without waiver of its common law rights, no claim is made to the word "Swivel" apart from the mark as shown.
For Tire Chains.
First use Aug. 15, 1961.

SN 127,679. Waldes Kohinoor, Inc., Long Island City, N.Y. Filed Sept. 11, 1961.

PIXIE

For Plastic Slide Fasteners.
First use on or about Dec. 20, 1960.

SN 129,198. Dexter Industries, Inc., Grand Rapids, Mich. Filed Oct. 4, 1961.

DURALOCK

For Latches To Be Used in Residences, Offices, and Buildings of All Descriptions.
First use Sept. 5, 1961.

SN 132,948. Societe Industrielle d'Etudes et de Realisations Scientifiques, S.I.E.R.S., Paris, France. Filed Nov. 28, 1961.



Owner of French Reg. No. 432,903, dated Sept. 15, 1953 (Seine); Natl. Inst. No. 18,322.
For Sluice-Gates and Valves for Bottled Gas.

SN 133,588. Rylands Brothers Limited, Warrington, England. Filed Dec. 7, 1961.

RYLASTIC

Owner of British Reg. No. 788,531, dated Mar. 17, 1959.
For Wire and Wire Products—Namely, Box-Stitching Wire, Baling Wire, Wire Netting, Wire Mesh, Wire Fencing, Wire Screening, Wire Cloth, Wire for Use in Bed Springs and Mattresses, Nails and Staples, All of the Foregoing Products Being Plain or Covered With a Plastic Coating.

SN 133,636. Clark Paper Converting Corp., Los Angeles, Calif. Filed Dec. 8, 1961.

SHIELDOR

Owner of Reg. No. 636,182.
For Urinal Screens.
First use Oct. 26, 1961.

SN 133,697. J. C. Pitman & Sons, Inc., Concord, N.H. Filed Dec. 8, 1961.

FLEX-O-FRY

For Deep Fat Frying Equipment.
First use Nov. 1, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 129,473. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 9, 1961.

TOPTEC

For Welding Alloys in Various Forms.
First use Sept. 22, 1961.

SN 129,474. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 9, 1961.

BASETEC

For Welding Alloys in Various Forms.
First use Sept. 22, 1961.

Class 15—Oils and Greases

SN 133,746. Ashland Oil & Refining Company, Ashland, Ky. Filed Dec. 11, 1961.

VALVOLINE

Owner of Reg. Nos. 53,237, 700,385, and others.
For Petroleum Products for Use in Connection With Vehicles Operated by Motive Power and in Connection With Engines and Machinery Generally.
First use at least as early as July 31, 1873.

Class 16—Protective and Decorative Coatings

SN 106,942. Sav-Rite Paint Co., Inc., Azusa, Calif. Filed Oct. 21, 1960.

PRISM

For Paint, Lacquers, Varnishes, Shellacs, Thinners, Reducers and Related Materials.
First use Nov. 1, 1959.

SN 110,493. Hoyt H. Todd, d.b.a. Todco, La Habra, Calif. Filed Dec. 19, 1960.

MICRO-ARC

For Composition To Be Painted on Metal in Preparation for Electric Arc Processing To Form a Hard Facing Surface.
First use June 29, 1959.

SN 130,009. Tuffy Products, Inc., Minneapolis, Minn. Filed Oct. 16, 1961.



For Modified Epoxy Protective Coatings.
First use Jan. 3, 1961.

Class 17—Tobacco Products

SN 144,395. Liggett & Myers Tobacco Company, New York, N.Y. Filed May 11, 1962.

DORADO

For Cigarettes.
First use May 4, 1962.

SN 145,949. Liggett & Myers Tobacco Company, New York, N.Y. Filed June 1, 1962.

PARKWAY

For Cigarettes.
First use May 24, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 112,796. U. Ravizza Società Accomandità per l'Industria Chimica e Farmaceutica, Milan, Italy. Filed Jan. 30, 1961.

COLLYRIUM ALPHA

Priority claimed under Sec. 44(d) on Italian application filed Dec. 28, 1960; Reg. No. 157,370, dated Nov. 28, 1961. The exclusive use of the word "Collyrium" as shown in applicant's mark is disclaimed apart from the mark as a whole.
For Pharmaceutical and Medicinal Preparations for Human and Veterinary Use.

SN 114,927. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Mar. 6, 1961.

TROMAL

For Anticonvulsant or Muscle Relaxant Drug for Oral Administration Under Prescription.
First use Jan. 11, 1961.

SN 127,259. Pharmetics Corporation, Baltimore, Md. Filed Sept. 5, 1961.

PHARMOLINE

For Petroleum Jelly for Pharmaceutical Use.
First use May 17, 1961.

SN 134,404. Sandoz, Inc., Hanover, N.J. Filed Dec. 20, 1961.

UML-491

For Medicinal Preparation Recommended for the Treatment of Vascular Headache.
First use Apr. 30, 1958.

SN 138,677. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 26, 1962.

TOLINASE

Owner of Reg. No. 696,674.
For Antidiabetic Agent.
First use Oct. 12, 1960.

SN 140,317. American Cyanamid Company, New York, N.Y. Filed Mar. 21, 1962.

ASP-250

For Animal Feed Supplement Containing Antibiotics.
First use Mar. 1, 1962.

SN 140,601. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 23, 1962.

SCRIPTAB

For Vitamin Preparation.
First use Dec. 18, 1961.

SN 141,101. Ormont Drug & Chemical Company, Inc., Long Island City, N.Y. Filed Mar. 29, 1962.

SKAYLOS

For Lotion To Relieve the Discomforts of Psoriasis.
First use Feb. 1, 1962.

SN 141,397. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Apr. 2, 1962.

ASTHMALIZER

For Anti-Asthma Preparation in Aerosol Form.
First use Mar. 23, 1962.

SN 141,533. Eli Lilly and Company, Indianapolis, Ind. Filed Apr. 4, 1962.

QUINTESS

For Antidiarrheal Medicinal Preparation.
First use Mar. 22, 1962.

SN 141,873. Norden Laboratories, Inc., Lincoln, Nebr. Filed Apr. 9, 1962.

LACTONOC

For Live Culture Desiccated Lactobacillus Acidolphilus as an Aid in the Prevention and Treatment of Bacterial Enteritis and for Use Following Antibiotic Therapy, Used in Veterinary Medicine.
First use September 1961.

SN 141,926. American Cyanamid Company, Wayne, N.J. Filed Apr. 10, 1962.

BASSOVAC

For Veterinary Vaccine.
First use Mar. 28, 1962.

SN 141,998. The Upjohn Company, Kalamazoo, Mich. Filed Apr. 10, 1962.

MAOLATE

For Muscle Relaxant-Tranquilizer Compound.
First use Jan. 8, 1962.

SN 142,105. Lake Products Company, Inc., St. Louis, Mo. Filed Apr. 12, 1962.

FINS-UP

For Antibiotic Composition for Veterinary Use, Specifically for Aquarium Use for Treatment of Fish.
First use Sept. 24, 1956.

SN 142,859. Provident Pharmaceuticals, Incorporated, Chattanooga, Tenn. Filed Apr. 23, 1962.

TUSSTROL

For Pharmaceutical Preparation for Symptomatic Relief of Cough, Nasal Congestion, and Other Symptoms Common to Colds, Hay Fever, and Other Allergies.
First use on or before Nov. 15, 1961.

SN 142,900. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Apr. 23, 1962.

DACTAFEM

For Dysmenorrhea Preparation.
First use Feb. 28, 1962.

Class 19—Vehides

SN 98,302. Nissan Jidosha Kabushiki Kaisha, Yokohama City, Japan. Filed June 2, 1960.

CEDRIC

Priority claimed under Sec. 44(d) on Japanese application filed Mar. 17, 1960; Reg. No. 578,783, dated Aug. 15, 1961.
For Ships, Automobiles, Buses, Trucks, Motorcycles, Ambulances, Truck Tractors, Vans, Sprinkling Trucks, and Parts Thereof, Seat Covers, Motor Vehicle Air Conditioners and Heaters, Visors, Auto Mirrors and Top of Car Luggage Carriers.

SN 115,433. Checker Motors Corporation, Kalamazoo, Mich. Filed Mar. 13, 1961.

AEROBUS

For Motor Vehicles Designed for Use in the Transporting of Passengers.
First use Feb. 20, 1961.

SN 116,982. Cuyahoga Products Corporation, Birmingham, Mich. Filed Apr. 3, 1961.

Uni-Grip

For Trim and Seal Assemblies for Automobile Doors and Openings, and Consisting of Flexible Metal Flange-Gripping Channel Covered by and Carrying Resilient Trim Material, in Some Forms With an Attached Longitudinally Extending Rubber Seal.
First use October 1960.

SN 126,596. John S. Isom, d.b.a. Packcycle Company, Upland, Calif. Filed Aug. 24, 1961.

PACKCYCLE

For Two Wheel Motor Driven Conveyance.
First use Apr. 1, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 117,759. The Acoustical Manufacturing Company, Ltd., Huntingdon, England. Filed Apr. 13, 1961.

QUAD

For Audio Frequency Amplifiers and Pre-Amplifiers, Radio Tuners, Loud Speakers and Parts Therefor.
First use in 1950; in commerce in 1952.

SN 119,566. Service Industries, Philadelphia, Pa. Filed May 8, 1961.

Sprk-jolt

For Power Booster Converter Accumulator for Ignition.
First use July 11, 1959.

SN 121,221. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed June 1, 1961.



The drawing is lined for red.
For Stereophonic High-Fidelity Sound Reproducing Equipment and Radio and Television Receivers.
First use Jan. 25, 1961.

SN 125,287. Dialight Corporation, Brooklyn, N.Y. Filed Aug. 3, 1961.

TELE-STRIPS

Owner of Reg. No. 684,370.
For Electric Indicator Lights for Pilot and Signal Light Purposes.
First use Oct. 16, 1958.

SN 127,917. Fair-Play Mfg. Co., Des Moines, Iowa. Filed Sept. 15, 1961.

FAIR-PLAY

For Electrical Scoreboards, Signs and Timing Equipment.
First use during 1935.

SN 128,388. The Bendix Corporation, Detroit, Mich. Filed Sept. 22, 1961.

OMNIMITE

Owner of Reg. No. 597,314.
For Magnetostrictive Sonic Transducers, One of Their Uses Being in Ultrasonic Cleaning Systems.
First use May 4, 1961.

SN 130,100. Parking Corporation of America, Chicago, Ill. Filed Oct. 17, 1961.

LOW-BOY

For Electromechanical Apparatus and Systems for Controlling Entrance to and/or Exit From Traffic Lanes.
First use Sept. 21, 1961.

SN 131,831. General Electric Company, Schenectady, N.Y. Filed Nov. 13, 1961.

Gentrode 10

For Carbon Electrode Materials and Carbon Electrodes.
First use on or about Feb. 9, 1961.

SN 131,931. The Arrow-Hart & Hegeman Electric Co., Hartford, Conn. Filed Nov. 14, 1961.

POWER LOCK

For Current Interrupting Devices; Receptacles and Covers and Cape Therefor, Cord Connectors and Bases.
First use July 20, 1961.

SN 131,951. Detroit Coil Company, Ferndale, Mich. Filed Nov. 14, 1961.

DECOIL

For Solenoids.
First use July 5, 1961.

SN 132,223. Consolidated Sewing Machine Corp., New York, N.Y. Filed Nov. 17, 1961.

VISCOUNT

Owner of Reg. Nos. 671,158 and 679,939.
For Vacuum Cleaners and Floor Polishers for Household and Domestic Use.
First use Oct. 11, 1961.

Class 22—Games, Toys, and Sporting Goods

SN 121,122. The J. Roberts Manufacturing Co., Kingston, Pa. Filed May 31, 1961.



No claim of exclusive right is made to "Barbells."
For Athletic Equipment—Namely, Barbells.
First use Mar. 14, 1961.

SN 131,874. Roberta Doll Co., Inc., New York, N.Y. Filed Nov. 13, 1961.

TOBY

For Dolls.
First use Oct. 16, 1961.

SN 131,875. Roberta Doll Co., Inc., New York, N.Y. Filed Nov. 13, 1961.

ROBERTA

For Dolls.
First use Dec. 31, 1956.

SN 131,876. Roberta Doll Co., Inc., New York, N.Y. Filed Nov. 13, 1961.

ROBERTA ANN

For Dolls.
First use Feb. 1, 1944.

SN 132,693. Louis Marx & Co. Inc., New York, N.Y. Filed Nov. 24, 1961.

MISS SWEETEEN

For Dolls.
First use Nov. 14, 1961.

SN 133,041. Alexander Doll Company, Inc., d.b.a. Madame Alexander, New York, N.Y. Filed Nov. 30, 1961.

"BOOBIE"

For Dolls.
First use Nov. 24, 1961.

SN 133,042. Alexander Doll Company, Inc., d.b.a. Madame Alexander, New York, N.Y. Filed Nov. 30, 1961.

"LAMBKIN"

For Dolls.
First use Nov. 18, 1961.

SN 133,715. Swim-Aid Corporation, West Hartford, Conn. Filed Dec. 8, 1961.

SWAN-BUOY

For Swimming Accessory, Flotation Device Worn Around Body for Buoyant Purposes.
First use Feb. 4, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 99,577. Diamantprodukter Aktiebolag, Hagersten, Sweden. Filed June 23, 1960.

DIPRO

Priority claimed under Sec. 44(d) on Swedish application filed Jan. 19, 1960; Reg. No. 102,121, dated Feb. 23, 1962.
Owner of U.S. Reg. Nos. 626,121 and 648,839.
For Files; Hand-Operated Power Driven Machines for Filing.

SN 114,224. Imperial-Eastman Corporation, Chicago, Ill. Filed Feb. 23, 1961.

KWIK·TITE

Owner of Reg. No. 651,369.
For Wrenches.
First use in June 1960.

SN 114,636. Outboard Marine Corporation, Waukegan, Ill. Filed Feb. 28, 1961.

DURARAIL

For Chain Saw Bars.
First use Oct. 15, 1960.

SN 115,403. Peter Willems, Lucerne, Switzerland. Filed Mar. 10, 1961.

ATOMIX

Owner of Swiss Reg. No. 146,346, dated Mar. 19, 1953.
For Machines, Apparatus, Devices and Equipment for Mixing, Dispersing and Emulsifying; High-Performance Emulsifiers; Homogenizers for Research and Industry; Machines, Apparatus, Devices and Equipment for Accelerating Reactions; All of Said Machines, Apparatus, Devices and Equipment Working on the Basis of Mechanical High Frequency.

SN 115,404. Peter Willems, Lucerne, Switzerland. Filed Mar. 10, 1961.

ATOMIX-MILL

Owner of Swiss Reg. No. 179,964, dated Feb. 27, 1960.
For Apparatus, Devices, Machines, and Equipment for Comminuting and Mixing All Kinds of Materials; Said Apparatus, Devices, Machines and Equipment Working on the Basis of Mechanical High Frequency.

SN 115,479. International Harvester Company, Chicago, Ill. Filed Mar. 13, 1961.

FLO-MATIC

For Cooling System for Internal Combustion Engines.
First use Feb. 22, 1961.

SN 117,106. International Parts Corporation, Chicago, Ill. Filed Apr. 4, 1961.

SILENCE IS GOLDEN

For Mufflers.
First use on or about Feb. 22, 1961.

SN 118,731. J. K. Smit & Sons (Canada) Limited, Toronto, Ontario, Canada. Filed Apr. 26, 1961.

UNIPRESS

Owner of Canadian Reg. No. 120,724, dated Jan. 6, 1961.
For Earth and Rock Drilling and Boring Apparatus and Parts Thereof.
First use May 18, 1960; in commerce May 18, 1960.

SN 119,520. Jabsco Pump Company, Costa Mesa, Calif. Filed May 8, 1961.

CENTRIPULSE

For Fluid Pumps.
First use Apr. 17, 1961.

SN 120,629. Farnborough Engineering Co. Ltd., Farnborough, England. Filed May 23, 1961.

TRANCO

Owner of British Reg. Nos. 752,200, dated Mar. 22, 1956, and 768,561, dated Aug. 21, 1957.
For Valves, Valve Guides, and Valve Springs for Internal Combustion and Compression Ignition Engines.

SN 121,380. Golden Arrow Sprayers Ltd., Calgary, Alberta, Canada. Filed June 5, 1961.



The drawing is lined to designate the color gold.
For General Purpose Sprayers, Field Sprayers, Row Crop Sprayers, Livestock Sprayers, Spray Guns, Field Markers, Pumps for Spraying Equipment, and Parts Thereof.
First use 1947; in commerce July 1956.

SN 121,497. Morse Sewing Machine and Supply Corp., New York, N.Y. Filed June 6, 1961.

ELECTROSONIC

For Sewing Machines and Parts Thereof for Home Use.
First use May 29, 1961.

SN 122,405. Western Fire Protection, Inc., d.b.a. Descent Control, Los Angeles, Calif. Filed June 19, 1961.

SKY GENIE

For Control Devices—Namely, Devices Used With a Rope for Controlling the Rate of Movement of a Load or the Like.
First use June 8, 1961.

SN 123,230. Racine Industrial Plant, Inc., Racine, Wis. Filed June 30, 1961.

Up-brush

Owner of Reg. No. 626,482.
For Carpet, Rug and Like Mechanical Scrubbing Machine Embodying a Rotary Brush.
First use April 1958.

SN 124,303. Star Parts, Inc., South Hackensack, N.J. Filed July 19, 1961.

AUTO SETTER

For Type Setting and Type Casting Machines and Parts Thereof.
First use on or about July 11, 1961.

SN 124,462. Service Clean Inc., Janesville, Wis. Filed July 21, 1961.

POWER CLEAN

For Power Vacuum Cleaning Apparatus for Cleaning Furnaces, Boilers, Pipes, Chimneys and Other Structures in Which Ashes, Soot or Other Foreign Matter Tends to Collect.
First use July 7, 1961.

SN 125,570. Yates Manufacturing Company, Chicago, Ill. Filed Aug. 7, 1961.

←Y→

For Mandrels.
First use July 10, 1961.

SN 125,881. Briggs & Stratton Corporation, Milwaukee, Wis. Filed Aug. 14, 1961.

EASY-SPIN

For Single Cylinder Internal Combustion Engines.
First use May 12, 1961.

SN 127,761. Electronic Assistance Corporation, Red Bank, N.J. Filed Sept. 13, 1961.

Sonaire

For Beer Foaming Apparatus.
First use June 7, 1961.

SN 128,455. Matsushita Electric Corporation of America, New York, N.Y. Filed Sept. 22, 1961.

POINT-O-MATIC

For Pencil Sharpener.
First use Aug. 15, 1961.

SN 128,466. Santa Anita Mfg. Corp., Temple City, Calif. Filed Sept. 22, 1961.

FOLDA-LIFT

For Hydraulic Loading Platforms for Use on Trucks and the Like.
First use September 1960.

SN 132,363. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Nov. 20, 1961.

POW-R-SET

Owner of Reg. Nos. 556,588, 638,407, and 727,963.
For Tools for Use in Driving Pins, Bolts, Studs, Screws, Rivets, and Plugs Into or Through Metal, Concrete, Masonry, Wood and the Like.
First use on or about Feb. 10, 1960.

SN 132,666. Gemco-Ware, Inc., Jamaica, N.Y. Filed Nov. 24, 1961.

GEMCO

Owner of Reg. No. 639,300.
For Knives, Forks, Spoons, Serving Ladles, Pan Turners, Combination Ladle and Strainers, Salad Sets, Egg Slicers, Ice Tongs, Ice Cream Spoons, Cocktail Strainers, and Scouring Sets, Made of Stainless Steel and/or Chrome Plated Metal and/or Plastic.
First use Aug. 1, 1954, on knives, forks, and spoons.

SN 132,947. Sier-Bath Gear and Pump Co., Inc., North Bergen, N.J. Filed Nov. 28, 1961.

SIER-BATH

Owner of Reg. No. 569,549.
For Flexible Couplings for Shafts.
First use in 1907.

SN 133,552. Estwing Manufacturing Company, Incorporated, Rockford, Ill. Filed Dec. 7, 1961.

VALIANT

For Carpenters' Hammers and Hatchets.
First use Nov. 13, 1961.

SN 133,687. A. M. Melcher, Minneapolis, Minn. Filed Dec. 8, 1961.

CAR-VAC

For Railway Freight Car Cleaning Systems, and Parts for the Same.
First use about October 1959.

SN 133,728. Delano Engineering Co., Inc., Delano, Calif. Filed Nov. 16, 1961.

DECO

For Agricultural Machinery, Including Dispensers for Fertilizers; Harvesters Adapted for Mounting on Vehicles; Produce Loaders; Spray Units; Tanks; Dispensers for Powdered Material, Such as Insecticides and the Like; Depth Gauge Wheels; and Parts and Accessories Therefor.
First use in the year 1949.

SN 134,376. Crescent Dental Manufacturing Company, Chicago, Ill. Filed Dec. 20, 1961.

WIG L BUG

Owner of Reg. No. 379,462.
For Electrically Operated Devices of Varying Sizes Adapted for Use in Mixing, Pulverizing, Grinding, Crushing, Diluting,

Blending, Emulsifying, Dry, Liquid, Granular, Comminuted, Solid or Semi-Solid Materials and Emulsions and Used in Industrial Research, Educational, Metallurgical, Chemical, Dental, Medical and Pharmaceutical Applications, Adapters Used on Said Devices and Comprising Closable Mixing Containers Having Clamping Means Thereon.
First use Dec. 5, 1938.

SN 134,403. Charles A. Rodolf, d.b.a. Transmission Headquarters, Seattle, Wash. Filed Dec. 20, 1961.

DRAG-O-MATIC

For Straight Line Gear Shifting Means for Automotive Transmissions.
First use on or about Mar. 14, 1960.

SN 134,761. SKF Industries, Inc., Philadelphia, Pa. Filed Dec. 27, 1961.

REED

For Ball Bearings.
First use Oct. 29, 1957.

SN 134,781. Arvin Industries, Inc., Columbus, Ind. Filed Dec. 28, 1961.

Arvin

Owner of Reg. Nos. 507,593, 514,371, and 609,529.
For Automotive Vehicle Mufflers.
First use on or about Aug. 15, 1959.

Class 25—Locks and Safes

SN 129,199. Dexter Industries, Inc., Grand Rapids, Mich. Filed Oct. 4, 1961.

DURALOCK

For Locks To Be Used in Residences, Offices, and Buildings of All Descriptions.
First use Sept. 5, 1961.

Class 26—Measuring and Scientific Appliances

SN 116,444. Sun Chemical Corporation, New York, N.Y. Filed Mar. 24, 1961.

Sun

For Machines—Namely, Photocopiers, Cameras, Photolettering Machines and the Like Used in Connection With Printing.
First use in March 1957.

SN 119,496. Engineered Electronics Company, Santa Ana, Calif. Filed May 8, 1961.

ENGELEX

For Computer Unit and Decimal Counter Electronic Indicators, Circuit Plug-In Units, and Equipment Racks; and Electronic Decimal Counters.
First use Apr. 12, 1961.

SN 123,703. Theta Instrument Corporation, Saddle Brook, N.J. Filed July 10, 1961.

MINI-DIAL

For Dial Assembly Used in Electronic or Electric Mechanical Equipment.
First use Apr. 3, 1961.

SN 124,803. Texas Electronic Products Corporation, Dallas, Tex., by change of name from Diversa Electronics, Inc., Dallas, Tex. Filed July 27, 1961.

Q-TROL

For Electrical Quality Control Apparatus—Namely, Electro-Mechanical Apparatus That Temporarily Stores Inspection Data and Produces an Accept or Reject Answer for a Selected Lot of Goods.
First use Mar. 2, 1961.

SN 128,418. Control Data Corporation, Minneapolis, Minn. Filed Sept. 22, 1961.

CONTROL DATA

For Electronic Data Processing Equipment, Including Electronic Process Control Equipment.
First use July 11, 1961.

SN 129,593. P. Gossen & Co. Gesellschaft mit beschraenkter Haftung, Erlangen, Bavaria, Germany. Filed Oct. 10, 1961.

LUNASIX

Owner of German Reg. No. 719,005, dated Oct. 27, 1958.
For Electrical Measuring Devices—Namely, Exposure Meters and Exposure Control Devices.

SN 133,758. Bowser, Inc., Fort Wayne, Ind. Filed Dec. 11, 1961.

BOMELCO

For Modular Electronic Computer Fuel Dispensing Equipment, Including a Meter and Controls Therefor.
First use Jan. 5, 1961.

SN 137,511. The Decker Corporation, Bala-Cynwyd, Pa. Filed Feb. 8, 1962.

600

For Gyroscopic Mass Flowmeters.
First use Feb. 10, 1961.

SN 139,543. The Space-General Corporation, Glendale, Calif. Filed Mar. 9, 1962.



For Air and Space Navigational Guidance Equipment; Air and Space Vehicle Tracking Equipment; Communications Equipment Including Transmitters, Receivers, and Telemetry and Data Transmission Apparatus; Computing Equipment Including Analog-to-Digital Converters and Switching Networks; Ground Checkout Equipment Including Data Reduction Apparatus and Apparatus for Checking Out Airborne Telemetry Systems; and Remote Control Equipment.
First use in or about November 1961.

Class 27 — Horological Instruments

SN 126,239. Leading Jewelers Association, Inc., Los Angeles, Calif. Filed Aug. 18, 1961.

Paul Monét

"Paul Monét" is a fictitious name.
For Watches.
First use July 27, 1961.

SN 133,332. Sunbeam Corporation, Chicago, Ill. Filed Dec. 4, 1961.

NIGHT LIGHTER

For Clocks.
First use May 10, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 94,866. Hickok Manufacturing Co., Rochester, N.Y., assignee, by mesne assignment and change of name, of Pioneer Industries, Inc., Darby, Pa. Filed Apr. 11, 1960.

Pioneer

from the
Versailles Collection

Owner of Reg. No. 178,791.
For Cuff Links, Collar Pins, Tie Bars, Tie Fobs, Studs, Key Chains, Money Clips and Vest Buttons, Made of Precious Metal or Ornamented With Same.
First use Feb. 8, 1960.

SN 123,231. Rodi & Wienenberger Aktiengesellschaft, Pforzheim, Germany. Filed June 30, 1961.

FIXOLUX

Owner of German Reg. No. 746,534, dated Mar. 9, 1961; and U.S. Reg. Nos. 626,537 and 710,607.
For Precious-Metal and Costume Jewelry, Watch Straps Made of Metal.

SN 123,232. Rodi & Wienenberger Aktiengesellschaft, Pforzheim, Germany. Filed June 30, 1961.

SUPERFLEX

Owner of German Reg. No. 745,564, dated Feb. 9, 1961.
For Precious-Metal and Costume Jewelry, Watch Straps Made of Metal.

SN 130,299. Popper Watch Co. Inc., New York, N.Y. Filed Oct. 19, 1961.

NITTO

For Jewelry—Namely, Rings, Pins, and Earrings.
First use Jan. 1, 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 129,322. Acme Brush Corporation, New York, N.Y. Filed Oct. 6, 1961.



The mark consists of a "Pyramid A" design.
For Paint Applying Devices—Namely, Brushes and Roller Applicators.
First use on or about Jan. 20, 1959.

Class 30 — Crockery, Earthenware, and Porcelain

SN 64,104. Shenango China, Inc., New Castle, Pa. Filed Dec. 11, 1958.

SHEPOCO

For Chinaware—Namely, Dinnerware.
First use in or before 1935.

SN 78,640. McNicol China Company, Clarksburg, W. Va. Filed July 29, 1959.

Therm - Oven China
PORTION CONTROLLED
McNICOL CHINA

The words "China" and "Portion Controlled" are disclaimed apart from the mark as shown.
For Chinaware Food Receptacles.
First use June 29, 1959.

SN 139,240. Royal Saxe Corporation, New York, N.Y. Filed Mar. 6, 1962.



For Tea and Dinner Ware Sets Made of Porcelain or China—Namely, Plates, Cups and Saucers, Vases and Decorative Serving Tea Tiles.
First use Oct. 20, 1952.

Class 31 — Filters and Refrigerators

SN 127,734. David J. W. Timmersman, Minneapolis, Minn. Filed Sept. 12, 1961.

HIDDEN SPRING

For Water Cooler.
First use Aug. 10, 1961.

SN 131,111. Cryovac, Inc., d.b.a. Cryovac Incorporated, Columbus, Ohio. Filed Nov. 1, 1961.

CVI

For Cryogenic Pumping Systems, Cryogenic Processing Equipment, and Related Components Such as Cryogenic Fluid Handling Accessories and Panels.
First use June 1961.

SN 131,351. Cryovac, Inc., d.b.a. Cryovac Incorporated, Columbus, Ohio. Filed Nov. 6, 1961.



For Cryogenic Pumping Systems, Cryogenic Processing Equipment, and Related Components Such as Cryogenic Fluid Handling Accessories and Panels.
First use June 1961.

SN 133,052. Chase Industries, Inc., Reading, Ohio. Filed Nov. 30, 1961.

AIR-GARD

For Curtains for Use Particularly With Refrigerated Openings.
First use Jan. 1, 1958.

SN 133,842. Swimquip, Inc., d.b.a. Baker Filtration Company, El Monte, Calif. Filed Dec. 11, 1961.

BF

For Filters.
First use May 2, 1956.

SN 133,954. Harvey Ruel Holt, Gruver, Tex. Filed Dec. 13, 1961.

SANFRE

For Filter.
First use on or before Sept. 12, 1961.

SN 134,288. Swimquip, Inc., d.b.a. Baker Filtration Company, El Monte, Calif. Filed Dec. 18, 1961.

BAKER

For Filters.
First use May 2, 1956.

SN 134,362. Victory Metal Manufacturing Corporation, Plymouth Meeting, Pa. Filed Dec. 19, 1961.

VIMCO

Owner of Reg. Nos. 637,712 and 637,732.
For Refrigerators, Refrigerated Cases, Refrigerated Units, Frozen Food Cabinets and Accessories and Parts Thereof.
First use on or about May 10, 1945.

SN 134,513. Belknap Hardware and Manufacturing Company, Louisville, Ky. Filed Dec. 22, 1961.

BLUE GRASS

Owner of Reg. Nos. 70,312, 666,299 and others.
For Water Coolers.
First use 1902.

SN 134,889. Arthur D. Little, Inc., Cambridge, Mass. Filed Dec. 29, 1961.

ADL

For Cryogenic Apparatus.
First use May 1957.

SN 134,891. Marx & Cie, Basel, Switzerland. Filed Dec. 29, 1961.

rexor

Owner of Swiss Reg. No. 172,005, dated July 14, 1958.
For Refrigerators, Refrigerating Chests, Refrigerating Plants and Refrigerating Installations.

Class 32 — Furniture and Upholstery

SN 122,328. La France Dry Cleaners, Inc., Youngstown, Ohio. Filed June 19, 1961.

Applicant disclaims "Quality Planned Kitchens" apart from the mark as shown.
For Wood and Metal Kitchen Cabinets.
First use May 15, 1961.

SN 133,101. Theratron Corporation, St. Paul, Minn. Filed Nov. 30, 1961.



For Mattress-Like Pad for Use as a Floor Pad for Performing Exercises, a Litter Pad, or a Mattress for Camping, Emergency Bedding or the Like.
First use Oct. 17, 1961.

SN 136,995. B. G. Mesberg Corp., New York, N.Y. Filed Jan. 31, 1962.



For Bedroom, Dining Room, Living Room and Kitchen Furniture—Namely, Beds, Benches, Bookcases, Breakfronts, Cabinets, Chairs, Chests, Dressers, Head Boards, Couches, Love Seats, Sofas, Stands, Stools, Tables, Wardrobes and Framed Mirrors.
First use on or about Jan. 10, 1962.

SN 137,144. Majestic Seat Company, Inc., Newnan, Ga. Filed Feb. 2, 1962.

DOLPHIN

For Child's Toilet Training Chairs.
First use Jan. 5, 1962.

SN 137,293. Virco Mfg. Corporation, Los Angeles, Calif. Filed Feb. 5, 1962.

MARTEST

For Plastic Seats and Backs for Chairs and Desks.
First use Nov. 1, 1961.

SN 137,652. Palmer-Shile Company, Detroit, Mich. Filed Feb. 9, 1962.



Owner of Reg. No. 659,821.
For Materials Handling Equipment—Namely, Stands, Bar Racks, Pallet Racks and Steel Storage Racks.
First use Mar. 27, 1961.

Class 33 — Glassware

SN 99,876. Rosenthal-Porzellan Aktiengesellschaft, Selb, Bavaria, Germany. Filed June 28, 1960.



For Table Glassware—Namely, Tumblers and Drinking Glasses.
First use Dec. 9, 1959; in commerce Dec. 9, 1959.

SN 139,061. Federal Paperboard Company, Inc., Columbus, Ohio. Filed Mar. 5, 1962.

YORKTOWN CRYSTAL

Applicant disclaims the word "Crystal" used apart from the mark as shown.
For Glass Tableware.
First use Jan. 15, 1962.

SN 140,944. HMH Publishing Co. Inc., Chicago, Ill. Filed Mar. 28, 1962.

FEMLIN

For Drinking Glasses and Martini Mixers Made of Glass.
First use Jan. 26, 1962.

SN 141,296. HMH Publishing Co., Inc., Chicago, Ill. Filed Apr. 2, 1962.



For Drinking Glasses and Martini Mixers Made of Glass.
First use Jan. 26, 1962.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 118,942. Bohn Aluminum & Brass Corporation, Detroit, Mich. Filed May 1, 1961.

LO-AIRE

For Space Cooling Apparatus.
First use Mar. 23, 1961.

SN 133,278. Koeller Air Products, Inc., Clifton, N.J. Filed Dec. 4, 1961.

KAPCO

For Oxyacetylene Welding and Cutting Equipment.
First use Mar. 22, 1960.

SN 133,296. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed Dec. 4, 1961.

FAIRWAY

Owner of Reg. Nos. 664,936, 672,136, and 713,518.
For Ventilating and Exhaust Fans, Fan Vent Shutters, Gas-Fired and Oil-Fired Boilers, Gas Water Heaters, Electric Water Heaters, Oil-Fired Water Heaters, Radiators, Gas Wall Heaters, Blower Conversion Units, Heating Ducts and Diffusers.
First use Jan. 31, 1958.

SN 133,704. Regaw Corporation, South Orange, N.J. Filed Dec. 8, 1961.

SHELTERSCOPE

For Periscope and Ventilating Assembly for Fallout and Blast Shelters.
First use Oct. 24, 1961.

SN 133,847. L. B. White Company, Inc., La Crosse, Wis. Filed Dec. 11, 1961.

LITTLE DAISY

For Portable Circulating Heaters.
First use Aug. 19, 1960.

SN 133,915. Whirlpool Corporation, Benton Harbor, Mich. Filed Dec. 12, 1961.

HEATROLA

Owner of Reg. No. 149,378.
For Ranges, Ovens and Surface Cooking Units.
First use Jan. 10, 1961.

SN 137,478. L. B. White Company, Inc., La Crosse, Wis. Filed Feb. 7, 1962.

BIG DAISY

For Portable Circulating Heaters.
First use Nov. 24, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 107,800. Amerace Corporation, New York, N.Y., assignee of Swan Rubber Company, Bucyrus, Ohio. Filed Nov. 3, 1960.

SWAN

For Hose Comprising Lawn and Garden Hose and Sprinkler, Welding, Utility, Drain, Water, Mixer and Inlet Hoses, and Nonmetallic Tires.
First use at least May 7, 1940.

SN 118,675. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. Filed Apr. 26, 1961.

TREVIRA

Owner of German Reg. No. 743,499, dated Dec. 12, 1960; and U.S. Reg. Nos. 690,881, 711,159, and others.
For Endless Straps and Webbing for Industrial and Technical Purposes—i.e., Drive Belts and Hoses for Transmission of Fluids, e.g. Fire Hoses, Garden Hoses, and Hoses for Various Industrial and Technical Purposes.

SN 121,922. William H. Harvey Co., Omaha, Nebr. Filed June 13, 1961.

"NO-SEEP"

Owner of Reg. No. 607,444.
For Combined Sleeve and Wax Gasket for Setting Toilet Bowls.
First use on or about Oct. 10, 1953.

SN 128,428. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Sept. 22, 1961.

Flexwing

For Tank Truck Hose Made Wholly or Principally of Rubber.
First use June 19, 1961.

Class 36 — Musical Instruments and Supplies

SN 124,786. Wightman Electronics, Inc., Easton, Md. Filed July 26, 1961.

Call of the Wild

For Record Player and Loud Speaker, Sold as a Unit.
First use Sept. 15, 1955.

Class 37 — Paper and Stationery

SN 120,382. Leader Cards, Inc., Milwaukee, Wis. Filed May 19, 1961.

WINCREST

For Commercial and Social Cards and Envelopes in Blank Form.
First use Feb. 2, 1961.

SN 120,878. P. H. Glatfelter Company, Spring Grove, Pa. Filed May 26, 1961.

P. H. GLATFELTER CO.
QUALITY PAPERS SINCE 1864

No claim is made to the words "Quality Paper Since 1864" except in the association shown.
For Writing Papers, Commercial Printing Papers, Book Publishing Papers, and Converting Papers.
First use Nov. 4, 1960.

SN 127,218. Fraser Paper, Limited, Madawaska, Maine. Filed Sept. 5, 1961.

KEDGWICK

For Offset Book Papers Used for Books, Annual Reports and the Like, and for Papeterie Papers Used for Greeting Cards.
First use Mar. 1, 1961.

SN 133,217. Columbia River Paper Co., Portland, Oreg. Filed Dec. 4, 1961.

TIMBERLINE

Owner of Reg. No. 548,175.
For Mimeographing Paper Used for Making Copies on Mimeograph Machines.
First use Aug. 1, 1954.

SN 135,307. Theodore Presser Company, Bryn Mawr, Pa. Filed Jan. 3, 1962.

Etude

Owner of Reg. No. 524,779.
For Music Manuscript Paper.
First use Aug. 8, 1961.

Class 38 — Prints and Publications

SN 132,659. Encyclopaedia Britannica Films Inc., Wilmette, Ill. Filed Nov. 24, 1961.

TEMAC

For Programmed Learning Materials in Kit or Book Form and Containing Printed Instructional Materials With Occasional Audio Components, for Use as Textbooks.
First use July 28, 1961.

SN 132,754. Donald H. Sharp, Sturgis, Ky. Filed Nov. 24, 1961.

SERMO-MAGIC

For Religious Printed Material To Assist in Preparation of Sermons and Similar Lectures.
First use Sept. 29, 1961.

SN 133,466. Haire Publishing Company, New York, N.Y. Filed Dec. 6, 1961.

GIFT & TABLEWARE
reporter

For Trade Magazine Produced Monthly.
First use Nov. 22, 1961.

SN 134,379. Diesel Publications, Inc., Stamford, Conn. Filed Dec. 20, 1961.

DIESEL EQUIPMENT SUPERINTENDENT

For Monthly Magazine Relating to Diesel Equipment.
First use Nov. 15, 1961.

Class 39 — Clothing

SN 96,350. J J Newberry Co., New York, N.Y. Filed May 3, 1960.

STANDWEAR

For Men's and Boys' Dress Shirts, Sport Shirts, Pajamas, Neck-Ties, Underwear, Knitted Sport Shirts, Belts and Suspenders, Rainwear, Suits, Slacks, Hats and Caps, Overalls, Dungarees, Semi-Dress Pants.
First use 1936.

SN 104,285. London Knitwear G.m.b.H., Giessen, Germany. Filed Sept. 12, 1960.

LONDON Knitwear

The words "London Knitwear" are disclaimed apart from the mark as shown. Owner of German Reg. No. 667,799, dated Dec. 8, 1954.
For Knitted Wearing Apparel for Men, Women, and Children—Namely, Pullovers, Vests, Dresses, Two-Piece Dresses, Suits and Coats.

SN 106,071. Endicott Johnson Corporation, Endicott, N.Y. Filed Oct. 10, 1960.

DEL RIO

For Women's Shoes.
First use Sept. 8, 1960.

SN 121,354. Ernest H. Bowling, d.b.a. Bowling Sales Co., Charleston, W. Va. Filed June 5, 1961.

CHARLESTONIAN

For Shoes for Infants, Children, Ladies and Men.
First use Apr. 17, 1961.

SN 121,825. Maurice Holman, Inc., Los Angeles, Calif. Filed June 12, 1961.

THERMEX

For Men's and Boys' Jackets.
First use Jan. 3, 1961.

SN 123,439. Sbicca of California, El Monte, Calif. Filed July 5, 1961.

FRANK Sbicca ORIGINALS

The word "Originals" is disclaimed apart from the balance of the mark as shown in the drawing. Owner of Reg. Nos. 411,483 and 681,873.
For Women's Shoes.
First use Mar. 30, 1961.

SN 124,093. Imperial Shirt Corp., New York, N.Y. Filed July 17, 1961.

The Imperial Lady

Owner of Reg. No. 91,127.
For Overalls, Work Shirts, Rompers, and Women's Shirts and Blouses.
First use Apr. 17, 1961.

SN 124,618. Alix of Miami, Inc., Miami, Fla. Filed July 25, 1961.

Alix International

Owner of Reg. Nos. 632,740, 726,002, and others.
For Women's Outer Camisoles and Bras, Outer Shorts and Shirt Combinations, Swim Suits, Pedal Pushers, Slacks, Jackets, Blouses, Skirts, Beach Coats and Dresses, and Men's Shirts, Shorts, Slacks, Swim Suits, Sport Jackets and Beach Coats.
First use in or about June 1961.

SN 126,036. Midwest Outerwear Mfg. Co., Port Washington, Wis. Filed Aug. 15, 1961.

SITZMARK

The drawing is lined for shading purposes only.
For Men's and Women's Outer Garments—Namely, Men's and Women's Ski Jackets and Ski Pants.
First use June 6, 1961.

SN 126,275. Tip-Top Hosiery Mills, Inc., Asheboro, N.C. Filed Aug. 18, 1961.

DURA
STRETCH
TOP

No claim is made to the words "Stretch Top" apart from the mark shown in the drawing.
For Hosiery for Men, Women, and Children.
First use Aug. 9, 1961.

SN 126,577. John E. Cosgrove, d.b.a. Foam Products Company, Union, N.J. Filed Aug. 24, 1961.

MR. FOAMY

For Wearing Apparel—Namely, Pre-Formed Ties.
First use Aug. 11, 1961.

SN 127,633. Gino Paoli, Clifton, N.J. Filed Sept. 11, 1961.

GINO PAOLI

"Gino Paoli" is a fictitious name and not that of any living individual.
For Men's, Women's, and Children's Coats, Suits, Dresses, Sweaters, Shirts, Slacks, Shorts, Bathing Suits, Beach Jackets, Beach Robes, and Blouses.
First use July 15, 1956.

SN 127,634. Gino Paoli, Clifton, N.J. Filed Sept. 11, 1961.

Gino Paoli

"Gino Paoli" is a fictitious name and not that of any living individual.
For Men's, Women's, and Children's Coats, Suits, Dresses, Sweaters, Shirts, Slacks, Shorts, Bathing Suits, Beach Jackets, Beach Robes, and Blouses.
First use July 15, 1956.

SN 128,704. R. G. Barry Corporation, Columbus, Ohio. Filed Sept. 27, 1961.

Snugfeets

For House Slippers.
First use Dec. 10, 1952.

SN 129,621. Mandarin Textiles Limited, Kowloon, Hong Kong. Filed Oct. 10, 1961.

DYNASTY

Owner of U.S. Reg. Nos. 578,869, 689,144, and 728,596.
For Sweaters.
First use Sept. 29, 1961; in commerce Sept. 29, 1961.

SN 131,262. Bata Shoe Company, Inc., Belcamp, Md. Filed Nov. 3, 1961.

SUSAN BOOTS

Applicant disclaims the word "Boots" apart from the mark as shown.
For Plastic Boots for Children.
First use Oct. 25, 1961.

SN 131,690. Kennington, Ltd., Los Angeles, Calif. Filed Nov. 9, 1961.



For Men's Sport Shirts and Dress Shirts.
First use Aug. 10, 1960.

SN 131,990. Petitemaker Inc., New York, N.Y. Filed Nov. 14, 1961.

demi Petite maker

Owner of Reg. No. 688,389.
For Ladies' Dresses and Suits.
First use Sept. 15, 1961.

SN 133,093. A. Schreter & Sons Co., Inc., Baltimore, Md. Filed Nov. 30, 1961.

SHIR-O-SHAKKAR KING OF WASHABLE NECKWEAR

The words "of Washable Neckwear" are disclaimed apart from the mark as shown.
For Neckties and Bow Ties.
First use May 15, 1934.

SN 133,566. Kennington, Ltd., Los Angeles, Calif. Filed Dec. 7, 1961.

GENTLEMEN'S LEISURE

For Men's Sportswear—Namely, Sport Shirts and Dress Shirts.
First use Nov. 17, 1961.

SN 134,562. Park Fashions, Inc., New Britain, Conn. Filed Dec. 22, 1961.

AMERICAN BAZAAR

The drawing is lined for red and blue, although the mark is not limited thereto.
For Ladies' Garments—Namely, Dresses, Suits, Coats, and Rain Apparel.
First use Nov. 6, 1961.

SN 134,574. Russell Stern Associates, Inc., Buffalo, N.Y. Filed Dec. 22, 1961.

DASH-ABOUT

For Ladies' Dresses.
First use Dec. 11, 1961.

SN 134,612. Cherberg Company, Inc., Philadelphia, Pa. Filed Dec. 26, 1961.



Owner of Reg. No. 708,121.
For Dresses.
First use Dec. 14, 1961.

SN 134,952. Danny Dare, Inc., Kansas City, Mo. Filed Jan. 2, 1962.

DANNY DARE

The name "Danny Dare" is the name of a fictitious person and is not the name of any particular living individual.
Owner of Reg. No. 633,209.
For Boyswear for Infants, Toddlers and Boys—Namely, Shirts, Pants, Suits, Shorts, Overalls, Slacks, Ski Pants, Sweatshirts, Sunsuits, Baseball and Novelty Suits, Coats, Jackets, Raincoats, Swimwear, Blue Jeans, Sweaters, Hats and Caps.
First use Nov. 2, 1946.

SN 135,277. Lansdale Clothes, Inc., New York, N.Y. Filed Jan. 5, 1962.

GASLIGHT

Owner of Reg. No. 694,599.
For Men's Slacks, Shirts, Shorts, and Underwear.
First use Jan. 2, 1959.

SN 135,719. Paul Sachs Originals Co., St. Louis, Mo. Filed Jan. 12, 1962.

JACQUELINE ARPEL

The name "Jacqueline Arpel" is fanciful.
For Ladies' and Misses' Wearing Apparel—Namely, Dresses, Blouses, Skirts, Slacks, Shorts, Jackets, and Suits.
First use Jan. 5, 1962.

SN 136,133. S. S. Kresge Company, Detroit, Mich. Filed Jan. 19, 1962.

PONTIAC

For Boys' Hosiery.
First use Dec. 20, 1961.

SN 136,187. Barney's Clothes, Inc., New York, N.Y. Filed Jan. 22, 1962.

BARNEY'S

Owner of Reg. Nos. 350,894 and 413,944.
For Men's Suits, Overcoats, Topcoats, Raincoats, Tuxedos, Sport Coats, Jackets, Trousers, Vests and Slacks.
First use 1937.

SN 136,245. International Latex Corporation, Dover, Del. Filed Jan. 22, 1962.

INSULATEX

For Lining Incorporated in Gloves.
First use Jan. 15, 1962.

SN 136,399. The Salem Company, Inc., Winston-Salem, N.C. Filed Jan. 23, 1962.

OLD SALEM

Owner of Reg. No. 502,956.
For Sportswear for Women, Girls and Children—Namely, Jeans, Slacks, Shorts, Skirts, Jackets, Blouses and Sweaters.
First use Sept. 4, 1946.

SN 136,524. Associated Dry Goods Corporation, New York, N.Y. Filed Jan. 25, 1962.

YoungSet

For Children's Underwear.
First use Dec. 29, 1961.

SN 136,627. Bow Shirts, Inc., Cleveland, Ohio. Filed Jan. 26, 1962.

Bow

For Shirts.
First use Nov. 2, 1961.

SN 136,679. Rosecrest Incorporated, Boston, Mass. Filed Jan. 26, 1962.

ROSECREST

For Ladies' Wearing Apparel—Namely, Skirts, Shorts, Slacks, Dresses, Suits, Blouses, Jackets, Sweaters, Coats, and Coordinates.
First use on or about Apr. 15, 1945.

SN 137,041. Champ Hats, Inc., Philadelphia, Pa. Filed Feb. 1, 1962.

SPACEWEIGHT

For Hats.
First use Nov. 22, 1960.

Class 40—Fancy Goods, Furnishings, and Notions

SN 90,239. Elastic S.A., Basel, Switzerland. Filed Feb. 3, 1960.

ZIG·ZAG

Owner of U.S. Reg. Nos. 375,666 and 376,731.
For Elastic and Non-Elastic Braids, Cords, Webbing and Tapes for Shoulder Straps, Suspenders, Garters and the Like.
First use June 25, 1934; in commerce June 25, 1934.

SN 108,925. Trimtex Inc., Williamsport, Pa. Filed Nov. 22, 1960.

NUFASHOND

Owner of Reg. Nos. 94,301, 316,545, and others.
For Bias Tape, Trimmings, Piping, Rick Rack, Binding, Belting, Elastic and Fancy Braids.
First use Feb. 9, 1960; Jan. 1, 1912, as to trademark "Nufashond."

SN 118,606. P. L. Robertson Mfg. Co. Limited, Milton, Ontario, Canada. Filed Apr. 25, 1961.

PAR-T-PAK

Owner of Canadian Reg. No. 121,241, dated Feb. 17, 1961.
For Notions—Namely, Safety Pins, Hair Clips, Bobby Pins, and Hair Pins.

SN 133,373. Henry A. Dix & Sons Corporation, New York, N.Y. Filed Dec. 5, 1961.

Dix-Make

For Waist Bands for Uniforms, Shields for Uniforms, Elastic Webbing for Uniforms, Bias Fold Tape and Bindings Used in Making Uniforms, Fabric Tape and Trimming and Braids Used in the Making of Uniforms, Aprons, Collars and Cuff Sets, and Dresses.
First use Aug. 9, 1935.

SN 133,475. Lord and Lady Windsor Inc., New York, N.Y. Filed Dec. 6, 1961.

DURELLE

For Wigs.
First use Oct. 11, 1961.

SN 133,705. Rhode Island Textile Company, Pawtucket, R.I. Filed Dec. 8, 1961.

STAY-TY

Owner of Reg. No. 520,962.
For Shoe Laces.
First use Sept. 23, 1948.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 119,779. Graniteville Company, Graniteville, S.C., assignee of McCampbell & Company, Inc., New York, N.Y. Filed May 11, 1961.

Weatherized

For Fabrics Such as Poplins, Twills, Sateens, Bonded to Foam, Used for Coats, Jackets, Slacks and the Like.
First use Mar. 23, 1961.

SN 119,795. Regal Rugs, Inc., North Vernon, Ind. Filed May 11, 1961.

DOWNY-TUFT

For Textile Rugs and Carpets.
First use Apr. 11, 1961.

SN 123,114. Mandarin Textiles Limited, Kowloon, Hong Kong. Filed June 29, 1961.

DYNASTY

Owner of Reg. Nos. 578,869 and 689,144.
For Fabrics Made of Silk and Mixtures Thereof, and Synthetic Fibers, Such as Rayon or Mixtures Thereof.
First use 1951; in commerce September 1952.

SN 124,190. Graniteville Company, Graniteville, S.C. Filed July 18, 1961.

COBOND

Owner of Reg. No. 637,230.
For Textile Fabrics Having Laminated Thereto Synthetic Plastic Foams and Films Used in Making Wearing Apparel.
First use June 2, 1961.

SN 125,710. The American Fabrics Company, Bridgeport, Conn. Filed Aug. 10, 1961.

AFC

Owner of Reg. No. 565,896.
For Embroidered, Printed or Lace-Trimmed Goods Comprising: Piece Goods, Luncheon Sets, Pillow Cases, Bed Sheets, Furniture Scarfs, Doilies, Runners, Towels, Table Cloths and Chair Back Sets, All of Cotton, Linen and Synthetic Fibres, Woven Narrow Fabrics and Nets in the Piece.
First use in 1923.

SN 129,865. Burlington Industries, Inc., New York, N.Y., assignee of Hess, Goldsmith & Co., Inc., New York, N.Y. Filed Oct. 13, 1961.

BURLINGTON GLASS FABRICS

Applicant disclaims the words "Glass Fabrics" apart from the mark as shown. Owner of Reg. Nos. 49,211, 634,114, and others.
For Textile Fabrics in the Piece Made of Glass Fibers.
First use Sept. 14, 1961.

SN 131,474. Dorron Industries, Inc., New York, N.Y. Filed Nov. 7, 1961.

WELDEX

For Textile Fabrics Employed To Reinforce or Stiffen Portions of Garments Such as Coats, Suits, Dresses and Other Wearing Apparel.
First use in or about October 1961.

SN 131,481. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Nov. 7, 1961.

REEMAY

For Fabrics of Man-Made Fibers and Filaments.
First use on or about Oct. 11, 1961.

SN 131,794. Big 3 Textile Corp., New York, N.Y. Filed Nov. 13, 1961.

WEATHER KNIT MILLS

Applicant disclaims any exclusive right to the use of the textile words "Knit Mills."
For Textile Fabrics Used for Making Into Coats, Suits, Jackets, Sweaters, Blouses, Dresses and the Like.
First use February 1961.

SN 132,864. J. J. O'Donnell Woolens, Inc., Farnumsville, Mass. Filed Nov. 27, 1961.

Wool of Switzerland
HEIGHT OF FASHION FROM TOP OF THE WORLD

No claim is made to the words "Wool of Switzerland" and "Height of Fashion" apart from the mark as shown.
For Woolen Piece Goods.
First use Aug. 4, 1961.

SN 135,234. Silveco Rubber Products, Inc., Chicago, Ill. Filed Jan. 4, 1962.

SILVAIRE-FOAM

For Fabric Coated Polyurethane Foam in Sheet Form or as Yard Goods Used To Make Contour Bust Forms in the Manufacture of Brassieres and Corsets.
First use Aug. 28, 1960.

SN 135,469. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 9, 1962.

MILLROCK

For Piece Goods of Wool and Combinations of Wool and Synthetic Fibers.
First use Aug. 24, 1961.

SN 135,470. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 9, 1962.

PIMADELLE

Owner of Reg. Nos. 634,902 and 668,107.
For Piece Goods of a Combination of Pima Cotton and Synthetic Fibers.
First use Sept. 27, 1961.

SN 136,221. Fieldcrest Mills, Inc., Spray, N.C. Filed Jan. 22, 1962.

Barsaleau

For Textile Rugs and Carpeting.
First use Dec. 30, 1961.

SN 136,490. Philadelphia Felt Company, Philadelphia, Pa. Filed Jan. 24, 1962.

PF CO

For Felt.
First use Jan. 20, 1956.

SN 136,565. The Kendall Company, Walpole, Mass. Filed Jan. 25, 1962.

WEBLOX

Owner of Reg. Nos. 565,501, 701,556, and 534,461.
For Non-Woven Fabrics Made From Textile Fibers, or Mixtures Thereof, and Such Non-Woven Fabrics in Combination With Other Textile Fabrics, in the Piece and in Cut Lengths or Sizes, for Use as Substitutes for Knitted, Netted and Woven Fabrics and the Like.
First use Oct. 5, 1961.

SN 136,601. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 25, 1962.

STEVENSTEX

Owner of Reg. Nos. 511,773, 708,137, and others.
For Nylon Tricot in the Piece for Lingerie, Dresses and Blouses.
First use Nov. 7, 1961.

SN 136,603. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 25, 1962.

ECHELON

For Piece Goods of Wool and Synthetic Fibers and Combinations Thereof.
First use Oct. 19, 1961.

SN 136,604. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 25, 1962.

HITEMP

For Fabrics of Glass Fibers for Industrial Purposes.
First use Oct. 10, 1961.

SN 136,662. The Kendall Company, Walpole, Mass. Filed Jan. 26, 1962.

WEBLINE

Owner of Reg. Nos. 565,501, 701,556, and 534,461.
For Non-Woven Fabrics Made From Textile Fibers, or Mixtures Thereof, and Such Non-Woven Fabrics in Combination With Other Textile Fabrics, in the Piece and in Cut Lengths or Sizes, for Use as Substitutes for Knitted, Netted and Woven Fabrics and the Like.
First use Oct. 25, 1961.

Class 43 — Thread and Yarn

SN 134,934. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Jan. 2, 1962.

BERNAT

Owner of Reg. Nos. 390,817 and 656,877.
For Hand Knitting Yarns.
First use Jan. 1, 1925.

SN 136,381. Lohrke Textiles, Inc., Philadelphia, Pa. Filed Jan. 23, 1962.

LORTWEED

For Textile Yarns.
First use Oct. 31, 1961.

SN 136,452. The Dow Chemical Company, Midland, Mich. Filed Jan. 24, 1962.

ZEFKROME

Owner of Reg. Nos. 647,642, 716,557, and others.
For Synthetic Yarn.
First use Dec. 28, 1961.

Class 44 — Dental, Medical, and Surgical Appliances

SN 118,676. Farbwerke Hoechst Aktiengesellschaft vormala Meister Lucius & Bruning, Frankfurt am Main, Germany. Filed Apr. 26, 1961.

TREVIRA

Owner of German Reg. No. 743,499, dated Dec. 12, 1960; and U.S. Reg. Nos. 690,881, 711,159, and others.
For Adhesive Plaster, Court Plaster, Bandaging Materials, Bandages, Hose for Medical Purposes.

SN 127,671. Testa Laboratorium A/S, Copenhagen-Vanlose, Denmark. Filed Sept. 11, 1961.

AMBU

Priority claimed under Sec. 44(d) on Danish application filed June 7, 1961; Reg. No. 1962–166, dated Jan. 27, 1962. Owner of U.S. Reg. No. 705,020.

For Apparatus for Demonstrating and Practicing Life Saving and Other Medical and Surgical Techniques, Including Anatomical Models; Carrying Cases and Other Containers for Such Apparatus; and Brochures, Instructions, Textbooks, and Visual Aids for Use With Such Apparatus.

SN 129,176. Van H. Steel, d.b.a. Kemolux Electronics Company, San Carlos, Calif. Filed Oct. 3, 1961.

KEM-O-LUX

For Electronic Instrument for Energizing and Activating Oxygen of Indoor Air in Biochemical Therapy for Treatment of Respiratory and Inflammatory Conditions, Essential Hypertension and Skin Dysfunctions.

First use June 15, 1960.

SN 131,010. Cardiosonics Medical Instruments Company, Belmont, Mass. Filed Oct. 31, 1961.

CARDIOSONICS

For Medical Instruments Such as Catheterization Valves, Electrocardiograph Electrodes, Catheter Guides, and Venous Manometers.

First use about June 1960.

SN 133,639. Helene Curtis Industries, Inc., Chicago, Ill. Filed Dec. 8, 1961.

SUE CORY

The mark "Sue Cory" is a fictitious name.

For Electrically Heated Hair Dryers and End Papers.

First use on or about July 20, 1959, on end papers.

SN 134,644. Interstate Transactions, Inc., Seattle, Wash. Filed Dec. 26, 1961.

AQUA-LAXER

For Hydro-Therapy Bath Tub Mat.

First use Aug. 15, 1961.

SN 134,721. Ceramco, Inc., Woodside, N.Y. Filed Dec. 27, 1961.

CERAMCOTE

Owner of Reg. No. 696,494.

For Metal Conditioner and Liquid for Dental Use.

First use on or about Aug. 16, 1961.

SN 134,973. Guild Hearing Aid Dispensers Inc., Newton, Mass. Filed Jan. 2, 1962.

HEARING AID GUILD DISPENSERS

The words "Hearing Aid" and "Dispensers" are hereby disclaimed apart from the mark as shown.

For Hearing Aids.

First use Oct. 18, 1961.

Class 45 — Soft Drinks and Carbonated Waters

SN 115,457. Eljon Co., Inc., Ontario, Calif. Filed Mar. 13, 1961.

3-11

For Fountain Syrups for Making Soft Drinks.

First use July 20, 1960.

SN 137,038. Calcific Products, Inc., San Francisco, Calif. Filed Feb. 1, 1962.

CALCIFIC C P I

For Canned Drinking Water.

First use Jan. 19, 1962.

Class 46 — Foods and Ingredients of Foods

SN 113,630. Euram Foods, Incorporated, Grand Rapids, Mich. Filed Feb. 14, 1961.

SWISS ROLLS

No claim of exclusive right is made to "Rolls," said word being a generic reference to the goods.

For Coated or Uncoated Filled Cake Rolls.

First use 1960.

SN 119,200. Greenleaf Producers, Kansas City, Mo. Filed May 3, 1961.

CEROLIFE

For Food Products—Namely, Dehydrated Cereal Grass Leaves.

First use Apr. 26, 1961.

SN 119,349. E. J. Brach & Sons, Chicago, Ill. Filed May 5, 1961.

HOLIDAY MIX

The word "Mix" is disclaimed apart from the mark as shown.

First use May 31, 1951.

For Candy.

SN 119,953. Foremost Dairies, Inc., San Francisco, Calif. Filed May 15, 1961.

Foremost

Owner of Reg. Nos. 301,356, 654,858, and others.

For Fresh Fluid Foods: Milk, Cream, Buttermilk, Nonfat Milk, Chocolate Milk, Concentrated Milk; Diet Food—Namely, a Modified Milk Product With Added Vitamins and Minerals Containing 900 Calories per Quart, Egg Nog, Orange Juice, Guava Nectar and Fruit Punch; Canned Fluid Foods:

Evaporated Milk, Sterilized Chocolate Milk and Sterilized Chocolate Drink; Powdered Foods: Nonfat Dry Milk and Dry Whole Milk; Frozen Foods: Ice Cream, Ice Milk, Sherbet, Imitation Ice Cream, Ice Milk Bars and Frozen Confections in Bar Form; Other Foods for Human Consumption: Cottage Cheese, Hard Cheese, Processed Cheese, Refrigerated Prepared Salads, Butter, Oleomargarine and Fresh Eggs; and Animal Foods: Pet Food—Namely, a Dog Milk Formula, Poultry Feed and Feed for Farm Animals—Namely, a Milk Supplement for Calves and Pigs.

First use Oct. 24, 1959, on dry whole milk.

SN 120,076. Can-Meat Corp., Verona, N.J. Filed May 16, 1961.

MAFNIFICO

For Sausage Meats, Lard, and Canned, Vacuum Packed Potted Meat Preparation.

First use June 1949.

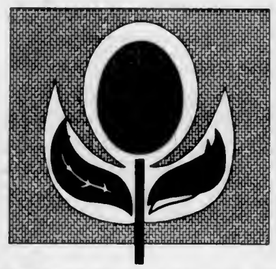
SN 120,405. Glenwood Products, Limited, Toronto, Ontario, Canada. Filed May 19, 1961.

GLENWOOD

Owner of Canadian Reg. No. 148, dated Apr. 20, 1950.

For Spices, Food Flavoring Extracts, Meatless Sauces, Baking Powder and Custard Powder.

SN 120,476. Armour and Company, Chicago, Ill. Filed May 22, 1961.



The drawing is lined for red, green, and gold.

For Margarine.

First use September 1958.

SN 120,534. Dolores E. Kashino, d.b.a. S and D Kashino, Pomona, Calif. Filed May 22, 1961.

KALOAS

For Food Product in the Form of a Sandwich Which Is Frozen for Storage and Transportation and Is Heated To Serve.

First use Feb. 7, 1961.

SN 120,620. J. S. Contas Bros. Inc., Boston, Mass. Filed May 23, 1961.

ROYAL OAK

For Canned Fruits, Canned Vegetables, Canned Tuna, Canned Bonita, Canned Tomato Puree, Canned Tomato Paste, Olives, Tomato Catsup, Salt, Pie Fillings, Jellies, and Jams.

First use Aug. 28, 1940.

SN 120,638. H. B. Hunter Co., Inc., Norfolk, Va. Filed May 23, 1961.

HUNTER'S

Owner of Reg. No. 142,279.

For Food Flavoring Extracts, Ice Cream Flavorings, Ice Cream Toppings—Namely, Fruit and Fruit Mixtures, Nuts, Caramel, Butterscotch and Chocolate, Food Syrups, Ice Cream Dips and Coatings, Sherbet Bases, Cocoa, Chocolate Base for Food Drinks, and Crushed Fruits.

First use 1910.

SN 120,826. H. R. Plate & Company Incorporated, San Francisco, Calif. Filed May 25, 1961.

PROMENADE

For Canned Fruit Juices.

First use Apr. 19, 1961.

SN 121,111. John Morrell & Co., Ottumwa, Iowa. Filed May 31, 1961.

QUIK CARV

For Cooked, Boneless, Smoked Ham.

First use July 13, 1960.

SN 127,392. Crown Nut Company, Inc., Kingston, Pa. Filed Sept. 7, 1961.

ASTRO NUTS

No claim of exclusive right is made to the word "Nuts" as the name of the goods herein.

For Edible Nuts, Salted and Unsalted, Shelled and Unshelled.

First use Mar. 20, 1961.

SN 128,503. Blue Water Seafoods, Inc., d.b.a. Institutional Seafoods Company, Cleveland, Ohio. Filed Sept. 25, 1961.

ARCTIC C

Owner of Reg. No. 627,958.

For Frozen Fish.

First use May 15, 1955.

SN 129,869. Lane Foods, Incorporated, Denver, Colo. Filed Oct. 13, 1961.

TRIPLE F favorite formula foods BRAND

The words "Favorite Formula Foods" and "Brand" are disclaimed apart from the mark as shown, without waiving applicant's common law rights.

For Frozen Combination Food Dishes Containing as a Principal Ingredient Egg Noodles.

First use Sept. 1, 1961.

SN 129,947. The Jenny Lind Candy Shops Limited, Toronto, Ontario, Canada. Filed Oct. 16, 1961.

JENNY LIND

Owner of Canadian Reg. Nos. 109/25621, dated Jan. 2, 1920; 103,574, dated June 15, 1956; and 103,575, dated June 15, 1956.

For Chocolates and Candies.

SN 129,962. Malcolm C. Mills, d.b.a. Mills, Mansfield & Company, Burlington, Vt. Filed Oct. 16, 1961.

East-woods

For Maple Syrup.
First use June 5, 1961.

SN 130,582. R & O Betancourt, Inc., Hato Rey, Puerto Rico. Filed Oct. 24, 1961.

Chic-  -Sweets

For Candy.
First use 1960.

SN 131,090. Uncle Ben's, Inc., Houston, Tex. Filed Oct. 31, 1961.

UNCLE BEN'S

Owner of Reg. Nos. 266,303, 595,292, and others.
For Food Mixes Consisting of Rice, Dehydrated Vegetables, Chicken or Meat Extracts, Spices, Seasonings and Other Food Ingredients.
First use spring of 1937 on rice.

SN 131,239. William H. Singer, Cheltenham, Pa. Filed Nov. 2, 1961.

Marie-Antoinette

For Canned Fish.
First use Oct. 16, 1961.

SN 131,718. Sigman Meat Company, Inc., Arvada, Colo. Filed Nov. 9, 1961.



No claim is made to the word "Quality."
For Bacon, Sausage and Smoked Meats.
First use in June 1938.

SN 132,297. Chesterton Candy Company, Chicago, Ill. Filed Nov. 20, 1961.

SMOOCHIES

For Candy and Peanut Butter.
First use Nov. 10, 1961.

SN 133,411. Emmet J. Purcell, d.b.a. Island Sun Company, San Francisco, Calif. Filed Dec. 5, 1961.

ISLAND SUN

Owner of Reg. No. 706,113.
For Canned Fruits.
First use on or about June 1, 1959.

SN 135,553. Allied Mills, Inc., Chicago, Ill. Filed Jan. 11, 1962.

WAYNE-MIX

Owner of Reg. Nos. 241,385, 671,979, and others.
For Concentrated Food Supplement for Use in Animal Feeds, and Animal Feeds Containing Said Supplement.
First use Jan. 9, 1960.

SN 137,859. Marine Trading, Inc., Long Beach, Calif. Filed Feb. 13, 1962.

White Waves

For Frozen Food Products—Namely, Swordfish Steaks.
First use Aug. 16, 1961.

SN 137,961. Dan Tudor & Sons, Delano, Calif. Filed Feb. 12, 1962.

TUDOR

Owner of Reg. No. 395,798.
For Fresh Grapes.
First use July 1938.

SN 140,627. Buitoni Foods Corporation, South Hackensack, N.J. Filed Mar. 26, 1962.

BUITONI

For Macaroni, Spaghetti, Egg Noodles, Meat Sauce for Macaroni Products, Meatless Sauce for Macaroni Products, Clam Sauce, Canned Tomatoes, Rice, Olive Oil, Tomato Paste and Tripe, Spaghetti and Meat Balls in Cans, Mushroom Sauce, Meatless Pizza Sauce, Bottled Roasted Peppers, Frozen Ravioli, Frozen Pizza, Grated Cheese, and Dehydrated Soup.
First use Feb. 19, 1941.

SN 141,917. Felix Zeloski, d.b.a. Zeloski Farms, Antigo, Wis. Filed Apr. 4, 1962.

STRAW HAT

For Raw Potatoes and Raw Onions.
First use Oct. 17, 1961.

SN 142,541. National Biscuit Company, New York, N.Y. Filed Apr. 18, 1962.

COOK-EEZ

For Cookie Mix.
First use Feb. 21, 1962.

Class 47—Wines

SN 130,577. José Pemartin y Cia. S.A., Jerez de la Frontera, Cadiz, Spain. Filed Oct. 24, 1961.

JOSÉ PEMARTIN

The mark was the name of the founder of applicant company, deceased. Owner of Spanish Reg. No. 20,046, dated Apr. 20, 1953.
For Wines.

Class 48—Malt Beverages and Liquors

SN 111,837. Aktieselskabet de Forenede Bryggerier, Copenhagen, Denmark. Filed Jan. 16, 1961.



Priority claimed under Sec. 44(d) on Danish application filed July 20, 1960; Reg. No. 2018–1960, dated Aug. 20, 1960.
For Beer.

Class 49—Distilled Alcoholic Liquors

SN 136,528. Barton Distilling Company, Chicago, Ill. Filed Jan. 25, 1962.

KG

For Whiskey.
First use Dec. 7, 1961.

Class 50—Merchandise Not Otherwise Classified

SN 129,125. James C. De Shazor, d.b.a. Combi-Clip Co., North Hollywood, Calif. Filed Oct. 3, 1961.

COMBI-CLIP

For Plastic Clip for Securing Together Multiple Containers and Serving as a Handle Element for Carrying the Assembled Containers.
First use Aug. 3, 1961.

Class 51—Cosmetics and Toilet Preparations

SN 112,194. Avon Products, Inc., New York, N.Y. Filed Jan. 23, 1961.

WHITE VELVET

For Cleansing Cream.
First use Dec. 21, 1960.

SN 133,519. Advance Brands, Inc., Chicago, Ill. Filed Dec. 7, 1961.

PREPARE

For Hair Pre-Conditioner.
First use Sept. 7, 1961.

SN 133,637. Colgate-Palmolive Company, New York, N.Y. Filed Dec. 8, 1961.

QUARRY

For Shaving Cream, After Shave Lotion, Hair Tonic, and Deodorant.
First use July 19, 1961.

SN 135,780. Joseph Diamond, d.b.a. Vanis Co. and Vanis Company, Philadelphia, Pa. Filed Jan. 15, 1962.

VANIS

Owner of Reg. No. 343,114.
For Deodorant.
First use 1919.

Class 52—Detergents and Soaps

SN 75,039. Wilmer A. Warfield, d.b.a. F & W Food Shopping Center, Washington, D.C. Filed June 3, 1959.



F & W

The words "Pink Mist" are disclaimed apart from the mark as shown. The drawing is lined to show the color red.
For Detergent for Use in Cleaning Eyeglasses, Windows, Windshields, Etc.
First use Apr. 16, 1959.

SN 116,670. Rick Laboratories, Inc., Mount Carmel, Ill. Filed Mar. 28, 1961.

S-W-I-S-H---OFF

For Chemical Preparation for Use in the Petroleum Industry for Removing Water and Paraffin From Oil Wells, Pipe Lines and Tanks and for Cleaning Trucks, Rigs, Tanks and Tools.
First use Aug. 1, 1960.

SN 137,266. Northwest Chemical Company, Detroit, Mich. Filed Feb. 5, 1962.

ALKALOX

For Metal Cleaning Compounds.
First use Feb. 10, 1959.

SERVICE MARKS

Class 100 — Miscellaneous

SN 118,924. Water-Sportsmen International, Inc., Fort Lauderdale, Fla. Filed Apr. 28, 1961.

WATER-SPORTSMEN

No claim is made to the wording "Water Sportsmen" apart from the mark shown, but applicant waives none of its common law rights therein.

For Services Rendered to Its Membership in Connection With Providing Information, Educational Facilities, Intelligence Report Systems, and Legislative Representation; and in Assisting in Securing Insurance and Assisting in Purchasing Equipment.

First use Feb. 1, 1961.

SN 132,296. Casady Engineering Associates, Beverly Hills, Calif. Filed Nov. 20, 1961.

CEA

For Engineering and Consulting Services in the Field of Equipment, Machinery, and Tool Design, Development and Processing.

First use Aug. 9, 1961.

Class 101 — Advertising and Business

SN 130,182. Computech, Inc., New York, N.Y. Filed Oct. 18, 1961.

COMPUTECH

For Data Processing and Related Services, Data Processing Consulting Services, Market and Applied Research Services, Numerical Analysis Services.

First use Nov. 13, 1956.

Class 102 — Insurance and Financial

SN 119,711. National Association of Schools and Publishers, Inc., Wilmington, Del. Filed May 10, 1961.

NSCS

For Delinquent Account Collection Services for Credit Card Operators.

First use Apr. 14, 1961.

SN 131,664. First Mortgage Investors, Boston, Mass. Filed Nov. 9, 1961.

For Financial Services—Namely, Managing and Investing the Funds of Others, Primarily in Mortgages on Real Estate.

First use Sept. 21, 1961.

SN 133,592. Alfred Lincoln Schonfeld, d.b.a. Alfred Lincoln Schonfeld C.L.U. & Associates, Great Neck, N.Y. Filed Dec. 7, 1961.



Applicant disclaims the word "Funding" apart from the mark as shown.

For Financial Services—Namely, Investing the Funds of Others.

First use Oct. 2, 1961.

SN 138,071. Allstate Insurance Company, Skokie, Ill. Filed Feb. 16, 1962.



Owner of Reg. Nos. 577,757, 719,067, and others.

For Underwriting of Vehicle Insurance Risks.

First use on or about Oct. 27, 1961.

SN 138,305. Irving Trust Company, New York, N.Y. Filed Feb. 20, 1962.

SAVEWAY

For Savings Account Service.

First use Oct. 13, 1961.

Class 103 — Construction and Repair

SN 132,764. Henry F. Teichmann, Inc., Peters Township, Washington County, Pa. Filed Nov. 24, 1961.



For Planning, Engineering, Designing, Building and Construction of Plants, of Apparatus, of Equipment, and of Machinery for Glass Manufacture and Fabrication, for Water Purification and for Production of Chemicals.

First use in July 1949.

Class 105 — Transportation and Storage

SN 130,696. Crouch Bros., Inc., St. Joseph, Mo. Filed Oct. 26, 1961.

CROUCH BROS. Inc.

The drawing is lined for the color red.

For Transportation of Goods by Motor Truck.

First use October 1956.

Class 106 — Material Treatment

SN 132,406. Western Piece Dyers & Finishers, Inc., Chicago, Ill. Filed Nov. 20, 1961.

Durabond



For Laminating the Fabrics of Others.

First use Aug. 9, 1961.

SN 134,098. District Photo, Inc., Washington, D.C. Filed Dec. 15, 1961.

Lustretone Prints

Applicant disclaims any exclusive right to the word "Prints" except as presented and/or as used in combination with the word "Lustretone."

For Photo-Finishing Services—Namely, Developing, Photo-Printing and Photo-Enlarging.

First use June 15, 1957.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

735,822. POLYMAX. Research Craft Corporation. SN 104,314. Pub. 5–29–62. Filed 9–12–60.

735,823. FANCIFUL FIGURE OF CHILD PLAYING IN SAND. South River Sand Company. SN 121,766. Pub. 5–29–62. Filed 6–9–61.

735,824. POLAR WHITE. Stone Products Corporation. SN 125,692. Pub. 5–29–62. Filed 8–9–61.

735,825. NYLFLOCK. Societe de la Viscose Suisse. SN 125,773. Pub. 5–29–62. Filed 8–10–61.

735,826. REEVON. Reeves Brothers, Inc. SN 127,495. Pub. 5–29–62. Filed 9–8–61.

735,827. BELLAIRE. Armour and Company. SN 131,647. Pub. 5–29–62. Filed 11–9–61.

735,828. VYSET. Monsanto Chemical Company. SN 132,250. Pub. 5–29–62. Filed 11–17–61.

735,829. KYFON. Pennsalt Chemicals Corporation. SN 132,713. Pub. 5–29–62. Filed 11–24–61.

Class 2 — Receptacles

735,830. CP AND DESIGN. The Creamery Package Mfg. Company. SN 72,710. Pub. 10–6–59. Filed 5–1–59.

735,831. AUTO-VAC. Landers, Frary & Clark. SN 124,204. Pub. 5–29–62. Filed 7–18–61.

735,832. POLYCARD. The American Packaging Corporation. SN 124,494. Pub. 5–29–62. Filed 7–24–61.

735,833. HOME-CARE. Home-Care Products Inc. SN 125,042. Pub. 5–29–62. Filed 7–31–61.

735,834. KST. King-Seeley Thermos Co. SN 127,114. Pub. 5–29–62. Filed 9–1–61.

735,835. PPC IN DIAMOND DESIGN. Phoenix Products Company, Inc. SN 129,291. Pub. 5–29–62. Filed 10–5–61.

735,836. MOR-CAN-PAK. Federal Paper Board Company, Inc. SN 130,895. Pub. 5–29–62. Filed 10–30–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

735,837. SUNGLOW. Theodor Manufacturing Corporation. SN 129,249. Pub. 5–29–62. Filed 10–4–61.

735,838. FORECAST. Sears, Roebuck and Co. SN 129,412. Pub. 5–29–62. Filed 10–6–61.

735,839. CINDUSHELLS. Cincinnati Industries, Inc. SN 129,463. Pub. 5–29–62. Filed 10–9–61.

735,840. CONTOUR. Buxton, Incorporated. SN 130,331. Pub. 5–29–62. Filed 10–20–61.

735,841. PLASTI-GUARD. Ereil Manufacturing Company. SN 130,893. Pub. 5–29–62. Filed 10–30–61.

Class 4 — Abrasives and Polishing Materials

735,842. KST. King-Seeley Thermos Co. SN 127,115. Pub. 5–29–62. Filed 9–1–61.

Class 6 — Chemicals and Chemical Compositions

735,843. AMBITROL. The Dow Chemical Company. SN 105,060. Pub. 5–29–62. Filed 9–23–60.

735,844. MRS. EARLY BIRD. John C. Stalfort & Sons, Inc. SN 106,440. Pub. 5–29–62. Filed 10–14–60.

735,845. ABEX. Alcolac Chemical Corporation, by merger from American Alcolac Corporation. SN 116,859. Pub. 5–29–62. Filed 3–31–61.

735,846. COLUMBIA. Columbia Wax Company. SN 119,937. Pub. 5–29–62. Filed 5–15–61.

735,847. DIVERFOS. The Diversey Corporation. SN 122,521. Pub. 5–29–62. Filed 6–21–61.

735,848. BUTOMERATE. The Pure Oil Company. SN 125,620. Pub. 5–29–62. Filed 8–8–61.

735,849. POLYFIBRON. W. R. Grace & Co. SN 126,022. Pub. 5–29–62. Filed 8–15–61.

735,850. ULTRA GUARD. Lee Rubber & Tire Corporation. SN 126,776. Pub. 5–29–62. Filed 8–28–61.

735,851. LEVAFIX. Farbenfabriken Bayer Aktiengesellschaft. SN 130,195. Pub. 5–29–62. Filed 10–18–61.

Class 7 — Cordage

735,852. PLI-MOOR. Columbian Rope Company. SN 131,345. Pub. 5–29–62. Filed 11–6–61.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

735,853. STRIKE RITE AND DESIGN. Dr.-Ing. Friedrich Meyer-Heibeck, d.b.a. "Sirius-Grunbach" Aktiengesellschaft für Industrie und Steinkohlenbergbau, Nachfolger Dr.-Ing. Freidrich Meyer-Heibeck. SN 51,208. Pub. 7–21–59. Filed 5–7–58.

735,854. STRIKE-RITE AND DESIGN. Dr. Ing. Friedrich Meyer-Heibeck, d.b.a. "Sirius-Grunbach" Aktiengesellschaft für Industrie und Steinkohlenbergbau, Nachfolger Dr. Ing. Friedrich Meyer-Heibeck, assignee of J. B. Griffin, d.b.a. J. B. Griffin Company and Southern Match Company. SN 52,653. Pub. 7–21–59. Filed 5–26–58.

735,855. VALOR AND SHIELD DESIGN. Valor Sales Corp. SN 120,459. Pub. 5–29–62. Filed 5–19–61.

735,856. GLOBE IN AN A. Atlas Chemical Industries, Inc. SN 125,712. Pub. 5–29–62. Filed 8–10–61.

735,857. FRED PALMER'S POSITIVE SHOOTING. Fred N. Palmer, d.b.a. Fred Palmer's—Positive Shooting. SN 125,977. Pub. 5–29–62. Filed 8–14–61.

Class 10 — Fertilizers

735,858. AQUA HUMUS. American Humates, Inc. SN 115,984. Pub. 5–29–62. Filed 3–20–61.

Class 11 — Inks and Inking Materials

735,859. LUXOR. Cabot Corporation, assignee of Acheson Industries, Inc. SN 117,758. Pub. 5–29–62. Filed 4–13–61.

Class 12 — Construction Materials

735,860. FLAG DESIGN. Timberline, Inc. of Oregon. SN 104,344. Pub. 5–29–62. Filed 9–12–60.

735,861. M WITHIN A CIRCLE. Mengel Wood Industries, Inc., assignee, by mesne assignment, of The Mengel Company. SN 108,648. Pub. 5–29–62. Filed 11–17–60.

735,862. VENTWOOD. Howard Manufacturing Co. SN 116,030. Pub. 5–29–62. Filed 3–20–61.

735,863. VINYL KING. W. J. Dennis & Company. SN 121,080. Pub. 5–29–62. Filed 5–31–61.

735,864. EVERGOLD. Globe Roofing Products Co., Inc. SN 122,798. Pub. 5–29–62. Filed 6–26–61.

735,865. CON-X-SPAN. The D. S. Brown Company. SN 124,167. Pub. 5–29–62. Filed 7–18–61.

735,866. INSUL-MASTIC. Insul-Mastic, Inc. SN 125,728. Pub. 5–29–62. Filed 8–10–61.

735,867. PRES-TABS. The Cleveland Fabricating Company, Inc. SN 125,805. Pub. 5–29–62. Filed 8–11–61.

735,868. PYRO-LASTIC. Des Moines Concrete Products Co. SN 129,928. Pub. 5–29–62. Filed 10–16–61.

735,869. MINERAL WELD. Macmillan Ring-Free Oil Co., Inc. SN 129,952. Pub. 5–29–62. Filed 10–16–61.

735,870. SPLASH-MASTER. Kesko Products, Inc. SN 130,915. Pub. 5–29–62. Filed 10–30–61.

735,871. WEIRMAR. Arthur R. Weir. SN 130,980. Pub. 5–29–62. Filed 10–30–61.

735,872. DURA-FLOAT. American Flotation Corporation. SN 130,994. Pub. 5–29–62. Filed 10–31–61.

735,873. CRAVALUME. Cravalume, Inc. SN 131,017. Pub. 5–29–62. Filed 10–31–61.

735,874. BEAUTYGUARD. Cravalume, Inc. SN 131,018. Pub. 5–29–62. Filed 10–31–61.

735,875. ZIPPERWALL. Kawneer Company. SN 131,048. Pub. 5–29–62. Filed 10–31–61.

735,876. MARK II COLORPORT. Reynolds Aluminum Supply Company. SN 131,075. Pub. 5–29–62. Filed 10–31–61.

735,877. PYROSPRAY. Baldwin-Ehret-Hill, Inc. SN 131,106. Pub. 5–29–62. Filed 11–1–61.

735,878. FRAC-SHOT. Reynolds Metals Company. SN 131,232. Pub. 5–29–62. Filed 11–2–61.

735,879. TD AND DESIGN. Air & Refrigeration Corporation. SN 131,249. Pub. 5–29–62. Filed 11–3–61.

735,880. FIRETARD. Johns-Manville Corporation. SN 131,287. Pub. 5–29–62. Filed 11–3–61.

735,881. ALCOA ALPLY. Aluminum Company of America. SN 131,328. Pub. 5–29–62. Filed 11–6–61.

735,882. ORION. Fabricas Orion S.A. SN 131,505. Pub. 5–29–62. Filed 11–7–61.

735,883. FORESTGLO. Weyerhaeuser Company. SN 131,637. Pub. 5–29–62. Filed 11–8–61.

735,884. CAN-O-LOK. Cannelton Sewer Pipe Co. SN 131,802. Pub. 5–29–62. Filed 11–13–61.

735,885. ERA. Electro Refractories & Abrasives Corporation. SN 131,824. Pub. 5–29–62. Filed 11–13–61.

735,886. TARTEMP. Basic Incorporated. SN 132,021. Pub. 5–29–62. Filed 11–15–61.

735,887. MARINER. United States Steel Corporation. SN 132,207. Pub. 5–29–62. Filed 11–16–61.

735,888. LA-COUSTIC. Lahabralite Company. SN 132,472. Pub. 5–29–62. Filed 11–21–61.

735,889. UNION CARBIDE IN HEXAGON DESIGN. Union Carbide Corporation. SN 132,596. Pub. 5–29–62. Filed 11–22–61.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

735,890. M—MUELLER BRASS CO. AND DESIGN. Mueller Brass Co. SN 99,949. Pub. 5–29–62. Filed 6–29–60.

735,891. SOUTHCO THREDS. South Chester Corporation. SN 126,960. Pub. 5–29–62. Filed 8–30–61.

735,892. MM IN DIAMOND DESIGN. Marshall McMurray Co. SN 128,573. Pub. 5–29–62. Filed 9–25–61.

735,893. PSN. Pioneer Screw & Nut Co. SN 128,919. Pub. 5–29–62. Filed 9–29–61.

735,894. KOOLSHADE. Borg-Warner Corporation. SN 128,955. Pub. 5–29–62. Filed 10–2–61.

735,895. TOROIDAL. The George Evans Corporation. SN 128,987. Pub. 5–29–62. Filed 10–2–61.

735,896. O.N.Z. Coats & Clark Inc. SN 129,666. Pub. 5–29–62. Filed 10–11–61.

735,897. SPEEDY-G. Parker-Hannifin Corporation. SN 130,235. Pub. 5–29–62. Filed 10–18–61.

735,898. KOOLSHADE. Borg-Warner Corporation. SN 130,325. Pub. 5–29–62. Filed 10–20–61.

735,899. MIDWEST. Crane Co. SN 130,432. Pub. 5–29–62. Filed 10–23–61.

735,900. CANDRIL. P. L. Robertson Mfg. Co., Limited. SN 130,485. Pub. 5–29–62. Filed 10–23–61.

735,901. AUTOPERF. Mueller Co. SN 131,301. Pub. 5–29–62. Filed 11–3–61.

735,902. UNION CARBIDE IN HEXAGON DESIGN. Union Carbide Corporation. SN 132,597. Pub. 5–29–62. Filed 11–22–61.

735,903. AIR HARD AND DESIGN. Vanadium-Alloys Steel Company. SN 72,912. Pub. 5–29–62. Filed 5–4–59.

Class 14 — Metals and Metal Castings and Forgings

735,904. FORTIWELD. The United Steel Companies Limited. SN 104,780. Pub. 5–29–62. Filed 9–19–60.

735,905. INSMETAL. Knapp Mills Incorporated. SN 126,773. Pub. 5–29–62. Filed 8–28–61.

Class 15 — Oils and Greases

735,906. SEVEN STAR. Ingenieursbureau Lemet Chromium H. van der Horst N.V. SN 127,603. Pub. 5–29–62. Filed 9–11–61.

735,907. SORCO AND DESIGN. Socal Oil & Refining Company. SN 127,661. Pub. 5–29–62. Filed 9–11–61.

735,908. WINELYTES. Mark Hyde, d.b.a. Universal Candies. SN 130,213. Pub. 5–29–62. Filed 10–18–61.

735,909. CBL. Kartane, Inc. SN 130,701. Pub. 5–29–62. Filed 10–26–61.

735,910. CANFIELD IN OVAL DESIGN. Canfield Oil Company. SN 130,880. Pub. 5–29–62. Filed 10–30–61.

Class 16 — Protective and Decorative Coatings

735,911. LACQUA. Bee Chemical Company. SN 104,981. Pub. 5–29–62. Filed 9–22–60.

735,912. FIN-OIL. Stanley H. Hall. SN 106,258. Pub. 5–29–62. Filed 10–12–60.

735,913. WUNDERKROME. Harry Griver, d.b.a. Pennsylvania Lacquer Center. SN 108,627. Pub. 5–29–62. Filed 11–17–60.

735,914. A·N·S. Barker Chemical Company. SN 126,556. Pub. 5–29–62. Filed 8–24–61.

735,915. DENODECK. A/S De-No-Fa og Lilleborg Fabriker. SN 127,548. Pub. 5–29–62. Filed 9–11–61.

Class 18 — Medicines and Pharmaceutical Preparations

735,916. KOZENE. International Laboratories, Inc. SN 99,022. Pub. 5–29–62. Filed 6–14–60.

735,917. ENZALUM. Chesebrough-Pond's Inc. SN 120,779. Pub. 5–29–62. Filed 5–25–61.

735,918. FOODS PLUS. Foods Plus, Inc. (Delaware corporation), assignee of Foods Plus, Inc. (New York corporation). SN 123,294. Pub. 5–29–62. Filed 7–3–61.

735,919. CAVED-(S). G. Van Loon, d.b.a. Cedona Haarlemmer Pharmaceutische Fabriek. SN 124,309. Pub. 5–29–62. Filed 12–18–61.

735,920. XTRA-LERT. Phar-Med, Incorporated. SN 124,580. Pub. 5–29–62. Filed 7–24–61.

735,921. ALERCAP. Ethical Pharmaceutical Company, Inc. SN 128,982. Pub. 5–29–62. Filed 10–2–61.

735,922. ZALAMATE. Chesebrough-Pond's Inc. SN 130,427. Pub. 5–29–62. Filed 10–23–61.

735,923. BABY'S HEAD DESIGN. Mead Johnson & Company. SN 130,568. Pub. 5–29–62. Filed 10–24–61.

735,924. PRO-ACTIDIL. The Wellcome Foundation, Ltd. SN 131,736. Pub. 5–29–62. Filed 11–9–61.

735,925. GLYNAPHYLLIN. First Texas Pharmaceuticals, Inc. SN 133,143. Pub. 5–29–62. Filed 12–1–61.

735,926. WAY-LES. Stevens Laboratories, Inc., assignee of Missouri Pharmaceutical Manufacturing Company. SN 133,480. Pub. 5–29–62. Filed 12–6–61.

735,927. KANFOTREX. Bristol-Myers Company. SN 136,341. Pub. 5–29–62. Filed 1–23–62.

735,928. DECA-DURABOLIN. Organon Inc. SN 136,387. Pub. 5–29–62. Filed 1–23–62.

735,929. NOVADONNA. Sherman Laboratories. SN 136,829. Pub. 5–29–62. Filed 1–29–62.

735,930. KLARON. Dermik Pharmacal Co., Inc. SN 137,051. Pub. 5–29–62. Filed 2–1–62.

735,931. DYMELOR. Eli Lilly and Company. SN 137,445. Pub. 5–29–62. Filed 2–7–62.

735,932. GASTRO-MAJIC. Hunt Oil Company. SN 137,630. Pub. 5–29–62. Filed 2–9–62.

735,933. MACTANOL. Beecham Research Laboratories Limited. SN 137,708. Pub. 5–29–62. Filed 2–12–62.

Class 21 — Electrical Apparatus, Machines, and Supplies

735,934. "TOMORROW'S LIGHTING TODAY" AND DESIGN. Smoot-Holman Company. SN 103,058. Pub. 5–29–62. Filed 8–19–60.

735,935. SAF-T-WARN. United Electric Service of Springfield, Inc. SN 114,557. Pub. 5–29–62. Filed 2–27–61.

735,936. SIPPICAN. The Sippican Corporation. SN 122,033. Pub. 5–29–62. Filed 6–14–61.

735,937. TIZAMIC. Globe-Union Inc. SN 123,613. Pub. 5–29–62. Filed 7–10–61.

735,938. DISCOVERER. The H. J. Ashe Co., Inc. SN 124,321. Pub. 5–29–62. Filed 7–20–61.

735,939. AQUA-CHEM. Aqua-Chem, Inc. SN 124,404. Pub. 5–29–62. Filed 7–21–61.

735,940. CHEM-PAC. Aqua-Chem, Inc. SN 124,405. Pub. 5–29–62. Filed 7–21–61.

735,941. FUSA-FAB. General Electric Company. SN 126,332. Pub. 5–29–62. Filed 8–21–61.

735,942. CENTURY. The Gamewell Company. SN 126,863. Pub. 5–29–62. Filed 8–29–61.

735,943. VERTOMATIC. Arcos Corporation. SN 127,175. Pub. 5–29–62. Filed 9–5–61.

735,944. GTI DESIGN. Glentronics, Inc. SN 127,340. Pub. 5–29–62. Filed 9–6–61.

735,945. ESPRESSOR. Modern Products, Inc. SN 127,417. Pub. 5–29–62. Filed 9–7–61.

735,946. FORMCLAD. Shawinigan Resins Corporation. SN 127,802. Pub. 5–29–62. Filed 9–13–61.

735,947. FORMESTER. Shawinigan Resins Corporation. SN 127,880. Pub. 5–29–62. Filed 9–14–61.

735,948. DIPAC. Deltron, Inc. SN 127,913. Pub. 5–29–62. Filed 9–15–61.

735,949. UNIPLANE. United-Carr Fastener Corporation. SN 128,866. Pub. 5–29–62. Filed 9–28–61.

735,950. ON-GUARD. Ever-Ready Automatic Burglar Alarm Co., Inc. SN 128,988. Pub. 5–29–62. Filed 10–2–61.

735,951. TACO ELECTRA. Technical Appliance Corporation (Delaware corporation), assignee of Technical Appliance Corporation (New York corporation). SN 129,246. Pub. 5–29–62. Filed 10–4–61.

735,952. TACO. Technical Appliance Corporation (Delaware corporation), assignee of Technical Appliance Corporation (New York corporation). SN 129,248. Pub. 5–29–62. Filed 10–4–61.

Class 22 — Games, Toys, and Sporting Goods

735,953. SPEEDY. Roller Derby Skate Corp. SN 127,652. Pub. 5–29–62. Filed 9–11–61.

735,954. FLUIE. Fred Vester Barker. SN 128,648. Pub. 5–29–62. Filed 9–26–61.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

735,955. CAN-O-MATIC. Rival Manufacturing Company. SN 697,995. Pub. 5–29–62. Filed 11–9–55.

735,956. AMERICAN "CABLE-WAY." The American Monorail Company. SN 68,098. Pub. 5–29–62. Filed 2–20–59.

735,957. AMERICAN "CHAINLESS." The American Monorail Company. SN 68,555. Pub. 5–29–62. Filed 2–27–59.

735,958. TOTE TILT. Hoover Ball and Bearing Company, assignee of Tote Engineering, Inc. SN 102,519. Pub. 5–29–62. Filed 8–11–60.

735,959. MAYHEW. Mayhew Steel Products, Inc. SN 113,430. Pub. 5–29–62. Filed 2–10–61.

735,960. LEVELING WING. Frink Sno-Plows, Inc. SN 117,772. Pub. 5–29–62. Filed 4–13–61.

735,961. FRINK. Frink Sno-Plows, Inc. SN 117,774. Pub. 5–29–62. Filed 4–13–61.

735,962. "NY-STEEL." Coats & Clark Inc. SN 118,416. Pub. 5–29–62. Filed 4–24–61.

735,963. ALPACCA BERNDORF AUSTRIA AND DESIGN. Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft. SN 121,684. Pub. 5–29–62. Filed 6–8–61.

735,964. NICRO STAINLESS BERNDORF AUSTRIA AND DESIGN. Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft. SN 121,685. Pub. 5–29–62. Filed 6–8–61.

735,965. FANCIFUL DISPLAY OF LETTERS AMP. AMP Incorporated. SN 125,268. Pub. 5–29–62. Filed 8–3–61.

735,966. BOLWOOD. John W. Bolton & Sons, Inc. SN 126,078. Pub. 5–29–62. Filed 8–16–61.

735,967. MERCRUISER. Kiekhaefer Corporation. SN 127,230. Pub. 5–29–62. Filed 9–5–61.

735,968. CHAMPION. F. L. Smithe Machine Company, Incorporated. SN 128,219. Pub. 5–29–62. Filed 9–19–61.

735,969. ASTRO-CERAMIC. Rayco Mfg. Co. SN 128,854. Pub. 5–29–62. Filed 9–28–61.

735,970. MOKON. Protective Closures Co., Inc. SN 130,106. Pub. 5–29–62. Filed 10–17–61.

735,971. MEMOIR. John P. Young, d.b.a. American Stainless Company. SN 130,261. Pub. 5–29–62. Filed 10–18–61.

735,972. HT AND DESIGN. Hughes Tool Company. SN 130,358. Pub. 5–29–62. Filed 10–20–61.

735,973. BARRACUDA AND DESIGN. Barracuda Tools, Inc. SN 130,410. Pub. 5–29–62. Filed 10–23–61.

735,974. MR. VERSATILE. Jack Pryor. SN 130,497. Pub. 5–29–62. Filed 10–23–61.

735,975. ROTASCOPE. Davis Engineering, Inc. SN 130,765. Pub. 5–29–62. Filed 10–27–61.

735,976. HT AND DESIGN. Henry F. Teichmann, Inc. SN 132,765. Pub. 5–29–62. Filed 11–24–61.

Class 24 — Laundry Appliances and Machines

735,977. INDESIT. Indes Industria Elettrodomestici S.p.A. SN 123,103. Pub. 5–29–62. Filed 6–29–61.

Class 26 — Measuring and Scientific Appliances

735,978. D. Dearborn Chemical Company. SN 89,334. Pub. 10–17–61. Filed 1–20–60.

735,979. MULTI-CHANGER. Standard Change-Makers, Inc. SN 106,151. Pub. 5–29–62. Filed 10–10–60.

735,980. VAC. Kimble Glass Company. SN 108,052. Pub. 5–29–62. Filed 11–8–60.

735,981. WELL TESTER. Oil Metering and Processing Equipment Corporation. SN 112,916. Pub. 5–29–62. Filed 2–1–61.

735,982. PANORAM. Burke & James, Inc. SN 115,216. Pub. 5–29–62. Filed 3–9–61.

735,983. MICROZOOM. Bausch & Lomb Incorporated. SN 119,265. Pub. 5–29–62. Filed 5–4–61.

735,984. SR. Rockwell Manufacturing Company. SN 119,424. Pub. 5–29–62. Filed 5–5–61.

735,985. KERA-FORM. Noel O. Stimson, d.b.a. Stimson Lens Laboratories. SN 122,226. Pub. 5–29–62. Filed 6–16–61.

735,986. TEMP-TENDOR. Assembly Products, Inc. SN 124,620. Pub. 5–29–62. Filed 7–25–61.

735,987. EYE SEE. Comptone Company Ltd. SN 125,724. Pub. 5–29–62. Filed 8–10–61.

735,988. VACU-MATEK. Fabri-Tek Incorporated. SN 127,393. Pub. 5–29–62. Filed 9–7–61.

735,989. SIXTY. American Optical Company. SN 128,639. Pub. 5–29–62. Filed 9–26–61.

735,990. III. Imperial Industries, Inc. SN 129,007. Pub. 5–29–62. Filed 10–2–61.

735,991. ORBITEER I. Knox Instruments, Inc. SN 129,153. Pub. 5–29–62. Filed 10–3–61.

735,992. MASTER THERM. Colorado Oil and Gas Corporation. SN 129,464. Pub. 5–29–62. Filed 10–9–61.

735,993. ISI-BLITZ. Agfa Aktiengesellschaft. SN 129,714. Pub. 5–29–62. Filed 10–12–61.

735,994. SOLAR-VISION. Bachmann Bros., Inc. SN 129,899. Pub. 5–29–62. Filed 10–10–61.

735,995. SLUMP-O-MATIX AND DESIGN. Slump-O-Matix Systems, Inc. SN 130,121. Pub. 5–29–62. Filed 10–17–61.

735,996. SMART. North American Electronic Systems, Incorporated. SN 130,142. Pub. 5–29–62. Filed 10–17–61.

735,997. TELE-PLAYBACK. American Bosch Arma Corporation. SN 130,406. Pub. 5–29–62. Filed 10–23–61.

735,998. ROTOVISKO. Gebruder Haake K.G. SN 130,549. Pub. 5–29–62. Filed 10–24–61.

Class 27 — Horological Instruments

735,999. CAMY AND DESIGN. Stroun Bros. Camy Watch Co. Limited. SN 122,388. Pub. 5–29–62. Filed 6–19–61.

736,000. KST. King-Seeley Thermos Co. SN 127,120. Pub. 5–29–62. Filed 9–1–61.

736,001. DESIGN REPRESENTING A HEART. General Time Corporation. SN 131,032. Pub. 5–29–62. Filed 10–31–61.

Class 28 — Jewelry and Precious-Metal Ware

736,002. SHUVON. Wingback Inc. SN 120,463. Pub. 5–29–62. Filed 5–19–61.

736,003. STOP-LIGHT. Gorham Corporation. SN 123,194. Pub. 5–29–62. Filed 6–30–61.

736,004. READY RINGED. Herbert E. Walters, d.b.a. Treasure Crafts. SN 129,179. Pub. 5–29–62. Filed 10–3–61.

736,005. WATSON. Wallace Silversmiths, Inc. SN 129,316. Pub. 5–29–62. Filed 10–5–61.

736,006. GRAND PRIX. Swank, Inc. SN 130,511. Pub. 5–29–62. Filed 10–23–61.

736,007. LADY CATHERINE. Oneida Ltd. SN 130,722. Pub. 5–29–62. Filed 10–26–61.

736,008. PROCHAIN AND DESIGN. Prochain, Inc. SN 130,729. Pub. 5–29–62. Filed 10–26–61.

736,009. PROLITE. Prochain, Inc. SN 130,730. Pub. 5–29–62. Filed 10–26–61.

736,010. PROCHAIN. Prochain, Inc. SN 130,731. Pub. 5–29–62. Filed 10–26–61.

736,011. WISHING BELL. Verité Jewels Ltd. SN 130,846. Pub. 5–29–62. Filed 10–27–61.

736,012. QUEEN BESS. General Mills, Inc. SN 130,901. Pub. 5–29–62. Filed 10–30–61.

Class 30 — Crockery, Earthenware, and Porcelain

736,013. ROYAL DUX BOHEMIA D AND DESIGN. Duchcovsky Porcelan, Narodni Podnik. SN 125,207. Pub. 5–29–62. Filed 8–2–61.

Class 31 — Filters and Refrigerators

736,014. GOLD SEAL. Watsco, Inc. SN 100,198. Pub. 5–29–62. Filed 7–1–60.

736,015. FOSTER. Foster Refrigerator Corporation. SN 113,825. Pub. 5–29–62. Filed 2–16–61.

736,016. FOSTER AND DESIGN. Foster Refrigerator Corporation. SN 113,826. Pub. 5–29–62. Filed 2–16–61.

736,017. FRIGECO. Frigeco S.A. SN 122,183. Pub. 5–29–62. Filed 6–16–61.

736,018. NOVO. Novo Industrial Corporation. SN 125,758. Pub. 5–29–62. Filed 8–10–61.

736,019. KST. King-Seeley Thermos Co. SN 127,121. Pub. 5–29–62. Filed 9–1–61.

Class 32 — Furniture and Upholstery

736,020. RIVIERA. Red Wing Wood Products, Inc. SN 121,320. Pub. 5–29–62. Filed 6–2–61.

736,021. AMCO. Amco Engineering Co. SN 122,589. Pub. 5–29–62. Filed 6–22–61.

736,022. BUD IMLOK. Alfred Imhof Limited. SN 130,359. Pub. 5–29–62. Filed 10–20–61.

736,023. EASCO. E. A. Stevenson Co. SN 131,420. Pub. 5–29–62. Filed 11–6–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

736,024. WONDER WARM. Temco, Inc. SN 124,389. Pub. 5–29–62. Filed 7–20–61.

Class 36 — Musical Instruments and Supplies

736,025. ROTO RECORDS. Lee A. Williams. SN 100,674. Pub. 5–29–62. Filed 7–11–60.

736,026. BOLKOW AND DESIGN. Bolkow-Entwicklungen Kommanditgesellschaft. SN 123,460. Pub. 5–29–62. Filed 7–6–61.

736,027. AC (LOGOTYPE). Aeolian Corporation. SN 126,137. Pub. 5–29–62. Filed 8–17–61.

736,028. CONTURA. Aeolian Corporation. SN 126,138. Pub. 5–29–62. Filed 8–17–61.

736,029. TECHNICORDER AND DESIGN. Trans-National Electronics Corporation. SN 126,820. Pub. 5–29–62. Filed 8–28–61.

736,030. WALKING O DESIGN. Columbia Broadcasting System, Inc. SN 126,907. Pub. 5-29-62. Filed 8-30-61.

Class 37 — Paper and Stationery

736,031. NYLL ETC. AND DESIGN. New York Loose Leaf Corp. SN 77,684. Pub. 5-29-62. Filed 7-14-59.

736,032. STARSHEEN. Butler Paper Corporations. SN 96,563. Pub. 5-29-62. Filed 5-6-60.

736,033. RAVEN. Wilson Jones Company. SN 107,767. Pub. 5-29-62. Filed 11-3-60.

736,034. CERTIFIED. Crown Zellerbach Corporation. SN 112,362. Pub. 5-29-62. Filed 1-24-61.

736,035. 19. The Parker Pen Company. SN 116,062. Pub. 5-29-62. Filed 3-20-61.

736,036. CHAMPION PAPERS. Champion Papers Inc., by change of name from The Champion Paper and Fibre Company. SN 118,866. Pub. 5-29-62. Filed 4-28-61.

736,037. CARTOGLASS AND DESIGN. ELCE. SN 119,493. Pub. 5-29-62. Filed 5-8-61.

736,038. TECHNOBALL REPROLAR. L. & C. Hardtmuth, Inc. SN 133,263. Pub. 5-29-62. Filed 12-4-61.

736,039. MOUNTED KNIGHT DESIGN. Champion Papers Inc. SN 133,931. Pub. 5-29-62. Filed 12-13-61.

736,040. CARNIVAL. Champion Papers Inc. SN 138,386. Pub. 5-29-62. Filed 2-21-62.

Class 38 — Prints and Publications

736,041. THE AMERICAN JOURNAL OF CLINICAL NUTRITION. The Reuben H. Donnelley Corporation, assignee of The American Journal of Medicine, Inc. SN 96,176. Pub. 5-29-62. Filed 5-2-60.

736,042. THE FAMILY CIRCUS AND DESIGN. The Register and Tribune Syndicate, Inc. SN 108,215. Pub. 5-29-62. Filed 11-10-60.

736,043. WORDS IN THE NEWS & NEWS IN THE WORDS. Ruvin Barth. SN 110,135. Pub. 5-29-62. Filed 12-13-60.

736,044. SHARE. Parker Chiropractic Research Foundation, Inc. SN 116,061. Pub. 5-29-62. Filed 3-20-61.

736,045. THE DISC JOCKEY'S JOURNAL. White-Brown Enterprises. SN 118,118. Pub. 5-29-62. Filed 4-18-61.

736,046. FENT-O-FOIL. Fenton Label Co. SN 118,146. Pub. 5-29-62. Filed 4-19-61.

736,047. RUB-A-PATTERN. The Carter's Ink Company. SN 118,557. Pub. 5-29-62. Filed 4-25-61.

736,048. HEADACHE AND DESIGN. American Association for the Study of Headache. SN 124,158. Pub. 5-29-62. Filed 7-18-61.

736,049. BRAVO. Bravo Publishing Co., Inc. SN 125,717. Pub. 5-29-62. Filed 8-10-61.

736,050. PETROLEUM MANAGEMENT. The Petroleum Engineer Publishing Company. SN 126,385. Pub. 5-29-62. Filed 8-21-61.

736,051. THE POST MARK. Consumer Mail Panels, Inc. SN 126,437. Pub. 5-29-62. Filed 8-22-61.

736,052. DESIGN CONSISTING OF SEVERAL POSTMARKS. Consumer Mail Panels, Inc. SN 126,438. Pub. 5-29-62. Filed 8-22-61.

736,053. TELEVISION DIGEST. Television Digest, Inc. SN 127,812. Pub. 5-29-62. Filed 9-13-61.

736,054. IRON AGE METALWORKING INTERNATIONAL. Chilton Company. SN 128,250. Pub. 5-29-62. Filed 9-20-61.

736,055. THE HELISTOP. Hughes Tool Company, d.b.a. Hughes Tool Company, Aircraft Division. SN 129,006. Pub. 5-29-62. Filed 10-2-61.

736,056. HARDWARE MERCHANDISER. The Irving-Cloud Publishing Company. SN 130,217. Pub. 5-29-62. Filed 10-18-61.

736,057. ARROW BOOK CLUB. Scholastic Magazines, Inc. SN 130,832. Pub. 5-29-62. Filed 10-27-61.

736,058. A AND DESIGN. American Greetings Corporation. SN 131,102. Pub. 5-29-62. Filed 11-1-61.

736,059. THE KIPLINGER BOOK LETTER AND K DESIGN. The Kiplinger Washington Editors, Inc. SN 131,138. Pub. 5-29-62. Filed 11-1-61.

736,060. ACROSTICKLERS AND DESIGN. Henry H. Adams and Allen Blow Cook (joint owners), d.b.a. Henry Allen. SN 131,247. Pub. 5-29-62. Filed 11-3-61.

736,061. NORCROSS. Norcross, Inc. SN 131,303. Pub. 5-29-62. Filed 11-3-61.

736,062. GEORGIA ANCHOR AGE AND DESIGN. Georgia Ports Authority. SN 131,509. Pub. 5-29-62. Filed 11-7-61.

736,063. THE MINUTE MAN. Society of the Sons of the Revolution in the State of Illinois. SN 131,890. Pub. 5-29-62. Filed 11-13-61.

736,064. UNITED PRESS. United Press International, Inc. SN 131,905. Pub. 5-29-62. Filed 11-13-61.

736,065. DIAL-A-DOLL. James P. Young, d.b.a. Advertex Company. SN 132,211. Pub. 5-29-62. Filed 11-16-61.

736,066. NEWS FROM THE VINEYARDS. Almaden Vineyards. SN 132,509. Pub. 5-29-62. Filed 11-22-61.

736,067. COLLOID-O-SCOPE. Marine Colloids, Inc. SN 132,927. Pub. 5-29-62. Filed 11-28-61.

736,068. COMICPAC. National Periodical Publications, Inc. SN 133,078. Pub. 5-29-62. Filed 11-30-61.

Class 39 — Clothing

736,069. FUN FASHIONS. Cole of California, Inc. (Delaware corporation), by change of name and assignment from Cole of California, Inc. (California corporation). SN 81,048. Pub. 3-8-60. Filed 9-9-59.

736,070. SAFE-TOE. Endicott Johnson Corporation. SN 95,367. Pub. 5-29-62. Filed 4-19-60.

736,071. JOCKEY THOROBRED. Coopers, Inc. SN 97,039. Pub. 5-29-62. Filed 5-13-60.

736,072. RONDO JESTERS. Robert Hosiery Mills, Inc. SN 106,748. Pub. 5-29-62. Filed 10-19-60.

736,073. CORAN. De Luxe Girdlecraft Co., Inc. SN 109,852. Pub. 5-29-62. Filed 12-8-60.

736,074. BUD BERMA -N- INVINCIBLE. Bud Berman Sportswear, Inc. SN 110,526. Pub. 5-29-62. Filed 12-20-60.

736,075. TUFFIES STA-UPS AND DESIGN. Oklahoma Clothing Manufacturers. SN 112,483. Pub. 5-29-62. Filed 1-25-61.

736,076. MR. SKI. Mr. T Inc. SN 112,632. Pub. 5-29-62. Filed 1-27-61.

736,077. OUTRIDER. John B. Stetson Company. SN 113,954. Pub. 5-29-62. Filed 2-17-61.

736,078. TRAIL RIDER. John B. Stetson Company. SN 113,956. Pub. 5-29-62. Filed 2-17-61.

736,079. TDS. Steve Matson Products, Inc. SN 114,119. Pub. 5-29-62. Filed 2-21-61.

736,080. BEAUTY AID. S. D. Arrowood & Company, Incorporated. SN 115,033. Pub. 5-29-62. Filed 3-7-61.

736,081. REPRESENTATION OF A RUNNING DEER. Ideal Products, Inc. SN 115,107. Pub. 5-29-62. Filed 2-23-61.

736,082. GANNEX. Kagan Textiles Limited. SN 116,133. Pub. 5-29-62. Filed 3-21-61.

736,083. CLAIRE TIFFANY. Reliance Manufacturing Company. SN 116,568. Pub. 5-29-62. Filed 3-27-61.

736,084. SMOOTHIKINS. The McKay Products Corporation. SN 118,267. Pub. 5-29-62. Filed 4-20-61.

736,085. SLENDIKINS. The McKay Products Corporation. SN 118,268. Pub. 5-29-62. Filed 4-20-61.

736,086. "TERRY ORIGINAL." Morris Rosen Fur Corp. SN 120,116. Pub. 5-29-62. Filed 5-16-61.

736,087. PEPPI'S. Caswell Shoes, Inc. SN 120,176. Pub. 5-29-62. Filed 5-17-61.

736,088. JACQUA TEX. Burbrooke Manufacturing Co., Inc. SN 120,959. Pub. 5-29-62. Filed 5-29-61.

736,089. MAGNE-BELT. Hickok Manufacturing Co. Inc. SN 121,388. Pub. 5-29-62. Filed 6-5-61.

736,090. EXCLAMATION. Burlington Industries, Inc. SN 123,072. Pub. 5-29-62. Filed 6-29-61.

736,091. WELT O' MAGIC. Holt Hosiery Corporation. SN 123,319. Pub. 5-29-62. Filed 6-30-61.

736,092. HEART'S DELIGHT. The Lovable Brassiere Co. SN 125,610. Pub. 5-29-62. Filed 8-8-61.

736,093. ASTROLUX. The Joseph & Feiss Company. SN 126,347. Pub. 5-29-62. Filed 8-21-61.

736,094. ROYAL PENN. Champ Hats, Inc. SN 126,504. Pub. 5-29-62. Filed 8-23-61.

736,095. KEVIN McANDREW. Byer-Rolnick Hat Corporation. SN 126,563. Pub. 5-29-62. Filed 8-24-61.

736,096. NFS. National Family Stores of New Jersey. SN 128,838. Pub. 5-29-62. Filed 9-28-61.

736,097. MacDEE. Standard Knitting Mills, Inc. SN 129,302. Pub. 5-29-62. Filed 10-5-61.

736,098. RONDO. Robert Hosiery Mills, Inc. SN 129,395. Pub. 5-29-62. Filed 10-6-61.

736,099. SUPERWON. The Alligator Company. SN 129,717. Pub. 5-29-62. Filed 10-12-61.

736,100. SPAND-EVER. Sarong, Inc. SN 129,808. Pub. 5-29-62. Filed 10-12-61.

736,101. KENWICK. Washington Manufacturing Company, Inc. SN 129,826. Pub. 5-29-62. Filed 10-12-61.

736,102. ST. TROPAZ. Flexnit Company, Inc. SN 133,381. Pub. 5-29-62. Filed 12-5-61.

736,103. CROWN-O-CREPE. Paperlynen Company. SN 133,407. Pub. 5-29-62. Filed 12-5-61.

736,104. ROUND TREE AND DESIGN. Miller & Levine Inc. SN 133,479. Pub. 5-29-62. Filed 12-6-61.

Class 40 — Fancy Goods, Furnishings, and Notions

736,105. GOOFY BIRD AND DESIGN. William D. Stitzel, d.b.a. Goofy Bird Enterprises. SN 100,315. Pub. 5-29-62. Filed 7-5-60.

736,106. LADY MARIAN. Michael C. Dipuppo, d.b.a. Emil Laboratories. SN 110,931. Pub. 5-29-62. Filed 12-28-60.

736,107. BELFLOU. Balloid Basler Celluloidwarenfabrik A.G. Therwil. SN 127,899. Pub. 5-29-62. Filed 9-15-61.

736,108. "BEAUTY SPOTS." J. H. Erstein & Bros., Inc. SN 129,351. Pub. 5-29-62. Filed 10-6-61.

736,109. CLOUD 9. Gaylord Products, Incorporated. SN 130,062. Pub. 5-29-62. Filed 10-17-61.

736,110. ROLL-O-MATIC. H. W. Meyer, Inc. SN 130,929. Pub. 5-29-62. Filed 10-30-61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

736,111. IVELA. J. H. Benecke. SN 109,763. Pub. 5-29-62. Filed 12-7-60.

736,112. E-Z TRIM. William E. Wright & Sons Company. SN 125,858. Pub. 5-29-62. Filed 8-11-61.

736,113. IMPACT. Dan River Mills, Incorporated. SN 133,057. Pub. 5-29-62. Filed 11-30-61.

736,114. CLINCHFIELD. Burlington Industries, Inc., d.b.a. Clinchfield Manufacturing Company. SN 133,531. Pub. 5-29-62. Filed 12-7-61.

736,115. RIVERKNIT. Dan River Mills, Incorporated. SN 133,543. Pub. 5-29-62. Filed 12-7-61.

Class 43 — Thread and Yarn

736,116. DANISH BULKY PAK. Emile Bernat & Sons Company. SN 114,917. Pub. 5-29-62. Filed 3-6-61.

Class 44 — Dental, Medical, and Surgical Appliances

736,117. IREX. Lingner-Werke G.m.b.H. SN 109,710. Pub. 5-29-62. Filed 12-6-60.

736,118. VERY-PERSONALLY-YOURS. Kimberly-Clark Corporation. SN 119,010. Pub. 5-29-62. Filed 5-1-61.

736,119. EPOX-E-DON ETC. AND DESIGN. E-Donolite Corporation. SN 120,976. Pub. 5-22-62. Filed 5-29-61.

736,120. 4PZ. 4PZ Corporation. SN 126,999. Pub. 5-29-62. Filed 8-31-61.

736,121. B-W, INGERSOLL PRODUCTS, BORG-WARNER AND DESIGN. Borg-Warner Corporation. SN 130,327. Pub. 5-29-62. Filed 10-20-61.

Class 45 — Soft Drinks and Carbonated Waters

736,122. HIRES AND DESIGN. Consolidated Foods Corporation. SN 124,421. Pub. 5-29-62. Filed 7-21-61.

Class 46 — Foods and Ingredients of Foods

736,123. GOODMAN'S DIET 10S AND DESIGN. A. Goodman & Sons, Inc. SN 89,911. Pub. 5-29-62. Filed 1-29-60.

736,124. VOLKSWURST. Geo. A. Hormel & Company. SN 108,327. Pub. 5-29-62. Filed 11-14-60.

736,125. FRIEDA SCHROEDER. Frieda Schroeder. SN 112,323. Pub. 5-29-62. Filed 1-23-61.

736,126. CHA-CHA AND DESIGN. Seyfert Potato Chip Company. SN 116,159. Pub. 5-29-62. Filed 3-21-61.

736,127. RIVEROLA. Berns & Koppstein, Inc. SN 127,313. Pub. 5-29-62. Filed 9-6-61.

736,128. BABY'S HEAD DESIGN. Mead Johnson & Company. SN 130,567. Pub. 5-29-62. Filed 10-24-61.

736,129. STORMY. John P. Storm. SN 130,965. Pub. 5-29-62. Filed 10-30-61.

736,130. ROMANY. Ward Baking Company. SN 131,438. Pub. 5-29-62. Filed 11-6-61.

736,131. WAVERLY. National Biscuit Company. SN 132,360. Pub. 5-29-62. Filed 11-20-61.

736,132. RIGHT TIME. General Foods Corporation. SN 132,667. Pub. 5-29-62. Filed 11-24-61.

736,133. CHEEZ WAFFIES. Old London Foods, Inc. SN 135,455. Pub. 5-29-62. Filed 1-9-62.

736,134. COUNTRY COOKIN'. The Procter & Gamble Company. SN 135,707. Pub. 5-29-62. Filed 1-12-62.

736,135. GRAND. The Grand Union Company. SN 135,792. Pub. 5-29-62. Filed 1-15-62.

Class 48 — Malt Beverages and Liquors

736,136. OLAND'S. Oland & Son Limited. SN 73,134. Pub. 5-29-62. Filed 3-23-62.

736,137. LEOPARD DOUBLE LL AND DESIGN. Leopard Brewery Limited. SN 128,743. Pub. 5-29-62. Filed 9-27-61.

Class 50 — Merchandise Not Otherwise Classified

736,138. DECORTAPE. Forest Mfg. Co. SN 124,904. Pub. 5-29-62. Filed 7-28-61.

736,139. ABSORB-O-MAT. Price Battery Corporation. SN 125,181. Pub. 5-29-62. Filed 7-28-61.

736,140. WONDERPANEL. William D. Edwards, d.b.a. Unusual Specialties. SN 126,157. Pub. 5–29–62. Filed 8–17–61.

Class 51 — Cosmetics and Toilet Preparations

736,141. ST. JOHNS AND DESIGN. West Indies Bay Company. SN 100,961. Pub. 5–29–62. Filed 7–15–60.

736,142. DESIGN OF AN INDIVIDUAL LEANING OVER A CASK. West Indies Bay Company. SN 100,962. Pub. 5–29–62. Filed 7–15–60.

736,143. MURRAY'S. Murray's Superior Products Company, assignee of Murray's Superior Products Company, Inc. SN 102,408. Pub. 5–29–62. Filed 8–10–60.

736,144. DE LY LY. De Ly Ly Incorporated. SN 110,141. Pub. 5–29–62. Filed 12–13–60.

736,145. CHER MONSIEUR F. MILLOT. Societe Technique de Parfumerie F. Millot. SN 125,104. Pub. 5–29–62. Filed 7–31–61.

736,146. DOROTHY LAMOUR. Dorothy Lamour Enterprises Ltd. SN 125,673. Pub. 5–29–62. Filed 8–9–61.

736,147. HORMO-FRUIT. Robert Alan Franklyn, d.b.a. Athena Marquesa. SN 126,423. Pub. 5–29–62. Filed 8–21–61.

736,148. HAY-PO. Grace French Davis, d.b.a. Davis Mfg. Co. SN 128,967. Pub. 5–29–62. Filed 10–2–61.

736,149. DARIL. Beecham Products Inc. SN 129,107. Pub. 5–29–62. Filed 10–3–61.

736,150. YRAM. Mary Chess, Incorporated. SN 130,043. Pub. 5–29–62. Filed 10–17–61.

Class 52 — Detergents and Soaps

736,151. DERMA SURGICAL. S. M. Edison Chemical Company, Inc., assignee of Sylvan M. Edison, d.b.a. S. M. Edison Chemical Company. SN 78,698. Pub. 5–29–62. Filed 7–30–59.

736,152. CLEANICIDE. Columbia Wax Company. SN 98,440. Pub. 5–29–62. Filed 6–6–60.

736,153. MURRAY'S. Murray's Superior Products Company, assignee of Murray's Superior Products Company, Inc. SN 102,409. Pub. 5–29–62. Filed 8–10–60.

736,154. SUPER LITE. Stamford Chemical Industries Inc. SN 123,505. Pub. 5–29–62. Filed 7–6–61.

736,155. NEOPHENE. Western Chemical Company. SN 124,962. Pub. 5–29–62. Filed 7–28–61.

736,156. YRAM. Mary Chess, Incorporated. SN 130,044. Pub. 5–29–62. Filed 10–17–61.

736,157. CARB-AID. Vanda Sauerborn, d.b.a. Labaid Company. SN 131,715. Pub. 5–29–62. Filed 11–9–61.

736,158. DEOGEN. The Diversey Corporation. SN 131,817. Pub. 5–29–62. Filed 11–13–61.

736,159. CUSSONS. Cussons, Sons & Company, Limited. SN 132,006. Pub. 5–29–62. Filed 11–14–61.

736,160. FIND. Colgate-Palmolive Company. SN 132,028. Pub. 5–29–62. Filed 11–15–61.

Service Marks

Class 100 — Miscellaneous

736,161. DENNY'S. Harold Butler Investment Corporation. SN 124,624. Pub. 5–29–62. Filed 7–25–61.

Class 101 — Advertising and Business

736,162. FRED'S DOLLAR STORE. Baddour Wholesale Dry Goods Company. SN 75,598. Pub. 5–29–62. Filed 6–12–59.

736,163. BONDIFIED AND DESIGN. Travelers Express Company, Inc. SN 124,856. Pub. 5–29–62. Filed 7–27–61.

736,164. T.G. & Y. T.G. & Y. Stores Co. SN 127,811. Pub. 5–29–62. Filed 9–13–61.

736,165. SUPER. The Kroger Co. SN 132,334. Pub. 5–29–62. Filed 11–20–61.

Class 102 — Insurance and Financial

736,166. KEY EMBLEM AND WIND MILL DESIGN. Millers' Mutual Insurance Association. SN 131,778. Pub. 5–29–62. Filed 10–30–61.

Class 103 — Construction and Repair

736,167. "U" FINISH. U-Finish Homes, Inc. SN 111,446. Pub. 5–29–62. Filed 1–6–61.

736,168. MIDAS BRAKE SHOPS. Midas, Inc. SN 134,035. Pub. 5–29–62. Filed 12–14–61.

Class 105 — Transportation and Storage

736,169. PANOCEAN SHIP A CAR SYSTEM AND DESIGN. Panocean-Ship-A-Car-System U.S.A. Incorporated. SN 113,441. Pub. 5–29–62. Filed 2–10–61.

736,170. FUNARAMA. The Greyhound Corporation. SN 125,737. Pub. 5–29–62. Filed 8–10–61.

736,171. ICX AND DESIGN. Illinois-California Express, Inc. SN 129,496. Pub. 5–29–62. Filed 10–9–61.

Class 106 — Material Treatment

736,172. PERMOBOND. United States Rubber Company. SN 113,161. Pub. 5–29–62. Filed 2–6–61.

Collective Membership Mark

Class 200

736,173. BFCLR AND DESIGN. The Supreme Assembly, Order of Rainbow, for Girls. SN 125,988. Pub. 5–29–62. Filed 8–10–61.

Certification Mark

Class A — Goods

736,174. DFPA ETC. AND DESIGN. Douglas Fir Plywood Association. SN 73,903. Pub. 5–29–62. Filed 5–18–59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

736,175. Kennatrack Corporation, Elkhart, Ind. SN 109,543. Filed P.R. 11–21–60; Am. S.R. 6–11–62.

AUTO-CLOSE

For Hardware for Folding Door Installations.
First use Aug. 17, 1960.

Class 18 — Medicines and Pharmaceutical Preparations

736,176. Lily Yuriko Takaki, Honolulu, Hawaii. SN 88,498. Filed P.R. 1–5–60; Am. S.R. 4–10–62.

NIPPON GWAN

The term "Gwan" may be translated as "pills."
For Medicinal Preparation for Use for Colds.
First use Aug. 3, 1924.

736,177. Southwest Products, Inc., San Antonio, Tex. SN 138,823. Filed P.R. 2–28–62; Am. S.R. 5–29–62.

STING TOPPER

For Neutralizer Composition for Relieving Discomfort Resulting From Bites or Stings of Insects, Pricks or Stings From Certain Sea-Life and Irritating Effects From Certain Plants.
First use on or about Apr. 13, 1961.

Class 26 — Measuring and Scientific Appliances

736,178. Jack W. Pearson, d.b.a. Pearson Products Company, Elyria, Ohio. SN 113,942. Filed P.R. 2–17–61; Am. S.R. 4–19–62.

MARK 16

For Layout Tool for Automatically Marking Measured Lengths for Studs or Other Building Materials.
First use Nov. 5, 1960.

Class 37 — Paper and Stationery

736,179. Marcal Paper Mills, Inc., East Paterson, N.J., by change of name from Marcalus Manufacturing Co., Inc., East Paterson, N.J. SN 83,895. Filed P.R. 10–23–59; Am. S.R. 6–13–62.

TISSUES FLUFF-OUT ONE BY ONE

For Facial Tissues.
First use Sept. 25, 1959.

736,180. Orchard Paper Company, St. Louis, Mo. SN 95,519. Filed P.R. 4–21–60; Am. S.R. 6–18–62.

SILVER SAVER

For Anti-Tarnish Paper for Wrapping Silverware.
First use July 15, 1953.

736,181. Marcal Paper Mills, Inc., East Paterson, N.J. SN 125,312. Filed P.R. 8–3–61; Am. S.R. 6–13–62.

TISSUES "FLUFF-OUT" ONE AT A TIME

For Facial Tissues.
First use on or about November 1959.

Class 39 — Clothing

736,182. Movie Star, Inc., New York, N.Y. SN 122,449. Filed P.R. 6–20–61; Am. S.R. 6–1–62.

FAMOUS MOVE-EASE FIT

For Women's and Misses' Panties and Briefs.
First use May 15, 1961, on women's and misses' panties.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

736,183. France-Voiles (Société à Responsabilité Limitée), Tarare (Rhone), France. SN 127,334. Filed P.R. 9–6–61; Am. S.R. 2–8–62.

FRANCE-VOILES

Owner of French Reg. No. 641, dated Mar. 17, 1953 (Tarare); Natl. Inst. No. 8507.
For Voile Fabrics, Including Veiling and Curtaining.

Class 45 — Soft Drinks and Carbonated Waters

736,184. Audrey M. Bartlett, Hobbs, N. Mex. SN 97,372. Filed P.R. 5–18–60; Am. S.R. 11–17–61.



The mark consists of the conformation of the bottle used as the container for the goods.
For Carbonated Soft Drink.
First use Feb. 1, 1960.

Class 46 — Foods and Ingredients of Foods

736,185. Henry & Henry, Inc., Buffalo, N.Y. SN 92,376. Filed P.R. 3–8–60; Am. S.R. 6–6–62.

ORAN-GEE

For Liquid Base Containing Orange Juice as Its Principal Ingredient or Food Derivative, for Making an Orange Food Beverage.
First use on or about Jan. 29, 1960.

736,186. Hereford Heaven Brands, Inc., d.b.a. Shorthorn Brands, Oklahoma City, Okla. SN 106,713. Filed P.R. 10–19–60; Am. S.R. 6–6–62.

SHORT-HORN BRANDS

For Fresh and Frozen Packaged Meats.
First use in 1954.

736,187. Hereford Heaven Brands, Inc., d.b.a. Yearling Brands, Oklahoma City, Okla. SN 106,717. Filed P.R. 10–19–60; Am. S.R. 6–6–62.

Yearling Brands

For Fresh and Frozen Packaged Meats.
First use in 1954.

736,188. Beech-Nut Life Savers, Inc., d.b.a. Beech-Nut, Canajoharie, N.Y. SN 133,756. Filed 12–11–61.



The drawing is lined to indicate the colors red, yellow, orange, and green.
For Chewing Gum.
First use Sept. 22, 1960.

Class 49 — Distilled Alcoholic Liquors

736,189. W. & A. Gilbey Limited, London, England. SN 127,472. Filed 9–8–61.



Priority claimed under Sec. 44(d) on British Reg. No. 820,548, dated May 8, 1961. Owner of U.S. Reg. Nos. 304,848, 324,956, and others.
For Gin.

736,190. Imported Brands, Inc., Brooklyn, N.Y. SN 128,445. Filed P.R. 9–22–61; Am. S.R. 5–14–62.

HOUSE OF APPIN

For Blended Scotch Whisky.
First use March 1960.

Class 51 — Cosmetics and Toilet Preparations

736,191. Nethercutt Laboratories (new partnership), Los Angeles, Calif., assignee of Nethercutt Laboratories (partnership), Los Angeles, Calif. SN 36,211. Filed P.R. 8–26–57; Am. S.R. 5–18–62.

ELECTRIC PINK

For Nail Enamel.
First use on or about July 26, 1957.

736,192. Nethercutt Laboratories (new partnership), Los Angeles, Calif., assignee of Nethercutt Laboratories (partnership), Los Angeles, Calif. SN 36,214. Filed P.R. 8–26–57; Am. S.R. 5–18–62.

COMET

For Nail Enamel.
First use on or about July 26, 1957.

736,193. Nethercutt Laboratories (new partnership), Los Angeles, Calif., assignee of Nethercutt Laboratories (partnership), Los Angeles, Calif. SN 36,215. Filed P.R. 8–26–57; Am. S.R. 5–18–62.

RED HOT RED

For Nail Enamel.
First use on or about July 26, 1957.

736,194. Michael Malecki, d.b.a. Michael Malecki Co., Brooklyn, N.Y. SN 88,059. Filed P.R. 12–28–59; Am. S.R. 10–26–61.

Shave Comfort

For Shaving Preparation in Liquid Form.
First use Dec. 12, 1957.

736,195. Quality Products Co., Inc., Brooklyn, N.Y. SN 104,548. Filed P.R. 9–15–60; Am. S.R. 12–26–61.

pro·set

For Hair Setting Lotion.
First use Aug. 31, 1960.

Service Mark

Class 103 — Construction and Repair

736,196. Sayve Corporation of America, Inc., Cincinnati, Ohio, by change of name from Clesco National, Inc., Cincinnati, Ohio. SN 92,442. Filed P.R. 3–9–60; Am. S.R. 10–17–61.

NITE N' DAY

For Coin-Operated Laundry Service.
First use Oct. 27, 1957.

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154,727. SPORTS. Cl. 39. 4–18–22.
156,067. RAZ-MAH. Cl. 18. 6–13–22.
157,219. SUMMIT. Cl. 23. 7–25–22.
157,464. MOTOR SERVICE. Cl. 38. 8–8–22.
159,048. BUNKER HILL. Cl. 46. 9–19–22.
159,364. GUILD. Cl. 37. 9–26–22.
160,919. MARVELLUM. Cl. 37. 10–31–22.
161,132. PIONEER. Cl. 1. 11–7–22.
161,439. RAIN KING. Cl. 13. 11–14–22.
161,517. VICTORY AND DESIGN. Cl. 42. 11–14–22.
161,790. ELECTION. Cl. 37. 11–21–22.
161,946. GUILD. Cl. 5. 11–28–22.
393,880. WONDER WOMAN. Cl. 38. 3–10–42.
393,893. LAND O' CLOVER. Cl. 46. 3–10–42.
393,945. K.D.S. Cl. 12. 3–10–42.
394,737. OTIS AND DESIGN. Cl. 42. 4–28–42.
394,740. GOLDMEDAL. Cl. 22. 4–29–42.
394,957. FRACTOL. Cl. 51. 5–5–42.
395,761. QUINTONE. Cl. 4. 6–9–42.
395,784. KOKO WHIP. Cl. 46. 6–9–42.
395,868. Q. Cl. 4. 6–16–42.
395,902. MUGUET DES BOIS. Cl. 51. 6–16–42.
396,314. RAMIX. Cl. 12. 7–7–42.
396,328. IROQUOIS AND DESIGN. Cl. 15. 7–7–42.
396,518. CHASE. Cl. 21. 7–21–42.
396,603. PLAY-GAYS. Cl. 39. 7–28–42.
396,796. FIRESTONE. Cl. 39. 8–4–42.
396,858. KODAK. Cl. 23. 8–4–42.
396,975. KODAK. Cl. 6. 8–11–42.
396,982. CUSTOM INSPIRED. Cl. 39. 8–11–42.
397,115. THE ATLAS FAMILY. Cl. 38. 8–18–42.
397,184. RED-DEVIL. Cl. 16. 8–25–42.
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397,446. CHASE. Cl. 23. 9–8–42.
397,477. GRO-CAT. Cl. 46. 9–8–42.
397,478. GRO-KIT. Cl. 46. 9–8–42.
397,665. REPUBLIC. Cl. 26. 9–15–42.
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398,883. UNI. Cl. 11. 12–1–42.
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629,310. EXPANSO-SEAL. Cl. 1.
629,312. PAN TAN. Cl. 1.
629,313. KATTELAR. Cl. 1.
629,316. REPRESENTATION OF BLUE DOME SHAPED BELL. Cl. 2.
629,317. YOUR PET IS THIRSTY TOO ! DOGGIE-THIRST AND DESIGN. Cl. 2.
629,318. PLASTUBE. Cl. 2.
629,319. PICNICRYTE. Cl. 2.
629,320. BEVERAGERYTE. Cl. 2.
629,321. GALRYTE. Cl. 2.
629,322. COOLRYTE. Cl. 2.
629,326. GLAMOUR LEAD. Cl 3.
629,327. A TEDRO ORIGINAL. Cl. 3.
629,332. ORTHO. Cl. 6.
629,333. RUHRCHEMIE. Cl. 6.
629,335. DOUGLASDUN DEVIL'S-FIRE AND DESIGN. Cl. 6.
629,348. FILTER-PLUS. Cl. 8.
629,349. INSTALITE. Cl. 8.
629,350. SUPREME. Cl. 8.
629,351. PAN CONDENSER. Cl. 8.
629,352. SMOTEX. Cl. 8.
629,355. INSTANT PEAT MOSS. Cl. 10.
629,360. PRUDENTIAL SILVER STAR PRODUCTS AND DESIGN. Cl. 12.
629,367. HASKO-MOLD AND DESIGN. Cl. 12.
629,368. HASKO-STRUCT AND DESIGN. Cl. 12.
629,369. PLAWALL. Cl. 12.
629,376. DE SPHINX. Cl. 13.
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629,394. AUXILODENT. Cl. 18.
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629,411. PRONTO-SAN. Cl. 18.
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629,430. V.P. Cl. 21.
629,431. HY/LOW. Cl. 21.
629,432. "SHRIMP-FIDDY." Cl. 22.
629,433. B LUCKEE. Cl. 22.
629,435. LET'S FACE IT. Cl. 22.
629,436. ZIG ZAGGLE. Cl. 22.
629,437. SPOT-A-CAR. Cl. 22.
629,438. FLIP-A-LID. Cl. 22.
629,439. LILI THE WALKING DOLL. Cl. 22.
629,446. QUATRO AND DESIGN. Cl. 22.
629,454. SWITCH-O-MATIC. Cl. 23.
629,456. FLEXIFEED. Cl. 23.
629,466. VACOPAK. Cl. 23.
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629,490. JUPITER. Cl. 27.
629,491. ZEUS. Cl. 27.
629,494. "IMPORTS OF IMPORT" INTERAMERICAN AND DESIGN. Cl. 28.
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A/S De-No-Fa og Lilleborg Fabriker, Oslo, Norway. 735,915, pub. 5–29–62. Cl. 16.
Accurate Kitchen Cabinets, Inc., Brooklyn, N.Y. 629,738, canc. Cl. 32.
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Air & Refrigeration Corp., New York, N.Y. 735,879, pub. 5–29–62. Cl. 12.
Alcolac Chemical Corp., from American Alcolac Corp., Baltimore, Md. 735,845, pub. 5–29–62. Cl. 6.
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American Association For The Study of Headache, St. Louis, Mo. 736,048, pub. 5–29–62. Cl. 38.
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Buxton, Inc., Agawam, Mass. 735,840, pub. 5–29–62. Cl. 3.
Byer-Rolnick Hat Corp., Garland, Tex. 736,095, pub. 5–29–62. Cl. 39.
Cabot Corp., Boston, Mass., from Acheson Industries, Inc., Port Huron, Mich. 735,859, pub. 5–29–62. Cl. 11.
Calavo Growers of California : *See*—
Calavo, Inc.
Calavo, Inc., to Calavo Growers of California, Los Angeles, Calif. 629,644, canc. Cl. 46.
California Spray-Chemical Corp., Wilmington, Del. 629,332, canc. Cl. 6.
Canfield Oil Co., Cleveland, Ohio. 735,910, pub. 5–29–62. Cl. 15.
Cannelton Sewer Pipe Co., Cannelton, Ind. 735,884, pub. 5–29–62. Cl. 12.
Cappel, MacDonald & Co., Dayton, Ohio, to Holgate Toys, Inc., Chicago, Ill. 397,828, ren. 8–14–62. Cl. 22.
Carter's Ink Co., The, Cambridge, Mass. 736,047, pub. 5–29–62. Cl. 38.
Caswell Shoes, Inc., Lynn, Mass. 736,087, pub. 5–29–62. Cl. 39.
Cedona Haarlemmer Pharmaceutische Fabriek : *See*—
Van Loon, G.
Chadbourn Gotham, Inc. : *See*—
Chadbourn Hosiery Mills, Inc.
Chadbourn Hosiery Mills, Inc., to Chadbourn Gotham, Inc., Charlotte, N.C. 629,558, canc. Cl. 39.
Champ Hats, Inc., Philadelphia, Pa. 736,094, pub. 5–29–62. Cl. 39.
Champion Paper and Fibre Co., The : *See*—
Champion Papers Inc.
Champion Paper Inc., Hamilton, Ohio. 736,039–40, pub. 5–29–62. Cl. 37.

Champion Papers Inc., from The Champion Paper and Fibre Co., Hamilton, Ohio. 736,036, pub. 5–29–62. Cl. 37.
Chase Brass & Copper Co. Inc., Waterbury, Conn. 396,518, ren. 8–14–62. Cl. 21.
Chase Brass & Copper Co. Inc., Waterbury, Conn. 397,406, ren. 8–14–62. Cl. 34.
Chase Brass & Copper Co. Inc., Waterbury, Conn. 397,446, ren. 8–14–62. Cl. 23.
Chase Brass & Copper Co. Inc., Waterbury, Conn. 397,783, ren. 8–14–62. Cl. 12.
Chase Brass & Copper Co. Inc., Waterbury, Conn. 398,429, ren. 8–14–62. Cl. 13.
Chesebrough-Pond's Inc., New York, N.Y. 735,917, pub. 5–29–62. Cl. 18.
Chesebrough-Pond's Inc., New York, N.Y. 735,922, pub. 5–29–62. Cl. 18.
Chess, Mary, Inc., New York, N.Y. 736,150, pub. 5–29–62. Cl. 51.
Chess, Mary, Inc., New York, N.Y. 736,156, pub. 5–29–62. Cl. 52.
Chevette, Inc., New York, N.Y. 629,564, canc. Cl. 39.
Chicago Flexible Shaft Co., to Sunbeam Corp., Chicago, Ill. 161,439, ren. 8–14–62. Cl. 13.
Chilton Co., Philadelphia, Pa. 735,054, pub. 5–29–62. Cl. 38.
Cincinnati Industries, Inc., Cincinnati, Ohio. 735,839, pub. 5–29–62. Cl. 3.
Cisco, Inc., New York, N.Y. 629,563, canc. Cl. 39.
Cleseo National, Inc.: *See*—
Sayve Corp. of America, Inc.
Cleveland Fabricating Co., Inc., The, Cleveland, Ohio. 735,867, pub. 5–29–62. Cl. 12.
Clinchfield Mfg. Co.: *See*—
Burlington Industries, Inc.
Coats & Clark Inc., New York, N.Y. 735,896, pub. 5–29–62. Cl. 13.
Coats & Clark Inc., New York, N.Y. 735,962, pub. 5–29–62. Cl. 23.
Cobblers Inc., Los Angeles, Calif., 629,583, canc. Cl. 39.
Cole of California, Inc., from Cole of California, Inc., Los Angeles, Calif. 736,069, pub. 3–8–60. Cl. 39.
Colgate-Palmolive Co., New York, N.Y. 736,160, pub. 5–29–62. Cl. 52.
Colorado Oil and Gas Corp., Denver, Colo. 735,992, pub. 5–29–62. Cl. 26.
Columbia Broadcasting System, Inc., New York, N.Y. 736,030, pub. 5–29–62. Cl. 36.
Columbia Wax Co., Glendale, Calif. 735,846, pub. 5–29–62. Cl. 6.
Columbia Wax Co., Glendale, Calif. 736,152, pub. 5–29–62. Cl. 52.
Columbian Carbon Co., New York, N.Y. 398,483, ren. 8–14–62. Cl. 16.
Columbian Rope Co., Auburn, N.Y. 735,852, pub. 5–29–62. Cl. 7.
Comptone Co. Ltd., New York, N.Y. 735,987, pub. 5–29–62. Cl. 26.
Consolidated Foods Corp., Chicago, Ill. 736,122, pub. 5–29–62. Cl. 45.
Consumer Mail Panels, Inc., Chicago, Ill. 736,051–2, pub. 5–29–62. Cl. 38.
Cook, Allen B.: *See*—
Adams, Henry H., and Allen Blow Cook.
Cooper, Eva, New York, N.Y. 629,680, canc. Cl. 50.
Coopers, Inc., Kenosha, Wis. 736,071, pub. 5–29–62. Cl. 39.
Copa Products, Inc., Beverly Hills, Calif. 629,698, canc. Cl. 51.
Coty, Inc., New York, N.Y. 395,902, ren. 8–14–62. Cl. 51.
Courtaulds Ltd., London, England. 629,609, canc. Cl. 42.
Craft Shoe Mfg. Co., Inc., to S. Koster, Philadelphia, Pa. 629,751, canc. Cl. 39.
Crane Co., Chicago, Ill. 735,899, pub. 5–29–62. Cl. 13.
Cravalume, Inc., Mt. Holly, S.C. 735,873–4, pub. 5–29–62. Cl. 12.
Creamery Package Mfg. Co., The, Chicago, Ill. 735,830, pub. 10–6–59. Cl. 2.
Cross, Clifford W., Sr., d.b.a. Midwest Shoe Specialty Co., Des Moines, Iowa. 629,598, canc. Cl. 39.
Crown Zellerbach Corp., San Francisco, Calif. 736,034, pub. 5–29–62. Cl. 37.
Cullen, Max O., Chicago, Ill. 629,745, canc. Cl. 38.
Cussons, Sons & Co., Ltd., Manchester, England. 736,159, pub. 5–29–62. Cl. 52.
Dan River Mills, Inc., Danville, Va. 736,113, pub. 5–29–62. Cl. 42.
Dan River Mills, Inc., Danville, Va. 736,115, pub. 5–29–62. Cl. 42.
Danfra' Ltd., New Haven, Conn. 629,568, canc. Cl. 39.
Davis Engineering, Inc., Dowagiac, Mich. 735,975, pub. 5–29–62. Cl. 23.
Davis, Grace F., d.b.a. Davis Mfg. Co., Memphis, Tenn. 736,148, pub. 5–29–62. Cl. 51.
Davis Mfg. Co.: *See*—
Davis, Grace F.
Davol Rubber Co., Providence, R.I. 629,627, canc. Cl. 44.
Dearborn Chemical Co., Chicago, Ill. 735,978, pub. 10–17–61. Cl 26.
Deltron, Inc., Philadelphia, Pa. 735,948, pub. 5–29–62. Cl. 21.
Deluxe Girdlecraft Co., Inc., New York, N.Y. 736,073, pub. 5–29–62. Cl. 39.
De Ly Ly Inc., Lexington, Ky. 736,144, pub. 5–29–62. Cl. 51.
Dennis, W. J., & Co., Franklin Park, Ill. 735,863, pub. 5–29–62. Cl. 12.
Dermik Pharmacal Co., Inc., Syosset, N.Y. 735,930, pub. 5–29–62. Cl. 18.
Des Moines Concrete Products Co., West Des Moines, Iowa. 735,868, pub. 5–29–62. Cl. 12.
Dipuppo, Michael C., d.b.a. Emil Laboratories, Philadelphia, Pa. 736,106, pub. 5–29–62. Cl. 40.
Diversey Corp., The, Chicago, Ill. 735,847, pub. 5–29–62. Cl. 6.
Diversey Corp., The, Chicago, Ill. 736,158, pub. 5–29–62. Cl. 52.
Dixon, Joseph, Crucible Co., Jersey City, N.J. 161,790, ren. 8–14–62. Cl. 37.
Dollyanna Publishers Inc., Atlantic City, N.J. 629,529, canc. Cl. 36.
Donnelley, Reuben H., Corp., from The American Journal of Medicine, Inc., New York, N.Y. 736,041, pub. 5–29–62. Cl. 38.
Douglas Fir Plywood Association, Tacoma, Wash. 736,174, pub. 5–29–62. Cl. A.
Dow Chemical Co., The, Midland, Mich. 735,843, pub. 5–29–62. Cl. 6.
Dr. Ing. Friedrich Meyer-Helbeck, d.b.a. "Sirius-Grunbach" Aktiengesellschaft fur Industrie und Steinkohlenbergbau, Nachfolger Dr.-Ing. Freidrich Meyer-Helbeck, Vienna, Austria. 735,853, pub. 7–21–59. Cl. 9.
Dr. Ing. Friedrich Meyer-Helbeck, d.b.a. "Sirius-Grunbach" Aktiengesellschaft fur Industrie und Steinkohlenbergbau, Nachfolger Dr. Ing. Friedrich Meyer-Helbeck, Vienna, Austria, from J. B. Griffin, d.b.a. J. B. Griffin Co. and Southern Match Co., Norfolk, Va. 735,854, pub. 7–21–59. Cl. 9.
Dranoff, Edwin, Philadelphia, Pa. 629,677, canc. Cl. 50.
Draper Brothers Co., Canton, Mass. 397,829, ren. 8–14–62. Cl. 42.
Duchcovsky Porcelan, Narodni Podnik, Duchcov, Czechoslovakia. 736,013, pub. 5–29–62. Cl. 30.
Dunning, Norman D., Somerville, Va. 629,335, canc. Cl. 6.
Dutchess Underwear Corp., New York, N.Y. 629,579, canc. Cl. 39.
Eagle-Picher Co., The, Cincinnati, Ohio. 629,429, canc. Cl. 21.
Eastman Kodak Co., Rochester, N.Y. 396,858, ren. 8–14–62. Cl. 23.
Eastman Kodak Co., Rochester, N.Y. 396,975, ren. 8–14–62. Cl. 6.
Eastman Kodak Co., Rochester, N.Y. 629,626, canc. Cl. 43.
Edison, S. M., Chemical Co.: *See*—
Edison, S. M., Chemical Co., Inc.
Edison, S. M., Chemical Co., Inc., from Sylvan M. Edison, d.b.a. S. M. Edison Chemical Co., Chicago, Ill. 736,151, pub. 5–29–62. Cl. 52.
Edison, Sylvan M.: *See*—
Edison, S. M., Chemical Co., Inc.
Edison, Thomas A., Inc., West Orange, N.J. 629,430, canc. Cl. 21.
E-Donolite Corp., Beverly Hills, Calif. 736,119, pub. 5–22–62. Cl. 44.
Educational Toy Co., Minneapolis, Minn. 629,516, canc. Cl. 32.
Edwards, William D., d.b.a. Unusual Specialties, St. Louis, Mo. 736,140, pub. 5–29–62. Cl. 50.
ELCE, Paris (Seine), France. 736,037, pub. 5–29–62. Cl. 37.
Electro Refractories & Abrasives Corp., Buffalo, N.Y. 735,885, pub. 5–29–62. Cl. 12.
Emil Laboratories: *See*—
Dipuppo, Michael C.
Empire Brushes, Inc., Port Chester, N.Y. 629,504, canc. Cl. 29.
Endicott Johnson Corp., Endicott, N.Y. 736,070, pub. 5–29–62. Cl. 39.
Erell Mfg. Co., Chicago, Ill. 735,841, pub. 5–29–62. Cl. 3.
Erstein, J. H., & Bros., Inc., New York, N.Y. 736,108, pub. 5–29–62. Cl. 40.
Ethical Pharmaceutical Co., Inc., Dallas, Tex. 735,921, pub. 5–29–62. Cl. 18.
Evans, George, Corp., The, Moline, Ill. 735,895, pub. 5–29–62. Cl. 13.
Ever-Ready Automatic Burglar Alarm Co., Inc., New York, N.Y. 735,950, pub. 5–29–62. Cl. 21.
Ewing, Jack B., Albuquerque, N. Mex. 629,317, canc. Cl. 2.
Excelsior Wrapper Co., to American Excelsior Corp., Chicago, Ill. 161,132, ren. 8–14–62. Cl. 1.
Fabricas Orion S.A., Monterrey, Nuevo Leon, Mex. 735,882, pub. 5–29–62. Cl. 12.
Fabri-Tek Inc., Hopkins, Minn. 735,968, pub. 5–29–62. Cl. 26.
Fairbanks, Morse & Co., Chicago, Ill. 629,426, canc. Cl. 19.
Falls Co., The, Winchendon, Mass. 394,737, ren. 8–14–62. Cl. 42.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 735,851, pub. 5–29–62. Cl. 6.
Federal Paper Board Co., Inc., Bogota, N.J. 735,836, pub. 5–29–62. Cl. 2.
Fenton Label Co., Philadelphia, Pa. 736,046, pub. 5–29–62. Cl. 38.
Findley, F. G., Co., The, Milwaukee, Wis. 397,247, ren. 8–14–62. Cl. 5.
Firestone Tire & Rubber Co., The, Akron, Ohio. 396,700, ren. 8–14–62. Cl. 39.
Firestone Tire & Rubber Co., The, Akron, Ohio. 397,874, ren. 8–14–62. Cl. 35.
First Texas Pharmaceuticals, Inc., Dallas, Tex. 735,925, pub. 5–29–62. Cl. 18.
Flexnit Co., Inc., Elisabeth, N.J. 736,102, pub. 5–29–62. Cl. 39.
Foam Rubber Center Ltd., Passaic, N.J. 629,739, canc. Cl. 32.
Foods Plus, Inc., from Foods Plus, Inc., New York, N.Y. 735,918, pub. 5–29–62. Cl. 18.
Forest Mfg. Co., Cleveland, Ohio. 736,138, pub. 5–29–62. Cl. 50.
Fortune Toys Inc., Brooklyn, N.Y. 629,439, canc. Cl. 22.
Foster Refrigerator Corp., Hudson, N.Y. 736,015–16, pub. 5–29–62. Cl. 31.
4PZ Corp., West Covina, Calif. 736,120, pub. 5–29–62. Cl. 44.

Frank, S. M., and Co., Inc.: *See*—
Reiss-Premier Corp., The.
Franklyn, Robert A., d.b.a. Athena Marquesa, Los Angeles, Calif. 736,147, pub. 5–29–62. Cl. 51.
France-Voiles (Societe a Responsabilite Limitee), Tarare (Rhone), France. 736,183. Cl. 42.
Freedman-Mathews Corp., The, Milwaukee, Wis. 629,679, canc. Cl. 50.
Freeman, Paul E., Tallahassee, Fla. 629,512, canc. Cl. 32.
Frigeco S.A., Courbevoie (Seine), France. 736,017, pub. 5–29–62. Cl. 31.
Frink Sno-Plows, Inc., Clayton, N.Y. 735,960–1, pub. 5–29–62. Cl. 23.
Gaines, M. Charles, to National Periodical Publications, Inc., New York, N.Y. 393,880, ren. 8–14–62. Cl. 38.
Gamewell Co., The, Newton Upper Falls, Mass. 735,942, pub. 5–29–62. Cl. 21.
Gaylord Products, Inc., Chicago, Ill. 736,109, pub. 5–29–62. Cl. 40.
Gebruder Haake K.G., Berlin-Steglitz, Germany. 735,998, pub. 5–29–62. Cl. 26.
Geigy Chemical Corp.: *See*—
Geigy Co., Inc.
Geigy Co., Inc., New York, N.Y., to Geigy Chemical Corp., Yonkers, N.Y. 398,710, ren. 8–14–62. Cl. 6.
General Electric Co., Schenectady, N.Y. 735,941, pub. 5–29–62. Cl. 21.
General Foods Corp., White Plains, N.Y. 736,132, pub. 5–29–62. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 398,619, ren. 8–14–62. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 736,012, pub. 5–29–62. Cl. 28.
General Time Corp., New York, N.Y. 736,001, pub. 5–29–62. Cl. 27.
Georgia Ports Authority, Savannah, Ga. 736,062, pub. 5–29–62. Cl. 38.
Gettelman, A., Brewing Co., Milwaukee, Wis. 629,674, canc. Cl. 48.
Gilbert, A. C., Co., The, New Haven, Conn. 629,427, canc. Cl. 21.
Gilbey, W. & A., Ltd., London, England. 736,189. Cl. 49.
Glass, Jackson C. E., d.b.a. Mill Agents & Distributors, Oakland, Calif. 629,532, canc. Cl. 37.
Glentronics, Inc., Glendora, Calif. 735,944, pub. 5–29–62. Cl. 21.
Globe Roofing Products Co., Inc., Whiting, Ind. 735,864, pub. 5–29–62. Cl. 12.
Globe-Union Inc., Milwaukee, Wis. 735,937, pub. 5–29–62. Cl. 21.
Goodman, A., & Sons, Inc., Long Island Cit., N.Y. 736,123, pub. 5–29–62. Cl. 46.
Goofy Bird Enterprises: *See*—
Stitzel, William D.
Gorham Corp., Providence, R.I. 736,003, pub. 5–29–62. Cl. 28.
Grace, W. R., & Co., Cambridge, Mass. 735,849, pub. 5–29–62. Cl. 6.
Greater New York Restaurant and Luncheonette Suppliers Association, Brooklyn, N.Y. 629,757, canc. Cl. 46.
Greyhound Corp., The, Chicago, Ill. 736,170, pub. 5–29–62. Cl. 105.
Grand Union Co., The, East Paterson, N.J. 736,135, pub. 5–29–62. Cl. 46.
Griess-Pfleger Tanning Co., The, Waukegan, Ill. 629,313, canc. Cl. 1.
Griffin, J. B.: *See*—
Dr. Ing. Friedrich Meyer-Helbeck.
Griffin, J. B., Co.: *See*—
Griffin, J. B.
Griver, Harry, d.b.a. Pennsylvania Lacquer Center, Philadelphia, Pa. 735,913, pub. 5–29–62. Cl. 16.
Guild Products Corp., to Stationers' Guild of America, Philadelphia, Pa. 159,364, ren. 8–14–62. Cl. 37.
Guild Products Corp., to Stationers' Guild of America, Philadelphia, Pa. 161,946, ren. 8–14–62. Cl. 5.
Hall, Stanley H., Branford, Conn. 735,912, pub. 5–29–62. Cl. 16.
Hallman, E., Co.: *See*—
Hallman, E.
Hallman, E., d.b.a. E. Hallman Co., Toronto, Ontario, Canada, 393,893, ren. 8–14–62. Cl. 46.
Hanes, P. H., Knitting Co.: *See*—
Vanity Fair Silk Mills.
Hardtmuth, L. & C., Inc., Bloomsbury, N.J. 736,038, pub. 5–29–62. Cl. 37.
Haskelite Mfg. Corp., Grand Rapids, Mich. 629,367–8, canc. Cl. 12.
Hassenfeld Bros., Inc., Central Falls, R.I. 629,435–8, canc. Cl. 22.
Hayden, Irene R., New York, N.Y. 629,658, canc. Cl. 46.
Heldreich, Ronald H., Honolulu, Hawaii. 629,495, canc. Cl. 28.
Henry & Henry, Inc., Buffalo, N.Y. 736,185. Cl. 46.
Hereford Heaven Brands, Inc., d.b.a. Shorthorn Brands, Oklahoma City, Okla. 736,186. Cl. 46.
Hereford Heaven Brands, Inc., d.b.a. Yearling Brands, Oklahoma City, Okla. 736,187. Cl. 46.
Hickok Mfg. Co. Inc., Rochester, N.Y. 736,089, pub. 5–29–62. Cl. 39.
Hiller Bros. & Hiller, Inc., New York, N.Y. 629,593, canc. Cl. 39.
Hodge, Woodrow W., d.b.a. Zodiac Turf Prediction Co., Chicago, Ill. 629,746, canc. Cl. 38.
Holgate Toys, Inc.: *See*—
Cappel, MacDonald & Co.
Holsaert, Eunice: *See*—
Bailey, Charity, and Eunice Holsaert.
Holt Hosiery Corp., New York, N.Y. 736,091, pub. 5–29–62. Cl. 39.
Home-Care Products Inc., Woodhaven, N.Y. 735,833, pub. 5–29–62. Cl. 2.
Hoover Ball and Bearing Co., Saline, Mich., from Tote Engineering, Inc., Seattle, Wash. 735,958, pub. 5–29–62. Cl. 23.
Hormel, Geo. A., & Co., Austin, Minn. 736,124, pub. 5–29–62. Cl. 46.
House & Garden Nurseries, Levittown, Pa. 629,309, canc. Cl. 1.
Household Products Co., Evanston, Ill. 398,711, ren. 8–14–62. Cl. 46.
Howard Mfg. Co., Kent, Wash. 735,862, pub. 5–29–62. Cl. 12.
Howard Preserving Co.: *See*—
Howard Preserving Co., Inc.
Howard Preserving Co., Inc., to Howard Preserving Co., Miami, Fla. 395,784, ren. 8–14–62. Cl. 46.
Howard Stores Corp., Brooklyn, N.Y. 629,576, canc. Cl. 39.
Hughes Tool Co., Houston, Tex. 735,972, pub. 5–29–62. Cl. 23.
Hughes Tool Co., Aircraft Division: *See*—
Hughes Tool Co.
Hughes Tool Co., d.b.a. Hughes Tool Co., Aircraft Division, Culver City, Calif. 736,055, pub. 5–29–62. Cl. 38.
Humble Oil & Refining Co.: *See*—
Stanco Inc.
Hunt Oil Co., Dallas, Tex. 735,932, pub. 5–29–62. Cl. 18.
Hunter Publishing Co.: *See*—
Bowyer, Ambrose.
Hyde, Mark, d.b.a. Universal Candles, Meols, Cheshire, England. 735,908, pub. 5–29–62. Cl. 15.
Ideal Products, Inc., Sykesville, Pa. 736,081, pub. 5–29–62. Cl. 39.
Illinois-California Express, Inc., Denver, Colo. 736,171, pub. 5–29–62. Cl. 105.
Imhof, Alfred, Ltd., London, England. 736,022, pub. 5–29–62. Cl. 32.
Imperial Industries, Inc., Stillwater, Okla. 735,990, pub. 5–29–62. Cl. 26.
Imported Brands, Inc., Brooklyn, N.Y. 736,190. Cl. 49.
Indes Industria Elettrodomestici S.p.A., Orbassano, Turin, Italy. 735,977, pub. 5–29–62. Cl. 24.
Ingenieursbureau Lemet Chromium H. van der Horst N.V., Hilversum, Netherlands. 735,906, pub. 5–29–62. Cl. 15.
Insul-mastic, Inc., Summit, Ill. 735,866, pub. 5–29–62. Cl. 12.
Interamerican Importing Co., Peoria, Ill. 629,494, canc. Cl. 28.
International Jean Co., Inc.: *See*—
Big Giant Mfg. Co.
International Laboratories, Inc., Rochester, N.Y. 735,916, pub. 5–29–62. Cl. 18.
Iroquois Oil Corp., Buffalo, N.Y. 396,328, ren. 8–14–62. Cl. 15.
Irving-Cloud Publishing Co., The, Lincolnwood, Chicago, Ill. 736,056, pub. 5–29–62. Cl. 38.
Isenberg, William, Los Angeles, Calif. 629,360, canc. Cl. 12.
Jackson, Earle G., Houston, Tex. 629,639, canc. Cl. 45.
Jaymar Specialty Co., Brooklyn, N.Y. 629,446, canc. Cl. 22.
Johns-Manville Corp., New York, N.Y. 735,880, pub. 5–29–62. Cl. 12.
Joseph & Feiss Co., The, Cleveland, Ohio. 736,093, pub. 5–29–62. Cl. 39.
Joyce, Inc., Cincinnati, Ohio. 398,513, ren. 8–14–62. Cl. 50.
Kagan Textiles Ltd., Elland, England. 736,082, pub. 5–29–62. Cl. 39.
Kaltchuck, Harold O., d.b.a. Boulevard Recording Studio, Chicago, Ill. 629,530, canc. Cl. 36.
Kartane, Inc., Marshall, Mich. 735,909, pub. 5–29–62. Cl. 15.
Kawneer Co., Niles, Mich. 735,875, pub. 5–29–62. Cl. 12.
Kedmont Mfg. & Waterproofing Co.: *See*—
Van Wolf, A. F.
Kedmont Waterproofing Co.: *See*—
Van Wolf, A. F.
Kellogg Co., Battle Creek, Mich. 397,477–8, ren. 8–14–62. Cl. 46.
Kemp & Beatley, Inc., New York, N.Y. 161,517, ren. 8–14–62. Cl. 42.
Kennatrack Corp., Elkhart, Ind. 736,175. Cl. 13.
Kesko Products, Inc., Bristol, Ind. 735,870, pub. 5–29–62. Cl. 12.
Kiekhaefer Corp., Cedarburg, Wis. 735,967, pub. 5–29–62. Cl. 23.
Kimberly-Clark Corp., Neenah, Wis. 736,118, pub. 5–29–62. Cl. 44.
Kimble Glass Co., Toledo, Ohio. 735,980, pub. 5–29–62. Cl. 26.
King-Seeley Thermos Co., Ann Arbor, Mich. 735,834, pub. 5–29–62. Cl. 2.
King-Seeley Thermos Co., Ann Arbor, Mich. 735,842, pub. 5–29–62. Cl. 4.
King-Seeley Thermos Co., Ann Arbor, Mich. 736,000, pub. 5–29–62. Cl. 27.
King-Seeley Thermos Co., Ann Arbor, Mich. 736,019, pub. 5–29–62. Cl. 31.
Kiplinger Washington Editors, Inc., The, Washington, D.C. 736,059, pub. 5–29–62. Cl. 38.
Kleinert, I. B., Rubber Co., New York, N.Y. 629,608, canc. Cl. 42.
Knapp Mills Inc., Long Island City, N.Y. 735,905, pub. 5–29–62. Cl. 14.
Knox Instruments, Inc., Seattle, Wash. 735,991, pub. 5–29–62. Cl. 26.
Koenig Iron Works, Inc., Houston, Tex. 629,424, canc. Cl. 19.
Kordell Sportswear, Inc., New York, N.Y. 629,625, canc. Cl. 42.
Koster, Samuel: *See*—
Craft Shoe Mfg. Co., Inc.
Kroger Co., The, Cincinnati, Ohio. 736,165, pub. 5–29–62. Cl. 101.

Labaid Co.: *See*—
Sauerborn, Vanda.
Labatt, John, Ltd., London, Ontario, Canada. 629,764–5, canc. Cl. 48.
Labradalite Co., Anaheim, Calif. 735,888, pub. 5–29–62. Cl. 12.
Lamour, Dorothy, Enterprises Ltd., Brooklandville, Md. 736,146, pub. 5–29–62. Cl. 51.
Landers, Frary & Clark, New York, N.Y. 735,831, pub. 5–29–62. Cl. 2.
Lavino, E. J., and Co., Philadelphia, Pa. 398,636, ren. 8–14–62. Cl. 12.
Lee Rubber & Tire Corp., Conshohocken, Pa. 735,850, pub. 5–29–62. Cl. 6.
Leopard Brewery Ltd., Hastings, New Zealand. 736,137, pub. 5–29–62. Cl. 48.
Lewis, Ted W., Fort Worth, Tex. 629,369, canc. Cl. 12.
Lickle, Jarrett S., New Hope, Pa. 629,725, canc. Cl. 107.
Lilly, Eli, and Co., Indianapolis, Ind. 735,931, pub. 5–29–62. Cl. 18.
Linen Thread Co., Inc., The, New York, N.Y. 394,740, ren. 8–14–62. Cl. 22.
Lingner-Werke G.m.b.H., Duesseldorf, Germany. 736,117, pub. 5–29–62. Cl. 44.
Lovable Brassiere Co., The, Atlanta, Ga. 736,092, pub. 5–29–62. Cl. 39.
Lux Clock Mfg. Co., Inc., The, Waterbury, Conn. 629,490–1, canc. Cl. 27.
Mac Distributors, Robbins, Ill. 629,412, canc. Cl. 18.
Maclennan & Maclennan Ltd., Stornoway, Isle of Lewis, Outer Hebrides, Scotland. 629,754, canc. Cl. 42.
MacMillan Ring-Free Oil Co., Inc., Los Angeles, Calif. 735,869, pub. 5–29–62. Cl. 12.
Maleckl, Michael, d.b.a. Michael Maleckl Co., Brooklyn, N.Y. 736,194. Cl. 51.
Manifold Supplies Co., Brooklyn, N.Y. 398,883, ren. 8–14–62. Cl. 11.
Manu-mine Research & Development Co., Mohnton, Pa. 629,716, canc. Cl. 103.
Marcal Paper Mills, Inc., East Paterson, N.J. 736,181. Cl. 37.
Marcal Paper Mills, Inc., from Marcalus Mfg. Co., Inc., East Paterson, N.J. 736,179. Cl. 37.
Marcalus Mfg. Co., Inc.: *See*—
Marcal Paper Mills, Inc.
Marine Colloids, Inc., New York, N.Y. 736,067, pub. 5–29–62. Cl. 38.
Marquesa, Athena: *See*—
Franklyn, Robert A.
Marvellum Co., The, Holyoke, Mass. 160,919, ren. 8–14–62. Cl. 37.
Mathiews, Sue A., Summit, N.J. 629,586, canc. Cl. 39.
Matson, Steve, Products, Inc., New York, N.Y. 736,079, pub. 5–29–62. Cl. 39.
Mayhew Steel Products, Inc., Shelburne Falls, Mass. 735,959, pub. 5–29–62. Cl. 23.
McKay Products Corp., The, New York, N.Y. 736,084–5, pub. 5–29–62. Cl. 39.
McMullen, R. O. C., Portland, Oreg. 629,352, canc. Cl. 8.
McMurray, Marshall, Co., Los Angeles, Calif. 735,892, pub. 5–29–62. Cl. 13.
Mead Johnson & Co., Evansville, Ind. 629,632, canc. Cl. 44.
Mead Johnson & Co., Evansville, Ind. 735,923, pub. 5–29–62. Cl. 18.
Mead Johnson & Co., Evansville, Ind. 736,128, pub. 5–29–62. Cl. 46.
Mengel Co., The: *See*—
Mengel Wood Industries, Inc.
Mengel Wood Industries, Inc., from The Mengel Co., Louisville, Ky. 735,861, pub. 5–29–62. Cl. 12.
Merck & Co., Inc., Rahway, N.J. 629,402–3, canc. Cl. 18.
Merrell, Wm. S., Co., The, to Richardson-Merrell Inc., Cincinnati, Ohio. 398,185, ren. 8–14–62. Cl. 6.
Meyer, H. W., Inc., Chicago, Ill. 736,110, pub. 5–29–62. Cl. 40.
Midas, Inc., Chicago, Ill. 736,168, pub. 5–29–62. Cl. 103.
Midwest Shoe Specialty Co.: *See*—
Cross, Clifford W., Sr.
Mill Agents & Distributors: *See*—
Glass, Jackson C. E.
Miller & Levine Inc., Boston, Mass. 736,104, pub. 5–29–62. Cl. 39.
Millers' Mutual Insurance Association, Alton, Ill. 736,166, pub. 5–29–62. Cl. 102.
Milsan Mills, Inc., Lebanon, Pa. 629,570, canc. Cl. 39.
Missouri Pharmaceutical Mfg. Co.: *See*—
Stevens Laboratories, Inc.
Mr. T Inc., New York, N.Y. 736,076, pub. 5–29–62. Cl. 39.
Modern Products, Inc., Milwaukee, Wis. 735,945, pub. 5–29–62. Cl. 21.
Mohawk Carpet Mills, Inc., Amsterdam, N.Y. 629,610–13, canc. Cl. 42.
Monsanto Chemical Co., St. Louis, Mo. 735,828, pub. 5–29–62. Cl. 1.
Movie Star, Inc., New York, N.Y. 736,182. Cl. 39.
Mueller Brass Co., Port Huron, Mich. 735,890, pub. 5–29–62. Cl. 13.
Mueller Co., Decatur, Ill. 735,901, pub. 5–29–62. Cl. 13.
Murray's Superior Products Co., Detroit, Mich., from Murray's Superior Products Co., Inc., Chicago, Ill. 736,143, pub. 5–29–62. Cl. 51.
Murray's Superior Products Co., Detroit, Mich., from Murray's Superior Products Co., Inc., Chicago, Ill. 736,153, pub. 5–29–62. Cl. 52.
Murray's Superior Products Co., Inc.: *See*—
Murray's Superior Products Co.
Naamloze Vennootschap Kristal-, Glas- en Aardewerkfabrieken "de Sphinx" Voorheen Petrus Regout & Co., Maastricht, Netherlands. 629,376, canc. Cl. 13.
National Biscuit Co., New York, N.Y. 736,131, pub. 5–29–62. Cl. 46.
National Chain Co., Providence, R.I. 629,735, canc. Cl. 28.
National Family Stores of New Jersey, Union, N.J. 736,096, pub. 5–29–62. Cl. 39.
National Institute of Drycleaning, Inc., Silver Spring, Md. 629,704, canc. Cl. 100.
National Motel Shows, The, Philadelphia, Pa. 629,713, canc. Cl. 101.
National Periodical Publications, Inc.: *See*—
Gaines, M. Charles.
National Periodical Publications, Inc., New York, N.Y. 736,068, pub. 5–29–62. Cl. 38.
Nesco, Division of New York Shipbuilding Corp.: *See*—
New York Shipbuilding Corp.
Nethercutt Laboratories, from Nethercutt Laboratories, Los Angeles, Calif. 736,191–3. Cl. 51.
New England Confectionery Co., Cambridge, Mass. 159,048, ren. 8–14–62. Cl. 46.
New Jersey Machine Corp., Hoboken, N.J. 629,456, canc. Cl. 23.
New Standard Baking Co., Philadelphia, Pa. 629,651, canc. Cl. 46.
New York Loose Leaf Corp., New York, N.Y. 736,031, pub. 5–29–62. Cl. 37.
New York Shipbuilding Corp., d.b.a. Nesco, Division of New York Shipbuilding Corp., Milwaukee, Wis. 629,319–22, canc. Cl. 2.
Norcross, Inc., New York, N.Y. 736,061, pub. 5–29–62. Cl. 38.
North American Electronic Systems, Inc., Jeffersonville, Pa. 735,996, pub. 5–29–62. Cl. 26.
Norwich Mills, Inc., Norwich, N.Y. 629,562, canc. Cl. 39.
Novo Industrial Corp., New York, N.Y. 736,018, pub. 5–29–62. Cl. 31.
Oakford & Fahnestock, Peoria, Ill., to Blue Ribbon Growers, Inc., Yakima, Wash. 21,340, ren. 8–14–62. Cl. 46.
Oil Metering and Processing Equipment Corp., Houston, Tex. 735,981, pub. 5–29–62. Cl. 26.
Oklahoma Clothing Manufacturers, Oklahoma City, Okla. 736,075, pub. 5–29–62. Cl. 39.
Oland & Son Ltd., Halifax, Nova Scotia, Canada. 736,136, pub. 5–29–62. Cl. 48.
Old London Foods, Inc., New York, N.Y. 726,133, pub. 5–29–62. Cl. 46.
Oneida Ltd., Oneida, N.Y. 736,007, pub. 5–29–62. Cl. 28.
Orchard Paper Co., St. Louis, Mo. 736,180. Cl. 37.
Organon Inc., West Orange, N.J. 735,928, pub. 5–29–62. Cl. 18.
Palmer, Fred N., d.b.a. Fred Palmer's—Positive Shooting, Houston, Tex. 735,857, pub. 5–29–62. Cl. 9.
Palmer's, Fred—Positive Shooting: *See*—
Palmer, Fred N.
Pan Condenser Co. Inc., Brooklyn, N.Y. 629,351, canc. Cl. 8.
Panocean-Ship-A-Car-System U.S.A. Inc., New York, N.Y. 736,169, pub. 5–29–62. Cl. 105.
Paperlynen Co., Columbus, Ohio. 736,103, pub. 5–29–62. Cl. 39.
Paraderm Laboratories, Inc., Boston, Mass. 629,391–4, canc. Cl. 18.
Paragon Molding Co., Melrose Park, Ill. 629,318, canc. Cl. 2.
Parker Chiropractic Research Foundation, Inc., Fort Worth, Tex. 736,044, pub. 5–29–62. Cl. 38.
Parker-Hannifin Corp., Cleveland, Ohio. 735,897, pub. 5–29–62. Cl. 13.
Parker Pen Co., The, Janesville, Wis. 736,035, pub. 5–29–62. Cl. 37.
Pearson, Jack W., d.b.a. Pearson Products Co., Elyria, Ohio. 736,178. Cl. 26.
Pearson Products Co.: *See*—
Pearson, Jack W.
Pennsalt Chemicals Corp., Philadelphia, Pa. 735,829, pub. 5–29–62. Cl. 1.
Pennsylvania Lacquer Center: *See*—
Griver, Harry.
Petersen Oven Co., The, Franklin Park, Ill. 629,454, canc. Cl. 23.
Petroleum Engineer Publishing Co., The, Dallas, Tex. 736,050, pub. 5–29–62. Cl. 38.
Phar-Med, Inc., East Detroit, Mich. 735,920, pub. 5–29–62. Cl. 18.
Philadelphia Quartz Co., Philadelphia, Pa. 398,704, ren. 8–14–62. Cl. 6.
Phoenix Products Co., Inc., Milwaukee, Wis. 735,835, pub. 5–29–62. Cl. 2.
Pierson, Harry H., Miami, Fla. 629,475, canc. Cl. 26.
Pioneer Screw & Nut Co., Melrose Park, Ill. 735,893, pub. 5–29–62. Cl. 13.
Pliantform Foundations, Inc., New York, N.Y. 629,595, canc. Cl. 39.
Polaroid Corp., Cambridge, Mass. 398,917–18, ren. 8–14–62. Cl. 11.
Pond Lily Co., The, New Haven, Conn. 398,788, ren. 8–14–62. Cl. 42.
Price Battery Corp., Hamburg, Pa. 736,139, pub. 5–29–62. Cl. 50.
Prochain, Inc., Providence, R.I. 736,008–10, pub. 5–29–62. Cl. 28.
Procter & Gamble Co., The, Cincinnati, Ohio. 736,134, pub. 5–29–62. Cl. 46.
Protective Closures Co., Inc., Buffalo, N.Y. 735,970, pub. 5–29–62. Cl. 23.
Prouvost Lefebvre of Rhode Island, Inc., Woonsocket, R.I. 629,307, canc. Cl. 1.
Pure Oil Co., The, Palatine, Ill. 735,848, pub. 5–29–62. Cl. 6.
Pryor, Jack, Pocahontas, Ark. 735,974, pub. 5–29–62. Cl. 23.
Quality Products Co., Inc., Brooklyn, N.Y. 736,195. Cl. 51.
Quinn, K. J., & Co., Inc., Malden, Mass. 395,761, ren. 8–14–62. Cl. 4.

Quinn, K. J., & Co., Inc., Malden, Mass. 395,868, ren. 8–14–62. Cl. 4.
Ramey Short Corp., Philadelphia, Pa. 629,556, canc. Cl. 39.
Rayalarm, Inc., Chicago, Ill. 629,481, canc. Cl. 26.
Rayco Mfg. Co., Paramus, N.J. 735,969, pub. 5–29–62. Cl. 23.
Red Spot Paint & Varnish Co., Inc., Evansville, Ind. 397,234, ren. 8–14–62. Cl. 16.
Red Wing Wood Products, Inc., Red Wing, Minn. 736,020, pub. 5–29–62. Cl. 32.
Reeves Brothers, Inc., New York, N.Y. 735,826, pub. 5–29–62. Cl. 1.
Register and Tribune Syndicate, Inc., The, Des Moines, Iowa. 736,042, pub. 5–29–62. Cl. 38.
Reiss-Premier Corp., The, to S. M. Frank and Co., Inc., New York, N.Y. 629,348, canc. Cl. 8.
Reliance Mfg. Co., New York, N.Y. 736,083, pub. 5–29–62. Cl. 39.
Republic Flow Meters Co., to Republic Flow Meters Company, Chicago, Ill. 397,665, ren. 8–14–62. Cl. 26.
Research Craft Corp., Los Angeles, Calif. 735,822, pub. 5–29–62. Cl. 1.
Revlon, Inc., New York, N.Y. 629,740, canc. Cl. 32.
Reynolds Aluminum Supply Co., Atlanta, Ga. 735,876, pub. 5–29–62. Cl. 12.
Reynolds Metals Co., Richmond, Va. 735,878, pub. 5–29–62. Cl. 12.
Richardson-Merrell Inc.: *See*—
Merrell, Wm. S., Co., The.
Rival Mfg. Co., Kansas City, Mo. 735,955, pub. 5–29–62. Cl. 23.
Robbins, Alfred, Organization, Inc., New York, N.Y. 629,349, canc. Cl. 8.
Robert Hosiery Mills, Inc., Collegeville, Pa. 736,072, pub. 5–29–62. Cl. 39.
Robert Hosiery Mills, Inc., Collegeville, Pa. 736,098, pub. 5–29–62. Cl. 39.
Robertson, P. L., Mfg. Co. Ltd., Milton, Ontario, Canada. 735,900, pub. 5–29–62. Cl. 13.
Rockwell Mfg. Co., Pittsburgh, Pa. 735,984, pub. 5–29–62. Cl. 26.
Roland Radio Corp., Mt. Vernon, N.Y. 629,428, canc. Cl. 21
Roller Derby Skate Corp., Litchfield, Ill. 735,953, pub. 5–29–62. Cl. 22.
Rosen, Morris, Fur Corp., New York, N.Y. 736,086, pub. 5–29–62. Cl. 39.
Rubicon, Inc., New York, N.Y. 629,533, canc. Cl. 37.
Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, North Rhine-Westphalia, Germany. 629,333, canc. Cl. 6.
Ryan, Lawrence C., Daytona Beach, Fla. 629,432, canc. Cl. 22.
Santos, Manuel, d.b.a. Tosan Drug Co., New York, N.Y. 629,411, canc. Cl. 18.
Sarong, Inc., Dover, Del. 736,100, pub. 5–29–62. Cl. 39.
Sauerborn, Vanda, d.b.a. Labaid Co., Milwaukee, Wis. 736,157, pub. 5–29–62. Cl. 52.
Sayve Corp. of America, Inc., from Clesco National, Inc., Cincinnati, Ohio. 736,196. Cl. 103.
Scher, M. M., & Sons, Inc., Baltimore, Md. 629,604, canc. Cl. 42.
Schmid, Julius, Inc., New York, N.Y. 398,551, ren. 8–14–62. Cl. 44.
Scholastic Magazines, Inc., New York, N.Y. 736,057, pub. 5–29–62. Cl. 38.
Schroeder, Frieda, Los Angeles, Calif. 736,125, pub. 5–29–62. Cl. 46.
Sears, Roebuck and Co., Chicago, Ill. 735,838, pub. 5–29–62. Cl. 3.
Seidner, Milton, Arcadia, Calif. 629,385, canc. Cl. 13.
Servel, Inc., Evansville, Ind. 629,509, canc. Cl. 31.
Seyfert Potato Chip Co., Columbus, Ohio. 736,126, pub. 5–29–62. Cl. 46.
Shawinigan Resins Corp., Springfield, Mass. 735,946–7, pub. 5–29–62. Cl. 21.
Sherman Laboratories, Detroit, Mich. 735,929, pub. 5–29–62. Cl. 18.
Shinderman Management Corp., Chicago, Ill. 629,718, canc. Cl. 105.
Shorthorn Brands: *See*—
Hereford Heaven Brands, Inc.
Siegel, Jacob, Co., Inc.: *See*—
Siegel, Jacob, Co.
Siegel, Jacob, Co., to Jacob Siegel Co., Inc., Philadelphia, Pa. 396,982, ren. 8–14–62. Cl. 39.
Silvel Mfg. Co., Los Angeles, Calif. 629,499, canc. Cl. 28.
Sing A Song Co.: *See*—
Bailey, Charity, and Ennice Holsnert.
Singer Mfg. Co., The, New York, N.Y. 397,814, ren. 8–14–62. Cl. 15.
Sippican Corp., The, Marion, Mass. 735,936, pub. 5–29–62. Cl. 21.
"Sirius-Grunbach" Aktiengesellschaft fur Industrie und Steinkohlenbergbau, Nachfolger Dr.-Ing. Freidrich Meyer-Helbeck: *See*—
Dr. Ing. Friedrich Meyer-Helbeck.
Slump-O-Matix Systems, Inc., Lenox, Mass. 735,995, pub. 5–29–62. Cl. 26.
Smithe, F. L., Machine Co., Inc., New York, N.Y. 735,968, pub. 5–29–62. Cl. 23.
Smoot-Holman Co., Inglewood, Calif. 735,934, pub. 5–29–62. Cl. 21.
Socni Oil & Refining Co., Huntington Beach, Calif. 735,907, pub. 5–29–62. Cl. 15.
Societe de la Viscose Suisse, Emmenbrucke, Switzerland. 735,825, pub. 5–29–62. Cl. 1.
Societe Technique de Parfumerie F. Millot, Paris, France. 736,145, pub. 5–29–62. Cl. 51.
Society of the Sons of the Revolution in the State of Illinois, Homewood, Ill. 736,063, pub. 5–29–62. Cl. 38.
South Chester Corp., Lester, Pa. 735,891, pub. 5–29–62. Cl. 13.
South River Sand Co., Old Bridge, N.J. 735,823, pub. 5–29–62. Cl. 1.
Southern Match Co.: *See*—
Dr. Ing. Friedrich Meyer-Helbeck.
Southwest Products, Inc., San Antonio, Tex. 736,177. Cl. 18.
Sportleigh Hall, Inc., New York, N.Y. 629,572, canc. Cl. 39.
Stalfort, John C., & Sons, Inc., Baltimore, Md. 735,844, pub. 5–29–62. Cl. 6.
Stamford Chemical Industries Inc., Stamford, Conn. 736,154, pub. 5–29–62. Cl. 52.
Stanco Inc., Wilmington, Del., and New York, N.Y., to Humble Oil & Refining Co., Houston, Tex. 394,957, ren. 8–14–62. Cl. 51.
Standard Brands Inc., New York, N.Y. 629,640, canc. Cl. 45.
Standard Change-Makers, Inc., Indianapolis, Ind. 735,979, pub. 5–29–62. Cl. 26.
Standard Knitting Mills, Inc., Knoxville, Tenn. 736,097, pub. 5–29–62. Cl. 39.
Starlian Lapidaries, Inc., New York, N.Y. 629,500, canc. Cl. 28.
Stationers Guild of America: *See*—
Guild Products Corp.
Stetson, John B., Co., Philadelphia, Pa. 736,077–8, pub. 5–29–62. Cl. 39.
Stevens, J. P., & Co., Inc., New York, N.Y. 629,614, canc. Cl. 42.
Stevens Laboratories, Inc., Clayton, from Missouri Pharmaceutical Mfg. Co., St. Louis, Mo. 735,926, pub. 5–29–62. Cl. 18.
Stevens Products, Inc., East Orange, N.J. 629,431, canc. Cl. 21.
Stevenson, E. A., Co., Los Angeles, Calif. 736,023, pub. 5–29–62. Cl. 32.
Stimson Lens Laboratories: *See*—
Stimson, Noel O.
Stimson, Noel O., d.b.a. Stimson Lens Laboratories, Los Angeles, Calif. 735,985, pub. 5–29–62. Cl. 26.
Stitzel, William D., d.b.a. Goofy Bird Enterprises, Shenandoah, Iowa. 736,105, pub. 5–29–62. Cl. 40.
Stone Products Corp., Roanoke, Va. 735,824, pub. 5–29–62. Cl. 1.
Storm, John P., Salinas, Calif. 736,129, pub. 5–29–62. Cl. 46.
Stroun Bros. Camy Watch Co. Ltd., Geneva, Switzerland. 735,999, pub. 5–29–62. Cl. 27.
Studner, D. M., New York, N.Y. 629,555, canc. Cl. 39.
Sunbeam Corp.: *See*—
Chicago Flexible Shaft Co.
Supreme Assembly, Order of Rainbow for Girls, The, McAlester, Okla. 736,173, pub. 5–29–62. Cl. 200.
Supreme Merchandise Co., New York, N.Y. 629,350, canc. Cl. 8.
Sussex Mfg. Corp., New York, N.Y. 629,326, canc. Cl. 3.
Swan Shoe Co., Inc., Baltimore, Md. 396,603, ren. 8–14–62. Cl. 39.
Swank, Inc., Attleboro, Mass. 736,006, pub. 5–29–62. Cl. 28.
T.G. & Y. Stores Co., Oklahoma City, Okla. 736,164, pub. 5–29–62. Cl. 101.
Takaki, Lily Y., Honolulu, Hawaii. 736,176. Cl. 18.
Technical Appliance Corp., from Technical Appliance Corp., Sherburne, N.Y. 735,951–2, pub. 5–29–62. Cl. 21.
Technical Color & Chemical Works, Inc., Mount Vernon, N.Y. 397,184–5, ren. 8–14–62. Cl. 16.
Tedro Fifth Ave. Ltd., Tuckahoe, N.Y. 629,327, canc. Cl. 3.
Telchmann, Henry F., Inc., Peters Township, Washington County, Pa. 735,976, pub. 5–29–62. Cl. 23.
Television Digest, Inc., Washington, D.C. 736,053, pub. 5–29–62. Cl. 38.
Temco, Inc., Nashville, Tenn. 736,024, pub. 5–29–62. Cl. 34.
Templeton's Ltd., Toronto, Canada. 156,067, ren. 8–14–62. Cl. 18.
Theodor Mfg. Corp., Los Angeles, Calif. 735,837, pub. 5–29–62. Cl. 3.
Thompson, Ernest: *See*—
Thompson, Joseph.
Thompson, Joseph, (Sheffield) Ltd.: *See*—
Thompson, Joseph.
Thompson, Joseph, by T. S. Woodcock, W. Thompson, and E. Thompson, executors, d.b.a. Joseph Thompson, to Joseph Thompson (Sheffield) Ltd., Sheffield, England. 157,219, ren. 8–14–62. Cl. 23.
Thompson, William: *See*—
Thompson, Joseph.
Timberline, Inc. of Oregon, Portland, Oreg. 735,860, pub. 5–29–62. Cl. 12.
Tosan Drug Co.: *See*—
Santos, Manuel.
Tote Engineering, Inc.: *See*—
Hoover Ball and Bearing Co.
Trans-National Electronics Corp., Montclair, N.J. 736,029, pub. 5–29–62. Cl. 36.
Travelers Express Co., Inc., Minneapolis, Minn. 736,163, pub. 5–29–62. Cl. 101.
Treasure Crafts: *See*—
Walters, Herbert E.
U-Finish Homes, Inc., Memphis, Tenn. 736,167, pub. 5–29–62. Cl. 103.
Union Carbide Corp., New York, N.Y. 735,889, pub. 5–29–62. Cl. 12.
Union Carbide Corp., New York, N.Y. 735,902, pub. 5–29–62. Cl. 13.
Union Mfg. Co., Frederick, Md. 629,587, canc. Cl. 39.
United-Carr Fastener Corp., Cambridge, Mass. 735,949, pub. 5–29–62. Cl. 21.
United Electric Service of Springfield, Inc., Springfield, Oreg. 735,935, pub. 5–29–62. Cl. 21.
United Press International, Inc., New York, N.Y. 736,064, pub. 5–29–62. Cl. 38.

U.S. Diamond Ring Corp., New York, N.Y. 629,497–8, canc. Cl. 28.
United States Rubber Co., New York, N.Y. 736,172, pub. 5–29–62. Cl. 106.
United States Steel Corp., Pittsburgh, Pa. 735,887, pub. 5–29–62. Cl. 12.
United Steel Companies Ltd., Sheffield, England. 735,904, pub. 5–29–62. Cl. 14.
Universal Candies: *See*—
Hyde, Mark.
Unusual Specialties: *See*—
Edwards, William D.
Vac-U-Pak Corp., San Francisco, Calif. 629,466, canc. Cl. 23.
Valor Sales Corp., New York, N.Y. 735,855, pub. 5–29–62. Cl. 9.
Van Loon, G., d.b.a. Cedona Haarlemmer Pharamaceutische Fabriek, Haarlem, Netherlands. 735,919, pub. 5–29–62. Cl. 18.
Van Wolf, A. F., d.b.a. Kedmont Mfg. & Waterproofing Co., to Kedmont Waterproofing Co., Chicago, Ill. 393,945, ren. 8–14–62. Cl. 12.
Vanadium-Alloys Steel Co., Latrobe, Pa. 735,903, pub. 5–29–62. Cl. 14.
Vanity Fair Silk Mills, Reading, Pa., to P. H. Hanes Knitting Co., Winston-Salem, N.C. 154,727, ren. 8–14–62. Cl. 39.
Vereinigte Metallwerke Ranshofen-Berndorf Aktiengesellschaft, Braunau am Inn, Austria. 735,963–4, pub. 5–29–62. Cl. 23.
Verite Jewels Ltd., New York, N.Y. 736,011, pub. 5–29–62. Cl. 28.
Wallace Silversmiths, Inc., Wallingford, Conn. 736,005, pub. 5–29–62. Cl. 28.
Walters, Herbert E., d.b.a. Treasure Crafts, Ramona, Calif. 736,004, pub. 5–29–62. Cl. 28.
Ward Baking Co., New York, N.Y. 736,130, pub. 5–29–62. Cl. 46.
Washington Mfg. Co., Inc., Nashville, Tenn. 736,101, pub. 5–29–62. Cl. 39.
Watsco, Inc., Hialeah, Fla. 736,014, pub. 5–29–62. Cl. 31.
Weir, Arthur R., Cleveland, Ohio. 735,871, pub. 5–29–62. Cl. 12.
Wellcome Foundation, Ltd., The, London, England. 735,924, pub. 5–29–62. Cl. 18.
West, Eugene F., New York, N.Y. 629,761–2, canc. Cl. 48.
West Indies Bay Co., Minneapolis, Minn. 736,141–2, pub. 5–29–62. Cl. 51.
Western Chemical Co., St. Joseph, Mo. 736,155, pub. 5–29–62. Cl. 52.
Western Peat Co. Ltd., Lulu Island, British Columbia, Canada. 629,310, canc. Cl. 1.
Western Peat Co. Ltd., Lulu Island, British Columbia, Canada. 629,355, canc. Cl. 10.
Weyerhaeuser Co., Tacoma, Wash. 735,883, pub. 5–29–62. Cl. 12.
White-Brown Enterprises, Beaumont, Tex. 736,045, pub. 5–29–62. Cl. 38.
Williams, Lee A., Lincoln, Nebr. 736,025, pub. 5–29–62. Cl. 36.
Wilson Jones Co., Chicago, Ill. 736,033, pub. 5–29–62. Cl. 37.
Wingback Inc., New York, N.Y. 736,002, pub. 5–29–62. Cl. 28.
Woodcock, Timothy S.: *See*—
Thompson, Joseph.
Wright, William E., & Sons Co., West Warren, Mass. 736,112, pub. 5–29–62. Cl. 42.
Yearling Brands: *See*—
Hereford Heaven Brands, Inc.
Young, James P., d.b.a. Advertex Co., Grays Lake, Ill. 736,065, pub. 5–29–62. Cl. 38.
Young, John P., d.b.a. American Stainless Co., Bronxville, N.Y. 735,971, pub. 5–29–62. Cl. 23.
Zodiac Turf Prediction Co.: *See*—
Hodge, Woodrow W.

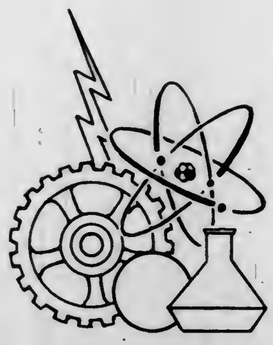
U.S. GOVERNMENT PRINTING OFFICE 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

August 21, 1962 • Volume 781 • Number 3



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 21, 1962 Volume 781 Number 3

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of July 1962

Examiner affirmed	330
Examiner affirmed in part	48
Examiner reversed	64
Total	442

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 5, 1962.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

July 16, 1962.

New Examining Procedures

"Compact" Prosecution—Special Status

Despite the unexpected increase in the number of new applications received during fiscal 1962, the Patent Office succeeded in reducing the total workload of cases by 3,537.

A large part of this improvement appears due to the success of two new examining procedures tested during the year. The first involved setting a shortened statutory period for reply and special status for every case which came up for a third or later action by the Office. This procedure was successfully applied throughout the Office, and will be continued.

The second new procedure, based on suggestions by a number of attorneys and Examiners, has been pilot-tested in a part of the examining operation.

It involves, first, greater emphasis upon more uniform high quality of prosecution and of patents issued.

Second, wherever feasible, there is an all-out effort to cut total hours of both prosecution and examination. The first action by the Office in every case is made thorough, clear and complete. Every possible means is then used to encourage the applicant to make his first response so complete as to put the case in condition for immediate disposal. This includes developing all claims of any desired scope and wording either on filing or on the *first* response.

Thereupon, wherever feasible, the second Office action is made final, either by allowance, or by outright final rejection of some or all claims, or by final rejection with suggestions for amendment under Rule 116.

This compact procedure, while not always possible, has been found feasible in 60 to 80% of all cases. It has received the full cooperation of most applicants and attorneys. To the few attorneys who take more than their fair share of Examiner time by delaying prosecution until after final rejection, during or after appeal, or after allowance, Rule 112 and Rule 116(b) are rigorously applied.

A test program based upon this more complete action by both Office and applicant has resulted in a sharp decrease in hours needed per case. In a limited test operation, it has reduced backlog, cut in half the number of completed appeals, sharply reduced the number of older cases, and brought other incidental benefits.

This program will now be extended throughout the Office.

This notice is issued in order that all attorneys and applicants may be fully aware of the urgency under this improved procedure of consolidating the planning and prosecution of all claims of any desired wording and scope *into the original application and the first response.*

EDWIN L. REYNOLDS,
Acting Commissioner of Patents.

July 26, 1962.

Decisions of the Commissioner of Patents

The 1961 edition of the Decisions of the Commissioner of Patents has been released from the printer and available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: $3.50.

Classification Order No. 341

Classification Order No. 341, dated July 26, 1962, incorporates changes in the following classes:

117, COATING: PROCESSES AND MISCELLANEOUS PRODUCTS
137, FLUID HANDLING
251, VALVES AND VALVE ACTUATION
284, VALVED PIPE JOINTS OR COUPLINGS (Abolished—Bulletin No. 353)

The above changes will be incorporated in the Manual of Classification replacement pages dated October 1962.

M. C. ROSA,
Director, Patent Examining Operation.

Patents Available for Licensing or Sale

2,971,914. Thickened Oil Containing Alkylene Higher Fatty Acid Diamides. Research Products Corp., 1015 E. Washington Ave., Madison 1, Wis.

New Applications Received During June 1962

Patents	7,294
Designs	371
Plant Patents	10
Reissues	26
Total	7,701

Issue

Patents	1,020	No. 3,049,712 to No. 3,050,731, incl.
Designs	46	No. 193,418 to No. 193,463, incl.
Plant Patents	1	No. 2,167
Reissues	5	No. 25,227 to No. 25,231, incl.
Total	1,072	

3,038,655. Device for Forcasting Time of a Race Horse. M. H. Hill. Correspondence to B. Edward Shlesinger, 1323 Lincoln Rochester Trust Bldg., Rochester 4, N.Y.

The following 2 patents are offered by D. H. Dave Associates, 1298 E. 22nd St., Brooklyn 10, N.Y.

2,966,718. Method for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

3,037,259. Apparatus for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

Hewlett-Packard Company is prepared to grant non-exclusive licenses under the following 10 patents upon reasonable terms to domestic manufacturers:

2,894,205. Probe Assembly.

2,942,207. Multivibrator.

2,963,618. Cathode-Ray-Tube Beam Finder Circuit.

2,963,655. Direct-Coupled Wide-Band Amplifier Including Vacuum Tubes and Transistors.

2,963,659. Square Wave Generator.

3,010,070. Oscilloscope Sweep Circuit Having an Adjustable Expanded Sweep.

3,010,071. Sweep Circuit.

3,011,129. Plural Series Gate Sampling Circuit Using Positive Feedback.

3,040,186. High Frequency Trigger Converters Employing Negative Resistance Elements.

3,040,206. Cathode Ray Tube Beam Finder Circuit.

Applications for license under the above patents may be addressed to Hewlett-Packard Company, 1501 Page Mill Road, Palo Alto, Calif., Attention J. C. Chognard.

General Electric Company is prepared to grant non-exclusive licenses under the following 6 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: General Electric Company, Component Products Division, 1635 Broadway, Fort Wayne, Ind., Attn. Patent Counsel.

2,969,491. Self-Excited Synchronous Motor.

2,995,685. Ignition System.

3,012,112. Timer.

3,016,486. Magnetic Amplifier Having Non-Linear Response Characteristic.

3,017,478. Thermally Responsive Switch.

3,028,265. Reinforced Synthetic Enamel Coating for Electrical Conductor.

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1962

Total number of pending applications (excluding Designs)	191,614
Total number of pending Design applications	5,955
Total number of applications awaiting action (excluding Designs)	100,841
Total number of Design applications awaiting action	2,048
Date of oldest new application	Feb. 1, 1961
Date of oldest amended application	Jan. 6, 1961

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) Manian, J. A. (acting), AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	8-23-61	9-8-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-6-61	11-13-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	6-2-61	6-1-61
4. (VI) FALLER, E. A., Material or Article Handling	7-13-61	8-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-4-61	8-2-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	4-7-61	5-8-61
7. (IV) ANDERSON, E. G., Optics	6-27-61	7-7-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	7-10-61	7-18-61
9. (VI) BRANSON, J. H., Pumps; Fans	9-7-61	9-1-61
10. (VI) BOYD, S. Firearms; Ordnance; Ammunition; Explosive Charge Making	8-18-61	7-18-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	7-24-61	7-18-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	6-6-61	5-3-61
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	5-4-61	4-4-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	3-27-61	3-31-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	8-14-61	8-31-61
16. (II) ROSE, R. H. (acting), Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	5-29-61	5-19-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	7-3-61	7-20-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	7-5-61	6-23-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	7-5-61	5-24-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	8-15-61	8-30-61
21. (III) MADER, R. C., Textiles	6-1-61	6-12-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	7-26-61	7-7-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education; Weighing Scales	10-2-61	8-1-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	6-28-61	7-24-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	5-1-61	6-5-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5-17-61	5-4-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6-27-61	7-3-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	6-26-61	7-7-61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	6-28-61	7-3-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6-5-61	7-14-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	7-3-61	7-3-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	6-2-61	6-12-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	7-3-61	6-5-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-17-61	2-13-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	8-8-61	8-3-61
36. (V) EVANS, R. L., Measuring and Testing (part)	5-15-61	6-2-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-31-61	4-7-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part); e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-16-61	6-12-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	6-28-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-22-61	6-21-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-31-61	4-20-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-2-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-20-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	2-13-61	2-8-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-4-61	10-30-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-3-61	4-13-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	7-26-61	7-10-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-24-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	5-23-61	5-17-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-19-61	7-24-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	6-1-61	5-11-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	10-10-61	10-2-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	9-1-61	9-5-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-6-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	4-7-61	5-1-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-16-61	6-26-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-22-61	6-26-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	9-5-61	9-14-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	3-6-61	5-31-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	2-1-61	1-6-61
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-9-61	11-1-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-8-61	6-16-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-24-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	4-3-61	3-15-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	3-6-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	6-2-61	4-27-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	6-1-61	6-1-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	8-14-61	8-28-61
81. (III) HANNAH, A. B., Industrial Arts	3-8-62	3-12-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-1-62	3-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	4-5-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-24-61	6-21-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	1-30-62
95. ANGEL, C. D., Metallic Building Structures	7-11-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	9-18-61	7-6-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1965*.

Patents.....Numbers 2,380,913 to 2,383,930 inclusive

Plant Patent.....Number 659

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals District of Columbia Circuit

THE BARR RUBBER PRODUCTS COMPANY

v.

BURLINGTON MILLS, INC. AND DAVID L. LADD, COMMISSIONER OF PATENTS

No. 16,513. Decided May 31, 1962

[—U.S. App. D.C.—; —F.2d—; 133 USPQ 617]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—ELECTION UNDER 15 U.S.C. 1071—CIVIL ACTION UNDER 35 U.S.C. 146—TRADEMARK OPPOSITION.

Where its opposition was dismissed and Barr, as a "dissatisfied" party, gave due notice of its appeal to the United States Court of Customs and Patent Appeals, pursuant to 15 U.S.C. 1071 (1958) and 35 U.S.C. 142 (1958), *Held* that "Burlington, as a party 'satisfied with the decision' of the Trademark Trial and Appeal Board, was entitled to invoke application of the next step, as 15 U.S.C. § 1071 (1958) expressly provides"; and that "When Burlington exercised the right there conferred upon it, all further proceedings were to be conducted as a civil action as provided in 35 U.S.C. § 146 (1958)."

2. SAME—SAME—SAME—SAME.

"Section 146 prescribes the mode in which that civil action is to proceed. The 'suit may be instituted against the party in interest as shown by the records of the Patent Office at the time of the decision complained of.' That 'party in interest' is Burlington, the applicant before the Patent Office in the inter partes proceeding which arose from the opposition filed by the registrant Barr."

3. REVIEW UNDER 35 U.S. 146—JURISDICTION OF U.S. DISTRICT COURT FOR THE DISTRICT OF COLUMBIA—NECESSARY PARTIES.

Held that "Burlington is an adverse party, and the only one"; that "Had there been more than one adverse party residing in a plurality of districts not embraced within the same state, or 'an adverse party residing in a foreign country,' pursuant to section 146, the District Court for the District of Columbia would have had jurisdiction"; that "section 146 expressly specifies that the Commissioner of Patents 'shall not be a necessary party,' and jurisdiction may not be obtained by service upon him"; and that "the Commissioner is not an 'adverse' party for the jurisdictional purposes of the statute, as here invoked."

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Albert L. Ely, with whom *Roberts B. Larson*, was on the brief, for appellant.

Boynton P. Livington, with whom *Edward G. Fenwick, Jr.*, was on the brief, for appellee, Burlington Mills, Inc.

Clarence W. Moore, for appellee, Ladd.

Before WILBUR K. MILLER, *Chief Judge*, and DANAHER and BURGER, *Circuit Judges*

DANAHER, *Circuit Judge:*

Appellant, an Ohio corporation, as owner of the registered trademarks BARR and BARTEX, asked the District Court in the District of Columbia to enjoin the Commissioner of Patents from issuing a certificate of registration of the trademark BUR-TEX to Burlington Mills, Inc., a Wisconsin corporation. The latter, not having been

served in this District, appeared specially and filed its motion to dismiss in which the Commissioner joined. This appeal is from the order dismissing the complaint.

It appears that the Commissioner on October 28, 1958, published for opposition in the OFFICIAL GAZETTE, Burlington's application Serial No. 38,667 for registration of its trademark BUR-TEX for life preservers, swim vests, water ski belts, wading pools and various other sports goods. Registration was opposed by Barr which for many years was registrant of the trademark BARR for toys, such as balls, dolls, basketballs, footballs and other items of various shapes, and of the mark BARTEX for rubber balloons.

The Trademark Trial and Appeal Board noted that BARR is a surname while BUR-TEX is a coined, arbitrary designation having no apparent significance. The respective marks were found to be distinctly different in sound and appearance. In view of what the Board deemed substantial differences between the marks and the goods as identified in the Burlington application and the opposer's registration, the Board concluded it to be unlikely, within the ambit of 15 U.S.C. § 1052(d) (1958), that the respective marks as applied to the goods would cause confusion, mistake, or deception of purchasers. The Board further concluded as to BARTEX, applied to toy rubber balloons when contrasted with BUR-TEX as applied to Burlington's sports goods and equipment that purchasers would not be likely to assume that the respective products emanate from the same source. The opposition accordingly was dismissed.[1]

Thereupon, Barr as a "dissatisfied" party gave due notice of its appeal to the United States Court of Customs and Patent Appeals, pursuant to 15 U.S.C. § 1071 (1958) and 35 U.S.C. § 142 (1958).

[1] Burlington, as a party "satisfied with the decision" of the Trademark Trial and Appeal Board, was entitled to invoke application of the next step, as 15 U.S.C. § 1071 (1958) expressly provides. When Burlington exercised the right there conferred upon it, all further proceedings were to be conducted as a civil action as provided in 35 U.S.C. § 146 (1958).[2]

[2] Section 146 prescribes the mode in which that civil action is to proceed. The "suit may be instituted against the party in interest as shown by the records of the Patent Office at the time of the decision complained of." That "party in interest" is Burlington, the applicant before the Patent Office in the inter partes proceeding which arose from the opposition filed by the registrant Barr.

[3] Under the circumstances such as were exhibited on this record, Burlington is an adverse party, and the only one. Had there been more than one adverse party residing in a plurality of districts not embraced within the same state, or "an adverse party residing in a foreign country," pursuant to section 146, the District Court for the District of Columbia would have had jurisdiction.

However section 146 expressly specifies that the Commissioner of Patents "shall not be a necessary party," and jurisdiction may not be obtained by service upon him. We have noted that the Commissioner is not an "adverse" party for the jurisdictional purposes of the statute,[3] as here invoked.

The District Court correctly dismissed the complaint.[4]

AFFIRMED.

[1] *The Barr Rubber Products Company* v. *Burlington Mills Incorporated*, 125 USPQ 592 (1960).

[2] The Commissioner took the position that he is "not a necessary party to an inter partes proceeding under Section 146," but that Burlington is an "indispensable party," not amenable to process in the District of Columbia, and had been served only in Burlington, Wisconsin.

[3] *Chris Laganas Shoe Company* v. *Watson*, 95 U.S. App. D.C. 324, 221 F.2d 881 (1955).

[4] Appellant mistakenly relies upon *Hans C. Bick, Inc.* v. *Watson*, 102 U.S. App. D.C. 322, 253 F.2d 344 (1958), where we pointed out the non-applicability of *Chris Laganas* and emphasized several distinguishing factors.

U.S. Court of Customs and Patent Appeals

IN RE ANTHONY C. DE NAPOLI, JR. AND DONALD F. BALMER

No. 6813. Decided May 18, 1962

[49 CCPA—; 302 F.2d 768; 133 USPQ 556]

1. CLAIMS—CONSTRUCTION OF CLAIMS—RECITATIONS IN PREAMBLE AND BODY TOGETHER IMPARTING LIMITATION.

With respect to the reference in the preamble of appellants' claim to "a phonographic transcribing machine," and, in the body of the claim, to an adjustable mirror as reflecting the image of a record, "into a position to be visible to the transcribing typist." *Held* that "It seems to us that, taken together, those two recitations impart a limitation to the claim which cannot be ignored in determining patentability."

2. PATENTABILITY—INVENTION—OBVIOUSNESS—MIRRORS AND SCREENS NOT EQUIVALENTS.

"The Board's comment that statements in the references would suggest to persons skilled in the art that they experiment 'with various types of screens, including mirrors and adopt that which meets the need of the experimenter' indicates that it regards it obvious to substitute mirrors for the screens on which Trout and Stephan display their pictures. To agree with that conclusion would require an assumption that mirrors and screens are virtual equivalents. The record here does not show that a mirror is the equivalent of a screen in the art of projecting moving pictures or television pictures. Thus, we question whether a person of ordinary skill in that art would be expected to substitute mirrors for the screens in the reference devices."

3. SAME—PARTICULAR SUBJECT MATTER—"INDICATING AND PLACE-FINDING APPARATUS FOR PHONOGRAPHIC MACHINES."

The decision of the Board of Appeals, refusing a claim in an application entitled "Indicating and Place-Finding Apparatus for Phonographic Machines" as unpatentable over the prior art, is reversed.

APPEAL from the Patent Office. Serial No. 158,104.

REVERSED.

Richard P. Schulze, *Clarence M. Fisher*, *J. Philip Anderegg*, and *Pennie, Edmonds, Morton, Barrows & Taylor*, for appellants.

Clarence W. Moore (*Raymond E. Martin*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office affirming the rejection of claim 37 of appellants' application Serial No. 158,104, filed April 26, 1950, for "Indicating and Place-Finding Apparatus for Phonographic Machines." Other claims in the application have been allowed.

The appealed claim reads:

37. In a phonographic transcribing machine having a cabinet, a support for rotatably holding a record member, an inclined mirror mounted above said support for reflecting an image of said record rearwardly and upwardly, an

adjustable mirror in said cabinet reflecting said image forwardly out of said cabinet into a position to be visible to the transcribing typist, said adjustable mirror being retractable downwardly into inoperative position within said cabinet.

The references relied on by the Board are:

Trout, 1,961,803, June 5, 1934.
Stephan, 2,424,513, July 22, 1947.
Traub, 2,466,338, April 5, 1949.
Harkin, 1,933,057, October 31, 1933.

Appellants' application discloses a phonographic machine for use in transcribing dictation from a record disc. Optical means are provided to enable the typist operating the machine to observe the record disc and the playback stylus during playback even though they are in the cabinet where they cannot be viewed directly. It is disclosed that indexing marks, signifying the locations of the ends of letters and instructions to the typist, are generally provided on the record disc by the dictator. The marks may be made by pencil or crayon or may be "in the form of relatively wide blank index spaces which have been provided between turns of the spiral groove at the desired locations on the record member."

The optical system comprises two mirrors, the first mounted within the machine cabinet in a position to reflect rearwardly and upwardly an image of the area of the record disc traversed by the stylus. The second is mounted on the inner surface of a retractable top section of the cabinet so that it can be raised to an operative position above the cabinet to intercept the image from the first mirror and display it for observation from the front of the machine. In its raised position the second mirror is adjustable about a substantially horizontal axis to permit adapting the viewing angle to the height of the typist.

The Trout patent relates to a cabinet housing sound and motion picture producing equipment. An opening is provided in the front of the cabinet through which the picture is projected from a reel of film onto a mirror outside the cabinet. A screen is secured to the inside of a lid hinged at its rear. With the lid up, the screen is disposed in a substantially vertical position at which it displays the picture reflected on it by the mirror.

The Stephan patent relates to a television receiver of the projection type. The picture tube is disposed in a cabinet with its axis disposed downwardly and rearwardly. A viewing screen is secured to the inside of a hinged lid so as to assume a substantially vertical position when the lid is open. An optical system, including a spherical mirror, a centrally apertured correction plate, and a plane mirror, all disposed within the cabinet, provides a magnified image of the tube picture on the screen.

The Traub patent is referred to by Stephan as disclosing a television system of the type with which his mounting arrangement is used. Traub describes a preferred screen for the system as a specularly reflective concave member having in its reflective surface a large number of minute random parallel grooves which are said to effect "a horizontal diffusion of the incident light."

The Harkin patent discloses an optical system, comprising a plurality of mirrors, for shifting the direction of projection of a motion picture.

The decision under review here is the Board's second decision involving the appealed claim. Previously it reversed a rejection by

the Examiner on other references and made a new rejection of the claim as unpatentable over Trout or Stephan. After further prosecution before the Examiner the application came before the Board on a rejection which appears to be substantially the same grounds embodied in its previous rejection on Trout or Stephan.

In affirming the final rejection, the Board held the word "record" to be recited so broadly as to include "magnetic tapes and optical records as well as a record made on the fluorescent end wall of a cathode ray tube." It regarded the problem faced by appellants as the same one confronting Trout and Stephan, viz, "the arrangement of the optical surfaces for reproducing an image off the optical axis of an object whose image is to be reproduced."

The Board further stated:

It is our view that one skilled in the art would be cognizant of the various combinations of optical surfaces which may be used to obtain images off the optical axis of an object, as for example combinations of mirrors or prisms as exemplified by Harkin (1,933,057) of record of the conventional binocular field glass or periscope, of which we take judicial notice; or mirrors and screens, which appellants assert are shown by Trout and Stephan; and would select and use such optical surfaces as would meet the needs of a particular situation.

The Board also agreed with the Examiner "that it would make no patentable difference whether the screen viewed by an observer in either reference [Trout or Stephan] was a diffusing screen or a mirror." It took the position that statements regarding the screens in Traub and Trout "would at least suggest" to those skilled in the art that they "experiment with various types of screens, including mirrors and adopt that which meets the need of the experimenter."

It was also the Board's view that the adjustability of appellants' retractable mirror fails to bring about a new result and thus lacks patentable significance.

Appellants point out that their construction makes it possible for a typist transcribing dictation from a marked record to locate the stylus accurately on the record without using an index strip. They refer to the elimination of such strips, along with the resultant nuisances to both dictators and transcribers, as an unobvious result arising from their combining a dictation transcribing machine and a double mirror viewing system. It is their position that the Board disregarded that unobvious result and treated the claim as defining merely a combination of optical surfaces for shifting the image of an object to a different axis.

[1] The Board failed to mention the reference in the preamble of the claim to "a phonographic translating machine," leaving the implication that it agreed with the Examiner that the preamble "is merely a statement of the suggested use and therefore lacking in patentable significance." However, the body of the claim refers to the adjustable mirror as reflecting the image "into a position to be visible to the transcribing typist." It seems to us that, taken together, those two recitations impart a limitation to the claim which cannot be ignored in determining patentability. Moreover, we do not find that limitation to be satisfied by the prior art on which the rejection of the appealed claim is based. Only Trout, Stephan, Traub and Harkin are relied on by the Board. None of those patents discloses the solution of the problem solved by appellants or even suggests that an arrangement of mirrors be employed to facilitate observation of a phonograph record.

[2] The Board's comment that statements in the references would suggest to persons skilled in the art that they experiment "with various types of screens, including mirrors and adopt that which meets the need of the experimenter" indicates that it regards it obvious to substitute mirrors for the screens on which Trout and Stephan display their pictures. To agree with that conclusion would require an assumption that mirrors and screens are virtual equivalents. The record here does not show that a mirror is the equivalent of a screen in the art of projecting moving pictures or television pictures. Thus, we question whether a person of ordinary skill in that art would be expected to substitute mirrors for the screens in the reference devices.

In our opinion the references relied on do not disclose the subject matter of the appealed claim or make what appellants have done obvious to one of ordinary skill in the art. [3] We are thus obliged to reverse the decision of the Board of Appeals.

REVERSED.

MARTIN, *J.*, did not sit or participate because of illness.

In the United States Patent Office Before the Board of Appeals

EX PARTE JULIUS A. JUPA

Appeal No. 214-68. Decided December 9, 1960

1. PATENTABILITY—AFFIDAVITS—AFFIDAVIT UNDER RULE 131.

Where a reference patent disclosed, and the broad claims on appeal embraced, a species of a composition in which an epoxy resin was present in "a major proportion" and also a species in which the epoxy resin was present in "a minor proportion," and the latter species was not covered by appellant's affidavit under Rule 131, *Held* that all the pertinent and anticipatory subject matter of the reference patent had not been antedated, and that it stood as a bar to the allowability of the appealed broad claims.

APPEAL from the Examiner. Serial No. 478,897, now Patent No. 3,023,189.

AFFIRMED.

Carpenter, Abbott, Coulter and *Kinney* for appellant.

Before MAGIL, *Examiner-in-Chief*, and BEHRENS and WILES, *Acting Examiners-in-Chief*

WILES, *Acting Examiner-in-Chief*:

This is an appeal from the final rejection of claims 1, 2, 5 through 8, 13 through 16 and 18. Of the remaining claims, claim 4 has been allowed, and claims 9 through 12 and 17 were withdrawn from further consideration as not reading on the elected species, hence these claims are not before us for consideration.

Claim 1 is sufficiently representative:

1. A novel composition comprising an admixture of a normally solid perfluorochloroethylene polymer and between 10 to 90 weight percent of the condensation product of epichlorohydrin and a condensable polyhydric organic compound said polyhydric organic compound being selected from the group consisting of polyhydric alcohols and polyhydric phenols, said weight percent being based on the total weight of said polymer and said condensation product and said condensation product having a melting point of at least 0° C. and an epoxy equivalent of at least 150 and not exceeding about 3400.

The references:

Welch, 2,777,783, January 15, 1957.
Smith (2), 2,789,960, April 23, 1957.

The alleged invention is not only apparent from the reproduced claim but is briefly described on page 1 of appellant's brief.

The references are described on page 2 of the Examiner's statement.

The Examiner has rejected the claims as basically unpatentable over Welch. Smith, which was not discussed by appellant, is relied upon to show the conventional use of an amine as a curing agent as required by some of the claims, hence the Smith reference need not be further considered.

An appellant points out in his brief, the sole issue herein relates to the adequacy of his affidavit under Rule 131 to overcome the Welch disclosure.

According to the Examiner, the appellant by his affidavit has:

"* * * established prior reduction to practice of a mixture of 15 parts epoxy resin and 8 parts perfluorochloro polymer, i.e. a mixture containing 65% by weight of the epoxy resin based on the weight of the two resins in the blend."

The Examiner, therefore, allowed claim 4, a species which calls for a "major proportion" of the epoxy resin in the claimed composition. The Examiner points out that the claims in issue are broad claims encompassing compositions in which either a major or a minor proportion of the epoxy resin may be present with the other claimed resin. The Examiner maintains that Welch also discloses compositions having "a minor proprotion" of the epoxy resin, and therefore in order to overcome this reference, appellant also must show priority as to this species. *In re Stempel, Jr.*, 44 CCPA 820, 1957 C.D. 200, 717 O.G. 886, 241 F.2d 755, 113 USPQ 77.

Appellant points out that Welch discloses several types of resins, one of which is an "epoxy resin." He thus urges that he has shown priority as to the "epoxy resins" admitted to be "one species of the Welch reference," hence he should be entitled to this species in all proportions. He further urges that the Welch teachings are generic, since they make no special distinction between compositions containing a major or a minor amount of the epoxy resin. He states:

"If appellant or Welch had established the criticality of certain proportions for the compositions, the Examiner's position might be well taken. However, no criticality has been asserted or shown, and the showing of both Welch and Appellant is a generic one as it relates to the issue on appeal."

Appellant thus seems to be of the view that his own dislcosure and that of Welch are generic, and that the *proportions* of the epoxy resin employed cannot be considered "species."

However, we cannot agree with appellant in the above respects. Appellant in his own disclosure draws a distinction between the use of a major and a minor amount of the epoxy resin in the coating composition. On page 5 of the specification it is stated that the proportions employed are based upon the intended use. For maximum chemical resistance a major amount of the perfluorochloroolefin polymer (and a minor amount of the epoxy resin) is used, but for maximum bond strength a major amount of the epoxy resin is used. This is exemplified by original claims 3 and 4, admittedly "drawn to compositions containing mutually exclusive proportions of the perfluorochloroolefin resin and epoxy resin." Failure of the Examiner to recognize and require an election between these mutually exclusive species cannot be taken as a position "directly opposite" to that now taken. Moreover, we are of the view that Welch not only discloses the generic idea but also species thereof with respect to the proportions. He, like appellant, refers to the use of a small amount or

proportion of the polyhalocarbon resin for a "strong bond between the surface and the extended resin," and conversely greater proportions of the polyhalocarbon resin are employed for anti-corrosive action. Note particularly the outer coating composition disclosed in column 7, lines 56 to 58, in which the polyhalocarbon resin is present in a "major amount." [1] It is evident, therefore, that appellant in the broad claims before us is seeking not only a species of a composition in which the epoxy resin is present in "a major proportion" but also a species wherein the epoxy resin is present in the coating composition in "a minor proportion" which is not covered by appellant's affidavit. Accordingly, all the pertinent and anticipatory subject matter of the Welch patent has not been antedated, and the reference stands as a bar to the allowability of the appealed broad claims. *In re Stempel, Jr.*, supra.

The rejection, therefore, must be and is sustained.

The decision of the Examiner is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,342,257, H. E. Edgerton, Electric systems; **2,406,764,** same, High-speed flash photography; **2,478,901,** same, Electric system, **filed** June 20, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1228, *Edgerton, Germeshausen & Grier, Inc.* v. *Hershey Manufacturing Co. et al.*

2,390,636, L. J. Biro, Writing instrument; **2,397,229,** same; **2,400,679,** same, Fountain pens; **2,413,904,** same, Writing instruments; **2,416,896,** same; **2,491,082,** same, Fountain pens, **filed** Sept. 15, 1958, D.C., S.D. Calif. (Los Angeles), Doc. 898/58–HW, *Hartley Pen Company* v. *The Parker Pen Company.* Patents held valid; Patents 2,390,636, 2,397,229, and 2,416,896 held infringed by plaintiff; injunction granted (notice June 20, 1962).

2,397,229. (See 2,390,636.)

2,400,679. (See 2,390,636.)

2,406,764. (See 2,342,257.)

2,413,904. (See 2,390,623.)

2,416,896. (See 2,390,623.)

2,478,901. (See 2,342,257.)

2,480,369, T. McLean Jasper, Manufacture of multilayer cylinders for high pressure vessels, **filed** Sept. 9, 1958, D.C., S.D. Tex. (Houston), Doc. 12/309, *Hahn & Clay* v. *A. O. Smith Corporation* and *A. O. Smith Corporation* v. *Hahn & Clay et al.* Order holding all claims of patent valid and infringed by counterclaim defendant Hahn & Clay; said defendant restrained June 14, 1962.

2,491,082. (See 2,390,623.)

2,523,395, J. J. Sellarole, Brassiere, **filed** June 14, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/810–K, *Joseph J. Sellarole* v. *Frederick's of Hollywood et al.*

2,565,346, C. H. Braselton, Cosmetic applicator, **Order** reopening case Jan. 16, 1962, D.C., S.D.N.Y., Doc. 60/548, *Revlon, Inc.* v. *Roth & Steiner.* Consent judgment; defendant enjoined June 15, 1962.

2,586,612, J. R. Caldwell, Sink mat; **Des. 191,901,** J. C. Breneman, Bath mat or similar article, **filed** June 14, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/809–TC, *Rubbermaid Incorporated* v. *Kraco Products, Inc.*

2,592,449, J. C. Miller, Removable footrest for wheel chairs, **filed** June 19, 1962, D.C., S.D. Ohio (Cincinnati), Doc. 5087, *Everest & Jennings, Inc.* v. *American Wheel Chair etc., Inc.*

2,614,474, C. B. Merry, Walking Cultivator; **2,634,666,** same, Improved earthworking wheel, **filed** Jan. 25, 1960, D.C., N.D. Ga. (Atlanta), Doc. 7081, *Merry Manufacturing Company* v. *Burns Tool Company et al.* Claims 1, 2, 7, 8, and 9 of Patent No. 2,614,474 held invalid and not infringed; claim 6 of Patent No. 2,634,666 held valid but not infringed; plaintiff enjoined June 14, 1962.

2,633,107, B. W. Mandelburg, Heating boiler with vertical undulating flue, **filed** June 8, 1954, D.C., S.D.N.Y., Doc. 93/336, *Columbia Boiler Company* v. *Manville Boiler Co., Inc.* Stipulation and order of settlement and dismissal with prejudice June 12, 1962. **Same, filed** Aug. 11, 1959, D.C.N.J. (Newark), Doc. 702/59, *Manville Boiler Company, Inc.* v. *Columbia Boiler Company, Inc.* Stipulation and order of dismissal June 25, 1962.

2,634,666. (See 2,614,474.)

2,670,143, H. Jordan, Garbage disposer with protective inlet; **2,858,989,** same, Stainless steel sink drainage sleeve with stopper and mounting means; **2,860,836,** same, Mounting sleeve and clamp means for disposal devices; **2,879,949,** same, Garbage disposal apparatus; **2,925,225,** same, Cushioned hanging device for garbage grinders; **2,965,313,** C. H. Jay, Shower head control valve, **filed** June 21, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/850–WB, *Waste King Corporation* v. *W. T. Hedlund Co. et al.*

2,689,367, E. D. Parker, Sweeper, **filed** June 20, 1962, D.C., S.D. Ohio (Dayton), Doc. 2749, *Parker Sweeper Company* v. *Lambert, Inc.*

2,710,461, N. Hack, Resilient shoe soles, **filed** Feb. 17, 1958, D.C., E.D. Mich. (Detroit), Doc. 17712, *O'Sullivan Rubber Corporation* v. *Ripple Sole Corporation.* Stipulation and order dismissing complaint and counterclaim without prejudice June 19, 1962. **Appeal, filed** June 9, 1961, C.C.A., 1st Cir., Doc. 5848, *Ripple Sole Corporation* v. *American Biltrite Rubber Company.* Judgment of District Court holding patent invalid affirmed (notice June 22, 1962). **Same, filed** July 11, 1960, D.C., N.D. Ohio (Cleveland), Doc. 36256, *Ripple Sole Corporation* v. *Sharyama, Inc. et al.* Consent decree; defendants enjoined June 26, 1952.

2,746,022, L. Gilbert, Separable connector assembly with aligning and securing means, **filed** June 14, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62c658, *Continental Connector Corporation* v. *Lionel Electronic Laboratories, Inc.*

2,759,562, B. I. Ulinski, Carriage and upright mounting for lift truck; **filed** July 14, 1960, D.C., N.D. Ill (Chicago), Doc. 60c1122, *The Yale & Towne Manufacturing Company* v. *Transitier Truck Company et al.* Dismissed by stipulation without prejudice June 18, 1962.

2,808,119, L. E. Steinman, Clutch controlling tractor hitch, **filed** June 15, 1962, D.C., N. Dak. (Fargo), Doc. 3939, *Leo E. Steinman* v. *Weldon, Wagner et al.*

2,858,989. (See 2,670,143.)

2,860,836. (See 2,670,143.)

2,869,822, N. E. Shurtliff, Logging cable haulback apparatus, **filed** Jan. 25, 1962, D.C. Oreg. (Portland), Doc. 62/47, *Norvall E. Shurtliff* v. *Lewis Manufacturing Company.* Order of dismissal without prejudice June 13, 1962.

2,879,949. (See 2,670,143.)

2,895,438, N. Shotsky, Multiple needle automatic quilting machine, **filed** Dec. 1, 1959, D.C., S.D.N.Y., Doc. 153/209, *The Multex Company* v. *Danan Mills, Inc. et al.* Consent judgment; defendant enjoined May 29, 1961. **Same, filed** June 12, 1962, same, Doc. 62/2072, *The Multex Company* v. *Bratman Bros., Inc. et al.*

2,925,225. (See 2,670,143.)

2,925,666, M. W. Gilmore, Grain dryer, **filed** April 18, 1960, D.C. Kans. (Wichita), Doc. W–2072, *Wichita Supply and Manufacturing Company, Inc.* v. *Merwin W. Gilmore et al.* Consent judgment; Patent held valid; plaintiffs restrained (notice June 18, 1962).

2,957,480, Widoff and Powers, Hair treating method and apparatus, **filed** June 19, 1962, D.C., S.D.N.Y., Doc. 62/2159, *Aldon Sundries, Inc.* v. *Betty Dain Creations, Inc. et al.*

2,965,313. (See 2,670,143.)

2,972,476, L. F. Blatt, Universal toggle clamp; **3,010,171,** same, Toggle clamp, **filed** June 18, 1962, D.C., E.D. Mich. (Detroit), Doc. 22679, *181 Manufacturing Inc. et al.* v. *Hollymar, Inc.*

3,001,202, R. A. Serrano, Vest of the cummerbund type and adjusting means therefor, **filed** June 12, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/798–Y, *Ricardo A. Serrano* v. *Jacob B. Samuels et al.*

3,010,171. (See 2,972,476.)

3,019,442, W. J. Hoeckele, Snap fastener applicator tools, **filed** June 14, 1962, D.C.N.J. (Newark), Doc. 499/62, *Eastern Seaboard Plastics, Inc.* v. *Pentapco, Inc.*

3,022,521, J. Martin, Border stabilizers, **filed** June 8, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c1144, *Eclipse Sleep Products, Inc.* v. *Sealy, Inc. et al.*

Des. 173,281, R. B. Morrison, Laboratory table unit, **filed** May 11, 1962, D.C., W.D. Wash. (Tacoma), Doc. 2827, *E. H. Sheldon and Company* v. *Educators Furniture & Supply Company, Inc. et al.*

Des. 186,115, W. C. Church, Buffet or the like, **filed** June 12, 1962, D.C., S.D.N.Y., Doc. 62/2074, *The Lane Co., Inc.* v. *Clairtone Sound Corporation, Ltd.*

Des. 191,901. (See 2,586,612.)

REISSUES

AUGUST 21, 1962

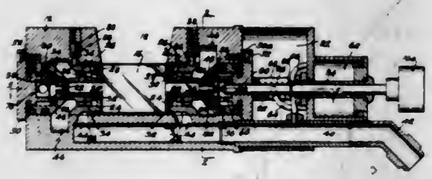
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,227
METHOD AND APPARATUS FOR COOLING AND LUBRICATING GAS TURBINE BEARINGS

Willard E. Buck, P.O. Box 357, Boulder, Colo.

Original No. 2,886,285, dated May 12, 1959, Ser. No. 567,148, Feb. 23, 1956. Application for reissue Jan. 11, 1960, Ser. No. 1,832

7 Claims. (Cl. 88—74)



6. In a turbine, a main cylindrical housing having a hollow interior comprising an axial cylindrical bore, bearing means including a pair of bearings arranged in spaced relation to each other within the housing, each of said bearings being supported by a bearing housing located in said cylindrical bore, and each of said bearings and bearing housings dividing a different portion of the interior of said main housing into a gas chamber and an oil chamber, means including a shaft having journals journaled for rotation within the bearings, said bearings, said bearing housings, and said shaft coacting to seal each gas chamber from its respective oil chamber, a turbine wheel mounted on the shaft in position to divide each gas chamber into an air intake cavity and an exhaust cavity, each exhaust cavity of which is in heat exchange relation to each oil chamber, respectively, an inner housing member within each intake cavity and having nozzle means and located to receive gas from said intake cavity through an outer annular air passage directing air to all of said nozzle means, said nozzle means being located to direct said gas through the turbine wheels to the exhaust cavities, respectively, to effect rotation of the shaft and cool any oil in the oil chambers upon expansion of said gas in the exhaust cavities.

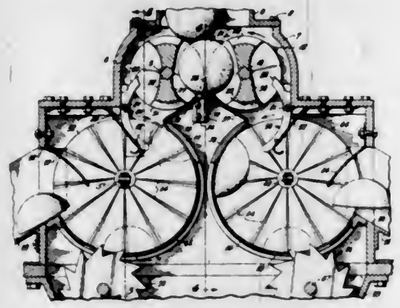
25,228
APPARATUS FOR EXTRACTING JUICE FROM CITRUS FRUITS

Robert D. Wehr, Lakeland, Fla., assignor to Anderson Bros. Manufacturing Co., Rockford, Ill., a corporation of Illinois

Original No. 2,945,431, dated July 19, 1960, Ser. No. 783,737, Dec. 30, 1958. Application for reissue July 13, 1961, Ser. No. 126,439

11 Claims. (Cl. 100—97)

1. Apparatus for extracting juice from citrus fruit comprising a pair of horizontally disposed rollers having horizontally spaced, parallel axes, means for rotating said rollers in synchronism in opposite directions, said rollers having matching fruit receiving cavities in their peripheral surfaces for receiving whole fruit and advancing the same between the rollers, a stationary cutting blade lying in a plane parallel to the axes of said rollers and positioned in the path of fruit passing between the rollers to slice such fruit in half, a pair of opposed, generally frusto-conical disks positioned below and on each side of said blade with the tapering surfaces of the disks of each pair facing each other, means for rotating said disks of each pair about axes extending outwardly and downwardly from the larger ends thereof to position the tapering surface of the disks of each pair closer together at their lower positions than at their upper positions to provide a squeezing action on fruit halves descending between each pair of rotating disks, a downwardly sloping



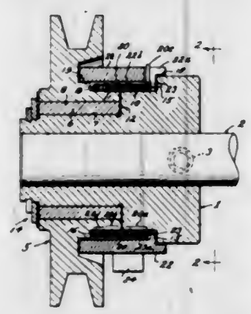
ramp on each side of said blade for engaging the cut faces of the fruit halves and guiding such fruit halves between the upper portions of said disks, a curved and perforated strainer plate extending from the end of each of said ramps around the lower portions of the peripheries of the adjacent pair of disks, and a deflection member positioned between the upper portions of each pair of disks in the paths of fruit halves leaving the lower ends of said ramps for deflecting such fruit halves to position the cut faces thereof in engagement with said strainer plates.

25,229
SPRING CLUTCH MECHANISMS

Columbus R. Sacchini, Willoughby, and Donald R. Tomko, Euclid, Ohio, assignors to Curtiss-Wright Corporation, New York, N.Y., a corporation of Delaware

Original No. 2,968,380, dated Jan. 17, 1961, Ser. No. 637,239, Jan. 30, 1957. Application for reissue Nov. 13, 1961, Ser. No. 152,970

4 Claims. (Cl. 192—81)



1. A friction coil clutch mechanism for coupling a continuously rotating drive to an intermittently operated load, said mechanism comprising an approximately cylindrical input clutch drum, an approximately cylindrical output clutch drum coaxial therewith, a [full-floating type] helical clutch spring having coils elastically preloaded radially against *an* approximately cylindrical surface [portions] *portion of the input drum* [respective drums], annular axial shoulders on respective drums facing respective end coil portions of the spring, a clutch release member and means supporting the release member for rotation relative to the drums about their common axis and in a predetermined axial position in the mechanism, said release member being connected to an input-drum-associated end coil of the spring[,] for rotation integrally with the spring, means operable to stop rotation of the release member hence rotation of the spring to disengage the clutch mechanism, said release member having a portion interposed between such input-drum associated free end coil of the spring and the axial shoulder of the input drum.

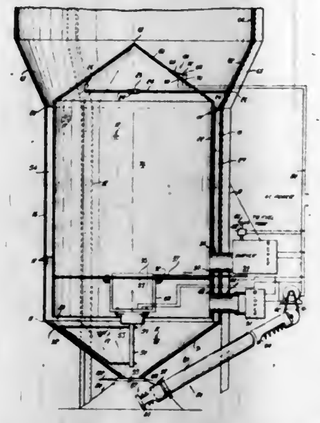
25,230
GRAIN DRIER

Harold W. Pierpoint, Yates Center, Kans.

Original No. 2,991,559, dated July 11, 1961, Ser. No. 690,587, Oct. 16, 1957. Application for reissue Nov. 17, 1961, Ser. No. 154,103

7 Claims. (Cl. 34—55)

1. Apparatus for drying grain comprising outer and inner sheets of perforated material shaped to form a substantially closed wall of grain of uniform thickness surrounding an inner plenum; a divider plate supported by said inner sheet for separating said plenum into upper and lower chambers; means positioned above said sheets for feeding grain into the space between said sheets; a source of heated gas; first duct means extending through said sheets for directing heated gas into the upper chamber of said plenum; second duct means extending through said sheets beneath said first duct for directing a cooler gas into the lower chamber of said plenum; grain barrier means between said inner and outer sheets on opposite sides of *said first and second duct means* and supported by said [first and second duct means] *outer sheet* for preventing grain flow in contact with said duct means; an inverted conical bottom member [of perforated material] connected to the outer sheet and having a centrally located grain removal region; said bottom member being positioned beneath the lower edge of said inner sheet; and agitator means supported in said inner plenum having a stirring member mounted for movment in a path adjacent the surface of said bottom mem-



ber to stir grain on said bottom member to assure even grain feed rate all around said drying apparatus.

25,231
ANGEL FOOD CAKE MIX

Thomas P. Finucane, Hartsdale, N.Y., William A. Mitchell, Lincoln Park, N.J., and Leonard Z. Raymond, White Plains, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Original No. 2,916,380, dated Dec. 8, 1959, Ser. No. 794,246, Feb. 19, 1959. Application for reissue Dec. 6, 1961, Ser. No. 158,936

15 Claims. (Cl. 99—94)

1. [A] *An* [*single package*] angel food cake mix *the ingredients of which are to be whipped together into a foam batter* comprising egg white, sugar, and a farinaceous ingredient; fatty anti-foaming agent being present in the mix at a level of 0.04–9.0% by weight of the dried egg white in the mix, wherein the aggregate level of said fatty anti-foaming agent present in the mix is below that level at which the egg white will not whip into a foam batter of substantial volume in the presence of the other mix ingredients and the cells of the egg white foam batter prouced upon whipping will not expand sufficiently upon baking, said level being above that level at which excessive swelling of the foam batter on baking and subsequent collapse of the cake on cooling is prevented.

PLANT PATENTS

GRANTED AUGUST 21, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,167
ROSE PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Oct. 16, 1961, Ser. No. 145,521

1 Claim. (Cl. 47—61)

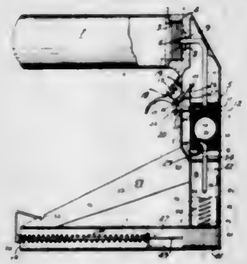
A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a tall habit of plant growth, full foliage of relatively large size, large flower size, with the shape of the flowers generally corresponding to that of the variety "Spartan" (Plant Patent No. 1,357), and a distinctive and attractive Pale Yellow-Orange color tonality of the flowers, lightly overcast with Orient Pink in the upper half of the flower petals.

PATENTS

GRANTED AUGUST 21, 1962

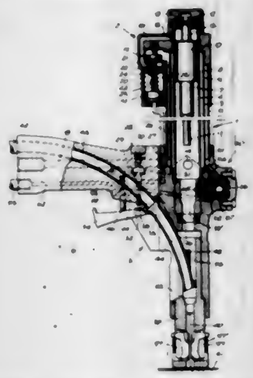
GENERAL AND MECHANICAL

3,049,712
GAS OPERATED STAPLER
Joseph A. Khan, Asbury Park, N.J.
Filed Apr. 7, 1961, Ser. No. 101,509
5 Claims. (Cl. 1—44.4)



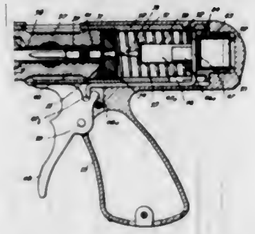
1. A fluid actuated stapler comprising a reciprocable driving ram carrying a driver blade, a gas chamber, a supply source of compressed fluid, a first fluid passage between said chamber and said ram, means to meter a charge of compressed fluid to move the ram in a staple driving stroke, means to return the ram, and manually operated means to actuate said metering means.

3,049,713
PNEUMATIC NAILING MACHINE
Andre Dupuy, Stuttgart-Mohringen, Wurttemberg, and Gustav Walliser, Reutlingen-Betzingen, Wurttemberg, Germany, assignors to Karl M. Reich Maschinenfabrik, Wurttemberg, Germany
Filed Sept. 21, 1959, Ser. No. 841,098
Claims priority, application Germany Dec. 24, 1958
24 Claims. (Cl. 1—44.4)



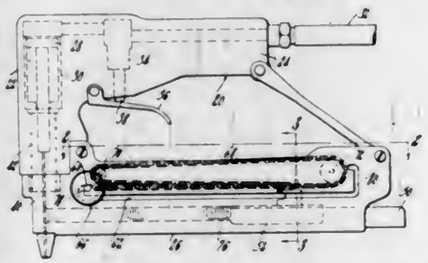
1. A pneumatic nailing machine comprising an air cylinder and a nozzle member having a driving channel therein, a ram piston with a striker pin thereon adapted to slide within said cylinder under the action of compressed air for driving a nail or the like into a wall or other object, a nail feed conduit in said machine entering said driving channel from one lateral side thereof for inserting a nail into said driving channel, said striker pin being adapted to drive said nail or the like inserted into said channel, said feed conduit having a pivoted end portion movable into and out of said driving channel when said striker pin is not within said driving channel.

3,049,714
STRIKER MECHANISMS IN PARTICULAR FOR POWER ACTUATED TOOLS
Jacques Bumiller, Valence, France, assignor, by mesne assignments, to Sarmi, S.A., Societa d'Applications de Recherches Minieres et Industrielles, Lenzerheide (Grisons), Switzerland
Filed Jan. 28, 1960, Ser. No. 5,187
Claims priority, application France June 12, 1959
6 Claims. (Cl. 1—44.5)



1. Striker mechanism for power actuated tool, comprising a breech having a rear axial cavity and manual control means for said mechanism which comprises: a permanent magnet mounted in the cavity of the breech; a rod of magnetic material which is parallel with the longitudinal axis of the tool and whose rear end is attracted by said magnet; a striker carried by the forward end of said rod; connecting means operatively connected to said control means and slidable along said rod; and elastic loading means bearing with one end against the forward end of said rod and with the other end against said connecting means and thereby being compressed when said control means are actuated.

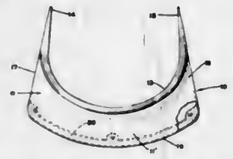
3,049,715
STAPLE MAGAZINE AND FEEDING MEANS
Howard G. Allen, Cranston, R.I., assignor to Bostitch, Inc., East Greenwich, R.I., a corporation of Rhode Island
Filed June 21, 1961, Ser. No. 118,682
5 Claims. (Cl. 1—49)



1. In a stapling tool having a staple driving mechanism, the combination of a staple feed control mechanism which comprises with a staple guideway, a staple pusher overlying said guideway, and a tensioning device for said pusher comprising a manual controller, a track

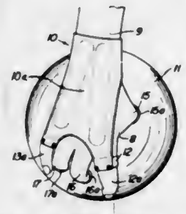
for said manual controller extending lengthwise of said guideway and having the ends thereof offset to provide a forward operating position and a rearward loading position of said manual controller, guides provided toward each end of said guideway, and a coiled tensioning spring passing around said guides at each end of said guideway, said spring having the ends thereof attached respectively to said manual controller and to said pusher.

3,049,716
EYESHIELDS
Raymond F. E. Stegeman, Greece, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Nov. 10, 1960, Ser. No. 68,478
4 Claims. (Cl. 2—14)



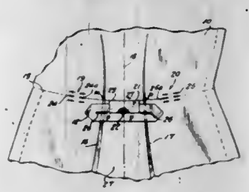
1. An eyeshield for wind protection and the like comprising an integral visor member formed from flexible material so as to extend from temple to temple across and in contact with the forehead of the wearer, said member having a substantially flat visor element adapted to extend straightforwardly and terminating at the front in a depending stiffening flange which is formed at an acute angle to said element integrally thereon, a curved seating surface formed on the front side of said flange, an interchangeable lens panel curved to fit said seating surface and covering the eyes of the wearer and formed of transparent flexible material, said lens panel extending obliquely downwardly and rearwardly so that the lower edge thereof is in close proximity to the checks of the wearer, separable fastener means cooperatively formed on the contiguous parts of said flange and panel to secure the panel in curved shape against said seating surface, and strap means for holding the eyeshield in operative position on the wearer's face, the straightforward arrangement of the visor element serving to provide a maximum of protection and ventilation in the immediate vicinity of the eyes of the wearer.

3,049,717
BOWLER'S WRIST SUPPORT
William F. Meyer, West Jordan, Utah, assignor to Bowling Master, Incorporated, a corporation of Utah
Filed June 16, 1960, Ser. No. 36,508
5 Claims. (Cl. 2—16)



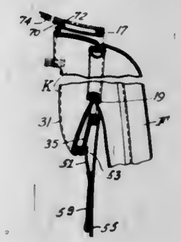
1. A wrist support, comprising a body portion of flexible material adapted to overlie the back of a hand; a relatively narrow finger loop at the forward end of the body portion adapted for receiving and encircling the index finger of the hand; a second relatively narrow finger loop at the forward end of the body portion in laterally spaced relationship to the first finger loop such that it receives and encircles the little finger of the hand; an extension at the rear end of the body portion arranged for encircling the forward portion of the forearm in the region of the wrist; means for securing said extension in its encircling relationship with the wrist; and resilient stiffening means associated with said body portion and extending along the length thereof.

3,049,718
ADJUSTABLE GARMENT
Armigene R. Johnson, 1880 Old Mill Road, Wantagh, N.Y.
Filed Oct. 6, 1958, Ser. No. 765,557
3 Claims. (Cl. 2—76)



1. A garment extending from the shoulders of the wearer to at least the waist including in combination a body part having a waist zone, a belt member, a set of belt fastening means including a first pair of laterally spaced belt fastening means disposed centrally of said waist zone and a second pair of laterally spaced belt fastening means disposed centrally of said waist zone with the lateral spacing of said second fastening means exceeding the spacing of the first said pair of fastening means, at least two additional sets of belt fastening means with one additional set disposed above the first said set and the other set disposed below the said first set, laterally spaced attaching means on said belt for attachment to selected pairs of attaching means on said waist zone, a tab secured along one edge to said waist zone and at a position approximately midway between said first pair of attaching means and at an opposing edge to said belt, said belt completely overlying said tab with the belt secured to any selected pair of attaching means.

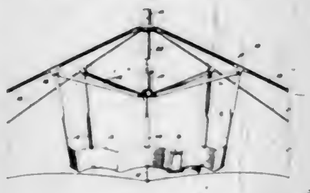
3,049,719
GARMENT WITH FLEXIBLE SLEEVE JOINTS
Hyman Carmen, Montreal, Quebec, Canada, assignor to E. & R. Inc., Montreal, Quebec, Canada
Filed Jan. 4, 1960, Ser. No. 236
3 Claims. (Cl. 2—93)



1. An upper garment, comprising a body having armholes and a sleeve having an inner margin at each of said armholes, a first continuous ring-like insert member having a circumferential margin connected to the inner margin of the sleeve and extending within the armhole to an outer circumferential margin and conforming to the contours of the body material adjacent thereto, a second ring-like insert member having an inner circumferential margin attached to the edge of each armhole and an outer circumferential margin attached to the outer cir-

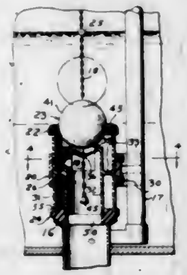
cumferential margin of the first insert member to form a combined margin, resilient means for retaining the end of each sleeve and its associated insert member within the armhole secured at the top, bottom, front and back parts of one of the insert members near its outer circumferential margin and to the garment at points spaced therefrom, means for restraining movement of the back, front and bottom resilient means to prevent rotational movement of the sleeves but to allow extension and retraction of said resilient means.

3,049,720
HEADGEAR
Paul H. Caine, 30 Somerset St., Worcester, Mass.
Filed June 20, 1960, Ser. No. 37,351
5 Claims. (Cl. 2—171)



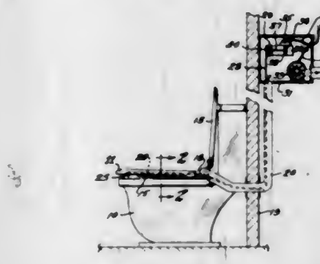
1. Headgear for protection from sun or rain, comprising an adjustable headband adapted to be fitted to the head, a plurality of ribs, a hub to which the ribs are hingedly connected, a flexible cover extending from the hub over the ribs in a generally umbrella-like configuration, a peg extending from the hub, an elongated ferrule adapted to fit over the peg and entirely separable therefrom, braces each hingedly attached at one end to the ferrule and at the other end to an intermediate part of a rib, and supporting rods each hingedly connected at one end to the said intermediate part of a rib and attached at the other end to the headband, the braces being of such a length that, as the ferrule is moved toward the peg, the ribs are moved outwardly from one another and the flexible cover is stretched tightly over the ribs, and so that, when the ferrule lies on the peg, the braces are held in an over-center position.

3,049,721
VALVE
Virgil Taylor, 105 8th St. W., P.O. Box 283, Radford, Va.
Filed June 27, 1961, Ser. No. 119,974
4 Claims. (Cl. 4—37)



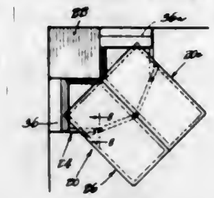
1. A two-level flush valve for use in a conventional toilet flush tank having an outlet port, a standpipe, and flush valve actuating means, comprising a bearing member having means for attachment thereof to said standpipe; a valve body mounted in said bearing member and having an outer wall in vertical sliding engagement with said bearing member, a vertical internal conduit, a peripheral web integrally interconnecting said internal conduit to said outer wall, said web extending substantially horizontally between the mid-portions of the internal conduit and outer wall, said internal conduit having a top edge at a predetermined position above said web and below the top edge of said outer wall, a downwardly dished cap having a stem hole and being formed integral with and substantially closing the top end of said internal conduit, the upper portion of said internal conduit above said web being cut-away to provide a water flow passage having an opening of predetermined capacity; a peripheral top seal mounted on the top of said outer wall, a plug member including a plug seated on top of said top seal and having a stem extending downwardly through the stem hole in the cap and upwardly for attachment to the conventional flush valve actuating means, the bottom end of said stem being positioned a predetermined distance below said cap when said plug is in seated condition and having an enlarged tip to enable abutting lifting engagement with the cap, a peripheral bottom seal mounted on the bottom of said outer wall and of said internal conduit adapted for sealing engagement with said conventional outlet port and defining with the outer wall, internal conduit and web a closed chamber of predetermined buoyancy.

3,049,722
TOILET FUME EXHAUST
Bruce Oden Boggs, 4497 Pearl Lane, R.R. 5, Batavia, Ohio
Filed Apr. 28, 1960, Ser. No. 25,372
1 Claim. (Cl. 4—213)



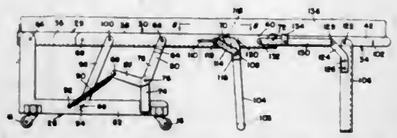
An arrangement for exhausting fumes from a toilet bowl which comprises: a toilet seat hinged to said toilet bowl along a horizontal axis, a first chamber fixed to the lower side of said seat and extending forwardly from said horizontal axis a substantal distance, said first chamber being in communication with the interior of said bowl above the water line thereof and having a coupling member extending therefrom, a second chamber, a conduit, one end of said conduit communicating with said second chamber and the other end of said conduit being rotatably received within said coupling member in a substantially air tight manner, said coupling member being rotatable about an axis which is in alignment with said first mentioned axis, a blower disposed in said second chamber, an exhaust conduit from said second chamber to the atmosphere, a normally open switch connected to said blower and a source of electricity, said blower directing gases from said second chamber through said exhaust conduit, a first diaphragm, a second diaphragm, and a tube connecting said diaphragms, said diaphragms and said tube constituting a closed system containing air, said second diaphragm having an operative connection to said switch, said first diaphragm being positioned to be actuated by the weight of one using the toilet seat, actuation of said first diaphragm causing the air in said closed system to actuate said second diaphragm and thereby said switch whereby to operate said blower.

3,049,723
CONVERTIBLE BED
Ervin H. Thierfelder, Wheaton, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Jan. 7, 1959, Ser. No. 785,403
7 Claims. (Cl. 5—8)



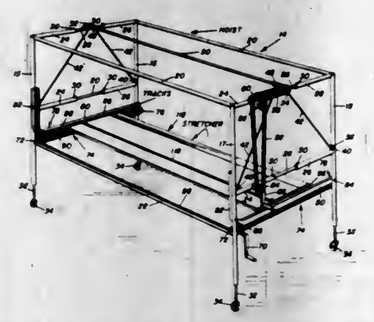
7. An assembly of the type described, comprising stationary frame means including an upstanding frame portion for supporting a bolster and the like and a horizontal frame portion including a pair of floor engaging frame members spaced apart longitudinally of the upstanding frame portion and extending laterally inwardly therefrom for supporting the same in erect position, a rectangular bed frame overlying said frame members, means providing a readily detachable pivotal connection between said bed frame and one of said frame members enabling the bed frame to be pivoted to various positions relative to the stationary frame means, and a plurality of floor engaging caster means connected to opposite ends of the bed frame for supporting the same independently of the pivotal connection between the bed frame and said one frame member, and the floor engaging caster means at the head end of the bed frame being disposed entirely between the said frame members permitting the bed frame to be moved to and from the various positions without interference between the caster means and the said frame members.

3,049,724
CONVERTIBLE BED CONSTRUCTION
Robert Goodman, 5325 Westminster Ave., Philadelphia, Pa.
Filed Apr. 3, 1961, Ser. No. 100,232
5 Claims. (Cl. 5—35)



1. A convertible bed assembly movable from a folded closed position to an extended open position, said assembly comprising a sectional framework including a head section, a front intermediate section pivotally connected at one end to said head section, a rear intermediate section pivotally connected at one end to the opposite end of said front intermediate section, and a foot section pivotally connected to the opposite end of said rear intermediate section, a generally square, hollow base section, said said head section being pivotally connected to said base section, a crank arm pivotally connected at diagonally spaced pivot points to said front intermediate section and to said base section, spring means connecting said crank arm to said base section, the pivotal connection between said crank arm and said base section being between said spring and the pivotal connection between said crank arm and said front intermediate section, a brace bar pivotally connected to said front intermediate section, means on said base section and on said foot section for selectively engaging said brace bar to retain said brace bar in a predetermined pivotal position, a first collapsible leg pivotally connected to said front intermediate section, a second collapsible leg pivotally connected to said foot section, and means for moving said collapsible legs into and out of folded and bed-supporting positions simultaneously with the corresponding pivotal movements of said rear intermediate and foot sections, said last-mentioned means being constructed and arranged to brace the corresponding collapsible legs when said collapsible legs are in bed-supporting position.

3,049,725
PATIENT HANDLING APPARATUS
Albert J. Bovre, Dunn Township, Dane County, Wis. (Rte. 3, Stoughton, Wis.)
Filed Feb. 18, 1960, Ser. No. 9,494
10 Claims. (Cl. 5—86)

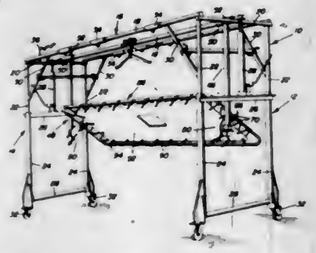


1. For use in handling, transporting and transferring a patient; a mobile apparatus comprising a hoist mounted on supporting and transporting legs, means carried by said hoist and operatively connected with said legs for elevating and lowering the hoist relative to the legs, and patient handling means operatively mounted on said hoist and liftable and lowerable simultaneously with the hoist, said patient handling means being mechanically movable from an out-of-the-way starting position at one longitudinal side of the hoist toward and to the other longitudinal side of the hoist, for travel between a patient reclining on a supporting bed and the patient supporting bed, powered endless apron means mounted on and movable relative to the handling means in response to movement of the handling means between said positions for patient loading and unloading purposes, a horizontally elongated endless upper apron driven either clockwise or counterclockwise, and a companion lower apron underlying the upper apron having a top run in friction-driven contact with a bottom run of the upper apron, said lower apron being adapted to work simultaneously and in conjunction with the upper apron and traveling in an opposite direction, the top run of the upper apron being adapted to engage and load and move the patient and the bottom run of the lower apron being adapted to contact the mattress in a manner to crawl across the mattress.

3,049,726
MOBILE BODY LIFT
Clarence A. Getz, P.O. Box 82, Hot Springs, Mont.
Filed Mar. 15, 1960, Ser. No. 15,077
5 Claims. (Cl. 5—86)

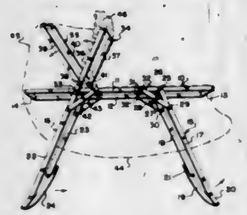
1. A mobile body lift adapted for use with one or more patient-supporting, handling, transporting and carrying frames, each frame including an openwork rectangular framework having at least one flexible panel secured therein, said body lift comprising: an inverted U-shaped support frame including a pair of vertically disposed end sections and a horizontal center section bridging and interconnecting upper portions of said end sections, said support frame being of a length that it is

adapted to span and partially encompass the patient-accommodating bed, said center section including spaced, longitudinally aligned depending supports, means on the lower portions of said supports adapted to support the opposite ends of the above-mentioned patient-supporting frame, the latter being disposed lengthwise between said supports, said supports being spaced inwardly from said end sections a distance sufficient to enable the headboard and footboard of a bed to be received between adjacent depending supports and end sections, and lowering means for the end portions of said center section including means for raising and lowering each end of said center



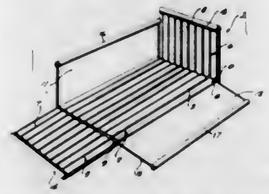
section independently of the other end, said support means including means for supporting a second patient-supporting and handling frame, said frames in parallel spaced relation and for adjustably positioning said carrying frames toward and away from each other and for rotatably mounting said carrying frames about an axis of rotation extending longitudinally of said patient-supporting and handling frames and between said vertical end sections, said center section including at least one longitudinally extending support rail, and a wheeled truck mounted on said support rail for movement therealong.

3,049,727
FOLDABLE CRADLE
Gerald Ruddy, 13 Union St., Lawrence, Mass.
Filed Mar. 10, 1959, Ser. No. 798,462
3 Claims. (Cl. 5—99)



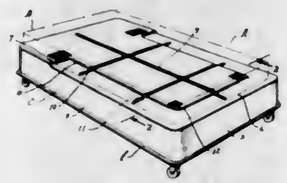
1. In a folding cradle structure, a horizontal rectangular frame element, a cradle body of flexible material suspended therefrom by attachment thereto along the peripheral margin of said body, said body having a hood portion at one end above said frame, two supporting members each including a pair of leg elements interconnected at their outer ends by a portion forming a rocker, the two leg elements of each of said supporting members being pivoted at the inner end portions of said elements to the respective opposite sides of said frame element at points equidistant inwardly from the opposite ends of said frame element, releasable means for locking the leg elements in a downwardly extending direction so as to hold each of said supporting members in cradle supporting position, a hood bow member of U-shape having its opposite ends connected to the respective adjacent supporting members, one of said supporting members being swingable about its pivots to collapse and fold said hood portion against the top of said frame and to bring the rocker portion thereof into juxtaposition to the lower side of said frame element so as to collapse and fold said cradle body against the bottom of said frame.

3,049,728
COLLAPSIBLE CRIB
William E. Lund, 1512 Dixon St., Apt. D, Glendale, Calif.
Filed June 12, 1959, Ser. No. 819,995
6 Claims. (Cl. 5—99)



1. A collapsible crib comprising an inclosure portion including a floor section, said floor section having air receiving compartments therein, a pair of end sections, one of the edges of the end sections being attached to each end of the floor section, a pair of side sections, one edge of each side section being attached to one side of the floor section, separable fasteners coupling the adjacent edges of said end and side sections, and a rigid frame means attached to each of said end sections, said rigid frame means comprising a pair of vertical legs, a bar on each leg, and means releasably connecting the bars together.

3,049,729
BED CONSTRUCTION
Horace N. Broyles, Moultrie, Ga., assignor to Dream Flex, Inc., Moultrie, Ga., a corporation of Missouri
Filed June 17, 1959, Ser. No. 820,955
1 Claim. (Cl. 5—200)

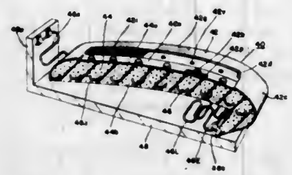


In a bed construction, the improvement comprising a mattress foundation of unitary molded plastic construction having a continuous, relatively thin, horizontal top wall, and continuous, relatively thin, side and end walls depending from said top wall for support thereof, said top wall having on its upper surface a marginal upwardly opening recess extending across one end thereof and partially along the adjacent sides, there being a plurality of spaced-apart, integrally provided friction pad-forming portions on the said upper surface of said top wall spaced from said marginal recess.

3,049,730
SEAT STRUCTURE
James R. Wall and Edward P. Harris, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 3, 1959, Ser. No. 856,989
3 Claims. (Cl. 5—351)

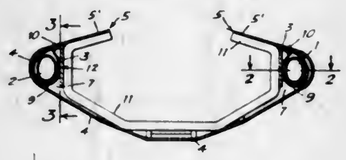
1. A seat assembly in a unitary package, comprising, a pre-shaped covering of vacuum-formed, grained vinyl-type materials having a seat contour with recess-like inward depressions, cloth insert means fitted over said covering in the depressions, simulated buttons completely integral

with said covering and having a cavity therewith on one side thereof, a urethane foam cushion as a filling bonded fully from end to end as well as side to side directly relative to said covering for backing said simulated buttons with respect to each cavity thereof and the depressions to avoid separation and slip therebetween as well as to resist tearing and tear propagation in said covering, and spring means having a zigzag configuration only a central



portion of which is adhesively embedded in said foam cushion and having opposite ends also of zigzag configuration completely free of foam so as to be adapted for mounting of the assembly as a unitary package, said spring means along said central embedded portion being in definite bonded relation to said foam cushion for linear modification of non-linear resilient reaction thereof with sist tearing and tear propagation in said covering, and respect to said covering.

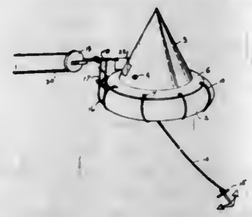
3,049,731
SUPPORT STRUCTURE FOR INFLATED TUBES IN COLLAPSIBLE BOATS
Alfred Ertl, Kolbermoor, near Rosenheim, and Franz Hermann, Rosenheim-Erlenau, Germany, assignors to Firma Klepper-Werke, Rosenheim, Bavaria, Germany
Filed Aug. 12, 1958, Ser. No. 754,570
Claims priority, application Germany Sept. 7, 1957
4 Claims. (Cl. 9—2)



1. In a boat having a rigid but collapsible frame, said frame including longitudinally spaced U-shaped ribs having inwardly turned free ends, and a canvas sheet covering the underside of said frame to define a hull skin portion and having opposite margins secured on the free ends of the ribs to define lateral deck skin portions, the combination comprising a pair of inflated air tubes disposed in spaces between the hull skin portion and sides of said ribs and extending longitudinally substantially parallel to each other, and a pair of protective coverings enveloping the respective tubes, each covering being formed from a rectangular piece of flexible material having longitudinal edges overlapped and secured to said deck skin by a single longitudinal seam.

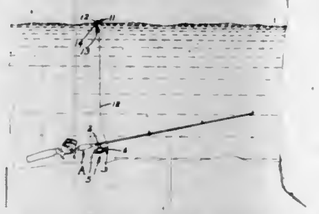
3,049,732
INFLATABLE MOORING BUOY
Willibald Martin, 133 Elaine Drive, Sunrise Terrace, Binghamton, N.Y.
Filed Nov. 29, 1960, Ser. No. 72,355
4 Claims. (Cl. 9—8)

4. An attachment for an inflated automobile inner tube to serve as a mooring buoy, comprising an inflatable plastic body of conical shape, having a base in the form of a laterally extending flange substantially equal in diameter to said inner tube, said flange having a plurality of equally spaced eyelets, a rope harness circumferentially enveloping said inner tube and passing through said eyelets, an-



choring means attached to said harness and a mooring bracket adapted to be clamped around said tube.

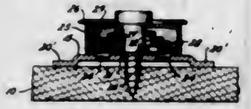
3,049,733
RETRIEVING DEVICE FOR SUBMERGED ARTICLES
John R. Mennenga, 721 11th St., Box 442, Worthington, Minn.
Filed Dec. 13, 1960, Ser. No. 75,623
1 Claim. (Cl. 9—9)



A retrieving device for an article submerged in water, said retrieving device comprising an open-ended tubular casing having an inner cylindrical surface and also having means for affixing the retrieving device to said article, a release cylinder having one open end and one closed end, said release cylinder being normally received in said casing and having a cylindrical outer surface of a slightly smaller diameter than the diameter of the inner surface of said casing, a compression coil spring generally coaxially received within said release cylinder in abutment with the closed end of said release cylinder, an elongated float adapted to be detachably received within said release cylinder and having one end portion thereof disposed in spaced relation to the closed end of said release cylinder in engagement with said spring to normally maintain said spring in compression, an enlarged other end portion defined by said float which other end portion normally extends beyond the open end of said release cylinder and is of a diameter generally approximating the outer diameter of said release cylinder, said other end portion of said float having an outer surface disposed in closely spaced relation to the inner surface of said casing and in general axial alignment with the outer surface of said release cylinder, a retrieving line wound upon said float generally intermediate the opposite end portions thereof and having its inner end secured thereto and its outer end secured to said release cylinder, an elongated paper locking strip having an intermediate portion normally disposed in engagement with said enlarged other end portion of said float and also having opposite end portions which are folded back along said float and snugly interposed intermediate the aligned outer surfaces of said release cylinder and said enlarged other end portion of said float and the inner surface of said casing so as to secure said float and said release cylinder within said casing, said enlarged other end portion of said float having a generally spherical portion normally seated against the open end of said release cylinder and normally maintained thereagainst by said locking strip whereby to trap a quantity of air within said re-

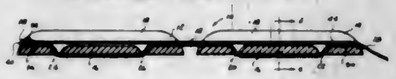
lease cylinder, and said locking strip being formed from a paper material which has sufficient tensile strength when dry to resist the stress imparted thereto from said compressed spring but which is unable to resist said stress when said locking strip is acted upon by water whereby said locking strip is parted and said float is released from within said casing.

3,049,734
AUTOMATIC LOCKING RATCHET ACTION SKI BINDER
Donald E. Johnson and Edmund Barany, McHenry, Ill.
Filed Oct. 9, 1958, Ser. No. 766,276
6 Claims. (Cl. 9—310)



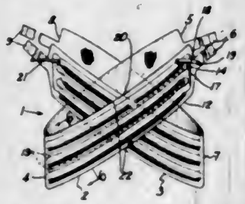
1. A ski comprising a ski base, toe and heel engaging members mounted on said ski base, one of said members being affixed to the base and the other slidable thereon, said slidable member having perforations therein, a pin fixed to said base, a latch body axially slidable on the pin, spring means urging said latch body toward the perforations in the slidable member, and a tongue depending from the latch body engageable with a selected perforation in the member.

3,049,735
SWIMMING AID
Edgar G. Baker, Carbondale, Pa., assignor to Gentex Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 28, 1959, Ser. No. 789,657
5 Claims. (Cl. 9—337)



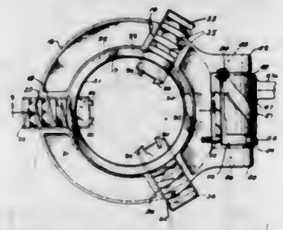
1. A swimming aid including in combination a pair of elongated channel-shaped buoyant masses, each having its channel extending in the direction of its length to form a base, a belt and respective loops in said belts extending around said bases for retaining said masses in end-to-end relationship, portions of said belt loops lying in the channels of said masses on said bases for an appreciable portion of the lengths of said masses whereby to restrain said masses against shifting laterally of said belt.

3,049,736
SWIMMING AID
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to Lars E. Birbach, Malden (Boston), Mass.
Filed June 3, 1959, Ser. No. 817,770
9 Claims. (Cl. 9—340)



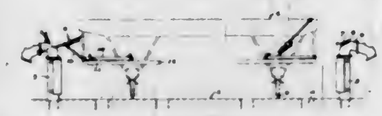
8. An inflatable life preserver particularly adapted for swimmers for disposition underneath a bathing suit and comprising a pair of relatively wide bands of flexible material having a detachable section for opening and closing each of said bands, said bands having walls which are porous and permeable to air and adapted for arrangement beneath the arms and over the hips below the waistline with cross-over points at the front and back thereof, a plurality of separate but interconnected air cells mounted between said walls, said air cells being inflatable to expand toward the outside of said life preserver, and means for retaining said life preserver on the body of the swimmer, and tubular means including a valve communicating with said air cells through which air is admitted to inflate the same.

3,049,737
ADJUSTABLE CENTERING WORKHOLDER
Herman Weibel, Westlake, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio
Filed July 31, 1957, Ser. No. 675,390
17 Claims. (Cl. 10—107)



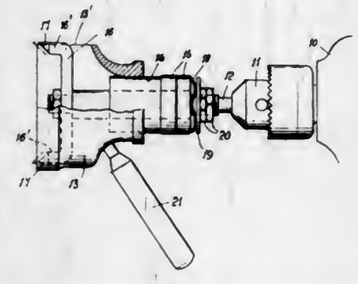
1. An adjustable centering workholder comprising a base for receiving a work piece, adjustable workholding means on said base including work gripping jaws, an index member adjustably mounted on said base and connected to said jaws, said index member being coupled to said workholding means so that the position to which the index member is adjusted determines the setting of said workholding means, and means to move said jaws into clamping relation with the work comprising a movable actuator means mounted on the base and operative in one position to pass the index member freely, said actuator means when moved from said one position engaging the index member to adjust the index member in response to such movement of the actuator means.

3,049,738
COKE OVEN ASCENSION PIPE DECARBONISING DEVICE
Geoffrey Edward Charles Randell and Herbert Milton Whitworth, London, England, assignors to Woodall-Duckham Construction Company Limited, London, England, a British company
Filed June 30, 1959, Ser. No. 823,995
3 Claims. (Cl. 15—5)



3. Apparatus for decarbonising the interior of the elbows and necks of a row of gas ascension pipes each in a row at the top of a battery of horizontal coking chambers having a coal charging car movable over the top of the battery alongside the row of ascension pipes into position for charging the chambers of the battery severally, said apparatus comprising: a portion of said coal charging car located alongside said row of ascension pipes, a rotary abrading element, said abrading element comprising an axially directed wire brush and peripherally arranged series of flails, means including a rotary shaft for driving said abrading element, supporting means for supporting said shaft for movement toward and from the ascension pipes, so that the abrading element can be introduced into and withdrawn from the elbow and neck of each ascension pipe, and for movement of the shaft so that the abrading element can be moved along and around the interior surfaces of the elbows and necks when the abrading element is inserted in the ascension pipes to decarbonise the same, said supporting means being mounted on said portion of the coal charging car in a position on said portion to spot the abrading element in line with the elbows and necks of the ascension pipes for the respective oven chambers when the coal charging car is in position over the several oven chambers for charging the same.

3,049,739
PAINT REMOVER AND SURFACING TOOL
Charles A. Lantto, 19170 Ashton Ave., Detroit 10, Mich.
Filed May 4, 1960, Ser. No. 26,907
3 Claims. (Cl. 15—93)



1. A paint remover and surfacing tool comprising in combination, a cylindrical housing open at one end, a co-axial bearing in the other end of said housing, a rotary and slidable drive shaft in said bearing, a rotor on said shaft within said housing, a diametrically disposed pair of pointed scribing elements carried by said rotor adjacent the housing wall, spring means normally retracting said rotor within said housing, and stop means limiting the operative forward projection of the scribing elements beyond the face of said housing, whereby lateral movement of said device over work will result in a surfacing action in increments of a progressively overlapping circular series of scribed grooves thereon.

3,049,740
MOPS WITH EXTRACTING MECHANISM AND ALIGNING MECHANISM THEREFOR
Peter S. Vosbikian, Melrose, Pa., and Thomas S. Vosbikian, 1012 70th Ave., Philadelphia, Pa.
Filed June 13, 1960, Ser. No. 35,519
2 Claims. (Cl. 15—119)



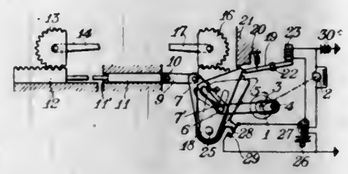
1. A mop, comprising a mop head and a handle connected with said mop head, in combination with extracting mechanism having a ring with a slot therethrough to permit the ring to pass over the handle into alignment with the mop head and movable over the mop head for a forward extracting stroke and movable rearwardly for a ring positioning stroke, a rod fixed at its front end to said ring, a sleeve slidable on the mop handle and pivotally connected with the other end of said rod to effect forward and rearward movement of the ring, and cam means on the mop handle contacted by the ring during its rearward movement to cause the cam to move the ring over the mop handle into longitudinal alignment with the mop head.

3,049,741
PAINT BRUSH GUIDE
Albert R. Bessette, 80 Falcon Ave., and Raymond N. Martin, 65 Cambridge Ave., both of Warwick 5, R.I.
Filed Dec. 22, 1960, Ser. No. 77,681
4 Claims. (Cl. 15—248)



1. A paint brush guide comprising a body member with a portion extending longitudinally on one side of the bristles substantially the width of the paint brush with portions folded from the opposite edges thereof to embrace the brush at a location spaced from the ends of the bristles, a tongue member to engage the opposite side of the paint brush also embraced by said body and of a length substantially the length of the body portion extending longitudinally of the bristles to support the bristles on opposite sides.

3,049,742
SYSTEM FOR DRIVING WINDOW WIPERS FOR A VEHICLE
Masumi Kato, Toyoakecho, and Shigeyoshi Kamimura, Okazaki, Japan, assignors to Toyota Motor Co., Ltd., Toyota, Japan, a corporation of Japan
Filed Dec. 14, 1960, Ser. No. 75,716
Claims priority, application Japan Dec. 14, 1959
2 Claims. (Cl. 15—250.17)



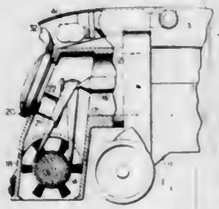
1. In a system for driving wipers for a vehicle, the combination of a cam member, a first operating member operatively coupled to one of a pair of wiper element a second operating member operatively coupled to the other wiper element, all said members being superposed on each other and capable of being rocked about a common axis, a pin member engaging an elongated slot provided in each of said cam member and said first and second operating members, and driving means for effecting reciprocal movement of said pin within said slots, said cam member cooperating with both said slots and said pin member to bring said pair of wiper elements to respective starting positions to rocking the same within predetermined limits and to stop the wiper elements to respective stored positions in partially or completely superposed relationship after the wiper elements have been brought into their positions corresponding to the starting positions respectively, one of said operating members including an element operable to energize and deenergize said driving means.

3,049,743
WINDSHIELD CLEANER
Bronislaus S. Graczyk, Snyder, and Joseph W. Ott, Tonawanda, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Oct. 24, 1961, Ser. No. 147,335
9 Claims. (Cl. 15—250.32)



9. A windshield cleaner comprising a wiper, an actuating arm having a terminal portion with a shoulder, an attaching clip on the wiper having an open-ended chamber slidably receiving the arm terminal portion, said clip chamber having an internal shoulder, and a liner interposed between the terminal portion and the clip and molded from plastic to have a conforming fit therewith, said arm shoulder being selectively interlockable with the clip shoulder and with a shoulder on the liner, said plastic liner extending out through the open end of the clip chamber and overhanging the same to afford protection therefor.

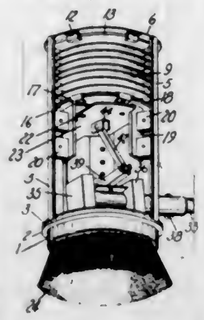
3,049,744
VACUUM CLEANER COMPONENT
Charles H. MacFarland, Rocky River, Ohio, assignor to The Scott & Fetzer Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 22, 1960, Ser. No. 71,058
7 Claims. (Cl. 15—324)



1. In a vacuum cleaner having a fan casing with an inlet opening, a fan shaft extending through said opening, an accessory detachably connected to said fan casing and having a drivable shaft connectable to said fan shaft by a belt, the improvement which comprises an accessory housing, an opening in said housing through which said fan shaft projects when said accessory housing is attached to said fan casing, a manually rotatable member positioned in a sidewall of said housing adjacent the free end of said fan shaft, a circumferential bearing positioned between said rotatable member and said housing to facilitate movement therebetween, said rotatable member having a light diffusing insert secured therein, said member having an opening through which a tab of said insert extends to maintain said insert in proper position, an electric lamp affixed to said fan casing and positioned above said member, and means carried by said member for applying said belt to said fan shaft and removing it therefrom by rotation of said member.

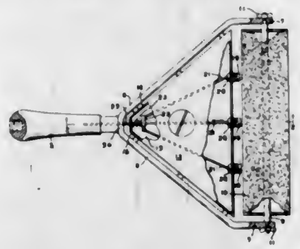
3,049,745
MANUALLY MANIPULATED SURFACE CLEANING DEVICE
Marvin Lambers, 810 W. 26th St., Holland, Mich.
Filed June 15, 1960, Ser. No. 36,357
10 Claims. (Cl. 15—554)

10. A device of the class described comprising a base member, a support member fixedly mounted on and projecting rearwardly from said base member, a collapsible container supportedly mounted at its outer end on said support member and having its inner end reciprocable relative to said base, a handle rotatably mounted on said base member and having an arm projecting laterally there-



from, a link connecting said arm to the inner end of said collapsible container, an applicator mounted on said base member, and a conduit opening at its outer end to said container and discharging at its inner end to said applicator.

3,049,746
PANLESS PAINT ROLLER
Ezra Rachal, 323 S. McGuire, Monroe 3, La.
Filed July 3, 1961, Ser. No. 121,447
1 Claim. (Cl. 15—575)

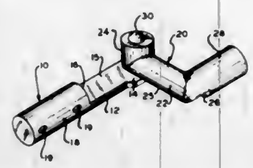


A paint roller and applicator, comprising, a handle, a roller frame having diverging arms projecting from one end of the handle, a paint roller rotatably mounted between the outer ends of the arms, a paint container secured intermediate said arms and having a flat side wall disposed parallel and rearwardly spaced from the roller, nozzles equally spaced and protruding normally from the side wall and communicating inwardly of the container, plungers for simultaneously closing the nozzles from within the container, converging rods leading from the plungers rearwardly within the container, a plate securing the converging ends of the rods, a trigger rod secured normally to the opposite side of the plate and extending outwardly through the container and terminating with a finger grip disposed adjacent the handle for operating the plungers, and a single compression spring disposed between said plate and a wall of said container to constantly urge all of said plungers into a closed relationship with respect to the nozzles.

3,049,747
HINGE
David C. McDonald, 1305 Alhambra Circle, Coral Gables, Fla.
Filed Feb. 25, 1960, Ser. No. 11,051
2 Claims. (Cl. 16—135)

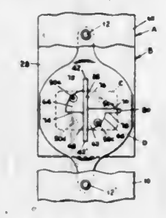
1. A door hinge for the pivotal mounting of a door in a door jamb comprising a straight hinge section formed

of round bar stock and having a substantial part of its length cut away to form a hemispherical portion providing a flat longitudinal surface, means disposed transversely of the round portion of said section for securing the latter into a door jamb, a right-angle hinge section also formed of round bar stock and having one leg thereof cut away to form a hemispherical portion with a flat surface of substantially the same size and configuration



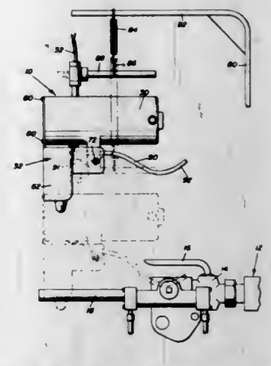
as the flat longitudinal surface of said straight hinge section and the remaining round leg of said right angle hinge section being insertable into and securable to the door edge which abuts the jamb, and a pintle passing through the outer end of the hemispherical portion of each hinge section to pivotally connect them together and cause said hemispherical portions to overlie with their flat longitudinal surfaces engaging each other in the closed position of said door in the door jamb.

3,049,748
HINGES
Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Mendham, N.J., a limited partnership
Filed Apr. 19, 1960, Ser. No. 23,179
1 Claim. (Cl. 16—171)



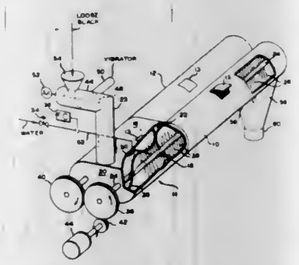
A hinge comprising a pair of cooperable hinge members constructed for relative rotation in parallel planes through a limited angle, one of the hinge members comprising a base portion and a rib portion integral with the base portion and extending transversely thereof, said rib portion being undercut with respect to the lateral ends thereof to provide laterally spaced root surfaces adjoining the base portion, a pair of projections on the base portion, one on each side of the rib portion for contact with the second hinge member, the second hinge member comprising a base portion provided with a pair of oppositely disposed, tip-adjoining, communicating cutout sectors each bounded by an arcuate surface and a pair of spaced, substantially radially extending surfaces, the included angles of the cutout sectors being the same and less than 180° the diametral distance between the arcuate surfaces being slightly greater than the distance between said laterally spaced root surfaces, the substantially radially extending surfaces limiting the extent of relative rotation between the hinge members, a tab extending from each side of the second hinge base portion for connecting the second hinge member to a part to be hinged, the tabs being offset from the base portion in an amount slightly greater than the amount said rib portion extends transversely from its base portion, and a slot in communication with one of the cutout sectors to receive a portion of said rib portion to lock the hinge members to one another.

3,049,749
PORTABLE CASING CLEANER AND APPLIER FOR CASING STUFFERS
Siegfried K. Mayer, 4409 Ellen St., and Adolph C. Ferrara, 3012 Lowerline St., both of New Orleans, La.
Filed Jan. 27, 1960, Ser. No. 5,029
11 Claims. (Cl. 17—43)



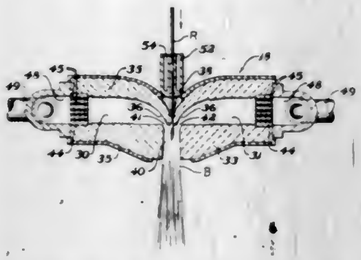
1. A portable, power operated casing applier for casing stuffing machines of the type having a stuffing horn with which material is formed into a casing and comprising a motor, a pair of rollers mounted upon and driven by said motor for rotation about vertically extending stationary axes disposed in spaced side by side relation, said rollers having their adjacent surfaces spaced from each other a sufficient distance to frictionally engage a stuffing casing when placed upon the horn of a casing stuffing machine and move said casing onto said horn and longitudinally upon the latter.

3,049,750
APPARATUS FOR PELLETING POWDERED MATERIALS
Oliver K. Austin, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,515
8 Claims. (Cl. 18—1)



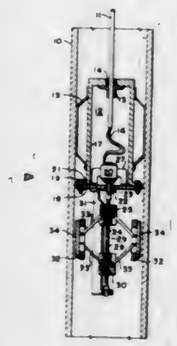
1. Wet pelleting apparatus comprising in combination, a pair of cylindrical pug mills arranged with their axes parallel and in a horizontal plane and their shells contiguous but closed to each other therebetween, each said mill being provided with an axial shaft with radial pins thereon; an enclosed common mixing chamber attached to and enclosing the upstream ends of said mills, said ends being open to said chamber and the axial shafts of said mills extending thru said chamber; a feed conduit in the top of said chamber adjacent the end remote from said mills; a feed screw on the upstream end of each said shaft extending at least to a point just below the downstream side of said feed conduit, said radial pins on said shaft commencing adjacent said screw and being spirally arranged; water spray means in an upper section of said chamber; and means for withdrawing pellets from the downstream ends of said mills.

3,049,751
METHOD AND APPARATUS FOR FORMING FIBERS
Charles J. Stalego, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 2, 1952, Ser. No. 323,561
18 Claims. (Cl. 18—2.5)



7. In an apparatus for forming fibers from heat-softenable fiber-forming material including a pair of horizontally opposed combustion chambers, each of said chambers adapted to burn a combustible mixture of gases, the outer end of each of said chambers having an inlet port through which the combustible mixtures of gases are introduced into the chambers, a passageway, each of said chambers having an orifice in communication with the passageway through which the products of combustion are discharged into the passageway to form a high temperature, high velocity blast, and means for delivering fiber-forming material into the passageway and into the blast whereby the fiber-forming material is attenuated by the blast to fibers.

3,049,752
DEVICE FOR OBTAINING IMPRESSION
Robert M. Jorda, Houston, Tex., and Royal P. Yachik, Garden Grove, Calif., assignors to Shell Oil Company, a corporation of Delaware
Filed Dec. 23, 1959, Ser. No. 861,471
3 Claims. (Cl. 18—5)

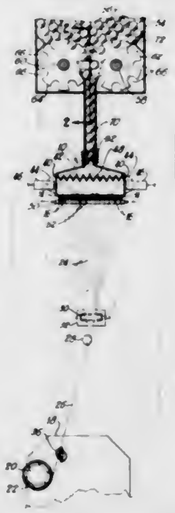


1. A device for obtaining an impression of the inner surface of a tubular member comprising: an expanding impression element formed from a plurality of individual segmented impression pad holders; a deformable impression pad mounted on the outer surface of each pad holder; at least two substantially equal toggle links pivotally secured to each pad holder at one end and pivotally secured to threaded nuts at their opposite ends; a threaded lead screw passing through both nuts, said toggle links and nuts being disposed with the surface of the impression pad substantially parallel with the axis of the lead screw; a reversible electric motor disposed in a housing and coupled to said lead screw; centering elements disposed on said housing for substantially aligning the axis of said lead screw and motor with the axis of the tubular member; and means for suspending said housing on a cable to lower said housing into the tubular member and retrieve said housing.

3,049,753
SPINNERETTE
Joseph Ogden, Maywood, and Percy J. Armeny, Roselle Park, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Apr. 29, 1959, Ser. No. 809,742
8 Claims. (Cl. 18—8)

1. A spinnerette comprising a plate portion having an inlet face and an outlet face, a plurality of extrusion orifices passing through the thickness of the plate, the material defining the orifices being composed of a sintered mixture of tungsten carbide powder and from one percent to twenty percent of a platinum group metal powder, at least a portion of the length of each orifice having cylindrical walls terminating in the outlet face.

3,049,754
METHOD AND APPARATUS FOR PROCESSING HEAT-SOFTENABLE MATERIALS
Philip J. Frickert, Anderson, S.C., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 29, 1959, Ser. No. 862,549
8 Claims. (Cl. 18—8)



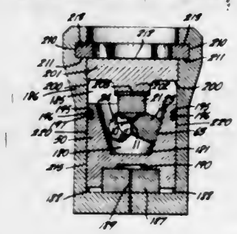
1. Apparatus of the character disclosed, in combination, a receptacle adapted to contain a supply of discrete spherically-shaped bodies of heat-softenable material, a chamber having a plurality of orifices formed in a wall thereof, a feed channel in communication with said chamber and said supply receptacle, a pair of feed wheels engageable with the bodies for feeding the bodies successively through the channel into the chamber, means for actuating said feed wheels to exert continuous pressure upon the bodies in the feed channel, and means for applying heat to reduce the material of discrete bodies in the chamber to a heat-softened state whereby streams of the heat-softened material are extruded through the orifices by the pressure exerted on the bodies.

3,049,755
PROCESS AND APPARATUS FOR STRETCH SPINNING CUPRAMMONIUM RAYON
Hiizu Aizawa, Nobeoka-shi, and Fukusa Ishida, Hyuga-shi, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan, a corporation of Japan
Filed July 25, 1960, Ser. No. 45,051
Claims priority, application Japan Aug. 3, 1959
3 Claims. (Cl. 18—8)



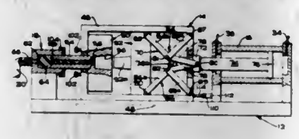
1. In an apparatus for the stretch spinning of cuprammonium rayon, in combination, a first, descending coagulating and stretching tube means having an upper end adapted for introduction thereinto of cuprammonium spinning solution and a stream of coagulating liquid, for simultaneous flow through said tube means in the same direction, said first tube means in the upper part thereof having a diameter d_1 and a length l_1; and being tapered in the remaining lower part toward the lower end thereof which has a narrower diameter d_2; a second, descending coagulating and stretching tube means connected with its upper end to the lower end of said first tube means, said second tube means having a length l_2 and being substantially of said diameter d_2 throughout said length l_2, and a third coagulating tube means having an enclosed upper end into which the lower end of said second tube means opens unrestrictedly and a further opening at the lower end, said third tube means having a substantially constant diameter d_3; l_1:l_2 ranging from (4 to 20):(3 to 25); l_1:d_1 ranging from 4:1.5 to 20:3.0; l_2:d_2 ranging from 3:0.5 to 25:10; d_1:d_2 ranging from 2:1 to 4:1, and d_3 being substantially larger than d_2, whereby completely coagulated and stretched filament is discharged from said opening at the lower end of said third tube means.

3,049,756
MULTI-ANVIL FORCE COMPENSATING PRESSURE APPARATUS
George Gerard, Yonkers, and Jacob Brayman, Staten Island, N.Y., assignors to Engineering Supervision Company, New York, N.Y., a corporation of New York
Filed June 14, 1960, Ser. No. 35,933
6 Claims. (Cl. 18—16)



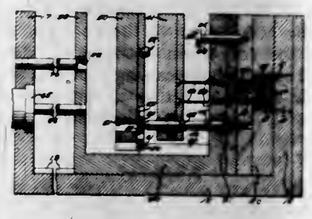
2. Apparatus comprising, an array of anvils disposed to converge from various sides on an object, a sleeve surrounding ones of said anvils and adapted to restrain them from outward movement, a hydraulic cylinder in which said sleeve is received as a piston, means to permit injection of hydraulic fluid into said cylinder so as to produce movement therein of said sleeve, means responsive to said movement to load said anvil array with a progressively increasing force acting through said sleeve-surrounding anvils against the restraint provided by said sleeve so as to render said object simultaneously compressed by all the anvils in said array, and fluid sealing means surrounding said sleeve forward of where said force acts thereon and adapted to retain pressurized hydraulic fluid injected into said cylinder in the interspace bounded by said cylinder, sleeve and sealing means.

3,049,757
INJECTION MOLDING MACHINE
John G. Hagerborg, Los Gatos, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed May 3, 1960, Ser. No. 26,599
7 Claims. (Cl. 18—30)



5. In a molding machine, a base, a transfer cylinder rigidly mounted on said base, a source of moldable material under pressure, material conducting means interconnecting said source and said cylinder and including a valve permitting flow of material from said source to said cylinder and precluding flow from said cylinder to said source, a support mounted on said base for movement toward and away from said cylinder, a mold section rigidly connected to said support, said mold section providing a mold cavity, a material conducting plunger slidably fitted in said cylinder and rigidly connected to said mold section, said plunger having a material passageway establishing communication between said cavity and said cylinder, and abutment members on said support and said cylinder for contact with each other during movement of said support toward said cylinder, one of said members being adjustable toward and away from the other of said members to adjust the extent of movement of said plunger into said cylinder.

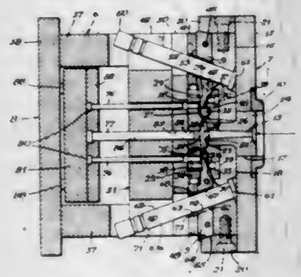
3,049,758
MOLDING MACHINE
Constantine N. Drevalas, Maywood, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 29, 1958, Ser. No. 711,833
2 Claims. (Cl. 18—42)



2. Apparatus for molding and then ejecting an article having a base, a pair of arms projecting outward from the base, and a sloping projection on the exterior surface of each arm; which comprises a fixed die designed for molding the exterior surface of the base of the article, a shell-like movable die designed for molding the ex-

terior surfaces of the arms of the article and having undercuts formed in the interior walls thereof which operate to mold the sloping projections, a movable die holder mounting said movable die for movement toward and away from said fixed die, a core slidably received within said movable die and designed for molding the interior surfaces of both the arms and the base of the article, a yoke mounting said core for movement into and out of said movable die, ejector pins slidable within said yoke and said core, the apparatus being so constructed and arranged that the molded article is released from the molding elements in stages by moving said yoke continuously away from said fixed die whereby said movable die holder and said ejector pins first move with said yoke to separate the article from said fixed die, means for temporarily stopping the movement of said movable die holder with said yoke whereupon further movement of said yoke causes retraction of said core from within said movable die to separate the article from said core, means for stopping the movement of said ejector pins with said yoke, and means for constraining movement of said movable die holder with said core whereupon said ejector pins push against the interior surface of the base of the article and the arms of the molded article are cammed inwardly to dislodge the projections on the article from the undercuts of said movable die to eject the article from said movable die.

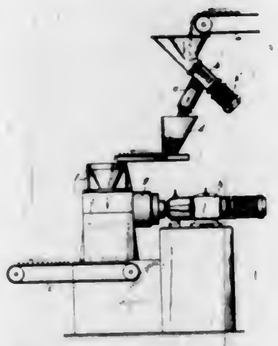
3,049,759
INJECTING MOULDING APPARATUS
Joseph Eberhardt, 2860 N. Broadway Ave., Chicago, Ill.
Filed Feb. 18, 1959, Ser. No. 794,087
5 Claims. (Cl. 18—42)



4. In an injection molding device for making a plastic casting, the combination of a pair of mating dies and an intervening core, said core having an enlargement and at least one of said dies having an encasing cavity receiving said enlargement therein and terminating in a lip structure overlapping said enlargement, a press having platens connected to respective dies for separating the dies laterally of the core at a predetermined rate, a guide and activating element mounted on one of said platens and diverging laterally outwardly of the dies and extending transversely of the core and operative through engagement with the core to move the core for concurrently withdrawing the core from between the dies at a rate such that said core with the casting is moved from between the dies while the lip structure continuously engages the casting and strips it off the enlargement.

3,049,760
METHOD AND APPARATUS FOR MASS-PRODUCING SMALL BALLS OF PLASTIC MATERIALS
Oskar Brendel and Kurt Grantz, Kochel, Upper Bavaria, Karl-Ernst Hofstadt, Munich, and Werner Franz, Moosburg, Upper Bavaria, Germany
Filed Mar. 25, 1960, Ser. No. 21,076
2 Claims. (Cl. 18—55)

1. A method for producing balls or pellets of diameters in the order of about 5 mm. made from ceramic and other compressible materials including the steps of: subjecting the material to be compressed to centrifugal force within a rotating cylindrical sieve having a mesh size substantially equal to the diameter of the balls or pellets to be produced, thereby slightly compressing the material and forming fragments of the material of a volume slightly greater than the volume of the balls or pellets to be produced and of a diameter of substantially the size as the



diameter of the balls or pellets to be produced; transferring and feeding said fragments to the roller gap of a pair of rotating pressure rolls each having a plurality of corresponding mold cavities formed therein, whereby each of said fragments fills one of the mold cavities; and finally additionally slightly compressing and reshaping said fragments within the corresponding mold cavities to form balls or pellets.

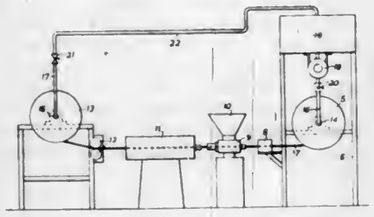
3,049,761
PROCESS FOR PRODUCING COLORED SHEET MATERIAL
Michael A. Yakubik, Hudson, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Mar. 7, 1956, Ser. No. 570,124
7 Claims. (Cl. 18—57)



1. A process for the production of a terrazzo-tile-appearing vinyl sheet material which comprises casting a layer comprising a plurality of pigmented, sharply outlined vinyl resin particles having at least one dimension smaller than the thickness of said layer surrounded by a plastisol vinyl resin paste which can be heat-fused into a transparent mass and then heating the cast layer to fuse said plastisol paste into a matrix which holds said particles therein.

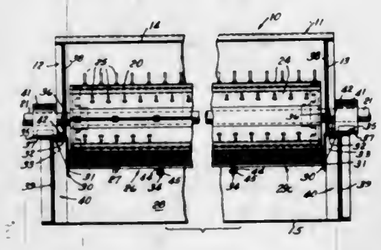
3,049,762
REINFORCED FLEXIBLE TUBING
Harold Ernest Jackson, Maurice, Devon, England, assignor, by mesne assignments, to Imperial-Eastman Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 23, 1959, Ser. No. 809,336
4 Claims. (Cl. 18—59)

1. The method of manufacturing flexible tubing, comprising the steps of: providing an elongated tubular thermoplastic core having opposite ends; circulating a coolant fluid under a controlled pressure through said core into one end and out from the opposite end thereof; moving the core longitudinally from a supply successively past a sheathing point and a heating point to a take-up while continuing said circulating of the coolant fluid therein; providing a thermosetting sheath on the moving core at said sheathing point; and delivering a preselected quantity



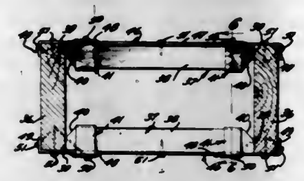
of heat energy to the sheath at said heating point to set said sheath, the circulation of the coolant fluid being preselected to maintain substantially all of the core at a temperature below that at which the core material will soften.

3,049,763
GRID STRUCTURE FOR SEED COTTON CLEANERS AND THE LIKE
Robert C. Schwartz and Ennis E. Moss, Sr., Lubbock, Tex., assignors to Botany Industries, Inc., Passaic, N.J., a corporation of New Jersey
Filed May 16, 1961, Ser. No. 118,754
6 Claims. (Cl. 19—93)



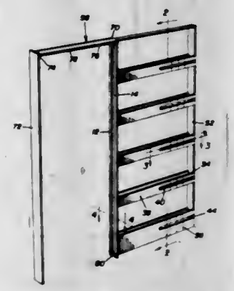
1. Cleaning apparatus for removing contaminating substances from fibrous material and the like comprising a plurality of rotatable cleaning cylinders serially arranged along a flow path for rotation about substantially horizontal parallel axes arranged transversely of the flow path, a grid structure extending in selectively spaced relation to the cleaning cylinders below the same over which the fibrous material is moved by said cylinders, a casing enclosing said cylinders and grid structure having an upper region of a width to accommodate the cylinders and a relatively wider lower region below said cylinders, said casing including downwardly facing transition side wall portions at each side of the casing at the top of the wider lower region, said grid structure including at least one grid section comprising a plurality of grid rods, a pair of side plates at the opposite sides of said grid section having a vertical plate portion supporting ends of the grid rods disposing the grid rods in parallelism therebetween along generally arcuate paths concentric with the axis of one of said cylinders spaced suitably to pass the contaminating substances therethrough while restraining passage of fibrous material, said side plates each having an outwardly projecting mounting flange integral with said plate portion extending into underlapping relation with said transition side wall portions, and means releasably fastening said mounting flanges of each grid section to said transition side wall portions to support said grid section in depending relation therefrom.

3,049,764
BRIDGING FOR JOISTS AND STUDDING
Arthur William Kawalle, Manitowoc, Wis.
Filed July 29, 1960, Ser. No. 46,153
1 Claim. (Cl. 20—9)



For use with spaced apart studs in a wall construction, a bridge unit comprising a beam of nailable material and of triangular cross-sectional configuration, said beam having flat ends, the portion of said beam adjacent each of said flat ends being chamfered, a ferrule encompassing the portion of said beam adjacent to and inwardly of each of said chamfered portions, a metal strip extending over one face of said beam and having a portion adjacent each end projecting beyond the adjacent flat end of said beam and terminating in a flange portion turned inwardly toward said beam, there being aligned holes in said strip and ferrule for the insertion therethrough of a nail for driving same outwardly of said flat end into a wall stud, said beam being adapted to fit between adjacent studs in a wall construction with each of the end portions of said strip overlying the studs and with the flat ends of the beam in engagement with the studs and with the flange portions extending partially over the faces of said stud remote from said beam.

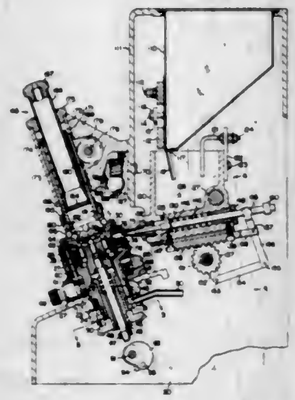
3,049,765
SLIDING DOOR FRAMEWORK WITH ADJUSTABLE FEATURE
Harry M. Elmore, Miami, Fla., assignor of fifty percent to G. L. Tapp, Jackson, Tenn.
Filed Feb. 17, 1960, Ser. No. 9,306
7 Claims. (Cl. 20—19)



1. A sliding door frame for mounting in an opening in a wall comprising a vertical back jamb and a vertical main jamb, a vertical split jamb disposed intermediate the back and main jamb with the split jamb including spaced parallel jamb members adapted to receive a sliding door therebetween, a plurality of spreaders connected to the back jamb and terminating adjacent the split jam, means adjustably interconnecting the spreaders and the split jamb for adjustably securing the split jamb members to the spreaders for permitting lateral adjustment of the split jamb members for alignment of the outer edge of the split jamb members with the surface of the wall adjacent the opening, and means adjustably interconnecting the spreaders and the back jamb for slidably adjustably securing the back jamb to the spreaders for permitting adjustment of the back jamb along the length of the

spreaders for varying the width of the frame for receiving different width doors, said means interconnecting the spreaders and split jamb members including elongated angle iron members having one leg thereof secured to the spreaders, the other leg of the angle iron members having laterally extending slots receiving fastening means extending therethrough and anchored to the split jamb members for lateral adjustment of the split jamb members, and means interconnecting the angle iron members and the split jamb members for retaining the split jamb members in adjusted position after being set.

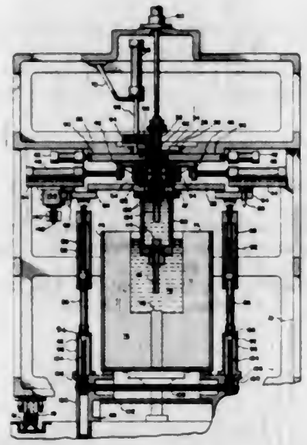
3,049,766
PROCESS AND APPARATUS FOR BLOCKING LENSES
Lloyd A. Buckminster, Geneva, N.Y., assignor to Textron Inc., Geneva, N.Y., a corporation of Rhode Island
Filed Jan. 27, 1960, Ser. No. 4,950
15 Claims. (Cl. 22—58)



1. The method of blocking a lens blank which comprises adhering a disc to one side of the blank, then seating the blank with the adhered disc on a mold which is open at its top and which is shaped to form a block on which the lens blank may be chucked in a machine for operating on the lens blank, with said disc and said one side of the blank covering and closing the mold cavity, flowing a molten metal into the mold cavity until the metal covers said disc and is in engagement with said one side of the blank around said disc, and cooling the metal to adhere it to said disc and to said one side of the blank.

3,049,767
CASTING EQUIPMENT
Marius G. Guyot, Rocky River, Ohio, assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 3, 1958, Ser. No. 777,971
2 Claims. (Cl. 22—68)

2. Integrated casting and casting handling and transferring equipment comprising a downwardly depending cavitied mold presenting a bottom open end, a flowable castable material supply reservoir below the open end of the cavitied mold, a cross head secured to said reservoir and translatable towards and away from the open end of the cavitied mold, a cover plate secured to the cross head in alignment with the open end of the mold, said cover plate defining a wall of the cavitied mold, a gate extending through the cover plate in communication with flowable castable material in the reservoir, means for imparting upward vertical translating movement to the cross head, cover plate and reservoir as a unit to place the cover plate in sealing relationship with the open end of the cavitied mold and define a finished surface of the cast article produced therein, means for pressurizing flowable castable material in the reservoir and deliver the same in a mold charging operation of the sealed mold, the gate through the cover plate constituting the entrance for the pressurized flowable castable material into the sealed mold, a finished casting-receiving device in offset relationship to the unitary cross head, cover plate and reservoir in its elevated mold charging position, means for retracting the unitary cross head, cover plate and reservoir out of sealing relationship of the cover plate with the cavitied mold and a solidified cast article therein, means for oscillatably swinging the finished casting-receiving device

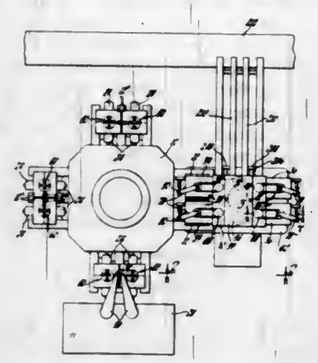


from its offset position to a position below the open ended cavitied mold and cast article therein, means for releasing and gravitationally discharging the cast article into the casting-receiving device disposed below the same, means for returning the casting-receiving device and finished casting carried thereby to the position first occupied by the casting-receiving device, and a triggering mechanism comprising a rigid bracket provided with an adjustable contact member movable with the cross head and an oscillatable extending rigid lever on the casting-receiving device, said adjustable contact member making interference contact with the oscillatable extending rigid lever on upward movement of the cross head to discharge a finished casting from the casting-receiving device.

3,049,768
APPARATUS AND PROCESS FOR CASTING PISTONS
Edgar R. Powell, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 30, 1959, Ser. No. 810,164
16 Claims. (Cl. 22—93)

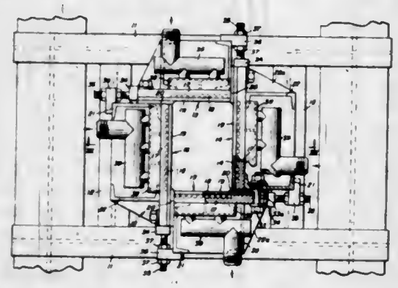
1. In a casting apparatus employing a permanent composite core, a core pulling device which includes a frame, a slide movably mounted on said frame by pivotally mounted parallel links, a core section support member relatively movable on said slide, said core section support member having a lower end to which a first section of a composite core is suitably secured, a movable support means for a second section of said composite core adjacent said support member, a second section of said composite core suitably attached to said support means, means for vertically moving said support means, and a cam member

associated with said support means for coaction with said parallel links to laterally move said first core section



toward said support means after a predetermined vertical movement of said support means.

3,049,769
ADJUSTABLE-TAPER MOLD FOR CONTINUOUS CASTING
Robert A. Schultz, Penn Hills Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed July 14, 1961, Ser. No. 124,073
5 Claims. (Cl. 22—145)



1. A mold comprising a fixed support, a plurality of wall panels extending upwardly therefrom together defining a mold cavity, one edge of each wall panel having flatwise engagement with the inner surface of an adjacent wall panel, releasable means securing the edges of adjacent wall panels together, a ball-and-socket bearing structure adjacent the lower edge of each wall panel, one part of said bearing structure being secured to its wall panel and the other part resting on said fixed support.

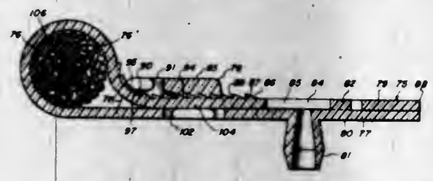
3,049,770
SAFETY CLIP
Leo Markoff-Moghadam, 2938 Newark St. NW., Washington, D.C.
Filed Oct. 4, 1961, Ser. No. 142,947
6 Claims. (Cl. 24—13)



3. In combination, a generally U-shaped clip for costume jewelry and the like comprising a pair of arms resiliently interconnected and normally in a spaced apart position, there being an elongated slot in one of said arms,

and a pin rigidly secured to said other arm, a cross-guard on said one arm at that end of the slot adjacent the free end of said pin, said cross-guard having a portion thereof extending angularly from said arm and overlying the end portion of the slot and pin, said pin having the free end portion adapted to extend through the slot in close adjacency with the cross-guard with substantially no clearance between the end of the pin and the end of the slot when said pair of arms is urged together, said pin adapted to engage fabric when the pin is extended through the slot beyond the cross-guard when the arms are brought together and the engaged fabric being drawn through the slot in said arm and over the cross-guard when the arms are released so as to lock the fabric in engagement with the clip to prevent the fabric from slipping from the clip.

3,049,771
ADJUSTABLE CLAMP
Walter J. Litwin and Joseph Eberhardt, Chicago, Ill.; said Eberhardt assignor to said Litwin
Filed Aug. 12, 1959, Ser. No. 833,206
15 Claims. (Cl. 24—16)



12. A holder including a flexible tongue and a flexible buckle associated therewith, the buckle having a pair of generally parallel longitudinal walls defining a tongue passage, the walls having the distance between them substantially equal to the height dimension of the tongue and the tongue having a width less than the width of the passage and projecting longitudinally through the passage generally parallel to the walls and providing a holding loop, one wall having longitudinally extending entrance and exit portions being more highly flexible than the other portions of the buckle and defining an aperture between said entrance and exit portions, said entrance and exit portions engaging and holding the tongue against the other wall in the relaxed position of the buckle, the tongue and buckle having teeth interengaging each other in line with the aperture in the relaxed position of the tongue and buckle, said entrance and exit portions of the one wall being temporarily deformable away from the other wall to disengage the teeth and accommodate movement of the tongue in the buckle during deflection.

3,049,772
NECKTIE CLASP
Olof V. Anderson, North Kingston, R.I., assignor to Anson, Inc., Providence, R.I., a corporation of Rhode Island
Filed Dec. 16, 1959, Ser. No. 860,005
4 Claims. (Cl. 24—49)



4. A clasp comprising a front jaw having an integrally formed U-shaped bight portion terminating in a free end, said free end underlying said front jaw a distance short of the total length of said front jaw, there being a slot in said bight portion, a back jaw, means securing said back jaw to said bight portion to form an extension of

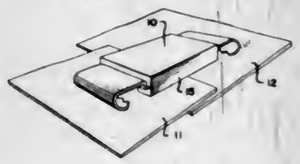
said free end for a distance substantially the total length of said front jaw, an arcuate shaped leaf spring provided with a projection on one end, and a flat seat on the opposite end, and means to secure said flat seat to said back jaw, said projection slidingly engaging said slot whereby material interposed between said front jaw and arcuate shaped leaf spring causes said projection to slide in said slot.

3,049,773
MANIPLE HOLDER
Boles Liubauskas, 15 South Ave., Du Bois, Pa.
Filed Feb. 28, 1961, Ser. No. 92,202
6 Claims. (Cl. 24—85)



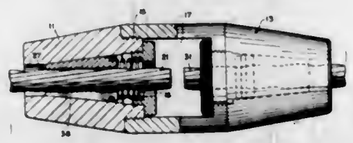
1. A maniple holder comprising a body having a primary portion having means for attaching a maniple thereto, the body also having a secondary portion offset from the primary portion having opposed projecting fingers projecting in generally opposite directions, opposed gripping members each having a slot therein and each having a gripping portion, one of the opposed projecting fingers entering the slot of one of the opposed gripping members and the other of the opposed projecting fingers entering the slot of the other of the opposed gripping members whereby the gripping members are mounted on the body, and means resiliently acting on the gripping members to urge the gripping portions thereof toward each other to grip a portion of a priest's garment to fasten the maniple to the garment, the offset relationship between the primary and secondary portions of the body providing for the gripping members to be disposed outside the edge of the maniple whereby to facilitate manipulation of the gripping members.

3,049,774
CLIPS
Alex Rhodes, 20148 McIntyre, and Solomon Charnow, 18642 Freeland, both of Detroit, Mich.
Filed Sept. 28, 1960, Ser. No. 59,085
3 Claims. (Cl. 24—87)



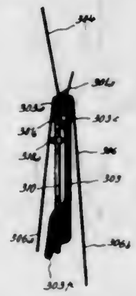
1. A clip comprising a sleeve, a pair of jaw members, and a spring means; the sleeve consisting of an elongated, rigid, flat body of uniform cross-section having a central opening extending from end to end thereof and a slot extending the length of the body and formed in one flat face thereof and opening into the central opening throughout its length; said jaw members consisting of a pair of flat, narrow, elongated, thin, rigid sheets, the two jaw members being substantially identical in size and shape and being arranged co-planar and end to end within the sleeve opening with their opposite, remote, ends extending out of the opposite ends of the sleeve, and said sleeve central opening being shaped in cross-section to correspond to the cross-sectional shape of the jaw members for closely but slidably receiving the jaw members for guiding the jaw members for sliding movement towards and away from each other in their common plane, said jaw members' opposite ends being bent back toward each other and being formed into sharp teeth for gripping into cloth; said spring means being in the form of a flat, sinuously bent, springy wire arranged in face to face contact with both of the jaw members and being completely within the sleeve central opening adjacent to said slot; and a struck-out lug formed in each of the jaw members and extending out of their common plane and fitted into said slot, the opposite ends of the spring each being connected to one of said lugs for interconnecting the two jaw members, with the spring arranged for spring urging the jaw members towards each other whereby the teeth of one jaw member may be engaged with a sheet of cloth and the other jaw member may be relatively pulled away from the first mentioned jaw member, against the spring force and engaged to the cloth for bunching the cloth together.

3,049,775
STRAND CHUCK
Elmer J. Ondeck, North Riverside, Ill., assignor to Supreme Products Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 23, 1959, Ser. No. 801,231
5 Claims. (Cl. 24—126)



1. A strand chuck comprising a sleeve having a bore defining a frusto-conical wall, a plurality of circumferentially arranged jaws mounted in said bore and correspondingly tapered so as to engage slidably with said wall, resilient means carried by said sleeve urging said jaws to the narrow end of the bore, said jaws being in engagement with one another circumferentially when disposed adjacent the narrow end of said wall, each jaw having a groove circumferentially disposed in its outer surface adjacent to the large end of said jaw aligned with each of the grooves in the other jaws, and an elastic O-ring positioned within said groove resiliently holding said jaws in circumferentially evenly spaced relationship and the grooves in alignment with one another when the jaws are moved along the bore from the narrow end to the large end of said bore by a strand inserted axially into the narrow end of the bore against the small ends of the jaws for reception within the jaws.

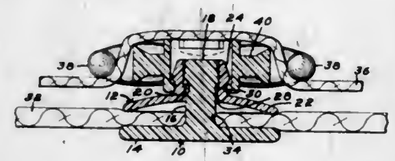
3,049,776
FASTENING DEVICES FOR RIBBONS AND THE LIKE
Jules Felix Paul Pugniet, 30 Ave. Alphand, Saint-Mande, France
Filed May 27, 1958, Ser. No. 738,183
Claims priority, application France July 8, 1953
10 Claims. (Cl. 24—170)



1. A fastening device for an article of clothing comprising, in combination, a substantially flat body member

formed from elastically deformable material and having an elongated edge face portion; retaining means having an elongated retaining portion adapted to abut against said edge face portion of said body member substantially along the entire length thereof; mounting means for mounting said retaining means on said body member for turning movement about a fixed axis transversely spaced from said elongated retaining portion into and out of a retaining position wherein said retaining portion of said retaining means abuts against said edge face portion of said body member substantially along the entire length thereof, the distance between said axis and said edge face portion being when said retaining means is turned out of its retaining position, greater than the distance between said axis and said elongated retaining portion so that when said retaining means is turned about said axis to said retaining position, the portion of the body member between said axis and said edge face portion will be compressed and the edge face resiliently pressed against said elongated retaining portion, whereby at least one ribbon or the like may be clamped between said portions when said retaining means is in its retaining position; and button means carried by said body member at a point distant from said mounting means, said body member serving also as the button mount of a stocking suspender.

3,049,777
TWO-PIECE PLASTIC STUD
Leon F. Lewin, Wollaston, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Nov. 4, 1960, Ser. No. 67,207
3 Claims. (Cl. 24—213)



3. The combination of a snap fastener stud unit and a support, said snap fastener stud comprising a post element and a receptacle element, said post element comprising a base flange and a rod element, said rod element in angular relation with said base flange, extending away from said base flange and having an abrupt external shoulder circumscribing a portion of said rod element, said snap fastener stud receptacle element comprising an apertured flange portion and a tubular stud portion extending away from said apertured flange portion, said stud portion having an internal continuous abrupt shoulder formed therein for cooperative engagement with said external shoulder of said rod element, said support being interposed in gripping relationship between said apertured flange portion and said base flange portion on engagement of said post and receptacle elements.

3,049,778
RATCHET BUCKLE
Ethan Weckesser, 5701 Northwest Highway, Chicago 46, Ill.
Filed Apr. 19, 1960, Ser. No. 23,181
1 Claim. (Cl. 24—180)



A buckle for latching a perforated strap including a rectangularly shaped body having a longitudinally extend-

ing passage formed therethrough, a base for said body providing a longitudinally extending closed bottom wall for said passage, a transversely extending strap-latching ratchet pin carried by said base and intersecting said passage, said body including a top wall providing a rectangularly shaped opening having communication with said passage and through which said perforated strap is looped so as to pass over said strap-latching pin when said strap is inserted in one direction through said passage, said base providing a resilient support for said strap-latching pin so that said support may be moved out of the longitudinal plane with respect to said body and said pin out of strap latching position within said passage when said strap is moved in an opposite direction through said passage, said strap-latching ratchet pin having its free end formed to provide a cam surface for engagement by said perforated strap when it is moved in an opposite direction through said passage for camming said strap-latching ratchet pin and its resilient support out of strap-latching position.

3,049,779
SEPARABLE FASTENER
Steven Ausnit, 124 E. 61st St., New York, N.Y.
Filed May 27, 1960, Ser. No. 32,278
7 Claims. (Cl. 24—201)

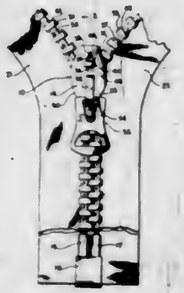


1. A fastener structure including a pair of flexible strips which are disposed in parallel planes with respect to one another when in assembly, said strips having inclined webs which are disposed in parallel relation with respect to one another and which are of such length that they extend beyond the plane of at least one of said strips so as to resist the direction of pull exerted through said strips, angular linking portions on each of said strips with each of said angular linking portions joining one of said strips and webs in assembly together, each of the angular linking portions extending away from the strip to which it is attached and across and beyond the plane of the other of the strips when the strips are in assembly so that the junction of the angular linking portion is beyond the plane of the other of the strips so as to further resist the direction of pull exerted through said strips, and a series of hook-like projections having rib and hook portions and a series of hook-like grooves on each of said webs, the hook-like projections on the web of one of said strips being engageable in the grooves on the web of the other strip and vice versa to sustain the strips in assembly together, each of said webs facing toward its respective strip with the rib portion extending toward the strip opposing a longitudinal pull on the strips away from said web.

3,049,780
RELEASE LOCK FOR SLIDE FASTENERS
Louis M. Llorens, 114—47 Lefferts Blvd., Ozone Park, N.Y.
Filed Aug. 29, 1960, Ser. No. 52,503
2 Claims. (Cl. 24—205.15)

1. A slider for a slide fastener including a pair of elongated stringers having beaded edges with spaced interfitting teeth secured to the beaded edges, said slider comprising a base plate, said plate having a central portion with parallel edges, a forward portion with tapering edges terminating in a forwardly extending rectangular lug, and a tapered rear portion formed with upstanding edges defining a channel therebtween; a post secured to said plate

and having an axially extending tip, a locking head rotatably mounted on the plate adjacent to said post, said head including a cylindrical member having an axial length substantially equal in length to said post, a shank extending axially of said member, and a locking bar extending transversely of said shank; a cover plate having a central portion with parallel edges, a forward portion with tapering edges terminating in a depending wall provided with a recess receiving said lug, and a tapered rear



portion formed with depending ridges defining another channel therebetween, said cover plate having a hole receiving said tip and a rectangular slot, said shank being disposed in the plane of the cover plate in said slot, said head being rotatable to dispose said locking bar transversely of said slot for locking the cover plate on the base plate, said head being further rotatable to dispose said locking bar longitudinally of said slot for unlocking the cover and base plates whereby said cover and base plates may be separated.

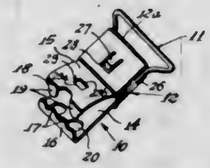
3,049,781
FASTENING DEVICE
Clarence W. Cochran, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 6, 1960, Ser. No. 822
1 Claim. (Cl. 24—213)



A fastener device formed as a single piece of flexible molded plastic, said fastener device having a horizontally single unitary flat base portion and a pair of opposed regular, smooth surface peg like attaching legs extending from an undersurface of said base portion in spaced, symmetrical relation and having their axes in angled directions relative to each other and providing the only means for attaching the fastener device to a support, the free ends of said legs spaced closer together than the distances between the legs where they join the base portion and said free ends being adapted to move away from each other to allow the legs to enter apertures in a support spaced the same distance as the legs where they join the base portion.

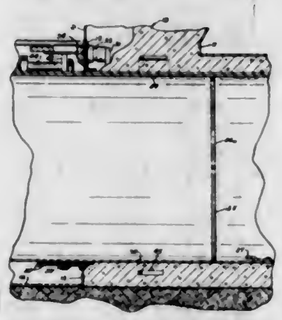
3,049,782
CLIP
Gabriel S. Hawie, Bridgeport, Conn., assignor to The Hawie Manufacturing Company, Bridgeport, Conn., a corporation of Connecticut
Filed Apr. 6, 1961, Ser. No. 101,255
2 Claims. (Cl. 24—260)

1. A clip comprising a resilient member having a transverse bend intermediate the ends thereof to provide upper and lower gripping jaws, one of said jaws extending beyond the other and both of said jaws having gripping portions at the ends thereof, the longer jaw having apertures therein adjacent the gripping portion thereof and the gripping portion of the shorter jaw having cooperating teeth extending into said apertures in gripping position, an attaching loop secured in the bend at the rear of the jaws and projecting rearwardly from said bend and having a wide tape-receiving portion, said jaws being normally urged to a position in which the gripping portions are in spaced relation to receive an article to be gripped thereby, a sleeve slidable on the jaws and having



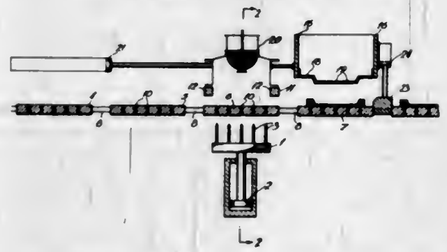
a length to substantially cover the jaws when moved from a retracted position to a forward gripping position in which the sleeve moves the gripping portions into gripping relation with the article, said sleeve having side notches at the rear for receiving the wide tape-receiving portion of the attaching loop, when the sleeve is moved to retracted position to overlie the end of the attaching loop connected to the jaw, whereby said sleeve is moved substantially off the jaws to permit a wider opening of the jaws, and a cooperating tongue and aperture means on the sleeve and at least one of the jaws for limiting the forward movement of the sleeve in gripping position.

3,049,783
CONSOLIDATOR FOR MONOLITH CONCRETE PIPE LAYING MACHINES
Raymond A. Hanson, Palouse, Wash., assignor to The First National Bank, Pullman, Wash.
Filed Oct. 30, 1959, Ser. No. 849,877
8 Claims. (Cl. 25—32)



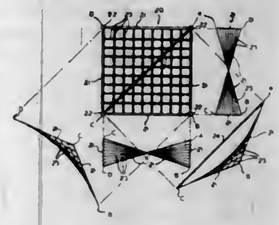
1. In an apparatus for producing pipe from cementitious material that solidifies upon standing in a trench having a bottom wall and side walls formed to directly receive the cementitious material, which apparatus comprises a shoe member having a bottom portion adapted to travel along the trench bottom and side walls, a hopper coupled to the shoe member to move therewith having a front bulkhead wall provided with an opening through which inner conduit form means may be extended from said shoe, inner form means, and a top conduit shaping outer form affixed to the hopper, the improvement comprising a circumferential material consolidating ring having a consolidating means thereon spaced radially about the inner form means rearwardly of the bulkhead wall and movably supported by the bulkhead wall, oscillating drive means in said shoe operatively connected to said consolidating ring, said oscillating drive means being operable to oscillate the consolidating ring within the space around the inner form between it and the trench surfaces and between the inner form and the top outer form.

3,049,784
MACHINE FOR THE MANUFACTURE OF MOULDED PERFORATED ARTICLES
Frank Sansom Cullen, North Balwyn, Victoria, Australia, assignor to Insulwool Products Proprietary Limited, Melbourne, Victoria, Australia, a company of Victoria
Filed Mar. 8, 1960, Ser. No. 13,598
2 Claims. (Cl. 25—42)



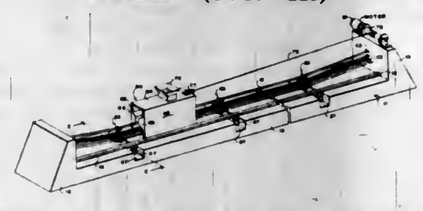
1. Apparatus for the manufacture of moulded perforated articles comprising a main frame, a horizontally disposed base plate mounted for vertical reciprocating movement on said main frame and being provided with a plurality of upwardly projecting pins, first thrust means to effect vertical movement of said base plate, stripper plate guide means extending transversely over said base plate, a chain of interconnected stripper plates intermittently movable one behind the other on said guide means and successively coming to rest in registered position over said base plate, and each of said stripper plates being provided with apertures to receive the pins on said base plate, links connecting said stripper plates together and permitting relative vertical movement between adjacent stripper plates, and said guide means permitting vertical movement of the stripper plate overlying said base plate, a restraint frame overlying said stripper plates and mounted for horizontal reciprocal movement on said main frame along the line of movement of said stripper plates, an upper plate provided with apertures to receive said base plate pins and overlying said stripper plates and supported by and movable with said restraint frame, filling means mounted on and movable with said restraint frame over said stripper plates, said filling means being adjacent the upper plate, second thrust means connected to said restraint frame, for reciprocating said restraint frame horizontally to alternately bring said upper plate and said filling means into position over said base plate, means carried by said restraint frame and contacting the stripper plate and operable to lock said chain of stripper plates to said restraint frame to effect corresponding movement of said chain on movement of the restraint frame in one direction to advance a stripper plate into position between said base plate and said filling means, said locking means being operable to release said chain of stripper plates to enable said restraint frame to move in the other direction without horizontal movement of said chain, a flask located above said base plate in position between said chain of stripper plates and said filling means and upper plate, means supporting said flask for vertical reciprocal movement along the line of movement of said base plate, said flask seating on a stripper plate located over said base plate to form with such stripper plate a mould to receive material when said base plate is raised by said first thrust means, said filling means being operable to discharge material to be moulded in the mould formed by said flash and associated stripper plate in the raised condition of said base plate, said locking means being operable after the discharge of such material into such mould to enable said second thrust means to move said restraint frame in said other direction to move said upper plate into position over the material discharged into the mould formed by said flask and the associated stripper and without moving the latter horizontally from its position over said base plate, said first thrust means being then operable to raise said base plate to mould the material between such associated stripper plate, said flask and said upper plate, and thereafter to lower said base plate to withdraw the pins thereof from the moulded article and the moulded article from the flask, leaving the article on the associated stripper plate.

3,049,785
APPARATUS FOR MAKING HYPERBOLIC-PARABOLOIDAL THIN SHELL BUILDING UNITS
Paul S. Chiado and John A. Sbarounis, Chicago, Ill.
Filed Feb. 13, 1957, Ser. No. 640,022
4 Claims. (Cl. 25—118)



1. In apparatus for making hyperbolic-paraboloidal thin shell building units, a quadrangular frame comprising substantially rigid side frame bars relatively oriented with their respective ends in adjacency, articulated connecting means by which the ends of said side frame bars are attached in angular adjustable relation whereby the bars are adjustable to place two opposite corners in an elevated relation to the remaining two opposite corners throughout a substantial range, flexible strands connected in substantially straight respective lines between two of the bars and flexible strands connected in substantially straight respective lines between the remaining pair of bars, means for placing the strands under tension after the corners have been relatively disposed with two of the corners elevated and two of the corners depressed, whereby to form a hyperbolic-paraboloidal supporting plane upon the strands, a compression strut and means connecting the ends of the compression strut to the elevated corners whereby the strut retains such corners in position under the tension of the strands, and underlayment supported conformably to said supporting plane provided by the strands and supportive of material to be molded into a hyperbolic-paraboloidal form thereupon.

3,049,786
APPARATUS FOR MAKING PRESTRESSED STRUCTURAL MEMBERS
Cordis W. Jones, Wichita, Kans.
(5142 W. Nevada Place, Denver 19, Colo.)
Filed May 28, 1958, Ser. No. 738,564
4 Claims. (Cl. 25—118)

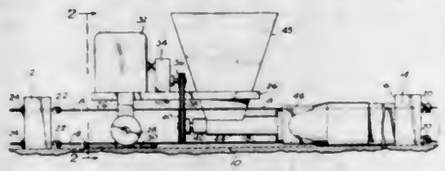


1. Apparatus for making pre-stressed concrete structural beam members having pre-tensioned metal elongated

reinforcing members substantially longitudinal therein and under great tension, comprising, in combination, an elongated and relatively smooth and flat base, a plurality of transversely extendng recesses in said base, end members rigidly secured to said base in mirror image relation with one of said end members at each of the end portions of said base, spaced and substantially parallel guide means secured to said base and extending longitudinally substantially the length thereof, each of said end members having means constructed to anchor end portions of a plurality of said reinforcing members stretched therebetween under great tension and in vertical and horizontal spaced relation, anchoring means, each of said recesses in said base having one of said anchoring means therein, each of said anchoring means including upwardly projecting bolt means, a plurality of permanently embedable deflecting assemblies, each of said assemblies including spaced vertical members and spaced horizontal members rigidly secured to said vertical members with each of said horizontal members constructed and positioned when said assemblies are mounted to receive and hold thereunder in deflected condition a plurality of spaced reinforcing members under tension to be embedded with said assemblies in concrete beams produced, a plurality of channel-shaped members, each of said deflecting assemblies having said vertical members thereof removably secured to said channel-shaped members and projecting upwardly therefrom, each of said transverse recesses in said base receiving one of said channel-shaped members therein with said deflecting assemblies thereon projecting upwardly therefrom and with said channel-shaped members being vertically adjustably mounted on said bolt means of said anchoring means to vertically adjust said deflecting assemblies, mold means comprising a mold member having sides, a top and a passageway therethrough and open in the end and bottom portions and slidably mountable on said base to move therealong in guided relation to said guide means, said base forming the bottom of a mold in operation, said mold member having a hopper in the top to introduce concrete thereinto, constructed on its inside to shape concrete therein in setting to a concrete member of a desired shape and to receive through said passageway said plurality of reinforcing members when stretched between said end members and to receive said deflecting assemblies, winch means mountable on one of said end members and having a cable therewith with said cable being attached to said mold member to move same substantially the length of said base during the molding process, said apparatus adapted when said plurality of reinforcing members are stretched and under pressure between said end members, deflected in contact with said deflecting assembly and passing through said mold member passageway to make a pre-stressed concrete member having said reinforcing members therein and having said deflecting assemblies therein by moving said mold member along said base and introducing concrete thereinto through said hopper means.

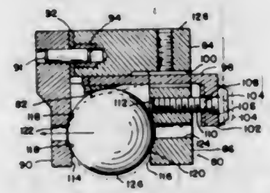
3,049,787
APPARATUS FOR EXTRUDING PRESTRESSED CONCRETE PRODUCTS
Ralph Hannan, Jr., 4741 NE. Davis St., and Henry Hannan, 3525 NE. Going St., both of Portland, Oreg.
Filed Apr. 6, 1959, Ser. No. 804,206
1 Claim. (Cl. 25—118)

Apparatus for forming prestressed elongated concrete articles comprising in combination a horizontal elongated casting bed, elongated track means substantially parallel to the bed, a vehicle, wheel means on the leading end of the vehicle engaging the track means for movably supporting and guiding the leading portion of the vehicle on the track means, extrusion means, a hollow mold on the trailing end of the vehicle communicating with the extrusion means for receiving and forming extruded concrete in a continuous elongated shape upon longitudinal movement of the vehicle, the mold having elongated cable guide means extending therethrough into the hollow thereof and longitudinally of the vehicle, a cable snugly but slidably confined in the guide means and extending through the hollow of the mold, stationary anchor means spaced apart at opposite ends of the casting



bed, and tensioning means on the anchor means releasably securing the cable at its opposite ends in tensioned condition between the stationary anchor means, said cable serving as a guide for the trailing end of the vehicle in the longitudinal extruding movement of the latter and forming reinforcing means for the extruded concrete articles said guide means being so located that said cable is clear of the extruding unit.

3,049,788
METHOD AND APPARATUS FOR FINISHING SURFACES
Eric Martin, Dearborn, Mich., assignor to Omega Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Feb. 26, 1960, Ser. No. 11,369
3 Claims. (Cl. 29—90)

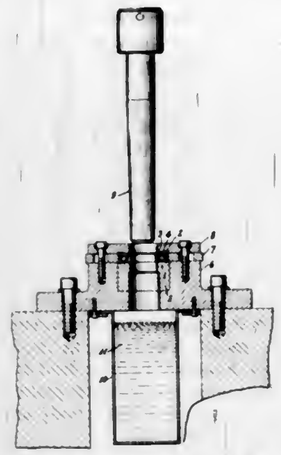


1. A burnishing tool comprising a housing having a base and a pair of spaced flanges connected to and defining with said base a ball receiving opening, an accurately finished spherical ball mounted in said opening for rotary movement in a vertical plane which is perpendicular to said flanges, said ball projecting beyond said flanges for engagement with a surface to be finished, a groove in the bottom wall of said base parallel to the aforesaid vertical plane, an element movable in said groove and having a portion which is tapered in engagement with said ball when said tool is in operation, and means for moving said element in said groove to regulate the depth of said ball in said housing when said tool is in operation.

3,049,789
METHOD OF MAKING BEARINGS
Lewis R. Helm, Fairfield, Conn., assignor, by mesne assignments, to Universal Bearing Corporation, Fairfield, Conn., a corporation of Delaware
Filed Oct. 6, 1959, Ser. No. 844,739
1 Claim. (Cl. 29—148.4)

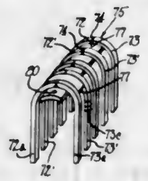
A method of sequentially manufacturing telescoped antifriction bearings comprising assembling an undersized inner member within an outer member with a full complement of rolling elements between the members, passing a tapered punch coated with lubricant through the inner member to expand the inner member to interlock the inner and outer members through the rolling

elements and to lubricate the members and elements and simultaneously immersing the end of said tapered punch



into a reservoir of liquid lubricant whereby said punch is cooled and lubricated for a subsequent similar operation.

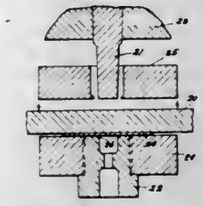
3,049,790
MAGNETIC HEAD AND METHOD OF MAKING SAME
Marvin Camras, Chicago, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
Filed June 3, 1954, Ser. No. 434,281
15 Claims. (Cl. 29—155.5)



13. The method of making a magnetic head which comprises securing a pair of strips of flat planar magnetic material to a non-magnetic member with end portions of the strip disposed in closely spaced relation and the non-magnetic member spanning therebetween, bending the strips about said non-magnetic member to extend on opposite sides of the member in spaced parallel relation, thereafter annealing said structure, and assembling said core structure with cooperating core parts to define a closed magnetic circuit with a winding linking said circuit.

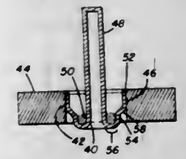
3,049,791
METHOD FOR CLADDING AN EXTRUDED STUD
Norman Shackman, Oak Park, Mich., assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1956, Ser. No. 614,956
1 Claim. (Cl. 29—155.55)

A method of forming a stud in a body by utilizing a die and a punch with said die having an opening with a rounded edge and said punch being aligned with said opening and having a larger diameter than the inner diameter of the opening; said method comprising the steps of placing the body between said punch and said die external of said opening; inserting a sheet of cladding material of larger size than said opening between said body and said die and entirely external of said opening; effecting relative motion of said die and said punch toward one another prior to securement of said cladding material to said body thereby forcing material of said body past said rounded



edge into said opening whereby a stud is formed with cladding material along the side of the stud and metallurgically clad to at least a portion of said stud external surface.

3,049,792
METHOD OF MAKING INSULATED TERMINALS OF THE RECEPTACLE TYPE
Walter H. Kohl, Los Altos, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application Oct. 11, 1955, Ser. No. 539,950. Divided and this application June 24, 1958, Ser. No. 744,298
3 Claims. (Cl. 29—155.55)



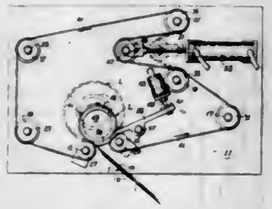
1. The method of making an insulated terminal assembly, for use in a vacuum tube or the like having a metal wall with an opening therethrough, which comprises the steps of inserting in said opening in said wall a relatively thin metal cup having an outer surface shaped to fit within said opening and having an inner re-entrant thimble portion extending upward from the base of said cup, said cup having a supply of glass therein adjacent said thimble; retaining said glass in said cup with the free surface of said glass in contact with the interior of said vacuum tube by virtue of said cup being concave upward towards the interior of said vacuum tube, whereby said vacuum tube can be brazed at a temperature exceeding the melting point of glass while still so retaining said glass in position in said cup; brazing said cup to said wall within said opening, the heat of said brazing operation melting said glass to form a sleeve of glass around the base of said thimble; allowing said glass to cool, forming a bond to the exterior of said thimble and the interior of the outer wall of said cup; and removing the metal joining said thimble to the main body of said cup to leave said thimble insulated from said cup by said glass; the length of said cup being so proportioned relative to the amount of glass that there remains an intermediate portion of said cup between the portion thereof brazed to said wall and the portion thereof in contact with said glass.

3,049,793
MANUFACTURE OF MAGNETIC CORES
Alfred S. Cooper, Toronto, Ontario, Canada, assignor to Moloney Electric Company, St. Louis, Mo., a corporation of Delaware
Filed Sept. 20, 1957, Ser. No. 685,170
2 Claims. (Cl. 29—155.57)

2. The method of making a magnetic core comprising forming a plurality of packets of segments of magnetic strip material, each packet consisting of a plurality

of strip segments with successive strip segments differing in length by the factor $2\pi T$ where T is the strip thickness, the first strip segment of a first packet having a length corresponding to the inside circumference of the core to be formed, the first strip segment of each successive packet differing in length from the last strip segment of the preceding packet by the factor $2\pi T$;

coiling said first packet around a rotating core form having a circumference corresponding to the inside circumference of the core to be formed, with the first strip segment of the first packet on the inside, while confining the packet against springing out, thereby forming said packet into a ring with each strip segment of the first packet extending substantially a full turn around the ring and with the two



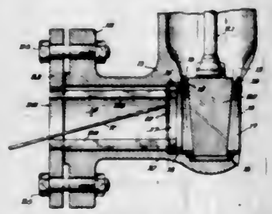
ends of each strip segment in the first packet substantially in butt joint relation with one another,

then coiling a second packet around the first packet, the latter rotating with the core form, with the first strip segment of the second packet on the inside, while confining the second packet against springing out, thereby forming said second packet into a ring surrounding the first packet with each strip segment of the second packet extending substantially a full turn around the ring and with the two ends of each strip segment in the second packet substantially in butt joint relation with one another,

continuing in this fashion until a number of packets sufficient to form a core of the desired build have been coiled one around another,

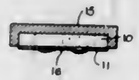
and applying means to the outside of the resultant core to retain the coiled strip segments thereof in assembled relation.

3,049,794
METHOD OF TESTING AND APPLYING VALVE SEAT RINGS
Kurt B. Bredtschneider, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Sept. 30, 1957, Ser. No. 687,131
11 Claims. (Cl. 29—157.1)



1. A method of pretesting the seat rings and disk of a wedge gate valve, comprising positioning a pair of opposed seat rings in a valve body with a wedge disk therebetween, adjusting said rings into full surface contact with the disk seating surfaces, pressing the disk between the rings to obtain tight joints between the contacting surfaces, subjecting said joints to fluid under pressure to test for leakage therethrough while preventing leakage past the rings otherwise, and upon indication of satisfactory leakage characteristics of the joints securing the rings in the body in the test position.

3,049,795
GAS PERMEABLE BODY
Emery I. Valyi, New York, N.Y.
(% A.R.D. Corporation, 20 S. Broadway, Yonkers, N.Y.)
Filed May 2, 1958, Ser. No. 732,663
20 Claims. (Cl. 29—182.3)



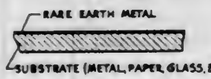
19. A compound metal structure comprising a porous sintered metal body bonded to an impervious metal body, said impervious metal body being in the state of having been inelastically deformed to form fluid passages between said bodies along a predetermined pattern bounded on one side by said impervious metal body and on the other side by said porous metal body.

3,049,796
PERFORATE METAL SHEETS
David B. Pall, Roslyn Heights, N.Y., assignor, by mesne assignments, to Pall Corporation, a corporation of New York
Filed July 12, 1957, Ser. No. 671,586
14 Claims. (Cl. 29—183.5)



1. Fluid-permeable metallic sheet material comprising a continuous homogeneous integral network having a pore system substantially corresponding to a wire mesh fabric, comprising interwoven metallic warp and weft filaments in contact with each other warp to weft and weft to weft and defining therebetween a regular system of pore openings of substantially uniform diameter of less than about 0.075 inch, the filaments being deformed at their points of contact so as to have a lesser height and a greater width at those points to form enlarged portions extending laterally in the plane of the sheet, and being homogeneously and uniformly united by interdiffusion of solid metal from adjacent filaments at said points and enlarged portions throughout the network to form a continuous homogeneous integral piece of metal.

3,049,797
GAS PLATING CERIUM
Folsom E. Drummond, Washington, D.C., assignor to Union Carbide Corporation, New York, N.Y.
Filed Jan. 22, 1959, Ser. No. 788,326
2 Claims. (Cl. 29—194)



1. A method of gas plating cerium metal on a metal substrate surface and which consists in establishing said substrate surface to be gas plated with cerium in a chamber, circulating through said chamber a mixture of argon and vapors of cerium acetylacetonate, maintaining a subatmospheric pressure of 1 mm. Hg, and concurrently heating the metal substrate to be plated to a temperature of approximately 550° C. to cause thermal decomposition of the cerium acetylacetonate and deposition of cerium metal on the heated substrate metal surface.

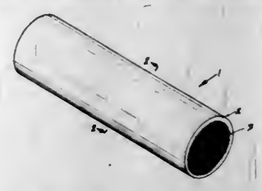
3,049,798
BRAKE SHOE TOOL
Albert P. Denis, Springfield, Mass.; Marguerite D. Sullivan, administratrix of said Albert P. Denis, deceased, assignor of one-fourth to Marguerite D. Sullivan, one-fourth to Dorothy D. Coleman, both of Springfield, one-fourth to Mary B. Denis, Holyoke, and one-fourth to Robert B. Denis, Longmeadow, Mass.
Filed Apr. 6, 1959, Ser. No. 804,351
1 Claim. (Cl. 29—227)



A plier type tool for holding, in coaxial assembly, a cylindrical cap and a cylindrical coiled spring of smaller diameter than the cap, for application and removal of the assembly as a unit to and from the stud on which a brake shoe is mounted, the work engaging jaws of said tool comprising opposed members substantially spaced from each other when in work engaging position, the work engaging faces of the jaws being each provided, adjacent the free end portions of the jaw, with channels, in the form of annular segments extending transversely of the jaws, to receive, and make gripping spanner engagement with opposed segmental portions of the cap member of the cap and spring assembly for the application of torque to the cap, the inner side walls of the channels extending engageably over the top of the cap member and thereby providing means whereby axial pressure may be applied to the cap inwardly of its periphery by manipulation of the tool, both before and after maximum closure of the jaws on said cap member, the free end portions of the jaws being formed with transversely arcuate surfaces positioned to engage and grip the spring member of the assembly to hold the cap and spring in assembled relation against the inner side walls of the channels when the latter are in spring compressing engagement with the cap member.

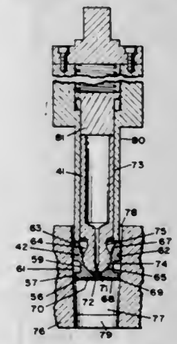
3,049,799
METHOD OF GAS PLATING
Elmer Robert Breining and John R. Whitacre, Dayton, Ohio, assignors, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York
Filed July 28, 1958, Ser. No. 751,395
4 Claims. (Cl. 29—420)

1. The process which comprises providing a body of loosely packed contacting fragments within a container such that the body takes the shape of said container and the fragments define interstices between themselves, said fragments being hollow, spherulitized and of low heat conductivity, heating the container to thereby transmit heat to the fragments, permeating the body with a heat decomposable metal bearing gas whereby metal deposits from the gas initially at a greater rate on the wall portion of the container than in the body of the fragments to cause further heating of the fragments through the deposited metal, continuing the permeation of the body



with the gas to provide a network of deposited metal throughout the body thereby binding the fragments by said deposited metal and inclosing spacings between the fragments, and thereafter removing the container from the metallized body of fragments.

3,049,800
METHOD OF CONNECTING A PISTON SHOE PERMANENTLY TO A PISTON
Darby B. Neff, Worthington, and John F. Dykes, Columbus, Ohio, assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Original application May 9, 1957, Ser. No. 658,165. Divided and this application Apr. 30, 1958, Ser. No. 731,958
4 Claims. (Cl. 29—441)

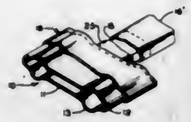


1. The method of permanently attaching a piston shoe of a fluid pressure energy translating device to a piston thereof for universal movement with respect to the latter through a ball and socket joint including the steps of forming a piston shoe to include a shrinkable skirt portion surrounding a ball socket; forming a piston to include a ball end upon which said shoe is to be mounted; inserting the ball end of said piston in said socket; applying pushing force directly to the end of said skirt portion to force said shoe through the tapered bore of a shrinking die to shrink said skirt portion around said ball end while holdings said ball end in said socket; reducing the outside diameter of said skirt portion; and rolling said skirt portion to loosen the connection produced by said shrinking operation, said shoe thereby being connected to said ball end so that the center of gravity of the shoe coincides with the geometrical center of the ball end.

3,049,801
METHOD OF ASSEMBLING FLEXIBLE INSULATORS ON BUS BARS
Charles R. Workman, Findlay, Ohio, assignor to Cooper Tire and Rubber Company, Findlay, Ohio, a corporation of Delaware
Filed Jan. 16, 1961, Ser. No. 83,049
3 Claims. (Cl. 29—450)

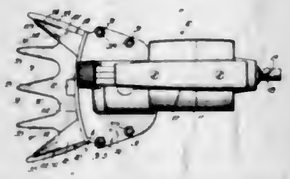
1. A method of assembling a stretchable insulator on a relatively long bus bar in an enclosure; said method

comprising the steps of expanding the insulator into contact with the inner walls of the enclosure, inserting a bus bar through the insulator and enclosure, contracting the insulator into contact with the bus bar, attaching



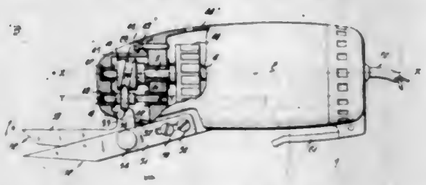
one end of another insulator to one end of the bus bar, and moving the bus bar through the enclosure in a direction away from the end having the second insulator attached thereto to move the second insulator into the enclosure.

3,049,802
SHRUB AND GARDEN SHEAR
Hugo W. Bork, Chicago, Ill., assignor to Skil Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 25, 1960, Ser. No. 71,540
7 Claims. (Cl. 30—197)



7. A shrub and garden shear comprising, in combination, a fixed blade member having a plurality of finger-like teeth with sharpened side edges, a pair of cutting blades having generally co-planar pointed ends with sharpened side edges overlying the teeth of said fixed blade member in sliding engagement therewith, means mounting the opposite ends of said cutting blades on said fixed blade member inwardly of said teeth for pivoting movement about separate spaced apart axes of rotation, and drive means for simultaneously oscillating said pair of cutting blades toward and away from each other generally transversely of said teeth of said fixed blade member between widely spaced apart and closely adjacent but non-abutting positions whereby to provide a shear-like cutting action, said pointed end of each of said pair of cutting blades being provided with a deflection toward said fixed blade member whereby to substantially improve the shearing action and render the shear self-sharpening.

3,049,803
MOTION TRANSFORMING DEVICE AND APPARATUS INCORPORATING SAID DEVICE
Roger Danger, Paris, France, assignor, by mesne assignments, of fifty percent to Inventions Finance Corporation, a corporation of Delaware
Filed Jan. 28, 1959, Ser. No. 789,689
Claims priority, application France Jan. 31, 1958
18 Claims. (Cl. 30—228)



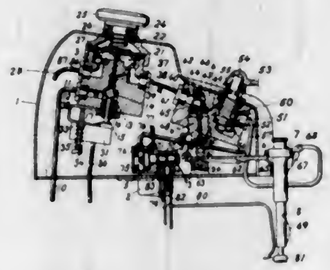
1. A power operated scissors of the type including a support, a source of rotary motion connected to a rotary driving member mounted on said support, a first cutting blade, and a second oscillatory cutting blade, an oscillatory driven member mounted in bearings on said support for linear reciprocating motion, a first connecting means mounted on said rotary driving member, and a second connecting means mounted on said driven member and engaging both said first connecting means and said oscillatory cutting blade, whereby rotation of the rotary driving member causes oscillation of said oscillatory cutting blade.

3,049,804
METHOD AND APPARATUS FOR SHAPING AND SIZING DENTURES
Clawson N. Skinner, 2108 Elray Drive, Whittier, Calif.
Filed Feb. 24, 1959, Ser. No. 794,999
11 Claims. (Cl. 32—1)



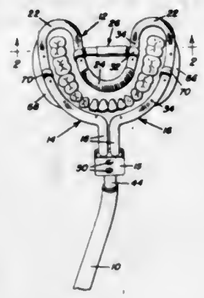
1. That improvement in the formation of individual dentures to shape and size which comprises directly forming a frontal image of the patient's face on sheet material to a scale approximately one-sixteenth the dimensions of the subject and utilizing the outline shape of the facial image so obtained to and including the forehead to approximately the base of the normal hair line to determine the size and frontal shape of replacement maxillary incisor dentures for that patient.

3,049,805
DENTAL APPARATUS
Kurt Herman Liedberg, Skara, and Stig Rune Zernell, Johanneshov, Sweden, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed Sept. 24, 1957, Ser. No. 685,921
3 Claims. (Cl. 32—22)



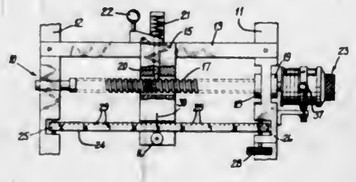
1. A dental apparatus comprising a casing, a dental engine holder movably mounted in said casing and formed to receive a dental engine, a pressure fluid supply means in said casing, a dental engine comprising a hand-piece and a pressure fluid operated motor, said dental engine being received in said holder when in inoperative position, a control valve connected to said fluid supply means, a conduit connecting said valve and said motor, and means providing an operative connection between said valve and said holder for operating said valve upon movement of said holder as the result of removing said dental engine from said holder for admitting pressure fluid to said dental engine.

3,049,806
MULTIPLE SALIVA EJECTOR
Rafael Cofresi, Ave. Palma 911, Santurce, Puerto Rico
Filed Oct. 9, 1959, Ser. No. 845,429
6 Claims. (Cl. 32—33)



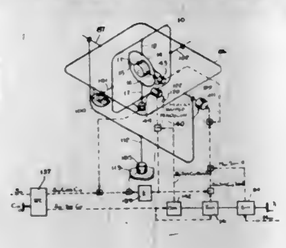
1. A dental saliva ejector comprising an ejector head comprising a tubular member having its ends disposed in side-by-side relation, a connector detachably secured to said ends and retaining them in fixed position and establishing communication between a suction conduit and said tubular member, said tubular member being curved between its ends to provide a frame enclosing a set of teeth and having inlet orifices opening to both sides of a set of teeth and educting saliva accumulating on both sides of said set of teeth, an adjustable brace secured to said tubular member and rigidifying the latter and constituting a tongue depressor.

3,049,807
CALIBRATED POSITIONING DEVICE
Gerard Gaston Frans Smeets, Brampton, Ontario, Canada, assignors to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Aug. 25, 1958, Ser. No. 756,975
5 Claims. (Cl. 33—189)



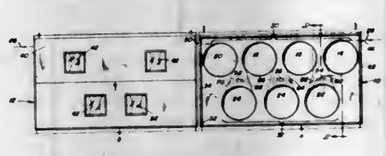
1. In a positioning device adapted to displace a first member with respect to a second member, and having a lead screw member adapted on rotation thereof to effect movement of the first member with respect to the second member, the improvement of means adapted to angularly rotate the lead screw a predetermined amount, said means comprising: a knob body corotatably secured to the lead screw for rotation thereof; a first collar fitted for rotation about said knob body; at least one series of angularly spaced indicia defining a calibrated scale related to the relative displacement between said members and located on said collar; a series of circularly arranged teeth disposed in uniformly spaced relation on said knob body; a second collar fitted about said knob body adjacent to said teeth for relative rotation with respect to said knob body; means carried by the second member and engaging said second collar in a manner so as to preclude rotation thereof when said knob body is rotated, said means being releasably engageable with said teeth to lock the angular position of said knob body and said lead screw; and reference means secured to said second collar and adapted to cooperate with said indicia for indicating relative displacement between the members.

3,049,808
GYRO COMPASS
Richard Y. Miner, Port Washington, Charles T. Davenport, Manhasset, and Frederick J. Kreitner, Roslyn Heights, N.Y., assignors to American Bosch Arma Corporation, a corporation of New York
Filed May 28, 1959, Ser. No. 816,411
5 Claims. (Cl. 33—226)



4. In a gyro compass for aircraft, pendulum means for controlling said gyro compass including a pendulum, means for heavily damping said pendulum and means for disconnecting said pendulum from control of said gyro compass under sustained acceleration, and means for delaying reconnection of said pendulum upon cessation of said sustained acceleration.

3,049,809
METHOD OF DRYING FILAMENTARY MATERIAL
William N. Sellers, Pensacola, Fla., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Original application Feb. 13, 1956, Ser. No. 565,003, now Patent No. 2,931,107, dated Apr. 5, 1960. Divided and this application Sept. 18, 1959, Ser. No. 840,979
11 Claims. (Cl. 34—18)

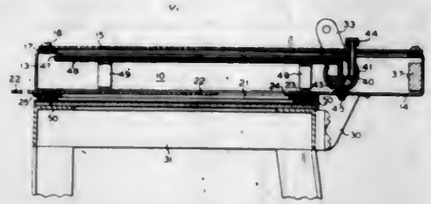


1. A method of continuously drying continuous, unfabricated, wet-spun, gelled, filamentary material in untensioned state comprised of a polymer of acrylonitrile, said method comprising continuously passing said filamentary material alternately over and under heated, cylindrical surfaces arranged in series in a heat-insulated housing so as to provide an undulating path of travel for said filamentary material, the temperature of the said cylindrical surfaces being within the range of 220° F. (dry-bulb) to 400° F. (dry-bulb); directing high velocity humid air of controlled moisture content against the said filamentary material; and maintaining the humid air in the said heat-insulated housing at an average dry-bulb temperature of from about 10° F. to 40° F. below the temperature of the said cylindrical surfaces.

3,049,810
XEROGRAPHIC FUSING APPARATUS
Ub Iwerks, Van Nuys, Calif., assignor to Xerox Corporation, a corporation of New York
Filed July 29, 1957, Ser. No. 674,777
10 Claims. (Cl. 34—151)

1. An apparatus for fixing resin base powder images on support surfaces including the combination of a vapor chamber having integrally connected top and side walls and a removable bottom wall, means for forming an atmosphere of vapor of a resin solvent within the cham-

ber, and a peripheral gasket member secured to the bottom of the vapor chamber for forming a substantially



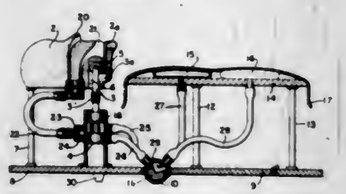
vapor-tight seal between the vapor chamber and a support surface.

3,049,811

ARTIFICIAL HUMAN BODY FORM FOR DEMONSTRATING REVIVING OF UNCONSCIOUS PERSONS

Henning Ruben, Kopenhamn-Lyngby, Denmark, assignor to Holger Hesse, Lyngby, Denmark

Filed Nov. 9, 1959, Ser. No. 851,868
Claims priority, application Germany Nov. 10, 1958
13 Claims. (Cl. 35—17)



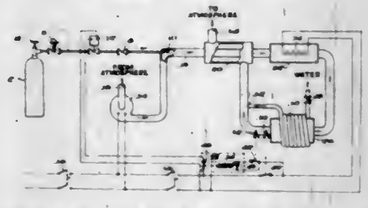
1. An artificial human body form for demonstrating and practicing reviving of unconscious persons comprising, a simulated human head, said head having at least one passage with an opening for insufflating air; means to adjust said head to different positions including improper and proper positions for resuscitating insufflation; and means responsive to said positions and acted upon by insufflated air to indicate whether the insufflation is taking place improperly or properly.

3,049,812

RESPIRATORY METABOLISM SIMULATOR

Robert M. Bovard, Evans City, Pa., assignor to M.S.A. Research Corp., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 30, 1961, Ser. No. 85,755
3 Claims. (Cl. 35—19)



1. A method of simulating the respiratory metabolism of animals which comprises completely combusting a mixture of an organic fuel and isolated atmosphere containing oxygen, consuming said fuel at a rate which on combustion produces carbon dioxide at the same rate as the animal to be simulated, said fuel containing carbon and at least one element from the group consisting of hydrogen and oxygen, adjusting the humidity of the resulting combustion products to provide a ratio of water to carbon dioxide equal to that produced by the animal, and returning said combustion products to said isolated atmosphere.

3,049,813

MOTOR DRIVEN GLOBE

Joseph Francis List, Riverton, N.J., assignor to Aero Service Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed June 23, 1961, Ser. No. 119,119
8 Claims. (Cl. 35—46)



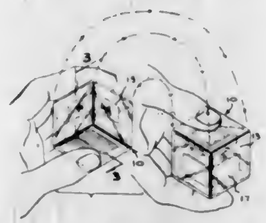
1. A globe comprising a substantially spherical hollow body, means supporting the body for rotation about a fixed axis, a prime mover disposed in the body, a finger associated with the prime mover for rotation thereby in an orbit normal to said axis and a flexible fin projecting inwardly in the body into the path of the finger for engagement thereby in its orbital travel about said axis.

3,049,814

EDUCATIONAL BLOCKS

William R. McLain, Nashville, Tenn., assignor to Kusan Incorporated, Davidson, Tenn.

Filed Nov. 7, 1961, Ser. No. 150,745
9 Claims. (Cl. 35—70)



4. A hollow transparent educational block comprising a rigid indicia bearing member interiorly of said block, a disk member mounted on said indicia bearing member in advance of said indicia bearing member, said disk having a cut away portion to expose and conceal indicia upon said indicia bearing member upon rotation of said hollow block.

3,049,815

FLEXIBLE COUNTER

Andrew Wilburn Davis, Madison, Ill., assignor to The Proctor Counter Co., St. Louis, Mo., a corporation of Missouri

Filed Apr. 22, 1957, Ser. No. 654,115
3 Claims. (Cl. 36—68)



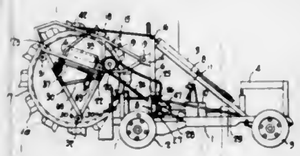
1. A shoe counter comprising a main body, and a flexible upper portion, said upper portion incorporating a plurality of spaced short slits distributed thereover extending into the counter from the outer side thereof providing flexibility, said slits being substantially closed when the counter material adjacent thereto is in a flat position, said short slits being disposed in spaced rows longitudinally of said counter, said slits comprising substantially clean cuts having substantially no loss of material thereby reducing gaping of said slits to a minimum when said counter is used in shoe making.

3,049,816

SELF RETURN TRIP CLEANER FOR TRENCHING MACHINES

Nathan B. Shimp, Celina, Ohio, assignor to Speicher Brothers, Inc., Celina, Ohio, a corporation of Ohio

Filed Dec. 19, 1958, Ser. No. 781,513
5 Claims. (Cl. 37—97)



1. In trencher construction of the class described, in combination, a portable frame, trench digging means carried thereby, said means including a series of buckets, carry-off mechanism to receive material from said buckets, and bucket cleaning instrumentalities including obstruction engaging means carried by said frame arranged to engage material in the buckets and cause the same to be directed to the carry-off mechanism, said instrumentalities including releasable means intermediate the obstruction engaging means and the frame whereby the obstruction engaging means is permitted to move out of the path of an immovable obstruction in a bucket, said instrumentalities including different means intermediate the obstruction engaging means and the frame whereby said instrumentalities are automatically returned to operative position after such obstruction has passed the same, said bucket cleaning instrumentalities comprising a pivoted arm connected to the frame, an extension of said arm arranged in position to enter the buckets, latch means to support the arm and extension in bucket cleaning position, said means being releasable when a predetermined pressure is encountered by the extension, and separate means to cause the arm to be returned to latched position after movement therefrom, said latch means including a spring pressed plate carried by the pivoted arm, a pivoted latch member mounted on the frame below the plate and arranged to engage and support the arm by the end of the plate when the arm is in bucket cleaning position, and spring means to maintain said member in plate engaging position, an obstruction causing said plate to slip past the end aforesaid.

3,049,817

ROADWAY MACHINE

Raymore D. MacDonald, Eureka, Ill., assignor to Ulmac Equipment Company, El Paso, Ill., a corporation of Illinois

Filed Apr. 4, 1960, Ser. No. 19,809
16 Claims. (Cl. 37—108)

1. A wheel belt loader apparatus for attachment to a motor grader for conditioning a surface of a road bed comprising in combination, a pair of parallel horizontal side frame members held in spaced relationship by a reinforcing cross member at the forward ends thereof, a pivotal swing type hitch secured to said cross member centrally between the forward ends of the parallel side frame members, a spade feeder rotatably mounted between the parallel frame members, a pair of gathering wings extending outwardly and forwardly of said feeder, actuating linkages pivotally connected to the side frame members and the gathering wings, adjustment means connected to said actuating linkages for raising or lowering individually or both the front or the rear portion of the gathering wings with respect to the ground surface, a conveyor pivotally connected between the side frame members, said conveyor having one end in contiguous relationship with the feeder and the other end positioned



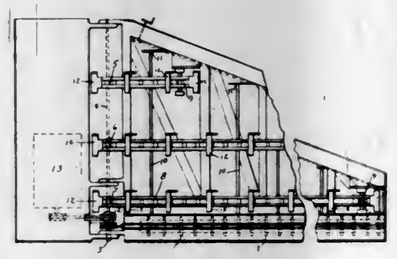
to discharge into a receiving vehicle, a pick-up blade mounted in front of the conveyor, adjustment means connected to the side frame members to control the position of the pick-up blades relative to the ground surface, a motive means, a dual outlet gear means connected to the motive means, and plural shaft means connecting said gear means with the conveyor and the feeder to effectively level, remove and load the excessive material from the road bed surface.

3,049,818

HIGHWAY SLOPE FINISHING MACHINE

Oscar Lee Arnold, 1309 E. Broad St., Gadsden, Ala.

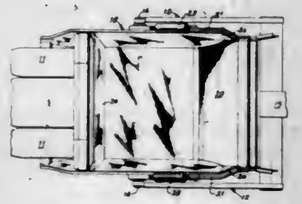
Filed Feb. 21, 1962, Ser. No. 174,860
1 Claim. (Cl. 37—109)



A highway slope finishing machine comprising, a supporting structure, said structure consisting of metal parts for holding a shaft set revolvably in bearings, three equal in size sprocket gears, these gears being mounted spaced apart and in fixed condition on said shaft; three additional similar sprocket gears, these gears being mounted revolvably at three different distances in the structure and in the end portion opposite the position of the said shaft with gears thereon; a comparatively long flat type chain, this chain being around the two gears spaced the longest distance apart in the structure; a second piece of flat type chain, this chain being mounted around the two gears spaced apart a shorter distance than the other; a third piece of flat type chain, this chain being mounted around the two gears the shortest distance apart; a plurality of similar parts formed as identical paddles each of said mounted flat type pieces of chain having a plurality of said paddles attached on the outer faces of the chain and spaced apart evenly upon the chains and being positioned to make contact with the earth when being moved under the lower parts of the chains when being revolved around the said respective sprocket gears; a plurality of round supporting bars, said bars being mounted revolvably below

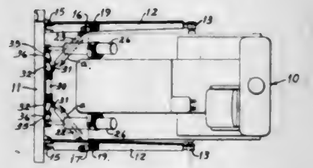
the upper parts of the chains as supporting means to relieve slackness in the upper parts of the chains when in use.

3,049,819
EARTH MOVING SCRAPER BOWL CONSTRUCTION
Gerald T. Cohron, East Peoria, and Roy E. Mayo, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed May 13, 1960, Ser. No. 28,872
3 Claims. (Cl. 37—129)



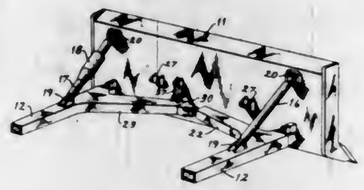
1. In an earth moving scraper having a bowl with a bottom, side walls, a vertically movable apron forming a front wall, and a cutting edge disposed forwardly of the bottom whereby the bowl can be loaded by advancing with the cutting edge in the earth and the apron lowered to the surface of the earth to induce a column of earth to advance upwardly into the bowl, the improvement which includes said side walls being sloped upwardly and outwardly to reduce frictional resistance to the upward movement of said column and having inwardly and forwardly converging forward portions conforming at their forward edges to the parallel edges of said apron whereby the apron may be received between said forward edges as it is raised and lowered.

3,049,820
DIAGONAL BRACE MOUNTING FOR BULLDOZER BLADES
Robert W. Lichti, Joliet, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Apr. 11, 1960, Ser. No. 21,501
5 Claims. (Cl. 37—144)



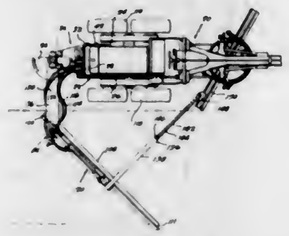
1. In a bulldozer blade mounting which comprises push arms secured to the blade, tilt braces extending upwardly between the tops of the push arms and the blade, and diagonal braces extending inwardly from the inner sides of the push arms to the blade and means to adjust the length of at least one of said tilt braces to effect tilting of the blade, means to reduce stresses set up in the mounting upon such tilting including, a member pivotally supported from the blade adjacent the end of each diagonal brace and having a part adapted to swing to and away from the blade and connections between the end of each brace and one of said parts, and torsion means connecting said pivotally supported members.

3,049,821
PUSH ARM AND MOUNTING STRUCTURE FOR TILTABLE BULLDOZER BLADE
Robert W. Lichti, Joliet, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Oct. 17, 1960, Ser. No. 63,117
3 Claims. (Cl. 37—144)



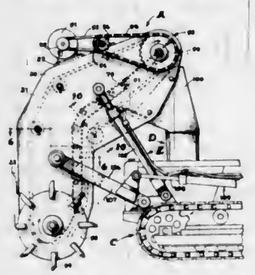
1. In a tiltable bulldozer blade mounting which comprises push arms articulately secured to the blade, tilt braces extending upwardly between the push arms and the blade, a diagonal brace formed integrally with each push arm and extending inwardly therefrom and an articulate connection between the inner ends of said diagonal braces, said articulate connection comprising a ball and socket joint of which the socket portion is housed within an end of one of said diagonal braces and the ball portion is slidably supported on a trunnion fixed to the end of the other of said braces.

3,049,822
SLOPE GRADER ATTACHMENT
Wayne W. McMullen, 1002 67th St., Des Moines, Iowa
Filed Nov. 15, 1960, Ser. No. 69,381
5 Claims. (Cl. 37—155)



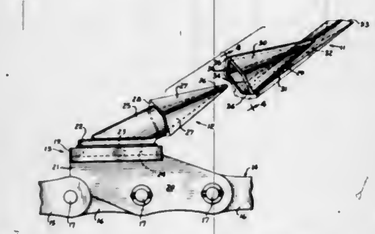
1. The combination with a wheeled frame including a pair of laterally spaced side members and a rear cross member connecting the rear ends of said side members together, of a slope grader attachment comprising an upstanding backing plate positioned so as to extend along and parallel to said cross member, tie means embodying a rigid strap extending along the rear end portion of each of said side members and detachably secured to the adjacent side member and having one end pivotally connected to said backing plate securing said plate to said side members, an anchoring element positioned in tandem relation with respect to said backing plate and supported from said backing plate, an arm arranged transversely of said anchoring element and having one end pivotally connected to said anchoring element and having the other end to one side of and spaced outwardly of one or the other of said side members, an elevating and lowering means carried by the other end of said arm, an upstanding deflecting blade having an inner end and an outer end positionable so that the inner end is adjacent said elevating and lowering means with the outer end outwardly of said one side member or so that the inner end is rearwardly of and remote from said one side member with the outer end rearwardly and adjacent to the other of said side members, means on said blade connecting said blade to said elevating and lowering means for movement therewith when said blade is disposed in either of the aforesaid positions, and an extensible and retractable bar means for operatively securing said blade to said frame when said blade is disposed in either of the aforesaid positions.

3,049,823
EXCAVATING MACHINES
Robert V. Spalding, 154½ N. 8th St., Page, Ariz.
Filed Feb. 21, 1961, Ser. No. 97,406
10 Claims. (Cl. 37—190)



1. An excavating machine, including a frame, excavating means carried by said frame, endless chains carried by said frame and operatively connected with said excavating means to cause operation of said excavating means, and conveyor means carried by said frame, for receiving and conveying excavated material excavated by said excavating means, including an endless belt rotatable in a path inwardly of the runs of said endless chains and spaced from said endless chains, and an excavated material receiving scoop of flexible material operatively carried at one end portion of said scoop by said endless chains to move therewith and carried by said endless belt at the other end portion of said scoop.

3,049,824
DIGGING TIP
Glenn W. McIninch, Omaha, Nebr., assignor to Auburn Machine Works, Inc., Auburn, Nebr., a corporation of Nebraska
Filed Apr. 21, 1961, Ser. No. 104,615
4 Claims. (Cl. 37—191)



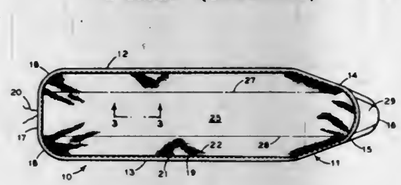
3. For use in a trenching machine having an endless loop of roller chain with alternating pairs of overlapping inside and outside links, the combination, comprising, a base plate carried by a pair of outside links on the roller chain, a shank having a cylindrical body portion and a pyramidal nose portion carried by said base plate, said pyramidal nose portion being pentagonal in cross section and terminated by an annular shoulder adjacent said body portion, said shoulder defining a step projecting radially outwardly from said cylindrical body portion, a digging tip having integral blade and shell portions with the shell defining a pyramidal socket on one side of the blade, said socket being dimensioned to mate intimately surface-to-surface with said nose portion and to overlie said shoulder thereby permitting any portion of the overlying socket to be deformed against any portion of said step to lock said tip on said shank, and said shank projecting from said base plate and being oriented with respect to the center line of the roller chain so as to sweep said blade through a fixed path parallel to the movement of the roller chain.

3,049,825
IRONING BOARD ASSEMBLY
Michael Boyd, 18426 Plymouth Road, Dearborn, Mich.
Filed Aug. 1, 1960, Ser. No. 46,643
2 Claims. (Cl. 38—112)



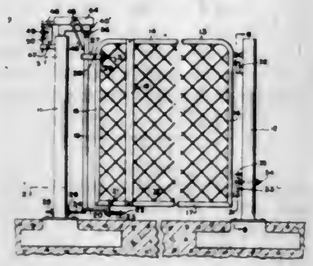
1. A portable collapsible ironing board comprising a pair of elongated longitudinally aligned box elements, each including a continuous marginal flange and a flat top wall, corresponding end flanges being in abutting relation and hingedly interconnected, a U-shaped leg arranged transversely of the outer end of each box element with its free ends pivotaly connected thereto, and normally extending angularly downward and outward with intermediate portions of said leg braced against a box element, apertured brackets on the outer end of one box element, a formed extension mounted in alignment with said top walls, interlocking means depending from one end of said extension in securing registry with said brackets, corner reinforcements within each box element, there being an inwardly directed aperture within each reinforcement, a removable partition removably positionable within the open end of each box element, and pins adjacent the corners of said partition and projecting therefrom for cooperative registry within said corner element recesses to thus define a pair of storage compartments within said box elements.

3,049,826
IRONING BOARD COVER
Kurt Goldsmith, Glencoe, Ill., assignor to Textile Mills Company, Chicago, Ill., a corporation
Filed Apr. 8, 1960, Ser. No. 20,986
1 Claim. (Cl. 38—140)



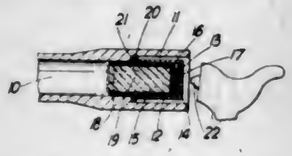
An ironing board cover comprising an elongated sheet of textile fabric, said sheet comprising cotton weft yarns extending to opposite sides of said sheet, cotton warp yarns interwoven with said weft yarns in the lateral edge portions of said sheet whereby said lateral edge portions are comprised of cotton yarns only, and asbestos warp yarns interwoven with said weft yarns in a central zone of said sheet between said lateral edge portions, and a heat reflective coating on the outer surface of said sheet.

3,049,827
GATES
Anthony Rascov, 4303 Tabasco Road, Clermont County, Ohio
Filed Dec. 29, 1960, Ser. No. 79,414
6 Claims. (Cl. 39—31)



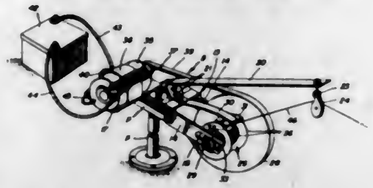
1. A bumper actuated two-way gate comprising a pair of fixed posts, a rigid gate between said posts, a third post having a pivotal connection at its base with one of said fixed posts, a frame secured to the top of said last named fixed post, said third post having roller connection with said frame, said gate having an upper connection and a lower shock absorbing yieldable connection with said third post, latch means between said gate and the other of said fixed posts, means for releasing said gate upon bumping of said gate below the center of said gate, and a dash pot actuated by the final movement of said gate to arrest the movement of said gate.

3,049,828
TOY GUN WITH DUMMY BULLET USING DEFORMABLE VEGETABLE MATTER
Aubrey Robert Mills, London, England, assignor to Die Casting Machine Tools Limited, London, England, a British company
Filed May 27, 1960, Ser. No. 32,425
5 Claims. (Cl. 42—54)



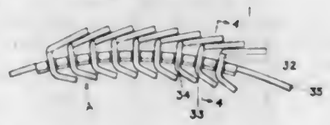
1. The combination of a toy gun with ammunition, the ammunition comprising a hollow cartridge case having a closed rear end, a detonator cap adapted to fit in said cartridge case adjacent the rear end thereof and a dummy bullet adapted to fit in said cartridge case with its rear end abutting against said detonator cap to hold said detonator cap against the closed rear end of the cartridge case, the dummy bullet being of hollow construction with its front end open and having an aperture at its rear end, and having at least one longitudinally extending rib on its internal surface, and said gun having a chamber for containing said ammunition, a barrel providing a free opening leading from the open front end of the bullet, cooperating stop means in the chamber and on said dummy bullet to prevent forward movement of the dummy bullet through the barrel and a trigger-operated striker arranged to strike the rear end of the cartridge case, when the ammunition is in said chamber, to detonate said detonator cap so that the gases produced by the detonation will be expelled through said aperture into said dummy bullet to eject from the latter a filling of relatively soft and deformable vegetable matter, such as a potato slug, formed by forcing the open front end of said dummy bullet into the vegetable matter to cut a core thereof tightly fitting said dummy bullet.

3,049,829
POWER DRIVEN FISHING TACKLE
Fred L. Clapp, 1008 Fairmont St., Greensboro, N.C.
Filed Sept. 1, 1961, Ser. No. 135,490
7 Claims. (Cl. 43—6.5)



1. A power-operated fishing apparatus comprising a motor and reel-supporting frame having a yoke at one end thereof and a motor-supporting base at the other end, a stanchion-supporting socket intermediate the frame and a stanchion mounted in said socket for supporting the motor and reel frame for horizontal movement at a suitable elevation, a flat resilient rod member securely mounted intermediate the frame at one terminal end of the rod member, said member reaching upwardly at an acute angle from the frame and having a line-supporting and guide pulley swivelly supported at the other terminal end thereof, a shaft supported in said yoke, a reel-driving pulley and reel rotatably mounted on said shaft and cooperatively connected to each other, friction brake means mounted on the frame releasably engaging the reel for controlling the speed of rotation of the pulley and reel, a motor and switch mounted on the frame motor supporting base, said motor having a shaft and a driving pulley mounted thereon, a flexible connector encircling said reel-driving and said motor mounted pulleys for transmission of rotary movement of the motor mounted driving pulley to the reel during pulley rotation, and a storage battery electrically connected to said motor and switch for supplying electrical energy to said motor.

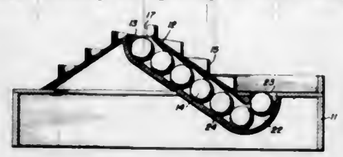
3,049,830
FISH LURES
Douglas R. Greer, 9 Jasper Ave., Toronto 9, Ontario, Canada
Filed Apr. 3, 1961, Ser. No. 100,425
3 Claims. (Cl. 43—42.34)



1. In a fish lure, a plurality of scale elements including transverse leaves mounted substantially perpendicular to a longitudinal mounting element of substantially rectangular cross-section by means providing a substantially rectangular hole in said transverse leaves, each of said transverse leaves having a portion bent rearwardly to create an overlapping relation with an adjacent leaf and contoured to provide a transverse plurality of simulated individual scales and means for spacing and confining said transverse leaves.

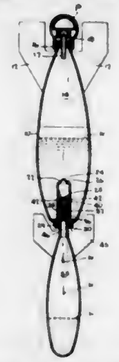
3,049,831
ROLLING MARBLE DEVICE
George H. Evans, Los Angeles, Calif., assignor of one-half to Richard K. Stevens, Washington, D.C.
Filed May 8, 1957, Ser. No. 657,883
2 Claims. (Cl. 46—43)

1. In a rolling marble game device comprising a base having a substantially flat surface, a vertical extending truncated cone element mounted on said base having its vertical axis perpendicular to the surface of said base, a spiral wall mounted on the outer periphery of the surface of said cone element defining a spiral track extending upwardly and inwardly around the outer surface of said cone element to the top thereof, and conduit track means defining an opening in said base, adapted



to receive a playing piece, adjacent to the base of said cone element and extending to the top thereof for providing communication between said base and the top of said cone for continuously conveying a series of playing pieces in juxtaposition with each other from the base of said cone to the top of said spiral track by continuous insertion of said playing pieces in said opening.

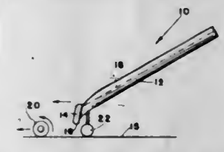
3,049,832
TWO-STAGE ROCKET
Edward J. Joffe, Summit, N.J., assignor to Park Plastics Co., Inc., Linden, N.J., a corporation of New Jersey
Filed Apr. 22, 1958, Ser. No. 730,202
17 Claims. (Cl. 46—74)



17. A rocket including at least two stages comprising in combination, a first stage including a storage vessel for pressurized fluid, said vessel having a fluid discharge outlet for propelling said rocket formed in a portion thereof, a second stage including a storage vessel for pressurized fluid, said vessel having a fluid discharge outlet for propelling said rocket formed in a portion thereof, means responsive to the pressure of said first stage for holding said first and second stages in engagement after pressurization with said first and second stage outlets not in engagement, said holding means having a normally released condition, and an operated condition, the pressure in said first stage prior to launching of said rocket causing said holding means to change from said released to said operated condition, said holding means maintaining said first and second stages in engagement when in said operated condition, and said second stage being released from said first stage when the pressure in said first stage diminishes sufficiently so that said holding means is no longer maintained in said operated condition.

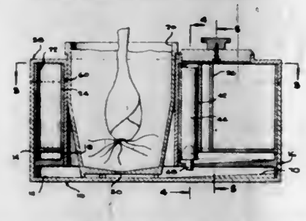
3,049,833
GUIDING STICK AND HOOP TOY
Henry W. Felsch, Box 279, Rte. 2, Orlando Park, Ill.
Filed Aug. 26, 1959, Ser. No. 836,297
1 Claim. (Cl. 46—220)

An amusement device comprising in combination a main shaft, ground engaging means at one end of said main shaft, said ground engaging means comprising a caster wheel, a driven member, guide means integral with said main shaft supporting said driven member for forward movement toward said one end of said shaft from the opposite end thereof, said main shaft comprising a substantially rigid, elongated member having a handle portion at the opposite end thereof from the said ground engaging means, said ground engaging means further comprising a pad member integral with said one end of said shaft and having a lowermost surface portion adapted



to move relative to the ground level, said driven member having a substantially circular peripheral portion for rollably engaging a ground level, said guide means comprising a longitudinal slot extending along the length of said main shaft from said handle portion to said ground engaging pad and said ground engaging means including said caster wheel rollably carried behind the front surface of said ground engaging pad and beneath said main shaft, said caster wheel supporting said lower edge of said pad above the ground level.

3,049,834
SELF-IRRIGATING FLOWER POT
Howard B. Heath, Rte. 2, Frenchtown Road, Elkton, Md.
Filed Aug. 26, 1960, Ser. No. 52,214
5 Claims. (Cl. 47—38)



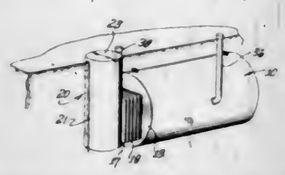
1. In a self-irrigating device for flower pots, an outer receptacle having a bottom and an upstanding wall rising from the perimeter of said bottom, a tray positioned within said receptacle and spaced above and adjacent said receptacle bottom, an open-ended sleeve rising from said tray, an inner receptacle including an upstanding enclosure disposed within said receptacle and bridging and supported upon said tray and constituting a reservoir, said upstanding enclosure seating upon said sleeve and forming with said sleeve a well for receiving a flower pot to be irrigated, a first siphoning means operatively connected to said reservoir and said tray for feeding water contained in said reservoir into said tray, and a second periodically-operating siphoning means operatively connecting said tray and said well for feeding water contained in said tray into said well.

3,049,835
FALLOUT SHELTER
Stratton W. Sundstrum, Pasadena, Calif., assignor to Swan Mira-Pools, Inc., Van Nuys, Calif., a corporation of California
Filed Nov. 2, 1961, Ser. No. 149,545
7 Claims. (Cl. 50—100)

1. A fallout shelter structure comprising, in combination:

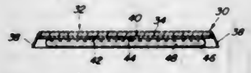
(*a*) a horizontally disposed cylindrical tank having an access opening in one end thereof;

(*b*) a prefabricated housing unit disposed within said tank and longitudinally extending throughout the length thereof, said housing unit being bounded by planar wall surfaces defining a polyhedral cross-section with the lines of intersection of said planar wall surfaces being contiguous with the longitudinal interior surface of said cylindrical tank, said housing unit having an access opening in one end thereof coextensive with the access opening in said one end of said cylindrical tank, the interior of said housing unit being fitted with predetermined appointments; and



(*c*) a generally vertically extending cylindrical casing having a sealed bottom end and a top end with a selectively sealable portion, said cylindrical casing defining an access opening in the peripheral surface near the bottom end thereof, said cylindrical casing being mounted to said one end of said tank by horizontally extending coupling means having one end encompassing said access opening in said tank and the other end encompassing said access opening in said cylindrical casing to thereby place the interior of said housing unit in communication with the lower interior portion of said cylindrical casing, said cylindrical casing being of a predetermined length whereby said fallout shelter may be buried with only said top end of said cylindrical casing exposed above the surface of the earth.

3,049,836
ROOFING REPAIR PATCH
Eugene Weissman, Libertytown, Md.
Filed Feb. 27, 1959, Ser. No. 796,104
1 Claim. (Cl. 50—243)



A roofing repair patch comprising a shallow inverted pan-like shell, a mastic composition in the upper portion of said shell, a membrane in the shell underlying the mastic composition, a frangible container in the shell underlying the membrane, and a waterproof adhesive in the container, said shell being flexible and crushable under foot pressure for rupturing the container and freeing the adhesive for securing the patch to a roof, said membrane having preformed, unobstructed openings therein of such dimensions as to normally retain the mastic composition but through which said mastic composition will extend in response to pressure on the shell for further securing the patch to the roof.

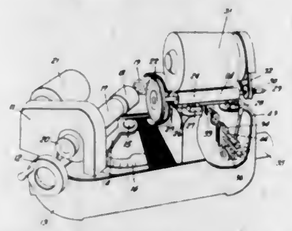
3,049,837
BLAST MACHINE ENCLOSURE
Ardee Horace Freeman, Granger, Ind., assignor to Bell Intercontinental Corporation, South Bend, Ind.
Filed Nov. 29, 1960, Ser. No. 72,359
11 Claims. (Cl. 51—13)

1. In a centrifugal blasting machine having a frame, a closing plate and access door assembly movably mounted on said frame, said closing plate being in the form of a rigid, flat plate and being movable in a rectilinear path relative to said frame, said door being also movable in a rectilinear path relative to said frame with the two such



paths intersecting to define a V-shaped crotch therebetween.

3,049,838
VALVE GRINDING MACHINES
Vyron E. Anderson, Cedar Rapids, Iowa, assignor to Cedar Rapids Engineering Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 4, 1959, Ser. No. 810,622
4 Claims. (Cl. 51—50)

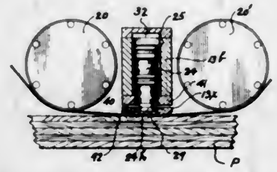


1. In a traversing mechanism for a valve grinding machine, a base member, a spindle housing, a spindle rotatably mounted in said spindle housing, a grinding wheel on the outer end of said spindle, said spindle housing and said spindle being mounted for longitudinal axial movement on said base member, a motor, a drive train interposed between said motor and said spindle housing, said drive train including means for converting rotary motion of said motor to reciprocating motion, said drive means further including a rocker shaft, said shaft having a clutch means thereon, said clutch means including a block member fixedly attached to the shaft and gripping blocks positioned on each side of said first named block, and means for selectively engaging and disengaging said clutch means by moving said gripping blocks into and out of frictional engagement with said fixedly attached block member, said rocker shaft having an additional manual positioning lever thereon, said clutch means being spring-loaded to permit the overriding thereof by movement of said positioning lever.

3,049,839
AIR ACTUATED PLATEN FOR SANDING MACHINES
Orson W. Smith, Seattle, Wash., assignor to Smithway Machine Company, Inc., Seattle, Wash., a corporation of Washington
Filed Feb. 29, 1960, Ser. No. 11,887
1 Claim. (Cl. 51—141)

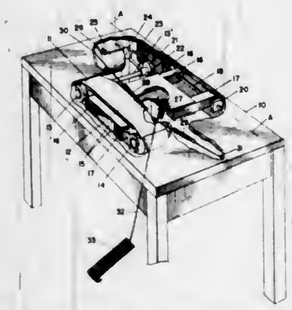
A panel sanding machine including means for supporting and advancing a panel therethrough for the sanding

of a surface thereof, said machine including a driven sanding belt operable for the sanding of a surface of the panel incident to its movement through the machine, a platen supported in the machine for pressing said sanding belt against the panel surface to effect the sanding thereof as the panel advances, said platen comprising a rigid relatively heavy elongated base portion extending transversely to the direction of movement of a panel through the machine and including a relatively thin quite flexible elongated continuous facing strip in contact with said sanding belt during operation, said heavy base portion having a plurality of cylinder chambers formed therein and spaced along the length thereof, a piston slidably disposed within each of said cylinder chambers, one end of each of said pistons being secured to said facing strip



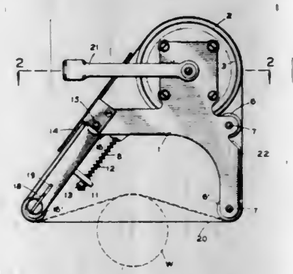
at spaced portions along the length thereof, resilient means normally urging said pistons in a direction so as to move said pistons away from a panel passing through the machine, fluid pressure means disposed in communication with each of said cylinder chambers for introducing fluid pressure against the opposite ends of each of said pistons for urging said pistons toward a panel passing through the machine, each of said pistons being of the same size and being subjected to the same amount of fluid pressure during operation such that equal pressure is applied by each of the pistons against the associated portions of the flexible facing strip, whereby the facing strip will cause the sanding belt to quite closely conform to the general contour of the panel surface, to enter all depressions in the panel surface to some extent and to sand off all high spots on the panel surface.

3,049,840
SANDING TOOL
George L. Williams, 250 20th St., Santa Monica, Calif.
Filed Aug. 30, 1960, Ser. No. 52,908
3 Claims. (Cl. 51—147)



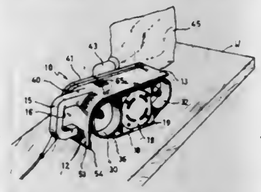
3. A power sanding tool comprising, in combination: a work table having a cutout in its upper surface; a continuous sanding belt; spaced parallel rollers for supporting and moving said belt; frame means supporting said rollers; pivot means pivoting said frame means to the under side of said table so that said rollers and sanding belt are swingable as a unit with said frame means from a position below said cutout upward into said cutout to a position in which the upper surface of said sanding belt is above the surface of said table; biasing means connected between said table and said frame means for urging said frame means upwardly; a motor secured to the under side of said table; and a pulley belt for transmitting power from said motor to one of said rollers.

3,049,841
PORTABLE SANDERS
J. Edwin Guinn, Riviera Beach, Fla., assignor of one-fourth to Amos E. Jackson, Palm Beach, Fla., and one-fourth to H. P. Knight, Riviera Beach, Fla.
Filed July 13, 1959, Ser. No. 826,793
4 Claims. (Cl. 51—170)



1. In a portable hand sander, the combination of a pair of spaced substantially Y-shaped frame members, power means mounted between said frame members, a driven pulley pivotally mounted between said frame members and surrounding said power means, gear reduction means connecting said power means and said driven pulley, gate legs pivotally mounted to the free end of opposed legs of said Y-shaped frame members, adjustable resilient means connecting said gate legs and frame members, a plurality of idler pulleys journaled in said frame members and gate legs parallel to said driven pulley and having common tangential planes with said driven pulley, a continuous sanding belt positioned around said pulleys, a presser plate fastened to said frame members and positioned intermediate said frame members and said sanding belt, adjustable means for displacing the longitudinal axis of at least one of said idler pulleys, and handles secured to said frame members along the longitudinal axis of said power means.

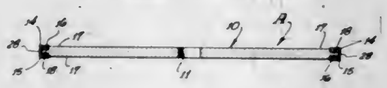
3,049,842
PORTABLE GRINDING MACHINE
Erwin Murschel, Stuttgart-Weilimdorf, Germany, assignor to C. F. Scheer & Cie., Stuttgart-Feuerbach, Germany
Filed Apr. 5, 1960, Ser. No. 20,199
Claims priority, application Germany Apr. 23, 1959
6 Claims. (Cl. 51—170)



1. In a portable grinding machine, in combination, a frame including a single elongated side wall; a pair of spaced wheels rotatably mounted in opposite longitudinal end portions and located at one side of said side wall; motor means mounted at substantially the same level and intermediate said wheels at said one side of the side wall and having a driving shaft extending through and to the

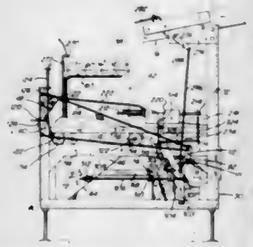
other side of said side wall, the axis of said shaft parallel with the axes of said wheels; a driving connection between said motor means and one of said wheels; an endless abrading band mounted on and extending about said wheels; a first and a second casing mounted on and located at the other side of said side wall; motor-cooling first fan means mounted in said first casing; and dust-evacuating second fan means mounted in said second casing, said first and second fan means coaxially connected with said driving shaft so as to be driven by said motor means when the motor means drives said one wheel to advance said abrading member about said wheels.

3,049,843
ABRASIVE CUTTING DEVICES
Frank L. Christensen, Salt Lake City, Utah, assignor to Christensen Diamond Products Company, Salt Lake City, Utah, a corporation of Utah
Filed Apr. 20, 1959, Ser. No. 807,669
21 Claims. (Cl. 51—206)



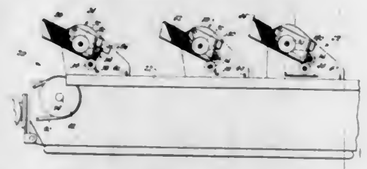
1. In an abrasive cutting device: a one piece supporting member having an outer end portion adapted to engage the work being cut; and preformed abrasive members brazed to opposite parallel sides of said outer end portion and to said supporting member inwardly of said outer end portion, said abrasive members extending outwardly at least to the outer end of said end portion to engage the work being cut; the abrasive members on one side of said outer end portion being parallel to the abrasive members on the other side of said outer end portion.

3,049,844
ARTICLE PACKING MACHINE AND METHOD
Ammon M. Leitzel, Portland, Oreg., assignor to Pacific Pulp Molding Co., Portland, Oreg., a corporation of Washington
Filed Oct. 26, 1959, Ser. No. 848,651
11 Claims. (Cl. 53—35)



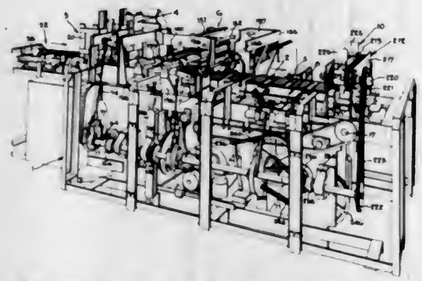
11. The method of packing a carton with articles supported upon trays, which comprises, piercing the lower portion of a side wall of said carton with a plurality of spaced horizontally extending and pointed tray supports and inserting said supports into said carton through said side wall, filling a first tray with said articles and supporting the resulting first filled tray on said supports adjacent the top of said carton while the top of said carton is open, lowering said supports to lower the filled tray a distance substantially equal to the height of said filled tray, filling a second tray with said articles and supporting the resulting second filled tray on said first filled tray, lowering said supports to lower resulting stack of trays and articles said distance, continuing the filling and supporting of trays and lowering of said supports until said carton is filled, and withdrawing said support from said carton through said side wall.

3,049,845
DOCUMENT HANDLING APPARATUS
Walter J. Hanson, Old Greenwich, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,710
15 Claims. (Cl. 53—62)



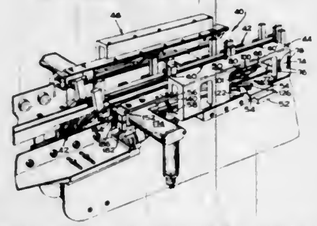
1. A cyclically operable apparatus for separating a stack of intermixed distinctive and non-distinctive documents into groups, each of said groups to comprise a respective distinctive document and any non-distinctive documents between one side of the respective distinctive document and the next distinctive document of the stack; said apparatus comprising: feeding means, operable during each cycle, to feed documents from said stack in one-by-one succession to a delivery position; control means, operable when actuated, to stop the feed of said documents by said feeding means; sensing means responsive to the feeding of said distinctive documents to actuate said control means during each cycle whenever one of said distinctive documents is fed by said feeding means; and advancing means operable to forwardly advance the document or documents disposed at said delivery position after each feeding operation of said feeding means.

3,049,846
TRAY-TYPE CARTONING MACHINE
Wickliffe Jones, Cincinnati, Ohio, assignor to R. A. Jones and Company, Inc., Covington, Ky., a corporation of Kentucky
Filed Apr. 2, 1959, Ser. No. 803,712
11 Claims. (Cl. 53—164)



1. A packaging machine for folding, loading and sealing blank containers formed of relatively stiff sheet material and having overlapping closure flaps at opposite ends thereof, said machine comprising, a magazine for confining a stack of containers in flat blank form, an intermittent transport conveyor including a channel-shaped carrier having an open face, a tamping mechanism having a foot element normally disposed above said conveyor and movable downwardly into the open face of the carrier during a conveyor dwell period, said foot element loosely interfitting the interior of the channel-shaped carrier, feed means associated with said magazine for advancing said container blanks individually from said magazine to a position interposed between said foot element and the open face of the channel-shaped carrier, whereby said foot element folds said blank generally into channel-shaped tray configuration and inserts the tray directly into said carrier upon movement of the foot element from said normal position into the carrier, an article loading mechanism disposed along said conveyor downstream from said tamping mechanism, said loading mechanism adapted to transfer articles in stack formation endwisely into the tray residing in the carrier during a conveyor dwell period, means for applying adhesive to said closure flaps and for folding said flaps to an overlapped closed position upon advancement of the tray from said loading mechanism, and means for applying pressure to said folded flaps upon advancement thereof from said folding means, said pressure applying means sealing the flaps and utilizing the articles within the container to support the flaps upon application of pressure thereto.

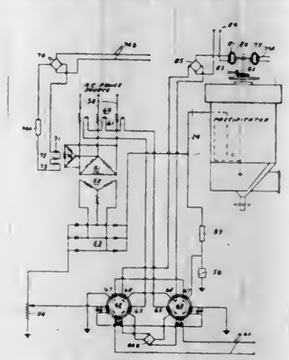
3,049,847
CARTON CLOSING MECHANISM
Robert K. Galloway, Hoopeston, Ill., assignor to FMC Corporation, a corporation of Delaware
Filed Feb. 17, 1961, Ser. No. 89,982
8 Claims. (Cl. 53—374)



1. In a carton closing mechanism for closing a carton including lower and upper end closure flaps hingedly connected to the lower and upper panels respectively of the carton, said carton having an arcuate slit therein substantially on the crease line between the lower flap and the lower panel, the upper closure flap having a tab projecting from its distal edge in position to enter the slit, the improvement which comprises a conveyor for advancing an erected carton along a predetermined path with the carton disposed transversely of the conveyor, carton closing means disposed adjacent said path including means mounted in position for engagement by the tab of the advancing carton for folding said tab downward to a position substantially perpendicular to said upper flap, a lower cam plate having an upturned wing in position for engagement by said lower flap for folding the same upward to a position substantially normal to said lower panel, an upper cam having a downwardly turned wing at a point forward of said upwardly turned wing on the lower cam plate and in position for engagement by said upper flap for folding the same downward toward a position overlying the upwardly turned lower flap, means adjacent said downwardly turned wing of the upper cam and cooperating therewith to guide said tab into said slit as said upper flap is folded downward, and cam means for engaging the outer surface of said upper flap adjacent the distal end thereof and forcing the same inward to push said tab into said slit.

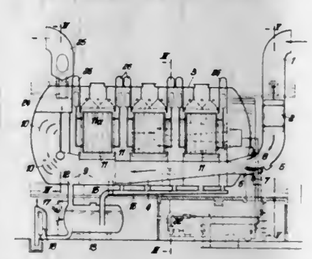
3,049,848
ELECTROSTATIC PRECIPITATOR CIRCUITS
Hans Klemperer, Belmont, Mass., assignor, by mesne assignments, to Apra Precipitator Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 17, 1953, Ser. No. 374,673
4 Claims. (Cl. 55—105)

1. In an electrostatic precipitator having an alternating electric current source, a transformer with its primary winding connected to said source, saturable reactor means connected in series with said primary and a rectifier connected to the secondary winding of said transformer for applying a charging voltage to the electrodes of said precipitator, the improvement comprising; a separate alternating current source and rectifying means therefor; a circuit connecting said rectifying means to supply an energizing current to the magnetizing windings of said series connected reactor; a saturable control reactor connected in said circuit; separate magnetizing windings for said



control reactor, one of said magnetizing windings for said control reactor being connected across the precipitator electrodes to be energized in response to variations in the voltage across the electrodes and another of said magnetizing windings for said control reactor being connected in series with the electrodes to be energized in response to variations in current flow through said electrodes, said magnetizing windings for said control reactor being connected in aiding and opposed relation respectively to the main windings of said control reactor.

3,049,849
APPARATUS FOR FILTERING GASES
Jean Wiemer, Oberhochstadt, and Heinz Muller, Frankfurt, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany
Filed Aug. 1, 1960, Ser. No. 46,657
Claims priority, application Germany Aug. 12, 1959
8 Claims. (Cl. 55—122)



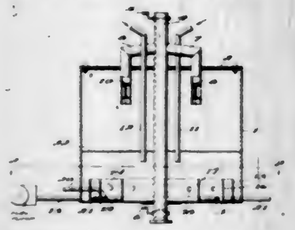
1. A pressure filter mechanism comprising means forming a substantially closed filtering chamber having electrostatic filtering means therein, said chamber having openings for the inlet and outlet of gas, a Venturi prewasher within the chamber, said filtering means having its outlet at the end adjacent the inlet opening of the chamber, means connecting said filtering means inlet with the inlet opening of the chamber, said connecting means including said Venturi washer and including means to deflect the gas through 180° between the outlet of the Venturi washer and the filtering means, said connecting means widening sharply at the outlet of the Venturi washer to provide an expansion space in which the gas

is turned through 180°, a Venturi after-washer in the chamber, means connecting the filtering means outlet with the outlet of the chamber, said connecting means including the Venturi after-washer, both said Venturi washers being horizontally arranged, means to spray water into said Venturi washers, means connected with the outlets of the Venturi washers to remove water sprayed thereinto, and means in the outlet of the chamber to maintain a pressure therein.

3,049,850
CARBURETER FOR INTERNAL COMBUSTION ENGINES

Procter A. Smith, Rte. 2, Beaver Dam, Va.

Filed June 25, 1959, Ser. No. 822,880
1 Claim. (Cl. 55—228)

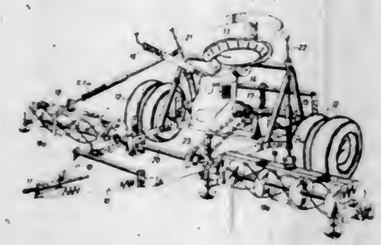


In a device for mixing a fuel charge for supply to the intake manifold of an internal combustion engine comprising, in combination, a duct having one end thereof connected to the intake manifold and having the other end open to atmosphere, intake pipes having one end connected to said duct, a vaporization chamber, the other ends of said intake pipes communicating with the upper end of said vaporization chamber, spring actuated valve means in said intake pipes, said valve means being normally closed but adapted to open in response to reduced pressure in the intake manifold, a porous membrane dividing the vaporization chamber into upper and lower compartments, means for feeding liquid fuel to the vaporization chamber within the compartment, means for pumping air below the surface of the liquid in the vaporization chamber within the lower compartment, means comprising hot water conduits for supplying heat to the liquid and a pair of valves disposed in said duct on opposite sides of the connection of said duct with the intake pipes to provide control over the supply of vaporized fuel and the ratio of fuel to air fed to the intake manifold.

3,049,851
APPARATUS FOR WORKING TURF

Derek Burtt Hargreaves, Adlington, Macclesfield, and Eric Staniforth, Gatley, England, assignors to W. Hargreaves & Company Limited, a company of England

Filed July 27, 1959, Ser. No. 829,827
6 Claims. (Cl. 56—7)

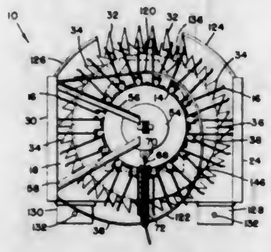


1. Apparatus for working turf comprising a main frame, said frame carrying a plurality of turf-working units each having its own frame, turf engaging wheels on each unit frame, a rotary turf-working member carried by each unit frame, an engine mounted on said main frame, a drive shaft driven by said engine for rotating said turf-working members, said drive shaft including a driven section and a free floating section between said driven section and each of said turf-working members, said free floating sections each having a universal joint at each end thereof, and free-floating linkage means connecting said turf-working units to said frame.

3,049,852
CROP HARVESTING ATTACHMENT FOR COMBINES

Delbert G. Jacobson, Rte. 2, Castlewood, S. Dak.

Filed Mar. 2, 1960, Ser. No. 12,362
4 Claims. (Cl. 56—23)

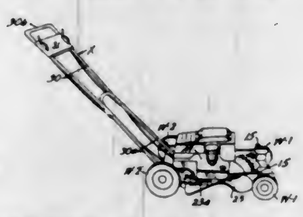


1. In a low crop harvester, the combination which comprises a vertically disposed spindle, a drum carried by the spindle, a base plate upon which the spindle and drum are positioned, a frame mounted on the base plate and in which the upper end of the spindle is rotatably mounted, a shield having vertically spaced horizontally disposed slots therein mounted on the frame and extended around the drum, the shield being positioned whereby the spring fingers travel through the slots therein, and wherein the shield pushes products from the spring fingers upon rotation of the drum with the spring fingers thereon, a horizontally disposed cutter assembly at the lower end of the drum, means for mounting the harvester on a combine, means for tilting the drum and cutter assembly forwardly to compensate for uneven surfaces of the ground, and a universal joint on the upper end of the spindle for connecting the spindle to power means for actuating the harvester assembly from the power take off of the combine.

3,049,853
ROTARY POWER MOWER

Herbert F. Horner, South Minneapolis, Harley E. Kroll, Hopkins, and Donald O. Benson, South Minneapolis, Minn., assignors to Toro Manufacturing Corporation, Minneapolis, Minn., a corporation of Minnesota

Original application Nov. 21, 1958, Ser. No. 775,492, now Patent No. 2,973,614, dated Mar. 7, 1961. Divided and this application Jan. 3, 1961, Ser. No. 80,114
4 Claims. (Cl. 56—25.4)

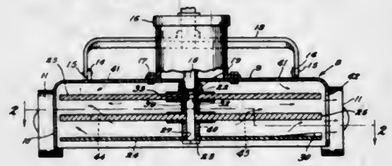


1. A rotary mower comprising,
a rigid housing having a top and a downwardly extending peripheral skirt,
means for mounting said housing for travel over the ground,
one side of the housing adjacent the front thereof having an unrestricted discharge mouth defined by an opening extending substantially the full heighth of said skirt, said mouth being directed laterally and outwardly,
said housing having a curved wall medium affixed thereto and extending downwardly and spaced inwardly from said skirt,
said wall medium extending forwardly along the side of the housing oppositely of said one side from at least a point spaced rearwardly of the transverse center line of the housing to a point spaced forwardly of the transverse center line, and thereafter extending transversely across the forward portion of said housing and ending at the rearward side of the discharge mouth and opening, said wall medium cooperating with said skirt to define a volute channel progressively increasing in width and heighth from its beginning to its ending at said discharge mouth and being unrestricted and uncumbered to provide for ever-expanding fast discharge of grass cuttings from the under forward portion of said housing,
driven rotary cutter mechanism supported from said housing and having a purality of cutter blades with cutting edges and with inclined edges for producing an up-draft fan action, said blades revolving in a general orbit within the confines of said housing and revolving directionally towards said discharge mouth,
whereby in the forward travel of the housing, stalks of grass and weeds are cut primarily in the forward portion of said orbit and are substantially immediately and effectively widely dispersed through said discharge mouth.

3,049,854
POWER LAWN MOWER

Ralph E. Denney, Cincinnati, Ohio, assignor of two-fifths to Philip Ganson, Cincinnati, Ohio

Filed Jan. 13, 1959, Ser. No. 786,599
8 Claims. (Cl. 56—25.4)



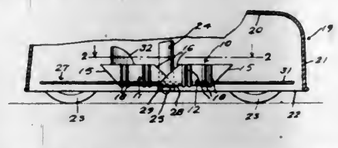
1. In a power mower the combination of a housing having a top portion and a depending skirt joined to said portion, a source of power for the mower, a vertical drive shaft operatively connected to the source of power and depending into the housing, a cutter blade fixed to the lower end of the shaft and rotated thereby in a horizontal plane within the lower portion of the housing, a solid air baffle disc fixed to the upper part of the shaft for rotation therewith in a horizontal plane wtihin the upper portion of the housing, and a perforate air impeller disc fixed to an intermediate part of the shaft for rotation by the shaft in a horizontal plane located within the housing and in spaced relation between the cutter blade and the air baffle disc.

3,049,855
FAN ATTACHMENT FOR ROTARY MOWER BLADE

Elmer E. McMillan, Mansfield, Mo.

Filed Feb. 5, 1960, Ser. No. 6,937
9 Claims. (Cl. 56—295)

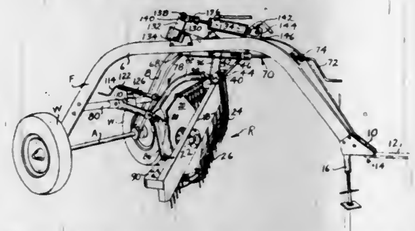
1. In combination with a rotary driven substantially upright lawn mower shaft, an elongated mower blade having an opening intermediate of its ends, and fastening means engaging through said opening and detachably securing the blade to a lower end of the shaft; a fan attachment having a pair of vanes straddling the blade and extending upwardly therefrom and an intermediate portion connecting said vanes in substantially parallel relation to one another and disposed beneath the intermediate portion of the blade, said intermediate portion of the fan attachment having an opening receiving the fastening means for securing the fan attachment to the blade and shaft.



3,049,856
AGRICULTURAL IMPLEMENTS

Harold A. Ralston, Rockford, Ill., and Philip D. Wenzel, Stockton, Calif., assignors to J. I. Case Company, a corporation of Wisconsin

Filed Nov. 18, 1959, Ser. No. 853,961
15 Claims. (Cl. 56—377)

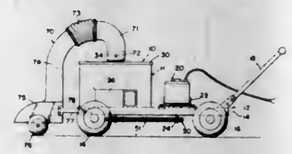


1. In an acute angle rake of the type comprising a longitudinally disposed main frame, a set of ground engaging wheels on the rear of the frame, means on the front of the frame for supporting and propelling the frame, a raking reel suspended beneath, transversely of and between the ends of the frame, and means for rotating the reel; the combination of a reel frame, a rock shaft above said reel frame, generally parallel thereto and journaled on said longitudinally disposed main frame, means for rocking said rock shaft and securing it in desired position, an arm fixed in relation to said rockshaft and extending in a generally fore-and-aft direction, a rigid link pivoted to said arm, extending downwardly and pivoted to said reel frame, a second arm fixed in relation to said rock shaft, spaced along said rock shaft from the first arm, a pivotal connection on said second arm, and a second rigid link connected to said pivotal connection, extending downwardly and connected with said reel frame.

3,049,857
COMMINUTOR

John D. Shaw, 4931 Cordell Ave., Bethesda, Md.

Filed Mar. 10, 1960, Ser. No. 14,152
9 Claims. (Cl. 56—501)



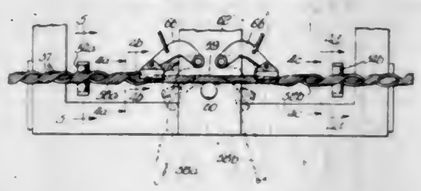
1. A comminuting mechanism comprising a housing having a top wall inlet and a side wall bottom outlet, a

horizontal foraminous partitioning wall in the housing between the inlet and outlet whereby are formed upper and lower chambers, a rotor unit supported in the embodying arms in the upper chamber in spaced parallel relation with said partitioning wall, means connected with said rotor for transmitting rotary power thereto from a prime mover, stationary cutting elements carried by the foraminous wall in the space between the latter and the rotor unit, cutting elements carried by the rotor arms and disposed in said space for coaction with said stationary elements, and fan means in said upper chamber for drawing air thereinto and driving the air through the foraminous wall into the lower chamber.

3,049,858
APPARATUS AND METHOD FOR POSITIONING A HELICAL BAND

Albert Bonds, Cleveland, Ohio, assignor to Preformed Line Products Company, Cleveland, Ohio, a corporation of Ohio

Filed Feb. 5, 1960, Ser. No. 6,966
11 Claims. (Cl. 57—55)

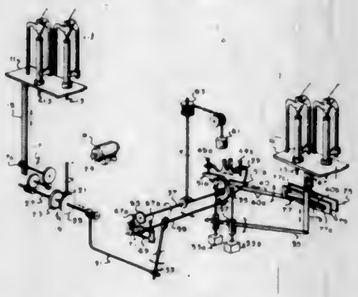


9. An apparatus for positioning and bending a helical band comprising a pin member about which said helical band is adapted to be bent, a pair of pivoted members laterally spaced in opposite directions from said pin member, a cylinder member mounted on each of said pivoted members so that both of the same may engage a helical band in a chordal relationship while the band is in close association with said pin member, means for interconnecting said pivoted members so that pivotal movement of one of said members causes pivotal movement of the other in the opposite direction, and means for bending said helical band about said pin member.

3,049,859
BUILDER MOTION

George Spence Wise, Jr., Union, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware

Filed Apr. 29, 1960, Ser. No. 25,677
11 Claims. (Cl. 57—99)



1. In a roving frame having a rotatable flyer and a bobbin carriage and an English type builder motion with an angularly movable traverse-reversing and traverse-length-controlling poker bar, a poker bar cam vertically movable as a function of the relative traversing position of said flyer and bobbin carriage, and being arranged in angular driving relation to said poker bar, and means for shortening the effective length of said poker bar from its pivot to the point of engagement with said cam, the improvement comprising a poker bar cam having a poker-bar-moving cam surface which forms adjacent opposite ends thereof two substantially straight cam face portions laterally offset with respect to one another and with an intermediate sloped cam face portion connecting said two offset cam face portions.

3,049,860
BEARING ASSEMBLY FOR TEXTILE MACHINERY SPINDLES

Karl Beerli, Niederuster, Zurich, Switzerland, assignor to Spindel-, Motoren- und Maschinenfabrik A.G., Uster, Zurich, Switzerland

Filed Feb. 5, 1962, Ser. No. 170,987
Claims priority, application Switzerland Feb. 13, 1961
8 Claims. (Cl. 57—135)

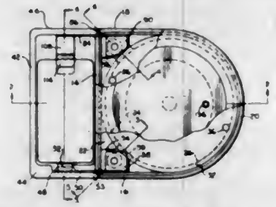


1. A textile mill spindle bearing assembly comprising in combination:
(*a*) a frame member;
(*b*) a casing having a substantially rigid portion in an attachment zone of which it is yieldingly attached to said frame member for transverse parallel and swinging displacement relative thereto;
(*c*) a bearing sleeve having a bearing support portion;
(*d*) radial and axial bearing means integral with or secured to said bearing support portion of said bearing sleeve;
(*e*) a spindle rotatably supported in said radial and axial bearing means;
(*f*) yielding means connecting said bearing support portion of said bearing sleeve to said rigid portion of said casing; and
(*g*) holding means engaging said casing in a zone of its said rigid portion situated on the side of its said attachment zone remote from its connection to said bearing sleeve by said yielding means, for exerting on the casing, at the said point, forces which tend to counteract transverse displacement thereof.

3,049,861
HOUSING FOR BATTERY DRIVEN CLOCK

Kaj H. Jensen, Bareville, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania

Filed July 17, 1958, Ser. No. 749,163
4 Claims. (Cl. 58—23)

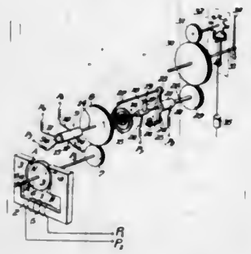


1. In a battery driven clock having a dial train and setting stem, a housing comprising: a base having a recessed floor and a side wall extending upwardly therefrom; said floor having an upper and lower side and said wall having an inner and outer surface; said floor having a large opening therein for receiving said dial train of said clock; a pillar plate removably mounted within said base and being in engagement with said upper side of said floor about said opening; a dial train plate removably mounted to said base and being in engagement with said lower side of said floor about said opening; a battery holder fixedly mounted to said wall; fiirst and second contact means extending from said battery holder to said floor of said base; each of said contact means comprising a planar portion abutting the inner surface of said wall, and a foot extending substantially perpendicular to said planar portion; said foot of said first contact means being retained between said base and said pillar plate and in electrical contact with said pillar plate; said foot of said second contact means being retained between said base and said pillar plate and electrically insulated therefrom; a cover removably mounted to said side wall; said cover including an insert parallel to said floor; and said insert being rotatably mounted to said cover and having an off-center hole therein for receiving said setting stem of said clock.

3,049,862
ELECTRIC CLOCK

Kenji Tokita, 529 3-chome, Shimomeguro, Meguro-ku, and Tomohachi Tsukagoshi, 23–3 Shimo 1-chome, Kita-ku, both of Tokyo-to, Japan

Filed June 28, 1960, Ser. No. 39,353
Claims priority, application Japan Dec. 15, 1959
1 Claim. (Cl. 58—41)

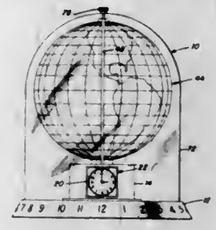


In an electric clock, in combination, a direct-current motor having a rotatable magnetic armature, a stator having at least one pair of poles adjacent said armature, and a stator winding adapted to energize said poles; a commutator rotatable by said armature; at least two pairs of angularly spaced brushes engaging said commutator for successively reversing the flow of current through said winding, said winding bridging one of said pairs of brushes; a spiral spring one end of which is coupled with said commutator, said spring being adapted to be wound by said motor upon rotation of said armature; a clock mechanism having a drive gear coupled with the other end of said spring and adapted to be rotated thereby; a source of direct current for energizing said winding; and switch means connected in series with said source across the other of said pairs of brushes, said switch means including a first contact member coupled with said drive gear and a second contact member coupled with said armature and engageable with said first contact member upon unwinding of said spring to energize said motor, one of said members being magnetic and adapted to attract the other member upon the approach of said members toward each other.

3,049,863
GLOBE AND CLOCK CONSTRUCTION

Bolvin C. Ranney, New Albany, Ohio

Filed Apr. 26, 1960, Ser. No. 24,758
1 Claim. (Cl. 58—44)

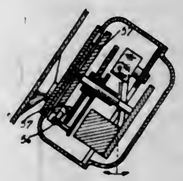


A clock and world globe combination comprising: a base, casing means mounted on said base, a clock in said casing means, a translucent globe mounted on said casing means and adapted to be driven by said clock, and adjustable illuminating means supported in said globe; said illuminating means comprising a light source, a reflector, support means for said light source and reflector including a tube extending into the upper portion of the interior of said globe, a rod rotatably mounted and supported in said tube and extending from within said globe to the exterior thereof for manual control, said reflector being disposed about said light source so as to shade a portion of said translucent globe; operating means including a worm gear carried by said rod, rack means on said reflector engaged with said worm gear, and means on said tube for confining motion of said reflector in a vertical plane and in the path of a prescribed arc, whereby the reflector and light source may be tilted up or down relative to the horizontal plane to selectively vary the position of the shade effected on the globe.

3,049,864
PARKING METER

Marius Terraz, Geneva, Switzerland, assignor of one-third to Michel Conchon, one-third to Louis Cottier, and one-third to Georges Philippin, all of Geneva, Switzerland

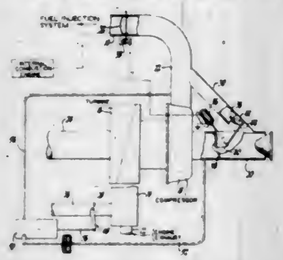
Filed Feb. 15, 1960, Ser. No. 8,836
Claims priority, application Switzerland Feb. 5, 1960
2 Claims. (Cl. 58—143)



1. A parking time meter for use on a vehicle windshield, comprising a clockwork including an hour wheel driven by said clockwork, a sloping plate carrying the clockwork, a spindle rotatably and slidably carried by said plate in coaxial relationship with the hour wheel, a disk-shaped indicator member having a time scale thereon beginning with zero fixed coaxially to said spindle, said indicator member being positioned on the outside of the hour wheel with reference to the plate and normally engaging the hour wheel under the action of gravity to be driven by said hour wheel, and adapted to be shifted into and out of engagement with said hour wheel, means urging the indicator member when out of engagement with the hour wheel into a position in which said time scale indicates zero and support means adapted to adhere to the inner surface of the windshield for supporting said meter with the hour wheel and the indicator member in substantial parallelism with the windshield to

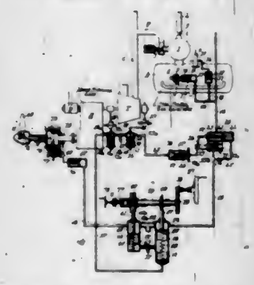
allow a viewing of said time scale through said windshield, a pendular weight pivoted on said plate to urge said spindle intermittently outwardly under the action of the motion of the vehicle, thereby disengaging the indicator member to allow its return to zero position.

3,049,865
TURBOCHARGER CONTROL MEANS
William L. Drayer, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 19, 1960, Ser. No. 9,961
1 Claim. (Cl. 60—13)



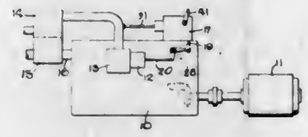
Control means for an engine turbocharger having a compressor and a turbine driven by exhaust gases from said engine and comprising a compressor inlet conduit, a compressor outlet conduit, valve means in each of said conduits for regulating the amounts of air flowing therethrough, a bypass conduit extending between said compressor inlet conduit and said compressor outlet conduit and upstream of each of said valve means therein, valve means in said bypass conduit for regulating the amount of air flowing therethrough, a microswitch actuated by said valve means in said compressor outlet conduit, a linkage operatively connecting said valve means in said compressor inlet conduit and said valve means in said bypass conduit for coordinated operation thereof, a solenoid operatively connected to said microswitch and to said linkage for operating said linkage upon actuation of said microswitch for regulating the proportion of air flowing therethrough to decrease the work load on said compressor during part throttle operation of the engine and decrease the compressor pressure buildup time period.

3,049,866
POWER PLANTS COMPRISING AT LEAST ONE FREE-PISTON GAS-GENERATOR AND A GAS TURBINE
Robert Huber, Bellevue, France, assignor to Societe d'Etudes et de Participations Eau, Gaz, Electricite Energie S.A., Geneva, Switzerland, a Swiss society
Filed Nov. 1, 1960, Ser. No. 66,476
Claims priority, application France Nov. 5, 1959
11 Claims. (Cl. 60—13)



1. A power plant which comprises, in combination, at least one free piston gas generator having a combustion chamber, an outlet for power gas and means for regulating the exhaust of compressed gas from said generator, a gas turbine having a power gas intake, gas conveying means extending from said generator outlet to said turbine intake, main control means for adjusting the output of power gases from said generator, said control means including a manually operated movable control member, and further control means operatively connected with said main control means for varying the action thereof on said power gas output without ever making this output equal to zero, said further control means being responsive to variation of said turbine speed beyond a predetermined value, independently of the setting of said control member, the power gas output variation produced by said further control means being in a direction opposed to the turbine speed variation in response to which it takes place.

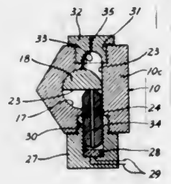
3,049,867
GOVERNOR FOR TURBO-SUPERCHARGED PRIME MOVERS
Sidney Lockwood Gillespie, Rockford, Ill., assignor to Woodward Governor Company, Rockford, Ill., a corporation of Illinois
Filed Sept. 21, 1959, Ser. No. 841,077
7 Claims. (Cl. 60—13)



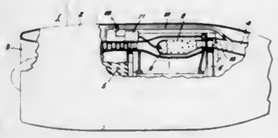
1. The combination of, a fuel burning prime mover supplied with combustion air by a supercharger driven by exhaust gas discharged from said prime mover, a governor for regulating the flow of fuel to said prime mover, said governor having a movable speed setter and a member moved back and forth to adjust the flow of fuel to said prime mover to maintain operation thereof at the speed selected by said setter, continuously acting means combining the movements of said adjuster and member and operable to adjust the load imposed on said prime mover to maintain a fixed relation between the prime mover speed and the flow of fuel to the prime mover, means for continuously measuring the pressure of the air delivered to said prime mover by said supercharger, and mechanism continuously actuated by said measuring means and operable to modify the action of said movement combining means automatically in accordance with changes in said output pressure whereby to match the fuel flow and available air supply in spite of the lag of said supercharger in following an increase in speed of said prime mover.

3,049,868
REMOTELY CONTROLLED EXPLOSIVE ACTUATING MEANS
Victor J. Adams, Jr., Parsippany, and Noel Y. Rothmayer, Morristown, N.J., assignors to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed July 28, 1960, Ser. No. 45,890
9 Claims. (Cl. 60—26.1)

1. Fast-acting remotely controlled actuating means for a two-position impulse-receiving member comprising a housing provided with a shaft-receiving bore of circular cross-section, an impulse transmission shaft journaled in said shaft-receiving bore and including means to connect the same to an impulse-receiving member for actuation thereof; said housing having a main guide bore communicating with said shaft receiving bore at a tangent thereto, an elongated driver cam mounted for longitudinal reciprocation above and partially within said main guide bore, said impulse transmission shaft having a side half portion thereof cut away to provide a flat cam follower face lying in a diametrical axial plane and adapted to be arranged in a pre-set position extending across said main guide bore in substantially perpendicular facing relation to one end of said driver cam to receive motion imparted by impingement of the latter against said cam follower face and be driven in rotation through an angle of ninety degrees into a tripped position bearing flatly against the side of said driver cam in locked condition, and remotely controlled means by which an actuating longitudinal impulse may be imparted to said driver cam.



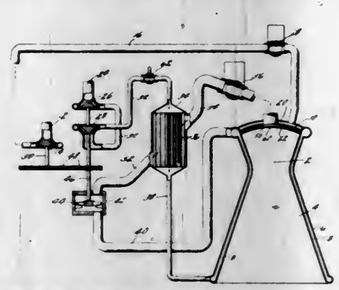
3,049,869
HIGH TEMPERATURE JET PROPULSION APPARATUS
Herbert E. Grenoble, Amsterdam, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 23, 1957, Ser. No. 704,536
3 Claims. (Cl. 60—35.3)



1. The method of increasing the operating temperature of a turbojet engine having critical operating parts including a metal from the group consisting of molybdenum and tungsten to the range of about 2000° F. to 3000° F., said method comprising combusting a fuel-air mixture in the engine which contains about 1.5 times the stoichiometric amount of fuel so that combustion products are produced which permit dioxides of molybdenum and tungsten to form and preclude formation of trioxides of these metals, and mixing additional air with the previously combusted fuel-air mixture after it has passed out of contact with the critical operating parts to effect further combustion thereof.

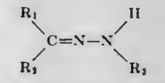
3,049,870
ROCKET PROPELLANT CYCLE
John Chamberlain, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,362
11 Claims. (Cl. 60—35.3)

1. In the operation of a liquid fuel rocket having an injector head and a nozzle wall and using a low boiling point fuel and in which that fuel is used to cool the nozzle wall and is thereby heated to supply energy to a turbine, the steps of heating the fuel before it is used for cooling the nozzle wall so that the fuel will be additionally heated by nozzle wall cooling and is accordingly hotter when it reaches the turbine and a further step of using the fuel exhausting from the turbine for heating the fuel before it reaches the nozzle wall for cooling it.



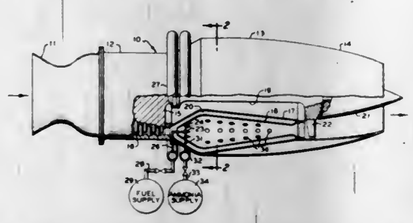
3,049,871
JET FUEL COMPOSITION
Fred K. Kawahara, Park Forest, Ill., and Blanchard L. Mickel, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed May 12, 1958, Ser. No. 734,426
8 Claims. (Cl. 60—35.4)

7. In the method of operating jet engines having oil-fuel heat exchangers, the improvement which comprises supplying to said engines a hydrocarbon fuel containing (*a*) from about 0.001 to about 5 volumes percent of a hydrazone of the formula



where R_1, R_2, and R_3 are each selected from the group hydrogen atoms, alkyl radicals of 1–6 carbon atoms each, and phenyl radicals, and (*b*) from about 0.0001 to about 5 volume percent of an alkali metal containing neutralized reaction product of a phosphorus sulfide and a normally liquid hydrocarbon obtained by reacting from about 1% to about 50% of a phosphorus sulfide with the normally liquid hydrocarbon at a temperature of from about 200° F. to about 500° F., hydrolyzing the resultant reaction product, and neutralizing the hydrolyzed reaction product with a basic alkali metal compound.

3,049,872
JET ENGINE COMBUSTION PROCESS
Marvin M. Johnson and Robert M. Schirmer, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 30, 1958, Ser. No. 770,839
12 Claims. (Cl. 60—35.4)

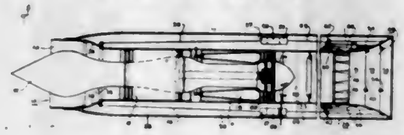


1. A method of operating a continuous combustion engine having a combustion chamber, which comprises burning a hydrocarbon fuel with air in said combustion chamber; and concomitantly injecting controlled amounts of ammonia solely and directly into the primary combustion zone in said combustion chamber adjacent said burning fuel thereby minimizing carbon formation and deposition therein.

3,049,873
EXHAUST NOZZLE HAVING A FLOW AREA OF VARIABLE CONVERGENCY AND DIVERGENCY

Norman E. Weeks, Jr., Kansas City, Kans., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 4, 1958, Ser. No. 713,123
2 Claims. (Cl. 60—35.6)

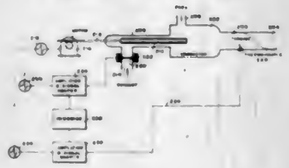


1. In an aircraft engine having a duct providing an exhaust gas outlet, a structure for controlling the area of said outlet comprising an annular array of movable leaves, means for moving said leaves radially inwardly so that a convergent duct is formed by said leaves, a plurality of graduated ring members having a generally frusto-conical shape and disposed adjacent the downstream portion of said leaves, said rings being axially translatable to a first position in which they are in mutual annular abutment and jointly define a divergent exhaust gas passage, one of said ring members defining jointly with said leaves a first annular passage for the flow of air therethrough when said leaves are moved inwardly, means for jointly and axially translating said ring members relative to each other in upstream direction relative to gas flow through said outlet to provide additional annular passages between said ring members, means for correlating the movement of said leaves and ring members to each other, and means for supplying pressurized air to said first annular passage and said additional annular passages.

3,049,874
RADIOACTIVE IONIZER FOR A COMBINATION CHANGER

Morris R. Morrow and Andrew D. Suttle, Jr., Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Oct. 30, 1958, Ser. No. 770,745
3 Claims. (Cl. 60—35.6)



1. In a device for generation of power by the burning of a volatilized fuel with a volatilized combustion agent in a combustion zone to provide hot combustion gases for the actuation of a turbine fed with hot gases from said combustion zone, said combustion zone being provided with separate conduits for the introduction of said fuel and said combustion agent, the improvement which comprises, in the combustion zone, a metallic screen, a high surface area deposit of a metallic radioactive material emitting principally alpha particles, having an intensity of alpha emission within the range of about 10^6 to about 10^{10} alpha particles per square centimeter of film surface per second and having an alpha decay chain with about 1 to 10 stages, said screen being reciprocably mounted within one of said inlets, and control means for reciprocating the mounting for said screen whereby a selected desired portion of said screen may be withdrawn from said combustion zone.

3,049,875
VARIABLE FLAP PLUG TYPE NOZZLE

John J. Horgan, Tariffville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed May 5, 1959, Ser. No. 811,219
7 Claims. (Cl. 60—35.6)



1. An exhaust nozzle having an axis and adapted to be used on a jet propulsion type aircraft engine which will fly at both subsonic and supersonic speeds comprising a fixed inner body having a forward and an after end and further having a diverging wall at its forward end and a converging wall at its after end with a central wall smoothly joining said diverging and converging walls to define the region of maximum dimension of said inner body, an outer duct having a forward and an after end and an inner and outer surface and concentrically enveloping a part of said inner body and extending from the forward end thereof and terminating substantially short of the after end thereof at a point aft of said inner body maximum dimension region and being divergent at said forward end and convergent at said after end to a greater degree than said inner body converging wall to define a gas passage with said inner body which is divergent with respect to said axis at its forward end and which is convergent with respect to said axis at its after end, a plurality of flaps having forward and after ends and an outer and inner surface and spaced peripherally about and pivotally attached to said outer duct after end to form a variable area continuation thereof, means to pivot said flaps between an inner subsonic position wherein said inner surfaces of said flaps form a convergent continuation of said outer duct inner surface while converging more rapidly than said inner body convergent wall to define a first nozzle throat between said flap after end and said inner body converging wall which is tipped with respect to said axis and is substantially perpendicular to said inner body converging wall while said flap outer surface is substantially parallel to said flap inner surface and forms a smooth convergent continuation of said outer duct outer surface and an outer supersonic position wherein said inner surface of said flaps forms a divergent continuation of said outer duct inner surface while a second tipped nozzle throat is formed between said outer duct after end and said inner body convergent wall which second throat is substantially perpendicular to said inner body convergent wall and of larger area than and spaced axially forward of said first throat and wherein said outer surfaces of said flaps coact with said outer duct outer surface to define a smooth surface.

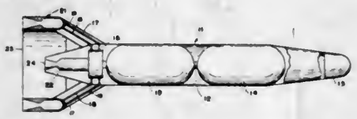
3,049,876
ANNULAR ROCKET MOTOR AND NOZZLE CONFIGURATION

James F. Connors, North Olmsted, Ohio, assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration

Filed Mar. 30, 1960, Ser. No. 18,776
9 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A rocket propelled vehicle comprising
an elongated body,
propellant storage means disposed in said elongated body for storing propellants,

an annular rocket motor combustion chamber, said chamber having an inner diameter larger than said fuselage at the rear terminus thereof,
means for securing said chamber to said elongated body near the rear terminus thereof to provide a spatial relationship therebetween whereby passage of free stream air flow is permitted,
exhaust nozzle means connected to said chamber, said nozzle means being in spatial relationship with the rear terminus of said elongated body whereby passage of free stream airflow is permitted, said nozzle means including
first surface means for expansion of rocket nozzle exhaust flow thereon,

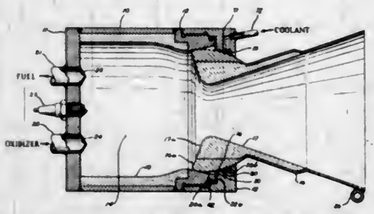


second surface means disposed divergently opposite of said first surface means, said second surface means terminating downstream of said first surface means and downstream of the rear terminus of said elongated body, thereby effecting internal rocket nozzle flow expansion between said first surface means and said second surface means up to the end of said first surface means and external rocket nozzle free flow expansion on the remainder of said second surface means, and
propellant flow means interconnected between said storage means and said combustion chamber for effecting a flow of propellant to said combustion chamber.

3,049,877
NOZZLE FOR REACTION MOTOR

Arthur Sherman, Clifton, N.J., assignor, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

Filed Feb. 13, 1956, Ser. No. 564,964
10 Claims. (Cl. 60—35.55)



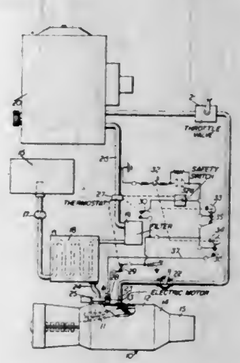
1. A reaction motor having a combustion chamber, a ball joint mounted dirigible nozzle in communication therewith, said nozzle being dirigible during operation of the reaction motor, interstices in said ball joint between the ball and its mating surfaces, an inlet to the interstices, and means for flowing coolant through said inlet and said interstices.

3,049,878
FUEL HEATING SYSTEM FOR A GAS TURBINE ENGINE

Donald George Goodall, Hucknall, England, and Jacques Charles Henri Joseph Lepers, Toulouse (Hte Garonne), France, assignors to Rolls-Royce Limited, Derby, England, a British company, and Sud-Aviation, Société Nationale de Constructions Aeronautiques, Paris, France, a French company

Filed Sept. 17, 1959, Ser. No. 840,601
Claims priority, application Great Britain Sept. 25, 1958
6 Claims. (Cl. 60—39.07)

1. A fuel heating system for a gas turbine engine comprising means for heating the fuel as it is fed to the engine, means for controlling the quantity of heat supplied by said heating means, drive means connected for adjusting said control means, a temperature sensing device responsive to the temperature of the fuel passing said heating means, means controlled by said sensing device upon a deviation of fuel temperature beyond one end of a predetermined temperature range to cause said drive means to adjust said control means to one limit of its range of adjustment whereby the fuel temperature is adjusted towards and passes through said predetermined temperature range, a

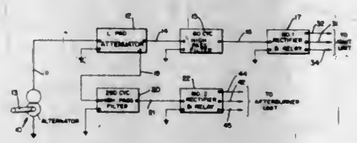


timing device separately controlled by said temperature sensing device when sensing a deviation of fuel temperature beyond the opposite end of said predetermined temperature range and means actuated by said timing device to effect successive intermittent stepwise adjustment of the control means to adjust the fuel temperature towards said predetermined temperature range, said temperature sensing device being connected to terminate said stepwise adjustment of the control means when the fuel temperature moves within said range.

3,049,879
ELECTRONIC SPEED RESPONSIVE DEVICE

Donald E. Clark, Ninevah, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

Filed Aug. 19, 1958, Ser. No. 756,023
3 Claims. (Cl. 60—39.14)



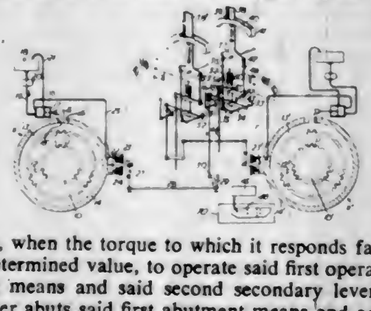
1. In a variable speed engine of the jet type having a rotatable shaft driven in synchronism with the engine, said engine having a main burner, an afterburner, an ignition system for the main burner, and an ignition system for the afterburner, said ignition system for the main burner being operated in a low range of speed of the engine and the ignition system for the afterburner being operated in a high range of speed of the engine, and a speed responsive device for controlling said ignition systems, the improved speed responsive device which comprises an alternator driven by said shaft in synchronism therewith, two circuits connected in parallel to the output of the alternator, a high pass filter in each of said circuits, the filters in the respective circuits having different cut-off frequencies, and a relay in each circuit connected to the output of the respective filter for controlling further separate circuits of the respective ignition systems.

3,049,880
POWER OUTPUT FUEL CONTROL MEANS FOR PLURAL ENGINES

Kenneth Edward George Bracey, Findern, and James Alexander Petrie, Littleover, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain

Filed Aug. 9, 1960, Ser. No. 48,492
Claims priority, application Great Britain Aug. 10, 1959
8 Claims. (Cl. 60—39.15)

1. A control system for use with a power plant which includes two engines, comprising first and second engine-torque-responsive devices, first and second fuel control members, first and second primary levers connected to and movable by said first and second fuel control members respectively, first and second fuel supply means, first and second linkages connecting, respectively, said first primary lever to said first fuel supply means so that movement of the same by said first fuel control member controls fuel to said first fuel supply means and said second primary lever to said second fuel supply means so that movement of the same by said second fuel control member controls fuel to said second fuel supply means, first and second secondary levers having fulcrums which are connected, respectively, to fulcrums of said first and second primary levers, adjustable first and second abutment means with which said second and first secondary levers, respectively, are engageable, first and second operative connecting means connecting, respectively, said first torque-responsive device to said second secondary lever and said second torque-responsive device to said first secondary lever, said first torque-responsive device



serving, when the torque to which it responds falls below a predetermined value, to operate said first operative connecting means and said second secondary lever so that the latter abuts said first abutment means and adjusts the position of the fulcrum of the second primary lever by an amount depending on the adjustment of the first abutment means, whereby the second primary lever adjusts said second linkage independent of movement of said second fuel control member to increase the fuel supply from said second fuel supply means, and said second torque-responsive device serving when the torque to which it responds falls below a predetermined value to operate said second operative connecting means and said first secondary lever so that the latter abuts said second abutment means and adjusts the position of the fulcrum of the first primary lever by an amount depending on the adjustment of the second abutment means, whereby the first primary lever adjusts said first linkage independent of movement of said first fuel control member to increase the fuel supply from said first fuel supply, said first and second abutment means being so arranged that the fuel supply from both said fuel supply means is maintained below a maximum safe value.

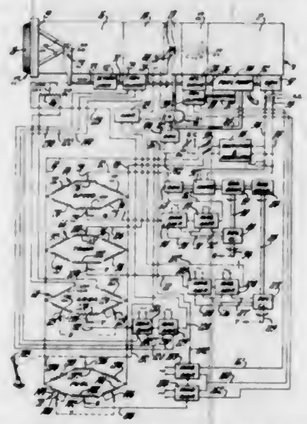
3,049,881
ENGINE CONTROL SYSTEM

Magnus V. Braunagel, Indianapolis, and John A. Dilley, Huntington, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Dec. 30, 1957, Ser. No. 706,188
14 Claims. (Cl. 60—39.28)

1. A control system for a gas turbine engine including a regulatable fuel supply means, the control system comprising, in combination, a manually operable power control, engine speed responsive means, engine turbine temperature responsive means, a computer connected to and actuated by the power control and the said responsive means, nonlinear input servomechanisms having substantially constant-velocity response characteristics coupling the speed responsive and temperature responsive means to the computer, the computer including means for regulating the value of engine fuel flow, and a nonlinear output servomechanism having substantially constant-velocity response characteristics coupling the regulating means of the computer to the fuel supply means, the said input servomechanism having faster response rates than the said output servomechanism.

3. A control system for a gas turbine jet engine including a variable area jet nozzle, the control system comprising, in combination, engine speed responsive means, engine turbine temperature responsive means, a computer connected to and actuated by the said responsive means, nonlinear input servomechanisms having substantially constant-velocity response characteristics coupling the



speed responsive and temperature responsive means to the computer, the computer including means for regulating the value of engine nozzle area, and a nonlinear output servomechanism having substantially constant-velocity response characteristics coupling the regulating means of the computer to the variable area jet nozzle, the said input servomechanisms having faster response rates than the said output servomechanism.

4. An engine control system comprising, in combination, means for regulating an independent parameter determinative of a characteristic of engine operation, means for measuring a dependent parameter indicative of the said characteristic of engine operation, operating means connected to the regulating means operable to vary the independent parameter, and control means connected to the measuring means for actuation thereby and to the operating means for actuation thereof, the operating means and the control means including non-linear servomechanisms having substantially constant-velocity response characteristics, and the servomechanism in the control means having a faster response rate than the servomechanism in the operating means.

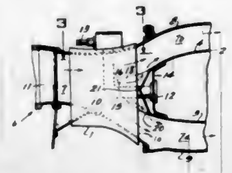
3,049,882
COMBUSTOR CONSTRUCTION WITH MEANS FOR PREVENTION OF HOT STREAKS

Albert Henry Labastie, Marblehead, and Edwin Wester, Lynnfield, Mass., and Donald Charles Blowers, Broad Albin, N.Y., assignors to General Electric Company, a corporation of New York

Filed May 16, 1960, Ser. No. 29,358
4 Claims. (Cl. 60—39.66)

1. A combustor construction for a gas turbine engine comprising, in combination; an inner casing and an outer

casing circumferentially spaced apart to form an annular fluid passage therebetween, at least one vane extending radially across said passage, a combustor mounted in said air passage and extending downstream from said vane with respect to the direction of fluid flow in said passage, an upstream end of said combustor formed with an indentation, said vane located in axially and circumferentially spaced apart proximity to said indentation by an amount

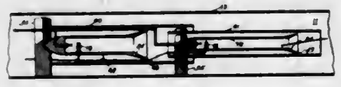


not less than one and one half percent (1½%) or substantially greater than two and one half percent (2½%) of the width of said vane, such that a flow of fluid is scooped into said indentation from said passage to flow downstream of said vane through said indentation to oppose the formation of a turbulent wake downstream of said vane thereby inhibiting the formation of hot streaks along said combustor.

3,049,883
RAMJET DEVICE

David H. Sloan, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Original application Jan. 26, 1951, Ser. No. 207,948. Divided and this application Feb. 6, 1957, Ser. No. 649,271
3 Claims. (Cl. 60—39.72)

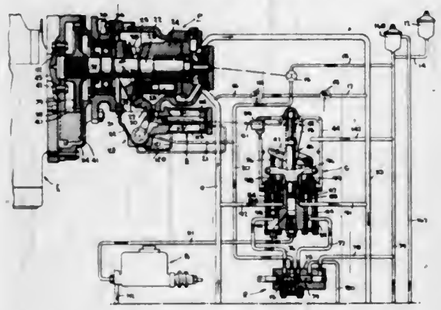


1. A flame holder unit comprising a plurality of ducts, a burner in each of said ducts, each burner having a skirt for retarding fuel flow to linger about its end, whereby complete fuel burning will be assured, and means for supporting said ducts in a sequentially arranged manner.

3,049,884
HYDRAULIC TRANSMISSION

Charles S. Schroeder, Villanova, Pa., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut

Filed July 13, 1960, Ser. No. 42,640
25 Claims. (Cl. 60—53)

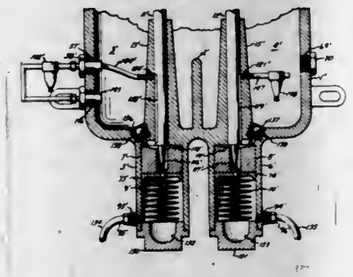


1. A hydraulic power transmission for use between a prime mover and a load, comprising a reversible variable displacement pump adapted to be driven by the prime mover, a hydraulic motor for moving the load, a fluid circuit connecting said pump and said hydraulic motor, an auxiliary source of fluid under pressure, fluid operable means including resilient yieldable connecting means operable by fluid under pressure from said auxiliary source to urge said pump to maximum displacement, fluid actuated means operable by an increase in the fluid pressure in said fluid circuit to decrease the displacement of said pump against the force of said resilient yieldable connecting means, and means for decreasing the displacement of said pump independently of said fluid actuated means.

3,049,885
MASTER HYDRAULIC BRAKE CYLINDER

Thomas J. Tuten, Rte. 1, Box 272, Live Oak, Fla.

Filed May 19, 1960, Ser. No. 30,354
10 Claims. (Cl. 60—54.6)

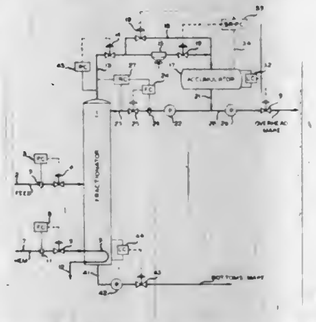


1. A manual master brake cylinder assembly for operating a plurality of brake mechanisms comprising a hydraulic fluid reservoir having a cylinder at the lower extremity thereof, a piston within said cylinder, said piston having an aperture therein, a hollow sleeve member formed to enclose the upper part of said cylinder, a check valve mounted between said reservoir and the upper end portion of said cylinder above said piston, a plunger passing through said reservoir and extending through said hollow sleeve and into said cylinder, said plunger while in an upward position having a portion exposed to the interior of said cylinder, a groove extending from said exposed portion of said plunger to a remote portion of said plunger which is within said reservoir.

3,049,886
FRACTIONATION COLUMN CONTROL

John T. Cabbage, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

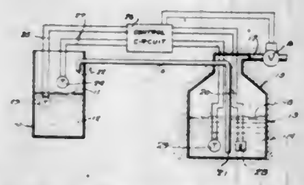
Filed Oct. 11, 1960, Ser. No. 61,979
8 Claims. (Cl. 62—21)



1. In a fractionating system including a fractionation column, a cooler, a reflux accumulator, a first conduit communicating with an intermediate section of said column to supply a feed stream thereto, a second conduit communicating between the top of said column and said

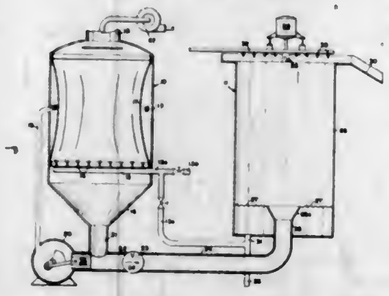
accumulator through said cooler, a first valve in said second conduit between said cooler and said accumulator, a third conduit communicating between the top of said column and said accumulator bypassing said cooler and said first valve, a second valve located in said third conduit, a fourth conduit communicating with said accumulator to remove condensed liquid from said accumulator, a fifth conduit for passing a portion of the condensed liquid in said fourth conduit to a section of said column near the top of said column to supply reflux thereto, a sixth conduit for removing the remainder of said condensed liquid in said fourth conduit as an overhead product, a third valve located in said sixth conduit, a liquid level controller on said accumulator, means responsive to said liquid level controller to regulate said third valve responsive to the liquid level in said accumulator to maintain a pre-determined liquid level in said accumulator, a split range pressure recorder controller communicating with said accumulator to establish a pneumatic pressure which is a function of the pressure in said accumulator, means responsive to said pneumatic pressure to control said first valve and said second valve responsive to the pressure in said accumulator, said first valve being normally closed and ranging from fully closed at a first, low value of said pneumatic pressure to fully opened at a second, intermediate value of said pneumatic pressure, and remaining fully opened from said second, intermediate value of said pneumatic pressure to a third, high value of said pneumatic pressure, said second valve being normally opened and remaining fully opened from said first, low value to said second, intermediate value, and ranging from fully opened at said second, intermediate value to fully closed at said third, high value, thereby to maintain a predetermined pressure in said accumulator.

3,049,887
LIQUID CONTROL DEVICE
Rodman A. Sharp, La Jolla, and Myron S. Eichen, Solana Beach, Calif., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 8,676
3 Claims. (Cl. 62—55)



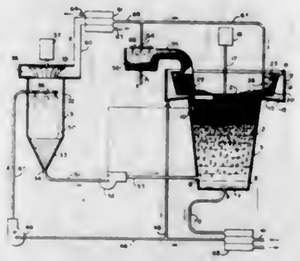
1. In a gas evacuating system provided with a cold trap having a receptacle for containing a limited supply of liquid coolant at a normal atmospheric pressure, which coolant at sea-level pressure is capable of being evaporated at a temperature substantially below the freezing point of water, and which receptacle is at a pressure approximating that of the ambient atmospheric pressure, the combination of a tank containing a reserve supply of said liquid, a conduit for conducting liquid from the tank to the receptacle and having an inlet below the level of said liquid reserve, and an outlet which is above the level of the liquid in the tank and also above the upper level of the liquid in the receptacle, said tank having a vent above the level of the reserve liquid for normally discharging, into the ambient atmosphere, gas evaporated from the upper surface of the liquid in said tank, means for sensing rise or fall of the liquid in the receptacle, and means controlled by the sensing means for heating said liquid in said tank and closing said vent to enable the evaporation of tank liquid to build up pressure in said tank so as to cause liquid to flow from said tank through said conduit into said receptacle.

3,049,888
SEPARATION SYSTEMS
Cyrus M. Bosworth, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Aug. 4, 1960, Ser. No. 47,517
9 Claims. (Cl. 62—58)



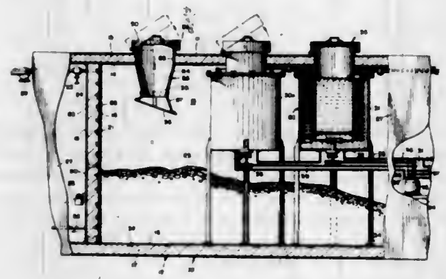
6. A method of operating a separation column which consists of the steps of passing a slurry of solid and liquid components to the separation column under pressure, withdrawing liquid components from the slurry in a manner to consolidate the solid component into a mass in said separation column and to create a hydraulic pressure difference across said mass of consolidated solid component in order to force said mass of solid component through said separation column under pressure in a predetermined direction in order to obtain a relatively high rate of production from said separation column passing a washing fluid through said separation column in counterflow relation to the movement of solid component through said column to wash said solid component free of adhering liquid component, and periodically pulsing the hydraulic pressure applied to said mass of solid component in said separation column to enhance the washing action therein.

3,049,889
METHOD AND APPARATUS FOR RENDERING BRINE SOLUTION POTABLE
Salvatore G. Carfagno, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Jan. 2, 1958, Ser. No. 706,629
3 Claims. (Cl. 62—58)



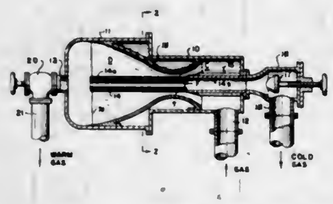
1. In a method of rendering a brine solution potable the steps of passing a brine solution to a freezer vessel, evacuating the freezer vessel to a pressure which causes flash freezing of the brine solution thereby producing a mixture of ice and brine in the freezer vessel, gravitationally partially separating the ice from the mixture, passing the partially separated ice to a centrifugal separator and washer, condensing relatively pure water from water vapor removed from the freezer vessel upon evacuation thereof, passing at least a portion of the condensed water vapor over the ice in the centrifugal separator while simultaneously rotating the centrifugal separator to wash and separate the ice therein from brine remaining on the surface and in the interstices of the ice, collecting the washed and separated ice and melting the collected ice to produce potable water.

3,049,890
IMMERSION FREEZER
Albert J. Ruppel, Ciudad del Carmen, Campeche, Mexico, assignor to Booth Fisheries Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 16, 1957, Ser. No. 690,460
15 Claims. (Cl. 62—64)



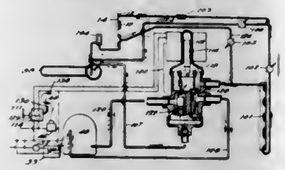
15. In a method of quick freezing shrimp and the like, the steps comprising submerging a catch of shrimp in a confined body of liquid refrigerant, forcing said shrimp to rise within the refrigerant by maintaining the specific gravity of the refrigerant at a value causing the shrimp to be buoyant, retaining the shrimp below a predetermined level in the body of the refrigerant, directing the body of liquid refrigerant to flow downwardly through the catch of shrimp at a velocity sufficiently great to counteract the buoyancy of the shrimp to maintain same in a submerged condition and agitate the catch of shrimp with sufficient turbulence to assure separation of the shrimps and absorb heat therefrom over their entire surface area, withdrawing liquid refrigerant from said body of liquid refrigerant at a level below the shrimp catch and conducting the withdrawn liquid over refrigeration coils to remove therefrom heat absorbed thereby from the shrimp and returning the withdrawn liquid refrigerant to said body of liquid refrigerant at said predetermined level continuously until said shrimp have attained the desired frozen state.

3,049,891
COOLING BY FLOWING GAS AT SUPERSONIC VELOCITY
Chandler H. Barkelew, Orinda, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,121
12 Claims. (Cl. 62—86)



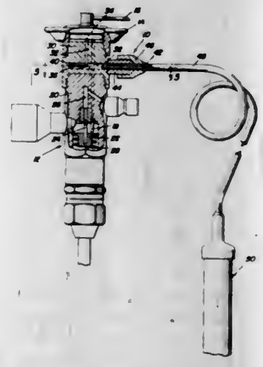
1. Method of generating cold which comprises the steps of accelerating a stream of gas by flow through a supersonic nozzle to a velocity above the local velocity of sound for the temperature and pressure conditions prevailing in the gas, and flowing said gas at the said velocity in indirect heat exchange with a fluid stream to be cooled.

3,049,892
DEFROSTING OF EVAPORATOR
Glenn Muffly, 1541 Crestview Drive, Springfield, Ohio
Application Dec. 12, 1955, Ser. No. 552,530, now Patent No. 2,942,432, dated June 28, 1960, which is a division of application Ser. No. 178,498, Aug. 9, 1950, now Patent No. 2,765,633, dated Oct. 9, 1956. Divided and this application Nov. 3, 1959, Ser. No. 850,984
5 Claims. (Cl. 62—210)



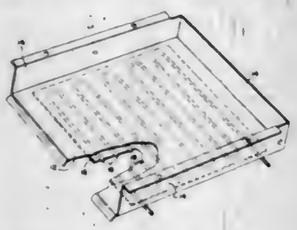
1. In a refrigerator, a space for storage of a product to be cooled, a primary refrigerating system, a secondary refrigerating system including an evaporator arranged to cool said space and a condenser arranged to be cooled by said primary system, heating means arranged to defrost said evaporator, valve means for shutting inlet and outlet of said evaporator off from said secondary condenser, and means for simultaneously actuating said heating means and said valve means.

3,049,893
THERMOSTATIC EXPANSION VALVE WITH CUT-OFF
James G. Hailey, 6005 Swiss Ave., Dallas, Tex.
Filed Apr. 29, 1959, Ser. No. 809,640
11 Claims. (Cl. 62—211)



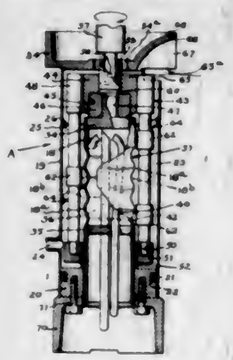
1. In combination with a thermostatic expansion valve in a refrigeration system including a diaphragm operated valve member and a valve body, a cutoff device comprising an adapter body mounted on the valve body of the expansion valve, said adapter body having a longitudinal passage therein, a lock pin slidable in the passage, one end of said lock pin being engageable with the diaphragm of the expansion valve, and a slidable wedge mounted in the adapter body, the inclined surface of the wedge being in engagement with the other end of the lock pin for moving the lock pin longitudinally thereby moving the diaphragm towards a disabled position whereby the valve member of the expansion valve may move toward a closed position, and means connected to said wedge for reciprocation thereof.

3,049,894
REFRIGERATING APPARATUS
Joseph R. Pichler, Dayton, and Harvey R. Tuck, Trotwood, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 23, 1960, Ser. No. 17,213
4 Claims. (Cl. 62—340)



1. An ice forming apparatus including an inclined plate having integrally formed side flanges and a bottom surface on which a slab of ice is adapted to be frozen, means for directing water over said inclined plate so as to freeze a slab of ice on said inclined plate, and means secured to the bottom side of said inclined plate for refrigerating said plate, said means including a metallic plate smaller than said inclined plate but substantially coextensive with the area of said bottom surface to be refrigerated and having a coefficient of heat transfer greater than that of said inclined plate.

3,049,895
MACHINE FOR MAKING ICE IN FLAKE FORM
Arthur G. Larson, Minitrista, Minn., and Francis M. Raver, Yoe, Pa., assignors to McQuay, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Sept. 27, 1960, Ser. No. 58,802
14 Claims. (Cl. 62—354)



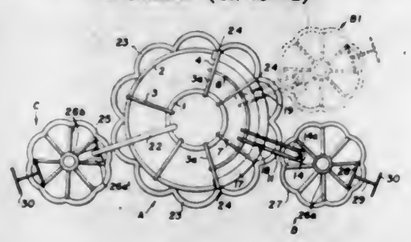
1. A machine for making ice in flake form, comprising an outer casing, a tubular inner casing within said outer casing, said casings defining a chamber therebetween, means for supplying liquid to said chamber to be frozen, means for chilling the inner casing sufficiently to effect the freezing on its outer surface of a quantity of the liquid within said chamber, means for breaking frozen liquid into fragments from said inner casing, said last means including a revoluble ice-breaking structure loosely encompassing the inner casing, means for rotating said structure about said inner casing, said structure having fracturing elements which engage frozen liquid on the outer surface of the inner casing and effect the breaking of such frozen liquid from such surface, said outer surface of said inner casing having relatively high portions which are closely skirted by the fracturing elements of the rotating ice-breaking structure, and having relatively low portions less closely skirted by said fracturing elements.

3,049,896
PERSONNEL ISOLATION AND PROTECTION SYSTEMS
Paul Webb, Yellow Springs, Ohio, assignor to Environment, Incorporated, Yellow Springs, Ohio, a corporation of Ohio
Filed Apr. 27, 1960, Ser. No. 25,105
7 Claims. (Cl. 62—384)



1. A protective system for isolating personnel in dangerous atmospheres while maintaining maximum mobility of the personnel, said system comprising an enclosing outer garment of material essentially impermeable to the atmosphere from which protection is desired and adapted to enclose the person completely defining a limited volume therewithin in which biological functioning of the person must be carried out, said outer garment including a transparent visor arranged for positioning opposite the eyes of the wearer providing external visibility for the wearer, passage means for conveying a circulating flow of air through the remote areas of the volume within said outer garment including a trunk duct, an air circulating means connected to circulate air through said duct, a portable power drive for said circulating means wholly contained within said outer garment, an air reconditioning unit including CO_2 absorber and a cooling device providing a heat sink for cooling and condensing of excess moisture from the air, means for mounting said reconditioning unit on the person within said outer garment, means directing the air flow induced by said circulating means through said reconditioning unit and into the volume within said garment, and means supplying a makeup quantity of oxygen to the circulating air to maintain a life-sustaining isolated atmosphere within said outer garment for an extended period of time.

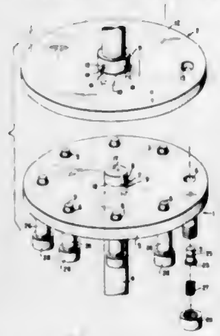
3,049,897
THREE LINK CONNECTOR WHEREIN THE LINKS MAY BE RELATIVELY ANGULARLY VARIED
Pierre Arpels, Paris, France, assignor to Societe Van Cleef & Arpels, Paris, France, a French corporation
Filed June 15, 1960, Ser. No. 36,232
Claims priority, application France Nov. 10, 1959
2 Claims. (Cl. 63—2)



1. A connector permitting a first and a second articulated element joined thereby to be arranged and secured in either of at least two alternative relative positions along at least two different directions in a plane in which said elements have a freedom of movement, when so secured, which is very much less than the angle between these

two directions, comprising an arcuate pivoting and guiding member of circular cross-section connected to a first of the elements, a coaxial arcuate locking member spaced from said first named arcuate member and joined to said first element and having two locking notches spaced angularly at a distance equal to the angle between the said two directions, an axle joined to the second element and a connecting spring member carried by the said axle and pivotally supported from the said pivoting and guiding member so as to be able to be turned about the latter and slid along it into registration with either locking notch, and said spring member having means thereon capable of being engaged elastically (with a snap action) in the selected notch.

3,049,898
APPARATUS FOR TRANSMITTING ROTARY MOTION
Donald E. Voth, Baton Rouge, La., assignor to Copolymer Rubber & Chemical Corporation, a corporation of Louisiana
Filed Mar. 15, 1961, Ser. No. 95,847
7 Claims. (Cl. 64—28)



1. An apparatus for transmitting rotary motion comprising a first member having a center of rotation and a plurality of openings therein having wall portions equispaced from the center of rotation, a second member having a second center of rotation and an opening therein alined with an opening in the first member, the centers of rotation of the first member and the second member falling on a straight line, a first shear pin disposed within an opening in the first member and received by the alined opening in the second member for transmitting rotary motion from one member to the other around the straight line as an axis of rotation, the wall portions of the plurality of openings in the first member and the alined opening in the second member being shaped to receive and hold shear pins against substantial lateral movement relative to the members, at least one additional shear pin disposed within an opening in the first member, and means for urging the shear pins longitudinally toward the second member, whereby the additional shear pin can be brought into alinement with said opening in the second flange upon breaking of the first shear pin.

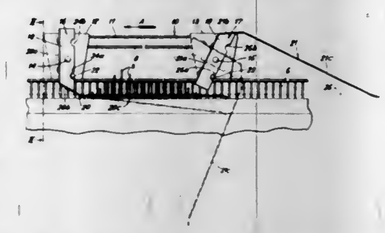
3,049,899
CIRCULAR KNITTING MACHINES
John Maurice Reymes Reymes-Cole, Blaby, and Bernard Thornton Reymes Reymes-Cole, Burbage, near Hinckley, England, assignors, by mesne assignments, to Singer-Fidelity, Inc., Philadelphia, Pa., a corporation of Delaware
Original application Nov. 19, 1956, Ser. No. 623,005, now Patent No. 2,980,981, dated Apr. 25, 1961. Divided and this application Aug. 27, 1959, Ser. No. 836,548
9 Claims. (Cl. 66—46)

1. A circular knitting machine organised to knit the foot, and leg of a ladies' stocking by rotational knitting and having a group of heel needles used for knitting the heel pouch and certain needles adjoining them and separated by intervening needles operable by means of butts of one length and other needles including said intervening needles used for knitting the forward or instep portion opposite the heel operable by means of butts



of a greater length and a selecting cam movable towards and away from an operative selecting position in relation to the needle in advance of the stitch cam in which selecting position the said selecting cam serves by selective deflection of needles to cause the needles operable by said greater length butts to be withheld from knitting activity while the remaining needles are caused to knit.

3,049,900
PRESSURE DEVICE FOR A FLAT BED KNITTING MACHINE
Walter Bräm, Dietikon, Zurich, Switzerland, assignor to Paliz-Holding A.G., Zug, Switzerland, a corporation of Switzerland
Filed Feb. 15, 1960, Ser. No. 8,805
Claims priority, application Switzerland Feb. 17, 1959
7 Claims. (Cl. 66—60)

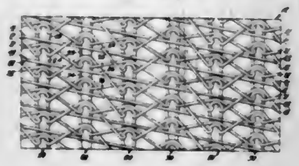


1. In a flat bed knitting machine for producing a knitted fabric, the machine having at least one oblong needle bed, a knocking-over comb connected to one long side of said needle bed, a plurality of juxtaposed parallel latch needles individually longitudinally movably supported by said bed, a knitted fabric supported by said needles, and cam means movably supported by said bed to move on said bed longitudinally thereof and transversely to the longitudinal axes of said needles and adapted to engage and to advance said needles through said comb and to retract said needles to a position behind said comb upon movement of said cam means: a pressure device including support means connected to said cam means to move therewith, and two mirror-symmetric pressure elements spaced in the longitudinal direction of said bed and individually rotatably connected to said support means to rotate in a vertical plane, which is parallel to the direction of movement of said cam means and adjacent to said comb, and to rotate on axes at right angles to said plane and above said needle bed, each of said pressure elements including a resilient arm extending downward below the plane of said needle bed when the respective pressure element is beyond said fabric and the needles thereat are in retracted position.

3,049,901
FLEXIBLE HOSE
John Greczin, Philadelphia, Pa., assignor, by mesne assignments, to Singer-Fidelity, Inc., Philadelphia, Pa., a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,403
4 Claims. (Cl. 66—190)

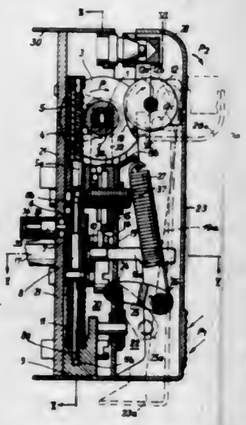
1. A reinforced flexible hose comprising a tubular hose body and a tubular knitted fabric surrounding said body,

said fabric being made up of separate individual mutually overlying knitted webs relatively arranged so that the wales of one web lie in parallel alignment with and within the spaces between the wales of the other web, the wale loops of both webs being disposed in the back face of the fabric, the yarn runs connecting the loops of each adjoining pair of wales of each web in one course following a path in the front face of the fabric passing in front of the loop of the intervening wale of the other web so



that in the spaces between the wales of said fabric, the connecting yarn runs of the webs intersect on lines diagonal to the said coursewise direction, and a reinforcing strand passing in front of the wale loops in one course of one web and following the paths of the connecting yarn runs of said course to pass in front of the wale loops of the other web and behind the diagonal connecting runs of said other web whereby said reinforcing strands are incorporated into the fabric intermediate its front and back faces with an absence of kinks, loops, and the like.

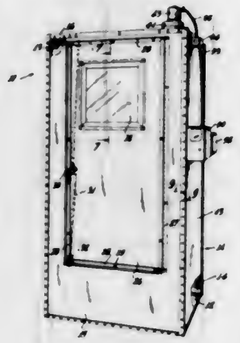
3,049,902
FRICTIONAL IGNITER
Theodor Ruetz, Kreuzlingen, Switzerland
Filed Oct. 21, 1959, Ser. No. 847,747
Claims priority, application Germany June 1, 1959
4 Claims. (Cl. 67—6.1)



1. An igniter comprising an axle, a disk-shaped flint rotatably mounted on the axle, said flint having a peripheral recess, a second axle, a friction wheel rotatable on the said second axle parallel to that of the disk-shaped flint, said friction wheel engaging said recess in the flint, and a spring biased means adapted to turn said flint to maintain a portion of said recess in contact with said friction wheel.

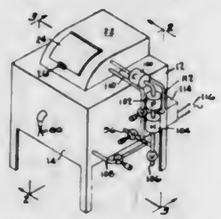
3,049,903
APPARATUS FOR STEAMING AND DRYING ARTICLES
Arthur Sussman, New York, N.Y., assignor to Automatic Steam Products Corp., New York, N.Y., a corporation of New York
Filed Feb. 7, 1961, Ser. No. 87,692
5 Claims. (Cl. 68—5)

5. In combination, a cabinet provided with a door, means near the upper end of the cabinet and accessible through said door to suspendingly support clothing, heating means located within the cabinet and near its lower end, means to operate the heating means to preheat the cabinet, said cabinet having an air outlet opening near its upper end, an air inlet opening near the lower end of the cabinet and located adjacent the heating means, a fan and associated air directing means to force and direct air into the cabinet through said inlet opening, over the heating means to be heated by said heating means,



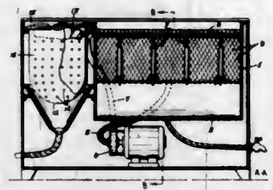
through the cabinet and out of said outlet opening, said heating means functioning to heat the cabinet independently of fan operation, and means additional to the heating means to inject steam into the lower end of the cabinet during the operation of the heating means, and control means operative to set the fan into operation independently of the heating means and subsequent to the operation of the means to inject steam into the cabinet and while the heating means is in operation.

3,049,904
DRY CLEANING MACHINE
Burton Rand, Bala-Cynwyd, Pa., assignor to Autosonics Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 14, 1961, Ser. No. 131,378
9 Claims. (Cl. 68—18)



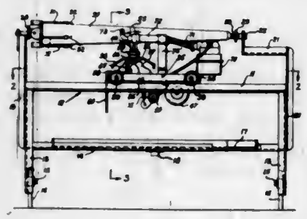
1. A dry cleaning machine comprising a housing, said housing having an upper chamber, said housing having a lower chamber adapted to have a cleaning solvent disposed therein, a perforated drum mounted for movement from a first position wherein said drum is disposed in said lower chamber to a second position wherein said drum is at least partially disposed within said upper chamber, means selectively isolating said drum and upper chamber from communication with said lower chamber in said second position of said drum, means for selectively causing said movement of said drum and for selectively rotating said drum, means for selectively creating air turbulence in said upper chamber, means for selectively removing volatile vapors from said upper chamber, and selectively operable means for reducing the volume of said drum exposed to said upper chamber.

3,049,905
CLOTHES WASHING MACHINE HAVING SQUEEZING MEANS TO EXTRACT LIQUID
Antonio Cunha Freire, Rua Sergipe 327-3°, Sao Paulo, Brazil
Filed June 28, 1960, Ser. No. 39,336
8 Claims. (Cl. 68—21)



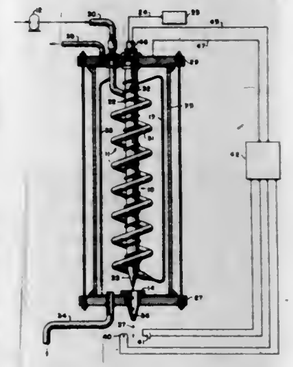
1. In a washing machine, in combination, reservoir means adapted to be filled with water to a predetermined level; divider means disposed in said reservoir means and forming a washing chamber and a filter chamber therein, said washing chamber being adapted to receive articles to be washed and to receive water for washing said articles, said divider means adapted to pass only water between said washing chamber and said filter chamber; flexible nozzle means in said washing chamber extending below said predetermined level of water therein for injecting water into said washing chamber, said flexible nozzle means reacting from the pressure of the water issuing therefrom so as to swing and thus agitate the water and the articles to be washed to separate the dirt therefrom and to divert said articles from blocking said divider means while allowing the water to pass through said divider means; and pump means connected to said filter chamber for removing the water therefrom and connected to said flexible nozzle means for circulating the water from said filter chamber therethrough.

3,049,906
FLESHING MACHINE
Lester Mills, Paynesville, Minn.
Filed Dec. 20, 1961, Ser. No. 160,735
4 Claims. (Cl. 69—46)



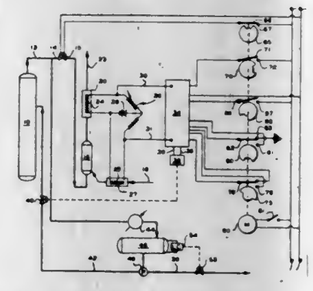
1. In a fleshing machine, in combination, a supporting frame, an upright extending above each end of said frame, a fleshing pole extending between said uprights, a spindle adapted for the reception of a pelt to be fleshed carried by said fleshing pole, a pair of tracks carried by the top of said frame extending in parallelism to said pole, a wheeled carriage having an open top forming an outer frame mounted on said tracks for longitudinal movement therealong, an inner frame pivotally mounted in said outer frame, an oscillating knife supporting arm carried by said inner frame, motor means dependingly secured to said inner frame for reciprocating said knife supporting arm, a fleshing knife detachably secured to the upper end of said knife supporting arm, and spring means positioned between said inner and outer frame tilting said inner frame in a direction to bias said fleshing knife into engagement with a pelt carried by said spindle.

3,049,907
FRACTIONAL BOILING POINT RECORDER
Francis B. Rolfson, San Pablo, Calif., assignor to Shell Oil Company, a corporation of Delaware
Filed June 27, 1958, Ser. No. 744,945
10 Claims. (Cl. 73—17)



1. A device for determining the boiling point of any fraction of a liquid mixture comprising: evaporator means; feed means for supplying a constant flow of the liquid mixture to the evaporator means; heating means for said evaporator means; control means for said heating means to control said heating means so that only the portion of said liquid mixture containing the fraction is evaporated and temperature measuring means for determining the temperature of the remaining liquid portion of the mixture.

3,049,908
PROGRAMMER-INTEGRATOR FOR CHROMATOGRAPHIC ANALYZER
Raymond L. Kindred and Marvin C. Burk, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 15, 1958, Ser. No. 755,312
15 Claims. (Cl. 73—23)



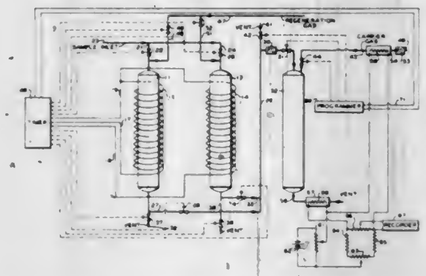
1. Process control apparatus comprising a chromatographic column having an inlet and an outlet; a sample measuring valve connected to said inlet; a sample cell connected to said outlet; a Wheatstone bridge circuit comprising first and second output terminals, a branch of the bridge being disposed in said sample cell, a zeroing potentiometer comprising a resistor connected between branches of said bridge circuit and a contactor, and means for connecting said contactor to one of said bridge output terminals; zero, integrating, and output signal servo circuits; a second potentiometer having a contactor; a direct current potential source connected to one terminal of said second potentiometer; means for providing to said zero and integrating circuits signals representative of the signals appearing between said bridge output terminals; means for adjusting said zeroing po-

tentiometer contactor responsive to said zero circuit; means for algebraically summing the signal from said integrating circuit and the signal from said second potentiometer contactor and for applying the summed signal to said output signal servo circuit; means for actuating said sample measuring valve for a first predetermined period of time; means for actuating said zero circuit for a second predetermined period of time; means for actuating said integrating circuit for a third predetermined period of time; and means for actuating said output signal servo circuit after said third period of time.

3,049,909
SAMPLING SYSTEM FOR AMMONIA-CONTAINING GASES

John C. Thomas, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 5, 1959, Ser. No. 844,533
6 Claims. (Cl. 73—23)

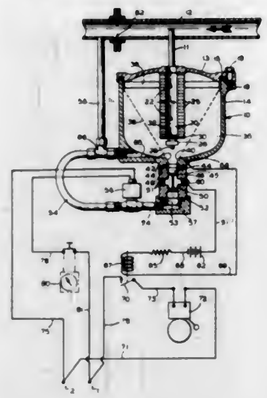


1. Apparatus for analyzing a fluid mixture comprising a first and second adsorption column filled with a material which selectively adsorbs one or more of the constituents of said fluid mixture, a first sample inlet conduit communicating with the inlet of said first adsorption column, a second sample inlet conduit communicating with the inlet of said second adsorption column, a first regeneration gas inlet conduit communicating with the inlet of said first adsorption column, a second regeneration gas inlet conduit communicating with the inlet of said second adsorption column, a first outlet conduit on said first adsorption column communicating with a sample inlet conduit on a chromatographic column, said first outlet conduit on said first adsorption column also communicating with a vent conduit, a first outlet conduit on said second adsorption column communicating with said sample inlet conduit on said chromatographic column, said first outlet conduit on said second adsorption column also communicating with a vent outlet, said sample inlet conduit on said chromatographic column having a vent conduit and a pneumatic valve therein, a carrier gas inlet conduit communicating with the inlet of said chromatographic column, said carrier gas inlet conduit having a flow controller and a first thermal conductivity cell therein, said chromatographic column in communication with an outlet vent conduit having a second thermal conductivity cell therein, said thermal conductivity cells having thermistors therein, the terminals of said thermistors being in thermal contact with the gases flowing through said inlet and outlet conduits of said chromatographic column, the terminals of said thermistors being connected to the terminals of a modified Wheatstone bridge network, said bridge being in electrical communication with a recorder, a programmer operating the pneumatic valves on the inlet conduits of said chromatographic column, a timer operating the pneumatic valves on the inlet and outlet conduits of said adsorption columns, and said timer and said programmer being in electrical communication with one another.

3,049,910
WATER DETECTOR FOR FUELS

George J. Topol, Hamilton, Ontario, Canada, assignor to Bowser, Inc., Fort Wayne, Ind., a corporation of Indiana

Filed Feb. 24, 1959, Ser. No. 795,191
5 Claims. (Cl. 73—53)

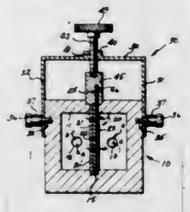


1. A device for detecting and measuring the amount of free and emulsified water in a liquid such as fuels and the like comprising means for diverting a substantially constant flow of said liquid during passage thereof, a coalescing medium through which said diverted flow is passed to produce freeing of the emulsified water therein, a foraminous member arranged in the path of flow of said liquid flow from said coalescing medium to effect separation of the free water from said liquid which is caused to pass therethrough, said foraminous member substantially surrounding said coalescing medium, a chamber for receiving said separated free water, electrical contact means adapted to form contact therebetween through the water contained in said chamber at a predetermined water content, and means for discharging said chamber at regular intervals, whereby accumulation of water in said chamber to form said contact is effected at or above predetermined percentages of water content of said fuel.

3,049,911
CELL FOR TESTING HYDROCARBON FUEL

Harold A. Price, Long Beach, Calif., assignor to Permanent Filter Corporation, Los Angeles, Calif., a corporation of California

Filed Nov. 12, 1959, Ser. No. 852,443
2 Claims. (Cl. 73—61)



1. A cell for testing hydrocarbon fuels comprising a body means having a cavity formed therein, said body means having an inlet and an outlet in communication with said cavity, a slot formed in the inner wall of said body means substantially surrounding said cavity for receiving an indicator means, the indicator means comprising a plurality of porous members of relatively flat construction disposed in abutting relationship with one another, an upstream one of said porous members comprising a hydrophobic material which is at least partially impregnated with a water soluble dye which is inert to hydrocarbons, an intermediate one of said porous members comprising a hydrophylic material adapted to receive said dye and indicate the presence of water when water passes through the test cell, a downstream one of said porous members comprising a relatively rigid member formed of metallic material, an opening formed in said body means, said slot means being in communication with said opening for inserting and removing the indicator means of the device, and a sealing member for sealing said opening during operation of the apparatus, said indicator means being disposed within said cavity such that the stream of flow passing between said inlet and outlet passes through said indicator means during operation of the cell.

3,049,912
TIME INTERVAL MEASURING DEVICE

William F. Cronin, Rye, N.Y., assignor to Branson Instruments, Inc., Stamford, Conn.

Filed Jan. 16, 1957, Ser. No. 634,442
12 Claims. (Cl. 73—67.9)



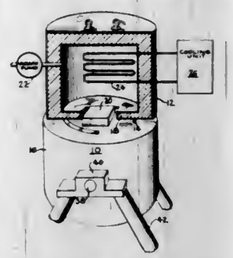
5. In a thickness measuring device, the combination of a source of alternating current, a gate pulse generator connected to convert alternatng current from sad source into a series of gate pulses each of which begins at the same point in a cycle of the alternating current input to said generator, phasing means connected between said source and said gate pulse generator and thereby adapted to vary the point along each cycle at the output of said source when a gate pulse is initiated, an oscillator, a transducer powered by said oscillator, frequency sweeping means connected to sweep the frequency of said oscillator in accordance with the output of said alternating current source, a coincidence gate circuit activated by the output of said gate pulse generator and the change in characteristics of said transducer resulting from acoustical resonance in an object coupled thereto, the frequency of said acoustical resonance corresponding to the thickness of said object, said gate circuit being arranged so that once activated it remains activated until the end of the gate pulse with which it was activated, and an integrator connected to the output of said gate circuit, the initiation and ending of each of said gate pulses corresponding to the tolerance limits on the thickness of said object, whereby the integral of the conduction time of said gate circuit indicates the proximity of the thickness of said object to the tolerances thereof.

3,049,913
ENVIRONMENTAL TEST APPARATUS

Frederick C. Hunt, Beverly, Mass., assignor, by mesne assignments, to Ling-Temco Electronics, Inc., a corporation of Delaware

Filed Oct. 24, 1958, Ser. No. 769,417
18 Claims. (Cl. 73—71.6)

1. Electrodynamic vibration test apparatus for imparting a reciprocating motion to a load comprising a magnetic core structure having an air gap therein, a direct current field winding a plurality of turns for establishing a unidirectional magnetic flux across the air gap, means including ducts for conducting a cooling medium past the winding turns to extract the heat therefrom, an armature movably supported with respect to the core structure and having an alternating current coil located in the air gap, the armature coil including a plurality of turns wound of a hollow electrical conductor, and conduit means including connections to the armature for circulating a cooling

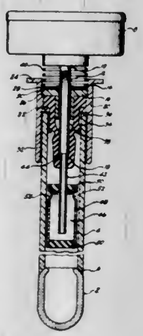


medium through the hollow conductor to conduct the heat from the armature said connections including yieldable portions disposed adjacent the armature to permit reciprocal movement thereof relative to the core structure.

3,049,914
GAGE ASSEMBLY AND ATTACHMENT FOR SOIL-MOISTURE TENSIOMETERS

Lorenzo A. Richards, 4455 5th St., Riverside, Calif.

Filed July 30, 1959, Ser. No. 830,580
8 Claims. (Cl. 73—73)



1. A soil-moisture tensiometer comprising a transparent, cylindrical soil tube, a porous ceramic cup having substantially the same diameter as said soil tube sealed to the lower end of said soil tube, and a vacuum gage assembly removably attached through a single opening provided at the top of and in axial alignment with said soil tube, the gage of said gage assembly being a Bourdon-type vacuum gage and communicating through tubular means with the interior of said soil tube, and gage assembly comprising sealing means consisting of a resilient boot having an external circular ridge intermediate between the ends thereof and normally contacting and forming a seal against the inside wall of said soil tube, and means for stretching said boot lengthwise to decrease the diameter of said external ridge.

3,049,915
SPECIMEN HOLDER FOR CONDUCTOMETRIC CORROSION MEASUREMENT

Arthur J. Freedman, Chicago Heights, Ill., and George Reid, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed July 2, 1959, Ser. No. 824,651
3 Claims. (Cl. 73—86)

1. A laboratory conductometric corrosion test probe assembly comprising a container for confining a corrodant, a cover for said container, a pair of tubes depending from said cover and extending into said container, clamp

means carried by each of said tubes, said clamp means being longitudinally disposed with respect to each other, said clamp means having electrically-insulating specimen-receiving jaws, at least one of said jaws being resilient,



a corrosion test specimen insertable between said jaws, and wire means extending through each of said tubes and having terminals in said specimen-receiving jaws whereby to establish electrical connection to said corrosion test specimen.

3,049,916
POCKET-SIZE TESTER FOR YARN, THREADS AND THE LIKE

Louis I. Weiner, West Newton, Mass., assignor to the United States of America as represented by the Secretary of the Army

Filed Mar. 27, 1959, Ser. No. 802,584
9 Claims. (Cl. 73—95)
(Granted under Title 35, U.S. Code (1952), sec. 266)



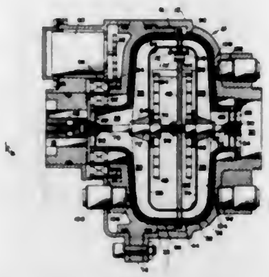
1. A device for testing the tensile strength of thread or the like comprising a frame member, a member conformed along a portion thereof to define an elongated pointer, means for rigidly anchoring said pointer forming member adjacent one end thereof upon said frame member, said pointer forming member being formed of spring metal so that a predetermined resistance to deflection is exerted by the free end of an anchored pointer, means on said frame member remote from said pointer for applying pull to a thread or the like anchored to said pointer thereby to deflect the latter, a first indicating member advanced by said pointer during deflection thereof a distance corresponding to the translatory dislocation of the thread to which pull is applied, a second indicating member advanced by said thread during the application of pull thereto a distance corresponding to the combined translatory dislocation and the elongation of the said thread and scales upon which the deflection of said pointer is indicated and both the translatory dislocation and the combined translatory dislocation and elongation of said thread are indicated by said indicating members.

3,049,917
FLOWMETER

Wallace J. Alspach, Davenport, Iowa, and Irving B. Cooper, Jr., Marblehead, Mass., assignors to The Bendix Corporation, a corporation of Delaware

Filed May 28, 1959, Ser. No. 816,469
6 Claims. (Cl. 73—194)

1. A mass flowmeter comprising a housing defining a flow path, first and second rotatable impellers disposed in series in said flow path, the first arranged to accelerate flow in a radial direction and the second arranged to decelerate said flow, drive means including a rotatable drive element and individual elastic coupling elements each

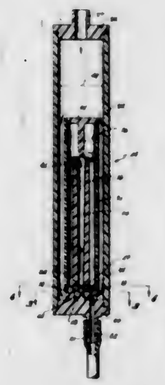


connected between said drive element and a respectively associated one of said impellers permitting rotational displacement between said drive element and said impellers, and means to measure the amount of said rotational displacement.

3,049,918
FLUID FLOWMETERS

Konstantin Sparkuhl, San Marino, Calif., assignor of fifty percent to Theodore Gregory, Studio City, Calif.

Filed Mar. 11, 1960, Ser. No. 14,260
4 Claims. (Cl. 73—209)

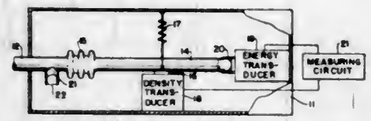


1. A flowmeter comprising three vertically and coaxially positioned cylinders, one of which has a tapered bore, fluid being adapted to first flow downwardly through said flowmeter, then upwardly in said tapered bore and then downwardly to exit from said cylinders, said cylinders including a first outer cylinder, a second cylinder within said first cylinder and closed at the top, and an inner cylinder having said tapered bore therein, said fluid first flowing downwardly between said second cylinder and said first cylinder, then upwardly through said tapered bore, and then downwardly between said second cylinder and said inner cylinder, said tapered bore in said inner cylinder having means therein for indicating the amount of fluid flowing therethrough, a base being provided for said first cylinder, said base being provided with a pair of bosses, a wall mounted on said bosses and spaced from the inner surface of said base, the ends of said second and inner cylinders being connected to said wall to provide a passage from the space between said first and second cylinders to said tapered bore.

3,049,919
MASS FLOWMETER

Wilfred Roth, % Roth Laboratory for Physical Research, 1240 Main St., West Hartford, Conn.

Filed Nov. 16, 1956, Ser. No. 622,629
18 Claims. (Cl. 73—228)

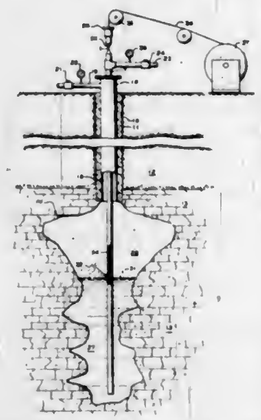


1. A mass flowmeter which comprises a closed housing, inlet and outlet fluid conduit sections mounted in a wall of said housing, a curved fluid conduit section within said housing, flexible couplings joining said inlet and outlet sections to the curved conduit section for fluid flow therethrough whereby a resultant force varying with flow energy is produced, said curved conduit section being oriented so that said resultant energy force is in a substantially horizontal direction, said flexible couplings allowing movement of the curved section in the direction of said resultant force and in the downward direction, the otherwise unoccupied volume of said housing being filled with fluid, flexible members attached fluid-tight to respective inlet and outlet conduit sections with opposite sides of each member subjected to fluid pressure within the respective conduit section and to fluid pressure in said housing to equalize said pressures, a substantially rigid member joining the moving portions of said flexible members to compel simultaneous movement thereof, and transducers responsive to forces in said directions for measuring energy and density of a fluid flowing in said curved conduit section.

3,049,920
METHOD OF DETERMINING AMOUNT OF FLUID IN UNDERGROUND STORAGE

James H. Allen, New York, N.Y., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 29, 1958, Ser. No. 738,663
8 Claims. (Cl. 73—291)

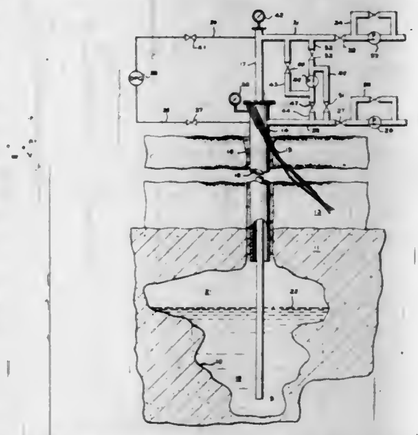


1. In a method of determining the amount of fluid stored above a pool of liquid in an underground storage cavern, said stored fluid being lighter than and immiscible with said liquid, said cavern comprising a chamber having known incremental volumes of relatively large diameter and an access bore of relatively small diameter extending up from said chamber to the ground, the physical steps comprising suspending an interface detecting device within said cavern and locating the interface between said stored fluid and said liquid, withdrawing said interface detecting device from said cavern after locating said interface, suspending a temperature recording device in said cavern and recording the temperature of said fluid in each of said incremental volumes above said interface, withdrawing said temperature recording device from said cavern, suspending a pressure recording device within said cavern and determining the pressure of said fluid in each of said incremental volumes, and withdrawing said pressure recording device from said cavern, whereby the amount of said fluid stored in said cavern can be computed by correlating all of the measurements taken.

3,049,921
UNDERGROUND STORAGE

Amos J. Shiver, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 843,010
17 Claims. (Cl. 73—302)



1. In a sealed underground storage cavern comprising a cavity having a relatively large diameter and an access bore having a relatively small diameter and extending from said cavity to the ground surface, said cavity containing in its lower portion a displacing liquid and in its upper portion a stored fluid lighter than and immiscible with said displacing liquid with an interface formed therebetween, a method of locating said interface, which comprises suspending a tubing within said access bore in such a manner that the lower open end of said tubing communicates with said displacing liquid and is initially filled therewith, introducing a column of said fluid from said cavern into said tubing, the lower end of said column terminating at a predetermined point within said tubing, and measuring the pressure differential between said fluid of said column and said cavern, whereby said pressure differential can be used as an index of the location of said interface.

3,049,922
COFFEE MAKER VISUAL INDICATOR

Fred C. Schwaneke, Chicago, Ill., assignor, by mesne assments, to Webcor, Inc., a corporation of Illinois

Filed Sept. 6, 1960, Ser. No. 54,149
1 Claim. (Cl. 73—323)

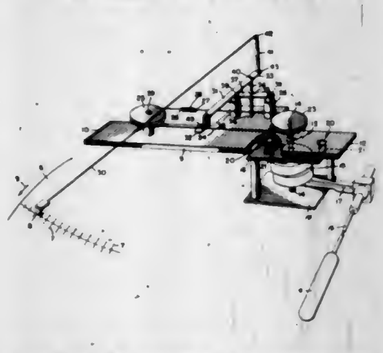
A visual indicating device adapted to a coffee maker for representation of the amount of liquid within a well comprising a contoured handle, screw members recessed in the handle to secure it to the coffee maker, a contoured groove formed in the handle, said groove substantially extending the length of the handle, a curved flow tube formed from a clear plastic material, a calibrated metallic readout, said readout and said tube disposed in said groove, an upper end of said tube open to atmospheric pressure, a lower end of said tube extending

through said handle into said coffee well, means to secure said lower end to the well in leakproof relationship, and means to secure the upper end of the tube to the handle



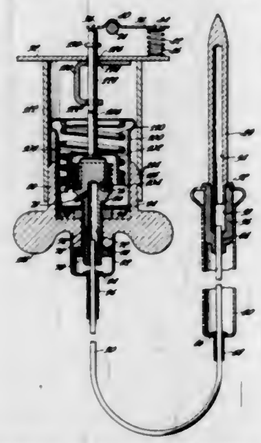
including an angular clip member secured to an upper surface of the handle and provides an opening therethrough in alignment with the upper end of the tube when in a secured position.

3,049,923
RECORDING THERMOMETERS
Curtis P. Mitchell, North College Hill, Ohio, assignor to Palmer Thermometers, Inc., Norwood, Ohio, a corporation of Ohio
Filed Dec. 30, 1957, Ser. No. 706,054
2 Claims. (Cl. 73—343.5)



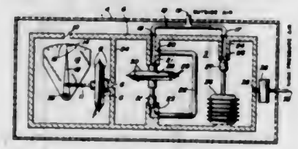
1. A recording thermometer for cooperation with a recording chart sheet and adapted for transport service, comprising a support plate, a pair of stools secured to the plate, a cross head, means securing the cross head to the stools and spaced thereby from the plate, an arm pivot journaled in the plate and in the cross head and projecting outwardly beyond the cross head, a rocker arm rigidly secured to the pivot having a portion extending forwardly in spaced overlying relation to the plate, a scribe arm secured to and movable with the rocker arm, said scribe arm being of greater length than the rocker arm and projecting thereabeyond, and control means variably to position the scribe arm carried by the plate including a plate assembly having upper and lower spaced plates and connecting means therefor, a Bourdon gauge and actuating means therefor including a temperature responsive element and coupled capillary gauge connected tubes carried by the assembly, a gauge pressure rotatable shaft carried by the gauge extending from the assembly through the plate and projecting above the plate, a lateral secured to the projecting portion of the shaft, operating connections between the lateral and the rocker arm for moving the rocker arm and scribe arm in accordance with Bourdon gauge effected movements of the lateral, and means for adjusting the angular relation of the lateral and thus the rocker and scribe arms relative to the support plate, said means including fasteners carried by the support plate engaged in arcuate slots formed in the upper plate of the assembly.

3,049,924
TEMPERATURE INDICATING DEVICE
Victor Weber, Greensburg, and William J. Russell, Williston, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Oct. 14, 1958, Ser. No. 767,233
6 Claims. (Cl. 73—368)



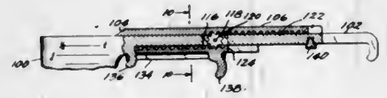
1. A temperature indicating apparatus for indicating temperatures within an enclosure at a location externally of a wall thereof, comprising in combination, a rotatable member adapted to be mounted externally of the wall, an indicator operable by said rotatable member, means for biasing said rotatable member in one direction, a first housing adapted to depend internally of the wall underlying said rotatable member, a second housing slidably engageable with said first housing, thermally responsive means including an expansible element mounted in said second housing for movement axially thereof and a flexible sensing element projecting from said expansible element, motion transmitting means operable between said expansible element and said rotatable member for moving the latter in another direction to operate said indicator in response to temperature variations at said sensing element, and interengaging elements on said first and second housings effective upon said slidable engagement for establishing a detachable connection therebetween whereby axial movement between said first and second housings is prevented, said thermally responsive means and said second housing thereby forming a unit manually separable from said first housing and adapted for removal from the enclosure.

3,049,925
CABIN PRESSURE SCHEDULE DEVIATION INDICATOR
Harcourt C. Sontag, 4717 37th St. N., Arlington 7, Va.
Filed Feb. 8, 1960, Ser. No. 7,496
4 Claims. (Cl. 73—407)
(Granted under Title 35, U.S. Code (1952), sec. 266)



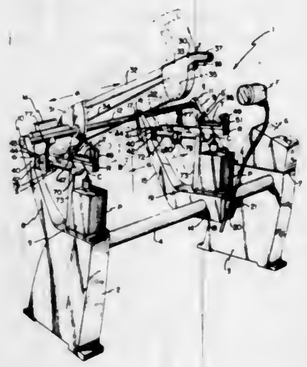
1. An indicator for indicating the deviation in pressure within an enclosure from a predetermined schedule of pressures to be maintained within said enclosure comprising a control chamber within said enclosure, means for varying the pressure within said control chamber according to a predetermined schedule of pressures, a first pressure capsule within said enclosure having an interior side and an exterior side, means for communicating the pressure within said control chamber to said interior side of said first pressure capsule, said exterior side of said first pressure capsule being exposed to the pressure within said enclosure and display means sensitive to the movement of said first pressure capsule for displaying the deviation of the pressure within said enclosure from said predetermined schedule of pressures.

3,049,926
MEASURING AND LEVELING VESSELS
Victor Victor, Bennett Gardens 4-A, Hempstead, N.Y.
Filed Apr. 8, 1958, Ser. No. 727,085
3 Claims. (Cl. 73—429)



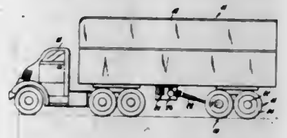
1. A measuring vessel comprising in combination: a container having an opening and having graduations thereon whereby desired amounts of substance to be contained therein may be measured; a handle extending from said container; a leveling means for said container opening; finger engaging means coupled with said leveling means for cooperating to impart movement to said leveling means to position said leveling means over said opening whereby said leveling means is adapted to move to strike off the excess substance from that in the container; and movement multiplying means coupled with said leveling means and said finger engaging means for multiplying the movement of said leveling means in response to a unit activation of said finger engaging means.

3,049,927
APPARATUS FOR BALANCING ROTATING BODIES
Marcellus S. Merrill and Lowell H. Erickson, Denver, Colo.; said Erickson assignor to said Merrill
Filed Dec. 15, 1958, Ser. No. 780,606
10 Claims. (Cl. 73—475)



1. In apparatus for balancing a rotatable body comprising a frame structure, a vibratory cradle mounted on the frame structure comprising two spaced suspension sections, each section comprising an elongated member, one end of said member being free to vibrate and having mounted thereon adjacent its free vibrating end bearing means for supporting the rotatable body at axially spaced points, a relatively short resilient connector mounted at one end on the frame structure, the other end of said member being secured to the connector adjacent its other end, a spring-like part mounted on said frame structure beneath said connector and member and arranged substantially coplanar therewith, fulcrum means connected and positioned between the part and member, the position of said fulcrum means being adjustable, the part, member and connector coacting with the adjusted fulcrum means to provide the vibratory phase of said member, and means responsive to the vibration of the member of each section for sensing the vibrations imparted to the sections.

3,049,928
NON-DRIVE TORQUE-TRANSMITTING AXLES FOR TRANSPORTATION VEHICLES
Lawrence G. Boughner, Detroit, Mich., assignor to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Filed Aug. 28, 1959, Ser. No. 836,740
8 Claims. (Cl. 74—13)

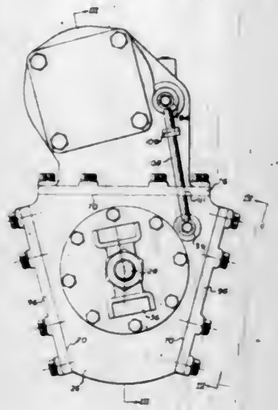


1. In a transportation vehicle, driven means mounted on said vehicle, and at least one non-driving torque-transmitting axle assembly supported at opposite ends by road-engaging wheels that rotate due to frictional contact with the ground for supporting said vehicle and driving said driven means, said axle assembly comprising a tubular axle housing, at least one non-driving wheel hub affixed to at least one of said wheels and rotatably mounted on said axle housing, said hub having an outwardly extending tubular section surrounding said housing in concentric spaced relation to said housing and terminating a predetermined axial distance inwardly of the adjacent outer end of said housing, a rotatably mounted shaft extending through said housing and terminating in a laterally extending flange member protruding beyond said housing in axially spaced relation to the end of said tubular section, means for drivingly connecting the inner end of said shaft to said driven means, and an adapter assembly for drivingly interconnecting said flange member and said hub for transmitting torque established by rotation of said wheels to said driven means.

3,049,929
SPLIT DRIVE SHAFT POWER TAKE-OFF UNIT
Robert W. Wagner, Chelsea, Mich., assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Mar. 6, 1959, Ser. No. 797,680
7 Claims. (Cl. 74—15.2)

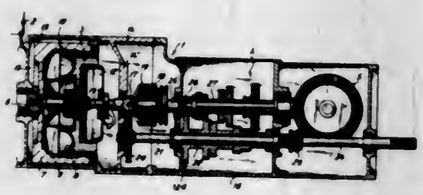
1. In a power take off drive assembly comprising a portion of a drive line, a housing, a plurality of large openings in relation to the housing dimensions defined on said housing such that the planes of said openings intersect in triangular relationship, input and output shafts journaled in said housing, clutch means selectively operable to drivingly interconnect said shafts, the planes

of each of said openings being the same distance from the axis of said input shaft, and means affixed to said



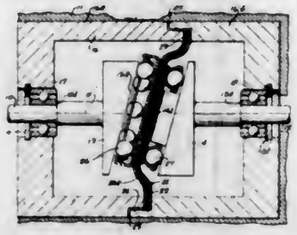
input shaft adjacent said openings for driving engagement with a power take off unit when secured to one of said openings.

3,049,930
POWER-TRANSMISSION UNIT, ESPECIALLY FOR TRACTORS
Ferdinand Porsche, Stuttgart, Karl Rabe, Korntal, Wurttemberg, and Walter Eberle, Goeppingen, Wurttemberg, Germany, assignors to Dr.-Ing. h.c.F. Porsche K.G., Stuttgart-Zuffenhausen, Germany
Filed Mar. 31, 1958, Ser. No. 725,324
Claims priority, application Germany Apr. 11, 1957
2 Claims. (Cl. 74—15.84)



1. A power transmitting unit, especially for a tractor, comprising change-speed transmission means having a hollow countershaft and operative to provide a plurality of different speeds, a drive clutch means operatively connected with said change-speed transmission means to enable the selective engagement of the drive through said change-speed transmission in the various speeds thereof, a power take-off shaft extending from the rear of said tractor adapted to drive agricultural implements, means for driving said power take-off shaft comprising an auxiliary shaft within said hollow countershaft and rotatable relative thereto, clutch means for selectively connecting said power take-off shaft and said auxiliary shaft comprising a slidable clutch member on said power take-off shaft and cooperating clutch teeth on one end of said auxiliary shaft, a gear secured to the other end of said auxiliary shaft, a drive shaft, a gear integral with said drive shaft meshing with said rotatable gear, said means for driving said power take-off shaft further comprising fluid coupling means comprising input means and output means, said output means being operatively connected with said drive shaft, and a rigid connection between said drive shaft and said drive clutch means.

3,049,931
SEALED ROTATION TRANSMISSION COUPLING
Alphonse G. Lang, Jr., Asheville, N.C., and Bernard S. Liss, Glen Rock, N.J., assignors to General Precision, Inc., a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,391
2 Claims. (Cl. 74—17.8)

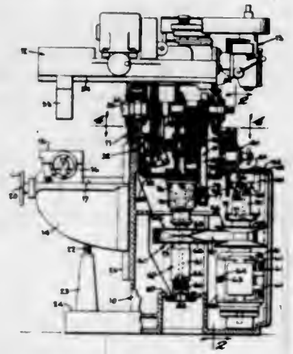


1. Means for rotating a member enclosed within a hermetically sealed housing comprising a flexible sheet sealing an opening through the housing, a member having an inclined surface external to the sheet and having a plurality of balls over said inclined surface against a relatively flat member attached to the flexible sheet, a second member having a complementary inclined surface inside the housing and having a plurality of balls in engagement with its incline, the balls being located against a relatively flat member attached to the other side of the flexible sheet, said first member being rotatively supported on a first shaft extending outside the housing and said second member being rotatively supported on a second shaft extending outside the opposite end of the housing that is coaxial with the first shaft, and both members being retained in pressured engagement against said flexible sheet thereby to enable their inclined surfaces to mate in sandwiched relation through the flexible sheet and the relatively flat members attached thereto, whereby rotation of said first shaft drives the second shaft, at least one of said relatively flat members attached to said flexible sheet being provided with an annular rim to define a cup; said balls bearing against said flat member having said annular rim to define said cup being removably disposed within said cup, at least one of said members having an inclined surface being provided with a substantially cylindrical hub integral with the member and substantially perpendicular to the inclined surface thereof, the second relatively flat member having a substantially circular central opening therethrough, the central opening being adapted to fit the cylindrical hub, said cylindrical hub being adapted to centrally support the second relatively flat member, the flexible sheet being formed of a thin flexible sheet of metal foil, a major portion of the surfaces of said metal foil being coated with a pliable plastic material.

3,049,932
VARIABLE PITCH DRIVING SYSTEM
S. Charles Straus, Cincinnati, Ohio, assignor to Cincinnati Manufacturing Corporation, Cincinnati, Ohio, a corporation of Ohio
Original application Aug. 30, 1956, Ser. No. 607,137, now Patent No. 2,963,944, dated Dec. 13, 1960. Divided and this application Mar. 1, 1960, Ser. No. 20,794
2 Claims. (Cl. 74—230.17)

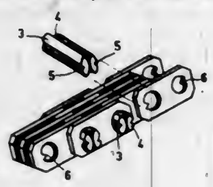
1. In a variable pitch driving system for a milling machine having a column, said system including variable pitch pulleys mounted for rotation about respective vertical axes, said pulleys being shiftable relative to one another along said vertical axes, and a belt connecting said pulleys, speed selector means for adjusting the pitch of said pulley system comprising, shiftable means connected to said pulleys for changing the pitch thereof, a speed selector shaft journalled in said column for rotation about

a generally horizontal axis, manual means for rotating said shaft, a worm mounted on the speed selector shaft, a rock shaft journalled in said column for rotation about a generally horizontal axis, a worm wheel keyed to said rock shaft, said worm wheel meshing with said worm, whereby the rock shaft is rotated in response to rotation of the speed selector, shaft and worm, said worm and worm wheel locking the rock shaft against rotary motion in a selected speed setting, a rock shaft lever keyed to the rock shaft, said rock shaft lever projecting from the rock shaft along a generally horizontal axis when the speed selector means is adjusted to an intermediate speed position, a yoke



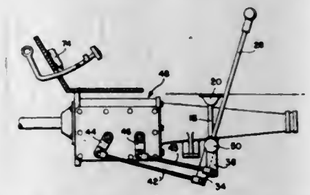
lever disposed along a generally horizontal axis and having one end pivotally connected to the column, a rigid link pivotally connecting the opposite end of said yoke lever to said rock shaft lever, said rigid link being disposed along a generally vertical axis, means connecting said yoke lever to the shiftable means of said variable pitch pulley, and a speed indicator mounted on said rock shaft, said speed selector shaft upon being rotated, causing rotation of said rock shaft and shifting the shiftable means of the variable pitch pulleys, in a direction to increase or decrease the pitch thereof, said indicator denoting the speed provided by said pulley system in response to rotation of the speed selector shaft.

3,049,933
VARIABLE STEPLESS CHAIN GEAR
Wilhelm Besel, Bad Homburg vor der Hohe, Germany, assignor to Firma Reimers-Getriebe KG, Ascona, Tessin, Switzerland
Filed Feb. 16, 1959, Ser. No. 793,443
Claims priority, application Germany Feb. 14, 1958
7 Claims. (Cl. 74—230.17)



1. In a stepless variable chain transmission, two discs having respective opposite coaxial conical faces constituting a V-pulley; and an elongated chain trained over said pulley and including a plurality of longitudinally consecutive links, adjacent ones of said links being formed with aligned openings jointly defining a passage longitudinally extending in a direction transverse of the chain; and two pin members in said passage pivotally connecting said adjacent links, each of said pin members having a face in said passage pivotally engaging the corresponding face of the other pin member for relative movement about an axis extending in said direction, and two end faces axially projecting from said passage for respective frictional engagement with said conical faces.

3,049,934
ELECTRICALLY ASSISTED MANUAL GEAR SHIFT MEANS
John L. Butler, Rte. 3, Box 570, Anacortes, Wash., and Richard A. Clemens, 1234 E. 98th St., Seattle, Wash.
Filed Jan. 27, 1961, Ser. No. 85,232
7 Claims. (Cl. 74—335)

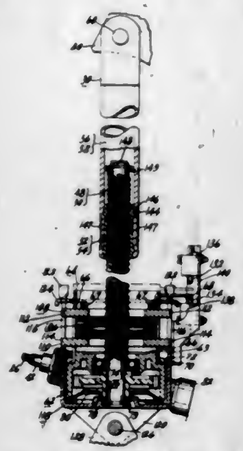


1. An electrically assisted manual gear shift means for a change speed gear transmission comprising: a horizontally disposed solenoid shaft; means for fixedly securing one end of said shaft; a gear selector means operably disposed on said shaft for selecting the movable gear required to effect a given gear change; said selector means comprising a shift selector yoke revolvably mounted on said shaft, having means to prevent it from moving longitudinally of said shaft and having a downwardly extending portion which is bifurcated to provide a lug receiving opening; a second and third speed shift bar revolvable and slidable on said solenoid shaft and having a shift lug adapted to selectively engage said lug receiving opening; a compression spring encircling said shaft and biasing said second and third speed shift bar to move toward said downward extending portion of said shift selector yoke, a first speed and reverse shift bar slidably and revolvably disposed on said solenoid shaft and having a shift lug disposed to selectively engage said lug receiving opening, spacing abutment and sleeve means providing a spacing means for said shift bars to prevent side engagement between said shift lugs, a solenoid coil slidably disposed on said solenoid shaft and adapted to use said shaft as a reactance core and move said first speed and reverse shift bar toward said selector when electric current is applied to said coil, said coil being returned to its de-energized position when the electric current is interrupted, by said compression spring; a source of electric current for operating said coil and switch means for controlling said current application to said coil; a manually operated shift lever for operating said selector yoke and shift rods operatively connecting said shift bars to said transmission.

3,049,935
FOLDING TOP ACTUATION MECHANISM
Milton E. Simmons and Carl J. Finsterwalder, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 56,738
6 Claims. (Cl. 74—424.8)

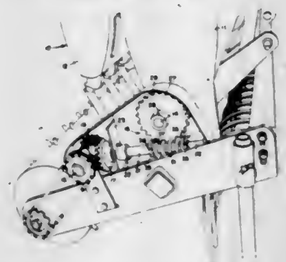
6. A screw and nut actuator including, a U-shaped mounting bracket having a pair of upstanding legs with diametrically located slots therein, a housing assembly disposed between the legs of said bracket and capable of axial movement relative thereto, said housing assembly comprising a gear housing and a spring housing rigidly attached thereto, said spring housing having a pair of diametrically located slots in radial alignment with the slots in the legs of said bracket, a pair of spaced washers disposed within said spring housing having radially extending fingers projecting through the aligned slots in said spring housing and said bracket legs, a re-

taining plate interconnecting the legs of said bracket adjacent the upper ends thereof, a preloaded Belleville spring washer stack disposed between said spaced washers and normally urging said washers in opposite directions into engagement with spaced movable abutment means on said housing assembly and said retaining plate and the ends of the slots in said bracket legs, said movable abutment means on said housing assembly comprising a plu-



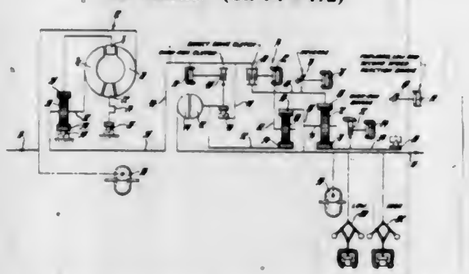
rality of circumferentially spaced inwardly extending tabs on said spring housing and the upper surface of said gear housing, a jackscrew rotatably journalled in said gear housing, and a nonrotatable nut threadedly engaging said jackscrew whereby when said jackscrew is subjected to a thrust load of a predetermined magnitude in either direction said jackscrew and said housing assembly will move axially in one direction or the other relative to said mounting bracket thereby compressing said Belleville spring washer stack.

3,049,936
WORM GEARING
Ernest E. Schnell, West Bend, Wis., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,221
2 Claims. (Cl. 74—458)



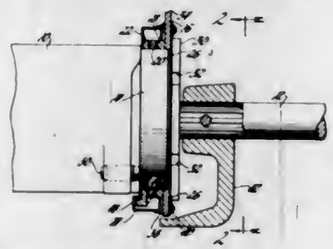
1. Yieldable drive gearing of the speed reduction type comprising: a shaft; a driven gear; and a driving worm mounted about said shaft and meshing with said gear to drive said gear, said worm comprising a helical spring coaxially carried by the shaft and axially removable therefrom, said spring having opposite terminal ends, each end being a partial continuation of the helix of the spring and lying generally at an angle to a radial plane normal to the shaft axis and each end further having a terminal portion transverse thereto to provide a driving abutment, the coils of the spring being spaced apart so as to mesh with the teeth of said driven gear; and two substantially identical collars coaxially carried by the shaft and in facing relationship to each other respectively at opposite ends of the helical spring, each of said collars having a notch therein facing the respective end of the spring and shaped to conform to said end, each notch having one wall inclined at the aforesaid angle to seat against its spring end and another wall engaging the respective abutment in driving relation thereto, and releasable means cooperable between at least one collar and the shaft for removably securing said collar about the shaft, the parts being so arranged and constructed that rotation of the shaft in either direction causes the collars to drive the helical spring worm which will in turn cause the driven gear to be driven, intermediate portions of the helical spring worm being free to resiliently flex generally axially in response to certain stresses or impact loads imposed on the drive when the shaft is rotated in either direction.

3,049,937
TRANSMISSION
John D. Lindsay, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 777,112
18 Claims. (Cl. 74—472)



1. A power transmission comprising in combination, a hydrodynamic torque converter which is driven by an engine controlled by a throttle and which drives an output member, the torque converter circulating liquid through an impeller, a turbine and a bladed reaction member whose blades can be placed in a high angle position in which they redirect through a relatively large angle liquid flowing from the turbine to the impeller and can be placed in a low angle position in which they redirect such liquid through a relatively small angle; means which holds the blades at high angle in response to closing of the throttle; and means which holds the blades at low angle in response to opening of the throttle.

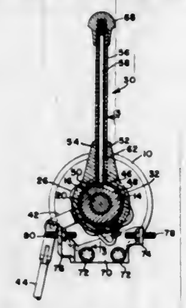
3,049,938
STEERING WHEEL STOP MECHANISM
Richard E. Hulten, Pontiac, and Carl J. Miller, Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 20, 1960, Ser. No. 57,303
5 Claims. (Cl. 74—526)



1. A vehicle including a rotary steering input member and dirigible means, a stop mechanism for said rotary

member comprising first stop means adapted to rotate with said member, fixed stop means axially spaced from said first stop means, a fixed support mediate said first stop means and said fixed stop means, and one or more ring elements encircling said support in axial alignment and rotatable thereon, each such ring element being provided with tang means coacting with said first stop means and said fixed stop means to limit the number of turns of said rotary input member possible in either direction of rotation of said member.

3,049,939
CONTROL MECHANISM
Lawrence R. Beard, Waterloo, Iowa, assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Apr. 3, 1961, Ser. No. 100,150
7 Claims. (Cl. 74—526)



1. In control mechanism having a support and a controllable device, the combination of: a shaft having first and second axially spaced apart portions, said first portion having means thereon for the mounting thereof on the support and said second portion being of circular section and having an outer circumferentially directed slot provided with opposite ends serving as angularly spaced apart stops; a sleeve concentrically surrounding the shaft and turnable thereon and having first and second ends respectively adjacent to said first and second ends of the shaft, said first end of the sleeve having means for the connection thereof to the controllable device and said second end of said sleeve having an aperture therethrough in radial register with said slot; a hub coaxially fixed to said second end of the sleeve and having a bore therein radial to the shaft and sleeve axis and in radial register with said sleeve opening; a plunger axially slidably carried in the bore and including an outer handle part projecting radially outwardly from the hub and an inner part of smaller transverse dimension than the arcuate length of the slot and adapted to project through the sleeve opening and into said slot; and biasing means acting between the hub and the plunger for normally urging the plunger inwardly to cause said inner part to travel in the slot as the handle part turns the sleeve whereby engagement of said inner part with either end of said slot limits turning of said sleeve, and said biasing means being yieldable to outward movement of the plunger via force applied to the handle part to withdraw the inner part clear of the shaft so as to enable further turning of the sleeve.

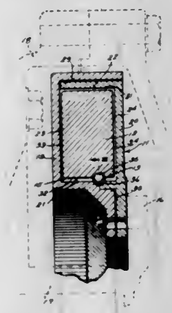
3,049,940
BALANCED PISTON SHOE
Darby B. Neff, Worthington, and John F. Dykes, Columbus, Ohio, assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 658,165, May 9, 1957. This application Feb. 8, 1961, Ser. No. 87,977
11 Claims. (Cl. 74—569)

1. A piston shoe for use in a fluid pressure energy translating device including a circular sole portion having an end face grooved to form an endless sealing land surrounded by wear pads and surrounding deflection pad means, said endless sealing land and wear pads having cam engaging surfaces lying on one plane, and said deflection pad means having cam engaging surface means lying on a second plane, said second plane extending through said sealing land and wear pad means; a neck portion of smaller diameter than said sole portion cooperating therewith to form a circular shoulder and extending from said sole portion opposite said face on an axis lying at right angles to the latter; a swageable skirt portion of greater diameter than said sole portion extend-



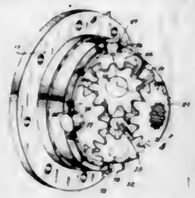
ing axially from said neck portion; wall means in said neck and skirt portions forming a socket including a hemispherical portion in said neck portion, a cylindrical portion extending from said hemispherical portion and a portion flaring outwardly from said hemispherical portion, said hemispherical portion having its radius originating at a point on said axis, said piston shoe having its center of gravity substantially on said point whereby said piston shoe will be substantially balanced dynamically and statically; wall means forming a recess in said neck portion opening to said hemispherical surface, and passage means extending from said recess to said end face and within the confines of said sealing land.

3,049,941
VIBRATION DAMPER STRUCTURE
Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Apr. 28, 1961, Ser. No. 106,221
6 Claims. (Cl. 74—574)



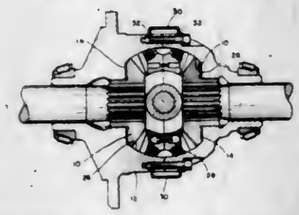
1. A viscous torsional vibration damper, comprising in combination: a pair of complementary housing sections of generally ring form having opposed annular axially opening complementary chamber recesses, said sections each having axially directed outer peripheral telescopically connected flanges and hub portions overlappingly related and secured together; inertia mass means housed within said chamber recesses; a series of bearings each engaging both of said housing sections and said inertia mass means, and jointly operative to support said inertia mass means in spaced relation to said housing sections and viscous damping fluid in said recesses in engagement with said housing sections and said inertia mass means.

3,049,942
DIFFERENTIAL WITH AUTOMATIC SLIP CONTROL
Conrad Dings Kohler, Box 2, Kohler, Wis.
Filed Jan. 3, 1961, Ser. No. 80,093
6 Claims. (Cl. 74—710.5)



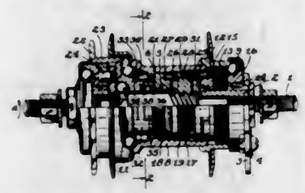
1. In a differential for driving aligned shafts, the combination with a cage comprising a housing having mounting portions coaxial with said shafts and having interior braking surfaces, shaft-connected gears within the housing, planetary gears within the housing including driving differential gears and also including intermediate gears each meshing between a driving gear and a shaft-connected gears, means including pins normal to said braking surfaces of the housing and upon which the several planetary gears are rotatable and upon which at least some of said gears are free for limited axial movement to and from respective braking surfaces of the housing, the gears so movable having braking surfaces complementary to the respective braking surfaces of the housing, means for transporting the pins and the planetary gears with the housing while accommodating differential action of the planetary and intermediate gears between the shaft-connected gears, the several gears having mating teeth with pressure angles of at least 20° whereby the transmission of motion from the housing through the planetary gears to the axle-connected gears develops a reaction pressure on the intermediate gears tending to move them axially into braking engagement with the interior of the housing.

3,049,943
DIFFERENTIAL
Herman C. Frentzel, % Frentzel Engineering Company, 125 W. Melvina St., Milwaukee 12, Wis.
Filed Aug. 13, 1959, Ser. No. 833,546
8 Claims. (Cl. 74—711)



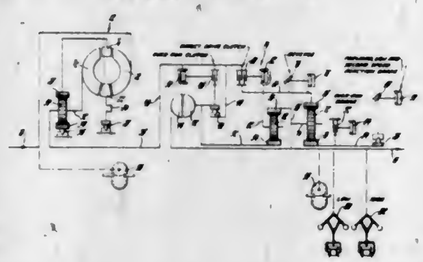
1. A differential for an automotive vehicle comprising, a rotatable housing, rotatable axles extending into the housing, driven gears positioned within the housing and secured to the ends of the axles, pinion gears rotatably carried by the housing and meshing with the driven gears, a single block positioned within the housing and defining areas of engagement and disengagement between the teeth of the pinion and driven gears, an annular enclosed reservoir mounted to slide on the housing in the plane of rotation of the axis of the pinion gears, means for supplying hydraulic liquid to the reservoir, means for transferring the liquid from the reservoir to the areas of disengagement when relative rotation occurs in the differential, and means in the block for regulating pressure difference between each of the areas of engagement and a corresponding area of disengagement so that the differential will provide some driving force to both axles at all times.

3,049,944
SEMI-AUTOMATIC TWO-SPEED HUB GEARING FOR VELOCIPEDES
Glenn S. Spencer, Horseheads, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 844,591
6 Claims. (Cl. 74—750)



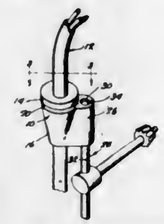
1. In a semi-automatic two-speed gear drive for velocipedes and the like a fixed axle, an anchor member non-rotatably mounted thereon, a low-speed screw shaft journalled on the axle, a high speed screw shaft rotatably mounted on the low-speed shaft, means for rotating said shafts at different speeds from a common driving member, a hub rotatably mounted on the anchor member and the high speed screw shaft, a low-speed clutch member threaded on the low-speed screw shaft and formed to engage and rotate the hub responsive to forward rotation of the low-speed screw shaft, a high speed clutch member threaded on the high speed screw shaft and formed to engage and rotate the hub responsive to forward rotation of the high speed screw shaft, and means under the control of the operator for preventing engagement of the high speed clutch member with the hub comprising an abutment member formed with radially biased circumferentially extending spring arms bearing in a circumferential groove in the high speed screw shaft to form a frictional swivel connection therewith and having a pawl and ratchet connection with the high speed clutch member, said abutment member and high speed clutch member having projections engageable to selectively prevent the high speed clutch member from moving into clutching engagement with the hub.

3,049,945
TRANSMISSION
John D. Lindsay, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Nov. 28, 1958, Ser. No. 777,112. Divided and this application Dec. 10, 1959, Ser. No. 858,741
4 Claims. (Cl. 74—759)



1. A power transmission comprising in combination, an output shaft; a planetary gearset which drives the output shaft including an input gear, a reaction gear, and a planet gear meshing with the input and reaction gears and journalled on a carrier which is connected to the output shaft; a one-way torque-establishing device which prevents reverse rotation of the reaction gear while permitting forward rotation thereof; another planetary gearset which drives said input gear including an input gear, a reaction gear and a planet gear journalled on a carrier which is connected to the first-mentioned input gear, the second-mentioned reaction gear being connected to the output shaft; power input means; a one-way torque-establishing connection between the input means and the second-mentioned input gear; means which selectively connects and disconnects the power input means and the first-mentioned input gear; and means which selectively establishes and interrupts a torque-transmitting connection between the second input gear and the output shaft.

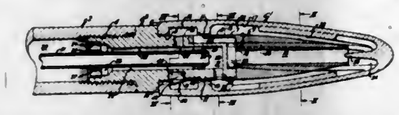
3,049,946
CHUCK KEY HOLDER AND STRAIN RELIEF
Robert K. Schelke, Richmond, Ind., assignor to Belden Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 27, 1959, Ser. No. 855,929
2 Claims. (Cl. 77—6)



1. A strain relief adapted for mounting about a power conductor of an electrical appliance and provided with a holder for an accessory used with the appliance; which strain relief comprises an elongated body portion, a projection extending laterally from said body portion, and a head portion; said head portion being joined to said body portion by a connection segment having a smaller cross-sectional area than said body portion and said head portion; said connecting segment being generally cylindrical in cross-section and having oppositely disposed truncated side portions; said projection having an aperture extending longitudinally therethrough for holding the accessory used with the appliance; the longitudinal axis of said aperture being positioned at a predetermined angle relative to the truncated sides of said body portion; said apertured projection having a flat surface lying in the same plane as the surface of said body portion adjacent said connecting segment so that said projection abuts the supporting wall of an appliance adapted with said strain relief and whereby an accessory used with the appliance may be readily inserted and withdrawn from said aperture without imparting undesirable flexing and bending to the power cord of the appliance whereto said strain relief is secured.

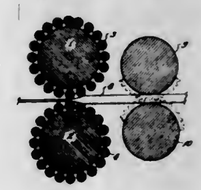
3,049,947
WATER-COOLED MANDREL
James Arthur Milnes, Frisco, Pa.
(Mounted Rte. 11, Ellwood City, Pa.)
Filed May 5, 1959, Ser. No. 811,089
7 Claims. (Cl. 78—103)

1. In a mandrel for fabricating seamless tubing, the combination with a tubular mandrel bar and a bar cap secured to its outer end, of a hollow mandrel supported on said mandrel bar by said bar cap, an extension having an axial opening secured to and projecting axially outwardly from said bar cap and cooperating with said hollow mandrel to define an inlet passage for the flow of cooling water over the internal surface of said hollow mandrel, a water supply pipe extending through said mandrel bar for delivering cooling water to said bar cap, said pipe and mandrel bar having spaced surfaces defining an exhaust passage for the removal of cooling water from said bar cap, and means including an inlet port in



said bar cap for delivering cooling water from said supply pipe through said inlet passage to the outer end of said mandrel, and means including said axial opening in said tubular extension and an outlet port in said bar cap connecting said axial opening with said exhaust passage for exhausting the cooling water from the forward end of said mandrel into the said exhaust passage.

3,049,948
DUAL DRIVE PLANETARY REDUCING MILLS
Tadeusz Sendzimir, Waterbury, Conn., assignor, by mesne assignments, of three-fortieths to Tadeusz Sendzimir and Bertha Sendzimir, trustees
Original application June 11, 1954, Ser. No. 436,075, now Patent No. 2,932,997, dated Apr. 19, 1960. Divided and this application Jan. 26, 1960, Ser. No. 4,699
6 Claims. (Cl. 80—38)

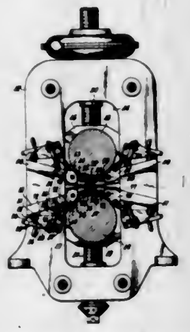


1. In a planetary rolling mill, a pair of driven backing rolls adjustable toward and away from each other for screwdown purposes, a series of working rolls arranged as satellites about the periphery of each backing roll and arranged to be driven by frictional contact therewith, means for maintaining predetermined radial positions of said working rolls about the peripheries of said backing rolls so as to insure simultaneous initial contact of a working roll of each series with a work piece being reduced in said mill, and means for applying to said working rolls in the active zone a force urging the working rolls forwardly in the direction of their translation about said backing rolls whereby to cause said working rolls in said active zone to exert on the work piece a forwardly directed pushing force, the ends of the said working rolls being mounted in retaining rings, the said rings being geared together, the said force applying means including a connection between said rings and a variable speed prime mover distinct from a source of power connected to said backing rolls.

3,049,949
ROLLING MILL
Clemens Volkhausen, Dusseldorf, and Arno Teutsch, Hosel, Kreis, Dusseldorf, Germany, assignors to Schloemann Aktiengesellschaft, Dusseldorf, Germany
Filed Aug. 11, 1959, Ser. No. 832,934
Claims priority, application Germany Aug. 12, 1958
9 Claims. (Cl. 80—38)

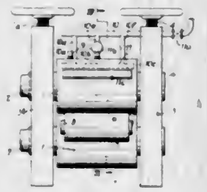
1. A rolling mill comprising a housing, upper and lower positively driven spaced backing rolls rotatably mounted in said housing, upper and lower freely rotatable working rolls disposed between said backing rolls, said working

rolls being spaced from said backing rolls, an upper pair of supporting rolls engaging said upper working roll and said upper backing roll, an upper pair of rigid beams secured to said housing and disposed on opposite sides of said upper backing roll in spaced parallel relation, an upper pair of supporting rollers rotatably mounted on said beams, upper intermediate rolls disposed between said supporting rollers and said supporting rolls, said upper supporting rollers engaging said upper backing roll and said intermediate rolls and providing lateral support for



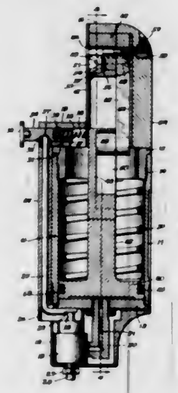
said upper supporting rolls, the lower pair of supporting rolls engaging said lower working roll and said lower backing roll, a lower pair of rigid beams secured to said housing and disposed on opposite sides of said lower backing roll in spaced parallel relation and a lower pair of supporting rollers comprising a plurality of axially spaced rollers rotatably mounted on said lower beams, lower intermediate rolls disposed between said lower supporting rollers and said lower supporting rolls, said lower supporting rollers engaging said lower backing roll and said lower intermediate rolls and providing lateral support for said lower supporting rolls.

3,049,950
MANUFACTURE OF METAL SHEET OR STRIP
William Kenneth Jamieson Pearson, Denham, England, assignor to The British Aluminium Company Limited, London, England, a company of Great Britain
Filed Sept. 15, 1958, Ser. No. 761,231
10 Claims. (Cl. 80—56)



1. A method of controlling the flatness or shape of metal strip produced by passing the strip through the bite of a pair of cooperating rolls in a rolling mill, which includes the following steps: measuring the difference between the radii of at least one of the rolls at at least two axially spaced locations thereon; establishing a predetermined difference value between said radii; measuring the difference between said radii of said roll against said predetermined difference value; and then modifying a controlling factor that is contributing to any departure in the difference between said radii from said predetermined difference value in accordance with the magnitude of such departure from the predetermined difference value in order to correct and compensate for such departure and restore the difference between said radii to a difference corresponding to said predetermined difference value.

3,049,951
PORTABLE CRIMPING TOOL
John M. Rensink, Tinley Park, Ill., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed Oct. 25, 1960, Ser. No. 64,847
2 Claims. (Cl. 81—15)



1. A tool for facilitating a worker's crimping of electrical contacts or the like comprising a frame having a portion defining a handle with a pair of ends, said handle being of a size to be conveniently received in and gripped by a worker's hand, said frame having an extension at one of said ends; power means in said handle, said power means including a fluid cylinder disposed about a first axis intersecting said ends, said cylinder having a cylinder head at the end thereof adjacent the other end of the handle, a piston within said cylinder, and a spring in said cylinder and bearing against said piston and said frame to urge said piston towards said cylinder head; a fluid valve in said handle adjacent said other end thereof communicating with said cylinder; a fluid supply connection at said other end communicating with said valve; an operating member operatively connected to said valve and positioned at said one end, said member being movable generally transversely of said handle to actuate said valve; a slide within said frame and movable with respect to the frame in a direction parallel to said axis, said slide having a cam slot therein, said slot being positioned angularly with respect to said axis, said slide being connected to said piston for movement therewith; crimping means in the aforesaid extension of the frame and rotatable in said frame about a second axis normal to said first axis, said crimping means having an opening along said second axis to receive a contact to be crimped; a cam follower in said cam slot; and a lever connecting said follower and said crimping means to rotate the crimping means as said slide is moved by said power means.

3,049,952
MULTI-PURPOSE WRENCH
Walter L. Wrigley, 124 S. Pine St., Palatine, Ill.
Filed Mar. 21, 1960, Ser. No. 16,283
5 Claims. (Cl. 81—71)

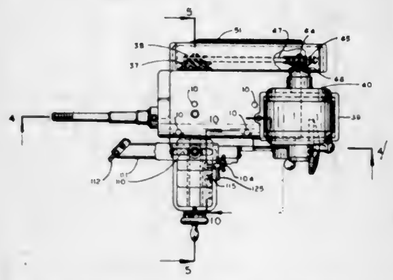
1. A wrench comprising an elongate body, said body having a bore, a plunger slidable in said bore, means for selectively establishing a drive connection between the plunger and the body and for disconnecting the plunger from the body, fastener engaging means carried by said

plunger and movable therewith, and a second fastener engaging means operatively connected with said body and having the first-mentioned fastener engaging means projecting coaxially therethrough and therebeyond to an operative position, said drive connection establishing means comprising a slot in the side wall of said plunger open at one end of said plunger, and a projection carried



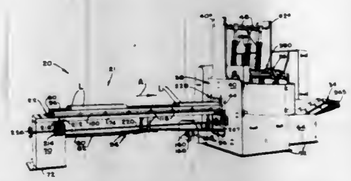
by said body and engageable with said slot through the open end thereof, said slot being of a length less than the longitudinal dimension of the free space in the body beyond the other end of the plunger when in its extended position, whereby said plunger may be retracted to a position wherein the projection will be disengaged from the slot and engageable with said one end of said plunger for supporting same.

3,049,953
LATHES AND METHOD OF MAKING SAME
Harry B. Barrett, Clayton, Mo.
(2101 Cass Ave., St. Louis 6, Mo.)
Filed Mar. 20, 1958, Ser. No. 722,795
7 Claims. (Cl. 82—24)



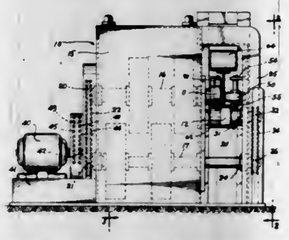
1. A lathe comprising a housing, a spindle rotatably mounted in said housing, a gear mounted on said spindle, a carriage shiftable along said housing in spaced parallel relation to the spindle, means operatively interposed between the carriage and spindle for intermittently shifting said carriage in predetermined equal amounts as the spindle rotates, a bearing retainer sleeve mounted on said housing and being provided with a bore, the center line of which is perpendicular to the axis of the spindle, bearing means operatively mounted in said sleeve, a shaft rotatably mounted in said bearing means and having a center line eccentric to the center line of said bore, and gear means mounted on said shaft, said bearing retainer sleeve, bearing means and shaft being adapted for rotary adjustment in unison so as to mesh said gear means with said gear and remove any backlash therebetween.

3,049,954
APPARATUS FOR CUTTING ARTICLES
Norval S. Barlament and Samuel J. Campbell, Green Bay, Wis., assignors to FMC Corporation, a corporation of Delaware
Filed June 3, 1957, Ser. No. 663,119
4 Claims. (Cl. 83—201)



1. In an apparatus for cutting a log of rolled paper into a plurality of sections, a log supporting trough having a transverse slot formed therein, a continuously driven band knife, means mounting said band knife above said trough for vertical reciprocatory movement through said slot, a clamp positioned on each side of said slot and above said supporting trough and mounted for pivotal movement toward or away from said supporting trough, resilient means connected to each of said clamps and arranged to pivotally move said clamp into clamping engagement on a log supported by said trough, a cam mounted for rotation below said trough, a lever mounted for pivotal movement and positioned between said trough and said cam, a cam follower mounted for rotation on said lever and positioned to ride against said cam to pivotally raise and lower one end of said lever, a linkage connected between said one end of the lever and both of said clamps and arranged upon upward pivotal movement of said lever to force said clamps away from the log against the urging of said resilient means, and power means connected to said knife mounting means and to said cam for reciprocating said band knife through said slot during the interval when said one end of the lever is in its lower position.

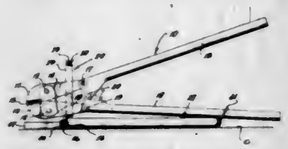
3,049,955
MACHINE FOR SHEARING FLANGES FROM I-BEAMS
Thomas J. Moore, Seattle, Wash., assignor to Isaacson Iron Works, Seattle, Wash., a corporation of Washington
Filed Aug. 27, 1959, Ser. No. 836,474
2 Claims. (Cl. 83—422)



1. A machine for shearing flanges from I-beams immediately adjacent the web, said machine comprising paired, coacting and rotatably driven upper and lower shearing rolls mounted on spaced horizontal axes with the adjacent peripheral edge portions thereof in shearing relationship, means for supporting and guiding an I-beam for endwise advancement to and through the shearing rolls with the flanges on the lower portion of the I-beam in supporting contact with the circumferential surface of the lower roll, an outwardly projecting boss on the end surface of the upper roll slidingly engageable with

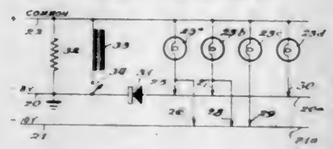
the adjacent side surface of the web of the advancing I-beam during the flange shearing operation, a pair of spaced stabilizing rollers mounted to engage the opposite side surface of the web of the advancing I-beam and to coact with said projecting boss in holding the advancing beam in fixed relationship relative to said rolls and said stabilizing rollers being positioned at opposite sides of the vertical plane of the axial line of said boss whereby three point pressure is applied to the web to maintain the proper relationship of the I-beam to the shearing rolls.

3,049,956
STEEL CUTTER SUPPORT GUIDE AND GAUGE
Arthur H. Lynch, Sr., 5119 W. 118th St., Hawthorne, Calif.
Filed Feb. 16, 1959, Ser. No. 793,460
5 Claims. (Cl. 83—467)



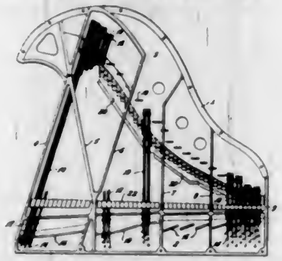
1. In combination: a pair of shears having opposed cutting jaws movable to and from each other by a pair of hand levers; a frame including a base adapted to rest upon a supporting surface, said base comprising a pair of divergent arms interconnected at their rearward ends and a cross member secured to the forward ends of said arms; said frame further including a generally vertical guide means comprising at least two vertical inner legs secured to said cross member at their lower ends and spaced from each other to provide a vertical guide slot of sufficient length to freely receive and slidably support simultaneously the jaws of said shears, said slot being of such width as to prevent said jaws from canting, outer diagonal legs secured to the upper ends of said inner legs and to said cross member; and means on said base at the rearward end of said arms adapted to be coupled to one of the hand levers to prevent substantial movement of said one hand lever relative to said base while permitting actuation of said other hand lever.

3,049,957
INSTRUMENT KEYING CIRCUIT
William H. Krug, Janesville, Wis., assignor to Gibbs Manufacturing & Research Corporation, a corporation of Wisconsin
Filed June 3, 1960, Ser. No. 33,847
2 Claims. (Cl. 84—1.09)



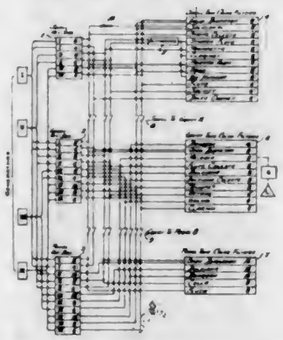
1. In an electronic musical instrument having voltage sensitive tone generating elements, a keying circiut for selectively actuating desired tone generating elements: comprising a first direct current power source at one potential; a second direct current power source at a higher potential; a first bus conductor connected with said first source; a second bus conductor connected with said second source; said bus conductors having the same polarity; switch means for selectively actuating desired elements by connecting at least some of them optionally with the first bus, or with the second bus, or with both of said bus conductors simultaneously, such that when said switch means is actuated to connect any of said elements to both of said bus conductors simultaneously said bus conductors are connected together and have the same potential; means connected between said first power source and the first bus conductor for isolating the second power source from the first power source to energize both of said bus conductors from said second power source at the higher of said potentials whenever said bus conductors are connected together.

3,049,958
ELECTRO-PIANO
Hugo Benioff, Pasadena, Calif., assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 13, 1959, Ser. No. 793,143
12 Claims. (Cl. 84—1.16)



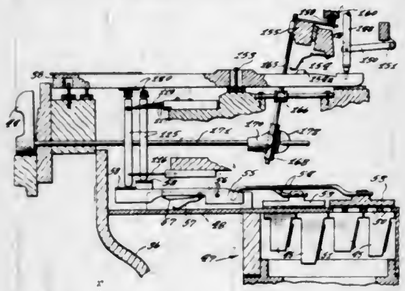
1. In a keyboard operated, stringed, electrical musical instrument, the combination of a frame, a string stretched on said frame between a tuning pin at one end and an attachment means at the other, and a device comprising a substantially non-vibratile support fixedly mounted with respect to said frame, a block attached to said support and configured to provide a cantilever with means at its outer end for contacting said string, the speaking length of said string extending between an agraffe at one point on said frame and the point a which said cantilever contacts said string, and means interposed between said cantilever and said non-vibratile support to damp the vibrations of said cantilever as produced by said string so that said cantilever is caused to exert on said string a damping action similar to that of a sounding board and bridge.

3,049,959
OBTAINING ENSEMBLE AND CELESTE EFFECTS IN ELECTRICAL MUSICAL INSTRUMENTS
Albert Meyer, Deer Park, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 22, 1957, Ser. No. 698,222
19 Claims. (Cl. 84—1.24)



1. In an electrical musical instrument, a plurality of ranks of generators slightly detuned as respects each other, a plurality of playing key operated switches, a plurality of tone color circuits, connections through said playing key operated switches between said ranks of generators and various ones of said tone color circuits, whereby ensemble effects are produced when oscillations derived from different ranks of generators are simultaneously transmitted to an output system, and means operatively associated with one of said ranks for selectively further detuning said one rank by an amount sufficient to produce a celeste effect when its oscillations are simultaneously sent to said output system with the oscillations of another of said ranks of generators.

3,049,960
COMBINED PIANO AND ACCORDION INSTRUMENT
Camillo Tannini, 29 Carmine St., 2nd floor, New York, N.Y.
Filed July 30, 1959, Ser. No. 830,618
6 Claims. (Cl. 84—172)



1. A musical instrument comprising, in combination, a set of strings, individual strikers for each of said strings, a set of reed means including a mounting panel, a plurality of reed bars mounted upon said panel, a plurality of tuned reeds mounted on said reed bars, air ports in said mounting panel in communication with each of said reed bars, a housing defining an air chamber around said reed bars on one side of said panel, individual air stoppers controlling passage of air through said air ports, pressure means comprising a conduit connected to said housing, a pump connected to said conduit, an electric motor connected to said pump, circuit means including a switch connected to said motor, a foot pedal connected to said switch for operating said switch, a valve in said conduit controlling the flow of air to said housing from said pump, a connecting rod extending between said valve and said foot pedal controlling the opening of said valve, and a pressure relief valve within said housing limiting the build-up of the pressure therewithin.

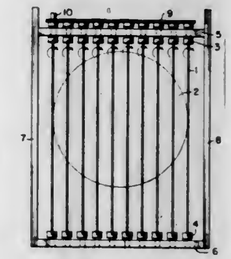
3,049,961
MUSICAL JUMPING ROPE
Molly Decker, 135 Seth Boyden Terrace, Newark, N.J.
Filed Sept. 20, 1960, Ser. No. 57,284
5 Claims. (Cl. 84—404)

1. A musical jumping rope comprising,
(*a*) a rope having a handle secured to at least one end thereof,
(*b*) a body member secured to the handle in spaced relationship thereto,
(*c*) a generally tubular, arcuate partial circumferential conduit secured to one end of the body member,
(*d*) a plurality of generally tubular, straight conduits connected end to end between the ends of the arcuate conduit, each straight conduit disposed at an acute angle to the straight conduit to which it is connected,
(*e*) sound producing means positioned at the intersection of the straight conduits with each other, and



(*f*) means within the conduits for percussively sounding the sound producing means.

3,049,962
METHOD AND APPARATUS FOR ELIMINATING THE DAZZLING EFFECT OF STRONG SOURCES OF LIGHT, PARTICULARLY FOR AUTOMOTIVE VEHICLES
Hans-Joachim Denecke, Heidelberg, Germany, assignor to Baulio Etablissement, Vaduz, Liechtenstein, a corporation of Liechtenstein
Filed Oct. 1, 1956, Ser. No. 613,078
Claims priority, application Germany Oct. 3, 1955
33 Claims. (Cl. 88—1)



1. A method of eliminating the dazzling effect of strong light sources, which comprises producing an intermittent light of high frequency including a phase of dim light following a dark phase and a phase of bright to dazzling light following said phase of dim light in a continuously recurring sequence by interruption of a constantly emitted light beam, the time interval elapsing between the beginning of said phase of dim light and the end of said phase of bright to dazzling light being less than the duration of the refractory phases of the eye.

3,049,963
OPTICAL INSTRUMENT IN THE NATURE OF A SURVEYING TRANSIT
Mahlon W. Parsons, Jr., 18 Gull Road, Middletown, N.J.
Filed June 30, 1959, Ser. No. 824,064
6 Claims. (Cl. 88—2.4)

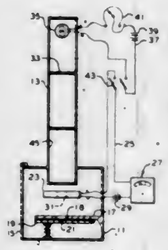
1. An optical instrument in the nature of a transit comprising a normally horizontal member supported for rotation about a vertical axis, means for leveling said member, a sighting arm supported above said horizontal member and pivoted with respect thereto about a normally horizontal axis, a normally vertical mirror disposed directly above the horizontal axis of said sighting arm and on the vertical axis of said horizontal member, another mirror mounted adjacent the free end of said sighting arm and adjustable about a normally horizontal axis to reflect the image of a relatively distant object from the

normally vertical mirror to an observer's eye adjacent the other end of said sighting arm, means for showing



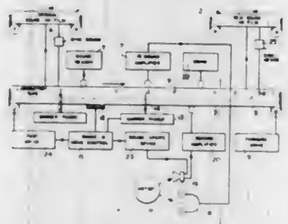
the angularity of the sighting arm with respect to the horizontal, and means for showing the angularity of said other mirror with respect to the sighting arm.

3,049,964
OPTICAL OIL CHANGE INDICATOR
Elmer C. Miller, Bartlesville, and Francis W. Karasek, Dewey, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 10, 1959, Ser. No. 832,531
3 Claims. (Cl. 88—14)



1. A device for estimating the load of solid impurities in internal combustion engine crankcase oil comprising, in combination, a light-tight housing, a source of light in said housing, means connected with said source of light for regulating its intensity, means mounted in said housing for collimating a beam of incident light from said source, a plate mounted in the path of said beam of light, said plate being rigidly fixed on the side of said means for collimating opposite said source of light, an opening in said plate, said opening, said means for collimating and said source of light being disposed along a common axis, one side of said plate facing said source of light, a spring loaded hinged plate mounted on the side of the fixed plate opposite said source of light, said hinged plate being positioned to bear one surface against the adjacent surface of said fixed plate, the opening in said fixed plate being of approximately the diameter of a spot comprising solid impurities from a predetermined number of drops of a used internal combustion engine crankcase oil on an absorbent paper, a photoelectric cell mounted in said housing in the path of light reflected from said absorbent paper mounted between said plates, a source of electromotive force, means for detecting flow of electric current, an electrical circuit including said photoelectric cell, said source of electromotive force and said means for detecting flow of electric current.

3,049,965
METHOD OF MODIFYING A RECORDED SOUND TRACK AND APPARATUS FOR PRODUCING A MODIFIED SOUND TRACK
Dennis Gunst, New York, N.Y., assignor to Instant Synchronization Corporation, a corporation of Delaware
Filed Jan. 8, 1959, Ser. No. 785,625
15 Claims. (Cl. 88—16.2)



1. The method of revising an artist's rendition of a sound track to produce a second and revised sound track on which revised and re-rendered sound-producing information is substantially synchronously related to the sound-producing information on the first sound track, which comprises the steps of

(*a*) providing a first sound track carrier with marker signals at predetermined spaced points corresponding to the periodic commencement on said first sound track of distinctive sound-producing information,

(*b*) advancing said first sound track carrier and stopping such advance in accordance with and under the control of a marker signal,

(*c*) thereafter and under the control of the artist resuming advancement of said first track carrier and simultaneously and synchronously advancing a second sound track carrier through a predetermined sound-producing sequence of said first sound track,

(*d*) continuing the simultaneously and synchronous advance of said first and second sound track carriers following said sound-producing sequence, and stopping said advance in accordance with and under the control of the next successive marker signal on said first sound track carrier,

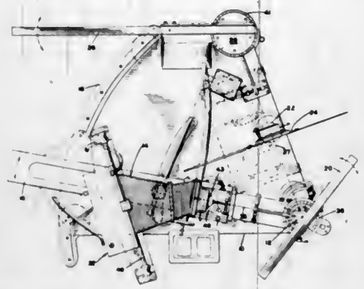
(*e*) audibly reproducing the sound-producing information of said first sound track during said sequence,

(*f*) audibly re-rendering the sound sequence substantially simultaneously with said audible reproduction, and

(*g*) recording the re-rendition of said sequence on said second sound track carrier to provide revised sound-producing information on said second sound track.

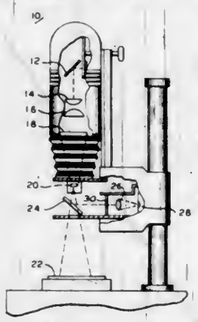
3,049,966
TWO-STAGE PHOTOGRAMMETRIC RECTIFIER
Heinz E. R. Gruner, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Apr. 17, 1961, Ser. No. 103,278
4 Claims. (Cl. 88—24)

1. A two-stage photographic rectifier for photogrammetric and like applications comprising a base, first and second pivots fixed on and rigidly supported by said base, said pivots being parallel to and laterally spaced from each other, first and second photographic easels respectively rotatable on said pivots with their front surfaces coincident with the respective pivot axes, a projection lens fixed between said pivots for imaging the front surface of said first easel upon the front surface of said second easel, a radius arm pivoted upon said first pivot, and a photographic projector mounted on said radius arm for projecting an image upon the front surface of said



first easel, said projector being of the adjustable type having an angularly and laterally movable film holder and an angularly movable lens holder.

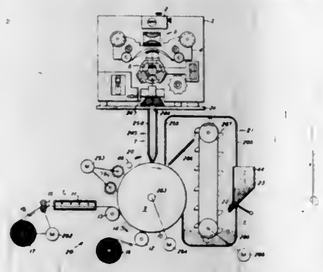
3,049,967
COLOR BALANCE AND DENSITY EVALUATION DEVICE
Herman H. Duerr, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 703,042
4 Claims. (Cl. 88—24)



1. In a photographic printing apparatus having photoelectric means for evaluating the exposure time in accordance with the light value reaching a phototube from transillumination of the negative, a mask having a large opening corresponding to the area of greater pictorial interest in the negative and at least one smaller opening representing the area of lesser interest, said mask being positioned in the path of light reaching said phototube whereby said mask modifies said transilluminating light in accordance with the ratio of light passing simultaneously through the two areas.

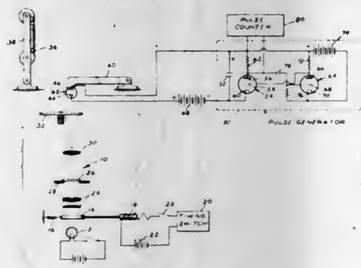
3,049,968
XEROGRAPHIC REPRODUCTION APPARATUS
Sten R. Johanson, Rochester, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Mar. 2, 1959, Ser. No. 796,561
6 Claims. (Cl. 88—24)

1. In a xerographic unit in which images are projected from continuously fed microfilm onto a xerographic plate moving at constant rate normal to a transverse exposure slit spaced from the plate, wherein said unit includes means adapted to feed microfilm at a predetermined rate relative to the plate movement to pass the film in projection relation to an optical system which has its optical axis disposed to extend through said slit normal to the plate; apparatus to effect image projection at variably selective magnification ratios including in combination an optical projection system mounted on a support member that is adapted to be moved normally toward or away from the xerographic plate, said optical system including a turret rotatively mounted on the support member, a plurality of different focal length objective lenses for different magnification ratios of image projection, each of said lenses being supported in said turret with its optical axis arranged radial to the turret axis of rotation, whereby any of said lenses can selectively be set into operative position in the optical axis by selective rotation of said



turret, said optical projection system also including a projection lamp and a condenser lens system mounted on the support member in spaced relation to the turret axis of rotation for projecting a light beam through the objective lens arranged in operative position, film support means mounted in said support member and arranged to support microfilm in operative spaced relation to the lens in operative position; presettable variable rate feed means adapted to effect film feed at a relative predetermined rate proportional to the ratio at which image magnification is to be effected, and a presettable drive mechanism connected to the support member to move said support member to position the optical system relative to the xerographic plate in accordance with the ratio at which image magnification is to be effected.

3,049,969
PHOTOGRAPHIC EXPOSURE READER
Roy A. Clapp, Minneapolis, Minn., assignor to Pako Corporation, Minneapolis, Minn.
Filed Apr. 6, 1959, Ser. No. 804,268
4 Claims. (Cl. 88—24)



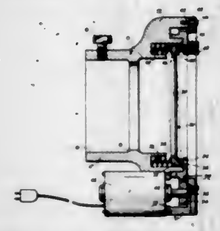
1. In combination with photographic exposure apparatus having an exposure lamp for supplying light energy to light sensitive material when disposed therewithin, a photosensitive probe located so as to receive a portion of the light energy transmitted from said lamp, said probe developing an electrical output signal having a magnitude in accordance with the light impinging thereon, a storage capacitor in circuit with said probe capable of being charged by said electrical signal, a first vacuum tube triode

and plate resistor connected in series across said capacitor, the triode thereby receiving its plate supply from said capacitor, a second vacuum tube triode, a second plate resistor in series with said second tube, a source of potential for said second triode, said source being connected to both said plate resistors, means capacitively coupling a point intermediate the first resistor and the plate of said first triode to the control grid of said second triode, the corresponding point intermediate the second resistor and the plate of said second triode being connected to the control grid of said first triode, and counting means connected across said first resistor for determining the number of times said storage capacitor is discharged through said first triode.

3,049,970
LENS ADAPTER

Otho L. Steinberg, 4637 S. Quincy Place, Tulsa, Okla.

Filed June 29, 1959, Ser. No. 823,441
3 Claims. (Cl. 88—24)

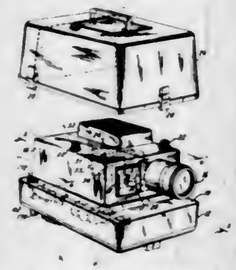


1. A lens adapter comprising a housing, light refracting means loosely disposed in the housing, gear means including a gear ring for retaining the refracting means within the housing, resilient means provided in the housing for constantly urging the refracting means in a direction toward the gear ring, adjustable means carried by said gear ring and rotatable therewith for tilting the refracting means within the housing, and means cooperating with said last mentioned means for rotation around the outer portion of the refracting means to provide a progressive tilting of the refracting means without rotation thereof, said adjustable means being brought into contact with the refracting means for progressively tilting said refracting means to a predetermined tilt-position thereof.

3,049,971
PROJECTOR

W Bruce Pester, Ypsilanti, Mich., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Nov. 25, 1959, Ser. No. 855,370
5 Claims. (Cl. 88—26)

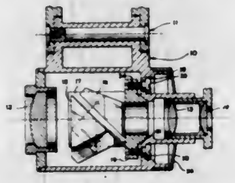


1. A slide projector including a lamp, a motor mounted on a foundation plate, a bottom cover over said foundation plate, an elevator arm pivotally mounted on said bottom cover near the rear end thereof and extending forward, said arm having an arcuate toothed rack extending within said cover and a gear drive within said cover and coupled to said rack for selectively driving said rack to extend from or retract into said cover whereby the front end of said projector may be raised or lowered, a pair of friction drive rollers continuously driven in opposite directions from said motor, a pulley adjacent said rollers, a belt drive connecting said pulley to said gear drive and means for selectively pressing said pulley against said drive rollers.

3,049,972
BINOCULAR WITH IMPROVED SYSTEM OF OPTICAL ADJUSTMENT

Tadeusz Malinowski, Midland, Ontario, Canada, assignor to Ernest Leitz Canada Limited, Midland, Ontario, Canada

Filed Apr. 19, 1961, Ser. No. 104,133
3 Claims. (Cl. 88—33)

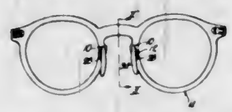


1. A binocular construction comprising a pair of hingedly connected telescope members, each of said telescope members including a system of erecting prisms, a separate mounting plate for each of said prisms, a base plate, at least one screw member protruding through said base plate to engage in threaded apertures in each of said mounting plates, said base plate having an annular groove in its face adjacent said mounting plates, and said mounting plates having arc-shaped protruding collars shaped to slidingly engage in said groove, whereby said mounting plates may be shifted, when said screws are loose, as to change the relative positioning of said prisms whereby to optically adjust said prisms so that they produce a correctly oriented image.

3,049,973
NOSE PAD FOR SPECTACLES

William C. Moeller, Kansas City, Mo., assignor to Parmelee Plastics Company, Kansas City, Mo., a corporation of Missouri

Filed May 5, 1955, Ser. No. 506,159
2 Claims. (Cl. 88—48)



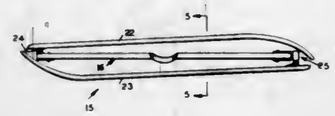
1. In combination with a perforated bracket adapted for mounting on a pair of spectacles, a nose pad having a back face provided with a bracket-receiving pocket; and a pair of opposed projections in the pocket received by the perforation of the bracket for attaching the pad to the bracket, said perforation being elongated, the projections being relatively offset to hold the pad against rotation on the bracket.

3,049,974
EYEGLASS FRAMES AND THE LIKE

Yukio Miwa, Tokyo, Japan, assignor to Herman Goodman, New York, N.Y.

Filed Mar. 3, 1960, Ser. No. 12,532
1 Claim. (Cl. 88—53)

In an eyeglass frame or the like, a rigid front portion to include lenses, two temples associated with said front portion by hinge structures respectively at each side end of said front portion; each temple extending rearwardly from said front portion and swingable to lie behind and along a line from side end to side end of said front portion; one of said hinge structures comprising first and second parts in pivotal relation; the first hinge part being secured to the associated temple and the second hinge part being pivotally mounted on a pin the axis of which is substantially parallel to the plane of the lenses; said pin being substantially horizontal when the frame is in normal

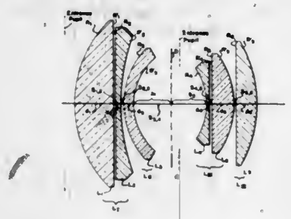


use position, whereby such temple is swingable about said pin to lie in front of said front portion, said pin extending in part exterior of said front portion; said exterior part having opposite flat faces; the second hinge part having a flat resilient element which is an integral extension of the hinge leaf portion of said second hinge part, extending in contact with one of said faces, in face-to-face relation when the temple which is adapted to be in front of said front part is positioned extending rearwardly from said front part and when it has been moved a half turn, said flat resilient element is in face-to-face contact with the other of said faces of said exterior part.

3,049,975
FOUR-COMPONENT WIDE-ANGLE OBJECTIVE LENS OF GAUSSIAN TYPE

Albrecht Wilhelm Tronnier, New York, N.Y., assignor to Farrand Optical Co., Inc., New York, N.Y., a corporation of New York

Filed Oct. 20, 1958, Ser. No. 768,336
12 Claims. (Cl. 88—57)

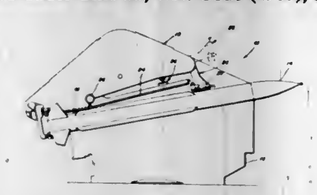


1. An objective lens of Gaussian type comprising, from front to back, a positive doublet component L_I including front and rear elements L_1 and L_2, a negative meniscus component L_{II} including an element L_3, and, behind the diaphragm position a negative doublet of meniscus shape L_{III} including front and rear elements L_4 and L_5, and a positive rear component L_{IV} including an element L_6, in which the absolute value of the sum of the powers of the first and last surfaces in front of the diaphragm and the absolute value of the sum of the powers of the first and last surfaces behind the diaphragm position both lie between 1.35Φ and 1.9Φ wherein Φ is the equivalent power of the lens, in which the absolute value of the difference between the power of the front surface of component L_{II} and the power of the rear surface of component L_{III} lies between 0.1Φ and 0.48Φ, in which the absolute value of the difference between the power of the rear surface of component L_{II} and the power of the front surface of component L_{III} lies between 0.08Φ and 0.24Φ, and in which the sum of the absolute values of the radii of curvature of the front surface of component L_I and of the rear surface of component L_{IV} lies between 85% of the equivalent focal length of the lens and 350% of the diameter of its entrance pupil.

3,049,976
ARMING SYSTEM

Ralph F. Hereth and Lawrence R. Morris, Port Orchard, Wash., assignors to the United States of America as represented by the Secretary of the Navy

Filed Oct. 11, 1960, Ser. No. 62,058
8 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

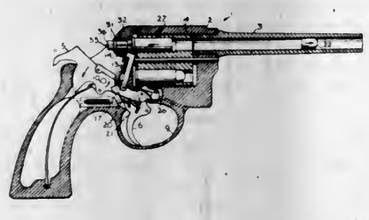


1. An arming system comprising, a missile having front and rear lugs, a firing circuit within said missile, a switch in said missile for completing or breaking said circuit, an arming lever fixed to said switch, a missile launcher having at least one launcher arm for reception of said missile, a front guide mounted on said launcher arm for pivotal movement between a lowered position wherein said front guide is in position for reception of the front lug of said missile and a raised position wherein said front guide is out of the path of travel of the rear lug of said missile as the same is launched, spring means biasing said front guide to said raised position, means on said launcher arm for moving said front guide to said lowered position against the action of said spring means, a secondary arm mounted on said front guide for pivotal movement between a first position wherein said secondary arm is adapted to engagingly receive said arming lever for movement therewith when the missile is received on said launcher arm and a second position removed from said first position, and means responsive to the action of said front guide moving means for moving said secondary arm between said first and said second positions whereby said arming lever actuates said switch for completing or breaking said firing circuit.

3,049,977
AUTOMATIC ACTION REVOLVER

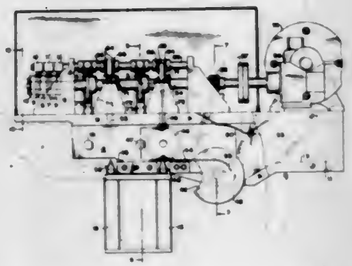
Robert J. Reich, 2135 E. Vine Ave., West Covina, Calif.

Filed June 13, 1960, Ser. No. 35,802
15 Claims. (Cl. 89—154)



1. An automatic action revolver comprising a frame, a cylinder rotatably mounted on said frame, an explosive cartridge including a case within a portion of said cylinder, a hammer for firing said cartridge, and a movable recoil plate assembly disposed to be moved forward by the hammer to engage the case of said cartridge in the firing position and actuated by said cartridge case for cocking said hammer upon the firing of said cartridge.

3,049,978
GAGING AND MACHINE TOOL CONTROL
Raymond C. Miles, Syosset, and Joseph G. Rubenson, Oceanside, N.Y., assignors, by mesne assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 15, 1955, Ser. No. 528,252
31 Claims. (Cl. 90—4)

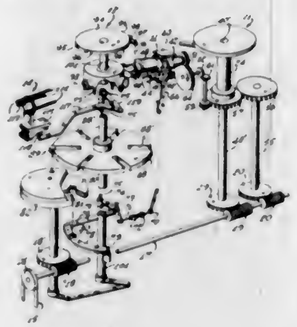


19. Apparatus for gaging gears produced by a hobbing machine and controlling said machine which comprises gaging means for gaging variations from a nominal value in substantially the clearance curve of a gear and yielding different indications for within-tolerance and outside-of-tolerance conditions thereof, circuit means utilizing said indications for setting up a hob-shift control circuit, and means for utilizing said control circuit to effect a shift of the hob in said hobbing machine.

28. Apparatus for gaging output gears from a machine tool and controlling said machine which comprises gaging means responsive to variations from predetermined nominal values in substantially the pitch diameter and substantially the root fillet of gears being gaged and adapted to yield different indications for within-tolerance and outside-of-tolerance conditions of said pitch diameter and root fillet respectively, a plurality of relays actuated in accordance with said different indications, interconnections between contacts of said relays to set up a plurality of alternative control circuits for different combinations of pitch diameter and root fillet indications predetermined to correspond to different adjustments of said machine tool, a plurality of stepping relays connected to be actuable through said control circuits respectively, cycling means coordinated with the gaging of successive gears for actuating said stepping relays in accordance with the respective control circuits set up, connections to contacts of said stepping relays for setting up respective adjustment circuits only after a plurality of steps by the respective relays, reset connections to said stepping relays for resetting a stepped relay to the initial position thereof upon stepping of another relay from the initial position thereof, reset connections responsive to within-tolerance indications for resetting a stepped relay to the initial position thereof, and means for utilizing said adjustment circuits to effect corresponding adjustments of said machine tool.

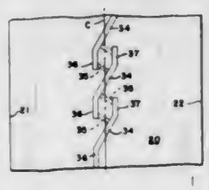
3,049,979
CUP FORMING METHOD AND APPARATUS
Frank M. Sayford, Jr., Litchfield, Conn., assignor to Frank M. Sayford Company, Litchfield, Conn., a corporation of Pennsylvania
Filed Dec. 12, 1960, Ser. No. 75,216
16 Claims. (Cl. 93—39.3)

1. Apparatus for forming pre-cut blanks of paper and similar materials into tubular bodies comprising a forming block having a recess therein with a configuration corresponding to the shape and size of the body to be formed, said block further including a side opening extending from the outer surface of the block to said recess, means for feeding a pre-cut blank through said side opening and into said recess with said blank lying in close proximity to the walls of the recess and the ends of the blank in overlying relationship and in substantial alignment with said side opening, a mandrel having a configuration corresponding to the internal dimensions of the body, means for effecting reciprocable movement between said block and mandrel to firmly seat the mandrel in said recess with the blank interposed between the surfaces of



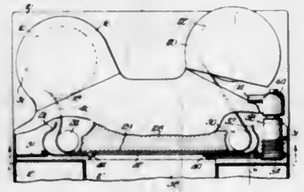
the mandrel and recess and to move said mandrel out of said recess in another position, means carried by said mandrel for clamping the ends of the blank against said mandrel when the latter is in said recess to secure the ends of the blank one to the other, said clamping means being retained in the clamped position until removal of the mandrel from said recess with the formed blank thereon, and means for releasing said clamping means for removal of the completed body from said mandrel.

3,049,980
HIGHWAYS
Edwin R. Gill, Jr., Millerton, N.Y., assignor to Karl W. Flocks, Washington, D.C.
Filed Oct. 7, 1959, Ser. No. 844,937
3 Claims. (Cl. 94—1.5)



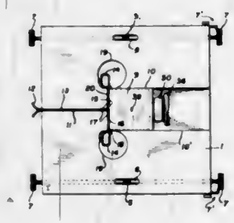
1. In combination with a highway, a series of highway lane delineator light-reflecting marker elements, the upper surface of each of said marker elements being spaced from the upper surface of adjacent elements, each of said elements being generally elongated and having one end thereof lying in an area between the longitudinal division of two adjacent highway lanes and the outer margin of one of said lanes, the general longitudinal axis of each of said elements crossing the center of said longitudinal division and being inclined from the left foreground to the right background as viewed by the driver over said one lane on said highway with attention being paid to the light-reflecting elements to the left, said spaced elongated light-reflecting elements each being located so that the general longitudinal axis of each element makes generally a minor acute angle with said longitudinal division, the area of the highway between the adjacent spaced ends of adjacent elements being relatively light absorbing in character whereby the combined highway and light-reflecting elements serve to alert the observer to keep to the right of the light-reflecting elements as well as to delineate the lanes of the highway, each of said elements having a light-reflecting tail portion in the foreground spaced from the central longitudinal axis of said two highway lanes and generally parallel thereto.

3,049,981
FILM THREADING DEVICE
Eugene W. Elliott, Oak Park, and Elmer J. Bury, Wheaton, Ill., assignors, by mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware
Filed Dec. 26, 1957, Ser. No. 705,317
5 Claims. (Cl. 95—34)



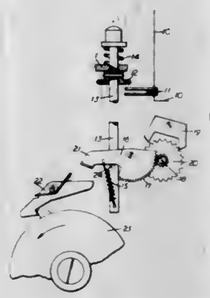
1. In a photographic device the combination comprising a camera body having a first cassette for supplying unexposed film, a take-up cassette for holding exposed film, and a format aperture plate disposed between said first and second cassettes, and a finger means when in operative position extending across said format aperture plate for guiding said film, a spring biasing said finger means toward its inoperative position, and means for rendering said take-up cassette inoperative when said finger means is in its operative position.

3,049,982
HIGH SPEED SHUTTER
Paul A. Kendall, 4615 Saul Road, Kensington, Md.
Filed July 20, 1960, Ser. No. 44,189
13 Claims. (Cl. 95—55)



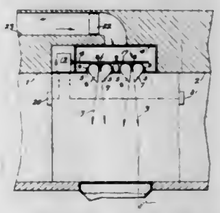
1. A high speed shutter mechanism comprising relatively stationary support and guiding means, said support and guiding means having a light aperture, a freely movable shutter element engaging the support and guiding means for movement relative thereto and having a light aperture for substantially instant registration with the first-named light aperture during movement of the shutter element, an actuator loop for propelling the shutter element in one direction including opposed sides adapted to separate when a current surge is passed through the loop, one side of said loop disposed adjacent one end of the shutter element and free from attachment thereto, and the other side of said loop being arranged to be substantially stationary when a current surge is passed therethrough, electrical means for passing said current surge through the loop, and means to arrest movement of the shutter element when the same is propelled in one direction by said actuator loop.

3,049,983
MIRROR REFLEX CAMERA WITH EXPOSURE METER
Heinz Schulze, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Apr. 1, 1960, Ser. No. 19,322
3 Claims. (Cl. 95—64)



1. In a reflex camera having a housing, a shutter mounted in the housing, including a shutter driving device operatively connected to said shutter and capable of moving from a cocked position to a rest position under the influence of a spring, releasable means for arresting the shutter driving device in its cocked position, an exposure meter circuit, including a moving coil and a photo-electric cell, and an aperture diaphragm coupled with the moving coil, the provision of a shutter release member mounted in the camera housing and movable between a rest position and a depressed position, a second spring for urging said release member into its rest position, a switch provided in the exposure meter circuit, said switch being operable by said release member immediately upon movement of the release member to its depressed position, a releasing member pivotally mounted in the housing and movable between a rest position and an operative position, said releasing member in its operative position co-acting with said releasable means to release said shutter driving device, a third spring for urging said releasing member from its rest position to its operative position, said releasing member in its rest position being arrested by the release member when the latter is in the rest position, and an escapement mechanism operatively connected to said releasing member to control the rate of movement of the releasing member from its rest position to its operative position.

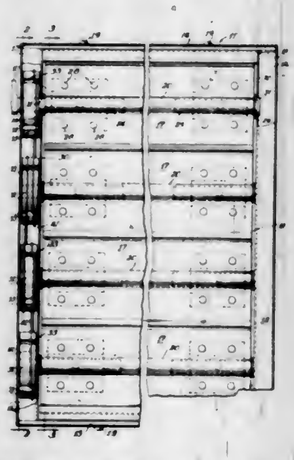
3,049,984
AIR CURTAINS
Arne Boysen, Lidingo, Sweden, assignor to Aktiebolaget Svenska Fläktfabriken, Stockholm, Sweden
Filed Nov. 3, 1959, Ser. No. 850,557
3 Claims. (Cl. 98—36)



1. A method of securing improved shielding effect of an air curtain moving in a path between two spaces at different pressures upon variations in the pressure difference between said spaces comprising the steps of introducing air at constant pressure in the form of an air curtain transversely between said spaces, deflecting said

curtain from its normal path toward that space wherein the relative pressure increases, and maintaining the flow velocity in said air curtain constant while increasing the quantity of flow in direct proportion to the extent of deflection of said air curtain from its normal position.

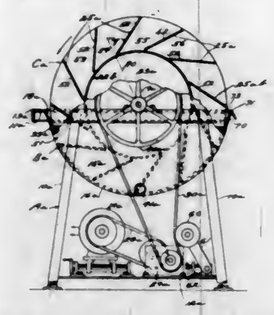
3,049,985
LOUVER TYPE DAMPER
William J. Klingberg, Bloomington, Ill., assignor to American Foundry & Furnace Company, Bloomington, Ill., a corporation of Illinois
Filed Jan. 19, 1959, Ser. No. 787,522
4 Claims. (Cl. 98—110)



1. In a louver assembly for use with heating and ventilating type ducts, a frame adapted for insertion into said duct, said frame including spaced apart side members at least one of which has an outwardly facing channel, separate shaft means supporting said louvers and extending into said channel, and a rotor carried by each said shaft means and positioned in said channel, and a separate cable interconnecting each adjacent pair of rotors for simultaneous rotation, each rotor including a plurality of segments having arms extending inwardly therefrom toward the center of the rotor, said segments defining a generally circular running surface for said cable while providing spaces between the segments, the cable for each adjacent pair of rotors having a portion thereof led through a space between segments of one rotor and secured to one of said arms of that rotor, while another portion of such cable is led through the space between segments in the other rotor of said pair and secured to one of said arms of that rotor.

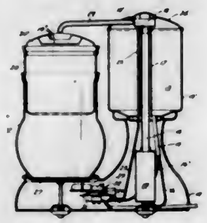
3,049,986
DIPPING MACHINE
William F. Weber, 6541 S. Troy St., Chicago 29, Ill.
Filed Jan. 19, 1959, Ser. No. 787,471
2 Claims. (Cl. 99—234)

2. In a machine for dipping pieces of meat or the like, a pan having a cylindrically shaped bottom, a wheel adapted to rotate about a horizontal axis with its lower portion in said pan and its periphery adjacent the bottom of said pan, said wheel having spaced paddle elements extending outwardly to the periphery of said wheel and adapted upon rotation of the wheel to push the pieces being treated from the front of the pan through said liquid to the rear of the pan, said paddle elements being inclined with respect to the radii of said wheel so that when they reach the rear of the pan they slope downwardly toward their outer edges thus to cause the pieces being treated to slide therefrom, said paddle elements having on their forward sides corrugated metal with the corrugations running radially of the wheel whereby the



dipped pieces being raised from the liquid by the paddle elements are permitted to drain and slide easily from the wheel.

3,049,987
DOMESTIC MACHINE FOR PRODUCING EXTRACTS OF COFFEE, TEA AND THE LIKE
Ludwig Bämpfer, Karlsruher Strasse 52, Schwenningen (Neckar), Germany
Filed Dec. 22, 1958, Ser. No. 782,112
Claims priority, application Germany Dec. 20, 1957
4 Claims. (Cl. 99—281)

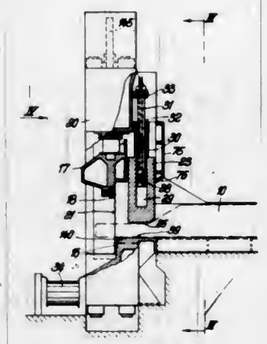


1. A machine for brewing extracts from coffee, tea and the like comprising a water container, a heater below the water container and having a riser tube communicating with the water container, a brewing vessel with a perforated bottom and beverage receptacle formed as a unit, one mounted on the other and provided adjacent the container, electric heating means for the through-flow heater, an electric switch connected with the heating means, a tube connected to the water container at the top of the riser tube and projecting over the top of the brewing vessel and a casing with a diaphragm therein and connected to be acted on by a liquid column in the water container to control the electric switch which latter is switched on and off according to the amount of liquid in the cold water container, and an air vent tube connected to the casing and extending to the top of the cold water container to prevent accumulation of the air under the diaphragm.

3,049,988
SCRAP SHEARING MACHINE
Waldemar Lindemann, Dusseldorf, and Fritz van Endert, Dusseldorf, Oberkassel, Germany; said Van Endert assignor to said Lindemann
Filed Mar. 18, 1957, Ser. No. 646,827
Claims priority, application Germany Apr. 20, 1956
18 Claims. (Cl. 100—95)

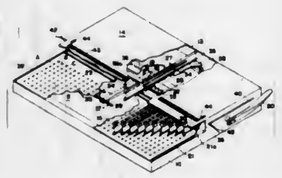
1. A machine adapted for the shearing of unsorted scrap metal, which comprises a plurality of plungers arranged side-by-side and adapted to operate along a substantially vertical axis for independently compressing

scrap metal and for holding compressed scrap metal in a stationary position while it is being sheared, individual drives for the operation of each of the said plungers, a shearing means positioned adjacent the said plungers which is capable of cutting a mat of compressed unsorted scrap metal including both light and heavy scrap, with said shearing means including a movable blade adapted to



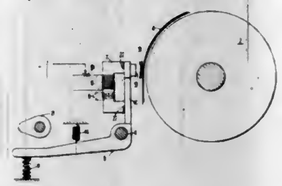
operate in a substantially vertical plane adjacent to said plungers, and a feeding means adapted to place loose scrap metal in position for compression by the said plungers and then in position for cutting by the said shearing means, in discontinuous movements which alternate with the movement of the said plungers to compress and hold the scrap metal and with the movement of the said shearing means to cut the compressed scrap metal.

3,049,989
RECORD PUNCHING MACHINE
Anton H. Edburg, Jr., Midland, Tex., assignor to Shell Oil Company, a corporation of Delaware
Filed Oct. 7, 1958, Ser. No. 765,887
9 Claims. (Cl. 101—19)



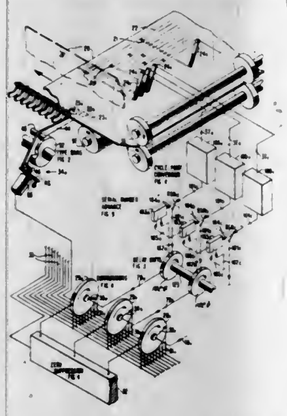
1. A record-issuing machine operable in a single cycle for punching data into records which comprises, in combination: a die plate for supporting the record, said plate having a plurality of holes arranged in columns; a plurality of individually settable punch bars, each said bar having a punch shaped to enter said holes and positioned on the bar for successive alignment with the holes of a column as the bar is set; a frame for said punch bars having guide means in which the bars are slidable, said guide means providing restraint against motion of the bars other than said sliding motion, said die plate being mounted for movement relatively to said frame; and means for effecting an approach motion between said punches and said die plate to cause said punches to enter the aligned holes and to perforate the record simultaneously at the said aligned holes.

3,049,990
PRINT HAMMER ACTUATOR
Edgar A. Brown, Gilroy, and Gunter H. Schacht, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 20, 1960, Ser. No. 77,135
9 Claims. (Cl. 101—93)



4. A print hammer actuator comprising: a core of magnetic material having first and second windings thereon wound in opposing relationship, a print hammer having an armature portion and movable between a ready position and a print position, means fixedly positioning said core to abut said armature when said hammer is in the ready position, spring means urging said hammer toward said print position, mechanical means for restoring said hammer to the ready position against the action of said spring means, means for continuously energizing said first winding to retain said restored hammer in the ready position with said armature abutting said core, and means for momentarily energizing said second winding to induce an opposing flux and reduce the flux density of said core whereby said hammer is released for movement toward said print position by the action of said spring means.

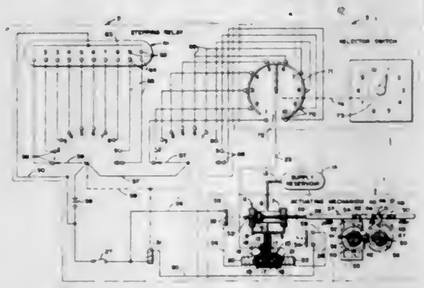
3,049,991
SERIAL NUMBERING PRINTER
George A. Giannuzzi, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 824,089
16 Claims. (Cl. 101—93)



1. In a data processing machine in which different data designations are manifested at corresponding ones of a sequence of times recurring at regular intervals, the combination of a plurality of storage elements each corresponding to different ones of said data designations, input means to enter data into said storage elements, means to cyclically condition each of said storage elements to be responsive to said input means successively in a timed sequence, different ones of said storage elements being selected to store different data designations according to the time of entry of said data by said input means, means

responsive to said storage elements for emitting data at times different from the corresponding time in said sequence, and means to selectively transmit said emitted data to said input means.

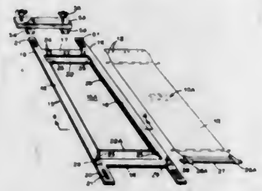
3,049,992
REMOTE CONTROL APPARATUS FOR A STAMPING MECHANISM
Alvin M. Brown, Penn Township, John S. Ayers, Scott Township, Robert L. Shields, Brentwood Boro, John M. Maloney, Canonsburg, and Thaddeus Jacob Kmiecik, Bethel Park Boro, Pa., assignors to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 6, 1958, Ser. No. 765,513
4 Claims. (Cl. 101—99)



1. In a control apparatus for a stamping mechanism having a rotatable annular die with a plurality of characters spaced evenly around the periphery thereof, a ratchet mechanism comprising a gear wheel for operatively engaging a rotary die for advancing the characters thereon one step at a time, a reciprocating bar for actuating said gear wheel, a pawl pivotally mounted on said reciprocating bar for advancing said wheel, said pawl having a driving arm arranged to pass over a tooth on said wheel during movement of said bar in a priming direction and to make driving engagement with the same tooth upon return movement of said bar, a stationary pin, a stop carried on said bar, said pawl having another arm arranged to rock freely in a release direction during the initial part of the priming stroke and to rock said pawl toward its operative position near the end of said priming stroke by collision with said stationary pin and to be prevented from pivoting past its operative position in the direction opposite to release direction by said stop, a stationary guide for directing said pawl toward its driving position during the latter part of the return stroke of said reciprocating bar and preventing said pawl from rocking in a direction to permit overtravel of said wheel in an advancing direction, and power means for reciprocating said bar.

3. In a marking machine having a rotary marking die with characters about its periphery and rotatable through equal angular increments to bring a selected character into marking position, a manually operable multiple contact selector switch having a number of contacts equal to the number of positions to which the marking die is movable and having a movable arm selectively movable only by manual operation into any one of said contacts and which remains in the selected position until manually moved therefrom for selecting the character on said die to be brought into marking position, operating means for rotating the marking die intermittently in one direction only in equal angular increments sufficient to bring a different character of the marking die into marking position with each increment, electromagnetic means and a circuit therefor connected with the selector switch for controlling the operation of the operating means so long as said circuit is energized, and means actuated by the operating means for opening said circuit when the character selected by the manual selector switch has been rotated to marking position.

3,049,993
DUPLICATING PRINTING DEVICE
Bernard S. Kobrin, 552 7th Ave., Bronx, N.Y.
Filed Oct. 3, 1960, Ser. No. 60,059
1 Claim. (Cl. 101—127.1)



A duplicating device comprising an open frame, a perforated synthetic plastic stencil sheet closing the opening in said frame, means on one end of said frame for detachably securing one end of said stencil sheet on the top surface of said one end of the frame, means on the other end of said frame for detachably securing the other end of said stencil sheet on the top surface of the other end of said frame while leaving the side edges of said stencil sheet in unsecured relation to the side edges of said frame, and means on said frame engageable with opposite end portions of said sheet for locating the major portion of said sheet between the end portions thereof below the bottom surfaces of the sides edges of said frame.

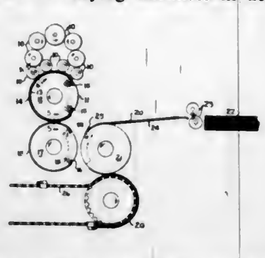
3,049,994
DUPLICATING PROCESS
Walter A. Raczynski, Park Ridge, Richard E. Thomas, Chicago, and Allen E. Uhl, Palatine, Ill., assignors to Ditto, Incorporated, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Oct. 19, 1959, Ser. No. 847,046
10 Claims. (Cl. 101—149.5)

1. A composition for reaction with the basic dyes, comprised of a carrier, 95% to 99.8% by weight, and an alkali metal salt of an acid selected from the group consisting of phosphotungstic, phosphomolybdic, silicotungstic, silicomolybdic, phosphotungstomolybdic, silicotungstomolybdic and combinations thereof, wherein the mole ratios of the oxides of phosphorous and of silicone to the oxides of molybdenum and tungsten is in a range between 1 to 12 and 1 to 24; said salt comprising from 0.2% to 5.0% by weight of said composition and said composition having a pH in the range from 5.0 to 6.5.

3,049,995
PRINTING EQUIPMENT
Robert H. Downie, Menasha, Wis., assignor, by mesne assignments, to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 5, 1957, Ser. No. 700,877
5 Claims. (Cl. 101—216)

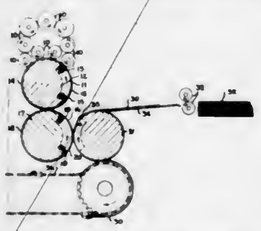
1. In a rotary printing press the combination of an inking cylinder and a plate cylinder of the same diameter mounted in predetermined closely spaced and parallel relation and driven in counter-rotating relation at equal peripheral speeds, a relief printing plate fixed to the surface of said plate cylinder and including printing portions slightly raised with respect to non-printing portions thereof, resilient inking means on said inking cylinder providing inking surfaces raised with respect to the remaining surface thereof and arranged in corresponding relation to

said raised printing portions of said plate, means for applying ink to said resilient raised inking surfaces for transfer to said printing portions only of said plate, and packing means of varying thickness in accordance with



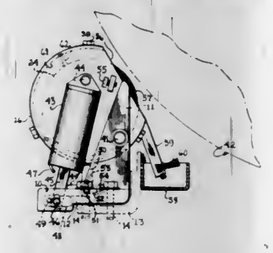
the desired thickness of ink deposit desired on said plate printing portions, said packing means being positioned beneath the raised inking surfaces of said inking means to control the pressure of contact between said printing portions of said plate and said raised inking surfaces.

3,049,996
ROTARY PRINTING PRESS
Robert H. Downie, Menasha, Wis., assignor, by mesne assignments, to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Apr. 25, 1958, Ser. No. 730,959
6 Claims. (Cl. 101—217)



1. A rotary relief type printing press comprising the combination of a rigid inking cylinder having a relatively thin resilient inking member extending over at least a predetermined fraction of the total surface of said cylinder, means operative to apply a coat of printing ink to the surface of said inking member, a plate cylinder extending parallel to and adjacent said inking cylinder, means on said plate cylinder for mounting an extremely shallow relief printing plate on a predetermined portion of the surface thereof, said plate cylinder and said inking cylinder being of such related diameters and said inking member and said plate mounting means being so dimensionally related that the same areas of the plate are always linked by the same areas of said inking member, bearers on the ends of each said cylinders adapted to run in contact under pressure during normal printing operation of said press to control the contact pressure between said inking member and the plate, said inking cylinder and plate cylinder each having sufficient strength and rigidity to maintain their positional relationship as determined by said bearers along the entire line of contact between said inking member and the plate maintaining compression of said inking member within a maximum of approximately 0.005 inch and thus sufficiently less than the relief of the plate in larger non-image areas thereof to prevent transfer of ink to such relieved non-image areas, means operative to drive each of said cylinders in counter-rotation to the other and at essentially equal peripheral speeds preventing relative movement between contacting portions of said inking member and the plate, and means including an impression member operable to bring print receiving material into contact with the inked plate to transfer an ink image directly from the plate to the material.

3,049,997
BLANKET ROLLER CLEANING DEVICE
Elmer C. Grembecki, 3006 S. Harlem Ave., Riverside, Ill., and Adolph J. Nelson, 1230 Forrest Drive, La Grange Park, Ill.
Filed Mar. 4, 1960, Ser. No. 12,831
3 Claims. (Cl. 101—425)

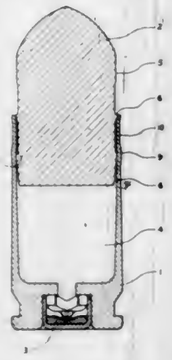


1. A device for cleaning the cylindrical surface of a printing press blanket roller comprising:
(*a*) a pair of fixedly mounting brackets arranged in spaced relation with respect to each other,
(*b*) an elongated hollow cylinder containing cleaning fluid pivotally arranged between said brackets in parallel relation with respect to the roller to be cleaned,
(*c*) means eccentrically connecting the ends of said cylinder to said brackets for pivotal movement relative thereto,
(*d*) an elongated cleaning brush mounted for rotation within said cylinder and having a longitudinal portion thereof exposed through an opening formed in said cylinder, with said cleaning brush normally spaced from the cylindrical surface of said roller,
(*e*) a moistening brush carried exteriorly of said fluid containing cylinder in parallel relation with respect to said cleaning brush and said roller to be cleaned and normally spaced therefrom,
(*f*) pneumatically operated cylinders pivotally connected to opposite ends of said fluid containing cylinder eccentrically with respect to the long axis thereof and the eccentric pivotal connection between said fluid containing cylinder and said fixed mounting brackets,
(*g*) said pneumatically operated cylinders having piston rods movable longitudinally therein with their free ends pivotally connected to said fixed brackets at a point offset with respect to the eccentric pivotal connection between said fluid containing cylinder and said fixed brackets for alternately pivoting said cleaning brush and said moistening brush into engagement with the cylindrical surface of the roller to be cleaned.

3,049,998
AMMUNITION
Robert A. Brown, Milford, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Sept. 14, 1956, Ser. No. 611,408
1 Claim. (Cl. 102—38)

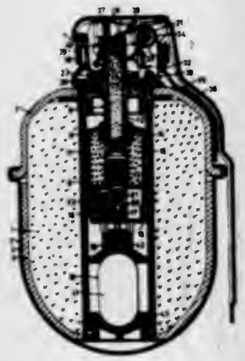
Ammunition for a rifled gun comprising a cylindrical cartridge case closed at one end and open at the other end, said cartridge case adapted to fit in the gun barrel, a propellant material within the cartridge case, a bullet adapted to be seated above the propellant material in said cartridge case, said bullet having an ogive shaped nose ex-

tending beyond the open end of the cartridge case, a bourrelet at the base of the nose to maintain the bullet in axial alignment with the barrel of the gun, said bullet having a tapered heel portion with a minor diameter at the base less than the inside diameter of the cartridge case and a major diameter greater than the normal inside diameter of the cartridge case, said major diameter portion constituting a first rifling band and adapted to spread the open end of the cartridge case when inserted therein and to maintain said bullet securely within the cartridge case, a second rifling band between the bourrelet and the first named rifling band and of the same diameter as



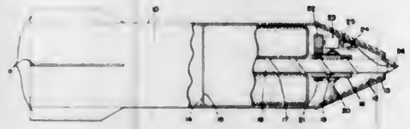
the first rifling band, said second band being embraced by the open end of the cartridge case which open end is crimped over the second band to seal the said bullet within the case, the body portion of the bullet between said bands and between said bourrelet and said second band being of a reduced diameter to form annular grooves therebetween, said annular grooves being of a greater longitudinal length than the bands and the bourrelet and adapted to form between the bands and between the bourrelet and the second band closed compartments with the cartridge case and the gun barrel to contain combustion gases and displaced metal from the rifling when the ammunition is discharged.

3,049,999
HAND GRENADE
Karl Henrik Sunden, Haga, Lindesberg, Sweden
Filed July 7, 1959, Ser. No. 825,468
Claims priority, application Sweden July 11, 1958
5 Claims. (Cl. 102—64)



1. In a grenade, a fuse comprising a detonator, a first actuating means for detonating said detonator a predetermined time interval after said grenade has been thrown, said first actuating means comprising a first striker pin, a first primer, means for striking said pin against said primer when said grenade is thrown, a powder time train, and a delay tube, said primer being mounted in the outer end of said delay tube, said time train being installed in said delay tube, said detonator being fixedly mounted on the inner end of said delay tube, said delay tube being mounted in said fuse for limited inward and outward sliding movement along the axis of said delay tube, first spring means urging said delay tube outwardly toward an outer position, first latch means for retaining said delay tube in an inner position until said grenade is thrown, a second actuating means for detonating said detonator, after said grenade has been thrown, upon impact of said grenade against an object, said second actuating means comprising a second striker pin, a second primer, and means for urging said second striker pin outwardly toward said detonator upon impact of said grenade with an object, second latch means for holding said second primer laterally offset from said second striker while said delay tube is in its inner position, and second spring means urging said second primer into an armed position between said second striker and said detonator, means for rendering said first actuating means inoperative while leaving said second actuating means operative, and means for rendering said second actuating means inoperative while leaving said first actuating means operative.

3,050,000
HYPERVELOCITY FLUID FLOW TEMPERATURE LIMITER
David J. Katsanis, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 23, 1958, Ser. No. 782,608
4 Claims. (Cl. 102—92.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

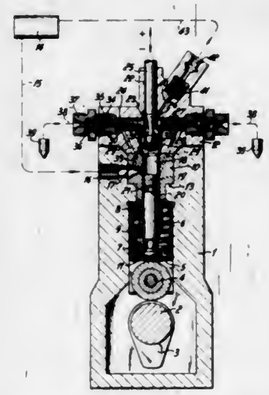


1. In a missile adapted to travel in space and having a tubular body with a cone truncated to provide an opening at its forward end, the combination therewith of means for dissipating the heat generated by atmospheric friction upon the return of said missile to the atmosphere, said heat dissipating means including a rod movably supported in said body and extending outwardly through and substantially filling said opening, said rod consisting of a material having low temperatures of fusion and vaporization with the sum of the latent heats of fusion and vaporization being high, means for feeding said rod outwardly through said opening, and temperature responsive means mounted adjacent a forward portion of said cone for actuating said rod feeding means.

3,050,001
FUEL SUPPLY SYSTEM
Heinz Links, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Jan. 24, 1961, Ser. No. 84,553
Claims priority, application Germany Jan. 29, 1960
9 Claims. (Cl. 103—2)

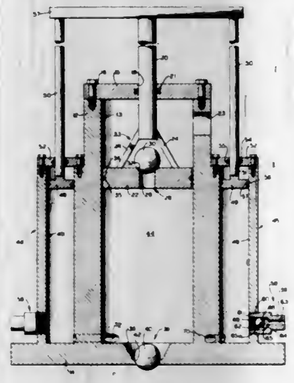
1. In a fuel supply system for internal combustion engines, in combination, a plurality of metering pumps for respectively metering the flow of fuel to the several cylinders of an internal combustion engine, each of said metering pumps including a metering cylinder and a metering piston slidable therein, each metering cylinder having a

discharge end through which fuel discharges from said cylinder and each metering piston having a working end directed toward said discharge end of said cylinder and an opposed operating end, the space of each metering cylinder between said discharge end thereof and the working end of the piston therein forming a metering pump chamber whose volume is reduced during the pressure stroke of said metering piston; support means carrying said metering pumps and defining a pressure chamber communicating with all of said operating ends of said metering pistons; a fuel pump comprising a main cylinder and a main piston slidable therein along pressure and suction strokes, said main cylinder having a discharge end communicating with said pressure chamber and said main piston having a working end directed towards said discharge end of said main cylinder, said discharge end of said main cylinder and said working end of said main piston defining between themselves a main pump chamber whose volume is reduced during the pressure stroke and increased during the suction stroke of said main piston; main supply conduit means communicating with said main pump chamber and terminating in an opening in said main cylinder located adjacent said working end of said main piston when the latter is at the end of its suction stroke so that said supply conduit is opened by said main piston when the latter reaches the end of its suction stroke; a plurality of metering supply conduit means communicating with said metering pump chambers, respectively, and with said main pump chamber, said plurality of metering supply conduit means respectively terminating at said main cylinder in openings also located adjacent said working end of said main piston when the latter is at the end of its suction stroke so that said main piston opens said plurality of metering supply conduits when said main piston reaches the end of its suction stroke, all of said supply conduits being closed at their ends which communicate with said main pump chamber during the initial part of the pressure stroke of said main piston; a fuel tank communicating with said main supply conduit means to deliver fuel thereto; and overflow valve means communicating with said pressure chamber and with said fuel tank for automatically placing said pressure chamber and fuel tank in communication with each other when said metering pistons have reached the ends of their pressure strokes, respectively.



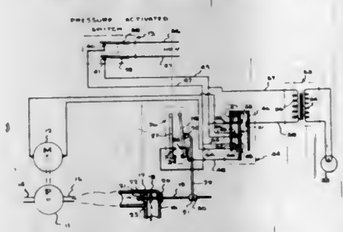
3,050,002
PUMP
Philip H. Harris, Monrovia, Calif.
Filed June 1, 1959, Ser. No. 817,343
2 Claims. (Cl. 103—9)

1. A pump for pumping fluids having settleable particles comprising means defining an elongate upright cylinder, a reciprocatable main piston disposed in the cylinder for up and down reciprocations within the cylinder and defining together with the sidewall of the cylinder a discharge chamber between the upper side of the main piston and the top of the cylinder, and an inlet chamber between the lower side of the main piston and the bottom of the cylinder, an outlet providing flow communication between the discharge chamber and a point of discharge, an inlet providing flow communication between the inlet chamber and a source of a first fluid, a passage in the main piston providing flow communication between the discharge chamber and the inlet chamber, first valve means associated with the inlet to permit flow only into the inlet chamber, second valve means associated with the passage in the main piston to permit flow only from



the inlet chamber into the discharge chamber, injection apertures peripherally spaced apart in the sidewall of the inlet chamber near the bottom of said chamber adjacent the first valve means, the injection apertures arranged to open into the inlet chamber tangentially to the sidewall of said chamber to inject a second fluid into the inlet chamber and around the first valve means, an elongate injection cylinder, the injection apertures providing flow communication between the inlet chamber and the injection cylinder, a reciprocatable injection piston disposed in the injection cylinder, a fluid inlet providing flow communication between the injection cylinder and a source of the second fluid, and means for reciprocating the main piston and the injection piston to inject the second fluid into the inlet chamber as the first fluid is discharged through the passage in the main piston.

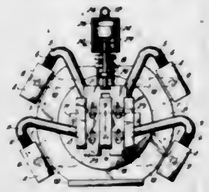
3,050,003
PUMP ALARM AND CONTROL DEVICE
Jack L. Edwards, 10475 Cornell St., Indianapolis, Ind.
Filed Oct. 21, 1960, Ser. No. 64,037
5 Claims. (Cl. 103—25)



1. In combination, a pump, an output line connected to said pump, a flow-responsive switch device operatively mounted in said output line and closing when the flow in

said output line decreases below a predetermined amount, an electrically operated alarm device, a source of current, a slow-acting relay device having a conductive operating element and normally open contacts closing responsive to the flow of a substantial amount of current through said operating element for a predetermined time period, means connecting said source to said alarm device through said contacts, normally closed switch means controlled by said operating element and opening responsive to deflection of the element, means connecting said source to said operating element through said switch means, and means connecting said source to said operating element through said flow-responsive switch device, whereby said operating element is energized responsive to the decrease of flow below said predetermined amount and closes said contacts after said predetermined time period.

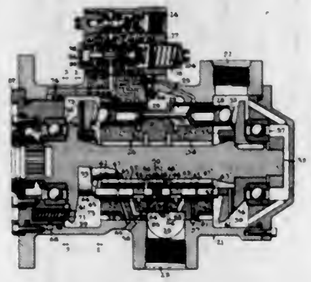
3,050,004
VALVE GEAR FOR FLUID PRESSURE PUMPS
Hans Friedrich Heintzmann, Bochum, Germany, assignor, by mesne assignments, to Bochumer Eisenhutte Heintzmann & Co., Bochum, Germany
Filed Mar. 15, 1957, Ser. No. 646,452
Claims priority, application Austria Mar. 19, 1956
21 Claims. (Cl. 103—37)



1. In a hydraulic pressure pump assembly the improvement comprising in combination
(*a*) a plurality of pump cylinders;
(*b*) a piston reciprocating in each cylinder with constant stroke;
(*c*) a rotatably mounted pump shaft actuating said pistons;
(*d*) a suction piping attached to each pump cylinder;
(*e*) a check valve in each suction piping;
(*f*) a pressure piping common to all pump cylinders;
(*g*) adjustable throttle means controlling said suction pipings;
(*h*) a motor having rated torque and power input characteristics and including a rotatable shaft drivingly connected to said pump shaft;
(*i*) means directly responsive to variations of at least one of said characteristics of the motor;
(*j*) and adjusting means for the throttle means operatively connecting the same and said responsive means thus that the effective passage of the throttle means is reduced when one of said characteristics increases and is enlarged when one of said characteristics decreases thereby preventing at least substantial variations of said characteristics resulting from changes of the motor load.

3,050,005
ENGINE
Ralph J. Pschunder, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Apr. 28, 1958, Ser. No. 731,269
13 Claims. (Cl. 103—37)

1. An engine comprising a housing containing an inlet passage and a discharge passage; a cylinder bore formed in the housing; a piston reciprocable in the bore and defining therewith a working chamber; means associated with the piston for reciprocating it; a distributing valve controlling communication between the working chamber and the inlet and discharge passages and being reciprocable between first and second positions in which it connects the working chamber with the inlet passage and the discharge passage, respectively, said valve in shifting from the first to the second position closes progressively the connection between the working chamber and the inlet passage and then opens progressively the connection be-



tween this chamber and the discharge passage; actuating means connected with the valve for reciprocating it in timed relation to the reciprocation of the piston; and override means associated with the valve and the actuating means for selectively maintaining the valve in the first position for a period of time whose length varies progressively between limits corresponding to minimum and maximum portions of the discharge stroke of the piston, and for simultaneously varying in inverse relation to the length of said period the distance the valve is shifted from its first position by the actuating means after said period has terminated.

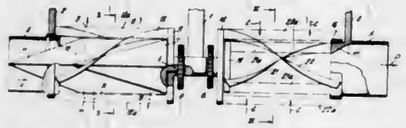
3,050,006
DEEP WELL SUBMERSIBLE PUMPING UNIT
William C. Wolf, 1828 Churchill Way, Oklahoma City, Okla.
Filed Apr. 8, 1960, Ser. No. 20,933
2 Claims. (Cl. 103—46)



1. In a deep well submersible pump unit, a closed hollow member and an oil eduction tube surmounting said member and carried by the latter, said closed hollow member being subdivided into a plurality of chambers superimposed one upon the other, the lowermost chamber constituting a support chamber, the chamber next to the support chamber constituting a hydraulic fluid

reservoir, the chamber next to the reservoir constituting a hydraulic piston displacement chamber, the chamber next to the displacement chamber constituting a hydraulic fluid collection and reverse flow chamber, and the chamber next to the collection chamber constituting the deep well oil-receiving chamber, a pump provided with an input and an output fixedly positioned within said support chamber, a two-discharge passage outlet valve in said reservoir, the input of said pump being in communication with the interior of said reservoir, a piston mounted in said displacement chamber for reciprocatory movement, a piston rod having one end secured to said piston and extending slidably through said displacement, fluid collection, and oil-receiving chambers and into said eduction tube and having the other end adjacent to and spaced inwardly from the lower end of said eduction tube, pumping means disposed within said eduction tube and carried by the other end of said piston rod, a first conduit means connecting one of the discharge passages of said valve to said piston chamber on one side of said piston, a second conduit means connecting the other of the discharge passages to said piston chamber on the other side of said piston, the oil-receiving chamber being provided with ingress means for admission of deep well oil therethrough, and means fixedly carried by the portion of said piston rod within said collection chamber and operable responsive to reciprocatory movement of said piston to sequentially actuate said pumping means to draw oil from the oil-receiving chamber through the eduction tube to a point of collection located on the earth surface adjacent the deep well.

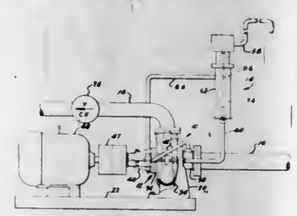
3,050,007
PROPELLER APPARATUS
Leon Rydz, 137 Webster Ave., Yonkers, N.Y.
Filed Apr. 27, 1959, Ser. No. 808,987
14 Claims. (Cl. 103—94)



1. A fluid propeller apparatus comprising a pair of concentric blade groups of which one is rotatable relative to the other, one of said groups surrounding the other, each of said groups having a number of axially elongated blade members spaced from each other over the periphery of said group and extending helically about the common axis of said groups, said rotatable group forming a cage structure having an inner cage space communicating between said blades with the space around the periphery of the cage, each blade member of said rotatable group having a transverse cross section composed of a leading portion and a trailing portion integral with each other, said leading portion extending, relative to a radial plane, in substantially concentric relation to said axis, and said trailing portion deviating in said plane angularly away from said leading portion in a sense which, relative to said axis, is the same for the trailing portions of all blade members of said rotatable group.

3,050,008
ELIMINATION OF AIR AND VAPORS FROM A CENTRIFUGAL PUMP
John J. Pacey, Springfield, and George D. Robinson, Jr., Agawam, Mass., assignors to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a corporation of Massachusetts
Filed Dec. 30, 1958, Ser. No. 783,842
4 Claims. (Cl. 103—113)

2. The combination of a centrifugal pump, a variable capacity priming pump having an inlet line from the suction side of the centrifugal pump and a discharge line back to the said suction side, and an air separator in said discharge line, said separator comprising a closed vessel with an air vent opening in its upper end and a liquid outlet spaced a substantial distance beneath said air vent, valve means for opening and closing said air valve, valve means for opening and closing said liquid outlet, liquid level responsive means actuating both said valve means for closing said air vent while opening said outlet and for



opening said air vent while closing said outlet, the level of liquid sufficient to cause closing of said air vent being substantially below said vent in order to block entrance of foam thereto, said separator vessel outlet being of lesser size than said discharge line from the priming pump into the vessel, and said priming pump having means responsive to pressure in said vessel to reduce the capacity of the pump and balance the rate of flow into the vessel in accordance with the rate of flow from the vessel.

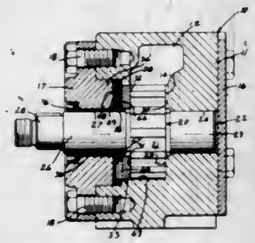
3,050,009
POSITIVE PRESSURE PUMP
Herman Dale Lowry, Los Angeles, Calif., assignor to Lowry Hydraulic Co., Santa Monica, Calif., a corporation of Nevada
Filed Oct. 28, 1960, Ser. No. 65,699
3 Claims. (Cl. 103—125)



1. A positive pressure pump comprising:
a housing having formed therein first and second partially overlapping cavities having cylindrical side walls interrupted to form an opening communicating between the cavities;
a rotor rotatably mounted in the first cavity provided with longitudinal grooves equally spaced about its periphery;
cylindrical rollers partially received in said grooves and in interference fit contact with the first cavity side wall;
means within the housing for retaining the rollers in said grooves during rotation of the rotor;
a wheel rotatably mounted in the second cavity and having a cylindrical periphery in interference fit contact with the second cavity side wall, said cylindrical periphery being interrupted by a series of equally arcuately spaced longitudinal grooves arranged to successively receive and mesh with the outer portions of said rollers in said opening in fluid-tight contact during rotation of the rotor and wheel, said wheel periphery and rotor periphery being in interference fit contact and said wheel and rotor being made of resilient material;

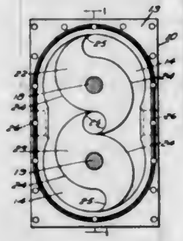
inlet and outlet conduit means in the housing communicating with opposite sides of the meshing contact between the rollers and the wheel grooves in said opening;
and means for rotating said rotor.

3,050,010
PRESSURE LOADED PUMP
John E. Thrap, Willoughby, and Herbert F. Prasse, Gates Mills, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 23, 1960, Ser. No. 10,446
4 Claims. (Cl. 103—126)



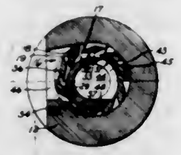
1. A pressure loaded gear pump comprising a casing having a pump chamber formed with an inlet and an outlet, meshing driver and driven gears in said chamber for moving fluid from said inlet to said outlet, a rigid end plate means closing one end of said pump chamber and having a front sealing face engaging the adjoining gear side faces, and having a rear face forming a motive surface, a first wafer member having one face engaging said rear face of said end plate means and having an opening formed therein of a double kidney configuration opposite the discharge side of the pump and further including a pair of openings opposite the inlet side of the pump, the margins of said first wafer member overlying said casing at the edges of said pump chamber, said wafer member being sufficiently flexible to bend about its margins for continued engagement with the rear face of said end plate means with axial movement of said end plate means, a shaped rubber gasket engaging the opposite face of said first wafer member and including an outer peripherally continuous web co-extensive in length to the adjoining peripheral portion of said first wafer member, a pair of inner peripherally continuous webs co-extensive in length to the adjoining bearing journals for the pump gears, cross webs interconnecting said inner webs and including a dividing rib connected to said outer web across the discharge side of the pump to rigidify the gasket, and a pair of cross webs interconnecting the inner and outer ribs on the inlet side of the pump, thereby to form within the gasket a pair of discharge zone sectors on the discharge side of the pump separated by said dividing rib and an inlet zone sector on the inlet side of the pump, an insert wafer corresponding in size and shape to said inlet zone sector and received therein to support said gasket against collapse, a second wafer member co-extensive in area with said gasket, and a cover member for said pump abutting against said second wafer member, said gasket sealingly squeezed between said wafer members and being expandible axially to maintain sealing relationship with the wafer members with axial shifting of the end plate means and first wafer member, whereby said first and second wafer members are clamped between said casing and said cover member and form together with said gasket a pressure control means to pressure-load said rigid end plate means with inlet pressure over an area corresponding to said inlet zone sector and with pump-generated discharge pressure over an area corresponding to said outlet zone sector.

3,050,011
ROTARY PUMP
Martin Karl, 48 Reed St., Pontiac, R.I., and Walter Rexroth, New London Turnpike, West Warwick, R.I.
Filed May 20, 1959, Ser. No. 814,490
4 Claims. (Cl. 103—126)



1. A reversible circulating pump comprising a housing having side walls and one end wall, a cover for the other end of said housing, said housing having an oval cavity, a pair of spaced parallel shafts extending through said end wall and cavity and into said cover, an impeller mounted in said cavity on each shaft, an inlet and outlet opening in opposite side wall portions of said housing between said shafts, and intermeshing timing gears on said shafts outside of said housing, said impellers being identical, each having a general S-shape with thick central portions tapering to a curved point at each end, said shafts extending through the center of said central portions, the axes of the said impellers being so spaced that the respective ends intermesh but so positioned that one end of one will clear the end of the other when they are rotated in opposite directions, the inside curve of each blade end forming a circle with the inside curve of the blade of the intermeshing impeller, the thickness and curvature of said impellers being so shaped that they sealingly contact each other at all times during rotation when said impellers are initially positioned at right angles to each other.

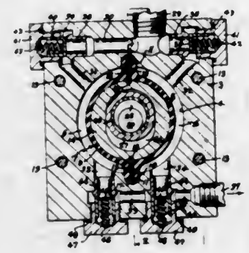
3,050,012
FLUID PUMP
Arnold E. Biermann, 4579 W. 212th St., Fairview Park 26, Ohio
Filed May 21, 1958, Ser. No. 736,934
7 Claims. (Cl. 103—140)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A rotary fluid pump comprising:
(*a*) a housing having an inner peripheral surface defining an internal space within said housing;
(*b*) an inlet duct fixedly attached to said housing and extending into said internal space;
(*c*) said inlet duct having an internal passageway therein and an outer peripheral surface;
(*d*) said outer peripheral surface of said inlet duct and said inner peripheral surface of said housing being mutually eccentric whereby a pump annulus having a variable transverse cross-sectional area is formed;
(*e*) inlet port means in said inlet duct communicating said pump annulus and said passageway;
(*f*) discharge port means in said housing communicating with said pump annulus;

(*g*) a rotor rotatably mounted in said housing and having a substantially cylindrical center portion disposed in said pump annulus;
(*h*) said cylindrical center portion being substantially spaced from said inner peripheral surface of said housing and said outer peripheral surface of said inlet duct between said inlet port and said discharge means;
(*i*) a plurality of rigid vanes;
(*j*) each said vane having a radially inner portion and a radially outer portion;
(*k*) said radially outer portion of each said vane having a lesser pressure area than said radially inner portion of each said vane; and
(*l*) means for pivotally attaching each said vane, substantially between its radially inner portion and its radially outer portion, to said rotor in a manner so that said radially outer portion and said radially inner portion of each said vane are pivoted about an axis perpendicular to and passing through a radius of said rotor and so that said radially outer portion is contiguous to said inner peripheral surface of said housing and said radially inner portion is contiguous to said outer peripheral surface of said inlet duct.

3,050,013
ROTARY DUPLEX PUMP
Stanley J. Ketterer, Stratford, Conn., assignor to The Griffith Company, Bridgeport, Conn., a corporation of Connecticut
Filed Aug. 18, 1960, Ser. No. 50,520
5 Claims. (Cl. 103—149)



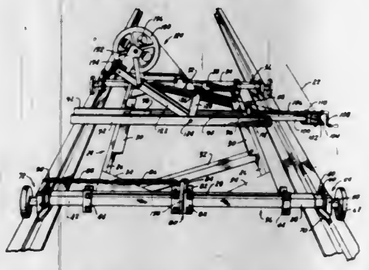
1. A rotary pump comprising a housing including side and end walls enclosing a pump chamber, a tubular flexible member in the chamber extending between the end walls and of smaller diameter than the chamber so that it is spaced from the side walls and provides with the side and end walls of the chamber pumping spaces on opposite sides of said member, longitudinal diametrically opposite ribs on the outer side of said flexible member, said housing provided with longitudinal grooves in which said ribs are seated and separate the pumping spaces, a driver fitting within and extending longitudinally of the flexible member provided with an elongated longitudinal passage, a rotary shaft extending longitudinally of and provided with an eccentric portion within the elongated passage operating to shift the driver and flexible member back and forth in said pumping spaces to vary the volume thereof, a seal plate embedded in each of said ribs in the flexible member and anchored at one edge for hinge movement in the walls of the housing and at the opposite edge in the walls of the driver, inlet and outlet conduit connections to the pumping spaces, and check valves in said connections controlling inlet and outlet flow of fluid to and from said spaces as their volumes vary by shifting of the flexible member by said eccentric and driver.

3,050,014
PUMP TIMING DEVICE
Richard N. Sullivan, Bloomfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 18, 1959, Ser. No. 821,180
1 Claim. (Cl. 103—162)



In an axial piston rotary pump having a plurality of pistons arranged around a common axis and each reciprocable in a path substantially parallel to said axis, a rotor carrying said pistons and rotatable about said axis, reaction means operatively connected to said pistons and fixedly disposed at an angle with respect to said axis whereby said pistons are reciprocated during rotation of said rotor, cylinders for said pistons forming a part of said rotor, said cylinders including openings for conducting the fluid being pumped to and from said cylinders, a disc valve abutting said openings and including a pair of annular slots comprising inlet and outlet ports, a land in said disc defining the closed space between the ends of said slots, passage means having a relief port opening in the face of said land adjacent said openings and communicating with said outlet port, means for rotating said disc valve for varying the pump output such that some of said pistons have their respective cylinder openings crossing said land whereby the pressure in said cylinder openings becomes excessive, a flexible cantilevered member fixed at one end on said disc valve and having a portion of its free end normally covering said relief port, said flexible cantilevered member having one surface in juxtaposition to the disc valve for effectuating damping when the cantilever member moves toward said disc valve, said free end being opened by an excessive pressure build-up in said passage means on the relief port side thereof for relieving fluid from said cylinders.

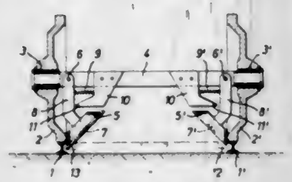
3,050,015
TRACK LINING EQUIPMENT
Henry H. Talboys, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed July 22, 1958, Ser. No. 750,144
10 Claims. (Cl. 104—2)



4. For use in lining track, a car having a frame, a joint on the frame, wheels mounted on each side adapted to roll on the rails of the track, flange elements on the car, the joint including an adjustable connection between the frame and each of the wheels on at least one side of the frame, means on the frame for biasing each of the wheels on the said one side outwardly so that the flange elements for the wheels on both sides of the frame

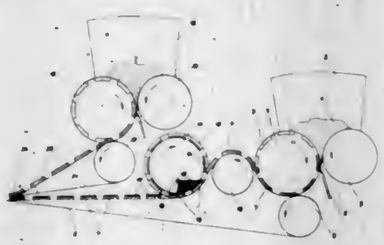
will engage the rails irrespective of gauge variations, a longitudinal reference line coordinating mechanism on the frame, and means for laterally adjusting the reference line mechanism in any one of a plurality of fixed positions so that the lateral distance of the reference line from one rail may be adjusted.

3,050,016
SET OF WHEELS FOR VEHICLES RUNNING ON TWO RAILS
Günter Fischer, Gauss Strasse 15, Braunschweig, Germany
Filed July 6, 1960, Ser. No. 41,205
Claims priority, application Germany July 8, 1959
5 Claims. (Cl. 104—245)



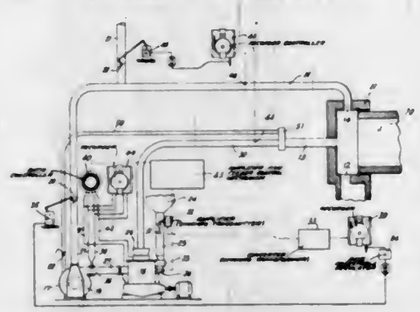
1. A set of wheels for vehicles travelling on a pair of rails comprising a non-rotative axle, two vehicle wheels rotatably mounted on the axle and having non-flanged peripheries adapted to roll on spaced apart rails, a frustroconical guide roller for each of said wheels, each guide roller being disposed in angular relation to an adjoining side of its associated wheel and to the rail, the axes of said wheels and the axes of said guide rollers being angularly disposed but lying in the same vertical plane, lever means pivotally connected to the axle and depending therefrom and rotatably supporting said guide rollers and energy storing means pressing said guide rollers into running contact with the adjoining sides of the wheels when the wheels are in proper position on the rails and pressing the guide rollers so that one of them comes into running contact with the adjacent rail for a transient time when the wheels move too far laterally on the rails in a direction transversely of the rails.

3,050,017
METHOD OF PRODUCING BISCUITS OR LIKE BAKED PRODUCTS AND APPARATUS FOR PERFORMING THE SAME
Willi Mähler, Seulberger Weg, Friedrichsdorf (Taunus), Germany
Filed May 22, 1961, Ser. No. 111,705
Claims priority, application Germany May 25, 1960
11 Claims. (Cl. 107—1)



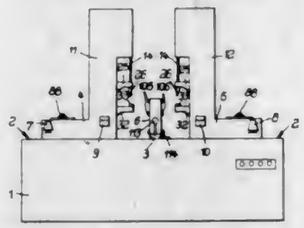
1. A continuous method producing biscuits and other dough shapes with an applied layer of additional material which comprises progressively moulding the dough shapes in an endless travelling series of cavities in the surface of a cylinder, transferring the moulded shapes to a further endless travelling series of moulding cavities and producing the layers of additional material on the said moulded shapes in the said further cavities.

3,050,018
PULVERIZER CONTROL SYSTEM
Leonard Pearson, Barberton, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 24, 1959, Ser. No. 801,539
6 Claims. (Cl. 110—101)



1. In an air swept pulverized material supply system the method of control comprising the steps of continuously measuring directly the rate of raw solid material delivery to a pulverizing zone, continuously comparing said rate of raw material delivery with a desired standard rate of delivery in terms of a deviation value to obtain an impulse proportional in direction and amplitude to the deviation of said raw material delivery rate from said standard, transmitting said impulse to a receiver effective to alter the rate of flow of carrier air to said pulverizing zone, and regulating the rate of raw material flow to said pulverizing zone in coordination with said rate of flow of carrier air to said pulverizing zone to maintain a predetermined ratio therebetween.

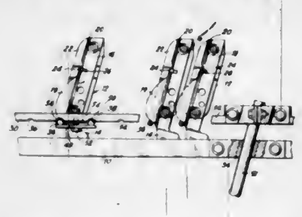
3,050,019
METHOD AND APPARATUS FOR BINDING ELECTRIC CONDUCTORS AND WINDINGS
Willi Muskulus, Bergen-Enkheim, Germany, assignor to Firma Balzer & Dröll Schnitt- und Werkzeugbau, Berlin-Enkheim, Germany, a firm of Germany
Filed Feb. 9, 1959, Ser. No. 792,003
Claims priority, application Germany Feb. 11, 1958
15 Claims. (Cl. 112—2)



1. An apparatus for bandaging the free portions of windings inserted into the grooves of a stator frame and projecting laterally from said frame, comprising a housing, a hooked needle rotatably mounted on said housing and adapted to reciprocate in its axial direction and constituting a first tool, a second housing, a thread guide rotatably mounted on said second housing coaxial to said needle and constituting a second tool, said needle adapted to reciprocate into and out of said thread guide, a third housing, a thread pickup member coaxially surrounding said needle and mounted on said third housing and constituting a third tool, means for rotatably mounting said pickup member and for sliding the same in the axial direction of said needle, means for driving said first, second and third tools, in a predetermined timed relation to each other, means for receiving and mounting the stator

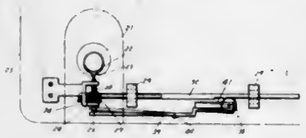
frame so that said winding portions will be disposed at a point between said housings for mounting the needle and the thread guide, and means for rotating said stator receiving means at timed intervals in accordance with the position of said winding portions to be bandaged and the spacing between them and in a predetermined timed relation with the operation of said driving means.

3,050,020
SCHIFFLI EMBROIDERY MACHINE
Theodore Bohus, 7024 Durham Ave., North Bergen, N.J.
Filed Feb. 5, 1960, Ser. No. 6,892
5 Claims. (Cl. 112—95)



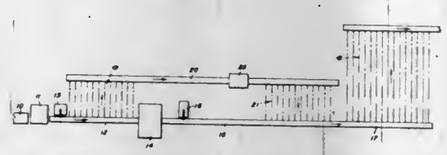
1. In an embroidery machine, including at least one needle, means reciprocating said needle along its longitudinal axis in a horizontal plane, a steel shuttle associated with said needle, and means, including a surface inclined to the vertical and facing parallel to the direction of reciprocation of said needle for slidably supporting said shuttle in operative relation to said needle, means reciprocating said shuttle on said surface, including a bar, means reciprocating said bar in a plane parallel to said surface, a magnetizable pin having one end portion thereof engaging against a bottom portion of said shuttle, and a plate of permanent magnetic material removably engaged on said bar contacting the other end portion of said pin and securing the same against said bar.

3,050,021
LOWER THREAD ADJUSTING APPARATUS IN SEWING MACHINES
Tomio Fukushima, Osaka City, Japan, assignor to Kabushiki Kaisha Tohoku Kosakusho, Sakai City, Japan
Filed Feb. 1, 1960, Ser. No. 5,932
6 Claims. (Cl. 112—229)



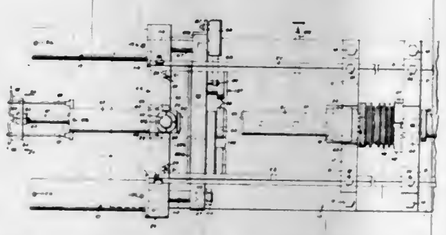
1. A device for adjusting thread tension on a sewing machine bobbin in which the bobbin has thread tensioning means thereon, said device comprising an adjusting shaft adapted to be mounted on the sewing machine adjacent the thread tensioning means for rotatable and slidable movement longitudinally of its length and having engaging means on one end thereof for engaging the thread tensioning means on the bobbin, a first spring means engaging said adjusting shaft and urging said adjusting shaft away from the bobbin, a first pinion on said adjusting shaft, an actuating shaft adapted to be mounted on the sewing machine adjacent said adjusting shaft for rotatable and slidable movement along its length and having a second pinion thereon, said pinions being drivingly connected to each other, a second spring means urging said actuating shaft longitudinally of its length toward one end thereof, and a lever pivotally mounted between said shafts and having one end engaging the other end of said adjusting shaft and having the other end engaging the other end of said actuating shaft.

3,050,022
CONTINUOUS METHOD OF MAKING PIPE
Charles C. Wales, deceased, late of Bay Village, Ohio, by Gladys C. Wales, executrix, Bay Village, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Filed Mar. 18, 1960, Ser. No. 15,873
2 Claims. (Cl. 113—33)



1. A method of making pipe in a range of sizes which consists in constantly feeding skelp heated to welding temperature in a straight-line path through a butt-weld mill thereby converting it to continuous pipe of the maximum size of said range, feeding said pipe along the line of said path through a multi-stand reducing mill thereby converting it to pipe of smaller size, cutting said smaller-sized pipe into cooling-bed lengths as it issues from said reducing mill, accelerating said lengths successively to provide kick-off intervals therebetween, advancing said lengths constantly in the same direction to a cooling-bed run-in conveyor alined with said straight-line path, and providing intervals for changing the roll stands of said reducing mill by cutting said pipe of maximum size into finished lengths, accelerating them successively and translating them laterally away from said straight-line path before they reach said reducing mill, then feeding said finished lengths longitudinally, next translating said finished lengths laterally back to the line of said straight-line path and finally delivering them to said conveyor.

3,050,023
TUBE SPINNING MACHINE
James D. Brown, R.D. 2, Box 300A, Halifax, Pa.
Filed May 29, 1959, Ser. No. 816,927
3 Claims. (Cl. 113—52)



1. Apparatus for making cylinders closed at one end, comprising, in combination, a frame having a central upstanding portion and integral bed plates projecting generally horizontally in opposite directions at the bottom thereof, said central portion having bifurcated bearing members projecting upward therefrom, upstanding cap blocks received over said bearing members and having longitudinal upper rail receiving means in their top portions, a mandrel member received in said bearing members and having mandrel portions at opposite ends and a drive pulley thereon positioned between said bifurcated bearing members, said bed plates having longitudinally extending spaced apart bottom rails thereon extending parallel to the axis of said mandrel member, a

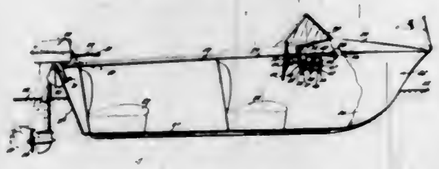
fluid pressure actuated jack for each end of the apparatus for clamping stock to be formed against the end of each mandrel portion, upstanding mounting means for each jack on each projecting bed plate permitting them to be moved transversely into and away from axial alignment with the mandrel and a stock engaging portion thereof axially toward and away from said mandrel to hold stock thereagainst to be formed, said jack mounting means having an aperture therethrough for movement of a formed closed end cylinder therethrough and upper rail mounting means thereon in alignment with the upper rail mounting means on said cap blocks, upper rails mounted in said upper rail mounting means and extending parallel to the axis of said mandrel member, a cross head mounted between said bottom and upper rails for sliding movement along said rails between each jack mounting means and the adjacent mandrel portion, said cross head having a central aperture for movement of the adjacent stock engaging portion of the jack therethrough and removal of a formed closed end cylinder, a circular recess in the face of each of said cross heads nearest the adjacent mandrel portion, a rotary circular plate member mounted in said recess in the cross head, said rotary plate having a central aperture therethrough in axial alignment with said aperture in the cross head and the axis of said mandrel member, roller mounting arms pivoted at their outer ends to the said cross head, spinning rollers rotatably mounted on the inner ends of said arms and projecting toward said adjacent mandrel portion for engagement with the stock to shape it over said adjacent mandrel portion, said rotary plate having arcuate cam means, cam guide means connected with said cam means and to said arms, means for rotating said rotary plate whereby said roller mounting arms carrying the spinning rollers are rotated to move said rollers toward and away from the axis of said mandrel member and means to move the cross head toward and away from said adjacent mandrel portion to bring said spinning rollers into working engagement with the stock.

3,050,024
TORPEDO PROPULSION AND CONTROL
Barnes W. McCormick, Springfield, and Joseph J. Eisenhuth and George F. Wislicenus, State College, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 26, 1957, Ser. No. 668,267
6 Claims. (Cl. 114—20)



4. Stabilizing means for a torpedo having propulsion means including a propeller at its rearward end having an inner portion and a predetermined load characteristic comprising: a non-rotatable hub element disposed rearwardly of the propeller and on the longitudinal axis of the torpedo; means connecting said hub element to the torpedo; and a plurality of fins radially carried by said hub, each said fin having an inner portion, a middle portion and an outer portion, said fin inner portion having a load characteristic substantially the same as the load characteristic of the inner portion of the propeller, said fin middle portion having a substantially flat load characteristic less than the maximum load characteristic of the propeller, said fin outer portion having a load characteristic that decreases in an outwardly radial direction, each of said fins having a plurality of radially disposed different stations, said fins having a predetermined angle and camber for each said different station determined by the propeller water exit conditions at each said different station cooperating to produce a net torque equal and opposite to that created by the propeller in operation and reduce the magnitude of low pressure areas on the fins.

3,050,025
BOAT STEERING MECHANISM
Albert J. Atkeson, 6410 N. Blackstone, Fresno, Calif.
Filed May 25, 1961, Ser. No. 112,575
1 Claim. (Cl. 114—144)



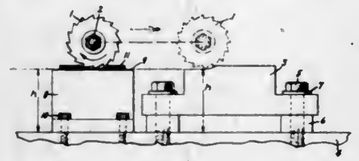
In a boat having a side wall, a dashboard, and a transom, a first rigid bracket projecting forwardly of said dashboard, a second rigid bracket projecting forwardly of said transom, a rigid hollow tube extending between said brackets and supported thereon, a bushing adjacent each end of said tube and receiving in one end thereof an adjacent portion of said tube and affixed thereto, a coil spring having a portion adjacent one end received in the other end of said bushing and secured therein, a sleeve having an end portion circumposed about and secured to the other end of said spring, a flexible wire extending slidably through said tube, said springs, and terminating at each end within the adjacent sleeve, and a plunger adjacent each end of said tube and having a portion adjacent one end slidably mounted in the adjacent sleeve and fixedly secured to the adjacent end portion of said wire for sliding movement with said wire, one of said plungers having its other end adapted to be connected to the steering mechanism of an outboard motor when mounted on said transom and the other of said plungers having its other end adapted to be connected to a hand actuable steering mechanism.

3,050,026
HATCH COVER ARRANGEMENT
David R. Ligh, Mariners Harbor, N.Y. (193 Main St., Madison, N.J.)
Filed May 27, 1957, Ser. No. 661,797
14 Claims. (Cl. 114—202)



1. A hatch cover arrangement comprising, in combination, a hatch coaming having a sealing edge; two pivot supports respectively located on opposite ends of said hatch coaming, each pivot support including link means having a first pivot means with a first pivot axis, said link means being turnable about a second pivot axis with said first pivot means turning about said second pivot axis to and from a first position, each of said pivot supports further including stop means on said link means; a hatch cover including two hatch cover means, each hatch cover means including an inner part and an outer part, and a second pivot means pivotally connecting said inner and outer parts for movement between a substantially aligned position and a plurality of folded positions, each outer part being supported on one of said first pivot means for turning movement about said first pivot means in said first position from said aligned position to a partly folded position in which the respective outer part thereof engages the respective stop means on the associated pivot support whereby further turning of said hatch cover means about said first pivot axis is terminated; a pair of track means located on both sides of said hatch coaming; two pairs of trolley means, the trolley means of each pair being in rolling engagement with said pair of track means, respectively, each pair of trolley means including a pair of third pivot means pivotally connected to one of said inner parts, the axes of said first pivot means in said first position, and of said second and third pivot means being aligned in said aligned position of said hatch cover means; an operating means connected to said hatch cover means, respectively, for moving said inner and outer parts of each of said hatch cover means from said aligned position to said partly folded positions with said trolley means rolling on said track means, and said second pivot means moving along a circle about said first pivot means in said first position whereby said inner edges of said inner parts move apart, said operating means moving said hatch cover means from said partly folded position to a completely folded position with said outer parts and said link means turning together about said second pivot axis of the respective pivot support.

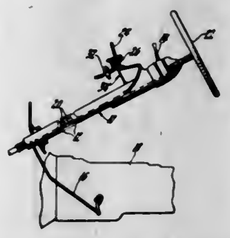
3,050,027
DEVICE AND PROCESS FOR MACHINING OPERATIONS
Christian Henry Borneman, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 2, 1960, Ser. No. 47,098
4 Claims. (Cl. 116—114)



1. An indicating device for a machining operation comprising a multilayer member adapted to be attached to a tool setting surface positioned adjacent a surface to be machined, adjacent layers of said member being of different colors whereby as a machine tool approaches the surface to be machined the layers are successively removed by the tool to provide a visual indication of the distance to the tool setting surface, and means to facilitate attachment of said device to a surface.

3,050,028
TRANSMISSION CONTROL INDICATOR MECHANISM
Thomas J. Griffen, Dearborn, and M. Morton Smith, Orchard Lake, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 7, 1960, Ser. No. 13,046
5 Claims. (Cl. 116—124)

1. In combination; an instrument panel for a vehicle; a steering column; a transmission control tube rotatably supported by the steering column for movement to a series of transmission control tube settings; the transmission control tube having a guide slot therein provided with an arcuate edge, a peripheral portion, and a substantially flat transmission control tube support surface formed thereon; a dial housing mounted on the instrument panel and having legends thereon corresponding to each of the transmission control tube settings; an indicator member for the dial housing; the indicator member including an arcuate guide surface in partial encircling engagement with the peripheral portion of the transmission control tube, an inturned end extending from the arcuate guide surface and constructed for reception within the guide slot, a pointer end opposite the inturned end, and a spring arm engageable with the transmission control tube support surface so as to afford a bias tending to pivot the indicator member about the inturned end thereof; the inturned end of the indicator member coacting with the arcuate edge of the guide slot so as to permit pivotal adjusting movement



of the indicator member about the inturned end of the indicator member in the plane of rotation of the transmission control tube and thereby cause the pointer end to be maneuvered relative to the legends; and an adjusting screw threadedly attaching the indicator member to the transmission control tube at a point between the pointer end and the inturned end so as to maintain the selected setting thereof against the bias from the spring arm and so as to cause pivotal adjusting movement of the indicator member when the screw is adjusted, the adjusting screw forming the axis for swingable adjustable movement of the indicator member in a plane substantially parallel to the longitudinal axis of the transmission control tube and within limits determined by the guide slot.

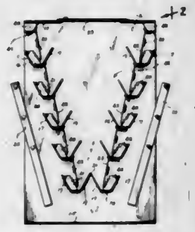
3,050,029
AUTOMATIC FISH FEEDER
Arthur I. Appleton, Northbrook, Ill. (% Appleton Electric Co., 1713 Wellington Ave., Chicago 13, Ill.)
Filed Nov. 12, 1959, Ser. No. 852,486
14 Claims. (Cl. 119—51.13)



1. An automatic feeder for fish or other pets and comprising, in combination, a support plate having a feed discharge opening therethrough, means for detachably mounting said support plate on an aquarium or the like, a timer output shaft mounted on said support plate, a driving arm mounted on said timer shaft for timed rotation bodily therewith, a feed carrier rotatably mounted on said support plate, said carrier having a plurality of circumferential feed pockets therein adapted to register successively with said discharge opening, said feed carrier also having a central chamber therein enclosing said driving arm, a plurality of inwardly extending circumferentially spaced abutments corresponding to each feed pocket in said central chamber situated in spaced horizontal relation to said plate and said driving arm, a raised cam element fixed to said support plate in the path of said driving arm, said cam element deflecting said driving arm

upward into engagement with one of said abutments for a predetermined and limited portion of each revolution of said timer output shaft.

3,050,030
ADJUSTABLE FEEDING TROUGHS FOR FOWL
Grant L. Grundmeier, Northwood, Iowa
Filed Jan. 6, 1961, Ser. No. 81,079
4 Claims. (Cl. 119—53)



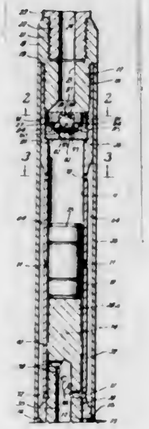
1. In a feeder, a frame housing having a top and two ends, two horizontally spaced apart rows of troughs; the troughs of each row being vertically spaced apart, bracket members in each of said troughs each having a substantially vertical row of sockets a baffle plate extending upwardly from each of said troughs having its lower edge selectively engaging the sockets of the bracket members in the trough from which it extends, whereby said lower edge is vertically spaced a selective distance from the bottom of one of said troughs and the top edge engages the next vertically spaced trough, said two rows of troughs and baffle plates providing a feed holding compartment, and a spring means yieldingly holding the upper end of at least some of said baffle plated adjacent the inner side wall of the trough above it.

3,050,031
NECK COLLAR FOR THE STALLING OF COWS
Louis Schierholz, Bremen, Germany
Filed Apr. 20, 1960, Ser. No. 23,479
Claims priority, application Germany Apr. 23, 1959
5 Claims. (Cl. 119—147)



1. A neck collar for stalling of cows adapted to be secured to an overhead rail and anchored to the floor at its lower end comprising a pair of spaced coplanar sidebars having parallel elongated parts lying in a single plane at their upper portion and having converging bends at their lower and upper ends, means pivotally interengaging said bends at said lower end, means for securing said bends at said upper end in fixed relation to one another, said parallel elongated parts each having a pair of parallel bends in their lower portions in parallel planes normal to said single plane forming approximately the lower third of each said parts into upper forwardly and contiguous lower rearwardly inclined sections from said single plane whereby the lower parts of said sidebars project forwardly of said single plane to accommodate the movements of cows when lying and moving to a standing position.

3,050,032
PERCUSSION-TYPE DRILL
Paul P. Carey, % Carey Machine & Supply, Inc., 1103 N. Rice Ave., Houston, Tex.
Filed Dec. 30, 1960, Ser. No. 79,891
6 Claims. (Cl. 121—28)

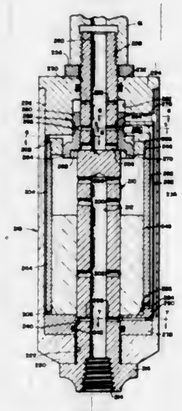


1. In an earth-boring drill, the combination comprising a tubular body having an axial bore, an anvil member mounted for limited longitudinal movement in the lower end of said bore and adapted to be secured to an earth-cutting bit member, a hammer member reciprocable in said bore relative to the anvil member for percussive engagement therewith, a valve chamber in the upper end of said bore, inlet port means extending radially through the wall of said chamber providing communication between the interior thereof and a source of pneumatic pressure fluid, first outlet port means at one end of said chamber below said inlet port means communicating with the interior of said bore above said hammer member, second outlet port means from the chamber above said inlet port means and coaxial with said first outlet port means, passage means connecting said second outlet port means with the interior of said bore at a level below that attained by the lower end of the hammer member in its downward travel, exhaust ports from said bore at longitudinally spaced points along the path of movement therein of said hammer member, and disk-shaped valve means horizontally disposed in said chamber for vertical movement between positions opening and closing the respective outlet port means and operable in response to reciprocation of the hammer member to direct pneumatic fluid from said inlet port means alternately to said first and second outlet port means, and valve means being dynamically unbalanced in the direction of said first outlet port means.

3,050,033
PERCUSSION MECHANISM AND ROTARY DRILLING APPARATUS
Paul P. Carey, P.O. Box 63, Houston, Tex.
Filed Oct. 6, 1959, Ser. No. 844,751
7 Claims. (Cl. 121—28)

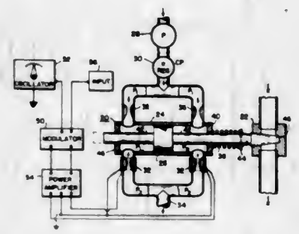
1. In apparatus for drilling earth formations, the combination comprising a rigid structure for fixed securement between lengths of drill string, said rigid structure including a central core member and means surrounding said core member defining an annular hammer chamber therearound, a hammer member mounted on said core

member within said chamber for free longitudinal reciprocation therein, said rigid structure also having fluid passage means for directing a source of pressurized fluid into and out of opposite ends of said chamber, and valve means movably carried by said rigid structure spaced apart from said hammer member and operably disposed in relation to said fluid passage means for controlling the flow of fluid alternatively into opposite ends of said cham-



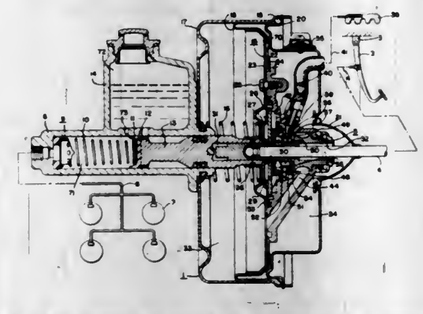
ber to effect reciprocation of said hammer mechanism therein, said valve mechanism being operably movable by the flow of fluid through said passage means in response to the reciprocating movement of said hammer member, said fluid passage means including a central bore formed in the upper end of said core member and spaced inlet ports communicating therewith for control by said valve mechanism.

3,050,034
TRANSDUCER-CONTROLLED SERVO-MECHANISM
Robert C. Benton, State College, Pa., assignor to Centre Circuits, Inc., Pine Grove Mills, Pa., a corporation of Pennsylvania
Filed Apr. 4, 1960, Ser. No. 19,751
18 Claims. (Cl. 121—38)



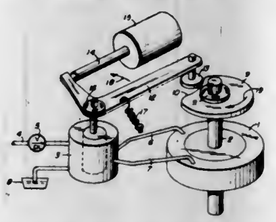
1. In servo-mechanism having a movable wall at one side of which is formed a variable pressure working chamber, control structure for developing a back pressure communicated to said chamber including a fluid flow passage presenting permanently open, restriction means in fixed locations of connection in said structure, and further means connected to said structure including an oscillatory transducer device for changing the resistance of said restriction means to flow by creating varying degrees of turbulence in the stream of fluid passing through said fluid passage thereby varying the buildup and decrease of back pressure in said chamber.

3,050,035
BRAKE BOOSTER VALVE
Carl E. Wilkens and Millard W. Keller, Jr., Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 29, 1960, Ser. No. 46,122
9 Claims. (Cl. 121—41)



1. A valve means for operation in combination with the brake booster unit including, a booster unit casing, a power wall operating within said booster unit forming a variable pressure chamber, a constant pressure chamber, a source of low pressure fluid having controlled communication through said valve means to said variable pressure chamber, a source of high pressure fluid in communication with said constant pressure chamber, manual means for operating said valve means, said valve means comprising a valve seat member, a low pressure valve seat supported on said valve seat member, a high pressure valve seat supported on said valve seat member, manually operated high pressure valve element for engaging said high pressure valve seat, means biasing said high pressure valve element normally in spaced relation to said high pressure valve seat, a low pressure valve element for engaging said low pressure valve seat, means for biasing said low pressure valve seat to a normally contacting position with said low pressure valve element, a contacting surface on said high pressure valve element lying in a plane which is non-parallel with a plane including the contacting surface of said low pressure valve element to prevent coaxial alignment during opening of said low pressure valve element with the closing of said high pressure valve element when said booster unit is operated.

3,050,036
SERVO CONTROL SYSTEM TO ENSURE THE ROTATION OF A TURNING MASS
Jacques Faisandier, 32 Blvd. Felix Faure, Chatillon-sous-Bagneux, France
Filed Apr. 7, 1961, Ser. No. 101,562
Claims priority, application France Apr. 21, 1960
6 Claims. (Cl. 121—41)



1. In an hydraulic servo control system including an actuating member and a valve distributor having a valve controlled by said actuating member, an hydraulic motor controlled by said valve distributor, a source of impulses, said actuating member being actuated by said

source, the provision of a rotary cam member operatively connected to said motor, a follower permanently controlled by said cam member and operatively connected to said actuating member whereby the displacement of said actuating member in response to an impulse received from said source initiates the rotary movement of said cam member, which movement serves to further maintain and control the displacement of said actuating member.

3,050,037
TRACTOR-IMPLEMENT HYDRAULIC CONTROL SYSTEM
Edward B. Heckenkamp, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Nov. 27, 1959, Ser. No. 855,705
19 Claims. (Cl. 121—46.5)



1. In a tractor hydraulic system having a fluid motor, fluid pumping means, a fluid reservoir, pressure fluid passage means connecting said pump to said motor, fluid return passage means connecting said motor to said reservoir, control means associated with said pressure fluid passage controlling delivery of said pressure fluid to said motor, a bypass passage connecting said pressure fluid passage to said reservoir, a first normally closed pressure fluid responsive valve in said bypass passage being operative to open at a first pressure; a second normally closed pressure fluid responsive valve located in said bypass passage in downstream relation to said first valve and being operative to open at a pressure lower than said first pressure; fluid containing means in fluid communication with said bypass passage between said first and second valves; restricted passage means permitting fluid to flow to said reservoir from said containing means when said second valve is closed, the volume of fluid flowing through said restricted passage means being less than the volume of fluid flowing into said containing means when the fluid pressure acting on said second valve is at least equal to said lower pressure, and means connecting said first and second valves whereby said first valve is open at said lower pressure when said second valve is open and permitting said first valve to open and close independently of said second valve when said second valve is closed.

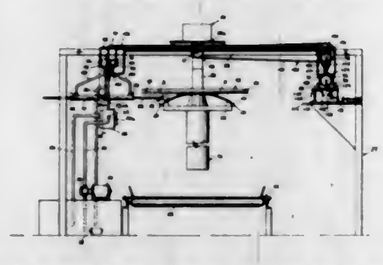
3,050,038
VALVE MECHANISM FOR FLUID OPERATED DOWNWELL PUMPS
Peter S. Bloudoff, 16726 Sausalito Drive, Whittier, Calif.
Filed Feb. 21, 1961, Ser. No. 90,841
4 Claims. (Cl. 121—123)

1. In a hydraulically actuated downwell pump of the type comprising a hydraulic engine having a reciprocating differential area piston actuated by power oil placed under pressure at the surface and in constant operative communication with the smaller of the differential areas of the piston, and having valve means controlling ports to apply power oil at substantially full pressure to the larger of the differential areas in a down stroke position and to connect said larger area to a discharge pressure in an upstroke position, the improvement comprising an elongated tubular valve spool member carried by and reciprocable in said piston and including an imperforate collar member, means to place the lower side of said valve collar member under constant power oil pressure, means forming a tubular valve body member in said piston in cooperative valving relationship with said valve spool member and having first and second spaced series of peripheral ports leading to an exterior annular chamber, a flow chamber above said valve collar and receiving power oil from said annular chamber through said second series of ports when said valve spool member stands in its down



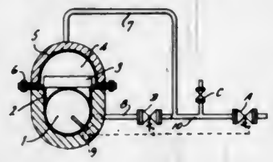
stroke position, whereby power oil flows into the space below said valve collar, through said first series of ports into said annular chamber, through said second series of ports into said flow chamber and thence through said valve controlled ports into the space above said piston, and means to cause a reversal of said valve spool from its down stroke position to an upstroke position.

3,050,039
APPARATUS FOR MAKING FIBROUS GLASS MATS
John H. Banks, Nashville, Tenn., assignor to The Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 23, 1959, Ser. No. 854,899
5 Claims. (Cl. 121—159)



1. In a pressure fluid control system for a reciprocal drive member coupled to an element for oscillating said element, a pilot valve interposed between a source of pressure fluid and the drive member for controlling the cyclic reciprocation of said drive member, a fluid pressure responsive control valve coupled to said drive member and to said pilot valve for supplying pressure fluid from said pilot valve alternately to one end and then to the other end of said drive member, means movably mounting said pilot valve, pilot valve control means comprising a valve member of said pilot valve mounted for oscillatory movement, said valve member having a pivotable exteriorly accessible lever effective to cause its oscillatory movement for reversing the flow of pressure fluid through said control valve, means for periodically actuating said lever including a coupling interconnecting said element and said pilot valve effective to move said pilot valve in response to and in timed relation with the oscillation of said element, and means disposed adjacent said lever and positioned for engagement with said lever so as to actuate said lever during movement of said pilot valve effective to cause the oscillation of said valve member.

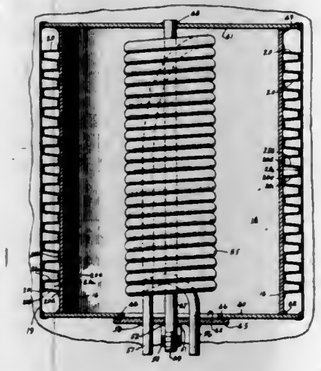
3,050,040
DEVICE FOR THE PREVENTION OF SHUTDOWN CORROSION ATTACKS IN STEAM SPACES AND CONDENSATE RECIPIENTS OF STEAM INSTALLATIONS
Marcel Stein, 528 E. 89th St., New York, N.Y.
Filed Feb. 5, 1959, Ser. No. 791,357
Claims priority, application Austria Dec. 5, 1958
4 Claims. (Cl. 122—4)



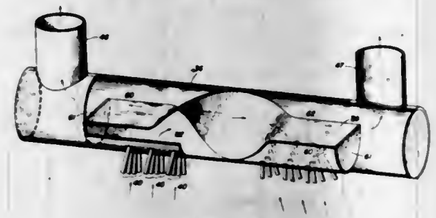
1. An arrangement for protecting steam enclosures against corrosion attacks during shutdown comprising, in combination, enclosure means to which steam is adapted to be supplied; closed container means adapted to contain a desiccator; first passage means connecting said container means with said enclosure means; second passage means connecting said container means with the outer atmosphere; first valve means in said first passage means and movable between an open and a closed position ofr opening and closing said first passage means, respectively; second valve means in said second passage means and movable between an open and a closed position for opening and closing said first passage means, respectively; and temperature sensing means in said enclosure means and operatively connected to said valve means for opening said first valve means and closing said second valve means when no steam is supplied to said enclosure means and the temperature therein drops below a predetermined temperature so as to connect said enclosure means with said container means whereby moisture contained in said enclosure means is absorbed by the desiccator in said container means and for opening said second valve means and closing said first valve means when steam is supplied to said enclosure and the temperature therein raised beyond a predetermined temperature so as to prevent steam from entering into said container means and to provide communication of said container means with the outer atmosphere so that moisture absorbed by the desiccator during the shutdown period may be discharged to the atmosphere.

3,050,041
BOILER
William A. Hale, 4503 N. Knoxville Ave., Peoria, Ill.
Filed Feb. 19, 1960, Ser. No. 9,988
4 Claims. (Cl. 122—367)

1. A boiler comprising means defining a combustion chamber, means introducing fuel into said combustion chamber for combustion thereof, heat transfer apparatus for transferring the heat of combustion of said fuel to a heat transfer fluid, comprising a generally cylindrical horizontally disposed boiler shell of generally circular cross-section positioned above said combustion chamber, an outlet positioned above said shell for directing the products of combustion passing upwardly around said shell to an outlet stack, means defining passageways upwardly around both sides of said shell to said outlet, each said passageway including a plurality of arcuate generally U-shaped channels having the legs thereof secured in heat conducting relation to said shell and having the bottom of the channel open to the combustion chamber and the top open to the outlet, the bight of the U providing a peripheral surface facing inwardly toward the periphery of said shell for forcing the upwardly flowing products of combustion to flow in close contact with the upper surface of said shell or with the channel to thereby conduct heat from the products of combustion to said fluid in an efficient manner.



3,050,042
STEAM GENERATOR ORGANIZATION
Edward L. Kochey, Princeton Junction, N.J., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 11, 1958, Ser. No. 727,824
7 Claims. (Cl. 122—406)



1. A vapor generator including means for burning a fuel and forming a stream of hot combustion gases, a pair of substantially coextensive headers disposed with their longitudinal axes in spaced generally parallel relation, and disposed transversely of said gas stream, said headers being interconnected at their ends by a pair of parallel conduits, one of said headers having plate means therein including a portion extending longitudinally thereof and dividing it into a first chamber and a second chamber separate from said first and each of which extends longitudinally of the header with said first chamber communicating with one of said conduits at one end of the header and with a substantial circumferential and longitudinal portion of the header wall on the opposite half of the header from said one end, and with the second chamber being oppositely arranged communicating with the other conduit at the other end of the header and with a substantial circumferential and longitudinal portion of the header wall at the opposite end, a number of steam heater elements spaced across said gas stream being effectively connected to said one header in spaced relation therealong in the same relative positions they occupy in gas stream, those connected with the longitudinal half

of the header including said one end communicating with said second chamber and being out of communication with said first chamber and the remaining elements communicating with said first chamber and being out of communication with said second chamber, other steam heater elements in series flow relation with the first mentioned elements and similarly spaced across said stream and connected with the other header in spaced relation therealong in the same relative positions they occupy in the gas stream.

3,050,043
OPERATION OF SPARK-IGNITION ENGINES
Maurice R. Barusch, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,211
3 Claims. (Cl. 123—1)

1. The method of operating a spark-ignition internal combustion engine equipped with means for recycling engine blowby gases into the air-fuel intake system so as to simultaneously reduce atmospheric air pollution from engine exhaust gases and to prevent accumulation of deposits in the air-fuel intake and carburetor system of said engine, the steps which comprise passing the engine blowby gases, atmospheric air, and a leaded gasoline into said air-fuel intake system and carburetor and thence into the combustion chamber of the engine, burning said gasoline in said combustion chamber, the blowby gases being returned to the air-fuel intake system, said leaded gasoline containing a minor amount sufficient to prevent accumulation of deposits as a result of said blowby gas circulation, within the range of about 0.0002% to about 0.2% by weight of said gasoline of an oil-soluble acyclic alkylene diamine selected from the group consisting of cis-9-octadecenyl-1,3-propylene diamine, and aminopropyl tallow amine wherein the tallow radical is an acyclic hydrocarbon group of 16–18 carbon atoms.

3,050,044
FUEL ECONOMIZER ATTACHMENT FOR INTAKE MANIFOLDS
Listen R. Anderson, 821 Walter SE., Albuquerque, N. Mex.
Filed June 18, 1958, Ser. No. 742,765
1 Claim. (Cl. 123—25)



A fuel economizer attachment for gasoline engines comprising a moist air supply line, a first fitting at one end of said moist air supply line adapted for attachment to an engine radiator, a second fitting on the opposite end of said moist air supply line adapted for attachment to an intake manifold for delivering moist air from a radiator to a fuel air mixture of an intake manifold, a flow control valve mounted within said moist air supply line, said control valve including a valve housing having a constant diameter longitudinal bore therein, an elongated spring urged cylindrical valve member snugly and slidably received within said bore, said housing having inlet and outlet openings, said openings being in communication with opposite ends of said bore, said valve member having a conical end portion receivable in said inlet opening comprising a closure therefor, a small restricting spiral passage formed in the outer surfaces of said valve member with the ends of said passage in communication with the opposite ends of said bore, whereby a greater pressure in said inlet opening relative to the pressure in said outlet opening will force said conical portion of said outlet away from said inlet opening allowing the moist air in said radiator to pass through said valve and into said intake manifold.

3,050,045
PUSH ROD STRUCTURE AND METHOD OF MANUFACTURE
Stanley Gondek, Birmingham, Mich., assignor to Bundy Tubing Company, Detroit, Mich., a corporation of Michigan
Filed Feb. 12, 1960, Ser. No. 8,331
4 Claims. (Cl. 123—90)

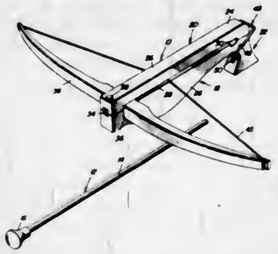


1. Push rod structure comprising, a tube having an end defining a seat having portions disposed at a non-perpendicular angle to the longitudinal extent of said tube, an end piece having an axial extent which is small as compared to the length of said tube, said end piece having in axial succession adjoining first, second, and third portions, said first portion providing a curved surface adjacent one end of said end piece having portions disposed at a non-penpendicular angle to the longitudinal extent of said tube and engaging said portions of said seat, said second portion having a diameter larger than the diameter of said tube, said second portion extending longitudinally away from said tube and from said first portion and terminating in a generally radial surface disposed toward said tubing, said radial surface defining a seat for a spring in a mechanism with which said push rod is adapted to be used, said longitudinally extending portion providing positioning means for a spring engaged against said seat, said third portion projecting longitudinally away from said spring seat and providing at the other end of said end piece a rounded surface portion defining a bearing surface adapted for engagement with a part of a mechanism with which said push rod is adapted to be used, and a fused metal connection connecting said curved surface of said end piece directly to said portions of said seat on said tube with said positioning means, spring seat, and bearing surface disposed exteriorly adjacent said tube end.

3,050,046
PISTOL BOW
Erby L. Love, Spartanburg, S.C. (151 Fairview Ave., Daytona Beach, Fla.)
Filed Aug. 25, 1960, Ser. No. 51,960
6 Claims. (Cl. 124—25)

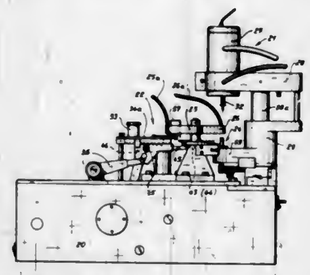
1. A pistol bow comprising a stock including an elongated barrel portion and a grip portion, said barrel portion including upper and lower portions having confronting lower and upper substantially planar horizontal surfaces respectively and secured together with said surfaces

in surface-to-surface contacting relation, at least one of said surfaces including a notch extending transversely thereacross and opening toward the other of said surfaces defining a longitudinal transversely extending slot in said barrel portion terminating a spaced distance from the opposite ends of said barrel portion, a bow extending transversely of the forward end of said barrel portion and having its mid-portion secured in the forward extremity of said slot, the confronting surfaces of said bow and at least one of said barrel portions having opposing notches formed therein by which said bow and at least one of said barrel portions are interlockingly engaged with each other, an elongated flexible member secured between opposite end portions of said bow and having its mid-portion slid-



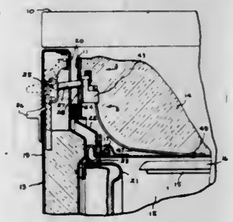
ably received in said slot, a longitudinal blind bore formed in said barrel portion and having portions thereof formed in both said upper and lower portions thereof and extending from the forward end of said barrel portion to a point spaced forwardly of the rear end of said slot, the rear end of said slot including an enlarged portion defining a catch for said flexible member, said grip portion including a trigger for releasing said flexible member from engagement with said catch, and said notch in said bow mid-portion including a portion aligned with said bore, said enlarged portion of said slot including a stop surface immediately adjacent said slot and disposed rearwardly of said bore lying in a plane extending transversely of said stock and disposed at substantially right angles to the longitudinal axis of said slot comprising said catch.

3,050,047
AUTOMATIC MACHINE FOR THE DRILLING OF A SUCCESSION OF BORES IN PARTS MADE OF HARD MATERIAL
Jean Schluchter, Geneva, Switzerland, assignor to Indufi S.A. de Participations, Geneva, Switzerland, a firm of Switzerland
Filed Aug. 12, 1960, Ser. No. 49,293
Claims priority, application Switzerland Aug. 17, 1959
20 Claims. (Cl. 125—30)



1. An automatic machine for drilling a succession of parts of hard material, chiefly clockwork stones, comprising a magazine adapted to hold the parts to be drilled and provided with an output for said parts, a drilling mechanism including a headstock and a vertically shiftable drill-carrying spindle, a container collecting the drilled parts, clamping means registering vertically with the spindle and adapted to hold transiently the successive parts to be drilled, a first horizontal arm adapted to rock round a vetrical axis to remove a part out of the output of the magazine and to shift it angularly to convey it into the clamping means, a second horizontal arm adapted to rock round a vertical axis to remove the drilled part out of the clamping means and to shift it angularly to drop it into the container, a common control system shifting vertically and angularly both horizontal arms, and a mechanism controlling and adjusting the movements of said control system and of the drilling spindle to make the machine produce in successive stages in successive operative cycles the simultaneous transfer through the two horizontal arms respectively of a part to be drilled from the magazine to the clamping means to be drilled therein and of the precedingly drilled part from the clamping means into the collecting container.

3,050,048
DOOR SAFETY LATCH FOR HEATED CAVITY
George A. Scott, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Feb. 10, 1961, Ser. No. 88,526
9 Claims. (Cl. 126—273)



1. A heated cavity and a door for closing and sealing said cavity, heating means for raising the temperature within the cavity, and latch means for locking the door in a closed position, and switch contact means that is closed by the latch means when the door is both closed and locked, the switch contact means serving as an electrical interlock system to prevent the energization of the heating means of the cavity until the oven door is closed and locked, and thermal interlock means motivated by the temperature within said cavity to hold the latch means in the locked position whenever the temperature within the cavity rises above a predetermined amount.

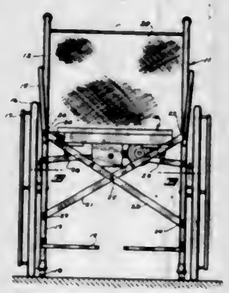
3,050,049
OTOSCOPE ILLUMINATION ASSEMBLY
John S. Kruglick, 1313 N. 2nd St., Phoenix, Ariz.
Filed Nov. 10, 1958, Ser. No. 773,077
5 Claims. (Cl. 128—23)



1. An illumination assembly for an otoscope comprising a case, an electric battery contained in said case, a lamp contact at one end of said case, a second lamp at the end of said case opposite said first mentioned lamp contact, conductor means within said case connecting said second lamp with both said first mentioned lamp contact and with a terminal of a battery adjacent said first mentioned lamp contact, a second conductor means within said case connecting said second lamp with another ter-

minal of a battery, retaining means holding said second lamp firmly attached to said case, and exteriorly accessible switching means mounted within said retaining means and adapted to turn said second lamp on and off in response to movement of said switching means.

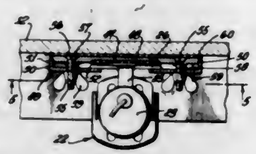
3,050,050
ALTERNATING PRESSURE SEAT
William G. Kubicek, Rosemount, Minn., assignor to Regents of The University of Minnesota, Minneapolis, Minn., a corporation of Minnesota
Filed July 13, 1956, Ser. No. 597,764
6 Claims. (Cl. 128—33)



1. In a collapsible wheel chair comprising front and back and vertical frame members, horizontal side members connecting said front and back vertical members, wheels journalled in said frame for rotation, a flexible back support between said back vertical frame members, diagonal folding braces extending between said front vertical frame members and between said back vertical frame members, said braces being pivotally mounted to the frame at their lowermost ends, pivotally attached to each other at their point of intersection and horizontal seat supporting rods carried by the upper ends of said diagonal braces, the improvement which consists in providing a foldable continuously alternating pressure seat comprising a rigid frame, a plurality of spaced apart stationary slats forming part of the body supporting surface of said seat securing to said frame, a plurality of movable slats disposed in the spaces between said stationary slats and likewise forming part of the body supporting surface of the seat, each of said movable slats being secured to a common supporting member whereby the movable slats are movable together as a unit, motor means secured to the bottom surface of said seat, a reduction gearing system for reducing the effective speed of said motor and means for translating the rotary motion of said motor means and gearing system into eccentric motion for moving said movable slats up and down with respect to said stationary slats, said translating means comprising a tilting shaft journaled in said seat frame transverse to the longitudinal direction of said slats for limited rotation, means on said shaft for engaging the undersurface of said movable slat unit and eccentric crank means for tilting said shaft, one side of said seat being pivotally supported by one of said horizontal seat supporting rods and hooks mounted on the frame on the opposite side of said seat for temporarily supporting that side of the seat from the opposite horizontal seat supporting bar.

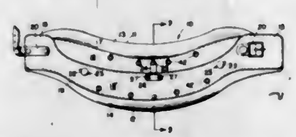
3,050,051
MASSAGE APPARATUS
William N. Moxley, 3821 Don Tomaso Drive, Los Angeles, Calif.
Filed Jan. 26, 1959, Ser. No. 789,156
8 Claims. (Cl. 128—33)

1. In massage apparatus: a supporting structure for a person; an integral bracket plate secured to said structure; a massage unit for providing a massaging action and having a frame; a substantially flat, pliant, elastic cushioning member flatwise on said bracket plate; clamp members on opposite sides of said frame extending inwardly over marginal portions of said frame releasably



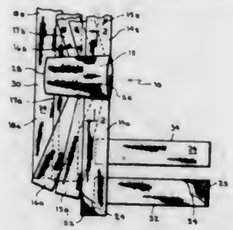
engaged therewith to hold said frame against said cushioning member; and means secured to said bracket plate and engaging said clamp members to releasably clamp said clamp members against said frame and said frame against said cushioning member.

3,050,052
CERVICAL COLLARS
Simon Grassl, 1561 3rd Ave., New York, N.Y.
Filed Jan. 4, 1961, Ser. No. 80,655
4 Claims. (Cl. 128—75)



1. A cervical collar comprising an upper and a lower section, each section consisting of a suitable material folded upon itself, a soft inlay and a plastic strip embodied within said material and a leather strip stitched to the latter, air vents through said sections, and means for adjusting the height of the collar, said means comprising a substantially flat bar secured to the upper section, two metal plates arranged one upon each side of the lower section with one of said plates being adapted to slidably receive said bar, screws adjustably securing said plates together, and a washer embodied in the wall of the lower section below the plate upon the outer side for friction engagement with the bar in adjusting the latter.

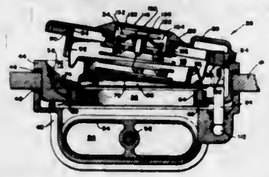
3,050,053
ORTHOPEDIC SUPPORTS
Arthur C. Peckham, 304 Trust Co. Bldg., Watertown, N.Y.
Filed Aug. 26, 1959, Ser. No. 836,101
7 Claims. (Cl. 128—80)



1. In a support of the character described: a stretchable sleeve member for encircling a portion of the body, a plurality of non-stretchable strap members having adhesive means on one side thereof, said strap members being fixed to the said sleeve member at one side thereof and extending outwardly therefrom in a predetermined angular pattern for engagement in a preselected manner with the sleeve member and adjacent body portion, and

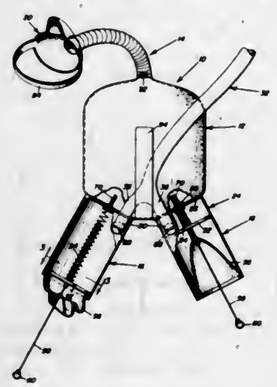
detachable non-adhesive means normally covering said strap member adhesive means prior to the application of the support.

3,050,054
BREATHING APPARATUS
Leon Jones, Garden Grove, Calif., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Aug. 1, 1957, Ser. No. 675,768
9 Claims. (Cl. 128—142)



1. In an exhaust valve for exhausting exhaled air from a face mask or the like of a breathing apparatus having a regulator for supplying breathing fluid under pressure to the mask and for varying the pressure of the breathing fluid within the mask with variations in atmospheric pressure, the combination comprising a casing adapted to be supported on the mask with an inlet port in communication with the interior of the mask and an outlet port for exhausting air to the atmosphere, a valve seat intersecting said inlet and outlet ports, a valve member biased into engagement with said seat and being pivotally mounted at one end thereof for pivotal movement out of engagement with said seat against said bias in response to an increase in said fluid pressure within said inlet port acting on one side of said valve member and caused by exhalation by the user of the apparatus, and means defining an expansible chamber operatively interconnected to and exerting a force on the other side of said valve member and adapted to be connected in communication with the regulator for compensating said valve member for variations in the pressure of the breathing fluid within the mask acting on said one side of said valve member.

3,050,055
UNDERWATER BREATHING DEVICE
Robert G. Vautin, 19 Paterson Ave., Nutley, N.J.
Filed June 29, 1960, Ser. No. 39,482
8 Claims. (Cl. 128—145)



1. An underwater breathing device comprising a sealed pressure chamber, a delivery conduit having one end in communication with the interior of said chamber, means on the other end of said conduit adapted for sealing engagement with a portion of the face of a swimmer and communication with his lungs, at least one air pump having a discharge opening communicating with the interior of said chamber, an inlet opening in said air pump, an inlet line having one end sealingly secured to said inlet opening and the other end adapted for positioning above the surface of a body of water, and operating means operatively connected to said air pump and adapted for securement to a limb of a swimmer for movement therewith to operate said pump, means on said chamber adapting the latter to be strapped to the back of a swimmer, said pump comprising a hollow cylinder secured to said chamber and projecting toward the feet of a swimmer on whose back said chamber is strapped, a piston slidably disposed in said cylinder for reciprocating movement therein, said inlet and discharge openings of said pump being formed in the forward end of said cylinder adjacent said chamber, a check valve in said inlet opening and a check valve in said discharge opening, said check valves permitting air to flow from the inlet line into said cylinder and preventing the flow of air from the cylinder back into the inlet line and permitting the air to flow from the cylinder into said chamber and preventing the flow of air from the chamber back into the cylinder respectively, means disposed in said cylinder resiliently urging said piston forwardly therein, means sealing the rear end of said cylinder, said operating means comprising a flexible member having one end secured to said piston and the other end adapted for securement to the foot of a swimmer.

3,050,056
SEA-SPRITE EAR PLUGS
Carol M. Dressler, 2313 W. Diversey, Chicago 47, Ill.
Filed Apr. 22, 1959, Ser. No. 808,179
3 Claims. (Cl. 128—151)



1. A combination ear ornament and swimming ear plug structure, the structure including an ear plug for insertion into an ear, and a non-metallic ear ornament secured directly to and in overlapping assembly with said ear plug at its outer end, the ear ornament being of such mass and peripheral dimension so as to comprise means for totally concealing both central and peripheral areas of said ear plug so the ear plug may be inconspicuously lodged within the ear canal, said ear ornament further providing means for ornamenting the ear as well as providing handle means to assist in inserting the ear plug structure in the ear canal and to assist in the removal of the ear plug from the ear canal, the ear ornament including a series of petal-like portions which are disposed in axially lapped relation with respect to one another along a longitudinal axis of the ear plug, a flower simulating core portion mounted on said ear ornament, and a clamp pierced through the petal-like portions securing the flower simulating core portion in assembly with the petal-like portions.

3,050,057
TOE GUARD
Rufus F. Johnson, 807 23rd S., Seattle, Wash.
Filed Apr. 25, 1960, Ser. No. 24,299
1 Claim. (Cl. 128—153)

A toe protector of the character described comprising a flexible and adjustable, circular band adapted to be re-

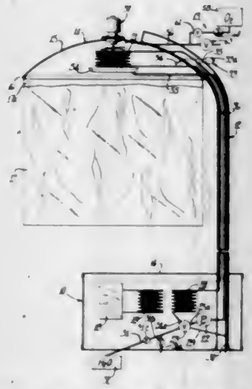
movably secured to a foot about the arch thereof, a plurality of stiff strips of U-form joined together to form a cage, of sufficient size to surround the toe end portion



of the foot, the ends of said strips being substantially parallel and secured to said band and at least one of said strips being positioned substantially at right angle to the other strips at the point of joining.

3,050,058
OXYGEN TENT
Albert H. Andrews, Jr., 4714 Greenwood Ave., Chicago 14, Ill.
Filed May 28, 1956, Ser. No. 587,860
10 Claims. (Cl. 128—191)

1. Apparatus for administering oxygen therapy comprising a cabinet assembly, a tubular member extending upwardly from said cabinet assembly, a hood carried by said tubular member in overlying relationship to said cabinet assembly, a canopy suspended from said hood for draping over the head of a patient, means for cooling the atmosphere within said canopy including a refrigeration



unit in said cabinet assembly having a set of cooling coils, a first set of coolant-carrying coils in heat exchange relationship with said cooling coils, a second set of coolant-carrying coils mounted under said hood and being connected to said first set of coolant-carrying coils, means for circulating coolant through said coolant-carrying coils, and means for introducing oxygen into said canopy.

3,050,059
HYPODERMIC SYRINGE
Wendell I. Wall, Glendale, Calvin C. Cowley, La Canada, and Donald A. Hamilton, Burbank, Calif., assignors to Don Baxter, Inc., Glendale, Calif., a corporation of Nevada
Filed May 25, 1959, Ser. No. 815,431
6 Claims. (Cl. 128—218)

1. A hypodermic syringe comprising a transparent wall barrel having an entrance end and an outlet end adapted to receive a detachable needle and containing an axial discharge passage for fluid delivery to the needle, an elongated plunger insertable and reciprocable within the barrel through its entrance and having an inner reduced tip, an elastomeric barrel-engaging stopper on said reduced tip of the plunger, the inner end of the barrel having an annular shoulder tapering at acute angularity to the barrel axis toward said discharge passage and the end annular surface of the stopper being tapered acutely



to the barrel axis in the same direction but at greater angularity to the barrel axis so that upon advancement of the plunger to its innermost position said end tapered stopper surface engages the tapered barrel shoulder progressively radially inwardly to correspondingly displace last remaining fluid from the barrel and the central end surface of the stopper engages the mouth of said discharge passage in the fully advanced position of the plunger.

3,050,060
SPECULUM LINER AND INSEMINATION ROD COMBINATION
Roy D. Hoffman, 325 S. Richard St., Bedford, Pa.
Filed Sept. 16, 1959, Ser. No. 840,293
2 Claims. (Cl. 128—260)

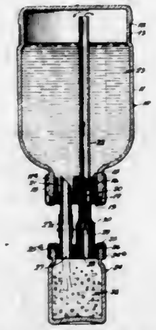


1. For use in expediting the steps pursued by a veterinarian when using a semen-charged inseminating rod; bovine impregnating means comprising, in combination, a rigid open ended speculum tube, and a contamination preventing envelope open at an outer end and closed at an inner end, said envelope being made of inelastic sheet material, being elongated and fitting telescopically into the passage of said speculum tube, the inwardly disposed and confined end of said envelope being normally closed but frangible, the rearward end being open and having a terminal portion folded over, surrounding the rearward end of the tube and being fastened thereto, said envelope providing a protective liner for the tube and an anti-contamination shield for the aforementioned insertable inseminating rod and being of a length, compared to the length of the tube that the normally enclosed end may be forcibly projected beyond the leading end of the tube by passing an insemination rod through the tube and forcibly pressing the distal end thereof against the closing frangible end of said envelope and extending the envelope to a position where it is sufficiently taut that said distal end is caused to rupture the envelope, whereby to allow the rod to pass through and beyond the ruptured portion of said envelope prior to entering the animal's vagina.

3,050,061
PARENTERAL SOLUTION EQUIPMENT
Leonard F. Goyke, Chicago, Ill., assignor to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed May 29, 1957, Ser. No. 662,361
3 Claims. (Cl. 128—272)

1. In combination, a parenteral solution container equipped with a resilient stopper, said stopper having a pair of passages therein adapted to communicate the interior of said container with the exterior of said stopper,

an air tube mounted in one of said passages and extending only inwardly of said container and to a point adjacent the bottom of said container, a vial containing a supplemental medicament for the container solution, a closure secured to said vial, said closure being equipped with a pair of spaced apart spouts of equal length extending only outwardly of the portion of said closure connected to said vial, said spouts having passages extending there-



through, both of said spouts being of generally circular cross-section and one spout being of smaller outer diameter than the other, the smaller outer diameter spout being received in the air tube-equipped passage of said stopper, the larger outer diameter spout being received in the other passage of said stopper, the smaller diameter spout being equipped with resilient means in sealing engagement with said stopper.

3,050,062
SECRETION SUCTION DEVICE FOR RESCUE APPARATUS
Wolfgang Ulmer, Bochum, Germany, assignor to Otto Heinrich Drager, Lubeck, Germany
Filed Sept. 19, 1960, Ser. No. 56,997
Claims priority, application Germany Oct. 2, 1959
1 Claim. (Cl. 128—276)



A device for the removal by suction of fluid matter from the respiratory passages of a stricken person comprising a fluid matter collecting vessel, catheter tube means attached to said vessel for insertion into the respiratory passages of said person, neck means joined to said vessel, a mouthpiece fastened directly to said neck means, a flange having a diameter large enough to extend over the teeth and secured to said mouthpiece for insertion between the lips and teeth of a rescue worker for holding said vessel by the lips and teeth while causing a partial vacuum in said vessel by mouth produced suction through said mouthpiece, and a small rib surrounding the outlet end of said mouthpiece.

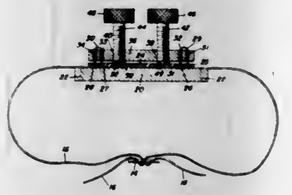
3,050,063
PINLESS BABY DIAPER
Mildred E. Margraf, 702 N. Ella Road, Palatine, Ill.
Filed Dec. 18, 1957, Ser. No. 703,556
2 Claims. (Cl. 128—284)

1. A diaper comprising an outer panel having an extension at each of the sides thereof and adjacent the top, an inner panel stitched to the top of the outer panel so that the inner panel will normally be positioned to lie flat against the outer panel when the diaper is unfolded, a single inwardly facing fastening element secured to the inside face of each said extension, a plurality of equally spaced outwardly facing fastening elements secured to the bottom of said outer panel and extending across the full width thereof, said extensions adapted to overlap and



cover the outside adjacent edges of the bottom of said outer panel and said fastening elements on said extensions adapted to selectively engage the equally spaced fastening elements on said outer panel to secure the diaper in folded condition about the body of a baby to vary the size of the waistband of the diaper, and fastening elements at the lower end of the inner panel to which an auxiliary pad may be detachably secured.

3,050,064
MECHANICAL COMPRESS BANDAGE
Robert E. Moore and Ralph Morris Adkins, West Frankfort, Ill.
Filed Oct. 22, 1959, Ser. No. 848,009
4 Claims. (Cl. 128—327)

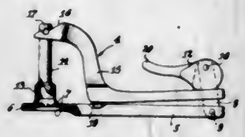


1. A compress bandage comprising, in combination, a compressibly resilient sterile pad, a base plate parallel to and spaced from a top side of said pad, a force transmitting and pressure equalizing member interposed and sandwiched between said pad and plate, said plate and member each having slots at their respective transverse ends, a flexible inelastic strap having free ends connectible by a cooperating manually adjustable buckle, a median portion of said strap being interposed between the top of said pad and bottom of said member, end portions of said pad projecting beyond corresponding end portions of said plate and member, median but longitudinally spaced portions of said strap being fixed to the respective projecting end portions of said pad, portions of said strap between the fixed portions being threaded through their cooperating slots and thus assembling the plate, member and pad, the top side of said member having at least one outstanding projection with a sealing recess therein, and at least one pressure screw carried by said plate and having one end aligned with and seated in said recess.

3,050,065
CIRCUMCISION CLAMP
Irving Grossman, Hicksville, N.Y., assignor to Diapulse Manufacturing Corp. of America, New York, N.Y., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 18,049
3 Claims. (Cl. 128—346)

1. A readily detachable circumcision clamp comprising a base member having an opening in one end and its

other end bifurcated, a handle member having an offset end and an opposite bifurcated end and pivotally mounted on said base member, a bell provided with a vertically disposed stem fitting into the opening of said base member and said stem being connected to the offset end of said handle member for vertical movement of said bell and stem upon rotation of said handle member in one direction about its pivot to form a clamp at the juncture of said bell with the circumferential edge of said base member adjacent the opening therein, and a cam lever assembly comprising a link having one end thereof pivoted to said base member and passing through the slot formed by the bifurcated end of said handle member and



a cam lever pivotally connected to said link and rotatable by depression of an extension finger to cause the cam surface thereof to directly engage and bear upon the surface of said handle member when said link is passed through the slot formed in the bifurcated end of said handle member to cause said handle member to be rotated about its pivotal connection with said base member to apply pressure to said clamp and to thereafter maintain said cam lever in a fixed position relative to said handle member against inadvertent dislodgement and to thus lock said clamp in operative position until intentionally released by lifting the extension finger of said cam lever and rotating it in an opposite direction thus immediately loosening said clamp.

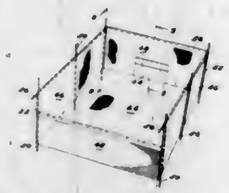
3,050,066
RETENTION CATHETERS
Wilbur R. Koehn, 509 Hudson St., New York, N.Y.
Filed Dec. 31, 1958, Ser. No. 784,222
5 Claims. (Cl. 128—349)



1. A retention catheter comprising an outer tube, an inner tube mounted to slide longitudinally in the outer tube, an annular sleeve of a thin, flexible material connected between the ends of the inner and outer tubes and located wholly within the outer tube when the inner tube is retracted relative thereto, said inner tube being movable relative to the outer tube to project the sleeve from the end of the outer tube, means for supplying a fluid under pressure between the inner and outer tubes to inflate the sleeve, and said sleeve being formed to produce an annular enlargement at the end of the outer tube when inflated.

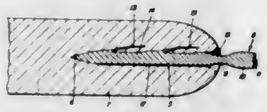
3,050,067
SUN TAN DEVICE
Parollee J. Trafton, 631 Westchester Road, Grosse Pointe, Mich.
Filed Feb. 4, 1959, Ser. No. 791,193
7 Claims. (Cl. 128—372)

1. A suntan platform provided with a floor comprising a flexible multi-layer sheet having a sunlight reflective intermediate layer interposed between two protective outer layers, one protective layer being a bottom layer and the other protective layer being a tough, relatively transparent and relatively thin plastic upper layer, said sunlight reflective layer comprising a multiplicity of bright metallic particles deposited upon and carried by that surface of the transparent plastic layer which juxtaposes the bottom layer, characterized in that the sunlight reflective layer and



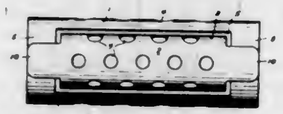
the transparent reflective upper layer are jointly embossed to present a multiplicity of relatively angularly disposed sunlight reflective surfaces each visible through its similar angularly disposed transparent plastic layer.

3,050,068
INSERTABLE CIGAR HOLDER
Remigio E. Primus, 7624 Rugby St., Philadelphia, Pa.
Filed Aug. 16, 1961, Ser. No. 131,820
7 Claims. (Cl. 131—13)



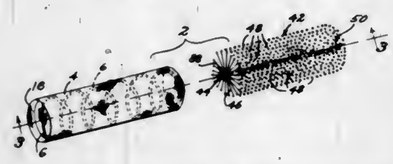
1. A cigar holder comprising a spike for insertion longitudinally in a cigar from the rear end thereof, a bit on the rear end of the spike, and a plurality of rearwardly divergent prongs integral with the spike for anchoring same in the cigar, said spike including a penetrating point on its forward end and having circumferentially spaced longitudinal grooves therein providing smoke channels between the point and the bit, said bit including a reduced neck of circular cross-section having communication with the grooves.

3,050,069
DIFFERENTIAL HAIR CURLER
Irvin H. Brown, 775 Post St., San Francisco, Calif.
Filed Feb. 1, 1960, Ser. No. 5,783
1 Claim. (Cl. 132—39)



A differential curler comprising:
a first roller for winding partially an end portion of a strand of hair hereon consisting of a hollow cylinder having a plurality of large perforations in the wall thereof and opened on both ends to facilitate the drying of the hair wound thereon; and
a pair of ears extending axially oppositely from the ends of said cylinder; and
a second roller consisting of a hollow cylinder of a much larger diameter than that of the first mentioned cylinder and having a plurality of large perforations in the wall thereof and opened on both ends to facilitate the drying of the hair wound thereon,
said second mentioned roller having a longitudinal opening therein for admitting the first mentioned roller with the strand of hair partially wound thereon into said second mentioned roller so that said ears rest on the outer surface of the second mentioned roller for winding the remaining portion of said strand on the latter.

3,050,070
BALL TIP BRISTLE BRUSH ROLLER
Abraham Sidelman, Jamaica, N.Y., assignor to H. Goodman & Sons, Inc., New York, N.Y., a corporation of Delaware
Filed June 7, 1961, Ser. No. 115,516
1 Claim. (Cl. 132—39)



A bristle brush hair roller adapted to be positioned temporarily in the wearer's hair and to form a hair curl comprising, in combination, a hollow flexible open mesh material tube and a longitudinally extending brush having radially extending bristles positioned therewithin, each of said bristles having integral, relatively smooth end portions extending through and beyond said open mesh material hollow tube, ball shaped terminal ends on said bristles disposed outwardly and beyond said open mesh material hollow tube, the cross-sectional area of each of said substantially ball-shaped terminal ends being larger than the cross-sectional area of the bristle portion directly adjacent thereto, said cross-sectional area of each of said ball shaped terminal ends being taken on a plane coinciding with the longitudinal axis of the bristle, whereby the hair is uniformly gripped while being wound about the hair roller and whereby the bristles, in engaging the scalp, impart at all times the feeling of softness, without any discomfort, to the scalp.

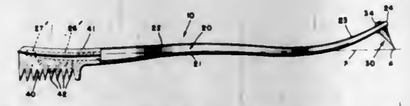
3,050,071
HAIR SOLUTION ABSORBER
Ruth W. Hall, 918 S. Dixie, Lake Worth, Fla.
Filed Nov. 19, 1959, Ser. No. 854,181
3 Claims. (Cl. 132—46)



1. A hair treating solution absorbing device comprising a substantially H-shaped porous spongy mass of minute interconnecting cells, in which the cross-member is approximately one third the length of the front hair line of a human head and divides the side members into shorter legs and longer legs, the shorter legs being approximately the length from the front hair line to the ear line, and the longer legs being sufficiently long to follow the hair line on each side of a human head and overlap at the center neck hair line.

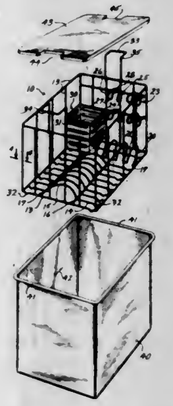
3,050,072
TOOTH CLEANING DEVICE
Jack Diener, 4545 Connecticut Ave., Washington, D.C.
Filed Aug. 28, 1959, Ser. No. 836,708
2 Claims. (Cl. 132—93)

1. In combination, an elongate handle and an interdental element thereon, said handle comprising a gradually curved main portion having the top surface thereof convex, and a head portion extending at an angle from an end of said main portion, the top of said head portion and the top of said main portion forming an obtuse angle, said head portion having a cylindrical aperture extending therethrough, a plurality of grooves extending through said head portion parallel to the axis of said aperture and communicating throughout their length with said aperture, said element comprising a conical tip, a truncated conical shank having the larger base thereof adjacent the base of said tip to thereby provide a shoulder on said



conical tip, and an enlarged head having an underside larger than the small base of said shank and intermediate in size between the diameter of said aperture and the outer boundaries of said grooves, the diameter of the shoulder of said conical tip being substantially as large as the outer boundaries of said grooves, the center of said handle main portion at the two ends thereof and the apex of said conical tip occupying substantially a common plane, the angle between a median plane passing through the center of the handle main portion and the axis of the interdental element being 60°.

3,050,073
DISHWASHER APPARATUS
Jean A. McMillan, New York, N.Y. (92 Meadowbrook Road, Short Hills, N.J.)
Filed July 13, 1959, Ser. No. 826,862
3 Claims. (Cl. 134—137)



1. Dishwasher apparatus comprising a container having a predetermined inner configuration and adapted to receive a cleansing fluid, a basket formed of spaced-apart wire members of a configuration to permit said basket to fit relatively closely within said container and to permit cleansing fluid to pass readily therethrough, a plurality of dish receiving means within said basket to maintain dishes in a substantially vertical position, first means within said basket to receive cups, second means within said basket to receive glasses, said first and second means each including outwardly extending substantially U-shaped portions to engage and grip the interior of the cups and glasses, each of said first and second means to receive and grip cups and glasses being inclined at an angle with the horizontal so that cups and glasses will tend to inhibit the development of air pockets when said

basket is raised and immersed repeatedly in cleansing fluid, receptacle means within said basket to receive and confine silverware, members depending from said basket to support said basket above a surface, handles on said basket by which said basket is raised and lowered in cleansing fluid to affect a cleansing action, said handles extending above said container when said basket is fully immersed, a lid to cover said container, and said lid having cut out portions to fit about said extending handles.

3,050,074
VEHICLE TENT AND TENT CARRIER
Louis C. Miller, Rte. 2, Sebeka, Minn.
Filed Feb. 3, 1960, Ser. No. 6,509
2 Claims. (Cl. 135—1)



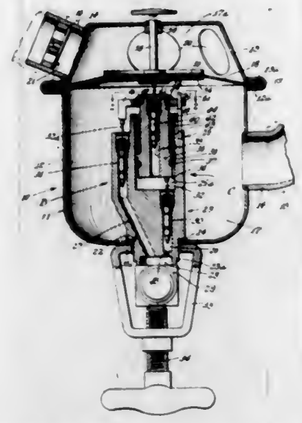
1. A vehicle tent carrier apparatus comprising an elongate supporting frame adapted to be mounted on the roof of a vehicle to extend longitudinally thereof, an elongate shaft rotatably mounted on said frame and extending longitudinally thereof, a pair of elongate arms each being affixed to one end of said shaft, each of said arms having an outer section telescopically mounted thereon, an elongate reel structure extending between and secured to said outer sections and having tent structure secured thereto and wound thereon, an actuating crank rotatably mounted on said support and having a driving gear affixed thereto, and a driven gear mounted on said shaft and engageable with said driving gear whereby said arms may be adjustably positioned from a horizontal position to upright position with respect to said frame upon rotation of said crank.

3,050,075
RETRACTABLE VEHICLE COVERING DEVICE
Rose Kaplan, Bernice Pernhall, and William Pernhall, all of 9310 Queens Blvd., Rego Park, N.Y.
Filed July 5, 1960, Ser. No. 40,717
1 Claim. (Cl. 135—5)



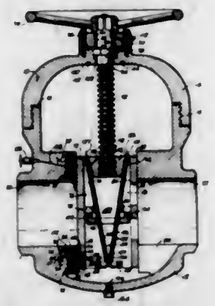
A container adapted to be mounted on a vehicle for housing a pair of retractible vehicle covers comprising a tubular member having a length greater than the width of the vehicle upon which the container is to be mounted, an end wall closing each end of the container, a pair of arcuate flaps each having a length greater than the length of the container and each being provided with offset radially extending end sections, said end sections of each flap being pivotally secured to the end walls of the container, said flaps adapted to normally overlie a pair of diametrically opposite longitudinal slots formed in said container, each of said flaps being independently pivotal to expose the respective slot to permit the withdrawal and retraction of a pair of covers disposed within the container, a pair of container mounting members each being attached to the respective end walls of the container and depending downwardly and inwardly from the container, and each of said mounting members being formed with an offset base portion having means for attaching the member to the rain gutter on the vehicle.

3,050,076
BREATHABLE GAS REGULATOR APPARATUS
James P. Fay, 18 France St., Norwalk, Conn.
Filed Dec. 29, 1960, Ser. No. 79,214
21 Claims. (Cl. 137—63)



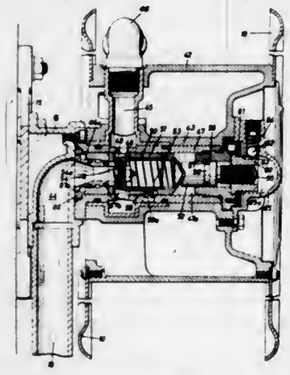
1. A breathable gas regulator apparatus comprising a housing; a pressure-responsive diaphragm dividing the housing into an inhalation chamber and an exhalation chamber, said exhalation chamber being exposed to the pressure of the surrounding fluid medium; a source of breathable gas under pressure; first means including means in said inhalation chamber operable to directly communicate said source of breathable gas to said inhalation chamber; and separate pneumatic amplifier means including second means disposed in said inhalation chamber and operated by said pressure-responsive diaphragm in response to reduced pressure in said inhalation chamber for operating said first means for communicating said source to said inhalation chamber, said amplifier means being operable with substantially reduced effort relative to said first means.

3,050,077
DOUBLE SEALED GATE VALVE
Charles Wheatley, 414 S. Detroit, Tulsa, Okla.
Filed May 11, 1959, Ser. No. 812,225
3 Claims. (Cl. 137—312)



1. A gate valve comprising a body, an inlet and outlet port provided in the body, a removable valve seat provided for the inlet port, a wedge member reciprocally disposed in the body transversely of the inlet and outlet ports, said wedge member provided with oppositely disposed wedge faces, a pair of valve discs disposed on opposite sides of the wedge and spaced therefrom, one of said discs cooperating with the valve seat for precluding fluid flow through the valve in a closed position thereof, bearing means carried by the wedge member, means for reciprocating the wedge member, means interconnecting the wedge member with the valve discs to move the valve discs from seating to non-seating relation to the valve seat, an inner seal member provided on the valve seat around the inlet port for sealing engagement with said one valve disc, an outer seal member provided on the valve seat around the inner seal member for engagement with said one valve disc, and retaining means interposed between the seal members for securing the seal members on the valve seat, and passageway means provided in the valve seat and retaining means to discharge any fluid leaking around the inner seal to preclude discharge thereof through the outlet port.

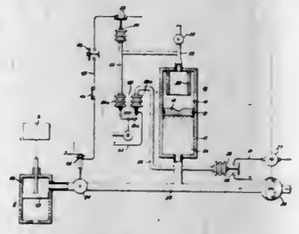
3,050,078
HOSE REELS AND VALVES OPERATED THEREBY
Edward Hooper, South Shields, England, assignor of one-half to Aero & Engineering (Merseyside) Limited, Wirral, England
Filed Nov. 9, 1959, Ser. No. 851,686
Claims priority, application Great Britain Nov. 8, 1958
5 Claims. (Cl. 137—355.19)



1. A hose reel including valve means and driving means between the reel and said valve means whereby the reel when rotated is operative to open said valve means, said driving means including a slipping clutch device, said valve means comprising a valve member proper, means supporting said valve member proper for movement from an open to a closed position and vice versa, a seating for said valve means proper, means supporting said valve seating for movement in the valve opening and closing direction, abutment means on said valve seating, a valve seating stop spaced from said abutment means in the valve opening direction, and means operative to cause movement of the valve seating in the valve opening direction until said abutment means engages the valve seating stop whereby during preliminary rotation of the reel there is a period during which the valve is closed.

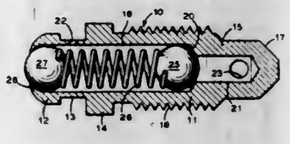
3,050,079
HYDRAULIC OPERATING SYSTEM
Ugo R. Tognella, Philadelphia, Pa., assignor to General Electric Company, a corporation of New York
Filed Mar. 10, 1960, Ser. No. 14,017
6 Claims. (Cl. 137—568)

2. In a hydraulic operating system for effecting predetermined controlling operations, a pneumo-hydraulic accumulator comprising a cylinder and a piston movably mounted within said cylinder to divide the cylinder into a liquid chamber and a gas chamber at the respective opposite sides of said piston, means including a source of pressure connected to said liquid chamber and operable to force liquid into said liquid chamber, pressure responsive means connected to said cylinder for effectively terminating operation of said source of pressure when the pressure of the liquid in the liquid chamber exceeds a first predetermined value, a stop arranged within said cylinder for limiting the travel of said piston in a a direction to compress any gas within said gas chamber, said gas chamber normally containing sufficient gas at a sufficient pressure to maintain said piston spaced from said stop when the pressure of said liquid equals said first predetermined value, a controlling valve operatively connected to said liquid chamber for releasing liquid from said accumulator to effect said predetermined controlling operations, differential pressure responsive means connected to said liquid chamber and said gas chamber and



sensitive to a pressure differential between the gas and the liquid on opposite sides of said piston for providing a controlling signal when said differential exceeds a predetermined amount, means operatively connected to said gas chamber for rendering said controlling valve incapable of releasing liquid from said accumulator when the pressure in said gas chamber is below a second predetermined value substantially less than said first predetermined value, said differential pressure responsive means operating in response to a substantially smaller pressure differential than the difference between said first and said second predetermined pressure values so as to provide an early warning of the loss of gas from said accumulator.

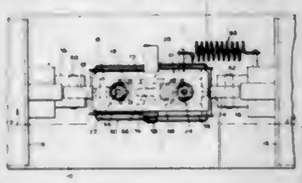
3,050,080
BLEEDER VALVES
Frank Pagano, Newark, N.J., assignor to Surelock Mfg. Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed May 11, 1959, Ser. No. 812,331
5 Claims. (Cl. 137—614.17)



1. As an article of manufacture for use as a permanent part of a hydraulic brake system of the type provided with an outwardly opening bleeder passage having an inner end formed as a valve seat having a port therethrough, and threaded to receive a bleeder valve: a bleeder valve comprising a unitary one-piece valve body adapted for threading into a bleeder passage to extend outwardly therebeyond and having an inner end, of less diameter than that of the bleeder passage, formed with a valve surface adapted to engage the valve seat in the latter and close the port therein; said body having a passage extending longitudinally thereof through its outer end and into such inner end, and relatively unrestricted inlet port means connecting said passage to the outer lateral surface of such inner end outwardly of said valve surface; said body passage being formed with a valve seat intermediate its ends dividing it into an outer substantially unrestricted section and an inner substantially restricted section, and with restricted outlet port means opening through the wall of said body adjacent its outer end and having a flow area substantially less than that of said inlet port means; a

spring-pressed check valve in said body passage engaged with said last-named valve seat and normally obstructing flow of fluid outwardly through said passage; and a second spring pressed check valve, within the outer section of the passage, engaged with a valve seat at the outer end of said passage and preventing flow of fluid outwardly through such outer end except when said second valve is pressed inwardly to disengage its valve seat; the fluid upon cracking of said bleeder valve to open the port in a bleeder passage, flowing into the bleeder passage and through said inlet port means into the inner substantially restricted section of said body passage; said check valve being lifted from its seat, when the fluid pressure exceeds the spring pressure, for flow of fluid past said check valve and through said outlet port means to completely fill said passage with fluid due to the restricted egress of fluid through such outlet port means in comparison with the substantially unrestricted ingress of fluid through said inlet port means, whereby to prevent entry of atmospheric air into said passage.

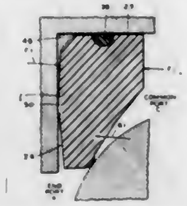
3,050,081
FLUID PRESSURE CONTROL VALVE
Mason W. Johnston and Ralph D. Markle, Jr., Red Hook, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1958, Ser. No. 784,369
3 Claims. (Cl. 137—622.5)



1. A control valve comprising a valve casing which defines a cylinder open at either end, said casing including a pair of system control ports and a supply port disposed between said two system control ports, said ports being in communication with said cylinder, two valve members disposed within said cylinder, each of said members being adapted to control fluid flow between said supply port and an associated control port and each including a valve stem and a fixed valve head, connection means disposed between said valve heads comprising a T member fixed to one valve head slidably mounted within a slotted member fixed to the other valve head, said connection means being adapted to allow a fixed degree of relative movement between the two valve heads, independent actuating means associated with each valve stem, two detent receiving portions on the valve stem of one valve member, and detent means pivotably mounted on said valve casing and adapted to cooperate with said detent receiving portions such that said one valve member may be secured in either of two positions of dwell, said valve members being adapted to be moved independently of one another by their associated actuating means when said one valve member is in a first dwell position and to be moved as a unit by the actuating means when said one member is in its second dwell position to provide coordinated control of fluid flow between said supply port and said control ports.

3,050,082
VALVE
Harold E. Bass, Ledyard, and Robert F. White, Stonington, Conn., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 15, 1960, Ser. No. 56,292
3 Claims. (Cl. 137—625.11)

1. A valve, comprising a valve housing having first and second axially aligned end ports and a common port; a rotatable ball disposed in the space within said housing and having a fluid passage arranged in a first rotational position of said ball to provide communication between said common port and said first end port only, in a second rotational position of said ball to provide communication between said common port and said second end port only, and in a third rotational position of said ball to prevent communication between said common port and both of said end ports; said housing having an annular valve seat adjacent and concentric with each of said end ports, each of said seats comprising an annular radially extending surface and an annular axially extending surface; a pair of annular seat seal rings each disposed in one of said seats and arranged to hold said ball therebetween, said seal rings being formed from a material having a substantial flexural stiffness and hardness and a relatively high modulus of elasticity, each of said seal rings having an inner diameter corresponding to the diameter of said passage, an outer diameter corresponding to the diameter of said axially extending surface, a rear face, a front face extending radially and inwardly from said inner diameter and arranged to contact said ball only over a first limited an-

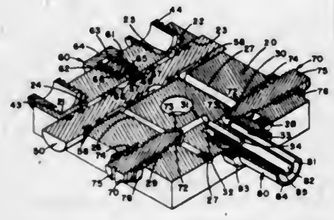


nular area adjacent said inner diameter under preload conditions and over a limited annular region including said first area under substantial load conditions urging said ball and said seal ring into contact, said rear face extending radially and generally outwardly from said inner diameter, said rear face having a circular ring located between said inner diameter and the centroid of said seal ring, said circular ring being arranged to contact said radially extending surface as a fulcrum when load is exerted on the front face of said seal ring, said rear face having an annular bearing area adjacent said inner diameter and axially spaced from said radially extending surface under preload conditions but contacting said axially extending surfaces under all load conditions on said front face by torsional twisting of said seal ring about said fulcrum; and separate sealing means affording sealing contact between said outer diameter of each of said seal rings and a respective one of said axially extending surfaces under all load conditions, said separate sealing means for each of said seal rings comprising a lip integral with said seal ring and projecting radially from said outer diameter intermediate said front and back faces.

3,050,083
METERING VALVE BLOCK
Clair J. Verway, Grand Rapids, Mich., assignor to C. J. Verway Company, Grand Rapids, Mich., a corporation of Michigan
Filed July 10, 1958, Ser. No. 747,670
4 Claims. (Cl. 137—625.18)

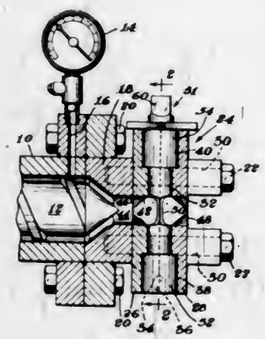
1. A fluid flow metering valve assembly, comprising: a valve block having a plurality of separate straight line passages formed through the side edges thereof, certain of said passages intersecting other of said passages and being receptive of means for controlling the flow of fluid through said valve block, said passages including separate air and liquid fluid inlet passages disposed in parallel spaced relation through one side edge of said valve block,

a control piston passage formed through opposite side edges of said block normal to and intersecting said air and liquid fluid inlet passages, separate intermediate passages formed through the side edge of said block opposite said one side edge and terminating in communication with said control piston passage, said intermediate passages being axially spaced from said inlet passages and having their outer ends closed, a control piston received in said piston passage and including annular shoulders and passages for simultaneously and selectively interconnecting and separating said intermediate passages from said inlet passages, said control piston being axially adjustable within said



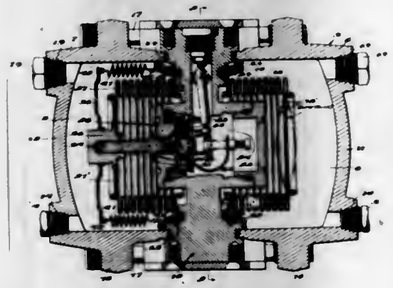
piston passage and having between the piston grooves detent means engaged therewith for holding said piston in its selected control position, separate metering valve passages formed through opposite sides of said block and each transversely intersecting one of said intermediate passages, said metering valve passages being axially spaced and extending in overlapping relation to each other, metering valves operatively engaged within said metering valve passages for selectively controlling the air and liquid fluid flow therein, and separate concentric passages formed through said valve block normal to said metering valve passages and each intersecting a different one of said metering valve passages at their overlapping ends.

3,050,084
VALVE FOR CONTROLLING BACK PRESSURE IN PLASTIC EXTRUDERS
Albert J. Palfey, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 4, 1960, Ser. No. 47,427
2 Claims. (Cl. 137—625.32)



1. A control valve for varying over a wide range the back pressure at the output end of an extruder, comprising a block-like valve body, means for coupling said valve body to an extruder output means in a fluid-tight manner, said valve body being composed of two plates each having a surface which is adapted to mate with the corresponding surface of the other plate, the body having a nozzle bore, said nozzle bore having a central part which is square in transverse cross sectional configuration and ends which are circular in transverse cross sectional configuration, and an intermediate part on each side of said central part which varies symmetrically from square to circular in transverse cross sectional configuration, which extends transversely through the plates and is adapted to communicate with a nozzle bore of said extruder, a valve stem bore, said valve stem bore extending edgewise through said valve body, the longitudinal axis of said valve stem bore intersecting the longitudinal axis of the nozzle bore in said central part thereof, said valve stem bore being counter-bored at each end thereof, the counter-bored parts of the bore having a constant diameter and being coaxial with the remainder of the bore, a valve stem, said valve stem being disposed within said valve body and having a body part and larger cylindrical parts at each end of the body part, the diameter of said larger cylindrical part being slightly smaller than the diameter of said counter-bored part, said body part of the valve stem being cylindrical except for the central section along the length thereof, the diameter of the body part of the valve stem being smaller than the diameter of the valve stem bore, said central section of the valve stem body part being that part of the valve stem which intersects the nozzle bore, said central part of said valve stem being symmetrically thinned to a minor fraction of the diametrical thickness of the rest of the valve stem body, and means for rotating said valve stem over a predetermined range and for securing said valve stem with respect to said valve body.

3,050,085
DIFFERENTIAL PRESSURE RESPONSIVE DEVICE
William Maurice Reese, % Industrial Instrument Corp., P.O. Box 777, Austin, Tex.
Filed Mar. 24, 1958, Ser. No. 723,429
13 Claims. (Cl. 137—779)

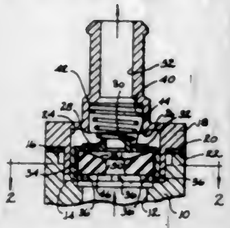


5. In a differential pressure responsive device, a housing having pressure chambers therein, a bellows and additional means each having a portion exposed to respective ones of said pressure chambers, said bellows and additional means enclosing a liquid, means operatively connected with the additional means and movable thereby in response to variations in pressure acting on the bellows and additional means, thermostatic means in heat exchange relation with the liquid and forming an end wall of the bellows for varying the capacity thereof in response to variations in temperature acting on the liquid and on the thermostatic means, and means separate from the bellows for establishing a liquid seal between the bellows and the pressure chambers, said means being exposed to both the pressure in said pressure chambers and the liquid in the interiors of said bellows, whereby the pressures acting on said means are substantially equalized.

3,050,086
FLOW CONTROL HAVING LOW PRESSURE BY-PASS

Philip George Honsinger, St. Clair Shores, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Filed June 29, 1959, Ser. No. 823,518
5 Claims. (Cl. 138—45)



1. In a constant volumetric fluid flow mechanism, a housing having a fluid flow passage therein, an annular valve seat in said passage, a cylindrical cup having a plate-like annular base, said cup being positioned within said fluid flow passage with said base engageable with said valve seat, flow passages formed between said cup and said housing passage to permit flow of fluid around said cup and through said valve seat, means biasing said cup away from said valve seat, and a separate deformable flow annulus carried within said cup.

3,050,087
FLEXIBLE HOSE

David M. Caplan, Los Angeles, Calif., assignor, by mesne assignments, to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Delaware

Continuation of application Ser. No. 407,248, Feb. 1, 1954. This application Mar. 22, 1957, Ser. No. 648,482
9 Claims. (Cl. 138—121)



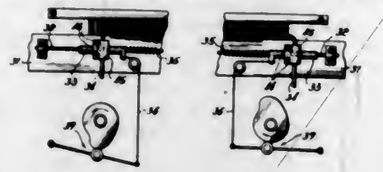
1. A mold-formed flexible hose comprising an interiorly and exteriorly corrugated tubular body molded from thermosetting plastic material, the exterior corrugations being defined by ridges and intervening valleys, the crests of said ridges, in cross-section axially of said hose, having a continuous, smooth, arcuate, mold-formed outer surface free of protuberances and added material, and wire-like reinforcing means encircling said body and secured to said ridges at the crests thereof, said reinforcing means having a portion of its outer surface substantially immediately contiguous the outer surface of said crests and being completely surrounded by thermoset plastic material, the thickness of said material radially outwardly of said reinforcing means being less than the thickness thereof radially inwardly of said reinforcing means.

3,050,088
WEFT TENSIONING AND INSERTING DEVICE FOR GRIPPER SHUTTLE LOOMS

Heinrich Schäffer, Werther, near Bielefeld, Germany, assignor to C. A. Delius & Söhne, Bielefeld, Germany, a firm of Germany

Filed Aug. 18, 1960, Ser. No. 50,430
10 Claims. (Cl. 139—126)

1. In a loom of the type in which lengths of weft yarn for two picks are withdrawn from pirns on both sides of the loom, the ends of the picks being inserted into the shed alternately from the right and the left of the loom by means of a pirnless shuttle riding upon a sley, and the ends of the picks upon being released by the shuttle are subject to suction to hold the picks under tension, the improvement which comprises, suction pipes slidably mounted at each side of the loom for movement into and out of the warp shed, and means to move each suction

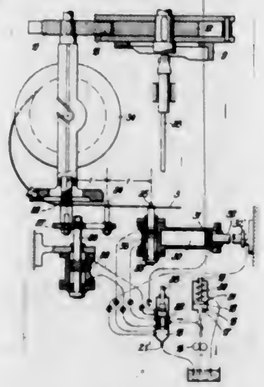


pipe into the shed to meet an approaching shuttle and withdraw the suction pipe in unison with the shuttle, whereby the pick ends will be drawn to the suction pipes as they slip from the shuttle and be held under tension as the suction pipes withdraw from the shed.

3,050,089
WIRE-LOOPING MACHINES

Heinrich Schmidt, Dusseldorf, Germany, assignor to Hein, Lehmann & Co. Aktiengesellschaft, Dusseldorf, Germany

Filed Feb. 27, 1958, Ser. No. 718,018
8 Claims. (Cl. 140—102)



1. A machine for forming a succession of equispaced closed loops on a wire, comprising a support, a spindle on said support having means for holding a supply reel for a wire to be looped, a first pin, a second pin and a third pin spacedly positioned parallel to one another along a path for said wire transverse to the axis of said spindle, said first pin being coaxial with said spindle, said second pin being disposed between said first and third pins at a predetermined distance from said axis, first holder means for said first and second pins displaceable in axial direction of said spindle between one position in which said first and second pins traverse said path and another position in which said first and second pins are withdrawn from said path, second holder means for said third pin displaceable in axial direction of said spindle between one position in which said third pin traverses said path and another position in which said third pin is withdrawn from said path, a carrier connected with said second holder means and reciprocable along said path together with said third pin, drive means for rotating said spindle about its axis, and control means coupled with said drive means, said first and second holder means and said carrier for performing in timed relationship the following operations:

(1) actuation of said drive means for rotating said spindle with said supply reel thereon through a full turn with said first holder means in said one position thereof whereby a loop of wire is formed around said first pin, said second pin concurrently engaging a second loop previously formed in said wire;

(2) displacement of said second holder means into said one position thereof for introducing said third pin into a third loop formed in said wire before said second loop;

(3) displacement of said first holder means into said other position thereof for withdrawing said first and second pins from their respective loops;

(4) advancement of said carrier in a direction away from said axis with entrainment of said wire by said third pin over a distance sufficient to align said second pin with a loop formed earlier in said wire;

(5) displacement of said first holder means into said one position thereof for inserting said second pin into the loop aligned therewith;

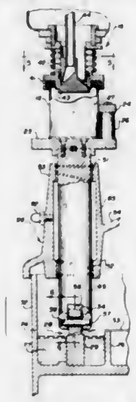
(6) displacement of said second holder means into said other position thereof for withdrawing said third pin from said third loop; and

(7) return of said carrier into a position in which said third pin is aligned with a loop on said wire formed before said third loop.

3,050,090
LIQUID FILLING APPARATUS

Paul E. Luther, 1807 107th Ave., Oakland, Calif.

Filed May 25, 1959, Ser. No. 815,476
6 Claims. (Cl. 141—150)

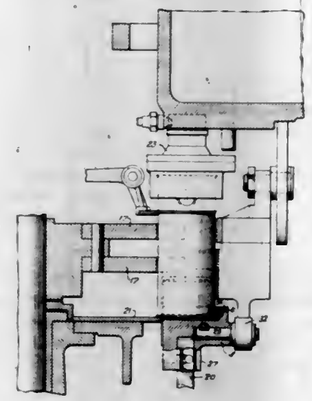


4. Filling apparatus including a product supply means, a plurality of valves operatively connected to said supply means, a plurality of container supporting members with each of the latter being disposed subjacent and in alignment with the respective valves, means rotating said valves and said members about a common vertical axis, a stationary annular cam positioned subjacent said platforms, each of said platforms having a cam follower operatively engaged with the upper surface of said cam, one-half of the circumferential extent of said upper surface having a first horizontal portion extending for about 30 degrees of arc, a continuing second upwardly inclined portion extending for about 30 degrees of arc, a third upwardly inclined continuing portion extending for about 25 degrees of arc with the amount of incline being less than that of said second portion and a fourth horizontal continuing portion extending for about 95 degrees of arc, the other half of said surface being complementary to said first one-half whereby the uppermost horizontal cam surface extends for more than one-half the circumferential extent thereof, and an annular lubricant reservoir having an open top intermediate the lower and upper cam portions whereby at least said first portion of said cam surface may be immersed in a liquid.

3,050,091
CAN FILLER STIRRUP

George L. N. Meyer, Milwaukee, Wis., assignor to Geo. J. Meyer Manufacturing Company, Cudahy, Wis., a corporation of Wisconsin

Filed Feb. 27, 1959, Ser. No. 796,080
3 Claims. (Cl. 141—370)

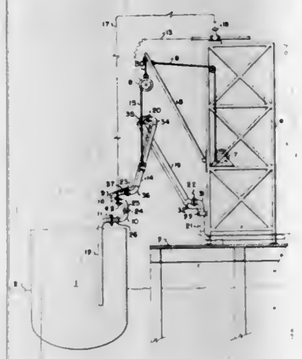


2. In a can filling machine of the character described, a stirrup having a can-supporting surface adjacent the upper portion thereof composed of non-magnetic material, a collar extending upwardly from the plane of said surface and having a bead recess in said collar adjacent the can supporting surface of said stirrup adapted to receive the lower bead of the can, said collar including a vertically extending cylindrical surface above said recess conforming to the outer surface of the can to be filled, and a horizontal bar magnet located in said collar disposed tangentially to the said vertically extending cylindrical surface adapted to produce a magnetic field adjacent the base of the can to retain the can in the collar prior to filling.

3,050,092
MARINE LOADING ARM

Franklin G. Palcanis, Mountainside, and Thomas M. Lynam, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

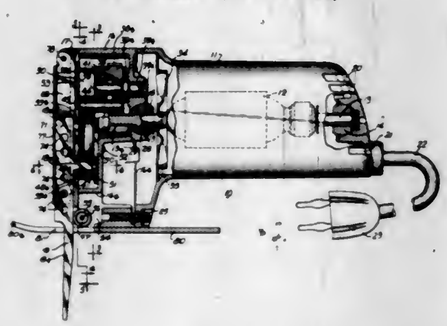
Filed June 26, 1959, Ser. No. 823,223
7 Claims. (Cl. 141—387)



1. Improved assembly for loading marine equipment which comprises in combination a marine line affixed to said marine equipment, a shore-based loading assembly, said loading assembly comprising a primary joint comprising two 90° elbows attached to one another and movable with respect to each other, one end of said primary joint attached to a feed line from a shore stor-

age tank and movable with respect thereto, the other end of said primary joint attached to one end of an inboard leg extension of said shore-based loading assembly, a secondary joint comprising two 90° elbows movable with respect to each other, one end of which is attached to the other end of said inboard leg extension, the other end of said secondary joint attached to one end of an outboard leg extension of said shore-based loading assembly, a tertiary joint comprising five 90° elbows movable with respect to one another and attached to the other end of said outboard leg extension, the other end of said tertiary joint attached to said marine line, raising and lowering means, a sensing device positioned on said tertiary joint which will initiate a signal to said raising and lowering means when a section of said tertiary joint deviates a predetermined number of degrees from the horizontal, said raising and lowering means functioning to return said section to a substantially horizontal position.

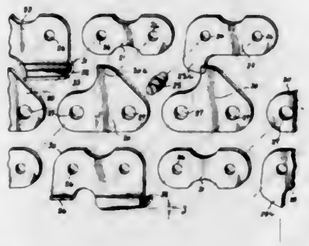
3,050,093
PORTABLE POWER DRIVEN SAW
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 13, 1956, Ser. No. 558,878
13 Claims. (Cl. 143—68)



1. A portable power saw of the reciprocating blade type, comprising a housing, a rotary type prime mover disposed within said housing, means adjacent the housing for said prime mover defining a gear chamber, gear means driven by said prime mover disposed in said gear chamber, a combined gear and crank rotatably supported in said gear chamber and driven by said gear means, a pitman rod connected to said crank, a saw blade guide having a slot defined therein, means for securing said guide to said housing, a saw blade readily insertable into said slot, said saw blade having cutting teeth on one edge thereof and an integral driving lug extending from the edge opposite said one edge, cooperating means associated with said pitman rod and said saw driving lug drivingly to interrelate the same upon mere insertion of said blade into said slot with said driving lug engaging said cooperating means, and readily releasable means for maintaining said blade in said slot.

3,050,094
SAW CHAIN
Henry Ricci, Seattle, Wash., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Original application Dec. 17, 1956, Ser. No. 628,794, now Patent No. 2,990,860, dated June 27, 1961. Divided and this application Apr. 20, 1961, Ser. No. 104,412
1 Claim. (Cl. 143—135)

A saw chain which includes a plurality of longitudinally spaced pairs of cutter and side links, each cutter link having a cutting tooth of router shape formed thereon and the paired side link being laterally spaced from each cutter link, a plurality of connector links respectively interposed between pairs of cutter and side links and having their respective ends pivotally connected to and disposed between a cutter link and a side link of each such pair, a depth gauge formed on a link other than a cutter link forward of the cutter tooth for limiting the cutting depth of said cutter tooth, each of said cutter links, including a sidewall gauge formed on the forward



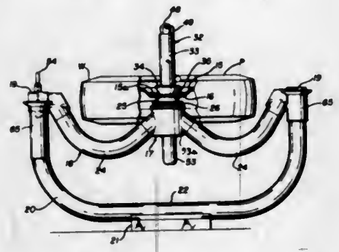
end thereof and spaced from the respective cutter tooth, said sidewall gauge having a vertical height less than the vertical height of the effective lateral cutting edge of the cutter tooth, each said sidewall gauge transversely overlapping the depth gauge and having less height than said depth gauge and said side wall gauge including a portion directed at an angle away from the longitudinal center line of said saw chain and terminating inwardly of the effective lateral cutting edge of the cutter tooth.

3,050,095
HAND OPERATED PIKE
Roland W. Prather, Rte. 2, Box 161, Woodburn, Oreg.
Filed June 24, 1960, Ser. No. 38,514
1 Claim. (Cl. 144—193)



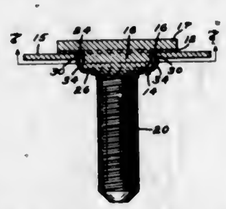
In a stumping bar, in combination, an elongated bar, a tear-drop shaped point on one end of said bar, a collar fixed to the other end of said bar, a second collar fixed to an intermediate point of said bar, a hammer mounted for reciprocatory movement on said bar between said collars, and oppositely disposed handle members on said hammer, said elongated bar having a detent therein between said collars, a spring biased pin extending through said hammer engageable with said detent for holding said hammer against reciprocatory movement, and means for retaining said pin out of engagement with said detent.

3,050,096
TIRE CHANGING MACHINE
John E. Lydle, Akron, and Robert R. Dunbar, Massillon, Ohio, assignors, by direct and mesne assignments, to said John E. Lydle
Filed Mar. 11, 1959, Ser. No. 798,667
4 Claims. (Cl. 144—288)



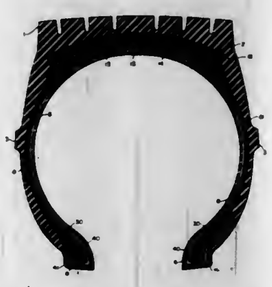
4. A machine as for changing a tire assembled on a wheel rim and use of a tool having an apertured portion for mounting said tool, said machine comprising a support having fixed upright means; arm means mounted on said upright means to extend freely therefrom and to rotate about a horizontal axis; means selectively operable to lock said arm means in various positions of rotation thereof about said horizontal axis to present the wheel assembly in a selected one of a plurality of planes including opposite horizontal positions in which at least a major portion of the tire and wheel assembly is substantially free and unobstructed at both sides axially thereof; a hub affixed on the free end of said arm means and having axially opposite ends; a table mounted on one axial end of said hub to rotate on an axis substantially at right angles to said horizontal axis, and including means within said hub for retaining said table against axial movement; and releasable means for securing the wheel rim in centered relation on said table to rotate therewith on said hub; said releasable means having a first tool-receiving, substantially cylindrical stem extending freely axially of said table; said hub having affixed on its other axial end a second substantially cylindrical tool-receiving stem to extend freely therefrom in direction opposite to that of said first tool-receiving stem, said stems being proportioned for interchangeable rotational and axially slidable reception of the apertured portion of the tire changing tool.

3,050,097
SNAP-IN BOLT RETAINER
Clarence W. Cochran, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Oct. 22, 1959, Ser. No. 847,934
1 Claim. (Cl. 151—41.75)



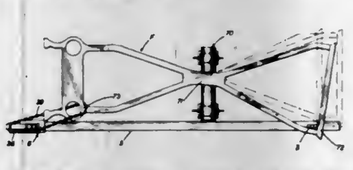
A snap-in bolt device comprising a head portion, a polygonal shoulder portion, said shoulder portion being integral with said head, the major traverse dimension of said shoulder being less than the smallest traverse dimension of said head, a threaded shank extending from said shoulder portion, a retainer member and means securing said retainer member to said shoulder portion, said retainer member having an apertured base portion, said threaded shank normally extending through said aperture and a plurality of yieldable tangs integral with said base portion underlying said head portion extending toward and terminating short of said head, inclined from said base portion of said retainer member and in spaced relation to said shoulder portion throughout the length of said tangs, and a series of tabs, integral with said base portion, intermediate said tangs, extending toward and terminating short of said head portion in substantially right angle relationship to said base portion, said tabs together defining a polygonal configuration generally complementary to said shoulder and said tabs having a greater length than said tangs, said tangs adapted to engage an apertured support adjacent the aperture on the side of said support remote from said head portion to retain said bolt device in said support.

3,050,098
TIRE WITH SIDEWALL INSERTS
Warren B. Grote, Silver Lake, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 28, 1961, Ser. No. 120,355
15 Claims. (Cl. 152—354)



1. A pneumatic tire comprising a carcass having a rubber tread, shoulders, sidewalls and bead portions, a bead ring in each of said bead portions, at least one radial ply with the cords thereof extending radially from bead to bead, at least two breakers of parallel metallic wire cords, the cords in the respective breakers extending at opposite acute angles to the centerline of the tread, and a sidewall insert at each side of the tire each of which extends from a location adjacent an end of the breaker to at least about the middle of the sidewall, each of said inserts comprising short lengths of filamentary material which increase its cut, crack, and abrasion resistance.

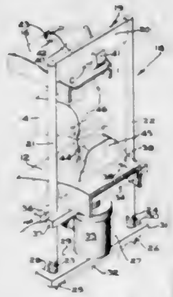
3,050,099
METHOD AND APPARATUS FOR STRAIGHTENING AUTOMOBILE FRAMES
Woodrow W. Smith, 3218 Purcell St., Grand Prairie, Tex.
Filed Dec. 30, 1957, Ser. No. 705,924
4 Claims. (Cl. 153—32)



1. A method for correcting a damaged auto frame comprising the steps of engaging one end of a wheel-supported longitudinal member with said frame in a selected location on said frame, causing the other end of said member to assume a first desired position, flexibly attaching the other end of said member to said frame at another location on said frame, said other end being outside the

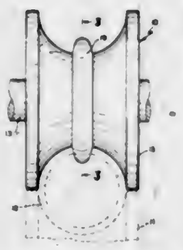
outline of said frame, applying a corrective tensile force to said frame at said other location through said other end of said member, said force being directed at an angle to the imaginary straight line connecting said two locations, applying heat to the damaged areas of said frame while continuing the application of said force, and thereby causing said tensile force to automatically change its direction by the movement of said other end, relative to said other location and to its first desired position, to a final desired position as said frame resumes its original normal shape under the influence of said heat and said continuously applied tensile force.

3,050,100
METHOD OF AND APPARATUS FOR ADJUSTING VEHICLE WHEELS
George W. Liskey, Okemos, Mich., assignor to FMC Corporation, a corporation of Delaware
Filed Jan. 2, 1958, Ser. No. 706,790
8 Claims. (Cl. 153—32)



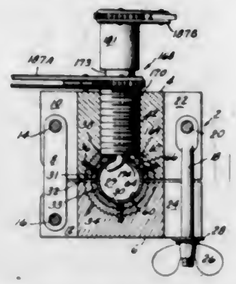
1. A method of increasing the camber of an automotive wheel mounted on an independent wheel suspension assembly having an upper and lower suspension arm comprising the steps of, positioning a bending device over the curved portion of the upper suspension arm, and applying a bending pressure through said bending device on the curved portion of the upper suspension arm to reduce the curvature of said curved portion for increasing the effective length of the upper suspension arm.

3,050,101
FIN ROLLS FOR TUBE MILLS
Stanley L. Nitkiewicz, Toledo, Ohio, assignor to Abbey Etna Machine Company, Perrysburg, Ohio, a corporation of Ohio
Filed Mar. 22, 1961, Ser. No. 97,536
4 Claims. (Cl. 153—54)



1. A fin roll for tube mills comprising a body structure having upwardly and outwardly curved side wall portions for tube engagement, the tube being disposed with the separated free edges thereof facing toward the central portion of the body structure, and a fin ring mounted on the body structure between the side wall portions and in such manner as to rotate freely and independently thereof, said ring extending into the space between the tube edges for abutment thereby whereby the fin roll is rotated by engagement therewith of the tube edges according to the linear speed of the tube and at a different speed than that of the body structure of the fin roll.

3,050,102
APPARATUS FOR SPINNING A LATERAL FLANGE ON A TUBE
Lawrence R. Hock, 363 Arch St., Meadville, Pa.
Filed June 16, 1958, Ser. No. 742,249
1 Claim. (Cl. 153—81)

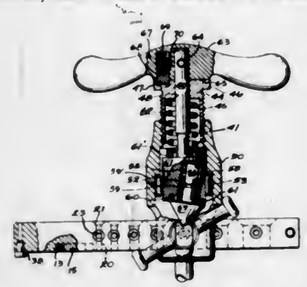


An apparatus for spinning a lateral flange on a metal tube, comprising: a split form for engaging around said tube, said form having a cylindrical passage therethrough in which said tube is received and an internally screw threaded cylindrical channel extending radially outward from said passage; a plug comprising a cylindrical body with external screw threads threadedly engaging in said channel, said body having inner and outer ends and an integral projection on the outer end of said body terminating in a flat annular outwardly facing bearing surface, wrench engaging surfaces on said projection, said body and projection having a coaxial cylindrical bore extending from end to end therethrough; a spinning device including a shank member of smaller external diameter than the internal diameter of the plug bore and removably disposed coaxially therein, said shank member having inner and outer ends respectively extending beyond the inner and outer ends of said plug body and projection, and a spinning finger integral with the inner end; a substantially cylindrical retaining member having inner and outer ends, a substantially flat annular bearing surface on the inner end of the retaining member engaging against the outwardly facing substantially flat annular bearing surface of the projection on the outer end of the plug body, said retaining member having an axial bore extending inwardly of the member from the inner end thereof, the outer end of said shank removably engaging in the bore of the retaining member, anti-rotation means releasably engaging between said retaining member and the outer end of the shank member, and wrench flats on said retaining member whereby one wrench element may be applied to the wrench engaging surfaces on the plug extension for applying screw driving torque to said plug and another wrench element may be applied to the wrench flats on the retaining member for applying spinning torque to the spinning device.

3,050,103
FLARING TOOL
Anton J. Janik, Elyria, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio, a corporation of Ohio
Filed July 9, 1959, Ser. No. 826,047
8 Claims. (Cl. 153—81)

1. A tube flaring tool comprising a pair of clamp bars hingedly connected to each other having tube clamping recesses therein, a flaring tool body slidably mounted on said clamp bars, tube flaring means carried by said body and including a feed screw threadedly engaged with the body at one end thereof, a flaring mandrel shaft slidably supported by said feed means and having a flaring mandrel carried on said end opposite the clamp bars, spring means in engagement with the mandrel and the feed screw and comprising the sole means for transmitting pressure from the feed screw to the mandrel during a flaring operation, a feed screw turning means on the shaft outside said feed screw and spring pressed means carried by the turning means and disposed for interlocking turning engagement with the feed screw.

7. A tube flaring tool comprising a pair of clamp bars formed with tube clamping recesses therein disposed in longitudinally spaced relation along the inner faces of the bars, hinge means for hingedly connecting the bars together spaced from the ends of the bars and including a pivot ring, said clamp bars each being formed with semicircular channels and said ring slidably seated in said channels, and retainer means for holding the ring



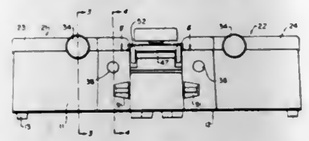
in said channels, said bars having outwardly diverging surfaces extending from the center of the pivot ring to the ends of the bars, a flaring tool body slidably mounted on said clamp bars and having clamp means for clamping said bars together, a tube flaring means carried by said body and including a feed screw threadedly engaged with the body at one end thereof, a flaring mandrel shaft slidably supported by said feed means and having a flaring mandrel carried on said end opposite the clamp bars, spring means in engagement with the mandrel and the feed screw and comprising the sole means for transmitting pressure from the feed screw to the mandrel during a flaring operation, a feed screw turning means on the shaft outside said feed screw and spring pressed means carried by the turning means and disposed for interlocking turning engagement with the feed screw, said flaring body being movable from flaring position to a position opposite said diverging surfaces and capable of exerting clamping pressure thereon to move said bars apart.

3,050,104
MANUFACTURE OF GYPSUM BOARD
George Henry Burt, Flossmoor, Ill., assignor to The Celotex Corporation, Chicago, Ill., a corporation of Delaware
Filed July 17, 1957, Ser. No. 672,416
5 Claims. (Cl. 156—347)



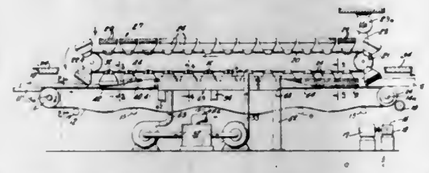
1. In a gypsum board machine consisting essentially of a machine conveyer on which a gypsum board is formed and set, means feeding cover sheets, means depositing gypsum slurry between the cover sheets and means forming the cover sheets and gypsum slurry in board form; the improvement comprising independent conveyers positioned adjacent each side edge of the machine conveyer and co-extensive therewith, means attaching mold strips adjacent their ends to the independent conveyers, mold strips attached thereby and means driving the independent conveyers in concomitance with the machine conveyer.

3,050,105
SPLICING APPARATUS WITH INDEXING MEANS
Dale P. Dolby, Cupertino, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Dec. 3, 1958, Ser. No. 777,867
10 Claims. (Cl. 156—379)



1. Apparatus for use in splicing tape comprising first and second guide means each adapted to receive and guide a tape end, means associated with each guide for moving the tape longitudinally in said guide to accurately position the ends of the tape, support means disposed to receive the ends of the tape, and means for releasably holding the tape on said supporting means, said last named means including a transparent plate whereby said tape is visible for indexing, said plate also serving as a guide for cutting the tape.

3,050,106
METHOD AND APPARATUS FOR FORMING PIPE INSULATION
Walter G. Pusch, New Brunswick, N.J., James M. Hendry, deceased, late of Centerville, N.J., by Janet D. Hendry, executrix, Centerville, N.J., and Foster V. Hulsizer, Clinton, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Mar. 3, 1958, Ser. No. 721,328
(Filed under Rule 47(a) and 35 U.S.C. 116)
13 Claims. (Cl. 156—457)

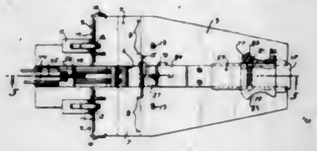


1. Apparatus for forming pipe insulation which comprises an endless belt, means for feeding a continuous felt of insulation containing an uncured binder onto said belt, a plurality of mandrels positioned to come successively into contact with said felt of insulation, an endless chain positioned above said belt, a separating wall mounting said mandrels, on said chain, each of said separating walls having a length adjacent the associated mandrel substantially coextensive with the longitudinal length of said associated mandrel, means for moving said chain to move said felt of insulation, said belt and said mandrels in the same direction, means for wrapping said belt and said felt of insulation around said mandrels, and means for curing said binder in said felt of insulation in the circular form.

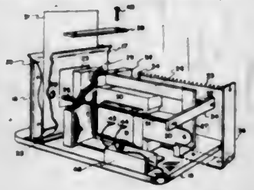
3,050,107
FILM SPLICER
William B. Barry, 279 Naomi Ave., Arcadia, Calif., and Philip T. Adams, 919 Palm Ave., South Pasadena, Calif.
Filed May 31, 1960, Ser. No. 33,044
9 Claims. (Cl. 156—486)

1. A film splicer, comprising: means for clamping a pair of film strips having sprocket perforations with

their ends in overlapping relationship and their sprocket perforations in predetermined relation; means defining a single cutting plane for cutting through the double thickness of overlapping ends of a pair of film strips whereby the cut ends are in abutment; adhesive-tape feeding means for placing a section of tape perpendicular to corresponding edges of said film strips; means for folding said tape over opposite sides of said film strips to bridge said abutting ends and bind said film strips in end-to-end relationship; and means for forming a sprocket perforation in said tape in equal spaced relationship to the sprocket perforations in said connected film strips.



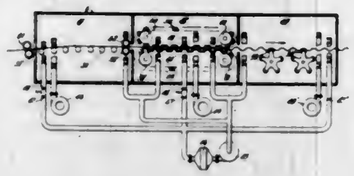
3,050,108
DATA CARD INSERT-REMOVING PUNCH
Gordon K. Hurlbut, Chenango Bridge, N.Y., assignor to Porta-Trace, Inc., Binghamton, N.Y., a corporation of New York
Filed Feb. 2, 1960, Ser. No. 6,328
10 Claims. (Cl. 156—584)



1. Apparatus for the removal of the protective membrane covering the aperture of data processing cards comprising a receptacle accommodating a card, said receptacle having walls defining an opening in alignment with the aperture in said card, an ejection member adapted to enter said opening and consisting of a membrane engaging head portion having at least one pierce tip and a resilient impact element on the leading surface thereof, said head portion being formed to follow the outline of said opening and to fit snugly therein, and a shank portion, means for supporting said shank portion for reciprocating movement, means for retaining said ejection member away from said opening thereby allowing insertion of said card into said receptacle, and power means for causing rapid entry of said ejection member into said opening.

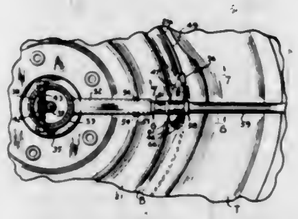
3,050,109
PROCESS AND MACHINE FOR THE CONTINUOUS PRODUCTION OF CORRUGATED LAMINATES OF PLASTIC MATERIALS
Ugo Monaco, Castellanza, Italy, assignor to Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy, a corporation of Italy
Filed Feb. 19, 1958, Ser. No. 716,102
Claims priority, application Italy July 8, 1957
9 Claims. (Cl. 156—588)

1. A polymerization apparatus for continuous production of a corrugated sheet of polymerized resin-reinforced material, comprising a pair of endless belts having adjacent portions travelling in the same longitudinal direction, means for mounting and turning the belts, means for supporting the material, coated with a thermosetting resin forming substance, for travel between the said adjacent portions of the belts, the belts carrying transverse, corrugation-forming, non-rotary shaping elements, the shaping elements of the respective belts interdigitating in said adjacent portions, the said elements also serving to draw the material along, the belts comprising generally horizontally disposed chain belts, support means carried



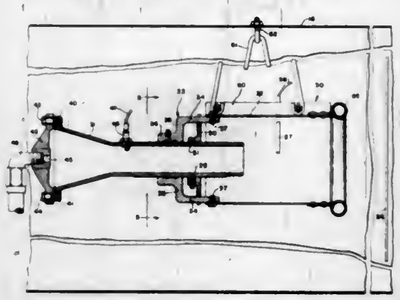
by respective chains, each support means having a plurality of transversely directed, longitudinally spaced bores, pin means fixedly carried by each non-rotary element, said pin means being engaged in the respective bores, the pin means having their axes disposed at a set horizontal distance from the middle line corresponding to about $\frac{3}{10}$ of the maximum width of the laminate.

3,050,110
CIRCUMFERENTIALLY TRAVELING TIRE MOUNTING TOOL
John E. Lydle, Akron, Ohio, assignor to The Ken-Tool Mfg. Company, Akron, Ohio, a partnership
Filed July 1, 1957, Ser. No. 668,970
2 Claims. (Cl. 157—1.24)



1. A tire tool as for mounting a pneumatic tire casing on a wheel having at least one flange of the rim terminating in an axially outwardly presented peripheral edge while the wheel is supported on a relatively fixed supporting device including a rigid axially extending central member, comprising a tire bead-engaging element having leading and trailing ends and top and bottom sides, said bottom side adapted to be in sliding engagement with said peripheral edge of the rim, said element having an arm affixed thereon to extend radially inwardly thereof for fulcruming connection with the central member to slide the element around said peripheral edge, and turning means for fulcruming said arm on said central member, said top side having an axially outwardly presented convex guide face of a substantial breadth extending to a radially outwardly presented outer portion to be substantially coextensive with said peripheral edge, said element having on the top side thereof a wall providing a radially outwardly presented arcuate bead-urging face generally at a dihedral angle to said guide face of said element, said bead-urging face being divergent from said outer portion toward said leading end, said element having a downturned angular extension from said outer portion thereof engageable with the radially outwardly presented portions of the rim flange to limit radially inward movement of the element upon yielding engagement of tire bead with said bead-urging face.

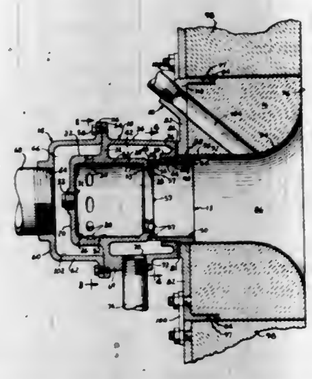
3,050,111
CROP DRYER
Wallace L. Hubbard, Des Moines, and Duane A. Essex, Ankeney, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Oct. 12, 1960, Ser. No. 62,225
6 Claims. (Cl. 158—28)



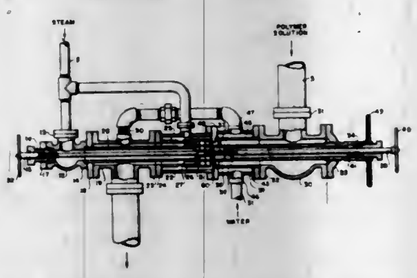
1. A liquid fuel burner comprising a first elongated casing formed about an axis and open at opposite ends; structure at one end of the casing defining a fuel-discharging orifice for directing a vaporized fuel through the casing from the aforesaid end to the opposite end thereof; a fuel-igniter element supported on the casing between its ends for igniting the fuel as it passes through the first casing; a second casing formed about an axis and disposed in axially coextensive relation to the first casing and having one end thereof larger than and surrounding the aforesaid opposite end of the first casing and an end remote from the first casing; bracket structure fixed to the second casing having an axial portion extending beyond said one end of the second casing in the direction of the first casing and a radial portion extending from thence inwardly to a hub portion overlying the outer surface of the first casing, said bracket structure being open to permit flow of air between the outer surface of the first casing and the inner surface of the second casing; releasable means locking the hub portion and first casing against relative axial movement; an annular shutter member slidably mounted for axial movement along the outer surface of the first casing and disposed radially inwardly of the axial portion of the bracket structure to thereby regulate the amount of air passing through the bracket structure; and a vaporizer tube disposed around the remote end of the second casing and extending from a liquid fuel inlet to a vaporized fuel outlet opening into the orifice.

3,050,112
RADIANT GAS BURNER
John A. Saunders and Edward E. Moore, Rockford, Ill., assignors to Eclipse Fuel Engineering Co., Rockford, Ill., a corporation of Illinois
Filed Sept. 2, 1960, Ser. No. 53,744
3 Claims. (Cl. 158—109)

1. In a gas burner assembly, in combination, a burner casing comprising a cylindrical cup-shaped body having a rear wall and a cylindrical side wall defining a forward open circular rim, said walls defining a substantially cylindrical swirl chamber, said side wall being provided with a series of circumferentially spaced air passages therethrough at a region spaced slightly forwardly of said rear wall, said air passages having their longitudinal axes extending substantially tangent to a circle which is coaxial with the side wall and which is of a diameter slightly less than the internal diameter of the swirl chamber, said air passages being disposed in a common transverse plane of the cylindrical swirl chamber, said side wall being further provided with a series of circumferentially spaced gas passages therethrough at a medial region spaced still further forwardly of said rear wall and rearwardly of said open circular rim, said gas passages being disposed in a common transverse plane of the cylindrical swirl chamber, the medial region of said side wall being provided with a continuous internal annular inwardly and forwardly directed rib which lies inside and is spaced radially inwardly from said gas passages and which, in combination with the inside face of the side wall, defines an annular pocket which opens forwardly and into which gas is discharged from said gas passages, said rib providing a restriction within the swirl chamber for inhibiting the forward flow of air in the latter to thus enhance the swirl characteristics of such air prior to passage thereof forwardly of said rib, means for supplying air to said air passages, and means for supplying gas to said gas passages.



3,050,113
APPARATUS FOR THE COAGULATION AND RECOVERY OF POLYMERS
Dean W. Rundquist, Long Beach, Calif., assignor to Shell Oil Company, a corporation of Delaware
Filed Sept. 17, 1959, Ser. No. 840,549
3 Claims. (Cl. 159—13)



1. In an apparatus for the coagulation of polymer the combination comprising:
- an elongated cylindrical casing having a central zone intermediate its ends;
- a coaxially mounted cylinder extending from one end of said casing toward said central zone and spaced from the inner wall of said casing to provide a first annular space therebetween for the feed of polymer solution;
- a longitudinally movable piston slideably mounted in that end of said cylinder which is adjacent the central zone;
- two concentric tubes rigidly mounted in said casing and coaxial therewith, said tubes being mounted in spaced relationship to form a second annular space therebetween, each of said tubes having a free end extending into said central zone adjacent to and spaced from said piston;

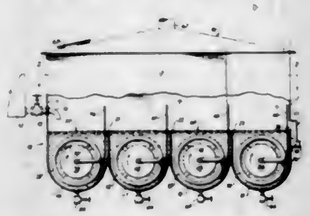
a perforate cap having concentric tubular sleeves aligned with and telescopically mounted on the free ends of said two concentric tubes and axially movable on said tubes, the outer of said two concentric tubes being spaced from said casing to form a third annular space within said casing;

means for feeding steam simultaneously into said third annular space and into the bore of the inner concentric tube;

means for feeding a stream of polymer into said first annular space,

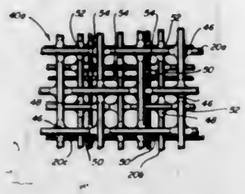
the alignment and circumferences of said concentric tubes and said cylinder being such that steam fed toward the central zone by passage through said third annular space and steam fed into the bore of said inner of said two tubes contacts the annular stream of polymer fed from said first annular space into said zone at right angles to both the interior and exterior portions of said stream of polymer, said second annular space forming a flow passage for discharge of co-mixed steam and polymer from said central zone.

3,050,114
APPARATUS FOR CONCENTRATING FOOD PRODUCTS
Ernst Mayer, Hayward, Calif., assignor to Hunt Foods, Inc., Los Angeles, Calif., a corporation of Delaware
Filed Dec. 1, 1959, Ser. No. 856,576
6 Claims. (Cl. 159—25)



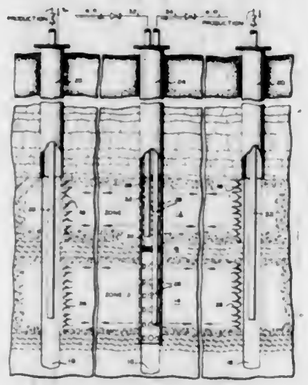
3. Apparatus for concentrating a fluid-like food product comprising a generally rectangular tank having a plurality of elongated U-shaped troughs extending in side-to-side relationship with one another between opposite ends of said tank, each of said troughs having first and second opposed side walls with the second side wall of each trough being the first side wall of the succeeding trough, a fluid guiding member disposed longitudinally in each trough from end to end thereof and having a lower surface generally complementary to and spaced from the bottom of said trough, a heating coil disposed in the spaces between each trough and the fluid guiding member therein, each of said coils being completely disposed below the upper levels of the side walls of the trough within which said coil is disposed, a plurality of partition members extending from end to end of said tank with one partition member being disposed in each trough adjacent the second side wall thereof, said partition members extending downwardly from above the trough side walls to between said fluid guiding members and said troughs, each of said partitions being generally uniformly closely spaced from the trough side wall adjacent thereto, said tank having an inlet therethrough into the first of said troughs for entry of a fluid-like food product into said trough, said partitions being adjacent the particular side wall of each trough such that the continual flow of product through said inlet into said tank will cause the product to flow out of each trough between the partition member and side wall thereof to spill over into the next trough adjacent thereto, said tank having an outlet from the last of said troughs arranged to receive the flow of said product from said last mentioned trough from between the partition and side wall thereof.

3,050,115
PULP MOLDING SUCTION DIE STRUCTURE AND METHOD OF MAKING
Ammon M. Leitzel, Portland, Oreg., assignor to Pacific Pulp Molding Co., Portland, Oreg., a corporation of Washington
Filed Aug. 10, 1959, Ser. No. 832,790
9 Claims. (Cl. 162—411)



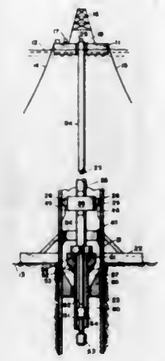
7. A pulp molding suction die comprising a perforated backing plate having areas of compound curvature, a woven metal wire screen structure positioned upon said backing plate, said structure including a screen fitting said backing plate and having the wires of said screen secured together at their areas of closest approach to each other by bonds of a metal having a melting point lower than the melting point of said metal of said wires.

3,050,116
MULTIPLE ZONE PRODUCTION BY IN SITU COMBUSTION
Francis W. Crawford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,721
4 Claims. (Cl. 166—10)



1. A process for producing hydrocarbons from a carbonaceous stratum comprising a first layer of relatively high and a second layer of relatively low permeability separated by a relatively thin impermeable layer, which comprises separately packing off each said first and second layer in a section of an injection borehole therein; providing a separatae air injection conduit to each packed-off section; substantially simultaneously establishing in situ combustion in each said first and second layer; and driving the resulting combustion fronts thru said layers by separately injecting air to said layer of high permeability at a relatively low pressure and to said layer of low permeability at a relatively high pressure whereby the fronts move thru said stratum simultaneously at a more nearly uniform rate than would occur using the same injection pressure on each layer.

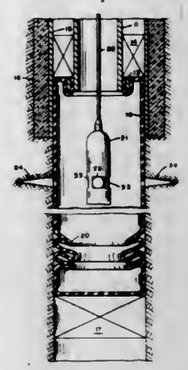
3,050,117
METHOD AND APPARATUS FOR CEMENTING UNDERWATER WELLS
John A. Haeber, Nicholas B. Newman, and Lloyd G. Otteman, Houston, Tex., assignors to Shell Oil Company, a corporation of Delaware
Filed Oct. 23, 1959, Ser. No. 848,283
9 Claims. (Cl. 166—21)



1. In well drilling operations carried out from a floating structure, a method of cementing casing in a fluid-filled well at an offshore location which comprises drilling a well in the ocean floor, installing in said well a wellhead assembly adapted to seat a casing therein, lowering into said well from said floating structure a well casing having hanger means thereon and being connected to the lower end of a pipe string, rigidly supporting temporarily the hanger means a fixed distance above the seat in said wellhead assembly to form a fluid passageway between said seat and hanger means, circulating a quantity of cement slurry down said pipe string and well casing whereby fluid filling the well is forced upwardly outside said well casing and through said fluid passageway between said seat and hanger means, pumping a quantity of fluid down said pipe string and well casing in back of said cement to force the cement up the outside of said well casing, subsequently lowering the well casing to seat the hanger means thereof in a fluid-tight manner within said wellhead assembly before the cement starts to set, disconnecting said pipe string from said well casing and withdrawing it to a point above the surface of the water.

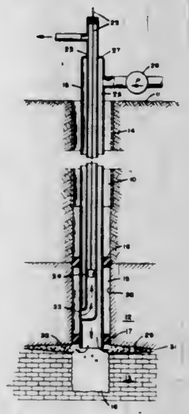
3,050,118
FRACTURE PLACING METHOD
Lloyd E. Elkins, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Mar. 23, 1959, Ser. No. 801,184
1 Claim. (Cl. 166—35)

A process for forming only at the desired level in the uncased portion of a well a substantially horizontal fracture in a formation penetrated by the well comprising lowering into said well, to the level at which said fracture is desired, a flexible, substantially impermeable bag, at least temporarily inert to well fluids, said bag having a circumference at least as great as the largest circumference of the portion of the well into which the bag is to be expanded, and said bag being lowered in a collapsed form having a diameter less than that of any portion of the well through which the bag must pass, forcing fluid into said bag after it reaches said level to expand said bag against the formation, detonating at least one jet perforator to form at least one hole extending through said bag and into said formation only in the horizontal plane in which said fracture is desired, and forcing liquid through said at least one hole in said bag and



into said formation at a rate sufficient to form said substantially horizontal fracture at said desired level.

3,050,119
METHOD OF FRACTURING FORMATIONS
Clarence R. Fast, George C. Howard, and Arthur Lubinski, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Dec. 30, 1958, Ser. No. 783,870
6 Claims. (Cl. 166—42)

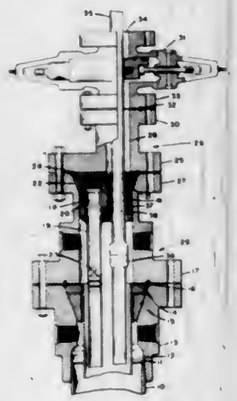


1. A method of producing a horizontal fracture in a subterranean permeable formation penetrated by a well comprising temporarily substantially reducing the fluid pressure in a first zone which extends through and is in fluid communication with a plastic formation and is adjacent to said permeable formation penetrated by said well, maintaining the reduced fluid pressure for sufficient time to at least partially relax said plastic formation, and then while said plastic formation is relaxed injecting a fracturing liquid into a second zone which extends through said permeable formation of said well and which is isolated from said first zone, said fracturing liquid being injected into said second zone under sufficient pressure to produce said horizontal fracture in said permeable formation.

3,050,120
METHOD AND APPARATUS FOR COMPLETING WELLS
Thomas W. McSpadden, Tulsa, Okla., assignor to Pan American Petroleum Corporation, a corporation of Delaware
Filed Nov. 25, 1955, Ser. No. 548,967
6 Claims. (Cl. 166—46)

1. A method of maintaining a well equipped with a casing and a tubing head under pressure control while paral-

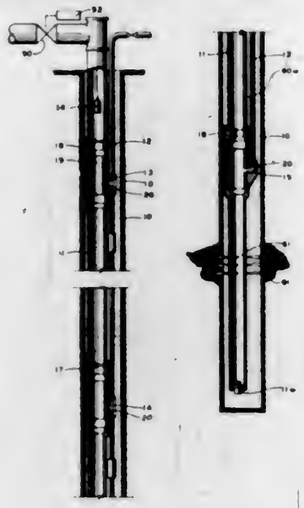
lel tubing strings are being run, comprising running a first tubing string into said well through a blowout preventer connected to said tubing head, landing said first tubing string in said well by connecting said first tubing string to a first opening of a dual-opening hanger mandrel in said tubing head, temporarily plugging said first tubing, removing said blowout preventer from said tubing head, subsequently mounting a blowout preventer eccentrically on said tubing head so that the opening is aligned with a second opening in said hanger mandrel, running a second tubing string into said well through said blowout preventer and said second opening, sealing said second tubing string in said second opening, removing said blowout preventer from said tubing head, placing a bonnet on said tubing head, said bonnet having dual openings spaced to match said first and second openings in said hanger mandrel, and suspending said second tubing string on said bonnet.



5. A wellhead apparatus for a well having a casing with multiple parallel tubing strings therein and a tubing head on the upper end of said casing comprising a hanger mandrel within said tubing head, multiple longitudinal off-center openings in said hanger mandrel, a fluid seal between said tubing mandrel and said tubing head, means to suspend a first tubing string from and to form a fluid seal with a first of said openings in said hanger mandrel, a second of said tubing strings extending through a second of said openings, means forming a fluid seal in said second of said openings surrounding said second tubing string, a bonnet on said tubing head, said bonnet having multiple longitudinal openings spaced to match said openings in said hanger mandrel, and means to suspend said second tubing string from one of said openings in said bonnet which is substantially coaxial with said second of said openings in said hanger mandrel, whereby said well may be completed under pressure control.

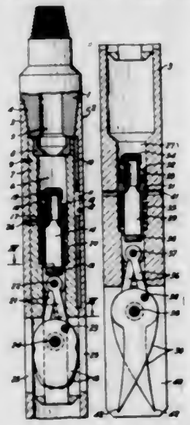
3,050,121
WELL APPARATUS AND METHOD
Henry U. Garrett and Clifford M. Peters, Longview, Tex., assignors to U. S. Industries, Inc., New York, N.Y.
Filed Apr. 22, 1957, Ser. No. 654,423
21 Claims. (Cl. 166—46)

6. A method of completing and producing a well after its bore hole has been drilled through a producing formation which comprises running a string of first and second parallel conduits into the bore hole with the first conduit extending to a point below the upper level of the producing formation, flowing cement down said first conduit and thence along the exterior thereof until the bore hole is filled to an upper level above the said producing formation, then forming a perforation in said first conduit and the cement surrounding the same to provide fluid communication between said first conduit and said formation, producing fluid from said formation by flowing such fluid through said perforation into said first conduit and thence out of the well through one of the first and



second conduits and, during the course of such production, establishing fluid communication between the first and second conduits at a level above said formation and flowing fluid into the well via the other of said first and second conduits and said communication and lifting the produced fluid from the well.

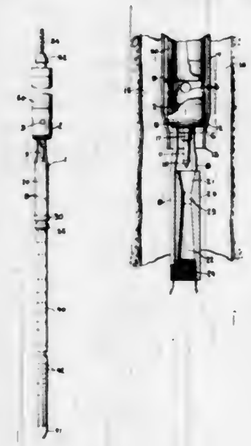
3,050,122
FORMATION NOTCHING APPARATUS
Jimmie L. Hultt, Glenshaw, Joseph L. Pekarek, Penn Hills, and Edward Topanelian, Jr., Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,792
10 Claims. (Cl. 166—55.8)



1. Apparatus for use within a well bore to form a notch in the walls of the well bore comprising: a generally tubular housing adapted to be lowered into and rotated with the well bore, means for introducing fluid under pressure within the upper end of said housing, casing severing means disposed within said housing adapted for movement into a projected operative position in cutting

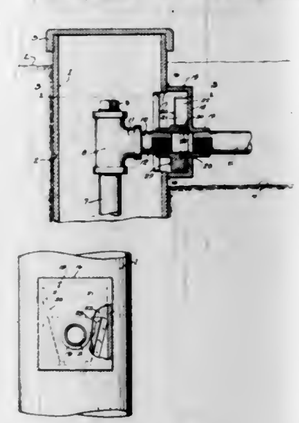
engagement with the well casing, formation notching means disposed within said housing adapted for movement into a projected operative position in cutting engagement with the walls of the well bore, the said formation notching means comprising a pair of oppositely disposed cutting elements having a generally elongated V-shape and a relatively sharp point at the forward edge thereof and a longitudinal dimension substantially greater than the transverse dimension thereof so as to permit substantial penetration into the earth formation, fluid pressure operated means within said housing for moving said casing severing means and formation notching means to projected operative position, slots in said housing through which said casing severing means and said formation notching means project into operative position, and means for retracting said casing severing means and said formation notching means to a non-projected inoperative position.

3,050,123
GAS FIRED OIL-WELL BURNER
J. O. Scott, Tulsa, Okla., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 7, 1958, Ser. No. 765,893
9 Claims. (Cl. 166—59)



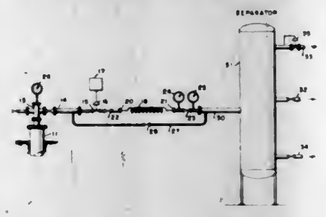
1. A bottom hole burner for initiating combustion in subterranean passages which includes a gas intake chamber closed at the upper end, lifting means fixed to the upper end of said chamber to permit raising and lowering of the burner in well tubing, the lower end of said intake chamber adapted to seat in the end of the well tubing, seal means associated with said lower end to provide a gas tight fit between the lower end of said chamber and the well tubing end, gas intake ports in the said chamber to receive combustion gas delivered down the well tubing, a nozzle in the bottom of said chamber communicating with the interior of said chamber to receive combustion gas from said chamber, said nozzle having a sufficient length to extend below the lower end of the well tubing when the burner is positioned therein, a plurality of support arms fixed to the lower end of said chamber, an open ended ejector positioned below said nozzle supported by said arms adapted to receive air from the annulus between the well bore and well tubing, an elongated perforated burner tube fixed to the lower end of said ejector, said burner tube being closed at the lower end, and having an ignitor exteriorly positioned thereon.

3,050,124
PITLESS WELL ADAPTER
Theophilus H. Ottenbacher, Muskego, Wis., assignor of one-half to Jack R. Jewell, Milwaukee, Wis.
Filed Oct. 22, 1958, Ser. No. 768,899
3 Claims. (Cl. 166—85)



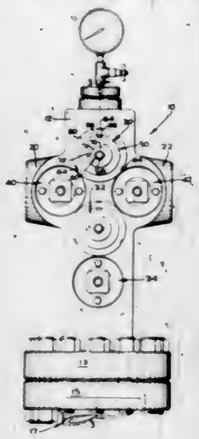
1. In combination with a generally vertical well casing having a supply pipe therein, said pipe having an upper laterally extending portion which terminates in a free end, an adapter comprising, a housing on said casing, outlet means in said housing for detachably receiving a lateral pipe, a yoke secured within said housing and around said outlet means, and a block secured to said free end and which is complementary to said yoke, said yoke and block both being generally V-shaped when viewed in an axial direction relative to said pipe, whereby said block may be lowered into wedging engagement with said yoke and held therein due to the weight of said supply pipe, and said free end is in fluid communication with said outlet means.

3,050,125
APPARATUS FOR PRODUCING HIGH PRESSURE WELLS
Douglas C. Meyers, Metairie, La., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,185
4 Claims. (Cl. 166—91)



1. Apparatus for producing an emulsifiable multiphase production fluid from a high-pressure oil well into a low pressure conduit, said apparatus comprising a well casing extending into a high-pressure well, wellhead means closing the top of said well casing, said wellhead means including a production fluid flowline therefrom, valve means in said flowline, a portion of said flowline downstream of said valve means consisting of at least one elongated length of small-diameter tubing for controlling the rate of flow of fluid from said well, the length of said tubing being sufficient to maintain the fluid velocity within the tubing below critical velocity while reducing the pressure of said fluid to a predetermined value.

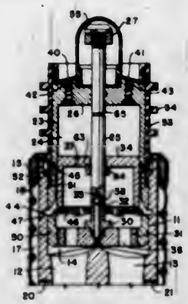
3,050,126
INTEGRAL WELL HEAD ASSEMBLY
Jacob M. Lebeaux and Peter L. De Marsh, Houston, Tex., assignors to FMC Corporation, a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,470
5 Claims. (Cl. 166—97)



1. A well head Christmas tree assembly comprising a one piece body having a lower flange portion for connection to a well tubing head, a straight vertical through bore extending through said body with the lower end of the bore being formed to communicate with the tubing head, a laterally extending branch bore in said body communicating with said through bore, said body having substantially planar front and rear face portions, horizontally extending tapered openings extending through said body at said face portions, one of said openings intersecting the axis of said through bore and another of said openings intersecting the axis of said branch bore, said branch bore being downstream from said opening that intersects said through bore, a one piece tapered valve housing fitting in each of said tapered openings and extending at least from one face portion to the other face portion of said body, retainer means for each of said valve housings at one of said body face portions, ports extending through said valve housings and aligned with the associated bores in the body, key means between said valve housings and said body for maintaining port alignment, fluid sealing means between said valve housings and said valve body and surrounding said ports, and valve members movably mounted in said valve housings, said valve members having ports alignable with the ports in said valve housings.

3,050,127
WELLHEAD SEAL
Kenneth W. Foster, Nicholas B. Newman, and Ronald L. Geer, Houston, Tex., assignors to Shell Oil Company, a corporation of Delaware
Filed July 30, 1959, Ser. No. 830,504
4 Claims. (Cl. 166—97)

1. A remotely positionable and removable wellhead sealing apparatus adapted to close in a fluidtight manner the top of wellhead assembly located under water at an offshore location, said sealing apparatus comprising a hollow cylindrical body member having a chamber formed therein, said cylindrical body member being of a diameter to fit within the open top of a wellhead assembly having a recessed locking groove on the inner wall thereof, a coaxial rod carried by said body member, the upper end of said rod slidably extending through the top of said body member, a fishing head secured to the extending upper end of said rod, latch means carried by said body member and extendible beyond the outer surface thereof and of a size to seat in the recessed groove on the inner wall of the wellhead assembly, latch actuating means carried by said body member and operatively engaging



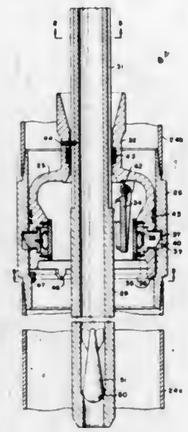
said latch means, means carried by said body member and operatively connected to said latch means for moving said latch means to a retracted position, and sealing means carried on the outer surface of said body member for establishing a fluidtight seal between said body member and the wellhead assembly.

3,050,128
WELL PACKER
Cicero C. Brown, Houston, Tex., assignor to Brown Oil Tools, Inc., Houston, Tex., a corporation of Texas
Filed Aug. 15, 1960, Ser. No. 49,583
14 Claims. (Cl. 166—120)



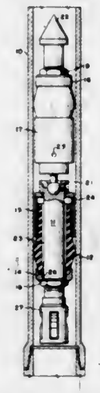
1. A well packer, comprising, a tubular body insertable in a well bore, a pair of longitudinally spaced anchor-and-seal assemblies mounted about the exterior of the body and secured against longitudinal movement relative thereto, said assemblies including anchor and seal elements radially projectible by longitudinal forces oppositely directed thereagainst from between the assemblies to anchor and seal said body to the well wall, fluid pressure-operated means including means movably positioned on the body between said assemblies to substantially simultaneously exert said oppositely directed longitudinal forces on the anchor elements of the respective assemblies to radially project said anchor and seal elements, means for supplying pressure fluid to said fluid pressure-operated means, and means initially securing said anchor and seal elements to the body in retracted position and releasable in response to the longitudinal force exerted on said assemblies by said fluid pressure-operated means.

3,050,129
APPARATUS FOR CEMENTING WELL CASING
John A. Haeber, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,552
4 Claims. (Cl. 166—129)



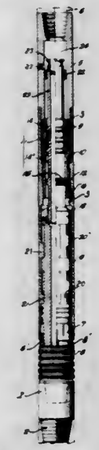
1. Apparatus for cementing well casing within a well comprising a tubular seating and latching section adapted to be connected into a string of well casing between two sections thereof, a pipe string adapted to pass through said well casing and said tubular section thereof, cement retainer means having a central hole therethrough which at one point at least is only slightly greater than the pipe string, said cement retainer being removably secured coaxially to said pipe string, check valve means carried by said cement retainer for closing the central hole therethrough against fluid flow therethrough in an upward direction when the pipe string is withdrawn from said central hole, and outwardly-extending latching means carried by the cement retainer for latching the cement retainer in said tubular seating and latching section.

3,050,130
TOOL CARRIER
Frederick Howard Culver, McAllen, and Edward B. Lagucki, Houston, Tex., assignors to Shell Oil Company, a corporation of Delaware
Filed Apr. 20, 1959, Ser. No. 807,708
6 Claims. (Cl. 166—153)



1. Apparatus adapted to be pumped through a pipe, said apparatus comprising a body element mandrel of a diameter smaller and a length longer than the diameter of the pipe through which it is to be pumped in an unsupported manner, expandable annular sealing means carried co-axially on said mandrel, retaining means fixedly securing opposite ends of the sealing means to said body element mandrel, and fluid passage means through said apparatus in communication between the inside of said seal means and the outside of said apparatus near one end thereof the other end of said body element mandrel being closed at all times.

3,050,131
JAR WITH SAFETY JOINT AND ADJUSTING MEANS
Dante A. Siracusa, Houston, Tex., and Raymond W. Walker, Huntington Beach, Calif., assignors to Bowen Itco, Inc., Houston, Tex., a corporation of Texas
Filed July 27, 1959, Ser. No. 829,847
8 Claims. (Cl. 166—178)

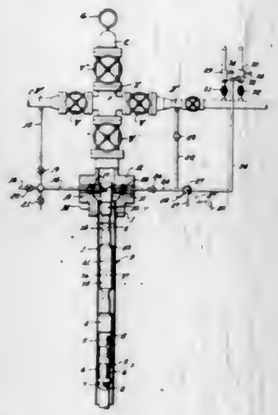


1. A jar and safety joint for bored wells comprising a mandrel, means on the lower end of the mandrel attachable to a lost object in the well, a shell extending over the mandrel, means on the upper end of the shell attachable to drill pipe, mandrel gripping means in the shell and means on the mandrel releasably engaged by said gripping means, an elongated and tapered split ring on the mandrel frictionally fitting into the bottom of the shell, said ring being slidably mounted on the mandrel, and spring means pressing the split ring into the shell, thereby fitting the mandrel in the shell.

3,050,132
FLUID PRESSURE OPERATED SHUT-OFF VALVE FOR WELLS
John S. Page, Long Beach, Calif., assignor to Page Oil Tools, Inc., Long Beach, Calif., a corporation of California
Filed July 1, 1957, Ser. No. 669,011
20 Claims. (Cl. 166—224)

1. In well flow control apparatus including: tubing extending into the well and forming an annulus between the tubing and the well wall; means packing off the annulus about the tubing; a fluid pressure operated valve assembly in said tubing above the packing means; and means at the well head for directing fluid under pressure into the annulus outside the tubing; said valve assembly having means for admitting annulus pressure to actuate the valve assembly; said valve assembly including a housing having a production fluid passage therethrough communicating with said tubing; means in said housing defining a seat circumscribing said passage; a plug valve shiftably mounted in said passage and comprising a plurality of axially and laterally movable plug segments;

means on said housing for shifting said segments into sealing engagement with one another upon movement of the segments toward engagement with said seat; and fluid pressure responsive actuator means in said housing and connected to said segments for shifting the segments



into and out of engagement with said seat; said actuator means including a member having opposed fluid pressure responsive surfaces subjected to annulus pressure in said assembly and to production fluid pressure in said passage, respectively.

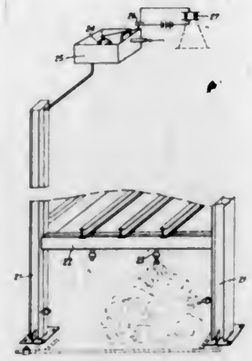
3,050,133
HORSESHOES
William H. Ketner, Kensington, Md. (520 Spruce St., Roaring Spring, Pa.), and John R. Neale, Jr., Raton, N. Mex. (4609 Emery Way, El Paso, Tex.)
Filed Sept. 15, 1958, Ser. No. 760,970
5 Claims. (Cl. 168—4)



1. A horseshoe for racing horses comprising a synthetic resin horseshoe body, an elongated, metal toe calk embedded in the resin of the toe portion of said horseshoe body, which body is of generally U-shaped configuration with the central portion of said horseshoe body being open, said synthetic resin horseshoe body being expandable laterally with the horse's foot when the horse is running, said horseshoe body further having a raised resin portion on each side segment thereof, a flat surface on each raised portion, an internally-threaded member mounted in said resin body at said raised portion, and a removably-mounted calk having a threaded shank threadedly engaging said internally threaded member, said calks projecting from the lower surface of said horseshoe body.

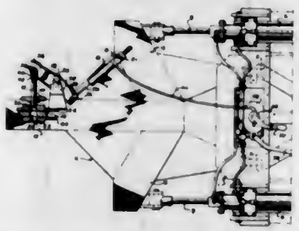
3,050,134
MEANS FOR PROTECTING CONSTRUCTIONS AND BUILDINGS AGAINST THE RISK OF FIRE
Paul Multin, 49 Blvd. du Lycee, Vanves, France
Filed Apr. 15, 1960, Ser. No. 22,524
Claims priority, application France Apr. 17, 1959
2 Claims. (Cl. 169—5)

2. A heat-resistant structural frame comprising hollow liquid tight interconnected structural elements providing the frame and each having a cavity extending the length thereof with the cavities of connected elements being in communication providing a continuous circuit for fluid through the frame and heat protected means connected to said circuit, maintaining said circuit filled with a heat absorbing liquid at all times including an expansion chamber connected to said circuit, a float valve in said chamber controlling the flow of liquid through said means, an alarm, a switch operatively connected to said float valve



for being closed when liquid in said chamber drops, an electrical circuit connecting said alarm and a source of current and controlled by said switch and means for automatically discharging liquid from said circuit onto a fire adjacent thereto lowering the liquid in said chamber and setting off said alarm.

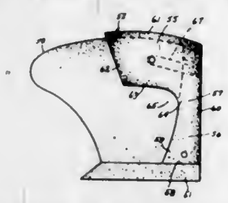
3,050,135
RIPPER SHANK ADJUSTMENT DEVICES
Leon O. Kelley, P.O. Box 488, Stamford, Tex.
Filed July 14, 1959, Ser. No. 827,026
1 Claim. (Cl. 172—681)



In combination with a ripper frame formed with a substantially vertically disposed ripper shank slot, a substantially upstanding ground engaging plurality apertured shank, a pair of upstanding lugs mounted on said ripper frame on either side of the shank slot, each of which lugs has an aperture formed transversely therethrough, which apertures are in axial alignment, said apertures in said lugs being adapted to register with at least one of said apertures in said shank when said shank is in one position in the shank slot, a slide pin formed with an aperture through the outer end thereof slidably mounted in said apertures in said lugs, a lug mounted on said ripper frame and extending horizontally outward therefrom, said outwardly extending, horizontally disposed lug on said ripper frame having a hole formed therein, an arm, which arm is apertured near each end thereof and intermediate the ends thereof, a pin, which pin is adapted to pass through said intermediate aperture of said arm and through said hole in said outwardly extending, horizontally disposed lug on said ripper frame to pivotally connect said arm to said ripper frame, a hydraulic cylinder, means pivotally connecting said cylinder to said ripper frame, a hydraulically actuated plunger within said cylinder, the outer end of which plunger is apertured to receive a pin therethrough, a pivot pin passing through said aperture in said

plunger and through an aperture in an end of said arm to pivotally connect said plunger to said arm, linkage means having apertures adjacent either end thereof, a pivot pin adapted to pass through an aperture in one end of said linkage means and through said aperture in said slide pin, another pivot pin adapted to pass through an aperture in the other end of said linkage means and through said aperture in the other end of said arm to operably connect said arm to said slide pin, conduit means connected with an end of said hydraulic cylinder for selectively directing fluid pressure thereto to effect movement of said cylinder, plunger, arm, linkage means, and slide pin members in the same horizontal plane to slidably retract said pin from engagement with the apertures of one of said lugs of said pair of lugs and said shank, resilient means within said hydraulic cylinder for moving said plunger in an opposite direction upon release of pressure therefrom to urge said slide pin through a selected aperture of said shank and through the aperture of the last mentioned lug to lock the shank in selected position relative to said ripper frame, and guide lug means connected to said ripper frame having an aperture in register with the apertures of said pair of lugs and disposed to have said slide pin slidably mounted therein in the retracted and locked positions.

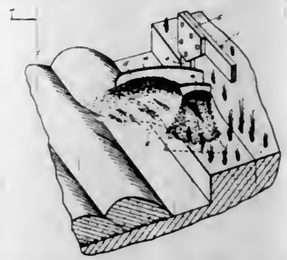
3,050,136
PLOW STRUCTURE
Walter W. Rayder, Valparaiso, Ind., assignor, by mesne assignments, to Brice H. Lantz, Valparaiso, Ind.
Filed Sept. 6, 1960, Ser. No. 53,954
5 Claims. (Cl. 172—759)



1. A plow comprising body structure having a share, a landside extending along the bottom thereof and provided with a leading edge, a primary moldboard carried by the body structure and having a lower portion merging with the share, and an elongate secondary moldboard carried by the body structure in an upstanding position substantially entirely in front of the primary moldboard and having a lower enlarged extremity provided with a straight edge portion merging with the share, said secondary moldboard also having a substantial spheroidal curvature and a leading edge with the latter disposed substantially in the same plane as the leading edge of said share, said secondary moldboard further having an enlarged upper extremity extending substantially parallel to said share and a curved edge disposed between said extremities defining an opening through which soil may flow.

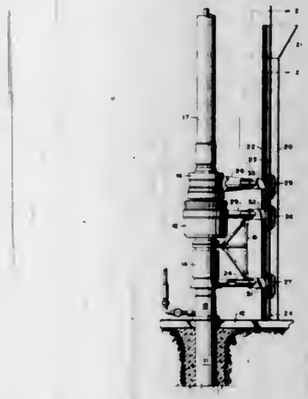
3,050,137
PLOW STRUCTURE
Walter W. Rayder, Valparaiso, Ind., assignor, by mesne assignments, to Brice H. Lantz, Valparaiso, Ind.
Filed July 6, 1959, Ser. No. 824,992
8 Claims. (Cl. 172—759)

1. A plow comprising body structure having a share, a landside extending along the bottom thereof and provided with a leading edge, a primary moldboard carried by the body structure and having a lower portion merging with the share, and an elongate secondary moldboard carried by the body structure in an upstanding position substantially in front of the primary moldboard and having a lower enlarged extremity merging with the share, said secondary moldboard also having a leading edge disposed substantially in the same plane as the leading edge of said share and further having an enlarged upper ex-



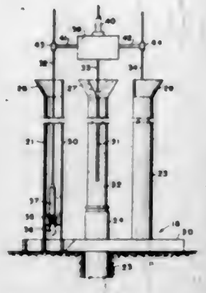
tremity extending substantially parallel to said share and a curved edge disposed between said extremities defining an opening through which soil may flow.

3,050,138
GUIDE SYSTEM FOR UNDERWATER WELLS
Bertram N. Outwin and Lloyd G. Otteman, Houston, Tex., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed July 8, 1960, Ser. No. 41,610
7 Claims. (Cl. 175—7)



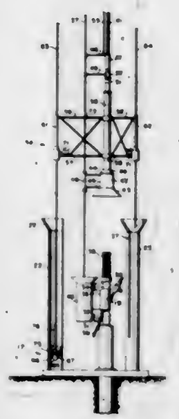
1. Apparatus for guiding into an operative position near the ocean floor a device to be used in drilling, completing and servicing an underwater well, said apparatus comprising a wellhead support frame positioned below the surface of water and fixedly secured to the ocean floor, said support frame including a plurality of vertically-positioned guide tubes fixedly secured to said support frame in spaced relationship to the axis of the well conductor pipe, there being a longitudinal slot through the side wall of each of said guide tubes downwardly from the open top thereof, a guide cable disposed within each of said guide tubes, one end of said cable being fixedly anchored within said guide tube, the cable being adapted to be held in tension from above so as to extend upwardly through the body of water, at least one guide member mounted for sliding movement on each of said guide cables, arm means fixedly secured at one end to each of said guide members and being adapted to extend through the slots in the wall of said guide tubes, the other ends of said arm means being adapted to be fixedly secured to a device to be positioned within said wellhead support frame, and a swivel joint positioned in each of said arm means intermediate the ends thereof for permitting at least partial rotation of the guide member on the axis of said arm means.

3,050,139
UNDERWATER GUIDE LINE SYSTEM
William J. Hayes, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,576
9 Claims. (Cl. 175—7)



1. Apparatus for guiding equipment to a predetermined position within a body of water, said apparatus comprising a floating vessel at a predetermined position on said body of water, guide assembly base means fixedly positioned below the surface of said body of water, anchoring means fixedly secured to said base means and extending into the water-covered earth formation for anchoring said base means thereto, at least two flexible guide cables in spaced relationship extending between said floating vessel and said base means, and disconnectible latching means connecting said guide cables to said base means.

3,050,140
METHOD AND APPARATUS FOR INSTALLING GUIDE LINES AT UNDERWATER WELLHEADS
William J. Hayes, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,577
11 Claims. (Cl. 175—7)

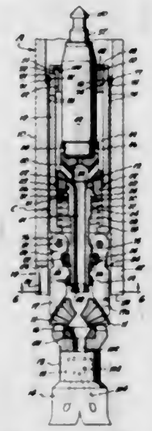


5. A method of remotely installing and connecting a plurality of spaced guide cables to an equipment base positioned below the surface of a body of water and anchored to the floor thereof, said method being carried out from an operational base positioned above the surface of the water, said method comprising the steps of positioning said operational base in a disconnected manner substantially directly above said equipment base anchored to the ocean floor, extending and connecting a flexible element between said bases to establish a connection between said bases, lowering through the water between said bases a plurality of guide cables while guiding them alongside said flexible element, bringing the lower ends of said cables into contact with said equipment base and releasably latching the lower ends of said guide cables to said equipment base in spaced relationship to each other.

3,050,141
EMULSION DRILLING FLUID AND METHOD
James L. Lummus and Theodore T. Martin, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
No Drawing. Filed Dec. 11, 1958, Ser. No. 779,524
6 Claims. (Cl. 175—41)

1. A method of sampling a subterranean formation comprising drilling a hole into said subterranean formation to produce formation cuttings, circulating furfural aqueous mud emulsion in said hole during drilling to circulate said cuttings to the surface, said emulsion containing at least about 6 percent by volume of furfural dispersed in the aqueous phase and irradiating said cuttings with ultraviolet light whereby said cuttings may be analyzed for fluorescence to determine the presence of crude oil in said formation.

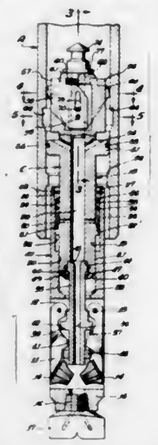
3,050,142
RETRIEVABLE DRILLING APPARATUS FOR WELL BORES
Archer W. Kammerer, Jr., Fullerton, Calif., assignor, by mesne assignments, of one-fifth to said Kammerer, one-fifth to Jean K. Lamphere, and three-fifths to Archer W. Kammerer, all of Fullerton, Calif.
Filed July 6, 1959, Ser. No. 825,126
21 Claims. (Cl. 175—260)



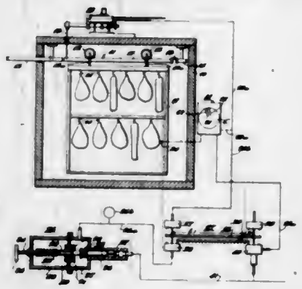
21. A shoe adapted to constitute the lower portion of a string of pipe disposed in a well bore, comprising a tubular member having circumferentially spaced slots extending upwardly from its lower end, each slot being defined by opposed side walls; one side wall of each slot being concavely curved outwardly from the inner wall of said tubular member in a direction toward the other side wall of said slot.

3,050,143
RETRIEVABLE WELL BORE DRILLING APPARATUS
Archer W. Kammerer, Archer W. Kammerer, Jr., and Jean K. Lamphere, Fullerton, Calif., assignors, by mesne assignments, of three-fifths to said Archer W. Kammerer, one-fifth to said Jean K. Lamphere, and one-fifth to said Archer W. Kammerer, Jr., all of Fullerton, Calif.
Filed July 6, 1959, Ser. No. 825,118
14 Claims. (Cl. 175—261)

1. In a retrievable drilling bit adapted to be lowered within and coupled to the lower portion of a string of pipe disposed in a well bore: a hollow body movable longitudinally through the pipe; initially retracted cutter means pivotally mounted on said body for expansion laterally outwardly of said body; said bit including means adapted to engage a lower portion of the pipe to locate the bit in the pipe with said cutter means projecting below the lower end of the pipe; hydraulically operable means movable within said body engaging said cutter means below its pivotal mounting on said body for expanding said cutter means laterally outwardly of the body to drill an effective hole diameter greater than the outside diameter of the pipe; means providing passage for fluid under pressure from the interior of the pipe above said body to said hydraulically operable means, whereby said fluid pressure actuates said hydraulically operable means; and means for coupling the bit to the pipe, whereby the pipe is adapted to rotate the bit.

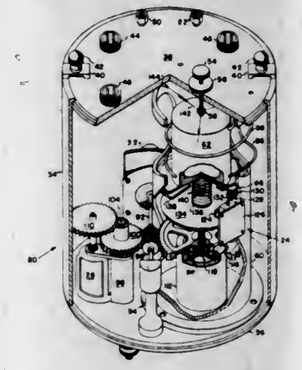


3,050,144
APPARATUS FOR MEASURING WEIGHT LOSS OF MEAT PRODUCTS IN THE SMOKE HOUSE
Owen Rice, Upper St. Clair Township, Allegheny County, and Donald M. Stough, Pittsburgh, Pa., assignors to Hagan Chemicals & Controls Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 5, 1958, Ser. No. 778,445
6 Claims. (Cl. 177—4)



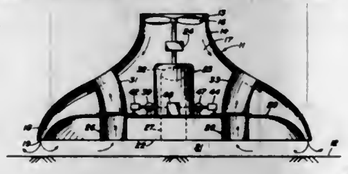
1. Apparatus for measuring the loss of weight in pickled meat products while being smoked on a tree in a smoke house, said apparatus comprising a weighing apparatus adapted to support the trees and having means for generating a pneumatic signal the magnitude of which is directly proportional to the weight of the products, means for producing a constant but adjustable pneumatic reference signal directly proportional to the final smoked weight of the meat products, a ratio totalizer comprising a fulcrumed beam and two separate pressure deflectable means disposed to exert contra turning forces on said beam, one of said pressure deflectable means being responsive to said constant signal and the other being responsive to the signal of the weighing apparatus, and means actuated by said beam for developing a signal that establishes that the final weight of the smoked products has been achieved.

3,050,145
LIQUID WEIGH CELL
Trent Lane, Rte. 1, Baker, La.
Filed Dec. 9, 1959, Ser. No. 858,366
20 Claims. (Cl. 177—210)



1. An apparatus for weighing liquids, said apparatus comprising (1) a base member, (2) a support element mounted on said base member and adjustable vertically with respect thereto, (3) resilient balancing means mounted on said support element and extending thereabove, (4) a tank member located on and above said resilient balancing means, said tank member being characterized by at least one access opening wherethrough liquids to be weighed may be introduced thereinto, (5) detecting means for sensing vertical displacement of said tank member from a predetermined null balance position with respect to said base member, said detecting means being capable of generating a signal indicative of at least the direction of displacement of said tank member from said predetermined null balance position, (6) adjusting means for elevating and lowering said support element with respect to said base member responsively to signals from said detecting means, and (7) signal transmission means connecting said detecting means and said adjusting means.

3,050,146
CONTROLS FOR VEHICLES UTILIZING THE GROUND EFFECT PRINCIPLE
Almer D. Crim, Falls Church, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 30, 1959, Ser. No. 849,999
5 Claims. (Cl. 180—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



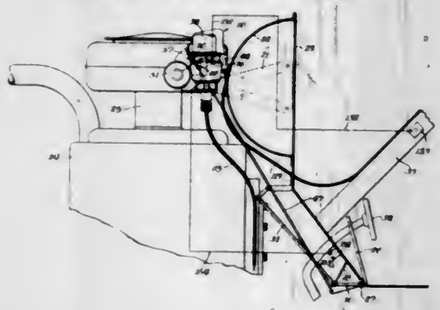
4. In a ground-effect machine supported on a ground cushion in the immediate proximity of the ground com-

prising in combination an exterior housing shaped essentially like the frustrum of a cone, an interior housing arranged within and circumferentially spaced from said exterior housing and including a solid surface opposite to and spaced from said ground and which is supported on said ground cushion, a downwardly directed nozzle in the shape of a closed plane curve, said nozzle being formed by the interior housing and the lowermost edge of the exterior housing to emit air normal to the ground, air inlet means in said exterior housing, means within said inlet means for pumping air from said inlet means to exhaust said air from said nozzle so that a portion of the air is confined below the machine creating said ground cushion beneath said solid surface of said inner housing, attitude-controlling means comprising a plurality of vents extending through said inner housing, a plurality of ducts, each of said ducts being connected to a separate vent at the inner end thereof and passing through said exterior housing and communicating with the atmosphere surrounding said exterior housing whereby at selected points the ground cushion below said lower surface may be placed in communication with the atmosphere, and means arranged in each vent for controllably and independently varying the size of the openings of the respective vents to vary thereby the extent of communication between the ground cushion to one side of some axis in the plane of the underside of the inner housing about which it is desired to effectuate moment control and the atmosphere.

3,050,147
SPEED CONTROL DEVICE FOR AN AUTOMOTIVE VEHICLE

Ralph R. Teetor, Hagerstown, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana

Filed Dec. 11, 1956, Ser. No. 627,650
38 Claims. (Cl. 180—82.1)



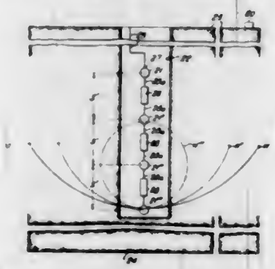
1. A speed control device for an automotive vehicle having a driver-operated throttle control member, comprising a rotatable member adapted to be rotated in one direction by said control member on advancing movement of the latter, drive means, means driven by said drive means for applying torque to said rotatable member in opposition to rotation in said direction, to provide opposition to advancing movement of said throttle control member, means responsive to the speed of the vehicle, and control means comprising a pair of parts movable respectively by said speed responsive means and said rotatable member and engageable with each other for energizing said drive means at a predetermined vehicle speed.

3,050,148
GEOPHYSICAL EXPLORATION

Burton D. Lee, Houston, Tex., assignor to Texaco Inc., a corporation of Delaware

Filed July 29, 1954, Ser. No. 446,625
5 Claims. (Cl. 181—.5)

1. In seismic surveying wherein explosive charges are detonated in a bore hole to generate seismic waves in the earth, in combination with at least three explosive charges spaced apart vertically in said bore hole, means operatively associated with said explosive charges for detonating said charges in time sequence at a velocity substantially equal to the seismic velocity of the medium surrounding said bore hole, in order to produce a reinforced seismic wave moving in the direction, as determined by said sequential detonation and a plurality of lesser seismic waves moving in the opposite direction, and means spacing said explosive charges a distance apart such that said

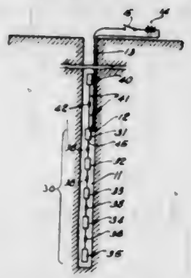


lesser seismic waves will pass a given point in substantially complete phase opposition each with respect to the preceding wave so as to cancel the effects thereof traveling in said opposite direction, the improvement comprising the relative strengths of said explosive charges being proportional to the square root of the corresponding numerical coefficients of the binomial expansion $(x+y)^n$ wherein n is a whole number having a value of at least two and sufficient to provide the same number of numerical coefficients resulting from the aforesaid binomial expansion as there are charges.

3,050,149
METHOD FOR SEISMIC PROSPECTING

Oswald A. Itria and Alvin L. Parrack, Bellaire, Tex., assignors to Texaco Inc., a corporation of Delaware

Filed Sept. 26, 1957, Ser. No. 686,386
1 Claim. (Cl. 181—.5)

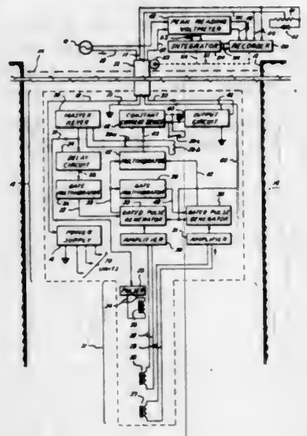


In seismic prospecting the method of improving the effects of high explosive charge detonation in a shot hole, comprising the steps of placing a plurality of principal charges spaced vertically from one another at predetermined depths in said shot hole, placing a bucking charge having substantially reduced strength relative to the total strength of said principal charges and spaced vertically above the uppermost of said principal charges in the shot hole, detonating said principal charges in sequence commencing with the uppermost charge, controlling the time between charges such that the sequential detonations take place at a velocity equal to the seismic velocity in the formation surrounding the shot hole, and detonating said bucking charge at a delay time after the uppermost principal charge detonation substantially greater than the time between the principal charge detonations in order to reduce hole blow and improve useful seismic energy.

3,050,150
METHODS FOR INVESTIGATING EARTH FORMATIONS

Maurice P. Tixier, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Filed Feb. 10, 1959, Ser. No. 792,346
17 Claims. (Cl. 181—.5)

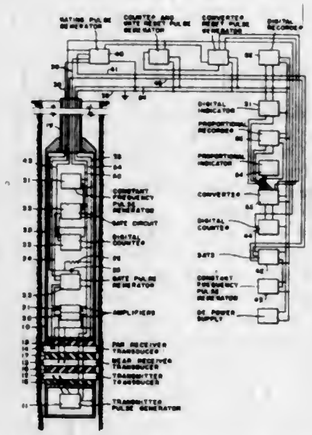


1. A method of investigating earth formations traversed by a borehole which comprises the steps of: emitting acoustic wave energy at one location in the borehole; intercepting at another location in the borehole acoustic wave energy propagated through the adjacent earth formations and arriving at said other location; generating sensible indications related to the travel time of acoustic wave energy in response to arrival of acoustic energy at said other location with an intensity exceeding a given level; and altering said level relative to the intensity of the emitted acoustic energy thereby to generate indications distinctive of said travel time indications and characterizing the acoustic attenuation property of the adjacent earth formations.

3,050,151
ACOUSTICAL WELL LOGGING

Charles B. Vogel, Houston, Tex., assignor to Shell Oil Company, a corporation of Delaware

Filed Aug. 26, 1959, Ser. No. 836,187
7 Claims. (Cl. 181—.5)

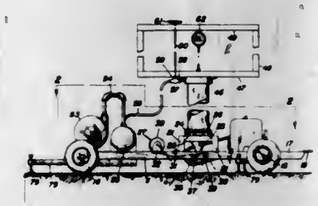


1. An acoustical logging system comprising: a downhole instrument including a transducer capable of transmitting an acoustical impulse and two closely spaced receiving transducers for receiving said impulse, said receiving transducers disposed to receive the impulse and convert it to electrical signals; said receiving transducers being coupled to a gating means located in the downhole instrument, said gate means being opened by one receiver signal and closed by the other receiver signal, said gate means being coupled to a first digital counter, a first source of high frequency pulses located in the downhole instrument, said gate means being disposed to control the application of pulses from said first source of relatively high frequency pulses to said first digital counter; a second digital counter and second gate means located at the surface, a second source of relatively low frequency pulses coupled to said second digital counter and said first digital counter by said second gate means, said second gate means being disposed to open when said first gate means closes, said first digital counter being disposed to generate a signal to close said second gate means when said first digital counter has been returned to its initial condition by the pulses from said second source and means coupled to said second digital counter for recording the total count recorded on said second digital counter.

3,050,152
HOISTS

Willard E. Blain, Miami, Okla. (713 W. South Ave., Vinita, Okla.)

Filed Nov. 1, 1960, Ser. No. 66,576
8 Claims. (Cl. 182—41)



1. A portable hoist comprising a frame with wheels rotatably mounted thereon, a drum rotatably mounted on said frame, an elongated flexible member coiled upon said drum, one end of said flexible member being secured to said drum, a member secured to and closing the other end of said flexible member, said member connected to a source of fluid medium for inflating said flexible member and maintaining same in a rigid condition and means engaging said flexible member for uncoiling same from said drum for elevating said flexible member contemporaneous with the inflating of same with said fluid medium.

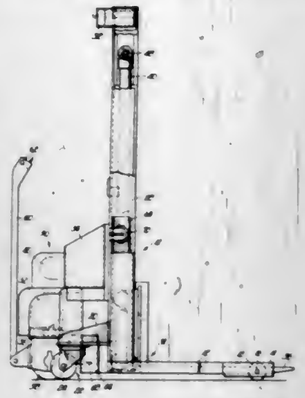
3,050,153
LIFT TRUCK WITH ARTICULATED POWER UNIT

Benedict Molis, Lake Villa, Ill., assignor to Economy Engineering Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 15, 1959, Ser. No. 846,612
6 Claims. (Cl. 187—9)

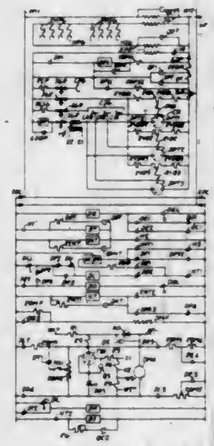
1. A fork lift truck comprising a main frame assembly, a pair of load wheels supporting one end of said main frame, a pair of caster wheels supporting the other end of said main frame, a pair of upper channel members mounted on said main frame assembly, a pair of lower channel members mounted on said main frame assembly, a power unit assembly, a drive wheel pivotally supporting said power unit assembly, a steering member connected to said drive wheel, motor means mounted within said drive unit assembly in driving engagement with said drive unit assembly, and upper and lower guide rollers mounted on

said drive unit for rolling engagement with said upper and lower channel members of said main frame assembly,



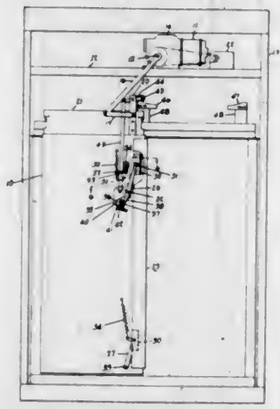
whereby said drive unit may be vertically articulated with said main frame and said drive wheel may maintain traction for driving said truck.

3,050,154
CONTROL FOR AN ELEVATOR CLOSURE
William Henry Bruns, Lincolndale, N.Y., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 2, 1958, Ser. No. 758,231
10 Claims. (Cl. 187—48)



1. In an elevator system in which a car serves several floors of a building, a control for a sliding type elevator door comprising, door operating means for opening and closing said door, switching means for controlling the energization of said door operating means, first initiating means for actuating said switching means to cause a door-opening operation of said door operating means incident to the car stopping at a floor, second initiating means effective following the opening of said door to fully open position for actuating said switching means to cause a door-closing operation of said door operating means, detecting means responsive to the presence of an object in the closing path of said door within a predetermined distance in advance of the leading edge of said door, said detecting means being effective upon detection of an object within said distance during the closing movement of said door to actuate said switching means to cause said door operating means to propel said door in an opening direction only as long as said detection persists, and delay means operatively responsive to said detecting means for maintaining said switching means in unactuated condition for a predetermined time interval after detection ceases before causing said door operating means to resume said door-closing operation.

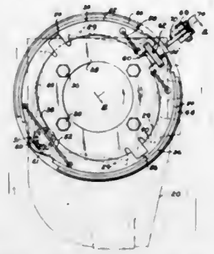
3,050,155
PROTECTIVE MECHANISM FOR DOORS
Philip Karmel, New York, N.Y., and Benjamin Whitehead Tucker, Jr., South Orange, N.J., assignors to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 21, 1953, Ser. No. 399,272
5 Claims. (Cl. 187—52)



1. In combination, a power actuated elevator sliding door, a first member rotatably mounted on said door, a second member rotatably mounted on the same axis as said first member, a switch mounted on said first member and operable by relative rotative movement of said members, a protective edge for the door, means including said second member for yieldably and movably supporting said edge on said door and in substantially constant parallel relationship thereto, and means connected to said first member operable upon rotative movement of said second member by yielding of said edge to hold said first member against rotative movement to cause operation of said switch and operable as the door reaches open position to cause rotative movement of said members as a unit to retract said edge without actuating said switch.

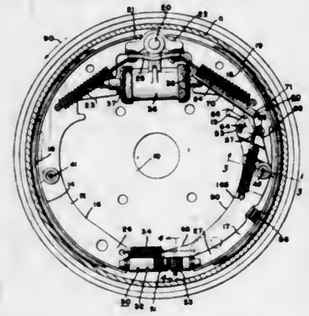
3,050,156
RIGHT ANGLE, LEVER-WEDGE ACTUATED MECHANICAL BRAKE
George P. Mathews, Ashtabula, Ohio, and Charles D. Shunkwiler, Linesville, Pa., assignors to Rockwell-Standard Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Filed Sept. 10, 1959, Ser. No. 839,237
10 Claims. (Cl. 188—78)

1. A brake assembly of the type wherein brake shoes are moved outwardly to engage a rotating drum comprising a support, a pair of oppositely movable brake shoes pivoted on one side of said support at adjacent ends at one side of the assembly, means for resiliently biasing said shoes toward a position where they are retracted with respect to said drum, an actuator for said shoes mounted on said support for substantially reciprocable movement in directions substantially perpendicular to the directions of shoe movement, said actuator comprising a wedge member extending slidably through a guide aperture in said support between the other ends of said shoes, an actuator lever pivoted to said wedge member at the side of said support opposite said brake shoes, means rigid with said support at said opposite side of said support providing a bearing and reaction surface



adapted to be engaged by a portion of said actuator lever when the actuator lever is rocked about its pivotal connection to said wedge member, and operator controlled means for rocking said lever.

3,050,157
AUTOMATIC BRAKE ADJUSTER
William V. Kenzik and Wilbur J. Oakley, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 3, 1961, Ser. No. 129,002
7 Claims. (Cl. 188—79.5)

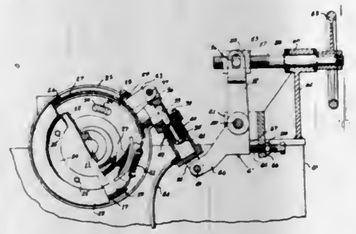


1. In a brake having a primary shoe and a secondary shoe, an automatic adjuster to maintain a predetermined brake shoe clearance in accordance with wear of the shoes, including, an extendible strut between the shoes including a rotatable wheel to extend the strut on rotation of the wheel, a first lever rotatably mounted on one of said shoes having one end engageable with said wheel to rotate the wheel on rotation of said lever, a second lever rotatably mounted on the opposite end of said first lever, spring means connected for operative reaction on said first lever and engaging said second lever holding the same resiliently in a predetermined position relative to said first lever, and a link between a fixed member of the brake and said second lever to effect rotation of said first lever thereby on movement of said one shoe and thereby effect rotation of said wheel to extend said strut.

3,050,158
BRAKE FOR ROCK LOADING MACHINE
Anthony R. Biedess, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 29, 1959, Ser. No. 862,646
4 Claims. (Cl. 188—152)

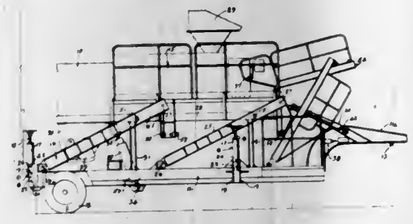
1. In a braking mechanism particularly adapted for rock loaders and the like,
(*a*) a drum,
(*b*) a friction braking member engageable with said drum to hold said drum from rotation,

(*c*) a hydraulic cylinder having
(*d*) a piston therein and
(*e*) a piston rod extensible therefrom upon the admission of fluid under pressure to said cylinder,
(*f*) an operative connection between said piston rod and said friction braking member for engaging said friction braking member with said drum upon the admission of hydraulic fluid under pressure to said cylinder,
(*g*) a lever forming a movable support for said hydraulic cylinder,



(*h*) means for limiting movement of said lever in one direction and adjustable to adjust the position of said hydraulic cylinder and piston rod with respect to said drum, to adjust the braking mechanism for wear.
(*i*) and other means manually operable to move said lever and hydraulic cylinder bodily to first retract said piston rod with respect to said cylinder and to then bodily move said piston rod and cylinder together to manually apply said friction braking member to said drum.

3,050,159
SELF-ERECTING PORTABLE MIXING PLANT OR THE LIKE
Robert J. Paulus, Aurora, and Robert E. Farnham, Naperville, Ill., assignors to Barber-Greene Company, Aurora, Ill., a corporation of Illinois
Filed Jan. 12, 1960, Ser. No. 1,886
10 Claims. (Cl. 189—11)



1. A collapsible frame structure having a collapsible frame adapted to be mounted on a truck bed and including front and rear pairs of legs, means comprising a single acting cylinder adapted to be connected to the truck bed at one end and connected to the rear legs at an opposite end for erecting and for collapsing said collapsible frame, spring loaded cables each connected at one end to the collapsible frame and adapted to be connected to a truck bed at an opposite end to facilitate lowering the collapsible frame by providing the force needed to move the collapsible frame off of dead center on its support legs so that gravity will complete the lowering operation of the collapsible frame against the support of said cylinder, and releasable lock means connected to the collapsible frame for locking the legs when in an erect position so the pressure in the cylinder may be allowed to drop when the collapsible frame is in an erect position.

3,050,160
SHEET METAL CONNECTION AND METHOD FOR EFFECTING THE SAME

Cecil E. Chesser, Hebron, Ohio, assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York

Continuation of application Ser. No. 406,769, Jan. 28, 1954. This application Mar. 9, 1961, Ser. No. 94,457
8 Claims. (Cl. 189—36)

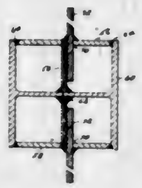


1. A tight joint between two plates, the first of said plates having a flat portion and a slot through said flat portion, the second of said plates having a portion in tight abutting relationship with said flat portion, said flat portion having a surface remote from said second plate, means tightly pressing and positively locking said abutting portions together comprising a tongue extending from said abutting portion of said second plate and passing through said slot and extending normal to said flat portion, said tongue having a base portion and a free end portion, said free end portion comprising a main part and at least one deformed part, said main part being integral with said base portion and extending outwardly from said surface in a direction normal thereto, said deformed part being integral with said main part but being severed from said base part by a cut through a part of said tongue, said cut lying in the plane of said surface so that the edge of said base defined by said cut and the edge of said deformed part defined by said cut both lie in the plane of said surface, said deformed part being bent from said main part so that it is transverse to said surface and transverse to the plane of said main part, said cut edge of said deformed part being in tight edgewise engagement along substantially its entire length with said surface adjacent said slot whereby said plates are tightly joined together in abutting relationship.

3,050,161
SQUARE COLUMN

Abraham E. Shlager, 15 Thacher St., Brookline, Mass.

Filed Apr. 14, 1958, Ser. No. 728,375
4 Claims. (Cl. 189—38)

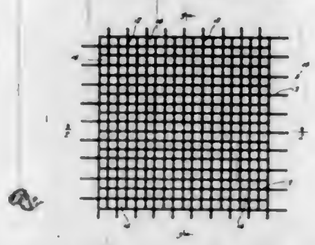


1. A vertical column comprising a beam having a pair of flanges integrally formed with and interconnected by a web, said flanges and web being disposed in a vertical plane, a pair of verticaliy oriented plates each parallel to the web and substantially the same width and height as the web, said plates being welded along their edges to the sides of the flanges, means interconnecting the web and the plates, said means being distinct from the flanges and being substantially equal in length to the plates, and eccentric load bearing members extending through the plates and secured to the means, said load bearing members being displaced from the vertical center lines of the plates.

3,050,162
LOUVERED CEILING CONSTRUCTION

Anthony E. Zingone, Massapequa, N.Y., assignor to Neo-Ray Products, Inc., New York, N.Y., a corporation of New York

Filed Nov. 16, 1960, Ser. No. 69,729
3 Claims. Cl. 189—82)

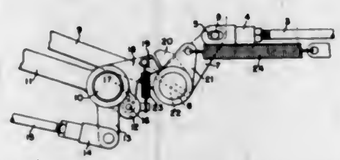


1. In a louvered ceiling construction, a plurality of parallel rows of louver units arranged with the louver units in each row disposed in contiguous planar relation, each of said louver units consisting of first and second rows of intersecting plates providing rows of cells opening through the top and bottom of the unit, alternate plates in said second row of plates extending outwardly at their ends beyond the plates therebetween a distance equal to two cells in length with said outwardly extending portions of the plates at one side of the louver unit alternating with the outwardly extending portions of the plates at the other side thereof, a frame support arranged between each adjacent rows of louver units and including a web arranged with its lower edge disposed substantially flush with the lower edges of the plates of the louver units and extending parallel with said first row of plates thereof, and the outwardly extending portions of said second row of plates of the louver units and the webs of the frame support between each adjacent rows of louver units having interengaging slotted portions supporting the row of louver units therebetween with the outwardly extending portions of said second row of plates projecting through the webs a full cell in length thereby providing a row of cells on each side of each of said webs respectively and between the same and the outermost plates of said first row of plates of the louver units.

3,050,163
SEQUENTIAL CLUTCH AND DIFFERENTIAL CONTROL

André P. Dhuicq, Taverny-Seto, France, assignor to Deere & Company, Moline, Ill., a corporation of Delaware

Filed July 6, 1960, Ser. No. 41,133
Claims priority, application France July 8, 1959
3 Claims. (Cl. 192—3.5)

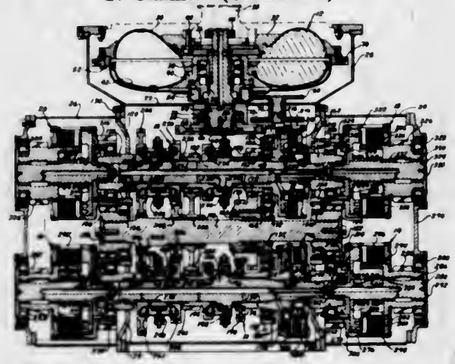


1. In a vehicle having a power source and a pair of traction devices: a power train and control therefor comprising differential means of the selectively lockable and unlockable type interconnecting the traction devices; clutch means selectively engageable and disengageable to respectively interconnect and disconnect the power source and differential means; clutch control means movable between clutch-engaged and clutch-disengaged positions; differential control means movable between differential-unlocked and differential-locked positions; and coordinating mechanism operative between the two control means and so constructed and arranged as to require movement of the clutch control means to its clutch-disengaged condition before the differential control means can be moved to its differential-locked condition, said mechanism including cooperative one-way-overrunning elements enabling return of the clutch control means to its clutch-engaged position while the differential control means is in its differential-locked condition and further enabling subsequent return of the differential control means to its differential-unlocked position even though the clutch control means has been returned to its clutch-engaged position.

3,050,164
MULTIPLE SPEED POWER TRANSMISSION

Glen L. Bowen, 14211 Stahelin, Detroit, Mich.; Robert W. Lemon, 23461 Glencroft, Farmington Township, Oakland County, Mich.; and Julius A. Clauss, Jr., 18330 Beverly Road, Westwood, Mich.

Filed Oct. 29, 1958, Ser. No. 770,502
17 Claims. (Cl. 192—4)



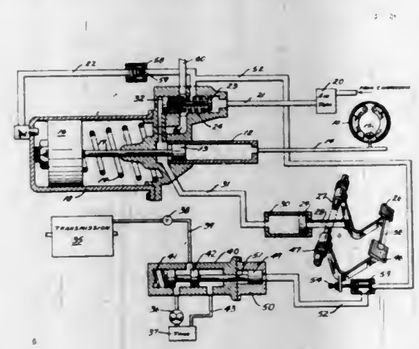
11. In a power transmission mechanism, a main shaft, a pair of counter shafts disposed in parallel relationship relative to said main shaft, a power input shaft having an axis transversely disposed relative to said main shaft, a power source, a fluid coupling connection between said power input shaft and said power source, separate geared power flow paths between said power input shaft and each of said counter shafts, each power flow path including a selectively engageable clutch, each counter shaft having a first intermediate gear rotatably mounted thereon, separate positive acting clutch means for selectively locking each countershaft to its associated first intermediate gear, a second intermediate gear connected to said main shaft in continuous meshing engagement with each of the first intermediate gears, a separate output gear drivably connected to said intermediate shaft at either end thereof, a pair of driven members, a geared power flow path between each output gear and a separate one of said driven members, each power flow path including a selectively engageable friction clutch which partly defines the same, separate brake means for individually braking each driven member, and means for alternately and individually energizing the brake means and the friction clutch of the associated power flow path for each output gear whereby clutch-brake steering may be accomplished.

3,050,165
SYSTEM FOR AUTOMATICALLY NEUTRALIZING A VEHICLE TRANSMISSION UPON APPLICATION OF BRAKES

Ralph R. Day, Aurora, and Raymond W. Fabere, Naperville, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Filed Aug. 26, 1959, Ser. No. 836,190
5 Claims. (Cl. 192—13)

1. In a vehicle which has air actuated brakes and a hydraulically actuated power transmission clutch, means including a brake pedal for controlling a supply of air under pressure to the brakes, a hydraulic circuit including a normally open valve for supplying hydraulic fluid to engage the clutch, air actuated means in communication with said supply of air under pressure to close said valve and effect disengagement of the clutch, an air valve

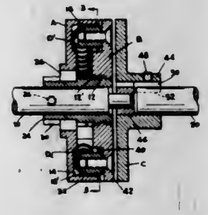


controlling the supply to said normally open valve, a secondary brake pedal normally holding said air valve closed and permitting it to open upon depression of the secondary pedal, and means to effect depression of said first named pedal with the secondary pedal to cause release of the clutch and application of the brake.

3,050,166
COUPLING DEVICES

Thomas P. Cunningham, 272 Bergen Blvd., West Paterson, N.J.

Filed Apr. 30, 1959, Ser. No. 809,940
17 Claims. (Cl. 192—43)

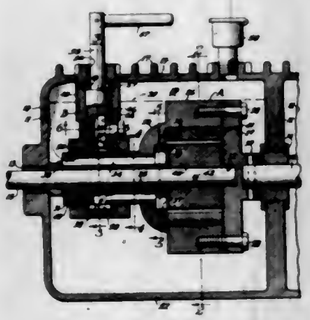


1. A coupling device comprising a driving member adapted for rotation with a driving shaft, externally threaded means extending axially of the driving member and rotatable therewith, a coupling member adapted for frictional engagement with a torque-receiving member and mounted in mating threaded engagement on said externally threaded means in adjacent, parallel relationship with respect to the driving member and providing a chamber between said members, an abutment fixed to and extending axially from the driving member into said chamber, an abutment fixed to and extending axially from the coupling member into said chamber, said abutments being disposed outward radially with respect to said threaded means and on substantially the same diameter, the abutment of one member being circumferentially off-set with respect to the abutment of the other member, and a pair of helically coiled springs in said chamber extending concentrically with respect to said threaded means in a plane substantially parallel thereto, the ends of each spring being respectively engaged by an abutment of each of the driving and coupling members.

3,050,167
VARIABLE SPEED AND TORQUE TRANSMITTING FLUID CLUTCHES

Orrin E. Lewis, Belleville, Kans., assignor to Speed Flow, Inc., Wichita, Kans., a corporation of Kansas

Filed May 22, 1959, Ser. No. 815,023
2 Claims. (Cl. 192—61)



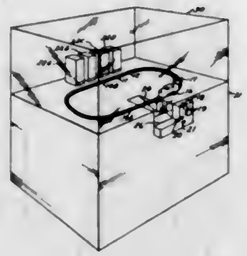
1. A variable speed hydraulic transmission comprising a stationary transmission housing containing a body of oil, rotatable and axially-aligned input and output shafts extending into said housing, a pump body secured to said output shaft and being at least partially immersed within the body of oil within said housing, said pump body defining a pumping chamber therein and having a cylindrical sleeve portion rotatably receiving said input shaft, said sleeve portion having oil intake and discharge passages communicating with said pumping chamber and extending within said sleeve portion in parallel relation to said input shaft, said intake and discharge passages each being spaced closer to the rotational axis of said sleeve than the radial distance between said axis and the outer limits of said pumping chamber, said intake passage having a continuously open oil intake port submerged in said body of oil and disposed at one end of said sleeve portion in close proximity to the rotational axis thereof, said discharge passage having a discharge opening in the side of said cylindrical sleeve intermediate the ends thereof, means within said pumping chamber for pumping oil therethrough and for coupling said input shaft and pump body for simultaneous rotation when the discharge of oil from said pumping chamber is restrained, and an adjustable control valve having a stationary valve casing entirely within said stationary transmission housing, said casing having a portion thereof extending about said sleeve portion and having an inner annular channel in constant communication with said oil discharge opening, said casing also having a fluid discharge port located radially outwardly from said sleeve portion in close proximity thereto and having oil passage means disposed between said discharge port and said annular channel, and a valve member rotatably mounted within said valve casing for selectively controlling the discharge of oil through said discharge port.

3,050,168
COIN CONTROLLED COMMODITY VENDING APPARATUS

Robert S. Kemp, 1408 Dancy St., Jacksonville 5, Fla.

Filed Sept. 8, 1959, Ser. No. 838,503
8 Claims. (Cl. 194—10)

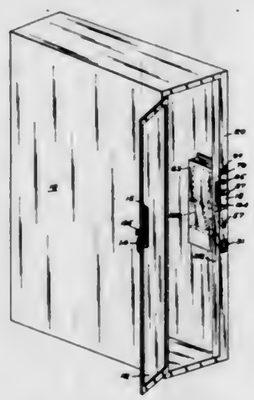
1. In a commodity vending apparatus, a train track, an electrical train on said track comprising an electrical engine and a car moved by said engine, a commodity loading arrangement adjacent said track for loading selected commodities onto said car, manual selection means for energizing said commodity loading arrangement, means responsive to the unloaded condition of said car for stopping said train before said commodity loading arrangement to permit loading of said car with a commodity corresponding to the operation of said manual selection means, a dispensing station having a dispensing chute, and means responsive to the loaded condition of said car for stopping said train at said dispensing station and for dumping said loaded commodity into said dispensing chute.



3,050,169
CHECKING LOCKER

Wells F. Stackhouse, Andover, Mass., assignor to American Locker Company, Inc., Boston, Mass., a corporation of Delaware

Filed Feb. 18, 1960, Ser. No. 9,614
14 Claims. (Cl. 194—19)

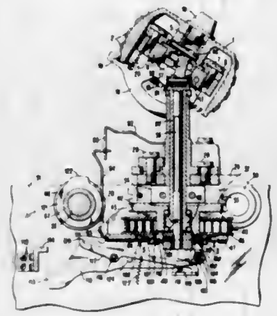


1. Checking locker mechanism comprising in combination, a chambered cabinet, a door therefor, a movable bolt for locking the door in closed position, key operated mechanism for moving the bolt to the door locked and unlocked positions, an accumulator mounted for stepped selective manual movement forwardly from zero position to a plurality of consecutive positions respectively representing different cash due amounts, means including the accumulator for permitting movement of the bolt from either of said positions to the other position when the accumulator is at zero but preventing such movement when the accumulator is in any of said predetermined positions, a spring normally returning the accumulator back to zero position, an escapement mechanism normally preventing such return movement, coin receiving and controlling mechanism, and means cooperating with said coin receiving and controlling mechanism and said spring and escapement mechanism for effecting said return movement of the accumulator one step for each coin deposited in the coin receiving mechanism.

3,050,170
SINGLE ELEMENT PRINTING MECHANISM

Ronald D. Dodge and Norwood K. Perkins, Lexington, Ky., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Mar. 22, 1961, Ser. No. 97,621
8 Claims. (Cl. 197—52)

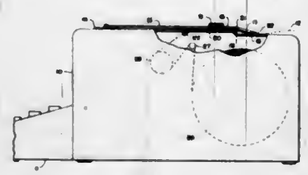


1. In a printing mechanism, the combination, comprising:
a shaft;
a printing element connected to said shaft and having a ring of detent notches therein;
a base supporting said shaft for rotation and having an annulus of detent teeth thereon concentric with the axis of said shaft;
a rotatable member;
connective means on said shaft operable in a first position for coupling said shaft to said member for rotation therewith, and movable to a second position to engage a pair of said teeth and disengage said member for positioning said shaft relative to said base;
detent means on said base engageable with one of said notches for positioning said printing element relative to said base;
and operating means for moving said connective means from said first position to said second position to engage a pair of said teeth and for engaging said detent means with one of said notches.

3,050,171
PAPER EXIT DUST SHIELD

William H. Baumgartner, Chicago, Ill., assignor to Teletype Corporation, Skokie, Ill., a corporation of Delaware

Filed May 26, 1961, Ser. No. 112,883
3 Claims. (Cl. 197—133)

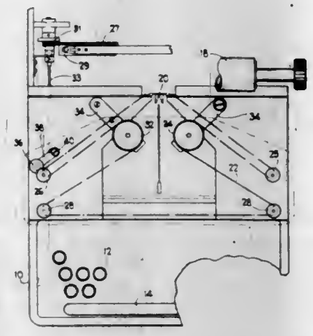


1. In a printer having a dust proof cover, a dust trap comprising a paper guide plate attached to said cover and having a first portion adjacent to said dust-proof cover to form a narrow portal for the paper and any dust-laden air and a second portion spaced from said cover portion to form a dust trap for dust-laden air.

3,050,172
TYPEWRITER RIBBON DEVICE

Edgar C. Lundeberg, 47 Hebron St., Hartford, Conn.

Filed June 24, 1959, Ser. No. 822,661
8 Claims. (Cl. 197—168)

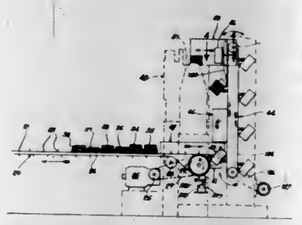


1. A ribbon advancing device for typewriters comprising a carriage driving drum, a vertical shaft supported on the typewriter frame, a flexible shaft constituting a driving connection from the carriage driving drum to said vertical shaft, a ribbon driving spool mounted at the upper end of said vertical shaft, and a freely rotatable resiliently mounted spool normally pressed toward the periphery of the ribbon driving spool, the ribbon passing between the peripheries of the driving spool and the resiliently mounted spool.

3,050,173
TRANSFER MECHANISM FOR VERTICALLY STACKED ENVELOPES OR THE LIKE

Glen E. Wimmer, Evanston, Ill., assignor to B. H. Bunn Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 24, 1960, Ser. No. 64,318
19 Claims. (Cl. 198—20)

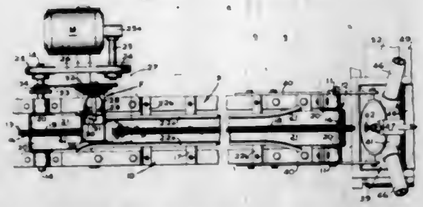


1. A transfer mechanism for transferring a stack of envelopes arranged in one plane from one level to another level and in a plane parallel with said one plane, said mechanism comprising a conveyor movable in said one plane and on which said stack is carried with the envelopes thereof disposed one upon the other, a stationary stack receiver disposed in line with the direction of movement of the conveyor, means for transferring the stack from the conveyor to the stack receiver, said stack receiver having spaced supports leaving bottom areas of the stack in said one plane exposed, a vertically movable conveyor having stack carrying buckets movable therewith, said buckets having fingers contacting the stack at the exposed bottom areas thereof and adjusted to transfer the stack from the stack receiver to the vertically movable conveyor, and means at the said other level adapted to enter a stack-carrying bucket as the latter moves to said other level and to push the stack out of said bucket.

3,050,174
CONVEYOR FOR ARRANGING ARTICLES IN SINGLE FILE

Ronald J. Billett, Santa Clara, Calif., assignor to FMC Corporation, a corporation of Delaware

Filed Nov. 7, 1960, Ser. No. 67,759
4 Claims. (Cl. 198—30)

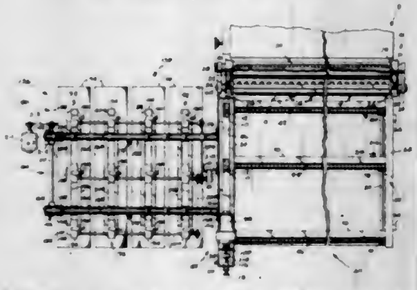


1. A conveyor for arranging a series of articles of substantially uniform size into single file, comprising an endless article transporting belt having a substantially horizontal upper reach, a pair of article delivery belts having upper reaches parallel to the upper reach of said article transporting belt, the upper reaches of said delivery belts being inclined from the horizontal to form a V-shaped trough with said transporting belt being at the apex of the trough, means for feeding the articles into the trough formed by said belts, spaced pulleys for entraining said belts, said article transporting belt extending longitudinally past the troughed portions of the upper reaches of said delivery belts the width of said article delivery belts substantially exceeding the maximum dimensions of the transported articles so that the delivery belts can fully support articles delivered thereto, that are parallel to said article transporting belt, the width of said article delivery belts substantially exceeding the maximum dimensions of the transported articles so that the delivery belts can fully support articles delivered thereto, the spacing between adjacent edges of the troughed portions of said delivery belts exceeding the maximum dimension of the articles so that the articles are deposited in single file on said article transporting belt and are transported to the delivery end of said transporting belt, whereupon said articles drop clear of said transporting belt at the delivery end of the belt and fall in a uniform trajectory, the angle of inclination of said delivery belts from the horizontal being sufficiently shallow to cause the belts to support the articles while they hunt for a gap between articles previously positioned on the transporting belt, means to drive said article transporting belt, and means to drive said delivery belts at a linear rate that is less than the linear rate of said transporting belt.

3,050,175
APPARATUS FOR EDGE SPACING STRUCTURALLY STABLE SHEETS

Otto G. Jeddeloh, Grants Pass, Oreg.

Filed Aug. 24, 1959, Ser. No. 835,560
19 Claims. (Cl. 198—34)



8. Lay-up conveyor apparatus for assembling rigid and semi-rigid sheets in edge to edge relationship with a spacing between the edges comprising a frame, plural laterally spaced endless conveyor belts supported on the frame and having upper runs defining a support plane, aligned sprockets mounting the forward ends of the belt runs, a common shaft secured to the sprockets, said sprockets and shaft rotating as a unit, driven pulley means secured to the shaft to rotate with the shaft and having a pulley surface disposed with the top thereof substantially at the level of said support plane, driving pulley means mounted above said driven pulley means and having a pulley surface disposed directly above and spaced a slight distance from the pulley surface of said driven pulley means, powered means for driving said driving pulley means, the latter driving said driven pulley means only when a sheet passes between the two pulley surfaces, and means inhibiting shifting of sheets deposited on the belts along the length of the belts, said means comprising plural retractable lug means mounted on said endless belts spaced along the length thereof and extending upwardly from the plane defined by the belts, said lug means being retractable below said plane when sheets are laid thereover.

3,050,176
CONVEYOR

John E. Brelsford, Terre Hill, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Mar. 16, 1960, Ser. No. 15,345
9 Claims. (Cl. 198—64)



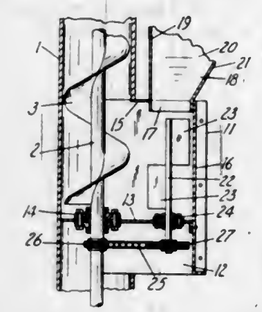
1. A conveyor for forage or the like comprising a supply source, a generally horizontally extending tube communicating with said supply source and normally having a first end adjacent the supply source and a second end remote therefrom, an auger rotatable in said tube to convey material from the supply source and through the tube from said first end and toward said second end, said tube having longitudinally spaced side openings through which material is laterally discharged as it is conveyed through the tube, the lower walls of said discharge openings being spaced progressively lower from a high point adjacent said first end of the tube to a low point adjacent said second end of the tube, the higher walls of said discharge openings being spaced progressively lower from a high point adjacent said first end of said tube to a low point adjacent said second end of the tube, the progressive spacing of said lower walls being different from the progressive spacing of said higher walls, and means for selectively mounting said tube rightside up with said first end toward said supply source or upside down with second end toward the supply source.

3,050,177
FORCED FEED FOR VERTICAL SCREW CONVEYOR AUGERS

Theron John Reed, Box 57, Burr Oak, Mich.

Filed Dec. 11, 1959, Ser. No. 858,899
6 Claims. (Cl. 198—64)

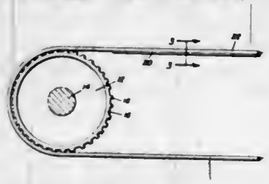
1. Material feeding structure for a vertically disposed screw conveyor having a tube with an auger rotatably mounted therein comprising a feed box secured to one side of said tube and projecting therefrom, said box having an open side registering with a hole formed in the side of said tube opposite the lower end of said auger, a bottom plate in said box positioned below the lower end of said auger and above the bottoms of the sides of the box, the shaft of said auger extending through said bottom plate and being provided with a bearing secured to said bottom plate, a removable front wall on said feed box defining one side of a rectangular feed opening in the top of said box alongside of said tube, a feed hopper with downwardly converging walls and a delivery neck positioned in the opening at the top of said box, an upright impeller shaft rotatably mounted on said bottom plate below said neck and opposite the lower end of said auger, vertically disposed rectangular impeller plates extending radially from said impeller shaft in opposite directions and one above the other, said impeller plates having their peripheries spaced substantially from the walls of said feed box and from said auger, and chain and sprocket means positioned below said bottom plate and drivingly connected between said auger shaft and said impeller shaft to drive the impeller shaft at about half the speed of the auger shaft.



3,050,178
TRACTION PATTERN FOR PULLEY SIDE OF CONVEYOR BELT

Guthrie B. Stone, Main St., Honeoye, N.Y.

Filed Sept. 28, 1959, Ser. No. 842,968
1 Claim. (Cl. 198—203)

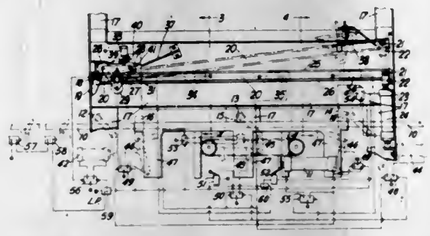


In a conveyor belt and pulley assembly including a drive pulley, a slider bed and an elongated flexible belt member of rubber and fabric construction having a friction reducing pulley engaging surface in which the fabric is partially exposed to provide a low coefficient of friction for sliding engagement with the slider bed and traction engagement with the drive pulley whereby such surface reduces the force required to drag the belt along the surface of the slider bed and also increases slippage between the pulley engaging surface of the belt and the drive pulley, that improvement comprising the friction reducing surface of the belt being provided with a plurality of recesses therein for further reducing the force required to drag the belt along the slider bed, said recesses being randomly arranged and spaced longitudinally and transversely of each other throughout the friction reducing surface of the belt, said pulley including a lagging on the outer surface thereof having a plurality of radial projections thereon, said projections being randomly arranged and spaced peripherally and longitudinally from each other on the lagging, said lagging and projections being of resilient material thereby eliminating the necessity of maintaining a timed relation between the belt and drive pulley, the randomly arranged recesses in the belt and the randomly arranged projections on the pulley forming a driving engagement with reduced slippage therebetween.

3,050,179
APPARATUS FOR AUTOMATICALLY AND SUCCESSIVELY MOVING CONTAINERS TO AND FROM A FILLING OR EMPTYING STATION

Rowland Sackville Preston Arber, Southall, England, assignor to U.D. Engineering Company Limited, London, England, a British company

Filed May 11, 1960, Ser. No. 28,415
Claims priority, application Great Britain May 12, 1959
9 Claims. (Cl. 198—232)



1. Apparatus for moving containers to and from a station comprising a platform, a conveyor continuously moving across the platform and carrying the containers, means for clamping the containers on the platform, means for projecting at least one stop into the path of the oncoming containers when others are already on the platform, means for moving the platform with the containers on it away from the conveyor to said station and then back again after the contents of the container have been modified, means for unclamping the containers from the platform so that they are carried away by the conveyor, means for withdrawing the aforesaid stop means, control devices for said means for projecting at least one stop, and for said means for clamping actuated by a carriage movable from an initial position and back again along a track disposed out of the path of travel of the crate, coupling means which are actuated by the return movement of the carriage to its initial position for establishing a drive between the carriage and an oncoming crate so as to move the carriage away from the initial position as the crate moves on to the platform for transporting it to the said station and means for returning the carriage to its initial position, which means are brought into operation by the outward limit of movement of the carriage away from its initial position, said movement also actuating the coupling means in a manner to interrupt the drive between the crate and the carriage.

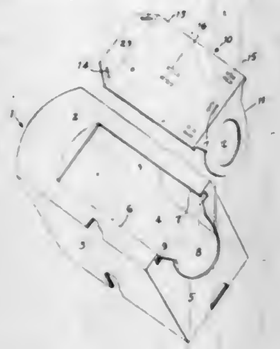
3,050,180
PACK FOR SKIN DIVING EQUIPMENT

Paul B. Huylebroeck, 76 E. 27th St., and Donald B. Potenza, 112 Lord Ave., both of Bayonne, N.J.

Filed June 6, 1960, Ser. No. 34,329
1 Claim. (Cl. 206—1)

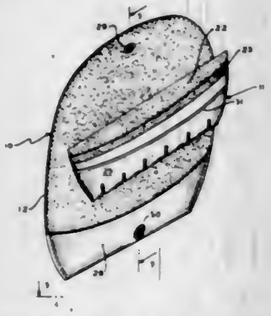
A pack for skin diving equipment comprising a receptacle having top, bottom, sides and ends, and having an elongated opening in its top beginning at one end of said receptacle, said opening having an inner end located short of the opposite end of said receptacle, said one end of said receptacle having also a recess communicating with said opening and a cover having side edges and one end downturned with an aperture therein, the side edges of the recess having notches to receive the side edges of the cover, the notches being below the side edges of said opening, so that said edges overlap the side edges of the cover when the cover is disposed in said opening, the downturned end of the cover fitting said recess when

the cover is fully in place, said cover having slots therein for the passage of shoulder straps by which the pack may be supported upon the owner's back, the cover having its edge at the inner end of said opening extending out of the plane thereof and away from said top when the cover is in place so that when the receptacle is



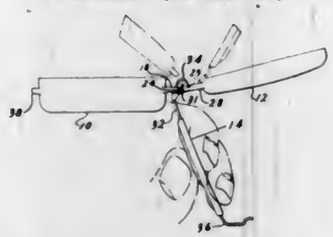
mounted on the back of the wearer the receptacle will engage the last-named end of the cover along the inner edge of the opening in the receptacle and the receptacle will hang on said cover when the straps are in engagement with the wearer's shoulders and the receptacle is mounted on the wearer's back.

3,050,181
SPECTACLE CASE
Emanuel Nathan, South Orange, N.J., assignor to The Opticase Co., Newark, N.J., a partnership
Filed Jan. 27, 1961, Ser. No. 85,428
1 Claim. (Cl. 206—5)



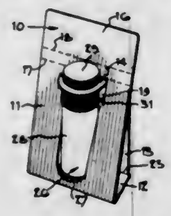
A two part spectacle case, one part of said case comprising an elongated plate member formed to define a pair of parallel longitudinal edges and bendable intermediate said edges axially longitudinally to define a pair of upwardly extending wall members defining a V-shaped unitary channel to receive spectacle frames therein of the size range accommodated by said channel, the ends of said wall members being formed arcuately from the axial longitudinal intermediate point of bending said plate, one of said wall members being of lesser height than the other, a rib on one of said wall members in spaced parallel relation to the longitudinal edge thereof reenforcing said wall member, transversely formed spaced ribs contiguous to the point of bending said plate extending from the lower end of said wall member, and a flexible holder defining the other part of the spectacle case and comprising an elongated flexible sheet formed at one end to define a pocket to receive the plate member and having a connected flap extending therefrom and adapted to be folded over the plate member, said plate member being so proportioned that it may be positioned in the pocket of the flexible holder and the flap folded over the pocket of the holder to thus enclose the plate member therein.

3,050,182
PYXES
Edward J. Conroy, Meriden, Conn., assignor to The International Silver Company, Meriden, Conn., a corporation of Connecticut
Filed Apr. 5, 1960, Ser. No. 20,178
4 Claims. (Cl. 206—19)



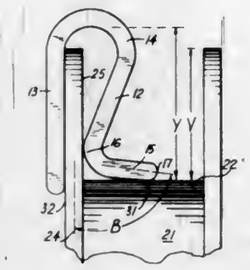
1. A pyx comprising an open top body, a cover, a handle, a common hinge pin assembly interconnecting said three members for swinging movement relative to each other with the cover overlying said box and being flanged to seal the open top of said body in the closed condition of the pyx, said handle overlying said cover in said closed condition and having an outline smaller than that of the cover and a catch member at the free end of the handle extending beyond the cover, said body having a catch piece opposite said hinge releasably engageable by said catch member and holding the cover and handle in their closed positions, said hinge assembly having abutment means limiting swinging movement of said cover relative to said body to an angle approximating 180° for an open position of the cover, abutment means limiting relative swinging movement between said handle and cover to an angle approximating 90° whereby the handle may be employed, after initial opening movement from closed position, to swing said cover to its said open position, and said handle will then be disposed in depending relation below said cover and body, and abutment means limiting further handle movement with respect to said body.

3,050,183
DISPLAY PACKAGE
John C. Mueller, Jr., Cincinnati, Ohio, assignor to Richardson Taylor-Globe Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 13, 1959, Ser. No. 852,727
2 Claims. (Cl. 206—45.14)



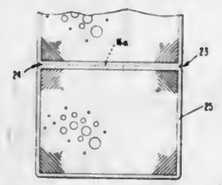
1. A display package comprising, a container having a base and a top, a one piece blank having, in sequence, a front panel having an elongated vertically directed aperture smaller in length than said container, a base panel, a back panel terminating in an edge and an apertured lock tab projecting centrally from said edge, said edge providing shoulders at each side of said lock tab, said base of said container resting on said base panel, said container projecting upwardly through the aperture in said front panel, and said lock tab projecting forwardly through the aperture of said front panel and surrounding said top of said container with said edge shoulders abutting said front panel.

3,050,184
DETACHABLE CLIP ARRANGEMENT FOR FILM STRIP
Herman D. Post, Flushing, N.Y.
Filed Mar. 16, 1960, Ser. No. 15,478
1 Claim. (Cl. 206—53)



An arrangement for preventing unwinding of a film strip from a reel comprising, in combination, a reel including a flange having an inner face and an outer face; a film strip wound on said reel adjacent the inner face of said flange and having an outer annular peripheral face; and a clip arrangement comprising a strip of resilient material folded in substantially R-configuration to form only two resilient arms, a first of said arms being of substantially S-configuration and having an upper portion and a lower portion at the free end thereof projecting transversely from the remainder of said first arm and forming a knee with the upper portion of said first arm and the second of said arms being substantially flat, said clip arrangement resiliently engaging and carried by the flange of said reel and abutting with the lower projecting portion of said first arm against the outer face of the film strip wound on said reel, with the knee of the said first arm abutting the inner face of the flange of said reel, and with said second arm extending substantially parallel to and adjacent with the outer face of the flange of said reel.

3,050,185
DISPOSABLE PLACE MATS
Harriet R. Crain, 2100 Beekman Place, Brooklyn, N.Y.
Filed Dec. 30, 1960, Ser. No. 79,730
2 Claims. (Cl. 206—56)



1. Disposable place mats comprising a web of flexible material having a predetermined length and width, a plurality of perforated lines extending across the width of said web at spaced apart intervals along said length so that preselected lengths of said web are detachable, each of said preselected lengths being of sufficient magnitude for use as a place mat, a ridge around each individual preselected length to prevent a flow of fluid off when in use as a place mat, said web being formed into a roll, and a predetermined design on at least one surface of each preselected length so that said preselected lengths of web material form place mats.

3,050,186
PACKAGING FOR SMALL UNIFORM ARTICLES
Ira P. Niles, Milwaukee, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 22, 1954, Ser. No. 470,196
3 Claims. (Cl. 206—59)

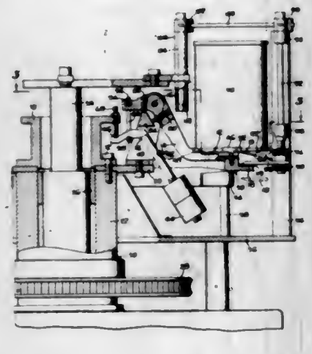


2. Packaging for a plurality of like circuit components having cylindrical bodies and axially disposed thin, deformable lead wires extending from the ends of the bodies which are of a cross section that is only a minor fraction of that of the bodies and which comprise the major length of the components, which packaging comprises a central spool, a pair of parallel end plates attached to and extending normal to the spool that are disposed a distance from one another slightly greater than the length of a component whereby a plurality of components may be placed parallel to one another between said plates with the ends of the components being closely adjacent the plates to have a fit prohibiting any substantial axial shift of the components, a pliant belting of a width approximately the same as the length of the component bodies having a coating of pressure sensitive adhesive permanently fixed on one face, said adhesive being permanently tacky and with cohesiveness exceeding its tackiness, said belting having one end attached to said spool and extending from said attached end to permit spiraling about the spool with the adhesive coated face disposed inwardly, a succession of said components mounted upon said belting with the bodies thereof extending across the width of the belting in cleanly separable adhering contact with the adhesive coating and the bodies being spaced from one another with a spacing between centers of adjacent components being no more than one and one-half times the width of a component in a direction along the belt, the belting and components being tightly spiraled about the spool to have a bearing pressure between the radially inner sides of the components and the back of the preceding turn of the belting whereby the components are held tightly in a position disposed lengthwise between said plates and parallel to one another with the deformable lead wires held at spaced distances from one another, and said belting continuing beyond the last of the succession of components to form an attachment end fixed to the preceding turn of the belting to retain the components in compact spiraled turns.

3,050,187
WEIGHING APPARATUS
Albert H. Kugler, Oakland, Calif., assignor to California Packing Corporation, San Francisco, Calif., a corporation of California
Filed Mar. 30, 1955, Ser. No. 497,949
11 Claims. (Cl. 209—121)

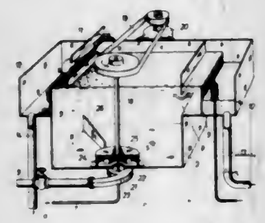
1. A device for weighing containers comprising: a container supporting plate, means for advancing said plate along a path, a cam supporting said plate during

a portion of its travel along said path, a self-balancing scale connected to said plate weighing the contents of a container on said plate when same is released by said



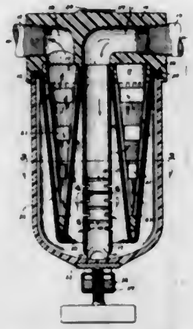
cam, and means for ejecting from said path improperly weighted containers said cam having a rate of descent slower than the rate of descent of said scale.

3,050,188
FLOTATION MACHINE
Henrik G. Nisser and Wolfgang Breuninger, Heidenheim (Brenz), Germany, assignors to J. M. Voith Gesellschaft mit beschrankter Haftung, Heidenheim (Brenz), Germany
Filed Mar. 10, 1960, Ser. No. 14,050
Claims priority, application Germany Mar. 12, 1959
12 Claims. (Cl. 209—170)



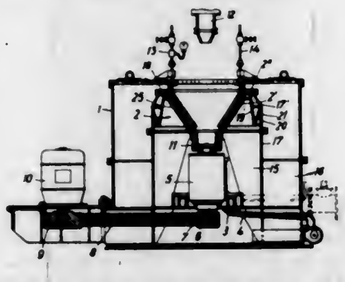
1. A flotation machine for the removal of printer's ink from a disintegrated waste paper suspension to produce a cleaned suspension, comprising: at least one tank for accommodating the waste paper suspension to be flotated, said tank consisting of a bottom and a plurality of side walls and having a liquid level of said suspension therein, first feeding means for feeding the uncleaned waste paper suspension into the tank, second feeding means for feeding air into the tank, a rotatably mounted impeller disposed in the tank in the paths of the waste paper suspension and the air, means disposed in said first feeding means to produce a whirl of said waste paper suspension before entering the center of said impeller, a distributor screen fixed to said tank and surrounding said impeller, guide plates mounted at said tank and extending radially from the outside of said distributor screen to the side walls of said tank, discharge means for discharging the cleaned suspension, said discharge means arranged at a first side wall of said tank below the liquid level therein, and overflow means for discharging foam or froth produced in said waste paper suspension during rotation of said impeller, said overflow means being attached to a second side wall of said tank in a remote relation to said discharge means.

3,050,189
FILTER
Roger F. Williams, 3420 SW. 9th, Des Moines, Iowa
Filed Mar. 18, 1959, Ser. No. 800,310
3 Claims. (Cl. 210—232)



3. A fluid filter device comprising a base head having a fluid inlet passageway communicating with its center underside and a fluid outlet passageway communicating with its underside at an area one side of its center area, a cup bowl adapted to be detachably secured to the underside of said base head, means for detachably securing said cup bowl to said base head, a longitudinally resilient vertical tubular core member having a tapered upper end for wedging engagement with said inlet passageway and a plurality of openings in said core member for the flow of liquid therethrough, the lower end of said core making contact with the inner surface of said cup bowl and being held in communicating relationship with said inlet by the upward thrust of said cup bowl when said cup bowl is secured to said base head, an open frame housing having its upper portion secured to the underside of said base head and its interior communicating with the outlet passageway of said base head, said frame housing having a wall that extends first downwardly and outwardly and then upwardly and outwardly, and a filter element substantially conforming to the shape of and embracing said frame housing having an annular outer top edge secured between the upper edge of said cup bowl and said base head and an annular inner top edge wedgingly secured between said vertical core member and said frame housing when said fluid filter is in operative condition.

3,050,190
CENTRIFUGES
Werner Siepe, Dusseldorf, Germany, assignor to Hein Lehman & Co. Aktiengesellschaft
Filed Jan. 27, 1960, Ser. No. 4,906
Claims priority, application Germany Feb. 25, 1959
4 Claims. (Cl. 210—380)



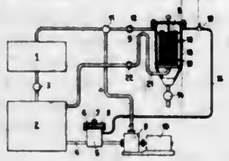
1. A centrifuge for the continuous separation of a liquid from solids admixed therewith, comprising a housing, a drum in said housing with an open end and a perforated peripheral wall of generally conical configuration rotatable about an upright axis, said wall diverging toward said open end along said axis, a generally conical jacket rotatable with said drum about said axis and externally surrounding said wall with clearance, said wall and said jacket defining between them an annular suction space with an annular outlet at an upper end of said suction space, a stationary partition dividing the interior of said housing into an inner and an outer chamber concentrically surrounding said drum and said jacket, and guide means on said drum divergingly extending downwardly and outwardly from said outlet toward said partition and defining therewith an annular flow space terminating in an annular gap through which sealing air is drawn downwardly into said inner chamber from said outer chamber through said flow space by the rotation of said drum, said guide means including a downwardly and outwardly directed surface terminating at said gap and disposed adjacent said outlet for directing a fluid mass along the latter from said outlet past said annular gap, thereby promoting the flow of said sealing air.

3,050,191
FILTER CARTRIDGES
Thomas J. Gillick, Jr., Glenville, and Arthur C. Wrotnowski and Harold G. Hencken, Greenwich, Conn., assignors to American Felt Company, Glenville, Conn., a corporation of Massachusetts
Filed July 29, 1958, Ser. No. 751,679
2 Claims. (Cl. 210—485)



1. A cartridge for a cartridge type filter, comprising a body of felt filter medium and a metal enclosure therefor, said enclosure comprising parallel widely spaced strips lying in a single plane between which are located a plurality of closely spaced parallel strips twisted transversely to said widely spaced strips forming an angle to the plane including said widely spaced strips; means on two opposed edges of said widely spaced strips for engaging the ends of said body of felt; and fastening means on the remaining two edges of said enclosure, whereby said encolsure may be wrapped around said felt body and securely fastened thereto.

3,050,192
FILTER
Friedrich August Bentler, Burglenstrasse 52, Berne, Switzerland
Filed Apr. 13, 1959, Ser. No. 805,870
Claims priority, application Switzerland Nov. 4, 1953
2 Claims. (Cl. 210—488)



1. A filtering mass carrier whereon a mass of auxiliary filtering material is deposited and maintained in position thereon by the normal pressure of the fluid when in use as a filter, comprising a plurality of strip-like generally flat elements moulded of synthetic resin, a central portion of said elements having flat opposite side surfaces, profiled edge portions at either side of said central portion, a place of maximum thickness of said profiled edge portions at a distance outside the said central portion, the said maximum thickness being smaller than the thickness of said central portion and the thickness of the profiled edge portions decreasing inside the said place of maximum thickness, the cross section of the said profiled edge portions being equal throughout the full length of the element at least outside the said place of maximum thickness, the elements positioned with their side surfaces adjacent and with their axes extending in generally vertical direction, slit-like fluid passages extending over the full length of the elements being formed between the said edge profiles of adjacent elements, such passages having a minimum width between said places of maximum width of the edge profiles and widening from the said places of minimum width inwardly, and carrying surfaces for the auxiliary filtering material being formed by the edge profile portions outside their said places of maximum thickness, such carrying surfaces comprising exclusively surface portions parallel to the said generally vertical direction so that no support is offered to the said auxiliary filtering material on said carrying surfaces and the filtering material will fall off the carrying surfaces when the filtering-fluid pressure is ceased.

3,050,193
FILTER CARTRIDGE
Thomas J. Gillick, Jr., Glenville, and Harold G. Hencken and Arthur C. Wrotnowski, Greenwich, Conn., assignors to American Felt Company, Glenville, Conn., a corporation of Massachusetts
Filed May 1, 1959, Ser. No. 810,456
3 Claims. (Cl. 210—494)



1. A filtering cartridge comprising a spool-like element having end members fixed to a perforated cylindrical core; a felt strip of rectangular cross-section and of substantially less thickness than the distance between said end members and having substantially the same porosity throughout, spirally wound about said cylindrical core between said end members in such fashion that succeeding convolutions contact preceding convolutions over substantially the entire width thereof; and spiked means adjacent the facing sides of said end members constituting the sole means for maintaining said felt strip in assembled relation on said core.

3,050,194
RACK ASSEMBLY
Dwight V. Sinninger, Oak Park, Ill., assignor to Senn Custom, Inc., Oak Park, Ill., a corporation of Illinois
Filed Apr. 28, 1960, Ser. No. 25,406
10 Claims. (Cl. 211—147)

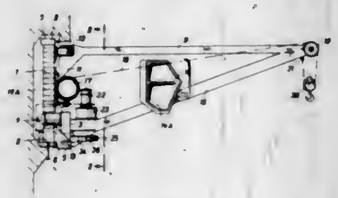
8. A rack assembly for removable units comprising a housing defining a vertical storage space having a generally rectangular cross section and an open front face, transverse cross members extending rearwardly from said front face to define a unit receiving space therebetween, generally vertical supports secured to said cross members in

spaced relationship on each side of said front face, and a slide construction on each side of said front face disposed between two supports, said slide construction being arranged in substantially coplanar relationship and each slide construction comprising a generally planar elongate shelf having an elongate edge, elongate guide means secured to the upper surface of said shelf and including a base having transverse slots therein and a lip portion extending upwardly from said base, means engaging said shelf through said slots and securing said guide means to said shelf whereby said lip is adjustably positioned generally parallel to said edge, a web extending transversely from said elongate edge of said shelf, an end tab extending



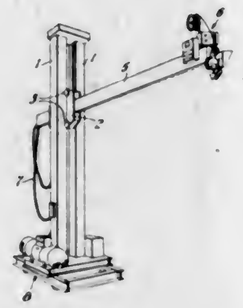
from said web beyond each end thereof and having roughened portions adapted to engage one of said vertical supports, clamp means secured to said web and generally coextensive with each end tab, said end tab and said clamp means having transverse dimensions substantially less than the width of said web and extending from said web at positions spaced from said elongate shelf, said shelf extending transversely from said web in a plane displaced vertically from said clamp means whereby said cross members and said shelf may be generally coplanar, and securing means interconnecting each of said clamp means and said web and adapted to draw said clamp means toward said end tabs whereby one of said vertical supports is rigidly maintained therebetween.

3,050,195
TRAVELLING WALL CRANE
Peter Eller, 35 Burgschmitstrasse, Nurnberg, Germany
Filed May 31, 1961, Ser. No. 113,784
Claims priority, application Germany June 1, 1960
12 Claims. (Cl. 212—17)



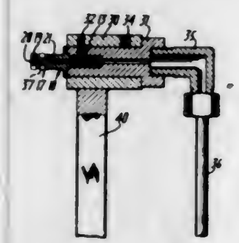
1. A travelling wall crane supported on horizontal rails mounted on a vertical wall and comprising a triangular frame having one side parallel to the horizontal rails, a boom pivotally mounted on said frame for pivoting movement about a vertical axis, a plurality of wheels on said frame for supporting said frame on said rails, two of said plurality of wheels being so positioned on said one side of said frame so that the vertical forces acting on said wheels passes through the intersections of the ends of said one side with the lower ends of the other two sides of said frame.

3,050,196
SUPPORTING AND MOVING RETRACTABLE BOOMS
Herbert Yates, Kingsbury, London, England, assignor to Yates Plant Limited, London, England
Filed Aug. 25, 1960, Ser. No. 51,827
Claims priority, application Great Britain Sept. 1, 1959
5 Claims. (Cl. 212—55)



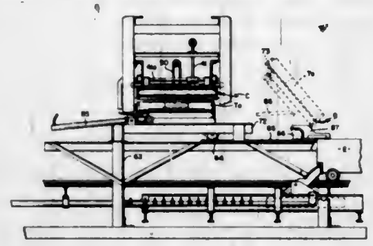
1. A boom structure comprising a boom carrier, a boom movably extending horizontally through said carrier and rollers journalled in said carried and supporting said boom as a cantilever in said carrier, in which at least one of said rollers is a frictional driving roller, for horizontal movement of said boom, and has a resilient peripheral rim, in frictional driving contact with said boom, and a rigid peripheral part of smaller diameter than said rim to limit radial compression of said rim under the load of said boom.

3,050,197
WORK SUPPORTING JIG
William F. Hannon, Berlin, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a corporation of Connecticut
Filed Feb. 19, 1960, Ser. No. 9,886
6 Claims. (Cl. 214—1)



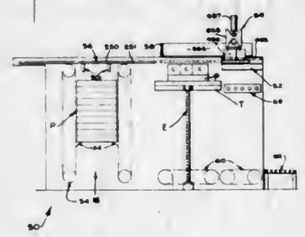
1. A jig for attachment on a loading arm to support a workpiece during transportation between two locations comprising a body portion adapted to be attached on the loading arm, an extended portion on said body portion to be received within an aperture in the workpiece, the extended portion having an opening therethrough at a predetermined position relative to the longitudinal axis of the body portion so that a workpiece positioned on said extended portion is urged further onto said extended portion by a fluid flow through said opening, and a channel extending through the body portion to communicate a source of fluid pressure with the opening.

3,050,198
UPENDER MECHANISM FOR TILE MACHINES
John D. Schmunk and Hall E. Gilliland, Findlay, Ohio, assignors to The Hancock Brick and Tile Company, Findlay, Ohio, a corporation of Ohio
Original application May 11, 1959, Ser. No. 812,393, now Patent No. 3,003,216, dated Oct. 10, 1961. Divided and this application Jan. 17, 1961, Ser. No. 83,250
1 Claim. (Cl. 214—6)



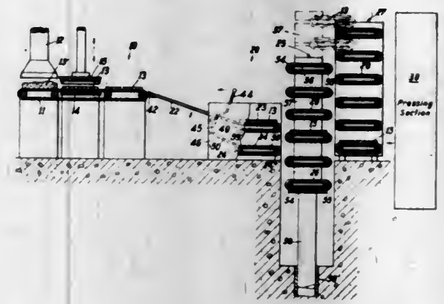
In a machine of the class described, a pair of vertically spaced tracks, an upender tray having a platform for receiving parallel rows of tile arranged in end to end relation, roller means on the inner end of said tray translatorily engaging the upper of said tracks, roller means depending from the outer end of said tray translatorily engaging the lower of said tracks, tile clamping means on the inner end of said platform shiftable in directions axially of the tile, tile clamping means on the outer end of the platform shiftable in directions laterally of the tile, stop means on the lower of said tracks engageable by said second roller means, and means to shift said tray to and fro, said shifting means causing said second roller means to engage said stop means and then continue its movement until the tray is rocked about said stop means to a vertical position.

3,050,199
APPARATUS FOR HANDLING CASES
Earle J. McGrath, San Bernardino, and Clarence H. Stevenson III, Glendale, Calif.; said McGrath assignor to FMC Corporation, a corporation of Delaware
Filed May 14, 1956, Ser. No. 584,730
12 Claims. (Cl. 214—6)



7. In a case handling machine, an elongated support structure, a pallet elevator disposed at a rear portion of said structure, a roller conveyor mounted at a forward portion of said structure, a table elevator disposed in said structure in alingnment with and between said pallet elevator and said conveyor, a carriage mounted for reciprocating movement longitudinally in said structure, said carriage having a plurality of fingers at its forward end and a support surface rearwardly of said fingers, latching means on the under surface of said carriage, means for actuating said pallet elevator when said carriage is in a rearward position above said pallet elevator to raise a stack of pallets thereon and move the uppermost pallet into engagement with said latching means to be gripped thereby, power means for moving said carriage forwardly to a position with said fingers disposed between the rollers of said roller conveyor and the pallet suspended above said table elevator, means including said power means for forming a plurality of lines of cases on said roller conveyor and transferring the lines to the fingers of said carriage and then to the flat support surface of said carriage to form a layer of cases, means on said table elevator for removing the suspended pallet from said latching means upon a predetermined upward movement of said table elevator, and a stationary stripper member disposed above said carriage substantially in alignment with the rearward edge of the table elevator and arranged to strip the layer of cases from said carriage and deposit it on the pallet on said table elevator when said carriage is moved to a position entirely rearwardly of said stripper member.

3,050,200
APPARATUS FOR STACKING SHEET MATERIALS
Eugen Siempelkamp, Hohenzollernstrasse 69, Krefeld, Germany
Filed Aug. 24, 1959, Ser. No. 835,686
Claims priority, application Germany Oct. 23, 1958
4 Claims. (Cl. 214—16.6)

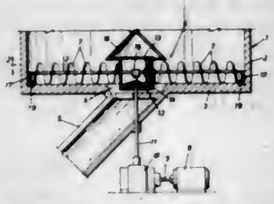


1. An apparatus for stacking loosely coherent sheet materials, comprising a primary conveyor; a plurality of stacked secondary conveyors horizontally spaced from said primary conveyor and disposed below the level thereof; a generally downwardly inclined swinging platform with a passive receiving surface pivotable about a horizontal pivot adjacent said primary conveyor for selective alignment with any of said secondary conveyors; means for depositing a succession of sheets on said primary conveyor with small mutual separation; means for driving said primary conveyor at a relatively low, substantially constant speed, thereby depositing said sheets successively on the receiving surface of said platform in a position for delivery to the secondary conveyor aligned therewith, means for driving each of said secondary conveyors at a relatively high, substantially constant speed, thereby removing said sheets from said platform with increased mutual separation; means for swinging said platform into alignment with another secondary conveyor upon the delivery of a single sheet to the secondary conveyor previously aligned with it whereby the next-following sheet is delivered to said other conveyor, and means for discharging each of said secondary conveyors upon the alignment of said platform with another secondary conveyor.

3,050,201
APPARATUS FOR UNLOADING MATERIALS FROM CONTAINERS
Frederick H. Humphrey, Markham, Ontario, Canada
Filed Aug. 29, 1960, Ser. No. 52,707
1 Claim. (Cl. 214—17)

In a cylindrical container adapted to receive materials to be unloaded from said container through a central opening in the bottom thereof, a pair of oppositely extending and laterally disposed conveyor screws positioned

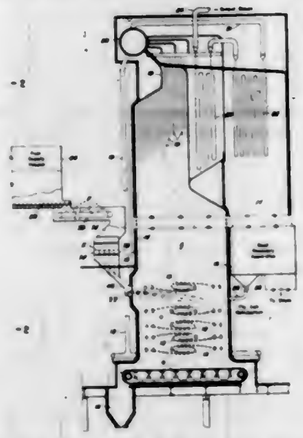
inside said container adjacent the bottom thereof, said screws extending substantially across the entire width of said bottom, said screws integrally formed on a horizontal shaft for rotation therewith, said conveyor screws having their inner ends positioned adjacent and over said opening and in spaced relationship with each other and their outer ends disposed adjacent the inner surface of said container, a vertical drive shaft extending from below said bottom upwardly through said opening and above said bottom, bearing means on the upper end of said vertical shaft for supporting said horizontal shaft, a first bevel gear fixed on said vertical shaft within said container, a second bevel gear fixed on said horizontal shaft, said gears positioned to engage each other so said screws are rotated about their longitudinal axis to cause said material to be drawn inwardly towards said central opening,



elongated inclined link members eccentrically pivotally mounted on said outer ends of said horizontal shaft and connected thereto for movement thereby, the outer ends of said link members comprising a free end consisting of a rectangular block having a plurality of downwardly facing serrations on the bottom thereof, a circular track secured to said bottom adjacent said inner surface of said container and partially disposed in an annular recess in said bottom, complementary upwardly facing serrations in the top of said track adapted to receive said block serrations, said block serrations being disposed to engage said track serrations by gravity to cause rotation of said conveyor screws in a plane substantially parallel to the bottom of said container, and means for rotating said vertical shaft whereby said screws rotate about said horizontal shaft and also rotatably sweep the bottom of said container to remove material through said opening.

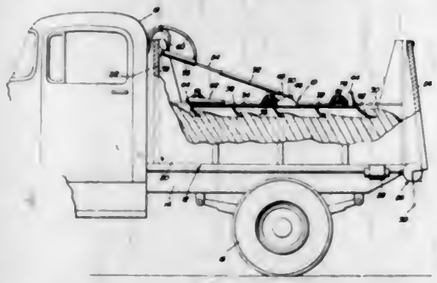
3,050,202
BARK-TYPE FUEL FEEDER WITH VIBRATING PROPORTIONING TABLE AND FLOW DIVIDING MEANS
Max O. Funk, Greenwich, Conn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 18, 1958, Ser. No. 774,708
4 Claims. (Cl. 214—18.38)

1. In a system comprising a furnace having a combustion chamber that is equipped with a plurality of fuel-injecting spreaders and fuel conveying means which bring to the location of said furnace cellulose fuel such as wood bark in the form of a primary supply stream that is non-uniform and erratic both as to flow volume and continuity, the combination of feeder apparatus for receiving said non-uniform primary stream of supply fuel and for converting it into a plurality of divided individual streams which are equal in size and relatively non-interrupted in flow continuity and which are respectively delivered by the apparatus to the furnace's said plurality of fuel-injecting spreaders, said feeder apparatus comprising an assemblage of parallel flow channels which are in respective supply communication with said plurality of furnace spreaders and which have upstream ends that are defined by a floor plus left and right side walls and intervening partitions upstanding from the floor; a proportioning table which extends away from said upstream channel ends in a horizontal plane that is at an elevation above the level of said floor and at least as high as the top edges of the said partition upstream ends and which is flanked by left and right upstanding side walls that merge with the corresponding side walls of said channel assemblage the discharge edge of said table being in feed communication with said upstream ends of all of said flow channels and the opposite or receiving end of the table being in feed communication with said fuel conveying means; means for imparting both to said table and to said flow channel assemblage a form of vibration which slowly advances said received fuel along said extended length of the table



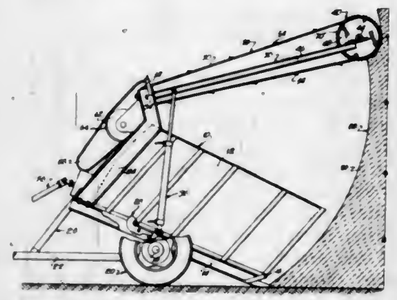
towards said discharge edge thereof and thence over that edge down into the upstream ends of all of said assemblage channels; the length of said table being such with respect to the width thereof that the vibrations produced in the table by the vibration means will spread the non-uniform primary stream of supply fuel evenly thereon, such that said fuel is spaced substantially evenly across the entire table width and length, as said fuel progresses along the length of the table, said fuel arriving at said discharge edge in a substantially continuous layer of uniform thickness.

3,050,203
PUSHER BLADE ASSEMBLY FOR TRUCK BODIES
Charles P. De Biasi, 74 Braman Road, Waterford, Conn.
Filed July 30, 1959, Ser. No. 830,609
14 Claims. (Cl. 214—82)



1. In combination with an open topped vehicle body having side and end walls, a pusher blade assembly for pushing material within the vehicle body toward one end wall comprising an open framework movable between the side walls and including longitudinal side rails adjacent the side walls and provided with depending flanges, a plurality of continuous blades extending between the depending flanges and rigidly affixed thereto, each blade being inclined downwardly and in the direction in which the material is to be moved with the trailing surface of the blade being inclined for riding upon the material during the return movement of the blade assembly, and means interconnecting the framework and the vehicle body for reciprocating the blade assembly for sequentially moving the material in the body in a step-by-step manner, said blade assembly including roller means, and means mounting the roller means on the framework for movement from an extended position in engagement with the top edges of the side walls for supporting the blade assembly from the top edges of the side walls of the vehicle body to a retracted position interiorly of the confines of the framework for permitting the blade assembly to move between the side walls of the vehicle body.

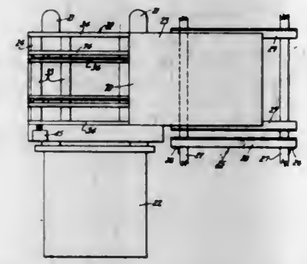
3,050,204
APPARATUS FOR HANDLING ENSILAGE AND SIMILAR PRODUCTS
William J. Haynes, Jr., Kansas City, Mo., assignor to Leavenworth Steel, Inc., Leavenworth, Kans., a corporation of Kansas
Filed Sept. 23, 1959, Ser. No. 841,741
4 Claims. (Cl. 214—508)



1. Apparatus for loading ensilage from a stack thereof comprising an open top body; a boom assembly pivotally coupled to the body adjacent one end of the boom for vertical swinging movement toward or away from a point adjacent said body; means coupled with the boom for swinging the latter with respect to the body; an endless conveyor supported by the boom and swingable with the latter, said conveyor including a plurality of spaced-apart flights movable through a path of travel fore and aft along the boom; means operably coupled with the conveyor for moving the flights through said path; a material loosening unit carried by the boom adjacent the free end thereof remote from the point of pivot of the boom with respect to the body, said unit including a shaft rotatably secured to the boom and a plurality of oval discs rigid to the shaft, the axis of the discs being inclined relative to the axis of the shaft with the outer peripheral margins of the discs being disposed to engage the face of the stack in wiping relationship thereto for loosening and breaking up said ensilage as the boom is swung toward said point, there being a plurality of notches at the peripheral edge of each disc.

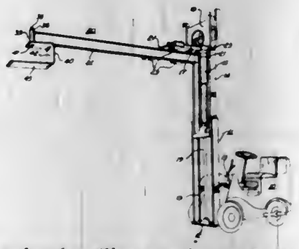
3,050,205
LOAD SHIFTING DEVICE
Robert E. Coash, Kalamazoo, and Alonzo B. Kendall, Galesburg, Mich., assignors to Rack Specialists, Inc., South Bend, Ind., a corporation of Indiana
Filed Dec. 30, 1954, Ser. No. 478,836
11 Claims. (Cl. 214—514)

9. A device for transporting a load and transferring the same to and from a rack having different storage levels, comprising a dirigible self-propelled vehicle, a power actuated load-supporting portion vertically shiftable on said vehicle, a transverse guide on said supporting portion, a traverse unit shiftable on and supported on said guide, and means for shifting said traverse unit on said guide to and from said rack, a load carrier carried by said traverse unit, means on said guide for raising and lowering the end portion of said carrier adjacent to said guide relative to said traverse unit, and means for similarly and equally elevating the opposite end portion of said carrier projected beyond said guide and a



vertically shiftable wheeled supporting unit at each end of said traverse unit, and means responsive to the position of the traverse member on said guide for lowering the wheeled supporting unit at the leading end of said traverse unit as the same moves from normal to laterally extended position and for elevating the wheeled supporting unit as the traverse unit returns from extended position to normal position.

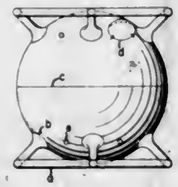
3,050,206
LOAD HANDLING SYSTEM
James W. McCracken, 81 Canal St., Leechburg, Pa.
Filed Nov. 18, 1958, Ser. No. 774,669
2 Claims. (Cl. 214—620)



1. In a lumber handling attachment for a conventional fork lift truck, apparatus comprising, in combination, a flat connector frame having a pair of longitudinally spaced transversely extending bars, each bar having transversely spaced sleeve bands underneath forming enclosures open in a longitudinal direction and shaped to conform to the cross section of the fork lift portion of said truck, said enclosures to each side on said bars being in longitudinal registery, set screws extending through the bottoms of said respective enclosures to affix said frame to said fork lift portion, one of said bars and the enclosures thereof being vertically drilled in registry with an opening through said fork lift portion, a pin adapted to pass through each set of registering openings when said frame engages said fork lift portion to secure said frame against longitudinal movement relative to said fork lift portion, cable means to flexibly attach said pins to said frame, a boom rigidly fastened to the underside of said bars to project forwardly in alignment with said fork lift portion, said boom being more than twice the length of said connector frame, a vertical bearing sleeve fastened to the outer end of said boom, a C-shaped single bent plate lift member having a flat solid top, side and bottom in rectangular relation, said lift member being open on the front and sides and having said top thereof terminating

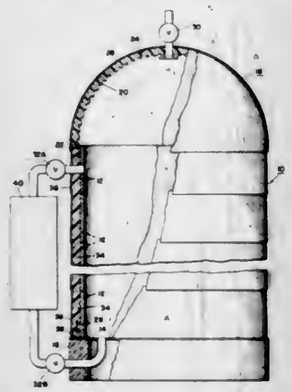
at about the middle of said bottom, a pivot rigidly connected to said top and extending through said bearing sleeve, thrust bearing means connecting said lift member to said bearing sleeve and boom for rotatable relative movement therebetween about the axis of said pivot and bearing sleeve, whereby modular bundles of lumber may be received endwise or lengthwise in the recess of said lift member for ready handling in accordance with movements of said truck and said lift member.

3,050,207
CONTAINER FOR LIQUEFIED GAS
Peter Rolfe Oxenham, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 17, 1960, Ser. No. 50,208
2 Claims. (Cl. 220—3)



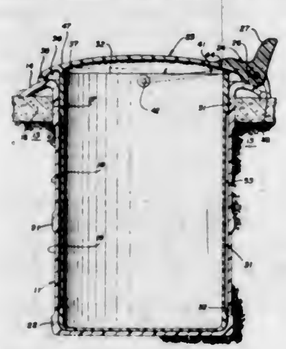
1. A spherical container for liquefied gases under pressure, said container having at least one fixed valve means, two ring-type circular supporting structures of substantially the same diameter, and of larger diameter than the diameter of said container, said circular supporting structures being positioned with their planes parallel to each other and attached to the container with their centers aligned with the axis of said spherical container, said axis of said spherical container being perpendicular to the said planes of said supporting structures and thereby forming a rolling means for said spherical container when the planes of said circular supporting means are vertical.

3,050,208
STORAGE VESSEL
Robert L. Irvine, 60 Sutton Place S., New York, N.Y.
Filed Sept. 25, 1959, Ser. No. 842,324
8 Claims. (Cl. 220—9)



1. A storage vessel for volatile liquids comprising a metal cylindrical tank having a hemispherical roof, with said hemispherical roof comprising an innermost layer of a fabric impregnated with an elastomer, said elastomer impregnated fabric being adhesively secured to the wall surface of said cylindrical tank about an annular margin at the top end of said cylindrical tank, and an outer insulation layer of a foam polymer secured to the outer surface of said innermost layer.

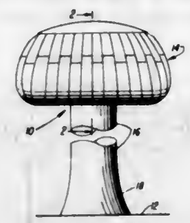
3,050,209
GARBAGE RECEPTACLE
Edward R. Germaine, 5633 Sapunor Way, Carmichael, Calif., and Chad L. Germaine, 3812 Anadale Lane, Sacramento, Calif.
Filed May 5, 1960, Ser. No. 27,143
1 Claim. (Cl. 220—18)



A garbage receptacle comprising:
(*a*) a hollow cylindrical shell having an upwardly opening mouth;
(*b*) a peripheral curled flange encompassing said mouth and extending outwardly therefrom, the outer margin of said flange being at an elevation below said mouth for supporting said shell at an elevation such that said mouth is above ground level;
(*c*) a plurality of peripherally raised portions disposed on the outer walls of said shell; said flange being in bearing engagement with the surface of the ground and said peripherally raised portions including upper radial shoulders capable of engaging the ground packed above them and of resisting the upward buoyancy of said shell in wet ground;
(*d*) a hollow cylindrical bucket insertable in said shell, said bucket including an upper annular margin defining a central opening, the elevation of said margin being at least as high as the elevation of the highest portion of said flange, said bucket further including on its outer walls a plurality of peripherally enlarged bands, the outer periphery of each of said bands having a diameter slightly less than the inner diameter of said shell for causing a piston-like action as said bucket is inserted in said mouth and released; and
(*e*) a foot-operated cover pivotally mounted on said flange, said cover including a downwardly extending annular portion adapted to register in closed position with said upper annular margin of said bucket, and a peripheral rim on said cover, said peripheral rim extending radially beyond said downwardly extending annular portion, said rim terminating at an annular margin engageable with said flange on said shell at an elevation above ground level, said rim defining with said flange on said shell and with the upper outer wall of said bucket an annular air space, said space having a substantial volume capable of cushioning the fall of said cover from open position to closed position, said cover having a relatively low mass relative to said volume of said air space.

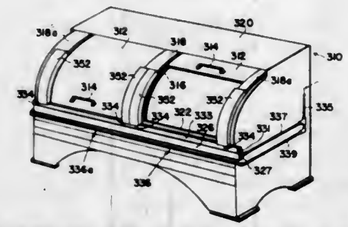
3,050,210
ELEVATED TANK
Jeng C. Shang, East Chicago, Ind., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 13, 1961, Ser. No. 137,851
13 Claims. (Cl. 220—18)

1. An elevated tank comprising a single riser construction, a storage vessel for housing liquid located at the upper end of and supported solely by the riser construction, said vessel having a generally toroidal construction of non-circular vertical cross-section having its upper and



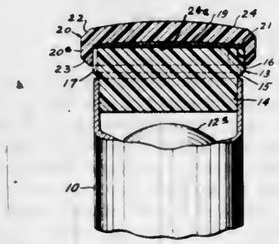
lower points of horizontal tangency horizontally displaced, and means for connecting the storage vessel to the upper end of said riser.

3,050,211
INFLATABLE WASHING MACHINE DOOR SEAL
Martin Hutterer, Forest Hills, N.Y., assignor to Cummings-Landau Laundry Machinery Company, Inc., Brooklyn, N.Y., a corporation of New York
Filed Jan. 31, 1961, Ser. No. 87,484
16 Claims. (Cl. 220—41)



1. In a washing machine comprising a door slidable between open and closed positions, spaced inner and outer runners to guide the sliding movement of the door therebetween, spacer means between said inner and outer runners and positioned adjacent an edge of said door when the same is closed, said outer runner having a portion thereof removed to expose adjacent edges of said spacer means and said door when the same is closed, an inflatable seal extending in overlying relationship with said exposed adjacent edges for at least the lengths thereof, means to inflate said seal throughout its overlying length to expand the same into fluid-tight sealing engagement with said exposed adjacent edges, and means to retain said inflatable seal in said overlying relationship with said exposed adjacent edges to prevent the same from expanding in a direction opposite from that of said exposed adjacent edges.

3,050,212
LIPSTICK CASE WITH PICTURE RETAINING CAP
Joseph M. Longo, 730 N. Main St., Waterbury, Conn.
Filed Feb. 21, 1961, Ser. No. 90,791
1 Claim. (Cl. 220—42)

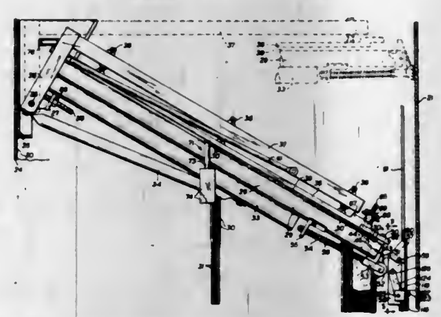


In a lipstick holder, a cylindrical case for housing a lipstick crayon, a solid cylindrical detachable plug fric-

tionally fitted into the top of said case, said plug having an enlarged flange at the top thereof provided with an outer cylindrical smooth unobstructed surface and being provided with a flat top surface for supporting a picture thereon, a concavo-convex lens cap of transparent material detachably mounted on the top flange of said plug and having a depending cylindrical skirt embracing said flange and frictionally connected therewith, said cap serving to hold said picture upon the top surface of said plug, the cylindrical surface of said flange having a vertical edge groove to serve as an air vent to permit the easy application and removal of said cap with respect to said plug by allowing the escape of air therefrom when said cap is inserted or removed from said case.

3,050,213
WITHDRAWN

3,050,214
SHOPPING BAG VENDING MACHINE
Philip Kopf, New York, N.Y.
(5738 Carlton Way, Hollywood 28, Calif.)
Filed Sept. 28, 1959, Ser. No. 842,720
4 Claims. (Cl. 221—240)

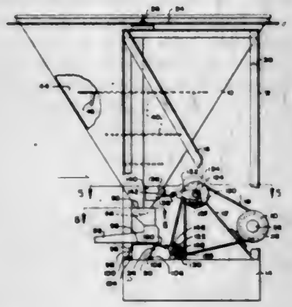


1. Dispensing apparatus comprising, in combination, a receptacle having an articles storage compartment, said receptacle having an outlet for directing articles outwardly from the interior of said compartment, a rack pivotally supported at one end within said compartment for selective movement between a normally inclined position and an adjusted horizontal loading position, the opposite end of said rack in said inclined position extending downwardly from said one end toward said outlet for directing articles carried upon said rack toward said outlet, selector means for separating a predetermined number of articles from said rack for movement through said outlet, and manually operated means for releasing each article separated by said selector means, said rack comprising a smoothed surface shaft member slidably supporting a pair of bail-type articles for movement by gravity along the length thereof from said one end to said opposite end, said selector means comprising a control plate pivotally supported upon said opposite end of said rack; said control plate having a finger of a length substantially equal to the width of one pair of the bail-type articles supported upon said shaft member, a guide plate supported in spaced apart parallel relationship upon said shaft member, the distance between said guide plate and said shaft being substantially equal to the thickness of each bail article to be slidably supported therebetween.

3,050,215
DEVICE FOR FEEDING GRANULAR MATERIAL
Edward C. Williams, 1378 Fernwood Crescent, North Vancouver, British Columbia, Canada
Filed Mar. 14, 1960, Ser. No. 14,664
12 Claims. (Cl. 222—161)

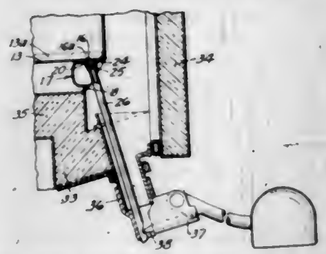
1. In a material feeding device, a base, a storage hopper having an outlet for containing the material in bulk

form, said storage hopper resiliently mounted in a support secured to said base; a control hopper having an open top spaced below the outlet of the storage hopper; a delivery trough connected to said control hopper and resiliently connected to said base; an adjustable gate on said control hopper providing a variable feed opening for discharge of material from the control hopper into the delivery trough; means for imparting vibratory movement of predetermined amplitude and frequency to said storage hopper,



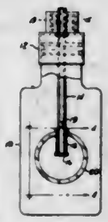
and means for imparting to said control hopper and delivery trough vibratory movement of lesser amplitude and greater frequency than the amplitude and frequency respectively of the storage hopper vibratory movement imparting means, the rate of discharge of material from the delivery trough being determined by the setting of said adjustable gate and by the frequency and amplitude of the vibratory movement imparted to said storage hopper and to said control hopper and delivery trough respectively.

3,050,216
CHAMBERED MILK CAN WITH THERMO-PLASTIC INSERTABLE COVER PLATE
Lannie F. Norris, Minneapolis, Minn., assignor to Norris Dispensers, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Dec. 14, 1959, Ser. No. 859,202
8 Claims. (Cl. 222—184)



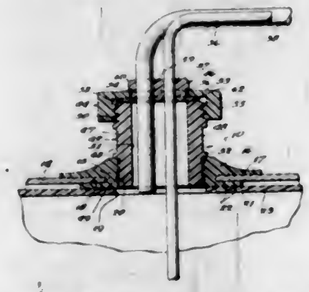
1. A bulk liquid container having a bottom adapted for use with sanitary dispensing apparatus, a peripheral base flange formed around the lower portion of the container and having an inwardly disposed depression formed therein, said depression having an aperture therethrough, a shell member mounted in said aperture formed in said depression and connected in fixed relation to said base flange surrounding said aperture, said shell member forming a compartment wherein a hollow discharge nipple is adapted to be positioned, said shell member having a mouth formed therein for providing access to said compartment, said mouth opening of said shell having a peripheral edge, means for closing the mouth opening of said shell in sealing relation comprising a disposable closure cap formed of plastic material and having an inner face, guide means extending from said inner face and engaging the inner surface portions of said compartment to thereby position marginal portions of the cap in sealing relation against the peripheral edge of said mouth, and retaining means for retaining said cap in mouth closing relation including interlocking elements on said cap and on the peripheral edge of said mouth opening respectively.

3,050,217
OIL OR THE LIKE DISPENSING DEVICE
Walter Mackey, Detroit, Mich., assignor of one-fourth to John Karpach, one-fourth to Joseph Karpach, both of Detroit, and one-fourth to Vincent Drobnak, Allen Park, Mich.
Filed Feb. 24, 1960, Ser. No. 10,772
10 Claims. (Cl. 222—211)



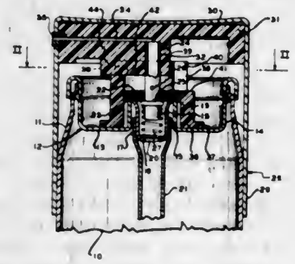
2. Dispensing apparatus for an oil or the like hand dispenser of the type having a flexible walled container comprising a hollow reciprocative stem having an aperture in its wall communicating its hollow to its outside, a sleeve slidably carried on the stem, and positioning means which acts on the sleeve to slide it on the stem between two positions thereon, said aperture being within the sleeve in one of said two positions by which the hollow of the stem is sealed off from its outside and being without the sleeve in the other of said two positions, said positioning means intercepting the sleeve at spaced points in opposite directions of reciprocation of the stem without intercepting the stem to hold the sleeve stationary during continued movement of the stem, whereby to slide the sleeve on the stem between said two positions.

3,050,218
CORROSIVE FLUID CONTAINER FITTING
Arthur Harvey, Chicago, Ill., assignor to Copymation, Inc., Chicago, Ill., a corporation of Illinois
Filed June 25, 1958, Ser. No. 744,447
7 Claims. (Cl. 222—498)



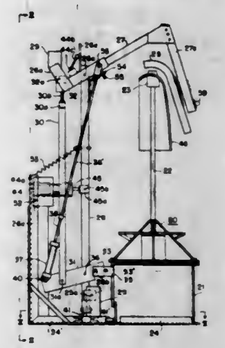
1. In a corrosive fluid supply system including a container having an outlet port and conduit means for withdrawing fluids from the container through said port; a cap structure having adapter means capable of connection through the port by a rotary movement, said cap structure having an annular side wall and a perforated transverse top wall and sealing means movably mounted in the perforation for movement along a path parallel with the axis of the perforation, said sealing means having support means exterior of the top wall capable of supporting said conduit means in communication with the interior of said container, said sealing means being movable along said path for sealing said perforation when the cap structure is operatively installed on the container, said sealing means comprising an integral plug member having a non-collapsible body member the cross sectional dimension of which is smaller than the size of the perforation, a head formation slightly larger in cross-sectional dimension than said perforation on one end of the body member exterior of the top wall comprising said means capable of supporting the conduit means, and a sealing flange on the body member engaging the opposite side of said transverse wall, said top wall being sufficiently resilient to permit passage of said head formation through said perforation.

3,050,219
LOCKING CAP DISPENSERS
Philip H. Sagarin, Bridgeport, and William R. O'Donnell, Trumbull, Conn., assignors to Valve Corporation of America, Incorporated, Bridgeport, Conn.
Filed May 29, 1959, Ser. No. 816,969
3 Claims. (Cl. 222—549)



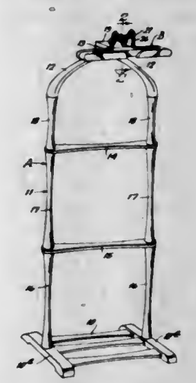
1. In combination with a container having a tubular upper portion and a bearing means thereon, and having a depressible valve and hollow valve-stem carried by said upper portion, said stem protruding at one end of said portion, a depressible cap comprising a thin inverted cup which is devoid of locking devices, said cap overlying the valve-stem and being rotatable on and having guided non-locking engagement with the exterior of said container upper portion and on and with the bearing means thereof whereby an operative bearing is had for the cap on the container exterior, said upper container portion, cap and bearing means being so constituted that the cap is at all times freely slidable and has unobstructed movement on the container portion and bearing means; means interposed between said container and cap and including a member having a discharge passage and nozzle communicating with the said valve stem, for preventing depression of said cap in one position of rotation thereof whereby the cap is inoperative to depress the valve stem, and for enabling depression of said cap to be effected in another, operative position of rotation thereof to enable said depression to be effected, said interposed means comprising a second member cooperable with the first-mentioned member, said members constituting a two-piece assemblage which is wholly contained within and wholly concealed by said cap, said depression-preventing means further including mutually engageable lugs on said members, the lug on the nozzle-carrying member extending radially from the axis of said member; and stop means on said second member cooperable with said radially-extending lug, limiting turning of the nozzle-carrying member to movement between its said operative and inoperative positions.

3,050,220
DRESS SHIRT PRESSING APPARATUS
August F. Paris, Oak St., Brockway, Pa.
Filed Aug. 11, 1959, Ser. No. 833,088
29 Claims. (Cl. 223—57)



1. A garment pressing machine including as a part thereof a garment support; a perforated breast plate; upwardly extending rearwardly curved shoulder extensions secured to and spaced along the upper edge of said plate, in combination with a pressing device movable toward and away from said plate and said extensions; a support mechanism for said device including an upwardly extending, pivotally supported mast; a support arm secured to said device and pivotally connected to said mast; a floating guide bar pivotally secured to said arm; a cam plate pivotally secured to said mast and said bar; spaced cam rollers; and means pivotally connected to said arm and said cam plate for moving said arm about its pivotal connection with said mast and for moving said cam plate to different positions relatively to said rollers.

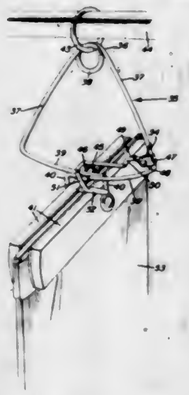
3,050,221
GARMENT HANGER
Charles N. Birnbaum, New York, N.Y., assignor to C. Birnbaum, Ltd., New York, N.Y., a corporation of New York
Filed Mar. 1, 1960, Ser. No. 12,180
3 Claims. (Cl. 223—91)



1. In combination, a base and garment hanger standard carried thereby, said standard providing a stationary bar having a clip surface, a slide providing a clip surface opposed to and adapted to engage the clip surface of said stationary bar, said slide having a trouser-receiving longitudinal recess therein tapering downwardly and inwardly and having an access opening in its outer side, inverted U-shaped members extending upwardly from said bar and said slide and hingedly connected to-

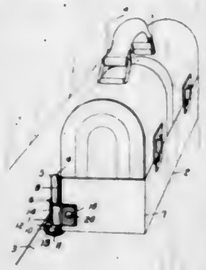
gether at their tops, and clamping means engaging said members for urging said slide toward said stationary bar and the clip surfaces toward one another.

3,050,222
GARMENT HANGER
Dafford D. Cates, 1042 Lewis St., Pomona, Calif.
Filed May 5, 1960, Ser. No. 27,138
5 Claims. (Cl. 223—96)



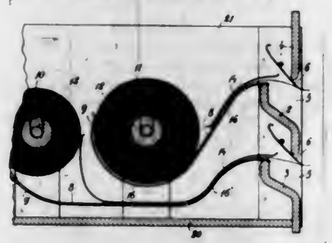
1. A garment hanger comprising a generally V-shaped expansible spring comprising divergent legs, inturned parallel arms on the free ends of said legs, opposed jaws on said arms for receiving and gripping a garment therebetween, a lug mounted on one of the arms, and a latch pivotally mounted on one of the legs and engageable with said lug for releasably locking the spring in expanded position with the jaws in open position, said latch including a trigger positionable in the path of a garment being inserted between the jaws for actuation thereby for disengaging said latch from the lug for releasing said jaws.

3,050,223
HOLDER FOR SECURING RECEPTACLES TO THE FLOOR OF A VEHICLE
Joseph Dudley Scioloro, 14620 Rath St., La Puente, Calif.
Filed Apr. 8, 1959, Ser. No. 804,978
3 Claims. (Cl. 224—29)



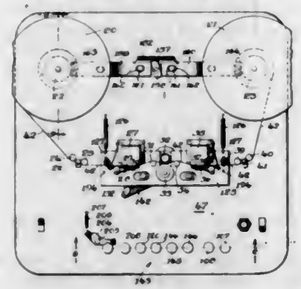
1. In combination with a motor vehicle having a seat and a floor extending from the seat, a container, and a holder for preventing the container from tipping over and sliding unrestrictedly about the floor of said motor vehicle, said holder including a base, a standard fixed to and extending upwardly of the base and having a smooth exterior surface terminating above the base in a rounded end, means for securing the base to the floor of the vehicle, near said seat, and a loop member having an axial passage to slide freely over the rounded end of the standard and having laterally extending ears embracing a part of said container whereby said loop member is attached to the container to be carried thereby, said axial passageway of the loop member being adapted to be registered with the rounded end of the standard and to pass the standard therethrough as the container is placed upon the floor of the vehicle and said loop member being adapted to swing about the standard to move the container into an out of way position against said seat of the vehicle.

3,050,224
ROLL PAPER DISPENSER
Einar Jens Drolshammer, Folke Bernadottesgate 31, Moss, Norway
Filed Sept. 9, 1959, Ser. No. 838,873
3 Claims. (Cl. 225—38)



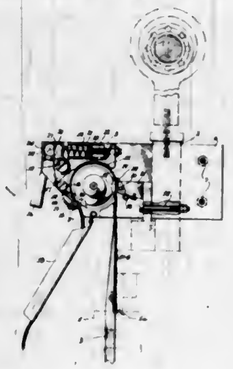
1. A roll paper dispenser comprising a container having side walls and a front wall, there being one or more slots in the front wall for withdrawal of paper, and a tearing knife associated with each slot, there being means associated with side walls to journal one or more rolls of paper, in combination with a narrow curved web-guiding passage between and leading from each roll of paper to its slot in the front wall adapted to control the web between those points, each such passage comprising a curved upper and a curved lower plate so close to each other as to insure that the paper web from the roll always contacts the major area of at least one of the curved plates when the web relaxes from the movement in the guided direction, the narrow curved guiding passage between plates thereby preventing the web from sliding backwards.

3,050,225
MAGNETIC RECORDER
Charles Ulman, 4106 S. Home Ave., Berwyn, Ill.
Filed Feb. 7, 1958, Ser. No. 713,942
13 Claims. (Cl. 226—51)



13. In a machine for driving an elongated magnetic record member between a pair of reels, a motor having a rotatable shaft, a capstan to engage the record member and to drive the same, said capstan being reversibly coupled to said shaft of said motor, guide means to guide said record member to and from said capstan, said guide means including switching means, and means connecting said switching means to said coupling means to reverse the direction of operation of said capstan when a sensitized portion of said record member engages said guide means and closes said switch means.

3,050,226
TAPE FEED DEVICE
Guido Perrella, 425 River St., Montreal, Quebec, Canada
Filed Dec. 22, 1959, Ser. No. 861,236
2 Claims. (Cl. 226—157)



1. A tape feed device comprising in combination with a reciprocating ram, a fixed body member, a wheel mounted in said body member for rotation on an axis fixed therewith and having an annular tape-engageable section and an annular ratchet, said section and said ratchet being fixed to each other for simultaneous rotation, a bracket fixed to said ram for reciprocation as a unit therewith, a pawl pivoted to said bracket and engaging said ratchet to rotate said wheel step by step in response to movement in one direction of said ram, a holding pawl mounted on said body member and engaging said ratchet to restrain movement of said wheel in response to reciprocation of said ram in the retrograde direction, tape holding means comprising a lever pivotally mounted on said body member, a pad pivotally mounted on said lever and having an arcuate tape-engageable surface conforming to a circumferential section of said tape-engageable section of said wheel, said tape-engageable surface having a tape-holding position wherein said tape-engageable surface is spaced a minor distance from said tape-engageable section and a tape-releasing position wherein said tape-engageable surface is spaced a major distance from said tape-engageable section, and manually controlled means carried by said body member and operable to pivot said lever to move said pad into either of said positions, said last-named means comprising an arm fixed to said lever for imparting swinging movement thereto to a selected one of said positions, a spring engaging said lever arm and urging said lever towards said tape-holding position, and a cam rotatably mounted in said body member and having a pair of cam surfaces selectively engaging said lever arm in response to rotation of said cam, said cam surfaces respectively determining said positions.

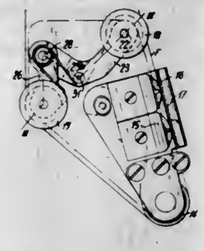
3,050,227
DEVICE FOR THE SOUND REPRODUCTION OF CINEMATOGRAPHIC FILMS
Jean Thevenaz, Grandson, Vaud, Switzerland, assignor to Paillard S.A., Sainte-Croix, Switzerland, a corporation of Switzerland
Filed Dec. 27, 1960, Ser. No. 78,489
Claims priority, application Switzerland Dec. 29, 1959
3 Claims. (Cl. 226—195)

1. A device for guiding a looped portion of a cinematographic file in its movement relative to a sound head from a feed spool to a receiving spool, comprising, in combination,

a film speed regulating roller located between the feed and receiving spool and over which the film passes,

two pairs of spaced arms,

a common support pivotally connecting the related inner ends of said arms, spring means coiled about said support and having radial ends engaging said

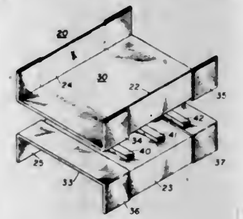


pairs of spaced arms independently to urge their outer ends respectively in opposite directions,

and film engaging rollers between each pair of arms, said rollers mounted on said spindles journalled freely to rotate and slide axially in the outer ends of said arms and also to tilt axially therein,

said rollers pressing the film loop outwardly between said speed regulating roller and the feed and receiving spools respectively.

3,050,228
REINFORCING INSERT FOR A CONTAINER
Dan R. Lane, Dallas, Tex., assignor to Lane Container Company, Dallas, Tex., a corporation of Texas
Filed Nov. 21, 1960, Ser. No. 70,762
9 Claims. (Cl. 229—15)



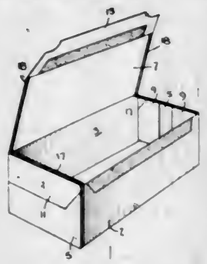
1. An insert for a paper board container which has two upstanding side walls, horizontal top and bottom walls connecting the side walls and one end of the container having a vertical wall constituting an openable closure means thereat, which comprises an article-supporting partition member comprising an upper panel and a lower panel of substantially rigid material horizontally disposed within the container and each substantially coextensive with and in parallel spaced relation to the top and bottom walls and thus forming upper and lower article-storing compartments within the container, the compartments being accessible from the open end of the container for inserting articles on the partition member or removing the same from the upper compartment and lower compartment, reinforcing means disposed between the upper and lower panels, said reinforcing means having partition-supporting and side wall reinforcing flaps on the ends thereof extending from the partition member along the side wall in at least one direction, and partition-supporting and side wall reinforcing flaps extending in the other direction from opposite edges of the insert, said flaps being fixed against their adjacent walls and the free edges of said flaps terminating adjacent the upper and lower inside corners of the container, the exposed edge

of said insert being unscored along the length of said upper and lower panels facing said one end of said container.

3,050,229
CONTAINER AND METHOD AND MEANS FOR MAKING SAME

Richard F. Neff, Manhasset, N.Y., assignor, by mesne assignments, to The Lord Baltimore Press, Incorporated, New York, N.Y., a corporation of Maryland

Filed July 24, 1959, Ser. No. 829,341
1 Claim. (Cl. 229—16)

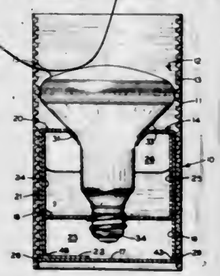


A one-piece container comprising a bottom panel having front, rear and end panels hinged thereto along fold lines, the front and rear panels having end flaps extending therefrom folded along fold lines and tightly secured to said end panels, a top panel extending from said rear panel and hingedly connected thereto along a fold line, said top panel having end flaps extending therefrom and folded substantially at right angles to said top panel along fold lines and tightly secured to said end panels, a front tab hingedly extending from said top panel along a fold line and releasably secured to said front panel, an outer partial cut line coinciding with the fold line in each corner formed by said top panel and each of said end flaps, an inner partial cut line on the lower face of said top panel spaced inwardly from each of said upper partial cut lines and parallel thereto and terminating at the fold line of said front tab, the front edge of the top panel between said partial cut lines being unattached to the front panel whereby the top panel will tear along a portion joining said partial cut lines when the front tab is pulled to open the carton thereby leaving an inwardly directed flange which will cooperate with the top panel in reclosing of the container to form a relatively air-tight seal therewith.

3,050,230
SHIPPING AND DISPLAY CARTON

Harry E. Cohane and Herbert J. Howard, Toledo, Ohio, assignors to Penetray Corporation, Toledo, Ohio, a corporation of Ohio

Filed July 10, 1961, Ser. No. 123,050
4 Claims. (Cl. 229—39)

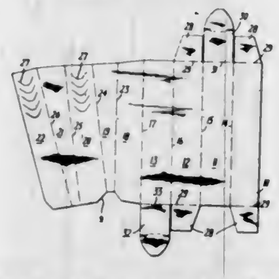


1. A shipping and display carton for articles of merchandise, said carton comprising, in combination, a tubular jacket having horizontally extending spaced ridges around the interior thereof in at least two zones, a tray having exterior lateral dimensions and plan configuration generally mated to the interior lateral dimensions and plan configuration of said jacket, said tray having a body comprising a flat platform top, at least one lower cross member parallel to said top and spaced side walls connecting said top and cross member, at least one lip on said body protruding horizontally outwardly beyond said side walls for engagement with said ridges in said zones for retaining said tray in at least two different positions within said jacket, the first of said positions being with said top of said tray near one end of said jacket and the other of said positions being with the bottom of said tray near the other end of said jacket, and means for removably retaining an article of merchandise on said tray with a major portion thereof above said top, said jacket having a height at least about equal to the total height of said tray and said article of merchandise mounted thereon.

3,050,231
PROTECTIVE CARTON

Hubert V. Bolding, Clarksville, Ind., assignor to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia

Filed Aug. 18, 1959, Ser. No. 834,590
8 Claims. (Cl. 229—39)

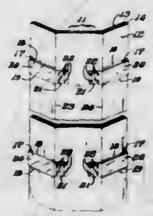


1. A collapsible and erectable protective carton made from a single blank comprising a plurality of panels connected seriatim by parallel score lines forming the outer walls of the carton, and a plurality of panels connected seriatim by score lines forming the walls of an interior article-receiving cell, at least one of the panels of the interior cell being angularly disposed with respect to the outer walls of the carton to form an interior cell which is wider at one end than at the other, the wider end of the interior cell occupying the greater portion of the area of the loading end of the carton.

3,050,232
DOOR FRAME PROTECTOR

Lionel M. Sutherland, 74 River Drive, Tequesta, Fla.

Filed June 11, 1959, Ser. No. 819,583
2 Claims. (Cl. 229—40)

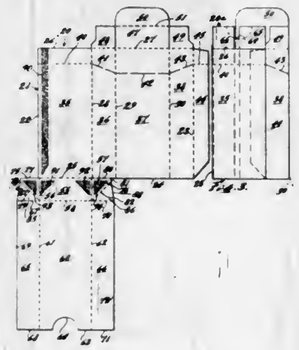


1. A protective article for installed construction materials comprising in combination an elongated flexible sheet of cellulosic material consisting of an outer layer, a corrugated core, and an inner layer; the sheet having formed transversely of each of its longitudinal edges a three-sided integral flap, the outer free edge of the flap being aligned with the respective longitudinal edge of the sheet; a readily deformable fastening member affixed to the outer layer of the sheet, the fastening member having a width not greater than that of the flap and a length such that it overlies a major portion of the flap in alignment therewith.

3,050,233
FOLDING BOX WITH ALIGNED LID

Frank H. Burgess, Landis Mill Road, R.D. 1, Telford, Pa.

Filed Jan. 11, 1961, Ser. No. 81,973
6 Claims. (Cl. 229—44)



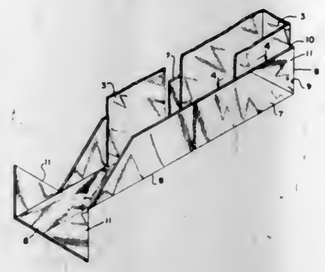
1. A folding-box construction comprising front, back and side walls hingedly connected together; a top wall extending over the space between said front, back and side walls; said front and side walls being formed with a continuous severance line spaced below said top wall having its ends terminating at opposite sides of said back wall; said back wall being provided with a hinge line extending between the ends of said severance line; said top wall and front-, back- and side-wall regions above said severance and hinge lines forming a hinged lid; a bottom wall hingedly connected to the lower region of said back wall and extending forward to the lower region of said front wall; an inner front wall extending upward from the forward region of said bottom wall along the inner surface of said front wall and terminating upward beyond said severance line; inner side walls extending rearward from opposite sides of said inner front wall along said side walls and having their upper edges spaced above said severance line, said hinged lid being swingable between a closed position encompassing the upper regions of said inner front and side walls and an open position rearward of said inner front and side walls; and webbing means connecting said inner side walls to said bottom wall for swinging said inner side walls between a collapsed condition facing said inner front wall when said bottom wall is coplanar with said inner front wall and a set-up condition normal to said inner front wall when said bottom wall is normal to said inner front wall.

3,050,234
WINDOW GLASS PACKAGE

Buster O. Salmon, Henryetta, Okla., assignor to Hoerner Boxes, Inc., Keokuk, Iowa, a corporation of Delaware

Filed Mar. 6, 1961, Ser. No. 93,569
8 Claims. (Cl. 229—51)

6. A container for packaged articles such as rectangular sheets of glass and the like comprising an elongated sheet of corrugated board folded along its corrugations around one or more articles forming an open ended sheath, similar trough shaped ends adhesively secured to the outside of the ends of the sheath, each said end comprising sections of corrugated board folded around the ends of the articles and sheath, forming sheath side overlaps and folded around the edges of the sheath at the corners a distance substantially equal to the side overlap

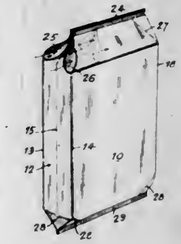


of the sheath side overlaps, forming an end wrap, each sheath side overlap at its corner being cut away along an angular line extending inwardly from the end wrap corner at its corner fold, the end wraps having wings extending in line with and joining the side overlaps and being adhesively secured to the folded sheath.

3,050,235
DOUBLE VALVE BAG

Richard Johann Tomson, Ville St. Laurent, Quebec, Canada, assignor to Du Pont of Canada Limited, Montreal, Quebec, Canada, a corporation of Canada

Filed Oct. 6, 1960, Ser. No. 60,904
Claims priority, application Canada Sept. 1, 1960
4 Claims. (Cl. 229—62.5)



1. A bag formed from a flattened tube of heat-sealable thermoplastic material, having a single gusset at each side, said tube being heat sealed at each end, having an integral extension in one corner, said extension comprising the section of the tube forming one gusset and the adjacent walls of the bag, each half of said extension comprising one side of said gusset and the adjacent wall of the bag being independently folded inwardly in such a manner that the line formed by the side of the gusset and the adjacent wall of the bag will be rotated through an angle of substantially 90°, forming two adjacent valve filling inlets.

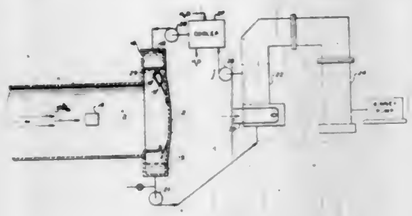
3,050,236
RENEWABLE LIQUID GETTERING PUMP

Thomas H. Batzer, Livermore, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 26, 1960, Ser. No. 24,860
4 Claims. (Cl. 230—69)

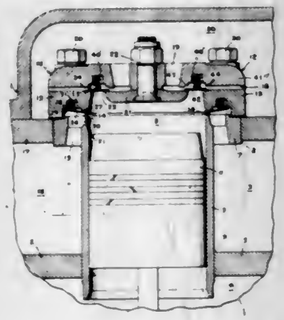
1. In an apparatus for creating a pumping action in a vacuum chamber, the combination comprising a vacuum chamber and a quantity of liquid gettering metal disposed therein for exposure of the liquid surface thereof

to the interior of said chamber, and liquid transmission means for maintaining relatively clean liquid gettering



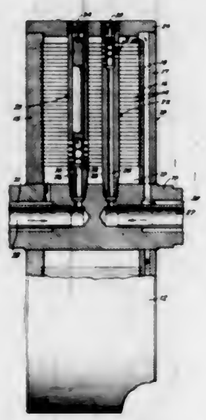
metal at said surface, whereby gases in said chamber are continuously absorbed into said liquid metal.

3,050,237
COMPRESSOR VALVE SERVICE
Andrew J. Nicholas, Suffield, Conn., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed June 10, 1959, Ser. No. 819,358
2 Claims. (Cl. 230—231)



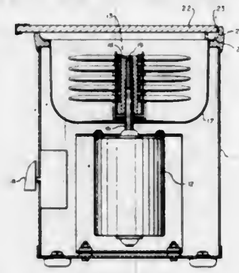
1. A valve service for a compressor including a casing having a cylinder formed therein, a closure means mounted on said cylinder, a suction inlet and a discharge outlet in said casing, a piston movably mounted in said cylinder for moving fluid into and out of said cylinder and through said suction inlet and discharge outlet, said valve service comprising plural cavities in said closure means and formed respectively in spaced relation with said suction inlet and discharge outlet, valve discs movably mounted in each of said cavities and respectively associated with said suction inlet and discharge outlet to regulate the flow of fluid to and from said cylinder, and means for reducing valve clatter formed in at least one of said cavities and said last mentioned means comprising a first annular shoulder formed on the inner portion of said cavity and a predetermined distance from the valve disc in said cavity, a second annular shoulder formed on the outer portion of said cavity and at a greater distance from the valve disc than the first shoulder whereby the inner portion of said valve disc having said last mentioned means on opening strikes said first annular shoulder prior to engaging said second annular shoulder and said first and second annular shoulders coacting to cock said valve to provide a venturi effect to fluid passing therethrough.

3,050,238
LIQUID FEED ARRANGEMENT FOR CENTRIFUGAL DEVICES
Collin M. Doyle, Chicago, and Martin J. Costello, Burnham, Ill., assignors, by direct and mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,584
4 Claims. (Cl. 233—15)



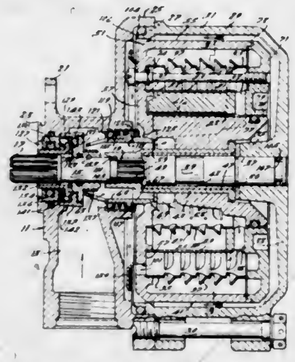
1. In a centrifugal device for contacting liquid phases of different densities wherein there is included a rotor having a central shaft and a hollow casing having an outer cylindrical wall mounted on said shaft to provide a radially-extending rotor chamber therein, said device also including a plurality of radially-spaced partition walls within said rotor chamber and surrounding said shaft, said partition walls having openings for the passage of said phases therethrough, said device further including means for removing the heavier phase from the outermost portion of said rotor chamber and means for removing the lighter phase from the innermost portion of said rotor chamber, an improved liquid feed arrangement comprising a plurality of tubes extending between said rotor shaft and said outer wall of said rotor casing, said tubes passing through said partition walls and internally providing liquid flow passages extending outwardly through radially-spaced distances from said shaft, said shaft providing separate passages for supplying respectively the light and heavy phases, some of said tubes being light phase inlet tubes and having the passages therein communicating with the said light phase supplying shaft passage, others of said tubes being heavy phase inlet tubes and having the passages therein communicating with the said heavy phase supplying shaft passage, said tubes providing inlet ports positioned outwardly of said shaft and providing communication between the passages therein and the spaces between certain of said partition walls, the inlet ports in said light phase inlet tubes being spaced outwardly further than the inlet ports in said heavy phase inlet tubes but spaced inwardly from the said outermost portion of said rotor chamber, the inlet ports in said heavy phase inlet tubes being spaced inwardly of said light phase inlet ports but outwardly of said innermost portion of said rotor chamber, and means for varying the radial spacing between said light phase inlet ports and said heavy phase inlet ports, said last-mentioned means being accessible from outside said casing.

3,050,239
CENTRIFUGE APPARATUS
Fred G. Williams, Jr., Redwood City, Calif., assignor to Beckman Instruments, Inc., a corporation of California
Filed Nov. 20, 1959, Ser. No. 854,281
4 Claims. (Cl. 233—24)



3. A centrifuge assembly comprising a housing, a centrifuge bowl carried by said housing, a drive motor disposed in said housing and having a drive shaft extending into said bowl, a rotor member adapted to rotate about its axis having at least one elongated rectilinear undercut slot in its outer peripheral surface and with its longitudinal axis substantially parallel to the rotor member disposed in said bowl and carried by said drive shaft, said slot having an axially facing open upper end, at least one elongated tube having an open end and a closed end, said tube including a laterally extending rim at its open end, a tube support having at least one aperture therethrough to receive said tube and support the same solely from the rim, said tube support being insertable within said undercut slot through the upper ends to support the tube to extend radially outwardly from the motor.

3,050,240
CENTRIFUGAL CONTAMINANT EXTRACTOR
Rex C. Darnell, Dexter, Mich., assignor to Dynamic Filters, Inc., Detroit, Mich., a corporation of Michigan
Filed Mar. 28, 1958, Ser. No. 724,717
1 Claim. (Cl. 233—31)



A device for extracting contaminants from liquid including a stationary housing, a drive shaft rotatably supported in said housing, a centrifuge assembly rotatably connected to and adapted to be driven by said drive shaft, said centrifuge assembly including a central hub, a body member integrally joined to said hub and provided with a annular channel around said hub, contaminant storage means disposed radially outwardly of said hub operable to retain contaminants centrifuged from liquid flowing through said channel, said body member having an opening of circular cross section coaxial with the axis of rotation of said centrifuge assembly and communicating with said channel, said housing having a passage therein, and seal means connecting the passage of said housing with the opening of said centrifuge body, said seal means including a first annular seal member frictionally engageable in the opening of said body member and adapted to be driven by said centrifuge assembly, said first seal member having a flat face, a second seal member secured to said housing having a flat face sealingly engaging the flat face of said first seal member, means limiting movement of said first seal away from said housing, means urging said second seal against said first seal member in a direction away from said housing whereby the sealing engagement of said seal members will be maintained upon disassembly of said centrifuge assembly from said housing.

3,050,241
TYPEWRITER TAPE PUNCH WITH AUTOMATIC LETTERS-FIGURES SHIFT
John E. Hickerson, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 22, 1960, Ser. No. 38,016
12 Claims. (Cl. 234—23)

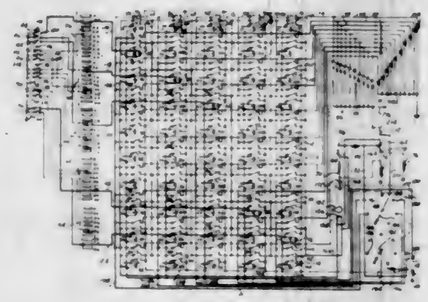


10. A mechanism connected to a typewriter and operating automatically to punch in a tape either one or another of two character shift codes comprising, in combination, a set of punch elements, a pair of elongated slides movable longitudinally from a home position to an operating position in which they effect actuation of said punch elements in different combinations representing "letter" and "figure" shift codes, means continuously urging said slides toward their operating positions, means normally holding said slides in their home positions, sensing devices located at points along said slides corresponding to various characters to be typed, openings in the one of said slides effecting punching of the "figure" shift code at alphabetic character positions, openings in the one of said slides effecting punching of the "letter" shift code at numeric character positions, means operating simultaneously with the typing of a character for moving the sensing device at the corresponding character position through one of said openings to hold the slide in which the opening is formed, means for releasing said holding means to permit movement of either one of said slides not held, and means operating on the movement of either slide for latching it against further movement.

3,050,242
CONSOLE CONTROL FOR CODING PUNCHED CARDS
George R. Mounce and Glenn Harris Kivell, Willowdale, Ontario, Canada, assignors to Electronic Associates Limited, Willowdale, Ontario, Canada, a private company of Ontario, Canada
Filed Sept. 25, 1958, Ser. No. 763,376
12 Claims. (Cl. 234—32)

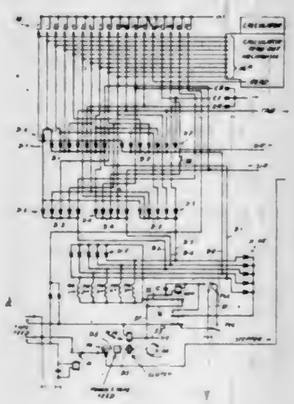
1. A console control for coding a record with a digital code number including in combination a plurality of windings adapted to be energized to code the record with a respective analogue of a digit of the number system, a plurality of banks of control devices, said banks corre-

sponding to the respective digits of a code number, each bank including a number of devices corresponding to the respective analogues of digits in the number system, the respective devices of each bank being adapted to be conditioned from a normally inoperative state to an operative state to ready one of said windings for ener-



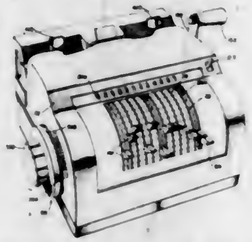
gization, a coding switch, means responsive to the actuation of said coding switch for simultaneously conditioning a control device of each bank to operative state and means for energizing the readied windings through respective operative control devices of said banks in sequence.

3,050,243
DATA-TRANSMITTING AND PUNCHING MECHANISM
Rudolf Bothe, Manchester, N.H., assignor to Bothe Computronics, Inc., Manchester, N.H., a corporation of New Hampshire
Filed July 22, 1959, Ser. No. 828,758
3 Claims. (Cl. 234—103)



1. In combination with a multiple-channel code punching apparatus of the type in which the punching in the several channels is controlled by respective magnets, a matrix including diodes, the matrix having input channels for receiving data-representative pulses and having output channels less in number than the input channels, said output channels being connected to said magnets to deliver pulses in code to said magnets, and means for protecting the diodes of the matrix, said means including further diodes connected across the magnets in a blocking direction with respect to said pulses.

3,050,244
MACHINES FOR PUNCHING TABULATING CARDS
Albert Hohmann, Brooklyn, N.Y., assignor to Taller & Cooper, Inc., Brooklyn, N.Y., a corporation of New York
Filed July 16, 1959, Ser. No. 827,569
12 Claims. (Cl. 234—112)



1. In combination, a support, a punch die assembly, means to mount said assembly for movement forwardly and rearwardly of the support, means on the assembly to support a tabulating card on its lower edge, means on the assembly for punching holes in each of a plurality of columns of the card, less than the total number of columns on the card, a carriage mounted for transverse movement on the support, and having means to engage a card on the assembly, to move the card lengthwise thereof, with the carriage, a segmental index on the support marked with indicia corresponding to the columns of punches on the assembly, a hand wheel rotatably mounted on the support coaxially of the index, and having an annular portion adjacent said segmental index, carrying indicia complementary to the indicia on the index and corresponding to the columns on the card, and means controlled by rotating the wheel for moving said carriage through distances corresponding to angle of movement of the wheel to indicate which columns of the card are in position to be punched.

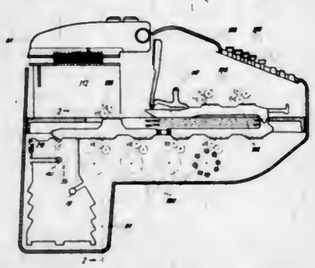
3,050,245
TOTALIZER ENGAGING CONTROLS
Georg Happ, Augsburg-Goggingen, Germany, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Apr. 15, 1958, Ser. No. 728,718
2 Claims. (Cl. 235—7)

1. A cash register or similar accounting machine adapted for the entry of single items and a series of items comprising a multiple item entry, including a plurality of banks of amount keys; control keys; an item totalizer including accumulating wheels; a group totalizer; two sets of actuators, including a first set cooperating with said item totalizer and a second set cooperating with said group totalizer; a coupling mechanism for coupling the two sets of actuators together for simultaneous operation; a coupling control mechanism controlled by said control keys; a differential mechanism comprising a first and a second setting member, each being settable under control of the amount keys; said first setting member being directly connected to the first set of actuators; a holding mechanism for said second setting member, being operated under control of certain ones of the control keys; zero stops for said banks of amount keys; and a zero stop release mechanism being operated under control of said certain ones of the control keys; the depression of one of said certain ones of the control keys being effective to release said zero stops and permit said first setting member to rotate said accumulating wheels of the item totalizer to zero position, during which the holding mechanism is rendered effective to restrain said second setting member against movement until the accumulating wheels have been so set to zero; said holding mechanism including a feeler arm permitted to cooperate with a peripheral surface of each accumulating wheel when said one of the control keys is depressed, said wheel surface having a notch therein in zero position, said feeler arm sensing said wheel surface upon rotation thereof, and said feeler arm cooperating with the second set-



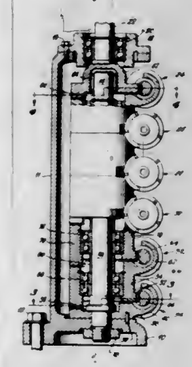
ting member so as to hold said member while the peripheral surface is sensed, then moving out of cooperative relationship therewith and releasing said member for complementary setting movement when the feeler arm cooperates with said notch.

3,050,246
READ-OUT APPARATUS FOR AN ACCOUNTING MACHINE
Wolfgang Görner and Renate Klüge, Karl-Marx-Stadt, Germany, assignors to VEB Buchungsmaschinenwerk Karl-Marx-Stadt, Karl-Marx-Stadt, Germany
Filed Apr. 18, 1958, Ser. No. 729,389
Claims priority, application Germany June 6, 1957
12 Claims. (Cl. 235—61)



1. An apparatus for transmitting quantities between a motor-driven accounting machine and an electronic storage means, said apparatus comprising a frame, a geared calculating rack slidable in said frame and having a plurality of contact teeth arranged thereon in longitudinally spaced relationship, an insulating ball cage movably arranged in said frame for selective positioning in the path of sliding movement of said rack, a contact ball held by said cage and projecting therefrom, a spring in said ball cage, said ball being urged by the restraint of said contact spring toward said teeth for sequential contact therewith when said rack slides past said ball cage, electrical means for producing a pulse upon contact of said teeth on said rack with said ball, a geared segment assigned to an individual digital position of said accounting machine and adapted to rotate through an angle in accordance with a particular value, an electromechanical pulse generator for producing pulses including a rotating toothed cam plate and a pair of electrical contacts responsive to said rotating cam plate, a delay coupling drive for delayed movement of said segment relative to the movement of said cam plate, a gear wheel hingedly supported in said frame and swingable for alternate meshing with said segment and with said rack to transmit values from said geared segment to said storage racks, a cam operatively linked to said rack for coordinate movement therewith, and a cam follower attached to said cage for rolling contact with said cam for selectively contacting said contact ball with said contact teeth.

3,050,247
SHAFT POSITIONER
Thor H. Ljunggren, Perkinsville, Vt., assignor, by mesne assignments, to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 31, 1958, Ser. No. 784,302
4 Claims. (Cl. 235—61)



1. A binary-to-analogue converter for angularly positioning an output shaft in relation to a stationary reference member, said converter comprising:

a stationary base plate;

a stationary housing having one end fastened to said base plate and another end with a bearing housing fastened thereto;

a cylindrical support member having one end rigidly fastened to said base plate and another end extending proximately to said bearing housing;

an output shaft substantially aligned with said support member and journaled in said bearing housing;

a flange element integral with the journaled end of said output shaft, said flange element being within said stationary housing and being journaled upon the end of said support member;

a plurality of annular members journaled on said support member and capable of limited angular rotation therearound, the amounts of angular rotations of the annular members being related according to a binary series;

means limiting the amount of angular rotation of any annular member and of the flange element relatively to the preceding annular member and limiting the amount of angular rotation of the first of said members relatively to the stationary base plate, said means comprising a lug operable within an angular zone defined by abutments on the preceding member;

simultaneously operable individual driving means for said annular members comprising:

a cylinder element fastened to the next preceding annular member, the cylinder element relative to the first of said annular members being fastened to the base plate;

a piston member in said cylinder member reciprocable by fluid pressure differentials upon the ends of said piston member;

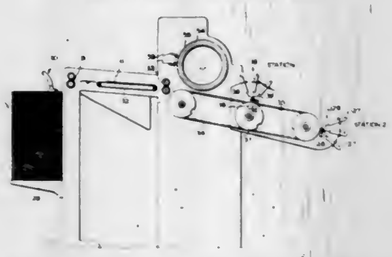
a toothed rack on a portion of said piston member member intermediate the ends thereof;

and a toothed sector meshing with said rack for tangential driving thereby and adapted to rotate the next following annular member, the last such toothed sector being integral with the flange element of said output shaft;

means transmitting the motion of any of said annular members to the next annular member between it and the flange element of the output shaft;

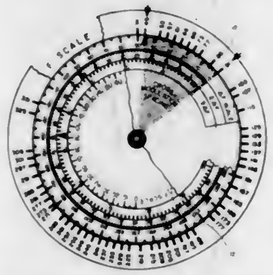
and means transmitting the motion of the last annular member directly to the flange element of the output shaft to cause said output shaft to be angularly positioned of an amount which is the algebraic sum of the angular motions of the driven annular members.

3,050,248
METHODS AND APPARATUS FOR PROCESSING DATA
Everet F. Lindquist, Iowa City, Iowa, assignor to Measurement Research Center, Inc., Iowa City, Iowa, a corporation, not for profit, of Iowa
Filed Sept. 21, 1955, Ser. No. 535,587
29 Claims. (Cl. 235—61.7)



1. An apparatus useful for comparing the positions occupied by bits of raw data, such as marks, in a raw data containing means with the positions occupied by corresponding bits of key data, such as marks, in a key data containing means, said apparatus comprising phototube means, means to automatically feed said key data containing means and said raw data containing means in succession past and in proximity to said phototube means to enable said phototube means to sense bits of data contained in said key data containing means and said raw data containing means, a rotatable drum having a magnetizable surface, said drum being rotatable in synchronism with movement of said data containing means, magnetic induction means positioned adjacent to the magnetizable surface of said drum, said magnetic induction means being operable to magnetize a discrete area on said magnetizable surface in any one of a predetermined number of positions in said surface at the same instant of time means connecting said phototube means and said magnetic induction means to magnetize a discrete area on said magnetizable surface when said phototube means senses a bit of key data contained by said key data containing means whereby said bit of key data may be recorded in said drum surface, each bit of key data being recorded in said drum surface in a position correlated to the position occupied by said bit of key data in said key data containing means, means connectible between said phototube means and said magnetic induction means to simultaneously read said recorded bits of key data as said phototube means senses corresponding bits of raw data contained in said raw data containing means, said connectible means emitting a signal each time that a bit of raw data sensed by said phototube means corresponds in position to the position occupied by the corresponding bit of key data read by said magnetic induction means.

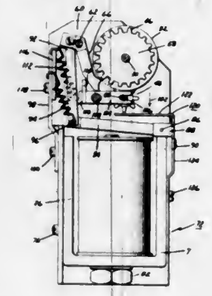
3,050,249
RADIO INTERFERENCE CALCULATOR
Joseph Awramik, Jr., Oxon Hill, Md. (4239 Oak Lane SE., Washington 22, D.C.), and Wayne M. Jewett, Oxon Hill, Md. (5012 Lindsay Road, Washington 21, D.C.)
Filed Nov. 24, 1958, Ser. No. 776,151
5 Claims. (Cl. 235—78)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A calculator for computing frequency spacings between stations or channels of a radio network comprising a base circularly graduated clockwise to represent frequency with a linear first scale, said scale having indicia equal in width to the bandwidth of said stations, a disc concentrically located with respect to said first scale and rotatably mounted on said base, the diameter of said disc being smaller than the diameter of said first scale, said disc being concentrically, circularly graduated counterclockwise with a second scale, a third scale and a fourth scale, the diameter of said third scale being smaller than the diameter of said second scale and larger than the diameter of said fourth scale, the ratio of the indicia on said first scale to the indicia on said second scale being one to one, and the relationship of said second scale to said third scale and said fourth scale being such that for the same angular distance on said second scale the frequency variation on said third scale is one-half and the frequency variation on said fourth scale is one-third that on said second scale, said second, third and fourth scales having their origin at the same radial line, whereby three harmonically related frequency spacings from a station on said first scale may be obtained from one setting of said disc.

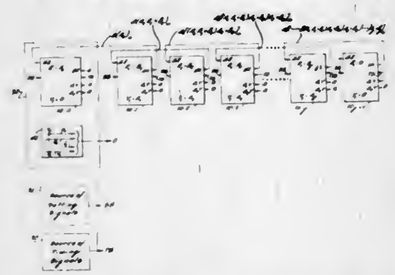
3,050,250
REVOLUTION COUNTER
Jabez H. Mann, Fort Wayne, Ind., assignor to Bowmar Instrument Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Jan. 31, 1961, Ser. No. 86,189
8 Claims. (Cl. 235—144)

7. In a revolution counter, a transfer mechanism and number wheel resetting assembly comprising: a segmental gear; a full tooth gear; a transfer pinion for operatively connecting said gears, said pinion being movable in a direction to come out of mesh with said gears; first and second cam means respectively operatively connected to said segmental and full tooth gears and each having high and dwell portions; operating means respectively engageable with said cam means for moving the same to predetermined positions; said full tooth gear having a plurality of adjacent teeth which have a radial height less than that of the remaining teeth, said pinion meshing with said plurality of teeth when said high portion of said



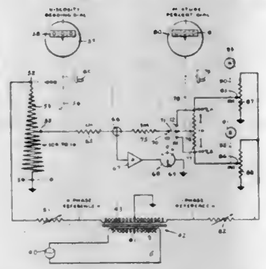
second cam is positioned to be engaged by the respective operating means and meshing with said remaining teeth when said dwell portion of said second cam is positioned to be engaged by the respective operating means; and abutment means for engaging said pinion when the same is moved and for limiting the movement thereof, said abutment means being positioned so that said pinion moves a distance sufficient to come out of mesh with said plurality of teeth but not sufficient to come out of mesh with said remainder of the teeth of said full tooth gear when said pinion is moved so that one tooth thereof engages said abutment means substantially at right angles thereto.

3,050,251
INCREMENTAL COMPUTING APPARATUS
Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., La Jolla, Calif.
Filed Sept. 16, 1957, Ser. No. 684,263
38 Claims. (Cl. 235—164)



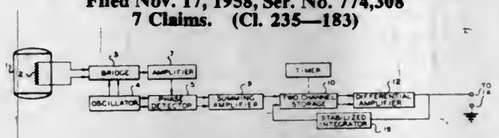
1. Incremental multiplying apparatus comprising: first means operable during time successive operation intervals i, where i has the successive values 1, 2, 3 . . . n, for serially producing a 1st sequence of signals representing corresponding decreasingly scaled increments ΔA_i whose summation is equal to a number A; second means operable during the successive operation intervals i for serially producing a 2nd sequence of signals representing corresponding successive decreasingly scaled increments ΔB_i whose summation is equal to a number B; 3rd means receiving said 1st and 2nd sequences of signals and responsive thereto for serially producing a third sequence of signals representing in successive operation intervals i corresponding successive decreasingly scaled increments $\Delta(AB)_i$ whose summation is substantially equal to the product AB.

3,050,252
ELECTRIC ANALOG INTERPOLATION APPARATUS
Ralph W. Burhans, Chagrin Falls, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 1, 1958, Ser. No. 764,651
9 Claims. (Cl. 235—179)



9. A computer for interpolating between two known value points of a non-linear function, said computer comprising, a voltage source having a pair of output terminals providing positive and negative voltages which are balanced in respect to a voltage mid-point, a non-linear potentiometer having a contact adjustable in position over the electrical length thereof and connected between one of said terminals and said mid-point to provide over said length a variation in voltage, relative to said mid-point, which simulates said function, means to adjust said contact to two seletced positions at which the voltages therefrom, relative to said mid-point, are respectively representative of said two known points, a pair of voltage supply potentiometers having taps thereon and each connected between the other of said terminals and said mid-point, linear potentiometer means connected to the taps of both said voltage supply potentiometers and having tap means which is slidable over said linear potentiometer to provide as an output a variable percentage of the difference in voltage value between the voltages on said taps with respect to said mid-point, first and second impedance means connected in series between said contact and said tap means, and electrical means connected between the junction of said impedance means and said mid-point to indicate the voltage of said junction with respect to said mid-point.

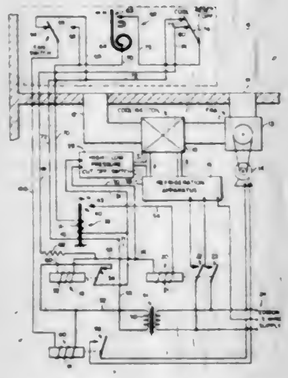
3,050,253
DETECTOR FOR SENSING SMALL RATE OF CHANGE SIGNALS
Dale A. Fluegel, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,308
7 Claims. (Cl. 235—183)



1. Apparatus for producing a signal representative of the rate of change of a measured condition, wherein the measured condition is represented by a continuous signal, comprising first signal storage means; means to apply said continuous signal to said first storage means; second signal storage means; signal subtracting means having first and second inputs; means connected to said first

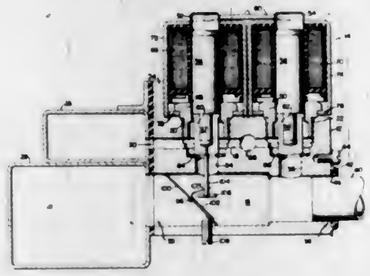
storage means to apply a first series of discrete signals representative of successive instantaneous values of said continuous signal to the first input of said subtracting means; means connected to said second storage means to apply a second series of discrete signals representative of successive instantaneous values of the input signal applied to said second storage means to the second input of said subtracting means; signal integrating means; means connecting the output of said subtracting means to the input of said integrating means; and means connecting the output of said integrating means to the input of said second storage means to establish said input signal, the output of said subtracting means being representative of said rate of change.

3,050,254
TIME DELAY AND ABNORMAL OPERATING CONDITION RESET CIRCUIT
James C. Blackett, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 24, 1960, Ser. No. 38,493
5 Claims. (Cl. 236—1)



1. In a control circuit for controlling the energization of air conditioning apparatus having a fan, first relay means having an energization winding and a normally closed switch controlled by said winding, second relay means having an energization winding and being adapted to control the air conditioning apparatus, time delay means having a first electrical circuit means which closes after a predetermined period of energization of an energization circuit of said time delay means, a source of power, electrical circuit means connecting said first and second mentioned energization windings and said first circuit in series to said source of power, condition responsive switch means providing an open circuit upon the presence of an abnormal condition, electrical means connecting said normally closed switch and said condition responsive switch means in series to shunt said energization winding of said first relay means so that upon the presence of an abnormal condition said shunt circuit is broken to place said energization winding of said first relay means in series with said energization winding of said second relay means thereby reducing the current to a predetermined low value to cause said second relay means to deenergize said conditioning apparatus, space temperature responsive switch means, electrical circuit means connecting said temperature responsive switch means, said energization circuit of said time delay means, and said normally closed switch of said first relay means in a series circuit to said source of power to maintain said first circuit of said time delay means closed, circuit means comprising a remote switch for completing a circuit connecting said source of power and said energization winding of said first relay means to maintain energization of said first relay means after said first electrical circuit means is opened, third relay means adapted to control the fan, and circuit means comprising said temperature responsive switch means for connecting said third relay means to said source of power.

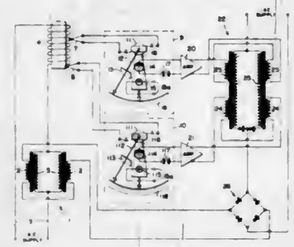
3,050,255
DOUBLE SOLENOID VALVE
James R. Willson and Charles D. Branson, Greensburg, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,522
3 Claims. (Cl. 236—1)



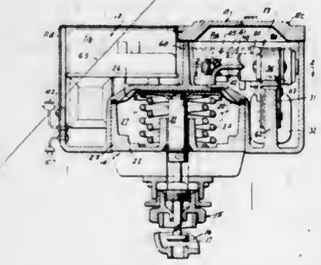
1. A control valve assembly for controlling the flow of fuel gas and primary air to a burner comprising a valve housing having a first passage extending therethrough from an air inlet to a valve outlet, means for supplying air to said air inlet, means defining a second passage in said housing extending inwardly of said housing from a gas inlet to an inner end located within said housing, means for supplying fuel gas to said gas inlet, means in said housing defining a first cross passage extending from a point in said first passage adjacent said air inlet to a point in said second passage adjacent said gas inlet, means defining a second cross passage in said housing extending from a point in said first passage adjacent said valve outlet to a point in said second passage adjacent said inner end, a normally energized solenoid controlled valve operable in each cross passage to permit gas to flow from said second passage to said first passage when its solenoid is energized and to block flow of gas through the cross passage when its solenoid is deenergized, an air control valve located in said first passage between said air inlet and said first cross passage for movement between a maximum air flow position and a minimum air flow position, and means coupling said air control valve to the solenoid valve operable in said first cross passage to locate said air control valve in said maximum air flow position when the first cross passage solenoid valve is energized and to locate said air control valve in said minimum air flow position when the first cross passage solenoid valve is deenergized.

3,050,256
AUTOMATIC ELECTRICAL CONTROL APPARATUS WITH OVERSHOOT CONTROL
William E. Fuller, North Wales, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 28, 1959, Ser. No. 830,126
10 Claims. (Cl. 236—15)

1. An electrical control apparatus comprising, in combination, a first sensing means for sensing the condition of a first variable to be controlled to a predetermined value and operating to produce an output signal directly proportional to said first variable, a second sensing means for sensing the condition of a second variable to be controlled to a predetermined value and operating to produce an output signal directly proportional to said second variable, said first variable being representative of a first environmental condition and said second variable being representative of a second environmental condition with said first condition being dependent on said second condition and co-existing therewith, a first controller means responsive to said first sensing means to produce a first output signal, a second controller means responsive to said second sensing means in a manner similar to said first controller means to produce a second output signal, signal reversing means for reversing said second output signal with respect to said first output signal to convert said second output signal into an output signal from said reversing means which varies inversely with respect to said first output signal in response to similar variations in signals from said sensing means whereby the variations of said first output signal may be compensated by subtracting said output signal from said reversing means from said first output signal, amplifier means responsive to the difference of said first output signal and an output signal from said reversing means, to produce a control signal proportional thereto, and environmental condition control means responsive to said control signal for controlling said first environmental condition whereby to affect the condition of said first and second variables.

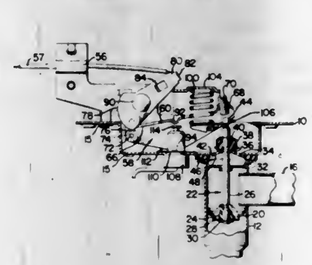


3,050,257
MEANS FOR OPERATING A VALVE OR THE LIKE IN ACCORDANCE WITH A CONTROLLED CONDITION
Russell P. Sweger and Alfred A. Horton, Rockford, and William G. Young, Loves Park, Ill., assignors to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Mar. 13, 1959, Ser. No. 799,274
5 Claims. (Cl. 236—74)



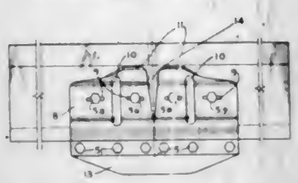
5. In a temperature control system for a controlled space and having a member for controlling the flow of heat relative to the space, the combination comprising an A.-C. source, a bridge circuit including a temperature sensitive element and energized by said A.-C. source for production of a signal which varies in phase and amplitude in accordance with the direction and magnitude of the departure of the temperature from a desired control point, an amplifier having an input and an output with the input being coupled to said bridge, means for supplying the amplifier output circuit with half waves of A.-C. from said source, a fluid relay having an orifice and an armature for controlling escape of fluid from the orifice, said fluid relay being connected in the amplifier output circuit so that the current flowing in said relay varies in accordance with the temperature, a fluid actuator having a return spring, a constantly running motor permanently connected to the A.-C. source, said motor having close-coupled thereto a fluid pump having its output connection connected to the orifice of said fluid relay and to said actuator so that the pressure in said actuator varies in accordance with the current in said relay, said amplifier being so constructed and arranged that a steady state reference current exists in said fluid relay at the control point and in the absence of a signal from said bridge circuit, and means for selectively reversing the phase of the alternating voltage supplied to the bridge circuit thereby to reverse the direction of movement of the flow controlling member when departure of the temperature occurs in a given direction from the control point for winter-summer operation at the same control point independently of making any change in the circuit other than said selective reversal of phase.

3,050,258
THERMAL VALVE
Herbert H. Rauh, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Jan. 14, 1960, Ser. No. 2,430
3 Claims. (Cl. 236—99)



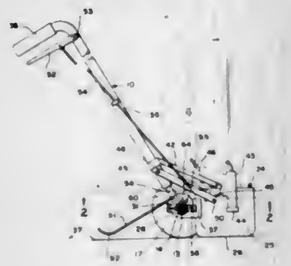
1. In a thermostatically controlled fluid valve comprising a housing, a valve casing mounted on said housing, a valve means within said casing movable between a first and a second position, a U-shaped adjusting beam having a web portion and oppositely disposed substantially triangular downwardly extending leg portions, a first pivot on said web portion intermediate the ends thereof and a second pivot at the extremity of said leg portions and in vertical alignment with said first pivot when said web portion of said adjusting beam is horizontally disposed, said adjusting beam being positioned to operatively engage said valve means for movement between open and closed positions, lever means disposed on said housing and adapted to operatively engage said adjusting beam to rotate said adjusting beam about said first and second pivots in one direction, resilient means engaging said housing and said adjusting beam for rotating said adjusting beam in an opposite direction, and thermally expansive means supported by said housing and having an actuating pin movable in response to an increase in temperature to operatively engage said first pivot and move said valve means between said first and second positions.

3,050,259
RAIL JOINT
Clifford James Nickerson, Vancouver, British Columbia, Canada (% General Delivery, Cawston, British Columbia, Canada)
Filed Feb. 15, 1960, Ser. No. 8,864
1 Claim. (Cl. 238—191)



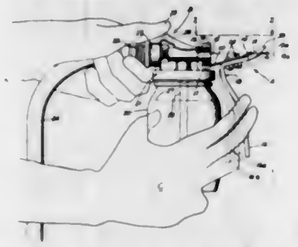
A rail joint comprising a pair of elongated members disposed on opposite sides of a pair of alined rails and extending across the joint between the rails, each member having a vertical portion in contact with the web of the rails bent along its upper edge to engage the underside of the rail head and a base portion formed to engage the upper and lower faces of the base flange of the rail, said vertical portion having a V-shaped slot depending from the upper edge thereof in alinement with the joint of the rails to permit longitudinal expansion and contraction of said vertical portion, bolts extending through longitudinal slots formed in said vertical portion on opposite sides of said V-shaped slot and the webs of the rails, bolts extending through the base portions of said members beneath the rails for securing the base portions in engagement with the base flanges of the rails and reinforcing ribs extending vertically of said vertical portion on opposite sides of said V-shaped slot.

3,050,260
SPRAY GUN CARRIERS
William K. Macrae and Walter Jackson, Vancouver, British Columbia, Canada, assignors to City Parking Ltd., Vancouver, British Columbia, Canada
Filed Dec. 12, 1960, Ser. No. 75,322
5 Claims. (Cl. 239—150)



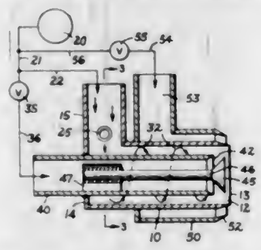
5. A cart adapted to transport a spray gun over a surface to be painted with lines, said cart comprising a frame member, a pair of surface engaging wheels mounted one on each side of the frame member, said frame member having a central part, a stem extending upwardly from the central part, a tubular shaft telescopically mounted on the stem, means for securing the shaft in selected position on the stem, a sleeve rotatably mounted on the frame member on each side of the central part, a forwardly extending paint guide endwise movable on each sleeve, means for clamping the paint guides to the sleeves an equal distance on either side of the central part, means carried by the shaft for supporting the spray gun with its nozzle disposed in the plane of the shaft and between the paint guides, said paint guides having lower edges normally in sliding contact with the surface and means for locking the sleeves against rotation upon the shaft whereby to enable the lower edges of the paint guides to be raised above the surface.

3,050,261
SPRAY PATTERN CONTROL MECHANISM FOR INSECTICIDE SPRAYER
Irvin W. Littlefield, San Jose, Calif., assignor of one-half to Robert Clayton Littlefield, Santa Clara, Calif.
Filed Apr. 24, 1961, Ser. No. 105,077
4 Claims. (Cl. 239—318)



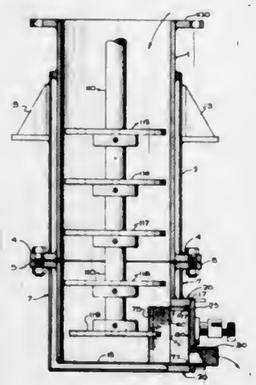
1. A spray pattern control mechanism for mounting on an insecticide dispenser which is adapted to be connected to the discharge end of a garden hose, the dispenser being constructed to discharge a narrow high velocity jet stream of water received from the hose, such jet stream containing entrained insecticide from the dispenser and being directed along a fixed path; said spray control mechanism comprising a leaf spring member secured at one end thereof to the dispenser, a primary target member on the other end of said leaf spring member and positioned normally in the path of such jet stream and at an acute angle thereto, a secondary target member secured to said leaf spring; a terminal target portion of said secondary target member being narrower than said primary target member and extending endwise beyond the primary target member in the direction of such jet stream, and a control handle secured to the leaf spring for actuation by an operator, whereby, with the control handle in one position thereof the primary target member is positioned in the path of the jet stream for the production of a first, wide, fan shaped spray pattern by the impingement of the jet stream thereagainst, and with the control handle moved to a second position thereof the primary target member is withdrawn clear of the path of the jet stream and the narrower, terminal, target portion of the secondary target member is positioned in the jet stream for the production of a second, narrower, spray pattern by the impingement of the jet stream thereagainst.

3,050,262
NOZZLE FOR PRODUCTION OF FOG OR MIST
Russell R. Curtis, Westfield, Ind., assignor to Curtis Automotive Devices, Inc., Westfield, Ind., a corporation of Ohio
Filed Dec. 12, 1960, Ser. No. 75,208
4 Claims. (Cl. 239—400)



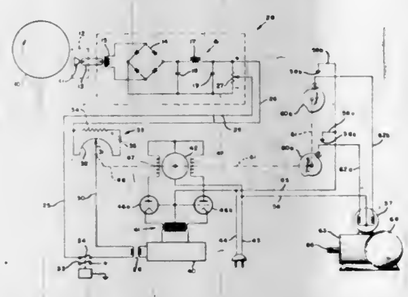
1. A nozzle construction for atomizing a liquid in a gas flow and producing a widely variable pattern of fog or mist, comprising a main nozzle tube terminating in a sharp circular edge surrounding and defining the discharge end thereof, means directing a relatively high velocity flow of gas in a swirling path about the longitudinal axis of said tube and out said discharge end, means constructed to discharge liquid into the gas flow in said main tube for deposit as a film on the interior surface of said main tube, and for atomization thereof by the gas flow across said sharp edge, an inner gas tube mounting concentrically within said main tube and terminating adjacent said discharge end thereof, deflector means cooperating with said inner tube to direct gas flowing therefrom outwardly across the swirling mist flow from said main tube to disperse said mist flow in a generally conical pattern, and means supplying a controllable flow of gas through said inner tube to vary the dispersing effect of gas flow from said inner tube upon the mist flow issuing from said main tube.

3,050,263
CONTINUOUS SMALL-BALL BALL MILL AND METHOD FOR DISPERSING PIGMENTS IN LIQUID VEHICLES
Aaron Barkman and Mike S. Fujimoto, Chicago, and Burnham R. Orwig, Crete, Ill., assignors to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 14, 1959, Ser. No. 786,783
11 Claims. (Cl. 241—30)



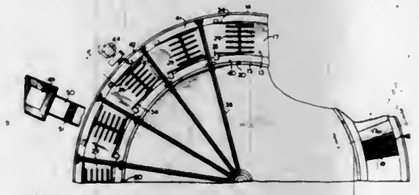
11. A process for the dispersion of a pigmentary solid in a liquid vehicle within an enclosed system which comprises continuously subjecting a downwardly directed main stream of a pre-mixed fluent slurry of the pigment in the liquid to bombardment essentially at right angles to the main stream flow with a mass of nodular grinding media, a maximum of 5% of which passes through an 18 mesh and none of which is retained on a 12 mesh U.S. Standard Sieve, continuously contacting and transferring energy to said nodular media from the rotating faces of a plurality of cylindrically perforated disks moved in a horizontal plane at a peripheral speed of not less than about 2500 feet per minute, and at the lower end of said moving stream, continuously centrifugally forcing removal of the finished liquid dispersion at a controlled flow rate from the grinding media in a plurality of individual streams of rectangular cross section, the width of which streams are less than the diameter of the grinding media and the length of which are a minimum of ten times said width, and at right angles to and outwardly from the downward main stream direction.

3,050,264
SOUND ACTUATED CONTROL SYSTEM FOR BALL MILL AND THE LIKE
Vernie W. Marcyes, 730 Hedegard St., Campbell, Calif., and Thomas L. Granger, 2434 Lansford Ave., San Jose, Calif.
Filed July 17, 1959, Ser. No. 827,847
5 Claims. (Cl. 241—34)



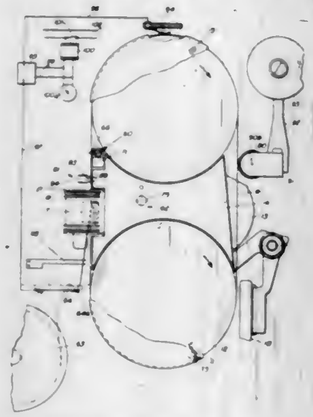
1. Apparatus for continuously modulating the input to a ball mill or the like to maintain the loading of said ball mill at a preselected value which comprises microphone means for detecting the audio output from said mill and for converting said output to an A.C. signal, rectifier means inductively connected to said microphone means for rectifying said A.C. signal, filter means connected to said rectifier means and an adjustable resistor connected across said filter means to provide a D.C. potential proportional in amplitude to the audio ouput of said ball mill and means responsive to said D.C. potential for continuously controlling the input of material to said mill to maintain said D.C. potential at a preselected value.

3,050,265
MACHINERY FOR DRESSING ORE
Frank Edwin Draper, Greigs Flats, via Pambula, New South Wales, Australia, assignor to Draper Multi-Disc Mining Processes Pty. Limited, Sydney, Australia
Filed June 7, 1960, Ser. No. 34,557
Claims priority, application Australia June 29, 1959
7 Claims. (Cl. 241—107)



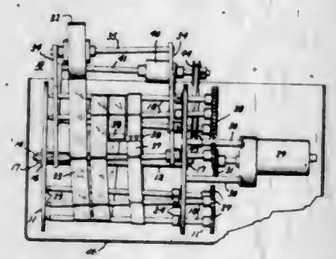
1. An ore dressing mill comprising a continuous channel, the channel floor having a substantially flat smooth surface, a series of circumferentially spaced groups of independently rotatable crushing rollers in the channel, the rollers of each group being radially spaced flat discs, means for moving the groups around the channel, the rollers of each group being staggered radially in relation to those of other groups to ensure that ore in the channel is crushed between the rollers and the wearing strip for the full channel width, means for feeding ore to the channel, means for feeding water to the channel, means for withdrawing water and selected fines from the channel at selected levels and means for withdrawing wet concentrates from the channel.

3,050,266
APPARATUS FOR WINDING WIRE ON FORMS
Louis Bucalo, Holbrook, N.Y., assignor to Specialties, Inc., Syosset, N.Y., a corporation of New York
Filed May 20, 1957, Ser. No. 660,282
9 Claims. (Cl. 242—4)



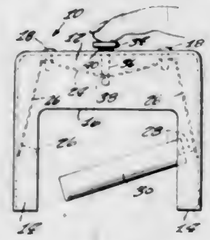
1. Apparatus for winding turns of wire on a form comprising means to support the form to be wound with turns of wire, guide means to support a system of a plurality of loops of wire of substantially larger size than the turns to be put on the form and to hold limbs of the loops in position to pass exposed through the supported form, motive means to drive the loop system in rotary motion, loop-releasing means to release successive loops of wire from the guide means, said loop-releasing means including a movable member complementary to said guide means and having a first portion to position the outermost loop of said loop system to be released from the guide means to be drawn closed on the form, said movable member including a second member movable between the two outermost loops to drive the outermost loops from the guide means and to hold the next outermost loop on the guide means, the motion of the driven loop system taking up the slack of each released loop to pull a turn about the form, and tension means including complementary friction surfaces in the space between the periphery of the loop system and the form, and spaced from the form, thereby to engage the released loop to maintain tension throughout the loop system during the intervals of taking up the slack of the released loop.

3,050,267
DEVICE FOR CONTINUOUS TREATMENT OF STRANDS
William E. Tragert, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 16, 1960, Ser. No. 15,493
6 Claims. (Cl. 242—47.1)



1. A continuous helical strand winding and unwinding apparatus comprising in combination, a pair of support means, a plurality of roller elements supported by said support means to define a generally cylindrical structure, means pivotally connecting said roller elements to said support means to provide for rotation of said elements about their longitudinal axis and skewing action thereof, adjusting means causing arcuate motion of one of said support means relative to the other of said support means to skew roller elements circumferentially out of parallelism with the longitudinal axis of said cylindrical structure, and means for rotating said roller elements in synchronism to helically wind a strand thereon.

3,050,268
ROLL HOLDER
Oscar W. Mortenson, 1420 Fulton Road, Santa Rosa, Calif.
Filed Aug. 1, 1960, Ser. No. 46,810
1 Claim. (Cl. 242—55.53)

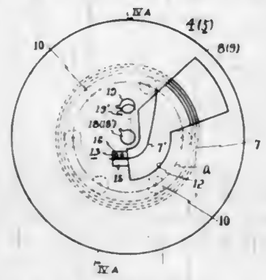


A tissue roll holder comprising, in combination, a housing having means for attachment to a stationary support, a spindle, a bracket within said housing rotatably supporting said spindle, and manually controlled actuating means for effecting the release of said spindle from said bracket, wherein said housing comprises a substantially hollow shell having a top wall and a pair of depending side walls defining a cutout providing access to the interior thereof, wherein said spindle comprises a shaft of uniform cross sectional configuration, said spindle extending substantially across said access opening defined by said housing and rotatably supporting the roll of tissue therewithin, wherein said bracket comprises an inverted U-shaped member of spring-like construction having a pair of spaced apart arms depending from said top of said housing along the opposite sides thereof, and said spindle being rotatably supported upon the outermost free ends of said arms of said bracket, wherein said actuating means comprises a push button having a plunger slidably supported upon said top of said housing into engagement with a central portion of said bracket, and a pair of suspension type anchor bolts securing spaced apart portions of said bracket within the interior of said housing, said plunger acting upon a central portion of said bracket to deform said bracket temporarily to extend the free ends of said side arms thereof outwardly in opposite directions to facilitate the insertion and removal of said spindle therebetween.

3,050,269
REEL APPARATUS
Shigetsune Iikura, Tokyo, Japan, assignor to Sony Kabushikikaisha (Sony Corporation), Tokyo, Japan, a corporation of Japan
Filed Dec. 24, 1958, Ser. No. 782,769
Claims priority, application Japan Jan. 11, 1958
4 Claims. (Cl. 242—71.8)

3. A reel comprising oppositely disposed side plates for restricting the side edges of a film or the like, each of said side plates being provided with a central aperture for receiving a shaft and mounting the reel in a first plane at right angles to said shaft, at least one of said side plates being provided with a window which is formed along the

radial direction of the side plate and which has a width large enough to insert fingers so that the inner end of the film wound on the reel can be pulled out through said window, and each of said plates also being provided with an additional eccentric aperture, each of which is misaligned with respect to the other, said eccentric and central apertures being of the same size to be selectively supportingly received by a shaft so that the shaft may be inserted to support the reel, said eccentric apertures positioned to incline said side plates with respect to said first plane in such a manner that the film can be pulled out and the side plates remain stationary.



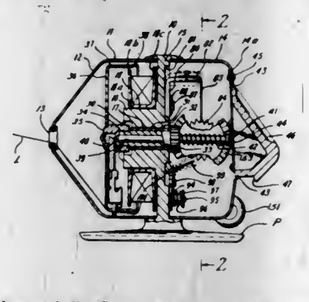
3,050,270
REEL APPARATUS
Shigetsune Iikura, Tokyo, Japan, assignor to Sony Corporation, Tokyo, Japan, a corporation of Japan
Filed Sept. 16, 1959, Ser. No. 840,282
4 Claims. (Cl. 242—71.8)



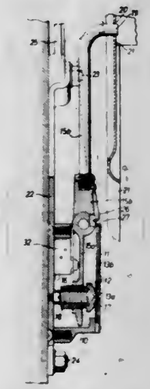
1. A reel comprising a pair of oppositely disposed side plates for restricting the side edges of a carrier, said plates disposed at right angles to a central first reel axis, at least one of said side plates being provided with a window positioned radially of the center of the plate and through which the inner end of the carrier wound on the reel can be pulled out, first means on the plates for supporting the reel on a shaft coaxial with said first axis, second means on the plates for supporting the reel on a shaft on a second reel axis having an angle with respect to said first reel axis, said second means being in a position so that the reel is inclined by a desired depression angle with respect to a vertical plane with said window facing downwardly and so that the reel is rotated about a horizontal axis by a desired torsional angle toward the direction in which the carrier is withdrawn from the reel when said second axis is horizontal.

3,050,271
CLICK MEANS FOR CLOSED-FACE SPINNING REEL
R. Dell Hull, 1131 E. Easton St., Tulsa 1, Okla.
Original application Aug. 27, 1957, Ser. No. 680,501. Divided and this application Jan. 26, 1959, Ser. No. 788,814
6 Claims. (Cl. 242—84.51)

1. In a spinning reel of the type having a frame including a transverse wall, a rotatable shaft extending rearwardly of the wall, a winding shaft extending substantially at right angles to said rotatable shaft and having driving engagement therewith, a sprocket mounted on said winding shaft rearwardly of and substantially at right angles to the wall and rotatable with said winding shaft in accordance with rotations of said rotatable shaft, and click-like means operable with said sprocket, the improvement characterized by said wall having an elongated recess in the rear face thereof, a flat bar received in said recess in substantially flush relation to said rear face, said bar being movable along its axis in said recess, said click-like means being adapted to be operated by said bar and being adapted upon movement of the bar in said recess to be moved into and out of operative contacting relation to said sprocket, and an operating lever pivoted on said wall for movement substantially in the plane thereof and having a first portion overlying said bar in flat relation and a second portion projecting outwardly of the frame and adapted for manual engagement.

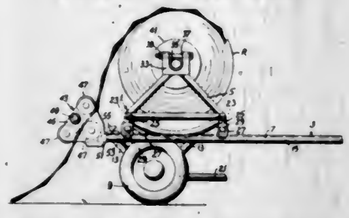


3,050,272
DEVICES RESPONSIVE TO FRACTURE OF A FRANGIBLE MEMBER
Edward Hooper, South Shields, England, assignor of one-half to Aero & Engineering (Merseyside) Limited, Wirral, England
Filed Mar. 8, 1961, Ser. No. 94,215
Claims priority, application Great Britain Apr. 22, 1960
8 Claims. (Cl. 242—86)



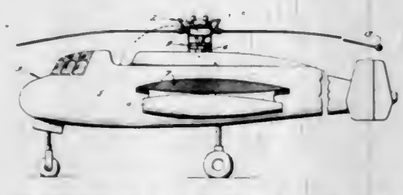
1. In a combination a fire-hose reel having a locking-bolt engaging means, means for supporting said hose reel for rotation, a reel locking bolt, means supporting said locking bolt for movement into and out of engagement with said locking-bolt engaging means of the reel, biasing means urging said locking bolt out of engagement with said locking-bolt engaging means of the reel and a frangible member holding the locking bolt in engagement with said bolt engaging means against the action of said biasing means so long as the frangible member is unbroken.

3,050,273
ROLL CARRIER
William B. Saunders, 2843 Henrietta, St. Louis, Mo.
Filed June 3, 1960, Ser. No. 33,686
3 Claims. (Cl. 242—86.52)



1. A wheeled roll carrier for carrying a roll of reinforcing mesh, said carrier comprising a frame, a pair of wheels mounted on one side of the frame and adjacent one end of the frame, said frame comprising a pair of tubular side members having curved portions constituting handles at the end opposite the said one end of the frame, a pair of roll supports extending from the other side of the frame adjacent the said one end of the frame, said supports having open-ended recesses at their outer ends, an arbor received in said recesses extending transversely of the frame, means for retaining the arbor in the recesses, said means being removable from the open ends of the recesses, a pair of chucks on the arbor for entry in the ends of a roll of reinforcing mesh, and a removable straightening roll assembly mounted at said one end of the frame for straightening reinforcing mesh unrolled from a roll thereof carried by said arbor, said straightening roll assembly comprising a pair of side plates having a plurality of straightening rolls carried thereby and having a pair of tubular prongs extending out therefrom, said prongs being removably received in said tubular side members at said one end of the frame, said frame being adapted to stand on its said one end when said assembly is removed for entry of said arbor into said recesses, when said retaining means are removed, by rolling the roll.

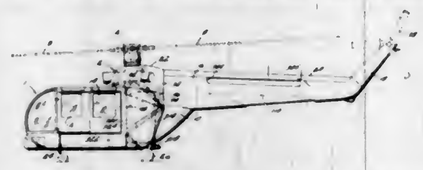
3,050,274
TILTING ROTOR HEAD SYSTEM
Frank L. Haight, Milford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,673
31 Claims. (Cl. 244—7)



1. In combination in an aircraft, a rotor head having a plurality of blades, a mounting base on which said rotor head is supported, means for tilting said base thereby tilting said rotor head, and means for folding said blades rearwardly in flight.

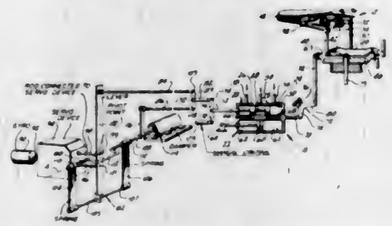
3,050,275
STEAM DRIVEN HELICOPTER ROTOR HEAD
Edward Kottsieper, Fairfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 28, 1959, Ser. No. 816,593
16 Claims. (Cl. 244—17.11)

1. A helicopter having in combination, a body, a steam engine, said engine having a casing, said casing having a section which projects upwardly therefrom, a rotor, said rotor being mounted on said upwardly projecting section of said casing, a torque transmitting shaft being supported in said upwardly projecting section, means fixing the upper end of said shaft to said rotor so that they move together,



a crank shaft supported in said casing, means connecting said crank shaft to said torque transmitting shaft so that said crank shaft rotates said torque transmitting shaft at its own speed, and means mounting said casing to said helicopter body.

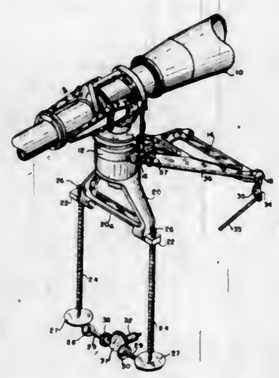
3,050,276
AUTOMATIC STABILIZATION DEVICE
Alan B. Wissinger, Westport, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 759,378
21 Claims. (Cl. 244—17.13)



1. In an automatic stabilization device for an aircraft, means for sensing the changes in pitch movement, means for controlling the attitude of said aircraft, means connecting said sensing means and operating means having two output members, one of said output members being directly connected between said sensing means and operating means to actuate said operating means immediately when a change is sensed by the sensing means, and the other of said output members being connected between said sensing means and operating means to actuate said operating means after a predetermined time delay after a change is sensed by the sensing means.

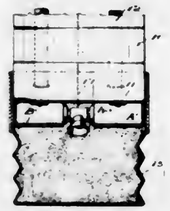
3,050,277
RETRACTABLE ROTOR MECHANISM
Edward F. Katzenberger, Westport, and John E. A. Steinbeck, Stamford, Conn., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 13, 1959, Ser. No. 852,918
2 Claims. (Cl. 244—17.27)

1. In an aircraft having a fuselage, means for extending a horizontal rotor mechanism to a vertical position with respect to the horizontal axis of the fuselage and above said fuselage and retracting said rotor mechanism to a position within said fuselage, and at an acute angle with respect to the horizontal axis of said fuselage, said means comprising a support bracket secured to said rotor mechanism, screwjack means threadably engaged with said bracket and fixedly supported with respect to said fuselage, means for driving said screwjack means for extending and retracting said rotor mechanism, a yoke pivotally secured to said rotor mechanism at one end and to the fuselage at its other end for guiding said rotor mechanism during its movement with said support bracket for providing a rigid support for said rotor mechanism, a blade for said rotor mechanism, pitch control means for regulating the pitch of said blade, and a pitch control linkage for actuating said pitch control means, said linkage comprising, a pitch control rod, a bell crank pivotally connected at each end of said rod, one of said bellcranks being pivotally connected to a linkage for actuation of said control rod,



the other of said bellcranks being pivotally connected to said pitch control means for changing the pitch of said blade, said bellcranks being so arranged that when said blade is in its feathered position the pivotal points of said connection with said pitch control mechanism and said connection with said linkage for actuation of said control rod fall in alignment with the pivotal connections of said yoke.

3,050,278
GROUND-CONTACT SHOCK ABSORBING SYSTEM
Charles N. Gardner, Suitland, Md., and Jack F. Furrer, Wayland, and George E. Murray, Lexington, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed July 19, 1961, Ser. No. 125,280
13 Claims. (Cl. 244—138)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. Ground-contact shock absorbing device comprising an expansible platform, means for attaching said platform to a load, and means within said platform for rapidly forming a cellular solid foam after ejection of said load and attached platform from an aircraft.

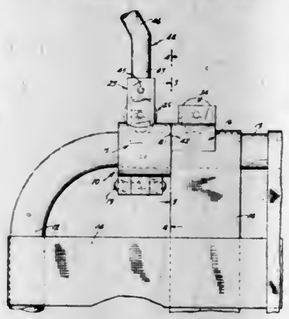
3,050,279
HEAT INSULATING SCREEN
Stanley F. Reed, Falls Church, and Emmett Francis Deady, Arlington, Va., assignors to Reed Research, Inc., Washington, D.C., a corporation of Delaware
Filed July 11, 1958, Ser. No. 748,080
2 Claims. (Cl. 245—11)

1. In a fabric of the type described, comprising; a first plurality of wires of substantially circular cross-section substantially parallel to each other; a second plurality of wires substantially parallel to each other and transverse to said first plurality, each of said wires of said second plurality having along its length alternate flat and circular cross-sections; said first and second pluralities woven in over-and-under relationship with each other, with each wire of said first plurality contacting each wire of said second plurality at a circular cross-section and



all of said flat cross-sections being parallel, the improvement comprising; said circular cross-sections of both said first and second pluralities being deformed slightly at their points of mutual contact to provide adjacent flat areas thereon and an interlocking anti-rotation engagement therebetween, thereby maintaining the parallel alignment of said flat cross-sections.

3,050,280
UMBRELLA ADAPTER FOR FOLDING CHAIR
Malachy J. Regan, 1516 York Ave., New York, N.Y.
Filed Sept. 23, 1959, Ser. No. 841,757
1 Claim. (Cl. 248—40)



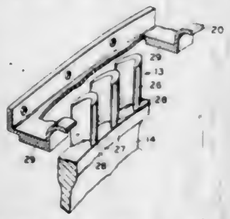
An adapter for chairs of the type having a U-shaped back rest of tubular stock, said back rest having a pair of legs and a cross piece, said adapter comprising a retainer member and a holder member, each of said members having a pair of movable clamp elements, each of the clamp elements of said holder member being substantially semi-circular, means hingedly to connect one end of each of said clamp elements of said holder member together, each of the other ends of said clamp elements of said holder member having a length of tubing semi-circular in cross section extending outwardly therefrom to define a socket, said socket extending at right angles to the axis of said hinge connection, each of the clamp elements of said retainer member being arcuate, each pair of clamp elements of said holder member and said retainer member being adapted to straddle the cross piece of said back rest, each of said clamp elements of said retainer member having a projecting leg, a screw extending through said legs to urge the clamp elements of said retainer member together tightly to grip said cross piece, a screw extending through the lengths of tubing of said holder member to maintain them together whereby the associated clamp elements of the holder member will tightly grip said cross piece, the clamp elements of each of said members having complementary locking conformations on the inner faces thereof, said complementary locking conformations when said inner faces of said members are in engagement restraining relative rotary movement of said members.

3,050,281
DISPENSING VALVE
Gilbert G. Budwig, 3400 Bayside Walk, Mission Beach, Calif.
Filed Aug. 31, 1959, Ser. No. 837,215
8 Claims. (Cl. 251—342)



1. A dispensing valve, comprising: a valve body formed of yieldable material and including a normally coaxially related tubular inlet end, outlet end, and constricted valve bore therebetween having a valve seat facing said inlet end, and an external mounting flange between said inlet end and said constricted bore, said valve body having a portion of reduced external diameter in the region of said valve bore, the resilience of said valve body, the axial length and diameter of said constricted valve bore, the wall thickness within and axial length of said portion of reduced external diameter being such that on flexing of said outlet end with respect to said inlet end, said valve bore and seat are caused to distort locally; and a valve element closing said valve seat when said valve seat is undistorted, and forming therewith a flow passage when said valve seat is distorted.

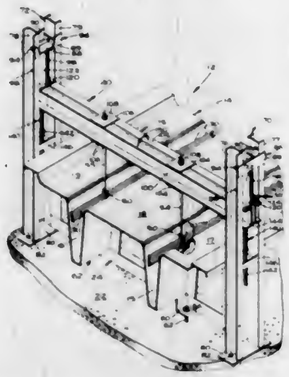
3,050,282
TURBINE SPEED LIMITING ARRANGEMENT
Ely George Allen, Lynn, and Granville Elbridge Carleton, Beverly Farms, Mass., assignors to General Electric Company, a corporation of New York
Filed Apr. 3, 1958, Ser. No. 726,134
6 Claims. (Cl. 253—77)



1. A turbine rotor comprising a hub portion, a plurality of blades extending radially from said hub portion, and a reduced cross section in each of the airfoil portions of said blades providing a maximum stress failure section in each of said airfoil portions, said maximum stress failure sections providing a stress level in said airfoil portions such that the portions of said airfoil portions extending radially beyond said maximum stress failure sections are thrown from said rotor at a preselected rotational speed of said rotor, the portions of said airfoil portions extending radially inward from said maximum stress failure section being of insufficient length to produce an acceleration torque on said rotor at the operating conditions selected.

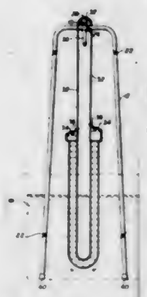
3,050,283
APPARATUS FOR DEPRESSING CABLES
Lawrence F. Tumey, Lakeland, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed Jan. 26, 1960, Ser. No. 4,785
9 Claims. (Cl. 254—51)

1. Apparatus for depressing stressing cables in a prestressed concrete molding form comprising a vertically movable bridge spanning the concrete molding form, guide means adjacent each end of the bridge adapted to guide the bridge during vertical movement thereof, a cable engaging rod extending downward from the bridge,



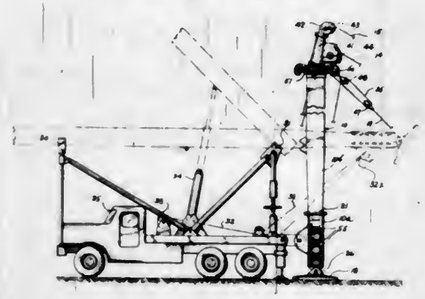
hydraulic means connected between said guide means and said bridge for forcing the cables downward in the form, and means connected to the bridge for locking the bridge and depressed cables in a selected vertical position.

3,050,284
HOIST FOR CLEANING VENETIAN BLINDS
Morris K. Lerner, Flushing, N.Y.
(23—55 Bell Blvd., Bayside 60, N.Y.)
Filed July 24, 1959, Ser. No. 829,439
2 Claims. (Cl. 254—139)



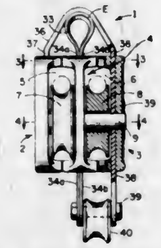
1. A cleaning device for a Venetian blind, comprising a roller rotatably mounted on a supporting frame, said roller having crank means for manually rotating the same in either angular direction, a pair of straps secured to said roller at opposite ends thereof and wound thereon in clockwise direction, said straps being provided with supporting means engageable with one end of a Venetian blind, an additional strap secured to said roller and being wound thereon in counter-clockwise direction, said additional strap being provided with supporting means engageable with the opposite end of said Venetian blind, whereby said Venetian blind is supported at both ends with its intermediate portion hanging downwardly in the form of a loop and whereby rotation of said roller in one angular direction causes said pair of straps to be wound further on said roller and said additional strap to be unwound therefrom and thereby causing the first mentioned end of the Venetian blind to be raised and the second mentioned end to be lowered, and whereby rotation of said roller in the opposite angular direction causes said pair of straps to be unwound therefrom and said additional strap to be further wound thereon, and causing said second mentioned end of the Venetian blind to be raised and said first mentioned end to be lowered.

3,050,285
METAL LOGGING SPAR
Marc D. Troyer, Seattle, Wash., assignor to Berger Industries Incorporated, a corporation of Washington
Filed July 20, 1959, Ser. No. 828,185
2 Claims. (Cl. 254—139.1)
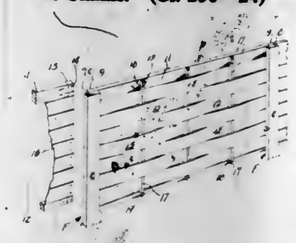


1. In a cable logging system of the character described, a portable spar of spar tree height, a base member, means on the top side of said base member for the fixed support of said spar, said spar comprising a lower end section and an upper end section rotatably mounted on said lower section, means joining said lower and upper sections in a rigid swiveling connection, an upper end structure rotatably mounted by said upper section including rigging for the support and operation of logging cables thereover, and including a plurality of cable winding drums mounted in fixed position on the lower end section thereof, cable blocks rotatably mounted on the upper end section and spar guying cable wound on and extending from each of the drums and over a block for the guying of said spar.

3,050,286
PULLEY BLOCK
Donald C. Seamans, Marblehead, and Wyatt O. Ingalls, North Reading, Mass., assignors to Boston & Lockport Block Co., Boston, Mass., a corporation of Massachusetts
Filed Sept. 18, 1957, Ser. No. 684,687
3 Claims. (Cl. 254—192)



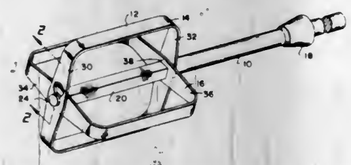
1. A pulley block assembly comprising a shell having at least one mortise for the reception of a pulley, a pulley for each mortise, a pintle pin rotatably supporting the pulley within the mortise, a hanger having opposed legs or straps, and retaining means for holding said pintle pin, hanger and shell in assembled relation, said shell comprising a pair of cheek members, each member being a unitary mass of plastic material, said cheek members being of substantially identical shape and size and each having a relatively thick rim portion bounding a relatively thin panel portion, the rim being widened at the top and bottom of the cheek member to form single spacers at said top and bottom, each spacer being wholly within the circumferential boundaries of the cheek member and projecting from the planes of the inner edge of the rim a distance which is substantially one-half the width of the pulley-receiving mortise, each spacer having therein a closed slot slidably receiving one of said straps without substantial excess, each spacer having means on its inner face for connecting the spacer to another spacer, said pintle pin being supported at each end respectively by one of said hanger straps and cheek members, said cheek members being held in assembled relation by said retaining means and by said slots and hanger, and, in addition thereto, being joined to said assembly solely at the inner faces of said spacers.

3,050,287
WOVEN PANEL FENCE
Roy W. Bloch, 3346 Paulan St., and Thomas E. Gress, 200 Marquette St., both of Bay City, Mich.
Filed Sept. 7, 1960, Ser. No. 54,414
4 Claims. (Cl. 256—24)



1. In an enclosure comprising, spaced-apart support posts, each post being made up of a strip of standard 2" x 4" material of predetermined length, a second strip of standard material of less width than the first strip secured to one face of the first strip equidistant from its edges and forming flanges on opposite sides thereof a perimeter frame comprising, top, bottom, and end members interposed between said posts, with the end members of the frame secured to the flanged sections of each post, metal strips secured to one side of said frame, said strips extending lengthwise of and being secured to the vertical end strips of said frame, and a plurality of vertical cross stakes interlaced with said metal strips and exposed alternately, first on one side and then on the other side of said strips, with the ends secured to the top and bottom members respectively.

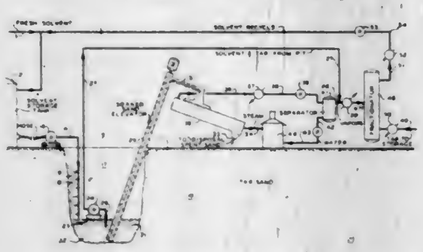
3,050,288
AGITATOR FOR DOMESTIC MIXERS
William Kolochynski, 2848 Leigh Road, Victoria, British Columbia, Canada
Filed Mar. 31, 1961, Ser. No. 99,877
11 Claims. (Cl. 259—134)



1. An agitator for a domestic mixing machine comprising a shaft formed at one end with a non-circular terminal portion, a stud secured to and projecting from the outer end of the non-circular terminal portion of said shaft, and agitating means comprising a pair of endless loops, each loop having diametrically opposite portions in substantial abutment with corresponding portions of the other to dispose said loops so that they substantially intersect at diametrically opposite points with one loop extending across the outside of the other at diametrically

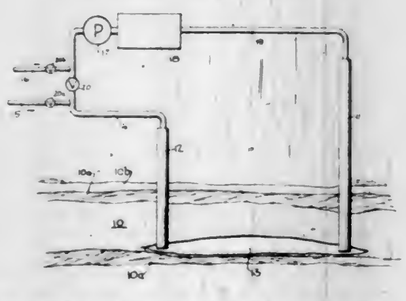
opposite points, said loops formed with aligned openings at their points of intersection, the openings of the outer of said loops and the innermost opening of the inner loop being shaped to receive the non-circular terminal portion of the shaft, the outermost opening in said outer loop consisting of a hole having a slot communicating with and radiating therefrom, the width of said slot being less than the width of the hole, said hole being large enough to permit the head of the stud to pass therethrough and the slot being of a width to permit the stud to move therealong while preventing the stud head from moving therethrough, said stud effective upon engagement with said slot to releasably lock the loops in position on said shaft.

3,050,289
HEAVY HYDROCARBON RECOVERY FROM PETROLIFEROUS DEPOSITS BY HYDRAULIC WASHING
Robert V. Gerner, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,919
11 Claims. (Cl. 262—2)



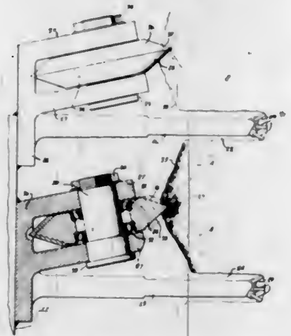
1. The process for recovering adsorbed hydrocarbon values from a naturally-occurring petroliferous deposit which comprises directing a jet of fluid hydrocarbon solvent against said deposit to comminute the same, separately collecting the resulting solution and the resulting comminuted deposit, recovering said adsorbed hydrocarbon values and said hydrocarbon solvent from said collected deposit by passing said collected deposit to a stripping zone, and stripping said adsorbed hydrocarbons from said collected deposit by passing superheated steam countercurrently through said stripping zone.

3,050,290
METHOD OF RECOVERING SODIUM VALUES BY SOLUTION MINING OF TRONA
Ned A. Caldwell, Brigham City, Utah, and William R. Frint, Green River, Wyo., assignors to FMC Corporation, a corporation of Delaware
Filed Oct. 30, 1959, Ser. No. 849,893
12 Claims. (Cl. 262—3)



1. The method of recovering sodium values from an underground trona formation which comprises circulating a solvent for trona through the formation, removing the trona solution from the formation, reheating and recycling all of said solution through the trona formation until the underground trona formation is heated, reheating and recycling a part of said removed trona solution through the formation, bleeding off the remainder of said removed trona solution to recover sodium values therefrom and adding make-up solvent to replace the bled off solution.

3,050,291
CORE BREAKING DEVICE FOR ROTARY BORING HEADS
Richard C. Lundquist, Palos Heights, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 11, 1960, Ser. No. 21,453
1 Claim. (Cl. 262—9)



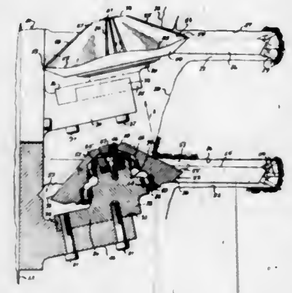
In a rotary boring head for continuous mining machines and the like, a boring arm rotatable about a generally horizontal axis and having radially spaced cutters projecting forwardly therefrom for cutting a series of concentric annular kerfs in a mine face, bracket members in association with the inner cutters of said radially spaced cutters and mounted on said boring arm in trailing relation with respect to the inner of said cutters, and each having parallel spaced support arms extending therefrom outwardly and forwardly of said boring arm into the spaces between said cutters, shafts fixedly mounted on said parallel spaced support arms and extending generally perpendicular thereto, core breaker disks mounted on said shafts for free rotation with respect thereto about axes eccentric of the centers of said shafts and extending generally radially of the axes of rotation of said boring head and perpendicular to said arms, and having wedge shaped cutting peripheries moved by said boring arm in annular paths in planes extending at acute angles with respect to the axis of rotation of said boring arm and periodically coming into wedging engagement with the core faces with increasing wedging actions by frictional engagement of said core breaker disks with the core faces, effected by rotation of said boring head and axial movement of said boring head into the mine face.

3,050,292
CORE BREAKER ROLLER FOR ROTARY MINING HEAD
John S. Newton, Glen Ellyn, and Richard C. Lundquist, Palos Heights, Ill., assignors to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 11, 1960, Ser. No. 21,545
3 Claims. (Cl. 262—9)

1. In a rotary core breaker adapted for continuous mining machines of the boring type having a rotatable boring arm having radially spaced annular cutters projecting forwardly therefrom for cutting a series of concentric annular kerfs in a mine face,

(*a*) at least one freely rotatable core breaker disk mounted on said arm in trailing relation with respect to an inner of said annular cutters,

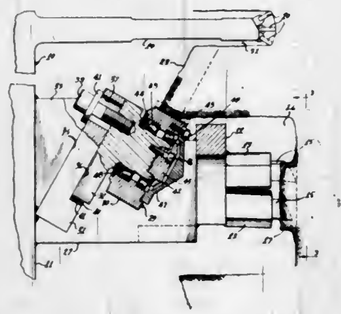
(*b*) a shaft supporting said disk for rotation about a generally radial axis intersecting the axis of rotation of said boring arm in advance of said boring arm and canted backwardly from the point of intersection of the axis of rotation of said core breaker disk with



the axis of rotation of said boring arm, toward said boring arm,

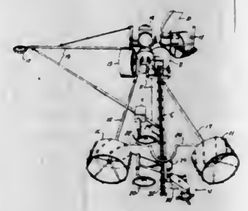
(*c*) said core breaker disk having a generally frustoconical breaking face having breaker means projecting outwardly therefrom, periodically forcing into wedging engagement with the kerf wall along lines of action generally parallel to the axis of rotation of the disk, by advance of the boring head into the mine face as said disk is rotated by bearing against the kerf wall and breaking the core with an outward wedging action.

3,050,293
ROTARY MINING HEAD AND CORE BREAKER THEREFOR
Emil J. Hlinsky, La Grange Park, and Richard C. Lundquist, Palos Heights, Ill., assignors to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed May 12, 1960, Ser. No. 28,593
3 Claims. (Cl. 262—9)



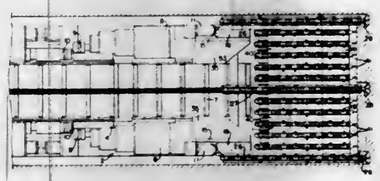
3. In a rotary core breaker for continuous mining machines of the boring type having a rotatable boring arm having a central pilot cutter and radially spaced annular cutters projecting forwardly from said boring arm for cutting a series of concentric annular kerfs in a mine face, an inclined core breaker roller for breaking the core between said pilot cutter and the next adjacent annular cutter, and downwardly inclined shaft means spaced radially inwardly of said annular cutters and rearwardly of said pilot cutter for mounting said core breaker roller on said boring arm for rotation about an axis extending generally axially of the axis of rotation of said boring arm and inclined radially inwardly from said boring arm toward the axis of rotation thereof and eccentric of the center of said core breaker roller, said core breaker roller having a cylindrical peripheral core breaking face spaced rearwardly of and diverging angularly outwardly of said pilot cutter at a wedging angle with respect to the core parallel to the axis of said shaft means, and periodically moving inwardly with respect to and outwardly of the core effected by axial advance of said boring head into the mine face and rotational movement thereof.

3,050,294
POWER CUTTER MECHANISM FOR SILAGE UNLOADERS
Paul Patz and Edward A. Graetz, Pound, Wis.
Filed July 13, 1961, Ser. No. 123,841
10 Claims. (Cl. 262—19)



1. In a silo unloader having an ensilage conveyor including an outer end that is revolved around the inside of the silo wall in close proximity thereto, a power cutter unit on said conveyor and adjacent said end, and means for mounting said cutter unit on said conveyor for translating said cutter unit relative to said conveyor and wall and towards said wall, and maintaining said cutter unit at a substantially constant angular relationship relative to the wall, said cutter unit comprising blades mounted for rotation about a generally vertical axis, said power cutter also including guide means for limiting said blades to a predetermined distance from said wall.

3,050,295
MINERAL DISINTEGRATING HEAD MECHANISM
Charles F. Osgood, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 13, 1959, Ser. No. 806,164
14 Claims. (Cl. 262—29)



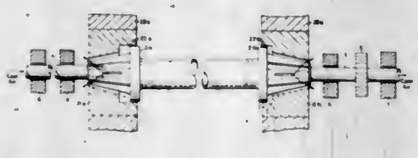
1. In a disintegrating head mechanism which is swingable about a pivot, parallel endless cutter bit carrying disintegrating chains, means for rapidly circulating said chains in elongated non-circular orbits, the pivot of the

head mechanism lying within the orbits of said chains, parallel endless cutter bit carrying disintegrating chains arranged intermediate said first mentioned chains also circulated in elongated non-circular orbits with the head pivot lying outside of said latter orbits, the orbits of said outer chains being elongated a substantial distance forwardly of the orbits of said intermediate chains, and means for circulating said intermediate chains at a relatively slow speed including a driving element coaxial with said pivot and connections between said driving element and said intermediate chains including speed reducing gearing at least in part lying within the orbit of one of said first mentioned distintegrating chains.

3,050,296
TRANSPORT ROLLER FOR INDUSTRIAL FURNACES

Hans Trimborn, Berghausen, near Engelskirchen, Bezirk Koln, Germany

Filed Dec. 19, 1960, Ser. No. 76,597
4 Claims. (Cl. 263—6)

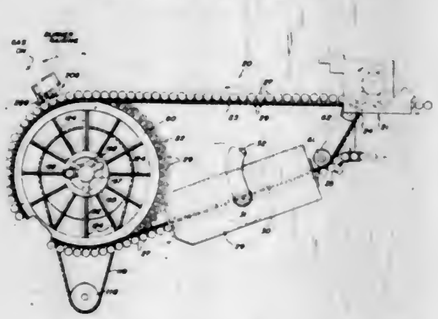


1. In an industrial furnace of the type having a heating chamber with two side walls, said chamber being operable at white-heat temperatures, in combination, a single unitary cylindrical body comprising a central portion traversing said heating chamber and end portions passing through said side walls and extending beyond said heating chamber, said body being rigid at normal temperatures but flexible at white-heat temperatures, bearing means outside said heating chamber comprising two pairs of axially spaced bearings each located on one side of said heating chamber and supporting a respective end portion of said body; and drive means for rotating said body.

3,050,297
FLAME CURING MACHINE FOR CAN BODIES

Charles T. Walter, Lemont, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Nov. 24, 1959, Ser. No. 855,046
29 Claims. (Cl. 263—8)

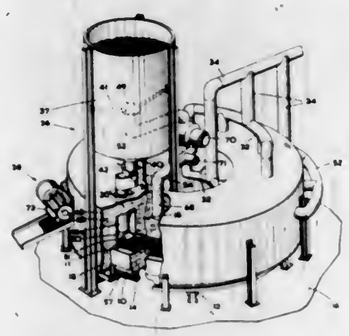


21. A flame curing machine for can bodies comprising an endless conveyor having a plurality of can holders spaced therealong, a plurality of flame curing stations, means mounting said flame curing stations for movement in unison with associated ones of said can holders along a portion of the path of movement of said can holders, a burner at each of said stations for projection into a can body, and means for projecting said burners into can bodies and operating said burners within the can bodies in timed relation to the movement of said flame curing stations.

3,050,298
CALCINATION MEANS AND METHOD

Hubert Lionel Hall, Weston, Ontario, Canada, assignor to Richard Terry Hall, Toronto, Ontario, Canada

Filed Apr. 4, 1960, Ser. No. 19,618
5 Claims. (Cl. 263—28)

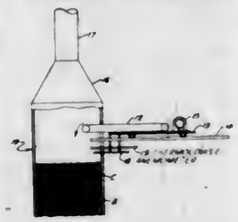


1. A process of calcining limestone including the steps of depositing substantially uniformly graded pieces of limestone upon a hearth, controlling the depth of the deposited material to approximately one and a half times the average limestone piece diameter, heating the depositted stone to a temperature of between 1600° F. and 2800° F. and then removing the calcined material from the hearth.

3,050,299
METHOD AND APPARATUS FOR CONTROLLING FEED TO SHAFT FURNACE

Thomas F. Reed, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed June 23, 1959, Ser. No. 822,298
2 Claims. (Cl. 263—29)

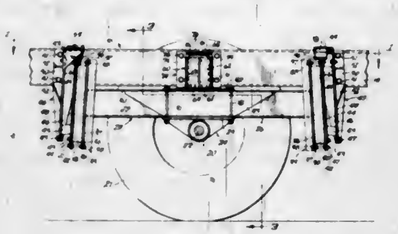


2. A method of controlling feed to a shaft furnace to which material feeds from a traversing feeder, said method comprising measuring the velocity of combustion gases passing through the burden adjacent the spot where the feeder is delivering material, developing a first voltage proportionate to the velocity measurement, separately measuring the temperature of the combustion gases at approximately the same spot, developing a second voltage proportionate to the absolute temperature measurement, balancing said first voltage against said second voltage to obtain an indication of the gas velocity at a standard temperature and thus of the relative permeability of the burden to flow of gases below this spot, and varying the rate of traverse in accordance with said indication to increase the feed rate over spots of relatively high permeability and decrease the rate over spots of relatively low permeability.

3,050,300
VEHICLE SPRING SUSPENSION

Albert F. Hickman, Eden, N.Y., assignor to Hickman Developments, Inc., Eden, N.Y., a corporation of New York

Filed Aug. 13, 1959, Ser. No. 833,514
12 Claims. (Cl. 267—63)

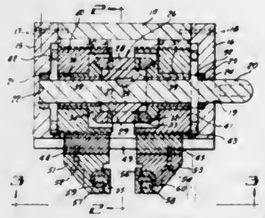


1. In a vehicle spring suspension interposed between the frame of a highway vehicle having main longitudinal side frame bars and the suspension having an axle having a wheel journalled thereon and spring means resiliently supporting said frame on said axle and permitting lateral movement of said frame lengthwise of said axle; the combination therewith of means resiliently resisting sideway of said frame, comprising bracket means fixed to and projecting upwardly from each end of said axle substantially in centered relation thereto and having a portion extending above the level of the bottom of the corresponding main longitudinal side frame bar and opposing the side face thereof, and a resilient cushion means arranged substantially equally on opposite sides of a vertical plane intersecting the axis of said axle and interposed between said portion of each bracket means and the adjacent opposing side of said frame to be compressed horizontally between said bracket means and a frame.

3,050,301
DIFFERENTIAL GEARING-ACTUATED WORK HOLDER CLAMP

Henry Palazzolo, 1393 Fontaine Ave., Madison Heights, Mich.

Filed Sept. 21, 1959, Ser. No. 841,320
6 Claims. (Cl. 269—218)

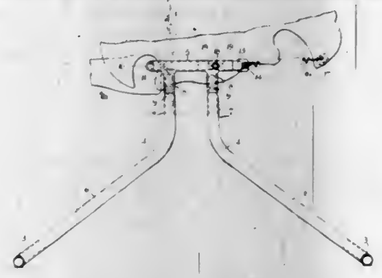


1. A work holder of the class described, comprising: a housing; a drive shaft rotatably mounted in said housing and provided with a differential driver means; a differential gearing means having a first pair of gears rotatably connected to said differential driver means on said shaft; said differential gearing means having a second pair of gears driven by said first pair of gears; a pair of externally threaded sleeves fixedly connected to said second pair of gears in said differential gearing means for rotation therewith; a pair of work engaging members slidably mounted on said housing for clamping a workpiece therebetween; and, each of said externally threaded sleeves being threadably connected to one of said pair of work engaging members for moving the same.

3,050,302
TOYS

Cecil Arthur Rassier, Erith, England, assignor to D. Sebel & Company Limited, Erith, Kent, England, a British company

Filed Dec. 9, 1958, Ser. No. 779,111
Claims priority, application Great Britain Dec. 21, 1957
10 Claims. (Cl. 272—52)

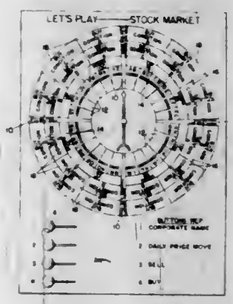


1. A toy of the type which is rocked by a child supported thereon, comprising an upwardly extending stand, floor-engaging members at the lower end of the stand, a body including child-supporting means positioned centrally lengthwise of the body, means pivotally supporting the body on the stand at its upper end for rocking about a substantially horizontal axis, said pivotal supporting means engaging the body at a point displaced longitudinally in one direction from the centre of the body and adjacent one end of said child-supporting means and spring means connecting the stand at its upper end to the body at a point displaced longitudinally in the other direction from the centre of the body and adjacent the other end of said child-supporting means for maintaining the body in a normally generally horizontal position and to permit the body to rock about the said pivotal support as a child supported by the body bounces or otherwise moves up and down on the body.

3,050,303
STOCK MARKET PLAYING GAME

Renato F. Borci, 256 Belmont St., Worcester, Mass.

Filed July 15, 1959, Ser. No. 827,206
1 Claim. (Cl. 273—1)



A game comprising a game board, a plurality of series of boxes in concentric circles on said game board, a spinning arrow located at the center thereof and capable of indicating any point at 360° in relation to said concentric circles, the innermost series of concentrically arranged boxes being identified by the names of various corporations, there being stock certificates for each of said corporations, the next outer circle of boxes comprising a lesser number thereof which are identified as "up" and "down" and including an amount of money by which the corporate stock may go up and down, the next two circles of boxes being identified as to "buying" and "sell-

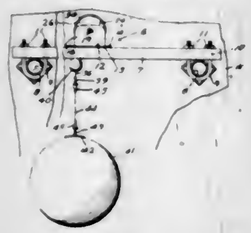
ing" together with indicia, and there being situations imprinted on the reverse sides of the stock certificates corresponding to the indicia in said two buying and selling circles of boxes and showing variations in the buying and selling conditions of said stocks, radial boxes extending from the innermost circle to the outermost circle identified for "dividends" to be paid the players and "penalties" to be paid by the players, and separate indicia means on the game board including "corporate name," "daily price move," "sell," and "buy," together with a movable button for each indicia means to signal the same.

3,050,304
BASKETBALL PRACTICE DEVICE
Robert L. Hulsebus, 432 N. Main St., Saluda, S.C.
Filed Aug. 15, 1960, Ser. No. 49,474
7 Claims. (Cl. 273—1.5)



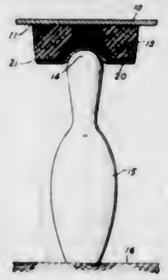
1. A regulation height portable basketball practicing apparatus for use in small gymnasiums and the like where available space is limited and comprising an upright vertically elongated pedestal body portion having side walls which are substantially free of external projections likely to be dangerous to the players, each side wall of the pedestal body portion sufficiently wide to provide a substantial backstop surface for free bounding basketballs, framework secured to and extending above the pedestal body portion, vertical backboards secured to said framework above the pedestal body portion and corresponding in number to the side walls of the pedestal body portion and substantially parallel thereto and offset forwardly of said side walls a substantial distance to provide adequate clearance for players moving beneath the backboards without bodily contacting the side walls, and regulation height basketball goals secured to the backboards and projecting outwardly therefrom in regulation manner.

3,050,305
BASKETBALL PRACTICE DEVICE
Stephen F. Bachand, 1314 Cummings Ave., and Walter J. Trolson, 911 Hughitt Ave., both of Superior, Wis.
Filed July 2, 1959, Ser. No. 824,710
1 Claim. (Cl. 273—1.5)



A basketball jump practicing apparatus comprising a stationary support, a frame fixed to and disposed above said support and having a pair of upstanding walls disposed in spaced apart relation to one another, said walls having aligned openings, a hollow shaft extending through said openings and journalled in the walls, said shaft having an elongated slot opening outwardly of one end thereof, a hollow reel journaled on and supported solely by said shaft, a spiral spring disposed within the reel and having an outer end anchored to the reel and an inturned inner end engaging in said slot and anchored to the shaft, a cord wound on the reel and having one end anchored thereto, said cord having a depending opposite end, a basketball attached to said depending cord end and supported thereby in an elevated position beneath said support, the other end of the hollow shaft having a noncircular tool receiving socket for turning the shaft in one direction to wind and tension the spring, one of said walls being provided with a stop, a pin detachably mounted in and projecting laterally from the first mentioned shaft end and engaging said stop to prevent rotation of the shaft to maintain tension on the spring, and a yieldable abutment member secured to the cord adjacent the basketball and disposed to engage an underside of the support to limit the extent that the cord can be rewound on the reel.

3,050,306
PIN SETTER TABLE
Henry K. Blough, Akron, Pa., assignor to Colonial Hills Bowl, Inc., Shillington, Pa., a corporation of Pennsylvania
Filed Oct. 24, 1960, Ser. No. 64,369
3 Claims. (Cl. 273—42)

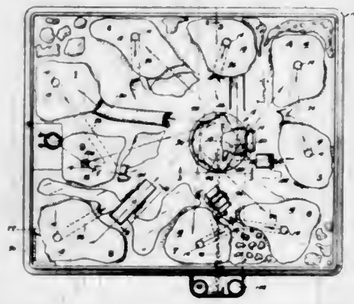


1. In an automatic pin setter, the combination of a horizontal table movable from an elevated position over an alley to a lowered position wherein a pin left standing after a ball has been thrown is clamped between the table and the alley, a resilient sponge rubber-like pad fastened to an underside of said table for operative engagement with said pin when the table is in said lowered position and distortable responsive to such engagement, said pad having a relatively high friction generally flat bottom face which upon engagement with the head of a pin would be relatively non-slidable relative thereto, and a flexible covering on said bottom face having a smooth pin engageable surface having substantially less friction than said high friction of said pad bottom face and said surface being readily slidable relative to an engaged pin upon distortion of said pad.

3,050,307
GAME
Marvin I. Glass, Lafayette Rittgers, and Burton C. Meyer, Chicago, Ill., assignors to Marvin Glass & Associates, Chicago, Ill., a partnership
Filed Feb. 1, 1962, Ser. No. 170,417
10 Claims. (Cl. 273—87.4)
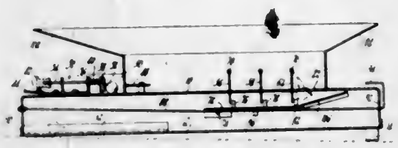
1. Game means for playing a game simulating golf, wherein a ball is propelled under the guidance of a player into successive holes, said game means comprising base means defining a playing surface sloping generally upwardly in all directions from a lowest point generally in the center thereof, said playing surface having a plurality

of holes therein disposed in different directions all around said lowest point, said playing surface sloping generally downwardly to each of said holes in the vicinity thereof, and said playing surface including obstacles to the passage of the ball from said lowest point along said playing surface to various ones of said holes; a plurality of conduits through which the ball may pass affixed to said base means below said playing surface, each of said conduits



sloping downwardly from one of said holes, each of said conduits being open at its upper end to receive the ball passing into the respective one of said holes, and each of said conduits being open at its lower end to discharge the ball onto said playing surface; and a ball propelling mechanism rotatably mounted on said base means at said lowest point of said playing surface, said ball propelling mechanism including means for striking the ball with a force determined by the player, and means under the control of the player for directing the means for striking.

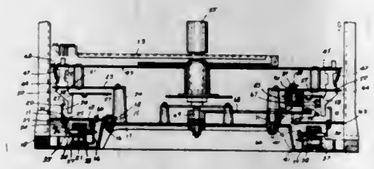
3,050,308
BASEBALL GAME
Richard G. Rideout, 3 Arlington St., Cambridge, Mass.
Filed Apr. 19, 1961, Ser. No. 104,129
5 Claims. (Cl. 273—122)



1. A game apparatus for two players, comprising a board having a plurality of apertures therethrough, a target swingably suspended at the front of each said aperture, locking means adjustable to prevent rocking movement of said targets, control means at the rear end of the board operable to unlock targets selected by one player, a ball, and means at the front of the board for projecting the ball toward a target selected by the other player.

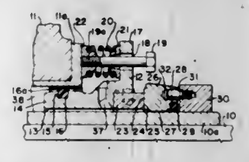
3,050,309
SELECTOR FOR AUTOMATIC PHONOGRAPHS
Fred H. Osborne, Snyder, Robert S. Tuttle, Eggertsville, and John H. Riggs, Kenmore, N.Y., assignors to The Wurlitzer Company, Chicago, Ill., a corporation
Filed Jan. 17, 1958, Ser. No. 709,530
9 Claims. (Cl. 274—10)

1. A selector apparatus adapted to cooperate with an automatic phonograph having a mechanism for selecting and presenting a record for playing and having a first series and a second series of manually operable switches, comprising an annular array of spaced selector pins normally resting in idle positions and movable into positions to cooperate with said mechanism to control its operation for presenting a selected record for playing, a wheel rotatably mounted coaxially of said pins, a plurality of pin selector means mounted on said wheel in operative relation to said pins, means operatively associated with said selector means and operable in response to operation of switches of said first series for operating said respective pin selector means, means for rotating said wheel progressively from one pin selecting position to another, a plurality of stops disposed in annular array on said wheel, a segmental supporting member pivotally



mounted over said stops, a plurality of stop spaced solenoids mounted on said segmental supporting member and having their plungers disposed for movement into the path of movement of said stops, each stop solenoid being positioned to stop said wheel with each selector means in operative association with a selector pin representative of a given switch of said second series, stop means spaced from each end of said segmental supporting member to limit its pivotal movement, and switch means adjacent one end of said segmented supporting member and operatively associated with said wheel rotating means, said switch means including switch members engageable by said segmental supporting member for de-energizing said wheel rotating means and momentarily reversing said wheel rotating means for disengaging said plungers from said stops.

3,050,310
SEALS FOR ROTARY SHAFTS OF SHIPS
Jan Kuiken, Old Coulsdon, England, assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 23, 1960, Ser. No. 31,011
Claims priority, application Great Britain Oct. 8, 1959
9 Claims. (Cl. 277—30)

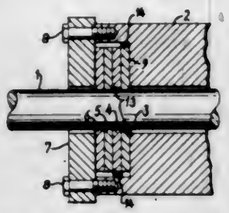


1. A seal comprising a non-rotatable member for the inboard end of a stern tube, a rotatable member of attachment to a shaft for rotation therewith and an intermediate member for interposition between said non-rotatable member and said rotatable member, a sealing element between said intermediate member and said rotatable member so that during rotation of the shaft said non-rotatable member maintains rubbing contact with the adjacent face of said intermediate member, said inermediate member having a convex bore permitting restricted rocking movement about an axis at right angles to the shaft.

ERRATUM

For Class 277—41 see:
Patent No. 3,050,319

3,050,311
SOLID RING FLOATING PACKING
Winborn L. Mikell, Houston, Tex., assignor to Garlock, Inc., Palmyra, N.Y., a corporation of New York
Filed Nov. 23, 1960, Ser. No. 71,280
5 Claims. (Cl. 277—157)

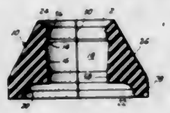


1. A mechanical packing set adapted to respond to fluid pressure for sealing said packing set to a rod of circular cross-section comprising a plurality of rings, each of said rings having an inner surface of sufficient size to pass said rod, said inner surface of each ring having a first radius over a given chord angle equal to the radius of said rod, and a second radius over the remaining chord angle which is larger than said rod radius, said rings being mounted on said rod in pressure seal abutting relationship and angularly oriented about said rod so that said inner surfaces of said first radius completely encircle the circumference of said rod, said rings when so mounted having their inner surfaces of said second radius adapted to respond to fluid pressure developed between said second radius inner faces and the adjoining rod surfaces to force said inner surfaces of first radius into pressure seal contact with said rod.

ERRATUM

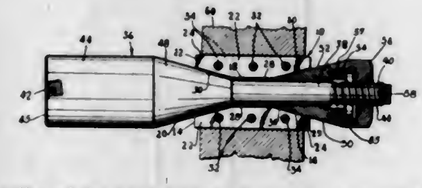
For Class 277—188 see:
Patent No. 3,050,354

3,050,312
PACKING GLANDS
Sheridan P. Tschappat, 1201 W. 17th St., Tulsa, Okla.
Filed Nov. 5, 1959, Ser. No. 851,147
2 Claims. (Cl. 277—208)



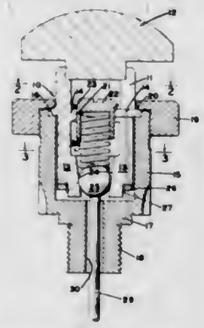
1. A molded packing gland for an oil well stuffing box having a reciprocal polished rod, and comprising a substantiallly conical shaped body portion, a slit provided in said body portion for facilitating disposition thereof within the stuffing box and around the polished rod, an internal bore extending longitudinally through the body and having a first wiping portion adapted for engaging the outer periphery of the polished rod under substantial radial pressure for an efficient wiping thereof, said bore having a second wiping portion adapted for engaging the outer periphery of the polished rod under substantially less radial pressure for riding easily therealong for reducing wear upon reciprocation of the polished rod, a tapered recess portion provided in the body above the said first wiping portion for trapping foreign particles wiped from the periphery of the polished rod and directing any of said particles escaping therefrom downwardly through the first wiping portion of the bore, an internal chamber provided in the body and interposed between the wiping portions for trapping lubricant therein and receiving the worn particles escaping from the tapered recess portion and first wiping portion, said second wiping portion precluding further downward movement of the foreign particles from the said internal chamber, and an enlarged recess portion provided in the bore below the said second wiping portion for reducing the radial pressure on the second wiping portion.

3,050,313
EXPANDIBLE COLLET FOR GRIPPING WORK PIECES
Gusztav Lengyel, 408 S. Pacific Drive, Fullerton, Calif.
Filed Mar. 18, 1960, Ser. No. 15,966
1 Claim. (Cl. 279—2)



A collet of the kind described comprising a cylindrical body having an axial bore, said body consisting of a plurality of spaced rectangular-shaped rigid plates constituting jaws, with resilient material between the plates, each jaw provided with an elongated outer friction work-gripping surface constituted by an elongated straight edge and an elongated inner surface in the bore to cooperate with a movable operating rod for the application of expanding pressure on the jaws, said inner surface constituted by conical end edge portions and by an intermediate straight edge portion parallel to the outer straight edge, said plates having elongated closed slots to receive the resilient material for integrating the parts and having spaced lugs with tapering ends on the outer long edges thereof.

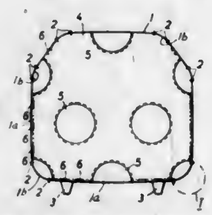
3,050,314
CHUCK
William J. Uebelacker, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, Rochester, N.Y., a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,411
5 Claims. (Cl. 279—46)



1. A chuck comprising a split sleeve defining a plurality of substantially equi-angularly spaced members interconnected by an integral flexible web portion disposed generally medially of said spaced members, said spaced members defining cooperable jaws at one end for holding an object therebetween, said spaced members defining facing internal cam surfaces at the other end, and a spring urged wedging member disposed between and cooperable with said cam surfaces for biasing the other end of said spaced members apart and thereby effecting pivotal movement

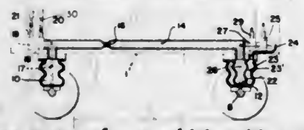
of the spaced members about said web portion as a fulcrum so as to in turn force said cooperable jaws toward one another.

3,050,315
TANKS FOR TANK VEHICLES
Adolf Kindler, Kassel, and Carl-Heinz Eckhardt, Minden, Westphalia, Germany, assignors to Gebruder Crede & Co. G.m.b.H., Kassel-Niederzwehen, Germany
Filed Jan. 29, 1960, Ser. No. 5,529
Claims priority, application Germany Jan. 31, 1959
1 Claim. (Cl. 280—5)



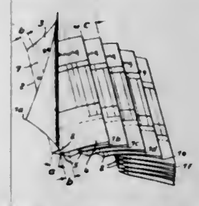
In a railway tank vehicle provided with spaced mounting means, a self-supporting tank bridging said mounting means, said tank having an elongated hollow body provided with end closures, said body being of generally rectangular cross-section and being constituted by contiguous, longitudinally extending flat and curved plates alternating in peripheral direction and welded to one another along longitudinal seams, said flat plates including a first horizontal plate defining a bottom wall, a second horizontal plate defining a top wall and two vertical plates defining respective side walls of said body, said curved plates having a width substantially less than that of said horizontal and vertical plates and merging tangentially with the adjoining flat plates respectively welded thereto; and at least one apertured surge plate extending transversely within said body in contact with at least said horizontal and vertical plates, said surge plate being provided with peripheral lugs extending some in one longitudinal direction and some in the opposite longitudinal direction along the inner wall surface of said body and welded thereto only along their longitudinal edges.

3,050,316
EQUALIZATION SPRING SYSTEM FOR VEHICLES, ESPECIALLY MOTOR VEHICLES
Franz G. F. Behles, Sindelfingen, Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed July 25, 1956, Ser. No. 600,026
Claims priority, application Germany Aug. 1, 1955
20 Claims. (Cl. 280—104)



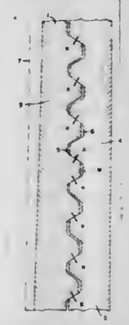
1. A spring system for a vehicle with a frame comprising an equalization spring system including pressure fluid actuated spring means extending and operative between two wheel support means to effect spring equalization therebetween, a stabilization spring system including automatically adjustable additional pressure fluid actuated spring means between one of said wheel support means and said frame to re-adjust the distance between said one wheel support means and said frame to a predetermined desired value after a change in the static load and automatic regulating means responsive to a deviation in the distance between the other wheel support means and said frame from said predetermined desired value for automatically changing the load carrying capacity of said equalization spring system in the direction toward keeping constant said distance at said predetermined value after a change of static load on the vehicle.

3,050,317
PACK OF BLANK FORMS
Johannes Meyer, Horneburg, N.E., Germany
Filed May 21, 1959, Ser. No. 814,857
Claims priority, application Germany May 29, 1958
7 Claims. (Cl. 283—63)



1. A pack formed of a plurality of superimposed sets of blank forms in which each set of blank forms comprises a main flexible sheet folded upon itself forming a folded edge and upper and lower portions, adhesive means connecting the under side of the lower main sheet portion of an upper set of blank forms with the upper side of the upper main sheet portion of the next lower one of said sets of blank forms defining an adhesion area having first and second edges parallel to and spaced from said folded edge, said first edge being nearest said folded edge and spaced therefrom a predetermined distance, said sheet being formed of flexible material and a folding line defined on said upper sheet portion adjacent said first edge whereby the linear portions of said upper and lower sheet portions contiguous with said adhesion area edge forms hinge portions, said folding line permitting a transverse displacement between the upper and lower portions of one set of forms and a transverse displacement between like portions of adjacent sets equal to twice said predetermined distance.

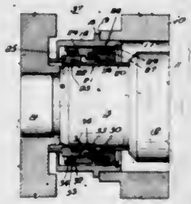
3,050,318
BOX-AND-PIN TYPE THREADED JOINT
Herman Tobias van der Wissel, The Hague, Netherlands, assignor to Shell Oil Company, a corporation of Delaware
Filed Oct. 29, 1959, Ser. No. 850,505
Claims priority, application Netherlands Oct. 31, 1955
8 Claims. (Cl. 285—334)



1. A box-and-pin type threaded joint comprising a pair of members adapted to be jointed together coaxially, a box having a screw-threaded portion formed thereon and comprising one of said members, a pin having a screw-threaded portion formed thereon and comprising the other of said members, at least one of the screw threads in an unloaded state deviating from the other screw thread in a

manner such that, in a longitudinal, cross-sectional view of both the box and the pin in an unloaded condition with the axes of said box and pin coinciding, and with reference planes taken perpendicular to the axes intermediate the two ends of the threaded portions of the box and the pin coinciding, the turns of the two threads overlap to an increasing extent from said planes towards both ends of said screw-threaded portions, the rate of increase of said overlap decreasing from said planes towards both ends of said screw-threaded portions, said screw-threaded portions of said box and pin being formed with the degree of said varying overlap of the threads in both directions from said planes being such that threaded portions are substantially equally loaded with the threads on substantially one-half of the threaded portions being loaded in one direction while those on the other half are loaded in the opposite direction.

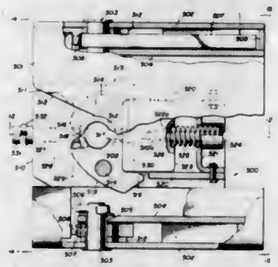
3,050,319
RADIALLY CONTACTING SEAL WITH BALANCING SLEEVE
George E. Colby, Barrington, R.I., assignor to Magnetic Seal Corp., a corporation of Rhode Island
Filed May 22, 1956, Ser. No. 586,417
5 Claims. (Cl. 277—41)



1. A rotary seal to prevent the escape of fluid under pressure from between relatively rotatable parts comprising a housing part, a shaft part extending through said housing part, a first member surrounding said shaft part and having an annular sealing surface thereon in a single plane, an O-ring between said member and said housing part anchoring said member thereto against relative rotary movement, a second member having an annular sealing surface thereon in a single plane in fluid sealing engagement with the first said annular sealing surface, an O-ring between said second member and said shaft part anchoring said second member thereto against relative rotary movement, one member being wholly a magnetized material and the other member comprising a magnetically attractable material drawing said sealing faces together, said two members together being spaced at one of their ends for limited axial movement together relative to said housing and shaft parts and said members being also spaced from said parts along their circular surfaces sufficiently for individual rocking movement of said members about said O-rings for alignment of said sealing faces whereby said members are unrestrained by any external influence and rotation of said shaft even though its axis is at a slight angle to the axis of the housing will cause said members to align said sealing faces in a plane perpendicular to said shaft axis.

3,050,320
FIFTH-WHEEL MECHANISMS FOR HITCHES CARRIED BY RAILWAY CARS
Deodat Clejan, Chicago, Ill., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Original application Dec. 22, 1959, Ser. No. 861,291. Divided and this application Nov. 16, 1960, Ser. No. 69,628
3 Claims. (Cl. 287—20)

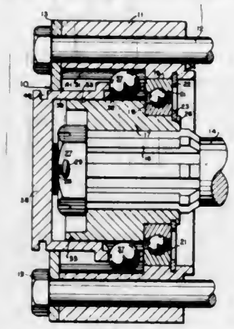
1. A hitch for a road semi-trailer of the type including a rear end carrying road wheels and a front end carrying a downwardly projecting king pin; said hitch comprising a head including hollow substantially box-like structure provided with an open front end and vertically spaced-apart top and bottom plates, said top plate having a longitudinally extending guide slot therein provided with an open front and rearwardly converging side walls and adapted to receive a cooperating king pin and to define a home position therefor, a pair of locking members arranged within said hollow head and between said plates and disposed in laterally spaced-apart relation and located on opposite sides of said guide slot, a pair of laterally spaced-apart upstanding pivot pins extending between said plates and respectively mounting said locking members for pivotal movements above the intermediate portions thereof, the front ends of said locking members respectively providing a pair of locking jaws movable between locking and unlocking positions with respect to a cooperating king pin in its home position, a block ar-



ranged within said hollow head and mounted for longitudinal movements between forward and rearward positions with respect to the rear ends of said locking members, said block in its forward position being disposed between the rear ends of said locking members and restraining said locking jaws into their locking position, said block in its rearward position being disposed from between the rear ends of said locking members and accommodating movement of said locking jaws into their unlocking position, means biasing said block into its forward position, an elongated slide bar arranged below said bottom plate and mounted for longitudinal movements between forward and rearward positions with respect thereto, the front end of said slide bar projecting longitudinally forwardly of the front end of said head so that it is readily accessible from the exterior when the front end of a semi-trailer is supported by said head, and means connecting the rear end of said slide bar to said block, whereby movement of said slide bar into its rearward position moves said block against said biasing means into its rearward position.

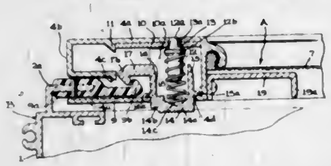
3,050,321
AUXILIARY DRIVE CLUTCH MECHANISM
John R. Howe, 2135 Meade St., and Joseph J. Cook, 1064 Adams St., both of Denver, Colo.
Filed Nov. 15, 1957, Ser. No. 696,692
1 Claim. (Cl. 287—53)

A clutch unit for use on the auxiliary drive assembly of multiple axle drive vehicles to selectively interconnect the drive axle and wheels comprising a hub member secured to the axle providing at its inner extremity an external cylindrical surface, a housing secured to the wheel and providing through a portion of its length an internal cylindrical surface in position aligned with the first named external cylindrical surface, a bearing element between said surfaces, snap rings on said hub member and housing for engagement with said bearing element to hold said cylindrical surfaces and the respective housing and hub members in aligned positions, splines on said hub member raised above said first named external cylindrical surface, splines on said housing, a second cylindrical surface on said hub member positioned adjacent said splines toward the outer extremity of said hub member and away from said first named external cylindrical surface, a plurality of balls adapted for contact with said second cylindrical surface, said balls being reciprocally movable along said second cylindrical surface for selective member interconnecting interposition between the splines of said housing and hub member, and a barrel type clutch actuating member inclusive of a cage



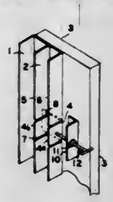
element movable therewith for holding said balls in engaged and disengaged positions, said barrel type clutch actuating member extending externally from said housing for rotation therewith and with cylindrical surfaces of said barrel type clutch actuating member in sliding contact with said housing and the said second cylindrical surface of said hub member for enclosing the interior of said clutch unit when in the engaged and disengaged positions and for maintaining said barrel type clutch actuating member and hub in aligned relation.

3,050,322
RELEASABLE LATCH ASSEMBLY
Robert P. Miller, South Miami, Fla., assignor to Daryl Industries, Inc., Miami, Fla., a corporation of Florida
Filed May 16, 1960, Ser. No. 29,287
5 Claims. (Cl. 292—114)



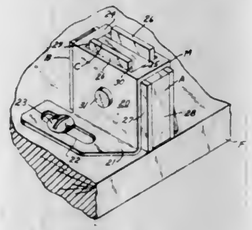
1. A releasable latch assembly for sliding closures, comprising a latch mounted movably in a housing formed in an edge of such a closure, a fixed keeper mounted adjacent to the closure for coopertion with the latch, a push button, secured to the latch and being floatingly mounted within the housing with a finger engageable portion normally urged outwardly through an opening provided in the housing and projecting through the opening when the latch is in its latched position engaging the keeper, resilient means urging said finger engageable portion outwardly, said push button being reciprocable in a straight line to a depressed position within the housing wherein the latch is in its unlatched position and also being rockable laterally into a hold-open position wherein the latch is unlatched from the keeper with the finger engageable portion projecting outwardly through the opening and tilted with respect to the edge of said opening, and detent means on the push button for cooperating with the edge of the opening to retain the push button in its tilted hold-open position until it is released by being depressed.

3,050,323
WINDOW LOCK MEANS
James Breeze, 331 Richards Ave., Hicksville, N.Y.
Filed Mar. 9, 1960, Ser. No. 13,880
3 Claims. (Cl. 292—155)



1. Window lock means for sashes mounted in channels in a window frame comprising a short channel like member having two parallel sides adapted to fit over an edge of one of said sashes, said member being slidable in a cut out portion of said channels for motion perpendicular to the axis of said channels, a mounting plate fixedly mounted with respect to one of said channels adjacent said slidably mounted member, a tapped shaftway in said plate, the axis of said shaftway being parallel the slide motion axis of said member, a threaded shaft movably mounted in said tapped shaftway, the end of said shaft being adapted to bear against said member, to cause each of said parallel sides of said member to bear against one of said sashes.

3,050,324
TRIPLE FACE MAGNETIC CATCH
Benjamin S. Faber, New York, N.Y., assignor to Penn-Akron Corporation, Woodside, N.Y., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,932
7 Claims. (Cl. 292—251.5)



3. A three faced magnetic catch for ready mounting on a closure comprising a box having top, front, back, bottom and lateral sides and having mounting ears and a combination permanent magnet block with side pole plates projecting through said front, back and top openings, said mounting ears consisting of laterally transversely outwardly extending slotted flanges and said block and pole pieces being positioned in a plane transverse to the plane of said flanges and said block and pole pieces being mounted with lost motion within said box so as to be capable of fore and aft linear movement within said box between the front and back sides of said box.

3,050,325
AIRCRAFT DOOR LATCH
John H. Zerwick, Columbus, Ohio, assignor to North American Aviation, Inc.
Filed Aug. 16, 1961, Ser. No. 131,888
6 Claims. (Cl. 292—218)

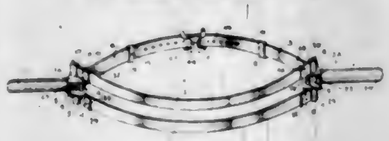
1. In a door latch assembly having engaged portions which are effective to simultaneously transmit loads in a direction along a longitudinal axis which parallels a hinge axis and other loads in all directions transverse

to said longitudinal axis, in combination: a socket means having an elongated recess oriented transverse to said longitudinal axis, a T bolt means which is installed in the latch assembly separate from said socket means, which is rigidly restrained by said socket means in directions along said longitudinal axis, and which has an elongated



head that is engaged with said socket means elongated recess in a direction transverse to said longitudinal axis, and bearing surface means for transmitting shear loads to and from said T bolt means, said bearing surface means contacting said T bolt means elongated head and being transversely fixed relative to said socket means with said socket means rotatable relative thereto.

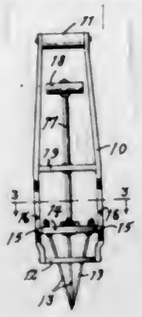
3,050,326
UTILITY CLAMP
Henry Sigvald Miller, Box 538, Huntsville, Ontario, Canada
Filed June 2, 1960, Ser. No. 33,557
3 Claims. (Cl. 294—15)



1. A lifter for containers comprising a pair of flexible straps extending around one side of the container and a single flexible strap extending around the other side of the container, U-shape lugs disposed between the ends of said pair of straps and straddling the ends of said single strap, pivot pins projecting from the sides of said lugs adjacent one end thereof pivotally connecting the ends of said pair of straps to said lugs, a pivot pin between the sides of said lugs adjacent the other end thereof pivotally connecting the ends of said single strap to said lugs, and handles extending from the closed ends of said lugs for oscillating said lugs to expand and contract said straps.

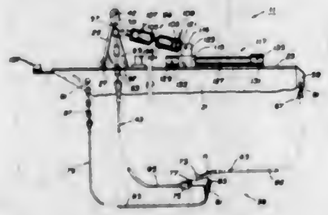
3,050,327
LAWN WEED PULLING TOOL
Henry A. Kuntz, 2041 N St., Eureka, Calif.
Filed Apr. 14, 1961, Ser. No. 103,042
2 Claims. (Cl. 294—50.5)

1. In a garden tool of the character described, the combination of a bifurcated frame having an offset hand grip located at a comfortable distance above the earth when grasped by a standing operator, a spike carrying member having trunnions mounted for reciprocating movement in slots formed in the sides of said bifurcated frame, an operating rod for said spike carrying member extending upwardly through a guiding strut extending between the sides of said bifurcated frame, an operating hand grip at the upper end of said operating rod terminating adjacent the hand grip at the upper end of said bifurcated frame, a spike guiding plate fixed between the lower ends of said frame having spike accommodating openings adapted to be positioned concentrically around the crown of a weed to be removed, and a plurality of spikes secured at their upper ends for universal movement upon said spike carrying member and extending downwardly through said spike guiding plate, characterized by the fact that said spike



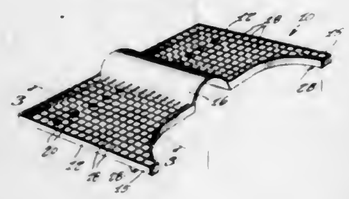
guiding plate will cause said spikes to move downwardly and inwardly towards each other as said spike carrying member is moved relative to said spike guiding plate by force applied through said operating rod.

3,050,328
SLING TRIPPING DEVICE
James J. Eaves, Louisville, Miss., assignor to Taylor Machine Works, Louisville, Miss.
Filed Oct. 13, 1960, Ser. No. 62,460
5 Claims. (Cl. 294—75)



1. In a load carrying apparatus, a supporting structure, a tripping device comprising a rocker arm rockably supported from said structure at a pivot axis, sling means for carrying a load, said sling means including at least a pair of sling members each having an upper end and a free end, one of said sling members being coupled adjacent its upper end to said structure and the other of said sling members being coupled adjacent its upper end to said rocker arm at a coupling axis spaced from said pivot axis, connecting means detachably connecting the free ends of said sling members to releasably hold the load, an elongated trip member attached adjacent one end thereof to said connecting means and adapted to be pulled, said trip member being coupled adjacent the opposite end thereof to said structure, said connecting means including means for disconnecting said connecting means when said trip member is pulled, means supporting said rocker arm in a first position tilted to one side of an upright dead center position of said rocker arm, mounting means carried by said structure; said mounting means including a rod, a base slidably mounted on said rod, a first stop member mounted on said rod adjacent one end thereof and a second stop member mounted on said rod adjacent the opposite end thereof; jack means coupled adjacent one end thereof to said rocker arm and coupled adjacent the opposite end thereof to said base, said jack means being moveable between a retracted position and extended positions, with said rocker arm in said first position extension of said jack means from said retracted position to a first extended position being effective to cause said base to slide from a first position adjacent said first stop to a second position adjacent said second stop, with said base in said second position further extension of said jack means beyond said first extended position to a second extended position being effective to pivot said rocker arm in one direction from said first position of said rocker arm past said dead center position to an unsupported position so that the weight of the load carried by said sling means is adapted to cause downward pivot of said rocker arm, said rocker arm being pivotable far enough downwardly in said one direction to carry said coupling axis below the level it occupied when said rocker arm was in said first position whereby said sling means is effectively lengthened relative to said trip member so that a pull is exerted thereon to disconnect the connecting means and release the load, and pivot of said rocker arm in said one direction past said dead center position being effective to pull therewith said jack means as a unit and slide said base on said rod without said jack means carrying any of the load.

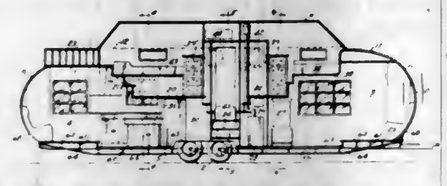
3,050,329
CAR FLOOR SANITIZER
William E. Pagan, 159—21 Hillside Ave., Jamaica, N.Y.
Filed Aug. 16, 1960, Ser. No. 49,962
2 Claims. (Cl. 296—1)



1. A car floor sanitizer comprising, in combination, a tray assembly for supported engagement upon a selected portion of the floor of an automotive vehicle, mesh type weight supporting means secured to said tray assembly spaced from the bottom of said tray assembly, drain means depending from one end of said tray assembly for discharging liquid matter out of the vehicle from said tray assembly, pedestal means carried by and elevating the opposite end of said tray assembly above the level of said one end thereof, said tray assembly comprising a pair of substantially identical tray sections, a centrally downwardly concave bridge portion integrally connecting said tray sections together, said bridge portion accommodating upwardly the drive shaft tunnel therewithin, and said mesh type weight supporting means comprising a plurality of perpendicularly intersecting rods defining a substantially rigid floor above the bottom of said tray assembly, said drain means comprising a plurality of drain outlets integral with and depending from said one end of said tray assembly, said outlets being receivable through openings in the floor of the vehicle, for draining moisture from the interior of the tray assembly outwardly of the vehicle.

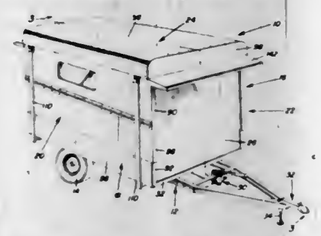
3,050,330
STAGGERED TWO-STORY HOUSE TRAILERS
Corwin D. Willson, 525 Golden Gate St., Lake Orion, Mich.
Filed Sept. 19, 1958, Ser. No. 762,016
15 Claims. (Cl. 296—23)

15. In a two-story vehicle body having a rigid outer shell, a legless bunk bed accessibly alongside and well above a floor in an upper chamber of the body, the bed being at the top of a partition that extends down to the floor between staggered body portions of full standing height, and the bed being at the bottom of a body portion of less than standing height that is confined within said



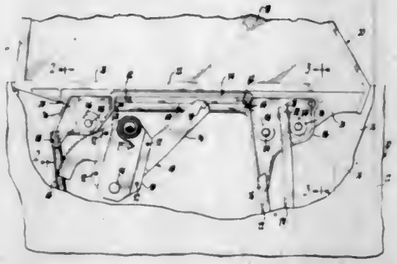
chamber and walled around three sides by, and exposed directly to, opposite sidewalls and one transverse upper endwall of said shell.

3,050,331
FOLDING TRAILER
Carl H. Mansen, 11429 Forest Ave., Chicago, Ill.
Filed July 19, 1960, Ser. No. 43,811
4 Claims. (Cl. 296—27)



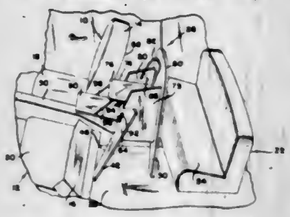
1. A collapsible trailer comprising, a wheeled frame means carrying open end bottom means having a floor and side members attached thereto, trailer roof means adapted to be raised and supported above said side members, inwardly foldable side wall means pivotally connecting said side members and roof means, end wall means hingedly connected to said floor and foldable inwardly to a position parallel to and spaced above said floor, said side wall means being foldable to a position above said end wall means when in folded position, and column support means mounted in fixed relation on said frame means exteriorly of the side wall means and engageable with said roof means for raising thereof and for support thereof when said column support means is in vertical position, said end wall means when unfolded contributing to the support of said roof means on the floor of the bottom means and acting thereby to lock said side wall means in unfolded position, said column support means including lever means pivotally mounted on said frame means adjacent each end of the bottom means, roller means mounted on upper ends of said lever means and engageable with track means connected to said roof means, and power actuating means mounted on said frame means beneath said floor and operatively connected to said lever means for actuation thereof from a collapsed position wherein said roller means are engageable with the track means intermediate forward and rear ends of said roof means, to a raised position wherein the lever means are disposed perpendicular to the roof means engaging said track means adjacent forward and rear ends of said roof means, said power actuating means including hydraulic motor means mounted on said frame means and connected to said lever means and pump means mounted on said frame means forwardly of said bottom means and hydraulically connected to said motor means, said roof means in collapsed position enclosing said end wall means and side wall means between the side members of said bottom means and end shield means pivotally connected to said roof means and foldable downwardly over forward and rear ends of said side members for complete enclosure of the foldable side and end wall means.

3,050,332
WINDOW AND WINDOW FRAME STRUCTURE
Everett B. Arnold, Jr., Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 18, 1960, Ser. No. 16,021
3 Claims. (Cl. 296—44)



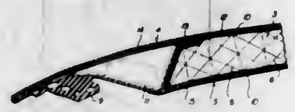
1. In a vehicle body having a window opening, the combination comprising, a vehicle window, guiding means, a window regulator mechanism, a main frame member secured to said window and including a depending portion having at least a pair of large surface area portions, an auxiliary frame member having a pair of large surface area portions adapted to pivotally and slidably seat against said pair of portions of said main frame member, guided means mounted on said portions of said auxiliary frame member and operatively connected to said guiding means, means connecting said auxiliary frame member to said window regulator mechanism, said portions of one of said frame members including enlarged holes, and securing means extending through said holes and releasably secured to the portions of the other of said frame members to releasably secure said frame members to each other and thereby operatively secure said window to said window regulator mechanism and to said guiding means, said holes being of greater extent than said securing means to permit simultaneous horizontal and vertical adjustment of said one frame member relative to said other frame member as said securing means move within said holes, said window being simultaneously adjustable in horizontal and vertical directions with respect both to said window regulator mechanism and to said guiding means by releasing said securing means and adjusting said window with respect thereto within said window opening to thereby permit said window to be accurately adjusted within said opening without adjustment of said window regulator mechanism and said guiding means.

3,050,333
AUXILIARY CAR CHAIR
Bobby L. Smith and Jean Smith, both of 737 Midland Ave., Manhattan, Kans.
Filed Jan. 19, 1960, Ser. No. 3,445
4 Claims. (Cl. 296—64)



1. An auxiliary automobile chair for a child in an automobile having a front seat with laterally spaced back rests and a rear seat; said auxiliary chair having front and rear legs resting on the automobile floor behind the front seat and on opposite sides of a raised central portion of the floor; means on the chair extending laterally from the space between the back rests for the front seat and at an elevation above the front seat cushion for abutting a rear surface of the back rest of the front seat to prevent the auxiliary chair from tipping forward; the rear legs extending upwardly in front of and sufficiently close to said rear seat cushion to prevent the auxiliary chair from tipping to the rear; and means including a seat member supported by said front and rear legs having a forwardly projecting portion extending into the lateral space between the spaced back rests for the front seat for abutting said back rests to prevent the auxiliary seat from tipping sidewise.

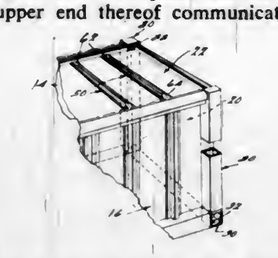
3,050,334
FOLDABLE ROOF FOR MOTOR VEHICLES
Friedrich Geiger, Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Jan. 18, 1960, Ser. No. 3,113
Claims priority, application Germany Jan. 23, 1959
2 Claims. (Cl. 296—107)



1. A foldable roof for motor vehicles, comprising means including inner cover means and outer cover means forming an air-tight casing provided with a hollow space adapted to be filled with compressed air, said outer cover means having a substantially smooth contour upon inflation of said roof, and rod-like connecting means arranged within said hollow space and operatively connecting said inner and outer cover means with each other, said connecting means being subjected to tensional loads upon inflation of said roof, said connecting means including first means extending substantially perpendicularly between said inner and outer cover means and interconnecting oppositely disposed points on said inner and outer cover means and diagonally extending second means interconnecting respective points on one of said cover means with points spaced from said oppositely disposed points on the other cover means, adjacent ones of said diagonally extending second means being secured to each other at points substantially midway between said inner cover means and said outer cover means, and additional rod-like connecting means interconnecting said last-mentioned points and extending substantially parallel to said inner and outer cover means upon inflation of said roof, each of said first, second and additional means extending substantially in the longitudinal direction of the vehicle.

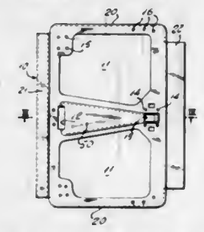
3,050,335
VEHICLE BODY CONSTRUCTION
Theodor C. Schubach, Detroit, Mich., assignor to Fruehauf Trailer Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 19, 1960, Ser. No. 63,658
3 Claims. (Cl. 296—137)

1. A roof and downspout construction for a van-type vehicle body comprising a roof panel having an upwardly extending flange around the entire periphery thereof defining a water reservoir, said roof panel having a plurality of transversely extending exterior roof support members, to direct water toward the outboard longitudinal flanges of the trailer roof, said members having end portions of reduced height to facilitate water flowage longitudinally of the reservoir defined by said roof panel along the longitudinal flanges thereof, and a tubular member extending downwardly from said roof panel and having an aperture at the upper end thereof communicating with the



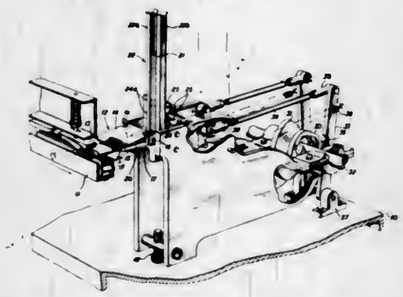
reservoir therein adjacent a longitudinal flange thereof and an aperture at the lower end thereof for the discharge of water downwardly and outwardly of the reservoir.

3,050,336
SLIDING ROOF FOR MOTOR VEHICLE OR THE LIKE
Johannes Werner, Offenbach, Germany, assignor to H. T. Golde G.m.b.H. & Co. K.G., Frankfurt, Germany
Filed July 21, 1959, Ser. No. 828,614
Claims priority, application Germany July 22, 1958
4 Claims. (Cl. 296—137)



1. A rigid sliding roof panel for motor vehicles, comprising a self-supporting hollow shell construction having an upper planar roof member and a lower substantially planar stiffening member, both of said members being constituted by prefabricated one-piece rigid stampings having substantially aligned rigid peripheral flange portions, said flange portions of the upper roof member being secured to said flange portions of the lower stiffening member along at least two edges of the roof panel, whereby the hollow shell construction lends the sliding roof panel increased stability without increasing the weight of either of the members.

3,050,337
METHOD AND MACHINE FOR INSERTING WEDGES IN PAINT BRUSHES
Andrew O. Patriquen, Lancaster, New Brunswick, Canada, assignor to T. S. Simms & Co. Limited, Saint John, New Brunswick, Canada
Filed June 13, 1960, Ser. No. 35,811
17 Claims. (Cl. 300—2)



1. A method of inserting brush plugs into ferrule-held knots of brush bristles comprising the steps of holding a pair of separable knives in inclined relation to one another with the knife edges of said knives substantially abutting to form a wedge-like splitter element, advancing said splitter element into the ends of the bristle knots along planes parallel to the plane of the knots as to separate the knots into at least two portions, separating said knives, and advancing brush plugs along said planes into position within said ferrules.

3,050,338
WHEEL COVER
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Sept. 9, 1957, Ser. No. 682,692
4 Claims. (Cl. 301—37)



1. In a wheel structure, a rim having an intermediate flange and a terminal flange and arranged to support a pneumatic tire having an outer sidewall, a cover member for disposition at the outer side of the wheel having a turned outer marginal portion for overlying the tire rim terminal flange and provided with generally axially inwardly extending cover retaining flange structure generally telescopically disposed in adjacent spaced relation to the intermediate flange and having axially inner terminal means retainingly engageable with the intermediate flange, and a non-metallic tire sidewall extension ring member of a diameter to overlie the tire sidewall adjacent to the rim terminal flange and also to overlie the terminal flange and having a portion thereof retainingly engaged between the turned outer marginal portion of the cover member and the tire rim and including an inner marginal cushion portion interposed in the space between the retaining flange structure of the cover member and the intermediate flange of the tire rim and serving as cushioning means to resist off-center deflection of the cover member under road shocks or other radial or diametrical forces tending to move the cover member diametrically relative to the wheel.

3,050,339
WHEEL COVER
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Sept. 11, 1957, Ser. No. 683,287
8 Claims. (Cl. 301—37)

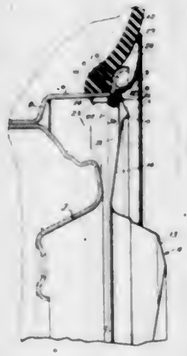
1. In a wheel structure including a tire rim and a pneumatic tire supported thereby, a resiliently flexible tire sidewall simulating member engageable with the tire sidewall and having a portion thereof overlying and engaging the tire rim, and a circular retaining member of relatively rigid material including a clamping portion engaging and clamping the tire rim overlying portion of the sidewall ring member, said retaining member including a generally axially inwardly extending portion having

cover retaining fingers struck therefrom and pressed generally radially outwardly opposite strike-out apertures and engaging the tire rim, with an inner marginal flange



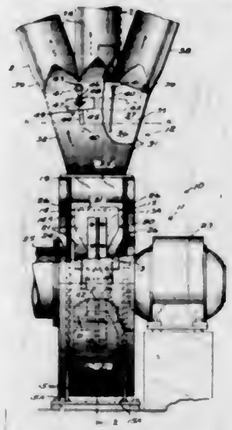
portion of the sidewall simulating ring member engaged by said fingers and pressed into said apertures for assisting in retaining the ring member and the retaining member assembled.

3,050,340
WHEEL COVER
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Feb. 10, 1958, Ser. No. 714,206
4 Claims. (Cl. 301—37)



1. In a wheel structure including a tire rim having intermediate and terminal flanges and supporting a tire with the sidewall projecting generally radially outwardly beyond the terminal flange, a cover assembly for overlying disposition to the outer side of the wheel including a sheet metal cover member having an outer marginal portion having therebehind a cover retaining flange structure comprising a generally radially inwardly extending portion and a generally axially inwardly extending portion with a radially inwardly projecting juncture rib of substantial radius bulging radially inwardly substantially beyond said axially inwardly extending portion and providing a radially outwardly opening annular groove, said axially inwardly extending flange portion having a free terminal structure with cover retaining means thereon engageable with a portion of said intermediate flange in press-on, pry-off relation, and a tire sidewall simulating non-metallic ring member having a thickened inner marginal flange structure retainingly engaged within said groove and projecting generally radially outwardly beyond said cover marginal portion to a diameter for overlying the tire sidewall radially outwardly beyond said terminal flange, said radially inwardly extending flange portion of the cover member engaging and clamping a portion of said non-metallic member radially outwardly adjacent to said thickened flange structure against the tire rim.

3,050,341
CONVEYING AND DISTRIBUTING APPARATUS FOR COMMINUTED MATERIAL AND AIR
Gilbert C. Whitney, Jr., Dansville, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed May 7, 1959, Ser. No. 811,641
6 Claims. (Cl. 302—28)



1. A comminuted material and air conveying and distributing apparatus, comprising a fan having a scroll shaped housing, said housing comprising two spaced side walls connected together by an end wall, a rotor disposed within said housing and mounted on at least one of said side walls for axial rotation within the housing, said housing having an inlet communicating with a source of comminuted material and air to pass said comminuted material and air into said housing axially of said rotor, an outlet in said end wall disposed substantially at right angles to the axis of rotation of said rotor, said outlet being in part defined by said end wall, a source of rotary power connected to said rotor to axially rotate said rotor whereby comminuted material and air is flowed from said inlet of the fan to the outlet of the fan, means comprising a plurality of pyramidal shaped deflecting baffles disposed along the inner surface of the end wall of the fan housing for distributing the comminuted material flowing within the housing so that substantially all the comminuted material is discharged through the fan housing outlet in a stream of substantially uniform density adjacent the end wall of said fan housing outlet under all loading conditions of the fan, second means for receiving said stream of comminuted material and air discharging from said housing outlet of said fan and dividing said stream into a plurality of smaller streams each having a predetermined proportion of the total comminuted material and air discharged from said housing outlet of said fan.

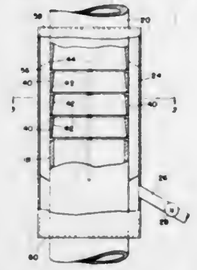
3,050,342
PNEUMATIC UNLOADING HOPPER STRUCTURE
Clarence J. Koranda, Western Springs, and William E. Fritz, Hinsdale, Ill., assignors to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed May 9, 1960, Ser. No. 27,660
8 Claims. (Cl. 302—52)

1. In combination, a pair of load containing railway car hoppers adapted for pneumatic unloading, said hoppers being disposed in transversely aligned relation; a conduit interconnecting the hoppers; means providing openings from the hoppers to the conduit normally open to allow lading to flow by gravity into the conduit; and means for selectively withdrawing lading from one of the hoppers to the exclusion of the other including a suc-



tion tube having a length sufficient to span the opening of only one of said hoppers to block the opening of the excluded hopper while permitting the withdrawal therethrough of lading from the companion hopper through its opening, and means on each hopper for receiving said suction tube for such endwise movement.

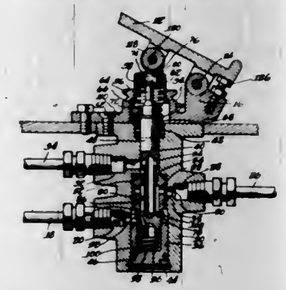
3,050,343
PNEUMATIC ELEVATION OF GRANULAR SOLIDS
Lawrence W. Larsen and William L. McClure, Toledo, Ohio, assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Apr. 29, 1958, Ser. No. 731,757
5 Claims. (Cl. 302—53)



1. In apparatus for elevating solid granular material from a lower vessel to an upper vessel through a lift conduit in communication with both vessels, the improvement which comprises a lift conduit having an upper and a lower portion, at least one conduit section having upwardly diminishing inner cross sectional area and situated between, and vertically spaced from, the upper and lower portions of the lift conduit, thereby to provide spaces adjacent the upper and lower ends respectively of said conduit section, said spaces providing communication between the interior of said lift conduit and the exterior thereof, and means for withdrawing a portion of the lifting fluid from the lift conduit through said spaces, said last named means comprising an enclosure surrounding said conduit section and said spaces, and a lifting fluid outlet conduit communicating with said enclosure.

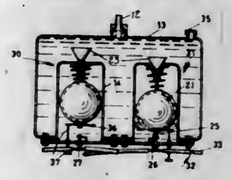
3,050,344
CONTROL VALVE
Osborn A. Kershner, St. Joseph, Mich., assignor, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan
Filed Mar. 1, 1961, Ser. No. 92,608
3 Claims. (Cl. 303—54)

1. A control valve comprising body means having axially extending bore means therein, inlet and exhaust ports communicating with axially spaced portions of said bore means, an intermediate outlet port communicating with said bore means between said inlet and exhaust ports, a first annular valve seat disposed between said inlet and outlet ports and defining a passageway between said inlet and outlet ports, a first valve element between said inlet port and said seat and shiftable axially with said bore means to and from a closed position against said valve seat and an opened position selectively for establishing and interrupting communication between said inlet port and said outlet port through said valve seat, said valve element having a first end portion engageable with said seat and an opposite end defining an end of a chamber within said body means, said first end portion presenting a second valve seat, passageway means disposed for establishing communication between said inlet port and said chamber only when said first valve element is in its opened position, a second valve element axially shiftable within the bore means and relative to said first valve element and engageable with said second



valve seat selectively for establishing and interrupting communication between said outlet port and said exhaust port, and means connected with said second valve element for actuating said second valve element for movement into engagement with said second seat for blocking flow of fluid to said exhaust port and for then shifting said first valve element to its open position and subsequently enabling the first valve element to return to its closed position in response to a buildup of fluid pressure in said chamber while providing a manually detectable force in accordance with such fluid pressure for informing an operator as to the extent to which the valve has been operated.

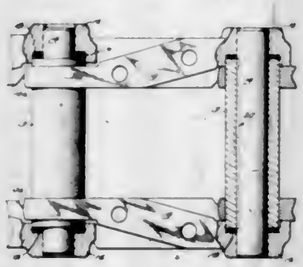
3,050,345
SAFETY BRAKE SYSTEM
Heinrich Zimmer, Oakville, Ontario, Canada (% Canadian Research & Development Foundation, 1434 Queen St. W., Toronto 3, Ontario, Canada)
Filed June 26, 1961, Ser. No. 119,472
5 Claims. (Cl. 303—84)



1. In a fluid-filled hydraulic brake system incorporating a master cylinder and a plurality of wheel cylinders, a safety device interposed between said master cylinder and said wheel cylinders and connected thereto by conduit means; said safety device including a fluid housing connected via said conduit means to said master cylinder, at least two float chambers detachably attached within said housing, said chambers having ports communicating with said housing and having passages connecting said chambers with said conduit means to said wheel cylinders; valve means cooperating with said ports; respective float means within said chambers attached to said valve means; said float means biasing said valve means away from said ports upon said chambers being filled with fluid and, conversely, covering said ports upon said chambers being

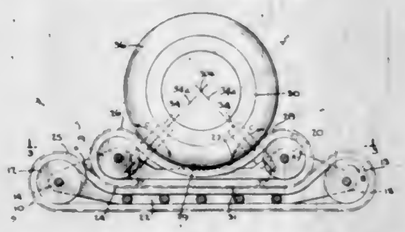
emptied of fluid; and indicating means operable by said float means when any one of said chambers become emptied of fluid.

3,050,346
COMBINED SEAL AND THRUST MEANS
Fred E. Simpson, Washington, and Robert A. Folkers, East Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Jan. 24, 1961, Ser. No. 84,676
5 Claims. (Cl. 305—11)



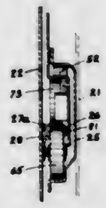
5. In a hinge connection between two links of a tractor track or the like having a pin and a bushing rotatable thereon and in which one link is tightly fitted on the pin and the other on the bushing, a seal to prevent entry of foreign matter toward the relatively rotatable surfaces between the bushing and the pin which comprises a frustoconical spring washer embracing the pin with its outer marginal edge in contact with the bushing, and a similar washer embracing the pin with its outer marginal edge in contact with the link on the pin, said last link being assembled on the pin sufficiently close to the bushing to compress said washers to substantially flat face-to-face positions.

3,050,347
TRACTION DEVICE
Hans Leonard Levi, 300 Broadway, Dobbs Ferry, N.Y.
Filed Aug. 3, 1960, Ser. No. 47,236
7 Claims. (Cl. 305—20)



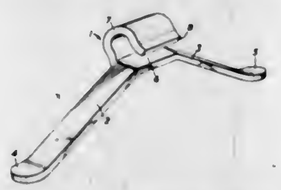
1. A traction device for an automotive driving wheel comprising a pair of spaced side plates, first and second pairs of rollers journaled at their respective ends to said side plates, said first pair of rollers disposed at opposite lower ends of said side plates, said second pair of rollers disposed at opposite upper ends of said side plates and spaced longitudinally inwardly from said first pair of rollers, and the bottom edges of said second pair of rollers lying below the plane of the top edges of said first pair of rollers, a first continuous flexible tread member trained over said first pair of rollers, a second continuous flexible tread member trained over said second pair of rollers, both tread members having upper and lower reaches intermediate their respective rollers, the lower reach of said second tread member and the upper reach of said first tread member being in frictional engagement whereby rotational movement of the upper tread member is transmitted to the lower tread member, the upper reach of said second tread member adapted to receive and contact an automotive driving wheel over a substantial portion of the bottom surface thereof, the depth of the latter said upper reach being sufficient to prevent longitudinal displacement of said driving wheel therefrom during use.

3,050,348
DRAWER SUSPENSION SLIDE
John Pipe, Grand Rapids, Mich., assignor to Steelcase, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Feb. 9, 1959, Ser. No. 791,923
5 Claims. (Cl. 308—3.8)



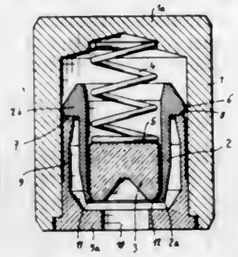
1. An extensible drawer slide assembly adapted to operate in a horizontal position, comprising: a pair of case rails; pull drawer means including a drawer and a pair of opposite drawer rails adjacent said case rails; a pair of intermediate extension rails positioned between the respective case rails and drawer rails; first roller disk means between each of said case rails and the respective intermediate rails, and a second roller disk means between each of said intermediate rails and the respective drawer rails; each of said disk means being vertically disposed to rotate in the direction of said rails; said drawer rails having roller disk bearing surfaces corresponding in shape to the periphery of said first roller disk means and riding thereon; and elongated, horizontal, deformed bearing surface protuberances extending out of said drawer means, spaced from said bearing surfaces, and engaging the inner side walls of said first disk means to reduce frictional contact of said drawer means with said case rails and intermediate rails.

3,050,349
MEANS FOR RESILIENTLY SUPPORTING A ROD OR THE LIKE
James Bertie Leonard Christian, Shirley, Birmingham, England, assignor to United-Carr Fastener Corporation, Wilmington, Del., a corporation of Delaware
Filed Dec. 31, 1959, Ser. No. 863,257
1 Claim. (Cl. 308—26)



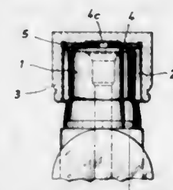
A plastic device for supporting a rod or the like comprising a head portion and a series of plate-like resilient legs, said head portion having a base and an arcuate yieldable slotted portion for receiving a movable rod or the like therein, said resilient legs being in integral angular relation to said base forming an arcuate bridge therewith and having a length at least twice as great as said base and said legs each having a free end with an outwardly turned foot, said foot in substantially parallel relationship with the plane of said base whereby said resilient legs and said head portion provide a yieldable supporting means for damping vibrations of the rod or the like.

3,050,350
SHOCK-ABSORBING BEARING FOR THE MOVABLE ELEMENT OF A SMALL MECHANISM
Edouard Loretan, Le Sentier, Canton of Vaud, Switzerland
Filed Feb. 1, 1962, Ser. No. 170,346
Claims priority, application Switzerland Nov. 30, 1961
2 Claims. (Cl. 308—159)



1. In a shock-absorbing bearing for the movable element of a small mechanism, comprising a bearing support provided with an inner recess, a mount consisting of a casing located in the said recess in such manner as to be radially displaceable therein, an external shoulder of the said casing, situated in the neighbourhood of its rear end, an internal ledge of the said casing, a pivot bearing disposed in the said casing in such manner as to be axially displaceable therein, and a resilient return device acting directly on the said pivot bearing for urging it against the said ledge of the said casing, in such a shock-absorbing bearing, an internal shoulder of the said support against which bears the said external shoulder of the casing, under the action of the said resilient return device.

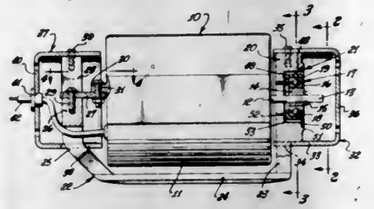
3,050,351
END BEARING FOR JOINT STUDS
Willi Kempf, Essen, Germany, assignor to Gelenkwellenbau G.m.b.H., Essen, Germany
Filed Dec. 27, 1960, Ser. No. 78,716
Claims priority, application Germany Dec. 30, 1959
9 Claims. (Cl. 308—174)



1. In combination, a joint stud having an end face, a bushing with a bottom portion facing said end face of said stud and surrounding the adjacent end portion of said stud, needles forming part of a needle bearing arranged loosely around said end portion of said stud, a disc of synthetic material interposed between said end face of said stud and said bottom, said synthetic material being softer than said needles, and ring means engaging the outer marginal portion of said disc and being interposed between said bottom and said needles for contact with the adjacent ends of said needles, the material of said ring means being at least as hard as the material of said needles.

3,050,352
MASSAGE APPARATUS
William N. Moxley, 3821 Don Tomaso Drive, Los Angeles, Calif.
Filed Apr. 27, 1959, Ser. No. 809,094
7 Claims. (Cl. 308—184)

1. In combination: a bearing support having a counterbore therein; rotatable eccentric means; a bearing on said rotatable eccentric means; a pliant, elastic cushioning member comprising a side wall engaging the bearing and the side wall of said bearing support defining said counterbore, a flange integral with said side wall of said cush-



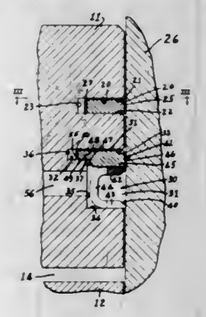
ioning member and extending outwardly beyond the support side wall for engagement with said bearing support, and a base integral with said side wall of said cushioning member and engaging an end of said bearing and closely adjacent to but spaced from the base of said counterbore.

3,050,353
CAGE FOR ROLLING BEARINGS
Axel Erland Bratt, Molndal, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Goteborg, Sweden, a corporation of Sweden
Filed Jan. 24, 1961, Ser. No. 84,656
Claims priority, application Sweden Feb. 3, 1960
8 Claims. (Cl. 308—217)



1. A cage for the rolling elements of rolling bearings comprising a pair of spaced side rings having inner confronting surfaces, means defining an annular groove in the inner surface of at least one of said side rings providing two opposed surfaces, a plurality of axially extending cage elements mounted between said rings and including cross bars spaced apart circumferentially to provide pockets for the rolling elements and a resilient member in the form of a ring segment connected to at least one end of each of said cross bars, said resilient members resiliently engaging said two opposed surfaces in said annular groove to thereby interlock said cage elements with said one ring.

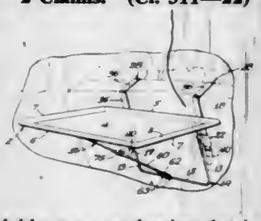
3,050,354
PISTON AND PISTON RING ASSEMBLY
Melvin W. Marien, Brentwood, Mo., assignor to Ramsey Corporation, a corporation of Ohio
Filed July 10, 1959, Ser. No. 826,277
4 Claims. (Cl. 277—188)



1. A piston ring assembly for location in a piston ring groove having portions of different radial depths, com-

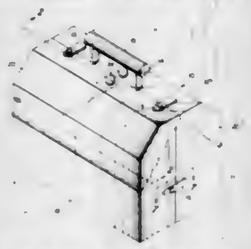
prising an oil control ring having connecting axially spaced resilient leg members, and a compression ring to be located in contact with one of said leg members and axially urged by the oil control ring, said compression ring being provided with a reduced thickness portion along the inner diameter thereof receivable in the piston ring groove portion of relatively lesser radial depth, the ring assembly when located in the groove performing both sealing and oil control functions and permitting substantial reductions in piston height.

3,050,355
ADJUSTABLE AND FOLDABLE TRAY
Paul Hess and Robert C. Stieg, Chicago, Ill.; said Stieg assignor to said Hess
Filed May 7, 1959, Ser. No. 811,672
2 Claims. (Cl. 311—22)



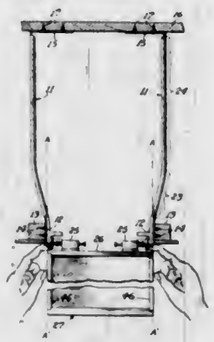
1. In a foldable tray mechanism having an unfolded supporting position and a folded stored position, the combination of a tray having front and rear edges, hinge means connected to the tray adjacent to said rear edge, a U-shaped base member having a pair of laterally spaced legs and a transverse interconnecting portion, pivot means on the legs operatively associated with respective hinge means whereby said base is swingable to selected angular relationships to the tray, and adjusting means operative between the base member and the front of the tray for holding the same in selected relationship, and said adjusting means comprising a pair of portions respecitvely pivotally connected to the base and to the tray adjacent to the front edge of the latter, said portion connected to the tray having a hook shaped end, said hook shaped end having such an extent as to engage the rear edge of the tray in folded position of the mechanism.

3,050,356
FISHING TACKLE BOX
Donald D. Messmer, Bay Village, Ohio (19331 Purnell Ave., Rocky River 16, Ohio)
Filed Jan. 11, 1960, Ser. No. 1,490
2 Claims. (Cl. 312—201)



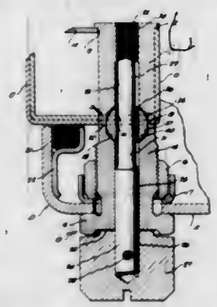
2. A fishing tackle box comprising a pair of symmetrical box sections, each of said sections constituting an individual container adapted to be used separately of the other, means on each box section for detachably connecting said sections together to form a single box unit, locating and aligning means on at least two sides of a corresponding wall of each box section for aligning said box sections when they are assembled to form a symmetrical structure with said corresponding walls being in spaced vertical alignment, said locating and aligning means including a folded lip extending around the ends and bottom of one of said walls and a recess extending around the sides and bottom of the other corresponding wall for receiving said lip, suspending and positioning means foldably hinged to said walls whereby said suspending and positioning means can be folded against said walls when said box sections are assembled and whereby said suspending and positioning means can be swung away from said corresponding walls when said box sections are disassembled to suspend each box section independent of the other from a gunnel of a boat and to position said box sections in a vertical plane spaced from the curved sides of a boat.

3,050,357
SLIDING DRAWER ASSEMBLY
Frank Hillson, 48 Brentwood Drive, Verona, N.J., and Rubin Krivisky, 4 Sherman Drive, Spring Valley, N.Y.
Filed Mar. 16, 1960, Ser. No. 15,381
6 Claims. (Cl. 312—332)



6. A sliding drawer assembly comprising a pair of opposed guide rails secured to a cabinet frame each having a longitudinal channel, a front portion in each guide rail, an integral intermediate portion on each guide rail rearwardly of the front portion and lying in a plane diverging from the plane of the intermediate portion of the opposite guide rail, an integral side portion on each guide rail extending generally rearwardly from the intermediate portion, a guide adapted to be movably positioned within each channel, means for securing the guides to a drawer, and resilient means normally urging the guides outwardly against the guide rails.

3,050,358
SHEAR FASTENER
Hans Jongbloed-Unterhorst, Newport Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 851,214
2 Claims. (Cl. 312—333)



1. A shear fastener for use between a movable drawer and a cabinet comprising, in combination: a tubular

socket carried by and secured to said cabinet; a tubular housing secured to said drawer, said socket and said housing being axially coextensive with each other; planar ends on said socket and said housing, said ends being adapted for engagement with each other and, when so engaged, lying in a plane of parting of said drawer and said cabinet; a counterbore formed in adjacent ends of both said socket and said housing, said counterbores having a common diameter greater than an inner diameter of said socket and said housing and defining a split cavity, an axial center of said cavity lying in said plane; a drawbolt disposed through said housing, having a threaded inner end portion and adapted for threadable engagement with said socket, said drawbolt having an outer end accessible from an outer surface of said drawer; and a shear ball freely slidably carried by said drawbolt and adapted for disposition in said cavity, said ball having a diameter substantially equal to a diameter of said cavity.

CHEMICAL

3,050,359
HEXAMETHYLENE TETRAMINE ACTIVATED CHLORITE BLEACH
Alfred Lehn, Frankfurt am Main, Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
No Drawing. Filed Jan. 14, 1960, Ser. No. 2,340
Claims priority, application Germany Jan. 17, 1959
3 Claims. (Cl. 8—108)

2. A process for bleaching cellulosic materials comprising introducing cellulosic materials into an alkaline aqueous chlorite bleaching solution containing a chlorite selected from the group consisting of alkali metal and alkaline earth metal chlorites, said solution containing 0.01 to 0.5 mol of hexamethylene tetramine per mol of chlorite and bleaching said materials in such solution at 50° to 100° C.

3,050,360
METHOD OF INHIBITING CORROSION OF IRON AND STEEL
Huib de Roos and Willem F. Jense, Amsterdam, Netherlands, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 19, 1960, Ser. No. 56,669
Claims priority, application Netherlands Nov. 26, 1959
1 Claim. (Cl. 21—2.7)

A corrosion inhibiting process for ferrous metal cargo compartments of a sea-going oil tanker which comprises: coating the metal inner surface of said compartment containing residual amounts of refined petroleum products with an aqueous concentrate containing 3–7 parts by weight of sodium nitrite, 2–6 parts by weight sodium acetate and 2–5 parts by weight of tri-ethanolamine and the balance to make 100 parts by weight being water, said concentrate being diluted with water to give a total active material concentration in final dilution of in excess of about 5.4% by weight and said final aqueous composition being coated on said metal surface.

3,050,361
DECABORANE SALTS AND THEIR PREPARATION
Earl L. Muetterties, Chadds Ford, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 5, 1958, Ser. No. 759,148
14 Claims. (Cl. 23—14)

1. Compounds represented by the formula

$$M(B_{10}H_{12}X)$$

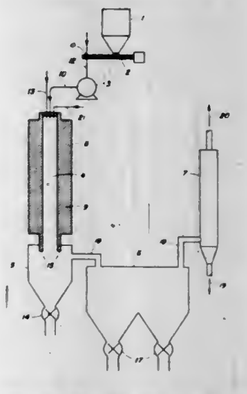
wherein M is a member of the group consisting of alkali metal atoms and the ammonium radical, and X is a monovalent group comprising at least one element selected from a group consisting of elements of groups V–A, VI–A and VII–A of the periodic table and having an atomic number of from 7 to 53, said compounds forming etherate addition products with ethers.

6. Process of reacting a solution of decaborane in a polar solvent with a salt of the formula

$$MX$$

wherein M is a member of the group consisting of alkali metal atoms and the ammonium radical, and X is a monovalent group comprising at least one element selected from a group consisting of elements of groups V–A, VI–A and VII–A of the periodic table and having an atomic number of from 7 to 53.

3,050,362
PROCESS FOR PRODUCING TITANIUM TETRACHLORIDE
Assur G. Oppegaard and Barth Hauge, Fredrikstad, Norway, and Helge Aas, Lewiston, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 15, 1958, Ser. No. 709,151
Claims priority, application Norway Feb. 6, 1957
7 Claims. (Cl. 23—87)



1. In a process for producing $TiCl_4$ free of impurities by treatment of a titaniferous material containing iron and substantial amounts of metal impurities including the oxides of Mg and Ca with gaseous chlorine in a vertically disposed reactor having a dust collector below its lower end for separating solid metal chloride impurities from the gaseous chlorides of titanium and iron, the improvement comprising: feeding a mixture of finely divided titaniferous material and a carbonaceous reducing agent in finely divided solid form into the upper end of said vertically disposed reactor, introducing separately a downwardly flowing stream of gaseous chlorine, admixing said gaseous chlorine with said titaniferous material and said carbonaceous reducing agent in said reactor to form a downwardly flowing stream of reactants in said reactor, heating said stream of reactants in the absence of an auxiliary flame to react said chlorine with said titaniferous material and said carbonaceous reducing agent, the temperature in said reactor being in the range of from 1000° C.–1400° C. to flash chlorinate said titaniferous material and form a downwardly flowing stream of gaseous chlorides of titanium and iron admixed with gaseous chlorides of said metal impurities, maintaining a cooling zone in said reactor at the lower end thereof and above said dust collector, the temperature of said cooling zone being in a range between the condensing temperature and solidification temperature of said metal chloride impurities whereby said metal chloride impurities are formed as liquids

adjacent the lower end of said reactor; and maintaining the cross sectional area of said downwardly flowing stream of gaseous chlorides substantially uniform throughout the length of said reactor and into said dust collector to enable said liquid chlorides to fall freely into said dust collector for collecting and separating the liquid metal chloride impurities from said gaseous chlorides of titanium and iron.

3,050,363
REMOVAL OF NITRIC OXIDE FROM GAS STREAMS

Dean J. Veal, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 28, 1958, Ser. No. 751,186
4 Claims. (Cl. 23—157)

1. A one-step process for the oxidation of nitric oxide in a gas stream containing the same in minor proportions and also containing oxygen, and the simultaneous removal of resulting nitrogen dioxide from said gas stream, which comprises contacting said gas stream at a temperature of −70 to +60° C. with a catalyst comprising iodine pentoxide deposited on a porous support having a surface area of at least 50 square meters per gram, simultaneously adsorbing the resulting nitrogen dioxide by said catalyst, and separating a substantially nitrogen dioxide-free gas stream from said catalyst.

3,050,364
PURIFICATION OF SAND CONTAINING COLOUR-IMPARTING IMPURITIES

Herbert Daymond Segrove, Redhill, England, assignor to British Industrial Sand Limited, Redhill, England, a British company

No Drawing. Filed Nov. 5, 1956, Ser. No. 620,190
Claims priority, application Great Britain Nov. 7, 1955
10 Claims. (Cl. 23—182)

1. A process for rendering high silica sand, containing ferric oxide as an impurity, suitable for glass-making which comprises contacting at a temperature below 250° C. (*a*) substantially dry washed sand grains contaminated with ferric oxide as an impurity with (*b*) substantially dry gaseous hydrogen chloride until change in color of the sand grains substantially ceases, thereby indicating that the reaction which occurs is substantially complete, and washing the resulting sand with water.

5. A process for removing ferruginous impurities from high silica sand in order to render it suitable for glass-making which comprises (I) simultaneously contacting at a temperature within the range from room temperature to 100° C. (*a*) substantially dry, washed sand grains contaminated with ferric oxide, with (*b*) hydrochloric acid and with (*c*) sulphuric acid of at least 90% concentration, the weight of water derivable from the hydrochloric acid being at most 30% of the weight of the sulphuric acid, whereby the hydrochloric acid and the sulphuric acid generate dry gaseous hydrogen chloride in situ, until change in color of the sand grains substantially ceases, thereby indicating that the reaction which occurs is substantially complete, and (II) subjecting the washed sand to froth flotation using an anionic collecting agent.

3,050,365
PREVENTION OF FORMATION OF INCRUSTATIONS DURING OXIDATION OF FERRIC CHLORIDE

Earl William Nelson, Lynchburg, and Thomas James Crossley, Amherst, Va., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

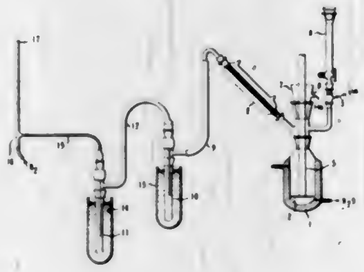
No Drawing. Filed Aug. 13, 1959, Ser. No. 833,378
5 Claims. (Cl. 23—200)

1. In the production of an iron oxide and chlorine by continuous combustion of an iron chloride with oxygen in a reactor having an inside diameter in excess of five inches, the method of inhibiting formation of incrustations on an interior surface of said reactor which comprises maintaining said surface at a temperature at least 10° C. higher than the temperature of the reaction mixture in contact therewith.

3,050,366
PRODUCTION OF SILANE BY THE USE OF A ZINC CATALYST

Owen E. Ringwald, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed July 15, 1959, Ser. No. 827,311
13 Claims. (Cl. 23—204)



1. A process for substituting hydrogen for silicon-bonded halogen atoms in a halogen-substituted silane comprising contacting an alkalinous metal hydride selected from the group consisting of sodium hydride and calcium hydride with said silane under non-contaminating conditions and in the presence of an ether reaction medium selected from the group consisting of tetrahydrofuran, ethyleneglycoldimethyl ether, diethyleneglycoldimethyl ether, triethyleneglycoldimethyl ether, tetraethyleneglycoldimethyl ether, diethyl ether, 1,4-dioxane, dipropyl ether, diisopropyl ether, and dichlorodiethyl ether, and in the presence of a zinc catalyst selected from the group consisting of zinc halides, zinc metal, zinc alloys, zinc carboxylates, zinc carbonate, zinc oxide, zinc alkyls, and zinc hydride.

3,050,367
SEPARATION OF BORON ISOTOPES

Karl Erik O. Holmberg, Stockholm, Sweden, assignor to Quartz & Silice S.A., Paris, France, a corporation of France

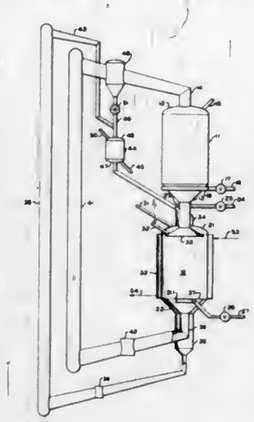
No Drawing. Filed Oct. 2, 1957, Ser. No. 687,602
Claims priority, application Sweden July 9, 1952
3 Claims. (Cl. 23—205)

1. The method of separating the boron isotope of mass 10 from the boron isotope of mass 11 which comprises forming a liquid complex of boron trifluoride and anisole, heating said complex to cause dissociation thereof into liquid anisole and gaseous boron trifluoride, establishing a countercurrent flow of said liquid complex and said gaseous boron trifluoride in a countercurrent system while maintaining said liquid complex and said gaseous boron trifluoride in intimate contact with one another, whereby the isotopic species of boron trifluoride containing boron of mass 10 concentrates in the liquid complex and the isotopic species of boron trifluoride containing boron of mass 11 concentrates in the gaseous boron trifluoride, and withdrawing said two isotopic species from the systems near the points at which they concentrate.

3,050,368
METHOD AND APPARATUS FOR PEROXIDE PRODUCTION

Jesse M. Brooke, Sweeny, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed June 2, 1958, Ser. No. 739,240
13 Claims. (Cl. 23—207)



1. A method of operating pebble heater apparatus for producing peroxide compounds comprising the steps of heating a mass of pebbles in a pebble heating zone; gravitating the heated pebble mass downwardly through the central axial portion of a reaction zone as a contiguous mass; cooling a second mass of pebbles in a pebble cooling zone, passing said cooled mass of pebbles into the outer periphery of the upper portion of said reaction zone as a stream surrounding and enclosing said heated pebbles, said cooled pebble stream being in continuous and intimate contact with said heated pebble stream during its passage through the reaction zone thereby providing said reaction zone with a peripheral cool portion; introducing oxygen and a normally gaseous aliphatic hydrocarbon having at least two carbon atoms per molecule into said reaction zone at a rate to provide a sufficient contact time to produce a reaction mixture containing a substantial amount of peroxide compounds, withdrawing the reaction mixture, and recovering the peroxide compounds therefrom.

3,050,369
RECOVERY OF IODINE FROM AQUEOUS IODIDE SOLUTIONS

Jack F. Mills, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

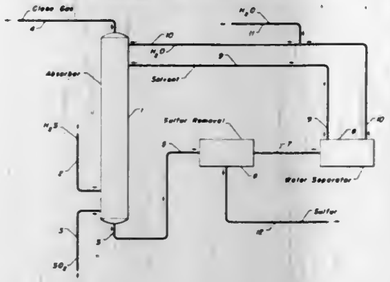
No Drawing. Filed Mar. 7, 1960, Ser. No. 12,932
6 Claims. (Cl. 23—216)

2. A method for separating and recovering iodine from an aqueous solution of an iodide salt by feeding said solution at 10° to 40° C. to a water-immersed bed of an anion exchange resin in a polyhalide anionic form, said polyhalide anion having the formula X_n^-, wherein *n* is an odd integer from 3 to 7 and X is a member of the group consisting of chlorine, bromine, iodine and combinations thereof, no more than one atom of which polyhalide anion is iodine, whereby available reactive halogen oxidizes iodide ion to liberate iodine, and the liberated iodine displaces corresponding halogen to give anion exchange resin polyiodide, and recovering iodine therefrom, said anion exchange resin in its normal form being a member of the group consisting of the halide salts of strongly basic quaternary ammonium and weakly basic polyamine anion exchange resins.

3,050,370
PRODUCTION OF SULFUR

Peter Urban, Northbrook, and Lester G. Massey, Arlington Heights, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed July 5, 1960, Ser. No. 40,776
6 Claims. (Cl. 23—226)

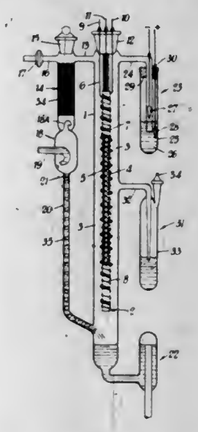


1. A process for the production of sulfur which comprises absorbing sulfur dioxide and hydrogen sulfide in a solvent comprising an ester, and having from about 0.5% to about 40% by volume of water dissolved therein, reacting the sulfur dioxide and hydrogen sulfide in contact with said ester, thereby forming sulfur, and separating the sulfur from said solvent.

3,050,371
METHODS FOR DETECTING AND/OR MEASURING THE CONCENTRATION OF OXYGEN IN AQUEOUS LIQUIDS SUCH AS BOILER FEED WATER

Arthur Gordon Dowson and Ivor John Buckland, London, England, assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

Filed Aug. 15, 1956, Ser. No. 604,233
Claims priority, application Great Britain Aug. 25, 1955
11 Claims. (Cl. 23—230)

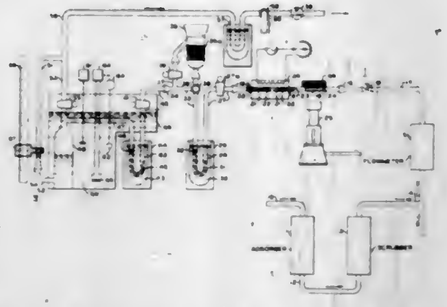


1. A process for determining the concentration of dissolved oxygen in a liquid which comprises continuously intimately contacting the entire body of liquid with an inert gas to form a gaseous admixture in the liquid phase, separating the gaseous admixture in the liquid phase into a gaseous phase and a liquid phase, the gaseous phase including at least a portion of the dissolved oxygen, and separating at least a portion of the oxygen from the gaseous phase by contacting the gaseous phase with the cathode of a galvanic cell whereby a current is generated which is proportional to the amount of oxygen separated.

3,050,372
MEANS AND METHOD FOR CARBON AND HYDROGEN ANALYSIS

Richard L. Scott, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Nov. 3, 1958, Ser. No. 771,665
15 Claims. (Cl. 23—230)



14. A method for determining the carbon and hydrogen content of a substance comprising subjecting a weighed sample of said substance to pyrolysis in a substantially pure oxygen stream to form vapors of carbon dioxide and water, sweeping said vapors of carbon dioxide and water by continued flow of said oxygen stream into a trap means maintained at a temperature below the freezing point of carbon dioxide and water, trapping said vapors of carbon dioxide and water as a mixture of solid particles in said trap means, preventing the passage of said solid particles from said trap means, selectively vaporizing said carbon dioxide solid particles to form carbon dioxide vapor by raising the temperature of said trap means to a temperature above the boiling point of carbon dioxide but below the freezing point of water, measuring the pressure of said carbon dioxide vapor in an evacuated mercury manometer means maintained at a constant elevated temperature, removing said carbon dioxide vapor from said mercury manometer means, vaporizing said water solid particles to form water vapor by raising the temperature of said trap means to a temperature at least as high as the boiling point of water, and measuring the pressure of said water vapor in said mercury manometer means maintained at said constant elevated temperature.

3,050,373
DIAGNOSTIC COMPOSITION FOR DETECTING GLUCOSE

Galen F. Collins, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Dec. 9, 1959, Ser. No. 858,309
13 Claims. (Cl. 23—253)

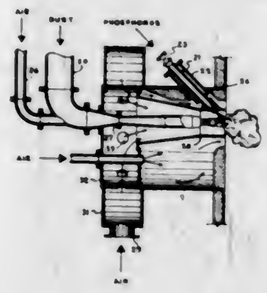
1. A test indicator for detecting glucose which comprises a bibulous material containing therein a mixture of glucose oxidase, peroxidase, a color forming substance oxidizable by hydrogen peroxide in the presence of said peroxidase, a buffer for maintaining the pH of said mixture at about 4 to about 6 in the presence of urine, and a surface-active agent for enhancing color formation occurring on contact of said indicator with glucose-positive urine.

3,050,374
PHOSPHORUS BURNER ASSEMBLY

Reynold B. Burt, Sheffield, and James C. Barber, Florence, Ala., assignors to Tennessee Valley Authority, a corporation of the United States

Filed Mar. 30, 1959, Ser. No. 803,039
1 Claim. (Cl. 23—277)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A burner structure for efficiently eliminating the presence of lower oxides of phosphorus in the production of phosphorus pentoxide powders produced by mixing a stream of molten phosphorus and a stream of air which comprises a substantially cylindrical inner-body member having a central duct terminating in a first outlet for the passage of a stream of first reactant therethrough, a substantially cylindrical first outer-body member of larger diameter than said inner-body member and disposed about said inner-body member to define a first annular passageway therebetween and terminating in the form of a first inwardly flared passageway coaxial with and extending from the periphery of said first outer-body member inwardly to juxtaposed relationship with the peripheral terminating surface of said inner-body member, said first flared passageway being in the form of the peripheral surface of a frustum of a cone coinciding at its maximum diameter with said first outer-body member and coinciding at its minimum diameter with said inner-body member, whereby said first defined annular passageway contains a fluid heating medium which circulates therethrough and which medium is restrained from contact with materials to be mixed by such burner structure, a substantially cylindrical second outer-body member of larger diameter than said first outer-body member and disposed about said first outer-body member to define a second annular passageway therebetween and terminating in a second outlet adjacent to said first outlet for the passage of a stream of second reactant therethrough, said second

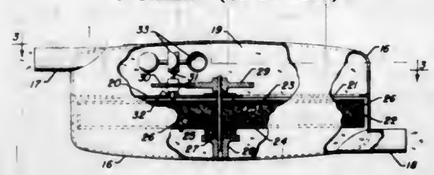


outlet having the form of a second inwardly flared passageway coaxial with and extending inwardly from the periphery of said second outer-body member, said second flared passageway being in the form of the peripheral surface of a frustum of a cone, the largest diameter of which coincides with said second outer-body member, the smallest diameter of which is substantially equal to the outer diameter of said first outer-body member, said second flared passageway being coaxial with said first outer-body member, and having an apex angle substantially equal to the apex angle of said first inwardly flared passageway, said burner structure in combination with a furnace having a port in a wall thereof, said burner structure disposed through said port, said first and second outlets in said burner assembly disposed within said furnace, and first and second reactant-supply means disposed outside of said furnace, said first reactant-supply means communicating with said central duct, said second reactant-supply means communicating with said second annular passageway, auxiliary air-supply means in combination with said burner structure, said auxiliary air supply means disposed adjacent to and in communication with said port, means independent of said air-supply means for controlling the flow of first reactant through said central duct, and means in combination with said burner structure for introducing an air-borne solid reactant to said auxiliary air-supply means upstream of said first and second reactant outlets.

3,050,375
MOVING BED CATALYTIC CONVERTER

Herman S. Bloch, Skokie, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed July 22, 1960, Ser. No. 44,651
9 Claims. (Cl. 23—288)

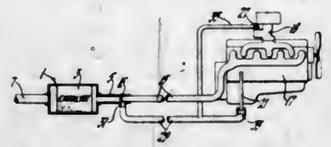


1. A catalytic converter for waste gases, comprising in combination, a confined housing, a perforate catalyst retaining section rotatably supported within the central portion of said housing, a gas inlet section adjacent to and connecting directly with only a fractional portion of said catalyst section, a gas outlet section adjacent to and communicating with another portion of said catalyst retaining section, a gas inlet port to said gas inlet section and a gas outlet port from said gas outlet section, and a plurality of vane means connective with said rotatable catalyst retaining section and positioned within the gas flow path through said housing whereby said catalyst section is caused to rotate by the gas flow.

3,050,376
APPARATUS FOR DISPOSAL OF CARBURETOR AND CRANKCASE FUMES

Ralph W. Bishop and Joseph T. Wentworth, Royal Oak, and Lloyd L. Withrow, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 6, 1958, Ser. No. 713,667
1 Claim. (Cl. 23—288)



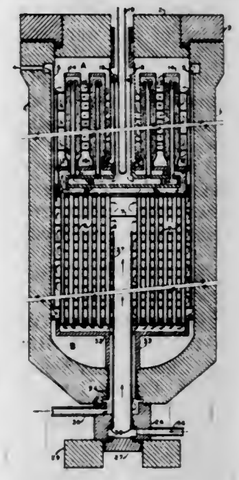
A system for minimizing air pollution due to operation of internal combustion engines while minimizing disturbance of normal engine operation comprising a catalytic converter having a gas inlet, an air inlet pipe connected with said gas inlet, an engine exhaust pipe connected with said gas inlet and cooperating with said air inlet pipe so as to constitute an aspirator for drawing air therein, crankcase vent tube interconnected with the engine crankcase, a carburetor vent tube interconnected with the carburetor of the engine, and the end of said air inlet pipe remote from the catalytic converter being formed with two branches, one branch being positioned sleevedly about and spaced apart from the outside surface of said crankcase vent tube and the other branch being sleevedly positioned about and spaced apart from the outside surface of said carburetor vent tube to enable the entrainment of venting fumes by the aspirated air.

3,050,377
CONVERTER

Axel Christensen, Stamford, Conn., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed July 21, 1958, Ser. No. 749,860
7 Claims. (Cl. 23—289)

1. An apparatus for carrying out exothermic chemical reactions which comprises a converter shell with internal heat exchanger and reaction tubes containing a body of catalyst therein, baffle means to direct the gas about the tubes placed in the heat exchange section, means to collect the gases and means to direct said gases from the heat exchange section to that portion of the catalyst tubes which is farthest from the heat exchange section said latter means defining an annular space between the shell and the catalyst tube section, baffle means to direct the gases about the catalyst tubes to the section of said catalyst-containing tubes nearest the heat exchange sec-

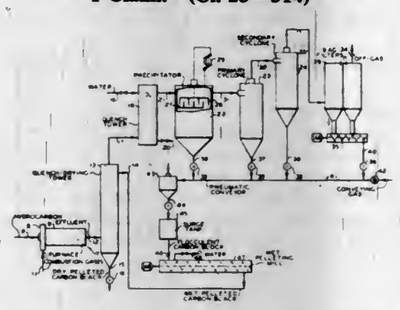


tion, means for collecting unreacted gases and distributing said unreacted gases to gas-carrying tubes embedded within the catalyst bed and in connection arrangement with the tubes containing the catalyst to define an annular bed of catalyst to direct the gases to the section of the catalyst-containing tubes farthest from the heat exchange section and to direct the unreacted gases through the catalyst, means to collect the reacted gases and direct said gases through tubes within the heat exchange section and means to allow gases from the heat exchange section to flow out of the converter.

3,050,378
PRODUCTION OF DRY CARBON BLACK PELLETS

Carl M. Kron, Houston, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 8, 1958, Ser. No. 778,730
1 Claim. (Cl. 23—314)



In a process for drying wet pelleted carbon black, wherein a stream of hot gaseous effluent from a carbon black furnace is quenched with water in a secondary quench zone, the resulting quenched effluent is passed to a gas-solids separation zone, and the resulting separated finely divided carbon black is wet pelleted, the improvement comprising introducing the resulting wet pelleted

carbon black having a moisture content in the range of 40 to 55 percent into the upper portion of a vertical quench-drying zone, introducing said stream of gaseous effluent from said furnace directly into the lower portion of said quench-drying zone at a temperature in the range of 1000 to 2500° F. and at a velocity sufficient to impede the settling of said carbon black in said latter zone, tending to suspend the same, and sufficient to insure substantially complete drying of said pelleted carbon black, countercurrently contacting in the latter zone a downwardly descending stream of said wet pelleted carbon black with said gaseous effluent so as to effect substantially complete drying of said wet pelleted carbon black to a moisture content of about 1 percent or lower and substantial quenching and cooling of said gaseous effluent, the only moisture entering said quench-drying zone being that found in said wet pelleted carbon black, withdrawing the resulting quenched and cooled effluent from the upper end of said quench-drying zone and passing said effluent to said secondary quench zone, and withdrawing dried carbon black pellets from the lower end of said quench-drying zone as the product of the process.

3,050,379
BREAK-IN COMPOSITIONS FOR INTERNAL COMBUSTION ENGINES

Albert Gordon Bell, Chester, and Sidney R. Epton, Whitby, Ellesmere Port, England, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed June 25, 1959, Ser. No. 822,738
Claims priority, application Great Britain Aug. 12, 1958
2 Claims. (Cl. 44—58)

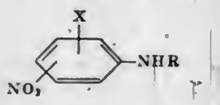
1. In breaking in internal combustion engines with a mineral oil-fuel mixture in which the mineral oil has a viscosity index of from about 30 to about 60 and a viscosity of from about 10 to about 100 SUS at 100° F., the improvement comprising adding to the fuel the mineral oil as defined above, said oil containing only a small amount of oil-soluble chromium C_{8-30} alkyl salicylate, the chromium C_{8-30} alkyl salicylate being in a concentration of from about 0.1 to about 2.5 grams of chromium per gallon of mineral oil-fuel mixture.

3,050,380
METHOD AND PRODUCT FOR SUPPRESSING THE NITRIFICATION OF AMMONIUM NITROGEN IN SOIL

Cleve A. I. Goring, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 16, 1957, Ser. No. 653,061
13 Claims. (Cl. 71—1)

1. A method useful for suppressing the nitrification of ammonium nitrogen in soil and preventing rapid loss of ammonium nitrogen therefrom, and improving plant nutrition therein which comprises impregnating soil below the soil surface in the growing area thereof with a nitroaniline compound in an amount of from about 2 to 150 parts by weight per million parts by weight of soil, wherein said nitroaniline compound is selected from the group consisting of (1) nitroanilines having the formula



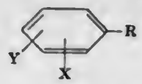
wherein X represents a member of the group consisting of hydrogen, methyl and chlorine, and R represents a member of the group consisting of hydrogen and methyl; and (2) salts of said nitroanilines.

3,050,381
METHOD AND PRODUCT FOR TREATING SOIL TO SUPPRESS THE NITRIFICATION OF AMMONIUM NITROGEN THEREIN

Cleve A. I. Goring, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 16, 1957, Ser. No. 653,064
13 Claims. (Cl. 71—1)

1. A method useful for suppressing the nitrification of ammonium nitrogen in soil and preventing rapid loss of ammonium nitrogen therefrom, and improving plant nutrition therein which comprises impregnating soil below the soil surface in the growing area thereof with a haloaniline compound in an amount of from about 2 to 150 parts by weight per million parts by weight of soil, wherein said haloaniline compound is selected from the group consisting of (1) haloanilines having the formula



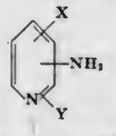
wherein X represents a member of the group consisting of hydrogen, methyl, chlorine, bromine and fluorine; Y represents a member of the group consisting of fluorine, chlorine and bromine; and R represents a member of the group consisting of amino, dimethylamino, lower alkylamino, lower alkenylamino and lower alkynylamino; and (2) salts of said haloanilines.

3,050,382
METHOD OF APPLYING AN AMINOPYRIDINE COMPOUND TO SOIL AND THE PRODUCT THEREOF TO PREVENT NITRIFICATION IN SOIL

Cleve A. I. Goring, Garden Grove, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 16, 1957, Ser. No. 653,067
13 Claims. (Cl. 71—1)

1. A method useful for suppressing the nitrification of ammonium nitrogen in soil and preventing rapid loss of ammonium nitrogen therefrom, and improving plant nutrition therein which comprises impregating soil below the soil surface in the growing area thereof with an aminopyridine compound in an amount of from about 2 to 150 parts by weight per million parts by weight of soil, wherein said aminopyridine compound is selected from the group consisting (1) aminopyridines having the formula



wherein X represents a member of the group consisting of hydrogen and methyl and Y represents a member of the group consisting of hydrogen, chlorine and bromine; and (2) salts of said aminopyridines.

3,050,383
FERTILIZER

Joseph F. Wilson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 10, 1958, Ser. No. 747,586
12 Claims. (Cl. 71—11)

1. A method of producing a high analysis granular fertilizer, which comprises substantially simultaneously admixing low analysis organic waste fertilizer material with an aqueous ammoniacal solution comprising ammonia and an acid selected from the group consisting of sulfuric acid and phosphoric acid, the amount of said aqueous ammoniacal solution employed being sufficient to provide ammonia in the amount of about 2 to 20 weight percent of the reaction mixture, the amount of said acid employed being about 2.5 to 6 parts of acid for each part by weight of ammonia in the reaction mixture, granulating the resulting reaction mixture, and recovering the resulting high analysis granular fertilizer product, said admixing and granulating being carried out at temperatures below about 300° F.

3,050,384
MANUFACTURE OF COMPLEX FERTILIZERS

Bernard Bigot, a Grand-Quevilly, France, assignor to Compagnie de Saint-Gobain, Paris, France

No Drawing. Filed May 27, 1959, Ser. No. 816,057
Claims priority, application France June 10, 1958
9 Claims. (Cl. 71—39)

1. A method of making fertilizer of which substantially all the phosphate ion is available as plant food, from phosphate of fertilizer grade comprising calcium phosphate by the method in which nitric acid is reacted with the phosphate, the product is neutralized by ammoniation, and the ammoniated product is converted by carbonatation, which consists in its essential steps of reacting phosphate of fertilizer grade containing calcium phosphate with nitric acid, neutralizing the free acidity of the reaction mass by introducing ammonia until the pH is in the range 4.5 to 6, adding CO_2 and additional ammonia in a proportion of 0.1 to 0.4 mole CO_2 to each 2 moles NH_3 until the pH attains 7, adding additional CO_2 and ammonia to the reaction mass of pH 7 in a proportion of 1.05 to 1.5 moles of CO_2 to each 2 moles NH_3 until the conversion is completed, maintaining the temperature in the foregoing steps below boiling, introducing a potassium salt after the ammoniation begins, drying the product of the successive ammoniations and carbonatations, at a temperature below 70° C., to about 0.5 to 1% water content while excluding humid air, and storing the product with exclusion of humid air.

3,050,385
SLOW RELEASE FERTILIZERS AND THEIR MANUFACTURE

Harry W. Parker, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 25, 1960, Ser. No. 44,896
6 Claims. (Cl. 71—64)

1. The process for the production of a new fertilizer composition comprising the steps of: comminuting an oil shale; admixing with said oil shale a water soluble synthetic fertilizer material selected from the group consisting of inorganic salts of nitrogen, phosphorous, and potassium; heating the resulting admixture in the range between 250–650° F., and pressing the heated admixture in the range of 500–5000 p.s.i. in a pellet molding zone to form a pelleted fertilizer composition consisting essentially of between 90 and 10 weight percent of said oil shale, and the remainder consisting essentially of between 10 and 90 weight percent of said fertilizer material.

3,050,386
METHOD OF PRODUCING SINTER ELECTRODES

Hans Hermann von Döhren and Christa Walther, Frankfurt am Main, Germany, assignors to Accumulatoren Fabrik A.G., Hagen, Westphalia, Germany

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,609
Claims priority, application Germany Nov. 22, 1958
15 Claims. (Cl. 75—223)

1. A method of producing porous sinter electrodes for alkaline storage batteries, comprising the steps of forming an intimate mixture of a metal powder adapted to be sintered and of a pulverulent oxganometallic compound adapted upon heating to the sintering temperature of said metal powder to form a gaseous decomposition product including a reducing gas and a metal adapted to be at said sintering temperature; pressing said mixture so as to form an electrode blank; and heating the thus formed electrode blank to said sintering temperature so as to sinter said metals and simultaneously to release said reducing gas the latter preventing oxidation of said metals, whereby a porous sinter electrode substantially free of oxides of said metals is formed.

3,050,387
LIGHT-SENSITIVE MATERIAL

Wilhelm Neugebauer, Oskar Süs, and Hans-Reiner Stumpf, all of Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J.

No Drawing. Filed July 28, 1958, Ser. No. 751,112
Claims priority, application Germany Aug. 1, 1957
31 Claims. (Cl. 96—33)

1. A presensitized printing plate of high yield comprising a base material having a layer thereon comprising a quinone-(1,4)-diazide and a resinous product selected from the group consisting of interpolymeric resins of maleic anhydride and vinyl compounds and ethers of a phenol-aldehyde resin with chloroacetic acid.

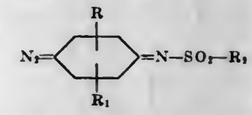
2. A presensitized printing plate according to claim 1 in which the layer also contains a light-sensitive iminoquinone diazide.

3,050,388
PRESENSITIZED PRINTING PLATES AND METHOD FOR THE PRODUCTION THEREOF

Wilhelm Neugebauer, Oskar Süs, and August Rebenstock, all of Wiesbaden-Biebrich, Germany, assignors, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Filed July 28, 1958, Ser. No. 751,113
Claims priority, application Germany Aug. 3, 1957
45 Claims. (Cl. 96—33)

1. A presensitized printing plate comprising a base material having a coating thereon comprising a resinous polyacrylic acid and a compound selected from the group consisting of an iminoquinone-diazide and diazonium salts thereof, the diazide having the formula



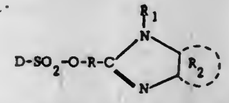
in which R and R_1 are selected from the group consisting of hydrogen, alkyl, alkoxy, and halide radicals, and R_2 is an aryl group.

3,050,389
LIGHT-SENSITIVE MATERIAL FOR THE PHOTOMECHANICAL PREPARATION OF PRINTING PLATES

Oskar Süs, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Murray Hill, N.J., a corporation of New Jersey

No Drawing. Filed July 28, 1958, Ser. No. 751,114
Claims priority, application Germany Aug. 3, 1957
26 Claims. (Cl. 96—33)

5. A presensitized printing plate comprising a base material having a coating thereon comprising a compound having the formula



in which D is a quinone-(1,2)-diazide radical, R and R_2 are arylene groups, and R_1 is selected from the group consisting of alkyl, aralkyl and aryl groups.

3,050,390

PHOTOPOLYMERIZATION OF VINYL MONOMERS BY MEANS OF SILVER COMPOUNDS AS CATALYSTS PROMOTED BY AMPHOTERIC METAL OXIDES

Steven Levinos, Vestal, and Fritz W. H. Mueller, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,275

25 Claims. (Cl. 96—35)

1. The process for photopolymerizing normally liquid to normally solid ethylenically unsaturated monomers, which comprises irradiating such monomers in the presence of water while utilizing a catalyst consisting essentially of a mixture of a radiation sensitive compound of silver which is stable in the dark and a promoter compound selected from the group consisting of compounds of zinc, zirconium, titanium and silicon, at least a portion of said last named compounds being selected from the group consisting of zinc oxide, zirconium dioxide, titanium dioxide and colloidal silicon dioxide.

3,050,391

PHOTOGRAPHIC FILM WITH FINE GRAIN SILVER CHLORIDE UNDERLAYER

Thomas R. Thompson and Robert H. Clark, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 30, 1957, Ser. No. 705,784

5 Claims. (Cl. 96—61)

1. A light-sensitive material carrying on a plastic transparent support in the following order, a subbing layer, a slow speed gelatinous silver chloride emulsion layer in which the silver chloride particles are of submicroscopic size and have a median particle size on the order of 50 millimicrons, and in direct contact with said silver chloride emulsion layer, a permanent high-speed gelatinous silver halide emulsion layer in which the silver halide emulsion is selected from the group consisting of silver bromide and silver bromoiodide emulsions and has a relative speed ranging from 45 to 138, the relative speed of said high-speed silver halide emulsion exceeding that of said silver chloride emulsion by a factor ranging from 50 to 2000, the speed of said lower silver chloride layer being so slow that no silver image is formed therein under conditions of exposure black and white development and fixing which give a high density silver image in the top layer, said relative speed being expressed in terms of reciprocal candle seconds to develop a density of 0.2.

3,050,392

OXIDATION-STABLE DEVELOPER COMPOSITIONS

John Eerde, New York, N.Y., assignor to Mergenthaler Linotype Company, a corporation of New York

No Drawing. Filed Aug. 1, 1958, Ser. No. 752,441

9 Claims. (Cl. 96—61)

8. A one-bath photographic developer-fixer having increased stability against aerial oxidation consisting essentially of an aqueous solution of benzotriazole; potassium bromide; hydroquinone; sodium sulfite; sodium thiosulfate; a compound selected from the group consisting of monomethyl para aminophenol sulfate and 1-phenyl-3-pyrazolidone; a compound selected from the group consisting of alkali metal phosphate, alkali metal carbonate and alkali metal hydroxide; and a concentration of from about 1% to about 10% alkali metal arsenite.

3,050,393

FILTER LAYER FOR PHOTOGRAPHIC ELEMENTS

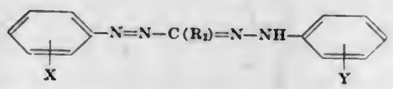
Eric Macdonald, Prestwich, Manchester, England, assignor to Ilford Limited, Ilford, Essex, England, a British company

No Drawing. Filed May 26, 1960, Ser. No. 31,809

Claims priority, application Great Britain June 26, 1959

3 Claims. (Cl. 96—84)

1. A photographic material which comprises a support carrying at least one silver halide emulsion layer and a filter layer formed of a colloid containing a dye of the general formula:



wherein X and Y are each selected from hydrogen, halogen, alkyl, alkoxy, sulphonic, sulphonylamido and carboxylic groups, and R_2 is selected from hydrogen, alkyl and aryl groups.

3,050,394

METHOD OF INCORPORATING COLOR COUPLERS IN HYDROPHILIC COLLOIDS

Aaron Ben-Ezra, Binghamton, N.Y., and Chester E. Rose, Montrose, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 30, 1959, Ser. No. 843,374

7 Claims. (Cl. 96—100)

1. The method of incorporating in a light sensitive gelatin silver halide emulsion, a color former fast to diffusion and capable of forming upon color development with a primary aromatic amino developing agent, a dye image selected from the class consisting of azomethine, indoaniline and phenazonium dye images, said color former containing a benzimidazole nucleus connected through its carbon atoms in the 2-position to the residue of the color forming molecule which is reactive with the oxidation product of a primary developing agent and which contains a reactive group selected from the class consisting of a reactive methylene, ethenol and phenolic hydroxy group said benzimidazole nucleus being substituted on one of the nitrogen atoms by an aliphatic hydrocarbon radical containing at least 10 carbon atoms and substituted in the benzene portion by a water solubilizing group which comprises dissolving said color former in dimethyl sulfoxide, diluting the resultant solution with an aqueous solution containing a surface active agent and then adding the resultant dispersion to the liquid gelatin silver-halide emulsion prior to coating it upon a suitable support.

3,050,395

DIRECT POSITIVE EMULSIONS CONTAINING N-OXIDES

George Frank Duffin, Ilford, England, assignor to Ilford Limited, Ilford, England, a British company

No Drawing. Filed Jan. 24, 1961, Ser. No. 84,487

Claims priority, application Great Britain Jan. 29, 1960

11 Claims. (Cl. 96—101)

1. A direct positive photographic element comprising a fogged gelatino silver chloride emulsion containing a desensitising compound which is a nitro derivative of a heterocyclic compound selected from the class consisting of pyridine, quinoline, isoquinoline, thiazole, benzthiazole, oxazole, benzoxazole, naphthathiazole, naphthoxazole, benzo-2,1,3-oxadiazole, pyrimidine and quinazoline, and wherein at least one hetero nitrogen atom is in the form of an N-oxide, the proportion of desensitising compound being 0.1 to 2 g. per 100 g. of silver chloride.

3,050,396

METHOD OF PRESERVING HAY

Jesse A. Haase, R.R. 5, Martinsville, Ind.

No Drawing. Filed Aug. 19, 1960, Ser. No. 50,578

9 Claims. (Cl. 99—8)

1. The method of preserving hay which comprises the steps, in any sequence, of encasing a compressed mass of hay in a substantially air-tight container, and treating the hay to inhibit the growth and reproduction of bacteria, spores and mold.

3,050,397

ALCOHOLIC BEVERAGE AND PROCESS OF MAKING THE SAME

Robert B. Carroll, Doubling Road, Greenwich, Conn.

No Drawing. Filed Jan. 4, 1960, Ser. No. 50

15 Claims. (Cl. 99—30)

1. A synthetic alcoholic beverage having a simulated aged flavor and substantially free from higher alcohols, consisting essentially of ethyl alcohol, and per 100 ml. of 100 proof ethyl alcohol, from 2 to 175 microliters of an organic ester of an aliphatic acid and an aliphatic alcohol having not over ten carbon atoms, from 2 to 150 microliters of n-propanol, and from 150 to 350 microliters of a non-toxic aliphatic alcohol-soluble polyol.

3,050,398

RAPID MATURATION OF ALCOHOLIC BEVERAGES

Robert B. Carroll, Doubling Road, Greenwich, Conn.

No Drawing. Filed Jan. 4, 1960, Ser. No. 51

9 Claims. (Cl. 99—47)

1. A process for the rapid maturation of alcoholic beverages by preparing a high ethyl acetate beer, which comprises cofermenting a beer with a yeast strain capable of fermenting carbohydrates to alcohol and a Penicillium variety capable of fermenting carbohydrates to ethyl acetate, and distilling the alcohol content in the resulting feremented wort.

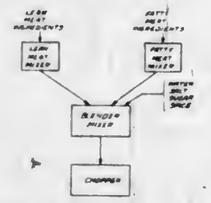
3,050,399

PREPARATION AND COMPOSITION CONTROL OF SAUSAGE MATERIALS

Elwood W. Kielsmeier and William B. Gara, Madison, Wis., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois

Filed Jan. 11, 1960, Ser. No. 1,569

7 Claims. (Cl. 99—109)



1. In the method of preparing sausage emulsion of predetermined moisture, fat and protein contents the steps which comprise, preparing a plurality of separate homogeneous masses of comminuted meat at least one being on the lean side and at least one being on the fatty side, determining the moisture, fat and protein contents of each mass by assaying for at least one of these constituents, and blending meat from said masses in proportions to yield a blend having said predetermined content of moisture, fat and protein.

3,050,400

SAUSAGE PRODUCT HAVING IMPROVED PHYSICAL PROPERTIES AND METHOD OF PRODUCING THE SAME

Arthur E. Poarch, Mill Valley, and Eugene Gwozdz, Petaluma, Calif., assignors to Western Dairy Products, Inc., San Francisco, Calif., a corporation of California

No Drawing. Filed Aug. 19, 1959, Ser. No. 834,656

5 Claims. (Cl. 99—109)

1. A method of making a sausage product comprising treating liquid skim milk to replace 20–70% of the calcium content thereof with sodium ion, thereafter replacing sodium ion with hydrogen ion to the extent required to reduce the pH to the range of about 6.0–7.0, concentrating and drying said skim milk to obtain dry skim milk, and compounding an amount of said dry skim milk with comminuted meat.

3,050,401

PROCESS AND COMPOSITION FOR PRESERVATION AND IMPROVED COLOR RETENTION OF MEATS

August R. Kohler, Trenton, N.J., Wilbur H. Miller, Springdale, Conn., and Harold M. Windlan, Trenton, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 10, 1958, Ser. No. 747,598

8 Claims. (Cl. 99—157)

1. A method of preserving the quality and appearance of fresh cut meat which comprises contacting the surface of fresh cut meat with a solution containing from 0.5 to 100 p.p.m. of a broad-spectrum antibiotic and myprozine in amounts from 0.5 to 500 p.p.m. the amounts of both antibiotic and myprozine being based on the weight of the meat.

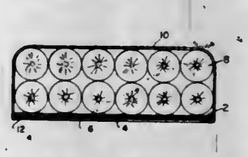
3,050,402

METHOD OF PACKAGING A FOODSTUFF

Robert L. Dreyfus and John W. Harrison, Arlington, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed July 22, 1959, Ser. No. 828,770

1 Claim. (Cl. 99—171)



A method of packaging a foodstuff comprising positioning the foodstuff on a fibrous cellulosic backing having an external coating of regular polyethylene, placing a cover of irradiated, biaxially oriented polyethylene, said irradiation being to an extent of 6 to 20 megarad., over said foodstuff and slightly overlapping said backing, heat sealing the overlapped portion of said cover to the external coating of polyethylene on said backing and then heat shrinking said cover tightly around said foodstuff.

3,050,403

CANNING OF FISH

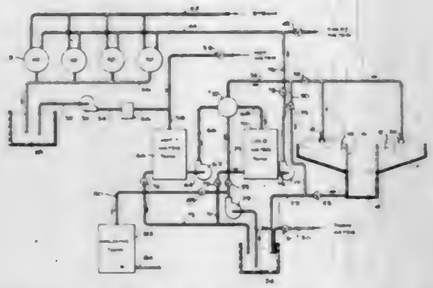
Reginald T. Erickson, San Juan Capistrano, Calif., assignor to Star-Kist Foods, Inc., Terminal Island, Calif., a corporation of California

Filed June 3, 1960, Ser. No. 33,806

7 Claims. (Cl. 99—188)

1. In the canning of initially frozen fish by means including can retort means, the steps comprising: providing a first body of liquid that is removed from said can retort means at a first temperature; providing a second body of liquid that is physically isolated from said first liquid body; circulating said first liquid body through a heat exchange zone; and circulating said second liquid body

over said fish and through said heat exchange zone whereby the heat contained in said first liquid body as it is removed from said retort means is transferred to said sec-



ond liquid body so as to raise the temperature thereof while lowering the temperature of said first liquid body from said first temperature.

3,050,404

METHOD FOR PREPARING FROZEN FRENCH FRIED POTATOES

Edwin Traisman, 1402 Pocohontas Drive, Madison, Wis.

No Drawing. Filed May 1, 1961, Ser. No. 106,530
2 Claims. (Cl. 99—193)

1. A method of preparing and preserving potatoes comprising, cutting the potatoes into pieces, washing the pieces to remove excess outside starch, cooking the washed pieces in hot cooking oil for a time period sufficient to reduce the moisture content of the pieces within a range of about 41% to 54% inclusive whereby to reduce ice crystal formation during subsequent freezing operations and minimize the rupture of cooked starch granules in the potato body, removing the pieces from the cooking oil, and freezing the pieces.

3,050,405

FOOD PRESERVING PROCESS

Samuel H. Hopper, Indianapolis, Ind., assignor to Economics Laboratory, Inc., a corporation of Delaware

No Drawing. Filed June 8, 1960, Ser. No. 34,645
8 Claims. (Cl. 99—222)

1. The process of treating food normally subject to spoilage by reason of bacterial growth which comprises the addition of a germicidal material in the form of an aqueous solution of BPL to thereby control the microbiological growth of bacteria in the food to insure against the deterioration of the treated food.

3,050,406

COATING MATERIAL ADDITIVE

Wesley N. Karlson, 1015 St. James Place, Park Ridge, Ill.

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,244
12 Claims. (Cl. 106—14)

1. An additive for incorporation in film forming coating compositions of the type including lacquers, sealers, solvent base paints, oil base paints, water base paints, and resin emulsion and latex emulsion paints, said additive comprising a mixture of chemicals consisting of essentially about 60% sodium polyphosphate, 20% monosodium phosphate, 10% sodium acid pyrophosphate and 10% of a reducing agent, said additive being effective to render the final coating film improved with respect to bonding and adherence characteristics and with respect to resistance to weathering, aging and to chemical agents.

3,050,407

SINGLE CRYSTAL GARNETS

James W. Nielsen, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 25, 1959, Ser. No. 836,008
7 Claims. (Cl. 106—42)

1. The method of producing single crystals of the garnet structure comprising a compound represented by the formula

$$A_3B_5O_{12}$$

where

A is at least one element selected from the group consisting of yttrium and the rare earth elements of atomic number between 57 and 71 inclusive,

B is at least one metal selected from the group consisting of iron, aluminum, scandium, indium, gallium and chromium and

O is oxygen,

comprising the steps of forming a melt consisting essentially of A, B, PbF_2, together with lead oxide, the latter in an amount of from 0 to 400 weight percent based on the amount of PbF_2 present, and cooling the melt to produce single crystals.

3,050,408

COMPOSITE LEAD-OXIDE-SILICA PARTICLES

Joseph A. Orsino, Mountain Lakes, N.J., and Edward J. Dunn, Jr., Port Washington, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 28, 1959, Ser. No. 809,344
19 Claims. (Cl. 106—297)

5. A process for the manufacture of a silica cored lead oxide particle comprising the steps of preparing a slurry of silica and at least one lead oxide, said lead oxide being present in amount from 20% to 95%, including at least 5% red lead, and said silica being present in amount from 5% to 80%, all percentages being based on the combined total weight of silica and lead oxide, grinding said slurry for at least 4 hours deliquoring said slurry, and calcining the solid portion thereof for at least 2 and not more than 8 hours at elevated temperature, wherein said elevated temperature is from 450° C. to 600° C., the time and temperature of calcination being so related that the solid portion contains red lead throughout calcination.

3,050,409

MANUFACTURE OF REFRACTORY OXIDE COATINGS

Gerhard Bayer, Hinteregg, Zurich, Switzerland, assignor to Owens-Illinois Glass Company, a corporation of Ohio

No Drawing. Filed Nov. 30, 1959, Ser. No. 855,971
7 Claims. (Cl. 117—22)

1. In a method of forming a firmly adhering coating on ceramic refractory bodies in which the coating has a metallic phase of 20 to 40 percent by weight and a ceramic phase of 60 to 80 percent by weight, the steps including applying a layer comprising an (*a*) oxide selected from the group consisting of iron oxide, titanium oxide, nickel oxide, tungsten oxide, boric oxide, manganese oxide, and chromium oxide and (*b*) a metal selected from the group consisting of aluminum, silicon, zirconium, and magnesium; and thereafter igniting the layer whereby sufficient heat is exothermically developed from the chemical interaction of the metal and oxide as to fuse the layer to form a dense hard coating.

3,050,410

METHOD OF COATING ALUMINUM WITH LEAD

Joseph L. Greene, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed Sept. 15, 1960, Ser. No. 56,124
10 Claims. (Cl. 117—130)

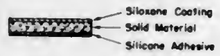
6. An immersion process for depositing lead and lead base alloys onto an aluminum body comprising the steps of immersing the aluminum body to be plated in a bath maintained between about 120° F. and 140° F. having an initial pH of 12.5 to 13.5 and containing the following in the concentrations indicated: lead ion about 0.0670 to 0.0720 gram-mole per liter, hydroxyl ion about 0.125 to 0.152 gram-mole per liter, tartrate ion about 0.380 to 0.440 gram-mole per liter and gelatin about 5 to 10 grams per liter.

3,050,411

RELEASE COATINGS COMPRISING THE REACTION PRODUCT OF 0.1–5 PERCENT METHYLHYDROGENPOLYSILOXANE AND 95–99.9 PERCENT PERFLUOROALKYLSILOXANE

Joseph W. Kell, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

Filed Sept. 16, 1959, Ser. No. 840,231
15 Claims. (Cl. 117—68.5)



5. An article of manufacture comprising a solid material coated with at least 0.1 percent by weight of a siloxane coating prepared by curing a mixture consisting essentially of (1) from 0.1 to less than 5 percent by weight methylhydrogenpolysiloxane and (2) from more than 95 to 99.9 percent by weight of a siloxane having a viscosity of at least 5000 cs. at 25° C. and consisting of at least 90 mol percent units of the formula

$$RCH_2CH_2Si(CH_3)O$$

in which each R is a perfluoroalkyl of less than four carbon atoms and not more than 10 mol percent units of the formula

$$R'_nSiO_{\frac{4-n}{2}}$$

in which each R′ is a monovalent hydrocarbon radical of less than seven carbon atoms and each *n* has a value selected from the group consisting of 1, 2 and 3, siloxane (2) having an average degree of substitution ranging from 1.9 to 2.0, substantially all of the molecules in siloxane (2) having attached thereto at least two silicon-bonded radicals selected from the group consisting of hydroxyl and alkoxyl radicals of less than 5 carbon atoms.

3,050,412

DISPERSION COATINGS

Beresford Coe, Riverton, N.J., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed May 14, 1959, Ser. No. 813,076
22 Claims. (Cl. 117—75)

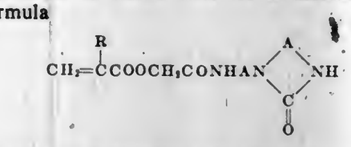
20. A process of coating a substrate which comprises applying to the substrate a composition comprising

(1) a primer solution and (2) a fluid dispersion,

the primer comprising a solution in a volatile organic liquid of a polymer of an acrylic monomer of the formula

$$ROOCC(R^1)=CH_2$$

in which R is an alkyl group containing 1 to 8 carbon atoms, and R^1 is selected from the group consisting of a hydrogen atom and a methyl group, and a maximum of about 10% of a monomer of the formula



in which R is selected from the group consisting of a hydrogen atom and a methyl radical, and A is an alkylene chain containing from 2 to 3 carbon atoms, and said primer solution being free of the dispersion coating,

applying the primer onto the substrate,

heating the applied primer to at least a temperature of 300° to 400° F. and sufficient to remove substantially all volatile, organic liquid,

applying over the primed substrate a fluid dispersion of vinyl halide having a molecular weight of at least 20,000 dispersed in a liquid, non-volatile, latent, organic plasticizer which is a non-solvent for the polyvinyl polymer at ordinary temperature but which is a plasticizer for the polyvinyl halide at elevated temperature, and

heating the applied material to at least a minimum temperature of about 300° to 400° F., whereby the substrate is coated with a homogeneous adhering coating.

3,050,413

QUICK DRYING PRINTING INK FOR COATING MATERIALS AND METHOD OF DRYING SAME

Benjamin L. Sites, Elmhurst, and Meyer S. Agruss, Chicago, Ill., assignors to Miehle-Goss-Dexter, Incorporated, a corporation of Delaware

No Drawing. Filed Feb. 1, 1956, Ser. No. 562,671
17 Claims. (Cl. 117—93)

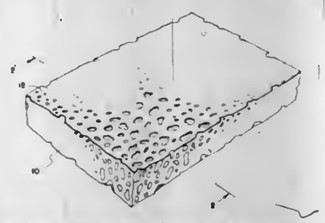
1. A method for rapidly indurating a drying oil having a conjugated system of double bonds, which comprises forming a non-aqueous solution of said drying oil and an oil soluble acyl chloride catalyst, forming a film of said solution, and irradiating said film with actinic energy.

3,050,414

COATED FOAM SCOURING PAD

Albert F. Reilly, Clarence, N.Y., assignor to General Mills, Inc., a corporation of Delaware

Filed May 27, 1960, Ser. No. 32,319
6 Claims. (Cl. 117—98)



1. A scouring pad comprising a flexible, resilient foam body having a frangible organic coating covering at least a portion of one surface thereof.

3,050,415

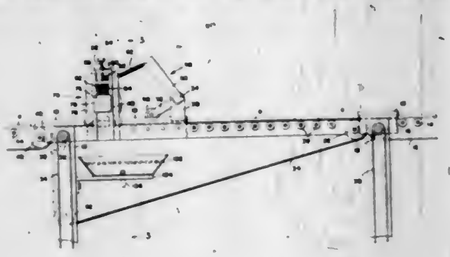
METHOD AND APPARATUS FOR APPLYING A LIQUID TO PANELS

Robert Clarence Brown, Memphis, Tenn., assignor, by mesne assignments, to E. L. Bruce Co. (Incorporated), a corporation of New York

Filed Sept. 18, 1959, Ser. No. 840,923
5 Claims. (Cl. 117—102)

1. Apparatus for applying a penetrating seal composition to grooved wood or cellulosic composition board

panels comprising a roller having a resilient covering, a pipe mounted above said roller and having a plurality of spaced openings for the delivery of an amount of penetrating seal composition in excess of the amount to be retained by the panels, said pipe being offset from the center line of the roller towards the direction from which the panels are conveyed, a foraminous conveyor passing under said roller, said roller and conveyor being spaced to accommodate the conveyance of the panels under said roller and in contact with the roller, said roller acting

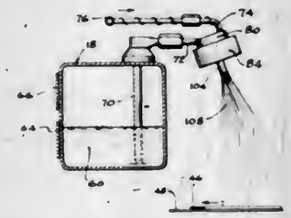


as a squeegee to remove excess penetrating seal composition and forcing the said composition into the panel whereby the penetrating seal composition is uniformly applied to the panel including the grooved portions of the panel and excess penetrating seal composition passes through the conveyor when a panel is not under said roller to prevent any substantial coating of the side of the panel facing the conveyor and a trough to catch the excess penetrating seal composition passing through the conveyor.

3,050,416
METHOD OF PREVENTING OFFSET ON A FRESHLY PRINTED SHEET

James G. Yahnke, deceased, late of Libertyville, Ill., by Grace Yahnke, executrix, Libertyville, and William E. Boyett, Libertyville, Ill., assignors, by direct and mesne assignments, to Oxy-Dry Sprayer Corporation, a corporation of New York

Filed May 27, 1957, Ser. No. 661,964
3 Claims. (Cl. 117—104)



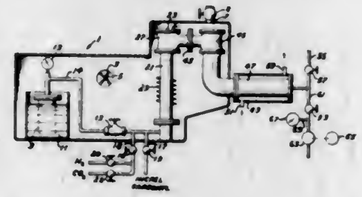
3. The method of preventing ink offset which comprises simultaneously setting the ink and applying a protective layer of wax particles thereover by spraying a stream of molten wax and simultaneously dispersing said stream into small particles by means of compressed steam.

3,050,417
CHROMIUM NICKEL ALLOY GAS PLATING

Herman R. Nack and Jack J. Bulloff, Columbus, and John R. Whitacre, Dayton, Ohio, assignors, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York

Filed Mar. 18, 1954, Ser. No. 417,132
3 Claims. (Cl. 117—107)

1. In a process of producing a highly adherent alloy coating on a metal base, the steps of providing sources of heat decomposable gaseous metal compounds of the metals which are to constitute the alloy, heating a metal base in an evacuated zone to a temperature which is above the decomposition temperature of each of said gaseous metal compounds, flowing a gaseous stream of one of the gaseous metal compounds over the base to

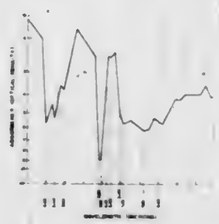


effect the deposition of a thin coating of one metal thereon, reducing the temperature of the base to below that of the effective decomposition point of only that gaseous metal compound which decomposes at the highest temperature, flowing a copious stream of mixed gases of the gaseous metal compounds over the heated base, raising the temperature of the base to the effective decomposition point of the mixture of gaseous metal compound to effect deposition of the metals, and removing the gaseous products of the thermal decomposition with undecomposed gases from the evacuated zone.

3,050,418
PROCESS FOR IMPARTING WETTABILITY TO SHAPED HYDROPHOBIC POLYMERIC MATERIAL

Meyer Mendelsohn, New York, and Carl Horowitz, Brooklyn, N.Y., assignors, by mesne assignments, to Yardney International Corp., New York, N.Y., a corporation of New York

Filed Nov. 9, 1959, Ser. No. 851,881
28 Claims. (Cl. 117—118)



1. A process for preparing a novel, readily wettable, composition of matter which comprises heating polyvinyl alcohol and a polycarboxylic acid under esterifying conditions for a sufficient time to effect a partial esterification so as to produce an ester having unreacted groups selected from a class consisting of hydroxy and carboxy groups, and reacting said ester at elevated temperatures with a hydrophobic thermoplastic polymeric material having functional groups capable of reacting with said unreacted groups of said ester whereby chemical bonds are formed between said hydrophobic thermoplastic polymeric material and said ester.

17. A readily wettable composition of matter comprising the reaction product of a partial ester of polyvinyl alcohol and a polycarboxylic acid having unreacted groups selected from the class consisting of carboxy and hydroxy groups and a hydrophobic thermoplastic polymeric material having functional groups capable of reacting with said unreacted groups, said polymeric material being chemically bonded to said ester.

3,050,419
PROCESS FOR FIXING AMINOPLASTS IN THE WET STATE ON CELLULOSIC FIBROUS MATERIALS

Andreas Ruperti, Arlesheim, Switzerland, assignor to Ciba Limited, Basel, Switzerland

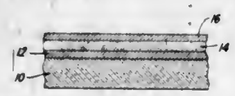
No Drawing. Filed Apr. 29, 1957, Ser. No. 655,515
Claims priority, application Switzerland May 8, 1956
2 Claims. (Cl. 117—138.5)

1. In a process for imparting to cellulosic fibrous material a water resistant impregnation protecting such material from attack by micro-organisms, without substantial change in the tensile strength of the said material, by treating it with an aqueous impregnating liquid of an aminoplast which contains a hardening catalyst, wherein after impregnating the material and removing mechanically the excess of impregnating liquid the aminoplast is hardened in and upon the fiber into the water-insoluble condition, the improvement consisting of heating the impregnated material to effect said hardening with retention of a substantial amount of the water of the impregnating liquid until the resin condensation is completed so that the condensation into the water-insoluble state is actually conducted in the presence of water originating from the impregnating liquid, the said hardening catalyst being a compound selected from the group consisting of diacetin, monochlorhydrin, dichlorhydrin, glycol diacetate, glycol methyl ether acetate, glycol ethyl ether acetate and diethyl tartrate.

3,050,420
RESISTOR

Moe Wasserman, Massapequa Park, N.Y., assignor to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Feb. 27, 1959, Ser. No. 796,156
3 Claims. (Cl. 117—201)



1. A non-linear resistor comprising a layer of essentially non-photoconductive cadmium sulfide powder embedded in glass enamel, first and second electrodes secured to opposite surfaces of said layer, said sulfide powder containing up to 2.4×10^{-4} gram atoms of copper per mole of sulfide.

3,050,421
SMOKING PREPARATION CONTAINING LAMINAR ALUMINA AND SMOKING UNIT CONTAINING SAME

Walter L. Haden, Jr., Metuchen, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed Feb. 25, 1960, Ser. No. 10,889
4 Claims. (Cl. 131—17)

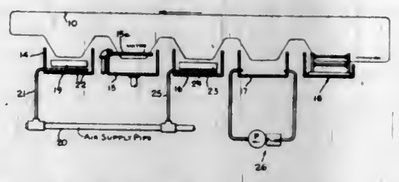
1. A smoking preparation comprising smoking tobacco mixed with a small amount of the laminar form of "X"-alumina, said alumina being further characterized by having an ASTM bulk density of about 2 lbs./cu. ft.

3,050,422
LENS CLEANING PROCESS

Theodore J. Zak, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York

Filed Feb. 18, 1960, Ser. No. 9,571
7 Claims. (Cl. 134—1)

1. The method of cleaning glass lenses comprising ultrasonically vibrating the lenses while they are disposed in a strong alkaline solution containing at least 48 percent

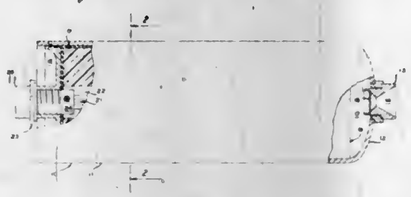


by weight of a strong alkali and simultaneously bubbling air through said solution.

3,050,423
SOLID PROPELLANT

Paul S. Hudson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed June 15, 1959, Ser. No. 820,556
8 Claims. (Cl. 149—19)



1. A castable solid propellant of the composite type, consisting essentially of 65 to 95 weight percent of a solid inorganic oxidzer and 5 to 35 weight percent of a polyurethane fuel-binder formed by the reaction of a polyisocyanate with a polyol copolymer of mixed cyclic ethers and a polyhydroxy crosslinking compound, said polyisocyanate being selected from the group consisting of benzene - 1,3-diisocyanate, benezene-1,4-diisocyanate, hexamethylene diisocyanate, toluene-2,4-diisocyanate, toluene-2,5-diisocyanate, diphenylmethane-4,4′-diisocyanate, diphenyl - 4,4′-diisocyanate, diphenyl-3,3′-dimethyl-4-4′-diisocyanate, 2-chloropropane-1,3-diisocyanate, diphenyl-3,3′-dimethoxy-4,4′-diisocyanate, naphthalene-1,5-diisocyanate, pentamethylene diisocyanate, tetramethylenediisocyanate, octamethylene diisocyanate, dimethylene diisocyanate, propylene-1,2-diisocyanate, benzene-1,2,4-triisocyanate, toluene-2,3-diisocyanate, diphenyl-2,2′-diisocyanate, naphthalene-2,7-diisocyanate, naphthalene-1,8-diisocyanate, toluene-2,4,6-triisocyanate, benzene-1,3,5-triisocyanate, benzene-1,2,3-triisocyanate, and toluene-2,3,4-triisocyanate, said cyclic ether being selected from the group consisting of epoxyethane, 1-phenyl-epoxyethane, 1-cyclohexyl-2-(4-chlorocyclohexyl)-epoxyethane, 1,2-diphenyl - epoxyethane, 1,2 - diphenyl-1-chloroepoxyethane, 1-cyclohexyl-2,3-epoxypropane, 1,2-epoxypropane, 1,3-epoxypropane, 1,2-epoxy-2-methylpropane, 3-chloro-1,2-epoxypropane, 3-bromo-1,2-epoxypropane, 2-methyl-1,2-epoxypropane, 3-phenyl-1,2-epoxypropane, 3-cyclohexyl-1,3-epoxypropane, 3-bromo-1,3-epoxypropane, 1-phenyl-3-(3-methylphenyl)-1,2-epoxypropane, 1-(3-chlorocyclohexyl)-3-cyclopentyl-1,2-epoxypropane, 1,2-epoxybutane, 2,3-epoxybutane, 1,3-epoxybutane, 1,4-epoxybutane, 3,4-dichloro-1,2-epoxybutane, 3-methyl-1,2-epoxybutane, 2,3-dimethyl-2,3-epoxybutane, 3-(3-methylphenyl)-1,2-epoxybutane, 1 - phenyl - 4 - (3-chlorophenyl)-1,2-epoxybutane, 1-(3-ethylcyclohexyl)-4-cyclopentyl-1,2-epoxybutane, 1,2-epoxypentane, 1,3-epoxypentane, 1,4-epoxypentane, 2,3-epoxyhexane, 1,2-epoxyheptane, 3,4-epoxydecane, 1,2-epoxydodecane, 5,6-epoxytricane, 1,2-epoxypentadecane, 1,3-epoxyoctadecane, 1,3-epoxyeicosane, 1,2-epoxypentacosane, 1,3-epoxytriacontane, 1,2-epoxydotriacontane, 1,3-epoxy-hexatriacontane, 1,2-epoxy-3-butene, 1,2-epoxy-3,5-

hexadiene, 5-methyl-6-phenyl-3,4-epoxy-1,5-hexadiene, 1,2-epoxy-3-butyne, 2,3-epoxy-4-pentyne, and 3,4-epoxy-1-heptene-6-yne, and said polyhydroxy crosslinking agent being selected from the group consisting of 1,2,3-propanetriol, 1,2,6-hexanetriol, trimethylolpropane, erythritol, pentaerythritol, ribitol, xylitol, sorbitol, mannitol, trimethylolphenol, trimethylolbenzene, trimethylolamine, triethanolamine, triisopropanolamine, tri-n-propanolamine, N,N,N',N'-tetrakis(2-hydroxypropyl) ethylene diamine, N(2-hydroxyethyl)-N,N',N'-tris(2-hydroxypropyl) ethylene diamine, castor oil, glyceryl mono-, di-, and triricinoleate, glyceryl mono-, di-, and tri(12-hydroxystearate), pentaerythritol mono-, di-, tri-, and tetraricinoleate, pentaerythritol mono-, di-, tri-, and tetra(12-hydroxystearate), 2,3-dihydroxypropyl-12-hydroxystearate, 2,3-dihydroxy ricinoleate, ethylene oxide adducts of glycerol, 1,2,6-hexanetriol, and pentaerythritol, propylene oxide adducts of glycerol, propylene oxide adducts of 1,2,6-hexanetriol, condensation products of 1,2,6-hexanetriol and glycerol and the octakis(2-hydroxypropyl) derivative of sucrose.

3,050,424
FLAMEPROOF SHEET
Milton G. Schmitt, Kaukauna, Wis., assignor to Thilmany Pulp & Paper Company, Kaukauna, Wis., a corporation of Wisconsin
No Drawing. Filed Nov. 8, 1957, Ser. No. 695,224
3 Claims. (Cl. 154—44)

1. A mineral wool batt comprising a mat of mineral fibers, a paper backing sheet of sufficient strength to support said mat when adhesively united thereto, a coating of asphalt on said backing sheet in amount at least approximately 5 pounds per 1000 square feet of backing, said coating serving to adhesively unite said backing sheet to said mat, and only partially embedded in the surface of said asphalt adjacent said mat, at least 3 pounds per 1000 square feet of coated sheet of ammonium sulfate, particles dispersed so that portions of the asphalt are left exposed for said adhesive union, portions of the particles being uncoated with asphalt and protruding from the surface of the asphalt.

3,050,425
QUICK-TACK POLYMERIC ADHESIVE FOR FIBROUS LAMINAE
Charles A. Carr, Jr., Ambler, and Louis E. Kelley, Wyncote, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Mar. 25, 1959, Ser. No. 801,689
14 Claims. (Cl. 154—46)

1. A laminar structure comprising at least one fibrous layer adhered to another substrate by an adhesive layer comprising a dried product of (1) a polymeric material consisting exclusively of an ammonium salt of a copolymer of 23 to 30% by weight of methacrylic acid, 20 to 57% by weight of methyl methacrylate, and 20 to 57% by weight of at least one compound selected from the group consisting of methyl acrylate and ethyl acrylate, the salt being of low molecular weight such that its viscosity in water at 25° C. and 10% concentration is between about 1.5 and about 10 poises and (2) 1 to 100% by weight, based on the weight of ammonium copolymer salt, of a material selected from the group consisting of starch, dextrin, gelatin, glue, casein, and α-protein.

3,050,426
VIBRATION ABSORBING MATERIAL AND METHOD FOR MAKING THE SAME
John Murray Stevens, Franklin, Mass., assignor to H. F. Livermore Corporation, Allston, Mass., a corporation of Delaware
Filed Nov. 21, 1958, Ser. No. 775,538
10 Claims. (Cl. 154—54)

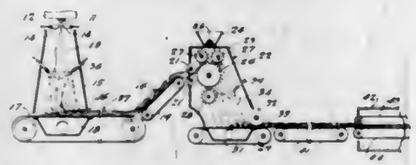
1. The method of making vibration absorbing material which includes the steps of superposing a plurality of layers of fibrous material and a plurality of layers of plastisol, at least one plastisol layer being disposed intermediate two adjacent fibrous layers and at least one plastisol layer being disposed exteriorly of one of said adjacent fibrous layers, said plastisol comprising a dispersion of a finely divided vinyl resin in liquid plasticizer, the ratio of resin to plasticizer in said intermediate plastisol layer being different from the ratio of resin to plasticizer in said exterior plastisol layer, polymerizing by heat said exterior plastisol layer and forcing by mechanical pressure the fibers of said one fibrous layer into said exterior layer while the latter is still soft and plastic, and thereafter polymerizing by heat the intermediate plastisol layer



while forcing the same into the adjacent fibrous layers to form a unitary structure having strata of differing natural frequencies of vibration.

8. A vibration checking pad composed of a plurality of layers of fibers bonded together and permeated throughout with polymerized plastisol, said plastisol comprising finely divided vinyl resin dispersed in liquid plasticizer, the weight ratio of resin to plasticizer in the plastisol being different in one portion of the thickness of the pad from the weight ratio of resin to plasticizer in the plastisol in an adjacent portion of the thickness of the pad to provide a heterogeneous structure having strata of differing natural frequencies of vibration.

3,050,427
FIBROUS GLASS PRODUCT AND METHOD OF MANUFACTURE
Games Slayter, Willard L. Morgan, and Albert R. Morrison, Newark, and Richard F. Shannon, Lancaster, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Apr. 29, 1957, Ser. No. 655,675
9 Claims. (Cl. 156—26)

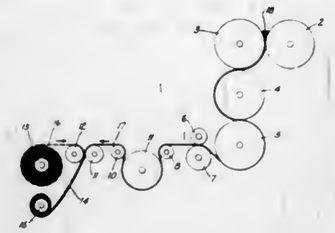


1. Method of producing a structure comprising mineral fibers and a foamed binder comprising advancing an integral web of intermeshed fibers, mechanically disrupting said web to reduce the intermeshing of said fibers and associating a foamable binder with said fibers, recollecting said fibers in the form of an integral web, and advancing said binder to a set, foamed condition whereby the foamed binder is bonded to the mineral fibers.

3,050,428
HIGHLY LUSTROUS PLASTIC SHEET MATERIAL AND A PROCESS OF MAKING SAME
Viktor Girtanner, Lachen, Canton Schwyz, Switzerland
Filed Oct. 5, 1954, Ser. No. 460,420
5 Claims. (Cl. 156—30)

1. In a process of producing a two-ply sheet material of a thermoplastic synthetic resin, said sheet material being readily separable into two sheets, each of said two sheets having a surface of high luster, the steps comprising placing upon each other two sheets of a thermoplastic synthetic resin of substantially the same composition, each of said sheets having a surface of high luster, and at least one

of said surfaces of high luster being provided immediately before such placing operation in face to face contact of said highly lusterous surfaces and exposing said superposed two sheets without application of heat to a pressure

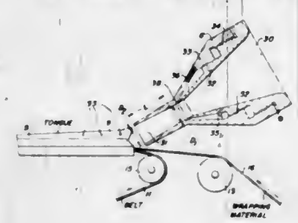


sufficient to unite said two sheets to a readily separable two-ply sheet, but insufficient to substantially reduce the high luster of said surfaces upon separation of said sheets from each other.

3,050,429
POLYETHYLENE INHIBITOR FOR PROPELLANT GRAINS
Jack H. Baxby, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Mar. 24, 1959, Ser. No. 801,670
1 Claim. (Cl. 156—86)
(Granted under Title 35, U.S. Code (1952), sec. 266)

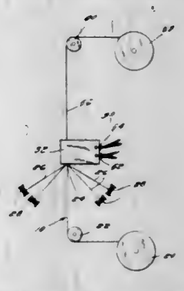
The method of bonding polyethylene to double-base, nitrocellulose-nitroglycerin, propellant grains which comprises coating the surface to be inhibited with a bonding agent comprising (*a*) diglycidyl ether of p-p isopropylidenediphenyl having a degree of polymerization of from 1 to about 4 on the average and (*b*) the condensation product of a fatty acid having a degree of polymerization of from 1 to about 4 on the average and an aliphatic polyamine having a viscosity of from about 5,000 to about 10,000 cps. at 25° C. and an amine number of from about 300 to 400, covering the bonding agent with a polyethylene boundary, and applying pressure by shrinking said polyethylene upon said grain until the bond is formed.

3,050,430
JET AND METHOD OF FILTER MANUFACTURE
Paul Gallagher, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Nov. 12, 1959, Ser. No. 852,267
10 Claims. (Cl. 156—166)



1. An apparatus for manufacturing filters out of continuous crimped filaments comprising a truncated cone-shaped jet with a large and a small end, said small end being in the form of a venturi leading into tongue compacting means, means for conducting gas through said jet, means for moving compacted filaments through said tongue compacting means, and means for feeding wrapping material in close association with said tongue compacting means.

3,050,431
MANUFACTURE OF TENNIS STRINGS
Julian T. Crandall, Ashaway, R.I., assignor to Ashaway Line & Twine Mfg. Co., Ashaway, R.I., a corporation of Rhode Island
Filed July 7, 1958, Ser. No. 747,063
2 Claims. (Cl. 156—172)

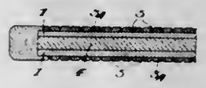


1. The method of manufacturing an integrated plastic string of the character described, comprising the following steps:
(A) taking a flexible thermoplastic core;
(B) winding a thermoplastic strand around said core to provide an armor sheath thereover; and
(C) drawing the composite core and sheath in a dry state through a heated die having an orifice of lesser diameter than that of the composite string, said string being integrated upon removal from the die.

3,050,432
PROCESS FOR COMPRESSING CELLULAR POLYURETHANE PLASTIC
Erwin Weinbrenner and Wilhelm Tischbein, Leverkusen, Peter Hoppe, Troisdorf, and Franzkarl Brochhagen, Odenthal, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Oct. 25, 1957, Ser. No. 692,258
Claims priority, application Germany Oct. 27, 1956
5 Claims. (Cl. 156—196)

1. A method for converting a normally air and water vapor impervious solid cellular polyurethane plastic into a porous web which is pervious to air but is impervious to liquids which comprises compressing the cellular plastic at a temperature above 20° C. under a pressure of from about 5 to about 200 atmospheres until the thickness of the cellular plastic remains at from about 5 percent to about 15 percent of its original thickness after the pressure has been removed.

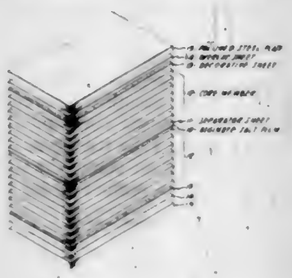
3,050,433
PROCESS FOR PRODUCING A RECORD DISC HAVING A PICTORIAL ILLUSTRATION PRINTED THEREON
Kumao Sakamoto, 801 Kidera-cho, Nara-shi, Japan
Filed Sept. 20, 1960, Ser. No. 57,236
Claims priority, application Japan Sept. 2, 1960
1 Claim. (Cl. 156—219)



A process for producing a record disc having a pictorial illustration printed thereon which comprises coating the surface of paper stock whereon has been printed a pictorial illustration with a bonding liquid containing vinyl chloride, said bonding liquid having been obtained by heating cyclohexanone to about 100° C., adding and mixing therewith

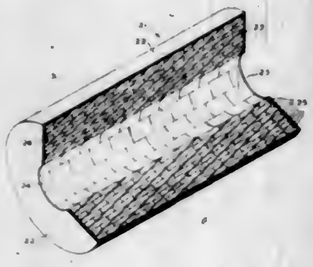
vinyl chloride powder followed by adding methyl ethyl ketone and xylol, then mixing further dioctyl phthalate and stirring; sprinkling vinyl chloride powder uniformly on the paper whose surface has been thus coated with a layer of bonding liquid; pressing said paper lightly with heated rolls to bond said powder to the surface of said paper; and thereafter tiering said paper with a core material and placing the foregoing in a record press, then pressing said vinyl chloride powdered layer to form a surface coating and thereafter impressing sound grooves upon said vinyl chloride coated surface.

3,050,434
ALGINATE COATED SHEETS FOR USE IN A DELAMINATING PROCESS
Avis E. Emily, Jr., and Kenneth A. Arata, Cincinnati, Ohio, assignors to Formica Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,148
6 Claims. (Cl. 156—289)



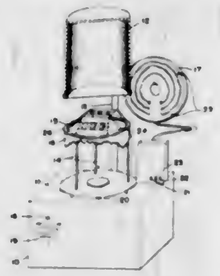
1. A process for releasing laminates pressed back to back comprising the steps of arranging a plurality of plies of resin-impregnated core stock in superimposed relationship in groups of at least two stacks, separating said stacks from one another with a web of paper coated on one side only thereof with a film of a salt of alginic acid, consolidating the plies by the application of heat and pressure and separating the ends of the stacks from one another at the locus of the alginate coated sheet.

3,050,435
METHOD OF CONSOLIDATING SOLID ROCKET PROPELLANT GRAINS
Homer M. Fox and Albert F. Stegelman, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 24, 1957, Ser. No. 692,236
6 Claims. (Cl. 156—294)



1. A method for consolidating a cylindrical, module grain of solid propellant of the composite type comprising a major amount of an oxidizer and a minor amount of a rubbery binder, said grain being built up from a plurality of contiguous blocks of propellant assembled within a rocket motor casing, said grain having an axial perforation defined by an internal exposed surface of propellant which functions as an initial burning surface, which method comprises applying a radial force to said grain while subjecting said grain to elevated curing temperatures for a time sufficient to effect a positive bond between contiguous surfaces of said blocks of propellant.

3,050,436
METHOD OF DELAMINATING CEMENTED GLASS OPTICS OR LENSES
Bernard Stepanski, Alan L. Smith, and Joseph Werthwine, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Oct. 26, 1959, Ser. No. 848,877
1 Claim. (Cl. 156—344)
(Granted under Title 35, U.S. Code (1952), sec. 266)



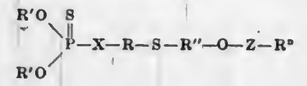
The process of separating optical rare earth lenses cemented together with a thermosetting resin consisting generally of about 60% by weight of an unsaturated polyester dissolved in about 40% by weight polymerizable solvent and comprising the steps of placing the cemented lenses on a support, resting an electric heater on said support without contacting said lenses, enclosing said support and heater with a vacuum chamber, said vacuum chamber having a valve for permitting ingress of surrounding atmosphere, evacuating said chamber to approximately 0.05 mm. of mercury, applying electric power to said heater while in vacuo until said heater attains about 330° C., maintaining the temperature of the heater at about 330° C. for a period of about 20 minutes, shutting off the electric power to said heater, very slowly cracking the vacuum chamber valve to permit ingress of said surrounding atmosphere until the pressure within the chamber and said surrounding atmosphere are generally equalized, permitting said lenses to reach ambient temperature, removing the chamber to expose said lenses now decemented, placing the decemented lenses in a solvent such as acetone for a period of the order of 2½ hours to remove all traces of cement from said decemented lenses and drying said lenses upon removal from said solvent.

3,050,437
MANUFACTURE OF SIZED PAPER
Herbert G. Arlt, Jr., Pearl River, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 16, 1959, Ser. No. 820,579
5 Claims. (Cl. 162—158)

1. A method of manufacturing sized paper which comprises forming an aqueous suspension of papermaking cellulose fibers, adding thereto an emulsion of a hydrophobic organic isocyanate, depositing at least part of said isocyanate on said fibers, sheeting the suspension to form a waterlaid web, and drying said web at a temperature between about 200° F.–250° F. whereby said deposited isocyanate chemically reacts with the fibers.

3,050,438
ORGANOPHOSPHORUS INSECTICIDES
Geert C. Vegter, Amsterdam, Netherlands, and Anthony M. Thrush, Ickenham, England, assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 5, 1960, Ser. No. 19,983
Claims priority, application Great Britain June 2, 1959
18 Claims. (Cl. 167—22)

5. The ester of the formula



wherein X is selected from the group consisting of oxygen and sulfur, R and R'' are each alkylene of up to 12 carbon atoms, R' is selected from the group consisting of alkyl of up to 10 carbon atoms, phenyl and nitrophenyl, Z is selected from the group consisting of



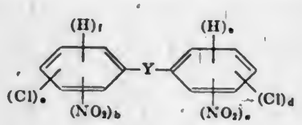
and —SO_2— and R^0 is selected from the group consisting of the hydrogen atom, alkyl of up to 6 carbon atoms, phenyl, tolyl and halomethyl.

3,050,439
STABLE ANHYDROUS DISODIUM ETHYLENE BISDITHIOCARBAMATE
Joseph W. Nemec, Abington, and Stanley J. Schechter, Levittown, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Original application Jan. 30, 1959, Ser. No. 790,070. Divided and this application Mar. 25, 1959, Ser. No. 801,687
7 Claims. (Cl. 167—22)

1. A new composition of matter comprising substantially anhydrous disodium ethylene bisdithiocarbamate having a melting point in the pure state of about 230° C. and at least one heavy metal salt from the group of heavy metals consisting of zinc, iron, manganese and copper, said salt being a member of the group consisting of ethylene bisdithiocarbamates and water-soluble salts, said water-soluble salts being at least as water soluble as $CuSO_4$, said salt being present in an amount by weight of at least 1% and up to about 95% provided that when said salt is a water-soluble salt, the said anhydrous disodium ethylene bisdithiocarbamate is in excess.

3,050,440
NEW FUNGICIDAL COMPOSITIONS OF MATTER
Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Oct. 13, 1960, Ser. No. 62,318
2 Claims. (Cl. 167—30)

1. A fungicidal composition comprising an inert carrier and a fungicidal toxic amount of a compound of the formula



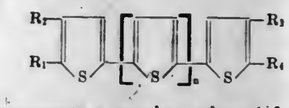
wherein Y is selected from the group consisting of O, S, SO and SO_2; *a* is an integer from 1 to 4, *b* is an integer from 1 to 3; *c* is an integer from 0 to 2; the sum of *b* and *c* being a maximum of 3; *d* is an integer from 2 to 5, the sum of *a* and *d* being larger than 5; and *e* and *f* are integers from 0 to 3, the sums of *a*, *b* and *f*, and *c*, *d* and e each being 5.

3,050,441
α-CHLORO-m-NITROACETOPHENONE FUNGICIDE
William C. Haskett, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed July 20, 1959, Ser. No. 828,018
5 Claims. (Cl. 167—30)

1. A process for the control of fungal infestations of seeds and of soil which comprises applying a fungicidally effective amount of α-chloro-m-nitroacetophenone to the locus to be treated.

3,050,442
METHOD OF DESTROYING NEMATODES WITH POLYTHIENYL COMPOUNDS
Johan Dirk Bijloo, Jan Hendrik Uhlenbroek, and Jasper Daams, Van Houtenlaan, Weesp, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed May 21, 1958, Ser. No. 736,687
Claims priority, application Netherlands May 31, 1957
8 Claims. (Cl. 167—33)

1. A method of destroying nematodes comprising contacting said nematodes with a composition containing a toxic amount of a polythienyl compound corresponding to the general structural formula:



wherein *n* represents a number selected from the group consisting of 0 and 1, R_1, R_2, R_3 and R_4 each represent substituents selected from the group consisting of hydrogen, methyl, propionyl, halogen, nitro, acetyl and phenyl radicals with the proviso that when *n* represents 0, R_3 represents in addition the thiophene radical and R_1, R_2 and R_4 represent only hydrogen.

3,050,443
HEADACHE REMEDY CONTAINING AMMONIA
Karl J. Kraus, deceased, late of Las Vegas, Nev., by Clifford E. Roop, administrator, Las Vegas, Nev., assignor to James F. Schuyler, Las Vegas, Nev.
Filed Feb. 16, 1960, Ser. No. 8,993
8 Claims. (Cl. 167—54)

1. An inhalent headache medicament including in combination between about .10% by weight and about .30% by weight of ammonia dissolved in a major amount of a volatile fluid.

3,050,444
METHOD FOR THE PRODUCTION OF LEVULOSE
Arthur G. Holstein, Lake Bluff, Ill., and Gunther C. Holsing, Lyndonville, N.Y., assignors, by mesne assignments, to Dawes Laboratories, Inc., a corporation of Illinois
No Drawing. Filed Apr. 3, 1959, Ser. No. 826,890
8 Claims. (Cl. 195—31)

5. In the method for the production of levulose from sucrose wherein invert sugar formed of the sucrose is fermented in the presence of glucose oxidase with the introduction of air and at a temperature of 28–38° C. and at a pH of 4.5–6.5 maintained by the addition of an alkalinizing agent selected from the group consisting of alkali and alkaline earth metal compounds, the steps of filtering the fermentation products, concentrating the filtrate to a specific gravity between approximately 1.45 to 1.50, diluting the concentrate with methanol in an amount to correspond to 50 percent by volume of the concentrate, cooling the mixture and allowing the mixture to stand whereby the gluconate salts precipitate from solution, separating the crystallized salts, distilling off the methanol, diluting the remainder with approximately an

equal volume of water, pasing the solution successively through a cation exchange resin and an anion exchange resin until the ionic content is reduced to a level in the range of 0.7–15 grains per gallon as measured by conductivity, concentrating the solution to a specific gravity of about 1.45, diluting the concentrate with methanol in an amount corresponding to about 50 percent by volume of the concentrate, allowing the solution to cool whereby levulose crystallizes from the solution, and separating the crystallized levulose from the remainder.

3,050,445
STABILIZED TRYPSIN SOLUTION

Charles W. Damaskus, La Grange, and Paul E. Bradford, Kankakee, Ill., assignors, by mesne assignments, to Armour-Pharmaceutical Company, a corporation of Delaware

No Drawing. Filed Aug. 13, 1958, Ser. No. 754,721
4 Claims. (Cl. 195—63)

1. A substantially stabilized aqueous solution of trypsin characterized by containing from about 0.5% to about 20% by weight of a sulfhydryl and disulfide free amino acid and from about 0.3% to about 5.0% by weight of a water-soluble non-toxic calcium salt, said solution having a pH of from about 3.5 to about 7.2 and having a concentration of trypsin of from about 5000 A.U. to about 25,000 A.U. per cc. of water.

3,050,446
FERMENTATION OF CHLORTETRACYCLINE AND DEMETHYLCHLOROTETRACYCLINE

Joseph Jacob Goodman, Nanuet, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

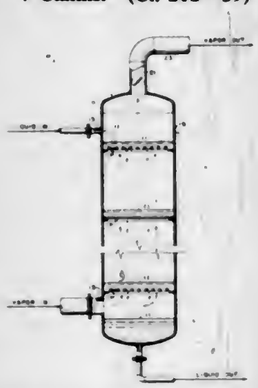
No Drawing. Filed July 28, 1960, Ser. No. 45,795
6 Claims. (Cl. 195—80)

1. The process of producing chlortetracycline by aerobic fermentation of an aqueous fermentation medium with a strain of *S. aureofaciens* which will produce both tetracycline and chlortetracycline which comprises carrying out the fermentation in the presence of from about 200 to about 1000 parts per million copper so as to increase the chlortetracycline production and to decrease the tetracycline production.

3,050,447
VAPOR-LIQUID CONTACTING PROCESS USING PRESSURE PULSATIONS

Richard B. Olney, Berkeley, Calif., assignor to Shell Oil Company, a corporation of Delaware

Filed Jan. 10, 1955, Ser. No. 480,982
7 Claims. (Cl. 202—39)

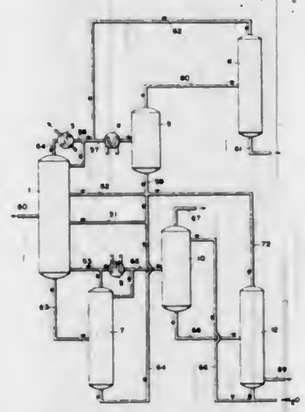


1. A process of contacting within a contacting zone an upwardly flowing vapor with a downwardly flowing liquid in a plurality of discrete contacting and disengaging steps vertically spaced at a distance of from about 6 to about 24 inches, inclusive, in which process mass is transferred between liquid and vapor phases, and wherein the liquid flow rate is from about 0.2 to about 5 gallons per minute per square foot of horizontal cross sectional area of said contacting zone, the vapor loading is from about 0.2 to 1.0, the pressure drop per contacting step is no more than 6 inches of water, the liquid hold-up in each contacting step is no more than 6 cubic inches per square inch of horizontal cross sectional area of said contacting step, the vapor density is from about 0.001 to about 3.0 pounds per cubic foot, the liquid density is from 20 to 90 pounds per cubic foot, the liquid viscosity is from about 0.05 to about 5 centipoises, and the liquid surface tension is from about 5 to about 70 dynes per centimeter, and facilitating a closer approach to equilibrium between the vapor and liquid in said steps by imposing forced pressure pulsations within said contacting zone, the frequency of said pulsations being from about 0.1 to about 15 cycles per second and the amplitude of said pulsations being equivalent to from about 0.1 to about 15 inches of water.

3,050,448
SEPARATION OF HYDROCARBONS

Merrell R. Fenske, Robert H. McCormick, and Harry Lawroski, State College, Pa., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 27, 1958, Ser. No. 724,367
10 Claims. (Cl. 202—39.5)

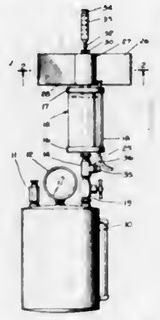


1. A vapor-liquid extraction process for separating less saturated hydrocarbons from more saturated hydrocarbons of substantially the same carbon content and having from 2 to about 5 carbon atoms, which comprises contacting a mixture of the said hydrocarbons in the vapor phase with a liquid ammonia solvent in a countercurrent vapor-liquid extraction zone wherein at least 150 wt. percent liquid ammonia is maintained in the liquid phase, said extraction zone having an upper stripping section and a lower enriching section, feeding the hydrocarbon mixture to be separated between said stripping and enriching sections, withdrawing from said upper section a hydrocarbon vapor stream containing the more saturated hydrocarbon and ammonia, and withdrawing from said lower section a hydrocarbon liquid stream containing the less saturated hydrocarbon and ammonia, cooling the hydrocarbon vapor stream to separate two liquid layers one of which is rich in ammonia and the other rich in hydrocarbon, returning a substantial part of the ammonia rich layer to the vapor-liquid extraction zone, recovering ammonia solvent from the liquid hydrocarbon stream, and returning the said recovered ammonia solvent to the said stripping section.

3,050,449
HYDROCARBON SAMPLING

Pernell J. Moore, Houston, Tex., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

Filed June 3, 1959, Ser. No. 817,828
3 Claims. (Cl. 202—152)

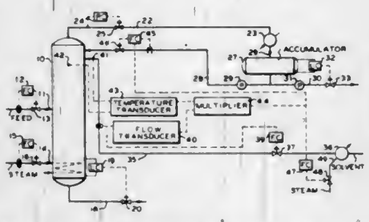


1. Apparatus for removing hydrocarbons from drilling mud comprising, in combination: a steam boiler; a mixing chamber having inlet means adjacent to the bottom thereof and outlet means adjacent to the top thereof; conduit means connecting said steam boiler and said inlet means; a fluid injection port in said conduit means; a solid condenser block disposed above said mixing chamber and penetrated throughout its length by a vertical, straight capillary bore at most ⅛ inch in inside diameter; connection means sealably connecting the top of said mixing chamber outlet means and the bottom of said capillary bore; a hypodermic needle having its lower portion within the upper portion of said capillary bore and its upper portion outside of and above said capillary bore; sealing means between said hypodermic needle and the upper portion of said capillary bore; and retractably stoppered syringe means connected to the upper portion of said hypodermic needle.

3,050,450
EXTRACTIVE DISTILLATION CONTROL

Louis D. Kleiss and Norman F. McLeod, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed June 12, 1959, Ser. No. 819,940
7 Claims. (Cl. 202—160)



1. In an extractive distillation column wherein a feed mixture to be separated is introduced into the column through first conduit means, a kettle product is withdrawn from the column through second conduit means, vapor is removed from the top of the column through third conduit means and cooled to condense at least a part thereof, a part of the condensed vapor is returned to the column through fourth conduit means as reflux, and a solvent is introduced into the column through fifth conduit means; a control system comprising means to establish a first signal representative of the rate of flow of solvent through said fifth conduit means; means to establish a second signal representative of the quantity ($K\Delta T$), where K is a constant and ΔT is the temperature difference between solvent introduced into the column through said fifth conduit means and vapor in the column adjacent the point of introduction of solvent; means to multiply said first and second signals to establish a third signal; and means responsive to said third signal to control the flow through said fourth conduit means.

3,050,451
PROCESS FOR THE PREPARATION OF CARBON WITH HIGH MODERATING PROPERTIES AND THE USE THEREOF IN NUCLEAR REACTORS

Willem J. D. van Dijck, The Hague, and Hendrik Kloosterziel, Amsterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,128
Claims priority, application Netherlands Jan. 31, 1957
8 Claims. (Cl. 204—154.2)

1. Process for the production of a solid carbon product containing bound deuterium and particularly suitable for use in nuclear reactors which comprises forming a bed of coke-like carbon particles containing from 0.5 to 5 percent of bound hydrogen of species H_2^1, maintaining said bed at a temperature between about 500° C. to about 1000° C., passing into one end of said bed a gas the sole hydrogen species of which is essentially H_2^2, removing from the other end of said bed a gas the sole hydrogen species of which is essentially H_2^1, and removing from said bed a solid coke-like carbon product containing bound hydrogen predominantly of the species H_2^2.

3,050,452
PREPARATION OF ORGANIC SULFUR COMPOUNDS

Rector P. Louthan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 8, 1960, Ser. No. 47,930
16 Claims. (Cl. 204—162)

1. A process for preparing an organic sulfur compound, comprising reacting an ethylenically unsaturated compound with hydrogen sulfide in the presence of ultraviolet radiation and a trialkyl phosphite.

3,050,453
ALKYLATION PROCESS

John Handschy and Robert J. Gordon, Walnut Creek, and Robert J. Moore, Orinda, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Nov. 19, 1956, Ser. No. 622,742
2 Claims. (Cl. 204—162)

1. A process for producing alkyl aromatic hydrocarbons which comprises exposing a liquid mixture containing at least one mole percent of an alkyl naphthalene and a saturated aliphatic hydrocarbon having at least 10 carbon atoms per molecule to a gamma radiation dosage of 5×10^8 roentgens, said radiation having an energy of at least about 1,000 electron volts.

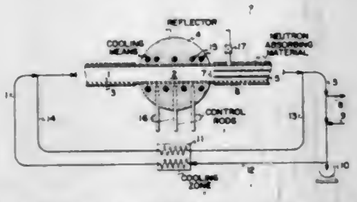
3,050,454
HIGH FLUX HOMOGENEOUS REACTOR WITH CIRCULATING FISSILE MATERIAL

Frank T. Barr, Summit, and James F. Black, Convent, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 13, 1957, Ser. No. 645,783
14 Claims. (Cl. 204—193.2)

1. In a nuclear reaction process wherein a homogeneous fluid composition of fissile material is passed as a flowing stream through a flow path and through a reaction zone, a sustained nuclear reaction being maintained in said reaction zone, and the cross-sectional area of at least an appreciable portion of said flow path being at least equal to the cross-sectional area of said reaction zone so that normally critical conditions would exit in said portion of said

flow path, the improvement which comprises maintaining in neutron absorbing relationship to said portion of said flow path a neutron absorbing material having a capture cross-section above 10 barns per atom for neutrons having an energy in the range of 0.025 to 2.5 ev., the amount of said neutron absorbing material being sufficient to maintain said portion of said flow path in a sub-critical condition.



3,050,455
OXIDATION OF RESIDUAL PETROLEUM WAXES

John Leslie Vosser, Sunbury-on-Thames, England, assignor to The British Petroleum Company Limited, London, England, a British joint-stock corporation

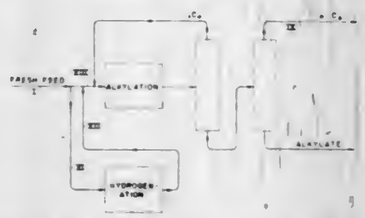
No Drawing. Filed July 20, 1959, Ser. No. 828,075
Claims priority, application Great Britain July 23, 1958
11 Claims. (Cl. 208—3)

1. A process for oxidizing residual petroleum wax derived from the residue left in the vacuum distillation of crude petroleum and having a micro-crystalline structure to produce emulsifying agents, which comprises oxidizing said residual petroleum wax at temperatures in the range of about 140° to 200° C. using as a catalyst a paraffin wax oxidate having acid values in the range of 20–200 mg. KOH/g., said paraffin wax oxidate being derived from the oxidation of paraffin wax which is largely crystalline in structure and which is obtained from petroleum distillates, the quantity of said catalyst being at least about 5 percent by weight of the residual petroleum wax feedstock, and continuing oxidation until the oxidized product has a saponification number of at least 5 mg. KOH/g.

3,050,456
CONVERSION PROCESS FOR THE PRODUCTION OF HIGH OCTANE NUMBER GASOLINE COMPONENTS

Jan G. Melchior, The Hague, Netherlands, assignor to Shell Oil Company, a corporation of Delaware

Filed Oct. 15, 1958, Ser. No. 767,424
Claims priority, application Belgium Oct. 18, 1957
8 Claims. (Cl. 208—67)

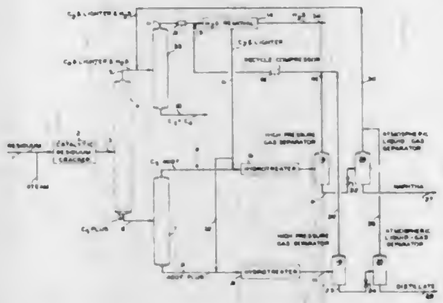


7. A process for the production of high octane number gasoline components which comprises catalytically cracking a hydrocarbon oil to produce a cracked product including a light hydrocarbon fraction having an iso- to normal butylene ratio of at least about 0.8:1 and having an isobutane to olefin ratio of less than 1:1, separating said fraction into a first portion and a second portion, hydrogenating in the presence of free hydrogen said first portion of said fraction to obtain isobutane and normal butane and recombining the hydrogenated first portion with said unhydrogenated second portion so that the recombined first and second portions have a molar ratio of isobutane to olefin of at least 1.05:1, recombining the portions and alkylating in an alkylation zone the recombined fraction by contact with a mineral acid alkylation catalyst at alkylation conditions whereby alkylate is formed, and recovering normal butane from said alkylation zone.

3,050,457
HYDROCARBON CONVERSION WITH THE HYDROGENATION OF THE CRACKED PRODUCTS

Reagan T. Wilson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Nov. 24, 1958, Ser. No. 775,996
5 Claims. (Cl. 208—67)



1. A process for cracking a high sulfur residuum to produce a desirable sulfur- and olefin-free product which comprises cracking said residuum in a fluid catalytic cracking operation, in the presence of a cracking catalyst having a quantity of metal contaminant, at a temperature in the range of about 800–1000° F., and at a pressure not in excess of 150 p.s.i.g., to convert at least 30 percent thereof per pass to produce a distillate liquid and hydrogen in an amount sufficient to remove sulfur and olefins from said liquid in a hydrogenation step, recovering said liquid from the cracking effluent, separating said liquid into a first stream of C_5 to 400° F. fraction and a second stream of 400° F. plus fraction, passing said first stream to a first hydrogenation zone, passing said second stream to a second hydrogenation zone, recovering hydrogen from said cracking effluent and passing a portion of the hydrogen thus recovered to said first hydrogenation zone, operating said first hydrogenation zone under first reaction conditions so as to effect the desired sulfur and olefin removal, passing a second portion of the recovered hydrogen to said second hydrogenation zone, operating said second hydrogenation zone under second reaction conditions so as to effect the desired sulfur and olefin removal; said first reaction conditions comprising a temperature in the range of about 500–800° F., a pressure in the range of about 150–1500 p.s.i.g., and a liquid hourly space velocity in the range of about 1 to 25; said second reaction condition comprising a temperature on the order of at least about 100° F. higher than the temperature of said first reaction condition, a pressure in the range of about 150–1500 p.s.i.g., and a liquid hourly space velocity in the range of about 1 to 25.

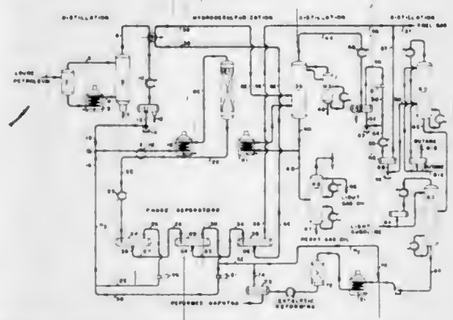
3,050,458
PETROLEUM REFINING PROCESS

Peter van't Spijker, Martinus Kolijn, and Hubrecht van der Marel, all of The Hague, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

Filed Dec. 10, 1958, Ser. No. 779,501
Claims priority, application Netherlands Dec. 13, 1957
6 Claims. (Cl. 208—89)

1. Petroleum refining process which comprises the combination of steps of separating from petroleum by a

topping distillation a broad range fraction including substantially all of the normally liquid hydrocarbons present boiling up to about 300 to 400° C. and containing pentanes, gasoline, naphtha, kerosene and other oils boiling up to said temperature range, contacting said broad range fraction in a hydrodesulfurization zone with a hydrogen containing gas obtained as hereafter specified and with a hydrodesulfurization catalyst under a pressure between about 30 and 65 kg./cm.² whereby part of the hydrogen is consumed, cooling the contacted mixture down to a temperature of at least about 40° C. under substantially the hydrodesulfurization pressure and passing the cooled material to a first phase separator, withdrawing gas rich in hydrogen from said first phase separator and recycling the same to the hydrodesulfurization zone, expanding the liquid phase from said first phase separator into a second phase separator maintained at a lower superatmospheric pressure between about 15 and 30 kg./cm.² and as further specified below, withdrawing gas from said second phase separator, adding to said last-mentioned gas



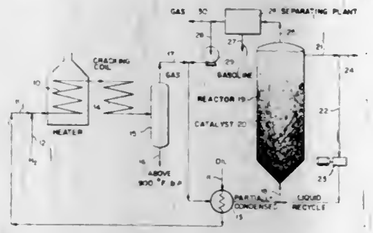
reformer hydrogen as further specified below and compressing the mixture and passing the same to said hydrodesulfurization zone, withdrawing liquid from said second phase separator and expanding the same into a third phase separator at a lower superatmospheric pressure between about 3 and 7 kg./cm.², withdrawing gas from said third phase separator, separating withdrawn liquid from said third phase separator and passing the same to a first fractionation zone operated under conditions to separate a gas and light hydrocarbon overhead product and a heavy liquid bottom product, fractionating from said overhead product a naphtha fraction, catalytically reforming said naphtha fraction under dehydrogenation conditions in the presence of recycled hydrogen at a pressure between about 15 and 30 kg./cm.² thereby to produce a reformed product and a gas rich in hydrogen, separating said last-mentioned gas from the reformed product and passing the same to the stream of gas being removed from said second phase separator prior to the compression of said gas as aforesaid, and the pressures in said second phase separator and in the catalytic reforming effluent being substantially equal.

3,050,459
TWO-STAGE CONVERSION OF HEAVY OILS

Seymour C. Schuman, Princeton, N.J., assignor to Hydrocarbon Research, Inc., New York, N.Y., a corporation of New Jersey

Filed Jan. 13, 1959, Ser. No. 786,490
12 Claims. (Cl. 208—97)

1. A process for refining a sulfur-containing heavy oil having at least 10% by volume of hydrocarbons boiling above 900° F., which comprises cracking said oil while substantially in the liquid state and in the presence of hydrogen at a pressure of at least 800 p.s.i.g. to convert at least 25% by volume of said hydrocarbons boiling above 900° F. to hydrocarbons boiling not in excess of 900° F., separating and removing substantially all residual hydrocarbons boiling above 900° F. from the thus cracked oil, and reacting the remainder of said cracked oil substantially free of hydrocarbons boiling above 900° F.

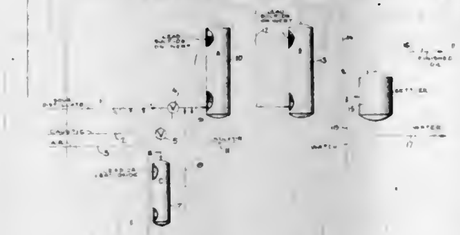


while substantially in the liquid state with hydrogen at a pressure of at least 800 p.s.i.g. in the presence of a particulate sulf-active hydrogenation catalyst to effect desulfurization.

3,050,460
CONCURRENT DEPOSITION OF LEAD SULFIDE AND MERCAPTAN CONVERSION IN HYDROCARBON OILS

Frank W. Brooks, Jr., Beaumont, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York

Filed May 8, 1959, Ser. No. 811,825
3 Claims. (Cl. 208—198)



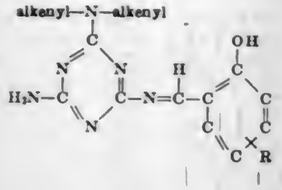
1. In a process for the sweetening of sour hydrocarbon fractions by conversion to polysulfides of mercaptans wherein a mixture of sour hydrocarbon fractions boiling below about 650° F. with caustic, oxidizing gas and sulfur is contacted with a supported lead sulfide catalyst and wherein activity of said catalyst declines with continued operation; the improved method for maintaining activity of said catalyst while sustaining rate of feed of sour hydrocarbon fraction to the process, which improved method comprises admixing caustic and oxidizing gas with a sour hydrocarbon fraction, passing a minor portion of the resultant caustic, oxidizing gas, and hydrocarbon blend in contact with a solid source of lead selected from the group consisting of metallic lead and lead compounds which react in alkaline medium with mercaptans to form lead mercaptide, and passing the total quantity of said resultant lead-containing caustic and hydrocarbon blend, after having mixed said blend with elemental sulfur, in contact with said supported lead sulfide catalyst so as to deposit fresh lead sulfide catalyst on the catalyst support.

3,050,461
REACTION PRODUCT OF N,N-DIALKENYLMELAMINE AND A SALICYLALDEHYDE AND ITS USE

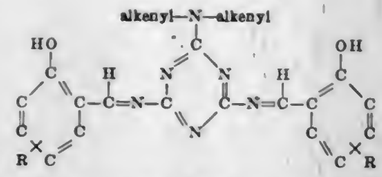
John P. Luvisi, Park Ridge, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed May 23, 1960, Ser. No. 30,760
13 Claims. (Cl. 208—251)

1. A compound selected from the group consisting of compounds having the following structures:



and



where R is selected from the group consisting of hydrogen and a hydrocarbon radical.

10. The method of removing a metal component from an organic liquid containing the same which comprises contacting said organic liquid with a compound as defined in claim 1.

3,050,462

STABILIZATION OF GLYCOL SOLUTIONS EMPLOYED IN AROMATIC RECOVERY

Philip J. Garner, Hooton, Wirral, England, assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,761

Claims priority, application Great Britain Jan. 28, 1959

3 Claims. (Cl. 208—323)

1. In a liquid-liquid extraction process employing a circulating glycol solvent for the recovery of aromatic materials from a hydrocarbon mixture wherein the aromatic materials are recovered from the solvent in a distillation zone, the improvement comprising incorporating in the solvent a small, oxidation-inhibiting amount of a phenothiazine having the following structure



where P is a polar radical selected from the group consisting of hydroxyl, amino and halogen radicals, *n* is an integer from 0 to 1, Y is an alkyl group having up to 3 carbon atoms, the total number of carbon atoms in the substituents not exceeding 12, *m* is an integer from 0 to 4 and $(m+n)$ is no greater than 4 on a single aromatic ring, said phenothiazine permitting the operation of the distillation zone at a subatmospheric pressure without the occurrence of excessive solvent of oxidation, and operating the distillation zone at said subatmospheric pressure and a correspondingly reduced temperature.

3,050,463

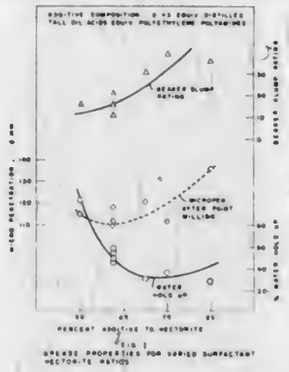
CLAY GREASE COMPOSITIONS

Walter H. Peterson, Point Richmond, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Feb. 18, 1960, Ser. No. 9,654

7 Claims. (Cl. 252—28)

1. A water-resistant thickened lubricant composition consisting essentially of a hydrophobic lubricating oil as the major component, a bentonitic clay colloidally dispersed therein and imparting a grease-like consistency thereto as a minor component, and oil-soluble, water-insoluble amino amide formed between fatty acids having 16–20 carbon atoms per molecule, at least 50% by weight of the fatty acids containing at least 1 double bond per molecule and a mixture of polyethylene polyamines, 20–80% by weight of the mixture comprising diethylene triamine, the remaining fraction being polyethylene polyamines having an average molecular weight within the



range 250–400, said amino amides having been formed by heating 0.4–0.5 equivalents of fatty acid for each equivalent of polyamine at a temperature between 200 and 225° C. for a reaction time of 1–4 hours, said amino amides being present in an amount less than the clay and imparting stability against deterioration by water.

3,050,464

DETERGENT-CONTAINING LUBRICATING OIL

Thomas F. Brown, Barnston, and Peter Mathews, Hartford, England, assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 1, 1959, Ser. No. 803,366

6 Claims. (Cl. 252—33)

1. A process for the production of a lubricating oil composition containing an oil-soluble detergent component which comprises contacting a naphthene-containing petroleum lubricating oil boiling from about 300° to about 500° C. with a hydrocarbon reforming catalyst containing a noble metal of group VIII of the periodic table at aromatizing conditions whereby the naphthene components in said oil are converted to aromatic hydrocarbons, subjecting the resulting reformed oil to sulfonation at sulfonating reaction conditions sufficient to convert a substantial proportion of the aromatic components to their sulfonated derivatives and thereafter neutralizing the sulfonated oil with an alkaline base.

3,050,465

WATER-IN-OIL EMULSION HYDRAULIC FLUIDS

Charles E. Francis, Martinez, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 4, 1959, Ser. No. 810,563

9 Claims. (Cl. 252—49.5)

1. A hydraulic fluid for colliery equipment consisting essentially of a water-in-oil emulsion in which the water phase is from about 20% to about 45% of the emulsion and the oil phase is from about 55% to about 80% of the emulsion, the oil phase being essentially an 80–100 V.I. mineral oil having a viscosity in the range of from 75 to 250 SUS at 100° F. containing from about 1% to about 4% of a monoester of a long chain fatty acid having from 8 to 18 carbon atoms and an alkitan selected from the group consisting of sorbitan and mannitan and from about 0.5% to about 3% of an oil-soluble C_{4-20} alkyl phenoxy(ethoxy)$_{4-6}$ethanol based on the oil.

3,050,466

ROLL OIL CONTAINING A PHOSPHORUS ACID ESTER AND AN OIL-MISCIBLE DICARBOXYLIC ACID

Theodore C. Heisig, Beacon, and Patrick J. Keating, Jr., Chelsea, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Dec. 19, 1955, Ser. No. 553,739

5 Claims. (Cl. 252—49.8)

1. A roll oil for use in the cold rolling of metals consisting essentially of a mineral lubricating oil of about 50–110 seconds Saybolt Universal viscosity at 100° F. containing about 1.5 percent by weight of tricresyl phosphate and about 0.015 percent by weight of an aliphatic dicarboxylic acid wherein the carboxy groups are separated by 1–4 carbon atoms and having a C_{6-20} aliphatic hydrocarbon substituent group, the said roll oil being substantially non-staining to steel when it is burned off during an annealing process.

3,050,467

ANTISEPTIC CLEANER

Carl Horowitz, Brooklyn, and Meyer Mendelsohn, New York, N.Y., assignors, by mesne assignments, to Yardney International Corp., New York, N.Y., a corporation of New York

No Drawing. Filed Nov. 8, 1957, Ser. No. 695,192

3 Claims. (Cl. 252—107)

1. An antimicrobial cleansing composition consisting essentially of a mixture of: (A) from about 90% to about 99%, by weight, of a water-soluble soap, and (B) from about 10% to about 1%, by weight, of a silver salt of partially depolymerized alginic acid, the viscosity of said acid when neutralized and prior to conversion into its silver salt ranging substantially between 1.25 and 1.75 centipoises in concentrations of 5% in aqueous solution.

3,050,468

PREVENTION OF RUN-OFF IN BITUMINOUS EMULSIONS

James R. Wright, El Cerrito, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed May 13, 1959, Ser. No. 812,813

8 Claims. (Cl. 252—311.5)

1. In the preparation of oil-in-water type cationic asphalt emulsions, an improved method which comprises emulsifying asphalt in water with the aid of a cationic emulsifying agent selected from the group consisting of amine salts and quaternary ammonium salts in an amount sufficient to effect formation of a stable oil-in-water type asphalt emulsion, characterized by an asphalt content of from about 55 to about 70% by weight based on the weight of the emulsion; introducing into this emulsion an amount equal to from about 0.1 to about 1.0% by weight of a quaternary nitrogen halide salt selected from the group consisting of bromides and chlorides; and thoroughly distributing this salt in the emulsion to dissolve it completely in the emulsion maintained at a temperature not exceeding about 150° F.

3,050,469

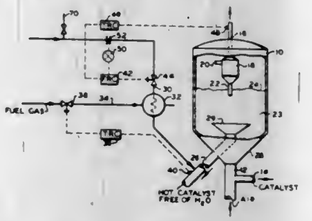
CATALYST REGENERATION PROCESS AND APPARATUS

Lyman W. Morgan, Golden, Colo., and Donald C. Tabler, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed May 25, 1959, Ser. No. 815,675

10 Claims. (Cl. 252—417)

1. In a process wherein a steam-sensitive solid catalyst contaminated with hydrocarbon and other carbonaceous deposit is removed from a reaction zone to be reheated and regenerated before being returned to the reaction zone; said catalyst is passed to a regeneration zone where it is heated and regenerated by burning in contact therewith a hydrocarbon-containing fuel gas with O_2-containing gas in excess of the amount required to burn said fuel gas, thereby burning said deposit from said catalyst and forming steam in said regeneration zone; and the regenerated hot catalyst containing steam is passed from said regeneration zone to said reaction zone, the improvement comprising stripping said hot catalyst of steam by contacting same with at least a portion of said fuel gas free of moisture, and at elevated temperature, then passing the resulting fuel gas into said regenerator as fuel, whereby said regenerated catalyst is substantially moisture-free; and passing resulting moisture-free catalyst into said reaction zone.



7. A process for regenerating and conditioning a steam sensitive particulate oxidizable metal oxide catalyst contaminated with carbonaceous deposit for return to a catalytic hydrocarbon conversion reaction, which comprises transporting a suspension of said catalyst in CO_2 substantially free of O_2 into a regeneration zone; maintaining a fluidized dense bed of said catalyst in said zone; burning a stream of moisture-free fuel gas with stoichiometric amount of air separately introduced to a central area of said bed to maintain an elevated temperature therein sufficient to react said CO_2 with said deposit to form CO; withdrawing a stream of regenerated catalyst from said zone; and feeding said fuel gas into said central area of said bed countercurrently thru the effluent stream of regenerated catalyst to strip same of steam and to provide a moisture-free regenerated catalyst.

3,050,470

PROCESS OF REACTING A GROUP III-A METAL WITH A GROUP IV-A METAL HALIDE AND HYDROGEN IN A LIQUID ORGANIC MEDIUM AND THE PRODUCT OF SAID PROCESSES

Tillmon H. Pearson and Thomas O. Sistrunk, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 10, 1957, Ser. No. 651,798

4 Claims. (Cl. 252—429)

1. The product obtained by reacting a group III-A metal with a group IV-A metal halide and hydrogen in the presence of a liquid organic medium selected from the group consisting of hydrocarbons and ethers, at a temperature between about 25 and 150° C., and a pressure between atmospheric and 50,000 p.s.i.g., said group III-A metal being present in an amount of at least about the stoichiometric amount required to reduce said group IV-A metal halide to its last lower valence state.

3,050,471

POLYMERIZATION CATALYST

Arthur William Anderson and John MacMillan Bruce, Jr., Wilmington, Del., Nicholas G. Merckling, deceased, late of Wilmington, Del., by Noelle K. Merckling, administratrix, Baltimore, Md., and William Lawrence Truett, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 21, 1959, Ser. No. 828,447

34 Claims. (Cl. 252—429)

1. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium tri-

halide with an organometallic compound containing at least one hydrocarbon radical bonded to metal, the quantity of the organometallic compound being sufficient to lower the valence state of the titanium, at least in part, to below three.

26. A catalyst composition consisting essentially of the reaction product obtained on admixing a titanium trihalide with a metal selected from the group consisting of alkali metals, alkaline earth metals and aluminum, the quantity of said metal being sufficient to lower the valence state of the titanium, at least in part, to below three.

3,050,472

POLYMERIZATION CATALYST

Jacque C. Morrell, 8 Oxford St., Chevy Chase, Md.

No Drawing. Filed Mar. 17, 1959, Ser. No. 799,857

8 Claims. (Cl. 252—435)

1. A polymerization catalyst comprising a dried mixture of a phosphoric acid and an inorganic support, said support consisting essentially of a natural porous silica material selected from the group consisting of kieselguhr, infusorial earth and diatomaceous earth and an additive selected from the group consisting of talc, sepiolite and pyrophyllite, the said phosphoric acid comprising about 70% to 85% of the said mixture, said support containing not less than about 80% of the said porous silica material and less than about 20% and more than 1% of said additive, said support being further characterized in that the said porous silica material together with said additive comprises not more than about 30% of the mixture.

3,050,473

POLYMERIZATION CATALYST

Jacque C. Morrell, 8 Oxford St., Chevy Chase, Md.

No Drawing. Filed Mar. 23, 1959, Ser. No. 800,948

5 Claims. (Cl. 252—435)

1. A polymerization catalyst comprising a dried mixture of a phosphoric acid and an inorganic support, said support consisting essentially of a natural porous silica material selected from the class consisting of kieselguhr, infusorial earth and diatomaceous earth and an additive selected from the group consisting of inorganic compounds of iron, the said phosphoric acid comprising about 70% to 85% of the said mixture, said support containing not less than about 80% of the said porous silica material and less than about 20% and more than 1% of said additive, said support being further characterized in that the said porous silica material together with said additive comprises not more than about 30% of the mixture.

3,050,474

EPOXIDE RESIN COMPOSITIONS

Donald H. Russell, Pennsauken, N.J., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 10, 1959, Ser. No. 858,607

11 Claims. (Cl. 260—2)

1. A composition of matter prepared by mixing an epoxide resin having at least one vicinal epoxy group, an epoxide resin curing agent, and up to about 28 percent by weight of a hydroxymethyl-dimethyl-meta-dioxane and curing the resulting mixture.

3,050,475

PRODUCTION OF POLYURETHANE PLASTICS USING SCHIFF'S BASE CATALYSTS

Erwin Müller, Leverkusen, Christian Wiegand, Wuppertal-Elberfeld, and Günther Braun, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Original application Oct. 18, 1956, Ser. No. 616,606, now Patent No. 3,004,933, dated Oct. 17, 1961. Divided and this application May 18, 1961, Ser. No. 110,881

Claims priority, application Germany Oct. 22, 1955

5 Claims. (Cl. 260—2.5)

2. In the manufacture of a cellular polyurethane plastic by a process which comprises reacting an organic polyisocyanate with water and an organic compound having a plurality of hydroxyl groups reactive with an —NCO group, said organic compound being capable of forming a polyurethane by reaction with an organic polyisocyanate, the method of making an elastic cellular polyurethane plastic which comprises reacting the organic polyisocyanate with water and an organic compound having hydroxyl groups reactive with an —NCO group and having an hydroxyl number below 150 in the presence of a Schiff's base having a tertiary nitrogen atom.

3,050,476

METHOD OF MAKING A SELF EXTINGUISHING EXPANDABLE POLYMER OF STYRENE BY BROMINATION

John J. Tress, Beaver Falls, Pa., and William J. Heilman, Lubbock, Tex., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Dec. 8, 1958, Ser. No. 778,565

13 Claims. (Cl. 260—2.5)

1. Method of making a self-extinguishing expandable polymer of styrene, comprising adding particles of said polymer to an aqueous medium at a temperature of 40–120° C., said aqueous medium containing from at least 2% to 10% by weight bromine based upon the quantity of said particles, contacting the bromine in said medium with an activating agent for the bromine at least until the color of said medium changes from orange to a pale yellow, and recovering said polymer from said medium, said polymer having been rendered capable of expansion by the incorporation therein of a volatile aliphatic hydrocarbon boiling in the range of —10 to 81° C.

3,050,477

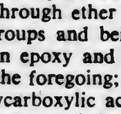
METHOD OF MAKING POLYURETHANE FOAM USING AN ORGANIC SILANE

George T. Gmitter, Akron, and Emery V. Braidich, Cuyahoga Falls, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 13, 1959, Ser. No. 846,052

11 Claims. (Cl. 260—2.5)

1. The method which comprises reacting (1) at least one organic polyisocyanate with (2) at least one polyether polyol containing at least two active alcoholic hydroxyl radicals in amounts sufficient to form a polyurethane in admixture with (3) a minor amount by weight of a foaming agent sufficient to foam the reaction mass of said polyisocyanate and said polyol and in contact with (4) a minor amount by weight, based on the total weight of polyol present and sufficient to stabilize the foaming reaction of said polyisocyanate and said polyol and to obtain cells of substantially uniform size in the resulting polyetherurethane, of at least one organic silane having the formula



where R is selected from the group consisting of an alkyl radical of from 1 to 6 carbon atoms and an alkenyl radical of from 2 to 6 carbon atoms and mixtures thereof.

3,050,478

SOLIDIFIABLE FLUID COMPOSITIONS PREPARED FROM ENEDIOYL ACIDS, EPOXIDIZED HYDROCARBON DRYING OIL, AND CONJUGATED DIENES

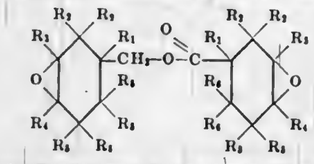
Sol B. Radlove, Chicago, Ill., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed July 28, 1958, Ser. No. 751,109

21 Claims. (Cl. 260—18)

1. A fluid, reactive composition which reacts to produce a solid reaction product and whose fluid unreacted but solidifiable component comprises essentially:

A. an epoxy component composed essentially of material selected from the group consisting of (*a*) epoxidized polymeric hydrocarbon drying oil containing residues of conjugated diolefins and having an oxirane oxygen content of at least about 2.3% by weight; (*b*) epoxidized glyceride oil having an oxirane content between about 2.3% and 7.5% by weight; (*c*) diepoxides of cycloaliphatic esters having a structure conforming to the general formula:



wherein R_1 through R_6 represent members selected from the group consisting of hydrogen and lower alkyl radicals; (*d*) crude, monoepoxide of diallyl esters of dicarboxylic acids; (*e*) glycidyl allyl esters of dicarboxylic acids; (*f*) polymeric polyether resinous derivatives of polyhydric phenols, said derivatives having alternating aromatic and aliphatic nuclei united together through ether oxygen, having terminal 1,2 epoxy groups and being free of functional groups other than epoxy and hydroxyl groups; and (*g*) mixtures of the foregoing;

B. monomeric polycarboxylic acidic dienophile selected from the group consisting of α, β unsaturated polycarboxylic acid and anhydrides thereof, said dienophiles being employed substantially in an amount which provides about 0.2–4 carboxyl groups for each oxirane oxygen group in said epoxy component; and

C. a reactive diluent component having low volatility at temperatures up to about 350° F. and having a melting point below about 70° C., said diluent component being compatible with said epoxy component, being essentially of ethylenically-unsaturated organic material of the foregoing physical properties and being capable of forming Diels-Alder adducts with monomeric α, β unsaturated polycarboxylic dienophiles, said ethylenically-unsaturated material being selected from the group consisting of ocimene, allo-ocimene, myrcene, α-terpinene, β-phellandrene, 2,4(8) p-menthadiene, 2,4(5) p-menthadiene and 3,8 p-menthadiene, conjugted linseed oil, conjugated soybean oil, tung oil, dehydrated castor oil and oiticica oil, and mixtures thereof, and being present in amounts not substantially exceeding that which can be converted to Diels-Alder adduct with the said monomeric polycarboxylic dienophile.

3,050,479

PROCESS COMPRISING HEAT-TREATING HALOGENATED BUTYL RUBBER IN THE PRESENCE OF A NOVOLAC RESIN AND THEREAFTER CURING, AND PRODUCT OBTAINED THEREBY

George J. Ziarnik, Roselle, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 24, 1959, Ser. No. 861,746

14 Claims. (Cl. 260—19)

13. A method which comprises preparing a rubbery copolymer of 97.5% isobutylene with 2.5% isoprene which has been modified to incorporate 1.2% chlorine therein; heat treating 100 parts of said copolymer in the presence of 1 part 2,2'-methylene (4-methyl-6-tertiary butyl) phenol, 4 parts of MgO, 50 parts of hydrated silica, 1 part of stearic acid, and 3 parts of novolac acid catalyzed phenol-formaldehyde resin and in the absence of ZnO at a temperature of 300° F. for 8 minutes; cooling said heat-treated rubbery copolymer to a temperature of 80° F.; and curing said cooled polymer at a temperature of 307° F. for 60 minutes in the presence of 1 part tetramethylthiuram disulfide, 2 parts of benzothiazyl disulfide, and 3 parts ZnO to provide a vulcanizate therefrom with a tensile strength of 1800 p.s.i.

3,050,480

PROTECTIVE FILM FORMING COMPOSITIONS AND RESULTANT FILMS

Walter M. Budde, Minneapolis, Minn., assignor to Archer-Daniels-Midland Company, Minneapolis, Minn., a corporation of Delaware

No Drawing. Filed Jan. 20, 1958, Ser. No. 709,791

25 Claims. (Cl. 260—22)

1. A coating vehicle for forming thin flexible hard dry films with an epoxidized fatty chain containing material selected from the group consisting of epoxidized long chain fatty acids and the esters thereof having an iodine value of at least 90 before epoxidation and after epoxidation containing not less than 4% oxirane groups located within the molecules of the said fatty chain material, said vehicle consisting of a mutual solvent containing a mixture of a said epoxidized fatty chain material and a polycarboxylic acid having a molecular weight of at least 180, at least two reactive carboxylic acid groups and a pH value of not more than about 4.7, and said acid and the said epoxidized fatty chain containing material constituting the reactants for forming said film.

3,050,481

EPOXIDIZED MONOGLYCERIDE DIACETATES AS PLASTICIZERS FOR POLYMERIZED VINYL CHLORIDE

Waldo C. Ault, Glenside, Pa., and Reuben O. Feuge, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Original application Apr. 12, 1954, Ser. No. 422,708, now Patent No. 2,895,966, dated July 21, 1959. Divided and this application Jan. 10, 1956, Ser. No. 563,826

3 Claims. (Cl. 260—23)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A plastic composition comprising polymerized vinyl chloride and monoepoxystearyl diaceto glyceride as a plasticizer-stabilizer therefor.

3,050,482

REACTION PRODUCT OF A POLYHYDROXY COMPOUND AND A POLYISOCYANATE IN THE PRESENCE OF A VINYL-SUBSTITUTED HETEROCYCLIC NITROGEN BASE

Raymond L. Cobb and Paul S. Hudson, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 3, 1959, Ser. No. 831,457

12 Claims. (Cl. 260—23)

11. As a new composition, the product formed by reacting an organic polyhydroxy compound with an organic

polyisocyanate in the presence of a vinyl-substituted heterocyclic nitrogen base and a vinyl polymerization catalyst, wherein said polyhydroxy compound is selected from the group consisting of castor oil, ethylene glycol, 1,3-propylene glycol, 1,2-propylene glycol, 1,2-butylene glycol, 2,3-butylene glycol, 1,4-butylene glycol, 2,2-dimethyl-1,3-propanediol, pentamethylene glycol, hexamethylene glycol, 1,2-octylene glycol, 4,5-octylene glycol, 4,5-decylene glycol, decamethylene glycol, dodecamethylene glycol, hexadecamethylene glycol, polyethylene glycol, polypyropylene glycol, poly(1,4-butylene) glycol, poly(2,3-butylene) glycol, poly(1-phenylethylene) glycol, poly(4,5-decylene) glycol, poly(2-methyl - 2 - ethyl-1,5-pentylene)glycol, ethylene-propylene glycol, and esters of such glycols formed by reacting the same with a carboxylic acid selected from the group consisting of succinic acid, monomethyl succinic acid, glutaric acid, adipic acid, pimelic acid, suberic acid, azelaic acid, sebacic acid, brassylic acid, thapsic acid, 6-oxoundecanedioic acid, octadecanedioic acid, 8-octadecenedioic acid, eicosanedioic acid, 6,8-octadecadienedioic acid, malic acid, maleic acid, fumaric acid, glutaconic acid, itaconic acid, cyclopentane-1,2-dicarboxylic acid, cyclopentane-1,3-dicarboxylic acid, phthalic acid, isophthalic acid, terephthalic acid, naphthalene-1,2-dicarboxylic acid, naphthalene-1,3-dicarboxylic acid, naphthalene-1,4-dicarboxylic acid, naphthalene-1,5-dicarboxylic acid, naphthalene-1,8-dicarboxylic acid, diphenyl-2,2'-dicarboxylic acid, diphenyl-4,4'-dicarboxylic acid, diphenyl-2,4'-dicarboxylic acid, 2,6-dimethylbenzene-1,4-dicarboxylic acid, and 4,5-dimethyl-benzene-1,2-dicarboxylic acid, said polyisocyanate being selected from the group consisting of benzene-1,3-diisocyanate, benzene - 1,4 - diisocyanate, hexamethylenediisocyanate, toluene-2,4-diisocyanate, toluene - 2,5 - diisocyanate, diphenylmethane-4,4'-diisocyanate, diphenyl-4,4'-diisocyanate, diphenyl-3,3'-dimethyl-4,4'-diisocyanate, diphenyl-3,3'-dimethyl - 4,4' - diisocyanate, 2 - chloropropane-1,3-diisocyanate, diphenyl - 3,3'-dimethoxy-4,4'-diisocyanate, naphthalene-1,5-diisocyanate, pentamethylenediisocyanate, tetramethylenediisocyanate, octamethylenediisocyanate, dimethylenediisocyanate, propylene-1,2-diisocyanate, benzene - 1,2,4 - triisocyanate, toluene - 2,3-diisocyanate, diphenyl-2,2'-diisocyanate, naphthalene - 2,7 - diisocyanate, naphthalene-1,8-diisocyanate, toluene-2,4,6-triisocyanate, benzene-1,3,5-triisocyanate, benzene - 1,2,3-triisocyanate, and toluene-2,3,4-triisocyanate, said vinyl-substituted heterocyclic nitrogen base being selected from the group consisting of 2-vinylpyridine, 4-vinylpyridine, 2,4,6-trimethyl - 5 - vinylpyridine, 3,4,5,6-tetramethyl-2-vinylpyridine, 3-ethyl-5-vinylpyridine, 2-vinyl - 5 - ethylpyridine, 2-methyl-5-vinylpyridine, 4,6 - dimethyl - 2-vinylpyridine, 2,6-diethyl - 4 - vinylpyridine, 2-isopropyl-4-vinylpyridine, 2-vinyl-5-propylpyridine, 2-vinyl-5-butylpyridine, 2-vinyl-5-hexylpyridine, 2-vinyl - 5 - heptylpyridine, 2-methyl-5-undecyl-6-vinylpyridine, 2,4 - dimethyl - 5,6 - dipentyl-3-vinylpyridine, 2-vinyl-quinoline, 2-vinyl-8-ethylquinoline, 4-hexyl - 5 - vinylquinoline, 4 - dodecyl-5-vinylquinoline, 3,4,5,6-tetramethyl-2-vinylquinoline, and 1-vinylisoquinoline, said catalyst being selected from the group consisting of benzoyl peroxide, n-butyl peroxide, lauroyl peroxide, tertiarybutyl peroxide, cumene peroxide, n-propyl hydroperoxide, and cumene hydroperoxide, wherein the total amount of said polyhydroxy and polyisocyanate compounds is 50 to 98 weight percent with 0.5 to 1.5 equivalents of said polyhydroxy compound being used per equivalent of said polyisocyanate compound, said vinyl-substituted heterocyclic nitrogen base being used in the amount of 1 to 50 weight percent, and said catalyst being used in the amount of 0.01 to 10 weight percent, said weight percents being based on the total weight of the reaction mixture.

3,050,483

ASPHALT-CHLORINATED POLYETHYLENE COMPOSITION FOR ROAD-MAKING

James Kalil, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 25, 1960, Ser. No. 4,238

2 Claims. (Cl. 260—28.5)

1. Asphalt containing dispersed therein from 0.5 to 5.0% by weight of said asphalt of a normally solid polyethylene, said polyethylene being chlorinated to the extent of from about 15 to 35% by weight thereof.

3,050,484

BITUMINOUS PROTECTIVE COATING AND METHOD OF USE

James Q. Wood, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 28, 1960, Ser. No. 17,762

10 Claims. (Cl. 260—28.5)

1. A bituminous coating composition comprising a normally liquid polymerized conjugated diene having from 4 to 8 carbon atoms per molecule, a polymer of acrylic acid selected from the group consisting of polyacrylic acid and a copolymer of acrylic acid and a conjugated diene having from 4 to 8 carbon atoms per molecule, and from 50 to 90 weight percent asphalt.

3,050,485

METHOD FOR CURING ORGANOPOLYSILOXANE COMPOSITIONS WITH SULFUR-CONTAINING COMPOUNDS WHICH ARE REDUCIBLE BY NASCENT HYDROGEN

Siegfried Nitzsche and Manfred Wick, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany

No Drawing. Filed July 16, 1958, Ser. No. 748,790

Claims priority, application Germany July 31, 1959

2 Claims. (Cl. 260—29.1)

1. A method of preparing a silicone rubber consisting of admixing (1) an essentially diorganosiloxane polymer of the formula $ZO(R_xSiO)_nZ$ where each R is selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals, each Z is selected from the group consisting of hydrogen atoms, monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals, x has an average value of from 1.95 to 2.05 and n has a value of at least 50, (2) an organohydrogensiloxane fluid of the average unit formula

$$R_mHSiO_{\frac{3-m}{2}}$$

where R is as above defined and m has an average value in the range of 0 to 2 inclusive, (3) a condensation catalyst selected from the group consisting of dibutyl tin dilaurate and dibutyl tin dimaleinate and (4) a minor proportion of a sulfur containing compound easily reducible by nascent hydrogen selected from the group consisting of thiocetamide, thiourea, dibenzyldisulfide, diphenylsulfide, dibutylsulfoxide, 4,4'-diaminodiphenylsulfone, paratoluolsulfonic acid methyl ester, phenylisothiocyanates, tetramethylthiuram disulfide, tetramethylthiurammonosulfide, mercaptobenzothiazole, zinc salt of mercaptobenzothiazole, N-cyclohexylbenzothiazyl-2-sulfenamide, ethylphenyldithiocarbamic zinc, tellurium diethyldithiocarbaminate and selenium dimethyldithiocarbiminate, and exposing the mixture to the atmosphere at room temperature.

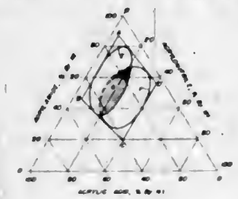
3,050,486

COATING COMPOSITION FOR PAPER COMPRISING A MINERAL PIGMENT AND AN ACRYLIC ACID-ACRYLAMIDE-ACRYLONITRILE COPOLYMER AS PRINCIPAL COATING COMPONENT

Daniel D. Ritson, Riverside, and Tzeng Jiueq Suen, New Canaan, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed May 13, 1959, Ser. No. 814,131

6 Claims. (Cl. 260—29.6)



1. A fluid aqueous coating composition for water-laid cellulose webs comprising a hydrophilic inorganic mineral pigment as coating component and a water-soluble tripolymer as principal adhesive component, said tripolymer being formed by polymerizing a mixture of 5% to 50% by weight of acrylic acid, 20% to 85% by weight of acrylamide, and 5% to 40% by weight of acrylonitrile, having a "relative viscosity" to aqueous ammonia in excess of 15, and being soluble in all proportions in water at 35° C., the relative amounts of each of the constituents of said polymer being chosen so as to be represented by any point within parallelogram ABCD of the annexed drawing, said coating composition having a pH between about 3.5 and 8.5.

3,050,487

REDUCING STICKINESS DURING THE MILLING OF A RUBBERY DIENE POLYMER BY ADDITION OF A HYDROCARBON ACID ESTER OF A PHOSPHORIC ACID

Paul W. Solomon, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 7, 1958, Ser. No. 719,712

12 Claims. (Cl. 260—30.6)

1. A process of reducing sticking during milling which comprises milling a rubbery diene polymer prepared by polymerizing a major portion of a conjugated diene containing 4 to 8 carbon atoms and a minor portion of an acid containing not more than 12 carbon atoms selected from the group consisting of ethylenically unsaturated copolymerizable monocarboxylic and dicarboxylic acids, said milling being carried out in the presence of a small amount of a hydrocarbon acid ester of a phosphoric acid containing 1 to 4 pentavalent phosphorus atoms.

3,050,488

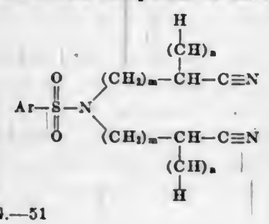
COMPOSITION COMPRISING POLYACRYLONITRILE PLASTICIZED WITH CYANOALKYL SULFONAMIDE

Paul R. Graham, Richmond Heights, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 2, 1958, Ser. No. 706,551

4 Claims. (Cl. 260—30.8)

1. A composition comprising a homopolymer of acrylonitrile and from about 10% to about 60% by weight of the composition of a compound of the structure



wherein m is an integer of from 0 to 2 and n is an integer of from 0 to 2, provided that when m is 0, then n is 0, and Ar is an aryl hydrocarbon radical having up to 15 carbon atoms.

3,050,489

METHOD OF STABILIZING OXIDIZED DRYING OILS FOR ISOCYANATE-SULPHUR DIOXIDE CURING

Ober C. Slotterbeck, Rahway, and Merilyn T. Winters, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 26, 1958, Ser. No. 723,971

6 Claims. (Cl. 260—33.4)

1. A viscosity stable coating composition comprising a synthetic oxidized polymer, said polymer being a normally liquid polymer of a conjugated diolefin having 4 to 6 carbon atoms per molecule, from about 1 to about 35% by weight, based on the polymer, of a tertiary aliphatic monohydric alcohol, and the reaction product of an isocyanate and a polyol having the formulae $R(NCO)_n$ and $R'(OH)_n$, respectively, wherein R and R' are selected from the group consisting of alkyl, aryl and alkaryl and n is any integer above 1; said composition having between about 0.0007 and about 0.0183 gram equivalents of free-NCO per 5 grams of said oxidized polymer.

3,050,490

BORON NITRIDE CONTAINING SELF-ADHERING SILICONE RUBBER

Siegfried Nitzsche and Manfred Wick, Burghausen, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Bavaria, Germany

No Drawing. Filed Feb. 5, 1960, Ser. No. 6,871

Claims priority, application Germany Feb. 20, 1959

7 Claims. (Cl. 260—37)

1. A composition of matter consisting essentially of a mixture of (*a*) 100 parts by weight of an essentially linear diorganosiloxane polymer of at least 1,000 cs. viscosity at 25° C., the organic substituents being selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals, at least 50 percent of the organic substituents being methyl radicals and (*b*) 10 to 100 parts by weight of boron nitride.

3,050,491

METHOD OF PREPARING SELF-ADHERING ORGANOPOLYSILOXANE ELASTOMERS

Siegfried Nitzsche and Manfred Wick, Burghausen, Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Bavaria, Germany

No Drawing. Filed Feb. 18, 1960, Ser. No. 9,428

Claims priority, application Great Britain Feb. 20, 1959

5 Claims. (Cl. 260—37)

1. A method of preparing self-adhering silicone rubber consisting essentially of (A) admixing (1) a high polymer diorganosiloxane prepared by polymerizing a low molecular weight diorganosiloxane of the unit formula

$$R_nSiO_{\frac{4-n}{2}}$$

wherein each R is a monovalent radical selected from the group consisting of hydrocarbon and halohydrocarbon radicals and n has an average value of 1.99 to 2.01 in the presence of .001 to 0.1 percent by weight based on the weight of the diorganosiloxane of a boron compound selected from the group consisting of boric acid and alkyl esters of boric acid, (2) a filler and (3) a vulcanizing agent and (B) vulcanizing the mixture.

5. The method of preparing high polymer diorganosiloxanes suitable for use in self-adhering silicone rubber consisting essentially of polymerizing low molecular

weight diorganosiloxane polymers consisting essentially of units of the formula

$$R_nSiO_{\frac{4-n}{2}}$$

where each R is a monovalent radical selected from the group consisting of hydrocarbon and halohydrocarbon radicals and n has an average value of 1.99 to 2.01 by contacting the low molecular weight polymer with .001 to 0.1 percent by weight based on the weight of the diorganosiloxane polymer of potassium meta borate.

3,050,492

LOW TEMPERATURE FLUORINATED ORGANOSILICON RUBBER

Keith E. Polmanteer and Eric D. Brown, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,124

9 Claims. (Cl. 260—37)

1. A vulcanizable composition comprising (I) a copolymeric organosiloxane consisting essentially of (A) from 6.5 to 15 inclusive mol percent of polymeric units of the formula

$$[CF_3(CF_2)_xCH_2CH_2](CH_3)_y(CF_3CH_2CH_2)_zSiO$$

where x, y and z are integers of from 0 to 1 inclusive, the sum of $x+z$ being from 0 to 1 inclusive and the sum of $y+z$ being 1, and (B) from 85 to 93.5 inclusive mol percent of units of the formula $(CH_3)_2SiO$, there being a maximum of 9.95% by weight fluorine in said copolymeric organosiloxane, (II) a filler for organosilicon rubber, and (III) an organosiloxane vulcanizing agent.

3,050,493

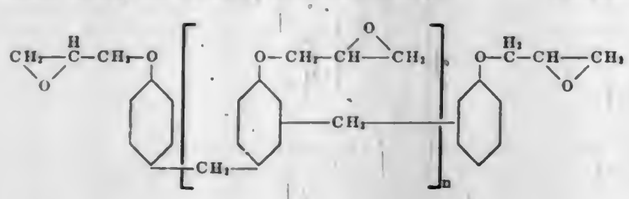
DRY EPOXY RESIN ADHESIVE COMPOSITION AND PROCESS FOR PREPARING SAME

Herman B. Wagner, Blooming Glen, Pa., and Ernest E. Weller, Sayreville, N.J., assignors to Tile Council of America, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed July 28, 1959, Ser. No. 829,962

10 Claims. (Cl. 260—37)

1. A dry bonding composition adapted to become functional upon the addition of a liquid selected from the group consisting of water, ethyl alcohol, and mixtures of the foregoing, which comprises: a liquid epoxy resin which is selected from the group consisting of the reaction product of epichlorohydrin with bisphenol, and epoxy resins having the following structural formula:



where n is a number such that the epoxy resin contains one gram-mole of the epoxide group per 180 to 200 grams of resin; the liquid epoxy resin being adsorbed on a finely divided, solid inert carrier; and, as the epoxy resin hardener, an acid salt of an amino compound containing at least two amino groups; and a strong base in powdered form.

3,050,494

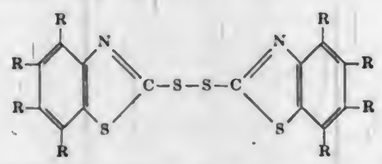
COMPOSITIONS COMPRISING AN OLEFIN POLYMER, CARBON BLACK, AND A DITHIOBISBENZOTHIAZOLE, AND PROCESS FOR CURING SAME

Archie L. Robbins and Kenneth R. Mills, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 30, 1958, Ser. No. 770,582

10 Claims. (Cl. 260—41)

1. A composition of matter comprising, as the sole polymeric material, a solid hydrocarbon polymer of a 1-olefin of 2 to 8 carbon atoms, at least 25 parts by weight of carbon black per 100 parts of said solid polymer, the amount of said black being sufficient to change appreciably the properties of said solid polymer, and as the sole curing agent an amount sufficient to cure said solid polymer of a compound of the structure



where each R is individually selected from the group consisting of hydrogen, halogen, and alkyl groups and where the carbon atoms in the sum of the R groups attached to an aromatic ring does not exceed 6.

3,050,495

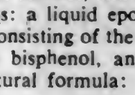
COMPOSITIONS COMPRISING BLENDS OF ALDEHYDE-MODIFIED AMIDE INTERPOLYMERS WITH AMINE RESINS AND ARTICLES COATED THEREWITH

Roger M. Christenson, Richland Township, Allegheny County, Pa., assignor to Pittsburgh Plate Glass Company

No Drawing. Filed Aug. 12, 1957, Ser. No. 677,778

10 Claims. (Cl. 260—45.2)

1. A resinous composition comprising an amino resin selected from the class consisting of urea-formaldehyde resins and melamine-formaldehyde resins, and an interpolymer of an amide selected from the class consisting of acrylamide, methacrylamide, maleuric acid, alkyl esters of maleuric acid, N-carbamyl maleimide, and N-alkoxymethyl acrylamides, and at least one other monomer containing a $CH_2=C<$ group, said interpolymer containing from about 5 percent to 50 percent by weight of said amide in polymerized form based on the total weight of said interpolymer and being characterized by having amido hydrogen atoms replaced by the structure



wherein R is a member selected from the class consisting of hydrogen, furyl, and lower alkyl, and R_1 is at least one member of the class consisting of hydrogen, lower alkyl, and butoxyethyl, said amino resin and said interpolymer being present in the relative percentages by weight of from 5 percent to 95 percent amino resin and 95 percent to 5 percent of said interpolymer.

3,050,496

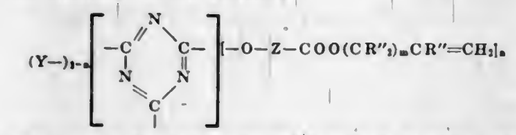
POLYMERS OF TRIAZINYL VINYL MONOMERS

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Sept. 30, 1958, Ser. No. 764,249

12 Claims. (Cl. 260—45.4)

1. A composition of matter comprising a polymerization product of a polymerizable mass comprising at least one monomer of the structure:



wherein n is an integer having a value of at least 2 and not more than 3, Z is a divalent radical selected from the class consisting of divalent aliphatic, cycloaliphatic and aromatic hydrocarbon radicals having no more than 12 carbon atoms therein Y represents a monovalent radical, R'' is a radical selected from the class consisting of hydrogen, halogen and aliphatic and aromatic hydrocarbon radicals having no more than 6 carbon atoms therein, and m is selected from the class consisting of 0 and 1.

3,050,497

IMPROVED HIGH MOLECULAR WEIGHT POLYISOBUTYLENE COMPOSITIONS AND METHOD OF MAKING

David W. Young, Homewood, Ill., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 15, 1961, Ser. No. 95,817

4 Claims. (Cl. 260—45.5)

1. Polymers consisting essentially of rubber-like polyisobutylene of a molecular weight of at least about 100,000 containing in admixture therewith about 1.5 to 4.5 weight percent based on the total composition of highly crystalline, low-pressure, linear polyethylene of a molecular weight of at least about 20,000 to one million and a density of about 0.94 to 0.97 made by polymerizing ethylene at a pressure not exceeding about 1,000 p.s.i.

3,050,498

COMPOSITIONS COMPRISING GRAFT COPOLYMERS OF AMINATED ACRYLATE AND METHACRYLATE MONOMERS ON ACRYLONITRILE POLYMERS AND METHOD OF PREPARING SAME

George W. Stanton, Walnut Creek, and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 29, 1958, Ser. No. 711,935

10 Claims. (Cl. 260—45.5)

1. Dye-receptive graft copolymer composition comprised of (1) an acrylonitrile polymer substrate which is a polymer of polymerizable, acrylonitrile-containing, ethylenically unsaturated monomeric material that has in the polymer molecule at least about 80 weight percent of polymerized acrylonitrile, said acrylonitrile polymer having chemically attached directly to carbon atoms in its chain, as graft copolymerized substituents thereon, a minor proportion of units of (2) a polymerized monomer of the formula:

$$CH_2=CX—COO—CH_2CH_2—NR_2 \quad (I)$$

wherein X is selected from the group consisting of hydrogen and methyl radicals and each R is independently selected from the group consisting of hydrogen, methyl and ethyl radicals.

3,050,499

STABILIZED VINYL HALIDE RESINS

Eliot G. Gordon, New York, and Otto König, Forest Hills, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 24, 1958, Ser. No. 723,138

8 Claims. (Cl. 260—45.7)

1. A vinyl halide polymer composition, said vinyl halide polymer being substantially free of hydroxyl groups, said polymer being selected from the group consisting of vinyl chloride and copolymers of vinyl chloride with vinyl acetate said composition containing as stabilizer and anti-yellowing agent therefor, at least one phosphorus compound, representable by the formula $(RO)_xPR'_y$, wherein R represents a radical selected from the group consisting of aliphatic hydrocarbon radicals containing from 1 to 18 carbon atoms and aryl radicals containing from 6 to 18 carbon atoms, R' represents a radical selected from the group consisting of aliphatic hydrocarbon radicals containing from 1 to 18 carbon atoms and aryl radicals containing from 6 to 18 carbon atoms, x is from zero to 2, y is from 1 to 3, and the sum of x and y is 3, said phosphorus compound being present in amounts equivalent from about 0.6 to about 6.0 parts of combined phosphorus per 10,000 parts of vinyl halide polymer.

3,050,500

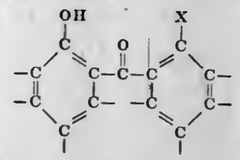
PHOTOSTABILIZED POLYOXYMETHYLENES

Laurence Thomas Sherwood, Jr., West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 2, 1960, Ser. No. 25,858

11 Claims. (Cl. 260—45.95)

1. A composition of improved photostability comprising a polyoxymethylene, selected from the class consisting of hydroxyl-free polyoxymethylene carboxylates and hydroxyl-free polyoxymethylene ethers, having a number average molecular weight of at least 20,000 and 0.1% to 5.0% by weight of said polyoxymethylene of a photostabilizer having the formula



wherein X is selected from the group consisting of hydrogen, hydroxyl, and chlorine, and the carbon atoms in the 3-, 4-, 5-, and 6-positions on each ring structure are each bonded to a member of the group consisting of hydrogen, alkyl radicals of 1–4 carbon atoms, alkoxyl radicals of 1–4 carbon atoms, and chlorine.

3,050,501

SILYLPROPYL SILYLBUTANOATES

Leo H. Sommer, State College, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed May 6, 1957, Ser. No. 657,023

6 Claims. (Cl. 260—46.5)

1. A silylpropyl silylbutanoate selected from the group consisting of (1) monomeric silanes having the formula

$$R_xY_{3-x}Si(CH_2)_3CO(CH_2)_3SiR_xY_{3-x}$$

where R is a monovalent hydrocarbon radical free of aliphatic unsaturation, Y is selected from the group consisting of Cl, Br, and alkoxy radicals, and x is an integer of from 0 to 2 inclusive, and (2) siloxanes containing polymeric units of the formula

$$O_{\frac{3-x}{2}}R_xSi(CH_2)_3CO(CH_2)_3SiR_xO_{\frac{3-x}{2}}$$

where R and x are as above defined.

3,050,502
DIAZO CONDENSATION POLYMERS

Ibert Mellan, Bayside, N.Y., assignor to Polychrome Corporation, Yonkers, N.Y., a corporation of New York

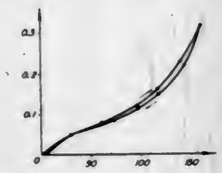
No Drawing. Filed Jan. 29, 1959, Ser. No. 789,782
5 Claims. (Cl. 260—72.5)

1. A condensation process which comprises contacting the double zinc chloride salt of para diazo nitroso diphenyl with formaldehyde in admixture with sulfuric acid and at a temperature in the range of about ambient temperature to 70° C.; and thereafter recovering the condensation product from the sulfuric acid solution.

3,050,503
CHLOROSULFONATED ELASTOMERS AND METHODS FOR MAKING THE SAME

Giulio Natta, Mario Bruzzone, and Carlo Borsini, Milan, Italy, assignors to Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy

Filed Apr. 9, 1957, Ser. No. 651,785
Claims priority, application Italy Apr. 20, 1956
14 Claims. (Cl. 260—79.3)



1. Linear, substantially amorphous, head-to-tail high homopolymers of alpha-olefines having the formula $CH_2{=}CHR$ and containing from 4 to 6 carbon atoms, said polymers having hydrogen atoms substituted by Cl atoms and SO_2Cl groups in a proportion such that the chlorine content of the substituted polymers is from 0.3% to about 10% by weight and the sulfur content is from 0.3% to 3.0% by weight.

3,050,504
AQUEOUS PHASE POLYMERIZATION OF VINYL AND RELATED MONOMERS WITH ORGANIC COCATALYSTS

Daniel F. Herman, Orange, and Albert L. Resnick, Fairlawn, N.J., and Dominic Simone, Bronx, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,588
11 Claims. (Cl. 260—80)

1. A process for the polymerization of vinyl and related monomers, said monomer being selected from the group consisting of acrylic acid and esters thereof, alkyl substituted acrylic acid and esters thereof, styrene, alkyl mono-substituted styrene, said mono-substitution being on the aromatic portion of the molecule, and acrylonitrile, comprising the steps of dispersing said vinyl monomer in a liquid system containing a first compound of the formula $R_nMR'_m$; wherein R is a hydrocarbon radical selected from the group consisting of cyclopentadienyl and substituted cyclopentadienyl radicals, M is a metal selected from the class of metals consisting of zirconium and titanium, R' is selected from the group consisting of alkoxy, cycloalkoxy and acyloxy groups, and halogen atoms, *n* is from one to two and *m* is from one to three, and when *m* is three, at least one R' must be selected from the class consisting of halogens and acylates, the sum of *m* and *n* being from 3 to 4, said liquid system also containing a second compound, said second compound being selected from the group consisting of unsubstituted aliphatic, unsubstituted aromatic, hydroxy-substituted and lower alkyl-substituted aromatic, and hydroxy substituted aliphatic organic acids said second compound being present in amount from 0.5 to 5 parts by weight for each part by weight of said first compound.

3,050,505
COPOLYMERIZATION PROCESS

Frank R. A. Litterio, East Orange, N.J., assignor to White Laboratories, Inc., Kenilworth, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 6, 1960, Ser. No. 53,881
6 Claims. (Cl. 260—80.3)

1. The process of preparing cross-linked water swellable resins in the form of distinct, relatively uniformly-sized, small beads which comprises: introducing an ethylenically unsaturated monomer subject to both homo- and copolymerization, a copolymerizable diethylenically unsaturated cross-linking agent, and a polymerization initiator into a vigorously agitated, smooth aqueous slurry of a water-soluble inorganic non-redox divalent-ion containing salt maintained at about 74–78 degrees centigrade; heating the resultant admixture for about 15 minutes with agitation at about 74–78 degrees centigrate, and then heating the admixture at about 90–95 degrees centigrade with agitation until the resin has been formed as beads; discontinuing heating and agitation; washing the resin beads, and drying them.

3,050,506
QUATERNIZATION OF VINYL CHLOROACETATE POLYMERS

David R. Sexsmith, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 22, 1960, Ser. No. 23,921
6 Claims. (Cl. 260—85.7)

1. A process for the reaction of a 1.5:1 to 1:1.5 molar ratio hydrophobic vinyl higher fatty acid ester-vinyl chloroacetate copolymer with a liquid pyridine, which consists essentially in mixing said copolymer with up to one equivalent of a pyridine which is liquid at a temperature below 200° C., and maintaining said mixture at a temperature between the melting points of said copolymer and said pyridine and the boiling point of said pyridine until the reaction of said pyridine with said copolymer is substantially complete.

3,050,507
EPOXY DERIVATIVES OF UNSATURATED POLYVINYL CHLORIDE

Richard W. Rees, Wilmington, Del., assignor to Shawinigan Chemicals Limited, Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Original application Jan. 22, 1957, Ser. No. 635,121, now Patent No. 2,908,662, dated Oct. 13, 1959. Divided and this application July 23, 1959, Ser. No. 828,960
3 Claims. (Cl. 260—87.1)

1. A process for the preparation of an epoxidized polymer derived from a saturated polymer of the group consisting of polyvinyl chloride and copolymers of vinyl chloride and vinyl acetate wherein the vinyl acetate does not exceed 20% by weight of the total copolymer, comprising reacting an organic percarboxylic acid of the group consisting of peracetic acid and perbenzoic acid under epoxidizing conditions with an unsaturated resin prepared by (*a*) reacting a solution of said saturated polymer in an inert solvent with ammonia at a temperature between 20° C. and 150° C. and a pressure of at least 40 p.s.i.g., for a period of time sufficient, at the selected temperature and pressure, to produce an unsaturated resin but insufficient to produce appreciable substitution by amino groups, whereby hydrogen chloride is removed

from the polymer and an unsaturated polymer is produced, and (*b*) recovering the unsaturated polymer from the solution.

3,050,508
PROCESS FOR PREPARING PURE POLYVINYL ALCOHOL

Werner Starck, Hofheim (Taunus), and Karl-Heinz Kahrs, Alfred Kuhlkamp, and Werner Ehmann, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Dec. 8, 1959, Ser. No. 858,072
Claims priority, application Germany Dec. 18, 1958
6 Claims. (Cl. 260—91.3)

1. A process for the manufacture of polyvinyl alcohol in a powdery filterable form adaptable to washing in cold water without swelling and containing no more than 11.5 percent of unhydrolyzed acyl groups, which process comprises saponifying an ester of polyvinyl alcohol and an aliphatic monocarboxylic acid having 1 to 10 carbon atoms at a temperature in the range between 10° C. and 120° C. in a saponification mixture of 0.1 to 10 percent by weight of at least one strong acid as a saponification catalyst, 0.5 to 15 percent by weight of water, the balance being a mixture of said ester and a water-miscible and acid-miscible solvent which is inert to said carboxylic acid and which is a non-solvent for polyvinyl alcohol, said ester being present as 1 to 50 percent by weight of said solvent in the ester-solvent mixture, whereby polyvinyl alcohol is precipitated in powdery form with the simultaneous formation of free carboxylic acid from the ester saponified.

3,050,509
PROCESS FOR DRYING COAGULATED CHLOROBUTADIENE EMULSION POLYMERS

Anton Robert Heinz, Koln-Flittard, Dietrich Rosahl, Koln-Stammheim, Wilhelm Graulich, Dormagen, and Paul Esser, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 25, 1960, Ser. No. 10,840
Claims priority, application Germany Mar. 3, 1959
8 Claims. (Cl. 260—92.3)

1. A process for isolating polychloroprene from a polychloroprene latex and drying the isolated polychloroprene which comprises coagulating said aqueous polychloroprene emulsion to produce a finely divided coagulated polychloroprene, coagulation being affected by adding the emulsion to an aqueous salt solution comprising 0.05–5% of salts selected from the group consisting of water-soluble aluminum and titanium salts, together with a member selected from the group consisting of 0.1–10% of a water-soluble alkaline earth metal salt and 5–100% of a water-soluble alkali metal salt, said percentages being based on the weight of the polychloroprene emulsion to be coagulated, separating said coagulated polychloroprene from the coagulation medium, washing said coagulated polychloroprene and thereafter subjecting said coagulated polychloroprene for a time of not more than about 2 minutes to a continuous kneading process by means of a worm at a reduced pressure not greater than about 300 mm. Hg and at a temperature of at least about 110° C. to obtain a substantially dry polychloroprene.

3,050,510
POLYMERIZATION OF ARYL OLEFINS

Peter J. Canterino and Boris Franzus, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,255
8 Claims. (Cl. 260—93.5)

1. A method for producing a solid polymer of an arylolefin of the group consisting of styrene and substituted styrenes containing up to and including 20 carbon atoms which comprises contacting said arylolefin with a catalyst comprising two components, one of said components being a metal compound selected from the group consisting of Groups IV, V, VI and VIII metal compounds, and the other of said components being selected from the group consisting of organo compounds of metals of Groups I, II and III, tin and lead, hydrides of metals of Groups I, II, and III, and metals of Groups I, II and III, the ratios of said components being in the range of 0.05 to 50 mols, said contacting occurring in a halogen-containing diluent consisting of carbon tetrachloride, the amount of said diluent being in the range of 0.5 to 20 volumes of diluent per volume of said arylolefin, at a temperature in the range of −20° F. to 70° F. and a pressure in the range of atmospheric to 1000 p.s.i.g.; and recovering the solid polymer so produced.

3,050,511
BLOCK COPOLYMERS OF ALKENYL AROMATIC HYDROCARBONS AND ALKYLENE OXIDES

Michael M. Szwarc, Syracuse, N.Y., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Sept. 15, 1958, Ser. No. 760,866
4 Claims. (Cl. 260—93.5)

1. A polymeric composition of matter consisting essentially of a block copolymer selected from the group consisting of block copolymers having the general formulae:

$$B_x{\cdot}A_y \text{ and } A_y{\cdot}B_x{\cdot}A_y$$

wherein B represents a monoalkenyl aromatic hydrocarbon of the benzene series and *x* is an integer such that the block of said B units in polymerized form has a molecular weight of at least 5000, and wherein A represents an oxyalkylene group containing from 2 to 4 carbon atoms and *y* is an integer such that the block of the oxyalkylene group in polymerized form having the formula

$$-C_nH_{2n}(OC_nH_{2n})_m-OH$$

wherein *n* is a whole number from 2 to 4, has an *m* value of from 10 to 1000, and wherein the terminal carbon atom of the block of the polymerized oxyalkylene groups is directly attached to a terminal carbon atom of the block of the polymerized monoalkenyl aromatic hydrocarbon.

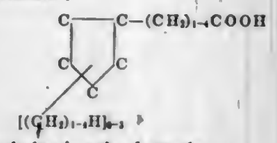
3,050,512
PURIFICATION OF POLYMERS BY TREATMENT WITH NAPHTHENIC ACIDS

Harold A. Wright, Beaver, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

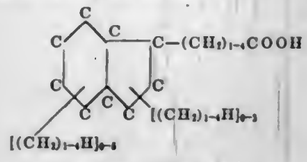
No Drawing. Filed June 12, 1959, Ser. No. 819,830
12 Claims. (Cl. 260—93.7)

1. A process for removing catalyst constituents from a solid polymerization product in a polymerization slurry, said polymerization slurry being obtained by polymerizing ethylenically unsaturated compounds in the presence of a catalyst dispersed in an anhydrous inert liquid organic reaction medium, said catalyst consisting of an admixture of a compound having at least one hydrocarbon group attached directly to a metal atom selected from the group consisting of zinc, aluminum, and magnesium, and a compound which is a halide of a metal of group IVB, of the periodic table, consisting of treating the said polymerization slurry with naphthenic acid to form metal salts with said metal constituents, said metal salts being soluble in said inert reaction medium and thereafter separating polymer from said metal salt containing reaction medium said naphthenic acid having a molecular weight

of about 200 to about 500, and said naphthenic acid being selected from the group consisting of compounds having the formula:



and compounds having the formula:



3,050,513
PROCESS AND CATALYST FOR PRODUCTION OF RUBBERY POLYMERS

Robert P. Zelinski and David R. Smith, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Apr. 20, 1956, Ser. No. 579,429
17 Claims. (Cl. 260—94.3)

1. A method for polymerizing a monomer selected from the group consisting of 1,3-butadiene and isoprene which comprises contacting said monomer under polymerization conditions with a catalyst comprising (*a*) a complex aluminum hydride corresponding to the formula $MAlH_4$, wherein M is selected from the group consisting of lithium, sodium, potassium, rubidium and cesium, and (*b*) titanium tetraiodide.

3,050,514
PROCESS AND PRODUCT OF POLYMERIZING ETHYLENIC HYDROCARBONS

Thomas M. Cawthon, Jr., Morristown, and George G. Joris, Madison, N.J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Filed July 16, 1956, Ser. No. 597,900
11 Claims. (Cl. 260—94.9)

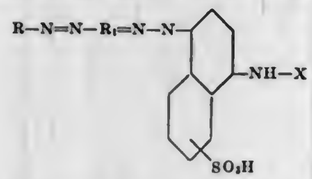
1. Process for polymerizing ethylene which comprises at least intermittently contacting ethylene in gaseous phase with porous, frangible solid contact substance said substance incorporating, throughout, a polymerization catalyst active for ethylene polymerization to solid polymers at temperatures ranging from about 120° C. down said contact substance including a porous, frangible agglomerate of at least one member of the group consisting of silica, alumina, and titania, said substance having total surface area of at least 1 square meter per gram and having average pore diameter of at least 50 A. and bulk density not greater than about one-third the density of the predominating constituent compound of the catalyst agglomerate shown by this compound in its highest density crystalline form, which substance is porous such that the interior is accessible to ethylene gas and which is frangible such that the substance will break into pieces from the internal pressure caused by formation of solid ethylene polymer internally of the substance, said pieces serving as active ethylene polymerization catalyst; and maintaining temperatures of the ethylene-catalyst system not above about 120° C. and sufficiently low that as solid polyethylene accumulates in and on the catalyst pieces, there are formed porous, friable solid polyethylene-catalyst masses without local overheating and fusion of the polyethylene; and continuing said contact of ethylene with the said polyethylene-catalyst masses at said temperatures and under polymerizing conditions until the ratio by weight of polyethylene to the contact substance incorporating the catalyst reaches at least 10:1 and contact substance incorporating the catalyst, as result of repeated breakages into smaller pieces and accumulation of polyethylene in and on the pieces, is uniformly distributed through the polyethylene.

3,050,515
WATER-SOLUBLE DISAZO-DYESTUFFS

Raymond Gunst, Binningen, Switzerland, assignor to Ciba Corporation, a corporation of Delaware

No Drawing. Filed Mar. 16, 1959, Ser. No. 799,444
Claims priority, application Switzerland Mar. 24, 1958
9 Claims. (Cl. 260—153)

1. A water-soluble disazo dyestuff of the formula



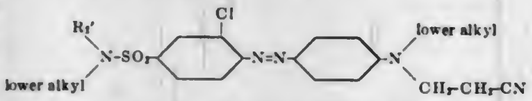
wherein R is sulfoaryl, the aryl of the sulfoaryl being a hydrocarbon of the series $C_{4n+2}H_{2n+3}$ in which *n* is a positive whole number of at most 2; R_1 is arylene of the series $C_{4m+2}H_{2m+2}$ in which *m* is a positive whole number of at most 2, bound in the 1:4 positions to the azo linkages; and X is a 2-amino-4-halogen-1:3:5-triazine nucleus which is bound in the 6-position to the —NH— group, the halogen having an atomic number from 17 to 35, inclusive.

3,050,516
MONOAZO DYESTUFFS OF LOW SOLUBILITY IN WATER

Ernest Merian, Bottmingen, Otto Senn, Arlesheim, and Walter Wehrli, Riehen, Switzerland, assignors to Sandoz A.G., Basel, Switzerland

No Drawing. Filed Feb. 5, 1959, Ser. No. 791,277
Claims priority, application Switzerland Feb. 7, 1958
4 Claims. (Cl. 260—205)

1. A monoazo dyestuff having low solubility in water, the formula of which is



wherein R_3' is a member selected from the group consisting of hydrogen and lower alkyl.

3,050,517
PURINE 6-THIO-GLYCOSIDES

George H. Hitchings, Yonkers, Gertrude B. Elion, Bronxville, and Irving Goodman, White Plains, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Oct. 11, 1957, Ser. No. 689,492
Claims priority, application Great Britain June 22, 1955
8 Claims. (Cl. 260—209)

1. A purine 6-thioglycoside.

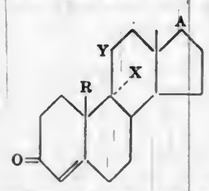
3,050,518
5-CYANO AND 5-CARBAMYL STEROID DERIVATIVES

Albert Bowers and Howard J. Ringold, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

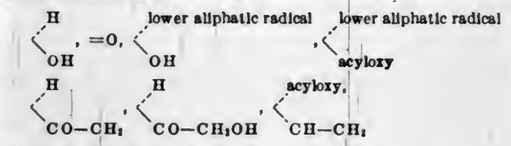
No Drawing. Filed July 17, 1959, Ser. No. 827,679
Claims priority, application Mexico July 22, 1958
20 Claims. (Cl. 260—239.55)

1. A process for preparing 5-cyano and 5-carbamyl analogs of certain 4,5 dihydro derivatives of steroidal

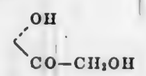
Δ^4-3-keto-hormones, comprising the steps of reacting a starting compound having the general formula:



wherein A is a radical arrangement selected from the group consisting of



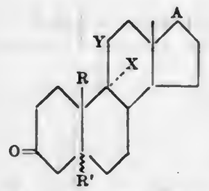
bis-methylenedioxy, and



wherein the acyl radical is derived from a hydrocarbon carboxylic acid of less than 12 carbon atoms; R is a member selected from the group consisting of hydrogen and methyl, X is an atom selected from the group consisting of hydrogen and fluorine, and Y is a member selected from the group consisting of H,

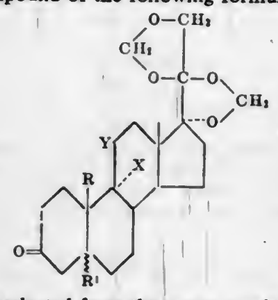


with the cyanide of a metal selected from the group consisting of the alkali-metals and the alkaline earth metals, in the presence of a hydroxylated organic solvent, so as to produce a new mixture of analogs being of the general formula:



wherein A, R, X and Y have the same significance as in the general formula of said starting material; and R' is selected from the group consisting of cyano and carbamyl, and separating the mixture to isolate the individual analogs therefrom.

12. A compound of the following formula:



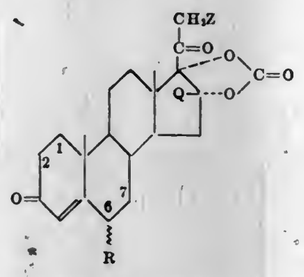
wherein R is selected from the group consisting of hydrogen and methyl; R^1 is selected from the group consisting of cyano and carbamyl; X is selected from the group consisting of hydrogen and fluorine and Y is selected from the group consisting of hydrogen, β-hydroxyl, α-hydroxyl and keto.

3,050,519
CYCLOCARBONATE ESTERS OF 16α,17α-DIHYDROXYPREGNENES

Josef Fried, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 13, 1960, Ser. No. 28,838
5 Claims. (Cl. 260—239.55)

1. A compound represented by the following general formula



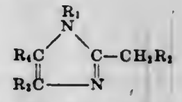
wherein the 1,2 and 6,7 positions are connected by a linkage selected from the group consisting of a single and a double bond; Q is a member selected from the group consisting of hydrogen and methyl; R is a member selected from the group consisting of hydrogen, lower alkyl, fluorine and chlorine; and Z is a member selected from the group consisting of hydrogen, halogen, hydroxy and the acyloxy radical of a hydrocarbon carboxylic acid of less than ten carbon atoms.

3,050,520
PROCESS OF PREPARING 2-OLEFINIC IMIDAZOLES

William E. Erner, Wilmington, Del., and Harold A. Green, Elkins Park, Pa., assignors to Air Products and Chemicals, Inc., a corporation of Delaware

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,798
3 Claims. (Cl. 260—240)

1. The method of preparing 2-olefinic imidazole which includes the steps of: heating



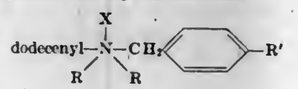
in which each of R_1, R_2, R_3, and R_4 is selected from the group consisting of hydrogen and lower alkyl, with an approximately equimolar quantity of an aldehyde selected from the group consisting of lower alkanals, glyoxal, cinnamaldehyde, benzaldehyde, methyl-substituted benzaldehyde, monohydroxy-substituted benzaldehyde, monomethoxy-substituted benzaldehyde and mono nitro-substituted benzaldehyde in the presence of catalytic amounts of a strongly basic amine containing only carbon, nitrogen and hydrogen atoms, to form water and 2-olefinic imidazole; and distilling water from the reaction mixture.

3,050,521
N-ALKYLBENZYL-N-DODECENYL QUATERNARY AMMONIUM SALTS

Warren D. Niederhauser, Huntsville, Ala., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 3, 1959, Ser. No. 803,835
7 Claims. (Cl. 260—247)

1. As a new composition of matter, the quaternary ammonium compound having the formula



in which R′ is an alkyl group of six to eight carbon atoms, the R groups taken singly represent alkyl groups of no more than two carbon atoms and taken collectively represent a saturated aliphatic chain of α,ω-divalency having four to five atoms which jointly with the amino nitrogen atom forms a five- to six-sided monoheterocyclic amine from the class consisting of morpholino, thiamorpholino, piperidino, and pyrrolidinyl, and X is an anion from the group consisting of chloride, bromide, iodide, sulfate, methylsulfate, phosphate, acetate, citrate, and tartrate.

4. As a new composition of matter, N-hexylbenzyl-N-dodecenylmorpholinium iodide.

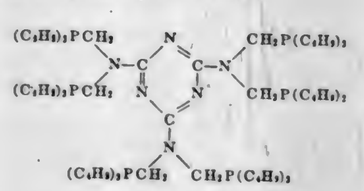
3,050,522
MANUFACTURE OF SUBSTITUTED ORGANIC PHOSPHINE DERIVATIVES

Harold Coates, Wombourn, and John Joseph Lawless, Tipton, England, assignors to Albright & Wilson (Mfg.) Limited, Oldbury, near Birmingham, England

No Drawing. Filed July 10, 1959, Ser. No. 826,145
Claims priority, application Great Britain July 15, 1958
10 Claims. (Cl. 260—249.6)

2. A process for the production of amidomethylphosphines which consists essentially of reacting a phosphine of the formula R_nPH_{3-n} wherein R represents a radical selected from the group consisting of alkyl having from 1 to 4 carbon atoms and phenyl, and n is an integer ranging from 0 to 2 with hexamethylolmelamine, in solution in an inert solvent and at a temperature ranging from room temperature to about 80° C.

10. The compound of the formula

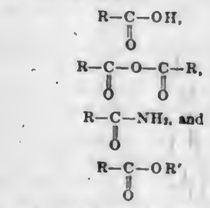


3,050,523
PREPARATION OF PYRIMIDINES

William E. Erner, Wilmington, Del., and Harold A. Green, Elkins Park, and George Alexander Mills, Swarthmore, Pa., assignors to Air Products and Chemicals, Inc., a corporation of Delaware

No Drawing. Filed Jan. 8, 1960, Ser. No. 1,166
13 Claims. (Cl. 260—251)

13. The method of preparing pyrimidine and 2-hydrocarbon substituted derivatives of pyrimidine which comprises reacting a 1,3-alkylene diamine with a non-oxycarbonylic compound in the presence of essentially halide-free platinum-alumina catalyst at a temperature in the range of 700–800° F.; said alkylene diamine being selected from the group consisting of straight chain and branched chain compounds having up to 6 carbon atoms in a straight chain, and said carbonylic compounds being selected from the group consisting of formic acid and compounds of the formulae



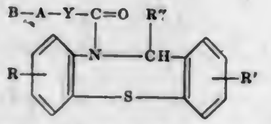
in which R is selected from the group consisting of alkyl of up to 6 carbon atoms, phenyl and benzyl, and R′ is an alkyl residue of an esterifying alcohol of up to 6 carbon atoms.

3,050,524
DIHYDRODIBENZOTHIAZEPINES

Harry Louis Yale, New Brunswick, and Francis A. Sowinski, Edison, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Feb. 10, 1961, Ser. No. 88,290
12 Claims. (Cl. 260—293.4)

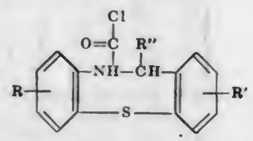
1. A compound selected from the group consisting of bases of the formula



wherein A is selected from the group consisting of lower alkylene and —A′—O—A″—, wherein A′ and A″ are each lower alkylene and the total number of carbon atoms in A′ and A″ is less than eight, B is selected from the group consisting of amino, (lower alkyl)amino, di(lower alkyl)amino, (hydroxy-lower alkyl)amino, di(hydroxy-lower alkyl)amino, piperidyl, (lower alkyl)piperidyl, di(lower alkyl)piperidyl, (lower alkoxy)-piperidyl, pyrrolidyl, (lower alkyl)pyrrolidyl, di(lower alkyl)pyrrolidyl, (lower alkoxy)pyrrolidyl, morpholinyl, (lower alkyl)-morpholinyl, di(lower alkyl)morpholinyl, (lower alkoxy)-morpholinyl, thiamorpholinyl, (lower alkyl)thiamorpholinyl, di(lower alkyl)thiamorpholinyl, (lower alkoxy)-thiamorpholinyl, piperazyl, (lower alkyl)piperazyl, di-(lower alkyl)piperazyl, (lower alkoxy)-piperazyl, (hydroxy-lower alkyl)piperazyl, (lower alkanoyloxyalkyl)-piperazyl, (hydroxy-lower alkoxy-lower alkyl)piperazyl and (carbo-lower alkoxy)piperazyl of less than twelve carbon atoms, Y is selected from the group consisting of oxy and imino, R and R′ are each selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy and trifluoromethyl, R″ is selected from the group consisting of hydrogen, lower alkyl and monocyclic hydrocarbon aryl; and non-toxic acid-addition salts thereof.

6. 8-halo-10,11-dihydrodibenzo [b,f] [1,4] thiazepine-10-carboxylic acid, ester with piperadino(lower alkoxy)-(lower alkanol).

9. A compound of the formula



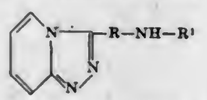
wherein R and R′ are each selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy and trifluoromethyl, and R″ is selected from the group consisting of hydrogen, lower alkyl and monocyclic hydrocarbon aryl.

3,050,525
CERTAIN DERIVATIVES OF s-TRIAZOLO [4,3-a]-PYRIDINE

John B. Bicking, 622 Salford Ave., Lansdale, Pa.

No Drawing. Filed Dec. 14, 1960, Ser. No. 75,668
6 Claims. (Cl. 260—296)

1. A pyrido (2.1-c)-s-triazole having the formula:



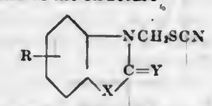
wherein R is lower alkylene having from 1 to 4 carbon atoms and R^1 is selected from the group consisting of hydrogen, benzoyl and lower alkanoyl having up to 4 carbon atoms.

3,050,526
3-THIOCYANOMETHYL-2-BENZOTHIAZOLINONES AND BENZOXAZOLINONES

Chien-Pen Lo, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Aug. 8, 1960, Ser. No. 47,949
8 Claims. (Cl. 260—304)

1. A compound of the structure



wherein R is a member selected from the class consisting of hydrogen, chlorine, bromine, alkyl of one to eight carbon atoms, alkoxy of one to four carbon atoms, cyclohexyl, phenyl, and alkanoyl of two to four carbon atoms, and X and Y are selected from the class consisting of oxygen and sulfur with the proviso that in a given compound only one is sulfur.

3,050,527
REACTION MIXTURE DERIVED FROM OLEIC ACID, SEBACIC ACID, AND TRIETHYLENE TETRAMINE

Elizabeth C. Dearborn, Boston, and Philip K. Isaacs, Brookline, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Dec. 28, 1960, Ser. No. 78,851
3 Claims. (Cl. 260—309.6)

1. A composition derived by reacting in a deoxygenated system 2 moles of oleic, 1 mole of sebacic acid and 2 moles of triethylene tetramine at a temperature of about 50° C. to 240° C. and a pressure of about 10 to 760 mm. Hg while continuously removing the water of reaction, and continuing the reaction until the flow of water of reaction substantially ceases.

3,050,528
REACTION PRODUCT OF OLEIC ACID, SEBACIC ACID, AND TRIETHYLENE TETRAMINE

Elizabeth C. Dearborn, Boston, and Philip K. Isaacs, Brookline, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Dec. 28, 1960, Ser. No. 78,878
3 Claims. (Cl. 260—309.6)

1. A composition derived by reacting in a deoxygenated system 2 moles of oleic acid, 5 moles of sebacic acid, and 6 moles of triethylene tetramine at a temperature of about 50° C. to 240° C. and a pressure of about 10 to 760 mm. Hg while continuously removing the water of reaction, and continuing the reaction until the flow of water of reaction substantially ceases.

3,050,529
CARBOXYLIC ACID-POLYAMINE REACTION MIXTURE

Elizabeth C. Dearborn, Boston, and Philip K. Isaacs, Brookline, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Dec. 28, 1960, Ser. No. 78,874
3 Claims. (Cl. 260—309.6)

1. A composition derived by reacting in a deoxygenated system 4 moles of oleic acid, 1 mole of a mixture of dimeric and trimeric fatty acids, 3 moles of sebacic acid and 8 moles of triethylene tetramine at a temperature of about 50° C. to 240° C. and a pressure of about 10 to 760 mm. Hg while continuously removing the water of reaction, and continuing the reaction until the flow of water of reaction substantially ceases, said dimeric-trimeric fatty acid mixture being a mixture of polymerized acids consisting of about 75 percent dimeric and 25 percent trimeric acids derived from a mixture of unsaturated 18-carbon monocarboxylic acids.

3,050,530
IMPROVED PROCESS FOR THE PREPARATION OF 3-(2-ETHYL-2-NITROVINYL) INDOLE

Jacob Szmuszkovicz, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Sept. 29, 1960, Ser. No. 59,154
3 Claims. (Cl. 260—319)

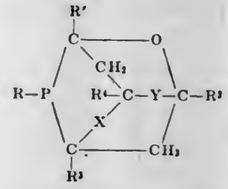
1. An improved process for the preparation of 3-(2-ethyl-2-nitrovinyl)indole by condensation of indole-3-carboxaldehyde and 1-nitropropane in the presence of ammonium acetate at a temperature within the range of about 70° C. to the boiling point of the reaction mixture, characterized in that water produced in the condensation is removed from the reaction mixture by entrainment of the vapor thereof in a continuous stream of inert gas.

3,050,531
SUBSTITUTED 10-PHOSPHATRICYCLO [3·3·1·1^{3,7}] DECANES AND METHODS OF PREPARING SAME

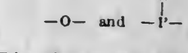
Martin Epstein and Sheldon A. Buckler, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 6, 1960, Ser. No. 41,027
9 Claims. (Cl. 260—340.7)

1. A 1,3,5,7 - tetraalkyl - 2 - oxa - 10 - phosphatricyclo-[3·3·1·1^{3,7}]decane of the formula



wherein X and Y each represent a member selected from the group consisting of



R', R^2, R^3 and R^4 each represent a member selected from the group consisting of CF_3 and lower alkyl; and R is a member selected from the group consisting of H and the residue of a primary phosphine.

3,050,532
TWO STAGE OXIDATION OF SCLAREOL

Joseph N. Schumacher, Walter Maurey Henley, Edward Bernasek, and Claude E. Teague, Jr., all of Winston-Salem, N.C., assignors to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey

No Drawing. Filed June 19, 1959, Ser. No. 821,345
7 Claims. (Cl. 260—343.3)

1. A process of preparing the compound decahydro-3a,6,6,9a - tetramethylnaphtho[2,1-b]furan - 2(1H) - one which comprises the first step of intimately contacting an aqueous dispersion of sclareol with an alkali metal permanganate oxidizing agent under alkaline oxidizing conditions to partially oxidize the sclareol, the second step of acidifying the resulting aqueous reaction mixtures and intimately contacting it with an oxidizing agent selected from the group consisting of a permanganate and chromic acid under acid oxidizing conditions whereby the oxidation is completed, separating a solid mixture of said compound and an intermediate 2-acetoxy-2,5,5,8a-tetramethyldecahydronaphthalene acetic acid from the reaction medium and thereafter subjecting the last mentioned mixture successively to saponification, acidifying and dehydrating conditions whereby to form said compound.

3,050,533
MANUFACTURE OF ESTERS

Neil Munro and Duncan Maclean, Harrogate, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed May 12, 1958, Ser. No. 734,407
Claims priority, application Great Britain Feb. 9, 1955
8 Claims. (Cl. 260—346.1)

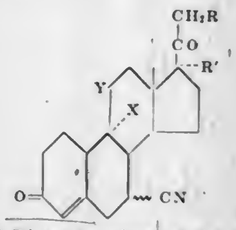
1. A method of esterifying terephthalic acid with a glycol selected from the group consisting of ethylene glycol and 1,4-butanediol comprising heating a mixture consisting essentially of terephthalic acid and from one to three molar proportions of said glycol at a temperature between the normal boiling point of said glycol and 300° C. and under a superatmospheric pressure of at least about the partial vapor pressure of said glycol but not exceeding the sum of the partial vapor pressures of the said glycol and the water produced in the reaction, said partial vapor pressures being those at the temperature of the reaction.

3,050,534
7-CYANO STEROIDS

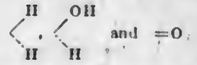
Albert Bowers and Howard J. Ringold, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Aug. 13, 1959, Ser. No. 833,387
Claims priority, application Mexico Aug. 13, 1958
37 Claims. (Cl. 260—397.3)

1. A new steroid compound having the general formula:



in which R and R′ are members of the group consisting of hydrogen, hydroxyl, and acyloxy OR″, R″ is an acyl radical derived from a hydrocarbon carboxylic acid having up to about 12 carbon atoms, X is a member of the group consisting of hydrogen and fluorine, Y is an arrangement selected from the group consisting of



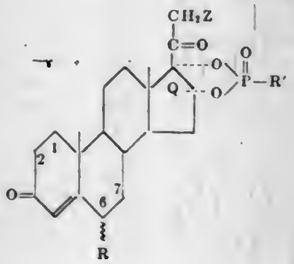
and ~CN represents a cyano radical selected from the group consisting of 7α-cyano and 7β-cyano.

3,050,535
SYNTHESIS OF STEROIDS

Josef Fried, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed June 13, 1960, Ser. No. 36,464
5 Claims. (Cl. 260—397.4)

1. A compound represented by the following general formula:



wherein the 1,2 and 6,7 positions are connected by a linkage selected from the group consisting of a single and a double bond; Q is selected from the group consisting of hydrogen and methyl; R is selected from the group consisting of hydrogen, lower alkyl, fluoro and chloro; R′ is a radical selected from the group consisting of R″ and R″—O—, R″ being a hydrocarbon radical of less than ten carbon atoms; and Z is a member selected from the group consisting of hydrogen, halogen, hydroxy, and the acyloxy radical of a hydrocarbon carboxylic acid of less than ten carbon atoms.

3,050,536
21-FLUORO-Δ⁴-PREGNENE-17α-OL-3,20-DIONE

Josef Fried, Princeton, N.J., and Josef E. Herz, Lomas, Mexico City, Mexico, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 8, 1961, Ser. No. 108,309
1 Claim. (Cl. 260—397.47)

21-fluoro-Δ⁴-pregnene-17α-ol-3,20-dione.

3,050,537
ORGANO-BIMETALLIC COMPOSITIONS

Richard D. Gorsich, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 5, 1960, Ser. No. 47,603
20 Claims. (Cl. 260—429)

1. A compound represented by the general formula

$$R_nM^4[M^7(CO)_5]_{4-n}$$

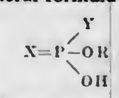
wherein R is a radical selected from the group consisting of alkyl, aryl, cycloalkyl, aralkyl and alkaryl radicals containing from 1 to about 18 carbon atoms, M^4 is an element of group IV–A of the periodic system having an atomic number from 14 to 82, inclusive, M^7 is an element of group VII–B of the periodic system having an atomic number from 25 to 75, inclusive, and n is an integer from 2 to 3, inclusive.

3,050,538
MOLYBDENUM BLUE COMPLEXES

Georges Hugel, Le Monastere, Ville d'Avray, and Moise Lerer, Paris, France, assignors to Institut Français du Petrole des Carburants et Lubrifiants, Paris, France, a corporation of France

No Drawing. Filed Apr. 16, 1958, Ser. No. 728,798
Claims priority, application France Apr. 19, 1957
10 Claims. (Cl. 260—429)

1. Complexes of molybdenum blue with phosphorus compounds of the general formula:



wherein X is selected from the group consisting of oxygen and sulphur, R is selected from the group consisting of hydrogen, phenyl and monovalent aliphatic hydrocarbon radicals containing from 4 to 18 carbon atoms, and Y is a monovalent organic radical selected from the group consisting of —OR′ and —NR″$_2$ radicals, wherein R′ is a monovalent aliphatic hydrocarbon radical containing from 4 to 18 carbon atoms and R″ is a monovalent aliphatic hydrocarbon radical containing from 2 to 18 carbon atoms.

3,050,539
PREPARATION OF FERRIC CHELATES OF ALKYLENE AMINO ACID COMPOUNDS

Robert Bruce Le Blanc, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 20, 1959, Ser. No. 847,473
5 Claims. (Cl. 260—439)

1. The method of preparing an iron chelate of a chelating agent selected from the group consisting of hydroxyethylethylenediaminetriacetic acid, hydroxyethyliminodiacetic acid, hydroxy ethyl glycine dihydroxyethylaminoacetic acid, comprising, mixing a water solution of a sodium salt of the said chelating agent with an equimolar amount of a water solution of ferrous sulphate to form iron chelate desired and sodium sulphate by-product, aerating the solution while maintaining the total amount of water present in the reaction mixture at a level such that the concentration of the chelating agent is about 30–35 percent by weight of the total, thereafter cooling the combined solution to a temperature in the range from about 0 to 20° C., thereby crystallizing hydrated sodium sulphate, separating the iron chelate solution from said crystallized sodium sulphate and recovering the iron chelate.

3,050,540
MANUFACTURE OF ALKYL ALUMINUM COMPOUNDS

Merle L. Gould, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 30, 1958, Ser. No. 751,843
7 Claims. (Cl. 260—448)

1. In a process of forming an ethyl aluminum compound by reacting aluminum with hydrogen in the presence of triethyl aluminum, said aluminum being active and susceptible to said treatment, the improvement comprising supplying as a hydrogenation accelerator a catalytic quantity, of from about 0.1 to 25 mole percent on the basis of the triethyl aluminum present, of an organo compound of a reactive metal selected from the group consisting of alkali metals and alkaline earth metals, and said compound consisting of metal, carbon and hydrogen, and carrying out said hydrogen treatment at a supra-atmospheric pressure of up to 5,000 pounds per square inch and at a temperature of from 75 to 200° C.

3,050,541
MANUFACTURE OF ALKYL ALUMINUM COMPOUNDS

Merle L. Gould, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 30, 1958, Ser. No. 751,891
6 Claims. (Cl. 260—448)

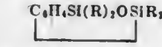
1. In a process of forming an ethyl aluminum compound by treating aluminum with hydrogen in the presence of liquid triethyl aluminum, said aluminum being active and susceptible to said treatment, the improvement comprising supplying an active metal component to said treatment in the proportions of from about 0.02 to 0.37 gram equivalent per gram mole of the triethyl aluminum, said active metal component being selected from the group consisting of the alkali metals, alkaline earth metals, alkali metal hydrides and alkaline earth metal hydrides, and carrying out said hydrogen treatment at a supra-atmospheric pressure of up to about 5,000 pounds per square inch and at a temperature of from 75 to 200° C.

3,050,542
ORTHO-DISILYL BENZENES

William A. Piccoli, Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,691
4 Claims. (Cl. 260—448.2)

1. An ortho-disilyl benzene selected from the group consisting of (A) ortho substituted benzenes of the formula $C_6H_4(SiR_2H)_2$ and (B) 1,1,3,3-tetraorgano-1,3-disila-2-oxa-indan of the formula



in the above formula each R being a radical selected from the group consisting of methyl, ethyl, vinyl, and phenyl radicals.

3,050,543
PHOSPHONIUM PHOSPHATES

Thomas Mason Melton, Richmond, Va., assignor to Virginia-Carolina Chemical Corporation, Richmond, Va., a corporation of Virginia

No Drawing. Filed Nov. 24, 1961, Ser. No. 154,860
29 Claims. (Cl. 260—461)

1. The phosphonium phosphates corresponding to the formula

$$[R^1{}_3R^2PX]_mP(X)(XR^3)_n$$

wherein R^1 is a member of the group consisting of lower alkyl, hydroxy-substituted lower alkyl, halo-substituted lower alkyl, phenyl, halo-substituted phenyl, lower alkyl-substituted phenyl, benzyl, halo-substituted benzyl, and naphthyl, R^2 has the same meaning as R^1, R^3 is a member of the group consisting of alkyl groups containing from 1 to 12 carbon atoms, phenyl, lower alkyl-substituted phenyl and halo-substituted phenyl, X is a member of the group consisting of oxygen and sulfur and m and n are whole numbers from 1 to 2, their sum being 3.

3,050,544
CYANOBENZYL AMINE

Edward W. Pietrusza, Morris Township, Morris County, and Richard E. Brown, Hanover, N.J., and Max B. Mueller, Media, Pa., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Apr. 30, 1959, Ser. No. 809,906
5 Claims. (Cl. 260—465)

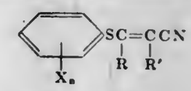
1. The method of preparing a cyanobenzyl amine selected from the group consisting of p- and m-cyanobenzyl amine by hydrogenating a phthalonitrile selected from the group consisting of tere- and iso-phthalonitrile suspended in a reaction medium consisting essentially of methanol in the presence of a palladium catalyst at reaction temperatures which do not exceed 100° C. to produce a cyanobenzyl amine.

3,050,545
3-(HALOPHENYLTHIO)ALKENENITRILES

Samuel Allen Heininger, Warson Woods, Mo., and Gail H. Birum, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 23, 1959, Ser. No. 861,454
8 Claims. (Cl. 260—465)

1. A 3-(halophenylthio)alkenenitrile of the formula



wherein R and R′ are selected from the class consisting of hydrogen and hydrocarbon radicals free of aliphatic unsaturation and containing from 1 to 6 carbon atoms, provided that not more than one of R and R′ are hydrocarbon radicals, X is a halogen atom and n is an integer from 1 to 5.

3,050,546
PROCESS FOR THE MANUFACTURE OF ACRYLONITRILE

Ernest C. Milberger, Maple Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Feb. 24, 1959, Ser. No. 794,841
4 Claims. (Cl. 260—465.3)

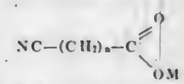
1. A process for the manufacture of acrylinitrile comprising the step of reacting in the vapor phase a mixture of propylene, ammonia, and oxygen in the presence of a catalyst selected from the group consisting of the bismuth, tin and antimony salts of phosphomolybdic and molybdic acids and bismuth phosphotungstate and an amount of hydrogen cyanide in the range of about 0.01 to 0.2 mol per mol of propylene.

3,050,547
1–2 RING CLEAVAGE OF 2-CYANOCYCLO-ALKANONES

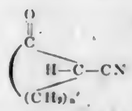
Rolland M. Waters, Freeport, and John M. Lee, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed July 2, 1959, Ser. No. 824,476
6 Claims. (Cl. 260—465.4)

1. A method for producing compounds having the formula



wherein M is an alkali metal and *n* is an integer from 4 to 16 comprising reacting a 2-cyanocyclo-alkanone having the formula



wherein *n'* is an integer from 3 to 15, with an alkali metal hydroxide in a glycolic medium at a temperature from about 160° to about 220° C. and separating the desired product from the reaction mixture, said reactants being employed in the relative proportions of from 1 to 4 moles of the alkali metal hydroxide for each mole of the 2-cyanocycloalkanone and said glycolic medium consisting of glycols and having a viscosity not exceeding 8 centistokes at 200°F.

3,050,548
IMPROVEMENTS IN THE ESTERIFICATION OF TEREPHTHALIC ACID WITH ETHYLENE GLYCOL

Neil Munro and Duncan Maclean, Harrogate, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed May 12, 1958, Ser. No. 734,391
Claims priority, application Great Britain June 29, 1955
6 Claims. (Cl. 260—475)

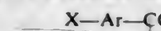
1. A method of esterifying terephthalic acid with ethylene glycol comprising heating a mixture consisting essentially of terephthalic acid and from 1 to 3 molar proportions of ethylene glycol at a temperature between 197° and 300° C. and under a superatmospheric pressure of at least about the partial vapor pressure of ethylene glycol but not exceeding the sum of the partial vapor pressures of the said ethylene glycol and the water produced in the reaction, said partial vapor pressures being those at the temperature of the reaction, and inhibiting the dehydration of ethylene glycol to form polyethylene glycol by adding a catalytic amount of an inorganic alkali.

3,050,549
PREPARATION OF AROYL CHLOROALKYL ESTERS

Samuel Gelfand, Niagara Falls, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed July 24, 1959, Ser. No. 829,235
10 Claims. (Cl. 260—475)

1. The process of preparing aroyl chloroalkyl esters in which the chlorine is at a locus in the alkyl chain previously occupied by an OH group and in which the ester is between the aroyl and the alkyl groups which comprises reacting (1) a material having the formula



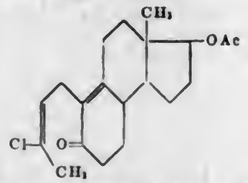
wherein Ar is an aryl radical selected from the group consisting of phenyl, naphthyl, anthracyl, and biphenylyl, and X is selected from the group consisting of H, halogen, CCl_3, lower alkyl and carb-lower alkoxy with (2) an aliphatic diol selected from the group consisting of mono-, di-, tri-, and poly-lower alkylene glycols.

3,050,550
NOVEL PROCESS FOR THE PREPARATION OF CYCLOPENTANO - OCTAHYDRONAPHTHALENE DERIVATIVES AND PRODUCTS OBTAINED IN THIS PROCESS

Gerard Nominé, Noisy-le-Sec, and Daniel Bertin, Montrouge, France, assignors, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

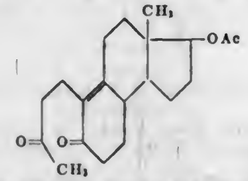
No Drawing. Filed Sept. 21, 1960, Ser. No. 57,412
Claims priority, application France, Oct. 15, 1959
8 Claims. (Cl. 260—476)

1. $\Delta^{8(9)}$-3-methyl-7-oxo - 8 - (3'-chloro-2'-butenyl)-3,4-[3'-acyloxy-cyclopentano - (2',1')]-octahydronaphthalene compounds of the formula:

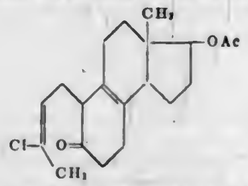


wherein Ac and acyl represent the acyl radical of a hydrocarbon carboxylic acid free of acetylenic unsaturation having from 1 to 18 carbon atoms.

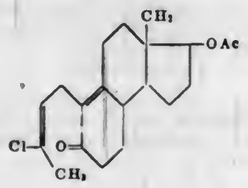
3. The process of producing $\Delta^{8(9)}$-3-methyl-7-oxo-8-(3'-oxobutyl) - 3,4 - [3'-acyloxy-cyclopentano-(2',1')]-octahydronaphthalene compounds of the formula:



wherein Ac and acyl represent an acyl radical of a hydrocarbon carboxylic acid free of acetylenic unsaturation having from 1 to 18 carbon atoms, which comprises the steps of reacting $\Delta^{9(10)}$-3-methyl-7-oxo-8-(3'-chloro-2'-butenyl) - 3,4 - [3'-acyloxy-cyclopentano-(2',1')]-octahydronaphthalene compounds of the formula:



wherein Ac and acyl have the meaning defined above, in an inert organic solvent with an anhydrous, non-hydrolyzing acidic agent at about room temperature, wherein the double bond in the 9–10 position is isomerized into the 8–9 position, hydrolyzing the $\Delta^{8(9)}$-3-methyl-7-oxo-8-(3'-chloro - 2' - butenyl)-3,4-[3' - acyloxy-cyclopentano-(2',1')[-octahydronaphthalene compounds of the structural formula:



wherein Ac and acyl have the meaning defined above, in the presence of a concentrated aqueous solution of a strong mineral acid at about room temperature, and recovering said $\Delta^{8(9)}$-3-methyl-7-oxo-8-(3'-oxobutyl)-3,4-[3' - acyloxy - cyclopentano-2',1')]-octahydronaphthalene compounds.

3,050,551
12-ACETOXY-1-HYDROXY-9-OCTADECENE AND METHOD FOR PRODUCING THE SAME

Martin Jacobson, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Original application Aug. 11, 1960, Ser. No. 49,108. Divided and this application Mar. 1, 1961, Ser. No. 104,493
2 Claims. (Cl. 260—488)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. 12-acetoxy-1-hydroxy-9-octadecene.

3,050,552
STABLE ANHYDROUS DISODIUM ETHYLENE BISDITHIOCARBAMATE

Joseph W. Nemec, Abington, and Stanley J. Schechter, Levittown, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,070
7 Claims. (Cl. 260—500)

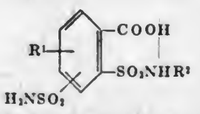
1. A method for the preparation of stable disodium ethylene bisdithiocarbamate substantially free of water of crystallization which comprises introducing disodium ethylene bisdithiocarbamate hexahydrate into a reaction environment having a temperature in the range of about 235° C. to 335° C. sufficiently above the melting range of said hexahydrate and for a sufficient length of time to remove molecularly held water without melting the resulting anhydrous disodium ethylene bisdithiocarbamate, and removing the anhydrous product from the reaction environment.

3,050,553
DISULFAMYLBENZOIC ACIDS

Frederick C. Novello, Lansdale, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 14, 1958, Ser. No. 773,825
4 Claims. (Cl. 260—515)

1. A disulfamylbenzoic acid compound selected from the group consisting of a compound having the general structural formula



and alkali metal salts and alkaline earth metal salts thereof; wherein R^1 is selected from the group consisting of chlorine, bromine, fluorine, trifluoromethyl, a lower alkoxy radical, a nitro and the amino radical; R^2 is hydrogen.

3,050,554
CATALYTIC OXIDATION OF TERTIARY BUTYL TOLUENE AND RECOVERY OF OXYGENATED PRODUCTS

Lee M. Porter, Pleasant Hill, Calif., William A. Chantry, Houston, Tex., and Roger F. York, Anaheim, Calif., assignors to Shell Oil Company, a corporation of Delaware

Filed July 7, 1958, Ser. No. 746,954
6 Claims. (Cl. 260—524)

1. In a process for the production of tert. butyl benzoic acid wherein a tert. butyl toluene-containing charge is subjected in the liquid phase to an oxygen-containing gas in the presence of an organic salt of a heavy metal as oxidation catalyst at a temperature of from about 125° to about 200° C. and at a pressure sufficiently high to assure the maintenance of at least a substantial part of tert. butyl toluene-containing charge and oxidation products in the liquid phase during the oxidation, an aqueous alkaline agent capable of salt formation is added in amount sufficient to react with at least a substantial amount of tert. butyl benzoic acid present in the oxidation mixture, thereby forming an aqueous alkaline extract containing a salt of tert. butyl benzoic acid with said alkaline agent in admixture with entrained organic oxidation products and unconverted tert. butyl benzene, mineral acid is added to said aqueous alkaline extract, thereby precipitating a solid phase comprising free tert. butyl benzoic acid, and said solid phase is separated from the resulting mother liquor containing said entrained oxidation products and unconverted tert. butyl toluene, the improvement of adding said mineral acid to said aqueous alkali extract in an amount which is sufficient to precipitate no more than about 70% of the available tert. butyl benzoic acid in said aqueous alkali extract, adjusting the hydrogen ion concentration of said mother liquor to a pH of from about 4.5 to about 6.5, thereafter extracting said aqueous mother liquor with tert. butyl toluene in a ratio of tert. butyl toluene to aqueous mother liquor in the range of from about 1:1 to about 1:20 by volume and at a temperature of from about 35° to about 100° C., thereby forming an organic extract comprising said tert. butyl toluene in admixture with said entrained oxidation products consisting predominantly of tert. butyl benzoic acid, dibasic acids, oxygen-containing by-products including tert. butyl benzoic acid precursors and unconverted tert. butyl toluene, and employing said organic extract as said tert. butyl toluene-containing charge subjected to said oxidation.

3,050,555
ETHYLENE TELOMERS

George Van Dyke Tiers, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Sept. 19, 1958, Ser. No. 761,921
5 Claims. (Cl. 260—543)

1. A compound corresponding to the formula

$$Cl(CH_2CH_2)_nSO_2F$$

wherein *n* is an integer having a value of from 2 to 45.

3,050,556
HALOGENATED ALKANE SULFONYL FLUORIDES

George Van Dyke Tiers, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Sept. 19, 1958, Ser. No. 761,922
4 Claims. (Cl. 260—543)

1. Chloroalkanesulfonyl fluorides corresponding to the formula $Cl(CHR—CH_2)_nSO_2F$ wherein R is an alkyl radical from 6 to 16 carbon atoms, and *n* is an integer from 1 to 2.

3,050,557
N-TERTIARY-BUTYL - 1,4,5,6 - TETRACHLORO-7,8-DIOXOBICYCLO(2.2.2.)OCT-5 - ENE - 2 - CARBOXAMIDE

Carleton W. Roberts, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 5, 1960, Ser. No. 47,587
2 Claims. (Cl. 260—557)

1. N - tert - butyl - 1,4,5,6 - tetrachloro - 7,8 - dioxobicyclo(2.2.2)oct-5-ene-2-carboxamide.

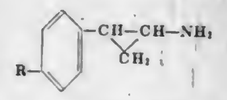
2. A method for preparing N-tert-butyl-1,4,5,6-tetrachloro - 7,8 - dioxobicyclo(2.2.2)oct - 5 - ene - 2 - carboxamide, comprising, reacting o-chloranil with N-tert-butylacrylamide in a suitable solvent at about atmospheric pressure and at about the reflux reaction temperature, said reactants being combined in the molar proportions of from about 1:2 to 2:1, and separating said carboxamide from the reaction mixture.

3,050,558
REFINING OF DEMETHYLCHLORTETRACYCLINE
Leland Leroy Smith, New City, Theodore Foell, Jr., Orangeburg, and Harold Mendelsohn, Nanuet, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Dec. 9, 1959, Ser. No. 858,332
6 Claims. (Cl. 260—559)

1. The process of extracting demethylchlortetracycline from a fermentation mash containing the same which comprises acidifying the mash to a pH of between about 0.5–2.5 with a mineral acid so as to solubilize the demethylchlortetracycline contained therein, filtering the mash, contacting the acid filtrate with from 0.5 to 3% by volume of a compound of the group consisting of oxalic acid and ammonium oxalate so as to precipitate excess calcium ions, adding to the decalcified acid filtrate from about 0.5 mole to about 3 moles per mole of demethylchlortetracycline of a quaternary ammonium compound selected from the group consisting of long chain alkyl trimethylammonium chlorides and dialkyldimethylammonium chlorides as to form a demethylchlortetracycline-quaternary ammonium complex, raising the pH of the acid filtrate to between about 8 and 12 with an alkali, contacting the acid filtrate with a methyl alkyl ketone solvent so as to extract the demethylchlortetracycline therefrom, separating the solvent extract, and thereafter isolating the demethylchlortetracycline from the solvent extract.

3,050,559
SUBSTITUTED PHENYLCYCLOPROPYLAMINES
Alfred Burger, Charlottesville, Va., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Sept. 22, 1958, Ser. No. 762,276
3 Claims. (Cl. 260—570.5)

1. A chemical compound selected from the group consisting of a trans-2-phenylcyclopropylamine free base of the formula:



in which R is a member selected from the group consisting of chlorine, bromine and trifluoromethyl, and addition salts thereof formed with nontoxic pharmaceutically acceptable acids.

3,050,560
PREPARATION OF DIMETHYL HYDRAZINE
Carl L. Randolph, Jr., Whittier, and Ralph E. Meyer, Duarte, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed Feb. 15, 1954, Ser. No. 410,412
6 Claims. (Cl. 260—583)

1. The method of preparing unsymmetrical lower dialkyl hydrazine hydrohalide which comprises reacting a lower dialkyl halo amine with ammonia at a temperature above about 0° C.

3,050,561
PROCESS FOR PREPARATION OF 2-CYCLOHEXENONE
William F. Brill, Skillman, N.J., assignor to Petro-Tex Chemical Corporation, Houston, Tex., a corporation of Delaware
No Drawing. Filed Nov. 16, 1959, Ser. No. 853,012
5 Claims. (Cl. 260—586)

1. A process for preparing 2-cyclohexenone which comprises contacting 4-vinylcyclohexene-4-hydroperoxide with a strongly acidic material having an ionization constant K_1 at 25° C. of greater than about 1×10^{-3}.

3,050,562
OXO SYNTHESIS AND CATALYSTS THEREFOR
Oskar E. H. Klopfer, Bloomfield Hills, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 1, 1961, Ser. No. 113,996
10 Claims. (Cl. 260—598)

1. In a process which comprises the reaction of olefins with a mixture of carbon monoxide and hydrogen at elevated temperature and pressure, the improvement of conducting said reaction in the presence of a catalytic quantity of a manganese polycarbonyl of the formula

$$R_aMn(CO)_y$$

where R is selected from the group consisting of alkyl hydrocarbon groups containing from one to 12 carbon atoms, aryl hydrocarbon groups containing from 6 to 10 carbon atoms, acyl groups containing from 2 to 12 carbon atoms, and cyclopentadienyl hydrocarbon radicals containing from 5 to 9 carbon atoms, where a is a whole number varying from 0 to 1 and where y is an odd whole number varying from 3 to 5.

3,050,563
α-SUBSTITUTED VINYL SULFIDES AND THEIR PREPARATION
Henry J. Schneider, Hatboro, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Aug. 1, 1960, Ser. No. 46,358
23 Claims. (Cl. 260—609)

1. Process for the preparation of α-arylvinyl sulfides, having the formula

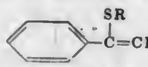
$$CH_2{=}C(Y)SY'$$

in which Y is selected from the class consisting of lower alkyl, benzyl and phenyl groups, and Y′ is selected from the class consisting of lower alkyl, hydroxy lower alkyl, benzyl and phenyl groups, comprising, reacting a compound of the formula

$$Y'S{-}CH_2{-}CH(Y)SY'$$

in which Y and Y′ have the values defined above, with acetylene in the presence of a catalyst, whose basicity is at least as strong as that of an alkoxide, dissolved in alcohol.

9. A composition of matter having the formula



in which R is selected from the class consisting of alkyl groups of C_1 to C_{18} length and hydroxy and amino derivatives thereof.

3,050,564
PREPARATION OF NEW HYDROPEROXIDES BY THE COOXIDATION OF OLEFINIC COMPOUNDS AND MERCAPTANS
Alexis A. Oswald, Sarnia, Ontario, Canada, assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 2, 1958, Ser. No. 777,617
10 Claims. (Cl. 260—609)

1. A hydroperoxide having the general formula:

$$R{-}R'(OOH){-}S{-}R''$$

wherein R and R″ are radicals having from 6 to 14 carbon atoms, R being selected from the class consisting of aryl, alkaryl and halogen-substituted aryl radicals and R″ being selected from the class consisting of naphthyl and halogen-substituted aryl radicals, and R′ is a saturated acyclic hydrocarbon radical having from 2 to 10 carbon atoms, the hydroperoxy group and sulfur atom of said hydroperoxide being bonded to next adjacent carbon atoms of R′.

3,050,565
TRINITROALKYL ETHERS
Pliny O. Tawney, Passaic, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed July 14, 1950, Ser. No. 173,961
9 Claims. (Cl. 260—614)

1. A compound having the formula

$$R{-}CH_2{-}CH(C(NO_2)_3){-}O{-}R'$$

wherein R is a radical selected from the class consisting of hydrogen and alkyl, and R′ is a radical selected from the class consisting of alkyl, lower alkenyl, lower alkoxyalkyl, lower carbalkoxyalkyl and phenyl.

7. A method of making a compound having the formula

$$R{-}CH_2{-}CH(C(NO_2)_3){-}O{-}R'$$

wherein R is a radical selected from the class consisting of hydrogen and alkyl, and R′ is a radical selected from the class consisting of alkyl, lower alkenyl, lower alkoxyalkyl, lower carbalkoxyalkyl and phenyl which comprises reacting a vinyl-type ether having the formula

$$R{-}CH{=}CH{-}O{-}R'$$

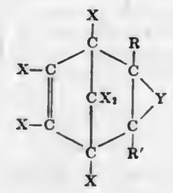
with trinitromethane.

3,050,566
3-(2,2,3-TRIMETHYLCYCLOBUTYL)-BUT-1-YN-3-OL AND PROCESS FOR PREPARING SAME
Habib-Emile Eschinazi, Montclair, N.J., now by change of name Emile Haviv Eschinasi, assignor to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Apr. 2, 1959, Ser. No. 803,565
1 Claim. (Cl. 260—617)

The chemical product, 3-(2,2,3-trimethylcyclobutyl)-but-1-yn-3-ol.

3,050,567
POLYCYCLIC COMPOUNDS CONTAINING NUCLEARLY SUBSTITUTED HALOGENS
Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Mar. 29, 1954, Ser. No. 419,626
7 Claims. (Cl. 260—648)

1. A Diels-Alder adduct of a hexahalocyclopentadiene and a cycloolefin, said adduct having the following empirical structure:

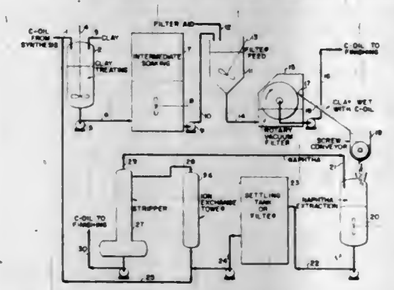


wherein R and R′ are selected from the group consisting of hydrogen and alkyl groups, X is a halogen selected from the group consisting of chloro and bromo, and Y is a divalent polymethylene radical containing at least 3, up to about 5, carbon atoms in the chain.

3,050,568
SELECTIVE CHLORINATION PROCESS
Robert P. Arganbright, Galveston, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 17, 1959, Ser. No. 833,912
3 Claims. (Cl. 260—654)

1. The method for selectively chlorinating butadiene in a mixture containing butadiene and butenes which comprises reacting said butadiene-containing mixture with hydrogen chloride and oxygen in contact with a catalyst consisting essentially of cupric chloride supported upon pumice at a temperature within the range from about 220° C. to about 400° C.

3,050,569
RECLAIMING OF POLYMER FROM CLAY USED IN QUENCHING POLYMERIZATION CATALYST
Neville Leverne Cull, Baker, and Merlan Meredith Lambert, James Woodford Carr, Jr., and Peter Joseph Berkeley, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Sept. 17, 1959, Ser. No. 840,634
4 Claims. (Cl. 260—669)



1. In a process for removing alkali metal and organo-alkali metal derivatives from a liquid hydrocarbon polymer of a C_4 to C_6 conjugated diolefin containing them, by contacting said polymer with an acid clay containing 1–25% by weight of bound water and filtering and in which a spent clay is obtained containing the alkali metal, organo-alkali metal derivatives and polymer adsorbed thereon, the method for recovering maximum polymer with minimum alkali metal and organo-alkali metal derivatives which comprises; extracting the spent clay with 50–66% of a hydrocarbon solvent (based on clay) selected from the group consisting of hexane, heptane, octane and a light naphtha fraction boiling between 30°–200° C., at a temeprature between 80° and 150° C. and for a contact time of ¼ to ½ hr. to obtain a recovered polymer phase containing less than 100 p.p.m., based on recovered polymer, of an alkali metal and organic alkali metal derivatives to provide recovered polymer with recovered alkali metal and organo-alkali metal derivatives therein being less than 100 p.p.m. based upon said recovered polymer.

3,050,570
ALKYLATION OF AROMATIC HYDROCARBONS
George L. Hervert, Downers Grove, and Carl B. Linn, Riverside, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Oct. 15, 1959, Ser. No. 846,540
10 Claims. (Cl. 260—671)

1. A process for the production of an alkylaromatic hydrocarbon which comprises passing to an alkylation zone containing boron trifluoride modified substantially anhydrous silica-magnesia, alkylatable aromatic hydrocarbon, olefin-acting compound, and not more than 2.5 grams of boron trifluoride per gram mol of olefin-acting

compound, reacting therein said alkylatable aromatic hydrocarbon with said olefin-acting compound at alkylation conditions in the presence of an alkylation catalyst comprising said boron trifluoride modified silica-magnesia, and recovering therefrom alkylated aromatic hydrocarbon.

3,050,571

SELECTIVE CONVERSION OF COS IN THE PRESENCE OF A NON-ACETYLENIC UNSATURATED HYDROCARBON GAS

Harold W. Fleming and William R. Gutmann, Louisville, Ky., assignors to Catalysts and Chemicals Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Filed Oct. 13, 1958, Ser. No. 766,712
5 Claims. (Cl. 260—677)

1. A process for the conversion of carbonyl sulfide in a gas composition containing a substantial proportion of non-acetylenic, normally gaseous, unsaturated hydrocarbons whereby the carbonyl sulfide is substantially completely converted without appreciable loss of said unsaturated hydrocarbons, which comprises the step of passing said gas composition, saturated with water vapor at atmospheric temperature and at a pressure in the range of from about 1 to 40 atmospheres, with hydrogen at a temperature in the range of about 350° to about 650° F. over a catalyst comprising a metallic catalytically active constituent for converting said carbonyl sulfide which is inactive towards said unsaturated hydrocarbons, said constituent being selected from the group consisting of the oxides and sulfides of copper and iron being present in a concentration by weight of from 2 to 10% together with chromium oxide in a concentration by weight of from 2 to 15% on a carrier having a surface area in the range of from 100 to 600 m.²/gm.

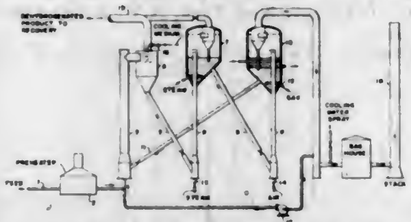
3,050,572

DEHYDROGENATION PROCESS

Bruce Masterton, Rolling Hills, and John A. Langton, Redondo Beach, Calif., assignors to Shell Oil Company, a corporation of Delaware

Filed Dec. 29, 1959, Ser. No. 862,607
9 Claims. (Cl. 260—680)

1. A process for the oxidative dehydrogenation of butylene to butadiene which comprises passing a vapor stream containing n-butenes in contact in a reaction zone at a tempertaure between 600 and 1000° F. and a contact time between about 1 and 20 seconds with a continuous stream of a powdered oxidant in a weight ratio of butylene to powdered oxidant of from 1:20 to 1:1200 with said powdered oxidant containing as the primary oxidizing agent at least about 15% by weight of iron oxide as Fe_2O_3, separating the used and partially reduced iron oxide from the hydrocarbon products, passing the separated iron oxide from said reaction zone to a separate steaming zone and steaming it with between about 1 and 20 pounds of steam per thousand pounds of said partially reduced oxidant, passing the partially reduced oxidant from said steaming zone to a fluidized bed in a separate reoxidation zone, maintaining the temperature of



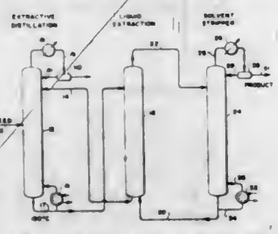
said reoxidation zone above that of the reaction zone but below 1025° F., feeding to said fluidized bed near the bottom a gas containing oxygen in an amount equivalent to from about 20 to 40 standard cubic feet of air per pound of butylene feed, and cycling partially reoxidized oxidant from said bed to said reaction zone.

3,050,573

EXTRACTIVE DISTILLATION

Ralph Anderson, Albany, and Carl H. Deal, Jr., Orinda, Calif., assignors to Shell Oil Company, a corporation of Delaware

Filed Dec. 6, 1957, Ser. No. 701,124
2 Claims. (Cl. 260—681.5)



1. A process for the extractive distillation of isoprene from a mixture of close boiling, more saturated C_5 hydrocarbons comprising extractively distilling the mixture in the presence of dimethyl sulfoxide to obtain a first extract phase containing dimethyl sulfoxide and isoprene, introducing said first extract phase to a liquid-liquid extraction with a C_7 to C_{10} paraffin to form a second extract phase containing said paraffin and isoprene, and stripping the second extract phase to separate the isoprene from the paraffin.

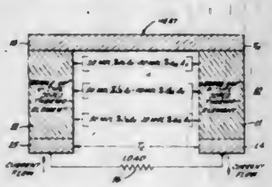
ELECTRICAL

3,050,574

THERMOELECTRIC ELEMENTS HAVING GRADED ENERGY GAP

Fred D. Rosi, Plainsboro, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed July 6, 1960, Ser. No. 41,158
14 Claims. (Cl. 136—5)



1. A thermoelectric generator comprising two circuit members of thermoelectrically opposite semiconductor materials, one said member being of P-type material and the other said member being of N-type material, said members being conductively joined to form a thermoelectric junction, at least one of said two members having a varying composition such that its energy gap is graded from one end to the other.

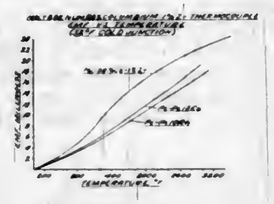
3,050,575

THERMOCOUPLE

Donald F. Sullivan, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Dec. 14, 1960, Ser. No. 75,876
6 Claims. (Cl. 136—5)

1. An electro-negative element for a thermoelectric couple comprising columbium and zirconium is approxi-



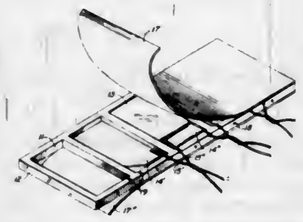
mately the weight proportion of 99% Cb–1% Zr.

3,050,576

BATTERY STRUCTURE

Milton Comanor, New York, N.Y., assignor to Yardney International Corp., New York, N.Y., a corporation of New York

Filed Apr. 6, 1959, Ser. No. 804,469
12 Claims. (Cl. 136—6)



1. A battery assembly comprising a substantially flat, non-conductive body provided with a plurality of juxtaposed cavities and a plurality of electrochemical cells respectively disposed in said cavities, said cavities opening toward at least one major surface of said body, each of said cells consisting essentially of a reversible electrochemical couple having a positive and a negative electrode, an electrolyte impregnated inter-electrode separator means encompassing at least one of said electrodes, cover means on said surface overlying all of said cavities sealing said cells therewith and inter-cell conductor means connected to said electrodes and extending between said cavities, said reversible electrochemical couples being selected from the group consisting of lead/lead peroxide, zinc/silver chloride, silver/zinc, silver/cadmium and nickel/cadmium.

3,050,577

METHOD OF CONTROL

James E. Harris, Eaton, and William D. Carson, Muncie, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed June 29, 1960, Ser. No. 39,714
3 Claims. (Cl. 136—27)

1. In a process of making Barton litharge which consists essentially of metallic lead with the remainder being substantially equal mixtures of yellow and red litharge, the steps comprising: creating a mist of molten lead particles from substantially pure molten lead including antimony within the range of .0015% to .0040% by weight, subjecting said mist to the action of an oxidizing gas for bringing the metallic lead content into a range of from 24% to 30% by weight of the whole, and then collecting and cooling the oxidized lead particles together with the lead particles.

3,050,578

RETAINER

Charles H. Huebner, Harper Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 7, 1958, Ser. No. 753,748
5 Claims. (Cl. 174—40)



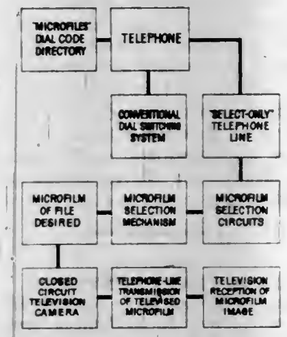
1. An integrally formed plastic insulating retainer for holding and spacing a plurality of parallel engine ignition wires and the like, said retainer comprising a flexible strip section, a plurality of spaced locking lugs integrally formed with said strip section adjacent one end thereof with each of said lugs having a body section and a rounded end and an annular groove formed in said body section adjacent said rounded end to define an annular barb on the rounded end side thereof and an annular shoulder on the other side thereof, the other end of said strip section having a plurality of apertures formed therein in spaced relation so that, when said strip section is reversely bent intermediate said lugs and said apertures, said lugs extend through said apertures and receive said strip section other end in said grooves to retain said strip section other end in parallel spaced relation to said strip section one end and to form apertures defined by said lugs and said strip section for receiving ignition wires and the like and maintaining them in completely insulated spaced relation, one extreme end of said strip section having a mounting lug integrally formed therewith and extending normally therefrom and having at least one annular barb thereon and a hollow recess extending within said annular barb, said mounting lug thereby being adapted to mount and support and retain said retainer and the wires on an apertured support member.

3,050,579

AUTOMATIC FILES SYSTEM

Victor H. Nash, 814 Oakwood Drive, Falls Church, Va., and Roy F. Nash, 1012 S. Quebec St., Arlington 4, Va.

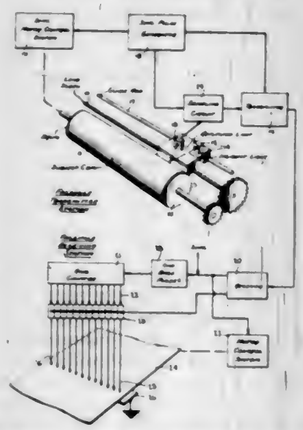
Filed Sept. 3, 1958, Ser. No. 758,806
4 Claims. (Cl. 178—5.6)



1. In an automatic files system, a rotatable drum, a plurality of microfilm cartridges on said drum peripherally mounted with respect thereto, said cartridges being adapted for removal and replacement in position on said drum, a cartridge selector having means to remove and transport a selected cartridge to a point for camera viewing, means to unroll said cartridge for said camera viewing, said selector having means to automatically pick up and replace a selected cartridge, a television camera at said point, a telephone circuit in interconnection with said selector and said camera, means in said circuit re-

sponsive to said interconnection to actuate said selector and said camera, means to time the duration of exposure to said camera, a closed circuit television camera arranged to view said cartridge when unrolled, and circuit means in association with said telephone subject to manual intervention to automatically actuate said cartridge selector, said unrolling means, said camera, said receiver and said time duration means.

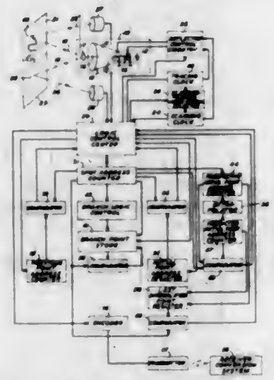
3,050,580
ELECTROSTATIC TECHNIQUES
Frederick A. Schwertz, Pittsford, N.Y., assignor to Xerox Corporation, a corporation of New York
Filed Feb. 4, 1957, Ser. No. 638,067
6 Claims. (Cl. 178—6.6)



1. A facsimile system comprising a scanner provided with means to move an original picture with reference to an optical device to produce electrical signals varying as a function of the light values of the picture in the course of scanning, means to sample said signals periodically at a predetermined rate to produce for each scan line a train of information pulses representative of the light values therein, an electrostatic recorder including an insulating web movable in synchronism with the movement of said original picture in said scanner and an electrode system constituted by a row of point electrodes disposed in serial alignment normally with respect to said web, means to apply said information pulses simultaneously to said electrodes, and timing pulse means sequentially to render said electrodes in condition for activation at a rate corresponding to said predetermined rate whereby only those electrodes are activated in which a timing pulse and an information pulse are coincident, each actuated electrode producing an electrostatic charge at the corresponding position on said web.

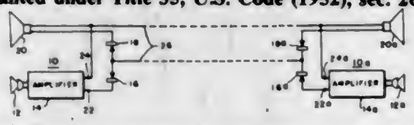
3,050,581
LINE TRACING SYSTEM
James S. Bomba, Millburn, N.J., Neil M. Haller, Northport, N.Y., and Ernest R. Kretzmer, New Providence, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 30, 1960, Ser. No. 52,820
13 Claims. (Cl. 178—7.1)

2. In a facsimile system for transmitting the contour of a line pattern in a field including a main line with at least one branch point and at least one branch line extending from each of said branch points, in combination, means establishing a system of coordinates by which location of points on said line pattern in relation to said field may be expressed, scanning means for approximately tracing the contour of said main line by a substantially continuous series of discrete steps, each step having an incremental distance and a coordinate direction defined by said system of coordinates, means including said scanning means, operative during the tracing of said main line, for locating said branch points and the coordinate direction of the respective branches extending from said branch points, means for storing the coordinate address of each of said branch points and



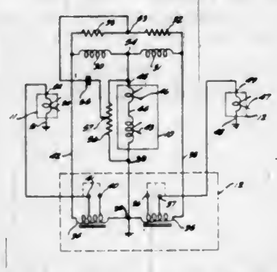
the coordinate direction of said branches from their respective branch points, means including said scanning means and said storing means operative upon the termination of the tracing of said main line for tracing in succession each of said branch lines by a respective substantially continuous series of said discrete steps, and means responsive to said scanning means for translating the coordinate direction of each of said discrete steps into a corresponding electrical signal.

3,050,582
ANTI-FEEDBACK SYSTEM
John L. Faherty, Jr., 135 Woodland Drive, Fair Haven, N.J.
Filed Oct. 1, 1957, Ser. No. 687,593
1 Claim. (Cl. 179—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



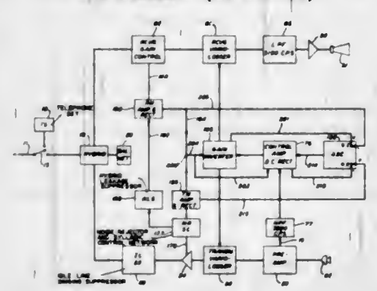
A system for simultaneous communications in two directions comprising a two conductor transmission line; a first and second diode, each having one electrode connected to one of said conductors, at a first station; a third and fourth diodes, each having the other electrode connected to said one of said conductors, at a second station; a first transmitting and a first receiving transducer at said first station; a second transmitting and a second receiving transducers at said second station; said first transmitting transducer at said first station having one terminal connected to the other electrode of said first diode and another terminal connected to the other of said conductors; said second receiving transducer at said second station having a first terminal connected to the one electrode of said third diode and another terminal connected to said other of said conductors; said second transmitting transducer at said second station having one terminal connected to the one electrode of said fourth diode and another terminal connected to the other of said conductors; and said first receiving transducer at said first station having one terminal connected to the other electrode of said second diode and another terminal connected to the other of said conductors.

3,050,583
CONTROLLABLE STEREOPHONIC ELECTRO-ACOUSTIC NETWORK
Emmanuel Berlant, Culver City, Calif., assignor to Stephens Trusonic, Inc., Culver City, Calif., a corporation of California
Filed Oct. 7, 1958, Ser. No. 765,860
1 Claim. (Cl. 179—1)



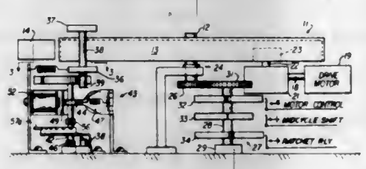
A loudspeaker system comprising: a two-channel source of audio signals; a first loudspeaker connected to one of said channels of said source, and being responsive to predetermined ranges of signals in said channel; a second loudspeaker connected to the other channel of said source, and being responsive to similar predetermined ranges of signals in said other channel; a third loudspeaker a pair of low-pass filters connected together at one end of each in a common junction, the other end of each, respectively, being connected to one, respectively, of said channels in said source, said common junction being connected to said third loudspeaker; a pair of resistors connected together at one end of each, forming a second common junction, the other end of each, respectively, being connected to one, respectively, of said chcannels in said source; a capacitor; and a potentiometer, said capacitor being connected between said second common junction and said potentiometer, said potentiometer being connected to said third loudspeaker, whereby said third loudspeaker normally responds to a range of frequencies passed by said low-pass filters from said two channels of said source of signals to said third speaker, and upon adjustment of said potentiometer responds also to said predetermined range of frequencies to which said first and second speakers are responsive.

3,050,584
CONFERENCE TELEPHONE APPARATUS
Wade M. Miller, Pittsburgh, Pa., assignor to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York
Filed Dec. 24, 1958, Ser. No. 782,748
12 Claims. (Cl. 179—1)



11. Conference telephone apparatus comprising an incoming channel including a first gain varying network and a loudspeaker, an outgoing channel including a microphone and a second gain varying network, the gain introduced into each of said channels by said networks being of such value that the direction of preferred transmission of voice frequency signals is normally through said incoming channel to said loudspeaker, means for deriving a first control voltage from voice frequency signals in said outgoing channel in a selected frequency range, gain inverting means connected to said networks, means responsive to said first control voltage for actuating said gain inverting means to vary inversely the gain introduced into said channels by said networks and thereby transfer the direction of preferred transmission in said apparatus from said incoming channel to said outgoing channel, frequency selective means in said incoming channel for eliminating said selected frequency range from the voice frequency signals transmitted to said loudspeaker, means for deriving a second control voltage from voice frequency signals in said outgoing channel, means responsive to said second control voltage for maintaining said gain inverting means in said actuated condition, said second control voltage deriving means comprising a threshold device for rendering said actuated condition maintaining means nonresponsive to signals below a predetermined threshold level, and means responsive to the presence of syllabic frequencies in said outgoing channel for reducing the level of said threshold, means for deriving a third control voltage from voice frequency signals in said incoming channel, means responsive to said third control voltage for neutralizing said second control voltage in the presence of signals in said incoming channel.

3,050,585
RECORDING AND REPRODUCING MECHANISM OF A TELEPHONE ANSWERING DEVICE
Joseph J. Zimmermann, Milwaukee, Wis., assignor to Electronic Secretary Industries, Incorporated, Waukesha, Wis., a corporation of Wisconsin
Filed May 12, 1958, Ser. No. 734,570
12 Claims. (Cl. 179—6)

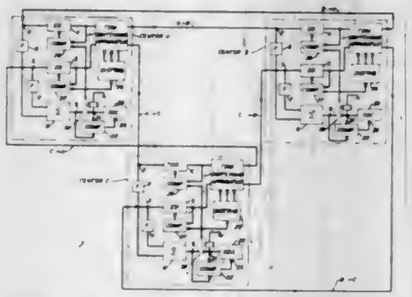


1. In a telephone answering machine connected to a telephone line: a cylindrical turntable having a recording surface on the arcuate wall thereof and on at least one end wall thereof; reproducing means engaged with the arcuate portion of said cylinder operable to transmit a prerecorded message from said surface to said telephone line; recording means engaged with the end wall of said cylinder operable to record a message from said telephone line on said surface; driving means for rotating said turntable; and means controlled by the rotation of said turntable for sequentially activating said reproducing means and said recording means.

3,050,586
RECIPROCAL TIMING OF TIME DIVISION SWITCHING CENTERS
John P. Runyon, Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 20, 1960, Ser. No. 30,551
19 Claims. (Cl. 179—15)

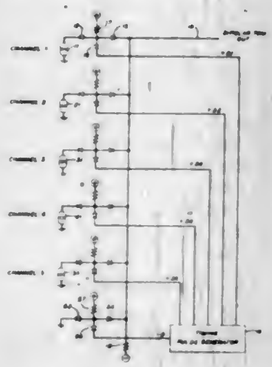
1. In a time division multiplex communication system comprising a plurality of switching centers, each of which is linked by incoming and outgoing communication channels with at least two other centers of said plurality, means at each center for governing sequential operations at said center, which comprises means for deriving from

each incoming channel a timing wave individual to said channel, means for developing a reference wave having the average frequency of all of said incoming timing waves and a first reference phase, a source of oscillations of controllable frequency, means for comparing the phase of the output wave of said local source with said reference phase, means responsive to said comparison for retuning the frequency of said local oscillation source in a sense to reduce the magnitude of a phase discrepancy indicated by said comparison, thereby to provide a second



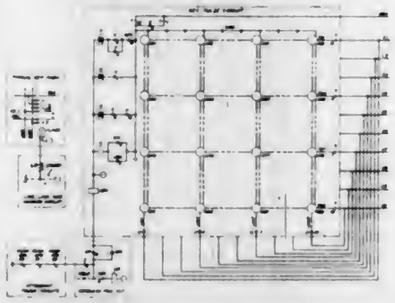
reference phase of said average frequency, means for utilizing the output of said local source, as thus retuned, to govern the timing operations of said center, means for individually comparing the phases of all of said incoming waves with said second reference phase, a controllable elastic delay device individual to each of said incoming channels and connected in tandem therewith, and means responsive to each individual phase discrepancy observed in said last-named comparisons for altering the magnitude of the delay introduced by said individual delay device.

3,050,587
BIPOLAR CLAMP FOR PULSE MODULATION SYSTEMS
Robert L. Carbrey, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 13, 1959, Ser. No. 812,855
14 Claims. (Cl. 179—15)



1. In a pulse modulation system, a signal pulse output bus, at least one source of unipolar pulses of direct current of variable amplitude and like polarity, said pulses having amplitudes which vary within a predetermined range, means to supply pulses from said source to said output bus during predetermined spaced time intervals, and means to convert said pulses into bipolar pulses which comprises means to connect said output bus to a predetermined reference potential intermediate in said amplitude range between each of said predetermined time intervals, and means to disconnect said output bus from said predetermined reference potential during each of said predetermined time intervals.

3,050,588
REGISTRATION CONTROL CIRCUIT
Milton L. Benson, Chatham, N.J., and Charles Breen, Mineola, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 5, 1960, Ser. No. 645
19 Claims. (Cl. 179—18)

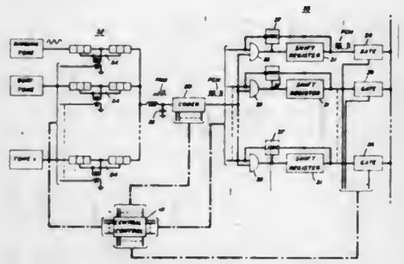


15. In a telephone system, a register; a first and a second section in said register; a plurality of register relays in each of said sections, the register relays of each of said pluralities being selectively operable to register a digit; a plurality of connector conductors connectable to said register and alternatively terminable in said first and second sections, each of said conductors being individually terminable at a corresponding one of said register relays and being energizable to operate the register relay corresponding thereto; an energizable control conductor connectable to said register; first relay means in said register operable to connect said connector conductors and said control conductor to said register; second relay means in said register for normally terminating said connector conductors in said first section and operable to terminate said connector conductors in said second section; third relay means in said register operable in response to the energization of said control conductor; a keyset at which said connector conductors and said control conductor terminate; a first and a second plurality of signal conductors in said keyset alternately connectable to said plurality of connector conductors, each of said signal conductors being individually connectable to a corresponding one of said connector conductors and being energizable to energize a connected connector conductor corresponding thereto; a plurality of keys in said keyset individually operable to selectively energize signal conductors of said first and second pluralities according to a first and a second digit respectively; and a control circuit in said keyset operable in response to concurrent operation of said first relay means and any one of said keys to alternately connect said pluralities of signal conductors to said connector conductors and to energize and de-energize said control conductor at timed intervals; whereby said first and second digits are registered in said first and second sections respectively.

3,050,589
MULTIPLEX SIGNALING SYSTEM
Henry E. Vaughan, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 11, 1958, Ser. No. 760,480
15 Claims. (Cl. 179—18)

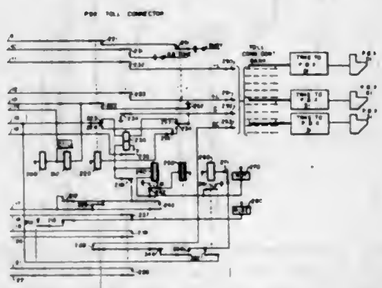
8. In a communication system, apparatus for providing each of a plurality of signaling tones in digital form dur-

ing each of a succession of time slot intervals in a frame interval comprising means for coding tone frequency samples in digital form, means for directing samples of a plurality of tone frequencies to said coding means in successive time slot intervals of a recurrent frame of time slot intervals, means for storing coded samples of cor-



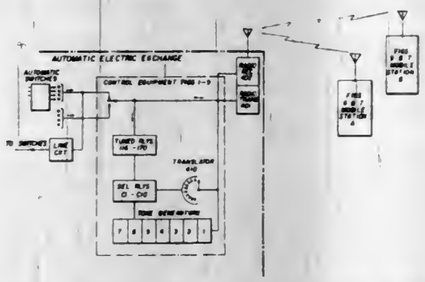
responding tone frequencies, means operated in synchronism with said directing means for directing coded samples from said coding means to said corresponding storage means, means for recirculating said coded samples through said storage means, and means for inhibiting such recirculation upon receipt of subsequent coded samples at said storage means.

3,050,590
PBX TOLL CONNECTOR PROVIDING SPECIAL SERVICE
Clarence E. Lomax, Hastings, Nebr., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Dec. 8, 1958, Ser. No. 778,810
6 Claims. (Cl. 179—27)



1. In a telephone system, a two-motion multi-level connector switch, a set of wipers included in said switch, a plurality of groups of trunk lines, each of said groups of trunk lines being connected to a different one of said levels, said trunk lines accessible to said connector switch by means of said set of wipers, a preceding switch train having access to said connector switch operated in response to the initiation of a calling connection thereover for including said switch in said calling connection, means for directively operating said connector switch over said connection to move said wipers in one of said motions to select one of said groups of trunk lines in one of said levels, means for further directively operating said connector switch over said connection to move said wipers in the other of said motions to engage the first trunk in said selected group, busy testing means in said connector switch for testing the busy condition of each trunk in said selected group, means operated in response to said first trunk testing busy by said busy testing means for automatically operating said connector switch to move said wipers in said other motion to successively hunt for an idle trunk in said selected group, means including wiper restoring means operated in response to the last trunk in said selected group being engaged by said wipers and found busy for automatically restoring only said wipers to normal, means for maintaining said connector switch in said calling connection with said preceding switch train subsequent to restoration of said wipers to normal, and means including means operated in response to said restoration of said wipers to normal for preparing said connector switch for subsequent reoperation of said wipers in the same above-mentioned said two directive motions whereby the busy condition of said trunks in said selected group is retested.

3,050,591
AUTOMATIC MOBILE TELEPHONE SYSTEM
Robert P. Dimmer, Lombard, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,321
2 Claims. (Cl. 179—41)

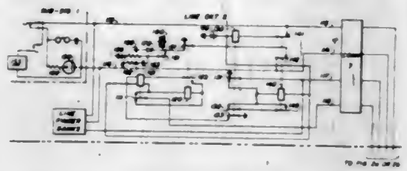


1. In a combined radio and wire telephone system, an automatic telephone exchange including automatic switches and wire lines accessible thereto, a plurality of mobile radio stations, a control equipment in said exchange having a pair of sets of terminals accessible to the automatic switches therein and having a radio receiver and transmitter associated therewith, a plurality of tone generators in said equipment, means for operating one of said switches in a particular manner when a call is being made from a wire line in the exchange to a mobile radio station to cause said switch to connect with a particular one of said sets of terminals and to apply a particular one of a plurality of frequencies of ringing current thereto dependent upon the mobile station being called, means in said control equipment including a series of tuned devices operated in a specific manner, dependent both upon the set of terminals seized and upon the frequency of the ringing current applied thereto, for selecting a particular pair of said tone generators and for causing tone currents from both selected generators to be simultaneously transmitted via said radio transmitter to the mobile stations, a pair of tuned devices at each mobile station, the pair of devices at each station responsive only to the simultaneous receipt of tone currents from a particular pair of tone generators to signal the subscriber at that station.

3,050,592
MESSAGE WAITING INDICATING CIRCUITS
Karl L. Burgener, Villa Park, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,867
9 Claims. (Cl. 179—86)

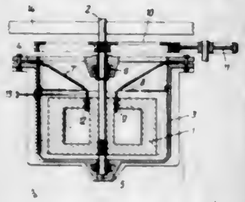
1. In a telephone message-waiting system, a telephone line, a substation at one end of said line, a first source of voltage connected to one side of said line for normal operation of said substation, a relatively high-impedance circuit including a visual signal device bridged across said line at said substation, said device being operative only on a voltage greater than that of said first voltage source, a relatively low-impedance circuit connectable across said line at the substation, a second source of voltage connect-

able to the other side of said line, and manually-controlled means at the opposite end of said line for connecting said first and second sources of voltage in a series-



aiding circuit including said line and said device, thereby operating said device with said low-impedance circuit disconnected from the line.

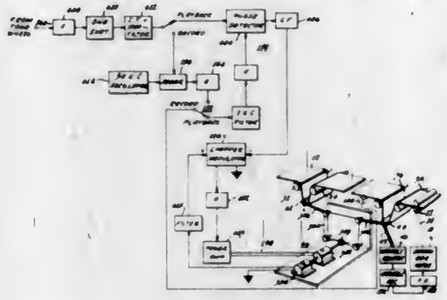
3,050,593
PHONOGRAPH, PARTICULARLY SOUND TAPE APPARATUS
Karl Cech, Modling, Austria, assignor to Karl Vockenhuber, Vienna, Austria
Filed Nov. 8, 1960, Ser. No. 68,104
Claims priority, application Austria Nov. 10, 1959
5 Claims. (Cl. 179—100.2)



1. A phonograph, particularly a sound tape apparatus, comprising a movable sound carrier, means driving said sound carrier, means for stabilizing the movement of said sound carrier, said stabilizing means comprising a rotatable mass of inertia in driving connection with said sound carrier, an electromagnetic loud-speaker comprising a magnetic system defining a cylindrical air gap and having cylindrical surfaces, a cylindrical moving coil movable within said air gap adjacent said cylindrical surfaces of said magnetic system, a membrane operatively connected with said moving coil, said moving coil performing upon energization an axial movement, at least said magnetic system of said loud-speaker being mounted for rotation about the longitudinal axis of said cylindrical air gap and in driving connection with said sound carrier, and said magnetic system constituting said means for stabilizing the movement of said sound carrier.

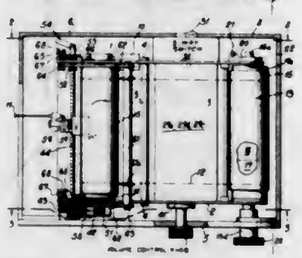
3,050,594
POSITION CONTROL SYSTEM
John D. Bick, Moorestown, and Jerome L. Grever, Delaware Township, Camden County, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 30, 1957, Ser. No. 693,324
16 Claims. (Cl. 179—100.2)

1. In combination with a storage system which employs magnetic tape, said storage system including a motor for moving said tape for reproducing operations, said tape having a constant frequency control signal recorded thereon for a tape movement subject to variations, apparatus for mounting said tape with respect to a predetermined point, said apparatus comprising a pair of fixed idlers, a corresponding pair of movable idlers, means for supplying a standard frequency signal, means for reproducing said recorded control signal, phase detecting means for deriving voltages from a difference in phase relationship between the reproduced and standard frequency signals, and means responsive to said derived voltage for moving said movable idlers with respect to said fixed idlers so that the distance as measured along the tape between said movable idlers remains constant, whereby the longitudinal position of the tape length between said movable idlers is changed in accordance with



said variations and yet the average motion of the tape and the tape tension remain unaffected, and means connected directly to and responsive to the position of one of said movable idlers for changing the rotational speed of said motor, whereby the speed with which the tape is driven is varied to maintain said movable idlers at a predetermined position with respect to said fixed idlers.

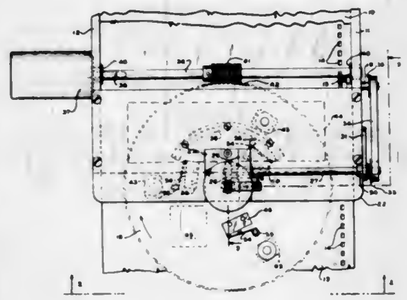
3,050,595
POCKET TAPE RECORDERS
Joseph I. Heller, 321 Atlantic Ave., Brooklyn, N.Y.
Filed Feb. 27, 1958, Ser. No. 717,877
18 Claims. (Cl. 179—100.2)



1. In a tape recorder; first and second stationary shafts arranged parallel to one another, a first hollow drum rotatably mounted on said first shaft, electric motor means stationarily mounted on said first shaft interiorly of said first drum, reducing gear means mounted within said first drum and operatively interconnecting said motor means to said first drum for rotating the same, a second hollow drum rotatably mounted on said second shaft, an endless belt of magnetic recording tape extending freely about said drums, a pressure bar adapted for engagement with a reach of said belt of tape intermediate said drums, a yoke mounted at one end and adjacent said second drum for pivotal movement about an axis parallel to the axis of rotation of said second drum and carrying said pressure bar at the other end, means connected with said yoke for biasing the same in such a direction as to cause said bar to engage and press against said reach of said belt of tape, to thereby tension the latter and cause it to transmit to said second drum the driving force exerted on said first drum by said electric motor means, a lead screw rotatably mounted adjacent and parallel to said second drum, a carriage mounted on said lead screw and provided with a follower element riding in the thread of said lead screw, whereby said carriage may be moved along said lead screw and along said second drum upon rotation of said lead

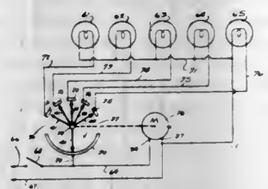
screw, transmission means operatively connecting said second drum to said lead screw for rotating the latter jointly and in synchronism with said second drum, a read/record and erase head assembly mounted on said carriage and movable therewith along said second drum for selective spiral track recording, playing back and erasing of signals on said belt of tape, means for disengaging said follower element from said thread of said lead screw and for simultaneously back-spacing said carriage along said lead screw without rotation of the latter to bring said read/record and erase head assembly into alignment with a previously formed section of the spiral recording track, electronic oscillator and amplifier means stationarily mounted on said second shaft interiorly of said second drum for providing and controlling signals applied to and sensed by said read/record and erase head assembly, electric power source means positioned intermediate said drums and in the space between the elongated reaches of said belt of tape, and manually operable switch means operatively interconnecting said oscillator and amplifier means with said read/record and erase head assembly and said electric power source means, respectively, in accordance with the desired operation of said read/record and erase head assembly.

3,050,596
TRANSVERSAL RECORDING MACHINE
William G. Whitney, Wayne, and Bosco Wu, Livingston, N.J., assignors to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,336
9 Claims. (Cl. 179—100.2)



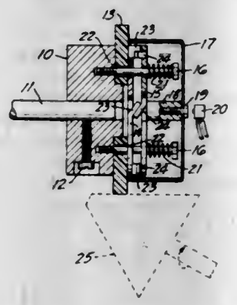
1. In a transversal type magnetic tape recording and/or reproducing machine including drive means for longitudinally advancing the tape through the machine; the combination of a rotatably mounted turntable having one face thereof confronting one side of the tape, a plurality of magnetic heads on said turntable circumferentially spaced around the axis of the turntable for movement transversely across said tape in succession as the turntable is rotated, a common circuit for said magnetic heads, a switch on said turntable for each of said heads each operable to connect the respective head effectively into said common circuit, said switches being equal angularly spaced about said axis and each having an operating member projecting therefrom, and a stationary arcuate cam member positioned in the path of travel of said switch operating members for causing said switches to be operated successively as the turntable is rotated, said cam member being relatively positioned about said axis and having a predetermined circumferential length adapted to cause each magnetic head to be connected to said common circuit only during its movement across a predetermined active portion of the tape.

3,050,597
ROTARY LIGHT SEQUENCE SWITCH DEVICE
Charles Yakem, 610 Soles St., McKeesport, Pa.
Filed Mar. 25, 1960, Ser. No. 17,630
1 Claim. (Cl. 200—19)



A switch device comprising an insulating support, a rotor element rotatably mounted in and extending through said support, a first arcuate conductive contact element mounted on said support concentric with said rotor element and being of substantial angular extent, a plurality of uniformly spaced relatively short additional conductive contact elements mounted on said support directly opposite said first contact element on an arc of substantially the same radius and subtending an arc of substantially the same length as that subtended by said first contact element and being concentric therewith, a conductive contact arm secured to said rotor element, respective angularly spaced resilient contact fingers integrally formed on said arm and being spaced apart by the same angles as said short contact elements and being of sufficient length to simultaneously engage said short contact elements, a further resilient contact finger integrally formed on said contact arm and extending directly opposite said first-named fingers, said last-named finger being engageable with the mid portion of the first contact element when the first-named fingers simultaneously engage said relatively short contact elements, an electric motor drivingly connected to said rotor element, and a pair of energizing conductors connected to said motor.

3,050,598
OVERLOAD SWITCHING DEVICE
John J. Fennessy, Rochester, N.Y., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,285
1 Claim. (Cl. 200—61.46)



A compact safety shut-off and power input device suitable for mounting in axially extended position at the end of a rotatable shaft, and comprising, in combination:

(*a*) a rotary drum axially attachable to said shaft end and having a flat end face;

(*b*) a power input disc having an inner flat face in frictional contact with said end face and having a peripheral edge surface for making frictional contact with a drive cone;

(*c*) a deflection disc centered on and attached to said disc (*b*) and having a plurality of edge tabs extending

outwardly from said disc (*b*) at an obtuse angle from the direction of rotation, said discs (*b*) and (*c*) being provided with a plurality of equally spaced arcuately extended slot-like perforations;

(*d*) a pressure disc adjacent said deflection disc, having pressure-surfaces cooperatively positioned with respect to said tabs for imparting axial motion to said disc on relative rotational movement of said discs (*c*) and (*d*), having a plurality of bolt-hole perforations corresponding to said slot-like perforations, and having an axial cover-mounting extension;

(*e*) bolt-like mounting means passing through the perforations in said discs and adjustably mounted in said drum;

(*f*) spring means on each of said mounting means in position for urging said discs toward said drum;

(*g*) cup-shaped cover means mounted on said extension; and

(*h*) a switch contact element carried on said extension, located axially of said device and outwardly of said cover means.

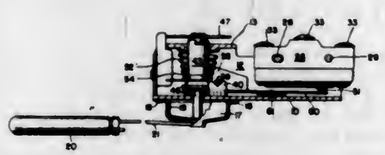
3,050,599
SNAP SWITCH
Arnold A. Brevick, Highland Park, Ill., assignor to Cherry Electrical Products Corp., Highland Park, Ill., a corporation of Illinois
Filed Oct. 10, 1960, Ser. No. 61,617
6 Claims. (Cl. 200—67)



1. A self-restoring snap switch having a movable actuator and an actuated blade, said blade having a flexible area resulting therein between its opposite ends, a pair of vertically aligned spaced apart stationary contacts disposed on opposite sides of said blade, a pair of spaced apart compression members providing seat means for opposite ends of said blade, said blade being of a length greater than the distance between said compression members and thereby bowed out of a horizontal plane and into contact with one of said stationary contacts when mounted therebetween and in the direction of said actuator, said one of said stationary contacts distorting the bow of said blade so as to change the angles of inclination of said bow at opposite ends of said blade between said members and the point of engagement of said actuator, with the flexible area of said blade disposed between the point of contact of the blade and either of said stationary contacts and said actuator, said blade movable toward the horizontal plane between said members by movement of said actuator in one direction against a portion thereof so as to cause said area to form an oppositely extending bow between said one of said contacts and said actuator, said oppositely extending bow upon obtaining a predetermined curvature causing said blade to snap into engagement with the other of said stationary contacts.

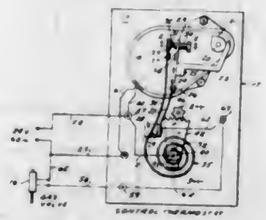
3,050,600
SIMULTANEOUS ACTUATOR FOR SNAP SWITCHES
Russell N. Booth, Lakeville, and Marvin E. Russell, St. Louis Park, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 27, 1955, Ser. No. 504,170
2 Claims. (Cl. 200—81.4)

1. In switching apparatus, at least two switches to be actuated substantially simultaneously, each of said switches including a snap switch and an actuator which, upon the application of sufficient force thereto causes the switch to snap and which will retain the switch in its snapped position with the application of less force thereto than is required to snap the switch, a non-resilient condition responsive means, mechanical actuating means including a pivoted lever operatively connected to said condition responsive means at a predetermined area of said lever in such a manner that the position of said lever has a fixed relation to the position assumed by said condition responsive means, said lever having a switch operating portion engaging the actuators of said snap switches, said portion being carried by and resiliently connected with the



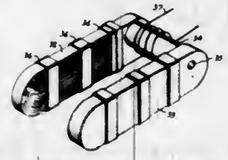
main portion of said lever to which said condition responsive means is connected, with the points of engagement of said switch operating portion with said actuator lying on a line sufficiently spaced resiliently from said predetermined area of said lever at which said condition responsive means is connected that the resiliency therebetween is sufficient that upon said main portion of said lever assuming a position in which sufficient force is applied to said switch operating portion of said lever to operate any one of said switches, the resilient force between the main and switch operating portions of the lever will cause the simultaneous operation of any other of said snap switches due to the operation of the first switch resulting in a greater portion of the resilient force being available for operation of the remaining switch or switches.

3,050,601
TEMPERATURE CONTROL SYSTEM
Donald I. Bohn, 377 Country Club Road, Asheville, N.C.
Filed Nov. 14, 1958, Ser. No. 773,942
4 Claims. (Cl. 200—136.3)



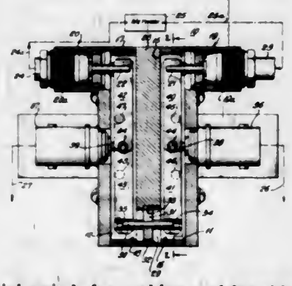
1. A control thermostat of the character described comprising a timing motor, a cam driven thereby, a flexible member of non-magnetic material cyclically displaced by said cam having a first contact, and a non-magnetic screw containing a permanent magnet, bimetallic thermal element with an arm with a second contact engageable with said first contact, a magnetic member mounted on said bimetallic element for cooperating with said first magnet, circuit means for closing an external control circuit within cyclic actuations upon the engagement of said contacts, and mechanism for adjusting the position of said arm and second contact with respect to said member and first contact whereby presettable temperature control action is established for the thermostat.

3,050,602
CIRCUIT INTERRUPTER
Richard M. Korte, Media, and Harold N. Schneider, Springfield, Pa., assignors to General Electric Company, a corporation of New York
Filed Mar. 7, 1960, Ser. No. 13,127
4 Claims. (Cl. 200—147)



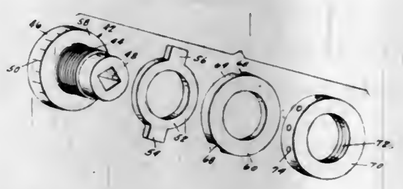
1. A circuit interrupter including means for establishing an arc and a magnet structure for extinguishing the arc comprising a pair of pole pieces arranged in parallel spaced apart relationship and each comprising insulated substantially continuous magnetic ribbon material formed into a spiral coil with each layer in physical contact with contiguous layers and an interconnecting yoke member generally perpendicular to the general planes of said shoes.

3,050,603
TWO-POSITION COAXIAL SWITCH STRUCTURE
Carl W. Concelman, Danbury, Conn., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,410
3 Claims. (Cl. 200—153)



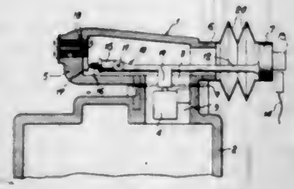
1. A coaxial switch for making and breaking electrical series connection between an electrical network or the like and electromagnetic wave transmission lines comprising, a switch body having a pair of internal and longitudinal chambers defined by opposite interior conducting walls including end walls, each of said chambers having first and second ends adjacent the respective end walls thereof, the walls of said switch body chambers having a common bore communicating with each chamber adjacent the first ends of said individual chambers, an inner conductor member coaxially supported in said common bore, said inner conductor member having opposite sections projecting into the individual chambers at the first ends thereof, a first pair of connector means supported by said switch body and each having an individual inner conductor section extending into an individual chamber adjacent the second end thereof for electrically connecting each chamber in electrical series relationship with said network, a second pair of connector means for making connection with the individual ones of said transmission lines and supported by said switch body, each of said second connector means having an individual inner conductor element extending into an individual chamber between the first and second ends thereof, a pair of flexible and longitudinal conductive switch arms in each chamber wherein each arm of said pair is fixedly connected to an individual inner conductor section adjacent the first and second chamber ends, each arm of a pair having a free end for make and break electrical contact with the inner conductor element in the chamber containing said pair of arms, and means for moving said arms from a first to a second of two positions for alternate phases of switch operation, the arms in said chambers and connected to the inner conductors of said first pair of connector means having their free ends making contact with respective ones of said inner conductor elements of the second pair of connector means as the free ends of the other arms in said chambers make contact with said chamber walls for one phase of switch operation for connecting said network in electrical series relationship with said transmission lines, the arms in said chambers and connected to the inner conductors of said first pair of connectors having their free ends making contact with the chamber walls as the free ends of the other arms in said chambers make contact with the respective inner conductor elements of the second pair of connector means for the other phase of switch operation for shorting said network and for connecting said transmission lines in electrical series relationship.

3,050,604
ADJUSTABLE AUXILIARY SWITCH
Norman A. Kusche, Los Angeles, Calif., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 5, 1959, Ser. No. 844,456
6 Claims. (Cl. 200—155)



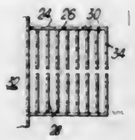
1. In an auxiliary switch; a movable contact assembly and a cooperating stationary contact means; said movable contact assembly having an operating shaft extending therefrom for rotating said movable contact assembly with respect to said stationary contact means; said movable contact assembly including movable contact means; said movable contact means being moved into contact engagement with respect to said stationary contact means by rotation of said operating shaft to a predetermined position; said movable contact assembly including a support means, said movable contact means, a pressure ring means and a locking means; said operating shaft being connectible to said support means; said movable contact means being positioned between said support means and said pressure ring means; said locking means being positioned adjacent said pressure ring means; said locking means being operatively connected to said support means and being operable to force said pressure ring toward a locking surface of said support means to frictionally lock said movable contact means in position with respect to said support means; said movable contact means being angularly adjustable with respect to said support means and thus said operating shaft when said locking means is unlocked; said locking means being unlockable with respect to said support means and remaining operatively connected thereto whereby the angular position of said movable contact means may be adjusted without complete disassembly of said movable contact assembly; said movable contact means having a contact engaging portion; said pressure ring means being formed of an insulation material; said pressure ring means overlapping substantially all of said movable contact means except said engaging portions to thereby contain arcs to said contacting portions of said movable contact means.

3,050,605
SWITCH ACTUATING MECHANISM FOR SUBMERSIBLE SUMP PUMPS
Abraham Pollak, 1 Main St., Linfield, Pa.
Filed Mar. 23, 1961, Ser. No. 132,998
6 Claims. (Cl. 200—168)



1. A float operated switch actuating mechanism for the motor of a submersible pump and motor assembly which comprises a fluid-tight casing, said casing comprising a flexible cylindrical extension closed at its free end, a switch actuating lever pivoted in said casing and having an arm extending through said extension and fluid-tightly through its free end and a shorter arm extending in the opposite direction from said pivot of said lever, and a spring mounted in the end of said casing opposite said extension and having a portion rounded convexly to the end of said extension to impart a snap action to said lever as it passes from one tilted position to the opposite position.

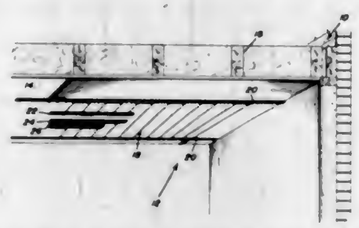
3,050,606
RADIO FREQUENCY DIELECTRIC HEATING APPARATUS
Christopher Evan Mundell Tibbs, Woklngham, England, assignor to Radio Heaters Limited
Filed Feb. 8, 1960, Ser. No. 7,413
Claims priority, application Great Britain Feb. 13, 1959
15 Claims. (Cl. 219—10.55)



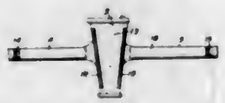
1. A radiation attenuation duct for radio frequency dielectric heating equipment having a fundamental frequency less than 500 mc./s., including a plurality of transverse electrically conductive partitions of sheet material, the planes of which make an angle with the direction of the duct and which are spaced from one another in the direction of the duct at distances which are small in comparison with a quarter wave length at the fundamental operating frequency of the equipment, the partitions being mounted within said duct to define a longitudinal path from one end of said duct to the other for the passage of the material to be heated.

3,050,607
INSTALLATION SYSTEM FOR ELECTRIC HEATING CABLE
Robert E. Domgard, 1229 Philip Ave., Norfolk, Nebr.
Filed July 14, 1959, Ser. No. 826,977
4 Claims. (Cl. 219—19)

1. In a ceiling heating system including electrical heating cable, means for accurately installing said cable on a ceiling comprising a plurality of insulative mounting strips secured to said ceiling, each of said strips including a plurality of open aligned hooks, said heating cable engaged with and extended around said hooks between said strips for support thereby, at least one of said strips having a perpendicular extension formed therewith and extending away from said strips, said extension supporting a cable hook and having a breakoff line scribed thereon spaced from said one strip.

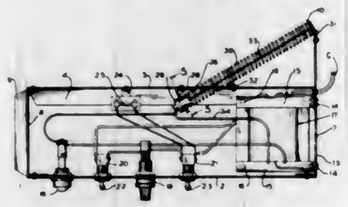


3,050,608
RESISTANCE HEATED STOPCOCK
Charles M. De Woody, Vineland, N.J., assignor to Ace Glass Incorporated, Vineland, N.J., a corporation of New Jersey
Filed Feb. 16, 1960, Ser. No. 9,019
1 Claim. (Cl. 219—19)



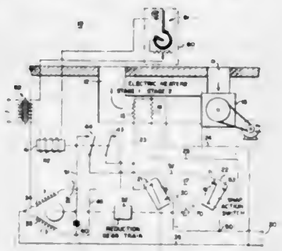
A heated stopcock formed of glassware, comprising a barrel and at least two stems, the outer surface of said barrel and stems being coated with an electrical resistance material, opposite terminal bands on said stems, electrically connected to said coating material, and shunt strips of a material of less resistance than said coating, formed on the coating of said barrel adjacent the junctions of said stems for intercepting a portion of the current flowing through said coating and redistributing the same to provide uniform heating.

3,050,609
SEAMING DETACHERS
Hoyt E. Brackin, 101 McKenny St., and Warren R. Spivey, both of Marvell, Ark.
Filed May 12, 1961, Ser. No. 109,569
14 Claims. (Cl. 219—19)



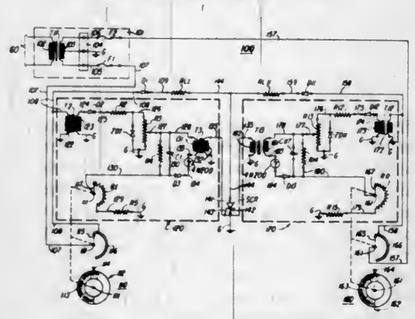
11. A machine for severing a piece of yarn, said machine comprising a housing having an outwardly extending flange, a dielectric support means mounted within said housing, a coil spring element mounted at one end on said dielectric support means internally of said housing and mounted at the other end externally of said housing on said outwardly extending flange, said spring having spaced convolutions, a high resistance heating element disposed within and extending axially through said coil spring, said heating element being mounted on said dielectric support means at one end and being mounted on said flange at its other end, and means for supplying current to said heating element.

3,050,610
CONTROL APPARATUS
Ralph T. Osen, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 23, 1959, Ser. No. 822,301
5 Claims. (Cl. 219—20)



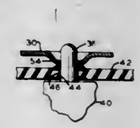
1. In a temperature control system, a temperature responsive means responsive to a space temperature, space temperature changing apparatus, relay means, connection means connecting said responsive means to control said relay means, said relay means having a normally closed switch and a normally open switch operated thereby, a reversible motor having a first energization circuit for operating said motor in a forward direction and a section energization circuit for operating said motor in a reverse direction, a source of power, a plurality of switches, connection means connecting said motor to said plurality of switches for operating said plurality of switches in sequence as said motor moves in a forward direction, a first switch of said plurality of switches providing a closed circuit upon an initial movement of said motor in a forward direction, connection means including said normally open switch for connecting said first energization circuit to said source, connection means including said first switch and said normally closed switch for connecting said second energization circuit to said source of power, and circuit means including said first switch connecting said space temperature changing apparatus to said source whereby said first switch performs a dual function of a limit switch and a control switch to limit the motor movement in the reverse direction after the conditioning changing apparatus is de-energized.

3,050,611
TEMPERATURE CONTROL SYSTEMS
Harris P. Kamide, Franklin Park, Ill., assignor to General Electric Company, a corporation of New York
Filed Jan. 3, 1961, Ser. No. 80,423
14 Claims. (Cl. 219—20)



1. In an electric heating system including a first heating element, a first manually operable controller selectively operative to set different desired temperatures of the medium heated by said first heating element, a second heating element, a second manually operable controller selectively operative to set different desired temperatures of the medium heated by said second heating element, and a source of A.C. electric power; the combination comprising a solid state controlled rectifier having a pair of power terminals and a control terminal and characterized by conduction between the power terminals thereof in response to the application of a control signal to the control terminal thereof, a first blocking rectifier for said first heating element, a second blocking rectifier for said second heating element, a network connecting the power terminals of said solid state controlled rectifier, and said first and second blocking rectifiers and said first and second heating elements to said source of power respectively so that the power supplied to said first and second heating elements is dependent upon the state of conduction of said solid state controlled rectifier and the states of conduction of said first and second blocking rectifiers respectively, said first and second blocking rectifiers being poled to conduct current in the same direction through said solid state controlled rectifier, a first control circuit selectively governed by the temperature setting of said first controller and selectively operative to produce during the positive half cycles of said power source corresponding first control signals, a second control circuit selectively governed by the temperature setting of said second controller and selectively operative to produce during the negative half cycles of said power source corresponding second control signals; and means for impressing said first and second control signals alternately upon the control terminal of said solid state controlled rectifier so as to govern the alternate conductions between the power terminals thereof and the consequent alternate energizations of said first and second heating elements.

3,050,612
DESOLDERING TIP
Ralph M. Eversole, Rte. 5, Fremont, Ohio
Filed Oct. 26, 1960, Ser. No. 65,198
4 Claims. (Cl. 219—26)

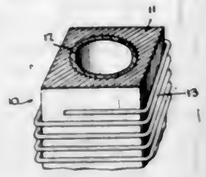


1. A desoldering tip for melting solder or other low melting joining metal used to connect electrically an electrical component having a plurality of contacts arranged in a predetermined pattern to a printed circuit board, said tip comprising a thin main plate, said plate having a plurality of unobstructed openings arranged in positions corresponding to positions of the contacts of the electrical component, said openings being slightly larger than said contacts to receive the same, said plate forming a projection adjacent each of said openings, said projections extending outwardly from a common side of the plate, and connecting means connected to the side of said plate opposite the projections for heating said plate to a temperature at which the joining metal will melt.

3,050,613
APPARATUS AND METHOD FOR BONDING TUBULAR ELEMENTS
Irving Sheinhartz, Whitestone, and John L. Zambrow, Westbury, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., a corporation of Delaware
Filed Sept. 23, 1959, Ser. No. 841,819
15 Claims. (Cl. 219—50)

1. A device for mutually bonding a plurality of coaxially fitted metal tubes comprising outer means closely

surrounding the outermost of said tubes, inner means in close registration within the innermost of said tubes, and



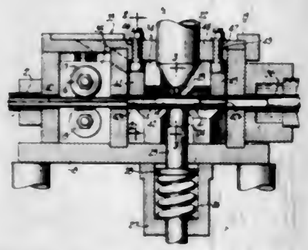
means adapted to thermally expand said inner means relative to said outer means.

3,050,614
APPARATUS FOR MAKING REINFORCING MESH
Carl L. Brown and Joseph R. Myers, Youngstown, Ohio, and Cecil J. Kinsey and Horace B. Menefee, Gadsden, Ala., assignors to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Filed Dec. 17, 1959, Ser. No. 860,115
21 Claims. (Cl. 219—56)



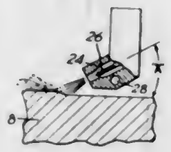
1. In an apparatus for continuously electrically making welded reinforcing mesh, the combination, comprising, a longitudinal wire storage station, a cross-wire assembly station beneath the level of said longitudinal wire storage station, means for moving longitudinal laterally spaced wires from the storage station and over the cross wire station, a welding station downstream of the cross wire assembly station, conveyor chains for elevating the cross wires toward the longitudinal wires at the welding station, a single lower rotatable welding drum, a plurality of juxtaposed individual rocking electrodes for cooperation with the drum, transfer chains partially overlapping in travel said conveyor chains for picking up the cross wires from the conveyor chains and placing them in selective spacing beneath the longitudinal wires at said drum for welding between the drum and the electrodes, and electrically driven power means for controlling the operation of the apparatus.

3,050,615
TUBE WELDING METHOD AND APPARATUS
Sterling A. Oakley, Lincolnwood, Ill., assignor to S. A. Oakley, Inc., Skokie, Ill., a corporation of Illinois
Filed Sept. 11, 1959, Ser. No. 839,416
9 Claims. (Cl. 219—60)



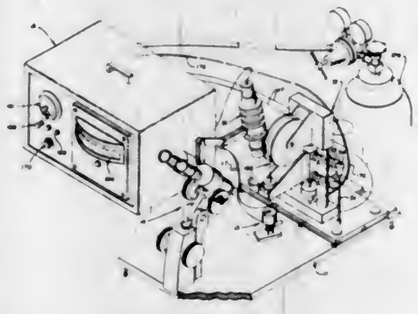
1. A welding apparatus for use in closing the seam in seamed tubing comprising means for continuously welding a tubular article as it is moved relative to said means, second means positioned within said tubular article and biased against the inner surface of said article to back up the weld during the welding operation, means including at least one magnet biasing said second named means by magnetic force against the inner surface of the article being welded, and means restraining said second named means from relative movement with respect to first named means.

3,050,616
ARC PROCESS AND APPARATUS
Robert M. Gage, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed Sept. 9, 1957, Ser. No. 682,918
7 Claims. (Cl. 219—69)



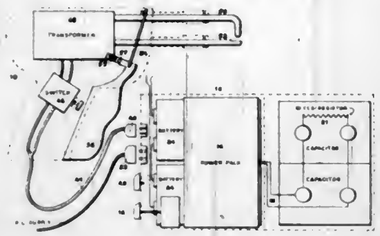
1. Process of working the surface of a workpiece which comprises applying a directionally stabilized arc effluent against such surface at a selected angle between the longitudinal axis of such effluent and a plane that is tangent to the area of such surface against which such effluent is applied, and thereby heating and removing a portion of said workpiece in such surface area with the force and heat of the arc effluent that is so applied.

3,050,617
THERMOCOMPRESSION LEAD BONDING APPARATUS
Cecil A. Lasch, Jr., Sunnyvale, and Walter G. Johnson, Santa Clara, Calif., assignors to Electroglas, Inc., Redwood City, Calif., a corporation of California
Filed Oct. 31, 1960, Ser. No. 66,207
24 Claims. (Cl. 219—85)



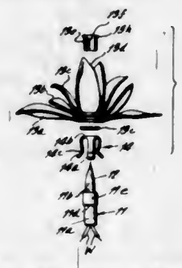
1. In a thermocompression lead bonding apparatus for bonding leads to an element, an element holder carrying the element, a bonding tool, a bonding tool holder carrying said bonding tool, means for supporting the bonding tool holder, means for lowering the bonding tool holder and the bonding tool at a controlled substantially uniform rate in two separate steps with the first step being substantially greater than the second step to cause the bonding tool to come into engagement with the lead and to urge the lead into engagement with the element in the element holder, and means for shifting the relative positions of the tool and the element holder with respect to each other so that the tool and the element can be precisely positioned with respect to each other after completion of the first step by the bonding tool.

3,050,618
PORTABLE SPOT WELDING TOOL
Martin N. Fischer, 2605 Gaither St., Washington 21, D.C.
Filed July 13, 1961, Ser. No. 126,438
1 Claim. (Cl. 219—90)



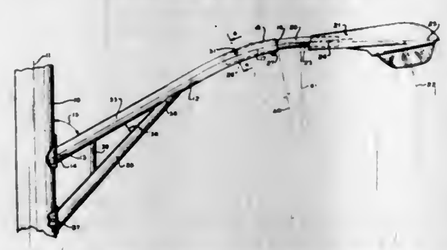
A portable spot welding tool comprising a power capacitance having a rating within the range 10 to 150 microfarads, a potentiometer having a first and a second terminal and a slider contact, said capacitance having terminal of said capacitance to said slider contact, a high voltage power source for delivering voltage at low current directly between said first and second contacts of said potentiometer, a voltage indicator, means connecting said voltage indicator between said second terminals of said power source and said capacitance, a welding gun, said welding gun including a voltage step-down transformer having a primary winding and a secondary winding and having a voltage step-down ratio from primary to secondary winding falling within the range 300:1 to 2000:1, a connection between said first terminal of said capacitance and a terminal of said primary winding, a long lead extending between said second terminal of said capacitance and a further terminal of said primary winding, a normally open switch connected in series with said lead and mounted on said welding gun, said welding gun having a trigger mounted therein and arranged for actuating said switch from normally open to closed condition in response to actuation of said trigger, a pair of welding electrodes directly connected across said secondary winding, the values of said capacitance, the inductances of said transformer windings and the resistance value of a normal welding load suitable for said welding tool being such that on closure of said switch the stored energy of said capacitance discharges as only a single complete cycle of a damped sinusoid through said primary winding via said switch, said damped sinusoid having a period of approximately 5 to 10 milliseconds.

3,050,619
DISPLAY OUTFITS WITH SEPARABLE DECORATIVE FLORAL COVER CONSTRUCTIONS
Abraham Abramson, New York, N.Y., assignor to Raylite Electric Corp., Bronx, N.Y., a corporation of New York
Filed Oct. 2, 1959, Ser. No. 844,131
4 Claims. (Cl. 240—10)



1. In combination, an electric socket for portable lighting outfits having a husk formed with an open lamp receiving end, an electric lamp mounted in said socket and projecting from said open end, said husk having a border of enlarged diameter adjacent said end defined by a shoulder spaced from said end, a detachable floral cover for said socket and lamp comprising leaf and petal elements each having a central opening, a grommet means extending through said central openings retaining said leaf and petal elements in concentric stacked relation, and prong means attached to said grommet means spanning said border and releasably engaging said shoulder to permit snap-on seating of said cover on said husk open end with said lamp extending through the grommet means and removal therefrom.

3,050,620
OUTDOOR LIGHTING UNIT
Francis G. Schlosser, Fairview, and Salvatore F. Gazzo, Irvington, N.J., assignors to Pfaff and Kendall, Newark, N.J., a corporation of New Jersey
Filed Apr. 4, 1960, Ser. No. 19,939
2 Claims. (Cl. 240—25)

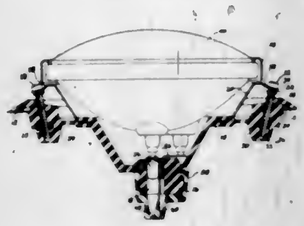


1. In an outdoor lighting device including a vertical support and a lighting unit disposed in downwardly directed position in extended relation to said vertical support, a tubular arm, means fixedly securing one end of said arm to said vertical support so that said arm is at all times restrained from movement in relation to said support, said arm extending outwardly from said support at an acute angle to the longitudinal axis of said vertical support, said arm being straight for a major portion of its length, said arm adjacent the free end being formed arcuately on a predetermined radius, a pipe secured at one end to said lighting unit and extending for a substantial length thereof from said lighting unit and curved to a radius conforming to that of the said portion of the arm adjacent the free end thereof and slidably mounted therein so that on movement of the said end of the pipe inwardly and outwardly of the said arcuate free end portion of the arm, said lighting unit will be disposed at correspondingly different angular positions relative to a line drawn at substantially right angles to the longitudinal axis of the vertical support, to thereby focus the light emitting from the lighting unit at correspondingly different areas therebelow said arm inwardly of the free end thereof being slit, apertured lugs secured to the arm in straddling relation to the slit portion thereof, said apertured lugs receiving means therethrough for compressing the slit portion of the arm about the pipe when the latter is positioned therein, to tightly hold the pipe in the arm, to the desired extent of insertion, for so focusing the light emitting from the light unit.

3,050,621
LAMP ASSEMBLY
William Robert Spencer, Roberts Drive, South Windsor, Conn.
Filed Feb. 10, 1958, Ser. No. 714,131
15 Claims. (Cl. 240—41.6)

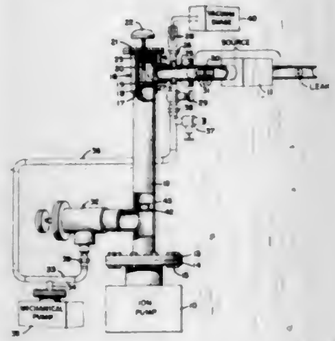
1. A lamp assembly adapted to be mounted in self-retaining position in an apertured plate comprising a cup-shaped unitary body portion of resilient rubber-like ma-

terial having a chamber and a rim defining an opening therein with the outer surface of the body portion having a circumferential recess adjacent said rim for receiving the edge of the aperture in said plate, a relatively rigid annular ring extending into said chamber and having its inner periphery embedded in the inner surface of said body portion and its outer periphery adjacent the open



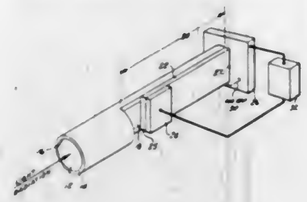
end of said chamber, a lighting unit having its outer periphery seated on the outer portion of said annular ring and having a substantial portion of its body extending into said chamber, a mounting ring fitting over the outer periphery of said lighting unit and releasably secured to the outer periphery of said annular ring for retaining said lighting unit in said chamber.

3,050,622
METHOD AND APPARATUS FOR CONNECTING A GETTER-ION PUMP TO AN ANALYTICAL MASS SPECTROMETER
Ernest W. Boyer, Harrell T. Ford, and Ernest E. McKelvey, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed Oct. 3, 1960, Ser. No. 59,870
6 Claims. (Cl. 250—41.9)



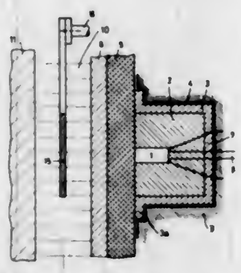
1. Apparatus for retaining a vacuum on a mass spectrometer tube, comprising:
an ion pump;
pipe means connecting the ion pump to the spectrometer tube; and
electrically conductive obstruction means in the pipe means electrically grounded to the spectrometer tube and positioned to prevent line-of-sight communication between the ion pump and the spectrometer tube, whereby
charged entities tending to migrate from the ion pump to the spectrometer tube are grounded by the obstruction means and are drawn back to the ion pump to prevent erroneous operation of the spectrometer tube.

3,050,623
RECORDING APPARATUS
Joseph T. McNaney, 8548 Boulder Drive, La Mesa, Calif.
Filed Jan. 27, 1961, Ser. No. 85,259
19 Claims. (Cl. 250—49.5)



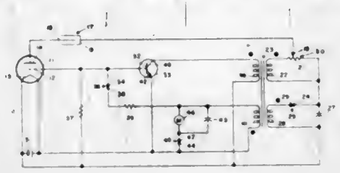
19. Means for utilization in a recording device comprising:
(*a*) a longitudinally extending layer of photoconductive material;
(*b*) a plurality of first light conductor means having a predetermined index of refraction for supporting said layer and conducting light to said layer;
(*c*) second light conductor means jacketing each of said plurality of first light conductor means and having an index of refraction less than said predetermined index for controlling the reflection of light through said first light conductor means and reflection of light to said layer.

3,050,624
NEUTRON-FLUX GAGE FOR NUCLEAR REACTORS
Karl Janner, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Mar. 13, 1959, Ser. No. 799,202
Claims priority, application Germany Mar. 14, 1958
6 Claims. (Cl. 250—83.1)



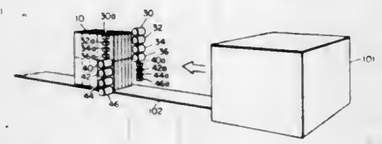
1. With a nuclear reactor having a reactor core and a vessel enclosing said core, in combination, a gamma-radiation absorber mounted on said vessel, a neutron-flux detector adjacent to said absorber, a shield structure enclosing said detector and comprising three layers, the one of said layers nearest the detector consisting of neutron moderator substance of great diffusion length, a second and intermediate one of said layers consisting of neutron reflective substance of small diffusion length, the outer third layer being a neutron absorber, and a body of fissile substance disposed in said reactor vessel apart from said core at a locality near said detector, said fissile substance serving as an additional neutron generative source between the main neutron source of the reactor and the neutron-flux detector, so as to increase the sensitivity of the latter, the moderator substance slowing down any remaining fast neutrons to thermal neutrons, the reflective substance causing a reflective dispersion of neutrons.

3,050,625
RECYCLING RADIATION RATE METER
Edward J. Wesley, 2501 Ensenada Way, San Mateo, Calif.
Filed May 3, 1960, Ser. No. 26,659
4 Claims. (Cl. 250—83.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



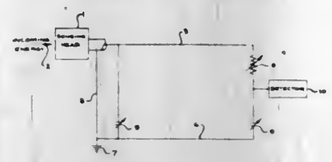
1. A recycling radiation rate meter for measuring radiation intensity comprising a blocking oscillator triggering means, including a radiation detecting means, for producing pulses whose rate is a direct linear function of the degree of radiation sensed by said radiation detecting means; power circuit means, whose input is connected to the output of said blocking oscillator triggering means, for producing pulses in sympathy with the pulses originated by said blocking oscillator triggering means and amplified with respect thereto; rectifier means coupled to said power circuit means for supplying an operating voltage to said radiation detecting means; and metering means, whose input is connected to the output of said power circuit means, for measuring the recycling rate of said amplified pulses from said power circuit means, said recycling rate being reflective of the degree of radiation sensed by said radiation detecting means.

3,050,626
MEASURING SYSTEM
John R. Dukes and Luther Eggman, Columbus, Ohio, assignors to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Mar. 30, 1959, Ser. No. 802,739
1 Claim. (Cl. 250—83.3)



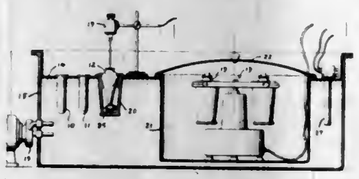
A system for determining a void in a machine packed case having at least two rows of elongated items therein and said rows are one above the other, a plurality of sources of nuclear radiation, means for mounting each of said sources on alternate sides of said rows and at a height approximating the center of a different row of items; a housing for each of said sources having a collimated slot formed therein to permit radiation to emanate from each source in a geometric pattern generally confined to its corresponding row; a plurality of groups of detectors, each of said groups comprising a plurality of detectors stacked one upon the other and of a number corresponding to the height of said elongated row, and said plurality of groups corresponding in number to said plurality of sources; means for mounting each group of detectors on the side of said row opposite to a corresponding one of said sources, each of said groups of detectors providing an electrical output of a magnitude dependent upon the energy impinging thereon, means connecting said groups of detectors is opposition for comparing the electrical energy in said groups and means indicating any difference therebetween.

3,050,627
NUCLEAR ELECTROMAGNETIC RESONATOR
Wesley C. Miller, 200 S. Anita Ave., Los Angeles, Calif.
Filed Nov. 9, 1959, Ser. No. 851,847
27 Claims. (Cl. 250—83.3)



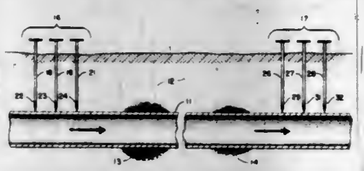
1. A nuclear electromagnetic resonator to detect the electromagnetic energy of the atom in wave frequency form comprising a metallic electrode, an electronic circuit formed of wire leads including a detector means electrically connected to said electronic circuit to detect the wave emitted from the resonator, a variable energy selector means electrically connected to said electronic circuit to select a wave emitted from the resonator, said metallic electrode being electrically connected to said electronic circuit to feed said wave frequency into the electronic circuit.

3,050,628
METHOD OF DETERMINING COMPOSITION OF AN OIL AND WATER MIXTURE
Martin B. Williamson, Villa Park, Ill., assignor, by mesne assignments, to The Kartridg Pak Co., a corporation of Iowa
Filed June 19, 1957, Ser. No. 666,558
6 Claims. (Cl. 250—106)



1. The method of determining the composition of a specimen containing an oil phase and a water phase comprising, adding to the specimen a radioactive compound having different solubility in the oil and water phases of the specimen, separating a sample of one of said phases, and measuring the radioactivity in said sample as a measure of the composition of the specimen.

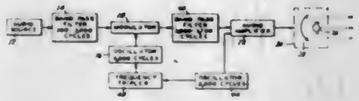
3,050,629
LOCATION OF PIPELINE LEAKS
Preston L. Gant and John D. Sudbury, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed Apr. 9, 1959, Ser. No. 805,283
4 Claims. (Cl. 250—106)



1. A method for detecting and locating leaks in a pipeline which comprises positioning at each of a number of geographically known locations along the length of said pipeline a series of groupings of radioactive markers, the groupings being spaced a considerable distance from each other and each grouping consisting of at least two gamma

ray emitting radioactive markers, said markers in each grouping being in close proximity to each other and adjacent the pipeline at each of said geographically known locations, flowing liquid through said pipeline, injecting into said pipeline a dilute liquid solution of radioactive material, flowing said solution of radioactive material through said pipeline whereby portions of said radioactive solution leak into the ground adjacent the pipeline by passage through leak holes in the line, flowing additional amounts of liquid behind the radioactive solution to flush radioactive material from the interior surface of the pipeline, introducing and passing a radioactivity detection and recording means through the pipeline along the path traveled by the radioactive solution and past groupings of markers, detecting and recording in a manner relatable to distance along the pipeline any radioactivity exterior of the pipeline which is emitted by the leaked solution and by the groupings of markers of known radioactivity emitting level whereby recorded radioactivity exterior of the pipeline due to the presence of leaks can be distinguished from recorded radio activity exterior of the pipeline due to the radioactive markers.

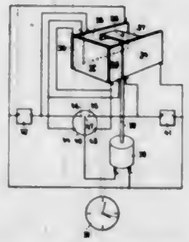
3,050,630
COMMUNICATION SYSTEM EMPLOYING A HIGH INTENSITY ARC MODULATED LIGHT SOURCE
Lester F. Bird, Newark, N.J., assignor to Engelhard Hanovia, Inc., a corporation of New Jersey
Filed Apr. 23, 1959, Ser. No. 808,328
2 Claims. (Cl. 250—199)



1. In a light communication system, a source of audio signals, means for limiting the frequencies of said audio signals, an audio frequency carrier oscillator having a higher frequency than the limited audio signals, modulation means for combining the audio signals and signals from said oscillator to produce output signals having a carrier and upper and lower side bands, means for suppressing said carrier and said upper side bands, a high intensity arc lamp, means for applying the lower side band signals to modulate said high intensity lamp, photosensitive means for detecting said transmitted signals, a second oscillator having about the same frequency as said first oscillator, and a demodulator for combining signals from said photosensitive means and said second oscillator to reconstitute the audio signals.

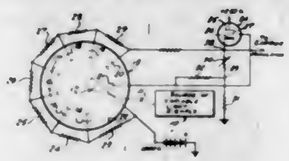
3,050,631
DEVICE FOR ENERGIZING A TIMEPIECE, INCLUDING AT LEAST ONE PHOTOELECTRIC CELL
Jules Florent Joseph Bourguignon, Seilles, Belgium, assignor to Baumgartner Freres S.A., Grenchen, Switzerland
Filed Dec. 14, 1960, Ser. No. 75,869
Claims priority, application Switzerland Dec. 18, 1959
3 Claims. (Cl. 250—203)

1. In a device for energizing a timepiece, including at least one photoelectric cell which is rigidly connected with at least two other photoelectric cells, called orienting cells, the set of cells forming a movable cell assembly rigidly fixed to a spindle adapted to be rotated by an electromotor, the improvement in which each orienting cell consists of two juxtaposed sub-cells, called primary and secondary sub-cells, respectively, the primary sub-cells being connected in opposition to a microswitch, whereas the secondary sub-cells are connected to condensers which are in turn connectable to said electromotor through the movable contact of said microswitch, the whole being arranged in such a way that as both orienting cells are illuminated, the primary sub-cells generate a current which actuates the movable contact of the microswitch in the one or the other direction according as the one or the other of the primary sub-cells receives the greater amount of light, whereas the corresponding condenser thus mounted into the circuit of the motor, which condenser has been



previously charged by the corresponding secondary subcell, causes the motor to rotate in the one or the other directions according to the position of the movable contact of the microswitch, until the movable cell assembly has reached a position of equilibrium, the relative disposition of the cells being chosen in such a manner that for the above mentioned position of equilibrum of the movable cell assembly, the first mentioned cell, adapted to energize the timepiece, receives the maximum amount of light.

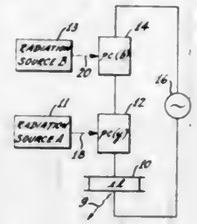
3,050,632
PHOTO-TRANSDUCER SIGNAL COMPRESSOR
Edward L. Lincoln, Jr., Brooklyn, N.Y., assignor, by mesne assignments, to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland
Filed Apr. 21, 1959, Ser. No. 807,858
2 Claims. (Cl. 250—207)



1. A photo-transducing system comprising a multiplier phototube having a plurality of dynodes, an output or load stage including an anode, and a primary cathode adapted to emit electrons when subjected to light or radiant energy, a voltage-dividing bleeder circuit for controlling the potentials of said dynodes, a source of direct current voltage for said bleeder circuit, an electron tube amplifier having an anode, a cathode and at least one control grid and connected as a cathode follower with its cathode-anode path in series relation with said bleeder circuit and said source, and a connection between the anode of the phototube and the control grid of said amplifier to vary the bleeder-circuit voltage and the multiplier phototube gain over a range corresponding to minimum and maximum excitation of the primary cathode of the phototube.

3,050,633
LOGIC NETWORK
Egon E. Loebner, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 27, 1958, Ser. No. 745,067
11 Claims. (Cl. 250—209)

7. A flexible logic circuit comprising: a plurality of photoconductors and an electroluminescent cell electrically connected in combination, means for electrically energizing said combination, a first light input applied to one of said cells, a second light input applied to another of said cells, a source of light of variable intensity applied to others of said cells, different ones of



said others of said cells having different amplitude threshold sensitivities to light from said source, and means for varying the intensity of light from said source to exceed selected ones of said amplitude threshold sensitivities.

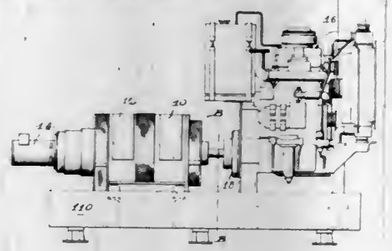
3,050,634
CURRENT BALANCING IRON CONSTRUCTION
Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 24, 1959, Ser. No. 835,743
9 Claims. (Cl. 307—58)



8. A current balancing reactor for balancing the current between a plurality of circuit conductors; said circuit conductors forming individual reactor windings for said current balancing reactor; the core for said reactor being comprised of a first, second and third plurality of magnetic laminations arranged in stacked relation; said first plurality of laminations having a first and second parallel row of spaced and longitudinally elongated slots; said second plurality of laminations having a first and second parallel row of spaced and longitudinally elongated slots longitudinally displaced from and partially overlapping said respective slots of said first plurality of laminations; said second plurality of laminations further including a transversely elongated slot at either end positioned to partially overlap the said slots of said first plurality of laminations at either end of said first plurality of laminations said third plurality of laminations including a plurality of spaced transversely elongated slots positioned to partially overlap respective slots of said first plurality of laminations; each of said slots receiving a pair of said conductors; each of said overlapping portion of said slots of said first, second and third pluralities of laminations defining and opening for a respective conductor of said plurality of conductors; each of said conductors being connected in series with a diode.

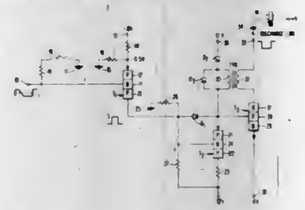
3,050,635
UNINTERRUPTED POWER SOURCES
Charles James Tanner, St. Laurent, Montreal, Quebec, Canada, assignor to Terry Machinery Company Limited, Montreal, Quebec, Canada
Filed Oct. 6, 1960, Ser. No. 60,836
5 Claims. (Cl. 307—64)

5. An apparatus for maintaining an A.C. output to load constant during periods of transition of power supply to an A.C. motor driving an A.C. generator from a first A.C. supply source to a second A.C. supply source on failure or variation of said first A.C. source; comprising in combination with said A.C. motor and said A.C. generator, a D.C. motor mounted for common rotation with and in the same direction as said A.C. motor and A.C. generator, storage batteries connected to said D.C. motor, and automatic switching means between said first and second A.C. supply sources and said A.C. motor adapted to energize said D.C. motor from said storage batteries when the voltage or frequency of said first A.C. supply source connected to said A.C. motor drops below a predetermined value and simultaneously coupling in



the second A.C. supply source to said A.C. motor, whereby said D.C. motor acts to maintain the rotational speed of said A.C. motor-generator set during the momentary lag of coupling in said second A.C. supply source, and further time controlled switching means to de-energize said D.C. motor within a predetermined time delay period.

3,050,636
HIGH SPEED TRANSISTOR SWITCH
Edward H. Sommerfield, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 24, 1960, Ser. No. 51,573
5 Claims. (Cl. 307—88.5)

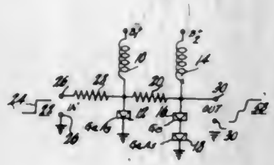


1. A switching circuit of the class described comprising, a switch transistor having emitter, base and collector electrodes, a storage capacitor in the collector circuit of said transistor, the voltage of said capacitor serving as the collector return potential for said transistor, means for normally biasing said switch transistor off, input circuit means connected to the base of said transistor, means for supplying a constant current pulse to said input circuit means to render said switch transistor conductive whereby minimum collector current is supplied to said capacitor, and feedback circuit means connected between the collector and base of said transistor and effective during conduction of same to provide overdrive feedback current sufficient to discharge said storage capacitor, said capacitor being effective upon discharge to disable said feedback circuit means, said switch transistor being thereafter maintained in normal conduction by said input circuit mean whereby rapid turn-off of said transistor may be effected upon termination of said constant current pulse.

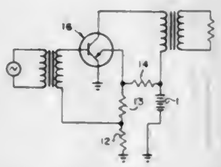
3,050,637
TUNNEL DIODE DRIVER
Melvin M. Kaufman, Merchantville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 5, 1961, Ser. No. 80,794
9 Claims. (Cl. 307—88.5)

1. A driver comprising, in combination, a first branch circuit including a voltage controlled negative resistance

element; a second branch circuit including two voltage controlled negative resistance elements in series, the element in the first branch circuit having a higher valley voltage than at least one of the elements in the second branch circuit and said one element in the second branch circuit having a lower current peak than the other element in the second branch circuit; quiescent bias means coupled to all negative resistance elements for applying a forward bias to said elements; and a direct current coupling circuit between the two branch circuits for applying a direct current from the first branch circuit to the two elements in the second branch circuit.

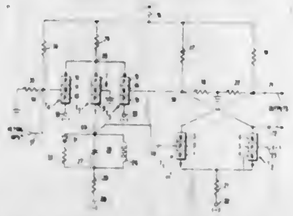


3,050,638
TEMPERATURE STABILIZED BIASING CIRCUIT FOR TRANSISTOR HAVING ADDITIONAL INTEGRAL TEMPERATURE SENSITIVE DIODE
Arthur D. Evans and Roger R. Webster, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 2, 1955, Ser. No. 550,541
2 Claims. (Cl. 307—88.5)



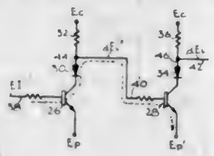
1. In a temperature compensated transistor circuit, a body of semiconductor material having a first region of one conductivty-type, a second region of the opposite conductivity-type defined in said body contiguous to said first region, a third region of said one conductivity-type defined in said body contiguous to said second region, said third region being spaced from said first region by less than a diffusion length for minority carriers whereby transistor action will be provided, a fourth region of said opposite conductivity-type defined in said body contiguous to said third region, said fourth region being spaced from said second region by greater than a diffusion length for minority carriers so that such minority carriers ejected into said third region from said fourth region will not reach said second region, voltage supply means having terminals of opposite polarity, a load impedance connected between one terminal of said voltage supply means and said first region whereby the junction between said first and second regions is back biased, the other terminal of said voltage supply means being connected to said third region, a voltage divider connected across said voltage supply means, said fourth region being connected to an intermediate point on said voltage divider, said second region being connected to another intermediate point on said voltage divider, and an input source connected in a closed series circuit with said second and third regions.

3,050,639
SINGLE SHOT MULTIVIBRATOR WITH PULSE WIDTH CONTROL
Lawrence A. Tate, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 30, 1958, Ser. No. 770,848
13 Claims. (Cl. 307—88.5)



1. A single shot multivibrator comprising a first signal translating device normally in a state of high conductivity, a second signal translating device normally in a state of low conductivity, circuit means interconnecting said signal translating devices for switching said second signal translating device to a state of high conductivity in response to cessation of conduction through said first signal translating device, a resonant circuit connected to bias said first signal translating device into a non-conductive state during a portion of a first cycle of oscillation of said resonant circuit, means normally supplying charging current to said resonant circuit, and means responsive to a keying pulse input signal for abruptly discontinuing the charging current whereby said resonant circuit is excited into oscillation.

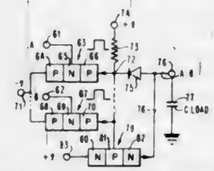
3,050,640
SEMICONDUCTOR MINORITY CARRIER CIRCUITS
Edward Dillingham, Corona Del Mar, and James J. Nyberg, Torrance, Calif., assignors to Thompson Ramo Wooldridge Inc., Los Angeles, Calif., a corporation of Ohio
Filed Mar. 30, 1959, Ser. No. 802,793
4 Claims. (Cl. 307—88.5)



1. In a data processing system including a source of binary coded information represented by first and second voltage levels of a bilevel signal and a source of complementary first and second clock signals, each clock signal defining a series of periodically recurrent pulses of like duration and polarity with the period between the beginning of immediately successive pulses defining the length of a digit period; an information storage circuit for providing a one digit period delay comprising: first and second semiconductor devices each capable of having established therein a condition of carrier storage; means applying said bilevel signal to the input of said first semiconductor device during a first portion of each digit period such that said condition of carrier storage is established therein in response to the application of said first voltage level but not in response to said second voltage level; means applying a pulse of said first clock signal to said first semiconductor device during a second portion of each digit period, subsequent to the completion of said first portion, for generating a signal in accordance with the establishment of said condition of carrier storage

in said first semiconductor device; means applying said generated signal to the input of said second semiconductor device; and means applying a pulse of said second clock signal to said second semiconductor device during first portion of each digit period for producing an output signal corresponding to said bilevel signal one digit period earlier.

3,050,641
LOGIC CIRCUIT HAVING SPEED ENHANCEMENT COUPLING
James L. Walsh, Hyde Park, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 20, 1959, Ser. No. 828,091
1 Claim. (Cl. 307—88.5)

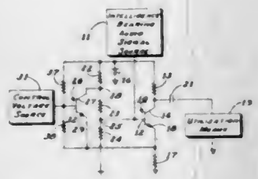


A multistage combinatorial logic system operable with minimum delay time at low power levels in response to a plurality of binary coded input signals having up and down levels to provide a binary coded signal having well-defined transition times at an output terminal for said system, comprising in combination a cascaded arrangement of a plural number of combinatorial logic blocks having capacitive loads and connected to enable alternate blocks to perform AND and OR logical functions with minimum delay time and having well-defined rise times for said blocks performing the AND function and well-defined fall times for said blocks performing the OR function; each of said blocks consisting of a logic performing circuit and a coupling network for connecting the associated logic circuit except the last logic circuit to the next succeeding logic circuit, the coupling network of the last block connecting the associated logic circuit to the system output terminal; each logic circuit for performing the AND logical function having at least two input terminals and one output terminal and consisting of in combination a current supply connected to the circuit output terminal, a voltage supply of negative polarity, a plurality of PNP transistors, each having a base, emitter and collector and connected in emitter follower circuit configuration, said transistors being equal in number to the number of input terminals for that circuit, so that each input terminal is connected to a transistor base, each of said collectors being directly connected to said negative voltage supply and each of said emitters being directly connected to the output terminal for that logic circuit, said circuit producing an up level at said circuit output terminal only when an up level signal is provided at all circuit input terminals; each logic circuit for performing the OR logical function having at least two input terminals and one output terminal and consisting of in combination a current sink connected to the circuit output terminal, a voltage supply of positive polarity, a plurality of NPN transistors, each having a base, emitter and collector and connected in emitter follower circuit configuration, said transistors being equal in number to the number of input terminals for that circuit, so that each input terminal is connected to a transistor base, each of said collectors being directly connected to the positive voltage supply and each of said emitters being directly connected to the output terminal for that circuit, said circuit producing a down level at said circuit output terminal only when a down level signal is provided at all circuit input terminals; each of said networks associated with a logic circuit for performing the AND logical function consisting of a semiconductor diode and an additional transistor having emitter, base and collector and connected as an emitter follower, said additional transistor being of the NPN type, a voltage supply of positive polarity directly connected to the collector of the additional NPN transistor, means for directly connecting the base of said additional NPN transistor to the output terminal of the associated logic circuit, and means for directly connecting the emitter of said additional NPN transistor to one of the input terminals of the next succeeding logic performing circuit, the base and emitter of the said additional NPN transistor being connected in parallel and oppositely poled to the diode of the respective network, said additional NPN transistor being normally nonconductive and the associated diode conductive enabling the associated diode to form part of a discharge path for the capacitive load for that block, said additional NPN transistor being rendered conductive and said diode nonconductive on the occurrence of an up level at the output terminal for the associated logic stage, so that said additional NPN transistor acts as a current source to charge the capacitive load for that block, thereby providing a well-defined rise time output signal for that logic block; each of said networks associated with a circuit for performing the OR logical function consisting of a semiconductor diode and an additional transistor having emitter, base and collector and connected as an emitter follower, said additional transistor being of the PNP type, a voltage supply of negative polarity directly connected to the collector of the additional PNP transistor, means for directly connecting the base of said additional PNP transistor to the output terminal of the associated logic circuit, and means for directly connecting the emitter of said additional PNP transistor to one of the input terminals of the next succeeding logic performing circuit, the base and emitter of said additional PNP transistor being connected in parallel and oppositely poled to the diode of the respective network, said additional PNP transistor being nonconductive when the associated logic circuit provides an up level signal at the circuit output terminal enabling the associated diode to form a charging path for the capacitive load for that block, said additional PNP transistor being at the circuit output terminal permitting said additional PNP transistor to act as a current sink to discharge the capacitive load for that block, thereby providing a well-defined fall time output signal for that logic block, the coupling network for the last logical circuit having the emitter of the additional transistor coupled to the system output terminal, whereby as each logic block performs its desired logical function the cumulative system delay time is reduced and said binary coded signal is provided at said system output terminal.

3,050,642
COMBINED SQUELCH CIRCUIT AND AMPLIFIER
Robert H. Rogers and Robert C. Carter, Richardson, Tex., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Aug. 3, 1959, Ser. No. 831,353
2 Claims. (Cl. 307—88.5)

1. An electronic switch comprising first transistor means including first base means, first collector means, and first emitter means, battery means comprising first and second terminals, first impedance means connecting said first emitter means to said first terminal, load impedance means connecting said first collector means to said second terminal, means for supplying an intelligence bearing signal to said first base means, means for utilizing the signal appearing at said first collector means, voltage divider means connected across said first and second terminals of said battery means, a tap on said voltage divider means connected to first base means, second transistor means including second collector means connected to a

point along said voltage divider means between said tap and said second terminal, second emitter means connected to said first emitter means, and second base means, biasing means for biasing said second base means, said biasing means constructed to be substantially independent of voltage variation across said load impedance means, and means for supplying a control signal to said second base means, said second transistor means constructed to respond to said control signal to become conductive



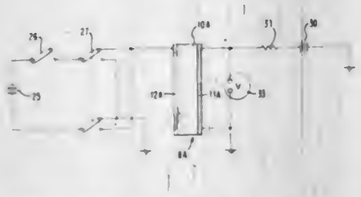
when said control signal reaches a predetermined value and to become nonconductive when said control signal reaches a second predetermined value, said first impedance, said load impedance, voltage divider means, and said battery means being constructed and arranged to cause said first transistor means to be nonconductive when said second transistor means is conductive and to cause said first transistor means to become conductive when said second transistor means is nonconductive.

3,050,643

SUPERCONDUCTIVE GATE SWITCHING ITS CONDUCTING STATE IN RESPONSE TO MECHANICAL STRESS IMPOSED BY PIEZOELECTRIC CRYSTAL

Richard A. Connell and Donald P. Seraphim, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 3, 1959, Ser. No. 850,700
10 Claims. (Cl. 307—88.5)



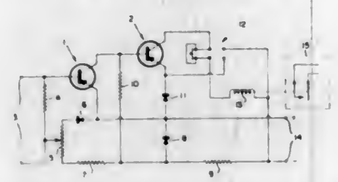
10. A superconductive switching device comprising; a body of material; said body exhibiting the property that an electrical potential of one polarity applied between opposite faces thereof produces a mechanical deformation in a first direction and an electrical potential of opposite polarity applied between said faces produces a mechanical deformation in a second direction; first and second electrodes secured to said opposite faces of said body; at least one of said electrodes being normally superconducting at a superconductive temperature; means maintaining said device at a temperature slightly above said superconductive temperature; and means coupling potentials of first and second polarities to said first and second electrodes of said devices, said potential of first polarity effective to lower the temperature at which said one electrode becomes superconducting and said potential of second polarity effective to raise the temperature at which said one electrode becomes superconducting; whereby said potential of second polarity is further effective to render said one electrode superconducting.

3,050,644

TRANSISTOR DECISION AMPLIFIER WITH TEMPERATURE COMPENSATING MEANS

Donald S. Ironside, King of Prussia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 10, 1959, Ser. No. 858,785
7 Claims. (Cl. 307—88.5)



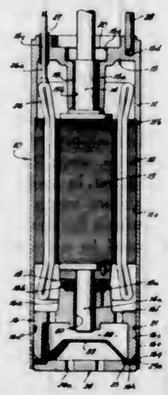
7. A decision amplifier comprising reference signal means for producing a comparison signal to be compared with an input signal, said means including means for altering said comparison signal in accordance with changes in ambient temperature, means for subtracting said comparison signal from said input signal to produce a difference signal, a transistor amplifying stage, and means for applying said difference signal as an input signal to said amplifying stage whereby said last mentioned input signal is indicative of a temperature dependent relationship between said first mentioned input signal and said comparison signal.

3,050,645

SUBMERSIBLE MOTOR STRUCTURE

Albert Redding, Jr., South Gate, Calif., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California

Filed May 12, 1958, Ser. No. 734,555
10 Claims. (Cl. 310—87)



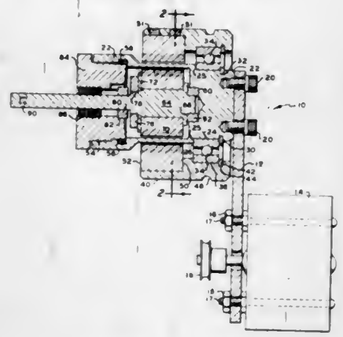
4. In a motor structure: a casing shell of uniform diameter and having an open end; a bearing support, having a peripheral portion telescopically mounted within said casing adjacent said end and mating with the interior surface of said shell, and having an end annular surface; a cap member mounted within said open end; said cap member and annular surface being juxtaposed; a diaphragm having marginal portions interposed between said cap member and annular surface within said shell; and means for clamping said marginal portions between said cap member and annular surface and fixing said support, cap member and diaphragm against movement relative to said shell.

3,050,646

MAGNETIC COUPLING

William R. Eddy and George T. Byer, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Jan. 6, 1958, Ser. No. 707,369
4 Claims. (Cl. 310—104)



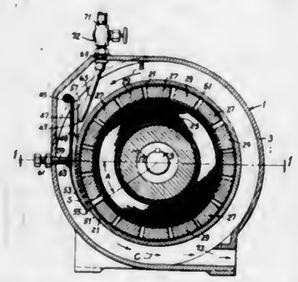
1. A magnetic coupling comprising a stationary cylindrical stainless steel housing, said housing having a wall across one end thereof to seal said one end, means on the other end of said housing forming a sealing engagement with a sealed vessel, an annular driving member surrounding said housing concentric therewith and extending longitudinally of said housing, bearing means on said housing concentric with said housing attached to its outer surface rotatably supporting said driving member, a stainless steel shaft within said housing rotatably mounted coaxially therewith, a stainless steel driven member mounted on said shaft concentric therewith, a first graphite support bearing for said shaft at said one end of said housing, a second graphite support bearing for said shaft spaced from said first bearing toward said other end of said housing, a plurality of magnets equally spaced circumferentially on the inner surface of said driving member, an equal number of magnets equally spaced circumferentially on the outer surface of said driven member, the poles of all of said magnets being arranged so that a plane perpendicular to the axis of said shaft may pass through all of said poles, said magnets on said driven member comprising a material including barium ferrite as a major constituent thereof.

3,050,647

LIQUID-COOLED ELECTRICAL MACHINES

Martin P. Winther, 422 Lake Shore Drive, Clermont, Fla.

Filed Aug. 10, 1960, Ser. No. 48,753
8 Claims. (Cl. 310—105)



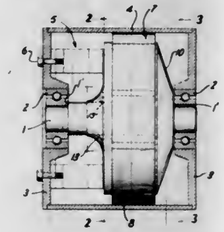
1. Eddy-current electrical apparatus comprising an inner rotary polar field member, an outer rotary eddy-current drum surrounding said field member, said drum and field member being also relatively rotary, a coolant-confining chute adjacent the outside surface of said rotary drum, said chute having a tangential coolant inlet portion adjacent said outside drum surface and a curved portion extending from said tangential portion to a lip thereof adjacent the drum surface, said curved portion having a concave portion adjacent a convex portion of said drum surface, an a coolant inlet at said tangential inlet portion, said concave portion extending around the drum over a substantial angle but substantially less than 360°, whereby coolant is held by the chute against the drum over a substantial angular extent thereof without entirely surrounding the same while in contact.

3,050,648

ROTOR AND METHOD OF ASSEMBLY THEREOF

William Kober, Fairport, N.Y., assignor to TKM Electric Corporation, Rochester, N.Y.

Filed Jan. 14, 1959, Ser. No. 786,796
8 Claims. (Cl. 310—156)



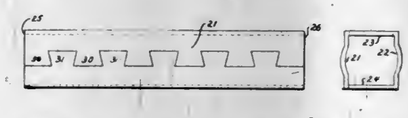
1. A dynamoelectric rotor comprising, a shaft journaled for rotation about substantially its lengthwise axis, an end plate fixed to said shaft for rotation therewith, a rotor body carrying magnets positioned on said shaft against said end plate, a pole piece structure positioned against the opposite end of said rotor body, and a collar gripping said shaft circumferentially thereof and clamping said pole piece structure and said rotor body against said end plate for rotation therewith.

3,050,649

MOTOR BRUSH HOLDER

Elmer J. Thomasko, Elyria, Ohio, assignor to Amherst Metal Products, Incorporated, Amherst, Ohio, a corporation of Ohio

Filed Aug. 18, 1958, Ser. No. 755,484
3 Claims. (Cl. 310—247)

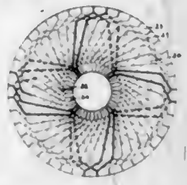


1. A brush holder for electric motors adapted to slidably, tightly embrace a rectangular brush bar and formed of a flat blank of rigid metal and having two parallel flat sides and an intervening side integral at the corners with the flat sides and formed with a convex, longitudinally extending mid-portion, the opposite longitudinal side of the holder being formed with plane surfaces extending inwardly from the corners at the margins and an intervening, longitudinally extending, convex mid-portion, the metal of the latter side having complementary, interlocking, dovetailed connection closing the side in the zone of the convex portion and in uniform alignment in said convex zone, said holder thus being shaped to have two of its sides engage the rectangular brush bar only at longitudinally extending narrow marginal surfaces extending inwardly from the corners thereof.

3,050,650
ELECTRICAL WINDINGS FOR ROTARY MACHINES

Jacques Henry-Baudot, Antony, France, assignor to Printed Motors Inc., New York, N.Y.

Filed Jan. 21, 1960, Ser. No. 3,771
Claims priority, application France Feb. 5, 1959
4 Claims. (Cl. 310—268)

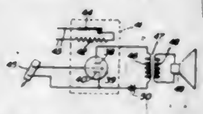


1. In a rotary electrical machine a member of which includes a winding made of flat conductor half-turns intimately secured to insulated faces of a sheet-like carrier, said half-turns being distributed over two opposite surfaces of said carrier and shaped for giving an effective winding pattern by face-to-face connections of their ends, the provision of any and all half-turn conductor as formed by an active slanted portion extended on both sides by inclined end portions with a slant reducing the actual mean winding pitch to a value which lies between the normal pole pitch and two-thirds of the said normal pitch in the machine.

3,050,651
HIGH TEMPERATURE ELECTRON DISCHARGE DEVICE AND APPARATUS

James E. Beggs, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Sept. 4, 1956, Ser. No. 607,805
10 Claims. (Cl. 313—15)

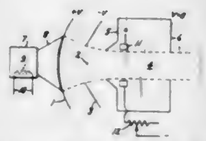


10. Electron discharge apparatus comprising an electron discharge device including an anode, and a heaterless thermionically emissive cathode enclosed within an evacuated envelope including a body of titanium exposed to the interior thereof, circuit components connected with the electrodes of said electric discharge device, an enclosing casing surrounding said discharge device and components and a heater element for supplying heat to the interior of said casing to supplement the heat generated by operation of said discharge device and components to maintain a predetermined level of emission from said cathode.

3,050,652
METHODS AND APPARATUS FOR DEVELOPING FORCES WITH ION BEAMS

George C. Baldwin, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 12, 1960, Ser. No. 49,366
7 Claims. (Cl. 313—63)

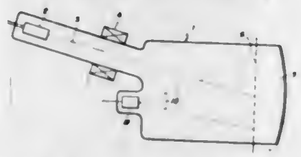


1. In a force developing system, the combination comprising means providing a beam of high speed ions, means establishing a field free region through which said beam is projected, and means including a source of electrons for introducing electrons into said beam as it passes through said region at a rate such that the total electrical charge of the beam is substantially zero as it emerges from said region.

3,050,653
MAGNETIC FOCUSING DEVICE

Hans W. G. Salinger, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation

Filed July 28, 1955, Ser. No. 525,041
8 Claims. (Cl. 313—68)

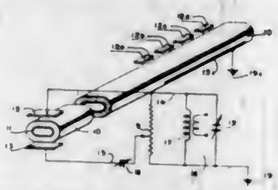


2. A cathode ray tube comprising a plate-like member having a plurality of tiny apertures therein, said member being composed of a thin foil of magnetic material permanently magnetized in its thickness direction so that when an external magnetizing force is removed the residual induction is substantially zero, said apertures having a diameter approximately equal to the thickness of said foil so that a focusing magnetizing force is present therein after said external magnetizing force is removed, and a layer of insulating material on said member and having secondary emission characteristics greater than unity.

3,050,654
IMPROVEMENTS IN LIGHT SOURCE CONTROL AND MODULATION

Pierre Marie Gabriel Toulon, Pittsburgh, Pa., assignor to Moore & Hall, Washington, D.C., a firm

Continuation of application Ser. No. 508,144, May 13, 1955. This application Nov. 6, 1957, Ser. No. 694,869
21 Claims. (Cl. 313—108)



1. In combination in means for modulating a light source, a pair of condensers at least one of which comprises ferro-electric material and having a common junction, means to apply a voltage across said condensers and means to vary the relative capacity of said condensers constituting said pair whereby a modulated voltage appears at said common junction.

3,050,655
ELECTROLUMINESCENT DEVICE

Paul Goldberg, Long Beach, and Allen Louis Solomon, Glen Cove, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Feb. 11, 1958, Ser. No. 714,481
3 Claims. (Cl. 313—108)

1. A device comprising

(*a*) an electroluminescent cell provided with first and and second separate electrically conducting electrodes, at least one of said electrodes permitting the passage of light therethrough, and

(*b*) a layer placed between said electrodes composed of a phosphor mixture dispersed in dielectric media,

said mixture consisting of 10–90% by weight of an electroluminescent phosphor component selected from the group consisting of the sulfides of zinc and zinc cadmium and 90–10% by weight of a non-electroluminescent photoluminescent phosphor component composed of copper activated chloride co-activated zinc sulfide, said electroluminescent phosphor component emitting visible light falling within a first wavelength range when excited by an electric

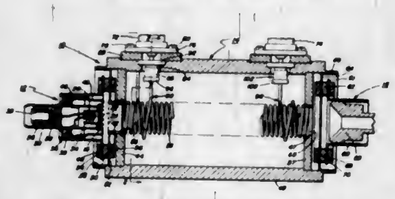


field and said non-electroluminescent photoluminescent phosphor component absorbing incident light falling within said first wavelength range and thereafter emitting visible light falling within a second range of wavelength, said non-electroluminescent phosphor component further emitting light within said second range of wavelength as an afterglow immediately after removal of said electric field from said electrodes.

3,050,656
BROADBAND COUPLING BETWEEN HELIX AND COAXIAL LINE

Charles B. Mayer, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 13, 1959, Ser. No. 806,052
7 Claims. (Cl. 315—3.5)

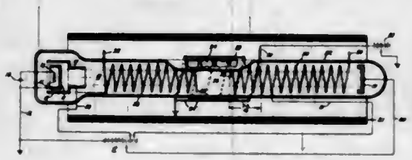


1. A broad band coupling device operable over a predetermined band of frequencies comprising a conductive cavity and an interaction helix extending therethrough, a helical winding extending about said helix in uniform spaced relationship thereto, a capacitor, one end of said winding being connected directly to an inner wall of said cavity and the other end of said winding being connected to an external line through said capacitor, said capacitor forming with the inductance of said winding a series resonant circuit at a frequency in said predetermined frequency band.

3,050,657
SLOW WAVE STRUCTURES

Garland M. Branch, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Jan. 12, 1955, Ser. No. 481,450
11 Claims. (Cl. 315—3.6)

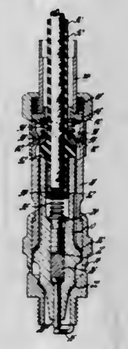


1. In a traveling wave interaction device including means for producing a beam of electrons within a vacuum enclosure, a slow wave structure comprising first and second helical sections oriented within said enclosure and in energy transferring relationship with the beam of electrons, the adjacent ends of said helical sections being in spaced, longitudinal relation with respect to the propagation of high frequency waves, a coupling helix placed outside the vacuum enclosure and oriented in overlapping relation with the adjacent ends of said helical sections to transfer electromagnetic wave energy between said helical sections, said coupling helix having a pitch substantially equal to the pitch of said helical sections but opposite in direction, a first attenuator oriented between the coupling helix and the interior of the vacuum enclosure and a second attenuator coupled to the coupling helix to stabilize the interaction device, whereby heat energy in the attenuators is easily dissipated and the amount of attenuation is easily controlled to effect idealized operation of the interaction device.

3,050,658
QUICK DETACHABLE, SHIELDED ELECTRICAL CONNECTOR

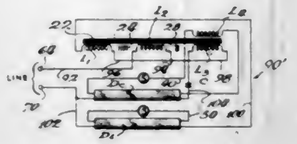
Robert Lay, Frank B. Paul, and Gerald E. Roy, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 11, 1961, Ser. No. 81,991
2 Claims. (Cl. 315—85)



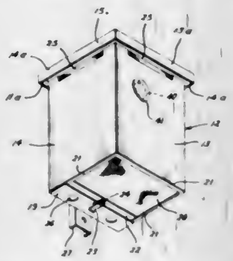
1. In a shielded spark plug assembly, an elongated insulator having a center electrode freely extending therefrom and having an upper and lower portion, a tubular shell enveloping the lower portion of the insulator and having a ground electrode secured thereto, a shielding barrel having one end thereof connected to the shell and located coaxially with the upper end of the insulator, a pair of diametrically located bayonet grooves formed in the other end of said barrel, each of said grooves terminating with a locking portion, a tubular detachable connector comprising a body portion having an annular skirt at one end thereof and a radially inwardly extending flange at the other end, a pair of diametrically located indentations formed in said skirt, a shielding sleeve having one end thereof projecting into said connector and terminating with a first ferrule, a first coil spring confined between the first ferrule and the flanged end of the connector, an ignition cable having a terminal end, a tubular guide for said cable having an enlarged shoulder with one end thereof abutting the upper portion of the insulator, a second ferrule mounted on said shoulder, a second coil spring interposed between said first and second ferrules, said cable terminal end adapted to be electrically connected to the center electrode by axially moving said connector so as to engage the indentations with said bayonet grooves followed by a slight rotation of the connector whereby said coil springs are placed in axial compression to maintain said indentations in the locking portion of the groove and said cable guide shoulder is placed in snug engagement with the upper portion of the insulator.

3,050,659
GASEOUS DISCHARGE BALLAST AND SYSTEM
Albert E. Feinberg, Chicago, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Filed Apr. 6, 1960, Ser. No. 20,412
27 Claims. (Cl. 315—257)



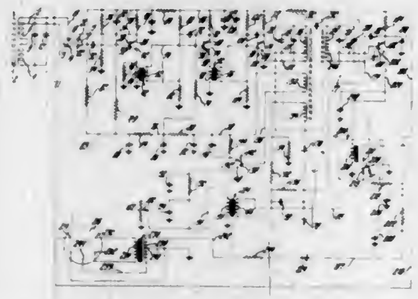
1. A lead-lag ballast for igniting and operating a pair of gaseous discharge devices from an A.C. source which comprises an elongate iron core having three windings disposed along the length thereof, the center winding being spaced from the end windings, lead means connected to one end of said center winding for connecting said one end to one side of said source, one end of the first end winding having lead means for connecting same through one of said pair of gaseous discharge devices to the second side of said source, one end of the second end winding having means including a series condenser for connecting same through the second one of said pair of second gaseous discharge devices to said second side of said source, the second ends of all three windings being connected together to provide two parallel paths for current flowing in said center winding when connected to said source, said windings being mounted on said core with the flux of each end winding bucking the flux of the center winding to create leakage reactance between said center winding and each of said end windings.

3,050,660
CURRENT RECTIFIER
Floyd B. Thorn, Jr., Houston, Tex., assignor to Cathodic Protection Service, Houston, Tex., a partnership
Filed Aug. 10, 1959, Ser. No. 832,721
1 Claim. (Cl. 317—99)



The combination of a current rectifier and housing therefor, comprising, a housing including a back wall, a front cover separably attachable to said back wall and forming therewith a generally box-like enclosure, a current rectifier unit enclosable within said housing, said rectifier unit including a supporting chassis having a rear wall removably mountable on the inner face of said back wall, and switch means including separable switch portions mounted in registering relation on the opposed faces of said back and rear walls, whereby mounting of said chassis on said back wall will automatically effect electrical inter-engagement of said switch portions, said front cover including a front wall, side walls spaced apart to receive said back wall and the rectifier unit mounted thereon, a top wall, and a perforate bottom wall extending rearwardly from said front wall to a point short of the rear edges of said side walls, said back wall having a flange extending forwardly from its lower edge between said side walls to complement said bottom wall in closing the bottom of said housing, said top wall and the upper edge of said back wall having separable inter-engageable portions adapted to separably support said front cover on said back wall, and latch means releasably connecting said bottom wall to said flange.

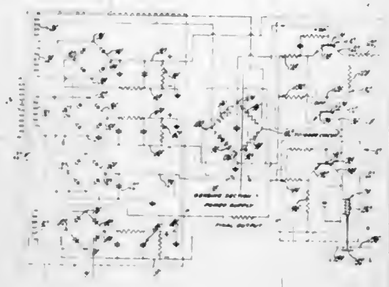
3,050,661
TRANSISTORIZED RECEIVER FOR DOOR OPERATOR
Richard L. Jenkins, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 3, 1958, Ser. No. 765,196
7 Claims. (Cl. 317—147)



1. In a control system, a source of electrical power, relay switching means connected to said source of electrical power, transistor amplifying means having an input and an output circuit, said output circuit being connected to said relay switching means to control the same, means for receiving and amplifying an unmodulated signal of a predetermined frequency, resonant circuits tuned to said predetermined frequency coupling said receiving and amplifying means to the input circuit of the transistor amplifying means to apply an actuating signal, said resonant tuned circuits being tuned to said predetermined frequency, means for generating and rectifying restraining signals from any modulation of the received signal connected to the resonant circuits and to the input circuit of the transistor amplifying means so poled as to be in opposition to the actuating signal to tend to prevent operation of the relay switching means if any modulation is present, and a second means for developing a further restraining voltage proportional to the peak value of the envelope of the applied signal connected to the resonant circuits and to the input of the transistor amplifying means also poled as to be in opposition to the actuating signal to provide higher selectivity.

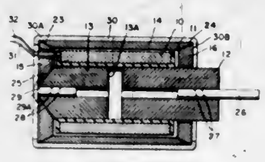
3,050,662
PROXIMITY SWITCH
Richard C. Miller, Detroit, and Edward J. Toton, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 7, 1958, Ser. No. 746,897
4 Claims. (Cl. 317—148.5)

3. In a device for detecting the presence of a metallic object, an inductance coil, a bridge circuit having said inductance coil in one of its arms, a source of alternating voltage connected across opposite terminals of said bridge circuit whereby said inductance coil is energized such that its impedance is subject to an appreciable change when said metallic object is brought in close proximity to said inductance coil, a trigger circuit having an input and an output, conductive means for connecting said input to the remaining terminals of said bridge circuit whereby a portion of said alternating voltage will appear at said input when said bridge is unbalanced, said trigger circuit adapted to produce a first signal at said output when the potential present at said input is less than a predetermined value and to produce a second signal when the potential is greater than a predetermined value such that said portion of said alternating voltage will produce alternately said first and second signals, a transistor having a base, an emitter, and a collector, a series circuit including a



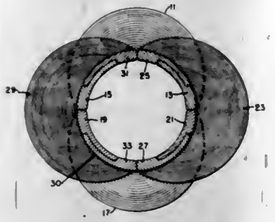
source of direct current supply, electrical utilization means, and said emitter and collector of said transistor such that current will flow through said utilization means when conduction is allowed between said emitter and collector, and conductive means connecting said base to said output whereby said transistor is driven alternately conductive and non-conductive during each cycle of said alternating voltage in accordance with said first and second signals, said utilization means being responsive to the average current flowing in said series circuit.

3,050,663
SOLENOID CONSTRUCTION
Walter J. Zipper, % Nuid Engineering Corp., 3003 Pico Blvd., Santa Monica, Calif.
Filed Dec. 24, 1959, Ser. No. 861,852
6 Claims. (Cl. 317—186)



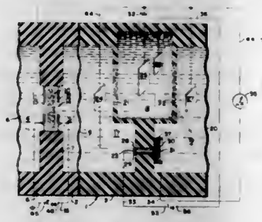
1. A solenoid construction comprising an energizing coil, a pole piece and a movable plunger projecting into said coil, an outer cylindrical housing member encircling said coil, said plunger, pole piece and said housing member being formed of magnetizable tape rolled generally in the form of a cylinder, a pair of end members, corresponding ends of said cylindrical housing member being tapered and contacting a corresponding mating tapered end of a corresponding end member, said pole piece also having one of its ends tapered, the other end of said one end member having a corresponding tapered surface contacting said tapered surface of said pole piece, the other end of the other end member being spaced from said plunger to provide an air gap between said other end member and said plunger, said plunger having a tapered surface, and a stack of laminations each in the form of washers mounted on said plunger, said stack having a tapered surface which meets and contacts the tapered surface on said plunger and said stack being spaced from said other end of said other end member.

3,050,664
MAGNETIC DEFLECTION YOKE
Dagfinn Bernstein, East Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 17, 1957, Ser. No. 690,860
5 Claims. (Cl. 317—200)



3. An electron beam deflection yoke comprising a plurality of coils longitudinally disposed with reference to the axis of said yoke and distributed around said axis so as to define a cylindrical space within said yoke, each of said coils having coil sides with sections thereof extending lengthwise along the longitudinal axis of said yoke and parallel thereto, each of said sections having a generally L-shaped cross-section in a plane perpendicular to the longitudinal axis of said yoke and longitudinally overlapping at least another one of said sections to form an annulus of coils around said cylindrical space having substantially uniform radial thickness around said axis.

3,050,665
ELECTROLYTIC PRODUCT CELL
Ray M. Hurd, Austin, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 13, 1955, Ser. No. 521,936
7 Claims. (Cl. 317—231)



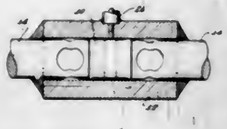
1. In an electrokinetic device, the combination of a casing, an electro-osmotic cell contained by a first portion of said casing, a pair of diaphragms enclosing the electro-osmotic cell, a linear detector cell in said casing, one of said diaphragms of said electro-osmotic cell being common to said electrolytic product cell for providing driving action thereof, said electro-osmotic cell further including an inert filter wall of ultra fine porosity and having a mutually spaced pair of electrodes in adjacency to said filter, means for applying electrical energy to said electrodes, a closure diaphragm for said detector cell, an electrolytic solution of iodine for providing iodine ions in said detector cell, means in said detector cell including a hydraulic resistance for providing an ion flow proportional to the driving force applied thereto by said common diaphragm, means within the detector cell for generating iodine molecules at a rate proportional to a second input current applied thereto, and means for providing an output signal which is proportional to the product of the voltage energizing said electro-osmotic cell and said second input current.

3,050,666

YIELDABLE ELECTRODE FOR SEMICONDUCTOR DEVICES

Harvey Stump, Canoga Park, Calif., assignor to Diodes Incorporated, Los Angeles, Calif., a corporation of California

Filed Nov. 2, 1960, Ser. No. 66,715
5 Claims. (Cl. 317—234)



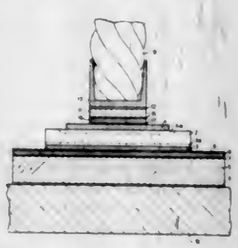
1. A semiconductor device comprising an outer hermetic sleeve, a semiconductor crystal within the sleeve, a pair of metal electrodes extending into opposite ends of the sleeve, means bonding the inner ends of the electrodes to the crystal, means hermetically sealing the ends of the sleeve to the adjacent portions of the electrodes whereby to form a hermetic enclosure for the crystal, at least one electrode having a transverse hole extending therethrough, said hole being at a point between said inner end and said adjacent portion of said one electrode, said electrodes having a higher coefficient of thermal expansion than said sleeve whereby during cooling of the semiconductor device after heating thereof, the electrodes contract with respect to the sleeve and tensile forces are created in the electrodes tending to rupture the bonds between the electrodes and crystal, the portions of said one electrode at opposite sides of said hole comprising relatively slender, column-like legs which are stressed in tension by said tensile forces in the electrodes, and said hole being so proportioned with respect to the diameter of said one electrode that the stress per unit area in said legs exceeds the elastic limit of the metal of the electrodes at a tensile force value in the electrodes which is less than that necessary to rupture said bonds between the crystal and electrodes.

3,050,667

METHOD FOR PRODUCING AN ELECTRIC SEMICONDUCTOR DEVICE OF SILICON

Reimer Emeis, Ebermannstadt, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany

Filed Dec. 28, 1960, Ser. No. 78,903
Claims priority, application Germany Dec. 30, 1959
9 Claims. (Cl. 317—240)



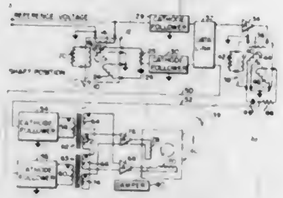
6. An electric semiconductor device comprising a silicon plate having an alloy-bonded surface electrode of gold, a carrier plate of molybdenum adjacent to the electrode in face-to-face relation thereto, a silver layer on said molybdenum plate, and a gold coating between the silver layer and the gold electrode of the silicon plate, said gold coating and gold electrode being alloy-bonded to, and merging with, each other.

3,050,668

FEEDBACK AND COMMAND SIGNAL COMBINING SERVOSYSTEM TO PRODUCE QUADRATURE OUTPUT CONTROL VOLTAGES

William M. Pease, Wellesley, and Theodore P. Heuchling, Concord, Mass. (both % Feedback Controls, Inc., 899 Main St., Waltham, Mass.)

Filed Feb. 24, 1959, Ser. No. 795,136
19 Claims. (Cl. 318—30)



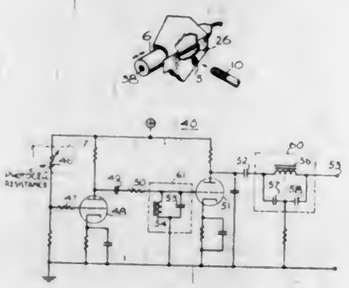
2. A servomechanism adapted to position a shaft in accordance with the relative phase of an alternating current command signal connected thereto comprising, in combination, a two-phase servomotor, a feedback element including a shaft adapted to generate an alternating current signal whose relative phase depends upon said shaft position, means interconnecting the shaft of said servomotor and said feedback element, means for generating a signal proportional to the vector sum of two alternating current signals connected thereto, means for generating a signal proportional to the vector difference of two alternating current signals connected thereto, means connecting the signal generated by said feedback element to said summing means and said differencing means, means connecting said command signal to said summing means and said differencing means, means connecting the output signal of said summing means to one phase of said servomotor and means connecting the output of said differencing means to the other phase of said servomotor.

3,050,669

OPTICAL CURVE FOLLOWING SERVOMOTOR CONTROL SYSTEM

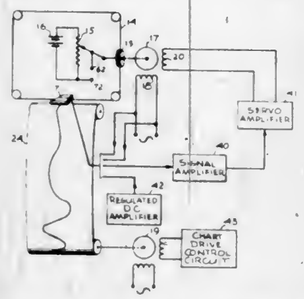
Francis L. Moseley and Andres O. Holdo, Pasadena, Calif., assignors to F. L. Moseley Co., a corporation of California

Filed July 29, 1960, Ser. No. 46,249
13 Claims. (Cl. 318—31)



6. An arrangement for causing a movable element to follow a graphical curve comprising a curve following head having a constant intensity light source for illuminating a particular segment of the curve, a single photoelectric detector, a first mirror fixedly attached to the head for reflecting the image of the illuminated portion of the curve, a second mirror rotatably attached to the head for sweeping the image reflected from said first mirror across said photoelectric detector, and means for

cyclically rotating said second mirror comprising a permanent magnet attached to the head, a movable pole piece of a magnetically permeable material attached to the second mirror and an electrical coil for varying the magnetic field applied to the movable pole piece, a motor having a pair of windings for controlling the position of the curve following head, means for applying an alternating signal of a reference frequency to the first winding of said motor and to said electrical coil, and a signal amplifier connected between the single photodetector and the second winding of the motor including a signal path, a first parallel network tuned to said reference frequency in shunt with the signal path and a second filter network tuned to a frequency which is twice the reference frequency in series with the signal path.

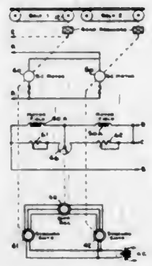


3,050,670

MOTOR CONTROL SYSTEM

Ernest G. Anger and Dorn L. Pettit, Wauwatosa, Wis., assignors to Square D Company, Detroit, Mich., a corporation of Michigan

Original application May 9, 1955, Ser. No. 507,083, now Patent No. 2,885,616, dated May 5, 1959. Divided and this application Sept. 23, 1958, Ser. No. 762,770
6 Claims. (Cl. 318—72)



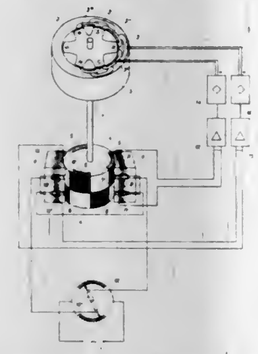
6. In a motor regulating system, a pair of direct current motors to be regulated at a predetermined speed difference, a source connected to supply the armatures of the motors with current, field windings for each of the motors connected in a series circuit with each other and a second current source, a position responsive means for each motor mechanically coupled thereto to provide an output representative of the angular position of the motor connected therewith, means for varying the relative impedance of the field windings of the motors, an adjustment means mechanically coupled to one of the pair of motors and connected to receive and adjust the output of the position responsive means connected with the said one of the pair of motors and to provide an output adjustably different than the output of the position responsive means connected therewith and a differential means interposed between the adjustable means and the position responsive means connected with the other of said pair of motors to receive and compare their respective outputs and provide an output representative of the difference therebetween, said differential means being mechanically coupled to the means for adjusting the relative resistance of the field windings to vary the current through the field windings to maintain said motors at an adjusted speed difference.

3,050,671

VARIABLE-SPEED MOTOR

Waldemar Möller, Ueberlingen (Bodensee), Germany, assignor to Bodenseewerk Perkin-Elmer u. Co. G.m.b.H., Askania Weg, Ueberlingen (Bodensee), Germany

Filed Sept. 21, 1959, Ser. No. 841,272
Claims priority, application Germany Sept. 24, 1958
5 Claims. (Cl. 318—171)



1. In a variable-speed two phase electric motor having a stator producing a rotating magnetic field and a rotor including a plurality of pairs of magnetic poles, the improvement which comprises:

a cylindrical member driven by said rotor, rotatable about its axis of revolution and having first and second regions adjoining along a line formed by the intersection of the cylindrical surface with a plane perpendicular to said axis of revolution, each of said first and second regions comprising surface areas of magnetically permeable material alternating with magnetically impermeable material, each area of said first region adjoining a dissimilar area of said second region; and

a first and a second variable induction system means in energizing relationship, respectively, to first and second windings of said stator, each of said induction system means comprising a transformer having a substantially E-shaped core adjoining said cylindrical member and positioned such that the magnetically permeable areas of said first region magnetically link the center leg of said E to one outside leg and the magnetically permeable areas of said second region magnetically link the center leg of the E to the other outside leg.

3,050,672

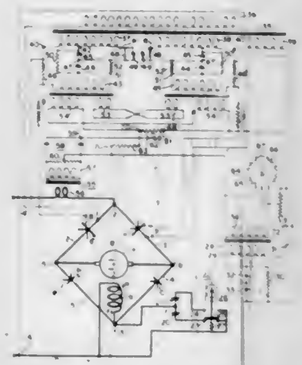
ELECTRIC MOTOR CONTROL APPARATUS

Ernst F. W. Alexanderson, 1132 Adams Road, Schenectady, N.Y.

Filed Apr. 17, 1961, Ser. No. 103,620
8 Claims. (Cl. 318—257)

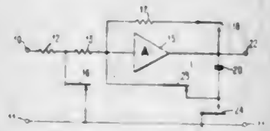
1. In combination, an alternating current input circuit, a direct current motor circuit comprising armature and field windings, means including a pair of triodes interconnecting said input circuit and the armature winding of said motor and arranged to supply rectified direct current to said armature winding, each of said triodes being provided with a control electrode circuit, a source of

alternating voltage connected to said input circuit and comprising a transformer having a pair of secondary windings, a pair of twin reactor-diode groups arranged with one group connected to each transformer winding, each reactor-diode group comprising a saturable reactor and a diode connected in series relation for energization from its associated secondary transformer winding, a low impedance connected in series relation with each reactor, the respective reactors being arranged to saturate in opposite polarity half cycles of applied alternating voltage with a consequent pulse of current upon saturation through said reactor and its series connected impedance thereby to generate a peak of voltage across said impedance, means in each reactor-diode group for establishing in each reactor a negative feedback electric quantity proportional to the rectified voltage of said direct current motor circuit, said negative feedback quantity being of



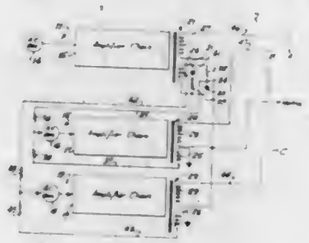
a character to retard the moment of saturation in each said reactor, means for establishing a positive feedback electric quantity in each said reactor in proportion to the current in said input circuit, said positive feedback quantity being of a character to advance the moment of saturation in each said reactor, ratio-adjusting circuit means for adjusting the ratio of the said negative and positive feedback quantities selectively to determine the moment of saturation in each said reactor, circuit means interconnecting respectively the control electrode circuit of each triode to the impedance element of its associated reactor-diode group, thereby to determine the moment of firing of the respective triodes and the magnitude of the speed and torque of said motor, and circuit means interconnected with said ratio-adjusting means for selectively controlling the direction of energizing of said motor field winding and thereby the direction of rotation and direction of torque of said motor.

3,050,673
VOLTAGE HOLDING CIRCUIT
Albert X. Widmer, Peekskill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 14, 1960, Ser. No. 62,576
3 Claims. (Cl. 320—1)



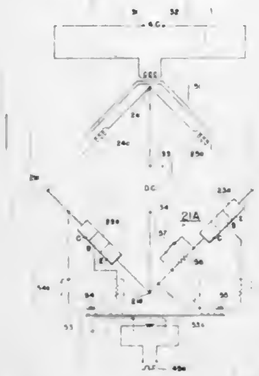
1. A voltage transmitting and retaining device comprising an amplifier having an input and an output, a pair of resistors each connected at one end to said amplifier input, a first switch means to connect the other end of one resistor to a voltage input terminal, a second switch means to connect the other end of the other of said resistors to said amplifier output, a capacitor having one lead connected to said output terminal and a pair of switches alternately operable to connect the other lead of said capacitor to a common voltage reference or to connect said other lead to said amplifier input and means to open said first and second switch means when said other capacitor lead is connected to said amplifier input.

3,050,674
PHASE REGULATED INVERTERS
Donald W. Moore, Los Angeles, Calif., assignor to Electrosolids Corporation, Panorama City, Calif., a corporation of California
Filed Aug. 9, 1960, Ser. No. 48,500
13 Claims. (Cl. 321—5)



1. A multi-channel static inverter system for converting electricity from a direct current source into polyphase alternating current electricity of a predetermined output phase relationship comprising, in combination: a master single-phase inverter channel and at least one other single-phase inverter channel for connection to said D.C. source, each of said channels including a generator of an A.C. voltage of symmetrical waveshape and predetermined frequency, and each of said channels also including output coupling means; frequency and phase reference means interconnecting said output coupling means of said master channel with a frequency-sensitive point in the A.C. voltage generators of said other channels to provide a reference voltage to synchronize the A.C. voltage generators of said other channels at the frequency of the master channel output voltage, said reference means including means for determining the phase of the reference voltage applied to each of the A.C. voltage generators of said other channels in accordance with said predetermined output phase relationship with respect to the output from said master channel; negative feedback means interconnecting said output coupling means of each of said other channels with a frequency-sensitive point in the respective A.C. voltage generator for that channel to provide a phase feedback voltage to combine with the reference voltage applied to that A.C. voltage generator, the peak magnitude of said phase feedback voltage being less than the peak magnitude of the applied reference voltage, the combination of said phase feedback voltage with said reference voltage forming a resultant signal voltage of fixed frequency but of variable phase and amplitude to thereby control the operation of the A.C. voltage generator for each of said other channels to maintain the output voltage of that respective channel in frequency and in phase with the applied reference voltage; output terminals; and output phasing means interconnecting said output coupling means of said inverter channels with said output terminals in said predetermined output phase relationship.

3,050,675
ELECTRICAL CONVERTER
Albert J. Williams, Jr., Philadelphia, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 1, 1958, Ser. No. 764,705
10 Claims. (Cl. 321—45)



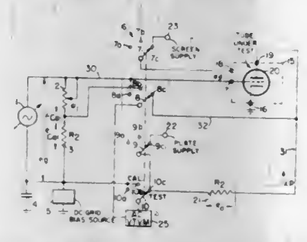
1. A full-wave converter comprising a bridge circuit having first and second transistors respectively in two adjacent arms, an impedance element in each of the remaining arms, control circuits respectively connected to control electrodes of said transistors for controlling their conductivity, means for applying an alternating control voltage to each of said control circuits for cyclically rendering said first transistor conductive and said second transistor non-conductive and for then rendering said second transistor conductive and said first transistor non-conductive, an external direct current circuit effectively connected across one diagonal of said bridge, an external alternating current circuit effectively connected across the opposite diagonal of said bridge, said transistors having a voltage offset characteristic which in the absence of an input signal from either of said external circuits produces across one diagonal of said bridge an alternating current voltage and across the opposite diagonal of said bridge a direct current voltage, said external direct current circuit being connected across the diagonal at which said alternating current voltage appears due to said offset and said external alternating current circuit being connected across said diagonal at which said direct current voltage appears due to said offset.

3,050,676
POWER COMPONENT DETECTOR
Edward W. Atherton, Houston, Tex., and Stanley E. Zocholl, Philadelphia, Pa., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 23, 1957, Ser. No. 704,703
5 Claims. (Cl. 323—66)



1. A power measuring means for an electrical circuit; said power measuring means having a first means for delivering a standard signal functionally related to the circuit voltage and in phase therewith, and second means for delivering a second signal functionally related to the system current and in phase therewith; a subtracting means operatively connected to said first and said second means to receive said standard signal and said second signal; said subtracting means delivering a third signal functionally related to the vector difference of the quantities measured by said first and second means; a comparator means; said comparator means having said second and third signals impressed thereon; said comparator device delivering an error signal responsive to a difference in magnitude between said second and third signals; said error signal being operatively connected to power condition responsive means to operate said power condition responsive means.

3,050,677
TRANSCONDUCTANCE MEASURING APPARATUS
Bruce A. Birnie, Danvers, Mass., assignor to Columbia Broadcasting System, Inc., Danvers, Mass., a corporation of New York
Filed Jan. 20, 1960, Ser. No. 3,610
3 Claims. (Cl. 324—26)

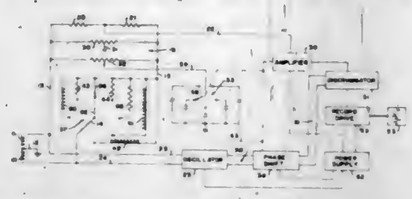


1. Apparatus for measuring the transconductance of an electron discharge device having control grid and plate electrodes comprising, a source of alternating current test signals, a calibration circuit separate from said electron discharge device and including a variable impedance and a first fixed impedance connected in series across said source, means connecting said source to the control grid of said device to supply input potentials thereto, a second fixed impedance equal in magnitude to said first fixed impedance having one terminal thereof for connection to the plate electrode of said electron discharge device, a source of plate supply voltage, voltage indicating means, and multiposition switching means operative in a first position to connect said voltage indicating means across said source of test signals, operative in a second position to connect said voltage indicating means across said first fixed impedance, and operative in a third position to connect said plate supply voltage source to the other terminal of said second fixed impedance and said voltage indicating means across said second fixed impedance.

3,050,678
MAGNETIC TESTING SYSTEM FOR METALLIC BODIES
Paul L. Datt, Walnut Creek, Calif., assignor to Shell Oil Company, a corporation of Delaware
Filed Nov. 4, 1958, Ser. No. 771,857
3 Claims. (Cl. 324—37)

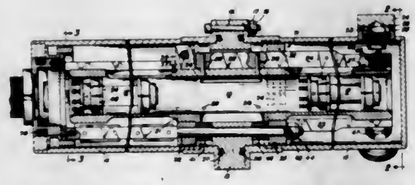
1. A magnetic detaching apparatus comprising: a sensing probe including two coils having substantially equal coil factors, said coils being disposed in the adjacent arms of a bridge circuit; impedance means disposed in series relationship with one of said coils for electrically unbalancing said one coil; switch means for selectively connecting and disconnecting said impedance means from said one coil; means for applying an oscillating voltage to two corners of said bridge, means for comparing the phase of the unbalance signal with the phase of the applied oscillating voltage and recording means for re-

cording the in-phase component of the unbalance signal and circuit means disposed to shift the phase of said



oscillating voltage supplied to said comparing means with respect to the signal supplied to said bridge.

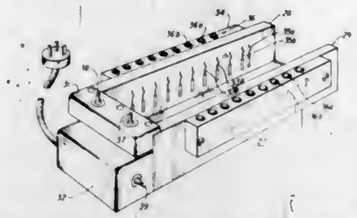
3,050,679
DEVICE FOR DETECTING OR MEASURING MAGNETIC FIELDS
Erick O. Schonstedt, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 18, 1960, Ser. No. 9,660
5 Claims. (Cl. 324—43)



5. In a magnetic gradiometer, a first outer casing section, a second outer casing section, an annular resilient block bolted between said sections, a hollow tube having a built-up center and flat end portions mounted in said annular block, field sensing coils mounted in each end of said hollow tube for movement therewith, a first pair of bars extending the length of said first outer casing and being pinned, one bar opposite the other, to said built-up center, a second pair of bars extending the length of said second outer casing and being pinned to said built-up center, one bar opposite the other, in a plane perpendicular to the plane in which the first said pair lies, a first clamp holding said first pair of bars at said center, a second clamp holding said second pair of bars at said center, said bars having threaded ends, screws in said threaded ends contacting said flat end portion, there being a port in said outer casing opposite each screw, cap means sealing said ports, whereby adjustment of said screws causes one end of said hollow tube to move in a horizontal plane and the opposite end of said hollow tube to move in a vertical plane so that the axes of said field sensing coils are brought into parallelism.

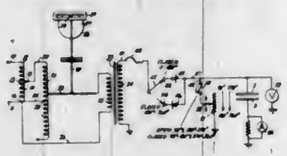
3,050,680
TESTING APPARATUS
Herman B. Fox, Cicero, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,201
5 Claims. (Cl. 324—51)

1. A testing apparatus for a tube system carrier having a pair of substantially parallel side walls, the outside of one or both of said walls mounting a terminal strip including at least one common terminal and a plurality of station terminals, and having manual selecting means for selectively connecting said common terminal with a predetermined one of said station terminals to control the travel of said carrier through said system; said testing apparatus comprising a substantially U-shaped receptacle with at least one side wall having on its inside a plurality of connector elements disposed so as to contact said common terminals and station terminals after said carrier has been inserted into said receptacle for testing, a current source, a plurality of indicator lamps each connected



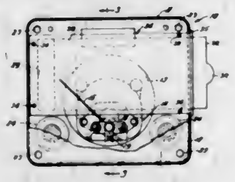
to one of said connector elements, and a continuity testing circuit including in series, said source, said terminals, said selecting means, and the indicator lamp corresponding to the setting of said selecting means.

3,050,681
METHOD FOR TESTING ELECTRICAL INSULATOR
Bhupendrakumar V. Bhimani, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Feb. 4, 1960, Ser. No. 6,755
6 Claims. (Cl. 324—54)



2. In a method for testing electrical insulation for use in alternating current equipment utilizing alternating current at a service frequency, the steps which consist in applying a test alternating voltage across the insulation having a frequency between $\frac{1}{100}$ and 5 cycles per second, increasing the potential of the test voltage to a predetermined level and terminating the test in response to a predetermined current, the power required to conduct the test at the test frequency being substantially less than the power required to perform the test at service frequency.

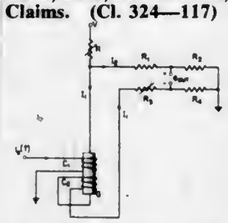
3,050,682
REMOVABLE SCALE METER
Eugene B. Szymczak, Chicago, and Charles R. Williams, Berkeley, Ill., assignors to The Welch Scientific Company, a corporation of Illinois
Filed Apr. 11, 1960, Ser. No. 21,469
4 Claims. (Cl. 324—115)



3. A meter for use in measuring potentials, said meter comprising a main housing having mounted therein movable indicator means operatively connected and responsive to potential receiving and disseminating means, a scale housing mounted in said main housing and opening outwardly of said main housing along one surface thereof to receive removable scales therein, said scale

housing being formed from a pair of spaced generally rectangular plates, and a window containing face plate mounted on said main housing outwardly of said scale housing, the outwardly opening portion of said scale housing being peripherally sealed with said main housing and the edge portions thereof within said main housing being sealed to prevent the entry of foreign matter into said main housing, said scale housing having at least one transparent face through which a scale received therein can be observed, said scale housing being positioned within said main housing with the transparent face thereof associated with said indicator means for operative use of a scale received in said scale housing with said indicator means.

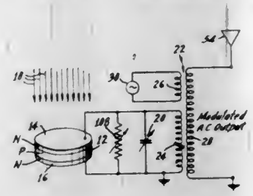
3,050,683
CRYOGENIC CIRCUIT
John L. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 3, 1958, Ser. No. 713,009
2 Claims. (Cl. 324—117)



1. A cryogenic circuit comprising, a gate having at low temperature and in the presence of a magnetic field a resistance-field strength characteristic which provides a progressive transition between superconductive and normal resistance values for said gate in response to variation over a limited range of the strength of said field, a first winding magnetically coupled with said gate and electrically in series therewith to develop from gate traversing current a magnetic field which biases said gate at a resistance value on said characteristic which is intermediate said superconductive and normal values, a second winding which is superconductive at said temperature and which is magnetically coupled to said gate, said second winding being responsive to input current to apply to said gate another magnetic field which varies the resistance of said gate away from said intermediate value in accordance with said characteristic, electric circuit means excluding said gate to supply said input current to said second winding, a resistor in series with said gate and first winding to form therewith the first arm of an electrical bridge, a second resistor in series with said first arm to provide a second bridge arm, a series branch including third and fourth resistors providing third and fourth bridge arms, respectively, said series branch being connected in parallel with the series branch of said first and second arms to form said bridge, a voltage source connected across the junctions of said two series branches to energize said bridge, and means to connect a voltage indicating instrument between the junction of said first and second arms and the junction of said third and fourth arms.

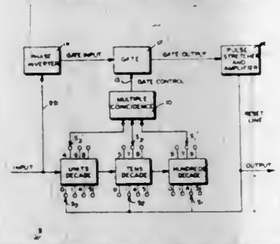
3,050,684
SELF-POWERED SEMICONDUCTOR OSCILLATORS
Nathan Sclar, Glen Rock, N.J., assignor to Nuclear Corporation of America, Denville, N.J., a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 844,275
7 Claims. (Cl. 325—105)

1. A self-powered semi-conductor oscillator including in combination a narrow junction degenerate semi-conductor diode exhibiting a negative resistance region at the low forward range of its current voltage characteristic, said diode comprising a body of semi-conductive material of one conductivity type and semi-conductive material of the other conductivity type making up said narrow



junction diode, and means comprising semi-conductive material of said other conductivity type forming a second junction with said body, said second junction generating a voltage within said low forward range in response to radiant energy impinging on the semi-conductor material of said other type forming said second junction.

3,050,685
DIGITAL FREQUENCY DIVIDER AND METHOD
Robert W. Stuart, Jr., Natick, Mass., assignor to General Radio Company, Cambridge, Mass., a corporation of Massachusetts
Filed June 24, 1959, Ser. No. 822,620
3 Claims. (Cl. 328—48)

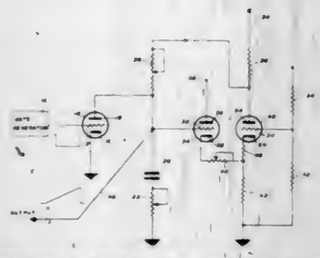


1. An electric system having, in combination, multiple decade counting circuits, means for applying input pulses to the counting circuits, means for selecting a number N of pulses to be counted by the decade counting circuits, a multiple coincidence circuit responsive to the recognition of the state of the counting circuits following a pulse preceding the N pulse to produce a control signal extending over the period from said preceding pulse to the N pulse, a gate circuit connected to the multiple coincidence circuit and to the input-pulse applying means to produce an output pulse corresponding to the N pulse in response to the application of said control signal and the N pulse to said gate circuit concurrently, pulse-stretching and amplifying means responsive to the output pulse for producing a reset pulse during the pulse period following the advent of the N pulse, and means for applying the reset pulse to the decade counting circuits.

3,050,686
DIRECT COUPLED BOOTSTRAP SAWTOOTH GENERATOR
Marvin Korff, Haddonfield, N.J., and Howard M. Scott, Philadelphia, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 12, 1959, Ser. No. 792,934
3 Claims. (Cl. 328—176)

1. A linear sawtooth generator comprising: a source of positive voltage with respect to ground; a first resistor, a second resistor and capacitor serially connected between said source of positive voltage and ground; a gate tube connected across said capacitor for receiving un-

blanking pulses to permit current flow into said capacitor from said voltage source; a direct coupled D.C. amplifier receiving its input from across said capacitor; said D.C. amplifier comprising, a first triode tube and a second triode tube, said second triode tube having a pair of

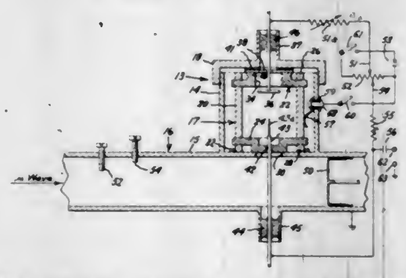


cathode resistors in series to ground and a grid resistor connected to ground, a coupling resistor connected between the cathode of said first triode tube and the juncture of said two cathode resistors; and a direct connection between the anode of said second triode tube and the juncture of said first and second resistors.

3,050,687
GASEOUS DISCHARGE STRUCTURES

John M. Anderson, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Jan. 2, 1959, Ser. No. 784,746
8 Claims. (Cl. 329—158)



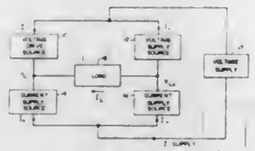
3. An apparatus comprising means providing an enclosed volume containing an ionizable gas at low pressure, means including anode and cathode electrode means having spaced and mutually insulated electrode surfaces exposed to the interior of said first mentioned means for establishing a potential gradient in a portion of said volume sufficiently great to establish a region of negative glow discharge therein, an elongated conductive probe projecting in a predetermined direction into said region and having a portion with a small surface area therein, means for directing an electromagnetic wave having an electric vector with a component parallel to said direction to impinge on said probe and induce electrical currents therein and impedance means connected in series with said probe for deriving an output resulting from the interaction between the potential produced at the surface of said probe within said region and the negative glow plasma immediately adjacent thereto dependent upon the electromagnetic wave intensity impinging on said probe.

3,050,688
TRANSISTOR AMPLIFIER

Richard C. Heyser, La Canada, Calif., assignor to California Institute Research Foundation, a corporation of California

Continuation of application Ser. No. 691,254, Oct. 21, 1957. This application Feb. 10, 1961, Ser. No. 88,492
7 Claims. (Cl. 330—24)

1. A transistor amplifier for driving a load having a first and second end from a source of signals comprising a first and second load-driving transistor, a first and second current-source transistor, means coupling said load first end to said first load-driving transistor and said load second end to said second current-source transistor for current flow from said first load-driving transistor through said load to said second-current-source transistor, means coupling said load second end to said second load-driving transistor and said load first end to said first current-source transistor for current flow from said second load-driving transistor through said load to said first current-source transistor, means for applying opposite-phase input signals from said source to said first and second load-driving

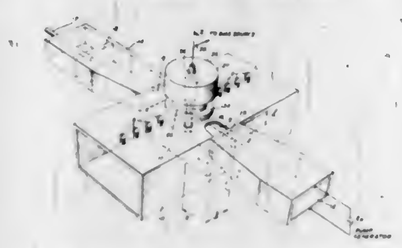


transistors, first Zener diode means for applying signals from said first load-driving transistor to said second current-source transistor, having the same phase as the input signal applied to said first load-driving transistor to control the conductive state of said second current-source transistor responsive to the conductive state of said first load-driving transistor, and second Zener diode means for applying signals from said second load-driving transistor to said first current-source transistor having the same phase as the input signal applied to said second load-driving transistor for controlling the conductive state of said first current-source transistor responsive to the conductive state of said second load-driving transistor.

3,050,689
BROADBAND SOLID STATE AMPLIFIER AND SWITCH USING "DAM" CAVITY

Bernard C. de Loach, Jr., Little Silver, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 12, 1960 Ser. No. 75,232
15 Claims. (Cl. 330—34)

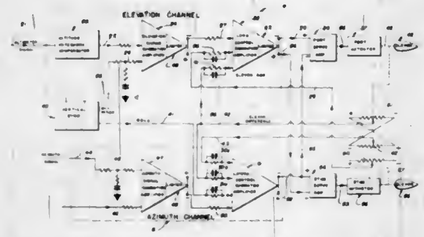


13. A parametric amplifier comprising a rectangular waveguide whose narrow dimension is abruptly reduced in step-like fashion over a given longitudinal length to define a section of reduced height waveguide, a variable-capacitance diode extending transversely across said section in a direction parallel to the narrow dimension thereof, said section forming a cavity whose dimensions are proportioned to resonate said diode at a predetermined frequency f_1 producing a given frequency response characteristic for said amplifier which extends from a first frequency below f_1 to a second frequency above f_1, means for coupling pumping wave energy into said section through one of the narrow walls of said section at a frequency higher than said second frequency, and means for energizing said cavity at a signal frequency f_s within said given frequency response.

3,050,690
SINGLE ENDED AMPLIFIER WITH DOUBLE ENDED OUTPUT

Harold K. Skramstad, Charles Raudenbush, and John A. Hart, Riverside, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Original application Jan. 17, 1952, Ser. No. 266,978. Divided and this application Feb. 25, 1953, Ser. No. 338,925
2 Claims. (Cl. 330—117)
(Granted under Title 35, U.S. Code (1952), sec. 266)

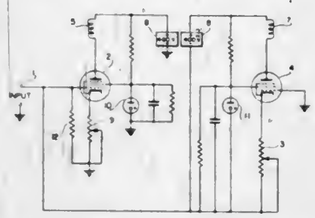


1. A double ended signal summation amplifier comprising two identical single ended, polarity reversing, negative feedback signal summation amplifiers, a coupling resistor, and a center tapped output resistor, the two amplifiers being connected in cascade through the coupling resistor, a negative feedback resistor disposed between the output and the input of the second cascaded summation amplifier, the value of the coupling resistor being equal to that of the negative feedback resistor of the second summation amplifier, the outputs of both amplifiers being connected to energize opposite ends of the output resistor, resistor means disposed between the center tap of the output resistor and ground, and feedback balance compensating means connected to the output resistor center tap to derive an unbalance responsive output for effecting compensation control by applying said last-named output to the input of a control circuit responsive to said double ended amplifier whereby in the absence of a zero voltage output at the compensating means this output represents an error correction signal fed to the control circuit to compensate for the unbalance error in the double ended amplifier.

3,050,691
MAGNETRON PREAMPLIFIER

James R. Hale, Canoga Park, and Robert C. Mauer, Sunland, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Nov. 4, 1960, Ser. No. 67,426
2 Claims. (Cl. 330—124)

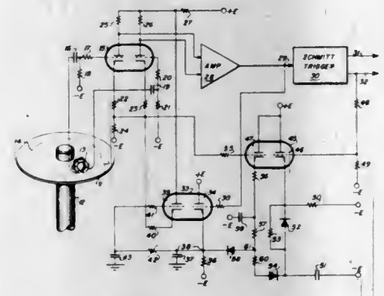


1. A magnetron preamplifier comprising an input signal source, a first pentode having at least an anode, cathode and control grid, a first reactive load and a first power supply connected in series with the cathode and anode of said first pentode, means connecting one side of said power supply to ground potential, means connecting said input signal to the control grid of said first pentode, a second pentode having at least an anode, cathode and control grid, a second reactive load and a second power supply connected in series with the anode and cathode of said second pentode, means connecting the control grid of said second pentode to ground potential, and means connecting the input signal source to the cathode of said second pentode, whereby the two current paths are independent and the second power supply is referred to the input signal.

3,050,692
AUTOMATIC GAIN CONTROL

Dennis D. Willard, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Continuation of application Ser. No. 705,426, Dec. 26, 1957. This application Nov. 14, 1960, Ser. No. 69,222
7 Claims. (Cl. 330—133)

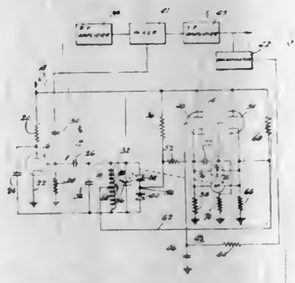


1. Apparatus for controlling the gain of an amplifier to maintain output signals therefrom at a constant level, comprising: an automatic gain control circuit having an output signal for adjusting the gain of the amplifier associated therewith, first and second inputs to said AGC circuit, means connecting said first input to be energized by the amplifier output whereby the gain of the amplifier is controlled by said AGC circuit to maintain output signals from said amplifier at a constant level, means connected to said AGC circuit and said amplifier output for storing the value of said AGC output signal in response to the absence of output signals from said amplifier and means for switching said stored signal value to said second AGC input in response to the absence of said output signals from said amplifier whereby the gain of said amplifier is controlled in response to said stored value through said AGC circuit.

3,050,693
VARIABLE OSCILLATOR CIRCUIT UTILIZING REVERSE BIASED DIODES FOR OPERATION AT A PREDETERMINED FREQUENCY

Dwight V. Sinninger, Oak Park, Ill., assignor to Senn Custom, Inc., Oak Park, Ill., a corporation of Illinois

Filed Apr. 28, 1960, Ser. No. 25,404
12 Claims. (Cl. 331—10)



1. A variable oscillatory circuit adapted for operation at a predetermined frequency, comprising a tank circuit

including inductance means and two opposed semiconductive capacitor means, each having a low impedance forward direction and a high impedance reverse direction, and connected seriatim across said inductive means, means for exciting said tank circuit with a periodic signal corresponding to the oscillations of said tank circuit, and means applying a bias voltage between a junction intermediate said capacitor means and a nodal connection on said inductance means, said means comprising a balanced amplifier including two amplifier components, one of said amplifier components receiving a control signal corersponding to the difference between said oscillations and said predetermined frequency and having an output applied to said junction, the other of said amplifier components having an output applied to said nodal connection, said amplifier components being otherwise similarly connected in said circuit.

3,050,694
CORRECTION CIRCUIT FOR DUAL SINUSOID GENERATOR

Robert M. Turner, Los Altos, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Mar. 14, 1961, Ser. No. 95,649
3 Claims. (Cl. 331—45)



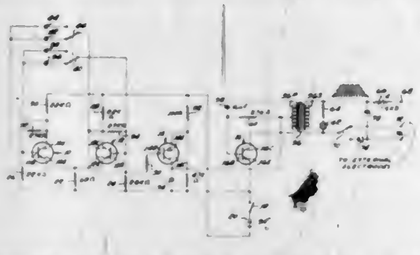
1. A sinusoid generator comprising a first integrator, a second integrator, a dual channel multiplier and an inverter, the output of said first integrator connected to the one input of said multiplier, one output of said multiplier connected to the input of said second integrator, the output of said second integrator connected to another input of said multiplier, the other output of said multiplier connected to the input of said inverter, the output of said inverter connected to the input of said first integrator, whereby forced oscillations of said sinusoid generator provide sine wave signals at the output of said first integrator and cosine wave signals at the output of said second integrator, an error correction circuit for said sinusoid generator comprising means detecting the instantaneous amplitude error between said sine wave signals and cosine wave signals, means integrating the detected instantaneous amplitude error between said since wave signal and said cosine wave signal, means applying the instantaneous amplitude error and the integrated instantaneous amplitude error to the inputs of said first and second integrators thereby reducing said instantaneous and integrated amplitude errors between said sine and cosine wave signals.

3,050,695
PULSE GENERATOR FOR HUMAN TREATMENT

Wilbur E. Du Vall, Gardena, Calif., assignor to W. W. Henry Co., Inc., Huntington Park, Calif., a corporation of California

Filed Sept. 10, 1959, Ser. No. 839,093
2 Claims. (Cl. 331—52)

1. A pulse generator for human treatment comprising a multivibrator circuit of the continuously oscillating type including a first and second transistor, a third transistor, means biasing said third transistor to be nonconductive in the quiescent state, means for applying output from said second to said third transistor to render said third transistor conductive responsive thereto, a blocking oscillator circuit including a fourth transistor,

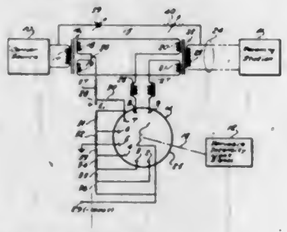


means for applying output from said third to said fourth transistor to render said blocking oscillator circuit oscillatory responsive thereto, output terminals, rectifier means connected to said output terminals, and switch means for selectively applying output from said blocking oscillator directly to said output terminals or to said rectifier means.

3,050,696
PHOTO-TRANSDUCER SIGNAL COMPRESSOR

William Howard Hill, Bronx, N.Y., assignor, by mesne assignments, to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland

Filed Feb. 10, 1959, Ser. No. 792,285
2 Claims. (Cl. 332—3)



2. A modulator comprising
a bridge modulator network having a pair of balanced input windings and a pair of balanced output windings,
the junction between each input winding constituting one conjugate point of the bridge,
a light scanner modulator and compressor device connected between said conjugate point and the balanced output windings,
said device including a multiplier phototube having a pair of output anodes each connected to a corresponding one of the balanced output windings and a final dynode, and
means to maintain the output anodes of said tube at a positive bias potential with respect to the cooperative final dynode which positive bias decreases as the anode current increases,
said last mentioned means comprising a resistor in circuit with said anodes.

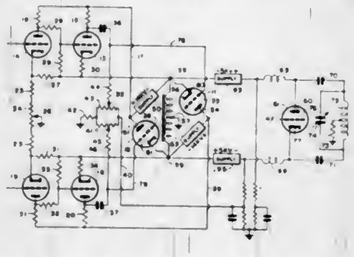
3,050,697
A.M. BRIDGE MODULATOR

Ronald J. Rockwell, Cincinnati, Ohio, assignor to Crosley Broadcasting Corporation, Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 15, 1960, Ser. No. 22,457
11 Claims. (Cl. 332—47)

1. In signal transmitting, the combination of a modulated radio frequency stage including an output tube

having at least an anode, a cathode and a control electrode, and means for applying modulating voltages both to said anode and to said cathode comprising: A source of push-pull audio signals; and a bridge amplifier stage between said source and the modulated electrodes of said radio frequency stage, said bridge amplifier comprising: first and second modulator tubes having respectively first and second cathodes, first and second control electrodes and first and second anodes, first and second power supplies arranged in a bridge configuration with the anode-cathode circuits of said first and second modulator tubes, said bridge network having one arm formed by the first modulator tube and the first power supply and another arm formed by the second modulator tube and the second power supply, means for coupling said source to the con-

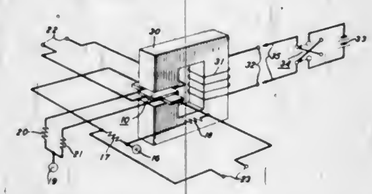


trol electrodes of said first and second modulator tubes, an impedance connected across and in parallel with both of said arms and between the junction of the negative terminal of the second power supply and the cathode of the first modulator tube and the junction of the negative terminal of the first power supply and the cathode of the second modulator tube, said impedance having a center tap connected to a point of reference potential, a third power supply connected in series between the first-mentioned junction and the anode of said output tube, and a fourth power supply connected in series between the other junction and the cathode of said output tube, the third power supply being poled to render the anode of said output tube positive relative to said point of reference potential, and the fourth power supply being poled to render the cathode of said output tube negative relative to said point.

3,050,698
SEMICONDUCTOR HALL EFFECT DEVICES

Robert L. Brass, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 12, 1960, Ser. No. 8,313
16 Claims. (Cl. 332—51)

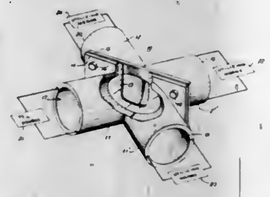


4. A multi-terminal semiconductor device comprising a semiconductor body, a centrally disposed region of said body comprising semiconductor material of one conductivity type and exhibiting a substantial Hall effect, a first plurality of regions adjacent to said central region comprising semiconductor material of the opposite conductivity type and forming first semiconductor rectifying junctions with said central region, a second plurality of regions of semiconductor material of said one conductivity type, each of which is adjacent to one of said first plurality of regions to form second semiconductor rectifying junctions, means for biasing said first and second semiconductor junctions in opposite senses with respect to their directions of low impedance, and means for establishing a magnetic field in said central region parallel to said semiconductor junctions.

3,050,699
MILLIMETER WAVE HYBRID JUNCTION

Enrique A. J. Marcatili, Fair Haven, and Douglas H. Ring, Red Bank, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 23, 1960, Ser. No. 77,928
8 Claims. (Cl. 333—11)

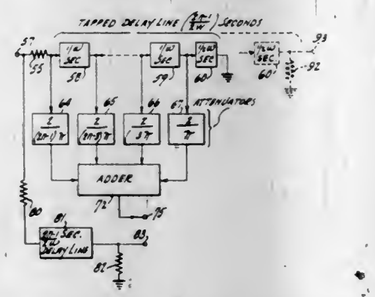


1. A millimeter wave hybrid junction comprising first and second intersecting wave guides,
said wave guides extending completely through one another to form a device having first, second, third, and fourth ports,
means for exciting said first port in the TE_{01} circular electric wave mode within a given range of operating frequencies,
means for dividing said energy when incident upon the common volume occupied by said first and said second guides into two substantially equal portions,
said dividing means comprising a planar member extending across said common volume at a 45° angle with respect to the coplanar axes of said guides,
and means for utilizing said wave energy associated with said second and third ports.

3,050,700
PHASE SHIFTING CIRCUIT

Kerns H. Powers, Trenton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Jan. 19, 1959, Ser. No. 787,479
1 Claim. (Cl. 333—29)



A phase-shift network comprising a delay line terminated at one end in its characteristic impedance and effectively shorted at its other end through a single resistor connected to a point of reference potential and having a resistance value small with respect to said characteristic impedance, a plurality of taps spaced at delays of 1/W seconds along said delay line with the tap nearest said shorted end spaced 1/2W seconds from said shorted end

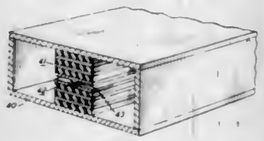
where W is the upper limit in cycles-per-second of an input signal applied to said one end of said delay line, a plurality of attenuators individually connected to said taps, said attenuators being arranged to cause the attenuation effected by said attenuators to decrease along said delay line, the largest amount of attenuation being effected by the attenuator connected to said tap nearest said one end and the smallest amount of attenuation being effected by the attenuator connected to said tap nearest said shorted end, an output terminal connected to the junction of said resistor and said delay line for deriving from across said resistor an output signal which is a delayed replica of said input signal, an adder connected to said attenuators for adding the outputs of said attenuators to produce a second output signal in phase-quadrature with said first output signal, the value of said attenuators being determined to give the desired amplitude response in said second output signal over the bandwidth of said input signal.

3,050,701
TAPERED WAVEGUIDE TRANSITION SECTION
Charles C. H. Tang, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 22, 1961, Ser. No. 97,602
6 Claims. (Cl. 333—34)



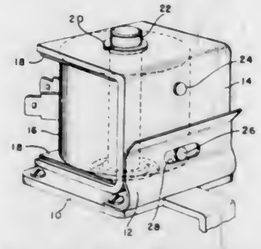
1. In an electromagnetic wave transmission system supportive of at least the first and the second order modes of a family of modes of wave propagation, a tapered transition section for the preferential transmission of said first order mode to connect a first multimode waveguide supportive of said modes to a second larger multimode waveguide of a similar cross-sectional configuration supportive of said modes, said taper having a first order mode to second order mode conversion characteristic including a plurality of intrinsic zero points and characterized by at least one new zero point at a preselected point between two of said intrinsic zero points.

3,050,702
CAPACITIVELY LOADED WAVEGUIDE
Lynden U. Kibler, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 28, 1960, Ser. No. 79,061
9 Claims. (Cl. 333—98)



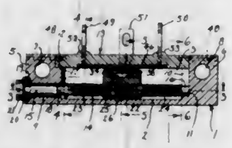
1. An electromagnetic waveguide of the capacitively loaded type comprising a plurality of longitudinally extending conductive and dielectric layers interleaved in a direction transverse to the axis of said guide forming a loading structure extending inwardly from the bounding surface of said guide to the central region thereof, and means for matching the relatively low impedance capacitively loaded section of guide at least at one end to a relatively high impedance section of guide associated therewith, said means comprising a short, abruptly tapered end section of said loading structure and including a progressively decreasing change in the dielectric constant of successive dielectric layers in the direction toward the axis of said guide.

3,050,703
COIL MOUNTING
John H. Duescher, Chicago, Ill., assignor to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Aug. 28, 1957, Ser. No. 680,763
4 Claims. (Cl. 336—67)



4. A coil mounting assembly comprising, a mounting plate including a spring clip projecting from the plate, a coil frame, a coil carried in the frame, said coil having an axial hole therethrough, means carried by said plate and projecting into said hole for restraining the coil to generally angular and axial motion with respect to said projecting means, said spring clip bearing against a surface of said frame when the frame is positioned on said projecting means to prevent angular motion of said frame on said projecting means, a projection on said surface, and a hole in said spring clip receiving said projection to prevent axial motion of the frame on the projecting means, said projection being releasable from the hole in the spring clip upon imparting a small angular motion to said frame, so that the coil and frame can be removed from the projecting means.

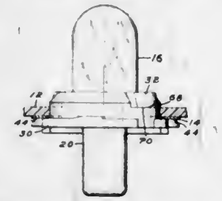
3,050,704
RECTILINEAR VARIABLE RESISTOR
Clarence R. Dickinson, Greendale, and James E. Slagg, South Milwaukee, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 4, 1959, Ser. No. 810,676
1 Claim. (Cl. 338—180)



In a rectilinear variable resistance the combination comprising: a molded case having a bottom, side walls and end walls to present a housing closed at its bottom and along its sides with an open top and hollow interior, said walls being stepped downwardly at their upper, inner edges to form a recessed ledge extending along the open top that presents a seat for receiving and positioning an enclosing base, said molded case also having a bearing opening paralleling said recessed ledge which extends through an end from the exterior to said hollow interior at a point near said case bottom; a rotatable lead screw extending through said bearing opening and across said hollow interior with a journal portion in bearing engagement with said bearing opening to be held in fixed relation with said case; a molded enclosing base that seats upon said recessed ledge and has a close fit with the upper edges of said side and end walls to cover the open top of said case, said base having resistance and collector tracks parallel to one another which are of dispersed carbon particles integrally molded therein, which tracks have their surfaces coplanar with the recessed

ledge of said case; a contact carrier within said case in threaded engagement with said lead screw for movement longitudinally along the lead screw, said contact carrier having a spring seat facing said base of a rectangular configuration defined by ridges rising toward the base which are located at the longitudinal ends thereof, with the ridges at an end being disposed transversely toward the side walls in positions closely adjacent such side walls; a rectangular contact brush seated between said ridges to be moved longitudinaly with the contact carrier upon a turning of said lead screw, which brush has a set of three raised contact points in engagement with said tracks, such contact points having both transverse and longitudinal spacing with respect to one another for stable engagement with said base; and a bias spring interposed between said spring seat of said carrier and said contact brush to urge the brush against said base, which spring has a plurality of raised spring fingers spaced both transversely and longitudinally with respect to one another for stable engagement with both said contact carrier and said contact brush.

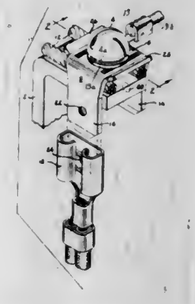
3,050,705
ELECTRICAL ASSEMBLY
Donald L. Benson, Cochictuate, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed July 14, 1959, Ser. No. 826,950
1 Claim. (Cl. 339—17)



A lamp socket for axial insertion within a continuous circuit panel, said socket comprising an insulated housing, a radial flange spaced from one end of said housing cooperating with cam means on the periphery of said end of the housing to retain the socket within the panel and a pair of contact members in spaced relation to each other, each of said contact members having a base, a central finger extending from said base having means for engaging said circuit panel, a pair of spring members extending from said base in the same direction as said central finger, spaced from said central finger on each side thereof and in angular relation with said base and at least two tabs extending upwardly from said base spaced from said central finger and from said spring members on opposite ends of said base, said tabs having pointed terminal ends in biting engagement with said housing.

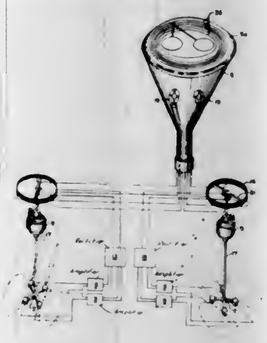
3,050,706
ELECTRICAL CONNECTORS
Hector Kitscha, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 24, 1958, Ser. No. 769,345
4 Claims. (Cl. 339—246)

4. In an electrical connector:
(*a*) a terminal bracket provided with a threaded aperture therethrough,
(*b*) a clamping member having an aperture in registration with said threaded aperture
(*c*) a clamping screw extending through said aperture in said clamping member and into threaded engagement in said threaded aperture in said terminal bracket to afford clamping at least one bare conductor between said clamping member and said terminal bracket and into electrical connection therewith, said screw affording clamping at least one connector lug between the head thereof and said clamping member and into electrical connection with the latter,
(*d*) said clamping member comprising a pair of integral straddling portions depending from opposite sides thereof for straddling said terminal bracket and at least one of said straddling portions having integral therewith a connector tongue extending beyond said terminal bracket, said straddling portions



and said connector tongue serving the dual purpose of preventing such bare conductor from sliding out from under said clamping member when said screw is tightened and of affording electrical connection thereto of a complementary electrical connector receptacle,
(*e*) and each of the other two sides of said clamping member diverging from said terminal bracket at an angle of less than ninety degrees to serve the dual function of guiding and thereby facilitating insertion of such bare conductor between said clamping member and said terminal bracket and of strengthening said clamping member.

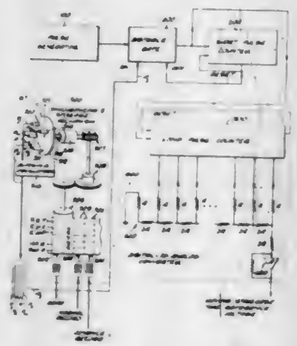
3,050,707
METHOD AND APPARATUS FOR TORPEDO DIRECTION LOCATING
Judd O. Baker, 4209 18th St. NW., Washington, D.C., and Nelson N. Estes, 319 Pinewood Ave., Silver Spring, Md.
Filed Dec. 8, 1950, Ser. No. 199,908
1 Claim. (Cl. 340—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



Apparatus for use aboard a ship for detecting, ranging and determining the azimuth of an underwater missile emitting characteristic sounds as it moves through the water, comprising in combination; a plurality of rotat-

able, directionally responsive, hydrophones in the aft portion of said ship; motor means connected to said hydrophones to provide rotation thereof; a dual beam cathode ray oscilloscope having first and second sets of deflection plates and a reference axis fixed with respect to the longitudinal axis of said ship, first means connected between said hydrophones and said first set of deflection plates and driven by said motor means to provide a generally circular display centered on said reference axis, and to produce an elongated pip on said circular display when said hydrophones detect said missile, the position of said pip with respect to the center of said circular display being correlative to the bearing of the missile with respect to said hydrophones; said first means including a rectifier, a potentiometer driven by said motor means for synchronous rotation with said hydrophones and being connected between said rectifier and said first set of deflection plates, and means connected between said hydrophones and said rectifier for amplifying the signal produced by said hydrophones; a second plurality of rotatable, directionally responsive hydrophones in the bow portion of said ship; second motor means connected to said second hydrophones to provide rotation thereof; second means connected between said second hydrophones and said second set of deflection plates and driven by said second motor means to provide a second generally circular display on the face of said oscilloscope displaced from said first display and centered on said reference axis and to produce a second elongated pip on said second circular display when said second hydrophones detect said missile, the position of said second pip with respect to the center of said second circular display being correlative to the bearing of the missile with respect to said second hydrophones; said second means including a second rectifier, a second potentiometer driven by said second motor means for synchronous rotation with said second hydrophones and being connected between said second rectifier and said second set of deflection plates, and means connected between said second hydrophones and said second rectifier for amplifying the signal produced by said second hydrophones; and range indicating indicia formed on the face of said cathode ray oscilloscope whereby the range indicia at the intersection of said first and said second pips indicates the range to said underwater missile.

3,050,708
TIME REFERENCE GENERATOR
Alvin Guy Van Alstyne, Los Angeles, and James Christopher Sampson, West Covina, Calif., assignors to Gilfillan Bros., Inc., Los Angeles, Calif., a corporation of California
Filed May 8, 1956, Ser. No. 583,523
2 Claims. (Cl. 340—23)



1. In an air traffic control system, the combination comprising: means for periodically generating command signals at a rate R to guide the approaches of a number of aircraft C successively on a time shared basis to a landing system entry gate to cause each aircraft to arrive at the entry gate at least a time interval A later than a previous one; a timing pulse source for producing timing pulses at a rate R; a pulse generator; a bistable gate responsive to output pulses of said timing pulse source to pass the pulses generated by the pulse generator; a first pulse counter responsive to the pulses generated by the pulse generator and passed by said bistable gate for pulsing said bistable gate off, said first pulse counter being adapted to count a number of pulses S given by the following relationship:

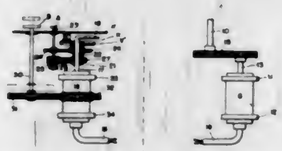
$$S=\frac{nAR}{C}$$

where n is any positive integer; means to reset said first pulse counter in response to the last of said S pulses; a second pulse counter responsive to the output pulses passed by the bistable gate for indicating the selected times to arrival of aircraft approaching the entry gate, said second pulse counter being adapted to count a number of pulses L given by the following relationship:

$$L=n(AR+1)$$

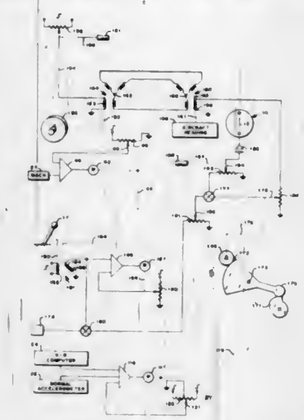
means to supply the output of said second pulse counter to said command signal generating means; means to reset said second pulse counter in response to the last of said L pulses; means for storing identities of guided aircraft; means operable for reproducing said identities one at a time from said storing means repeatedly in the same sequence; and means for synchronously operating said timing pulse source and said reproducing means to cause said aircraft identities to be reproduced at the rate R.

3,050,709
REMOTE CONTROL FOR ANGLE SETTING INDICATOR
Robert E. Finch, 6308 Orchid Drive, Bethesda, Md.
Filed May 22, 1959, Ser. No. 815,235
2 Claims. (Cl. 340—26)
(Granted under Title 35, U.S. Code (1952), sec. 266)



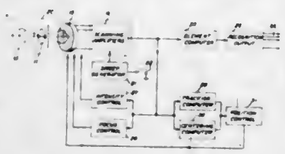
1. In a system for landing aircraft on the flight deck of a carrier on which a visual means is located and which is moved by an operator on the flight deck through a sequence of adjustments, the improvement which comprises a register in an area remote from the visual means, said register comprising a fixed scale having indicia thereon and an indicator movable relative to the indicia on said scale, synchronous means including a generator responsive to movement of the visual means and a motor, said motor being located in the area remote from the visual means and having its operating shaft connected to said indicator, said synchronous means being effective to move the indicator from a reference indicia on the scale in accordance with each adjustment made by the operator to the visual means, means for rotating said motor, said means being inoperative when an adjustment is made to the visual means and manually operative after each adjustment to move the indicator a predetermined value to check the accuracy of each adjustment in order to be certain that the actual adjustments made to the visual means are those which provide the proper glide path for landing an aircraft on the flight deck.

3,050,710
COMMAND LIMITER
Louis S. Guarino, Hatboro, and Horace B. Welk, Jr., Churchville, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed July 2, 1959, Ser. No. 824,749
14 Claims. (Cl. 340—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



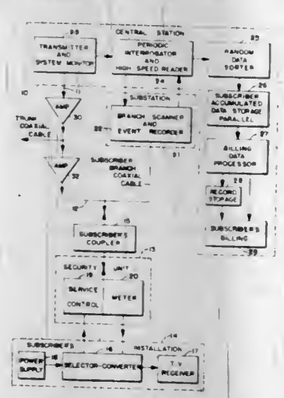
1. A command limiter for an aircraft having a control stick and comprising, means for monitoring the dynamic condition of the aircraft and transmitting a first signal proportional to the dynamic condition of the aircraft, means for generating and transmitting a second signal representative of an aircraft maneuver to be executed, visual display means including an indicator movable relative to an index, said first and second signals being transmitted to said visual display means in opposition to each other and causing said visual display means to indicate any difference between said first and second signals representative of the pilot error in executing the command maneuver, and quickened display means including means for monitoring the control stick positioning and incrementally altering said first signal for providing a quickened display of the effect of the control stick positioning on the dynamic condition of the aircraft.

3,050,711
AUTOMATIC CHARACTER ANALYZER
Leon D. Harmon, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 26, 1959, Ser. No. 795,649
18 Claims. (Cl. 340—146.3)



11. Apparatus for automatically classifying a visible line-trace character within a field of view, comprising in combination, scanning means comprising a plurality of sensing elements each adapted to sense the presence of visible line-trace portions in an exclusive pre-established segment of said field and to produce signals representative thereof, means for focusing said field on said scanning means, means for sequentially connecting to register means preselected ones of said sensing elements together forming substantially concentric rings about a point near the center of a character within said field, means included in said register means for recording the relative times of occurrence of signals representative of sensed character portions within pre-established segments as said concentric rings of said sensing elements are sequentially connected to said register, means activated after all of said sensing elements have been connected to said register for transferring said recorded voltages to comparator means, means included in said comparator means for detecting prescribed signal relationships within said recorded voltages, means supplied with signal voltages according to said relationships for producing an output signal uniquely related to said recorded voltages, and means responsive to said output signal for producing therefrom unique activity indicative of said signal relationship.

3,050,712
WIRED PROGRAM DISTRIBUTION SYSTEM
George Bruck, Cincinnati, Ohio, assignor to Avco Corporation, a corporation of Delaware
Filed Feb. 13, 1959, Ser. No. 793,209
3 Claims. (Cl. 340—150)



1. In a programmed electrical service distribution system for pay-television, the combination of:

a central station and a distribution system having coaxial-cable trunk lines and coaxial-cable branch lines for furnishing services at video frequencies, each of said trunk lines being connected to said central station and providing a series of junctions along its length and each of said branch lines being connected to one of said junctions and similarly providing a series of subscriber taps along its length;

a plurality of groups of subscriber equipments, one for each branch line, each subscriber equipment being connected to a subscriber tap and including signaling means for continuously transmitting metering signals of radio frequencies identifying the subscriber and indicating his usage;

a substation connected to each branch line, each substation having scanner-type interrogating and recording means coupled to its associated branch line for transcribing metering signals from all subscribers connected to said associated branch line onto a substation tape record in the form of electrical signals;

bilateral amplifiers inserted in series into those portions of the trunk lines which are between junctions;

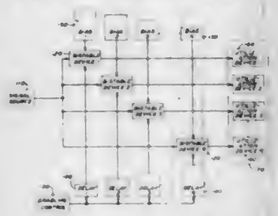
other bilateral amplifiers inserted in series into those portions of the branch lines between their respective junctions with trunk lines and the subscriber taps;

all of said bilateral amplifiers being command-controlled by the central station so that the bilateral amplifiers are operable in one direction to pass the program from the central station to the subscribers and

in the other direction to pass signals from the substations back to said central station;

and means coupled to the trunk lines and located at the central station for sequentially interrogating the recording means at the substations and transcribing signals from all of the recording means onto a central station tape record.

3,050,713
OUTPUT SELECTING CIRCUIT
Leon D. Harmon, Warren Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 16, 1959, Ser. No. 859,896
6 Claims. (Cl. 340—172)



4. A classifying circuit comprising a plurality of gaseous discharge devices each having a control grid and a screen grid, a plurality of resistor-capacitor networks each having a time constant different from that of any other network and each associated with a different one of said screen grids, means for connecting the capacitor of said network between its associated screen grid and a first source of reference potential, means for connecting the resistor of said network between its associated screen grid and the selective terminal of a common switching means, one fixed terminal of said switching means being connected to a second source of potential sufficient to bias all of said screen grids to cutoff, and another fixed terminal of said switching means being connected to said first source of reference potential, a plurality of third potential sources each with a potential different from that of any other of said third potential sources and each connected to a different one of said screen grids through a unidirectional current-passing device, said potentials being selected so that their relative magnitudes bear an inverse relation to the time constants of said resistor-capacitor networks associated with said screen grids, an input capacitor connected to all of said control grids, means for applying an input signal of given amplitude to said input capacitor, and means for disconnecting said selective terminal of said switching means from said fixed terminal connected to said second source of potential and applying said selective terminal to said other fixed terminal connected to said first source of reference potential in order to discharge each of said capacitors in said resistor-capacitor networks.

3,050,714
SHIFT REGISTER
Carl M. Campbell, Jr., Broomall, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 19, 1959, Ser. No. 821,497
7 Claims. (Cl. 340—173)

1. A shift register stage comprising, in combination,

a pair of input "and gate means;

a pair of output "and" gate means;

a pair of bistable devices, each being connected to input of an individual one of said output "and" gate means;

input means connected to each of said input "and" gate means;

first clock pulse means connected to input of one of said pair of input "and" gate means and of one of said pair of output "and" gate means;

second clock pulse means connected to input of the other of said pair of input "and" gate means and to the other said pair of output "and" gate means; and

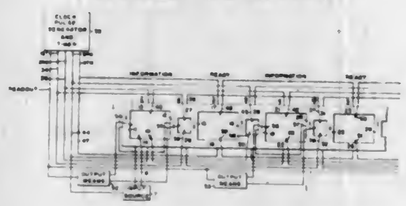
means connecting the outputs of said input "and" gate means and an individual one of said bistable devices, wherein the input "and" gate means connected to



one of said clock pulse means is connected to the bistable device associated with the output "and" gate means which is connected to the other of said clock pulse means,

whereby information fed through the input "and" gate means connected to one of said clock pulse means is stored in a bistable device feeding the output "and" gate means connected to the other of said clock pulse means and may be advanced to a subsequent stage simultaneously with the feeding of information to the other input "and" gate means.

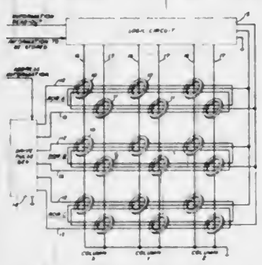
3,050,715
ALL MAGNETIC SHIFT REGISTER
Edward P. Stabler, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 2, 1960, Ser. No. 12,333
10 Claims. (Cl. 340—174)



1. A signal translating device having a continuous magnetic core member of a core material which exhibits remanence plus low permeability at saturation for information storage having a configuration comprising a series of alternating first and second closed magnetic flux path elements, said elements each being interconnected by two legs providing separate magnetic flux paths therebetween, means for orienting the flux in said elements in a single direction in accordance with stored information, said means including a four phase pulse source for supplying clocking signals to said core member having the first phase coupled to at least one of said legs coupling the first closed-path elements to the succeeding second closed-path elements, the second phase being coupled to each of said first closed-path elements, the third phase being coupled to at least one of said legs coupling said second

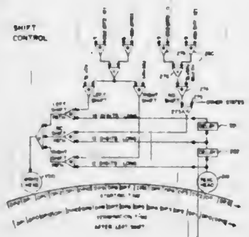
closed-path elements to the succeeding first closed-path elements and said fourth phase being coupled to each of said second closed-path elements whereby the stored information is successively shifted from said first closed-path elements through succeeding second closed-path elements to succeeding first closed-path elements.

3,050,716
MAGNETIC STORAGE CIRCUITS
Ernest G. Andrews, Mountain Lakes, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 8, 1958, Ser. No. 766,040
12 Claims. (Cl. 340—174)



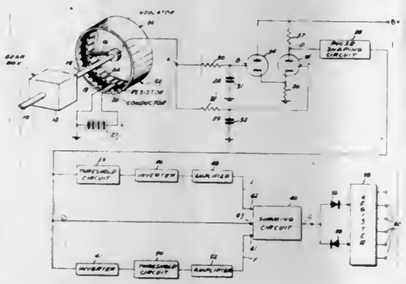
1. In a magnetic memory circuit, pairs of magnetic devices arranged in rows and columns, each of said devices having a substantially rectangular hysteresis characteristic and capable of being switched from one magnetic condition to another, first means for both selectively switching at least one of said devices to a first magnetic condition when in a second magnetic condition and only tending to switch its companion device from said first magnetic condition to said second magnetic condition, second means for sensing the switching of said devices from said second magnetic condition to said first magnetic condition, and third means for selectively producing an effect additive to that produced by said first means with respect to said companion devices to cause said companion devices to switch to said second magnetic condition.

3,050,717
COMPUTER SHIFT CONTROL CIRCUITS
George G. Hoberg, Berwyn, John R. Van Andel, Bridgeport, and Edward W. Veitch, Rosemont, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Original application Mar. 4, 1955, Ser. No. 492,062. Divided and this application Aug. 7, 1956, Ser. No. 602,654
10 Claims. (Cl. 340—174.1)



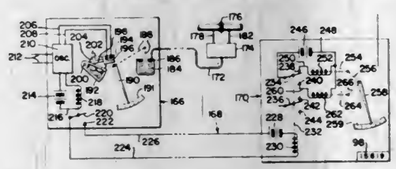
9. In an electronic computer system, a revolving memory loop on a moving magnetizable medium for serially recording a word having N number of digits, a transducer head for reading from said loop, a transducer head for writing on said loop, said heads being spaced apart from each other a distance equivalent to N—1 digits, three separate circuit loops each providing a separate regenerative path connectible between said read transducer head and said write transducer head, including respectively a path having no time delay, a path with delay means having a time delay equivalent to one digit and a path with delay means having a time delay equivalent to two digits, said time delay means including an adder counter for serial read-in and serial read-out, timing signals of discrete width synchronized with said revolving memory loop and occurring simultaneously with said words for retiming digits introduced by said writing transducer head, and shift control circuit means connected to said regenerative paths and responsive to signals from the computer system for connecting a selected one of said paths to the heads whereby information received by the write head from the read head is selectively delayed or not delayed, depending upon the regenerative path selected.

3,050,718
PHYSICAL DISPLACEMENT REGISTER
George J. Giel, Redondo Beach, Calif., assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 12, 1957, Ser. No. 645,480
4 Claims. (Cl. 340—203)



1. A system for manifesting the angular displacement of a rotatively-mounted shaft, comprising: a cyclic bi-directional step potentiometer connected to said rotatively-mounted shaft, for providing a single output signal having a range of discrete levels dependent on the angular position of said rotatively-mounted shaft; a differentiator circuit connected to receive said signal from said potentiometer, for providing output pulses upon the occurrence of level changes in said signal from said potentiometer, the sense of said output pulses being indicative of the direction of a level change in said signal; and a two-way digital register connected to receive said pulses from said differentiator circuit to register pulses of one sense as increments and pulses of the other sense as decrements.

3,050,719
TRANSMITTING APPARATUS
William J. Ambrose, Springfield, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 18, 1959, Ser. No. 860,533
14 Claims. (Cl. 340—206)



1. A time delay apparatus for use in a gear train transmitting power from a driving shaft to a driven shaft, said time delay apparatus comprising a stub shaft fixedly po-

sitioned to support two freely rotatable clutch gears of said gear train thereon, each of said clutch gears having a detent protruding therefrom on faces that are immediately adjacent one another, a first of said clutch gears being operably connected to rotate only on an outer end portion of said stub shaft and the other of said gears being operably connected to slide along said stub shaft, an intermittently energized solenoid, a forked lever fixedly connected at one of its end to a movable core of said solenoid and at its other end to an embossed portion on another face of said other of said gears, a spring operably positioned to apply a force to said forked lever to cause said detent of said other gear to be brought into driving engagement with said detent of said other mentioned clutch gear only after said driving shaft has rotated said other driving gear through one complete revolution and said solenoid is deenergized to thereby effect a constant time delay before said power can be transmitted between said driving and driven shafts through said gear train.

3,050,720
SYSTEM FOR SENSING A CHANGE IN AN AMBIENT CONDITION

Stanley R. Rich, West Hartford, Conn., assignor to General Ultrasonics Company, Hartford, Conn., a corporation of Connecticut

Filed Dec. 17, 1958, Ser. No. 781,119
19 Claims. (Cl. 340—244)



1. A system for sensing a change in an ambient condition comprising an electro-mechanical sensing device having a natural frequency of resonance, means providing alternating electric energy for driving said device, means for progressively altering the frequency of said energy through a band which includes said frequency of resonance and another frequency at which a change in the acoustic loading of said device causes a substantially greater change in the impedance of said device to driving alternating energy than the same change in acoustic loading causes at said frequency of resonance, means for sensing a change in the impedance of said device with respect to frequency and with respect to the ambient medium said sensing means including means to detect the modulation envelope of the alternating current supplied to said device with respect to frequency over said band, and means for indicating a change in said envelope resulting from a change in said impedance caused by a change in the ambient condition.

3,050,721
SUPERCONDUCTIVE CIRCUITS

Owen T. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Feb. 24, 1960, Ser. No. 10,655
12 Claims. (Cl. 340—347)

9. A superconductive analog to digital converter comprising; a plurality of pairs of complementary cryotrons; means maintaining said cryotrons at a temperature at which the gate conductors thereof are normally superconducting; each of said gate conductors having first and second terminals; a plurality of output lines representing digital data; a current source; first superconducting circuit means connecting said first terminal of the gate conductor of one of the first of a pair of cryotrons electrically in series with said current source, connecting the first terminal of the gate conductors of the remaining first of each of said pairs of cryotrons electrically in series with the second terminal of the gate conductors of the first of each of said pairs of cryotrons, and connecting the second terminal of the last of said serially connected cryotrons electrically in series with the output line representing the lowest order of digital datum, whereby a normally superconducting path is provided between said current source and said lowest order output line; second superconducting circuit means connecting the first terminal of the gate conductors of each of the second of said pairs of cryotrons electrically in parallel with the first terminal of the gate conductor of the first of each complementary cryotron and connecting the second terminal of the gate conductor of each of said second of said pairs of cryotrons electrically in series with a predetermined output line; means tending to maintain the gate conductors of each of said second of said pairs of cryotrons resistive to thereby isolate each of said predetermined output lines from said current source, said last named means including a first control conductor for each of said second of said pairs of cryotrons, first means supplying a first plurality of independent biasing currents to each of said first control conductors, said first biasing currents being proportional

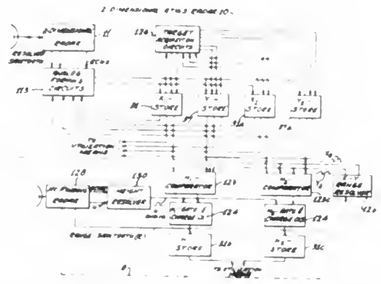


to the digital datum represented by the output line to which the corresponding gate conductor is connected, and each of said first biasing currents being effective to switch said corresponding gate conductor from the superconducting to the resistive state; means modifying the critical magnetic field of the gate conductors of each of said first of said pairs of cryotrons, including a first control conductor for each of said first of said pairs of cryotrons, means supplying a second plurality of independent biasing currents to each of said first control conductors, each of said second plurality of biasing currents being proportional to the magnitude of each of said first plurality of biasing currents supplied to the complementary second of said pairs of cryotrons, and each of said second biasing currents being ineffective by itself to switch the corresponding gate conductors from the superconducting to the resistive state; a current proportional to an analog function; and further superconducting circuit means conducting said analog current to reinforce the magnetic fields generated by said second biasing currents and to oppose the magnetic fields generated by said first biasing currents, whereby each of the gate conductors of one of said pairs of cryotrons oppositely switch between the superconducting and resistive states in response to a predetermined change in the magnitude of said analog current to provide a unique superconducting path between said current source and one of said output lines.

3,050,722
MULTIPLE TARGET AUTOMATIC TRACK-WHILE-SCAN RADAR

Frank D. Covely 3rd, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Aug. 25, 1955, Ser. No. 530,485
21 Claims. (Cl. 343—11)



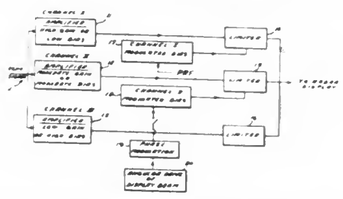
2. In a system for tracking a plurality of moving objects including at least one radar system having at least means for generating radio energy in pulse form, antenna means for radiating said energy and receiving reflected energy from irradiated objects and receiver means for amplifying and detecting said received reflected energy, in combination, means for deriving from said radar system an intermittent supply of information as to the spatial position of each of said plurality of objects, said information being in the form of X, Y and Z Cartesian coordinates of the position of each of said objects; a plurality of pairs of X and Y store circuits coupled to said derivation means, each pair for storing information indicative of the X and Y coordinates of a different one of said objects; a plurality of Z store circuits coupled to said derivation means, each for storing information indicative of the Z coordinates of a different one of said objects; means operatively associated with said radar system for initially obtaining and inserting in each said pair of X and Y stores information indicative of the magnitudes of the X and Y Cartesian coordinates of a different one of said objects; and a plurality of means, each coupled to said derivation means, to one said pair of X and Y stores, and to one of said Z stores, for comparing the intermittently derived X and Y coordinate information with all stored X and Y information, for selecting that pair of X and Y stores whose stored information is equivalent within a predetermined range, to the intermittent X and Y information with which it is then being compared and for respectively supplying to said selected pair of X and Y stores and to the Z store associated with said selected pair information indicative of a parameter of said intermittent X, Y and Z information, whereby said stored information is caused to correspond to said intermittent information.

3,050,723
DEVICE TO DISCRETELY CHARACTERIZE LEVELS OF SIGNAL INTENSITY IN RADAR MAPPING AND COMPUTER DISPLAYS

David Atlas, 62 Wiswall Road, Newton Centre, Mass.

Original application Jan. 4, 1955, Ser. No. 479,876, now Patent No. 2,911,640, dated Nov. 3, 1959. Divided and this application Apr. 11, 1958, Ser. No. 728,023
3 Claims. (Cl. 343—11)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. For use with a radar system having means for scanning an area with directionally radiated periodic pulses of high frequency energy, means for receiving echo signals from reflecting objects illuminated by said radiation and a plan position indicator for visually displaying said echo signals at azimuth and range positions corresponding to the azimuth and range positions of the reflecting objects producing the echo signals, a network for plotting an intensity contour map of a storm in the surveillance area of said radar system, said network comprising: a low threshold amplifier-limiter channel, an intermediate threshold amplifier-limiter channel and a high threshold amplifier-limiter channel, each amplifier-limiter channel having a substantially constant output for all input signals exceeding its threshold; means for applying said echo signals to

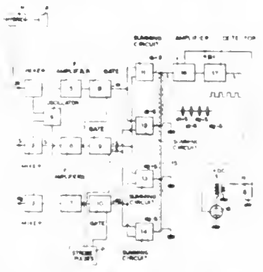


the inputs of said amplifier-limiter channels in parallel; means synchronized with the radiated pulses of said radar system for blocking transmission through one of said low and intermediate threshold channels for the duration of a pulse repetition interval following alternate radiated pulses; means for applying a characteristic amplitude modulation to the echo signals in the other of said low and intermediate threshold channels; and means for applying the outputs of the three amplitude-limiter channels in parallel to the echo signal input of said plan position indicator.

3,050,724
AMPLIFYING ARRANGEMENTS

Peter Frederic Thomas Cryer Stillwell, Haddenham, Aylesbury, England, assignor to Electric & Musical Industries Limited, Middlesex, England, a company of Great Britain

Filed Nov. 29, 1957, Ser. No. 699,574
Claims priority, application Great Britain Dec. 4, 1956
3 Claims. (Cl. 343—16)



1. In radar apparatus of the simultaneous lobing type, a source of a plurality of trains of radar signals in which each train comprises signals occurring at spaced time intervals with the signals in each train occurring substantially coincidentally with the signals in another train, the signals in one train representing a difference signal d_1, the signals in another train representing a difference signal d_2, and the signals in another train representing a sum signal S, means for gating said signals so as to pass substantially coincidentally occurring gated signals from each train, means for deriving from said gated signals, composite signals representing d_1+S, d_1-S, d_2+S and d_2-S, means for delaying said composite signals relatively to one another to cause composite signals derived from one group of coincidentally occurring gated signals to occur in succession before the occurrence of composite signals derived from the next group of coinci-

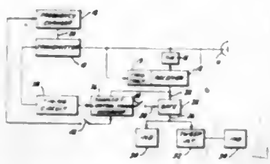
dentally occurring gated signals, a common amplifier, and means for feeding the relatively delayed signals to said common amplifier.

3,050,725
RADIO FREQUENCY IMAGE DETECTOR
John A. Kuecken, Cincinnati, Ohio, assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Oct. 4, 1960, Ser. No. 60,339
3 Claims. (Cl. 343—17)



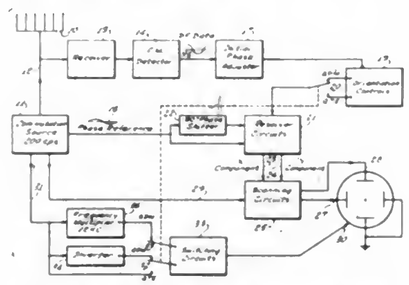
1. A radio frequency detector comprising: a transparent, deformable dielectric material; a source of light; a beam splitter; means for directing a beam of light from said source through said beam splitter, said beam dividing into two paths, the lengths of said paths being different by one-half wavelength, one of said paths being through said material; means for combining said paths whereby the light in said paths cancel; and means for focusing radio frequency energy onto said material whereby said plate is deformed and the length of the path through said material is varied in accordance with said deformation.

3,050,726
RADAR SYSTEM INCLUDING ANTI-JAMMING MEANS
George J. Laurent, Jenkintown, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Apr. 23, 1956, Ser. No. 579,791
9 Claims. (Cl. 343—17.1)



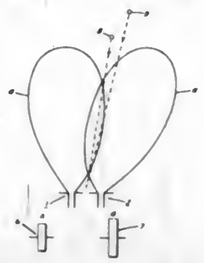
2. In a radar system including a pulse type transmitter, a receiver which is tuned to receive object reflected echoes of signals radiated by said transmitter, and a signal utilization device connected to the output of said receiver, means for sampling the output of said receiver at intervals normally free of object reflected echo signals, means responsive to sample signals supplied by said sampling means for generating a control signal for each sampling interval in which said sample signals exceed a preselected amplitude, and means coupled to said receiver and responsive to said control signals for immediately decoupling said receiver from said signal utilization device for a time interval equal to a large fraction of an interpulse period of said pulse type transmitter.

3,050,727
REVERSE BEARING INDICATOR
Paul G. Hansel, Greenvale, and Herbert H. Waller, Hicksville, N.Y., assignors to Servo Corporation of America, Hicksville, N.Y., a corporation of New York
Filed Oct. 26, 1960, Ser. No. 65,147
5 Claims. (Cl. 343—113)



1. An indicator for use in a direction finder capable of selectively and visually displaying either of two independent directional indications each in distinctive form, comprising means for receiving bearing information, first and second control means for orienting said bearing information with respect to true north and magnetic north respectively, switch means for selecting one of said control means, a display scope having deflection circuits, means coupled to the output of said switch means for resolving said information into orthogonal deflection voltage components, means for applying said voltage components to said deflection circuits for producing a diametral strobe indicative of the bearing of said direction finder with respect to the selected true north or magnetic north orientation, first means for blanking a radial portion of the diametral strobe, and second means for blanking regular portions of the remaining radial portion of one of said selected orientations, whereby a radial true north bearing or a radial reciprocal magnetic north bearing is produced in distinctive form on said scope dependent on the selected orientation of said bearing information.

3,050,728
RADIO DIRECTION FINDING SYSTEM
Sidney J. Worley, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Filed June 17, 1958, Ser. No. 744,035
3 Claims. (Cl. 343—119)



1. A passive radio direction finding system comprising: first and second input circuits adapted respectively to be connected to two antennas for respectively receiving a radio signal from a distant source; a first signal mixer having its signal input circuit coupled to said first input circuit; a second signal mixer having its signal input circuit coupled to said second input circuit; a local oscillator having its output circuit coupled to the carrier input circuits by said first and second signal mixers and including means for shifting the phase of the carrier supplied to said second signal mixer with respect to the phase of the carrier supplied to said first signal mixer; an adding circuit connected to the output circuits of said first and second signal mixers; an amplifier having its input circuit connected to the output circuit of said adding circuit; first and second synchronous detectors having their signal input circuits respectively connected to the output circuit of said amplifier and having their carrier input circuits connected respectively to said local oscillator to receive said phase shifted carriers; and a differential amplifier having two input circuits connected respectively to the output circuits of said first and second synchronous detectors and having its output circuit adapted to be connected to deflection means oscilloscope means.

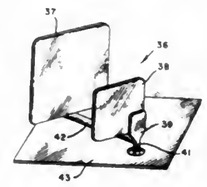
3,050,729
RADIO DIRECTION FINDING SYSTEM
Kenneth Norman Fromm, Cincinnati, Ohio, assignor to International Telephone and Telegraph Corporation
Filed June 17, 1958, Ser. No. 744,036
5 Claims. (Cl. 343—119)



1. A radio direction finding system for determining the location of a source of pulsed radio signals comprising: first and second input circuits including detector means for respectively receiving a pulsed radio signal from a distant source and for respectively providing first and second detected input pulses having a first frequency band; means coupled in said first input circuit for shifting said first input pulse to a different frequency band; means coupled to said input circuits for adding the pulses therein; amplifying means coupled to said adding means to provide an output from said amplifying means indicative of the ratio of said first and second input signals, first means coupled to said amplifying means for passing a pulse having said first frequency band; second means coupled to said amplifying means for passing a pulse having the same frequency band as said different frequency band; third means coupled to said second means for demodulating the pulse therein to said first frequency band; and means coupled to said first means and said third means for differentially combining the pulses provided thereby.

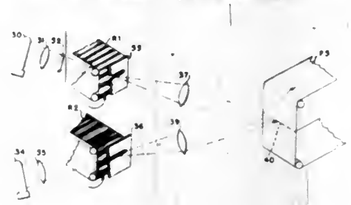
3,050,730
BROADBAND PLATE ANTENNA
Bernard J. Lamberty, Santa Clara, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed July 9, 1959, Ser. No. 825,996
3 Claims. (Cl. 343—843)

3. A high frequency untuned antenna comprising a pair of generally rectangular continuous plates of conducting material arranged over a ground plane with a plane containing the axis of symmetry of each plate perpendicular to the plates, each of said plates having a maximum length along any side thereof equal to one-eighth of a wavelength at the lowest design operating frequency for said plate, said plates being spaced closely



to and normal to a ground plane, the linear dimensions and spacing of successive plates varying in progressive increments of a predetermined ratio, and a transmission line for feeding said plates comprising a coaxial line having an inner conductor connected to the edges of said plates closest to the ground plane and an outer conductor connected to the ground plane.

3,050,731
METHOD AND APPARATUS FOR PREPARING DISPLAYS OF SEISMIC INFORMATION
Eugene Usdin, Tulsa, Okla., assignor, by mesne assignments, to Sinclair Research, Inc., New York, N.Y., a corporation of Delaware
Filed June 26, 1959, Ser. No. 823,218
2 Claims. (Cl. 346—1)



1. A method for preparing visual displays of seismic signals which includes reproducing a first selected frequency spectrum of a seismic signal as a first variable density recording along the length of a first photographic medium moved continuously as a function of time, reproducing a second selected frequency spectrum of said seismic signal as a second variable density recording along the length of a second photographic medium moved continuously as a function of time, in which said first variable density recording is thereafter projected with a first light of a first predetermined light frequency content, and said second variable density recording is simultaneously projected with a second light of a second predetermined light frequency content, said first and second variable density recordings being moved uniformly in synchronism past said first light and said second light respectively, and directing said projected light of said first predetermined light frequency content and said projected light of said second predetermined light frequency content to produce a common visual image varying in light content as a function of time.

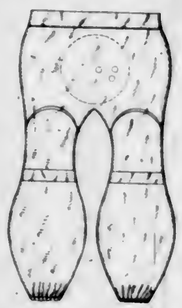
DESIGNS

AUGUST 21, 1962

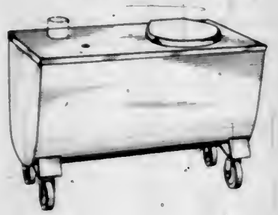
193,418
DISPENSER FOR HOT CHOCOLATE OR THE LIKE
Richard J. Skiera, 4339 N. Mulligan Ave., Chicago, Ill., and Paul K. Phillips, 710 E. Madison St., Lombard, Ill.
Filed Dec. 27, 1960, Ser. No. 63,332
Term of patent 14 years
(Cl. D2—3)



193,419
SPORT TROUSERS
Lorena G. Bedient, Marshall, and Julia E. Mewes, Spokane, Wash., assignors of one-third to Ruth W. Dobson, Spokane, Wash.
Filed Feb. 24, 1961, Ser. No. 64,053
Term of patent 14 years
(Cl. D3—17)



193,420
PORTABLE TOILET TANK
James M. Kulka, 1623 S. Jefferson St., Chicago, Ill.
Filed Sept. 22, 1961, Ser. No. 66,804
Term of patent 14 years
(Cl. D4—5)



193,421
CASTER
Paul S. Price and Frederick C. Greene, both of St. Joseph, Mich., assignors to Shepherd Casters, Inc., a corporation of Michigan
Filed Oct. 17, 1961, Ser. No. 67,125
Term of patent 14 years
(Cl. D10—6)



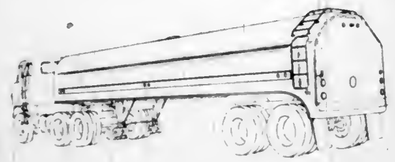
193,422
HOUSE
Donald J. Scholz, Toledo, Ohio, assignor to Scholz Homes, Inc., Toledo, Ohio, a corporation of Ohio
Filed Aug. 4, 1961, Ser. No. 66,194
Term of patent 14 years
(Cl. D13—1)



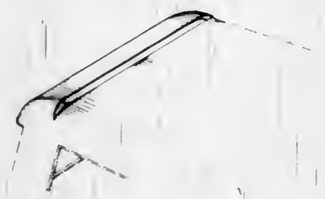
193,423
AUTOMOBILE
Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, a stock corporation of France
Filed Aug. 2, 1961, Ser. No. 66,173
Claims priority, application France Feb. 22, 1961
Term of patent 14 years
(Cl. D14—3)



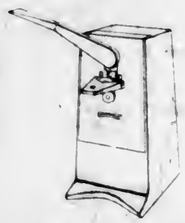
193,424
TANK TRUCK
Melvin W. Krueger, Madison, Wis., assignor to Dairy Equipment Company, Madison, Wis., a corporation of Wisconsin
Filed Sept. 15, 1961, Ser. No. 66,726
Term of patent 14 years
(Cl. D14—3)



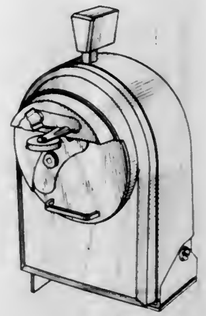
193,425
AUTOMOBILE
Hugh W. Shumaker, 517 S. Jackson St., Moscow, Idaho
Filed Jan. 26, 1961, Ser. No. 63,714
Term of patent 14 years
(Cl. D14—6)



193,426
CAN OPENER
Don J. Defano, River Grove, and Robert I. Kallman, Geneva, Ill., assignors to Cory Corporation, Chicago, Ill., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 64,419
Term of patent 7 years
(Cl. D22—2)



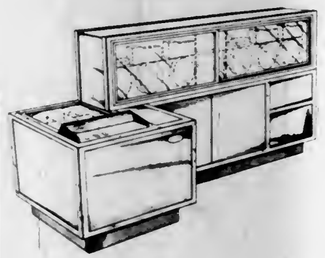
193,427
ELECTRIC CAN OPENER OR THE LIKE
Douglas W. Anderson, Palatine, and Andrew L. Alger, Evanston, Ill., assignors to Burgess Vibrocrafters, Inc., Grayslake, Ill., a corporation of Delaware
Filed Feb. 15, 1962, Ser. No. 68,840
Term of patent 14 years
(Cl. D22—2)



193,428
DENTAL MIRROR OR SIMILAR ARTICLE
Jacob C. Butler, Flossmoor, Ill., assignor to The William Getz Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 2, 1961, Ser. No. 64,118
Term of patent 14 years
(Cl. D24—1)



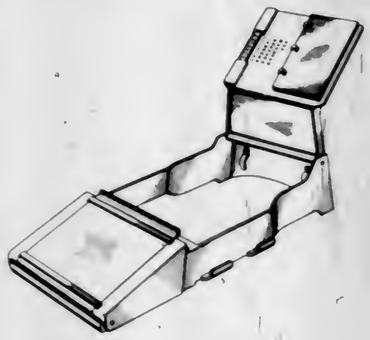
193,429
CONSOLE FOR COMPUTING MACHINE
Elmer J. Stoltz, Alameda County, Calif., assignor to Friden, Inc., a corporation of California
Filed Dec. 28, 1959, Ser. No. 58,837
Term of patent 14 years
(Cl. D26—5)



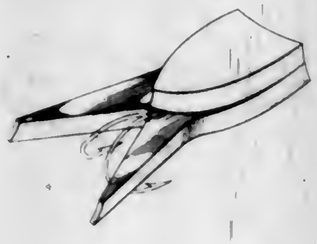
193,430
COMBINED CONSOLE AND DESK FOR A COMPUTING MACHINE
Elmer J. Stoltz, Alameda County, Calif., assignor to Friden, Inc., a corporation of California
Filed Dec. 28, 1959, Ser. No. 58,838
Term of patent 14 years
(Cl. D26—5)



193,431
ATTACHMENT FOR A DESK TELEPHONE
William Chesterfield Newton, 69 Devon St., Annerley, Brisbane, Queensland, Australia
Filed Jan. 12, 1960, Ser. No. 59,019
Claims priority application Australia July 17, 1959
Term of patent 14 years
(Cl. D26—14)



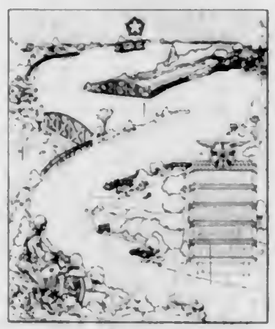
193,432
FISH LURE
Ralph R. Gunderson, 2450 S. Prairie Ave., Chicago, Ill.
Filed Oct. 26, 1961, Ser. No. 67,275
Term of patent 14 years
(Cl. D31—4)



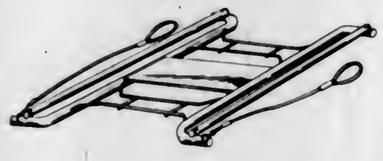
193,433
COSTUMER
Robert Goldman and Lillian Goldman, Louisville, Ky., assignors to Lill, Inc., Salem, Ind., a corporation of Indiana
Filed Aug. 18, 1961, Ser. No. 66,409
Term of patent 3½ years
(Cl. D33—8)



193,434
PANEL FOR AN AMUSEMENT DEVICE
David H. Braun, Miami, Fla., assignor to All-Tech Industries, Inc., Hialeah, Fla., a corporation of Florida
Filed Aug. 15, 1961, Ser. No. 66,352
Term of patent 14 years
(Cl. D34—5)



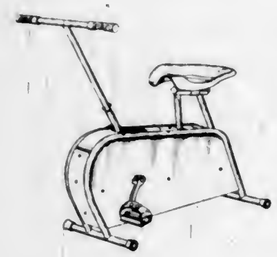
193,435
EXERCISER
Eugene Weiss, New York, N.Y., assignor to Beacon Enterprises, Inc., New York, N.Y., a corporation of New York
Filed Nov. 24, 1961, Ser. No. 67,681
Term of patent 7 years
(Cl. D34—5)



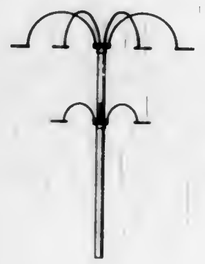
193,436
GAME CLUB
Burton E. Patrick, 905 Forest Drive, Kokomo, Ind.
Filed Jan. 30, 1962, Ser. No. 68,581
Term of patent 14 years
(Cl. D34—5)



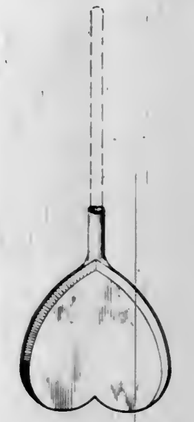
193,437
EXERCISING MACHINE
James Maratta, Pelham, N.Y., assignor to Physio-Health, Inc., Pelham, N.Y., a corporation of New York
Filed Mar. 14, 1962, Ser. No. 69,254
Term of patent 14 years
(Cl. D34—5)



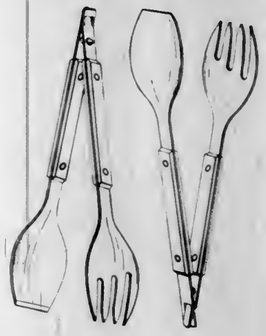
193,438
FLOWER POT HOLDER
Joseph Holt, 99 Kingsboro Road, Rochester, N.Y.
Filed Nov. 18, 1960, Ser. No. 62,896
Term of patent 14 years
(Cl. D35—3)



193,439
SNOW SHOVEL
Ellsworth W. Severance, Stratford, Conn., assignor of one-third to Raymond E. Severance, one-third to William L. Severance, and one-third to Mrs. Paul E. Herrmann, all of Stratford, Conn.
Filed May 26, 1961, Ser. No. 65,367
Term of patent 7 years
(Cl. D39—1)



193,440
SALAD TONG
William F. Vernon, Newton, Iowa, assignor to The Vernon Company, Newton, Iowa
Filed Dec. 19, 1961, Ser. No. 67,965
Term of patent 14 years
(Cl. D44—4)



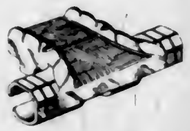
193,441
HOLDER FOR COCKTAIL OLIVES AND THE LIKE
Lucien A. Marsh, Stinson Beach, Calif., assignor to G. T. Marsh & Co., San Francisco, Calif., a corporation of California
Filed Jan. 25, 1961, Ser. No. 63,692
Term of patent 14 years
(Cl. D44—29)



193,442
BRACELET LINK OR SIMILAR ARTICLE
Murray L. Cowan, Boston, Mass., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed June 22, 1961, Ser. No. 65,690
Term of patent 14 years
(Cl. D45—4)



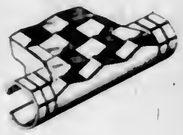
193,443
END LINK FOR A BRACELET OR SIMILAR ARTICLE
Murray L. Cowan, Boston, Mass., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed Feb. 9, 1962, Ser. No. 68,747
Term of patent 14 years
(Cl. D45—4)



193,444
WATCH BRACELET COMPONENT OR SIMILAR ARTICLE
Murray L. Cowan, Boston, Mass., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed Feb. 9, 1962, Ser. No. 68,748
Term of patent 14 years
(Cl. D45—4)



193,445
END LINK FOR A BRACELET OR SIMILAR ARTICLE
Murray L. Cowan, Boston, Mass., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed Feb. 9, 1962, Ser. No. 68,755
Term of patent 14 years
(Cl. D45—4)

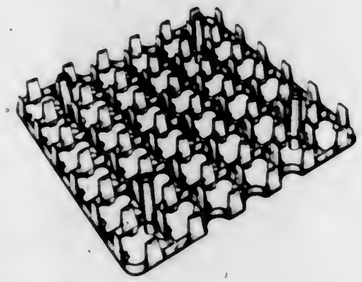


193,446
JUG
Neal D. Houghton, Orange, Calif., assignor to Kerr Glass Manufacturing Corporation, Los Angeles, Calif., a corporation of Nevada
Filed Jan. 23, 1962, Ser. No. 68,485
Term of patent 7 years
(Cl. D58—5)

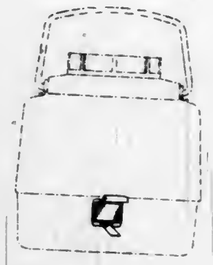


193,447
DISPLAY BOX
Marvin W. Vannice, Burbank, Calif., assignor to Vue-Chest, Inc., Burbank, Calif., a corporation of California
Filed Nov. 22, 1960, Ser. No. 62,934
Term of patent 14 years
(Cl. D58—12.6)

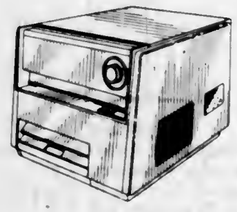
193,448
EGG TRAY
Arthur W. Theilig, Fort Atkinson, Wis., assignor to Rockwood & Co., Chicago, Ill., a corporation of Delaware
Filed Aug. 11, 1961, Ser. No. 66,304
Term of patent 14 years
(Cl. D58—13)



193,449
DISPENSING SPIGOT
Herbert M. Piker, Wyoming, Ohio, assignor to Hamilton-Skotch Corporation, Hamilton, Ohio, a corporation of Ohio
Filed Aug. 9, 1961, Ser. No. 66,269
Term of patent 14 years
(Cl. D58—17)

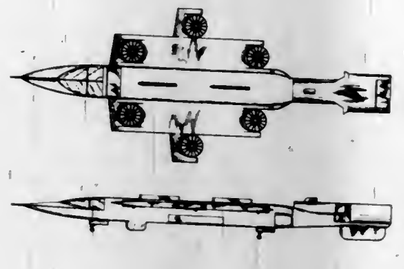


193,450
DOCUMENT REPRODUCING APPARATUS
William H. Armstrong, 427 Orchard Hill Drive, Bloomfield, Mich., and James G. Balmer, Jr., 553 Coolidge Road, Birmingham, Mich.
Filed Jan. 9, 1961, Ser. No. 63,493
Term of patent 14 years
(Cl. D61—1)



193,451
FONT OF CHARACTER NUMERALS
Samuel Ralph Parris, Malvern, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 19, 1961, Ser. No. 63,617
Term of patent 14 years
(Cl. D64—12)

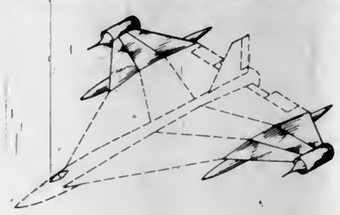
193,452
VERTICAL TAKE-OFF AND LANDING AIRCRAFT
Lawrence B. Rellis, 5123 W. Deming Place, Chicago, Ill.
Filed June 9, 1960, Ser. No. 60,904
Term of patent 3½ years
(Cl. D71—1)



193,453
BOAT
Milton M. Siegel, Los Angeles, Calif., assignor to Columbia Plastics Corp., Culver City, Calif., a corporation of California
Filed Aug. 15, 1960, Ser. No. 61,747
Term of patent 14 years
(Cl. D71—1)



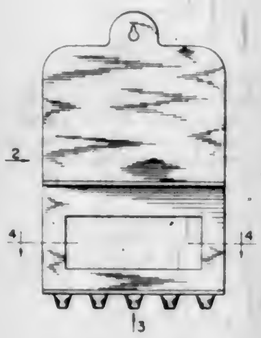
193,454
AIRCRAFT
William C. Sleeman, Jr., Newport News, Va., and Thomas A. Toll, Lancaster, Calif., assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Continuation of design application Ser. No. 61,939, Aug. 18, 1960. This application May 19, 1961, Ser. No. 65,299
Term of patent 14 years
(Cl. D71—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



193,455
HAND SWIMMING FLIPPER
Raoul L. Lassonde, 2610 Girouard Blvd., St.-Hyacinthe, Quebec, Canada
Filed July 24, 1961, Ser. No. 66,020
Term of patent 14 years
(Cl. D71—1)



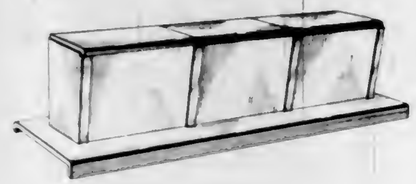
193,456
PENCIL HOLDER
Menno Bellar, 21 Rockland St., Fitchburg, Mass.
Filed Jan. 30, 1961, Ser. No. 63,755
Term of patent 3½ years
(Cl. D74—1)



193,457
PENCIL SHARPENER
Jack Fairchild Fleming, Summit, N.J., assignor to Sterling Plastics Co., Union, N.J., a corporation of New Jersey
Filed May 10, 1961, Ser. No. 65,098
Term of patent 14 years
(Cl. D74—21)



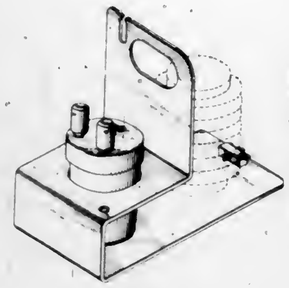
193,458
COUNTER TOP UNIT FOR BANKS OR THE LIKE
Ira J. Pearson, 3680 Chicago Ave., Riverside, Calif.
Filed Jan. 20, 1960, Ser. No. 59,117
Term of patent 14 years
(Cl. D80—2)



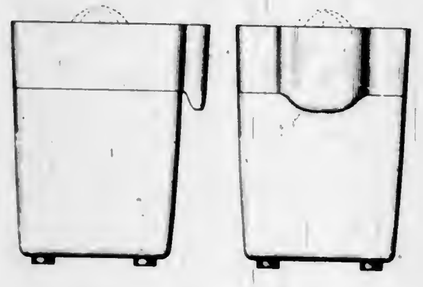
193,459
DISPLAY STAND FOR PAMPHLETS OR THE LIKE
John F. Carvlin, San Francisco, Calif., assignor to Missionary Society of St. Paul the Apostle in the State of California, San Francisco, Calif., a corporation of California
Filed June 27, 1960, Ser. No. 61,121
Term of patent 14 years
(Cl. D80—9)



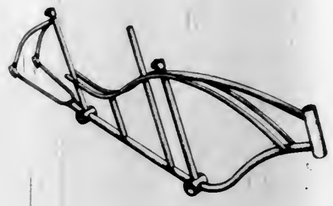
193,460
COMBINED CARRIER AND RECEIVER FOR A PORTABLE MEDICAL ASPIRATOR
George H. Stoner, Warminster, Pa., assignor to Air-Shields, Inc., Hatboro, Pa., a corporation of Delaware
Filed Nov. 4, 1960, Ser. No. 62,735
Term of patent 14 years
(Cl. D83—1)



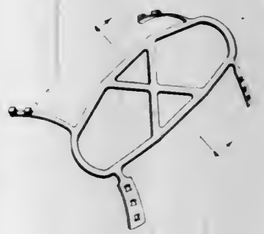
193,461
ELECTRIC FRUIT JUICER
Henry J. Talge, Kansas City, Mo., assignor to John C. Hockery, trustee, Independence, Mo.
Filed Feb. 23, 1962, Ser. No. 68,927
Term of patent 14 years
(Cl. D89—1)



193,462
TANDEM BICYCLE FRAME
Joseph A. Silbereis, Dayton, Ohio, assignor to The Huffman Manufacturing Company, Dayton, Ohio, a corporation of Ohio
Filed June 5, 1961, Ser. No. 65,493
Term of patent 14 years
(Cl. D90—8)



193,463
ANTI-SKID UNIT FOR AUTOMOBILE TIRES
Henry L. Bunker, Jr., Swarthmore, Pa., and William J. Powers, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 9, 1961, Ser. No. 67,021
Term of patent 14 years
(Cl. D90—20)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 21ST DAY OF AUGUST, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Anderson Bros. Mfg. Co.: *See*—
Wehr, Robert D. Re. 25,228.

Buck, Willard E. Method and apparatus for cooling and lubricating gas turbine bearings. Re. 25,227, 8–21–62, Cl. 88—74.

Curtiss-Wright Corp.: *See*—
Sacchini, Columbus R., and Tomko. Re. 25,229.

Finucane, Thomas P., W. A. Mitchell, and L. Z. Raymond, to General Foods Corp. Angel food cake mix. Re. 25,231, 8–21–62, Cl. 99—94.

General Foods Corp.: *See*—
Finucane, Thomas P., Mitchell, and Raymond. Re. 25,231.

Mitchell, William A.: *See*—
Finucane, Thomas P., Mitchell, and Raymond. Re. 25,231.

Pierpoint, Harold W. Grain drier. Re. 25,230, 8–21–62, Cl. 34—55.

Raymond, Leonard Z.: *See*—
Finucane, Thomas P., Mitchell, and Raymond. Re. 25,231.

Sacchini, Columbus R., and D. R. Tomko, to Curtiss-Wright Corp. Spring clutch mechanisms. Re. 25,229, 8–21–62, Re. 192—81.

Tomko, Donald R.: *See*—
Sacchini, Columbus R., and Tomko. Re. 25,229.

Wehr, Robert D., to Anderson Bros. Mfg. Co. Apparatus for extracting juice from citrus fruits. Re. 25,228, 8–21–62, Cl. 100—97.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 2,167, 8–21–62, Cl. 47—61.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 2,167.

LIST OF DESIGN PATENTEES

Air-Shields, Inc.: *See*—
Stoner, George H. 193,460.

Alger, Andrew L.: *See*—
Anderson, Douglas W., and Alger. 193,427.

All-Tech Industries, Inc.: *See*—
Braun, David H. 193,434.

Anderson, Douglas W., and A. L. Alger, to Burgess Vibrocrafters, Inc. Electric can opener or the like. 193,427, 8–21–62, Cl. D22—2.

Andre Citroen, Societe Anonyme: *See*—
Brueder, Antoine. 193,423.

Armstrong, William H., and J. G. Balmer, Jr. Document reproducing apparatus. 193,450, 8–21–62, Cl. D61—1.

Balmer, James G., Jr.: *See*—
Armstrong, William H., and Balmer. 193,450.

Beacon Enterprises, Inc.: *See*—
Weiss, Eugene. 193,435.

Bedient, Lorena G., and J. E. Mewes, ½ to R. W. Dobson. Sport trousers. 193,419, 8–21–62, Cl. D3—17.

Bellar, Menno. Pencil holder. 193,456, 8–21–62, Cl. D74—1.

Braun, David H., to All-Tech Industries, Inc. Panel for an amusement device. 193,434, 8–21–62, Cl. D34—5.

Brueder, Antoine, to Andre Citroen, Societe Anonyme. Automobile. 193,423, 8–21–62, Cl. D14—3.

Bunker, Henry L., Jr., and W. J. Powers, Jr., to E. I. du Pont de Nemours and Co. Anti-skid unit for automobile tires. 193,463, 8–21–62, Cl. D90—20.

Burgess Vibrocrafters, Inc.: *See*—
Anderson, Douglas W., and Alger. 193,427.

Burroughs Corp.: *See*—
Parris, Samuel R. 193,451.

Butler, Jacob C., to The William Getz Corp. Dental mirror or similar article. 193,428, 8–21–62, Cl. D24—1.

Carvlin, John F., to Missionary Society of St. Paul the Apostle in the State of California. Display stand for pamphlets or the like. 193,459, 8–21–62, Cl. D80—9.

Columbia Plastics Corp.: *See*—
Siegel, Milton M. 193,453.

Cory Corp.: *See*—
Defano, Don J., and Kallman. 193,426.

Cowan, Murray L., to Speidel Corp. Bracelet link or similar article. 193,442, 8–21–62, Cl. D45—4.

Cowan, Murray L., to Speidel Corp. End link for a bracelet or similar article. 193,443, 8–21–62, Cl. D45—4.

Cowan, Murray L., to Speidel Corp. Watch bracelet component or similar article. 193,444, 8–21–62, Cl. D45—4.

Cowan, Murray L., to Speidel Corp. End link for a bracelet or similar article. 193,445, 8–21–62, Cl. D45—4.

Dairy Equipment Co.: *See*—
Krueger, Melvin W. 193,424.

Defano, Don J., and R. I. Kallman, to Cory Corp. Can opener. 193,426, 8–21–62, Cl. D22—2.

Dobson, Ruth W.: *See*—
Bedient, Lorena G., and Mewes. 193,419.

Du Pont de Nemours, E. I., and Co.: *See*—
Bunker, Henry L., Jr., and Powers. 193,463.

Fleming, Jack F., to Sterling Plastics Co. Pencil sharpener. 193,457, 8–21–62, Cl. D74—21.

Friden, Inc.: *See*—
Stoltz, Elmer J. 193,429.
Stoltz, Elmer J. 193,430.

Getz, William, Corp., The: *See*—
Butler, Jacob C. 193,428.

Goldman, Lillian: *See*—
Goldman, Robert and L. 193,433.

Goldman, Robert and L., to Lill, Inc. Costumer. 193,433, 8–21–62, Cl. D33—8.

Greene, Frederick C.: *See*—
Price, Paul S., and Greene. 193,421.

Gunderson, Ralph R. Fish lure. 193,432, 8–21–62, Cl. D31—4.

Hamilton-Skotch Corp.: *See*—
Piker, Herbert M. 193,449.

Herrmann, Mrs. Paul E.: *See*—
Severance, Ellsworth W. 193,439.

Hockery, John C.: *See*—
Talge, Henry J. 193,461.

Holt, Joseph. Flower pot holder. 193,438, 8–21–62, Cl. D35—3.

Houghton, Neal D., to Kerr Glass Mfg. Corp. Jug. 193,446, 8–21–62, Cl. D58—5.

Huffman Mfg. Co., The: *See*—
Silbereis, Joseph A. 193,462.

Kallman, Robert I.: *See*—
Defano, Don J., and Kallman. 193,426.

Kerr Glass Mfg. Corp.: *See*—
Houghton, Neal D. 193,446.

Kulka, James M. Portable toilet tank. 193,420, 8–21–62, Cl. D4—5.

Krueger, Melvin W., to Dairy Equipment Co. Tank truck. 193,424, 8–21–62, Cl. D14—3.

Lassonde, Raoul L. Hand swimming flipper. 193,455, 8–21–62, Cl. D71—1.

Lill, Inc.: *See*—
Goldman, Robert and L. 193,433.

Maratta, James, to Physio-Health, Inc. Exercising machine. 193,437, 8–21–62, Cl. D34—5.

Marsh, G. T., & Co.: *See*—
Marsh, Lucien A. 193,441.

Marsh, Lucien A., to G. T. Marsh & Co. Holder for cocktail olives and the like. 193,441, 8–21–62, Cl. D44—29.

Mewes, Julia E.: *See*—
Bedient, Lorena G., and Mewes. 193,419.

Missionary Society of St. Paul the Apostle in the State of California: *See*—
Carvlin, John F. 193,459.

Newton, William C. Attachment for a desk telephone. 193,431, 8–21–62, Cl. D26—14.

Parris, Samuel R., to Burroughs Corp. Font of character numerals. 193,451, 8–21–62, Cl. D64—12.

Patrick, Burton E. Game club. 193,436, 8–21–62, Cl. D34—5.

Pearson, Ira J. Counter top unit for banks or the like. 193,458, 8–21–62, Cl. D80—2.

Phillips, Paul K.: *See*—
Skiera, Richard J., and Phillips. 193,418.

Physio-Health, Inc.: *See*—
Maratta, James. 193,437.

Piker, Herbert M., to Hamilton-Skotch Corp. Dispensing spigot. 193,449, 8–21–62, Cl. D58—17.

Powers, William J., Jr.: *See*—
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Siegel, Milton M., to Columbia Plastics Corp. Boat. 193,453, 8–21–62, Cl. D71—1.
Silbereis, Joseph A., to The Huffman Mfg. Co. Tandem bicycle frame. 193,462, 8–21–62, Cl. D90—8.
Sklera, Richard J., and P. K. Phillips. Dispenser for hot chocolate or the like. 193,418, 8–21–62, Cl. D2—3.
Sleeman, William C., Jr., and T. A. Toll, to United States of America, National Aeronautics and Space Administration. Aircraft. 193,454, 8–21–62, Cl. D71—1.
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Anderson, John M., to General Electric Co. Gaseous discharge structures. 3,050,687, 8–21–62, Cl. 329—158.
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Barrett, Harry B. Lathes and method of making same. 3,049,953, 8–21–62, Cl. 82—24.
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Bohus, Theodore. Schiffli embroidery machine. 3,050,020, 8–21–62, Cl. 112—95.
Bolding, Hubert V., to Standard Packaging Corp. Protective carton. 3,050,231, 8–21–62, Cl. 229—39.
Bomba, James S., N. M. Haller, and E. R. Kretzmer, to Bell Telephone Laboratories, Inc. Line tracing system. 3,050,581, 8–21–62, Cl. 178—7.1.
Bonds, Albert, to Preformed Line Products Co. Apparatus and method for positioning a helical band. 3,049,858, 8–21–62, Cl. 57—55.
Booth Fisheries Corp.: *See*—
Ruppel, Albert J. 3,049,890.
Booth, Russell N., and M. E. Russell, to Minneapolis-Honeywell Regulator Co. Simultaneous actuator for snap switches. 3,050,600, 8–21–62, Cl. 200—81.4.
Borel, Renato F. Stock market playing game. 3,050,303, 8–21–62, Cl. 273—1.
Bork, Hugo W., to Skil Corp. Shrub and garden shear. 3,049,802, 8–21–62, Cl. 30—197.
Borneman, Christian H., to General Electric Co. Device and process for machining operations. 3,050,027, 8–21–62, Cl. 116—114.
Borsini, Carlo: *See*—
Natta, Giulio, Bruzzone, and Borsini. 3,050,503.
Bosch, Robert, G.m.b.H.: *See*—
Links, Heinz. 3,050,001.
Bostitch, Inc.: *See*—
Allen, Howard G. 3,049,715.
Boston & Lockport Block Co.: *See*—
Seamans, Donald C., and Ingalls. 3,050,286.
Bosworth, Cyrus M., to Carrier Corp. Separation systems. 3,049,888, 8–21–62, Cl. 62—58.
Botany Industries, Inc.: *See*—
Schwartz, Robert C., and Moss. 3,049,763.
Bothe Computronics, Inc.: *See*—
Bothe, Rudolf. 3,050,243.
Bothe, Rudolf, to Bothe Computronics, Inc. Data-transmitting and punching mechanism. 3,050,243, 8–21–62, Cl. 234—103.
Boughner, Lawrence G., to Rockwell-Standard Corp. Non-drive torque-transmitting axles for transportation vehicles. 3,049,928, 8–21–62, Cl. 74—13.
Bourguignon, Jules F. J., to Baumgartner Freres S.A. Device for energizing a timepiece, including at least one photoelectric cell. 3,050,631, 8–21–62, Cl. 250—203.
Bovard, Robert M., to M.S.A. Research Corp. Respiratory metabolism simulator. 3,049,812, 8–21–62, Cl. 35—19.
Bovre Albert J. Patient handling apparatus. 3,049,725, 8–21–62, Cl. 5—86.
Bowen, Glen L., R. W. Lemon, and J. A. Clauss, Jr. Multiple speed power transmission. 3,050,164, 8–21–62, Cl. 192—4.
Bowen Iteo, Inc.: *See*—
Siracusa, Dante A., and Walker. 3,050,131.
Bowers, Albert, and H. J. Ringold, to Syntex Corp. 5-cyano and 5-carbamyl steroid derivatives. 3,050,518, 8–21–62, Cl. 260—239.55.
Bowers, Albert, and H. J. Ringold, to Syntex Corp. 7-cyano steroids. 3,050,534, 8–21–62, Cl. 260—397.3.
Bowling Master, Inc.: *See*—
Meyer, William F. 3,049,717.
Bowmar Instrument Corp.: *See*—
Mann, Jabez H. 3,050,250.
Bowser, Inc.: *See*—
Topol, George J. 3,049,910.
Boyd, Michael. Ironing board assembly. 3,049,825, 8–21–62, Cl. 38—112.
Boyer, Ernest W., H. T. Ford, and E. E. McKelvey, to Continental Oil Co. Method and apparatus for connecting a getterion pump to an analytical mass spectrometer. 3,050,622, 8–21–62. Cl. 250—41.9.
Boyett, William E.: *See*—
Yahnke, James G., and Bovett. 3,050,416.
Boysen, Arne, to Svenska Flaktfabriken, Aktiebolaget. Air curtains. 3,049,984, 8–21–62, Cl. 98—36.
Bracey, Kenneth E. G., and J. A. Petrie, to Rolls-Royce Ltd. Power output fuel control means for plural engines. 3,049,880, 8–21–62, Cl. 60—39.15.
Brackin, Hoyt E., and W. R. Spivey. Seaming detachers. 3,050,609, 8–21–62, Cl. 219—19.
Bradford, Paul E.: *See*—
Damaskus, Charles W., and Bradford. 3,050,445.
Braidich, Emery V.: *See*—
Gmitter, George T., and Braidich. 3,050,477.
Bram, Walter, to Paliz-Holding A.G. Pressure device for a flat bed knitting machine. 3,049,900, 8–21–62, Cl. 66—60.
Branch, Garland M., Jr., to General Electric Co. Slow wave structures. 3,050,657, 8–21–62, Cl. 315—3.6.
Branson, Charles D.: *See*—
Willson, James R., and Branson. 3,050,255.
Branson Instruments, Inc.: *See*—
Cronin, William F. 3,049,912.
Brass, Robert L., to Bell Telephone Laboratories, Inc. Semiconductor hall effect devices. 3,050,698, 8–21–62, Cl. 332—51.
Bratt, Axel E., to Svenska Kullagerfabriken, Aktiebolaget. Cage for rolling bearings. 3,050,353, 8–21–62, Cl. 308—217.
Braun, Günther: *See*—
Muller, Erwin, Wiegand, and Braun. 3,050,475.
Braunagel, Magnus V., and J. A. Dilley, to General Motors Corp. Engine control system. 3,049,881, 8–21–62, Cl. 60—39.28.
Brayman, Jacob: *See*—
Gerard, George, and Brayman. 3,049,756.
Bredtschneider, Kurt B., to Crane Co. Method of testing and applying valve seat rings. 3,049,794, 8–21–62, Cl. 29—157.1.
Breen, Charles: *See*—
Benson, Milton L., and Breen. 3,050,588.
Breeze, James. Window lock means. 3,050,323, 8–21–62, Cl. 292—155.
Breining, Elmer R., and J. R. Whitacre, to Union Carbide Corp. Method of gas plating. 3,049,799, 8–21–62, Cl. 29—420.
Brelsford, John E., to Sperry Rand Corp. Conveyor. 3,050,176, 8–21–62, Cl. 198—64.
Brendel, Oskar, K. Grantz, K.-E. Hofstadt, and W. Franz. Method and apparatus for mass-producing small balls of plastic materials. 3,049,760, 8–21–62, Cl. 18—55.
Breuninger, Wolfgang: *See*—
Nisser, Henrik G., and Breuninger. 3,050,188.
Brevick, Arnold A., to Cherry Electrical Products Corp. Snap switch. 3,050,599, 8–21–62, Cl. 200—67.
Brill, William F., to Petro-Tex Chemical Corp. Process for preparation of 2-cyclohexenone. 3,050,561, 8–21–62, Cl. 260—586.
British Aluminium Co., Ltd., The: *See*—
Pearson, William K. J. 3,049,950.
British Industrial Sand Ltd.: *See*—
Segrove, Herbert D. 3,050,364.
British Petroleum Co. Ltd., The: *See*—
Vosser, John L. 3,050,455.
Brochhagen, Franzkarl: *See*—
Weinbrenner, Erwin, Tischbein, Hoppe, and Brochhagen. 3,050,432.
Brooke, Jesse M., to Phillips Petroleum Co. Method and apparatus for peroxide production. 3,050,368, 8–21–62, Cl. 23—207.
Brooks, Frank W., Jr., to Socony Mobil Oil Co., Inc. Concurrent deposition of lead sulfide and mercaptan conversion in hydrocarbon oils. 3,050,460, 8–21–62, Cl. 208—198.
Brown, Alvin M., J. S. Ayers, R. L. Shields, J. M. Maloney, and T. J. Kmiecik, to Jas. H. Matthews & Co. Remote control apparatus for a stamping mechanism. 3,049,992, 8–21–62, Cl. 101—99.
Brown, Carl L., J. R. Myers, C. J. Kinsey, and H. B. Menefee, to Republic Steel Corp. Apparatus for making reinforcing mesh. 3,050,614, 8–21–62, Cl. 219—56.
Brown, Cicero C., to Brown Oil Tools, Inc. Well packer. 3,050,128, 8–21–62, Cl. 166—120.
Brown, Edgar A., and G. H. Schacht, to International Business Machines Corp. Print hammer actuator. 3,049,990, 8–21–62, Cl. 101—93.
Brown, Eric D.: *See*—
Pohlmanteer, Keith E., and Brown. 3,050,492.
Brown, Irvin H. Differential hair curler. 3,050,069, 8–21–62, Cl. 132—39.
Brown, James D. Tube spinning machine. 3,050,023, 8–21–62, Cl. 113—52.
Brown Oil Tools, Inc.: *See*—
Brown, Cicero C. 3,050,128.
Brown, Richard E.: *See*—
Pietrusza, Edward W., Brown, and Mueller. 3,050,544.
Brown, Robert A., to United States of America, Army. Ammunition. 3,049,998, 8–21–62, Cl. 102—38.
Brown, Robert C., to E. L. Bruce Co. (Inc.). Method and apparatus for applying a liquid to panels. 3,050,415, 8–21–62, Cl. 117—102.
Brown, Thomas F., and P. Mathews, to Universal Oil Products Co. Detergent-containing lubricating oil. 3,050,464, 8–21–62, Cl. 252—33.
Broyles, Horace N. Bed construction. 3,049,729, 8–21–62, Cl. 5—200.
Bruce, E. L., Co. (Inc.): *See*—
Brown, Robert C. 3,050,415.
Bruce, John M., Jr.: *See*—
Anderson, Arthur W., Bruce, Merkling, and Truett. 3,050,471.
Bruck, George, to Avco Corp. Wired program distribution system. 3,050,712, 8–21–62, Cl. 340—150.
Bruns, William H., to Otis Elevator Co. Control for an elevator closure. 3,050,154, 8–21–62, Cl. 187—48.
Bruzzone, Mario: *See*—
Natta, Giulio, Bruzzone, and Borsini. 3,050,503.
Bucalo, Louis, to Specialties, Inc. Apparatus for winding wire on forms. 3,050,266, 8–21–62, Cl. 242—4.
Buchungsmaschinenwerk Karl-Marx-Stadt, VEB: *See*—
Görner, Wolfgang, and Klüge. 3,050,246.
Buckland, Ivor J.: *See*—
Dowson, Arthur G., and Buckland. 3,050,371.
Buckler, Sheldon A.: *See*—
Epstein, Martin, and Buckler. 3,050,531.
Buckminster, Lloyd A., to Textron Inc. Process and apparatus for blocking lenses. 3,049,766, 8–21–62, Cl. 22—58.
Budde, Walter M., to Archer-Daniels-Midland Co. Protective film forming compositions and resultant films. 3,050,480, 8–21–62, Cl. 260—22.
Budwig, Gilbert G. Dispensing valve. 3,050,281, 8–21–62, Cl. 251—342.
Bulloff, Jack J.: *See*—
Nack, Herman R., Bulloff, and Whitacre. 3,050,417.
Bumiller, Jacques, to Sarmi, S.A. Societa d'Applications de Recherches Minieres et Industrielles, Lenzerheide. Striker mechanisms in particular for power actuated tools. 3,049,714, 8–21–62, Cl. 1—44.5.
Bundy Tubing Co.: *See*—
Gondek, Stanley. 3,050,045.
Bunn, B. H., Co.: *See*—
Wimmer, Glen E. 3,050,173.

Burgener, Karl L., to Automatic Electric Laboratories Inc. Message waiting indicating circuits. 3,050,592, 8–21–62, Cl. 179—86.

Burger, Alfred, to Smith Kline & French Laboratories. Substituted phenylcyclopropylamines. 3,050,559, 8–21–62, Cl. 260—570.5.

Burgess, Frank H. Folding box with aligned lid. 3,050,233, 8–21–62, Cl. 229—44.

Burhans, Ralph W., to The Standard Oil Co. Electric analog interpolation apparatus. 3,050,252, 8–21–62, Cl. 235—179.

Burk, Marvin C.: *See*—
Kindred, Raymond L., and Burk. 3,049,908.

Burroughs Corp.: *See*—
Campbell, Carl M., Jr. 3,050,714.

Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Hitchings, George H., Elion, and Goodman. 3,050,517.

Burroughs Corp.: *See*—
Hoberg, George G., Van Andel, and Veitch. 3,050,717.

Burt, George H., to The Celotex Corp. Manufacture of gypsum board. 3,050,104, 8–21–62, Cl. 156—347.

Burt, Reynold B., and J. C. Barber, to Tennessee Valley Authority. Phosphorus burner assembly. 3,050,374, 8–21–62, Cl. 23—277.

Bury, Elmer J.: *See*—
Elliott, Eugene W., and Bury. 3,049,981.

Butler, John L., and R. A. Clemens. Electrically assisted manual gear shift means. 3,049,934, 8–21–62, Cl. 74—335.

Byer, George T.: *See*—
Eddy, William R., and Byer. 3,050,646.

Cabbage, John T., to Phillips Petroleum Co. Fractionation column control. 3,049,886, 8–21–62, Cl. 62—21.

Caine, Paul M. Headgear. 3,049,720, 8–21–62, Cl. 2—171.

Caldwell, Ned A., and W. R. Frint, to FMC Corp. Method of recovering sodium values by solution mining of trona. 3,050,290, 8–21–62, Cl. 262—2.

California Institute Research Foundation: *See*—
Heyser, Richard C. 3,050,688.

California Packing Corp.: *See*—
Kugler Albert H. 3,050,187.

California Research Corp.: *See*—
Baruch, Maurice R. 3,050,043.
Wright, James R. 3,050,468.

Campbell, Carl M., Jr., to Burroughs Corp. Shift register. 3,050,714, 8–21–62, Cl. 340—173.

Campbell, Samuel J.: *See*—
Barlament, Norval S., and Campbell. 3,049,954.

Camras, Marvin, to Armour Research Foundation of Illinois Institute of Technology. Magnetic head and method of making same. 3,049,790, 8–21–62, Cl. 29—155.5.

Canterino, Peter J., and B. Franzus, to Phillips Petroleum Co. Polymerization of aryl olefins. 3,050,510, 8–21–62, Cl. 260—93.5.

Caplan, David M., to H. K. Porter, Co., Inc. Flexible hose. 3,050,087, 8–21–62, Cl. 138—121.

Carbrey, Robert L., to Bell Telephone Laboratories, Inc. Bipolar clamp for pulse modulation systems. 3,050,587, 8–21–62, Cl. 179—15.

Carey, Paul P. Percussion-type drill. 3,050,032, 8–21–62, Cl. 121—28.

Carey, Paul P. Percussion mechanism and rotary drilling apparatus. 3,050,033, 8–21–62, Cl. 121—28.

Carfagno, Salvatore G., to Carrier Corp. Method and apparatus for rendering brine solution potable. 3,049,880, 8–21–62, Cl. 62—58.

Carleton, Branville E.: *See*—
Allen, Ely G., Lynn, and Carleton. 3,050,282.

Carmen, Hyman, to E. & R. Inc. Garment with flexible sleeve joints. 3,049,719, 8–21–62, Cl. 2—93.

Carr, Carles A., Jr., and L. E. Kelley, to Rohm & Haas Co. Quick-tack polymeric adhesives for fibrous laminae. 3,050,425, 8–21–62, Cl. 154—46.

Carr, James W., Jr.: *See*—
Cull, Neville Leverne, Lambert, Carr, and Berkeley. 3,050,569.

Carrier Corp.: *See*—
Bosworth, Cyrus M. 3,049,888.
Carfagno, Salvatore G. 3,049,880.

Carroll, Robert B. Alcoholic beverage and process of making the same. 3,050,397, 8–21–62, Cl. 99—30.

Carroll, Robert B. Rapid maturation of alcoholic beverages. 3,050,398, 8–21–62, Cl. 99—47.

Carson, William D.: *See*—
Harris, James E., and Carson. 3,050,577.

Carter, Robert C.: *See*—
Rogers, Robert H., and Carter. 3,050,642.

Case, J. I., Co.: *See*—
Ralston, Harold A., and Wenzel. 3,049,856.

Catalysts and Chemicals Inc.: *See*—
Fleming, Harold W., and Gutmann. 3,050,571.

Caterpillar Tractor Co.: *See*—
Cohron, Gerald T., and Mayo. 3,049,819.
Day, Ralph R., and Fabere. 3,050,165.
Lichti, Robert W. 3,049,820.
Lichti, Robert W. 3,049,821.
Simpson, Fred E., and Folkers. 3,050,346.

Cates, Dafford D. Garment hanger. 3,050,222, 8–21–62, Cl. 223—96.

Cathodic Protection Service: *See*—
Thorn, Floyd B., Jr. 3,050,660.

Cawthon, Thomas M., Jr., and G. G. Joris, to Allied Chemical Corp. Process and product of polymerizing ethylenic hydrocarbons. 3,050,514, 8–21–62, Cl. 260—94.9.

Cech, Karl, to Karl Vockenhuber. Phonograph, particularly sound tape apparatus. 3,050,593, 8–21–62, Cl. 179—100.2.

Cedar Rapids Engineering Co.: *See*—
Anderson, Vyron E. 3,049,838.

Celotex Corp., The: *See*—
Burt, George H. 3,050,104.

Centre Circuits, Inc.: *See*—
Benton, Robert C. 3,050,034.

Chamberlain, John, to United Aircraft Corp. Rocket propellant cycle. 3,049,870, 8–21–62, Cl. 60—35.3.

Chantry, William A.: *See*—
Porter, Lee M., Chantry, and York. 3,050,554.

Charnow, Solomon: *See*—
Rhodes, Alex, and Charnow. 3,049,774.

Chemical Construction Corp.: *See*—
Christensen, Axel. 3,050,377.

Cherry Electrical Products Corp.: *See*—
Brevick, Arnold A. 3,050,599.

Chesser, Cecil E., to Sears, Roebuck and Co. Sheet metal connection and method for effecting the same. 3,050,160, 8–21–62, Cl. 189—36.

Chiado, Paul S., and J. A. Sbarounis. Apparatus for making hyperbolic-paraboloidal thin shell building units. 3,049,785, 8–21–62, Cl. 25—118.

Chicago Aerial Industries, Inc.: *See*—
Elliott, Eugene W., and Bury. 3,049,981.

Christensen, Axel, to Chemical Construction Corp. Converter. 3,050,377, 8–21–62, Cl. 23—289.

Christensen Diamond Products Co.: *See*—
Christensen, Frank L. 3,049,843.

Christensen, Frank L., to Christensen Diamond Products Co. Abrasive cutting devices. 3,049,843, 8–21–62, Cl. 51—206.

Christenson, Roger M., to Pittsburgh Plate Glass Co. Compositions comprising blends of aldehyde-modified amide interpolymers with amine resins and articles coated therewith. 3,050,495, 8–21–62, Cl. 260—45.2.

Christian, James B. L., to United-Carr Fastener Corp. Means for resiliently supporting a rod or the like. 3,050,349, 8–21–62, Cl. 308—26.

Ciba Corp.: *See*—
Gunst, Raymond. 3,050,515.

Ciba Ltd.: *See*—
Ruperti, Andreas. 3,050,419.

Cincinnati Mfg. Corp.: *See*—
Straus, S. Charles. 3,049,932.

Cities Service Research and Development Co.: *See*—
Scott, J. O. 3,050,123.

City Parking Ltd.: *See*—
Macrae, William K., and Jackson. 3,050,260.

Clapp, Fred L. Power driven fishing tackle. 3,049,829, 8–21–62, Cl. 43—6.5.

Clapp, Roy A., to Pako Corp. Photographic exposure reader. 3,049,969, 8–21–62, Cl. 88—24.

Clark, Donald E., to The Bendix Corp. Electronic speed responsive device. 3,049,879, 8–21–62, Cl. 60—39.14.

Clark, Robert H.: *See*—
Thompson, Thomas R., and Clark. 3,050,391.

Clauss, Julius A., Jr.: *See*—
Bowen, Glen L., Lemon, and Clauss. 3,050,164.

Clejan, Deodat, to General American Transportation Corp. Fifth-wheel mechanisms for hitches carried by railway cars. 3,050,320, 8–21–62, Cl. 287—20.

Clemens, Richard A.: *See*—
Butler, John L., and Clemens. 3,049,934.

Coash, Robert E., and A. B. Kendall, to Rack Specialists, Inc. Load shifting device. 3,050,205, 8–21–62, Cl. 214—514.

Coates, Harold, and J. J. Lawless, to Albright & Wilson (Mfg.) Ltd. Manufacture of substituted organic phosphine derivatives. 3,050,522, 8–21–62, Cl. 260—249.6.

Cobb, Raymond L., and P. S. Hudson, to Phillips Petroleum Co. Reaction product of a polyhydroxy compound and a polyisocyanate in the presence of a vinyl-substituted heterocyclic nitrogen base. 3,050,482, 8–21–62, Cl. 260—23.

Cochran, Clarence W., to United-Carr Fastener Corp. Fastening device. 3,049,781, 8–21–62, Cl. 24—213.

Cochran, Clarence W., to United-Carr Fastener Corp. Snap-in bolt retainer. 3,050,097, 8–21–62, Cl. 151—41.75.

Coe, Beresford, to Rohm & Haas Co. Dispersion coatings. 3,050,412, 8–21–62, Cl. 117—75.

Cofresi, Rafael. Multiple saliva ejector. 3,049,806, 8–21–62, Cl. 32—33.

Cohane, Harry E., and H. J. Howard, to Penetray Corp. Shipping and display carton. 3,050,230, 8–21–62, Cl. 229—39.

Cohron, Gerald T., and R. E. Mayo, to Caterpillar Tractor Co. Earth moving scraper bowl construction. 3,049,819, 8–21–62, Cl. 37—129.

Colby, George E., to Magnetic Seal Corp. Radially contacting seal with balancing sleeve. 3,050,319, 8–21–62, Cl. 277—41.

Coleman, Dorothy D.: *See*—
Denis, Albert P. 3,049,798.

Collins, Galen F., to Miles Laboratories, Inc. Diagnostic composition for detecting glucose. 3,050,373, 8–21–62, Cl. 23—253.

Collins Radio Co.: *See*—
Rogers, Robert H., and Carter. 3,050,642.

Colonial Hills Bowl, Inc.: *See*—
Blough, Henry K. 3,050,306.

Columbia Broadcasting System, Inc.: *See*—
Birnie, Bruce A. 3,050,677.

Comanor, Milton, to Yardney International Corp. Battery structure. 3,050,576, 8–21–62, Cl. 136—6.

Combustion Engineering, Inc.: *See*—
Funk, Max O. 3,050,202.
Kochey, Edward L. 3,050,042.

Compagnie de Saint-Gobain: *See*—
Bigot, Bernard. 3,050,384.

Conceiman, Carl W., to Amphenol-Borg Electronics Corp. Two-position coaxial switch structure. 3,050,603, 8–21–62, Cl. 200—153.

Conchon, Michel: *See*—
Terraz, Marius. 3 049,864.

Connell, Richard A., and D. P. Seraphim, to International Business Machines Corp. Superconductive gate switching its conducting state in response to mechanical stress imposed by piezoelectric crystal. 3,050,643, 8–21–62, Cl. 307—88.5.

Connors, James F., to United States of America, National Aeronautics and Space Administration. Annular rocket motor and nozzle configuration. 3,049,876, 8–21–62, Cl. 60—35.6.

Conroy, Edward J., to The International Silver Co. Pyxes. 3,050,182, 8–21–62, Cl. 206—19.

Continental Can Co., Inc.: *See*—
Walter, Charles T. 3,050,297.

Continental Oil Co.: *See*—
Boyer, Ernest W., Ford, and McKelvey. 3,050,622.
Gant, Preston L., and Sudbury. 3,050,629.

Controls Co. of America: *See*—
Duescher, John H. 3,050,703.

Cook, Joseph J.: *See*—
Howe, John R., and Cook. 3,050,321.

Cooper, Alfred S., to Moloney Electric Co. Manufacture of magnetic cores. 3,049,793, 8–21–62, Cl. 29—155.57.

Cooper, Irving B., Jr.: *See*—
Alspach, Wallace J., and Cooper. 3,049,917.

Cooper Tire and Rubber Co.: *See*—
Workman, Charles R. 3,049,801.

Copolymer Rubber & Chemical Corp.: *See*—
Voth, Donald E. 3,049,898.

Copymation, Inc.: *See*—
Harvey, Arthur. 3,050,218.

Costello, Martin J.: *See*—
Doyle, Collin M., and Costello. 3,050,238.

Cottier, Louis: *See*—
Terraz, Marius. 3,049,864.

Covely, Frank D., 3rd, to Radio Corp. of America. Multiple target automatic track-while-scan radar. 3,050,722, 8–21–62, Cl. 342—11.

Cowley, Calvin C.: *See*—
Wall, Wendell I., Cowley, and Hamilton. 3,050,059.

Crain, Harriet R. Disposable place mats. 3,050,185, 8–21–62, Cl. 206—56.

Crandall, Julian T., to Ashaway Line & Twine Mfg. Co. Manufacture of tennis strings. 3,050,431, 8–21–62, Cl. 156—172.

Crane Co.: *See*—
Bredtschneider, Kurt B. 3,049,794.

Crawford, Francis W., to Phillips Petroleum Co. Multiple zone production by in situ combustion. 3,050,116, 8–21–62, Cl. 166—10.

Credé & Co. G.m.b.H., Gebruder: *See*—
Kindler, Adolf, and Eckhardt. 3,050,315.

Crim, Almer D., to United States of America, Navy. Controls for vehicles utilizing the ground effect principle. 3,050,140, 8–21–62, Cl. 180—7.

Cronin, William F., to Branson Instruments, Inc. Time interval measuring device. 3,049,912, 8–21–62, Cl. 73—67.9.

Crosley Broadcasting Corp.: *See*—
Rockwell, Ronald J. 3,050,697.

Crossley, Thomas J.: *See*—
Nelson, Earl W., and Crossley. 3,050,365.

Cull, Neville L., M. M. Lambert, J. W. Carr, Jr., and P. J. Berkeley, Jr., to Esso Research and Engineering Co. Reclaiming of polymer from clay used in quenching polymerization catalyst. 3,050,569, 8–21–62, Cl. 260—669.

Cullen, Frank S., to Insulwool Products Proprietary Ltd. Machine for the manufacture of moulded perforated articles. 3,049,784, 8–21–62, Cl. 25—42.

Culver, Frederick H., and E. B. Laguckl, to Shell Oil Co. Tool carrier. 3,050,130, 8–21–62, Cl. 166—153.

Cummings-Landau Laundry Machinery Co., Inc.: *See*—
Hutterer, Martin. 3,050,211.

Cunningham, Thomas P. Coupling devices. 3,050,166, 8–21–62, Cl. 192—43.

Curtis Automotive Devices, Inc.: *See*—
Curtis, Russell R. 3,050,262.

Curtis, Russell R., to Curtis Automotive Devices, Inc. Nozzle for production of fog or mist. 3,050,262, 8–21–62, Cl. 239—400.

Cutler-Hammer, Inc.: *See*—
Klitscha Hector. 3,050,706.
Miles, Raymond C., and Rubenson. 3,049,978.

Daams, Jasper: *See*—
Bijloo, Johan D., Uhlenbroek, and Daams. 3,050,442.

Daimler-Benz Aktiengesellschaft: *See*—
Riehles, Franz G. F. 3,050,316.
Geiger, Friedrich. 3,050,334.

D'Alello, Gaetano F., to Dal Mon Research Co. Polymer of trinzinyl vinyl monomers. 3,050,496, 8–21–62, Cl. 260—45.4.

Dal Mon Research Co.: *See*—
D'Alello Gaetano F. 3,050,496.

Damaskus, Charles W., and P. E. Bradford, to Armour-Pharmaceutical. Stabilized trypsin solution. 3,050,445, 8–21–62, Cl. 195—63.

Dana Corp.: *See*—
Wagner, Robert W. 3,049,929.

Danger, Roger, 50% to Inventions Finance Corp. Motion transforming device and apparatus incorporating said device. 3,049,803, 8–21–62, Cl. 30—228.

Darnell, Rex C., to Dynamic Filters, Inc. Centrifugal contaminant extractor. 3,050,240, 8–21–62, Cl. 233—31.

Daryl Industries, Inc.: *See*—
Miller, Robert P. 3,050,322.

Datt, Paul L., to Shell Oil Co. Magnetic testing system for metallic bodies. 3,050,678, 8–21–62, Cl. 324—37.

Davenport, Charles T.: *See*—
Miner, Richard Y., Davenport, and Kreitner. 3,049,808.

Davis, Andrew W., to The Proctor Counter Co. Flexible counter. 3,049,815, 8–21–62, Cl. 36—68.

Dawes Laboratories, Inc.: *See*—
Holstein, Arthur G., and Holsong. 3,050,444.

Day, Ralph R., and R. W. Fabere, to Caterpillar Tractor Co. System for automatically neutralizing a vehicle transmission upon application of brakes. 3,050,165, 8–21–62, Cl. 192—13.

Deady, Emmett F.: *See*—
Reed, Stanley F., and Deady. 3,050,279.

Deal, Carl H., Jr.: *See*—
Anderson, Ralph, and Deal. 3,050,573.

Dearborn, Elizabeth C., and P. K. Isaacs, to W. R. Grace & Co. Reaction mixture derived from oleic acid, sebacic acid and triethylene tetramine. 3,050,527, 8–21–62, Cl. 260—309.6.

Dearborn, Elizabeth C., and P. K. Isaacs, to W. R. Grace & Co. Reaction product of oleic acid, sebacic acid and triethylene tetramine. 3,050,528, 8–21–62, Cl. 260—309.6.

Dearborn, Elizabeth C., and P. K. Isaacs, to W. R. Grace & Co. Carboxylic acid-polyamine reaction mixture. 3,050,529, 8–21–62, Cl. 260—309.6.

De Biasi, Charles P. Pusher blade assembly for truck bodies. 3,050,203, 8–21–62, Cl. 214—82.

Decker, Molly. Musical jumping rope. 3,049,961, 8–21–62, Cl. 84—404.

Deere & Co.: *See*—
Beard, Lawrence R. 3,049,939.
Dhuicq, Andre P. 3,050,163.
Hubbard, Wallace L., and Essex. 3,050,111.
Schnell Ernst E. 3,049,936.

Deering Milliken Research Corp.: *See*—
Wise, George S., Jr. 3,049,859.

Delius, C. A., & Sohne: *See*—
Schaffer, Heinrich. 3,050,088.

De Loach, Bernard C., Jr., to Bell Telephone Laboratories, Inc. Broadband solid state amplifier and switch using "dam" cavity. 3,050,689, 8–21–62, Cl. 330—34.

De Marsh, Peter L.: *See*—
Lebeaux, Jacob M., and De Marsh. 3,050,126.

Denecke, Hans-Joachim, to Baulio Etablissement. Method and apparatus for eliminating the dazzling effect of strong sources of light, particularly for automotive vehicles. 3,049,962, 8–21–62, Cl. 88—1.

Denis, Albert P., deceased (M. D. Sullivan, administratrix), ¼ to M. D. Sullivan, ¼ to D. D. Coleman, ¼ to M. B. Denis, and ¼ to R. B. Denis. Brake shoe tool. 3,049,798, 8–21–62, Cl. 29—227.

Denis, Mary B.: *See*—
Denis, Albert P. 3,049,798.

Denis, Robert B.: *See*—
Denis, Albert P. 3,049,798.

Denney, Ralph E., ⅜ to Philip Ganson. Power lawn mower. 3,049,854, 8–21–62, Cl. 56—25.4.

De Roos, Huib, and W. F. Jense, to Shell Oil Co. Method of inhibiting corrosion of iron and steel. 3,050,360, 8–21–62, Cl. 21—2.7.

Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See*—
Lehn, Alfred. 3,050,359.

De Woody, Charles M., to Ace Glass Inc. Resistance heated stopcock. 3,050,608, 8–21–62, Cl. 219—19.

Dhuicq, Andre P., to Deere & Co. Sequential clutch and differential control. 3,050,163, 8–21–62, Cl. 192—3.5.

Diapulse Mfg. Corp. of America: *See*—
Grossman, Irving. 3,050,065.

Dickinson, Clarence R., and J. E. Slagg, to Allen-Bradley Co. Rectilinear variable resistor. 3,050,704, 8–21–62, Cl. 338—180.

Die Casting Machine Tools Ltd.: *See*—
Mills, Aubrey R. 3,049,828.

Diener, Jack. Tooth cleaning device. 3,050,072, 8–21–62, Cl. 132—93.

Digital Control Systems, Inc.: *See*—
Steele, Floyd G. 3,050,251.

Dilley, John A.: *See*—
Braunagel, Magnus V., and Dilley. 3,049,881.

Dillingham, Edward, and J. J. Nyberg, to Thompson Ramo Wooldridge Inc. Semiconductor minority carrier circuits. 3,050,640, 8–21–62, Cl. 307—88.5.

Dimmer, Robert P., to Automatic Electric Laboratories, Inc. Automatic mobile telephone system. 3,050,591, 8–21–62, Cl. 179—41.

Diodes Inc.: *See*—
Stump, Harvey. 3,050,666.

Ditto, Inc.: *See*—
Raczynski, Walter A., Thomas, and Uhl. 3,049,994.

Dodge, Ronald D., and N. K. Perkins, to International Business Machines Corp. Single element printing mechanism. 3,050,170, 8–21–62, Cl. 197—52.

Dolby, Dale P., to Ampex Corp. Splicing apparatus with indexing means. 3,050,105, 8–21–62, Cl. 156—379.

Domgard, Robert E. Installation system for electric heating cable. 3,050,607, 8–21–62, Cl. 219—19.

Dortort, Isadore K., to I-T-E Circuit Breaker Co. Current balancing iron construction. 3,050,634, 8–21–62, Cl. 307—58.

Dow Chemical Co., The: *See*—
Goring, Cleve A. I. 3,050,380.
Goring, Cleve A. I. 3,050,381.
Goring, Cleve A. I. 3,050,382.
Le Blanc, Robert B. 3,050,539.
Mills, Jack F. 3,050,369.
Palfey, Albert J. 3,050,084.
Roberts, Carleton W. 3,050,557.
Stanton, George W., and Traylor. 3,050,498.
Szwarc, Michael M. 3,050,511.
Waters, Rolland M., and Lee. 3,050,547.

Dow Corning Corp.: *See*—
Keil, Joseph W. 3,050,411.
Piccoli, William A. 3,050,542.
Poimanteer, Keith E., and Brown. 3,050,492.
Sommer, Leo H. 3,050,501.

Downie, Robert H., to Harris-Intertype Corp. Printing equipment. 3,049,995, 8–21–62, Cl. 101—216.

Downie, Robert H., to Harris-Intertype Corp. Rotary printing press. 3,049,996, 8–21–62, Cl. 101—217.

Dowson, Arthur G., and I. J. Buckland, to Engelhard Industries, Inc. Methods for detecting and/or measuring the concentration of oxygen in aqueous liquids such as boiler feed water. 3,050,371, 8–21–62, Cl. 23—230.

Doyle, Collin M., and M. J. Costello, to Dresser Industries, Inc. Liquid feed arrangement for centrifugal devices. 3,050,238, 7–21–62, Cl. 233—15.

Drager, Otto H.: *See*—
Ulmer, Wolfgang. 3,050,062.

Draper, Frank E., to Draper Multi-Disc Mining Processes Pty. Ltd. Machinery for dressing ore. 3,050,265, 8–21–62, Cl. 241—107.

Draper Multi-Disc Mining Processes Pty. Ltd.: *See*—
Draper, Frank E. 3,050,265.

Drayer, William L., to General Motors Corp. Turbocharger control means. 3,049,865, 8–21–62, Cl. 60—13.

Dresser Industries, Inc.: *See*—
Doyle, Collin M., and Costello. 3,050,238.

Dressler, Carol M. Sea-sprite ear plugs. 3,050,056, 8–21–62, Cl. 128—151.

Drevalas, Constantine N., to Western Electric Co., Inc. Molding machine. 3,049,758, 8–21–62, Cl. 18—42.

Dreyfus, Robert L., and J. W. Harrison, to W. R. Grace & Co. Method of packaging foodstuff. 3,050,402, 8–21–62, Cl. 99—171.

Droilshammer, Einar J. Roll paper dispenser. 3,050,224, 8–21–62, Cl. 225—38.

Drummond, Folsom E., to Union Carbide Corp. Gas plating cerium. 3,049,797, 8–21–62, Cl. 29—194.

Duerr, Herman H., to General Aniline & Film Corp. Color balance and density evaluation device. 3,049,967, 8–21–62, Cl. 88—24.

Duescher, John H., to Controls Co. of America. Coil mounting. 3,050,703, 8–21–62, Cl. 336—67.

Duffin, George F., to Ilford Ltd. Direct positive emulsions containing N-oxides. 3,050,395, 8–21–62, Cl. 96—101.

Dukes, John R., and L. Eggman, to Industrial Nucleonics Corp. Measuring system. 3,050,626, 8–21–62, Cl. 250—83.3.

Dunbar, Robert R.: *See*—
Lydle, John E., and Dunbar. 3,050,096.

Dunn, Edward J., Jr.: *See*—
Orsino, Joseph A., and Dunn. 3,050,408.

Du Pont de Nemours, E. I., and Co.: *See*—
Anderson, Arthur W., Bruce, Merkling, and Truett. 3,050,471.
Kalil, James. 3,050,483.
Muetterties, Earl L. 3,050,361.
Oxenham, Peter R. 3,050,207.
Ringwald, Owen E. 3,050,366.
Sherwood, Laurence T., Jr. 3,050,500.

Du Pont of Canada Ltd.: *See*—
Tomson, Richard J. 3,050,235.

Dupuy, Andre, and G. Wailliser, to Karl M. Reich Maschinenfabrik. Pneumatic nailing machine. 3,049,713, 8–21–62, Cl. 1—44.4.

Du Vall, Wilbur E., to W. W. Henry Co., Inc. Pulse generator for human treatment. 3,050,695, 8–21–62, Cl. 331—52.

Dykes, John F.: *See*—
Neff, Darby B., and Dykes. 3,049,800.
Neff, Darby B., and Dykes. 3,049,940.

Dynamic Filters, Inc.: *See*—
Darnell, Rex C. 3,050,240.

E. & R. Inc.: *See*—
Carmen, Hyman. 3,049,719.

Eastman Kodak Co.: *See*—
Gallagher, Paul. 3,050,430.

Eaves, James J., to Taylor Machine Works. Sling tripping device. 3,050,328, 8–21–62, Cl. 294—75.

Eberhardt, Joseph: *See*—
Litwin, Walter J., and Eberhardt. 3,049,771.

Eberhardt, Joseph. Injecting moulding apparatus. 3,049,759, 8–21–62, Cl. 18—42.

Eberle, Walter: *See*—
Porsche, Ferdinand, Rabe, and Eberle. 3,049,930.

Eckhardt, Carl-Heinz: *See*—
Kindler, Adolf, and Eckhardt. 3,050,315.

Eclipse Fuel Engineering Co.: *See*—
Saunders, John A., and Moore. 3,050,112.

Economics Laboratory, Inc.: *See*—
Hopper, Samuel H. 3,050,405.

Economy Engineering Co.: *See*—
Mollis, Benedict. 3,050,153.

Edburg, Anton H., Jr., to Shell Oil Co. Record punching machine. 3,049,989, 8–21–62, Cl. 101—19.

Eddy, William R., and G. T. Byer, to Phillips Petroleum Co. Magnetic coupling. 3,050,646, 8–21–62, Cl. 310—104.

Edwards, Jack L. Pump alarm and control device. 3,050,003, 8–21–62, Cl. 103—25.

Eerde, John, to Mergenthaler Linotype Co. Oxidation-stable developer compositions. 3,050,392, 8–21–62, Cl. 96—61.

Eggman, Luther: *See*—
Dukes, John R., and Eggman. 3,050,626.

Ehmann, Werner: *See*—
Starck, Werner, Kahrs, Kuhlkamp, and Ehmann. 3,050,508.

Eichen, Myron S.: *See*—
Sharp, Rodman A., and Eichen. 3,049,887.

Eller, Peter. Travelling wall crane. 3,050,195, 8–21–62, Cl. 212—17.

Eisenhuth, Joseph J.: *See*—
McCormick, Barnes W., Eisenhuth, and Wisiicenus. 3,050,024.

Electric & Musical Industries Ltd.: *See*—
Stillwell, Peter F. T. C. 3,050,724.

Electroglas, Inc.: *See*—
Lasch, Cecil A., Jr., and Johnson. 3,050,617.

Electronic Associates Ltd.: *See*—
Mounce, George R., and Kivell. 3,050,242.

Electronic Secretary Industries, Inc.: *See*—
Zimmermann, Joseph J. 3,050,585.

Electrosolids Corp.: *See*—
Moore, Donald W. 3,050,674.

Elion, Gertrude B.: *See*—
Hitchings, George H., Elion, and Goodman. 3,050,517.

Elkins, Lloyd E., to Pan American Petroleum Corp. Fracture placing method. 3,050,118, 8–21–62, Cl. 166—35.

Elliott, Eugene W., and E. J. Bury, to Chicago Aerial Industries, Inc. Film threading device. 3,049,981, 8–21–62, Cl. 95—34.

Elmore, Harry M., 50% to G. L. Tapp. Sliding door framework with adjustable feature. 3,049,765, 8–21–62, Cl. 20—19.

Emeis, Reimer, to Siemens-Schuckertwerke Aktiengesellschaft. Method for producing an electric semiconductor device of silicon. 3,050,667, 8–21–62, Cl. 317—240.

Emily, Avis E., Jr., and K. A. Arata, to Formica Corp. Alginate coated sheets for use in a delaminating process. 3,050,434, 8–21–62, Cl. 156—289.

Engelhard Hanovia, Inc.: *See*—
Bird, Lester F. 3,050,630.

Engelhard Industries, Inc.: *See*—
Dowson, Arthur G., and Buckland. 3,050,371.
Ogden, Joseph, and Armeny. 3,049,753.

Engineering Supervision Co.: *See*—
Gerard, George, and Brayman. 3,049,756.

Englander Co., Inc., The: *See*—
Thierfelder, Ervin H. 3,049,723.

Enterprise Railway Equipment Co.: *See*—
Koranda, Clarence J., and Fritz. 3,050,342.

Environment, Inc.: *See*—
Webb, Paul. 3,049,896.

Epstein, Martin, and S. A. Buckler, to American Cyanamid Co. Substituted 10-phosphatricyclo [3.3.1.1^{3,7}] decanes and methods of preparing same. 3,050,531, 8–21–62, Cl. 260—340.7.

Epton, Sidney R.: *See*—
Bell, Albert G., and Epton. 3,050,379.

Erickson, Lowell H.: *See*—
Merrill, Marcellus S., and Erickson. 3,049,927.

Erickson, Reginald T., to Star-Kist Foods, Inc. Canning of fish. 3,050,403, 8–21–62, Cl. 99—188.

Erner, William E., and H. A. Green, to Air Products and Chemicals, Inc. Process of preparing 2-olefinic imidazoles. 3,050,520, 8–21–62, Cl. 260—240.

Erner, William E., H. A. Green, and G. A. Mills, to Air Products and Chemicals, Inc. Preparation of pyrimidines. 3,050,523, 8–21–62, Cl. 260—251.

Ertl, Alfred, and F. Hermann, to Klepper-Werke, Firma. Support structure for inflated tubes in collapsible boats. 3,049,731, 8–21–62, Cl. 9—2.

Eschinasi, Emile F.: *See*—
Eschinazi, Habib-Emile. 3,050,566.

Eschinazi, Habib-Emile, now by change of name Emile F. Eschinasi, to The Givaudan Corp. 3-(2,2,3-trimethylcyclobutyl)-but-1-yn-3-ol and process for preparing same. 3,050,566, 8–21–62, Cl. 260—617.

Esser, Paul: *See*—
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Essex, Duane A.: *See*—
Hubbard, Wallace L., and Essex. 3,050,111.

Esso Research and Engineering Co.: *See*—
Barr, Frank T., and Black. 3,050,454.
Cull, Neville L., Lambert, Carr, and Berkeley. 3,050,569.
Fenske, Merrell R., McCormick, and Lawroski. 3,050,448.
Morrow, Morris R., and Suttle. 3,049,874.
Oswald, Alexis A. 3,050,564.
Palcanis, Franklin G., and Lynam. 3,050,092.
Slotterbeck, Ober C., and Winters. 3,050,489.
Ziarnik, George J. 3,050,479.

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Baker, Judd O., and Estes. 3,050,707.

Ethyl Corp.: *See*—
Gorsich, Richard D. 3,050,537.
Gould, Merle L. 3,050,540.
Gould, Merle L. 3,050,541.
Klopfer, Oskar E. H. 3,050,562.
Pearson, Tillmon H., and Sistrunk. 3,050,470.

Evans, Arthur D., and R. R. Webster, to Texas Instruments Inc. Temperature stabilized biasing circuit for transistor having additional integral temperature sensitive diode. 3,050,638, 8–21–62, Cl. 307—88.5.

Evans, George H., ⅓ to R. K. Stevens. Rolling marble device. 3,049,831, 8–21–62, Cl. 46—43.

Eversole, Ralph M. Desoldering tip. 3,050,612, 8–21–62, Cl. 219—26.

Ex-Cell-O Corp.: *See*—
Ljunggren, Thor H. 3,050,247.

FMC Corp.: *See*—
Barlament, Norval S., and Campbell. 3,049,954.
Billett, Ronald J. 3,050,174.
Caldwell, Ned A., and Frint. 3,050,290.
Galloway, Robert K. 3,049,847.
Hagerborg, John G. 3,049,757.
Lebeaux, Jacob M., and De Marsh. 3,050,126.
Liskey, George W. 3,050,100.
McGrath, Earle J., and Stevenson. 3,050,199.
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Day, Ralph R., and Fabere. 3,050,165.

Fafnir Bearing Co., The: *See*—
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Faherty, John L., Jr. Anti-feedback system. 3,050,582, 8–21–62, Cl. 179—1.

Faisandier, Jacques. Servo control system to ensure the rotation of a turning mass. 3,050,036, 8–21–62, Cl. 121—41.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
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Farnham, Robert E.: *See*—
Paulus, Robert J., and Farnham. 3,050,159.

Farrand Optical Co., Inc.: *See*—
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Fast, Clarence R., G. C. Howard, and A. Lubinski, to Pan American Petroleum Corp. Method of fracturing formations. 3,050,119, 8–21–62, Cl. 166—42.

Fay, James P. Breathable gas regulator apparatus. 3,050,076, 8–21–62, Cl. 137—63.

Feinberg, Albert E., to Advance Transformer Co. Gaseous discharge ballast and system. 3,050,659, 8–21–62, Cl. 315—257.

Felsch, Henry W. Guiding stick and hoop toy. 3,049,833, 8–21–62, Cl. 46—220.

Fennessy, John J., to Minnesota Mining and Mfg. Co. Overload switching device. 3,050,598, 8–21–62, Cl. 200—61.46.

Fenske, Merrell R., R. H. McCormick, and H. Lawroski, to Esso Research and Engineering Co. Separation of hydrocarbons. 3,050,448, 8–21–62, Cl. 202—39.5.

Ferrara, Adolph C.: *See*—
Mayer, Siegfried K., and Ferrara. 3,049,749.

Ferro Corp., The: *See*—
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Feuge, Reuben O.: *See*—
Ault, Waldo C., and Feuge. 3,050,481.

Finch, Robert E. Remote control for angle setting indicator. 3,050,709, 8–21–62, Cl. 340—26.

Finsterwalder, Carl J.: *See*—
Simmons, Milton E., and Finsterwalder. 3,049,935.

First National Bank, The: *See*—
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Fischer, Gunter. Set of wheels for vehicles running on two rails. 3,050,016, 8–21–62, Cl. 104—245.

Fischer, Martin N. Portable spot welding tool. 3,050,618, 8–21–62, Cl. 219—90.

Fleming, Harold W., and W. R. Gutmann, to Catalysts and Chemicals Inc. Selective conversion of COS in the presence of a non-acetylenic unsaturated hydrocarbon gas. 3,050,571, 8–21–62, Cl. 260—677.

Flocks, Karl W.: *See*—
Gill, Edwin R., Jr. 3,049,980.

Fluegel, Dale A., to Phillips Petroleum Co. Detector for sensing small rate of change signals. 3,050,253, 8–21–62, Cl. 235—183.

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Smith, Leland L., Foell, and Mendelsohn. 3,050,558.

Folkers, Robert A.: *See*—
Simpson, Fred E., and Folkers. 3,050,346.

Ford, Harrell T.: *See*—
Boyer, Ernest W., Ford, and McKelvey. 3,050,622.

Formica Corp.: *See*—
Emily, Avis E., Jr., and Arata. 3,050,434.

Foster, Kenneth W., N. B. Newman, and R. L. Geer, to Shell Oil Co. Wellhead seal. 3,050,127, 8–21–62, Cl. 166—97.

Foster Wheeler Corp.: *See*—
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Fox, Herman B., to Automatic Electric Laboratories, Inc. Testing apparatus. 3,050,680, 8–21–62, Cl. 324—51.

Fox, Homer M., and A. F. Stegelman, to Phillips Petroleum Co. Method of consolidating solid rocket propellant grains. 3,050,435, 8–21–62, Cl. 156—294.

Francis, Charles E., to Shell Oil Co. Water-in-oil emulsion hydraulic fluids. 3,050,465, 8–21–62, Cl. 252—49.5.

Franz, Werner: *See*—
Brendel, Oskar, Grantz, Hofstadt, and Franz. 3,049,760.

Franzus, Boris: *See*—
Canterino, Peter J., and Franzus. 3,050,510.

Freedman, Arthur J., and G. Reid, to Standard Oil Co. Specimen holder for conductometric corrosion measurement. 3,049,915, 8–21–62, Cl. 73—86.

Freeman, Ardeo H., to Bell Intercontinental Corp. Blast machine enclosure. 3,049,837, 8–21–62, Cl. 51—13.

Freire, Antonio C. Clothes washing machine having squeezing means to extract liquid. 3,049,905, 8–21–62, Cl. 68—21.

Frentzel, Herman C. Differential. 3,049,943, 8–21–62, Cl. 74—711.

Frickert, Philip J., to Owens-Corning Fiberglas Corp. Method and apparatus for processing heat-softenable materials. 3,049,754, 8–21–62, Cl. 18—8.

Fried, Josef, to Olin Mathieson Chemical Corp. Cyclocarbonate esters of 16α,17α-dihydroxypregnenes. 3,050,519, 8–21–62, Cl. 260—239.55.

Fried, Josef, to Olin Mathieson Chemical Corp. Synthesis of steroids. 3,050,535, 8–21–62, Cl. 260—397.4.

Fried, Josef, and J. E. Herz. 21-fluoro-Δ^4-pregnene-17α-ol-3,20-dione. 3,050,536, 8–21–62, Cl. 260—397.47.

Frint, William R.: *See*—
Caldwell, Ned A., and Frint. 3,050,290.

Fritz, William E.: *See*—
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Fromm, Kenneth N., to International Telephone and Telegraph Corp. Radio direction finding system. 3,050,729, 8–21–62, Cl. 343—119.

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Schubach, Theodor C. 3,050,335.

Fujimoto, Mike S.: *See*—
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Fukushima, Tomio, to Kabushiki Kaisha Tohoku Kosakusho. Lower thread adjusting apparatus in sewing machines. 3,050,021, 8–21–62, Cl. 112—229.

Fuller, William E., to Minneapolis-Honeywell Regulator Co. Automatic electrical control apparatus with overshoot control. 3,050,256, 8–21–62, Cl. 236—15.

Funk, Max O., to Combustion Engineering, Inc. Bark-type fuel feeder with vibrating proportioning table and flow dividing means. 3,050,202, 8–21–62, Cl. 214—18.38.

Furrer, Jack F.: *See*—
Gardner, Charles N., Furrer, and Murray. 3,050,278.

Gage, Robert M., to Union Carbide Corp. Arc process and apparatus. 3,050,616, 8–21–62, Cl. 219—69.

Gallagher, Paul, to Eastman Kodak Co. Jet and method of filter manufacture. 3,050,430, 8–21–62, Cl. 156—166.

Galloway, Robert K., to FMC Corp. Carton closing mechanism. 3,049,847, 8–21–62, Cl. 53—374.

Ganson, Philip: *See*—
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Gant, Preston L., and J. D. Sudbury, to Continental Oil Co. Location of pipeline leaks. 3,050,629, 8–21–62, Cl. 250—106.

Gara, William B.: *See*—
Kielsmeier, Elwood W., and Gara. 3,050,399.

Gardner, Charles N., J. F. Furrer, and G. E. Murray, to United States of America, Army. Ground-contact shock absorbing system. 3,050,278, 8–21–62, Cl. 244—138.

Garner, Philip J., to Shell Oil Co. Stabilization of glycol solutions employed in aromatic recovery. 3,050,462, 8–21–62, Cl. 208—323.

Garrett, Henry U., and C. M. Peters, to U.S. Industries, Inc. Well apparatus and method. 3,050,121, 8–21–62, Cl. 166—46.

Gazzo, Salvatore F.: *See*—
Schlosser, Francis G., and Gazzo. 3,050,620.

Geer, Ronald L.: *See*—
Foster, Kenneth W., Newman, and Geer. 3,050,127.

Gehrie, Charles S., to Presto Lock Co. Hinges. 3,049,748, 8–21–62, Cl. 16—171.

Geiger, Friedrich, to Daimler-Benz Aktiengesellschaft. Foldable roof for motor vehicles. 3,050,334, 8–21–62, Cl. 296—107.

Gelenkwellenbau G.m.b.H.: *See*—
Kempf, Willi. 3,050,351.

Gelfand, Samuel, to Hooker Chemical Corp. Preparation of aroyl chloroalkyl esters. 3,050,549, 8–21–62, Cl. 260—475.

General American Transportation Corp.: *See*—
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General Aniline & Film Corp.: *See*—
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Levinos, Steven, and Mueller. 3,050,390.
Thompson, Thomas R., and Clark. 3,050,391.

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Beggs, James E. 3,050,651.
Bernstein, Dagfinn. 3,050,664.
Bhimani, Bhupendrakumar V. 3,050,081.
Borneman, Christian H. 3,050,027.
Branch, Garland M., Jr. 3,050,057.
Grenoble, Herbert E. 3,049,869.
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General Mills, Inc.: *See*—
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General Motors Corp.: *See*—
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Bishop, Ralph W., Wentworth, and Withrow. 3,050,376.
Braunagel, Magnus V., and Dilley. 3,049,881.
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Greene, Joseph L. 3,050,410.
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Germaine, Edward R. and C. L. 3,050,209.

Germaine, Edward R. and C. L. Garbage receptacle. 3,050,209, 8–21–62, Cl. 220—18.

Gerner, Robert V., to Phillips Petroleum Co. Heavy hydrocarbon recovery from petroliferous deposits by hydraulic washing. 3,050,289, 8–21–62, Cl. 262—2.

Getz, Clarence A. Mobile body lift. 3,049,726, 8–21–62, Cl. 5—86.

Giannuzzi, George A., to International Business Machines Corp. Serial numbering printer. 3,049,991, 8–21–62, Cl. 101—93.

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Pacey, John J., and Robinson. 3,050,908.

Gilfillan Bros., Inc.: *See*—
Van Alstyne, Alvin G., and Sampson. 3,050,708.

Gill, Edwin R., Jr., to K. W. Flocks. Highways. 3,049,980, 8–21–62, Cl. 94—1.5.

Gillespie, Sidney L., to Woodward Governor Co. Governor for turbo-supercharged prime movers. 3,049,867, 8–21–62, Cl. 60—13.

Gillick, Thomas J., Jr., A. C. Wrotnowski, and H. G. Hencken, to American Felt Co. Filter cartridges. 3,050,191, 8–21–62, Cl. 210—485.

Gillick, Thomas J., Jr., H. G. Hencken, and A. C. Wrotnowski, to American Felt Co. Filter cartridge. 3,050,193, 8–21–62, Cl. 210—494.

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Eschinazi, Habib-Emile. 3,050,566.

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Glass, Marvin I., L. Rittgers, and B. C. Meyer, to Marvin Glass & Associates. Game. 3,050,307, 8–21–62, Cl. 273—87.4.

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Gmitter, George T., and E. V. Braldich, to The General Tire & Rubber Co. Method of making polyurethane foam using an organic silane. 3,050,477, 8–21–62, Cl. 260—2.5.

Goldberg, Paul, and A. L. Solomon, to Sylvania Electric Products Inc., Electroluminescent device. 3,050,655, 8–21–62, Cl. 313—108.

Golde, H. T., G.m.b.H.: *See*—
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Goldsmith, Kurt, to Textile Mills Co. Ironing board cover. 3,049,826, 8–21–62, Cl. 38—140.

Gondek, Stanley, to Bundy Tubing Co. Push rod structure and method of manufacture. 3,050,045, 8–21–62, Cl. 123—90.

Goodall, Donald G., and J. C. H. J. Lepers, to Rolls-Royce Limited and Sud-Aviation, Societe Nationale de Constructions Aeronautiques. Fuel heating system for a gas turbine engine. 3,049,878, 8–21–62, Cl. 60—39.07.

Goodman, H., & Sons, Inc.: *See*—
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Goodman, Herman: *See*—
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Goodman, Irving: *See*—
Hitchings, George H., Elion, and Goodman. 3,050,517.

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Goring, Cleve A. I., to The Dow Chemical Co. Method and product for treating soil to suppress the nitrification of ammonium nitrogen therein. 3,050,381, 8–21–62, Cl. 71—1.

Goring, Cleve A. I., to The Dow Chemical Co. Method of applying an aminopyridine compound to soil and the product thereof to prevent nitrification in soil. 3,050,382, 8–21–62, Cl. 71—1.

Görner, Wolfgang, and R. Klüge, to Buchungsmaschinenwerk Karl-Marx-Stadt, VEB. Read-out apparatus for an accounting machine. 3,050,246, 8–21–62, Cl. 235—61.

Gorsich, Richard D., to Ethyl Corp. Organo-bimetallic compositions. 3,050,537, 8–21–62, Cl. 260—429.

Gould, Merle L., to Ethyl Corp. Manufacture of alkyl aluminum compounds. 3,050,540, 8–21–62, Cl. 260—448.

Gould, Merle L., to Ethyl Corp. Manufacture of alkyl aluminum compounds. 3,050,541, 8–21–62, Cl. 260—448.

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Dearborn, Elizabeth C., and Isaacs. 3,050,527.
Dearborn, Elizabeth C., and Isaacs. 3,050,528.
Dearborn, Elizabeth C., and Isaacs. 3,050,529.
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Erner, William E., Green, and Mills. 3,050,523.

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Greer, Douglas R. Fish lures. 3,049,830, 8–21–62, Cl. 43—42.34.

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Grembecki, Elmer C., and A. J. Nelson. Blanket roller cleaning device. 3,049,997, 8–21–62, Cl. 101—425.

Grenoble, Herbert E., to General Electric Co. High temperature jet propulsion apparatus. 3,049,869, 8–21–62, Cl. 60—35.3.

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Grossman, Irving, to Diapulse Mfg. Corp. of America. Circumcision clamp. 3,050,065, 8–21–62, Cl. 128—346.

Grote, Warren B., to The Goodyear Tire & Rubber Co. Tire with sidewall inserts. 3,050,098, 8–21–62, Cl. 152—354.

Grundmeier, Grant L. Adjustable feeding troughs for fowl. 3,050,030, 8–21–62, Cl. 119—53.

Gruner, Heinz E. R., to Bausch & Lomb Inc. Two-stage photogrammetric rectifier. 3,049,966, 8–21–62, Cl. 88—24.

Guarino, Louis S., and H. B. Welk, Jr., to United States of America, Navy. Command limiter. 3,050,710, 8–21–62, Cl. 340—27.

Guinn, J. Edwin, ¼ to A. E. Jackson and ¼ to H. P. Knight. Portable sanders. 3,049,841, 8–21–62, Cl. 51—170.

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Gunst, Raymond, to Ciba Corp. Water-soluble disazo-dyestuffs. 3,050,515, 8–21–62, Cl. 260—153.

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Foarch, Arthur E., and Gwozdz. 3,050,400.

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Haden, Walter L., Jr., to Minerals & Chemicals Philipp Corp. Smoking preparation containing laminar alumina and smoking unit containing same. 3,050,421, 8–21–62, Cl. 131—17.

Haeber, John A., N. B. Newman, and L. G. Otteman, to Shell Oil Co. Method and apparatus for cementing underwater wells. 3,050,117, 8–21–62, Cl. 166—21.

Haeber, John A., to Shell Oil Co. Apparatus for cementing well casing. 3,050,129, 8–21–62, Cl. 166—129.

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Hailey, James G. Thermostatic expansion valve with cut-off. 3,049,893, 8–21–62, Cl. 62—211.

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Hale, William A. Boiler. 3,050,041, 8–21–62, Cl. 122—367.

Hall, Hubert L., to R. T. Hall. Calcination means and method. 3,050,298, 8–21–62, Cl. 263—28.

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Hall, Ruth W. Hair solution absorber. 3,050,071, 8–21–62, Cl. 132—40.

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, Jensen, Kaj H. 3,049,861.

Hancock Brick and Tile Co., The: *See*—
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Handschy, John, R. J. Gordon, and R. J. Moore, to Shell Oil Co. Alkylation process. 3,050,453, 8–21–62, Cl. 204—162.

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Hannan, Ralph, Jr. and H. Apparatus for extruding prestressed concrete products. 3,049,787, 8–21–62, Cl. 25—178.

Hannon, William F., to The Fafnir Bearing Co. Work supporting jig. 3,050,197, 8–21–62, Cl. 214—1.

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Hanson, Raymond A., to The First National Bank. Consolidator for monolith concrete pipe laying machines. 3,049,783, 8–21–62, Cl. 25—32.

Hanson, Walter J., to Pitney-Bowes, Inc. Document handling apparatus. 3,049,845, 8–21–62, Cl. 53—402.

Happ, Georg, to The National Cash Register Co. Totalizer engaging controls. 3,050,245, 8–21–62, Cl. 235—7.

Hargreaves, Derek B., and E. Staniforth, to W. Hargreaves & Co. Ltd. Apparatus for working turf. 3,049,851, 8–21–62, Cl. 56—7.

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Hargreaves, Derek B., and Staniforth. 3,049,851.

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Downie, Robert H. 3,049,996.

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Hayes, William J., to Shell Oil Co. Method and apparatus for installing guide lines at underwater wellheads. 3,050,140, 8–21–62, Cl. 175—7.

Haynes, William J., Jr., to Leavenworth Steel, Inc. Apparatus for handling ensilage and similar products. 3,050,204, 8–21–62, Cl. 214—508.

Heath, Howard B. Self-irrigating flower pot. 3,049,834, 8–21–62, Cl. 47—38.

Heckenkamp, Edward B., to Allis-Chalmers Mfg. Co. Tractor-implement hydraulic control system. 3,050,037, 8–21–62, Cl. 121—46.5.

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Heininger, Samuel A., and G. H. Birum, to Monsanto Chemical Co. 3-(halophenylthio)alkenenitriles. 3,050,545, 8–21–62, Cl. 260—465.

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Heintzmann, Hans F., to Eisenhutte Heintzmann & Co. Valve gear for fluid pressure pumps. 3,050,004, 8–21–62, Cl. 103—37.

Heinz, Anton R., D. Rosahl, W. Graulich, and P. Esser, to Farbenfabriken Bayer Aktiengesellschaft. Process for drying coagulated chlorobutadiene emulsion polymers. 3,050,509, 8–21–62, Cl. 260—92.3.

Heisig, Theodore C., and P. J. Keating, Jr., to Texaco, Inc. Roll oil containing a phosphorus acid ester and an oil-miscible dicarboxylic acid. 3,050,466, 8–21–62, Cl. 252—49.8.

Heller, Joseph I. Pocket tape recorders. 3,050,595, 8–21–62, Cl. 179—100.2.

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Gillick, Thomas J., Jr., Wrotnowski, and Hencken. 3,050,191.

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Pusch, Walter G., Hendry, and Hulsizer. 3,050,106.

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Hereth, Ralph F., and L. R. Morris, to United States of America, Navy. Arming system. 3,049,976, 8–21–62, Cl. 89—1.7.

Herman, Daniel F., A. L. Resnick, and D. Simone, to National Lead Co. Aqueous phase polymerization of vinyl and related monomers with organic cocatalysts. 3,050,504, 8–21–62, Cl. 260—80.

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Heyser, Richard C., to California Institute Research Foundation. Transistor amplifier. 3,050,688, 8–21–62, Cl. 330—24.

Hickerson, John E., to International Business Machines Corp. Typewriter tape punch with automatic letters-figures shift. 3,050,241, 8–21–62, Cl. 234—23.

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Hill, William H., to Litton Systems, Inc. Photo-transducer signal compressor. 3,050,696, 8–21–62, Cl. 332—3.

Hillson, Frank, and R. Krivisky. Sliding drawer assembly. 3,050,357, 8–21–62, Cl. 312—332.

Hitchings, George H., G. B. Elion, and I. Goodman, to Burroughs Wellcome & Co. (U.S.A.) Inc. Purine 6-thiolycosides. 3,050,517, 8–21–62, Cl. 260—209.

Hlinsky, Emil J., and R. C. Lundquist, to Goodman Mfg. Co. Rotary mining head and core breaker therefor. 3,050,293, 8–21–62, Cl. 262—9.

Hoberg, George G., J. R. Van Andel, and E. W. Veitch, to Burroughs Corp. Computer shift control circuits. 3,050,717, 8–21–62, Cl. 340—174.1.

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Hoffman, Roy D. Speculum liner and insemination rod combination. 3,050,060, 8–21–62, Cl. 128—260.

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Holstein, Arthur G., and Holsong. 3,050,444.

Holstein, Arthur G., and G. C. Holsong, to Dawes Laboratories, Inc. Method for the production of levulose. 3,050,444, 8–21–62, Cl. 195—31.

Honsinger, Philip G., to American Radiator & Standard Sanitary Corp. Flow control having low pressure by-pass. 3,050,086, 8–21–62, Cl. 138—45.

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Hooper, Edward, ½ to Aero & Engineering (Merseyside) Ltd. Devices responsive to fracture of a frangible member. 3,050,272, 8–21–62, Cl. 242—86.

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Horgan, John J., to United Aircraft Corp. Variable flap plug type nozzle. 3,049,875, 82–21–62, Cl. 60—35.6.

Horner, Herbert E., H. E. Kroll, and D. O. Benson, to Toro Mfg. Corp. Rotary power mower. 3,049,853, 8–21–62, Cl. 56—25.4.

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Smeets, Gerard G. F. 3,049,807.

Howard, George C.: *See*—
Fast, Clarence R., Howard, and Lubinski. 3,050,119.

Howard, Herbert J.: *See*—
Cohane, Harry E., and Howard. 3,050,230.

Howe, John R., and J. J. Cook. Auxiliary drive clutch mechanism. 3,050,321, 8–21–62, Cl. 287—53.

Hubbard, Wallace L., and D. A. Essex, to Deere & Co. Crop dryer. 3,050,111, 8–21–62, Cl. 158—28.

Huber, Robert, to Societe d'Etudes et de Participations Eau, Gaz Electricite Energie S.A. Power plants comprising at least one free-piston gas-generator and a gas turbine. 3,049,866, 8–21–62, Cl. 60—13.

Hudson, Paul S.: *See*—
Cobb, Raymond L., and Hudson. 3,050,482.

Hudson, Paul S., to Phillips Petroleum Co. Solid propellant. 3,050,423, 8–21–62, Cl. 149—19.

Huebner, Charles H., to General Motors Corp. Retainer. 3,050,578, 8–21–62 Cl. 174—40.

Hugel, Georges, and M. Lerer, to Institut Francais du Petrole des Carburantes et Lubrifiants. Molybdenum blue complexes. 3,050,538, 8–21–62, Cl. 260—429.

Hughes Aircraft Co.: *See*—
Jongbloed-Unterhorst, Hans. 3,050,358.

Huitt, Jimmie L., J. L. Pekarek, and E. Topanelian, Jr., to Gulf Research & Development Co. Formation notching apparatus. 3,050,122, 8–21–62, Cl. 166—55.8.

Hull, R. Dell. Glick means for closed-face spinning reel. 3,050,271, 8–21–62, Cl. 242—84.51.

Hulsebus, Robert L. Basketball practice device. 3,050,304, 8–21–62, Cl. 273—1.5.

Hulsizer, Foster V.: *See*—
Pusch, Walter G., Hendry, and Hulsizer. 3,050,106.

Hulten, Richard E., and C. J. Miller, to General Motors Corp. Steering wheel stop mechanism. 3,049,938, 8–21–62, Cl. 74—526.

Humphrey Frederick H. Apparatus for unloading materials from containers. 3,050,201, 8–21–62, Cl. 214—17.

Hunt Foods, Inc.: *See*—
Mayer, Ernst. 3,050,114.

Hunt, Frederick C., to Ling-Temco Electronics, Inc. Environmental test apparatus. 3,049,913, 8–21–62, Cl. 73—71.6.

Hurd, Ray M., to United States of America, Navy. Electrolytic product cell. 3,050,665, 8–21–62, Cl. 317—231.

Hurlbut, Gordon K., to Porta-Trace, Inc. Data card insert-removing punch. 3,050,108, 8–21–62, Cl. 156—584.

Hutterer, Martin, to Cummings-Landau Laundry Machinery Co., Inc. Inflatable washing machine door seal. 3,050,2..1, 8–21–62, Cl. 220—41.

Huylebroeck, Paul B., and D. B. Potenza. Pack for skin diving equipment. 3,050,180, 8–21–62, Cl. 206—1.

Hydrocarbon Research, Inc.: *See*—
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I-T-E Circuit Breaker Co.: *See*—
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Dortort, Isadore K. 3,050,634.
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Ikura, Shigetsune, to Sony Corp. Reel apparatus. 3,050,270, 8–21–62, Cl. 242—71.8.

Ilford Ltd.: *See*—
Duffin, George F. 3,050,395.
MacDonald, Eric. 3,050,393.

Imperial Chemical Industries Ltd.: *See*—
Munro, Neil and Maclean. 3,050,533.
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Imperial-Eastman Corp.: *See*—
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Indufi S.A. de Participations: *See*—
Schluchter Jean. 3,050,047.

Industrial Nucleonics Corp.: *See*—
Dukes, John R., and Eggman. 3,050,626.

Ingalls, Wyatt O.: *See*—
Seamans, Donald C., and Ingalls. 3,050,286.

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Insulwool Products Proprietary Ltd.: *See*—
Cullen, Frank S. 3,049,784.

International Business Machines Corp.: *See*—
Anderson, John L. 3,050,683.
Anderson, Owen T. 3,050,721.
Brown, Edgar A., and Schacht, 3,049,990.
Connell, Richard A., and Seraphim. 3,050,643.
Dodge, Ronald D., and Perkins. 3,050,170.
Giannuzzi, George A. 3,049,991.
Hickerson, John E. 3,050,241.
Johnston, Mason W., and Markle. 3,050,081.
Sommerfield, Edward H. 3,050,636.
Tate, Lawrence A. 3,050,639.
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International Silver Co., The: *See*—
Conroy, Edward J. 3,050,182.

International Telephone and Telegraph Corp.: *See*—
Fromm, Kenneth N. 3,050,729.
Salinger, Hans W. G. 3,050,653.
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Irvine, Robert L. Storage vessel. 3,050,208, 8–21–62, Cl. 220—9.

Isaacs, Philip K.: *See*—
Dearborn, Elizabeth C., and Isaacs. 3,050,527.
Dearborn, Elizabeth C., and Isaacs. 3,050,528.
Dearborn, Elizabeth C., and Isaacs. 3,050,529.

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Ishida, Fukusa: *See*—
Aizawa, Hiizu, and Ishida. 3,049,755.

Itria, Oswald A., and A. L. Parrack, to Texaco Inc. Method for seismic prospecting. 3,050,149, 8–21–62, Cl. 181—.5.

Iwerks, Ub, to Xerox Corp. Xerographic fusing apparatus. 3,049,810, 8–21–62, 34—151.

Jackson, Amos E.: *See*—
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Jackson, Harold E., to Imperial-Eastman Corp. Reinforced flexible tubing. 3,049,762, 8–21–62, Cl. 18—59.

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Jacobson, Delbert G. Crop harvesting attachment for combines. 3,049,852, 8–21–62, Cl. 56—23.

Jacobson, Martin, to United States of America, Agriculture. 12-acetoxy-1-hydroxy-9-octadecene and method for producing the same. 3,050,551, 8–21–62, Cl. 260—488.

Janik, Anton J., to The Ridge Tool Co. Flaring tool. 3,050,103, 8–21–62, Cl. 153—81.

Janner, Karl, to Siemens-Schuckertwerke Aktiengesellschaft. Neutron-flux gage for nuclear reactors. 3,050,624, 8–21–62, Cl. 250—83.1.

Jeddeloh, Otto G. Apparatus for edge spacing structurally stable sheets. 3,050,175, 8–21–62, Cl. 198—34.

Jenkins, Richard L., to General Motors Corp. Transistorized receiver for door operator. 3,050,661, 8–21–62, Cl. 317—147.

Jense, Willem F.: *See*—
De Roos, Huib, and Jense. 3,050,360.

Jensen, Kaj H., to Hamilton Watch Co. Housing for battery driven clock. 3,049,861, 8–21–62, Cl. 58—23.

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Ottenbacher, Theophilus H. 3,050,124.

Jewett, Wayne M.: *See*—
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Joffe, Edward J., to Park Plastics Co., Inc. Two-stage rocket. 3,049,832, 8–21–62, Cl. 46—74.

Johanson, Sten R., to Xerox Corp. Xerographic reproduction apparatus. 3,049,968, 8–21–62, Cl. 88—24.

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Pusch, Walter G., Hendry, and Hulsizer. 3,050,106.

Johnson, Armigene R. Adjustable garment. 3,049,718, 8–21–62, Cl. 2—76.

Johnson, Donald E., and E. Barany. Automatic locking ratchet action ski binder. 3,049,734, 8–21–62, Cl. 9—310.

Johnson, Marvin M., and R. M. Schirmer, to Phillips Petroleum Co. Jet engine combustion process. 3,049,872, 8–21–62, Cl. 60—35.4.

Johnson, Rufus F. Toe guard. 3,050,057, 8–21–62, Cl. 128—153.

Johnson, Walter G.: *See*—
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Johnston, Mason W., and R. D. Markle, Jr., to International Business Machines Corp. Fluid pressure control valve. 3,050,081, 8–21–62, Cl. 137—622.5.

Jones, Cordis W. Apparatus for making prestressed structural members. 3,049,786, 8–21–62, Cl. 25—118.

Jones, Leon, to Robertshaw-Fulton Controls Co. Breathing apparatus. 3,050,054, 8–21–62, Cl. 128—142.

Jones, R. A., and Co., Inc.: *See*—
Jones, Wickliffe. 3,049,846.

Jones, Wickliffe, to R. A. Jones and Co., Inc. Tray-type cartoning machine. 3,049,846, 8–21–62, Cl. 53—164.

Jongbloed-Unterhorst, Hans, to Hughes Aircraft Co. Shear fastener. 3,050,358, 8–21–62, Cl. 312—333.

Jorda, Robert M., and R. P. Yachik, to Shell Oil Co. Device for obtaining impression. 3,049,752, 8–21–62, Cl. 18—5.

Joris, George G.: *See*—
Cawthon, Thomas M., Jr., and Joris. 3,050,514.

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Osgood, Charles F. 3,050,295.

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Fukushima, Tomio. 3,050,021.

Kahrs, Karl-Heinz: *See*—
Starck, Werner, Kahrs, Kuhlkamp, and Ehmann. 3,050,508.

Kalil, James, to E. I. du Pont de Nemours, and Co. Asphalt-polyethylene composition for road-making. 3,050,483, 8–21–62, Cl. 260—28.5.

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Kamide, Harris P., to General Electric Co. Temperature control systems. 3,050,61F, 8–21–62, Cl. 219—20.

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Kammerer, Archer W., A. W. Kammerer, Jr., and Lamphere. 3,050,143.

Kammerer, Archer W., Jr., ⅓ to said Kammerer, ⅓ to J. K. Lamphere, and ⅓ to A. W. Kammerer. Retrievable drilling apparatus for well bores. 3,050,142, 8–21–62, Cl. 175—260.

Kammerer, Archer W., A. W. Kammerer, Jr., and J. K. Lamphere, ⅓ to said A. W. Kammerer, ⅓ to said J. K. Lamphere, and ⅓ to said A. W. Kammerer, Jr. Retrievable well bore drilling apparatus. 3,050,143, 8–21–62, Cl. 175—261.

Kaplan, Rose, B. and W. Pernhall. Retractable vehicle covering device. 3,050,075, 8–21–62, Cl. 135—5.

Karasek, Francis W.: *See*—
Miller, Elmer C., and Karasek. 3,049,964.

Karl, Martin, and W. Rexroth. Rotary pump. 3,050,011, 8–21–62, Cl. 103—126.

Karlson, Wesley N. Coating material additive. 3,050,406, 8–21–62, Cl. 106—14.

Karmel, Philip, and B. W. Tucker, Jr., to Otis Elevator Co. Protective mechanism for doors. 3,050,155, 8–21–62, Cl. 187—52.

Karpach, John: *See*—
Mackey, Walter. 3,050,217.

Karpach, Joseph: *See*—
Mackey, Walter. 3,050,217.

Kartridg Pak Co., The: *See*—
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Kato, Masumi, and S. Kamimura, to Toyota Motor Co. Ltd. System for driving window wipers for a vehicle. 3,049,742, 8–21–62, Cl. 15—250.17.

Katsanis, David J., to United States of America, Army. Hypervelocity fluid flow temperature limiter. 3,050,000, 8–21–62, Cl. 102—92.5.

Katzenberger, Edward F., and J. E. A. Steinbeck, to United States of America, Air Force. Retractable rotor mechanism. 3,050,277, 8–21–62, Cl. 244—17.27.

Kaufman, Melvin M., to Radio Corp. of America. Tunnel diode driver. 3,050,637, 8–21–62, Cl. 307—88.5.

Kawabara, Fred K., and B. L. Mickel, to Standard Oil Co. Jet fuel composition. 3,049,871, 8–21–62, Cl. 60—35.4.

Kawalle, Arthur W. Bridging for joists and studding. 3,049,764, 8–21–62, Cl. 20—9.

Keating, Patrick J., Jr.: *See*—
Helsig, Theodore C., and Keating. 3,050,466.

Keil, Joseph W., to Dow Corning Corp. Release coatings comprising the reaction product of 0.1–5% methylhydrogenpolysiloxane and 95–99.9% perfluoro-alkylsiloxane. 3,050,411, 8–21–62, Cl. 117—68.5.

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Wilkens, Carl E., and Keller. 3,050,035.

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Carr, Charles A., Jr., and Kelley. 3,050,425.

Kemp, Robert S. Coin controlled commodity vending apparatus. 3,050,168, 8–21–62, Cl. 194—10.

Kempf, Willi, to Gelenkwellenbau G.m.b.H. End bearing for joint studs. 3,050,351, 8–21–62, Cl. 308—174.

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Kendall, Paul A. High speed shutter. 3,049,982, 8–21–62, Cl. 95—55.

Ken-Tool Mfg. Co., The: *See*—
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Kenzik, William V., and W. J. Oakley, to General Motors Corp. Automatic brake adjuster. 3,050,157, 8–21–62, Cl. 188—79.5.

Kershner, Osborn A., to Lambert Brake Corp. Control valve. 3,050,344, 8–21–62, Cl. 303—54.

Ketner, William H., and J. R. Neale, Jr. Horseshoes. 3,050,133, 8–21–62, Cl. 168—4.

Ketterer, Stanley J., to The Griffith Co. Rotary duplex pump. 3,050,013, 8–21–62, Cl. 103—149.

Khan, Joseph A. Gas operated stapler. 3,049,712, 8–21–62, Cl. 1—44.4.

Kibler, Lynden U., to Bell Telephone Laboratories, Inc. Capacitively loaded waveguide. 3,050,702, 8–21–62, Cl. 333—98.

Kielsmeier, Elwood W., and W. B. Gara, to Oscar Mayer & Co., Inc. Preparation and composition control of sausage materials. 3,050,399, 8–21–62, Cl. 99—109.

Kindler, Adolf, and C.-H. Eckhardt, to Crede & Co. G.m.b.H., Gebruder. Tanks for tank vehicles. 3,050,315, 8–21–62, Cl. 280—5.

Kindred, Raymond L., and M. C. Burk, to Phillips Petroleum Co. Programmer-integrator for chromatographic analyzer. 3,049,908, 8–21–62, Cl. 73—23.

Kinsey, Cecil J.: *See*—
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Kleiss, Louis D., and N. F. McLeod, to Phillips Petroleum Co. Extractive distillation control. 3,050,450, 8–21–62, Cl. 202—160.

Klemperer, Hans, to Apra Precipitator Corp. Electrostatic precipitator circuits. 3,049,848, 8–21–62, Cl. 55—105.

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Görner, Wolfgang, and Klüge. 3,050,246.

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Kober, William, to TKM Electric Corp. Rotor and method of assembly thereof. 3,050,648, 8–21–62, Cl. 310—156.

Kobrin, Bernard S. Duplicating printing device. 3,049,993, 8–21–62, Cl. 101—127.1.

Kochey, Edward L., to Combustion Engineering, Inc. Steam generator organization. 3,050,042, 8–21–62, Cl. 122—406.

Koehn, Wilbur R. Retention catheters. 3,050,066, 8–21–62, Cl. 128—349.

Kohl, Walter H., to United States of America, Navy. Method of making insulated terminals of the receptacle type. 3,049,792, 8–21–62, Cl. 29—155.55.

Kohler, August R., W. H. Miller, and H. M. Windlan, to American Cyanamid Co. Process and composition for preservation and improved color retention of meats. 3,050,401, 8–21–62, Cl. 99—157.

Kohler, Conrad D. Differential with automatic slip control. 3,049,942, 8–21–62, Cl. 74—710.5.

Kolochynski, William. Agitator for domestic mixers. 3,050,288, 8–21–62, Cl. 259—134.

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Kopf, Philip. Shopping bag vending machine. 3,050,214, 8–21–62, Cl. 221—240.

Koppers Co., Inc.: *See*—
Tress, John J., and Hellman. 3,050,476.
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Koranda, Clarence J., and W. E. Fritz, to Enterprise Railway Equipment Co. Pneumatic unloading hopper structure. 3,050,342, 8–21–62, Cl. 302—52.

Korff, Marvin, and H. M. Scott, to United States of America, Navy. Direct coupled bootstrap sawtooth generator. 3,050,686, 8–21–62, Cl. 328—176.

Korte, Richard M., and H. N. Schneider, to General Electric Co. Circuit interrupter. 3,050,602, 8–21–62, Cl. 200—147.

Kottsieper, Edward, to United Aircraft Corp. Steam driven helicopter rotor head. 3,050,275, 8–21–62, Cl. 244—17.11.

Kraus, Karl J., deceased (by C. E. Roop, administrator), to J. F. Schuyler. Headache remedy containing ammonia. 3,050,443, 8–21–62, Cl. 167—54.

Kreitner, Frederick J.: *See*—
Miner, Richard Y., Davenport, and Kreitner. 3,049,808.

Kretzmer, Ernest R.: *See*—
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Krug, William H., to Gibbs Mfg. & Research Corp. Instrument keying circuit. 3,049,957, 8–21–62, Cl. 84—1.09.

Kruglick, John S. Otoscope illumination assembly. 3,050,049, 8–21–62, Cl. 128—23.

Kubicek, William G., to Regents of The University of Minnesota. Alternating pressure seat. 3,050,050, 8–21–62, Cl. 128—33.

Kuecken, John A., to Avco Corp. Radio frequency image detector. 3,050,725, 8–21–62, Cl. 343—17.

Kugler, Albert H., to California Packing Corp. Weighing apparatus. 3,050,187, 8–21–62, Cl. 209—121.

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Kuiken, Jan, to Shell Oil Co. Seals for rotary shafts of ships. 3,050,310, 8–21–62, Cl. 277—30.

Kuntz, Henry A. Lawn weed pulling tool. 3,050,327, 8–21–62, Cl. 294—50.5.

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Kusche, Norman A., to I-T-E Circuit Breaker Co. Adjustable auxiliary switch. 3,050,604, 8–21–62, Cl. 200—155.

Labastie, Albert H., E. Wester, and D. C. Blowers, to General Electric Co. Combustor construction with means for prevention of hot streaks. 3,049,882, 8–21–62, Cl. 60—39.66.

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Culver, Frederick H., and Lagucki. 3,050,130.

Lambers, Marvin. Manually manipulated surface cleaning device. 3,049,745, 8–21–62, Cl. 15—554.

Lambert Brake Corp.: *See*—
Kershner, Osborn A. 3,050,344.

Lambert, Merlan M.: *See*—
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Kammerer, Archer W., A. W. Kammerer, Jr., and Lamphere. 3,050,143.

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Lane, Dan R., to Lane Container Co. Reinforcing insert for a container. 3,050,228, 8–21–62, Cl. 229—15.

Lane, Trent. Liquid weigh cell. 3,050,145, 8–21–62, Cl. 177—210.

Lang, Alphonse G., Jr., and B. S. Liss, to General Precision, Inc. Sealed rotation transmission coupling. 3,049,931, 8–21–62, Cl. 74—17.8.

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Rayder, Walter W. 3,050,137.

Larsen, Lawrence W., and W. L. McClure, to Sun Oil Co. Pneumatic elevation of granular solids. 3,050,348, 8–21–62, Cl. 302—53.

Larson, Arthur G., and F. M. Raver, to McQuay, Inc. Machine for making ice in flake form. 3,049,895, 8–21–62, Cl. 62—354.

Lasch, Cecil A., Jr., and W. G. Johnson, to Electroglas, Inc. Thermocompression lead bonding apparatus. 3,050,617, 8–21–62, Cl. 219—85.

Laurent, George J., to Philco Corp. Radar system including anti-jamming means. 3,050,726, 8–21–62, Cl. 343—17.1.

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Coates, Harold, and Lawless. 3,050,522.

Lawroski, Harry: *See*—
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Lebeaux, Jacob M., and P. L. De Marsh, to FMC Corp. Integral well head assembly. 3,050,126, 8–21–62, Cl. 166—97.

Le Blanc, Robert B., to The Dow Chemical Co. Preparation of ferric chelates of alkylene amino acid compounds. 3,050,539, 8–21–62, Cl. 260—439.

Lee, Burton D., to Texaco Inc. Geophysical exploration. 3,050,148, 8–21–62, Cl. 181—.5.

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Leeds and Northrup Co.: *See*—
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Lehn, Alfred, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Hexamethylene tetramine activated chlorite bleach. 3,050,359, 8–21–62, Cl. 8—108.

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Leitzel, Ammon M., to Pacific Pulp Molding Co. Article packing machine and method. 3,049,844, 8–21–62, Cl. 53—35.

Leitzel, Ammon M., to Pacific Pulp Molding Co. Pulp molding suction die structure and method of making. 3,050,115, 8–21–62, Cl. 162—411.

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Lengyel, Gusztav. Expandible collet for gripping work pieces. 3,050,313, 8–21–62, Cl. 279—2.

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Goodall, Donald G., and Lepers. 3,049,878.

Lerer, Moise: *See*—
Hugel, Georges, and Lerer. 3,050,538.

Lerner, Morris K. Hoist for cleaning Venetian blinds. 3,050,284, 8–21–62, Cl. 254—139.

Levi, Hans L. Traction device. 3,050,347, 8–21–62, Cl. 305—20.

Levinos, Steven, and F. W. H. Mueller, to General Aniline & Film Corp. Photopolymerization of vinyl monomers by means of silver compounds as catalysts promoted by amphoteric metal oxides. 3,050,390, 8–21–62, Cl. 96—35.

Lewin, Leon F., to United-Carr Fastener Corp. Two-piece plastic stud. 3,049,777, 8–21–62, Cl. 24—213.

Lewis, Orrin E., to Speed Flow, Inc. Variable speed and torque transmitting fluid clutches. 3,050,167, 8–21–62, Cl. 192—61.

Lichti, Robert W., to Caterpillar Tractor Co. Diagonal brace mounting for bulldozer blades. 3,049,820, 8–21–62, Cl. 37—144.

Lichti, Robert W., to Caterpillar Tractor Co. Push arm and mounting structure for tiltable bulldozer blade. 3,049,821, 8–21–62, Cl. 37—144.

Liedberg, Kurt H., and S. R. Zernell, to Atlas Copco Aktiebolag. Dental apparatus. 3,049,805, 8–21–62, Cl. 32—22.

Ligh, David R. Hatch cover arrangement. 3,050,026, 8–21–62, Cl. 114—202.

Lincoln, Edward L., Jr., to Litton Systems, Inc. Phototransducer signal compressor. 3,050,632, 8–21–62, Cl. 250—207.

Lindemann, Waldemar, and F. van Endert; said van Endert assor. to said Lindemann. Scrap shearing machine. 3,049,988, 8–21–62, Cl. 100—95.

Lindquist, Everet F., to Measurement Research Center, Inc. Methods and apparatus for processing data. 3,050,248, 8–21–62, Cl. 235—61.7.

Lindsay, John D., to General Motors Corp. Transmission. 3,049,937, 8–21–62, Cl. 74—472.

Lindsay, John D., to General Motors Corp. Transmission. 3,049,945, 8–21–62, Cl. 74—759.

Ling-Temco Electronics, Inc.: *See*—
Hunt, Frederick C. 3,049,913.

Links, Heinz, to Robert Bosch, G.m.b.H. Fuel supply system. 3,050,001, 8–21–62, Cl. 103—2.

Linn, Carl R.: *See*—
Hervert, George L., and Linn. 3,050,570.

Liskey, George W., to FMC Corp. Method of and apparatus for adjusting vehicle wheels. 3,050,100, 8–21–62, Cl. 153—32.

Liss, Bernard S.: *See*—
Lang, Alphonse G., Jr., and Liss. 3,049,931.

List, Joseph F., to Aero Service Corp. Motor driven globe. 3,049,813, 8–21–62, Cl. 35—46.

Litterio, Frank R. A., to White Laboratories, Inc. Copolymerization process. 3,050,505, 8–21–62, Cl. 260—80.3.

Littlefield, Irvin W., ½ to R. C. Littlefield. Spray pattern control mechanism for insecticide sprayer. 3,050,261, 8–21–62, Cl. 239—318.

Littlefield, Robert C.: *See*—
Littlefield, Irvin W. 3,050,261.

Litton Systems, Inc.: *See*—
Hill, William H. 3,050,696.
Lincoln, Edward L., Jr. 3,050,632.

Litwin, Walter J., and J. Eberhardt; said Eberhardt assor. to said Litwin. Adjustable clamp. 3,049,771, 8–21–62, Cl. 24—16.

Liubauskas, Boles. Maniple holder. 3,049,773, 8–21–62, Cl. 24—85.

Livermore, H. F., Corp.: *See*—
Stevens, John M. 3,050,426.

Ljunggren, Thor H., to Ex-Cell-O Corp. Shaft positioner. 3,050,247, 8–21–62, Cl. 235—61.

Llorens, Louis M. Release lock for slide fasteners. 3,049,780, 8–21–62, Cl. 24—205.15.

Lo, Chien-Pen, to Rohm & Haas Co. 3-thiocyanomethyl-2-benzothiazolinones and benzoxazolinones. 3,050,526, 8–21–62, Cl. 260—304.

Lockheed Aircraft Corp.: *See*—
Hale, James R., and Mauer. 3,050,691.
Turner, Robert M. 3,050,694.

Loebner, Egon E., to Radio Corp. of America. Logic network. 3,050,633, 8–21–62, Cl. 250—209.

Lomax, Clarence E., to Automatic Electric Laboratories, Inc. PBX toll connector providing special service. 3,050,590, 8–21–62, Cl. 179—27.

Longo, Joseph M. Lipstick case with picture retaining cap. 3,050,212, 8–21–62, Cl. 220—42.

Lord Baltimore Press, Inc., The: *See*—
Neff, Richard F. 3,050,229.

Loretan, Edouard. Shock-absorbing bearing for the movable element of a small mechanism. 3,050,350, 8–21–62, Cl. 308—159.

Louthan, Rector P., to Phillips Petroleum Co. Preparation of organic sulfur compounds. 3,050,452, 8–21–62, Cl. 204—162.

Love, Erby L. Pistol bow. 3,050,046, 8–21–62, Cl. 124—25.

Lowry, Herman D., to Lowry Hydraulic Co. Positive pressure pump. 3,050,009, 8–21–62, Cl. 103—125.

Lowry Hydraulic Co.: *See*—
Lowry, Herman D. 3,050,009.

Lubinski, Arthur: *See*—
Fast, Clarence R., Howard, and Lubinski. 3,050,119.

Lumnus, James L., and T. T. Martin, to Pan American Petroleum Corp. Emulsion drilling fluid and method. 3,050,141, 8–21–62, Cl. 175—41.

Lund, William E. Collapsible crib. 3,049,728, 8–21–62, Cl. 5—99.

Lundeberg, Edgar C. Typewriter ribbon device. 3,050,172, 8–21–62, Cl. 197—168.

Lundquist, Richard C.: *See*—
Hlinsky, Emil J., and Lundquist. 3,050,293.
Newton, John S., and Lundquist. 3,050,292.

Lundquist, Richard C., to Goodman Mfg. Co. Core breaking device for rotary boring heads. 3,050,291, 8–21–62, Cl. 262—9.

Luther, Paul E. Liquid filling apparatus. 3,050,090, 8–21–62, Cl. 141—150.

Luvisi, John P., to Universal Oil Products Co. Reaction product of N,N-dialkenylmelamine and a salicylaldehyde and its use. 3,050,461, 8–21–62, Cl. 208—251.

Lydle, John E., to The Ken-Tool Mfg. Co. Circumferentially traveling tire mounting tool. 3,050,110, 8–21–62, Cl. 157—1.24.

Lydle, John E., and R. R. Dunbar; to said J. E. Lydle. Tire changing machine. 3,050,096, 8–21–62, Cl. 144—288.

Lynam, Thomas M.: *See*—
Palcanis, Franklin G., and Lynam. 3,050,092.

Lynch, Arthur H., Sr. Steel cutter support guide and gauge. 3,049,956, 8–21–62, Cl. 83—467.

Lyon, George A., to Lyon Inc. Wheel cover. 3,050,338, 8–21–62, Cl. 301—37.

Lyon, George A., to Lyon Inc. Wheel cover. 3,050,339, 8–21–62, Cl. 301—37.

Lyon, George A., to Lyon Inc. Wheel cover. 3,050,340, 8–21–62, Cl. 301—37.

Lyon Inc.: *See*—
Lyon, George A. 3,050,338.
Lyon, George A. 3,050,339.
Lyon, George A. 3,050,340.

M.S.A. Research Corp: *See*—
Bovard, Robert M. 3,049,812.

MacDonald, Eric, to Ilford Ltd. Filter layer for photographic elements. 3,050,393, 8–21–62, Cl. 96—84.

MacFarland, Charles H., to The Scott & Fetzer Co. Vacuum cleaner component. 3,049,744, 8–21–62, Cl. 15—324.

Mackey, Walter, ¾ to John Karpach, ¼ to Joseph Karpach, and ¼ to V. Drobnak. Oil or the like dispensing device. 3,050,217, 8–21–62, Cl. 222—211.

Maclean, Duncan: *See*—
Munro, Neil, and Maclean. 3,050,533.
Munro, Neil, and Maclean. 3,050,548.

Macrae, William K., and W. Jackson, to City Parking Ltd. Spray gun carriers. 3,050,260, 8–21–62, Cl. 239—150.

Magnetic Seal Corp.: *See*—
Colby, George E. 3,050,319.

Mahler, Willi. Method of producing biscuits or like baked products and apparatus for performing the same. 3,050,017, 8–21–62, Cl. 107—1.

Malinowski, Tadeusz, to E. Leitz Canada Ltd. Binocular with improved system of optical adjustment. 3,049,972, 8–21–62, Cl. 88—33.

Maloney, John M.: *See*—
Brown, Alvin M., Ayers, Shields, Maloney, and Kmiecik. 3,049,992.

Mann, Jabez H., to Bowmar Instrument Corp. Revolution counter. 3,050,250, 8–21–62, Cl. 235—144.

Mansen, Carl H. Folding trailer. 3,050,331, 8–21,62, Cl. 296—27.

Marcatili, Enrique A. J., and D. H. Ring, to Bell Telephone Laboratories, Inc. Millimeter wave hybrid junction. 3,050,699, 8–21–62, Cl. 333—11.

Marcyes, Vernie W., and T. L. Granger. Sound actuated control system for ball mill and the like. 3,050,264, 8–21–62, Cl. 241—34.

Margraf, Mildred E. Pinless baby diaper. 3,050,063, 8–21–62, Cl. 128—284.

Marien, Melvin W., to Ramsey Corp. Piston and piston ring assembly. 3,050,354, 8–21–62, Cl. 277—188.

Markle, Ralph D., Jr.: *See*—
Johnston, Mason W., and Markle. 3,050,081.

Markoff-Moghadam, Leo. Safety clip. 3,049,770, 8–21–62, Cl. 24—13.

Martin, Eric, to Omega Industries, Inc. Method and apparatus for finishing surfaces. 3,049,788, 8–21–62, Cl. 29—90.

Martin, Raymond N.: *See*—
Bessette, Albert R., and Martin. 3,049,741.

Martin, Theodore T.: *See*—
Lummus, James L., and Martin. 3,050,141.

Martin, Willibald. Inflatable mooring buoy. 3,049,732, 8–21–62, Cl. 9—8.

Massey, Lester G.: *See*—
Urban, Peter, and Massey. 3,050,370.

Masterton, Bruce, and J. A. Langton, to Shell Oil Co. Dehydrogenation process. 3,050,572, 8–21–62, Cl. 260—680.

Mathews, George P., and C. D. Shunkwiler, to Rockwell-Standard Corp. Right angle, lever-wedge actuated mechanical brake. 3,050,156, 8–21–62, Cl. 188—78.

Mathews, Peter: *See*—
Brown, Thomas F., and Mathews. 3,050,464.

Matthews, Jas. H., & Co.: *See*—
Brown, Alvin M., Ayers, Shields, Maloney, and Kmiecik. 3,049,992.

Mauer, Robert C.: *See*—
Hale, James R., and Mauer. 3,050,691.

Mayer, Charles B., to General Electric Co. Broadband coupling between helix and coaxial line. 3,050,656, 8–21–62, Cl. 315—3.5.

Mayer, Ernst, to Hunt Foods, Inc. Apparatus for concentrating food products. 3,050,114, 8–21–62, Cl. 159—25.

Mayer, Oscar, & Co., Inc.: *See*—
Kielsmeier, Elwood W., and Gara. 3,050,399.

Mayer, Siegfried K., and A. C. Ferrara. Portable casing cleaner and applier for casing stuffers. 3,049,749, 8–21–62, Cl. 17—43.

Mayo, Roy E.: *See*—
Cohron, Gerald T., and Mayo. 3,049,819.

McClure, William L.: *See*—
Larsen, Lawrence W., and McClure. 3,050,343.

McCormick, Barnes W., J. J. Eisenbuth, and G. F. Wislicenus, to United States of America, Navy. Torpedo propulsion and control. 3,050,024, 8–21–62, Cl. 114—20.

McCormick, Robert H.: *See*—
Fenske, Merrell R., McCormick, and Lawroski. 3,050,448.

McCracken, James W. Load handling system. 3,050,206, 8–21–62 Cl. 214—620.

McDonald, David C. Hinge. 3,049,747, 8–21–62, Cl. 16—135.

McDonald, Raymore D., to Ulmac Equipment Co. Roadway machine. 3,049,817, 8–21–62, Cl. 37—108.

McGrath, Earle J., and C. H. Stevenson, III, said McGrath assor. to FMC Corp. Apparatus for handling cases. 3,050,199, 8–21–62, Cl. 214—6.

McGraw-Edison Co.: *See*—
Whitney, William G., and Wu. 3,050,596.

McIninch, Glenn W., to Auburn Machine Works, Inc. Digging tip. 3,049,824, 8–21–62, Cl. 37—191.

McKelvey, Ernest E.: *See*—
Boyer, Ernest W., Ford, and McKelvey. 3,050,622.

McLain, William R., to Kusan Inc. Educational blocks. 3,049,814, 8–21–62, Cl. 35—70.

McLeod, Norman F.: *See*—
Kleiss, Louis D., and McLeod. 3,050,450.

McMillan, Elmer E. Fan attachment for rotary mower blade. 3,049,855, 8–21–62, Cl 56—295.

McMillan, Jean A. Dishwasher apparatus. 3,050,073, 8–21–62, Cl. 134—137.

McMullen, Wayne W. Slope grader attachment. 3,049,822, 8–21–62, Cl. 37—155.

McNaney, Joseph T. Recording apparatus. 3,050,623, 8–21–62, Cl. 250—49.5.

McQuay, Inc.: *See*—
Larson, Arthur G., and Raver. 3,049,895.

McSpadden, Thomas W., to Pan American Petroleum Corp. Method and apparatus for completing wells. 3,050,120, 8–21–62, Cl. 166—46.

Measurement Research Center, Inc.: *See*—
Lindquist, Everet F. 3,050,248.

Melchior, Jan G., to Shell Oil Co. Conversion process for the production of high octane number gasoline components. 3,050,456, 8–21–62, Cl. 208—67.

Mellan, Ibert, to Polychrome Corp. Diazo condensation polymers. 3,050,502, 8–21–62, Cl. 260—72.5.

Melton, Thomas M., to Virginia-Carolina Chemical Corp. Phosphonium phosphates. 3,050,543, 8–21–62, Cl. 260—461.

Mendelsohn, Harold: *See*—
Smith, Leland L. Foell, and Mendelsohn. 3,050,558.

Mendelsohn, Meyer: *See*—
Horowitz, Carl, and Mendelsohn. 3,050,467.

Mendelsohn, Meyer, and C. Horowitz, to Yardney International Corp. Process for imparting wettability to shaped hydrophobic polymeric material. 3,050,418, 8–21–62, Cl. 117—118.

Menefee, Horace B.: *See*—
Brown, Carl L., Myers, Kinsey, and Menefee. 3,050,614.

Mennenga, John R. Retrieving device for submerged articles. 3,049,733, 8–21–62, Cl. 9—9.

Merck & Co., Inc.: *See*—
Novello, Frederick C. 3,050,553.

Merckling, Nicholas G.: *See*—
Anderson, Arthur W., Bruce, Merckling, and Truett. 3,050,471.

Merckling, Noelle K.: *See*—
Anderson, Arthur W., Bruce, Merckling, and Truett. 3,050,471.

Mergenthaler Linotype Co.: *See*—
Eerde, John. 3,050,392.

Merian, Ernest, O. Senn, and W. Wehrli, to Sandoz A.G. Monoazo dyestuffs of low solubility in water. 3,050,516, 8–21–62, Cl. 260—205.

Merrill, Marcellus S., and L. H. Erickson; said Erickson assor. to said Merrill. Apparatus for balancing rotating bodies. 3,049,927, 8–21–62, Cl. 73—475.

Messmer, Donald D. Fishing tackle box. 3,050,356, 8–21–62, Cl. 312—201.

Metallgesellschaft Aktiengesellschaft: *See*—
Wiemer, Jean, and Muller. 3,049,849.

Meyer, Albert, to The Baldwin Piano Co. Obtaining ensemble and celeste effects in electrical musical instruments. 3,049,959, 8–21–62, Cl. 84—1.24.

Meyer, Burton C.: *See*—
Glass, Marvin I., Rittgers, and Meyer. 3,050,307.

Meyer, Geo. J., Mfg. Co.: *See*—
Meyer, George L. N. 3,050,091.

Meyer, George L. N., to Geo. J. Meyer Mfg. Co. Can filler stirrup. 3,050,091, 8–21–62, Cl. 141—370.

Meyer, Johannes. Pack of blank forms. 3,050,317, 8–21–62, Cl. 283—63.

Meyer, Ralph E.: *See*—
Randolph, Carl L., Jr., and Meyer. 3,050,560.

Meyer, William F., to Bowling Master, Inc. Bowler's wrist support. 3,049,717, 8–21–62, Cl. 2—16.

Meyers, Douglas C., to Shell Oil Co. Apparatus for producing high pressure wells. 3,050,125, 8–21–62, Cl. 166—91.

Mickel, Blanchard L.: *See*—
Kawahara, Fred K., and Mickel. 3,049,871.

Miehle-Goss-Dexter, Inc.: *See*—
Sites, Benjamin L., and Agruss. 3,050,413.

Mikell, Winborn L., to Garlock, Inc. Solid ring floating packing. 3,050,311, 8–21–62, Cl. 277—157.

Milberger, Ernest C., to The Standard Oil Co. Process for the manufacture of acrylonitrile. 3,050,546, 8–21–62, Cl. 260—465.3.

Miles Laboratories, Inc.: *See*—
Collins, Galen F. 3,050,373.

Miles, Raymond C., and J. G. Rubenson, to Cutler-Hammer, Inc. Gaging and machine tool control. 3,049,978, 8–21–62, Cl. 90—4.

Miller, Carl J.: *See*—
Hulten, Richard E., and Miller. 3,049,938.

Miller, Elmer C., and F. W. Karasek, to Phillips Petroleum Co. Optical oil change indicator. 3,049,964, 8–21–62, Cl. 88—14.

Miller, Henry S. Utility clamp. 3,050,326, 8–21–62, Cl. 294—15.

Miller, Louis C. Vehicle tent and tent carrier. 3,050,074, 8–21–62, Cl. 135—1.

Miller, Richard C., and E. J. Toton, to General Motors Corp. Proximity switch. 3,050,662, 8–21–62, Cl. 317—148.5.

Miller, Robert P., to Daryl Industries, Inc. Releasable latch assembly. 3,050,322, 8–21–62, Cl. 292—114.

Miller, Wade M., to American Telephone and Telegraph Co. Conference telephone apparatus. 3,050,584, 8–21–62, Cl. 179—1.

Miller, Wesley C. Nuclear electromagnetic resonator. 3,050,627, 8–21–62, Cl. 250—83.3.

Miller, Wilbur H.: *See*—
Kohler, August R., Miller, and Windlan. 3,050,401.

Mills, Aubrey R., to Die Casting Machine Tools Ltd. Toy gun with dummy bullet using deformable vegetable matter. 3,049,828, 8–21–62, Cl. 42—54.

Mills, George A.: *See*—
Erner, William E., Green, and Mills. 3,050,523.

Mills, Jack F., to The Dow Chemical Co. Recovery of iodine from aqueous iodide solutions. 3,050,369, 8–21–62, Cl. 23—216.

Mills, Kenneth R.: *See*—
Robbins, Archie L., and Mills. 3,050,494.

Mills, Lester. Fleshing machine. 3,049,906, 8–21–62, Cl. 69—46.

Milnes, James A. Water-cooled mandrel. 3,049,947, 8–21–62, Cl. 78—103.

Miner, Richard Y., C. T. Davenport, and F. J. Kreitner, to American Bosch Arma Corp. Gyro compass. 3,049,808, 8–21–62, Cl. 33—226.

Minerals & Chemicals Philipp Corp.: *See*—
Haden, Walter L., Jr. 3,050,421.

Minneapolis-Honeywell Regulator Co.: *See*—
Ambrose, William J. 3,050,719.
Blackett, James C. 3,050,254.
Booth, Russell N., and Russell. 3,050,600.
Fuller, William E. 3,050,256.
Ironside, Donald S. 3,050,644.
Osen, Ralph T. 3,050,610.

Minnesota Mining and Mfg. Co.: *See*—
Fennessy, John J. 3,050,593.
Tiers, George V. D. 3,050,555.
Tiers, George V. D. 3,050,556.

Mitchell, Curtis P., to Palmer Thermometers, Inc. Recording thermometers. 3,049,923, 8–21–62, Cl. 73—343.5.

Miwa, Yukio, to H. Goodman. Eyeglass frames and the like. 3,049,974, 8–21–62, Cl. 88—53.

Mobay Chemical Co.: *See*—
Muller, Erwin, Wiegand, and Braun. 3,050,475.
Weinbrenner, Erwin, Tischbein, Hoppe, and Brochhagen. 3,050,432.

Moeller, William C., to Parmelee Plastics Co. Nose pad for spectacles. 3,049,973, 8–21–62, Cl. 88—48.

Molis, Benedict, to Economy Engineering Co. Lift truck articulated power unit. 3,050,153, 8–21–62, Cl. 187—9.

Möller, Waldemar, to Bodenseewerk Perkin-Elmer u. Co. G.m.b.H. Variable-speed motor. 3,050,671, 8–21–62, Cl. 318—171.

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Cooper, Alfred S. 3,049,793.

Monaco, Ugo, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Process and machine for the continuous production of corrugated laminates of plastic materials. 3,050,109, 8–21–62, Cl. 156—588.

Monsanto Chemical Co.: *See*—
Arganbright, Robert P. 3,050,568.
Graham, Paul R. 3,050,488.
Heininger, Samuel A., and Birum. 3,050,545.

Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Monaco, Ugo. 3,050,109.
Natta, Giulio, Bruzzone, and Borsini. 3,050,503.

Moore, Donald W., to Electrosolids Corp. Phase regulated inverters. 3,050,674, 8–21–62, Cl. 321—5.

Moore, Edward E.: *See*—
Saunders, John A., and Moore. 3,050,112.

Moore & Hall: *See*—
Toulon, Pierre M. 3,050,654.

Moore, Pernell J., to National Lead Co. Hydrocarbon sampling. 3,050,449, 8–21–62, Cl. 202—152.

Moore, Robert E., and R. M. Adkins. Mechanical compress bandage. 3,050,064, 8–21–62, Cl. 128—327.

Moore, Robert J.: *See*—
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Moore, Thomas J., to Isaacson Iron Works. Machine for shearing flanges from I-beams. 3,049,955, 8–21–62, Cl. 83—422.

Morgan, Lyman W., and D. C. Tabler, to Phillips Petroleum Co. Catalyst regeneration process and apparatus. 3,050,469, 8–21–62, Cl. 252—417.

Morgan, Willard L.: *See*—
Slayter, Games, Morgan, Morrison, and Shannon. 3,050,427.

Morrell, Jacque C. Polymerization catalyst. 3,050,472, 8–21–62, Cl. 252—435.

Morrell, Jacque C. Polymerization catalyst. 3,050,473, 8–21–62, Cl. 252—435.

Morris, Lawrence R.: *See*—
Hereth, Ralph F., and Morris. 3,049,976.

Morrison, Albert R.: *See*—
Slayter, Games, Morgan, Morrison, and Shannon. 3,050,427.

Morrow, Morris R., and A. D. Suttle, Jr., to Esso Research and Engineering Co. Radioactive ionizer for a combination changer. 3,049 874, 8–21–62, Cl. 60—35.6.

Mortenson, Oscar W. Roll holder. 3,050,268, 8–21–62, Cl. 242—55.53.

Moseley, F. L., Co.: *See*—
Moseley, Francis L., and Holdo. 3,050,669.

Moseley, Francis L., and A. O. Holdo, to F. L. Moseley Co. Optical curve following servomotor control system. 3,050,669, 8–21–62, Cl. 318—31.

Moss, Ennis E., Sr.: *See*—
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Mounce, George R., and G. H. Kivell, to Electronic Associates Ltd. Console control for coding punched cards. 3,050,242, 8–21–62, Cl. 234—32.

Moxley, William N. Massage apparatus. 3,050,051, 8–21–62, Cl. 128—33.

Moxley, William N. Massage apparatus. 3,050,352, 8–21–62, Cl. 308—184.

Mueller, Fritz W. H.: *See*—
Levinos, Steven, and Mueller. 3,050,390.

Mueller, John C., Jr., to Richardson Taylor-Globe Corp. Display package. 3,050,183, 8–21–62, Cl. 206—45.14.

Mueller, Max B.: *See*—
Pietrusza, Edward W., Brown, and Mueller. 3,050,544.

Muetterties, Earl L., to E. I. du Pont de Nemours and Co. Decaborane salts and their preparation. 3,050,361, 8–21–62, Cl. 23—14.

Muffly, Glenn. Defrosting of evaporator. 3,049,892, 8–21–62, Cl. 62—210.

Muller, Erwin, C. Wiegand, and G. Braun, ½ to Farbenfabriken Bayer Aktiengesellschaft and ½ to Mobay Chemical Co. Production of polyurethane plastics using Schiff's base catalysts. 3,050,475, 8–21–62, Cl. 260—2.5.

Muller, Heinz: *See*—
Wiemer, Jean, and Muller. 3,049,849.

Multin, Paul. Means for protecting constructions and buildings against the risk of fire. 3,050,134, 8–21–62, Cl. 169—5.

Munro, Neil, and D. Maclean, to Imperial Chemical Industries Ltd. Manufacture of esters. 3,050,533, 8–21–62, Cl. 260—346.1

Munro, Neil, and D. Maclean, to Imperial Chemical Industries Ltd. Improvements in the esterification of terephthalic acid with ethylene glycol. 3,050,548, 8–21–62, Cl. 260—475.

Murray, George E.: *See*—
Gardner, Charles N., Furrer, and Murray. 3,050,278.

Murschel, Erwin, to C. F. Scheer & Cie. Portable grinding machine. 3,049,842, 8–21–62, Cl. 51—170.

Muskulus, Willi, to Balzer Droll Schnitt- und Werkzeugbau, Firma. Method and apparatus for binding electric conductors and windings. 3,050,019, 8–21–62, Cl. 112—2.

Myers, Joseph R.: *See*—
Brown, Carl L., Myers, Kinsey, and Menefee. 3,050,614.

Nack, Herman R., J. J. Bulloff, and J. R. Whitacre, to Union Carbide Corp. Chromium nickel alloy gas plating. 3,050,417, 8–21–62, Cl. 117—107.

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Nash, Victor H. and R. F. 3,050,579.

Nash, Victor H. and R. F. Automatic files system. 3,050,579, 8–21–62, Cl. 178—5.6.

Nathan, Emanuel, to The Opticase Co. Spectacle case. 3,050,181, 8–21–62, Cl. 206—5.

National Cash Register Co., The: *See*—
Happ, Georg. 3,050,245.

National Lead Co.: *See*—
Gordon, Eliot G., and Konig. 3,050,499.
Herman, Daniel F., Resnick, and Simone. 3,050,504.
Moore, Pernell J. 3,050,449.
Oppegaard, Assur G., Hauge, and Aas. 3,050,362.
Orsino, Joseph A., and Dunn. 3,050,408.

Natta, Giulio, M. Bruzzone, and C. Borsini, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Chlorosulfonated elastomers and methods for making the same. 3,050,503, 8–21–62, Cl. 260—79.3.

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Ketner, William H., and Neale. 3,050,133.

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Neff, Darby B., and J. F. Dykes, to American Brake Shoe Co. Balanced piston shoe. 3,049,940, 8–21–62, Cl. 74—569.

Neff, Richard F., to The Lord Baltimore Press, Inc. Container and method and means for making same. 3,050,229, 8–21–62, Cl. 229—16.

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Nemec, Joseph W., and S. J. Schechter, to Rohm & Haas Co. Stable anhydrous disodium ethylene bisdithiocarbamate. 3,050,552, 8–21–62, Cl. 260—500.

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Neugebauer, Wilhelm, O. Süs, and A. Rebenstock, to Azoplate Corp. Presensitized printing plates and method for the production thereof. 3,050,388, 8–21–62, Cl. 96—33.

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Haeber, John A., Newman, and Otteman. 3,050,117.

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Niederhauser, Warren D., to Rohm & Haas Co. N-alkylbenzyl-N-dodecenyl quaternary ammonium salts. 3,050,521, 8–21–62, Cl. 260—247.

Nielsen, James W., to Bell Telephone Laboratories, Inc. Single crystal garnets. 3,050,407, 8–21–62, Cl. 106—42.

Niles, Ira P., to Allen-Bradley Co. Packaging for small uniform articles. 3,050,186, 8–21–62, Cl. 206—59.

Nisser, Henrik G., and W. Breuninger, to J. M. Voith, Gesellschaft mit beschrankter Haftung. Flotation machine. 3,050,188, 8–21–62, Cl. 209—170.

Nitkiewicz, Stanley L., to Abbey Etna Machine Co. Fin rolls for tube mills. 3,050,101, 8–21–62, Cl. 153—54.

Nitzsche, Siegfried, and M. Wick, to Wacker-Chemie G.m.b.H. Method for curing organopolysiloxane compositions with sulfur-containing compounds which are reducible by nascent hydrogen. 3,050,485, 8–21–62, Cl. 260—29.1.

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Norris, Lannie F., to Norris Dispensers, Inc. Chambered milk can with thermo-plastic insertable cover plate. 3,050,216, 8–21–62, Cl. 222—184.

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North American Philips Co., Inc.: *See*—
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Patz, Paul, and E. A. Graetz. Power cutter mechanism for silage unloaders. 3,050,294, 8–21–62, Cl. 262—19.

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Pearson, Tillmon H., and T. O. Sistrunk, to Ethyl Corp. Process of reacting a group III-A metal with a group IV-A metal halide and hydrogen in a liquid organic medium and the product of said processes. 3,050,470, 8–21–62, Cl. 252—429.

Pearson, William K. J., to The British Aluminium Co. Ltd. Manufacture of metal sheet or strip. 3,049,950, 8–21–62, Cl. 80—56.

Pease, William M., and T. P. Heuchling. Feedback and command signal combining servosystem to produce quadrature output control voltages. 3,050,668, 8–21–62, Cl. 318—30.

Peckham, Arthur C. Orthopedic supports. 3,050,053, 8–21–62, Cl. 128—80.

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Perrella, Guido. Tape feed device. 3,050,226, 8–21–62, Cl. 226—157.

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Piccoli, William A., to Dow Corning Corp. Ortho-disilyl benzenes. 3 050,542, 8–21–62, Cl. 260—448.2.

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Pietrusza, Edward W., R. E. Brown, and M. B. Mueller, to Allied Chemical Corp. Cyanobenzyl amine. 3,050,544, 8–21–62, Cl. 260—465.

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Pollakm, Abraham. Switch actuating mechanism for submersible sump pumps. 3,050,605, 8–21–62, Cl. 200—168.

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Porter, Lee M., W. A. Chantry, and R. F. York, to Shell Oil Co. Catalytic oxidation of tertiary butyl toluene and recovery of oxygenated products. 3,050,554, 8–21–62, Cl. 260—524.

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Primus, Remigio E. Insertable cigar holder. 3,050,068, 8–21–62, Cl. 131—13.

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Proctor Counter Co., The: *See*—
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Pschunder, Ralph J., to The New York Air Brake Co. Engine. 3,050,005, 8–21–62, Cl. 103—37.
Pugniet, Jules F. P. Fastening devices for ribbons and the like. 3,049,776, 8–21–62, Cl. 24—170.
Pusch, Walter G., J. M. Hendry, deceased (by J. D. Hendry, executrix), and F. V. Hulsizer, to Johns-Manville Corp. Method and apparatus for forming pipe insulation. 3,050,-106, 8–21–62, Cl. 156—457.
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Kaufman, Melvin M. 3,050,637.
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Rand, Burton, to Autosonics Inc. Dry cleaning machine. 3,049,904, 8–21–62, Cl. 68—18.
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Randolph, Carl L., Jr., and R. E. Meyer, to Aerojet-General Corp. Preparation of dimethyl hydrazine. 3,050,560, 8–21–62, Cl. 260—583.
Ranney, Bolvin C. Globe and clock construction. 3,049,863, 8–21–62, Cl. 58—44.
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Rayder, Walter W., to B. H. Lantz. Plow structure. 3,050,-137, 8–21–62, Cl. 172—759.
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Reed, Stanley F., and E. F. Deady, to Reed Research Inc. Heat insulating screen. 3,050,279, 8–21–62, Cl. 245—11.
Reed, Theron J. Forced feed for vertical screw conveyor augers. 3,050,177, 8–21–62, Cl. 198—64.
Reed, Thomas F., to United States Steel Corp. Method and apparatus for controlling feed to shaft furnace. 3,050,299, 8–21–62, Cl. 263—29.
Rees, Richard W., to Shawinigan Chemicals Ltd. Epoxy derivatives of unsaturated polyvinyl chloride. 3,050,507, 8–21–62, Cl. 260—87.1.
Reese, William M. Differential pressure responsive device. 3,050,085, 8–21–62, Cl. 137—779.
Regan, Malachy J. Umbrella adapter for folding chair. 3,050,280, 8–21–62, Cl. 248—40.
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Richter, Sidney B., to Velsicol Chemical Corp. New fungicidal compositions of matter. 3,050,440, 8–21–62, Cl. 167—30.
Rideout, Richard G. Baseball game. 3,050,308, 8–21–62, Cl. 273—122.
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Janik, Anton J. 3,050,103.
Weibel, Herman. 3,049,737.
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Ring, Douglas H.: *See*—
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Ritson, Daniel D., and T. J. Suen, to American Cyanamid Co. Coating composition for paper comprising a mineral pigment and an acrylic acid-acrylamide-acrylonitrile copolymer as principal coating component. 3,050,486, 8–21–62, Cl. 260—29.6.
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Roberts, Carleton W., to The Dow Chemical Co. N-tertiarybutyl-1,4,5,6-tetrachloro-7,8-dioxobycyclo(2.2.2.) oct-5-ene-2-carboxamide. 3,050,557, 8–21–62, Cl. 260—557.
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Lo, Chien-Pen. 3,050,526.
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Nemec, Joseph W., and Schechter. 3,050,552.
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Heinz, Anton R., Rosahl, Graulich, and Esser. 3,050,509.
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Roth, Wilfred. Mass flowmeter. 3,049,919, 8–21–62, Cl. 73—228.
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Ruetz, Theodor. Frictional igniter. 3,049,902, 8–21–62, Cl. 67—6.1.
Rumsey, Rollin D., to Houdaille Industries, Inc. Vibration damper structure. 3,049,941, 8–21–62, Cl. 74—574.
Rundquist, Dean W., to Shell Oil Co. Apparatus for the coagulation and recovery of polymers. 3,050,113, 8–21–62, Cl. 159—13.

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Sayford, Frank M., Jr., to Frank M. Sayford Co. Cup forming method and apparatus. 3,049,979, 8–21–62, Cl. 93—39.3.
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Nemec, Joseph W., and Schechter. 3,050,552.
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Schelke, Robert K., to Belden Mfg. Co. Chuck key holder and strain relief. 3,049,946, 8–21–62, Cl. 77—6.
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Schlosser, Francis G., and S. F. Gazzo, to Pfaff and Kendall. Outdoor lighting unit. 3,050,620, 8–21–62, Cl. 240—25.
Schluchter, Jean, to Indufi S.A. de Participations. Automatic machine for the drilling of a succession of bores in parts made of hard material. 3,050,047, 8–21–62, Cl. 125—30.
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Schmerling, Louis, to Universal Oil Products Co. Polycyclic compounds containing nuclearly substituted halogens. 3,050,567, 8–21–62, Cl. 260—648.
Schmidt, Heinrich, to Lehmann Hein & Co. Aktiengesellschaft. Wire-looping machines. 3,050,089, 8–21–62, Cl. 140—102.
Schmitt, Milton G., to Thilmany Pulp & Paper Co. Flameproof sheet. 3,050,424, 8–21–62, Cl. 154—44.
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Schnell, Ernst E., to Deere & Co. Worm gearing. 3,049,936, 8–21–62, Cl. 74—458.
Schonstedt, Erick O., to United States of America, Navy. Device for detecting or measuring magnetic fields. 3,050,-679, 8–21–62, Cl. 324—43.
Schroeder, Charles S., to The Yale & Towne Mfg. Co. Hydraulic transmission. 3,049,884, 8–21–62, Cl. 60—53.
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Schultz, Robert A., to United States Steel Corp. Adjustable-taper mold for continuous casting. 3,049,769, 8–21–62, Cl. 22—145.
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Schumacher, Joseph N., W. M. Henley, E. Bernasek, and C. E. Teague, Jr., to R. J. Reynolds Tobacco Co. Two stage oxidation of Sclareol. 3,050,532, 8–21–62, Cl. 260—343.3.
Schuman, Seymour C., to Hydrocarbon Research, Inc. Two-stage conversion of heavy oils. 3,050,459, 8–21–62, Cl. 208—97.
Schuyler, James F.: *See*—
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Schwaneke, Fred C., to Webcor, Inc. Coffee maker visual indicator. 3,049,922, 8–21–62, Cl. 73—323.
Schwartz, Robert C., and E. E. Moss, Sr., to Botany Industries, Inc. Grid structure for seed cotton cleaners and the like. 3,049,763, 8–21–62, Cl. 19—93.
Schwertz, Frederick A., to Xerox Corp. Electrostatic techniques. 3,050,580, 8–21–62, Cl. 178—6.6.
Scioloro, Joseph D. Holder for securing receptacles to the floor of a vehicle. 3,050,223, 8–21–62, Cl. 224—29.
Sclar, Nathan, to Nuclear Corp. of America. Self-powered semiconductor oscillators. 3,050,684, 8–21–62, Cl. 325—105.
Scott & Fetzer Co., The: *See*—
MacFarland, Charles H. 3,049,744.
Scott, George A., to General Electric Co. Door safety latch for heated cavity. 3,050,048, 8–21–62, Cl. 126—273.
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Scott, J. O., to Cities Service Research and Development Co. Gas fired oil-well burner. 3,050,123, 8–21–62, Cl. 166—59.
Scott, Richard L., to Phillips Petroleum Co. Means and method for carbon and hydrogen analysis. 3,050,372, 8–21–62, Cl. 23—230.
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Sebel, D., & Co. Ltd.: *See*—
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Segrove, Herbert D., to British Industrial Sand Ltd. Purification of sand containing colour-imparting impurities. 3,050,364, 8–21–62, Cl. 23—182.
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Sendzimir, Tadeusz. 3,049,948.
Sendzimir, Tadeusz, ¾0 to T. and B. Sendzimir. Dual drive planetary reducing mills. 3,049,948, 8–21–62, Cl. 80—38.
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Sinninger, Dwight V. 3,050,693.
Senn, Otto: *See*—
Merian, Ernest, Senn, and Wehrli. 3,050,516.
Seraphim, Donald P.: *See*—
Connell, Richard A., and Seraphim. 3,050,643.
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Sexsmith, David R., to American Cyanamid Co. Quarternization of vinyl chloroacetate polymers. 3,050,506, 8–21–62, Cl. 260—85.7.
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Shang, Jeng C., to Union Tank Car Co. Elevated tank. 3,050,210, 8–21–62, Cl. 220—18.
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Sheinhartz, Irving, and J. L. Zambrow, to Sylvania Electric Products Inc. Apparatus and method for bonding tubular elements. 3,050,613, 8–21–62, Cl. 219—50.
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Barkelew, Chandler H. 3,049,891.
Bell, Albert G., and Epton. 3,050,379.
Culver, Frederick H., and Lagucki. 3,050,130.
Datt, Paul L. 3,050,678.
De Roos, Huib, and Jense. 3,050,360.
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Francis, Charles E. 3,050,465.
Garner, Philip J. 3,050,462.
Haeber, John A. 3,050,129.
Haeber, John A., Newman, and Otteman. 3,050,117.
Handschy, John, Gordon, and Moore. 3,050,453.
Hayes, William J. 3,050,139.
Hayes, William J. 3,050,140.
Jorda, Robert M., and Yachik. 3,049,752.
Kuiken, Jan. 3,050,310.
Masterton, Bruce and Langton. 3,050,572.
Melchior, Jan G. 3,050,456.
Meyers, Douglas C. 3,050,125.
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Van't Spijker, Peter, and Van der Marel. 3,050,458.
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Barkman, Aaron, Fujimoto, and Orwig. 3,050,263.
Sherwood, Laurence T., Jr., to E. I. du Pont de Nemours and Co. Photostabilized polyoxymethylenes. 3,050,500, 8–21–62, Cl. 260—45.95.

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Brown, Alvin M., Ayers, Shields, Maloney, and Kmiecik. 3,049,992.

Shimp, Nathan B., to Speicher Brothers, Inc. Self return trip cleaner for trenching machine. 3,049,816, 8–21–62, Cl. 37—97.

Shiver, Amos J., to Phillips Petroleum Co. Underground storage. 3,049,921, 8–21–62, Cl. 73—302.

Shlager, Abraham E. Square column. 3,050,161, 8–21–62, Cl. 189—38.

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Sidelman, Abraham, to H. Goodman & Sons, Inc. Ball tip bristle brush roller. 3,050,070, 8–21–62, Cl. 132—39.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Emels, Reimer. 3,050,667.
Janner, Karl. 3,050,624.

Siempelkamp, Eugen. Apparatus for stacking sheet materials. 3,050,200, 8–21–62, Cl. 214—16.6.

Siepe, Werner, to Lehman-Hein & Co. Aktiengesellschaft. Centrifuges. 3,050,190, 8–21–62, Cl. 210—380.

Simmons, Milton E., and C. J. Finsterwalder, to General Motors Corp. Folding top actuation mechanism. 3,049,935, 8–21–62, Cl. 74—424.8.

Simms, T. S., & Co. Ltd.: *See*—
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Simone, Dominic: *See*—
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Simpson, Fred E., and R. A. Folkers, to Caterpillar Tractor Co. Combined seal and thrust means. 3,050,346, 8–21–62, Cl. 305—11.

Sinclair Refining Co.: *See*—
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Sinclair Research, Inc.: *See*—
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Singer-Fidelity, Inc.: *See*—
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Reymes-Cole, John M. R. and B. T. R. 3,049,899.

Sinninger, Dwight V., to Senn Custom, Inc. Rack assembly. 3,050,194, 8–21–62, Cl. 211—147.

Sinninger, Dwight V., to Senn Custom, Inc. Variable oscillator circuit utilizing reverse biased diode for operation at a predetermined frequency. 3,050,693, 8–21–62, Cl. 331—10.

Siracusa, Dante A., and R. W. Walker, to Bowen Itco, Inc. Jar with safety joint and adjusting means. 3,050,131, 8–21–62, Cl. 166—178.

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Pearson, Tillmon H., and Sistrunk. 3,050,470.

Sites, Benjamin L., and M. S. Agruss, to Miehle-Goss-Dexter, Inc. Quick drying printing ink for coating materials and method of drying same. 3,050,413, 8–21–62, Cl. 117—93.

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Bork, Hugo W. 3,049,802.

Skinner, Clawson N. Method and apparatus for shaping and sizing dentures. 3,049,804, 8–21–62. Cl. 32—1.

Skramstad, Harold K., C. Raudenbush, and J. A. Hart, to United States of America, Navy. Single ended amplifier with double ended output. 3,050,690, 8–21–62, Cl. 330—117.

Slagg, James E.: *See*—
Dickinson, Clarence R., and Slagg. 3,050,704.

Slayter, Games, W. L. Morgan, A. R. Morrison, and R. F. Shannon, to Owens-Corning Fiberglas Corp. Fibrous glass product and method of manufacture. 3,050,427, 8–21–62, Cl. 156—26.

Sloan, David H., to United States of America, Navy. Ramjet device. 3,049,883, 8–21–62, Cl. 60—39.72.

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Smeets, Gerard G. F., to Houdaille Industries, Inc. Calibrated positioning device. 3,049,807, 8–21–62, Cl. 33—189.

Smith, Alan L.: *See*—
Stepanski, Bernard, Smith, and Werthwine. 3,050,436.

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Smith, David R.: *See*—
Zelinski, Robert P., and Smith. 3,050,513.

Smith, Jean: *See*—
Smith, Bobby L. and J. 3,050,333.

Smith Kline & French Laboratories: *See*—
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Smith, Leland L., T. Foell, Jr., and H. Mendelsohn, to American Cyanamid Co. Refining of demethylchlortetracycline. 3,050,558, 8–21–62, Cl. 260—559.

Smith, M. Morton: *See*—
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Smith, Orson W., to Smithway Machine Co., Inc. Air actuated platen for sanding machines. 3,049,839, 8–21–62, Cl. 51—141.

Smith, Procter A. Carburetor for internal combustion engines. 3,049,850, 8–21–62, Cl. 55—228.

Smith, Woodrow W. Method and apparatus for straightening automobile frames. 3,050,099, 8–21–62, Cl. 153—32.

Smithway Machine Co., Inc.: *See*—
Smith, Orson W. 3,049,839.

Societe d'Etudes et de Participations Eau, Gaz: *See*—
Huber, Robert. 3,049,866.

Societe Van Cleef & Arpels: *See*—
Arpels, Pierre. 3,049,897.

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Solomon, Allen L.: *See*—
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Solomon, Paul W., to Phillips Petroleum Co. Reducing stickiness during the milling of a rubbery diene polymer by addition of a hydrocarbon acid ester of a phosphoric acid. 3,050,487, 8–21–62, Cl. 260—30.6.

Sommer, Leo H., to Dow Corning Corp. Silylpropyl silylbutanoates. 3,050,501, 8–21–62, Cl. 260—46.5.

Sommerfield, Edward H., to International Business Machines Corp. High speed transistor switch. 3,050,636, 8–21–62, Cl. 307—88.5.

Sontag, Harcourt C. Cabin pressure schedule deviation indicator. 3,049,925, 8–21–62, Cl. 73—407.

Sony Corp.: *See*—
Iikura, Shigetsune. 3,050,270.

Sony Kabushikikaisha (Sony Corp.): *See*—
Iikura, Shigetsune. 3,050,269.

Sowinski, Francis A.: *See*—
Yale, Harry L., and Sowinski. 3,050,524.

Spalding, Robert V. Excavating machines. 3,049,823, 8–21–62, Cl. 37—190.

Sparkuhl, Konstantin, 50% to T. Gregory. Fluid flowmeters. 3,049,918, 8–21–62, Cl. 73—209.

Specialties, Inc.: *See*—
Bucalo, Louis. 3,050,266.

Speed Flow, Inc.: *See*—
Lewis, Orrin E. 3,050,167.

Speicher Brothers, Inc.: *See*—
Shimp, Nathan B. 3,049,816.

Spencer, Glenn S., to The Bendix Corp. Semi-automatic two-speed hub gearing for velocipedes. 3,049,944, 8–21–62, Cl. 74—750.

Spencer, William R. Lamp assembly. 3,050,621, 8–21–62, Cl. 240—41.6.

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Brelsford, John E. 3,050,176.

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Spivey, Warren R.: *See*—
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Square D Co.: *See*—
Anger, Ernest G., and Pettit. 3,050,670.

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Stalego, Charles J., to Owens-Corning Fiberglas Corp. Method and apparatus for forming fibers. 3,049,751, 8–21–62, Cl. 18—2.5.

Standard Oil Co., Indiana: *See*—
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Kawahara, Fred K., and Mickel. 3,049,871.

Standard Oil Co., Ohio, The: *See*—
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Standard Packaging Corp.: *See*—
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Staniforth, Eric: *See*—
Hargreaves, Derek B., and Staniforth. 3,049,851.

Stanton, George W., and T. G. Traylor, to The Dow Chemical Co. Compositions comprising graft copolymers of aminated acrylate and methacrylate monomers on acrylonitrile polymers and method of preparing same. 3,050,498, 8–21–62, Cl. 260—45.5.

Starck, Werner, K.-H. Kahrs, A. Kuhlkamp, and W. Ehmann, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for preparing pure polyvinyl alcohol. 3,050,508, 8–21–62, Cl. 260—91.3.

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Steelcase, Inc.: *See*—
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Stegelman, Albert F.: *See*—
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Stegeman, Raymond F. E., to Bausch & Lomb Inc. Eyeshields. 3,049,716, 8–21–62, Cl. 2—14.

Stein, Marcel. Device for the prevention of shutdown corrosion attacks in steam spaces and condensate recipients of steam installations. 3,050,040, 8–21–62, Cl. 122—4.

Steinbeck, John E. A.: *See*—
Katzenberger, Edward F., and Steinbeck. 3,050,277.

Steinberg, Otho L. Lens adapter. 3,049,970, 8–21–62, Cl. 88—24.

Stepanski, Bernard, A. L. Smith, and J. Werthwine, to United States of America, Army. Method of delaminating cemented glass optics or lenses. 3,050,436, 8–21–62, Cl. 156—344.

Stephens Trusonic, Inc.: *See*—
Berlant, Emmanuel. 3,050,583.

Stevens, John M., to H. F. Livermore Corp. Vibration absorbing material and method for making the same. 3,050,426, 8–21–62, Cl. 154—54.

Stevens, Richard K.: *See*—
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Stevenson, Clarence H., III: *See*—
McGrath, Earle J., and Stevenson. 3,050,199.

Stieg, Robert C.: *See*—
Hess, Paul, and Stieg. 3,050,355.

Stillwell, Peter F. T. C., to Electric & Musical Industries Ltd. Amplifying arrangements. 3,050,724, 8–21–62, Cl. 343—16.

Stone, Guthrie B. Traction pattern for pulley side of conveyor belt. 3,050,178, 8–21–62, Cl. 198—203.

Stough, Donald M.: *See*—
Rice, Owen, and Stough. 3,050,144.

Straus, S. Charles, to Cincinnati Mfg. Corp. Variable pitch driving system. 3,049,932, 8–21–62. Cl. 74—230.17.

Stuart, Robert W., Jr., to General Radio Co. Digital frequency divider and method. 3,050,685, 8–21–62, Cl. 328—48.

Stump, Harvey, to Diodes Inc. Yieldable electrode for semiconductor devices. 3,050 666, 8–21–62, Cl. 317—234.

Stumpf, Hans-Reiner: *See*—
Neugebauer, Wilhelm, Süs, and Stumpf. 3,050,387.

Sud-Aviation, Societe Nationale de Construction Aeronautiques: *See*—
Goodall, Donald G., and Lepers. 3,049,878.

Sudbury, John D.: *See*—
Gant, Preston L., and Sudbury. 3,050,629.

Suen, Tzeng J.: *See*—
Ritson, Daniel D., and Suen. 3,050,486.

Sullivan, Donald F., to United Aircraft Corp. Thermocouple. 3,050,575, 8–21–62, Cl. 136—5.

Sullivan, Marguerite D.: *See*—
Denis, Albert P., and Sullivan. 3,049,798.

Sullivan, Richard N., to United Aircraft Corp. Pump timing device. 3,050,014, 8–21–62, Cl. 103—162.

Sunbeam Corp.: *See*—
Jepson, Ivar. 3,050,093.

Sunden, Karl H. Hand grenade. 3,049,999, 8–21–62, Cl. 102—64.

Sundstrum, Stratton W., to Swan Mira-Pools, Inc. Fallout shelter. 3,049,835, 8–21–62, Cl. 50—100.

Sun Oil Co.: *See*—
Larsen, Lawrence W., and McClure. 3,050,343.

Supreme Products Corp.: *See*—
Ondeck, Elmer J. 3,049,775.

Surelock Mfg. Co., Inc.: *See*—
Pagano, Frank. 3,050,080.

Süs, Oskar: *See*—
Neugebauer, Wilhelm, Süs, and Rebenstock. 3,050,388.
Neugebauer, Wilhelm, Süs, and Stumpf. 3,050,387.

Süs, Oskar, to Azoplate Corp. Light-sensitive material for the photo-mechanical preparation of printing plates. 3,050,389, 8–21–62, Cl. 96—33.

Sussman, Arthur, to Automatic Steam Products Corp. Apparatus for steaming and drying articles. 3,049,903, 8–21–62, Cl. 68—5.

Sutherland, Lionel M. Door frame protector. 3,050,232, 8–21–62, Cl. 229—40.

Suttle, Andrew D., Jr.: *See*—
Morrow, Morris R., and Suttle. 3,049,874.

Svenska Flaktfabriken, Aktiebolaget: *See*—
Boysen, Arne. 3,049,984.

Svenska Kullagerfabriken, Aktiebolaget: *See*—
Bratt, Axel E. 3,050,353.

Swan Mira-Pools, Inc.: *See*—
Sundstrum, Stratton W. 3,049,835.

Sweger, Russell P., A. A. Horton, and W. G. Young, to Barber-Colman Co. Means for operating a valve or the like in accordance with a controlled condition. 3,050,257, 8–21–62, Cl. 236—74.

Sylvania Electric Products Inc.: *See*—
Goldberg, Paul, and Solomon. 3,050,655.
Lamberty, Bernard J. 3,050,730.
Pester, W Bruce. 3 049,971.
Sheinhartz, Irving, and Zambrow. 3,050,613.
Wasserman, Moe. 3,050,420.

Syntex Corp.: *See*—
Bowers, Albert, and Ringold. 3,050,518.
Bowers, Albert, and Ringold. 3,050,534.

Szmuszkovicz, Jacob, to The Upjohn Co. Improved process for the preparation of 3-(2-ethyl-2-nitrovinyl) indole. 3,050,530, 8–21–62, Cl. 260—319.

Szwarc, Michael M., to The Dow Chemical Co. Block copolymers of alkenyl aromatic hydrocarbons and alkylene oxides. 3,050,511, 8–21–62, Cl. 260—93.5.

Szymczak, Eugene B., and C. R. Williams, to The Welch Scientific Co. Removable scale meter. 3,050,682, 8–21–62, Cl. 324—115.

TKM Electric Corp.: *See*—
Kober, William. 3,050,648.

Tabler, Donald C.: *See*—
Morgan, Lyman W., and Tabler. 3,050,469.

Talboys, Henry H., to Nordberg Mfg. Co. Track lining equipment. 3,050,015, 8–21–62, Cl. 104—2.

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Hohmann, Albert. 3,050,244.

Tang, Charles C. H., to Bell Telephone Laboratories, Inc. Tapered waveguide transition section. 3,050,701, 8–21–62, Cl. 333—34.

Tanner, Charles J., to Terry Machinery Co. Ltd. Uninterrupted power sources. 3,050,635, 8–21–62, Cl. 307—64.

Tannini, Camillo. Combined piano and accordion instrument. 3,049,960, 8–21–62, Cl. 84—172.

Tapp, G. L.: *See*—
Elmore, Harry M. 3,049,765.

Tate, Lawrence A., to International Business Machines Corp. Single shot multivibrator with pulse width control. 3,050,639, 8–21–62, Cl. 307—88.5.

Tawney, Pliny O., to United States Rubber Co. Trinitroalkyl ethers. 3,050,565, 8–21–62, Cl. 260—614.

Taylor Machine Works: *See*—
Eaves, James J. 3,050,328.

Taylor, Virgil. Valve. 3,049,721, 8–21–62, Cl. 4—37.

Teague, Claude E., Jr.: *See*—
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Teetor, Ralph R., to Perfect Circle Corp. Speed control device for an automotive vehicle. 3,050,147, 8–21–62, Cl. 180—82.1.

Teletype Corp.: *See*—
Baumgartner, William H. 3,050,171.

Tennessee Valley Authority: *See*—
Burt, Reynold B., and Barber. 3,050,374.

Terraz, Marius, ⅓ to M. Conchon, ⅓ to L. Cottier, and ⅓ to G. Philippin. Parking meter. 3,049,864, 8–21–62, Cl. 58—143.

Terry Machinery Co. Ltd.: *See*—
Tanner, Charles J. 3,050,635.

Teutsch, Arno: *See*—
Volkhausen, Clemens, and Teutsch. 3,049,949.

Texaco, Inc.: *See*—
Heisig, Theodore C., and Keating. 3,050,466.
Itria, Oswald A., and Parrack. 3,050,149.
Lee, Burton D. 3,050,148.

Texas Instruments Inc.: *See*—
Evans, Arthur D., and Webster. 3,050,638.

Textile Mills Co.: *See*—
Goldsmith, Kurt. 3,049,826.

Textron Inc.: *See*—
Buckminster, Lloyd A. 3,049,766.

Thevenaz, Jean, to Paillard S.A. Device for the sound reproduction of cinematographic films. 3,050,227, 8–21–62, Cl. 226—195.

Thierfelder, Ervin H., to The Englander Co., Inc. Convertible bed. 3,049,723, 8–21–62, Cl. 5—8.

Thilmany Pulp & Paper Co.: *See*—
Schmitt, Milton G. 3,050,424.

Thiokol Chemical Corp.: *See*—
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Thomas, John C., to Phillips Petroleum Co. Sampling system for ammonia-containing gases. 3,049,909, 8–21–62, Cl. 73—23.

Thomas, Richard E.: *See*—
Raczynski, Walter A., Thomas, and Uhl. 3,049,994.

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Dillingham, Edward, and Nyberg. 3,050,640.
Thrap, John E., and Prasse. 3,050,010.

Thompson, Thomas R., and R. H. Clark, to General Aniline & Film Corp. Photographic film with fine grain silver chloride underlayer. 3,050,391, 8–21–62, Cl. 96—61.

Thorn, Floyd B., Jr., to Cathodic Protection Service. Current rectifier. 3,050,660, 8–21–62, Cl. 317—99.

Thrap, John E., and H. F. Prasse, to Thompson Ramo Wooldridge Inc. Pressure loaded pump. 3,050,010, 8–21–62, Cl. 103—126.

Thrush, Anthony M.: *See*—
Vegter, Geert C., and Thrush. 3,050,438.

Tibbs, Christopher E. M., to Radio Heaters Ltd. Radio frequency dielectric heating apparatus. 3,050,606, 8–21–62, Cl. 219—10.55.

Tiers, George V. D., to Minnesota Mining and Mfg Co. Ethylene telomers. 3,050,555, 8–21–62, Cl. 260—543.

Tiers, George V. D., to Minnesota Mining and Mfg. Co. Halogenated alkane sulfonyl fluorides. 3,050,556, 8–21–62, Cl. 260—543.

Tile Council of America, Inc.: *See*—
Wagner, Herman B., and Weller. 3,050,493.

Tischbein, Wilhelm: *See*—
Weinbrenner, Erwin, Tischbein, Hoppe, and Brochhagan. 3,050,432.

Tixier, Maurice P., to Schlumberger Well Surveying Corp. Methods for investigating earth formations. 3,050,150, 8–21–62, Cl. 181—.5.

Tognella, Ugo R., to General Electric Co. Hydraulic operating system. 3,050,079, 8–21–62, Cl. 137—568.

Tokita, Kenji, and T. Tsukagoshi. Electric clock. 3,049,862, 8–21–62, Cl. 58—41.

Tomson, Richard J., to Du Pont of Canada Ltd. Double valve bag. 3,050,235, 8–21–62, Cl. 229—62.5.

Topanelian, Edward, Jr.: *See*—
Huitt, Jimmie L., Pekarek, and Topanelian. 3,050,122.

Topol, George J., to Bowser, Inc. Water detector for fuels. 3,049,910, 8–21–62, Cl. 73—53.

Toro Mfg Corp.: *See*—
Horner, Herbert F., Kroll, and Benson. 3,049,853.

Toton, Edward J.: *See*—
Miller Richard C., and Toton. 3,050,662.

Toulmin, Harry A., Jr., to Lars E. Birbach. Swimming aid. 3,049,736, 8–21–62, Cl. 9—340.

Toulon, Pierre M., to Moore & Hall. Improvements in light source control and modulation. 3,050,654, 8–21–62, Cl. 313—108.

Toyota Motor Co. Ltd.: *See*—
Kato, Masumi, and Kamimura. 3,049,742.

Trafton, Parollee J. Sun tan device. 3,050,067, 8–21–62, Cl. 128—372.

Tragert, William E., to General Electric Co. Device for continuous treatment of strands. 3,050,267, 8–21–62, Cl. 242—47.1.

Traisman, Edwin. Method for preparing frozen french fried potatoes. 3,050,404, 8–21–62, Cl. 99—193.

Traylor, Teddy G.: *See*—
Stanton, George W., and Traylor. 3,050,498.

Tress, John J., and W. J. Hellman, to Koppers Co., Inc. Method of making a self extinguishable expandable polymer of styrene by bromination. 3,050,476, 8–21–62, Cl. 260—2.5.

Trico Products Corp.: *See*—
Graczyk, Bronislaus S., and Ott. 3,049,743.

Trimborn, Hans. Transport roller for industrial furnaces. 3,050,296, 8–21–62, Cl. 263—6.

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Bachand, Stephen F., and Trolson. 3,050,305.

Tronnier, Albrecht W., to Farrand Optical Co., Inc. Four-component wide-angle objective lens of Gaussian type. 3,049,975, 8–21–62, Cl. 88—57.

Troyer, Marc D., to Berger Industries Inc. Metal logging spar. 3,050,285, 8–21–62, Cl. 254—139.1.

Truett, William L.: *See*—
Anderson, Arthur W., Bruce, Merckling, and Truett. 3,050,471.

Tschappat, Sheridan P. Packing glands. 3,050,312, 8–12–62, Cl. 277—208.

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Tokita, Kenji, and Tsukagoshi. 3,049,862.

Tuck, Harvey R.: *See*—
Pichler, Joseph R., and Tuck. 3,049,894.
Tucker, Benjamin W., Jr.: *See*—
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Tumey, Lawrence F., to FMC Corp. Apparatus for depressing cables. 3,050,283, 8–21–62, Cl. 254—51.
Turner, Robert M., to Lockhead Aircraft Corp. Correction circuit for dual sinusoid generator. 3,050,694, 8–21–62, Cl. 331—45.
Tuten, Thomas J. Master hydraulic brake cylinder. 3,049,885, 8–21–62, Cl. 60—54.6.
Tuttle, Robert S.: *See*—
Osborne, Fred H., Tuttle, and Riggs. 3,050,309.
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Arber, Rowland S. P. 3,050,179.
Uebelacker, William J., to Bausch & Lomb Inc. Chuck. 3,050,314, 8–21–62, Cl. 279—46.
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Bijloo, Johan D., Uhlenbroek, and Daams. 3,050,442.
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Ulman, Charles. Magnetic recorder. 3,050,225, 8–21–62, Cl. 226—51.
Ulmer, Wolfgang, to O. H. Drager. Secretion suction device for rescue apparatus. 3,050,062, 8–21–62, Cl. 128—276.
Union Carbide Corp.: *See*—
Breining, Elmer R., and Whitacre. 3,049,799.
Drummond, Folsom E. 3,049,797.
Gage, Robert M. 3,050,616.
Nack, Herman R., Bulloff, and Whitacre. 3,050,417.
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Shang, Jeng C. 3,050,210.
United Aircraft Corp.: *See*—
Chamberlain, John. 3,049,870.
Haight, Frank L. 3,050,274.
Horgan, John J. 3,049,875.
Kottsieper, Edward. 3,050,275.
Sullivan, Donald F. 3,050,575.
Sullivan, Richard N. 3,050,014.
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Benson, Donald L. 3,050,705.
Christian, James B. L. 3,050,349.
Cochran, Clarence W. 3,049,781.
Cochran, Clarence W. 3,050,097.
Lewin, Leon F. 3,049,777.
U.S. Electrical Motors, Inc.: *See*—
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Navy: *See*—
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Crim, Almer D. 3,050,146.
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Hurd, Ray M. 3,050,665.
Kohl, Walter H. 3,049,792.
McCormick, Barnes W., Eisenhuth, and Wislicenus. 3,050,024.
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Heim, Lewis R. 3,049,789.
Universal Oil Products Co.: *See*—
Bloch, Herman S. 3,050,375.
Brown, Thomas F., and Mathews. 3,050,464.
Hervert, George L., and Linn. 3,050,570.
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Kubicek, William G. 3,050,050.
Upjohn Co., The: *See*—
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Sagarin, Philip H., and O'Donnell. 3,050,219.
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Van Alstyne, Alvin G., and J. C. Sampson, to Gilfillan Bros., Inc. Time reference generator. 3,050,708, 8–21–62, Cl. 340—23.
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Hoberg, George G., Van Andel, and Veitch. 3,050,717.
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Van der Wissel, Herman T., to Shell Oil Co. Box-and-pin type threaded joint. 3,050,318, 8–21–62, Cl. 285—334.
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Van't Spijker, Peter, and H. van der Marel, to Shell Oil Co. Petroleum refining process. 3,050,458, 8–21–62, Cl. 208—89.
Vaughan, Henry E., to Bell Telephone Laboratories, Inc. Multiplex signaling system. 3,050,589, 8–21–62, Cl. 179—18.
Vautin, Robert G. Underwater breathing device. 3,050,055, 8–21–62, Cl. 128—145.
Veal, Dean J., to Phillips Petroleum Co. Removal of nitric oxide from gas streams. 3,050,363, 8–21–62, Cl. 23—157.
Vegter, Geert C., and A. M. Thrush, to Shell Oil Co. Organophosphorus insecticides. 3,050,438, 8–21–62, Cl. 167—22.
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Verway, Clair J., to C. J. Verway Co. Metering valve block. 3,050,083, 8–21–62, Cl. 137—625.18.
Victor, Victor. Measuring and leveling vessels. 3,049,926, 8–21–62, Cl. 73—429.
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Vogel, Charles B., to Shell Oil Co. Acoustical well logging. 3,050,151, 8–21–62, Cl. 181—.5.
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Von Dohren, Hans H., and C. Walther, to Accumulatoren Fabrik A.G. Method of producing sinter electrodes. 3,050,386, 8–21–62, Cl. 75—223.
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Nitzsche, Siegfried, and Wick. 3,050,490.
Nitzsche, Siegfried, and Wick. 3,050,491.
Wagner, Herman B., and E. E. Weller, to Tile Council of America, Inc. Dry epoxy resin adhesive composition and process for preparing same. 3,050,493, 8–21–62, Cl. 260—37.
Wagner, Robert W., to Dana Corp. Split drive shaft power take-off unit. 3,049,929, 8–21–62, Cl. 74—15.2.
Wales, Charles C., deceased (C. G. Wales, executrix), to United States Steel Corp. Continuous method of making pipe. 3,050,022, 8–21–62, Cl. 113—33.
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Wall, Wendell I., C. C. Cowley, and D. A. Hamilton, to Don Baxter, Inc. Hypodermic syringe. 3,050,059, 8–21–62, Cl. 128—218.
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Waters, Rolland M., and J. M. Lee, to The Dow Chemical Co. 1-2 ring cleavage of 2-cyanocycloalkanones. 3,050,547, 8–21–62, Cl. 260—465.4.
Webb, Paul, to Environment, Inc. Personnel isolation and protection systems. 3,049,896, 8–21–62, Cl. 62—384.
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Weber, Victor and W. J. Russell, to Robertshaw-Fulton Controls Co. Temperature indicating device. 3,049,924, 8–21–62, Cl. 73—368.

Weber, William F. Dipping machine. 3,049,986, 8–21–62, Cl. 99—234.
Webster, Roger R.: *See*—
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Weckesser, Ethan. Ratchet buckle. 3,049,778, 8–21–62, Cl. 24—180.
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Weiner, Louis I., to United States of America, Army. Pocket-size tester for yarn, threads and the like. 3,049,916, 8–21–62, Cl. 73—95.
Weissman, Eugene. Roofing repair patch. 3,049,836, 8–21–62, Cl. 50—243.
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Classification of Designs

D 2— 3: 193,418
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20: 193,463

U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 21, 1962 Volume 781 Number 3

TRADEMARKS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 5, 1962.

With the exception of former patent examiners for whom the examination is waived, all persons recognized for practice before the Patent Office in patent cases must, pursuant to the noted rule, pass the examination. Those passing the examination do not thereby qualify for recognition before the Patent Office in trademark cases. Recognition for practice in trademark cases is governed by Rule 2.12 of the Trademark Rules of Practice, which does not require the passing of an examination.

The examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 5, 1962.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

EDWIN L. REYNOLDS,
Chairman, Committee on Enrollment.

July 16, 1962.

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Trojan Corporation, New York, N.Y., Reg. No. 414,645, Canc. No. 7799.

Process Manufacturing Company, Chicago, Ill., Reg. No. 417,570, Canc. No. 7844.

Peter Scott & Co., Limited, Hawick, Scotland, Reg. No. 207,189, Canc. No. 7845.

Bernard Rice's Sons, Inc., New York, N.Y., Reg. No. 429,255, Canc. No. 7889.

John J. O'Connor, Inc., New York, N.Y., Reg. No. 660,221, Canc. No. 7897.

HORACE B. FAY, JR.
Assistant Commissioner of Patents.

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,300
Date of oldest new application	Oct. 6, 1961
Date of oldest amended application	Oct. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	10-6-61	10-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-2-62	1-2-62
Renewals (All Classes)	6-4-62	6-25-62
Sec. 12 (c) Publications (All Classes)	6-11-62	

Applications filed during the month of June 1962—2,204

Registrations Issued ..... 402—No. 736,197 to No. 736,598
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Decisions of the Commissioner of Patents

The 1961 edition of the Decisions of the Commissioner of Patents has been released from the printer and available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: $3.50.

Erratum

In the OFFICIAL GAZETTE of July 10, 1962, at page TM 51, under "Trademark Suits," Reg. No. 320,151, "Lockheed Aircraft Corporation v. Lockheed Aircraft Corporation" should read *Lockheed Aircraft Corporation v. Lockheed Developers, Inc., et al.*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 155,951 (ALFRED DUNHILL in script), Alfred Dunhill of London, Inc., Tobacco products; **Reg. No. 203,732** (UNIQUE LIGHTER DUNHILL AND DESIGN), same, Portable and pocket cigar and cigarette lighters; **Reg. No. 355,304** (DUNHILL), same, Razors; **Reg. No. 356,504** (DUNHILL DOUBLE-CLARO), same, Tobacco products, particularly cigars; **Reg. No. 403,661**, same, Alfred Dunhill, Ltd., Pyrophoric lighters; **Reg. No. 404,218**, same, Tobacco, manufactured or unmanufactured, cigars and cigarettes; **Reg. No. 406,638**, same, Tobacco, pipes, cigar and cigarette holders; **Reg. No. 419,717** (ALFRED DUNHILL in script), same, Cosmetic preparations—namely, powder, rouge, lipstick, grease paints, hair oil, shampoo preparations, hair lotions, hair tinting preparations, etc.; **Reg. No. 421,429**, same, Soaps and shaving creams; **Reg. No. 527,207** (DUNHILL), same, Pyrophoric lighters; **Reg. No. 527,208**, same, Tobacco pipes, cigar and cigarette holders; **Reg. No. 534,705**, same, Tobacco pouches made of leather; **Reg. No. 539,892**, same, Raw tobacco, smoking and chewing tobacco, snuff, cigars and cigarettes; **Reg. No. 540,389**, same, Billfolds, purses, handbags, document cases and wallets, all being goods made of leather; **Reg. No. 541,949** (DUNHILL DOUBLE-CLARO), Alfred Dunhill of London, Inc., Tobacco products, particularly cigars; **Reg. No. 634,071** (ALFRED DUNHILL), same, Men's ties, **filed** July 30, 1959, D.C., S.D.N.Y., Doc. 149/10, *Alfred Dunhill of London, Inc. v. Dunhill Barber Shop, Inc.* Order dismissing action for lack of prosecution Dec. 13, 1961.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

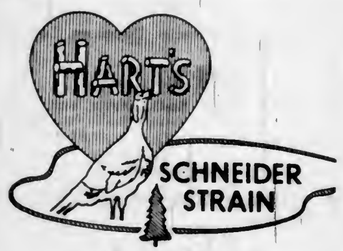
Class 1—Raw or Partly Prepared Materials

SN 102,606. Armstrong Cork Company, Lancaster, Pa. Filed Aug. 15, 1960.

RESILO-PAK

For Polystyrene Foam Cushioning Material for General Use.
First use Feb. 23, 1960.

SN 111,882. Hart's Hatchery, Inc., Medford, Oreg. Filed Jan. 16, 1961.



The drawing is lined for the colors red and green. Applicant disclaims the words "Schneider Strain."
For Turkey Poults and Turkey Hatching Eggs.
First use Apr. 1, 1950.

SN 122,077. The B. F. Goodrich Company, Akron, Ohio. Filed June 15, 1961.

ARRAFLEX

Owner of Reg. No. 430,584.
For Laminated Sheet Material Comprising Rubber or Plastic and Textile Fabric for General Use in the Industrial Arts.
First use Oct. 11, 1938.

SN 123,098. Great Lakes Carbon Corporation, New York, N.Y. Filed June 29, 1961.



The drawing is lined for the color red.
For Barbecue Briquets.
First use Mar. 14, 1961.

SN 128,256. Davoe Corporation, New York, N.Y. Filed Sept. 20, 1961.

BARATRON

Owner of Reg. Nos. 366,215 and 694,720.
For Expanded Vinyl-Coated Flannel Fabric Used in Making Handbags, Luggage, Billfolds, Wallets, Belts, and the Like.
First use on or about Sept. 7, 1961.

SN 128,448. Les Usines de Melle, Melle, Deux-Sevres, France. Filed Sept. 22, 1961.

FURYMEL

Priority claimed under Sec. 44(d) on French Reg. No. 869, dated July 11, 1961 (Niort); Natl. Inst. No. 169,657.
For Synthetic Resins for Use in Industry.

SN 130,699. Intercontinental Leather Corp., New York, N.Y. Filed Oct. 26, 1951.

"DURATANNED"

For Leather Sheepskins for Use in Washing and Polishing.
First use Sept. 27, 1961.

SN 135,782. Fiber Industries, Inc., Charlotte, N.C. Filed Jan. 15, 1962.



The drawing is lined to represent the color red.
For Synthetic Textile Fibers, Including Staple Fibers and Continuous Filaments.
First use October 1960.

SN 135,783. Fiber Industries, Inc., Charlotte, N.C. Filed Jan. 15, 1962.

FII

For Synthetic Textile Fibers, Including Staple Fibers and Continuous Filaments.
First use October 1960.

SN 136,252. The Kendall Company, Walpole, Mass. Filed Jan. 22, 1962.

APPLI-COIL

For Slivers of Cotton or Synthetic Fibers for General Use in the Industrial Arts.
First use Oct. 9, 1961.

SN 136,377. The Lancashire Tanning Company, Littleborough, England. Filed Jan. 23, 1962.

ZOË CALF

No claim is made to the word "Calf." Owner of British Reg. No. 819,516, dated Apr. 15, 1961.
For Calf Leather.

SN 136,713. American Colloid Company, Skokie, Ill. Filed Jan. 29, 1962.

NEO-BOND

For Bentonite Used as a Bonding Agent in Foundry Molding Sand Compositions.
First use Nov. 25, 1961.

SN 136,792. Minerals & Chemicals Philipp Corporation, Menlo Park, N.J. Filed Jan. 29, 1962.

CHEMSORB

For Clay for Use in the Treatment of Dry Cleaning Solvents.
First use Dec. 15, 1961.

SN 136,857. H. Wenzel Tent & Duck Co., St. Louis, Mo. Filed Jan. 29, 1962.

PERMALOFT

For Resilient Heat Insulation and Filling Material for General Use in the Industrial Arts.
First use Dec. 1, 1961.

SN 137,075. Martin Marietta Corporation. St. Louis, Mo. Filed Feb. 1, 1962.

POXI-PAK

For Resins and Accelerators Therefor Packaged in a Cartridge or Dispenser for Same.
First use on or about Oct. 17, 1961.

SN 137,134. General Mills, Inc., Minneapolis, Minn. Filed Feb. 2, 1962.

GENSOY

For Soy Flour for Industrial Purposes.
First use Feb. 28, 1961.

137,518. Gellich Tanning Company, Taunton, Mass. Filed Feb. 8, 1962.

LAMITAN

For Leather.
First use at least as early as Oct. 2, 1961.

SN 137,553. Thomas J. Palmer, d.b.a. Young-Walders, Paterson, N.J. Filed Feb. 8, 1962.

PALMER METHOD

For Flowers, Including Foliage, That Retain a Live Appearance Over an Appreciable Period of Time After Cutting.
First use Dec. 27, 1961.

SN 137,667. The Stearns & Foster Company, Cincinnati, Ohio. Filed Feb. 9, 1962.

TRUBOND

For Cotton Wadding Impregnated With Heat Sensitive Resinous Strands.
First use Feb. 1, 1962.

SN 137,674. United States Rubber Company, New York, N.Y. Filed Feb. 9, 1962.

U. S. DALEX

For Thermoplastic Sheet Materials.
First use Dec. 29, 1961.

SN 137,752. Husky Oil Company, d.b.a. Husky Briquetting, Cody, Wyo. Filed Feb. 12, 1962.

GRILL TIME

For Barbecue Briquets.
First use Apr. 6, 1961.

SN 137,823. Westlake Plastics Company, Lenni Mills, Pa. Filed Feb. 12, 1962.

PROPLUX

For Propylene Resin Rods, Sheets, and Tubes for General Use.
First use Nov. 2, 1960.

SN 137,824. Westlake Plastics Company, Lenni Mills, Pa. Filed Feb. 12, 1962.

ZELUX

For Polycarbonate Resin Rods, Sheets, and Tubes for General Use.
First use Feb. 21, 1961.

SN 137,825. Westlake Plastics Company, Lenni Mills, Pa. Filed Feb. 12, 1962.

CELLULUX

For Acetate Resin Rods, Sheets, and Tubes for General Use.
First use Dec. 23, 1959.

SN 137,826. Westlake Plastics Company, Lenni Mills, Pa. Filed Feb. 12, 1962.

ELUX

For Ethylcellulose Resin Rods, Sheets, and Tubes for General Use.
First use Sept. 7, 1961.

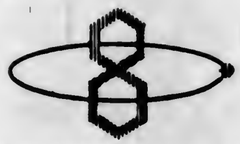
SN 137,827. Westlake Plastics Company, Lenni Mills, Pa. Filed Feb. 12, 1962.

CELLULUX B

For Butyrate Resin Rods, Sheets, and Tubes for General Use.
First use Nov. 21, 1961.

Class 6—Chemicals and Chemical Compositions

SN 99,881. Schwarz Bioresearch, Inc., Mount Vernon, N.Y. Filed June 28, 1960.



The lining on the drawing designates red and black, but color is not claimed as a feature of the mark.
For Biochemical Intermediates and Reagents, Chemicals With Radioactive Isotopes and Pharmaceutical Chemicals.
First use Apr. 1, 1960.

SN 117,275. Hayes-Sammons Chemical Co., Mission, Tex. Filed Apr. 6, 1961.

SEED SENTRY

No claim is made to the word "Seed" apart from the mark as shown.
For Cotton Seed Protectant.
First use Jan. 10, 1961.

SN 117,292. Momoi Company, Inc., Long Beach, Calif. Filed Apr. 6, 1961.

TETRON ME-1103

For Preservatives for Use With Fishnets and Fishing Floats.
First use Mar. 1, 1961.

SN 123,092. Fries & Fries, Inc., Cincinnati, Ohio. Filed June 29, 1961.

ESSENTOL

For Imitation Essential Oils.
First use Jan. 1, 1960.

SN 123,425. Industrial Chemicals, Inc., South Bend, Ind. Filed July 5, 1961.

WATCON

For Water Treatment Chemicals and Compositions for Softening, Chlorifying, and Adapting the Water for Use.
First use June 19, 1961.

SN 123,557. Nopco Chemical Company, Newark, N.J. Filed July 7, 1961.

NOPCOFOAM

Owner of Reg. Nos. 121,927, 658,378, and others.
For Chemical Components for Producing Polyurethane Foamed Plastics for General Use in the Industrial Arts.
First use May 25, 1961.

SN 125,051. J & J Research Company, Fort Worth, Tex. Filed July 31, 1961.

2 GEM

For Chemical Composition for Sealing Radiators and Motor Blocks in Cooling Systems for Internal Combustion Engines.
First use July 1, 1959.

SN 126,620. Syn-Chem Corporation, Spartanburg, S.C. Filed Aug. 24, 1961.

VERSATINT

For Fugitive Tints.
First use Apr. 7, 1961.

SN 126,696. Technic, Inc., Cranston, R.I. Filed Aug. 25, 1961.

OROTEMP

Owner of Reg. No. 711,065.
For Gold Plating Solution and Salts To Be Used in Gold Plating Solutions.
First use January 1961.

SN 126,697. Technic, Inc., Cranston, R.I. Filed Aug. 25, 1961.

OROMERSE

Owner of Reg. No. 711,065.
For Gold Plating Solution and Salts To Be Used in Gold Plating Solutions.
First use November 1960.

SN 128,263. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Sept. 20, 1961.

ANTHRASOL

Owner of German Reg. No. 522,212, dated June 15, 1940.
For Dyestuffs.

SN 129,585. Geigy Chemical Corporation, Ardsley, N.Y. Filed Oct. 10, 1961.

DIPOFENE

Owner of Reg. No. 720,196.
For Insecticides.
First use Mar. 24, 1961.

SN 129,768. W. R. Grace & Co., New York, N.Y. Filed Oct. 12, 1961.

GRACE

Owner of Reg. No. 718,075.
For Catalysts and Catalyst Compositions for Use in Chemical Procedures—Namely, Petroleum Cracking, Dehydrogenation, Reforming, and Polymerization Reactions.
First use May 29, 1961.

SN 130,070. The Harshaw Chemical Company, Cleveland, Ohio. Filed Oct. 17, 1961.

THERMOPRINT

For Textile Pigment Carrier.
First use Sept. 23, 1960.

SN 130,175. Ciba Limited, Basel, Switzerland. Filed Oct. 18, 1961.

SILVATEX

Owner of Swiss Reg. No. 180,540, dated Apr. 26, 1960; and U.S. Reg. No. 96,918.
For Chemical Preparations for Use in the Textile, Leather, and Paper Industries.

SN 130,177. Ciba Limited, Basel, Switzerland. Filed Oct. 18, 1961.

ZEROFIX

Owner of Swiss Reg. No. 180,541, dated Apr. 26, 1960; and U.S. Reg. No. 666,154.
For Chemical Preparations for Use in the Textile, Leather, and Paper Industries.

SN 130,959. Soluol Chemical Co., Inc., Natick, R.I. Filed Oct. 30, 1961.

SOLUREZ

Owner of Reg. Nos. 550,026 and 636,326.
For Natural and Synthetic Resins for Binding and Finishing Textile Fibers and Fabrics.
First use February 1958.

SN 131,444. Benjamin F. Wright, Port Alberni, British Columbia, Canada. Filed Nov. 6, 1961.

PINCH

Priority claimed under Sec. 44(d) on Canadian application filed May 6, 1961; Reg. No. 125,191, dated Jan. 26, 1962.
For Composition To Be Applied to the Fingers and Hands To Facilitate the Handling of Documents, Bank Notes, and Other Items.

SN 133,030. Theratron Corporation, St. Paul, Minn. Filed Nov. 29, 1961.

THERASOL

For Electrolyte for Use With Electronic Therapeutic and Diagnostic Devices.
First use Oct. 9, 1961.

SN 136,704. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 26, 1962.

ROTEBAN

Owner of Reg. No. 660,032.
For Rodent Repellent.
First use Jan. 3, 1962.

SN 136,842. Texize Chemicals, Inc., Greenville, S.C. Filed Jan. 29, 1962.

EX-SOL

For Liquid Bleach.
First use Jan. 19, 1962.

Class 10—Fertilizers

SN 141,775. Western Auto Supply Company, Kansas City, Mo. Filed Apr. 6, 1962.

REVELATION

Owner of Reg. Nos. 575,184 and 705,133.
For Fertilizers.
First use Jan. 15, 1962.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 96,535. Tubular Lining Corporation, Houston, Tex. Filed May 5, 1960.

AUTOTRONICS

For Pipe Lined With a Protective Coating.
First use Aug. 1, 1957.

Class 15—Oils and Greases

SN 132,374. Riedel-De Haen Aktiengesellschaft, Seelze, near Hannover, Germany. Filed Nov. 20, 1961.

KOLLAG

Owner of German Reg. No. 323,075, dated Oct. 25, 1924.
For Oils, Greases, Lubricants, and Lubricants Containing Colloidal Graphite.
First use at least as early as 1916; in commerce at least as early as 1932.

SN 132,375. Riedel-De Haen Aktiengesellschaft, Seelze, near Hannover, Germany. Filed Nov. 20, 1961.

HYDROKOLLAG

Owner of German Reg. No. 327,414, dated Jan. 23, 1925.
For Oils, Greases, Lubricants, and Lubricants Containing Colloidal Graphite.
First use at least as early as 1916; in commerce at least as early as 1932.

Class 18—Medicines and Pharmaceutical Preparations

SN 91,785. Gift of Dream, Inc., d.b.a. Madam Boykin's Hair Products Co., Birmingham, Ala. Filed Feb. 29, 1960.

GIFT OF DREAM

For Harmless Hair and Scalp Ointment for Men, Women and Children.
First use Nov. 20, 1956.

SN 116,473. Caprio Bros., Dunmore, Pa. Filed Mar. 27, 1961.

ORIPAC

For Medicated Ointment and Lotion for Topical Use.
First use Sept. 1, 1959.

SN 121,686. The Wellcome Foundation, Ltd., London, England. Filed June 8, 1961.

WELLCOVAX

Priority claimed under Sec. 44(d) on British Reg. No. 814,930, dated Dec. 22, 1960.
For Medicinal Vaccine Preparation.

SN 121,901. Bristol-Myers Company, New York, N.Y. Filed June 13, 1961.

DURASPAN

Owner of Reg. No. 725,271.
For Analgesic.
First use Mar. 1, 1961.

SN 123,604. Carter Products, Inc., New York, N.Y. Filed July 10, 1961.

DUALL

For Pharmaceutical Preparations—Namely, Pharmaceutical Tonic.
First use May 26, 1961.

SN 126,229. Hilcoa Enterprises, Inc., Kansas City, Mo., assignee of George Hillestad, d.b.a. The Hilcoa Company. Filed Aug. 18, 1961.



For Ingredient Consisting Substantially of Atlantic and Pacific Kelp Bladderwrack and Dulse and Incorporated in a Vitamin and Mineral Food Supplement.
First use Apr. 6, 1961.

SN 127,047. Scott-Allison Company, Inc., Hempstead, N.Y. Filed Aug. 31, 1961.

DIVASO

For Coronary Vasodilator.
First use Aug. 9, 1961.

SN 127,048. Scott-Allison Company, Inc., Hempstead, N.Y. Filed Aug. 31, 1961.

SPASMOREL

For Composition for Treatment of Peptic Ulcer, Pylorospasm, Gastroenteritis, Cardiospasm, Spastic Colon, Dysmenorrhea, Irritable Bowel Syndrome, Duodenal Ulcer.
First use Aug. 9, 1961.

SN 129,586. Geigy Chemical Corporation, Ardsley, N.Y. Filed Oct. 10, 1961.

ANTURANE

For Uricosurics.
First use June 2, 1960.

SN 130,159. Abbott Laboratories, North Chicago, Ill. Filed Oct. 18, 1961.

ELAN

For Analgesic and Muscle Relaxant.
First use Aug. 26, 1961.

SN 133,889. Polk Miller Products Corporation, Richmond, Va. Filed Dec. 12, 1961.

WORM-AWAY

Owner of Reg. No. 663,598.
For Anthelmintic for Large Round-Worms in Dogs and Puppies.
First use Dec. 20, 1956.

SN 134,146. Jeanne Nadal, Incorporated, d.b.a. Jeanne Nadal, Chicago, Ill. Filed Dec. 15, 1961.



For Foot Salve, Callous Remover, and Spray for Athlete's Foot.
First use Sept. 24, 1958.

SN 135,216. McNeil Laboratories, Incorporated, Fort Washington, Pa. Filed Jan. 4, 1962.

BUTIZIDE

Owner of Reg. Nos. 378,610 and 641,821.
For Analgesic Combinations.
First use Sept. 12, 1961.

SN 135,906. Nidia Caribbean Inc., New York, N.Y. Filed Jan. 16, 1962.

KITAMAL

For Rubbing Alcohol.
First use Aug. 26, 1961.

SN 137,201. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Feb. 5, 1962.

CODALON

Owner of Reg. No. 642,013.
For Analgesic Drug.
First use Jan. 16, 1962.

SN 137,245. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Feb. 5, 1962.

ACOTRAL

For Anticholinergic and Tranquilizing Medication.
First use Dec. 12, 1961.

SN 137,550. Nopco Chemical Company, Newark, N.J. Filed Feb. 8, 1962.

NOPGRO-PAK

Owner of Reg. Nos. 622,958 and 718,134.
For Preparations Containing Vitamins, Minerals, Antibiotics, and Enzyme Fermentation Products for Fortifying Foods and Feeds for Poultry and Animals.
First use Jan. 17, 1962.

SN 138,632. Metal & Thermit Corporation, Woodbridge Township, Middlesex County, N.J. Filed Feb. 26, 1962.

STANOPASTE

For Dental Prophylaxis Paste.
First use at least as early as Oct. 11, 1961.

SN 138,794. Mattox and Moore, Inc., Indianapolis, Ind. Filed Feb. 28, 1962.

JECT-ADE

For Vitamin A, D, and E Preparation for Veterinary Use.
First use Sept. 1, 1961.

SN 139,119. Merck & Co., Inc., Rahway, N.J. Filed Mar. 5, 1962.

RESPIHALER

Owner of Reg. No. 537,292.
For Pharmaceutical Preparation for the Treatment of Diseases Affecting the Upper and Lower Respiratory Tract.
First use Jan. 26, 1962.

SN 141,178. The Governors of the University of Toronto, d.b.a. Connaught Medical Research Laboratories, Toronto, Ontario, Canada. Filed Mar. 30, 1962.

PHENOXALID

Owner of Canadian Reg. No. 121,152, dated Feb. 10, 1961.
For Pharmaceutical Preparations for the Treatment of Tuberculosis in Man.

SN 141,196. McKesson & Robbins, Incorporated, d.b.a. Norcliff Laboratories, New York, N.Y. Filed Mar. 30, 1962.

DAB

For Antiseptic and Astringent Preparation for the Treatment of Skin Irritations.
First use Mar. 26, 1962.

SN 141,198. Merck & Co., Inc., Rahway, N.J. Filed Mar. 30, 1962.

MERMETH

Owner of Reg. No. 523,956.
For Antibacterial Preparations for Veterinary Use.
First use Mar. 12, 1962.

SN 141,204. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Mar. 30, 1962.

NATRITOPE

For Pharmaceutical Preparations Containing Radioactive Sodium.
First use at least as early as Aug. 22, 1961.

SN 141,511. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Apr. 4, 1962.

MARETIN

Owner of German Reg. No. 64,578, dated Nov. 20, 1903.
For Chemotherapeutic Agents for Animals.

SN 141,556. H. Trommsdorff Chemische Fabrik, Aachen, Germany. Filed Apr. 4, 1962.

NICOPRED

Owner of German Reg. No. 734,236, dated Feb. 26, 1960.
For Antirheumatic and Antiphlogistic Drug.

SN 141,611. Geigy Chemical Corporation, Ardsley, N.Y. Filed Apr. 5, 1962.

PLANION

For Antidepressant Preparation.
First use Mar. 2, 1962.

SN 141,653. G. D. Searle & Co., Skokie, Ill. Filed Apr. 5, 1962.

TOTAVAR

Owner of Reg. No. 637,379.
For Pharmaceutical Preparation Useful as an Anabolic Agent.
First use Jan. 30, 1962.

SN 141,774. Werner Laboratories, Inc., Kenosha, Wis. Filed Apr. 6, 1962.

PERITIME

For Pentaerythritol Tetranitrate Capsules With and Without the Addition of Amobarbital for the Treatment of Coronary Artery Disease.
First use on or about Sept. 1, 1961.

SN 141,802. C. H. Boehringer Sohn, Ingelheim (Rhine), Germany. Filed Apr. 9, 1962.

NORMOLAXAN

Owner of German Reg. No. 736,089, dated Apr. 29, 1960.
For Laxatives.

SN 142,108. Lemmon Pharmacal Company, Sellersville, Pa. Filed Apr. 12, 1962.

LEMMON PHARMACAL COMPANY

For Pharmaceutical Preparations.
First use 1950.

SN 142,139. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Apr. 12, 1962.

NOZINAN

Owner of French Reg. No. 465,458, dated June 6, 1957.
For Anesthetic and Sedative Preparations Used in the Practice of Psychiatric Medicine.

SN 142,183. First Texas Pharmaceuticals, Inc., Dallas, Tex. Filed Apr. 13, 1962.

HYSTAL

For Sedative.
First use December 1950.

SN 142,240. Nopco Chemical Company, Newark, N.J. Filed Apr. 13, 1962.

MICRO-DEE

For Mineral Stable Vitamin D-Containing Compositions Employed in Poultry and Livestock Feeding.
First use Mar. 28, 1962.

SN 142,405. Bio Ramo Drug Company, Baltimore, Md. Filed Apr. 17, 1962.

I.D.-100

For Iron-Polysaccharide Complex for Veterinary Use.
First use Mar. 1, 1962.

SN 142,452. Riker Laboratories, Inc., Northridge, Calif. Filed Apr. 17, 1962.

THIAVER

For Medicinal Preparation for an Antihypertensive Agent.
First use Mar. 28, 1962.

SN 142,577. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Apr. 18, 1962.

PRE-SATE

For Appetite Suppressant.
First use Mar. 28, 1962.

SN 142,629. Forest Laboratories, Inc., Brooklyn, N.Y. Filed Apr. 19, 1962.

METHAMSUSTAC

For Appetite Depressant Action-Delayed Tablets, Especially Tablets Containing Methamphetamine Hydrochloride.
First use on or about Feb. 16, 1961.

SN 142,703. The Fielding Pharmaceutical Company, d.b.a. The Fielding Company, Webster Groves, Mo. Filed Apr. 20, 1962.

DURACID

For Antacid and Demulcent Composition.
First use Apr. 6, 1962.

Class 22 — Games, Toys, and Sporting Goods

SN 108,843. Samuel N. Vose, Boston, Mass. Filed Nov. 21, 1960.

CROSS CUT PUZZLE

No claim of exclusive right is made to "Puzzle" as applied to puzzles.
Word Puzzles Combining and/or Incorporating Characteristics of Crossword and Jigsaw Puzzles.
First use Feb. 4, 1954.

SN 127,609. Lanky Links Company, Kenosha, Wis. Filed Sept. 11, 1961.

LANKY LINKS

For Toy Construction Sets.
First use on or about July 27, 1961.

SN 134,460. Jacmar Manufacturing Co., Inc., Brooklyn, N.Y. Filed Dec. 21, 1961.

MR. DRAW

For Question and Hidden Answer Device.
First use Feb. 7, 1961.

Class 37 — Paper and Stationery

SN 127,013. Charles K. Howard Associates, Blue Bell, Pa. Filed Aug. 31, 1961.

SERVICE-AIDE

For Diaries.
First use Aug. 18, 1961.

SN 133,021. The Sanitary Paper Mills, Inc., East Hartford, Conn. Filed Nov. 29, 1961.

MAYFLOWER

For Absorbent Tissue Paper Suitable for Hygienic, Cosmetic or Cleaning Purposes.
First use Feb. 3, 1961.

SN 139,589. Cert-A-Check, Inc., Denver, Colo. Filed Mar. 12, 1962.

CERT-A-CHECK

For Forms in the Nature of Checks, Money Orders and Other Negotiable Instruments.
First use Apr. 1, 1958.

SN 140,837. General Aniline & Film Corporation, New York, N.Y. Filed Mar. 27, 1962.

PROJECTO-MOUNT

For Mounts for Transparencies Intended for Projectors.
First use Jan. 26, 1962.

SN 140,839. General Aniline & Film Corporation, New York, N.Y. Filed Mar. 27, 1962.

PROJECTO-PERMOUNTS

For Mounts for Transparencies Intended for Projectors.
First use Jan. 26, 1962.

SN 140,882. Talens & Son, Inc., Union, N.J. Filed Mar. 27, 1962.

PANDA

For Artists' Pastel Crayons.
First use Mar. 16, 1961.

SN 141,505. Doeskin Products, Inc., New York, N.Y. Filed Apr. 4, 1962.

INSTANT

For Cleansing Tissues.
First use Feb. 1, 1962.

SN 141,862. Michigan Carton Co., Battle Creek, Mich. Filed Apr. 9, 1962.

FILMLINE

For Plastic Coated Paperboard.
First use Jan. 22, 1962.

SN 141,894. Sperry Rand Corporation, New York, N.Y. Filed Apr. 9, 1962.

RECORDEX

For Card Indexes and Folders.
First use Aug. 1, 1928.

Class 38 — Prints and Publications

SN 109,491. General Aniline & Film Corporation, New York, N.Y., assignee of Grant Photo Products, Incorporated, Lakewood, Ohio. Filed Dec. 2, 1960.

TRUFOTO

For Photo-Sensitive Materials—Namely, Photographic Prints.
First use June 2, 1930.

SN 123,211. Lebhar-Friedman Publications, Inc., New York, N.Y. Filed June 30, 1961.

DISCOUNT STORE NEWS

For Newspaper.
First use June 28, 1961.

SN 134,815. HMH Publishing Co. Inc., Chicago, Ill. Filed Dec. 28, 1961.

SBI

For Magazine Published Bi-Weekly.
First use April 1961.

Class 45 — Soft Drinks and Carbonated Waters

SN 123,463. A. J. Canfield Company, Chicago, Ill. Filed July 6, 1961.

Canfield's

Owner of Reg. Nos. 540,334 and 653,486.
For Soft Drinks.
First use June 12, 1961; Feb. 10, 1931, as to "Canfield's."

SN 137,272. Frank N. Pond, Long Island City, N.Y. Filed Feb. 5, 1962.

RUS-CIT

For Soft Drinks.
First use Nov. 3, 1961.

Class 46 — Foods and Ingredients of Foods

SN 62,701. Allied Old English, Incorporated, Newark, N.J., assignee of Plantation Foods, Inc., Newark, N.J. Filed Nov. 18, 1958.

PLANTATION



For Blackstrap Molasses.
First use in October 1942.

SN 80,141. Wilson & Co. Inc., Chicago, Ill. Filed Aug. 24, 1959.

WILSON'S CERTIFIED

For Fresh, Cooked, Smoked, Cured and Frozen Meats—Namely, Hams, Picnics, Bacon, Canadian Bacon, Sausage, Loaves, Dried Beef, Beef Tongues, and Beef Briskets; Canned Meats and Meat Products—Namely, Hams, Luncheon Meat, Beef Stew, Chili Con Carne, Hamburger, Corned Beef, Corned Beef Hash, Pigs' Feet, Potted Meat, Tamales and Beef Extract; Meat By-Products—Namely, Hearts, Tripe, Sweetbreads, Brains and French Fried Bacon Rinds; Fresh Dressed and Fresh Frozen Poultry Products—Namely, Turkeys, Capons, Ducks, Ducklings, Geese, Cornish Hens and Chickens; Dairy Products—Namely, Butter and Fresh Eggs, Fresh Frozen Eggs and Dried Eggs; and Refinery Products—Namely, Lard, Animal and Vegetable Shortening, Margarine, Salad and Cooking Oils, Oleo Oil and Edible Tallow.
First use in 1917.

SN 85,168. Space, Inc., Washington, D.C. Filed Nov. 12, 1959.

SPACESTIK

For Frozen Confections on a Stick.
First use Nov. 3, 1959.

SN 88,111. Vegetable Oil Products Company, Inc., Wilmington, Calif. Filed Dec. 28, 1959.

gold·n· sweet

Owner of Reg. No. 314,545.
For Vegetable Cooking Oil, Vegetable Shortening and Margarine.
First use Nov. 4, 1957.

SN 91,336. E. J. Brach & Sons, Chicago, Ill. Filed Feb. 23, 1960.

CONTINENTALS

For Candy.
First use Dec. 30, 1959.

SN 95,368. Fine Products Corporation, d.b.a. Sweetly Yours, Augusta, Ga. Filed Apr. 19, 1960.

CHUCK WAGON

For Candy.
First use Feb. 16, 1960.

SN 97,244. Quisenberry Mills, Inc., Kansas City, Mo. Filed May 16, 1960.

SUPREMA

Owner of Reg. No. 694,338.
For Poultry and Livestock Feeds.
First use Apr. 5, 1960.

SN 98,774. Challenge Cream & Butter Association, Los Angeles, Calif. Filed June 10, 1960.



Owner of Reg. Nos. 548,636, 699,925 and 714,445.
For Ice Cream; Frozen Confections on Sticks, Bars, and in Paper Cups; Fluid Milk, Cream and Buttermilk; Sour Cream; Powdered Milk; Chocolate Milk Drink; Orange Food Drink; Cream Cheese; Cheese; Cottage Cheese; Butter; Fresh Eggs; and Whey.
First use 1923.

SN 101,215. Thomas Coffee Company, York, Pa. Filed July 20, 1960.

NEW LIFE COFFEE

The word "Coffee" is disclaimed.
For Coffee.
First use July 16, 1957.

SN 101,291. Weldon Farm Products, Inc., New York, N.Y. Filed July 21, 1960.

ALBACAL

Owner of Reg. Nos. 568,453 and 670,693.
For Powdered Food Concentrate Consisting Principally of Non-Fat Milk Solids, Soya Flour, Sucrose, Starch, Whole Milk Solids, With Added Vitamins and Minerals.
First use July 15, 1960.

SN 101,762. East Coast Fruit Co., Jacksonville, Fla. Filed Aug. 1, 1960.

MR. TOM

For Fresh Tomatoes.
First use July 20, 1960.

SN 102,077. A. Arena & Co., Ltd., Los Angeles, Calif. Filed Aug. 5, 1960.

FARM FRESH

Owner of Reg. Nos. 379,831 and 609,215.
For Fresh Vegetables and Melons.
First use Apr. 6, 1939.

SN 103,325. Caffarel Prochet, Turin, Italy. Filed Aug. 24, 1960.



The name of the character shown in the trademark "Gianduia" has no equivalent in the English language. It is the name of the Masque of the Piemonte, the Italian region of which Turin is the capital.
For Baking Chocolate and Chocolate Candy.
First use as early as Feb. 6, 1951; in commerce Feb. 6, 1951.

SN 108,546. Fred Fear & Co., Brooklyn, N.Y. Filed Nov. 16, 1960.

CARY'S

For Pancake Syrup.
First use Dec. 16, 1959.

SN 112,074. Phipps Products Co., Kansas City, Kans. Filed Jan. 18, 1961.

OLD SOUTHERN

For Barbecue and Italian Sauces.
First use on or about July 10, 1948.

SN 115,659. E. J. Brach & Sons, Chicago, Ill. Filed Mar. 15, 1961.

BRACH'S PICK-A-MIX

Owner of Reg. Nos. 214,857, 581,109, and others.
For Candy.
First use on or about Apr. 3, 1959.

SN 118,535. Sun Pep Company, Plant City, Fla. Filed Apr. 17, 1961.

SUN·PEP

Owner of Reg. No. 533,337.
For Frozen Concentrated Orange Juice.
First use Jan. 27, 1955.

SN 119,416. Pearce-Young-Angel Co., Greenville, S.C. Filed May 5, 1961.

PYA

For Food Products—Namely, Salt, Cheese, Gelatin, and Sugar.
First use Nov. 13, 1958.

SN 119,971. Ireks G.m.b.H., Kulmbach, Germany. Filed May 15, 1961.

SOUREX

Owner of German Reg. No. 518,334, dated Dec. 28, 1939; and U.S. Reg. No. 388,385.
For Bacteriologics, Enzymatics, Water-Binding and Chemical Items, in Particular Dough Acidifying Medium for Baking Uses.

SN 121,631. Carthage Creamery Company, Incorporated, Carthage, Mo. Filed June 8, 1961.

CORNCREST

For Margarine.
First use May 18, 1961.

SN 121,793. Badger Turkey Industries, Inc., Barron, Wis. Filed June 12, 1961.

TASTERITE

For Frozen Turkeys.
First use on or about Sept. 12, 1960.

SN 122,166. Continental Baking Company, Rye, N.Y. Filed June 16, 1961.

HOSTESS

Owner of Reg. Nos. 126,368 and 247,986.
For Potato Chips, Cookies, Shelled Peanuts, Luncheon Crackers, Sweet Cakes, Snack Sandwiches.
First use at least as early as Apr. 21, 1948, on cookies.

SN 122,541. Barth Levitt Products, Valley Stream, N.Y. Filed June 21, 1961.

WORLD O' NUTS

No claim of exclusive right is made to the word "Nuts" as the name of the goods herein.
For Assorted Shelled Nuts.
First use October 1959.

SN 123,276. Chelsea Milling Company, Chelsea, Mich. Filed July 3, 1961.

JIFFY

Owner of Reg. Nos. 147,681 and 500,961.
For Prepared Baking and Frosting Mixes.
First use September 1930 on prepared baking mixes.

SN 123,430. Kidde Manufacturing Company, Inc., Bloomfield, N.J. Filed July 5, 1961.

Whippets "5 to 1" TOPPING

No claim of exclusive right is made to the word "Topping" as the name of the goods herein.
For Vegetable-Derived Food Product Adaptable for Whipping, for Use as a Food Topping.
First use on or about Feb. 21, 1961.

SN 123,459. The Blue Channel Corp., Port Royal, S.C. Filed July 6, 1961.

STRUCOL

For Chemical Compounds Used as Additives for Canned Seafood To Retard Struvite Formation and To Promote Color Retention.
First use June 16, 1961.

SN 124,118. Nutrafoods Corporation, Valley Stream, N.Y. Filed July 17, 1961.

CAR-O-BAR

For Dietetic, Chocolate-Like Confection Bar.
First use Mar. 9, 1961.

SN 125,040. Heggblade-Marguleas Co., San Francisco, Calif. Filed July 31, 1961.

RANCHO EL DORADO

For Fresh Grapes.
First use June 5, 1961.

SN 126,369. John McKeever, Manteca, Calif. Filed Aug. 21, 1961.

VALBEST

For Fresh and Frozen, Ready to Cook Poultry.
First use Aug. 2, 1961.

SN 126,552. Aktieselskabet Matador Food and Export Company, Charlottenlund, near Copenhagen, Denmark. Filed Aug. 24, 1961.

DAN-VIKING

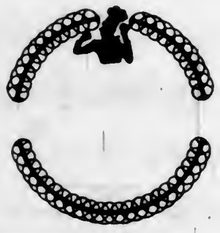
For Canned Meat, Luncheon Meat, and Sausages.
First use June 1, 1960; in commerce June 1, 1960.

SN 128,211. Putnam Pantry Candies, Inc., d.b.a. Putnam Pantry, Danvers, Mass. Filed Sept. 19, 1961.



The lining in the drawing constitutes shading and color is not claimed.
For Candies and Shelled Nuts.
First use April 1961.

SN 128,500. G. Armanino & Son, Inc., San Francisco, Calif. Filed Sept. 25, 1961.



For Frozen Vegetables.
First use Mar. 27, 1961.

SN 129,166. Norrig Hermetikkfabrikker A/S (A/S-Aksjeselskap), Stavanger, Norway. Filed Oct. 3, 1961.



No claim is made to the exclusive use of the words "Norway" and "Brand" or the representation of the can of sardines, except in connection with the label as shown. As shown in the drawing, the latter is lined for red and blue.
Owner of Reg. No. 709,480.
For Canned Fish—Namely, Sardines.
First use June 17, 1955; in commerce June 17, 1955.

SN 130,222. Marlan Company, Chicago, Ill. Filed Oct. 18, 1961.

LICKITY-SPLIT

Owner of Reg. No. 719,738.
For Frozen Confection on a Stick.
First use at least as early as June 20, 1961.

SN 130,533. Meta H. Anwarter and Frieda Hansmann Cossitt, trustees of Frederick H. Hansmann estate, d.b.a. Hansmann's Mills, Smithville Flats, N.Y. Filed Sept. 15, 1961.

HANSMANN'S

For Pancake Mixes, Flours, Granulated and Bolted Meals.
First use about Jan. 2, 1925.

SN 133,986. Betsy Ross Bakeries, Inc., Bluefield, W. Va. Filed Dec. 13, 1961.

Betty Lewis

The mark comprises the name of the sister of George Washington.
For Bakery Goods—Namely, Bread and Cake.
First use June 16, 1960.

SN 135,025. Macomber's, Inc., Berkeley, Calif. Filed Jan. 2, 1962.

"SIPPIN' CIDER"

No claim is made to the word "Cider."
For Apple Cider.
First use Dec. 4, 1961.

SN 135,247. Anderson, Clayton & Co., Dallas, Tex. Filed Jan. 2, 1962.

mrs. Tucker's

Owner of Reg. Nos. 133,999, 559,387, and others.
For Vegetable Shortening, Salad and Cooking Oils and Frozen Ready-To-Bake Cakes.
First use Aug. 10, 1961; at least as early as September 1917 on food products.

SN 137,410. N. Weiss & Co. Inc., Chicago, Ill. Filed Feb. 6, 1962.

V. I. P.

For Food for Dogs and Cats.
First use Jan. 27, 1962.

SN 137,524. Hills Bros. Coffee, Inc., San Francisco, Calif. Filed Feb. 8, 1962.

BLENDERS' CHOICE

For Coffee.
First use Nov. 6, 1961.

SN 138,113. Plymouth Canning Company, Inc., Plymouth, Ind. Filed Feb. 16, 1962.

KING MIDAS

For Packaged Orange Juice, Either Fresh or Reconstituted.
First use Jan. 15, 1962.

SN 138,212. Lincoln Foods, Inc., d.b.a. Valley Crest Farms Co., Lawrence, Mass. Filed Feb. 19, 1962.

VALLEY CREST FARMS

For Preserves, Canned Food Beverage Comprising Orange Juice and Lesser Ingredients, Canned Food Beverage, Comprising Orange and Pineapple Juice and Lesser Ingredients, Canned Food Beverage Comprising Grape Juice and Lesser Ingredients.
First use January 1959.

SN 138,967. Mission Valley Canning Co., Inc., d.b.a. Mission Valley Canning Co., San Jose, Calif. Filed Mar. 2, 1962.

M. V.

For Canned Vegetables.
First use August 1943.

SN 138,968. Mission Valley Canning Co., Inc., San Jose, Calif. Filed Mar. 2, 1962.

CANTEEN

For Canned Vegetables.
First use September 1943.

SN 141,289. General Mills, Inc., Minneapolis, Minn. Filed Apr. 2, 1962.

GENPRO

For Soy Flour.
First use Oct. 17, 1961.

SN 141,484. Allied Chemical Corporation, New York, N.Y. Filed Apr. 4, 1962.

NACCO

Owner of Reg. No. 153,804.
For Food Colors.
First use on or about Nov. 20, 1929.

SN 141,744. The Nestle Company, Inc., White Plains, N.Y. Filed Apr. 6, 1962.

BRITE

For an Imitation Dairy Product To Be Used as a Creaming Agent.
First use Mar. 23, 1962.

SN 141,975. Original Herkimer County Cheese Company, Inc., Ilion, N.Y. Filed Apr. 10, 1962.

CHUTTER

For Cheese Spread.
First use Mar. 28, 1962.

SN 142,218. Safeway Stores, Incorporated, Oakland, Calif. Filed Apr. 13, 1962.



Owner of Reg. No. 685,246.
For Frozen Fish, Frozen Fruits, Frozen Fruit Juice Concentrates, Frozen Fruit Pies, Frozen Berry Pies, Frozen Seafood Dinners, Frozen Shellfish Dinners, Frozen Shellfish, Frozen Vegetables, and Frozen Bakery Goods—Namely, Biscuits, Rolls and Waffles.
First use April 1957 on frozen fish (halibut).

SN 142,760. J. A. Wood Company, Growers, Packers & Shippers, Phoenix, Ariz. Filed Apr. 20, 1962.



Owner of Reg. No. 631,891.
For Fresh Vegetables.
First use May 27, 1955.

SN 143,089. American Bakeries Company, Chicago, Ill. Filed Apr. 26, 1962.

DOUGH-MOGENIZED

For Bread.
First use Mar. 14, 1962.

SN 143,102. CMC, Inc., d.b.a. Cumberland Mfg. Company, Nashville, Tenn. Filed Apr. 26, 1962.

WINDSOR

For Food Flavoring Extracts and Spices.
First use Jan. 1, 1895.
Subj. to Intf. with SN 115,658.

Class 47 — Wines

SN 108,238. E. Willm & Cie., Barr, Bas-Rhin, France. Filed Nov. 10, 1960.



ALSACE WILLM

The lining in the drawing does not represent color. No claim is made to the exclusive right to use the word "Alsace" apart from the mark as shown.
For Wines.
First use prior to Jan. 1, 1950; in commerce Apr. 17, 1950.

SN 123,406. Blanchard Importing & Distributing Co., Inc., Boston, Mass. Filed July 5, 1961.

MT. PRIDE

For Wines.
First use June 1956.

Class 49 — Distilled Alcoholic Liquors

SN 123,401. Blanchard Importing & Distributing Co., Inc., Boston, Mass. Filed July 5, 1961.



No claim is made to the word "Screwdriver" apart from the mark shown. The drawing is lined for orange.
For Bottled Alcoholic Drink Containing Vodka Diluted With Orange Flavoring.
First use Apr. 1, 1961.

SN 123,820. Charles Jacquin et Cie, Inc., d.b.a. London Tower Distilled Products, Ltd., Philadelphia, Pa. Filed July 12, 1961.



No claim of exclusive right is made to "London" as used on distilled London dry gin. Owner of Reg. No. 435,863.
For Gin.
First use July 5, 1961.

SN 137,805. Seager, Evans & Co., Limited, London, England. Filed Feb. 12, 1962.

GLEN TARRAS

Owner of British Reg. No. 712,942, dated Jan. 14, 1946.
For Scotch Whisky.

SN 137,807. Seager, Evans & Co., Limited, London, England. Filed Feb. 12, 1962.

CLYDE SPRAY

Owner of British Reg. No. 566,756, dated Feb. 25, 1936.
For Scotch Whisky.

SN 137,809. Seager, Evans & Co., Limited, London, England. Filed Feb. 12, 1962.

GLEN ALVA

Owner of British Reg. No. B566,755, dated Feb. 25, 1936.
For Scotch Whisky.

SN 137,986. W. H. Chaplin and Company Limited, London, England. Filed Feb. 14, 1962.

TANTALLON

Owner of British Reg. No. 36,004, dated Mar. 7, 1884.
For Scotch Whisky.

Class 51 — Cosmetics and Toilet Preparations

SN 110,956. Tress Tex Laboratories, Hollywood, Calif. Filed Dec. 28, 1960.

TRESS-TEX

For Hair Conditioner.
First use Oct. 20, 1959.

SN 112,856. Daniel N. Pompilio, d.b.a. Nutri-Genic Hair and Scalp System Laboratory, Mount Vernon, N.Y. Filed Jan. 31, 1961.

NUTRI-GENIC

For Emollient Cream and Hair and Scalp Preparations, Including Hair Coloring Preparations.
First use Aug. 25, 1955.

SN 114,545. L'Oreal, Paris, France, by change of name from Societe Monsavon-l'Oreal, Societe Anonyme, Paris, France. Filed Feb. 27, 1961.

LUMIPLIX

Owner of French Reg. No. 480,471, dated May 21, 1959 (Seine); Natl. Inst. No. 126,294.
For Cosmetics, Essential Oils, Make-Up, Dyes, Coloring Matters, Tints and Lotions for Hair and Beards, Products for Removing Hair Coloring, Products for Hair Care and Beuaty, Hair Waving and Curling Products.

SN 114,546. L'Oreal, Paris, France, by change of name from Societe Monsavon-l'Oreal, Societe Anonyme, Paris, France. Filed Feb. 27, 1961.

SATIN JEUNE

The words "Satin Jeune" literally translated mean "youthful satin." Owner of French Reg. No. 475,596, dated Nov. 6, 1958 (Seine); Natl. Inst. No. 115,366.
For Soaps, Cosmetics, Beauty Cream Lotions, Dyes, Coloring Matters, Tints and Lotions for Hair and Beards, Hair Color Removing Products, Hair Waving and Curling Products.

SN 114,725. L'Oreal, Paris, France, by change of name from Societe Monsavon-l'Oreal, Societe Anonyme, Paris, France. Filed Mar. 1, 1961.

ELNETT

Owner of French Reg. No. 484,591, dated Dec. 10, 1959 (Seine); Natl. Inst. No. 135,657.
For Perfumes, Essential Oils, Rouge, Face Powder, Hair Dyes and Hair Rinses, Hair Bleaches, Lacquers and Lotions for Hair and Beards.

SN 125,085. Nicholas Freres S.A., Chatou, Seine-et-Oise, France. Filed July 31, 1961.

PLATINYL

Owner of French Reg. No. 32,364, dated Sept. 27, 1960 (Lyon); Natl. Inst. No. 152,393.
For Hair Coloring Preparations, and Preparations for Removing Such Coloring.

SN 130,103. John Robert Powers Products Co., Inc., New York, N.Y. Filed Oct. 17, 1961.

UP-LIFT

For Cosmetic Skin Cream and Lotion.
First use Oct. 3, 1961.

SN 130,104. John Robert Powers Products Co., Inc., New York, N.Y. Filed Oct. 17, 1961.

VITA-FIRM

For Cosmetic Skin Cream and Lotion.
First use Oct. 3, 1961.

SN 130,285. Sybil Ives Ltd., Yonkers, N.Y. Filed Oct. 19, 1961.

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For Cold Permanent Waving Lotion.
First use June 10, 1959.

SN 131,185. Carter Products, Inc., New York, N.Y. Filed Nov. 2, 1961.

DRYEX

For Combination of Anti-Perspirants Incorporated as an Ingredient in a Personal Deodorant.
First use Aug. 8, 1961.

SN 134,544. Keystone Laboratories, Inc., d.b.a. Long Aid Company, Memphis, Tenn. Filed Dec. 22, 1961.

LONG AID

Owner of Reg. No. 565,526.
For Hair Dressing, Hair Cream, Hot Oil Preparation for Treating the Hair, Hair Pressing Compound, Hair Control Stick, Color Restorer and Hair Spray.
First use in March 1949, on hair dressing.

SN 135,800. International Cosmetics, Inc., Los Angeles, Calif. Filed Jan. 15, 1962.

GLO & BEHOLD

For Liquid Make-Up.
First use Nov. 28, 1961.

SN 136,028. Colgate-Palmolive Company, New York, N.Y. Filed Jan. 18, 1962.

BITE 'N BRUSH

For Dentifrice.
First use Nov. 6, 1961.

SN 136,061. Germaine Monteil Cosmetiques Corp., New York, N.Y. Filed Jan. 18, 1962.

FASHION FINISH

For Liquid Make-Up, Face Powder, and Lipstick.
First use Jan. 9, 1962.

SN 142,559. Helena Rubinstein, Inc., New York, N.Y. Filed Apr. 18, 1962.

TINTILLATE

For Hair Dye Product.
First use on or about Feb. 2, 1962.

Class 52 — Detergents and Soaps

SN 92,989. K & E Chemical Sales Company, Cleveland, Ohio. Filed Mar. 16, 1960.

STERILKLENZ

For Cationic Cleansing Agent.
First use in or about January 1960.

SN 99,964. The Realistic Company, d.b.a. Beauty Specialties Company, Cincinnati, Ohio. Filed June 29, 1960.

REQUEST

For Hair Shampoo.
First use on or about Aug. 14, 1959.

SN 101,329. Kao Soap Company Limited, Chuo-ku, Tokyo, Japan. Filed July 22, 1960.

FUJISNO

Priority claimed under Sec. 44(d) on Japanese application filed May 9, 1960; Reg. No. 584,531, dated Apr. 10, 1962.
For Hair Shampoos and Toilet Soaps.

SN 105,160. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Filed Sept. 26, 1960.

SOAK-EZE

For Composition for Soak Cleaning and Detarnishing of Tableware.
First use Mar. 24, 1960.

SN 106,992. Detrex Chemical Industries, Inc., Detroit, Mich. Filed Oct. 24, 1960.

SONI-CLEANER

Owner of Reg. No. 596,746.
For Aqueous Cleaning Compositions for Use in Cleaning Metals, Glass, Ceramics, and Glassware, in Conjunction With Cleaning Apparatus.
First use Apr. 26, 1960.

SN 108,248. Ajem Laboratories, Inc., Livonia, Mich. Filed Nov. 14, 1960.

JEM STRIP

No claim is made by this registration to the words "Strip" apart from its use in the total mark. Owner of Reg. No. 641,141.
For Removing Chemical Compositions for Use in Removing Oxide Films, Deposited Layers, Asphalt and Paint Coatings From the Surfaces of Metal Parts and Products.
First use on or about Nov. 3, 1959.

SN 108,438. C-Z Chemical Company, Inc., Beloit, Wis., by change of name from Allied Home Products Corporation, Beloit, Wis. Filed Nov. 15, 1960.

DUNK-IT

For Liquid Cleaner for Carburetors and Engine Parts.
First use Sept. 1, 1960.

SN 108,667. The Procter & Gamble Company, Cincinnati, Ohio. Filed Nov. 17, 1960.

LIQUID LIFE

For Superfat Ingredient Incorporated in Toilet Soap.
First use Sept. 23, 1960.

SN 123,448. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 5, 1961.

CHICCO

For Washing and Detergent Composition, Especially Adapted for Commercial and Industrial Laundry Use.
First use July 21, 1958.

SN 126,555. C. P. Baker & Company, Philadelphia, Pa. Filed Aug. 24, 1961.

TOPS

Owner of Reg. No. 413,517.
For Liquid Household Cleansers.
First use May 6, 1960.

SN 134,788. The Chemithon Corporation, Seattle, Wash. Filed Dec. 28, 1961.

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For Detergents for Dishes and Fine Fabrics.
First use in or about March 1958.

SN 135,102. Chicopee Manufacturing Corporation, d.b.a. Refined Products Company, New Brunswick, N.J. Filed Jan. 3, 1962.

KARALENE

For Detergent Dyeing Assistant and Scouring Agent.
First use Mar. 31, 1959.

SN 136,353. Economics Laboratory, Inc., St. Paul, Minn. Filed Jan. 23, 1962.

IMPACT

For Liquid Acid Detergent for Milkstone Removal and for Dissolving Lime Scale in Dairy and Food Processing Equipment.
First use Nov. 9, 1960.

SN 136,592. Joan Roth, d.b.a. Roth Laboratories, Cleveland, Ohio. Filed Jan. 25, 1962.

SMART

For Car Cleaner in Liquid Form.
First use Jan. 12, 1962.

SN 136,752. Flite Chemical Company of California, Hawthorne, Calif. Filed Jan. 29, 1962.

FLITE

For Synthetic Chemical Degreasing and Cleaning Fluid.
First use on or about Sept. 11, 1960.

SN 136,841. Texize Chemicals, Inc., Greenville, S.C. Filed Jan. 29, 1962.

EX-SOIL

For Liquid Household Cleaner.
First use Oct. 1, 1959.

SN 137,616. The Dow Chemical Company, Midland, Mich. Filed Feb. 9, 1962.

DOWGARD

Owner of Reg. Nos. 370,415, 702,767, and others.
For Cleaning Preparations Especially for Use in Cleaning Automotive Upholstery.
First use Mar. 3, 1961.

SN 137,892. John H. Breck, Inc., Springfield, Mass. Filed Feb. 14, 1962.

Emerald

For Shampoo.
First use Feb. 1, 1962.

SERVICE MARKS

Class 100 — Miscellaneous

SN 109,441. Technic, Inc., Cranston, R.I. Filed Dec. 1, 1960.



For Technical Service Rendered to Customers Involving Advice on Control and Use of Processes for Electro Plating Precious Metals.
First use Sept. 8, 1958.

SN 110,978. Harold Butler Investment Corporation, Buena Park, Calif. Filed Dec. 29, 1960.

DENNY'S

For Coffee Shop Services.
First use on or about Mar. 11, 1959.

SN 112,218. Bob Clampett, Los Angeles, Calif. Filed Jan. 23, 1961.



For Art Work in Use of Comic Books, Motion Pictures, and Television Programs.
First use Aug. 13, 1953.

SN 117,079. Ansul Chemical Company, Marinette, Wis. Filed Apr. 4, 1961.



The drawing is lined for the color red; color is not claimed as a feature of the mark. The mark is characterized in that the face of the figure constituting the mark represents the letter "a."

For Services in Designing Fire Protection Systems for Others.

First use about June 1954.

SN 122,531. Holiday Inns of America, Inc., Memphis, Tenn. Filed June 21, 1961.

YOUR HOST FROM COAST TO COAST

Owner of Reg. No. 657,302.

For Motel Services—Namely, Providing Lodgings and Meals in Motels.

First use July 31, 1953.

SN 122,708. George Miller, d.b.a. Beacon Research Laboratories, Waltham, Mass. Filed June 23, 1961.



The term "Research Laboratories" is disclaimed apart from the mark as shown.

For Research Services in Chemical, Metallurgical, Electrical, Nuclear, and Medical Materials.

First use Apr. 3, 1961.

SN 123,982. Go Oil Well Services, Inc., Fort Worth, Tex. Filed July 14, 1961.

GO

For Oil Well Wire Line Services—Namely, Radioactivity, Temperature, Density, Electrical, Flowmeter, Tracing, and Collar Locator Logging; Perforating, Bridge Plug and Packer Setting, and Dump Boiler Services, for the Petroleum Industry.

First use Jan. 1, 1955.

SN 124,520. Coffee Dan's Inc., Los Angeles, Calif. Filed July 24, 1961.



Applicant disclaims the word "Coffee" apart from the mark as shown.

For Restaurant, Cocktail Lounge, and Coffee Shop Services.

First use 1911.

SN 125,439. Union Carbide Corporation, New York, N.Y. Filed Aug. 4, 1961.

LINDE

Owner of Reg. Nos. 652,046, 666,296, and 722,837.

For Leasing of Refrigeration Apparatus.

First use on or about Apr. 11, 1961.

SN 130,230. Mr. Quick—Bloomington, Inc., Bloomington, Ill. Filed Oct. 18, 1961.

MR. QUICK

For Restaurant Services.

First use June 9, 1960.

SN 136,553. Hotel Corporation of America, Boston, Mass. Filed Jan. 25, 1962.

CHARTER HOUSE HOTEL

Applicant disclaims the word "Hotel" apart from the mark as shown.

For Hotel Services.

First use October 1955.

SN 136,555. Hotel Corporation of America, Boston, Mass. Filed Jan. 25, 1962.

CHARTER HOUSE MOTOR HOTEL

Applicant disclaims the words "Motor Hotel" apart from the mark as shown.

For Motor Hotel Services.

First use October 1955.

SN 137,278. John D. Poole, Hollywood, Calif. Filed Feb. 5, 1962.



For Detective and Private Investigator Services.

First use Aug. 1, 1961.

SN 140,452. Hotel Corporation of America, Boston, Mass. Filed Mar. 22, 1962.

RIB ROOM

For Restaurant and Bar Services.

First use August 1953.

Class 101 — Advertising and Business

SN 87,291. Wm. Stroh, Inc., West New York, N.J., assignee of William Stroh, Jr., and William C. H. Stroh III, d.b.a. William Stroh, Jr., West New York, N.J. Filed Dec. 14, 1959.



Applicant disclaims the map of the United States, except in combination with the other features of the mark. The lining shown in the drawing is actually part of the mark and is not used to indicate any particular color.

For Brokerage and Rental of Names in the Mail Order Industries.

First use January 1939.

SN 113,380. Towers Marts, Inc., New York, N.Y. Filed Feb. 9, 1961.

TOWERS

For Discount Department Store Services.

First use on or about Mar. 22, 1957.

SN 123,714. Jacob L. Weinberg, d.b.a. American Parents Guild, Evanston, Ill. Filed July 10, 1961.

AMERICAN PARENTS GUILD

Owner of Reg. No. 697,216.

For Promoting the Sale of the Goods and Services of Others Through the Distribution of Sample Goods and Sales Literature to Expectant Parents.

First use on or about June 5, 1961.

SN 123,740. Paul J. Friedman, d.b.a. Timely Shopping Guide, Lancaster, Pa. Filed July 11, 1961.



No claim is made to the words "Shopping Guide" apart from the mark.

For Direct Mail Advertising Service for Promoting the Sale of Goods and Services of Others.

First use Oct. 17, 1960.

SN 130,793. Family Discount Stamp Co., Cleveland, Ohio. Filed Oct. 27, 1961.

COMMUNITY STAMPS

No claim is made to the word "Stamps."

For Promoting the Goods and Services of Others Thru the Medium of Trading Stamps Redeemable in Merchandise or Cash.

First use on or about Sept. 1, 1950.

SN 134,678. Red Owl Stores, Inc., Minneapolis, Minn. Filed Dec. 26, 1961.



For Grocery Store Services.

First use in or about April 1948.

SN 134,679. Red Owl Stores, Inc., Minneapolis, Minn. Filed Dec. 26, 1961.

RED OWL

For Grocery Store Services.

First use in or about the year 1922.

SN 134,746. Medical Computing Associates, Hyannis, Mass. Filed Dec. 27, 1961.

medcomp

For Installation and Maintenance of Bookkeeping Systems for Doctors.

First use Oct. 5, 1961.

SN 135,987. McCallum Inspection Company, Norfolk, Va. Filed Jan. 17, 1962.



For Inspecting and Grading Lumber for Others.
First use in 1928.

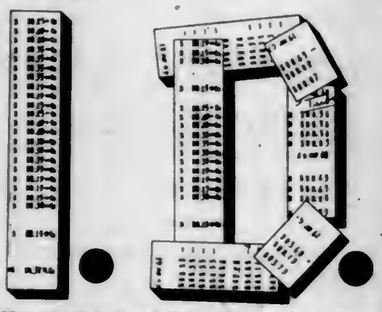
Class 102 — Insurance and Financial

SN 123,204. Insurance City Life Company, Hartford, Conn. Filed June 30, 1961.

THE HOMESAVER PLAN

For Underwriting of Disability Insurance and Life Insurance.
First use Feb. 1, 1958.

SN 124,457. Philco Finance Corporation, Philadelphia, Pa. Filed July 21, 1961.



For A Merchandising and Sales Financing Program Under Which Customers of Member Supermarkets Are Enabled To Purchase Applicant's Appliances Through Participating Applicant Dealers and Finance Such Purchases Through the Facilities of Applicant's Corporation.
First use May 24, 1961.

SN 125,050. Insurance Company of North America, Philadelphia, Pa. Filed July 31, 1961.

INA AGENCY BUILDER

Owner of Reg. Nos. 713,296 and 713,297.
For Aiding Insurance Agencies in the Selection and Training of Their Sales Personnel.
First use July 24, 1961.

SN 125,713. Aviation Employees Corporation, Silver Spring, Md. Filed Aug. 10, 1961.



For Insurance Underwriting Services and Industrial and Commercial Loan Services.
First use Oct. 15, 1960.

SN 133,645. Econ-O-Pay, Inc., Valley City, N. Dak. Filed Dec. 8, 1961.

ECON-O-PAY

For Arranging for Financing of Goods Purchased From Merchandising Stores.
First use Sept. 1, 1961.

SN 134,547. Forrest A. Lee, Inc., San Francisco, Calif. Filed Dec. 22, 1961.

INSURE/MENTS

For Integrated Financial Programing Service—Namely, Life Insurance and Investment Counseling.
First use Aug. 30, 1961.

SN 135,316. American Pioneer Life Insurance Company, Orlando, Fla. Filed Jan. 8, 1962.

AMERICAN PIONEER

For Underwriting Life and Disability Insurance.
First use Dec. 1, 1961.

Class 103 — Construction and Repair

SN 100,916. Harold D. Lewis, d.b.a. Advent Homes, New Orleans, La. Filed July 15, 1960.

Advent homes

The word "Homes" is hereby disclaimed apart from the mark as shown.
For Construction of Houses.
First use Mar. 30, 1960.

SN 129,492. Hub Laundry, Inc., Mount Rainier, Md. Filed Oct. 9, 1961.



The term "The Finest Shirt in Town" is disclaimed apart from the mark as shown.
For Laundry Services.
First use Dec. 2, 1958.

SN 140,374. Monroe Calculating Machine Company, Orange, N.J. Filed Mar. 21, 1962.

LIFEGUARD

For Maintenance and Repair of Business Machines, Including Adding Machines and Cash Registers.
First use December 1961.

Class 104 — Communication

SN 133,644. Dick Broadcasting Co., Inc., d.b.a. Radio Station WIVK, Bearden, Tenn. Filed Dec. 8, 1961.

SOUNTIFIC RADIO

Applicant disclaims any exclusive right to the word "Radio" apart from the mark as shown.
For Radio Program Broadcasting Services.
First use Nov. 1, 1961.

Class 105 — Transportation and Storage

SN 79,879. The Rail-Trailer Co., Chicago, Ill. Filed Aug. 19, 1959.



For Transportation of Goods of Others by Truck and Railroad Flat Cars.
First use on or about July 1, 1959.

SN 107,930. Eastern Air Lines, Inc., New York, N.Y. Filed Nov. 7, 1960.

"AIR BUS"

Owner of Reg. Nos. 655,355 and 720,141.
For Interstate Air Transportation of Persons.
First use Oct. 31, 1960.

SN 114,476. HMH Publishing Co., Inc., d.b.a. Playboy Tours, Chicago, Ill. Filed Feb. 27, 1961.

PLAYBOY TOURS

The word "Tours" is disclaimed apart from the mark as shown.
Owner of Reg. Nos. 600,018, 711,035, and others.
For Arranging and Conducting Travel Tours and Arranging Hotel Accommodations and Entertainment for Tourists.
First use Dec. 13, 1960.

SN 123,556. Nevadarama, Inc., San Francisco, Calif. Filed July 7, 1961.

NEVADARAMA

For Travel Agency Services.
First use June 5, 1961.

SN 124,588. Safaritours, Inc., Hollywood, Calif. Filed July 24, 1961.

VOODOO SAFARIS

The word "Safaris" is disclaimed apart from the mark as shown.
For West Indies Travel Tours.
First use July 1, 1957.

SN 125,983. Fourways Travel Limited, London, England. Filed Aug. 11, 1961.



For Travel Organizers and Tour Operators.
First use Mar. 19, 1946; in commerce Dec. 31, 1946.

SN 129,752. Eastern Air Lines, Inc., New York, N.Y. Filed Oct. 12, 1961.



Owner of Reg. Nos. 655,355 and 720,141.
For Air Transportation of Persons.
First use Nov. 14, 1960.

SN 130,992. Union Speditions Gesellschaft mit beschraenkter Haftung, Inc., Dusseldorf, Germany. Filed Oct. 30, 1961.



No claim is made to the words "Air Transport" apart from the mark as shown.
For Transportation of Cargo and Freight by Airplanes and Motor Vehicles.
First use July 1, 1960; in commerce July 1, 1960.

SN 135,424. Caribbean Cruise Lines, Inc., Washington, D.C. Filed Jan. 9, 1962.



The drawing is lined for red and blue, the contrasting colors forming part of the mark, but no claim is made to the colors so named since other contrasting colors are frequently used.
For Conducting Ocean Cruises.
First use on or about Nov. 29, 1959.

Class 106 — Material Treatment

SN 96,536. Tubular Lining Corporation, Houston, Tex. Filed May 5, 1960.

AUTOTRONICS

For Cleaning and Coating Pipe for Others With a Protective Coating.
First use approximately Aug. 1, 1957.

SN 121,058. Anadite Inc., South Gate, Calif. Filed May 17, 1961.

VAC-CAD

For Applying Corrosion Resistant Coatings of Cadmium to Metal Articles, Parts, or Structures to the Order of Others.
First use May 1958.

SN 124,944. Radiation Applications Incorporated, Long Island City, N.Y. Filed July 28, 1961.

FOAMET

For Service of Separating Components in Homogeneous Aqueous Solutions for Others.
First use Mar. 13, 1961.

SN 125,395. Mab Service Corp., Paterson, N.J. Filed Aug. 4, 1961.

Perma Brite

For Screen Printing Textile Fabrics of Others.
First use June 21, 1961.

SN 133,081. Photo Service, Inc., Des Plaines, Ill. Filed Nov. 30, 1961.



Applicant disclaims the wording "Picture Protection" in the mark separate and apart from the design of the mark.
For Developing of Film and the Making of Photographic Prints.
First use May 22, 1961.

Class 107 — Education and Entertainment

SN 46,042. Allied Publishers' Inc., Portland, Oreg. Filed Feb. 18, 1958.

BRIEFHAND WORKSHOPS

Applicant disclaims the word "Workshops" apart from the mark as shown.
For Educational Services in Connection With Instruction in an Abbreviated System of Writing Longhand and Note Taking.
First use May 1957.

SN 119,172. Behner Travel, Inc., Monroe, Mich. Filed May 3, 1961.

"SCHOOL-ON-THE-ROAD"

For A Conducted Tour.
First use Nov. 1, 1959.

SN 123,758. National Baby Care Council, Wilmington, Del. Filed July 11, 1961.



For Preparation, Publication, and Distribution of Educational Material Designed To Promote the Health, Education, and Welfare of Babies.
First use Jan. 19, 1960.

SN 138,082. Capitol Dance Society, Inc., Washington, D.C. Filed Feb. 16, 1962.

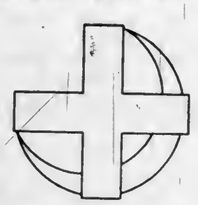
"BOY MEETS GIRL"

For Entertainment Services—Namely, Providing an Orchestra and Ballroom Space for Dancing for Members and Guests.
First use Aug. 1, 1952.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 103,170. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Aug. 22, 1960.



For Indicating Membership in Applicant.
First use Dec. 29, 1925.

SN 103,172. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Aug. 22, 1960.



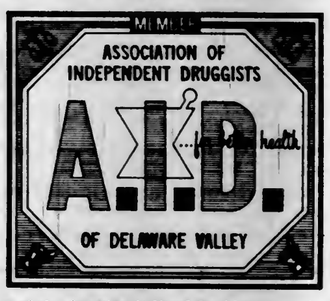
The Greek words on the seal mean "seal of the brotherhood of Lambda Chi Alpha."
For Indicating Membership in Applicant.
First use Mar. 22, 1913.

SN 106,729. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Oct. 19, 1960.



The Greek letters shown as part of the mark are Lambda Chi Alpha.
For Indicating Membership in Applicant.
First use 1913.

SN 136,335. Association of Independent Druggists, Inc., Philadelphia, Pa. Filed Jan. 23, 1962.



A portion of the drawing is lined for blue.
For Indicating Membership in the Applicant Corporation.
First use Jan. 2, 1962.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

736,197. CELACLOUD. Celanese Corporation of America. SN 13,139. Pub. 12–4–56. Filed 7–31–56.

736,198. EMPRESS CHINCHILLA THE PRECIOUS FUR FOR A PRECIOUS FEW. Farmers Chinchilla Cooperative of America, Inc. SN 81,891. Pub. 6–5–62. Filed 9–23–59.

736,199. STAPEL. Consolidated Papers, Inc., by change of name from Consolidated Water Power & Paper Company. SN 103,763. Pub. 6–5–62. Filed 9–1–60.

736,200. LX–685. Neville Chemical Company. SN 111,908. Pub. 6–5–62. Filed 1–16–61.

736,201. LX–1000. Neville Chemical Company. SN 111,909. Pub. 6–5–62. Filed 1–16–61.

736,202. LX–782. Neville Chemical Company. SN 111,911. Pub. 6–5–62. Filed 1–16–61.

736,203. MELLO FOAM. Mello Foams, Inc. SN 119,220. Pub. 6–5–62. Filed 5–3–61.

736,204. REPRESENTATION OF A TREE ETC. American Sumatra Tobacco Corporation. SN 125,997. Pub. 6–5–62. Filed 8–15–61.

736,205. GOLDEN GARDEN BRAND ETC. AND DESIGN. N.V. Bloembollenkwekerij en -Handel v.h. J. Onderwater & Co. SN 129,382. Pub. 6–5–62. Filed 10–6–61.

736,206. LAY-KLEEN. Gus Dettelbach, Inc. SN 132,817. Pub. 6–5–62. Filed 11–27–61.

736,207. CHEVRON. Standard Oil Company of California. SN 132,880. Pub. 6–5–62. Filed 11–27–61.

736,208. COMPLEXIFORM. Anchor Plastics Company, Inc. SN 132,966. Pub. 6–5–62. Filed 11–29–61.

736,209. U.S. ROYAL. United States Rubber Company. SN 133,032. Pub. 6–5–62. Filed 11–29–61.

Class 2—Receptacles

736,210. HARVEY. KVP Sutherland Paper Company. SN 123,652. Pub. 6–5–62. Filed 7–10–61.

736,211. PRINCETEX. Genesco Inc. SN 127,767. Pub. 6–5–62. Filed 9–13–61.

736,212. QUEENTEX. Genesco Inc. SN 127,770. Pub. 6–5–62. Filed 9–13–61.

736,213. ECONO-TRAY. Nelson Brady Corp. SN 128,706. Pub. 6–5–62. Filed 9–27–61.

736,214. E-Z SERVE. Gulf States Paper Corporation. SN 131,283. Pub. 6–5–62. Filed 11–3–61.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

736,215. VALENTINA. Roxanne Leather Goods, Inc. SN 127,497. Pub. 6–5–62. Filed 9–8–61.

736,216. SHOE SPARE. R. G. Barry Corporation. SN 128,703. Pub. 6–5–62. Filed 9–27–61.

Class 6—Chemicals and Chemical Compositions

736,217. DITTO DIRECT PROCESS FLUID. Ditto, Incorporated. SN 94,659. Pub. 6–5–62. Filed 4–8–60.

736,218. DRIZONE. Metro-Atlantic, Inc. SN 111,676. Pub. 6–5–62. Filed 1–11–61.

736,219. TP–90B. Thiokol Chemical Corporation. SN 113,777. Pub. 6–5–62. Filed 2–15–61.

736,220. PATCO'S CHEK. Lee Patten Seed Company. SN 114,252. Pub. 6–5–62. Filed 2–23–61.

736,221. VICTALITE. Stauffer Chemical Company. SN 117,922. Pub. 6–5–62. Filed 4–14–61.

736,222. PENNZONE. Pennsalt Chemicals Corporation. SN 118,480. Pub. 6–5–62. Filed 4–24–61.

736,223. EMERSTAT. Emery Industries, Inc. SN 118,671. Pub. 6–5–62. Filed 4–26–61.

736,224. SM–30. W. R. Grace & Co. SN 118,781. Pub. 6–5–62. Filed 4–27–61.

736,225. STANDARDETTES. Haines-Fizette Laboratory, Inc. SN 119,823. Pub. 6–5–62. Filed 4–24–61.

736,226. AIRSANIZE. Brook Barton Company. SN 125,460. Pub. 6–5–62. Filed 8–7–61.

736,227. LEFLEX. Lehigh Chemical Company. SN 126,173. Pub. 6–5–62. Filed 8–17–61.

736,228. ULTRA CHEMICAL WORKS AND DESIGN. Ultra Chemical Works, Inc. SN 126,968. Pub. 6–5–62. Filed 8–30–61.

736,229. EASY-AID. G. N. Coughlan Company. SN 128,419. Pub. 6–5–62. Filed 9–22–61.

736,230. CHROMOSAL. Farbenfabriken Bayer Aktiengesellschaft. SN 128,424. Pub. 6–5–62. Filed 9–22–61.

736,231. AVILON. Ciba Limited. SN 130,176. Pub. 6–5–62. Filed 10–18–61.

736,232. MILBAN. E. I. du Pont de Nemours and Company. SN 130,192. Pub. 6–5–62. Filed 10–18–61.

736,233. DIE-SLUG. Triangle Chemical Company. SN 130,595. Pub. 6–5–62. Filed 10–24–61.

Class 7—Cordage

736,234. SILVERMIST. Minnesota Mining and Manufacturing Company. SN 106,214. Pub. 6–5–62. Filed 10–11–60.

Class 9—Explosives, Firearms, Equipments, and Projectiles

736,235. PIC AND DESIGN. Precise Imports Corp. SN 120,439. Pub. 6–5–62. Filed 5–19–61.

736,236. MATCH TARGET AND DESIGN. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 126,576. Pub. 6–5–62. Filed 8–24–61.

736,237. COLT. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 130,762. Pub. 6–5–62. Filed 10–27–61.

Class 12—Construction Materials

736,238. INSEL PLASTIC. Mastic Corporation. SN 117,202. Pub. 6–5–62. Filed 4–5–61.

736,239. DURA-DECK. Caloric Corporation, assignee of Caloric Appliance Corporation. SN 119,673. Pub. 6–5–62. Filed 5–10–61.

736,240. CHAL-A. Koppers Company, Inc. SN 120,727. Pub. 6–5–62. Filed 5–24–61.

736,241. OPERABLE WALL. The E. F. Hauserman Company. SN 121,824. Pub. 6–5–62. Filed 6–12–61.

736,242. BUTYLSEAL. The Parr Paint & Color Company. SN 122,457. Pub. 6–5–62. Filed 6–20–61.

736,243. DURAFIRM. Arcadia Air Products Company. SN 124,499. Pub. 6–5–62. Filed 7–24–61.

736,244. BOND-A-LUM. Bonded Homes, Inc. SN 125,879. Pub. 6–5–62. Filed 8–14–61.

736,245. VISTA-LUX. Central Building Supply, Inc. SN 127,377. Pub. 6–5–62. Filed 9–7–61.

736,246. ZONO COUSTIC. Zonolite Company. SN 131,097. Pub. 6–5–62. Filed 10–31–61.

736,247. T & G AND DESIGN. E. D. Delaney, Inc. SN 131,941. Pub. 6–5–62. Filed 11–14–61.

736,248. BASTITEMP. Basic Incorporated. SN 132,020. Pub. 6–5–62. Filed 11–15–61.

736,249. GARSTONE. The Garaway Corporation. SN 132,664. Pub. 6–5–62. Filed 11–24–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

736,250. STAR CHARCOAL. Continental Copper & Steel Industries, Inc., Hanover Wire Cloth Division. SN 100,430. Pub. 6–5–62. Filed 7–7–60.

736,251. TAPTITE. Research Engineering & Manufacturing, Inc. SN 118,812. Pub. 6–5–62. Filed 4–27–61.

736,252. TK. Tube-Kote, Inc. SN 119,074. Pub. 6–5–62. Filed 5–1–61.

736,253. GEOMETRICAL DESIGN. Aktiebolaget Gense. SN 123,157. Pub. 6–5–62. Filed 6–30–61.

736,254. PRESTIL. Societe Francaise de Fermetures de Luxe. SN 123,570. Pub. 6–5–62. Filed 7–7–61.

736,255. GEOMETRIC DESIGN. Nuclear Products Company. SN 124,280. Pub. 6–5–62. Filed 7–19–61.

736,256. HULA BALL. Harry B. Corsaw, d.b.a. Corsaw Company. SN 125,584. Pub. 6–5–62. Filed 8–8–61.

736,257. CS. Products Research Company. SN 126,798. Pub. 6–5–62. Filed 8–28–61.

736,258. SOUPETTE. Chemex Corporation. SN 127,200. Pub. 6–5–62. Filed 9–5–61.

736,259. CHROMOVEIL. Brater Merchandising, Inc. SN 132,443. Pub. 6–5–62. Filed 11–21–61.

736,260. SIGNATURE. Montgomery Ward & Co., Incorporated. SN 132,852. Pub. 6–5–62. Filed 11–27–61.

Class 14—Metals and Metal Castings and Forgings

736,261. AUTODIE. Columbia Tool Steel Company. SN 127,380. Pub. 6–5–62. Filed 9–7–61.

Class 15—Oils and Greases

736,262. PUROL MILSPEC. The Pure Oil Company. SN 67,823. Pub. 6–5–62. Filed 2–16–59.

736,263. UNIFLAME. Union Oil Company of California. SN 108,839. Pub. 6–5–62. Filed 11–21–60.

736,264. GO-MIX. Ashland Oil & Refining Company. SN 109,148. Pub. 6–5–62. Filed 11–28–60.

736,265. LSF AND DESIGN. Donald K. Olson, d.b.a. Walter J. Olson Company. SN 112,301. Pub. 6–5–62. Filed 1–23–61.

736,266. KM. Kerr-McGee Oil Industries, Inc. SN 123,547. Pub. 6–5–62. Filed 7–7–61.

736,267. HOUSTON AND DESIGN. Houston Chemical Corporation. SN 131,574. Pub. 6–5–62. Filed 11–8–61.

736,268. SUNOCO AND DESIGN. Sun Oil Company. SN 131,773. Pub. 6–5–62. Filed 11–10–61.

Class 16—Protective and Decorative Coatings

736,269. REDI-KOTE. National Chemsearch Corporation of Texas. SN 111,424. Pub. 6–5–62. Filed 1–6–61.

736,270. DIAMOND SPAR. West Paint & Varnish Company. SN 117,577. Pub. 6–5–62. Filed 4–11–61.

736,271. WALL FASHIONS. Bruno Movrich Company. SN 125,079. Pub. 6–5–62. Filed 7–31–61.

736,272. IMPERIAL AND DESIGN. Tobias Paint Manufacturing Co. SN 127,437. Pub. 4–3–62. Filed 9–7–61.

736,273. BUDD-GARD. The Budd Company. SN 129,733. Pub. 6–5–62. Filed 10–12–61.

736,274. CARDINAL. Cardinal Decorating, Inc. SN 129,839. Pub. 6–5–62. Filed 10–13–61.

736,275. SUPERCHARGER. Pittsburgh Plate Glass Company. SN 129,877. Pub. 6–5–62. Filed 10–13–61.

Class 17—Tobacco Products

736,276. HAMLET Y OFELIA AND DESIGN. Waitt & Bond, Inc., assignee of Alles & Fisher, Inc. SN 113,787. Pub. 6–5–62. Filed 2–16–61.

736,277. FRAPPE AND DESIGN. Stephano Brothers. SN 128,480. Pub. 6–5–62. Filed 9–22–61.

Class 18—Medicines and Pharmaceutical Preparations

736,278. FLAV-OR-AID. Personal Home Products, Inc. SN 92,113. Pub. 11–22–60. Filed 3–3–60.

736,279. TABOCAPS. U.S. Standard Products Co. SN 114,282. Pub. 6–5–62. Filed 2–23–61.

736,280. GESTEST. Olin Mathieson Chemical Corporation. SN 117,388. Pub. 6–5–62. Filed 4–7–61.

736,281. PYROAL. R. G. Dunwody & Sons, Inc. SN 125,018. Pub. 6–5–62. Filed 7–31–61.

736,282. SILAIN. Plough Laboratories, Inc. SN 127,640. Pub. 6–5–62. Filed 9–11–61.

736,283. SILAIN-GEL. Plough Laboratories, Inc. SN 127,641. Pub. 6–5–62. Filed 9–11–61.

736,284. BABY PERCY. Merrick Medicine Company. SN 130,928. Pub. 6–5–62. Filed 10–30–61.

736,285. TIXOBAR. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 131,178. Pub. 6–5–62. Filed 11–2–61.

736,286. MILCITY. Carter Products, Inc. SN 131,186. Pub. 6–5–62. Filed 11–2–61.

736,287. VI-ORA AND DESIGN. Vitamin Food Company, Inc. SN 131,244. Pub. 6–5–62. Filed 11–2–61.

736,288. GLYMAXIL. Beecham Research Laboratories Limited. SN 131,334. Pub. 6–5–62. Filed 11–6–61.

736,289. MINTASE. The Mintase Co. SN 131,382. Pub. 6–5–62. Filed 11–6–61.

736,290. PANCARD. Pan American Laboratories, Inc. SN 131,702. Pub. 6–5–62. Filed 11–9–61.

736,291. PANCOF. Pan American Laboratories, Inc. SN 131,705. Pub. 6–5–62. Filed 11–9–61.

736,292. INOBEX-CAL. Textron Pharmaceuticals, Inc. SN 132,097. Pub. 6–5–62. Filed 11–15–61.

736,293. DORMAREX. Republic Drug Co., Inc. SN 133,898. Pub. 6–5–62. Filed 12–12–61.

736,294. KAORESIN. Richardson-Merrell Inc. SN 133,899. Pub. 6–5–62. Filed 12–12–61.

736,295. VYTONE. Dermik Pharmacal Co., Inc. SN 137,052. Pub. 6–5–62. Filed 2–1–62.

736,296. ZE-TAR-QUIN. Dermik Pharmacal Co., Inc. SN 137,053. Pub. 6–5–62. Filed 2–1–62.

736,297. ATH-O-MED. The Chattanooga Medicine Company, d.b.a. Ath-O-Med Company. SN 138,159. Pub. 6–5–62. Filed 2–19–62.

736,298. COR-D-TAR. Desitin Chemical Co., Inc. SN 138,291. Pub. 6–5–62. Filed 2–20–62.

736,299. SPIRAMIX. Societe des Usines Chimiques Rhone-Poulenc. SN 138,437. Pub. 6–5–62. Filed 2–21–62.

Class 19—Vehicles

736,300. FLEX-O-DECK. Gordon-Chapman Company. SN 122,694. Pub. 6–5–62. Filed 6–23–61.

Class 21—Electrical Apparatus, Machines, and Supplies

736,301. SAFE-T-LITE. Wilford H. Hudson, d.b.a. Hudson Enterprises. SN 88,395. Pub. 6–5–62. Filed 1–4–60.

736,302. GORHAM ELECTRONICS AND DOT DESIGN. Gorham Corporation, by change of name from Gorham Manufacturing Company. SN 104,086. Pub. 6–5–62. Filed 9–8–60.

736,303. GORHAM. Gorham Corporation, by change of name from Gorham Manufacturing Company. SN 104,087. Pub. 6–5–62. Filed 9–8–60.

736,304. CW AND DESIGN. Charles Wagner Mfg. Co. Inc. SN 107,087. Pub. 6–5–62. Filed 10–24–60.

736,305. STRONG 35/70 SPECIAL. The Strong Electric Corporation. SN 115,269. Pub. 6–5–62. Filed 3–9–61.

736,306. GRADUALITE. Gradualite Corporation. SN 117,858. Pub. 6–5–62. Filed 4–14–61.

736,307. FEDTRONICS. Fedtro, Inc. SN 120,514. Pub. 6–5–62. Filed 5–22–61.

736,308. MULTIPOISED. General Controls Co. SN 120,983. Pub. 6–5–62. Filed 5–29–61.

736,309. CURVILINE. R-M-S Associates, Inc. SN 125,247. Pub. 6–5–62. Filed 8–2–61.

736,310. QUIK-LID AND DESIGN. Hobart Brothers Company. SN 126,931. Pub. 6–5–62. Filed 8–30–61.

736,311. AIRLINE. Montgomery Ward & Co., Incorporated. SN 127,625. Pub. 6–5–62. Filed 9–11–61.

736,312. PLANTALITE. Plantalite Company. SN 127,639. Pub. 6–5–62. Filed 9–11–61.

736,313. QUICK WATER. Trojan Battery Company. SN 128,118. Pub. 6–5–62. Filed 9–18–61.

736,314. SUPERDUTY. Portable Electric Tools, Inc. SN 128,464. Pub. 6–5–62. Filed 9–22–61.

736,315. EQUI-GLIDE. Equipto Electronics Corporation. SN 128,539. Pub. 6–5–62. Filed 9–25–61.

736,316. FSP AND DIAMOND AND CIRCLE DESIGN. Whirlpool Corporation. SN 128,629. Pub. 6–5–62. Filed 9–25–61.

736,317. SOLID STATE ELECTRONICS AND DESIGN. General Motors Corporation. SN 128,995. Pub. 6–5–62. Filed 10–2–61.

736,318. SIANOR. Pucel Enterprises, Inc. SN 129,077. Pub. 6–5–62. Filed 9–26–61.

736,319. BUG BEACON. The Consolidated Specialties Company. SN 129,578. Pub. 6–5–62. Filed 10–10–61.

736,320. HEAT FLO. The Edwin L. Wiegand Company. SN 129,649. Pub. 6–5–62. Filed 10–10–61.

736,321. PERMA-PLUG. Vocaline Company of America, Incorporated. SN 129,823. Pub. 6–5–62. Filed 10–12–61.

736,322. VOCALINE. Vocaline Company of America, Incorporated. SN 129,824. Pub. 6–5–62. Filed 10–12–61.

736,323. COASTOP. Space Avionics, Inc. SN 129,891. Pub. 6–5–62. Filed 10–13–61.

736,324. BULL-STRENGTH. Trio Manufacturing Co. SN 130,007. Pub. 6–5–62. Filed 10–16–61.

736,325. FUZZ BUTTON. Technical Wire Products, Inc. SN 130,127. Pub. 6–5–62. Filed 10–17–61.

736,326. RAYESCENT. Westinghouse Electric Corporation. SN 130,135. Pub. 6–5–62. Filed 10–17–61.

736,327. FABRI-THERM. General Electric Company. SN 130,279. Pub. 6–5–62. Filed 10–19–61.

736,328. SEAL-THERM. General Electric Company. SN 130,280. Pub. 6–5–62. Filed 10–19–61.

Class 22—Games, Toys, and Sporting Goods

736,329. A.L. & W. Allcock, Laight & Westwood Limited. SN 74,100. Pub. 6–5–62. Filed 5–20–59.

736,330. PAPCO. Paul A. Price Co., Inc. SN 115,518. Pub. 6–5–62. Filed 3–13–61.

736,331. JACK THE KNIFE. Honey Toy Industries, Inc. SN 116,129. Pub. 6–5–62. Filed 3–21–61.

736,332. BUTTERBALL. American Doll & Toy Corporation. SN 116,191. Pub. 6–5–62. Filed 3–22–61.

736,333. ANNIE OAKLEY. Annie Oakley Enterprises, Inc. SN 116,462. Pub. 6–5–62. Filed 3–27–61.

736,334. CITATION. Permo-Plastics. SN 117,392. Pub. 6–5–62. Filed 4–7–61.

736,335. SABRA. Denison-Johnson, Inc. SN 119,859. Pub. 6–5–62. Filed 5–12–61.

736,336. BC MONO AND DESIGN. Shakespeare Company. SN 120,138. Pub. 6–5–62. Filed 5–16–61.

736,337. THE BOOK WITCH. Reading Treasure House. SN 121,120. Pub. 6–5–62. Filed 5–31–61.

736,338. TANDY TALKS. Goldberger Doll Mfg. Co., Inc. SN 124,359. Pub. 6–5–62. Filed 7–20–61.

736,339. THE DOCTOR'S PRESCRIPTION R AND DESIGN FISHING ROD. Willis S. Peck. SN 124,751. Pub. 6–5–62. Filed 7–26–61.

736,340. SECO ETC. AND DESIGN. Sports Equipment Corporation. SN 124,954. Pub. 6–5–62. Filed 7–28–61.

736,341. SLEEPER-KING. Dell Plastics Co., Inc. SN 125,363. Pub. 6–5–62. Filed 8–4–61.

736,342. L WITHIN CIRCLE DESIGN. The Lionel Corporation. SN 125,393. Pub. 6–5–62. Filed 8–4–61.

736,343. BABY MARIE. F. W. Woolworth Co. SN 125,447. Pub. 6–5–62. Filed 8–4–61.

736,344. LITTLE BABY MARIE. F. W. Woolworth Co. SN 125,448. Pub. 6–5–62. Filed 8–4–61.

736,345. LITTLE MISS MARIE. F. W. Woolworth Co. SN 125,450. Pub. 6–5–62. Filed 8–4–61.

736,346. DONNA MARIE. F. W. Woolworth Co. SN 125,452. Pub. 6–5–62. Filed 8–4–61.

736,347. PLASTITE BOTTOM. American Foreign Industries, Inc. SN 125,869. Pub. 6–5–62. Filed 8–14–61.

736,348. GARCIA AND DESIGN. The Garcia Corporation. SN 125,908. Pub. 6–5–62. Filed 8–14–61.

736,349. ROD POD DMC AND DESIGN. DMC, Inc. SN 126,012. Pub. 6–5–62. Filed 8–15–61.

736,350. MULTIPEG. McKinley Cole Ballard, d.b.a. M. C. Ballard & Co. SN 126,728. Pub. 6–5–62. Filed 8–28–61.

736,351. TOOIE. Gertrude Voorhees. SN 126,971. Pub. 6–5–62. Filed 8–30–61.

736,352. CALYMBO. Peter Pratt, d.b.a. Peter Pratt Enterprises. SN 127,038. Pub. 6–5–62. Filed 8–31–61.

736,353. ROUND-UP TIME. Joseph Falcone. SN 127,101. Pub. 6–5–62. Filed 9–1–61.

736,354. TARGETSMAN. Colt's Patent Fire Arms Manufacturing Company, Incorporated. SN 128,958. Pub. 6–5–62. Filed 10–2–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

736,355. KEEN-EDGE. J. Wiss & Sons Co. SN 108,851. Pub. 6–5–62. Filed 11–21–60.

736,356. POLAR. Popular Motor Specialties Inc. SN 111,009. Pub. 6–5–62. Filed 12–29–60.

736,357. GAUTHIER. Alfred Gauthier G.m.b.H. SN 111,491. Pub. 6–5–62. Filed 1–9–61.

736,358. CHOCOJOY. Automated Products, Inc. SN 116,197. Pub. 6–5–62. Filed 3–22–61.

736,359. HYDRO-PNEU-TRONICS. Hydro-Pneu-Tronics, Inc. SN 116,523. Pub. 6–5–62. Filed 3–27–61.

736,360. SHIFT FAST. E. E. Lobn Company, Inc., d.b.a. Eelco Mfg. and Supply Co. SN 116,537. Pub. 6–5–62. Filed 3–27–61.

736,361. ROTA-SCREW. Gardner-Denver Company. SN 117,776. Pub. 6–5–62. Filed 4–10–61.

736,362. COM-PANT. B. G. Harmon Service and Equipment Company. SN 118,440. Pub. 6–5–62. Filed 4–24–61.

736,363. MOLDTRONICS. Grayhill Moldtronics, Inc. SN 120,203. Pub. 6–5–62. Filed 5–17–61.

736,364. ROCKBITER. Trainer Associates, Inc. SN 124,014. Pub. 6–5–62. Filed 7–17–61.

736,365. AIRCHIME. Railway Appliance Research Limited. SN 124,843. Pub. 6–5–62. Filed 7–27–61.

736,366. HALM AND DESIGN. Halm Instrument Co., Inc. SN 126,836. Pub. 6–5–62. Filed 8–25–61.

736,367. HYDRO-VAC. The V. L. Smithers Manufacturing Company. SN 130,308. Pub. 6–5–62. Filed 10–19–61.

736,368. BORONIC. Société Genevoise d'Instruments de Physique. SN 130,310. Pub. 6–5–62. Filed 10–19–61.

736,369. SPUDNIK. Spudnik Equipment Company. SN 130,592. Pub. 6–5–62. Filed 10–24–61.

736,370. UNIDRILL. Rockwell Manufacturing Company. SN 130,657. Pub. 6–5–62. Filed 10–25–61.

736,371. TANDEMER. Didde-Glaser, Inc. SN 130,888. Pub. 6–5–62. Filed 10–30–61.

Class 24—Laundry Appliances and Machines

736,372. FSP AND DIAMOND AND CIRCLE DESIGN. Whirlpool Corporation. SN 128,628. Pub. 6–5–62. Filed 9–25–61.

Class 26—Measuring and Scientific Appliances

736,373. VERNIDIAL. Howell Instrument Company. SN 96,501. Pub. 5–29–62. Filed 5–5–60.

736,374. ARITHMETIC SYMBOL DESIGN. Victor Adding Machine Co. SN 97,735. Pub. 6–5–62. Filed 5–23–60.

736,375. SET 'N FORGET. Ace Electronics Associates, Inc. SN 121,619. Pub. 6–5–62. Filed 6–8–61.

736,376. BENKA. Benjamin F. Kalina, d.b.a. Benka Sales. SN 130,463. Pub. 6–5–62. Filed 10–23–61.

736,377. TOPPER. Radiant Manufacturing Corporation. SN 131,613. Pub. 6–5–62. Filed 11–8–61.

736,378. JIFFY. Radiant Manufacturing Corporation. SN 131,615. Pub. 6–5–62. Filed 11–8–61.

736,379. MAGIC TRI-LOCK. Radiant Manufacturing Corporation. SN 131,711. Pub. 6–5–62. Filed 11–9–61.

736,380. UNI-LUME. Flex Electric Products, Inc. SN 133,555. Pub. 6–5–62. Filed 12–7–61.

Class 27—Horological Instruments

736,381. CROMWELL. Clinton Watch Company. SN 125,267. Pub. 6–5–62. Filed 8–1–61.

736,382. SESSIONGLO. The Sessions Clock Co. SN 127,277. Pub. 6–5–62. Filed 9–5–61.

736,383. STRONG-PACER. Earl P. Strong, d.b.a. Trico Service Company. SN 129,816. Pub. 6–5–62. Filed 10–12–61.

736,384. RL AND DESIGN. Ronda AG (Ronda S.A.) (Ronda Ltd.) SN 132,728. Pub. 6–5–62. Filed 11–24–61.

Class 28—Jewelry and Precious-Metal Ware

736,385. MARTINI MINDER. Gorham Corporation. SN 131,127. Pub. 6–5–62. Filed 11–1–61.

736,386. IMPERIAL WEAR. Imperial Outfitters to Large Men, Inc. SN 131,369. Pub. 6–5–62. Filed 11–6–61.

736,387. ETOILE BY TRIFARI AND DESIGN. Trifari, Krussman & Fishel, Inc. SN 131,428. Pub. 6–5–62. Filed 11–6–61.

Class 30—Crockery, Earthenware, and Porcelain

736,388. HERALDO-MUG. Loren Murchison & Co., Inc. SN 125,929. Pub. 6–5–62. Filed 8–14–61.

736,389. TRADITIONAL AMERICANA BY ARNART AND DESIGN. Arnart Imports, Inc. SN 140,320. Pub. 6–5–62. Filed 3–21–62.

Class 31—Filters and Refrigerators

736,390. PCA. Precipitator Corporation of America. SN 121,315. Pub. 1–23–62. Filed 6–2–61.

736,391. VISCO. American Air Filter Company, Inc. SN 126,140. Pub. 6–5–62. Filed 8–17–61.

736,392. PREST-O-LITE. Union Carbide Corporation. SN 126,402. Pub. 6–5–62. Filed 8–21–61.

736,393. CARBAC. The Cellulo Company. SN 126,983. Pub. 6–5–62. Filed 8–31–61.

736,394. KOOLBAR. Paul E. Brandwen, d.b.a. Paul E. Brandwen Mfg. Co. SN 127,194. Pub. 6–5–62. Filed 9–5–61.

736,395. ULTRAVAC. Swimquip, Inc. SN 127,286. Pub. 6–5–62. Filed 9–5–61.

736,396. ICETTES. Commonwealth Plastics Corp. SN 127,456. Pub. 6–5–62. Filed 9–8–61.

736,397. SERVOGARD. The Rosaen Filter Company. SN 127,653. Pub. 6–5–62. Filed 9–11–61.

736,398. VORTACOOL. Cleveland Technical Center, Inc. SN 128,150. Pub. 6–5–62. Filed 9–19–61.

736,399. HI-FI. The Wil-Nes Corporation. SN 128,315. Pub. 6–5–62. Filed 9–20–61.

736,400. FSP AND DIAMOND AND CIRCLE DESIGN. Whirlpool Corporation. SN 128,627. Pub. 6–5–62. Filed 9–25–61.

Class 32—Furniture and Upholstery

736,401. CONFORMATIC. Columbia Bedding Company. SN 112,029. Pub. 6–5–62. Filed 1–18–61.

736,402. FORM FIT. Alladin Plastics, Inc. SN 113,972. Pub. 6–5–62. Filed 2–20–61.

736,403. GB. Gaylord Bros., Inc. SN 118,437. Pub. 6–5–62. Filed 4–24–61.

736,404. EDUCATORS AND DESIGN. Educators Manufacturing Company. SN 119,492. Pub. 6–5–62. Filed 5–8–61.

736,405. JEBCO. Jebco, Inc. SN 120,724. Pub. 6–5–62. Filed 5–24–61.

736,406. FINISHIELD. Fine Hardwoods Association. SN 124,039. Pub. 6–5–62. Filed 7–25–61.

736,407. DOCU-TRAY. Barry Wright Corporation. SN 125,856. Pub. 6–5–62. Filed 8–11–61.

736,408. GOLD STAR DESIGN. Barry Wright Corporation. SN 125,857. Pub. 6–5–62. Filed 8–11–61.

736,409. TIRE-RAMA. Flannery and Associates, Inc. SN 126,219. Pub. 6–5–62. Filed 8–18–61.

736,410. TENACREST. The Safegard Corporation, d.b.a. Tenacrest. SN 131,621. Pub. 6–5–62. Filed 11–8–61.

736,411. ROOM SPAN. Simmons Company. SN 131,626. Pub. 6–5–62. Filed 11–8–61.

736,412. OFFICE SPAN. Simmons Company. SN 131,627. Pub. 6–5–62. Filed 11–8–61.

736,413. BINDAFILE. Oxford Filing Supply Co., Inc. SN 131,740. Pub. 6–5–62. Filed 10–17–61.

736,414. LUXLINE. The Grabill Cabinet Company, Inc. SN 131,959. Pub. 6–5–62. Filed 11–14–61.

736,415. PRIVATE-I AND DESIGN. Century Industries, Inc. SN 132,122. Pub. 6–5–62. Filed 11–16–61.

736,416. WINK-'N-WAKE. Rose-Derry Company. SN 132,190. Pub. 6–5–62. Filed 11–16–61.

736,417. TORSION AUTO-SHIFT. Hamilton Manufacturing Company. SN 132,239. Pub. 6–5–62. Filed 11–17–61.

736,418. PLANO CLASS AND DESIGN. Agepa Aktiengesellschaft fuer Erfindungs- und Patentverwertung. SN 132,430. Pub. 6–5–62. Filed 11–21–61.

736,419. SPICE. Breneman-Hartshorn Inc. SN 133,051. Pub. 6–5–62. Filed 11–30–61.

Class 33 — Glassware

736,420. SKOL. Bonniers, Inc. SN 122,508. Pub. 6–5–62. Filed 6–21–61.

736,421. PINK HOPE. Sperling and Schwartz, Inc. SN 126,267. Pub. 6–5–62. Filed 8–18–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

736,422. COPPER-KING AND DESIGN. Everhot All-Copper, Incorporated. SN 97,390. Pub. 6–5–62. Filed 5–18–60.

736,423. AGITROL. Air Devices, Inc. SN 117,427. Pub. 6–5–62. Filed 4–10–61.

736,424. ROTO-JET. Air Devices, Inc. SN 117,428. Pub. 6–5–62. Filed 4–10–61.

736,425. HOTLINE. Radiant-Ray Radiation, Inc. SN 124,942. Pub. 6–5–62. Filed 7–28–61.

736,426. ECON-O-KLEEN. Goodling Electric Company. SN 127,474. Pub. 6–5–62. Filed 9–8–61.

736,427. PYROTUBE. Metals Research Limited. SN 127,487. Pub. 6–5–62. Filed 9–8–61.

736,428. FSP AND DIAMOND AND CIRCLE DESIGN. Whirlpool Corporation. SN 128,626. Pub. 6–5–62. Filed 9–25–61.

736,429. THUNDERBIRD. Electronic's Incorporated. SN 128,727. Pub. 6–5–62. Filed 9–27–61.

736,430. CITATION. Electronic's Incorporated. SN 128,728. Pub. 6–5–62. Filed 9–27–61.

736,431. PRECISION. Precision Parts Corporation. SN 128,849. Pub. 6–5–62. Filed 9–28–61.

736,432. RAYTHERM. Raypak Company, Inc. SN 129,042. Pub. 6–5–62. Filed 10–2–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

736,433. QUICKEE. Fre-Mar Industries. SN 113,708. Pub. 4–24–62. Filed 2–15–61.

Class 36 — Musical Instruments and Supplies

736,434. MARI SUPER-TONE. E. & O. Mari, Inc. SN 121,109. Pub. 6–5–62. Filed 5–31–61.

736,435. CONFERETTE. Bölkow-Apparateban G.m.b.H. SN 128,953. Pub. 6–5–62. Filed 10–2–61.

Class 37 — Paper and Stationery

736,436. PEN-PAL. Pen-Pal Inc. SN 105,201. Pub. 5–2–61. Filed 9–26–60.

736,437. EXECUMATIC. P. Fredric Julian, d.b.a. Execumatic Systems. SN 118,084. Pub. 6–5–62. Filed 4–18–61.

736,438. GB. Gaylord Bros., Inc. SN 118,436. Pub. 6–5–62. Filed 4–24–61.

Class 38 — Prints and Publications

736,439. COLOR-KEYED. Regan Productions, Inc., by change of name from Regan Film Productions, Inc. SN 98,934. Pub. 6–5–62. Filed 6–13–60.

736,440. PANOGRAPH. John S. Herold, Inc. SN 105,742. Pub. 6–5–62. Filed 10–4–60.

736,441. ELECTRICITY IN BUILDING. Electrical Information Publications, Inc. SN 112,956. Pub. 6–5–62. Filed 2–2–61.

736,442. "PEEL 'N STIK." King Tape & Label, Inc. SN 118,344. Pub. 6–5–62. Filed 4–21–61.

736,443. SUPERMAN ETC. AND DESIGN. Superman, Inc. SN 119,809. Pub. 6–5–62. Filed 5–11–61.

736,444. ASE AND DESIGN. American Science and Engineering, Inc. SN 120,168. Pub. 6–5–62. Filed 5–17–61.

736,445. DOWGARD SIGNALS. The Dow Chemical Company. SN 121,367. Pub. 6–5–62. Filed 6–5–61.

736,446. THE COTTON TRADE JOURNAL & AGRICULTURAL REPORTER. The Cotton Trade Journal, Inc. SN 127,459. Pub. 6–5–62. Filed 9–8–61.

736,447. WHO'S WHO IN THE EGG AND POULTRY INDUSTRIES. Watt Publishing Company, assignee of Urner-Barry Co. SN 128,491. Pub. 6–5–62. Filed 9–22–61.

736,448. KONA. Dell Publishing Co., Inc. SN 132,034. Pub. 6–5–62. Filed 11–15–61.

736,449. BOATING YEAR ROUND. Outboard Magazines, Inc. SN 132,183. Pub. 6–5–62. Filed 11–16–61.

736,450. KULCHUR. Kulchur Press Inc. SN 132,470. Pub. 6–5–62. Filed 11–21–61.

Class 39 — Clothing

736,451. THE REGISTERED SHIRT ETC. AND DESIGN. The Registered Shirt Laundry Association, Inc., by change of name from The Registered Shirt Corp. SN 98,024. Pub. 6–5–62. Filed 5–27–60.

736,452. I-Z MONOGRAM. Izod, Ltd. SN 106,262. Pub. 6–5–62. Filed 10–12–60.

736,453. MISTER E AND DESIGN. Excelsior Underwear, Inc. SN 112,837. Pub. 6–5–62. Filed 1–31–61.

736,454. FLIGHT EASE. Vincent J. Donahue. SN 115,407. Pub. 6–5–62. Filed 3–2–61.

736,455. TRICOLANA. N.V. Tricolana. SN 120,432. Pub. 6–5–62. Filed 5–19–61.

736,456. IZOD'S LOAFER. Izod, Ltd. SN 123,649. Pub. 6–5–62. Filed 7–10–61.

736,457. BARRICADE. Barry-Walt, Inc. SN 124,621. Pub. 4–3–62. Filed 7–25–61.

736,458. DON MARSHALL. Don Marshall Inc. SN 124,920. Pub. 6–5–62. Filed 7–28–61.

736,459. ADVIZOR. Martin J. Ferguson. SN 125,209. Pub. 6–5–62. Filed 8–2–61.

736,460. DESIGNER SERIES BY BOB EVANS AND DESIGN. Jacobs Brothers, Inc. SN 125,226. Pub. 6–5–62. Filed 8–2–61.

736,461. BRAZOTTA. Fairmoor Coat & Suit Corp. SN 125,375. Pub. 6–5–62. Filed 8–4–61.

736,462. ARISTOGRAIN. Robert Hall Clothes, Inc., d.b.a. Robert Hall Clothes. SN 125,594. Pub. 6–5–62. Filed 8–8–61.

736,463. CONJOINED LETTERS A AND E. Aigner Shoe Co., Inc. SN 125,787. Pub. 6–5–62. Filed 8–11–61.

736,464. ELF MODE. Thomas Textile Co., Inc. SN 126,621. Pub. 6–5–62. Filed 8–24–61.

736,465. JERSEYFIELD. Jerseyfield Limited. SN 126,658. Pub. 6–5–62. Filed 8–25–61.

736,466. PREMIUM WALK. Melville Shoe Corporation. SN 127,026. Pub. 6–5–62. Filed 8–31–61.

736,467. BIRDIE. Richard A. Leslie Co. SN 127,408. Pub. 6–5–62. Filed 9–7–61.

736,468. LEE LEENS AND DESIGN. The H. D. Lee Company, Incorporated. SN 129,949. Pub. 6–5–62. Filed 10–16–61.

736,469. LOCKOUT. Rainfair, Inc. SN 130,107. Pub. 6–5–62. Filed 10–17–61.

736,470. FLEXI-TOUCH. Charleston Rubber Company. SN 130,174. Pub. 6–5–62. Filed 10–18–61.

736,471. TOOKE. Tooke Bros. Limited. SN 130,255. Pub. 6–5–62. Filed 10–18–61.

736,472. AIRGORA-SPUN. Rose Brothers, Inc. SN 130,302. Pub. 6–5–62. Filed 10–19–61.

736,473. LOUART. Lassar & Gross Co., Inc. SN 130,468. Pub. 6–5–62. Filed 10–23–61.

736,474. DORAND. The May Department Stores Company, d.b.a. Famous-Barr Co. SN 130,476. Pub. 6–5–62. Filed 10–23–61.

736,475. WARD HILL. Knipe Bros.-Ward Hill Shoes, Inc. SN 130,916. Pub. 6–5–62. Filed 10–30–61.

736,476. CREST AND DESIGN. White Rock Uniform Co. Inc. SN 133,604. Pub. 6–5–62. Filed 12–7–61.

736,477. O'SHAUGHNESSY AND DESIGN. Malcolm Kenneth Company. SN 133,731. Pub. 6–5–62. Filed 11–21–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

736,478. LOPA. Alscap, Inc. SN 56,907. Pub. 6–5–62. Filed 8–11–58.

736,479. A MAN YOU CAN LEAN ON THAT'S KLOPMAN. Klopman Mills, Inc. SN 121,205. Pub. 6–5–62. Filed 6–1–61.

736,480. MERRY TERRYS. Barth & Dreyfuss. SN 121,797. Pub. 6–5–62. Filed 6–12–61.

736,481. ARLURE. Arkwright Merchandising Corporation. SN 129,568. Pub. 6–5–62. Filed 10–10–61.

736,482. THERMA-LINE. United Merchants and Manufacturers, Inc. SN 133,188. Pub. 6–5–62. Filed 12–1–61.

736,483. DANSTAR. Dan River Mills, Incorporated. SN 133,544. Pub. 6–5–62. Filed 12–7–61.

736,484. BONANZA. Deering Milliken, Inc. SN 133,768. Pub. 6–5–62. Filed 12–11–61.

736,485. WHITE SAIL. Erwin Mills, Inc. SN 134,107. Pub. 6–5–62. Filed 12–15–61.

736,486. THUNDERHEAD. Graniteville Company, assignee of McCampbell & Company, Inc. SN 134,251. Pub. 6–5–62. Filed 12–18–61.

Class 44 — Dental, Medical, and Surgical Appliances

736,487. CARESS. Cellulose Products Corporation. SN 119,183. Pub. 6–5–62. Filed 5–3–61.

736,488. BU-TEE-TEETH. Robert J. Crawford. SN 120,787. Pub. 6–5–62. Filed 5–25–61.

736,489. ACMISTAT. American Cystoscope Makers, Inc. SN 127,990. Pub. 6–5–62. Filed 9–18–61.

736,490. TRAVAD 1500. Travenol Laboratories, Inc. SN 133,336. Pub. 6–5–62. Filed 12–4–61.

Class 45 — Soft Drinks and Carbonated Waters

736,491. AMERICL. Kurt Reisa. SN 3,552. Pub. 6–5–62. Filed 12–8–60.

736,492. BUSH AND DESIGN. W. J. Bush & Company Limited. SN 92,439. Pub. 6–5–62. Filed 3–9–60.

736,493. BLAST-OFF. Walter Boychick, d.b.a. Blast-Off Beverage Co. SN 126,562. Pub. 6–5–62. Filed 8–24–61.

736,494. TOP TREAT AND DESIGN. National Tea Co. SN 128,289. Pub. 6–5–62. Filed 9–20–61.

736,495. PARASOL. Brassiere Piedboeuf. SN 132,807. Pub. 6–5–62. Filed 11–27–61.

Class 46 — Foods and Ingredients of Foods

736,496. CHINA LILY. Lee's Food Products Limited. SN 45,886. Pub. 4–24–62. Filed 2–14–58.

736,497. COLLEGE HILL. College Hill Poultry, Inc. SN 54,383. Pub. 3–17–59. Filed 6–27–58.

736,498. TRIANGLE DESIGN. National Biscuit Company. SN 74,599. Pub. 6–5–62. Filed 5–27–59.

736,499. BUSH IN LOZENGE DESIGN. W. J. Bush & Company Limited. SN 92,436. Pub. 6–5–62. Filed 3–9–60.

736,500. PEEBLES' TURKEY BLUE AND DESIGN. Western Condensing Co. SN 111,941. Pub. 6–5–62. Filed 1–16–61.

736,501. FIESTA. The Welch Grape Juice Company, Inc. SN 115,402. Pub. 6–5–62. Filed 3–10–61.

736,502. HY-ZEST. Wm. M. Bell Co. SN 115,576. Pub. 6–5–62. Filed 3–14–61.

736,503. KING BRAND AND DESIGN. North Coast Importing Co. SN 115,940. Pub. 6–5–62. Filed 3–17–61.

736,504. LOLA. Peter Maggiore, d.b.a. Lola Macaroni Co. SN 117,287. Pub. 6–5–62. Filed 4–6–61.

736,505. TENDER MIX. Hart's Bakery. SN 118,243. Pub. 11–7–61. Filed 4–20–61.

736,506. LE 60/40. M & R Dietetic Laboratories, Inc. SN 119,396. Pub. 6–5–62. Filed 5–5–61.

736,507. CORN CABIN AND DESIGN. Corn Cabin Company. SN 120,292. Pub. 6–5–62. Filed 5–18–61.

736,508. HONEYBUNCH. Griffin Pie Co. of South Charleston, d.b.a. Griffin Pie Co. SN 120,633. Pub. 6–5–62. Filed 5–23–61.

736,509. WAGON WHEEL. Schulze and Burch Biscuit Co. SN 121,129. Pub. 11–14–61. Filed 5–31–61.

736,510. ST. MICHAEL. Marks and Spencer Limited. SN 121,493. Pub. 6–5–62. Filed 6–6–61.

736,511. HAUSER. Modern Products, Inc. SN 122,345. Pub. 6–5–62. Filed 6–19–61.

736,512. EVANGELINE AND DESIGN. Evangeline Pepper & Food Products, Inc. SN 128,026. Pub. 6–5–62. Filed 9–18–61.

736,513. DUPSTIK. Mallett Products Ltd. SN 129,021. Pub. 6–5–62. Filed 10–2–61.

736,514. KING KRUNCH. Ort Bros. Bakery, Inc. SN 130,487. Pub. 6–5–62. Filed 10–23–61.

736,515. FLAVORLAND. Sunset Packing Company of Oregon, d.b.a. Sunset Packing Company and Sunset Packing Co. SN 131,422. Pub. 6–5–62. Filed 11–6–61.

736,516. WONDERLAND. Gammie-Reed Fruit Co. SN 131,751. Pub. 6–5–62. Filed 11–10–61.

736,517. JACK FROST. Gammie-Reed Fruit Co. SN 131,752. Pub. 6–5–62. Filed 11–10–61.

736,518. ROGERS ROYAL. B. C. Rogers & Sons, Inc. SN 133,166. Pub. 6–5–62. Filed 12–1–61.

736,519. THRIVETTES. Thrivo Co., Inc., d.b.a. Thrivo Company, Inc. SN 133,184. Pub. 6–5–62. Filed 12–1–61.

736,520. COPPER HOOD. Louis Milani Foods, Inc. SN 133,291. Pub. 6–5–62. Filed 12–4–61.

736,521. HAIFA. Homestead Turkey Co. Inc., d.b.a. Homestead Turkey Company, Inc. and United Kosher Turkey Co. SN 135,443. Pub. 6–5–62. Filed 1–9–62.

736,522. SOLURESIN. Fritzsche Brothers, Inc. SN 136,549. Pub. 6–5–62. Filed 1–25–62.

Class 47 — Wines

736,523. PICARDY. Les Caves Sequanaises (Société à Responsabilité Limitée). SN 132,338. Pub. 6–5–62. Filed 11–20–61.

Class 49 — Distilled Alcoholic Liquors

736,524. CLANSMAN'S CHOICE. H. Ewart Thomson & Sons (Glasgow) Limited. SN 87,592. Pub. 6–21–60. Filed 12–18–59.

736,525. NO-CHARG-PAK. Schenley Industries, Inc. SN 123,840. Pub. 6–5–62. Filed 7–12–61.

Class 50 — Merchandise Not Otherwise Classified

736,526. FORMCO. Forest Mfg. Co. SN 126,447. Pub. 6–5–62. Filed 8–22–61.

Class 51 — Cosmetics and Toilet Preparations

736,527. JUVENA. Diva-Laboratorium Aktiengesellschaft, assignor to Produits De Beaute Juvena G.m.b.H. SN 673,267. Pub. 1–7–58. Filed 9–16–54.

736,528. BEAUTIFUL CROWN. A. M. Hollingsworth, d.b.a. Hollingsworth Products Co. SN 26,231. Pub. 9–22–59. Filed 3–15–57.

736,529. PERMA-FIRM. The Marmic Company. SN 33,627. Pub. 9–9–58. Filed 7–12–57.

736,530. LARAY. Laray Cosmetics, Inc. SN 116,649. Pub. 6–5–62. Filed 3–28–61.

736,531. AZIZA AND DESIGN. The Aziza Corporation of America. SN 118,641. Pub. 6–5–62. Filed 4–26–61.

736,532. EYE VELVET. Revlon, Inc. SN 126,186. Pub. 6–5–62. Filed 8–17–61.

736,533. ELIGERE. Cynthia Andrews, Inc. SN 126,845. Pub. 6–5–62. Filed 8–29–61.

736,534. LEOMINT. Leo-Werke, G.m.b.H. SN 129,556. Pub. 6–5–62. Filed 10–9–61.

736,535. FACE UP. Germaine Monteil Cosmetiques Corp. SN 130,372. Pub. 6–5–62. Filed 10–20–61.

736,536. WARM UP. The Gillette Company. SN 130,623. Pub. 6–5–62. Filed 10–25–61.

736,537. PERPETUA. House of Westmore, Inc. SN 130,626. Pub. 6–5–62. Filed 10–25–61.

Class 52 — Detergents and Soaps

736,538. WIPE AWAY. James Austin Company. SN 81,867. Pub. 1–12–60. Filed 9–23–59.

736,539. AND-CLOR. Anderson Chemical Company. SN 110,194. Pub. 6–5–62. Filed 12–14–60.

736,540. CLOR-MINUS. Anderson Chemical Company. SN 110,195. Pub. 6–5–62. Filed 12–14–60.

736,541. NEW SOUTH'S PINK MAGIC CONCENTRATE AND DESIGN. New South Manufacturing Company. SN 113,757. Pub. 6–5–62. Filed 2–15–61.

736,542. CR–1. Yosemite Chemical Co., d.b.a. Yosemite Chemical Company. SN 115,752. Pub. 6–5–62. Filed 3–15–61.

736,543. MONOLITE AND DESIGN. Hayes-Sammons Chemical Co. SN 117,006. Pub. 6–5–62. Filed 4–3–61.

736,544. CROWN DESIGN WITHIN AN OVAL. Armour and Company. SN 117,435. Pub. 6–5–62. Filed 4–10–61.

736,545. EMERTERGE. Emery Industries, Inc. SN 118,670. Pub. 6–5–62. Filed 4–26–61.

736,546. HENRI ROCHEAU. The Andrew Jergens Company. SN 126,026. Pub. 6–5–62. Filed 8–15–61.

736,547. ELIGERE. Cynthia Andrews, Inc. SN 126,844. Pub. 6–5–62. Filed 8–29–61.

736,548. ULTRA CHEMICAL WORKS AND DESIGN. Ultra Chemical Works, Inc. SN 126,967. Pub. 6–5–62. Filed 8–30–61.

736,549. BIO-SHAMPOO. Helena Rubinstein, Inc. SN 127,043. Pub. 6–5–62. Filed 8–31–61.

Service Marks

Class 100 — Miscellaneous

736,550. KINGDOM POLLED HEREFORD ASSOCIATION AND DESIGN. Kingdom Polled Hereford Association. SN 55,856. Pub. 6–5–62. Filed 7–23–58.

736,551. NATIONAL COMMITTEE ON MOTHER'S DAY AND DESIGN. National Committee on the Observance of Mother's Day, Inc. SN 122,631. Pub. 6–5–62. Filed 6–22–61.

736,552. REPRESENTATION OF TWO FACED HUMAN HEAD (JANUS). John Huron Bradley, d.b.a. National Scientific Information Service. SN 129,458. Pub. 6–5–62. Filed 10–9–61.

Class 101 — Advertising and Business

736,553. GOOD NEIGHBOR PHARMACY AND DESIGN. Drug Store Council, Inc., assignee of Coordinated Merchandising Corp. SN 105,246. Pub. 6–5–62. Filed 9–26–60.

736,554. KELLY GIRL. Kelly Girl Service, Inc. SN 108,051. Pub. 6–5–62. Filed 11–8–60.

736,555. PIP. United Trading Stamp Corporation. SN 122,975. Pub. 6–5–62. Filed 6–27–61.

736,556. SAMA. Scientific Apparatus Makers Association. SN 132,588. Pub. 6–5–62. Filed 11–22–61.

Class 102 — Insurance and Financial

736,557. SAM THE WINDOW MAN AND DESIGN. Aluminum Screen and Window Company, Inc. SN 78,238. Pub. 6–5–62. Filed 7–23–59.

736,558. SAM THE WINDOW MAN. Aluminum Screen and Window Company, Inc. SN 78,239. Pub. 6–5–62. Filed 7–23–59.

736,559. BAY VIEW AND DESIGN. Bay View Federal Savings and Loan Association. SN 128,937. Pub. 6–5–62. Filed 9–25–61.

Class 103 — Construction and Repair

736,560. ULTR-O-RAY. National Cleaning Equipment Corporation. SN 107,500. Pub. 6–5–62. Filed 10–31–60.

736,561. BI-BRAZE. Bi-Braze Corporation, assignee of Eastern Heat Treating & Brazing Corp. SN 113,193. Pub. 6–5–62. Filed 2–7–61.

736,562. KM. Kerr-McGee Oil Industries, Inc. SN 123,548. Pub. 6–5–62. Filed 7–7–61.

Class 105 — Transportation and Storage

736,563. STYLIZED T AND DESIGN. The Flying Tiger Line Inc. SN 107,849. Pub. 6–5–62. Filed 11–4–60.

736,564. RUNIC SYMBOL DESIGN. The Experiment in International Living, Inc. SN 127,302. Pub. 6–5–62. Filed 9–5–61.

Class 107 — Education and Entertainment

736,565. SUNDAY AT HOME. Bernard J. Greer, d.b.a. Ben-Mar-Enterprises. SN 131,960. Pub. 6–5–62. Filed 11–14–61.

736,566. TODAY IN AGRICULTURE. McClatchy Newspapers. SN 132,356. Pub. 6–5–62. Filed 11–20–61.

736,567. GREGG NOTEHAND AND DESIGN. McGraw-Hill Book Company, Inc. SN 134,656. Pub. 6–5–62. Filed 12–26–61.

Collective Membership Mark

Class 200

736,568. NALS IN SHIELD DESIGN. National Association of Legal Secretaries (International). SN 124,830. Pub. 6–5–62. Filed 7–27–61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

736,569. Raburn Products, Inc., Chicago, Ill. SN 108,669. Filed P.R. 11–17–60; Am. S.R. 6–4–62.

RABURN RACK

For Plastic and Plastisol-Coated Over Metal Racks Used in Connection With the Cleansing, Storing and Transportation of China and Glassware.
First use Dec. 15, 1959.

736,570. The Pillsbury Company, Minneapolis, Minn. SN 126,418. Filed P.R. 8–15–61; Am. S.R. 6–20–62.

"CARRY CAKE"

For Disposable Aluminum Cake Pans With Plastic Covers.
First use June 9, 1961.

736,571. Abe Golub, Far Rockaway, N.Y. SN 132,830. Filed P.R. 11–27–61; Am. S.R. 6–8–62.

COUPON-ON-THE-BAG

For Paper Bags.
First use Jan. 19, 1961.

Class 4 — Abrasives and Polishing Materials

736,572. The Gerson Stewart Corporation, Cleveland, Ohio. SN 95,496. Filed P.R. 4–21–60; Am. S.R. 5–21–62.

SYSTEMATIZED SANITATION

For Liquid Polishing Material for Enameled Metal and and Varnished and Painted Woodwork and Wax in Paste and Liquid Form for Floors.
First use May 1956.

Class 6 — Chemicals and Chemical Compositions

736,573. Purex Corporation, Ltd., South Gate, Calif. SN 70,525. Filed P.R. 3–30–59; Am. S.R. 10–20–61.



The mark consists of the configuration of the bottle for the goods.
For Bleach.
First use Oct. 24, 1957.

736,574. The Gerson Stewart Corporation, Cleveland, Ohio. SN 95,494. Filed P.R. 4–21–60; Am. S.R. 5–21–62.

SYSTEMATIZED SANITATION

For Insecticides, Disinfectants, Germicides and an Additive Having Disinfectant Properties for Use in Cutting Oils and Cutting Compounds.
First use May 1956.

736,575. Gillette Inhibitor Co., Chicago, Ill. SN 96,210. Filed P.R. 5–2–60; Am. S.R. 2–19–62.

CRABGRASS-RID

For Composition Having Combined Utility as a Crabgrass Killer and an Agricultural Fungicide.
First use November 1959.

736,576. Wood Treating Chemicals Co., St. Louis, Mo. SN 110,389. Filed P.R. 12–16–60; Am. S.R. 6–20–62.

POLE-TREAT

For Chemical Grease-Type Paste Preservative for Wood.
First use Nov. 9, 1960.

Class 16—Protective and Decorative Coatings

736,577. The Gerson Stewart Corporation, Cleveland, Ohio. SN 95,495. Filed P.R. 4–21–60; Am. S.R. 5–21–62.

SYSTEMATIZED SANITATION

For Penetrating Wood Floor Surface Sealer.
First use May 1956.

Class 19—Vehicles

736,578. John J. Peters, Springfield, Ill., assignee of Royal Engineering Co., Inc., Pleasant Plains, Ill. SN 102,421. Filed P.R. 8–10–60; Am. S.R. 5–16–61.

POWER MIRROR

For Rear View Mirrors for Vehicles.
First use Jan. 9, 1960.

736,579. Made-Rite Autobody Products, Inc., Cleveland, Ohio. SN 109,604. Filed P.R. 12–5–60; Am. S.R. 6–19–62.

EZ-ON

For Automobile Rocker Panels.
First use Mar. 25, 1957.

736,580. Made-Rite Autobody Products, Inc., Cleveland, Ohio. SN 109,605. Filed P.R. 12–5–60; Am. S.R. 6–19–62.

MADE-RITE

For Automobile Panels.
First use Mar. 25, 1957.

736,581. Made-Rite Autobody Products, Inc., Cleveland, Ohio. SN 109,606. Filed P.R. 12–5–60; Am. S.R. 6–19–62.

MADE-RITE E-Z ON

For Automobile Rocker Panels.
First use Mar. 25, 1957.

Class 21—Electrical Apparatus, Machines, and Supplies

736,582. Lithonia Lighting Products Company, Conyers, Ga. SN 97,496. Filed P.R. 5–19–60; Am. S.R. 6–20–62.

"PLASTI-LENS"

For Plastic Glare Shield for Fluorescent Lamps.
First use Feb. 1, 1960.

Class 26—Measuring and Scientific Appliances

736,583. Science Kit Lab Corp., Tonawanda, N.Y. SN 120,346. Filed P.R. 5–18–61; Am. S.R. 12–8–61.

SCIENCE KIT LAB

For Portable Laboratory Tables and Associated Equipment and Apparatus for Science Instruction.
First use March 1958.

736,584. The Perfect Parts Company, Baltimore, Md. SN 126,883. Filed 8–29–61.

PERFECT SCIENCE CENTER

For Merchandiser Containing Laboratory Equipment and Supplies.
First use Feb. 1, 1960.

Class 27—Horological Instruments

736,585. Sovereign Watch Company, Inc., New York, N.Y. SN 122,130. Filed P.R. 6–15–61; Am. S.R. 5–11–62.

IN TIME WITH STYLE

For Watches.
First use May 9, 1961.

736,586. Ernest Borel & Cie S.A., Neuchatel, Switzerland. SN 130,675. Filed P.R. 10–26–61; Am. S.R. 5–28–62.

BOREL

Owner of Swiss Reg. No. 181,008, dated June 3, 1960; and U.S. Reg. No. 631,284.
For Clocks, Watches, and All Parts Thereof.

Class 37—Paper and Stationery

736,587. Debs Hospital Supplies, Inc., Chicago, Ill. SN 56,932. Filed P.R. 8–11–58; Am. S.R. 5–14–62.

pks BY DEBS HOSPITAL SUPPLIES INC.

For Patient Name Cards and Color-Coded Instruction Cards for Use in Hospitals.
First use July 24, 1958.

736,588. Joseph Dixon Crucible Company, Jersey City, N.J. SN 88,305. Filed P.R. 12–31–59; Am. S.R. 5–11–62.



For Pencils.
First use Nov. 2, 1959.

736,589 Curtis 1000, Incorporated, West Hartford, Conn. SN 97,292. Filed P.R. 5–17–60; Am. S.R. 6–25–62.

MARINE FIBRE

For Mailing Envelopes of Tinted Paper Adopted Particularly for Banking Use.
First use Mar. 31, 1960.

736,590. The Joseph Dixon Crucible Company, Jersey City, N.J. SN 137,118. Filed P.R. 2–2–62; Am. S.R. 5–29–62.

TAPERASER

For Blockout Typewriting Correction Tape
First use May 16, 1961.

Class 38—Prints and Publications

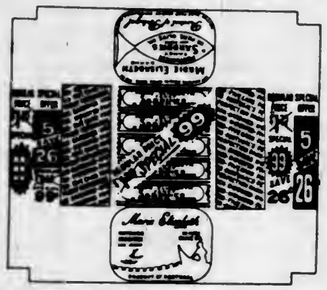
736,591. Quigley Publishing Company, Inc., New York, N.Y. SN 127,359. Filed P.R. 9–6–61; Am. S.R. 6–6–62.

TELEVISION TODAY

For Regularly Published Section in a Motion Picture Magazine.
First use July 18, 1955.

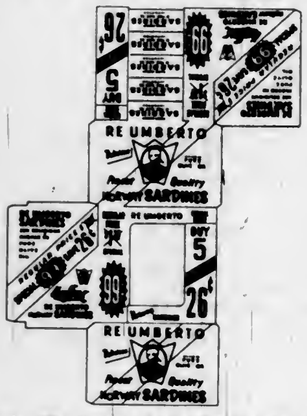
Class 46—Foods and Ingredients of Foods

736,592. Strohmeyer & Arpe Company, d.b.a. United Pure Food Co., New York, N.Y. SN 108,227. Filed 1–10–62.



For Canned Sardines.
First use Jan. 20, 1960.

736,593. Strohmeyer & Arpe Company, d.b.a. United Pure Food Co., New York, N.Y. SN 122,136. Filed 1–12–62.



The words "Re Umberto" are the Italian equivalent of "King Umberto" and that name and the accompanying portrait are of the deceased Italian King Umberto.
For Canned Sardines.
First use Nov. 2, 1960.

736,594. Turlock Fruit Co., Turlock, Calif. SN 133,612. Filed P.R. 12–7–61; Am. S.R. 4–27–62.



For Fresh Melons.
First use in 1924.

Class 51—Cosmetics and Toilet Preparations

736,595. Hazel Bishop Inc., Newark, N.J., assignee of Lanolin Plus, Inc., Newark, N.J. SN 122,093. Filed P.R. 6–15–61; Am. S.R. 6–20–62.

ORIENTAL PEARL

For Nail Enamel and Strengthener
First use May 31, 1961.

Class 52—Detergents and Soaps

736,596. The Gerson Stewart Corporation, Cleveland, Ohio. SN 95,493. Filed P.R. 4–21–60; Am. S.R. 4–30–62.

SYSTEMATIZED SANITATION

For Liquid Soap and Powdered Hand Soap; Cleaning Powder for Toilet Bowls; Paste Cleaning Composition for Tile, Porcelain and Articles Made Thereof; Liquid Cleaner for Floors, Walls, Furniture and the Like; Soap for Cleaning Tile, Terrazzo, Rubber, Asphalt, Vinyl, Linoleum, Cork and Wood Surfaces.
First use May 1956.

Service Marks

Class 102—Insurance and Financial

736,597. Monumental Life Insurance Company, Baltimore, Md. SN 115,072. Filed P.R. 3–7–61; Am. S.R. 6–12–62.

PROTECTION IN A NEW LIGHT!

For Underwriting Life, Accident, Health and Sickness Insurance.
First use Sept. 12, 1960.

Class 103—Construction and Repair

736,598. Somerville Construction Company, Ada, Mich. SN 119,724. Filed P.R. 5–10–61; Am. S.R. 4–16–62.

TOTAL PROJECT MANAGEMENT

For Construction Financing and Engineering Services, Particularly Feasibility Studies, Engineering Reports, Financing Proposals, Quotations, Contracting, and the Like.
First use Apr. 3, 1961.

TRADEMARK REGISTRATIONS RENEWED

20,942. WHITE ROSE. Cl. 46. 4–5–1892.
21,716. COAT OF ARMS. Cl. 47. 9–6–1892.
154,805. DIXIE MAID. Cl. 46. 5–9–22.
154,806. KOTO. Cl. 15. 5–9–22.
156,330. LOVELY LADY. Cl. 39. 6–20–22.
157,693. ARISTOCRAT. Cl. 52. 8–15–22.
157,714. BREADLAC. Cl. 46. 8–15–22.
159,677. CARNEY. Cl. 12. 10–3–22.
160,124. SILVA PUTZ. Cl. 4. 10–17–22.
160,552. BOLTED KING WHITE AND DESIGN. Cl. 1. 10–24–22.
160,563. ASSET. Cl. 37. 10–24–22.
160,916. MARK. Cl. 35. 10–31–22.
161,209. NEOTUSSIN. Cl. 18. 11–7–22.
161,824. MINUTE TAPIOCA AND DESIGN. Cl. 46. 11–21–22.
162,060. TUFHORSE AND DESIGN. Cl. 39 and 22. 12–5–22.
162,309. WEBSTER'S NEW INTERNATIONAL AND DESIGN. Cl. 38. 12–12–22.
162,310. WEBSTER'S AND DESIGN. Cl. 38. 12–12–22.
392,752. DOUBLE SHARP AND DESIGN. Cl. 23. 1–13–42.
395,271. 3 IN 1 WORKBOOK. Cl. 38. 5–19–42.
395,814. ELECTRO PAINTLOK. Cl. 14. 6–16–42.
395,983. FINEX. Cl. 6. 6–23–42.
396,266. AMERICAN AND CIRCULAR DESIGN. Cl. 15. 6–30–42.
396,597. LIBERTY BELL. Cl. 51. 7–28–42.
396,662. ELVETTE. Cl. 39. 7–28–42.
396,820. KBS AND DESIGN. Cl. 36. 8–4–42.
396,850. GOLDEN GLOW. Cl. 46. 8–4–42.
396,947. SPANKING. Cl. 51. 8–11–42.
396,948. SPANKING DE SCHIAPARELLI. Cl. 51. 8–11–42.
397,224. AIRCO "45." Cl. 34. 8–25–42.
397,252. SILENCE. Cl. 51. 8–25–42.
397,317. SALUT DE SCHIAPARELLI. Cl. 29. 9–1–42.
397,318. SCHIAPARELLI. Cl. 29. 9–1–42.
397,319. SCHOCKING DE SCHIAPARELLI. Cl. 29. 9–1–42.
397,359. TUFFY. Cl. 33. 9–1–42.
397,366. SALUT. Cl. 29. 9–1–42.
397,367. FIRESTONE. Cl. 29. 9–1–42.
397,463. SLEEPING. Cl. 51. 9–8–42.
397,504. ELVETTE. Cl. 42. 9–8–42.
397,569. RED RIBBON. Cl. 51. 9–8–42.
397,585. SALUT. Cl. 51. 9–8–42.
397,698. MY FRIEND. Cl. 40. 9–15–42.
397,759. SHOCKING. Cl. 29. 9–22–42.
397,888. FROU FROU. Cl. 51. 9–29–42.
398,057. BUTASAN. Cl. 6. 10–6–42.
398,058. ETHASAN. Cl. 6. 10–6–42.
398,059. METHASAN. Cl. 6. 10–6–42.
398,060. PEPTIZENE. Cl. 6. 10–6–42.
398,134. KLEER-FLO. Cl. 23. 10–13–42.
398,166. SUNTAN. Cl. 1. 10–13–42.
398,195. ZENITH. Cl. 23. 10–13–42.
398,252. MYCO AND DESIGN. Cl. 4. 10–20–42.
398,260. CASCOLAC. Cl. 6. 10–20–42.
398,321. LIQUI-TAN. Cl. 51. 10–20–42.
398,517. B.A.B. Cl. 21. 11–3–42.
398,694. FLORALIFE. Cl. 6. 11–17–42.
398,730. PEPSODENT. Cl. 18. 11–17–42.
398,731. PEPSODENT. Cl. 51. 11–17–42.
398,782. COOK'S IMPERIAL. Cl. 47. 11–24–42.
398,830. MUSTARINE. Cl. 18. 11–24–42.
399,098. NUWITE. Cl. 16. 12–15–42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

131,972. VIGOR. Cl. 46. 6–8–20.
208,869. "LARRO" AND DESIGN. Cl. 46. 2–9–26.
208,870. LARRO. Cl. 46. 2–9–26.
209,254. "LARRO" AND DESIGN. Cl. 46. 2–16–26.
718,284. PAPALINI. Cl. 39. 7–11–61.
726,019. FORWARD THRUST. Cl. 39. 1–2–62.

Section 8

293,245. LETTUCE-LEAF. Cl. 46. 4–19–32.
436,241. COMPARE RESULTS AND DESIGN. Cl. 10. 1–27–48.
612,348. TO OIL IT WELL ALWAYS USE AN OIL WELL AND DESIGN. Cl. 2. 9–13–55.

The following registrations issued July 3, 1956

629,768. COLLO ALL FOAM. Cl. 1.
629,776. AYRPRUF. Cl. 2.
629,777. HOTOP POLY-X HP AND DESIGN. Cl. 2.
629,781. HOSE-MIX'T. Cl. 6.
629,784. GRIZZLY AND DESIGN. Cl. 6.
629,787. IMPAC. Cl. 6.
629,790. ALTEST. Cl. 6.
629,791. TAPE-MARKED. Cl. 7.
629,794. SILVER-TONE. Cl. 8.
629,795. KINDLE KID. Cl. 9.
629,802. DURASEAL. Cl. 12.
629,808. PD17. Cl. 12.
629,810. FOLD-VENT. Cl. 12.
629,812. JOHN-EE SENIOR SEAT. Cl. 13.
629,813. JOHN-EE CONVERTIBLE SEAT. Cl. 13.
629,816. MAGIC-LINK. Cl. 13.
629,818. SHINE BOY ETC. AND DESIGN. Cl. 13.
629,820. CAMCO. Cl. 13.
629,822. SECURITY AND DESIGN. Cl. 13.
629,823. DS BOLTS AND DESIGN. Cl. 13.
629,827. SPREDRITE. Cl. 14.
629,836. NEELIUM. Cl. 16.
629,843. REFLECTA-KOTE. Cl. 16.
629,844. CEME-PRUF. Cl. 16.
629,847. SEAL RITE AND DESIGN. Cl. 16.
629,852. ES-ROH. Cl. 18.
629,858. SMARTIE CART. Cl. 19.
629,859. STRATOCELL AND DESIGN. Cl. 19.
629,860. HUMMER. Cl. 19.
629,863. KUSHINGARD. Cl. 19.
629,865. CE. Cl. 19.
629,868. WASH'N WIPER AND DESIGN. Cl. 19.
629,869. COVER-FAST. Cl. 20.
629,873. HAMCAB. Cl. 21.
629,874. REAL PAK. Cl. 21.
629,876. ROYAL GUARD. Cl. 21.
629,886. FUNSTIX. Cl. 22.
629,887. RANDI. Cl. 22.
629,888. AQUAMASTER. Cl. 22.
629,890. ON STAGE. Cl. 22.
629,891. OCTOPUS. Cl. 22.
629,892. FANCIFUL CHARACTER. Cl. 22.
629,893. KARDKRIB. Cl. 22.
629,895. DOG-BONE. Cl. 23.
629,901. SWIF-T-RAZOR AND DESIGN. Cl. 23.
629,902. ELCONA. Cl. 23.
629,909. SERVOTYPER. Cl. 23.
629,918. TRIM-PLY. Cl. 23.
629,920. CLEAR SPACE. Cl. 23.
629,927. AVIATRON. Cl. 26.
629,929. E-Z-WAY TEMPLATE. Cl. 26.
629,941. KILO-Q. Cl. 26.
629,943. FOLD-VU AND DESIGN. Cl. 26.
629,955. DUREXACT. Cl. 27.
629,956. KEY-WATCH ST. BLAISE. Cl. 27.
629,957. CALLING CARD. Cl. 28.
629,958. FEATHER TOUCH. Cl. 28.
629,976. PRESENT-TAINER. Cl. 32.
629,981. SIROCCO. Cl. 32.
629,982. DATELINE. Cl. 32.
629,986. CALI-LOUNGER. Cl. 32.

629,987. EDELGARD. Cl. 33.
629,996. DIRECT ACTION. Cl. 34.
629,997. REX. Cl. 34.
629,999. AIR-O-VENT. Cl. 34.
630,000. PORT-A-TEM AND DESIGN. Cl. 34.
630,002. COOK N VENT. Cl. 34.
630,003. E AND DESIGN. Cl. 34.
630,007. VOIT. Cl. 35.
630,008. PANAMA. Cl. 35.
630,010. JAZZ WEST COAST AND DESIGN. Cl. 36.
630,011. 407. Cl. 37.
630,016. LEGGETT'S. Cl. 37.
630,023. APPLIED HYDRAULICS. Cl. 38.
630,026. HIT PARADE AND DESIGN. Cl. 38.
630,029. SCENORAMA. Cl. 38.
630,032. DISTRIBUCION. Cl. 38.
630,033. WHAT THE PICTURE DID FOR ME. Cl. 38.
630,034. THE COMMUTER. Cl. 38.
630,037. ATORGENICS. Cl. 38.
630,038. TALES OF THE UNEXPECTED. Cl. 38.
630,041. FILMSTRIP FORUM AND DESIGN. Cl. 38.
630,042. PROJECTION SHOTS. Cl. 38.
630,045. AACC AND DESIGN. Cl. 38.
630,049. NEWAYGO NEWT AND DESIGN. Cl. 39.
630,052. LITTLE JEFFREY. Cl. 39.
630,053. TUBBY TUB. Cl. 39.
630,056. TUFF TOGS AND DESIGN. Cl. 39.
630,057. SPORT-LAD. Cl. 39.
630,058. POWER PANTS AND DESIGN. Cl. 39.
630,066. AGNUS. Cl. 39.
630,072. SYLVAIL. Cl. 39.
630,073. SPLEND-ORAY. Cl. 39.
630,076. LURANA. Cl. 39.
630,077. KAP-PO. Cl. 39.
630,078. "M'ASCOTS." Cl. 39.
630,091. TENNIS CLUB. Cl. 39.
630,096. HIGHFALUTIN. Cl. 39.
630,101. TALISMAN LACE. Cl. 39.
630,109. BRIARCLIFF. Cl. 39.
630,113. PAR-LIN. Cl. 42.
630,115. IRON-LESS. Cl. 42.
630,116. NINO-VEL. Cl. 42.
630,122. SCREEN MASTER PRINTS. Cl. 42.
630,123. ROBENVINE FABRICS AND DESIGN. Cl. 42.
630,124. RESIST-A-SLIP. Cl. 42.
630,127. FULLCORD. Cl. 42.
630,129. CHECKERTONE. Cl. 42.
630,130. CUPRALAIN. Cl. 43.
630,137. DESIGN OF A MAN. Cl. 46.
630,141. OLE MOSE AND DESIGN. Cl. 46.
630,144. VBC AND DESIGN. Cl. 46.
630,149. JAZZ STEEK "PRIMER." Cl. 46.
630,158. TEXANNE AND DESIGN. Cl. 46.
630,160. LA FIESTA. Cl. 47.
630,161. CARLITO. Cl. 47.
630,162. COORS EXPORT LAGER BEER AND DESIGN. Cl. 48.
630,168. MOIST-SORB. Cl. 50.
630,179. SECLUDE. Cl. 52.
630,187. LOWELL CALF. Cl. 1.
630,188. ROLLIT. Cl. 2.
630,193. LEMON SODA MAGNESIA AND DESIGN. Cl. 18.
630,200. KIDDIE KUMFORT. Cl. 32.
630,205. MRS. KIDD'S. Cl. 46.
630,206. D'ORAZIO. Cl. 46.
630,207. DOOLINS AND DESIGN. Cl. 46.
630,208. PURITY SEALED AND DESIGN. Cl. 46.

Section 18

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Graduallte Corp., Stamford, Conn. 736,306, pub. 6–5–62. Cl. 21.
Graniteville Co, Graniteville, S.C., from McCampbell & Co., Inc., New York, N.Y. 736,486, pub. 6–5–62. Cl. 42.
Grayhill Moldtronics, Inc., Clarendon Hills, Ill. 736,363, pub. 6–5–62. Cl. 23.
Greer, Bernard J., d.b.a. Ben-Mar Enterprises, Greenville, S.C. 736,565, pub. 6–5–62. Cl. 107.
Griffin Pie Co.: *See*—
Griffin Pie Co., of South Charleston.
Griffin Pie Co., of South Charleston, d.b.a. Griffin Pie Co., South Charleston, W. Va. 736,508, pub. 6–5–62. Cl. 46.
Grimith, R. F., Inc., Fulton, Mo. 630,168, canc. Cl. 50.
Gulf States Paper Corp., Tuscaloosa, Ala. 736,214, pub. 6–5–62. Cl. 2.
Haines-Fizette Laboratory, Inc., Clearwater, Fla. 736,225, pub. 6–5–62. Cl. 6.
Hall, Robert, Clothes: *See*—
Hall, Robert, Clothes, Inc.
Hall, Robert, Clothes, Inc., d.b.a. Robert Hall Clothes, New York, N.Y. 736,462 pub. 6–5–62. Cl. 39.
Halm Instrument Co., Inc., Glen Head, N.Y. 736,366, pub. 6–5–62. Cl. 23.
Hamilton Mfg. Co., Two Rivers, Wis. 736,417, pub. 6–5–62. Cl. 32.
Harley-Davidson Motor Co., Milwaukee, Wis. 629,860, canc. Cl. 19.
Harmon, B. G., Service and Equipment Co., Carmi, Ill. 736,-362, pub. 6–5–62. Cl. 23.
Haro Mfg. Co., Cleveland, Ohio. 630,200, canc. Cl. 32.
Hartford Textile Corp., New York, N.Y. 629,869, canc. Cl. 20.
Hart's Bakery, Memphis, Tenn. 736,505, pub. 11–7–61. Cl. 46.
Hauserman, E. F., Co., The, Cleveland, Ohio. 736,241, pub. 6–5–62. Cl. 12.
Hayes-Sammons Chemical Co., Mission, Tex. 736,543, pub. 6–5–62. Cl. 52.
Hays, Marian, d.b.a. Alison Dale, San Francisco, Calif. 630,-078, canc. Cl. 39.
Herold, John S., Inc., Greenwich, Conn. 736,440, pub. 6–5–62. Cl. 38.
Hicks Body and Chemical Products Co., Inc., LeBanon, Ind. 629,876, canc. Cl. 21.
Hit Parade Program Service, Inc., New York, N.Y. 630,-026, canc. Cl. 38.
Hobart Brothers Co., Troy, Ohio. 736,310, pub. 6–5–62. Cl. 21.
Hollingsworth, A. M., d.b.a. Hollingsworth Products Co., Fayetteville, N.C. 736,528, pub. 9–22–59. Cl. 51.
Hollingsworth Products Co.: *See*—
Hollingsworth, A. M.
Hollingsworth & Whitney Co., Boston, Mass. 630,011, canc. Cl. 67.
Homestead Turkey Co. Inc., d.b.a. Homestead Turkey Co., Inc. and United Kosher Turkey Co., Philadelphia, Pa. 736,521, pub. 6–5–62. Cl. 46.
Honey Toy Industries, Inc., Brooklyn, N.Y. 736,331, pub. 6–5–62. Cl. 22.
House of Westmore, Inc., New York, N.Y. 736,537, pub. 6–5–62. Cl. 51.
Houston Chemical Corp., New York, N.Y. 736,267, pub. 6–5–62. Cl. 15.
Howard Plastics, Inc., Council Bluffs, Iowa. 629,777, canc. Cl. 2.
Howell Instrument Co., Fort Worth, Tex. 736,373, pub. 5–29–62. Cl. 26.
Hudson Enterprises: *See*—
Hudson, Wilford H.
Hudson, Wilford H., d.b.a. Hudson Enterprises, San Diego, Calif. 736,301, pub. 6–5–62. Cl. 21.
Humble Oil & Refining Co.: *See*—
Standard Oil Co., (Inc. in New Jersey).
Hydro-Pneu-Tronics, Inc., Cleveland, Ohio. 736,359, pub. 6–5–62. Cl. 23.
Ibberson, George, & Co., to William G. Ibberson, d.b.a. George Ibberson & Co., Sheffield, England. 392,752, ren. 8–21–62. Cl. 23.
Ibberson, William G.: *See*—
Ibberson, George, & Co.
Imperial Outfitters to Large Men, Inc., New York, N.Y. 736,-386, pub. 6–5–62. Cl. 28.
Imperial Paper and Color Corp., Glens Falls, N.Y. 629,787, canc. Cl. 6.
In. Pe. R., Industria Formaggio Pecorino Romano, Rome, Italy. 630,206, canc. Cl. 46.
International Research Corp., Danbury, Conn. 629,781, canc. Cl. 6.
Izod, Ltd., New York, N.Y. 736,452, pub. 6–5–62. Cl. 39.
Izod, Ltd., New York, N.Y. 736,456, pub. 6–5–62. Cl. 39.
Jacobs Brothers, Inc., Baltimore, Md. 736,460, pub. 6–5–62. Cl. 39.
Jebco, Inc., Jonesboro, Ga. 736,405, pub. 6–5–62. Cl. 32.
Jenkins, George O., Co., Bridgewater, Mass. 398,166, ren. 8–21–62. Cl. 1.
Jennings-Sherry Co., to Jennings Sherry Co., Inc., Los Angeles, Calif. 157,693, ren. 8–21–62. Cl. 52.
Jennings Sherry Co., Inc.: *See*—
Jennings-Sherry Co.
Jergens, Andrew, Co., The, Cincinnati, Ohio. 736,546, pub. 6–5–62. Cl. 52.
Jerseyfield Ltd., Macclesfield, England. 736,465, pub. 6–5–62. Cl. 39.
Jiffimeals Inc., Vineland, N.J. 630,141, canc. Cl. 46.
Julian, P. Fredric, d.b.a. Executmatic Systems, Newton, Mass. 736,437, pub. 6–5–62. Cl. 37.
Jung, E. & F., Co., Inc., Buffalo, N.Y. 629,987, canc. Cl. 33.
KVP Sutherland Paper Co., Kalamazoo, Mich. 736,210, pub. 6–5–62. Cl. 2.
Kalina, Benjamin F., d.b.a. Benka Sales, Bowman, N. Dak. 736,376, pub. 6–5–62. Cl. 26.
Karisch Co., Inc., The, Austin, Tex. 629,868, canc. Cl. 19.
Kay Electric Co., Pine Brook, N.J. 629,941, canc. Cl. 26.
Kelly Girl Service, Inc., Detroit, Mich. 736,554, pub. 6–5–62. Cl. 101.
Kelsey, Frank, Passaic, N.J. 612,348, canc. Cl. 2.
Kenneth, Malcolm, Co., Boston, Mass. 736,477, pub. 6–5–62. Cl. 39.
Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla. 736,266, pub. 6–5–62. Cl. 15.
Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla. 736,562, pub. 6–5–62. Cl. 103.
Keystone Broadcasting System, Inc., Chicago, Ill. 396,820, ren. 8–21–62. Cl. 36.
King, E. & F., Co., Inc., Norwood, Mass. 160,552, ren. 8–21–62. Cl. 1.
King Tape & Lavel, Inc., Dallas, Tex. 736,442, pub. 6–5–62. Cl. 38.
Kingdom Polled Hereford Association, New Bloomfield, Mo. 736,550, pub. 6–5–62. Cl. 100.
Klenzade Products, Inc., Beloit, Wis. 630,179, canc. Cl. 52.
Klopman Mills, Inc., New York, N.Y. 736,479, pub. 6–5–62. Cl. 42.
Knie, Joseph, & Sons, Inc., New York, N.Y. 630,123, canc. Cl. 42.
Knipe Bros.-Ward Hill Shoes, Inc., Gardiner, Maine. 736,475, pub. 6–5–62. Cl. 39.
Koppers Co., Inc., Pittsburgh, Pa. 736,240, pub. 6–5–62. Cl. 12.
Kuhre, Leland B., Granite City, Ill. 630,037, canc. Cl. 38.
Kulchur Press Inc., New York, N.Y. 736,450, pub. 6–5–62. Cl. 38.
Lanolin Plus, Inc.: *See*—
Bishop, Hazel, Inc.
Laray Cosmetics, Inc., Newark, N.J. 736,530, pub. 6–5–62. Cl. 51.
Larrowe Milling Co., The, Detroit, Mich. 208,869–70, canc. Cl. 46.
Larrowe Milling Co., The, Detroit, Mich. 209,254, canc. Cl. 46.
Lassar & Gross Co., Inc., Los Angeles, Calif. 736,473, pub. 6–5–62. Cl. 39.
Lee, H. D., Co., Inc., The, Kansas City, Mo. 736,468, pub. 6–5–62. Cl. 39.
Lee, Simpson, Paper Co.: *See*—
Lesh, C. P., Paper Co.
Lee's Food Products Ltd., Toronto, Ontario, Canada. 736,496, pub. 4–24–62. Cl. 46.
Leggett, Francis H., & Co.: *See*—
Seeman Brothers.
Leggett, Francis H., & Co., New York, N.Y. 630,016, canc. Cl. 37.
Lehigh Chemical Co., Chestertown, Md. 736,227, pub. 6–5–62. Cl. 6.
Leo-werke, G.m.b.H., Frankfurt am Main, Germany. 736,534, pub. 6–5–62. Cl. 51.
Les Caves Sequanaises (Societe a Responsabilite Limitee), Paris, France. 736,523, pub. 6–5–62. Cl. 47.
Lesh, C. P., Paper Co., Indianapolis, Ind., to Simpson Lee Paper Co., Everett, Mass. 160,563, ren. 8–21–62. Cl. 37.
Leslie, Richard A., Co., Brooklyn, N.Y. 736,467, pub. 6–5–62. Cl. 39.

Lever Brothers Co.: *See*—
Braun, Geo. P., Co.
Pepsodent Co., The.
Lewis, Ted W., Fort Worth, Tex. 629,843–4, canc. Cl. 16.
Linen Thread Co., Inc., The, New York, N.Y. 630,124, canc. Cl. 42.
Lionel Corp., The, New York, N.Y. 736,342, pub. 6–5–62. Cl. 22.
Lithonia Lighting Products Co., Conyers, Ga. 736,582. Cl. 21.
Loes, Franz E., to Chesebrough-Pond's Inc., New York, N.Y. 161,209, ren. 8–21–62. Cl. 18.
Lohn, E. E., Inc., d.b.a. Eelco Mfg. and Supply Co., Inglewood, Calif. 736,360, pub. 6–5–62. Cl. 23.
Lola Macaroni Co.: *See*—
Maggiore, Peter.
Lone Star Cone Co., San Antonio, Tex. 630,158, canc. Cl. 46.
Louis Stix Co., The, Cincinnati, Ohio, to Chadbourn Gotham, Inc., Charlotte, N.C. 156,330, ren. 8–21–62. Cl. 39.
M & R Dietetic Laboratories, Inc., Columbus, Ohio. 736,506, pub. 6–5–62. Cl. 46.
Macy, R. H., & Co., Inc., New York, N.Y. 195,051, canc. Cl. 39.
Made-Rite Autobody Products, Inc., Cleveland, Ohio. 736,579–81, Cl. 19.
Maggiore, Peter, d.b.a. Lola Macaroni Co., Cicero, Ill. 736,504, pub. 6–5–62. Cl. 46.
Magic Chef, Inc., St. Louis, Mo. 629,996, canc. Cl. 34.
Mallett Products Ltd., North Surrey, British Columbia, Canada. 736,513, pub. 6–5–62. Cl. 46.
Mari, E. & O., Inc., Long Island City, N.Y. 736,434, pub. 6–5–62. Cl. 36.
Mark, Clayton, & Co.: *See*—
Mark Mfg. Co.
Mark Mfg. Co., Chicago, Ill., to Clayton Mark & Co., Evanston, Ill. 160,916, ren. 8–21–62. Cl. 35.
Marks and Spencer Ltd., London, England. 736,510, pub. 6–5–62. Cl. 46.
Marmic Co., The, South Bend, Ind. 736,529, pub. 9–9–58. Cl. 51.
Marshall, Don, Inc., New York, N.Y. 736,458, pub. 6–5–62. Cl. 39.
Massey, B. & S., Ltd., Openshaw, Manchester, England. 629,920, canc. Cl. 23.
Mastic Corp., South Bend, Ind. 736,238, pub. 6–5–62. Cl. 12.
Masury-Young Co., Boston, Mass. 398,252, ren. 8–21–62. Cl. 4.
May Department Stores Co., The, d.b.a. Famous-Barr Co., St. Louis, Mo. 736,474, pub. 6–5–62. Cl. 39.
McCampbell & Co., Inc.: *See*—
Graniteville Co.
McCarthy, Donald D., Baltimore, Md. 726,019, canc. Cl. 39.
McClatchy Newspapers, Sacramento, Calif. 736,566, pub. 6–5–62. Cl. 107.
McGraw-Hill Book Co., Inc., New York, N.Y. 736,567, pub. 6–5–62. Cl. 107.
McGraw-Hill International Corp., New York, N.Y. 630,032, canc. Cl. 38.
Mello-Foams, Inc., New York, N.Y. 736,203, pub. 6–5–62. Cl. 1.
Melville Shoe Corp., New York, N.Y. 736,466, pub. 6–5–62. Cl. 39.
Merrell-Soule Co., Syracuse, N.Y., to The Borden Co., New York, N.Y. 157,714, ren. 8–21–62. Cl. 46.
Merriam, G. & C., Co., Springfield, Mass. 162,309–10, ren. 8–21–62. Cl. 38.
Merrick Medicine Co., Waco, Tex. 736,284, pub. 6–5–62. Cl. 18.
Merrill, Charles E., Books, Inc.: *See*—
American Education Press, Inc.
Metals Research Ltd., Cambridge, England. 736,427, pub. 6–5–62. Cl. 34.
Metro-Atlantic, Inc., Centredale, R.I. 736,218, pub. 6–5–62. Cl. 6.
Michigan Wheel Co., Grand Rapids, Mich. 629,888, canc. Cl. 22.
Milani, Louis, Foods, Inc., Los Angeles, Calif. 736,520, pub. 6–5–62. Cl. 46.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 736,234, pub. 6–5–62. Cl. 7.
Mintase Co., The, Los Angeles, Calif. 736,289, pub. 6–5–62. Cl. 18.
Minute Tapioca Co., Orange, Mass., to General Foods Corp., White Plains, N.Y. 161,824, ren. 8–21–62. Cl. 46.
Modern Products, Inc., Milwaukee, Wis. 736,511, pub. 6–5–62. Cl. 46.
Modernaire Corp., Cleveland, Ohio. 629,816, canc. Cl. 13.
Monsanto Chemical Co., St. Louis, Mo. 398,057–60, ren. 8–21–62. Cl. 6.
Montgomery Ward & Co., Inc., Chicago, Ill. 736,311, pub. 6–5–62. Cl. 21.
Monumental Life Insurance Co., Baltimore, Md. 736,597. Cl. 102.
Moore, Benjamin, & Co., New York, N.Y. 399,098, ren. 8–21–62. Cl. 16.
Movrich, Bruno, Co., Chicago, Ill. 736,271, pub. 6–5–62. Cl. 16.
Murchison, Loren, & Co., Inc., Newark, N.J. 736,388, pub. 6–5–62. Cl. 30.
N.V. Bloembollenkwekerij en-Handel v.h. J. Onderwater & Co., Lisse, Netherlands. 736,205, pub. 6–5–62. Cl. 1.
N.V. Tricolana, Tilburg, Netherlands. 736,455, pub. 6–5–62. Cl. 39.
Naco Fertilizer Co., New York, N.Y. 436,241, canc. Cl. 10.
National Association of Legal Secretaries (International), Beckley, W. Va. 736,568, pub. 6–5–62. Cl. 200.
National Biscuit Co., New York, N.Y. 736,498, pub. 6–5–62. Cl. 46.
National Chemsearch Corp. of Texas, Dallas, Tex. 736,269, pub. 6–5–62. Cl. 16.
National Cleaning Equipment Corp., Harrisburg, Pa. 736,560, pub. 6–5–62. Cl. 103.
National Comics Publications, Inc., New York, N.Y. 630,038, canc. Cl. 38.
National Committee on the Observance of Mother's Day, Inc., New York, N.Y. 736,551, pub. 6–5–62. Cl. 100.
National Scientific Information Service: *See*—
Bradley, John H.
National Shoes, Inc., New York, N.Y. 718,284, canc. Cl. 39.
National Tea Co., Chicago, Ill. 736,494, pub. 6–5–62. Cl. 45.
Neville Chemical Co., Pittsburgh, Pa. 736,200–2, pub. 6–5–62. Cl. 1.
New South Mfg. Co., Atlanta, Ga. 736,541, pub. 6–5–62. Cl. 52.
Newaygo Sportsmens Supply, Inc., Newaygo, Mich. 630,049, canc. Cl. 39.
Niehues & Dutting, Nordhorn, Germany. 630,116, canc. Cl. 42.
North Coast Importing Co., Seattle, Wash. 736,503, pub. 6–5–62. Cl. 46.
Northwest Metal Products, Inc., Seattle, Wash. 629,858, canc. Cl. 19.
Norton Games, Inc., New York, N.Y. 629,890–1, canc. Cl. 22.
Nuclear Products Co., Cleveland, Ohio. 736,255, pub. 6–5–62. Cl. 13.
Oakley, Annie, Enterprises, Inc., Los Angeles, Calif. 736,333, pub. 6–5–62. Cl. 22.
Old Co., The: *See*—
Companhia Geral Da Agricultura Das Vinhas Do Alto Douro.
Olin Mathieson Chemical Corp., New York, N.Y. 736,280, pub. 6–5–62. Cl. 18.
Olson, Donald K., d.b.a. Walter J. Olson Co., Minneapolis, Minn. 736,265, pub. 6–5–62. Cl. 15.
Olson, Walter J., Co.: *See*—
Olson, Donald K.
Ort Bros. Bakery, Inc., Cumberland, Md. 736,514, pub. 6–5–62. Cl. 46.
Outboard Magazines, Inc., Jacksonville, Fla. 736,449, pub. 6–5–62. Cl. 38.
Oxford Filing Supply Co., Inc., Garden City, N.Y. 736,413, pub. 6–5–62. Cl. 32.
Pacific Jazz Enterprises, Inc., Hollywood, Calif. 630,010, canc. Cl. 36.
Pan American Laboratories, Inc., New Orleans, La. 736,290–1, pub. 6–5–62. Cl. 18.
Parfums Schiaparelli, Inc., New York, N.Y. 397,252, ren. 8–21–62. Cl. 51.
Parfums Schiaparelli, Inc., New York, N.Y. 397,317–19, ren. 8–21–62. Cl. 29.
Parfums Schiaparelli, Inc., New York, N.Y. 397,366, ren. 8–21–62. Cl. 29.
Parfums Schiaparelli, Inc., New York, N.Y. 397,463, ren. 8–21–62. Cl. 51.
Parfums Schiaparelli, Inc., New York, N.Y. 397,585, ren. 8–21–62. Cl. 51.
Parfums Schiaparelli, Inc., New York, N.Y. 397,759, ren. 8–21–62. Cl. 29.
Parfums Schiaparelli, Inc., New York, N.Y. 396,947–8, ren. 8–21–62. Cl. 51.
Parkland Sportswear Co., Inc., Dallas, Tex. 630,113, canc. Cl. 42.
Parr Paint & Color Co., The, Cleveland, Ohio. 736,242, pub. 6–5–62. Cl. 12.
Patten, Lee, Seed Co., Jersey City, N.J. 736,220, pub. 6–5–62. Cl. 6.
Payne Coal Co., Inc., Wilkes-Barre, Pa. 294,396, canc. Cl. 38.
Peck, Willis S., Maumee, Ohio. 736,339, pub. 6–5–62. Cl. 22.
Penfield Saw Works, Inc., The, Thomaston, Conn. 629,918, canc. Cl. 23.
Pennsalt Chemicals Corp., Philadelphia, Pa. 736,222, pub. 6–5–62. Cl. 6.
Pen-pal Inc., Van Nuys, Calif. 736,436, pub. 5–2–61. Cl. 37.
Pepsodent Co., The, Chicago, Ill., to Lever Brothers Co., New York, N.Y. 398,730–1, ren. 8–21–62. Cl. 18.
Perfect Belt Mfg. Co., Inc., Atlanta, Ga. 630,109, canc. Cl. 39.
Perfect Parts Co., The, Baltimore, Md. 736,584. Cl. 26.
Permo-Plastics, Royal Oak, Mich. 736,334, pub. 6–5–62. Cl. 22.
Persinger, William G., d.b.a. Astro Metals Co., North Hollywood, Calif. 629,818, canc. Cl. 13.
Personal Home Products, Inc., Hicksville, N.Y. 736,278, pub. 11–22–60. Cl. 18.
Peter Pan Foundations, Inc., New York, N.Y. 630,096, canc. Cl. 39.
Peters, John J., Springfield, from Royal Engineering Co., Inc., Pleasant Plains, Ill. 736,578. Cl. 19.
Peterson, John L., Clearwater, Fla. 630,077, canc. Cl. 39.
Pettijohn, Charles E., Stanfield, Ariz. 630,193, canc. Cl. 18.
Picardy Mills, Inc., Brooklyn, N.Y. 396,662, ren. 8–21–62. Cl. 39.
Picardy Mills, Inc., Brooklyn, N.Y. 397,504, ren. 8–21–62. Cl. 42.
Pillsbury Co., The, Minneapolis, Minn. 736,570. Cl. 2.
Pin Money Brands, Inc., to Cargill & Wilson, Inc., Richmond, Va. 630,205, canc. Cl. 46.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 736,275, pub. 6–5–62. Cl. 16.
Plantalite Co., San Diego, Calif. 736,312, pub. 6–5–62. Cl. 21.
Plough Laboratories, Inc., Memphis, Tenn. 736,282–3, pub. 6–5–62. Cl. 18.
Popular Motor Specialties Inc., Chicago, Ill. 736,356, pub. 6–5–62. Cl. 23.
Poretz Brothers Inc., New York, N.Y. 630,076, canc. Cl. 39.
Portable Electric Tools, Inc., Geneva, Ill. 736,314, pub. 6–5–62. Cl. 21.
Practical Mfg. Co.: *See*—
Bublick, Sol.
Practical Products Co.: *See*—
Bublick, Sol.

Pratt, Peter, d.b.a. Peter Pratt Enterprises, Nokomis, Fla. 736,352, pub. 6–5–62. Cl. 22.
Precipitator Corp. of America, Boston, Mass. 736,390, pub. 1–23–62. Cl. 31.
Precise Imports Corp., New York, N.Y. 736,235, pub. 6–5–62. Cl. 9.
Precision Parts Corp., Nashville, Tenn. 736,431, pub. 6–5–62. Cl. 34.
Prefect Mfg. Co.: *See*—
Fischer, Charles G.
Pre-mar Industries, East Butler, Pa. 736,483, pub. 4–24–62. Cl. 35.
Pressman Toy Corp., New York, N.Y. 629,892, canc. Cl. 22.
Price, Paul A., Co., Inc., New York, N.Y. 736,330, pub. 6–5–62. Cl. 22.
Private Brands, Inc., New York, N.Y. 293,245, canc. Cl. 46.
Products Research Co., Burbank, Calif. 736,257, pub. 6–5–62. Cl. 13.
Produits De Beaute Juvena G.m.b.H.: *See*—
Diva-Laboratorium Aktiengesellschaft.
Pucel Enterprises, Inc., Cleveland, Ohio. 736,318, pub. 6–5–62. Cl. 21.
Pure Oil Co., The, Chicago, Ill. 736,262, pub. 6–5–62. Cl. 15.
Purex Corp., Ltd., South Gate, Calif. 736,573. Cl. 6.
Quigley Publishing Co., Inc., New York, N.Y. 630,033, canc. Cl. 38.
Quigley Publishing Co., Inc., New York, N.Y. 736,591. Cl. 38.
R-M-S Associates, Inc., Mamaroneck, N.Y. 736,309, pub. 6–5–62. Cl. 21.
Raburn Products, Inc., Chicago, Ill. 736,569. Cl. 2.
Radiant Mfg. Corp., Morton Grove, Ill. 736,377–9, pub. 6–5–62. Cl. 26.
Radiant-Ray Radiation, Inc., Newington, Conn. 736,425, pub. 6–5–62. Cl. 34.
Railway Appliance Research Ltd., Vancouver, British Columbia, Canada. 736,365, pub. 6–5–62. Cl. 23.
Rainfair, Inc., Racine, Wis. 736,469, pub. 6–5–62. Cl. 39.
Raypak Co., Inc., El Monte, Calif. 736,432, pub. 6–5–62. Cl. 34.
Richardson-Merrell Inc., New York, N.Y. 736,294, pub. 6–5–62. Cl. 18.
Reading Treasure House, Lake Bluff, Ill. 736,337, pub. 6–5–62. Cl. 22.
Real Companhia Dos Vinhos Do Porto: *See*—
Companhia Geral Da Agricultura Das Vinhas Do Alto Douro.
Regan Film Productions, Inc.: *See*—
Regan Productions, Inc.
Regan Productions, Inc., from Regan Film Productions, Inc., Detroit, Mich. 736,439, pub. 6–5–62. Cl. 38.
Registered Shirt Corp., The: *See*—
Registered Shirt Laundry Association, Inc., The.
Registered Shirt Laundry Association, Inc., The, from The Registered Shirt Corp., New York, N.Y. 736,451, pub. 6–5–62. Cl. 39.
Reiss, Kurt, Toronto, Ontario, Canada. 736,491, pub. 6–5–62. Cl. 45.
Republic Drug Co., Inc., Buffalo, N.Y. 736,293, pub. 6–5–62. Cl. 18.
Republic Steel Corp., Cleveland, Ohio. 395,814, ren. 8–21–62. Cl. 14.
Research Engineering & Mfg., Inc., New Bedford, Mass. 736,251, pub. 6–5–62. Cl. 13.
Revlon, Inc., New York, N.Y. 736,532, pub. 6–5–62. Cl. 51.
Rockwell Mfg. Co., Pittsburgh, Pa. 736,370, pub. 6–5–62. Cl. 23.
Roddenbery Bros., to W. B. Roddenbery Co., Inc., Cairo, Ga. 154,805, ren. 8–21–62. Cl. 46.
Roddenbery, W. B., Co., Inc.: *See*—
Roddenbery Bros.
Rogers, B. C., & Sons, Inc., Morton, Miss. 736,518, pub. 6–5–62. Cl. 46.
Ronda Ag (Ronda S.A.) (Ronda Ltd.), Basel-Campagne, Switzerland. 736,384, pub. 6–5–62. Cl. 27.
Rosaen Filter Co., The, Hazel Park, Mich. 736,397, pub. 6–5–62. Cl. 31.
Rose Brothers, Inc., New York, N.Y. 736,472, pub. 6–5–62. Cl. 39.
Rose-Derry Co., Newton, Mass. 736,416, pub. 6–5–62. Cl. 32.
Roxanne Leather Goods, Inc., Passaic, N.J. 736,215, pub. 6–5–62. Cl. 3.
Royal Engineering Co., Inc.: *See*—
Peters, John J.
Royal Oporto Wine Co.: *See*—
Companhia Geral Da Agricultura Das Vinhas Do Alto Douro.
Rubinstein, Helena, Inc., New York, N.Y. 736,549, pub. 6–5–62. Cl. 52.
Safegard Corp., The, d.b.a. Tenacrest, Cincinnati, Ohio. 736,410, pub. 6–5–62. Cl. 32.
Safeway Stores, Inc., Oakland, Calif. 630,208, canc. Cl. 46.
Schenley Industries, Inc.: *See*—
American Wine Co.
Schenley Industries, Inc., New York, N.Y. 736,525, pub. 6–5–62. Cl. 49.
Schulze and Burch Biscuit Co., Chicago, Ill. 736,509, pub. 11–14–61. Cl. 46.
Science Kit Lab Corp., Tonawanda, N.Y. 736,583. Cl. 26.
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Security Chain-Line Fence Co., Harlingen, Tex. 629,822, canc. Cl. 13.
Seeman Brothers, to Francis H. Leggett & Co., New York, N.Y. 20,942, ren. 8–21–62. Cl. 46.
Seitzinger, Edward, d.b.a. Thomas F. Seitzinger's Sons, Atlanta, Ga. 629,827, canc. Cl. 14.
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Seitzinger, Edward.
Sessions Clock Co., The, Forestville, Conn. 736,382, pub. 6–5–62. Cl. 27.
Shakespeare Co., Kalamazoo, Mich. 736,336, pub. 6–5–62. Cl. 22.
Simmons Co., New York, N.Y. 736,411–12, pub. 6–5–62. Cl. 32.
Sinykin, J. L., Minneapolis, Minn. 396,597, ren. 8–21–62. Cl. 51.
Smith, Delbert L., McKees Rocks, Pa. 629,823, canc. Cl. 13.
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Socereign Watch Co., Inc., New York, N.Y. 736,585. Cl. 27.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 736,299, pub. 6–5–62. Cl. 18.
Societe Francaise de Fermetures de luxe, Choisy-le-Roi, France. 736,254, pub. 6–5–62. Cl. 13.
Societe Genevoise d'Instruments de Physique, Geneva, Switzerland. 736,368, pub. 6–5–62. Cl. 23.
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Standard Oil Co. (Inc. in New Jersey), Bayonne, N.J., and New York, N.Y., to Humble Oil & Refining Co., Houston, Tex. 154,808, ren. 8–21–62. Cl. 15.
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Strohmeyer & Arpe Co., d.b.a. United Pure Food Co., New York, N.Y. 736,592–3. Cl. 46.
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Textron Pharmaceuticals, Inc., New Lebanon, N.Y. 736,292, pub. 6–5–62. Cl. 18.
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Thomas Textile Co., Inc., New York, N.Y. 736,464, pub. 6–5–62. Cl. 39.
Thomson, H. Ewart, & Sons (Glasgow) Ltd., Glasgow, Scotland. 736,524, pub. 6–21–60. Cl. 49.
Thrivo Co., Inc., d.b.a. Thrivo Co. Inc., Philadelphia, Pa. 736,519, pub. 6–5–62. Cl. 46.
Tobias Paint Mfg. Co., Cleveland, Ohio. 736,272, pub. 4–3–62. Cl. 16.
Tooke Bros. Ltd., Montreal, Quebec, Canada. 736,471, pub. 6–5–62. Cl. 39.
Torres, F. Rodgiguez, & Co., Inc., Bayamon, Puerto Rico. 630,091, canc. Cl. 39.
Trainer Associates, Inc., New Castle, Del. 736,364, pub. 6–5–62. Cl. 23.
Travenol Laboratories, Inc., Morton Grove, Ill. 736,490, pub. 6–5–62. Cl. 44.
Triangle Chemical Co., Macon, Ga. 736,233, pub. 6–5–62. Cl. 6.
Trico Service Co.: *See*—
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Trio Mfg. Co., Griggsville, Ill. 736,324, pub. 6–5–62. Cl. 21.
Trojan Battery Co., Los Angeles, Calif. 736,313, pub. 6–5–62. Cl. 21.

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20th Century Fabrics, d.b.a. Twentieth Century, Hermosa Beach, Calif. 630,122, canc. Cl. 42.
Ultra Chemical Works, Inc., Paterson, N.J. 736,228, pub. 6–5–62. Cl. 6.
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Underwood Corp., New York, N.Y. 629,909, canc. Cl. 23.
Union Carbide Corp., New York, N.Y. 736,392, pub. 6–5–62. Cl. 31.
Union Oil Co. of California, Los Angeles, Calif. 736,263, pub. 6–5–62. Cl. 15.
United Kosher Turkey Co.: *See*—
Homestead Turkey Co. Inc.
United Merchants and Manufacturers, Inc., New York, N.Y. 736,482, pub. 6–5–62. Cl. 42.
United Pure Food Co.: *See*—
Strohmeyer & Arpe Co.
United States Rubber Co., New York, N.Y. 736,209, pub. 6–5–62. Cl. 1.
U.S. Standard Products Co., Mount Prospect, Ill. 736,279, pub. 6–5–62. Cl. 18.
United Trading Stamp Corp., Philadelphia, Pa. 736,555, pub. 6–5–62. Cl. 101.
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Vacuum Baking Corp., New York, N.Y. 630,144, canc. Cl. 46.
Ventabood Co., Dallas, Tex. 630,002, canc. Cl. 34.
Victor Adding Machine Co., Chicago, Ill. 736,374, pub. 6–5–62. Cl. 26.
Virginia Maid Hosiery Mills, Inc., Pulaski, Va. 630,101, canc. Cl. 39.
Vitamin Food Co., Inc., Newark, N.J. 736,287, pub. 6–5–62. Cl. 18.
Vocaline Co. of America, Inc., Old Saybrook, Conn. 736,321–2, pub. 6–5–62. Cl. 21.
Volt, W. J., Rubber Corp., Los Angeles, Calif. 630,007, canc. Cl. 35.
Van Camp Hardware & Iron Co., Indianapolis, Ind. 630,008, canc. Cl. 35.
Voorhees, Gertrude, Rochester, N.Y. 736,351, pub. 6–5–62. Cl. 22.
Wagner, Charles, Mfg. Co. Inc., Brooklyn, N.Y. 736,304, pub. 6–5–62. Cl. 21.
Waitt & Bond, Inc., Newark, N.J., from Allen & Fisher, Inc., Boston, Mass. 736,276, pub. 6–5–62. Cl. 17.
Ward, Montgomery & Co., Inc., Chicago, Ill. 736,260, pub. 6–5–62. Cl. 13.
Watt Publishing Co., Mount Morris, Ill., from Urner-Barry Co., New York, N.Y. 736,447, pub. 6–5–62. Cl. 38.
Welch Grape Juice Co., Inc., The, Westfield, N.Y. 736,501, pub. 6–5–62. Cl. 46.
Wells, S. C., & Co., Le Roy, N.Y. 398,830, ren. 8–21–62. Cl. 18.
West Paint & Varnish Co., Everett, Mass. 736,270, pub. 6–5–62. Cl. 16.
Western Beauty Shop Supply Co., d.b.a. Furniture Co., Denver, Colo. 629,886, canc. Cl. 22.
Western Condensing Co., San Francisco, Calif. 736,500, pub. 6–5–62. Cl. 46.
Westinghouse Electric Corp., Pittsburgh, Pa. 736,326, pub. 6–5–62. Cl. 21.
Whirlpool Corp., St. Joseph, Mich. 736,316, pub. 6–5–62. Cl. 21.
Whirlpool Corp., St. Joseph, Mich. 736,372, pub. 6–5–62. Cl. 24.
Whirlpool Corp., St. Joseph, Mich. 736,400, pub. 6–5–62. Cl. 31.
Whirlpool Corp., St. Joseph, Mich. 736,428, pub. 6–5–62. Cl. 34.
White Rock Uniform Co. Inc., New York, N.Y. 736,476, pub. 6–5–62. Cl. 39.
Wiegand, Edwin L., Co., The, Pittsburgh, Pa. 736,320, pub. 6–5–62. Cl. 21.
Williams & Humbert Ltd., London, England. 630,161, canc. Cl. 47.
Wil-nes Corp., The, New York, N.Y. 736,399, pub. 6–5–62. Cl. 31.
Winston-Shillings Tool Co., Newark, N.J. 629,895, canc. Cl. 23.
Winzen Research, Inc., Minneapolis, Minn. 629,859, canc. Cl. 19.
Wiss, J., & Sons Co., Newark, N.J. 736,355, pub. 6–5–62. Cl. 23.
Wood Treating Chemicals Co., St. Louis, Mo. 736,576. Cl. 6.
Woolworth, F. W., Co., New York, N.Y. 736,343–6, pub. 6–5–62. Cl. 22.
Wright, Barry, Corp., Watertown, Mass. 736,407–8, pub. 6–5–62. Cl. 32.
Yosemite Chemical Co., d.b.a. Yosemite Chemical Co., San Francisco, Calif. 736,542, pub. 6–5–62. Cl. 52.
Zonolite Co., Chicago, Ill. 736,246, pub. 6–5–62. Cl. 12.
Zuendappwerke G.m.b.H., Nuernberg, Germany. 629,902, canc. Cl. 23.

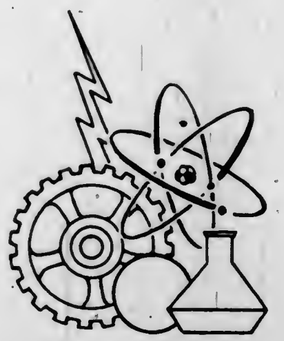
U.S. GOVERNMENT PRINTING OFFICE 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

August 28, 1962 • Volume 781 • Number 4



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

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OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 28, 1962 Volume 781 Number 4

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of July 1962

Examiner affirmed	330
Examiner affirmed in part	48
Examiner reversed	64
Total	442

Decisions of the Commissioner of Patents

The 1961 edition of the Decisions of the Commissioner of Patents has been released from the printer and available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Price: $3.50.

New Examining Divisions Established

Divisions 71, 72, 73, 74, 75,.76, 77 and 78 have been established in the Electrical Examining Operation.

The following classes or parts of classes have been transferred to each from the divisions indicated:

To division—	From division—	Class	Subclasses
71 (Room 6899-A.)	26	320	2-72.
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	48	317	99-122, 158-203, 242-261.

Adjudicated Patent

(D.C. Ohio) Thies Patent No. 2,750,216 (277—32), for bowl sleeve gasket. Claims 1 and 2 *Held* valid and infringed. *Harvey* v. *Levine*, 204 F. Supp. 947; 133 USPQ 80.

Disclaimer

3,042,479.—*Augustine Hicks Lawrence, Jr.*, and *John H. Dowling*, Wilmington, Del. CHLOROFLUOROHYDROCARBONS IN DRY CLEANING COMPOSITIONS AND PROCESS. Patent dated July 3, 1962. Disclaimer filed July 19, 1962, by the assignee, *E. I. du Pont de Nemours and Company.*

Hereby enters this disclaimer as to claims 1, 2, and 4 of said patent.

Patents Available for Licensing or Sale

2,863,966. Repeater Fuse. Henry Greber, 225 W. 80th St., Apt. 8-D, New York 24, N.Y.

3,039,191. Utility Shears. Richard O. Saxton, Rte. 1, Custer, Mich.

3,039,564. Checking Out System. Arthur J. Shaukis, P.O. Box 689, Haverhill, Mass.

3,040,391. Adjustable Roller Assembly. Robert M. Saunders, 4119 Hayward Ave., Baltimore 15, Md.

3,041,780. Rubber Band Shooting Figure. Jack P. Rodgers, 7600 Holland Swamp Road, Norfolk 2, Va.

3,043,595. Magnetically Controlled Game. Ralph J. Lauper, 5911 Ortega St., Sacramento 24, Calif.

3,043,618. Protective Device for Motor Vehicles. Diego Peitrrojo, 127 Florida St., Buffalo 8, N.Y.

3,043,980. Spark Plug With Intensifier. Thomas A. Zalesak, Box 208, R.D. 2, Wallkill, N.Y.

The following 2 patents are offered by D. H. Dave Associates, 1298 E. 22nd St., Brooklyn 10, N.Y.

2,966,718. Method for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

3,037,259. Apparatus for the Installation of Reinforced Concrete Floors in Multi-Storied Buildings.

General Electric Company is prepared to grant non-exclusive licenses under the following 5 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: Patent Counsel, Heavy Military Electronics Dept., General Electric Company, Legal Section, Bldg. 1, Room 36, Court Street Plant, Syracuse, N.Y.

2,901,709. Wave Coupling Arrangement.

2,987,674. Frequency Measuring Apparatus.

3,020,482. Synchronization Network.

3,020,541. Electrical Signal Indicator.

3,028,660. Ferrite Core Splitting Process.

New Applications Received During June 1962

Patents	7,294
Designs	371
Plant Patents	10
Reissues	26
Total	7,701

Issue

Patents	1225	No. 3,050,732 to No. 3,051,956, incl.
Designs	33	No. 193,464 to No. 193,496, incl.
Reissues	2	No. 25,232 to No. 25,233, incl.
Total	1260	

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1962

Total number of pending applications (excluding Designs)	191, 614
Total number of pending Design applications	5, 955
Total number of applications awaiting action (excluding Designs)	100, 841
Total number of Design applications awaiting action	2, 048
Date of oldest new application	Feb. 1, 1961
Date of oldest amended application	Jan. 6, 1961

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) Manian, J. A. (acting), AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION.	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

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1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	8-23-61	9-8-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-6-61	11-13-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	6-2-61	6-1-61
4. (VI) FALLER, E. A., Material or Article Handling	7-13-61	8-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-4-61	8-2-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	4-7-61	5-8-61
7. (IV) ANDERSON, E. G., Optics	6-27-61	7-7-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	7-10-61	7-18-61
9. (VI) BRANSON, J. H., Pumps; Fans	9-7-61	9-1-61
10. (VI) BOYD, S. Firearms; Ordnance; Ammunition; Explosive Charge Making	8-18-61	7-18-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	7-24-61	7-18-61
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13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	5-4-61	4-4-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	3-27-61	3-31-61
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	8-14-61	8-31-61
16. (II) ROSE, R. H. (acting), Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	5-29-61	5-19-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	7-3-61	7-20-61
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	7-5-61	6-23-61
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25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	5-1-61	6-5-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	5-17-61	5-4-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	6-27-61	7-3-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	6-26-61	7-7-61
29. (V) SCHEEL, W. A. (acting), Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Joint Packings; Tool-Handling Fastenings	6-28-61	7-3-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	6-5-61	7-14-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	7-3-61	7-3-61
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part), Gas Separation	6-2-61	6-12-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	7-3-61	6-5-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	4-17-61	2-13-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	8-8-61	8-3-61
36. (V) EVANS, R. L., Measuring and Testing (part)	5-15-61	6-2-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	3-31-61	4-7-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	6-16-61	6-12-61
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	5-24-61	6-28-61
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	6-22-61	6-21-61
41. (II) SAX, E. J. (acting), Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	3-31-61	4-20-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	3-17-61	3-2-61
43. (I) KNIGHT, W. B., Wolk, M. O. (acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-11-61	3-20-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	2-13-61	2-8-61
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-4-61	10-30-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-3-61	4-13-61
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	7-26-61	7-10-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-14-61	2-24-61
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	5-23-61	5-17-61
50. (I) BERCOVITZ, L. J. (acting), Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	6-19-61	7-24-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	6-1-61	5-11-61
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	10-10-61	10-2-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	9-1-61	9-5-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	3-6-61	4-3-61
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	4-7-61	5-1-61
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	6-16-61	6-26-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-22-61	6-26-61
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	9-5-61	9-14-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	3-6-61	5-31-61
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	2-1-61	1-6-61
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-9-61	11-1-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	6-8-61	6-16-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	5-24-61	5-1-61
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	4-3-61	3-15-61
65. (II) SAX, E. J. (MILLER, B. G., acting), Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	3-6-61	3-2-61
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	6-2-61	4-27-61
67. (VII) Wyman, A. (acting), Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	6-1-61	6-1-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	8-14-61	8-28-61
81. (III) HANNAH, A. B., Industrial Arts	3-8-62	3-12-62
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-1-62	3-16-62
91. BAILEY, J. S. (KENT, A. P., acting), Glass	4-13-61	4-5-61
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	9-19-61	8-29-61
93. WAHL, R. A., Wire Working	7-24-61	6-21-61
94. BERLOWITZ, W., Motors, Fluid	11-27-61	1-30-62
95. ANGEL, C. D., Metallic Building Structures	7-11-61	7-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	9-18-61	7-6-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents	Numbers 2,380,913 to 2,383,930 inclusive
Plant Patent	Number 659

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE HORACE L. LANSING

No. 6819. Decided May 18, 1962

[49 CCPA—; —F.2d—; 133 USPQ 558]

1. PATENTABILITY—INVENTION—OBVIOUSNESS—35 U.S.C. 103.

Held that "35 U.S.C. 103 applies, * * *, to the situation where 'the invention is not identically disclosed or described as set forth in section 102 of this title' and requires that a determination be made as to whether 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious.'"

2. SAME—PARTICULAR SUBJECT MATTER—"COMBINED RAIL JOINTS AND SHIMS."

The decision of the Board of Appeals refusing a claim in an application entitled "Combined Rail Joints and Shims" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 454,099.

AFFIRMED.

Emory L. Groff and *Emory L. Groff, Jr.* for appellant.

Clarence W. Moore (*Jere W. Sears* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

The Board of Appeals affirmed the Examiner's rejection of claim 6, the only claim remaining in the case, of appellant's application for patent, Serial No. 454,099, filed September 3, 1954, for "Combined Rail Joints and Shims." The application in issue is a continuation of an earlier application, Serial No. 120,144, filed October 7, 1949 which matured into U.S. Patent No. 2,702,161.

The application discloses a joint bar to be used in joining aligned sections of railway track. The joint bar has enlarged head and foot portions to which metal shims are secured by an adhesive. The upper shim has wing portions overlying the upper load bearing and inwardly facing non-load bearing surfaces of the enlarged head portion. Similarly, the lower shim has wing portions overlying the lower load bearing and inwardly facing non-load bearing surfaces of the enlarged foot portion. A made-up rail joint utilizes one of appellant's joint bars, on each side of the rail ends, bolted together through the web of the aligned rail ends. The upper and lower shim portion bear against the underside of the rail head portion and the upper face of the rail foot portion, respectively, while the inwardly facing shim portions bear against the webs of the joined rail ends.

Appellant has summarized the invention in his brief as relating to "*a prefabricated unitary joint bar and shim for use on railway rails.*"

Appealed claim 6 reads as follows:

A preassembled consolidated shimmed rail joint bar unit for simplifying the handling of such consolidated units prior to installation and also facilitating the safe positioning thereof into the related fishing spaces of railway rail ends during movement of the unit to operative position relative to said ends, comprising, in combination, a joint bar having head and foot portions including upper and lower load bearing surfaces and inwardly facing non-load bearing surfaces, and

a metal shim having opposite wing portions, one of which wing portions is applied to a related load bearing surface and the other of which wing portions is disposed over an inner non-load bearing surface, and a sticky non-metallic glutinous substance between the load bearing surface of the bar and the contacting surface of the shim to immovably hold the shim thereto.

Appellant's position as to the invention thus claimed is stated in his brief as follows:

The integrated product defined by the single claim on appeal, provides, for the first time in the railway industry a shimmed rail joint bar which can be completely fabricated at a rolling mill and then distributed to the railroads as a complete unit, ready for installation in track on new rail, and at the required time, readily re-shimmed while saving the original bar in toto without removing it from the track site for re-forming or other operations, and permitting restoration without encountering the hazards incident to repairing a worn bar.

A shim shown in appellant's earlier Patent No. 2,702,161, like the shim here disclosed, is a long shim which extends the length of the rail joint bar. As distinguished from the presently claimed construction, the shim of appellant's prior patent is held in place on the rail joint bar by the resilient snap-on characteristics of the shim. In the presently claimed construction the shim is held in place by an adhesive bond. It is, therefore, only this adhesive bond feature which distinguishes the presently claimed invention over appellant's own prior patent.

The specification of the application on appeal, explains the problem existing in the art of connecting the ends of adjacent railway track sections by means of joint bars bolted thereto. It is pointed out, that in the normal life of a rail, at least two sets of joint bars will be required to connect the rail ends. This is a costly maintenance procedure and, as the specification points out,

* * * One way of meeting the problem has been to use separate shims on the head or head and base of the bar so that one set of joint bars can thus be reserviced to last the life of the rail. This practice of using separate metal shims as such, has not come into general or standardized use, not because it does not produce a better joint and effect economies, but because of the difficulty in installation and consequent cost caused by the handling of an increased number of separate parts.

Appellant also has pointed out in the specification what are asserted to be the objections to the general use of shims and which are here summarized as follows:

1. Installation is difficult and slow for track crew members who must hold the otherwise loose and separate shim properly in place during installation of the joint bar.

2. The use of the hands and fingers in this operation is hazardous because of the risk of having them mashed or cut, and tongs or other tools are impractical since they are awkward and in the way of assembly operations and do not contribute to accurate emplacement.

3. The separate head shims have a tendency to cock, skew or shift and, therefore, are seldom properly seated.

4. If the loose shims are applied to the head, or head and base, of the bar under present practice, they will shift either under their own weight or because of unbalanced frictional contact during the relative movement of parts to an undesired position.

5. Since the work is done by unskilled track crews, there is no assurance that the shim is properly located in the final installation.

Appellant asserts that the claimed invention overcomes the foregoing objections to the use of shims because of the allegedly novel combination he has disclosed.

The single figure of the drawings of the application shows a joint bar with a shim extending substantially throughout the length of the

load bearing face of the bar, the shim being attached by bonding material at its underside to the load bearing surfaces at the top and bottom of the bar to provide an integrated bar and shim, which may be made at a rolling mill, so that a new bar after it is rolled may be provided with a shim which will take the wear, and, when such wear becomes critical, the worn shims on the bars may be removed by breaking the adhesive bonds and by re-cementing a new shim thereon.

The bar with the worn shim may be reconditioned for further use by breaking the adhesive bond and removing the worn shim, after which a new shim is secured to the old bar by an adhesive bond which may be applied while the bar is loosened while in place. Thus re-shimmed, the old bar may then be tightened to the rail ends and its service life is extended by the new shim.

The references relied upon by the Examiner are:

Keough, 1,707,434, April 2, 1929.
Crowther, 1,874,462, August 30, 1932.
Fifield, 2,069,361, February 2, 1937.
Fink, 2,542,405, February 20, 1951.
Lansing, 2,702,161, February 15, 1955.
Ciba Ltd. (Australia), 133,819, August 10, 1949.

The Board relied primarily upon the Fifield, Crowther and Fink patents in its decision, so it is not necessary to discuss the other references in detail.

The Examiner in his answer took the position that the claim was unpatentable over Fifield in view of Crowther and additionally relied upon the patent to Fink. It was therefore the position of the Board that the Examiner had found the claim to be unpatentable over Fifield in view of Crowther or Fink.

The Fifield patent, No. 2,069,361, discloses a rail joint in which shims are interposed between the undersurfaces of the rail head and the upper load bearing surfaces of the joint bars. Each shim has a wing portion to overlie the inwardly facing non-load bearing surface of the joint bar head portion, and a load bearing wing portion tapered in thickness from mid-section to ends. To shim the worn joint, the tie bolts may be loosened, a shim for each joint bar slid lengthwise by means of the integral tab to the desired position between the rail head and head portion of the joint bar, and the bolts then retightened Each tab is then bent down and welded to the joint bar, "to hold the shim rigidly against displacement in the joint." The thick intermediate portion of the shim is located at the greatest point of wear, rarely at the actual joint or gap between the rails when load traffic is not the same in both directions. However, where the track is used for two-way traffic of like load, the shim position may be medial of the joint bar as shown in the drawing.

The patent to Crowther, No. 1,874,462, discloses bolts or nuts having lock washers adhesively secured in ultimate position thereto, to obviate assembly therewith at the work site.

The patent to Fink, No. 2,542,405, discloses a connecting rod bearing having selectively removable metal layers adhesively secured to the back side thereof, to facilitate fitting the bearing to an undersized or worn shaft.

In its decision, the Board agreed with the Examiner that claim 6 is unpatentable over Fifield in view of Crowther or Fink. The Board stated:

> It is our opinion that the Fifield shim and joint bar could be preassembled in those situations where adjustment was deemed unnecessary [two-way traffic with like load] and that such preassembly of parts would be obvious to a person of ordinary skill particularly in view of the teaching of Crowther and Fink.

With regard to attachment of Fifield's shim to his joint bar as a preassembled unit, the Board stated that "it would be obvious to use conventional adhesive means such as used by Crowther and Fink for instance." The Board observed that the recited "sticky non-metallic glutinous substance" was simply a dictionary definition of "adhesive," which was the term originally employed by appellant and used by both Crowther and Fink.

It is appellant's position that the Fifield reference does not disclose the claimed combination and that the Crowther and Fink references are from remote and non-analogous arts. In his brief the argument is stated as follows:

> * * * the single claim involved is a *combination* claim. The patentability of claims of this type does not depend solely upon the finding of a new result or an unobvious result. It is fundamental that a combination of old elements that produces a new and beneficial result may be patentable. The new, practical and advantageous results are dwelt upon in the original specification and elsewhere in this brief.
>
> Appellant predicates patentability of his claim on the *combination of a rail joint bar and a shim preassembled to provide a consolidated shimmed rail joint bar* wherein the metal shim is *permanently* fixed to the bar as a stage in original manufacture and before installation.

If we are to support the rejection, based on 35 U.S.C. 103, we must find that the invention as a whole would have been obvious at the time the invention was made to one of ordinary skill in the art involved.

The primary reference relied upon by the Examiner and the Board is the Fifield reference. It is admitted, as argued by appellant, that this reference does not disclose the claimed combination. The shim and the rail bars disclosed by Fifield are not connected to form a preassembled consolidated shimmed rail joint bar such as applicant has provided. [1] 35 U.S.C. 103 applies, however, to the situation where "the invention is not identically disclosed or described as set forth in section 102 of this title" and requires that a determination be made as to whether "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious."

The issue we must decide, therefore, is whether it would have been obvious to one of ordinary skill in this art with the Fifield disclosure before him, to unite the loose shims to the rail bar by means of an adhesive disclosed in the Crowther and Fink references in which metal to metal surfaces are joined by an adhesive to form a single unit for ultimate use. The screw and lock washer of Crowther and the bearing shim laminates or layers of Fink are each unitary, preassembled combinations of the individual elements in the same sense that appellant's attached preassembled shim and rail bar is a combination of its individual elements.

Fifield secures shims to rail bars by bending the tabs of the shims and welding them to the rail bar. While there are differences between Fifield and appellant as to the time when the shims and the rail bars become a single prefabricated unit, we think Fifield clearly teaches such a combination. Appellant urges that since the Fifield construction will not provide a shim long enough to cover the entire

rail joint bar, it is not a satisfactory solution for the problem presented in the art. It is appellant's position that the placement of Fifield's shorter shims can be effective only if such shims are tab welded as taught by Fifield. Appellant then argues that such a construction is not practical because of failure of the welds in service. We find, however, no basis in Fifield which warrants appellant's suggestion that the weld for the tab might fail under conditions of use. It is apparent that appellant's shim, as well as Fifield's, is subject to compressive forces exerted by the rail ends and joint bar and we see no reason to assume that one would be any more likely to succeed than the other in maintaining the shims on the rail bars under such conditions.

The function of the shim in bringing the joint bar to full effective size is the same in appellant's and Fifield's joints. The question then is not whether a new combination or mode of operation is presented, but rather whether it would be obvious to make the substitution of appellant's shim securing means in the old Fifield combination.

It seems to us that the Fifield shim and joint bar could be secured together as a preassembled unit by use of an adhesive and that such preassembly by use of an adhesive would be obvious to a person of ordinary skill in the art, in view of the uses made of adhesives in Crowther and Fink to provide preassembled units of otherwise separate elements.

[2] For the foregoing reasons, we affirm the decision of the Board of Appeals.

AFFIRMED.

MARTIN, *J.*, sat but did not participate because of illness.

U.S. Court of Customs and Patent Appeals

IN RE ADOLPH WOLFENSPERGER

No. 6790. Decided May 18, 1962

[49 CCPA—; —F.2d—; 133 USPQ 537]

1. APPLICATION—DISCLOSURE—SUFFICIENCY OF DISCLOSURE—*Brand* v. *Thomas* CONSTRUED.

"The Patent Office cites * * * this court's decision of *Brand* v. *Thomas*, 125 CCPA 1053, 96 F.2d 301, 37 USPQ 505, wherein this court said that a 'Lack of clear disclosure is not supplied by a speculation as to what one skilled in the art might do or might not do if he followed the teaching of the inventor.' These words, however, are a two-edged sword. Using the reasoning of the *Brand* case, we find that a disclosure, unequivocal in and of itself, may not be held wanting merely by reason of a *speculation* that one skilled in the art might interpret the teaching of the inventor in a remote and equivocal manner."

2. SAME—SAME—DRAWING.

"The Board's statement that 'drawings alone cannot form the basis of a valid claim' is too broad a generalization to be valid and is, furthermore, contrary to well-settled and long-established Patent Office practice. We cannot regard it as 'well established.' Consider, for one thing, that the sole disclosure in a design patent application is by means of a drawing. Rule 153. For another thing, consider that the only informative and significant disclosure in many electrical and chemical patents is by means of circuit diagrams or graphic formulae, constituting 'drawings' in the case. To put this matter in proper perspective, however, considerations must also be given to actual Patent Office practice, taken in conjunction with the fundamental requirement that the invention claimed must be disclosed, in terms comprehensible to one of ordinary skill in the relevant art."

3. SAME—SAME—AMENDMENT OF SPECIFICATION TO CONFORM TO ORIGINAL DRAWINGS—RULE 118.

"Patent Office Rule 118 authorizes, by implication at least, the amendment of the words in the written specification so as to add statements not originally contained in it to *conform* to originally filed drawings."

4. SAME—SAME—DRAWING—35 U.S.C. 132 AND RULE 118.

"The practical, legitimate enquiry * * * is what the drawing in fact discloses to one skilled in the art. Whatever it does disclose may be added to the specification in words without violation of the statute and rule which prohibit 'new matter.' 35 U.S.C. 132, Rule 118, for the simple reason that what *is* originally disclosed cannot be 'new matter' within the meaning of this law. If the drawing, then, contains the necessary disclosure, it *can* 'form the basis of a valid claim.'"

5. SAME—SAME—AMENDMENT OF SPECIFICATION TO SUPPORT LANGUAGE OF CLAIMS—RULE 75(d).

"This is not to say that the Patent Office, before permitting a patent to issue, cannot * * * enforce compliance with another requirement, found in its Rule 75(d), that 'the terms and phrases used in the claims must find clear support or antecedent basis in the description *so that the meaning of the terms in the claims may be ascertainable by reference to the description.*' * * * This matter is further elucidated in MPEP 608.01(o) which clearly contemplates that it may be necessary to change or add to the language of the specification so as to provide proper support for the language of 'new claims.'"

6. SAME—SAME—SUFFICIENCY OF DISCLOSURE.

In determining whether there is supporting disclosure in an application, *Held* that "* * * it does not seem, under established procedure of long standing, approved by this court, to be of any legal significance whether the disclosure is found in the specification or in the drawings so long as it is there."

7. SAME—SAME—DRAWING—*In re Olson* CONSTRUED.

"In support of its view in the instant case that 'drawings alone cannot form the basis of a valid claim,' i.e., furnish supporting disclosure for a copied claim, the Board cites *In re Olson*, 41 CCPA 871, 212 F.2d 590, 101 USPQ 401. We have carefully considered that opinion and it is our view that it stands only for the proposition that if drawings which are relied on for supporting disclosure *do not in fact contain it*, then disclosure is lacking."

APPEAL from the Patent Office. Serial No. 521,495.

REVERSED.

Strauch, Nolan & Neale, and *James E. Nolan*, for appellant.

Clarence W. Moore (*George C. Roeming*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the Examiner's rejection of claim 33, the sole claim before us, "as failing to read on applicant's disclosed structure." Appellant presented claim 33 in his application Ser. No. 521,495, filed July 12, 1955, entitled "Ball Type Valve," requesting an interference on this claim with Kaiser Patent No. 2,868,498 issued January 13, 1959, from which patent the claim was copied.

Appellant's invention relates to a ball type valve "for use in large high pressure fluid pipe lines up to 30 inches and more in diameter." Appellant's valve contains a shut-off member in the form of a roughly spherical ball plug having a diametral bore therethrough. The plug is rotatable about an axis perpendicular to the bore. When the bore in the ball plug is in alignment with the axis of the pipe line with which it is used, the valve is fully open. When the plug is rotated

approximately 90° out of alignment with the pipe line axis, the valve is closed.

Claim 33 reads:

33. In a valve device, in combination, a valve housing member formed with a bore therethrough; a valve arranged in said housing member, said valve being formed with a passage therethrough and being movable between open and closed positions wherein said passage is in and out of registration with said bore, respectively; and sealing means interposed between said housing member and said valve, said sealing means including an annular sealing member coaxial with said bore of said housing member, said members being so shaped as to form between themselves *an annular chamber* of substantially rectangular cross-section bounded by an inner face, an outer face and two side faces, and *a packing ring* arranged in said chamber, said ring being made of a resilient material and being compressed between said side faces of said annular chamber and *having, in untensioned condition, a mean diameter corresponding approximately to the mean diameter of said chamber and a radial width smaller than the radial width of said chamber.* [Emphasis added.]

The sole question before us is whether the above italicized portion of appellant's claim is readable on his disclosed structure, one embodiment of which is reproduced in part below.

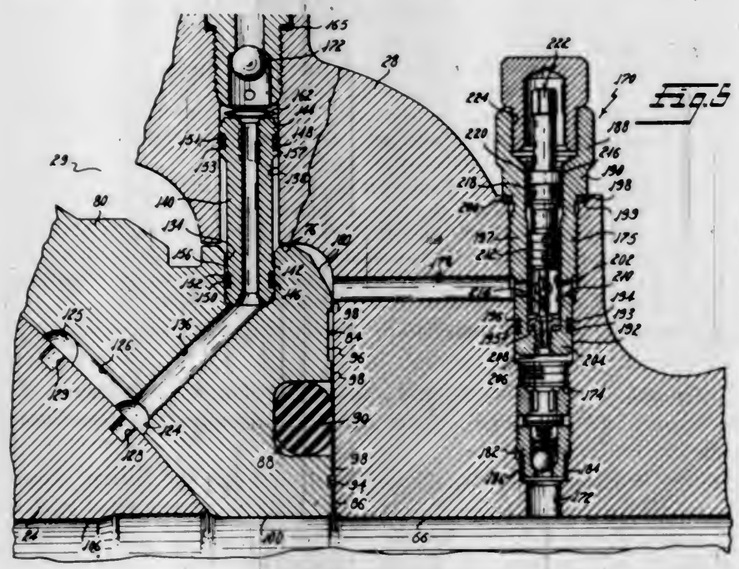


FIG. 5

The above drawing shows appellant's valve in the open position. Accordingly, fluid would tend to flow, if the high pressure side of the pipe line were to the right in the drawing, through openings 66, 100 and 106 in, respectively, valve housing 28, seat ring 80 and ball plug 24. The packing ring of the claim is shown in section at 90, seated in its annular chamber.[1] It is, when unstressed, of circular cross-section and is a large "O-ring."

The main functions of appellant's O-rings are set forth in his specification as follows:

When the valve is open the large O-rings at the end walls of the seat rings [appellant's device, in its entirety, has two such O-rings and seat rings], each having a cross-sectional diameter of approximately one inch and compressed in assembly approximately one-eighth inch, by their inherent resilience tend to center the seat rings and ball inside the valve body cavity with equal clearance between the back face of each seat ring and its valve body seat. The O-rings also provide a fluid tight seal between the back face of the seat ring and the valve body * * *. In valve closed condition the resilient upstream O-ring holds the upstream seat ring in full surface contact with the ball and away from the valve body, and permits line fluid pressure to enter and bias the seat ring against the ball.

The Kaiser patent discloses, in FIG. 2 reproduced below,[1] O-ring 35 seated in chamber 34. In other figures the patent shows several modifications of this structure.

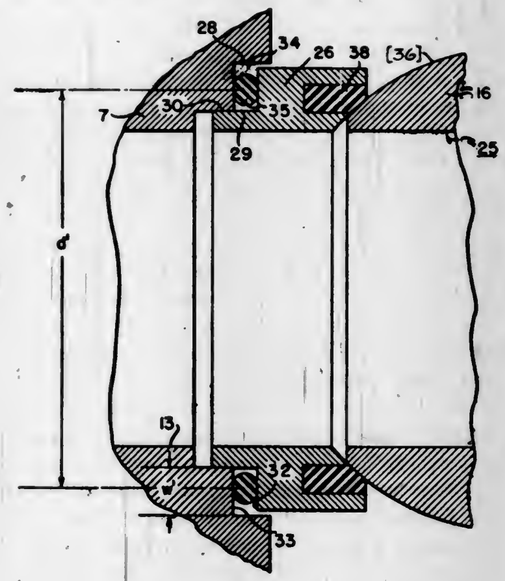


Figure 2 of Kaiser— 2,868,498

When inserted in this chamber, the cross-sectional diameter of O-ring 35 is such that (1) "the said O-ring exerts an elastic pressure on the annular piston 26 * * * and presses the annular piston against the surface 36 of the ball plug 16," and that (2) "the O-shaped packing ring 35 is arranged in the compartment 34 spaced from the inner and outer faces thereof when the packing ring 35 is in untensioned condition."[2]

With the above comments on the disclosures of appellant and Kaiser as a background, we now turn to the italicized portion of claim 33, supra.

As noted by the Board, this portion of the appealed claim recites two dimensional relationships, the first of which is that the "packing ring," in "untensioned condition," has "a mean diameter corresponding approximately to the mean diameter of said chamber." Looking at appellant's FIGURE 5, it is obvious that the ring *as shown* does have a mean diameter corresponding approximately to the mean diameter of the annular chamber formed by channel 88 and surface 84. The point raised by the Patent Office as to this disclosure, however, is that there is *no evidence* that the O-ring 90 *as it appears in*

[1] This reproduction is from appellant's brief and he has added some reference numerals (taken from other figures) and the dimension lines d' and w'. Ring 35 has mean diameter d' and compartment 34 has width w'.

[2] In the Kaiser structure, with the valve 16 closed and fluid attempting to flow outwardly through chamber 34 (to the right in FIG. 2), Kaiser discloses that O-ring 35 will be urged radially outward. Such radial expansion puts O-ring 35 under circumferential tension. In Kaiser, "untensioned condition," accordingly, refers to the condition of O-ring 35 when fluid pressure is *not* urging the O-ring to expand radially within chamber 34. However, for the purposes of deciding this case we do not limit it to that connotation and give it its ordinary meaning.

channel 88 is in "untensioned condition." The Board put it this way:

• • • it is our opinion that the same symmetrical cross section would be obtained if the mean diameter of the untensioned ring were *smaller* than that of the chamber, *the ring being installed in the chamber by suitably stretching.* [Emphasis ours.]

[1] The Patent Office cites in support of its position this court's decision of *Brand* v. *Thomas*, 25 CCPA 1053, 96 F.2d 301, 37 USPQ 505, wherein this court said that a "Lack of clear disclosure is not supplied by a speculation as to what one skilled in the art might do or might not do if he followed the teaching of the inventor." These words, however, are a two-edged sword. Using the reasoning of the *Brand* case, we find that a disclosure, unequivocal in and of itself, may not be held wanting merely by reason of a *speculation* that one skilled in the art might interpret the teaching of the inventor in a remote and equivocal manner. We find nothing in the disclosure of appellant, or elsewhere in the record, to suggest that one skilled in the art would place in appellant's "chamber" of FIG. 5 and O-ring which had to be stretched to fit the groove and which would, in consequence, be in tensioned condition. Indeed, it seems to us that the Patent Office is stretching its imagination to find a lack of disclosure in this regard. We cannot agree with the Board that appellant does not disclose the first-noted dimensional relationship. We do not think it was incumbent on the applicant to state, in respect of every O-ring in his structure, that it was so sized as to be untensioned when put in place. One would normally expect that to be the case.

The second dimensional relationship recited in claim 33 which the Patent Office considered not supported by appellant's disclosure is that, in untensioned condition, the packing ring has "a radial width smaller than the radial width of said chamber" (*w'* in Kaiser FIG. 2, supra).

In the partially flattened condition shown in appellant's FIG. 5, supra, packing ring 90 is shown as having a radial width which is the same as that of the chamber, which is the width of the annular groove 88 (the vertical dimension as shown in the drawing). However, in that showing the O-ring is not "untensioned." It is compressed almost to the full extent possible. The only problem in finding support for this claim limitation in appellant's disclosure arises from having to decide what one skilled in the art would understand the relative radial widths of the O-ring and the groove to be when the O-ring is in its uncompressed condition, a state nowhere illustrated in the drawings. The simple question which must be answered is whether it would be apparent to one skilled in the art that, on the basis of the whole disclosure, the ring's cross-sectional diameter when relaxed would be less than the radial width of "said chamber," i.e., less than the dimension in appellant's structure corresponding to dimension *w'* in Kaiser FIG. 2, supra.

On this point the Board said:

• • • appellant refers to FIGURE 5 of his drawings and contends that if the axial depth of the chamber, which is disclosed as ⅞ inch, is used to establish the scale of FIGURE 5, the radial depth measured on the same scale is 1⅛ inches, and since the cross-sectional diameter of the untensioned ring is disclosed as being 1 inch, the relationship claimed is shown in FIGURE 5. This argument is not convincing, since it is well established that drawings alone cannot form the basis of a valid claim. *Thompson* v. *Dicke*, 27 CCPA 931; 517 O.G. 564; 110 F.2d 98; 1940 C.D. 269. *In re Olson*, 41 CCPA 871; 685 O.G. 700; 212 F.2d 590; 101 USPQ 401; 1954 C.D. 167.

[2] The Board's statement that "drawings alone cannot form the basis of a valid claim" is too broad a generalization to be valid and is, furthermore, contrary to well-settled and long-established Patent Office practice. We cannot regard it as "well established." Consider, for one thing, that the sole disclosure in a design patent application is by means of a drawing. Rule 153. For another thing, consider that the only informative and significant disclosure in many electrical and chemical patents is by means of circuit diagrams or graphic formulae, constituting "drawings" in the case. To put this matter in proper perspective, however, consideration must also be given to actual Patent Office practice, taken in conjunction with the fundamental requirement that the invention claimed must be disclosed, in terms comprehensible to one of ordinary skill in the relevant art.

[3] Patent Office Rule 118 authorizes, by implication at least, the amendment of the words in the written specification so as to add statements not originally contained in it to *conform* to originally filed drawings. Commenting on that rule, the Manual of Patent Examining Procedure, 3rd Ed. (MPEP), says, 608.04 (repeating a statement in 608.01(1):

In establishing a *disclosure* applicant *may rely* not only *on the* specification and *drawing* as filed but also on the original claims if their content justifies it. [Emphasis ours.]

[4] The practical, legitimate enquiry in each case of this kind is what the drawing in fact discloses to one skilled in the art. Whatever it does disclose may be added to the specification in words without violation of the statute and rule which prohibit "new matter," 35 U.S.C. 132, Rule 118, for the simple reason that what *is* originally disclosed cannot be "new matter" within the meaning of this law. If the drawing, then, contains the necessary disclosure, it *can* "form the basis of a valid claim."

[5] This is not to say that the Patent Office, before permitting a patent to issue, cannot at the same time enforce compliance with another requirement, found in its Rule 75(d), that "the terms and phrases used in the claims must find clear support or antecedent basis in the description *so that the meaning of the terms in the claims may be ascertainable by reference to the description.*" [Emphasis ours.] This matter is further elucidated in MPEP 608.01(o) which clearly contemplates that it may be necessary to change or add to the language of the specification so as to provide proper support for the language of "new claims." It says:

While an applicant is not limited to the nomenclature used in the application as filed, yet whenever by amendment of his claims, he departs therefrom, he should make appropriate amendment of his specification so as to have therein clear support or antecedent basis for the new terms appearing in the claims.

This would appear to be particularly applicable to situations, such as that at bar, where the applicant copies a claim from the patent of another, since it is unlikely that independent specification writers will use identical language in describing even identical embodiments of an invention. A copied claim is, in a mechanical case, almost certain to use terminology which will not find "antecedent basis" in the application of the one who copies it. But that is not the issue. [6] The issue here is whether there is supporting "disclosure" and it does not seem, under established procedure of long standing, approved by this court, to be of any legal significance whether the disclosure is found in the specification or in the drawings so long as it is there.

McCrady, Patent Office Practice, Fourth Edition (1959), states in Sec. 54 (p. 77):

> Matter disclosed in the drawing alone, and not described in the specification as filed, has been held sufficient to support valid claims.

One of the cases cited in the footnote in support of that statement is this court's decision in *Kendall* v. *Searles*, 36 CCPA 1045, 173 F.2d 986, 81 USPQ 363, wherein one issue, raised throughout the interference by Kendall's motion to dissolve on the ground that Searles' disclosure did not support the counts, was whether Searles disclosed a ball-bearing, molded-plastic pulley wherein the parts were concentric and in axial alignment. This court said:

> The Board noted that appellee [Searles] made no statement in his specification about accurate concentric and axial alignment of the pulley work surface and the bearing raceway. The Board further noted, however, that it appeared from appellee's drawings that such alignment was present * * *.
>
> The limitations of the counts appear to be clearly disclosed by appellee. His drawings show that all parts of his construction are concentric, * * *. Accordingly, the court finds no manifest error in the concurring decisions of the tribunals of the Patent Office with respect to their disposition of appellant's motion to dissolve the interference.

[7] In support of its view in the instant case that "drawings alone cannot form the basis of a valid claim," i.e., furnish supporting disclosure for a copied claim, the Board cites *In re Olson*, 41 CCPA 871, 212 F.2d 590, 101 USPQ 401. We have carefully considered that opinion and it is our view that it stands only for the proposition that if drawings which are relied on for supporting disclosure *do not in fact contain it*, then disclosure is lacking. The structure recited in Olson's claim and alleged not to be supported by his disclosure was equal spacing of certain ball seats in a self-sealing hydraulic fluid line coupling. The Board pointed out that "the distances and dimensions involved are of the order of *a few thousandths of an inch* and it appears obvious that the drawing alone cannot be scaled off, *under these circumstances*, to show that any particular distances or sizes are exactly equal when the specification is completely silent in this respect." [Emphasis ours.] That is the decision this court affirmed. We do not find in that decision any support for the broad rule stated by the Board in the instant case. We note, in passing, that the Patent Office Board of Appeals, as appears from its opinion in the record on file in this court, said, "* * * while we agree with appellant that it is proper, under certain circumstances, to amend the specification to include subject matter shown in the drawing, we do not agree with him that this is proper in the present application." This immediately precedes the passage from the Board opinion quoted in the *Olson* opinion. The Solicitor's brief (p. 6) also admitted, "Had any * * * clearly disclosed features been neither disclosed nor claimed in the original application, claims could have been added to these features, and the specification amended to describe them."

The other case cited by the Board is *Thompson* v. *Dicke*, 27 CCPA 931, 110 F.2d 98, 44 USPQ 514. There too we find the situation to have been, not that drawings cannot *contain* supporting disclosure by themselves, but that the drawings before the court did not in fact contain it. There was great diversity of opinion on this fact issue, the Examiner and the Board twice disagreeing on the matter and this court finally agreeing with the Examiner, basing its decision on the findings that the drawing was "vague and non-informative" while the specification "contains no express teachings."

In this phase of patent prosecution, the question is not whether an applicant has put his application in such condition that a patent can properly be issued to him but, rather, whether his original disclosure shows with sufficient clarity that he was in possession of an invention being claimed by someone else so as to establish his right to make the claim *and* to so amend his application, without adding anything new in the way of subject matter, that a patent *might* be issued to him containing such claim.

Before leaving this point of law, we think it well to mention that we are not unaware of the existence of a sentence in one of this court's opinions, not referred to by the Board or in the Patent Office brief, which closely parallels what the Board said in this case. In *Vickery* v. *Barnhart*, 28 CCPA 979, 118 F.2d 578, 49 USPQ 106, at CCPA p. 988, the court said:

> It is well established that drawings alone in a patent application cannot form the basis of a valid claim, and the fact that "There is nothing in the specifications * * * to refute this showing" (of the drawing) is immaterial.

The phrase quoted by the court was from appellee's argument. The court did not say when or wherein it had been so "well established" except to quote extensively from concluding obiter dictum in the opinion in *Permutit Co.* v. *Graver Corp.*, 284 U.S. 52, 60. We have carefully considered the *Permutit* case without finding a sound basis for the broad conclusion above quoted. In *Permutit* the Supreme Court predicated its decision on a finding that the invention being asserted by the plaintiff as patentable over the prior art—the use in a water softener of a "free" as distinguished from a "locked" bed of zeolites—was nowhere either disclosed *or claimed* in the patent in suit. It held the patent invalid for failure to comply with R.S. 4888 (predecessor to 35 U.S.C. 112). We do not, therefore, regard the above passage in the *Vickery* case as sound law. As to the facts respecting the drawings involved in that case, the Examiner of Interferences based his view on his finding that, "The dimensions in the drawing are so close that any difference in the minimum diameters [as claimed] could be attributable to a draftsman's error."

We cannot, for the reasons above stated, accept the assumed legal basis for the Board's decision, because we deem it to be nonexistent, and turn now to the fact issue as to whether there is disclosure in appellant's application to support the count limitation that "in untensioned condition" the O-ring has "a radial width smaller than the radial width of said chamber," referring to the chamber in which it is positioned when in use. This entails a consideration of the combined disclosure of the specification and drawings of appellant's application, for appellant does not rely on the drawings alone. His contention is "that there is a clear, correlated pictorial and descriptive dimensional disclosure."

The specification states:

> *The drawings illustrate* a thirty inch sphere valve *embodiment* wherein the *relative dimensions* and various structural reinforcing ribs and members having [sic] been designed for use in a specific system. [Emphasis ours.]

In the drawings, FIG. 5, copied above in part, is but one of four substantially identical illustrations of the O-ring seal in question, the relative dimensions in particular being the same throughout the drawings which, it can be observed, are not in the least sketchy or diagrammatic in character. These showings of the seal are enlarged,

carefully drawn details wherein the relative width and depth of groove 88 is clearly shown.

The specification states:

When the valve is open the large O-rings at the end walls of the seat rings, each having a cross-sectional *diameter of approximately one inch* and *compressed* in assembly approximately *one-eighth inch*, by their inherent resilience tend to center the seat rings and ball inside the valve body cavity with equal clearance between the back face of each seat ring and its valve body seat. The O-rings also provide a fluid tight seal between the back face of the seat ring and the valve body • • •

• • • • • • •

O-rings 90 which when relaxed are preferably of *circular cross-section* are of a sufficient diameter relative to the depth of grooves 88 to result in their compression between the seat rings 78 and 80 and the valve body recesses in the assembly by an amount greater than the total relative axial displacement between the seat rings and the plug and the body. [Emphasis ours.]

The Patent Office Solicitor admits that, "From the foregoing it is obviously deducible that the groove 88 is approximately 7/8 inch deep." Based on this obviously deducible fact and the statement, which is not disputed, that the cross-sectional diameter of the O-ring when relaxed is one inch, appellant says one skilled in the art would know that the relaxed ring was of less diameter than the radial width of groove 88 and so meets the claim limitation. To demonstrate how this would be known, the following diagram "FIGURE A" has been submitted, first with an affidavit of Paul A. Manor, Chief Engineer of the company which is assignee of the application at bar, and again in the brief.

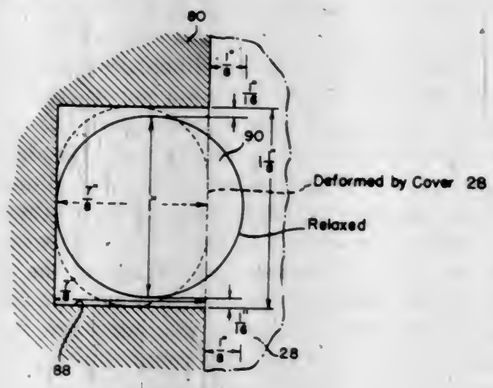


Figure A

What the above diagram shows, in brief, is that if the depth of groove 88 is 7/8 inch, the drawings clearly show, and consistently throughout the several figures, that the radial width of groove 88 must be about 1 1/8 inch and therefore that a one-inch O-ring would be of less width. The dotted outline 90 shows the O-ring as it is illustrated in the application drawings and the solid circle 90 shows how it would look when released from tension. We find this argument convincing. We also find that it reasonably supports the opinions expressed in the Manor affidavit that this is what one skilled in this art would be taught by the application.

The principal counter argument of the Solicitor is to the effect that appellant has no right to rely on the drawings for the relative width and depth dimensions which they show, for the reason that "patent application drawings are not presumed to be drawn to scale or correct proportion." Only the *Olson* case, supra, is cited to support this proposition. We find nothing therein, however, which raises a presumption that drawings such as those here are not drawn to scale with reasonable accuracy or that four enlarged detailed figures consistently showing the same relative proportions must be ignored. We think the showing of the drawings can be relied on to the extent they have been by applicant.

The decision of the Board is reversed.

REVERSED.

MARTIN, *J.*, sat but did not participate because of illness.

U.S. Court of Customs and Patent Appeals

IN RE NEAL A. PENNINGTON

No. 6777. Decided May 18, 1962

[49 CCPA—; —F.2d—; 133 USPQ 530]

1. PATENTABILITY—INVENTION—OBVIOUSNESS—ADVANTAGES OVER PRIOR ART—35 U.S.C. 103.

"While the claimed structure may possess advantages over the prior art structures, it does not, in our opinion, claim a structure which would have been unobvious to one of ordinary skill in the art. 35 U.S.C. 103."

2. SAME—REFERENCE—CONSTRUCTION OF REFERENCE—REFERENCE DISCLOSURE OF "SUITABLE HYGROSCOPIC MATERIAL."

"Newton et al. disclose the use of a 'suitable hygroscopic material.' As a teaching to one of ordinary skill in this art, the Examiner and the Board suggested that this would include both blotter paper or common cardboard as 'hygroscopic materials.' In objecting to this suggestion, appellant contends that such suggestion is contrary to the affidavit of Dr. Robert S. Taylor. Appellant argues that the affidavit shows, on the basis of affiant's knowledge of air conditioning systems at the time when the Newton et al. patent application was filed that silica gel, which cannot be made into corrugated sheets, was used in the moisture transferrer of Newton et al. Whatever might have been the hygroscopic material used in the art in actual practice, Newton et al. disclose nothing to limit their 'suitable hygroscopic material' to the materials then used in actual practice, or to any particular material."

3. SAME—PARTICULAR SUBJECT MATTER—"COMBINED HUMIDIFIER-DEHUMIDIFIER."

The decision of the Board of Appeals refusing a claim in an application entitled "Combined Humidifier-Dehumidifier" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 473,509.

AFFIRMED.

Eric Y. Munson, *Albert W. Rinehart*, *Lowry & Rinehart* (*Oliver S. Titcomb* and *Curtis, Morris & Safford* of counsel) for appellant.

Clarence W. Moore (*Joseph F. Nakamura* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

The Board of Appeals affirmed the Examiner's rejection of claim 33 of appellant's application for patent Serial No. 473,509, filed December 7, 1954, for improvements in a "Combined Humidifier-Dehumidifier." The rejection, based on 35 U.S.C. 103, is that the claimed invention would have been obvious to one of ordinary skill in view of the references which are:

Newton et al., 2,200,243, May 14, 1940.

Farr, 2,286,480, June 16, 1942.

The single claim on appeal reads as follows:

33. A humidity changer for air conditioning, comprising; two air passages; means for impelling air through each of said passages; a moisture transferrer comprising a packing composed of corrugated sheets of non-metallic fibrous material, impregnated with a non-volatile hygroscopic substance, a structure for supporting said packing to position the corrugations to extend through the transferrer in the direction of air-flow, thereby dividing the packing into mutually-supporting small passageways having common partition-walls extending through the transferrer, and being open at both ends to allow the flow of air therethrough; means for moving said transferrer cyclically across said passages; and heating means in one of said passages to regenerate the transferrer.

The sole issue is whether the Board was correct in holding that:

Given the Newton et al. and Farr patents, we consider it would be obvious to workers in the art to increase the contact area in the Newton et al. wheel by making it of corrugated sheeting as taught by Farr while still using hygroscopic material as desired by Newton et al. for its moisture absorbing function. Impregnating the material with any known non-volatile hygroscopic substance to increase its hygroscopic property involves only skill and is not a patentable expedient.

Appellant's invention is a humidity exchanger for conditioning air by transferring moisture from one stream of air to another. In the embodiment shown in the drawing and described in the specification, the moisture transferrer removes moisture from an air stream in one passage and transfers it to an air stream in another passage. For example, a stream of air to be dehumidified, such as air entering a building, passes through one passage where the moisture transferrer absorbs moisture from the air. The other stream of air, such as air being exhausted from the building, passes through another passage where it removes the previously absorbed moisture from the moisture transferrer.

Appellant's "moisture transferrer," in one embodiment, is a wheel carrying hygroscopic or moisture absorbing material. This wheel revolves on an axis parallel to both air streams and intersects the streams so that the air flows axially through part of it. The air streams are located on opposite sides of the axis of rotation. The hygroscopic material has a greater affinity for water vapor than the air to be dehumidified so that moisture from such air is taken up by the transferrer. The other stream of air is heated to a temperature at which it has a greater affinity for water vapor than the hygroscopic material so that the latter loses moisture to the air in such stream. Stated another way, the stream of air to be dehumidified has a much higher relative humidity than the second stream of air. Moisture flows from the air to be dehumidified to the moisture transferrer and then from the latter to the heated air in the second stream. Each portion of the moisture transferrer is moved continuously in a closed circuit through the separate streams of air successively to first remove moisture from the air to be dehumidified and then transfer it to the other stream of air and so on.

The humidity changer as thus far described is, as admitted by appellant, similar to the disclosure in the patent to Newton et al. Applicant's improvement as defined in claim 33 is directed to a new combination of elements including an improved packing for the moisture transferrer "composed of corrugated sheets of a non-metallic fibrous material," one form of which is disclosed as "corrugated asbestos paper or the like" impregnated with "some appropriate solution of a hygroscopic liquid or salt." The packing is supported

to position the corrugations in the cylinder so as to extend axially through the transferrer in the direction of air flow, thus dividing the packing into mutually supporting small passageways having common partition walls extending through the transferrer. The small passageways are open at both ends to allow the air of the separate streams to flow therethrough.

Appellant asserts that claim 33 covers a humidity changer which is distinguished from the references either singly or combined:

• • • by defining among other elements in a humidity changer, a moisture transferrer comprising *a packing composed of corrugated sheets of non-metallic fibrous material, impregnated with a non-volatile hygroscopic substance*, a structure for supporting said packing to position the corrugations to extend through the transferrer in the direction of air flow, thereby dividing the packing into mutually-supporting small passageways having common partition walls extending through the transferrer, and being open at both ends to permit the free flow of air therethrough. [Emphasis added.]

[1] While the claimed structure may possess advantages over the prior art structures, it does not, in our opinion, claim a structure which would have been unobvious to one of ordinary skill in the art. 35 U.S.C. 103.

It is clear that the identical structure of claim 33 is not disclosed in the prior patents to Newton et al. and Farr, since neither one discloses a packing of thin sheets of non-metallic fibrous material impregnated with a hygroscopic substance. However, the patent to Newton et al., discloses dehumidifying means for an air conditioning system comprising a freely rotatable dehumidfying wheel having its upper portion extending into and across an upper air passage and its lower portion extending into and across a drying and reactivating chamber. The Newton et al. dehumidifying wheel is formed of "a suitable hygroscopic material" for absorbing moisture from air and is provided with axially extending passageways for air to flow through the wheel. Fresh air and return air from a room are drawn through the upper air passage by a fan and flow through the passageways in the dehumidifying wheel where moisture in the air is absorbed. As the dehumidifying wheel rotates, portions thereof which have absorbed moisture pass out of the upper air passage into the lower drying and reactivating chamber where air, heated by a heating element, is blown through the passageways in the wheel to drive off absorbed moisture.

The Farr patent discloses an "Air Purifier or Conditioner" comprising a wheel-like purifier element continuously wetted with water and mounted to rotate in a duct through which air to be purified and humidified is drawn by a fan. The wheel-like purifier element comprises a corrugated web and a flat web of "preferably wire mesh of fine gauge" wrapped spirally around a drum to form from the corrugations a large number of air channels or passages inclined to the direction of air flow. Such construction provides an "extraordinarily large superficial area" for contact with the air to remove impurities and add moisture thereto.

Farr, in discussing the material from which the body of the wheel is constructed states in the specification, that:

• • • This body 6 is so formed that it presents a multiplicity of air passages or channels through which the air passes in passing through the flue.

The principal advantage claimed by appellant is the use of corrugated sheets of non-metallic fibrous material positioned on a support with the corrugations extending in the direction of air flow to divide

the packing into small, open-ended air passageways having common partition walls, thus providing a larger surface area per unit of volume for contact with air and a larger cross-sectional area for the flow of air than Newton et al. would provide. It is evident that claim 33 actually distinguishes over Newton et al. in requiring a greater number of air passageways, and hence, a greater area for contact with air than Newton et al. would appear to provide.

The idea of using sheet material which has been corrugated and wound into a roll on a support to form a large number of air passages, and thus, to provide a very large area for contact with air, seems to us expressly taught by Farr. That teaching, the Examiner and the Board held, would suggest to workers in the art of air conditioning the idea of using corrugated sheet material to increase the number of air passageways, and, thus, the contact area, in the moisture transferrer of Newton et al.

Appellant challenges the holdings of the Examiner and of the Board as to what the Farr patent would teach to one of ordinary skill in this art, and states:

> The Farr patent does not disclose a humidity changer. The Farr patent could not be used as a humidity changer for absorbing moisture from a stream of air. The patentee Farr states that the web of wire mesh (R. 80, col. 1, lines 10 and 14), can be soldered which, it is submitted, constitutes a disclosure that the wire mesh is metallic and would transmit heat from one portion of the wheel to the other and thereby defeat the purpose of a moisture transferrer of the kind defined in appellant's claim 33. Furthermore, the perforate reticulated wire mesh body of the Farr patent would permit moisture to flow through the openings from one side of the wheel or body to the other and thereby prevent any absorption of moisture at one side of the wheel.

We think that appellant's argument ignores the express teaching of Farr that a large number of air passageways and a very large contact area can be provided by using corrugated material wound into a roll. Clearly, that teaching is not dependent upon the use of metallic sheets, nor is it dependent upon whether the device functions to remove impurities from the air or to transfer moisture to the air. Where a large number of air passageways for transferring large amounts of moisture is contemplated, one of ordinary skill in the art could be expected to look to expedients, such as Farr teaches, for providing that result. Moreover, in seeking to increase the capacity for transferring moisture both to and from the air, one skilled in this art would, it is believed, turn naturally to the art of transferring moisture *to*, as well as to the art of transferring moisture *from*, an air stream.

Appellant has directed our attention to the limitation in claim 33 that the sheets are formed of a "non-metallic fibrous material." [2] Newton et al. disclose the use of a "suitable hygroscopic material." As a teaching to one of ordinary skill in this art, the Examiner and the Board suggested that this would include both blotter paper or common cardboard as "hygroscopic materials." In objecting to this suggestion, appellant contends that such suggestion is contrary to the affidavit of Dr. Robert S. Taylor. Appellant argues that the affidavit shows, on the basis of affiant's knowledge of air conditioning systems at the time when the Newton et al. patent application was filed that silica gel, which cannot be made into corrugated sheets, was used in the moisture transferrer of Newton et al. Whatever might have been the hygroscopic material used in the art in actual practice, Newton et al. disclose nothing to limit their "suitable hygroscopic material" to the materials then used in actual practice, or to any particular material.

This court, in considering a similar contention raised in *In re Liebergeld et al.*, 20 CCPA 1031, 64 F.2d 541, 17 USPQ 344, refused to interpret the express teaching of "*power mechanism*, such as a hydraulic cylinder," in a reference patent as being limited to a hydraulic cylinder, which, the appellants urged, was shown by an affidavit of record to be the power mechanism used in actual practice. The court there held that whatever may have been the actual practice, the language, "such as a hydraulic cylinder," in the patent merely pointed to one form of power mechanism and did not limit the patent to that form. Similarly here, whatever may have been the actual practice is not determinative of what Newton et al. actually teach.

What would constitute a "suitable hygroscopic material" as disclosed by Newton et al. would obviously depend upon factors such as the desired contact area. Where a large contact area is desired, it would be obvious, as taught by Farr, to use corrugated sheets. Selection of a fibrous, non-metallic material capable of being impregnated with a hygroscopic substance is well within the skill of the art. That blotter paper and common cardboard are fibrous, non-metallic, and absorbent, and hence, are capable of being so impregnated, is a matter of common knowledge. Such materials clearly meet the limitation of claim 33 to "non-metallic fibrous material."[1] Impregnating the fibrous material seems to us, as it was held by the Board, to be an obvious expedient known to one of ordinary skill in this art for increasing hygroscopicity.

Appellant argues that the problems involved in the Newton et al. and Farr patents are entirely different, and, therefore, under the asserted authority of *In re Pennington*, 44 CCPA 789, 241 F.2d 750, 113 USPQ 81, those patents have been improperly combined. We agree with the Board's disposition of that argument. It pointed out that Newton et al. and Farr involve the same problem of providing a large area of contact between air passageways in a moisture transferrer and the air, and the same ultimate problem of transferring moisture to air.

[3] For the foregoing reasons, we affirm the decision of the Board of Appeals.

AFFIRMED.

MARTIN, *J.*, sat but did not participate in decision.

United States District Court for the District of Columbia

GERBER PRODUCTS COMPANY

v.

DAVID L. LADD, COMMISSIONER OF PATENTS

Civil Action No. 2748–60. Decided February 2, 1962.

1. TRADEMARK—CONFUSING SIMILARITY—"MODALAC" AND "MODILAC" FOR MODIFIED LIQUID MILK PRODUCTS.

Upon review of the refusal to register applicant's mark "MODILAC" for a modified milk formula for infants especially in liquid form, the formula being prepared from cow's milk, butterfat removed, replaced by corn oil and the formula being modified with supplements including vitamins A, B_1, B_6, C, and D, because of the prior registration of the trademark "MODALAC" for a modified fluid milk product of low fat content with the addition of

[1] The affidavit describes appellant's apparatus as a "transfer wheel made of *corrugated paper sheets* impregnated with an absorbent * * *" [Emphasis added.]

vitamins A and D, the trademark being distinctively printed with a materially enlarged first A, the lower ends of the A being extended horizontally outwardly thereof to underline the letter groups OD and LA and with the M intermediate in size between the larger A and the other letters, *Held* that "It is likely that a mother seeing in a supermarket refrigerator the fluid modified milk product of Kennedy's Dairy, Inc., identified by the mark 'MODALAC' printed as in the registration therefor, would conclude that that product has the same origin as the plaintiff's liquid modified milk product, identified by the mark 'MODILAC,' which, on the recommendation of a physician, she had previously obtained from unrefrigerated shelves in a drug store or a supermarket grocery store."

2. SAME—SAME—EFFECT OF APPLICANT'S PRIOR REGISTRATION.

In connection with the refusal to register applicant's mark "MODILAC" for a modified liquid milk formula prepared from cow's milk with the butterfat replaced by corn oil and supplemented with added ingredients including vitamins A, B_1, B_6, C and D, in view of the prior registration (Registration No. 542,980) in 1951 of the trademark "MODALAC" for a modified fluid milk product of low fat content with added vitamins A and D, the trademark being distinctively printed with an enlarged first A having the lower ends thereof extended to underline letters OD and LA and with the M intermediate in size between the larger A and the other letters, where the applicant asserts ownership of the trademark "MODILAC" (Registration No. 198,430), registered in 1925 and renewed in 1945, for tablets to be dissolved in fluids for producing food for infants and invalids, *Held* that "The matter of likelihood of confusion between plaintiff's mark 'MODILAC' used on the goods of Registration No. 198,438 and the mark 'MODALAC' of Kennedy's Dairy, Inc., used as in Registration No. 542,980 is a matter substantially different from that of likelihood of confusion between plaintiff's mark 'MODILAC' used on the goods of the instant application and the mark 'MODALAC' of Kennedy's Dairy, Inc., used as in Registration No. 542,980."

3. SAME—SAME—"MODALAC" AND "MODILAC" FOR MODIFIED LIQUID MILK PRODUCTS.

On the issue of confusing similarity between the applicant's mark "MODILAC" for a modified liquid milk formula having the butterfat replaced by corn oil with added supplements including vitamins A, B_1, B_6, C and D, and the previously registered trademark "MODALAC" for a modified fluid milk product of low fat content with added vitamins A and D, the trademark being distinctively printed with an enlarged first A having the lower ends thereof extended to underline letters OD and LA and with the M intermediate in size between the larger A and the other letters, *Held* that "As between the trademark 'MODALAC' printed and used as specified in Registration No. 542,980, and the mark 'MODILAC' printed and used as specified in plaintiff's instant application, confusion of purchasers as to origin would be likely to occur."

4. REVIEW BY THE U.S. DISTRICT COURT FOR THE DISTRICT OF COLUMBIA—CIVIL ACTION UNDER 35 U.S.C. 145—FINDINGS OF PATENT OFFICE NOT CLEARLY ERRONEOUS—TRADEMARK—CONFUSING SIMILARITY IN FINDING OF FACT.

"A finding by the Patent Office that there is likelihood of confusion as to origin in concurrent use of involved trademarks is a finding of fact. That finding may be overturned by the District Court only if it is clearly erroneous."

5. TRADEMARK—CONFUSING SIMILARITY—DIFFERENCE IN CHANNELS OF TRADE.

"Differences of environment of sales or of channels of trade for a registrant's and an applicant's goods are immaterial where the application for registration does not limit sales in any manner or to any particular stores or stations, it being well established that sales methods are subject to change at any time."

6. SAME—SAME—SAME.

"The fact of different channels of trade for a registrant's and an applicant's goods is immaterial where the purchasers and users of the goods of both may well be the same persons and where the goods and the marks are not so different as to preclude the impression that the goods have the same source or origin."

7. SAME—SAME—FEATURE ON LABEL NOT PART OF MARK IS IRRELEVANT.

"On the issue of likelihood of confusion between a registered mark and the mark of an application, a feature of a label or of a simulation of a label which is used on an involved product, but which is not shown in the application or the registration, is irrelevant."

8. SAME—SAME—LACK OF EVIDENCE OF CONFUSION.

"Lack of evidence of confusion does not preclude a holding of likelihood of confusion even in an inter partes case."

John G. Semmes for plaintiff.

Clarence W. Moore (*George C. Roeming* of counsel) for defendant.

HART, *J.*:

Findings of Fact

1. This is a civil action brought under 15 U.S.C. 1071 and 35 U.S.C. 145 in which plaintiff, Gerber Products Company, as the applicant in an application for trademark registration, Serial No. 73,563, filed May 13, 1959, sought to have the court authorize the Commissioner of Patents to issue to it a certificate of registration on the Principal Register established by the Trademark Act of 1946 (15 U.S.C. 1052), based on that application, of the mark "MODILAC" for modified milk formula for infants especially in liquid form, the formula being prepared from cow's milk, butterfat removed, replaced by corn oil and the formula being modified with dextrins-maltose-dextrose supplemented with vitamins A, B_1, B_6, C, and D.

2. The mark "MODILAC" on the modified milk product, as set forth in application Serial No. 73,563, was first used on April 24, 1959, and was first used in interstate commerce on the same date. Since that date plaintiff has continued to sell and now sells in large quantity that product so marked.

3. In application Serial No. 73,563, plaintiff asserts ownership of Registration No. 198,438, issued May 19, 1925, to Wm. S. Merrell Co., and renewed May 19, 1945. That registration is for the trademark "MODILAC" for tablets to be dissolved in fluids for producing food for infants and invalids. Assignment of that registration to plaintiff was recorded in the U.S. Patent Office on April 9, 1959.

4. Registration No. 542,980, on the Principal Register established by the Act of 1946, was issued May 29, 1951, to Kennedy's Dairy, Inc., of Mount Pleasant, Iowa. That registration is for the trademark "MODALAC" for a modified fluid milk product of low fat content with the addition of vitamins A and D, the mark being distinctively printed with a materially enlarged first A, the lower ends of the A being extended horizontally outwardly thereof to underline the letter groups OD and LA and with the M intermediate in size between the larger A and the other letters, the M having the shape of an inverted W. The registration includes a disclaimer of the exclusive right to use the letter "A" and the term "Lac" apart from the rest of the mark.

5. In the Patent Office, both the Examiner and the Trademark Trial and Appeal Board found that, as between the trademark "MODALAC," applied to goods as indicated in the registration, and the mark "MODILAC," applied to goods as indicated in the application, "confusion as to origin would be reasonably likely to occur."

6. Neither plaintiff's application nor Registration No. 542,980 limits use of its mark to goods sold in a specific kind of container.

7. Neither plaintiff's application nor Registration No. 542,980 limits use of its mark to goods sold in particular stores or stations.

8. There is no evidence of actual confusion of purchasers as to origin of the modified milk product of Kennedy's Dairy Inc., sold under the mark "MODALAC" and plaintiff's modified milk product sold under the mark "MODILAC."

9. Plaintiff currently sells its modified milk product in a can whose simulated label carries prominently both a well-known registered trademark and the nonregistered mark "MODILAC." There is no evidence that the product has ever been sold in any quantity, or in substantial quantity, with a different label.

10. There is no evidence before this court that plaintiff's modified milk identified by the mark "MODILAC" is sold solely in drug stores. That product so marked has been sold in a supermarket in at least one instance. Competitive products sold under competitor's trademarks have also been sold in supermarket grocery stores. There is no evidence that it has been held by any court that the "filled milk" statute, 21 U.S.C. 61, makes it illegal either (1) to ship plaintiff's instant product or its competitor's competitive products in interstate commerce to wholesale druggists who in turn supply it to supermarket grocery stores, or (2) to sell in supermarket grocery stores plaintiff's instant product or its competitor's competitive products where those products have been supplied by wholesale druggists to whom those products were shipped in interstate commerce.

11. The modified milk product of Kennedy's Dairy, Inc., identified by the mark "MODALAC" printed as shown in the registration drawing is sold in paper containers from house-to-house milk delivery vehicles and from refrigerator cabinets of supermarket and other grocery stores.

12. Plaintiff's modified milk infant formula identified by the mark "MODILAC" is sold in cans from unrefrigerated shelves in drug stores, including those of the self-service type, and in self-service supermarket grocery stores, those shelves being devoted to this and competitive products and/or special diet canned foods. The plaintiff's cans of this product and the competitor's cans of competitive products are marked "For Use As Directed by Physician." Plaintiff's extensive advertising since October 1959, of the instant product under the instant mark has been and is in media directed primarily to physicians, druggists, and nurses. Plaintiff's professional service representatives concentrates their sales efforts for the instant product primarily on physicians. Plaintiff's instant product is initially bought by or for mothers of infants primarily upon recommendation of a physician.

13. There is no evidence that the "MODALAC" modified milk of Kennedy's Dairy, Inc., has not been and could not be recommended for infant feeding by a physician.

14. Both the "MODALAC" modified milk of Kennedy's Dairy, Inc., and the "MODILAC" modified milk of plaintiff are purchased by mothers of infants.

15. It is likely that the "MODALAC" modified milk of Kennedy's Dairy, Inc., and the "MODILAC" modified milk of plaintiff could find their way into the same self-service cart of a supermarket customer shopping as or for the mother of an infant, and to the same kitchen counter or table of the mother of an infant.

16. The modified milk product of Registration No. 542,980 is not so different from the plaintiff's modified milk product of its application as to preclude likelihood of confusion of the purchaser as to origin when both products, marked as indicated in the registration and the application, respectively, are bought by or for a mother of an infant.

17. The mark of the drawing of Registration No. 542,980 is not so different from the mark of the drawing of plaintiff's instant application as to preclude likelihood of confusion of the purchaser as to origin when the products indicated in the registration and the application, respectively, and marked as indicated therein, respectively, are bought by or for a mother of an infant.

18. Between the marks and the products specified in Registration No. 542,980 and plaintiff's application, respectively, the cumulative differences are insufficient to preclude likelihood of confusion of the purchaser as to origin when those marked products are bought by or for the mother of an infant.

[1] 19. It is likely that a mother seeing in a supermarket refrigerator the fluid modified milk product of Kennedy's Dairy, Inc., identified by the mark "MODALAC" printed as in the registration therefor, would conclude that that product has the same origin as the plaintiff's liquid modified milk product, identified by the mark "MODILAC," which, on the recommendation of a physician, she had previously obtained from unrefrigerated shelves in a drug store or a supermarket grocery store.

[2] 20. The matter of likelihood of confusion between plaintiff's mark "MODILAC" used on the goods of Registration No. 198,438 and the mark "MODALAC" of Kennedy's Dairy, Inc., used as in Registration No. 542,980 is a matter substantially different from that of likelihood of confusion between plaintiff's mark "MODILAC" used on the goods of the instant application and the mark "MODALAC" of Kennedy's Dairy, Inc., used as in Registration No. 542,980.

[3] 21. As between the trademark "MODALAC" printed and used as specified in Registration No. 542,980, and the mark "MODILAC" printed and used as specified in plaintiff's instant application, confusion of purchasers as to origin would be likely to occur.

22. No clear error is found in the finding in the Patent Office of both the Examiner and the Trademark Trial and Appeal Board that as between the trademark "MODALAC," applied to goods as indicated in the registration, and the mark "MODILAC," applied to goods as indicated in the application, "confusion as to origin would be reasonably likely to occur."

Conclusions of Law

1. Section 2(d) of the Trademark Act of 1946 (15 U.S.C. 1052d) precludes registration on the Principal Register of an applicant's mark which so resembles a mark registered to another in the Patent Office, as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers.

[4] 2. A finding by the Patent Office that there is likelihood of confusion as to origin in concurrent use of involved trademarks is a finding of fact. That finding may be overturned by the District Court only if it is clearly erroneous.

[5] 3. Differences of environment of sales or of channels of trade for a registrant's and an applicant's goods are immaterial where the application for registration does not limit sales in any manner or to any particular stores or stations, it being well established that sales methods are subject to change at any time.

[6] 4. The fact of different channels of trade for a registrant's and an applicant's goods is immaterial where the purchasers and users

of the goods of both may well be the same persons and where the goods and the marks are not so different as to preclude the impression that the goods have the same source or origin.

[7] 5. On the issue of likelihood of confusion between a registered mark and the mark of an application, a feature of a label or of a simulation of a label which is used on an involved product, but which is not shown in the application or the registration, is irrelevant.

[8] 6. Lack of evidence of confusion does not preclude a holding of likelihood of confusion even in an inter partes case.

7. The plaintiff is not entitled to have the mark here involved registered on the Principal Register established by the Trademark Act of 1946.

8. The complaint should be dismissed.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,381,589, S. A. Hayes, System and apparatus for distributing liquid solutions, **filed** Oct. 23, 1961, D.C., S.D. Calif (Los Angeles), Doc. 1353/61–TC, *Hayes Spray Gun Company* v. *Sears Roebuck & Company et al.* Consent judgment; Patent held valid and infringed by Chapin Manufacturing Works, Inc. Action dismissed with prejudice as to Sears, Roebuck & Co. and all other claims dismissed with prejudice (notice June 19, 1962).

2,415,708, D. Sciaky, Welding method and apparatus therefor; **2,431,083,** same, Electric valve converting system, **filed** C.C.A., 6th Cir., Doc. Nos. 14464–65, *General Electric Company* v. *Sciaky Bros., Inc.* Claims 1 through 6 of Patent 2,431,083 and Claims 3, 6, and 10 of Patent 2,415,708 held valid and infringed. Decree of District Court affirmed June 20, 1962.

2,431,083. (See 2,415,708.)

2,445,322, M. C. Fridolph, Body garment, **filed** Oct. 25, 1961, D.C., S.D.N.Y., Doc. 61/3799, *Sarong, Inc.* v. *Klairette Foundations, Inc.* Consent judgment; defendant enjoined June 28, 1962.

2,536,003, H. P. Dupre, Coaxial cable connection, **filed** June 21, 1962, D.C., S.D.N.Y., Doc. 62/2196, *Burndy Corporation* v. *Sealectro Corporation.*

2,596,807, M. C. Dippel, Self-sealing bag for separating dust from an air stream; **2,621,757,** E. Anderson, Extendible and collapsible filter bag; **filed** July 2, 1962, D.C., S.D.N.Y., Doc. 62/2346, *Eletcrolux Corporation* v. *Western Vacuum Bag Manufacturing Inc. et al.*

2,607,826, L. T. Barnes, Trimmer capacitor, **filed** June 19, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62c670, *JFD Electronics Corporation* v. *Voltronics, Inc.*

2,621,757. (See 2,596,807.)

2,637,634, H. J. Kothe, Egg white composition, **filed** June 29, 1962, D.C., E.D. Mich. (Detroit), Doc. 22721, *Standard Brands Incorporated* v. *Frigid Food Products, Inc.*

2,706,230, M. E. Bourns et al, Variable resistor; **2,777,926,** same, **filed** Dec. 9, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39591, *Bourns, Inc.* v. *Zack Radio Supply Company.* Consent judgment; action dismissed with prejudice June 27, 1962.

2,743,177, A. T. Cape, Nickel-silicon boron alloys; **2,755,183,** same, **filed** Jan. 18, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 58/61–Y, *Coast Metals, Inc.* v. *Wall Colmonoy Corporation.* Patents held not infringed; order dismissing case (notice June 28, 1962).

2,755,183. (See 2,743,177.)

2,761,830, E. Frey, Articulated banner unit construction, **filed** June 29, 1962, D.C., N.D. Ill. (Chicago), Doc. 62/1270, *Massillon-Cleveland-Akron Sign Co.* v. *Chicago Sign Printing Company.*

2,772,994, G. H. Lacy, Laminated thread, **filed** June 29, 1962, D.C., S.D.N.Y., Doc. 62/2332, *Riegel Paper Corporation* v. *The Dow Chemical Co., Inc.*

2,777,926. (See 2,706,230.)

2,780,547, Ferzola and Botkin, Diazotype photoprinting materials and processes for preparing same, **filed** Feb. 8, 1962, D.C., N.D. Ill. (Chicago), Doc. 62c431, *Charles Bruning Co., Inc.* v. *General Aniline & Film Corporation.* Consent decree; patent held valid and infringed; defendant restrained Apr. 13, 1962.

2,784,037, A. Rexroth, Apparatus for shooting material into cupolas, **filed** June 29, 1962, D.C., S.D. Ill. (Peoria), Doc. P–2542, *Alfred Rexroth* v. *Demmler Manufacturing Company.* **Same, filed** June 28, 1962, D.C., E.D. Wis. (Milwaukee), Doc. 62–C–176, *Alfred Rexroth* v. *John F. Penner et al.*

2,818,109, T. S. Voorhels, Variable load burner construction, **filed** Jan. 23, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40456, *Coen Company, Inc.* v. *Industrial Steam, Inc. et al.*

2,838,592, F. Feketics, Shielding enclosures, **filed** June 26, 1962, D.C.N.J. (Camden), Doc. 536/62, *Shieldtron, Inc.* v. *Temperature Engineering Corporation et al.*

2,842,113, L. W. Roper, Archery bow, **filed** June 20, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40843, *Carolyn Roper et al.* v. *Edward A. Canale et al.*

2,875,534, Grossman French Heel Covers, Heel protector, **filed** June 22, 1962, D.C.N.J. (Camden), Doc. 506/62, *Evelyn Grossman* v. *Judy Jewel Co., Inc. et al.*

2,883,985, R. P. Evans, Medical appliance, filed June 27, 1962, D.C.N.J. (Newark), Doc. 542/62, *Sterilon Corporation* v. *C. R. Bard, Inc.*

2,905,945, L. Winter, Collar construction for shirts, **filed** Jan. 26, 1962, D.C., S.D.N.Y., Doc. 62/442, *Snap-Tab Corporation* v. Nevele Shirt Corporation. Consent decree; order of dismissal June 25, 1962. **Same, filed** same, Doc. 62/443, *Snap-Tab Corporation* v. *Barry Morell Shirt Co., Inc.* Decree as above.

2,920,371, J. C. Shoemaker, Tie-wires for concrete forms; **3,010,175,** same, Tie-wire for concrete forms, **filed** June 28, 1962, D.C., N.D. Ill. (Freeport), Doc. 62c39, *Simplex Forms System, Inc.* v. *Gustave A. Markuson et al.*

2,929,109, C. N. Cresap, Method for folding pulverulent material, **filed** Oct. 11, 1960, D.C.N.J. (Newark), Doc. 893/60, *Charles N. Cresap* v. *Chemplast, Inc.* Patent held invalid; complaint dismissed June 29, 1962.

2,932,232, T. W. Minervini, Accordion operating upon an electrical musical instrument, **filed** June 28, 1962, D.C., E.D.N.Y. (Brooklyn), Doc. 62c709, *Tony W. Minervini* v. *C. Iorio et al.*

2,956,368, E. Klein, Adjustable foot for hospital and restaurant cabinets, tables, and like articles of furniture, **filed** March 29, 1962, D.C., S.D.N.Y., Doc. 62/1317, *Klein Hardware Co., Inc.* v. *Solomon Kaplan et al.* Stipulation and order of discontinuance June 22, 1962.

2,962,979, W. C. McCormick, Method of correcting existing track and alignments and means for practicing it, **filed** Sept. 25, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1607, *Nordberg Manufacturing Company et al.* v. *Donald J. Hogan.* Consent judgment; defendant enjoined June 29, 1962.

2,977,997, N. L. Seltzer, Diaper, filed June 25, 1962, D.C. Mass. (Boston), Doc. 62/462–S, *The Kendall Company* v. *Chicopee Manufacturing Corporation.*

2,983,969, D. C. Muessel, Building construction; **3,023,859,** same, Metal construction element; **filed** June 12, 1962, D.C., S.D. Fla. (Miami), Doc. 320/62–M, *Kaweneer Company* v. *American International Aluminum Corporation.*

3,002,174, L. J. Rafter, Display lighting apparatus, **filed** Dec. 6, 1961, D.C.N.J. (Trenton), Doc. 1038/61, *George L. Olson* v. *Amelda Corporation.* Consent judgment July 5, 1962.

3,010,175. (See 2,920,371.)

3,015,471, N. W. Madill, Spar treem, **filed** June 27, 1962, D.C. Oreg. (Portland), Doc. 62/252, *The Skookum Company, Inc. et al.* v. *Sutherlin Machine Works, Inc. et al.*

3,023,859. (See 2,983,969.)

3,030,819, O. V. Edelbrock, Linkage for multiple carburetor installation, **filed** June 14, 1962, D.C., S.D. Calif. (Los Angeles), Doc. 62/811–HW, *E. E. Lohn Company, Inc., d/b/a Eelco Manufacturing & Supply Co.* v. *Edelbrock Equipment Company.*

Re. 24,084 (of 2,656,531), D. Atlas, Device to permit radar contour mapping of rain intensity in rainstorms, **Appeal** from Order of District Court dated Jan. 8, 1962, dismissing complaint, **filed** June 13, 1962, C.C.A., 1st Cir., Doc. 6014, *David Atlas* v. *Eastern Air Lines, Inc. et al.*

Re. 24,530, D. Biermann, Full feathering propeller, **filed** C.C.A., 6th Cir., Doc. 14554, *Hartzell Industries, Inc.* v. *McCauley Industrial Corporation.* Summary judgment of District Court dismissing plaintiff's complaint as to Claims 8 and 9 of Re. 24,530 vacated June 26, 1962.

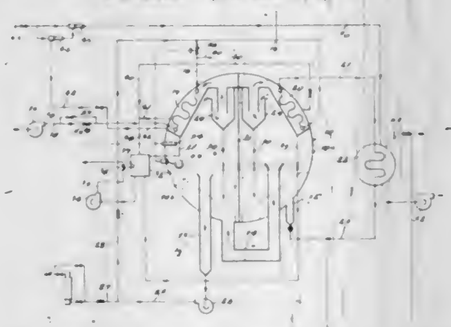
Des. 149,066, B. D. Kaplan, Hygienic soap dish, **filed** Apr. 4, 1955, D.C., S.D.N.Y., Doc. 99/363, *Hygienic Specialties Co.* v. *H. G. Salzman, Inc. et al.* Judgment of District Court dated Jan. 27, 1961, holding patent valid and infringed reversed and complaint dismissed Apr. 19, 1962.

REISSUES

AUGUST 28, 1962

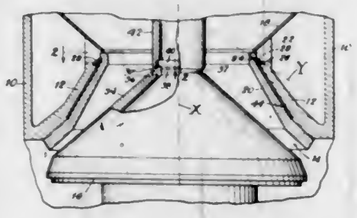
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,232
PLURAL STAGE FLASH EVAPORATION METHOD
Richard W. Goeldner, Brookfield, Wis., assignor, by mesne assignments, to Aqua-Chem, Inc., Waukesha, Wis., a corporation of Wisconsin
Original No. 2,959,524, dated Nov. 8, 1960, Ser. No. 568,576, Feb. 29, 1956. Application for reissue Oct. 18, 1961, Ser. No. 146,408
6 Claims. (Cl. 202—53)



1. The method of operating a flash evaporator having a plurality of stages in *horizontally spaced* series relationship from a first and highest *pressure* stage to a last and lowest *pressure* stage, said evaporator having a condenser section and a flash chamber [in] *within* each stage for distilling salt water which comprises, withdrawing brine from a lower stage of the evaporator, discharging a minor portion of said withdrawn brine to waste, mixing the major portion of said brine with fresh salt water, passing the mixture through the condenser section [of] *in* a higher stage of the evaporator to condense vapors formed in the flash chamber of said higher stage and then further heating said mixture and introducing the same into the flash chamber of the first stage of said evaporator.

25,233
TIGHTENING DEVICE FOR MANTLES AND LINERS IN CRUSHERS
John S. Broman, Smedjebacken, Sweden, assignor, by mesne assignments, to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Original No. 2,916,219, dated Dec. 8, 1959, Ser. No. 596,209, July 6, 1956. Application for reissue Dec. 4, 1961, Ser. No. 157,875
10 Claims. (Cl. 241—299)



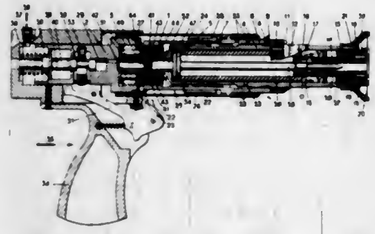
9. In a gyratory crusher or the like, a generally frustoconic concentric bowl structure and removable matching liner, and an interlock between them so that the liner may be removed and replaced, including a continuous groove on one of the bowl structure and liner, said groove having circumferentially stepped longitudinally arcuate wedging surfaces uniformly eccentric to the bowl axis, and a plurality of wedges lockingly fitted between the bowl structure and liner and received within said groove, said wedging surfaces being stepped in a direction so that the bowl structure and liner are self-tightening.

PATENTS

AUGUST 28, 1962

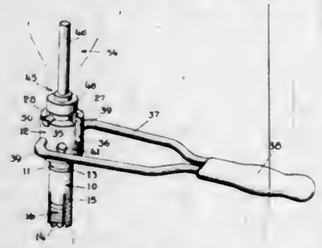
GENERAL AND MECHANICAL

3,050,732
FASTENER DRIVING INTERLOCKING PISTOL OR TOOL
Pierre Termet, 16 Impasse Belloeuf, Lyon 3, France
Filed Nov. 24, 1958, Ser. No. 775,951
Claims priority, application France Nov. 29, 1957
3 Claims. (Cl. 1—44.5)



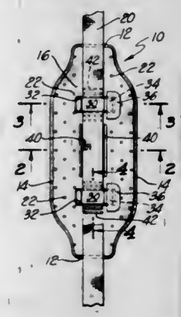
1. An explosion-actuated fastener-driving tool having a barrel for receiving a fastener to be driven, a breech block defining a firing chamber, cylindrical means defining a piston chamber between said barrel and firing chamber, and piston means slidable in said piston chamber between a rear position in which said piston means closes one end of said firing chamber and a forward position axially removed therefrom, said cylindrical means comprising a transverse wall portion mounted for axial adjustment relative to said breech block, said adjustable wall portion constituting a rear wall for said piston chamber through which one end of said piston means projects and defining with the forward part of the firing chamber wall an adjustable vent by-passing said piston chamber through which the forward end of said firing chamber is connected to the exterior of the tool, said vent being blocked by said piston means when it closes said firing chamber but progressively opened by said piston means as it moves forward.

3,050,733
TOOL
Edward William Bach, 1226 W. Jarvis Ave., Chicago 26, Ill.
Filed Feb. 8, 1961, Ser. No. 87,875
10 Claims. (Cl. 1—49.8)



1. A tool for holding an object securely while it is being driven into another object which comprises: means for holding the object to be driven and to transmit thereto hammering blows applied to the holding means, said holding means being adapted to receive said object snugly; hammer means associated with said holding means; means carried by said hammer means and said holding means for selectively engaging said hammer means with said holding means to transmit hammering blows from the former to the latter and thence, without any direct mechanical connection between the hammer means and the object to be driven which is held by the holding means, to said object; and guide means carried by said hammer means and said holding means for selectively directing said hammer means against said object held by said holding member, so as to apply hammering blows from said hammer means directly to said object without applying any hammering blows directly from said hammer means to said holding means, thereby disengaging said object from said holding means.

3,050,734
SHOULDER STRAP PADS
Harriet B. Dopyera, 1888½ Harbor Blvd., Costa Mesa, Calif.
Filed Dec. 21, 1959, Ser. No. 861,059
4 Claims. (Cl. 2—2)



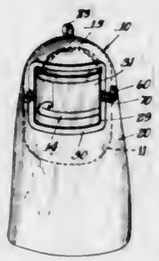
1. A shoulder strap pad which comprises:
an elongated backing strip formed of a thermoplastic material having a limited amount of flexibility, said strip having substantially a flat top and a flat bottom and having opposed ends, and being adapted to be used in conjunction with a shoulder strap extending across said top side between said ends, said backing strip including two openings extending between said top and said bottom, each of said openings being located adjacent to one of said ends, said openings extending across the path taken by a shoulder strap extending between said ends of said backing strip, said backing strip including integral strap means formed thereon at one extremity of each of said openings on one side path and integral pocket means for receiving and holding an end of one of said strap means located on the other side of said path at an extremty of each of said openings;
a flexible, resilient foam pad secured to said backing strip so as to extend along and cover said bottom side of said backing strip, said flexible resilient foam pad being spaced from said pocket means so that a shoulder strap may be located so as to extend along said path and said strap means may be placed over a shoulder strap extending along said path so as to hold said shoulder strap within said openings and so that the extremities of each of said strap means can be located within said pocket means so as to retain said shoulder strap in place.

3,050,735
APPARATUS FOR AUTOMATICALLY PIVOTING A HINGED CLOSURE INTO CLOSED POSITION
Herbert George Albert Newman, Tolworth, and Charles Thomas Hammond, Norbury, London, England, assignors to Redwing Limited, Surrey, England, a British company
Filed Mar. 24, 1959, Ser. No. 801,586
Claims priority, application Great Britain Mar. 28, 1958
9 Claims. (Cl. 2—6)



1. Apparatus for automatically pivoting a hinged vizor of an airman's helmet into closed position on a predetermined fall in the pressure of the surrounding atmosphere, said apparatus comprising fluid pressure operated mechanism connected with the hinged vizor for effecting pivoting movement into closed position, a receptacle containing fluid under pressure for operating the mechanism, a frangible diaphragm seal for said receptacle, means supporting said diaphragm seal against rupture by the fluid under pressure in said receptacle, and a pressure responsive device operable on said predetermined fall in pressure to effect the release of said diaphragm seal supporting means to permit the fluid under pressure in the receptacle to burst the diaphragm and operate the said mechanism to close the vizor.

3,050,736
PROTECTIVE FACE SHIELD AND HOOD
Robert Malcom, Jr., Chicago, Ill., assignor to Chicago Eye Shield Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 13, 1959, Ser. No. 846,171
8 Claims. (Cl. 2—9)



1. A protective face shield comprising a helmet shaped foundation member having means for supporting the same on the head of the wearer and having an opening in the front thereof and a plurality of holes around the opening, a removable resilient rubber-like gasket located on the outside of the foundation member around the opening therein and having a plurality of integral rearwardly extending resilient rubber-like fingers frictionally received in the holes in the foundation member for removably securing the gasket in place on the foundation member, a removable window assembly including a frame member coextensive with the gasket and a transparent window removably received within the frame member and engaging the gasket and enclosing the opening in the foundation member, and separable clamping means carried by the foundation member and the frame member for removably securing the window assembly in place upon the foundation member and compressing the gasket between the transparent window and the foundation member to seal the opening in the foundation member.

3,050,737
NECKTIE HOLDERS
John T. Scully, 235 W. 76th St., New York, N.Y.
Filed Mar. 23, 1960, Ser. No. 17,074
3 Claims. (Cl. 2—153)



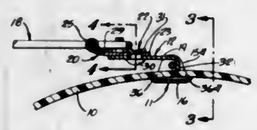
1. A necktie holder for use in conjunction with a pretied necktie and comprising a knot supporter member having a forward central portion and a generally horizontal upper edge and a generally horizontal lower edge, the lower edge defining the bottom of said central portion, the central portion having an outer face generally straight in the up and down direction, the knot supporter member having side members diverging rearwardly with respect to the outer face of the central portion, said side members having bottom side edges inclined relatively to said upper and lower edges of the knot supporter member and converging downwardly from the rearward direction towards the lower edge of said central portion, an inner backing clamp element extending rearwardly on said knot supporter member and disposed substantially centrally widthwise thereon and having a rearmost clamping face portion spaced rearwardly of the outer face of said central portion, said side members extending rearwardly in the form of wings a distance further than said backing clamp element extends to form a concavity rearwardly of said backing clamp element, and a hook clamp element depending from said forward central portion rearwardly downwardly and in said concavity and being resiliently adjustable with respect to said backing clamp element and cooperative with said clamping face portion thereof to clamp a necktie to the neckband of a collar, the hook clamp element having a closed top end and an open bottom end, said closed top end of the hook clamp element spaced upwardly of said backing clamp element and having its forward end supported by and joined to the forward central portion of the knot supporter member whereby said top end of the hook clamp element forms substantially a rearward extension of the top of the forward central portion of the knot supporter member, the hook clamp element being open from said bottom open end thereof substantially to said closed top end thereof to receive necktie material and being adapted to receive the neckband of a collar passed upwardly through the bottom open end of the hook clamp element to dispose the neckband of a collar adjacently beneath the top end of the hook clamp element, said hook clamp element spaced throughout its length at all times from the inner backing clamp element and having a downwardly extending, generally straight, divergent clamping portion adapted to engage the inner side of the neckband of a collar to cooperate with the inner backing clamp element to position and clamp the knot supporter member on a collar with said rearmost clamping face portion of the backing clamp element opposite said divergent clamping face portion of the hook clamp element and with the outer face of the forward central portion inclined to and diverging downwardly with respect to said divergent clamping portion of the hook clamp element and adapted to be disposed in a plane at an acute angle to the neckband of a collar, said divergent clamping portion of the hook clamp element diverging, at all times, in the downward direction relatively away with respect to the plane of the outer face of the central portion of the knot supporter member, said rearmost clamping face portion of the inner backing clamp element disposed on the knot supporter member only in a position spaced downwardly from said upper edge of the knot supporter member.

3,050,738
GLOVE
Anton W. Rytina, Coshocton, Ohio, assignor to Edmont Inc., a corporation of Ohio
Filed Nov. 5, 1959, Ser. No. 851,117
12 Claims. (Cl. 2—167)



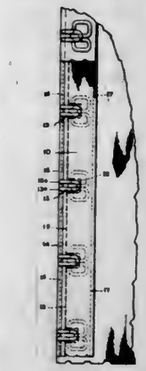
1. A glove comprising a palm portion, a back portion, a thumb stall at least one finger stall, said stalls and portions being fastened together to form said glove, at least said palm portion comprising a fabric material having an outer coating, said coating comprising the fusion product of an admixture of a polyvinyl chloride plastisol with discrete elastomer particles dispersed therethrough.

3,050,739
ADJUSTABLE SUPPORT MECHANISM FOR EAR MUFFS AND SIMILAR ARTICLES
Charles P. Fogarty, 58—33 84th Place, Elmhurst, N.Y.
Filed Jan. 8, 1960, Ser. No. 1,350
7 Claims. (Cl. 2—209)



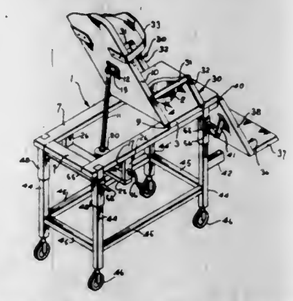
1. An adjustable support for head fittings, comprising a band of arcuate contour adapted to fit the head of a wearer, a pair of support mechanisms fitted to the band, each of said support mechanisms including a buckle slidably fitted to the band, a clamping member pivotally supported by each buckle, the pivot means being substantially parallel to the outer surface of the band, each clamping member having means integral therewith adapted to engage and grip the outer surface of the band, a clip member supported by each clamping member, each clip member being supported by a pivot member, each head fitting being pivotally supported by the mating clip member, the axis of said pivot member being substantially perpendicular to the arcuate outer surface of the band, to enable the clip member supporting each head fitting to be moved away from the band, each clamping member including an integral flat outer wall, each clip member including an integral flat strip section, engaging one face of the outer wall of the mating clamping member, and pivot means extending through the strip section of each clip member and the plate section of the adjacent clamping member, each of said pivot means being adapted to pivotally support the mating clip member, the outer wall of each clamping member being nominally substantially parallel to a plane tangent to the arcuate outer surface of the band.

3,050,740
HOOK FASTENINGS FOR GARMENTS
William Simpson, Handsworth, Birmingham, England, assignor to Newey Brothers Limited, Birmingham, England, a company of Great Britain
Filed Dec. 1, 1958, Ser. No. 777,293
Claims priority, application Great Britain Dec. 21, 1957
1 Claim. (Cl. 2—265)



A garment fastening assembly comprising in combination: a hook tape having spaced longitudinal edges and a plurality of hooks secured at spaced intervals along said tape, each of said hooks having a bill defined by a pair of wires spaced by a distance at least as great as the thickness of a needle, the outer ends of said bills being a smoothly curved loop portion of the wires and positioned substantially flush with one edge of the tape; a garment having a longitudinal edge; and a substantially straight line of stitching securing said hook tape to said garment along the longitudinal edge thereof, said line of stitching being close to the said one edge of said tape under the outer ends of said bills with at least one point of stitch penetration through the tape located between the wires defining the bill of each of said hooks.

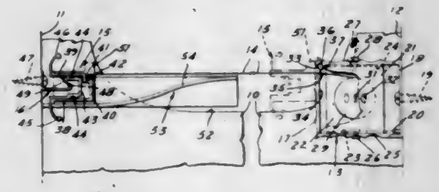
3,050,741
BED TABLE AND COMMODE
Charles S. Coleman, 1802 W. 41st, 2nd Floor W., Kansas City 11, Mo.
Filed Apr. 11, 1960, Ser. No. 21,492
3 Claims. (Cl. 4—134)



1. A bed table and commode for temporarily supporting an invalid comprising, a frame, legs adjustable in height for supporting said frame in a selectively elevated position, a substantially horizontal seat section fixed to said frame and having forward and rearward edges and an underneath side, said seat section having an opening therethrough, a waste receiving vessel, means for removably securing said vessel to said underneath side and in a position communicating with said opening, a back section foldably connected to said rearward edge of said seat section, means for selectively folding and unfolding

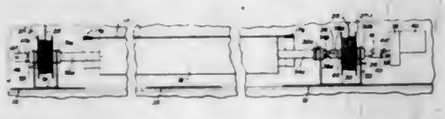
said back section for selectively maintaining said back section in co-planar and folded position with respect to said seat section, a leg and foot rest having a leg support section and a foot support section, said foot support section extending substantially perpendicularly to said leg support section, said leg and foot rest being foldably connected to said forward edge of said seat section and adapted to normally extend with said leg support section substantially perpendicularly to said seat section, collapsible braces adapted to selectively support said leg and foot rest in a position wherein said leg support is in co-planar relationship with said seat section and said foot support section is in a substantially perpendicular position with respect to said seat section, and caster wheels on said legs, whereby said table is rendered mobile and convertible from a planar prone-invalid receiving condition to a structure adapted for comfortably seating an invalid on a substantially horizontal seat section.

3,050,742
BATHTUB ENCLOSURE
Charles E. Munson, 1012 El Dorado Drive, Fullerton, Calif.
Filed Mar. 22, 1960, Ser. No. 16,717
2 Claims. (Cl. 4—154)



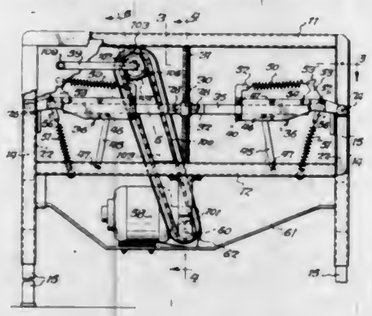
1. A bathtub enclosure, comprising: a vertically extending hollow elongate housing adapted to be secured at one end of a bathtub above the upper end of an outer wall thereof, said housing having an elongate opening along a side thereof; a spring actuated roller mounted on said housing; a flexible curtain wound on said roller and extending through said opening; a jamb member at an opposite end of said tub; a stile secured along the exposed end of said curtain and projecting generally forwardly of the plane of the curtain; said curtain being secured to said stile inward of the median plane thereof so as to define substantially a planar continuation of an inner wall of said stile; members carried by said stile and engageable inward of said inner wall of said stile with said housing to oppose inward tilting of the stile when the curtain is rerolled on the roller; and means for releasably interconnecting the stile and jamb to retain the curtain in an unrolled position extending between said tub ends above the outer wall of the tub.

3,050,743
EXTENDIBLE AND RETRACTABLE COVER APPARATUS FOR SWIMMING POOLS
Joe H. Lamb, Salt Lake City, Utah, assignor to Philip A. Mallinckrodt, Salt Lake City, Utah
Filed Aug. 7, 1961, Ser. No. 129,881
12 Claims. (Cl. 4—172)



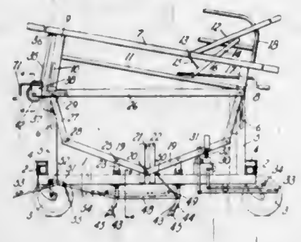
8. In combination with a swimming pool, an extendible and retractable cover apparatus therefor, comprising an elongate drum; shaft means mounting the drum for rotation along one end of the pool and extending from opposite ends of said drum; a sheet of flexible material having width greater than the length of the drum and wound thereon with the longitudinal edges of said sheet overhanging the ends of said drum, said sheet having width and length adapted to completely cover the pool and sufficient slack to drop to the normal level of water in the pool; guideway means spaced from said drum and having re-entrant slideway channels disposed laterally of and extending along the area of extension and retraction of said sheet at respectively opposite sides of said sheet, said sheet having its opposite longitudinal edges continuously beaded and received by said slideway channels as anchor slides adapted for sliding movement therealong in the extension and retraction of the sheet; draw cords attached to the outer end of the sheet as prolongations of the respective beaded edges of such sheet; return guideway means substantially paralleling the first-named guideway means; guide means at the outer ends of said guideway means and of said return guideway means, about which the draw cords are looped, respectively, in passing from one to the other of said guideway means; guide pieces spaced from said drums and pivotally mounted at the adjacent ends of the respective guideway means on substantially vertical axes, said guide pieces having respective re-entrant channels disposed as continuations of said mutually opposing slideway channels of said guideway means, the beaded edges of said sheet being received by said channels of the guide pieces for sliding movement therethrough in passing from and back to said drum; reels mounted on said shaft means at opposite ends of the drum, respectively, and beyond the zones of overhang of said margins of the sheet, said draw cords passing back through said return guideway means, respectively, and being secured to said reels, respectively, for winding thereon as the sheet is extended; and means for alternately driving the reels and the drum for alternately extending and retracting said sheet.

3,050,744
BED CONSTRUCTION
Stuart N. Mann, Derby, and Arthur Boyd Doty, Buffalo, N.Y., assignors to Hard Manufacturing Company, Buffalo, N.Y.
Filed June 16, 1959, Ser. No. 820,637
5 Claims. (Cl. 5—63)



1. In a vertically adjustable bed comprising a bed frame including bed ends having legs each of which comprises two connected parts slidable vertically relatively to each other, one part of each leg resting on the floor and the other part being secured to a bed end, that improvement which includes a pair of levers pivoted to each other on each end frame in spaced relation to said legs, and extending from the middle of the bed end in opposite directions to said legs, each lever comprising two parts slidably connected with each other to vary the length of the lever and held in alinement with each other, one end of the lever being connected with the leg part resting on the floor, means for raising and lowering the other end of said lever, and a pivoted link for each lever, said link having a pivotal connection with the bed end and a pivotal connection with its lever.

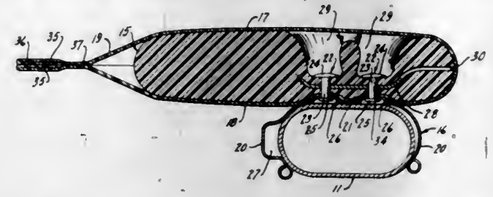
3,050,745
HOSPITAL STRETCHER
Paul C. Tabbert, Bridgman, Mich., assignor to Tabbert Manufacturing Company, Bridgman, Mich., a corporation of Michigan
Filed Nov. 21, 1960, Ser. No. 70,673
9 Claims. (Cl. 5—86)



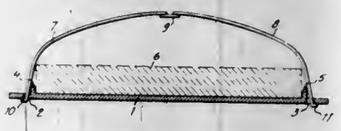
1. A hospital stretcher comprising a carriage frame including a centrally disposed longitudinal body member and cross members at the ends thereof, wheels mounted on the said cross members, uprights having vertical slots therein mounted on said carriage frame at the ends and centrally thereof, a platform having downwardly projecting posts disposed in overlapping guided relation to said uprights, one of said posts having a longitudinally extending arcuate slot therein, means for supporting and vertically and tiltably adjusting said platform comprising adjustable support members pivotally connected at their inner ends, supporting links for said support members pivotally connected thereto and pivotally mounted on said longitudinal body member, means for vertically guiding the inner ends of said support members, a crossbar, links connecting the outer ends of said support members to said crossbar, the upper ends of said connecting links and said crossbar having guiding engagement with said slots in said uprights, said crossbar projecting at one end thereof beyond the post having the curved slot therein, manually operated means for adjusting said support members and supporting them in their adjusted positions and for controlling the return movement thereof, a downwardly projecting rack mounted on said platform at the outer side of and in parallel relation to said post having the curved slot therein, a first gear mounted on the projecting end of said crossbar in meshing engagement with said rack, a worm gear disposed axially of and connected to said first gear, and a manually actuated worm rotatably mounted on said crossbar in coacting relation to said worm gear.

3,050,746
PROTECTIVE PAD AND METHOD OF FORMING THE SAME
Floyd L. Mikesell, Cedar Rapids, Iowa, assignor to Nissen Corporation, Cedar Rapids, Iowa
Filed Apr. 28, 1961, Ser. No. 106,343
6 Claims. (Cl. 5—317)

1. A protective pad comprising in combination, a body of yieldable material having spaced first and second exterior surfaces facing in opposite directions and away from each other, said body having a slit disposed between and spaced from both of said surfaces, a flat strip of reinforcing material disposed in said slit, a mounting bracket having a generally flat portion extending along and adjacent said first one of said surfaces in registry with said strip, and two elongated headed fastening elements extending through said flat portion of said mounting bracket and having shorter lengths than the spacing between said surfaces, said strip and said body in a direction transversely of said exterior surfaces and at spaced points to secure such parts together with the body compressed between the mounting bracket and enlarged heads on the ends of the elements remote from the bracket, said heads being disposed within spaced recesses in said second surface resulting from compression of the body.

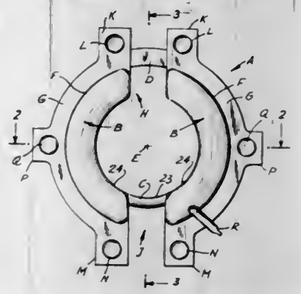


3,050,747
SUPPORT FOR BEDCLOTHES
Henrietta Uhl, 151 8th Ave., New York, N.Y.
Filed Dec. 22, 1960, Ser. No. 77,571
9 Claims. (Cl. 5—319)



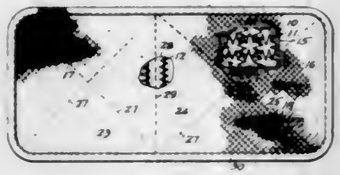
1. A support for bed clothes adapted to be associated with the mattress of a bed comprising an elongated strip of relatively stiff material of a length about equal to the width of said bed and constituting a base, an elongated sheet of relatively stiff and flexible material of a length greater than that of said strip and constituting a bow, said sheet being separate from said strip, cooperating means at the respective ends of said strip and sheet for detachably anchoring the ends of said sheet to hold said sheet in bowed position.

3,050,748
INVALID CUSHION
Henry Deutinger, Oak Summit Road, R.F.D. 2, Millbrook, N.Y.
Filed Nov. 3, 1960, Ser. No. 67,119
6 Claims. (Cl. 5—338)



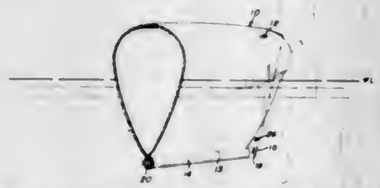
1. An invalid cushion comprising separate semi-circular arcuate tubular portions with a small diameter rear tubular connection and a forward connecting strip and outwardly extending wide stabilizing peripheral flat strips, and suction cups mounted on the bottom of said flat strips to hold said portions in position said flat strips being positioned midway between the top face and the bottom face of the tubular portions and terminating at the ends of the arcuate portions and having forward, rearward and lateral square extensions at the ends of the arcuate portions and midway of the arcuate portions.

3,050,749
VENTILATED SPACER
Samuel P. Crane, 1 Warwick Road, Great Neck, N.Y., and Stephen D. Kent, 567 Liberty St., Newburgh, N.Y.
Filed Mar. 23, 1960, Ser. No. 17,161
9 Claims. (Cl. 5—347)



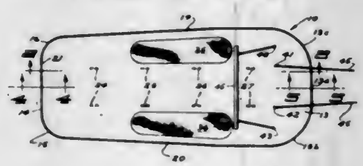
1. In a ventilating spacer, an inner unit and a casing for the unit, the casing comprising an inner open mesh sheet, selected pigmented areas on the sheet constituting decoration, and an outer mesh protecting sheet, the inner sheet being smaller than the outer sheet and having the edges thereof arranged in inward spaced relation to the respective adjacent edges of the outer sheet to provide elongated ventilating spaces between the edges of the inner and outer sheets, the spaces being covered in part only by the outer sheet, the openings in the mesh of the outer sheet being sufficiently large to expose the greater parts of the pigmented areas to view.

3,050,750
ICE-DAMAGE PREVENTER FOR SWIMMING POOLS
Charles E. Harrison, Harrisburg, Pa. (571 West Court, Scotch Plains, N.J.)
Filed Nov. 13, 1958, Ser. No. 773,773
4 Claims. (Cl. 9—8)



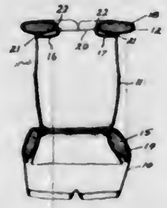
1. For a swimming pool an ice-damage preventer comprising a closed, horizontally elongated inflated flexible-walled container, a pocket secured along the outside of the lower end of the container and depending therefrom, said pocket having an opening at one end, closure means for said opening, said pocket housing weights adapted when said container is placed in water to hold said container in a substantially stable condition with its lower end down and with over one-half of its height submerged, said pocket housing said weight being of greater transverse horizontal dimension than the lower end of said container.

3,050,751
BOAT STRUCTURE
Robert R. Moon, Redwood Falls, Minn.
Filed July 20, 1959, Ser. No. 828,157
2 Claims. (Cl. 9—310)



1. A surfboard type of boating device having in combination, a completely enclosed shell of small central vertical dimension being convexly curved in transverse and longitudinal section uniformly at its upper and lower sides, said sides tapering to form a medial peripheral edge portion of small radial dimension, said shell having a slightly rounded front end portion and a substantially rectilinear rear end portion and having a substantially uniform width with a slight taper as to said width in the direction from the front end portion toward the rear end portion of said shell.

3,050,752
BUOYANT GARMENT
Sylvia Aileen Birchall, 109 Lytton Blvd., Toronto 12, Ontario, Canada
Filed Oct. 13, 1958, Ser. No. 767,053
1 Claim. (Cl. 9—334)



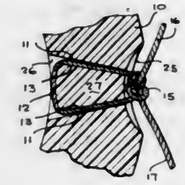
A garment adapted to give the wearer a buoyancy in water, comprising: a pair of pants, a buoyancy device secured to the inside of the pants and adapted to substantially encircle the wearer's body in the region of the hips, wide shoulder portions overlying each of the wearer's shoulders, said shoulder portions being connected to and forming a part of means adapted to support said pair of pants, a separate buoyant relatively wide and flat and relatively flexible neck piece adapted to substantially encircle the wearer's neck and to overlie said shoulder portions and attached to said pants support means at the inner and outer edges of said pants support means, whereby said neck piece is held substantially flat in a plane substantially perpendicular to the spinal column of the wearer.

3,050,753
FLOTATION VEST
Edgar G. Baker, Carbondale, Pa.
Filed Apr. 28, 1959, Ser. No. 809,495
4 Claims. (Cl. 9—337)



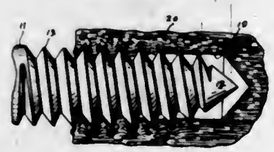
4. A buoyant vest for use by a wearer having a certain head size including in combination a first buoyant mass, a second buoyant mass having shoulder extension formed with ends and means for securing said first and second masses to each other, said securing means comprising a shoulder strap carried by said first mass and means for securing said strap to said second mass at a point spaced from one of said second mass shoulder extension ends, the length of said strap being such that said strap and said masses define a restrictive neck opening of a size smaller than said certain size when said vest is in position on the wearer's person to prevent said vest from slipping readily over the wearer's head, said strap being free of said second mass shoulder extension over the portion of its length extending from said point to permit the end of said second mass shoulder extension to which said strap is secured to be swung away from said strap length to form an opening of a size larger than said certain size to permit the vest to be slipped readily over the wearer's head.

3,050,754
LIFE RING
Joseph H. Le Blanc, Jr., New Orleans, La., assignor to The American Pad & Textile Co., Greenfield, Ohio, a corporation of Ohio
Filed Apr. 5, 1960, Ser. No. 20,171
4 Claims. (Cl. 9—340)



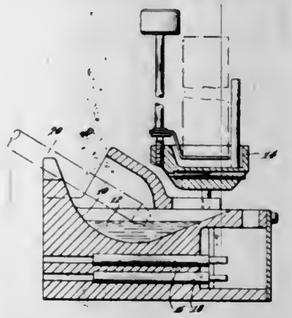
1. A life ring having a flotation body consisting of stiffly resistant plastic foam in the shape of an annulus with an open center, and having holes extending chordally relative to the general axis and from the inner to the outer periphery of the annulus substantially in the median plane of the body, said holes being present in pairs at peripherally spaced regions of the body with the holes of the pair spaced farther apart at the inner periphery than at the outer periphery, and a rope extending through the holes and passing around the plastic foam material located between the holes, with a knot at the outer ends of each such pair of holes for connecting the legs of the rope and preventing movement of the rope in the respective pair of holes, the rope having between the knots at successive pairs of holes a run of greater length than the peripheral arc along the body between such knots.

3,050,755
METHOD OF FORMING THREADS BY APPLYING SLIDING PRESSURE
Donald P. Welles, Jr., Rockford, Ill., assignor to Besly-Welles Corporation, South Beloit, Ill., a corporation of Illinois
Filed July 23, 1958, Ser. No. 750,377
4 Claims. (Cl. 10—152)



1. A method of threading a cylindrical surface of a member subject to plastic deformation, comprising applying radial sliding pressure in pressure areas to said surface at a plurality of equally circumferentially spaced locations on said cylindrical surface, the said radial pressure areas comprising portions of maximum pressure all positioned in the same helical path with the radial pressure diminishing substantially equally on opposite sides of said portions of maximum pressure axially of said cylindrical surface and said radial pressure diminishing in each direction helically of the portions of maximum pressure, and advancing said radial pressure areas along said cylindrical surface along said helical path from one end of said cylindrical surface, said radial pressure areas increasing in size and pressure from the first pressure area applied to said one end of said cylindrical surface, gradually deforming said cylindrical surface at said spaced locations into substantially complementary form to the axial cross sectional shape of said radial pressure areas throughout at least a plurality of turns of said helical path, and thereafter applying sliding pressure in pressure areas substantially equal in size and pressure to the last pressure area at a plurality of helically spaced locations, each being on said helical path and radially overlapping the initial cylindrical surface by approximately the same amount on each side thereof and advancing said last mentioned areas along said helical path to form the threaded cylindrical surface to a shape that is substantially complementary to the axial cross sectional shape of said last mentioned plurality of helically spaced areas.

3,050,756
METHOD OF APPLYING ADHESIVE IN SHOE MANUFACTURE
Jacob S. Kamborian, 133 Forest Ave., West Newton, Mass.
Filed May 11, 1960, Ser. No. 28,408
1 Claim. (Cl. 12—145)

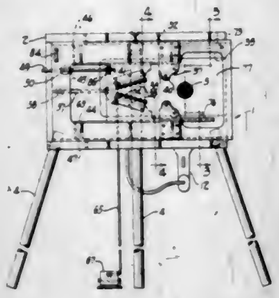


The method of bonding the lasting margin to the insole of shoe using a quick-setting adhesive that is normally solid at ambient temperature, comprising the steps of dipping an applicator in a supply of molten adhesive to pick up a quantity of the adhesive, transferring the applicator with the adhesive thereon to the shoe, rubbing the applicator on at least one of the surfaces of the lasting margin and insole which are to be bonded, supplying heat to the applicator during the transference of the applicator and the rubbing of the applicator to maintain the adhesive molten, removing the applicator, and wiping the lasting margin in over the insole while the adhesive is still molten so as to cause the lasting margin to adhere to the insole.

3,050,757
PIPE BURNISHING APPARATUS
Harry G. Dodge, Painesville, Ohio, assignor of four-tenths to John Stanik, Newbury, Ohio
Filed Feb. 16, 1960, Ser. No. 9,062
18 Claims. (Cl. 15—88)

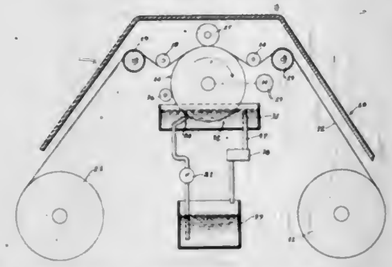
17. Apparatus for cleaning and burnishing a surface of a work piece such as pipe, tube, fittings or the like comprising a base, cleaning means rotatably supported on said base for rotation about an axis, slide means mounted on said base for reciprocation relative thereto in a plane perpendicular to said axis, a plurality of pairs of parallel, opposed support means carried on said slide means and adapted to engage the work piece to be treated in said apparatus, one support means of each said pair being disposed on each side of a line extending through

said axis and each said pair of support means being spaced a greater distance from said line than an adjacent pair of support means, and means for selectively displac-



ing said slide means in a predetermined direction relative to said cleaning means to engage said work piece and displace said surface into functional engagement with said cleaning means.

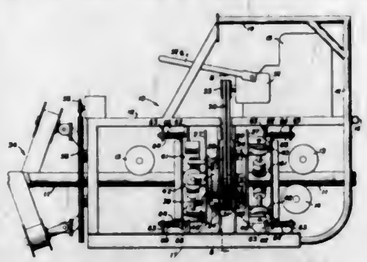
3,050,758
MACHINE FOR STRIPING FILM
Lowell A. Wilkins, 6 N. 256th Ave., Roselle, Ill.
Filed Sept. 6, 1960, Ser. No. 53,983
2 Claims. (Cl. 15—100)



1. Apparatus for conditioning a motion picture film having an anti-halation layer for the reception of a magnetic sound track which comprises a tank containing a solvent for penetrating said anti-halation layers, a roller partially immersed in said tank, a liquid permeable pad carried by said roller and supplied with solvent from said tank, means for moving a motion picture film across said pad so that said pad rubs said solvent onto said anti-halation layer along a limited portion thereof, means for rotating said roller so that its periphery moves in a direction opposite to the movement of said film past said roller, and a spray device arranged to direct a spray of solvent at said pad at an area remote from the rubbing area to clean the same.

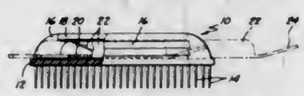
3,050,759
BRUSH DRIVE MEANS FOR CLEANING CYLINDRICAL SURFACES
Alvin E. Betzel, Sr., P.O. Box 113, Arlington, Tex.
Filed Sept. 29, 1961, Ser. No. 141,697
5 Claims. (Cl. 15—104.04)

1. In a pipe cleaning machine of the type which is movably supported on the pipe to be cleaned and wrapped, and wherein said machine includes a frame receiving said pipe therethrough and a prime mover mounted on said frame, at least one mounting plate transversely secured in said frame and having an opening therethrough, support rollers on said mounting plate around said opening, a rotor assembly extending through the opening in said mounting plate and rotatably supported by support rollers, means connecting said prime mover with and rotating said rotor assembly radially disposed brush shafts rotatably mounted on said rotor assembly, brushes on the inner ends of said shafts, friction tread



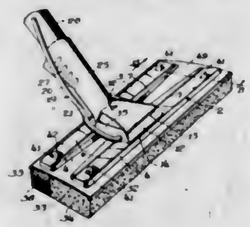
rollers on said shafts, and a pressure plate carried by said frame and positioned to make contact with the treads of said friction tread rollers.

3,050,760
CLEANER
Beryl E. Darnell, 3907 Lake Meade Way, Redwood City, Calif.
Filed Mar. 16, 1961, Ser. No. 96,154
2 Claims. (Cl. 15—113)



1. A cleaning device comprising a brush having an elongated groove in its back, the groove including a pair of laterally spaced side walls having integral inwardly extending retaining lips, a substantially flat plate disposed in the groove against the back of the brush, the plate having ends and upwardly extending sides, the width of the plate and height of the plate sides being such that the plate sides make a sliding fit against the side walls of the groove and under the lips, one end of the plate having outwardly extending and laterally spaced cleaning prongs.

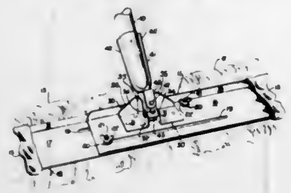
3,050,761
SELF-WRINGING SPONGE MOP
Paul A. Morgan, Chicago, Ill., assignor, by mesne assignments, to The Drackett Company, Cincinnati, Ohio, a corporation of Ohio
Filed June 15, 1959, Ser. No. 820,258
7 Claims. (Cl. 15—119)



1. A sponge mop holder comprising a pair of mop plates arranged in spaced parallel relationship, a hinge member pivotally connected to each of said mop plates, a wringing lever pivotally connected to said hinge member and a first mop plate, a socket, a mop handle having one end secured to said socket, said socket being pivotally connected to said hinge member and said second mop plate, whereby said wringing lever is operable to move said first mop plate pivotally relative to said hinge member and said second mop plate, and said mop handle is operable to move said second mop plate pivotally relative to said hinge member and said first mop plate,

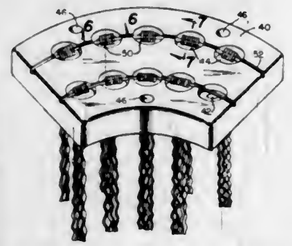
and cooperating stop means on said socket and said hinge member to limit the pivotal movement of said second mop plate relative to said hinge member.

3,050,762
MOPHEAD HOLDER HAVING A UNIVERSAL JOINT AND ALSO CAPABLE OF PIVOTAL MOVEMENT RESTRAINED ALONG A VERTICAL PLANE
Wallace Atkinson Ballinger, 8 Sycamore Road, Orinda, Calif.
Original application Aug. 26, 1957, Ser. No. 680,264, now Patent No. 2,987,745, dated June 13, 1961. Divided and this application Nov. 27, 1959, Ser. No. 859,548
3 Claims. (Cl. 15—147)



1. In a dust mop having a holder pivotally secured to a mop handle by means of a universal joint with an upper pivoted member and a lower pivoted member joined by a pivot, the combination in which said lower pivoted member of a universal joint is positioned between a pair of upwardly extending flanges on said mop holder, said flanges being spaced apart a distance substantially equal to the thickness of said upper pivoted member and each having two portions of different height, the lower portions being opposite each other and supporting a pivot member extending transverse to said universal joint pivot, said pivot member constituting a pivotal connection between said flanges and said lower pivoted member, the upper edges of said lower portions being lower than the lower end of said upper pivoted member, the higher portions extending above a portion of said upper pivoted member of said universal point, to maintain a fixed alignment between the handle and holder when the handle is tilted in a direction where said upper pivoted member lies between said higher portions, while said universal joint can move about its own pivot when the handle is tilted in the other direction and the upper pivoted member lies above said lower portions.

3,050,763
STREET BRUSH CONSTRUCTION
Philip Martin, North Hollywood, Calif., assignor to United Engineering Manufacturing Co., Covina, Calif.
Filed Aug. 22, 1958, Ser. No. 756,559
5 Claims. (Cl. 15—197)



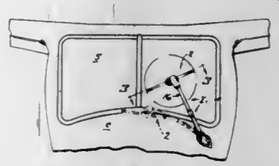
5. In a brush construction, a body member having a tuft passage therethrough, said tuft passage comprising a relatively wide upper portion and a relatively narrow lower portion with shoulders therebetween; a bristle tuft comprising a plurality of bristles of generally U-shaped configuration, the bight of each U-shaped bristle being enlarged in a direction substantially normal to the length of the bristle and joined to the two legs of the bristle by inwardly extending portions spaced from said enlarged bight, said inwardly extending portions abutting said shoulders and said enlarged bight lying within said relatively wide upper portion of said passage when said bristle is assembled with said body member with its legs extending from the narrow lower portion of said tuft passage, the bights of said bristles being arranged in side-to-side succession in said passage upper portion; said body member having channels intersecting said relatively wide upper portion of said tuft passage; and a wire element extending in said channels and through the spaces in said bights in succession.

3,050,764
GRINDING AND POLISHING MAT
Emil Schmieder and Werner Haiss, Haslach (Kinzigtal), Germany, assignors to FA. Ernst Haiss Eisen- und Metall-K.G., Haslach (Kinzigtal), Baden, Germany, a corporation of Germany
Filed Mar. 17, 1959, Ser. No. 800,005
9 Claims. (Cl. 15—209)



1. A grinding and polishing mat, particularly for band-polishing machines, comprising a carrier and a coextensive layer of steel wool secured to one side of said carrier and having a front side and a back side, said layer of steel wool comprising a plurality of at least individual plaits disposed in side-by-side relationship, and a layer of adhesives securing said backside of the steel wool layer to said carrier.

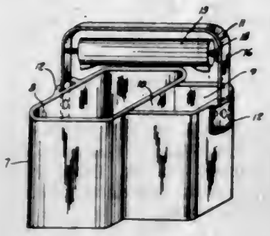
3,050,765
ROTARY WIPERS, PARTICULARLY FOR AIRCRAFT
Jack H. Eichler, Chagrin Falls, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 12, 1960, Ser. No. 2,017
7 Claims. (Cl. 15—250.22)



1. A rotary wiper mechanism for an aircraft windshield having a framework forming part of the cockpit, said mechanism comprising an elongated wiper blade unit adapted for rotation about an axis normal to its longitudinal axis and to the surface of the windshield to be wiped, a generally rigid supporting arm for the blade unit, an angularly movable pivot member connected to an inner or pivot end portion of the arm and projecting through an opening in the windshield framework and adapted for manipulation by a person rearwardly of the windshield or within the cockpit to enable movements of the blade unit between operating and stowed positions, a torque converter unit carried by the outer or free end portion of the arm adjacent the wiper unit and having a rotary low speed, high torque output member connected to drive the wiper unit, the converter having a rotary high speed, low torque input member, a motor having a rotary output

element, and flexible torque transmitting means connecting the output element of the motor with the input member of the torque converter.

3,050,766
SANITIZING DEVICE FOR DAIRY COWS
Max E. Millikin, 6972 John St., Brown City, Mich.
Filed June 28, 1961, Ser. No. 120,417
1 Claim. (Cl. 15—264)



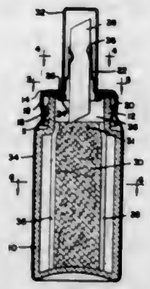
A device of the character described, comprising a receptacle of non-corrosive inert material, having a comparatively large compartment and a comparatively small compartment, there being a short carrying bail for commonly supporting said compartments, and means on said bail for supporting a roll of toweling material, said towel supporting means consisting of a pair of inwardly directed horizontal brackets supported in spaced relation on said bail, said brackets having disc-shaped elements thereon, said disc-shaped elements having hubs for supporting a roll of material, one of said discs and hubs being spring-backed to permit slidable action on its supporting bracket.

3,050,767
VACUUM SYSTEM AND NOZZLE FOR REMOVING CUT HAIR
James L. Rankin, Berkeley, Mo.
(5952 Brown Road, St. Louis 34, Mo.)
Filed Oct. 12, 1961, Ser. No. 144,665
4 Claims. (Cl. 15—314)



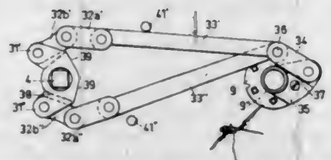
3. A vacuum nozzle comprising a hollow outer casing having a free end and an end adapted to be connected to a conduit, a spacer member positioned at the free end and projecting forwardly thereof, said spacer member defining an opening with the free end and spacing said free end from the object being vacuumed, a plate positioned within said casing, and a mercury switch positioned between said plate and said casing inner wall, said switch comprising a pair of exposed leads and a pool of mercury, said mercury establishing an electrical connection between said leads only when the free end of said nozzle is in a downwardly operative position.

3,050,768
FELT PACK CONSTRUCTION OF PENS
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Original application Apr. 30, 1957, Ser. No. 656,138. Divided and this application Jan. 5, 1961, Ser. No. 80,895
5 Claims. (Cl. 15—563)



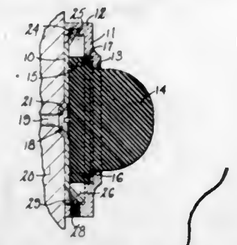
1. A pen comprising a vapor confining open end reservoir having a reduced neck portion, an absorbent compressible ink saturated carrier therein, a cap secured to the open end of said reservoir and having a nib holder extending therefrom, an absorbent nib in said holder extending beyond the end thereof and in contact with said carrier, said carrier having a transverse dimension at its outer end greater than that at said neck and being arranged with said outer end compressibly engaged by and extending into said reduced neck portion to maintain said carrier in operative ink supplying position in the reservoir.

3,050,769
HYDRAULIC DOOR KEEPER
Heinz Bomm, Ennepetal-Voerde, Germany, assignor to Firma Dorken & Mankel K.G., Ennepetal-Voerde, Germany
Original application Dec. 4, 1956, Ser. No. 626,235, now Patent No. 2,965,917, dated Dec. 27, 1960. Divided and this application Nov. 17, 1958, Ser. No. 781,177
Claims priority, application Germany Aug. 3, 1956
3 Claims. (Cl. 16—55)



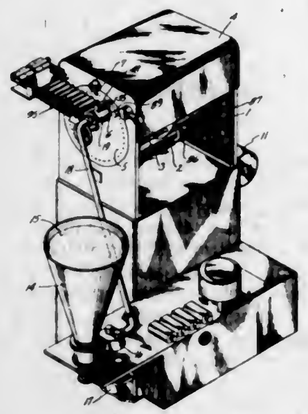
1. A door keeper comprising a first and a second stud parallel to each other, spring means tending to rotate said first stud in a predetermined direction about its axis, said second stud being provided with coupling means for connecting it to a swingable door, and transmission means positively interconnecting said studs for joint rotation about their axes; said transmission means comprising a rod intersecting the common axial plane of said studs, a first articulated linkage including a first crank coupled with said first stud and a first connecting bar pivotally connected to said first crank and to one extremity of said rod, and a second articulated linkage including a second crank coupled with said second stud and a second connecting bar pivotally connected to said second crank and to the other extremity of said rod, said linkages being so dimensioned that said first linkage unwinds itself from said first stud while said second linkage winds itself upon said second stud upon rotation of said second stud with entrainment of said first stud in a direction opposing the force of said spring means.

3,050,770
WALL BUMPER
John B. Morse, Hamden, and Fritz C. Benson, West Haven, Conn., assignors to The H. B. Ives Company, New Haven, Conn., a corporation of Connecticut
Filed Apr. 14, 1960, Ser. No. 22,344
1 Claim. (Cl. 16—86)



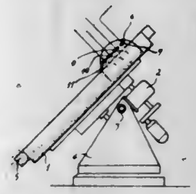
A wall bumper for doors comprising a rear plate member, means securing said plate member to a wall, a front member having a front wall portion with an opening therein and a rearwardly extending flange engaging the plate member, the latter having a lug projecting forwardly therefrom adjacent an edge portion thereof and an outwardly facing recess at another edge portion, said flange having an inwardly facing opening to receive said lug, and a fastening member adjustably mounted in said flange and adapted to be received in the recess in the plate member to secure said front and rear members together, and a deformable bumper member having a flange portion and a domed portion, the flange portion being clamped between the front member and the rear plate and the domed portion extending through an opening in the front wall of the front member, and a washer disposed between said flange and the front wall of the front member and provided with prongs embedded in said flange portion.

3,050,771
SYSTEM FOR FEEDING MEAT IN WATER EMULSION INTO MOLDS
George D. Mylchreest, Hartford, Conn., assignor to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware
Filed June 16, 1960, Ser. No. 36,625
9 Claims. (Cl. 17—41)



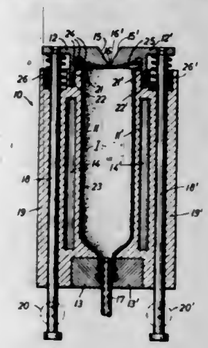
1. In a machine embodying a circular mold-carrying turret, a plurality of molds near the circumference of said turret, indexing driving means for rotating the turret in step-by-step fashion through successive stations including a mold charging station and a product ejection station, the improvement comprising an ejection nozzle for feeding material to each mold when at the charging station, a feed pump, a supply line connecting said pump and said nozzle, an accumulator disposed in said supply line between said pump and said nozzle, means responsive to accumulation of material in said accumulator to stop said pump, means for applying pressure to material in said accumulator when each mold is at the filling station, and means to stop the application of pressure to material in said accumulator prior to indexing of said turret.

3,050,772
MANUFACTURE OF GRANULATED FERTILIZERS
Lothar von Reppert, Wiesbaden, Germany, assignor to Düngemittel Technik A.G., Basel, Switzerland, a corporation of Switzerland
Filed June 27, 1960, Ser. No. 39,019
Claims priority, application Germany June 30, 1959
5 Claims. (Cl. 18—1)



1. In a granulator device of the rotating type for the granulation of powdered fertilizers, comprising a frame, a rotatable tray mounted on said frame, means mounted on said frame and said tray for rotating said tray, a bell-shaped member mounted above said tray and in proximity therewith, an opening disposed in said bell-shaped member and parallelly arranged with respect to said tray, and admission members arranged in said bell-shaped member for supplying materials to said tray.

3,050,773
PROCESS AND APPARATUS FOR MANUFACTURING BLOWN ARTICLES
Norbert Hagen, Siegburg, Rhineland, Germany, assignor to Reinold Hagen, Hangelar, uber Siegburg, Germany
Filed July 14, 1959, Ser. No. 827,005
Claims priority, application Germany July 26, 1958
8 Claims. (Cl. 18—5)



1. Process for the manufacture of hollow plastic articles, comprising extruding at least a single formation of the plastic material used to suspend vertically, in a condition of plasticity, into the open space between sections of a sectional mold, the mold including at least three sections, closing the mold about at least a single segment of the extruded formation, the closed mold having at least a single cavity conforming in shape to an intermediate product, thereby forming an inflatable product within the closed mold, admitting a fluid pressure medium to the inflatable product, expanding same into molding contact

with the mold cavity and forming the intermediate product, relatively moving, before the plastic material has lost its plasticity, at least two mold sections toward each other, with the mold in closed condition and the blown intermediate product within the mold, thereby pressing and welding portions of the intermediate product upon each other and thus converting the intermediate product into the final article, moving said relatively moved together mold sections apart, opening the mold, and withdrawing the final article.

5. Apparatus for the manufacture of hollow plastic articles by blowing, comprising

(*a*) a sectional mold defining, when in blowing position, at least a single composite cavity conforming in shape to an intermediate product having at least a single dilated portion, said cavity having, with respect to adjacent cavity confines, at least a single widened portion and thus yielding said intermediate product,

(1) said mold including at least three sections adapted to form from the initial plastic material used, on closing said mold, at least a single inflatable product within said mold,

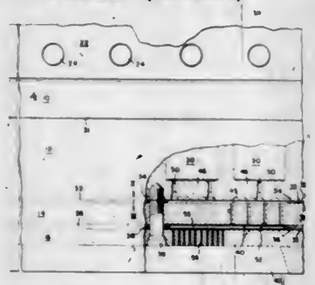
(*b*) means to expand said inflatable product to said intermediate product,

(2) at least two of said mold sections being mounted to be relatively movable toward and from each other, while said mold is in closed condition and the expanded intermediate product is within the closed mold,

(3) said relatively movable mold sections having opposite face portions, and

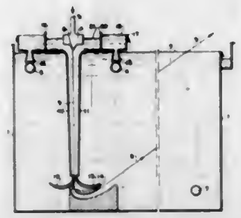
(*c*) means to impart said relative movement and to cause said face portions, on moving said relatively movable mold sections toward each other, to assume a contiguous relationship and to sandwich wall parts of said dilated portion therebetween, thereby pressing and welding said wall parts upon each other and converting said intermediate product into a final article having at least a single strengthening formation.

3,050,774
SPINNERET ASSEMBLY
Robert A. Tait, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 27, 1960, Ser. No. 45,569
4 Claims. (Cl. 18—8)



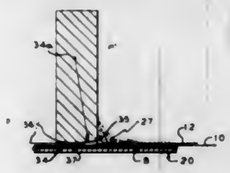
1. A spinneret assembly comprising superimposed filter block, distribution plate and spinneret plate elements, said elements being spaced to present zones therebetween, each element being provided with a pattern of spaced, substantially equi-dimensional flow holes, the holes in the successive elements being more frequent and smaller in diameter with the distribution hole pattern covering a larger area, extending peripherally beyond the other patterns, and being substantially conterminous with both zones, each distribution hole also being staggered with respect to the holes in the other elements, there being a uniform density of holes throughout the area of each pattern.

3,050,775
SPINNING OF CELLULOSE FILM
Robert Levison and Frans Hesselink, Arnhem, Netherlands, assignors, by mesne assignments, to N.V. Onderzoekingsinstituut Research, Arnhem, Netherlands, a corporation of the Netherlands
Filed Mar. 24, 1960, Ser. No. 17,433
Claims priority, application Netherlands Apr. 22, 1959
9 Claims. (Cl. 18—15)



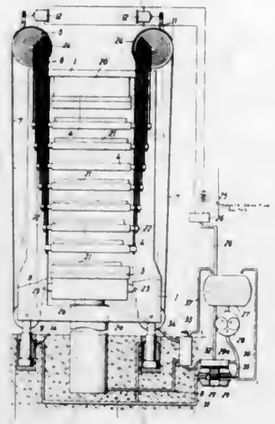
1. A method for wet spinning ribbon-shaped products comprising the steps of extruding a liquid spinning mass vertically downwardly through a casting device having a casting slit extending into a coagulating medium, completely enclosing the freshly-extruded ribbon-shaped product in a body of coagulating medium, guiding the extruded product vertically downwardly by flowing the coagulating medium in the direction of spinning at a sufficiently high rate of speed to produce movement in the ribbon-shaped product by reason of frictional interaction between the coagulating medium and the ribbon-shaped product, and deflecting the coagulating medium away from the ribbon-shaped product while simultaneously accelerating the flow thereof.

3,050,776
NICKEL-POWDER LEVELING APPARATUS
Edward C. Kopper, Verona, N.J., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Apr. 21, 1960, Ser. No. 23,674
1 Claim. (Cl. 18—15)



An apparatus for leveling dry nickel powder and providing the same with a smooth surface, comprising a support having parallel side edges for receiving a layer of nickel powder, a V-shaped leveling blade above said support comprising two diverging blade members having rounded leveling surfaces at their bottom sides parallel with said support, said leveling surfaces being generated about an axis above the leveling surface and parallel with the supporting plate, said axis being set back from the vertical medial plane of said blade to provide a greater rise at the front of the blade than at the rear of the blade, and means for providing relative rectilinear movement between said leveling blade and support in the direction of the apex of the blade whereby the front faces of the blade flow the nickel powder from the center of said layer in opposite directions towards said side edges of said support and the curved leveling surfaces of the blade concurrently slightly compact the nickel powder by an ironing action to provide the layer of powder with a smooth uniform surface.

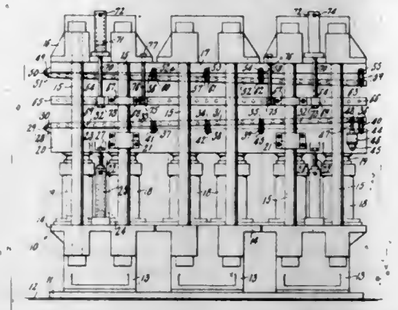
3,050,777
MULTI-PLATEN PRESS
Eugen Siempelkamp, Hohenzollernstr. 69, Krefeld, Germany
Filed Feb. 2, 1960, Ser. No. 6,188
Claims priority, application Germany Feb. 5, 1959
9 Claims. (Cl. 18—16)



1. A multi-platen press for the compaction of sheet materials, comprising a frame; a plurality of vertically spaced sheet-supporting platens held on said frame for vertical movement; a fixed stop on said frame above said platens; plunger means below said platens operable to act upon the lowermost platen in a manner pressing all of said platens and the intervening sheets against one another and said stop; operating means for raising said plunger means; transmission means coupled with said plunger means for raising said platens simultaneously with said plunger means at rates decreasing progressively from the lowermost to the uppermost platen whereby the separations between said platens concurrently decrease upon the rise of said plunger means, said transmission means comprising a stepped pulley, a set of cables passing around respective stops of said pulley and anchored to respective platens, and coupling means including a further cable releasably interconnecting said plunger means and said pulley for rotating the latter upon a rise of the former; tensioning means bearing upon said further cable in a first direction tending to raise said platens through said transmission means for maintaining the connection between said pulley and said plunger means during at least part of the rise of said plunger means; and automatic means coupled with said tensioning means and controlled by said operating means for temporarily inactivating said coupling means at an intermediate point in the rise of said plunger means by slackening said further cable through a displacement of said tensioning means in a second direction opposite said first direction.

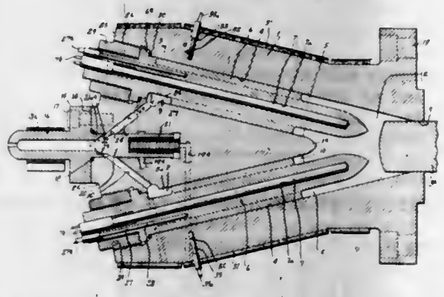
3,050,778
PRESSES FOR TREATING SHEET OR STRIP MATERIALS
Herbert F. Jurgeleit, Oceanside, N.Y., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 1, 1961, Ser. No. 136,154
15 Claims. (Cl. 18—17)

1. A press for flat stock comprising two press members arranged for parallel rectilinear reciprocal movement toward and away from each other, one of said press members comprising a first platen; a second unitary platen located intermediate said first platen and the other of said press members and extending over said other press member substantially co-extensive with said first platen, said first and second platens having substantially planar mating surfaces; hinge means connecting said second platen at one end thereof to the corresponding end of said other press member for angular reciprocal movement relative to the latter, said hinge means permitting no substantial lateral movement between said second platen and said other press member; means operatively connected to said second platen and said other press member for limiting the extent of angular movement of said



second platen relative to said other press member; said first and second platens during relative approaching movement of said press members coming into engagement with one another first at the other end of said second platen and thereafter progressively over their entire surface areas to said one end of said second platen, said first and second platens during relative diverging movement of said press members separating from one another first at said one end of said second platen and thereafter progressively over their entire surface areas to said other end of said second platen.

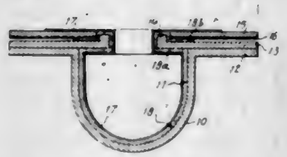
3,050,779
PLASTIC PLASTICIZING HEATER
Francis S. Farley, 564 1st St., Westfield, N.J.
Filed Aug. 8, 1960, Ser. No. 48,018
4 Claims. (Cl. 18—30)



1. A plastic plasticizing heater including a body of an integral piece forming a plastic receiving chamber having an entrance through which unplasticized plastic may be charged under pressure and forming a discharge passage, means at said entrance for fastening the latter to the discharge end of an injection molding machine's shooting cylinder, means at said discharge passage for connecting an injection nozzle to this passage, said body having an outer face extending radially from the location of said discharge passage and a plurality of heating cylinders formed by bores extending inwardly from said face and having counterbores at their outer ends, said plurality of heating cylinders having inlet ends open to said chamber so that said plastic flows from the latter in the form of divided flows through said cylinders, said cylinders located side by side in diverging relation with their said inlet ends mutually adjacent and merging together so as to open in common to said chamber and the latter's said entrance

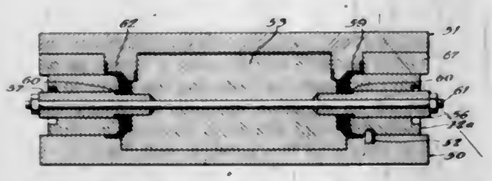
axially opposite to said inlet ends, said heater including torpedoes positioned in said cylinders to spread said divided flows therein, said torpedoes having radial projections contacting the walls of said cylinders and having base flanges fitted in said counterbores and having bores formed axially therein and extending axially through their said base flanges to locations close to the torpedoes' forward ends for receiving electric resistance heating cartridges having conductors extending outwardly and releasable means for holding said base flanges forced against the bottoms of said counterbores and providing passages for said conductors, said cylinders having outlet ends, said discharge passage substantially aligned axially with said entrance and extending oppositely therefrom and ducts connecting said discharge passage with said outlet ends which extend from said cylinders' outlet ends convergingly to join with said discharge passage, so that said plasticized divided flows rejoin for discharge through said passage.

3,050,780
MANUFACTURE OF HAT BLOCKS
Paul Stanley Pollitt, Denton, England, assignor to J. Moores & Sons Limited, Denton, Lancashire, England, a British company
Filed July 16, 1959, Ser. No. 827,593
5 Claims. (Cl. 18—34)



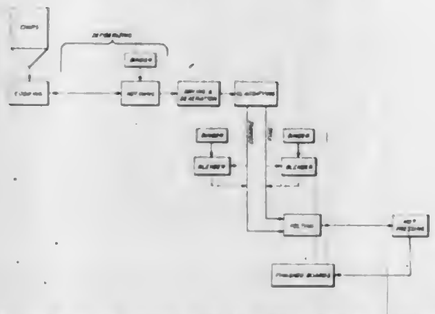
1. Apparatus for forming hat blocks comprising a mold closed at one end and having an opening at the other end, an outwardly extending flange surrounding said other end, a first washer disk covering said flange and extending partly over said opening and forming a constricted neck for said opening, said first disk being secured to said mold, a second washer disk having a central aperture larger than said neck and overlying said first disk, said disks being spaced apart to receive a moldable mixture, vent grooves in one of said disks, means for clamping said second disk to said first disk and said mold, and an inflatable bag in said mold and overlying said second disk.

3,050,781
MOLDED IN PLACE RUBBER SEAT BUTTERFLY VALVE
Henry R. Killian, Park Forest, Ill., assignor to Henry Pratt Company, a corporation of Illinois
Filed Aug. 28, 1959, Ser. No. 836,710
9 Claims. (Cl. 18—36)



1. Apparatus for forming a resilient valve seat in a valve body, comprising: a base, a male mold member on the base having machined openings extending laterally of the base, a pivot pin on the base beside the male mold member, a valve body resting on the base about the male mold member and having machined openings therein, said valve body having means receiving said pivot pin pivoting the body relative to said base for aligning the machined openings in the male mold member and the valve body, pin members engaging said aligned machined openings to lock the valve body in position relative to the base with a cavity for a resilient seat between the valve body and male mold member, and a closure engaging the valve body and male mold member for closing said cavity.

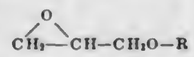
3,050,782
METHOD OF MAKING CONSOLIDATED LIGNOCELLULOSE BOARDS
John G. Meiler, Cleveland, Tenn., assignor to Bowater Board Company, Calhoun, Tenn., a corporation of Delaware
Filed Mar. 3, 1959, Ser. No. 796,770
6 Claims. (Cl. 18—47.5)



1. A method of producing a board which comprises forming lignocellulose particles into a compact mat containing from about 6% to about 16% of water and from about 0.5% to about 10% of a resinous binder, said percentages being based on the dry weight of said particles, positioning said mat between a pair of smooth, imperforate surfaces, rapidly subjecting the faces of said mat to a temperature of from about 380° F. to about 520° F. and to an initial high pressure greater than the pressure of saturated steam at the operating temperature and in the range of from about 600 p.s.i. to about 1200 p.s.i., maintaining said initial high pressure until the mat is compressed to a desired density, releasing said initial high pressure at a relatively rapid rate to an intermediate pressure substantially below the pressure of saturated steam at the operating temperature but not less than 100 p.s.i. to permit the escape of steam from the mat with an audible squeal, maintaining said intermediate pressure until said squealing substantially ceases, and thereafter reducing the pressure applied to said mat to zero to produce a board characterized by high strength, high resistance to moisture absorption and hard, smooth, abrasive-resistant surfaces substantially undamaged by escaping steam.

3,050,783
PROCESS FOR STABILIZING VINYL CHLORIDE POLYMERS
Ernst Pirot, Wuppertal-Barmen, Germany, assignor to J. P. Bemberg Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
No Drawing. Filed Mar. 21, 1960, Ser. No. 16,149
Claims priority, application Germany Mar. 20, 1959
10 Claims. (Cl. 18—57)

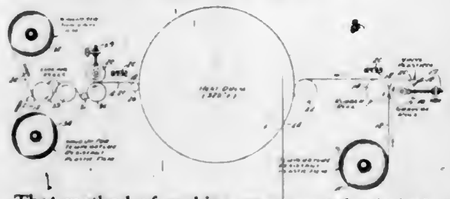
1. In a process for extruding a film of vinyl chloride polymer stabilized with a metal soap, the steps which comprise adding to said polymer before extrusion the metal soap stabilizer together with an epoxy compound of the formula



in which R is a member selected from the group consisting of hydrogen, lower alkyl, lower alkenyl and acetyl

with a boiling point below 190° C., extruding the stabilized polymer into a film, and heating the extruded film to vaporize and substantially completely separate said epoxy compound from said polymer, said metal soap being retained in said polymer.

3,050,784
METHOD OF MAKING RELATIVELY THIN VINYL FILMS
Rudolph A. Jerothe, Pines Lake, Wayne, N.J., assignor to Toscony, Inc., Passaic, N.J., a corporation of New York
Filed Dec. 16, 1959, Ser. No. 859,937
2 Claims. (Cl. 18—57)



1. That method of making unsupported relatively thin vinyl films of less than about 1.5 mils thickness which includes the steps of continuously passing a temperature resistant plastic film having a highly polished, smooth, and non-porous surface through an elongated path, continuously applying a plurality of dots of vinyl plastisol to the surface of the plastic film, said vinyl plastisol dots being normally in excess of two thousand to the square inch and positioned sufficiently close together and with the plastisol sufficiently liquid so that the dots run together and form a uniform surface coating of less than about 1.5 mils thickness over substantially the entire plastic film, applying pressure uniformly to the vinyl plastisol as it is led through a confined path of movement, continuously heating the vinyl plastisol while under pressure to complete the coalescing of the dots into a uniform film and to fuse the plastisol into a vinyl film, continuously cooling the laminated films, continuously separating the vinyl film when cooled from the plastic film, and continuously winding up the vinyl film.

3,050,785
PROCESS WHICH COMPRISES FORMING A GEL FROM A SOLUTION IN A VINYLIDENE COMPOUND OF ISOTACTIC POLYMETHYLMETHACRYLATE AND SYNDIOTACTIC POLYMETHYLMETHACRYLATE AND POLYMERIZING SAID GEL
William J. Cunningham, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed July 7, 1960, Ser. No. 41,258
13 Claims. (Cl. 18—59)

1. A process for preparing polymers of improved properties which comprises dissolving in a polymerizable vinylidene compound a small proportion of poly(methyl methacrylate) of isotactic structure, bringing the resulting solution into contact with a solution of poly(methyl methacrylate) of syndiotactic structure, whereby a gel is formed, an polymerizing said gel under the influence of a free radical initiator.

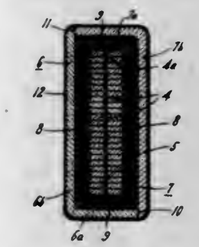
3,050,786
METHODS OF LINING AND JACKETING TUBULAR MEMBERS WITH PRESTRESSED POLYTETRAFLUOROETHYLENE
Alexander N. T. St. John, Glen Ridge, and William E. Titterton, Whippany, N.J., assignors to Resistoflex Corporation, Roseland, N.Y., a corporation of New York
Filed Jan. 30, 1957, Ser. No. 637,159
11 Claims. (Cl. 18—59)

1. The method of tightly jacketing a longitudinal member with polytetrafluoroethylene resin which comprises the steps of selecting a pre-stressed sintered tube of said resin which is substantially dimensionally stable indefinitely at room temperature but adapted due to its pre-stressing to alter its girth substantially uniformly throughout its length without the assistance of molding pressure upon being heated to a given temperature between 300° F. and 620° F. and thereafter cooled, the nature of said



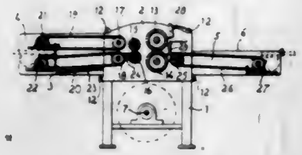
pre-stressed tube being such that its internal perimeter was smaller than the external perimeter of a longitudinal member which it is to jacket prior to pre-stressing but is now adapted to mate loosely with said longitudinal member, inserting the longitudinal member within the selected pre-stressed tube, heating the assembly of said tube and member to said given temperature, and thereafter cooling the assembly.

3,050,787
METHOD FOR MAKING ARMATURE CONDUCTOR BAR
Charles D. Richardson, Ballston Lake, and Joseph M. Jasniewski, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Mar. 4, 1959, Ser. No. 797,159
4 Claims. (Cl. 18—59)



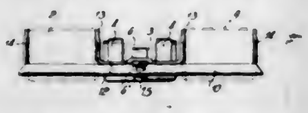
4. The method of manufacturing a generator stator conductor bar for use in the armature slots of the stator core comprising the steps of providing a conductor bar having electrically conductive strands wrapped with a plurality of layers of mica insulating tape, said insulating tape being covered and impregnated with a thermosetting resin binder, applying a protective layer of non-permeable substance over said insulating tape, enclosing the slot portion of said conductor bar in a pressure-constrictable mold, said mold being comprised of two mutually opposing angle pieces forming an enclosure conforming approximately to the shape of said armature winding slots, covering said pressure-constrictable mold with a heat shrinkable material, placing said conductor bar in a pressure tight tank and reducing pressure on the conductor bar so as to remove volatile material while simultaneously heating said tank to cause the heat shrinkable material to constrict said mold, introducing into the tank molten asphalt, maintaining said asphalt at a pressure exceeding that imposed on the mold by the heat shrinkable material and at a temperature exceeding the cure temperature of said thermosetting resin to compact the entire conductor bar insulation under uniform hydraulic pressure and to shape the slot portion with the pressure-constrictable mold while curing the thermosetting resin.

3,050,788
DECORTICATING MACHINE AND PROCESS
Elek Almassy, East London, Cape Province, Union of South Africa, assignor of forty-eight percent to Dorothy Yerta Arenson, Cape Province, Union of South Africa
Filed May 18, 1959, Ser. No. 813,749
Claims priority, application Union of South Africa June 11, 1958
9 Claims. (Cl. 19—28)



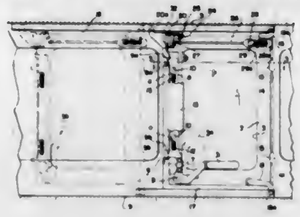
1. A decorticating process which comprises subjecting leaves of a type in which fibres are embedded in a juicy substance to pressure by which the juice is at least partly pressed out and the skin of the leaves is at least partly crushed and applying friction and pressure to both sides of the leaves, by which the crushed pulp and skin of the leaves is rubbed loose and separated from the fibres, in which process the friction and pressure result from passing the leaves between two hard and smooth substantially unyielding surfaces, by maintaining said surfaces constantly spaced and parallel at least at the locality of closest proximity of the said surfaces and at the same time moving said surfaces relative to one another at speeds different from one another in a direction parallel to the direction of passage of the leaf at the said locality of closest proximity, said spacing at the locality of closest proximity and at the time of movement being small in comparison with the normal cross-section of the leaves.

3,050,789
DEVICE FOR SUPPORTING AND GUIDING BELTS OF DRAFTING ASSEMBLIES
Ernst Rogner, Stuttgart-Bad Cannstatt, Germany, assignor to SKF Kugellagerfabriken G.m.b.H., Stuttgart-Bad Cannstatt, Germany
Filed July 31, 1959, Ser. No. 830,830
Claims priority, application Germany Aug. 5, 1958
5 Claims. (Cl. 19—252)



1. For use in the drafting assembly of a spinning machine, a device for supporting and guiding an upper drafting belt which extends around a top roll, said device comprising, in combination, a supporting member including supporting strip means in which a portion of a shaft of the top roll is received and connecting strip means integral with said supporting strip means; an elongated guide rail located forwardly of said supporting strip means and having an upper side, an underside, and a front edge around which the upper belt passes, said guide rail being substantially parallel with the axis of the top roll and at least a portion of said connecting strip means extending along one side and adjacent to an intermediate portion of said guide rail, said portion of the connecting strip means being rigidly connected with the intermediate portion of said guide rail so as to reinforce the same and so that the supporting member and the guide rail form a unitary structure; a leaf spring having a first portion received between said portion of the connecting strip means and the intermediate portion of said guide rail, and a second portion extending beyond the upper side of said guide rail; and belt guiding members rigid with said unitary structure and extending beyond the upper side of said guide rail.

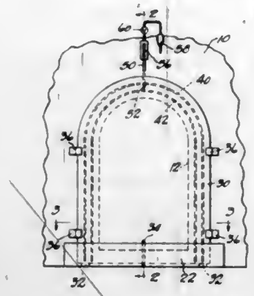
3,050,790
OPENABLE AIRCRAFT WINDOW
Douglas B. Wakefield, North Hollywood, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Sept. 9, 1959, Ser. No. 839,024
6 Claims. (Cl. 20—42)



3. An openable window structure for an aircraft compartment comprising a stationary frame integral with and forming an opening in the aircraft compartment, a movable window assembly positionable in the stationary frame opening for closure thereof, said window assembly having a perimeter comprising an upper and lower portion and first and second side portions, said side portions interspaced between said upper and lower portions, roller means connected to the upper and lower portions of said window assembly, means connected to the compartment proximate each the upper and lower portions of the window assembly on which the roller means ride guiding the path of the window assembly in an opening as well as a closing movement, a handle pivotally connected to the window assembly about an axis normal to the plane thereof, first lock lugs integral with the stationary frame at both portions thereof registering with the first and second side portions of the window assembly when said window assembly is positioned in said stationary frame, said first lock lugs extending into the opening formed by the stationary frame, second lock lugs integral with the window assembly along the first side portion thereof and engageable with the first lock lugs registering with the first side portion of the window assembly when the window assembly is in closed position, and third lock lugs actuably mounted along the second side portion of the window assembly and interconnected with said handle whereby the first movement of the handle in an opening direction releases the third lock lugs from engagement with the first lock lugs registering with the second side portion and the last movement of the handle in closing direction lockingly engages the third lock lugs with the first lock lugs registering with the second side portion.

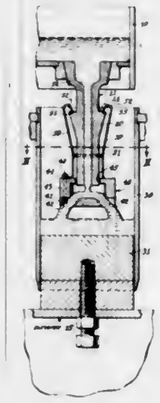
3,050,791
SEALED DOOR FOR A COMPARTMENT HAVING A CONTROLLED ENVIRONMENT
Philip C. Trexler, Niles, Mich., assignor to University of Notre Dame du Lac, Notre Dame, Ind., a corporation of Indiana
Filed Mar. 31, 1958, Ser. No. 725,381
6 Claims. (Cl. 20—69)

6. In combination, an enclosure for a controlled environment including a wall having an opening, a liquid container at the lower end of said opening, a door panel larger than said opening, means releasably positioning said door in spaced relation to said wall with its lower portion immersed in liquid in said container and with its top and side margins lapping said wall around said opening, seal means defining an inverted U-shaped passage around said opening between the lapped portions of said door and wall, the ends of said passage communicating with said container, means for filling said passage with



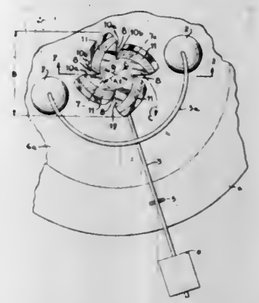
liquid, and means positioning the bottom edge of said door spaced above the bottom of said container.

3,050,792
APPARATUS FOR CONTINUOUS METAL CASTING AND PARTS THEREOF
Leonard M. Lipman, Hillside, and Harry Morris, Oradell, N.J., assignors to Warner Mfg. Corp., Bloomfield, N.J., a corporation of New Jersey
Filed Aug. 27, 1959, Ser. No. 836,392
2 Claims. (Cl. 22—57.2)



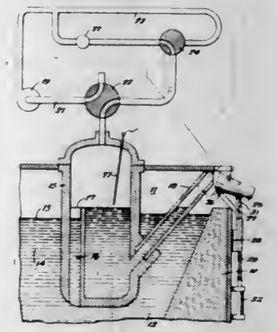
1. In an apparatus for continuous casting and including a pour pan, a spout depending therefrom, a mold, a movable stool, and a float, the improvement comprising in combination therewith a shoulder on an inverted frustro-conical portion of said spout, and means for hanging said float on said shoulder whereby said float is movable up and down in response to the level of metal in said mold to automatically prevent and permit the flow of metal from said pan into and through said spout and float into said mold, with said means comprising a plurality of elements secured to said float and extending upwardly therefrom, with the free ends of said elements extending inwardly from said upwardly extending portions thereof and adapted to rest on said shoulder to support said float in its lowermost position, said elements being resiliently flexible thereby capable of being deformed outwardly when slid over said frustro-conical portion and then returned inwardly to dispose said ends on said shoulder.

3,050,793
MOLTEN METAL DISTRIBUTION APPARATUS
Erich Trägner and Rolf Küster, Singen/Hohentwiel, Germany, assignors to Aluminium-Industrie-Aktien-Gesellschaft, Chippis, Switzerland, a joint-stock company of Switzerland
Filed May 5, 1961, Ser. No. 108,050
Claims priority, application Germany May 25, 1960
4 Claims. (Cl. 22—79)



1. A distributor, for use in connection with a molten metal bath in a walled mold for continuous casting and a nozzle having a substantially horizontal discharge opening for the passage of molten metal toward said bath, said distributor comprising a bucket including a bottom and a sidewall, support means, including float means adapted to be supported on said metal bath, and a balancing beam including a counter-balancing weight and a balancing knife edge operable to rest on the mold wall, thereby supporting said bucket in a position wherein said bottom of the bucket is disposed a short distance below the discharge opening of said nozzle, said bucket having in the sidewall a series of upright slots for the discharge of molten metal from the bucket into said bath.

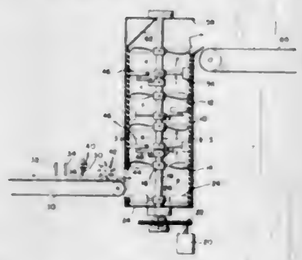
3,050,794
FURNACE LADLING APPARATUS
George W. Holz, Chicago, Ill., assignor to Lindberg Engineering Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 8, 1959, Ser. No. 838,585
2 Claims. (Cl. 22—79)



1. Furnace ladling apparatus comprising, in combination with a furnace body formed with a chamber to contain molten metal, a crucible in the chamber, means defining a vertically elongated inlet passage opening into the crucible above its bottom and into the chamber below the minimum operating level of molten metal therein, a discharge tube communicating with the lower part of the crucible below opening of the inlet passage into the crucible and discharging above the maximum level of molten metal in the chamber adjacent to the top and one side

of the chamber, fluid pressure means to subject the crucible to vacuum to draw molten metal into it through the inlet passage and thereafter to apply pressure to the crucible to force molten metal therein out the discharge tube, a launder mounted adjacent to the upper end of the discharge tube to receive molten metal from the discharge tube and movable from one position in which it directs molten metal outside of the chamber to a second position in which the molten metal is returned to the chamber, means to move the launder from one of said positions to the other, a primary control to operate the forcing means while the launder is in said one position to discharge molten metal from the furnace, and control means to move the launder from said one position to said second position and thereafter to operate the fluid pressure means to apply forcing pressure to the crucible to force molten metal through the discharge tube into the launder and back into the furnace chamber, the control means including time responsive means operable after a predetermined time interval, means controlled by operation of the time responsive means to operate the control means, and means operated by the primary control to reset the time responsive means whereby if the primary control is operated more frequently than said predetermined time interval the time responsive means will not operate.

3,050,795
CONTINUOUS TYPE SAND MIXER
Harry W. Dietert, Detroit, Mich., assignor to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed May 16, 1960, Ser. No. 29,494
4 Claims. (Cl. 22—89)



1. Apparatus for conditioning granular material comprising an enlongated cylindrical substantially vertical casing having a length more than double its diameter, said casing having an inlet opening at its lower end and an outlet opening in its side wall at the top thereof, means for establishing a continuous flow of granular material vertically upward through said casing to produce a continuous discharge of conditioned granular material at the same rate of supply of material to said casing through said inlet opening, a vertical rotary drive shaft in said casing extending for the full length thereof substantially along the axis of said casing, a plurality of inclined blades fixed to said shaft at substantially uniform axial spacing throughout the length of said shaft, rollers connected to said shaft intermediate adjacent pairs of axially spaced blades, means mounting said rollers for radially outward movement by centrifugal force into position to roll granular material against the inner surface of said casing, scrapers carried by said shaft in the same horizontal planes occupied by said rollers, means for continuously introducing granular material in finely divided separated particle condition into the bottom opening in said casing, and means for driving said shaft at a speed sufficient to produce a continuous upward flow of granular material through the combined mechanical action of the blades throwing the granular material upwardly and the flow of air upwardly through the casing induced by the fan action of said blades to produce a continuous discharge of conditioned granular material from the top opening of said casing at the same rate as the continuous introduction of granular material into the bottom opening thereof.

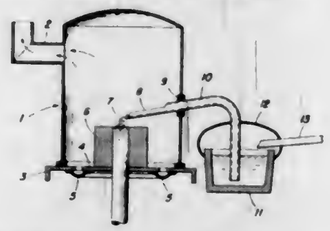
3,050,796
METHOD OF IMPROVING FOUNDRY MOLDS
William H. Moore, New Rochelle, N.Y., assignor to Meehanite Metal Corporation, a corporation of Missouri
No Drawing. Filed Feb. 16, 1960, Ser. No. 8,909
3 Claims. (Cl. 22—193)

1. The method of accelerating the solidification rate of molten metal by casting said metal in a molding mixture forming at least a portion of a mold cavity, said molding mixture consisting of a high conductivity substance selected from the group consisting of silicon carbide and zirconite and containing a first additive of sodium silicate in the amount of from 2% to 12% and a second additive selected from the group consisting of zinc, cadmium, and tin oxide in the amount of from 5% to 25%, said additives improving the heat extraction ability of said molding mixture by an endothermic reaction.

3,050,797
WATER SENSITIVE MOLDS AND CORES OF FAST COLLAPSIBILITY
Bernard Freedman and Jerome J. Mestdagh, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 18, 1959, Ser. No. 821,084
6 Claims. (Cl. 22—193)

1. A process for producing dry sand molds and cores capable of exhibiting fast collapsibility when used in metal casting operations the said process consisting of the steps of (*a*) shaping molds and cores from a sand-resin mixture, the resin consisting essentially of a water-dilutable liquid condensate in mol ratio of 1–3 mols of aldehyde per mol of phenol, said condensate resulting from a condensation reaction carried out at a temperature of 60–100° C. and at a pH of 8.0–11.0 until the reaction mixture has a water dilutability of from 1:1 to 24:1 and thereafter readjusted to a pH of 6.0–8.5 by the addition of a boric acid, then (*b*) setting the shaped molds and cores by curing the resin to a point wherein it has water-sensitivity.

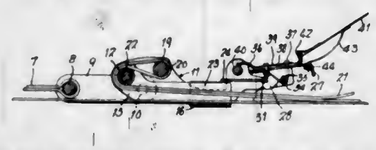
3,050,798
PROCESS FOR CONTINUOUS CASTING AND VACUUM DEGASIFICATION
Frank W. Chambers, Darien, Conn., assignor, by mesne assignments, to Strategic Materials Corporation, New York, N.Y., a corporation of New York
Filed June 13, 1960, Ser. No. 35,486
7 Claims. (Cl. 22—200.1)



1. Process for the continuous casting and vacuum degassing of metals and alloys that comprises maintaining a vacuum chamber at a substantially subatmospheric pressure while maintaining an exteriorly located molten metal bath at substantially atmospheric pressure, drawing said molten metal into said vacuum chamber through a siphon terminating in said vacuum chamber and communicating with the interior of said molten metal bath, said siphon being adapted to deliver said metal to an oscillating continuous-casting mold located within said vacuum chamber, allowing said molten metal to solidify in said mold and said subatmospheric pressure controlling the rate of flow of said metal from said bath through said siphon and into said mold, and continuously recovering said solidified metal therefrom.

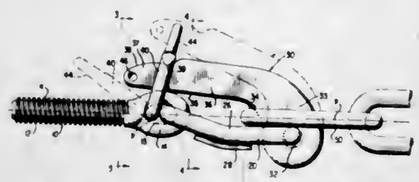
2. The process as claimed in claim 1, wherein said subatmospheric pressure acts to remove entrained gaseous impurity elements from said molten metal as it passes from said siphon into said mold.

3,050,799
HEAVY DUTY TIEDOWN BUCKLE WITH REMOTELY OPERABLE SAFETY TENSION RELEASE
Frank L. Davis, 129—07 7th Ave., College Point, N.Y.
Filed Mar. 28, 1961, Ser. No. 98,867
3 Claims. (Cl. 24—68)



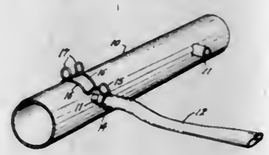
1. Remotely operable tension releasing tiedown buckle comprising the combination of a buckle frame having spaced sides connected at one end by a cross member, a web tensioning lever pivoted to the opposite end of said frame and carrying means by which a web connected therewith may be tensioned in pivoting movement of said lever down over the frame, a latch on the free end of said lever spring tensioned to effect interlocking engagement with said cross member in the web tensioning movement of the lever down over the frame, a locking slide on said latch for locking said latch against releasing movement, shiftable into and out of engagement with the frame for locking the latch in the holding position or unlocking the latch, and a pull connection extending from said locking slide and from said latch for unlocking the slide and shifting the unlocked latch to release the lever from its web tensioning position on the frame, said latch being in the form of a plate pivoted to rock on the tensioning lever and being provided with a cam portion extended to engage said cross member in the pivotal movement of said plate to thereby impart lifting movement of said web tensioning lever in respect to the frame.

3,050,800
PELICAN HOOK FOR RATCHET COUPLINGS
Richard H. Kernahan, Coraopolis, Pa., assignor to Western Rivers Corporation, Pittsburgh, Pa., a corporation of Pennsylvania.
Filed June 21, 1961, Ser. No. 118,691
15 Claims. (Cl. 24—69)



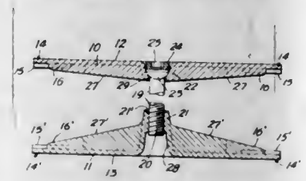
1. A pelican hook coupling having a terminal eye, a closed link connected to the eye, a pelican hook locking arm curved to engage with a chain link and having adjacent one end a pivot aperture receiving said closed link, the other end of said hook arm being free, said hook arm having a length greater than that of said closed link so that the free end portion of said arm overlaps and rests against said eye in locking position, and a keeper link pivotally supported by said eye and being of a length to snugly but freely surround the free end portion of said hook arm when the latter engages the eye in locking position, the free end portion of said hook arm being provided with an outer arcuate edge extending to the free end of said arm, said arcuate edge having a radius of curvature approximately equal to the length of the opening of said keeper link, and said eye supporting said keeper link for pivotal movement only, whereby to enable substantially free swinging movement of the keeper link to and from locking engagement over said arcuate edge when the locking arm engages the eye but inhibiting accidental movement of said keeper link from locking position.

3,050,801
UNIVERSAL SOCK CLAMP
Gilles L. Downey, 703 W. 15th St., Grand Island, Nebr.
Filed Oct. 26, 1960, Ser. No. 65,075
1 Claim. (Cl. 24—81)



A sock supporting device for supporting a tubular flexible irrigation sock in alignment with an outlet gate on an irrigation pipe comprising: a relatively short sock tube fitted snugly within the intake extremity of said sock; and a clamping element adapted to resiliently engage said irrigation pipe and simultaneously and resillently surround and clamp said sock to said sock tube, said clamping element comprising a single length of resilient rod, a ring formed by said rod at the medial portion thereof surrounding and clamping said sock to said sock tube, the end portions of said rod extending oppositely and tangentially outward from said ring in overlapping relation. thence extending first upwardly from said ring and thence downwardly to form inverted U-shaped finger brackets which when pressed together expand said ring to release said sock, said end portions extending arcuately from said brackets to form semi-circular portions extending circumferentially about said irrigation pipe in parallel spaced planes at right angles to the axis of said pipe, said ring having a normal diameter less than the diameter of said sock tube and said semi-circular portions having a normal diameter less than the diameter of said pipe so that said tube and said pipe will be frictionally gripped as a result of the contractive bias of said ring and said semi-circular portions.

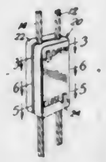
3,050,802
MULTIPLE PRODUCT COUPLING CLAMP
Jack G. Imparato, 1121 82nd St., Brooklyn, N.Y.
Filed Dec. 18, 1958, Ser. No. 781,233
3 Claims. (Cl. 24—81)



2. A clamp of the character described comprising a pair of plates, each plate having an inwardly offset hub portion and circumferentially arrange clamp portions spaced with respect to said hub portion, one hub portion

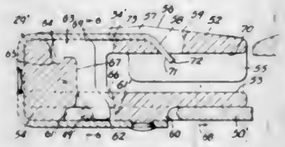
comprising a curved socket, the other hub portion having a threaded bore, each clamp portion having at its end integral article engaging means, means extending centrally from each clamp portion to and integrally joining the offset hub portion for reinforcing each of the plates, a screw for drawing the plates together in securely coupling a plurality of articles engaged by the means of the clamp portion of each of said plates, the screw having a rounded head seating in said curved socket, said screw being threaded to engage the threaded hub portion, the outer exposed surfaces of both of said plates being generally flat, and each article engaging means of each clamp portion including a pair of curved article engaging elements.

3,050,803
PLASTIC OPERATOR FOR DRAPERY CORD
Harold D. Hulterstrum, Baraboo, Wis., assignor to Flambeau Plastics Corporation, Baraboo, Wis., a corporation of Wisconsin
Filed Mar. 14, 1960, Ser. No. 14,715
1 Claim. (Cl. 24—129)



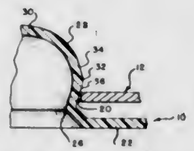
An actuator for a pair of pulley cords comprising a pair of generally flat blocks of resilient material connected to each other with their flat faces in spaced parallel relation by means of a central web, the peripheral edges of said blocks around said web being free to flex toward each other about said web, a first pulley cord channel on one side of said web and spaced laterally therefrom, a second pulley cord channel on the other side of said web and spaced laterally therefrom, each said channel being formed by a pair of complementary grooves in opposed faces of said blocks, said first channel having a series of internal gripping projections near one end of said actuator below said web and said second channel having a series of internal gripping projections near the other end of said actuator above said web, whereby a cord disposed within said internal gripping projections of said channels can be gripped by manually flexing said blocks toward each other.

3,050,804
THIN SLIDER FOR ONE SIDED SEPARABLE FASTENER STRINGERS
Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)
Filed Dec. 8, 1960, Ser. No. 74,500
5 Claims. (Cl. 24—205.14)



1. A slider of the character described, comprising a body having spaced walls joined at one end in a connecting web, one wall having flanged sides defining the channel of the slider body, the walls of the slider body having alined apertures at the inner end portion of said web, a U-shaped locking spring arranged upon outer surfaces of both walls and over the outer end of said web, means fixing one end portion of said spring to the other of said walls, means fixing a crosshead of the spring to the outer end of said web, the other end portion of the spring being free to form a spring arm flexing with respect to said first named wall, the first named end of the spring forming a closure to the aperture in the second named wall, a pull having a part operating in the aperture of the second named wall inwardly of the first named end of said spring to operatively engage the end portion of a spring actuating element disposed in said aperture, the other end portion of said element engaging said spring arm, whereby in actuation of the pull for movement of the slider in one direction said element is actuated to move said spring arm into extended position with respect to said first named wall, and said spring arm including scoop engaging means normally disposed in the channel of the slider body and move into position to clear the channel in outward flexing of said arm by said element.

3,050,805
SNAP FASTENERS
Joseph Clyne, Bronx, N.Y., assignor to Flexsleev, Inc., New York, N.Y., a corporation of New York
Filed Oct. 9, 1959, Ser. No. 845,394
3 Claims. (24—214)



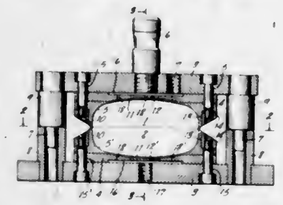
1. A separable snap fastener for joining parts of a garment together, comprising a substantially rigid ring-shaped female member of thin material for attachment to one part of the garment, said ring-shaped female member having a central circular opening of fixed diameter, a male base member for attachment to another part of the garment to be joined to said one part, said male base member cooperating with the female member for separably joining said parts of the garment together, said male base member having an annular flange for attachment to the garment and a hollow head integral with and projecting from the central portion of one face of the annular flange, said head being adapted to be snapped through the opening in the female member, a hollow neck connecting the head and flange and having a smaller diameter than that of the opening in the female member, said male base member being of synthetic plastic material having the characteristics of providing a resilient, momentarily deformable head structure adapted to be contracted when snapped through and withdrawn from the circular opening in the female member and to recover to its normal shape and size, the head of the male base member having a rounded top merging into a circular annular portion at the maximum diameter of the head which in turn merges into the neck, said neck having a smaller diameter than that of the circular annular portion of the head, said circular annular portion of the head having a circular annular area of maximum diameter and steep annular engagement surfaces respectively on opposite sides of its circular annular area of maximum diameter, said maximum diameter being somewhat greater than that of the circular opening of fixed diameter in the female member, and the head being contractible when it is snapped through and withdrawn from said circular opening in the female member.

3,050,806
GARMENT FASTENING EYE
Maurice Cohn, South St., South Coventry, Conn.
Filed Oct. 7, 1960, Ser. No. 61,125
2 Claims. (Cl. 24—226)



1. An improved eye for association with a hook in a hook and eye garment fastening device, the said eye comprising a generally rectangular sheet member having a generally rectangular centrally located longitudinally extending opening to receive the hook and which defines a pair of longitudinal bars on opposite sides of the said opening, one being an engaging bar which is bent downwardly along a longitudinal bend line coincident with the adjacent longitudinal edge of the said central opening and over which the hook is passed through the opening to effect fastening engagement, and the other being an anchoring bar over which threads are extended in stitching the eye in place on the garment fabric, a substantial portion of the said anchoring bar being struck transversely in cuts extending from the said opening and being bent downwardly along a longitudinal bend line from the plane of the eye member to define a tongue engageable with the fabric to project the engaging bar and eye opening away from the fabric for easy engagement and disengagement of the hook.

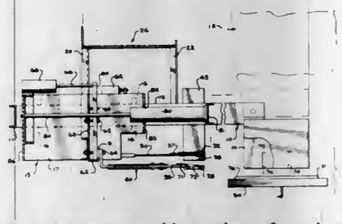
3,050,807
PRESSES
Cornelis Johannes Adrianus Cleremans, Rotterdam, Netherlands, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine
Filed Apr. 30, 1958, Ser. No. 731,932
7 Claims. (Cl. 25—10)



1. A press comprising cooperating die means, a continuous resilient cup-shaped lining on the inside of each cooperating die means, means for forcing the die means together to make a mass of solid plastic material inserted between the die means conform to the shape of the die means, a backing member of substantially rigid material positioned adjacent the resilient lining of each die means for support thereof during a pressing operation, a manifold adjacent each of the rigid backing members on the sides furthermost from the resilient linings, each rigid backing member having a plurality of apertures communicating between the respective manifolds and the respective resilient linings, and means for applying fluid pressure to the manifolds to deform the resilient linings and disengage the mass of pressed plastic material therefrom.

3,050,808
APPARATUS FOR MAKING SHELL BRICK
Raymond W. Clanton, Sunland, Albert R. Clanton, Pacoima, and Hollis L. Clanton, Sun Valley, Calif., assignors, by mesne assignments, to Kaiser Steel Corporation, Oakland, Calif., a corporation of Nevada
Filed Oct. 20, 1959, Ser. No. 847,482
7 Claims. (Cl. 25—41)

1. In apparatus for making a laterally spaced pair of molded blocks connected by at least one transverse tie bar having its ends embedded in the individual blocks of the pair, said apparatus including a pair of spaced vertical molds with each mold having at least one vertical slot on the inner wall thereof adapted to receive the end of a tie bar raised upwardly from below said molds, means for inserting the ends of a tie bar in the vertical slots of said pair of molds and for supporting said tie bar in a mold inserted position during at least a portion of the block molding operation and for preventing a loss of material through said slots during at least a portion of the block molding operation, said means comprising a frame, a carriage mounted on said frame for horizontal movement toward and away from said molds, a tie bar positioning arm pivotally mounted on said carriage and having a free end portion projecting towards the vertical space between said molds, said free end portion of said tie bar positioning arm being adapted to loosely support at least one tie



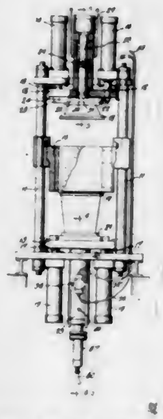
bar thereon, means on said carriage for pivoting said arm, means for moving said carriage and said arm toward said vertical molds in such a fashion that the free end portion of said arm is brought below said vertical slots and in registry with the space therebetween, means for actuating said arm pivoting means in such a fashion as to first raise the free end portion of said arm into said space between said molds whereby at least one tie bar on said free end portion of said arm is inserted in position in the slots of said molds and then to hold said arm in a raised position while the free end portion thereof supports said tie bar in position during at least a portion of the molding operation, said free end portion of said arm being of such a dimension as to substantially fill the space between said molds in the region of said slots to prevent loss of material through said slots during at least a portion of the block molding operation.

3,050,809
SYNCHRONIZED AND EQUALIZED OPPOSED HAMMER PRESS
John J. Kupka, Gladstone, N.J., assignor to McKiernan-Terry Corporation, Harrison, N.J., a corporation of New Jersey
Filed Dec. 8, 1960, Ser. No. 74,580
2 Claims. (Cl. 25—91)

1. An opposed dual hammer press in which the mold closing pressure of opposed press platens is augmented by hammer blows of opposed reciprocating power hammers and the opposing impacts of the hammers on the material being molded are synchronized and equalized while the press is closing, comprising the combination of,
a vertically disposed open ended mold box,
vertically operating upper and lower press platens cooperating with the upper and lower open ends of said mold box,
anvil plates carried by said platens,
dies for closing the upper and lower ends of said mold box,
said dies being connected with said anvil plates to transmit the effect of hammer blows on said anvil plates to material confined in the mold box independently of mold closing pressure applied by said platens,
upper and lower power hammers mounted in opposing relation on said upper and lower platens and having

oppositely acting reciprocating rams disposed to hammer said anvil plates,

means connected with and shiftable with the hammer on the lower platen for applying a constant, yielding lifting force to the ram of the lower power hammer independently of the force for reciprocating that ram, substantially equal in effect to the effective mass weight of both lower and upper rams and thereby supporting the lower ram raised in engagement with its anvil at start of operations and augmenting the force applied by the lower ram to substantially equal the force applied by the upper ram,

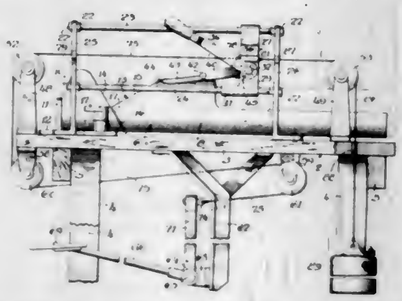


said power hammers having control devices similar in effect on said hammers,

means connecting said control devices of similar effect and holding the rams of the opposed power hammers synchronized to start with and to continue in synchronized, power equalized striking operation, and

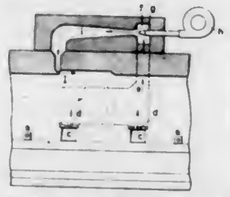
means for applying continuous mold closing pressure to said platens independently of the hammer blows delivered by said power hammers, whereby to continuously hold and take up compaction of material effected by the synchronized and power equalized blows of the hammers.

3,050,810
METHOD AND MACHINE FOR CUTTING TILE PIPE
Henry E. Lindbloom, Tulsa, Okla., assignor to Martin-Marietta Company, a corporation of Illinois
Filed Mar. 15, 1957, Ser. No. 646,279
14 Claims. (Cl. 25—107)



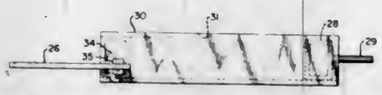
12. A machine for cutting pipe sections of uncured tile which comprises a base, a cutting guide frame secured to said base and adapted to hold a horizontally disposed pipe section, a support member secured to said base and projecting upwardly above said cutting guide frame, a carriage slidably mounted on said support member, a cutting wire secured to said carriage and extending transversely of said cutting guide frame, means on said cutting guide frame for guiding said cutting wire, means for moving said carriage and cutting wire longitudinally relative to said pipe section, and hand operated means pivotally mounted on said carriage for moving said cutting wire downwardly simultaneously with said longitudinal movement.

3,050,811
DEVICE FOR LOCALIZING RAPID VARIATIONS OF TEMPERATURE AT PREDETERMINED POINTS IN TUNNEL TYPE KILNS, PARTICULARLY IN KILNS FOR THE FIRING OF CERAMIC PRODUCTS
Remo De Bartolomeis, Milan, Italy, assignor to S.p.A. Forni ed Impianti Industriali Ingg. De Bartolomeis, Milan, Italy, an Italian company
Filed Feb. 3, 1959, Ser. No. 790,946
Claims priority, application Italy July 3, 1958
4 Claims. (Cl. 25—142)



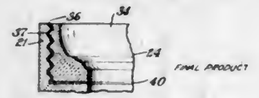
1. In a kiln of the tunnel type, means to produce an abrupt change in temperature at a localized cross-section of the kiln comprising intake means arranged in a wall of the kiln at said cross-section, a mixing chamber arranged exteriorly of the kiln, conduit means communicatively connecting said intake means with the chamber, means defining a flaring injector passage communicating at its smaller end with said chamber, nozzle means in said chamber directed into said smaller end of the injector passage, means for injecting fluid through said nozzle means into said injector passage, whereby to develop suction in said chamber to withdraw gases from the kiln via said intake means into said chamber, and return conduit means communicatively connecting the larger end of said injector passage with the kiln at said cross-section, whereby the gases, diluted with said fluid, re-enter the kiln at said cross-section, thereby producing a distinct temperature change at the cross-section between the intake means and the return conduit means.

3,050,812
METHOD OF PRODUCING VITREOUS CLAY PRODUCTS
John Lawson Felder, P.O. Box 8005, San Antonio, Tex.
Filed June 6, 1960, Ser. No. 34,159
12 Claims. (Cl. 25—156)



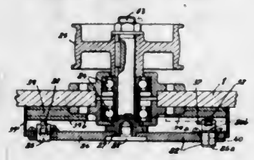
1. The process for forming a vitreous product from a gas-containing argillaceous material comprising the steps of heating the raw material to a bloated condition below the temperature of fusion, discharging the heated material into a mold, the mold being at a temperature below the temperature of fusion of the material, and applying a uniform pressure to the material in the mold while confining the gases therein until the material is converted throughout into a fused condition.

3,050,813
METHOD OF PRODUCING A COMBINED RADIANT HEAT FUEL BURNER BLOCK AND REFRACTORY CUP
James Kniveton, Wyncote, Pa., assignor to Selas Corporation of America, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 22, 1954, Ser. No. 424,973
1 Claim. (Cl. 25—156)



In a method of producing a radiant heat burner structure, the steps which comprise firing an externally threaded refractory cup, applying a coat of combustible paint to the external threads, pouring an insulating block around said painted threads, air-drying said block, and firing the resulting structure thereby burning off said combustible paint and forming a loose fit between said cup and said block with ashes between the threads.

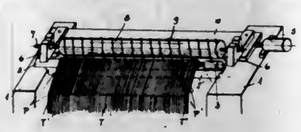
3,050,814
APPARATUS FOR CUTTING OPEN THREAD LOOPS ON TEXTILE FABRICS
Eduard Marschik, Poststrasse 18, Sankt Gallen, Switzerland
Filed Sept. 30, 1959, Ser. No. 843,425
6 Claims. (Cl. 26—11)



1. A thread-cutting apparatus for a fabric sheet, comprising support means rotatable about an axis substantially perpendicular to said sheet and in close proximity to a surface thereof, said support means being provided with a plurality of angularly spaced gripper elements adapted to engage threads of said sheet extending above said surface and a cutter member operatively connected with each of said gripper elements, each of said cutter members having a cutting edge lying in a plane substantially parallel to said axis and adapted to sever threads engaged by a respective one of said gripper elements, said support means comprising a disc having a working surface in close proximity to the surface of said sheet, said gripper elements being arranged in at least two circular arrays concentric with said disc.

3,050,815
METHOD OF AND APPARATUS FOR LIMITING THE SHEARING OPERATION OF CLOTH
Henri Paulus, 59 Rue Neuve, Dison, Belgium
Filed Feb. 17, 1960, Ser. No. 9,254
Claims priority, application Belgium Feb. 19, 1959
7 Claims. (Cl. 26—15)

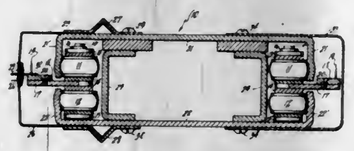
1. A method of limiting the shearing operation of cloth fed over a laterally displaceable table towards a laterally displaceable shearing cylinder, comprising the steps of moving said cloth in longitudinal direction and laterally displacing said table and said shearing cylinder, respectively, in opposite directions relative to each other, in order to move selectively at least one of the selvedges



of said cloth out of the working range of said shearing cylinder.

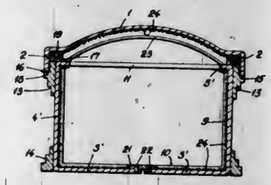
5. An apparatus for limiting the shearing operation of cloth comprising a frame, a shearing table mounted on said frame for lateral movement, a piston integrally formed with said table, a cross-bar disposed on said frame for lateral movement, at least one shearing cylinder supported by said cross-bar for lateral movement therewith and a piston integrally formed with said cross-bar, said shearing table and said cross-bar being movable in opposite directions relative to each other, and sensing means disposed opposite the selvedges of said cloth and causing the lateral movement of said cross-bar and of said shearing table, respectively; in response to a decrease of the width of said cloth.

3,050,816
HIGH SPEED TENTER CHAIN DEVICE
John McCreary, N. Mohawk St., Cohoes, N.Y.
Filed Mar. 14, 1960, Ser. No. 14,919
5 Claims. (Cl. 26—61)



1. In a tenter, the improvement of a chain device comprising link connecting chain pins each having first and second roller supporting spindle portions, first and second rollers mounted on said respective portions of each of said pins, a tenter member carried by said pins and being normally connected thereto at one end between said portions and rollers and being provided at its free end with fabric holding pins, and housing means including a bed for said chain device and a pair of angular spring plates resiliently mounted on said housing around said tenter member having opposed portions.

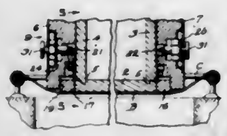
3,050,817
ASBESTOS CEMENT CASKET
Donat Paré, Black Lake, Quebec, Canada, assignor to Les Cercueils Amiante Ltee—The Asbestos Caskets Ltd., Thetford Mines, Quebec, Canada
Filed Jan. 21, 1960, Ser. No. 3,838
2 Claims. (Cl. 27—7)



1. A coffin comprising a box-like structure and cover therefor, both made of a composition of asbestos and cement, said box-like structure consisting of an elongated

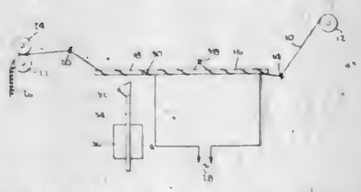
main body section having a channel shape defining a bottom and integral longitudinal side walls, and end sections defining the end walls of said structure, each of said end sections consisting of a panel with marginal flanges overlapping and secured to the bottom and longitudinal side walls of said body section, a molding secured to the top marginal portion of said end and side walls externally of said box-like structure, said cover having along its perimeter a downwardly extending flange for resting on said molding in the closed position thereof, and sealing means between said cover and box-like structure, said sealing means including a T-shaped male sealing member fixed underneath said cover and a grooved female sealing member fixed to the top of said molding and of said end and side walls, the groove of said female sealing member adapted to receive a rib of said male sealing member in the closed position of said cover, and a sealing strip of flexible woven asbestos fibers impregnated with a mineral oil disposed in the bottom of said groove to be pressed by said rib of said male sealing member.

3,050,818
TWO-PART BURIAL CASKET
Charles H. Phillips, 100 W. Franklin St., Richmond, Va.
Filed Oct. 28, 1960, Ser. No. 65,816
6 Claims. (Cl. 27—35)



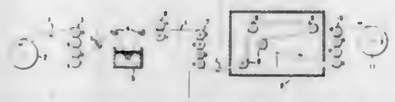
6. In a two-unit burial casket, a bottomless outer unit comprising rigidly interconnected top, side and end walls, a base unit sized to fit smoothly within the lower edges of the walls of said outer unit to close the same, a plurality of brackets fixed with the side edges of said base unit in spaced relation therealong, a pair of rods each extending horizontally in and along a respective side wall of said outer unit, for longitudinal sliding relatively thereto, a plurality of sets of hooks, each said set being rigidly connected with a respective one of said rods and movable as a unit therewith between a first position wherein each hook of the respective set is engaged with a corresponding bracket, and a second position wherein each hook is free and clear of its bracket, and means connected with each said rod and manually operable from the exterior of the side walls of said outer unit, to translate said rods between said first and said second positions.

3,050,819
MANUFACTURE OF BULKED FIBER
William T. Allman, Jr., Rock Hill, S.C., and Claude E. Layman, Charlotte, N.C., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed June 3, 1958, Ser. No. 739,522
19 Claims. (Cl. 28—1)



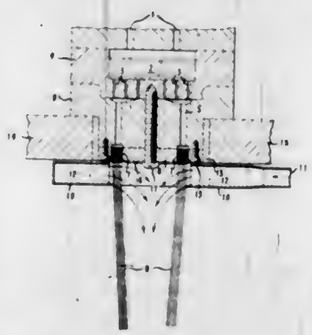
1. A method of bulking thermoplastic filamentary material comprising coiling said filamentary material about a first member and then about a second member in a plurality of helical turns, advancing the turns in sliding engagement with said first and second members, subjecting said turns to heat when disposed on said first member thermoplastically to deform them, and subjecting said turns to a lower setting temperature when disposed on said second member to set the turns.

3,050,820
PROCESS FOR TREATING TIRE CORD
Georges Pamm, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,340
1 Claim. (Cl. 28—75)



An improved method for improving the break strength, tenacity, and break elongation properties substantially undiminished during the coating of a polyhexamethylene adipamide tire cord with a rubber adhesive solution for use in reinforced rubber tires, and for stabilizing said cord and its said break strength, tenacity, and break elongation properties against the detrimental effects of variations in the acidity of the adhesive and degradation due to prolonged exposure to the high temperatures encountered during the process, said method consisting solely of the steps in sequence of moving a polyhexamethylene adipamide tire cord having a tenacity of at least 8.0 grams per denier through an aqueous acidic rubber adhesive bath while maintaining the cord under a tension of from 0.4 to 2.5 grams per denier while said cord is immersed in said bath, subsequently removing excess adhesive solution from the cord and then moving said cord into a heating zone to subject the cord to a temperature of about 445° F. for a period of about two minutes duration while exerting sufficient tension to produce a total net stretch of about 12%, and finally removing the stretched cord from the heating zone and cooling it when the desired stretch has been achieved.

3,050,821
HIGH BULK TEXTILE FIBERS
Joseph J. Kilian, Covington, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Jan. 8, 1960, Ser. No. 1,302
2 Claims. (Cl. 28—82)



1. A high bulk textile material comprising synthetic linear glycol-terephthalate filaments having, when relaxed for 15 minutes in a hot air oven at 140° C., a tenacity of 2 to 4.5 g.p.d. in the 1 to 6 denier per filament range; a break elongation in the range of 15% to 45%; an initial modulus between 500 and 1000 kg./mm.²; a compliance ratio between 0.4 and 0.8; and about 4 to 13 helical crimps per inch with a crimp index value between 15% and 70%; and further characterized by having a differential birefringence across the width of the filaments.

3,050,822
PILL RESISTANT POLYAMIDE FIBER
Otto J. Matray, Concordville, Pa., and William H. Stine, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 9, 1961, Ser. No. 94,447
13 Claims. (Cl. 28—82)

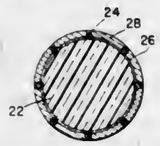
1. A drawn oriented crimped polyamide filament having frequent, spaced, weak spots in the length thereof, said filament being characterized as to weak spot frequency and severity by a significant decrease in the break tenacity (measured in grams/denier) of filament samples as the sample length is increased from the zero length, there being at least one weak spot in substantially all of a plurality of one inch lengths.

3,050,823
CRIMPABLE REGENERATED CELLULOSE FIBERS AND YARN
Rudolph Woodell, Kinston, N.C., assignor, by mesne assignments, to Beaunit Mills, Incorporated, a corporation of New York
Filed Oct. 30, 1958, Ser. No. 770,761
3 Claims. (Cl. 28—82)



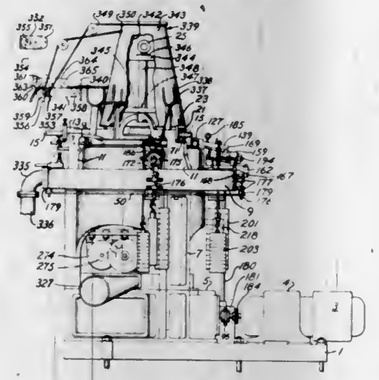
1. An integral regenerated cellulose rayon fiber having a cross-sectional width at least 8 times the general thickness, said fiber consisting essentially of two longitudinal ribbon-like components disposed side-by-side, one of said components having a thick skin which constitutes at least 80% of the cross-sectional area, the other of said components having a thinner skin which constitutes not over 64% of the cross-sectional area, said components having different shrinkage potentials, one of said components being wrinkled.

3,050,824
REFLECTIVE THREAD
Jerome H. Lemelson, 8B Garfield Park Apt., Metuchen, N.J.
Filed Sept. 1, 1959, Ser. No. 838,018
5 Claims. (Cl. 28—82)



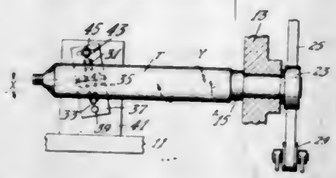
3. In a reflecting textile material adapted to be woven into an outer garment for use as a safety reflecting device at night time, comprising the combination of a flexible light transmitting thread member having a diameter of about .004 to .02 inch, a plurality of minute glass spheres extending the length of said thread member and embedded therein, each of said spheres having reflex reflecting characteristics, diameters within the range of 1 to 50 mils, a refractive index within the range of 1.5 to 2.0 and defining a reflex reflector for reflecting light directed thereto over a wide range of incident angles back to the source thereof, said spheres being disposed in said thread member in sufficient density and in a circumscribing array whereby light striking said thread member from any angle will be reflected back to the source thereof, thereby enabling said garment which contains said thread member as part of the exterior surface thereof to be easily viewable by the driver of an approaching vehicle from which said light emanates.

3,050,825
METHOD AND MACHINE FOR MAKING METAL WOOL AND SIMILAR PRODUCTS
Crosby Field, 360 Furman St., Brooklyn 1, N.Y.
Filed Oct. 4, 1955, Ser. No. 538,362
4 Claims. (Cl. 29—4.5)



1. In a metal wool producing machine the combination of a frame, a rotor rotatably mounted in said frame, a mandrel mounted on said rotor for supporting a metal strip wound into a coil consisting of a plurality of overlapping wraps in engagement with one another, with the rotor mandrel and metal strip concentric to one another, and said mandrel including an inclined annular base portion for supporting said wraps in angularly inclined relation to one another with the exposed upper edges of the overlapping wraps successively tapering from a plane transverse to the axis of the coil to approach a conical surface and with the lower edges of said wraps resting upon said inclined annular base portion, a second frame, a plurality of cutting tools floatingly and pivotally mounted on said second frame at positions angularly spaced from one another, with the cutting edges of said tools extending generally parallel to the line of the upper edges of said wraps, means for yieldably urging said cutting tools into cutting engagement with said exposed upper edges in a direction generally parallel to the axis of said coil, so that each tool cuts metal wool leaving after the cutting a substantially conical surface which is substantially parallel to the surface existing on said coil just before the cutting, drive means operatively connected to said rotor for rotating said rotor and said coil relative to said cutting tools, means supporting said mandrel and said second frame for vertical movement relative to one another, drive means for causing vertical movement of said mandrel and said coil relative to said second frame, means for sensing the vertical position of the upper end of said coil and said second frame relative to one another, and control means responsive to said sensing means for controlling said drive means for causing relative movement of said mandrel and coil relative to said second frame and said cutting tools to maintain the exposed upper edges of said coil at proper cutting height relative to said cutting tools.

3,050,826
TUBE ROTATING
Raymond Ero Wuorio, Maynard, Mass., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 17, 1959, Ser. No. 807,151
3 Claims. (Cl. 29—38)



1. For use in supporting and rotating a tubular container having an open end and a portion cooperable with a stop surface on a mandrel to determine appropriate axial relationship therebetween, the combination of a rotatable cylindrical mandrel having a base end, a free end, and a stop surface; means for rotating the mandrel about its axis to frictionally rotate the container therewith; and means for holding a container on said mandrel and causing the same to rotate therewith, comprising an idle roller positioned adjacent said mandrel and having a frictional periphery in contact with the wall of the container on said mandrel, the axis of rotation of said roller being slightly out of parallel with the axis of said mandrel in a direction such that the motion vector of the roller in response to mandrel rotation, when indicated by a line tangent to the peripheral track of the roller at the point of contact with the container, has a component directed away from the free end of the mandrel and towards the base end thereof to urge the container along the mandrel to a predetermined position wherein its stop surface cooperating portion is seated against the stop surface of said mandrel, and to maintain this predetermined position.

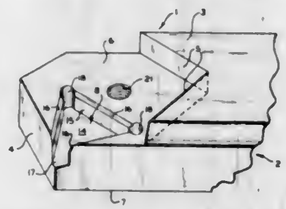
3,050,827
ABRASIVE ELEMENTS
George Davies, St. Brelade, Jersey, Channel Islands, assignor of one-half to Hedda Wertheimer, St. Brelade, Jersey, Channel Islands
Filed July 7, 1959, Ser. No. 825,566
Claims priority, application Great Britain July 9, 1958
1 Claim. (Cl. 29—78)



An abrasive element consisting of a flexible backing of thin sheet material, and a plurality of metal wires secured to said flexible backing, all of the wires secured to said flexible backing being parallel to each other, whereby said element is free to conform to a simple curve in a plane perpendicular to said wires without bending any of said wires, each of said wires being formed with an abrasive surface directed away from said backing.

3,050,828
TOOL HOLDER
Robert W. Cashman and Anthony Wasco, Jr., Saginaw, Mich., assignors to Saginaw Machine and Tool Company, Saginaw, Mich., a corporation of Michigan
Filed Sept. 28, 1960, Ser. No. 59,056
4 Claims. (Cl. 29—96)

1. A tool holder comprising a support member having upper and lower surfaces and a cavity formed in said upper surface of said member adjacent one end thereof, said cavity presenting in plan a substantially regular geometric configuration having side walls that converge toward said one end of said member along lines that intersect beyond said one end of said member, whereby said cavity has an opening at said one end of said member, each of the side walls of said cavity having an upper portion adjacent the upper surface of said member inclined from said upper surface toward the lower surface of said support member along lines that converge toward the lower surface of said support member, each of the side walls of said cavity having lower portions extending toward the lower surface of said support member along non-converging lines; a tool bit having a shape in plan corresponding substan-



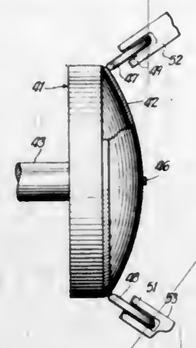
tially to the shape of said cavity and being removably received in the latter with a part thereof extending through the opening in said cavity, said tool bit having the full height of each of its sides sloping complementally to the inclination of said upper portions of said cavity side walls, said tool bit having a thickness greater than the inclined portions of said cavity walls so as to extend beyond the inclined portions of said cavity walls in a direction toward the lower surface of said support member whereby the sloping walls of said tool bit and said lower portions of said cavity walls provide a clearance all around said tool bit; and releasable clamp means reacting between said support member and said tool bit for releasably clamping the latter in said cavity.

3,050,829
PRESSURE APPLYING ROLLERS
Valentin Appenzeller, Krefeld, Germany, assignor, by mesne assignments, to Eduard Kusters, Maschinenfabrik, Krefeld, Germany
Filed May 31, 1960, Ser. No. 32,773
Claims priority, application Germany Apr. 2, 1960
2 Claims. (Cl. 29—113)



1. A roller for the pressure treatment of strips of material comprising a rigid cylindrical tubular hollow element having a continuous peripheral surface adapted to rotate, said rotatable element forming the operative periphery of the roller, a rigid cylindrical tubular nonrotatable hollow element of invariable cross section, upon which the aforesaid rotary peripheral element is supported and upon which the aforesaid hollow element is able to rotate; and a nonrotatable core, inside the stationary hollow element, with ends forming bearing journals, the core having an outer diameter smaller than the inner diameter of the stationary hollow element; in combination with one tubular element which can be inflated on each side of a plane running through the axis of the core and the parallel longitudinal contact line of the outer hollow element in the gap between the stationary core and the stationary hollow element surrounding it.

3,050,830
METHOD OF SPINNING AGRICULTURAL DISCS
David H. E. Genter, Sewickley, Pa., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey
Filed Nov. 12, 1957, Ser. No. 695,913
1 Claim. (Cl. 29—148.3)



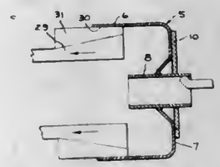
The method of producing an agricultural steel disc comprising the steps of placing a steel blank having unidirectional grain properties and developable area greater than the surface area of said disc between work roll means and a mandrel, said work roll means and mandrel each having a working surface of relatively smooth finish and texture for contact with said blank, and said mandrel having an outer peripheral cutting edge adjacent said mandrel surface, rotating said mandrel and blank while simultaneously pressing said work roll means surface against said blank and thereby into contact with said surface of the mandrel to conform the blank to the configuration of said mandrel surface, the area of contact between the work roll means surface and the blank progressing radially outward from the center area of the blank during formation of said disc and the action of the work roll means continuing past said outer peripheral cutting edge of the mandrel, and imparting substantially increased pressure of said work roll means surface against said blank when said area of contact therebetween has progressed to the vicinity of said outer peripheral cutting edge of the mandrel thereby to pinch off excess material of said blank and fully size said disc, whereby said disc has multidirectional grain properties and the work face of said disc has a high character finish approximating that of a "land polished" surface.

3,050,831
METHODS OF MAKING STRUCTURAL BEAMS
Harry Diamond, P.O. Box 360, Elizabeth, N.J.
Original application May 29, 1959, Ser. No. 817,441, now Patent No. 2,990,038, dated June 27, 1961. Divided and this application Mar. 28, 1960, Ser. No. 17,994
9 Claims. (Cl. 29—155)



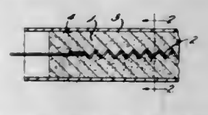
1. The method of re-forming a beam which comprises the steps of cold-punching out a first series of diagonally disposed slugs of material from the web of said beam at intervals along its length, cold-punching out a second series of diagonally disposed slugs of material from the web of said beam at intervals between said first-named intervals, so as to divide said beam longitudinally into halves having interfitting generally triangular portions, separating said halves, moving said halves relative to each other to a position in which the tips of said triangular portions on one half come into abutting relationship with the tips of said triangular portions on the other half, and welding said tips to each other along the points of abutment thereof, thereby producing a deeper, lighter beam than the original.

3,050,832
METHOD OF MANUFACTURING A MOTOR COMPRESSOR UNIT
Owen H. Scheldorf, Fern Creek, Ky., assignor to General Electric Company, a corporation of New York
Filed Feb. 18, 1960, Ser. No. 9,584
3 Claims. (Cl. 29—155.5)



1. The method of manufacturing a motor-compressor unit including a motor stator which comprises:
providing a frame including a stator-supporting cup having a cylindrical wall for engaging a stator and a bearing sleeve extending coaxially through and secured to the end of said cup;
by means of an expanding chuck, expanding the cylindrical wall of said cup beyond the yield point thereof and to a diameter which is greater than the diameter of said stator but which does not exceed said stator diameter by an amount greater than the shrinkage in the diameter of said cylindrical wall taking place upon removal of the cup from said chuck;
machining the inner surface of said sleeve concentric with the expanded cylindrical wall while said cup is held in the expanded state on said chuck by relative rotation of said cup and a cutting tool about an axis concentric with the axis of said expanded cylindrical wall;
removing said cup from said chuck;
heating said cup to cause said cylindrical wall to expand sufficiently to receive said stator;
inserting said stator into said cup and cooling said cup to cause said cylindrical wall to shrink onto said stator thereby positioning said stator relative to said bearing sleeve.

3,050,833
METHOD OF MAKING ELECTRICALLY INSULATED HEATING UNITS
Russell L. Schwing, Akron, Ohio, assignor to Thermal Manufacturing Company, Akron, Ohio, a corporation of Ohio
Filed May 19, 1958, Ser. No. 736,393
9 Claims. (Cl. 29—155.64)



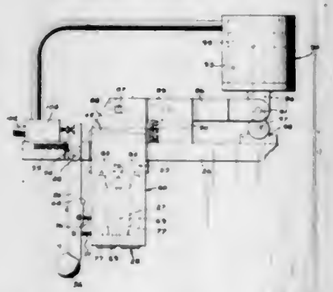
1. The method of making an electrically insulated heating unit which comprises surrounding a resistor heating element in a closely confined space within a shell with dry particles of a material of a class consisting of fused and ground magnesium oxide, cuprous oxide, aluminum oxide, and zinc oxide which are capable of reacting with phosphoric acid to form a stone-like solid mass, saturating the material with excess phosphoric acid

by slight pressure applied thereto and retaining the acid material in contact with the material to form a solid embedment in positive engagement with the resistor element by chemical reaction of the acid with the material in situ at room temperature, suctionally removing excess acid, and drying the embedment produced by a positive heating action below the boiling temperature.

3,050,834
COMPOSITE METAL ARTICLE
John B. Ulam, Canonsburg, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,912
4 Claims. (Cl. 29—196.3)

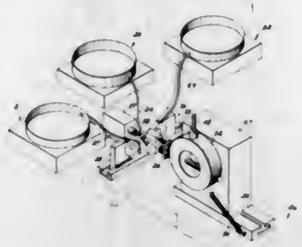
1. A flat composite metallic article comprising at least one layer of austenitic stainless steel bonded to at least one layer of a deoxidized copper base alloy that consists essentially of from .01% to .85% chromium, balance copper.

3,050,835
DEVICE FOR STRIPPING A PART FROM AN ARTICLE TO WHICH IT IS ATTACHED
George J. Novak, Riverside, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 21, 1960, Ser. No. 16,226
5 Claims. (Cl. 29—203)



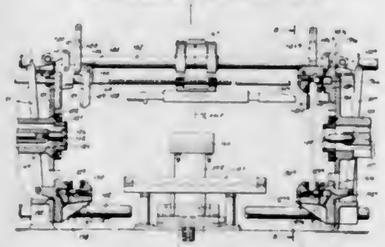
1. A device for stripping a part from a flat side of an article comprising a holder for supporting such an article in a fixed position, a carrier, mounting means for supporting said holder and for supporting said carrier in a retracted position relative to said holder and for advance and return movement relative to said holder along a path parallel to the flat side of the article in said holder, a stripping jaw mounted pivotally on said carrier in a normal position in laterally spaced relation to the flat side of the article in said holder for advance movement with said carrier toward the part on the article and for pivotal movement from said normal position on said carrier into engagement with the flat side of the article, a cam element, means for supporting said cam element for movement with said carrier and said jaw and in engagement with said jaw and for supporting said cam element for advance movement relative to said carrier and to said jaw parallel to said path, means for imparting movement to said carrier to effect the stripping of the part from the article, and yieldable means for holding said cam element against movement with said carrier during the initial portion of the advance movement of said carrier to effect relative movement between said cam element and said carrier and the pivotal movement of said jaw into engagement with the flat side of the article, said cam element moving with said carrier and said jaw during the latter portion of the advance movement of said carrier and serving to hold said jaw in engagement with the flat side of the article as the jaw advances along the article and strips the part therefrom.

3,050,836
APPARATUS FOR STRIPPING MOLDED ARTICLES FROM CORE PINS
Earl W. Cressman, Sellersville, Andrew P. Jurnak, Coopersburg, and Ralph L. Mueller, Emmaus, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 27, 1960, Ser. No. 32,224
7 Claims. (Cl. 29—208)



1. An apparatus for stripping molded articles from core pins and reloading the core pins with hollow parts for molding of articles including the parts on the core pins, the apparatus comprising a holder adapted to receive successive molded articles on core pins, a carriage to support the holder, means to support the carriage for reciprocation between a normal position and a loading position, means to feed the molded articles on their core pins singly to the holder at one interval when the holder is in the loading position, a unit adapted to carry first hollow parts movable relative to the carriage to align a first hollow part with the core pin and cause it to be mounted on a first end of the core pin during the next movement of the holder into the loading position, a collet actuable to grip the first end of the core pin carrying the first part, means to support the collet for movement into engagement with the first end of the core pin when the holder is located in the loading position, means mounted on the holder to remove the molded article from the gripped core pin during movement of the holder to its normal position, a unit actuable to align a second hollow part with a second end of the gripped core pin, and means operable to move the second part onto the second end of the core pin.

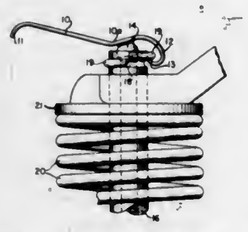
3,050,837
RAILROAD WHEEL MOUNTING PRESS
John W. Reed, Elizabeth, and Henry J. Halvorsen, Cranford, N.J., Peter Hold, Milford, Conn., and William R. Miller, Rochester, N.Y., assignors to Farrel-Birmingham Company, Inc., Ansonia, Conn., a corporation of Connecticut
Filed Oct. 24, 1958, Ser. No. 769,503
10 Claims. (Cl. 29—208)



1. A press for manipulating a railroad axle having end lathe centers and wheel seats, and two railroad wheels having hubs with wheel seat bores for press fitting on said seats; said press including means for holding said wheels upright with their bores axially aligned on a horizontal center line and spaced apart more widely than

the length of said axle and with one wheel reciprocatively movable towards the other, two axle centers having forward ends with points and diameters smaller than those of said bores and freely insertable through the latter, means for mounting said centers axially aligned with said center line and their points pointing towards each other and spaced apart more widely than the outsides of the hubs of said held wheels and reciprocative inwardly by passing through said hubs' bores, and means for moving said centers inwardly so their points enter said recesses of said axle and apply pressure to the latter when the latter is located in axial alignment with said center line and for thereafter while releasable maintaining said pressure to hold said axle reciprocating said centers simultaneously and in phase to shuffle said axle relative to one or the other of said wheels.

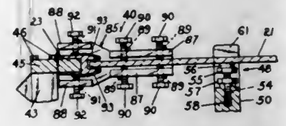
3,050,838
SAFETY TOOL FOR REMOVING SNAP RINGS
Posy G. Stultz, Jr., Roanoke, Va., assignor to Charles M. O'Boyle, Wilmington, Del.
Filed Aug. 18, 1959, Ser. No. 834,441
2 Claims. (Cl. 29—229)



1. For use with a stem having a flaring mouth at a free end thereof and a seat close to the free end for a split resilient snap ring, a safety tool for removing the snap ring and making the snap ring captive to the tool comprising a lever, a ring-engaging member at an end portion of the lever for engaging the ring and shifting the same from its seat and off the end of the stem when the ring is expanded, and a fulcrum member on the lever spaced from the ring-engaging member of ball form having a central equatorial plane spaced from and substantially parallel to the lever portion carrying the fulcrum member and dividing the ball fulcrum into inner and outer hemispheres, said outer hemisphere adapted to enter and rock on the flaring mouth with the inner hemisphere having a part-spherical wall diminishing in cross section progressively from the central plane toward the lever for guiding the freed and contracting snap ring to the diminishing cross section of the inner hemisphere and toward the lever, the diameter of the ball fulcrum being slightly less than the internal diameter of the snap ring in its contracted condition and greater than the width of the gap between the split ends of the snap ring in the expanded condition of the snap ring.

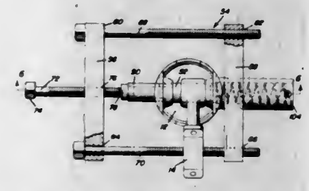
3,050,839
GLASS DOOR HARDWARE LOCATING APPARATUS
William J. Hubbard, Toledo, and Lester H. Flaherty, Maumee, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Mar. 17, 1960, Ser. No. 15,731
14 Claims. (Cl. 29—256)

1. Apparatus for use in the fabrication of doors composed of a glass panel having a channeled metal sash member covering at least one edge margin thereof and a filler material disposed within said channel to secure the sash member to the glass panel, said apparatus comprising a horizontal base, means carried by said base for supporting said sash member, with the channel therefacing in a horizontal direction, means also carried by said base for supporting said panel in a horizontal position and in alignment with the channel in said sash member, means for moving said sash member supporting means and glass panel relative to one another to



position the edge of the panel in said channel in spaced relation to the walls thereof, and a clamping fixture for maintaining said sash member and panel in such spaced relation to permit a filler material to be placed within said space to secure the sash member to the panel.

3,050,840
PISTON PIN INSTALLING TOOL
Arthur A. Dunkerley, 1413 Campus Road, Los Angeles, Calif.
Filed Apr. 1, 1959, Ser. No. 803,456
2 Claims. (Cl. 29—263)

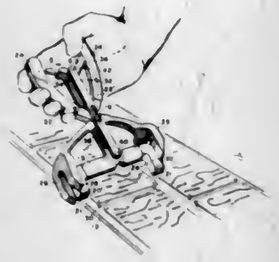


1. In combination with a piston and a pivotally associated rod, a tool for installing and removing a solid connecting wrist pin comprising a central threaded bolt, said central bolt aligned with said wrist pin, means for rotating said bolt, a pair of spaced cross members, two pairs of aligned apertures terminally positioned in said cross members, a terminal bolt received through each pair of said aligned apertures, each of said bolts having an abutment on one end floatingly engaging one of said cross members and threads on the other end mating with threads in one of the apertures in the other cross member, said central bolt threadedly received through a first of said cross members, said central bolt terminally carrying a ball type universal joint, a thrust transmitting member, depressions in said member and threaded bolt for receiving said ball, an undersized hollow pin, said thrust transmitting member abutting said hollow pin for driving said hollow pin against said wrist pin, a concave seat is formed on a second of said cross members, a sleeve secured on the second cross member, said sleeve, second cross member and seat having aligned bores of a diameter larger than said wrist pin, a coil spring in said bores for ejecting said wrist pin when the tool is removed from said piston, a removable spring abutment in the sleeve.

3,050,841
CIRCUIT BOARD LIFTER TOOLS
James O. Esselstyn, Waltham, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,192
1 Claim. (Cl. 29—268)

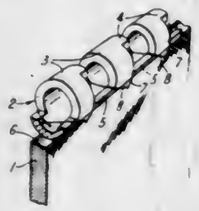
For separating circuit element cards from supporting boards, a tool comprising: a pedestal member having a substantially horizontal crossbar portion and a substantially vertical guide bar portion; said crossbar portion

having a supporting foot member depending from either end thereof, said feet being adapted to straddle and said crossbar being thereby adapted to bridge an element card to be separated; a vertical slot in said guide bar; a pivot pin reciprocably mounted in said slot; a pair of manipulating levers, each having a handle portion and a clamping portion, said portions being connected by a flexible joint; each of said clamping portions being pivotable upon said pivot pin as a fulcrum for its respective lever, and each being terminable in a bifurcation; said bifurcations each being adapted to straddle a corresponding one of said pedestal feet and each terminating in a card-



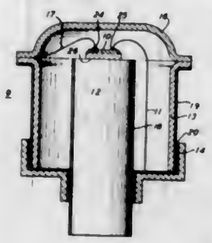
engaging lip; a spring member holding said pin at one end of said slot; and, first and second rocker arms connected between the handle portions of one and the other, respectively, of said pair of levers and said guide bar; whereby, in response to lateral pressure on said handle portions, said tool is adapted to pivot said levers upon said reciprocably-mounted pin as a fulcrum until said clamping portions contact against opposite sides of an element card, whereupon said handle portions pivot at said flexible joints and, through said rocker arms, exert a thrust against said guide bar and the force of said spring, said pin moving in said slot to accommodate the resulting relative motion of said guide bar and said levers.

3,050,842
METHODS OF MAKING SLIDING CLASP FASTENERS
Herbert Evans, Cardiff, Wales, assignor to Flex Fasteners Limited, Dinas, Rhondda, Glamorgan, Great Britain, a company of Great Britain
Filed Aug. 13, 1958, Ser. No. 754,747
Claims priority, application Great Britain Aug. 30, 1957
7 Claims. (Cl. 29—410)



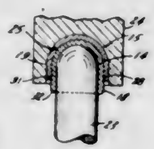
1. A method for use in the manufacture of sliding clasp fasteners, comprising the steps of providing a seamless tube of resilient plastic material, pressing opposite parts of the tube wall flat into direct contact with each other, removing portions of the tube wall parts while pressed flat into contact with each other, releasing the pressure to enable the tube wall parts to recede from each other, the removed tube wall portions being of such a shape that seamless rings remain after release of the pressure and the rings are provided with axially extending coupling elements and are inter-connected by part-cylindrical bridge pieces to form a string of inter-connected interlocking members, and attaching said string to a flexible carrier for a sliding clasp fastener.

3,050,843
METHOD OF BONDING METALLIC MEMBERS
David P. Margolis, Murray Hill, and Edward G. Walsh, Madison, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 15, 1959, Ser. No. 806,560
4 Claims. (Cl. 29—470)



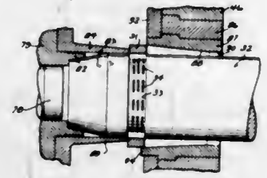
1. The method of bonding two members of metals characterized by a readiness to grow thin oxide films when exposed to the air and a thick, uniform and strongly adherent dielectric film under controlled conditions at an elevated temperature comprising growing an oxide layer on each metallic surface portion, each of said oxide layers being at least .0005 inch thick, arranging said members with the oxide layers thereof in face-to-face contacting relation, and applying to the members a pressure of between 10,000 and 40,000 p.s.i. substantially at right angles to said oxide layers at the insulating bond forming temperature for that pressure.

3,050,844
METHOD OF MAKING END CAPS FOR PIPE RAILINGS
Adolph A. Wagner, Milwaukee, Wis., assignor to R & B Wagner, Inc., Milwaukee, Wis., a corporation of Wisconsin
Original application Sept. 5, 1957, Ser. No. 682,213, now Patent No. 2,917,084, dated Dec. 15, 1959. Divided and this application Sept. 10, 1959, Ser. No. 839,130
3 Claims. (Cl. 29—520)



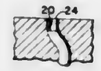
1. A method of forming a double walled cap of the character described and comprising the first step of forming an annular disc over a mandrel and into the shape of an inner member having a hemispherical end section and a tangential tubular extension, the second step of forming a second annular disc of substantially identical size and configuration with the first disc over the previously formed inner member to form an outer member having a hemispherical end section on a radius which is greater by an amount substantially equal to the thickness of the inner member, the end of the sleeve portion of the outer member being axially spaced from the end portion of the inner member, interlocking said inner and outer members before removal thereof from the mandrel and removing the interlocked members from the mandrel.

3,050,845
METHOD OF SHELL BANDING
Bruce D. Johnson, De Pere, Wis., assignor to The C. A. Lawton Company, Inc., De Pere, Wis., a corporation of Wisconsin
Original application Oct. 24, 1956, Ser. No. 618,117, now Patent No. 2,951,401, dated Sept. 6, 1960. Divided and this application Dec. 3, 1959, Ser. No. 862,741
1 Claim. (Cl. 29—520)



A method of swaging a band into the peripheral groove of a shell, said method comprising the steps of aligning the shell on a horizontal axis coaxially with the band, a shell seat and a swaging die with the shell seat and the band on the side of the die opposite the shell, advancing the shell on said horizontal axes in a direction toward the the band and at least partially through the die to dispose the shell in its seat and to radially align the band with the shell groove, advancing the die in the same direction on said horizontal axis to partially swage the band into the groove, arresting the die before the band is completely seated in the groove, and ejecting the shell and said partially swaged band in the opposite direction on said horizontal axis through the die to complete the swaging of the band into the groove.

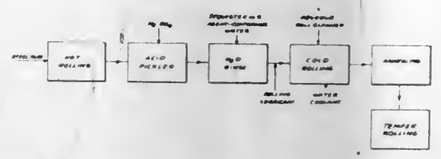
3,050,846
PUMP WEAR PLATE
Robert O. Bayer, Wilmington, Del., and Roy C. Meinzer, Kennett Square, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 23,842
4 Claims. (Cl. 29—527)



1. A method of relocating the orifice of a tube embedded in and having at least one of its ends substantially flush with a surface of an integral casting, said tube being of a material having a higher fusibility than said casting, said method comprising the steps of: upsetting said one end of the tube, thereby partially closing it and leaving an upset portion beneath said casting surface; machining the casting and the tube to a new surface intersecting the upset portion; and drilling through said portion to provide an orifice therein of the desired size at the desired location on said new surface.

3,050,847
METHOD OF PREVENTING THE SURFACE STAINING OF COLD ROLLED STEEL
Uno T. Hill, Gary, Ind., assignor to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 1, 1958, Ser. No. 725,670
9 Claims. (Cl. 29—528)

1. In the production of hot-rolled, pickled, cold-reduced and box-annealed low-carbon, steel strip, the step which comprises immersing a hot-rolled steel strip in a pickling solution and thereafter rinsing the steel strip with an aqueous solution of a hard water containing sufficient amounts of a water-soluble, inorganic condensed phosphate to combine with objectionable, precipitate-forming metal ions in said hard water to form stable,



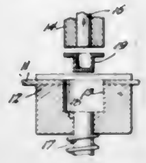
water-soluble, chelates of said ions whereby residual pickling solution and reaction products fromed during said pickling are substantially removed from the steel strip surfaces, and cold reducing and box annealing said strip.

3,050,848
METHODS OF MAKING INTERNALLY SLITTED STRIP MATERIAL
Richard A. Wilkins, Rome, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland
Filed Aug. 14, 1958, Ser. No. 755,847
4 Claims. (Cl. 29—528)



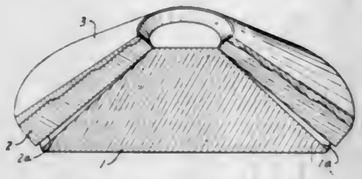
1. The method of making metal strip of a metal of the group consisting of copper, copper base alloys, carbon steel, cupro-nickel containing approximately 20 to 30 percent nickel, and nickel base alloys such as Monel metal, such metal strip having between its opposite faces a plurality ot slits extending lengthwise thereof in parallel relation to its opposite faces and edges, which slits widthwise thereof extend widthwise of the strip, comprising casting a relatively thick elongated billet in a vertical mold chamber by entering molten metal into such chamber from above and about a plurality of elongated, vertically positioned, smooth-walled strip-form metal members in such wise that said members project from at least one end of the casting so formed, said members being of flattened, such as oblong, transverse cross-section, which cross-section is of uniform size and shape throughout the portions of said members within the casting and is of requisite area relative to the mass of the casting to cause said members to be at substantially the temperature of the contiguous metal of the casting when such metal is at its solidus temperature, the metal of said members having a melting point higher than the pouring temperature of the metal of said casting, and having an average coefficient of thermal linear expansion greater than that of the metal of the casting for a temperature difference corresponding to the cooling of the billet from such solidus temperature to room temperature whereby to minimize the tightness of the fit of said members in the casting when the billet cools so as to permit withdrawal from the billet of said members lengthwise under forces less than those which will stress said members to their yield points; so withdrawing said members by pulling on their end portions projecting from the billet; filling with weld preventing material the passages in the billet left by such withdrawal of said members; and rolling the billet lengthwise of said passages to elongate the billet and thin it to the desired gauge of the strip and to move opposite faces of said passages substantially into contact.

3,050,849
METHOD OF COLD FORMING METAL
John O. Etchison, Jr., Clemmons, and Erle M. Hutchins, Winston-Salem, N.C., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 29, 1959, Ser. No. 816,976
4 Claims. (Cl. 29—534)



1. A method of cold forming metal cups which comprises moving two coaxially mounted punches at the same speed into engagement with a metal strip, blanking out a disk from said strip, inserting the disk into a die cavity, stopping one of said punches, forcing the second punch to engage the central portion of the disk whereby the central metal is displaced from the center to the periphery of the disk, and simultaneously advancing the two punches at different relative speeds whereby the material in the periphery is forced toward the displaced central portion to form a cup.

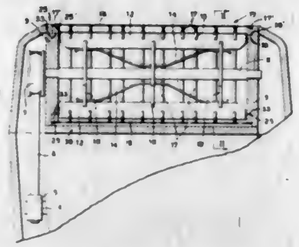
3,050,850
METHOD OF TRUING MANGANESE CASTINGS
Everett Chapman, West Chester, Pa., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 18, 1958, Ser. No. 755,744
3 Claims. (Cl. 29—552)



1. The method of rounding up castings received in out-of-round condition, for example concave or convex castings for use in gyratory crushers or the like, which includes providing a shaping mass having an accurately finished surface which is precisely the same as the desired shape of a finished casting, applying to such shaping mass a casting to be rounded up, said casting being seated upon said accurately finished surface with the out-of-round areas forming spaces between the casting and said finished surface applying a generally uniform layer of explosive to the surface of the casting remote from the shaping mass, detonating said explosive and thereby forcing the casting against the shaping mass and conforming the surface of the casting opposite to the explosive to the finished surface of the shaping mass.

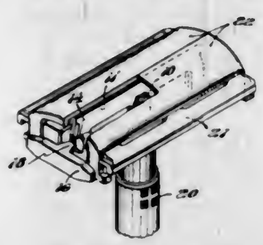
3,050,851
ROTARY TYPE DRY SHAVER HAVING A CYLINDRICAL GRILL
Franco Negri, Ivrea, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy
Filed Oct. 6, 1959, Ser. No. 844,685
Claims priority, application Italy Oct. 11, 1958
2 Claims. (Cl. 30—43)

1. In a dry shaver comprising a casing, a shaft mounted for continuous rotation in said casing, radially urged blades carried by said shaft, a cylindrical grill assembly comprising a set of substantially closely spaced separate annular members and a grill plate made of a flat plate fully wound about said members and rigidly supported thereby, the end portions of said grill plate being overlapped to form a substantially helical joint, a pair of longitudinal reinforcing strips mounted outside said grill plate, one of



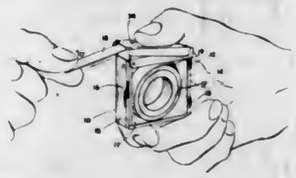
said strips covering said joint, means on said members for riveting said strips and said grill plate to said members, and a pair of projections on each of two members of said set for securing said grill assembly to said casing with said shaft.

3,050,852
SAFETY RAZOR SPIDER
Warren I. Nissen, Topsfield, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Aug. 4, 1960, Ser. No. 47,537
5 Claims. (Cl. 30—60.5)



1. A spider for a safety razor of the clam-shell type, comprising an upright spindle having a transverse carrier bar secured to its upper end, the said bar having downturned arms terminating in divergent and upright flanges, and cross bars having spaced lugs embracing said flanges and being folded into engagement with intermediate portions of said arms behind the said divergent flanges.

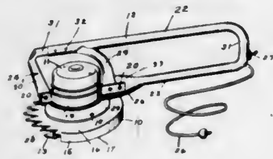
3,050,853
TAPE DISPENSER
Steven Domeny, Chicago, Ill., assignor to Crane Packing Company, Morton Grove, Ill., a corporation of Illinois
Filed Sept. 26, 1960, Ser. No. 58,343
7 Claims. (Cl. 30—131)



1. A tape dispenser comprising a container adapted to hold a roll of tape, said container having an opening thereinto, a cover for the opening, said cover having an opening therethrough in substantial alignment with the opening in the container to allow tape from said roll

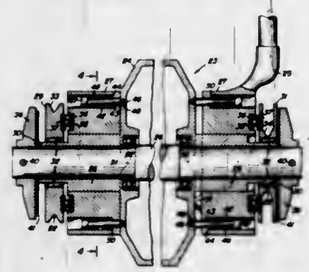
to pass to the exterior of the cover, a lower shear blade on the cover, an upper shear blade cooperating with the lower shear blade to cut a segment of tape from said roll, means hingedly mounting the upper shear blade on the cover for movement past the lower shear blade, a pair of spaced openings through the upper shear blade through which the tape is threaded, resilient means in compression between the cover and upper shear blade tending to separate the shear blades, stop means on the cover limiting separation of the shear blades, and resilient means on the cover urging the blades laterally against one another.

3,050,854
ROTARY HEDGE TRIMMER
John Becker, 3651 Cumberland Road, and Charles H. Wagman, 7840 E. Lake Road, both of Erie, Pa.
Filed Jan. 12, 1961, Ser. No. 82,263
2 Claims. (Cl. 30—276)



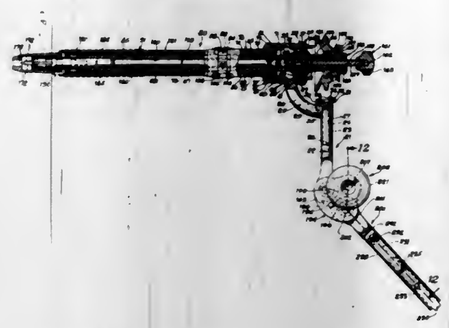
1. A hedge trimmer comprising a motor terminating in a flange at one end, said motor having a shaft, a guard, said guard having a disk like part coextensive with said flange and fixed thereto, a flange on said guard, an inner handle attached to said motor, said handle being generally U-shaped and having spaced legs extending generally parallel to said shaft, teeth on the front part of said flange, a rotating blade on said shaft running in a plane parallel to the plane of said guard, and an outer U-shaped handle having one leg thereof attached to the intermediate part of said inner handle and the other end attached to an outer end of one leg of said inner handle.

3,050,855
DENTAL APPARATUS
Charles A. Ellis, Hamden, Conn., assignor to Ritter Company, Inc., Rochester, N.Y., a corporation of Delaware
Filed May 10, 1957, Ser. No. 658,442
10 Claims. (Cl. 32—26)



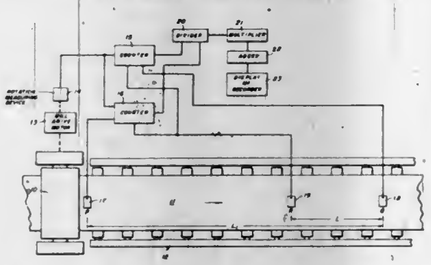
1. Dental apparatus comprising, in combination, a dental handpiece assembly including a handpiece, a driving motor, means supporting said handpiece for swinging movement with respect to said motor, and driving means partially carried by said supporting means mechanically interconnecting said motor and said handpiece, said supporting means being arranged to move between a position wherein said handpiece is mechanically disengaged from said driving motor to a position drivably interconnecting said handpiece with said driving motor.

3,050,856
DENTAL HANDPIECES
Martin Staunt, Des Plaines, Ill. (4439 W. Rice St., Chicago, Ill.)
Filed Aug. 13, 1959, Ser. No. 833,412
28 Claims. (Cl. 32—26)



1. In a high speed dental handpiece, the combination of a support with an elongated external sheath rotatably mounted on said support, a tubular metal member in said sheath, antifriction bearings carried by one end of said tubular member, antifriction bearings carried by the other end of said tubular member, a spindle rotatably mounted in said sheath in said antifriction bearings, said spindle being provided with a pulley at one end and being provided with a driving connection at the other end for driving dental tools, said driving connection being located inside said shearth, and being in alignment with an aperture for tool shanks, said sheath being provided intermediate its ends with a separable joint, the major portion of the tool end of said sheath being quickly detachable, and means for locking said quickly detachable portion of said sheath on the other portion of said sheath, said latter means comprising a manually rotatable collar and a circumferentially extending open band carried by said collar rotatably mounted in aligned grooves in both parts of said sheath to lock the parts together or to release them.

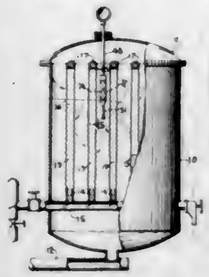
3,050,857
SYSTEM FOR MEASURING THE LENGTH OF ROLLING-MILL PRODUCT
David W. Pierce, Flossmoor, Ill., and Charles H. Wexler, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 27, 1960, Ser. No. 78,616
5 Claims. (Cl. 33—141)



1. A system for determining the length of a hot-rolled workpiece as it issues from a rolling mill comprising a rotation measuring device connected to be driven at a speed proportional to that of the mill, two independent means for accumulating the output of the device, means responsive to arrival of the leading end of the piece at a predetermined point beyond the mill effective to start both said accumulating means, a second means responsive to the arrival of said leading end at a point spaced

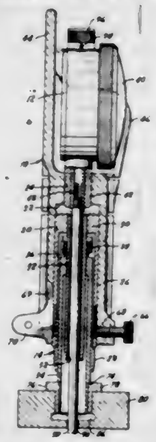
a predetermined distance from said first mentioned point effective to stop one of said accumulating means and means responsive to the emergence of the trailing end of the piece from the mill to stop the other accumulating means.

3,050,858
FILTER CAKE DETECTOR
Robert C. Giesse, Bettendorf, Iowa, assignor to Ametek, Inc., a corporation of Delaware
Filed Sept. 8, 1959, Ser. No. 838,496
14 Claims. (Cl. 33—168)



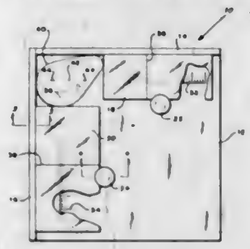
12. A bridging detector for use with multiple leaf-type filters comprising in combination, a pendant adapted to be supported between adjacent leaf filters; an hermetically sealed chamber attached to said pendant and comprising parallel walls; separate opposed flexible diaphragm means attached to each of said walls; electrical contacts fixed to the center of the inner surfaces of said diaphragm means; a resilient tube communicating with said chamber having its free end sealed and having an outside diameter less than the spacing of said parallel walls; separate electrical conductors connected to each of said contacts and extending outwardly from said chamber and through said pendant; and dielectric liquid substantially filling said chamber and tube.

3,050,859
DEPTH GAUGE
Bernard F. Wojcik, Beloit, Wis., assignor to Limit Gages, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 3, 1959, Ser. No. 796,885
3 Claims. (Cl. 33—172)



1. In a depth gauge for comparing the actual dimension of a depression relative to a predetermined dimension desired therefor, a telescoped micrometer thimble and barrel adapted to be rotated relative to each other with indicia thereon for indicating the amount of their telescoping, a base fixed to the barrel and having a gauging surface, the barrel and base having aligned bores, a housing fixed to and surrounding at least a portion of the thimble and having an upper portion extending beyond the end of the thimble and barrel remote from the base, a bore in the upper portion aligned with the bores in the barrel and base, a dial indicator mounted in the upper portion of the housing with a rod extending through the aligned bores, means for adjustably mounting the dial indicator on the housing so that the dial indicator and its rod may be axially adjusted, as a unit, in the aligned bores, a lateral threaded bore through the housing and thimble aligned so that when the indicia on the thimble and barrel is zeroed, the lateral bore will be aligned with the indicia on the barrel, and a manually operable set screw in the lateral bore for preventing rotation of the thimble relative to the housing and for releasably holding the barrel in any given position relative to the thimble.

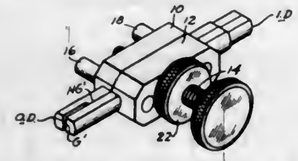
3,050,860
LENS MEASURING INSTRUMENT
Allan E. Kosh, 74 Donnybrook Road, Scarsdale, N.Y.
Filed June 9, 1959, Ser. No. 819,182
1 Claim. (Cl. 33—174)



For use in measuring the box dimensions of an irregularly shaped lens having markings thereon to denote a meridian, an instrument, comprising: a base plate; first and second shoulders carried by said plate, said shoulders being in perpendicular relationship to one another and forming a right angle corner against which the lens may be abutted for measurement thereof; first and second elongated, flat, transparent slides carried by said plate, each of said slides having a first side edge in contact with a respective one of said shoulders and being movable along its respective shoulder towards and away from said corner along a path parallel to said shoulder, each slide being provided with an end edge facing said corner for contacting the lens, each end edge being normal to the path of movement of its respective slide; first and second means in contact with a second side edge of said first and second slides, respectively, for movably holding each first side edge in contact with its respective shoulder; a group of thin, closely spaced, lines carried on said plate adjacent said corner for orienting the lens with respect to said shoulders, said lines being aligned parallel to one of said shoulders, said plate being provided with a scale for and beneath each of said slides, each slide being provided with a hairline extending over one of said scales, each scale being calibrated to read under said hairline the box dimension of the lens between the end edge of said slide and the oppositely facing shoulder when the meridian of the lens is aligned parallel to said lines.

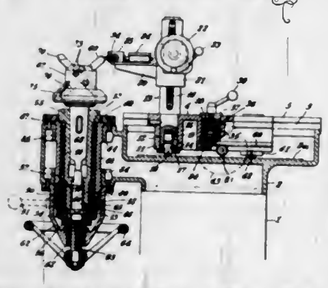
3,050,861
I.D. AND O.D. LIMIT GAGE
Robert H. Ruble, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 21, 1958, Ser. No. 736,795
2 Claims. (Cl. 33—178)

1. A gage for checking the I.D. and O.D. of articles of manufacture comprising two spaced apart body members, a mounting pin extending through the two spaced apart body members and serving to adjustably space said two spaced apart body members one from the other, said pin having screw threads over an enlarged diameter portion thereof which threadedly engage one of said two spaced apart body members, said pin having a reduced diameter end portion rotatably engaged with the other of said two spaced apart body members, fastening means threadedly engaged with said end portion and adapted to prevent axial movement of said pin relative to said other of said two spaced apart body members, means fixedly secured to the enlarged diameter end of said pin for rotating said pin to thereby adjustably space said one of said



two spaced apart body members from the other, a lock nut threadedly engaged with the enlarged diameter portion of said pin and adapted to bear against said one of said two spaced apart body members to thereby lock said pin and said one of said two spaced apart body members in position relative to one another, two spaced apart finger members secured to one side of the body members and shaped to provide step portions which define go and no-go gaging surfaces for the I.D. of the article to be tested, and two spaced apart finger members secured to the opposite side of the body members, one of the last named finger members being shaped to provide a step portion which defines go and no-go gaging surfaces for the O.D. of the article to be tested.

3,050,862
SETTING DEVICE FOR BORING OR DRILLING TOOLS
Benno Koch, 58 Rue de Carouge, Geneva, Switzerland
Filed Dec. 2, 1959, Ser. No. 856,684
Claims priority, application Switzerland Dec. 9, 1958
7 Claims. (Cl. 33—185)

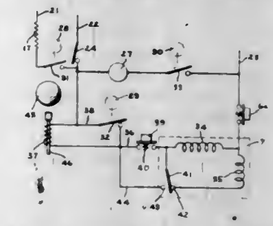


1. A device for setting the position of a tool in an elongated boring mandrel, said mandrel having at least one tool releasably lockably mounted thereon adjacent one end and slidable in a radial direction in respect to the mandrel axis for adjustment on said mandrel, comprising bearing means for rotatably supporting said mandrel with the tool extending upwardly from said bearing means, a measuring apparatus mounted adjacent said bearing means including a carriage shiftable toward and away from said bearing means, a member on said carriage elongated in a direction extending above said bearing means, a measuring gauge supporting arm adjustably positionable along the length of said member, a measuring gauge mounted at the end of said arm including movable sensing means extending outwardly from said arm for positioning in contact with the tool of said mandrel, whereby the position of the end of the tool can be measured by a direct reading on said measuring gauge.

3,050,863
METHOD OF DRYING ATTAPULGITE CLAY DISPERSIONS
Aldo P. Allegrini, Westfield, and Tom A. Cecil, Highland Park, N.J., assignors to Minerals & Chemicals Philipp Corporation, a corporation of Maryland
No Drawing. Filed Dec. 9, 1960, Ser. No. 74,752
5 Claims. (Cl. 34—17)

1. A method for drying attapulgite clay dispersions so as to produce a low bulk density product therefrom which comprises forming a fluid dispersion of attapulgite clay in water containing a deflocculating agent, while maintaining said dispersion in deflocculated condition applying a thin film of said dispersion to the outer surface of a rotating drum, heating the inner periphery of said rotating drum with steam while simultaneously directly contacting said film with hot dry air which is at a temperature below that which will cause said dispersion to boil, and removing the dried product from the drum surface.

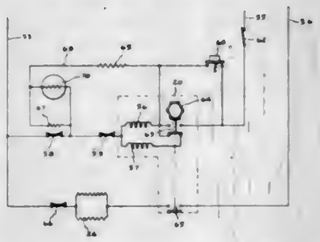
3,050,864
SIGNALLING DEVICE FOR APPLIANCES AND THE LIKE
Russell M. Sasnett, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 14, 1960, Ser. No. 14,679
1 Claim. (Cl. 34—45)



A clothes dryer comprising: a rotatable basket; air moving means for circulating air through said basket; electric heater means for heating air prior to its entry into said basket; an induction-type motor for rotating said basket and operating said air moving means, said motor including low-impedance start and run windings connected in parallel with each other and a speed-responsive switch mechanism having a first position below a predetermined speed and a second position above said predetermined speed; a sequence controller; first, second and third timer switches controlled by said sequence controller, said first timer switch being connected in series with said heater and controlling energization thereof, said second timer switch being connected in series with said sequence controller and controlling energization thereof; sound-producing means including a high-impedance coil connected in series with said motor, an armature member rapidly movable from a first toward a second position in response to brief energization of said coil, and stationary means positioned to be struck by said armature member during its movement from said first position to said second position whereby said sound-producing means is effective to provide a single audible signal when energized for a brief period by the striking of said stationary means by said armature member; a short circuit connected across said high-impedance means, said third timer switch being connected in said short circuit and controlling completion thereof; a starting circuit for said motor including a manually operable switch in series with both said windings and with both said high-impedance means and said short circuit, said manually operable switch being biased to an open position; and a bypass circuit around said manually operable switch including

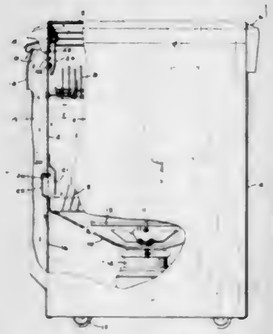
said speed-responsive mechanism, said speed-responsive mechanism opening said bypass circuit and completing connection of said start winding when in said first position thereof and completing said bypass circuit and disconnecting said start winding when in said second position thereof, whereby opening of said third timer switch during motor operation energizes said high-impedance means in series with said motor, and said motor as a result is de-energized opening said bypass circuit.

3,050,865
CONTROL SYSTEM FOR CLOTHES DRYERS
Everett D. Morey, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 9, 1959, Ser. No. 825,934
10 Claims. (Cl. 34—45)



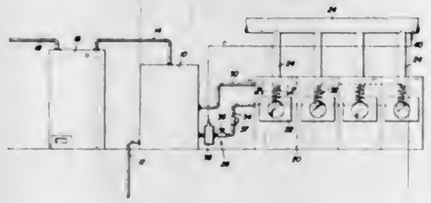
1. A clothes drying machine comprising a clothes container, a main heater positioned to heat clothes in said container, thermostatic means positioned to be responsive to the temperature of clothes in said container, an electric resistance-type biasing heater positioned in heating relation to said thermostatic means, means controlling operation of said main heater, said thermostatic means causing said controlling means to shut off said main heater in response to a predetermined high temperature, conductive means having an internal resistance variable to a substantial extent with changes in the temperature of said conductive means, a circuit including both said conductive means and said biasing heater connected to cause a decrease in the heating effectiveness of said biasing heater with increases in the temperature of said conductive means, and said conductive means being positioned to sense temperature changes significant to the operation of said machine to dry clothes.

3,050,866
DISHWASHER WITH DRYING MEANS
Herbert J. Macemon, Jeffersontown, Ky., assignor to General Electric Company, a corporation of New York
Filed June 13, 1960, Ser. No. 35,791
5 Claims. (Cl. 34—78)



1. A dishwasher comprising walls defining a vat into which dishes may be placed for a washing operation, heating means in said vat for heating the air and drying the moisture therein, a wall spaced from and coextensive with a wall area of said vat having openings adjacent the top and bottom to form a flue so that relatively cool ambient air may flow up through said flue and cool the said wall area to promote moisture condensation on the inside of the vat, and an air passageway between the top of said flue and said vat serving to remove the moisture in the air leaving the vat to reduce the amount of water vapor seen issuing from the dishwasher, said vat being formed to be in communication with ambient air during washing and drying of dishes substantially only through said flue.

3,050,867
ASSEMBLY FOR EMPLOYING DRIER EXHAUST HEAT FOR PREHEATING INLET WATER
Paul J. Friedman, 1423 Hillcrest Road, Lancaster, Pa.
Filed Apr. 20, 1960, Ser. No. 23,476
6 Claims. (Cl. 34—86)

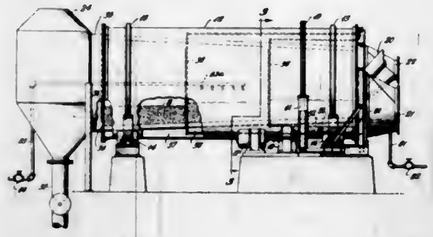


1. A preheating assembly for laundries employing a plurality of washing machines requiring hot water, a hot water heater for supplying such washing machines, a plurality of driers for drying the washed clothes, said preheater assembly including an exhaust manifold for the hot air discharged from the driers, an exhaust stack connecting each drier to the manifold, a heat exchanger coil disposed in each exhaust stack, a water storage tank supplying water directly to said hot water heater wherein the supplying connection between said storage tank and the hot water heater comprises the sole means by which water can be fed to the hot water heater, and a circulating system interconnecting the storage tank and the heat exchanger coil for circulating water through the coil for heating the water in the storage tank by employing the exhausted heat from the driers, thus increasing the capacity of the hot water heater, said storage tank being connected adjacent the bottom thereof with a water inlet for raw water, said tank having an outlet to the heat exchanger coils at the central portion of the storage tank, said circulating system having a discharge at the bottom of the storage tank for modulating the temperature of the incoming water for passage through the heat exchanger coils for reducing condensation of moisture on the external surface of the heat exchanger coils.

3,050,868
ROTARY COOLERS
Maurice J. Erisman, Oak Park, Ill., Norman L. Francis, Birmingham, Ala., and Earl C. Antonson, Tinley Park, Ill., assignors to Link-Belt Company, a corporation of Illinois
Filed Aug. 7, 1959, Ser. No. 832,229
12 Claims. (Cl. 34—136)

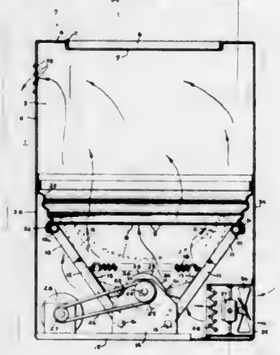
1. A rotary cooler, comprising a horizontal drum shell, a shell positioned concentrically of and in radially, inwardly spaced relation to the drum shell to form a central treatment chamber, annular means for dividing the treatment chamber into three successive axially arranged portions which are in communication with each other,

means for feeding flowable solid material into one end of the treatment chamber shell to form a bed that advances successively through the said three portions of the chamber shell as the drum shell is rotated, means for discharging the material from the opposite end of the chamber shell, means including the drum and chamber shells for



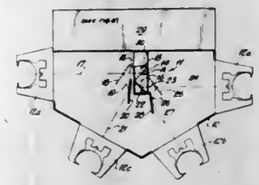
separately flowing cooling air upwardly through the three parts of the material bed that are advancing through the three portions of the said chamber shell, and means for applying a sprayed cooling liquid to the part of the bed that is advancing through the intermediate one of the said three portions of the chamber shell.

3,050,869
ARTICLE DRYING MACHINE
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Jan. 30, 1961, Ser. No. 85,541
1 Claim. (Cl. 34—164)



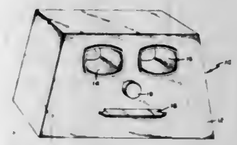
A machine for drying articles comprising: an article-receiving compartment having a floor of flexible material deformable from a first shape as a substantially centered declivity to a second shape as a horizontal surface; means for cyclically rapidly deforming said floor from said first shape to said second shape and returning said floor to said first shape thereby to bounce up articles resting on said floor, said deforming means including rigid members secured to said floor on opposite sides thereof, and means for rapidly spreading said members apart and then returning them toward each other including an electric motor, cam means driven by said motor, means connecting said cam means to said rigid members in controlling relation thereto, and spring means biasing said rigid members toward each other, said cam means being formed so that upon rotation thereof by said motor it cyclically spreads said rigid members apart against the action of said spring means, and said spring means cyclically returns said rigid members toward each other; and means for directing a stream of drying fluid through said compartment thereby to dry articles bouncing therein.

3,050,870
SENSORAMA SIMULATOR
Morton L. Heilig, Long Beach, N.Y.
(10 Sheridan Square, New York 14, N.Y.)
Filed Jan. 10, 1961, Ser. No. 81,864
13 Claims. (Cl. 35—1)



1. In a simulator apparatus, housing means, hood means mounted on said housing means to fit about the head of an observer, visual image projection means supported by said housing means, optical means to direct visual images from said projection means to said hood means, said optical means including eye pieces adapted to fit relatively close to the eyes of an observer to provide a 3-D effect with complete peripheral vision, means associated with said housing means to direct a breeze toward said hood means, means to enclose an odor-sense stimulating substance for release into said hood means, and means to coordinate said breeze directing means and said odor whereby the cooperative effects of said breeze, said odor and said visual images stimulate a desired sensation in an observer.

3,050,871
QUESTION AND HIDDEN ANSWER DEVICE
Irving Jacobs, New York, N.Y., assignor to Edward Jacobs, New York, N.Y.
Filed Jan. 30, 1961, Ser. No. 85,729
4 Claims. (Cl. 35—9)



1. A question and answer apparatus employing electrical circuits and punched cards for closing the circuits and comprising: a frame having a slot to receive the card, a normally open switch with a plurality of interconnected spring contact fingers arranged to be closed upon contact with the leading edge of the inserted card, an electric buzzer provided with an armature and a bell, the card being inserted into the frame between the armature and the bell, said card having a void to permit one of said circuits to remain open upon insertion of the card, the card also having a void located in the area of the inserted card lying between the armature and the bell to permit the armature to strike the bell when inserted in one position and to shield the bell when in another position.

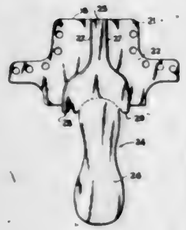
3,050,872
MAP MAKING AND APPARATUS THEREFOR
Donald Evan Myers, Horsham, and Joseph Francis List and James Clifford Bowman, Philadelphia, Pa., assignors, by mesne assignments, to Aero Service Incorporated, a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,806
7 Claims. (Cl. 35—40)

1. A cell for production of a two-dimensional map providing information as to a third dimension in terms of relative light density comprising a complementary pair of transparent bodies extending between spaced parallel planes and defined from each other by a surface, points

on which are spaced from one of said planes distances corresponding to said third dimension, the bodies having substantially identical indices of refraction but different light transmission characterstics, one of said bodies transmitting light normal to said plane substantially unimpeded and the other transmitting it substantially in inverse proportion to the distances of said points, respectively, from said plane.



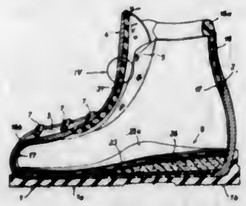
3,050,873
BABY BOOT
Alfred W. Payne, Jr., 120 E. 73rd St., New York, N.Y.
Filed Sept. 8, 1960, Ser. No. 54,710
1 Claim. (Cl. 36—2.5)



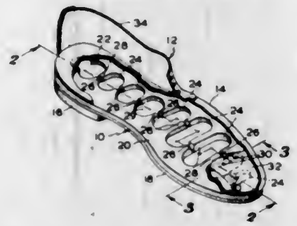
In a shoe having a flexible upper and a stiff outer sole, an integral inner sole and counter member of soft, smooth upper material, said inner sole and counter member constituted by a counter portion and an inner sole portion, said inner sole portion being contiguous with and a continuation of the counter portion, said counter portion being adapted to be secured to the upper and extend downward and around the heel area of the shoe and said inner sole portion constituting the inner sole, said counter portion having flaps adjacent the inner sole portion securing the inner sole portion in a position angularly disposed from the counter portion and constituting a natural curved and accurately fitting heel contour and snug fitting heel area for the shoe, said counter flaps adapted to fold under the inner sole portion, and a back quarter, said counter portion of the inner sole and counter member being secured at the central portion of the back quarter on the inside of the shoe.

3,050,874
RUBBER SKI SHOE
Armando Silombra, Turin, Italy, assignor to Superga Societa per Azioni, Turin, Italy
Filed Jan. 9, 1961, Ser. No. 81,510
Claims priority, application Italy Sept. 21, 1960
3 Claims. (Cl. 36—2.5)

1. A ski shoe comprising in combination; a seamless upper of vulcanized laminated rubber of diverse stiffness including an outer barrier of rubber layers alternating with fabric layers, an intermediate stiff rubber layer made of rubber having a comparatively greater stiffness than that of said rubber layers of the outer barrier, an insert of foam rubber and a layer of fabric such as woolen fabric applied to at least one face of said foam rubber insert, a sole of stiff rubber bonded by vulcanization to said upper, an insole including an inner layer of fabric such as woolen fabric, a foam rubber layer, an intermediate rubber layer, a stiff rubber layer made of rubber having a comparatively greater stiffness than that of said intermediate rubber layer of the insole and a stiff rubber filler interposed between said stiff rubber layer and said sole, and a wedge made of conglomerate material such as cork conglomerate interposed between said layers of said insole.

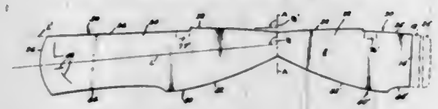


3,050,875
SELF-VENTILATING SOLE
Daniel T. Robbins, 2104 Pepper St., Burbank, Calif.
Filed May 7, 1962, Ser. No. 192,869
4 Claims. (Cl. 36—3)



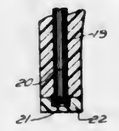
1. A self-ventilating sole for a shoe, comprising:
an outer sole, an intermediate filler and an insole joined together in sealed relation;
said filler being resilient and having a plurality of interconnected cavities therein extending along a major portion of the length of said filler;
said insole having vents communicating with said cavities and disposed in the forward end portion of the insole in the area occupied by the toes of the wearer.

3,050,876
EASILY LASTED MOCCASIN CONSTRUCTION
Jerome H. Grossman, Bangor, Maine, assignor to Penobscot Shoe Company, Old Town, Maine, a corporation of Maine
Filed Apr. 20, 1962, Ser. No. 189,084
4 Claims. (Cl. 36—11)



1. In a moccasin, an upper and sole portion comprising a blank including a pair of connected elongated segments symmetrical about the medial transverse axis of said blank, each of said segments including toe, shank and heel portions constituting respectively opposite sections of the toe, shank and heel portions of said upper and sole portion, each segment being of a full length of the moccasin to be formed and terminating at a heel edge, the medial longitudinal axis through each of said segments being disposed at an obtuse angle ϕ with respect to said medial transverse axis of appreciably less than 135°, one elongate edge of each segment having two edge portions, one edge portion of said one elongate edge being gently convex and extending from said medial transverse axis along the toe portion of said segment, the other edge portion of said one elongate edge extending across said shank and heel portions of the segment to the heel edge thereof, said other edge portion of said one elongate edge being generally straight and inwardly offset from said one edge portion of said one elongate edge, the medial axis of said other edge portion of said one elongate edge being disposed at an obtuse angle ϕ' less than said obtuse angle ϕ, the opposite elongate edge of each segment also having two edge portions, one edge portion of said opposite elongate edge extending from said medial transverse axis appreciably convexly into the shank portion of the segment, the other edge portion of said opposite elongate edge being inwardly offset adjacent said one edge portion of said opposite elongate edge and tapering outwardly to said heel edge of the segment, said blank being folded with said one edge portion of each of said opposite edges in abutting contact along a sole seam extending longitudinally and medially of said folded blank, and with said heel edges in abutting contact along a heel seam, said blank being stitched along said sole seam and said heel seam to maintain said blank as folded, said other edge portions of each of said opposite edges defining, in said blank as folded, side edges of an elongate opening in said sole portion extending along said shank portion to and within said heel portion thereof, said elongate opening being axially aligned with said sole seam and having a mean width substantially less than the mean width of said sole portion.

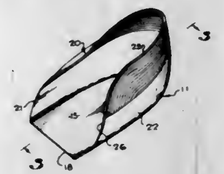
3,050,877
REINFORCED HEEL AND TAP
Fernando M. Ronci, Providence, R.I.
(2 Atlantic Blvd., Centredale, R.I.)
Filed June 16, 1960, Ser. No. 36,654
4 Claims. (Cl. 36—34)



1. A shoe heel lift attachment for insertion into a hole located in a shoe heel comprising a roughened elongated shank of a size adapted to be forced into said hole and to form a grip therein by means of the roughened portion, a head on said shank, and a solid synthetic-resin plastic lift molded to said head, the head being constituted by an interlocking form substantially embedded in said plastic lift, whereby the shank is strongly attached in the heel by said grip and the lift is interlockingly adhered to the head.

3,050,878
HEEL CUP
Herman L. Goeckner, 2246 Rochelle, Monrovia, Calif., and Harry E. Hukill, 903 N. Garfield, Alhambra, Calif.
Filed May 31, 1960, Ser. No. 32,878
2 Claims. (Cl. 36—58.5)

1. A heel-gripping cup adapted to be inserted without attachment in the heel-receiving portion of a shoe, comprising a body of thin, resilient, flexible, rubber-like material formed to provide a relatively flat sole portion having a relatively smooth upper surface and relatively rough lower surface and to provide an upright wall extending upwardly from the sole portion at the sides and rear thereof, said upright wall being characterized by being contoured to fit the interior of the heel-receiving portion of the shoe and being characterized by downwardly and forwardly inclined forward edges, said upright wall being further characterized by having relatively rough areas throughout a substantial portion of its inner and outer surfaces adapted to grip the heel of an individual and the interior of a shoe, respectively.



3,050,879
EARTH MOVING MACHINE
George W. Brown, 3648 E. 1st St., Fort Worth, Tex.
Filed May 15, 1961, Ser. No. 110,105
3 Claims. (Cl. 37—8)



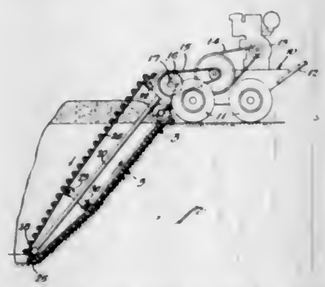
1. An earth moving machine comprising a wheeled vehicle carrying a plow and having a load carrying bed positioned rearwardly of the plow, and having a traction wheel, independent of its supporting wheels, rotatable by frictional engagement with the ground upon forward movement of the vehicle, and an upwardly and rearwardly inclined belt conveyor driven by the traction wheel extending rearwardly of the plow, between the plow and the load carrying bed, arranged to receive increments of loose earth as displaced by the plow and deposit it on the load carrying bed, the wheeled vehicle having an elongated frame supported rearwardly thereof on a pair of wheels and adapted to be towed by a tractor vehicle, and having a sub-frame carrying the plow, the traction wheel, and the conveyor pivotally connected at one end to the frame, whereby the opposite end of the sub-frame is adapted to be raised and lowered, the plow and the traction wheel being adapted to be disengaged from the ground when said opposite end of the sub-frame is in its raised position, the load carrying bed having its rearward end pivotally connected to the frame, rearwardly thereof, whereby its forward end is adapted to be raised and lowered, the forward end of the load carrying bed being supported on the frame in its lowermost position, a beam arranged longitudinally of the frame and fulcrumed intermediate its ends on an upward extension thereof, the beam having its opposite ends connected by linkage to the forward end of the load carrying bed and the end of the sub-frame opposite its pivot, respectively, whereby said end of the sub-frame is adapted to be raised, to thereby disengage the plow and the traction wheel from the ground, upon downward movement of the forward end of the load carrying bed in response to a load of predetermined weight deposited on the load carrying bed, and a latch on the frame engageable with the forward end of the load carrying bed to secure it in its lowermost position.

3,050,880
SPUD WELL FOR DREDGES
Paul J. Cushing, Sr., Piedmont, Calif., assignor to Hydraulic Dredging Co., Ltd., Oakland, Calif., a corporation of Delaware
Filed Nov. 28, 1960, Ser. No. 71,972
7 Claims. (Cl. 37—73)



1. A dredge comprising a hull adapted to float on water, a generally vertical spud well mounted on said hull and having upper and lower open ends, a spud mounted in said spud well and movable vertically therethrough, lift means for raising said spud through said spud well and lowering said spud through said spud well to engage the bottom of the body of water on which said hull floats to moor said hull in dredging position, spud well entry means attached to the bottom of said spud well and defining said lower open end of said well, said entry means having wear resistant wall portions shaped to embrace said spud with their inner surfaces closer together than the inner surface of said spud well, and mounting means for said entry means supporting said entry means against movement axially of said spud well while permitting universal flexure of said entry means with respect to said spud well, said spud well with said entry means mounted thereon being constructed of two semi-cylindrical halves one rigidly attached to said hull and one pivotally mounted on said hull about a generally vertical axis, and latch means is provided for latching said pivotally mounted half to said rigidly attached half with said halves in a closed, spud well defining relation.

3,050,881
TRENCHING MACHINE CUTTER MECHANISM
William Delbert Brown, Woodbine, Iowa
Filed Apr. 19, 1961, Ser. No. 104,042
7 Claims. (Cl. 37—86)



1. In a trenching machine having a frame, a trench forming mechanism comprising a movable boom extending from the frame, an endless cutter chain mounted on the boom for travel in lower and upper paths whereby in a trenching operation the chain in the lower path travels upwardly, a plurality of cutters carried by the chain and lying at opposite sides thereof to cut earth and the like and means for increasing the space between an opposed pair of cutters including a bracket secured to the chain and extending beyond opposite sides thereof with lateral surfaces at the ends thereof, means mounting said opposed pair of cutters on said bracket lateral surfaces with their cutting edges adjacent the bracket, and means defining at least one pocket in said bracket at the side of the chain having closed sides and an open top and bottom whereby earth or the like can be received within the pocket and conveyed by the bracket to a level above the trench whereby further elevation of the bracket causes the dirt to discharge from the pocket from the bottom thereof.

3,050,882
WHEEL SUPPORTED DITCHER
Robert C. Chattin, 2400 Bannock St., Boise, Idaho
Filed Oct. 20, 1959, Ser. No. 847,638
5 Claims. (Cl. 37—98)



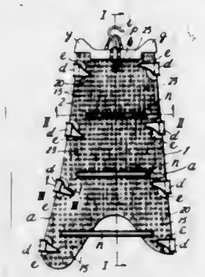
1. In ditcher apparatus having an elongated main frame, a ditcher implement adjacent the rear end of said main frame, and an axle extending transversely of said main frame positioned forwardly of said implement and with wheels journaled on the axle, the improvement comprising the combination of legs on said axle extending downwardly and toward the rear of said main frame with said wheels journaled on the ends of said legs, means pivotally mounting the axle and means pivotally mounting the implement for pivotal movement about substantially parallel axes extending transversely of said main frame, elongated wing members for said ditcher implement that laterally diverge and slope upwardly progressing rearwardly from the forward end of the implement, crank means joined to said axle intermediate its ends and projecting upwardly from the axle, extensible means pivotally connected at one end to said crank means and at its other end to said ditcher implement above the pivot axis for the implement and connecting the two whereby pivotal movement of the legs of the axle to the rear and upwardly relative to said main frame is accompanied by pivotal movement of the implement in the same direction with the rear ends of said wing members moving upwardly and the slope of the wing members increasing, and power-actuated means for pivoting said axle.

3,050,883
SCRAPER PLANE
John A. White, Jr., Gilroy, Calif., assignor to Be-Ge Manufacturing Co., Gilroy, Calif., a corporation of California
Filed Feb. 27, 1961, Ser. No. 91,975
6 Claims. (Cl. 37—153)



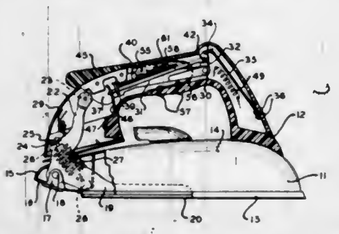
1. A leveler comprising an elongated wheel-supported frame, a transverse leveling blade unit pivotally mounted on the frame adjacent the rear end thereof for upward swinging movement, a tail-boom overlying the frame and extending rearwardly therefrom a material distance and having ground engaging elements on its rear end, means pivoting the tail-boom at its forward end on the frame ahead of the blade unit, a suspension device connecting the tail-boom and blade unit, power means mounted on the tail-boom and connected to the blade unit to raise the latter to a predetermined position relative to the frame and to then swing the tail-boom upwardly about the pivot means to raise said elements from the ground, and means between the blade unit and frame to releasably hold the blade unit against downward movement from said predetermined position.

3,050,884
CLAMP FOR PRESSING TROUSERS
Motosuke Takeda, 19 Minamikagaya-machi, Sumiyoshi-ku, Osaka, Japan
Filed Aug. 5, 1959, Ser. No. 831,779
4 Claims. (Cl. 38—71)



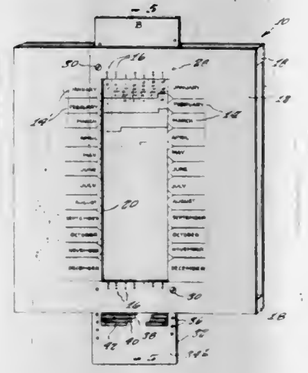
1. Apparatus for pressing a pair of trousers comprising, in combination, a pair of substantially flat clamping boards having a size and shape substantially that of said pair of trousers, said clamping boards being adapted to cover a pair of trousers placed therebetween, each of said clamping boards having opposite side surfaces with a plurality of grooves formed in said opposite side surfaces and with a plurality of air holes formed therethrough, each of said air holes communicating with grooves in the opposite side surfaces of said clamping boards; a substantially flat crease board having a size and shape substantially that of said clamping boards, said crease board being adapted to be positioned between the legs of a pair of trousers placed between said clamping boards; and clamping means for clamping said clamping boards together with a pair of trousers and said crease board positioned between the legs of said pair of trousers placed between the said clamping boards in a manner whereby the said pair of trousers is pressed by the said clamping boards and the said crease board.

3,050,885
SELF-LIFTING FLATIRON
Kenneth O. Whitfield, 175 Bloomfield Ave., Montclair, N.J.
Filed June 20, 1961, Ser. No. 118,375
10 Claims. (Cl. 38—79)



1. A flatiron comprising a body, a handle fixedly secured thereto, lifting means for said body movable between operative and inoperative positions, resilient means urging said lifting means to operative position, latch means in said handle for retaining said lifting means in inoperative position, keeper means for holding said latch means in effective position, a trigger movably mounted in said handle and connected to said latch means, a heat-sensitive element with one end fixed and the other end connected to said trigger, an electrical heating element disposed near said heat-sensitive element for causing it to heat, flex and move said trigger to release said latch means, a switch open when horizontal, closed when tilted in only one direction and disposed in a circuit with said electrical heating element, and resilient means mounted on said handle for tilting said switch to closed position, when the handle is released, to energize the heating element and cause heating and movement of said heat-sensitive element to effect lifting of said body.

3,050,886
ADJUSTABLE CODED CALENDAR
Victor F. Smets, 116—20 Myrtle Ave., Richmond Hill, N.Y.
Filed Mar. 1, 1961, Ser. No. 92,546
7 Claims. (Cl. 40—109)

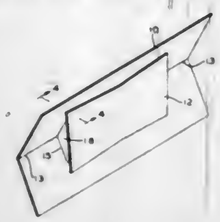


1. An adjustable coded calendar comprising, in combination, a main housing having central window openings, indicia carried by said main housing around said window openings designating the month of the year and the days of the week, two individual date sheets each slidably supported within said main housing for selective independent movement relative to said window openings having numerical indicia designating the dates of each month, a coded card, said coded card being slidably supported within said main housing for movement between said date sheets relative to said date sheets, said coded card having colored geometric indicia designating a multiple data schedule for relating said schedule to said dates, said main housing comprising a pair of substantially rigid opaque panels, said panels being secured together in spaced apart parallel relationship, and a plurality of spacer blocks mounted between said panels, said spacer blocks maintaining said panels in spaced apart parallel relationship.

3,050,887
DISPLAY ASSEMBLY
Herbert O. Sperry, Newtown Square, Pa., assignor to Color Process Company, Inc., West Conshohocken, Pa., a corporation of Pennsylvania
Filed May 2, 1961, Ser. No. 107,193
2 Claims. (Cl. 40—124.1)

1. A display assembly comprising a backing member bent to form a selected reentrant angle and having two transverse slots, a panel for receiving advertising material, two tabs on said panel projectable towards said member and spaced to traverse said slots respectively and project therefrom, a leg on each tab to seat on a surface as a support for said member, and means on each

tab depending from the projecting portion thereof to interlock with a slot margin to latch said member in bent



position and to hold said panel in a projected position within said reentrant angle.

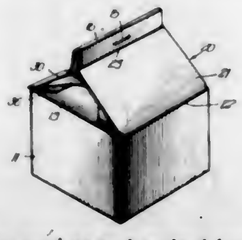
3,050,888
CHANGEABLE EXHIBITORS
Bernard Myers, Surbiton, and Joseph Dembinsky, Hendon Way, London, England, assignors to John Myers, New York, N.Y.
Filed Dec. 26, 1958, Ser. No. 783,056
8 Claims. (Cl. 40—132)



1. A changeable exhibitor comprising means for producing a flood of colored light, means for displaying a semi-transparent message in the path of said colored light, said message being invisible while said light is passed therethrough, means for alternately rendering one or the other of said message and said flood of colored light visible to an observer, said alternate rendering means including a partially light transmissive and partially light reflective member, said message forming part of said partially light transmissive and partially light reflective member at the reflective face thereof, said colored light producing means including a plurality of light reflecting colored discs and means for projecting an intense beam of light thereon to be reflected therefrom, said colored discs being divided into primary colored segments in alternating arrangement, means for rotating said colored discs at high speed and all at the same speed, and for rotating one in a direction opposite to that of the others.

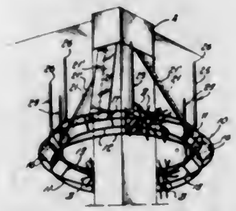
3,050,889
DISPLAY DEVICES
John M. Eichelman, 4637 Oakwood Ave., Burr S. Eichelman, 748 Chicago Ave., and Donald D. Towsley, 744 Maple Ave., all of Downers Grove, Ill.
Filed Nov. 28, 1960, Ser. No. 71,992
5 Claims. (Cl. 40—312)

1. In combination: a container having an upper ridge and recessed end portions between top and end walls in the form of inverted pyramids; a resilient sheet mounted on said container, said resilient sheet having a display portion intermediate the ends of said sheet, a cut extending the length of said display portion receiving therein said upper ridge of the container, and score lines traversing the ends of said display portion to define flap portions, said flap portions folded under said body portion into said recessed end portions of the container, and tab portions on said flap portions folded back with re-



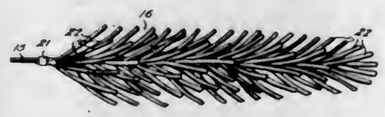
spect to said flap portions and wedged between said top and end walls of the container in order to attach said resilient sheet thereto.

3,050,890
SKELETON RINGS FOR ORNAMENTAL AND DISPLAY PURPOSES
Erich Bloch, 556 W. 141st St., New York, N.Y.
Filed Mar. 6, 1959, Ser. No. 797,608
6 Claims. (Cl. 41—12)



1. A display device comprising a plurality of similar separate arcuate units of equal radii adapted when assembled to be placed in juxtaposition end to end to conjointly form a ring, said ring units being of open framework construction made up essentially of interconnected wire elements to permit the ring elements when assembled to be adorned and dressed with such decorative accessories as branches, leaves and flowers to form a wreath, each of said units comprising at least three arcuate concentric wire elements, two of which are in different planes, and frames at opposite ends of each of said units holding said arcuate wire elements in predetermined spaced relationship and including a series of wire elements extending between and transversely of the arcuate wire elements, the transversely extending wire elements of each end frame in assembled condition of the ring units adjoining and lying alongside of corresponding transversely extending wire sections of the contiguous end frame of the juxtaposed ring unit, and means for detachably securing the frames of juxtaposed ring units together.

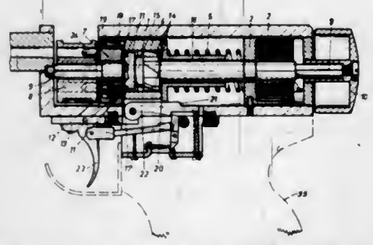
3,050,891
ARTIFICIAL TREE BRANCHES
Richard N. Thomsen, 923 N. 12th St., and Wesley G. Martin, 1346 N. 10th St., both of Manitowoc, Wis.
Filed Apr. 27, 1959, Ser. No. 808,980
2 Claims. (Cl. 41—15)



1. The process of forming an artificial tree branch which comprises the securing of one end of a metal foil strip to a stiff wire body member adjacent one end thereof,

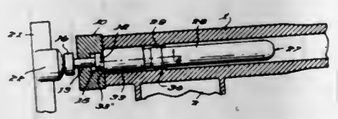
said metal foil strip having a solid longitudinal marginal edge portion, a plurality of parallel slits interrupting the other marginal edge of said foil strip and extending to said solid marginal portion of said strip to form a plurality of relatively long and narrow surfaces on said metal foil strip, forming closely associated creases in said solid marginal portion of said metal foil strip, said creases being disposed in parallel relationship at an angle extending upwardly and inwardly from said solid longitudinal edge of said strip, winding said metal foil strip turn upon turn in cylindrical form on said stiff wire member adjacent one end thereof, slidably moving the free end of said cylindrically wound metal foil strip axially along said wire body member and simultaneously turning said wire body member to permit the cooperating engagement between said creases formed in the adjacent abutting surfaces of the turns of said solid marginal portion of said metal foil strip to facilitate the spiral winding of said solid longitudinal marginal portion of said strip in partially overlapping relationship, and releasably securing the free end of said foil strip on said stiff wire body member to retain said foil strip in tight spirally wound position on said stiff wire member.

3,050,892
AUTOMATIC FIREARM UTILIZING A SPRING FOR RELOADING
Heinrich Vogler, Eggstrasse 32, Oberengstringen, near Zurich, Switzerland, and Heinz Krausser, Orleansstrasse 31, Munich, Germany
Filed Mar. 18, 1959, Ser. No. 800,148
Claims priority, application Germany Mar. 21, 1958
5 Claims. (Cl. 42—5)



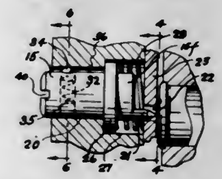
1. In an automatic firearm, in combination, a stock, a loading and firing mechanism supported by said stock, a barrel disposed forwardly of said stock, said mechanism comprising a casing, a plate closing the forward end of said casing and defining with the rear end of said barrel a space open on top, a shaft journalled for rotation in said casing, a drum coaxially mounted on said shaft and rotatable therewith and having cartridge receiving bores parallel of the axis of the shaft and drum, said drum being disposed in said space, said shaft being shiftable axially oppositely between a normal position wherein its forward end projects into said space and engages said drum and, respectively, a retracted position wherein the forward shaft end is retracted from the space and releases the drum to be lifted out, a rotor mounted inside said casing coaxially on said shaft and being rotatable therewith and restrained from movement axially of said shaft and having a cam surface, a spring connected to said shaft and operable to rotate said shaft, a sliding member disposed coaxially of the shaft axis and being axially slidable in said casing between a forward firing position and a rearward cocking position and being restrained from rotating and having a cam follower surface engaging the cam surface of said rotor, said rotor being operable thereby to move said sliding member into the cocking position when said rotor is rotated by the shaft, resilient means in said casing urging said sliding member into the firing position, releasable latching means operable to latch said sliding member releasably in the cocking position, trigger means operable to release said latching means, firing means adapted to detonate a cartridge in a drum bore when said sliding member during forward propulsion reaches the firing position, and releasable locking means inactive when said sliding member is in the firing position and active in all other positions of said sliding member to limit the rotation of said rotor to a predetermined angle to turn thereby the drum to the next cartridge, said firing means including a firing pin, said rotor including detents, said releasable locking means including a locking element operable to engage a detent of the rotor, said firing pin and element being movable axially of said shaft and normally disposed in the path of said sliding member adjacent the firing position thereof for impact actuation thereby when said sliding member is propelled from the cocking position into the firing position, whereby in the firing position of said sliding member said locking means will be rendered inactive and said firing means will be activated.

3,050,893
TOY GUN AND PROJECTILE THEREFOR
Duane C. Maddux, 3016 W. Verdugo Ave., Burbank, Calif.
Filed July 16, 1959, Ser. No. 827,509
3 Claims. (Cl. 42—55)



1. In combination, a toy gun having a barrel, a removable breech block closing the rear end of the barrel, a firing pin in said breech block, and spring actuated hammer means for delivering an impact on said firing pin; said barrel having an internal peripheral bead of slightly less diameter than the bore thereof disposed inwardly of said rear end thereof, and projectile means for use therewith comprising an elongated projectile component having a slightly compressible peripheral bead of slightly greater diameter than the projectile body and the reduced diameter of said bore formed by said bead in said barrel and disposed a lesser distance from the rear end of said projectile than the distance of said internal bead from the rear end of said barrel, a cap holding means on the rear end of said projectile means including a detonation chamber and means for detonating a cap disposed in said chamber upon impact on said cap holding means by said hammer means; the interengagement of said beads being sufficient to offer resistance to firing pin impact to insure cap detonation but insufficient to prevent passage of said projectile in response to pressure in said chamber deriving from cap detonation.

3,050,894
ROTATABLY ADJUSTABLE FIRING PIN FOR CENTER OR RIM FIRE CARTRIDGES
Jessie T. Ivy, 523 Henderson St., Seattle, Wash.
Filed Mar. 18, 1960, Ser. No. 15,922
3 Claims. (Cl. 42—69)



1. A firearm including a mounting frame, a chamber mounted in said frame for holding a cartridge for firing,

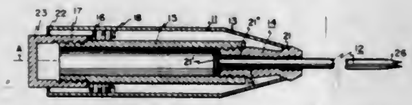
a hammer mounted in said frame, a bore formed in said frame coaxially with said cartridge holding chamber, a pair of spaced axially extending channels formed in the wall surfaces of said bore, a firing pin rotatably mounted in said bore in position to be struck by said hammer and engageable with a cartridge in said chamber, said firing pin being mounted for limited endwise movement and for limited axial rotative adjustment, a firing point formed eccentrically on the inner end of said firing pin which by axial rotative adjustment of the firing pin to one limit will be positioned for firing center fire cartridges and by axial rotative adjustment of the pin to its other limit will be positioned for firing rim fire cartridges, a transverse bore formed in said firing pin, and a spring pressed ball mounted in said transverse bore whereby, incident to rotation of said firing pin, the ball is adapted to be seated in one of said channels to hold the pin in the desired position.

3,050,895
ANCHOR FOR DECOYS
Gustave C. Bratland, Box 103, Yamhill, Oreg., and Charley E. Johnson, 1333 Johnson St., McMinnville, Oreg.
Filed Nov. 21, 1960, Ser. No. 70,644
2 Claims. (Cl. 43—3)



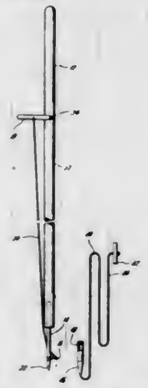
1. An anchor for a fowl simulating decoy used in a body of water comprising an annular spool, said spool having portions defining a V-shaped circumferentially extending recess therein, a line having one end secured to said spool, wound in said V-shaped recess, aligned pairs of protrusions on said spool adjacent said V-shaped recess on opposite sides thereof, said protrusions having undercut portions defining a recess therein extending in the direction in which said line is unwound, said line adapted to unwind from the V-shaped recess in said spool during movement thereof to an anchoring position, said line engageable with one of said protrusions adjacent the V-shaped recess in said spool when the same is in an anchoring position, and said line movable into said recess in said protrusions to prevent further unwinding thereof.

3,050,896
FISHING TOOL
Trent J. Parker, 7880 Laurelhurst Drive, Salt Lake City, Utah
Filed June 20, 1960, Ser. No. 37,200
2 Claims. (Cl. 43—4)



1. A tool including, in combination: a barrel having a central axis, a socket end, a remote end, and an interior spring reaction shoulder; exteriorly tapered, resilient, openable jaw means seated within said barrel socket end, being closed thereby, and translationally displaceable therefrom away from said barrel along said axis thereof for jaw means opening; a depressable, jaw release button disposed within and protruding from end of said barrel; a sleeve interposed between and connected to said button and circumscribingly engaging said jaw means; a compression spring circumscribing said sleeve and engaging said shoulder and said button; and a work member disposed through said jaw means, being engaged thereby, said work member being selectively translatable along said axis when said button is depressed so as to translate said jaw means away from said barrel socket end to enable said jaw means to open, said work member having stop means engageable with that portion of said jaw means disposed within said sleeve.

3,050,897
FISHING GIG WITH ATTACHABLE STRING LINE
Loye D. Pitts, 231 Cayton St., Houston, Tex.
Filed Sept. 22, 1960, Ser. No. 57,674
3 Claims. (Cl. 43—6)



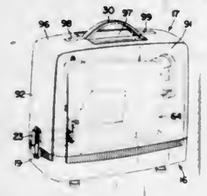
1. In a fishing gig, a handle, a spike mounted on said handle, said spike having a recess, a retractable barb having first and second ends, the first end of said barb being pivotably mounted in said recess, a spring yieldingly urging said barb outwardly, an abutment adjacent said barb and positioned to limit outward movement of said barb, a hollow cap slidable over said spike and said barb thereby retracting said barb within said recess, said cap having an internal shoulder engageable with the second end of said barb, and a stringline attached to said cap.

3,050,898
AUTOMATIC LINE RELEASE MEANS
Louis E. Bernd, 1211 E. Kansas, McPherson, Kans.
Filed Sept. 5, 1961, Ser. No. 136,018
6 Claims. (Cl. 43—25)



3. Release means for a line comprising, in combination, line receiving means adjustably mountable on flexible means, wedgeable means operable with said line receiving means when mounted therewith to removably hold a line or the like stationary relative thereto by being wedged against said line receiving means, said wedgeable means movable relative to said line receiving means upon movement of said line receiving means to release said line.

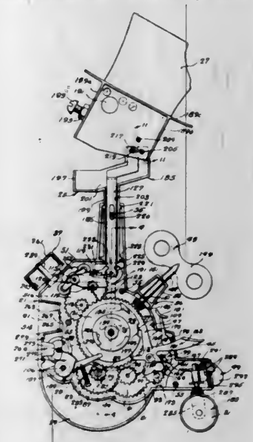
3,050,899
CARRYING CASE COVER FOR SEWING MACHINES
Edward W. Stanton, Cranford, and Kenneth Perkins, Scotch Plains, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Mar. 27, 1959, Ser. No. 802,413
4 Claims. (Cl. 45—68.2)



1. A molded or cast cover for a sewing machine carrying case, said cover comprising a front wall, a back wall, two end walls and a top wall, said top wall being provided with cavities formed in portions of said top wall and each of said cavities communicating with a hole passing through said top wall; a handle having apertured ends disposed in said cavities; a channel shaped end cover positioned on top of each end of said handle; a shank member secured to each of said end covers and said shank members passing through the apertured ends of said handle, and through said holes in said top wall; means for securing said shank members to said top wall; and a pair of spaced reinforcing ribs extending along the inside surface of said front wall, along the inside surface of said top wall and along the inside surface of said back wall, said pair of reinforcing ribs being interrupted by the portions of said top wall which form the said cavities.

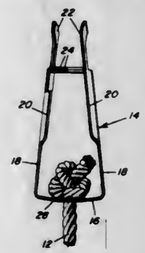
3,050,900
TOY
Marvin I. Glass, Chicago, and Leonid Kripak, Villa Park, Ill.; said Kripak assignor to said Glass
Filed Dec. 28, 1959, Ser. No. 862,208
7 Claims. (Cl. 46—22)

1. An animated toy which can be readily disassembled and reassembled, said toy comprising a body constituting a hollow casing including two complementary sections and fastening means detachably assembling said sections together, a power mechanism removably supported within said casing for animating said toy, said power mechanism including a main spring capable of storing energy therein and selectively releasing the energy to animate said toy, a gear train terminating in a shaft, means for removably mounting said gear train within said hollow casing and removably connecting said gear train to said power mechanism, stopping means mounted on said casing and movable to frictionally engage said shaft and thereby arrest the release of energy from said main spring, a tricycle wheel means removably carried by said body for supporting said body on a supporting surface, said tricycle means including a pair of wheels mechanically connected with said power mechanism to thereby propel said body over the supporting surface, and a third wheel carried by said body for movement about a generally vertical axis, means removably carried by said body in mechanical connection with said third wheel and extending exteriorly of said body for angularly adjusting the position of said third wheel to control the direction of movement of said toy, leg members removably and hingedly carried by said body at a point above the supporting surface, said leg members extending in close proximity to the supporting surface and being mechanically connected with said wheels for oscillation thereby to simulate walking action of said body, arm members removably and hingedly carried by said body, said arm



members being mechanically connected with said leg members for swinging movement in synchronism with the oscillatory movement thereof, sounding means including a siren noisemaker and a ring sounding noisemaker removably carried by said body, said noisemakers being mechanically connected to said power mechanism for sounding operation thereof, and a head member removably and hingedly attached to said casing, said head member being mechanically connected to said power mechanism and periodically driven thereby to provide a simulated head nodding action.

3,050,901
TOY LARIAT
Paul H. Maffet, Woodland Park, Colo.
Filed Jan. 20, 1960, Ser. No. 3,544
6 Claims. (Cl. 46—51)



4. The combination of a length of rope having a slip-knot at one end portion with an adjacent portion of the rope proper slidingly cooperable with the slip-knot and defining an adjustable noose and a hand-tied knot at the other end, a readily attachable and detachable handle U-shaped in edge elevation and embodying a bight portion and a pair of opposed relatively long limbs lateral to the ends of the bight portion, said limbs opposed to each other and conjointly defining a grip, said bight portion

having a hole of predetermined diameter slightly greater than the cross-section of the rope so that a portion of the rope may be passed through the hole and the knotted end of the rope allowed to abut the bight portion and in this manner provide a separable and swivel connection betwen the rope and bight portion, the length of the bight portion being appreciably greater than the largest diameter of the knot so that the limbs at the ends of the bight portion are spaced on diametrically opposite sides of the knot, said limbs having free end portions and said free end portions having tongues projecting therefrom, said tongues extending laterally and inwardly toward the respective limbs and slidingly overlapping each other and constituting stop lugs, the free ends of the lugs being engageable with the opposite limbs to rigidify the limbs and yet to allow sufficient freedom of action of the limbs in response to handling of the same by a user.

3,050,902
NOVELTY
Marvin I. Glass and Bayard C. Reed, Chicago, Ill.; said Reed assignor to said Glass
Filed Dec. 17, 1959, Ser. No. 860,204
4 Claims. (Cl. 46—123)



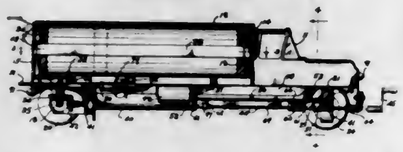
1. In an articulated snake fabricated from sections connected together by hinged pivots with each pivot having an axis, the improvement which comprises said axes of the pivots between adjacent sections being arranged at sequentially different angles relative to a given one of said axes, and adjacent sections being sequentially vertically offset relative to one another at the said axes, whereby highly responsive and realistic movement may be achieved with very little manipulation by the user.

3,050,903
WALKING AND SITTING DOLL
Ruth Kaplan, 230—41 131st Ave., New York, N.Y.
Filed Mar. 23, 1961, Ser. No. 97,849
9 Claims. (Cl. 46—149)



1. In a doll, including a torso having circular leg openings in opposed corners of the bottom portion thereof, said openings spaced by a crotch portion, and a leg rotatably supported by its upper end portion in each of said openings, said leg including a portion extending into said torso, a mechanism for simulating a walking movement for said doll, comprising a pair of elongated spring elements within said torso, means on said crotch portion engaging each of said spring elements by one end, for supporting said spring elements in substantially upright position, each said spring element curving away from the other in the direction of the upper portion of one of said leg openings and closely adjacent thereto, and means on the inwardly projecting portion of each of said legs extending into the said torso and disposed, when said leg is in substantial alinement with said torso, closely adjacent to and rearwardly of the free end of the adjacent spring element and engageable by said spring element when said leg is moved to be disposed at a rearwardly extending angle to said torso.

3,050,904
MOBILE TOY VEHICLE
William L. Morse, Issaquah, Wash., assignor to Pre-Controls, Inc., Seattle, Wash., a corporation of Washington
Filed Feb. 16, 1961, Ser. No. 89,692
6 Claims. (Cl. 46—213)



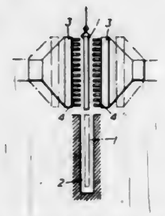
2. In a wheel mounted toy comprising a frame that is equipped at its front and rear ends, respectively, with steering and driving wheels, a vacuum cylinder fixed in the frame and fitted with a piston; said cylinder being sealed against entry of atmospheric air at one end and having an atmospheric air port at its other end, a rotatably mounted drive shaft for said driving wheels, a flexible band connected at one end to said piston and at its other end to said rotatably mounted drive shaft for winding said band from and onto it, a manually operable winding shaft geared to the drive shaft and operable to effect the winding of said belt thereon and the incident travel of the piston in the cylinder to establish a condition of vacuum at one side thereof; said winding shaft having a non-rotatable nut threaded for travel thereon, a steering plate pivoted at one end in the vehicle for lateral adjustment at its other end and having operative connection at said other end with means for steering control of said steering wheels, and tabs applied to said plate engageable by said nut in its travel on said winding shaft as it rotates with travel of the vehicle to actuate the steering plate and effect steering adjustment of said steering wheels.

3,050,905
METHOD AND MEANS FOR FIXING A GRAFT IN A STOCK
Paul Marie Antoine Vlaeminck, 119 Rue de la Station, Schellebelle, Belgium
Filed June 29, 1960, Ser. No. 39,667
Claims priority, application Belgium Aug. 19, 1959
3 Claims. (Cl. 47—6)



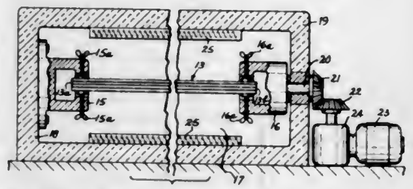
1. A method of securing a scion to a stock comprising inserting a scion in an incision in the bark of a stock, engaging the scion and stock together by applying a preformed resilient member on said stock to extend only partially therearound to prevent relative movement between the stock and the scion in the direction of the incision while allowing the free growth of said scion in directions extending radially from said incision by deformation of said resilient member and providing a sap impermeable cushion between said resilient member and said stock at said incision to prevent escape of sap from said incision.

3,050,906
METHOD OF MANUFACTURING MATCHING SHEETS OF GLASS
Norman Murphy, Roby, and Carlo Ciceri, St. Helens, England, assignors, by mesne assignments, to Glaces de Boussois, Paris, France, a French body corporate
Filed Mar. 21, 1960, Ser. No. 16,244
8 Claims. (Cl. 49—77)



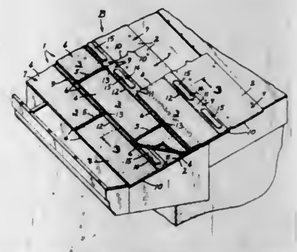
1. The method of manufacturing matching glass sheets from a parent sheet of glass having substantially parallel opposed faces, a pair of opposed lateral peripheral sections and a pair of opposed end peripheral sections between said lateral peripheral sections, which method comprises scoring the perimeter of the parent sheet along said sections and in a region between said faces, and subjecting said parent sheet to thermal glass-splitting down shock by heating said parent sheet, chilling the parent sheet on both faces simultaneously thereacross between said lateral peripheral sections and progressively along said parent sheet from a leading peripheral section constituting one of said end sections to the opposite peripheral end section, while maintaining the thermal down shock at the margins of the parent sheet along said lateral peripheral sections between 5° to 10° C. less than the thermal down shock in the middle area of said parent sheet, to split said parent sheet thereacross between said lateral peripheral sections and progressively along said parent sheet from said leading peripheral end section, and controlling the rate of progression of chilling along the parent sheet from the leading peripheral end section at a rate corresponding to the rate of propagation of split along said parent sheet.

3,050,907
METHOD FOR SHAPING A FIBER OPTICAL DEVICE
John W. Hicks, Jr., Fiskdale, and Wilfred P. Bazinet, Jr., Webster, Mass., assignors to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed June 27, 1958, Ser. No. 745,092
4 Claims. (Cl. 49—84)



2. The method of making a flexible assembly of a plurality of relatively long and thin light-conducting glass fibers comprising assembling said fibers in loosely grouped side-by-side longitudinally aligned relation with each other, securing only a relatively short section of said fibers together at each end of said assembly, suspending said assembly from adjacent the opposite secured ends thereof within a heating chamber, rotating at least one of said ends about a longitudinal axis passing substantially centrally through each of the ends of said assembly an amount such as to impart a desired axial twist to said intermediate portion of said assembly, holding said assembly in said twisted condition, heating said assembly to a temperature approximating the temperature required to cause a single fiber of the same material and cross-sectional size as the fibers of said assembly to sag approximately one-quarter inch when said fiber is supported at one end so as to protrude horizontally to a free end thereof at a distance of approximately 500 times its diameter, shutting off said heat and allowing said assembly to cool to room temperature.

3,050,908
SELF-SEALING SHINGLE
Walter E. Schenk, Minneapolis, Minn., assignor to The B. F. Nelson Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota
Filed July 18, 1960, Ser. No. 43,611
5 Claims. (Cl. 50—243)

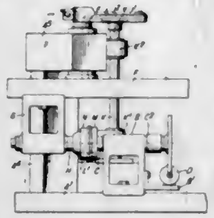


1. A freely stackable nonadhering self-sealing flexible composition roof shingle body comprising a head lap portion and an exposure portion and having flat generally parallel upper and bottom surfaces, said upper surface having an upwardly opening recess positioned between said head lap and exposure portions to receive the lower free edge of the exposure portion of a shingle overlapping said head lap portion when laid in normal course relationship, an adhesive coating in said recess, the upper limits of said coating lying below the plane of the upper surface of said head lap and exposure portions, whereby the free edge of said exposure portion terminates within the confines of said recess to be depressed therein and anchored by said adhesive coating in use and for purposes of shipment and storage a plurality of said shingles may be compactly and freely stacked upon each other with the flat bottom of each thereof bridging the adhesive coating in the recess in the upper surface of the underlying shingle.

3,050,909
APPARATUS FOR AND METHOD OF POLISHING ASPHERIC SURFACES
George Ormerod Rawstron, 104 Stoughton St., Leicester, England
Filed Feb. 16, 1960, Ser. No. 9,084
Claims priority, application Great Britain Feb. 19, 1959
9 Claims. (Cl. 51—124)

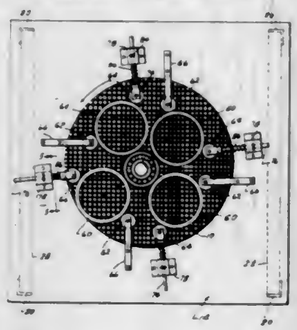
1. A method of uniformly polishing an aspheric surface of revolution which deviates only by small amounts from a basic spherical surface by means of a flexible polishing element having a cooperating polishing surface, which method comprises the steps of imparting a relative reciprocating movement to said flexible polishing element

and the surface to be polished, said movement being directed along a great circle of said basic spherical surface, maintaining the polishing element in contact with the entire area of the surface to be polished throughout said relative reciprocating movement, and varying the orientation of the reciprocating movement with respect to the



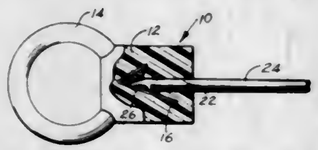
surface to be polished by imparting a relative rotational movement to said surface and polishing element by rotationally driving one of them about its axis of symmetry, the relative displacement per unit of time caused by said reciprocating movement being greater than that caused by said rotational movement.

3,050,910
AUTOMATIC LAPPING MACHINE
Alfred F. Lichtenfeld, Glenview, Ill.; Hedwig Lichtenfeld, executrix of said Alfred F. Lichtenfeld, deceased, assignor of one-half to Harry J. Harris, Melrose Park, Ill.
Filed Dec. 21, 1959, Ser. No. 860,957
2 Claims. (Cl. 51—129)



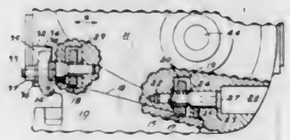
1. The combination with a rotatable lapping plate of means for holding a lapping pot on said plate and moving the same back and forth while said plate is rotating, said means comprising an eccentric unit on the lapping plate, a fixed lapping pot holding arm and a movable holding arm, said eccentric unit and said holding arms being adapted to engage a lapping pot at three points of contact.

3,050,911
DIAPER PIN AND SAFETY PIN SHARPENER
Louis W. Brittingham, Jr., 200 Macon St., Berier, Mo.
Filed Apr. 5, 1961, Ser. No. 100,898
3 Claims. (Cl. 51—214)



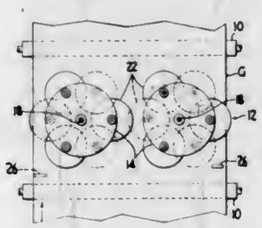
1. An instrument for sharpening pointed objects comprising in combination a main support block having an opening at one end for receiving the pointed end of an object to be sharpened therewithin, an abrasive element, a bracket supporting said element within said block within said opening and a handle ring mounted upon the opposite end of said block, said opening in said main support block being in axial alignment with said handle ring and said bracket comprising a flat rectangular plate having an angularly related terminal flange having said abrasive element affixed to one side of said terminal flange, said side being adjacent said plate.

3,050,912
MOUNTING CONSTRUCTION FOR MACHINE TOOL MEMBER
Jacob Decker, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed May 18, 1959, Ser. No. 814,083
5 Claims. (Cl. 51—237)



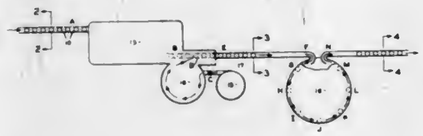
1. In a machine tool a bed having a laterally inclined upper surface defining a way and having a pair of spaced parallel longitudinal slots therein, each slot having a flat bottom surface defining a track parallel to the way in the longitudinal direction and relative to which the way is inclined in the lateral direction, a member mounted on the way having a plurality of rollers mounted therein and depending therefrom, said rollers received in the slots in the way, and a clamp connected to one side of the member and engaged with one side of the bed to slide the member up the way and to hold the member up on the way with the rollers disengaged from the tracks, said member slidable down the way on release of the clamp to engage the rollers with the track for longitudinal movement of the member along the bed.

3,050,913
GLASS MANUFACTURE
Robert E. Kirby, Ford City, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Aug. 11, 1959, Ser. No. 833,094
4 Claims. (Cl. 51—283)



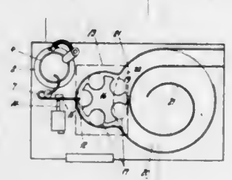
1. In the art of polishing a major surface of a glass sheet by providing relative compound movement between the glass sheet and a polishing felt with contact between the felt and the major surface while feeding polishing media to the interface between the major surface and the felt, said felt being characterized by a tendency to become caked with and hardened by the polishing media, the improvement which comprises adhering strip material on a part only of the major surface of the glass sheet with the strip material extending outwardly of the plane of the major surface of the glass sheet to an extent for a scraping action of the strip material on the felt during the relative movement between the glass sheet and the felt.

3,050,914
STERILIZING PROCEDURES FOR ASEPTIC CANNING
Harry A. Morgan, Jr., Palos Verdes Estates, Calif., assignor to Reddi-Wip, Inc., Los Angeles, Calif., a corporation of Missouri
Filed May 25, 1959, Ser. No. 815,673
6 Claims. (Cl. 53—25)



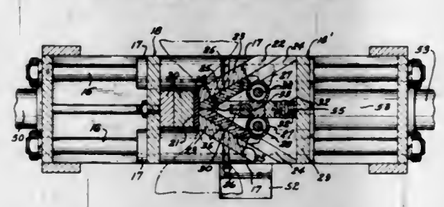
1. A method of preparing a can and can cover for aseptic canning within a processing chamber, comprising the steps of heat sterilizing an open can and a can cover in a sterile atmosphere, then without removing from the sterile atmosphere, placing such sterilized cover upon such sterilized can whereby to cover its opening, but not to seal same then conveying the can with cover thereon out of the sterile atmosphere and permitting them to cool to but not below a temperature suitable for aspetic canning, then introducing the can with cover thereon into a processing chamber and removing the cover from the can, then introducing a sterilizing fluid into said chamber whereby to restore the surfaces of the can and cover to sterility, then evacuating the sterilizing fluid by sub-atmospheric pressure.

3,050,915
APPARATUS FOR ASEPTICALLY POURING A BACTERIOLOGICAL SUBSTRATE OR THE LIKE INTO COVER-CARRYING VESSELS
Karl Oskar Lennart Silverstolpe, Skytteholmsvagen 26, Solna, Sweden
Filed Oct. 5, 1960, Ser. No. 60,658
6 Claims. (Cl. 53—111)



1. Apparatus for aseptically pouring a bacteriological substrate into vessels each having a cover protruding with at least one portion above said vessel and tiltable relatively to the vessel, said apparatus comprising a sterile chamber, a conveyor for passing subsequent vessels along a moving path through said sterile chamber, container means for said bacteriological substrate, conduit means for connecting said container means with said sterile chamber, a spout at the sterile chamber-end of said conduit means, extending into said moving path, a dosage device in said conduit means, allowing upon operation a metered quantity to pass, and a cam-member extending along part of said moving path in said chamber and engaging said protruding portion of the cover of each vessel passing along it so as to tilt the cover to a predetermined angular position in a predetermined point of the moving path and to release it upon disengagement, said spout being located in said predetermined point of the moving path.

3,050,916
PACKAGING MACHINE FILM SEALING MECHANISM
Alfred P. Gausman and August R. Zellmer, Sheboygan, Wis., assignors to Hayssen Manufacturing Company, Sheboygan, Wis., a corporation of Wisconsin
Filed Apr. 24, 1961, Ser. No. 105,137
12 Claims. (Cl. 53—182)



1. In a packaging machine end seal die assemblage wherein a pair of complementary die jaws reciprocate from open to closed position and operate on package forming film material extended therebetween, the improvements which comprise: a film heat seal member reciprocatably mounted in one of the die jaws; a film cooling member reciprocatably mounted in the same die jaw; and means for projecting the heat seal member into film engaging position while the film cooling member is retracted and subsequently retracting the heat seal member and projecting the film cooling member into film engaging position.

3,050,917
OPENING DEVICE FOR DOCUMENT CARRIERS
Herman K. M. Verhoeven, Antwerp, Belgium, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed June 19, 1959, Ser. No. 821,421
Claims priority, application Belgium June 21, 1958
5 Claims. (Cl. 53—381)

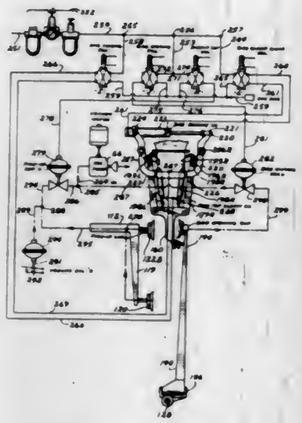


1. In a document carrier opening system for document carriers each having two side flaps of different heights, said side flaps being normally closed and displaceable from one another at both their top and side edges to define an opening therebetween, separating means for displacing the side flaps of said carriers to open said carriers, means associated with said separating means for inserting documents in said open carriers, edgewise conveying means for conveying the document carriers along a conveying path which includes said separating and closing means, said separating means comprising a first stationary deflecting member crossing the conveying path at an acute angle, and positioned above the top edge of the lower side flap but positioned to engage the top portion of the higher side flap to deflect it laterally, and a second stationary deflecting member crossing the conveying path at an acute angle and positioned to engage the top portion of the lower side flap between the side edges of said flaps to deflect it in the opposite direction to said first side flap deflection.

3,050,918
AUTOMATIC BAG FEEDING MACHINE

Jack D. Helm and Frank L. Hopkins, Minneapolis, Minn., assignors to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri

Filed Apr. 16, 1959, Ser. No. 806,955
48 Claims. (Cl. 53—386)

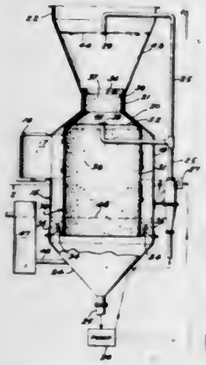


1. In a bag opening machine for opening a bag having a pair of bag walls and positioning said bag to be filled with a product comprising a frame, means for picking up an unopened bag, means mounted on the frame for at least partially opening the unopened bag after said unopened bag has been picked up, bag clamp means mounted on the frame for clamping onto the at least partially opened bag and positioning the at least partially opened bag to have said bag filled with said product and control means for operating the aforementioned means in timed sequence.

3,050,919
GAS-LIQUID CONTACT PROCESS AND APPARATUS

John P. Tailor, 1840 W. 2nd St., Davenport, Iowa

Filed Dec. 11, 1959, Ser. No. 858,906
7 Claims. (Cl. 55—90)

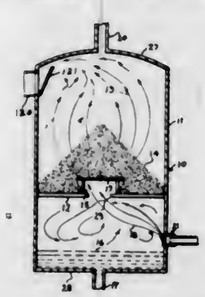


1. A method of contacting a gas with a liquid comprising the steps of forming a vertical tubular-like flowing film of liquid substantially concentrically within a chamber to define an outer annular zone and an inner zone, flowing gas around said film of liquid in said annular zone, confining said gas flow to cause inward flow from said annular zone through said flowing film of liquid to said inner zone, said forming of a tubular-like flowing film being accomplished by transversely spraying a sheet of liquid from a point within said chamber into contact with the inner surface of said tubular-like flowing film and flowing a film of liquid downwardly from the top of said chamber in contact with the outer surface of said tubular-like flowing film, and said confining of gas flow being accomplished by forming liquid seals at each end of said tubular-like flowing film.

3,050,920
AIR DRIER

Orlo Clair Norton, 544 Virginia Ave., Erie, Pa.

Filed Aug. 14, 1959, Ser. No. 833,759
3 Claims. (Cl. 55—280)

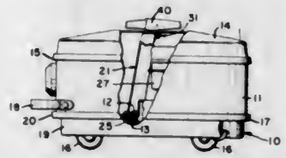


1. A deliquescent type air drier comprising a tank having an inlet for compressed gas spaced from the bottom and an outlet adjacent the top, support means for a deliquescent chemical between said inlet and said outlet in the path of air from said inlet through said chemical to said outlet, and a valve connecting said inlet to the interior of said tank, said valve comprising a diaphragm member made of resilient flexible material fixed to said inlet and extending across said inlet, said resilient flexible material being deflectable by said air to allow said air to flow through an opening, said air being increased in velocity as it passes said diaphragm member whereby particles of moisture entrained in said air are agglomerated into liquid collected in the bottom of said tank.

3,050,921
SUCTION CLEANER CENTER SUPPORT AND COVER LOCKING MEANS

Arthur W. Seyfried, Racine, Wis., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Aug. 17, 1959, Ser. No. 834,107
6 Claims. (Cl. 55—467)



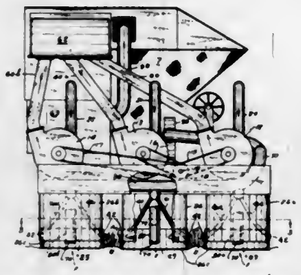
1. A suction cleaner of the canister type having a housing including a bottom, vertical side walls and an open top, a removable cover closing said top, the bottom comprising two connected parts having overlapping edges and resilient means between said edges, a center support comprising an upright wall member and upper and lower flanges projecting laterally from said upright member, means extending through said overlapping edges of the bottom parts, resilient means between said edges, and through the lower flange connecting said center support to the bottom, said upright member extending from the bottom to near the under side of the cover, and manually operable locking means on top of the cover extending through the cover into engagement with the upper flange

of the center support and drawing the cover downwardly on the housing side walls.

3,050,922
COTTON SALVAGING MACHINES

Hubert Massey, Rte. 1, Box 143, Gilbert, Ariz.

Filed Jan. 6, 1961, Ser. No. 81,182
4 Claims. (Cl. 56—12)

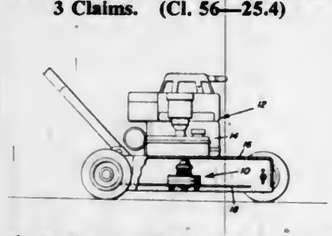


1. A cotton salvaging machine composed of a self propelled tractive implement having a body, an engine thereon, a cotton cleaner and a cotton receiving cage, suction fans having inlet and exhaust pipes, a blower fan mounted on said frame, a plurality of hoods having side walls and rounded front and rear ends disposed on the front of the body with their lower edges normally disposed slightly above the surface of the earth of the cotton field over which the implement is moved, vertically extending suction pipes having their lower ends near the surface of the earth, and disposed within the rear portion of said hoods, connected to the inlet pipes of said suction fans, pipes connecting the outlet pipes of said fans to the inlet of said cotton cleaner and a pipe connecting the outlet pipes of said cotton cleaner with said cotton receiving cage; blow pipes connected to said blower fan and opening nearer ground level at the rear of each hood to direct a stream of air over the earth and lift cotton tufts from the ground and urge them toward the ends of said suction pipes; blow pipes connected to said blower fan having outlet openings disposed to direct a draft of air transversely over the ground between said hoods and carry cotton tufts toward adjacent suction pipe openings.

3,050,923
OVERLOAD COUPLING FOR LAWN MOWER BLADE

Carl C. Sanderson, Vardaman, Miss., assignor of one-third to Thomas D. Morrow, Calhoun, Miss.

Filed July 19, 1960, Ser. No. 43,812
3 Claims. (Cl. 56—25.4)

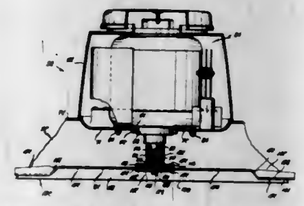


1. A method of assembling a rotary cutting blade of a rotary type lawn mower on a vertically depending engine shaft, comprising the steps of: fastening an abutment member to said shaft axially spaced from its bottom end; inserting an axial coil spring over said shaft and up against said abutment member; positioning an annular pressure plate under said coil spring; splining on the shaft a clutch disc having an upper sleeve extending through the pressure plate and a lower sleeve, with the upper side of the clutch disc disposed beneath said pressure plate; inserting cam elements into bores extending axially through said clutch disc; rotatably mounting a blade coupling disc on said lower sleeve with recesses on its upper surface in registry with said bores and cam elements on the clutch disc; bolting the rotary blade to the underside of said coupling disc while it abuts against a lower end of said lower sleeve; and securing an axial thrust washer to the bottom end of the shaft to abut against the blade.

3,050,924
POWER MOWER ROTARY CUTTER DEVICE

John R. West, Marysville, Ohio, assignor to The O. M. Scott & Sons Company, Marysville, Ohio, a corporation of Ohio

Original application July 31, 1957, Ser. No. 675,331, now Patent No. 3,028,717, dated Apr. 10, 1962. Divided and this application July 25, 1961, Ser. No. 126,549
1 Claim. (Cl. 56—295)

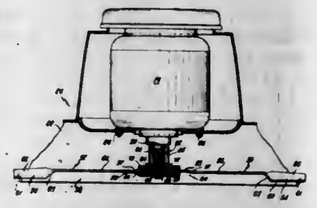


An elongate rotary cutter unit for use in combination with a rotary type lawn mower having a vertical drive shaft, said cutter unit comprising: a planar flat mid portion constituting the major extent of the elongate dimension of said unit and including two diametrically arranged long arms, a short flat end portion on the opposite ends of said arms offset from and parallel with said arms, each of said short end portions being made structurally integral with its associated arm through an abrupt transition portion having bends of approximately forty degrees from parallel planes through said arms and said end portions, and means at the middle of said flat mid portion rigid with both said arms enabling the securing of the cutter unit to the mower drive shaft so the cutter unit will rotate with said end portions in a common planar circular path; the forward edge of said end portions being knife edged and swept back; a trailing edge portion on each end portion having a sharply upswept flange of approximately sixty degrees from a plane parallel to said arms and said end portions; and said abrupt transition portion and said upswept trailing edge portion being integrally joined by a bend portion of compound curvature providing high strength and dynamic rigidity between said cutter unit arms and associated said end portion.

3,050,925
ROTARY CUTTER

John R. West, Marysville, and Donald E. Robinson, Broadway, Ohio, assignors to The O. M. Scott & Sons Company, Marysville, Ohio, a corporation of Ohio

Filed June 18, 1958, Ser. No. 742,877
15 Claims. (Cl. 56—295)



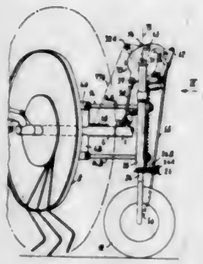
1. A rotary cutting blade assembly for use in combination with a rotatable member comprising: at least two

elongate blade pieces, each having a cutting edge at one end and having an aperture enabling a pivot connection at the other end; and means, adapted to be secured to the rotatable member, to pivotally secure all said blade pieces by means of the apertures at said other ends of said blade pieces for restrained relative pivotal movement about a common axis coextensive with the axis of rotation of the blade assembly.

3,050,926
AGRICULTURAL IMPLEMENTS

Cornelis van der Lely and Ary van der Lely, both of Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited-liability company

Filed Aug. 4, 1959, Ser. No. 831,623
Claims priority, application Netherlands Sept. 4, 1958
17 Claims. (Cl. 56—377)

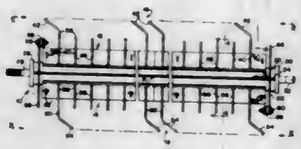


1. An implement for displacing material lying on the ground comprising a frame having a plurality of rake wheels thereon, a ground wheel supporting engagement means between said wheel and said frame, rocker arm means intermediately pivotally supported on said engagement means, one terminal portion of said arm means being connected to said frame and the other terminal portion being connected to said engagement by means of a spring, an actuating means inter-connecting said rocker arm and said ground wheel and a ratchet between said rocker arm and said engagement means, whereby energy may be stored in said spring which may be released to cause elevating of said frame.

3,050,927
ROTOR FOR AGRICULTURAL MACHINES AND THE LIKE

David R. Markham and Kenneth Q. Kessler, Ottumwa, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Filed Apr. 27, 1960, Ser. No. 25,007
12 Claims. (Cl. 56—504)

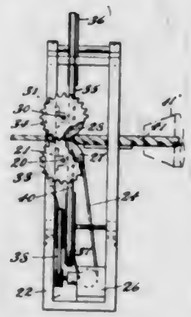


1. A rotor of the class described, comprising: elongated shaft means having first and second opposite ends; first and second generally radial arm-like elements disposed respectively at diametrically opposite sides of the shaft means, the elements in each set respectively having inner ends spaced uniformly axially apart and connected to the shaft means so that the inner end of each element in one set lies in generally the same radial plane as the diametrically opposite element in the other set, the elements in the first set respectively having outer ends axially offset from their respective inner ends toward the first end of the shaft means and the elements in the second set respectively having outer ends axially offset toward the second end of the shaft means whereby centrifugal force during rotation of the rotor produces an end-for-end overturning moment about a point intermediate the ends of the shaft means; first and second balance weight support means carried by the shaft means respectively at its first and second ends and respectively diametrically opposed according to the diametrically opposed relation of the first and second sets of elements; and first and second balance weight means carried respectively by the support means for canceling the aforesaid overturning moment during rotation of the rotor.

3,050,928
CONVERTING CONTINUOUS FILAMENT TO STAPLE FIBER

George Vibert Sumner, Columbia, S.C., assignor to Sumner Company, Incorporated, Columbia, S.C., a corporation of South Carolina

Filed Aug. 18, 1959, Ser. No. 834,444
20 Claims. (Cl. 57—2)

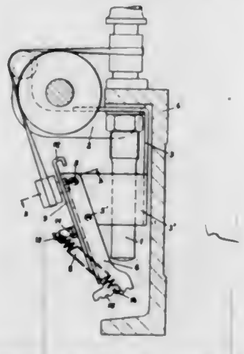


1. The method of converting a tow of continuous artificial filament into staple fiber, which comprises twisting the tow of continuous filament and cutting said tow continuously longitudinally down the center, and by said cutting completely severing said tow into two slivers.

3,050,929
BELT TENSIONER, PARTICULARLY FOR SPINNING OR TWISTING MACHINES

Fritz Stahlecker, Geislingerstrasse 41, Bad Ueberkingen, Wurttemberg, Germany

Filed Dec. 27, 1960, Ser. No. 78,397
Claims priority, application Germany Dec. 31, 1959
15 Claims. (Cl. 57—105)

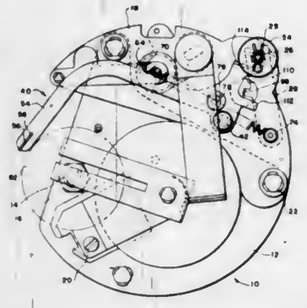


1. A belt tensioning device, especially for spinning and twisting machines, comprising a tension pulley adapted to tighten a belt and having a shaft, a stationary support, a slideway on said support, a slide member carrying said shaft and slidable along said slideway, and means connected to said slide member for exerting a tension thereon in the direction opposite to said belt so as to tighten said belt and also for pressing said slide member in any position thereof into engagement with said support said slide member and the tension pulley thereon being held on said slideway solely by said belt and said means.

3,050,930
AUTOMATIC STARTING DEVICE FOR AUTOMOBILE CLOCK

Daniel Fritsch, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania

Filed July 6, 1959, Ser. No. 825,032
14 Claims. (Cl. 58—28)

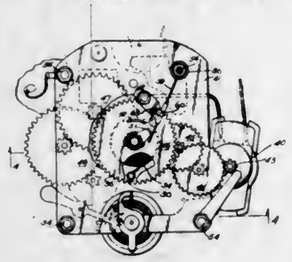


1. A self-starting mechanism for timepieces having a setting stem and a balance wheel comprising a starting lever pivotally mounted in said timepiece, a starting wire carried by said starting lever for engaging said balance wheel when said lever is pivoted about its mount, means engaged and energized by said setting stem upon longitudinal displacement thereof from its normal operating position for pivoting said starting lever to bring said starting wire into engagement with said balance wheel, means energized by return of said setting stem to its initial longitudinal position for pivoting said lever and said starting wire away from said balance wheel with sufficient initial contact between said starting wire and said balance wheel to start said timepiece, and an over-center tension spring connected to said starting lever for securely locking said starting lever in either of its two extreme pivoted positions.

3,050,931
BATTERY OPERATED CLOCK WINDING MECHANISM

Oliver P. Horning, Chicago, Ill., assignor of one-half to Max R. Kraus, Chicago, Ill.

Filed Aug. 18, 1958, Ser. No. 755,508
5 Claims. (Cl. 58—41)

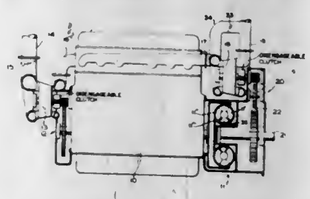


1. In a switch mechanism for controlling the winding of the main spring of an electrically wound clock, including a rewind gear and a drive gear coupled to said main spring so that the drive gear is driven by said spring, said switch including a pair of electrical contacts, one contact fixedly mounted on a portion of the clock and the other contact mounted on a support, said support pivotally and resiliently connected to said clock so that the support is normally in rest position out of contact with said fixed contact but may be moved toward and away from said fixed contact, a member coupled to said drive gear for periodically engaging said support and moving same away from its rest position and into engagement with said fixed contact when overcoming the biasing force offered by the resilient connection of the support with the clock, means coupled to said rewind gear and positioned to engage said support when said rewind gear is rotated to lift said support out of the path of said aforementioned member whereby said biasing force moves the support back to its rest position thereby breaking the engagement of the electrical contacts.

3,050,932
AUXILIARY TURBINE DRIVE ARRANGEMENT FOR SUPERCHARGED INTERNAL COMBUSTION ENGINES

Alfred H. Mueller, Waiblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed Dec. 30, 1958, Ser. No. 783,847
Claims priority, application Germany Jan. 18, 1958
18 Claims. (Cl. 60—13)



1. A drive arrangement with turbine-like conversion characteristics and favorable efficiency and using a supercharged internal combustion engine having a crankshaft comprising, output means, connecting means including hydraulic torque converter means operatively connecting said crankshaft with said output means, supercharger means, transmission means operatively connecting said supercharger means with said crankshaft, and means additionally and effectively connecting said engine with said output means in bypassing relationship with respect to said torque converter means including exhaust gas turbine means driven by the exhaust gases of said internal combustion engine and having an output member and transmission means separate from said connecting means and said first-mentioned transmission means operatively connecting the output member of said exhaust gas turbine means with said output means.

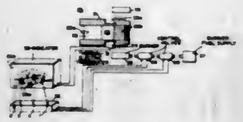
3,050,933
DEVICE FOR PROTECTING THERMO-DYNAMIC ENGINES

Herman Fokker, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 21, 1960, Ser. No. 3,828
Claims priority, application Netherlands Feb. 11, 1959
16 Claims. (Cl. 60—24)

9. A temperature responsive control circuit to control the action of a heater system for a hot gas reciprocating apparatus having at least one cylinder, said circuit comprising thermal-electrical transducer means disposed in a predetermined spatial relationship with said apparatus to provide a signal proportional to the temperature sensed thereat, indicator means having a movable member responsive to said signal, a source of light, a pair of photo-

sensitive transducer means having output means associated therewith coupled to said heater system, each of the photosensitive transducer means of said pair being adapted for mutually exclusive light energy coupling relationship with said source, and an opaque member coupled to said movable member adapted to be disposed between said light source and a predetermined one of the photo-



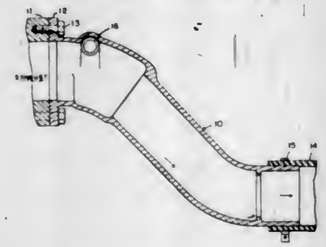
sensitive transducer means of said pair at temperatures below a given temperature range to stop said action and to be disposed between said light source and the other of the photosensitive transducer means of said pair at temperatures above said given temperature range to stop said action, said given temperature range having at least one predetermined temperature.

3,050,934

WATER COOLED EXHAUST ELBOW

Jack Robert Bartlow, Detroit, Mich., assignor to Gray Marine Motor Company, Detroit, Mich., a corporation of Michigan

Filed July 2, 1959, Ser. No. 824,511
4 Claims. (Cl. 60—30)



1. An exhaust elbow for marine engines comprising a pipe structure having an inlet end adapted for connection with the exhaust manifold of an internal combustion engine, said structure having an intermediate downwardly sloping section and terminating in an outlet disposed at a level lower than the inlet end thereof, means introducing a liquid coolant into said pipe structure adjacent the inlet end and generally normal to the flow of exhaust gases, and a deflector at the outlet end of said pipe structure and operable to accentuate vaporization of the coolant in said exhaust gases at engine idling speeds and at speeds slightly above idling to provide effective cooling of said exhaust gases prior to exhaust from said pipe structure.

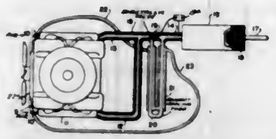
3,050,935

APPARATUS FOR CATALYTICALLY TREATING INTERNAL COMBUSTION ENGINE EXHAUST GASES

Sylvander C. Eastwood, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Jan. 5, 1961, Ser. No. 80,888
3 Claims. (Cl. 60—31)

1. In combination with an internal combustion engine, a catalytic converter containing a bed of oxidation catalyst and communicating with the exhaust outlet of said engine through a system comprising two alternative conduits, one of which is insulated against loss of heat of the exhaust gas of said internal combustion engine flowing therethrough and the other of which is uninsulated to reduce the temperature of the exhaust gas flowing therethrough, a valve in said system responsive to temperature changes in said exhaust gas and means for control-



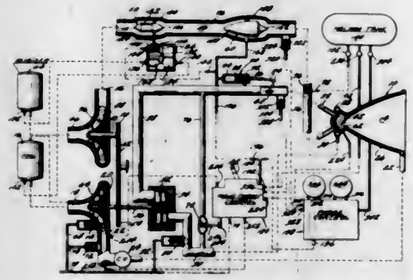
ling said valve to divert the flow of said exhaust gas from said insulated conduit to said uninsulated conduit as a function of a predetermined temperature level in said exhaust gas and to thereby control the inlet temperature of exhaust gas to said converter.

3,050,936

PURGE SYSTEM FOR ROCKET PROPELLANT SYSTEM

Robert N. Abild, New Britain, Claude O. Broders, Simsbury, and Hugh S. Crim, Glastonbury, Conn., and James O. Gallant, Rehoboth, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 30, 1959, Ser. No. 824,135
8 Claims. (Cl. 60—35.6)



4. In a dual propellant rocket engine system having a supply conduit for each propellant, a combustion chamber to which the propellants flow and means for starting and stopping said engine, a shutoff valve in each conduit, a first pair and a second pair of purge accumulators, first valve means controlling said first pair of purge accumulators and second valve means controlling said second pair of purge accumulators, means for shifting said first valve means to discharge said first pair of purge accumulators to purge said conduits downstream of said shutoff valves and said combustion chamber when said engine is started, means for simultaneously shifting said second valve means to charge said second pair of purge accumulators, means for shifting said second valve means to discharge said second pair of purge accumulators to purge said conduits downstream of said shutoff valves and said combustion chamber when said engine is stopped, and means for simultaneously shifting said first valve means to charge said first pair of purge accumulators.

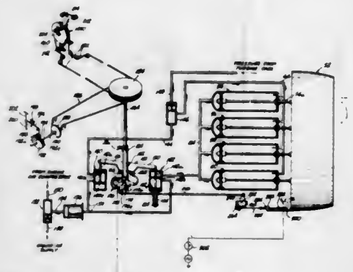
3,050,937

REVERSIBLE THRUST JET ENGINES AND CONTROLS THEREFOR

Varnell L. R. James and Raymond E. Pearson, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed June 9, 1958, Ser. No. 740,721
17 Claims. (Cl. 60—35.54)

1. In a reversible jet engine nozzle apparatus, a wall structure including a duct through which gases flow rearwardly from the engine, and nozzle orifice means on the aft end of said duct for the discharge of such gases in a rearwardly directed jet producing forward thrust, said orifice means comprising a constriction through which gas velocity is materially increased relative to the velocity at a location forwardly thereof, said wall structure having at least one side opening therein leading to the exterior and located forwardly of said constriction and at a longitudinal position at which gas velocity is materially below that in said constriction, a retractable flow obstruction door-like member mounted in said nozzle device to be extended therein across the path of flow at a location substantially between said constriction and said side opening to divert at least a major portion of said gases outwardly through said opening to produce reverse thrust, said door-like member being actuatable between its extended, flow-obstructing position and a retracted position wherein rearwardly flowing gases are substantially unobstructed there-



by, means for so actuating said door-like member, said door-like member being mounted in the nozzle device to lie substantially parallel to the rearward direction of flow imposed over said side opening in the retracted position of such door-like member, and swingable therefrom to advance its rearward edge inwardly into the extended position of said door-like member, said door-like member being pivotally mounted to swing about a transverse axis offset materially from its center of pressure of the gases acting thereon in its extended position to produce retraction torque on such member whereby the same is adapted to be forced toward the retracted position when released, throttle mechanism for controlling engine power, and an actuating connection between said door-like member and said mechanism, operable to reduce engine power automatically in response to forced retraction of the door-like member by gas pressure upon release of the door-like member with said throttle mechanism remaining in a relatively high-power setting.

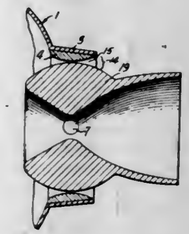
10. Jet engine apparatus comprising, in combination with jet engine thrust reverser means movable between extended and retracted positions for changing the direction of thrust between reverse and forward, respectively, actuating means connected to said reverser means to effect such movement thereof, throttle mechanism operatively arranged to vary engine power, coordinated control means operatively connected to said actuating means and to said throttle mechanism for sequentially reducing engine power followed by reversal of the setting of said reverser means during progressive control movement of said control means in one direction or the other, respectively, movable stop means cooperating with said control means and positionable in relation thereto in either of two positions, one to limit subsequent power-increasing movement of said control means at a predetermined point upon movement of said control means sequentially to reduce power and reverse thrust in one direction, and the other to so limit said control means movement at a predetermined point upon such movement in the opposite direction, and positional feed-back means interconnecting said stop means and said reverser means and operable to reposition said stop means to permit power-increasing movement of said control means in response to thrust reversal by said reverser means.

3,050,938

ROCKET NOZZLES

Robert H. Twyford, Alexandria, Va., assignor to Atlantic Research Corporation, Alexandria, Va., a corporation of Virginia

Filed Nov. 12, 1958, Ser. No. 773,521
3 Claims. (Cl. 60—35.55)



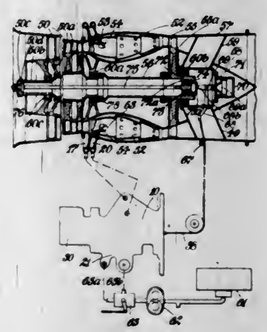
1. In a jet motor, a chamber for confining the high pressure gases from which thrust is derived, a deflectable exhaust nozzle, and an annular exhaust nozzle surrounding said deflectable nozzle, said nozzles each communicating directly with said chamber in parallel relation, said annular nozzle having an outer component sealingly fixed to the wall of said chamber, within which component said deflectable nozzle is swingably mounted on a transverse axis, the exterior wall of said deflectable nozzle being the inner wall of said annular nozzle, the outer wall of said deflectable nozzle in the throat region of said annular nozzle having a spherical contour centered at a point in the axis of swing of said deflectable nozzle whereby the axis of the annular jet remains coincident with the axis of said outer component throughout the range of deflection of said deflectable nozzle.

3,050,939

GAS TURBINE ENGINE WITH SHAFT FAILURE CONTROL

Frederick William Walton Morley, Castle Donington, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed May 5, 1960, Ser. No. 27,101
3 Claims. (Cl. 60—39.09)



1. In a gas turbine engine including a rotor assembly comprising a shaft and a turbine rotor at one end of the shaft and further including control means which responds to failure of the shaft to prevent over-speeding of the turbine rotor, said control means comprising a pair of

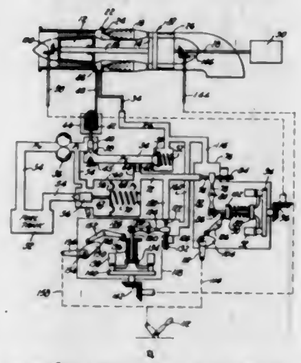
mechanically-connected parts respectively mechanically connected to the rotor assembly at opposite ends of the driving shaft, the mechanical connections between the parts and the rotor assembly permitting one of the parts to move relative to the adjacent end of the shaft on failure of the shaft and consequent relative rotation of the turbine rotor and a portion of the shaft remote from the turbine rotor, a fuel system including a cut-off valve, the said one of the parts being mechanically connected to cause by said movement closure of the valve; a construction of said valve comprising a fixed valve element, a movable valve element, a frangible annular diaphragm interconnecting the fixed and movable elements of the valve and holding the valve in an open position, the diaphragm being fractured as a result of a load applied to the movable valve element in the sense of closing the valve on movement of the one part of the control means relative to the shaft on shaft failure, and a spring also loading the movable valve element in the sense of closing the valve thereby to ensure rapid closure of the valve on shaft failure, the fixed element of the valve comprising a valve body and a separate housing for the spring secured together and gripping between them the outer peripheral portion of the diaphragm, the valve body and spring housing having aligned bores, the movable element of the valve sliding in the bore in the valve body, an abutment member formed as a separate piece from the movable valve element and sliding in the bore in the spring housing, the spring bearing on the abutment member, the abutment member being secured to one end of the movable valve element, the abutment member and the movable valve element gripping the inner peripheral portion of the annular diaphragm between them, and the said one part of the control means being connected to the opposite end of the movable element and applying a load on shaft failure causing sliding of the movable element in a direction away from the spring housing.

3,050,940
LIQUID PROPELLANT RELEASE MECHANISM
Vernon R. Vorwerk, Los Angeles, and Roland R. Morin, Manhattan Beach, Calif., assignors to North American Aviation, Inc.
Filed Dec. 12, 1952, Ser. No. 325,576
7 Claims. (Cl. 60—39.14)



1. In a rocket having a rearward combustion chamber, a quick acting propellant release mechanism comprising a first, second, and third chamber, said first chamber containing means for generating pneumatic pressure, said second and third chambers containing liquid propellants, a plurality of openings between the rear of said second and third chambers and said combustion chamber of said rocket, rear diaphragms connected across each of said openings, interconnected first knife means adjacent each of said diaphragms, diaphragm sealed pressurizing ports at the forward end of said second and third chambers, interconnected second knife means adjacent each of said ports, movable piston means pneumatically connected to said means for generating pneumatic pressure and mechanically connected to said second knife means to cause said second knife means to engage said diaphragm sealed ports upon movement of said piston means, means for starting said pneumatic pressure generating means to create gases against said piston means and means including said movable piston means to force each of said rear diaphragms and each of said first knife means and each of said second knife means and said diaphragm sealed ports into engagement whereby said rear diaphragms are affirmatively punctured, said diaphragm sealed ports are opened, and any propellants which are contained in said second and third chambers are forced out through the openings created by the said punctured rear diaphragms into said combustion chamber of said rocket.

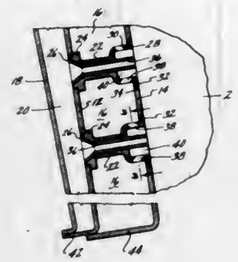
3,050,941
FUEL CONTROL APPARATUS FOR A COMBUSTION ENGINE
Francis Reed Rogers, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Oct. 6, 1958, Ser. No. 765,651
4 Claims. (Cl. 60—39.28)



1. In a fuel supply system for a combustion engine having a compressor and a compressor driving turbine, the combination of a fuel source, a main conduit interconnecting said fuel source and the engine, engine driven pump means disposed in said main conduit to pressurize the fuel therein, a metering valve defining a variable restriction in said main conduit disposed intermediate said pump and the engine, a pressurizing valve positioned in said main conduit in series flow relationship therewith downstream of said metering valve, a by-pass conduit connected on one end to said main conduit intermediate said pump and said metering valve and on the other end to said fuel source, a by-pass valve operative with said by-pass conduit to control the rate of fuel being returned to said fuel source, a movable pressure responsive member connected to said by-pass valve to control the fuel controlling position thereof in response to pressures acting on opposed sides, first means communicating fuel from said main conduit intermediate said pump and said metering valve to one side of said pressure responsive member in a direction urging said by-pass valve in flow increasing direction, second means containing a flow limiting bleed member therein for communicating fuel from said main conduit intermediate said metering valve and said pressurizing valve to the other side of said pressure responsive member urging said by-pass valve in a flow decreasing direction, a flow passage connected to said last named means downstream of said bleed member on one end and said main conduit downstream of said pressurizing valve on the other, and governor means responsive to turbine speed operative to control the fuel flow through said flow passage and vary the pressure acting on said other side of said pressure responsive member.

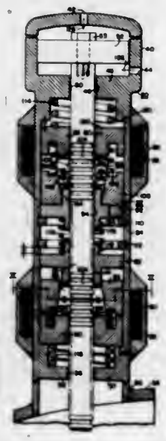
3,050,942
PROPELLANT INJECTOR DEVICE
Philip G. Dooley, Bolton, and Albert D. Tinkelenberg, Manchester, Conn., assignors to United Aircraft Corporation, Hartford, Conn., a corporation of Delaware
Filed June 24, 1959, Ser. No. 822,608
2 Claims. (Cl. 60—39.46)

1. An injector head for introducing propellants into a rocket combustion chamber and mixing them therein including a main plate, a second plate at one side of and spaced from said main plate defining a first chamber therebetween, a cap on the other side of said main plate forming therewith a second chamber, said plates having a plurality of openings therein distributed over the plate areas, the openings in said plates being in alignment, injector elements extended between said plates at each set of aligned openings each injector element including a hollow post having a cup-shaped portion at one end and a flange at the other end, each of said elements having the rim of its cup-shaped end portion secured about an opening in said second plate with said rim flush with said plate



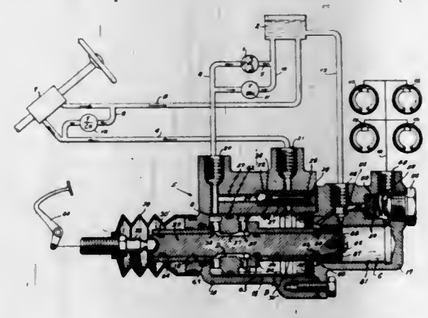
opening at said combustion chamber and its flange secured about an aligned opening in said main plate, and a metering tube extended through the axial passage in said hollow post and concentric therewith having its upstream end terminating in said second chamber and its discharge end terminating substantially in the plane of the rim of said cup-shaped end portion, said cup-shaped portion having oblique passages through its side wall communicating with said first chamber and directed toward the discharge end of said metering tube, whereby mixing of said propellants takes place downstream of the discharge end of said metering tube in said combustion chamber.

3,050,943
LINEAR DRIVING MECHANISM
John P. Thorel, Monroeville, Anthony J. Mei, Murrysville, and Howard C. Flaton, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 29, 1957, Ser. No. 655,646
15 Claims. (Cl. 60—52)



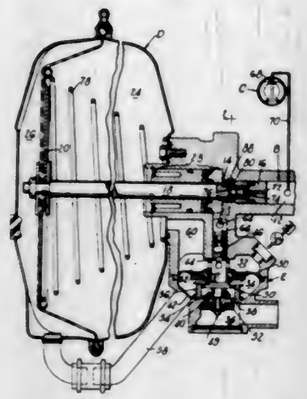
15. A linear motion device comprising an elongated element linearly movable substantially along its longitudinal dimension, said element having a plurality of teeth formed on a surface thereof and spaced along said longitudinal dimension thereof, each of said teeth having a portion extending laterally with respect to the longitudinal dimension of said element, a pair of latching means disposed laterally of said element, said latching means each having a portion thereon movable laterally to a position of engagement with at least one of said portions of said teeth, a plurality of stops, means mounting said stops stationarily in spaced relationship along the longitudinal dimension of said element, each of said latching means being mounted between a pair of adjacent ones of said stops for movement therebetween in a direction generally parallel to the path of movement of said linearly movable element, and means for selectively and individually moving said portions of said latching means laterally into engagement with at least one of said teeth portions.

3,050,944
POWER HYDRAULIC BRAKE DEVICE
Robert E. Schwartz, Clayton, Mo., Roy P. Stahl, South Bend, Ind., and Edward J. Falk, St. Louis, Mo., assignors to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware
Continuation of abandoned application Ser. No. 496,711, Mar. 28, 1955. This application Nov. 22, 1960, Ser. No. 71,102
13 Claims. (Cl. 60—54.6)



1. A servo motor for an open center fluid pressure system having pumping means for continuously circulating pressure fluid through said system and said servo motor, said servo motor comprising a cylinder, inlet and outlet ports in said cylinder connected with the discharge and return sides, respectively, of said pumping means, a power piston slidable in said cylinder between said inlet and outlet ports, extension means on said power piston extending externally of said cylinder, said power piston having a bore and inlet and outlet passage means on opposite sides of said power piston providing fluid communication between said bore and said inlet and outlet ports, a throttling rod slidable in said bore, said throttling rod and power piston forming a throttling passage therebetween in communication with said inlet and outlet passage means in said power piston providing series pressure fluid flow from said inlet port to said outlet port, cooperable means on said throttling rod and power piston forming a normally unrestricted, but variable valving orifice in said throttling passage, said throttling rod being movable relative to said power piston in response to an applied force to reduce the size of the variable valving orifice for developing a fluid pressure differential across said power piston to actuate said power piston and extension means in follow-up relation with said throttling rod and to maintain said valving orifice in a non-closed condition for continuous circulation of pressure fluid therethrough.

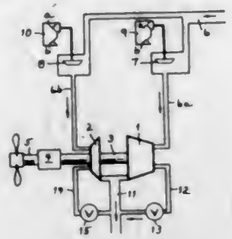
3,050,945
PRESSURE INTENSIFYING UNIT
Charles E. Maynard, South Bend, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed July 17, 1961, Ser. No. 124,556
6 Claims. (Cl. 60—54.6)



1. Fluid pressure intensifying means having an inlet for receiving and intensifying a primary pulsating fluid pressure signal and comprising: a fluid pressure intensifying chamber having a movable wall therein dividing said fluid pressure intensifying chamber into an output chamber and a follow-up chamber, said movable wall having a normal position in said intensifying chamber; compensating means communicating said follow-up chamber to said output chamber and including check valve means for preventing flow from said output chamber to said follow-up chamber, said check valve means being open when said movable wall is in its normal position, a servomotor for moving said movable wall from said normal position to enlarge said follow-up chamber and force fluid out of said output chamber; control means for communicating a power supply to actuate said servomotor; expansible means driven by said primary fluid pressure signal for actuating said control means of said servomotor; valve means for controlling communication between said inlet and said follow-up chamber, motor means actuated by said power supply to said control means and biasing said valve means closed when power is supplied to said control means, and flow control means in parallel flow relationship with said valve means, said flow control means including a structure which prevents large fluid flow from said inlet to said follow-up chamber but which permits slow compensating fluid flow therethrough at substantially no differential in pressure.

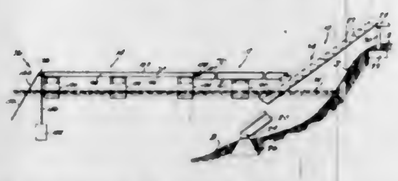
3,050,946
METHOD AND APPARATUS FOR OPERATION OF SHIP INSTALLED GAS TURBINE PLANTS
André Marque, Paris, France, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Filed Sept. 4, 1959, Ser. No. 838,109
7 Claims. (Cl. 60—102)

1. In a ship installed gas turbine plant for effecting propulsion, the combination comprising an astern turbine, an ahead turbine, means coupling said turbines to the ship screw, a non-regulatable inlet valve for each turbine, said valves being arranged to occupy only a fully open or a fully closed position for controlling admission of pressure gas to said turbines from a main pressure gas feed line, a by-pass line from the inlet to the outlet of at least one of said turbines and a regulatable valve in said by-pass line for controlling the amount of pressure gas by-passed with said inlet valves in full open position thereby to effect a corresponding variation in the relative torques produced by said turbines so that during maneuvering of said ship,



said torques can be made equal or one to predominate the other.

3,050,947
SELF-OPERATING FLOATING DOCK FOR VARYING LEVEL WATERS
John E. Burton, 220 Webster St., P.O. Box 571, South Boston, Va.
Filed Sept. 9, 1960, Ser. No. 55,076
8 Claims. (Cl. 61—48)

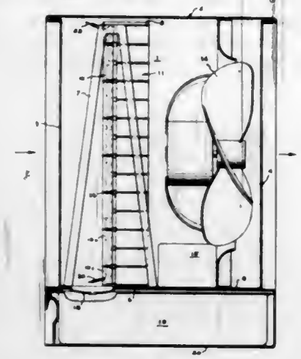


1. In combination, a body of water having a bottom and a shore having a top spaced above the level of the water, a self-operating floating dock comprising a declining stairway having an upper end fixed on the shore top and a lower end fixed to the water bottom, a horizontal floating walkway having an outer end and an inner end, first means including a pivoted arm projecting from the inner end of said walkway and having the free end connected to said stairway for movement therealong connecting the walkway at its inner end to the stairway to move vertically along the stairway as the level of the water changes, a floating dock platform positioned at the outer end of the walkway, said platform having an outer end and an inner end, second means horizontally hinging the platform at its inner end to the outer end of the walkway, and cable and anchor means on the outer end of the platform.

3,050,948
THERMOELECTRIC DEHUMIDIFIER
Gary D. Jones, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Aug. 24, 1961, Ser. No. 133,629
3 Claims. (Cl. 62—3)

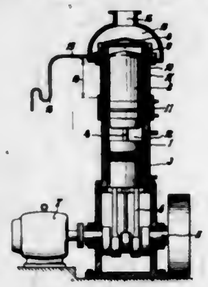
1. A thermoelectric dehumidifier comprising a thermoelectric unit including a plurality of P and N type thermoelectric elements alternately arranged to form a plurality of horizontally spaced parallel rows of elements with the elements in each row being in substantially axial alignment with one another, junction members having vertically extending flat portions interposed between said elements with the opposite sides thereof contacting and series connecting adjacent elements to form a set of hot junctions and a set of cold junctions, the junction members forming said hot junctions including fin sections integral with the flat portions thereof and disposed on one side of said unit, each of said fin sections comprising spaced side portions, electrically insulating means securing said side portions of each hot junction member to the side

portion of an adjacent hot junction member, said joined side portions being adapted to maintain the connections



between said junction members and said elements under compression.

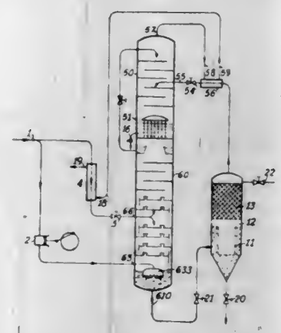
3,050,949
HOT-GAS RECIPROCATING MACHINE
Roelf Jan Meijer, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 7, 1956, Ser. No. 590,027
Claims priority, application Netherlands June 14, 1955
2 Claims. (Cl. 62—6)



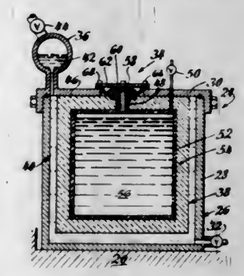
1. A hot-gas reciprocating apparatus comprising a freezer, regenerator and cooler connected in series, a tubular wall surrounding said regenerator and connected to said freezer at one end thereof and to said cooler at the other end thereof and subject to extremes of heat and cold, said wall constituting a plurality of concentric, separated layers of material being normally slack when relatively hot, said layers being deformable upon cooling to a substantially linear condition, the distance between the freezer and cooler being constant when subject to said extremes of heat and cold while a portion of said freezer moves laterally.

3,050,950
PROCESS FOR THE SEPARATION OF SOLID CARBON DIOXIDE FROM AIR AS IT DECOMPOSES IN WHICH THE CARBON DIOXIDE CONTAINING AIR IS PREVIOUSLY COOLED BELOW THE SOLIDIFICATION TEMPERATURE OF THE CARBON DIOXIDE
Ernst Karwat and Josef Weishaupt, Pullach, and Jakob Oberpriller, Buchenhain, Germany, assignors to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a German company
Filed Aug. 31, 1960, Ser. No. 53,221
1 Claim. (Cl. 62—13)

A process for removing solid carbon dioxide from air during the fractionation thereof by compression and cooling, which comprises providing a first stream of said air, expanding said first stream with production of external work, whereby carbon dioxide condenses and is entrained by the gas as snow; providing a second stream of air, cooling it to a temperature which is 10 to 20° C. below the temperature at which the separation of solid CO_2 begins and liquefying part of it by throttling, the carbon dioxide being precipitated in this liquid as snow; washing said first stream with a mixture of the liquefied part of the second stream and liquid obtained by rectifying the gaseous first stream and the gaseous part of said second stream in the high pressure column of a two-stage rectifier, suspending thus all the carbon dioxide in the liquid mixture, cleaning said liquid mixture by filtration and adsorption and leading it into the low-pressure stage of the two-column rectifier.

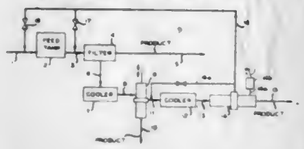


3,050,951
SHIPPING CONTAINER AND METHOD FOR TRANSPORTING LIQUEFIED GASES AND THE LIKE
Willard J. Gebien, 929 N. Milwaukee, Libertyville, Ill.
Filed Apr. 30, 1959, Ser. No. 809,974
10 Claims. (Cl. 62—45)



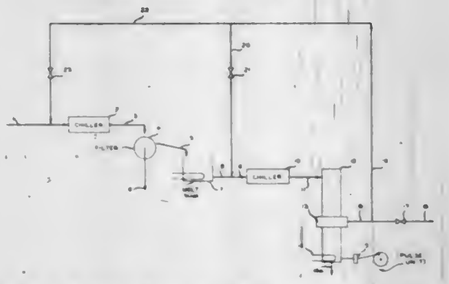
5. A method of transporting liquefied gases at substantially atmospheric pressure characterized by the steps of surrounding a quantity of said liquefied gases with a receptacle formed of insulating material, submerging substantially the entirety of said receptacle in a buoyantly supporting, mobile, sealant fluid, continuously maintaining the entire body of said sealant fluid in fluid condition, continuously maintaining said sealant fluid in intimate contact with the outer surface of said insulating material, maintaining said liquefied gas within said receptacle below its critical temperature, restraining said receptacle against the buoyant force of said sealant fluid, maintaining said sealant fluid at a pressure higher than that exhibited by said gas whereby said sealant fluid is urged into discontinuities in said insulating material to congeal therewithin and to seal said discontinuities against leakage therethrough.

3,050,952
SEPARATION BY CRYSTALLIZATION
Stanley J. Marwil, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,634
10 Claims. (Cl. 62—58)



3. In the process for separation of a liquid mixture wherein said mixture is cooled to partially solidify at least one component of said mixture and the resulting cooled mixture is introduced without further change in composition into a purification zone wherein at least a portion of the solidified component is melted and a portion of the resulting melt countercurrently contacted with said cooled mixture by periodic application of pressure pulses to the liquid in said purification zone and then subsequently withdrawn from said purification zone as mother liquor, the improvement comprising passing at least a portion of said withdrawal mother liquor melt into said liquid mixture at such a point that the composition of the mixed stream produced by said step of passing remains constant until its introduction into said purification zone.

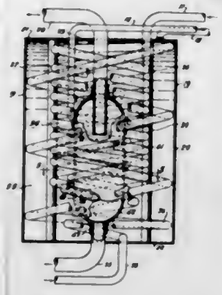
3,050,953
SEPARATION BY CRYSTALLIZATION
Lawrence V. Wilson, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,672
10 Claims. (Cl. 62—58)



1. In a process for separation of at least one component from a fluid mixture containing it wherein the fluid mixture is cooled to cause a partial freezing thereof, the frozen portion is separated from the fluid portion, the frozen portion is subsequently at least partially melted and then cooled to a higher temperature than the first cooling step to cause partial freezing thereof, the resulting cooled portion is treated in a crystal purification zone by countercurrent contact with melt resulting from reheating therein of said resulting cooled portion, and a portion of mother liquor is withdrawn from said zone subsequent to said contact, the improvement comprising returning at least a portion of said withdrawn mother liquor to said now at least partially melted frozen portion prior to the cooling thereof.

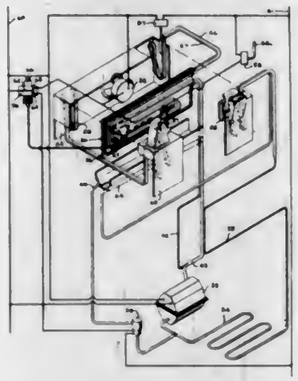
3,050,954
MOISTURE CONDENSER
Edwin H. Royse, 4740 Vicksburg, Dallas, Tex.
Filed May 6, 1960, Ser. No. 27,448
9 Claims. (Cl. 62—139)

1. A moisture condenser for dehumidifying fluids under pressure including a sealed housing containing a cooling liquid, a heat exchanger immersed in the liquid and having coils for circulating a refrigerant and a fluid in heat exchange relationship to condense moisture in the fluid, a separator immersed in the liquid and having a chamber communicating with the fluid coil of the heat exchanger to receive the fluid therefrom, the chamber being of larger



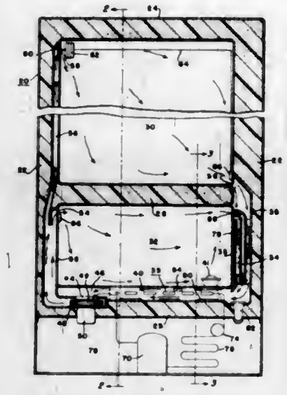
area than said fluid coil whereby the velocity of the fluid is reduced to permit the dropping out of condensed moisture in said chamber, outlet means for conducting the dehumidified fluid from said chamber, and means for draining the condensed moisture from said chamber.

3,050,955
MULTI-TEMPERATURE REFRIGERATOR
Douglas A. Solley, Jr., Fern Creek, and Kenneth A. Robbie, Louisville, Ky., assignors to General Electric Company, a corporation of New York
Filed Dec. 19, 1960, Ser. No. 76,538
7 Claims. (Cl. 62—155)



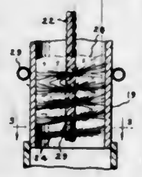
1. A household refrigerator including a freezer compartment for the storage of frozen foods and a fresh food compartment for the storage of foodstuffs at above-freezing temperatures, an evaporator unit in said freezer compartment for refrigerating both of said compartments, said unit including a housing including opposed walls, an evaporator formed from a continuous coiled tubing and comprising a first section extending along one of said walls and a second section extending along the other of said walls, a vertical partition having refrigerant passages therein disposed between said sections and dividing said housing into a first chamber and a second chamber, said sections and said refrigerant passages being connected in series refrigerant flow relationship whereby said partition operates at a lower temperature than said sections, and duct and fan means for circulating air from said fresh food compartment through said second chamber and from said freezer compartment through said first chamber.

3,050,956
REFRIGERATING APPARATUS WITH FROST FREE COMPARTMENT
Leonard J. Mann and John J. O'Connell, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 8, 1960, Ser. No. 41,612
5 Claims. (Cl. 62—283)



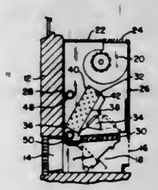
1. A refrigerator including insulating means enclosing a below freezing compartment and an above freezing compartment, means forming an evaporator compartment outside said compartments, an evaporator portion within said evaporator compartment, first air duct means having a first portion extending from said below freezing compartment to said evaporator compartment and having a second portion extending from said evaporator compartment to said below freezing compartment, said air duct means in said first portion including an air to air heat transfer device having heat transfer wall means normally maintained at below freezing temperatures by air flow through said first duct means, second air duct means having a first portion extending from and carrying air from said above freezing compartment first into heat transfer relation with said heat transfer wall means of said heat transfer device and thereafter to said evaporator compartment and having a second portion extending from said evaporator compartment to said above freezing compartment, said heat transfer wall means being located to keep separated the air from said below and above freezing compartments in said heat transfer device, and means for circulating air simultaneously through said first and second duct means into heat transfer relation with said heat transfer device and thereafter through said evaporator compartment into heat transfer with said evaporator portion.

3,050,957
DEFROST WATER DRAIN SEAL
Kenneth A. Robbie, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 26, 1960, Ser. No. 58,418
3 Claims. (Cl. 62—285)



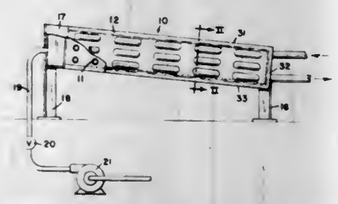
1. A refrigerator cabinet comprising an evaporator normally operating at a sub-freezing temperature, means for collecting defrost water from said evaporator during defrosting thereof and disposing of the defrost water outside said cabinet including a drain extending through a wall of said cabinet and having an upper portion normally cooled by said evaporator to a temperature below freezing and combination means for cleaning said drain and for effecting a deposit of frost in said drain for closing said drain during normal operation of said evaporator comprising a bristle brush removably positioned in said upper drain portion with the ends of the bristles thereof contacting the inner walls of said drain.

3,050,958
THROUGH-PIPING ARRANGEMENT FOR AIR CONDITIONING UNIT
Richard E. Allender, Davenport, Iowa, assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Apr. 12, 1961, Ser. No. 102,502
6 Claims. (Cl. 62—285)



1. In a through-piping arrangement for a remote air conditioning unit having a cabinet enclosing a pair of opposite end compartments and a central air passageway with a forwardly inclined coil in said central air passageway of the type adapted to selectively receive hot and chilled water: drip pan means generally underlying the bottom side of said coil and of a sufficiently limited width that it does not extend forwardly to any substantial degree below the front face of said coil; a pair of pipes extending from one end compartment through said central passageway into the other end compartment for conveying said water therethrough, said pipes being generally aligned with each other in vertically spaced relation and collectively overlying said drip pan means in aligned relation within said central passageway so that condensate forming on and dropping from said pipes during a period of chilled water circulation will be received by said drip pan means which also serves said coil.

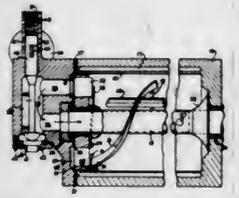
3,050,959
REFRIGERATION APPARATUS
Donald G. Rich, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,312
4 Claims. (Cl. 62—305)



1. In a refrigeration system, apparatus comprising a hollow rigid relatively impervious relatively good heat conducting metal pipe having an exterior surface and an interior surface, means to pass a first fluid medium in heat exchange relation with one surface of said metal pipe, a metal heat transfer member secured to the other surface of said pipe and forming a plurality of relatively low resistance thermal bonds therewith, said heat transfer mem-

ber comprising a relatively good heat conducting porous metal member having a large number of internal pores in communication with each other and with the surfaces of said member, said heat transfer member having a portion thereof between said relatively low resistance thermal bonds which is spaced from said other surface of said impervious metal pipe and forming with said pipe a hollow fluid passage having a porous wall through which a second fluid medium may pass while being in heat exchange relation with said first fluid medium which is in contact with said one surface of said metal pipe, said heat exchange taking place directly through the walls of said metal pipe and said porous metal heat transfer member and through said plurality of relatively low resistance thermal bonds therebetween.

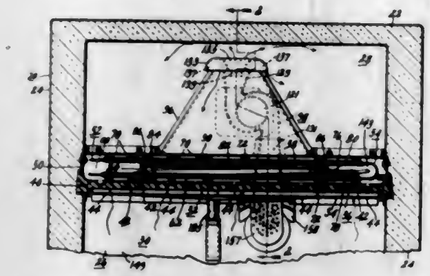
3,050,960
SOFT ICE-CREAM MACHINES
George Fitzsimon Clifford, Arncliffe, New South Wales, Australia, assignor to Jersey Creme Holdings Pty. Limited, Sydney, Australia, a company of New South Wales
Filed Sept. 6, 1960, Ser. No. 54,040
Claims priority, application Australia Sept. 14, 1959
4 Claims. (Cl. 62—342)



1. In a soft ice-cream machine the combination of a freezing cylinder, a shaft mounted co-axially with and for rotation within said freezing cylinder, means carried on said shaft to agitate ice-cream in the said cylinder and urge it towards one end thereof, a removable closure member secured to and sealing said one end of the said cylinder, a valve chamber in said closure member, a delivery outlet from said valve chamber, a valve member in said valve chamber arranged to control said delivery outlet, first and second passages in said closure member connecting the interior of the freezing cylinder and the valve chamber, impeller means constructed and arranged so that on rotation of said shaft when said delivery outlet is open, ice-cream is propelled to said delivery outlet from said cylinder by way of said first passage and said valve chamber and is delivered therefrom, and a third passage communicating with said second passage and extending through the interior of said cylinder to the other end thereof, said third passage being open in the region of the other end of said cylinder, said passages being arranged in such a manner that on rotation of said shaft, when said valve member is in a position to close said delivery outlet, ice-cream is passed continuously from said cylinder past said valve member and is returned through the cylinder by way of the said second and third passage to the other end of said cylinder.

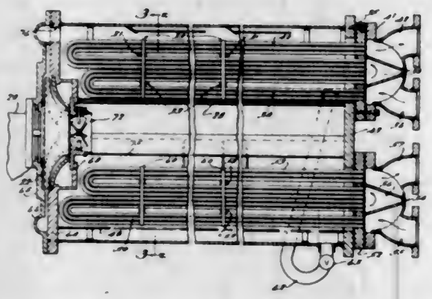
3,050,961
SINGLE EVAPORATOR TWO-COMPARTMENT REFRIGERATOR
Leonard J. Mann and John J. O'Connell, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Continuation of application Ser. No. 41,614, July 8, 1960. This application May 9, 1961, Ser. No. 116,224
18 Claims. (Cl. 62—419)

1. A refrigerator including insulating means enclosing a below freezing compartment and an above freezing compartment, means forming an evaporator compartment separated from said compartments containing an evaporator portion, means for circulating air from said below and above freezing compartments through said evaporator compartment in heat transfer with said evaporator portion and in commingling relationship and returning the cooled air to said above and below freezing compart-



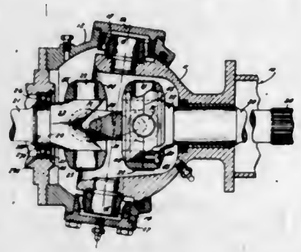
ments, said circulating means including means for proportioning the circulation of the air to maintain said below and above freezing compartments at temperatures below and above freezing respectively, and cooling means for precooling said air circulating from said above freezing compartment prior to its commingling with said below freezing compartment air.

3,050,962
CENTRIFUGAL COMPRESSOR AND HEAT EXCHANGER UNIT
Kenneth F. Goldmann, Clearwater, Fla., and Joseph R. Lejk, Dayton, Ohio, assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Jan. 16, 1961, Ser. No. 83,020
2 Claims. (Cl. 62—517)



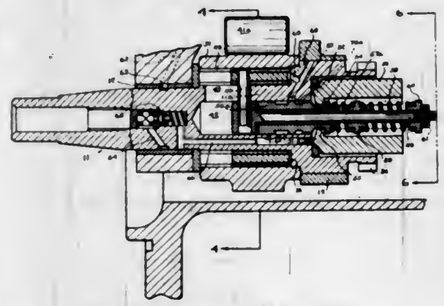
2. Refrigeration apparatus comprising an elongated shell having a first and a second end, partition means extending lengthwise of the shell and dividing the interior of said shell into first and second elongated compartments adapted to serve respectively as a condenser compartment and an evaporator compartment, means providing a fluid flow connection between said first and second compartments, an expansion valve in such connection, a centrifugal compressor having an inlet and an outlet, means supporting said compressor substantially centrally of the second end of said shell with the compressor inlet in fluid flow communication with said second compartment, said last mentioned means providing an outlet passage extending radially from the periphery of said centrifugal compressor and communicating with said first compartment, each portion of the above mentioned outlet passage being in alignment axially of said shell with no more than one of said compartments with a substantial portion of the outlet passage aligned with other than said second compartment and substantially less than the entire area of said outlet passage in alignment with and in direct heat exchange relation with said second compartment, and a motor located externally of said shell and drivingly connected to said compressor.

3,050,963
DOUBLE UNIVERSAL JOINT
George D. Simonds, Robert W. Stieg, Kenneth A. McLyman, and Arne V. Larson, Clintonville, Wis., assignors to FWD Corporation, Clintonville, Wis., a corporation of Wisconsin
Filed Dec. 17, 1959, Ser. No. 860,207
3 Claims. (Cl. 64—21)



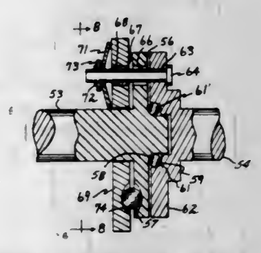
1. A multiple universal joint comprising driving and driven shafts, a housing enclosing said joint consisting of two parts hingedly related for oscillation about an axis, one of said shafts being axially fixed with respect to one part of said hinged housing, and the other of said shafts being axially movable with respect to the other part of said housing, each said shaft being provided with a pair of opposed trunnions, a central member comprising a body and two pairs of opposed trunnions, an annular member connecting each said pair of shaft trunnions with a said pair of trunnions on said central member, said shafts having axes which intersect at a vertex, the geometric center of the central member coinciding with a line intersecting said axes at equal angles when said axes have a predetermined angular relationship to each other, said geometric center of said central member being displaced from said line intersecting said axes at equal angles when said shafts are co-axially aligned.

3,050,964
TIMING DEVICE FOR FUEL INJECTION PUMP
Hans Hogeman, Longmeadow, and Arthur E. Huse, Springfield, Mass., assignors to American Bosch Arma Corporation, a corporation of New York
Filed Sept. 11, 1961, Ser. No. 137,155
3 Claims. (Cl. 64—25)



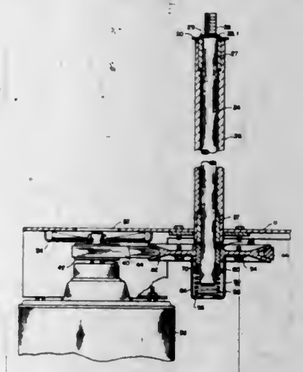
3. In a device of the character described, a drive shaft, a cam carried by and adjustable relative to said drive shaft, and means for adjusting said cam relative to said drive shaft, said means for adjusting said cam relative to said drive shaft comprising a splined sleeve positioned between said cam and drive shaft and means for automatically effecting actuation of said splined sleeve for adjusting said cam relative to said drive shaft, said means for effecting automatic actuation of said splined sleeve comprising hydraulic means and valve means for controlling said hydraulic means and means automatically controlling the position of said valve means.

3,050,965
COUPLING
Porter Landrum, 7225 2nd Ave. S., Birmingham 6, Ala.
Filed Nov. 4, 1960, Ser. No. 67,336
4 Claims. (Cl. 64—29)



1. In a coupling, a driving shaft and a driven shaft arranged in an end-to-end relation and being aligned axially, a radially enlarged portion on each of said shafts, a disc about the driving shaft and disposed adjacent the radially enlarged portion of the driving shaft to move axially of the shaft, wedge elements between the disc and the radially enlarged portion of the driving shaft effective under relative rotation between the shafts to move the disc along the shaft on which it is mounted while the shafts remain axially fixed, the radially enlarged portions of said shafts and disc having aligned openings therethrough, pins extending through said openings to connect the driven shaft to the driving shaft for driving, said openings in the radially enlarged portion of said driving shaft being arcuate slots to allow relative rotation between the driven and driving shafts, and resilient means urging the disc toward the radially enlarged portion of the driving shaft with a force sufficient to cause the wedge elements to transmit a given torque while permitting relative rotation between the shafts when the given torque is exceeded.

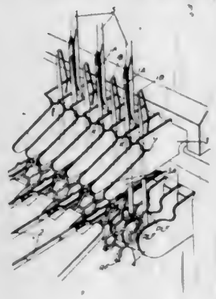
3,050,966
CLUTCH MECHANISM
Alfred H. Petersen, Brookfield, Ill., assignor to General Electric Company, a corporation of New York
Filed Sept. 18, 1961, Ser. No. 138,790
3 Claims. (Cl. 64—30)



1. In combination, a stationary base, a tubular support member fixed thereon against rotational or axial displacement relative thereto, shaft means disposed with-

in said support member for rotational and axial displacement therein, said shaft means and said support member having at one end bearing means establishing a predetermined limit of axial displacement of said shaft means in one direction while permitting rotation thereof, a drive sheave having a sleeve bearing receiving an opposite end portion of said shaft means whereby said drive sheave is rotatable and axially movable on said shaft, a first annular clutch plate member of lubricant-impregnated material fixed on said shaft below said sleeve bearing to provide a rotational base for said drive sheave, a U-shaped frame fixed at the extremities of its leg portions to said drive sheave, said leg portions extending in parallel spaced relation to said shaft, the nexus of said frame extending across said shaft in spaced relation to the end thereof, a second annular clutch plate member of lubricant-impregnated material disposed within said frame for axial displacement therein and rotation therewith, and spring means encircling said shaft and bearing against said frame and said second clutch plate to maintain said first and second clutch plates in frictional engagement.

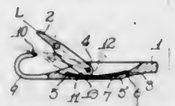
3,050,967
PRODUCTION OF GARMENTS ON STRAIGHT BAR KNITTING MACHINES
George Taylor, Brookfield, Arnold, England, assignor to William Cotton Limited
Filed Nov. 20, 1956, Ser. No. 623,370
7 Claims. (Cl. 66—88)



1. A method of producing knitted blanks with plain and rib courses on a two-bank straight bar knitting machine having a group of simultaneously operable plain needles composed of certain spaced plain needles and intervening plain needles and a group of simultaneously operable spaced rib needles which match in number and spacing with the intervening plain needles which method comprises the steps of knitting plain fabric jointly on said certain spaced plain needles and said intervening plain needles knitting rib fabric jointly on said certain spaced plain needles and said spaced rib needles and inter-changing yarn between said intervening plain needles and the matched spaced rib needles to produce a matched arrangement of intervening plain needle loops in the plain knitting and rib needle loops in the rib knitting whereby there is an equal number of single loops per course in the plain fabric and in the rib fabric.

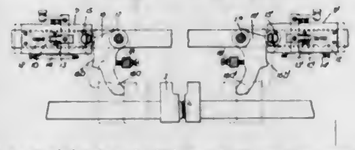
3,050,968
KNITTING NEEDLES
Ryozo Masujima, 1 Oaza Shiota Machi, Chisagata-gun, Nagano-ken, Japan
Filed June 16, 1959, Ser. No. 820,719
9 Claims. (Cl. 66—121)

2. A latch type knitting needle having a stem and a hook at one end of the stem, the stem being fomred with a longitudinal groove adjacent the hook end, and the bottom of the groove having a longitudinal slot therethrough of less length than the length of the groove to form a pair of bases spaced longitudinally by said slot; a latch pivoted at one end in said groove for cooperation with said hook; and a relatively elongated initially longitudinally curved substantially flat spring longitudinally bridging said slot and with its ends seated on said bases; the pivoted end of



said latch being curved and engaging the initially convex surface of said spring and, in all positions of said latch, maintaining said spring resiliently deformed into said slot to an extent that such initially convex surface is concave; said pivoted end of said latch having at least one flat engageable by said spring to bias said latch to a pre-set position relative to said hook.

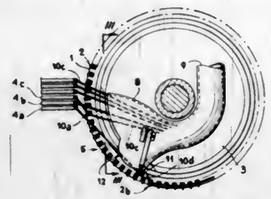
3,050,969
SHOCK ABSORBER FOR STRAIGHT BAR KNITTING MACHINE
Patrick Gideon McCarthy, Loughborough, Leicestershire, England, assignor to William Cotton Limited
Filed Sept. 16, 1958, Ser. No. 761,395
Claims priority, application Great Britain Sept. 25, 1957
7 Claims. (Cl. 66—130)



7. In a straight bar knitting machine the combination with draw mechanism, a reciprocatory friction bar, a friction box on the friction bar and a pair of independently adjustable stops for independently adjusting the end stopping positions of the friction box, of buffer means for decelerating the friction box comprising a slide bar, speed reduction means connecting the slide bar to the draw mechanism, a pair of slide boxes on the slide bar adjacent said stops respectively, a roller-and-ramp clutch in each slide box for clutching the slide boxes to the slide bar, a pair of cams pivoted one to each of said stops, a pair of screw abutments on the respective stops for said cams, a pair of cam followers one on each slide, a pair of springs connecting the slides to the respective stops and biassing the cam followers against the cams and the cams against the screw abutments, tail parts on the cams in the path of the friction box for operation of the cams during approach of the friction box to its end positions of stopping by said stops to clutch the slides to the slide bar and thereby decelerate the friction box, a pair of control levers with runners one on each slide and associated with the clutch rollers respectively, and pattern control means for operating the control levers including a pair of rails parallel to the slide bar and on which the control lever runners ride respectively to maintain the clutches released during required periods.

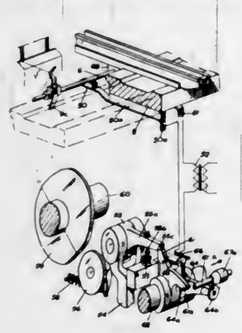
3,050,970
YARN CUTTING MEANS FOR KNITTING MACHINE
Giorgio Billi, Viale Torricelli 23, Florence, Italy
Filed Feb. 10, 1959, Ser. No. 792,396
Claims priority, application Italy Feb. 14, 1958
8 Claims. (Cl. 66—140)

1. In a circular knitting machine having a rotary needle cylinder; yarn guides lowerable to feed a yarn and raisable to interrupt the feed of the yarn; movable needles slidable in grooves in said cylinder at a stitching location thereof for engaging the yarn to stitch the same into fabric and a stationary cover overlying the cylinder; a yarn engaging device comprising a suction duct having



an arcuate open inlet disposed on said cover adjacent a rotary path of movement of the needles at said stitching location of the cylinder; and a yarn severing device located at an end of said inlet in the direction of rotation of the cylinder for cutting a portion of yarn engaged in said inlet under suction.

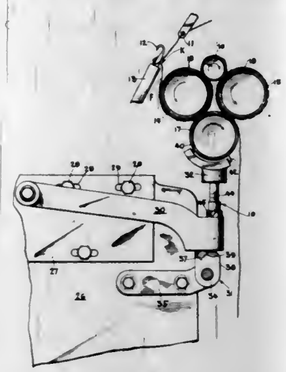
3,050,971
STRAIGHT BAR KNITTING MACHINES
Raymond Blood, Shepshed, England, assignor to William Cotton Limited
Filed Oct. 22, 1959, Ser. No. 847,957
Claims priority, application Great Britain Oct. 24, 1958
10 Claims. (Cl. 66—145)



1. In a knitting machine having a row of needles and sinkers, in combination, a yarn deflector including a severing means and being movable along said row of needles to and from an operative deflecting position located in a plane perpendicular to said row of needles for engaging and deflecting with said severing means a yarn extending freely to a knitted workpiece so that the yarn is located in said plane; and means for actuating said severing means when said yarn deflector is in said deflecting position, and while the yarn is locked to the needles by the sinkers.

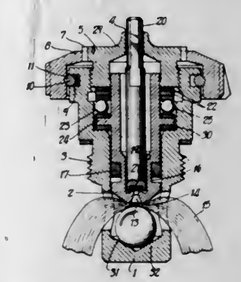
3,050,972
TAKE-UP MECHANISM FOR KNITTING MACHINES
Harold C. Noe, Upper Montclair, N.J., assignor to Kidde Textile Machinery Corporation, Bloomfield, N.J., a corporation of Delaware
Filed Apr. 4, 1958, Ser. No. 726,482
8 Claims. (Cl. 66—152)

1. In a take-up mechanism for a cloth fabric forming machine the combination of a rotatably mounted take-up roll adapted to engage and operate on a sheet of cloth fabric, a bracing roll in contacting relationship with said take-up roll to prevent oscillation of said take-up roll, and a plurality of bearing means intermediate the ends of said take-up roll for rotatably mounting said bracing roll, at least one of said bearing means being positioned



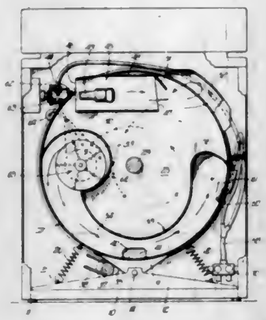
to be intermediate the edges of a sheet of cloth fabric operated on by said take-up roll.

3,050,973
BURNER VALVES FOR COMPRESSED GASEOUS FUELS
John Ansell Goddard, Ashtead, England, assignor, by mesne assignments, to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Jan. 21, 1958, Ser. No. 710,348
Claims priority, application Great Britain Jan. 29, 1957
5 Claims. (Cl. 67—7.1)



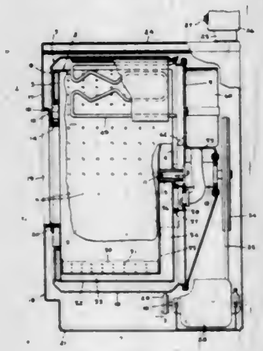
4. A burner valve for cigar lighters and the like utilizing compressed gaseous fuels such as butane, having a housing about an axis, compression members carried by said housing and having a compressible fuel conducting body disposed to be acted upon thereby upon relative movement of said compression members toward and from one another, a compression zone between said compression members, one of said compression members having an aperture therethrough which is located within the compression zone of said members and having a peripherally extending flange associated therewith, means for mounting said apertured compression member for axial sliding movement in said valve housing towards and from the other of said compression members, a pressure adjusting member, means mounting said adjusting member for movement towards and from said movably mounted compression member, and means for transmitting pressure from said compression adjusting member to said apertured compression member including a resilient washer interposed between said compression adjusting member and said flange and deformable to a greater or lesser extent as said adjusting member moves towards and from said last mentioned compression member thereby providing a lost motion connection therebetween.

3,050,974
COMBINATION WASHER-DRIER HAVING AN AIR FLOW WATER TRAP
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Feb. 6, 1961, Ser. No. 87,235
7 Claims. (Cl. 68—20)



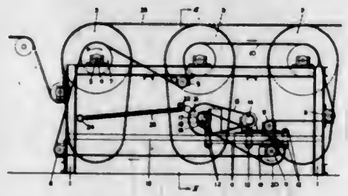
1. In a machine for washing and drying fabrics during washing and drying operations, a tub including walls defining a chamber for retaining a pool of washing fluid during said washing operation, a rotatable drum positioned within said chamber for receiving and tumbling said fabrics during the washing and drying operations, air circulating means operatively associated with said chamber and communicating therewith so as to withdraw air from the chamber, an exhaust conduit also communicating with the chamber through said circulating means for venting air to the atmosphere, said exhaust conduit being in spaced relationship with said air circulating means, and an air flow passage connecting the air circulating means with the exhaust conduit, said air flow passage having a low portion of the same passing through a pool of washing fluid and being submerged by the fluid, whereby a fluid trap is provided preventing air flow from taking place in said passage when the level of the fluid is above the said portion of the passage.

3,050,975
LAUNDRY MACHINE WITH SUCTION MEANS FOR REMOVING MOISTURE
James M. Pinder, North Canton, Ohio, assignor to General Electric Company, a corporation of New York
Filed Oct. 14, 1959, Ser. No. 846,436
11 Claims. (Cl. 68—20)



1. In a laundry machine, means for tumbling clothes including a perforated member having one surface arranged to contact the clothes at least intermittently, said perforated member being formed so that during the contacting of the clothes a substantial majority of its perforations are covered by the clothes, and suction means on the other side of said surface exercising a strong intermittent suction only through the perforations of said surface substantially concurrently with the intermittent contacting of clothes with said surface.

3,050,976
APPARATUS FOR CONTINUOUSLY WET TREATING YARNS AND FABRICS IN ROPE FORM
Robert Ronald Laupman, Wijchen, Netherlands, assignor to Gebr. Stork & Co's Apparatenfabriek N.V., Amsterdam, Netherlands, a corporation of the Netherlands
Original application July 21, 1958, Ser. No. 749,981. Divided and this application Jan. 12, 1961, Ser. No. 82,192
Claims priority, application Netherlands July 20, 1957
4 Claims. (Cl. 68—176)



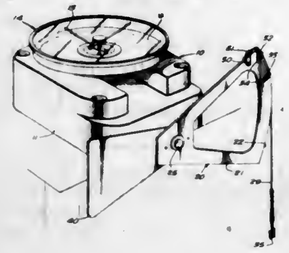
1. An apparatus for continuously wet treating fabrics in rope form by a method in which the rope is passed at a constant velocity downwardly into and upwardly out of at least one treating liquid and there is superimposed on the movement of the rope of material a reciprocating motion in the direction of the length of the material with a sinusoidal velocity, said apparatus comprising a frame, a plurality of winches rotatably mounted on said frame, at least one vat beneath said frame, a constant speed driving means on said frame, and a transmission means connected between said driving means and said winches for driving said winches rotatably first in one direction and then in the other direction, the amount of rotation in said other direction being less than the amount of rotation in said one direction.

3,050,977
PERMANENT DIAL MARKER FOR PERMUTATION LOCKS
Daniel J. Foote and Alex D. Stahl, Wauwatosa, Wis., assignors to Master Lock Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 22, 1961, Ser. No. 126,417
5 Claims. (Cl. 70—332)



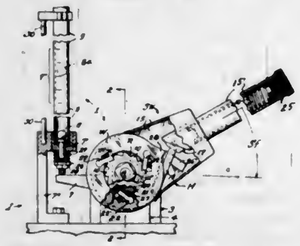
1. In a permutation lock having a case with an externally accessible graduated dial rotatably mounted in an outer wall thereof, said outer wall of the case having an aperture therein beyond a peripheral portion of the dial, and a surface within the case outwardly of a peripheral portion of the dial and off-set inwardly from the outer wall of the case and registering with said aperture to form a well-like indicator outwardly of the periphery of the dial relative to which selected graduations on the dial may be brought into registration.

3,050,978
CALIBRATION DEVICE FOR TORQUE MEASURING TOOLS
Frank W. Livermont, Duarte, Calif.; Milford S. Zimmerman, executor of said Frank W. Livermont, deceased, assignor to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed June 30, 1960, Ser. No. 40,079
4 Claims. (Cl. 73—1)



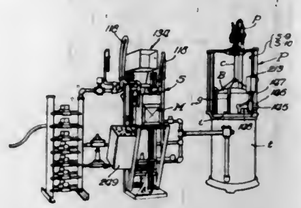
1. In a calibration device for a torque measuring instrument having a torque receiving member, the combination of: a segment arm having an arcuate peripheral portion, a hub having a cylindrical portion concentric with said arcuate peripheral portion, said hub being fixed to the segment arm and having means forming a detachable driving connection with the torque receiving member, a flexible cable contacting said arcuate peripheral portion and adapted to support a weight, means fixing one end of the cable to said segment arm, and a counterbalance mounted to move relative to the hub, the counterbalance having a bore receiving said cylindrical portion of said hub, the counterbalance being movable with respect to the segment arm from a retracted non-balancing position to an extended position in which it balances the weight of the segment arm and cable about said axis of the hub, and means for securing the counterbalance in said extended position.

3,050,979
IMPACT TESTING
Merrill A. Young, Gates Mills, and David N. Erlenbach, Lakewood, Ohio, assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Aug. 15, 1960, Ser. No. 49,729
7 Claims. (Cl. 73—1)



1. An instrument for testing rotary impact tools, comprising an elongated torsion bar, means supporting one end portion only of the bar and holding that portion against angular movement about the longitudinal axis of the bar, means adapted demountably to connect the opposite end portion of the bar to an output or impact-delivering member of a tool to be tested, an abutment connected to the torsion bar so as be jolted in a predetermined direction when the free end portion of the bar is subjected to torsional impact by the tool, a projectile normally resting against the abutment, and a go-and-return guide along which the projectile is propelled in said direction by the jolting movement of the abutment.

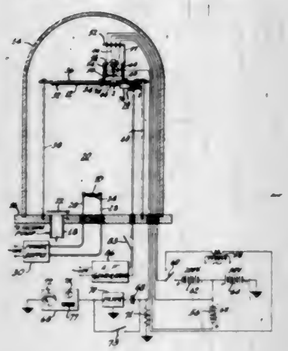
3,050,980
METER PROVING MEANS
Raymond J. Dufour, Wheaton, Ill. (% Northern Illinois Gas Company, 615 Eastern Ave., Bellwood, Ill.), and William C. Isley, 201 Regent St. Hampton, Va.
Filed Apr. 25, 1956, Ser. No. 580,554
1 Claim. (Cl. 73—3)



In meter proving means of the type wherein a predetermined quantity of fluid under pressure is delivered from a source of supply to a movable prover bell and part of this fluid is subsequently delivered from the bell through a meter during one or more complete cycles of movement of the prover instrumentality of the meter and the accuracy of the meter is determined by measuring the extent of movement of the bell during a predetermined number of cycles of movement of said instrumentality, the improvement comprising in combination, means for sensing each movement of the prover instrumentality past a given point in its path of movement, an electric control circuit operatively associated with said sensing means, said sensing means triggering said circuit upon movement therepast of the prover instrumentality, first conduit means for supplying fluid under pressure from the source to the meter, second conduit means for supplynig fluid under pressure from the bell to the meter, third conduit means for supplying fluid under pressure from the source to the bell, a first electrically operated valve in said first conduit means, a second electrically operated valve in said second conduit means, a third electrically operated valve in said third conduit means, said first valve being normally open for normally causing fluid under pressure to be supplied from the source to the meter, said second and third valves being normally closed, first means in said circuit connected to the operating means of said third valve and responsive to the position of the bell for energizing the operating means of said third valve when the bell is depleted of fluid and for de-energizing said third valve when the bell is filled to a predetermined extent with fluid, second means in said circuit connected to the operating means of said first and second valves and triggered by said sensing means upon an initial passage of the prover instrumentality past said sensing means for substantially simultaneously energizing the operating means of said first and second valves for closing said first valve and opening said second valve thereby to cause a meter proof to be commenced when the meter is under pressure and in operation, said second means being triggered by said sensing means upon a subsequent passage of the prover instrumentality past said sensing means for substantially simultaneously deenergizing the operating means of said first and second valves for opening said first valve and closing said second valve thereby to complete a first proof, third means in said circuit for correlating said first and second means and causing said first and second means to duplicate in sequence their respective functions thereby to repeat the meter proof, fourth electrically operated valve means associated with at least said second conduit means and the meter and having orifices of different sizes for controlling the rate of flow of fluid from the bell through the meter, fourth means in said circuit connected to the operating means of said fourth valve and associated with said third means for varying the rate of flow of fluid through the meter during

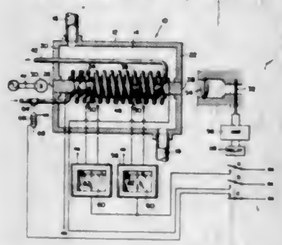
successive proofs, graphic record means associated with the bell including a record card and a recording stylus operatively associated with the bell to be moved thereby during at least the terminal part of the meter proving movement of the bell, and fifth means in said circuit associated with said first and second means and said recording stylus for shifting said stylus relative to said record card at the commencement of each proof.

3,050,981
VAPORIZATION RATE MEASURING APPARATUS
Helmut J. Schwarz, Somerville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,155
10 Claims. (Cl. 73—15)



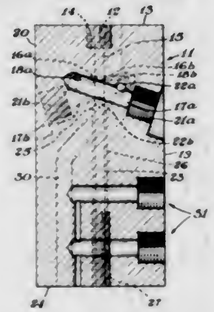
1. In an evacuated system having a gas at a relatively low pressure and wherein a material is vaporized into a vapor stream, means to measure the rate of vaporization of said material comprising an ionization gauge, means to dispose said ionization gauge in said vapor stream, means to interrupt periodically said vapor stream to said ionization gauge, said ionization comprising means to ionize said interrupted vapor stream and said gas into ions, ion current indicating means, and direct current blocking means connecting said ndicating means to said ionization gauge to cause said ions from said periodically interrupted vapor stream to flow therethrough whereby to measure the ion current of said vapor ions as a function of said rate of vaporization of said material.

3,050,982
DEW POINT MEASURING APPARATUS
James Vollmer, Philadelphia, and John A. Duke, Roslyn, Pa., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 5, 1958, Ser. No. 733,063
16 Claims. (Cl. 73—17)



1. Apparatus for measuring the dew point of an atmosphere containing a condensable vapor wherein the measurement is based on changes in the absorption characteristics and changes in the index of refraction, comprising a highly refractive elongated radiant energy transmitting member adapted to have the external surface extending between its end portions disposed in said atmosphere, radiant energy generating means disposed adjacent one end of said elongated transmitting member and directed thereat, radiant energy sensing means disposed adjacent the opposite end of said elongated transmitting member, means for varying the temperature of said atmosphere adjacent said elongated transmitting member and means for measuring the dew point temperature adjacent the surface of said member that extends between the ends thereof when a substantial, predetermined drop in the amount of radiant energy is sensed by said radiant energy sensing means.

3,050,983
THERMOCONDUCTIVITY CELL
Roland S. Gohlke, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Oct. 17, 1960, Ser. No. 63,036
3 Claims. (Cl. 73—27)

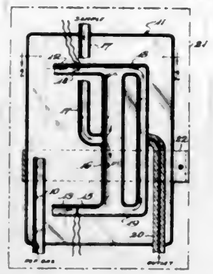


1. A thermoconductivity cell which comprises a body member having internal gas measuring cavities and an internal by-pass gas flow passageway therein, said gas measuring cavities and said by-pass gas flow passageway being connected independently to a common gas delivery tube, the junction of said by-pass gas flow passageway and said gas delivery tube being downstream from said gas measuring cavities, said gas delivery tube being fitted with a gas flow control means above said junction of said by-pass gas flow passageway and said gas delivery tube, said gas flow control means controllably diverting the flow of gas from said gas measuring cavities into said by-pass flow passageway.

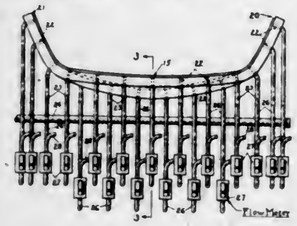
3,050,984
GAS DENSITY BALANCE
Arvie Glenn Nerheim, Crown Point, and Elton B. Tucker, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Sept. 29, 1959, Ser. No. 843,263
9 Claims. (Cl. 73—30)

1. In a gas density balance apparatus having a pair of reference gas flow conduits, one portion of each of said conduits being open to receive reference gas and another portion of said conduits discharging externally of said balance, a vertically elongated sample introduction conduit communicating between said flow conduits, sample gas inlet means on said sample introduction conduit intermediate the ends thereof, and means for determining differentials in rates of flow through said flow conduits caused by a sample having a density different from that of the reference gas, the improvement comprising a manifold chamber surrounding said reference gas flow conduits,

said sample introduction conduit and said differentials determining means, said chamber having a reference gas inlet thereto whereby reference gas passes into the chamber and thereafter into the pair of reference gas flow conduits contained therein.



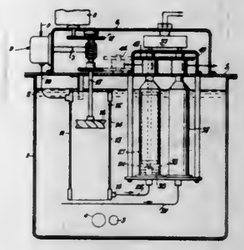
3,050,985
APPARATUS FOR GAUGING THE CURVATURE OF SHEET MATERIAL
Robert P. Roetter, Perrysburg, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Sept. 14, 1959, Ser. No. 839,867
8 Claims. (Cl. 73—37.8)



1. Apparatus for gauging sheet material for deviation from a prescribed curvature, comprising a base having a concave upper surface and having its marginal edge portion conforming in outline and curvature to the prescribed curvature of the sheet material and adapted to support the sheet material thereon, a plurality of nozzles, each provided with a discharge orifice extending through said base and disposed normal to the surface of the sheet material when positioned on said base, means for introducing a uniform volume of gas into each of said nozzles and causing it to discharge from the orifice in proportion to the amount of deviation between the base and sheet material, and means for measuring the gas discharged at each of said orifices to determine the magnitude of deviation at such point.

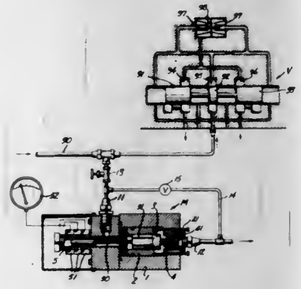
3,050,986
VISCOSITY SENSITIVE APPARATUS
Horace James Brazier, Ealing, London, England, assignor to S. Smith & Sons (England) Limited, London, England, a company of Great Britain
Filed Dec. 4, 1959, Ser. No. 857,400
8 Claims. (Cl. 73—60)

1. Viscosity sensitive apparatus for producing a signal in accordance with a difference between the viscosities of two liquids, comprising a first supply line for receiving a specimen sample of one liquid having a required predetermined degree of viscosity, a water bath, a first viscosity sensitive device, immersed in said water bath, for continuously receiving said specimen sample of liquid from said first supply line, a second supply line for receiving a comparable sample of another liquid, a heat exchanger, immersed in said water bath, for continuously receiving said comparable sample of liquid from said second supply line, a second viscosity sensitive device, immersed in said water bath, for continuously receiving said comparable sample of liquid from said heat exchanger, a heater immersed in said water bath, a thermostat for controlling said heater to establish in said water bath and



in said sample liquids delivered respectively to said first and second viscosity sensitive devices substantially equalized temperatures selected for accurate comparison of the viscosities of said samples, and means coupled to said viscosity sensitive devices and operable in dependence upon the differential between the relative viscosities of said specimen and said comparable sample of oils, automatically to produce a signal.

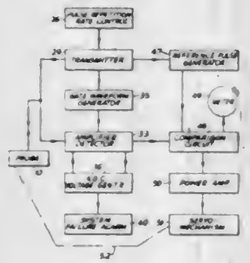
3,050,987
CONTAMINATION METER AND PROCESS FOR DETECTING CONTAMINATION
Richard E. Osgood, Edmonds, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 28, 1959, Ser. No. 789,632
14 Claims. (Cl. 73—61)



1. A device for measuring physical contamination present in a hydraulic fluid such as is employed in control systems or the like, comprising a chamber for connection in such a system and a piston fitted within said chamber with clearance equivalent to a critical clearance in the system, and displaceable therein from a neutral position by application of a displacing force, whereby there is established a path for flow of system fluid otherwise than through such clearance between piston and chamber, resiliently yieldable means opposing displacement of the piston and operable to return the piston to or towards such neutral position upon removal of the displacing force, and to close such flow path and to confine flow to such clearance, whereby the piston's return to neutral position is resisted by any contaminant material deposited within the clearance between piston and chamber, means to apply a displacing force to the piston to first open such flow path, and to remove such force,

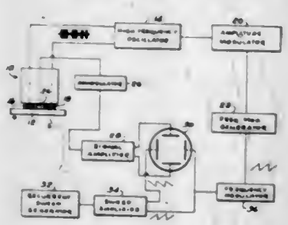
to then close the flow path, and means to sense and to indicate the extent of the piston's failure to return to neutral position, following its displacement and the removal of the displacing force.

3,050,988
ULTRASONIC TESTING
George Andrew Douglas Gordon, Richmond, and Harold William Taylor and John Malcolm Lester Wood, Barkingside, England, assignors, by mesne assignments, to S. Smith & Sons (England) Ltd., Cricklewood, London, England, a corporation of England
Filed Feb. 13, 1959, Ser. No. 793,074
Claims priority, application Great Britain Feb. 18, 1958
4 Claims. (Cl. 73—67.5)



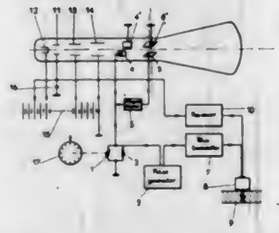
1. Ultrasonic testing apparatus comprising in combination, transducer means for injecting recurrent pulses of ultrasonic waves into a body under test and for receiving pulses of said waves after their traversal of said body, a source of further pulses of the same frequency as said recurrent pulses, an electrical comparator having two inputs and one output, means coupling said transducer means and said source of further pulses to said inputs respectively, and a responsive device coupled to the output of said comparator and responsive to the time difference between said received pulses and said further pulses, said responsive device comprising means for varying the position of said transducer means in such a sense as to tend to reduce said difference.

3,050,989
CARRIER TECHNIQUE FOR WIDE RANGE ULTRASONIC INSPECTION
Elliott A. Henry, Newtown, Conn., assignor to Sperry Products, Inc., a corporation of New York
Filed Oct. 30, 1958, Ser. No. 770,778
7 Claims. (Cl. 73—67.7)



6. Ultrasonic inspection apparatus comprising transducer means, means for energizing said transducer means with substantially square-wave electrical pulses of a carrier frequency substantially equal to the natural frequency of said transducer means, means for frequency modulating the repetition rate of said pulses over a frequency range encompassing the resonance frequency of the workpiece being inspected, and which range is a fractional part of the carrier frequency, and means connected to said transducer means for indicating the value of the modulating frequency corresponding to the occurrence of mechanical resonance in the workpiece.

3,050,990
DISPLAY DEVICE FOR RECURRING ECHOES
Paul Renaut, Saint Maur, France, assignor to Société "Realisations Ultrasoniques," a corporation of France
Filed July 23, 1956, Ser. No. 599,508
Claims priority, application France July 29, 1955
1 Claim. (Cl. 73—67.8)

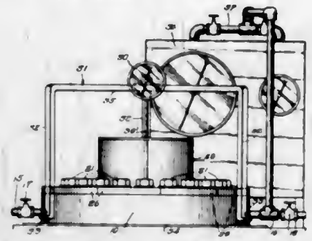


An apparatus for inspecting an object having pulse reflecting surfaces, comprising, in combination, cathode ray tube means having a control electrode for causing cathode ray emission upon application of voltages to said control electrode, a screen exposed to said cathode ray emission, and first and second pairs of cathode ray deflector elements for determining the path of the light spot produced on said screen by said cathode ray emission; a pulse generator delivering at its output sequences of primary pulses at predetermined primary pulse intervals; pulse transmitting means connected to said output for transmitting said primary pulses at said predetermined pulse intervals to the object to be inspected for being reflected by its pulse reflecting surfaces; second pulse transmitting means for transmitting echo pulses, derived from the reflection of each of said primary pulses at said reflecting surfaces during each of said primary pulse intervals, to said control electrode for causing intermittent intensified cathode ray emissions to said screen at the periodicity of said echo pulses; and adjustable cathode ray beam control means including tunable passive resonant circuit means connected between said output of said pulse generator means and said first pair of deflector elements, respectively, for being shock excited by said primary pulses and responding to each of said primary pulses by furnishing an alternating voltage having amplitudes decreasing with time and a variable frequency exceeding that of said primary pulses, said alternating voltage being applied to said first pair of deflector elements, phase shifter means being connected between said resonant circuit means and said second pair of deflector elements for applying to the latter said alternating voltage with a

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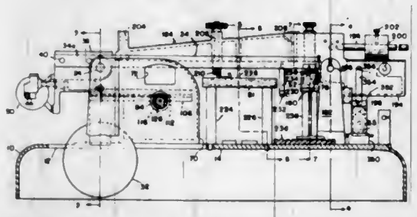
phase shift so that on said screen a spiral light spot path is determined in which identical phases of consecutive waves of said alternating voltage would appear, during said intensified cathode ray emissions, on said screen at points spaced from each other along a substantially straight radial line of said spiral path, said control means including means for varying said variable frequency, whereby, upon adjustment of said variable frequency so as to be equal to the periodicity of said echo pulses, a series of intensified light spots representing said echo pulses appears on the screen in a distinct substantially straight line arrangement, the thus adjusted value of said variable frequency being a direct indication of the spacing between the pulse reflecting surfaces of an inspected object of given material.

3,050,991
APPARATUS FOR DETERMINING THE DRAWING QUALITY OF SHEET STEELS
Edmund S. Madrzyk and Francis E. Gibson, Lansing, Ill., assignors to Inland Steel Company, a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,407
6 Claims. (Cl. 73—87)



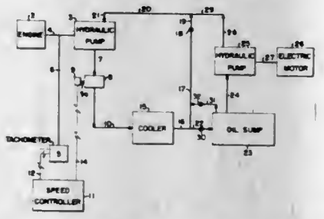
1. In an apparatus for determining the drawability index of a specimen sheet metal disk, a rigid base member being provided with an open-face, internal cavity, an upstanding wall on said base member surrounding said cavity, said wall being of sufficient thickness to withstand hydraulic pressures encounter in determining said drawability index without distortion, said wall having a recessed portion in the upper face thereof contiguous with the edge of said wall surrounding said cavity, said recessed portion having a non-skid marginal portion adjacent the aforesaid edge, a specimen locking ring comprising a plate adapted to be disposed within said recessed portion and having a curved inner opening with a peripheral configuration similar to the peripheral outline of said cavity, the bottom of said plate having a non-skid marginal portion adjacent the edge of the inner opening cooperating with said non-skid surface on said recessed portion to securely hold a sheet metal specimen clamped therebetween, the thickness of the non-skid marginal portion of said ring being greater than the thickness of the remaining portion of said ring, clamping means resting on said upstanding wall and said specimen locking ring for securely clamping said ring in said recessed portion, means for applying a clamping force to said clamping means, and means for introducing a hydraulic fluid into said cavity.

3,050,992
UNIVERSAL STRENGTH TESTING MACHINE
Ralph E. Steinmueller, Detroit, and Victor M. Rowell, Dearborn, Mich., assignors to Harry W. Dietert Co., Detroit, Mich., a corporation of Michigan
Filed Feb. 24, 1959, Ser. No. 795,027
27 Claims. (Cl. 73—93)



1. A testing machine comprising a base, a primary beam pivoted thereto, a weight in the form of a pendulum pivotally connected to said primary beam, a motor carried by said primary beam and operatively connected to said weight to move said weight to apply variable torque to said primary beam, a secondary beam pivoted to said base, means for coupling said primary beam to said secondary beam at a selected one of a plurality of points to predetermine the range of torque applicable by said secondary beam by movement of said weight relative to said primary beam, and strength testing mechanism including means operably connected to and actuated by said secondary beam.

3,050,993
HYDRAULIC DYNAMOMETER AND PROCESS OF USING SAME
John M. Draughon, Franklin Park, and Robert L. Van Voorhies, Mountainside, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Aug. 28, 1959, Ser. No. 836,777
1 Claim. (Cl. 73—116)

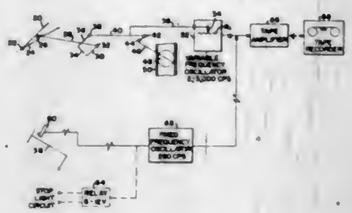


A test dynamometer for operation of an internal combustion engine having a drive shaft, said dynamometer comprising a constant displacement hydraulic pump adapted to be coupled to the drive shaft of said internal combustion engine, and characterized by inlet and outlet sides, a heat exchanger characterized by inlet and outlet sides, a conduit for hydraulic fluid connecting the outlet side of said heat exchanger with the inlet side of said constant displacement pump, a check valve in said conduit disposed to permit flow of fluid through said conduit only from said heat exchanger to said constant displacement hydraulic pump, a flow control valve having electrically actuated opening and closing means, a hydraulic fluid sump, a variable displacement hydraulic pump driven by an external power source, and characterized by inlet and outlet sides, a plurality of conduits for hydraulic fluid to permit flow of said fluid sequentially from the outlet side of said constant displacement pump through said flow control valve to the inlet side of said heat exchanger, from the outlet side of said heat exchanger to said sump, from said sump to the inlet side of said variable displacement hydraulic pump, and from the outlet side of said variable displacement hydraulic pump to the inlet side of said constant displacement hydraulic pump, a pressure relief valve in the one of said plurality of conduits which permits flow from the outlet of said heat exchanger to said sump, said relief valve being disposed to open upon the hydraulic fluid pressure in said heat exchanger being a determined amount greater than that in said sump, a tachometer adapted to be coupled to the drive shaft of said internal combustion engine, a speed controller, first transmission means connecting said tachometer with said speed controller whereby electrical signals generated at said tachometer may be imposed upon said controller, and second transmission means connecting said speed controller with said opening and closing means of said flow control valve whereby electrical signals generated at said speed controller may be imposed upon said opening and closing means.

3,050,994
ROAD SIMULATION SYSTEM
John J. Heigl, Short Hills, James A. Wilson, Lake Lackawanna, and Oliver G. Lewis, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed July 16, 1958, Ser. No. 749,020
8 Claims. (Cl. 73—117)

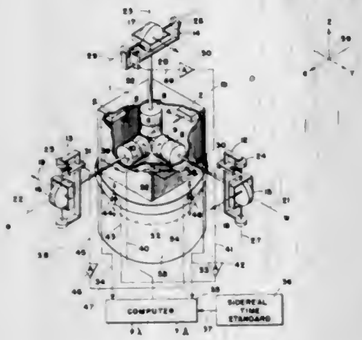
1. A method for the accumulation of operational mileage on a throttle-controlled motor vehicle having a

wheel brake system and at least one wheel wherethrough driving force is transmitted, which method comprises the steps of test driving said motor vehicle on an actual roadway for a relatively short master test run; continuously measuring and recording with respect to time during said master test run the position of a selected point in the mechanism whereby the throttle is actuated, which point moves in accordance with changes in throttle position; recording brake impulses with respect to time during said



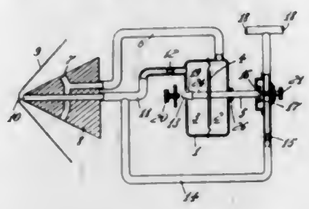
master test run; thereafter affixing said vehicle in a stationary position with its wheel wherethrough driving force is transmitted in contact with a traction roll; firing the motor of said vehicle and regulating the position of the mechanism whereby the throttle is actuated with respect to time in a schedule similar to the position record taken during said master test run, and concurrently imposing a braking load upon said traction roll in a schedule similar to the brake impulse record taken during said master test run.

3,050,995
AUTONAVIGATOR
Leonard C. Dozier, Jr., Whittier, Calif., assignor to North American Aviation, Inc.
Filed July 9, 1954, Ser. No. 442,255
15 Claims. (Cl. 73—178)



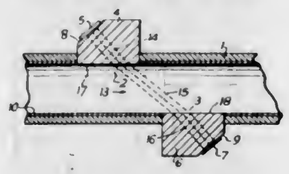
1. A stable platform comprising a stable element, three gyroscopes located upon said stable element two or more of which are adapted to be rotated about their input axes with respect to said stable element, pick-off means associated with each said gyroscope for detecting torque thereon, means for torquing said stable element in accordance with the output of said pick-off means to remove the torque from said gyroscopes, acceleration sensitive means located upon said stable element, and means for rotating said gyroscopes about their respective input axes relative to said stable element in accordance with the output of said acceleration sensitive means, said means for rotating further comprising means for maintaining each of said gyroscopes with zero component of angular velocity with respect to space about its input axis and for maintaining said stable element locally level, whereby said stable element achieves its stabilization.

3,050,996
SPEED RESPONSIVE DEVICES
Frank Dryburgh Henderson, Bristol, England, assignor, by mesne assignments, to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed June 13, 1955, Ser. No. 514,802
Claims priority, application Great Britain June 14, 1954
7 Claims. (Cl. 73—182)



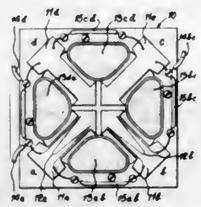
4. A device comprising a hollow container, a movable wall serving to divide the container into a first chamber and a second chamber, a first duct for conveying pressure fluid to the first chamber, a first restriction in said first duct, the first chamber having an outlet and a second restriction in said outlet, one of said restrictions comprising a first movable member connected to the movable wall to move therewith and to vary the area of that restriction, a second duct for transmitting a pressure to the second chamber, a third duct connected to a source of pressure fluid at a control pressure, a third restriction in said third duct, an outlet from said third duct disposed downstream of the third restriction, and a fourth restriction controlling said outlet, one of which restrictions in said third duct comprises a second movable member connected to said movable wall to move therewith and to vary the area of that restriction, and a conduit connection between said third and fourth restrictions leading to a pressure sensing means.

3,050,997
FLOWMETERS
David Brian Lake, Herne Hill, London, England, assignor to National Research Development Corporation, London, England
Filed June 3, 1959, Ser. No. 817,863
Claims priority, application Great Britain June 10, 1958
11 Claims. (Cl. 73—194)



1. In an ultrasonic flowmeter for measuring velocity of a confined fluid stream, a transmitting set comprising an ultrasonic transmitting transducer and a coupling block having a first face disposed to contact the fluid stream, said coupling block also having a second face against which said transducer is mounted, and comprising means, including said transducer, for generating ultrasonic shear waves in said coupling block and for directing said waves to be incident upon said first face at such an angle that compressional waves propagated in the fluid stream from said first face leave said first face at an angle of approximately 45° from normal.

3,050,998
FLOW MEASURING STRAIN GAUGE TRANSDUCERS
Hugo E. Dahlke, East Brunswick, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed July 1, 1959, Ser. No. 827,673
19 Claims. (Cl. 73—228)



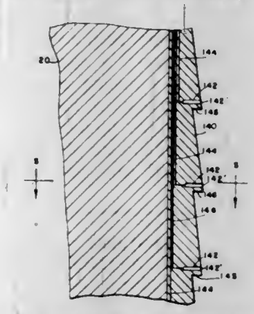
1. A strain gauge transducer comprising a hollow body, a plurality of inwardly extending arrow-shaped elastic resilient elements affixed at their outer ends to the periphery of said hollow body and spaced each from each, strain responsive wire elements affixed to said resilient elements and insulated therefrom and stressed thereby, means for connecting said strain responsive wire elements to an external electrical circuit and baffles affixed to the periphery of said hollow body located between said resilient elements.

3,050,999
CAPACITY UNIT FOR LIQUID QUANTITY GAUGES
Harrison F. Edwards, Ossining, N.Y., assignor to Simmonds Precision Products, Inc., a corporation of New York
Filed Aug. 20, 1957, Ser. No. 679,161
6 Claims. (Cl. 73—304)



1. A liquid quantity gauging system comprising a measuring condenser having a pair of spaced concentric cylindrical electrode members of self-supporting insulating material provided with metallic electrodes on the confronting surfaces thereof, at least one electrode occupying less than the total area of the insulating surface upon which it is supported so as to provide throughout the length of the condenser an inactive zone, insulating spacer means disposed between said electrode members entirely within said inactive zone for establishing and maintaining said spaced concentric relationship, openings adjacent opposite ends of said condenser for admitting liquid to the space between said electrode members, and a plurality of liquid transfer perforations in the wall of the outer electrode member distributed along the greater part of its length and all located wholly within said inactive zone, said condenser being adapted for mounting in a container so as to be immersed in the liquid therein and to receive the liquid in the space between said electrode members as a function of the quantity of liquid in the container; a reference condenser for total immersion adjacent the bottom of the container in the liquid in the container; a gauging circuit for indicating the quantity of liquid in the container as a function of the relative capacities of said condensers; and means for agitating the liquid contents of said container such that said reference condenser continually senses the average dielectric constant of the liquid contents of the container, whereby the liquid between the electrodes of the measuring condenser is substantially identical in character and homogeneity with the rest of the liquid in the container and the errors due to liquid stratification are substantially eliminated such that the desired relationship is obtained between the indications of the gauging circuit and changes in the dielectric constant of the liquid between the electrodes of the measuring condenser.

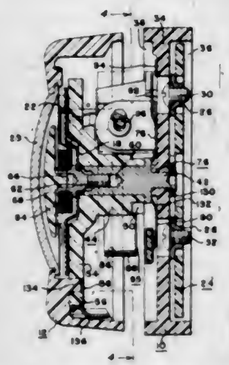
3,051,000
SUBMERGENCE MEASURING APPARATUS
John Walter Keller, Miami, Fla., assignor to Miami Shipbuilding Corporation, Miami, Fla., a corporation of Florida
Filed Jan. 28, 1959, Ser. No. 789,619
2 Claims. (Cl. 73—304)



1. A system for measuring submergence into a conductive fluid comprising an elongated non-conductive body member for varying degrees of insertion into said fluid, a plurality of spaced apart conductive members on the body member and having at least a portion exposed for contact with said fluid, means for separately grounding the system to said fluid regardless of the degree of insertion of the body member into said fluid, a first source of potential, a plurality of circuit stages one for each conductive member, a point in each stage electrically connected to one of said conductive members, each stage having a first resistance means connected between one side of said first source and said point connected to one of said conductive members, the other side of said source connected to said grounding means, a second source of potential having a side connected in common with said one side of said first source, and the second side thereof being of value intermediate that of the first source, a plurality of unidirectional conducting means connecting the second side of the second source and each one of the conductive members to effect voltage clamping action on said conductive members, resistance means interconnecting all of the conductive members in common, to provide an output, each stage thereby comprising a voltage clamping device for insuring a predetermined maximum voltage excursion regardless of further increases in resistance of the fluid circuit, the arrangement being such that

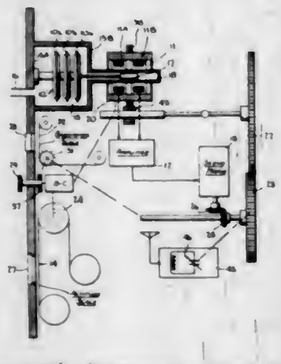
the amount of current flowing in said common output means is proportional to the number of conductive members the exposed surfaces of which are immersed in said fluid.

3,051,001
ROOM THERMOSTAT
Donald W. Laviana, Pittsford, and Theodore Fedkew, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 19, 1958, Ser. No. 722,440
6 Claims. (Cl. 73—363.7)



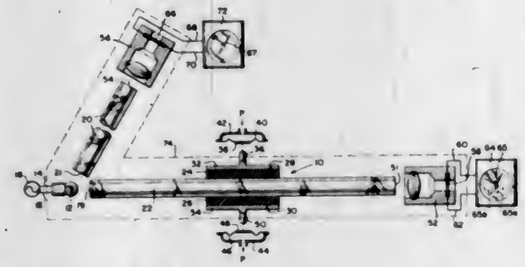
1. In a thermostat, a circular base member, temperature responsive means carried by said base member, a fixed stub shaft carried by said base member, adjusting means for said temperature responsive means rotatably mounted on said stub shaft, a circular cover member interconnected with said adjusting means for positioning said adjusting means and having indicia of temperature thereon, and an index fixedly attached to said stub shaft and cooperating with said indicia of temperature to indicate the control point of said temperature responsive means.

3,051,002
SEA LEVEL INDICATING BAROMETER
Arthur L. Rawlings, Jamaica, N.Y., assignor to Bulova Research and Development Laboratories, Inc., Woodside, N.Y., a corporation of New York
Filed June 23, 1959, Ser. No. 822,241
4 Claims. (Cl. 73—386)



1. A barometric instrument comprising a pressure-sensitive unit, means to detect the movement of the unit to produce an indicating signal, a barometric indicating device responsive to said signal to provide readings of barometric pressure, an externally adjustable scale calibrated in terms of elevation above sea level, a barometric correction mechanism operatively coupled both to said adjustable scale and said barometric indicating device including means to compute the product of a first factor determined by the local elevation of the instrument relative to sea level at the instrument location and a second factor depending on the momentary pressure of the instrument at said local elevation to provide a correction value, and means coupled to said mechanism to correct said indicating device in accordance with the computed value to provide sea level pressure readings.

3,051,003
MEASURING APPARATUS
Walter Witt, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 21, 1958, Ser. No. 775,483
11 Claims. (Cl. 73—388)



1. An apparatus to continuously measure changes taking place in the magnitude of a fluid pressure, comprising a radiant energy emitting means, two elongated radiant energy conducting members each having a first and second end and a peripheral side wall, said first ends being positioned substantially equidistant from said radiant energy emitting means, the radiant energy emitting means being operable to direct bands of radiant energy through and out of each of said members, a resilient means having a portion of one of its surfaces in contact with a portion of a peripheral side wall of one of said members, the area of physical contact which the contacting surface of said resilient means makes with said side wall being increased or decreased as said magnitude of said fluid pressure being applied to said resilient means is increased or decreased, a means to indicate increases or decreases in the quantity of radiant energy passing out of said one of said members due to variations in the area of contact between said resilient means and the side wall of said one member as said magnitude of said fluid pressure is altered from one magnitude of said fluid pressure to another, and a second reference radiant energy indicating means to indicate the quantity of radiant energy that is passing out of the other of said members.

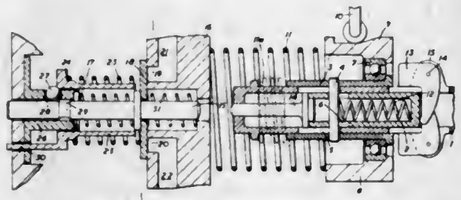
3,051,004
PRESSURE METERS FOR DRILL BORES AND THE LIKE
Helmut Hügel, Salvador-Bahia, Brazil, assignor to Firma Gutehoffnungshutte Sterkrade Aktiengesellschaft, Oberhausen, Rhineland, Germany
Filed June 24, 1958, Ser. No. 744,092
Claims priority, application Germany June 26, 1957
12 Claims. (Cl. 73—395)

12. A device for recording the pressure of a liquid in a well comprising, in combination, an elongate tubular housing having inlet means and adapted to be inserted into the well so that liquid may enter from the well through said inlet means; a tubular diaphragm in said housing, said diaphragm defining within itself a first enclosure and being spaced from said housing so as to define with the latter a second enclosure normally sealed from said first enclosure, one of said enclosures in permanent communication with said inlet means so that the liquid contained in the well may enter said one enclosure to exert a pressure against the diaphragm in a direction to deform the same and to thereby reduce the volume of the other enclosure; a supply of fluid in said other enclosure for transmitting pressures exerted against the diaphragm by the liquid entering through said inlet means; means provided in said housing for recording the pressure of liquid in said one



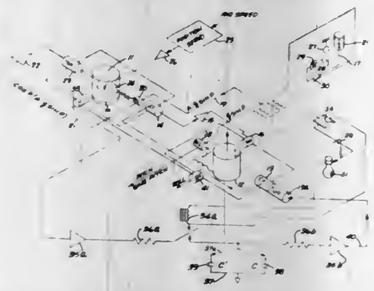
enclosure in response to the pressure transmitted by said fluid; normally closed first one-way valve means provided between said other enclosure and said inlet means for permitting the escape of fluid from said other enclosure in response to a predetermined fluid pressure in said other enclosure; and normally closed second one-way valve means provided between said enclosures for permitting the flow of liquid from said one enclosure to said other enclosure in response to a predetermined difference in pressures prevailing in said enclosures.

3,051,005
AUTOMATIC OVER-SPEED AND UNDER-SPEED TRIP VALVES
Geoffrey John Deverell, Chigwell, England, assignor to The Plessey Company Limited, London, England, a British company
Filed June 14, 1961, Ser. No. 117,242
2 Claims. (Cl. 73—537)



1. A centrifugal switching device, comprising in combination a rotatable shaft, a centrifugal member mounted eccentrically on said shaft for rotation with it about the axis of the shaft and for movement relative to the shaft under centrifugal action, an actuator member operatively connected to said centrifugal member for movement in accordance with the movement of said centrifugal member under such centrifugal action, an abutment member movable with predetermined limits relative to said first actuator member in the direction of movement thereof, a preloaded first spring interposed between said actuator member and abutment member to normally maintain said abutment member at its end position determining the limit of the movement of the abutment member relative to the actuator member in the direction of the centrifugal movement of said actuator member, a first control element operatively connected to said abutment member, second spring means having a preload less than that of said first spring means acting upon said control element and abutment member in opposition to said first spring means so that initial movement of said actuator member under the action of centrifugal force will move said control element against the force of said second spring, stop means limiting the movement of said abutment member in the direction of such movement, a second control element movable by said actuator member under such centrifugal action, a preloaded third spring means acting on the second control element in opposition to such movement, and a further stop means limiting the movement of the second control element under the action of the third spring means to maintain the second control element spaced from said actuator member until the latter has moved the abutment member to its limit of movement and continues movement under deformation of said first spring.

3,051,006
VERTICAL REFERENCE SYSTEM
James C. Gevas, Newark, N.J., assignor to General Precision, Inc., Little Falls, N.J., a corporation of Delaware
Filed Apr. 6, 1960, Ser. No. 20,291
3 Claims. (Cl. 74—5.41)

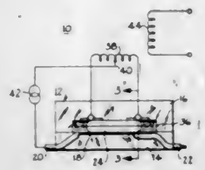


1. In a servo loop wherein a servo means provides driving information to a driven means, including means to temporarily disconnect the servo means from said driven means under error conditions, the improvement therein, comprising in combination, a pair of condensers in the servo loop, mechanical means periodically feeding one or the other condenser with a driving signal supplied by said servo means, and, an amplifier between said condensers and said driven means, whereby, upon releasing said driven means from said servo means for a short period of time, said condensers will continue to provide the last driving signal stored thereon for said short period of time to the driven means.

3,051,007
VERTICAL SENSING DEVICE
Richard C. Remington, Pompton Plains, N.J., assignor to General Precision Inc., Little Falls, N.J., a corporation of Delaware
Filed Sept. 26, 1960, Ser. No. 58,545
7 Claims. (Cl. 74—5.47)

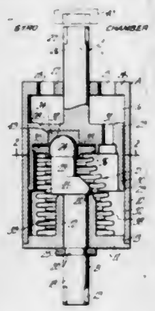
1. A gravity responsive device adapted to erect a gyroscope, comprising a tiltable hermetically sealed housing, said housing being tiltable relative to the longitudinal axis of the fluid chamber, a fluid chamber within said housing, having fluid by-pass means on either side thereof, conductive fluid means within said fluid chamber, a bubble within said fluid chamber, said fluid chamber

being in the form of multiple parallel-faced connected cavities, said bubble extending through substantially the entire height of the fluid chamber, a pair of electrodes within said housing axially spaced along the longitudinal axis of said fluid chamber and in operative contact with said bubble, a third electrode within said housing in operative contact with said bubble and spaced from said pair of electrodes by said fluid chamber, said electrode



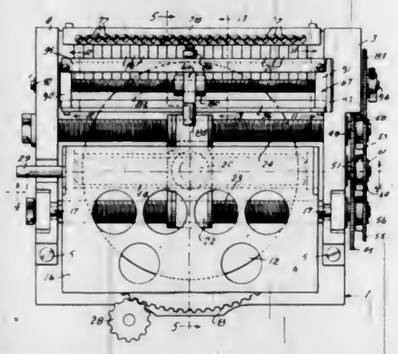
and bubble combination being adapted to indicate the angular displacement of the housing relative to the nominal position thereof regardless of the position of the electrodes relative to the bubble, a torque motor coupled to each of said electrodes and responsive to a differential current flow through said fluid means and between said electrodes, wherein the current flow is proportional to the angle of tilt of said housing.

3,051,008
HERMETICALLY SEALED ROTARY DRIVE COUPLING
Victor E. Hamren, Los Angeles, Calif., assignor to Mech-Metal Ironics, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 22, 1960, Ser. No. 57,743
16 Claims. (Cl. 74—18.1)



1. A hermetically sealed shaft coupling of miniature proportions having length and diameter dimensions within a range of ½ inch maximum for transmitting rotation from an externally operable shaft through the wall of a sealed casing to a driven part sealed within said casing, said coupling comprising: a housing including a tubular barrel having an inner end member provided with a central bearing part, and a cap secured and sealed to the outer end of said barrel and having a central bearing; a seal unit comprising a coupling part having a socket open toward said outer end cap, and a bellows having a wall film of substantially uniform tissue thinness in the range of between .005 inch maximum and .0002 inch minimum, said film being of chemically deposited metal within the group including nickel, nickel phosphorus alloys, cobalt, and cobalt-phosphorus alloys, and said bellows having its inner end secured and sealed to said coupling socket and its outer end secured and sealed to said outer end cap; an externally operable drive shaft unit including a shaft journalled in said cap bearing and a crank on the inner end of said shaft, said crank being pivotally engaged in said coupling socket; and a driven shaft unit comprising a shaft journalled in said bearing part and extending into the inner end portion of said housing, and means, on the inward end of said driven shaft unit, having a rotary drive-receiving connection with said coupling part, said bellows and coupling part cooperatively sealing said drive shaft and its crank in external relation to the space around the bellows within said housing.

3,051,009
COMPENSATED INTEGRATOR
Edwin H. Mernyk, Old Bridge, N.J., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Feb. 6, 1961, Ser. No. 87,264
12 Claims. (Cl. 74—198)

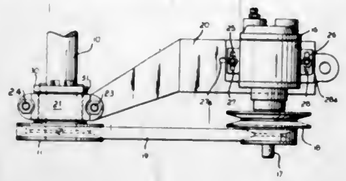


1. In a mechanical integrator having a base, a pair of spaced parallel supporting brackets secured to said base and extending outwardly therefrom, a disk rotatably mounted on said base between said brackets, a roller the rotation of which represents the output of said integrator rotatably mounted between said brackets with the axis thereof disposed perpendicular to and intersecting the axis of said disk, lead screw means rotatably supported by and between said brackets with the axis thereof disposed parallel to the axis of said roller, a carriage mounted on said lead screw means for back and forth movement radially of said disk, and a pair of contacting balls carried by said carriage with one of said balls engaging said disk and the other of said balls engaging said roller, that improvement which comprises; a mechanical differential having a spider shaft with a spider secured thereon, a pair of spaced similar bevel gears rotatably mounted on said spider shaft one on each side of said spider, and a pair of pinion gears carried by said spider in mesh with each of said bevel gears, a first gear train connected to said spider shaft through which said spider shaft is rotated, a second gear train interposed between one of said bevel gears and said lead screw means through which said lead screw means is rotated, and adjustable compensating means connected to the other of said bevel gears by which the rotation of said lead screw means is automatically advanced or retarded in accordance with known errors in the output of said integrator.

3,051,010
SPEED CHANGING ASSEMBLY FOR POWER TAKEOFF SHAFTS
Oscar C. Blomgren and Oscar C. Blomgren, Jr., both of 1303 Morrow Ave., North Chicago, Ill.
Filed July 15, 1960, Ser. No. 43,094
12 Claims. (Cl. 74—217)

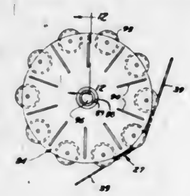
2. A speed changing assembly for splined power takeoff shafts including a pulley having an internally splined fitting for receiving a splined power takeoff shaft therein,

means for preventing axial displacement of said pulley relative to its splined driving shaft, said pulley having a boss on one side thereof and an arm journalled on said boss for relative rotation of said boss and arm, means preventing axial displacement of said arm on said boss,



said arm extending radially from said boss and a second pulley rotatably supported on said arm and aligned with said first named pulley, a drive belt extending around both pulleys, and means carried by said arm for preventing swinging movement of said arm on said boss.

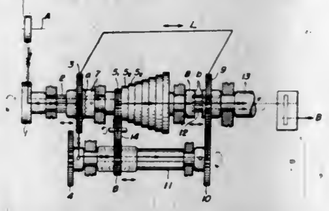
3,051,011
CONVEYOR TURN WHEEL CONSTRUCTION
Donald D. Zebley, Box 7176, Branwood St., Greenville, S.C.
Original application Apr. 1, 1957, Ser. No. 649,837, now Patent No. 2,869,709, dated Jan. 20, 1959. Divided and this application Jan. 20, 1959, Ser. No. 787,864
1 Claim. (Cl. 74—243)



In a trolley conveyor, a support, a turn wheel loosely journaled thereon adapted to receive a movable cable carrying an idler series of equally spaced load supporting conveyor assemblies, said wheel consisting of a pair of centrally apertured discs, a supporting hub secured to portions of said discs defining their apertures, intermediate annular portions of said discs converging and secured together, said annular portions terminating in a pair of outwardly projecting parallel spaced peripheral flanges defining an annular recess, and a series of spaced pulleys partially nested within said recess and journaled between said flanges, the pulley axes being parallel to the wheel axis, portions of spaced pairs of said pulleys extending outside the edges of said flanges being spaced apart at least half the pulley diameter adapted to cooperatively receive a conveyor assembly therebetween, as said cable engages around a plurality of said pulleys, said pulleys being spaced to compensate for slight variations in spacing of said conveyor assemblies on said cable.

3,051,012
SHIFTING MECHANISM BETWEEN INCH AND METRIC SYSTEM THREADING FEEDS FOR SCREW THREAD CUTTING ON MACHINE TOOLS
Fumio Sato, Nagoya-shi, Japan, assignor to Kabushiki Kaisha Okuma Tekkosho, Kita-ku, Nagoya-shi, Japan, a corporation of Japan
Filed July 7, 1960, Ser. No. 41,382
6 Claims. (Cl. 74—354)

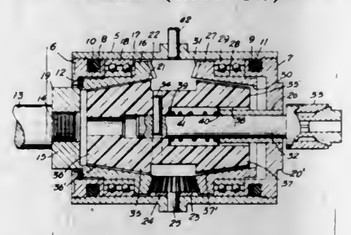
1. A shifting mechanism for converting between the inch and metric system and enabling the selective cutting of threads of P_1 threads per inch and of threads having a pitch of P_2 millimeters, said mechanism comprising: a first driveshaft, gear means on the first driveshaft and rotatable therewith, a second driveshaft, an engaging gear on the second driveshaft and rotatable therewith, the latter said gear being engaged in driving relation with the gear means, a first pair of gears coaxial with respect to said first driveshaft, a second pair of gears on said second driveshaft, means coupled to said first pair of gears for sliding the same axially and in unison between



a first and second position, one of said gears from each of the pairs being engaged in driving relation in each of said positions, and clutch means alternately engaging a respective one of the gears of the first pair in driving relation with said driveshaft in response to the axial displacement of said first pair of gears, the gear means and said engaging gear on the second driveshaft including teeth in the ratio of Z_1/Z_3 the pair of gears on the first and second driveshafts including teeth in the ratio of Z_1/Z_2 respectively, the teeth being in the following relationship

$$\left(\frac{Z_1}{Z_2}\right)^2\left(\frac{Z_3}{Z_1}\right)^2=\frac{25.4}{P_1P_2}$$

3,051,013
FORWARD AND REVERSE FRICTION DRIVE TAPPING ATTACHMENT
Asher I. Zagar, Brooklyn, N.Y., assignor to Ettco Tool & Machine Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed Aug. 22, 1958, Ser. No. 756,658
1 Claim. (Cl. 74—379)



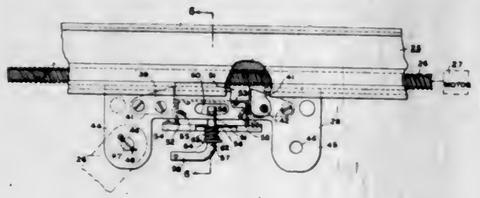
A tapping attachment comprising a tubular casing having a one diameter bore, a forward drive member rotatable in and protruding from one end of the casing, means for attachment of a drive spindle with said member, a reverse drive member rotatably mounted entirely within the other end portion of the casing, both members having, on adjacent surfaces, conical bores, the bore of the first member extending the major portion of the length thereof, the bore of the second member extending the full length thereof, terminal ends of said adjacent surfaces having bevelled gears meshing with a plurality of bevelled idler pinions mounted on and spaced circumferentially in said casing, a one-piece plastic clutch element arranged within the casing and the conical bores of both of said members, said element having conical ends arranged and maintained within and operatively engaging the conical bores of said members in the forward and reverse drives of the attachment, the ends of the bore of the casing being

threaded, end plates in threaded engagement with said threaded ends to form closures for the ends of the casing, said end plates within the casing having annular grooves in the periphery thereof, O-sealing rings arranged in the grooves of said plates and seating in the bore of said casing, both members being spaced from the bore of the casing and said end plates for free rotation therein, one end plate having a bearing sleeve extending into the casing and said element, tensional means arranged entirely within said element and operatively engaging said bearing sleeve and said element in normally supporting one conical end of said element in operative engagement with the forward drive member, said element including a shaft portion supported in said bearing sleeve, anti-friction bearings arranged between said members and the casing for free rotation of both of the members in said casing, and said anti-friction bearings being of the self-alining type.

3,051,014
SCREW AND NUT MECHANISM

Richard D. Houk, Alliance, Ohio, assignor to Consolidated Electronics Industries Corporation, a corporation of Delaware

Filed July 30, 1959, Ser. No. 830,579
5 Claims. (Cl. 74—424.8)



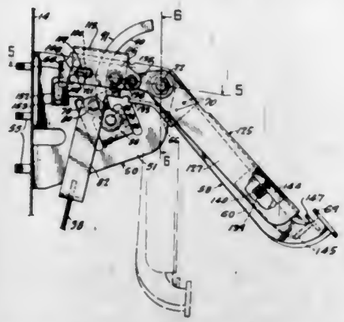
3. In an overhead garage door operator, the provision of drive mechanism including a support channel, a drive screw in said channel having an exposed arcuate segment, means to rotate said screw, longitudinal guide means in said channel, a carrier, means on said carrier riding in said guide means to permit longitudinal movement of said carrier relative to said channel, a link connected to said carrier and adapted for connection to a door, a partial nut movably carried in said carrier and adapted to mesh with said drive screw, an operating rod loosely carried in said carrier, a cam pin connected to said operating rod, an abutment on said operating rod, a cam follower aperture in said carrier, and a compression spring surrounding said operating rod and acting between said abutment and said partial nut, whereby said operating rod may be moved against the urging of said spring and rotated into a first position to have said cam pin engage said cam follower aperture to resiliently urge said partial nut against said drive screw, and whereby when said operating rod is rotated into a second position said spring is released to permit said partial nut to move away from said screw whereby said entire carrier may longitudinally move without connection to said drive screw.

3,051,015
MECHANISM CONTROL

Robert S. Hinsey, Toledo, Ohio, assignor, by mesne assignments, to Van Norman Industries, Inc.

Filed June 28, 1956, Ser. No. 594,595
6 Claims. (Cl. 74—529)

1. A device of the character disclosed, in combination, a support having a uniplanar portion, a foot operated lever fulcrumed upon the uniplanar portion of the support, a foot pad secured to the lever, said support being formed with a laterally offset portion, an arcuately shaped arm connected with said offset portion, said lever having a portion straddling said arm, detent means associated with the lever and engageable with the arm for retaining the lever in adjusted positions, means for connecting the lever with mechanism to be operated, a control member

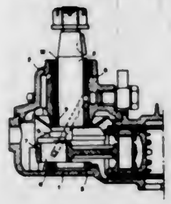


for the detent means pivotally supported for movement relative to the lever, said control member having a foot pad portion laterally offset from the lever, and resilient means normally biasing the detent means toward lever retaining position.

3,051,016
AIR COMPRESSORS FOR PRESSURE AIR PLANTS, PARTICULARLY FOR VEHICLES

Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm

Filed July 7, 1959, Ser. No. 825,596
Claims priority, application Italy July 9, 1958
2 Claims. (Cl. 74—595)



1. An air compressor assembly for pressure air plants including in combination, an air compressor housing, a driving shaft arranged in the side of said housing, a cantilever crank pin on the end of said driving shaft within said housing, a connecting rod rotatably connected to said crank pin, a flat contact surface on the inner surface of said housing in contact with the end of said crank pin and the end of said connecting rod connected to said crank pin, said contact surface preventing axial movement of said driving shaft and lateral movement of said connecting rod in one direction, a shoulder carried by said housing, and a shoulder on said driving shaft in contact with said first mentioned shoulder preventing axial movement of said driving shaft and lateral movement of said connecting rod in the other direction.

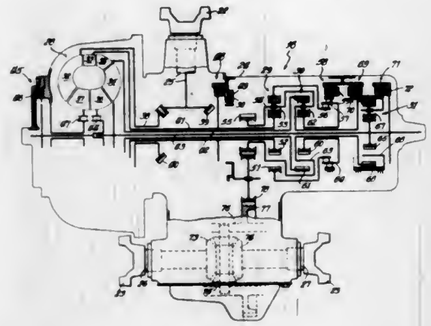
3,051,017
REAR MOUNTED TRANSMISSION

George E. Flinn, Muncie, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Mar. 27, 1958, Ser. No. 724,399
3 Claims. (Cl. 74—677)

1. In a transmission, the combination of an input member, an output member, a hydraulic torque converter having an impeller or driving element driven by said input member and a stator or reaction element and first

and second turbine or driven elements, a one way brake for said stator for preventing reverse rotation of the stator, first and second planet gear sets each having a first element thereof connected to said output member, means for connecting said first turbine element to a second element of said first gear set, a one way brake for a third element of said first gear set for providing a reduced speed forward drive power train from said first

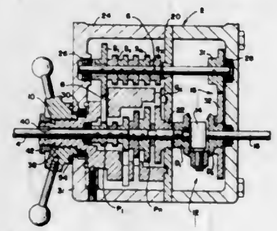


turbine element to said output member, means for connecting said second turbine element to a second element of said second gear set, a brake for a third element of said second gear set for providing a reverse drive through said second gear set from said second turbine element to said output member, and a friction clutch for locking together two elements of said second gear set for completing a direct drive from said second turbine element to said output member.

3,051,018
MULTI-SPEED PRECISION GEAR BOX

Edward Kenneth Rowley, Beloeil Station, Quebec, and Donald Corey West, Beloeil, Quebec, Canada, assignors to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada

Filed July 21, 1960, Ser. No. 44,366
11 Claims. (Cl. 74—681)

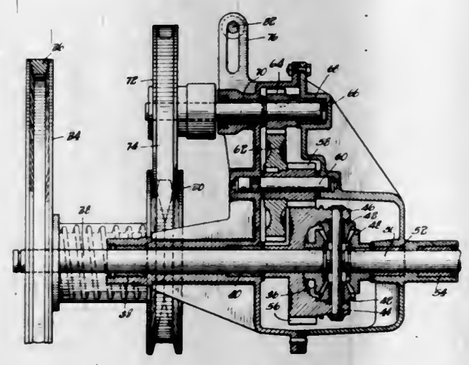


1. A transmission system comprising an input shaft, a plurality of primary gears fixed on said input shaft, a secondary shaft, a plurality of secondary gears fixed on said secondary shaft, at least one of said pluralities of gears including gears of different radii, means supporting a plurality of intermediate gears in meshing relation with different ones of said primary gears, means for selectively moving any one of said intermediate gears also into meshing engagement with one of said secondary gears whereby said secondary shaft is driven at a preselected speed, differential gear means including a differential follower gear, means drivingly connecting said secondary shaft to said differential gear means, and an output shaft drivingly connected to said differential follower gear whereby said output shaft is driven at a preselected speed in accordance with the selected movement of one of said intermediate gears into meshing engagement with one of said secondary gears.

3,051,019
VARIABLE SPEED DRIVE

Joseph Seliber, 313 Hibbard Road, Wilmette, Ill.

Filed June 15, 1960, Ser. No. 36,403
6 Claims. (Cl. 74—689)



1. A continuous variable speed drive for use with a single source of rotational energy, said drive including, a pair of spaced supports, a housing pivotedly mounted on said supports, an input shaft rotatably mounted in said housing, drive means drivingly connecting the input shaft to the source of rotational energy, a drive gear drivingly connected to the input shaft within said housing, a planetary gear meshing with the drive gear, a carrier rotatably supporting said planetary gear, a second drive means drivingly connecting the carrier and the source of rotational energy, said second drive means including a belt and continuous variable sized pulley, an output gear meshing with said planetary gear, an output shaft drivingly connected to said output gear, and means for selectively positioning the housing on said supports to determine the effective diameter of said variable sized pulley to regulate the speed of said output shaft.

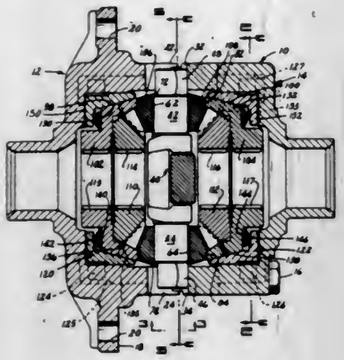
3,051,020
LOCKING DIFFERENTIAL WITH PRESSURE RELIEF DEVICE

Perry B. Hartupee, Dearborn, Mich., assignor to Thornton Axle Inc., Detroit, Mich.

Filed Feb. 16, 1959, Ser. No. 793,471
3 Claims. (Cl. 74—710.5)

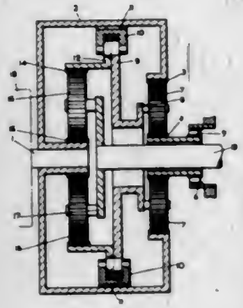
1. A locking differential power transmission for use with a power source comprising, a rotatable case adapted to be rotated about an axis; a pair of side gears one mounted at each side of said case for rotation relative thereto; a spider means disposed in said case; a plurality of pinion gears rotatably disposed on said spider means, the teeth of said pinion gears being in mesh with the teeth of said side gears; inter-engaging cam means connecting said spider means to said case, and operative upon relative rotation of the spider means and case about said axis to provide a force parallel to said axis; a pair of locking members one disposed at each side of said case outward of said side gear and rotatable with said case; a first clutch surface on each of said locking members; a pair of driving members one disposed between each side gear and the adjacent locking member, and adapted to be affixed to a driven shaft; a second

clutch surface on each of said driving members; the application of power from said power source causing said inter-engaging cam means to move said first and second clutch surfaces into engagement and lock the device in straight ahead movement; and a pair of resilient members one disposed between each locking member



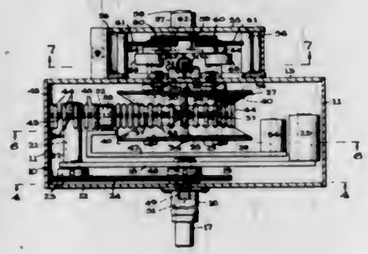
and the adjacent driving member; said resilient members exerting an energizing pre-load between the driving member and the locking member apart from the clutch faces to provide a quick limited lock when the unit is not differentialing; and which resilient members also assist in unlocking the lock provided through the engaged clutch surfaces when said side gears rotate at a speed of rotation different than the speed of rotation of the case.

3,051,021
AUTOMATIC CHANGE SPEED GEARS
Albert Arthur Miller, Esher, England, assignor to Self-Changing Gears Limited, Coventry, England, a company of Great Britain
Filed Oct. 13, 1959, Ser. No. 846,107
Claims priority, application Great Britain Oct. 15, 1958
16 Claims. (Cl. 74—751)



1. An automatic change speed gear, comprising a driving element, a driven element, a step-down transmission train between said driving element and said driven element, said step-down transmission train including a first friction clutch element, a complementary second friction clutch element carried by said driving element, means whereby engagement of said friction clutch elements completes an en bloc connection of said driving element with said driven element, means whereby torque transmitted by said step-down transmission train generates a first force, varying according to said torque and tending to pull said clutch elements out of engagement, and means whereby a second force tends, according to the speed of rotation of said first clutch element, to press said clutch elements into engagement, a portion of said step-down transmission train between the driving element and said first clutch element being a step-down portion, and a portion of said step-down transmission train between said first clutch element and said driven element being a step-up portion.

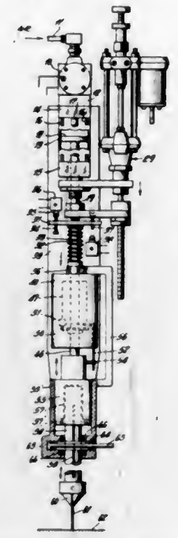
3,051,022
VARIABLE SPEED GEARING
Lee V. Way, Jr., Sumter, S.C.
(306 Firwood Drive, Huron, Ohio)
Filed Apr. 24, 1961, Ser. No. 104,957
5 Claims. (Cl. 74—793)



1. Variable speed gearing comprising supporting means, input and output shafts journaled for rotation upon the supporting means, a stationary sun gear secured to the supporting means near the input shaft, planet gearing connected with the input shaft to turn therewith and operatively engaging the sun gear and orbiting the same and driven thereby and including a constantly turning sprocket wheel, an adjustable pulley and gearing unit secured to the supporting means and held against rotation, said unit comprising a companion pair of conically tapered pulley sections adapted to move axially relative to each other for varying the effective pulley diameter, means connected with said pulley sections to shift them axially toward or from each other, combined bearing and cam elements associated with the pulley sections and being shiftable radially of the pulley sections inwardly or outwardly when the pulley sections are adjusted axially away from or toward each other, a pair of shafts journaled for rotation upon and carried bodily by said bearing and cam elements and shiftable radially therewith, a companion pair of sprocket wheels secured to said shafts to turn and shift radially therewith, a sprocket chain trained about said pulley and gearing unit and the first-named sprocket wheel of the planet gearing and constantly meshing with at least one of said companion pair of sprocket wheels during orbiting of the planet gearing and having parts constantly bearing upon the conical faces of said pulley sections, resilient slack take-up means for said sprocket chain and orbiting with the sprocket chain and planet gearing around said pulley and gearing unit, and gearing operatively interconnecting said pair of shafts with said output shaft.

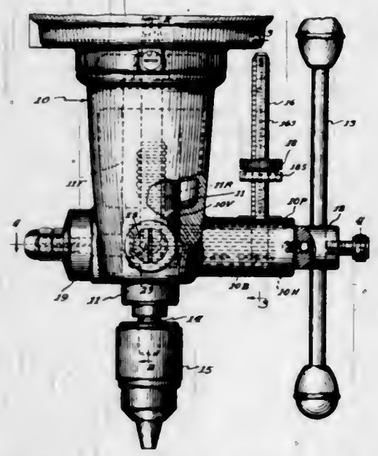
3,051,023
AUTOMATIC DRILL WITH SENSING HEAD
Louis W. Hirsch, 2385 Jerome Ave., New York 38, N.Y.
Filed Sept. 15, 1960, Ser. No. 56,308
4 Claims. (Cl. 77—32.4)

1. An automatic drilling device comprising a mechanically responsive sensing head, a drill operatively associated with said sensing head and responsive to drilling resistance, means for advancing and retracting said sensing head to impart corresponding actuation to said drill and means for imparting continuous rotational movement to said drill, said sensing head including a cylindrical casing, a rod in said casing and projecting therebeyond into contact with said drill, a helical spring surrounding said rod



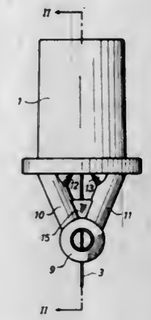
within said casing and a bracket secured to said casing and extending alongside at least a part of said drill, said bracket having an elongated slot therein for the reception of a pin projecting laterally from said drill.

3,051,024
DRILL PRESSES
Russel E. Frushour, Niles, Mich., assignor to Amsted Industries Incorporated, Chicago, Ill., a corporation of New Jersey
Filed Oct. 19, 1960, Ser. No. 63,577
19 Claims. (Cl. 77—34.5)



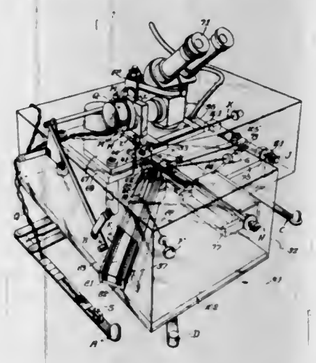
1. In a drill press, a drill press head, a quill linearly shiftable in said head, a spindle rotatably mounted in said quill and movable linearly therewith, a depth-gage rod mounted on said head for linear shifting movement and carrying adjustable stop means for abutment with said head to limit downward shifting movement of said rod, and a feed shaft for said quill rotatably mounted in said head in simultaneous positive driving engagement with both said quill and said rod for shifting said quill and said rod in unison.

3,051,025
SMALL-SIZED DRILLING TOOL FOR THE DRILLING OF EXTREMELY HARD MATERIALS
André Mieville, Lausanne, Switzerland, assignor to Marie-Louise Spira-Klein, Geneva, Switzerland
Filed Aug. 5, 1960, Ser. No. 47,716
Claims priority, application Switzerland Dec. 8, 1959
1 Claim. (Cl. 77—67)



A small-sized drilling tool to be fitted on a spindle and serving for the drilling of extremely hard materials, comprising a body of synthetic material provided with an axial recess at one end, a metal socket fitted centrally in said recess in a permanent manner and adapted to be fitted over the tool spindle, and a drilling wire embedded in the body of synthetic material axially of said recess, including an end projecting out of said body in a direction opposed to said recess and a short inner terminal section opposed to the first mentioned end and extending inside said body at right angles with reference to the axial direction of said recess, a ring of synthetic material lying in a diametrical plane of the body beyond the end of the latter facing away from the recess and through and beyond which the projecting part of the drilling wire extends diametrically, and a V-shaped stay system of synthetic material extending to either side of said projecting part of the wire and connecting said ring with the body.

3,051,026
MICROMANIPULATOR
Harry da Costa, Phoenix, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 19, 1959, Ser. No. 794,391
20 Claims. (Cl. 78—82)



1. Micromanipulator apparatus for use in performing a precise operation on a workpiece of miniature size, said apparatus including in combination, a base, a support plate mounted on said base, a positioning plate on said support plate, bearing means between said plates permitting movement of said positioning plate in the plane thereof means connected to said positioning plate

having first and second cam surfaces disposed angularly with respect to each other, first and second coaxial and independently rotatable cams engaging said first and second cam surfaces respectivley and each having a shape to cause movements of said positioning plate in the aforesaid plane upon rotation of said cams, means biasing said positioning plate and urging said cam surfaces against said cams, and control means coupled to said cams to rotate the same, said control means and said cams providing reduction of control movements so that the resulting movements of said positioning plate will be substantially smaller than the control movements.

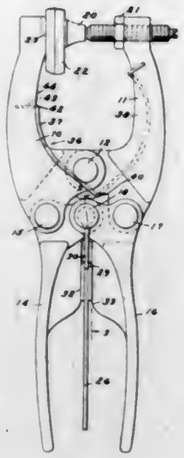
3,051,027
ULTRASONIC WELDING
Arthur Kuris, Riverdale, Lewis Balamuth, Woodside, and Claus Kleesattel, Forest Hills, N.Y., assignors to Cavitron Ultrasonics Inc., New York, N.Y., a corporation of New York
Filed Nov. 16, 1959, Ser. No. 853,172
5 Claims. (Cl. 78—82)



1. An ultrasonic welding tip for use with extremely small elements to be welded comprising a body of relatively large mass adapted to be vibrated at high frequency and low amplitude in a predetermined direction and being symmetrical about the direction of the vibrations, and at least one projection extending from said body and having relatively minute cross-sectional dimensions and an end surface with a small radius of curvature for defining a minute area of contact with elements to be welded, said projection extending at right angles to said direction of the vibration of said body so that said end surface vibrates in said direction and said mass of the body prevents damping of the vibrations of said end surface by contact of the latter with the elements to be welded.

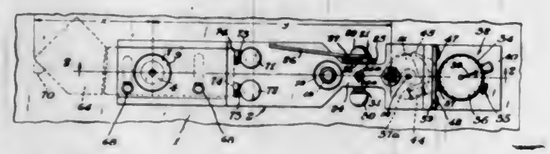
3,051,028
TOGGLE CLAMP OPENING MECHANISM
Ralph E. Kreger, Detroit, Mich., assignor to Detroit Stamping Company, Detroit, Mich., a corporation of Michigan
Filed May 14, 1959, Ser. No. 813,127
1 Claim. (Cl. 81—351)

In a toggle clamp of the type having a pair of jaws pivotally connected by a jaw pivot and a pair of handles each of which is pivoted to one of the jaws and to the other handle at a common handle pivot to form a toggle joint which when locked retains said jaws in closed position; means whereby said toggle may be released and the jaws completely opened by a one-hand operation comprising a toggle release lever and a detachable jaw opening spring adapted, when said toggle joint is unlocked, to drive said clamp jaws to open position and hold them there; said spring having a pair of legs and a substantially straight central portion extending transverse thereto, said central portion having a length in excess of the thickness of said clamp in a direction parallel to and adjacent the jaw pivot thereof, means for detachably connecting said spring to said clamp comprising a notch in the edge of one of the jaws between the jaw and handle pivots thereof, said spring being adapted to be threaded through said notch to place the central portion of said spring in said notch, with one of said spring legs extending outwardly along one face of one clamp jaw and the other spring leg extending outwardly along the opposite face of the other clamp jaw, each of said spring legs having a terminal portion which extends across the clamp jaw



inwardly thereof and into overlapping engagement with the jaw face opposite to that engaged by the leg.

3,051,029
TOOL SUPPORTING APPARATUS
Robert W. Cashman and Anthony Wasco, Jr., Saginaw, Mich., assignors to Saginaw Machine and Tool Company, Saginaw, Mich.
Filed Jan. 11, 1960, Ser. No. 1,772
8 Claims. (Cl. 82—36)

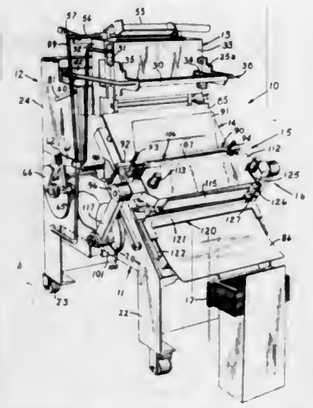


1. Adjustable tool supporting apparatus comprising a base member; a tool supporting member; means mounting said supporting member at a selected distance between its ends on said base member for rotation relative thereto about an axis in either of two opposite directions; manipulatable adjusting means reacting between said base member and said supporting member operable to effect relative rotation of said members in either of said directions about said axis; and indicating means independent of said adjusting means reacting between said base member and said supporting member at a predetermined distance from said axis for indicating the amount of relative movement between said members in either of said directions.

3,051,030
BATTERY GRID CASTING AND TRIMMING METHOD AND MACHINE
Herbert C. Winkel, Watervliet, Mich.
Filed Sept. 27, 1956, Ser. No. 612,501
8 Claims. (Cl. 83—268)

1. In a machine for trimming a battery grid including an inclined track extending downardly, the combination comprising: a first device spaced downwardly from the upper end of said track for releasably engaging and retarding a grid as it moves along said track, said first device including a pressure plate disposed transversely above said track, said pressure plate and said track diverging with respect to each other toward the upper end of the track, said first device also including a stop member

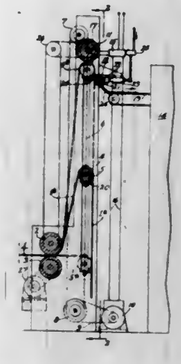
located beyond the lower end of said pressure plate, said stop member having a planar surface extending perpendicular to the upper surface of said track; a second device arranged along said track for receiving and aligning a grid released from said first device, said second device including a pair of parallel, adjacent rolls located adjacent the lower end of the upper portion of said track, the axes of said rolls defining a first plane substantially perpendicular to a second plane passing between said rolls and substantially defined by the upper surface of said track; a third device arranged along said track for receiving a grid released from said second device and for positioning same in a trimming location; a shear arranged to trim a grid held in trimming location by said third device; and actuating means for effecting the retarding,



aligining, positioning and trimming of said grid in a predetermined manner, said actuating means including lift means operable in timed relation to the movement of said shear for reciprocating said pressure plate between one position adjacent said track and another position spaced therefrom a greater distance than the thickness of the grid and for reciprocating said member between one position intersecting said second plahe and another position spaced from said second plane a distance greater than the thickness of the grid, the reciprocation of said pressure plate and said member being synchronized so that said member intersects said second plane when a grid is released from said pressure plate, said actuating means also including drive means for rotating one of said rolls in a peripheral direction away from said first device along said second plane.

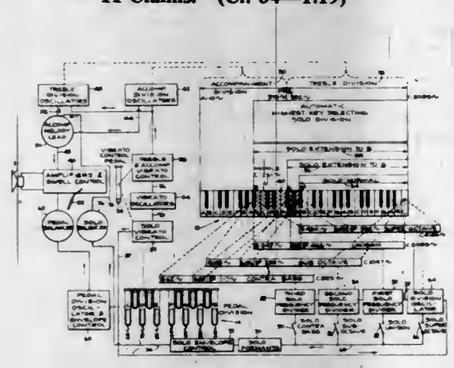
3,051,031
WEB CUTTER BETWEEN TANDEM-ARRANGED WORK CONVEYING MEANS
Claes Allander, Sodra Angby, Sweden, assignor to Aktiebolaget Svenska Fläktfabriken, Stockholm, Sweden
Filed Jan. 7, 1959, Ser. No. 785,442
Claims priority, application Sweden July 12, 1956
2 Claims. (Cl. 83—424)

1. A device for lifting and threading a continuous flexible web onto the uppermost conveyor of a multi-deck drier comprising a pair of cooperating feed rolls disposed at a level below the level of said uppermost conveyor for advancing the web toward said drier at a given rate of advance, lifting means intermediate said feed rolls and said drier comprising a vertically extending guide, a freely rotatable hoisting roll mounted in said guide for vertical movement therein, hoisting means operable after advance of the web to drape over and frictionally engage said hoisting roll to displace said hoisting roll in said guide at a speed substantially one half said given rate of advance of the web from a lower limit position at the level of said feed rolls to an upper limit position at the level of said uppermost conveyor, a drive roll journalled in said guide for rotation about a fixed axis adjacent said upper limit position to frictionally engage the web draped over said hoisting roll into the latter position, drive means for said drive roll to rotate the same at a peripheral speed corresponding to said given rate of advance



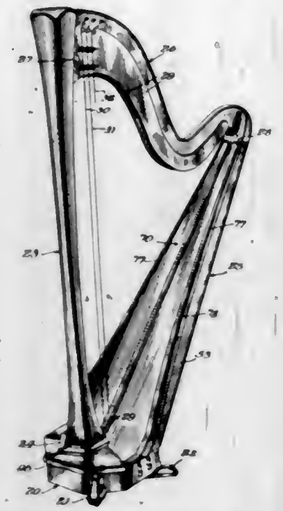
of the web to thereby drive said hoisting roll and advance the web onto said uppermost conveyor, and cutting means at said upper limit position operable upon engagement of said hoisting roll with said drive roll to cut away the portion of the web suspended beyond said drive roll whereby the remaining portion of the web may be threaded onto the uppermost conveyor of the drier.

3,051,032
SINGLE MANUAL DOUBLE COUNTERMELODY ELECTRICAL MUSICAL INSTRUMENT
John M. Hanert, Des Plaines, Ill., assignor to Hammond Organ Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 18, 1959, Ser. No. 800,257
11 Claims. (Cl. 84—1.19)



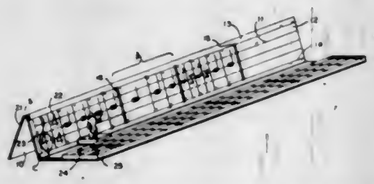
1. In an electrical musical instrument upon which polyphonic chords and a solo melody may be simultaneously produced, a single continuous keyboard having upper and lower portions, a polyphonic tone generating system operated by the lower portion of said keyboard only, a separate polyphonic tone generating system operated by the upper portion of said keyboard only, circuit means providing several different tonal responses for each of the polyphonic sections, means for selecting any of several different tonal responses to be sounded independently by the two polyphonic sections, and means providing an automatic highest key selecting monophonic tone system operated by the upper portion only of said keyboard.

3,051,033
BODY SHELL AND SOUNDING BOX STRUCTURE FOR HARPS
Samuel O. Pratt, Chicago, Ill., assignor to Lyon & Healy, Inc., Chicago, Ill., a corporation of Illinois
Filed May 18, 1959, Ser. No. 813,793
9 Claims. (Cl. 84—265)



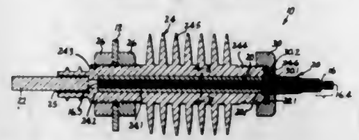
1. In frame structure for a harp, the combination including a sounding box comprising a body shell and a sounding board, said body shell consisting of right and left side panels and a rear panel, said side and rear panels being flat throughout their entire length, said side panels each being connected along one side edge to the rear panel and being connected along their opposite side edge to the sounding board, whereby the side and rear panels and the sounding board form a longitudinal chamber approximately quadrilateral in cross section at all points along the length of the sounding box, said rear panel having a plurality of longitudinally elongated and spaced openings formed therein and which communicate with the chamber, a base for supporting the sounding box, a column also supported by the base and located in front of the sounding board, and neck structure connecting the column and the sounding box at the top end of said elements.

3,051,034
MUSIC TIMING DEVICES
Edward J. Kozak, 3729 Greenway Place, Shreveport, La.
Filed Aug. 3, 1959, Ser. No. 831,212
2 Claims. (Cl. 84—465)



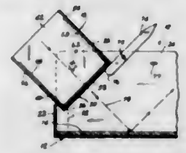
1. A music timing device comprising, a pair of musical staffs similating the bass and treble clefs of a musical score, musical characters in the form of notes and rests adapted for positioning upon said staffs in proper musical relationship, movable measure bars, means for positioning said bars between said notes and said rests to divide the same according to a chosen time signature, an animated conductor positioned between said bass and said treble clefs, means for moving said conductor along between said clefs, means cooperating with said conductor whereby the same is made to move an arm up and down in conducting fashion in the rhythm of the chosen time signature and means also associated with said conductor for producing an audible signal upon approaching a note character in either the bass or treble clef.

3,051,035
FLEXIBLE PYROSCOPES
Andrew A. Root, Shrewsbury, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed May 17, 1960, Ser. No. 29,699
4 Claims. (Cl. 88—1)



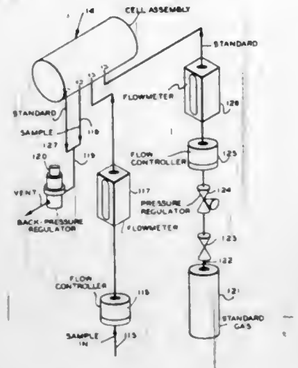
1. A flexible light-transmitting device comprising a light-conducting member of relatively high efficiency said member embodying a multiplicity of light-conducting glass fibers disposed in side-by-side bundled relation, said fibers having respective light-insulating glass coatings; a light-conducting member of relatively high heat resistance; and coupling means securing said members in sequence and in spaced relation to provide a substantially continuous light channel therethrough, said coupling means being secured in heat-transferring relation to said member of high heat-resistance and having external fin means adapted to radiate heat transferred thereto from said member of high heat resistance, said member of high heat-resistance being of minimum selected length for cooperating with said member of high light-conducting efficiency to permit extension of said light channel from an area of high temperature while spacing said member of high light-conducting efficiency a minimum selected distance from said area of high temperature for shielding said member of high light-conducting efficiency from the harmful effects of said high temperature.

3,051,036
SKY SCANNING DEVICE
Charles J. Zone, 2417 Macklind Ave., St. Louis 10, Mo.
Filed Nov. 25, 1960, Ser. No. 71,682
5 Claims. (Cl. 88—1)



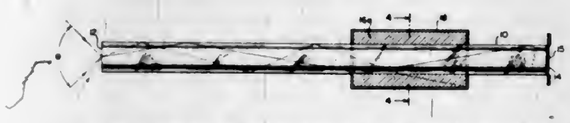
1. A hand operated sky scanning device for viewing objects in the sky comprising a flat base supportable horizontally upon the hand of a viewing individual, a mirror horizontally supported by said base, a pair of side walls extending upwardly from said base and a viewing member pivotally supported by said side walls, such that the line of sight of the viewing member may be angularly adjusted with respect to said mirror, said viewing member having a rear opening fitting over the eyes of an individual viewer and a front opening adjacent said mirror, said viewing member being comprised of a top wall, a bottom wall and a pair of side walls, said walls extending between the side walls of said base and being in movable contact therewith, said walls defining a rear opening fitting over the eyes of a viewer and a front opening looking at said mirror.

3,051,037
DIFFERENTIAL REFRACTOMETER
Arthur B. Broerman, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 26, 1957, Ser. No. 705,311
2 Claims. (Cl. 88—14)



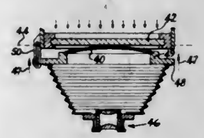
1. Apparatus for measuring the refractive index of a fluid comprising a first plate having a radiation transparent opening therein, a cell assembly having first and second adjacent chambers separated by a second radiation transparent plate, a mirror positioned across one end of said cell assembly, first conduit means communicating with said first chamber to introduce a sample fluid therein, second conduit means communicating with said second chamber to introduce a reference fluid therein, third conduit means communicating with said first and second chambers to withdraw fluids therefrom, an adjustable back-pressure regulator in said third conduit means to maintain a predetermined adjustable absolute pressure in said third conduit means whereby the ratio of pressures and absolute pressures in said first and said second chambers can be maintained at a predetermined constant value, a source of radiation positioned on one side of said first plate, means to direct a beam of radiation through the opening in said first plate, means positioning said cell assembly on the second side of said first plate so that said beam of radiation passes through said chambers and is reflected by said mirror back through said chambers and said opening, means to measure the deviation of the reflected beam which represents the difference between the refractive indices of fluids in said first and second chambers, a first housing connected to said first plate and enclosing said cell assembly, a second housing connected to said first plate and enclosing said source of radiation and said means to measure, means connected to said first housing to maintain the interior thereof at an elevated temperature, and heat insulating means enclosing said cell assembly.

3,051,038
TEMPERATURE MEASURING APPARATUS
John A. Duke, Roslyn, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 21, 1958, Ser. No. 768,578
3 Claims. (Cl. 88—22.5)



1. An apparatus for measuring the temperature of a preselected area of a heated environment, comprising a single radiant energy transmitting rod of a unitary construction, one end of the rod being positioned immediately adjacent the heated environment to receive rays of radiant energy emitted therefrom, a coating surrounding a preselected length of the rod at an opposite cold end portion thereof, said coating having an index of refraction greater than unity and less than that of the rod, the coating being so selected that it will absorb substantially all of the rays of radiant energy that enter the rod which are emitted from portions of the heated environment that are outside the preselected area and to simultaneously allow those rays of radiant energy which are emitted from the preselected area of the heated environment to be transmitted through and out of the cold end of the rod, and a means positioned adjacent the cold end of the rod to measure the radiant energy emitted therefrom.

3,051,039
PRESSURE PLATE FOR A PROJECTION PRINTING APPARATUS
Ralph H. Wight, Pittsburgh, Pa., assignor to J. W. Fecker, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1959, Ser. No. 801,219
3 Claims. (Cl. 88—24)

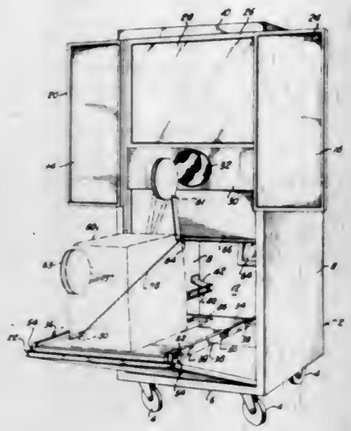


1. A pressure plate for use with a projection printer or the like for holding a piece of flexible photographic sheet material in a flattened condition in engagement with a flat face of a rigid supporting plate of said printer during exposure thereof, said pressure plate being formed of thin transparent material so as to transmit image-forming light rays with a minimum of astigmatism and distortion therethrough, said pressure plate being relatively thin in comparison to its length and width, and having front and rear surfaces in generally parallel relation to each other, and being convexly spherically curved relative to the photographic sheet material to be engaged thereby, said pressure plate having a relatively long radius of curvature of a predetermined value ranging between approximately 200 and 800 inches, whereby when one of said plates is moved toward the other while photographic sheet material is disposed therebetween, the convex surface of said pressure plate will initially engage the photographic sheet material near the center of the image area thereof and will urge same into engagement with the supporting plate, the thickness of said pressure plate relative to its length, width and radius of curvature being such as to allow, as said plates are thereafter urged toward each other, a flexing of said pressure plate and an increase in the area of said sheet material being engaged and flattened thereby.

3,051,040
PROJECTION CABINET
Hubert J. Davis, 143 Carolina Ave., Portsmouth, Va.
Filed Apr. 3, 1959, Ser. No. 803,991
5 Claims. (Cl. 88—24)

1. A projection cabinet comprising, a casing construction, a viewing screen mounted at one side of said casing construction with its viewing surface exposed to view from the side of the cabinet construction and with the other surface exposed for projecting a light beam thereon, a plurality of mirrors providing a reflecting and enlarging path for a light beam from a first mirror at the lower portion of said cabinet construction upwardly in zigzag

fashion and onto said other surface of said screen, a sliding platform which is adapted to support a projector in a position to project a light beam onto said first mirror and thence along said path, a collapsible track assembly providing support for said platform and permitting a projector to be moved to and from said first mirror whereby said projector is moved in between a projecting position outside of said cabinet construction



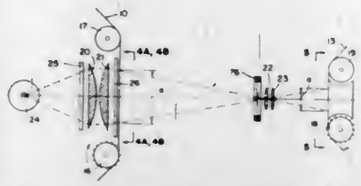
and a nested position adjacent said first mirror and within said cabinet construction, and a door hinged along its bottom edge to the lower portion of said cabinet construction and adapted to provide support for said track assembly and said platform when said door is in its open position, said door being effective to close the lower portion of the cabinet construction when said platform is moved into said cabinet construction.

3,051,041
IMAGE PROJECTION
Ernest Henry Lehmann, Rochester, N.Y., and William David Wright, London, England, assignors to Xerox Corporation, a corporation of New York
Filed May 25, 1959, Ser. No. 815,475
5 Claims. (Cl. 88—24)



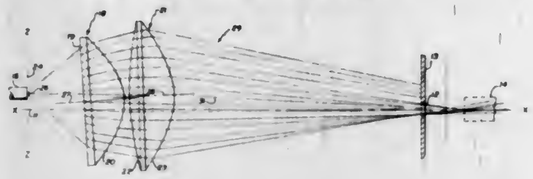
1. In projection apparatus having a light source, a condenser, a specular reflecting surface bearing a light diffusing pattern of material, a projection lens and a viewing screen and in which the elements are arranged to pass the light from said light source through said condenser to the specular reflecting surface and specularly back from the specular reflecting surface through said lens and to said viewing screen and in which said projection lens is positioned relative to said specularly reflecting surface and to said screen to focus said specularly reflecting surface onto said screen, the improvement comprising positioning a converging lens adjacent to and across said specular reflecting surface so that light from said condenser passes through said converging lens to said specular reflecting surface and is then specularly reflected back through said converging lens to said projection lens and to said viewing screen.

3,051,042
METHOD OF RE-RECORDING A SOUND RECORD LINE AND APPARATUS FOR RE-RECORDING A SOUND RECORD LINE
John A. Maurer, New York, N.Y., assignor to The Kalart Company Inc., Plainville, Conn.
Filed May 28, 1959, Ser. No. 816,608
16 Claims. (Cl. 88—24)



1. A method of recording on a carrier a sound record area in the form of an array of parallel adjacent sound record lines, said method comprising the steps of providing a first carrier having recorded thereon a linear continuous sound record line and a second carrier sensitized to receive a recording for forming said array on the second carrier, re-recording a predetermined section of said continuous record line upon said second carrier, moving said first carrier through a predetermined distance in the direction of the continuous record line thereon and moving the second carrier transversely of the section recorded thereon through a predetermined distance to place both carriers in position for the recording of a second section on the second carrier to duplicate section by section the continuous recording on the first carrier in the form of parallel sections on the second carrier.

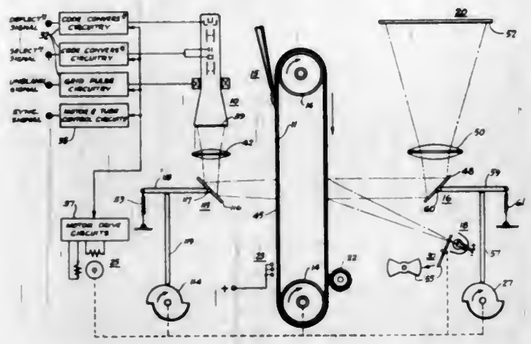
3,051,043
PROJECTION SYSTEM
Garry V. Miller, 257 Cross St., Salinas, Calif.
Filed Aug. 31, 1959, Ser. No. 836,987
4 Claims. (Cl. 88—24)



1. In a picture projector: means providing a carbon arc with a carbon end as a source of light, first and second condenser lenses for such light, each lens having its individual axis noncoaxial of the other; a projecting lens system; and a film aperture plate having an aperture between said lenses and said system; said system providing an optical axis passing thru the center of said aperture; the center of said carbon end and all said axes being coplanar; and said carbon center and the axes of said condenser lens being unilateral of said optical axis, whereby light from said carbon end will fall asymmetrically on said aperture.

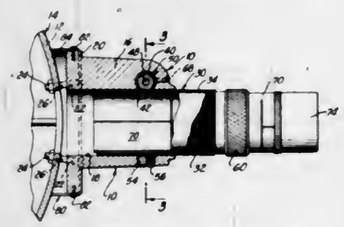
3,051,044
RECORDING AND PROJECTION SYSTEM
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Sept. 9, 1959, Ser. No. 838,973
3 Claims. (Cl. 88—24)

1. The combination comprising: a stationary cathode ray tube having a faceplate; means for producing a complete visual display on said faceplate; a xerographic recording system, said system comprising a continuously moving endless belt clad with a photoconductive material; means for simultaneously recording all elements of said complete visual display upon said belt in the form of a latent electrostatic image which is stationary with respect to said continuously moving belt, said means comprising movable optical unit means for causing said complete display to be projected onto said continuously moving belt so that the image projected upon said belt moves at the same speed as said belt thereby providing no relative movement between said belt and said projected image;



means for developing said latent electrostatic image upon said belt by xerographic methods to produce a visible image corresponding to said complete display; and means for projecting said developed visible image from said moving belt onto a stationary viewing screen, said means comprising second movable optical unit means for causing said complete visible image to appear as a stationary projected image upon said screen, whereby the complete display that appeared on said faceplate of said tube is reproduced in its entirety on said screen.

3,051,045
EYEPIECE FOCUSSING MOUNT
Louis J. Misuraca, 1359 Romulus Drive, Glendale, Calif.
Filed July 10, 1959, Ser. No. 826,214
1 Claim. (Cl. 88—32)



In an eyepiece mount for use in conjunction with a telescope, the combination of: a housing having an elongated axial bore therein and also incorporating a transversely oriented bore in communication with said axial bore, said housing having a flat mounting flange at one extremity with a circular perimeter; an eyepiece carriage of cylindrical configuration mounted for axial movement in said bore and having a continuous helical rack formed upon its external surface and in encompassing relationship therewith; a pinion mounted in said housing in said transversely oriented bore for engagement with said rack whereby rotation of said pinion in said transverse bore will result in longitudinal transposition of said carriage in said axial bore and whereby such transposition may concurrently or separately be attained by rotation of the rack itself; and a sheet metal mounting strip bent into conformity with the circular perimeter of said flange and secured thereto, said strip having arcuate recesses in one edge thereof conforming to the external configuration of a telescope upon which said housing is mounted.

3,051,046
BINOCULARS AND OPTICAL SYSTEM THEREFOR
Kenneth B. Thompson, Sierra Madre, Calif. (20660 W. Pine Canyon Road, Lake Hughes, Calif.)
Filed June 16, 1958, Ser. No. 742,183
6 Claims. (Cl. 88—33)

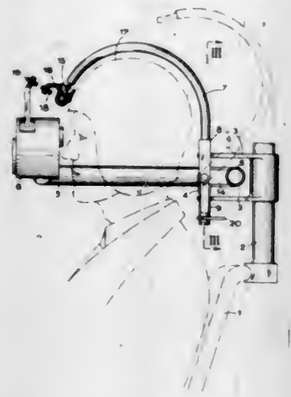


1. A binocular comprising: an enclosure member havtwo sides, one of said sides being open and one of said sides being closed, a pair of tracks at the closed side of said housing, a cover member for closing the said open side, said cover member having four apertures therein which are spaced from each other, said apertures being provided in pairs, the members of each pair being spaced one above the other, a pair of lens housings, each comprising a face adapted to bear against said cover member, a pair of overhanging flanges adapted to engage said tracks, so as to hold the cover member against the enclosure member, and two apertures which are generally aligned with a respective pair of apertures on the cover member when the lens housing engages the enclosure member, a retainer having a generally triangular configuration defining an opening, a rim overhanging a part of said opening, a backing member having a cavity therein, said backing member being adapted to be engaged by said retainer, said retainer and backing member being adapted to be mounted to each lens housing, a retrodirective reflector held in each said backing member by the said retainer, a deflecting reflector facing the apertures and including an odd number of planar reflecting surfaces which are all normal to a reference plane and which are successively impinged upon by the light rays from the field of view, said reflecting surfaces being so disposed and arranged that the deflecting reflector has the angular deflecting properties of a planar mirror, an objective lens in one of the apertures of each of the lens housings between the deflecting reflector and the retrodirective reflector, and an eyepiece system disposed in each of the other apertures in the lens housing facing the deflecting reflector.

3,051,047
DEVICE FOR THE SUSPENSION OF A TELESCOPE ON A VEHICLE
Jean Fieux, Paris, France, assignor of one-half to Societe des Forges et Ateliers du Creusot, Paris, France, a company of France
Filed Dec. 15, 1959, Ser. No. 859,703
Claims priority, application France Dec. 23, 1958
8 Claims. (Cl. 88—36)

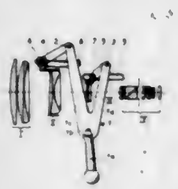
3. A device for the suspension and pointing of a telescope on a vehicle having an observer's seat which is subject to vibration as in a helicopter, comprising a bracket fixed to said seat, a telescope, an arm rigidly connected to said telescope, a joint having two axes of free rotation with respect to said bracket between said bracket and said arm, one axis for bearing and the other axis for elevation, said axes intersecting at a point, said arm and said telescope being balanced in substantially neutral equilibrium about the center of said joint, an eye-piece for said telescope with space between said eye-piece and

said joint for the head of the observer using said telescope, a brace connected to the observer's head, articulation members for said brace permitting movement of the observer's head during use of said telescope and connecting means between said brace and said telescope, said



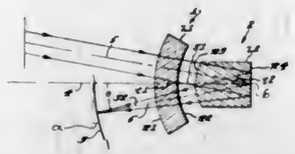
brace being attached to said bracket through said articulation members, said members having two axes of free rotation, one axis for bearing and the other axis for elevation, said last named axes intersecting at a point, said second point being coincident with said first point.

3,051,048
MECHANISM FOR RELATIVELY DISPLACING THE COMPONENTS OF OPTICAL OBJECTIVES
Herbert Mahn, Bad Kreuznach, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed Mar. 24, 1960, Ser. No. 17,338
Claims priority, application Germany Apr. 22, 1959
5 Claims. (Cl. 88—57)



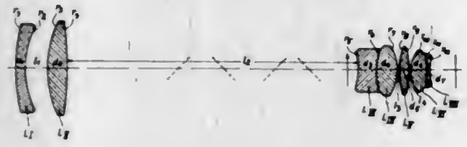
1. In an optical objective system, in combination a plurality of movable components, a lever having a fixed fulcrum, a pitman articulatedly linking one of said components with a point of said lever relatively remote from said fulcrum, a control element swingable about a fixed pivot spaced from said fulcrum, first link means joining said element with a portion of said lever relatively close to said fulcrum, first guide means constraining said one component to a motion along a generally rectlinear path, said first link means having a dead-center position whereby a unidirectional swing of said element is converted into a reciprocating motion of said one component along said path, second link means connecting another of said components with said element for unidirectional displacement by a unidirectional swing of the latter, and second guide means constraining said other component to generally rectilinear motion in line with said path, said control element being provided with a pair of rigidly interconnected arms having free extremities respectively secured to said first and second link means.

3,051,049
CATADIOPTRIC OBJECTIVE
Walter R. Linke, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 2, 1959, Ser. No. 796,484
8 Claims. (Cl. 88—57)



1. In a catadioptric objective, a substantially plano reflective surface, a lens component having a convex refractive surface of a radius equal to the axial distance of the refractive surface from the reflective surface, and a film plane positioned completely to one side of the longitudinal axis of the objective and tilted slightly relative to the normal of the optical axis of the objective.

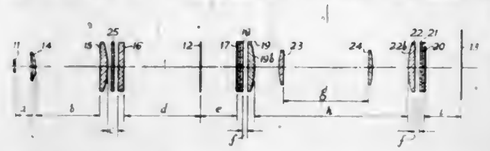
3,051,050
BINOCULAR LENS SYSTEM
Horst Kohler, Heidenheim (Brenz), Germany, assignor to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany
Filed Apr. 30, 1959, Ser. No. 810,183
Claims priority, application Germany May 2, 1958
1 Claim. (Cl. 88—57)



In an optical system for use in direct vision telescopes without image inverting glass prisms and in binoculars having surface mirror image erecting systems located between an objective and a collective wide-angle eyepiece covering a subjective angular field of at least 50° said eyepiece being of the well known form comprising two collective outer cemented doublet components standing on either side of a collective simple lens or lens component, the said objective consisting of two single lenses of opposite refractive power separated by an air space, the dispersive lens of which being bent into meniscus form convex towards the object side and located on the object side in front of the collective lens, and said air space being of the form of a meniscus-shaped air lens turning its concave side towards the image side and having an axial thickness between 3% and 10% of the objective focal length, the Abbe-ν number of the glass of said dispersive lens being chosen for an amount of at least 20 lower than that of the glass of said collective lens in order to produce a negative chromatic difference of magnification for compensating, in the absence of any image inverting glass prism between eyepiece and objective, for the chromatic difference of magnification caused by said collective wide-angle eyepiece.

3,051,051
OPTICAL JUSTIFYING MEANS
John Henry Jeffree, London, England, assignor to CAPS Limited, London, England
Filed July 7, 1959, Ser. No. 825,524
Claims priority, application Great Britain July 11, 1958
7 Claims. (Cl. 88—57)

1. Optical means for justifying lines of characters to be projected onto a surface, said optical means consisting of an imaging lens system which is disposed between the line of characters to be justified and the said surface and comprises two similar series of cylindrical lenses of substantially identical form and focal length which have their axes parallel to the length of the line of characters and together image the line of characters on the said surface in the direction of line height, and between the said two



series of cylindrical lenses, a third series of cylindrical lenses which have their axes perpendicular to the length of the line of characters and image the line in the direction of line length, at least part of the third series of cylindrical lenses being movable towards or away from the line of characters to vary the magnification in the direction of the length of the line only.

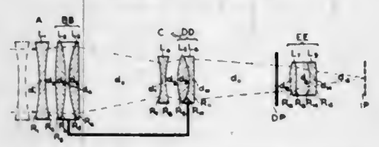
$b_1=d_{3,4}-d_{2,3}+d_{1,2}$
$b_2=-d_{3,4}d_{2,3}+d_{3,4}d_{1,2}-d_{2,3}d_{1,2}+f_3^2+f_2^2$
$b_3=-d_{3,4}d_{2,3}d_{1,2}+d_{1,2}f_3^2+d_{3,4}f_2^2$
$c_1=-d_{2,3}+d_{1,2}$

and further satisfying the relationship

$$R_f=(b_3+b_2+b_1)/b_3$$

where R_f is the varifocal range; said focal lengths f_1 and f_3 being different from each other with the larger focal length equaling substantially 1.03 to 1.20 times the smaller focal length.

3,051,052
VARIFOCAL LENS SYSTEM WITH FOUR POINTS OF EXACT IMAGE SHIFT COMPENSATION
Leonard Bergstein, 1583 Lincoln Place, Brooklyn, N.Y.
Filed Aug. 31, 1959, Ser. No. 837,032
5 Claims. (Cl. 88—57)



1. A varifocal optical lens system comprising four air-spaced components including a movable first component at the image side of the system, a stationary second component ahead of said first component, a movable third component ahead of said second component, and a stationary fourth component ahead of said third component, the refractive powers of said components being of alternate sign; and means for axially displacing said first and third components at the same rate with respect to said second and fourth components; said system having an image distance x, measured between an image plane and the secondary focal point of said first component, equal to x_0+z for four predetermined values z_1, z_2, z_3, z_4, of a variable z representing the extent of displacement of said movable components from a reference position toward the image side of the system, x_0 being a constant; said image distance being increased by $\pm y$ for other values of y where y is an image deviation varying as a fourth-order polynomial of z according to the equation

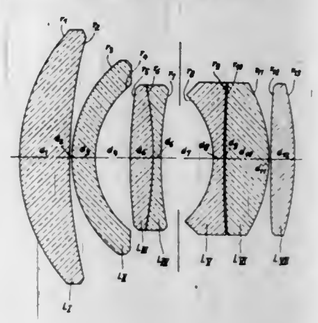
$y=\frac{z^4+a_1z^3+a_2z^2+a_3z}{z^3+b_1z^2+b_2z+b_3}$, having the roots z_1, z_2, z_3 and z_4

the coefficients a_1 to a_3 and b_1 to b_3 of said polynomial satisfying a set of three equations

$$a_1=b_1-x_0$$
$$a_2=b_2-x_0b_1+f_4^2$$
$$a_3=b_3-x_0b_2+f_4^2c_1$$

the values of b_1 to b_3 and c_1 being given in terms of the principal focal lengths f_1 to f_3 of said first through third components and of the interfocal spacings $d_{1,2}$ to $d_{3,4}$ of all of said components, measured from the secondary focal point of any higher-order component to the primary focal point of the nearest lower-order component, by the expressions

3,051,053
PHOTOGRAPHIC OBJECTIVE
Guido Johannes Berger, Heidenheim (Brenz), Wurttemberg, Germany, assignor to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany
Filed Oct. 5, 1959, Ser. No. 852,158
Claims priority, application Germany Oct. 10, 1958
1 Claim. (Cl. 88—57)

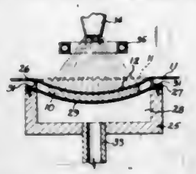


A photographic objective of the Gauss type comprising two collective outer components enclosing two dispersive meniscus-shaped components concave toward the diaphragm which is located between said dispersive components, the absolute values of the radii of the concave surfaces of said two dispersive components lying between $0.18\cdot f$ and $0.40\cdot f$ and the axial separation between said concave surfaces being greater than the arithmetic mean of the absolute values of the radii of these surfaces but smaller than twice said arithmetic mean, and a further meniscus-shaped dispersive component located between said two first named dispersive components in the direction of the incoming light rays in front of and concave towards said diaphragm, said further dispersive component consisting of two lenses of opposite refractive power cemented together the cemented surface having converging power and being convex towards the diaphragm, the Abbé-ν-number of the glass of the dispersive lens of said further dispersive component being smaller than that of the glass of the convergent lens cemented to it, the concave surface adjacent the diaphragm of said further dispersive component having a radius between the limits $0.5\cdot f$ and $2.0\cdot f$, and the difference of the radii of the two outer surfaces bordering on air of said further dispersive component lying within the limits of $0.20\cdot f$ and $2.50\cdot f$, f being the focal longth of the objective.

3,051,054
LIGHT POLARIZING ARTICLES AND METHOD OF MAKING SAME
Harry D. Crandon, Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Dec. 18, 1958, Ser. No. 781,302
3 Claims. (Cl. 88—65)

1. A light-polarizing laminated lens unit comprising a glass lens and a polyvinyl alcohol film, said film being

molecularly oriented and containing a dye for producing a dichroic light-polarizing effect in said film, said film incorporating silicic acid therein and being tenaciously bonded to a side surface of said glass lens by subjecting the moistened film incorporating said silicic acid to heat



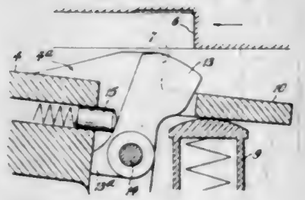
while in contact with said glass lens for at least partially drying the film and by thereafter baking the assembled lens and film as a unit at a temperature not substantially exceeding 175° F., thereby to produce a tenacious bond between said lens and film by action of the silicic acid incorporated in said film.

3,051,055
COMBINATION OVERHEAD SIGNAL VIEWER AND SIDE CLEARANCE INDICATOR
William C. West, 9425 New Hammond Highway, Baton Rouge, La.
Filed Dec. 8, 1959, Ser. No. 858,188
2 Claims. (Cl. 88—81)



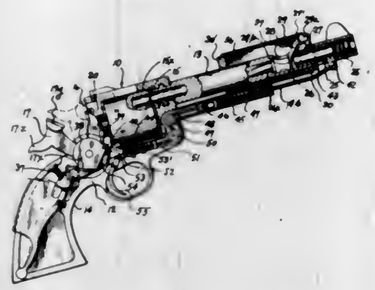
1. A combination overhead light signal viewer and side clearance indicator, comprising a substantially hemispherical hollow housing, a mounting base upon which said housing is supported with its axis in a substantially horizontal position, said housing having a forwardly facing open side and having an opening in its top portion, a reflective glass secured in said open side, and an arcuate sphero-conical convex lens secured in the housing and closing said top opening, said lens having a spherical outer surface generally conforming to the hemispherical curvature of the hollow housing and having a conical inner surface arranged in angled relationship to said open side, and having a reflective coating on its inner surface.

3,051,056
AUTOMATIC GUN BREECH BLOCK CONTROL MECHANISM
Arend Willem Kuijvenhoven, Barrowby, Grantham, and Roy Gilbert Vickers, Grantham, England, assignors to Brevets Aero-Mecaniques, S.A., Geneva, Switzerland, a body corporate of Switzerland
Filed June 10, 1959, Ser. No. 819,385
Claims priority, application Great Britain June 23, 1958
7 Claims. (Cl. 89—132)



1. In an automatic gun breech mechanism, a sear disposed in said mechanism and having a breech-block arresting shoulder, a guard movably mounted on said sear with a component of movement axial relatively to said shoulder, and a spring operative on said guard for movement thereof away from said shoulder.

3,051,057
AUTOMATIC HAMMER COCKING AND CYLINDER INDEXING MEANS FOR REVOLVERS
Jessie T. Ivy, 523 Henderson St., Seattle, Wash.
Filed Aug. 18, 1960, Ser. No. 50,507
5 Claims. (Cl. 89—191)



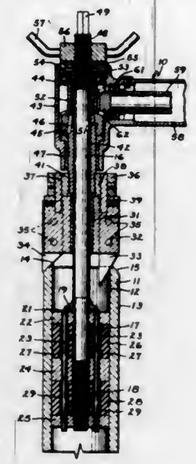
1. In a firearm having a frame, a barrel fixed in said frame, a cartridge firing hammer movable between "down" and "cocked" positions, a releasable sear for retaining the hammer in cocked position, a trigger mechanism for releasing said sear; a hammer cocking means comprising a gas chamber formed in the outer end portions of the barrel as a counter bore, said counterbored portion of the barrel having a slot formed longitudinally thereof, a coaxially positioned sleeve reciprocally fitted in the counterbore and bored for the passage of bullets of fired cartridges therethrough, a flame deflecting means comprising a lever pivotally mounted on the barrel and formed at one end with a flame deflecting baffle and at its other end with an angular actuating arm, a cam lug projecting from said sleeve, and movable along said slot with the movement of said sleeve, to engage the angular arm of said lever to swing said baffle into and from the barrel for the outward deflection of flame of expanding gas through said slot.

3,051,058
METHOD OF MAKING GEARS
Vernon E. Gleasman, 3808 Kirkwood Road, Cleveland Heights, Ohio
Filed Dec. 2, 1954, Ser. No. 472,761
4 Claims. (Cl. 90—3)



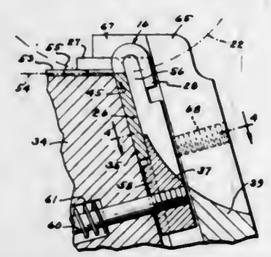
1. In a method of forming a gear of less than twelve teeth to provide an increased pitch diameter tooth for sustaining a predetermined load, comprising the steps of forming the teeth of one standard pitch to the size of the teeth of said one pitch and cutting same to the depth of the teeth of a smaller pitch; and increasing the size of the blank over a conventional larger pitch blank an amount substantially equal to the difference in the working depth of the two pitches of said teeth.

3,051,059
TUBE END MILLING MACHINE
Gerald F. Davey, Holden, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Jan. 2, 1959, Ser. No. 784,634
2 Claims. (Cl. 90—12)



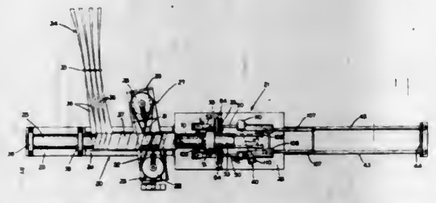
1. A tube end milling machine, comprising a tool head, an elongated shaft on which the tool head is slidably rotatably supported, means for rotating the tool head, threads formed on one end of the shaft, a stop member on the shaft adjacent the said threads, a nut engaging the said threads, a rubber-like annular block consisting of a series of cylindrical disks lying between the said member and the nut, the block having an outer cylindrical surface with a relaxed diameter less than the minimum inner diameter likely to be encountered in tubes of the nominal size being milled, threads formed on the other end of the shaft, a hand-actuated nut engaging the last-named threads for moving the tool head toward the said one end of the shaft and a rod spaced from and parallel to the shaft extending through the stop member, disks, and the first-named nut to prevent rotation of these elements relative to one another.

3,051,060
DEVICE FOR SUPPORTING AND MOVING AN ARTICLE IN A MACHINE
Richard E. Halverson, Westchester, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,460
2 Claims. (Cl. 90—18)



1. A fixture for use in a milling machine for supporting an article for rectilinear and arcuate movements relative to a rotary cutter, said fixture comprising a base releasably attachable to the table of the milling machine for rectilinear movement therewith relative to the cutter, a holder for releasably supporting the article, means on said base for supporting said holder for movement therewith and for pivotal movement thereon from a normal first position to a second position about an axis parallel to the axis of the rotary cutter, and means on said base for moving said holder from said first position to said second position.

3,051,061
TUBE FORMING MACHINE CONSTRUCTION
James C. Baxter, Minerva, and Raymond A. Gowing, Canton, Ohio; said Gowing assignor to said Baxter
Filed Mar. 10, 1959, Ser. No. 798,385
7 Claims. (Cl. 93—80)

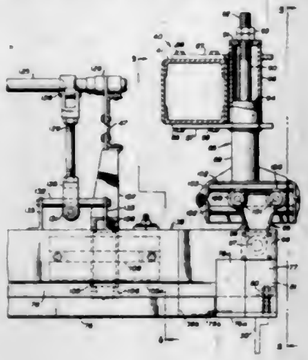


1. Tube forming machine construction for continuously spirally forming thin walled tubing, an axially stationary mandrel upon which the tubing is formed and moves continuously rotatably and axially, said tubing being formed having a circumferential periphery, a cutoff device mounted in a position radially adjacent the rotatably and axially moving tubing, engagement means on the cutoff device including rotatable engagement members for peripherally physically engaging the tubing against the mandrel at a predetermined axial location while the tubing continues to move axially with respect to the mandrel, means mounting the engagement means for axial movement axially along the mandrel with the tubing while the tubing is engaged by said engagement means against the mandrel and the engagement means engagement members and tubing continue to rotate, the engagement between the tubing and engagement means maintaining the axial movement of the engagement means along the mandrel exactly with the axial movement of the tubing along the mandrel, severing means operably connected to the engagement means radially adjacent the mandrel and mounted movable axially exactly with the engagement means axially along the mandrel for severing the tubing against the mandrel while said tubing continues to move axially along the mandrel, means for operating the engagement means to engage the tubing against the mandrel at a said predetermined axial location, and means for operating the severing means for severing the tubing against the mandrel after the engagement means has engaged the tubing against the mandrel and the engagement means and severing means are moving axially exactly with the tubing along the mandrel; the cutoff device engagement means including a clutch member circumferentially surrounding the tubing and mandrel; the engagement means rotatable engagement members being clutch shoes mounted on the clutch member radially movable between engaged and disengaged positions, the clutch shoes have inner arcuate surfaces engageable with the tubing periphery and against the mandrel when the shoes are in engaged positions, and the clutch shoes being mounted in the clutch member freely rotatable with the tubing at least in the engaged position.

3,051,062
SCREED UNIT AND SUSPENDING MEANS
John H. Apel and Robert J. Beeson, Columbus, Ohio, assignors to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio
Filed Sept. 11, 1959, Ser. No. 839,387
4 Claims. (Cl. 94—45)

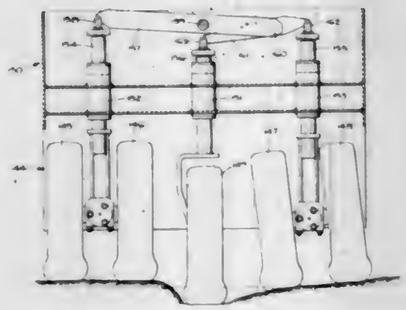
1. A finisher machine adapted to operate along laterally spaced upstanding side forms and to produce an accurate

surface on workable paving material previously laid between the forms comprising a frame, traction members for supporting the frame for movement along said side forms, a screed carried by the frame and extending transversely thereof for acting on the material between the side forms and having a main portion of less length than the distance between said forms, adjustable means for suspending the screed from the frame for reciprocation relative thereto so that the screed is supported independently of the side forms and its main portion can be



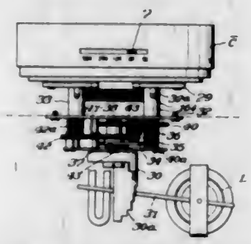
adjusted downwardly within the associated side forms when desired, means for reciprocating the screed relative to the frame, form-contacting end shoes mounted at each end of the main portion of the screed for vertical movement relative thereto and adapted to extend outwardly from said main portion and contact with and slide along the forms, and yieldable means for urging said shoes downwardly into contact with the forms to prevent bleeding of material beyond the side forms at the ends of the main portion of the screed.

3,051,063
COMPACTOR ROLLER
James H. Roberts, Galion, Ohio, assignor to Jeffrey Galion Manufacturing Company, a corporation of Ohio
Filed Feb. 19, 1959, Ser. No. 794,282
4 Claims. (Cl. 94—50)



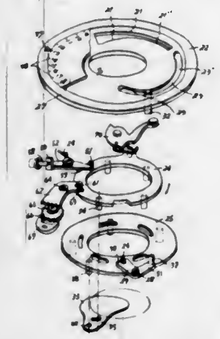
2. A multi-wheel compactor roller comprising a main frame, ground compacting wheels disposed in substantial transverse alignment for traversing a ground surface and compacting the material thereof, an upright rotatable and axially reciprocable cylindrical king pin for one of said compacting wheels, another upright rotatable and axially reciprocable cylindrical king pin for another of said compacting wheels, each king pin including means for rotatably mounting a compacting wheel on the king pin, supporting means for each king pin secured to the main frame, said supporting means each including cylindrical means complementally formed with respect to a king pin and rotatably and axially reciprocably mounting the king pin on the main frame, a center upright rotatable and axially reciprocable cylindrical king pin disposed intermediate the first said king pins, said center king pin including means for rotatably mounting a compacting wheel on the king pin, supporting means for the center king pin secured to the main frame, the last said supporting means including cylindrical means complementally formed with respect to a king pin and rotatably and axially reciprocably mounting the center king pin on the main frame, and motion transmitting means secured to the first said king pin and to said other king pin and center king pin and connecting the king pins to transmit the axial reciprocatory motion of the first said king pin to the other king pins for axially reciprocating the first said king pin and the other king pins in opposite directions, said motion transmitting means comprising a first motion transmitting link having one end secured to the first said king pin, a second motion transmitting link secured to said other king pin and said center king pin, pivot means disposed intermediate the ends of said first motion transmitting link pivotally mounting said first motion transmitting link, and pivot means connecting the end of the first motion transmitting link remote from the first said king pin to said second motion transmitting link intermediate the ends thereof.

3,051,064
AUTOMATIC EXPOSURE CONTROL APPARATUS FOR PHOTOGRAPHIC CAMERA
Takayoshi Sato and Atsutada Nakatani, Tokyo-to, Japan, assignors to Kabushiki Kaisha Koparu, Tokyo-to, Japan
Filed June 24, 1960, Ser. No. 38,605
Claims priority, application Japan June 24, 1959
7 Claims. (Cl. 95—10)



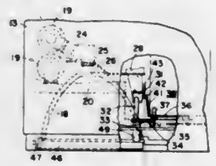
1. In a photographic camera including a shutter blade operating means for opening and closing the shutter blades, the combination of an automatic exposure control mechanism including a photoelectric light meter which comprises a differential gear assembly including a differential gear and two cylinders which are alternately rotated by a driving spring, stop means, a pointer on the photoelectric light meter to engage said stop means, a shutter speed control device including a shutter speed preset means, a shutter speed delaying mechanism, a shutter speed adjusting lever means which pivotally actuates said shutter delay mechanism, a shutter speed adjusting means connected with one of said cylinders and also operatively connected with said preset means and said adjusting lever means, a diaphragm aperture control device including a diaphragm aperture adjusting means connected with said other cylinder, a diaphragm aperture operating lever means engaged operatively with said diaphragm aperture adjusting means, a first lever means unlatching said diaphragm aperture adjusting means when said shutter speed adjusting means finishes a first adjustment preset by said preset means, a second lever means unlatching said shutter speed adjusting means for a second adjustment thereof when said stop means is not yet engaged by said pointer, notwithstanding the first adjustment of said shutter speed adjusting means and the adjustment of said diaphragm aperture adjusting means, and a ring means releasing said shutter blade operating means after said stop means has engaged said pointer.

3,051,065
LENS SHUTTER FOR CAMERA
Tatsuo Kobayashi, Amagasaki City, Japan, assignor to Chiyoda Kogaku Seiko Kabushiki Kaisha, Osaka City, Japan, a corporation of Japan
Filed Dec. 3, 1959, Ser. No. 857,064
Claims priority, application Japan Dec. 5, 1958
6 Claims. (Cl. 95—10)



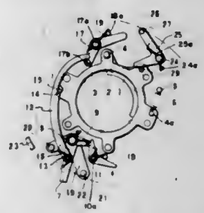
1. A camera lens shutter comprising, a lens casing, a plurality of overlapping shutter blades disposed within the lens casing in a plane perpendicular to the longitudinal axis of the lens for exercising the functions of shutter and diaphragm, the shutter blades having obliquely extending holes therethrough, driving means including an actuating ring disposed in a plane parallel to the plane of the shutter blades for opening and closing said shutter blades with a constant force, driving pins fixed to the actuating ring extending through the holes in the blades to open and close said blades, means for regulating the overlap of the shutter blades when closed, a single releasing bar for releasing the driving means extending therefrom out of the lens casing, a separate pin fixed to the actuating ring and a brake governor operatively connected to the separate pin for actuation thereby to decelerate movement of the blade actuating ring as the shutter blades are fully opened thereby.

3,051,066
TWO-SPEED CAMERA FOR FLASH PHOTOGRAPHY
Norman N. Lareau and Richard J. Olson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Dec. 23, 1960, Ser. No. 78,020
14 Claims. (Cl. 95—11.5)



1. In a flash camera, the combination comprising:
(*a*) a shutter mechanism including a part which moves when the shutter operates to make an exposure;
(*b*) flash means for said camera movable between an operative position for illuminating the subject upon making an exposure, and an inoperative position for preventing illumination of the subject upon making an exposure;
(*c*) control means movable between two positions into and out of engagement with said movable part of said shutter mechanism to achieve shutter speeds of two different durations; and
(*d*) means interconnecting said control and flash means for moving said control means into one of said two positions in response to movement of said flash means from one of its positions to the other.

3,051,067
AUTOMATIC CONTROL MECHANISM FOR PRESET IRIS DIAPHRAGMS OF PHOTOGRAPHIC CAMERAS
Takeshi Goshima, Tokyo, Japan, assignor to Canon Camera Company, Inc., Otaku, Japan, a corporation of Japan
Filed July 29, 1957, Ser. No. 674,804
Claims priority, application Japan Aug. 3, 1956
9 Claims. (Cl. 95—64)



1. An automatic controlling mechanism for lens diaphragms of cameras, the diaphragms being of the multi-lamella type with each lamella pivotable on a diaphragm ring, comprising a diaphragm operating ring for controlling the aperture of a camera lens diaphragm, an operating spring biasing the operating ring toward its full open aperture position, a tensionable member movable between a released position and a latched position and biased toward its released position, means for moving the tensionable member to its latched position, means for latching the tensionable member in its latched position, a coupling lever pivotally mounted on the tensionable member and movable thereby, means on said coupling lever cooperating with the diaphragm operating ring to rotate said ring in its aperture closing direction, a diaphragm preset cam, means including a follower for said cam for limiting the movement of the tensionable member toward its released position to limit the movement of the coupling lever, the coupling lever in turn limiting the rotation of the diaphragm operating ring; release of said latching means permitting the coupling lever to be moved by the tensionable member to rotate the diaphragm operating ring against the bias of the operating spring to close the lens aperture as determined by the diaphragm preset cam; and means for releasing the operating ring rotating means to permit the biased operating spring to return the diaphragm operating ring to its full open aperture position.

3,051,068
AUTOMATIC PHOTOGRAPHIC EXPOSURE CONTROL WITH GLARE COMPENSATION AND BACK-LIGHT COMPENSATION
Robert A. Shimkus, Chicago, Ill., assignor, by mesne assignments, to Revere Camera Company (formerly Samica Corporation), a corporation of Delaware
Filed July 14, 1958, Ser. No. 748,349
6 Claims. (Cl. 95—64)

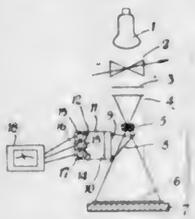
1. In a camera, an automatic exposure control having glare compensation comprising a light meter responsive to the luminous intensity of the camera view field, a

plurality of movably mounted cooperating iris blades, drive means interconnecting said iris blades and said light meter whereby said iris blades are moved to provide an iris opening of size properly proportional to the luminous intensity of the camera view field from minimum picture-taking intensity to maximum normal pic-



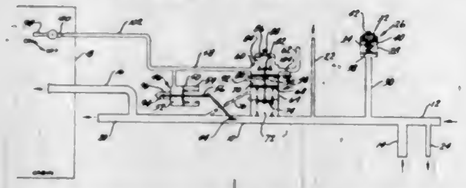
ture-taking intensity, said light meter responsive to luminous intensity in excess of maximum normal picture-taking intensity and said iris blades under such condition having means automatically providing an iris opening of larger than minimum size whereby subjects having back-light and side-light illumination are exposed properly.

3,051,069
PRODUCTION OF COLOUR PRINTS
Denis Manktelow Neale, Ilford, England, assignor to Ilford Limited, Ilford, England, a British company
Filed Jan. 18, 1961, Ser. No. 83,535
Claims priority, application Great Britain Jan. 25, 1960
1 Claim. (Cl. 95—73)



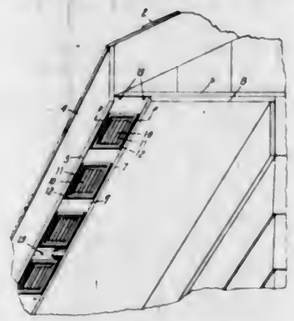
A method for printing multi-colour photographic records on to multi-colour light-sensitive material with light having red, green and blue components which comprises causing some of the printing light to fall on colour selective filters behind which is at least one photocell, assessing the colour quality of said light by comparing the electrical outputs from each combination of filter and photocell, making and processing a trial print, placing said processed trial print in the path of light reaching said combinations of filter and photocell so that light reaching said combinations is modified by the colour of said processed trial print, re-adjusting the colour of printing light in accordance with said modification of light reaching said combinations, said modification of the colour of printing light being made to modify the relative proportions of the red, green and blue components of printing light by amounts substantially proportional to the modification of the relative proportions of the red, green and blue components of light transmitted by the said trial print and said modification of colour of printing light being in that sense necessary to reduce the colour cast associated with the trial print, and using said re-adjusted printing light to expose further prints.

3,051,070
PRESSURE CONTROLLING MEANS IN AIRCRAFT AIR CONDITIONING SYSTEM
Walter C. Shaw, Grand Junction, Colo., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Original application Nov. 30, 1955, Ser. No. 549,999, now Patent No. 2,925,255, dated Feb. 16, 1960. Divided and this application Feb. 6, 1959, Ser. No. 791,691
4 Claims. (Cl. 98—1.5)



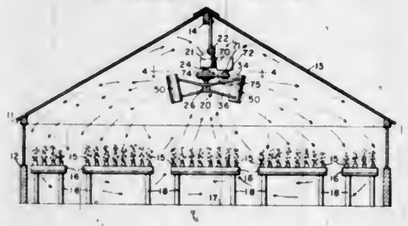
1. An air conditioning system for an aircraft having a cabin requiring air under pressure and having or carrying at least one other compartment requiring air at greater than cabin air pressure, the said system comprising pressurized air conduit means including a conduit connected with the cabin, a conduit extending from said cabin conduit to said other compartment, a valve adjustably disposed in said cabin conduit downstream of said conduit extending to said other compartment, valve operating means adapted to adjust the position of the valve so as to maintain a predetermined pressure drop thereacross and including an actuator comprising a housing having piston means disposed therein and operatively connected with said valve, resilient means biasing said piston means in one direction to close said valve, said housing defining a fluid chamber for receiving fluid under pressure to move said piston means in the opposite direction to open the valve, said operating means also including valve means movable in one direction to vent said fluid chamber and movable in the opposite direction to close said chamber, the said valve means being responsive to fluid pressure in said cabin conduit on the downstream side of the said valve to move in said one direction, said valve means being responsive to fluid pressure in said cabin conduit on the upstream side of the said valve to move in said opposite direction.

3,051,071
SOFFIT VENTILATED ATTICS AND VENTILATOR MEMBERS THEREFOR
Robert L. Leigh, Coopersville, Mich., assignor to Air Control Products, Inc., Coopersville, Mich., a corporation of Michigan
Filed Apr. 16, 1958, Ser. No. 729,020
3 Claims. (Cl. 98—37)



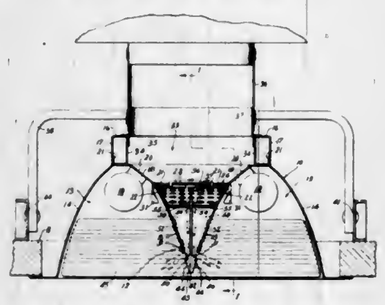
1. A building including an attic, and a roof having eaves including a front member and a soffit member the front edge of which is in inwardly spaced relation to said front member providing an elongated opening therebetween, and an elongated soffit ventilator member disposed in said elongated opening and constituting a closure therefor, said soffiet ventilator member having a plurality of longitudinally spaced louvered openings therein, the louvers extending longitudinally of said ventilator member and being disposed in forwardly projecting inclined relation to the plane of the body portion thereof, said ventilator member having a downwardly projecting bead-like rib surrounding each group of said louvers, said ribs constituting reinforcing and stiffening means for said soffit ventilator member, the roof having an air ventilator disposed at an elevation substantially above that of the said soffit ventilator member.

3,051,072
AIR CIRCULATING AND MIXING FAN
Hoy R. Bohanon, 213 E. Broadway, Muskogee, Okla.
Filed Mar. 20, 1961, Ser. No. 96,738
8 Claims. (Cl. 98—40)



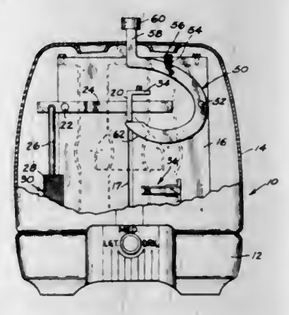
1. An air circulating and mixing device for a greenhouse having an inclined roof providing a gable, comprising a fan mounted in the gable portion of the greenhouse, said fan having a shaft rotatable about a vertical axis, a pair of upper and lower bars having arms projecting diametrically in opposite directions from said shaft, an arcuate impeller blade mounted on the outer ends of each pair of said arms and arranged in spaced angular relationship with respect to said shaft and with respect to each other so that the velocity vector of each blade is substantially at an angle of approximately 90° with respect to the longitudinal center lines of said arms and the chord line of each blade it at an angle of from 10° to 30° less than the angle of the velocity vector with respect to the longitudinal center lines of said arms, and means for driving said shaft to cause the impeller to generate a substantially radial flow of air in a direction toward the inclined roof so as to produce a dispersion of air over a wide area within the greenhouse.

3,051,073
AIR DISTRIBUTION OUTLET
Walter W. Kennedy, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed May 15, 1961, Ser. No. 109,963
4 Claims. (Cl. 98—40)



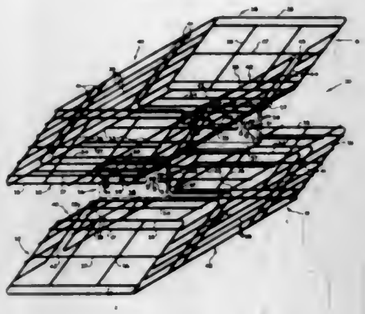
1. In an air distribution outlet, the combination of an elongated upwardly opening channel of V-shaped cross-section defined by imperforate sidewalls converging downwardly at substantially equal angles to an apex, air discharge openings comprising elongated slots in said walls extending along the channel and disposed adjacent to but spaced above said apex, a partition disposed within and extending throughout the length of said channel and bisecting the angle included between said walls, flanges on said walls projecting inwardly therefrom toward but short of said partition to define with the latter narrow air passages having a combined area less than that of said slots, means defining a plenum chamber enclosing the open base of said V-shaped channel, a supply duct for delivering air into said plenum chamber to maintain the chamber under pressure while causing curtains of air to be discharged through said passages and downwardly along opposite sides of said partition, and deflector surfaces within said channel extending upwardly and inwardly from the lower edges of said slots to said partition for impingement by said air curtains and deflection of the latter and outwardly through said slots at angles corresponding to the inclination of the deflector surfaces.

3,051,074
SEMI-AUTOMATIC TOASTER
Charles D. Visos, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,897
6 Claims. (Cl. 99—329)



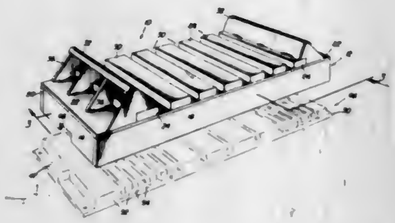
6. An automatic toaster comprising, in combination, stationary structure defining a toasting chamber and toaster casing means, a movable bread carrier in said toasting chamber having a control portion thereon extending outwardly of said toasting chamber and within said casing means, bread-toasting means in said toasting chamber, elongated lever arm means pivoted to the stationary structure outside of said toasting chamber and to one side of said control portion, one portion of said arm means being operatively connected with said carrier through said control portion and another portion of said arm being connected to motor means, a normally open switch in circuit with bread-toasting means and positioned to be closed by said control portion of said bread carrier only when the bread carrier is down in toasting position, toasting-cycle-terminating means operable to energize said motor through said closed switch to move said bread carrier through said lever arm means to up position upon completion of the toasting operation, movable latch means positioned to engage said control portion on said bread carrier for maintaining the bread carrier in raised position, and a manual control projecting outwardly of the toaster casing means and being attached to said movable latch means, so that actuation of said manual control operates to selectively move said latch means out of a latching position to permit the bread carrier to move to said toasting position.

3,051,075
BASKET STRUCTURE
James G. Watts, Marathon, Fla., assignor of fifty percent to Bernard S. Frasik, Bay City, Mich.
Filed Mar. 18, 1959, Ser. No. 800,136
14 Claims. (Cl. 99—397)



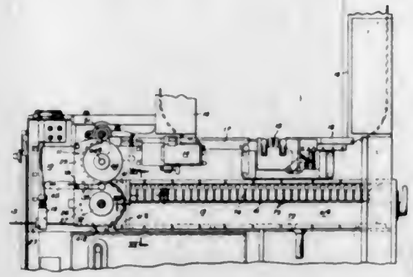
1. A basket construction comprising a first body including opposed, substantially planar top and bottom grid portions and opposed, spaced apart, substantially planar side grid portions joined to said bottom grid portion and extending therefrom; a second body similar to said first body and including opposed, substantially planar top and bottom grid portions and opposed, spaced apart, substantially planar side grid portions, said first and second bodies being arranged with their bottom portions adjacent and substantially parallel to one another; mounting means secured to each of said bodies and extending beyond the bottom grid portion of its associated body; and means joining the mounting means of said bodies and separably connecting said bodies together.

3,051,076
METHOD AND APPARATUS FOR COMPRESSING COTTON
William A. West, P.O. Box 3678, Phoenix, Ariz.
Filed Sept. 8, 1961, Ser. No. 136,894
9 Claims. (Cl. 100—3)



7. An improved method for compressing gin bales having a predetermined number of spaced bands thereon in a compress having a pair of opposing platens with slots therein spaced at different distances than said bands, the method comprising the steps of providing a third platen having grooves wider than and spaced the same as said bands and the number of said grooves being at least as great as said predetermined number, supporting said third platen on one of the compress platens with the grooves facing the other compress platen, placing said bale between said third and other platen with the bands directly in alignment with said grooves, urging said compress platens together so as to compress said bale between said third and other platen of the compress and force said bands into said grooves, tightening said bands on said bale while it is compressed between the platens.

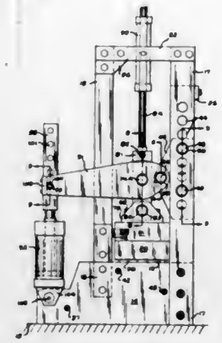
3,051,077
ESCAPEMENT FOR AUTOMATIC WIRE-TYING MACHINE
Paul W. Fawcett, Western Springs, Ill., assignor to United States Steel Corporation, a corporation of New Jersey
Original application Nov. 20, 1956, Ser. No. 623,458, now Patent No. 2,912,099, dated Nov. 10, 1959. Divided and this application Aug. 11, 1959, Ser. No. 832,961
4 Claims. (Cl. 100—26)



1. In an automatic wire-tying machine designed and adapted to draw wire from a source of supply, feed the wire around a guide track in the form of a loop with the ends of the loop overlapped in a knotter pinion, draw the wire tight around a package disposed in the guide track by pulling back on the wire and retracting it from the guide track, twist the overlapped ends of the loop together by rotating the knotter pinion, and then cut the twisted knot free from the supply wire, the improvement therewith of a receptacle for receiving said wire loop when it is retracted from the guide track to draw the wire tight around the package, said receptacle comprising a generally vertical supporting plate, a pair of horizontally elongated confining plates disposed side-by-side in spaced parallel relation to said plate by means adjacent their edges remote from each other, the adjacent edges of said confining plates being spaced apart defining a slot therebetween, and a series of yieldable fingers mounted on one of said confining plates and extending through said slot toward said supporting plate, said fingers being of such a configuration that they may be successively displaced by said loop pushed into the space between the supporting plate and confining plates and repositioned thereafter to support the upper run of said loop.

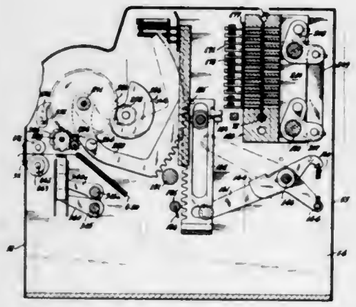
3,051,078
ADJUSTABLE-SHUT-HEIGHT PRESS
John L. Webster, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Aug. 9, 1960, Ser. No. 48,544
14 Claims. (Cl. 100—257)

1. In combination in a press having an adjustable shut height, a frame having a vertically arranged upright at one side thereof, a lower platen, an upper platen movable toward and from said lower platen, a fulcrum member adjustably and removably mounted upon said upright, a power piston-and-cylinder assembly pivotally mounted at the side of said frame opposite said upright and having a power piston rod extending outwardly of said power cylinder, a lever extending across said upper platen and having a first end pivotally attached to said fulcrum member and a second end pivotally and removably attached to said power piston rod, a link pivotally attached at its respective ends to said upper platen and to said lever intermediate the ends of said lever, a lifting piston-and-cylinder assembly pivotally mounted upon said frame above said upper platen and having a lifting piston rod projecting downwardly from said lifting cylinder, means pivotally connecting said lifting piston rod to said upper platen, means for directing pressure fluid to and from said power piston-and-cylinder assembly thereby to move said upper platen selectively toward and away from said



lower platen, and means for directing pressure fluid to and from said lifting piston-and-cylinder assembly thereby to support said upper platen, said lever arm, and said fulcrum member during an adjustment in shut height of said press.

3,051,079
TABULATING CARD PERFORATING APPARATUS
Michael M. Platzman, Brooklyn, and Lincoln M. Keefe, Elmhurst, N.Y., assignors to National Automation Corp., Jamaica, N.Y.
Filed June 7, 1960, Ser. No. 34,422
6 Claims. (Cl. 101—19)



3. A device for repeated printing and punching of information on a tabulator card comprising in combination: a punch and die set; a print wheel; a movable carriage adapted to receive said card; means to move said carriage to position a first portion of said card in operating relationship with said punch and die set and said print wheel; means for setting a punch arrangement corresponding to information to be punched and means co-operating therewith for setting said print wheel to simultaneously print the same information on the card; means for actuating said punch and die set and said print wheel to punch and print the card; means for retaining the set information; means for shifting said carriage to position the card with a fresh information surface in operative relationship with said punch and die set and said print wheel; means for providing a second printing and punching operation; and means for returning said carriage to a starting position and for simultaneously clearing the set data.

3,051,080
ARCHITECTURAL FINISH
Francis J. Clarke, Leechburg, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 8, 1960, Ser. No. 67,889
6 Claims. (Cl. 101—32)

1. The method of providing an architectural finish to the surface of flat cold rolled austenitic stainless steel which comprises the steps:

(*a*) providing a steel roll that possesses a hardness of approximately 66/67 Rockwell C,

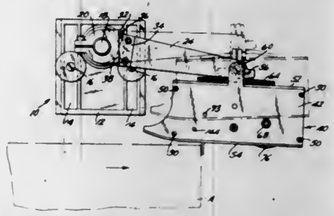
(*b*) grinding the surface of said roll with an 80 grit abrasive so as to effect a uniform 80 grit finish thereon,

(*c*) grit blasting the surface of said roll with No. 16 grit particles so as to effect a uniform 16 grit, grit grit blasted finish thereon,

(*d*) grit blasting the surface of said roll with No. 40 grit particles so as to effect a uniform 40 grit, grit blasted finish thereon,

(*e*) inserting said roll as a work roll in a cold rolling mill and rolling said flat cold rolled austenitic stainless steel through said cold rolling mill so as to emboss on the surface of said stainless steel the surface finish of said roll.

3,051,081
MARKING APPARATUS
Francis C. Worth, Ridgewood, N.Y., assignor to Adolph Gottscho, Inc., Hillside, N.J., a corporation of New York
Filed Sept. 13, 1960, Ser. No. 55,681
13 Claims. (Cl. 101—35)

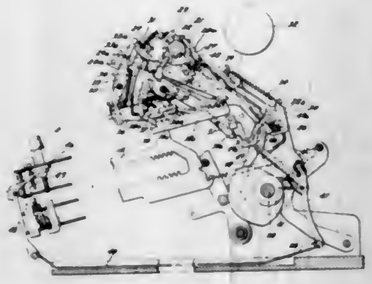


1. An apparatus for applying markings to successive conveyed articles, comprising a rotatable marking wheel carrying marking means at its periphery and including bearer rims which are adapted to be engaged by each conveyed article and which have minor portions of their peripheries formed of a material having a low coefficient of friction to permit the conveyed article to slide relative thereto, while the major portions of the peripheries of said rims are of a frictional material to effect rotation of the marking wheel when engaged by a conveyed article, releasable latch means for holding the marking wheel in a predetermined rotational position where said minor portions of the bearer rims are disposed for sliding engagement by each conveyed article, drive roller means adapted for frictional engagement by each conveyed article so as to be rotated by the latter, and yieldable transmission means between said drive roller means and said marking wheel to effect initial rotation of the latter from said drive roller means upon release of said latch means.

3,051,082
DECIMAL POINT MECHANISM
Heinrich W. Wagemann, West Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Aug. 17, 1959, Ser. No. 834,123
7 Claims. (Cl. 101—93)

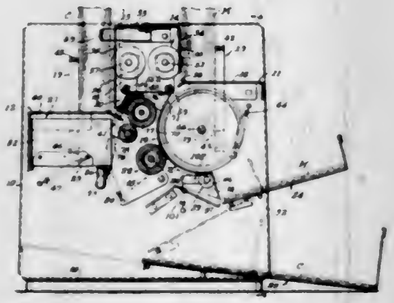
1. In a business machine having printing mechanism including an ordinal series of digit type members each

differentially settable from a normal position, spring means for operating each digit type member, a latch for restraining each digit type member from operation by said spring means, a comomn operating member, an adjustable releasing member for each latch normally out of the path of movemnet of said common operating member, and means operable upon movement of each digit type member from normal position to adjust the releasing member of the associated latch into the path of



movement of said common operating member; a decimal point type member adjustably coupled to a given digit type member for operation therewith, means normally operable to adjust said decimal point type member to a disabled position, means for adjusting said decimal point type member to an enabled position, and means operable upon adjustment of said decimal point type member to enabled position to adjust the releasing member for the latch of the coupled digit type member into the path of movement of said common operating member.

3,051,083
ADDRESSING MACHINE
Kunio A. Sumida, 1114 N. Kenter Ave., Los Angeles 49, Calif.
Filed Aug. 8, 1960, Ser. No. 48,178
7 Claims. (Cl. 101—132.5)

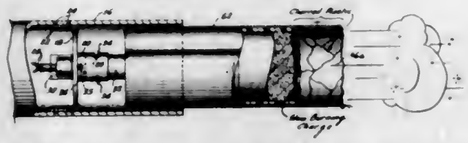


1. An addressing machine comprising a horizontal support for the edges of a pack of master elements each having an indicia-imprinting face, a separate support for the edges of a pack of copy elements, means to synchronously move successive pairs of master and copy elements in a transverse direction from said supports together in a common arcuate path of approximately 90°, means to apply pressure to said pairs while the same are so moving to imprint on the copy element the indicia of the imprinting face of the master element, means to separate said elements at the end of said common path, means to receive the master elements in stacked relation at the end of the path thereof, and separate means directly beneath the master element-receiving means to receive the imprinted copy elements in stacked relation at the end of the path thereof.

3,051,084
RESINOUS COMPOSITIONS AND THEIR PREPARATIONS
James R. Scheibli, Oakland, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Oct. 16, 1959, Ser. No. 846,814
15 Claims. (Cl. 260—37)

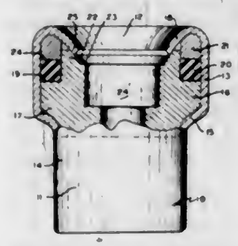
9. A composition for rendering surfaces non-skid comprising a mixture of (1) a polyepoxide possessing more than one vic-epoxy group, (2) at least 20% by weight of (1) and (2) of a polyalkylated phenol possessing from 2 to 3 alkyl groups each of which contains at least 7 carbon atoms, and (3) at least 50% by weight of the combined mixture of (1) and (2) of small hard inert particles.

3,051,085
PYROTECHNIC FLARE
Don B. Finkelstein, Redondo Beach, Calif., assignor to Del Mar Engineering Laboratories, Los Angeles, Calif., a corporation of California
Filed Nov. 24, 1958, Ser. No. 776,103
4 Claims. (Cl. 102—37.8)



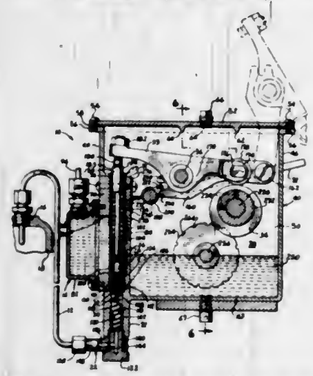
1. A flare for use in a tow target to facilitate tracking thereof, comprising: an elongate hollow metal casing; an inner plastic shell lining said casing; a compacted charge of highly combustible material enclosed by said inner shell; means within said casing at one end thereof for igniting the contiguous end of said charge to create a traveling combustion zone for progressively igniting said charge longitudinally of the casing with consequent projection of a flame longitudinally from said casing, said charge fitting said inner plastic shell snugly and the plastic material of the inner shell having a low thermal conductivity to retard ignition of the peripheral portions of the charge in advance of the traveling combustion zone, said casing being a thin-walled shell of metal having a relatively low melting point to be melted by said flame with the melting zone traveling progressively longitudinally of the casing, the plastic material of said inner shell charring as the shell is subjected to the flame whereby a charred portion of the inner shell survives the heat of the combustion zone to cause the melting zone to lag behind said combustion zone for continuous confinement of the combustion zone by the casing.

3,051,086
ENVIRONMENTAL SEAL FOR CARTRIDGE
Nicholas J. La Costa and Paul L. Brown, Baltimore County, Md., assignors to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed Sept. 8, 1958, Ser. No. 759,698
7 Claims. (Cl. 102—39)



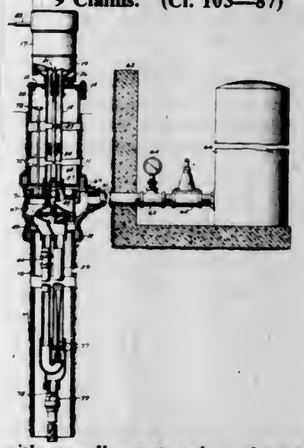
1. A device for holding high pressure fluids comprising: a casing having a cylindrical bore; said casing being open at one end; a ring on the open end of the casing; means to prevent the ring from being axially moved on the casing in a direction away from the other end of the casing, said ring having a cylindrical sealing surface concentric with but spaced from the bore, said ring having an annular gasket supporting surface facing toward the other end of the casing; a resilient gasket engaged with said gasket supporting surface; said gasket being radially expandable against the casing when the gasket is axially compressed; and a circular-sectioned closure mounted in the bore for closing the open end of the casing, said closure having a cylindrical sealing surface engaged with the cylindrical sealing surface on said ring and an annular gasket supporting surface engaged with said gasket, said closure adapted to move axially in the bore in a direction away from the other end of the casing in response to the action of the pressure of the fluids on the closure, the last mentioned axial movement of the closure causing compression of the gasket between the gasket supporting surfaces, the engagement of the cylindrical sealing surfaces preventing radial expansion of the gasket when the latter is axially compressed between said gasket supporting surfaces for causing said gasket to exert a radial force on said casing that is proportional to the axial compression of the gasket, such radial force preventing fluid from leaking between the gasket and the casing.

3,051,087
FUEL INJECTION APPARATUS
Axel R. Scholin, 4646 N. Wolcott Ave., Chicago 40, Ill.
Filed Dec. 14, 1959, Ser. No. 859,484
4 Claims. (Cl. 103—4)



1. Liquid fuel injection apparatus comprising in combination, a casing structure defining a fuel reservoir, a plurality of injection pump assemblies, each pump assembly including a tubular vertically disposed pump body providing a pumping bore, there being a fuel inlet cut-off opening in the wall of said pump body, the various pump bodies being at least partially submerged within the liquid fuel in the reservoir with said cut-off openings in direct communication with the liquid fuel, a pump plunger reciprocable in said bore and having an end thereof movable past said cut-off opening in sealing relationship with respect thereto, the portion of the bore forwardly of the cut-off opening constituting a fuel pressurizing and displacement chamber, said casing structure also defining an internal operating chamber, a vertical wall separating said reservoir from the operating chamber, a pair of lever arms pivoted within the operating chamber for limited swinging movement about a horizontal axis, a horizontal shaft extending between said lever arms and capable of limited vertical displacements upon movement of the lever arms, a series of rocker arms, one for each plunger, mounted medially of their ends on said shaft, a cam shaft extending across the chamber and parallel to said shaft, one end of each rocker arm being designed for engagement with one of said plungers and the other end being designed for engagement with the cam shaft, a rock shaft extending across the chamber and parallel to the cam shaft, the distal end of each lever arm being provided with a bifurcation, a finger on said rock shaft and projecting into respective bifurcations on the lever arm, and an operating lever connected to said rock shaft and disposed exteriorly of the chamber.

3,051,088
PITLESS PUMP CONSTRUCTION
John Gordon Baker, Evansville, Wis., assignor to Baker Manufacturing Company, a corporation of Wisconsin
Filed Mar. 18, 1959, Ser. No. 800,150
9 Claims. (Cl. 103—87)



1. In a pitless well construction, the combination of an upright elongated casing having an outer wall and an inner wall with an upper and a second sealing surface, a detachable cap at the upper end of said casing, a spool insertable into and withdrawable from said casing from the top thereof having an upper and second flanges sealable against said upper and second sealing surfaces respectively, a fluid delivery outlet through the wall of said casing between said sealing surfaces, an outlet recess formed by said spool and said casing in communication with said outlet, an upper chamber extending between said upper flange and said cap, a pump chamber within said spool having an outer and an inner wall, a centrifugal pump having an impeller disposed within said pump chamber journaled in said spool and adapted to discharge fluid into said outlet recess, a drain passage between the outer wall of said pump chamber and said casing, a threaded aperture in said upper flange of said spool connecting said upper chamber and said outlet recess, a second threaded aperture in said upper flange of said spool connecting said upper chamber and said drain passage, means disposed within said upper chamber for alternately opening and closing said respective apertures, a shaft means carrying said impeller and extending upwardly within said casing for actuation from a point above the top of the casing.

3,051,089
PUMPS
Harald Hany, Kassel-Brasselsberg, Richard Roosen, Kassel, and Eugen Spehr, Kassel-Harleshausen, Germany, assignors to Henschel Werke G.m.b.H., Kassel, Germany
Filed Jan. 13, 1960, Ser. No. 2,290
Claims priority, application Germany Apr. 8, 1959
10 Claims. (Cl. 103—101)

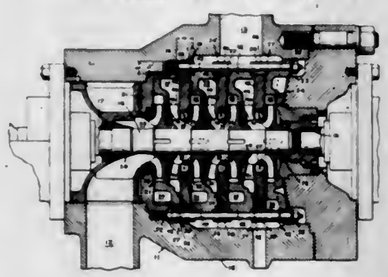
1. A rotary pump particularly for high pressures comprising wall means defining a central liquid intake passage, a substantially toroidal shaped hollow discharge member

surrounding the inner end of said passage, said member having a radially outwardly extending portion having a discharge opening, discharge passage means exteriorly coaxial of said intake passage in communication with said discharge member, a rotating casing member surrounding said intake passage and said discharge member, said



casing member including a central vane free inner peripheral portion and inwardly extending vane portions arranged on each side of said peripheral portion to draw liquid in through said liquid intake passage and deliver it at increased pressure through said discharge opening and rotary seal means between the exterior of said discharge passage means and said casing member.

3,051,090
SEGMENTED CASING FOR MULTISTAGE CENTRIFUGAL FLUID MACHINES
Peter C. Zumbusch, Upper Montclair, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Aug. 4, 1960, Ser. No. 47,449
5 Claims. (Cl. 103—108)



1. A multi-stage centrifugal fluid machine having a high pressure fluid passing therethrough comprising:

(*a*) a shaft rotatably disposed in said machine and connected to a source of power,

(*b*) a plurality of impellers mounted on said shaft in spaced relationship to each other and adapted to energize the fluid in said machine on rotation of said shaft,

(*c*) a segmented inner casing disposed about said impellers to form a plurality of spaced chamber means thereabout in series flow communication with each other whereby a plurality of stages is formed in said machine,

(*d*) said segmented inner casing including a plurality of volute shell means and a plurality of partition means formed by two complementing components to permit said chamber means to be formed with said impellers mounted on said shaft,

(*e*) each of said partition means having one of said volute shell means on either side thereof and in abutment thereto,

(*f*) each of said volute shell means having a larger inner diameter than the outer diameter of said impellers whereby said volute shell means can be longitudinally slipped over said impellers on assembly thereof,

(*g*) an interstage partition means formed with said partition means in spaced relationship therewith and fixedly connected thereto,

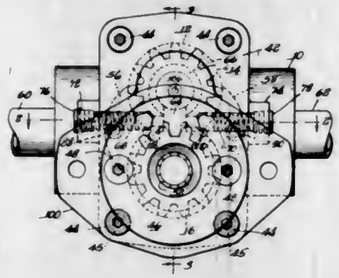
(*h*) said volute shell means to nest on said interstage partition means to define said chamber means inboardly thereof and a passageway outboardly thereof leading to the next stage whereby on assembly thereof said two complementing components of said partition means are joined and separate adjacent chamber means,

(*i*) an annular means mounted about each partition means to permit assembly thereof and to engage said volute shell means on either side of said partition means to form a seal therebetween whereby a leak proof operative assembly is obtained,

(*j*) an outer casing having an inlet means and an outlet means for said fluid,

(*k*) means fixedly connecting said inner casing to said outer casing with said inlet means communicating with said first chamber means and said outlet means communicating with said last chamber means.

3,051,091
GEAR PUMP OR MOTOR
Robert N. Bennett and Rex W. Vaughan, Gilroy, Calif., assignors, by mesne assignments, to Be-Ge Manufacturing Company, Gilroy, Calif., a corporation of California
Filed Nov. 18, 1959, Ser. No. 853,767
3 Claims. (Cl. 103—126)

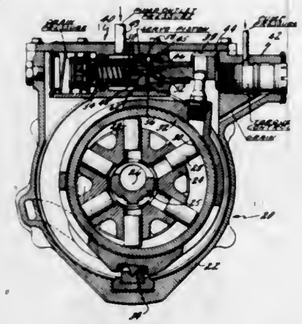


1. In a generally cylindrical wear plate for a pressure-balanced self-compensating wear plate type gear pump, said plate having a central gear trunnion receiving aperture therein and having a chordal flat on the periphery thereof for abutment with an adjacent wear plate and having a face adjacent a pump gear exposed to unequal fluid pressures tending to cock said wear plate and having a periphery exposed to high fluid pressures; the improvement comprising a pressure relieving groove in the periphery of the wear plate extending circumferentially thereabout on the side adjacent the inlet chamber of the pump for substantially 90 degrees from adjacent said chordal flat thereof whereby to provide a low pressure area on said periphery, said groove at its end adjacent said flat extending to the face thereof adjacent said pump gear; and another groove in said face of the plate extending part way across the same parallel to the chordal flat from and communicating with the adjacent end of the first named groove, whereby the tendency of said wear plate to cock is counteracted.

3,051,092
PUMP TORQUE LIMITING MEANS
Raymond P. Lambeck, Simsbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 6, 1959, Ser. No. 785,238
3 Claims. (Cl. 103—161)

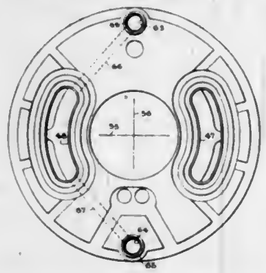
3. In a rotary piston hydraulic pump having a plurality of reciprocating pistons, a rotor carrying said pistons and rotatable about an axis, a track ring engaging the outer ends of said pistons, a pivot supporting said track ring, said track ring movable in a concentric

and eccentric position relative to said axis, means engaging said ring for varying the eccentricity of said ring relative to said axis for varying the stroke of said pistons including a stroke control element, servo means connected to said eccentricity varying means and responsive to the output pressure of said pump for reducing pump



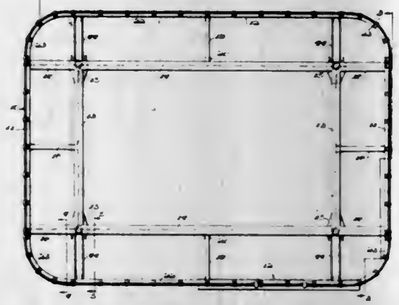
stroke at a predetermined rate over a given pressure range and moving said element in a stroke reducing direction only, and a second servo operated means operatively connected to said ring and responsive to the outlet pressure of said pump for further varying stroke of said pistons at pressures above said range for limiting the pump discharge pressure.

3,051,093
VALVE PLATE FOR ENGINE
Tadeusz Budzich, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Aug. 12, 1957, Ser. No. 677,636
2 Claims. (Cl. 103—162)



1. In an engine of the type including a housing having a stationary wall containing high and low pressure ports, a rotary cylinder barrel supported within the housing for movement along the axis of rotation and provided with and end face containing a circumferential series of working chamber ports, and means exerting a biasing force on the cylinder barrel urging it toward the housing wall, the improvement which comprises a valve plate mounted freely between the cylinder barrel and the housing wall; means preventing rotation of the valve plate; a front face on the valve plate adjacent the end face of the cylinder barrel and containing arcuate high and low pressure ports arranged symmetrically about an axis and positioned to register sequentially with each working chamber port as the barrel rotates; a pressure land surrounding the high pressure port on the front face for supporting a fluid film that exerts a pressure force, the area of the land being so selected that the pressure force acting thereon is not greater than the biasing force; a rear face on the valve plate adjacent the housing wall and containing arcuate high and low pressure ports communicating respectively with the high and low pressure ports on the front face and registering with the corresponding ports in the housing wall; a resilient O-ring surrounding the high pressure port on the rear face and defining a main pressure area on which pressure from the high pressure port develops a first pressure force, the center of pressure of this area being radially and circumferentially aligned with the center of pressure of the high pressure port and surrounding land on the front face; auxiliary pressure areas located on the rear face of the valve plate along said axis about which the arcuate high and low pressure ports are symmetrical; means establishing continuous communication between the high pressure ports and the auxiliary pressure areas, whereby second pressure forces are developed on these areas; and a resilient O-ring surrounding each auxiliary pressure area, the main and auxiliary areas being so dimensioned that the sum of the first and second pressure forces acting thereon is not greater than the force acting on the pressure land.

3,051,094
COLLAPSIBLE MONORAIL TRACK
Albert A. Shames, Waban, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 10, 1957, Ser. No. 683,188
4 Claims. (Cl. 104—126)

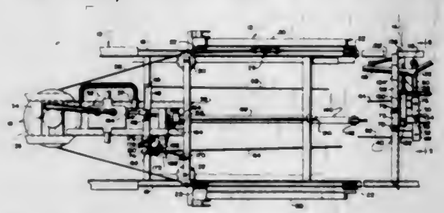


1. In a mobile work platform, including a fixed support having two opposite sides as well as front and rear ends; the improvement comprising a pair of fixed track sections, means mounting said fixed track sections in horizontal coplanar relation axially outwardly of said ends of said support in transverse relation to the same, said fixed track sections having opposite ends, a pair of substantially U-shaped movable track sections each comprising a pair of spaced legs having inner and outer ends and a web portion connecting said outer ends of said legs together, hinge means hingedly connecting said inner ends of said legs to said opposite ends of said fixed track sections, struts fixed to said legs of said movable track sections outwardly of said inner ends, hinge means hingedly connecting said struts to said support, said hinge means of each movable track section and its struts having aligned axes, said movable track sections being swingable on said hinge means from operative positions in coplanar relation with said fixed track sections with said inner ends of said movable track sections abutting said opposite ends of said fixed track sections and with said web portions laterally outwardly of said opposite sides of said support to substantially vertical inoperative positions, and means readily releasably supporting said movable track sections in said operative positions.

3,051,095
IRRIGATION PIPE MOVING APPARATUS
Donald L. Smeal, Snyder, Nebr., assignor to L. R. Nelson Mfg. Co., Peoria, Ill., a corporation of Illinois
Filed Oct. 9, 1961, Ser. No. 143,719
17 Claims. (Cl. 104—162)

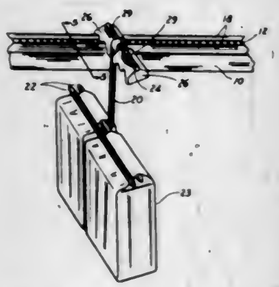
1. Apparatus of the type described comprising a boom, a carriage assembly mounted for movement along said

boom between spaced limiting positions, power operated means for effecting movement of said carriage assembly between said positions in both directions, a control assembly carried by said boom adjacent each of said positions, one of said control assemblies including an actuating member movable between a plurality of control positions with respect to said power operated means including a first position wherein said power operated means is operable to prevent power operated movement of said carriage assembly, a second position wherein said power operated means is operable to effect movement of said carriage assembly in a direction toward one of said limiting positions, and a third position wherein said power operated means is operable to effect movement of said carriage assembly in a direction toward the other of said



limiting positions, manually movable means carried by the other of said control assemblies and operatively connected with said actuating member for effecting movement of the latter from said first position to said second position and from said first position to said third position, means included in the control assembly adjacent said one limiting position operable in response to the movement of said carriage assembly into engagement therewith for effecting movement of said actuating member from said second position to said first position, and means included in the control assembly adjacent said other limiting position operable in response to the movement of said carriage assembly into engagement therewith for effecting movement of said actuating member from said third position to said first position.

3,051,096
ARTICLE CARRIER FOR OVERHEAD CONVEYOR
John C. Walsh, William M. Haselton, Edward T. Holland, Jr., and Kenneth P. Juhl, all of Cedar Rapids, Iowa, assignors to Cherry-Burrell Corporation, Cedar Rapids, Iowa, a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,336
4 Claims. (Cl. 104—167)



1. For use with an overhead conveyor having a spiral drive shaft rotatable in a housing that provides load supporting surfaces, an article carrier comprising a pair of runners laterally spaced apart an amount to engage said surfaces slidingly, a plurality of projections between said runners adapted to engage said drive shaft, and a flange extending downwardly outside each of said runners to engage the exterior of said housing, said runners, projections and flanges forming a one-piece shaft engaging member, said member being formed of a low friction, wear resistant material.

3,051,097
TRAVEL AID FOR THE BLIND
Louis W. Wyman, 799 Mountain View Drive, Moab, Utah
Filed May 26, 1961, Ser. No. 113,003
7 Claims. (Cl. 104—247)



1. A guiding device for the blind, comprising a track of sheet-form, rubbery material having two sloping ramps with bevelled, outer edges adapted to dwell on a ground surface, said track having a channel-form, longitudinally extending groove defined by parallel wall portions depending from the inner edges of the respective ramps, and having a bottom wall substantially co-planar with the outer edges of the ramps, said ramps, wall portions, and ground surface defining triangular air spaces, one of said inner edges of said ramps being rounded, and the other being relatively sharp, means to fix said track in position on a supporting surface, a site-identifying element having a base portion secured, in part, to one of said ramps, and extending therefrom in part, and having a prominence for sensing by contact of a human foot, and a follower means for cooperation with said track, comprising a cane-like handle, with a transversely extending sleeve at one end, a roller mounting bracket having a portion journalled in said sleeve, and a roller mounted for free rotation in said mounting, said roller being of a width slightly less than that of the groove in said track.

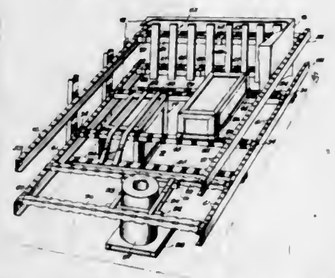
3,051,098
APPARATUS FOR HANDLING FREIGHT
Jack E. Gutridge, Dyer, Ind., assignor to Pullman Incorporated, a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,819
19 Claims. (Cl. 105—368)



1. Apparatus for transporting freight comprising a railroad car formed with upstanding side wall structures, a container support movably mounted on each side wall structure, cushioning means interposed between each container support and the side wall structure on which it is carried, a container adapted to be mounted between and carried by said supports, said container carrying laterally extensible rigid support members on either side thereof engageable with said supports, respectively, a

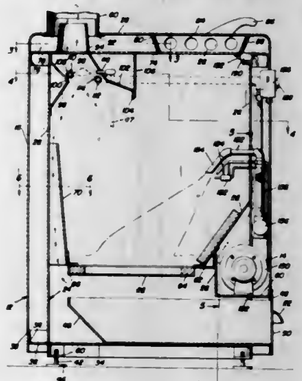
chassis adapted to be separably connected to said container, said supports each including means for raising and lowering the container with respect to said chassis, and means for backing said chassis onto the car and for drawing the chassis away therefrom, whereby, said chassis with the container carried thereby may be backed onto the car, said container may be lifted upwardly to take a substantial portion of the weight of the container off the chassis to permit removal of the chassis, and after removal of the chassis the container may be lowered to a transporting position of minimum height.

3,051,099
LOADER BEAM ASSEMBLIES FOR FREIGHT CARS, TRUCKS, AND THE LIKE
Harry G. Robertson, 12908 S. Elm St., Blue Island, Ill.
Filed Nov. 30, 1960, Ser. No. 72,642
3 Claims. (Cl. 105—369)



1. A load anchoring assembly for securing loads in freight cars, trucks, or other vehicles having a floor and upwardly extending side walls, comprising a plurality of metal channels, each having a wide vertical web secured to the side walls of the vehicle and each having narrow inwardly projecting upper and lower parallel flanges carried by said web and provided with a multiplicity of regularly horizontally spaced vertical cylindrical apertures located in the upper flange of each channel, a plurality of loader beams each extending horizontally from a channel on one wall to a channel at the same level on the other wall, each loader beam comprising an extruded externally rectangular hollow metal member provided on its inside with an integral cylindrical reinforcing rod located and attached inside each of the four inner corners of said hollow metal member and extending from a point near one end of each loader beam to a similar point in the other end of each loader beam, each end of each loader beam having the reinforcing rods removed at the ends of each beam outwardly of said points, leaving the ends of each beam with a short empty rectangular horizontal socket, and an end fitting carried by each end of each loader beam and fitting therein, each fitting having a horizontal central body flange projecting beyond the end of the loader beam and provided at a specific distance from the end of the loader beam with a pair of integral vertically extending cylindrical depending lugs, spaced accurately to be received in two adjacent apertures in the upper flanges of the metal channels at the same time the vertically extending lugs at the other end of any loader beam are located in similar apertures at the other side of the vehicle with each loader beam extending horizontally and at right angles to the walls, each end fitting being of substantially the shape of a rectangular S, which fits against the bare inner vertical walls of the socket in the end of each loader beam and against the top and bottom wall of each socket, the upper flange and the lower flange of each fitting being secured to the upper beam flange and to the lower beam flange, by threaded means, respectively, each beam having a multiplicity of elongated rectangular apertures adapted to receive a steel strapping, said apertures being arranged in a plurality of series, each series being located about all sides of each beam, and each aperture being located with one of its sides adjacent one side of each reinforcing rod so that a steel strapping fitting the apertures may pass into the beam about a rod in said beam and out an aperture in another side of the beam without any sharp bends, the said beams having their ends placeable with their vertical cylindrical lugs movable into anchoring position only when the beam carrying them is located accurately horizontal and at right angles, and being removable only in the reverse direction simultaneously at both ends, the beams being held by gravity with their cylindrical lugs in cylindrical apertures and resisting separation or movement in any other direction than vertically upward.

3,051,100
GAS-FIRED INCINERATOR
Charles N. Singleton, 921 Hammond Ave., Aurora, Ill.
Filed Sept. 30, 1958, Ser. No. 764,327
3 Claims. (Cl. 110—8)



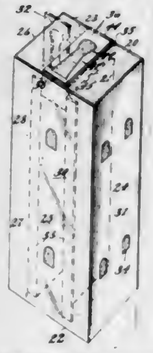
1. A gas-fired incinerator comprising an outer shell, an inner shell, each shell including an upper wall, means spacing the outer and inner shells from each other and permitting passage of air therebetween, a grate disposed horizontally in the inner shell adjacent the bottom thereof, the top region of the inner and outer shells having a passageway extending therethrough for providing access to the combustion area above the grate for inserting articles to be burned, a closure door for said access opening, a gas burner disposed above the grate and directed toward the grate for burning articles disposed on the grate, an upwardly extending exhaust breeching in the upper wall of the inner shell, an upwardly extending exhaust breeching in the upper wall of the outer shell, the breeching on the outer shell being larger than the breeching on the inner shell, the breeching on the inner shell extending upwardly into the breeching on the outer shell and defining an air passage between the breechings communicating with the space between the inner and outer shells for mixing the air drawn from between the inner and outer shells with the gas discharged from the combustion chamber within the inner shell out through the breeching on the inner shell, and afterburner means mounted in the inner shell adjacent to and on the inlet side of the breeching on the inner shell for burning the exhaust products of combustion as they pass therethrough and eliminating odors and fly ash, said afterburner means including a pair of deflectors for guiding the exhaust products and pinching the same into the breeching on the inner shell, and including a pair of spaced parallel transverse burners having a plurality of gas jets, said burners being disposed adjacent the deflectors and directing the flames generally towards each other for burning all of the exhaust products passing between the deflectors, each of said burners having a longitudinal axis and being

rotatably mounted on their axes for directing the flames produced by the gas jets upwardly or downwardly for increasing the exit volume of exhaust products or decreasing the exit volume of exhaust products thereby determining the rate of burning of the material on the grate.

3,051,101
REFRACTORY BRICK AND METHOD OF MOLDING

Russell Pearce Heuer, Bryn Mawr, Pa., assignor to General Refractories Company, a corporation of Pennsylvania

Filed Nov. 12, 1958, Ser. No. 773,308
2 Claims. (Cl. 110—99)



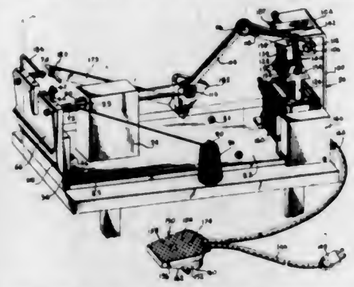
1. A basic refractory brick composed of basic refractory of the class consisting of magnesia and mixtures of chromite and magnesia containing at least 10 percent of magnesia, having a hot end, a cold end, and side faces, the refractory at the cold end having a rib protruding across the cold end beyond the rest of the cold end, having a metallic hanger tab adjacent the cold end, said tab including two arms in L formation, one of said arms extending along a side face of the refractory brick adjoining the cold end, said tab having a metallic anchorage portion protruding into and comolded within the refractory adjacent the cold end and securing the hanger tab to the refractory, the other arm of the hanger tab extending across the rib at the cold end in face to face relation with the refractory of the rib, said other arm in extending across the rib being coextensive with the width of the rib, and the rib by reason of its thickness placing said other arm of the hanger tab in accessible position to be pried away from the cold end and erected in upstanding relation to the cold end.

3,051,102
APPARATUS FOR FORMING BELT LOOPS ON GARMENTS

Alfred S. Minchenberg, 61 Railroad St., Winchendon, Mass.

Filed Aug. 5, 1960, Ser. No. 54,557
3 Claims. (Cl. 112—2)

1. A machine for forming belt loops of thread in a fabric work piece, comprising a support having a flat supporting surface, a base plate secured to said supporting surface, a supporting block mounted on said base plate, needle carrying means mounted on the block and reciprocable axially to advance the needle carrying means for extending the needle through the work piece and to retract the needle carrying means for withdrawing the needle from the work piece, linkage means operatively connected to the needle carrying means to advance and retract the same, means for mounting a spool of thread on the base plate with a free end of the thread engaged in an eye of the needle, an upstanding slotted plate for supporting the work piece mounted on said base plate in the path of advancement of said needle, a cam carried by said linkage means, a bar pivotally mounted intermediate its forward and rear ends adjacent to said linkage means, said cam engaging the rear end of the bar and depressing the same while elevating the forward end of the bar to raise the free end of the thread when the needle carrying means is retracted, spring means con-

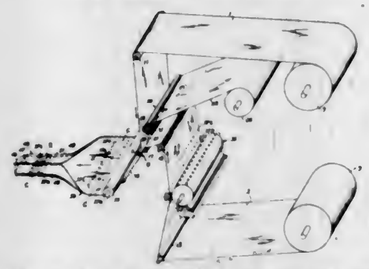


nected to said bar to pivot the bar and lower the forward end while raising the rear end thereof when the needle carrying means is advanced and said cam is clear of the bar and drive means operatively connected to said linkage means to advance and retract the needle carrying means.

3,051,103
BAG MANUFACTURE

Russell J. Williams, Clayton, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri

Filed Apr. 10, 1958, Ser. No. 727,564
6 Claims. (Cl. 112—10)

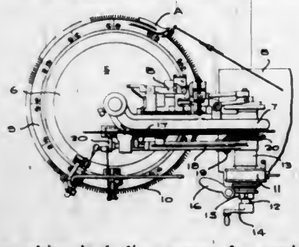


1. The method of manufacturing multi-ply paper bags comprising continuously feeding a plurality of paper webs in a predetermined path at a predetermined speed and combining the webs to form a multi-ply web, continuously feeding at least one continuous strip of reinforcing material in a path between said paper webs in the same direction as said paper webs and at a predetermined speed less than that of said paper webs, segmenting said strip of reinforcing material transversely into pieces, accelerating said pieces up to the speed of said paper webs and feeding them in between said paper webs, the difference between the speed of said paper webs and the speed of said strip being such that said pieces are spaced at bag length intervals along the length of the multi-ply web, applying adhesive for adhering the pieces between the paper webs, continuously forming the multi-ply web with said pieces therein into a flattened tube, segmenting the flattened tube into individual flattened multi-ply bag lengths, each of which is open at both ends, on lines extending transversely of the tube and intersecting said pieces so that each piece is divided into two parts and each of said open-ended bag lengths has one of said parts adhered between its plies at each end, and thereafter forming each bag length at least at one end with a bottom closure with the said part at said one end included in the bottom closure.

3,051,104
CUTTER ATTACHMENT FOR LOOPING MACHINES

Ralph M. Graves, Harriman, Tenn., assignor of one-half to Roane Hosiery, Inc., Harriman, Tenn., a corporation of Tennessee

Filed Feb. 9, 1959, Ser. No. 792,036
6 Claims. (Cl. 112—25)

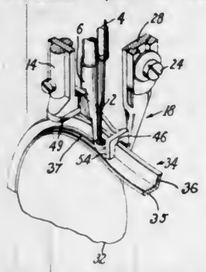


1. In a machine including means for sewing together a series of looped fabrics by a continuous chain of stitching, means for severing the chain of stitching between the looped fabrics, a cutter mounted on the machine above the chain of stitching having horizontally disposed co-acting cutter blades, one of said blades being movable towards the other blade and having an extension in bearing engagement with the other blade, air suction means above said cutter blades for raising and holding the severed ends of the chain stitching to a position between said cutter blades, and means for actuating the movable cutter blade to clip off the severed ends to a maximum predetermined length.

3,051,105
SHOE SEWING MACHINES

Edward Quinn, Peabody, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Filed Aug. 25, 1958, Ser. No. 756,865
4 Claims. (Cl. 112—52)

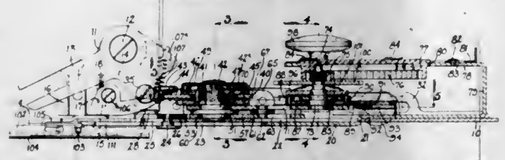


1. A sewing machine for inserting a seam through a reverse welt having inseam and outseam flanges and through the margins of other shoe parts including a shoe upper and a sock lining while the parts are unsupported by a last, said machine having a frame, a work-supporting post, a straight eye-pointed needle mounted for reciprocating movement toward and from the post, a work-feeding dog extending through the upper surface of the post, a work-clamping presser foot bar and a work-feeding presser foot, in combination with a work-clamping presser foot supported on the work-clamping bar, extending to a point of clamping engagement with the welt ahead of the needle, work-clamping presser foot including means for embracing the welt to restrain it against lateral movement during the portion of the sewing cycle when the work-clamping presser foot is out of clamping engagement with the welt as the shoe parts are being advanced and also having an indentation between its welt embracing portion and the work-clamping presser foot bar, and an edge gage formed with a tongue extending into the indentation and maintained at least partially within the indentation throughout normal movements of the work-clamping presser foot.

3,051,106
BUTTONHOLE ATTACHMENT FOR SEWING MACHINES

Samuel P. Caldwell, Hamden, and John Connors, Orange, Conn., assignors, by mesne assignments, to Mite Corporation, New Haven, Conn., a corporation of Delaware

Filed June 17, 1959, Ser. No. 820,935
10 Claims. (Cl. 112—77)

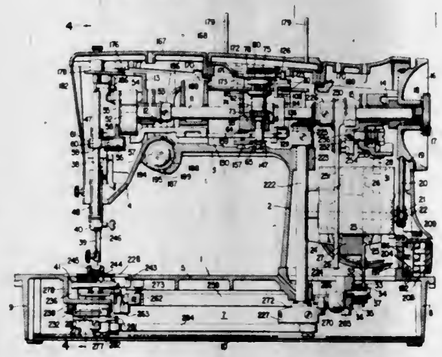


1. A buttonhole attachment for sewing machines comprising a base plate, a feed blade pivotally mounted thereon, a fork arm pivotally carried by the base plate, means connecting said fork arm to the feed blade to actuate the latter, said means including a cam member mounted on the frame for rotation in a horizontal plane, a ratchet wheel mounted coaxially with the cam member and connected thereto, means for rotating said ratchet wheel in a step-by-step movement from the actuation of the fork arm, a lever pivoted on the axis of the cam member, means for actuating the lever from the cam member, connections between said lever and the feed blade to actuate the latter in both longitudinal and pivotal movements with respect to the base plate, said lever-actuating means comprising a slide mounted on the base plate for movement transversely thereof, means on said slide engaged by the cam member, and means connecting the slide to the lever at a point eccentric to the pivot of the latter.

3,051,107
ZIGZAG SEWING MACHINES

Ralph E. Johnson, Mountainside, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Jan. 25, 1960, Ser. No. 4,430
8 Claims. (Cl. 112—158)



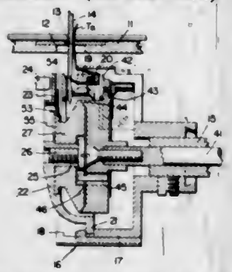
1. In a zigzag sewing machine comprising a frame, a needle bar, means for mounting said needle bar is said frame for endwise reciprocation and for lateral vibration, and means for imparting lateral vibration to said needle bar comprising an oscillating element, means for pivotally mounting said oscillating element in said frame and defining a pivot axis for said oscillating element, means for imparting oscillation to said oscillating element, a pitman, means connecting said pitman to said needle bar for imparting lateral vibration to said needle bar upon

actuation of said pitman, means defining an adjustable connection between said pitman and said oscillating element for imparting actuation to said pitman upon oscillation of said oscillating element and for varying the connection outwardly relatively to the pivot axis of said oscillating element between a predetermined maximum position and a minimum position in which substantially no actuation is imparted to said pitman upon oscillation of said oscillating element, means for manually shifting said pitman between said maximum and minimum positions, and means responsive to the movement of said pitman into said minimum position for physically disconnecting said pitman from said oscillating element when said pitman is adjusted to said minimum position.

3,051,108
TENSION RELEASE MECHANISM FOR SEWING MACHINES

Stanley J. Ketterer, Morris Plains, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Aug. 24, 1961, Ser. No. 133,604
3 Claims. (Cl. 112—181)



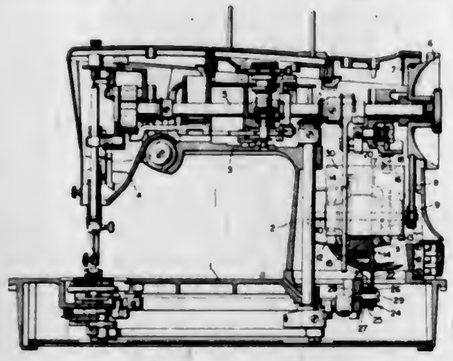
1. A lock stitch sewing machine having a frame including a work support, an endwise reciprocatory thread carrying needle carried by said frame at one side of said work support, a loop-taker journaled for turning movement in the frame at the opposite side of said work support, means for imparting interrelated motion to said needle and said loop-taker as is required for the formation of lock stitches, a bobbin case journaled in said loop-taker, means carried on said frame for constraining said bobbin case from turning movement with said loop-taker, a bobbin journaled in said bobbin case for turning and limited axially sliding movement therein, a thread tensioning spring anchored on said bobbin case and having a free extremity biased yieldingly against said bobbin case, means effective during said interrelated motion of said needle and loop-taker as is required for the formation of lock stitches for introducing a thread between the free extremity of said thread tension-spring and said bobbin case and to said bobbin, bobbin winding means including a bobbin rotating member shiftable in a direction axially of said bobbin into effective driving engagement therewith and effective during continued interrelated motion of said needle and loop-taker as is required for the formation of lock stitches for winding on said bobbin said thread introduced thereto, and means operated by said bobbin winding means for shifting the free extremity of said thread tensioning spring away from said bobbin case during operation of said means for introducing thread to said bobbin and during operation of said bobbin winding means.

3,051,109
DRIVE MEANS FOR SEWING MACHINES

Edward W. Bialy, Hillside, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Jan. 25, 1960, Ser. No. 4,353
4 Claims. (Cl. 112—220)

1. In a sewing machine having a frame including a hollow standard and a bracket arm carried by said standard, a main shaft journaled longitudinally of said bracket arm, an electric motor having a drive shaft, pulleys mounted upon said drive shaft and said main shaft, a belt entrained about said pulleys for imparting rotation to said main shaft upon actuation of said motor, and means for mounting said motor within said standard with its drive shaft axis parallel to the axis of said main shaft for adjustment radially of the main shaft to adjust the tension of said belt, said means comprising a stud of electrically non-conductive material mounted in said frame upon

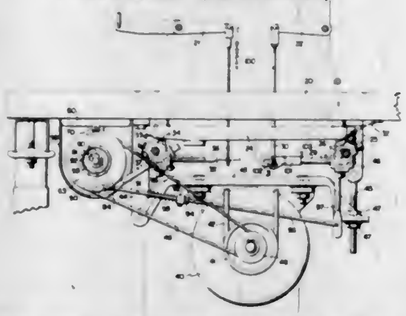


an axis normal to the axis of said main shaft, a diametrically-arranged bracket on said motor and including an arm at one end having an aperture slidably receiving said stud for adjustment of said bracket in a direction endwise of said stud, said bracket having a slot in the end opposite from said ear, a threaded fastening element extending through said slot and into said frame for adjustably securing said bracket to said frame, and an electrically non-conductive element disposed between said frame and fastening element and said bracket for insulating said bracket from said frame.

3,051,110
POWER CONTROL UNIT FOR SEWING MACHINES

Richard P. Graham, Stratford, William L. Herron, Bridgeport, and Stanley J. Ketterer, Stratford, Conn., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Mar. 10, 1959, Ser. No. 798,401
13 Claims. (Cl. 112—239)



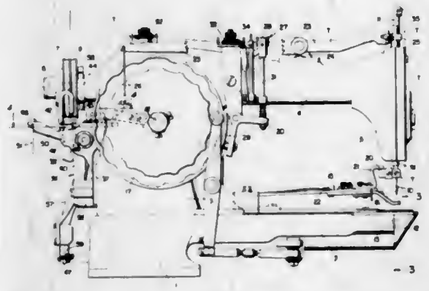
2. Mechanism for opening and closing a sewing machine work clamp or the like, comprising a shaft, frame means for supporting said shaft in turning and axial movements, rotary actuating means fast on said shaft and adapted to be operably connected to open and close a sewing machine work clamp or the like, a drive member journaled in said frame means, means for imparting continuous rotary motion to said drive member, interengaging clutch means carried on said shaft and on said drive member engageable and disengageable upon the shifting of said shaft, means biasing said shaft axially in one direction into the engaged position of said clutch means, a cam follower finger fast on said shaft to describe a

circular path upon rotation of said shaft, a cam member embracing said shaft at one side of said cam follower finger, means for supporting said cam member on said frame means for shifting movement substantially perpendicularly to said shaft, said cam member formed with a pair of inclined cam surfaces disposed at diametrically opposite sides of said shaft and spaced apart a distance less than the diameter of the circular path described by said cam follower finger, and operator influenced means for shifting said cam member transversely of said shaft to position a selected one of said pair of cam surfaces out of the path of motion of said cam follower finger.

3,051,111
THREAD SEVERING MEANS FOR SEWING MACHINES

Joseph Cortese, Union, N.J., and Joseph Vollman, deceased, late of Union, N.J., by Victor H. Eichhorn, administrator, Elizabeth, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed June 24, 1960, Ser. No. 38,654
6 Claims. (Cl. 112—252)



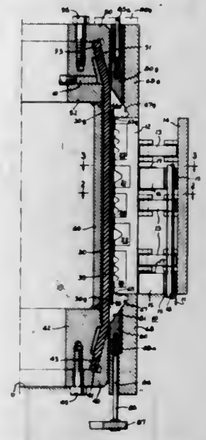
1. In a cyclically operated sewing machine having stitching mechanism including a needle and a loop taker cooperating with the needle in the formation of stitches, said loop taker having a stitch-forming cycle wherein a loop of thread thrown by said needle is seized by said loop taker and thereafter expanded by a thread drawing action during which thread is drawn into the thread system from a supply, thread nipper mechanism for preventing the drawing of thread into the thread system, means for automatically rendering said thread nipper mechanism effective during the thread drawing action of said loop taker upon the last stitch of the sewing cycle, and a stop motion mechanism automatically effective upon the last stitch of the sewing cycle for stopping the forward motion of said sewing machine at a point in the stitch-forming cycle where, after said thread nipper mechanism has been rendered effective, said loop taker has been advanced through the thread drawing action thereof sufficient to stress the thread in the system beyond the breaking point and thereby sever the same.

3,051,112
DRUM FORMING MACHINE

Oscar J. van Leer, Barrington, and Christian Ragettli, Chicago, Ill., assignors to Grotnes Machine Works, Inc., Chicago, Ill., a corporation of Illinois

Filed Aug. 8, 1958, Ser. No. 753,934
6 Claims. (Cl. 113—44)

3. In a machine for forming a drum from a cylindrical workpiece or blank, the combination comprising a base, a stationary hollow cylindrical core on said base, an upper head secured to the top of said core, a lower head secured to the bottom of said core, a cylindrical blanket having its upper and lower ends held by said heads respectively, a cylindrical die assembly including a set of outer dies surrounding said blank and said heads to define an annular space therebetween for insertion of a cylindrical workpiece, annular support members surrounding said upper and lower heads for supporting said die assembly, means for applying pressure between said core member and the blanket for inflating the same for pressing the workpiece outwardly against said dies, and upper and lower filler

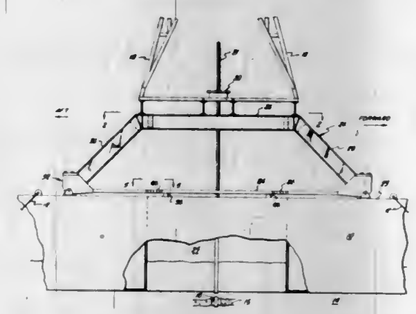


members slidable within said support members interposed between at least one of said heads and said die assembly, and each having a surface for contacting the workpiece to position the same and being retractable into said support member for supporting the portion of the inflated blanket which extends beyond said workpiece.

3,051,113
APPARATUS FOR SUPPORTING FLOATING LOAD

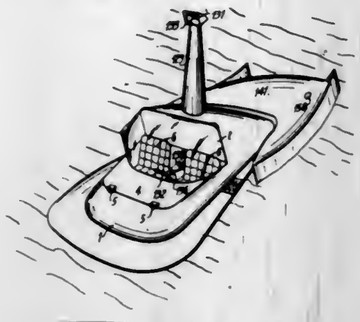
William F. Swiger, Scituate, Mass., assignor to Shell Oil Company and Continental Oil Company, both corporations of Delaware, and The Superior Oil Company and Union Oil Company of California, both corporations of California, all of Los Angeles, Calif.

Filed Nov. 29, 1957, Ser. No. 699,772
8 Claims. (Cl. 114—.5)



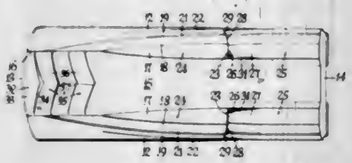
1. Apparatus for supporting a load on a body of water comprising a deformable floating vessel, a unitary load-bearing structure comprising a pair of upwardly extending load-bearing legs mounted with their lower ends supported by the vessel at spaced locations, an elongated upper chord rigidly connected at longitudinally spaced locations to respective upper portions of the legs, an elongated lower chord rigidly connected at longitudinally spaced locations to the legs below the upper chord to resist any tendency for the lower portions of the legs to move toward and away from each other, means on the vessel providing a lubricated surface for the structure, the lower end of one of the legs being disposed on the lubricated surface and being free to slide with respect to the vessel, and means holding the lower end of the other leg against sliding with respect to the vessel.

3,051,114
SUBMERSIBLE
Roger Bajulaz, Renens, Vaud, Switzerland (13 Chemin Pierre Crise, Geneva, Switzerland)
Filed June 23, 1959, Ser. No. 822,237
Claims priority, application Switzerland May 12, 1959
7 Claims. (Cl. 114—16)



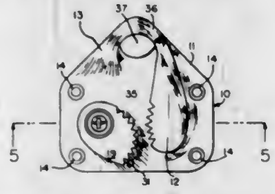
1. In a submersible boat for movement on and under the surface of the water having a hull, a watertight compartment located inside said hull, control means located inside said compartment to control the immersion and ascension of said submersible boat, safety means resting on the surface of the water and adapted to carry the whole weight of said submersible boat, connecting means hinged to said safety means and to said hull for connecting said safety means to said hull so that said hull submerges to a depth limited by said connecting means, said connecting means comprising two deformable parallelograms each having arms, said arms being hinged on both said hull and said safety means and one of said arms of each deformable parallelogram being prolonged in the direction of the forepart of said hull beyond its articulation on said hull for carrying a mass, and a water chamber connected to said hull, the emptying and the filling of which are controlled by said control means for the immersion of said hull and its ascension to the surface of the water.

3,051,115
FOUR POINT PLANING TYPE OF SPEED BOAT HULL
Henry Donald Canazzi, 178 Jewett Parkway, Buffalo, N.Y.
Filed July 19, 1960, Ser. No. 43,944
8 Claims. (Cl. 114—56)



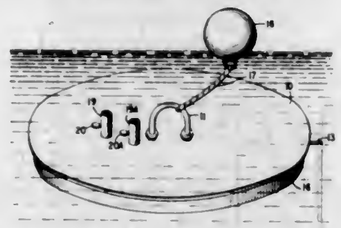
1. A planing type of speed boat hull of the character described wherein the hull bottom is formed with a pair of downwardly and rearwardly inclined upright bow stems, each spaced inwardly from one side of the hull, a pair of flat planing surfaces each spaced inwardly from one side of the hull and each having its longitudinal center alined with and extended rearwardly from one of said stems to the stern end of the hull, a central tunnel formed between and having each of its sides defined by and adjoined to the inner side of one bow stem and one planing surface, the wall of said tunnel being extended from the bow end to the stern end of the hull and having predetermined longitudinal and transverse curvatures each progressively increasing from the stern to the bow end, thereby to cause water and air displaced thereinto by the bow stems to flow therethrough and exert a continuous predetermined lift on the tunnel wall; a pair of outwardly and upwardly inclined primary non-trip surfaces each extended from the stern to the bow of the hull and each having its inner side adjoined to the outer side of one of the planing surfaces and to the outer side of one of the bow stems; and a pair of outwardly and upwardly inclined secondary non-trip surfaces each extending from the stern forwardly and each having its inner side adjoined to the outer side of one of the primary non-trip surfaces and its outer side adjoined to one side wall of the hull, whereby during a turn the then outermost non-trip surfaces ride up the wall of water being displaced thereby and cause the hull to tilt or bank toward the inner side of the turn path.

3,051,116
LINE HOLDER
Robert N. Weil, 709 California Drive, Erie, Pa.
Filed Nov. 16, 1959, Ser. No. 853,399
8 Claims. (Cl. 114—199)



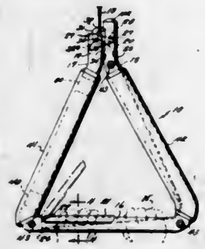
1. A device for holding lines comprising a flat plate like member, a fixed stop attached to said plate like member and a cam, said cam being swingably attached to said plate like member and spaced therefrom, said cam having a curved toothed edge portion curved in a path having its center of curvature spaced from the center about which said cam is swingable, said curved edge portion extending from the side of said cam adjacent said plate like member away from said plate like member and toward said fixed stop forming a first portion of the teeth of said toothed portion and then from said plate like member and then away from said plate like member forming a second portion of said teeth and away from said stop whereby a line can be readily inserted between said cam and said stop past said first portion of said teeth into the space between said second portion of said teeth and said stop.

3,051,117
VACUUM ANCHOR
Omer Benjamin Hunter, Jr., 21701 Schoenborn St., Canoga Park, Calif.
Filed June 21, 1960, Ser. No. 37,807
5 Claims. (Cl. 114—206)



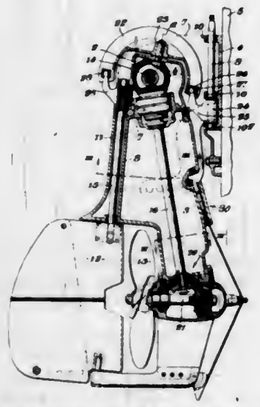
1. An anchor for an amusement apparatus such as a water supported float or an air supported balloon comprising a metal plate having a U-bolt attached to the center of the top side thereof, a tube, of doughnut shape, the top side of which rests against the plate, and the outer side of which has an attached air valve, a rim the outer side of which rests on the inner side of the tube and supports the tube pressure, a seal the top side of which rests against the tube bottom side, and the bottom of which rests against a strong surface such as the cement bottom of a swimming pool to which it may adhere by vacuum action.

3,051,118
SAFETY SKI BAR
Oberlee D. Calk, 1345 Pioneer Drive, and Curtis O. Priddy, 1234 Willis St., both of Abilene, Tex.
Filed Aug. 18, 1960, Ser. No. 50,415
5 Claims. (Cl. 115—6.1)



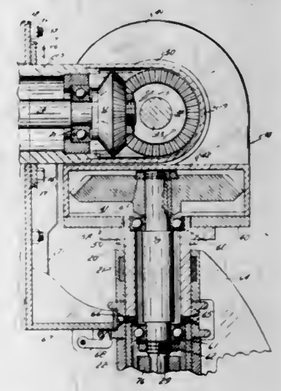
1. A ski bar comprising a tubular member of generally triangular configuration, a hook pivotally mounted at the apex of the triangle adapted to releasably engage a tow rope, a lever pivotally mounted on the base of the triangle adapted to be grasped and held against the base by the skier's hands and a cord connection extending from said lever to said hook whereby release of said handle permits said hook to swing about its pivot to release said tow rope.

3,051,119
MARINE PROPULSION UNITS
Peter Morton Hamlyn, Totney House, Kingsdown, Bath, Somerset, England; John Edwin Snelling, Woodlea House, Stockwood Vale, Keynsham, near Bristol, Somerset, England; and Bevan Graham Horstmann, 1 Fersfield, Perrymead, Bath, Somerset, England
Filed Dec. 18, 1961, Ser. No. 160,040
3 Claims. (Cl. 115—35)



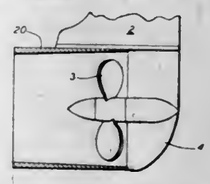
1. Marine propulsion unit attachable to boats, including a main casing containing a main driving shaft geared to drive a propeller mounted on the bottom of the casing, a rudder also mounted on the casing astern of the propeller, said casing being supported by a transom bracket in a manner whereby the unit is capable of tilting, a rudder mounting shaft housed within said casing and carrying the rudder, the unit being combined with a separate rudder post outside the main casing adapted to be mounted on a boat's transom, the post and mounting shaft each having an arm (the post arm and shaft arm respectively) projecting therefrom and turnable therewith, an arcuate frame of channel section mounted over the main casing concentric with the unit's axis of tilt, the mounting of said arcuate frame being on a pivotal axis upstanding from the casing approximately radial of the frame, the respective free ends of the post and shaft arms being freely located in the channel of said arcuate frame whereby movement of the arm from said post is communicated to the mounting shaft arm.

3,051,120
INBOARD OUTBOARD DRIVE MECHANISM FOR BOATS
Stanley Standal, S. 1104 Ray, Spokane, Wash.; Elizabeth V. Standal, executrix of the estate of said Standal, deceased
Filed May 16, 1958, Ser. No. 735,903
8 Claims. (Cl. 115—41)



6. A boat propulsion unit of the character described and including, a frame adapted to be attached to the boat, a drive shaft carried by the frame on a longitudinally disposed axis, an arm shiftable relative to the frame to support a propeller assembly, a driven shaft carried by the arm to operate said propeller assembly, means pivotally joining the arm to the frame on a substantially horizontal transverse axis, an intermediate shaft on an axis coincidental with the axis of said means, the axis of the driven shaft being normal to the axis of the intermediate shaft to swing in a plane substantially coincidental with the axis of the drive shaft, and a gear drive having a pair of angularly related gears with one gear carried on the drive shaft and the other on the intermediate shaft and having a pair of angularly related gears with one gear carried on the intermediate shaft and the other on the driven shaft.

3,051,121
OUTBOARD DRIVE AND RUDDER
Bailey P. Dawes, 366 Warec Way, Los Altos, Calif.
Filed May 11, 1961, Ser. No. 109,455
2 Claims. (Cl. 115—42)



1. In an outboard motor drive on the rear end of a boat, said motor drive having a propeller rotatable about

a horizontally extending axis, propeller supporting means supporting said propeller for said rotation and for movement therewith about a vertically extending axis, the improvement that consists of:

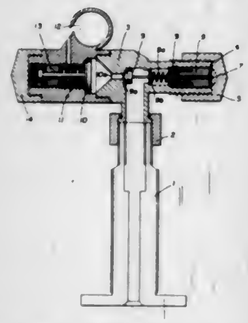
(*a*) a cylindrical, open-ended, tubular rudder having a leading end and a trailing end and which leading end is positioned around and coaxial with said propeller and is the end of the rudder that is leading when said propeller is rotated for driving said boat in a forward direction;

(*b*) the outer surface of said rudder being of substantially uniform diameter from end to end thereof;

(*c*) the leading end of said rudder terminating in a relatively thin edge and the inner surface of said rudder being of progressively decreasing diameter from its leading edge to substantially the opposite trailing end of said rudder;

(*d*) means connecting said rudder with said propeller support for holding said rudder coaxial therewith at all times during bodily movement of said rudder about said vertical axis.

3,051,122
PRESSURE-MONITORING DEVICE, PARTICULARLY FOR MOTOR VEHICLE PNEUMATIC TIRES, COMPRESSED AIR PIPES FOR BRAKES, TANKS AND THE LIKE
Settimio Gorini, Rome, Italy, assignor to Edoardo Gabriele, Schenectady, N.Y.
Filed Feb. 16, 1959, Ser. No. 793,408
4 Claims. (Cl. 116—34)



1. In a device for signaling drop of pressure to a predetermined value in a pressure vessel, a valve body having a chamber, inlet and outlet connections to said chamber, said body having an exhaust passage from said chamber to outside air, signal means fixed with said body and operated by escape of pressure fluid from said passage, valve means in said body closable to cut off said passage in response to predetermined high pressure in said chamber, spring means in said body urging said valve means to open position, and a valve in said chamber including interconnected first and second closure elements movable to close said inlet and said passage respectively, said first element being in position closing said inlet when said second element is in position opening said passage, and vice versa, and means urging said valve into position closing said inlet.

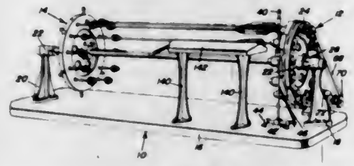
3,051,123
HOLDER
Alexander C. Grove, Pleasantville, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Sept. 21, 1959, Ser. No. 841,283
3 Claims. (Cl. 116—114)

2. A device for holding a strip of material suitable for the display of printed matter and coded information comprising, a substantially rigid body having an elongated platen surface, means for holding the strip in contact with the platen surface, a light columnating passage extending through said holder, a member pivotally mounted in the said passage so that the member permits the trans-



mission of light through said passage when held in one position by contact with an adjacent holder and inhibits the transmission of light through the said passage when held in an alternate position when said member is not in contact with an adjacent holder.

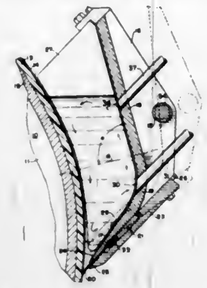
3,051,124
ARROW CRESTING MACHINE
Hugo J. H. Schlensker and Jacob R. Mellott, Anderson, Ind., assignors to Mellott Arrow Crest, Inc., a corporation of Indiana
Filed May 6, 1959, Ser. No. 811,462
6 Claims. (Cl. 118—503)



1. An arrow cresting machine comprising a head stock assembly and a tail stock assembly disposed in longitudinally spaced relation, an elongated shaft rigidly interconnecting the head stock and tail stock assemblies, said tail stock assembly being longitudinally adjustably supported on said shaft, at least one driven chuck mounted on the head stock assembly, at least one rotatable socket on the tail stock assembly, a hand rest adjacent the area between the chuck and socket whereby the hand rest will be disposed alongside of an arrow having the nock end in the chuck and the pointed end in the socket whereby a painting implement may be steadied while applying a stripe coating of paint on a portion of the arrow, said rest being provided with a radially movable saddle for movement into rotational supporting engagement with the central portion of the arrow to prevent run-out of the arrow.

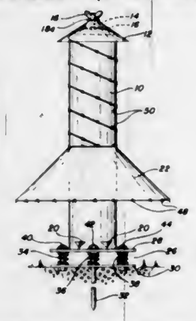
3,051,125
COATING OF PAPER WEBS AND THE LIKE
Edward V. Ahara, Ralph A. Johnson, Jr., Howard S. De Groot, and Constantine J. Stalmuke, Rumford, Maine, assignors to Oxford Paper Company, New York, N.Y., a corporation of Maine
Filed Aug. 13, 1958, Ser. No. 754,753
7 Claims. (Cl. 118—603)

2. In a trailing blade coater for applying a coating layer directly to a moving web and comprising a web-supporting backing roll about which a web is passed, a reservoir placed against the backing roll for holding a supply of coating material, and a blade forming in part a wall of said reservoir and engaging a web moving around said roll, the improvement characterized by said reservoir comprising means including said blade forming a bottom wall, and a back wall extending downward toward said bottom wall, said back wall lying at an angle of not less nor substantially more than 90° to a radius line extending from the axis of said backing roll to the lower edge of said back wall, and duct means entering



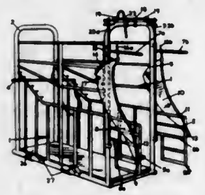
said reservoir at preselected points for removal of coating material from areas surrounding said preselected points.

3,051,126
BIRD FEEDERS
Willie M. Merritt and Frank F. Forth, Warwick, Ga., assignors to Merritt Bird Feeder Company, Warwick, Ga., a partnership comprising Willie M. Merritt and Frank F. Forth as equal partners
Filed Aug. 25, 1960, Ser. No. 51,913
12 Claims. (Cl. 119—52)



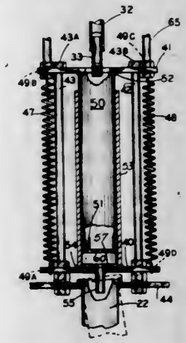
1. A ground-type bird feeder for use in feeding small wild game birds on ranges on which livestock animals also feed comprising, in combination, a normally upright feed receptacle and coaxially related resilient supporting means therefor constructed and arranged as to support said receptacle from below and also to allow the receptacle to yield laterally when nudged or pushed and thereupon to spring back to initial position when free to do so.

3,051,127
CATTLE PENS AND DOORS THEREFOR
Eric Norbury, Shurnock Court Farm, Astwood Bank, near Redditch, England
Filed Jan. 13, 1961, Ser. No. 82,636
5 Claims. (Cl. 119—99)



1. In a cattle pen of the kind comprising a base, two sides upstanding therefrom and a pair of outwardly openable doors at the exit end of the pen, the combination of said pair of doors and a pair of yoke members, each pivotally mounted on one of said doors for swinging movement across said door toward and away from said other yoke member, the pivot of each yoke member being located laterally inward of the centre of gravity of said member, whereby said member is biased by its own weight to pivot laterally oppositely to said other yoke member, one of said yoke members having adjustable means to hold it in a desired angular position with respect to the door on which it is mounted and both said yoke members having co-operable faces in the regions of their pivots, such that on closing the doors said faces will abut each other and said yoke members will automatically assume laterally opposite positions with respect to each other according to the position in which said one yoke member has been set with respect to the door on which it is mounted and that on opening said doors, said faces will become separated and said yoke members will move outwardly away from each other under their own weight, thereby releasing the neck of a beast held between the yoke members when the doors were closed.

3,051,128
REGULATING MEANS
Francis W. McKinley, 121 E. Costilla, Colorado Springs, Colo.
Filed Aug. 11, 1960, Ser. No. 49,037
8 Claims. (Cl. 119—157)

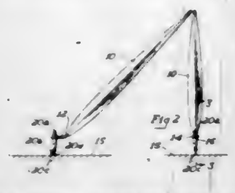


1. A regulating and metering device having a frame inclusive of spaced apart frame members interconnected by resilient means, at least a pair of tubular members mounted on said frame members and adapted to coact and move in a piston-like manner, means defining an inlet opening into a first of said tubular members, means defining an outlet opening from a second of said tubular members, means cooperative between said first and second tubular members to prevent flow from said first tubular member to said second tubular member when the device is in a closed position, and limit means on said frame arranged to limit the magnitude of said piston-like movement, and said second tubular member encompassing a major portion of the first tubular member throughout the range of said piston-like movement.

3,051,129
STENCIL MARKING DEVICE
Robert E. Williams, 4920 Arthur St., Gary, Ind.
Filed May 5, 1960, Ser. No. 27,037
1 Claim. (Cl. 120—8)

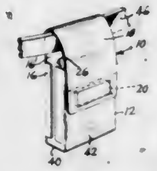
A stencil marking device comprising an elongated handle, a mounting member connected to the lower end of said handle and having a longitudinally extended portion disposed at an obtuse angle relative to the axis of said handle, a stencil marking tool having a loop formed at

the lower portion thereof and swivally mounted at the outer end portion of said mounting member and disposed normally to the extended portion thereof, the lower end of



said tool having a stencil engaging marking element in the form of an arcuately curved member connected therewith and having the stencil engaging portion thereof disposed in laterally offset relation to the swivel axis.

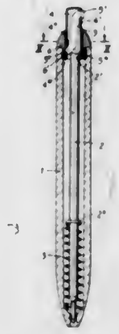
3,051,130
CASES
Robert S. Morris, Dudley, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Jan. 26, 1961, Ser. No. 85,124
2 Claims. (Cl. 150—28)



1. A case of the character described comprising a rigid open ended box-shaped main body part having a front, back, opposite sides and a bottom formed of a single folded piece of sheet metal of the type which will respond to magnetic force, inner and outer coverings of relatively limp non-magnetic sheet material disposed over the respective inner and outer sides of said main body part each extended in superimposed relation with the other continuously away from said back of said main body part adjacent the open end thereof to form a relatively limp flap adapted to overlap said open end of said main body part and the greater portion of the front of said main body part, a permanent magnet disposed between said inner and outer coverings adjacent the terminal end of said flap, said coverings being secured together about the respective peripheral edges of said flap, and along a line transversely thereof adjacent the side of said magnet opposite to said terminal end of said flap to pocket said magnet between said coverings whereby said terminal end of said flap may be magnetically attached to any and all parts of said main body part of said case within the reach of said flap.

3,051,131
RETRACTABLE BALL-POINT PEN
Josef Maria Schwarzäugl, Stein near Nurnberg, Germany, assignor to A. W. Faber-Castell, Stein near Nurnberg, Germany, a firm of Germany
Filed June 8, 1959, Ser. No. 818,598
Claims priority, application Germany June 11, 1958
2 Claims. (Cl. 120—42.03)

1. A ball-point pen comprising, in combination: a tubular casing having a rear end and an annular shoulder within said rear end; a ball point insert within said casing; a retracting spring acting upon said insert for retracting the same into said casing from an advanced writing position to a retracted position; a tubular hollow push button closed at its outer end and having an outwardly directed flange at its opposite inner end, said push button being slidably mounted within said rear end of said casing, said flange of said push button engaging in said retracted position of said insert said annular shoulder within said rear end of said casing, said push button having a wall provided with a first aperture above said rear end of said casing and a second aperture near said flange; a flat and substantially S-shaped locking member loosely arranged within said hollow push button, said locking member having an upper actuating end portion extending radially outwardly through



said first aperture and a lower end portion provided with an inclined cam surface engaging with said rear end of said insert under the resilient pressure of said retracting spring for pressing said lower end portion radially outwardly; and a locking shoulder provided at said lower end portion of said locking member, said locking shoulder projecting through said second aperture and engaging underneath said annular shoulder within said casing when said push button is depressed to maintain said insert in said advanced writing position thereof.

3,051,132
PROTRACTION-RETRACTION MECHANISM FOR WRITING INSTRUMENTS
Frank T. Johmann, 49 Hampton Drive, Berkeley Heights, N.J.
Filed Sept. 21, 1959, Ser. No. 841,243
12 Claims. (Cl. 120—42.03)



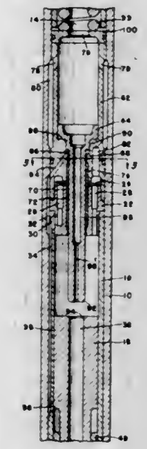
12. A writing instrument comprising: a barrel having upper and lower ends, a writing unit longitudinally movable within said barrel and including a writing point, resilient means urging said writing unit to an extended position whereby said writing point extends through the lower end of said barrel, a hood unit carried by said barrel and having a lower end extending past the lower end of said barrel, said hood unit lower end being longitudinally movable relative to said barrel, a pushbutton having an inner end within said barrel and an outer end outside said barrel, and a retraction-protraction mechanism having a point retracted position and a point protracted position, said mechanism being engageable with one of said units, said mechanism also being engageable with said pushbutton, said mechanism being shifted from said point protracted position to said point retracted position in response to longitudinal movement of the unit engageable with said mechanism obtained by pressing said writing point and said hood unit lower end into contact with a rigid surface and then releasing from said contact, said mechanism being shifted from said point retracted position to said point protracted position in response to movement of said pushbutton obtained by depressing and releasing said pushbutton, said mechanism when in a point retracted position being operable to conceal said writing point within said hood unit, said mechanism when in a point protracted position being operable to expose said writing point outside of said hood unit for writing.

3,051,133
CONTAINER FOR BALL-POINT INSERT
Josef M. Schwarzäugl, Stein, near Nurnberg, Germany, assignor to A. W. Faber-Castell, Stein, near Nurnberg, Germany, a firm of Germany
Filed June 8, 1959, Ser. No. 818,674
Claims priority, application Germany June 18, 1958
10 Claims. (Cl. 120—42.4)



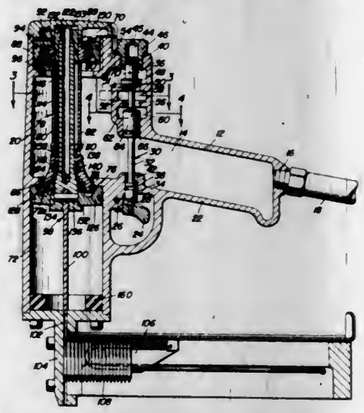
1. The combination which comprises: a ball point pen having an elongated stem and an elongated writing tip which extends beyond one end of said stem; and a container for said pen, said container comprising first and second tubular sections connectable to each other to form the complete container, said first and second sections being formed, respectively, with first and second shoulders spaced from each other a distance equal to the length of said stem so as to hold said pen within the container formed by said sections, said first section having a closed end formed with a blind first bore extending from said first shoulder, being at least as long as said writing tip, and being adapted to receive said writing tip, said second section having a second bore through which said writing tip may extend, said second bore extending from said second shoulder, being shorter than said writing tip, and having an end through which said writing tip may project, whereby said pen may be received within said container in an inoperative position wherein said writing tip is within said first bore, said combination thus forming a packaged pen, or in an operative position wherein said writing tip extends through said second bore so that the very end portion of said writing tip projects exteriorly of said container, said combination thus forming a pen ready for use.

3,051,134
PRESSURE FLUID OPERATED DRILL MOTOR
Paul A. Lincoln, Bloomsbury, N.J., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 28, 1960, Ser. No. 18,063
9 Claims. (Cl. 121—15)



1. A motor for pressure fluid actuated rock drills having a main cylinder, a main piston reciprocatory in said cylinder having its power stroke in a forward direction and a recovery stroke in the opposite direction, a valve automatically operable to control the flow of motive pressure fluid to the cylinder for actuating the main piston, an auxiliary cylinder, an auxiliary piston in said auxiliary cylinder having a shorter stroke than said main piston, a plunger for said auxiliary piston and extending therefrom to contact said main piston and to transmit driving force thereto, said auxiliary cylinder being rearwardly open constantly to full fluid pressure to urge said auxiliary piston forward and having conduit means forward of the auxiliary piston associated with said valve for intermittent admission of pressure fluid to said auxiliary cylinder.

3,051,135
PNEUMATIC TOOL
Arthur J. Smith, Visalia, Calif., assignor, by mesne assignments, to Bostitch Industrial Stapling Machine Co., East Greenwich, R.I., a corporation of Rhode Island
Filed Mar. 27, 1959, Ser. No. 802,368
16 Claims. (Cl. 121—21)



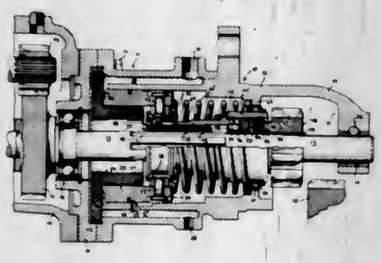
1. In a pneumatic impact tool, a body having a first air chamber and an opening in registry therewith for con-

nection with a source of air under pressure, a second chamber in said body, a port separating said chambers, a hollow poppet having a piston at one end operable in said first chamber and forming a movable wall thereof and a head at the opposite end normally closing said port and isolating said chambers, a driver assembly reciprocatable in said hollow poppet, a third chamber in said body with said piston forming a movable wall thereof, a valve assembly carried by said body, an air conductor network controlled by said valve assembly and establishing communication between said first chamber and said third chamber to thereby enable air to enter said third chamber and move said poppet in one direction, said driver assembly including a stem with a smaller piston at one end and operable in said hollow poppet, a larger piston on said stem and disposed in said second chamber and moved by air under pressure passing through said port, a cylinder forming a fourth chamber in said third chamber and accommodating said smaller piston, said smaller piston being withdrawn from said cylinder as said driver assembly begins to move thereby subjecting one side of said smaller piston to pressure from said third chamber, said poppet having a port registered with said first chamber which communicates said first chamber with the opposite side of said smaller piston and thereby returns said driver assembly when said first and second chamber are isolated, during which movement said smaller piston re-enters said cylinder and creates a back pressure to buffer the return movement of said driver assembly.

3,051,136
STARTING MOTOR CONTROL

Robert J. Muehlhausen, Indianapolis, Ind., assignor to Schwitzer Corporation, a corporation of Indiana

Filed Aug. 8, 1960, Ser. No. 47,972
6 Claims. (Cl. 121—37)

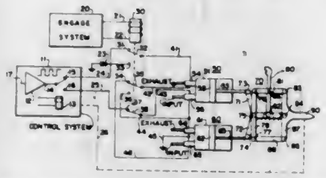


1. In a pneumatic starting apparatus for an internal combustion engine or the like of the type which includes a pneumatic motor, a shaft driven thereby and a pinion gear movable axially along the shaft for engagement with the engine flywheel gear: a tubular housing extending coaxially with said shaft, a sleeve disposed within said housing and extending in coaxial spaced relation therewith, an annular piston slidable along the axis of said shaft between said sleeve and housing walls, a drive collar slidable axially along said shaft for moving the pinion gear, means mechanically linking said collar and said piston, resilient means urging said piston and collar in a direction such as to disengage the pinion gear from the engine flywheel gear, said housing having an air inlet passage therein communicating with the space between said housing and sleeve at one end of said piston whereby upon the introduction of control air under pressure into said passage said piston is moved against the force exerted by said resilient means to engage the pinion gear with the engine flywheel gear, and an air outlet passage formed in said housing and communicating with the space between said housing and sleeve, said outlet passage being positioned so as to be uncovered by said piston as it completes its pinion engaging movement to thereby allow control air to flow through said outlet passage only when the pinion gear has engaged the engine flywheel.

3,051,137
CONTROL APPARATUS

Robert J. Kutzler, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Sept. 30, 1959, Ser. No. 843,506
14 Claims. (Cl. 121—38)



1. Control apparatus, comprising: a pair of adjacently mounted pneumatic actuators having their output rams arranged to operate along spaced-apart parallel axes; a pair of control ports in each of said actuators; a plurality of normally closed, electrically operated control valves; means including an input pair of said valves for individually connecting one of the ports in each of said actuators to a source of high pressure air; means including an exhaust pair of said valves for exhausting air from said actuators by way of the other ports therein; a support member mounted intermediate said rams; a first crank ram rotatably pinned at one end to said support member and at the other end to one of said output rams; a second crank arm rotatably pinned at one end to said support member and at the other end to the other of said output rams; a controlled member; a control bar rotatably pinned at its center to said support member; means connected between the extremities of said control bar and said controlled member whereby to achieve reversible control of said controlled member; and electrical control means for individually operating said control valves, operation of the input valve of one actuator and the exhaust valve of the other actuator being effective to operate said one actuator to drive the corresponding ram and crank arm against said control bar to achieve forward movement of said controlled member, and operation of the exhaust valve of said one actuator and the input valve of said other actuator being effective to operate said other actuator to drive the other ram and crank ram against said control bar to achieve reverse movement of said controlled member, the non-driven end of said control bar being effective to force the non-driven ram into the actuator from which air is exhausted.

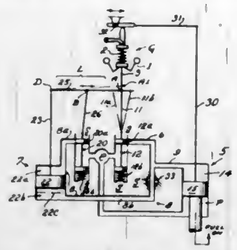
3,051,138
HYDRAULIC GOVERNORS

Rufus Oldenburger, West Lafayette, Ind., assignor to Curtiss-Wright Corporation, New York, N.Y., a corporation of Delaware

Filed June 7, 1960, Ser. No. 34,498
18 Claims. (Cl. 121—42)

1. A hydraulic governor comprising an error measuring or detecting unit, a hydraulic servomotor having an output member operative to effect correction of error, a pilot valve connected for movement by said unit in opposite directions to initiate error-correcting movements of the output member proportionally to detected amounts of error, and differentiating means including a differentiating valve member connected for movement by said unit and operating to cause back and forth movement of a differentiating wall member movable in and transversely blocking a differentiating fluid channel leading to the servomotor, so that movement of fluid contained in the

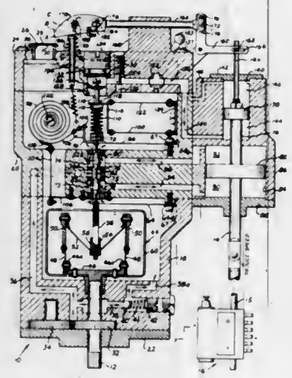
channel can have two way action to modify the proportional movements of the output member as functions of rate of change of error, said differentiating means further including feedback lever means connecting said differentiating wall member to the differentiating valve member and operating thereon in a manner to move that valve member to closed position during movement of the differentiating wall member in each direction.



3,051,139
FLUID POWERED GOVERNOR OR CONTROLLER

Robert H. Thorner, 19754 Monte Vista, Detroit 21, Mich.

Filed June 23, 1958, Ser. No. 743,542
38 Claims. (Cl. 121—42)

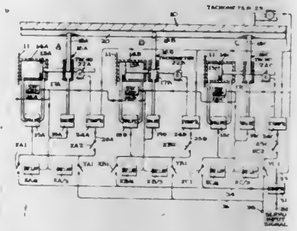


1. In a governor device for a rotating machine having control means to regulate the rotary speed thereof the combination of means for effecting speed-regulating movements of said control means comprising, a pressure responsive member operatively connected to said control means for actuation thereof, a fluid circuit having a source of pressure fluid to produce a flow of fluid therethrough and communicating with said pressure responsive member, valve means in said circuit for directing fluid therein to and from said pressure responsive member for effecting regulating movements thereof, speed sensing means responsive to changes in the speed of the rotating machine to produce forces varying as a function of the speed thereof and acting on said valve means to effect movements thereof for effecting speed-controlling movements of said pressure responsive member and said control means, a fluid chamber having an aperture therein, means operatively connected to said pressure responsive member to produce temporary pressure in said chamber as a result of movements of said pressure responsive member, a pressure sensitive member disposed within said aperture to form a movable portion of a wall of said chamber, means to mount said pressure sensitive member and to position same to provide a predetermined clearance between the entire perimeter of said pressure sensitive member and an adjacent surface forming said aperture, said clearance passing the fluid producing said temporary pressure on said pressure sensitive member, said mounting means including substantially frictionless swingable means imparting rigidity in one direction acting to support said pressure sensitive member and maintain said perimetrical clearance in all positions of said member for substantial frictionless movements in a direction transverse to said first-named direction, said movements of said pressure producing means effected by speed-controlling movements of said pressure responsive member producing said temporary fluid pressure acting on said pressure sensitive member until dissipated through at least said perimetrical clearance for displacing said valve means in a direction to stop further movement of said pressure responsive member.

3,051,140
SERVO-CONTROLLED DRIVES

Richard Samuel Jonathan Good, Edinburgh, Donald Ferguson Walker, Barnton, Midlothian, and David Theodore Nelson Williamson, Priorwood Polton, Midlothian, Scotland, assignors to Ferranti, Limited, Hollinwood, England, a company of Great Britain and Northern Ireland

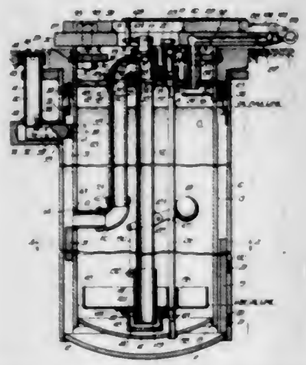
Filed Nov. 9, 1960, Ser. No. 68,251
Claims priority, application Great Britain Nov. 13, 1959
9 Claims. (Cl. 121—45)



1. A servo-controlled drive for imparting to an object a movement with respect to a reference structure in dependence on an input signal representing at any given moment a required kinetic relationship of the object to the structure at that given moment including: (*a*) at least two hydraulic actuators each having a piston arranged to traverse a cylinder which is short compared with the range of said movement, (*b*) for each actuator a clutch for coupling said actuator to drive the object relative to said structure, valve means whereby the position of the piston of said actuator in its cylinder is dependent on a valve control signal applied to said valve means, and a group of electrical switches arranged to be operated sequentially as the piston of said actuator makes each active stroke from a rest position, said drive also including (*c*) a measuring device for deriving a measured signal representing at any given moment the actual kinetic relationship of the object to said structure at said given moment, (*d*) a comparator for comparing said measured signal with said input signal and deriving an error signal dependent in sense on the sense of the difference between those signals, and (*e*) a relay system arranged to be controlled by said groups of switches so that the actuators, acting cyclically in sequence, effect by means of said switches the following operations successively: (1) cause the error signal to be applied as the said valve control signal to the valve means of an inactive one of said actuators so as to cause its piston to be driven from a rest position in the direction of said movement, (2) after said piston has attained the speed of said movement, cause the clutch of said inactive actuator to be engaged, thereby rendering said actuator active, (3) apply a start signal to the next oncoming actuator, (4) cause the clutch of the first-mentioned actuator

to be disengaged, thereby rendering said first-mentioned actuator inactive, and (5) cause a restoration signal to be applied in place of said error signal as the said valve control signal to the valve means of the first-mentioned actuator to cause its piston to be restored to its rest position, the said application of the start signal being such as to initiate operations (1) to (5) as regards said oncoming actuator, said switches being so operated that the clutch of an active actuator is not disengaged in accordance with operation (4) until the clutch of the next oncoming actuator has been engaged in accordance with operation (2).

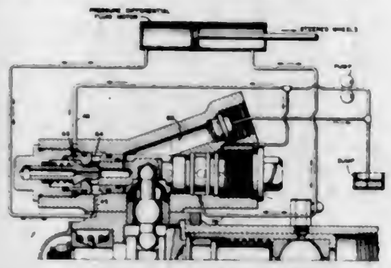
3,051,141
HYDRAULIC LIFT
Ira A. Weaver, Springfield, Ill., assignor to Dura Corporation, Oak Park, Mich., a corporation of Michigan
Filed June 1, 1960, Ser. No. 33,266
12 Claims. (Cl. 121—46)



3. A hydraulic lift comprising, in combination, a cylinder, a hollow piston movable up and down in said cylinder, said hollow piston being adapted to contain the working liquid and closed at its lower and upper ends, a first conduit extending downwardly from the top of the piston and terminating at its lower end near the bottom of said piston, a second conduit extending downwardly from the top of the piston and opening through the side wall of the piston into space between the piston and cylinder, said space being in communication with the lower end of the cylinder beneath the piston, a valve located near the upper end of the piston and having an open position allowing the liquid to be forced upwardly from the piston through said first conduit and downwardly through said second conduit into said space, said valve being operable to closed position to prevent the return of liquid into said piston, whereby to hold the piston at any point in its upward travel, said first conduit near the bottom of the piston having a valve attached thereto, and an upwardly opening pan operable to hold said valve open by gravity weight, so that when the liquid level in the piston is diminished to a point where it is near the bottom of said pan, the weight of liquid trapped in said pan overcomes the gravity weight and closes said valve.

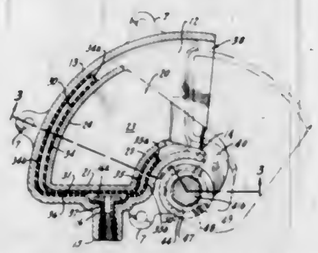
3,051,142
POWER STEERING VALVE
Oscar H. Banker, Evanston, Ill., assignor, by mesne assignments, to Fawick Corporation, Cleveland, Ohio, a corporation of Michigan
Filed July 18, 1958, Ser. No. 749,355
5 Claims. (Cl. 121—46.5)

1. In a valve for controlling the flow of fluid under pressure to a double-acting work cylinder, the combination of a valve body having a longitudinal bore therein, said longitudinal bore being in communication with a first cross-bore centrally located with respect to the longitudinal bore and substantially at atmospheric pressure, with two axially spaced cross-bores disposed one on either side of said first cross-bore and connected to opposite sides of said work cylinder, and with other axially spaced cross-bores disposed in proximity to the axially spaced cross-bores and connected to a source of fluid under pressure; a first valve element in the bore having centrally located passages, each of said passages communicating with the first cross-bore, an actuator for the first valve element to impart reciprocating axial movement thereto,



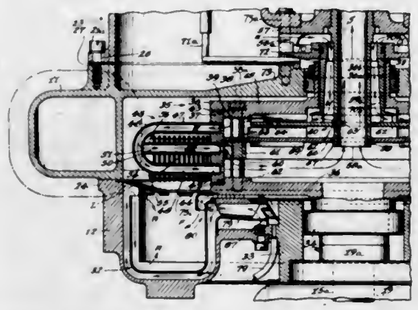
spaced poppet valve elements in the valve bore, said poppet valve elements being mutually exclusively engageable and axially movable by the first valve element, poppet valve seats in the bore disposed between the cross-bore connected to a side of said cylinder and a cross-bore connected to a source of fluid under pressure, said poppet valve elements having portions thereof continuously exposed to and hydraulically balanced with respect to the fluid in the cross-bores connected to said source of fluid under pressure, and said poppet valves having other portions seating upon the first valve element to close the centrally located passages therein upon engagement of said poppet valves by said first valve element.

3,051,143
ACTUATOR
Michael J. Nee, 6148 N. Keystone, Chicago 48, Ill.
Filed Apr. 19, 1961, Ser. No. 104,025
4 Claims. (Cl. 121—48)



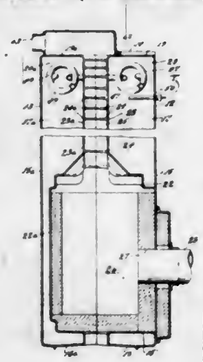
1. An actuator comprising arcuate housing, an arcuate piston movable in said housing and having its walls inwardly spaced from the walls of said housing, a rolling diaphragm in said housing, portions of said diaphragm being positioned to roll off and on said piston and said housing walls when relative motion occurs between said piston and said housing, a shaft rotatably mounted on said housing, an arm formed integrally with said piston and having an actuating engagement with said shaft effective to produce rotation of said shaft in response to movement of said piston within said housing, a torsion spring surrounding said shaft, one end of said spring being secured to said housing, the opposite end of said spring being adjustably secured to said shaft, movement of said piston within said housing being effective to rotate said shaft in one direction and to produce a tightening of said spring.

3,051,144
ROTARY HOT WATER AND STEAM GENERATOR
Lothar A. Huettner, Portsmouth, R.I., assignor to Dynamic Engineering Corporation, Newport, R.I., a corporation of Rhode Island
Filed Oct. 6, 1958, Ser. No. 765,589
1 Claim. (Cl. 122—11)



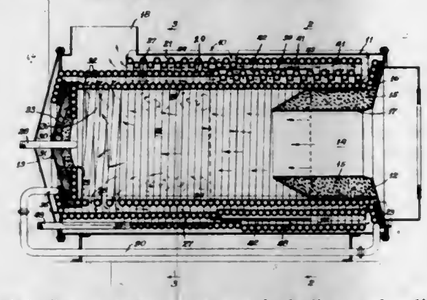
A steam or vapor generator comprising a housing, a rotor in said housing, at least a heater element on said rotor having a fluid inlet and outlet, a supply of solid fuel connected with said heater element at the inlet thereof, an exhaust opening in said housing connected with said heater element at the outlet thereof, means on said generator to rotate said rotor, a burner chamber beneath said housing including fuel supply means, means in said chamber rotatable with said means to rotate said rotor and being in the path of the supplied fuel to atomize said fuel, means to heat and gasify said atomized fuel, and air inlet guide means in said burner chamber to direct the mixture of air with said gasified fuel, means in said burner chamber to ignite said mixture of said air and gasified fuel, and means separating said rotor from said burner chamber and having an aperture defined therein to enable the fire from said ignited fuel to move from said burner chamber into said housing beneath said heater element.

3,051,145
SECTIONAL BOILERS
Anthony J. Donohue, Paoli, Pa.
(50 E. Wynnewood Road, Wynnewood, Pa.)
Continuation of application Ser. No. 599,040, July 20, 1956. This application Apr. 17, 1959, Ser. No. 807,181
2 Claims. (Cl. 122—225)



1. A sectional boiler comprising a plurality of separate vertical boiler sections each with enclosing walls, said enclosing walls of each of said sections including top wall portions on each of said sections and aligned vertical outer side wall portions on each of said sections, said sections being disposed in facing relation, said sections having therebetween at the lower part thereof a combustion space, a fluid connection at the lower part of said sections connecting said sections for fluid circulation between the lower interior portions thereof, the upper parts of each of said sections having inclined plane terminal face portions extending downwardly from said top wall portions and terminating at corresponding outer side wall portions, said face portions having openings therethrough, flueway bounding connecting walls on each section between the face portions of said sections, and a connecting head in bridging relation to said sections having on one side thereof openings surrounded by plane face portions in juxtaposed abutting relation to said first mentioned plane face portions, said head connecting the interior portions of said sections for fluid circulation between the upper interior portions of said sections, said boiler having a vertical flueway extending upwardly from said combustion space, said flueway being bounded at one end by said connecting walls, said connecting head having a domestic hot water heating member carried thereby, said heating member including inlet and outlet connections extending through a wall portion of said connecting head, and said heating member including a coil extending through said openings and into at least one of said vertical boiler sections.

3,051,146
WATER TUBE BOILER OR STEAM GENERATOR
Alick Clarkson, Paul Spur, Ariz., and Donald W. Miller, Midland, Tex., assignors to Vapor Heating Corporation, Chicago, Ill., a corporation of Delaware
Original application Feb. 18, 1955, Ser. No. 489,060, now Patent No. 2,998,807, dated Sept. 5, 1961. Divided and this application June 15, 1961, Ser. No. 117,404
13 Claims. (Cl. 122—249)

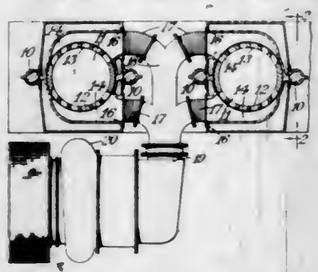


1. A boiler or steam generator including a plurality of serially connected tubular coils for containing liquid to be heated or vaporized and arranged one within another in spaced apart relation to provide an annular passageway between adjacent coils, the innermost coil of which constitutes a fire chamber and comprises a group of convolutions forming a closed side wall portion of the fire chamber at one end thereof and a group of spaced apart convolutions at the other end thereof providing gas discharge openings communicating with the surrounding annular passageway between the said innermost coil and the next adjacent coil, whereby the combustion gases follow a streamline flow path through the fire chamber and said surrounding annular passageway, and said next adjacent coil comprises a plurality of axially aligned groups of convolutions one of which is composed of a series of contiguous convolutions providing a closed wall portion arranged opposite the gas discharge opening of the fire chamber, and another group is composed of contiguous convolutions each of which has a series of portions offset radially relative to adjacent convolutions at circumferentially spaced locations to provide a series of discharge openings located opposite the closed side wall portion of the fire chamber.

3,051,147
EXHAUST MEANS FOR MULTI-CYLINDER MULTIPLE PISTON INTERNAL COMBUSTION ENGINES

Percy Jackson and Ernest Taylor, Pallion, Sunderland, England, assignors to William Doxford & Sons (Engineers) Limited, Pallion, Sunderland, England, a British company

Filed Apr. 28, 1958, Ser. No. 731,237
Claims priority, application Great Britain Apr. 26, 1957
2 Claims. (Cl. 123—51)

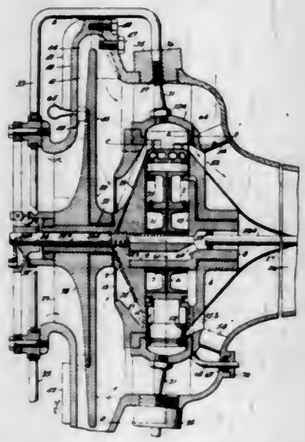


1. A multi-cylinder, in-line, two stroke cycle diesel engine having in each cylinder two opposed pistons working in opposite end portions of the cylinder, a crankshaft common to all the cylinders and extending lengthwise of the line of cylinders at a position opposite to the same ends of all the cylinders, said shaft having three crank throws for each cylinder, connecting rod means connecting the piston in the end of each cylinder which is opposite to the crankshaft to the center one of the three throws for that cylinder, means which include two side connecting rods which lie alongside the cylinder connecting the other piston to the other two throws of the crankshaft, there being two such side rods between each pair of adjacent cylinders one for each cylinder of the pair, and each cylinder of the pair has exhaust ports extending around arcuate portions of the cylinder diametrically opposed on opposite sides of the line of cylinders and each subtending an angle of more than 90°, and exhaust outlet connections from said exhaust ports to an exhaust pipe extending transversely of the cylinder axis between the said pair of cylinders.

3,051,148
TWO CYCLE-RADIAL, HIGH-SUPERCHARGE ENGINES

Douglas K. Warner, 1937 Panama Drive, Sarasota, Fla.

Filed May 31, 1955, Ser. No. 512,228
16 Claims. (Cl. 123—55)

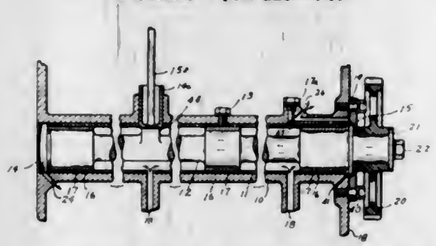


1. In a two-cycle short stroke engine having a single row of radially disposed cylinders having inlet and exhaust ports on opposite sides of said radial cylinders and cylinder heads having fins mounted thereon, and pistons alternately closing and opening said ports, a compressor fan mounted on said engine and receiving power therefrom and directing part of its output over said fins and part thru said cylinders, and expansion nozzles directly communicating with said exhaust ports directed inwardly rearwardly, and inwardly contracting passages communicating with air leaving said fins, and with gases leaving said nozzles, and a pipe communicating with said gases and said air, said pipe being concentric with said engine and of about 2 diameters in length, whereby within said pipe the supersonic hot exhaust gases entrain and further compress the air moving over said fins.

3,051,149
CAMSHAFT HOUSING

Arthur H. Yordi, 5942 3rd Ave., Kenosha, Wis.

Filed Jan. 18, 1961, Ser. No. 83,511
2 Claims. (Cl. 123—90)

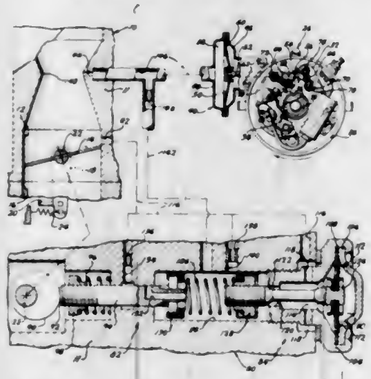


2. The combination in a camshaft housing, a sleeve and a camshaft, said sleeve inserted within the interior of said housing, alined threaded openings in said housing and sleeve, a set screw threadedly mounted in said openings and holding said sleeve in position in said housing, tappets spaced along said sleeve and movable vertically through openings in said sleeve, a pump, said pump remote from said sleeve, said pump directing fluid into said sleeve to maintain said sleeve filled with said fluid under pressure, said fluid exerting constant pressure against said tappets, a passageway drilled through said housing and said sleeve, a relief valve disposed in said passageway, said valve adapted to permit air to escape through said passageway.

3,051,150
AUTOMATIC-SPARK ADVANCE MECHANISM

Kalin S. Johnson, Northville, and Robert K. Frank, Mount Clemens, Mich., assignors to Holley Carburetor Company, Warren, Mich., a corporation of Michigan

Filed Jan. 31, 1961, Ser. No. 86,080
8 Claims. (Cl. 123—117)

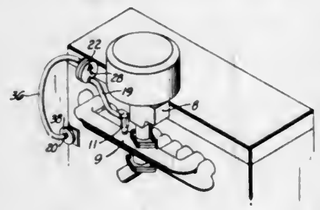


1. An ignition system for an internal combustion engine having an induction passage with a throttle valve controlling the flow of air therethrough, comprising an ignition distributor having a housing, a switch in said housing, a cam member normally rotatable in accordance with engine speed and adapted to intermittently open said switch for effecting a make and break of the ignition circuit, a breaker plate normally supporting said switch and having relative angular motion with respect to said housing, pressure responsive means secured to said housing and operatively connected to said breaker plate for rotating said breaker plate in accordance with engine requirements, a venturi formed in said induction passage upstream of said throttle valve, first conduit means communicating between the throat of said venturi and said pressure responsive means, second conduit means communicating between said induction passage at a point upstream of said throttle valve when said throttle valve is in its normally closed position and said first conduit means, first valve means connected serially in said second conduit means and adapted to at times control the communication through said second conduit means, said first valve means comprising a diaphragm member, a valve member secured to said diaphragm member and adapted to be positioned thereby, said diaphragm member being responsive to the vacuum sensed by said second conduit means at its point of communication with said induction passage and effective to move said valve member in the opening direction upon the attainment of a predetermined vacuum value, third conduit means connected in parallel with said second conduit means so as to bypass said first valve means, a variably positioned abutment member, spring means connecting said abutment member and said valve member to each other, a cam member rotatably positioned in accordance with the position of said throttle valve, second spring means continually urging said abutment member against said cam member, said cam member and abutment member being effective to vary the force of said first mentioned spring means so as to vary said predetermined vacuum value required to open said valve member.

3,051,151
CRANKCASE VENTILATOR FOR AUTOMOTIVE VEHICLES

Carl Helwig, 2601 San Fernando Road, Los Angeles 65, Calif.

Filed Aug. 28, 1961, Ser. No. 134,522
7 Claims. (Cl. 123—119)

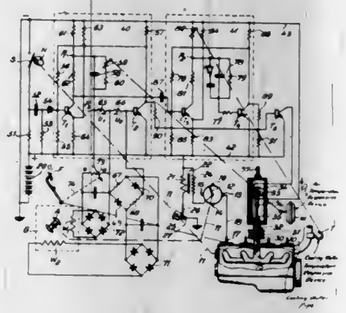


1. A device of the class described for automotive vehicle engines of the type having an intake manifold and a crankcase, said device comprising a fitting screw threadedly extending into an opening in the intake manifold, a hose having one end thereof connected to said fitting, a valve control member having an inlet tube on one side thereof and an outlet tube on the other side, the opposite end of said hose being connected to said outlet tube, an elongated leaf spring mounted within said control member and secured at one end thereof to said control member, a seal carried by the opposite end of said leaf spring, said seal being adapted to close off said outlet tube, a first adjusting screw mounted on one side of said control member and adapted to engage one side of said leaf spring between the ends thereof to move said seal away from said outlet tube, a second adjusting screw mounted on the opposite side of said control member and adapted to engage the other side of said leaf spring adjacent to said seal to limit the movement of said seal away from said outlet tube, a second hose having one end thereof connected to said inlet tube, the opposite end of said hose being connected to a resilient hollow plug, said plug having external serrations engaging the walls of an opening in the crankcase.

3,051,152
FUEL CONTROL ARRANGEMENT

Kurt Paule, Stuttgart-Oberturkheim, Heinrich Knapp and Richard Zechnall, Stuttgart, and Otto Schütte, Darmstadt, Germany, assignors to Firma Robert Bosch G.m.b.H., Stuttgart, Germany

Filed Sept. 17, 1958, Ser. No. 761,551
Claims priority, application Germany Sept. 18, 1957
20 Claims. (Cl. 123—119)

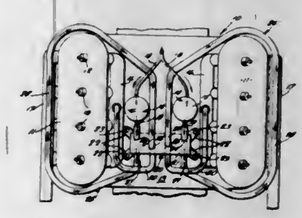


1. Fuel control arrangement comprising, in combination, an electrical operating device for operating the fuel supply means of a combustion engine; at least one monostable circuit connected to said operating device for actuating the same, and including a timing device operable between an inoperative condition, and an operative condition, for holding said operating device actuated, and passing from said operative condition to said inoperative condition after a variable time period; and means adapted to be controlled by said combustion engine for producing a variable voltage depending on the rotary speed of said combustion engine, said means being electrically connected to said timing device and controlling the same to vary said variable time period in accordance with said variable voltage and thereby depending on the rotary speed of the combustion engine whereby the time periods during which said fuel supply means supply fuel to said combustion engine are varied depending on the rotary speed of said combustion engine.

3,051,153
FUEL CONVERTER

Robert Lee Scott, P.O. Box 846, Bishop, Tex.

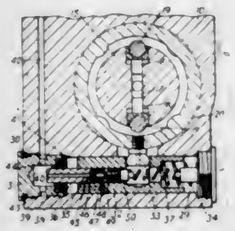
Filed Aug. 3, 1961, Ser. No. 129,085
2 Claims. (Cl. 123—122)



1. In a V-type engine which includes a pair of cylinder blocks, a support portion extending between said cylinder

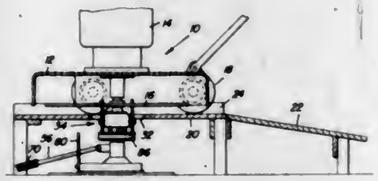
blocks, intake and exhaust manifolds for said blocks, a carburetor mechanism including two barrels, inlet lines connected to said barrels for conveying fuel from a source of supply of fuel to said barrels, outlet lines connected to said barrels; a fuel converter comprising a body member interposed between said cylinder blocks, spaced apart apertured lugs affixed to said body member, securing elements extending through said apertured lugs and connected to said support portion, there being pairs of first and second passageways in said body member and said first passageways communicating with said outlet lines, conduits having end portions thereof communicating with said first passageways and said conduits having portions thereof arranged in contiguous heat exchange relation with respect to said exhaust manifolds, the other ends of the conduits communicating with said second passageways, and lines connecting said second passageways to said intake manifolds.

3,051,154
LIQUID FUEL PUMPS
Kenneth Albert Walters Kemp, Ealing, London, England, assignor to C.A.V. Limited, London, England
Filed Aug. 28, 1961, Ser. No. 134,266
Claims priority, application Great Britain Aug. 30, 1960
5 Claims. (Cl. 123—139)



1. A liquid fuel pump of the kind specified for supplying fuel to an internal combustion engine, and comprising in combination a body part provided with a cylindrical bore, a fuel inlet passage leading to one side of said bore at a position intermediate the ends thereof, and a plurality of angularly spaced delivery ports extending outwardly from said bore at other positions, feed means for supplying fuel under pressure to said fuel inlet passage, a rotary cylindrical distributor which is mounted in said bore and is adapted to be driven by the engine, and which is provided with an axial passage, a plurality of angularly spaced fuel inlet passages extending outwardly from said axial passage at positions for enabling said angularly spaced fuel inlet passages to communicate in turn with the fuel inlet passage in said body part during rotation of said distributor, and a fuel outlet passage extending outwardly from said axial passage at another position for enabling said outlet passage to communicate in turn with the fuel delivery ports in said body part during rotation of said distributor, a head provided on one end of said distributor so as to be rotatable therewith, and having a transverse bore in constant communication with the adjacent end of the axial passage in said distributor, at least one plunger mounted in said transverse bore, an annular cam which surrounds said head, and through the medium of which said plunger is movable inwardly during rotation of said distributor, a cylindrical chamber situated parallel with a tangent to said annular cam, and provided at opposite ends respectively with a coaxial extension and a drain, a fluid-pressure operable piston slidably mounted in said cylindrical chamber, and provided with a coaxial bore, means interconnecting said piston and said annular cam so that movement of said piston serves to impart angular movement to said annular cam about the axis thereof, a cylindrical valve member slidably mounted in said coaxial bore, and extending from one end thereof into slidable engagement with the coaxial extension of said cylindrical chamber, the portion of said cylindrical valve member between said piston and the coaxial extension of said chamber being surrounded by an annular space within said chamber, a first spring acting on said piston in the direction for moving said piston towards the coaxial extension of said chamber, a second spring acting on said valve member in the same direction as said first spring acts on said piston, a supply passage through which fluid at a pressure variable with the speed of the engine is admissible to the coaxial extension of said chamber for acting on the adjacent end of said valve member, further passages through which fluid under pressure is admissible to said annular space surrounding said cylindrical valve member when the latter and said piston occupy predetermined relative axial positions, a non-return valve for preventing return flow of fluid from said annular space through said further passages, and an exhaust passage through which fluid can flow from said annular space to said drain when said valve member and said piston occupy other predetermined relative axial positions.

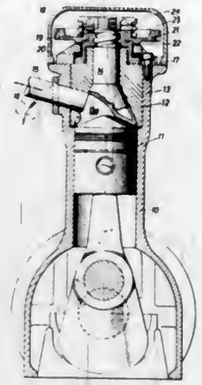
3,051,155
ENGINE STARTER APPARATUS FOR LAWN MOWERS
Walter L. Mehl, Mardela Springs, Md. (P.O. Box 568, Salisbury, Md.), and William A. Reid, P.O. Box 568, Salisbury, Md.
Filed Oct. 13, 1960, Ser. No. 62,449
16 Claims. (Cl. 123—179)



1. Apparatus for starting an engine of a rotary lawn mower having mower blades comprising, a starter mechanism, positioning means for positioning a rotary lawn mower above the starter mechanism, said mechanism including driving means, and lift means for moving said starter mechanism toward said positioning means for engagement of the starter mechanism with the blades of the lawn mower for rotation thereof.

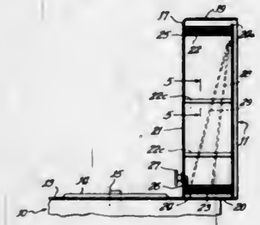
3,051,156
INTERNAL COMBUSTION ENGINES, COMPRESSORS AND THE LIKE
Frank Metcalf Aspin, Thornleigh, Peover Lane, Chelford, England
Filed Oct. 24, 1960, Ser. No. 64,430
3 Claims. (Cl. 123—190)

1. In a rotary valve having a driving stem and a seat for said valve, the improvement which comprises a driving gear on said stem having freedom of relative axial and rotary movement, a thrust bearing for said driving gear, spring means between said gear and said stem for loading said valve onto said seat, said spring means having torsional as well as axial resilience, the said driving gear and driving stem also having complementary engaging driving formations providing transmission of rotational torque from the driving gear to the valve stem with the generation of a resultant axially directed force



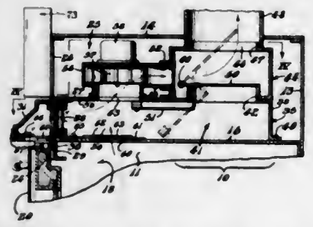
in a direction to ease the valve off its seat against the loading of the spring means.

3,051,157
AUXILIARY OVEN FOR A RANGE
Virgil C. Rice, South Bend, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 21, 1959, Ser. No. 841,205
27 Claims. (Cl. 126—19)



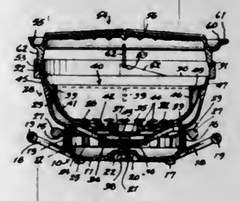
20. A heating appliance comprising a main body portion provided at its top with a surface heater; a backguard disposed at the rear of, and extending above, the top of said main body portion and having a storage compartment therein adjacent said surface heater; and an oven assembly above said surface heater and including relatively movable top, bottom, side wall and door sections foldable to compact the oven assembly for storage within said compartment.

3,051,158
VENTILATING SYSTEM FOR A COOKING OVEN OR THE LIKE
Walter R. Kimberley, Signal Mountain, Tenn., assignor to Samuel Stamping & Enameling Company, Chattanooga, Tenn., a company of Tennessee
Filed Nov. 3, 1960, Ser. No. 66,998
2 Claims. (Cl. 126—21)



1. In a domestic cooking appliance, the combination comprising an oven, and a ventilating system for said oven, said oven including walls providing a compartment, a door closing said compartment, there being a substantially wide opening extending across the top of said closed door and placing the interior of said compartment in communication with atmosphere, said venting system including a first duct extending fore and aft over said compartment and having an open end at the front of said compartment, an upwardly extending flue communicating with the aft end of said first duct, said oven walls including a horizontally extending top wall having a portion thereof serving as the bottom wall of said first duct, said horizontally extending wall portion having a broil opening formed therein, a horizontally extending hood coextensive in length with the top of said door and overhanging the open end of said first duct, a control panel for said oven positioned above said hood, said substantially wide opening being in communication with atmosphere at substantially the level of said horizontally extending wall, a damper at the outlet from said first duct normally biased open, means operable for controlling said broil vent opening, a second duct connected between said first duct and flue and bypassing said damper, and a fan disposed within said second duct and operable for closing said damper against the influence of said bias, said compartment being vented to the interior of said first duct principally via said broil vent when the same is open and being vented to the interior of said first duct via said opening over the closed door, said hood and said open end of the first duct when said broil vent is closed, said first duct being vented to atmosphere via said flue by natural draft when said fan is off and via said bypass duct and flue when said fan is on.

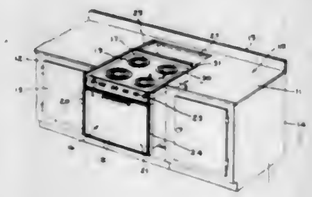
3,051,159
PORTABLE COOK STOVE
Peter S. Hardy, Trumbull, Conn., assignor to Peerless Aluminum Foundry Co., Inc., Bridgeport, Conn., a corporation of Connecticut
Filed Oct. 31, 1960, Ser. No. 66,182
3 Claims. (Cl. 126—25)



1. In a cook stove of the character described, a base part including an ash receiving well portion having a central vertically extending bolt-receiving hole, an annular ledge surrounding said ash receiving well, and an annular upstanding base wall surrounding said ledge and having a plurality of circumferentially spaced air receiving openings; a damper part including a circular damper wall rotatably seated upon said ledge within said annular wall of said base part and having a plurality of circumferentially spaced damper openings adapted in one position of rotation of said damper part to register with said base openings and in another position of rotation to be out of register with said base openings with said circular wall closing said base openings, and knob means carried by said damper part extending outwardly therefrom for manually rotating said damper part; there being slot means in said base part through which said knob means projects having end walls for engagement by said knob means and of a length to limit the rotation of said damper means to the registering and out-of-register positions of said damper openings with respect to said base openings; a bow-like body part having an open upper side and including a side

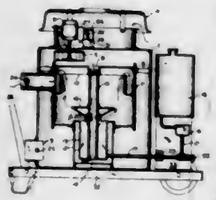
wall having an annular bead defining a circular opening and engaged within said annular base wall for positioning said body part in centralized position upon the upper edge of said base wall, a spider structure within said circular opening having a central hub portion and radial arms extending between said hub portion and said annular bead, and a downwardly extending bolt carried by said hub engaged through said bolt-receiving hole of said base part; a nut engaged on said bolt at the under side of said base part; a fuel containing grate part supported within said body part above said spider structure and removable through the open upper side of said body part; and a food supporting part supported by said body part above said grate part.

3,051,160
ONE-PIECE BUILT-IN RANGE
William A. Nielsen, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 31, 1959, Ser. No. 863,253
6 Claims. (Cl. 126—37)



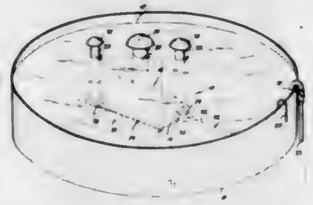
1. A one-piece built-in range comprising a combined cooktop and oven wherein the cooktop is provided with a plurality of surface heating units mounted therein and the oven is disposed directly beneath the cooktop, supporting flanges extending outwardly from the side and rear edges of said range unit adjacent the top surface of said cooktop, and trim strips fitted to said flanges respectively both to overlie and underlie the flanges and yieldingly to engage the undersides thereof so as to provide resilient support means for said flanges and thereby for said range.

3,051,161
AIR HEATING APPARATUS AND CONTROL MEANS THEREFOR
Robert G. Hicks, Bettendorf, Iowa, assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Sept. 16, 1957, Ser. No. 684,100
3 Claims. (Cl. 126—110)



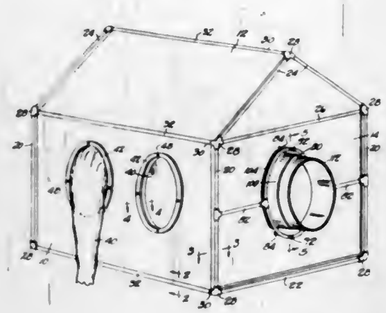
1. In air heating apparatus including a heating cabinet having disposed therein a burner-containing combustion chamber interconnected by a fuel line to a source of fuel supply and having a motor driven blower means for supplying tempering air to said cabinet to be heated and combustion supporting air to the burner for combustion purposes, said combustion chamber having an exhaust stack means cooperating therewith, a control circuit comprising: fuel flow control means disposed in said fuel line, a first electrical circuit connecting said blowers means to a source of power, a second electrical circuit containing actuating means for said fuel flow control means connected to said source of power, first switching means common to both of said circuits including a normally openly biased switch member manually closable to complete said first circuit and energize said blower means and a temperature responsive switching means responsive to temperatures in said exhaust stack means above a predetermined value and after combustion is fully established to complete said first circuit independent of said manually closable switch member and air responsive switching means in said second electrical circuit responsive only to a preselected mass flow rate of air delivery by said blower means to complete said second circuit and energize said fuel flow control actuating means, said preselected mass flow rate of air being sufficient to obtain complete combustion of the fuel supplied to said combustion chamber.

3,051,162
SUBMERSIBLE HEATER
Harry J. Porter, P.O. Box 1475, Post, Tex.
Filed Dec. 10, 1958, Ser. No. 779,386
5 Claims. (Cl. 126—360)



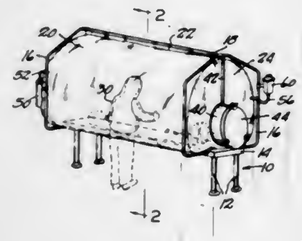
1. A submersible heater for use in heating a confined body of fluid comprising a longitudinally elongated housing defining a combustion chamber and having air inlet openings at its opposite ends located at the level of the bottom of the combustion chamber and a centrally located exhaust opening in its top wall, said openings being relatively arranged to one another and to said housing to assure a movement of inlet air inwardly from the opposite ends of said housing in a vortical swirl path extending in surrounding relationship to the longitudinal axis of said housing and sweeping the walls of said housing; a fuel burner supported by said housing in upwardly spaced relation to the end air inlets and having burner jets disposed substantially in a predetermined longitudinal plane above said inlet openings so as to be along the lowermost inner cylindrical portion of said vortical swirl path to receive combustion air from said inwardly moving inlet air, said burner jets being positioned to locate the flame jets longitudinally centrally of said housing in the center of the vortical swirl path to directly heat the main body of inlet air which in turn sweeps the housing walls to substantially uniformly heat the housing walls in the passage of said body to inlet air to said exhaust opening; inlet air stacks communicating with said end air inlets of said housing and adapted to extend upwardly through said body of fluid to dispose their upper ends above the upper level of said body of fluid; an exhaust stack communicating with said exhaust opening and adapted to extend upwardly through said body of fluid to dispose its upper end above the upper level of said body of fluid; and respective hoods associated with each of said stacks and having skirts extending in radial outwardly spaced relation to said upper stack ends to shield the upper ends of said stacks and assure a uniformly constant operation irrespective of ambient air conditions and prevent entry of the elements into said stacks.

3,051,163
ISOLATING DEVICE
Philip C. Trexler, Niles, Mich., assignor to University of Notre Dame du Lac, Notre Dame, Ind., a corporation of Indiana
Filed May 1, 1957, Ser. No. 656,396
10 Claims. (Cl. 128—1)



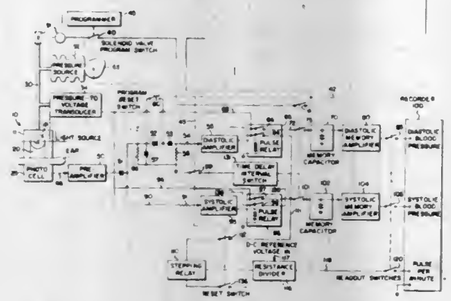
1. An isolating device comprising an enclosure formed of flexible film material, said enclosure having an opening, a flexible access glove having a sleeve portion, inner and outer rigid registering rings, securing means drawing together said rings for clamping said film material therebetween continuously around said opening, said glove sleeve extending around the inner ring with its open end portion inturned and clamped between said rings, said glove having elasticity to accommodate flat positioning of said inturned end portion in continuous sealed wrinkle-free engagement with said film material and with the clamping surface of said outer ring around said opening outwardly of said securing means.

3,051,164
JACKET ISOLATOR FOR USE IN STERILE TECHNIQUES
Philip C. Trexler, Niles, Mich., assignor to University of Notre Dame du Lac, Notre Dame, Ind., a corporation of Indiana
Filed Aug. 17, 1959, Ser. No. 834,119
16 Claims. (Cl. 128—1)



7. A jacket isolator comprising an enclosure, a table, means stabilizing said enclosure relative to said table, said enclosure having an opening therein, a flexible jacket within said enclosure and having a sealed connection with said enclosure continuously around said opening, said jacket being imperforate and including a hood having a transparent portion and sleeves terminating in gloves, means for discharging air into said jacket, and means for circulating air in said enclosure at a pressure above atmosphere and greater than air pressure in said hood.

3,051,165
APPARATUS FOR AUTOMATICALLY MEASURING BLOOD PRESSURE AND PULSE RATE
Arlon D. Kompelien, Richfield, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 14, 1959, Ser. No. 846,468
10 Claims. (Cl. 128—2.05)



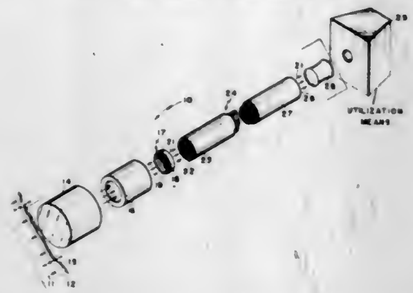
1. Apparatus for automatically sensing and recording a plurality of body functions comprising a primary sensor including a light source and photocell combination and a variable pressure clamping means, a source of variable pressure connected to said clamping means, means for cyclically adjusting said pressure source, signalling means connected to said clamping means for converting variable pressures therein to an electrical signal output proportional to the same, said sensor being adapted to be mounted on a body and so aligned that when said sensor is associated with a body said clamping means can alter the flow of blood through a portion of the body affected by said clamping means to vary the amount of light from said light source to said photocell, said photocell when so clamped on a body being adapted to produce an output of pulsed signals in accordance with blood flow providing a maximum output in accordance with a lack of blood in the portion of the body when clamped and a minimum output under normal conditions of blood flow in the body, a first circuit means connected to said photocell and including a voltage peak detecting circuit means, an amplifier, a relay connected to and controlled by said amplifier connected to said peak detecting circuit and providing pulsed operation of said relay in accordance with pulsed input signals thereto from said photocell as long as each succeeding pulsed signal is larger than the preceding signal, switching circuit means including a part of said relay of said amplifier and connected to the signalling means, a memory circuit means including a capacitor connected to said relay switching circuit means and adapted to receive the signal output from said signalling means with each pulsed operation of said relay means, first output circuit means connected to said memory circuit means and responsive to the signal on said capacitor, second circuit means connected to said photocell and responsive to the pulsating signal output thereof, a second amplifier and relay means connected to said second circuit means and operated in accordance with said pulsed signal output, second switching means included in said second relay means connected to said signalling means, memory circuit means including a second capacitor connected to said second relay switching means and responsive to the output of said signalling means, second output circuit means connected to and responsive to the signal on said second capacitor, third circuit means connected to said first circuit means and including a stepping relay responsive to the pulsed output of said photocell, transducer means providing an analogue signal output connected to said stepping relay means, a recorder, and a motor driven

switching circuit means cyclically connecting said first and second output circuit means and said analogue transducer means to said recorder.

3,051,166
ENDOSCOPE

Hrair Philip Hovnanian, Winchester, Mass., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Dec. 1, 1959, Ser. No. 856,455
10 Claims. (Cl. 128—4)

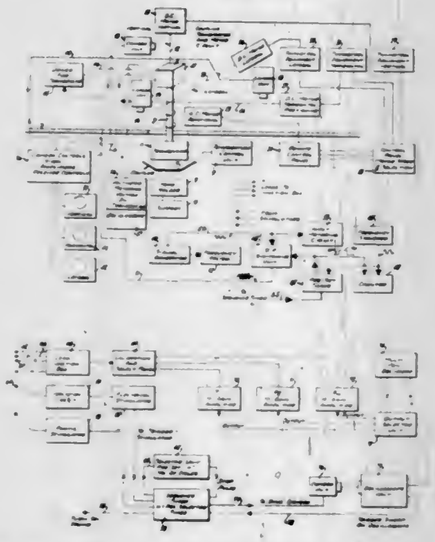


1. In an endoscope an image converter and an image translator comprising: a sensing means for converting an invisible radiant energy image to a light image; and light image transmission means comprising a fiber optic bundle terminated by distal and proximal ends, the distal end being in light communication with said sensing means for receiving the light image therefrom.

3,051,167
TIMING AND SEQUENCE CONTROL CIRCUITRY

William J. Fry, Frank J. Fry, and Leroy Dreyer, Champaign, Ill., assignors to University of Illinois Foundation, Urbana, Ill.

Filed July 23, 1957, Ser. No. 673,595
1 Claim. (Cl. 128—24)

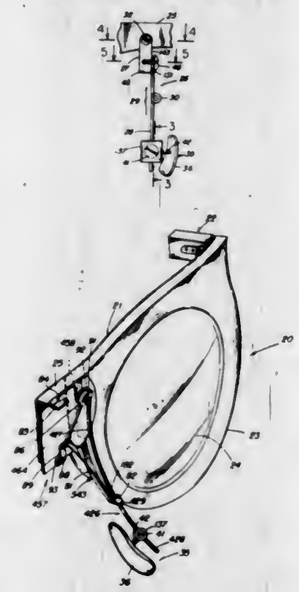


In apparatus for ultrasonic irradiation of a subject, the combination comprising a source of stabilized oscillations at a frequency above audibility, a plurality of transducers each to convert the source frequency oscillations to sonic energy, means to focus the sonic energy developed by each transducer at a common focal point at a finite distance therefrom, a counter circuit, a connection between the counter circuit and the plurality of transducers, means controlled by the counter circuit following a preselected count number to initiate transducer excitation and subsequently to arrest transducer excitation following a second preselected number of source oscillations means for stimulating the nerve system of the subject concurrent with irradiation, means controlled from the counter circuit for initiating and arresting the operation of the stimulating means, and means for registering the effects of the stimulation in the subject.

3,051,168
SPECTACLE SUPPORTED NASAL PRESSURE-APPLYING DEVICE

Gustave Aufricht, 1009 Park Ave., New York, N.Y.

Filed Oct. 11, 1961, Ser. No. 144,494
13 Claims. (Cl. 128—76)



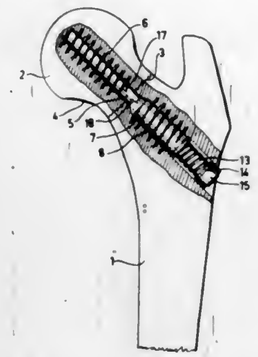
4. A spectacle supported nasal pressure-applying corrective device comprising, in combination with a transverse nose bridge structure of a spectacle frame, an elongated depending leg means, said leg means being suspended from said nose bridge structure and having a top section, a bottom pad-supporting section and an intervening section with the latter two sections and at least a portion of the top section being in the form of integral portions of a resilient wire element, and a relatively stiff elongated depending means connected in a laterally adjustable manner to said nose bridge structure with at least a part of the top portion of said resilient wire element being laterally abutted against a lower portion of said relatively stiff elongated depending means to limit lateral movement of the upper portion of the intervening section of the resilient wire element to an adjusted position of lateral movement.

3,051,169
SURGICAL SCREW CONNECTOR

Gustaf-Bertil Leonard Grath, Goteborg, Sweden, assignor to Aktiebolaget Stille-Werner, Stockholm, Sweden, a corporation of Sweden

Filed Dec. 5, 1958, Ser. No. 778,415
5 Claims. (Cl. 128—92)

1. A surgical screw connector for use in connection with fractures of the femur neck comprising, a screw inserted into the upper part of the femur in the direction of the ball head thereof, said screw having a threaded end anchored in the ball head, a sleeve arranged around the screw and fixed in the upper part of the femur and arranged to control any movement of the screw in a radial direction, a nut threaded on the outer end of the screw, helical springs displaceable on the screw and which springs abut at one end against the sleeve and abut at the other

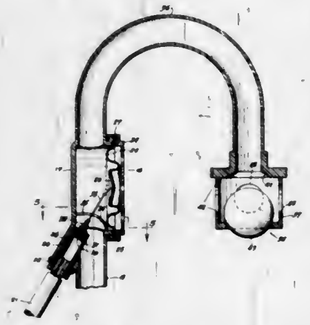


end against the nut, whereby the adjustment of the nut on the screw will cause the femur head at the point of fracture to be resiliently set against the femur, the sleeve having external threads so arranged that after the screw has been inserted into a previously prepared bore and the sleeve threaded therein to a position selected according to the location and shape of the fracture, a stable fastening will result.

3,051,170
UNDERWATER BREATHING APPARATUS PROVIDED WITH A SNORKEL

Howard A. Benzel, Lancaster, N.Y., assignor to Scott Aviation Corporation, Lancaster, N.Y., a corporation of New York

Filed Apr. 23, 1956, Ser. No. 579,867
3 Claims. (Cl. 128—142)



1. An underwater breathing apparatus adapted to be used by a swimmer and comprising: a substantially straight breathing duct adapted to be connected to the lungs of a swimmer and to be positioned substantially vertically when in operative position; a mouthpiece tubularly connected to the lower end of said breathing duct; a regulator connected with the upper end of said breathing duct and adapted to supply breathing fluid thereto; a communicating tube positioned above and connected with said regulator; and a snorkel valve connected with said communicating tube and positioned at approximately the same vertical level as said regulator when said breathing duct is in substantially operative position.

3,051,171
SURGICAL DRESSING

Gerald J. Liloia, New Brunswick, George A. Crowe, Jr., Plainfield, and Henry L. Beidler, Princeton, N.J., assignors to Johnson & Johnson, a corporation of New Jersey

Filed Feb. 4, 1959, Ser. No. 791,049
11 Claims. (Cl. 128—156)

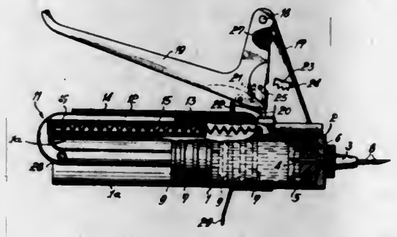


2. A needle loomed fabric suitable for use in surgical dressings and surgical wraps comprising an absorbent, resilient, non-woven web of mechanically interlocked cellulosic fibers wherein the fibers are not twisted together by spinning into the form of threads and where said unspun fibers have a fiber length of about 1 to 3 inches, a denier of about 1 to 5.5 and a surface lubricant content of 0.02 to 0.1% by weight lubricant based on the weight of the lubricated fiber, unspun fibers of said web while in a dry state having been mechanically interlocked by some of the fibers having been mechanically forced into the web in a direction crosswise thereof with the result that portions of such fibers extend downwardly through said web and interlock the fibers of said web together, said downwardly extending fibers also acting to draw fluid from the surface of said web into the main body of said web when the surface of said web is wetted, said needle loomed fabric having a tensile strength in at least one direction in excess of 100 grams per inch width.

3,051,172
AMPULE SYRINGE, PARTICULARLY FOR VETERINARY USE

Paul Ch. Bruchhaus, Solingen-Grafrath, Germany, assignor to H. Hauptner, Solingen, Germany

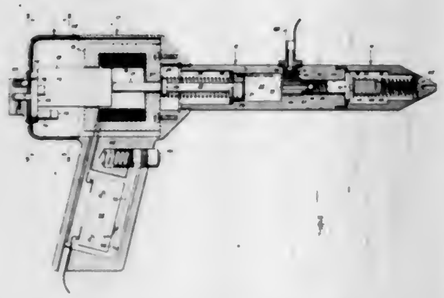
Filed Jan. 28, 1960, Ser. No. 5,170
6 Claims. (Cl. 128—218)



1. A syringe for an ampule having an end wall portion displaceable toward a front wall portion for dispensing fluid therefrom, comprising an ampule housing having one end open for the insertion of an ampule therein and an opposite end closed by an end wall, a hypodermic needle connecting piece mounted on said end wall including a hollow discharge pin for insertion into the ampule for discharging the fluid therefrom through said hollow pin, a substantially U-shaped plunger rod having a relatively longer guiding leg portion and a relatively shorter plunger leg portion having one end rigidly interconnected to one end of said guiding leg portion, each of said leg portions adapted to be moved conjointly longitudinally relatively to said ampule housing, said plunger leg portion disengageably protruding into said housing to engage and to displace the displaceable wall portion of the ampule in said housing to discharge fluid through said hollow needle, guide means on the exterior of said ampule housing in continuous guiding engagement with the guide leg portion of said plunger rod for movement backwardly and for-

wardly longitudinally in respect to said housing and providing for rotation of said plunger within said guide means, said plunger rod being displaceable along said guide in an amount sufficient to permit disengagement of said plunger leg portion from said ampule housing while said guiding leg portion remains engaged in said guide means, said plunger being rotatable about its guiding leg portion, when its plunger leg portion is disengaged from said housing, to dispose said plunger leg portion alongside said housing, and hand operated means mounted on said housing for displacing said plunger rod longitudinally in respect to said housing.

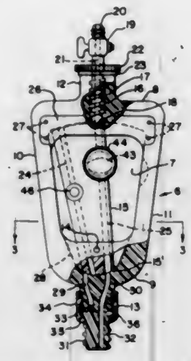
3,051,173
VETERINARY HYPODERMIC SYRINGE
Alvin P. Johnson, 11004 Mansel Ave., Inglewood, Calif., and James W. Keenan, Inglewood, Calif. (601 Pasco Delos Reyes, Redondo Beach, Calif.)
Filed May 12, 1960, Ser. No. 28,739
14 Claims. (Cl. 128—218)



1. In a hypodermic syringe of the type in which a hollow needle is electrically projected beyond the syringe to pierce the epidermis followed by injecting a fluid through the needle and into the underlying tissues, a casing having therein a pair of communicating coaxial bores of unequal diameters, the larger bore forming a chamber, means for admitting fluid into the chamber, said casing having an exit opening, a power driven plunger fitting the chamber, a hollow hypodermic needle within the casing coaxial with the plunger and adapted to be projected through the exit opening and beyond the casing, means for closing communication between the chamber and the hollow needle when the plunger is in inoperative position and means to return the plunger and needle to initial position, said last mentioned means making the fluids admitting means operable.

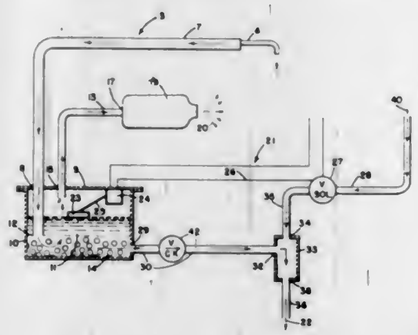
3,051,174
INTERCHANGEABLE MIXING CHAMBER FOR DOUCHES
William B. Mandell, 15 Center St., Neptune, N.J.
Filed Sept. 6, 1961, Ser. No. 136,291
5 Claims. (Cl. 128—274)

1. An interchangeable mixing chamber comprising a flat yoke frame having a hollow center, and having a top, sides and bottom, a centrally-disposed inlet housing projecting upwardly from said top and having a threaded vertical hole passing therethrough, a threaded pin designed to ride in said hole, said pin terminating at the top with a shut-off means, and at the bottom with a tapered end, a flange attached on said pin between said ends and designed to engage the top of said housing in outside sealing relation, a flat duct bar having front and rear walls and pivotally-mounted in said hollow center at its bottom and to the center of said frame bottom, two generally vertically-directed ducts adjacently-disposed in said bar in a manner such that sidewise movement of said bar in said frame would place the upper end of either duct in register with the tapered end of said pin which, when screwed into either duct, would be joined therewith in outside sealing relation, an outlet nipple centrally-disposed and projecting downwardly from said frame bottom, two canals disposed generally vertically and penetrating said nipple and said frame bottom and positioned in



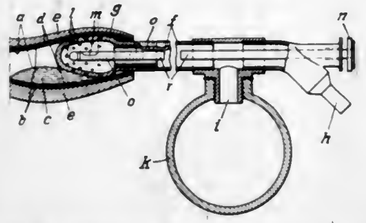
a manner such that, when either of said ducts is in register with said pin, the upper end of one of said canals is in register with the lower end of the pin-positioned duct, screened capsule means penetrating the duct bar for insertion therein of a solid medicament to be fed in solution form into said positioned duct, and an opening also penetrating the duct bar for insertion therein of a liquid container end to feed liquid into the other duct.

3,051,175
DENTAL WASTE DISPOSAL SYSTEM
John I. Nugent, Rochester, N.Y., assignor to Ritter Company, Inc., Rochester, N.Y., a corporation of Delaware
Filed Feb. 29, 1960, Ser. No. 11,719
4 Claims. (Cl. 128—276)



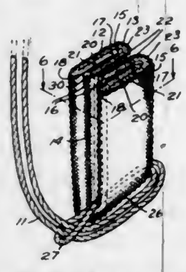
1. Apparatus for disposing of dental waste matter being conveyed to said apparatus by reduced air pressure comprising, in combination, a reservoir, conduit means adapted to extend from a source of waste to said reservoir for conducting waste, first pressure reducing means communicating with the upper portion of said reservoir, separator means in said reservoir intermediate said conduit and first pressure reducing means for separating said waste into the lower portion of said reservoir, and second pressure reducing means communicating with said lower portion of said reservoir adapted to produce a greater pressure reduction than said first pressure reducing means for removing said waste without causing any substantial increase in pressure in said reservoir.

3,051,176
RECTOSCOPIC DEVICES
Franz Alberti, Lindenstrasse 52, Burgsteinfurt, Germany
Filed Dec. 11, 1959, Ser. No. 859,070
3 Claims. (Cl. 128—276)



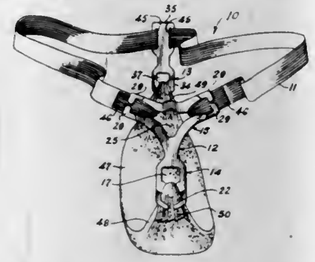
1. A surgical apparatus for examination of diseased mucosa in an intestine and for withdrawal by suction of secretion from the mucosa, particularly in the area of the sigmoid flexure of the intestine, said apparatus comprising, in combination, an elongated suction tube of substantially constant diameter, said suction tube having a first and a second longitudinal end and formed with a smooth outer surface; a substantially egg-shaped hollow body airtightly joined with one longitudinal end of said suction tube, said hollow body having a smooth outer surface with a gradual transition into the outer surface of said suction tube and formed with aperture means communicating with the interior of said suction tube; a rectoscope disposed in said suction tube, said rectoscope comprising an optical system for observation of the mucosa normally located in said hollow body and eyepiece means optically coaxial with and spaced from said optical system and located at the other longitudinal end of said suction tube; container means communicatively connected with said suction tube in the proximity of said other end thereof; and means provided in the proximity of said other end for connecting said suction tube to a source of vacuum whereby, when said hollow body is inserted into the intestine, secretion is withdrawn from the mucosa through said aperture means and through said suction tube and is collected in said container means.

3,051,177
ABSORBENT PRODUCT
Louise A. Wilson, Highland Park, N.J., assignor to Personal Products Corporation, a corporation of New Jersey
Filed Mar. 27, 1958, Ser. No. 724,332
5 Claims. (Cl. 128—285)



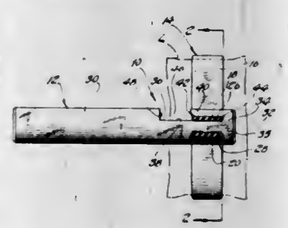
2. An oblong cylindrical catamenial tampon comprising a core of absorbent material composed of a single sheet folded upon itself into six plies extending lengthwise of the tampon, and a cover sheet of liquid-permeable material folded upon itself into six plies also extending lengthwise of the tampon and overlapping the plies of the core forming sheet, said core forming sheet and said cover sheet being compressed into a compact solid unit with the two outermost plies of the cover sheet forming an outside smooth confining wall for the unit and with the edges of both sheets located within the peripheral confines of the unit, said unit being free from stitching and adhesives and maintained in its final form by the interlocking and the intermeshing of the plies of both sheets due to compression while capable of expansion to permit the absorbent core to expand when wetted.

3,051,178
SANITARY BELT
Walter M. Jonas, Easton, Pa., assignor to Sobel Metal Products, Inc., Easton, Pa., a corporation of Pennsylvania
Filed Apr. 17, 1961, Ser. No. 103,360
11 Claims. (Cl. 128—291)



1. A sanitary belt consisting of a single elongated elastic member; a one-piece back buckle member including an upper portion having spaced apart slots through which said elastic member is threaded to suspend said back buckle member therefrom and a lower gripping portion adapted to secure one end portion of a sanitary pad to said back buckle member; and a one-piece front buckle member including an upper part having gripping portions at the opposite sides thereof adapted to adjustably secure the end portions of said elastic member to said front buckle member and a lower gripping portion adapted to secure the other end portion of a sanitary pad to said front buckle member; each of said gripping portions including means defining an opening adapted to receive the related end portion to be secured thereby and having a tapering wedge-shaped part into which the related end portion can be drawn for gripping engagement thereby, and means defining a slot adjacent said wedge-shaped part of the opening adapted to receive the end portion after extension of the latter through said opening for preventing inadvertent disengagement of the end portion from said wedge-shaped part of the opening.

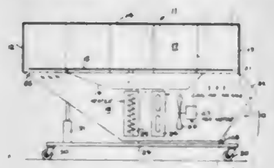
3,051,179
TOURNIQUET
Russell A. Dwyer, Wolverine, Mich.
Filed July 15, 1959, Ser. No. 827,306
4 Claims. (Cl. 128—327)



1. A tourniquet comprising an elongated elastic flexible limb-constricting element having opposite end portions and a limb-constricting loop portion disposed between said end portions, and an elongated operating member having its longitudinal axis disposed substantially per-

pendicular to the medial plane of said loop portion, said operating member including a handle portion and an apertured constricting-element-receiving portion disposed axially from said handle portion, said apertured portion having a pair of openings therein spaced apart from one another in a direction transverse to the center line of said operating member with the mouths of said openings on one side of said apertured portion having snubbing edges thereat, one of said openings passing through said operating member, one of said end portions of said limb-constricting element passing through one of said openings and the other of said end portions entering the other of said openings with the opposite ends of said loop portion bent sharply at said snubbing edges relatively to said end portions in snubbed locking relationship with said apertured portion.

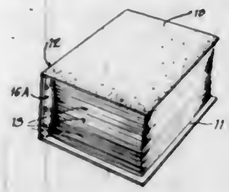
3,051,180
BODY TEMPERING APPARATUS
Jack Adams-Ray and Per-Oskar Persson, Stockholm, Sweden, assignors to Richard Magnus Kindal
Filed July 31, 1959, Ser. No. 830,775
Claims priority, application Sweden Dec. 3, 1954
4 Claims. (Cl. 128—373)



1. Cabinet with an apparatus for lowering the body temperature of a human body comprising a space for the patient separated from the ambient atmosphere, said space forming part of a path of flow for air, means for circulating the air, a heating means and a cooling means for the air, means for supporting the patient arranged in said space so that the entire body area can be brought in contact with the air, means for regulating the heat transfer at the body surface by members for controlling the temperature difference between the body and the circulating air, means for regulating the heat transfer at the body surface by members for controlling the heat transmission coefficient by changing the air velocity, a body contacting thermostat which is responsive to the body temperature of the patient, means actuated by said thermostat for selectively energizing the heating means and the cooling means in dependence on the body temperature, a second thermostat for controlling the heating means connected in series with a first relay having contacts in a first main circuit containing the heating means, and a third thermostat for controlling the cooling means connected in series with a second relay having contacts in a second main circuit containing the cooling means.

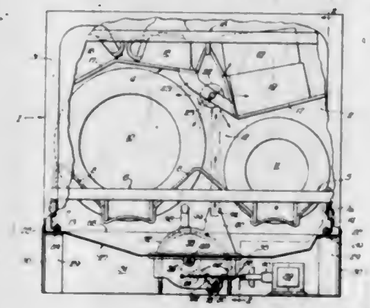
3,051,181
ROD-TYPE PERIODICAL BINDER
Arthur F. Johnson, Northbrook, Ill., assignor to Anderson Tool & Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 17, 1959, Ser. No. 793,760
5 Claims. (Cl. 129—38)

1. In a binder of the rod type having covers joined with a back comprising a pair of rod seats mounted in spaced relation on the back of the binder with binding rods of predetermined length spanning the space for seating of the respective ends of the rods therein; improved rod seating means comprising in each seat a base portion, a forward wall providing an arcuate gliding ledge upstanding from said base portion, and a hollow rearward wall structure constituting a well to receive and shield the ends of the binding rods, said hollow wall structure having a series of rod-receiving holes arranged in arcuate concentricity with, and at a level above, the arcuate surface of said gliding ledge, said holes in each rod seat being axially aligned with the holes in the companion seat, and said rods being of springy character and of a length such that they are adapted by slight bending deflection thereof



to be sprung into a pair of aligned rod holes in the pair of seats, said holes being situated at a level to space said rods as aforesaid a predetermined distance above the appertaining gliding ledges, which is sufficient to permit bound material of a predetermined maximum thickness at the binding gutter to glide on said ledge in a pivotal sense about the appertaining binding rod.

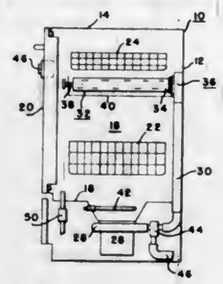
3,051,182
FLUID CIRCULATING POWER MEANS FOR A DISHWASHING MACHINE
George M. Gibson, % G. M. Gibson Corporation, Bellevue, Iowa
Filed Oct. 4, 1957, Ser. No. 688,247
26 Claims. (Cl. 134—108)



1. In a dishwashing machine cabinet, a fluid handling system adapted for the distribution and recirculation of said fluid within said cabinet comprising a fluid collecting pan having an opening therein, a pump connected with said pan and having a separable housing supporting and confining a fluid actuating impeller, said housing providing top and bottom portions secured to opposite faces of said pan respectively and extending about the opening in the latter, inlet means for said housing connected with the pan through another opening therein to draw fluid therefrom, and said housing having a discharge throat positioned upwardly and outwardly of said pan to direct impeller propelled fluid into said cabinet, and said pump providing means to recirculate the fluid returned to said fluid collecting pan from within said cabinet.

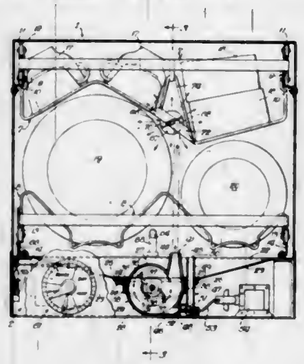
3,051,183
SPRAY TUBE FOR A DISHWASHER
James W. Jacobs, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,800
6 Claims. (Cl. 134—174)

1. A dishwasher having a washing chamber comprising, means for supporting dishes or the like in said chamber, a sump at the bottom of said chamber, means connected to said chamber for admitting a fluid medium to said sump, a jet spray tube in said chamber, conduit means connecting said sump and said spray tube, means connected to said conduit means for circulating said fluid medium from said sump to said spray tube, said spray tube including an inner cylindrical member rotatably journalled in said conduit and an outer cylindrical member mounted for relative rotation on said inner member, and swirl imparting means in said conduit means between said circulating means and said jet spray tube for



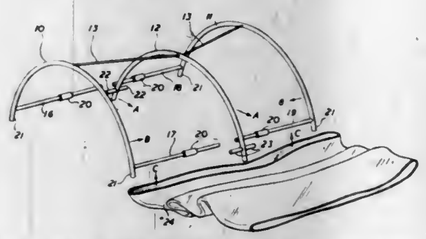
rotating said members relatively, said outer member having a plurality of radially directed slots, said inner member having a plurality of non-radially directed ports sequentially registering with said slots when said first and second members are rotated relatively and said outer member is in close enough relationship to the outer surface of said inner member to operate as a valve for certain of said ports not registering with said slots, thereby to change the jet spray patterns of said cleansing medium in said chamber.

3,051,184
APPARATUS FOR WASHING ARTICLES
George M. Gibson, % G. M. Gibson Corporation, Bellevue, Iowa
Filed Oct. 4, 1957, Ser. No. 690,176
27 Claims. (Cl. 134—183)



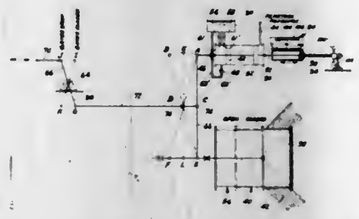
1. A dishwashing machine comprising a cabinet enclosing a given dishwashing space, dish carrying trays to support dishes to be washed throughout the dishwashing space, fluid impelling means supported outside and below the dish carrying confines of said cabinet and having a discharge nozzle to direct a stream of washing fluid along a given path into and across the interior of said cabinet, and a freely rotatable fluid deflecting vane operable about an axis disposed across the dishwashing space and across the path of the stream of washing fluid, said vane being supported at an elevated position within said cabinet space and in close proximity among the tray supported dishes within said cabinet dish carrying space and in the path of said fluid stream, impingement of said stream causing rotation of said vane, said vane acting to deflect the fluid out of its given path toward and against the dishes supported above and below said vane within said cabinet space.

3,051,185
ARCHED SHELTER STRUCTURE
John Edward Reynolds, Gosfield South, Ontario, Canada (Box 34, Leamington, Ontario, Canada)
Filed Sept. 10, 1959, Ser. No. 839,183
4 Claims. (Cl. 135—3)



3. An arched supporting structure, comprising: a spaced pair of arched supporting members each including a pair of generally upright base portions converging upwardly and inwardly into a centrally disposed upper portion; longitudinal frame members removably mounted between said arched supporting members to assist in maintaining the same in spaced parallel relation, said frame members extending between opposed points on said supporting members in the central portions and in the base portions thereof; means associated with at least one of said longitudinal frame members and operable to urge said supporting members apart; and a flattened sleeve of flexible material extending around the opposed supporting members for substantially the full length thereof, said sleeve forming a double-walled, arched covering and serving to limit outward movement of said support members under the influence of said last mentioned means.

3,051,186
PRESSURE REGULATOR SYSTEM FOR HYDRAULIC TURBINES
Jacob Fisch, Webster J. McCormack, and Harry E. Smyser, York, Pa., assignors, by mesne assignments, to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a corporation of Delaware
Filed Oct. 30, 1958, Ser. No. 770,641
7 Claims. (Cl. 137—25)



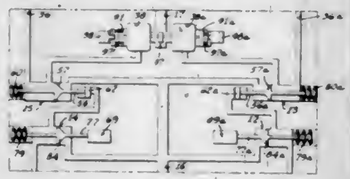
1. A pressure regulator system for a hydraulic turbine comprising a distributor surrounding said turbine and having means to communicate with a head of water from a penstock, and gate means actuated by gate ring connected thereto and operable to control the flow of water from said distributor to said turbine, in combination wit ha by-pass valve communicating with said distributor and having a movable valve member, a dashpot having a cylinder connected at one end to penstock pressure and a piston movable therein, fluid source means connected to the other end of said cylinder, restricted fluid outlet means connected between said fluid source means and said other end of said cylinder, a floating

lever connected at opposite ends respectively to said dash-pot piston and movable valve member, an actuating lever connected between said floating lever and gate ring, whereby when said gate means are closed to stop said turbine said gate ring will move said actuating lever and floating lever in a direction to move said valve member to open position while said dash-pot piston remains substantially stationary and thereafter the penstock pressure will act upon the piston of said dash-pot to move it in a direction to move said floating lever in a direction to move said valve member toward closed position at a rate slower than the opening movement while said actuating lever is maintained stationary by said closed gate means, and adjustable stop means interconnected to said dash-pot piston and operable to limit the movement thereof by penstock pressure in said direction to move said valve member to closed position, whereby said by-pass valve may remain open a desired predetermined amount at all times to permit a predetermined amount of water to be by-passed from said penstock when said gate means are open and closed.

3,051,187
PRESS SAFETY VALVE

Walter D. Ludwig, 3865 W. Lincoln Drive, Birmingham, Mich.

Filed Oct. 29, 1959, Ser. No. 849,554
5 Claims. (Cl. 137—110)



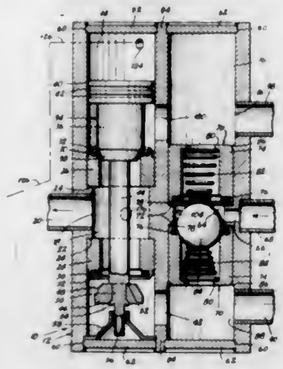
1. An air valve comprising: a shuttle valve for connection to an apparatus to be supplied with fluid under pressure; a pair of flow control valves connected in parallel with each other and to a source of fluid under pressure; one of said flow control valves being connected to one end of the shuttle valve and the other flow control valve being connected to the other end of the shuttle valve, whereby when fluid under pressure is passed to the shuttle valve by the flow control valves, the shuttle valve will be under a balanced condition and will be positioned in a central position so as to pass the fluid under pressure to the apparatus to be supplied with fluid under pressure, and whereby when either one of the flow control valves fails, the fluid pressure on the shuttle valve will be unbalanced and the shuttle valve will be moved to a position to block the flow of fluid to said apparatus and to exhaust said apparatus to the atmosphere; a pilot valve interconnected between each of said flow control valves and said source of fluid under pressure for controlling the operation of the flow control valves; each of said pilot valves being moved to the operative position by a solenoid; and, electric circuit means connected to the solenoids of the pilot valves and operable to deenergize said solenoids when the shuttle valve is unbalanced due to a failure in the air valve.

3,051,188
REVERSE CYCLE VALVE

Ralph B. Tilney, Clayton, Mo., assignor to Alco Valve Company, University City, Mo., a corporation of Missouri

Filed Mar. 14, 1955, Ser. No. 494,174
4 Claims. (Cl. 137—119)

1. In a valve mechanism: a housing having a high pressure inlet and a low pressure outlet, and first and second working pipe outlets; flow constricting means between the inlet and the outlet to produce a fluid pressure drop in fluid flowing through the housing; first and second, opposed valve seats on opposite sides of the outlet; a valve means oppositely movable to cooperate with each valve seat, fluid pressure means including a movable wall connected to the valve means to move it in response to pressure conditions on opposite sides of the wall, the wall being exposed on the first side to fluid pressures upstream of the outlet and upstream of flow constricting means, and on the side of the first valve seat remote from the outlet, and means selectively to connect the second side of

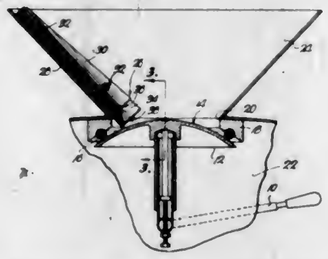


the wall to an area of higher pressure upstream of constricting means in the housing; and an area of lower pressure in the housing downstream of constricting means; the areas of the two sides of the movable wall, and the pressures to which they are subjected, being proportioned so that the valve means will be continuously urged in one direction when the second side of the wall is subjected to one of its aforesaid pressures, and continuously urged in the other direction when the second side of the wall is subjected to the other of its aforesaid pressures; and additional valve means movable to connect the inlet pressure to the first and second working lines selectively.

3,051,189
ANTICLOG DEVICE FOR VALVED OPENINGS

George M. Pro, Leawood, Kans., assignor to Air Placement Equipment Company, Kansas City, Mo., a corporation of Missouri

Filed Sept. 15, 1958, Ser. No. 760,894
4 Claims. (Cl. 137—242)



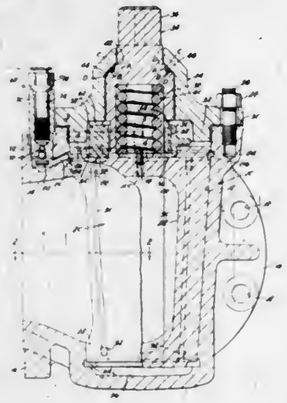
1. In a particulate materials handling machine having a plurality of elements including a materials feeding chute having a lowermost opening therein, a valve seat adjacent to and surrounding said opening, and a valve provided with a convex face slidably movable along the seat to and from a normal position closing said opening and bearing against said seat, the combination with said elements of a materials retention device secured to said chute for holding materials against movement with the

valve as the latter slides along the seat during movement thereof toward said position, said device having a resilient, lowermost marginal edge portion projecting downwardly from said chute and into said opening, said portion being disposed in relatively close proximity to said face to flex toward said seat under the influence of the materials on the face of said valve and to return to its initial position under the influence of the restoring force due to the resiliency thereof as said valve moves toward said position, whereby said materials are shifted away from said seat and are prevented from accumulating between said valve and said seat.

3,051,190
PLUG VALVE

Bertram J. Milleville, Wadsworth, Ohio, assignor to The Ohio Injector Company, Wadsworth, Ohio, a corporation of Ohio

Filed Jan. 26, 1960, Ser. No. 4,784
4 Claims. (Cl. 137—246.18)

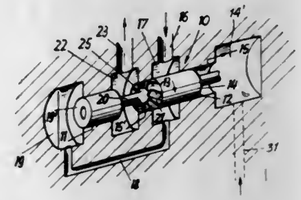


1. The combination in a valve of a valve body having a tapered seat open at its large end to the outside of the body, said body having a fluid passage therethrough intersecting the seat between the bottom and top thereof, a tapered plug rotatably received on the seat and having a fluid passage therethrough adapted to be substantially aligned with the fluid passage through the body or turned at an angle to close the fluid passage through the body, a stem substantially aligned with the large end of the plug but spaced axially therefrom, the end of the stem adjacent the plug being axially counterbored, a compression spring received in the counterbored stem and engaging with the plug to resiliently press the plug on its seat, a cover rotaiably receiving the stem which extends therethrough, said cover closing the valve body at the large end of the plug, means for releasably securing the cover to the body in fluid tight relation, opposed annular surfaces on the stem and cover inclined to the axis of the stem, an annular gasket of tough, slippery plastic carried by one of the inclined surfaces and engaging with the other to fluid seal the stem in the cover, an equalizer ring surrounding the lower end of the stem and resting on the top of the plug, integral diametrically-opposed lugs on the equalizer ring extending radially-inwardly into diametrically-opposed slots formed in the end of the stem adjacent the plug, integral diametrically-opposed ears on the equalizer ring and extending radially outwardly into diametrically-opposed recesses formed in the top of the plug, said lugs and said ears on the equalizer ring being at substantially right angles to each other, the plug having a bore connecting the top of the plug with the passage through the plug, a check valve in the bore allowing flow of fluid from the top of the plug to the plug passage, a pressure lubricating fitting secured to the side of the valve body, said valve body and plug having passages connecting the pressure fitting with upper and lower areas of the valve seat and with substantially the entire area of the small end of the plug, and interengaging means between the equalizer ring and the cover limiting rotary movement of the plug between substantially fully open and substantially fully closed positions.

3,051,191
PRESSURE REGULATING SLIDE VALVE, ESPECIALLY FOR AUTOMATIC CONTROL MECHANISMS FOR SHIFTING THE GEARS OF MOTOR VEHICLES

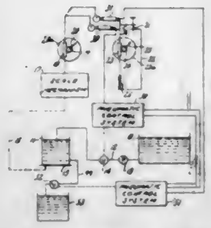
Friedrich W. Schöllhammer, Stuttgart-Bad Cannstatt, and Georg Eltze, Stuttgart-Riedenberg, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed June 8, 1959, Ser. No. 818,809
Claims priority, application Germany June 11, 1958
5 Claims. (Cl. 137—332)



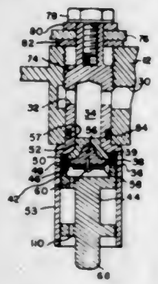
1. A pressure regulating slide valve comprising a valve housing having therein an inlet chamber, an outlet chamber at one side of and spaced from said inlet chamber, a third chamber at the other side of and spaced from said outlet chamber, coaxial bores connecting the adjacent chambers with each other, an inlet conduit connected to said inlet chamber, an outlet conduit connected to said outlet chamber, and a channel connecting said inlet chamber with said third chamber, a slide member within said housing comprising at least one piston slidable in the axial direction within said bores, one part of said piston being disposed substantially within said inlet chamber and within one of said bores and having a control edge adjacent to the side wall of said inlet chamber facing toward said outlet chamber, said control edge cooperating with a seating surface defined by the intersection of said one bore and the inlet chamber to control fluid flow from the inlet chamber to the outlet chamber, a second part of said piston slidable within the other of said bores and having an end surface responsive to the fluid pressure within said third chamber exerted by a pressure medium passing through said inlet conduit, inlet chamber and connecting channel into said third chamber, resilient means acting upon said one part of said piston in one axial direction on the side opposite said control edge, and a turbine part positively connected to said slide member and disposed between said first and second piston parts and adapted to be acted upon directly by the pressure medium flowing in the axial direction from said inlet chamber to said outlet chamber and then through said outlet conduit to rotate said slide member about its axis when said pressure medium acts upon said end surface of said second piston part so as to slide said slide member in the axial direction opposite to the direction of force of said resilient means to shift said one piston part so that said control edge thereon will be disposed within said inlet chamber.

3,051,192
CONTROL SYSTEM
Godfrey E. Fagot and Joseph C. Vance, Baton Rouge, La., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 20, 1960, Ser. No. 23,434
5 Claims. (Cl. 137—391)



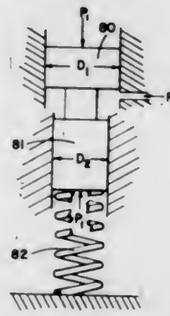
1. In a system for controlling the flow of material including valve means for controlling the flow of the material and a vessel for the material, control means comprising: scale means for weighing the material and comprising a longitudinally displaceable member positioned in accordance with the weight of the material; nozzle means for discharging a stream of gas transversely with respect to said longitudinally displaceable member; baffle means having a surface with a gradually altered component of transverse displacement with respect to said longitudinally displaceable member; one of said nozzle means and said baffle means being attached to said displaceable member for longitudinal displacement and effective to cause a gradual transverse variation of distance between said nozzle means and said surface of said baffle means to develop a gradual variation of back pressure in said nozzle means; and control means responsive to the back pressure of said nozzle means for controlling the flow of material in accordance with the weight of the material.

3,051,193
FUEL INLET VALVE
Ralph R. Griffen, Roseville, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Aug. 3, 1959, Ser. No. 831,232
11 Claims. (Cl. 137—450)



1. A fluid valve comprising an elongated tubular body provided with an inlet port and an outlet port, an annular valve seat in said body interposed between said ports, a rigid member spanning the interior of said tubular body in between said inlet port and said valve seat, said rigid member having a width less than the width of the interior of said body to permit free flow of fluid around said rigid member, said rigid member having a recess provided in one side thereof which faces in a direction away from said inlet port, a pressure absorbing member located in said tubular body, said pressure absorbing member including a fluid barrier and a stem on one side of said barrier which is received in said recess, said fluid barrier having a peripheral surface which is spaced from the wall of said body, means connecting the stem of said pressure absorbing member to said rigid member for supporting said pressure absorbing member in a predetermined fixed position in said body, a control member movable in said body on said one side of said rigid member, and a resilient diaphragm connected between said fluid barrier and said control member, said diaphragm having a center portion in surface to surface contact with said peripheral surface and the other side of said fluid barrier, said diaphragm including an integral annular valve portion at the outer edge of said center portion, said control member being movable towards and away from said valve seat to control flow across said valve seat with said valve portion of said diaphragm.

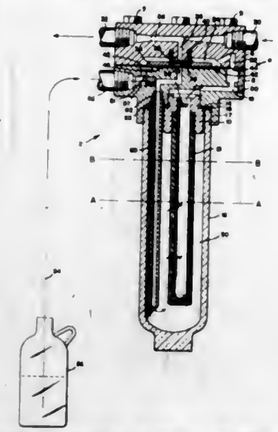
3,051,194
TEMPERATURE COMPENSATED SPRING-BIASED LINEAR HYDRAULIC DEVICE
Knut Henrichsen, Los Angeles, Calif., assignor to North American Aviation, Inc.
Filed May 6, 1958, Ser. No. 733,408
9 Claims. (Cl. 137—468)



1. A device for producing axial motion substantially proportional to an applied fluid pressure, that is substantially temperature invariant comprising a housing; an opposed piston means in said housing; means for applying an effective hydraulic force on said piston means tending to move said piston means axially in said housing means having a temperature sensitive modulus of elasticity biasing said piston means in a direction opposite to the effective hydraulic force tending to move said piston means axially, said piston means and said housing being proportioned and comprised of different materials whereby the effective hydraulic force acting on said piston means varies with temperature changes in a manner proportional to the variation in the biasing means force due to temperature changes in the modulus of elasticity of said biasing means.

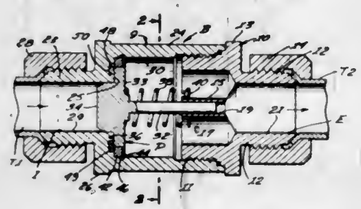
3,051,195
FLOW CONTROL DEVICE
Nyyrikki K. Stenberg, Roslyn, Pa., assignor to Fischer & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
Filed May 11, 1959, Ser. No. 812,259
9 Claims. (Cl. 137—501)

1. A device for introducing an additive liquid to a second liquid which comprises a reservoir adapted to contain said additive liquid, a permeable body with capillary pores having one side adapted to contact the additive liquid in said reservoir, said capillary pores being fillable with said additive liquid by capillary action to make said body gas impervious, the side of said permeable body opposite the side in contact with the additive liquid being in communication with the second liquid, means to vary the level of the additive liquid in the reservoir to control the rate of flow from the reservoir and means producing an excess pressure on the liquid on the reservoir side of the



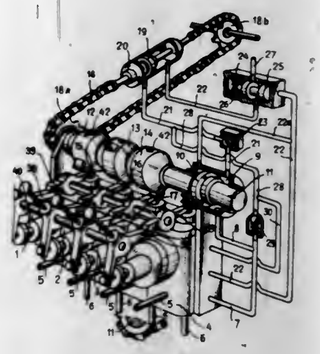
permeable body over the pressure on the liquid on the opposite side of the permeable body.

3,051,196
CHECK VALVE
Le Roy Miller, Los Angeles, Calif., assignor to Precision Equipment Co., Inc., Torrance, Calif., a corporation of California
Filed Oct. 24, 1958, Ser. No. 769,363
1 Claim. (Cl. 137—516.29)



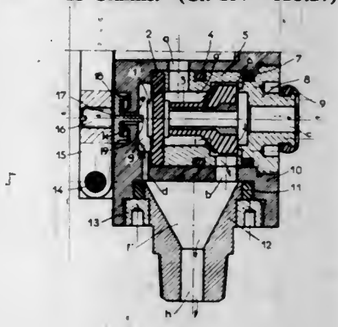
In a check valve having a body formed with a chamber from which extends a bore, with a shoulder being defined at the juncture of said chamber and said bore, and a poppet having a piston formed with a shoulder movable towards and away from the first-mentioned shoulder, the combination of: a groove formed in said first-mentioned shoulder with a relief channel formed in the wall of said groove facing said chamber; a seal of resiliently deformable material positioned in said groove to form a valve seat; a rigid retaining element secured in said chamber and encircling the radially outer portion of said seal and extending away from said valve seat, said retaining element being formed with a bore coaxial with the piston of said poppet whereby at such time as the shoulder of said piston engages the said first-mentioned shoulder said seal will be completely entrapped against flow; a serration formed in the shoulder of said piston and aligned with said relief channel, said serration engaging and deforming said seal into said relief channel as said shoulders are engaged; and a protrusion on the end of said poppet adjacent said juncture formed with a cylindrical portion immediately adpacent said piston engagement about its entire periphery with said bore and a frustoconically-shaped portion on said cylindrical portion opposite said piston, said protrusion being smaller than the length of movement of said piston away from said first-mentioned shoulder to be removed entirely from said bore, the said tapered portion of said protrusion slidably entering said bore as said shouders are engaged to cause cylindrical portion to positively guide said piston into the bore of said retaining element.

3,051,197
HYDRAULIC AUTOMATIC CONTROL DEVICE, MORE PARTICULARLY FOR MACHINE TOOLS
Giuseppe Zomer, 20 Via Montezemolo, Turin, Italy
Filed Nov. 14, 1960, Ser. No. 69,172
Claims priority, application Italy Mar. 16, 1960
5 Claims. (Cl. 137—622)



1. Hydraulic automatic control device comprising a plurality of control valves for controlling the operation of a number of hydraulic circuits, means for operating said valves in a predetermined time sequence and restoring the device, including a shaft having a plurality of cams mounted thereon, a mechanism comprising a first hydraulic cylinder for axially displacing said shaft and selectively displacing said cams to their operative and inoperative positions, respectively, a second hydraulic cylinder for rotating said shaft, and means for excluding the operation at will of at least one of the hydraulic circuits, said first and second hydraulic cylinders being actuated by pressure fluid supplied by a circuit controlled by a sequence valve out of said plurality of valves.

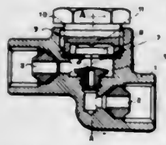
3,051,198
SERVO-ASSISTED SHUT-OFF DEVICE
Pierre Martin, Houilles, France, assignor to Compagnie Parisienne d'Outillage a Air Comprime, Paris, France
Filed Jan. 19, 1960, Ser. No. 3,283
Claims priority, application France Feb. 27, 1959
13 Claims. (Cl. 137—625.27)



1. A servo-assisted shut-off device comprising: means defining a primary pressure chamber having an aperture forming a pressure fluid inlet thereto; a deformable diaphragm constituting at least partly one wall of the primary pressure chamber; valve means including a mobile valve member secured to said diaphragm, a first seat at one wall of the chamber and a second seat debouching on

a discharge aperture, said valve member being alternately engageable with said seats; means defining a compression chamber having a fluid outlet duct toward a receiving apparatus; fluid passage means connecting said compression chamber through said valve means to the primary pressure chamber by way of the first seat and to the discharge aperture by way of the second seat; means defining a reaction chamber one wall of which is constituted at least partly by the diaphragm, said reaction chamber being situated at the side of the diaphragm opposite from the primary pressure chamber; a reaction duct interconnecting the reaction chamber with the compression chamber; means defining a pressure relieving aperture in a wall of said reaction chamber; control valve means for closing said reaction chamber aperture; and actuator means operable from the exterior of said device for moving the mobile valve member secured to the diaphragm to lift the valve member from said first seat.

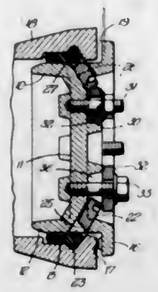
3,051,199
ANTICLOGGING DEVICE PARTICULARLY FOR CALIBRATED HOLES IN PNEUMATIC PIPE FITTING OF MOTOR VEHICLES
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a firm
Filed May 14, 1959, Ser. No. 813,277
Claims priority, application Italy May 24, 1958
2 Claims. (Cl. 138—44)



1. A flow restricting device adapted to be mounted on a movable member, a fluid inlet and a fluid outlet in said device, a passage in the device connecting the fluid inlet and the fluid outlet, a restricting nozzle member having a restricted passage therethrough provided in said passage in said device, an elongated needle like member projecting through the restricted passage in the nozzle, said elongated needle like member having a thickness in a direction transverse to the restricted passage in the nozzle substantially less than the size of the said restricted passage, a freely movable inertial member secured to one end of the elongated needle like member, an opening in said device aligned with said needle like member, a plug in said opening, and a housing for the inertial member in said plug, the interior dimensions of said housing being substantially greater than the dimensions of the inertial member whereby movement of the movable member vibrates said inertial member to move said needle like member within the restricted opening in the nozzle and maintain said restricted passage in the nozzle open.

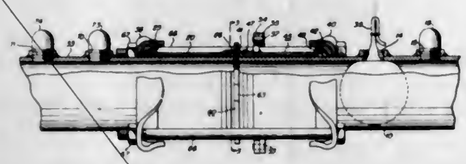
3,051,200
PIPE PLUG
William J. Bevington, Coshocton, Ohio, assignor to James B. Clow & Sons, Inc., Coshocton, Ohio, a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,789
3 Claims. (Cl. 138—89)

1. In combination: a pipe bell having a thick rubber sealing ring mounted therein, groove and ridge means cooperating between said bell and said rubber sealing ring for preventing axial translation of rubber sealing ring relative to said bell; a plug within said pipe bell comprising a cylindrical wall having an outside diameter larger than the inside diameter of said sealing ring, said cylindrical wall extending axially inwardly for compressing the sealing ring radially, a center wall extending radially across said cylindrical wall, a plurality of latches that project radially outwardly somewhat beyond said cylindrical wall and have sliding relationship with the nominally outer side of said center wall, a threaded post projecting from said center wall in radial alignment with each said latch, and a rectangular bar pivotally mounted



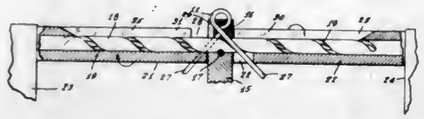
on each said post for the dual purpose of wedging each said latch radially outwardly in a first pivoted position and for clamping said latch in a retracted position when desired in a second pivoted position, means on said threaded posts for forcing each said latch against the outer end of the sealing ring and engaging the pipe bell axially outwardly when in service.

3,051,201
FLUID CONNECTION AND METHOD OF MAKING SAME
John E. Wilson, 4315 W. 162nd St., Cleveland 11, Ohio
Filed Oct. 23, 1957, Ser. No. 691,946
2 Claims. (Cl. 138—94.3)



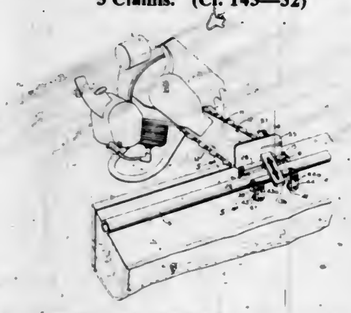
2. A fluid connection comprising in combination a pipe, an extension aligned with said pipe, a generally flat annular valve member residing between the ends of said pipe and said extension, a continuous annular sleeve slidably residing on an end portion of said extension and having first and second end portions slightly spaced from said extension, sealing means between said first end portion of said continuous annular sleeve and said extension adjacent one side of said generally flat annular valve member, sealing means residing between said second end portion of said continuous annular sleeve and said extension, a first follower slidable on said extension and engageable with said second end portion of said continuous annular sleeve and said sealing means thereat, a removable sleeve residing on said end portion of said pipe and having first and second end portions slightly spaced from said pipe, sealing means residing between said first end portion of said removable sleeve and said pipe adjacent another side of said generally flat annular valve member, sealing means residing between said second end portion of said removable sleeve and said pipe, a second follower slidable on said pipe and engageable with said second end portion of said removable sleeve and said sealing means thereat, and means extending between said first and second annular followers to bring said sleeves and generally flat annular valve member and sealing means together.

3,051,202
MACHINE FOR MAKING HELIXES
Harry L. Kitselman, Muncie, Ind., assignor to Indiana Steel & Wire Company, Inc., Muncie, Ind., a corporation of Indiana
Filed June 6, 1958, Ser. No. 740,451
9 Claims. (Cl. 140—90)



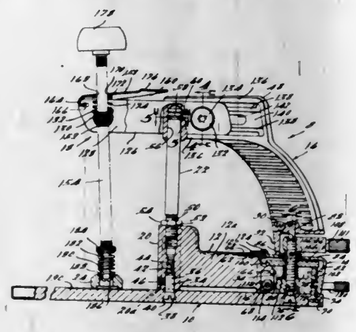
1. Apparatus for forming a long-pitch helix from a length of resilient wire, comprising relatively rotatable, coaxial members, one of said members being an elongated quill having an external helical groove substantially corresponding in base diameter to the internal diameter of the helix to be formed and in pitch to the pitch of such helix, the other of said members being a sleeve surrounding said quill and rotatable about the axis thereof, said sleeve being provided with a slot extending longitudinally of the quill and at the base of which the quill is received, said slot opening into a first end face of said sleeve and having a width at least approximately equal to the outer diameter of the helix to be formed, and means for securing a length of wire stationary with respect to the quill and in such position that it lies in said groove at said first sleeve-end and extends obliquely beyond the quill through said slot whereby as the sleeve is rotated on the quill in one direction the wire will be wound into said groove to form a helix, said slot extending radially through the wall of said sleeve so that when the helix is unwound from the quill by rotation of the sleeve in the opposite direction the helix may be removed from the sleeve by radial movement through the slot.

3,051,203
LUMBER SAW ATTACHMENT FOR CHAIN SAWS
Ernest A. Hayden, P.O. Box 248, Callahan, Calif.
Filed Dec. 28, 1959, Ser. No. 862,357
3 Claims. (Cl. 143—32)



1. In portable apparatus for sawing lumber from logs and the like the combination of a portable power driven saw having a saw bar, a frame, means for attaching said frame to the saw bar of said power driven saw so that said frame extends laterally to the side of the cutting element thereof for supporting said saw in a substantially vertical position during the sawing operation, a guide positioned on the log being sawed, said frame having a pair of adjustable cross members, one of said cross members being positioned on one side of said guide and the other of said cross members being positioned along the other side of said guide, means attached to said cross members engaging the opposite sides of said guide, a plurality of rollers, means for pivotally attaching the plurality of rollers to said frame for supporting said frame on a sawed surface of the log whereby said saw supported by said frame and said rollers may be rolled along on said sawed surface as the saw cuts into the log, said first mentioned attaching means including means for supporting said saw at an angle such that the cutting element of the saw urges itself into the log during the sawing operation.

3,051,204
MITER GAUGE
Walter L. Gaskell, Ypsilanti, Mich., assignor to King Seeley Thermos Co., a corporation of Michigan
Filed Sept. 29, 1958, Ser. No. 764,024
3 Claims. (Cl. 143—169)



1. In a tool comprising a bar adapted to be slidably mounted on a worktable, a handgrip secured to and extending generally normally upwardly from the bar, and a supporting arm having one end thereof mounted on said hand grip with the other end thereof overlying a portion of the bar, the improvement comprising a rod slidably mounted on the other end of the arm, one end of said rod adjacent the bar being adapted to engage a workpiece and cooperate with the bar to clamp the workpiece therebetween, and quick release means mounted on the other end of the arm comprising resilient means normally biasing said rod away from the bar, ratchet means directly and releasably engaging the rod to normally prevent movement thereof in a direction away from the workpiece and freely permit movement thereof in a direction toward the workpiece, and a latch member on the arm and movable to effect disengagement of said ratchet means from said rod to free said rod for movement away from the bar under the bias of said resilient means thereby to quickly unclamp the workpiece.

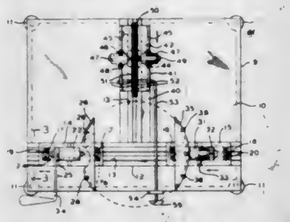
3,051,205
TWIST DRILL
William J. Kallio, Glen Ellyn, Ill., assignor to United-Greenfield Corporation, Chicago, Ill., a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,605
2 Claims. (Cl. 145—117)



1. A twist drill comprising a cylindrical body formed with a helical chip flute extending radially inwardly of the body at least to its axis and lengthwise to the cutting tip of the body, the cutting tip of the body being defined

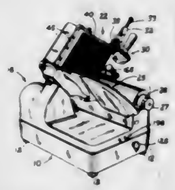
by a smooth continuous surface extending completely across the end of the body at an acute angle to the axis of the body and which intersects the leading edge of the flute surface of the body at a point angularly forward of the axially outermost intersection of said smooth continuous surface with the outer cylindrical surface of the body and at the periphery of the body, said smooth continuous surface defining with the outer cylindrical surface of the body a cutting spur extending axially beyond any other part of the body and the point of intersection of said smooth continuous surface with the leading edge of the flute surface lying axially beyond any part of the body except the cutting spur and serving to pick up material cut out by the cutting spur and direct it into the flute.

3,051,206
FRUIT CUTTERS
Harry J. Freiling, 942 Pratt St., Philadelphia, Pa.
Filed Nov. 20, 1959, Ser. No. 854,354
8 Claims. (Cl. 146—73)



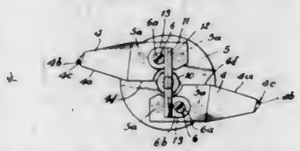
1. Apparatus for cutting an article of fruit into halves comprising a base, spaced uprights slidably mounted on said base, members engaging said base and said uprights for retaining said uprights at selected locations, horizontally disposed shafts rotatably mounted at fixed locations on said uprights and in longitudinal axial alignment, separated facing rotatable fruit gripping members carried by said shafts for the reception of an article of fruit to be cut carried therebetween, one of said shafts having a member for rotating said gripping member, a cutter support, members slidably mounting said cutter support on said base for movement toward the rotational axis of said fruit gripping members and to a location between said members, a rotatable cutter mounted on said support and having cutting edges on the periphery thereof, and a member connected to said cutter support for advancing said cutter to cutting engagement with fruit supported between said fruit gripping members.

3,051,207
FOOD HANDLING APPARATUS
Richard S. Hartley, Troy, Ohio, assignor to The Hobart Manufacturing Company, Miami, Ohio, a corporation of Ohio
Filed Oct. 2, 1959, Ser. No. 843,993
4 Claims. (Cl. 146—102)



1. In a slicing machine having a rotating slicing knife mounted in an inclined slicing plane, an open top carriage extending in an oppositely inclined direction intersecting said slicing plane for gravity feed of material down said carriage to said knife, means mounting said carriage for linear movement parallel to said slicing plane to carry the material back and forth across the cutting edge of said knife, drive means for power reciprocation of said carriage including a pivotally mounted drive arm having one end extending generally beneath the path of movement of said carriage, a first drive member supported on said one end of said arm, a second drive member extending from said carriage, roller means mounted on one of said drive members and extending toward the other said drive member, a track member carried by the other said drive member and extending transversely to the direction of movement of said carriage, said track member having sufficient length to contain said roller during a complete arcuate movement of said first drive member, means connected to move said second drive member selectively into position for driving engagement between said roller and said track to control the drive connection between said carriage and said drive means, and means for retaining said second drive member in a position where driving engagement between said roller and said track cannot be effected.

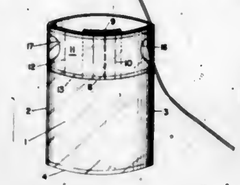
3,051,208
BLADE ASSEMBLY FOR COMMINUTING MACHINE
Carl Schnell, Winterback, near Schorndorf, Wurttemberg, Germany, assignor of one-half to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 27, 1959, Ser. No. 836,485
15 Claims. (Cl. 146—192)



1. In a centrifugal comminuting machine a rotary cutter comprising a circular disk portion rotatable about a central axis, an annular foraminous plate surrounding said disk, at least one cutting arm overlying and projecting from said disk and having an inner forwardly directed cutting edge spaced away from and overlying said disk and an outer forwardly directed cutting edge spaced away from and overlying said foraminous plate, for comminuting material during rotation of the cutter about said axis, and a blade overlying the disk and extending away from said disk and from said inner cutting edge in the axial direction and having a portion lying in said axis, said blade extending outwardly from said axis so that its path in rotation overlaps in the radial direction the path of said inner cutting edge, whereby said blade propels material which lies over said disk and closely adjacent the axis laterally to pass over the path of the inner cutting edge to overlie the foraminous plate and the path of the outer cutting edge.

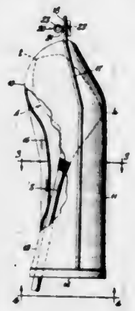
3,051,209
MANUFACTURE OF CONTAINERS MADE OF PLASTIC MATERIALS OR THE LIKE
Jacques de los Santos Gonzalez, De Pinte, Belgium, assignor to Societe Financiere de la Cellulose, Luxembourg, Grand Duche de Luxembourg
Filed Apr. 1, 1960, Ser. No. 19,292
1 Claim. (Cl. 150—9)

A bag made of plastic material for holding a substance, having a casing with a slit cut down on part of the depth of the front wall of the casing, a sheet applied behind the slit against the said wall of the casing, said sheet being fixed along its entire width at one side edge and also at its upper and lower sides to said front wall of the casing and being left free relative to said front wall at that place where the slit has been cut and along its remaining surface on one side of the latter, thus allowing a passage for a tube into the bag through the slit to feed a substance into the bag, means for closing the bag at its upper part, and a band of plastic material applied upon the front face of the front wall of the casing,



which band covers the slit and is fixed at its lower part on its entire length and is fixed at its upper part, towards the opening, jointly with the said means for closing the bag and with the said band, thus forming a thick upper edge which closes the bag with a tight fit and is highly resistant to tear.

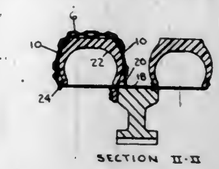
3,051,210
GOLF CLUB HEAD COVER
Robert H. Mesinger, Lakecrest Drive, Aunt Hack Ridge, Danbury, Conn.
Filed Jan. 10, 1961, Ser. No. 81,774
4 Claims. (Cl. 150—52)



1. A golf club head cover comprising a unitary, jointless, homogeneous and flexible bag-like cover formed of a molded flexible plastic, said cover having a rounded head enclosing portion larger than the golf club head and an elongated sleeve portion depending therefrom and having an open bottom end, the head enclosing and sleeve portions being angularly related at greater than 160° and not greater than about 175° the angle being substantially larger than the angular relation between a wood golf club head and shaft, the lower portion at the rear center of the sleeve portion being outwardly displaced from round contour to provide a longitudinal groove to receive a golf club shaft, the head portion of sleeve angle of the cover being sufficiently greater than the golf club head to shaft angle to cause the cover to bind the heel and toe portions of the club head and hold the club shaft in said groove so that the groove material resiliently presses against the shaft whereby the cover is retained on club head but can be readily pulled off the head.

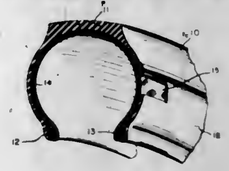
3,051,211
TRACTION DEVICE
Samuel R. Colosimo, 1025 Bluff St., Pittsburgh, Pa.
Filed Oct. 31, 1961, Ser. No. 149,021
2 Claims. (Cl. 152—220)

1. In combination a plurality of chain sections and hooks welded to an outside wheel of a pair of rear dual vehicle wheels and to a metal cylinder between said dual wheels, each of said chain sections comprising a pair of cross links joined at each end to two corners of equilateral metal triangles, one triangle at each end of said pair of cross links, the remaining corner of each of said triangles joined to an extension chain, at least one extension chain terminating in a snap ring, one end of the



other extension chain being secured onto one of said hooks welded to said metal cylinder communicating between said rear dual wheels, said snap ring being secured to another of said hooks, welded to the outside rim of said outside wheel of said dual wheels, said hooks being welded on said metal cylinder and said outside wheel being located at several positions around said rear dual wheels.

3,051,212
REINFORCED COMPOSITE STRUCTURES
William W. Daniels, Kinston, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 26, 1959, Ser. No. 823,138
11 Claims. (Cl. 152—330)



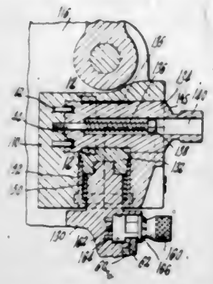
1. A composite structure comprising a rubber article having incorporated therein reinforcing fibers prepared from a linear terephthalate polyester having a relative viscosity of at least 25, said fibers having a concentration of free carboxyl groups of less than 15 equivalents per million grams, an ether concentration of not more than 3 mol percent, a tenacity above 6 grams per denier, and an initial modulus of at least 80 grams per denier.

8. A textile yarn comprised of filaments of a linear terephthalate polyester having a relative viscosity of at least 25, said filaments having a concentration of free carboxyl groups of less than 15 equivalents per million grams and an ether concentration of not more than 3 mol percent.

3,051,213
ADJUSTABLE CRIMPING PRESS FOR VARIOUS DIAMETERS OF WIRES AND INSULATION
Hugh W. Batcheller, Newton Highlands, Mass. (188 Needham St., Newton Upper Falls, Mass.)
Filed Dec. 11, 1959, Ser. No. 858,879
3 Claims. (Cl. 153—1)

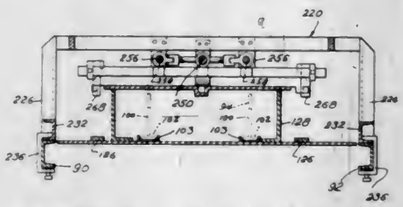
1. In a crimping machine having a base, an anvil on said base to support an object to be crimped, and a plunger body reciprocable toward and from said anvil; a tool carrier mounted on said plunger body and adjustably movable relatively thereto toward or from said anvil, means adjusting said tool holder comprising a spacer block carried by said plunger body and rotatable about a horizontal axis, said block having a series of plane surfaces variously spaced from said axis and selectively engageable with said tool holder, two crimp-

ing tools mounted on said holder, one said tool being adjustably movable relatively to the tool holder toward or from said anvil, and means for adjusting said movable tool relatively to said tool holder, the last named means



comprising a second spacer block carried by said tool holder and rotatable about a horizontal axis, said second block having a series of plane surfaces variously spaced from the axis of said second block and selectively engageable with said movable tool.

3,051,214
MACHINE FOR EDGING AND FORMING
Walter Rutten, deceased, late of Plainfield, Ill., by Marion Rutten, Lester Quinn, and The Northern Trust Company, executors, Plainfield, Ill.
Filed Oct. 15, 1958, Ser. No. 767,350
9 Claims. (Cl. 153—2)



1. In a straight line machine for fabricating tapered sheet metal blanks including a starting platform having guide means for a sheet metal blank thereon, a set of forming rollers forward of said platform for making a medial groove in said blank, a movable carriage, a saddle on said carriage for support of a sheet metal blank, cam tracks on said carriage, a set of edge cutting and forming rollers in advance of said platform, means for moving said carriage forward past the medial groove forming rollers and the edge cutting and forming rollers, and a radius forming mechanism in advance of said edge cutting and forming rollers for bending a tapered blank to a desired shape, the improvement consisting of a pusher mechanism for moving a blank into said radius forming mechanism, means for operation of said pusher mechanism, and switch means adapted to sequentially provide both forward and reverse movement of said pusher mechanism.

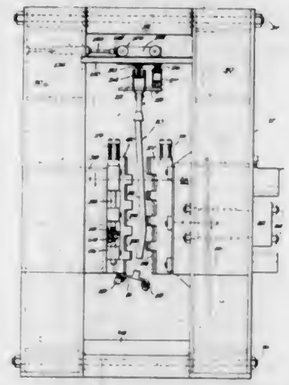
3,051,215
THERMAL FLATTENER PLATES
Fred W. Schnackenberg, St. Louis, Mo., assignor to Nordberg Manufacturing Co., a corporation of Wisconsin
Filed Aug. 2, 1960, Ser. No. 47,105
9 Claims. (Cl. 153—32)

1. A thermal flattening plate for rolled metal sheet comprising a plate having a predetermined substantial length and a predetermined lesser width, said plate having upper and lower surfaces, said plate being composed of cast metal, a series of laterally disposed passageways in said plate extending therethrough, said passageways separated by a series of transverse walls joining the upper and lower surfaces, a high tolerance finish on each of said



surfaces and a plurality of lifting lugs extending from each of the longitudinal edges of said plate.

3,051,216
ELECTRODE BAR STRAIGHTENER
Joseph W. Tomka and Frank G. Cizek, Cincinnati, Ohio, assignors, by mesne assignments, to Nordberg Manufacturing Company, a corporation of Wisconsin
Filed Nov. 10, 1958, Ser. No. 773,023
6 Claims. (Cl. 153—32)



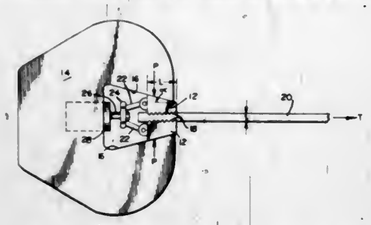
1. A device for straightening a T-shaped bar having a body of substantially rectangular cross-section and a base portion substantially at right angles thereto, said device comprising: means for delivering said bar in a first position along a given path to a straightening station; a stationary clamping die; means for rotating said bar through an angle of approximately 45° for orienting said bar relative to said clamping die; means for moving said bar out of said path to a point adjacent said stationary die before the bar is straightened, said moving means functioning to return the bar to said path after the bar is straightened; a movable die for clamping said body against the stationary die; dual straightening means for exerting pressure on said base portion on opposite sides of said body while said movable die is held in clamping position; means for automatically actuating said rotating means to rotate the straightened bar to said first position; and means for removing the straightened bar from said station.

3,051,217
STRETCHING MECHANISMS
Harry N. Hill, Apollo, and John W. Clark and Wilton A. Woodburn, New Kensington, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 11, 1958, Ser. No. 748,057
3 Claims. (Cl. 153—35)

1. In a stretching mechanism for permanently stretch deforming wrought material characterized by a

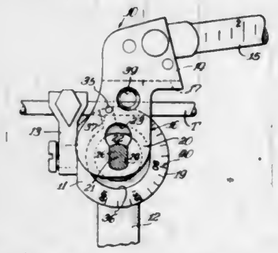
$$\frac{\text{shear strength}}{\text{stretching stress}}$$

ratio of 0.6 to 2, the mechanism having at least one pair of material clamping jaws, a housing for supporting said jaws in relatively movable relationship into and out of clamping engagement on opposite substantially parallel surfaces of the material to be stretch deformed, pressure exerting means for holding the jaws in clamped relationship on the material, and means for manipulating the housing and jaw-clamped material to exert tension thereon, the improvement comprising a material engaging length L



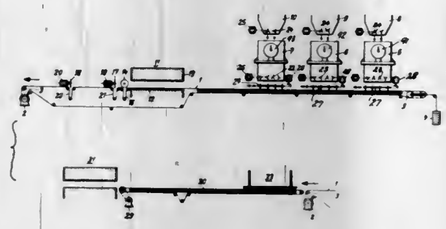
for each jaw member axially in the direction of stretch defined in terms of an L/t ratio within the range of 2 to 10, where t is the gauge thickness of the material, the pressure exerting means of the jaws having a capacity to deliver a total material clamping force P and the means for translating the housing having a capacity to deliver a total stretching force T, and the ratio P/T falling within the range 0.75 to 1, the said defined L/t and P/T ratios being compatibly correlated and insuring permanent stretch deformation of the material to be stretched beyond its yield strength in the absence of failure by shear of the material between the clamping jaws.

3,051,218
TUBE BENDER
George E. Franck, Riverside, Ill., assignor to Imperial-Eastman Corporation, a corporation of Illinois
Filed Jan. 5, 1960, Ser. No. 540
5 Claims. (Cl. 153—46)



1. A tube bender comprising: a mandrel having a peripheral bend-forming groove having a bend-start point; a shoe having a tube-pressing surface; and means connecting the shoe to the mandrel for movement of the shoe in a path circumjacent said groove away from said bend-start point and with said surface confronting the groove to urge a tube into the groove during such movement, said connecting means including an arm extending from the shoe, a pin on one of said mandrel and arm extending transversely to the central plane of said groove, and a pin receiving groove in the other of said mandrel and arm having an annular portion and a straight portion extending outwardly from the annular portion substantially in alignment with said bend-start point, a post on one of said mandrel and arm and a hole in the other of said mandrel and arm, the one of the post and hole on said mandrel being at the axis of said bend-forming groove, said hole having a pivot portion and a recess portion extending radially outwardly from the pivot portion, the post and recess portion being complementary to permit movement of the shoe outwardly from said path only at the bend-start point and 180° therefrom and maintaining the shoe in said path at all other points along said path.

3,051,219
SYSTEM FOR CONTINUOUSLY PREPARING PREDIMENSIONED BODIES WITH LAYER FORMATIONS
Hans Kaiser, Bern, Switzerland, assignor to Interwood AG., Zug, Switzerland
Filed Nov. 1, 1957, Ser. No. 693,982
Claims priority, application Switzerland Nov. 2, 1956
3 Claims. (Cl. 156—375)

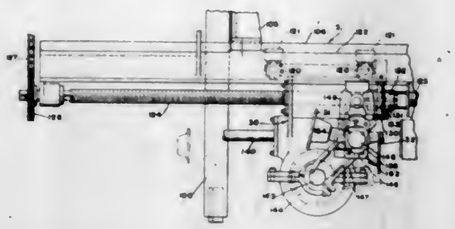


1. A device for forming accurately trimmed plate-shaped bodies from fiber materials having a binder mixed therewith comprising a continuous endless belt flexible conveyor, roller guide means along the length of said conveyor disposed along an elongated feed path and extending in a direction downwardly away from and upwardly back to said feed path at at least one location to form a loop with an opening being defined thereby in said feed path of shorter extent than the length of the body being formed by an amount to insure movement of the body on said conveyor over the loop opening, means for directing fibrous materials and at binder in a layer onto said conveyor as said conveyor is moved, said means being arranged at at least one location, means for intermittently moving said conveyor, pressing means disposed along the length of said conveyor in a position permitting passage of said conveyor with the material layer thereon and connected to said conveyor and effective to operate in timed relationship therewith to press a length of said fibrous material layer when said conveyor is stopped into a plate-shaped body, first rotary saw means disposed adjacent said pressing means and the loop of said conveyor including a rotary saw having a portion rotating below the feed line of said conveyor feed path in the loop opening of said conveyor and effective to move transversely through said body to trim said body after it is moved beyond said pressing means by said conveyor, and second rotary saw means arranged to move longitudinally of said conveyor to trim the longitudinal edges of said plate-shaped body.

3,051,220
STITCHER ASSEMBLY IN A TIRE BUILDING MACHINE
Bruce W. Ewing, Barberton, Edwin E. Mallory, Cuyahoga Falls, and John P. Sapp, Kent, Ohio, assignors to National Rubber Machinery Company, Akron, Ohio, a corporation of Ohio
Filed Apr. 29, 1957, Ser. No. 655,754
7 Claims. (Cl. 156—398)

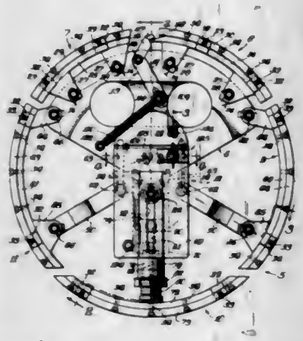
1. For use with a tire building machine having a rotary drum around which stock is adapted to be wrapped

and over the ends of which the stock is adapted to be turned in for positioning of beads thereagainst, a stitcher assembly comprising a pair of stitcher carriages, a pair of stitcher discs on each carriage adapted to be selectively moved to press stock against the drum and drum ends, means for supporting said carriages for movement parallel



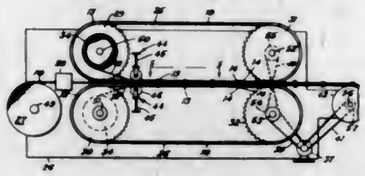
to the axis of the drum, means supporting said carriages for movement radially of the drum along a path that is downwardly inclined with respect to the drum, and means mounting said stitcher discs on said carriages for oscillation about an axis that is tangent to an arc struck from the axis of the drum.

3,051,221
FORMER FOR BEAD BUILDING MACHINES OR THE LIKE
Richard J. Strozewski, South Bend, Ind., assignor to National-Standard Company, Niles, Mich., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,749
11 Claims. (Cl. 156—422)



1. A former for a machine of the class described comprising, frame means including a hub member, first former segment means fixedly mounted on said frame means and having an arcuate groove in the periphery thereof lying outwardly of said hub member and substantially in a circular path of predetermined radius from the rotational axis of said hub member, second former segment means having an arcuate groove of substantially the same radius as the radius of the arcuate groove of said first former segment means, pivot means for mounting one end of said second former segment means on said frame means for movement of said second former segment means relative to said first former segment means to position the arcuate groove of said second former segment means substantially on or within said circular path, bracket means pivotally connected at one end to the other end of said second former segment means, and actuating means connected with the other end of said bracket means and mounted on said frame means for straight line reciprocating movement to dispose, selectively, said second former segment means in its aforesaid positions.

3,051,222
APPARATUS FOR APPLYING PROTECTIVE COVERS TO ADHESIVE TAPE
Dean E. Rueckert, Mokena, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Application Feb. 26, 1957, Ser. No. 642,463, which is a division of application Ser. No. 469,903, Nov. 19, 1954, now Patent No. 2,820,734, dated Jan. 21, 1958. Divided and this application Jan. 11, 1960, Ser. No. 3,227
12 Claims. (Cl. 156—459)

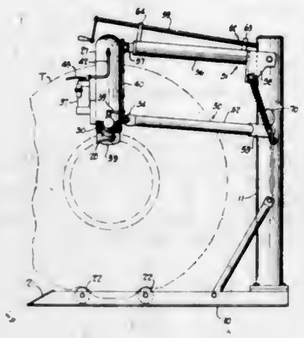


12. A device suitable for use in the formation of double-face pressure sensitive tape which comprises: means for coating at least two surfaces of a flexible tape with adhesives, means for depositing covering tape on the coated surfaces, means for bunching said covering tape to form an inverted U at spaced intervals during the depositing thereof, and severing means for dividing said inverted U into two portions at a point along the arcuate portion thereof, all said means being cooperatively associated.

3,051,223
CUTTING DEVICE
Edward Waltz, Grand Rapids, Mich., assignor to E. O. Bulman Manufacturing Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Apr. 10, 1961, Ser. No. 101,967
9 Claims. (Cl. 156—527)

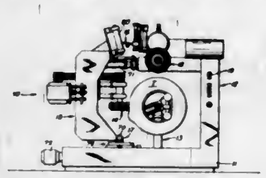
1. A device for dispensing adhesive tape from a roll thereof, comprising: an elongated body member having a lengthwise passageway; means extending from one end of said body member and at an acute angle to the lengthwise extent thereof for supporting the roll of tape upon said body member near said one end thereof; a cutting blade mounted upon and within said body member and having a cutting edge disposed near the other end of said body member, the extremity of said body member at the other end thereof having a pair of convex guide surfaces located at the opposite ends of said blade, said surfaces being spaced from and curving around an extended line defined by the cutting edge of said blade; a guide roller rotatably supported within said body member near said other end thereof; an applicator roller rotatably supported in said body member between and substantially parallel with said guide roller and the cutting edge of said blade, the periphery of said applicator roller extending outwardly of said body member, said tape passing between said rollers with the adhesive side thereof engaging said guide roller, whereby the adhesive surface of said tape can be applied to a surface by said applicator roller and the previously applied portion of said tape severed from the remainder of said tape by pivoting said body member around said guide surfaces thereof.

3,051,224
BEAD BREAKER
Frank S. Pearne, Alhambra, Calif., assignor to Regent Jack Mfg. Co., Inc., Downey, Calif., a corporation of California
Filed Jan. 5, 1960, Ser. No. 644
8 Claims. (Cl. 157—1.28)



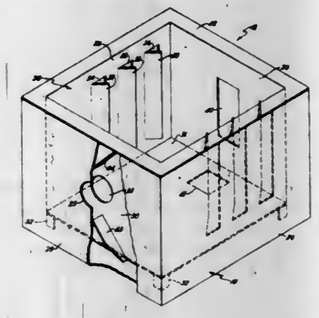
2. A bead breaker comprising a base; means on said base for rotatably supporting a tire and wheel in a vertical plane; a post mounted on said base; a head assembly including an inverted U-shaped frame for straddling a tire, opposed pressure rams respectively mounted on depending ends of said frame, and means for actuating said rams; and cantilever means mounted on said post well above the level of said tire supporting means for supporting said head assembly above a tire and wheel supported on the base as aforesaid, said cantilever means including structure restraining said head assembly against movement transversely of said vertical plane and mechanism for adjusting the vertical height of said head assembly while so restrained.

3,051,225
TIRE BUFFING MACHINE
Adolf H. Frohlich and Edward J. Harris, Akron, Ohio, assignors to The Cleveland Trust Company, Cleveland, Ohio, as trustee
Filed Apr. 22, 1957, Ser. No. 654,103
3 Claims. (Cl. 157—13)



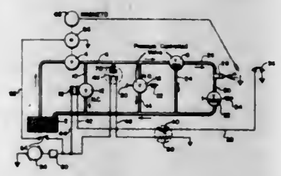
2. A tire buffing machine of the character described, comprising; a frame; support means for rotatably supporting a pneumtaic tire with respect to said frame; buffing means carried by said frame and being engageable with a tire supported on said support means; means for oscillating said buffing means along an arcuate path transverse to the tire tread; shifting means for positively shifting said frame towards and from said support means; cam means carried by said support means and having a camming edge surface engaged by said frame during shifting thereof; means for shifting said cam means relatively of said support whereby the depth of penetration by said buffing means may be varied; and adjustment means carried by said cam means and varying the length of said camming edge surface, whereby the path of movement of said buffing means transversely of said tread may be varied; said cam means include a base plate having an edge surface that forms a portion of said camming edge surface of said cam means; and a pair of side plates disposed on opposed sides of the center of said edge surface of said base plate and having edge surfaces that coact with said edge surface of said base plate to define an additional portion of said camming edge surface; said adjustment means moving said side plates in unison with respect to the center of said base plate.

3,051,226
RECIRCULATING COMBUSTION APPARATUS
Bruce R. Walsh, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Aug. 5, 1958, Ser. No. 753,254
10 Claims. (Cl. 158—1)



1. A fuel burning apparatus comprising an outer shell, an inner shell having generally upright wall means disposed within said outer shell and spaced therefrom to define a passage extending around the outer periphery of said upright wall means, the inside of said inner shell being a combustion chamber and said passage around said upright wall means adapted to serve as a recirculation passage for combustion gases from said combustion chamber; means closing the upper and lower ends of said recirculation passage, first opening means in said upright wall means adapted for the horizontal admission of fuel to said combustion chamber, said first opening means establishing an inlet to said combustion chamber from said recirculation passage, second opening means in said upright wall means establishing an outlet from said combustion chamber to said recirculation passage, said recirculation passage providing a path for circulation of combustion gases from said second opening means to said first opening means, said inner shell having an open top establishing overhead exhaust removal means from said combustion chamber, the only access between said overhead exhaust removal means and said recirculation passage being through said combustion chamber.

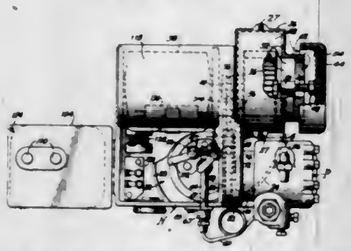
3,051,227
SAFETY CONTROL SYSTEM FOR AIR HEATER
Aubrey H. Robson, Rock Island, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Feb. 23, 1960, Ser. No. 10,188
10 Claims. (Cl. 158—28)



1. In a bypass type fuel control system for an air heater having a liquid fuel burner: fuel line means; means for supplying fuel under pressure to said fuel line means; a

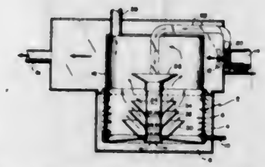
normally closed fuel pressure regulating valve in said fuel line means operable to open and pass fuel to said burner in response to a predetermined fuel pressure in said fuel line means; a first fuel bypass line connected to said fuel line means; a second fuel bypass line connected to said fuel line means; a normally closed first bypass valve in said first bypass line; a solenoid for operating said first bypass valve to an open position upon energization thereof; a normally open second bypass valve in said second bypass line operable in a closed position to initiate fuel flow to said burner by increasing the fuel pressure in said fuel line means to at least said predetermined fuel pressure; a source of electrical power; time delay switch means including a normally open time delay switch and an electrically energized operator operable in response to energization thereof to close said time delay switch at the end of a first predetermined time period; a normally closed combustion responsive switch operable to an open position during a second maximum predetermined time period less than said first predetermined time period in response to initiation of combustion in said burner; a first circuit including said solenoid, said time delay switch, and said combustion responsive switch connected in series; a second circuit including said operator in parallel with said first circuit; means including a normally open fuel pressure responsive switch operable to a closed position in response to a fuel pressure in said fuel line means corresponding to said regulating valve being open, said pressure responsive switch being connected between said power source and said time delay switch operator so that said operator is only energized while said regulating valve is open and fuel is flowing to said burner.

3,051,228
OIL BURNER
Graydon Peoples and Don H. Vreeland, Marshalltown, Iowa, assignors to Lennox Industries, Inc., Marshalltown, Iowa, a corporation of Iowa
Filed Feb. 9, 1960, Ser. No. 7,659
1 Claim. (Cl. 158—76)



In an oil burner of the character disclosed, a draft tube, a burner housing connected thereto and providing a chamber communicating with said draft tube, said burner housing having an access opening therein, an ignition transformer hinged to the outer wall of said burner housing to serve as an access cover therefor, said burner housing having a scroll portion, a blower in said scroll portion, a motor on one side of said scroll portion and having a shaft for operating said blower about a common axis transverse to the axis of said blast tube, an air entrance tube projecting from the other side of said scroll portion, a control cover for said air entrance tube comprising a cap-like element having a back wall threadedly mounted along said common axis for adjustment in overlapping relationship to the outer end of said entrance tube to thereby vary the air flow through said entrance tube, a continuously arcuate side wall for said scroll portion extending from between said air entrance tube and said blower to said draft tube with said side wall having an axis of curvature transverse to said common axis, a barrier in said chamber comprising a curved baffle plate having an axis of curvature parallel to the axis of said draft tube for effecting in combination with said arcuate side wall the swirl of air tangentially entering said chamber before it flows into said draft tube, a fuel pump having a shaft, a bracket means for mounting said fuel pump beneath said scroll portion and adjacent said arcuate side wall with the axis of said fuel pump shaft parallel to said common axis with said fuel pump being belt driven from said motor, said bracket being rigidly connected to the back wall of said housing at the side of the access opening covered by said transformer.

3,051,229
LIQUID FUEL BURNER
Robert G. Hicks, Bettendorf, Iowa, assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed May 7, 1959, Ser. No. 811,621
8 Claims. (Cl. 158—91)



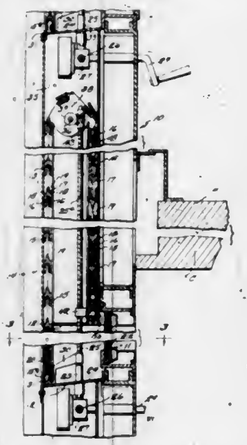
1. A liquid fuel burner of the type adapted to receive a forced draft combustion air supply, comprising: an upwardly open burner pot including a bottom wall provided with a central opening and a circumferential wall having a plurality of vertically spaced rows of air inlets in communication with said air supply for admitting air into said pot interior; a centrally disposed air tube extending upwardly from said central opening and a plurality of upwardly flaring baffles disposed concentrically in vertically spaced relation to project outwardly from said tube below the upper end of said pot, each successively higher baffle projecting radially outwardly less than the baffle immediately below, the space between said air tube and said pot circumferential wall being substantially unobstructed except for said baffles; and means defining air outlets in said air tube for directing air against the upper surfaces of said baffles.

3,051,230
GAS BURNER LINT SCREEN
Thomas F. Hart, 1283 S. Clayton St., Denver, Colo.
Filed Aug. 4, 1960, Ser. No. 46,628
1 Claim. (Cl. 158—118)



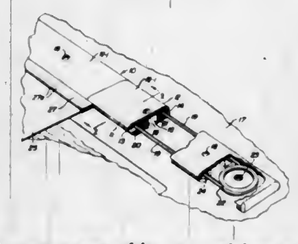
An attachment for an air shutter such as is commonly used on a gas burner construction comprising a flat-faced disk-shaped screen of prerequisite mesh and having a keyhole-shaped opening, the circular end portion of said opening being located at the axial center point of the screen and the companion wedge-shaped slot portion radiating from said circular portion and opening through a marginal edge portion of the screen, said screen also having resilient lugs projecting from said marginal edge, said lugs being spaced circumferentially from each other and from said slot portion, and constituting attaching and retaining clips capable of being readily applied and removed, said clips being located at the normal top portion of the screen, and the outer open end of the wedge-shaped slot portion being located at the central portion of the bottom of the screen and said lugs and slot being located at circumferentially spaced points around the marginal edge of the screen.

3,051,231
ADJUSTABLE SLAT BLIND
Alfonso Alvarez, 204 Bellevue Ave., Upper Montclair, N.J.
Filed Sept. 23, 1960, Ser. No. 58,014
4 Claims. (Cl. 160—34)



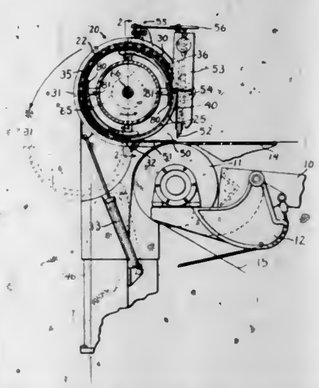
1. An adjustable slat blind comprised of a plurality of substantially U-shaped slats having shoulders formed on opposite sides of the exterior thereof, elongated guide means slidably mounting said slats, flexibly foldable connecting means between said slats providing for edge to edge abutment of adjacent slats or for spacing a part of said slats longitudinally of said guide means, roller means mounted above and spaced to one side of the top of said guide means over which said slats and flexible connecting means extend, a storage channel for holding said slats in abutting relation in inverted position on the opposite side of said roller means from said guide means, said slats being adapted to nest within each other when in abutting relation in said storage channel and means for raising and lowering said slats over said roller means.

3,051,232
RETRACTABLE COVER ASSEMBLY AND DRAW CORD CARRIER THEREFOR
Joe H. Lamb, Salt Lake City, Utah, assignor to Philip A. Mallinckrodt, Salt Lake City, Utah
Filed Feb. 29, 1960, Ser. No. 11,737
1 Claim. (Cl. 160—272)



A retractable cover assembly, comprising an elongate carrier strip formed from a plurality of lengths of a rigid, elongate, structural shape aligned end-to-end, each of said lengths having tubular longitudinal margins which have respective, relatively narrow, rectilinear openings extending continuously along their lengths, and adjoining end portions of adjoining lengths having bottom channels formed longitudinally thereof and opening into the adjoining ends of said lengths in registering alignment with each other; joint-bridging inserts snugly fitted within the bottom channels of respective sets of adjoining ends for maintaining said lengths and the tubular margins and rectilinear openings thereof in exact alignment; a flexible sheet cover having an edge formed as a bead which is thicker than the width of said openings and is adapted for passage within and along one of said margins; a draw cord forming a longitudinal prolongation of said bead and extending within and along the interior of said one tubular margin and within and along the interior of the other of said tubular margins; and means at one end of said carrier strip about which said draw cord is looped for passage from one of said tubular margins to the other.

3,051,233
PAPER MACHINERY
Joseph Baxter, Jr., Franklin, Ohio, assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed May 1, 1958, Ser. No. 732,324
10 Claims. (Cl. 162—337)



3. A headbox for delivering paper making stock to the forming member of a paper making machine, comprising a stationary casing of cylindrical section adapted to extend across the width of the paper machine adjacent the forming member thereof, said casing having multiple perforations thereof over an area extending substantially the full length thereof and at least a portion of the entire circumference thereof, walls forming a discharge chamber extending the length of said casing in overlying enclosing relation with said perforate area and including an outlet passage leading to the forming member and forming the only connection between said discharge chamber and the atmosphere, means for supplying stock to one end of said casing at a sufficient rate to maintain said casing and said discharge chamber continuously full of stock, a rotary hub within said casing, a bar carried by said hub in close relation with said casing for constant movement adjacent the inner surface of said casing, said bar being of generally airfoil section arranged to create during each passage around said casing a positive pressure wave tending to force the stock outwardly through said perforations and a negative pressure wave following said positive pressure wave and tending to draw solid particles inwardly from the surface of said screen, and continuously operative means for removing said solid particles from the opposite end of said casing.

3,051,234
OIL DISPLACEMENT BY WATER CONTAINING SUSPENDED CLAY

John R. Kyte, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware

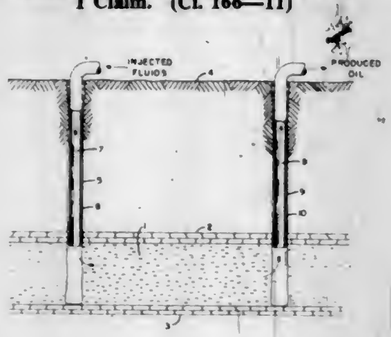
No Drawing. Filed Jan. 22, 1959, Ser. No. 788,257
7 Claims. (Cl. 166—9)

4. A method of producing oil from a reservoir by means of a pattern including an input well and a spaced output well, which comprises: injecting water containing suspended clay into the reservoir through the input well, said clay having a fineness sufficient to pass through said reservoir, the amount of clay within the injected water being sufficient to increase the viscosity of the water to a value of at least about 5 centipoises, the quantity of such water being at least 10 percent of the pore volume of the reservoir within the pattern, and recovering fluids through said output well.

3,051,235
RECOVERY OF PETROLEUM CRUDE OIL, BY IN SITU COMBUSTION AND IN SITU HYDROGENATION

William P. Banks, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company

Filed Feb. 24, 1958, Ser. No. 717,256
1 Claim. (Cl. 166—11)



A method of producing petroleum crude oil from a subterranean oil bearing formation which comprises injecting an oxygen-containing gas into the formation through an input well under conditions to effect combustion within a zone of the formation adjacent said input well, continuing said injection of oxygen-containing gas until the temperature within said zone is between 400° F. and 1200° F., thereafter discontinuing the injection of said oxygen-containing gas to terminate said combustion, injecting an inert gas within said formation through said input well to flush said oxygen-containing gas from said zone adjacent said input well, then injecting hydrogen and a gaseous hydrogenation catalyst within the formation through said input well whereby to hydrogenate oil within the formation in the presence of said catalyst, maintaining the pressure of the formation in excess of 50 p.s.i.g., and recovering oil from the formation through an output well laterally spaced from said input well.

3,051,236
TREATING UNDERGROUND FORMATIONS

Francis J. Mitch and Leo Landau, Houston, Tex., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Dec. 30, 1958, Ser. No. 783,660
6 Claims. (Cl. 166—30)

1. A method of treating an underground water-containing formation to alter the permeability and porosity thereof which comprises introducing into said formation a solution consisting essentially of diphenyl phthalate in an organic solvent selected from the group consisting of an aliphatic ketone and an aliphatic alcohol to contact the water therein to precipitate said diphenyl phthalate from said solution thereby altering the aforesaid characteristics of said formation.

3,051,237
APPARATUS FOR VARYING WELL PUMP STROKE

Joseph R. Liles, Jr., Corpus Christi, Charles B. Corley, Jr., Houston, and Samuel E. Loy III, Midland, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Jan. 30, 1961, Ser. No. 85,889
4 Claims. (Cl. 166—75)



4. For use in an oil well pumping system including a wellhead, a downhole pump, and a rod string in the well connected to the pump and extending toward the earth's surface, and pump drive apparatus at the earth's surface adapted to impart reciprocating motion to the rod string, the combination comprising:

a polished rod adapted to be connected to the rod string and to extend through the wellhead;

a liquid-filled piston cylinder connected to the upper end of the polished rod;

a piston in said cylinder adapted to be connected to the pump drive apparatus;

a metering valve and a flow line connected between the upper and lower ends of said cylinder for metering the flow of liquid from the upper to the lower end of said cylinder as said piston moves upwardly through the cylinder;

a check valve connected in parallel with said metering valve to bypass said metering valve and to permit substantially unrestricted flow of liquid through said flow line from the lower end to the upper end of said cylinder as said piston moves downwardly through the cylinder;

first and second additional piston cylinders adapted to contain a liquid and further adapted to be affixed to the wellhead;

a second piston in said first additional cylinder;

spring means in said first additional cylinder downwardly biasing said second piston therein;

valve means hydraulically interconnecting the lower ends of said additional piston cylinders so as to permit substantially greater unrestricted flow of liquid from said first to said second additional cylinders than from said second to said first additional cylinder; and

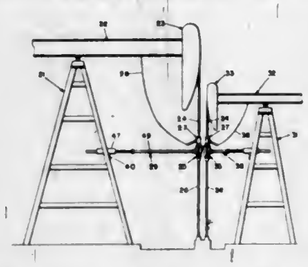
a piston affixed to said polished rod and extending downwardly into said second additional piston cylinder adapted to exert pressure on the liquid therein

to overcome the force of said spring and said first annular piston and to force liquid through said valve means into said first additional piston cylinder.

3,051,238
DUEL COMPLETION APPARATUS FOR USE WITH WALKING BEAMS

Le Roy Randolph Arnold, Judson Evan Bloyd, and Forrest Leon Carson, Borger, Tex., assignors to J. M. Huber Corporation, Locust, N.J., a corporation of New Jersey

Filed Aug. 25, 1958, Ser. No. 756,939
4 Claims. (Cl. 166—75)



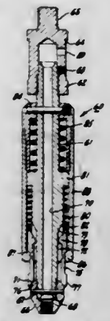
1. In a dual completion apparatus of the type including an oil well casing having a pair of spaced parallel well tubings therein, a pair of Samson posts disposed on opposite sides of said oil well casing, a walking beam mounted on each of said Samson posts, a carrier bar assembly supported on each of said walking beams, and a polish rod mounted for vertical reciprocation in each of zontal pivot securing each of said T's to its respective carrier bar assemblies, with said carrier bars being arranged in closely spaced relation, means for preventing contact between said carrier bar assemblies during relative vertical reciprocation thereof comprising a U-shaped bracket rigidly secured to the side of each of said carrier bar assemblies opposite the other of said carrier bar assemblies, a T positioned in each of said brackets, a horisaid well tubings supported by a respective one of said bracket with said pivots arranged in parallel relation, a stabilizer bar secured to and extending perpendicularly from the center of each of said T's, a second U-shaped bracket rigidly secured to each of said Samson posts, and means mounting said stabilizer bar to said second U-shaped bracket for pivotal and lateral movement with respect to said second U-shaped bracket whereby said carrier bar assemblies are restrained against rotary movement about the axis of said polish rods.

3,051,239
RUNNING AND PULLING TOOL

William W. Dollison, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas

Original application Apr. 21, 1958, Ser. No. 729,682. Divided and this application Mar. 14, 1960, Ser. No. 14,915
3 Claims. (Cl. 166—125)

1. A wire line tool for running and retrieving well tools having an inner annular fishing groove, comprising: a vertically disposed mandrel, a downwardly and outwardly projecting cam surface formed on the lower end of said mandrel, a longitudinal groove formed in the outer surface of said mandrel and extending upwardly from said cam surface, the bottom of said groove having the upper end thereof curved radially outwardly of said mandrel, a locking dog longitudinally slidably received within said groove, said dog having a lower end engageable with said mandrel cam surface, an inwardly extending projection on the upper portion thereof engaging the bottom of its groove and an outwardly projecting portion on the lower end thereof receivable within said annular well tool groove, spring means for resiliently biasing said locking dog downwardly against said cam surface to cause said outwardly projecting dog portion to



move outwardly relative to the axis of said mandrel, and means engageable with the mid-portion of said locking dog to restrain outward movement of said locking dog from said groove.

3,051,240
MULTIPLE TESTING AND PRESSURING APPARATUS

Hiram H. Fisher, Jr., Houston, Tex., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed Apr. 13, 1959, Ser. No. 806,110
15 Claims. (Cl. 166—131)



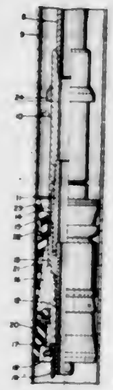
1. In apparatus for testing and pressuring a well bore: a well packer having a tubular body, normally retracted anchoring means adapted to be expanded outwardly for securing said body in the well bore against movement in both upward and downward directions, normally retracted packing means on said body adapted to be expanded outwardly into sealing engagement with the well bore, and releasable means operatively connected to said body and anchoring means for latching said anchoring means in retracted position and releasable by manipulation of said body to permit outward expansion of said anchoring means; first and second tubular members disposed one within the other and movable with respect to one another; means adapted to secure one of said tubular members to a tubular running-in string; means for securing the other of said tubular members to said tubular body; releasable clutch means engaged for se-

curing said tubular members to each other for rotation together, and releasable to permit their relative rotation; flow control means on said tubular members for determining the flow of fluid through said members and shiftable between opened and closed position in response to manipulation of said one tubular member by the running-in string; and barrier means within and releasable latched to one of said tubular members to prevent flow of fluid through said members when said flow control means is in closed position, said barrier means being adapted for release and removal from said one tubular member and through the tubular running-in string to fully open the passage through said tubular members.

3,051,241
DRILLABLE LIMIT PLUG

Burchus Q. Barrington, Duncan, Okla., assignor to Halliburton Company, a corporation of Delaware

Filed Jan. 30, 1959, Ser. No. 790,136
4 Claims. (Cl. 166—143)



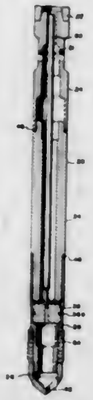
1. A well casing limit plug comprising: a flexible cylindrical packer secured to said plug, terminating at its lower end with a downwardly extending, outwardly flared cup, and having a flexible flange disposed above said cup; said flange having an outside diameter larger than the inside diameter of a well casing in which said limit plug is inserted and being disposed to bend down and overlap an upper portion of said cup between said cup and said casing when said cup is raised within said casing; a wedge body disposed beneath said cup, tapering toward said cup, and slideable thereinto for expanding said cup and compressing said cup and said flange against said casing; means for moving said wedge body into said cup to expand it laterally into tight fitting engagement with said conduit; a mandrel slideably mounted within said wedge body; an outwardly extending flange portion mounted on said mandrel; and retaining means on said wedge body engaging said flange portion of said mandrel to permit limited longitudinal movement between said mandrel and said wedge body, said retaining means being releasable under tension applied by upward movement of said mandrel within said wedge body.

3,051,242
MULTIPLE ZONE CONTROL APPARATUS

Richard O. Chamberlain, Caliente Ranch, and Charles E. Wakefield, Jr., Bakersfield, Calif., assignors to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware

Filed June 29, 1956, Ser. No. 594,845
6 Claims. (Cl. 166—185)

1. An apparatus comprising an elongated, generally cylindrical member having a longitudinal bore, a first aperture through the wall of said cylindrical member communicating with said bore, a second aperture through the wall of said cylindrical member communicating with said bore and vertically spaced below said first aperture, a removable member in said bore between said first and second apertures and having a through longitudinal orifice, retractable means in said bore extendable to plug said orifice for preventing fluid flow through the bore between said first and second apertures, means for releasably holding said retractable means in flow-preventing position, a member pivotally mounted in said cylindrical member, means biasing said pivotally mounted member

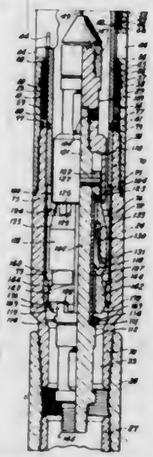


towards a position in which it does not extend radially beyond said cylindrical member, means associated with said retractable means for positioning said pivotally mounted means so that it projects outwardly from said cylindrical member when said retractable means is held in flow-preventing position, and means for releasing said holding means and said means for positioning said pivotally mounted member in projecting position so that the retractable means can be withdrawn from fluid flow-preventing position when the pivotally mounted member is biased towards the position in which it does not extend radially beyond said cylindrical member.

3,051,243
WELL TOOLS

George G. Grimmer, 10617 Coogan Drive, and James H. Bostock, 5615 La Foy Blvd., both of Dallas, Tex.

Filed Dec. 12, 1958, Ser. No. 780,112
21 Claims. (Cl. 166—224)

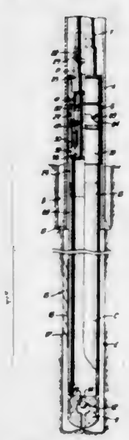


1. A flow control device for a flow conductor having a lateral port including: a valve element in said well flow conductor for controlling flow of fluids between the interior and the exterior of the well flow conductor through said lateral port, said valve element having an equalizing port and a flow port for permitting flow of fluids through said lateral port when one of said equalizing port and said flow port is in communication with said lateral port, said valve element being movable longitudinally in said flow conductor between a first closed position wherein said lateral port is closed by said valve element, a second intermediate position wherein said equalizing port is in communication with said lateral port to permit flow therethrough, and a third open position wherein said flow port is in communication with said lateral port to permit flow of fluids between the exterior and the interior of said flow conductor through said flow port and said lateral port, said valve element having means engageable with stop means of the well flow conductor to limit longitudinal movement of the valve element in the flow conductor; and means for releasably restraining said valve member against longitudinal movement with respect to the housing in said intermediate position with said equalizing port in communication with said lateral aperture of said housing.

3,051,244
WELL LINER RUNNING AND SUPPORTING APPARATUS

Mason R. Litchfield, Shreveport, La., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed Mar. 22, 1960, Ser. No. 16,737
11 Claims. (Cl. 166—225)



1. In an apparatus for running a conduit string in a well bore on a tubular running-in string: a first member adapted to be connected to the conduit string extending therebelow; a second member adapted to be connected to the tubular running-in string extending thereabove; releasable coupling means connecting said members to each other for transmitting torque from said second member to said first member; latch means on one of said members below said coupling means and comprising a latch sleeve connected to said one member having laterally movable latch legs releasably connected to said other member to releasably secure said members to each other against substantial relative longitudinal movement and to hold said coupling means in connected condition; shiftable holding means engaging said latch means to prevent release of said latch means from said other member; and means for shifting said holding means from said latch means to permit release of said latch means from said other member and release of said coupling means, whereby said second member can be elevated in the well bore away from said first member.

3,051,245
WELL TOOLS FOR SUBSURFACE FLOW CONTROL

Norman K. Andrew and Hugh E. Metcalf, Houston, Tex., assignors to Johnston Testers, Inc., Sugar Land, Tex., a corporation of Texas

Filed Aug. 19, 1958, Ser. No. 755,932
15 Claims. (Cl. 166—226)



1. A well tool comprising a tubular housing having an annular valve seat along its bore, an annular valve head in said bore movable between a closed and an open position with respect to said valve seat, means normally biasing said valve head toward its closed position, a tubular mandrel extending into said bore and slidably through said valve head for limited longitudinal movement with respect to said housing, said mandrel having a lateral flow port spaced therealong for movement past said valve seat which port is opened by movement of said valve head to its open position to place the interior of said mandrel on one side of said valve head in communication with the exterior of said mandrel on the other side of said valve head, and a member carried by said mandrel and projecting outwardly therefrom for engaging said valve head to move it with said mandrel, said member being spaced from said valve head prior to engagement and arranged for moving said valve head with said mandrel to its open position as said flow port is moved past said valve seat.

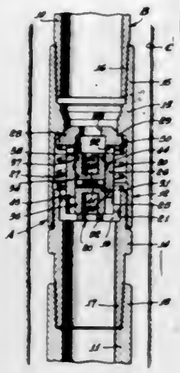
3,051,246
AUTOMATIC FLUID FILL APPARATUS FOR SUBSURFACE CONDUIT STRINGS

Earnest H. Clark, Jr., Downey, and Julian D. Keithahn, Anaheim, Calif., assignors to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Filed Apr. 13, 1959, Ser. No. 805,975
14 Claims. (Cl. 166—226)

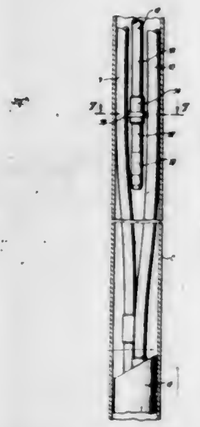
1. In apparatus for controlling the flow of fluid in a conduit string positionable in a well bore: a tubular member having a valve seat therein; a valve member in said tubular member movable to and from engagement with said seat and responsive to pressures on opposite sides thereof; means providing an open by-pass passage around said valve member when said valve member is engaged with said seat; means for closing said by-pass passage;

releasable means retaining said closing means in a position opening said passage; and means for retaining said



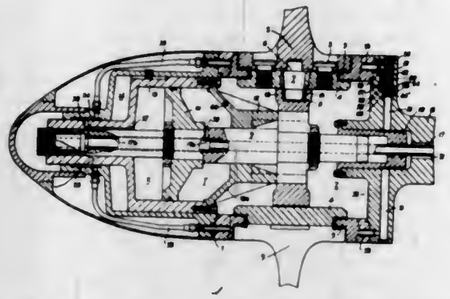
closing means in closed position after release of said releasable means.

3,051,247
PARALLEL TUBULAR STRING APPARATUS FOR WELL BORES
Theodore H. Schorr, Los Angeles, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Aug. 29, 1960, Ser. No. 52,686
9 Claims. (Cl. 166—241)



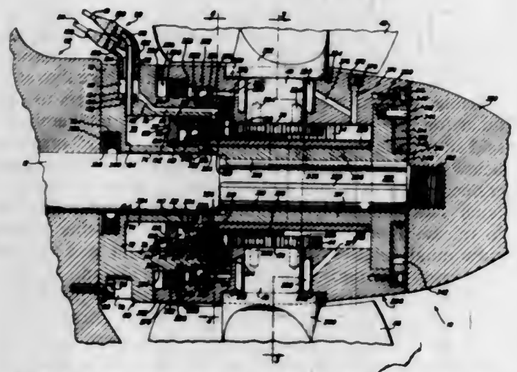
1. In well production apparatus for use in a well bore: a head adapted to be disposed in the well bore and having a plurality of passages therein; a tubular string extending to the top of the well bore and engaging the head in communication with one of said passages, said one passage being eccentric of the longitudinal axis of said head; another tubular string adapted to be lowered in the well bore along said first mentioned tubular string into engagement with said head and in communication with another of said passages; and means on said another tubular string relatively movable laterally thereon and engageable with said first mentioned tubular string to prevent movement of said another tubular string from one side of said first mentioned tubular string to an opposite side thereof.

3,051,248
PROPELLERS OR THE LIKE HAVING VARIABLE-PITCH BLADES
Ernest Charles Hatcher, Instow, Woodside Road, Northwood, England
Filed Apr. 11, 1958, Ser. No. 727,831
Claims priority, application Great Britain Apr. 18, 1957
2 Claims. (Cl. 170—160.32)



1. A propeller comprising a hub, variable-pitch blades mounted on said hub, a fluid-pressure servo-motor disposed in said hub, mechanism operatively connecting said motor to said blades for imparting pitch adjustment thereto, a hollow propeller shaft on which said hub is fast, and a fluid-pressure system comprising a tube passing co-axially through said shaft with an annular space between them, connection means communicating between said motor and said tube and between said motor and said annular space of said shaft, valve means for controlling the admission of pressure-fluid to and its exhaust from said motor by way of said tube and said annular space, fluid-conducting means communicating, under the control of said valve means, with said motor and also communicating with the interior of said hub, a pump for providing pressure for the fluid of said fluid system, and a gravity vessel for providing a head of fluid pressure when said pump is not operating, said pump being in communication with said gravity vessel, and both said pump and said gravity vessel being in communication with said fluid-conducting means, whereby said interior of the hub is maintained under said head of fluid pressure when said pump is not operating.

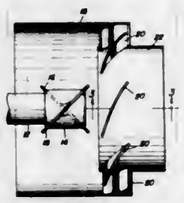
3,051,249
MOTION TRANSFORMING APPARATUS
Paul P. Dirlik, 4847B S. 28th St., Arlington 6, Va.
Filed Dec. 23, 1959, Ser. No. 861,638
14 Claims. (Cl. 170—160.32)



9. For attachment to the drive shaft of a marine engine, a controllable pitch propeller assembly comprising a control block having a bore extending therethrough for

receiving the drive shaft, said control block having an annular fluid chamber therein around said bore; a hub revolvable around said control block; a water-tight seal between said revolvable hub and said control block; said control block including an end plate extending partially across one end of said fluid chamber; a piston in said chamber, said piston being slidably reciprocable along the length of said chamber and rotatable relative to said control block around the axis of said bore; means for selectively delivering fluid under pressure to the portion of said fluid chamber bounded by said plate to exert pressure on one end of said piston; means for selectively delivering fluid under pressure to said fluid chamber at the opposite end thereof to exert pressure on the other end of said piston; an actuator reciprocable unitarily with said piston and rotatable relative to said piston, said actuator being generally annular in shape; anti-friction means connecting said piston and said actuator for permitting said rotation of said actuator relative to said piston, said anti-friction means providing a driving connection between said actuator and said piston for producing said unitary reciprocation of said actuator and said piston; said piston including a sleeve of annular shape extending adjacent the inner edge of said plate and surrounding said actuator; and seal means between the inner edge of said plate and said sleeve for maintaining the fluid pressure within said fluid chamber.

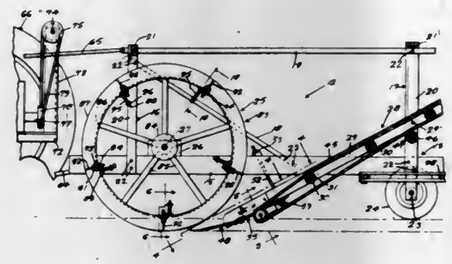
3,051,250
BOAT PROPELLING DEVICE
Harold G. Jones, La Belle, Pa.
(6107 Cardiff Ave., Baltimore, Md.)
Filed July 20, 1960, Ser. No. 44,166
11 Claims. (Cl. 170—168)



1. A boat propelling device adapted for securement to a propeller shaft, said device including a propeller assembly having a hub portion with a plurality of circumferentially spaced and generally radially extending blades projecting outwardly therefrom, said hub adapted for securement to a propeller shaft for rotation therewith, constricting means carried by said propeller assembly and spaced rearwardly of said blades for partially obstructing and throttling the rearward flow of water effected by the outer end portions of said blades, and means carried by said propelling device for preventing outward deflection of the throttled flow of the outer extremities of said blades whereby a portion of the rearward flow between the outer ends of said blades and said obstructing means will be directed inwardly toward said hub and thereby decrease the amount of thrust effected by the outer ends of said blades and increase the amount of thrust effected by the inner ends of said blades and provide a more even rate of discharge of water by said propelling device over the entire area scribed by the said blades wherein a more effective aggregate thrust is effected.

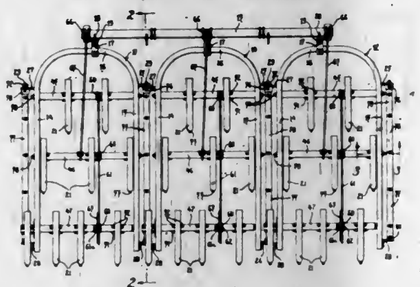
3,051,251
SOD CUTTING AND ELEVATING APPARATUS
Whitely M. Golden, Springville, Pa.
Filed Feb. 5, 1960, Ser. No. 6,936
3 Claims. (Cl. 172—20)

1. A sod cutting and elevating machine comprising an elongated frame, transversely spaced rear ground engaging wheels connected to and supporting the rear end of the frame, a single front ground engaging wheel journaled in and supporting a forward end of the frame, an elevator supported by and disposed longitudinally wtihin said frame and having a lower forward end disposed behind and adjacent the bottom portion of said front wheel, said front wheel including transversely spaced annular cutting blades and circumferentially spaced cross cutting blades extending between said an-



nular blades for cutting sod over which the wheel travels into pieces of uniform sizes, said front wheel having load bearing rims straddling the annular blades and spaced radially inward from cutting edges of the annular blades and cross cutting blades, and a scoop blade connected to and extending downwardly and forwardly from said elevator and having a forward cuttingend adapted to undercut the sod pieces behind and adjacent the cutting blades of said wheel for deflecting the cut sod pieces upwardly and onto the lower end of the elevator.

3,051,252
AGRICULTURAL HARROWS
Peter B. Andersen, Ayr, Scotland, and John B. Murray, Wolston, England, assignors to Massey-Ferguson (United Kingdom) Limited, a British company
Filed Feb. 18, 1959, Ser. No. 794,044
2 Claims. (Cl. 172—390)



2. An agricultural harrow comprising, in combination, a transverse drawbar, a plurality of harrow units assembled in side-by-side relation and each pivotally connected at its forward end to said drawbar, said units being alike and each comprising a generally U-shaped frame including spaced parallel side members connected at their forward ends by a front member, cross members supported between the side members of the frame each carrying a plurality of ground working tools, a pair of brackets projecting laterally from each side member of the frame, said brackets being located respectively adjacent the front and rear ends of the side members and spaced apart so that the brackets on the side members of one unit frame overlap the brackets on the side members of the adjacent unit frame upon assembly of and connection of the units with the drawbar, coupling pins on the rearmost bracket of each overlapping pair engaging in apertures in the companion brackets for coupling the units together for

relative pivoting movements, and elongated skids supported between the front and rear brackets in a position to determine the spacing of the coupled units from the ground.

3,051,253
ICE AND POST HOLE AUGER
Floyd E. McCann, Milwaukee, Wis., assignor of one-half to Herbert McCann, Milwaukee, Wis.
Filed Aug. 2, 1961, Ser. No. 128,756
7 Claims. (Cl. 175—18)



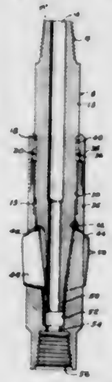
1. A cutting head for a hole digger comprising, a tubular body, a flat segmental cutting blade bounded by an arc and by two intersecting chords, said blade being rigidly attached to said body at an intermediate portion of one of said chords at an oblique angle relative to the axis of said body with the arc being disposed concentrically thereof and the other chord being located in advance of said body to provide a cutting area radiating therefrom, and a flat centering point extending axially from said tubular body in a plane approximately parallel to said other chord.

3,051,254
DEVICE FOR RECOVERING PIPE FROM WELLS
John McClinton, 8603 Glenaire, Houston, Tex.
Filed July 21, 1958, Ser. No. 749,833
4 Claims. (Cl. 175—257)



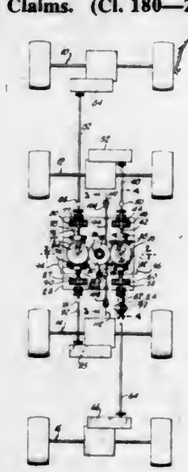
1. In a device for recovering pipe from wells, the combination with a tubular body adapted to be connected at its upper end to a tubular operating string for lowering with the string in a well bore, tubular guide means on the body shaped for engagement with the upper end of a pipe located in the bore to guide the body into a position in longitudinal alignment with the pipe, said body and guide means having outlets positioned to discharge fluid under pressure from the interior of the body and guide means in the same direction toward the surrounding wall of the bore, means in the guide means located below the outlet in the guide means for restricing the downward flow of fluid through the body and guide means to cause the fluid discharged from said outlets to exert a lateral force on the body and guide means to urge the body and guide means in a direction to position the guide means to enter the pipe upon downward movement of the body in the bore and means on the body positioned for engagement with the pipe upon downward movement of the body with the guide means in guiding engagment with the pipe to connect the body to the pipe, of external cutter means on the body extending radially outwardly from the body in the direction of outflow of said fluid from the body, said body having an uninterrupted, external, peripheral surface extending about the body from one side of said cutter means to the other side thereof.

3,051,255
REAMER
Carroll L. Deely, 6210 N. Central Expressway, Dallas, Tex.
Filed May 18, 1960, Ser. No. 29,847
4 Claims. (Cl. 175—265)



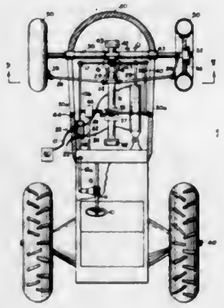
1. A tool for reaming the bore hole of a well, which tool is positioned above the drill bit and which reams the bore hole as the well is being drilled with a rotary drill bit, said tool being adapted to be positioned on the drill stem intermediate the lower end thereof and the drill bit, portions of which tool are expansible by the weight of the drill stem on said drill bit, said tool comprising; a body, said body having an axial opening formed therethrough, a portion of the surface of said body being convex and exteriorly tapered inwardly toward the distal end thereof, a hollow shell telescoped over at least the tapered portion of said body, at least a portion of said hollow shell being tapered to complementally fit said tapered portion of said body, means limiting the longitudinal movement of said body relative to said shell, means interconnecting said body and said shell in rotatable, driving relation, said shell having longitudinal slots formed therein, a reamer blade complementally fitted within each said slot in said shell and being rotatable with said shell, each blade having a concave side, which concave side complementally seats on the convex, tapered surface of said body throughout the entire length of each reamer blade, each said reamer blade being slidable relative to said tapered surface of said body, said reamer blades having the respective ends thereof converging in an outward direction with respect to the portion thereof which seats on said body, and the slots in said shell having the respective ends thereof converging in an outward direction in complementary relation to the ends of said reamer blades, the innermost length of each reamer blade being greater than the minimum length of said respective slots to retain the inner ends of said reamer blades within the respective slots in said shell.

3,051,256
POWER DRIVE FOR FOUR AXLE VEHICLE
Herbert Brandt, Leipzig, Germany, assignor to VEB Getriebewerk Leipzig, Bohlitz-Ehrenberg, Germany
Filed Apr. 6, 1959, Ser. No. 804,326
6 Claims. (Cl. 180—24)



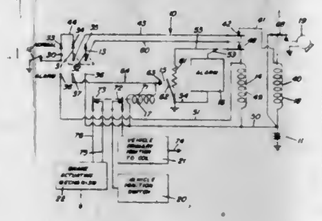
1. A four-axle vehicle including power means to drive said vehicle, a centrally located shaft connected to said power means for rotation thereby, a first differential driving gear means connected to said shaft for rotation thereby and connected to at least two of the axles, a second differential driving gear means connected to said shaft and to the remaining ones of the axles, and slip clutch means connected beween said shaft and one of said differential driving gear means.

3,051,257
VEHICULAR STEERING SYSTEM
Heinz Selle, Nordhausen, Harz, Germany, assignor to VEB Schlepperwerk Nordhausen, Nordhausen, Harz, Germany, a corporation of Germany
Filed Dec. 7, 1959, Ser. No. 857,733
Claims priority, application Germany Jan. 9, 1959
7 Claims. (Cl. 180—79.2)



1. A steering mechanism for an automotive vehicle having a chassis and at least one front-wheel assembly including an axle and wheel-controlling rod means extending alongside said axle, said mechanism comprising a first and a second shaft disposed generally vertically on said chassis with relative horizontal spacing in the longitudinal direction of the vehicle, a control member displaceable in two directions from a normal position, first link means operatively connecting said first shaft with said control member for rotation thereby, second link means operatively connecting said second shaft with said first shaft for rotation in unison therewith, and a connecting element extending from said second shaft to said rod means for entrainment of the latter by said first and second link means, said first shaft being engageable by an element identical with said connecting element whereby a front-wheel assembly may also be disposed at a different part of said chassis for orientation of its wheels by said control member, said second link means including a first elongated member rigidly connected to said first shaft, a second elongated member rigidly connected to said second shaft and a third elongated member articulated to said first and second elongated members.

3,051,258
VEHICLE OPERATOR ALARM
Clarence H. Byers, 510 6th Ave. N., Princeton, Minn.
Filed Apr. 6, 1960, Ser. No. 20,450
16 Claims. (Cl. 180—82)

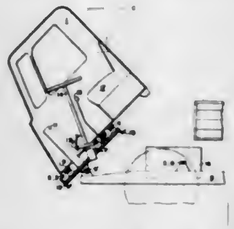


1. An alarm system for a motor vehicle which has a horn and a horn relay operatively connected with the horn to control the operation of the horn, a source of electrical potential with which the horn relay is operatively connected, said system comprising a normally open switch adapted to be held manually in a closed position by the vehicle operator, a multi-pole, multi-position selector switch with which said manual switch is connected, means connected with a battery to provide potential at such selector switch, a control relay having two switch sections and a coil which is connected with said battery and said selector switch, said two switch sections of said control relay also connected with said selector switch, an alarm connected with one of said switch sections and to ground so that said alarm is rendered operative in response to closing said one of said switch sections by opening said manual switch, a time delay relay connected in parallel with said alarm and operatively connected through said selector switch to the other of said switch sections, and means connected with said other of said switch sections for energizing said horn relay when said time delay relay is activated to thereby provide an exterior warning to pedestrian and vehicular traffic.

3,051,259
MOTOR VEHICLE CONSTRUCTION
Otto Lorenz, Fellbach, near Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Feb. 6, 1959, Ser. No. 791,641
Claims priority, application Germany Feb. 11, 1958
10 Claims. (Cl. 180—89)

1. A truck type motor vehicle comprising a main vehicle frame having longitudinally extending bearer

members, a drive unit with the longitudinal axis thereof disposed essentially in the driving direction of the vehicle and inclined about the crank shaft thereof with respect to the vertical, a driver cab having a level floor section and seat means, said drive unit being disposed below said seat means, and means for tiltably supporting said driver cab on said main vehicle frame so as to be tiltable forwardly and thereby expose said drive unit comprising an auxiliary frame means disposed below said floor section forwardly of said drive unit, said frame means including members forming an essentially rectangular frame, said last-named members including for-



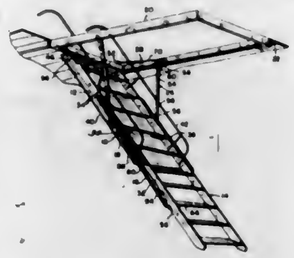
wardly extending side members, coaxial tiltable joints interconnecting the forward ends of said side members and the forward ends of said bearer members, said members forming an essentially rectangular frame further comprising a cross bearer member connecting and disposed forwardly of said side members, first resilient bearing units for supporting said floor section on said cross bearer member, means including a second resilient bearing unit spaced rearwardly of said cross bearer member on said rectangular frame and resiliently connecting said cab to a rear part of said rectangular frame, and third resilient units separably supporting the rear end of said cab on said vehicle frame.

3,051,260
DOOR FOR ATTENUATING SOUND
Oliver C. Eckel, Carlisle, Mass.
(P.O. Box 226, Cambridge 38, Mass.)
Filed Apr. 6, 1960, Ser. No. 20,431
10 Claims. (Cl. 181—33)



1. A door for attenuating sound comprising an outer body portion, an inner body portion, means attaching said body portions together, said inner body portion embodying sound absorbing material, two frame members spaced apart intermediate opposite side extremities of said inner body and at opposite side extremities of said material, yielding material next to and interiorly of said frame members, a panel opposite and exteriorly of said frame members and sound absorbing material, means attaching said panel to said frame members, resilient retainers at opposite side extremities of said panel having openings, opposite side extremities of said panel extending into said openings, and a resilient septum sheet between said inner and outer body portions in contact with portions of said panel assembly.

3,051,261
ADJUSTABLE STAIRS
Cleitus E. Webb, Sr., Memphis, Tenn., and Cleitus E. Webb, Jr., and Robert J. Webb, Little Rock, Ark., assignors to Wel-Bilt Products Company, Memphis, Tenn., a co-partnership
Filed July 18, 1960, Ser. No. 43,346
1 Claim. (Cl. 182—78)

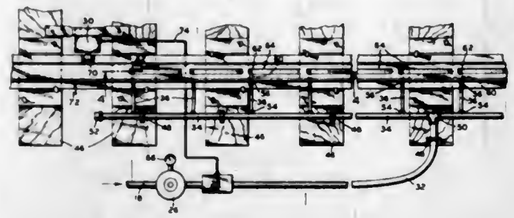


A disappearing stairway construction comprising a frame constructed around an opening in a ceiling or the like, a main stairway section, pivot means for attachment of one end of the main stairway section to said frame for swinging movement of said main stairway section between a stored position wherein the main stairway section is substantially in the same plane as the frame and an in use position wherein said main stairway section extends at a substantial angle to said frame, a foldable strut at each side of said main stairway section having one end pivotally secured to the main stairway section adjacent the other end thereof, the struts being folded when said main stairway section is in the stored position and being operable in an unfolded position in conjunction with said pivot means to support said main stairway section from said frame in the in use position of said main stairway section, and counterbalancing means for said main stairway section comprising pivot pins secured to opposite sides of said frame, on offset bracket rigidly attached to the other end of each of the foldable struts and positioned between said frame and the other end of said foldable struts, said other end of said foldable struts and the offset brackets being pivotally mounted on the respective pivot pins and forming an open pocket therewith at the other end of each of the foldable struts, a lever secured to said other end of each of the foldable struts extending substantially perpendicularly thereto adjacent said pocket, a pair of springs one end of each of which is adjustably connected to one of the levers and the other end of which is connected to said frame, a camming surface on the other end of each of said struts for camming the springs into the pockets on the ends of the struts on movement of said main stairway section into an in use position from the stored position thereof whereby said springs are bent around the pivot pins with the main stairway section in the in use position so that the ends of each of said springs are substantially aligned through the respective pivot pins with the main stairway section in the in use position reducing the tendency of the springs to return the main stairway section to the stored position thereof.

3,051,262
APPARATUS FOR REDUCING FRICTION BETWEEN RAILROAD CAR WHEELS AND RAILS
David C. Bettison, Omaha, Nebr., assignor to Railroad Accessories Corporation, Cresskill, N.J.
Filed Nov. 20, 1959, Ser. No. 854,499
5 Claims. (Cl. 184—3)

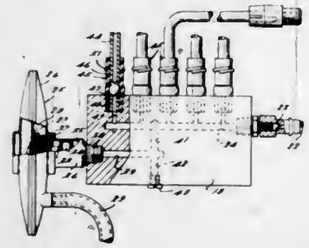
1. Apparatus for reducing friction by lubricating with oil the peripheral rim of a railroad car wheel and the running surface of a portion of railroad track over which said wheel travels, comprising, in combination, a standard rail having a wheel-contacting top running surface, said

top surface having a plurality of longitudinal shallow wells formed therein, lubricating oil supply and metering means, and means forming passageways in said rail con-



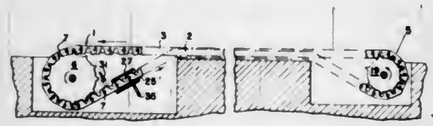
necting each well to said supply and metering means, whereby a metered amount of lubricating oil is passed to said wells and is picked up by the tread of said car wheel to reduce friction between said rail and said wheel.

3,051,263
LUBRICATING SYSTEM
William G. McKenzie, Racine, Wis., assignor, by mesne assignments, to Walker Manufacturing Company, Racine, Wis., a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,787
13 Claims. (Cl. 184—7)



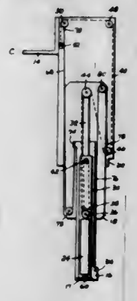
1. In a lubricating system, a source of lubricant, a feed line leading from said source, a metering device in said feed line comprising a chamber having an expandable wall responsive to application of lubricant pressure from said source to yieldably enlarge said chamber and retain a quantity of lubricant and responsive to reduction of lubricant pressure at said source to discharge at least a portion of the retained lubricant, and valve means responsive to application of lubricant pressure from said source to close the connection between said metering device and the delivery end of said feed line, and responsive to reduction in said source pressure to open said connection.

3,051,264
LUBRICATION SYSTEM AND METHOD FOR CHAIN CONVEYOR
Robert L. Batchelor, 87 Mackay Drive, Tenafly, N.J.
Filed Oct. 14, 1960, Ser. No. 62,700
5 Claims. (Cl. 184—15)



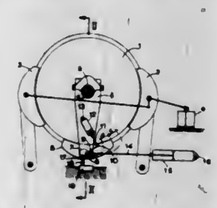
1. A system for lubricating a flexible structure having a plurality of links interconnected by linkage means, each of said interconnected links having a substantially flat face portion which is discontinuous at said linkage means comprising channeling means having a base portion for receiving said flexible structure, foamed lubricant injecting means rigidly supported in said base portion, means for providing foamed lubricant under pressure to said foamed lubricant injecting means, and means for transporting said flexible structure along said channeling means such that said face portions are in contact with said base portion and pass over said foamed lubricant injected means whereby a slide valve control of said foamed lubricant injecting means is effected by successive ones of said links.

3,051,265
FORK TRUCK WITH TRI-LIFT MAST
Robert S. Boyajian, Somerville, and Bernard B. Becker, Belmont, Mass., assignors to Lewis-Shepard Company, Watertown, Mass., a corporation of Massachusetts
Filed June 6, 1960, Ser. No. 34,086
10 Claims. (Cl. 187—9)



1. A tri-lift fork truck comprising a fixed mast, an intermediate mast and an inner mast, a fork mounted on and movable vertically with respect to the inner mast, a pair of pull cylinders having their lower ends fixed with respect to said fixed mast, cooperating pistons in said pull cylinders and chain and pulley means actuated by said pistons for raising said fork at a three-to-one ratio through its full free lift with respect to said inner mast while the inner mast is held in fixed relation to said fixed mast, a push cylinder and ram plunger therein operable only upon completion of the movement of the pistons in said pull cylinders, means comprising the same chain and pulleys acting in cooperation with the upward movement of said ram plunger for raising said inner mast and fork with respect to said fixed mast at a two-to-one ratio, and other means independent of said chain and pulleys for causing said intermediate mast to move up and down along with said inner mast at a rate equal to one-half that of the inner mast.

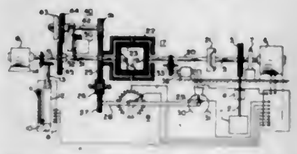
3,051,266
AUXILIARY ELEVATOR BRAKE FOR ADJUSTMENT OF GAGE LEVEL
Maurice Bonzon, Le Creusot, France, assignor to Societe des Forges et Ateliers du Creusot, Paris, France, a French company
Filed June 27, 1960, Ser. No. 39,125
Claims priority, application France July 3, 1959
8 Claims. (Cl. 187—28)



1. In a mine hoisting system including a pit cage attached to a rope and a pithead pulley for operating said rope, main brake means engageable with said pulley to

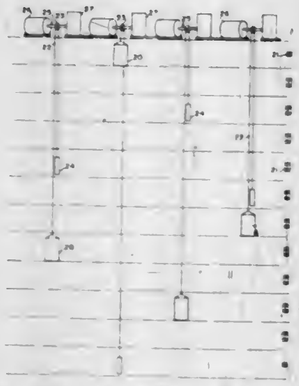
hold said cage at a prescribed pit level, auxiliary brake means engageable with said pulley and means mounting said auxiliary brake means for limited angular displacements bodily and coaxially with the pulley in the engaged condition of said auxiliary brake means, senser means positioned at said level for sensing minor displacements of said cage relative thereto, and actuator means connected with said senser means and said auxiliary brake means for imparting to said pulley compensatory angular displacements to maintain said cage substantially at said prescribed level.

3,051,267
ELEVATOR CONTROL
Joseph H. Borden, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Aug. 10, 1959, Ser. No. 832,576
28 Claims. (Cl. 187—29)



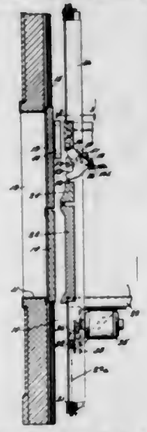
3. In an elevator control, in combination; an elevator car serving a plurality of floors; an elevator motor adapted to drive said car; motor control means for accelerating said car; means for detecting the normal uniform velocity of said car comprising a differential having two inputs coupling said elevator motor and an advance motor; an output of said differential being operative to change the resistance of a rheostat to which said motor control means is responsive; means for detecting a predetermined ratio of the distance traveled by said car from its last stop to the total distance to be traveled comprising means fixing the relationship of said output with one of said inputs of said differential for a predetermined interval after said car has moved away from a floor and means for detecting a stop signal for said car; said motor control means being operative to interrupt said acceleration in response to the detection of said predetermined ratio or to the detection of normal uniform velocity, whichever occurs first.

3,051,268
ELEVATOR CONTROL SYSTEM
John R. Dinning, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Oct. 27, 1959, Ser. No. 848,950
28 Claims. (Cl. 187—29)



21. In an elevator system, in combination, a plurality of cars adapted to serve traffic between a plurality of floors and a particular floor, means for registering calls for service; means responsive to a predetermined demand for defining a continuous zone of floors to receive preferred service in which the limit remote from the particular floor is a call for service toward the particular floor, means for limiting travel of cars away from the particular floor to said limit, means for reducing the zone as the call at the limit is answered, and means for temporarily disabling the travel limiting means in response to a car serving said zone of floors.

3,051,269
POWER OPERATOR FOR ELEVATOR SHAFTWAY DOORS
Nicholas R. Guilbert, Jr., Glenside, and John J. De Feo, Philadelphia, Pa., assignors to Guilbert, Incorporated, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 25, 1958, Ser. No. 731,029
8 Claims. (Cl. 187—60)



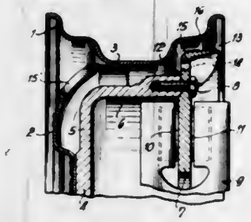
1. Door operating mechanism for a vertically slidable hatchway door in an elevator hatchway having an elevator car therein, comprising a vertically movable member on said elevator car movable with respect to said car, a vertically elongated abutment mounted at a fixed location on and projecting from said hatchway door, said abutment having force applying parts releasable upon application of a predetermined force thereon, a pivotally mounted pendant vane on said movable member and swingable in a vertical plane, and members including a fixed guide on a fixed portion of said car and a projection on said vane engaging said guide for swinging said vane and thereby positioning the lower part of said vane for engagement with said parts of said abutment upon relative movement of said movable member and said fixed portion of said car in one vertical direction and for retracting said vane upon relative movement of said movable member and said fixed portion of said car in the opposite vertical direction.

3,051,270
LOCKING MECHANISM FOR MOBILE UNITS
Karl H. Burzlaff, Rochester, N.Y., assignor to Ritter Company, Inc., Rochester, N.Y., a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 777,869
13 Claims. (Cl. 188—2)



1. A locking device for the casters of a frame, said casters being rotatable about at least their horizontal axis comprising, in combination, means for pressure locking each of the casters against rotation about at least their horizontal axis, a manually operated member movable from a caster released position to a caster locked position, latch means intermediate said manually operated member and said frame, said latching means being movable into latching relation upon actuation of said manually operated member, means interconnecting said manually operated member and said pressure locking means for each of the casters, said interconnecting means including pressure limiting means for limiting the pressure applied to each of the locking means for said casters upon operation of said manually operated means and resilient means intermediate said manually operated member and said interconnecting means enabling further movement of the manually operated member after said pressure limiting means has limited the pressure applied to the caster locking means.

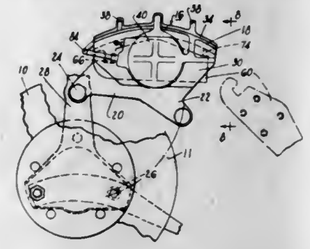
3,051,271
DISK BRAKE
Hans Spannagel, Wilferdingen, Kreis Pforzheim, and Nikolaus von Ruecker, Stuttgart, Germany, assignors to Dr. Ing. h.c. F. Porsche K.G., Stuttgart-Zuffenhausen, Germany
Filed May 16, 1960, Ser. No. 29,517
Claims priority, application Germany May 30, 1959
7 Claims. (Cl. 188—18)



1. A disk-brake construction for the wheel of a vehicle, especially of a motor vehicle, said wheel being provided with a felly having a drop-center portion, comprising an annular brake disk, main braking means for said disk surrounding said disk at the inner edge thereof, support means for said brake disk arranged within said felly, said support means having an essentially drum-like shape and including a disk portion and a rim portion secured thereto, said rim portion being of essentially annular configuration and having an axial length at least equal to that of said drop-center portion, and means detachably securing the brake disk to the rim portion of said support means at the end thereof opposite to said disk portion, said brake disk being provided with an annular extension which extends beyond the area of fastening of said brake disk to said support means outwardly of said support means, said extension having a collar-like projection secured to the rim portion thereof and extending substantially perpendicular to said brake disk adjacent said felly in the direction away from said supporting means, the diameter of said brake disk and extension thereon being larger than the diameter of said drop-center portion of said felly, said extension being provided with a plurality of apertures for the passage therethrough of cooling air, said apertures being provided adjacent to said projection between said means for detachably securing said brake disk to said support means and said projection.

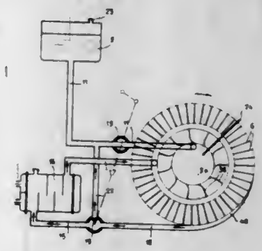
3,051,272
IMPROVEMENT FOR DISK BRAKE STRUCTURE
Richard T. Burnett, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 3, 1959, Ser. No. 817,823
5 Claims. (Cl. 188—73)

1. A brake comprising a rotor mounted for rotation at the radially inner portion thereof, a housing having means extending radially inwardly for attachment to a fixed member, said housing including two integrally constructed laterally spaced sides extending closely adjacent the opposite faces of said rotor and a transverse side located radially beyond the periphery of said rotor and interconnecting said sides, an anchor boss constructed at one end of each of said spaced sides and projecting toward the adjacent disk face, two friction members each including a rigid stiff backing and a lamination of friction material disposed for engagement with the opposing disk surface, each of said friction members having a notch at one end of the backing proportioned to receive a respective one of said anchoring bosses and slidable



relatively thereto for substantially free movement of the friction material into engagement with the opposing surface of the disk, said notch having spaced edges which are effective one in each direction of rotation as anchoring surfaces in engagement with a respective one of said anchoring bosses, at least one supporting ledge formed integrally with each of the sides of said housing for slidably carrying the weight of the friction member and resisting turning of the friction member on said anchor boss, and an integral abutment formed in each of the sides of said housing and slidably engageable by the backing of the respective friction members to resist turning of the friction member on the associated anchor boss.

3,051,273
HYDRAULIC BRAKE
Ettore Cordiano and Giovanni Candellero, Turin, Italy, assignors to Fiat Societa per Azioni, Turin, Italy
Filed July 13, 1960, Ser. No. 42,544
Claims priority, application Italy July 15, 1959
2 Claims. (Cl. 188—90)



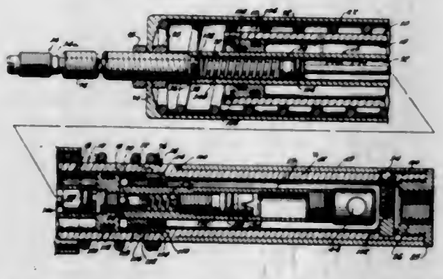
1. In a hydrodynamic brake for motor vehicles of the variable oil-filling type having a bladed rotor keyed to a vehicle drive shaft and a bladed stator enclosing said rotor, an oil reservoir, an oil pump for feeding oil to the bladed region of the rotor, and an external heat exchanger, a first conduit interposed between said reservoir and the inlet side of said pump, a wide-mouthed intake formed on the periphery of said stator outwardly of the periphery of said rotor, a second conduit interposed between said wide-mouthed intake and the inlet to said heat exchanger, a third conduit interposed between the outlet from said heat exchanger and a zone arranged inside the inner periphery of the rotor blades, a one-way valve

arranged in said first conduit, a three-way valve arranged in said second conduit, a fourth conduit connecting one way of said three-way valve to a point in said first conduit situated between said one-way valve and said reservoir, and a vent connecting the inlet to said pump with the atmosphere, said valves being so arranged for said one-way valve to be open when said three-way valve leaves free the communication between said dynamic intake and said heat exchanger and intercepts said fourth conduit, and to be closed when said three-way valve leaves free the communication between said dynamic intake and said fourth conduit and simultaneously intercepts the communication with said heat exchanger, means being provided for simultaneously operating said valves to afford their above mentioned function.

3,051,274
HYDRAULIC LOCKING DEVICE

Percy L. Porter, Los Angeles, Calif., assignor to P. L. Porter Co., Los Angeles, Calif.

Filed Mar. 10, 1959, Ser. No. 798,436
12 Claims. (Cl. 188—96)

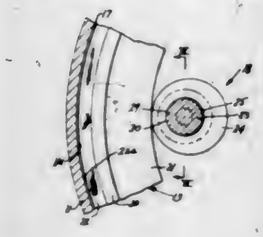


1. In a hydraulic locking device having a cylinder, a piston dividing the cylinder into two locking chambers, a locking valve controlling fluid flow between the two chambers to control the freedom of the piston, a tubular piston rod united with the piston, and means including a spring-loaded gland and a portion of said tubular piston rod forming a reservoir for replenishing fluid flow and for fluid flow to compensate for thermal changes, the improvement comprising: means including a normally closed check valve connecting said reservoir with said chambers to control flow between the reservoir and said chambers, said check valve being responsive to said locking valve to be opened by opening of the locking valve and when normally closed positively preventing flow into the reservoir from the chambers.

3,051,275
AUTOMATIC BRAKE ADJUSTER

Louis T. Knocke, Birmingham, Mich., assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Sept. 23, 1959, Ser. No. 841,816
4 Claims. (Cl. 188—196)

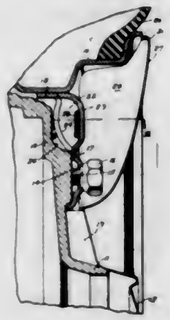


1. An automatic brake adjusting mechanism for positioning a brake shoe comprising an element adapted to be a rigid part of a brake shoe, a follow up cam member for engaging said element, a support for said cam member supporting said cam member for movement between a first position and a second position and limiting movement of said cam member away from the brake surface and establishing a brake release position, means biasing the cam member to a second position to move with said element as the shoe moves against the brake surface, means limiting movement of the cam member at said second position, and biasing means urging the cam member in a direction to prevent a space from forming between the cam member and the element when the element tends to move beyond said second position of the follow up member so that wear in the brake shoe will be automatically compensated.

3,051,276
WHEEL STRUCTURE

George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Filed Apr. 15, 1959, Ser. No. 806,612
9 Claims. (Cl. 188—264)



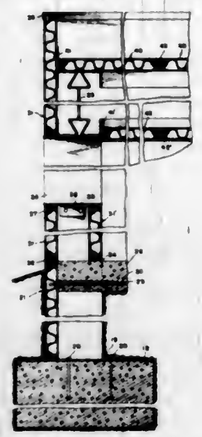
1. In a wheel structure including a multi-flange tire rim supported by a wheel body having radially inner bolt-on flange structure engageable by a circumferential series of bolts to attach the same to a brake drum, spoke portions on the wheel body offset relative to adjacent portions of the wheel body and providing generally radially extending spoke portions in line with the attachment bolt means, individual cover hood members retainingly engaging said radially extending spoke portions and thrusting against the tire rim, said hood members having air vane side walls with angled air deflector portions thereof which are the portions of the hood members that thrust against the tire rim.

3,051,277
PREFABRICATED BUILDING STRUCTURE AND PANELS COMPRISING THE SAME

Paul T. Day, Jr., Baltimore, Md., assignor to American Metalcore Systems, Inc., Baltimore, Md.

Filed Mar. 6, 1959, Ser. No. 797,630
7 Claims. (Cl. 189—1)

1. In a building structure having spaced, vertical, structural columns and horizontal structural members connecting the upper terminals of the vertical structural columns, a prefabricated foundation, wall and roof panel assembly supported by, and secured to, the structural columns and members, each of the panels being of like, rectangular conformation, the edges of the panels having longitudinal recesses extending about the perimeter thereof, adjacent panels being erected vertically in contiguous edge-to-edge or right angle relationship to form the foundation and walls of the structure, and erected horizontally to form the roof of the structure, and connectors

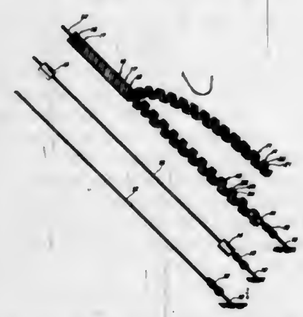


interposed in the recesses between adjacent panels for locking the panels together.

3,051,278
GUY GUARD

Robert L. Smythe, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Filed Feb. 3, 1958, Ser. No. 712,828
1 Claim. (Cl. 189—31.5)



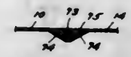
A hollow guard for protecting a guy wire comprising, in combination, a pair of spacers adapted to be secured to said guy wire in spaced apart relation lengthwise thereof, and a pair of helically preformed elements having the same pitch and diameter and being of an internal diameter larger than the diameter of said guy wire and slightly smaller than the external diameter of said spacers, said elements being adapted to encircle said guy wire without disturbing it, said elements constituting half lays and being adapted to be intertwisted to form a whole lay surrounding said guy wire in radially spaced relation thereto and surrounding said spacers in clamping engagement therewith and providing a sheath free of projections for protecting said guy wire.

3,051,279
METHOD AND APPARATUS FOR SECTIONING AUTOMOTIVE BODY PANELS

Everett D. Hougen, % Blair Equipment Co., 902 Blair St., Flint, Mich.

Filed Mar. 31, 1958, Ser. No. 725,125
10 Claims. (Cl. 189—36)

10. In combination, a pair of sheet metal panels having contiguous edge portions forming a joint, said edge portions each being channel-shaped with the channel disposed below the plane of the panel, said channels each having adjacently positioned free edge portions terminating in a plane below the plane of said panels, a fused metal connection between said free edge portions and serving to secure said panels together and a layer of plastic filler material solidified in situ filling said channels and concealing said fused metal connection, said

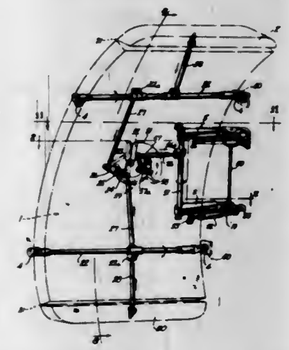


channels each comprising a pair of said walls, one of which comprises the free edge portion of the channel, the last mentioned side wall of each channel lying in a plane disposed generally perpendicularly to the plane of the panel and said fused metal connection comprising a weld bead at the upper ends of the last mentioned side walls which overhangs the last mentioned side walls of said channels.

3,051,280
OUTWARD-OPENING PLUG TYPE DOOR FOR AIRCRAFT

Burton Bergman, Kent, and Robert D. Eisenhart, Allan W. Opsahl, and Stuart K. Wood, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

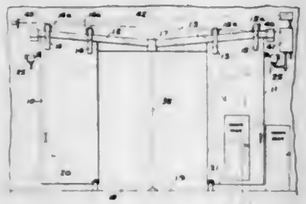
Filed Apr. 4, 1958, Ser. No. 726,573
7 Claims. (Cl. 189—46)



1. In combination, a wall structure having an opening therein, a closure panel, said opening and closure panel having complementally formed edges adapted for seating of said panel against said wall structure to plug said opening from one side of said wall, and supporting and guiding means disposed along one edge of said closure panel and interconnecting said closure panel and said wall structure along the adjacent edge of the opening, said supporting and guiding means comprising an elongated member pivotally connected by one end to the closure panel and pivotally connected by its opposite end to the wall structure, the length of such elongated member and the relative locations of its pivotal connections providing clearance for hinged movement of the closure panel sequentially inwardly to unseat it from said wall structure opening, and thereupon angularly in relation to said elongated member to address it edge opposite said one edge outwardly through the opening, followed by outward bodily movement through said opening with said latter edge leading, into a final position adjacent to said opening, said closure panel having a dimension parallel to the first-mentioned edge thereof which is at least slightly less than the corresponding dimension of the opening to permit such edgewise movement of the closure panel through said opening, and having a dimension generally perpendicular to said first-

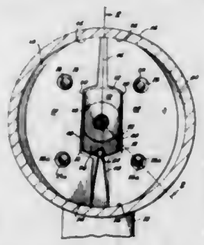
mentioned edge which is materially in excess of the corresponding dimension of said opening to permit said closure panel to seat against the first-mentioned side of the wall structure, said supporting and guiding means further comprising a second elongated member pivotally connected at one end to the closure panel at a location offset, in the thickness direction of the closure panel, from the closure panel pivotal connection of the first elongated member, a link pivotally connected at its opposite ends repectively to the first and second elongated members with the second such member disposed substantially parallel to the first, thereby forming, in conjunction with the portion of closure panel between the elongated members' pivots thereon, a parallelogram linkage, said second elongated member having a portion projecting endwise beyond its connection to said link, and control means operable to control the relative angular positioning of the closure panel, accompanying said sequential movements, said control means comprising a guide track mounted on the wall structure and a slider engaged in said guide track, said slider being carried by the projecting portion of the second elongated member, and said guide track having a curved initial portion producing the initial swinging of the closure panel angularly in relation to the first elongated member, and an oppositely curved final portion extending from one end of its initial portion to produce limited swinging of said closure panel relative to said first elongated member in the opposite sense through a relatively small angle during subsequent closure panel opening movement to its final position adjacent to the opening.

3,051,281
FIRE DOOR
Warren M. Huff, Jr., Omaha, Nebr.
(1759 High School Drive, Brentwood 17, Mo.)
Filed Mar. 31, 1958, Ser. No. 725,300
5 Claims. (Cl. 189—47)



1. A safety smoke closure device for a building having at least two separate space compartments and an opening providing communication between said two compartments, a track mounted at said opening, a closure provided on said track and movable thereon to close and to open said opening, said track and said closure being adapted to have said closure move on said track from its upper position at which the opening is open to its lower position at which the opening is closed by gravity alone and thus, unless restrained by extraneous means, constantly tends to move from its open position to its closed position; locking means provided on the building structure at said opening and engaging said closure in the upper position thereof to hold it in such upper position and thus to keep said opening open and to restrain said closure from downward movement on said track that would close said opening; solenoid means normally energized and maintaining said locking means in their closure-engaging position but releasing said means when de-energized to cause said closure to move by gravity to its closed position; an electric circuit including a source of electric energy and connected to said solenoid means to keep the same normally energized; a source of artificial light adapted to produce a beam of light, said source of light being disposed adjacent said closure in one of said compartments, a photo-electric receiver disposed adjacent said closure but in the other compartment, said photo-electric receiver including circuit-interrupting means normally closed but adapted, when operated, to open said circuit; a glazed opening provided in the building structure separating said compartments and adapted to pass the light beam from said source of light to said photo-electric receiver, said photo-electric receiver being adapted to actuate its circuit-interrupting means to de-energize said solenoid means and thus to release the closure for its downward closing movement when smoke is present in a predetermined concentration in the space traversed by the light beam in either one of said two separate building compartments.

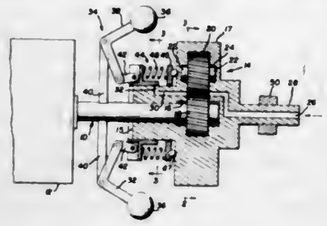
3,051,282
SELF-LOCKING ROTARY TRANSMISSION
Whitney E. Greene, 712 S. Wilton Place,
Los Angeles, Calif.
Filed Dec. 15, 1959, Ser. No. 859,802
4 Claims. (Cl. 192—8)



1. Means to transmit actuating force from a rotary input member to a rotary output member on the same axis and to immobilize the rotary output member automatically in the absence of such force, comprising: a non-circular member on said axis united with said output member for rotation therewith; a fixed circumferential wall concentric to said axis and surrounding said non-circular member to define therewith a radial space; a pair of shoes in said radial space on opposite sides of a diameter through said axis, said shoes forming a central non-circular opening around said non-circular member for mutual engagement between the pair of shoes and the non-circular member; spring means acting between the two shoes at one end only of the pair of shoes to urge said shoes in opposite directions of rotation from said one end of the pair to grip the non-circular member from opposite sides with wedging action against the fixed circumferential wall when said input member is idle thereby to completely eliminate freedom of rotation of the non-circular member relative to the fixed circumferential wall when the input member is idle; and driving means extending into said radial space from said input member to engage said shoes for transmitting rotation from the input member to the non-circular member through the shoes and to retract the shoes out of wedging engagement with the fixed circumferential wall to permit rotation of the non-circular member.

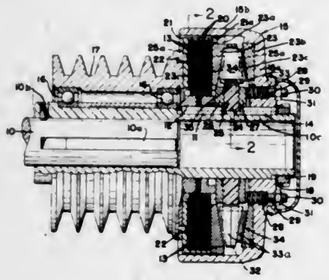
3,051,283
GEAR TYPE HYDRAULIC COUPLING
Arthur Bentley, Fredericksburg, Tex.
(11003 Auldine Drive, San Antonio 30, Tex.)
Filed Dec. 15, 1958, Ser. No. 780,522
11 Claims. (Cl. 192—61)

1. A hydraulic transmission comprising a rotatable transmission housing, a first rotatable shaft, a rotary fluid pump means within said housing connected to and rotatable with said first shaft, a fluid inlet to and a fluid outlet from said housing in hydraulic circuit with said pump means whereby rotation of said pump means is effective to pump hydraulic fluid from said inlet to said outlet, said fluid outlet being located on a peripheral surface of said housing, a second shaft, one of said shafts being connected to and rotatably movable with said housing, a ring valve mounted for axially sliding movement along said peripheral surface of said housing and into radially outward overlying relation to said fluid outlet, said ring valve and



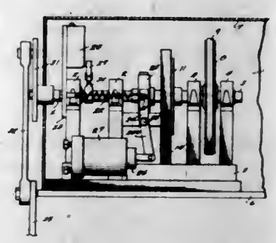
said housing being mounted for relative rotation therebetween, said ring valve having a plurality of circumferentially displaced fluid passages therein with circumferentially spaced fluid flow restrictions interposed between successive fluid passages, and means for slidably moving said ring valve into overlying relation to said fluid outlet to intermittently permit and restrict fluid flow from said fluid outlet of said housing in accordance with the relative rotation between said ring valve and said fluid outlet.

3,051,284
CENTRIFUGAL CLUTCH
Thomas L. Fawick, Cleveland, Ohio, assignor to Fawick Corporation, a corporation of Michigan
Filed Jan. 19, 1959, Ser. No. 787,486
10 Claims. (Cl. 192—105)



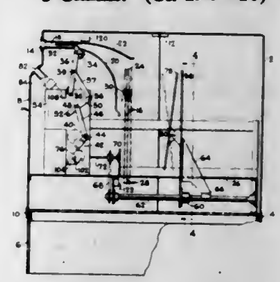
1. In a centrifugal clutch assembly having a rotary driving member and a rotatable driven member mounted for relative movement axially with respect to one another, said driving and driven members presenting axially spaced apart, confronting annular cam faces which converge toward each other in a radially outward direction and which define between them an annular cam space which is progressively narrower radially outward, the improvement which comprises the combination of a rotary cam carrier, and a plurality of circumferentially spaced cam sets carried by said cam carrier in said cam space, each of said cam sets comprising a bearing support which is inter-locked with said cam carrier against movement circumferentially with respect to the cam carrier but free to move centrifugally outward as the cam carrier rotates, and roller bearing means rotatably mounted on said bearing support and projecting beyond said bearing support and having line contact with said cam faces across the latter in a direction centrifugally outward from the axis of the clutch.

3,051,285
ONE-REVOLUTION CLUTCH AND STOP MEANS
Clifton F. West, Jesse B. Wethington, and William F. Rhem, Kinston, N.C.
Original application Jan. 22, 1957, Ser. No. 635,481, now Patent No. 2,876,610, dated Mar. 10, 1959. Divided and this application Jan. 8, 1959, Ser. No. 785,735
2 Claims. (Cl. 192—148)



1. A clutch mechanism comprising a driving shaft; a driven shaft having a crank arm fixed thereto, a connecting rod pivotally secured to said crank arm interengaging clutch elements positively secured to said driving and driven shafts, a stop element normally lying in the plane of revolution of said crank arm, mechanically interconnected means for bringing said clutch elements into engagement and for simultaneously shifting said stop element to a position out of the plane of revolution of said crank arm, whereby the latter is free to rotate, and automatic means brought into operation by said driven shaft as it completes on revolution, for disengaging said clutch elements and simultaneously restoring said stop element to its normal position in which said crank arm impinges against it and is arrested.

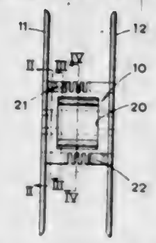
3,051,286
COIN-CONTROLLED SHOPPING BAG DISPENSER
Charles W. Stange, 125 Northfield Ave., West Orange, N.J., and Harold R. Smith, 15 Fairchild Place, Whippany, N.J.
Filed Feb. 2, 1959, Ser. No. 790,447
3 Claims. (Cl. 194—10)



1. Equipment for dispensing one shopping bag at a time from a supply of such bags maintained in such equipment comprising means for supporting said supply of shopping bags in a flat folded arrangement and in a vertical position one behind another with the tops of the bags facing downward and the folded bottoms of the bags facing forwardly in the equipment, means for urging said bags forward in the equipment, a lifting member positioned in front of said supply of bags, said lifting member having one end thereof pivotally mounted on the equipment and provided at its opposite end with an upwardly turned edge movable in an arcuate path to project beneath the forwardly facing folded bottom of the foremost bag in said supply, means urging said edge of the lifting member into engagement with the foremost bag in said supply, a motor connected to said lifting member and operable to move the same through

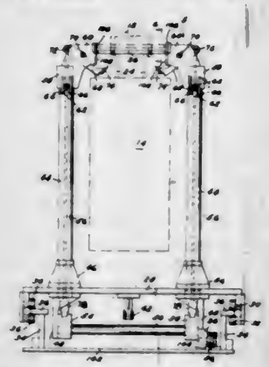
a cycle of operation from a raised bag dispensing position to a lowered position in which said edge of the lifting member projects beneath the downwardly facing folded bottom of the foremost bag of said supply and back to said raised bag dispensing position, a coin slot, a circuit for actuating said motor including a switch located adjacent said coin slot and operable upon insertion of a coin into said slot for initiating said cycle of operation, switch means operable upon conclusion of said cycle for de-energizing said motor, and means actuated by a bag being dispensed for obstructing said coin slot.

3,051,287
SPOOLS FOR BUSINESS MACHINES
Eric Alexander Grafton, Eltham, London, England, assignor to Walter Grafton & Son Limited, London, England
Filed June 1, 1960, Ser. No. 33,187
Claims priority, application Great Britain June 5, 1959
6 Claims. (Cl. 197—175)



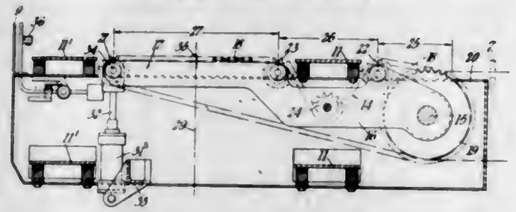
3. A ribbon spool for a business machine comprising, a cylindrical hub having a recess in the circumference thereof, and a cylindrical spring metal clip of substantially C-shaped cross-section frictionally engaged around the outside of said hub, said clip having a window intermediate the free ends thereof and at least one barbed prong integral with an edge of the window and extending into said window from a side edge thereof giving free access to said prong to enable attachment of a ribbon thereto, said recess and window being substantially in registry one with the other.

3,051,288
WORK LOADER
Daniel J. Borodin, Detroit, Mich., assignor to Wagner Brothers Incorporated, Detroit, Mich., a corporation of Michigan
Filed June 3, 1957, Ser. No. 663,132
2 Claims. (Cl. 198—20)



1. Apparatus for transferring a work rack horizontally from one hooked supporting device to another comprising a track extending horizontally between said devices, a carriage mounted for movement on said track, means for reciprocating said carriage along said track, said carriage having a platform portion, a pair of levers pivotally supported on said carriage below said platform, one at each side thereof, means interconnecting said levers for movement in unison, a cam extending lengthwise of said track, a cam follower on said carriage adapted to engage said cam and in turn actuate said lever, said levers having their pivotal axes axially aligned and extending transversely of said track, a pair of upright supports on said platform, one at each side thereof, a pair of levers pivotally supported intermediate their ends at the upper ends of said upright supports, said last mentioned levers having their axes in generally the same horizontal plane, the pivotal axes of said upper levers extending parallel to said track, vertical links interconnecting the outer ends of said last mentioned levers with the first mentioned levers and lifting members carried by the inner ends of said levers at the upper ends of said upright supports, said cam having a rise portion which when engaged by said cam follower is adapted to shift the lifting members vertically from a lowered position to an elevated position.

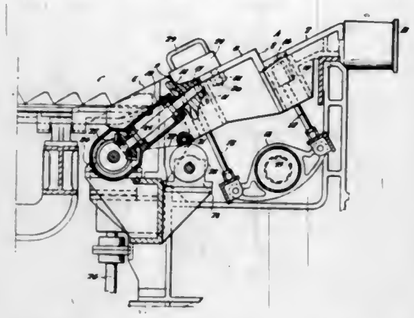
3,051,289
CONVEYOR DEVICES
Eric J. Horsford, Peterborough, England, assignor to Baker Perkins Incorporated, Saginaw, Mich.
Filed Sept. 2, 1959, Ser. No. 837,699
Claims priority, application Great Britain Sept. 5, 1958
7 Claims. (Cl. 198—20)



1. Apparatus for transferring articles from a feeding conveyor means to a receiving conveyor means spaced from said feeding conveyor means and having its longitudinal axis extending transversely of the longitudinal axis of said feeding conveyor means, at least one of said conveyor means including at least a pair of spaced endless conveyor elements together defining a path along which articles may be conveyed, said apparatus comprising a transfer conveyor means bridging the space between said feeding conveyor means and said receiving conveyor means and including an endless driven conveyor member providing an article supporting run, said conveyor member having a section of its supporting run displaced beneath the path defined by one conveyor element of said pair of conveyor elements whereby to form a gap in said supporting run, the remaining section of said supporting run being substantially continuous; means mounting said transfer conveyor means for raising and lowering movements such that said remaining section of said supporting run moves to positions respectively above and below the level of said path of said receiving conveyor means; and means connected to said transfer conveying means for raising and lowering the latter.

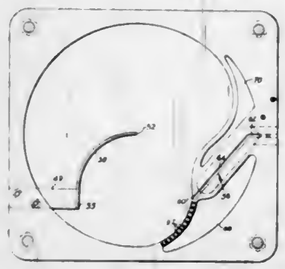
3,051,290
APPARATUS FOR THE MECHANICAL HANDLING OF ELONGATE PRODUCTS OF A ROLLING MILL
William Udall, Sheffield, England, assignor of one-half to The Brightside Foundry & Engineering Co., Limited, Sheffield, England
Filed Jan. 4, 1961, Ser. No. 80,608
Claims priority, application Great Britain Jan. 5, 1960
6 Claims. (Cl. 198—29)

1. Apparatus for the mechanical handling of elongate products of a rolling mill comprising a grid composed of a plurality of spaced apart side-by-side elements providing collectively a receiving surface for the step-by-step traverse therealong of the elongate products in a direction transverse to the axes of said products, an oscillatable hollow arm pivotally mounted in a bearing below the grid and extending upwardly and inclinedly to-



wards said grid, a spindle extending through said arm carrying and driving an aligning roller mounted thereon beyond the limits of the upper end of the oscillatable arm, driven gearing accommodated in the pivotal mounting of the oscillatable hollow arm for driving the spindle, and means for oscillating said arm.

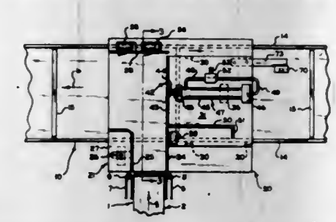
3,051,291
ARTICLE-FEEDING APPARATUS
William M. Hennessey, Roslyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 23, 1960, Ser. No. 10,133
2 Claims. (Cl. 198—30)



1. Apparatus for feeding small, lightweight, substantially round articles comprising a frame member having a central cutout area, a rotatable table positioned beneath said frame and accessible through said cutout area, and a channel in said frame providing a path for feeding said articles from the table to another location, said channel being of a width substantially the same as the diameter of said articles and having an entrance portion of like width communicating with said table, said cutout area forming a predetermined and unobstructed path across said entrance portion, and said entrance portion being oriented at substantially right angles to said predetermined path.

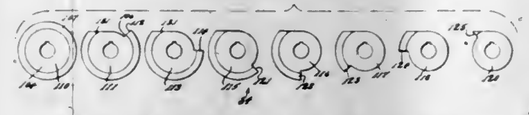
3,051,292
MATERIAL HANDLING APPARATUS
Gene J. Sundquist, 56 W. Hannum, and Stanley Marlow, 3200 Weigl Road, both of Saginaw, Mich.
Filed June 13, 1960, Ser. No. 35,725
6 Claims. (Cl. 198—31)

1. Material handling apparatus for receiving goods from a delivery conveyor or the like and loading them on a movable discharge conveyor, said apparatus comprising a frame having a goods receiving section to which goods are delivered from said delivery conveyor means and a loading section in communication with said receiving section; pusher means operable to engage goods on said receiving section and push them selectively to said loading section or to said discharge conveyor; and electrical circuit means, said circuit means having first actuating switch means located in the path of and operated by goods delivered to said receiving section, second actuating



switch means located in the path of an operated by goods moving to said loading section, control switch means actuated by said discharge conveyor in timed relation to its rate of speed, and means interconnecting said first and second actuating switch means, said control switch means, and said pusher means for operating the latter in response to operation of either of said actuating switch means and said control switch means.

3,051,293
BAR SEPARATOR
Edward T. Peterson, Reading, Pa., assignor to Birdsboro Corporation, Birdsboro, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1960, Ser. No. 17,186
4 Claims. (Cl. 198—34)



1. A bar separator including means for supporting a succession of stock bars side by side and for advancing the same transversely to their lengths, in combination with a shaft located beneath the stock bars and extending transverse to the lengths of the stock bars, a plurality of index discs on the shaft each having a portion of limited radial extent and a portion of greater radial extent, the portion of limited radial extent being of sufficient radius to block the transverse advance of the stock bars and the portion of greater radial extent being of sufficient radius to block the transverse advance of the stock bars, the portions of the index discs of greater radius starting at successive angular positions around the shaft, the index disc whose indexing portion is at the most retarded position angularly being the last of the sequence and the other indexing discs having their indexing portions angularly disposed in sequence toward the first disc, and means for rotating the portion of greater radial extent of a particular index disc from a position in which said index disc is entirely below the transverse advance of the stock bars into a position in which the said portion of greater radial extent blocks the transverse advance of the stock bars.

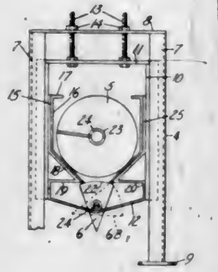
3,051,294
CATTLE FEED DISTRIBUTING APPARATUS
Theron John Reed, Burr Oak, Mich.
Filed May 21, 1959, Ser. No. 814,854
8 Claims. (Cl. 198—65)

6. Cattle feed distributing apparatus comprising a trough made up of integral spaced side members

having upright upper portions forming side walls of said trough and laterally inwardly and downwardly converging bottom portions forming spaced inclined bottom walls of said trough with a slot between the opposed edges thereof,

means spaced along said trough and connecting said side members,

a conveyor screw disposed in said trough and supported on said bottom walls with the sides of the screw in close but clearing relation to said side walls,



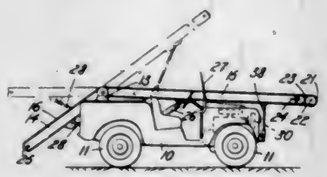
an elongated valve of segmental cross section extending along the lower side of said slot,

means rotatively adjustably supporting said valve from said side members along a longitudinal axis of the valve to selectively position the peripheral surface of the valve in closing relation to said slot or in slot opening position to either side of the slot,

means for supporting said trough and valve above a collecting platform for material discharged through said slot,

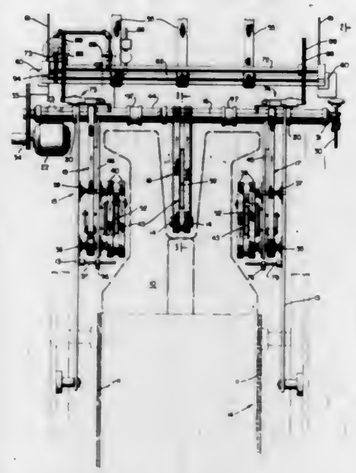
and means for rotatively driving said screw.

3,051,295
MOBILE ELEVATORS
Peter Charles Duffield Moy, Flat 1, South Lee, Nowton Road, Bury St. Edmunds, Suffolk, England
Filed Mar. 21, 1960, Ser. No. 16,366
Claims priority, application Great Britain Mar. 23, 1959
9 Claims. (Cl. 198—115)



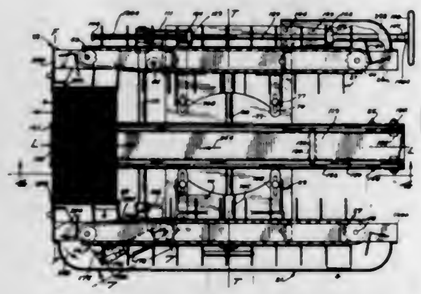
1. A mobile conveying and elevating apparatus comprising a self-propelled vehicle, a conveyor support frame mounted on said vehicle, two booms pivoted co-axially on said support frame with one extending forwardly from the pivot axis and the other extending rearwardly, an endless conveyor belt extending along both said booms, a first elevating means mounted on said vehicle for elevating the forwardly extending boom between a substantially horizontal position and an upwardly inclined position, a second elevating means mounted on said vehicle for elevating said rearwardly extending boom between a position upwardly inclined toward said pivot axis and a substantially horizontal position, holding down means on said booms for holding down the upper run of said conveyor belt in the region of said pivot axis, and reversible drive means for driving said belt in either direction.

3,051,296
OVEN STRIPPER
Ralph F. Mertz, Valley Cottage, N.Y., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,854
11 Claims. (Cl. 198—134)



1. In an apparatus for receiving and conveying sheets of material the combination of a plurality of spaced apart conveyor means, means to sequentially feed sheets onto said conveyor means, means for creating a suction between said conveyor means, a frame pivoted at one end for supporting one end of said conveyor means, means operatively secured to the other end of said frame to retain the same in a substantially horizontal position, means to release said frame retaining means, and means responsive to a downward pressure on each conveyor in excess of the weight of said sheet to actuate said frame releasing means.

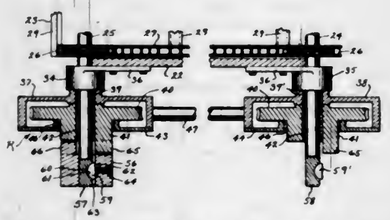
3,051,297
BAG MAGAZINE
Jack D. Helm and Frank L. Hopkins, Minneapolis, Minn., assignors to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri
Filed Nov. 6, 1959, Ser. No. 851,295
18 Claims. (Cl. 198—165)



1. In a bag magazine for advancing a group of bags from a loading station to a feed line whereat the bags are mechanically removed one at a time from said magazine, comprising a base, elongated bag support and conveyor means mounted on the base for advancing bags from said loading station to said feed line, said aforementioned means including at least one endless belt and

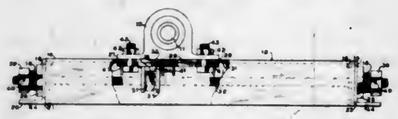
means including a first drive shaft for rotatably mounting said endless belt, a single first two way acting piston cylinder combination having a piston rod, means for drivingly connecting said piston cylinder combination to the first drive shaft for rotating said shaft in only one direction, a fluid supply line connected to either end of said cylinder, pressurized fluid supply means, control valve means connected to the fluid supply means and to the opposite ends of the fluid supply lines for supplying fluid under pressure alternately to each of the supply lines, and control operator means for actuating the control valve means to supply fluid to the other supply line, said control operator means including a power supply, circuitry connecting said power supply to the valve means, and switch means connected in said circuitry for controlling the supply of power to the valve means.

3,051,298
DRIVE AND REVERSING MECHANISM FOR ENDLESS CONVEYORS
Stanley W. Knight, Brodhead, Wis.
Filed Apr. 22, 1960, Ser. No. 23,940
4 Claims. (Cl. 198—203)



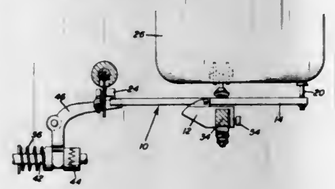
1. A drive and reversing means for endless conveyors of the type having a supporting frame and a transversely extending shaft at each end of the conveyor carried by the frame and abouut which the conveyor is trained and keyed for movement in response to the direction of rotation of said shafts comprising, a gear casing for each shaft supported by said frame, said shafts each being freely rotatable in respect to its respective casing, a gear wheel mounted on each shaft in said gear casing and freely rotatable in respect to its respective shaft and casing, means for simultaneously driving each gear wheel in an opposite direction from one another, and means including a removable toothed clutch hub and reversing jaw for alternately connecting each shaft in drive with its respective gear wheel, whereby the direction of travel of said conveyor can be changed as desired.

3,051,299
TAKE-UP DEVICE
Leland D. Stoner, 1327 Boat Rock Road SW., Atlanta, Ga.
Filed Jan. 28, 1959, Ser. No. 789,550
13 Claims. (Cl. 198—208)



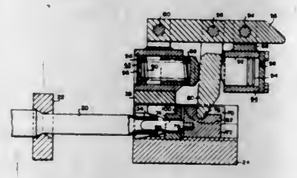
1. In a take-up device, an elongated frame including side members and end members secured between the side members inwardly of the ends of the side members; threaded bearing boss members projecting outwardly from the respective end members; mounting members for the frame and each including a planar apertural wall portion disposed against an end of the side members; nut members on the boss members for holding the mounting members against the side members, and detent members fast on the respective wall portions for engaging the side members to prevent the mounting members from turning with respect to the side members.

3,051,300
LINOTYPE SAFETY DEVICE
Charles W. Magnat, Jr., 3 Dick St., Bergenfield, N.J.
Filed Apr. 27, 1960, Ser. No. 25,077
10 Claims. (Cl. 199—52)



1. In a type-casting machine having a melting pot, a pot lever thereon, cam mechanism for yieldably advancing said pot through its lever, disengageable cam driving mechanism, stopping mechanism for the cam driving mechanism, and an improved safety device for disengaging said cam driving mechanism when advancement of the pot is interrupted by malfunctioning of the machine, said safety device comprising; lever means movable in response to relative movement between said pot and pot lever in excess of a predetermined amount, and means connected to said stopping mechanism and engageable by said lever means to thereby disengage said cam driving mechanism in response to movement of said lever means.

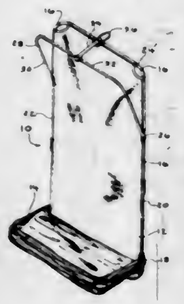
3,051,301
DRAWBENCH GRIPPING MECHANISM
Lynn J. Hummel, Albany, N.Y., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed Feb. 11, 1960, Ser. No. 8,051
6 Claims. (Cl. 205—24)



1. In a drawbench carriage having slidable gripper jaw members disposed to be actuated to engage and hold the end of a tube during a drawing operation, a pivoted arm disposed to engage and to be operated to simultaneously actuate said gripper jaw members into and out of said holding engagement, actuating means disposed to be operated to drive the pivoted arm in a direction to actuate the gripper jaw members into said holding engagement, and actuating means disposed to drive the pivoted arm in the opposite direction to actuate the gripper jaw members away from said holding engagement, the combination therewith of, a block disposed for slidable movement between said gripper jaw members, a tapered plug carried by the block, the tapered plug being disposed to extend forward therefrom centrally of the gripper jaw members and in alignment with the end of the tube, said plug being of a size to fit into said tube, the block having means disposed in engagement with the pivoted arm to be actuated thereby simultaneously with

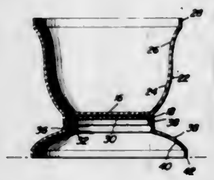
the actuation of the gripper jaw members whereby the plug is moved into the end of the tube as the gripper jaw members are driven into engagement therewith and the plug is driven in a direction away from the tube as the gripper jaw members are released therefrom, the plug cooperating with the jaw members when the jaw members grip the tube to prevent collapse of the end of the tube under the gripping force of the jaw members, and tube stop means disposed closely adjacent the tapered plug without interfering with the movement thereof for receiving the end of the tube when the gripper jaws are released therefrom to facilitate stripping the tube from the tapered plug as the plug moves away from the tube.

3,051,302
GARMENT CARRIER
Walter W. Crowley, 123 N. Taylor St., Oak Park, Ill.
Filed May 22, 1961, Ser. No. 111,837
8 Claims. (Cl. 206—7)



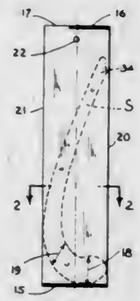
1. A garment carrier adapted for the hanging and transporting of garments in a wrinkle-free manner comprising a rigid elongated rectangular frame, a rigid U-shaped member having the ends thereof connected to the long sides of said frame and having the base portion thereof approximately horizontally disposed with respect to one of the short sides of said frame, a rigid hanging bar connecting said one side with said base portion, and a cover adapted to fit about said frame.

3,051,303
COMBINED CONTAINER AND SERVING DISH
Sylvester J. Daanen, 1014 Ernst Drive, Green Bay, Wis., and Thomas H. Lutsey, 846 St. Francis Road, De Pere, Wis.
Filed Apr. 7, 1960, Ser. No. 20,596
2 Claims. (Cl. 206—45.31)



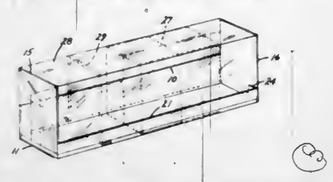
1. A combination storage container and serving dish comprising a lower container portion, and a removable cover, said container portion having a downwardly opening recess in the bottom thereof defined by a cylindrical peripheral flange, said cover being generally convex and having an upwardly extending protrusion on the upper surface thereof defined by a cylindrical peripheral flange, said peripheral flange on the cover adapted to telescopically and frictionally engage with the peripheral depending flange on the container portion for attaching the cover below the container portion and forming a base for the container portion, said cover normally being received on the open upper end of the container portion and forming a closure therefor, the open upper end of the container portion being provided with a cylindrical peripheral flange, the lower open end of the cover also having a cylindrical peripheral flange telescopically and frictionally engaging over the upwardly extending flange on the open upper end of the container portion thereby detachably and sealingly retaining the cover on the container portion, the container portion being constructed of thin plastic material and tapering upwardly and outwardly and includes a lower inwardly facing concave portion and an upper inwardly facing convex portion reinforcing the container portion and rigidifying the peripheral wall thereof, the upstanding peripheral flange forming the protrusion being provided with a peripheral radial outwardly extending shoulder at the lower end thereof for limiting the engagement between the depending flange on the container portion and the upstanding flange on the cover for securely locking the cover to the container portion to serve as a rigid base therefor, said shoulder being of a width equivalent to the width of said depending flange so as to give the appearance of a unitary structure.

3,051,304
PACKAGE OR SIMILAR ARTICLE
Gregory S. Dolgorukov, Ferndale, Mich. (407 Fisher Bldg., Detroit, Mich.)
Filed Feb. 29, 1960, Ser. No. 11,622
4 Claims. (Cl. 206—45.33)



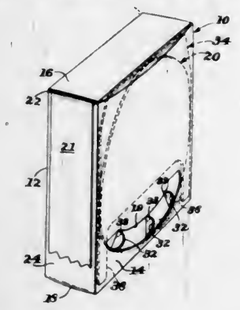
1. A package comprising an elongated sleeve made of transparent plastic film, said package having in its fully completed form one of its ends closed and its opposite end closed through a portion of its width with the remaining portion being open, and with the corner of the package at said opening being cut off on a slant; a T-square, having a head and a blade with one end of said blade being secured to the head and the other end being free, said T-square being fully housed within said package and assuming an inclined position therein with the free end of the blade and one end of the head being in contact with the side of the package on the closed side of the partially closed end thereof, with the other end of the head being in close proximity to the opposite side of the package, and a sealed spot provided near the bottom of the package under the opening of the upper end thereof at such a location as to be contacted by one end of the head to tilt the T-square into an inclined position in the package and to bring the free end of the blade against the closed portion of said partially closed end.

3,051,305
CIGARETTE CARTON
James A. Houle, Havertown, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 4, 1960, Ser. No. 26,858
2 Claims. (Cl. 206—45.34)



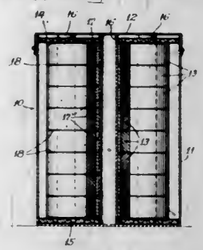
1. A cigarette display carton comprising a single piece of paperboard cut, folded and secured to provide a bottom panel in the form of an elongated rectangle, a plurality of cigarette packages standing upright on said bottom panel, said packages being arranged in two side-by-side rows with the side edges of adjacent packages in each row touching one another and the bottom of said plurality of packages being coextensive with said bottom panel, said bottom panel being formed of two pieces of paperboard which overlap throughout the longitudinal extent of said panel, adhesive means detachably securing together the overlapping portions of said panel, side panels integral with the long sides of said bottom panel and extending the full length of said bottom panel, said side panels snugly engaging the lower portions of the cigarette packages and having a height substantially less than the height of the cigarette packages, end panels extending between said side panels, said end panels extending substantially the full height of said packages, a flexible transparent packaging film wrapped tightly around the plurality of packages, the end panels and the side panels, and means securing said film to said side panels near the bottom edges of said side panels for substantially the full length thereof, said adhesive means permitting the opening of the carton without damage to the film or the paperboard.

3,051,306
PACKAGE FOR DISPENSING RIBBON
John J. Lowe and Gerald D. Thomas, South Hill, Va., assignors to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Jan. 12, 1960, Ser. No. 2,044
2 Claims. (Cl. 206—52)



1. A package for displaying and dispensing ribbon comprising:
(1) container means having:
(*a*) A pair of opposite sidewalls, one of said sidewalls having an arcuate slot therein, and
(*b*) a ribbon dispensing opening;
(2) a spindle supporting member disposed between said container sidewalls adjacent said arcuate slot and having a cooperatively aligned cutout portion therein;
(3) ribbon dispensing means including:
(*a*) A spindle joined to said supporting member,
(*b*) a disk member joined to said spindle and positioned adjacent said supporting member cutout portion and of a smaller size than said container sidewalls and freely rotatable with respect to said container sidewalls
(*c*) means joined to said disk member for carrying the ribbon and rotatable therewith,
(*d*) a plurality of circumferentially spaced apart apertures in said disk member extending substantially the radial ribbon carrying area thereof in alignment with said cutout portion and arcuate slot to provide a visual indication of the quantity of ribbon carried by said ribbon carrying means as viewed from said arcuate slot, and whereby ribbon may be dispensed upon manual rotation of said disk member.

3,051,307
ADHESIVE TAPE PACKAGE
Raymond M. Hoey and George Anton Kaiser, Chicago, Ill., assignors to The Kendall Company, Boston, Mass., a corporation of Massachusetts
Filed Nov. 7, 1960, Ser. No. 67,560
8 Claims. (Cl. 206—65)



1. A composite package of pressure-sensitive adhesive tape rolls comprising an outer container including a base, upstanding walls from said base forming an open compartment, and a removable cover closing said compartment, and contents disposed within said compartment including upper and lower separated spacer-like discs parallel to said base, the outermost points on the peripheries of said discs delineating an area substantially the cross-sectional area of the container opening and fitting loosely therein, a plurality of hollow-cored pressure-sensitive adhesive tape rolls between said discs and a plurality of preformed parallel substantially rigid spindles each slidably projecting through aligned holes in said discs and through the cores of a number of said rolls, said spindles being free of attached extending projections not freely passable in the extended position through the cores of said rolls and extending substantially from base to cover of each of said containers when closed, said spindles constraining the rolls thereon from contact with rolls on adjacent spindles and with the upstanding walls of said container.

3,051,308
COIN BOX
George C. Estrem, Slayton, Minn.
Filed Aug. 2, 1960, Ser. No. 47,033
1 Claim. (Cl. 206—.83)

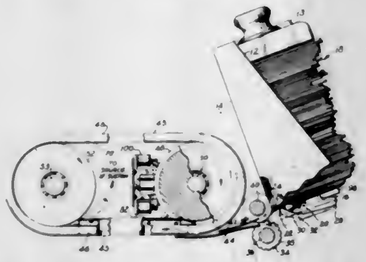
A coin box comprising a body having side and end walls, the lower edges of which form a supporting base, an integral bottom wall upwardly offset within said side and end walls and inclined from one side wall to the other, said bottom wall being provided with a series of

parallel corrugations of substantially uniform wall thickness and of graduated depth and contour, forming inclined coin receiving channels to accommodate coins of varying denominations and circumference, said body being tapered in one direction to conform to the graduated depth of said channels and in the other direction to conform to the elevation of said channels, a cover for



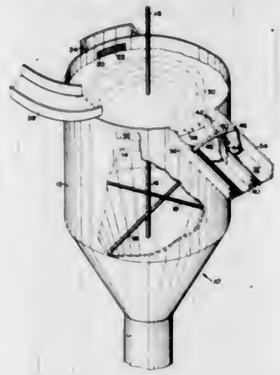
said body, and a pair of spaced legs projecting downwardly respectively from the underside of adjacent corrugations of said bottom wall and spaced inwardly from the adjacent side wall to receive a coin in edgewise position with a portion of its periphery engaging between said adjacent corrugations, whereby said body is further elevated at that side.

3,051,309
DOCUMENT SORTER
Ward Leathers, Massapequa Park, N.Y., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 3, 1958, Ser. No. 706,949
7 Claims. (Cl. 209—72)



1. In a device adapted to sort a stack of intermixed documents of various sizes into groups bearing related information, a source of suction, a document carrier comprising a flexible endless belt having a front surface and a rear surface, a first plurality of circular cutouts extending partially through said belt from the front surface and arranged one behind another in a row around said belt each to form a closed chamber when covered by a document, a second plurality of circular cutouts extending partially through said belt from the front surface and arranged one behind another in a row around said belt each to form a chamber when covered by a document, a first plurality of small diameter open suction restrictive conducting passageways each coupling a circular cutout of said first plurality of circular cutouts to the rear surface of said belt, a second plurality of small diameter open suction restrictive conducting passageways each coupling a circular cutout of said second plurality of circular cutouts to the rear surface of said belt, a primary suction conducting channel fed by said source of suction and slidably coupled to the rear surface of said belt, a secondary suction conducting channel interposed between said primary suction conducting channel and the rear surface of said belt and aligned to couple a group of said first plurality of small diameter open suction restrictive conducting passageways to said primary suction conducting channel, another secondary suction conducting channel interposed between said primary suction conducting channel and the rear surface of said belt and aligned to couple a group of said second plurality of small diameter open suction restrictive conducting passageways to said primary suction conducting channel, drive means coupled to drive said belt to advance said first and second plurality of small diameter open suction restrictive conducting passageways past said secondary suction conducting channels, a document pickoff channel positioned between said first and second plurality of circular cutouts on said belt, a pickoff finger, and orienting means responsive to information borne by said documents coupled to position an end of said pickoff finger within said document pickoff channel to remove a document from said belt.

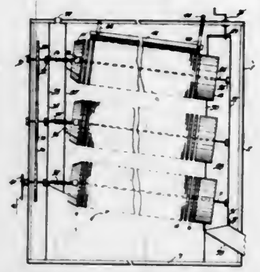
3,051,310
APPARATUS FOR AND METHOD OF SEGREGATING MATERIAL BY SPECIFIC GRAVITY
Jay Howard Gwynne, Morgantown, W. Va., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 2, 1961, Ser. No. 86,799
6 Claims. (Cl. 209—172.5)



1. A heavy media separator comprising a vessel containing an inventory heavy media, said vessel formed so that said inventory of heavy media has a circular upper surface, means to introduce material having a mixture of specific gravities onto said media upper surface, means to cause low specific gravity material having a specific gravity lower than said heavy media to flow in a circumferential pattern on said media upper surface, an overflow launder extending radially from said vessel adjacent said media upper surface, said overflow launder having one end connected to the periphery of said vessel at such a height as to enable said low specific gravity particles to overflow said vessel periphery into said launder, said launder having an upstream side and a downstream side when viewed in relation to said low specific gravity material circumferential flow pattern, and dividing means positioned in said launder and extending the length of said launder to segregate material entering said launder adjacent said upstream side from material entering said launder adjacent said downstream side so that said material may be removed from said launder in segregated quantities, said dividing means including a pivoted splitter and a clamping means to position said pivoted splitter at varying distances between said launder upstream and downstream sides to permit selection of a desired portion of said segregated material overflowing said vessel periphery.

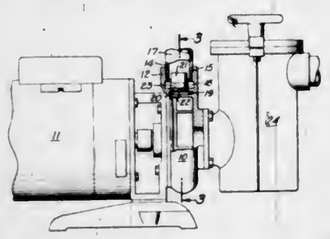
3,051,311
ROTATING RING GRAIN CLEANER
Martin Dettling, P.O. Box 1, Clairmont, Alberta, Canada
Filed Mar. 20, 1959, Ser. No. 800,749
8 Claims. (Cl. 209—292)

1. A grain cleaner comprising in combination a supporting framework, a plurality of grain cleaning elements supported for rotation within said framework and superposed one above the other, said elements inclining downwardly from one side of said framework to the other, means to rotate said elements, each of said elements including a central shaft, a set of spiders on each end of said shaft, and horizontal ring holding bars extending between the extremities of the set of spiders on one end of said shaft and the extremities of the set of spiders on the other end of said shaft, a plurality of screening rings mounted around said ring holding bars, the end rings being secured to said bars, the remaining rings being free



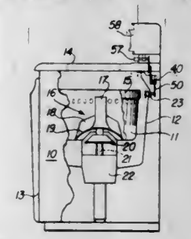
on said bars, means to adjust the gaps between adjacent rings within limits, means to feed grain to be cleaned into the upper ends of said elements, and means to collect clean grain from the lower ends of said elements, said means to adjust the gaps between adjacent rings comprising a cross shaft supported from each of said ring holding bars externally of said rings, a plurality of tapered segments mounted for endwise movement to said cross shaft and entering between each pair of adjacent rings whereby partial rotation of said cross shaft forces said segments between said rings.

3,051,312
PUMP AND FILTER SYSTEM FOR SWIMMING POOLS
Thorstein Arge, 165 S. Fair Oaks Ave., Pasadena, Calif.
Filed Dec. 7, 1959, Ser. No. 857,711
3 Claims. (Cl. 210—137)



2. In a pump and filter system for swimming pools, a pump having a cylindrical hollow collar forming a water outlet, said collar having internal screw threading adapted to removably receive the external screw threading of one end of an outlet pipe, an annular radially inwardly directed flange disposed within said collar and spaced inwardly from said screw threading, said annular flange having internal screw threading of a substantially smaller diameter than the screw threading of said collar, a diatomaceous earth filter connected to the opposite end of said outlet pipe, the rate of flow of water from said pump through said filter being maximum when said filter is clean and being progressively reduced by increased opposition as said filter becomes dirty, means for controlling the rate of water flow through said filter comprising an outlet control member removably mounted within said collar, said outlet control member having at one end thereof external screw threading adapted to engage the internal screw threading of said annular flange, a water flow orifice extending through said outlet control member, said orifice having a large opening at the inner end thereof and a substantially narrower opening at the outer end thereof, the walls of said orifice forming a curve tapering from the inner end of said orifice toward the outer end thereof, said orifice providing maximum opposition to water flow from said pump when said filter is clean and substantially less opposition as said filter becomes dirty, whereby the flow of water through said filter is regulated by said orifice in a manner inverse to the action of said filter upon said water flow.

3,051,313
CONTROL MECHANISM
Daniel E. Stelli, Chicago, Ill., assignor to General Electric Company, a corporation of New York
Filed Aug. 26, 1959, Ser. No. 836,223
3 Claims. (Cl. 210—144)

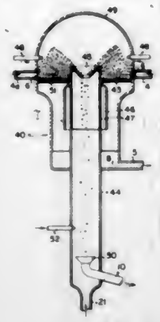


1. In an automatic clothes washing machine having an outer cabinet, a stationary tub mounted within said cabinet, a washing receptacle journalled for gyratory rotation within said tub, and circuit means for controlling the rotation of said receptacle; means for disenabling said circuit on excessively gyratory rotation of said receptacle, comprising a resilient unitary member with a resilient, yieldable knob extending into said tub in an area where said knob is normally positioned so that it will be struck by said receptacle on excessive gyration thereof, said member including a resilient shaft protruding from the knob through said tub, said member further including elements circumjacent said shaft for resiliently securing said member to said tub for linear motion transmission through said tub, said shaft resiliently constructed to deflect and return to its normal position after having been struck by said receptacle, said shaft responsive only to said knob having been struck a substantial blow by said receptacle for transmitting motion therethrough axially along said resilient shaft, and switch means responsive to said axial motion transmission by said shaft for disenabling said circuit control means for thereby stopping the rotation of said receptacle.

3,051,314
TREATING FINELY-DIVIDED SOLIDS
Mervin E. Conn, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Nov. 17, 1959, Ser. No. 853,593
8 Claims. (Cl. 210—189)

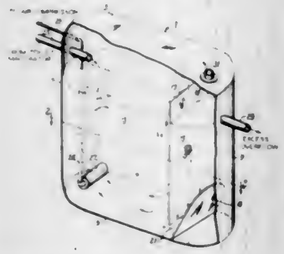
1. An apparatus for continuously treating finely-divided solids in a slurry which comprises a housing having at least one inlet to receive said slurry, a filter medium mounted within said housing extending laterally therein to separate said slurry into finely divided solids and a liquid, said filter medium being adjacent to and below said inlet, a hollow member extending upwardly into said housing through said filter medium, means to introduce a fluid into said hollow member, means to transfer said solids from said filter medium into said hollow member, means to

withdraw said solids from said hollow member, means to withdraw said fluid from said hollow member and means



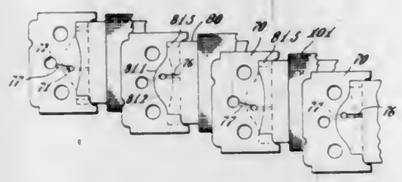
to withdraw said liquid from said housing below said filter medium.

3,051,315
SEWAGE TREATMENT APPARATUS
Carl F. Boester, Arlington, Va.
(404 North St., Lafayette, Ind.)
Filed Aug. 1, 1957, Ser. No. 675,748
1 Claim. (Cl. 210—195)



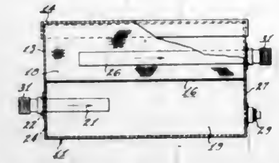
A household sewage treatment apparatus comprising a tank unit having outer end walls spaced widely apart, an upright partition extending across the tank from the top thereof to near the bottom thereof and positioned substantially nearer to one end wall than the other and dividing the tank into a primary aerating compartment and a substantially smaller secondary settling compartment, the primary compartment having a substantially horizontal bottom wall and the secondary compartment having a bottom wall inclined from the outer end wall of the secondary compartment downwardly toward the primary compartment and with its lowermost portion meeting said primary compartment bottom wall along a line in substantial vertical alignment with and spaced below the lower edge of said partition to provide a permanently open restricted passageway of predetermined fixed area between said compartments, there being an inlet for a sewage-water mixture into the upper portion only of said primary compartment, there being an outlet means from the upper portion only of the secondary compartment, means for discharging air bubbles to the primary compartment along the bottom of its outer end wall and upwardly thereof to aerate the sewage-water mixture in the primary compartment and induce a generally vertically circular uniform current of the sewage-water mixture in said primary compartment moving downwardly continuously along said partition and past said passageway and then along the bottom wall of said primary compartment toward said remote outer wall of the latter and thereby effecting a continuous aspiration action on any solid particles settling toward the lowermost part of said secondary compartment bottom wall and adjacent said passageway, and drawing such particles into said primary compartment for exposure to air bubbles therein, thereby effecting aerobic decomposition of all the carbonaceous waste in the single primary compartment while freeing the liquid in the single secondary compartment of solids and maintaining it clear and inoffensive and substantially quiescent except for upward flow of the liquid under gravity pressure to said outlet means in the upper portion of the secondary compartment.

3,051,316
EXCHANGE APPARATUS
Arthur E. MacNeill, Buffalo, N.Y. (% Warren E. Collins, Inc., 555 Huntington Ave., Boston, Mass.)
Filed July 5, 1957, Ser. No. 670,108
22 Claims. (Cl. 210—321)



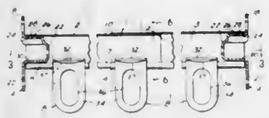
17. A header assembly for dialytic exchange apparatus comprising: two series of individual insert and tube assemblies each including an essentially rectangular plate having a first perforation at one side of a line normal to an edge of the plate and a second perforation on said line, with the first perforation between the second perforation and the edge, having on the first face of the plate a first groove connecting said first perforation and said edge, having on the second face of the plate a second groove connecting said perforations, having two cuts extending from said edge parallel to and at essentially equal distances from said line and oblique to said faces of the plate, and having two tabs extending at opposite corners of said edge and forming with said edge rounded inside corners, and a flat tube having an end with borders extending transversely between its creases, and being by opposite curvatures distanced from each other, said plate being inserted into said end of said tube end such that said outer border extends on said first face of said plate beyond said first perforation, whereas said inner border extends on said first face of said plate beyond said edge but short of said first perforation, and with said tube creases on opposite faces of said plate on the outside of said cuts such that said creases are essentially aligned with the inner edges of said tabs with the creases outside said rounded inside corners; said two series of individual assemblies being stacked such that inversely aligned individual assemblies alternate, with the first grooves of pairs of adjacent plates, one of each series, facing each other across the two inner borders of their tube ends with communication through said first perforations, and with the second grooves of other pairs of adjacent plates, one of each series, facing each other across the two outer borders of their tube ends with communication through said second grooves and second perforations which are open throughout the assembly; and compression plate means on the outside of the stacked individual assemblies for firmly contacting said plates with said tube ends therebetween; whereby the plates and tube ends are tightly sealed to each other and the first grooves provide separate access to respective tubes from each first perforation, the second grooves provide communication between first and all second perforations, the crease portions on respective faces of the plates perfect the seal, and the rounded inside corners of the tabs smoothly direct the flow at the crease regions of the tubing.

3,051,317
STRAINING DEVICE
James A. Muth, 7850 Fond du Lac Road, Rte. 2, Oshkosh, Wis.
Filed Mar. 14, 1960, Ser. No. 14,842
3 Claims. (Cl. 210—409)



1. A device for filtering out impurities in a liquid under pressure comprising a hollow body having an inlet chamber and an outlet chamber disposed therein, a screen of predetermined uniform thickness mounted within said hollow body and separating said inlet and outlet chambers, an inwardly extending inlet conduit mounted in said inlet chamber substantially parallel to said screen on a first wall of said hollow body, and an outlet conduit extending through a second wall of said body oppositely disposed to said first wall and to said inlet conduit and into said outlet chamber in an overlapping and substantially parallel relationship with said inlet conduit, said inlet conduit opening toward said second wall and said outlet conduit opening toward said first wall whereby the fluid from said inlet conduit is forcibly directed toward said second wall and the flow thereof reversed in said housing causing impurities to be dislodged from said screen by the opposite forces of liquid in said compartments.

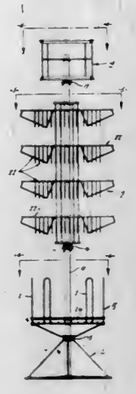
3,051,318
CLOSET BAR ASSEMBLY
Clifford F. Murphy, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed June 6, 1960, Ser. No. 34,156
7 Claims. (Cl. 211—94)



5. A closet bar assembly comprising a pair of roll-formed elongate telescoping sheet metal members, each of said members being integrally formed with a convexly curvilinear crown portion, linear side walls and inwardly disposed, substantially U-shaped convexly arcuate lip portions defining a channel therebetween, the inner member being dimensioned so as to snugly interfit in the outer member and be slidable therein for longitudinal adjustment with the arcuate lip portions of the outer member providing a track and bearing surface for the lip portions of the inner member, the edges of said lip portions of inner and outer members lying in a common horizontal plane to support hanger glides slidably carried in said channel; and means rigidly engaged in the outer ends of said telescoping members for securing the telescoping members to walls and the like.

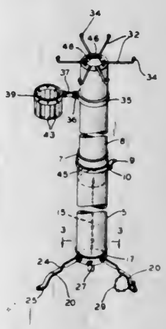
3,051,319
MERCHANDISE DISPLAY STAND
Marcus Glaser, San Francisco, Calif., assignor to Glaser Bros., San Francisco, Calif., a corporation of California
Filed Feb. 8, 1960, Ser. No. 7,176
2 Claims. (Cl. 211—133)

1. A display stand for cigars and the like including a vertical support pole mounted upon a base, an axial support means provided on said pole, and a display assembly mounted upon said support means comprising an arbor mount formed of vertical and parallel rod members spaced radially of said pole and interconnected by axially spaced frames, one of said frames disposed upon said support means, and a container arrangement supported from said rod members and including a plurality of container baskets disposed in abutment one to another about said arbor,



each of said baskets having a back-edge member and a side-edge member, said back-edge members connecting with a rod member and extending parallel to and connecting with the side-edge member of an abutting basket, said baskets having an upwardly inclined bottom structure and an angularly inclined support structure therefor connecting to said back-edge member, said structures consisting of rod members.

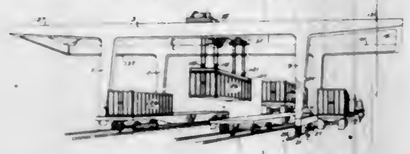
3,051,320
VARI-TABLE
Luther De Loss Barnett, P.O. Box 426, Parrish, Ala.
Filed Dec. 27, 1960, Ser. No. 78,384
4 Claims. (Cl. 211—178)



1. An adjustable folding stand comprising, in combination, a casing, collapsible legs depending from the lower end of the casing, an extension tube slidably received within the casing and adapted to extend upwardly therefrom in an adjustable manner a serrated cam member pivotally mounted to the casing for selectively locking the tube with respect to the casing by frictional engagement therewith, a platform comprising a series of radially extending wires pivotally supported on a ring slidably received within the extension tube, said radially extending wires adapted to be selectively stored in the tube, a container spaced radially of the extension by a link pivotally extending from a band slidably mounted

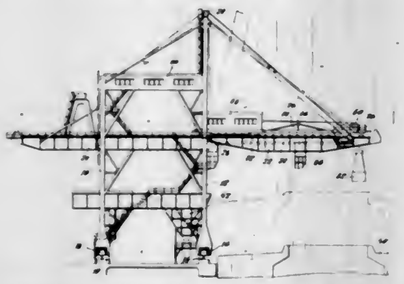
on the tube, said container adapted to be selectively engaged over the top of the extension tube to provide a cap therefor.

3,051,321
GANTRY TYPE CRANE ASSEMBLY
Charles D. Ramsden, Alameda, Calif., assignor to Pacific Coast Engineering Company, Alameda, Calif., a corporation of California
Filed Nov. 23, 1959, Ser. No. 854,862
7 Claims. (Cl. 212—14)



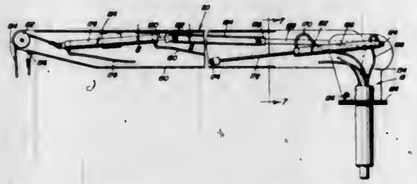
1. A gantry type crane comprising a pair of parallel spaced main girders supported on legs, said main girders extending beyond at least one pair of said legs as cantilever extensions, a cross beam connecting said pair of legs toward the lower ends thereof and a cross beam connecting said main girders at said extended ends to permit of movement of a suspended load beyond said pair of legs; a bridge supported on said main girders for movement therealong, including said cantilever extensions, said bridge having an open space therethrough; and means supported by said bridge for rotatably suspending a load about a vertical axis, said means including a circular track on said bridge in the area of said open space, a trolley assembly having a plurality of wheels on said circular track to enable said assembly to rotate about an axis centrally of said circular track, said trolley assembly including hoist equipment having a plurality of load carrying sheaves disposed at the corners of a rectangle lying symmetrically about said central axis.

3,051,322
SHIP OR BARGE UNLOADERS
Ronald Bellinger, Bristol, England, assignor to Strachan & Henshaw Limited, Bristol, England, a company of Great Britain and Northern Ireland
Filed Mar. 2, 1961, Ser. No. 92,910
Claims priority, application Great Britain Mar. 4, 1960
7 Claims. (Cl. 212—15)



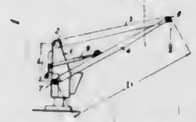
1. A ship unloader comprising, in combination, a mobile structure mounted for movement substantially parallel to the ship being unloaded, a jib pivotally connected to said structure at the front thereof and adapted when in its lowermost and horizontal position to project over the ship being unloaded, a crab mounted for horizontal movement on said structure and the rearwardmost part of said jib, a grab for conveying the material being unloaded, a trolley rigidly coupled to said crab frontwardly of the latter and adapted to travel jointly therewith so as to be at the outermost and front end of said jib when said crab is at the rear end of said jib, a plurality of pulleys mounted on said trolley, mechanism arranged in said crab for operating and hoisting said grab, and a plurality of cables connected to said grab and passing over said pulleys on said trolley and operatively connected to said operating and hoisting mechanism.

3,051,323
BOOM MECHANISM AND CONTROL
Harold L. Kuhlenschmidt, Floyd E. Kuhlenschmidt, Arthur Geiselman, and Arnold Geiselman, all of Elberfeld, Ind., assignors to Elberfeld Manufacturing Co., Inc., Elberfeld, Ind., a corporation of Indiana
Filed Nov. 1, 1960, Ser. No. 66,636
19 Claims. (Cl. 212—35)



1. A self-contained boom assembly adapted to be mounted on a base comprising, mounting frame means, frame stabilizer means pivotally connected to the mounting frame means selectively conditioned for engagement with the ground from a folded position against the frame means, boom pivot means swively mounted by the frame means, tubular boom means pivotally connected to the boom pivot means, extensible boom elevation means operatively connected to the boom means and pivot means and completely enclosed by the boom means and pivot means for all positions of the boom means relative to the pivot means, extensible load pickup means operatively mounted and enclosed within the boom means, load engaging means operatively connected to the load pickup means, selectively operable power means operatively connected to the pivot means, elevation means, load pickup means and stabilizer means and remote control means operatively connected to the power means for constant rotational control of the pivot means, relative to the frame means, and alternative stabilization control of the frame means and position control of the boom means and the load-engaging means.

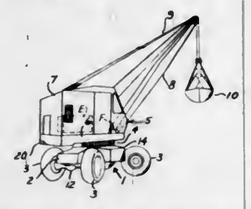
3,051,324
WHIPPING CRANE
Friedrich Pohl, Hamburg, Germany, assignor, by mesne assignments, to Atlas Werke A.G., Bremen, Germany
Filed June 5, 1959, Ser. No. 818,418
Claims priority, application Germany June 6, 1958
6 Claims. (Cl. 212—35)



1. In a crane column structure for a whipping crane: a crane column, guide pulley means carried by the upper end of said crane column, an overhang beam pivoted at one end to the column, and a plurality of bearing means respectively arranged at predetermined different levels of and supported by said column toward the bottom thereof for journalling the said one end of the respective overhang beam with which said crane is to be equipped, the distances of said bearing means from said pulley means

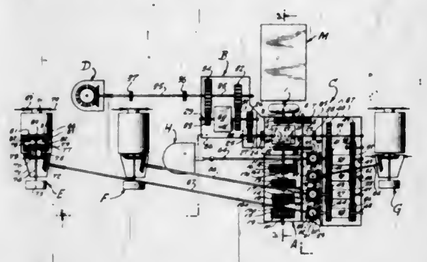
corresponding to the length of the respective overhang beam to be journaled in the said respective bearing means, other pulley means carried by the outer end of the beam, a load cable passing over said guide pulley means and said other pulley means and including a portion dependent at the outer end of the beam to support a load, and other bearing means arranged at predetermined different levels of and supported by said column toward the top thereof for pivotally receiving one end of an actuating piston-cylinder means having its other end pivoted to the respective beam carried by said column.

3,051,325
CRANE
William L. Risto, Amherst, Ohio, assignor to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Filed Feb. 5, 1958, Ser. No. 713,372
5 Claims. (Cl. 212—38)



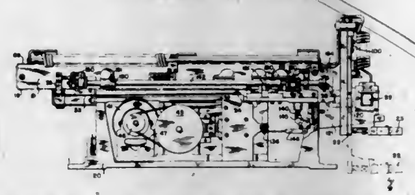
1. In a swinging crane, the combination of a mobile chassis having a chassis frame and ground-engaging propelling means, a turntable on said chassis frame between the ends and sides thereof, a crane base swingably mounted on said turntable about a vertical axis, a crane cab mounted on said base, drive means for said ground-engaging propelling means in said crane cab, a boom having its foot pivotally connected to said base whereby the tip of said boom may be raised or lowered, and fixed counterweights carried on said chassis frame and spaced above the ground with their centers of gravity inward of said propelling means to substantially increase the side stability of said crane with reference to swinging of a load on said boom to either side of said crane.

3,051,326
CRANE DRIVES
Herbert Brandt, Leipzig, Germany, assignor to VEB Getriebewerk Leipzig, Bohlitz-Ehrenberg, Germany
Filed Apr. 29, 1959, Ser. No. 809,788
5 Claims. (Cl. 212—38)



1. In a transportable crane having grab-lift, emptying and holding, pull-in, rotating, and transporting mechanisms, the improvement comprising a main driving engine, a multi-step switching and reversing gear mechanism driven by said main engine and including two separate off-drives adapted to be rotated in either direction and at a predetermined number of torque/speed ratios, clutch means for each of said off-drives to connect and disconnect said off-drives as desired, an auxiliary power gear mechanism connected to one of said off-drives for driving in either direction said transporting mechanism, and crane-operating distributor gear means connected to the other of said off-drives for individually driving in either direction any of said grab-lift, said emptying and holding, said pull-in and said rotating mechanisms independently from the operation of said transporting mechanism.

3,051,327
AUTOMATIC MANIPULATOR APPARATUS
John D. Goodell, Silver Spring, and Torsten N. Tengsater, Takoma Park, Md., and Edwin F. Shelley, New Rochelle, N.Y., assignors to U. S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 14, 1961, Ser. No. 103,053
11 Claims. (Cl. 214—1)

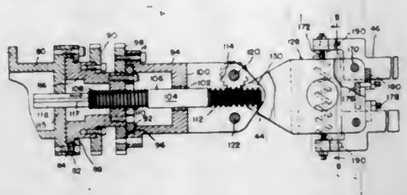


1. Automatic article manipulator apparatus comprising a support base, a carriage arm mounted on said base, said arm being disposed for and movable oppositely in horizontal translation with respect to said base to an extended "out" position and to a retracted "in" position, an elevator carriage mounted on said carriage arm, said carriage being disposed for and movable oppositely in vertical translation with respect to said arm to an "up" position and to a "down" position, article grasping jaws mounted on said vertical elevator carriage, said jaws being adapted to be actuated to an "open" release position and to a "closed" pick-up position, a first yieldable drive means coupled to said horizontally disposed carriage arm for moving said carriage arm from the retracted "in" position to the extended "out" position, a second drive means for elevating said vertical carriage from said "down" position to said "up" position and for moving said horizontal carriage from said extended "out" position to said retracted "in" position, a coupling clutch adapted to connect said second drive means to said carriage arm and to said elevator carriage, latching means adapted to lock said carriage arm at said "in" position and said "out" position, means responsive to movement of said elevator carriage from the "down" position to the "up" position to lock said elevator carriage thereat and unlock said carriage arm, means responsive to movement of said carriage arm to said "in" position or said "out" position to lock said carriage arm thereat and unlock said elevator carriage, electromechanical control means adapted to operatively engage said coupling clutch when said elevator carriage is moved to the "down" position, a first cam means adapted to disengage said coupling clutch when the carriage arm is retracted to the "in" position, and a second cam means adapted to disengage said coupling clutch when the carriage arm is in the locked "in" position and the elevator carriage is moved to the locked "up" position.

3,051,328
AUTOMATIC HANDLING MECHANISM
Joe B. Brown, East Lansing, and Robert E. Place, Lansing, Mich., assignors to Planet Corporation, Lansing, Mich., a corporation of Michigan
Filed Mar. 13, 1957, Ser. No. 645,756
9 Claims. (Cl. 214—1)

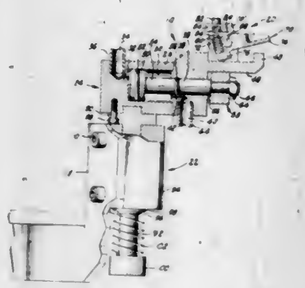
1. Article handling mechanism comprising an adjustable arm, a slide carried by said arm extending parallel

to and movable longitudinally of the arm, a head at one end of said slide comprising a rotary support member connected to said slide for angular adjustment about the longitudinal axis of said arm and a wrist member pivotally connected to said rotary support member for angular adjustment about an axis perpendicular to the longitudinal axis of said arm, a pair of rotary drive motors at the end of said arm opposite said head, first actuating means for



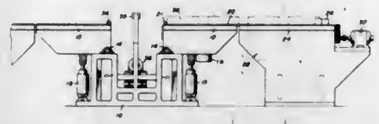
angularly adjusting said support member, means for pivoting said wrist member comprising a rotary gear on said rotary support member, a rotary circular rack having a threaded portion, a nut engaging the threaded portion, means supporting the nut for rotation and against axial movement, means supporting said rack against rotation, and means for rotating said nut to advance said rack to rotate said gear, and transmission means coupling said motors to said actuating means and gear respectively.

3,051,329
ARTICLE SEATING DEVICE
Herbert J. Bloom, Brookville, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,595
3 Claims. (Cl. 214—1)



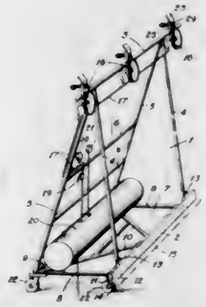
1. An apparatus for seating in a given position a plurality of articles delivered in sequence to a workstation comprising; article seating means having a U-shaped yoke member with upstanding legs, a pivot pin between said legs, a fork-like seating member mounted on said pin, said fork-like member having a first stop and a second stop formed thereon, a bar member spanning and attached to the free ends of said yoke legs, biasing means between the fork-like member and the bar member to bias the fork-like seating member to a non-engaging position wherein said first stop contacts said bar member, said fork-like article seating member being mounted adjacent the work-station for compound movement relative to said given position, means formed to move said article seating means and means to engage said second stop on the fork-like seating member to overcome said bias when said article seating means is moved whereby the fork-like seating member is moved into engagement with said article to provide seating thereof at said given position.

3,051,330
APPARATUS FOR HANDLING WHEEL BLANKS ENTERING AND LEAVING ROLLING MILL
Peter Chacharis, Gary, Ind., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Apr. 14, 1959, Ser. No. 806,321
9 Claims. (Cl. 214—1)



7. A manipulator for handling wheel blanks to and from a wheel mill comprising a base, a pair of spaced tables pivoted side-by-side thereon for uptilting about one edge to opposed spaced parallel position, means for pushing a wheel blank from between said tables when uptilted and a guide slot in each of said tables parallel to said one edge, said slots being positioned to aline when the tables are uptilted and serving to guide the travel of the blank by engagement with the ends of a mandrel inserted through said slots and a hole in the blank.

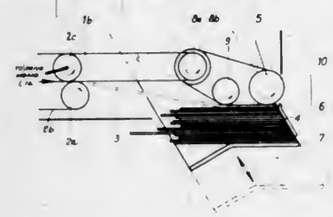
3,051,331
DEVICE FOR HANDLING SHEET MATERIAL
André Schram, Bruges, Belgium, assignor to S. A. Glaverbel, Brussels, Belgium, a Belgian company
Filed Dec. 4, 1959, Ser. No. 857,357
Claims priority, application Belgium Dec. 18, 1958
11 Claims. (Cl. 214—1)



1. A movable hand truck for handling and transporting sheet material, such as sheet or plate glass, comprising a frame, a resting bar mounted on said frame in spaced, horizontal relation above the ground so as to be engaged by the bottom portion of the inner face surface of a sheet of material above the bottom edge thereof when such sheet is carried by said truck, a plurality of sheet supporting vacuum cups mounted on said truck at a substantial distance above said resting bar for supporting a sheet in depending relation against vertical movement, means yieldably supporting said vacuum cups enabling them to so carry such sheet that the weight of the latter will cause such bottom portion of the inner face surface of said sheet to bear against said rest bar, said vacuum cup supporting means being adapted to be moved to advance said vacuum cups forwardly to a position in front of said rest bar and into engagement with such inner face surface of a sheet of material standing vertically on edge before said resting bar and in such engagement enabling said vacuum cups to yield so as to come into proper bearing relation against the upper portion of such inner face surface of the sheet, and to retract said vacuum cups with the sheet of material secured thereto against vertical movement to a position in rear of said resting bar and so that

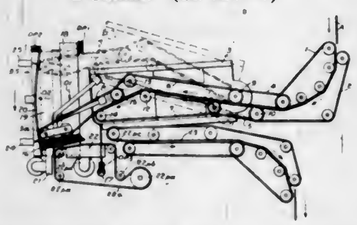
in such retracting movement of said cups, the sheet of material will be lifted and the vacuum cups by the weight of said lifted sheet will yield to enable the bottom portion of such inner face surface to bear against said resting bar, so that in the retracted position of said vacuum cups said sheet will be entirely supported against vertical movement by said vacuum cups and held in upwardly inclined relation by said engagement of said vacuum cups and said resting bar with such inner surface thereof, and means on said truck for providing sufficient vacuum pressure to said vacuum cups to enable them to support the entire weight of a sheet of material against vertical movement.

3,051,332
STACKING DEVICE
Eberhard Richert, Berlin-Steglitz, and Horst Fliegner, Berlin-Lankwitz, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,769
Claims priority, application Germany Dec. 19, 1957
4 Claims. (Cl. 214—7)



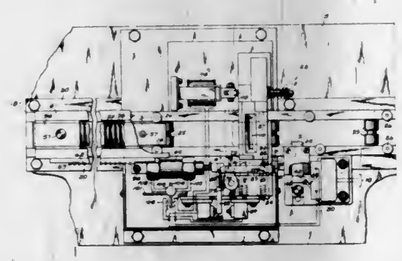
1. An arrangement for stacking flat articles in an edgewise conveying system comprising an edgewise conveying means for conveying flat articles, a stacking belt having a sloped section which intercepts articles delivered from said edgewise conveying system at an obtuse angle which is less than 180° to impart a sideways as well as a forward motion to said articles, said stacking belt having a further section following said sloped section which is shorter than the shortest article to be stacked and substantially parallel to said edgewise conveying means, a stack supporting plate parallel to and urged towards said further section of said stacking belt to allow an arriving article to move therebetween, a stop member disposed at an acute angle to said supporting plate to stop an article between said stacking belt and said supporting plate so that a stack of such articles may be formed.

3,051,333
STORAGE APPARATUS FOR ARTICLE SORTING SYSTEM
Eberhard Richert, Berlin-Steglitz, and Horst Fliegner, Berlin-Lankwitz, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,613
Claims priority, application Germany July 31, 1958
2 Claims. (Cl. 214—7)



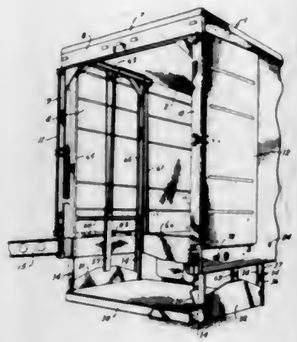
1. Equipment for use in edgewise conveying systems employed to deliver flat articles continuously to a receiving station comprising a storer adapted to receive articles at random times, outgoing edgewise conveyor means in communication with a portion of said storer to remove stored articles therefrom periodically, said storer comprising means for stacking said articles on edge, means for urging said articles towards said outgoing edgewise conveyor means and means for singly delivering said articles from the stack to said outgoing conveyor means, said means for stacking said articles comprising a pivoted conveyor belt system, said pivoted conveyor system including a pivoted arm having an axis corresponding to the axis of pivoting of said belt system, a plurality of belt rollers mounted on said arm for cooperation with said belt system and means for normally urging said pivoted arm toward said outgoing edgewise conveyor means, said equipment further comprising a curved stop wall having a radius equal to the length of the run of said pivoted belt system disposed to cooperate with said pivoted conveyor system, a first endless belt extending the length of said storer and movable in a direction substantially parallel to the direction of said means for singly delivering said articles and in a direction toward said curved stop wall, a second endless belt extending the length of said storer and movable in a direction substantially perpendicular to said first belt system said direction being such as to urge said articles towards said means for delivering said articles.

3,051,334
APPARATUS FOR LOADING PLATING RACKS
George E. Algatt, Allentown, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 7, 1959, Ser. No. 825,543
4 Claims. (Cl. 214—8.5)



1. An apparatus for loading racks having connectable companion members with flexible masking surfaces comprising a conveyor to support certain members of the racks, guides on the conveyor to limit movement of the members in a given path, a hopper for articles to be plated held in stacked formation therein and having an exit opening located at a feeding station above the conveyor, a spacing element removably mounted at a given position on the masking surface of a rack member disposed on the conveyor, lateral partitions of the element dividing the masking surface of the rack member into article supporting areas and cooperating to form guide passageways to the supporting areas for the articles, means to move the element with its rack member on the conveyor relative to the exit opening of the hopper to receive the articles singly therefrom, an ejector for the articles mounted at the exit end of the hopper, means operable to actuate the ejector to cause an article to drop onto each of said areas, a reciprocable ram mounted above the conveyor at a position spaced from the hopper, and latches mounted at spaced positions on the ram to engage the ends of the spacing element on the down stroke and remove the element from the rack member free of disturbance to the articles.

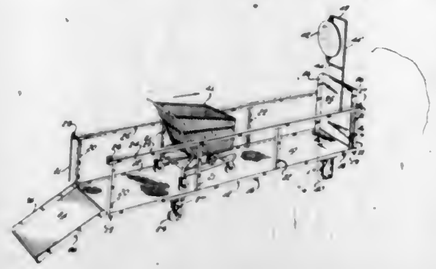
3,051,335
TRAILER ELEVATOR
Percy H. Bartlett, Riverside, Ill., assignor to Bartlett Trailer Corporation, Chicago, Ill., a corporation of Illinois
Filed July 15, 1959, Ser. No. 827,296
2 Claims. (Cl. 214—75)



1. A vehicle comprising a floor, a pair of spaced side walls uprising from opposite longitudinal edges of said floor, a roof joining said side walls at their upper edges, said side walls and roof each extending an equal distance beyond one end of said floor, ground contacting members positioned beneath said floor and supporting said floor, side walls and roof above the ground, a pair of spaced parallel guide rails mounted on the inner surfaces of said side wall extensions, each of said guide rails extending from a point beneath the upper surface of said floor to a point adjacent said roof, a support member bridging the upper ends of each said pair of rails immediately beneath said roof, a pulley assembly mounted on each of said support members, a generally rectilinear platform having a dimension substantially equal to the width of said floor and another dimension substantially equal to the extension of said side walls and said roof, a frame assembly upstanding from each of the opposite ends of said platform, each said frame assembly being slidably mounted in one of said pairs of rails, a second pulley assembly mounted on an upper portion of each of said frame assemblies, a winch and means for operating it mounted beneath said floor, a cable wound about said pulley assemblies on each of said support members and each of said frame assemblies, each of said cables passing through said floor and about said winch, said frame assemblies having a height substantially less than the height of said side wall extensions whereby said platform may be moved between a ground-contact position and a level substantially above the level of said floor.

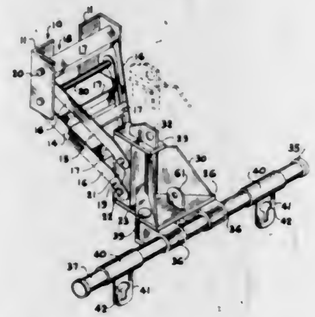
3,051,336
VEHICLE STORAGE AND TRANSPORTING MEANS
Benjamin Felsten, Philadelphia, Pa., assignor to Food Fair Stores, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 4, 1960, Ser. No. 6,784
6 Claims. (Cl. 214—85)

1. A storage vehicle for wheeled conveyances comprising a substantially rectangular platform, upstanding lateral restraining means mounted to said platform and extending along the sides thereof, a ramp-tailgate pivotally mounted to said platform at each of the ends thereof to move upwardly to close said vehicle and downwardly to permit wheeled conveyances to transit said respective ramp-tailgate wheel means mounted to the underside of said platform between a center and a first end thereof upon which the same may be transported, and



skid-bracket means mounted between the center and the other end of the platform.

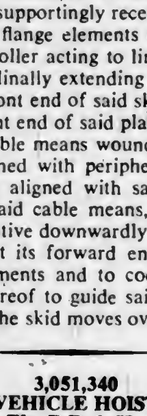
3,051,337
AUTOMOBILE TOWING DEVICE
Arthur W. Nelson, 5903 Preston Court, Brooklyn, N.Y.
Filed July 1, 1958, Ser. No. 745,976
3 Claims. (Cl. 214—86)



1. A towing device including support means for rigid attachment in the rear of a towing vehicle, a socket for disengageably retaining a towing accessory in operative position between the towing and a towed vehicle, said socket comprising a pair of parallel plates fixedly secured to each other in vertically spaced relation to thereby define a socket having planar top and bottom walls, a parallelogram linkage arrangement interconnecting said socket and said support whereby said socket is maintained in horizontal disposition, in combination with a towing accessory adapted to be mounted in said socket, said towing accessory including a boss extending therefrom, said boss being adapted to be received within said socket space and being provided with planar top and bottom walls for abutment with the planar top and bottom walls of said socket, means for disengageably locking said boss in position within the socket.

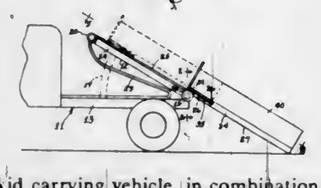
3,051,338
HAND TRUCK ASSEMBLY
Thomas W. Safford, Santa Clara, Calif., assignor to Arcoa, Inc., Portland, Oreg., a corporation of Oregon
Filed June 19, 1961, Ser. No. 117,909
5 Claims. (Cl. 214—374)

1. In a hand truck assembly of the type embodying a frame support for articles to be trucked, an article fastening means comprising a crank shaft embodying opposed offset portions and a handle, said shaft being rotatably supported in said frame, a first strap means secured to one of said offset portions and including a fastener at its free end, a second strap means secured at one end to another of said offset portions and having its free



end extensible about said frame and into said fastener of said first strap means.

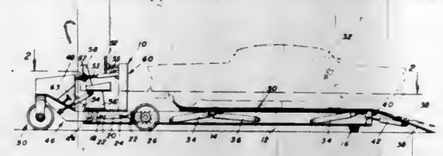
3,051,339
LOADING AND UNLOADING EQUIPMENT FOR A MOTOR TRUCK
Mikko Terho, Naantali, Finland
Filed Dec. 30, 1957, Ser. No. 705,997
5 Claims. (Cl. 214—505)



1. In a skid carrying vehicle, in combination, a vehicle body having a rear end, a pivotally, supported platform mounted on said vehicle body turnable about a transverse axis extending along the rear end of said vehicle body, said platform having a top face, a load carrying skid arranged on said top face of said platform and movable in the axial direction of said vehicle so that when the front end of the platform is raised said skid is slidable downwardly in the rearward direction of said vehicle, a supporting roller rotatably mounted on said platform on said transverse axis and supportingly receiving said load carrying skid, respective flange elements on the opposite ends of said supporting roller acting to limit lateral movement of the skid, longitudinally extending cable means secured at one end to the front end of said skid, and winch means mounted on the front end of said platform and having the other end of said cable means wound thereon, said flange elements being formed with peripheral grooves substantially longitudinally aligned with said cable means and located to receive said cable means, and said skid being provided with respective downwardly facing longitudinally grooved elements at its forward end arranged to move over the flange elements and to cooperate with the peripheral grooves thereof to guide said cable means while the forward end of the skid moves over said roller.

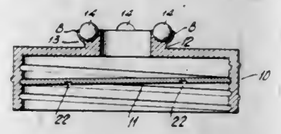
3,051,340
VEHICLE HOIST
Howard L. Ely, R.R. 1, Houston, Ohio
Filed Aug. 10, 1959, Ser. No. 832,795
6 Claims. (Cl. 214—512)

1. A hoist comprising an elongated main frame, a pair of caster wheels mounted on and supporting the forward end of said frame, a pair of laterally spaced driving and braking wheels journaled for rotation about axes fixed relative to said frame and supporting the other end of said frame, power and braking means independently operatively connected to each of said last mentioned wheels, a platform carried by said frame adapted to



support a load, and means for raising and lowering said platform, a second frame member having one end pivotally secured to the rear end of said main frame and a dirigible wheel carried by the other end adapted to engage the supporting surface of said hoist, means for raising and lowering said other end of said second frame.

3,051,341
NURSING BOTTLE CAP
Raynor Mead, 39 Marble Hill Ave., New York, N.Y.
Filed July 31, 1959, Ser. No. 830,956
6 Claims. (Cl. 215—11)



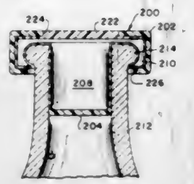
1. In combination with a bottle, a retaining cap removably and adjustably secured to said bottle, said cap having a tubular neck-like extension centrally formed in the top, including a bead-like element surrounding said extension at the top, and having a series of rollers arranged in the top of said extension, and having a revolvable and adjustable and removable circular disc arranged between said bottle and said cap, said disc having a life-like or legendary figure handle extending up through said cap, and including an arrangement of figures extending down from said disc and into said bottle, to perform in various ways to amuse an infant, by adjusting said disc with said handle.

3,051,342
BOTTLE CAP SEAL
Juan Garcia Paniagua, Tepeyac 121, Col. Leon Moderno, Leon, Guanajuato, Mexico
Filed Oct. 17, 1961, Ser. No. 145,694
2 Claims. (Cl. 215—40)



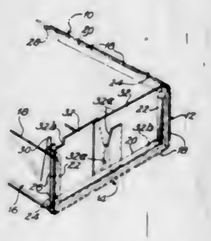
1. In a bottle cap seal, a disc of flexible material having planar surfaces on opposite sides thereof, a series of integral concentric rings on the underside of said seal, an annular rim about the upper side of said seal extending upwardly from the marginal edge thereof, and a plurality of vertically extending resilient fingers carried by the top of said seal in perpendicular relation to the planar surface thereof and disposed within the area defined by said annular rim, said fingers being in the form of truncated cones, and decreasing in length and diameter from the center of the disc toward the periphery.

3,051,343
BOTTLE CLOSURES
Edward I. Pappas, 1521 Argonne Drive, Baltimore, Md.
Filed Nov. 7, 1960, Ser. No. 67,857
3 Claims. (Cl. 215—52)



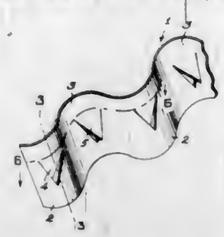
1. In combination, a container having an annular lip defining an opening, and a stopper closure for closing said opening in said container, said closure consisting of a resilient structure of a permeable elastic material defining a top having an annular flange extending outwardly and substantially angularly therefrom at substantially the edge periphery thereof, and deformable insert consisting of an inflatable center plug for closing said opening and a spaced coaxially surrounding inflatable rim defining a perimetral space for said annular lip of said container, said inflatable plug forming a closed chamber with said top.

3,051,344
WIREBOUND CONTAINER END CONSTRUCTION
Joseph McCrea, Rockaway, N.J., assignor to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Filed July 21, 1959, Ser. No. 828,517
4 Claims. (Cl. 217—14)



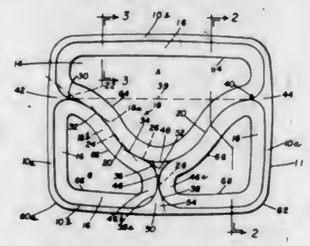
1. In a wirebound container blank of the type having top, bottom, front and back sections each formed of side material with reinforcing cleats at the lateral edges of the container blank, the several sections being foldably secured together by binding wires extending longitudinally of the container blank, an integral container end construction comprising two end-forming sheets of flexible material, one secured to said front section and one secured to said back section, each of said end-forming sheets extending the full width of said container blank and its ends being interposed between the side material and cleats at the lateral edges thereof, each of said sheets being divisible along a line extending longitudinally of the container blank into two end members which are bendable against the inner faces of said cleats when the container blank is folded around into container form so that the two end members on the front section respectively overlap those on the back section to close the ends of the container, and said end members having cooperative engageable elements arranged to be interlocked with those of the overlapping member to secure said members together.

3,051,345
ARTICLE SUPPORT
Stanley F. Flynn, 4228 Columbia Pike, Arlington, Va.
Filed Feb. 24, 1958, Ser. No. 717,111
3 Claims. (Cl. 217—34)
(Granted under Title 35, U.S. Code (1952), sec. 266)



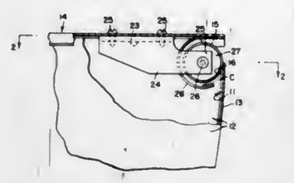
1. A separator strip for packaged articles, such as rows of eggs or other fragile articles, comprising a pre-shaped elongated strip of material combining the characteristics of relative stiffness and flexibility, said strip being of any desired length and having a substantially constant width throughout its length, said strip also being of undulated configuration lengthwise thereof, the undulations providing a series of contiguous alternating oppositely directed pocket portions adapted when in use to cooperate with articles arranged in adjacent rows, and a series of tongues formed from said strip of material, one thereof being disposed in each of said pocket portions, with the free ends of all tongues extending in a common general direction toward one of the longitudinal edges of the separator strip, each of said tongues projecting outwardly beyond the surface of the separator strip from within a pocket portion thereof alternately on opposite faces of said strip whereby packaged articles received in said pockets will be resiliently supported by said tongues.

3,051,346
CURVED DIVIDER TRAY
Merrill A. Grogel, Richmond, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Feb. 19, 1959, Ser. No. 794,274
4 Claims. (Cl. 220—23.8)



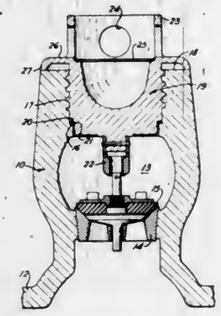
1. A dinner tray and the like comprising a flexible sheet forming an edge surrounding said tray, a bottom wall connected to said edge by a rising wall, an inverted V-ridge divider wall having a relatively sharp ridge at the top and joining said bottom wall at the base to divide said bottom wall into a plurality of compartments, one of said compartments having a substantially triangular configuration defined by said edge and said V-ridge divider wall, said V-ridge divider wall having an arcuate central portion defining the apex of said triangular compartment and part of the pair of legs of said triangular compartment, said V-ridge divider wall having a pair of end portions respectively interconnected to said central portion and reversely curving relative thereto to define a continuous substantially S-shaped configuration for each leg of said triangular compartment whereby each leg deviates substantially from a straight line, said end portions respectively defining at least part of the remainder of said pair of legs of said triangular compartment.

3,051,347
HINGE FOR GRAIN DRILL HOPPERS
Ernst E. Schnell, West Bend, Wis., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Dec. 12, 1960, Ser. No. 75,274
5 Claims. (Cl. 220—31)



1. In a grain drill or the like including a hopper having a cover, side walls and end walls, hinge means connecting the cover with one of the side walls, comprising a hollow hinge sleeve carried by said one side wall and having ends terminating in inwardly spaced relation relative to the associated end walls, a pair of pivot brackets fixed to the cover and each having a pivot carrying portion disposed in the space between the adjacent end of said hinge sleeve and the adjacent end wall, and pivot means disposed in each end of said hinge sleeve and carried by the adjacent portion of the associated pivot bracket.

3,051,348
PUMP-VALVE COVER
William J. Redman, Wilkinsburg, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Mar. 28, 1960, Ser. No. 18,181
2 Claims. (Cl. 220—39)



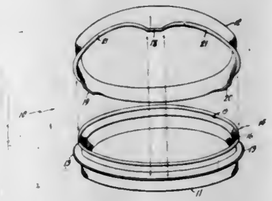
1. In a valve which includes a pot having an internal shoulder, internal screw threads above said shoulder and a flat annular upper face above said threads, and a sealing gasket bearing against said shoulder, the combination with said pot of a cover having external screw threads engaging said internal threads and an external shoulder confronting said internal shoulder and bearing against said gasket, said cover including an integral flange overlying said upper face and spaced therefrom and a lip depending from the circumferential edge of said flange and having a flat bottom face which bears against said upper face to limit the extent to which said gasket is compressed as the cover is tightened, said flange providing a spring action whereby engagement of said faces locks said cover in said pot against accidental loosening.

3,051,349
CLOSURE FOR OIL PAN DRAIN OPENING
William J. Howard, P.O. Box 573, Wilson, N.C.
Filed Apr. 19, 1961, Ser. No. 104,073
5 Claims. (Cl. 220—39)



1. A plug for closing a tapped drain outlet of the kind described comprising an elongate unthreaded body of circular cross-section, said body being tapered substantially throughout its length and provided at its larger end with means for receiving a driving tool for imparting combined axial thrust and torque to said body, said body being formed of tough, rigid material softer than the material defining said outlet, and the surface of said body being permanently deformable to exactly correspond with the threads of said outlet on screwing said body thereinto.

3,051,350
CONTAINER WITH SNAP-OFF COVER
Ralph V. Burdick and Ralph V. Burdick, Jr., both of P.O. Drawer 29, Albany, N.Y.
Filed Feb. 13, 1959, Ser. No. 793,083
1 Claim. (Cl. 220—43)

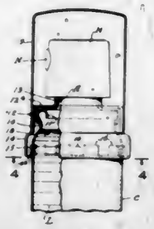


In a substantially cylindrical metal box of the character described comprising a cylindrical container and a cylindrical cover therefor; a peripheral sealing bead formed on the upper edge of said container, an outwardly directed peripheral ledge formed on said container and spaced beneath said sealing bead, a skirt portion on said cover, at least three downwardly extending wings peripherally formed on the skirt of said cover to be integral with said cover, each of said wing portions being equidistantly spaced about the periphery of said skirt, the skirt portions along the periphery between said wing portions being rolled back to form a peripheral skirt reinforcement, said wings being so dimensioned in length that upon the closing of said box said wings each perch on said peripheral ledge to form at least a three point support with said peripheral skirt reinforcement located beneath said sealing bead but vertically spaced therefrom whereby downward pressure on said cover overlying an area between any two of the wings causes one of the wings to act as a fulcrum and to pivotally tip the spaced skirt downwardly against the ledge while the opposite side of the cover tilts upwardly to unseat the cover.

3,051,351
CLOSURE NECK FOR DISPENSING CONTAINERS
Howard B. Finkenzeller, Waterbury, Conn.
Filed Mar. 22, 1961, Ser. No. 97,475
2 Claims. (Cl. 220—67)

1. The combination of a cylindrical container having an open end provided with an inturned annular bead at its upper end of smaller diameter than said container,

with a closure neck having a reduced upper section at the top of said container and provided with a depending cylindrical section having an enlarged bottom flange, a plurality of spaced ears integral with said flange, said ears being curled inwardly and bent upwardly from said flange in spaced relation therefrom and arranged in a



circle having a diameter smaller than the diameter of said container to provide a strong resilient frictional engagement with the exterior of said container when assembled thereon, the thickness of said ears being smaller than the thickness of the depending cylindrical section of said closure neck to facilitate the inward curling and upward bending of said ears.

3,051,352
SHEET MATERIAL DISPENSER
John P. Greene, Denville, N.J., assignor to Parachem Corporation, Newark, N.J., a corporation of New Jersey
Filed July 2, 1959, Ser. No. 824,698
19 Claims. (Cl. 221—26)



1. A dispenser for sheet material comprising a housing for enclosing said material, feeding means in said housing supportingly underlying the free edge portion of and frictionally engaging said material, said housing having a slot in its front wall adjacent the free edge of the material when engaging said feeding means, a combination cover and actuating device for said feeding means closing the top and upper front of and slidable up and down with respect to said housing, and spring means for supporting said combination device in upper position and returning it to that position after actuation.

3,051,353
HAND LABEL DISPENSER
Alfred P. Krueger, Southbury, Conn., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,210
9 Claims. (Cl. 221—73)

1. A hand dispenser for labels carried on a backing strip comprising a frame providing a strip support, a pair of cooperating rotatably mounted feed rolls supported from the frame and between which the strip is gripped to be advanced thereby, an actuating member movably mounted on the frame and having means for manual operation thereof to effect movement of said actuating member in one direction, and operative means of connection between said actuating member and one of said feed rolls, the last-mentioned roll being mounted for movement toward and away from the other of said feed rolls, the actuating member being spring-biased in the



opposite direction toward the normal position thereof in which the movable roll is maintained out of driving relation with the strip through said operative means of connection, the actuating member being operative on manipulation to move said movable roll into a position for driving engagement with the strip and drive the last-mentioned roll, the strip being gripped between the rolls only when the movable roll is in the last-mentioned position thereof.

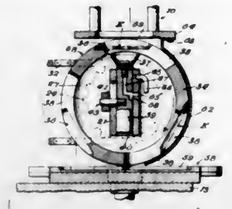
3,051,354
FEEDER MECHANISM
Henry J. Zwald, Seneca Falls, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,927
4 Claims. (Cl. 221—166)

1. In a feeder for eyelets the combination comprising; a hopper, said hopper having a bottom in the form of a rotatable disc; a plurality of eyelet receiving members mounted on said disc and adapted to receive said eyelets in an aligned position; means for containing a mass of eyelets in one portion of the hopper; means for positioning said contained eyelets in said receiving member; means for sequentially rotating and stopping said disc for moving said receiving members from said one portion to a transfer position; eyelet transfer means located adjacent the transfer position for picking up said eyelets from said receiving members and delivering said eyelets to a remote position; and means to operate said transfer means during the stopping of said disc.

3,051,355
FEEDING AND TURN-OVER MECHANISM FOR INVERTED CONTAINER END ELEMENTS
Walter J. Honor, Chicago, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Nov. 13, 1958, Ser. No. 773,596
7 Claims. (Cl. 221—211)

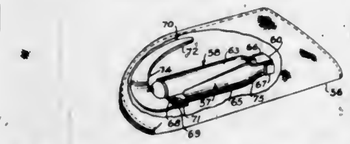
1. In a mechanism in which inverted container end elements are successively pulled downwardly from a stack, turned over and delivered to a transfer means; a drum turret for receiving the end elements from the stack, turning them over and delivering them to the

transfer means, means rotatably mounting said drum turret on a horizontal axis, a suction cup mounted separately from said drum turret for up and down movements within said drum turret and operable to successively pull



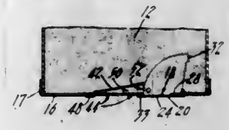
the end elements downwardly from the stack and engage them with said drum turret, said drum turret having openings through which said suction cup is operable, means for driving said turret, and means for actuating said suction cup in timed relation with the rotation of said turret.

3,051,356
CARTRIDGE PIERCING MECHANISM OR THE LIKE
Harold L. Kirby, Los Angeles, Calif., assignor to Airmarine Development Corporation, Los Angeles, Calif., a corporation of California
Original application Aug. 29, 1955, Ser. No. 531,169, now Patent No. 3,031,693, dated May 1, 1962. Divided and this application May 4, 1959, Ser. No. 810,891
3 Claims. (Cl. 222—5)



1. A piercing mechanism for piercing a relatively rigid cylindrical cartridge adapted to contain a gas, comprising:
a body member for mounting the gas cartridge, said body member being U-shaped in longitudinal configuration and having a pair of substantially identical, opposed, substantially parallel side members arcuately shaped in transverse section to receive said cartridge so as to prevent lateral movement of said cartridge while permitting axial movement thereof;
the bight portion of said U-shaped member being provided with two ears which are bent at right angles thereto so as to form with said arcuately shaped side members a square container portion;
a piercing member secured in said bight portion and extending coaxially between said side members in parallelism therewith for piercing a relatively soft plug end portion of said cartridge;
handle means pivotally connected to and between said side members at the ends of said members remote from said bight portion and having a cam portion extending across the end of said cartridge opposite said soft end portion for moving said cartridge axially along said body member towards said piercing member when said handle means is actuated;
said piercing member comprising a tubular body having a tapered portion at one end to form a piercing point and a central opening in said tubular body to emit the gas from the interior of said cartridge after insertion of said piercing member in said soft portion, said tapered portion of said piercing member serving as a wedge to push the soft portion away from the piercing member as it enters into the cartridge, said handle means and said body member being so related as to be manually grippable for piercing said cartridge.

3,051,357
DISPENSING CONTAINER
William Binford Elam, Jersey City, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 24, 1959, Ser. No. 861,872
1 Claim. (Cl. 222—480)

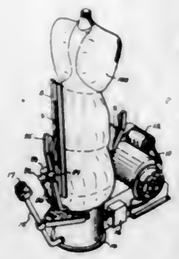


In combination, a dispensing container for a granular product or the like wherein said container is provided with a substantially planar end wall,
said end wall having a pouring aperture provided with a closure therefor,
and said wall having a plurality of unobstructed sifter openings spaced laterally from said pouring aperture,
a baffle having a substantially U-shaped cross-sectional configuration defining a channel and having one end of said channel closed,
and means securing said baffle to the interior of said end wall beneath said sifter openings with the open side of said channel confronting said sifter openings,
said baffle being disposed with its closed channel end remote from said pouring aperture to define with said end wall a pocket opening towards said pouring aperture,
whereby when said container is tilted to dispose said end wall at an angle to the vertical with the pouring aperture below said sifter openings said baffle prevents entry of the granular product into said pocket while permitting dispensing of the product through said pouring aperture upon closure removal,
and when said container is tilted to dispose said end wall in a substantially horizontal plane, said granular product may enter said pocket for dispensing through said sifter openings.

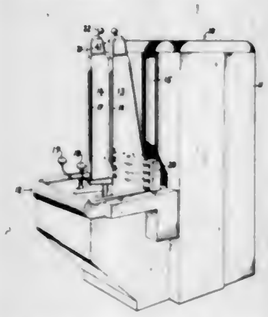
3,051,358
GARMENT FINISHER CLAMP
Frank H. Richterkessing, Louisville, Ky., assignor to W. M. Cissell Manufacturing Company, Louisville, Ky., a corporation of Kentucky
Filed May 7, 1959, Ser. No. 811,668
5 Claims. (Cl. 223—67)

1. In a garment finisher having a rotatable form enveloped by a distendable fluid-pervious bag for supporting a garment fitted thereon, said form including at least one elongated rigid support member having a row of spaced apertures therein permitting fluid within said form to pass outwardly through said support member, said member having spaced clamping surfaces along opposite sides of said row of apertures, a clamp rotatable with said form for holding said garment against said bag and said bag in turn against said member in the apertured region thereof, said clamp comprising an elongated paddle having parallel spaced side surfaces adapted to be pressed against said member along said clamping surfaces thereof and being joined by an imperforate recessed central clamp portion for receiving and diffusing fluid passing through a plurality of said apertures in said member, said bag and said garment, and a lever pivotally mounted upon said form and supporting said clamp, said lever

being resiliently connected to said clamp for selectively adjusting the clamp into a first position in clamped relation to said form and into a second position in unclamped relation thereto.



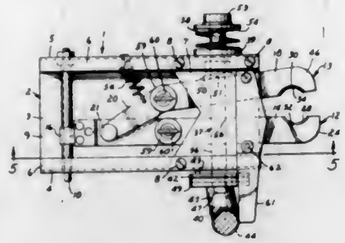
3,051,359
SLEEVE SEAM LOCATER
Wallace F. Gayring, Minoa, N.Y., assignor to Ward Industries Corporation, a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,147
8 Claims. (Cl. 223—73)



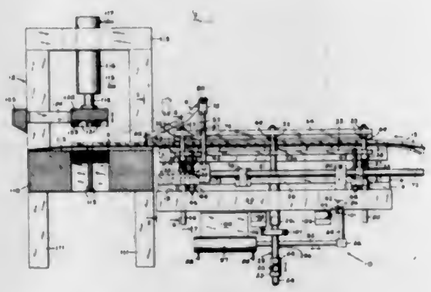
1. A sleeve press comprising a form, an expander carried by said form, a pair of pressing heads coacting with said form, a table supporting said form, said table being mounted for moving said form to a position in contact with said pressing heads and then away from said pressing heads, means for positioning said form at different elevations relative to said pressing heads; said means comprising a second means for projecting a plurality of reference indicators against an article dressed on said form, and separate actuators corresponding to each of the reference indicators.

3,051,360
DEVICE FOR SPLITTING BULBS AND THE LIKE
Oswald R. Ring, Savage, Minn.
Filed Apr. 6, 1961, Ser. No. 101,245
4 Claims. (Cl. 225—96)

1. A device for splitting bulbs and the like, said device comprising a frame structure, a pair of normally spaced cooperating jaws carried by said frame structure, said jaws each comprising knife-equipped cooperating jaw sections which are generally co-planar with the jaw sections of the other jaw, means mounting said jaws for movement between a bulb-receiving position wherein said jaws are disposed in relatively widely spaced relation to one another and a bulb-gripping-and-cutting position wherein said jaws are disposed in relatively closely spaced relation, means for imparting said movement to said jaws between said bulb-receiving position and said bulb-gripping-and-cutting position, means mounting said jaw sections for movement between a closed position wherein said jaw sections are disposed in generally flat face-to-face relationship and an open position wherein said jaw sections are disposed in relatively widely spaced relationship to one another, said movement of said jaw sections between said open and closed positions being in a direction generally normal to the direction of movement of said jaws between said bulb-receiving and bulb-gripping-and-cutting positions, and means for imparting said movement to said jaw sections between said closed position and said open position thereof, the movement of said jaws from said bulb-receiving position thereof to the bulb-gripping-and-cutting position thereof causing the knives of said jaw sections to grip and cut into a bulb received between said jaws and the subsequent movement of said jaw sections to said open position thereof causing splitting of said bulb.

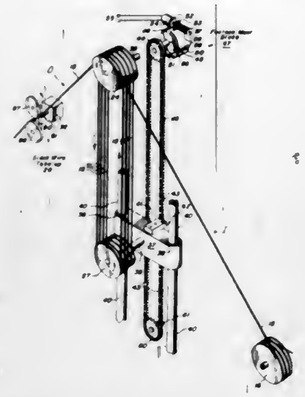


3,051,361
FEEDING APPARATUS AND METHOD
Gary G. Menkel, Jamaica, N.Y., assignor to Design Center, Inc., Long Island City, N.Y., a corporation of New York
Filed Aug. 10, 1959, Ser. No. 832,584
7 Claims. (Cl. 226—6)



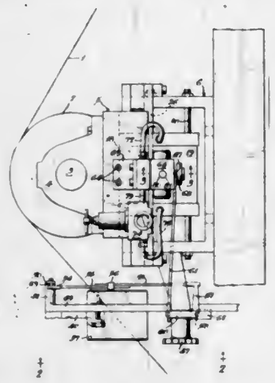
6. A method for advancing sheet material along a feed path to a predetermined work location, comprising clamping along said feed path a web of said sheet material adjacent the longitudinal marginal edges thereof, said web including a plurality of longitudinally spaced raised work pieces formed thereon, moving said web in a direction normal to said feed path to a position adjacent an advancing member, releasing said web to thereby permit movement thereof along said path, and, after said web is released, moving said advancing member in a direction parallel to said feed path, said advancing member engaging one of the work pieces on said web during its movement, to thereby advance said web along said path toward said predetermined work location.

3,051,362
BEAD BUILDING APPARATUS
Donald H. Shook, Niles, Mich., assignor to National-Standard Company, Niles, Mich., a corporation of Delaware
Filed May 5, 1960, Ser. No. 27,134
6 Claims. (Cl. 226—11)



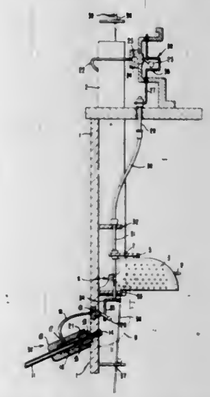
1. Bead building apparatus comprising storage means having elements movable relative to each other for storing tire bead material of varying amount between said elements, means for delivering tire bead material to said storage means, means for withdrawing tire bead material from said storage means at variable rates of speed along an output path, brake means for said storage means for preventing movement of said elements with respect to each other, control means for preventing slack in a tire bead material in said output path, said control means including means for effecting application of said brake means upon breakage or existence of a free end of the tire bead material in said output path.

3,051,363
GUIDE FOR A TRAVELING VERTICAL WEB
Harry W. Brown, Appleton, Wis., assignor to Gilbert & Nash Company, Menasha, Wis., a corporation of Wisconsin
Filed Sept. 8, 1960, Ser. No. 54,995
7 Claims. (Cl. 226—23)



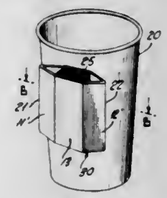
2. In a web guiding device wherein a guide roll in surface contact with a traveling web is shifted in response to the movement of a feeler palm in contact with the lateral edge of the web, the combination of a stationary frame, a carriage movably mounted on said frame for carrying one end of said guide roll, a control valve, means connecting said control valve to a source of air under pressure, a cylinder rigidly mounted on said carriage and movable generally vertically relative to said frame, a piston carried in said cylinder and fixedly mounted relative to said frame, means connecting said control valve to the opposite ends of said cylinder and including means normally producing a differential in air pressure between the opposite ends of said cylinder to nullify the effects of gravity on said carriage, and means for connecting said control valve to said palm to selectively actuate said control valve in response to movement of said palm.

3,051,364
FLUID YARN-TRANSFER DEVICE
Thomas Wilson Barnes, Donelson, Tenn., and Broadus Edward Hill, Jr., Kinston, N.C., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 8, 1961, Ser. No. 115,752
6 Claims. (Cl. 226—97)



1. A yarn-transfer apparatus comprising a tube having discharge and receiving extremities, a cup mounted on said tube near the discharge extremity thereof for swinging movement to and from a position in closing relationship to the bottom of said tube, a means for controlling the movement of said cup attached to said cup, a suction means below said discharge extremity, said suction means opening into said cup when the cup is in closing relationship to the discharge extremity of said tube, a fluid injection means opening into the tube near the receiving extremity thereof, said means being positioned for directing a flow of fluid toward said discharge extremity, a valve connected to said injection means for controlling the flow of fluid thereto, and a valve connected to said suction means for controlling the fluid flow thereto.

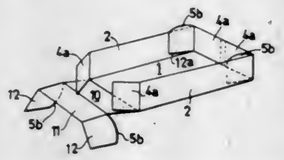
3,051,365
CUP AND CONTAINER HANDLE
Frank M. Sayford, Jr., Litchfield, Conn., assignor to Frank M. Sayford Company, Brooklyn, N.Y., a corporation of Pennsylvania
Filed May 11, 1959, Ser. No. 812,216
12 Claims. (Cl. 229—1.5)



1. A receptacle comprising a bottom and upwardly extending sides and a handle secured to the side of said

receptacle, said handle including a pair of side walls secured to said receptacle and movable from a collapsed position lying against the wall of said receptacle outwardly to a position extending therefrom and a plurality of side wall separating means formed of sheet-like elements extending between the side walls, said separating means being movable from a collapsed position with the sheet-like elements in overlying relationship to an expanded position between said side walls when the latter are moved to said extended position, said separating means being substantially perpendicular to the side walls when the latter are in the extended position and forming with the side walls a rigid gripping element holding the side walls in spaced position upon being grasped.

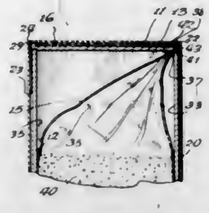
3,051,366
SLIDING BOX
Sixten Arvid Sandström, Jonkoping, Sweden, assignor to Aktiebolaget Siefvert & Fornander, Kalmar, Sweden
Filed Jan. 4, 1961, Ser. No. 80,688
Claims priority, application Sweden Jan. 15, 1960
9 Claims. (Cl. 229—9)



1. A sliding box for matches comprising an outer box having a top panel, a bottom panel and two side walls, and an inner cardboard box, slidably inserted in said outer box and having a bottom; two side walls extending in the sliding direction of the inner box and provided, at their respective ends, with a corner flap, folded so as to extend substantially perpendicularly to said side walls; and two double end walls each having an outer portion contiguous to said bottom and folded substantially 90° with respect thereto, and an integral, inner portion folded substantially 180° upon the outer portion, said inner and outer portions embracing, at each end of the inner box, one pair of said corner flaps, each of said inner end wall portions having at its respective ends an integral end flap folded so as to extend along one adjacent side wall of the inner box; each end flap being displaceable relative to the respective side wall of the inner box and having an upper edge defining a convex, projecting, rounded tongue frictionally bearing against the inner surface of said top panel of the outer box with its central portion and narrowing therefrom in the sliding direction of the inner box towards its both ends, and a lower edge, which is located at a distance above the bottom of the inner box; said inner box consisting of cardboard with its grain prevailing in one direction, coincident with the sliding direction of the inner box and, on account of the folding of the end walls and the end flaps, with that direction in which said tongues project.

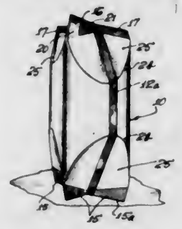
3,051,367
CONTAINER
Clarence M. Einhorn, Atlanta, Ga., assignor, by mesne assignments, to Armour and Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 13, 1960, Ser. No. 62,202
3 Claims. (Cl. 229—14)

1. A container comprising an outer container having a front side, a rear side and a cover rotatably attached to the said rear side; a liner having a front wall, a rear wall, one of said walls having an upper edge, and a top rotatably attached to one of said walls, said top having a lower surface and an edge, and said liner being positioned interior to said outer container so that said front wall is positioned adjacent to said front side; and a flexible container having a lower portion with a top part and an upper portion with a bottom part, said lower portion being positioned interior to said outer container and said



liner, the top part of said lower portion being tightly positioned between said lower surface and said upper edge, and said upper portion being positioned between said cover and said top and the bottom part of said upper portion being tightly positioned between one of said sides and the edge of said top.

3,051,368
DISPENSING CONTAINER
William S. Schneider, Glendale, and Jack French, Los Angeles, Calif.; said French assignor to said Schneider
Filed Nov. 28, 1958, Ser. No. 777,000
11 Claims. (Cl. 229—17)

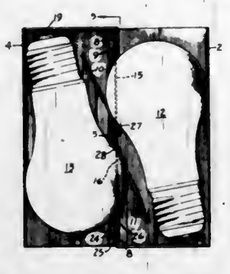


1. A dispensing package comprising:
a quantity of material to be dispensed;
and a tubular container enclosing said material and formed from a section of a continuous web of thin flexible material having one heat sealable face, said tubular container having opposing longitudinal marginal portions of said web joined together to form a longitudinally extending seam with no cut edge of the web exposed to the material within the container, and said container having at each end marginal portions sealed together face-to-face to close the container and to form at one end of the container three radially extending end seals of substantially equal radial length that meet centrally of the container and that have one edge substantially in a common plane perpendicular to the axis of the container to provide a base upon which the package rests.

3,051,369
LAMP PACKAGE
Robert W. Drake, Melrose, and Stuart M. Kleinfelter, Topsfield, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,694
4 Claims. (Cl. 229—39)

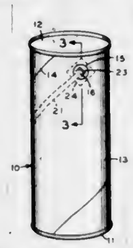
1. A package for an electric lamp or the like, comprising a parallelepiped of cardboard sheet, a partition down the middle of said parallelepiped, said partition having two partially cut-out flaps therein capable of being folded in a direction away from said partition, a flap for

closing an end of one of the compartments formed by the partition, said last-mentioned flap having a tab extend-



ing part way across the end of the other compartment when not folded back, and being foldable back onto said partition and into said cut out portion.

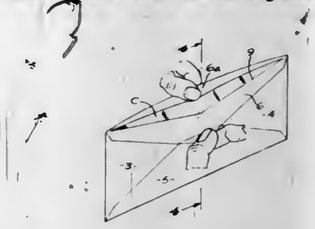
3,051,370
CONTAINER
Donald V. Hanlon, Webster Groves, Mo., assignor to Container Corporation of America, Sefton Fibre Can Company Division, St. Louis, Mo., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,799
1 Claim. (Cl. 229—51)



A container for packaging material which is bodily removed therefrom without mutilation, said container comprising an inner wall ply spirally wound and with its margins forming a butt joint having a pitch to extend substantially completely about the circumference of the container, an outer wall ply spirally wound and overlying the butt joint in said inner wall ply, said wall plies being adhesively bonded throughout the contacting surfaces thereof, a tear tape disposed between said wall plies and pitched to extend substantially completely about the circumference of the container adjacent to said butt joint, said outer wall ply having a cut line registered with said tape and including a cut transversely of said tape thereby forming a pull tab in said outer wall ply including a portion of said tape, and means disposed between said wall plies and underlying said tape in the area adjacent to said pull tab, said means being adhesively bonded to said inner wall ply and covering an area of said inner wall ply inclusive of said cut lines to reinforce the same in the area at said pull tab.

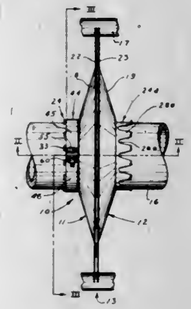
3,051,371
ENVELOPES
Harold R. Day, 11939 Lawndale Drive, Cleveland 30, Ohio
Filed May 19, 1960, Ser. No. 30,300
1 Claim. (Cl. 229—85)

An envelope comprising a front section, a back section and a closure flap integral with said front section and depending from the upper edge thereof for overlapping envelope-closing engagement with portions of said back section, said closure flap being free of openings therein and being provided with adhesive means for envelope-sealing purposes, said closure flap also being provided between said sealing means and its upper edge with a scored or perforated line of weakness extending substantially across the closure flap, at least the middle portion of said line of weakness being spaced from the upper edge of the closure flap to thereby provide above the line of weakness a closure flap space which may be manually held in fixed relation to that portion of the envelope front section which is in alignment with said



closure flap space, and said closure flap also being provided at its lower edge and thus below said line of weakness with a pull tab which is free of adhesive and which can be conveniently grasped, whereby the opening of the envelope, when sealed, along the line of weakness in said closure flap can be readily effected by manually holding the aforesaid closure flap area in fixed relation to that portion of the envelope front section which is in alignment thereby and by manually grasping and pulling the pull tab in a direction away from the front section of the envelope.

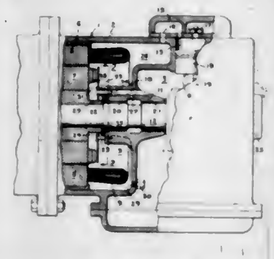
3,051,372
HUB STRUCTURE FOR AN IMPELLER CENTER PLATE AND METHOD FOR MAKING SAME
Wilden A. Rockafield and Joseph E. Brundage, Kalamazoo, Mich., assignors to The Brundage Company, Kalamazoo, Mich., a corporation of Michigan
Filed Apr. 18, 1960, Ser. No. 22,948
1 Claim. (Cl. 230—134)



In a centrifugal impeller having a pair of adjacent, substantially identical center plates and a plurality of blades engaged by the peripheral portions of said center plates, a hub construction for mounting the impeller upon a hollow shaft, comprising: a plurality of uniformly spaced and substantially identical fingers arranged in two sets respectively integral with and extending in opposite axial directions from said center plates, the set of fingers on each center plate having transversely curved, concave inner surfaces substantially arranged to define a cylinder having a diameter approximately equal to the outside diameter of the shaft, said surfaces being snugly engageable with said shaft, the axially extending edges of each finger converging away from said center plate to define

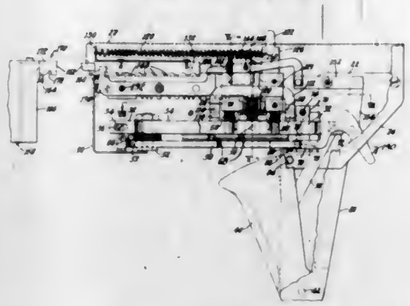
V-shaped slots between adjacent fingers; stop means on the radially outer surface of at least some of said fingers, said stop means being spaced from said center plate; annular clamp means encircling and snugly embracing the radially outer surfaces of each set of fingers between said stop means and said center plate; and adjustment means on said clamp means for reducing the circumference thereof, whereby said axially extending edges of said fingers are urged radially inwardly against the shaft embraced by said fingers to oppose axial movement thereof in said direction of their extension, so that said sets of fingers coact to oppose positively rotational and axial movement of said impeller with respect to the shaft.

3,051,373
ENCLOSED MOTOR COMPRESSOR UNIT
Henri Soumeral, Springfield, Mass., assignor to Worthington Corporation, Hudson, N.J., a corporation of Delaware
Filed Apr. 29, 1960, Ser. No. 25,610
1 Claim. (Cl. 230—206)



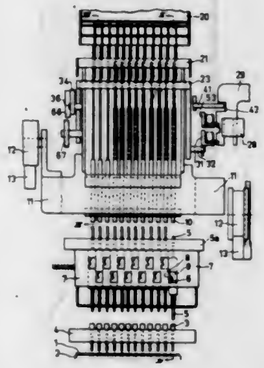
In a compressor of the hermetic type including a casing, partition means for dividing the casing into a driving compartment and a compression compartment, compression means in the compression compartment and driving means having a rotatable portion disposed in the driving compartment, said partition means forming a bearing housing for accommodating a shaft, said shaft journaled in said bearing housing to operatively interconnect said driving means to said compression means, a port through the portion of said partition forming said bearing housing, said port providing communication between said driving compartment and said compression compartment, fan means formed on the rotatable portion of the driving means and in spaced relation with said port to flow fluid from said compression compartment to said driving compartment, a circular baffle about said shaft, means for connecting said circular baffle to the bearing housing and for maintaining said circular baffle in spaced relation with respect to said bearing housing and with said fan means to provide a portion of a housing for said fan means whereby the operative efficiency of said fan means is increased, said last mentioned means comprising a spacer means disposed through the lower portion of said circular baffle and connected to said bracing housing and a tube member connected at one end to the upper portion of said circular baffle and disposed in said port at the other end, a baffle member connected to the shaft between the partition means and the fan means and disposed in spaced relation with said bearing housing to form a space therebetween whereby lubricant leaking out of said bearing housing strikes said baffle member and flows downwardly through said space into the driving compartment, and means in the lower portion of the partition providing operative communication between the driving compartment and the compression compartment whereby lubricant flows from the driving compartment to the compression compartment.

3,051,374
HAND PUNCHES
Karl J. Braun, Springdale, Conn., assignor to A. Kimball Company, Brooklyn, N.Y., a corporation of New York
Filed Aug. 31, 1959, Ser. No. 837,266
4 Claims. (Cl. 234—45)



1. A recording apparatus including a hand-held device presentable to individual units for recording data identifying each individual unit, said device including a plurality of punches for perforating data indications in individual records and settable slides associated with said punches for selecting said punches, means for locating said device in a fixed position with respect to each unit upon presentation thereto, coded identifiication means associated with each unit and insertable into said device upon presentation to said unit, said coded means being operable by the insertion thereof to set said slides to select associated punches according to the data coded in said coded means, a support for positioning a record in accurate registration with said punches, and manually operated means for imparting relative movement between the punches and the support for causing selected punches to perforate the record.

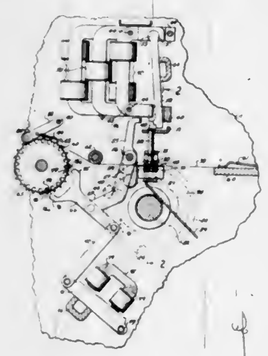
3,051,375
METHOD OF AND A DEVICE FOR PUNCHING STATISTICAL CARDS
Hugo Teodore Hjalmar Axel Bergman, Jonkoping, Sweden, assignor to Jönköpings och Vulcans Tändsticksfabriks Aktiebolag, Jonkoping, Sweden, a Swedish joint-stock company
Filed July 29, 1957, Ser. No. 674,964
Claims priority, application Sweden Aug. 2, 1956
6 Claims. (Cl. 234—91)



1. In a machine for punching data in columns of statistical cards, at least one row of punches for ordinary

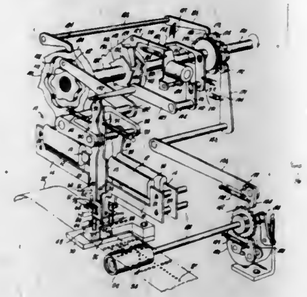
punching as well as overpunching operations in response to input impulses; a die for performing punching and overpunching simultaneously; a support bar extending transversely to said row of punches and carrying a plurality of stop members fastened to said support bar in selected locations; and a carriage movable along said support bar and having an operating mechanism comprising a memory with a row of storage elements, corresponding in number to the number of punches for ordinary punching operations, for storing input impulses, a row of punch actuating members, corresponding in number to the number of punches of one row and each being alignable with its respective punch, a row of switch members for transmitting input impulses, when in one working position, to the member actuating the punches for ordinary punching and, when in a second working position, to the storage elements of the memory, means for shifting said switch members from the position for ordinary punching to the position for overpunching in response to the impact of said shifting means on one of said stop members provided on said support bar, a converting device connected with the memory, for preparing the overpunching operation in response to those storage elements storing overpunching input impulses, and a transmission device for transmitting impulses received by the storage elements of the memory therefrom to the members for actuating the punches for overpunching through said converting device.

3,051,376
PERFORATING APPARATUS
Kenneth F. Oldenburg, Monterey Park, and Fred N. Schwend, El Monte, Calif., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Nov. 17, 1960, Ser. No. 70,049
4 Claims. (Cl. 234—115)



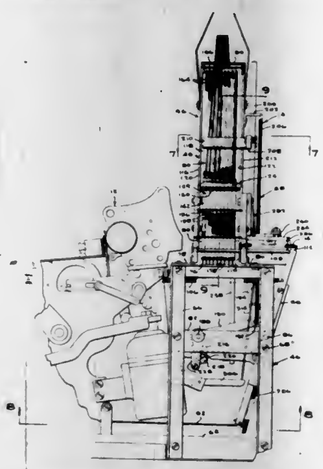
1. Perforating apparatus for a record medium comprising at least one elongate punch of magnetic material, means for guiding said punch for endwise movement, a die element, means for advancing and retracting said die element in the direction of movement of said punch, means for guiding said record medium between said die element and said punch, a punch retractor carried by said die element and effective to move said punch with said die element but out of punching relation with said die element during retraction of said die element, said retractor being magnetized to yieldably maintain said punch out of punching relation with said die element, and means for selectively blocking said punch from endwise movement during advancement of said die element whereby to cause said die element to perforate said record medium over said punch.

3,051,377
PERFORATOR
Wilburn F. Bradbury, Northbrook, Ill., assignor to Smith-Corona Marchant Inc., a corporation of New York
Filed July 11, 1958, Ser. No. 748,019
28 Claims. (Cl. 234—115)



1. In combination in a perforating device; a group of punches; a group of selector levers of magnetic material each of which is operatively coupled with, and is adapted to operate, an associated one of said punches; at least one lever, exclusive of said group of selector levers, operatively coupled with and operable on an associated one of said punches; mechanical means to cyclically cam all said selector levers into a punching position; a series of individual electro-magnets, each of which is associated with a selector lever, for selective energization to magnetically retain, when energized, selected ones of said selector levers in punching position, and operating means connected to all said levers to cyclically operate said at least one lever and associated punch and all selected electro-magnetically retained selector levers and their associated punches through a punching cycle.

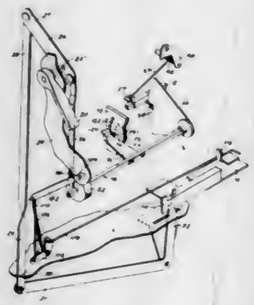
3,051,378
CASH REGISTER
Paul E. Walton, Orlando, Fla., assignor to R. C. Allen Business Machines, Inc., Grand Rapids, Mich.
Filed Apr. 13, 1956, Ser. No. 578,061
10 Claims. (Cl. 235—25)



1. A visual indicating attachment for cash registers or the like comprising a support frame member, visual indicator tab means supported on said frame member and including visual tab assemblies corresponding to the keyboard of a cash register, indexing means on the

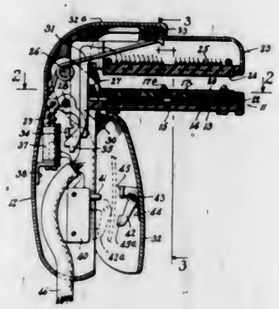
support frame member engageable with the visual tab assemblies and including force transmitting means engageable with an indexing portion of the cash register for simultaneous movement therewith, and actuating means including a portion engageable with reciprocable power means of the cash register, said actuating means including a portion engageable with the indexing means for activation of the same after the indexing means has been indexed for disposing visual tab assemblies in an observation position during each recording operation of the cash register, the indexing means including a transverse shaft journaled between opposite side portions of the frame member, elongated vertically pivotal lever means on an intermediate portion of the shaft, the force transmitting means of said indexing means comprising an elongated element connected at one end to a lower end portion of said lever means and including adjusting means on the other end portion thereof for adjusting the effective length of the elongated element providing pivotal movement of the lever means in proportion to the movement of an indexing portion of the cash register, an elongated indexing rod, means for slidably and rotatably supporting said rod on an upper portion of the frame member on an axis of rotation in alignment with the pivotal path of an upper end portion of the vertically pivotal lever means, means extending between the indexing rod and lever means causing the indexing rod to move a predetermined distance during a recording operation of the cash register, said indexing rod including a lateral abutment portion disposable in indexed alignment wtih a visual tab assembly whereby rotation of said indexing rod activates the visual tab assembly.

3,051,379
PARTY SELECTING MECHANISM FOR VOTING MACHINE
Ransom F. Shoup, Bryn Mawr, and Edward A. Fox, Sr., Morton, Pa., assignors to Shoup Research and Development Corporation, New York, N.Y., a corporation of New York
Filed Nov. 10, 1959, Ser. No. 852,135
1 Claim. (Cl. 235—55)



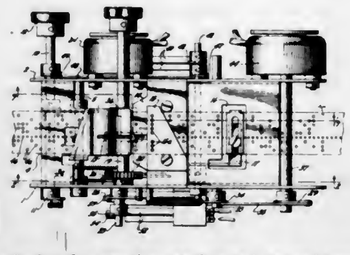
A party selecting mechanism for a voting machine of the type which comprises a plurality of voting spindles rotatable in vote casting direction and vice versa, a curtain movable to a first closed and to a second open position, actuating means movable to a first position for moving said curtain to its first position, and to a second position for moving said curtain to its second position, said party selecting mechanism including a plurality of freely movable slides, means connecting said slides to said spindles, respectively, in such a manner that rotation of said spindles in vote casting direction moves the corresponding slides in one direction and vice versa, a rotatable obstructing plate located adjacent said slides to prevent movement thereof and hence rotation of the corresponding spindles, said obstructing plate having an opening therein large enough for the passage of a slide therethrough, a fixed plate having holes therein which correspond to said slides, a rotatable and laterally movable shaft slidable through both of said plates and operative to rotate said obstructing plate selectively to bring said opening in registration with one of said slides to permit movement thereof and, hence rotation of its corresponding spindle in vote-casting direction, a pin carried by said shaft, said shaft being movable to a first position in which said pin is inserted into one of said holes to prevent rotation of said shaft and said obstructing plate and into a second position in which said pin is withdrawn from said hole to permit rotation of said obstructing plate, an arm carried by, and movable with said actuating means, and a hub carried by, and movable with said shaft, said hub and said arm being so located that, when said shaft is in its second position, said hub obstructs the movement of said arm and, hence, movement of said actuating means to its first position and whereby, when said actuating means is in its first position, said shaft cannot be moved to its second position, a second pivoted arm, means biasing said second arm into the path of movement of said shaft from its first to its second position, and means operable upon movement of said actuating means to its second position for removing said second arm from the path of movement of said shaft to permit movement of said shaft to its second position.

3,051,380
PERFORATED RECORD SENSING DEVICE
Kenneth F. Oldenburg, Monterey Park, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Mar. 3, 1958, Ser. No. 718,617
6 Claims. (Cl. 235—61.11)



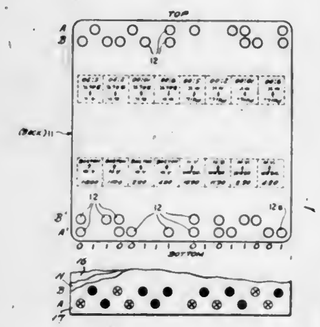
5. A portable sensing device for perforated records comprising a contact plate member, a supporting member, a plurality of helically coiled compression springs attached at one end of each thereof to said supporting member, the opposite end of each of said springs forming a sensing tip, a locating element for a perforated record extending between said members, said locating member having perforations therein aligned with said springs, means pivotally connecting said members and said locating element for movement about a common pivot axis, and spring means for normally maintaining said locating element with a record locating surface thereof above said tips of said springs, said spring means being yieldable upon movement of said members toward each other whereby to permit said pins to project through said perforations.

3,051,381
SENSING DEVICE
Jacob H. Drillick, Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Mar. 10, 1958, Ser. No. 720,322
10 Claims. (Cl. 235—61.11)



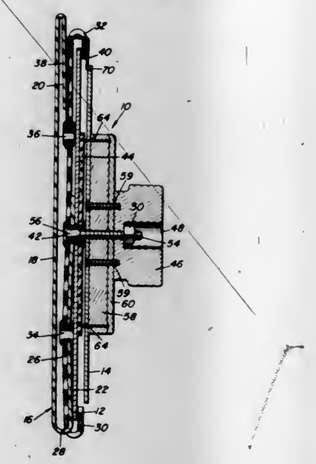
1. In a device for sensing perforated record material; a carrier operable in a given path of movement, a hit or miss member adjustably mounted on said carrier, resilient means for biasing said hit or miss member in a given direction on said carrier, a sensing pin operable upon operation of said carrier to engage a non-perforated area of said record material to restrain said hit or miss member in one adjusted position against the bias of said resilient means and operable upon operation of said carrier to enter a perforation in said record material to permit movement of said member to another adjusted position by said resilient means, and a member movable to control a contact element and located in the path of movement of said hit or miss member when in one of said adjusted positions upon operation of said carrier.

3,051,382
CARD CONTROLLED SWITCH DEVICE
Thomas S. Harris, Jr., Stamford, Conn., assignor to The Teleregister Corporation, Stamford, Conn., a corporation of Delaware
Filed Dec. 9, 1958, Ser. No. 779,138
8 Claims. (Cl. 235—61.11)



1. In combination, a card reader having a plurality of spaced apart rows of card perforation reading pins with the pins in one of said rows offset laterally with respect to the pins in the other of said rows, and a card having a plurality of perforatable code positions along at least one edge thereof in rows corresponding to the number of said rows of said reading pins, said card having perforatable code positions corresponding to the position of said pins and between said pins in each row, and means operated by the pins and controlled by the offset relationship of said reading pins and perforatable code positions on the card in one combination when the card perforations are read by the pins from one side thereof and in a different and independent combination when the card perforations are read by the pins from the other side thereof.

3,051,383
DIAL COMPUTER
William C. Payne, Miami, Fla.
(Box 2423, Marathon Shores, Fla.)
Filed Sept. 16, 1955, Ser. No. 534,659
5 Claims. (Cl. 235—78)

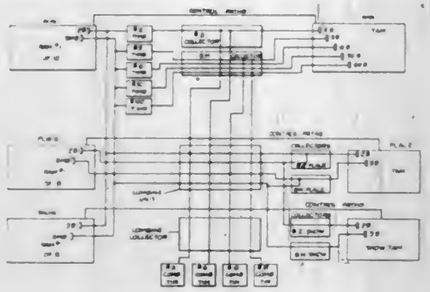


1. In a balance computer for a bank account, a first disk having calibrations readable in dollars, a bracket constituting a base for said disk, a hollow eyelet rotatably fastening said disk to said base, a second disk calibrated identically to the first mentioned disk, means mounting said second disk in superposition to said first disk and for rotation with respect thereto, said mounting means including a spindle provided with a head which is rotatable and slidable in said hollow eyelet, a clutch between said disks which is manually engageable by depressing said second disk on said first disk so that said second disk may be freely rotated to minus and plus positions which represent withdrawals and deposits respectively, and then engaged with the first disk so that rotation of said second disk will result in a corresponding rotation of said first disk in order to total the transactions and show the result by the final position of rotation of said first disk, a reference device attached to said base and operatively connected with said second disk from which to read the results from said first disk, said clutch comprising a member composed of soft material secured to one disc, a sharp rigid member secured to the other disc, one of said clutch members adapted to move when said second disc is depressed so as to cause said sharp member to penetrate the member of soft material.

3,051,384
TOTALISATOR SYSTEM
Le Roy J. Lange, Towson, Md., assignor to American Totalisator Company, Division of Universal Controls, Inc., Towson, Md., a corporation of Maryland
Filed Oct. 9, 1959, Ser. No. 845,395
17 Claims. (Cl. 235—92)

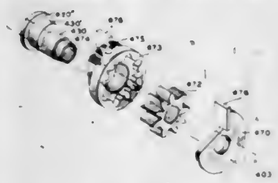
1. In a totalisator system, a total adding machine containing two, five, ten, fifty and one hundred unit acceptance relays; a plurality of ticket issuing machines arranged to issue two unit tickets, a plurality of machines for issuing five unit tickets, a plurality of machines for issuing ten unit tickets, a plurality of machines for issuing fifty unit tickets, and a plurality of machines for issuing

one hundred unit tickets; a first collector having a main and a reflex chain; means responsive to an operation of a two unit ticket machine for operating the collector to establish a connection from the two unit acceptance relay to the operated ticket machine through either of the two collector chains; a second collector having a main and a reflex chain; means responsive to an operation of a five unit ticket machine for operating the second collector to



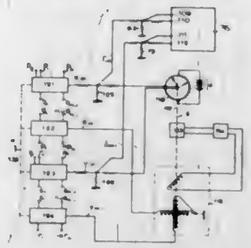
establish a connection from the five unit acceptance relay over the main chain of that collector to the operated ticket machine; and means responsive to an operation of a ticket machine in the group consisting of the ten, the fifty, and the one hundred unit machines for operating the second collector to extend a circuit from the acceptance relay corresponding to the operated ticket machine, over the reflex chain of that collector to the operated ticket machine.

3,051,385
CRAWL CARRY MECHANISM
Douglas C. Durgin, West Orange, and James W. Dodsworth, Mount Tabor, N.J., assignors to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Nov. 7, 1960, Ser. No. 67,675
7 Claims. (Cl. 235—136)



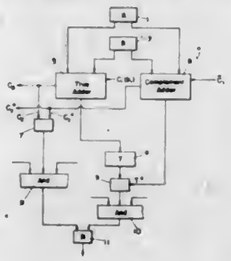
1. In a business machine having a plurality of registers including a series of accumulator wheels, actuator gears therefor, differentially moveable actuators having gear segments adapted for engagement with said actuator gears, crawl carry tens transfer devices between said series of accumulator wheels comprising actuator gears, a concentrically rotatable hub upon which the related actuator gear is rotatably mounted, said hub having an eccentric for rotation therewith, a floating gear constituted by an accumulator wheel of unitary structure rotatably mounted upon said eccentric and having internal teeth meshing with the related actuator gear, the number of teeth of the actuator gear and the accumulator wheel gear having a ratio of nine to ten, and coupling means between the accumulator wheel gear of lower order and the hub of the eccentric related to the accumulator wheel gear of next higher order; and wherein said coupling means comprises within the accumulator wheel a plurality of radial slots, and a coupling member combined with zero stop means secured to said hub for concentric rotation therewith, and whereby the said coupling member is adapted to be engaged selectively with one or the other of said slots in an adjacent lower order accumulator wheel.

3,051,386
MACHINE CONTROL DEVICE
Georges G. Fayard, Paris, France, assignor to Office National d'Etudes et de Recherches Aéronautiques, Chatillon-sous-Bagneux, France, a company of France
Original application Nov. 7, 1955, Ser. No. 545,397. Divided and this application Oct. 10, 1958, Ser. No. 766,472
Claims priority, application France Mar. 28, 1955
2 Claims. (Cl. 235—151)



1. Apparatus for producing continuously varying signals representative of the abscissa and ordinate of a first-closed profile parallel to a second closed profile defined by a set of values representative of the coefficients of a limited number of terms in two Fourier series describing respectively the variation of the abscissa and ordinate along said second profile as a function of a cyclically varying parameter comprising first and second harmonic synthesizers being arranged to develop from signals proportional to said coefficient values and from said parameter output signals proportioned to the values of said abscissa and ordinate series, third and fourth harmonic synthesizers arranged to develop from signals proportional to said coefficient values and from said parameter output signals proportional to the values of the differentials of said abscissa and ordinate series with respect to said parameter and means for adding the output signals of said first and fourth harmonic synthesizers and the output signals of said second and third harmonic synthesizers.

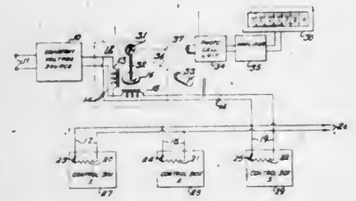
3,051,387
ASYNCHRONOUS ADDER-SUBTRACTOR SYSTEM
James H. Pomerene and John Cocke, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 24, 1959, Ser. No. 794,944
18 Claims. (Cl. 235—153)



1. A multi-stage system suited for adding two binary numbers comprising means for storing signals respectively representative of the digits of said numbers, a first adding means in each stage for combining the signals representing the true values of the digits of the corresponding order and of the input carry from the preceding order stage to produce output signals respectively representing the sum of said true values and the

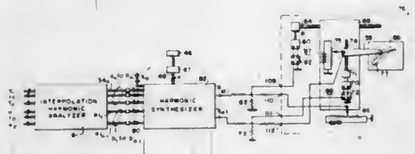
carry for the next higher order stage, register means for storing the sum signals from said first adding means of the stages as the total sum of said binary numbers, a second adding means in each stage for combining signals representing the complement values of the digtis of the corresponding order and the complement of the carry input of that order to produce output signals representing the complement sum of the true digit values of that order and the complement of the carry to the next higher order stage, and means including means in each stage for comparing the outputs of said first adding means of the stage with the outputs of said second adding means of the stage to produce a signal indicating completion of the addition of the true values of said numbers and correctness of the total sum stored in said register means.

3,051,388
METHOD OF MEASURING AND SUMMING TIME FUNCTION DATA
Charles A. Freihofer, 207 Winding Way, Merion Station, Pa.
Filed June 7, 1954, Ser. No. 434,920
2 Claims. (Cl. 235—184)



f. The method of determining man-hours worked by integrating time function data comprising selectively connecting in parallel with one another to a source of constant voltage, a fixed or unitary impedance for each man who is working and removing the impedance as each man finishes working and continuously integrating over a selected period of time the total current drawn.

3,051,389
MACHINE CONTROL
Georges G. Fayard, Paris, France, assignor to Office National d'Etudes et de Recherches Aéronautiques, Chatillon-sous-Bagneux, France, a French body corporate
Filed Nov. 7, 1955, Ser. No. 545,397
Claims priority, application France Nov. 6, 1954
5 Claims. (Cl. 235—180)



1. Apparatus for producing a continuously varying signal representative of one of the coordinates of a closed profile defined with reference to the parametric coordinates of a finite plurality p of points along said profile, said apparatus comprising sine multiplying circuits having shafts and windings and being adapted to compute products of the voltages feeding said windings and the sine of the position angle of said shafts and products of said voltages and the cosine of said position angle, means for feeding said windings with voltages proportional to the p values of one of said coordinate Y_j (j being an integer varying from 1 to p), means for stopping said shafts at angles equal to j times the angular parameter α_1 corresponding to a given coordinate Y_1 whereby the products

$$Y_j \cos(j\alpha_1) \text{ and } Y_1 \sin(j\alpha_1)$$

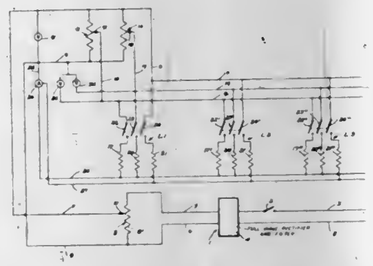
are obtained, means for adding respectively said sine products therebetween and said cosine products therebetween whereby quantities

$$a_i = \sum_{j=1}^{p} Y_j \cos(j\alpha_i)$$

$$b_i = \sum_{j=1}^{p} Y_j \sin(j\alpha_i)$$

are obtained, said quantities being the coefficients of the terms out to the order $p/2$ of a Fourier series describing the values of said one coordinate along said curve as a function of said parameter, and a harmonic synthesizer adapted to develop from said coefficients and from a continuously varying signal representative of said parameter a signal representative of the value of said coordinate for a continuous range of values of said parameter.

3,051,390
APPARATUS FOR ANALYZING VOLUME OF GAS IN GAS PIPE LINES
Harlan A. Larberg, Kansas City, Mo., assignor to Panhandle Eastern Pipeline Company, Kansas City, Mo., a corporation of Delaware
Filed May 1, 1958, Ser. No. 732,352
4 Claims. (Cl. 235—185)

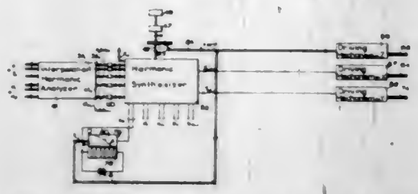


1. In an apparatus for determining the line pack in gas flow line sections at selected input and output pressures comprising, an electric circuit having connected conductors, meters and resistances arranged to simulate pressure and flow conditions in the flow line section in which the pack is to be determined, a power source connected to said circuit, means in the circuit for adjusting the voltage applied to said circuit, first and second voltage dividers in said circuit, first and second voltmeters connected across the output of the first and second voltage dividers respectively to indicate the voltage of said respective outputs, said voltmeters each being calibrated in pressure in pounds per square inch whereby said meters each provide a reading in pressure proportionate to the voltage output of the respective voltage dividers, first, second and third resistances, means connecting the first and second resistances to the output of the voltage dividers, means connecting the third resistance in the circuit whereby said voltage applied to the circuit is applied thereto, and a differential ammeter calibrated in millions of cubic feet and in the circuit between the constant voltage source and the first, second and third resistances to measure the sum of the currents from the first and second resistances less the current from the third resistance whereby the reading on the differential ammeter corresponds to the volume of the gas in said flow line section.

3,051,391
MACHINE CONTROL

Georges G. Fayard, Paris, France, assignor to Office National d'Etudes et de Recherches Aeronautiques, Chatillon-sous-Bagneux, France, a corporation of France

Filed Feb. 25, 1957, Ser. No. 642,255
Claims priority, application France Nov. 6, 1954
4 Claims. (Cl. 235—197)



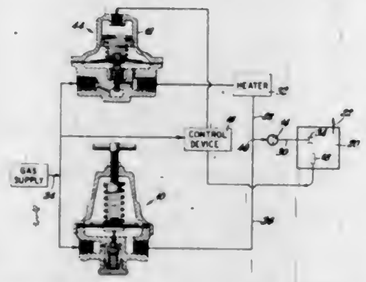
1. Control unit for creating desired values for machining a workpiece in three dimensions according to a geometric value known from the developments of its coordinates $X(\alpha,\beta)$, $Y(\alpha,\beta)$, $Z(\alpha,\beta)$ in a three rectangular axis reference system with respect to first and second continuously varying parameters β and α, in the form of finite number secondary coefficient Fourier series developed as a function of the second parameter α, said secondary coefficients being themselves developed in the form of finite-number constant primary-coefficient Fourier series developed as a function of the first parameter β, said unit comprising three sets of pluralities of primary harmonic synthesizer means, each set relating to one coordinate, each of said synthesizer means comprising a plurality of general inputs, a driving input and one output, said general inputs receiving the constant primary coefficient values relative to a given secondary coefficient and said driving input receiving a continuously variable value representative of the first parameter β, and being adapted to derive the value of said given secondary coefficient from said constant primary coefficient values and from the continuously variable value representative of the first parameter β and to supply said secondary coefficient value to said output, and three secondary harmonic synthesizer means, each relating to a given coordinate, comprising a plurality of general inputs connected to the outputs of a given set of primary harmonic synthesizer means, a driving input receiving a continuously variable value representative of the second parameter α and one output and being adapted to derive the value of said given coordinate from said secondary coefficient values supplied to its general inputs and from the continuously variable value representative of the second parameter α and to supply said coordinate value to said output, said coordinate values derived from the three secondary harmonic synthesizer means being the desired values.

3,051,392
PRECISION TEMPERATURE CONTROLLER

Sterling T. Martin, Charleston, W. Va., and Stanford B. Spracklen, Fullerton, Calif., assignors to Union Carbide Corporation, a corporation of New York

Filed Sept. 17, 1957, Ser. No. 684,536
5 Claims. (Cl. 236—13)

1. Apparatus for providing a continuous flow of temperature-controlled gas, comprising, in combination, a heated gas stream; an unheated gas stream; a selectably adjustable self-regulating valve in one of said streams, said valve having a gradual shut-off response characteristic for downstream pressures within a range which includes a preselected downstream pressure for which said self-regulating valve is selectably adjusted, a full shut-off response characteristic for downstream pressures greater than pressures within said range and a full open response characteristic for downstream pressures less than pressures within said range; a pneumatically operated controllably variable regulating valve disposed in the other of said streams, said pneumatically operated controllably variable regulating valve having located therein a controlling diaphragm arranged to be subjected on one side to pressure of said gas stream downstream of said variable regulating valve tending to close the valve and on a second side to pressure of a controlling pneumatic operating signal tending to open the valve, whereby said pneumatically operated controllably variable regulating valve is controlled according to a pressure differential ob-

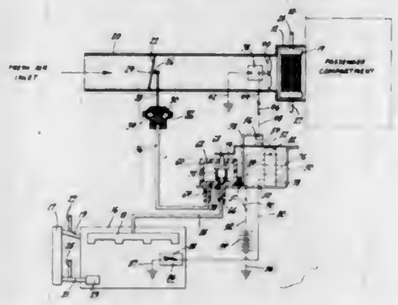


taining between said gas stream and said pneumatic operating signal; a single conduit means into which said heated stream and said unheated stream flow; control means adapted to furnish a pneumatic operating signal to said pneumatically operated controllably variable regulating valve, said signal having an amplitude corresponding to temperature of a gas in said single conduit means; and temperature sensing means operably connected to said control means and arranged with respect to said single conduit means to respond according to temperature of a gas therein.

3,051,393
VEHICLE HEATING SYSTEM

Herman L. Hartzell and Kenneth W. Young, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 6, 1958, Ser. No. 765,388
4 Claims. (Cl. 237—2)



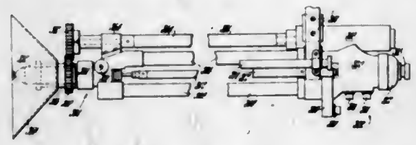
4. In combination with a motor vehicle having a fluid cooled engine and a passanger compartment, the combination comprising, an intake manifold for said engine, a fluid cooling system for said engine, a duct having an inlet side connected with the atmosphere positioned to discharge into said passenger compartment, a heat exchanger positioned in the path of air flowing between said inlet side of said duct and said passenger compartment, means connecting said engine cooling system and said heat exchanger, a thermostatic switch positioned to sense the temperature of said cooling system, a relay including, an actuating coil, a shiftable armature and a pair of normally open relay switch contacts one of which is shiftable by

said armature to cause a closure of the relay switch contacts, a damper controlling the flow of fresh air through said duct, a vacuum motor connected to move said damper, valve means operable to connect said vacuum motor with said intake manifold, said valve means being controlled by the armature of said relay and being shifted to a position connecting said vacuum motor and said intake manifold when said relay switch contacts are closed, an energizing electric circuit for said actuating coil of said relay including said thermostatic switch, an electric motor driven fan positioned in said duct, and an electric energizing circuit for said electric motor including said relay switch contacts.

3,051,394
ELECTROSTATIC SPRAY COATING APPARATUS AND METHOD

John Sedlacsik, Jr., Garfield, N.J., assignor to Interplanetary Research & Development Corp., Garfield, N.J., a corporation of New Jersey

Original application Dec. 1, 1955, Ser. No. 550,373, now Patent No. 2,913,186, dated Nov. 17, 1959. Divided and this application Nov. 16, 1959, Ser. No. 853,404
6 Claims. (Cl. 239—3)

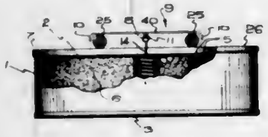


3. A method of coating an article with electrostatically charged particles of coating material comprising, providing a spray of particles of coating material with certain of said particles of said spray having a forward velocity component to project said certain of said particles substantially axially toward said article, said spray of particles also including a lateral velocity component to direct certain other of said particles of said spray laterally, collecting said other of said particles having the lateral velocity component and projecting same radially to provide an annular spray pattern of particles, and establishing a voltage differential between said article and said particles for charging the particles of the axially and radially projected spray components to facilitate deposition of the particles on the article electrostatically.

3,051,395
REFRIGERATOR DEODORIZER

Melvin J. Spritz, Boston, Mass.
(% Larrimore, Inc., P.O. Box 116, Somerville 43, Mass.)

Filed June 9, 1959, Ser. No. 819,052
3 Claims. (Cl. 239—57)

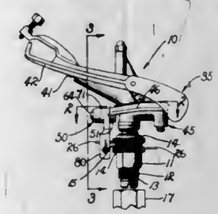


3. A canister adapted to be attached in secure engagement to the lower surface of a grating having parallel rods comprising a canister having a top wall, a bar projecting upwardly through said wall, a flat engaging plate having lips formed at opposite ends of said plate and flared in a direction normal to the center of said plate, means pivotally interchanging said bar and said center of said engaging plate adapted to permit pivoting of said center between positions parallel and normal to said walls and tilting of said plate in various planes, spring means positioned within said canister and tensioning said bar toward said spring means whereby said top wall and plate center are urged toward each other.

3,051,396
RETRACTABLE STOP FOR A ROTARY SPRINKLER

Edward M. McElhenie, Fresno, Calif., assignor to Buckner Manufacturing Co., a corporation of California

Filed Apr. 17, 1961, Ser. No. 103,305
6 Claims. (Cl. 239—230)

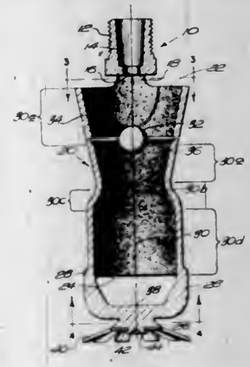


1. In a sprinkler, a relatively stationary, tubular, mounting member circumscribing an axis of reference; a relatively movable, fluid conducting member rotatably received in the mounting member for rotation about said axis; a stop ear connected to the mounting member and outwardly extended substantially radially of said axis; a reversing member mounted on said fluid conducting member having a boss extended outwardly therefrom, a tongue extended from the boss in spaced substantially parallel relation to said axis; and a retractable stop including a mounting portion connected to the fluid conducting member and a retractable portion extended from the mounting portion longitudinally of said axis, said mounting portion having a notch therein longitudinally aligned with said retractable portion to receive said tongue and to position the retractable portion for engagement with the ear during rotation of the fluid conducting member, said retractable portion being movable rearwardly relative to the direction of rotation of the fluid conducting member when the retractable portion is urged against the ear with predetermined pressure thereby to disengage said tongue from the notch to permit movement of the retractable portion of the stop slidably past the ear.

3,051,397
FOAM-WATER SPRINKLER DEVICE

Eric P. Hanson, North Providence, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware

Filed Apr. 3, 1961, Ser. No. 100,359
1 Claim. (Cl. 239—432)



A foam-water sprinkler device comprising:

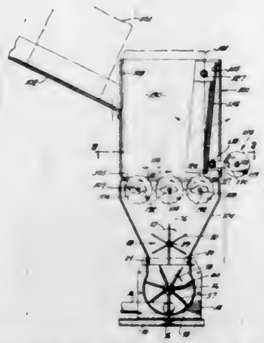
(I) a hollow tubular member having:

(A) an open upstream inlet end,

(B) an open downstream discharge end,
(C) an axis,
(D) a passageway which:
(1) is of substantially circular cross section,
(2) extends:
(i) through said tubular member,
(ii) between said ends,
(iii) along said axis,
(3) has a first portion which is defined by tubular member walls tapering downstream gradually inwardly toward said axis with a substantially constant first taper,
(4) has a second portion which:
(i) is defined by tubular member walls extending upstream abruptly inwardly toward said axis with a second taper substantially greater than said first taper,
(ii) has its upstream end joining the downstream end of the first portion to form a throat,
(iii) has a length along said axis substantially shorter than the length of said first passageway portion,
(5) has a third portion which:
(i) is between said second portion and said tubular member discharge end,
(ii) is defined by tubular member walls extending parallel to said axis,
(iii) has a cross sectional area greater than a cross sectional area of said throat,
(II) a liquid nozzle which:
(A) is connected to said tubular member at said inlet end,
(B) has a single discharge orifice directed into said tubular member inlet end along said tubular member axis,
(III) a ball splitter which:
(A) is located on the upstream side of said first passageway portion,
(B) has a diameter greater than the diameter of said nozzle orifice,
(IV) at least one strut connecting said ball splitter to said tubular member,
(V) a cone deflector which:
(A) is connected to said tubular member across the open discharge end thereof,
(B) has a cone apex presented to said open discharge end on said axis.

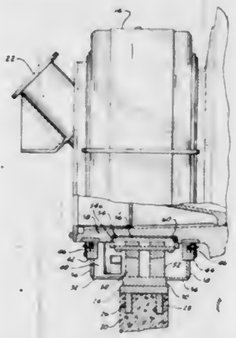
3,051,398
APPARATUS FOR PREPARING BALED INSULATION MATERIAL FOR GAS ENTRAINMENT
Marvin O. Babb, 1807 E. 7th St., Los Angeles, Calif.
Filed Apr. 14, 1959, Ser. No. 806,365
2 Claims. (Cl. 241—136)

1. Apparatus for processing a bulky body of fibrous insulation material adapting the material for gas stream entrainment, comprising means for receiving the body to advance forwardly and endwise downwardly and forming a cutting zone into which the body progressively advances, cutters movable in said zone for cutting the material into segments at the forward end portion of said body advancing downwardly within said zone and for continuously urging the forward portion of the advancing body in a first direction transverse to the direction of body advancement, means for alternately pushing against the forward end portion of the advancing body to displace said forward end portion in a second transverse direction generally opposite to said first transverse direction and releasing the forward end portion of the body to allow said forward end portion to travel in said first transverse direction, whereby the forward end portion of said body oscillates tranversely as it advances downwardly into said cutting zone, and means for severing the advancing segment of material within said cutting



zone and for discharging the severed material from said zone and away from the forward end portion of said body.

3,051,399
GRINDING MILL TRUNNION
Hans Fred Stauffer, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 10, 1959, Ser. No. 852,035
6 Claims. (Cl. 241—176)

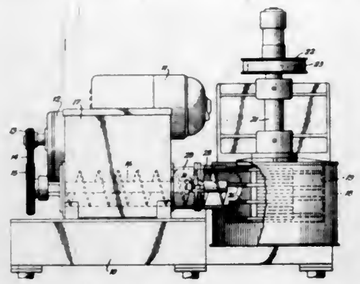


1. A grinding mill comprising a rotating drum having a generally cylindrical head at one end, a trunnion bearing for supporting said head including a bearing housing mounting said head for rotation therein, an annular grease pocket in said housing adjacent said head, an annular steel band, formed of a material harder than the head, mounted on said head to move through said grease pocket, an annular elastic seal ring mounted in said grease pocket to bear against said band generally throughout its length, and a spring biasing said seal ring toward said band.

3,051,400
GRANULATING APPARATUS
Albert Kircher, Jr., Downers Grove, Ill., assignor to The Fitzpatrick Company, a corporation of Illinois
Filed Apr. 25, 1960, Ser. No. 24,563
3 Claims. (Cl. 241—186)

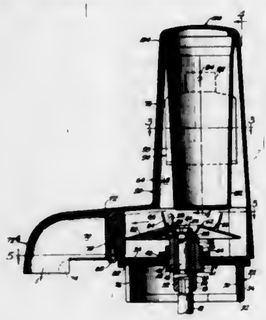
1. Granulating apparatus comprising a vertical cylindrical casing having an inlet opening in its side wall adjacent to its top and closed at its top and open at its bottom for discharge of granulated material, a rotor rotating on a vertical axis in the casing, a plurality of spaced radially projecting relatively thin horizontal flat

blades on the rotor terminating adjacent to the casing wall to sweep closely across the inlet opening as the rotor turns, said blades spanning an axial space from the casing top to a point substantially below the bottom of the inlet



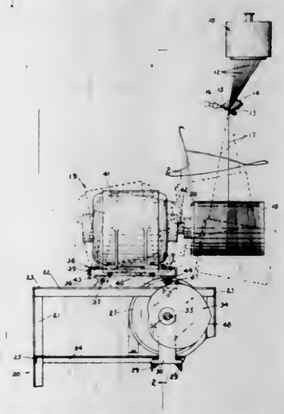
opening, and means to force material to be granulated into the inlet opening to be picked off by the tips of the blades as they pass the inlet opening, to be granulated by the blades and to drop from the open bottom of the casing by gravity.

3,051,401
ICE CRUSHER
Alfred J. Huck, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Jan. 27, 1960, Ser. No. 5,054
5 Claims. (Cl. 241—257)



5. An ice crusher comprising, in combination, means defining an upright elongated passageway through the upper end of which block ice may be introduced and advanced downwardly, means defining a laterally extending passageway through which crushed ice is to be laterally delivered, means including a rotary disc defining an ice crushing chamber above said rotary disc which communicates with one end of each said passageway, rotary ice-crushing-and-discharging means on said disc in said ice crushing chamber arranged for rotation about an upright axis and with said laterally extending passageway disposed relatively tangentially of said ice-crushing-and-discharging means, said ice-crushing-and-discharging means being positioned to have the downwardly advancing block ice thrust thereagainst while said ice-crushing-and-discharging means grinds up the block ice into relatively small flakes and chips and effects discharge of the flakes and chips above said rotary disc under centrifugal force through said tangentially extending lateral passageway, the portions of said means defining said ice crushing chamber that are located peripherally of and above said disc providing jamming surfaces which cooperate with the rotatable ice-crushing means to insure that the block ice is ground to relatively small flakes and chips before discharge from the ice crusher, said jamming surfaces being formed of plastic to prevent ice accumulations thereon, and means for varying the speed of rotation of said ice-crushing means to selectively produce relatively coarsely ground-up ice at low speeds and relatively finely ground-up ice at high speeds.

3,051,402
APPARATUS FOR PACKAGING STRANDED MATERIAL
Vernon C. Rees, Monroe County, Mich., assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,532
5 Claims. (Cl. 242—18)



1. Apparatus for forming a continuous strand package of predetermined width from a plurality of continuous filaments, comprising a source for said strand, a spool rotatable about a first axis and adapted to receive a strand on the periphery thereof, means for rotating said spool, means spaced from said first axis for collecting said filaments into a strand and for directing said strand onto said spool in a path normal to the axis of said spool, and oscillating means oscillating said first axis within a prescribed arc to traverse said strand upon said spool a length substantially corresponding to said predetermined width, said oscillating means oscillating about a second axis perpendicular to said first axis and out of vertical alignment with said spool.

3,051,403
CUTOVER MECHANISMS FOR STRAND-REELING INSTALLATIONS
William A. Johnson, Ralston, Nebr., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,376
13 Claims. (Cl. 242—25)



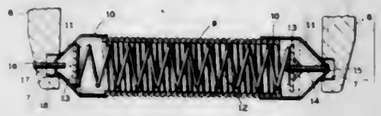
1. An improved snagger device for strand-reeling installations, which comprises a snagging finger designed for attachment to a take-up reel for rotation therewith and projecting in the direction of rotation, a clamping member mounted radially beneath the finger, and resilient means for biasing the clamping member and finger relatively to-

ward each other to a position where a rear portion of the outer surface of the clamping member engages a rear portion of the inner surface of the finger, forward portions of the facing sufaces of the clamping member and finger diverging so as to define a converging passage therebetween which a strand enters during a snagging operation; one of the clamping-member and finger elements having a transverse notch across the rear portion of its strand-engaging surface, the strand being snagged forcing the clamping member and finger slightly apart permitting the strand to enter the notch, after which the resilient means urges the clamping member and finger relatively together to clamp the strand securely within the notch.

3,051,404
FLEXIBLE TOILET PAPER HOLDER

William D. Ritchey, 684 NE. 40th St., Fort Lauderdale, Fla.

Filed Aug. 15, 1961, Ser. No. 131,639
4 Claims. (Cl. 242—55.2)

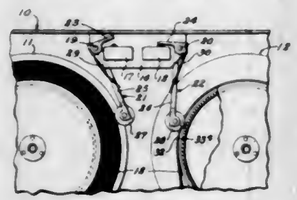


1. Means for rotatably supporting a roll of toilet paper in a fixed wall bracket, the bracket being of the type that is provided with a pair of wings that are socketed and with the sockets in opposed relation, the said means embodying a roll-forming member that extends between the wings, the roll-forming member consisting of an elongated close-packed coil spring on which the roll of paper is directly mounted, a cylindrical end cap fixedly connected to one end of the spring, the end cap having a conical portion that is adapted to seat in a socket of one wing, a cylindrical cap for the opposite end of the spring having a conical portion for engagement in the other socket of the opposite wing, the last named cap overlying and being slidable upon the end portion of the spring, compression means disposed within the spring axially thereof, the compression means being fixed at one end to the first-named end cap and at its opposite end being adjustably connected to the second-named cap whereby the second-named cap is biased outwardly axially of the spring to yieldably engage the conical portion of the second-named cap into the socket of the adjacent wing.

3,051,405
TAPE REVERSAL MECHANISM

William H. Lyon, Orange, Calif., assignor to The Soundscriber Corporation, New Haven, Conn.

Filed Feb. 12, 1959, Ser. No. 792,740
11 Claims. (Cl. 242—55.12)

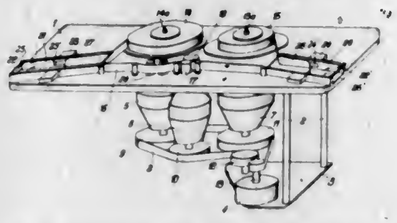


3. In a tape recording machine for use with a tape having means forming a slot therethrough and having reversible tape transport means, a tape reversal mechanism comprising, in combination, wheel means included in said tape transport means over which a tape is passed, means forming a groove on the surface of said wheel means in contact with said tape, and switching means including a sensing end portion resiliently urged against the tape and aligned with said groove, said switching means being connected to reverse the tape transport means when actuated.

3,051,406
TAPE RECORDER DRIVE

Heinrich Wehde, Hamburg-Rissen, and Hans-Georg Lange, Georg Fischer, and Manfred Spreng, Wedel, Holstein, Germany, assignors to Telefunken G.m.b.H., Berlin, Germany

Filed Dec. 22, 1959, Ser. No. 861,258
Claims priority, application Germany Dec. 24, 1958
18 Claims. (Cl. 242—55.12)

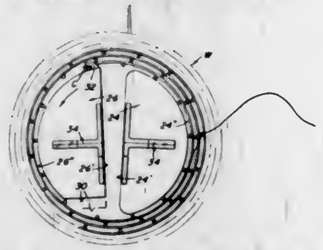


12. In combination with a high-acceleration-rate tape deck having tape advancing means including two reel-carrying spindles and at least one tape drive capstan and having drive motor means, a pair of electromagnetic clutch means connected between said motor means and each respective spindle, said clutch means each comprising a housing; a tape drive shaft journaled in said housing and connected with a tape advancing means; low-inertia clutch disc means connected with said drive shaft; a power-driven shaft journalled in said housing and aligned with said drive shaft and connected with said motor means; electromagnetic brake winding means fixed to said housing parallel with and adjacent said disc means; electromagnetic shaft coupling winding means carried on said power-driven shaft parallel with and adjacent said disc means; separate wiring means connected, respectively, with each of said winding means, whereby braking or coupling may be alternatively selected; drive means connected between said motor means and each of said clutches and rotating the clutches in each pair in mutually opposite directions; and direction selector means for alternatively energizing one of the clutches in each pair.

3,051,407
MANDREL FOR COILING WIRE FABRIC

Charles P. Pettigrew, Elwood, Ill., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Apr. 27, 1960, Ser. No. 25,096
2 Claims. (Cl. 242—72)

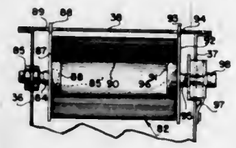


1. A mandrel for coiling wire fabric comprising a pair of sectors generally semi-cylindrical in shape each comprising a plane diametral surface and an arcuate surface, said sectors being adapted to be secured together with their diametral surfaces adjacent each other, means for releasably supporting said sectors and securing said sectors together with their diametral surfaces adjacent each other, one of said sectors being truncated on one side and having a series of fixed hooks spaced along the opposite side, whereby, after a coil of wire fabric has been wound on said mandrel, the other of said sectors may be removed longitudinally from the coil and said one of said sectors may thereupon be rotated to disengage the hooks from the innermost turn of the coil and then be removed transversely of the coil.

3,051,408
RECORD TAPE LOADING AND DRIVE MECHANISM

Horace T. Finch, Arcadia, Calif., assignor to The Birtcher Corporation, Los Angeles, Calif., a corporation of California

Filed Oct. 20, 1958, Ser. No. 768,219
2 Claims. (Cl. 242—75.4)



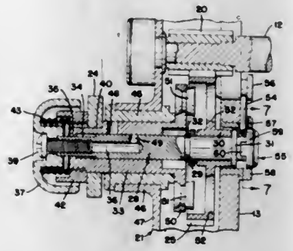
1. A mechanism for mounting a roll of record tape wound on a hollow sleeve comprising: first and second aligned hubs insertable into the hollow ends of said sleeve; first and second supports each rotatably mounting a respective one of said hubs, said first support being stationary and the second support being movable, spring means for resiliently biasing said second support toward said first support whereby said hubs are normally spaced apart a distance less than the length of said sleeve and said hubs are insertable into such hollow ends of said sleeve by forcibly opposing said spring means; a first arm supported by said first hub and movable independently of the support which rotatably mounts the first hub, said first arm extending from said first hub across one end of said sleeve and tape supported thereby; a second arm supported by said second hub and movable independently of the support which rotatably mounts the second hub, said second arm extending from said second hub across the other end of said sleeve and tape supported thereby; fixed means engaging said arms for preventing rotation of said arms with said sleeve during unwinding of said tape while permitting angular and longitudinal movement of said arms with respect to the axis of said sleeve, said arms being held in uniform frictional engagement with the entire ends of said roll of tape by said spring means and serving to guide the tape from said roll in a straight direction while maintaining an axial drag force on said roll substantially proportional to the radial thickness of said roll.

3,051,409
FISHING REEL CLUTCH

Thomas F. Sarah, Akron, Ohio, assignor to The Enterprise Manufacturing Company, Akron, Ohio, a corporation of Ohio

Continuation of application Ser. No. 856,505, Dec. 1, 1959. This application Dec. 26, 1961, Ser. No. 162,289
9 Claims. (Cl. 242—84.54)

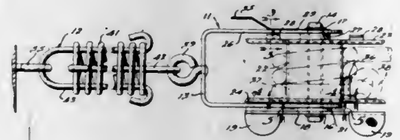
9. In a fishing reel having a frame, a hollow drive shaft journaled in said frame, a crank handle on said drive shaft, a clutch shaft axially slidable and non-rotatable in said drive shaft, a drive gear, a clutch element on said drive gear, a mating clutch element on at least one of said relatively non-rotatable shafts, said drive gear being journaled on said clutch shaft for rotation relative thereto when said clutch elements are disengaged, said drive gear being rotatable with said clutch shaft when said clutch elements are engaged, axial displacement of said clutch shaft selectively engaging and disengaging said clutch elements, a spring urging said clutch shaft to engaging position, a spring latch bar on the frame for engaging said clutch shaft, and a head on said clutch shaft to engage behind said latch bar to hold said clutch shaft in disengaged position.



3,051,410
CABLE TAKE-UP DEVICE

Clair E. Miles, 22504 Bayview, St. Clair Shores, Mich.

Filed Apr. 6, 1959, Ser. No. 804,370
1 Claim. (Cl. 242—100)



In a cable take-up mechanism, a shaft, a bail rotatably connected to opposite ends of said shaft and adapted to secure the shaft to a relatively stationary support, a drum comprising an annular main drum portion and a pair of flange plates non-rotatably secured to said shaft, a handle non-rotatably secured to the shaft for rotating the shaft in one direction, means for securing a cable end to said drum, a plurality of circumferentially spaced ratchet teeth struck diagonally outwardly from one flange plate, a leaf spring pawl extending parallel to the bail arm adjacent said one flange plate and having one end mounted on said shaft, a pawl in the form of a tab struck inwardly from a central portion of said spring pawl, and an apertured portion in said bail arm, said pawl extending through said apertured portion and having an inclined edge and a lateral edge, whereby the ratchet teeth may slide past said pawl when the drum is rotated in one direction, the pawl preventing rotation of the drum in the opposite direction.

3,051,411
TEXTILE BOBBIN

Rawson Atwood, Buttonwood Lane, Rumson, N.J., and Charles C. L'Allemand, 168 The Fellsway, Murray Hill, N.J.

Filed June 18, 1958, Ser. No. 742,825
6 Claims. (Cl. 242—125.1)

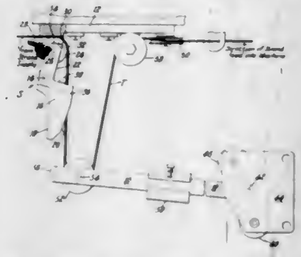
1. A textile bobbin comprising a generally cylindrical barrel structure and a flexible tubular cover thereon, the cover extending over substantially the entire thread carrying surface of the bobbin and having at one end a peripherally limited tab portion extending beyond the end of the tubular cover generally and lying against the surface

of the barrel structure which also extends beyond the tubular cover, whereby the thread end may be inserted



under the said tab portion and frictionally held thereby against the surface of the barrel structure.

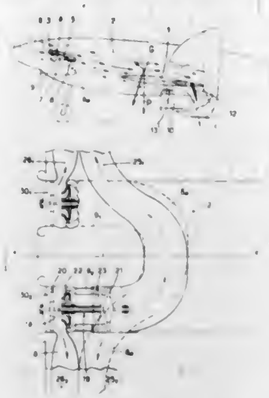
3,051,412
TWINE TENSION CONTROLLING DEVICES
John J. Mulvey and Lionel W. G. Wilkinson, Leicester, Leicestershire, England, assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Feb. 13, 1961, Ser. No. 88,751
Claims priority, application Great Britain May 18, 1960
3 Claims. (Cl. 242—129.2)



1. A twine tension controlling device for use with a bundle tying machine wherein surplus portions of the twine which has been drawn into the machine must periodically be retracted from the machine in order to maintain a proper twin tension, said device comprising: a pivotally mounted slack take-up arm having a twine holding guide on the free end of said arm movable between an upper and a lower position; and a twine snubbing mechanism for controlling the passage of twine from the source of twine supply to said arm, said mechanism being constructed and arranged to allow the passage of twine through it only when said arm is in its upper position.

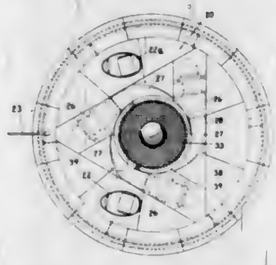
3,051,413
VTOL AIRCRAFT
Robert Pouit, 3 Rue Auguste Mayet, Asnieres, France
Filed Oct. 25, 1960, Ser. No. 64,755
Claims priority, application France Mar. 18, 1960
11 Claims. (Cl. 244—12)

1. A VTOL aircraft which comprises, in combination, a lift supplying wing, nozzle means extending transversely of the fore-and-aft axis of said aircraft and fixed with respect to said wing ahead of and at a distance from the leading edge thereof for blowing a rearwardly flowing sheet of gas toward said wing leading edge, means carried by said wing for feeding gas under pressure to said nozzle means, means carried by said nozzle means forming at least one air induction duct having a forwardly facing inlet and a rearwardly directed outlet adjacent to said nozzle means outlet for causing an air mass to be driven from the atmosphere by suction by said gas sheet toward said wing whereby the relatively small mass of



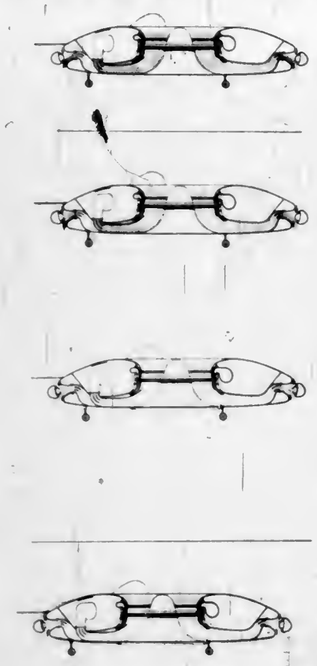
gas issuing as a high speed jet from said nozzle means causes a relatively big mass of air to be driven toward said wing at lower speed, gas blowing means carried by said wing for increasing circulation along the profile thereof, and lift increase means carried by said wing.

3,051,414
AIRCRAFT WITH JET FLUID CONTROL RING
John Carver Meadows Frost, Georgetown, Ontario, Canada, assignor, by mesne assignments, to A. V. Roe Canada Limited, Toronto, Ontario, Canada, a corporation
Filed May 8, 1961, Ser. No. 108,365
17 Claims. (Cl. 244—12)



1. An aircraft having a body structure; walls within the structure defining a gas displacement passage which includes and terminates in a propulsive nozzle having a mouth, one of said walls forming one boundary of the mouth and curving away therefrom in a smooth convex surface and the other wall forming another boundary of the mouth; means within the structure to impel propulsive gas along the passage and to expel the gas from the mouth; gas directing means; suspsension means interposed between the gas directing means and the structure to movably suspend the gas directing means adjacent to said other boundary of the mouth; said gas directing means having a gas control surface which forms a movable extension of said other boundary of the mouth and which is shaped to direct gas expelled from the mouth around said convex surface; and actuating means to move the gas directing means on its suspension means to vary the position of the gas control surface relative to said mouth and thus to variably control the direction of flow of the propulsive gas expelled from the mouth.

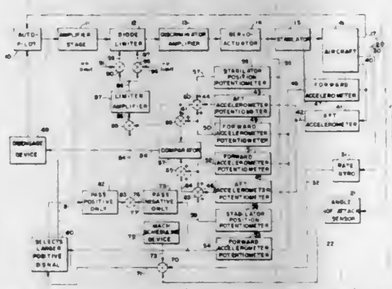
3,051,415
FLUID SUSTAINED AIRCRAFT
John Carver Meadows Frost, Georgetown, Ontario, and Claude John Williams, Downsview, Ontario, Canada, assignors to Avco Aircraft Limited, Malton, Ontario, Canada, a corporation
Filed Aug. 6, 1959, Ser. No. 832,404
45 Claims. (Cl. 244—23)



1. An aircraft comprising a body structure; upper and lower walls within the structure defining a gas displacement passage which includes and terminates in an outlet nozzle arranged to discharge at a multiplicity of positions distributed around the periphery of the structure; impelling means on the body structure to cause propulsive gas to flow generally outboardly in the displacement passage and through the nozzle; opposed upper and lower gas deflecting means adjacent to the outlet nozzle, said gas deflecting means being spaced apart across said passage and associated with the upper and lower walls respectively so that the propulsive gas flows outboardly between the upper and lower gas deflecting means, each of said walls curving away from the other of said walls outboardly of the gas deflecting means thus providing said outlet nozzle with a curved, outboardly divergent cross-section, said gas deflecting means being operable to vary the directions in which the propulsive gas leaves the nozzle by selectively disturbing the flow of the propulsive gas along the walls; and control means operatively connected to the gas deflecting means.

35. An aircraft comprising a lentiform inboard body structure sheathed by opposed aerofoil surfaces which provide lift developing surfaces; upper and lower walls within the structure defining a gas displacement passage which includes and terminates in an outlet nozzle arranged to discharge at a multiplicity of positions distributed around the periphery of the structure; a downwardly directed stabilizing nozzle in the lower aerofoil surface of the aircraft and in communication with the gas displacement passage; impelling means on the inboard body structure to cause propulsive gas to flow generally outboardly in the displacement passage and through the outlet and stabilizing nozzles; an outboard body structure secured to the inboard body structure in juxtaposed spaced relation to the outlet nozzle and providing therewith upper and lower peripheral nozzles in communication with the outlet nozzle; opposed upper and lower primary gas deflecting means adjacent to the outlet nozzle and associated with the upper and lower walls respectively, each of said walls curving away from the other of said walls outboardly of the primary gas deflecting means and merging with one of said aerofoil surfaces in a smooth, outboardly convex curve thus providing said outlet nozzle with a curved, outboardly divergent cross-section, said primary gas deflecting means being operable to vary the directions in which the propulsive gas leaves the outlet nozzle by selectively disturbing the flow of the propulsive gas along the walls thereby apportioning the flow of the propulsive gas through the peripheral nozzles; secondary gas deflecting means associated with the peripheral nozzles and operable to vary the directions in which the propulsive gas leaves the peripheral nozzles; an automatic control system to operate the primary gas deflecting means to reduce the divergence of the aircraft when it encounters a disturbance resulting in a tilt rate; and secondary control means operatively connected to the secondary gas deflecting means for controlling the latter.

3,051,416
MANEUVER LIMITING AUTOPILOT MONITOR
Donald J. Rotier, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 6, 1958, Ser. No. 772,316
29 Claims. (Cl. 244—77)

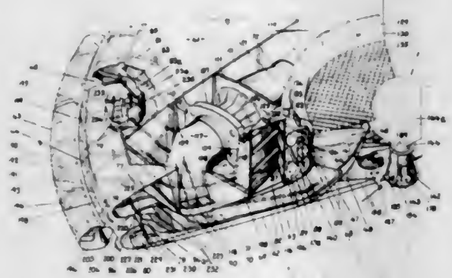


8. Control apparatus for a dirigible craft having a control means for controlling attitude thereof, comprising: power means for positioning said control means; first signal providing means normally effective to control said power means; second signal providing means responsive to a condition while the craft changes attitude due to said first signal; third signal providing means responsive to the same condition within a limit for generating a third signal having ordinarily a predetermined relation to said second signal during changes thereof; means for terminating said first signal; and means operated responsive to said second and third signals for operating said terminating means upon change of said ordinarily predetermined relationship due to said condition reaching the limit.

3,051,417
AIRCRAFT CONTROL SYSTEMS
John Carver Meadows Frost, Georgetown, Ontario, and Claude John Williams, Downsview, Ontario, Canada, assignors to Avco Aircraft Limited, Malton, Ontario, Canada, a corporation
Filed Aug. 6, 1959, Ser. No. 832,406
17 Claims. (Cl. 244—79)

1. A control system for an aircraft having a body structure; engine means within the structure to provide propul-

sive gas; and an outlet nozzle to discharge the propulsive gas at a multiplicity of positions distributed around the periphery of the structure; the control system comprising gas deflecting means associated with the nozzle and operable to variably control the flow characteristics of the propulsive gas discharged from the nozzle at any selected position of said multiplicity of positions; a rotor rotatable about a spin axis and having a neutral position relative to the body structure, the rotor being mounted within the structure to have a limited degree of universal movement; biasing means associated with the rotor to bias it to its neutral position and to allow relative movement between the rotor and the body structure with consequent tilting

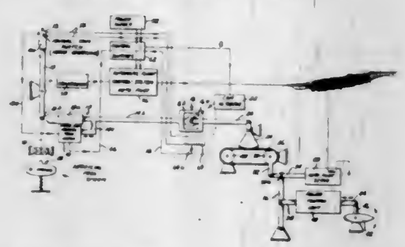


of the rotor from its neutral position when the aircraft acquires a rotational velocity about a turn axis lying normal to the spin axis; and a link system interposed between the rotor and the gas deflecting means to operate the latter in response to tilting of the rotor from its neutral position and in a manner determined by the tilted position of the rotor; individual links of the system being operatively coupled to correlated portions of the gas deflecting means spaced around the periphery; operation of the gas deflecting means as a result of a disturbance which imparts a rotational velocity to the aircraft about a turn axis controlling the flow characteristics of the propulsive gas discharged from the outlet nozzle to reduce the divergence of the aircraft incident upon said disturbance.

3,051,418
FLIGHT CONTROL SYSTEM

Richard V. Ramsey, Wichita, Kans., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Sept. 27, 1960, Ser. No. 58,719
11 Claims. (Cl. 244—83)

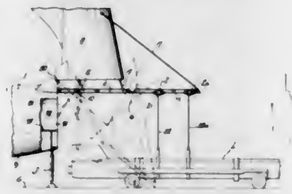


1. A flight control system comprising, in combination with a flight control surface, a first means to actuate said surface, a second means to actuate said surface including a manually operable control member and a connecting mechanism between said surface and said control member, said mechanism including a disengageable coupling having relatively movable parts engaged during manually controlled actuation of the surface by said second means and disengaged during actuation of the surface by said first means, said mechanism further including a variable-length connecting device therein interconnecting said control member and said coupling, and servomechanism responsive to relative movement between said parts effected by the first means and operable thereby to vary the effective length of said connecting device in response to such latter movement for limiting relative displacement between said parts with said control member remaining substantially unmoved.

3,051,419
OVERHEAD CARGO HANDLING MECHANISM FOR SWING-TAIL AIRPLANES

Richard H. Weiland and Donald W. Kelton, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Aug. 10, 1959, Ser. No. 832,612
8 Claims. (Cl. 244—137)

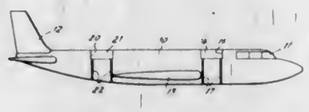


1. A cargo airplane including a fuselage open at an end for access to a cargo space within it, a closure section hingedly mounted thereon for swinging between a flight position, wherein it closes the open end of the fuselage, and a loading position, clear of such open end and affording access to the cargo space, means in addition to the hinge mounting inter-connecting the fuselage and the closure section for supporting the latter in its loading position, overhead track means proper within the cargo space and supported by the fuselage, an extension of said track means separate from the latter and shiftable from a stowed position into a loading position externally of the fuselage and aligned with the track means proper, means intermediate the closure section and said extension, when both are in the loading position, supporting the extension from the closure section, and hoist means guided for movement along said track means and its extension through the open end of the fuselage, for handling cargo between the levels of the ground and the cargo space.

3,051,420
AIRCRAFT SAFETY DEVICE

Stanley P. Novak, 2 Highland Ave., Belmont Hills 27, Pa.

Filed Jan. 9, 1961, Ser. No. 81,598
6 Claims. (Cl. 244—139)

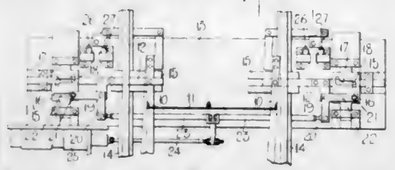


1. In combination, an airplane fuselage having a pair of longitudinally spaced upwardly facing forward and rearward openings, forward and rearward packed parachutes disposed respectively in said forward and rearward openings, connection means connected to each of said parachutes and girdling said fuselage, an openable closure over each of said openings, and release means for sequentially ejecting said forward parachute and then said rearward parachute to open exteriorly of said fuselage without fouling of the parachute lines.

3,051,421
ACTUATING MECHANISM FOR RAILWAY POINTS

Walford John Louis Simons, Brentford, and Gordon Joseph White, Greenford, England, assignors to Rotax Limited, London, England

Filed Mar. 3, 1961, Ser. No. 93,095
Claims priority, application Great Britain Mar. 4, 1960
2 Claims. (Cl. 246—401)

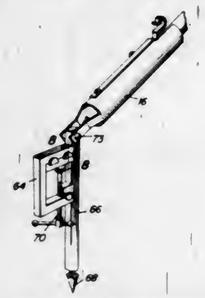


1. Actuating mechanism for railway points, comprising in combination a first slide which is connectible to a movable rail of the points so that movement of the first slide is accompanied by movement of the rail, a second slide movable transversely relative to the first slide, one of the slides being provided with a projection, and the other slide being provided with a slot which is slidably engaged by the projection, and which has a rectilinear main portion parallel with the direction of movement of the first slide, and a pair of opposite end portions which extend in opposite directions respectively from, and at right angles to, the main portion so that when the projection is in engagement with either of the said end portions of the slot the second slide serves to prevent movement of the first slide, a bell crank lever pivotally mounted on the first slide, and having one end operatively connected to the second slide, and actuating means connected to the other end of the lever, for imparting movement through the latter to the first and second slides so that, when the first slide is held in either of its extreme positions by the engagement of the projection with one of the said end portions of the slot, movement of the actuating means in the appropriate direction first causes the second slide to be moved through the medium of the lever for effecting disengagement of the projection from the last mentioned end portion of the slot, then causes the first slide to be moved through the medium of the lever to its other extreme position, and finally causes the second slide to be moved further through the medium of the lever for effecting engagement of the projection with the other of the said end portions of the slot.

3,051,422
FISHING ROD HOLDER

William M. Crump, Atherton, Calif. (1700 California Ave., Mountain View, Calif.), and Donald A. Vaillancourt, Box 408, and James B. Bowens, 2345 Middlefield Road, both of Redwood City, Calif.

Filed Nov. 12, 1959, Ser. No. 852,470
2 Claims. (Cl. 248—40)

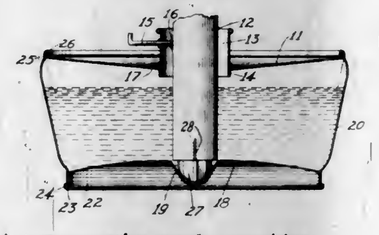


2. A fishing rod holder comprising a generally F-shaped post, a removable C-clamp slidably mounted on the arms of said post, a tube pivotally and removably mounted on said C-clamp and means for securing a fishing rod in said tube, said post including pairs of guides on said arms thereof slidably receiving the legs of said C-clamp therebetween, said C-clamps including a screw threadedly mounted in one of its legs and cooperable with its other leg for securing one of said post arms therebetween.

3,051,423
CHRISTMAS TREE STAND

Samuel Wagner, Sheridan, Wyo., and Theodore K. Kellner, Box 237, 1315 Ellis St., Waukesha, Wis.

Filed Apr. 27, 1953, Ser. No. 351,446
2 Claims. (Cl. 248—45)



1. A tree-supporting stand, comprising:

(1) a bottom having a central cup-shaped recess, means rigidly connected to said bottom and including

(*a*) a member substantially above said recess defining an opening coaxial with said recess and adapted to have a tree trunk passed therethrough in radially spaced relation,

(*b*) said member carrying a circumferentially spaced plurality of tree trunk retaining screws threadedly operable on radial axes and having plate elements on their trunk-engaging ends to engage the tree trunk and prevent embedding of the screw ends in the tree trunk but arranged for engaging and loosely holding at times the tree trunk in alignment with said recess,

(2) and a member arranged to be secured to the end of a tree trunk and having segmental spherical surface portions in the form of circumferentially spaced radially and upwardly extending ribs for riding in said recess with a minimum of friction,

whereby the tree can be rotated in the stand.

3,051,424
PIPE HANGER

Gerard Duhamel, 230 Gardner Ave., Cornwall, Ontario, Canada

Filed Sept. 28, 1959, Ser. No. 842,689
1 Claim. (Cl. 248—62)



A pipe hanger comprising a keeper in the form of an inverted substantially U-shaped sheet metal member, bolt means secured to the bight portion of said member for suspending said member from supporting overhead structure, said member having downwardly extending depending arms the lower ends of which are turned outwardly and upwardly to form upwardly opening U-shaped hook members, and a cradle of generally U-shape cross-sec-

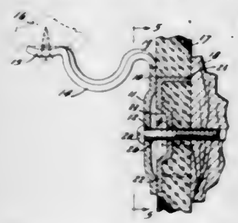
tion having a pipe engaging bight portion and upstanding side arms the upper ends of which are turned inwardly and downwardly to form downwardly facing U-shaped hook members engageable and connectable with the upwardly facing hooks of said keeper, the outer side legs of the hooks of said keeper have an upper portion of reduced width defining shoulders at the lower end of said portion, the bight of the hooks at the upper ends of said cradle being slotted to receive said portion of reduced width, and removable cotter pins passing through alined openings made in the side legs of said upwardly facing hooks of said keeper and engaging with the bight portions of the downwardly facing hooks of said cradle to prevent upward movement of the latter.

3,051,425
TRIPOD WITH PLUMB
William F. Homrighausen, 509 S. Orange Ave., Monterey Park, Calif.
Filed Nov. 25, 1960, Ser. No. 71,554
8 Claims. (Cl. 248—168)



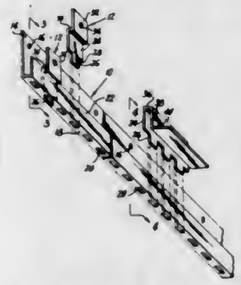
1. A tripod structure comprising, in combination, a support member, three longitudinally adjustable legs hingedly connected to said member to support the same, a longitudinally telescopic enclosure depending from said member and rigidly connected therewith, a stake point on the lower end of said member, resilient means biasing said point toward the surface on which said legs are adapted to rest, a plumb within and mounted on the axis of the enclosure and having an upwardly directed rod, and a downwardly directed rod affixed to said support member on the same axis.

3,051,426
HAND RAIL BRACKET AND FILLER
Adolph A. Wagner, Milwaukee, Wis., assignor to R & B Wagner, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 11, 1958, Ser. No. 727,883
3 Claims. (Cl. 248—205)



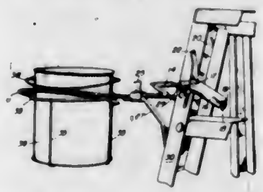
1. The combination with a filler having plate and leg portions disposed at substantially right angles, said plate portion having a central recess with an aperture therethrough and being further provided in unrecessed marginal band portions thereof with a series of marginal holes, of a hand rail bracket having a mounting flange and a curved bracket arm disposed at an angle to said flange, said flange having a marginal band portion registering with the marginal band portion of the filler plate and having a central portion dished outwardly therefrom and means fastening said mounting flange to said filler plate.

3,051,427
WALL BRACKET
Alfonso Alvarez, 204 Bellevue Ave., Upper Montclair, N.J.
Filed Dec. 7, 1960, Ser. No. 74,408
1 Claim. (Cl. 248—224)



A wall bracket comprised by a rear plate having openings therein for the reception of fastening devices to secure the bracket to a wall, an integral flange on the bottom of the rear plate extending outwardly at right angles to the latter and having a series of rectangular openings along its longitudinal center line and a front plate integral with the bottom flange extending upwardly in parallel relation to the rear plate and to approximately half the height of the latter, and a clip comprised by a lower plate having shoulders in its side walls forming a central lug for reception in one of the rectangular openings in the bottom flange on the wall bracket, a right angle flange at approximately its mid-section and the length of the right angle flange being greater than the distance from the forward edges of the openings to the front plate, so that a portion of the right angle flange will be positioned above and closely adjacent to the top edge of the front plate of the wall bracket and an upper plate integral with and at right angles to the right angle flange and disposed oppositely from the lower plate on the right angle flange for vertical alignment with the front plate of the wall bracket when the clip is in place on the latter.

3,051,428
SELF-LEVELING HOLDING DEVICE
Albert W. Schult, 128 Taylor Blvd., Laurelton, N.J.
Filed May 12, 1960, Ser. No. 28,748
16 Claims. (Cl. 248—226)



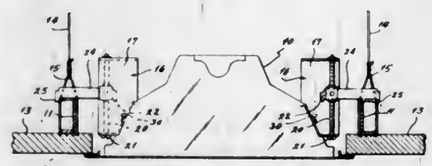
1. A self-leveling holding device for a ladder and the like comprising an article supporting portion, and an adjustable clamping portion, said clamping portion having a rectangular frame adapted to receive a side bar of the ladder therein, a pivotal latch forming the fourth side of said frame and a movable arm cooperating with said latch to clamp said side bar therebetween.

3,051,429
PAINT CAN HOLDER
Gertrude Lillian Long, 400 Erie St., Little Valley, N.Y.
Filed Oct. 18, 1960, Ser. No. 63,369
1 Claim. (Cl. 248—226)



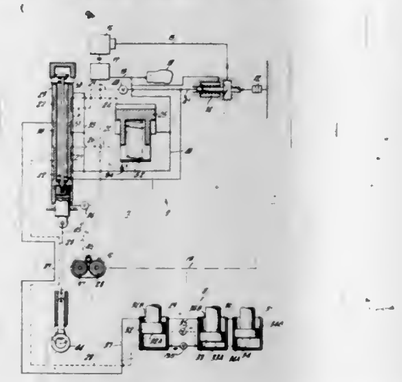
A paint can holder for scaffolding and the like, comprising in combination: can holding means having a base portion including an extension piece, and can-engaging prongs connected with said base portion and extending perpendicularly thereto, a support rod having a top portion firmly supporting said can holding means; clamping means carried by said support rod and comprising a frame-like top jaw fixedly connected at one end to a lower portion of said support rod, an elongated lower jaw cooperating with said fixed jaw and pivotally mounted at one end to said lower portion of said support rod, and a tension spring connected with said lower jaw and said support rod and urging said lower jaw toward said upper jaw, a connecting rod having a lower end pivotally connected to said lower jaw intermediate its length; and a lever pivotally mounted intermediate its ends upon said support rod, said lever being located adjacent to and below said can holding means and having an end pivotally connected with a top end of said connecting rod, the other end of said lever extending in the direction of said can holding means base extension piece.

3,051,430
LIGHTING FIXTURE LEVELING SUPPORT
Thomas C. Halfaker, Overland, Mo., assignor to Day-Brite Lighting, Inc., St. Louis, Mo., a corporation of Missouri
Filed June 30, 1961, Ser. No. 121,189
5 Claims. (Cl. 248—343)



1. The combination with a body to be supported in a ceiling assembly, of a leveling support carried by the body and engaging with a part of the ceiling assembly, said support including a frame attached to the body, an adjustment screw rotatably mounted on said frame against linear movement, a carrier operably mounted on said screw to move relative to said frame along the length of the screw, a support arm movably mounted in said carrier for extension and retraction relative to said frame, said arm and carrier moving together along the length of said screw upon rotation of the screw, and means in said carrier engaged on said screw and having friction engagement with said arm for extending and retracting said arm depending upon the direction of screw rotation.

3,051,431
APPARATUS FOR RAISING A MULTI-ELEMENT TELESCOPIC PROP OR THE LIKE
Rudolf Vogel, Oberhausen-Sterkrade, and Karl Hoefer, Essen-Frintrop, Germany, assignors to Gutehoffnungshütte Sterkrade Aktiengesellschaft, Oberhausen-Sterkrade, Germany
Filed Apr. 17, 1959, Ser. No. 807,240
Claims priority, application Germany Apr. 23, 1958
12 Claims. (Cl. 248—354)

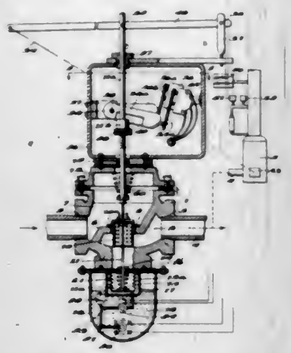


1. Apparatus for raising a multi-element telescopic prop including a first prop member, a second prop member telescopically slidable in said first prop member and a lock for frictionally clamping said first and second prop members in their extended telescoped condition, comprising first reversible pressure-responsive means operable in one direction for raising and applying a predetermined pressure to the prop, second reversible pressure-responsive means adapted to be connected to said lock operable in one direction for clamping said prop members with respect to one another, third reversible pressure-responsive means operable in one direction for fixing said lock in clamped condition, pump means for providing a pressurized fluid for operating said first, second and third reversible means, pressure-responsive-pressure-transmitting means interposed between said pump means and said first, second and third reversible means for applying pressure to said first, second and third reversible means, and pressure-responsive control means for controlling said pressure transmitting means so that after attainment of a predetermined pressure sufficient to operate said first, second and third reversible means in said one direction, operation of said pump means effects operation of said first, second and third reversible means in an opposite direction, respectively, thereof.

3,051,432
TWO-STAGE HYDROMOTOR-OPERATED VALVE
Timothy J. Sullivan, Butte, Mont., assignor to Sullivan Valve and Engineering Company, Butte, Mont., a corporation of Montana
Filed Feb. 18, 1960, Ser. No. 9,636
7 Claims. (Cl. 251—30)

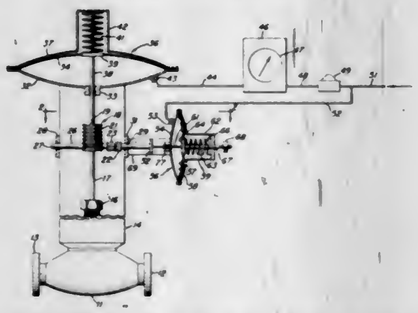
1. In combination with a valve body having an inlet chamber and an outlet chamber divided by a transverse wall provided with an opening containing a valve seat, and a valve member in said valve body adapted to be seated upon said seated opening to close the same; the invention which consists of hydromotor means for raising said valve member from its seat comprising a pressure chamber housing connected to said valve body, a flexible bellows in

said pressure chamber housing, said valve member having an extension adjacent said bellows for engagement thereby, means including a conduit for introducing fluid under pressure into said pressure chamber housing to distort said belolws in a direction to raise said valve member relative to its seat, an electrically-actuated solenoid control valve means in said conduit for interrupting the flow of



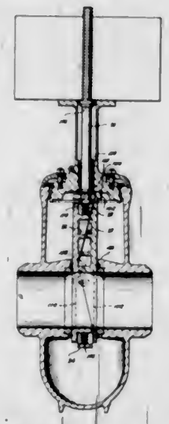
fluid in either direction through said conduit, said combination further including means biasing said valve member to a closed position on its seat and for biasing said bellows to urge fluid out of said pressure chamber housing through said conduit, and means responsive to the position of said valve member relative to its seat for actuating said solenoid valve to close the same when the valve member is positioned at a predetermined position relative to its seat.

3,051,433
CONTROL VALVE LOCKING APPARATUS
Allan L. Dale and Alma Orullian, Salt Lake City, Utah, and Bill J. Pope, Abadan, Iran, assignors, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Dec. 10, 1959, Ser. No. 858,622
1 Claim. (Cl. 251—61)



For a fluid-operated control valve, having a body containing a valve plug, a diaphragm chamber, a diaphragm for said chamber variably positioned by fluid pressure from a controller, a first spring opposing said pressure and urging said diaphragm in one direction, a valve stem attached to said diahpragm and operating said valve plug, and a pair of legs rigidly positioning said diaphragm chamber with respect to said valve body, a valve stem locking apparatus which comprises: a toothed cylindrical collar carried by said valve stem; a slideable toothed yoke adapted to engage said cylindrical collar and prevent movement of said valve stem; a pair of guide rods carrying said yoke, one rod on each side of the valve stem; a pair of brackets each having guide-rod-receiving ports therein and adapted for attachment to the pair of legs; a second diaphragm chamber carried by one of said brackets; a second diaphragm for said second diaphragm chamber connected to said slideable toothed yoke and operated by fluid pressure supplied to the controller for the said control valve; and a second spring opposing the fluid pressure supplied to said second diaphragm and urging said slideable toothed yoke into engagement with the toothed cylindrical collar on said valve stem, whereby failure of controller operating fluid locks the control valve stem in its pre-failure position.

3,051,434
BACK SEATING FOR VALVE STEMS
Ronald A. Gulick, Houston, Tex., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Jan. 9, 1959, Ser. No. 785,919
3 Claims. (Cl. 251—167)

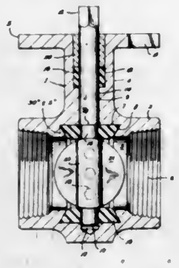


3. A through conduit wedge gate valve provided with means to enable a formation on the stem extending from the gate to establish a seal with a seat in the bonnet, said valve comprising: a housing having aligned flow passages and a valve chamber interposed between said passages, a reciprocating wedge gate valve assembly positioned in said chamber, said valve assembly having a portion covering said passages in the closed position and a portion having a passage which aligns with said passages in the open position, said valve assembly provided with means which laterally expand the assembly in the closed position and means which laterally contract the assembly during movement of the assembly, a stem attached to said assembly, a passage in the body to receive said stem, a packing assembly in the passage around said stem, a seat in the passage prior to said packing, a second seat in the passage outward of said packing, two protuberances on said stem one of which mates with said seat prior to the packing to seal the valve chamber from the packing, and the other which mates with the second seat to effect a seal in the closed position, spring means between the stem and gate assembly which permits additional travel of the stem after full expansion of the gate assembly enabling one or the other of the protuberances to effect a seal with its seat.

3,051,435
VALVE
William H. Ramsey, Houston, Tex., assignor to C. K. Stillwagon, Houston, Tex.
Filed May 27, 1959, Ser. No. 816,223
1 Claim. (Cl. 251—306)

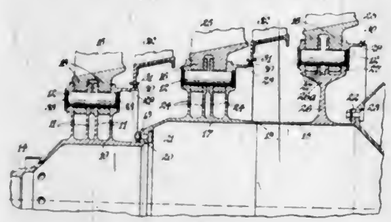
A disc valve in a size range equivalent to approximately two inch through eight inch internal diameter comprising

a unitary valve body having a flow passageway therethrough, said body having an annular seat receiving dovetail groove in the valve body opening into and surrounding the passageway intermediate its ends, said groove having each side wall undercut in the body at an angle within the range of 25 to 35 degrees relative to a plane normal to the flow axis through said body, a disc valve member removably and rotatably mounted within the body on an axis parallel to the plane of the disc and normal to the flow axis and intermediate the ends of said groove for controlling flow through said passageway, and an annular resilient seat free of metallic reinforcement



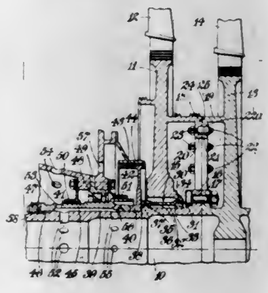
mounted in said groove and cooperating with the valve member to control flow through the passageway, said seat having a hardness in the range of approximately 60–65 durometer, a thickness in the optimum range of approximately 0.24 inch through 0.42 inch, and a width exposed through the open face of the groove in the range of approximately 1.05 inches through 1.75 inches, and substantially filling the groove so as to be deformed by the edge of the valve member when said member is in closed position, and, with said valve member removed, to be deformed sufficiently for insertion into and removal from said groove.

3,051,436
ROTOR FOR AXIAL-FLOW FLUID MACHINE
Nelson Hector Kent and Thomas Steel, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Feb. 10, 1960, Ser. No. 7,869
Claims priority, application Great Britain Feb. 5, 1960
3 Claims. (Cl. 253—39)



3. A rotor for an axial-flow fluid machine comprising a plurality of tubular members secured together end to end to provide a hollow torque-carrying structure of the rotor, the tubular members having a radial wall thickness which is small and an internal diameter which is large compared with the wall thickness, and each tubular member having in one piece with it and extending radially outwards from it between its ends radial external flange means the radial extent of which is substantially smaller than the internal diameter of the tubular member, each said tubular member having a smooth internal bore extending axially from one end thereof to beyond said external flange means, and a series of rings of blades, each ring of blades being mounted on a corresponding one of the tubular members, each blade in a ring having a root portion directly attached to the radial flange means.

3,051,437
ROTORS, FOR EXAMPLE ROTOR DISCS FOR AXIAL-FLOW TURBINES
Frederick William Walton Morley, Castle Donington, Nelson Hector Kent, Derby, Philip Edgar Hunter, Chellaston, and Wilfred Henry Wilkinson, Turnditch, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Nov. 23, 1959, Ser. No. 854,885
8 Claims. (Cl. 253—39)

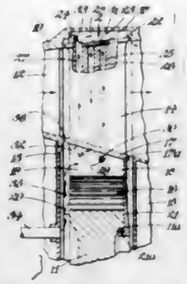


1. A rotor comprising a plurality of rotor discs including an end rotor disc and an adjacent rotor disc next to the end rotor disc, said end rotor disc being formed with a central bore having a first diameter, a shaft rotatively secured to the said adjacent rotor disc, the shaft having a diameter smaller than said first diameter and the shaft extending through the said central bore with radial clearance from the said end rotor disc, cooperating oppositely-facing axially directed first abutments on the said end rotor disc and on the adjacent rotor disc, locating means interconnecting said end rotor disc and said adjacent rotor disc and holding them against radial and circumferential relative displacement, the locating means and the axially-directed abutments being located on circles of substantially greater diameter than the diameter of the said central bore, a second axially directed abutment on the end rotor disc adjacent the central bore and facing in the opposite direction to the first abutment thereon, an axially-directed abutment on the shaft facing in the opposite direction to the second abutment on the end rotor disc, and on the side of the end rotor disc remote therefrom, a sleeve on the shaft, said sleeve having axially-directed abutments cooperating with the second abutment on the end rotor disc and the abutment on the shaft, and means urging said abutments on the sleeve axially into engagement with said second abutment on the end rotor disc and with the abutment on the shaft.

3,051,438
AXIAL-FLOW BLADING WITH INTERNAL FLUID PASSAGES
Derek Aubrey Roberts, Breadsall, and Edward Page, Chellaston, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Feb. 12, 1958, Ser. No. 714,848
Claims priority, application Great Britain Feb. 22, 1957
7 Claims. (Cl. 253—39.15)

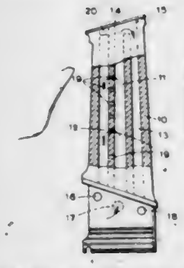
1. A blade for use in a turbo-machine, which blade has an aerofoil section, a leading edge and a trailing edge and has a plurality of bores extending lengthwise within it, the said bores being interconnected at their ends to afford a sinuous flow path having an odd number of courses through which fluid flows in succession, a first of said bores being adjacent the said leading edge and a second of

said bores being adjacent the said trailing edge, a fluid inlet to the path opening into said second of the said bores



at its end adjacent one end of the blade and a fluid outlet opening from the path leading from the first of said bores at its end adjacent the opposite end of the blade.

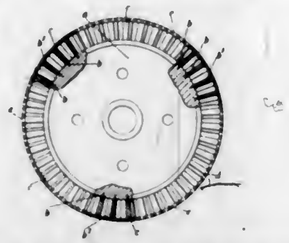
3,051,439
BLADES FOR GAS TURBINE ENGINES
Kenneth David Hilton, Allestree, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed June 8, 1959, Ser. No. 818,885
Claims priority, application Great Britain June 18, 1958
5 Claims. (Cl. 253—39.15)



1. A blade for a gas turbine engine having at least two wholly internally positioned longitudinally arranged passages, one of which is situated further from a blade edge than the other and constitutes a cooling fluid entrance and intermediate blade portion cooling passage, the other constituting a fluid discharge passage, said passages being connected respectively with separate apertures in the blade root on the high and low pressure sides respectively of the blade for the entry and discharge of fluid respectively, said entrance passage and discharge passage being interconnected intermediate their lengths only by transverse passage means of smaller cross-sectional area than either longitudinal passage for the transfer of fluid in high velocity jet form directly across the discharge passage toward the blade edge, said blade and passages being so constructed that cooling fluid after use flows only longitudinally of the blade for discharge.

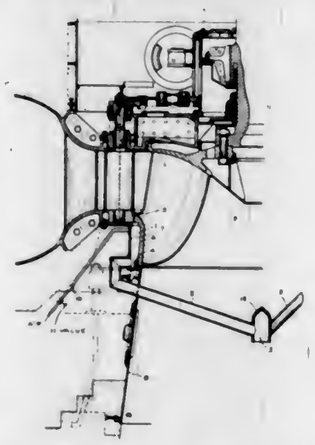
3,051,440
AIR DRIVEN TURBINES
Robert Walter Chandler, Solihull, England, assignor to Rotax Limited, London, England
Filed July 20, 1960, Ser. No. 44,179
Claims priority, application Great Britain July 27, 1959
1 Claim. (Cl. 253—77)

A rotor for an air-driven turbine of the kind specified, comprising in combination a central body part, a plurality of blades extending in equi-angularly spaced relationship from the periphery of said body part, projections rigid with said blades and extending therefrom into axially slidable engagement with openings in the peripheral portion of said body part, and an endless band which encircles said blades to hold them in position on said body part, and which has at least one weakened portion for



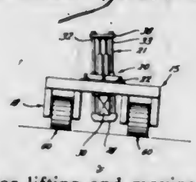
enabling said band to be broken by centrifugal forces, due to the weight of said band and blades, in the event of the rotor exceeding its normal maximum speed by a predetermined amount.

3,051,441
DRY BAND FRANCIS TURBINE
Robert S. Sproule, Montreal, Quebec, Canada, assignor to Dominion Engineering Works Limited
Filed Aug. 23, 1960, Ser. No. 51,368
2 Claims. (Cl. 253—117)



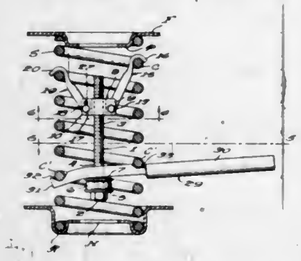
1. In a device of the character described, a rotating runner band, a static throat ring, a close clearance upper band seal between said band and ring, a lower seal and an annular space between said band and ring, static duct means connecting said annular space to a zone of pressure at the center of the draft tube lower than the pressure immediately below said lower seal and an air inlet to said annular space.

3,051,442
LIFTING AND MOVING APPARATUS
Jake B. Tipps, Houston, Tex., assignor to Joe Stine, Inc., a corporation of Texas
Filed Dec. 24, 1959, Ser. No. 861,993
7 Claims. (Cl. 254—2)



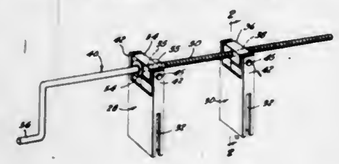
1. Apparatus for lifting and moving including, a support structure, means mounted thereon for moving said support structure along the earth's surface, a universal joint mounted on said support structure, lifting means extending slidably through and carried by said universal joint whereby a lifting effort may be applied independently of motion of said universal joint, said lifting means including a support member below said universal joint for supporting a member to be lifted, a pair of spaced members secured to said support member and extending slidably upwardly through said universal joint, an upper crossbar above said universal joint and connecting said spaced members together, means mounted on said universal joint for engaging said crossbar to raise and lower said members and said support connected therewith below said universal joint, and said universal joint accommodating relative movement between said support structure and said lifting means as said support structure moves over the earth's surface.

3,051,443
SPRING COMPRESSOR TOOL
John H. Castoe, 6718 Shady Grove St., Tujunga, Calif.
Filed Dec. 27, 1960, Ser. No. 78,610
8 Claims. (Cl. 254—10.5)



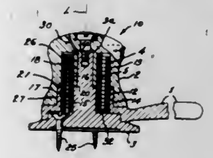
1. In a tool for compressing helical springs and holding the springs engaged thereby in compressed condition a screw threaded bolt adapted to be positioned within the spring and substantially axially aligned with the axial line of the spring, a nut on the threaded body of said bolt, at least two spring coil engaging members carried by said nut and having hooked ends adapted to engage a convolution of the spring at equally peripherally spaced points, a head on said bolt adapted for engagement by a wrench, a thrust bearing on said bolt and engaging the said head, and a fork member adapted to extend between adjacent convolutions of the spring and engage the side of said thrust bearing opposite the bolt head; said fork member having a slot straddling said bolt and having coil engaging grooves on the face thereof which is opposite the face which engages said thrust bearing.

3,051,444
DEVICE FOR INSTALLING SPLIT COUPLING COLLARS ON CORRUGATED PIPE
Andrew J. Stephenson, 13231 S. Hoover, Gardena, Calif.
Filed Aug. 10, 1959, Ser. No. 832,605
5 Claims. (Cl. 254—67)



1. A tool for installing a sheet metal collar to couple together two corrugated sheet metal pipes, which collar is split longitudinally with its two adjacent ends provided with apertured longitudinally extending radial flanges, said flanges having apertures to receive screw elements for tightening the collar, said tool comprising: two elongated engagement means each having inner ends with longitudinal slots therein to straddle said flanges, respectively; two members mounted on the outer ends of said two engagement means, respectively, to swing about hinge axes relative thereto; a manually operable screw extending through said two members in screw-threaded engagement with at least one of the two members for rotation in one respect to urge the outer ends of the two engagement means away from each other thereby to cant the two engagement means relative to said flanges and away from each other to cause the two engagement means to fixedly engage the flanges and to move the flanges apart to spread the two ends of said collar, and for rotation of the screw means in the opposite respect to draw the outer ends of the two engagement means towards each other thereby to cant the two engagement means towards each other to cause the two engagement means to fixedly engage the flanges and move the flanges towards each other for tightening the collar.

3,051,445
SHEET OR HALYARD WINCHES
Lloyd Jackson Moulton, Marblehead, Mass., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,624
6 Claims. (Cl. 254—150)



5. A winch mechanism for use on board a vessel and comprising a base adapted for attachment to a deck, mast or the like, a generally hollow winch head rotatable on a fixed axis intersecting the base, a handle having a hub portion journaled on the base so that it can rotate on said axis independently of the winch head, two axially adjacent circular clutch drum surfaces on the handle and winch head respectively, two axially adjacent brake drum surfaces on the winch head and base respectively, an overrunning helical clutch spring bridging the clutch drum surfaces in preloaded full floating relationship to both drum surfaces for enabling silent ratchetlike or indexing operations of the winch head by to and fro angular movement of the handle, and a helical one-way locking brake spring bridging the brake drum surfaces in preloaded full floating relationship to both brake drum surfaces to hold a load operatingly engaged with the winch head against retrogressive angular movement, the brake and clutch drum surfaces of the hollow winch head being disposed entirely therewithin, and the head, base and handle hub portion telescoping and interfitting so as to enclose all the drum surfaces and both helical springs.

3,051,446
WINCH CONSTRUCTION
Marvin D. Nelson and Donald N. Cole, Hastings, Nebr., assignors to Dutton-Lainson Company, Hastings, Nebr., a corporation of Nebraska
Filed Dec. 14, 1959, Ser. No. 859,352
7 Claims. (Cl. 254—186)

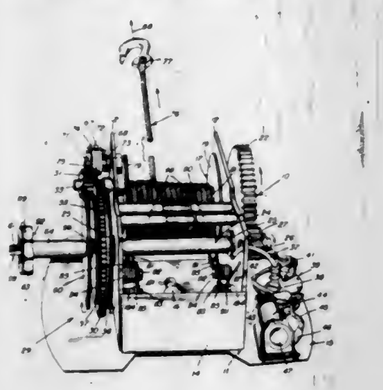
1. In a winch, a frame having an axle mounted thereon, a rope drum mounted on said axle, gearing at one end of the drum for rotating it about the axis of the axle, said gearing including a ring gear attached to said drum and a driving pinion meshing with said gear, a latching pawl having a pair of spaced hook portions for separate engagement with the teeth of the pinion, said pawl being

pivotally mounted on the axis of the axle, manually engageable means connected to the pawl for selectively moving either hook portion into and out of operative en-



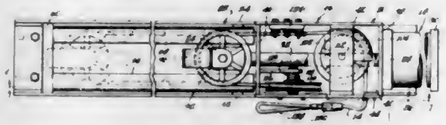
gagement with said pinion, and means for releasably securing the latching pawl in a neutral intermediate position of adjustment with both hook portions positioned out of operative engagement with said pinion.

3,051,447
POWER DRIVEN CABLE WINCH AND DRIVE AND BRAKE MEANS THEREOF
Fred E. Ahlbin, 3663 Congress St., Fairfield, Conn.
Filed Mar. 2, 1960, Ser. No. 12,360
2 Claims. (Cl. 254—187)



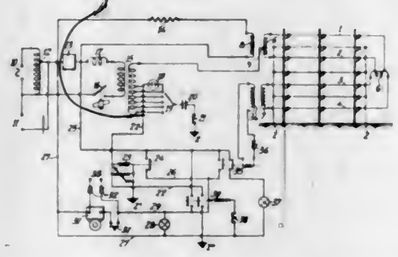
1. In a power driven cable winch driving means comprising, in combination, a train of spur gears coupling a power source to a small cable reel for reeling on the latter a springy wire cable, a spring-biased click dog engaging one of said spur gears to permit rotation thereof in only one direction for cable reeling drive of the reel, a transverse drive shaft independent of the reel and inserted in said gear train following said spur gear engaged by said dog and ahead of the reel with said train including gearing for drivably connecting the reel to said shaft, said transverse shaft having an outer end section, combined clutch and brake means mounted on said transverse shaft having a first inner friction disk fixed on the latter and a second outer friction disk slidably carried by the outer end section of said shaft for axial translation thereon, means preventing relative rotation between said shaft section and said second disk, a spur gear of said train mounted for free rotation on said shaft between and intermediate of said disks with opposite side faces thereof opposed to faces of said disks for engagement by the latter to provide alternately a friction clutch and a drag brake, a compression spring carried by said shaft section between said intermediate gear and said second disk biasing said intermediate gear with limited pressure against said first disk when said second disk is freed from contact with said intermediate gear to eliminate cable backlash while permitting relative rotation by pull of the cable when the latter is appreciably loaded, said outer shaft section being threaded with the threads being spirally advanced toward said second disk in the direction of rotation of said shaft for cable reeling drive of the reel, and an accessible rotary manual knob having an internally-threaded shank threadably engaged on the outer end of said shaft threaded section beyond said second disk for forcing the latter and said intermediate gear axially toward said first disk to cooperative adjusted frictional engagement between said first disk and said intermediate gear and between the latter and said second disk with compression of said spring when said knob is screwed forward on said shaft threaded section either by manual knob rotation when the reel is idle or by application of manual drag to said knob while the latter is rotating with said shaft upon load pay-out of the cable from the reel.

3,051,448
MARINE SNUBBER
William H. Pletta, Chicago, Ill.
(346 E. Church St., Elmhurst, Ill.)
Filed May 16, 1960, Ser. No. 29,382
13 Claims. (Cl. 254—189)



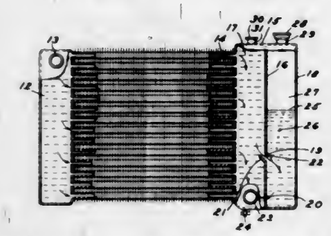
10. A marine snubber comprising, in combination, a fluid motor, a frame connected to said fluid motor, a pair of substantially parallel rope guides mounted on said frame, a sheave rotatably connected to the fluid motor, said sheave moveable in a path between said rope guides, a rope having one end anchored and the other end free for attachment to a water craft, said rope being engageable with the sheave and being positioned between the rope guides, whereby the sheave is retractable from the rope, and the rope is supported by the rope guides and the sheave is selectively placed into engagement with the rope.

3,051,449
ELECTRIFIED FENCES
Jean Legrand, 8 Rue Jules Gautier, Nanterra, France
Filed Nov. 14, 1958, Ser. No. 773,905
Claims priority, application France Nov. 19, 1957
12 Claims. (Cl. 256—10)



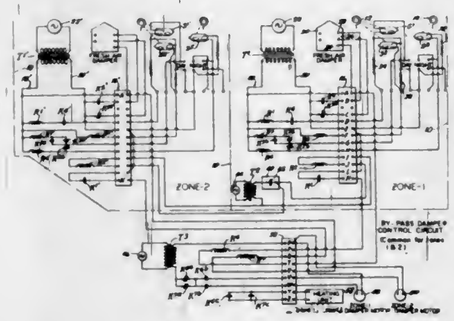
1. An electrified fence arrangement comprising a fence section comprising a plurality of groups of conductors, each group consisting of three spaced conductors the outer one of which are inductively coupled and fed from the primary of a transformer and respectively connected by an auto-transformer, and the central ones of which spaced conductors are interconnected and respectively connected to ground.

3,051,450
COOLING SYSTEM
Theodore Zane White, Dearborn, and Robert M. Thorpe, Taylor, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 29, 1960, Ser. No. 25,684
5 Claims. (Cl. 257—125)



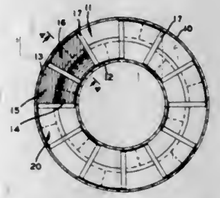
1. An improved cooling system including a radiator, said radiator comprising horizontal cooling tubes, a first vertical header tank on one side of said horizontal cooling tubes, a second vertical header tank on the other side of said horizontal cooling tubes, a substantially vertical partition in one of said vertical header tanks dividing said tank into a first compartment remote from said horizontal cooling tubes and a second compartment adjacent to said horizontal cooling tubes, a first opening in said partition between said compartments at a point removed from the bottom of said header tank and a second opening in said partition at a location vertically displaced from said first opening, an inlet in one of said vertical header tanks and an outlet in the other of said vertical header tanks.

3,051,451
THERMOSTAT AND CONTROL CIRCUIT FOR HEATING, AIR CONDITIONING AND VENTILATING SYSTEM
Henry C. Bierwirth and Norman L. Rutgers, Marshalltown, Iowa, assignors to Lennox Industries, Inc., a corporation of Iowa
Filed Sept. 15, 1958, Ser. No. 761,113
8 Claims. (Cl. 257—274)



1. A temperature responsive control system for air heating and venting apparatus comprising thermostat means for selectively operating the heating and venting apparatus in accordance with temperature changes, said thermostat means comprising a first spiral bimetal, a day heat control mercury tube switch and a vent control mercury tube switch supported on said first bimetal for rotation thereby as determined by said temperature changes, said day heat control mercury tube switch being mounted on said first bimetal so as to make on a temperature fall and said vent control mercury tube switch being mounted on said first bimetal so as to make on a temperature rise, a second spiral bimetal, a night heat control mercury tube switch supported on said second bimetal for rotation thereby as determined by said temperature changes, said night heat control mercury tube switch being mounted on said bimetal so as to make on a temperature fall, and circuit means connecting said thermostat means to said heating and venting apparatus for controlled operation of the latter in accordance with said temperature changes, said circuit means comprising relay means responsive to the rotation of said first bimetal for causing said heating apparatus to be energized upon the making of said day heat control mercury tube switch and for causing said venting apparatus to be energized upon the making of said vent control mercury tube switch, relay means responsive to the rotation of said second bimetal for causing said heating apparatus to be energized upon the making of said night heat control mercury tube switch, and selectively operable day-night control switching means in circuit with said relay means for rendering either the first or second bimetal mercury tube switches effective to control said air heating and venting apparatus, said switching means comprising an automatic clock timer for placing said heating and venting apparatus under control of said first or second bimetal mercury tube switches at predetermined intervals during each 24 hour period.

3,051,452
PROCESS AND APPARATUS FOR MIXING
Leendert Nobel, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,305
Claims priority, application Netherlands Nov. 29, 1957
7 Claims. (Cl. 259—4)

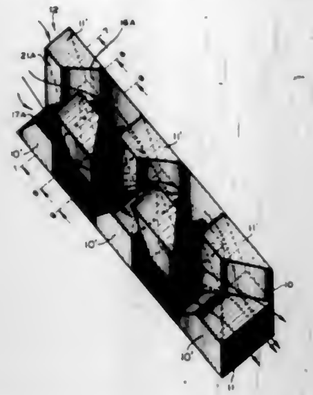


1. A process for mixing at least two streams of flowing materials comprising the steps of combining the streams into a single main stream, dividing the main stream into a plurality of partial streams, each having major and minor axes in cross-section, and displacing at least one partial stream with respect to an adjacent partial stream while altering the cross-sectional shape so as to reverse the major and minor axes thereof.

3,051,453
MIXING APPARATUS
Robert Sluijters, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed June 22, 1959, Ser. No. 821,917
Claims priority, application Netherlands July 8, 1958
3 Claims. (Cl. 259—4)

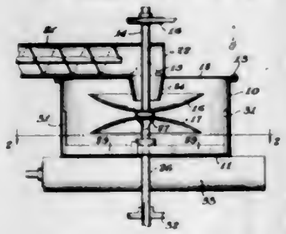
1. A mixing apparatus comprising a conduit of uniform cross section for supplying a main stream of material to be blended, means within said conduit for dividing said main stream into first and second branch streams, means within said conduit for simultaneously sub-dividing said first branch stream into first and second sub-branch streams and said second branch stream into third and fourth sub-branch streams, means within said conduit for directly combining said first sub-branch

stream with said third sub-branch stream and said second sub-branch stream with said fourth sub-branch stream, thereby producing modified first and second branch



streams, and means for directly combining said first and second modified branch streams into a modified main stream.

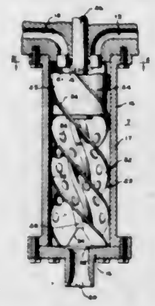
3,051,454
MIXING APPARATUS
Arthur W. Goos and Maurice A. Trepanier, Marquette, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Dec. 11, 1959, Ser. No. 858,981
5 Claims. (Cl. 259—6)



1. A mixing apparatus for intermixing solids in particulate form with fluids to form moldable products comprising a vertically disposed cylindrical housing having a top and bottom, a shaft rotatably mounted extending axially into said cylindrical housing from the top, a pair of dished disks mounted in said housing on said shaft one above the other with the concave side of the top disk facing upwardly and the concave side of the bottom disk facing downwardly, means to rotate the shaft, means to discharge the solid material into the concave side of the top disk, means to discharge the viscous fluid up into the concave side of the bottom disk, a rotatable scraper positioned adjacent to the vertical wall of said cylindrical housing, means to rotate said scraper, and means for removing the mixed product from said apparatus.

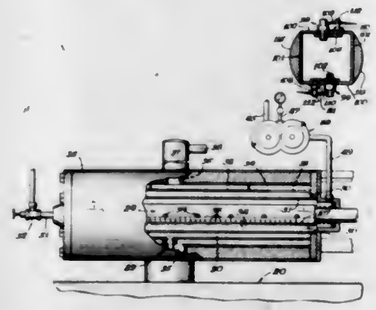
3,051,455
MIXING NOZZLE
Earl H. Magester, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 25, 1960, Ser. No. 44,941
1 Claim. (Cl. 259—8)

A mixing nozzle for mixing separate streams of resin-forming components including a vaporizable liquid and for discharging the resultant mixture in a single rod-like stream, said nozzle comprising a vertical housing including a bottom wall and a cylindrical side wall, inlet means at the top of said housing for introducing said streams at points spaced from the cylindrical housing side wall, a rotatable mixing impeller in said housing comprising an upper portion including a cylindrical member open at the top and bottom and spaced from said housing cylindrical wall for receiving said streams from said inlets and a spiral lower portion for mixing said streams, said lower portion comprising four equally spaced helical blades extending outwardly from the impeller axis and having their outer edges in near wiping engagement with said housing side wall and their upper ends extending across the open bottom of said cylindrical member, said blades including a plurality of openings spaced along the lengths



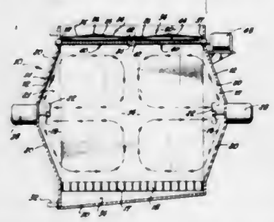
thereof for permitting portions of said ingredients to pass through said blades during rotation of said impeller, said bottom housing wall having a flared outlet at the center thereof, the inner portions of the lower ends of said blades being relieved to form an axially-positioned conical recess in the lower end of said impeller above said outlet opening whereby, during rotation of said impeller, portions of the mixture will flow into said recess out of the path of the remaining lower end portions of said blades as said mixture flows toward said outlet opening, said blades including extensions extending upwardly around the outer surface of said cylindrical member for removing any portions of said mixture backing up into the space between said cylindrical member and said housing.

3,051,456
AGITATING DEVICE
Frank Joseph Clarke, Lynx Hill, East Horsley, and Thomas Leslie Goldsmith, Hanwell, London, England, assignors to Clarke-Built Limited, London, England, a British company
Filed July 28, 1959, Ser. No. 830,142
2 Claims. (Cl. 259—9)



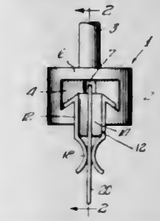
2. In combination, a cylindrical processing chamber having an inlet end and an outlet end, a coaxially mounted and imperforate surfaced rotatable agitator shaft housed centrally within said processing chamber and forming with said processing chamber a substantially annular flow passage, scraper blade means each carried on said agitator shaft outwardly of said shaft and within said processing chamber by a plurality of blade supporting device means arranged in a row adapting said blade means to scrapingly engage the inner surface of said processing chamber throughout the entire length of said scraper blade means, said shaft being hollow and having at the product inlet portion thereof a substantially square cross section extending lengthwise thereof throughout approximately one-half of the length of said shaft and having at that portion thereof an outer surface comprised of four longitudinally extending straight and flat surfaces of substantially equal width and of substantially equal length and having throughout the remaining portion of the length of said shaft at the outlet portion thereof a pair of substantially equal length and substantially equal width and parallel and opposed major flat surfaces which extend longitudinally of said shaft and which are joined along their juxtaposed edges by two outwardly convex and opposed and uniformly curved major surfaces of equal length and of equal width and uniformly spaced from the longitudinally extending central axis of said shaft, said curved major surfaces each having a radius equal to the radial spacing of the edges of said pair of parallel and opposed major flat surfaces, said major flat surfaces of said shaft adjacent the outlet portion thereof comprising equal width continuations of two opposed and equal width flat surfaces of said shaft adjacent the inlet portion thereof forming thereby two opposed and parallel flat surfaces which extend substantially the entire length of said shaft on opposite sides thereof and which underlie the rear edges of an opposed pair of said scraper blade means, said scraper blade means each being substantially flat and elongated and straight and relatively thin and narrow compared to its length and being provided with an uninterrupted and straight leading and scraping edge and an uninterrupted and straight following and uniformly rounded rear blade edge, said rounded rear blade edge comprising a supporting and product spreading and pivot edge, and a series of uniformly spaced product by-pass apertures in each said blade means intermediate said scraping edge and said supporting and product spreading edge.

3,051,457
CLEANING TANK CLOSURE APPARATUS
Gordon L. Rice, Whittier, Calif., assignor, by mesne assignments, to Purex Corporation, Ltd., a corporation of California
Filed May 11, 1959, Ser. No. 812,286
4 Claims. (Cl. 259—121)



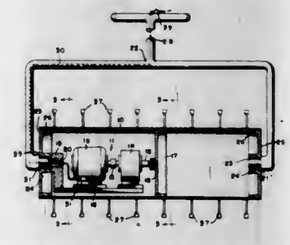
1. In combination with an upright receptacle for receiving articles to be cleansed by liquid within an interior zone of the receptacle and means within a receptacle side recess for agitating said cleansing liquid, said receptacle having a rectangular opening in a horizontal plane above the level of said agitating means, a baffle panel assembly extensible within said opening into substantially horizontal overlying and covering relation with the interior zone of the receptacle for confining said agitated liquid therein, said assembly including hinge means interconnecting panels to fold together upwardly thereby lifting the hinge means in response to movement of the assembly toward a first upright wall of the receptacle defining one side of the receptacle rectangular opening, the panels extending substantially vertically in folded-together relation so as to be confined adjacent said upright wall and within a vertical projection of the opening, and means for moving said assembly transversely toward and away from said receptacle wall and out of and into covering relation with said zone, said means being outside said interior zone of the receptacle and the entire extent of said means within said receptacle being confined adjacent a second upright wall extent of the receptacle defining a second side of the receptacle rectangular opening normal to said one side of said opening, whereby articles to be cleansed may be placed downwardly through said opening and into said interior zone and removed upwardly therefrom without interference from either said folded panels or said means, the edges of the panels when extended into covering relation with the receptacle interior defining leakage paths for flow of liquid from above the panels downwardly into said interior zone.

3,051,458
MIXER FIXTURE
Stephen J. Fraenkel, Winnetka, Ill., assignor to Stanray Corporation, Chicago, Ill., a corporation of Delaware
Filed May 31, 1961, Ser. No. 113,824
5 Claims. (Cl. 259—138)



1. An improved mixing or stirring apparatus comprising in combination a spool-like element, a shaft extending axially from said element for attachment to rotating means, said spool-like element having a hollow body portion with a slot in the rear wall thereof, means holding a flat stirring member in said hollow body with a portion of said means within said slot, said means being unbalanced on opposite sides of its longitudinal axis of rotation, whereby upon rotation of said element centrifugal force will hold the means within said hollow body.

3,051,459
APPARATUS AND PROCESS FOR AGITATING STORED GRAIN
Marion Witzenburg, Dunkerton, Iowa
Filed Dec. 24, 1959, Ser. No. 861,868
4 Claims. (Cl. 262—14)



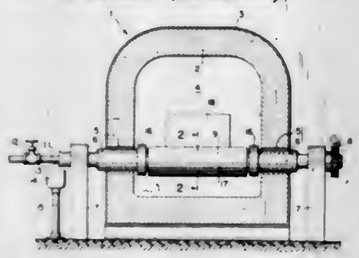
1. An apparatus for agitating stored grain comprising a cylinder, a plate mounted in and secured to the cylinder, a power plant mounted in the cylinder, including a moving part in operative engagement with said plate, to effect rotation of the cylinder when the power plant is in operation, fingers extending from said cylinder, the

fingers being elongated to penetrate through the grain crust into the mass subjacent the crust to establish breathing spaces for the grain, said cylinder being hollow to provide the necessary buoyance for preventing the agitator entity from sinking into the grain mass.

3,051,460
FURNACE CONVEYOR ROLL

Alfons A. Furczyk, Wyncote, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania

Filed Feb. 24, 1958, Ser. No. 717,174
2 Claims. (Cl. 263—6)

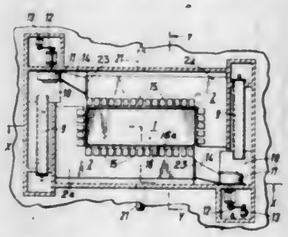


1. A conveyor roll used for supporting and conveying heated objects comprising an elongated cylindrical body, a cylindrical sleeve loosely received on said body, the diameter of said sleeve being only slightly larger than that of said body but large enough to hang loosely thereon whereby the interior of said sleeve engages said body only at its upper surface as said body rotates, and is spaced from said body at the sides and bottom thereof, said body being tubular, and means to circulate cooling water through the center of said body.

3,051,461
PROCESSING BATHS

Henry Lawson-Tancred, Wetherby, England, assignor to Tancred & Langley Limited, Leeds, England, a British company

Filed Mar. 14, 1960, Ser. No. 14,606
Claims priority, application Great Britain Mar. 26, 1959
8 Claims. (Cl. 263—11)

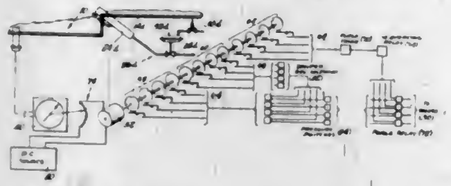


1. A processing bath comprising a vessel for the material to be heated, said vessel having an upstanding side wall, at least one plenum chamber extending horizontally along and adjacent to the lower edge of said side wall, a plurality of feeding ducts extending upwardly from and communicating with said plenum chamber, said feeding ducts being spaced apart from and parallel to each other and each having a wall spaced apart from and adjacent to said side wall of said vessel, said wall of each feeding duct which is adjacent to said side wall of said vessel being provided with venting openings for discharging hot gas against said side wall of said vessel, gas heating means, a second chamber into which hot gas is discharged from said heating means, means for drawing hot gas from said second chamber and delivering said hot gas under pressure into said plenum chamber, a gas passageway surrounding said feeding ducts for collecting the gas emitted from said venting openings, said gas passageway communicating with said second chamber whereby the gas discharged from said feeding ducts is recirculated under pressure with fresh hot gas from said heating means.

3,051,462
METHOD AND MEANS FOR OPERATING A SOAKING PIT

Anthony A. Fennell, Homewood, Ill.
(379 E. 147th St., Harvey, Ill.)

Filed Mar. 12, 1959, Ser. No. 799,030
7 Claims. (Cl. 263—15)



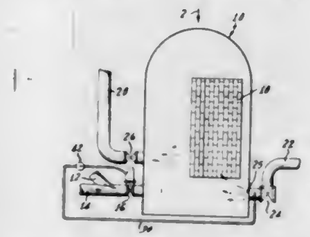
1. A system for heating materials comprising: a furnace; a plurality of energy transducers arranged to deliver heat energy to the interior of said furnace; regulating means for each of said transducers controllably supplying source energy thereto; rotatable shaft means external to said furnace; means for periodically and unidirectionally rotating said shaft means at a speed proportional to the temperature within said furnace; means individually conditioning said regulating means for operation; a first plurality of timing means on said shaft means individually actuating said conditioning means in sequence; means individually operating said regulating means when said regulating means have been readied for operation by said conditioning means; and a second plurality of timing means on said shaft means individually actuating said operating means in sequence, whereby to supply source energy to said transducers periodically and at selected intervals and whereby to vary said intervals according to the temperature within said furnace in order to minimize overheating of materials introduced therein.

5. The method of heating a soaking pit to a desired temperature by a plurality of burners, which method is characterized by the steps of: firing the plurality of burners in a predetermined repeated order to establish a heating cycle over a starting period of time; sensing the temperature within said pit; and reducing the period of time required to complete the repeated order of firing in the heating cycle in accordance with the approach of temperature sensed within the pit to said desired temperature.

3,051,463
COOLING MEANS FOR HOT BLAST STOVES

Ludwig Walther, Duren, Rhineland, Germany, assignor to Zimmermann & Jansen, G.m.b.H., Duren, Rhineland, Germany, a corporation of Germany

Filed Mar. 3, 1961, Ser. No. 93,144
8 Claims. (Cl. 263—19)



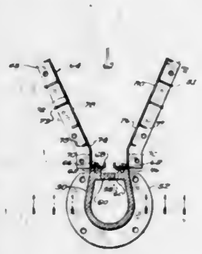
1. In a hot blast stove adapted to supply hot blast to a blast furnace and being periodically changed between an

"On Gas" condition thereof in which the stove checker work is heated by the combustion of an air-gas mixture and an "On Blast" condition thereof in which cold air is introduced into the stove, passes by the checker work to be heated thereby, and exits from the stove as hot blast destined for the blast furnace, said stove having a cold blast valve through which said cold air originating from a cold blast main passes before entering the stove and a hot blast valve through which the air heated by the checker work exits the stove when the stove is in the "On Blast" condition, said stove also having a burner shut-off valve through which an air-gas mixture enters the stove, when the latter is in the "On Gas" condition, where combustion thereof takes place for heating said checker work; the improvement comprising means for cooling the burner shut-off valve, said cooling means comprising conduit means having an inlet adapted to be in fluid communication with said cold blast main through which cooling air from the cold blast main is introduced and having an outlet connected to said burner shut-off valve through which said cooling air is introduced into the burner shut-off valve for cooling the latter, and means for preventing said cooling air from being introduced into said burner shut-off valve at any time that the latter is open and has an air-gas mixture passing therethrough.

3,051,464
AIR-HEATING GAS BURNER

Robert H. Yeo and Donald E. Wald, Muncie, Ind., assignors to Maxon Premix Burner Company, Muncie, Ind., a corporation of Delaware

Filed Oct. 20, 1958, Ser. No. 768,261
10 Claims. (Cl. 263—19)

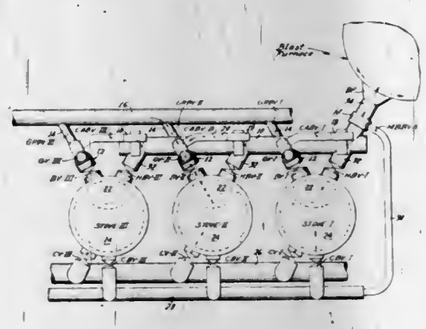


1. A high turn-down gas burner adapted for operation in an air stream flowing forwardly past the burner at a velocity of the order of 1500 to 4000 feet per minute, comprising an elongated burner body defining a fuel gas supply passage and having an elongated forward wall to lie transversely of the direction of the air stream, said wall having gas port means at a series of points along its length, flame shielding walls extending forward from adjacent the sides of the body in spaced relation along opposite sides of said gas port means, defining a low-flame zone in front of said gas port means, mixing plate walls extending obliquely forward and outward from said shielding walls in divergent relation at an included angle of the order of 50°, said walls defining a forwardly widening trough-shaped mixing space forwardly of said gas port means, said mixing space being forwardly wide open for free and open discharge communication with the passing air stream, said mixing plate walls projecting laterally of said burner body with their back faces positioned to lie exposed to the air stream flowing past the burner, a plurality of apertures in said mixing plate walls spaced both longitudinally thereof and at different distances from said burner body, said apertures being smaller than the wall areas between the same and having a total area substantially less than the forward open discharge area of said mixing space, the inner apertures being of smaller capacity than the outer apertures, air deflector means projecting obliquely outward and rearward into the path of the passing air stream from adjacent the down stream edges of said apertures, said burner body and divergent walls being shaped to divide and outwardly deflect the air stream flowing past the burner and cause such flow to create reduced pressure in said mixing space, and said apertures and deflector means being positioned and arranged to admit and direct air from such passing air stream into the mixing space in distinct jets flowing obliquely forward and inward in said mixing space in front of said low-flame zone, said gas port means being operable to discharge variable amounts of fuel gas from said burner body to said low-flame zone and mixing space whereby to provide low flame combustion in said zone and progressively higher flame combustion involving progressively more of the spaced air jets in said mixing space.

3,051,465
AUTOMATIC HEAT REQUIREMENT REGULATOR FOR AUTOMATIC CHANGE-OVER SYSTEM FOR BLAST STOVES FOR BLAST FURNACES

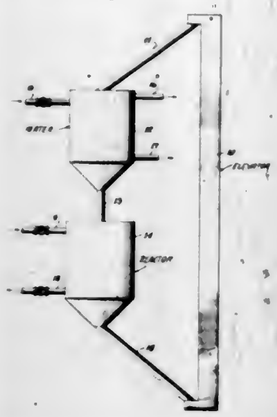
Hermann Jansen and Ludwig Walther, Duren, Rhineland, Germany, assignors to Zimmermann & Jansen Gesellschaft mit beschrankter Haftung, Duren, Rhineland, Germany, a corporation of Germany

Filed Nov. 16, 1959, Ser. No. 853,357
Claims priority, application Germany July 16, 1959
8 Claims. (Cl. 263—19)



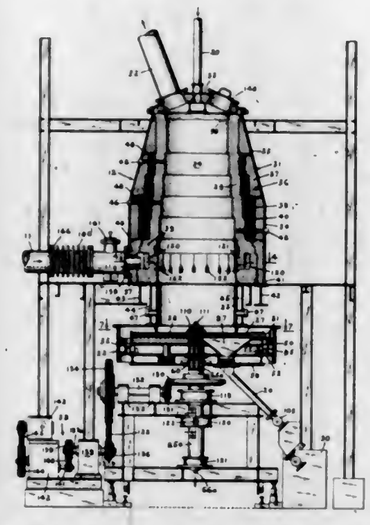
1. In a blast furnace installation having three hot blast stoves and adapted to be selectively operated either in a first condition in which all three stoves are utilized and changed over automatically, in a second condition in which two of the three stoves are utilized and changed over automatically, or in a third condition in which each of the stoves is automatically operated independently of the others, and having means for producing an electrical output signal proportional to the required load for said blast furnace installation; the improvement comprising means for automatically distributing the heat load for providing the required blast furnace load among said stoves for each of said three conditions, said distributing means comprising an electrically operated gas volume regulator means for each stove, means electrically connecting said output signal to each of said gas volume regulating means, and means for automatically interrupting said electrical connecting means to each gas volume regulator means when said installation is not operating in said first condition, whereby to automatically transmit said output signal only when the installation is operating in said first condition, for equally distributing said heat load among the stoves when the installation is operating in said first condition.

3,051,466
METHOD FOR HEATING GRANULAR SOLIDS
Robert D. Drew, Wenonah, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Jan. 3, 1956, Ser. No. 557,163
1 Claim. (Cl. 263—52)



In a thermal conversion process in which a granular contact material is passed as a compact gravitating mass through a heating zone in which a mixture of air and combustible gas is continuously introduced and burned in contact with the particles to substantially raise the temperature of the granular material to approximately 2000–3000° F. and in which the granular contact material at this elevated temperature is passed as a compact gravitating mass through a reaction zone in which saturated hydrocarbons are continuously introduced to contact the granular material, extract heat from the granular material, thereby substantially cooling the the granular material, and be transformed from saturated to unsaturated hydrocarbons, the improved method of introducing the mixture of air and combustible gas into the heating zone which comprises: introducing the contact material into the heating zone as it is discharged from the reaction zone at a temperature substantially below that required for effecting the conversion reaction of the saturated hydrocarbons to the desired unsaturated hydrocarbons, gravitating the granular contact material downwardly in said zone as a substantially compact mass, baffling the flow of contact material in said zone to direct the solid particles through vertical flow paths of substantially restricted cross-section, whereby the vertical velocity of the stream of granular material is substantially increased, introducing the mixture of combustible gas and air into said compact mass of granular material through laterally confined flow passages which terminate centrally within the flow paths of restricted cross-section, whereby heat produced by combustion of the gaseous mixture in the passages is rapidly carried away from the passages by the rapidly moving stream of solid granular material, the heat transfer effected thereby being sufficient to protect the passages from heat damage, discharging the granular material and the combustion gases from said restricted flow paths into a combustion region of substanially greater horizontal cross-section whereby the vertical velocity of the gravitating granular material is substantially reduced, the combustion of the combustible gases is completed and the temperature of the granular material is substantially increased to the desired approximately 2000–3000° F. range, withdrawing the combustion gaseous products from the heating zone and transferring the highly heated granular material from the bottom of the heating zone to the reaction zone.

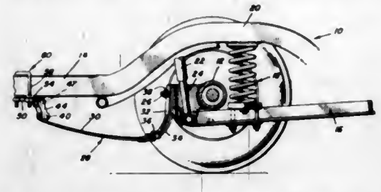
3,051,467
APPARATUS FOR PRODUCING SPONGE IRON
Charles R. Kuzell, Phoenix, Morris G. Fowler and John H. Davis, Jr., Douglas, Leonard Klein, Scottsdale, and Irvine Macdougall, Warren, Ariz., assignors to Phelps Dodge Corporation, New York, N.Y., a corporation of New York
Filed Mar. 8, 1960, Ser. No. 13,592
9 Claims. (Cl. 266—24)



1. In a reduction apparatus for the treatment of a comminuted charge containing metallic oxides to be reduced, a reduction chamber through which the charge is passed for reducing reaction having an upper end for the introduction of charge to be treated therein and a lower end from which to deliver treated charge, conduit means connected to said chamber for introducing a gaseous reducing agent into a charge in said chamber, a rotatable bottom closure having a circular periphery and closing said lower end of said chamber and upon which treated charge temporarily rests as it passes through said chamber, means mounting said bottom closure for rotation on a vertical axis, a rotatable delivery cylinder having cutter means at its periphery, means mounting said delivery cylinder on said bottom closure for rotation of its periphery in contact with the treated charge resting upon said bottom closure and with the axis of rotation of said cylinder extending from the periphery of said rotatable bottom closure toward its vertical axis, drive means connected with said bottom closure and drive means connected with said rotatable delivery cylinder operative to rotate said delivery cylinder on its axis of rotation simultaneously with the rotation of said bottom closure on its vertical axis, said cutter means removing small amounts from said treated charge upon rotation of said cylinder and bottom closure and delivering said amounts to a place outside of said chamber.

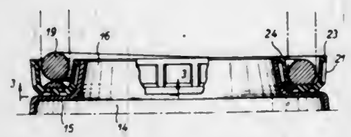
3,051,468
LEAF SPRING ATTACHMENT FOR VEHICLES
Sidney Lenet, 6511 Bradford Terrace, Philadelphia, Pa.
Filed Feb. 18, 1960, Ser. No. 9,469
1 Claim. (Cl. 267—16)

In combination, a vehicle frame member, a torque rod extending diagonally beneath said frame member, spring means operatively extending between and resiliently coupling said torque rod and frame member, a shock absorber connected at one end to said frame member and connected at its other end to the torque rod by a bracket, a supplemental spring assembly extending angularly from said torque rod and said frame rearwardly of said spring means, said spring assembly comprising a leaf spring curved upwardly at one end and having means thereon



securing said curved end against said bracket, and link means at the other end of said leaf spring with means extending therefrom securing the link means to said frame member.

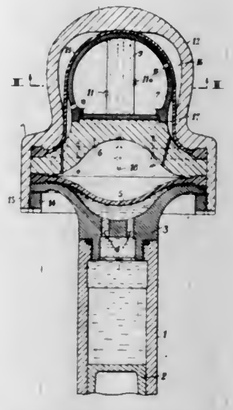
3,051,469
ANTIVIBRATING WASHER FOR HELICAL SPRING SUSPENSIONS
Antonio Boschi, Milan, Italy, assignor to Societe Applicazioni Gomma Antivibranti S.A., G.A., S.p.A., Milan, Italy
Filed Sept. 11, 1961, Ser. No. 137,101
Claims priority, application Italy Oct. 26, 1960
4 Claims. (Cl. 267—33)



1. In a vehicle suspension comprising sprung and unsprung masses and a helical metal spring arranged to work under axial compression between the masses, an antivibrating group interposed between one at least of the masses and the respective end turn of the spring comprising an annular rigid abutment surface fast with the said one of the masses opposite the said end turn of the spring, and a rubber washer arranged between the said end turn and abutment surface for transmitting load therebetween, the said rubber washer including a load-transmitting face resting on the said surface comprising a closed network of annular and radial ribs defining therebetween a uniform pattern of alveoli the plan area of which is comprised between 2/5 and 3/5 of the plan area of the said load transmitting face, the said washer having a Shore hardness between 60 and 85 and a corresponding elastic modulus between 40 and 80 kg./cm.².

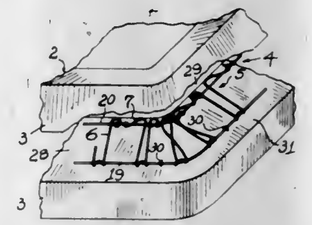
3,051,470
PNEUMATIC SUSPENSION FOR VEHICLES
Georges Boulet, Toulouse, France, assignor to Société à Responsabilité Limitée: Recherches Etudes Production R.E.P., Paris, France, a corporation of France
Filed Nov. 4, 1959, Ser. No. 850,832
Claims priority, application France Nov. 15, 1958
3 Claims. (Cl. 267—64)

1. A suspension comprising first and second members defining a space; a first elastic diaphragm sealably engaged between said members defining first and second chambers in said space, a cylindrical body coupled to one of the members and communicating with said first chamber, a piston displaceable in said cylindrical body to exert pressure in said first chamber, a liquid enclosed between the piston and the diaphragm, a hollow body on the other of said members, said hollow body including in part a spherical surface, said hollow body being provided with a plurailty of compartments and an orifice for each of said compartments opening externally of said body, the orifices being spaced longitudinally along said hollow body, a hollow cap over said hollow body and the other of said members and defining a space therewith, a second elastic diaphragm in the latter said space and sealably engaged between said hollow body and said hollow cap, said second elastic diaphragm being stretched over said spherical surface of the hollow body and dividing said latter space into two annular spaces, said other member



being provided with a plurality of passages providing fluid communication between said second chamber and one of the annular spaces; a gas in the second chamber, said one annular space, said compartments and said passages; said gas providing a predetermined position of the piston in the cylinder such that at least one of the orifices is exposed, the other of the orifices being closed by the second diaphragm.

3,051,471
WIRE REINFORCEMENT MEMBER FOR CUSHIONS
William H. Neely, Cleveland, Ohio, assignor, by mesne assignments, to Hoover Ball & Bearing Co., Saline, Mich., a corporation of Michigan
Filed Sept. 30, 1959, Ser. No. 843,502
3 Claims. (Cl. 267—81)

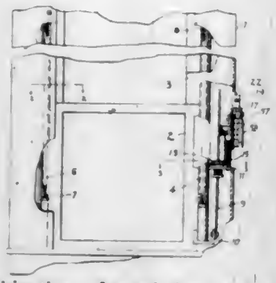


1. In a reinforced resilient cushion, a body of foamed sponge material having longitudinally slitted side walls, longitudinally extending a yieldable reinforcing member of substantially V-shape in transverse cross section embodying two angularly related elongated sections formed by laterally spaced cross members integrally extended from the apex of said V-shaped yieldable reinforcing member, said yieldable V-shaped reinforcing member being arranged within the slits of said side walls so that said cross members extend from said apex toward said side walls, and said slits being extended into said body a distance greater than the transverse dimension of said reinforcing member so that said slits are closable between said reinforcing member and said body side walls to enclose said reinforcing member within said body.

3,051,472
WINDOW RAISING APPARATUS WITH CONTROLLING MEANS

Henri Mandel, Cliffside Park, N.J.
(1 W. Tremont Ave., Bronx 53, N.Y.)

Filed July 3, 1959, Ser. No. 824,808
2 Claims. (Cl. 268—122)

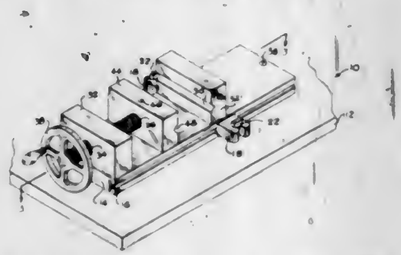


1. The combination of a window casing, a member movably mounted therein, spring means extending vertically of said casing and connected to said member for moving said member to full or partly opened position, a bar with spirally curved edges extending vertically of said casing and operatively connected to said member to be moved with said member, a gear train having a rotary element surrounding and meshing with said bar to be actuated thereby when said member and bar are moved to be opened by said spring, and a depressible stop mounted in the casing beside said gear train, said stop and said train having adjacent parts to be engaged with each other to stop the gear train, member and bar, and to be disengaged when the stop is released to permit said rotary gear train to be actuated, said element and said bar having a one way ratchet connection to enable said member to be retracted without operation of said gear train.

3,051,473
HAND VISE FOR DRILL PRESSES, MILLING MACHINES AND SURFACE GRINDERS

Walter Juhase, 2095 Davidson Ave., New York 53, N.Y.

Filed Jan. 5, 1960, Ser. No. 598
2 Claims. (Cl. 269—95)



1. A hand vise that is positionally connected to a machine, comprising a base, a block connected to the base at one end thereof and having a threaded opening therethrough, a screw extending through and threadedly engaging the threaded opening to move axially along the base as it is rotated, a jaw supported on the base and connected to the end of the screw to be moved along the base by axial movement of the screw, the jaw and block having coextensive faces for holding objects therebetween, the jaw having a second face with a gripping groove therein, and another jaw pivotally connected to the base at its end opposite the block, the pivotal jaw having a pair of faces each coextensive with and cooperable with the grooved face of the jaw connected to the screw for holding an object clamped between the jaws, each face of the pivotal jaw having a groove wherein one groove is parallel to the groove of the jaw connected to the screw and the other groove is normal thereto.

3,051,474
CLAMPING DEVICE

Robert W. Helda, Williamsville, and William L. Lehner, Snyder, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Nov. 28, 1958, Ser. No. 776,949
2 Claims. (Cl. 269—165)

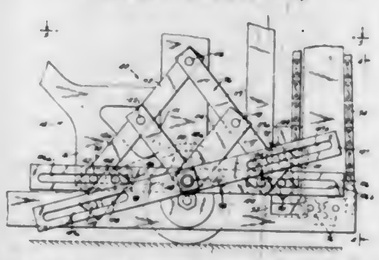


1. A clamping device for an article provided with an edge portion comprising a block formed with a longitudinal cylindrical opening and a shoulder formed at the exterior surface of said block to receive said edge portion of the article comprising a clamping surface and a back surface formed to abut said article edge portion lying substantially perpendicular to said clamping surface, a clamping bracket formed to provide clamping faces spaced from and aligned with said shoulder clamping surface and sleeves located adjacent the ends of said longitudinal opening, said clamping bracket, clamping surface, and back surface being positioned relative to one another to provide an open front and open ended longitudinally extending slot for receiving said article edge portion, said clamping bracket being mounted on the block for restricted transverse movement between an article release position and an article clamping position whereat said article edge portion is held between said clamping faces and the clamping surface of said shoulder, and a clamping bar mounted in said cylindrical opening for longitudinal movement and extending through said sleeves formed to operate transversely on said sleeves to provide transverse movement of the bracket clamping faces relative to said block clamping surface.

3,051,475
AUTOMATIC CLOTH-SPREADING MACHINE

Frederick Kibler, Whitestone, N.Y., and Harold Z. Shapiro, East Orange, N.J., assignors to Spreading Machine Exchange, Inc., New York, N.Y., a corporation of New York

Filed Sept. 20, 1960, Ser. No. 57,314
7 Claims. (Cl. 270—31)

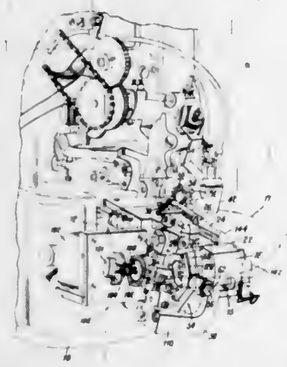


1. In a machine for spreading cloth in superposed layers including a carriage reciprocable between limits and a device for spreading said cloth fixed on a first shaft mounted for rotation on said carriage to turn said cloth-spreading device about at the limits of reciprocation thereof and for movement on said carriage to raise said cloth-spreading device as the height of said superposed layers increases; a mechanism for turning said cloth-spreading device in different vertical positions thereof comprising a driving crank, a second shaft rotatably mounting said driving crank at a fixed location on said carriage, means for rotating said second shaft for turning said driving crank over as said carriage reaches the limits of reciprocation thereof, a driven crank secured to said first shaft to turn said cloth-spreading device and to move vertically therewith, lever means formed with longitudinal slots at opposite ends thereof, both of said cranks including connecting pins projecting therefrom at locations radially offset from the respective centers of rotation thereof and engaging said respective longitudinal slots to make a rotary driving connection between said lever means and each of said cranks and permitting sliding motion of said lever means between said cranks to compensate for vertical movement of said driven crank, and a floating pivot mounting said lever means for pivotal movement whereby to transmit turning motion between said cranks and positioned for floating movement whereby to center said floating pivot between said first and second shafts in different vertical positions of said driven crank.

3,051,476
WORK STEERING AND FEEDING MECHANISM

Hans F. Schaefer, Jr., Rockport, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Oct. 10, 1960, Ser. No. 61,436
12 Claims. (Cl. 271—1)



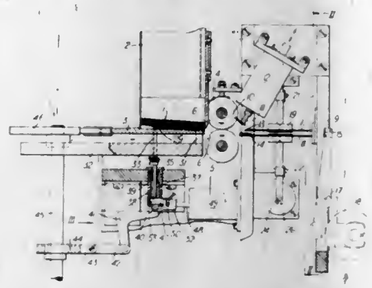
1. A machine for progressively operating on a work piece the margin of which is curved comprising an edge gage, a work support on which a work piece is to be automatically guided for movement relatively to the gage, feeding means arranged intermittently to engage, advance, and release the work to effect step by step translation thereof relatively to the gage, and curvature sensing means for causing said feeding means directionally to deviate during its advance to steer the work in accordance with the curvature being sensed.

3,051,477
CARD-FEEDING APPARATUS

Ivo Pavlic, South Croydon, England, assignor to International Computers and Tabulators Limited, London, England, a British company

Filed June 21, 1960, Ser. No. 37,763
Claims priority, application Great Britain July 17, 1959
17 Claims. (Cl. 271—3)

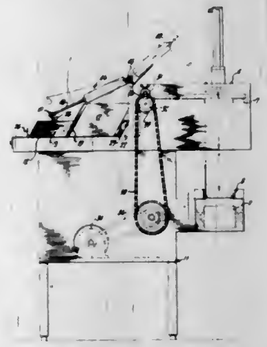
17. Card feeding apparatus comprising a magazine, at least two card-receiving platforms disposed one above the other in spaced relation each to receive a card from said magazine, feeding means operable to withdraw cards from the platforms, card ejectors, one for each platform, selectively operable to move a card from the platform appropriate thereto and to deliver the card to said feeding elements, card-feeding means operable to feed cards one at a time from the magazine to said platforms, and control means operable on operation of any one of said ejectors to effect operation of the card-feeding means to deliver a card from the magazine to the platform from which a card has been moved by the ejector appropriate thereto thereby to maintain a card in position on each of the platforms for selective movement therefrom by the ejector appropriate thereto.



3,051,478
CARTON BLANK FEEDER

Marlin B. Rasmusson, 6601 Elvas Ave., Sacramento, Calif.

Filed Feb. 1, 1960, Ser. No. 5,993
5 Claims. (Cl. 271—42)



1. A carton blank feeder comprising a frame, a carton blank support on said frame, a carriage reciprocable over said support, a pair of wheels on opposite sides of said carriage and rotatable on said support, means at one end pivoted on said frame and at the other end connected to said carriage for reciprocating said carriage over said support, means on said carriage between said wheels for engaging a blank on said support, and means including said wheels for turning said carriage for engaging said means with said blank during reciprocation of said carriage in one direction and for turning said carriage for holding said means out of engagement with said blank during reciprocation of said carriage in the opposite direction.

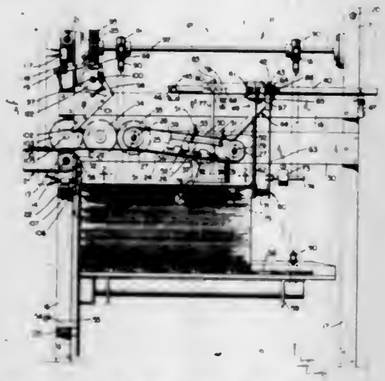
3,051,479
SHEET HANDLING APPARATUS

Owen L. Gore, Hillsdale, N.J., assignor to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware

Filed May 23, 1958, Ser. No. 737,307
11 Claims. (Cl. 271—68)

1. In the combination of a support for a pile of metal sheets and means to convey metal sheets one after another generally horizontally forward into the space over

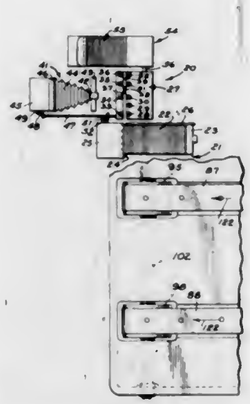
said support, a sheet slow-down means located above only a portion of the horizontal path of movement of said sheets in said space and adapted to contact the upper surface of the forward portion of each sheet as it moves into said space, magnet means located above the sheet slow-down means having a magnetic field extending downwardly through the slow down means and through only the forward portion of the horizontal path of movement of said sheet and adapted to magnetically attract only the forward portion of each sheet and lift the same so that its upper surface is in contact with the slow-down means while at the same time exerting a decelerating force upon said sheet whereby the sheet is decelerated so that the pull of gravity on the entire sheet will overcome the magnetic attraction of said magnet and the sheet will fall flatwise onto the pile support.



9. The method of delivering metal sheets to a pile support comprising the steps of feeding sheets one after another and in non-overlapping relation to each other and into a generally horizontally extending path in the space over said support, temporarily engaging only the forward end of each sheet after said end has passed substantially into the space over said support and before said forward end has passed completely through said space and simultaneously with said engaging causing the horizontally forward motion of each sheet to be decelerated, causing the rear end of each sheet to fall downwardly as each sheet is decelerated whereby the entire sheet will be pulled downwardly by gravity and the forward end will be detached from said temporary support.

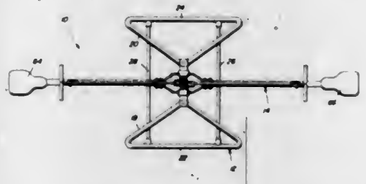
3,051,480
BUSINESS MACHINES
Harry Carlin, Inwood, N.Y., and Ronald J. Cieplik, Elizabeth, N.J., assignors to Vari-Typer Corporation, Newark, N.J., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,383
9 Claims. (Cl. 271—87)

1. A card stacker for a photocomposing machine or other business machine from which record cards are ejected, in vertical alignment, at a relatively high velocity and in a predetermined direction, said stacker comprising: a card storage magazine for receiving cards ejected from said machine and storing said cards in vertical alignment, said magazine including an adjustable support member for determining the storage capacity of said magazine; a feed roll for engaging said cards and continuing movement of said cards into said storage magazine; said feed roll being mounted for movement in a direction transverse to said direction of ejection of cards from said machine; biasing means urging said feed roll into contact with the last card deposited in said magazine; drive means, mechanically connected to said adjustable support member, for adjusting said support member to vary the capacity of said magazine; and control means for increasing the storage capacity of said magazine in accordance with actual need and independently of the thickness of individual record cards, said control means including a control switch electrically connected to said drive means and



a sensing arm, movable conjointly with said feed roll, for actuating said control switch between a normal condition and an actuated condition in response to movement of a plurality of record cards of predetermined total thickness into said magazine.

3,051,481
CHILD'S TEETER
Fred Johnson, 1925 N. Water St., Decatur, Ill.
Filed May 3, 1961, Ser. No. 107,360
6 Claims. (Cl. 272—54)

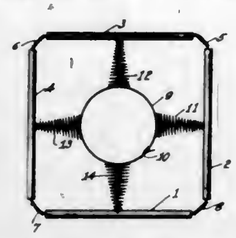


1. A teetering device comprising, a support, a teeter member centrally pivoted about a first fulcrum fixedly mounted by the support in spaced relation above the ground, a second fulcrum fixedly mounted on the support in vertical spaced relation above the first fulcrum, lever means pivotally mounted on the second fulcrum and disposed entirely above the teeter member, handle means pivotally mounted on the teeter member adjacent opposite ends thereof and operatively connected to an upper end of the lever means, and connecting means operatively connecting a lower end of the lever means to spaced points on the teeter member for pivotal displacement of the teeter member about the first fulcrum only in response to a displacing force applied through the handle means to the upper end of the lever means in excess of an amount proportional to a predetermined load differential at the opposite ends of the teeter member.

3,051,482
TOY EXERCISER
Lawrence M. Harpham, 9460 Acacia St., Fontana, Calif.
Filed Jan. 4, 1960, Ser. No. 374
1 Claim. (Cl. 272—80)

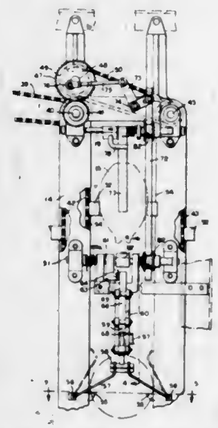
A toy exerciser including: a belt, spiral helical springs, the base ends of which are secured to the belt and extend radially from the belt in equidistantly spaced relation-

ship, rods forming an enclosure, the apex end of each helical spring being secured to a rod intermediate the



length thereof, and springs interconnecting adjacent ends of the rods forming the enclosure.

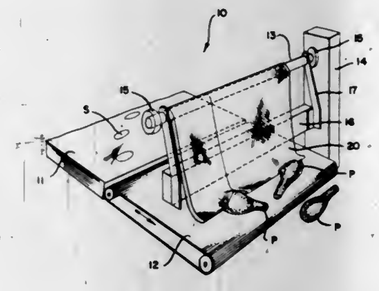
3,051,483
MECHANISM FOR ELEVATING AND SEPARATELY DISCHARGING BOWLING BALLS AND PINS
Kenneth C. Sherman, Glen Burnie, Md., assignor to Sherman Enterprises, Inc., Worcester, Mass., a corporation of Massachusetts
Original application Aug. 2, 1955, Ser. No. 526,033, now Patent No. 2,920,891, dated Jan. 12, 1960. Divided and this application Jan. 7, 1960, Ser. No. 975
2 Claims. (Cl. 273—43)



1. In combination, a bowling alley having a pit at its far end, an elevator arranged to receive balls and pins in said pit, said elevator comprising endless chains having opposed vertical reaches and pairs of opposed lift bars spaced at intervals along the chains and cooperating to elevate single balls or pins, a ball return adjacent to said elevator, means for selectively ejecting balls from the elevator to the ball return and allowing pins to be elevated further, and means at a higher level than the ball ejector for ejecting pins from said elevator, said ball-ejecting means including a rock shaft constantly rocking in timed relation to the upward travel of said lift bars, an arm loosely depending from said shaft and swingable between the reaches of the elevator chains toward said ball reutrn, and means responsive to contact by a ball being lifted by said elevator to operatively connect said arm to said rock shaft for a ball-ejecting stroke.

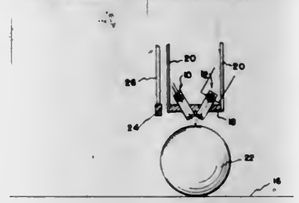
3,051,484
BOWLING PIN DUSTER
Joseph I. Shulevitz, Detroit, Mich., assignor to Cadillac Overall Supply Company, Detroit, Mich.
Filed Nov. 9, 1961, Ser. No. 151,325
2 Claims. (Cl. 273—43)

2. Means for dusting bowling pins passing through and being handled by an automatic bowling pin setter in a pit at the end of a bowling alley, including a constantly moving endless conveyor belt arranged in said pit in horizontal alignment with the end of the wood floor of the bowling alley to receive pins struck down thereon and for conveying said pins in the pit from the floor to a means for replacing the pins upon the floor in proper order, and including a horizontal bar arranged considerably above and transverse to the belt, resilient rubber bushings mounting the bar at its ends for reciprocal rotation so that it can rock back and forth, and a ball bumper fixedly secured to the bar and arranged above and transverse to the belt but below the bar for stopping a rolling ball and receiving the impact of the ball, with such impact being transmitted



from the bumper to the bar; said first-mentioned means comprising an endless cloth band loosely passed over and looped around said bar to rest upon the bar and covering a substantial length of the bar and hanging free downwardly with its free end dragging on the belt and with the frictional drag of the belt against the band normally being less than the frictional contact between the cloth and the bar; the band being advanced around the bar to change its portion in contact with the belt in response to the shock of a bowling ball striking the bumper, said shock being transmitted to the bar to momentarily reduce the frictional contact between the band and the bar and hence permit the frictional drag of the moving belt to drag the band and advance it a slight amount.

3,051,485
PRACTICE BOWLING ALLEY
David G. Heilbrun, 1211 Linden Ave., Dearborn, Mich.
Filed July 18, 1961, Ser. No. 125,011
3 Claims. (Cl. 273—54)



3. A practice bowling alley adapted for the rolling of a bowling ball thereover, comprising: a longitudinal section of a bowling alley; a suitable lamp adapted for generating a directed light beam at said bowling alley section, the angle of said light being inclined with respect to the plane of the alley; a photoelectric unit disposed at a selected point with respect to said lamp and said alley section and operative to be actuated by the reflection of light originating from said lamp off the surface of a bowling ball passing over a pre-selected spot on the alley; and signalling means connected to said photoelectric unit so as to be actuated upon the activating of said unit.

3,051,486
GUIDE MEANS FOR UNSIGHTED BOWLERS AND THE LIKE
William J. Zenchenko, Milwaukee, Wis. (1123 Jenifer, Madison 3, Wis.)
Filed Dec. 16, 1959, Ser. No. 860,002
8 Claims. (Cl. 273—54)



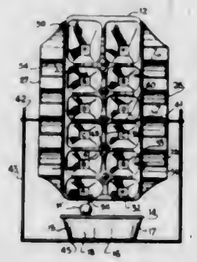
5. Guide means for unsighted bowlers comprising: an elongated strip member having a plurality of uncovered pockets disposed in axially spaced relationship to each other in the upper surface of said strip member, said pockets being arranged in a predetermined spaced relationship to at least one end of said strip member; a plurality of weight means each having touch sensitive indicia integrally formed in the top surface thereof and disposed one in each of said uncovered pockets whereby said strip is maintained in a preselected position upon and relative to a bowling alley and said indicia protrude from said pockets to reveal the predetermined spaced relationship of said pockets relative to said end of said strip member; a pin receiving means extending transversely of said strip member in corresponding relationship to each of said indicia; and an arm member associated with each receiving means having pin means attached thereto, said pin means coacting with said pin receiving means whereupon said arm member is pivotable laterally relative to said strip member to align the heels of an unsighted bowler with said indicia.

3,051,487
TOY BALL PROJECTOR
Walter Stewart Miller, 31 Regent St., Wilkes-Barre, Pa.
Filed Apr. 13, 1959, Ser. No. 806,068
1 Claim. (Cl. 273—87.2)



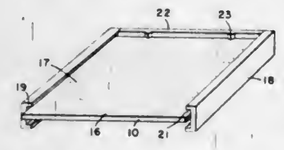
A device of the character described comprising, a longitudinal frame member of rectangular cross-section having narrow longitudinal top and bottom surfaces, deep side vertical longitudinal surfaces and a vertical rectangular shaped bearing surface on the forward end thereof, a downwardly and angularly and rearwardly extending grip member rigidly and integrally secured at its upper end to the rear end of said longitudinal frame member, a club shaft having upper and lower ends, a club head integrally secured to the lower end of said club shaft, a bearing member integrally secured to the upper end of said club shaft having a vertical bearing surface and a horizontal bore extending therethrough, a pivot pin horizontally arranged with its rear end secured within the forward end portion of said longitudinal frame member and having its forward end extending outwardly beyond said vertical bearing surface at the forward end of said longitudinal frame member, said bearing member at the upper end of said shaft pivotally mounted upon said pivot pin, said pivot pin extending through said bore in said bearing member and the vertical bearing surface of said bearing member in sliding contact with the vertical rectangular shaped bearing surface on the forward end of said frame member, said club shaft and said club head movable in a vertical plane at right angles relative to a plane extending vertically through said frame member, a solid longitudinal type trigger with upper and lower ends, said trigger having a transverse bore therein adjacent its upper end and pivotally mounted upon an outwardly extending pin arranged in one side surface and intermediate the ends of said frame member, a bore having a closed rear end arranged within the upper end of said grip member, a plunger mounted within said bore within said grip member, a compressible coil spring assembled between said plunger and the closed rear end of said bore in said grip member urging said plunger forwardly and outwardly from said bore, the forward end of said plunger in frictional contact with the rear vertical side of said trigger, said trigger actuatable by the finger of an operator pressing upon the forward vertical side of said trigger and compressing said spring, means pivotally connected with said trigger intermediate its upper and lower ends comprising a rigid rod with a rear end portion turned horizontally at right angles relative to its intermediate portion and extending into and pivotally assembled with said trigger, the forward end of said rod turned vertically downwardly with relation to the intermediate portion thereof and extending into and pivotally assembled with the rear end portion of a horizontal rotatable member, the rear end portion of said rotatable member being mounted upon the lower end portion of a vertical pin extending upwardly through said frame member, the forward end portion of said rotatable member comprising a vertical aperture, said club shaft extending through said vertical aperture, the internal side walls of said vertical aperture contacting said club shaft during movement thereof, whereby pivotal movement of said club shaft is effected when said trigger is squeezed toward said grip member by an operator.

3,051,488
CARTON GAME DEVICES
Nicholas J. Villa, 267 Ege Ave., Jersey City, N.J.
Filed Sept. 3, 1959, Ser. No. 837,863
1 Claim. (Cl. 273—105)



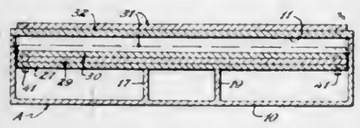
A balance game, comprising a generally rectangular box supported at an angle to the horizontal, said box having a plurality of pairs of longitudinally spaced compartments therein, a rod extending transversely and centrally through the box between compartments, a wire support for the rod whereby the box is tiltable in an elevated position on the rod, said compartments being adapted to receive balls thrown therein, said compartments having concave side walls, said box having side flaps hinged thereto, said flaps being formed with exterior troughs aligned with the concave side walls for guiding balls falling on the flaps into the compartments, said box being formed with webs transversely between the compartments and a central ridge longitudinally disposed between the compartments, said compartments having flat bottom walls and said ridge having flat portions adapted to carry indicia for identifying the compartments and for scoring points when balls are thrown into the several compartments.

3,051,489
GAMES
Hans Goldschmidt, Atherton, Calif., assignor to H. Goldschmidt & Associates, Inc., Menlo Park, Calif., a corporation of California
Filed Nov. 18, 1959, Ser. No. 853,752
2 Claims. (Cl. 273—136)



1. A game board construction, comprising: a game base having a planar upper surface provided with perforations in accordance with a predetermined pattern; a plurality of interchangeable game boards of a uniform size each adapted to substantially cover said planar surface and having a pattern of perforations different from the others to provide for the playing of different types of games; means for holding a selected game board in overlying position on said planar surface, said perforations in the respective game boards being arranged in such a manner as to align with perforations in said game base; and a plurality of game pieces each having one end adapted to extend through any perforation in a selected game board and be received in a corresponding perforation in said game base, at least one of said game boards being provided with a playing area in one portion thereof, a spinner dial in another portion thereof and a spinner needle mounted on a spindle adapted to extend through a perforation in said game board centrally disposed with respect to said spinner dial and being received in an aligned perforation in said game base.

3,051,490
COUNTING BOARDS
John H. Newman, 477 Holly, St. Paul, Minn.
Filed Feb. 24, 1959, Ser. No. 795,154
1 Claim. (Cl. 273—148)



A game counting apparatus including an enclosure including a bottom panel and rectangularly arranged side wall panels connected thereto and extending upwardly therefrom, a pair of parallel partition walls extending between two opposed walls of said enclosure dividing the area of said bottom panel into a center compartment and side compartment means between said partitions and the remaining side walls, said partitions being of substantially less height than said side walls, a plurality of game counting panels within said enclosure and resting upon said partition walls, each of said game counting panels having apertures therein arranged in a manner for use in keeping the score of a game and including indicia adjacent the apertures to assist in the keeping of the score, each of said panels having a plurality of projections extending in parallel relation from one surface and having corresponding sockets in the opposite surface for accommodating the projections of an adjoining panel, the projections and the corresponding sockets being in axial alignment, a top closure panel of sufficient dimensions so as to overlie said side wall panels, said top closure panel having sockets therein disposed in one face for accommodation of the projections of any of the first named panels and having projections on its other face spaced outwardly with respect to the sockets in its said one face, said side walls having pockets disposed in the upper edges thereof for accommodation of the projections on said other face of said closure panel.

3,051,491
RETURNABLE PRACTICE GOLF BALL
Nat Cabot, 843 Maple Lane, East Meadow, N.Y.
Filed May 15, 1959, Ser. No. 813,451
1 Claim. (Cl. 273—200)

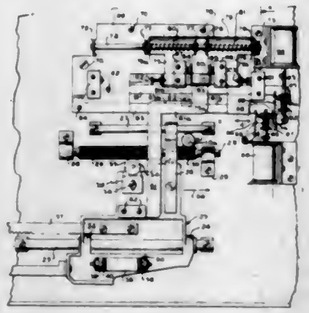


A tethered golf ball practice device comprising a ball having an eye fixed thereto and arranged adjacent to its exterior surface, a tethering cord having one end secured to the ground, link means comprising a swivel connecting the other end of said tethering cord with the eye of said ball, and an additional cord of greater length than said link means in the form of a loop connected at one end to the end of the tether cord attached to said link means and passing freely through the eye of the ball and having a knot on its other end larger than said eye, to thereby bypass said link means and become operative to prevent the ball from becoming detached from the tether cord if the link means happens to break during use.

3,051,492
MEMORY MARKING APPARATUS FOR THE HEAD CARRIAGE OF A PHONOGRAPH
Harry E. Crocker, Irvington, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Sept. 15, 1961, Ser. No. 138,444
5 Claims. (Cl. 274—14)

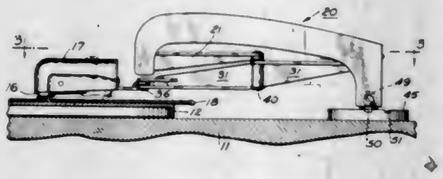
1. A memory marking apparatus for the traveling carriage of a phonograph comprising forward and rearward marking devices mounted for movement with said carriage, spring biasing means movable with said carriage for urging said marking devices respectively against forward and rearward faces on the carriage whereby the marking devices are normally conditoned to move in unison with the carriage, shiftable operating members respectively operatively interposed between said marking devices and carriage, said operating members being biased to non-operated positions with forces substantially greater than the forces transmitted thereto by said biasing means, respective marking switches operable by shifting movement of said operating members, and respective means for locking said marking devices to cause said for-

ward marking device when locked to define a prior position of farthest advance of the carriage while the carriage is moved rearwardly therefrom against the force of said biasing means and said forward marking switch to be operated when the carriage is moved in advance of said prior position of farthest advance, and to cause said



rearward marking device when locked to define a prior position of advance while the carriage is moved forwardly therefrom against the force of said biasing means and said rearward marking switch to be operated when the carriage is moved rearwardly from said prior position of advance.

3,051,493
PHONOGRAPH PICK-UP DEVICE
Raymond C. Dreier, 6930 South Shore Drive, Chicago, Ill.
Filed Mar. 26, 1959, Ser. No. 802,064
7 Claims. (Cl. 274—23)



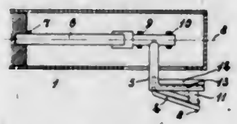
1. A tone arm assembly for a phonograph, disc recorder or the like having a turntable, comprising: a normally stationary supporting frame having a free-end portion adapted to project toward said turntable; a pair of Scott Russell straight line mechanisms mounted upon the underside of said frame in side-by-side position, each of said Scott Russell mechanisms respectively including a first link having first and second end portions, said first end portion of said first link being pivotally supported upon said free-end portion of said frame about a first pivotal axis, a second link having first and second end portions, means on said frame inwardly of said free-end portion thereof for supporting said first end portion of said second link for pivotal movement about a second pivotal axis parallel to said first pivotal axis, and means on said second end portion of said first link pivotally supporting an intermediate portion of said second link for pivotal movement about a third pivotal axis parallel to said first and second pivotal axis, the distances between said first and third axes and said second and third axes being constant and equal in each of said Scott Russell mechanisms, said second and third pivotal axes in each of said Scott Russell mechanisms respectively lying in and defining a plane and said planes being parallel; a tie element extending between and pivotally joined at a pair of fourth pivotal axes to the respective second end portions of said second links of said Scott Russell mechanisms, said fourth pivotal axes respectively lying in said planes and being parallel to the others of said pivotal axes therein with the distance between said third and fourth pivotal axes in each of said Scott Russell mechanisms being equal and equal to the distance between said second and third axes therein, said Scott Russell mechanisms and said links thereof and said tie element being supported entirely by said frame for movement with respect thereto about said pivotal axes; and stylus carrying means mounted on said tie element and adapted to be disposed above said turntable, said Scott Russell mechanisms serving to limit said stylus carrying means to linear movement with respect to said frame.

3,051,494
GRAMOPHONE PICKUPS
Jean Walton, London, England, assignor to Cosmocord Limited, Waltham Cross, England
Filed Nov. 16, 1959, Ser. No. 853,269
Claims priority, application Great Britain Nov. 20, 1958
16 Claims. (Cl. 274—23)



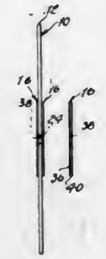
1. A gramophone pick-up arm assembly comprising a substantially vertical support, a member having appreciable weight pivotally mounted on said support by means of a single pivot point bearing, a pick-up supporting arm, horizontal pivot means pivotally mounting said arm on said weighted member for pivotal movement about a horizontal axis, said arm being substantially balanced about said horizontal pivot axis and the center of gravity of said weighted member and said arm together being below said pivot point bearing so that said weighted member depends by gravity from said pivot point bearing.

3,051,495
PICK-UP COMPRISING TWO OR MORE NEEDLES THE HOLDERS OF WHICH ARE EXTERNALLY DAMPED
Nico Wittenberg, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 1, 1954, Ser. No. 453,529
Claims priority, application Netherlands Sept. 17, 1953
1 Claim. (Cl. 274—37)



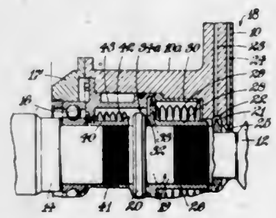
A pick-up comprising at least two resilient needle holders, a scanning needle mounted in each needle holder and alternately operable, a common transducing element, a separate armature for connecting each needle holder to said common transducing element, each of said armatures having an extension extending in a direction substantially parallel to the longitudinal axis of said needle holder, and a damping member arranged between each resilient needle holder and the extension of its corresponding armature and extending substantially perpendicular to the latter.

3,051,496
APPLIED RECORD SPACING DISC
Domenico Lawrence Borgia, 9910 Blackburn Ave., Livonia, Mich.
Filed July 17, 1958, Ser. No. 749,170
2 Claims. (Cl. 274—42)



2. A safety stacking device adapted to be applied to a phonograph record having a centrally-disposed circular label area and an annular rim portion with a sound groove zone disposed therebetween, said stacking device comprising a circular disc of transparent sheet material of approximately the same diameter as the label and of materially greater thickness than the thickness of said label, said disc having a central hole therein and a layer of transparent adhesive material disposed on one side thereof.

3,051,497
SEALING MEANS BETWEEN RELATIVELY ROTATING PARTS
Raymond Ernest Wigg, Littleover, and Norman Battle, Chilwell, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Jan. 20, 1958, Ser. No. 710,041
Claims priority, application Great Britain Jan. 25, 1957
10 Claims. (Cl. 277—3)



1. Sealing means to prevent leakage through a clearance space between relatively rotating parts of which one part extends through the other part, which means comprises a cylindrical-surfaced portion on the one part, a sleeve which is carried by said other part and has a cylindrical-surfaced bore occupied by the cylindrical-surfaced portion of the one part, a bellows member having one end connected to the sleeve and its other end connected to said other part to mount the sleeve on said other part in a positively sealed manner, the cylindrical surfaces of the bore and said portion having a small clearance from one another, the annular clearance space thus formed being open at one end to a chamber containing pressure gas leakage of which is to be prevented, said relatively rotating parts defining between them an annular chamber communicating with the opposite end of said clearance space, means to deliver oil under pressure to said annular chamber at a pressure exceeding that of the gas in the gas-containing chamber, fine helical grooving in one of the surfaces bounding said clearance space, the helical grooving in said one surface and the other surface together forming a pump creating a fall of pressure in the oil tending to flow in the clearance space and a rise of pressure in the gas tending to leak through the clearance space, whereby stable oil/gas interface is created between said ends of the clearance space, said means delivering oil under pressure to the annular chamber comprising a space containing oil at low-pressure, a second cylindrical-surfaced portion on said one part, a second sleeve on said other part, said second sleeve having a cylindrical-surfaced bore within which said second cylindrical-surfaced portion extends with a small radial clearance communicating at one end with the low-pressure oil space and at the other end with the annular chamber, one of the cylindrical surfaces of the second portion and second sleeve being formed with helical grooving to provide a pump taking up oil from the low-pressure oil space and delivering the oil at high pressure to the annular chamber.

3,051,498
MECHANICAL SEALS
Frederick B. Porges, Ben Mar, Carr Wood, Hale Barns, Cheshire, England, assignor to Flexibox Limited, Manchester, England, a company of Great Britain
Filed Feb. 15, 1960, Ser. No. 8,758
Claims priority, application Great Britain Feb. 23, 1959
2 Claims. (Cl. 277—93)



1. A mechanical seal for making a sealing joint between relatively rotating parts, such a seal comprising a stuffing box, interengaging rotary and stationary seal rings in said stuffing box, the rotary seal ring being resiliently pressed against the stationary seal ring which is mounted at the face of the stuffing box of the apparatus in connection with which the fluid seal is required, characterised in that there is a member bolted to the stuffing box and surrounding the stationary seal ring, the stationary seal ring having a part of greater diameter than the rotary seal ring, such part being clamped to the annular face of the stuffing box by a plurality of screws threading through said member on a pitch circle which is not less in diameter than the bore of the stuffing box so that the clamping pressure of each screw is transmitted through the part of the stationary seal ring of greater diameter substantially directly to the face of said stuffing box.

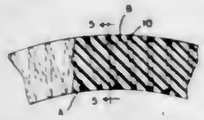
3,051,499
SPRING RING
Takashi Minegishi, Kawagoe City, Japan, assignor to Nippon Piston Ring Kabushiki Kaisha, Tokyo, Japan
Filed Dec. 16, 1959, Ser. No. 859,948
Claims priority, application Japan Jan. 14, 1959
4 Claims. (Cl. 277—140)



1. A piston ring assembly comprising in combination upper and lower rails spaced apart at an interval in an axial direction, and a spacer expander keeping said rails at said interval, said spacer expander being of channel shape and comprising circumferentially spaced upper and

lower flanges for receiving each rail and straight webs connected between said flanges defined by slits cut therein throughout their length from each edge of said flanges alternately and symmetrically, with a small axial projection defined at the end of each of said slits on the inner periphery of said flanges, said projections extending outwardly adjacent said rails, each of said rails being pressed by said projections outwardly in a radial direction, respective projections bearing against the rail nearest the end of the slit which defines said projections.

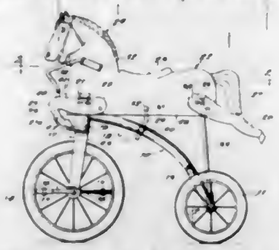
3,051,500
O RING STRUCTURE
Sumner D. Wiltse, 4943 Ridgewood Ave., Detroit, Mich.
Filed Sept. 16, 1957, Ser. No. 684,245
4 Claims. (Cl. 277—228)



1. An article of manufacture comprising a composite two-part elastic radially expansible and contractible substantially non-compressible circumferentially stretchable shear resisting sealing O-ring of uniform circular radial cross section throughout its circumference, one part aforesaid of said O-ring being an annulus consisting of an endless solid elongated member of circular shape and constituting an annular core of said O-ring, said annulus having a uniform circular radial cross section throughout its circumference, being formed of stretchable resilient material, and having a circular center line, the other part aforesaid of said O-ring being an annulus consisting of an endless substantially tubular reinforcing cage for the first mentioned annulus, the second mentioned annulus having the same circular shape and having the same uniform circular radial cross section as the first mentioned annulus, the second mentioned annulus having a circular center line coinciding with the circular center line of the first mentioned annulus and disposed in a plane at substantially right angles to the axis of said O-ring, the cage of the second mentioned annulus consisting of an endless strand having along the coincident center lines of the first and second mentioned annuluses circumferentially spaced interconnected helical convolutions of uniform diameter extending substantially radially and embedded in the surfaces of all sides of the first mentioned annulus, each of the convolutions of said strand having an outside diameter equal to the outside diameter of the endless elongated member so that the exterior surfaces respectively of the elongated member and cage aforesaid are flush with each other and provide said O-ring with a continuous relatively smooth composite exterior surface throughout its circumference.

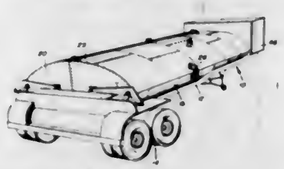
3,051,501
STEERING APPARATUS FOR CHILD'S VEHICLE
Opal L. Bunn, Chicago, Ill., assignor to Fields-Mabie Corporation, a corporation of Illinois
Original application Sept. 2, 1958, Ser. No. 758,434. Divided and this application Mar. 20, 1961, Ser. No. 97,985
4 Claims. (Cl. 280—1.188)

1. A child's vehicle, comprising: a tricycle frame and wheels of usual structure having a front wheel steering fork pivotally secured in said frame, said pivotal connection including means disposed within the connection for receiving a handle bar support; a simulated animal body form secured to said frame, the head and forward portion of said body form extending over and forwardly of said steering fork with a portion of the body extending over and about the upper portion of said fork and frame enclosing the same; a handle bar with a steering handle extending rearwardly on either side of the front portion of said body form in a position to enable a child astraddle the body form to steer the vehicle by grasping said handles; and a support secured to said handle bar, ex-



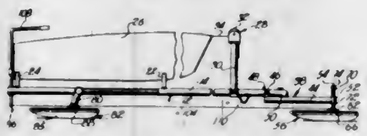
tending downwardly in front of the body form, rearwardly therefrom toward the steering fork below the animal body and then upwardly and into said connecting means to form an operable connection to the front wheel steering fork, said support being spaced forwardly of the for- in front of the body form.

3,051,502
TRUCK TANKER CONSTRUCTION
Donald G. Webster, 4018 N. Monroe St., Spokane, Wash.
Filed May 7, 1957, Ser. No. 657,683
9 Claims. (Cl. 280—5)



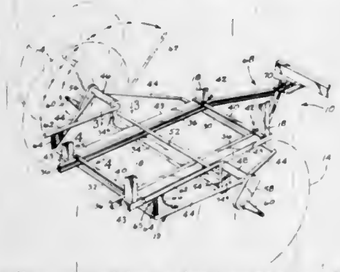
1. In combination with a convertible transportation vehicle of the tanker type including a frame having a plurality of supporting wheels, a sealed tank body construction carried by said frame, said tank body construction including a plurality of individual, adjoining, and sealed tanks, said tanks being normally arranged in a compact manner for transporting a liquid cargo, support means supported from said frame, means pivotally mounting each of two of said adjoining tanks of said tank construction on said support means along one side of each of said two adjoining tanks for movement about a fixed axis of rotation generally paralleling an axis extending longitudinally of said frame for movement toward and away from each other providing a space therebetween for carrying bulk cargo when said pivotally mounted tanks are pivoted away from each other.

3,051,503
ICE CONVERSION UNIT FOR BOAT TRAILERS
David Halperin, Shawnee, Kans., assignor to Catamaran Corporation of America, Kansas City, Mo., a corporation of Missouri
Filed Sept. 8, 1959, Ser. No. 838,787
5 Claims. (Cl. 280—16)



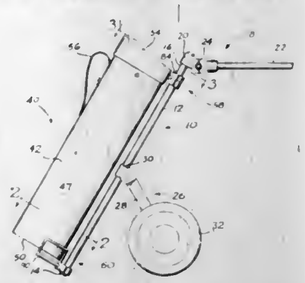
1. In a mobile unit, a frame assembly having means thereon adapted to support a boat in a relatively fixed position on said frame assembly and including an elongated member disposed in a normally horizontal position substantially perpendicular to the normal path of travel of the unit; tongue means secured to said frame assembly in substantially perpendicular relationship to said member and extending forwardly from said frame assembly; a pair of side skate components each including an elongated connector having ice-engaging means thereon at one end thereof; a front steering skate component including an elongated element having ice-engaging means thereon at one end thereof, said components being disposed for imparting mobility to said frame assembly with the boat thereon over the frozen surface of a body of water; and means for releasably securing the opposite ends of said connectors to respective ends of said member to space the ice-engaging means on said connectors a substantial distance outwardly of the ends of said members and for releasably securing the opposite end of said element to said tongue means, said connectors and said element being in positions permitting the same to be readily removed, the connectors being replaceable with wheel and axle structures and the tongue means connectable to a vehicle to thereby impart mobility to said frame assembly over the surface of the ground.

3,051,504
TRAILER WITH VERTICALLY ADJUSTABLE FRAME
Harold Perry Bruvold, 5106 Fairview Ave., Boise, Idaho
Filed Dec. 24, 1959, Ser. No. 861,857
2 Claims. (Cl. 280—43.18)



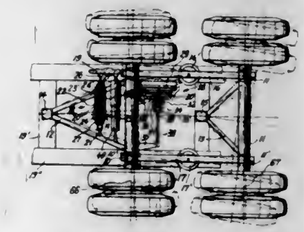
2. A trailer comprising a load-supporting frame; said frame having elongated and transversely extending frame sections at the front and rear thereof occupying substantially a common plane with bottom portions defining a base for the frame adapted to rest squarely on the ground and top portions defining a support plane for a load, laterally spaced longitudinals disposed over the transversely extending frame sections and secured thereto, a pair of inclined frame sections on each side of the frame secured to the transversely extending frame sections, one to each, and converging at a location spaced outwardly of the ends of the transversely extending frame sections and intermediate the ends of the frame, and at least a pair of transversely extending clamp bars detachably connected to and extending over the tops of the longitudinals for securing a load in place on the frame; support wheels outwardly of either side of said frame; and means disposed laterally outwardly of said longitudinals mounting the support wheels on said frame; the latter means comprising an axle bearing mounted on the ends of the pairs of inclined frame sections, a drop axle rotatably journaled in each axle bearing including an offset wheel spindle rotatably mounting one of said support wheels, an arm connected to each drop axle, and means detachably connecting each arm to the frame including bias mechanism interposed between the frame and arm accommodating swinging of the arm on rotation of the drop axle; said frame including a brace member disposed intermediate the ends of the frame extending between said bearings.

3,051,505
ATTACHMENT OF GOLF BAG TO CART
James E. Flanagan, 1119 SE. 146th Ave., Portland, Oreg.
Filed Mar. 21, 1960, Ser. No. 16,539
4 Claims. (Cl. 280—47.26)



1. In combination with a wheeled golf cart and an elongated golf bag mounted thereon at the rear thereof, said golf cart having an upright frame substantially coextensive with the length of the bag, means holding the bottom of the bag from lateral shifting relative to said frame, and detachable mechanism securing the top of the bag to said frame and holding the bag dependently on the frame with the bottom of the bag restrained from swinging to the rear of the frame, said mechanism comprising a first locking member secured to the bag over an expanse extending transversely of the bag and held from twisting relative to the bag about an upright axis, a second locking member secured to the frame in fixed position thereon, one of said locking members having a horizontally extending tenon portion and the other of said locking members having an horizontally extending and complementary mortise portion, said mortise and tenon portions being interengageable by relative horizontal movement extending laterally of the bag and having a construction that confines the two portions from relative vertical movement and twisting about a horizontal transverse axis when interengaged, and means for detachably securing said first and second locking members from relative horizontal movement.

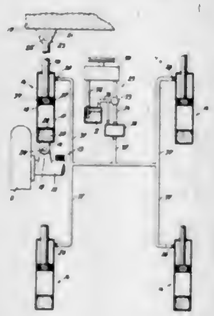
3,051,506
SYSTEM FOR STABILIZING A TWIN AXLE, PARTICULARLY A TWIN REAR AXLE OF A MOTOR VEHICLE RESPONSIVE TO THE TRAVEL THROUGH CURVES
Eugen Stump, Stuttgart-Unterturkheim, and Paul E. Strifler, Kornwestheim, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Feb. 2, 1960, Ser. No. 6,163
Claims priority, application Germany Feb. 4, 1959
13 Claims. (Cl. 280—81)



1. In a motor vehicle the combination comprsing a chassis, a pair of twin rear wheel axles, means including longitudinal links rigidly connected to each of said axles and pivotally connected to said chassis for affording each axle liberty of relative up and down movement of a steering movement in response to travel through a curve, coupling means pivotally connected to said chassis

and to said axles coupling the latter to each other for counter-rotative steering movements and including longitudinally extending leaf springs each being mounted on said chassis between its ends for pivotal movement about a vertical axis and having its ends connected to said axles for common movement transversely to said chassis, stabilizing means for resiliently arresting at least one of said axles in a vertical transverse plane of said chassis, said stabilizing means including a biased spring and being connected to said chassis and to at least one of said axles for locking the latter in said plane.

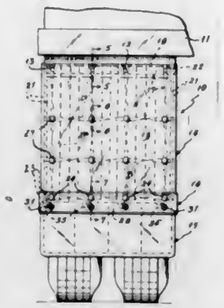
3,051,507
SHOCK ABSORBER CONTROL SYSTEM FOR A VEHICLE
Ernst J. H. Fiala, Sindelfingen, Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Jan. 16, 1959, Ser. No. 787,200
Claims priority, application Germany Jan. 18, 1958
6 Claims. (Cl. 280—124)



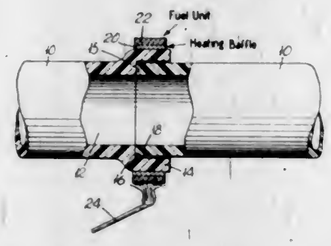
1. In a vehicle having a body supported by and mounted on wheels for relative up and down springing movement, the combination comprising hydraulic shock absorbers individually coordinated to the wheels, each shock absorber being composed of a cylinder element and of a piston slidably guided therein and provided with a piston rod element extending out of said cylinder element, one of said elements being connected to the associated one of said wheels and the other element being connected to said body in a manner causing said springing movement to produce relative reciprocation of said elements, said hydraulic shock absorbers coordinated to some of said wheels including piston rod elements having a diameter different than that of the piston rod elements of shock absorbers coordinated to others of said wheels, pressure producing means connected to each shock absorber for maintaining pressure in the cylinder element thereof, and means connected with said body and at least one of said wheels and responsive to variations of the elevational position of said body relative to said wheels and connected with said pressure producing means for controlling the latter to maintain said cylinder element under a variable pressure causing said last mentioned shock absorber to maintain said body substantially at a selected elevational position irrespective of changes of the load imposed on said body.

3,051,508
VEHICLE SPLASH GUARD
Robert P. Federspiel, 6317 Hurstgreen Lane, Affton, Mo.
Filed Feb. 13, 1961, Ser. No. 88,819
4 Claims. (Cl. 280—154.5)

1. A vehicle splash guard comprising a main section having top, bottom and side edges, a frame extending around the outer periphery of the main section spaced from the edges thereof, longitudinal stringers connecting the top and bottom frame members, transverse stringers connecting the side frame members, said longitudinal and transverse stringers crossing with mutual bearing contact therebetween to define a series of hinge points, rivets positioned at the stringer intersections to securely position said stringers, a plastic body covering said frame, said frame being bonded to said body, said rivet heads being positioned on the surface of said body, a replaceable end section, and means at the bottom edge of said main section to engage said replaceable end section.

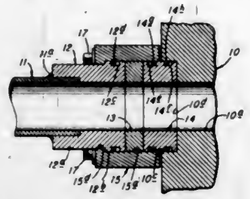


3,051,509
FUSED BELL PLASTIC PIPE JOINT
Peter Wilton, Plainfield, and Franklin D. Marrow, Middlesex, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Feb. 18, 1959, Ser. No. 794,154
8 Claims. (Cl. 285—21)



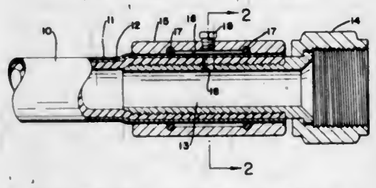
1. Method of joining an open bell to an open plain end of organic resin plastic pipe conduit, said open bell having an internal annular shoulder and an inner surface adapted to snugly receive said open plain end, which comprises inserting said open plain end into said open bell into abutting relation with said internal annular shoulder with their hollow interiors in alignment and the outer organic resin surface of said open plain end in plastic to plastic contact with the inner organic resin surface of said open bell, encircling said bell with a heat conductive sleeve on the outside with a layer of a substance capable of emitting heat when consumed by slowly propagating low ignition, and igniting said substance to transfer heat through said sleeve and open bell into said open plain end to fuse said inner organic resin surface of said open bell to the contacting outer organic resin surface of said open plain end, while maintaining a through passage from the hollow interior of said open plain end through said annular shoulder to the hollow interior of said open bell.

3,051,510
HYDRAULIC CONNECTING STRUCTURE
Leslie J. Dawes, Van Nuys, Calif., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 19, 1959, Ser. No. 854,112
6 Claims. (Cl. 285—31)



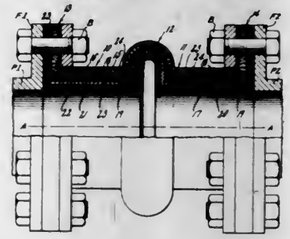
1. A joint structure for making fluid connection between two members rigidly fixed with respect to each other, one of said members being a body member having a port and a counterbore at the outer end of the port, and the other member being a fluid-conducting member, said structure comprising: a head portion with a cylindrical external surface of diameter slightly less than said counterbore on said tubular fluid-conducting member; first and second rigid tubular spacers, said second spacer having an external cylindrical surface of the same diameter as said head portion for slidably fitting in said counterbore and being of length greater than said counterbore, and said first spacer having radial dimensions corresponding to said second spacer for fitting between said head portion of said tubular member and said second spacer for spacing them apart; the ends of said first spacer and the abutting ends of the adjacent members being substantially perpendicular to the axis of said head portion and body member; a retaining sleeve having a cylindrical bore dimensioned to slidably fit over said head and spacers and maintain them in alignment; first sealing means on said head for sealing between the cylindrical surface of said head and said sleeve; second sealing means on said second spacer adjacent one end thereof for sealing between the cylindrical surface of said second spacer and said sleeve; third sealing means on said second spacer adjacent the other end thereof for sealing between the cylindrical surface of said second spacer and the cylindrical surface of said counterbore; the distance between the face of the body member and the end of the head portion being at least equal to the distance between said third sealing means and said one end of said second spacer whereby upon the removal of said first spacer said second spacer may be moved axially towards said head portion, thereby exposing said third sealing means, and means for detachably securing said sleeve to said body member.

3,051,511
HOSE COUPLING HAVING FLUID PRESSURE BALANCING MEANS
Thomas L. Fawick, Statler Hotel, Cleveland, Ohio
Filed July 14, 1958, Ser. No. 748,356
2 Claims. (Cl. 285—106)



1. A hose coupling assembly comprising a hose of elastomeric material having an annular wall which is expandable radially outward under pressure at the inside of the hose, a rigid annular nipple tightly received inside the hose in fluid-tight engagement with said annular hose wall at one end of the hose, a rigid annular sleeve at the outside of said hose wall extending around the hose and said nipple at said one end of the hose, said sleeve being insertable endwise onto the hose prior to the insertion of said nipple therein, said sleeve having at its inside circumference an annular groove of substantial axial length extending around the outside of the hose, said nipple when inside the hose forcing the contiguous portion of the hose wall radially outward tightly against the portions of said sleeve axially outwardly of said groove, said nipple and said contiguous portion of the hose wall each having at least one transverse opening therein in radial registration forming a registered opening which provides fluid communication between the interior of the nipple and said internal groove in the sleeve, said sleeve having transverse opening means therein which extends from the outside of the sleeve to said internal groove, said sleeve opening and said registered opening being at substantially the same axial and radial position along the hose, closure means closing said transverse opening means in the sleeve in fluid tight fashion, and means carried by said sleeve at the opposite ends of said recess and deformable under pressure to provide fluid tight seals between the sleeve and the outside of the hose, whereby pressure fluid within said hose is communicated through said registering transverse openings in said nipple and said hose wall into said annular groove to press said hose wall radially inward against said nipple, said nipple being removable from said hose, and said sleeve being removable endwise from said hose after the removal of said nipple.

3,051,512
EXPANSION JOINT
Lawrence Cranston, Glen Rock, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 20, 1958, Ser. No. 722, 806
1 Claim. (Cl. 285—114)

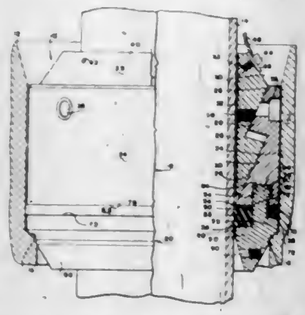


In an expansion joint of the type formed of plies of rubber and fabric and having an annular arch portion interconnecting generally cylindrical portions, said cylindrical portions having axially spaced circumferentially extending metal reinforcing rings embedded therein, the improvement comprising an embedded layer of longitudinally extending wires extending from one end of the joint to the other over the outer surfaces of said rings and bound down between and engaging the outer surfaces of said rings by wires which are embedded in said plies of said joint and are wound circumferentially of the joint between said rings.

3,051,513
HANGER ASSEMBLY AND SEAL THEREFOR
John D. Watts and Elwood K. Pierce, Jr., Houston, Tex., assignors to Gray Tool Company, Houston, Tex., a corporation of Texas
Filed Mar. 11, 1959, Ser. No. 798,709
12 Claims. (Cl. 285—146)

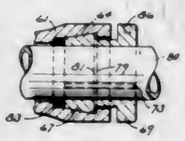
1. A hanger assembly for supporting an inner pipe string from the interior seat of a casing head comprising

a plurality of arcuate segmental upper and lower members disposable together in cooperating relation with respect to each other to form a substantially radially rigid annular body having an exterior seat for engaging the interior seat of a casing head, a bore for receiving a pipe string, and means for supporting a pipe string received in said bore, said members in cooperating relation being arcuate about a common axis, said upper and lower members having axially extending first and second holding



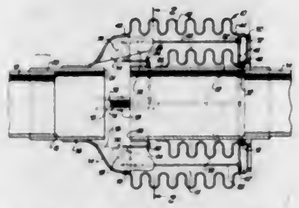
means, respectively, adapted to engage one another upon relative arcuate movement about said common axis from a first position of cooperating relation wherein said members are movable out of and into cooperating relation to permit the same to be moved into surrounding relation to a pipe string between the ends thereof and a second position of cooperating relation wherein said members are fixedly retained by said holding means in cooperating relation to form said substantially radially rigid annular body.

3,051,514
CONNECTING MEANS HAVING A CAM OPERATED SPLIT CONTRACTIBLE SLEEVE
James W. Consolloy, Pennington, N.J., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Filed Mar. 13, 1958, Ser. No. 721,130
2 Claims. (Cl. 285—215)



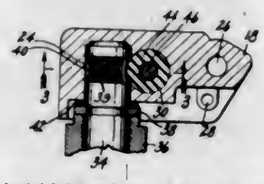
1. A connecting means for a cylindrical member, comprising in combination a socket having an axial bore therethrough and a substantially radially extending end wall at its open end, a frustro-conical counter bore in said socket, said counter bore being axially directed toward the open end of the socket and having a substantially radially extending end wall joining the wall of said axial bore, a split frustro-conical sleeve non-removable mounted in and adapted to rotate in said counter bore, said sleeve being slit from end to end longitudinally along its axis, said sleeve having a portion thereof extending outwardly beyond the end wall of said socket to facilitate its rotation, said sleeve having a cylindrical bore adapted to receive internally said cylindrical member and a radially outwardly projecting shoulder thereon engaging the end wall of said socket, an axially directed peripheral low pitch cammed surface on one of the end walls of said socket, a mating axially directed peripheral cammed surface on said sleeve, the pitch of said mating cammed surface being below the angle of repose of said sleeve in said socket, said socket and said sleeve being so constructed and arranged that when said sleeve is rotated in one direction relative to said socket the sleeve is urged axially in the frustro-conical counter bore of said socket in the direction of reduced diameter by said mating cammed surfaces thereby compressing said sleeve and reducing said longitudinal slit thereby reducing the bore of said sleeve causing the same to grip a cylindrical member placed therein, said sleeve when rotated relative to said socket in the other direction axially separating said mating cammed surface permitting said sleeve to be moved in said counter bore in the direction of increasing diameter thereby releasing the compression on said sleeve and thus increasing the bore of said sleeve to release said cylindrical member therein.

3,051,515
PRESSURE COMPENSATING EXPANSION JOINT
Robert W. Graves, Canoga Park, Calif., assignor to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Aug. 17, 1960, Ser. No. 50,260
8 Claims. (Cl. 285—228)



8. A flexible and shiftable joint for fluid-tight interconnection of adjacent ends of first and second axially aligned tubes comprising: first and second open-ended, tubular bellows members disposed coaxially of the tubes, said second bellows member having a smaller mean diameter than said first bellows member and being nested within said first bellows member, a fluid-tight connection between each bellows member adjacent one end thereof and a respective tube end portion, a fluid-tight connection between said bellows members adjacent their other ends to complete fluid-tight interconnection of the tube ends, line pressure tending to spread the tube ends apart also exerting a force tending to expand the larger bellows member axially, and means within said joint extending between said bellows members and linking the larger bellows member adjacent its said other end with both tube ends for delivery and redirection of such force into axially directed contracting force tending to bring the tube ends into closer proximity.

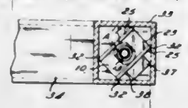
3,051,516
WINDSHIELD WIPER ARM ATTACHMENT
Francis M. Ryck, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 14, 1959, Ser. No. 846,412
8 Claims. (Cl. 287—53)



1. In a windshield wiper organization, an actuating shaft having a serrated annular groove adjacent its outer end, an inner arm section having a socket recess adapted to receive the end of said actuating shaft, elastically compressible wedge means of rubber-like material arranged

transversely of the axis of said shaft and carried by said inner arm section for engaging said serrated groove, and means for compressing said wedge means to securely lock the inner arm section to said shaft at an infinite number of relative angular positions therebetween.

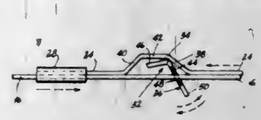
3,051,517
SPRING METAL U-SHAPED ANCHOR
Abraham Yalen, 2292 S. Taylor Road, Cleveland Heights 18, Ohio
Filed Jan. 17, 1961, Ser. No. 83,199
5 Claims. (Cl. 287—54)



1. The combination of thin wall tubular bodies and a tube coupling device therefor comprising:
(*a*) thin wall tubes rectangular in transverse section,
(*b*) the end of at least one said tube being end cut for abutting engagement with a second tube,
(*c*) a coupling device for joining said tubes comprising a spring metal U-shaped tube engaging member wherein the dimensions of the transverse section of the abutting tube are larger than the dimension between the outside surfaces of the side walls of said U-shaped member adjacent the free ends thereof when expanded and an anchor expansion mechanism member,
(*d*) said U-shaped member having a parallelogram base with a centrally located opening therein and rectangular side walls perpendicular thereto and extending upwardly therefrom in parallel planes on opposite sides of the longitudinal plane of the diagonal of said transverse section of said abutting tube, the said side wall edges disposed in longitudinal sliding engagement within said abutting tube and position retaining means therefor,
(*e*) the said anchor expansion member is mounted between the side walls of said U-shaped member and in substantial alignment therewith,
(*f*) the said anchor expansion mechanism member having an upper and lower U-shaped spring clip each having an opening in the base thereof,
(*g*) the arms thereof extending in the same direction and relative position as the side walls of the said U-shaped member and arranged in co-axial alignment with the base opening thereof,
(*h*) lateral wings on the upper free ends of said spring clips,
(*i*) a draw bolt in said openings in said spring clips and said U-shaped member and extending through a similarly aligned opening in at least one surface of a second tube,
(*j*) an upper and lower wedge block screw threaded on said draw bolt with the larger ends thereof superjacent said wings whereby rotation of said draw bolt will distend the wings into impinged relation with the side walls of said U-shaped member and effect the frictional engagement of the edges thereof with the adjacent inner walls of said tube and join said tube into abutting joint engagement with said second tube.

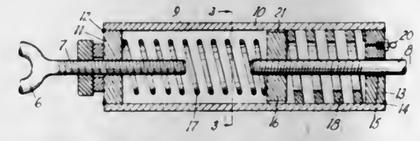
3,051,518
TROUSERS CREASER AUTOMATIC LOCK
Lawrence J. Meyer, St. Charles, Mo., assignor to Lee-Rowan Company, St. Louis, Mo., a corporation of Missouri
Filed Apr. 20, 1960, Ser. No. 23,399
1 Claim. (Cl. 287—58)

An automatic lock for a trousers creaser having two elongated relatively movable sections and guides at the ends of said sections receiving each section to hold the sections together in slidable relation, said lock comprising a bowed portion in a first one of said sections and a lock element fitted upon the second one of said sections underneath said bowed portion, said bowed portion being comprised of opposed first and second upwardly converging sides connected by a substantially flat top side, said lock element being comprised of a rigid plate-like material having a locking portion provided with an opening conforming to the cross-section of said second one of



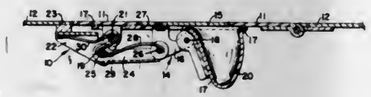
said sections and having an upper end connected at an obtuse angle to the locking portion and fitting into the bowed portion of the first section and a lower end extending substantially beyond the second section and being operable by a user, said locking portion being substantially flat and positioned upon the second portion at an obtuse angle underneath and engageable at its upper end with said first side of the bowed portion, said upper end of the locking portion being extended closely adjacent to and being engageable by the second side of said bowed portion.

3,051,519
HOLD DOWN AND TOWING CHAIN WITH TENSION CUSHIONING TURNBUCKLE
Stanley I. Sudeikis, Kalamazoo, Mich., assignor to Pilot Distributing Company, Battle Creek, Mich.
Filed Feb. 13, 1961, Ser. No. 88,981
1 Claim. (Cl. 287—60)



An elongated flexible towing and binding member having interior ends connected to oppositely threaded screws of a turnbuckle, said turnbuckle comprising a tubular body of noncircular cross section, end walls permanently and fixedly secured at each end of said body, one of said screws being threadedly engaged with one end wall, the other of said screws passing freely through the other end wall, an interior nut nonrotatably and slidably positioned in said body, said other screw being threadedly engaged with said interior nut, a relatively light spring bearing between said one end of said body and said nut, and a relatively heavy spring positioned between said nut and said other end wall, said heavy spring being substantially shorter than said body whereby said light spring holds said interior nut against the heavy spring in spaced relation to said end walls.

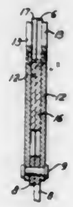
3,051,520
TOGGLE LATCH
Lloyd R. Poe, Los Angeles, Calif., assignor to Hartwell Corporation, a corporation of California
Filed June 1, 1960, Ser. No. 33,145
4 Claims. (Cl. 292—223)



1. In a flush type toggle latch having a support structure, a level pivotably mounted at a first fixed axis near

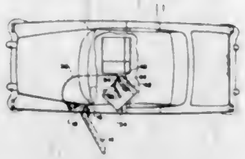
one end of said support, a latch bolt rotatably supported at a second fixed axis remote from said first fixed axis, said latch bolt having a keeper bearing surface, said second fixed axis being at one end of said bolt remote from said bearing surface, said bolt being rotatable about said second fixed axis between latching and retracted positions, a connecting link rotatably affixed at its ends to said lever and to said latch bolt, one end of said link being affixed to said bolt at a first movable axis, said first movable axis being at said latch bolt one end and offset from a line connecting said keeper bearing surface and said second fixed axis, the other end of said link being affixed to said lever at a second movable axis, said first axes defining a plane, said second movable axis being below said plane in said latching position and above the same in said retracted position, and a torsion spring having a coil portion encompassing said first movable axis and end portions connected to said second axes, the improvement which comprises oblong passages in said latch bolt one end, said passages being disposed at and about said first movable axis to accommodate limited swinging movement of said bolt when said second movable axis is below said plane.

3,051,521
AUTOMATICALLY RELEASING LIFTING TONGS
Edmund A. Skowron, Verona, Pa., assignor to Woodings-Verona Tool Works, Verona, Pa., a corporation of Pennsylvania
Filed Feb. 9, 1962, Ser. No. 172,318
3 Claims. (Cl. 294—83)



1. Automatically releasing lifting tongs comprising a vertical handle provided at its lower end with an upwardly extending slot through it, a cross pin extending across the lower part of the slot, a pair of inclined upper toggle links having upper ends pivotally mounted on said pin and extending laterally out of opposite sides of the slot and down, a crossed pair of lower toggle links, a center pin pivotally connecting the crossed portions of the lower links, end pins pivotally connecting the upper ends of the lower links to the lower ends of the upper links, clamping members secured to the lower ends of the lower links, a pair of vertical bars disposed in the handle at opposite sides of said slot and extending down below the handle with their lower ends mounted on the opposite ends of said center pin, the bars having vertical slots receiving said cross pin to permit vertical sliding of the bars in the handle, a stop member secured between the bars in the area between the upper and lower links, the stop member having downwardly facing surfaces, holding levers pivotally connected to the upper links and extending down and under said stop member surfaces while the stop member is in its upper position, and means connected to said levers urging their lower ends up against the stop member to normally hold said bars in said upper position to space said clamping members apart, said lower ends of the holding levers being swingable down away from said stop member surfaces by the pressure of the stop member against them when said clamping members are pressed toward each other manually.

3,051,522
SWIVEL SEAT CONTROL
Richard L. Myers, Royal Oak, Mich., assignor to Dura Corporation, Oak Park, Mich., a corporation of Michigan
Filed Apr. 15, 1960, Ser. No. 22,600
6 Claims. (Cl. 296—68)



2. In a motor vehicle seat actuating mechanism for a swivel seat, the combination comprising linkage means constructed for operation in a door hinge of a vehicle, a flexible cable, a flexible housing for said cable, one end of the cable joined to said linkage means, the corresponding end of the housing constructed for anchoring the same adjacent the door hinge of said vehicle, the cable and housing constructed for operative extension between the door hinge of said vehicle and the seat mount thereon, means for pivotally joining the other end of said cable to the swivelable part of said seat mount, and the other end of the housing constructed for anchoring the same to the stationary part of said seat mount, said pivotally joining means including a slide part for said other cable end, a housing for the slide part, and an overtravel spring in the housing operating between the slide part and one end of the housing.

3,051,523
COUNTERBALANCED TRUCK BED LID
William I. Boyce-Smith, Burbank, and Merrill R. Powell, Van Nuys, Calif., assignors to Leslie A. Dawes, Long Beach, Calif.
Filed Sept. 20, 1961, Ser. No. 139,496
8 Claims. (Cl. 296—100)



1. A counterbalanced lid structure capable of being removably mounted on an automotive pick-up type vehicle having a cab and truck bed, two side walls and a forward wall that extend upwardly from said bed, and a tailgate pivotally supported from the rear of said bed, which lid structure comprises: a rain gutter including an elongate web having first and second flanges extending upwardly from the sides thereof; means for holding said gutter at a fixed position adjacent said forward wall and parallel thereto; a rectangular lid having downwardly extending forward and rear end portions and side portions, said lid being of such dimensions as to cover said truck bed when said side portions are disposed adjacent the upper edges of said side walls and parallel thereto; engageable means disposed above said web; engaging means projecting forwardly from said forward end portion of said lid and capable of engaging said engageable means for pivotally supporting said lid on said vehicle; two parallel, laterally spaced support members affixed to the interior surface of said lid and extending longitudinally relative thereto; two longitudinally extending, laterally spaced, parallel, upwardly projecting ribs affixed to the bottom of said truck bed; two lugs projecting downwardly from said members in vertical alignment with said ribs;

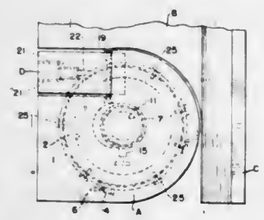
two sets of first, second, third and fourth links; a plurality of first means for pivotally connecting said links in each of said sets together in the form of a parallelogram; second means for pivotally connecting each of said first links to one of said ribs; third means for pivotally connecting each of said second links to one of said lugs; two tensioned helical springs that extend between said second and third links and at all times exert an upwardly directed force on said support members, with the magnitude of said upwardly directed force decreases as said lid is pivoted towards the fully open position, but which force is at all times just sufficient to balance said lid in the particular position to which it may have been pivoted; means for removably locking said links and said lid in a fixed open position relative to said truck bed; and means for locking said lid to said tailgate when said lid and tailgate are both in a closed position.

3,051,524
GUARD DEVICE
Clarence B. Palmer, Lincoln County, Mo. (R.F.D. 1, Old Monroe, Mo.)
Filed Aug. 26, 1959, Ser. No. 836,180
5 Claims. (Cl. 296—100)



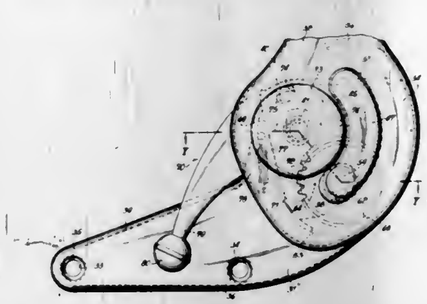
1. A guard device for shielding the corner formed by angularly related walls of a truck body having a flexible cover, said guard device comprising a body portion having angularly related abutments for contact with angularly related walls of a truck body, a rounded exterior surface for supporting a flexible cover, and means for securing the body portion to a wall of a truck body including a flange connected to said body portion and extending away from the exterior surface substantially normal to the plane of one of the abutments, said flange having an arcuate portion curving into a plane substantially parallel with said one abutment and spaced therefrom for receiving a wall of a truck body therebetween.

3,051,525
AUTOMOBILE SEATS
James A. Taylor, 25 Old Oak Road, Glen Ridge, N.J.
Filed June 16, 1958, Ser. No. 742,424
5 Claims. (Cl. 297—313)



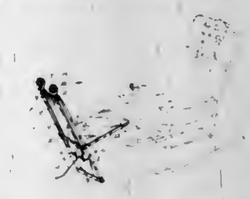
5. In a device of the class described, a driver's seat of an automobile, means for depressing a section of the front edge of such seat and so positioning the same relative to the remainder of the seat as to remove such edge from contact with the leg of the driver and means for maintaining such edge in a plurality of positions.

3,051,526
HINGE FITTING FOR SEATS
Paul Werner and Heinz Jung, Remscheid-Hasten, Germany, assignors to Fritz Keiper, Remscheid-Hasten, Germany
Filed Aug. 6, 1959, Ser. No. 832,004
Claims priority, application Germany Nov. 8, 1958
4 Claims. (Cl. 297—367)



1. A locking arrangement for adjustable seat back rests, comprising, in combination, a fixed seat support element; a back rest element; pivot means connecting said elements for free turning movement of said back rest element about a pivot axis; gear means secured to said back rest element concentric with said pivot axis; pinion means mounted on said seat support element for turning movement about an axis parallel to said pivot axis and meshing with said gear means; locking wheel means having locking teeth about the periphery thereof and being fixedly secured to said pinion means for turning movement with the same, said locking wheel means having a greater diameter than said pinion means; and locking lever means mounted on said seat support element for movement between a locking position and an inoperative position, and having a part matching said locking teeth of said locking wheel means and engaging the same in said locking position for locking said back rest element in angular positions angularly displaced relative to said seat support element, said angular positions being spaced in accordance with the shape and spacing of said locking teeth.

3,051,527
PORTABLE FOOT AND LEG REST
Richard J. McKenna, 20540 Eastwood Ave., Cleveland, Ohio
Filed Aug. 11, 1960, Ser. No. 48,948
3 Claims. (Cl. 297—439)

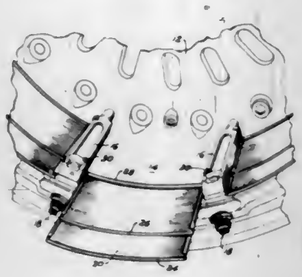


1. A portable foot and leg rest and relaxer comprising a floor engaging panel member adapted, when in use, to engage the floor with one of its ends as a fulcrum, and a tiltable foot and leg supporting panel having a transverse portion embracing said first panel, said panels being relatively slidable one along the other, cooperating means carried by said relatively slidable panels whereby the panels may be stacked one over the other in substantially parallel relation for storage or carrying, said last named means including a hinge member at the end of said first panel for pivotally and slidably receiving and guiding said transverse portion when said panels are moved to stacked position.

3,051,528
SEGMENTED HEAT SHIELD FOR WHEELS

Raymond R. Rogers, Paw Paw, Ill., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware

Filed Aug. 15, 1960, Ser. No. 49,567
4 Claims. (Cl. 301—6)

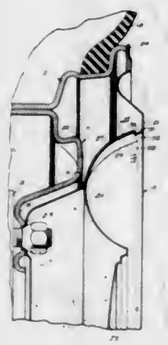


1. A wheel comprising a tire supporting rim defining the outer periphery of a brake receiving cavity, a plurality of brake drive keys spaced circumferentially along the inner surface of said rim, a heat reflective shield member removably secured at opposite sides to adjacent drive key members.

3,051,529
WHEEL COVER

George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Filed Sept. 17, 1959, Ser. No. 840,725
16 Claims. (Cl. 301—37)



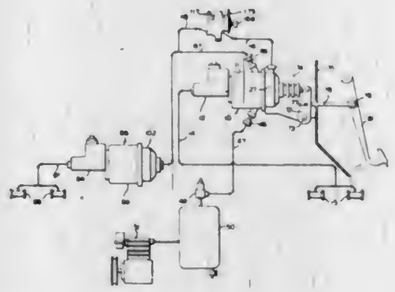
1. In a wheel structure including a wheel assembly having means thereon for retaining a cover in place, a cover assembly including a member having means engageable retainingly with said wheel means, and a second cover member related to said first mentioned cover member to conceal said cover means, said cover members having interlocking structure for retaining the cover members in assembled relation, said interlocking structure comprising a generally axially facing shoulder on one of the cover members and a generally oppositely axially projecting annular edge on the other of the cover members with spaced segments of the annular edge coacting with the shoulder in press-on, pry-off relation and having a portion providing an axially outwardly opening pry-off tool gap between the cover members into which a pry-off tool is adapted to be inserted for freeing said edge from said shoulder.

3,051,530
FLUID PRESSURE OPERATED BRAKE MECHANISM

David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Filed Apr. 6, 1959, Ser. No. 804,486
5 Claims. (Cl. 303—6)

1. In a motor mechanism, a fluid pressure operated motor having a pressure responsive unit and a pressure chamber at one side thereof, a device to be operated connected to said pressure responsive unit, a control valve mechanism carried by said pressure responsive unit coaxial therewith and having a control chamber therein, said valve mechanism having connection with sources of relatively high and low pressures and normally connecting said control chamber to said low pressure source, pedal operable means directly connected to said valve mechanism coaxially of said motor to operate it to disconnect said control chamber from said source of low pressure and connect it to said source of high pressure, a fluid line connected at its ends respectively to said control chamber and said pressure chamber, adjustable means in said fluid line having a normally open valve therein to normally connect said control chamber and said pressure chamber and being adjustable to close said fluid line upon the building up of any predetermined pressure in said pressure chamber to limit energization of said motor, and a pressure responsive device carried by said pressure responsive unit and exposed to pressure in said control chamber and connected for transmitting to said pedal operable means reaction forces proportional to pressures in said control chamber.

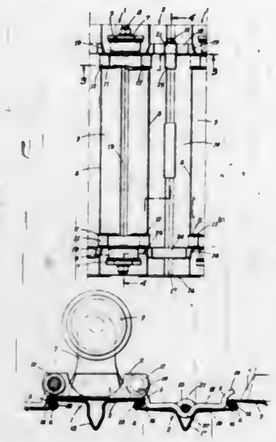


3,051,531
ENDLESS TRACK UNIT

Emmitt M. Tucker, Sr., Medford, Oreg., assignor to Tucker & Sons, Grass Valley, Calif., a corporation of California

Filed Sept. 6, 1961, Ser. No. 136,354
6 Claims. (Cl. 305—50)

1. An endless track unit comprising a plurality of links, means on alternate links for engagement with a supporting structure, cooperating hooks on the adjacent ends of all the links connecting the links together in relatively swivel and draft relationship, the hooks of adjacent links being arranged for disengagement from each other by transverse movement of one of such links in one direction relative to each other, and releasable means on

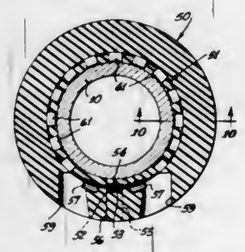


and engaging said adjacent links preventing such movement of the links.

3,051,532
WELL PIPE PROTECTOR

Charles H. Collett, 4116 Riverside Drive, Burbank, Calif.

Filed Nov. 20, 1958, Ser. No. 775,182
11 Claims. (Cl. 308—4)



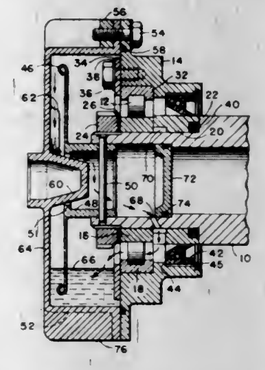
1. A protective collar for drill pipe, comprising a tubular elastomeric body split longitudinally and openable at one side for application to the pipe, metallic gripping means within said body and exposable at its inside surface for engagement against the pipe to prevent displacement of the body along the pipe, said gripping means comprising a metallic band bonded to the inner portion of the body and carrying circularly distributed pipe engaging projections, said band terminating near the body split, and means for interconnecting the portions of the body and band at opposite sides of the split to thereby hold the body in circularly tensioned condition and maintain the gripping means pressed against the pipe surface, said projections being in the form of teeth capable of penetrating the pipe surface.

3,051,533
RECIRCULATING LUBRICATION SYSTEM

Edward A. Brass, Norwalk, Conn., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Aug. 2, 1961, Ser. No. 128,752
3 Claims. (Cl. 308—187)

1. In a system for lubricating the bearings of a rotatably supported shaft, the combination comprising: a bearing support having an aperture for receiving said bearings, and end of said shaft being hollow and being rotatably mounted within said bearings; a lubricant dispersing element mounted on a second shaft positioned within the end of said hollow shaft, said second shaft being pinned to said hollow shaft for rotation therewith; an end housing connected to said bearing support to provide an enclosure for said end of said shaft and said dispersing element, said end housing having an end wall opposite the end of said shaft, said end wall having projections extending into said enclosure and forming a trough terminating in a deflector, said deflector extending into said end of said shaft; a reservoir of lubricant

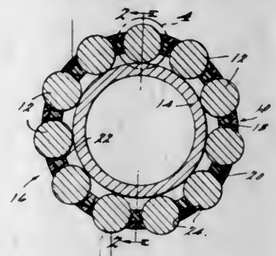


in said enclosure, said dispersing element extending from said second shaft and dipping into said reservoir; and a plurality of communicating passageways from the interior of said shaft through the walls of said shaft and over said bearings and back to said reservoir, whereby rotation of said shaft causes said dispersing element to centrifugally direct lubricant from said reservoir onto said end wall and whereby said lubricant thereafter gravity feeds along said trough and deflector into said hollow shaft and thereafter is centrifuged through said passageways and over said bearings and back to said reservoir.

3,051,534
BEARING CAGE ASSEMBLY

Theodor B. Kohler, Detroit, and Edwin Aho, Center Line, Mich., assignors to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan

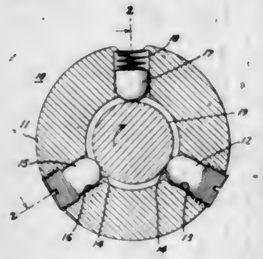
Filed Jan. 18, 1960, Ser. No. 3,070
17 Claims. (Cl. 308—217)



1. In a bearing which includes rollers and means for retaining said rollers in predetermined spaced positions with respect to the bearing axis, said means comprising a first ring member having circumferentially spaced openings therein in which said rollers are located, and a second ring member adjacent to and concentric with said first ring and provided with circumferentially spaced openings disposed in radial alignment with said first openings, said second ring having retaining portions at circumferentially opposite sides of each opening which are deflectable in directions extending generally radially of said second ring and each said opening in said second ring having a profile defined by confronting ones of said

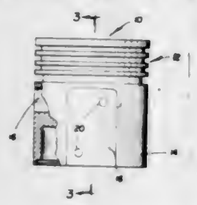
retaining portions being similar to and slightly smaller than the projected profile of each of said rollers so that said rollers are movable in one direction substantially radially of said rings through said openings in said second ring to a position within the slots in said first ring and retained against movement in an opposite direction by said retaining portions.

3,051,535
DRY LUBRICANT BALL-TYPE BEARING WITH NON-ROTATING BALLS
Robert V. Klint, Rexford, and Robert S. Owens, Watervliet, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 20, 1959, Ser. No. 854,391
14 Claims. (Cl. 308—240)



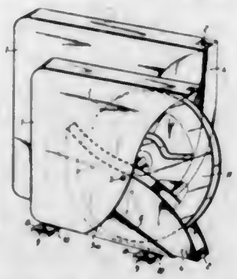
1. A unitary bearing comprising in combination a support member, a moveable element positioned for movement in said support member to define adjacent bearing surfaces, a dry lubricant film on one of said surfaces, means providing additional dry lubricant to said one surface, at least one fixed arcuate surface on the other of said surfaces engaging the said one of said surfaces so that sliding bearing action takes place defining substantially line contact between the arcuate surface and the said one surface on said film.

3,051,536
PISTON
John O. McLean, Thomas L. Fritzlen, and Roger H. Hendrick, Henrico County, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed July 7, 1960, Ser. No. 41,387
3 Claims. (Cl. 309—14)



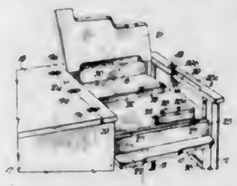
1. A cast piston for an internal combustion engine having an aluminum body with an annular ring area and a cylindrical skirt depending therefrom, said skirt having diametrically opposed wrist pin supporting bosses with aligned pin holes therein, said skirt having diametrically opposed wear areas substantially normal to the axis of said wrist pin bosses, said skirt having an exterior recessed portion in each of said wear areas, a semi-porous, arcuate, wear-resistant, metallic insert received within each of said recessed portions, said inserts being cast integrally with said piston and having their longitudinal edges flared inwardly throughout their entire length, and said inwardly flared longitudinal edges having a plurality of apertures throughout their length to receive metal from said piston as said piston is cast to lock said inserts in place.

3,051,537
DEVICE FOR STORING FILM AND SOUND RECORD TAPES
Ludwig Diehl, Rohrbach-Darmstadt, and Johann Heinrich Fuchs, Gadernheim, Odenwald, Germany, assignors to Firma Carl Schneider, Rohrbach-Darmstadt, Germany, a German company
Filed June 10, 1959, Ser. No. 819,341
Claims priority, application Germany June 12, 1958
11 Claims. (Cl. 312—20)



1. A tape cassette for storing circular tape reels and the like, comprising an outer container housing having oppositely disposed sides connected by a bottom, top and rear edge walls to provide a container open along the front edge, and a cover lid for said container forming therewith a generally square cassette having interior dimensions generally corresponding to the diameter of the circular elements to be stored, pivot means mounting said cover lid on said housing on an axis which is symmetrically spaced from the geometrical center of the cassette toward said bottom and front edges thereof a distance less than the radii of such circular elements and said axis being displaced from said geometrical center a horizontal distance less than the horizontal distance between said axis and the front edge of said bottom wall, opening of the lid being operative to move a circular stored element contained therein laterally outward beyond the front edge of the cassette whereby such an element may be readily grasped with the center of gravity of such an element at all times remaining within said generally square cassette.

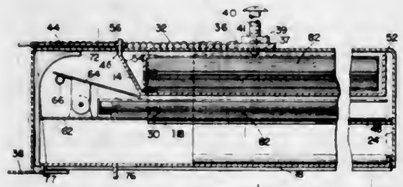
3,051,538
SEWING MACHINE CABINET
Joe T. Parsons, Box 212, Osceola, Ark.
Filed Sept. 19, 1960, Ser. No. 56,796
2 Claims. (Cl. 312—30)



1. In a sewing machine cabinet of the type having a hollow housing with a top, a pair of opposed side walls, a front wall, a back wall and an opening in the top, a shelf within the housing having one edge pivotally connected with the inside of the front wall of the housing for swinging movement of the shelf about a first horizontal axis located adjacent said front wall from a horizontal position to a downwardly inclined retracted position, said shelf, when in said horizontal position, substantially filling the inside horizontal cross sectional area of said housing, means for securing a sewing machine to said shelf so that in the horizontal position of the shelf the machine extends upwardly through said opening and in the retracted position of the shelf is below the top, a pair of

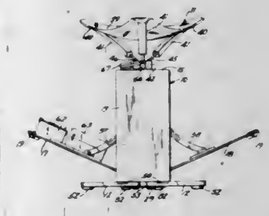
elongate substantially upright latching members each pivoted respectively to the opposed side walls of the housing for movement about a common, second horizontal axis parallel with but spaced from said first axis, said latching members spaced from one another to lie near said opposed side walls and having latching recesses adapted to engage the shelf at edge locations remote from the first axis and intermediate the front and rear edges of the shelf whereby to releasably support same in said horizontal position, tie means tying said latching members together for simultaneous movement, resilient means urging the said latching members into the position wherein said latching portions engage said shelf, one of said latching members extending upwardly past the upper surface of said shelf and through a second opening in said cabinet top for access thereto, said opening being of a size sufficient to permit sufficient pivotal movement of the latching members away from said shelf as to permit disengagement of the latching portions from the shelf whereby said shelf may be lowered to its retracted position, said shelf having openings adjacent said latching members constructed to permit said pivotal movement of said latching members and subsequent downward movement of the shelf without interference with the latching members.

3,051,539
TRUCK DRIVER'S DAILY LOG BOOK HOLDER
Henry M. Montgomery, 1115 S. Ash, Wichita, Kans.
Filed Mar. 21, 1960, Ser. No. 16,516
3 Claims. (Cl. 312—231)



3. A log book maintenance device for a normally driven closed vehicle having a substantially circular steering wheel in an area therein for the driver comprising, in combination, a box-like housing having door means pivotally mounted on said housing closing one end thereof, said housing having mounting means therewith for securing said housing to the interior of the vehicle near the driver area with said door means in position for ready access to the inside of said housing, the inside of said housing having means therein dividing same into a plurality of sections, said door means being mounted and positioned to when open provide access to each of said sections, desk-type means having a flat work surface removably positioned in one of said sections of said housing, said desk-type means having means therewith to mount same on the steering wheel with said work surface facing the driver, board means having a flat work surface removably positioned in another of said sections in said housing and having clip means therewith to receive and hold a log book or the like thereon, said board means and said desk-type means having cooperating structure therewith to removably mount said board means in fixed position on said desk-type means when the latter is mounted on said steering wheel, and drawer means removably mounted in said housing and of size and construction to receive and hold therein a log book, said drawer means having means therewith structurally cooperating with said housing to maintain said drawer means in position in said housing out of the way of said desk-type means and said board means to provide for easy withdrawal of said desk-type and board means from said housing and insertion of said desk-type and board means into said housing.

3,051,540
CARRYING CASE AND SEAT
Charles R. Wood, 45 Glenorchy Road, New Rochelle, N.Y.
Filed Oct. 5, 1960, Ser. No. 60,680
6 Claims. (Cl. 312—235)



1. In a carrying case and seat combination, an elongated case including end and side walls and top and bottom walls, said top wall having an opening therethrough, at least one of said side walls including a hingedly connected closure for gaining access to the case, a frame located within the case and extending between the top and bottom walls thereof and with an upper portion thereof projecting into said opening in the top wall of the case to gain slight lateral support from said case, a seat for supporting an individual in seated position thereon, means pivotally mounting said seat on the projecting upper portion of said frame with the seat arranged in spaced relation above said case whereby a weight imposed upon said seat is transmitted to said frame and by said frame to the bottom wall of the case, and bars extending longitudinally of said case below the bottom wall thereof and pivotally connected therewith for swinging movement of said bars from longitudinally extending relation with said case to divergent relation extending outwardly therefrom.

CHEMICAL

3,051,541
PROCESS OF VAT DYEING
Warren S. Clapp, Salem, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 25, 1960, Ser. No. 64,725
3 Claims. (Cl. 8—34)

1. In a continuous process for dyeing textile fabrics with vat dyes in which the fabric is first padded with an aqueous dispersion of the unreduced vat dye to a moisture content of from 50% to 100% based on the weight of the fabric and then either before or after drying the pigment-padded fabric is padded with a caustic alkali and alkali metal hydrosulfite reducing and developing solution, the improvement which comprises holding the vat dye pigment-padded fabric, prior to further processing, in the moist state and under non-drying conditions for a period sufficient to inhibit the migration of the dye pigment in the fabric during subsequent treatment and to substantially reduce the bleeding of the pigment from the textile in the reducing bath, which holding period is for from 1 to 15 minutes.

3,051,542
PROCESS FOR DYEING OR PRINTING POLYHYDROXYLATED MATERIALS

Hans Heinrich Bosshard and Heinrich Zollinger, Binningen, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed May 4, 1959, Ser. No. 810,540
Claims priority, application Switzerland May 6, 1958
10 Claims. (Cl. 8—46)

1. A process for dyeing and printing textile material selected from the group consisting of natural and regenerated cellulose, which comprises impregnating the material to be dyed with an aqueous solution of a member selected from the group consisting of an azo-dyestuff and a coupling component, which contains at least one acid group imparting solubility in water and at least one isothiocyanate group, fixing the member selected from the group consisting of the azo-dyestuff and the coupling component to the said material in the presence of a base, and, when the member of the last-named group fixed on the material is a coupling component, treating the material with an aqueous solution of a diazotized arylamine.

3,051,543
METHOD OF REACTING FELTED CELLULOSE, SULPHATE CELLULOSE AND SULPHITE CELLULOSE WITH GASEOUS KETENES

Anders Skogseid, Gentofte, Denmark, assignor to A/S Jens Villadsen's Fabrikker, Copenhagen, Denmark

No Drawing. Filed Feb. 25, 1957, Ser. No. 641,816
Claims priority, application Denmark Feb. 29, 1956
1 Claim. (Cl. 8—121)

Method of treating a felted fibrous sheet material containing cellulose fibres from the class consisting of fibres of cellulose rags, sulphate cellulose and sulphite cellulose to stabilize the material against the influence of moisture vapors, consisting in reacting said felted material in a substantially dry state by exposing it to a gaseous atmosphere at a temperature between approximately 100 and 250° C. and containing a gaseous low molecular ketene having the formula $R^1R^2C{:}C{:}O$ in which R^1 and R^2 are selected from the group consisting of hydrogen and an alkyl group having 1 to 3 carbon atoms, and R^1 and R^2 together have a maximum of 4 carbon atoms, so as to react said gaseous ketene with substantial numbers of alcoholic groups, and discontinuing the exposure of the felted material to said gaseous ketene-containing atmosphere when said felted material has absorbed an amount of said gaseous ketene which, calculated as ketene (CH_2CO), increases the weight of said felted material by 4 to 30 percent, whereby said felted material has a decreased ability to absorb moisture, an increased strength and improved stability of length and volume under variable moisture conditions.

3,051,544
LUSTERED WOOL PRODUCT AND METHOD OF MAKING THE SAME

Harold W. Wolf, Clifton, and Werner von Bergen, North Caldwell, N.J., assignors to J. P. Stevens & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 12, 1959, Ser. No. 792,726
8 Claims. (Cl. 8—128)

1. A process which comprises treating a raised woolen fabric containing raised fibers with a wool reducing agent to cleave cystine linkages thereof thus rendering the raised fibers orientable, treating the orientable fibers with a re-cross-linking agent and subjecting the fibers so treated to a straightening operation to produce a high luster whereby the same are oriented uniformly and set.

3,051,545
PROCESS OF FORMING SHAPED ARTICLES

Walter Steuber, Media, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Feb. 28, 1955, Ser. No. 491,208
1 Claim. (Cl. 18—54)

A process for producing a continuous filament which comprises extruding an aqueous mixture having a dispersion phase comprising polyacrylonitrile in discrete particulate form and a solution phase comprising water and sodium alignate dissolved therein through a spinneret into a dilute aqueous bath of calcium thiocyanate to coagulate and gel the sodium alignate; exposing the extruded material to the action of the said aqueous bath until the sodium alginate has coagulated and gelled into a filament in which the discrete polyacrylonitrile particles are immobilized in the gelled sodium alginate; and thereafter contacting the gelled filament with a concentrated aqueous bath of calcium thiocyanate to fuse the said discrete polyacrylonitrile particles into a continuous filament.

3,051,546
BORON COMPOUNDS AND THEIR PREPARATION

Henry C. Miller, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 29, 1959, Ser. No. 843,053
18 Claims. (Cl. 23—14)

1. A boron compound of the general formula

$$(R_1R_2HN{\cdot}BH_2)_zY{\cdot}xBH_3$$

where Y is selected from the group consisting of —SCN, —CN, OCN, $—NO_3$, —OOCR, —SR, =S, and $=SO_4$, R is a hydrocarbon radical of not more than 18 carbon atoms, R_1 and R_2 are selected from the group consisting of hydrogen and hydrocarbon radicals of not more than 18 carbon atoms, z is the valence of Y, and x is a cardinal number of 0 to 2 inclusive, with the proviso that x is 1 only when Y is selected from the group consisting of —CN and —SR, and is 2 only when Y is selected from the group consisting of =S and $=SO_4$.

3,051,547
PRODUCTION OF POTASSIUM FLUOTANTALATE FROM TANTALUM ORE AND THE LIKE

Edwin J. Bielecki, Boyertown, Pa., assignor to Kawecki Chemical Company, Boyertown, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 27, 1960, Ser. No. 65,300
4 Claims. (Cl. 23—19)

1. In the extraction of the tantalum and columbium contents of a tantalum ore in which the ore is digested in a concentrated hydrofluoric acid-containing solution, the resulting columbium- and tantalum-containing liquor is separated from the ore residue, the total columbium and tantalum content of the liquor (calculated as oxides) is adjusted by the addition of water if necessary to not more than about 1.2 pounds per gallon and its fluoride content is adjusted to about 5 to 20% by weight, the adjusted liquor is passed in contact with an anion-exchange resin capable of removing from the liquor its columbium and tantalum components, the thus-adsorbed columbium is selectively stripped from the resin by eluting it with an aqueous soultion of ammonium chloride acidified with hydrofluoric acid, and thereafter the adsorbed tantalum is stripped from the resin by eluting it with an aqueous solution of ammonium fluoride and ammonium chloride, the improvement which comprises recovering the adsorbed tantalum component in a state capable of being directly converted to potassium fluotantalate by (*a*) incorporating hydrochloric acid in the digestion liquor in amount such that when the columbium, tantalum and fluoride contents of the liquor are adjusted as aforesaid its chloride content is about 1.5 to 25% by weight, (*b*) effecting the elution of the adsorbed tantalum from the resin with a quantity of said acidified ammonium chloride eluant not in excess of that which will yield a solution composed essentially of the eluant containing at least 15 grams per liter of dissolved tantalum (calculated as oxide), (*c*) adding to the resulting tantalum-containing solution a stoichiometric excess of potassium chloride and an amount of acid sufficient to provide a strongly acidic solution of potassium fluotantalate, and (*d*) crystallizing the potassium fluotantalate from said solution thereof.

3,051,548
PROCESS FOR TREATING ORES CONTAINING CLAYS

William Page Wilson, Carlsbad, N. Mex., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Oct. 30, 1958, Ser. No. 770,607
4 Claims. (Cl. 23—38)

1. The method of treating sylvinite ores containing slime-forming clay to render said clay hard and non-dispersible which comprises heating said ore at a temperature of from about 400 to about 1000° F. under reducing conditions and then separating the clay from the ore values.

3,051,549
CONTINUOUS MANUFACTURE OF CALCIUM CYANAMIDE

Thomas Fischer, Trostberg, Franz Kaess, Traunstein, and Hermann Kronacher, Trostberg, Germany, assignors to Suddeutsche Kalkstickstoff-Werke Aktiengesellschaft, Trostberg, Germany

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,228
Claims priority, application Germany Apr. 1, 1959
3 Claims. (Cl. 23—78)

1. A method of the continuous manufacture of calcium cyanamide in a rotary kiln comprising passing powdered calcium carbide and nitrogen through a rotary kiln, adding to said calcium carbide powder calcium cyanamide powder of at least 15% higher fineness than said calcium carbide powder, and adjusting the amount of said added calcium cyanamide powder so as to maintain the temperature of the material at about 1000° C.

3,051,550
FREE-FLOWING SODIUM SILICATE POWDER

David B. Speed, Euclid, Ohio, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 14, 1961, Ser. No. 95,464
3 Claims. (Cl. 23—110)

1. The method of improving the free-flowing characteristics of sodium silicate powder comprising admixing therewith from 0.5 to 1.0% by weight of an amorphous precipitated silico-aluminate having a SiO_2 content from 68–75 weight percent, an Al_2O_3 content from 8–12 weight percent, an Na_2O content from 4 to 9 weight percent, and an average particle diameter size in the range from 0.02 to 0.04 micron.

3,051,551
SULFAMIC ACID

Henry J. Ferlin and Robert E. Brady, Joliet, and Walter J. Merwin, Orland Park, Ill., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

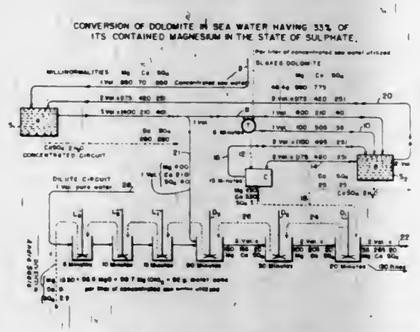
No Drawing. Filed Nov. 3, 1959, Ser. No. 850,539
2 Claims. (Cl. 23—166)

1. A process for the manufacture of sulfamic acid which comprises dissolving urea in oleum having a strength between about 79% and about 82% to provide a sulfur trioxide molar excess between 360% and 455% based on the urea, employing substantially 1 mole of urea for each mole of sulfuric acid, maintaining the resultant reaction mixture between about 50° C. and about 70° C. solely by evaporation of sulfur trioxide from the solution until the urea is substantially completely dissolved, and thereafter elevating the temperature of the reaction mix to at least about 80° C. and dissipating the heat of reaction by evaporation of sulfur trioxide from the mixture.

3,051,552
PROCESS FOR THE CONVERSION OF DOLOMITE

André Sablé, Marseille, France, assignor to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France

Filed June 30, 1959, Ser. No. 824,082
Claims priority, application France July 2, 1958
3 Claims. (Cl. 23—201)



1. A process of converting slaked dolomite into $Mg(OH)_2$ by employing an initial magnesium brine substantially saturated in NaCl and containing, in addition to chlorides, a substantial proportion of sulphate, which comprises mixing with said initial brine a sufficient quantity of a recycled concentrated brine rich in $CaCl_2$ than said initial brine to thereby cause the supersaturation of calcium sulphate without lowering the NaCl content of the mixture and crystallize a great part of the $CaSO_4$ in the form of gypsum in a desulphating step, removing the gypsum from its mother liquor, mixing magnesium brine mother liquor from said desulphating step with slaked dolomite in a first converting step to partially convert in concentrated medium the dolomite into $Mg(OH)_2$ and produce a concentrated brine richer in $CaCl_2$ than said mother liquor, utilizing the concentrated brine produced in said first converting step as the recycled brine which is mixed with said initial brine, removing the partially converted dolomite from said first converting step and carrying on the conversion in a second converting step by mixing it with magnesium-containing brine which is more dilute than said mother liquor and is obtained by diluting mother liquor from said desulphating step with water in order to increase the solubility of the $CaSO_4$ still present in the medium and avoid its precipitation, and to obtain finally a magnesium hydroxide with a very small amount of $CaSO_4$.

3,051,553
PRODUCTION OF BORON TRICHLORIDE

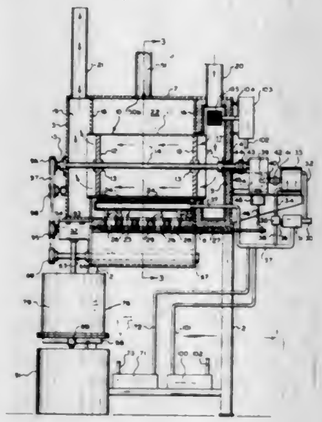
Paul M. Caro, Niagara Falls, N.Y., and Clark O. Miller and Raymond A. Xavier, Willoughby, Ohio, assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Nov. 29, 1956, Ser. No. 625,200
2 Claims. (Cl. 23—205)

1. In a process for the production of boron trichloride wherein chlorine is introduced into a primary reaction zone containing a bed of carbon and boric oxide maintained at elevated temperatures such that a normally solid

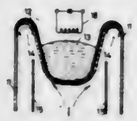
complex of boric oxide and boron trichloride is produced in addition to boron trichloride, the step of introducing the effluent from the bed and chlorine into a secondary reaction zone containing a bed consisting essentially of carbon maintained at a temperature within the approximate range 1200° F. to 1700° F. whereby the effluent from the secondary reaction zone is substantially free of the normally solid complex of boric oxide and boron trichloride, and recovering boron trichloride from the effluent from the secondary reaction zone.

3,051,554
CARBON RECLAIMING METHODS AND APPARATUS
Richard R. Butts, Saginaw, and Edward J. Whyte, Jr., Bay City, Mich., assignors to Carbon Chemical Corporation, Bay City, Mich., a corporation of Michigan
Filed Dec. 3, 1959, Ser. No. 856,984
23 Claims. (Cl. 23—209.8)



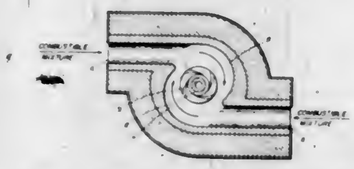
3. A method of reclaiming carbon from a gas containing carbon comprising burning said gas within a housing in an oxygen starved atmosphere to form free carbon and other products of combustion; rotating a collecting drum adjacent said burning gas; circulating air from outside said housing into contact with said drum; and refrigerating said air prior to its contact with said drum whereby said air is capable of cooling said drum.

3,051,555
CRUCIBLE FOR MELTING SILICON OF HIGHEST PURITY AND METHOD OF MAKING IT
Theodor Rümmel, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany
Filed Mar. 17, 1958, Ser. No. 721,895
Claims priority, application Germany Apr. 15, 1957
3 Claims. (Cl. 23—223.5)



1. A method of producing silicon crystals of highest purity, wherein the semiconductor material is melted in a crucible and the crystal obtained by drawing from the melt, comprising the steps of placing the semiconductor material to be melted into a crucible formed of a material which is electrically and thermally of good conductivity, constructed for operation as an element of an electrical high frequency heating system, lining said crucible on its inside with a highly pure coating, deposited from the gas phase, of the semiconductor material that is to be melted, melting the material to be processed by the action of high-frequency current flowing through the crucible body, the latter being slotted so that the field of the high frequency current is directed into the melt, cooling the crucible during the melting of the processing material to a temperature below the melting temperature of the crucible body and below the temperature of the semiconductor melt, and controlling the cooling to compensate for the Joul heat developed inside the crucible body and thereby maintain the semiconductor lining of the crucible in a solidified state and prevent fusing of the melt to the semiconductor lining.

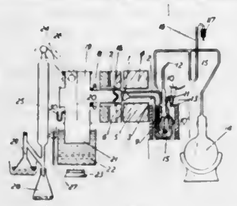
3,051,556
CARBON BLACK APPARATUS
Travis S. Whitsel, Jr., Borger, Tex., assignor to United Carbon Company, Inc. (Maryland), Houston, Tex., a corporation of Maryland
Filed Apr. 11, 1960, Ser. No. 21,309
4 Claims. (Cl. 23—259.5)



1. A reactor for producing carbon black by thermal decomposition of a hydrocarbon feedstock which comprises: a tubular combustion chamber having a diameter greater than its length communicating axially through one of its ends with a tubular reaction chamber of smaller diameter and greater length than said combustion chamber; a hydrocarbon feedstock conduit extending through the other end of said combustion chamber and completely across the width thereof for introducing hydrocarbon feedstock axially into said reaction chamber, said conduit forming an annulus with the circumferential wall of said combustion chamber; at least one injection means tangentially disposed with respect to the circumferential wall of said combustion chamber and communicating therewith for tangentially injecting a stream of a combustible mixture into said annulus, thereby giving said stream of combustible mixture including the combustion mass resulting from the combustion thereof a rotational flow; said combustion chamber and conduit providing said annulus with a progressively decreasing cross-sectional area from the point at which said injection means is tangentially disposed with respect to said circumferential wall in the direction of flow of said tangentially injected stream whereby the rotational velocity of said stream is accelerated; and means for directing said rotationally flowing stream into said reaction chamber.

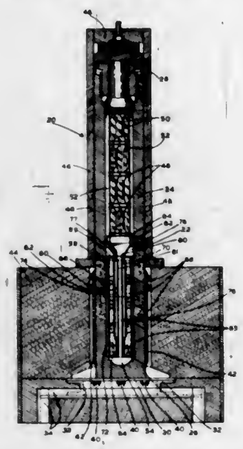
3,051,557
MANUFACTURE OF PURE SILICON
Malcolm MacPhee and Derek Edwin Bolger, Aldwych, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Mar. 10, 1959, Ser. No. 798,502
Claims priority, application Great Britain Mar. 12, 1958
2 Claims. (Cl. 23—263)

1. Apparatus for the manufacture of substantially pure silicon by the reaction of zinc vapour with silicon tetrachloride vapour comprising a furnace, an elongated reaction vessel having an open end and a closed end, said vessel being horizontally disposed within said furnace with the open end protruding from said furnace, first and second inlet pipes connected to the closed end of said vessel, said pipes extending substantially parallel to the axis of said reaction vessel for a distance within said furnace, a crucible-shaped baffle within said reaction vessel adjacent the closed end thereof for directing vapours entering from said inlet pipes towards the walls of said vessel with a minimum of turbulence, a vapour-generating vessel adapted to contain molten zinc connected to said first inlet pipe by means of a first convoluted connecting pipe, a furnace for maintaining said vapour-generating vessel at a predetermined vapour-generating temperature and



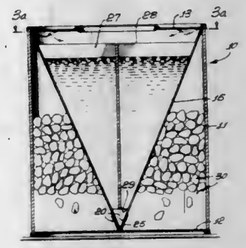
containing convolutions of said first convoluted connecting pipe, whereby zinc vapor within said pipe is superheated, a boiler adapted to contain silicon tetrachloride connected to said second inlet pipe by means of a second convoluted connecting pipe having convolutions within said furnace, means for maintaining said boiler at a predetermined vapour-generating temperature, means for automatically maintaining a substantially constant pressure of vapour in said second inlet pipe comprising a manometer tube connected to said second inlet pipe and adapted to contain a quantity of silicon tetrachloride, deposition means connected to the open end of said reaction vessel, and condensing means connected to said deposition means.

3,051,558
HYDROTHERMAL SYNTHESIS OF QUARTZ
Jacob M. Jost, Cleveland, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 6, 1956, Ser. No. 608,384
12 Claims. (Cl. 23—273)



1. Apparatus for the hydrothermal synthesis of quartz in single crystal form comprising: means defining a vertically elongated enclosed chamber adapted to contain a fluid transfer medium under conditions of high temperature and pressure, said chamber having a quartz growing region in its upper end and a source material supply region in its lower end; means operative to supply heat to the lower end of said chamber; and circulation control means in said chamber including a baffle interposed between said growing and supply regions, said circulation control means being so constructed and arranged as to define, and limit flow communication between said regions to, an upward flow passage and a downward flow passage, jointly controlling and directing the convectional flow of such a fluid transfer medium due to heat supplied by said heat supply means, each of said passages, individually having a cross-sectional area relatively small in comparison to that of said chamber, said downward flow-passage being substantially centrally located with respect to the vertical centerline of said chamber, said upward flow-passage being located adjacent the laterally outer limits of said chamber and opening into said growing region a substantial distance above the location where said downward flow passage opens into said supply region.

3,051,559
OVEN CLEANING ARTICLE
Alan D. Brite, 335 S. Bently, Los Angeles, Calif.
Filed Mar. 23, 1959, Ser. No. 801,355
8 Claims. (Cl. 23—282)

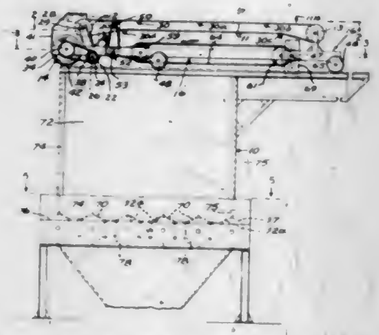


1. As an article of manufacture for cleaning ovens and the like, a small disposable container adapted to be bodily inserted into a household oven or like apparatus and to be thrown away after use, said container having an opening in its top portion, a removable closure member for said opening, a partition of fibrous material in said container forming a cup portion in said container having an opening at its top at least as large as the opening in the top of said container and in registry therewith whereby water can be poured into said cup portion when said closure is removed, said partition being at least partially spaced from the bottom of said container so as to provide a compartment separated from the interior of said cup portion, a supply of steam and ammonia-generating material disposed in said compartment and positioned to be contacted by water poured into said cup portion, said partition having means for slowly passing water through its wall at the bottom of the cup portion into said compartment and said partition including a portion operable by pressure generated in said compartment to release gases and steam from said compartment and out of the opening in the top of said container.

3,051,560
APPARATUS FOR AGING ALKALI CELLULOSE
Elzeario Barboza, Brussels, Belgium, assignor, by mesne assignments, to Robert P. King, New York, N.Y.
Filed May 11, 1959, Ser. No. 812,502
8 Claims. (Cl. 23—284)

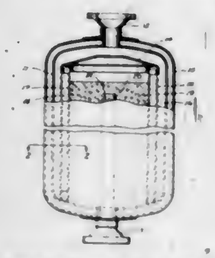
1. An alkali cellulose aging apparatus comprising a vertical tower open at the upper end thereof and defining an aging chamber, a pair of spaced parallel elongated guide rails secured across the upper end of said tower and extending out beyond one end thereof, a carriage mounted on said rails for reciprocal back and forth movement over

the open upper end of said tower, a longitudinally extending endless conveyor belt mounted on said carriage, a transversely disposed distributor means mounted on said carriage adjacent the discharge end of said conveyor and extending substantially the entire width of said carriage, a non-reversible drive unit mounted on said carriage in fixed position thereon, operative connections between said drive unit and said endless conveyor and said distributor means through which said endless conveyor and said distributor means are constantly driven in the same direction by said non-reversible drive unit during operation, and interconnecting means between said car-



riage and said non-reversible drive unit through which said carriage is driven by said non-reversible drive unit and which is operative to periodically reverse the direction of movement of said carriage, said distributor means being operative to receive material discharged from said conveyor and for continuously and progressively discharging said material into said chamber in a direction normal to the movement of said carriage to thereby effect an even distribution of said material transversely of said chamber as said carriage is reciprocated back and forth, and means located in the lower end of said tower by which said material is discharged therefrom at a positively controlled velocity.

3,051,561
RADIAL FLOW REACTOR
William W. Grimes, Cleveland, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed May 14, 1959, Ser. No. 813,199
1 Claim. (Cl. 23—288)



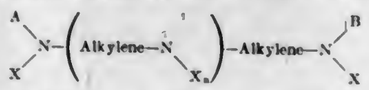
A radial flow catalytic reactor comprising means forming a chamber having a substantially cylindrical side wall, with a central fluid outlet at one end of said chamber, fluid inlet means at the other end of the chamber for supplying gases and vapors under pressure thereto, a perforated discharge conduit extending inwardly from said fluid outlet along the axis of the chamber to the other end portion of the same, a support screen laterally enclosing said conduit in spaced relation and being spaced also from the substantially cylindrical side wall of the chamber, said support screen and the conduit defining a first annular section which is coextensive with the perforated conduit and spaced inwardly from the side wall of the chamber, a bed of particulate catalyst contained by the conduit and support screen in and filling said first annular section between the two, a substantially cylindrical particle-retaining screen in spaced co-extensive relation about the support screen and spaced from the chamber wall, said particle-retaining screen forming a second annular section with the support screen and a third annular section with the chamber wall, said second and third annular sections being unobstructed, means for closing the ends of said second annular section defined by the particle-retaining screen and the support screen, and means for directing the gases and vapors from the chamber inlet means to the outermost third annular section defined by the chamber wall and the particle-retaining screen, the gases and vapors thus supplied to the chamber thereby being caused to flow radially first through the particle-retaining screen for entrapment of solids, and then through the unobstructed second annular section for redistribution therein before encountering the support screen and proceeding through the bed of contact material.

3,051,562
STABILIZED JET COMBUSTION FUELS
Paul Y. C. Gee, Woodbury, and Harry J. Andress, Jr., Pitman, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Jan. 20, 1960, Ser. No. 3,484
13 Claims. (Cl. 44—62)

1. A liquid hydrocarbon jet combustion fuel containing between about 5 pounds per thousand barrels of fuel and about 2000 pounds per thousand barrels of fuel of an additive composition comprising the reaction product obtained by (1) esterifying a 1:1 molar copolymer of a 1-olefin, having between about 2 carbon atoms and about 20 carbon atoms per molecule, and maleic acid anhydride with between about 1.5 moles and about 1.75 moles, per mole of said copolymer, of an organic aliphatic alcohol containing between about 4 carbon atoms and about 20 carbon atoms per molecule to produce a mixed mono- and di-ester product; (2) reacting said ester product with between about 0.25 mole and about 0.50 mole of a polyamine of the formula $H_2N(—R—NH)_n—H$, wherein R is selected from the group consisting of ethylene and propylene and n varies between 1 and 2, and between about 0.25 mole and about 0.50 mole salicylaldehyde, per mole of said ester product.

3,051,563
METHOD OF CORRECTING TRACE METAL DEFICIENCIES IN SOIL BY APPLYING A MIXTURE OF FREE CHELATING AGENT AND IRON CHELATE THERETO
Frederick C. Bersworth, East Orange, N.J., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 20, 1957, Ser. No. 697,515
5 Claims. (Cl. 71—1)

1. The method of correcting trace metal deficiencies in soil which comprises applying to the soil to be treated an agricultural chelating composition comprising a mixture of free chelating agent and an iron chelate thereof wherein said chelating agent corresponds to the following:

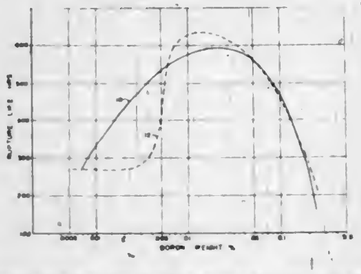


wherein alkylene is a low molecular weight divalent alkyl group which interposes 2–3 carbon atoms between the indicated nitrogens; X is selected from the group consisting of $—CH_2COOH$, $—CH_2CH_2COOH$ and alkali metal, and ammonium salts thereof; A is selected from the group consisting of X, hydrogen, alkylol, alkyl, aralkyl and sulfhydryl; and B is selected from the group consisting of A and X; and n is an integer from the group 0–4, wherein the relative amounts are at least 0.5% of free chelating agent to about 95% of free chelating agent.

3,051,564
COMPOSITION FOR METALLURGICAL USE AND PROCESS OF USING THE SAME
John F. Drenning, Birmingham, Ala., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 12, 1959, Ser. No. 833,159
6 Claims. (Cl. 75—53)

1. The process of melting iron for castings comprising bringing a mixture comprising a major proportion of silicon carbide and in excess of about 10 parts up to about 25 parts by weight of an alkaline modifying agent per 100 parts by weight of pure silicon carbide into contact with the molten iron.

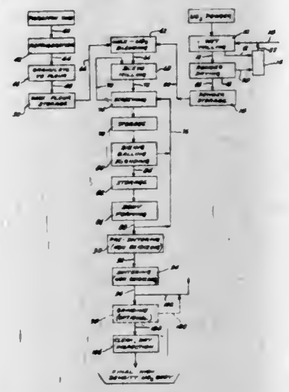
3,051,565
AUSTENITIC ALLOYS
Richard K. Pitler, Oakmont, Edward E. Reynolds, Allison Park, and George Aggen, Sarver, Pa., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed Apr. 29, 1960, Ser. No. 25,790
4 Claims. (Cl. 75—134)



1. A precipitation hardening wrought intermediate iron-nickel base alloy suitable for use at elevated temperatures of up to at least 1500° F. and higher, consisting of, less than 0.12% carbon, less than 1.5% manganese, less than 1.5% silicon, from 13.0% to 16.0% chromium, from 42.0% to 48.0% nickel, from 3.0% to 5.0 molybdenum and from 2.0% to 5.0% tungsten, the sum of the molybdenum and tungsten being within the range between 6.25% and 9.0%, from 2.0% to 3.75% titanium and from 0.7% to 2.0% aluminum, the sum of the aluminum and titanium being within the range between 3.0% and 5.75%, less than 1.0% vanadium, from 0.007% to less than 0.03% boron, and from 25.0% to 32.0% iron with incidental impurities, said alloy being characterized by exhibiting substantially the same level of rupture properties when measured in the longitudinal and in the transverse directions.

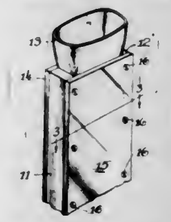
3,051,566
PROCESS FOR PRODUCING HIGH DENSITY REFRACTORY BODIES
Donald L. Schwartz, Detroit, Mich., assignor to General Electric Company, a corporation of New York
Filed Jan. 20, 1959, Ser. No. 787,848
20 Claims. (Cl. 75—213)

1. A process for producing a high density body from a powdered high melting point material selected from the class consisting of tungsten, columbium, molybdenum, tantalum, and the oxides, carbides, silicides, nitrides and borides of uranium, thorium, plutonium, titanium, tungsten, zirconium, hafnium, gadolinium, samarium, europium, erbium, dysprosium, tantalum, columbium, molybdenum, vanadium, and beryllium, which process comprises maintaining the ratio of the number of 0.1 to 0.8 micron particles to the number of 0.8 to 2.5 micron particles in the powdered material at a value of at least about 3.0, blending said powdered material with a lubricant-binder to form a free flowing mixture having a consistent fill density of at least about 23 percent of the theoretical density of said material, forming from said mixture a



green body having a density of at least about 40 percent of theoretical, presintering said body at a temperature between about 400° F. and about 900° F. to remove said lubricant-binder, and finally sintering the presintered body at a temperature below its melting point and between about 2200° F. and about 3550° F. to produce said high density body having a density of from 94 percent to 100 percent of theoretical.

3,051,567
METHOD AND APPARATUS FOR MAKING POWDERED METAL ARTICLES
Paul F. Ziegler, Northbrook, Ill., assignor to Fansteel Metallurgical Corporation, North Chicago, Ill., a corporation of New York
Filed July 28, 1958, Ser. No. 751,416
13 Claims. (Cl. 75—214)



1. A method of forming shaped articles of powdered metal, comprising disposing a flexible fluid impervious liner of sheet material in a hollow substantially rigid form of the desired shape and size for the article to be formed and having fluid leakage paths therein, filling said liner with powdered metal and sealing the ends thereof, applying fluid pressure to said form and said liner to press said powder into a green compact of substantially the same size and shape as the interior of the hollow form.

3,051,568
OFFSET ELECTROPHOTOGRAPHY
Edward K. Kaprelian, Weatogue, Conn. (29 Riveredge Road, New Shrewsbury, N.J.)
Filed Dec. 6, 1955, Ser. No. 551,289
3 Claims. (Cl. 96—1)

1. A method of electrophotography employing an electrophotographic plate comprising a photoconductive in-

sulating layer overlying a conductive backing layer and in electrically conductive contact therewith, said method comprising the steps of uniformly charging said photoconductive insulating layer by subjecting the latter to a charging potential, exposing said charged photoconductive insulating layer to a light image pattern to increase its conductivity selectively, allowing current flow selectively from the charged photoconductive insulating layer to the conductive backing layer in accordance with the light image pattern to produce a corresponding electrostatic latent image on said layer, bringing an insulating surface into juxtaposition on top of said photoconductive insulating layer, applying pressure to force said insulating surface and said photoconductive insulating layer into intimate contact to cause transfer of the charges comprising the electrostatic latent image from said photoconductive insulating layer to said insulating surface, lifting said insulating surface off said photoconductive insulating layer to thereby carry off said transferred electrostatic image, and modifying the contrast characteristics of said transferred electrostatic latent image on said insulating surface by subjecting said image to the electrostatic field of a charged electrode, said insulating surface being provided with a uniform pattern of protuberant and depressed areas.

3,051,569
PHOTOCONDUCTIVE MATERIALS

Meyer L. Sugarman, Jr., Glencoe, and Nicholas P. Steiner, Chicago, Ill., assignors to American Photocopy Equipment Company, Evanston, Ill., a corporation of Illinois

Filed Oct. 26, 1959, Ser. No. 848,600
13 Claims. (Cl. 96—1)

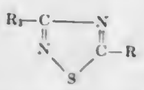
4. A photoconductive composition comprising finely divided photoconductive zinc oxide suspended in an electrically insulating film forming vehicle having incorporated therein an organic dye blend of a plurality of compatible colored spectrally sensitive organic dyes of such colors and in such amounts as to have when mixed a gray to black appearance, said gray to black blend being incorporated with said zinc oxide and vehicle in an amount sufficient, in cooperation with said zinc oxide, to broaden the basic spectral response thereof to include visible light between about 4300 A. and about 7000 A., and to produce, in combination with said zinc oxide, an overall spectral reflection imparting to the overall composition a white to off-white spectral appearance.

3,051,570
ANTIFOGGANTS AND STABILIZERS FOR PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Fritz Dersch, Frank J. Kaszuba, and Emil B. Rauch, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 1, 1958, Ser. No. 764,529
8 Claims. (Cl. 96—67)

1. A photographic material comprising a base and a light-sensitive silver halide emulsion carried thereby, said photographic material containing, in fog inhibiting amount, a mercapto-1,2,4-thiadiazole of the following general formula:



wherein R is selected from the class consisting of an alkoxy group of from 1 to 11 carbon atoms, a hydroxy group, a carboxy lower alkyl group and the alkali metal, ammonium and silver salts and lower alkyl esters thereof, a sulfo lower alkyl group and the alkali metal and ammonium salts thereof, an $—SR_4$ grouping wherein R_4 is selected from the class consisting of hydrogen, an alkyl group of from 1 to 11 carbon atoms and a carboxy lower alkyl group and the alkali metal and ammonium salts and lower alkyl esters thereof, a radical of the formula $—NR_1R_2$ wherein R_1 and R_2 are each selected from the class consisting of an alkyl group of from 1 to 10 carbon atoms and taken together can complete a heterocyclic ring selected from the class consisting of morpholine, piperidine and pyrrolidine; R_3 is selected from the class consisting of an alkyl group of from 1 to 8 carbon atoms, an $—SR_4$ grouping wherein R_4 is selected from the class consisting of hydrogen, an alkyl group of from 1 to 11 carbon atoms and a carboxy lower alkyl group and the alkali metal and ammonium salts and the lower alkyl esters thereof, an aralkyl group of the benzene and naphthalene series wherein the alkyl chain contains from 1 to 2 carbon atoms and at least one of said R and R_3 always being a $—SR_4$ grouping.

3. The product as defined in claim 1 wherein said mercapto-1,2,4-thiadiazole is located in a layer adjacent to said silver halide emulsion layer.

3,051,571
PROCESS OF MAKING A STOCK FEED ADDITIVE

Marcus N. Pergament, 79 Versailles Blvd., New Orleans, La.

No Drawing. Filed Feb. 10, 1959, Ser. No. 792,272
4 Claims. (Cl. 99—2)

1. The process of making an additive for ready mechanical admixture with stock feeds which includes mixing between approximately 10% and approximately 12% water with between approximately 75% and approximately 80% saponifiable fat, heating said mixture to a temperature of approximately 190° F. while agitating the same, adding between approximately 9% to approximately 11% quicklime to said mixture while continuing the agitation, raising the temperature of the mass with continued agitation to approximately 230° F. whereat saponification commences to take place, removing the entire batch from the reaction vessel after the same has been substantially completely saponified, permitting the removed batch to cool and dry, and reducing the mass to a pulverulent state.

3,051,572
METHOD OF PREPARING FLAVORED STABILIZED FEEDS

Talmadge B. Tribble, 1204 Westview Road, Glenview, Ill.

No Drawing. Filed May 18, 1959, Ser. No. 813,677
1 Claim. (Cl. 99—2)

A method of preparing a livestock feed composition which comprises homogeneously mixing fresh livestock feed with stabilizing flavoring to form a mixture of from about 99.75% to about 99.96% by weight of fresh feed and from about 0.04% to about 0.25% by weight of a stabilizing flavoring, said flavoring comprising from about 8% to about 85% by weight of an edible oxidizable flavoring, from about 1.5% to about 50% of a food grade antioxidant and from about 0% to about 81% by weight of a carrier for said flavoring and said antioxidant.

3,051,573
FEED CONTAINING CARBOXYMETHOXYLAMINE

Jonas Kamlet, New York, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 7, 1959, Ser. No. 855,532
4 Claims. (Cl. 99—4)

1. A solid feed concentrate comprising carboxymethoxylamine in an amount of from about 5 to 50% by weight of carboxymethoxylamine and a solid carrier.

3,051,574
FOAMING MALT BEVERAGES

Edward Segel, Chicago, Ill., assignor to J. E. Siebel Son's Company, Inc., Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 6, 1959, Ser. No. 844,639
4 Claims. (Cl. 99—48)

1. The method of improving the cling of carbonated alcoholic malt beverages which comprises dissolving therein Polysaccharide B–1459.

3,051,575
METHOD OF PREPARING STABLE EGG-IMPREGNATED GREEN COFFEE

Fletcher A. Chase, Morris Plains, N.J., assignor to North Woods Coffee Company, a corporation of Illinois

No Drawing. Filed Sept. 21, 1959, Ser. No. 841,031
5 Claims. (Cl. 99—65)

1. A method for preparing stable egg-impregnated green coffee which comprises drying green coffee beans to a moisture content of less than 8%, adding to said beans the equivalent on the wet basis of about 1% to 6% of homogenized whole eggs, mixing until all of the egg has been absorbed by the beans and drying the mixture at a temperature which maintains the surface of the beans at 170° to 220° F. for a period of time sufficient to reduce the moisture content in the green egg-containing beans to less than about 2%, said percentages being by weight.

3,051,576
NUTRITIONAL COMPOSITION AND METHOD OF MAKING THE SAME

Andreas Lendvai, Spring Valley, N.Y.
(202 Van Ripper Ave., North Tarrytown, N.Y.)

No Drawing. Filed Dec. 24, 1959, Ser. No. 861,752
20 Claims. (Cl. 99—97)

1. A method of producing a nutritional composition, comprising the steps of forming a mixture consisting essentially of a major portion of an autolyzable yeast adapted to be autolyzed at an elevated autolyzation temperature and of a minor portion of a carbohydrate adapted to be fermented with said yeast; allowing the thus formed mixture to ferment; mixing said fermenting mixture with a carbohydrate selected from the group consisting of sugars and sugar polymers in a quantity sufficient to substantially arrest fermentation of said mixture so as to form a second mixture; heating said second mixture to said autolyzation temperature for a period of time sufficient to autolyze the yeast thereof to a desired predetermined degree; and heating the thus treated mixture to a temperature higher than said autolyzation temperature and sufficiently high to prevent further autolyzation of said yeast, whereby a nutritional composition containing autolyzed yeast and substantially free of the characteristic taste and odor of autolyzed yeast is formed.

3,051,577
GLYCERYL LACTO ESTERS IN COATINGS

Vigen K. Babayan, Livingston, and George Newell Comes, Denville, N.J., assignors to Drew Chemical Corporation, a corporation of Delaware

No Drawing. Filed July 2, 1959, Ser. No. 824,470
9 Claims. (Cl. 99—118)

1. A hard butter comprising a hard fat and a minor proportion of an ester of glycerine, lactic acid and a fatty acid, said ester being of fatty acids having 10 to 24 carbon atoms, and having at least one hydroxyl group of the glycerine esterified with lactic acid.

3,051,578
COMPOSITION AND PROCESS FOR TREATING POTATOES

Eugene D. Kitzke, South Milwaukee, Wis., assignor to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,824
7 Claims. (Cl. 99—154)

1. A method of inhibiting greening of unpeeled potatoes which comprises treating said unpeeled potatoes with an anti-greening composition containing an anti-greening agent selected from the group consisting of ethylene diamine tetraacetic acid, its sodium, potassium and calcium salts and mixtures thereof in an amount ranging from about 0.1 to about 5% by weight of the anti-greening composition, and a liquid diluent for said agent.

3,051,579
METHOD OF CURING MEAT

Paul A. Hammes, Scotch Plains, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

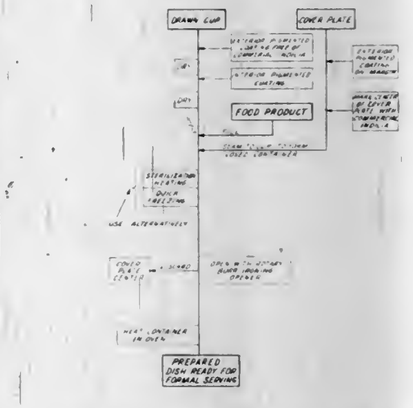
No Drawing. Filed Sept. 9, 1960, Ser. No. 54,850
7 Claims. (Cl. 99—159)

1. A method of curing meat to accelerate the rate of curing obtained with a nitric-oxide producing curing medium, which comprises contacting the meat along with the curing medium with at least 0.015% of a compound selected from the group consisting of an acidic α-hydroxy carbonyl compound and its salts and esters based on the weight of the meat, said acidic α-hydroxy carbonyl compound, salts and esters thereof, having the property of rearranging to form an acidic water soluble enediol compound at a pH of about 5 to 8.5.

3,051,580
METHOD OF PACKAGING FOOD

Thomas Francis Brennan, Valhalla, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Dec. 29, 1958, Ser. No. 783,326
3 Claims. (Cl. 99—171)

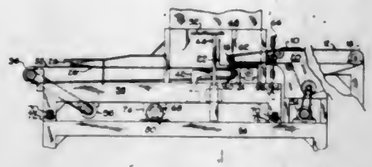


1. The method of providing and using a food packaging container suitable not only for economical storage and merchandising, but also for convenient refined table service of contained food, which comprises draw forming a sheet metal cup having a bottom integrally connected by a smooth radius to a side wall; press-forming a sheet metal cover shaped at its margin to receive the upper margin and edge of said side wall and to be double seamed thereto; applying to the outer surface of said side wall and radius and to the upper surface of said cover in the double seam margin area a pigmented opaque coating which is resistant to flexing, to scratching and to cooking oven heat, while maintaining the side wall free of commercial marks and indicia; causing said coating to harden and set to a tough decorative layer; therafter double seaming said cover to the upper margin of said side wall, after the cup is filled with food; cutting out the central portion of the cover closely adjacent the double seam; and smoothing the resulting burr at the inside of the double seam to provide a container having the appearance of conventional food-serving oven ware.

3,051,581
METHOD AND APPARATUS FOR PACKAGING FOOD

Ernest Bonami, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 2, 1959, Ser. No. 784,680
12 Claims. (Cl. 99—171)

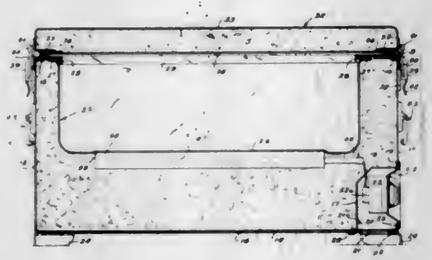


1. A method for accurately depositing non-aligned groups of food product on divider cards comprising the steps of sequentially positioning divider cards at a given location; moving a plurality of serially spaced non-aligned groups of food product along a path generally toward said location; registering the relative lateral position of a side of each group successively as it approaches said location on said path with respect to an edge of a divider card at said location; moving one of said path and said location laterally with respect to the other in response to the relative positions to bring said group and said divider card into proper lateral alignment; and moving said divider card with said group of product from said location as said product is deposited thereon.

3,051,582
METHOD OF STORING PREPARED FOODS

Frank Muckler and Edward B. Vandas, Sappington, Mo., assignors to Southern Equipment Company, St. Louis, Mo., a corporation of Missouri

Filed Aug. 24, 1959, Ser. No. 835,585
4 Claims. (Cl. 99—171)

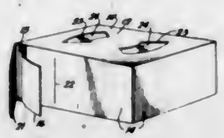


1. The method of holding food prepared in one place and transported to another place in appetizing condition in a closed space and in substantially its prepared condition comprising the steps of providing a portable container with a food receiving well having heat conductive walls and heat storing means in thermal contact with a portion of the conductive walls, delivering heat to said storing means and accumulating the heat for subsequent dissipation into the well through the conductive walls, discontinuing heat delivery to the storing means after the food receiving well has been preconditioned, providing a substantially complete thermal barrier about the exterior of the food receiving well and heat storing means so that the preconditioning of the well is substantially maintained and the accumulated heat travels into the food well as its principal route of dissipation, and placing the previously prepared food in the well where it continues to receive heat.

3,051,583
BACON PACKAGE

John M. Tindall, 522 Greenleaf, Wilmette, Ill.

Filed June 8, 1959, Ser. No. 818,609
9 Claims. (Cl. 99—174)

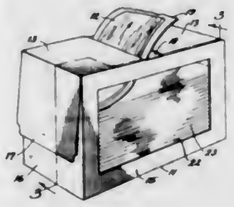


1. A bacon package comprising a container having rectangular top and bottom walls and having an opening in a side wall thereof, said top and bottom walls having substantially smooth and flat outer surfaces, a spindle disposed within said container and extending upwardly from the bottom wall thereof, a roll rotatably supported within said container upon said spindle and comprising a single coil strip of flexible grease-resistant material having bacon slices extending longitudinally in spaced relation therealong, a tube extending through the center of said roll and rotatably receiving said spindle, said strip having a free outer end extending through said side wall opening, and a side wall flap extending over said opening and said free outer end of said strip and being movable into an open condition for exposing said free outer end and said opening, whereby, when said flap is open, the free outer end of said strip may be grasped and pulled outwardly to unwind said roll and to withdraw the bacon slices within the container, said slices being disposed upon the outermost surface of said strip upon withdrawal of the strip from said container, said slices clinging only to the surface of said strip facing away from said roll as said strip is unwound.

3,051,584
BACON PACKAGE

John M. Tindall, 522 Greenleaf, Wilmette, Ill.

Filed Aug. 12, 1959, Ser. No. 833,280
5 Claims. (Cl. 99—174)



1. A bacon package comprising a narrow strip of flexible non-porous sheet material folded back and forth upon itself to form a series of horizontal pockets facing in opposite directions, a plurality of bacon slices each disposed in one of said pockets and being arranged in stacked relation with the other of said slices, portions of said strip thereby separating adjacent bacon slices of said stack from each other, and a container enclosing said slices and strip and having a centrally-disposed opening in a top wall thereof, said strip having an upper end adapted to be pulled upwardly from said container through said opening for unfolding said strip and for withdrawing said bacon slices from said container one by one while at the same time peeling the undersurface of said strip as it is unfolded away from the slices of said stack therebelow.

3,051,585
PROTECTIVE COATINGS FOR POLYESTER RESINS

Alan E. Weinberg, Kenmore, Claude T. Bean, Niagara Falls, Paul Robitschek, Wilson, and Blaine O. Schoepfle, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Dec. 2, 1958, Ser. No. 777,560
13 Claims. (Cl. 117—33.3)

1. A method for forming a plastic article with a weather-resistant, adherent, transparent coating, chemically combined in said plastic article, which comprises: (I) mixing together a coating composition comprising (A) a major portion of an unsaturated liquid polyester resin and a vinylidene monomer, and (B) a minor portion of a hydrocarbon wax, an ultraviolet light stabilizer and a polymerization initiator; (II) spreading said coating composition upon a self-supporting film to a thickness of from about 0.1 to about 25 mils and allowing said coating composition to gel; (III) contacting the gelled side of the coated self-supporting film and a copolymerizable composition comprising (A) an unsaturated polyester resin and (B) an vinylidene monomer; and (IV) heating the resulting coated composition at an elevated temperature, thereby simultaneously curing said coated composition and obtaining chemical combination of the coating composition and the copolymerizable composition.

3,051,586
SOLID LUBRICANT FILM RESISTANT TO CORROSION

Arthur N. Heath, San Fernando, and Lowell C. Horwedel, Burbank, Calif., assignors to Electrofilm, Inc., North Hollywood, Calif., a corporation of California

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,170
16 Claims. (Cl. 117—49)

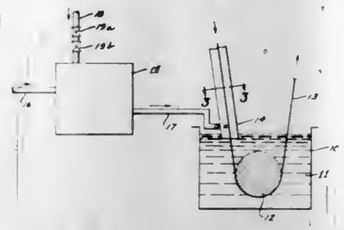
1. The combination comprising a part having a surface which is subjected in use to mechanical friction, said surface having irregularities forming minute depressions distributed substantially uniformly thereacross, and a lubricant coating bonded to said surface, said coating including a binder cured to solid form on said surface and continuously bonded thereto, finely divided solid lubricant particles distributed within the binder across substantially said entire surface, finely divided particles distributed within the binder separately from said surface and formed of a corrosion inhibitive inorganic compound operable to resist corrosion of said surface but which compound would normally tend to accelerate frictional wearing of the coating, said inorganic compound being selected from the group consisting of zinc chromate, barium carbonate, barium chromate, cadmium chromate, strontium chromate, red iron oxide (Fe_2O_3), dicalcium phosphate and red lead oxide (Pb_3O_4) and a large number of finely divided metal particles distributed within said binder in addition to the above mentioned materials in sufficient amount to counteract the wear accelerating tendency of said corrosion inhibitive pigment.

3,051,587
METHOD OF TREATING METALLIC STRIP WITH SODIUM VAPOR

Kenneth G. Coburn, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Aug. 19, 1960, Ser. No. 50,722
6 Claims. (Cl. 117—51)

1. In a process of coating a ferrous metal article with molten coating metal of a class consisting of aluminum and aluminum alloys, in which the metal article is passed through a hood into a bath of said molten coating metal, and in which a protective atmosphere which is substantially non-oxidizing to ferrous metals is maintained in said hood; the steps of generating sodium vapor outside said hood, conveying said sodium vapor, by means of a carrier stream of nitrogen gas, into said hood adjacent the

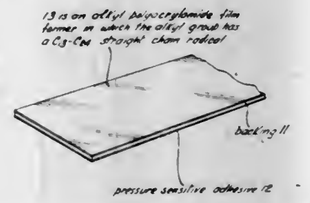


surface of said molten coating metal, whereby to subject the surface of the molten coating metal and the surfaces of the metal article being coated, to the action of sodium vapor.

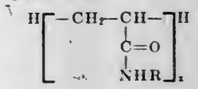
3,051,588
PRODUCT AND METHOD OF MANUFACTURE

Patricia Lavanchy, Wayne, Pa., assignor to Johnson & Johnson, a corporation of New Jersey

Filed Apr. 10, 1959, Ser. No. 805,356
6 Claims. (Cl. 117—68.5)



1. A pressure-sensitive adhesive tape comprising a backing selected from the group consisting of paper, cloth and film materials, a coating of pressure-sensitive adhesive on one major side of said backing, and, on the opposite side of said backing, a release coating consisting essentially of an alkyl polyacrylamide film former which contains the following recurring formula:



where R is a member of the group consisting of hydrogen and an alkyl group, and at least 50% of the R's are straight chain alkyl groups of C_{13}–C_{24}, and where x is greater than 100.

3,051,589
CORROSION RESISTANT COATED EQUIPMENT AND METHODS OF MAKING THE SAME

Elbert A. Sanford, Rochester, and George Warren, Gates, N.Y., assignors to Pfaudler Permutit, Inc., Rochester, N.Y., a corporation of New York

Filed Aug. 13, 1958, Ser. No. 754,886
13 Claims. (Cl. 117—70)

11. The method of applying a glossy corrosion resistant fused vitreous coating to the surface of a metallic body comprising the steps of applying to said surface a fused enamel ground coat, forming a cover coat frit and adding thereto a quantity of discrete particles of inert refractory material having a melting point higher than the fusing temperature of said frit, said particles being of two sizes, the smaller of said particles being between 500 and 100 mesh, and the larger of said particles being between 20 to 80 mesh, the quantity of said particles being insufficient to destroy the glossy surface of said coating, applying

the mixture of said frit and refractory particles over said ground coat, and heating and fusing said frit to form a



fused cover coat having high resistance to thermal and mechanical shock.

3,051,590
PROCESS FOR COATING BRICKWORK, MASONRY, CONCRETE AND WOOD AND COMPOSITIONS THEREFOR

Jacqueline Leonie Proux, 2 Rue Joseph-Sansboeuf, Paris (8e), France

No Drawing. Filed May 11, 1959, Ser. No. 812,143
Claims priority, application France Nov. 7, 1958
8 Claims. (Cl. 117—70)

1. A method for coating a surface comprising the steps of applying to the surface a first primer consisting of a liquid bonding agent, said liquid agent consisting of an aqueous suspension comprising substantially, by weight, 19% calcium chloride, 3% aluminum sulfate, 10% urea, 1% fatty sulfonate alcohol, then allowing said first primer to set; thereupon, applying a layer of a pasty bonding agent consisting of a mixture of said first primer with a pulverized solid bonding agent comprising substantially by weight 6% asbestos, 2.5% pumice stone, 7% glass, 3% lithopone, 3.5% barium sulfate, 38% white sand and 40% hydraulic cement; allowing said solid bonding agent to harden; and thereupon, before said solid bonding agent has completely hardened, applying at least one coat of said first primer.

3,051,591
QUICK DRYING VEHICLE AND METHOD

Benjamin L. Sites, Elmhurst, and Meyer S. Agruss, Chicago, Ill., assignors to Miehle-Goss Dexter, Inc., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 23, 1958, Ser. No. 750,312
16 Claims. (Cl. 117—93)

7. A method of rapidly indurating a drying oil having a conjugated system of double bonds, which comprises forming a non-aqueous, stable solution of said drying oil, an oil soluble organic peroxide present in an amount of at least 2% by weight of the total weight and a tertiary amine, forming a film of said solution, and irradiating said film with actinic energy.

3,051,592
CERAMIC METALIZING PROCESS

John J. Woerner, Santa Barbara, Calif., assignor to Penta Laboratories, Inc., Santa Barbara, Calif., a corporation of California

No Drawing. Filed Sept. 29, 1958, Ser. No. 763,783
5 Claims. (Cl. 117—121)

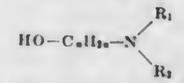
1. A method of metalizing an alumina type ceramic body including the steps of: coating the ceramic body with a mixture suspended in a liquid vehicle of at least about 1% of a finely divided borosilicate glass free from materials reducible in hydrogen and metal components consisting essentially of finely divided particles of manganese oxide, and at least one finely divided metal-oxide selected from the group consisting of molybdenum oxide and tungsten oxide; and firing the ceramic material in the presence of hydrogen at 1600° C. for 5 to 10 minutes.

3,051,593
PROCESS FOR INCREASING THE SCRATCH RESISTANCE OF GLASS

Charles Louis Gray, Jr., Wilmington, and Robert Harold Dettre, Brandywine Hundred, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 27, 1960, Ser. No. 58,616
5 Claims. (Cl. 117—124)

1. In a process for increasing the scratch resistance of a glass body, the steps consisting of applying to the surface of said body an aqueous solution of an organic titanate, allowing the excess moisture to drain, subjecting the treated glass to heating at a temperature sufficient to anneal the glass but below that at which perceptible deformation of the shape of the glass body steps in, cooling the glass body and allowing the same to stand in open air for not less than 20 minutes before exposing the same to handling wherein rubbing of the glass body against other glass bodies is likely to occur, said organic titanate being a titanate ester composition obtained by subjecting one mole of a tetraalkyl titanate whose alkyl radicals contain from 2 to 4 C-atoms to transesterification with from 2 to 3 moles of an alkanolamine of the formula



wherein n is an integer from 2 to 4, and R_1 and R_2 are members of the group consisting of hydrogen, alkyl of 1 to 3 C-atoms and hydroxyalkyl of 2 to 3 C-atoms.

3,051,594
POLYMETHYLENE TEREPHTHALATE FIBER COATED WITH POLYMERIZED TRIALLYL CYANURATE

Roger Gordon Aitken, St. Hilaire Station, Quebec, Canada, assignor to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Filed June 8, 1959, Ser. No. 818,571
Claims priority, application Canada June 28, 1958
3 Claims. (Cl. 117—138.8)

1. Fibrous material derived from polymethylene terephthalates coated with a composition containing polymerized triallyl cyanurate and from 50% to 90% by weight of a vinyl chloride polymer.

3,051,595
NON-AQUEOUS PHOSPHATIZING SOLUTION

Lawrence Fullhart, Jr., and Donald A. Swalheim, New Castle, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 12, 1961, Ser. No. 82,159
8 Claims. (Cl. 148—6.15)

1. A substantially non-aqueous phosphatizing solution consisting essentially of at least 85% by weight of a chlorohydrocarbon selected from the group consisting of trichloroethylene and perchloroethylene, at least 0.05% by weight of phosphoric acid and an amount of a solubilizing agent effective for solubilizing said phosphoric acid in said chlorohydrocarbon to which has been added a stabilizing amount of a compound selected from the group consisting of nitroso aromatic compounds and azo aromatic compounds to minimize the formation of corrosive chlorides.

3,051,596
NEW NEAR INFRARED SPECTRUM FILTER MEDIA

Donald H. Baltzer, Cincinnati, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

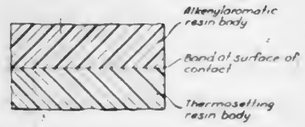
No Drawing. Filed May 16, 1958, Ser. No. 735,708
5 Claims. (Cl. 154—2.7)

1. A near infrared spectrum filter medium comprising in combination a lucent supporting material and rhenium trioxide, the said rhenium trioxide having a blue-green coloration by transmission.

3,051,597
BONDING THERMOSETTING RESINS TO POLYSTYRENE PLASTICS

Lloyd B. Bushong, Bay City, and Robert N. Kennedy and Paul H. Lipke, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed June 21, 1956, Ser. No. 592,768
11 Claims. (Cl. 154—43)

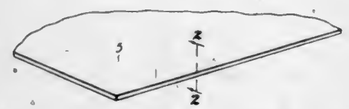


1. In a method of making composite structures having a thermoset solid resin selected from the class consisting of epoxy resins and phenolic-aldehyde resins securely bonded at a surface of contact with a solid polymer that comprises a major proportion by weight of an alkenylaromatic compound and a minor proportion of at least one polymerizable material selected from the group consisting of conjugated aliphatic dienes and ethylenically unsaturated polymerizable nitriles in polymeric combination, the improvement that comprises contacting a surface of the solid alkenylaromatic polymer with an oxidizing flame without visibly melting that surface, whereby such surface is modified and rendered adherent to a thermoset solid resin, applying to the resulting flame-treated surface an uncured liquide to soft solid curable thermosetting resin-forming composition selected from the class consisting of uncured curable epoxy resin-forming compositions and uncured curable phenolic-aldehyde resin-forming compositions and curing such resin-forming composition while in contact with the flame-treated surface to obtain a solid thermoset resin securely bonded at the surface of contact with the solid alkenylaromatic polymer.

3,051,598
HEAT RESISTANT LAMINATED COUNTER TOP

Arthur D. Chipman, Reading, Mass., and Joseph M. Shaheen, Whittier, Calif., assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Mar. 25, 1958, Ser. No. 723,717
1 Claim. (Cl. 154—43)

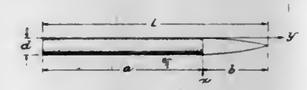


In a laminated heat and stain resistant sheet material suitable for counter tops and having a relatively thin transparent upper layer of polyethylene terephthalate, and a relatively thick intermediate layer of a polyvinyl chloride base compound bonded to said upper layer, the combination therewith of a cement layer consisting essentially of a tripolymer consisting of about 80 percent by weight of vinyl butyral groups, about 19 percent by weight of vinyl alcohol groups, and a small percentage of vinyl acetate groups, and a relatively thin lower layer of aluminum foil bonded to said intermediate layer by said cement.

3,051,599
ARTICLE EXHIBITING REDUCED FRICTIONAL DRAG IN FLUIDS

Fitzhugh W. Boggs, Upper Montclair, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Filed June 23, 1958, Ser. No. 743,673
4 Claims. (Cl. 154—43)



1. An object designed for movement through a fluid medium and exhibiting optimum drag-reducing characteristics at a design velocity V, having on its fluid-contacting surfaces a thin resilient elastomeric covering having any one of its properties of thickness, modulus and hysteresis constant; said covering being further characterized in that when its thickness is constant, its modulus varies along the length of said object from bow to stern substantially proportionally to

$$\frac{V^4}{R_v}$$

and its hysteresis varies along the length of said object from bow to stern substantially proportionally to

$$\frac{V^2}{R_v^{1/2}}$$

when its modulus is constant, its thickness varies along the length of said object from bow to stern substantially proportionally to

$$\frac{R_v^{1/2}}{V}$$

and its hysteresis varies along the length of said object from bow to stern substantially proportionally to

$$\frac{R_v^{1/2}}{V^2}$$

and when its hysteresis is constant, its thickness varies along the length of said object from bow to stern substantially proportionally to

$$\frac{R_v^{1/4}}{V}$$

and its modulus varies along the length of said object from bow to stern substantially proportionally to

$$\frac{V^2}{R_v^{1/2}}$$

where in all cases V is said design velocity and R_v is the Reynold's number at said design velocity expressed as

$$R_v = \frac{V \times \text{distance from bow}}{\text{Kinematic viscosity of fluid medium}}$$

3,051,600
ORNAMENTAL SHEET MATERIAL AND METHOD OF MAKING SAME
George Markus, West Orange, N.J., and Martin Siegel, Roslyn, N.Y., assignors to Aristocrat Leather Products, Inc., New York, N.Y., a corporation of New Jersey
Original application July 22, 1955, Ser. No. 523,716, now Patent No. 2,891,340, dated June 23, 1959. Divided and this application Sept. 30, 1958, Ser. No. 764,349
9 Claims. (Cl. 154—47)



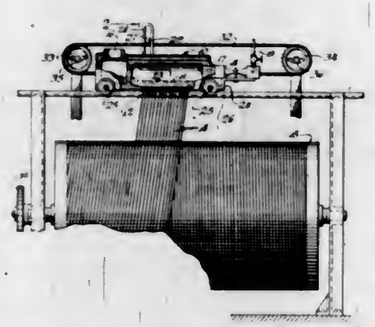
1. A method of making an ornamental sheet assembly, comprising providing a frame member of sheet material having a marginal edge portion extending along the periphery of said member and an opening positioned inwardly of said periphery and a series of thermoplastic studs spaced from each other along the length of said edge portion and projecting from a surface thereof, superposing a non-thermoplastic sheet member on said surface of said edge portion inwardly of said studs and in position covering said opening, superposing thermoplastic sheet material on said studs and in position overlying and covering said non-thermoplastic sheet member, and applying heat and pressure on said thermoplastic sheet material so that said studs penetrate the overlying portions of said thermoplastic sheet material and form apertures therein and parts of said studs project through said apertures and are upset in situ and overlie the portions of said thermoplastic sheet material adjacent said apertures to form a mechanical securement between said frame-member and said thermoplastic sheet material with the non-thermoplastic member secured in position therebetween and visible through said opening.

3,051,601
LAMINATED POLYURETHANE FOAM CUSHION
Harold P. Schick, Cuyahoga Falls, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 7, 1958, Ser. No. 772,637
3 Claims. (Cl. 154—54)



1. A flexible foam cushion comprising (1) a relatively thin upper foam layer of a relatively low density cellular polyurethane elastomer, said elastomer being the reaction product of an organic diisocyanate and an acyclic hydroxyl-terminated polyalkylene ether having a molecular weight of about 1500 to 5000, and (2) a relatively thick foam base layer of a relatively low density cellular polyurethane elastomer, said base layer having a lower deflection per unit of load at high deflection than said upper layer, said last-named elastomer being the reaction product of (*a*) an organic diisocyanate, (*b*) an acyclic hydroxyl-terminated polyalkylene ether having a molecular weight of 1500 to 5000 in an equivalent weight ratio of diisocyanate to glycol of about 2:1 to 6:1, (*c*) an activator mixture comprising water and a reaction catalyst which influences the polyurethane foaming reaction, and (*d*) about 10 to 25 parts by weight based on 100 parts by weight of the polyalkylene ether plus diisocyanate of elongated wood cellulose particles having a particle size of about 1 to 100 microns.

3,051,602
MULTI-SPEED FURNACE TRAVERSE
Albert W. Schairbaum, Wabash, Ind., assignor, by mesne assignments, to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 12, 1959, Ser. No. 786,097
9 Claims. (Cl. 154—54)



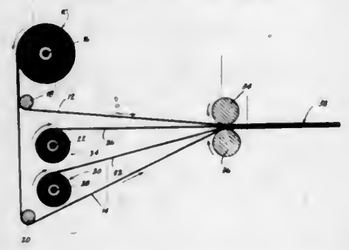
1. The method of forming a sheet composed of multiple layers of fibers comprising the steps of reciprocating a furnace containing molten fiber-forming material axially along and over a rotating drum, discharging the molten material through orifices in the furnace and attenuating the molten material into fibers, collecting the fibers on the drum as the furnace is moved axially of the drum, moving the furnace through a cycle in which the furnace is moved through a first set of one or more traverses substantially from one to the other end of the drum at a first constant speed to lay fibers on the drum at a desired angle of lay and then through another set of one or more traverses substantially from one to the other end of the drum at another constant speed to lay fibers at a different angle of lay than the preceding set, applying a binder to said fibers, repeating said cycle to build up a collected condensed mat of fibers so laid on the drum to a desired thickness, slitting the mat so formed axially of the drum and removing it as a sheet, and expanding the sheet by pulling it at substantially a right angle to the lay of the fibers.

7. A condensed, filamentous, sheet-like mat of the type normally produced by winding fibers upon a drum and applying a binder material to form a cylindrical mat, slitting the mat axially to remove it from the drum and trimming it longitudinally to remove its axial end areas comprising: a series of overlying sets of layers or fibers, each layer being substantially coextensive with said mat and consisting of parallel fibers disposed at one angle to the longitudinal axis of the mat, each set consisting of one or more layers of fibers, the fibers within each set of layers disposed at equal angles to the longitudinal axis of the mat, the fibers of each successive set of layers disposed at a different angle to the longitudinal axis of the mat than the preceding set, the angular disposition of said sets of layers of fibers varying in a repetitive sequence through said series.

3,051,603
DESCUMMING PREPARATION AND PROCESS
James Michaels, Brooklyn, N.Y.
(26 Valmont Lane, Commack, N.Y.)
No Drawing. Filed July 14, 1959, Ser. No. 826,933
3 Claims. (Cl. 156—14)

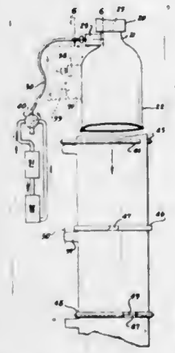
1. In combination with the process of developing a photographic plate and thereafter etching said plate, the intermediate process of removing the scum formed by the developing from the developed plate prior to the etching step, said descumming process consisting of a single treatment of the printed plate by a single preparation consisting essentially of an aqueous solution of ammonium persulfate, said treatment consisting of the steps of preparing the aqueous solution of ammonium persulfate, pouring the solution upon the plate, spreading the solution over the printed surface of the plate, and then rinsing off the solution.

3,051,604
METHOD OF MAKING LAMINATED TAPE
Mark B. Andrews, 1916 N. Signal Hills Drive, St. Louis 22, Mo.
Filed Sept. 30, 1959, Ser. No. 843,508
4 Claims. (Cl. 156—152)



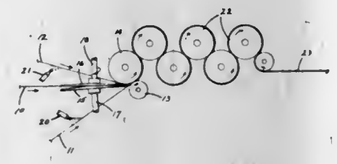
2. A method of making a laminated tape comprising the steps of continuously delaminating transparent pressure-sensitive label stock to separate the adhesive carrying layer from the liner layer, continuously disposing a plurality of continuous strips of material in overlaying relation and between said separated layers of the label stock, and thereafterwards continuously pressing said layers of label stock into trapping relation with said continuous strips to provide a laminated tape.

3,051,605
METHOD OF MAKING VALVED BAGS FROM EXTRUDED THERMOPLASTIC MATERIALS
Forrest B. Stannard, N. High St., Clinton, Conn.
Filed Nov. 20, 1958, Ser. No. 775,304
12 Claims. (Cl. 156—196)



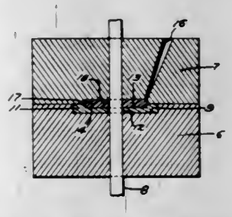
1. The method of making merchandizing bags of thermoplastic material which comprises, heating the material to a plastic condition, extruding the heated material through a die orifice to continuously form a seamless tube, providing the tube as it emerges from the die orifice and while it is in a plastic deformable condition with a succession of spaced filling valve members extending integrally therefrom and at an angle to the axis thereof, welding successive opposed transverse portions of the seamless tube walls, adjacent to and at one side of said filing valve members, together to form a succession of connected lengths of closed seamless tubing with each of said lengths provided with a filling tube, and severing the valve member transversely substantially centrally along said transversely welded portions.

3,051,606
RAYON FABRIC REINFORCED LAMINATED SHEET
Horace P. Fry, Jr., West Chester, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,587
2 Claims. (Cl. 156—229)



1. The method of making a rayon fabric reinforced laminated paper, comprising stretching an open-mesh fabric formed of unstrained rayon yarn having a substantial degree of extensibility to the extent that the individual yarns of the fabric are elongated to the point where their remaining extensibility is approximately equal to the extensibility of the paper with which the fabric is to be laminated, applying an aqueous adhesive to one face of each of two sheets of paper, introducing the fabric while in the above mentioned stretched condition between the adhesive coated faces of the sheets of paper whereby the fabric is wetted by the aqueous adhesive, and drying the adhesive and the fabric while maintaining the fabric in the stretched condition whereby the individual rayon yarns retain their elongation so long as they remain dry to thus produce a rayon fabric reinforced paper wherein the fabric and the paper have approximately the same extensibility.

3,051,607
METHOD OF MAKING AN ASSEMBLY OF RELATIVELY MOVABLE MEMBERS
Joseph R. Werth, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 1, 1960, Ser. No. 12,166
8 Claims. (Cl. 156—242)



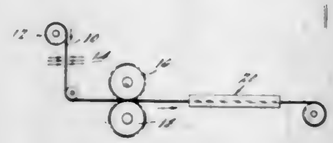
1. The method of making an assembly wherein first and second members of the assembly are movable linearly relative to one another and cooperating surfaces of the members are formed to close tolerances with respect to one another whereby the members are closely restricted to relative linear movement, said method comprising the steps of forming a surface on the first member parallel

to the desired direction of relative linear movement of the members, and then forming the second member by molding a substantially liquid material, which is capable of solidifying into a rigid mass, against said formed surface.

3,051,608
RESILIENT ARTICLE AND METHOD OF MANUFACTURE THEREOF

Jack C. Gordon, % Gordon Chapman Co., 1720 12th St., Detroit, Mich.

Filed Apr. 18, 1958, Ser. No. 729,331
7 Claims. (Cl. 156—339)

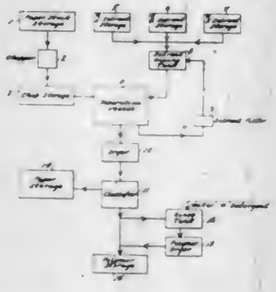


1. The method of manufacturing a resilient pad which comprises the steps of applying an adherent bonding material to at least one surface of a sheet of flexible fibrous sheet material while maintaining a portion of the fibrous sheet material at the interior of the sheet free of the bonding material, moving first and second pluralities of spaced apart portions of said flexible material relative to one another in a direction generally normal to said surface to form indentations each greater than one-half of the total thickness of the manufactured pad and moving tensioning stretching and drawing the portions therebetween into walls between said first and second pluralities of portions disposed at an angle to the surface of said flexible material to form a manufactured pad which is substantially thicker than said fibrous sheet material while said bonding material is in a fluid condition, and transforming said bonding material into a solid form to resiliently fix said indentations in shape.

3,051,609
PROCESS OF TREATING POLYOLEFIN-COATED PAPER

Elihu D. Grossmann, 44 Greenhill Road, Media, Pa., and Robert E. Myers, Wynnewood Park Apts., Apt. 9-B, Wynnewood, Pa.

Filed July 25, 1960, Ser. No. 45,151
12 Claims. (Cl. 162—5)

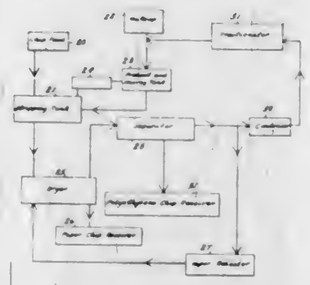


1. The process of treating paper coated with a polyolefin having a monomer unit of the class consisting of etheylene, propylene, 1-butene, 2-butene and isobutene to separate said polyolefin as a film from the paper, which comprises immersing and agitating said polyolefin coated paper in the form of chips in a liquid composition at a temperature between 35° C. and 65° C., essentially consisting of a mixture of (1) carbon disulfide between 15 and 85%, (2) a water miscible liquid alcohol of a first class consisting of methyl alcohol, ethyl alcohol, normal propyl alcohol, isopropyl alcohol, tertiary butyl alcohol, allyl alcohol, propargyl alcohol, and ethylene glycol between 5 and 50%, (3) a liquid of a second class consisting of halogen substituted saturated and unsaturated straight and branched carbon chain compounds of a carbon chain length between 1 and 6 carbon atoms, benzene, halogen substituted benzenes, toluene, halogen substituted toluenes, xylene, halogen substituted xylenes and hydrogenated naphthalenes between 5 and 50% and (4) from 0.20 to 10 percent of water, said liquid composition operating synergistically to swell and permeate without dissolving the polyethylene and to swell the fibers of the paper, and break down the bond of adhesion between the polyolefin and the paper fibers, then removing said liquid composition from the paper and separate polyolefin film, and finally separating the polyolefin film and paper.

3,051,610
PROCESS OF TREATING POLYOLEFIN-COATED PAPER

Elihu D. Grossmann, 44 Greenhill Road, Media, Pa., and Robert E. Myers, Wynnewood Park Apts., Apt. 9-B, Wynnewood, Pa.

Filed Aug. 5, 1960, Ser. No. 47,770
11 Claims. (Cl. 162—5)



1. The process of treating paper coated with polyolefin having a monomer unit of the class consisting of ethylene, propylene, 1-butene, 2-butene and isobutene to separate the polyolefin as a film from the paper, which comprises immersing and agitating the polyolefin coated paper in the form of chips in a liquid composition at a temperature in the range from about 35° to about 65° C., said composition essentially consisting of a mixture of (1) a liquid of a first class consisting of saturated ring compounds having between 3 and 8 carbon atoms in the ring, single methyl substituents thereof, decahydronaphthalene and tetrahydronaphthalene between 15 and 85%; (2) a water miscible liquid alcohol of a second class consisting of methyl alcohol, ethyl alcohol, propyl alcohol, isopropyl alcohol, tertiary butyl alcohol, allyl alcohol, propargyl alcohol, and ethylene glycol between 5 and 50%; (3) a liquid of a third class consisting of halogen substituted saturated and unsaturated straight and branched carbon chain compounds of a carbon chain length between 1 and 6 carbon atoms, halogen substituted benzines, halogen substituted toluenes and halogen substituted xylenes between 5 and 50%; and (4) from 0.20 to 10% of water, said liquid composition operating synergistically to swell and permeate without substantially dissolving the polyolefin, to swell the fibers of the paper, and break down the bond of adhesion between the polyolefin and the paper fibers, then remove said liquid composition from the paper and separate polyolefin film, and finally separating the polyolefin film and paper.

3,051,611
HYDROLYSIS OF BAGASSE

José Ramón de la Vega Falcón and Emiliano Ramos Rodriguez, Vedado, Havana, Cuba, assignors of seventy-five percent to Instituto Cubano de Investigaciones Tecnologicas, Havana, Cuba, and twenty-five percent to Universidad de Villanueva, Marianao, Cuba, both corporations of Cuba

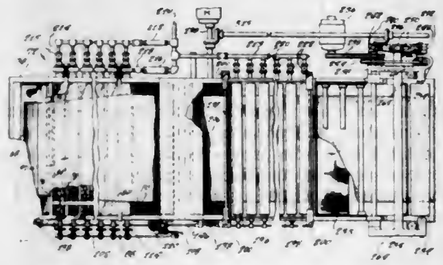
No Drawing. Filed Nov. 16, 1959, Ser. No. 852,936
13 Claims. (Cl. 162—68)

1. A process of hydrolyzing bagasse to reduce the proportion of pentosans while minimizing the reduction in the degree of polymerization of the holocellulose comprising hydrolyzing the bagasse with a hydrolyzing agent consisting essentially of water free of oxygen and carbon dioxide at a temperature above the boiling point of water at atmospheric pressure and at the saturating pressure of the system.

3,051,612
SUBSTITUTE LEATHERS AND THE MANUFACTURE THEREOF

John M. Bennett, New York, N.Y., assignor, by mesne assignments, to Leather Industries, Inc., Dover, Del., a corporation of Delaware

Filed June 15, 1953, Ser. No. 361,674
19 Claims. (Cl. 162—151)



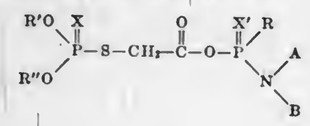
1. In a method of making a sheeted leather substitute material, the procedure which comprises preparing a fibre-water mixture in which at least ninety-six percent of the fibre content consists of leather fibres, mixing therewith a latex solution in such relative quantities that the ratio of solid rubber to leather fibre lies within the range of fifteen to seventy-five on the one hand and thirty to sixty on the other to form a composite mixture, coagulating the latex, delivering the resultant composition in gel form in a broad flat stream, conveying said stream away from the point of delivery, and during such conveyance subjecting the material to lateral oscillation of diminishing amplitude, simultaneously kneading the material and subjecting it to progressively increased suction to effect a partial separation of the water, then while further subjecting the material to progressively increasing suction applying surface heat and at the same time applying progressively increasing smoothing and condensing pressure.

3,051,613
MIXED ANHYDRIDES OF PHOSPHORUS CONTAINING ACIDS

John P. Chupp, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 8, 1960, Ser. No. 34,630
20 Claims. (Cl. 167—22)

1. Mixed anhydrides of the structure



wherein X and X′ are chalkogens of atomic weight less than 40, wherein —R is selected from the group consisting of —OR‴ and



and wherein R′, R″, R‴, A and B, respectively, contain from 1 to 5 carbon atoms and are selected from the group of aliphatic radicals consisting of alkyl, alkenyl, chloroalkyl, chloroalkenyl and alkoxyalkyl.

3,051,614
HEAVY OIL FOR TREE SPRAY

Paul F. Warner, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 30, 1959, Ser. No. 802,613
6 Claims. (Cl. 167—22)

1. A method for protecting a base against attack by mites which comprises placing between said base and said mites a film of a dispersion comprising, as the principal active ingredient thereof, 0.1 to 1.0 weight percent of a high boiling ditertiary alkyl polysulfide having from 2 to 5 sulfur atoms per molecule and alkyl groups containing from 8 to 16 carbon atoms in a carrier medium, said polysulfide boiling within the range of about 600 to about 800° F.

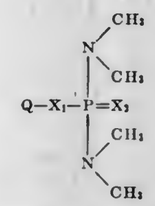
3,051,615
PROCESS FOR THE PREPARATION OF PHOSPHOR-CONTAINING HETEROCYCLIC COMPOUNDS

Jan Hendrik Uhlenbroek and Bernardus Gerhardus van den Bos, Weesp, Netherlands, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 1, 1960, Ser. No. 5,592
Claims priority, application Netherlands Nov. 9, 1959
9 Claims. (Cl. 167—33)

6. The method of destroying plant harmful fungi comprising contacting said fungi with a fungicidally effective amount of a compound of claim 7.

7. A phosphorus containing heterocyclic compound of the formula:



wherein Q is a heterocyclic member selected from the group consisting of 1,2-pyronyl, 1,4-pyronyl, 1,2-benzopyronyl, chromonyl, 2,3 benzopyronyl, tetronyl, maleic anhydride, 2-furanone and unsubstituted 1–6 carbon alkyl and unsubstituted 1–6 carbon alkoxy derivatives thereof, X_1 is a member of the group consisting of oxygen and sulfur and X_2 is a member of the group consisting of oxygen and sulfur and X_1 is directly attached to a heterocyclic ring carbon of Q.

3,051,616
MOTHPROOFING AGENTS

Othmar Drapal, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 21, 1957, Ser. No. 647,471
Claims priority, application Great Britain Mar. 23, 1956
8 Claims. (Cl. 167—37)

1. A dry composition comprising a compound selected from the group consisting of triphenylmethanes and di-

phenyl ethers, said triphenylmethanes and said diphenyl ethers being mothproofing agents, and a member selected from the group consisting of benzamide and phenylurea.

3,051,617
BIRD REPELLENT

Alma F. Mann, 826 N. 34th St., Milwaukee, Wis.

No Drawing. Filed Feb. 16, 1960, Ser. No. 8,905
4 Claims. (Cl. 167—46)

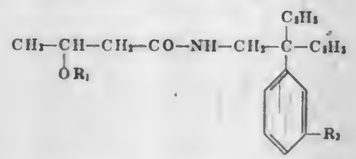
1. A bird repellent comprising whole anise seed, crushed and finely divided, and a carrier vehicle for the same.

3,051,618
BETA-HYDROXY-BUTYRIC ACID AMIDE DERIVATIVES AND PROCESS FOR THEIR USE AS NARCOTICS

Gustav Ehrhart, Bad Soden (Taunus), Ingeborg Hennig, Kelkheim (Taunus), Ernst Lindner, Frankfurt am Main, and Heinrich Ott, Eppstein (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Apr. 24, 1959, Ser. No. 808,549
Claims priority, application Germany Nov. 6, 1956
13 Claims. (Cl. 167—52)

1. A member of the group consisting of beta-hydroxybutyric acid amide derivatives of the general formula



wherein R_1 represents a saturated aliphatic dicarboxy acyl group containing from four to six carbon atoms; and R_2 is a member of the group consisting of hydrogen and alkoxy groups containing one to four carbon atoms, and nontoxic alkali metal, ammonium, magnesium and calcium salts of said derivatives.

3,051,619
4-HYDROXY BUTYRIC ACID THERAPEUTIC COMPOSITIONS AND PROCESS OF USE FOR CLINICAL SEDATION, HYPNOSIS, OR ANAESTHESIA

Henri Marie Laborit, Paris, France, assignor to L'Equilibre Biologique, Commentry, France, a French body corporate

No Drawing. Filed May 9, 1961, Ser. No. 108,715
Claims priority, application France May 19, 1960
13 Claims. (Cl. 167—65)

1. Therapeutic composition having a sedative, hypnotic and anaesthetic effect and having an action on the metabolism of nitrogen, containing, as active principle, in association with a pharmaceutically administrable vehicle, a compound selected from the group consisting of 4-hydroxy-butyric acid and the therapeutically administrable salts thereof.

3,051,620
TREATMENT OF MENTAL DISTURBANCES BY CHEMOTHERAPEUTIC MEANS

Leo George Abood, Oak Park, Ill.

No Drawing. Continuation of abandoned application Ser. No. 5,648, Feb. 1, 1960. This application Oct. 16, 1961, Ser. No. 145,427
3 Claims. (Cl. 167—65)

1. A method of reducing and in some cases eliminating the outward signs of hostility and paranoid tendencies evidenced by aggression, combativeness and belligerency, and certain types of withdrawal and detachment engendered by hostility, without causing central nervous system depression or sedation, in mentally disturbed human subjects in whom the aforementioned signs are evident, comprising administering to said human subjects a composition containing from about 0.3 g. to about 1.5 g. of N-benzoylpiperidine and a non-toxic pharmaceutical carrier.

3,051,621
GEL COMPOSITION, PRESSURIZED CONTAINER WITH SAME, AND METHOD OF PREPARATION

Daniel M. Green, University City, Kenneth Joseph Kohnle, Warson Woods, and Robert Joseph Elliott, Manchester, Mo., assignors to Grove Laboratories Incorporated, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 22, 1959, Ser. No. 847,913
5 Claims. (Cl. 167—65)

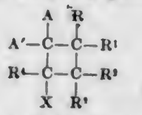
5. An analgesic gel composition having a viscosity of about 1950 cps. to about 200,000 cps. at 25° C. and comprising, per liter of gel, from about 40 grams to about 120 grams of magnesium salicylate, from about 10 to about 100 grams of a gelling agent and at least 500 milliliters of water.

3,051,622
ANALGESIC CYCLOBUTANES

Samuel Kuna, Westfield, and Anthony W. Pircio, East Brunswick, N.J., assignors to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 25, 1959, Ser. No. 855,285
26 Claims. (Cl. 167—65)

1. An analgesic composition in unit dosage form comprising a significant quantity of a pharmaceutical carrier and from about 0.1 grain to about 25 grains of a member selected from the group consisting of a cyclobutane derivative and a non-toxic acid addition salt of said cyclobutane derivative wherein the cyclobutane derivative can be represented by the following generic formula:



wherein each of A and A' is a lower alkyl radical; each of R, R^1, R^2 and R^3 is a member selected from the group consisting of hydrogen, a lower alkyl radical, the phenyl radical, the nitro radical, a lower alkyl sulfonyl radical, the cyano radical, a lower alkyl ester, and a lower alkyleneamino radical, provided that at least one of R, R^1, R^2 and R^3 is the phenyl, the nitro, a lower alkyl sulfonyl, the cyano, a lower alkyl ester, and a lower alkyleneamino radical; R^4 is a member selected from the group consisting of hydrogen and a lower alkyl radical having from 1 to 2 carbon atoms; and X is tertiary amino radical selected from the group consisting of a lower dialkylamino, the piperazino, the piperidino, the morpholino, and the thiomorpholino radical.

3,051,623
CODEINE AND 2-METHYL-3-O-TOLYL-4-QUINAZOLONE ANALGESIC COMPOSITION

Edwin E. Hays and Leonard Michelson, Rochester, N.Y., assignors to Wallace and Tiernan Inc., a corporation of Delaware

Filed Apr. 24, 1959, Ser. No. 808,622
1 Claim. (Cl. 167—67)

Therapeutic compositions having analgesic properties comprising a mixture of a substance of the group consisting of codeine and its pharmaceutically acceptable acid addition salts, with a substance of the group consisting of 2-methyl-3-o-tolyl-4-quinazolone and its pharmaceutically acceptable acid addition salts, said quinazolone compound and codeine compound being present in a ratio 20 to 66 parts by weight of quinazolone to 50 to 100 parts by weight of codeine.

3,051,624
LONG-ACTING HORMONE PREPARATIONS

Ezra Lozinski, Westmount, Quebec, Canada, assignor to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of Quebec

No Drawing. Filed June 1, 1961, Ser. No. 114,045
6 Claims. (Cl. 167—74)

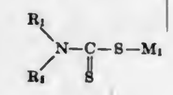
1. A hormone injection preparation comprising a long acting testosterone fatty acid ester wherein the fatty acid grouping has at least five carbon atoms, a long acting estradiol fatty acid ester wherein the fatty acid grouping has at least four carbon atoms and a quick acting estrogen in a liquid carrier.

3,051,625
DITHIOCARBAMATE TUMOR-INHIBITORY PROCESS

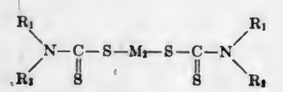
Koppaka V. Rao, Pine Brook, N.J., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 1, 1959, Ser. No. 824,170
6 Claims. (Cl. 167—78)

1. A process for retarding the growth of malignant tumors which comprises administering to a malignant tumor bearing host a daily dosage of from about 1 to 2000 mg. per kilogram of body weight of a substance represented by a formula selected from the group consisting of



and



wherein M_1 is selected from the group consisting of sodium, potassium, lithium, alkyl containing from 1 to 18 carbon atoms, phenyl, phenyl alkyl wherein the alkyl group contains from 1 to 4 carbon atoms; monoalkylammonium, dialkylammonium and trialkylammonium wherein the alkyl groups contain from 1 to 12 carbon atoms; alkanolammonium, dialkanolammonium, and trialkanolammonium wherein the alkanol groups contain from 2 to 4 carbon atoms; piperidinium, pyrrolidinium, morpholinium and pyrrolinium, and N-alkylderivatives thereof wherein the alkyl group contains from 1 to 3 carbon atoms;

M_2 is selected from the group consisting of calcium and magnesium;

R_1 and R_2 when taken separately are selected from the group consisting of alkyl containing from 1 to 18 carbon atoms, hydroxyalkyl containing from 2 to 4 carbon atoms, phenyl, and phenyl alkyl wherein the alkyl group contains from 1 to 4 carbon atoms; and

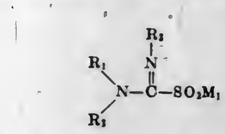
R_1 and R_2 when taken together with the nitrogen atom to which they are attached are selected from the group consisting of 1-piperidyl, 1-pyrrolidyl, 1-morpholinyl and 1-pyrryl.

3,051,626
AMINOIMINOMETHANE SULFINIC ACID TUMOR-INHIBITORY PROCESS AND PHARMACEUTICAL COMPOSITION

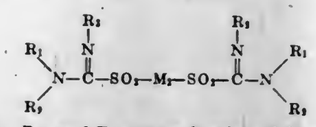
Koppaka V. Rao, Pine Brook, N.J., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 1, 1959, Ser. No. 824,203
7 Claims. (Cl. 167—78)

1. A process for retarding the growth of malignant tumors which comprises administering to a malignant-tumor bearing host a daily dosage of from about 1 to 500 mg./kilogram of body weight of a substance represented by a formula selected from the group consisting of:



and



wherein R_1, R_2, and R_3 are each selected from the group consisting of hydrogen, alkyl containing from 1 to 18 carbon atoms, hydroxyalykyl containing from 2 to 4 carbon atoms, phenyl, or phenylalkyl wherein the alkyl group contains from 1 to 4 carbon atoms; M_1 is selected from the group consisting of hydrogen, alkyl containing from 1 to 18 carbon atoms, hydroxyalkyl containing from 2 to 4 carbon atoms, phenyl, phenylalkyl wherein the alkyl group contains from 1 to 4 carbon atoms, sodium, potassium, lithium; monoalkylammonium, dialkylammonium, and trialkylammonium wherein the alkyl groups contain from 1 to 12 carbon atoms; alkanolammonium, dialkanolammonium and trialkanolammonium wherein the alkanol groups contain from 2 to 4 carbon atoms; piperidinium, pyrrolidinium, morpholinium and pyrrolinium, and N-alkyl derivatives thereof wherein the alkyl group contains from 1 to 3 carbon atoms; and M_2 is selected from the group consisting of calcium and magnesium.

3,051,627
STABILIZED CHYMOTRYPSIN SOLUTION

Paul E. Bradford, Kankakee, Charles W. Damaskus, La Grange, and James B. Lesh, Flossmoor, Ill., assignors, by mesne assignments, to Armour-Pharmaceutical, a corporation of Delaware

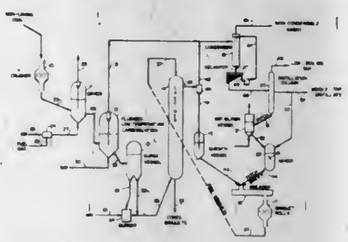
No Drawing. Filed Aug. 18, 1960, Ser. No. 50,302
7 Claims. (Cl. 195—63)

1. A stabilized preparation of alpha chymotrypsin characterized by containing from 0.5 to 15 parts by weight of an amino acid in its free acid form, said free amino acid being selected from the group consisting of glycine, methionine, valine, threonine, serine, proline, and mixtures thereof.

3,051,628
PREPARING METALLURGICAL FUEL FROM NON-CAKING COAL UTILIZING AIR-BLOWN PITCH BINDER

Everett Gorin, Pittsburgh, and Robert J. Friedrich, Finleyville, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 22, 1960, Ser. No. 44,602
4 Claims. (Cl. 202—26)



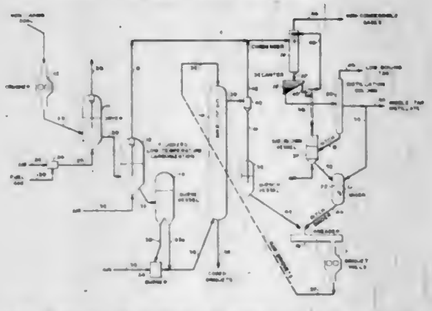
1. The method of preparing coked briquets from a non-caking coal which comprises carbonizing said non-

caking coal to produce gas, tar and char, heating said char in particulate form to an elevated temperature above the carbonization temperature at which said char was generated to effect shrinking of the char, recovering a high boiling pitch from said tar, subjecting said pitch to air blowing at an elevated temperature to thereby increase its fixed carbon content, forming raw briquets from said preshrunk char and said air blown pitch at low temperature, and thereafter coking said raw briquets.

3,051,629
PREPARING METALLURGICAL FUEL BRIQUETS FROM NON-CAKING COAL BY PRESHRINKING CHAR

Everett Gorin, Pittsburgh, and Robert J. Friedrich, Library, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 7, 1958, Ser. No. 746,990
5 Claims. (Cl. 202—26)

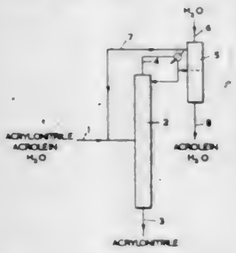


1. The method of preparing metallurgical fuel briquets which comprises carbonizing a non-caking coal in a fluidized state at low temperature until substantially complete evolution of tar has occurred, whereby a particulate char is obtained as a residue, heating said char in particulate form as a suspension in hot gases to an elevated temperature above the carbonization temperature at which said char was generated to effect shrinkage of said char, passing said heated char at said elevated temperature as a dilute phase suspension through a coking zone in heat exchange relation with raw briquets whereby said briquets are coked, recovering char from the cooled dilute phase suspension, forming raw briquets from said char for transfer to said coking zone, and recovering coked briquets from said coking zone.

3,051,630
PURIFICATION OF ACRYLONITRILE

David James Hadley, Epsom Downs, and John Bernard Bream, Banstead, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

Filed Jan. 13, 1959, Ser. No. 786,534
Claims priority, application Great Britain Jan. 25, 1958
3 Claims. (Cl. 202—71)



1. The process which comprises distilling a mixture consisting substantially of acrylonitrile, water and 0.3–0.5% acrolein at a temperature to drive off a fraction consisting of all of the water and acrolein together with substantial amounts of acrylonitrile, withdrawing said fraction as an overhead fraction, refluxing said fraction, passing a portion of the reflux to the distilling phase, and washing another portion with sufficient water to form an aqueous phase containing acrolein and only a small proportion of acrylonitrile and a water-saturated acrylonitrile phase, separating and introducing the acrylonitrile phase to the distilling phase, and withdrawing as the bottoms fraction highly pure, dry acrylonitrile.

3,051,631
METHOD AND APPARATUS FOR THE CONTROL OF OXIDATION-REDUCTION REACTIONS

Adie D. Harbin, Jr., Painesville, and Harold E. Munns, Perry, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Filed Apr. 7, 1959, Ser. No. 804,835
15 Claims. (Cl. 204—1)



1. An apparatus for use in measuring the oxidation-reduction potential produced in the reactions involving chlorine which comprises a unitary cell body of an electrically nonconductive non-fragile material resistant to shattering on impact and further resistant to high temperatures, solutions of strong and weak alkalies and acids, and solutions of oxidizing and reducing agents, the surface of said cell body which is exposed to the reactants whose oxidation-reduction potential is to be measured having two electrodes imbedded therein and bonded thereto, one electrode having a surface of silver and the other electrode having a surface of platinum, the silver and platinum surfaces of said electrodes being substantially flush with the surface of the cell body, said electrodes having leads secured thereto, said leads being secured to said electrodes in the cell body and imbedded and bonded to the material of which said cell body is formed so as to be insulated from each other and sealed from any contact with the reactants whose oxidation-reduction potential is being measured.

3,051,632
METHOD OF ELECTROPLATING COPPER ELBOWS

Melville Arthur Dike, San Jose, Calif., assignor to William D. Kraemer, Maywood, Calif.

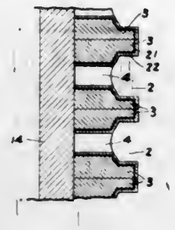
Filed July 27, 1959, Ser. No. 829,792
6 Claims. (Cl. 204—16)

1. A method of forming an elbow having uniform wall thickness out of copper tubing comprising the steps of, bending the copper tubing into the shape of an elbow, locating the wall portions of said elbow which are of reduced thickness due to such bending, and electroplating onto said wall portions sufficient copper to overcome said reduced thickness to thereby provide an elbow of uniform wall thickness.

3,051,633
PROCESS OF CHROMIUM PLATING VENTED PISTON RINGS

Donald A. Paull and Donald J. Wilson, Muskegon, Mich., assignors to Sealed Power Corporation, Muskegon, Mich., a corporation of Michigan

Filed Mar. 16, 1959, Ser. No. 799,676
16 Claims. (Cl. 204—24)



1. The method of chromium plating the outer peripheral surface of a piston ring having radial slots extending from said outer peripheral surface to the inner periphery thereof which comprises temporarily closing said slots only at the inner periphery of the ring by applying a liner to the inner peripheral surface of the ring and while said slots are thus closed, depositing by electroplating a metallic coating or copper on the outer peripheral surface of the ring and on the side surfaces of the slots therein and thereafter chromium plating the outer peripheral surface of the ring.

3,051,634
BATHS FOR THE PRODUCTION OF COPPER ELECTROPLATES

Wennemar Strauss and Wolf-Dieter Willmund, Dusseldorf-Holthausen, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,354
Claims priority, application Germany Nov. 30, 1957
10 Claims. (Cl. 204—52)

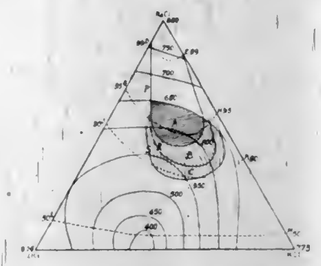
1. An acid copper electroplating bath for producing bright copper deposits comprising an aqueous acid solution of a copper salt, an organic sulfonic acid full brightening agent having at least one carbon atom linked only to heteroatoms and a short aliphatic radical linked to the said carbon atom through a member of the group consisting of a nitrogen atom and a sulfur atom, the aliphatic radical having attached thereto a sulfonic acid group, and a compound in sufficient amount to broaden the effective operating ranges of current density and temperature, said compound being selected from the group consisting of thiocarboxylic acid amides and isothiocarboxylic acid amides.

3,051,635
PROCESS FOR THE MANUFACTURE OF SODIUM BY ELECTROLYSIS OF FUSED SALT BATHS

Jacques van Diest, Uccle, Brussels, Belgium, assignor to Solvay & Cie, Brussels Belgium, a Belgian company

Filed June 14, 1960, Ser. No. 35,961
Claims priority, application Belgium June 17, 1959
2 Claims. (Cl. 204—68)

1. A process for producing sodium in a pure state by electrolysis of boths of fused salts which comprises subjecting to electrolysis at a temperature below 700° C. and under a voltage of 5 to 7 volts a bath of salts constituted by x gram molecule percent of sodium chloride, y gram molecule percent of lithium chloride and z gram molecule percent of at least one salt selected from the group consisting of potassium chloride, rubidium chloride



and caesium chloride, the ratio $x:y$ being between 1 and 3 and the ratio $z:y$ being between 1 and 2.

3,051,636
ELECTROLYTIC PREPARATION OF CADMIUM SALTS

Alfred F. Kaspaul, Stamford, Conn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

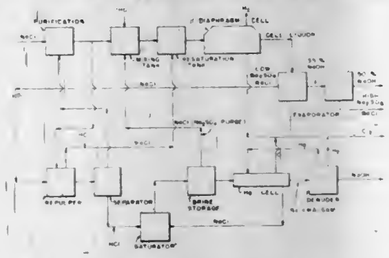
No Drawing. Filed Mar. 30, 1960, Ser. No. 18,499
2 Claims. (Cl. 204—92)

1. The process for the preparation of a cadmium salt of the group consisting of cadmium sulfide and cadmium selenide, which comprises the steps of subjecting an aqueous solution consisting essentially of acetic acid and a compound of the class consisting of thioacetamide and selenoacetamide to electrolysis with a cadmium anode.

3,051,637
PROCESS FOR COORDINATED OPERATION OF DIAPHRAGM AND MERCURY CATHODE ELECTROLYTIC CELLS

Richard H. Judice, Houston, Tex., and Henry R. Wiesner, South Euclid, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Filed June 10, 1959, Ser. No. 819,494
9 Claims. (Cl. 204—98)

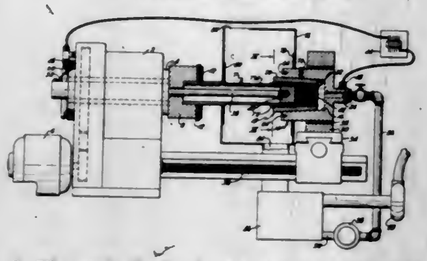


1. In the process for the coordinated operation of diaphragm and mercury cathode electrolytic cells for the electrolysis of alkali metal halide brines, wherein solid salt recovered from the evaporation of the diaphragm cell catholyte is used to resaturate the depleted brine from the mercury cathode cells, the improvement which comprises evaporating the diaphragm cell catholyte to an alkali metal hydroxide concentration of about 35%, recovering the precipitated solid alkali metal halide resulting from such evaporation, adding the thus-recovered solid alkali metal halide to the depleted brine from the mercury cell so as to resaturate said brine to the alkali metal halide concentration required for mercury cathode cell operation and sending a portion of the resaturated mercury cathode cell brine back to the diaphragm cell brine feed, the amount of said portion being sufficient to maintain the impurities in the mercury cathode cell brine feed at a level below that which is detrimental to the operation of the mercury cell.

3,051,638
METHOD AND APPARATUS FOR MAKING A TAPERED THREAD

John E. Clifford and Charles L. Faust, Columbus, Ohio, assignors, by mesne assignments, to United States Steel Corporation, Pittsburgh, Pa., a corporation of New Jersey

Filed Mar. 12, 1959, Ser. No. 798,919
6 Claims. (Cl. 204—143)

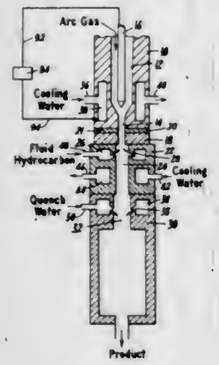


3. The method of making a tapered thread on a workpiece comprising providing a workpiece having a tapered surface, providing a threaded non-erodible cathode die having a helical thread thereon, the threaded portion of said die being substantially longer than the surface to be threaded and arranged at substantially the same taper as the thread to be formed, coating all but the crest of the thread of said die with an insulating material, telescoping the cathode die and workpiece one within the other with their small ends facing in the same direction until there is a small uniform space between the die and tapered surface of the workpiece to be threaded, then causing helical motion between said die and workpiece while flowing an electrolyte through the space between the workpiece and the die, and at the same time causing a substantially constant direct current to flow between said workpiece and said die.

3,051,639
ARC TORCH CHEMICAL REACTIONS

John E. Anderson, Danville, Ind., assignor to Union Carbide Corporation, a corporation of New York

Filed Sept. 25, 1958, Ser. No. 763,418
25 Claims. (Cl. 204—171)



5. A process for the production of acetylene by the pyrolysis of fluid hydrocarbons which comprises energizing a high-pressure arc having a predetermined arc intensity, flowing at a controllable rate an arc gas stream through said high-pressure arc to form a resulting stream of hot arc gas having a substantially constant heat content determined by said predetermined arc intensity and by maintaining said controllable flow rate of arc gas substantially constant, collimating such hot arc gas, chilling the outer layer of said hot arc gas to wall-stabilize such arc, discharging the resultant collimated hot arc gas at a preselected velocity, intimately mixing the effluent stream of hot arc gas with a supply of fluid hydrocarbon stock to pyrolyze and crack said stock and produce acetylene, passing the acetylene-containing hot pyrolysis product within a fixed period of time determined by said preselected discharge velocity into a quench zone to suddenly cool such products and then recovering the acetylene therefrom whereby increased yields of acetylene are obtained.

3,051,640
AMINO ACID SEPARATION PROCESS

James T. Traxler, Chicago, Ill., assignor, by mesne assignments, to Armour-Pharmaceutical, a corporation of Delaware

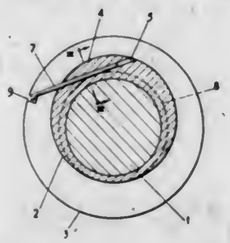
No Drawing. Filed Sept. 21, 1959, Ser. No. 841,050
7 Claims. (Cl. 204—180)

1. In a process of separating amino acids by electrodialysis, the steps comprising maintaining a potential difference across a series of aqueous solutions of ionizable compounds contained in compartments separated alternately by selective anion and cation permeable membranes by using an anode and a cathode, introducing an amino acid mixture into a central compartment, adjusting the pH of the amino acid mixture to a pH of about the pH of the isoelectric point of at least one of the amino acids in the mixture, maintaining the solution in the compartment which is positioned towards said anode and adjacent to the central compartment and separated therefrom by a selective anion permeable membrane at a pH substantially higher than the pH of the mixture in the central compartment and maintaining the solution in the compartment which is positioned towards said cathode and adjacent to the central compartment and separated therefrom by a selective cation permeable membrane at a pH substantially lower than the pH of the solution in the central compartment.

3,051,641
NUCLEAR REACTOR FUEL ELEMENT HAVING A THERMOCOUPLE JUNCTION WITHIN ITS SHEATH

Piyatilleke Perera Guneratne, Seascale, and Melville Young and George Henry French, Whitehaven, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed July 29, 1957, Ser. No. 674,709
Claims priority, application Great Britain July 27, 1956
4 Claims. (Cl. 204—193.2)

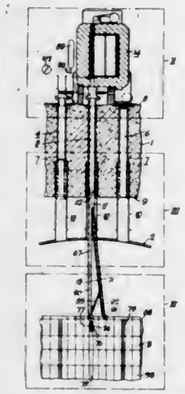


1. In a nuclear reactor, an elongated fuel member clad in a protective sheath having a uniform characteristic thickness and an enlarged portion extending radially outwardly from the characteristic outer periphery of the sheath, said enlarged portion being disposed eccentrically about the longitudinal axis of the sheath and defining a passageway open at its ends to an external surface of said eccentrically disposed enlarged portion, and a thermocouple cable having a diameter smaller than that of the passageway and extending within and terminating in the passageway, the terminal portion of the cable being formed with a thermocouple junction and having a diameter so greater than that of the passageway as to forcibly engage therein.

3,051,642
HETEROGENEOUS NUCLEAR REACTOR FUEL ELEMENT CHARGING AND DISCHARGING MEANS

Kenneth Henry Dent, Cuddington, near Northwich, England, assignors to United Kingdom Atomic Energy Authority, London, England

Filed Aug. 6, 1957, Ser. No. 676,652
Claims priority, application Great Britain Aug. 14, 1956
3 Claims. (Cl. 204—193.2)

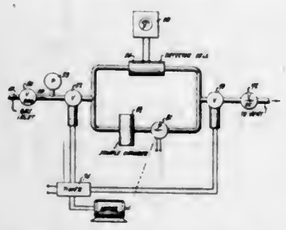


1. A charging/discharging device for a pressurised gas cooled heterogeneous nuclear reactor having a radiation shield and a pressure vessel comprising a pillar having at one end a locating spigot and at the other end means for locating the pillar at the lower end of a charge tube passing through the radiation shield and connecting with the pressure vessel of a nuclear reactor, said means for locating the pillar including a rotatable chute passing through the charge tube, a second chute coupling with the rotatable chute and pivotted at its coupling with the rotatable chute so that it has a lower free end movable radially outwards from said pillar, means for rotating said rotatable chute about its axis together with said second chute and means for moving said second chute radially outwards from the pillar.

3,051,643
MEASURING APPARATUS

Gustav Bergson, Jenkintown, Pa.
(250 Titus Ave., Warrington, Pa.)

Filed Mar. 16, 1959, Ser. No. 799,796
6 Claims. (Cl. 204—195)

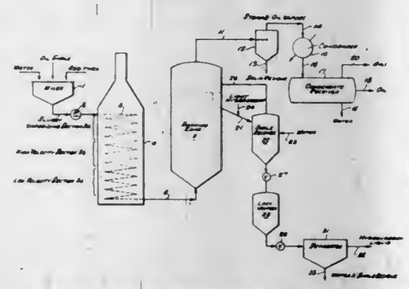


1. A measuring apparatus comprising in combination, a detector cell for measuring a component of a gas passed therethrough, pump means, a closed loop gas recirculating path including said detector cell and said pump means, said closed loop gas recirculating path having an inlet port connected to a first normally closed valve and an outlet port connected to a second normally closed valve, said first valve adapted to be connected to a source of gas under a first pressure and adjustable to an open condition to admit said gas at said first pressure to said closed loop recirculating path, said pump means adapted to recirculate gas admitted to said path through said detector cell, said second valve adjustable to an open condition to exhaust gas from said closed loop recirculating path.

3,051,644
METHOD FOR RECOVERING OIL FROM OIL SHALE

Louis D. Friedman and Leon P. Gaucher, Beacon, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

Filed July 1, 1959, Ser. No. 824,300
1 Claim. (Cl. 208—11)



A method for recovery of oil from oil shale which comprises forming a flowable mixture of particles of oil shale in water, introducing said mixture as a flowing stream at a velocity in the range of 1 to 10 feet per second to an elongated tubular heating zone at a pressure above about 1000 pounds per square inch gauge, heating said mixture in said heating zone as it flows therethrough to a temperature in the range of 800 to 1000° F. completely vaporizing said water to steam and forming a dispersion of shale particles in steam moving at a velocity in the range of about 4 to 50 feet per second, discharging said dispersion of heated shale particles in steam into the lowermost portion of a vertically extended soaking zone of relatively large cross-sectional area containing a bed of said heated shale particles, passing said steam upwardly through said soaking zone in contact with said shale particles in said bed at a velocity sufficient to impart motion to said shale particles contained therein but insufficient to produce a fluid bed of said particles in said zone, maintaining said particles in said bed in contact with steam at a pressure within the range of 1000 to 3000 pounds per square inch gauge and a temperature within the range of 800 to 900° F. for a period of 20 minutes to 3 hours, continuously removing treated shale particles from the uppermost portion of said bed, withdrawing steam and oil vapors substantially free from shale particles from said soaking zone at a point above the uppermost portion of said bed, and recovering oil from said effluent stream of steam and oil vapors.

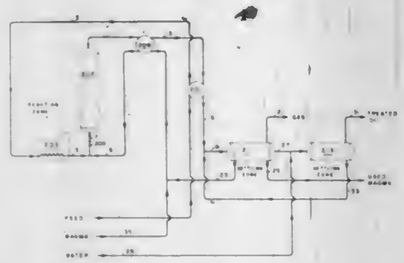
3,051,645
UPGRADING HEAVY HYDROCARBON OILS

William B. Wilson, Pleasant Hill, and George M. Good, Piedmont, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed May 23, 1960, Ser. No. 30,878
6 Claims. (Cl. 208—230)

1. Process for upgrading heavy hydrocarbon oils containing contaminants selected from the group consisting

of metals and heteroatomic compounds of sulfur and nitrogen which comprises the steps (1) intimately contacting the oil in the liquid phase with a magma consisting essentially of the carbonate, sulfide and hydroxide of a metal selected from the group consisting of sodium, potassium, and mixtures thereof and no more than about 30% by weight water, basis the metal hydroxide content of the magma, the weight ratio of metal hydroxide in the magma to hydrocarbon oil being from 0.1 to 1.5, the magma comprising at least 50% by weight of said hydroxide, at a temperature between about 375 and 450° C., and a pressure of at least 200 p.s.i.g. for at least one minute at the high end of the contacting temperature range to at least about 1 hour at the low end of said range thus forming a reaction mixture of magma and reacted oil product, (2) cooling the reaction mixture to a temperature above the solidification temperature of the

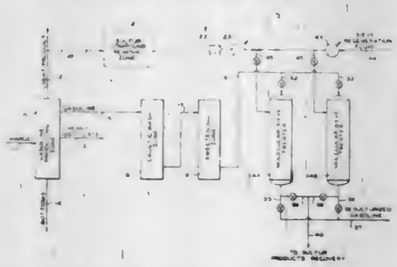


magma, (3) adding water to the cooled reaction mixture, (4) separating in a first separation zone the cooled reaction mixture of reacted oil product and magma into at least three phases, (*a*) a vaporous phase comprising normally gaseous oil reaction product, (*b*) an upper liquid phase comprising normally liquid reaction product, and (*c*) a lower liquid phase comprising reacted magma and water, (5) withdrawing separately the normally gaseous reaction product from the first separation zone, (6) withdrawing separately the upper liquid phase from the first separation zone, (7) mixing the withdrawn liquid phase of oil reaction product with water, (8) separating in a second separation zone the mixture of liquid oil reaction product and water into two liquid phases, (*d*) an upper liquid phase substantially freed of magma and having substantially reduced content of contaminants, and (*e*) a lower liquid phase of water containing magma removed from the liquid oil reaction product.

3,051,646
REMOVAL OF SULFUR MATERIALS FROM HYDROCARBONS

Jesse M. Brooke, Sweeny, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 13, 1961, Ser. No. 95,774
8 Claims. (Cl. 208—250)



1. A process for selectively removing disulfides from gasoline fractions previously sweetened, which comprises contacting said gasoline fraction with a molecular sieve adsorbent material having rigid three dimensional anionic networks and having average pore diameters of about 13 angstroms, and recovering a gasoline product having an improved lead response.

3,051,647
HYDROGENATION OF GASOLINES

Peter Thomas White, Sunbury-on-Thames, England, assignor to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed July 20, 1959, Ser. No. 828,068
Claims priority, application Great Britain July 25, 1958
11 Claims. (Cl. 208—255)

1. In a process for treating gasoline, containing unsaturated hydrocarbons, which tends to form gum, the improvement which comprises contacting the gasoline together with a gas comprising hydrogen with an activated catalyst, prepared initially by impregnating a support with a solution of a complex of ammonia with a substantially water-insoluble nickel salt of formic acid, the conditions of contact being such that the gasoline is partially hydrogenated and the gum-forming tendency reduced.

3,051,648
STABILITY OF HYDROCARBON DISTILLATE

Frederick G. Hess, Cranbury, and Walter C. Bradbury, Union, N.J., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

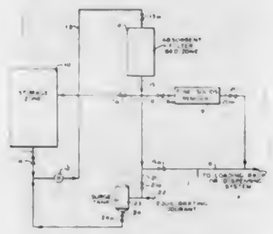
No Drawing. Filed Apr. 29, 1960, Ser. No. 25,565
8 Claims. (Cl. 208—297)

1. The process for improving the stability of hydrocarbon distillate fuel which comprises contacting the same in the liquid phase in an anhydrous atmosphere with a supported aluminum phosphate catalyst.

3,051,649
PURIFICATION OF LIQUEFIED PETROLEUM GASES

Theodore W. Legatski, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 5, 1959, Ser. No. 844,348
9 Claims. (Cl. 208—299)

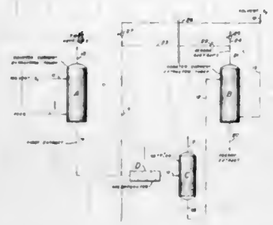


1. A method for purifying an odorized liquefied petroleum gas containing heavy contaminating materials comprising heavy oils, greases, polymers and the like, before passing said liquefied gas to a place of utilization which comprises removing said odorized liquefied gas from storage, passing same to an adsorption zone containing a fixed bed of a solid adsorbent material, passing said liquefied gas in the liquid phase through said bed to selectively remove said contaminating materials therefrom and to obtain said liquefied gas substantially free of said contaminating materials, passing said purified liquefied gas through a fine solids filtration zone to remove entrained fine adsorbent entrained therein, and passing said liquefied gas to said place of utilization as a product of the method.

3,051,650
SOLVENT EXTRACTION WITH LIQUID SULFUR DIOXIDE FOLLOWED BY HYDROCARBON WASH

Reuben F. Pfennig, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed July 6, 1954, Ser. No. 441,444
3 Claims. (Cl. 208—338)



1. A solvent liquid phase extraction process of improved volumetric efficiency for separating aromatic components from a hydrocarbon feed stock containing such aromatic components in admixture with non-aromatic components, said process including the steps of charging a stream of said feed stock to a first liquid-liquid contact zone and there countercurrently contacting the same with liquefied sulfur dioxide, removing a first raffinate stream comprising non-aromatic components from said first zone, removing a first impure extract stream comprising a solution of said aromatic components and a portion of said non-aromatic components in liquefied sulfur dioxide from said first zone, initially admixing said first impure extract stream with a wash oil comprising non-aromatic hydrocarbons heavier than the non-aromatic components present in said feed stock in an amount sufficient to form two liquid phases, passing the resultant mixture to a settling zone and there allowing said mixture to settle under the influence of gravity to form a first phase derived primarily from said first extract and comprising a solution of said aromatic components and a reduced amount of said non-aromatic components of said feed stock in said liquefied sulfur dioxide and a second phase comprising said wash oil and displaced non-aromatic components from said feed stock, passing said first phase to a second liquid-liquid contact zone and countercurrently contacting the same therein with a wash oil comprising non-aromatic hydrocarbons heavier than the non-aromatic components present in said feed stock to form a second purified extract phase substantially free from non-aromatic components of said feed stock and a second raffinate phase comprising said wash oil and displaced non-aromatic components, and removing said second raffinate phase and said extract phase from said second zone, whereby the volumetric efficiency of said second contact zone is substantially improved.

3,051,651
METHOD OF REMOVING OXYGEN DISSOLVED IN WATER BY MEANS OF ANION EXCHANGE RESINS

Karl Haagen, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,117
Claims priority, application Germany Feb. 12, 1959
5 Claims. (Cl. 210—32)

1. A method of removing oxygen dissolved in water by means of anion exchange resins, which comprises conducting water containing dissolved oxygen through an anion exchange resin containing both weakly basic and strongly basic functional groups and the strongly basic groups thereof being charged with an anion selected from the group consisting of dithionous acid and a reaction product of dithionous acid with an aldehyde.

3,051,652
PROPELLANT COMPOSITION

John W. Olandt, North Arlington, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey

Filed Feb. 17, 1961, Ser. No. 90,013
8 Claims. (Cl. 252—7)

2. A propellant for expelling dry free flowing powder from a container, said propellant consisting essentially of gaseous mixture of between about 35 and about 40 parts by weight of bromotrifluoromethane, between about 65 and about 60 parts by weight of sulphur hexafluoride, and a sufficient amount of an inert, non-flammable compressed gas to pressurize the mixture to between about 160 and about 300 p.s.i.g. at 70° F.

3,051,653
PARAFFIN CONTROL COMPOSITION AND METHOD

Paul L. Skolaut, Great Bend, Kans., and Almon B. Waters, Duncan, Okla., assignors to Halliburton Company, a corporation of Delaware

No Drawing. Filed Oct. 6, 1959, Ser. No. 844,624
17 Claims. (Cl. 252—8.3)

5. A method of treating oil and gas wells and the like for inhibiting the formation of paraffin on surfaces past which liquid hydrocarbons are conducted, comprising the step of, introducing into the well a treating composition consisting essentially of naphthalene and a less readily oil-soluble material selected from the group consisting of beta naphthol and anthracene and mixtures thereof, the ratio of said less readily oil-soluble material to said naphthalene being sufficiently large to reduce the rate of solubility of said composition in liquid hydrocarbons as compared to the rate of solubility of naphthalene alone in liquid hydrocarbons and the rate of solubility of said treating composition being sufficiently slow thereby providing a continuing paraffin inhibiting treatment.

3,051,654
PREPARATION OF METAL SALTS OF PHOSPHORUS SULFIDE-HYDROCARBON REACTION PRODUCTS

Eli W. Blaha, Highland, and Albert R. Sabol, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Dec. 23, 1959, Ser. No. 861,434
18 Claims. (Cl. 252—32.7)

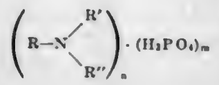
1. In a process for reacting a basic alkaline earth metal compound and a hydrolyzed phosphorus sulfide-hydrocarbon reaction product prepared by reacting a hydrocarbon with from about 1% to about 50% of a phosphorus sulfide at a temperature in the range of from about 200° F. to about 600° F., the improvement which comprises reacting said hydrolyzed phosphorus sulfide-hydrocarbon reaction product with at least about 0.5 mol of a basic alkaline earth compound per mol of phosphorus present in said hydrolyzed phosphorus sulfide-hydrocarbon reaction product at a temperature in the range of from about 150° F. to about 400° F. in the presence of from about 0.25 to 10 moles (per mole of basic alkaline earth compound) of an organic compound selected from the class consisting of aldehydes and ketones having less than 10 carbon atoms and boiling below about 450° F.

3,051,655
METALWORKING LUBRICANT

George E. Barker, Norristown, Pa., assignor to Quaker Chemical Products Corporation, Conshohocken, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 1, 1957, Ser. No. 693,808
1 Claim. (Cl. 252—49.9)

As an improved metalworking lubricant, a composition consisting essentially of a mineral oil of lubricating viscosity and 0.5 to 50% by weight of a compound having the structural formula



where R is an alkyl group containing a carbon chain possessing from 12 to 30 carbon atoms; R′ is selected from the group consisting of H, aminopropyl and ethoxylated aminopropyl groups; R″ is selected from the group consisting of H, and polyethoxy groups having 1 to 5 ethylene oxide residues; *n* is an integer 1 to 3; and *m* is an integer 1 to 2.

3,051,656
METHOD OF PREPARING MAGNETIC GARNET CRYSTALS

Bernhard Kramarsky, % Microwave Chem. Lab. Inc., 282 7th Ave., New York, N.Y.

No Drawing. Filed May 8, 1959, Ser. No. 811,807
7 Claims. (Cl. 252—62.5)

2. The method of growing magnetic iron rare-earth garnet crystals, comprising the steps of providing a mixture of iron oxide, from 25 to 70 mole percent, lead oxide, from 30 to 70 mole percent, rare-earth oxide, from 0.1 to 10 mole percent, the rare earth being selected from the group consisting of yttrium, gadolinium, erbium and samarium, and boric anhydride, from 2 to 15 mole percent, heating said mixture to a temperature in the range of 1315 to 1345 degrees centigrade, and then cooling said heated mixture at a controlled rate in the range of 0.5 to 5 degrees centigrade per hour to allow for proper crystal growth.

3,051,657
PROCESS OF DECREASING THE SALT CONTENT OF AN ACIDIC SILICA HYDRO-ORGANOSOL

Wilson H. Power, Des Peres, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 19, 1958, Ser. No. 761,957
16 Claims. (Cl. 252—306)

1. A process of decreasing the salt content of an acidic silica hydro-organosol which comprises contacting at a temperature below 30° C. an acidic silica hydroorganosol containing water, from about 5 to 12% by weight of silica as silicic acid, from about 25 to 60% by weight of a substantially neutral water-miscible organic liquid consisting of carbon, hydrogen and oxygen atoms, at least 0.1% by weight of a salt of a mineral acid and a water-soluble alkali silicate and a mineral acid in an amount sufficient to provide a pH of 1.8 to 4.5, with the hydrogen form of a water-insoluble strong cation-exchange material and the sulfate form of a water-insoluble anion-exchange material containing salt-forming nitrogen atoms, until the hydro-organosol contains less than 0.05% by weight of said salt, said hydro-organosol being removed from contact with said anion-exchange material before the pH of the sol exceeds 4.5.

14. A process of decreasing the salt content of an acidic hydro-organosol which comprises contacting at a temperature below 30° C. an acidic hydro-organosol containing water, from about 5 to 12% by weight of silica as silicic acid, from about 25 to 60% by weight of a substantially neutral water-miscible organic liquid consisting of carbon, oxygen and hydrogen atoms, at least 0.1% by weight of salt of a mineral acid and an alkali silicate and a mineral acid in an amount sufficient to provide a pH of 1.8 to 4.5, with the hydrogen form of a water-insoluble strong cation-exchange material and the sulfate form of a water-insoluble anion-exchange material containing salt-forming nitrogen atoms, until the hydro-organosol contains less than 0.025% by weight of said salt, said hydro-organosol being removed from contact with said anion-exchange material before the pH of the sol exceeds 4.5, treating the resulting anion-exchange material with water until it is regenerated to the sulfate form and treating the cation-exchange material with the resulting water to at least partially regenerate said cation-exchange material to the hydrogen form and thereafter contacting additional quantities of said first mentioned acidic silica hydro-organosol with said regenerated, cation-exchange material and said regenerated anion-exchange material in accordance with the aforedescribed process.

3,051,658
PROCESS OF DECREASING THE SALT CONTENT OF AN ACIDIC SILICA HYDRO-ORGANOSOL

Wilson H. Power, Des Peres, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 19, 1958, Ser. No. 761,958
11 Claims. (Cl. 252—306)

1. A process of decreasing the salt content of an acidic silica hydro-organosol containing salts which comprises contacting at a temperature below 30° C. an acidic silica hydro-organosol containing water, from about 5 to 12% by weight of silica as silicic acid, from about 25 to 60% by weight of a substantially neutral water-miscible organic liquid consisting of carbon, hydrogen and oxygen atoms, at least 0.1% by weight of a salt of a mineral acid and an alkali silicate and a mineral acid in an amount sufficient to provide a pH of 1.8 to 4.5, with the hydrogen form of a water-insoluble strong cation-exchange sulfonated polymerizate and the base form of a water-insoluble weak anion-exchange material containing a plurality of salt-forming nitrogen atoms, until the hydro-organosol contains less than 0.025% by weight of said salt, said hydro-organosol being removed from contact with said anion-exchange material before the pH of the sol exceeds 4.5.

3,051,659
METHOD OF PRODUCING A STABLE COAGEL OF AN ALKALINE EARTH FLUORIDE

Sjerp Anne Troelstra, Emmasingel, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

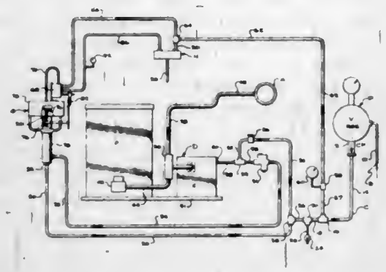
No Drawing. Filed Feb. 15, 1961, Ser. No. 89,355
2 Claims. (Cl. 252—317)

1. A method of producing a stable coagel consisting essentially of an alkaline earth fluoride comprising the steps, forming a dispersion of an alkaline earth fluoride in water, increasing the surface charge on the dispersed particles of said alkaline earth fluoride by adding to said dispersion a solution in water of a potential determining ion selected from the group consisting of Ca^{++}, Mg^{++}, Zn^{++}, Sr^{++}, Cd^{++}, Cu^{++}, Ni^{++}, Mn^{++}, Co^{++}, Fe^{+++}, NH_4^{+}, Pb^{++}, Ce^{+++}, Cs^{+}, UO_2^{++}, Li^{+} and Th^{++} and then adding to said dispersion, in an amount sufficient to coagulate said dispersion, a coagulating solution consisting of a solution of an electrolyte in water, the amount of water in said coagulating solution being sufficient to produce a gel containing from 50% to 98% by volume of water.

3,051,660
TEMPERATURE RESPONSIVE LIQUID DISCHARGE UNIT

Clyde A. Owens, Box 52, Wheeler Ridge, Calif.

Filed Nov. 16, 1959, Ser. No. 853,165
4 Claims. (Cl. 252—360)



1. In an apparatus for continuously introducing a liquid treating chemical into the flow from an oil and gas well at a uniform rate above a predetermined temperature of the ambient atmosphere, but which automatically increases the rate of flow of said chemical in inverse proportion to the extent that the temperature of said ambient temperature decreases below said predetermined temperature, consisting of: a reservoir for said liquid treating chemical; a gas actuated reciprocating pump which discharges a liquid therefrom at a rate that is proportional to the rate at which a gas is supplied thereto; first means connecting said reservoir to a liquid chemical inlet side of said pump; second means connecting the liquid chemical discharge side of said pump to said flow from said well; a source of gas under uniform pressure; third means for supplying said gas from said source to said pump at a first rate of flow to actuate said pump to discharge said treating chemical into said flow from said well at said uniform rate; fourth means for controlling said rate to one suited for the particular treating chemical being used and the particular flow from an oil and gas well being treated; fifth means capable of permitting said gas to flow from said third means to said pump at a second variable rate of flow; and sixth means responsive to the temperature of the ambient atmosphere and operatively associated with said third and fifth means for maintaining said fifth means in a closed position when the temperature of the ambient atmosphere is above said predetermined temperature and which actuates said fifth means to allow said gas to flow therethrough at said second rate when the temperature of said ambient atmosphere falls below said predetermined temperature, which fifth and sixth means cooperatively allow said gas at said second rate of flow to increase in an inverse relationship to the extent that the temperature of said ambient atmosphere drops below said predetermined temperature.

3,051,661
pH INDICATOR UNITS IN TABLET FORM

Galen F. Collins, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed July 3, 1956, Ser. No. 595,605
7 Claims. (Cl. 252—408)

1. A pH indicator unit comprising an intimate homogeneous mixture, compressed in tablet form, of from about 0.01% to about 0.05% by weight, in the aggregate, of Brom Creson Purple, Brom Cresol Green and a member of the group consisting of Methyl Orange and Dimethyl Yellow, from about 10% to about 90% by weight of cellulose powder, and, as the remainder, a neutral, substantially white filler and binding agent, the proportion of Brom Cresol Purple:Brom Cresol Green:the member of said group being 4.5–6.5:1.5–3.0:1.

3,051,662
PRESSURE-FORMED CATALYST STRUCTURES AND METHOD OF MANUFACTURING SAME

Emory W. Pitzer and Bill T. Morgan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 17, 1958, Ser. No. 767,757
14 Claims. (Cl. 252—430)

1. A pressure-formed shaped article comprising a matrix of a solid polymer of aliphatic 1-olefin containing finely divided solid catalytic material dispersed therein.

5. A method of manufacturing pressure-formed shaped articles from finely divided solid catalytic material comprising compressing said finely divided solid catalytic material admixed with finely divided polymer of aliphatic 1-olefin.

3,051,663
COMPOSITION COMPRISING A POLYMER OF AN ETHYLENIC MONOMER AND A SALT OF AN ESTER OF A CARBOXYLIC ACID AND HYDROXYALKYLATED ALKYLENE POLYAMINE

Myron A. Coler, 56 Secor Road, Scarsdale, N.Y., and Arnold S. Louis, 5450 Mosholu Ave., Riverdale, N.Y.

No Drawing. Filed Mar. 30, 1956, Ser. No. 574,956
9 Claims. (Cl. 252—500)

1. A composition of matter comprising a polymer produced by polymerization of an ethylenically unsaturated monomer and containing as a destaticizing agent between 1% and 7% by weight of a salt selected from the group consisting of acid salts and quaternary ammonium salts of an ester formed by esterification of a saturated aliphatic carboxylic acid containing no more than four carbon atoms and a compound selected from the group consisting of hydroxyalkylated alkylene polyamines, with from 2 to 8 carbon atoms in the hydroxyalkyl groups, from 2 to 6 carbon atoms in the alkylene groups connecting the amine nitrogen atoms and with no more than 5 nitrogen atoms in the compound.

3,051,664
PROCESS FOR THE PRODUCTION OF HIGH IMPACT TYPE CASTINGS BY THE COPOLYMERIZATION OF EPOXY COMPOUNDS WITH AMINES

Stanley Turner, Whittier, Calif.
(2136 Wallace St., Costa Mesa, Calif.)

No Drawing. Filed Nov. 25, 1957, Ser. No. 698,383
5 Claims. (Cl. 260—2)

1. The process for the production of tough, high-impact type, open mold castings through the copolymerization of epoxy compounds with amines while controlling the exothermic heat of reaction during said production, which comprises: providing an epoxy compound having only terminal 1,2-epoxy groups, with no other cyclic structure or functional groups in their molecular structure, and wherein the number of said epoxy groups is a number from 3 to 4; admixing with said epoxy compound a primary mono amine, the amount of said amine being such that there is one amino hydrogen for each said 1,2-epoxy group of said epoxy compound, and said amine being one with the nitrogen atom attached to a carbon atom of a six-carbon ring having no other functional group attached to said ring; stirring the mixture to keep the temperature therein substantially uniform therethrough while extracting heat of reaction through heat exchange surfaces to hold the temperature of said mixture at about 40° C. to 80° C. until said liquid mass evidences substantially no tendency to rise in temperature, whereby the product formed is an unpolymerized intermediate characterized by its ability to remain in such state over a prolonged period of time; subsequently transferring said liquid mass to an open casting mold; raising its temperature to between about 140° C. and 160° C. and holding it at said temperature for a period of time, thereby to form said mass into a polymerized body having all amino-type polymerization linkage therein.

3,051,665

METHOD OF FOAMING AN ADMIXTURE OF EPOXY RESIN, A CHLOROFLUOROCARBON, AND A CURING CATALYST

Marco Wismer, Gibsonia, and William R. Hydro, New Kensington, Pa., assignors to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,124
9 Claims. (Cl. 260—2.5)

1. The method of forming a foamed resin body which comprises mixing a liquid epoxy resin containing a plurality of terminal epoxy rings, a volatile chlorofluorocarbon that boils at not substantially above room temperature, an emulsifying agent, and a coordination compound of boron trifluoride, the mixture being at a temperature below the boiling point of the chlorofluorocarbon, and allowing the mixture to warm up without application of external heat whereby to foam and cure the same.

3,051,666

ADHESIVE COMPOSITION FOR ELASTOMERS

William J. Snoddon, Sandusky, Mich., assignor to Yale Rubber Manufacturing Co., Sandusky, Mich., a corporation of Mich.

No Drawing. Filed Nov. 21, 1958, Ser. No. 775,396
4 Claims. (Cl. 260—3.5)

2. An adhesive composition for bonding metals to elastomers, said composition comprising: 100 parts of chlorosulfonated polyethylene, 8 parts of sulfur, 100 parts of chlorinated rubber, 88 parts of a polyisocyanate selected from the class consisting of polymethylenepolyphenylisocyanate, 4,4'-methylenedi-o-tolylisocyanate, and mixtures of said polyisocyanates, and an amount of xylene sufficient to dissolve the aforesaid components.

3,051,667

COMPOSITION COMPRISING THERMOPLASTIC RESIN AND A RESINOUS POLYPINATE PLASTICIZER

Walter T. Koch, Drexel Hill, Marion R. Lytton, West Chester, and Edward A. Wielicki, Philadelphia, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Original application Dec. 23, 1954, Ser. No. 477,426, now Patent No. 2,892,814, dated June 30, 1959. Divided and this application Sept. 22, 1958, Ser. No. 762,206
10 Claims. (Cl. 260—16)

1. A new composition of matter comprising a physical mixture of a resinous polypinate plasticizer prepared from a mixture consisting of pinic acid and an organic diol having the following general formula:

HO—R—OH

wherein R is selected from the group consisting of divalent unsubstituted aliphatic and organic substituted aliphatic hydrocarbon radicals containing from 2 to 12 carbon atoms, and a different thermoplastic resin selected from the group consisting of cellulose esters, vinyl resins, polyhexamethylene adipamide resins and synthetic polyester resins, said plasticizer being present in an amount of from 3 to 50% by weight of said thermoplastic resin.

3,051,668

PROCESS FOR THE PRODUCTION OF STABLE AQUEOUS DISPERSIONS OF POLYMERIZED VINYLESTERS

Hans Bauer, Eduard Bergmeister, and Joseph Heckmaier, all of Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany, a German firm

No Drawing. Filed July 20, 1959, Ser. No. 828,062
Claims priority, application Germany Aug. 1, 1958
4 Claims. (Cl. 260—17)

1. In a process for the production of stable, aqueous emulsions of polymers of vinyl acetate and copolymers of vinyl acetate with polymerizable esters of unsaturated aliphatic acids wherein emulsion polymerization is effected in an aqueous medium at about neutral pH and containing an anionic emulsifying agent as well as a protective colloid, the step which comprises effecting said emulsion polymerization in the presence of a compound selected from the group consisting of (A) the chloride and sulfate salts of a metal of the group consisting of metals of group IIa of the periodic system and aluminum, said salt being present in an amount stoichiometrically equivalent to the acid moiety of the anionic emulsifying agent, and (B) the salt of a metal of said group with the acid moiety of the anionic emulsifying agent, said metal salt being used in an amount of about 0.02 to 0.5% by weight of the reaction mixture.

3,051,669

AQUEOUS COATING COMPOSITIONS FOR PRODUCTION OF SHELL MOULDS AND PROCESS FOR PREPARING SAME

Harold Garton Emblem, Grappenhall, near Warrington, Norman Duncan Gerard Mountford, Donington, and Charles William Morley, Alvaston, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,068
Claims priority, application Great Britain Nov. 5, 1958
8 Claims. (Cl. 260—17)

1. A coating composition for the production of shell moulds comprising finely divided refractory powder, an aqueous binding liquid comprising a mixture of a substantially electrolyte-free silica aquasol and a non-cationic emulsion of unplastised polyvinyl acetate, an aqueous solution of sodium carboxy methyl cellulose in a concentration not exceeding 5 grams of said sodium carboxy methyl cellulose in 100 milliliters of water, the viscosity of a 1% solution dry weight of the sodium carboxy methyl cellulose at 25° C. being 7–15 centipoises, and an anionic wetting agent, the proportion of aquasol to emulsion being from substantially 4:1 to substantially 5:1 by weight, and the volume of aquasol being more than 8 times the volume of the said aqueous solution.

3,051,670

COATING COMPOSITION COMPRISING CELLULOSE DERIVATIVE AND A CRYSTALLINE POLYMER

William G. Grantham, Wilmington, Del., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Nov. 13, 1959, Ser. No. 852,634
11 Claims. (Cl. 260—17)

1. A lacquer coating composition for film comprising from about 40 to 99.9% based on the weight of the solids of a film former selected from the group consisting of organic solvent-soluble cellulose ethers and cellulose esters, from about 0.1 to about 3.0% based on the weight of the solids of a crystalline polymer selected from the group consisting of polyvinyl cyclohexane, polyallyl cyclohexane and poly-4-phenyl-1-butene, and an organic solvent.

3,051,671

EPOXY RESIN-ISANO OIL COMPOSITIONS

Lowell O. Cummings, San Anselmo, Calif., assignor to Pacific Vegetable Oil Corporation, San Francisco, Calif., a corporation of California

No Drawing. Filed Dec. 7, 1959, Ser. No. 857,545
18 Claims. (Cl. 260—18)

1. A process for producing resinous coating compositions, comprising: admixing reactive amounts of isano oil and an epoxy resin at substantially atmospheric pressure and in accordance with a time-temperature combination correct for obtaining a reaction between the said isano oil and the said epoxy resin.

3,051,672

POLYVINYL HALIDES PLASTICIZED WITH EPOXIDIZED ESTERS OF HIGHER FATTY ACIDS CONTAINING PAIRS OF ACYLOXY GROUPS

Stanley P. Rowland, Cincinnati, Ohio, and Ralph G. White, Minneapolis, Minn., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 18, 1958, Ser. No. 749,336
4 Claims. (Cl. 260—23)

1. As a new composition of matter, a vinyl halide polymer containing as a plasticizer therefor a mixture of water-insoluble alkyl esters of aliphatic acids containing 11 to 22 carbon atoms and alcohols from the group consisting of monohydric and polyhydric alcohols containing from two to eighteen carbon atoms, the esters in said mixture being substantially free of ethylenic unsaturation, each ester in said mixture having as sole substituents on different pairs of carbon atoms at least one substituent from the group consisting of oxirane oxygen and pairs of vicinal acyloxy groups containing two or four carbon atoms, the total substituents in the esters of said mixture averaging about two to about eight weight percent oxirane oxygen and about one to about thirty-five weight percent pairs of said vicinal acyloxy groups.

3,051,673

COATING COMPOSITIONS

Fred John Stark, Princeton, Ill., assignor to Custom Polymers, Inc., Princeton, Ill., a corporation of Delaware

No Drawing. Filed Aug. 28, 1959, Ser. No. 836,627
18 Claims. (Cl. 260—28.5)

1. A coating composition comprising a solution in an aliphatic hydrocarbon solvent of an interpolymer of isobutylene and a small amount up to 7% by weight, based on the isobutylene, of an aliphatic 1,3-diene hydrocarbon of 4–6 carbons, a wax selected from the group consisting of ozokerite, a synthetic hydrocarbon wax obtained by the Fischer-Tropsch process, said synthetic wax having an average molecular weight in the range of 630–980 with a melting point in the range of about 180–225° F., and mixtures of said waxes, the waxes amounting to 4–80 weight percent of said interpolymer, and 4–150 weight percent, based on said interpolymer, of a solid hydrocarbon resin derived by the metal halide polymerization of a hydrocarbon mixture obtained from the deep cracking of petroleum, 90% of which mixture boils at atmospheric pressure below 125° C., and which mixture comprises at least 10% by weight of conjugated diolefins and a total of at least 20% by weight of conjugated diolefins and readily polymerizable olefins and being approximately devoid of polymerizable aromatics.

3,051,674

TEXTILE FINISHING COMPOSITION COMPRISING AN AQUEOUS DISPERSION OF THE INTERACTION PRODUCT OF UREA, FORMALDEHYDE, A FATTY ACID AMIDE AND A PRIMARY AMINE

Bernard H. Kress, Lafayette Hill, Pa., assignor to Quaker Chemical Products Corporation, Conshohocken, Pa., a corporation of Pennsylvania

No Drawing. Filed May 25, 1959, Ser. No. 815,268
3 Claims. (Cl. 260—29.4)

1. A textile finishing composition comprising an aqueous dispersion of the products of interaction at reflux temperatures of (*a*) an amide of a long chain fatty acid having 8 to 35 carbon atoms, (*b*) formaldehyde, (*c*) urea and (*d*) a saturated primary amine containing not more than two amino groups in which the NH_2 groups are attached to a radical selected from the group consisting of monovalent and divalent hydrocarbon radicals having not more than four carbon atoms for each amino group attached thereto, monovalent and divalent radicals having not more than four carbon atoms and having one hydroxyl substituent, radicals having not more than four carbon atoms and having a polyether substituent of the formula $HO(CH_2CH_2O)_x$—where *x* is an integer from 1 to 10, and radicals of the formula

$$-(CH_2)_3O(CH_2CH_2O)_y(CH_2)_3-$$

where *y* is an integer from 1 to 5; the molar ratio of reacting substances being taken so that the ratio of formaldehyde to urea is between 3:1 and 5:1; the ratio of amine to urea is between 0.25:1 and 1.0:1 and the ratio of amide to amine is between 0.5:1 and 2.0:1.

3,051,675

STABILIZING LATEXES OF CHLOROETHYLENE POLYMERS WITH MONO SODIUM UREA

Marta G. Glueck, Hazel Park, and Austin L. Jankens, Bay City, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 4, 1960, Ser. No. 19,489
6 Claims. (Cl. 260—29.6)

1. A pH stabilized latex composition of a chloroethylenic polymeric material containing about 1–2 percent of monosodium urea.

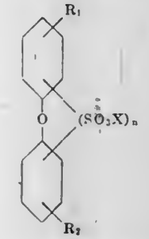
3,051,676

SOLUTIONS OF POLY-N-VINYL-5-METHYL-2-OXAZOLIDINONE CONTAINING ALKYL DIPHENYL ETHER SULFONATE

William W. Bakke, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 24, 1960, Ser. No. 51,483
8 Claims. (Cl. 260—29.6)

1. An aqueous solution of poly-N-vinyl-5-methyl-2-oxazolidinone which comprises said polymer dissolved in an aqueous solvent vehicle consisting essentially of water mixed with at least one alkyl diphenyl ether sulfonate of the formula:



wherein:

R_1 is an alkyl radical containing 9 to 15 carbon atoms,
R_2 is selected from the group consisting of hydrogen and an alkyl radical containing 9 to 15 carbon atoms,
X is selected from the group consisting of an alkali metal, ammonium and hydrogen, and
n is 1 or 2;

said alkyl diphenyl ether sulfonate being present in said aqueous solvent vehicle in an amount such that the cloud point of the polymer in the resulting solution is increased in comparison with the cloud point of the same polymer at the same concentration in the same said aqueous solvent vehicle not containing said alkyl diphenyl ether sulfonate.

3,051,677

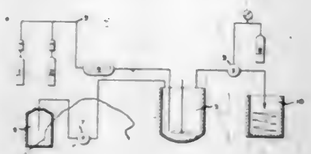
COPOLYMER ELASTOMER OF VINYLIDENE-FLUORIDE AND HEXAFLUOROPROPENE

Dean R. Rexford, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 29, 1957, Ser. No. 655,856
11 Claims. (Cl. 260—29.6)

1. An elastic copolymer of about 70% to 30% by

weight of vinylidene fluoride and from about 30% to 70%



by weight of hexafluoropropene.

3,051,678

SCRATCH MASKING COATING COMPOSITION FOR MASONRY COMPRISING A POLYESTER RESIN, SAND AND MINERAL OIL

Itzhak Bentov, Cambridge, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Nov. 24, 1958, Ser. No. 775,736

1 Claim. (Cl. 260—33.6)

In a sand filled resinous coating composition for a masonry building unit wherein said resin is selected from the group consisting of (*a*) the condensation product of propylene glycol and dipropylene glycol with phthalic anhydride and maleic anhydride and (*b*) the condensation product of ethylene glycol and diethylene glycol with phthalic anhydride, maleic anhydride, and adipic acid, the improvement which comprises: an insoluble mineral oil therein in a scratch masking amount in the range of 1.2 to 7.5 parts by weight per 100 parts of said resin, said oil having a specific gravity between 0.7 and 0.9 at 60° F., and a viscosity between 35 and 5,000 Saybolt Universal seconds at room temperature.

ERRATUM

For Class 260—37 see:
Patent No. 3,051,084

3,051,679

POLYESTER RESINS

George E. Forsyth, Trevose, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Dec. 12, 1960, Ser. No. 75,137

7 Claims. (Cl. 260—40)

1. A process for preparing fiber-reinforced plastic objects, which comprises forming a mat of fibers, mixing a first solution of a polyester having units from a dihydric alcohol and from an α,β-ethylenically unsaturated dicarboxylic acid in polymerizable monomer having a vinylidene group, $CH_2=C<$, and a second solution containing polymerizable polyester having units from a dihydric alcohol and from an α,β-unsaturated dicarboxylic acid in a monomer having a vinylidene group, one of said solutions having dissolved therein a small proportion of isotactic poly(methyl methacrylate) and the other solution having dissolved therein a small proportion of syndiotactic poly(methyl methacrylate), at least one of said solutions containing a polymerization initiator, applying the resultant mixture, while still fluid, to said mat, whereupon said mixture forms a gel, and initiating polymerization of said mixture at a temperature below the melting point of said gel.

3,051,680

PROCESS FOR VULCANIZING A BLEND OF A HALOGENATED ISOOLEFIN-DIOLEFIN COPOLYMER AND AN ISOOLEFIN-VINYL-AROMATIC COPOLYMER WITH FERRIC AND ZINC CHLORIDES AND PRODUCT OBTAINED

Leon S. Minckler, Jr., Metuchen, and Delmer L. Cottle, Highland Park, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 10, 1958, Ser. No. 720,088

13 Claims. (Cl. 260—41.5)

1. A vulcanized composition comprising a major proportion of a halogenated isobutylene-diolefin butyl rubber copolymer, a minor proportion of a copolymer of about 30 to 70% of a C_4 to C_{10} olefin with about 30 to 70% of a compound containing at least one cyclic nucleus, said composition being selected from the group consisting of styrene, alkyl ring substituted styrenes, halo-ring substituted styrenes and mixtures thereof, and about 0.5 to 30.0 weight percent based on halogenated copolymer of a metal chloride selected from the group consisting of ferric chloride and zinc chloride.

3,051,681

PROCESS FOR INHIBITING CRYSTALLIZATION OF THE DIGLYCIDYL ETHER OF BISPHENOL A COMPRISING INCORPORATING THEREIN AN EPOXYLATED NOVOLAK RESIN, AND COMPOSITION OBTAINED THEREBY

Alexander M. Partansky, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 29, 1959, Ser. No. 849,446

3 Claims. (Cl. 260—43)

1. An epoxy resin composition consisting essentially of the diglycidyl ether of 2,2-bis(4-hydroxyphenyl)propane and a minor proportion, sufficient to inhibit crystallization, of an epoxylated novolak resin, said novolak resin, before epoxylation, containing 2 to 5 phenolic groups and consisting predominantly of methylenebisphenol.

3,051,682

SUSPENSION POLYMERIZATION OF VINYLIDENE AROMATIC COMPOUNDS

John B. Ott, Northampton, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 1, 1958, Ser. No. 764,528

7 Claims. (Cl. 260—45.5)

1. In a process for preparing granular polymerization products, the improvement which comprises polymerizing in aqueous dispersion a polymerizable material containing an aromatic monomer of the group consisting of a monovinylidene aromatic hydrocarbon, a ring-halogenated monovinylidene aromatic hydrocarbon, and mixtures thereof in the presence of a dispersing agent of the group consisting of:

(*a*) a water-soluble interpolymer containing from $1+4n$ to $10+5n$ mol percent of a combined (C_6–C_7 alkyl) ester,

(*b*) a water-soluble interpolymer containing from $0.5+1n$ to $5+3n$ mol percent of a combined (C_8–C_9 alkyl) ester,

(*c*) a water-soluble interpolymer containing from $0.5+0.5n$ to $2+5n$ mol percent of a combined (C_{10}–C_{11} alkyl) ester,

(*d*) a water-soluble interpolymer containing from $0.3+0.7n$ to $1.5+4.5n$ mol percent of a combined (C_{12}–C_{15} alkyl) ester, and

(*e*) a water-soluble interpolymer containing from $0.1+0.4n$ to $1+1.5n$ mol percent of a combined (C_{16}–C_{18} alkyl) ester;

each of said alkyl esters being a member of the group consisting of an alkyl acrylate, an alkyl methacrylate and mixtures thereof; the remainder of the composition of each of said water-soluble interpolymers being constituted by a combined acid of the group consisting of acrylic acid, methacrylic acid, and mixtures thereof; *n* in the above formulas representing the mol fraction of acrylic acid included in the acidic component of the interpolymer.

3,051,683

POLYTETRAFLUOROETHYLENE - HEXAFLUOROPROPYLENE-TETRAFLUOROETHYLENE COPOLYMER COLLOIDAL BLEND AND ARTICLE THEREOF

Robert Salim Mallouk, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 10, 1959, Ser. No. 851,973

5 Claims. (Cl. 260—45.5)

1. A composition of matter comprising a homogeneous colloidal blend of 65 to 99 weight percent of colloidal polytetrafluoroethylene and complementally therewith 35 to 1 weight percent of a colloidal copolymer of hexafluoropropylene and tetrafluoroethylene, said copolymer having a hexafluoropropylene content of 6.5 to 27 weight percent and a specific melt viscosity of 1.5×10^3 to 3×10^5 poises, said homogeneous blend having a hexafluoropropylene content of from 0.5 to 8%.

3,051,684

ORGANOSILOXANE POLYMERS CONTAINING POLYDIENE BLOCKS

Maurice Morton, Akron, Ohio, and Alan Rembaum, Altadena, Calif., assignors to The Board of Directors of The University of Akron, Akron, Ohio

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,028

27 Claims. (Cl. 260—46.5)

1. A linear block copolymer produced by anionic polymerization, each of the two terminal segments of which copolymer is a di-functional polyorganosiloxane segment, the copolymer having at least one sulfur-vulcanizable polydiene intermediate segment of the class consisting of polymers of conjugated diolefin hydrocarbons and chlorohydrocarbons, and containing sufficient diene content to permit vulcanization and sufficient polyorganosiloxane content to modify the properties of the copolymer, and where there is more than one polydiene segment each two such segments are separated by a polymer of a monomer polymerizable by carbanion.

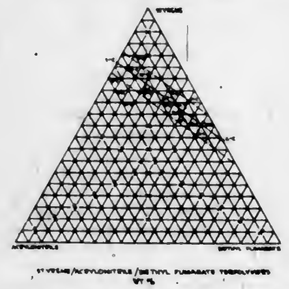
3,051,685

METHYL VINYL KETONE TERPOLYMERS

Robert J. Slocombe, Dayton, and George L. Wesp, Englewood, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Original application Dec. 7, 1953, Ser. No. 396,506, now Patent No. 2,829,128, dated Apr. 1, 1958. Divided and this application Mar. 31, 1958, Ser. No. 725,030

6 Claims. (Cl. 260—63)



1. A clear terpolymer prepared by free-radical initiated batch polymerization to a conversion of at least 20 weight percent of a monomeric mixture consisting of (*a*) a monomer selected from the group consisting of styrene, vinyltoluene and vinylxylene, (*b*) acrylonitrile, and (*c*) methyl vinyl ketone, the proportions of the three monomers in said monomeric mixture being limited to those in the area of mixtures that produce clear terpolymers, said area encompassing the line joining the polymerization azeotrope composition of the particular (*a*) and acrylonitrile on the one hand and the particular (*a*) and methyl vinyl ketone on the other hand as plotted on an equilateral triangular coordinate graph.

3,051,686

POLYCHLOROFORMATES

William E. Bissinger, Akron, Ohio, assignor, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,510

5 Claims. (Cl. 260—77.5)

1. An interpolymer of (A) an olefinically unsaturated chloroformate and (B) a compound selected from the group consisting of aliphatic olefinically unsaturated hydrocarbons and aliphatic olefinically unsaturated halohydrocarbons, said interpolymer containing a multiplicity of reactive chloroformate groups and containing from 5 to 85 percent olefinically unsaturated chloroformate moieties, by weight, based upon the combined weight of said (A) olefinically unsaturated chloroformate moieties and of (B) said compound selected from said group.

3,051,687

POLYURETHANE RESINS

Donald M. Young, Geneva, Switzerland, and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 30, 1957, Ser. No. 655,966

22 Claims. (Cl. 260—77.5)

1. Method which comprises the steps of (I) simultaneously reacting, at a temperature between about 10 and 200° C., (*a*) a lactone having at least four carbon atoms in the ring with (*b*) a difunctional compound of the group consisting of dihydric alcohols, diphenols, dimercaptans, mercapto alcohols, water and hydrogen sulfide, and (*c*) a monomeric vicinal epoxide, the proportions of said reactants being such as to form a mixture of linear polyesters having terminal hydroxyl groups and molecular weights int he range of about 400 to about 10,000; (II) reacting said mixture of linear polyesters with a 30 to 60% molar excess of organic diisocyanate at a temperature up to about 300° C. to form a mixture of substantially linear polyester-polyurethane diisocyanates; and (III) reacting said mixture of linear polyester-polyurethane diisocyanates with an amount of a polyfunctional compound in excess of that required for reacting with all of the isocyanate groups of the said mixture of linear polyester-polyurethane diisocyanates, said polyfunctional compound being selected from the group consisting of water and organic compounds having at least two reactive sites selected from the group consisting of alcoholic hydroxyl, primary amino, secondary amino, and carboxyl groups to form a non-hardening gum stock.

3,051,688

NEW POLYMERIZATION PRODUCTS AND PROCESS FOR THEIR MANUFACTURE

Alberto Deflorin, Basel, and Arthur Maeder, Therwil, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed Jan. 21, 1959, Ser. No. 788,035

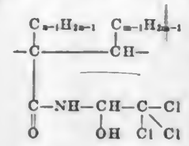
Claims priority, application Switzerland Dec. 23, 1955

18 Claims. (Cl. 260—86.1)

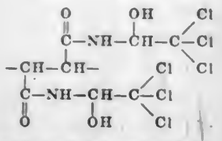
1. A linear addition polymer 5 to 100 percent by weight of which consists of at least one unit selected from

the group consisting of those having the structure of Formulas I and II

(I)



(II)



wherein *n* and *m* each is an integer from 1 to 2 and from 95 to 0 percent by weight of which polymer consists of units obtained from a different ethylenically unsaturated monomer containing one copolymerizable —CH=C< group.

3,051,689

PROCESS FOR THE TRIALKYLBORON CATALYZED POLYMERIZATION OF VINYL MONOMERS

Nathan L. Zutty, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,248
4 Claims. (Cl. 260—87.5)

1. In the aqueous trialkylboron-catalyzed polymerization of a monomer selected from the group consisting of vinyl chloride and mixtures of vinyl chloride with ethylene wherein the polymerizable monomer is suspended in an aqueous diluent containing a suspending agent and contacted therein with a catalytic amount of a trialkylboron at a temperature of from about —30° C. to about 100° C. and for a period of time sufficient to produce a polymeric product, the improvement which comprises the step of bringing said vinyl chloride into admixture with said trialkylboron in the absence of and prior to contact thereof with said suspending agent.

3,051,690

PROCESS FOR POLYMERIZING OLEFINS WHEREIN HYDROGEN IS UTILIZED AS A MOLECULAR WEIGHT CONTROL AGENT

Edwin J. Vandenberg, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 29, 1955, Ser. No. 525,364
23 Claims. (Cl. 260—88.2)

6. In a process for the copolymerization of at least two ethylenically unsaturated hydrocarbons wherein a mixture of at least two ethylenically unsaturated hydrocarbons is contacted with at least a catalytic amount of a catalyst, formed by mixing a compound of a metal selected from the group consisting of metals of groups IV-B, V-B, VI-B and VIII of the periodic table and manganese, with an organometallic compound of a metal selected from the group consisting of alkali metals, alkaline earth metals, zinc, earth metals and the rare earth metals, the step of adding hydrogen, in an amount of at least about 0.001 mole percent of said unsaturated hydrocarbons, to the polymerization system.

3,051,691

CATIONIC, NITROGENATED, HYDROPHILIC COLLOIDS

Lee H. Elizer, Glen C. Glasscock, and John M. Seitz, Keokuk, Iowa, assignors to The Hubinger Company, Keokuk, Iowa, a corporation of Iowa

No Drawing. Filed Jan. 15, 1959, Ser. No. 786,926
12 Claims. (Cl. 260—91.3)

9. A cationic nitrogenated polyvinyl alcohol obtained by reacting polyvinyl alcohol colloidally dispersed in an aqueous solution with a compound from the group consisting of cyanamide, alkali metal salts of cyanamide and alkaline earth metal salts of cyanamide at a pH of at least 1 until a cationic nitrogenated polyvinyl alcohol is formed.

3,051,692

PRODUCTION OF SOLID OLEFIN POLYMERS

Harold D. Lyons, Orange, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 6, 1960, Ser. No. 33,945
11 Claims. (Cl. 260—93.7)

1. A process for polymerizing an olefin corresponding to the formula $R—CH=CH_2$, wherein R is selected from the group consisting of alkyl radicals containing from 1 to 4, inclusive, carbon atoms, a phenyl radical, and an alkyl-substituted phenyl radical, the total number of carbon atoms in said substituted alkyl groups being in the range of 1 to 6, inclusive, said process comprising the step of contacting said olefin with a catalyst comprising (*a*) an organoaluminum compound having the formula R'_3Al, wherein R' is selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl and aralkyl, (*b*) titanium tetrachloride, (*c*) an organophosphorus-containing compound corresponding to the formula R''_3P, wherein R'' is selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl and aralkyl and (*d*) a sodium aryl compound, the ratio of said catalyst components being in the range of 0.2 to 3 mols of (*c*) to 1 mol of (*b*) to 0.2 to 3.0 mols of (*a*) and 1.5 to 4 mols of (*d*) per mol of (*b*).

8. A catalyst composition comprising (*a*) an organoaluminum compound having the formula R'_3Al, wherein R' is selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl and aralkyl, (*b*) titanium tetrachloride, (*c*) an organophosphorus-containing compound corresponding to the formula R''_3P, wherein R'' is selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl and aralkyl and (*d*) a sodium aryl compound, the ratio of said catalyst components being in the range of 0.2 to 3 mols of (*c*) to 1 mol of (*b*) to 0.2 to 3.0 mols of (*a*) and 1.5 to 4 mols of (*d*) per mol of (*b*).

3,051,693

METHOD OF POLYMERIZING ACETYLENIC COMPOUNDS

Joseph R. Leto, Stamford, Conn., assignor to American Cyanamid Company, Stamford, Conn., a corporation of Maine

No Drawing. Filed Jan. 29, 1960, Ser. No. 5,372
15 Claims. (Cl. 260—94.1)

1. A method of polymerizing a polymerizable compound having acetylenic unsaturation comprising polymerizing said compound at a temperature between about 20° C. and 250° C. in a liquid reaction medium selected from the group consisting of water and an inert organic solvent, while said polymerizable compound is in catalyzed relationship with a catalyst comprising a carbonyl of a metal selected from the group consisting of molybdenum, chromium, and tungsten, wherein the ratio in parts by weight of said catalyst to said acetylenic compound to said solvent is 0.01–10:1–50:100 respectively.

3,051,694

POLYMERIZING SUBSTITUTED ACETYLENES USING NICKEL-CARBONYL COMPLEX CATALYSTS

Lewis S. Meriwether, Norwalk, and Marilyn L. Fiene, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application Nov. 17, 1958, Ser. No. 774,150. Divided and this application May 27, 1960, Ser. No. 32,102
8 Claims. (Cl. 260—94.1)

1. A process comprising polymerizing an acetylene selected from the group consisting of monoalkyl substituted acetylenes, mono(dialkylamino)alkyl substituted acetylenes and monocycloalkyl substituted acetylenes in the presence of a catalyst represented by the general formulas selected from the class consisting of

$$Ni(CO)_2[PX_2(C_2H_4CN)]_2$$

and $Ni(CO)_2[R_2PYPR_2]$ wherein X represents at least one member selected from the class consisting of hydrogen and the cyanoethyl group $—C_2H_4CN$, R represents at least one member of the class consisting of alkyl, aryl, alkaryl, aralkyl, alkoxy, aryloxy cyanoalkyl, carboalkoxyalkyl and carbamoylalkyl groups and Y represents a member of the class consisting of ethylene, trimethylene and orthophenylene groups.

3,051,695

PRODUCTION OF POLYMERIC MERCAPTANS

Paul F. Warner, Phillips, and Richard D. Franz, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 12, 1959, Ser. No. 845,602
10 Claims. (Cl. 260—139)

1. A process for preparing a polymeric mercaptan which comprises reacting a liquid diene polymer in an inert liquid reaction medium with hydrogen sulfide at an elevated temperature up to about 450° F. and a pressure sufficient to maintain liquid phase conditions in the presence of a cobalt molybdate catalyst to form said mercaptan, and recovering said polymeric mercaptan as a product of the process.

3,051,696

CHROMATION OF AZO DYES

William Dettwyler, Hockessin, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,958
9 Claims. (Cl. 260—147)

1. In the process of producing a 1:2 chromium-azo dye in substance by chromating an o,o-dihydroxymonoazo dye, the improvement which consists of applying as chromating agent a water-soluble inorganic compound of hexavalent chromium in quantity not less than theoretical based on the quantity of said monoazo dye, and effecting the chromation in an aqueous medium, at a temperature not less than 80° C., and in the presence of a water-soluble alkanolamine which possesses not more than 4 C-atoms in any of its alkyl radicals and which is present in quantity of not less than 2 moles per mole of said monoazo dye.

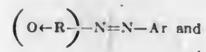
3,051,697

AZOMONAZONE N-OXIDES, PRODUCTION AND DEOXYGENATION

Charles E. Lewis, Somerville, Albert P. Paul, New Brunswick, Sien Moo Tsang, Middlesex, and Julian J. Leavitt, Plainfield, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,326
6 Claims. (Cl. 260—156)

4. A 2-arylazomonazine-N-oxide selected from the group consisting of said N-oxides of the formulae



and



in which (O←R) represents a 2-monazine-N-oxide wherein R is selected from the group consisting of the pyridyl, quinolyl, isoquinolyl, and methyl, ethyl, methoxy, ethoxy, chloro- and bromo-substituted pyridyl, quinolyl and isoquinolyl radicals, and Ar is the residue of an aromatic carbocyclic coupling component the ring structure of which is selected from those of the group consisting of phenyl and naphthyl, said coupling component being further limited to those having an amino group in a position conjugated with the azo linkage and the said conjugated amino group being selected from the group consisting of amino, mono- and di-(lower alkyl)amino, phenylamino, phenylmethylamino, methyl-cyanoethylamino, bis-(cyanoethyl)amino, and hydroxyethylamino.

3,051,698

CELLULOSE PRODUCTS AND PROCESS FOR MAKING SAME

Lee H. Elizer, Glen C. Glasscock, and John M. Seitz, Keokuk, Iowa, assignors to The Hubinger Company, Keokuk, Iowa, a corporation of Iowa

No Drawing. Filed June 22, 1959, Ser. No. 821,675
23 Claims. (Cl. 260—212)

1. A process for making a cationic nitrogenated cellulose product which comprises reacting a cellulosic material selected from the group consisting of cellulose, fatty acid esters of cellulose, and cellulose xanthate with an aqueous alkaline solution of cyanamide.

17. The cationic, nitrogenated reaction product of a cellulosic material, selected from the group consisting of cellulose, the fatty acid esters of cellulose, and cellulose xanthate and an aqueous alkaline solution of cyanamide.

3,051,699

NITROGENATED GRANULAR STARCH PRODUCTS

Lee H. Elizer, Glen C. Glasscock, and John M. Seitz, Keokuk, Iowa, assignors to The Hubinger Company, Keokuk, Iowa, a corporation of Iowa

No Drawing. Filed Jan. 15, 1959, Ser. No. 786,927
4 Claims. (Cl. 260—233.3)

1. A product from the class consisting of a nitrogenated granular starch product obtained by reacting granular ungelatinized starch at a temperature below the gelatinization temperature of said starch with a substance from the group consisting of cyanamide and alkali metal and alkaline earth metal salts of cyanamide, in an aqueous alkaline solution having a pH of at least about 8.5, and acid addition products of said nitrogenated granular starch product.

3,051,700

CATIONIC, NITROGENATED, STARCH PRODUCTS CONTAINING AT LEAST FIFTY PERCENT AMYLOSE

Lee H. Elizer, Glen C. Glasscock, and John M. Seitz, Keokuk, Iowa, assignors to The Hubinger Company, Keokuk, Iowa, a corporation of Iowa

No Drawing. Filed July 17, 1959, Ser. No. 827,715
5 Claims. (Cl. 260—233.3)

1. The cationic, nitrogenated product produced by reacting starch having an amylose content of at least about 50% with an aqueous alkaline solution of cyanamide.

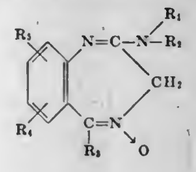
3,051,701

BENZODIAZEPINE COMPOUNDS

Earl Reeder, Nutley, and Leo Henryk Sternbach, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Roche Park, Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 10, 1959, Ser. No. 858,597
8 Claims. (Cl. 260—239)

1. A compound selected from the group consisting of benzodiazepines of the structural formula



wherein:

R_1 represents a member of the group consisting of lower alkanoyl, cyanoethyl, carboxyethyl, carbo-lower alkoxyethyl, and alkali metal carboxyethyl,

R_2 represents a member of the group consisting of hydrogen and lower alkyl,

R_3 represents a member of the group consisting of phenyl, mono-halophenyl, mono-lower alkylphenyl, and mono-lower alkoxyphenyl, and

R_4 and R_5 each represents a member of the group consisting of hydrogen, halogen and lower alkyl,

and pharmaceutically acceptable acid addition salts of the basic benzodiazepines.

4. 7 - chloro - 2 - (N - methylacetamido) - 5 - phenyl-3H-1,4-benzodiazepine 4-oxide.

3,051,702

PROCESS FOR THE PREPARATION OF N^1-ALKANOYLATED SULFANILAMIDOPYRIDAZINES

Gilmer T. Fitchett, Greenbrook Township, and John E. Gordon, Bridgewater Township, Somerset County, and Robert G. Shepherd, Ridgewood, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 21, 1960, Ser. No. 37,576
3 Claims. (Cl. 260—239.7)

1. In a process for producing an N^1-acylated sulfanilamidopyridazine from an N^4-aralkylidene compound having the formula



wherein Ar is selected from the group consisting of phenyl, tolyl, anisyl and veratryl, Py is selected from the group consisting of pyridazinyl, methoxypyridazinyl and dimethoxypyridazinyl and Ac is selected from the group consisting of formyl, acetyl and propionyl, the improvement which comprises: at a hydrolysis temperature in the range of from about 0° to about 60° C., forming a reaction mixture comprising 100 parts of said N^4-aralkylidene compound, from about 10 to about 1000 parts of water, from about 200 to about 5000 parts of a liquid amine base selected from the group consisting of pyridine and picoline and from about the stoichiometrically equivalent amount to about 1,000 parts of a lower alkanoic acid, whereby dissolution of said N^4-aralkylidene compound and selective hydrolysis of the N^4 substituent is initiated; maintaining said mixture at a temperature within said hydrolysis temperature range until hydrolysis is substantially complete and isolating the resultant N^1-acylated product.

3,051,703

PROCESS FOR PREPARING $\Delta^{9(11)}$-PREGNANES AND INTERMEDIATES

Carl Djerassi and Albert Bowers, Mexico City, Mex., assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Dec. 18, 1959, Ser. No. 860,338
Claims priority, application Mexico Dec. 20, 1958
7 Claims. (Cl. 260—239.55)

1. A process for producing a pregnan-3β-ol-20-one having double bonds at least between C–9, C–11 and C–16, C–17, comprising the steps of reacting a steroidal sapogenin having a 12-keto group and a 3-acyloxy group of up to 12 carbon atoms, with selenium dioxide in t-butanol and in the presence of a catalytic amount of pyridine to introduce a double bond between C–9 and C–11, reacting the resulting $\Delta^{9(11)}$-intermediate with hydrazine and an alkali metal hydroxide to remove the 12-keto group and degrading the side chain of the resulting reduction product with acetic anhydride so as to introduce a further double bond between C–16 and C–17 and produce the $CO.CH_3$ side chain, of the pregnane end product.

6. $\Delta^{5,9(11)}$-22α,25α-spirostadien-3β-ol-12-one acetate.

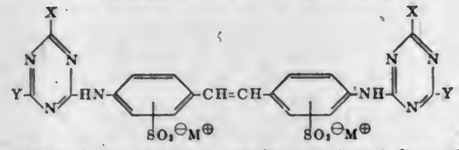
3,051,704

OPTICAL BRIGHTENING AGENTS OF THE 4,4'-BIS-(TRIAZINYLAMINO)-STILBENE DISULFONIC ACID SERIES

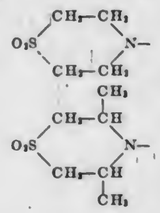
Robert Gehm, Oswald Schmidt, Heinrich Mertens, Wolfgang Grunwald, and Manfred Hehl, all of Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Jan. 19, 1960, Ser. No. 3,265
Claims priority, application Germany Jan. 24, 1959
3 Claims. (Cl. 260—240)

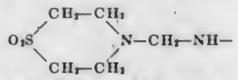
1. A water-soluble compound of the formula



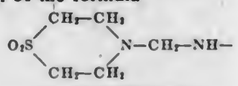
in which X stands for a substituent selected from the group consisting of



and



$M^{\oplus}$ is a cation and Y is a substituent selected from the group consisting of hydroxy, amino, dimethylamino, 2-hydroxyethylamino, di-(2-hydroxyethyl)-amino, 3-methoxypropylamino, phenylamino, pyrrolino, morpholino and the radical of the formula



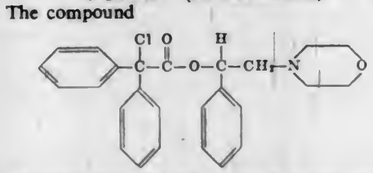
3,051,705

SUBSTITUTED DIPHENYL-CHLORACETATES

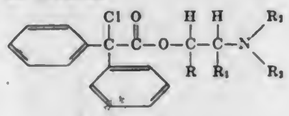
Seymour L. Shapiro, Hastings on Hudson, Louis Freedman, Bronxville, and Harold Soloway, New Rochelle, N.Y., assignors to U. S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware

No Drawing. Filed Apr. 7, 1960, Ser. No. 20,529
4 Claims. (Cl. 260—247.2)

3. The compound



4. The compound selected from the group consisting of diphenylchloracetate esters of aminophenylethanol and the non-toxic hydrochloric acid salts and methiodide salts thereof of the formula



in which esters and salts R and R_1 are selected from the group wherein one of R and R_1 is hydrogen and the other is phenyl, and wherein $—NR_2R_3$ is selected from the group consisting of pyrrolidino, morpholino, and piperidino.

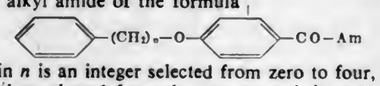
3,051,706

NEW PHENYLOXY AND PHENYLALKOXY BENZOIC ACID AMIDES

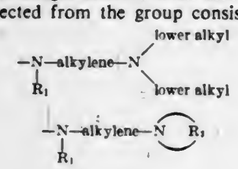
Hans Suter and Hans Zutter, Schaffhausen, Switzerland, assignors to Eprova Limited, Schaffhausen, Switzerland

No Drawing. Filed June 3, 1960, Ser. No. 33,643
Claims priority, application Switzerland June 11, 1959
7 Claims. (Cl. 260—247.2)

1. A chemical compound selected from the group consisting of 4-phenyloxy and 4-phenylalkoxy benzoic acid amino alkyl amide of the formula



wherein *n* is an integer selected from zero to four, Am is a member selected from the group consisting of



and

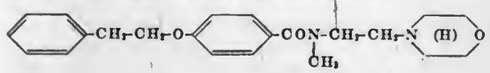


in which R_1 is selected from the group consisting of hydrogen and the lower alkyl radical, alkylene is the lower alkylene radical of at least 2 carbon atoms,



is the radical selected from the group consisting of piperidino, pyrrolidino and morpholino radicals, and R_3 is selected from the group consisting of the lower alkyl and lower hydroxyalkyl radical, and acid addition salts of said amino alkyl amide with pharmacologically acceptable inorganic and organic acids.

6. The 4-phenylethoxy benzoic acid-2'-N-(morpholino)-ethyl-N'-methyl-amide of the formula



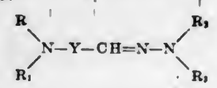
3,051,707

UNSYMMETRICAL MONO-(AMINOALKYLENE)-HYDRAZINES

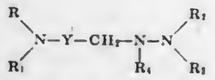
John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., a corporation of Delaware

No Drawing. Filed Mar. 21, 1961, Ser. No. 97,160
10 Claims. (Cl. 260—247.5)

1. A compound of the group consisting of compounds of the formulae:



and



nontoxic pharmacologically acceptable acid addition salts and nontoxic pharmacologically acceptable quaternary ammonium salts thereof of the group consisting of lower alkyl halides, phenyl-lower alkyl halides and di-lower alkyl sulfates, wherein Y is a lower alkylene group, R, R_1, R_2 and R_3 are members of the group consisting of phenyl, lower alkyl, lower alkenyl and groups in which R and R_1, and R_2 and R_3, are joined together to form cyclic secondary amino groups of the group consisting of morpholino, pyrrolidino, piperidino, 1,2,3,4-tetrahydroisoquinolino, 1,2,3,4-tetrahydroquinolino, isoindolino, 4-lower alkyl-1-piperazino, 3-hydroxypiperidino, 4-hydroxypiperidino, 3-(N'-lower alkyl-piperidyloxy)piperidino and 4-(N'-lower alkyl-piperidyloxy)piperidino and R_2 and R_3 are phenyl-lower alkyl, and R_4 is a member of the group consisting of hydrogen and lower acyl from lower aliphatic monocarboxylic acids.

10. N - (Morpholinoethyl)-amino - 1,2,3,4 - tetrahydroisoquinoline.

3,051,708

PRODUCTION OF CYANURIC ACID

Karl Merkel and Albert Palm, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Apr. 29, 1960, Ser. No. 25,514
Claims priority, application Germany Apr. 3, 1958
6 Claims. (Cl. 260—248)

1. In a process for the production of cyanuric acid by heating urea in an inert liquid, the improvement which comprises introducing urea into a hot liquid medium consisting essentially of at least one diphenyl compound selected from the group consisting of diphenyl, diphenyl oxide and the same compounds containing up to two halogen substituents selected from the group consisting of bromine and chlorine in each of the phenyl nuclei, said hot liquid being maintained at a temperature of from 220° C. to 300° C. and being heated to said temperature prior to the introduction of said urea.

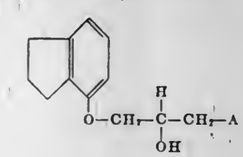
3,051,709

SUBSTITUTEDAMINO-3-(4- AND 5-INDANOXY)-PROPANE-2-OLS

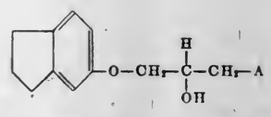
Seymour L. Shapiro, Hastings on Hudson, and Louis Freedman, Bronxville, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware

No Drawing. Filed Apr. 22, 1960, Ser. No. 23,910
6 Claims. (Cl. 260—268)

1. A composition of matter selected from the group consisting of 1-substituted amino-3-(4- and 5-indanoxy)-propane-2-ols, said 1-substituted amino-3-(4- and 5-indanoxy)-propane-2-ols having the structure

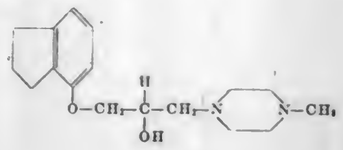


and



wherein A— is a secondary amino radical selected from the group consisting of piperidino, morpholino, pyrrolidino, (4-methyl)-piperazino, (4-hydroxyethyl)-piperazino, (4-phenyl)-piperazino, indolino, tetrahydroisoquinolino and R_1R_2N, wherein R_1 is selected from the group consisting of methyl, ethyl, allyl, benzyl, α-methylphenylethyl, pyridylethyl, dimethylaminoethyl and dimethylaminopropyl and R_2 is selected from the group consisting of methyl, ethyl, allyl, and hydroxyethyl.

2. The compound

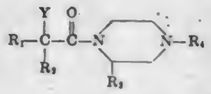


3,051,710
GLYCOLIC ACID AMIDE DERIVATIVES OF PIPERAZINE AND USE THEREOF

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Dec. 21, 1959, Ser. No. 860,653
6 Claims. (Cl. 260—268)

1. A member of the group consisting of compounds of the formula



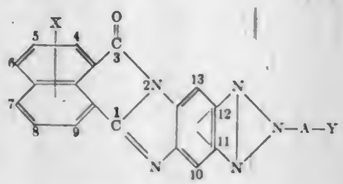
and nontoxic acid addition salts thereof, wherein R_1 is a member of the group consisting of phenyl, cyclohexyl, thienyl, furyl, halophenyl, lower alkoxy-phenyl, and lower alkyl-phenyl groups, R_2 is a member of the group consisting of cyclohexyl, 2-thienyl and cyclopentyl groups, R_3 is a member of the group consisting of hydrogen and the methyl group, and R_4 is a member of the group consisting of hydrogen, lower alkyl, phenyl, phenyl-lower alkyl, hydroxy-lower alkyl, acyloxy-lower alkyl, benzil-oxy-lower alkyl, phenyl-lower acyloxyalkyl and diphenyl-chloroacetoxy-lower alkyl groups and Y is a member of the group consisting of hydroxy, halo, acyloxy groups from lower aliphatic monocarboxylic acids, benzoyloxy and phenylacetoxy.

3,051,711
DYES OF THE PERINAPHTHOYLENE-BENZIMIDAZOLE SERIES

Fritz Graser, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Rheinland-Pfalz, Germany

No Drawing. Filed Sept. 27, 1960, Ser. No. 58,631
Claims priority, application Germany Sept. 29, 1959
4 Claims. (Cl. 260—282)

1. Dyes of the perinaphthoylene-benzimidazole series having the formula



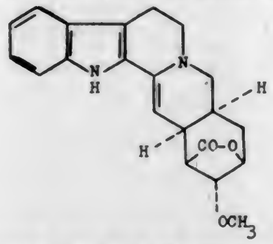
in which X represents a member selected from the class consisting of hydrogen, nitro, amino and acetylamino in one of the positions 5, 6, 7 and 8, the triazole ring in the formula being connected with the benzene ring of the perinaphthoylene-benzimidazole moiety in one of the positions (10, 11), (11, 12) and (12, 13) and in which A represents a member selected from the class consisting of phenylene, naphthalene and biphenylene, and Y represents a member selected from the class consisting of hydrogen, lower alkyl, lower alkoxy, halogen, acetylamino, N,N-dimethylamidosulfonyl and phenyl.

3,051,712
Δ^{3-14}-ISODESERPIDIC ACID LACTONE

Georges Muller, Nogent-sur-Marne, France, assignor, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Apr. 11, 1958, Ser. No. 727,783
Claims priority, application France May 22, 1957
4 Claims. (Cl. 260—287)

1. 3-Dehydro-isodeserpidic acid lactone of the formula



4. The process for producing deserpidic acid lactone which comprises the step of

(*a*) reacting tryptamine with the methyl ester of levorotatory 1β-carboxy methyl-2β-methoxy carbonyl-3α-methoxy-4β-acetoxy-6β - acetoxy - 6β - formyl cyclohexane in the presence of a neutral organic solvent,

(*b*) reacting the resulting methyl ester of 18β-acetoxy-17α-methoxy-16β-methoxy carbonyl-2,3-3,4 - diseco-$\Delta^{4(21)}$-dehydro-20α-yohimbane-3-carboxylic acid with an alkali metal borohydride in the presence of an alcoholic solvent at the reflux temperature,

(*c*) saponifying the resulting reaction product with an aqueous alcoholic alkali metal hydroxide at reflux temperature,

(*d*) lactonizing the resulting dextrorotatory 18β-hydroxy-17α-methoxy-16β-carboxy-2,3-seco-3-oxo-20α-yohimbane by heating with acetic acid anhydride in the presence of lithium acetate,

(*e*) cyclizing the resulting levorotatory lactone of 18β-hydroxy-17α-methoxy-16β-carboxy-2,3-seco - 3 - oxo-20α-yohimbane by heating at the reflux temperature with an agent selected from the group consisting of phosphorous oxychloride and thionylchloride,

(*f*) dissolving the resulting reaction product in methanol and alkalizing with ammonia,

(*g*) reducing the resulting lactone of 18β-hydroxy-17α-methoxy-16β-carboxy-$\Delta^{3(14)}$-dehydro-20α-yohimbane by the action of zinc and acetic acid at reflux temperature, and

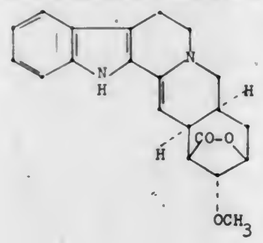
(*h*) recovering said deserpidic acid lactone by recrystallization from organic solvents.

3,051,713
Δ^{3-14}-ISORESERPIC ACID LACTONE

Georges Muller, Nogent-sur-Marne, France, assignor, by mesne assignments, to Roussel-UCLAF, S.A., Paris, France, a corporation of France

No Drawing. Filed Feb. 11, 1958, Ser. No. 714,473
4 Claims. (Cl. 260—287)

1. 3-dehydro-isoreserpic acid lactone of the formula



3,051,714
4-(1,2,3,4, TETRAHYDROISOQUINOLINO)-2-BUTYN-1-OL

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Feb. 6, 1958, Ser. No. 713,549
1 Claim. (Cl. 260—289)

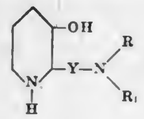
4-(1,2,3,4-tetrahydroisoquinolino)-2-butyn-1-ol.

3,051,715
2-(AMINOALKYL)-3-HYDROXYPIPERIDINES

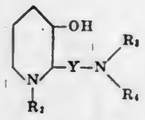
John H. Biel, Milwaukee, Wis., and Frederick F. Blicke, Ann Arbor, Mich.; said Biel assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware, and said Blicke assignor to Regents of the University of Michigan, Ann Arbor, Mich., a corporation of Michigan

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,513
5 Claims. (Cl. 260—294.7)

1. A member of the group consisting of compounds of the formulae



and



and acid addition salts thereof of the group consisting of mineral acid, formic acid, citric acid, fumaric acid and maleic acid salts and quaternary ammonium salts thereof of the group consisting of lower alkyl halide, methyl sulfate, ethyl sulfate and phenyl-lower alkyl halides in which the alkyl portion has 1 to 3 carbons, wherein R and R_1 are members of the group consisting of hydrogen, lower alkyl, phenyl-lower alkyl, phenyl, and groups in which



represents morpholino, pyrrolidino, piperazino, 4-lower alkyl piperazino, piperidino, hydroxypiperidino, 1,2,3,4-tetrahydroisoquinolino and 1,2,3,4-tetrahydroquinolino, R_2 is a member of the group consisting of lower alkyl and phenyl-lower alkyl, R_3 and R_4 are members of the group consisting of lower alkyl, phenyl-lower alkyl, phenyl, and groups in which



represents morpholino, pyrrolidino, piperazino, 4-lower alkyl piperazino, piperidino, hydroxypiperidino, 1,2,3,4-tetrahydroisoquinolino, and 1,2,3,4-tetrahydroquinolino and Y is a member of the group consisting of methylene and ethylene.

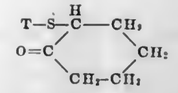
3. 2-(dimethylaminomethyl)-3-hydroxypiperidine.

3,051,716
THIAZOLYLTHIOCYCLOHEXANONES

John J. D'Amico, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 18, 1960, Ser. No. 63,254
11 Claims. (Cl. 260—302)

1. A 2-(2-thiazolylthio)cyclohexanone of the formula



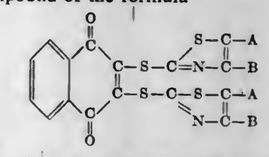
where T is a member of the group consisting of 4-(lower alkyl)-2-thiazolyl, 4-(lower alkyl)-5-(lower carboalkoxy)-2-thiazolyl, 4,5-di-(lower alkyl)-2-thiazolyl, 4-(lower carboalkoxy)-2-thiazolyl, 4-(lower alkyl)-5-acetyl-2-thiazolyl, 4-(lower alkyl)-5-carbamyl-2-thiazolyl, 4-(lower alkyl)-5-(n-phenylcarbamyl)-2-thiazolyl, 2-benzothiazolyl, monochloro-2-benzothiazolyl, mono- and di-(lower alkyl)-2-benzothiazolyl, mono-(lower alkyl)monochloro-2-benzothiazolyl, mono-(lower alkoxy)-2-benzothiazolyl, mono-(lower alkoxy)monochloro-2-benzothiazolyl, phenyl-2-benzothiazolyl, di-(lower alkyl)monochloro-2-benzothiazolyl and di-(lower alkyl)dichloro-2-benzothiazolyl.

3,051,717
DIHYDRODIOXONAPHTHYLENEDITHIOBIS (THIAZOLECARBOXYLATES)

John J. D'Amico, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 29, 1960, Ser. No. 72,276
8 Claims. (Cl. 260—302)

1. A compound of the formula



wherein one of A and B is selected from the group consisting of carboxyl, lower carboalkoxy, lower alkyl carbonyl, carbamoyl and phenylcarbamoyl and the other is selected from the group consisting of hydrogen and lower alkyl.

3,051,718
PRODUCTION OF PHTHALOCYANINE COLORS IN PIGMENTARY STATE

Norris G. Wheeler, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 25, 1960, Ser. No. 4,168
6 Claims. (Cl. 260—314.5)

1. In a process of acid-swelling a premilled chlorine-free phthalocyanine color of the group consisting of copper phthalocyanine and metal-free phthalocyanine, the improvement which consists of selecting for said swelling treatment an acid which is liquid at the temperature of the treatment and which has an ionization constant not greater than 5×10^{-2} and not less than 1.4×10^{-5}, the concentration of said acid being sufficient to react with said color to form a salt therewith but insufficient to dissolve substantial quantities of said color.

3,051,719
PHTHALOCYANINES STABLE TO SEPARATION

Georg Geiger, Binningen, Baselland, and Armando Geiger, Basel, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Mar. 8, 1961, Ser. No. 94,166
Claims priority, application Switzerland Mar. 18, 1960
3 Claims. (Cl. 260—314.5)

1. Process for the production of modified phthalocyanine pigments which comprises reacting by heating to a temperature between about 50° and 150° C. 1 mol of a phthalocyanine selected from the group consisting of copper, nickel and zinc phthalocyanines and the corresponding monochlorinated compounds with 1 to 10 moles of glyoxal.

3,051,720
PRODUCTION OF PHTHALOCYANINE PIGMENTS

John W. Minnich, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,104
10 Claims. (Cl. 260—314.5)

3. A process for the comminution of a phthalocyanine pigment which comprises dry milling said pigment in a ball mill, contacting said dry-milled pigment with from 2–12 parts of sulfuric acid per part of pigment, said sulfuric acid having a concentration of from 50–100%, adding sufficient water to hydrolyze the copper phthalocyanine sulfate formed as a result of contact with the H_2SO_4, and recovering the finished phthalocyanine pigment product.

3,051,721
PIGMENTARY COPPER PHTHALOCYANINE IN THE "R" FORM AND ITS PREPARATION

Frederick L. Pfeiffer, Chatham, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Jan. 13, 1959, Ser. No. 786,485
5 Claims. (Cl. 260—314.5)

1. A solvent stable, tinctorially strong, unsubstituted copper phthalocyanine pigment, in the "R" form, the particles of which are characterized by (1) having an average size of less than two microns, (2) being crystalline in structure, (3) when exposed to X-rays in an X-ray diffraction apparatus having a diffraction pattern with the line of maximum intensity corresponding to an interplanar spacing of 11.6 A., the second most intense line corresponding to a spacing of 9.66 A., and a third line at 3.14 A., (4) when subject to infra-red radiation having characteristic absorption maxima at 11.49, 12.91 and 13.74 microns, and (5) yielding the conventional red-shade form pigment when subjected to acid pasting.

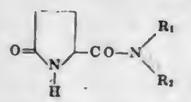
2. A method of producing a solvent stable, tinctorially strong, unsubstituted copper phthalocyanine pigment, in the "R" form, the particles of which are characterized by (1) having an average size of less than two microns, (2) being crystalline in structure (3) when exposed to X-rays in an X-ray diffraction apparatus having a diffraction pattern with the line of maximum intensity corresponding to an interplanar spacing of 11.6 A., the second most intense line corresponds to a spacing of 9.66 A., and a third line at 3.14 A., (4) when subject to infrared radiation having characteristic absorption maxima at 11.49, 12.91 and 13.74 microns, and (5) yielding the conventional red-shade form pigment when subjected to acid pasting, which comprises: heating within the range of about 140° C. and about 300° C., and thereby reacting, a dry mixture of 100 parts of phthalonitrile, about 50 to 100 parts of urea, and about 27 to 100 parts of a copper reagent selected from the group consisting of free copper, copper oxides and copper salts, and simultaneously agitating the mixture under conditions of high shear.

3,051,722
5-PYRROLIDONE-2-CARBOXAMIDES

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., a corporation of Delaware

No Drawing. Filed Oct. 21, 1960, Ser. No. 63,990
3 Claims. (Cl. 260—319)

3. Compounds of the formula



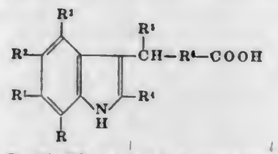
wherein R_1 is a member of the group consisting of hydrogen, lower alkyl, lower alkenyl and lower alkynyl and R_2 is indolyl-lower alkyl.

3,051,723
SYNTHESIS OF 3-INDOLEALKANOIC ACID COMPOUNDS

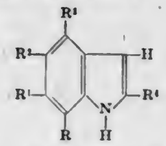
Henry E. Fritz, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed June 27, 1961, Ser. No. 119,783
10 Claims. (Cl. 260—319)

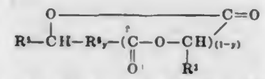
1. In a process for producing a 3-indolealkanoic acid of the formula:



wherein each R, R^1, R^2, and R^3 is a member selected from the group consisting of a hydrogen atom, a halogen atom, alkyl of from 1 to 8 carbon atoms, alkoxy of from 1 to 8 carbon atoms, aryl of from 6 to 8 carbon atoms, aryloxy of from 6 to 8 carbon atoms, benzamide, and acetamide; R^4 is a member selected from the group consisting of a hydrogen atom, alkyl of from 1 to 8 carbon atoms, alkoxy of from 1 to 8 carbon atoms, aryl of from 6 to 8 carbon atoms, and aryloxy of from 6 to 8 carbon atoms; the number of carbon atoms contained by said R, R^1, R^2, R^3, and R^4 being less than 11; R^5 is a member selected from the group consisting of a hydrogen atom and alkyl of from 1 to 9 carbon atoms; R^6 is alkylene of from 1 to 9 carbon atoms; the total number of carbon atoms contained by said R^5 and R^6 being no greater than 9; and y is a member selected from the group consisting of 0 and 1, the step which comprises heating at 150° C. to 350° C. an indole of the formula:



and a heterocyclic, carbonyloxy-containing compound of the formula:



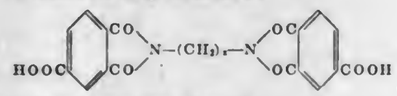
wherein R, R^1, R^2, R^3, R^4, R^5, R^6, and y are previously defined, with a sufficient amount of strong base selected from the group consisting of an alkali metal hydroxide, an alkali metal lower alkoxide, and an alkali metal amide to promote the reaction of said indole and said heterocyclic carbonyloxy-containing compound.

3,051,724
NOVEL BIS(TRIMELLIT-IMIDE) ALKANES AND BIS(TRIMELLIT-AMIDE) ALKANES

Benjamin A. Bolton, Gary, Ind., and Kenneth E. Kolb, Corning, N.Y., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Feb. 3, 1961, Ser. No. 86,848
5 Claims. (Cl. 260—325)

1. A bisimide having the formula:



where *x* is an integer from 2 to 12.

5. Bis(trimellit-amide)alkane of 2 to 12 carbon atoms in said alkane.

3,051,725
TETRAPHTHALIMIDO AND TETRAMINO QUINONES

Kurt A. W. Wallenfels and Wilfried J. Draber, Freiburg, Breisgau, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed July 12, 1960, Ser. No. 42,223
Claims priority, application Germany July 16, 1959
6 Claims. (Cl. 260—326)

1. The compound tetramino-benzoquinone.

2. The compound tetraphthalimido-benzoquinone.

3,051,726
GLYCOLIC ACID ESTERS OF N-SUBSTITUTED-2-PYRROLIDYLCARBINOLS

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed Sept. 15, 1959, Ser. No. 840,015
3 Claims. (Cl. 260—326.3)

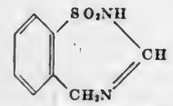
1. N-lower alkyl-2-pyrrolidylmethy phenylcyclopentyl-glycolate.

3,051,727
2,5-DIHYDRO-1,2,4-BENZOTHIADIAZEPINE-1,1-DIOXIDE

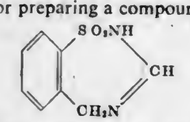
Uberto Teotino and Giorgio Cignarella, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy

No Drawing. Filed Dec. 5, 1960, Ser. No. 73,526
Claims priority, application Italy Dec. 9, 1959
2 Claims. (Cl. 260—327)

1. 2,5-dihydro-1,2,4-benzothiadiazepine 1,1-dioxide of the formula:



2. A process for preparing a compound of the formula:



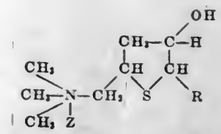
which comprises bubbling chlorine into a suspension of dithiosalicylamide in dilute hydrochloric acid to complete solution; neutralizing with a member of the group consisting of alkali metal carbonates and hydroxides, evaporating the mixture to dryness, extracting the residue with hot absolute ethanol, cooling, collecting the precipitated sodium o-cyanobenzenesulfonate, refluxing the same with phosphorous oxychloride, pouring the mixture in water, collecting the formed o-cyanobenzenesulfonyl chloride and dissolving it in diethyl ether, bubbling ammonia into the solution, collecting the precipitate, washing it with water, hydrogenating the formed o-cyanobenzenesulfonamide in the presence of palladium, and heating the formed o-aminomethylbenzenesulfonamide with ethyl orthoformate while continuously distilling off the formed ethyl alcohol.

3,051,728
THIOPHANE DERIVATIVES

Conrad Hans Eugster, Wallisellen, Switzerland, assignor to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

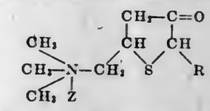
No Drawing. Filed Jan. 27, 1961, Ser. No. 85,219
Claims priority, application Switzerland Jan. 28, 1960
6 Claims. (Cl. 260—332.3)

1. A thiophane derivative of the formula



wherein R is a member selected from the group consisting of hydrogen and methyl, and Z is an anion of a therapeutically useful acid.

2. A thiophane derivative of the formula



wherein R is a member selected from the group consisting of hydrogen and methyl, and Z is an anion of a therapeutically useful acid.

3,051,729
METHOD OF PREPARING EPOXIDIZED OILS AND THE LIKE

Louis I. Hansen and Grant O. Sedgwick, Minneapolis, Minn., assignors to Archer-Daniels-Midland Company, a corporation of Delaware

No Drawing. Filed Sept. 10, 1957, Ser. No. 683,024
11 Claims. (Cl. 260—348.5)

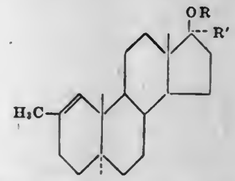
1. The process for the epoxidation of a higher fatty acid ester which comprises introducing and mixing into the said ester at a temperature of about 90°–150° F., 0.7–10 moles of hydrogen peroxide and 0.3–0.7 mole of acetic acid for each mole of unsaturation of the said ester, and about 3%–8% of sulfuric acid on the weight of the acetic acid, the said introducing being effected over a period of about 2 hours or more and continuing the reaction at the said temperature until epoxidation of the ester is effected.

3,051,730
DERIVATIVES OF Δ^1-ANDROSTEN-17β-OL

Albert Bowers, John Edwards, and James C. Orr, all of Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Sept. 29, 1961, Ser. No. 141,604
21 Claims. (Cl. 260—397.1)

1. A compound of the following formula:



wherein R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms, and R^1 is selected from the group consisting of hydrogen, an alkyl, an alkenyl and an alkynyl group each containing less than 8 carbon atoms.

3,051,731
5,6,7,8-TETRAHYDRO-1-METHYL-2-NAPHTHOXY-ACETIC ACID ESTERS OF HYDROXY STEROIDS

Robert L. Hull, Madison Heights, and James R. Fisher, Royal Oak, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Apr. 11, 1960, Ser. No. 21,105
8 Claims. (Cl. 260—397.4)

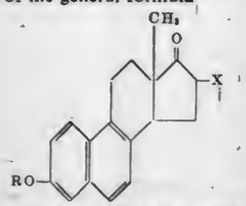
1. Testosterone - 17 - (5',6',7',8' - tetrahydro - 1' - methyl-2'-naphthoxyacetate).

3,051,732
16-SUBSTITUTED EQUILENIN DERIVATIVES

Marcel Harnik, Morristown, Tenn., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 16, 1961, Ser. No. 131,728
9 Claims. (Cl. 260—397.4)

1. A steroid of the general formula



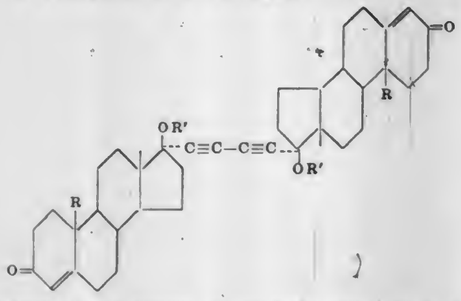
wherein R is a member of the group consisting of hydrogen, lower alkyl and lower alkanoyl radicals and X is a member of the group consisting of trifluoroacetyl, trifluoroethylidene, trifluoroethyl and acetoxytrifluoroethylidene radicals.

3,051,733
DI-17α(Δ⁴-ANDROSTEN-17β-OL-3-ONE) BUTADIYNE

John A. Zderic, Palo Alto, Calif., and Pierre Crabbé, Mexico City, Mexico, assignors, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Oct. 3, 1961, Ser. No. 142,482
5 Claims. (Cl. 260—397.4)

1. A compound of the following formula:



wherein R is a member of the group consisting of hydrogen and methyl and R^1 is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acid of less than 12 carbon atoms.

3,051,734
METHOD OF MAKING DIGLYCERIDES

Sol B. Radlove, 5220 W. Van Buren St., Chicago, Ill.

No Drawing. Filed Nov. 23, 1959, Ser. No. 854,536
12 Claims. (Cl. 260—410.8)

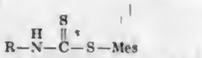
1. The method of producing an essentially diglyceride ester mixture which comprises heating to a temperature in the range between about 120° C. and 200° C. epihalohydrin and a mixture substantially free of water comprising substantially equimolar amounts of fatty acid and hydroxy acid and monovalent basic reacting cation in molecular equivalent amounts for reaction with the amount of hydroxy acid present.

3,051,735
HALOGEN SUBSTITUTED ALKENYL DITHIOCARBAMIC ACID SALTS AND ESTERS

John J. D'Amico, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

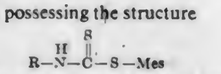
No Drawing. Filed Sept. 18, 1958, Ser. No. 761,702
7 Claims. (Cl. 260—429.9)

1. A compound possessing the structure



where R represents a halogen substituted lower 2-alkenyl group in which said halogen is attached to unsaturated carbon and Mes is selected from a group consisting of zinc, copper and nickel.

2. A compound possessing the structure



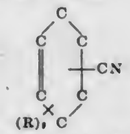
where R represents a halogen substituted lower 2-alkenyl group in which said halogen is attached to unsaturated carbon and Mes is selected from a group consisting of di(lower alkyl)aminoethyl, lower 2-alkenyl, cyclohexenyl and halogen substituted lower 2-alkenyl in which said halogen is attached to unsaturated carbon.

3,051,736
CUPROUS COMPLEXES

Christian F. Horn, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 27, 1960, Ser. No. 78,250
4 Claims. (Cl. 260—438)

1. The cuprous complex produced by the reaction of a cuprous salt of an inorganic mineral acid with a cyclohexene-carbonitrile of the formula:



wherein each R, individually is selected from the group consisting of hydrogen and the alkyl radicals of from 1 to 6 carbon atoms, at a temperature of from about 20° C. to about 100° C.

3,051,737
PREPARATION AND USE OF CATALYSTS

Eric John Gibson, Bromley, England, assignor, by mesne assignments, to Council for Scientific and Industrial Research, London, England

No Drawing. Filed July 18, 1958, Ser. No. 749,316
21 Claims. (Cl. 260—449.6)

1. A method of increasing the activity of a solid unreduced alkali-promoted iron oxide catalyst which has been subjected at least to incipient melting temperature, for use in the catalytic synthesis of hydrocarbons from carbon monoxide and hydrogen comprising subjecting said catalyst in the form of particles below 200μ in size to ionizing radiation.

3,051,738
ANTIHEMORRHAGIC COMPOUNDS AND PROCESSES FOR PREPARING THE SAME

Ralph F. Hirschmann, Scotch Plains, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Mar. 22, 1957, Ser. No. 647,747, now Patent No. 2,913,477, dated Nov. 17, 1959. Divided and this application Feb. 27, 1959, Ser. No. 795,925
24 Claims. (Cl. 260—461)

1. 1-lower fatty acid ester of 2-methyl-3-phytyl-1,4-naphthohydroquinone-4-(dichloro)phosphate.

7. Dialkali metal salt of 2-methyl-3-phytyl-1,4-naphthohydroquinone-4-phosphate.

8. The process which comprises reacting 2-methyl-3-phytyl-1,4-naphthohydroquinone-1-acetate with phosphorous oxychloride to form 2-methyl-3-phytyl-1,4-naphthohydroquinone-1-acetate - 4 - (dichloro)phosphate, reacting the latter compound with sodium hydroxide to form a mixture of sodium and disodium 2-methyl-3-phytyl-1,4-naphthohydroquinone-1-acetate-4-phosphate, reacting the latter compound with hydrochloric acid to form 2-methyl-3-phytyl-1,4-naphthohydroquinone - 1 - acetate - 4 - phosphate, reacting the latter compound with a concentrated aqueous alcoholic metal hydroxide to form a mixture of the mono-, di- and tri-sodium salt of 2-methyl-3-phytyl-1,4-naphthohydroquinone-4-phosphate and reacting the latter compound with hydrochloric acid to form 2-methyl-3-phytyl-1,4-naphthohydroquinone-4-phosphate.

3,051,739
MANUFACTURE OF TRIMETHYL PHOSPHATE

Merle L. Gould, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 20, 1959, Ser. No. 834,961
5 Claims. (Cl. 260—461)

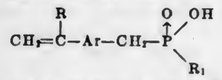
1. Process for the manufacture of trimethyl phosphate comprising establishing a reaction zone containing from about 3 to 20 stages, continuously feeding methanol, phosphorus oxychloride and an alkyl chloride to said zone, said methanol being fed in at least 30 percent excess based on stoichiometry, said alkyl chloride being selected from the group consisting of methyl chloride and ethyl chloride, a fraction of said alkyl chloride being fed in the liquid phase in quantity sufficient to remove the heat of reaction and heat of solution of said hydrogen chloride in the reaction mixture by vaporization thereof, the major portion of said alkyl chloride being fed in the vapor phase and constituting from 2 to 10 moles per mole of hydrogen chloride produced as a by-product.

3,051,740
ETHYLENICALLY UNSATURATED AROMATIC PHOSPHORUS ACIDS

John G. Abramo, Albert Y. Garner, and Earl C. Chapin, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 4, 1960, Ser. No. 16
5 Claims. (Cl. 260—461)

1. An ethylenically unsaturated aromatic phosphorus acid corresponding to the general formula:



wherein R is a radical selected from the group consisting of hydrogen and methyl, Ar is a divalent aromatic residue containing from 6–14 carbon atoms, and R_1 is a radical selected from the group consisting of OH, R_2 and OR_2 radicals, wherein, in turn, R_2 is a hydrocarbon radical containing from 1–20 carbon atoms.

3,051,741
PROCESS FOR PURIFYING ALKYLATED ACID AMIDES

Herbert Marzolph and Walter Ruf, Dormagen, and Herbert Corte, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 6, 1960, Ser. No. 73,974
Claims priority, application Germany Dec. 19, 1959
7 Claims. (Cl. 260—465.4)

1. In a process for the purification of an alkylated acid amide selected from the group consisting of N,N-dimethyl formamide, N,N-dimethyl acetamide, N,N-dimethyl methoxy acetamide and N-methyl-N-β-cyanoethyl formaamide, the improvement which comprises passing said alkylated acid amide containing at least about 10% by weight of water over a strongly acid ion exchanger in the H-ion form, and over a strongly basic ion exchanger in the carbonate ion form, and thereafter removing a substantial amount of the water from said amide to obtain the purified product.

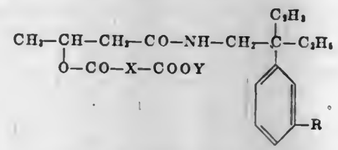
7. A process according to claim 1 wherein N-methyl-N-β-cyanoethyl formamide is combined with about 10%–60% by weight of water.

3,051,742
β-HYDROXY-BUTYRIC ACID AMIDE DERIVATIVES AND PROCESS OF PREPARING THEM

Gustav Ehrhart, Bad Soden (Taunus), Ingeborg Hennig, Kelkheim (Taunus), Ernst Lindner, Frankfurt am Main, and Heinrich Ott, Eppstein (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Nov. 25, 1958, Ser. No. 776,195
Claims priority, application Germany Nov. 30, 1957
3 Claims. (Cl. 260—475)

1. β-Hydroxy butyric acid amide derivatives of the formula



wherein R represents a member selected from the group consisting of methoxy and ethoxy and wherein X is a member of the group consisting of alkenylene having up to five carbon atoms and six-membered monocyclic carbon rings and Y is a member selected from the group consisting of hydrogen, alkali metal and ammonium.

3,051,743
VINYL 4,4,4-TRINITROBUTYRATE

Irwin J. Schaffner, Waldwick, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 26, 1951, Ser. No. 233,705
1 Claim. (Cl. 260—478)

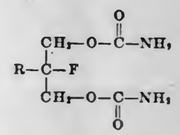
Vinyl 4,4,4-trinitrobutyrate.

3,051,744
CARBAMIC ACID ESTERS

Albert Bowers, Mexico City, Mexico, assignor, by mesne assignments, to Syntex Corporation, a corporation of Panama

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,544
Claims priority, application Mexico Oct. 7, 1959
9 Claims. (Cl. 260—482)

1. A compound of the formula:



wherein R is selected from the group consisting of alkyl, aryl and aralkyl radicals each of said radicals containing up to 8 carbon atoms.

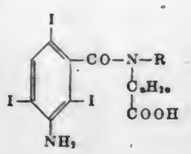
3,051,745
NEW IODINE-CONTAINING AMINOBENZOIC ACID AMIDES AND A METHOD OF PRODUCING THE SAME

Werner Herrmann Obendorf, Linz, Austria, assignor to Osterreichische Stickstoffwerke Aktiengesellschaft, Linz, Austria

No Drawing. Filed June 29, 1959, Ser. No. 823,316
Claims priority, application Austria July 23, 1958
8 Claims. (Cl. 260—518)

1. An iodine containing amino benzoic acid amide

compound selected from the group consisting of compounds having the formula



wherein R is selected from the group consisting of the phenyl radical and alkyl having 1 to 4 carbon atoms and *n* is an integer from 1 to 2 and the salts thereof with non-toxic bases.

3,051,746
AROMATIC CARBOXYLIC ACID PURIFICATION
William G. Toland, Jr., San Rafael, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Apr. 18, 1958, Ser. No. 731,567
4 Claims. (Cl. 260—525)

1. A process for removing sulfur and non-acidic sulfocarbon impurities from a carboxylic acid containing such impurities and selected from the group consisting of benzoic acid, toluic acids, phthalic acids, and naphthenic acids, which comprises heating a mixture of (1) the impure acid, (2) at least 1 mol of hexamethylenetetramine salt of the acid per 4 mols of carboxyl radical in said acid, and (3) at least sufficient water to dissolve all of the ammonium carboxylate formed but insufficient to dissolve all the carboxylic acid present, in a distillation zone, separating an overhead fraction comprising aqueous formaldehyde and a bottoms fraction comprising an aqueous solution of ammonium salts of the acid in the distillation zone at a temperature not in excess of about 350° F., mixing the bottoms fraction with a solid adsorbent and filtering the mixture, mixing the filtrate and the aqueous formaldehyde overhead from the distillation zone to form a mixture of free acid, the hexamethylenetetramine salt of the acid and water, separating the free organic acid from the mixture and returning the residue to the distillation zone together with further quantities of impure organic acid.

3,051,747
SYNTHESIS OF ACRYLIC ACIDS
Joel M. Leathers and George E. Woodward, Freeport, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 27, 1958, Ser. No. 724,267
6 Claims. (Cl. 260—526)

1. A process for the preparation of acrylic acids which comprises the steps of contacting an alkanoic acid containing 2 to 7 carbon atoms and having an alpha methylene group with formaldehyde in the presence of a catalyst comprising an alkali metal salt of the alkanoic acid supported on an inert absorbent bed at a temperature of from 300° to 450° C., and separating the acrylic acid from reaction effluent.

3,051,748
ORGANOMETALLIC COMPOUNDS
David O. De Pree and Earl G. De Witt, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 2, 1958, Ser. No. 777,589
10 Claims. (Cl. 260—526)

1. A process for the preparation of a metal salt of 2-carboxy-3-metallo propene which comprises reacting a metal salt of 2-methyl propenoic acid with a metalating agent selected from the group consisting of alkali metal amides, alkaline earth metal amides, alkali metal hydrides, alkaline earth metal hydrides, alkali metals and alkaline earth metals, the metal constituent of said last named metal salt having a valence of 1 through 4, inclusive; said process being conducted in an inert atmosphere and at a temperature of about 160° C. up to the decomposition temperature of the 2-carboxy-3-metallo propene salt produced.

3,051,749
METHOD FOR THE OXIDATION OF OLEFINS
Francis E. Lawlor, Wyndmoor, Pa., and Anthony Truchan, Skaneateles, N.Y., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed May 8, 1958, Ser. No. 733,829
8 Claims. (Cl. 260—539)

1. The method of producing a perhalogenated olefinic acid compound selected from the group consisting of anhydrides and carboxylic acids containing the radical $CX_2{:}CXCO$— which comprises the steps of contacting with sulphur trioxide a halogenated olefin of the formula $CX_2{:}CXCX_3$, where each X represents a halogen atom having an atomic weight of below 40, and hydrolyzing the resulting reaction product.

3,051,750
NITROSATION PROCESS
William Dettwyler, Hockessin, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 5, 1960, Ser. No. 20,030
5 Claims. (Cl. 260—556)

1. The process of producing an organic nitroso compound which comprises feeding an aqueous solution of an alkali-metal nitrite into an aqueous mass consisting essentially of a naphthalene compound, acetic acid in quantity corresponding to between 1.5 moles and 4 moles per mole of said naphthalene compound, and water in quantity to provide a solution of between 5% and 15% by weight of the said acetic acid, said naphthalene compound being a naphthol selected from the group consisting of 1-naphthol, 2-naphthol and nuclear substitution derivatives of these in which the substituents are located in positions other than 1 and 2 and are members of the group consisting of methyl, methoxy, chloro, bromo, nitro, sulfo, sulfamoyl and carboxy, and allowing the reaction to proceed at a temperature between 20° and 40° C.

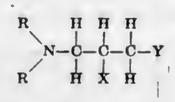
3,051,751
SELECTIVE AMIDE FORMATION WITH 2-p-DIOXANONE
William W. Levis, Jr., Wyandotte, and Eugene A. Weipert, Detroit, Mich., and Harry Rubinstein, Bethlehem, Pa., assignors to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan
No Drawing. Filed Mar. 4, 1960, Ser. No. 12,662
8 Claims. (Cl. 260—561)

1. A process for selectively blocking a primary amino radical in the presence of a nonheterocyclic amino radical of higher order by selectively converting said primary amino radical into an N-substituted-β-hydroxyethoxyacetamide group, which comprises, contacting 2-p-dioxanone with a mixed amine reactant at a temperature up to about 60° C. in a substantially anhydrous system, said mixed amine reactant being selected from the group consisting of (*a*) a mixture of a primary amine and a nonheterocyclic amine of higher order, (*b*) a polyamine containing a primary amino radical and a nonheterocyclic amino radical of higher order and (*c*) mixtures of (*a*) and (*b*).

7. The process of claim 1 wherein said mixed amine reactant is N,N-diallylethylenediamine.

3,051,752
METHOD FOR THE PREPARATION OF N,N,N',N',N'',N''-HEXASUBSTITUTED 1,2,3-TRIAMINOPROPANES
Richard C. Doss and Howard W. Bost, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Jan. 31, 1957, Ser. No. 637,590
8 Claims. (Cl. 260—570.5)

1. A process which comprises reacting a material of the formula



wherein R is selected from the group consisting of alkyl, cycloalkyl, alkenyl, cycloalkenyl, aryl, alkaryl, and arylalkyl radicals, said R's can be alike and unlike and the number of carbon atoms in each R does not exceed 10; and radicals which in combination with nitrogen constitute saturated carbon-nitrogen and carbon-nitrogen-oxygen rings having not less than 5 and not more than 6 members of which at least 4 members are carbon atoms which can be alkyl substituted; X is a halogen selected from the group consisting of chlorine, bromine, and iodine; and Y is selected from the group consisting of



R being as hereinbefore described and a halogen selected from the group consisting of chlorine, bromine, and iodine, with a secondary amine at an elevated temperature, and recovering a N,N,N',N',N'',N''-hexasubstituted 1,2,3-triaminopropane as a product.

3,051,753
ACTIVATORS FOR RHODIUM CATALYSTS
Andrew J. Dietzler and Theodore R. Keil, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Dec. 29, 1958, Ser. No. 783,168
12 Claims. (Cl. 260—580)

1. In a process for producing an aromatic primary haloamine wherein the halogen has an atomic number below 36 comprising hydrogenating the corresponding nitro compound at a temperature of about 20 to 100° C. and a hydrogen pressure of about 1 to 30 atmospheres and in the presence of a catalytic amount of rhodium, the improvement consisting of conducting the hydrogenation in the presence of calcium hydroxide.

3,051,754
PREPARATION OF AMINE-BORINES
Herbert Jenkner, Hannover-Wulfel, Germany, assignor to Kali-Chemie A.G., Hannover, Germany
No Drawing. Filed Mar. 10, 1958, Ser. No. 719,996
Claims priority, application Germany Mar. 9, 1957
4 Claims. (Cl. 260—583)

1. The method of preparing amine-borines which consists in heating a boron chloride compound of the formula

$$BCl_nR_{3-n}$$

wherein *n* is an integer from 1 to 3, and R is a member of the group consisting of lower alkyl and lower alkoxy, at a temperature of about 40 to 120° C. with sodium hydride and an amine selected from the group consisting of piperidine, morpholine, lower N-alkyl derivatives of piperidine and morpholine, and secondary and tertiary lower alkylamines, the alkyl group of said alkylamines having 1 to 5 carbon atoms, in the presence of an efficient amount of at least 5 percent by moles, calculated on said sodium hydride of an activator of the formula

$$BR'_nR''_{3-n}$$

wherein R' is a member of the group consisting of lower alkyl, phenyl, and lower alkoxy, R'' is a member of the group consisting of R' and hydrogen, and *n* is an integer between 1 and 3.

4. A method of preparing N-triethyl borazan comprising heating boron trichloride at a temperature of about 40 to 120° C. with sodium hydride and triethylamine in a mineral oil suspension containing triethylborine in an amount of about 5 to 30 percent by moles of said sodium hydride, and distilling off the obtained N-triethyl borazan.

3,051,755
PROCESS FOR THE DRYING OF GASEOUS FORMALDEHYDE
Otto Schweitzer, Konigstein (Taunus), and Jürgen Behrends, Hanau (Main), Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
No Drawing. Filed Jan. 4, 1960, Ser. No. 81
Claims priority, application Germany Jan. 7, 1959
4 Claims. (Cl. 260—606)

1. A process for drying moist monomeric gaseous formaldehyde which comprises treating said monomeric gaseous formaldehyde with an agitated aluminum silicate gel essentially composed of 80 to 90% of silicic acid and the remainder alumina at a temperature between —70 to +65° C. and recovering the resulting dried monomeric gaseous formaldehyde.

3,051,756
MONOMERS, POLYMERS, AND METHODS FOR MAKING THE SAME
Thurman E. Gier, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 22, 1960, Ser. No. 23,882
5 Claims. (Cl. 260—606.5)

1. A polymeric solid product corresponding grossly to an empirical formula $(HCP)_n$ wherein *n* is an integer greater than 3, said product, though pyrophoric as initially formed, becoming non-pyrophoric after three weeks' storage in an oxygen-free atmosphere at atmospheric pressures and room temperatures.

2. A process for preparing monomeric methinophosphide comprising the steps of passing phosphine through a rotating low-intensity carbon arc at a pressure below 300 mm. Hg and then passing the product gases into a trap maintained at —196° C.

3,051,757
SULFONE PREPARATION PROCESS
Howard Johnston, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 11, 1960, Ser. No. 28,219
4 Claims. (Cl. 260—607)

1. Process which comprises the step of reacting together dimethylsulfoxide, alkali metal hydroxide, and bromine, in aqueous medium.

3,051,758
PRODUCTION OF MERCAPTANS AND SULFIDES
Richard D. Franz and Paul F. Warner, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 22, 1961, Ser. No. 125,299
5 Claims. (Cl. 260—609)

1. In a process for the production of alkyl mercaptans wherein olefin feed stock is reacted with hydrogen sul-

fide, the improvement comprising carrying out said reaction in the presence of a ditertiary alkyl polysulfide.

3,051,759
ACETYLENIC ETHERS
William E. Parham, St. Paul, Minn., assignor to Regents of the University of Minnesota, Minneapolis, Minn., a corporation of Minnesota
No Drawing. Filed Aug. 13, 1956, Ser. No. 603,816
5 Claims. (Cl. 260—609)

1. The method of preparing substituted mercaptoacetylenes of the general formula:

$$R—S—C\equiv CH$$

wherein R is any monovalent radical selected from the group consisting of alkyl, aryl, aralkyl and alicyclic radicals which comprises treating a mercaptoethylene of the general formula:

$$R—S—CH=CH—S—R$$

wherein R is as above specified, with butyl lithium in an inert volatile organic solvent.

3,051,760
METHOD OF PURIFICATION AND CRYSTALLIZATION OF 2,2'-ISOPROPYLIDENE BIS(p-PHENYLENEOXY)DIETHANOL
Arthur R. Sexton, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 10, 1958, Ser. No. 766,415
2 Claims. (Cl. 260—613)

1. A method for the purification and crystallization of 2,2'-isopropylidene bis(phenyleneoxy)diethanol which comprises introducing a crude molten 2,2'-isopropylidene-bis(phenyleneoxy)diethanol product into water maintained at a temperature between about 0° and about 75° C. while rapidly agitating the water, and recovering the so purified and crystallized product.

3,051,761
PROCESS FOR MAKING PENTACHLOROPHENOL
Gordon MacBeth and Robert G. Heitz, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed June 2, 1958, Ser. No. 738,936
2 Claims. (Cl. 260—623)

1. In a process for making pentachlorophenol by the alkaline hydrolysis of hexachlorobenzene wherein there is formed an aqueous alkaline solution of pentachlorophenol at a temperature above about 190° C. and a pressure at least sufficient to maintain the materials in the liquid state, the steps comprising isolating the pentachlorophenol from the aqueous solution by acidifying said solution, thus to form a molten pentachlorophenol phase and an aqueous brine phase, and separating said phases.

3,051,762
PHENOL ALKYLATION PROCESS
Rudolf Stroh, Leverkusen-Bayerwerk, and Robert Seydel, Koln-Dellbruck, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Oct. 15, 1958, Ser. No. 767,269
7 Claims. (Cl. 260—624)

1. In the process for introducing an alkyl group onto at least one of the ortho and para positions of a phenol by reacting a phenol with an aliphatic olefin in the presence of a catalyst in the form of a phenoxide of a metal selected from the group consisting of zinc, aluminum, iron, magnesium, calcium, lithium, and sodium, the improvement essentially consisting of effecting the alkylation reaction in the additional presence of 0.5 to 20% by weight referred to the phenol of a halide of a metal selected from the group consisting of sodium, potassium, lithium, silicon, magnesium, barium, zinc, lead, titanium, iron, and cobalt.

3,051,763
PREPARATION OF CHLORINATED NAPHTHALENES
John W. Wagner, Westminster, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
No Drawing. Filed July 22, 1960, Ser. No. 44,581
5 Claims. (Cl. 260—650)

1. In a process for producing chlorinated naphthalenes by treating a petroleum naphthalene mixture in the liquid phase with chlorine in the presence of a Lewis-type acid catalyst, said naphthalene mixture boiling in the range of 400 to 600° F., the improvement comprising: delaying the addition of said catalyst until chlorine equivalent to approximately one-fourth mole of chlorine per mole of naphthalenes has been reacted therewith.

3,051,764
HALOGENATED ORGANIC COMPOUNDS
Murray Hauptschein, Glenside, and Milton Braid, Philadelphia, Pa., and Fran is E. Lawlor, Mesa, Ariz., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed May 13, 1958, Ser. No. 734,841
18 Claims. (Cl. 260—653.1)

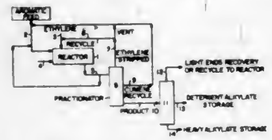
1. Telomers selected from the class consisting of those having the general formulae $R'(CF_2CHCl)_nQ$ and $R'(CF_2CHCl)_n(CHClCF_2)_mR'$ where R' is selected from the class consisting of perfluoro, perchloro, perfluorochloro, perfluorohydro, perfluorochlorohydro and perchlorohydro radicals; where Q is a halogen selected from the class consisting of iodine, chlorine and fluorine; where n and m are integers and where the value of n in compounds of the formula $R'(CF_2CHCl)_nQ$ is at least 3 and where the value of $n+m$ in compounds of the formula $R'(CF_2CHCl)_n(CHClCF_2)_mR'$ is at least 3.

3,051,765
CHEMICAL PROCESS FOR PREPARING FULVENE COMPOUNDS
George H. McCain, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Mar. 30, 1959, Ser. No. 802,595
7 Claims. (Cl. 260—666)

1. The method of preparing a fulvene compound which comprises reacting approximately equimolar amounts of cyclopentadiene and a compound selected from the group consisting of aldehydes and ketones in the presence of an anionic exchange resin at a temperature in the range of about −20° C. to 50° C. and at atmospheric pressure, separating the reaction mixture from the ion exchange catalyst and distilling the reaction mixture to recover the desired fulvene.

3,051,766
MANUFACTURE OF ALKYLATED AROMATIC COMPOUNDS
Edward Allen Hunter, Clyde Lee Aldridge, and David Edward Gensheimer, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 1, 1960, Ser. No. 19,294
12 Claims. (Cl. 260—668)

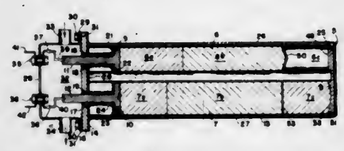
1. A method for producing an alkylated aromatic compound which comprises contacting a low molecular weight monolefinic hydrocarbon with an alkylated aromatic



compound in a reaction zone at a temperature between 100° to 350° C. in the presence of a free radical source initiator, said initiator being added to the reaction mixture in increments at intervals of between 0.5 and 60 minutes to effect improved yields of alkyl aromatic compounds, the total amount of initiator thus added being equivalent to about 0.1 to 20 grams of cumene hydroperoxide per liter of aromatic compound fed to the reaction zone and the maximum instantaneous initiator concentration being maintained at less than 50 percent of the total initiator employed.

ELECTRICAL

3,051,767
THERMOELECTRIC DEVICES AND THERMOELEMENTS
Russell E. Fredrick, White Bear Lake, and Robert W. Fritts, Arden Hills, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Nov. 21, 1958, Ser. No. 775,529
15 Claims. (Cl. 136—5)



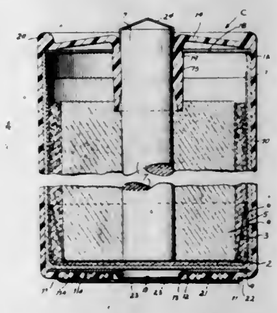
1. A thermoelectric element having spaced thermojunction means and adapted for operation with a predetermined temperature gradient thereacross between said thermojunction means, said element having substantially homogeneous segments formed of different active thermoelectric materials, the material of each of said segments having a figure of merit which is superior to that of any other of said materials for the temperature range within said gradient obtaining across said segment when said predetermined temperature gradient obtains across said element.

3,051,768
ELECTRIC BATTERY AND BATTERY ELECTROLYTE
Eric F. Kujas, Philadelphia, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey
No Drawing. Filed Oct. 13, 1958, Ser. No. 766,718
10 Claims. (Cl. 136—24)

1. In a nickel-cadmium battery, an alkaline electrolyte containing a salt of a halogen selected from the group consisting of chlorine, bromine, and fluorine in an amount ranging from about 1 to 10 molar percent.

3,051,769
LEAKPROOF PRIMARY OR SECONDARY CELL AND PROCESS FOR MANUFACTURING THE SAME
Jean Firmin Jammet, Poitiers, France, assignor to Societe des Accumulateurs Fixes et de Traction (Societe Anonyme), Romainville, France, a company of France
Filed July 13, 1960, Ser. No. 42,624
Claims priority, application France July 17, 1959
16 Claims. (Cl. 136—133)

1. A leakproof cell comprising a cup-shaped outer electrode, a plastic casing surrounding said cup-shaped outer electrode, said casing having a perforated bottom, provided with a serrated portion about the perforation, the wall thickness of said serrated portion being thicker than other portions of said bottom, a pair of metal plates positioned on opposite sides of said bottom and joined together in the perforation, said metal plates having parts extending in substantial parallelism with said serrated



portion of said casing compressed between said parts of said metal plates.

3,051,770
NORMAL JOINT FOR HIGH TENSION CABLES AND PROCESS OF MAKING THE SAME
Nicola Palmieri, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed Aug. 24, 1960, Ser. No. 51,712
Claims priority, application Italy Aug. 26, 1959
12 Claims. (Cl. 174—22)



1. A joint for high tension cable cores each having a conductor surrounded by solid insulation which is in turn surrounded by conductive screening, a ferrule connecting the cable conductors, a prefabricated sleeve of synthetic resin having an embedded screening electrode, said sleeve and electrode surrounding said ferrule with the sleeve closely surrounding that part of the cable core insulation near the end of the conductor and adjacent to the ferrule, said sleeve being of an inner diameter greater than the outer diameter of the cable insulation only by an amount required for sliding of the sleeve over the cable insulation, the end of the insulation of the cable adjacent to the ferrule being at right angles to the longitudinal axis of the sleeve, the cable core screening terminating short of the sleeve by an amount exceeding the thickness of the sleeve, bell shaped insulation around the cable and varying from a minimum diameter where the cable screening ends to a maximum diameter surrounding a part of the sleeve, and conductive screening means surrounding the bell shaped insulation and the sleeve and electrically connected to the cable core screening.

3,051,771
ELECTROSTATIC SHIELD FOR HIGH VOLTAGE CABLES

Edwin Charles Lee, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed July 29, 1959, Ser. No. 830,236
Claims priority, application Great Britain Aug. 15, 1958
3 Claims. (Cl. 174—36)

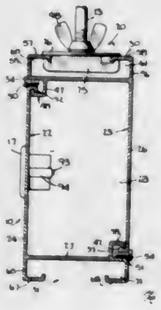


1. The combination of an electric cable and an electrostatic screen surrounding the cable core, said screen comprising paper covered on both sides with a metallic layer and arranged in such manner that the entire surface of said core is covered by at least two metallic layers.

3,051,772
MOUNTING STRIP

Ariel R. Davis, 3687 S. State, Salt Lake City, Utah

Filed Dec. 7, 1960, Ser. No. 74,426
4 Claims. (Cl. 174—61)



1. A mounting strip for electrical fixtures and the like comprising a first member having a first side wall and a bottom wall at right angles to the side wall, said first side wall having a hook portion extending longitudinally along the free edge opposite to said bottom wall and forming a groove with said first side wall, said bottom wall having a flange and a hooked member at right angles to the flange and extending toward the free edge of the bottom wall and spaced from the bottom wall, a second member having a second side wall and a top wall at right angles to the second side wall, said second side wall having a second hook portion extending along the free edge of the second side wall opposite to said top wall and forming a second groove with said second side wall, said top wall having a second flange and a hook member at right angles to the second flange and extending toward the free edge of the top wall and spaced from the top wall, said first side hook portion and said top hook member interlocking and said second side hook portion and said bottom hook member interlocking to form a longitudinally extending groove between said top wall and said first side hook portion and a second longitudinally extending groove between said bottom wall and said second hook portion, screws fitted in said grooves at spaced intervals to retain said side first and second members as a unitary mounting strip.

3,051,773
WIRE GRIPPING ELEMENTS AND METHOD OF MAKING AND CRIMPING SAME

Hugh W. Batcheller, Newton Highlands, Mass. (188 Needham St., Newton Upper Falls, Mass.)

Filed Sept. 23, 1959, Ser. No. 841,865
4 Claims. (Cl. 174—94)



1. A method of joining together two metal strip ends, which comprises forming a recess in one said end, said recess being widest at its inner end, forming a projection on the other said end approximately the same shape as said recess and widest at its extremity, the widest part of said projection being slightly narrower than the narrowest part of said recess, moving said ends edgewise into mutual engagement with the projection within said recess, and cold-forging said projection and the metal adjacent to said recess by striking on the faces thereof to flatten and spread said projection and adjacent metal sufficiently to fill the clearance between the edges of said projection and the edges of said recess.

4. An electric element of sheet metal adapted to be mounted on the end portion of a wire, said element having a wire-gripping portion comprising oppositely extending tongues adapted to be curled around a wire to grip the same, one of said tongues having a T-shaped recess in the end thereof, said recess consisting of a slot extending in from the end of said tongue with a widened inner end, the other said tongue having a T-shaped projection extending out from the end thereof the length of said recess being substantially equal to that of said projection, the maximum width of said projection being slightly less than the minimum width of the slot.

3,051,774
STRAIN RELIEF

Robert K. Schelke, Richmond, Ind., assignor to Belden Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Nov. 20, 1957, Ser. No. 697,584
3 Claims. (Cl. 174—135)

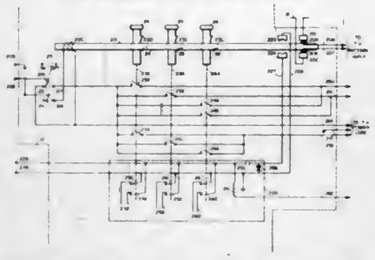


1. In combination, a flexible electrical conductor cord and a strain relief tightly molded about said cord, said strain relief comprising a head for attachment of said strain relief and said cord to equipment with which said strain relief and said cord are to be used, and a molded sleeve of flexible resilient material integrally connected to said head at one end thereof, said sleeve being unidirectionally tapered along substantially the entire length thereof so that the widest portion of said sleeve is adjacent said head, said sleeve having walls of uniformly varying thickness and provided with a plurality of apertures disposed in spaced apart relationship along the entire tapered length thereof and extending therethrough to the surface of said cord so that inspection of said cord is permitted and flexing of said sleeve is facilitated.

3,051,775
SUBSCRIPTION TELEVISION USE RECORDING SYSTEM

Warren D. Novak, Chappaqua, and Raymond L. Garman, Hastings on Hudson, N.Y., assignors to General Precision, Inc., a corporation of Delaware

Filed Nov. 13, 1959, Ser. No. 852,826
1 Claim. (Cl. 178—5.1)



A multiple channel closed circuit television use recording system comprising;

an attachment for receiving a plurality of different information bearing signals each superposed on a different carrier frequency, a corresponding number of different conversion signals, and a clock signal;

said attachment including a plurality of converter means each of which when activated converts one of said information bearing carriers by mixing with its corresponding conversion signal to a single preselected frequency which is identical to the frequency of a single preselected standard television broadcast channel and in addition provides a signal for identifying the converted carrier;

a plurality of displaceable selectors each of which activates one only of the above said converter means when displaced;

a television receiver having a tuner preset to the said preselected standard television broadcast channel when used for receiving any one of the aforesaid closed circuit television information bearing signals;

means for connecting the converted carrier signals from the attachment to the antenna input of the television receiver;

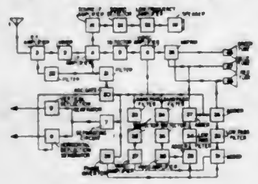
means responsive to the said clock signal for providing a time record;

and means responsive to the said carrier identifying signal for providing a record, contiguous with the said time record, for identifying the selected converted carrier signal.

3,051,776
CORRECTION OF HIGH FREQUENCY COMPONENTS OF BRIGHTNESS SIGNAL IN COLOR RECEIVER

Kees Teer, Eindhoven, Netherlands, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware

Filed June 17, 1957, Ser. No. 666,173
Claims priority, application Netherlands Aug. 13, 1956
11 Claims. (Cl. 178—5.4)

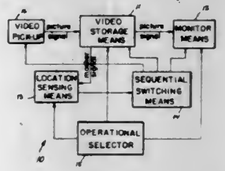


2. A circuit for deriving image signals in a color television receiver adapted to receive color television signals having a first signal of relatively large bandwidth and a second signal of relatively small bandwidth, comprising means connected to demodulate said first signal to provide third and fourth signals having inverted phases, means connected to demodulate said second signal to provide a fifth signal, a first adding means connected to add said third and fifth signals, a low-pass filter having a frequency pass range for passing only the frequency range of said fifth signal, means connected to apply the added signals to said low-pass filter, and a second adding means connected to add the output of said low-pass filter and fourth signal.

3,051,777
MAGNETIC RECORDING SYSTEMS

Jerome H. Lemelson, 43A Garfield Apts., Metuchen, N.J.

Filed June 27, 1957, Ser. No. 668,348
23 Claims. (Cl. 178—6.6)



1. A system for the single frame recording of video signals on a magnetic tape and the single frame playback of said recording and its use to modulate the write beam of a cathode ray tube said tape being divided into a plurality of lengths positioned in tandem relationship parallel to the longitudinal axis of said tape, said system comprising a video camera, a monitor means, a location sensing means a marker playback transducer, a video recording transducer, a video playback transducer, said tape being movable along its longitudinal axis and having at least one marker channel and at least one video picture signal channel parallel to said marker channel and (extending parallel to said longitudinal axis), each of said plurality of lengths having a marker signal recorded thereon, said marker playback transducer being operatively positioned to reproduce said marker signals, said video recording transducer being operatively positioned to record video signals on said video channel, said video playback transducer being operatively positioned to reproduce video signals recorded on said video channel, said video camera being operatively connectable to said video recording transducer to feed video signals thereto, said video playback transducer being operatively connectable to said monitor means to feed video signals thereto, said marker playback transducer being operatively connected to said location sensing means to feed marker signals thereto, said location sensing means being operatively connected to said video transducers whereby said video recording transducer is operatively connected to said video camera and said video playback transducer is operatively connected to said monitor means when a preselected length of said tape is opposite the respective video transducers.

3,051,778
SEQUENTIAL SCAN TELEVISION WITH LINE INTERPOLATION

Robert E. Graham, Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 20, 1960, Ser. No. 63,893
7 Claims. (Cl. 178—6.8)

1. Television transmission apparatus that comprises a source of picture signals including a sequence of signal elements arranged in a succession of field signal groups,

means for transmitting selected field signals to a receiver station, means at said receiver station for deriving from said received field signals a plurality of interpolated picture signal elements representative respectively of elements in nontransmitted field signals, means for choosing one of said plurality of interpolated signal elements for each corresponding element in said nontransmitted field,

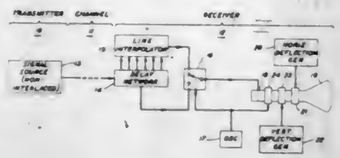
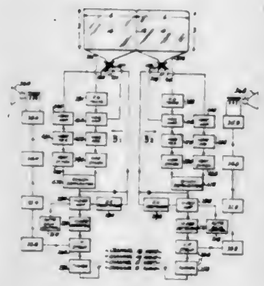


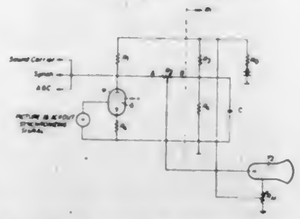
image reproducing means including means adapted to scan an image screen with an electron beam subjected to field, line, and wobble deflections, said wobble deflections being transverse to said line deflections, and means for influencing said beam alternately with one of said received field signal elements and one of said chosen interpolated signal elements in synchronism with said wobble deflections.

3,051,779
WIDE SCREEN TELEVISION APPARATUS
Leo E. Lakjer, Philadelphia, Pa., assignor of one-half to Louis Marcus, Philadelphia, Pa.
Filed May 13, 1959, Ser. No. 812,948
6 Claims. (Cl. 178—6.8)



5. A cathode ray image producing tube including two adjacent evacuated bowl portions, each of said bowl portions having a neck portion communicating therewith and rearward thereof and faceplates forming the front thereof, said bowl portions arranged in horizontal, adjacent position relative to each other and said neck portions mounted in the respective bowl portions in horizontal adjacent positions relative to each other; a single common relatively thin web along side of each said bowl portion immediately adjacent the other, said web forming a common side of the bowl portions and forming a portion of the inner side of each said bowl portion, said web joining said respective faceplates and extending rearward thereof, said web being of relatively minute thickness compared to the combined width of the faceplates; an electron gun contained within each respective neck portion, said electron guns receiving impulses from separate signal sources, said signal sources forwarding horizontally adjacent scenes respectively to each said electron gun, said electron guns casting images of respective adjacent scenes upon respective face plates, whereby the images cast upon the faceplate phosphor by the electron guns are continuous and laterally juxtaposed.

3,051,780
VIDEO-FREQUENCY CONTRAST-CONTROL ARRANGEMENT FOR TELEVISION RECEIVERS
Ernst-Günther Trost, Durlach, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 4, 1960, Ser. No. 19,645
1 Claim. (Cl. 178—7.5)



A contrast control circuit arrangement for a television receiver comprising:

a video amplifier having an input terminal for a video signal and an output terminal;

a picture reproducing device having a control electrode and a biasing electrode;

a brightness control connected between said biasing electrode and said control electrode for adjusting the black level of the reproduced picture;

a direct current network connected between said output terminal and said control electrode comprising three resistors and the internal resistance of said video amplifier connected as a resistive bridge having four arms and two opposite diagonals;
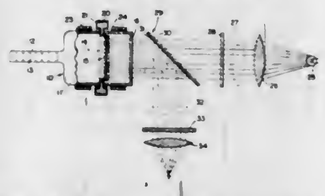
a voltage source connected across one of said diagonals;

a contrast control resistor connected across the other diagonal;

means for adjusting the resistance value of at least one of the arms of said resistive bridge for reducing the potential difference across said contrast control to substantially zero during the blanking period of the video signal, said potential difference varying directly with the signal voltage during the picture period;

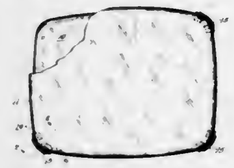
and adjustable means connected between said contrast control resistor and said control electrode for varying the picture contrast independently of the brightness of said reproduced picture.

3,051,781
MEANS OF CONVERTING ELECTRICAL SIGNALS TO VISIBLE PICTURES
Samuel A. Ward, Ridgefield, Conn., assignor to The Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Filed Apr. 4, 1960, Ser. No. 19,887
12 Claims. (Cl. 178—7.5)
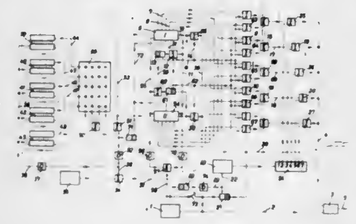


7. A target for a converter tube, comprising a layer of light reflecting material of low magnetic susceptibility, a layer of superconductive material on one side of the light reflecting layer and means whereby said material is characterized by its ability to repel magnetic flux when below its transition temperature and to readily pass flux through areas heated above said transition temperature, and a layer of magneto-optic material on the opposite side of the light reflecting layer and means whereby said magneto-optic material is characterized by its ability to change the plane of polarization of light rays passing therethrough in areas where magnetic flux passes when the superconductive layer is heated above its transition level, and means whereby said light reflecting layer is adapted to reflect said light rays back through the magneto-optic layer.

3,051,782
IMPLOSION PANEL SPACING DEVICE
Anacleto D. Giacchetti and Sheldon F. Isenberg, Chicago, Ill., assignors to National Video Corporation, Chicago, Ill.
Filed July 13, 1959, Ser. No. 826,698
9 Claims. (Cl. 178—7.82)



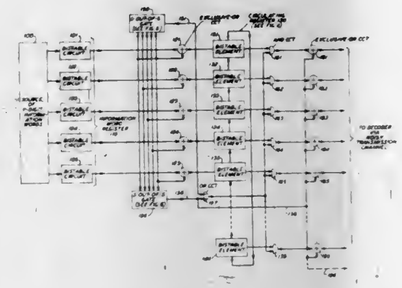
1. In combination a cathode ray tube having a front viewing face, an implosion panel substantially coextensive with said face, confronting the same and having a predetermined spacing therefrom, said panel being provided with a peripheral flange, and a plurality of devices, each device comprising a portion engaging said flange and a spacing tab extending from said portion interposed between the confronting faces of the tube and panel, said tab being sandwiched between said confronting faces to maintain said predetermined spacing, and means precluding relative displacement between said tube and panel.

3,051,783
APPARATUS FOR ENCIPHERING-DECIPHERING TELEPRINTER COMMUNICATIONS
Rudolf Hell, Kiel, and Roman Koll, Kiel-Wellingdorf, Germany, assignors to Dr.-Ing. Rudolf Hell Kommanditgesellschaft, Kiel, Germany, a company of Germany
Filed June 17, 1959, Ser. No. 821,342
Claims priority, application Germany June 21, 1958
2 Claims. (Cl. 178—22)



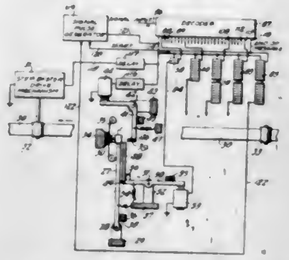
1. In the transmission of messages by teleprinter machines, a device for respectively enciphering and deciphering said messages by mixing the pulses of the teleprinter symbols with key pulses, comprising a key pulse generator, means for alternately separately storing key pulse combinations formed from individual key pulses, from said generator, means operatively connected to said storage means for releasing the pulses of a stored key pulse combination responsive to the start pulse of the teleprinter symbol, means operatively connected to said storage means and said teleprinter machine operative to mix the pulses of the teleprinter symbols with the pulses of the released key pulse combination, means operatively connected to said generator for starting the production of key pulses responsive to said start pulse, to effect storage during the transmission and reception of the teleprinter symbol, of a key pulse combination in place of the released combination, and means operatively connected to said generator for stopping the production of key pulses responsive to the storing of the last pulse of such key pulse combination.

3,051,784
ERROR-CORRECTING SYSTEM
Peter G. Neumann, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 12, 1961, Ser. No. 109,738
21 Claims. (Cl. 178—23)



1. In combination in a self-correcting system for transmitting a digital information word over a noisy channel which introduces $\leq m-1$ digit errors in the transmitted word, where m is any positive integer greater than one, an encoder comprising first means for generating and storing any one of a plurality of information words, second means for sequentially generating one-half of the words of a code set, each word of the set being n digits in length, where $n \geq 4m-1$, and being uniquely characterized by a subset which is identical to one of said plurality of information words, means responsive to the output words of said first and second means for successively comparing an information word with the subsets of the generated words and for providing a first gating signal if said information word is identical to one of said subsets and a second gating signal if said information word is the exact inverse of one of said subsets, and means responsive to said first gating signal for gating to said noisy channel the generated code word which includes said identical subset and responsive to said second gating signal for gating to said noisy channel the inverse of the generated code word which includes said inverse subset; and a decoder connected to said noisy channel for receiving therefrom a code word which may be mutilated, said decoder including third means for sequentially generating one-half of the words of said code set, means responsive to a received code word and to the output code words of said third means for successively comparing a received code word with said output code words and for providing a third gating signal if said received code word and one of said output code words differ in $\leq m-1$ digit places and for providing a fourth gating signal if said received code word and one of said output code words differ in $\geq n-(m-1)$ digit places, and means responsive to said third gating signal for gating out of said decoder the unique subset of the output code word whose comparison resulted in said difference in $\leq m-1$ digit places and responsive to said fourth gating signal for gating out of said decoder the inverse of the unique subset of the output code word whose comparison resulted in said difference in $\geq n-(m-1)$ digit places.

3,051,785
HIGH SPEED RECORDING APPARATUS
Robert Harding, Jr., Briarcliff Manor, N.Y., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed May 28, 1957, Ser. No. 662,275
9 Claims. (Cl. 178—23)



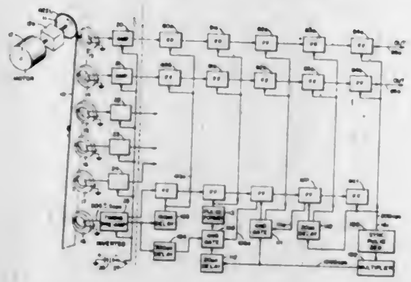
1. A recording apparatus comprising an input circuit adapted to receive an unlimited succession of signals representing characters to be recorded, a row of record making units, each corresponding to a different one of said characters, means for supporting a record medium in close proximity to said row of units and parallel thereto, means responsive to the received signals for moving said record medium through said apparatus in a direction parallel to said row of units a distance equal to the space separating two adjacent record making units for each successive signal received, separate operating means for each unit for individually causing each of said units to record its character on said record medium in response to a signal received at said input circuit representing the character carried by said unit and delay means for each unit included in said last mentioned means for delaying a unit operating means for a period of time sufficient for a point on said record medium to reach said unit from a predetermined point at the end of said row positioned in a direction opposite to the direction of movement of said record medium, each delay means comprising means for storing energy received in response to a signal representing the particular record making unit associated with said delay means, means for releasing said energy after the record medium has moved a predetermined distance from the predetermined point and for feeding said energy to the associated unit operating means, and means for causing said unit operating means to record the character carried by said unit in response to receipt of said energy, and means responsive to an end-of-message signal for causing said record-medium-moving means to continue moving the record medium as long as there is any energy stored in one of the delay means.

3,051,786
FREQUENCY MODULATION SYSTEM
Anatole Girinsky, Boulogne, Seine, and Pierre Charles Augustin Bacot, Creteil, France, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed May 26, 1960, Ser. No. 31,980
Claims priority, application France June 19, 1959
8 Claims. (Cl. 178—66)



1. A pulse code frequency modulation system comprising: a generator of carrier waves; and signal means connected to said generator for modulating said carrier waves including a source of binary code elements each having one of two conditions, means for changing the frequency of said carrier waves at the beginning of every code element and means for also changing the frequency of said carrier waves in the middle of only those code elements having a given one of said two conditions.

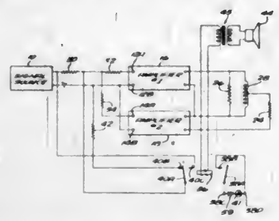
3,051,787
BUFFER STORAGE BETWEEN MAGNETIC TAPE AND SYNCHRONOUS OUTPUT
William J. Parks, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Sept. 4, 1958, Ser. No. 759,030
10 Claims. (Cl. 178—70)



1. In combination in a coded telegraphic transmitter having a recorded message medium, and pickup means for reading binary code symbols at near synchronous frequency, said transmitter comprising a first clock pulse source connected to said message medium for generating clock pulses of near synchronous frequency, a shift register with a plurality of cascaded flip-flops, one output electrode of each flip-flop being coupled directly to one input electrode of the next adjacent flip-flop, the input of the first flip-flop being coupled to said pickup means and the last flip-flop of the register being coupled to a teleprinter transmitting link of synchronous frequency, means connected to said pickup means and responsive to said first clock pulses of said near synchronous frequency for resetting said first flip-flop and transferring the binary content of the first flip-flop to succeeding flip-flops, a second source of clock pulses of synchronous frequency, means connected to said second source and responsive to clock pulses of said synchronous frequency for resetting said last flip-flop and transferring the binary content of the last flip-flop to said transmitting link; a third clock pulse source of a frequency distinctly higher than said synchronous frequency, flip-flops intermediate said first and last flip-flops being responsive to the higher frequency clock pulses for moving binary information read at asynchronous speeds toward the last flip-flop.

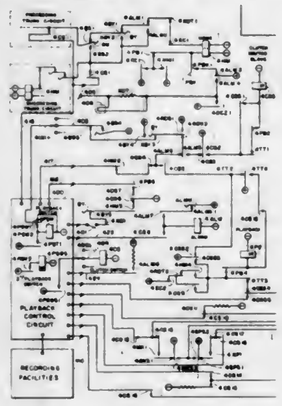
3,051,788
AMPLIFIER INTERCONNECTING CIRCUIT
Edward S. Seeley, Santa Ana, Calif., assignor to Altec Lansing Corporation, Anaheim, Calif., a corporation of Delaware
Filed May 12, 1961, Ser. No. 109,734
6 Claims. (Cl. 179—1)

1. In a system of the type wherein a load is supplied with signals from two amplifiers each having a pair of output terminals, said amplifiers being connected to a single input-signal source to insure that said load is supplied with signals from said source despite a failure in either one of said amplifiers, said improvement comprising a connection between one of the two output terminals of each one of said amplifiers and one side of said load, and means connecting the other side of said load to the remaining output terminal of each of said amplifiers, said means comprising a resistive impedance and an inductive impedance connected in parallel and between the



remaining output terminals of said two amplifiers, said inductive impedance having a center tap which is connected to the other side of said load.

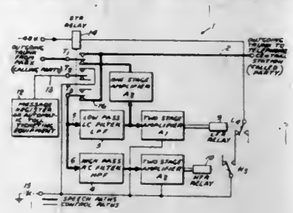
3,051,789
TELEPHONE SYSTEM INCLUDING MAGNETIC STORAGE DEVICE
Milton A. Clement, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,396
6 Claims. (Cl. 179—7.1)



1. An automatic toll ticketing system comprising a plurality of trunk recorders each having an elongated record medium on which data pertaining to toll calls is stored, means for storing data on said record medium, means for sequentially seizing said trunk recorders for advancing the record mediums to transmit the stored data, advance circuit means connecting adjacent trunk recorders to move the medium in the trunk recorder next succeeding the seized trunk recorder to a predetermined position, and first busy means individual to each of said trunk recorders for interrupting said advance circuit means when the associated trunk recorder is being operated by said means for storing data.

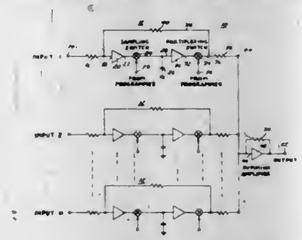
3,051,790
ANSWERING SIGNAL DETECTOR FOR A PRIVATE AUTOMATIC BRANCH EXCHANGE
Leslie B. Haigh, West Orange, Henry F. Herbig, Smoke Rise, and Robert W. Blanchard, East Orange, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Dec. 31, 1958, Ser. No. 784,376
9 Claims. (Cl. 179—9)

1. An answering signal detector for a private automatic branch exchange comprising a calling and a called end, a voice operated device, means connected to the called end for discriminating between voice intelligence signals originating at the called end of relatively high frequency and



supervisory tones of low frequency and means activated by said voice intelligence for operating said device.

3,051,791
MULTIPLEXING MEANS
Frink Mansfield Young, Boston, and Evan T. Colton, Melrose, Mass., assignors to Epsco, Incorporated, Boston, Mass., a corporation of Massachusetts
Filed Feb. 28, 1957, Ser. No. 643,159
6 Claims. (Cl. 179—15)

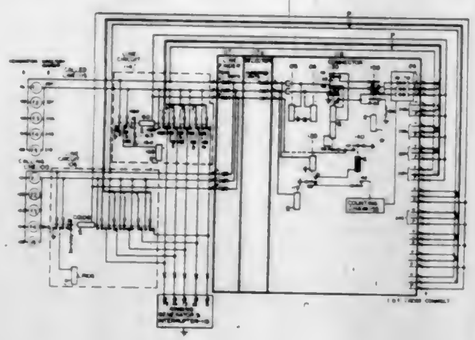


1. A multiplexing circuit comprising an input terminal adapted to receive an information signal, and an output terminal; a first amplifier unit having an input for receiving signals from said input terminal, and an output; a signal storing device; a first switching means controllably transmitting signals from the output of said first amplifier to said storing device; a second amplifier unit having an input receiving signals from said first switching means and said storing device, and an output; a second switching means controllably transmitting signals from the output of said second amplifier unit to said output terminal; and a loop return means for delivering inverse feedback signals from said second switching means to the input of said first amplifier unit to cause said first and second amplifier units and said loop return means to constitute an operational amplifier when said first and second switching means are conditioned to transmit signals.

3,051,792
SELECTIVE PARTY LINE SIGNALING SYSTEM
Per O. Dahlman, Galion, Ohio, assignor to North Electric Company, Galion, Ohio, a corporation of Ohio
Filed Jan. 22, 1957, Ser. No. 635,276
5 Claims. (Cl. 179—17)

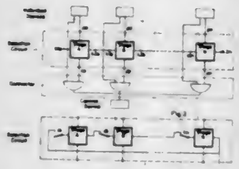
1. In an automatic telephone system, a plurality of subscriber lines, each of which has an individual line circuit and at least one substation connected thereto, switching equipment including at least a connector switch, a plurality of final terminal sets connected for use by said connector switch in extending connections between the substations on the different subscriber lines, each terminal set being assigned for use in extending connections to only one preassigned substation, different sets being assigned for use with different substations; switching means connected in the line circuit for each subscriber line operative responsive to the selection of its associated line by said connector switch to close a ringing circuit to the line

including two of the final terminals of its associated terminal set, and means operative responsive to answer by the called party to control said switching means in the line



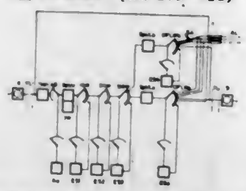
circuit to interrupt said ringing circuit and to close a talking circuit from the calling substation over said two terminals to its associated substation.

3,051,793
ELECTRONIC SELECTION CIRCUITS
Rolf Hiller, Starnberg, Upper Bavaria, Karl Rütkowski, Munich-Grosshesselohe, and Werner Krägeloh, Dieter Voegtlen, and Siegfried Zahlhaas, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Filed Mar. 18, 1958, Ser. No. 722,357
Claims priority, application Germany Mar. 20, 1957
54 Claims. (Cl. 179—18)



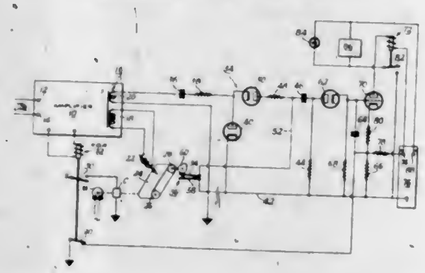
1. In a signalling system, a selection circuit having a plurality of switching stages, each of said switching stages having first a testing input for receiving a potential signifying idle or busy condition, second, a marking output for extending a potential signifying neutral condition or marking condition, third, a coupling input and, fourth, a coupling output for respectively receiving and extending a potential signifying release or blocking, a first gate having a first input and a second input, means for connecting said first input with said coupling input, and having an output connected with said coupling output, said first gate extending the blocking potential from said coupling input to said coupling output, a second gate of a type complementary to said first gate, said second gate being jointly controled by the potentials at said coupling input and said testing input and extending a marking potential to said marking output responsive to a release potential and an idle potential respectively extended to said coupling input and to said testing input, and an inverter cooperatively connected with said first and second gates for adapting the potential at said coupling input or said testing input for use in said first or said second gate to provide thereby a blocking potential at the second input of said first gate in response to a release potential and an idle potential extended respectively to said coupling input and to said testing input.

3,051,794
CIRCUIT ARRANGEMENT FOR CONNECTORS HAVING ACCESS TO P.B.X TELEPHONE LINES AND CONTROLLED BY MARKER DEVICES
Kurt Laas, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany
Filed Mar. 4, 1959, Ser. No. 797,235
Claims priority, application Germany Mar. 11, 1958
13 Claims. (Cl. 179—18)



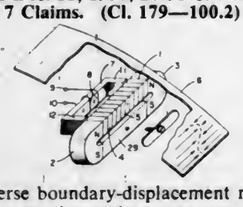
1. In a telephone system and the like, a circuit arrangement for connector switches having access to private branch exchange lines and comprising devices for setting said connector switches which are respectively common to a plurality of connector switches, wherein the marking of decades is effected over respectively different contact banks by tens digits and that of individual lines by units digits, said circuit arrangement comprising means controlled by a marker device for marking in the multiple of an auxiliary contact bank of a seized connector the decade contacts over which individual lines are to be subsequently tested, a relay set including resistance means cooperable with the seized connector while marking in the multiple of another auxiliary contact bank of the connector the individual lines and private branch exchange lines over said relay set, whereby individual lines are marked directly while private branch exchange lines are preparatorily marked by way of said resistance means, means including an auxiliary wiper of the connector for simultaneously producing a testing circuit for ascertaining the condition of the private branch exchange lines, and means controlled by testing means in said testing circuit for finally completing the marking circuit for the private branch exchange lines in the presence of an idle line to effect stopping of the wipers of said connector switch in engagement with the bank contacts connected with such idle line.

3,051,795
FAILURE DETECTING AND INDICATING MEANS FOR SOUND RECORDING SYSTEMS
Frederick W. Roberts, Fairfield, Lloyd R. Jones, Monroe, Alfred L. Di Mattia, Fairfield, and Roger C. Curtis, New Haven, Conn., assignors to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York
Filed Mar. 31, 1959, Ser. No. 803,257
8 Claims. (Cl. 179—100.1)



1. For use with remotely-operated sound recording systems and the like, wherein the recording equipment is of the type which includes a recording head and a motor drive mechanism adapted to produce relative scanning movement between said recording head and a sound record cooperable therewith, and wherein said sound record is arranged to receive impressions from said recording head in accordance with sound signals fed to the recording head from a signal-supplying device such as a microphone or the like; apparatus for producing a visible or audible indication to warn of a failure in the sound recording equipment which comprises: circuit means coupled to the output of said signal-supplying device for developing an output voltage in accordance with sound signals being fed from said signal-supplying device to said recording head; motion-responsive means coupled to said drive mechanism and including means to produce an electrical signal having a characteristic that varies in response to changes in the rate of movement of the record relative to said recording head; and sensing means coupled to both said circuit means and said motion-responsive means, said sensing means including means to produce a warning indication either when said output voltage falls below a predetermined level or when said characteristic of said electrical signal corresponds to a rate of movement of said record relative to said recording head that is inadequate to produce proper recording of sound signals fed to the recording head.

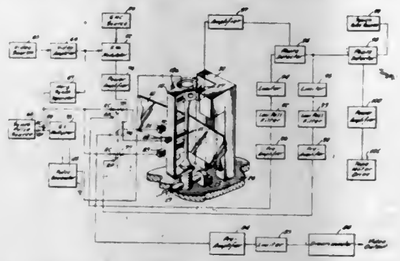
3,051,796
TRANSVERSE BOUNDARY-DISPLACEMENT RECORDING HEAD
Joseph W. Gratian, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 22, 1958, Ser. No. 782,304
7 Claims. (Cl. 179—100.2)



1. A transverse boundary-displacement recording head comprising a magnetic conductor composed of a linear series of low reluctance segments having narrow high reluctance segments interposed between adjacent low reluctance segments, said magnetic conductor being adapted to be oriented in cooperative relationship with a magnetic medium movable in a direction transverse to the length of said conductor, magnet means for applying a magnetomotive force of a given polarity to one end of said magnetic conductor and a magnetomotive force of the same given polarity to the other end of said magnetic conductor and for varying the relative magnitudes, but not the polarities, of the magnetomotive forces with respect to each other in response to a signal applied thereto.

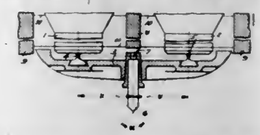
3,051,797
TRANSDUCING SYSTEM
Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,192
10 Claims. (Cl. 179—100.2)

1. In a system for transversely recording on and reproducing relatively high frequency information signals from a longitudinally moving magnetic tape, transverse recording and reproducing means positioned adjacent said magnetic tape for transversely recording the information signals across said tape and for reproducing transversely recorded information signals, a first and a second magnetic head positioned adjacent said tape for recording relatively low frequency reference signals along the edges of said tape over the transversely recorded information signals, means including said first and said second magnetic heads for reproducing any signals recorded along the edges of the magnetic tape and for separating the reference signals from the rest of the signals reproduced thereby, means for pivotally supporting said transverse recording and reproducing means so that its angular position is adjustable relative to the magnetic tape, means coupled to said reproducing and separating means for recognizing any misalignment due to a variation in the position of the tape



relative to said transverse recording and reproducing means, means coupled to said means for pivotally supporting said transverse recording and reproducing means and to said recognizing means for pivoting said transverse recording and reproducing means on said supporting means by an amount and direction related to the recognized misalignment, and circuit means electrically coupled to said transverse recording and reproducing means for separating said information signals from the rest of the signals reproduced thereby.

3,051,798
DEVICE FOR THE RECORDING OR REPRODUCTION OF SOUND TRACKS
Einer Kristian Knudsen, Vanlose, Copenhagen, Denmark, assignor to Fonofilm Industri A/S, Copenhagen, Denmark
Filed Mar. 2, 1959, Ser. No. 796,655
Claims priority, application Denmark Mar. 5, 1958
3 Claims. (Cl. 179—100.41)



1. In an electromechanical recording and reproducing device, a mechanical oscillating system comprising an elongated armature including a needle mounted centrally thereon, a plurality of electromechanical members connected to the armature symmetrically on each side of said needle, the connection between each of the electromechanical members and the armature being so arranged that the armature is carried by said electromechanical members and that two fixed and sharp points of action are defined through which no turning moment may be transmitted, the armature being further provided with extensions extending outwardly from said points of action, said extensions being so arranged that the center of gravity of the armature is positioned substantially on a straight line through the two points of action so that the distance between each of the two points of action and said center of gravity is equal to

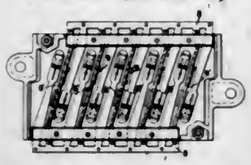
$$\sqrt{\frac{I}{M}}$$

where I is the moment of inertia of the armature about an axis through said center of gravity perpendicular to the plane formed by the point of the needle and said two points of action, while M is the mass of the armature.

3,051,799
KEYBOARD FOR USE IN SIGNALLING SYSTEMS

Walter Paul, Albert Geese, Franz Gaber, and Hans Greska, all of Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany

Filed Apr. 8, 1958, Ser. No. 727,222
Claims priority, application Germany Apr. 17, 1957
8 Claims. (Cl. 200—5)

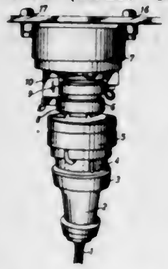


1. A keyboard for use in a communication system, having a plurality of respectively individually operable keys assembled to form a unit, contact springs disposed in layers forming sets of contact springs respectively cooperating with the respective keys, the contact springs included in each layer being formed from a punched sheet and interconnected by webs to form a contact spring multiple therefor, said webs being disposed to connect two respective springs in series and pairs of springs in parallel, said webs being severable with retention or removal of selected webs determining the conductive interconnections between said springs in accordance with at least part of the interior wiring of said keyboard.

3,051,800
PLUG SOCKET WITH PLUG

Roman Schuster, 14 Funkweg, Senden (Iller), Germany

Filed Aug. 20, 1959, Ser. No. 835,011
4 Claims. (Cl. 200—51)



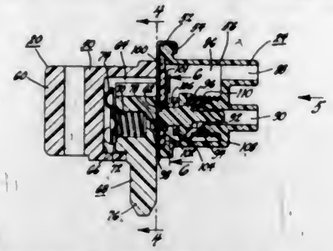
1. A rotatable electrical connecting device comprising a plug socket mount firmly attached to a surface, a protective cover surrounding said plug socket mount, slip ring brushes being carried offset at the outer end of said plug socket mount, a housing rotatably journalled in said plug socket mount, and a shaft at one end of said housing, said shaft carrying slip rings and being in rotatable engagement with said plug socket mount, whereby said slip rings and said slip ring brushes are in contacting engagement, and a standard plug socket provided in said rotatable housing, said plug socket being in electrical connection with said slip ring brushes.

3,051,801
COMBINED SWITCH AND VALVE FOR PARKING BRAKE RELEASE SYSTEMS

Glen E. Tranbarger, Anderson, Ind., Lester Murray, Lathrup Village, Mich., and Kenneth W. Young and John G. Mehagan, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 22, 1959, Ser. No. 841,548
10 Claims. (Cl. 200—61.86)

1. A controller comprising, at least one fixed contact, a movable contactor shiftable in relation to said fixed contact, shiftable means for moving said movable contactor, valve means including passage means and a valve member shiftable relative to said movable contactor, and

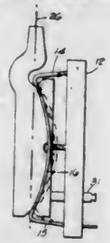


resilient means normally urging said valve member to a position wherein said passage means are connected and into sliding engagement with said shiftable means.

3,051,802
SIMPLIFIED SNAP-ACTION CONTACT SWITCH

Hugh E. Riordan, Wyckoff, N.J., assignor to General Precision Inc., Little Falls, N.J., a corporation of Delaware

Filed Oct. 24, 1960, Ser. No. 64,412
8 Claims. (Cl. 200—67)



1. An electrical contact switch, comprising; a base; first support means mounted upon said base, said first support means having an aperture therein; spring means partially contained within two points of support on the circumference of said aperture, the portion of said spring means contained in said aperture being longer in length than said aperture in which it is contained, so that said contained portion of said spring means is retained arcuately within said aperture; first contact means located along the arcuately contained portion of said spring means; second support means affixed to said base; and second contact means, mounted upon said second support, adapted to cooperate with said first contact means such that movement of said portion of said spring means contained within said aperture will cause said first and second contact means to engage or disengage, and a plurality of adjusting screws inserted through said first support means, the screws being threadably fitted to the base, the adjusting screws urging the first support means toward the base, the adjusting screws being adapted when rotated in one direction to elongate the aperture through the first support means, and when rotated in the opposite direction to shorten the aperture through the first support means.

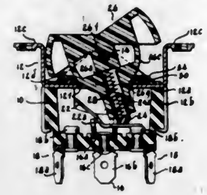
3,051,803
ELECTRIC SWITCHES

Harry W. Brown, Mukwonago, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Original application Aug. 29, 1958, Ser. No. 758,125, now Patent No. 2,927,983, dated Mar. 8, 1960. Divided and this application Nov. 12, 1959, Ser. No. 852,294
1 Claim. (Cl. 200—67)

In an electric switch having an insulating base, contact means for selectively completing electrical circuits

mounted within said base, a plurality of discrete rocker button actuating levers for actuating said contact means, means pivotally supporting said actuating levers in side by side relation comprising a supporting member mounted on said base and having an aperture for said actuating levers and a common pivot member inserted transversely through said actuating levers, and said pivot member

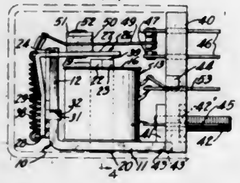


having its extremities supported by said supporting member, the improvement comprising means for shielding arcing light which is normally visible through the space between said rocker button actuating levers, said shielding means comprising an opaque member filling the portion of said aperture between said actuating levers and being confined between said supporting member and the pivot portions of said actuating levers.

3,051,804
ELECTROMAGNETIC RELAYS

Lewis Henry Mayer, Princeton, Ind., assignor to American Machine & Foundry Company, a corporation of New Jersey

Filed Dec. 28, 1960, Ser. No. 79,064
6 Claims. (Cl. 200—87)

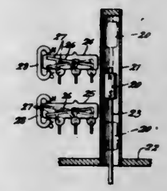


1. In an electromagnetic relay, the combination of a magnetic frame member comprising
a flat base, and
a flat leg projecting at right angles from said base and terminating in a free tip presenting a bearing edge spaced from said base;
an electromagnet mounted on said base and extending beside said leg, said electromagnet comprising
a core, and
a bobbin-supported coil,
said core being T-shaped and disposed with the stem of the T extending through said coil and the cross-bar of said T extending across one end of the bobbin supporting the coil, said base being provided with an opening and the end of the stem of the T of said core being mechanically fixed in said opening to rigidly secure said core with said coil being clamped between said base and the cross-bar of the T of said core,
the width of the cross-bar of the T of said core being small as compared to the length thereof and said core being so positioned that the length of the cross-bar of the T thereof extends parallel to said bearing edge;
an armature of magnetic material, said armature comprising
a flat body pivotally engaged with said bearing edge and extending from said leg beyond said cross-bar of the T of said core, said armature body being provided with an opening disposed at the side of said leg opposite said electromagnet;
a generally T-shaped, integral nonmagnetic bracket mounted on the side of said leg opposite said electromagnet, said bracket comprising
a stem portion,
a flat cross-bar portion, and
a spring-retaining lug,
said cross-bar portion of said bracket extending transversely of said leg near said base and said stem portion of said bracket extending longitudinally of said leg and projecting through said opening in said armature body, the tip of said stem portion being located on the side of said armature body opposite said base and extending at an angle to the plane of said leg to retain said armature body in proper location,
said leg being provided with a pair of transversely opposed notches located each in a different edge thereof, and end portions of said cross-bar portion of said bracket being bent each into engagement with a different one of said notches;
a support secured to said base and projecting therefrom on the side of said electromagnet opposite said leg;
a fixed contact mounted on said support and projecting toward said leg;
movable contact means mounted on said armature body and including a spring arm extending to a point adjacent said fixed contact on the side thereof facing said base; and
a tension spring having one end connected to said spring-retaining lug and the other end connected to said armature body on the side of said leg opposite said electromagnet,
said spring being operative to pivot said armature body on said bearing edge in a direction away from said electromagnet to such a degree that said movable contact means is caused to engage said fixed contact,
energization of said electromagnet causing said armature body to pivot on said bearing edge, against the action of said tension spring, into engagement with the cross-bar of the T of said core.

3,051,805
ELECTRIC SWITCH CONTROL MEANS

Benjamin L. Binford, Elmwood Park, Ill., assignor to Magnetrol, Inc., Chicago, Ill., a corporation of Illinois

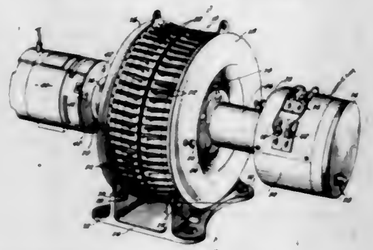
Filed Mar. 9, 1959, Ser. No. 797,939
1 Claim. (Cl. 200—87)



Electric switch control means comprising an elongated sealed envelope having contact forming means adjacent to each of its ends, a movable contact of magnetic material pivoted on a horizontal axis intermediate the ends of the envelope and swingable to two different positions to establish circuits with the contact forming means respectively at each of said positions, a non-magnetic enclosure adjacent to one end of the envelope, a magnet movable in the enclosure for movement of one of its poles toward and away from the adjacent end of the envelope to cause the contact to swing about its pivotal

axis, and a permanent magnet providing two poles respectively above and below the envelope at the opposite end thereof tending to hold the contact in either of its two positions which it then occupies.

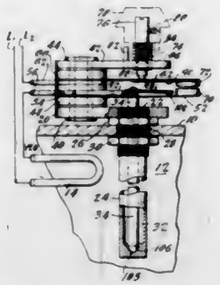
3,051,806
SWITCH ASSEMBLY
Glenn A. Reese, Canoga Park, Calif., assignor to Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,736
25 Claims. (Cl. 200—90)



1. A magnetically controlled switching assembly including: first means including first and second magnetic pole members spaced to define a first annular air gap therebetween and provided with at least one contour in at least one of the members to define at least one displacement in the first air gap, second means mechanically coupled to the first means in coaxial relationship therewith including third and fourth magnetic pole members spaced to define a second annular air gap therebetween and provided with at least one contour in at least one of the members to define at least one displacement in the second air gap, magnetic means coupled to the pole members for providing in the first and second annular air gap a magnetic flux having uniform characteristics at successive positions in the air gaps and exhibiting variations in characteristics at the positions of the displacements in the air gaps, a housing for the switching assembly having at one end a first support portion disposed in facing spaced relationship with the first annular air gap and having at its other end a second support portion disposed in facing spaced relationship with the second annular air gap, a first magnetically operated switch mounted on the first support portion of the housing and extending into the first annular air gap, a second magnetically operated switch mounted on the second support portion of the housing and extending into the second air gap, and means for imparting relative motion between the switches and the first and second means to produce periodic actuation of the switches.

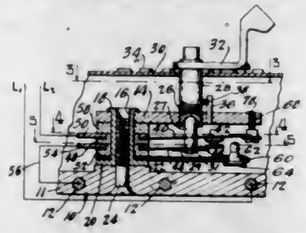
3,051,807
THERMORESPONSIVE SWITCH MECHANISM
John W. Huffman, Mansfield, Ohio, assignor to Pace, Inc., Mansfield, Ohio, a corporation of Ohio
Filed May 1, 1959, Ser. No. 810,286
6 Claims. (Cl. 200—137)

1. Switch mechanism including, in combination, a support, a first switch member, a second switch member, cooperating contacts carried by said members, manually operable means for adjusting the position of said first switch member, thermoresponsive means for actuating said second switch member, said thermoresponsive means including a tubular member formed of metal secured to the support, a rod of nonmetallic material extending into the tubular member and having one end engaging an abutment in the tubular member, an element mounted upon said support and having a portion coextensively arranged adjacent said second switch member, the distal end region of said element being adapted for engagement with said second switch member, said element being normally stressed to bias the second switch member in a direction to disengage the contacts, the other end of said rod engaging said element adjacent



said support whereby lengthwise movement of the rod under the influence of changes in the effective length of the tubular member due to temperature variations causes an increased movment of the distal end of said element to actuate said second switch member.

3,051,808
THERMORESPONSIVE SWITCH
Donald L. Reffel, Mansfield, Ohio, assignor to Pace, Inc., Mansfield, Ohio, a corporation of Ohio
Filed Oct. 20, 1958, Ser. No. 768,216
4 Claims. (Cl. 200—138)



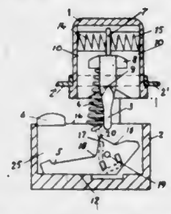
1. Switch mechanism including, in combination, a support means including a frame plate, a pair of flexible current conducting members, cooperating contacts on said current conducting members, one end of each of said members being insulatingly mounted by the support means, a thermoresponsive element arranged to engage one of the current conducting members for changing the position thereof under the influence of temperature variations, said current conducting members being disposed between the frame plate and the thermoresponsive element, manually operable means for controlling the relative position of the other of said current conducting members, said manually operable means comprising a rotatable element having a socket formed therein, a pin formed of insulating material having one end engageable in the socket formed in the rotatable element, said pin being formed at its other end with a zone of noncircular cross-section, a comparatively thin plate secured to said switch arm controlled thereby, said plate being provided with recess means adapted to receive the noncircular end zone of the pin whereby said pin is restrained against rotation during adjusting movements of the manually adjustable element, insulating means carried by the frame plate extending into the path of movement of the distal end of the current conducting member influenced by the thermo-responsive element for limiting the movement thereof in one direction, said movement limiting means being adjustable to a position to effect a separation of said contacts when the manually rotatable element is moved to a predetermined position.

3,051,809
PROTECTIVE DEVICE WITH TERMINAL CLIPS THEREON
Saul V. Dell, Akron, Ohio, assignor to Mechanical Industries Production Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 27, 1959, Ser. No. 836,505
2 Claims. (Cl. 200—138)



2. In a thermostat or other electrical protective article, a case, circuit control means positioned within said case, a terminal connecting to said circuit control means and extending from said case, said terminal including a flat metal strip having an integral loop formed at its free end, said loop having a bore extending transversely of said strip, said strip having a longitudinally extending slot formed in said loop and extending through said loop into the remainder of said strip to divide said loop into two sections, and a lead conductively secured to said terminal, an end portion of said lead loosely extending through one section of said loop, and terminating adjacent the other section of said loop, said other loop section having said lead end portion received therein and secured thereto, said lead extending from said terminal substantially parallel thereto whereby the connection of said end portion of said lead to the remainder of said lead can be flexed in a loosely confined space along at least the length thereof extending through said one loop section.

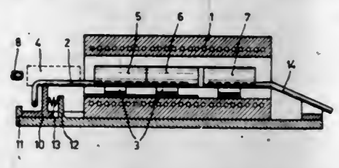
3,051,810
PUSH BUTTON SWITCH
Gustaf Adolf Wåhlström, Fagerviksvagen 1, Bromma, Sweden
Filed Mar. 23, 1959, Ser. No. 801,216
6 Claims. (Cl. 200—153)



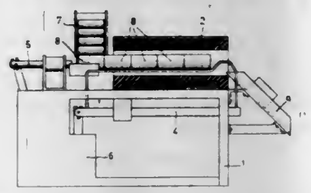
1. A push button switch comprising a swingable contact arm pivotally mounted so as to be set into two extreme positions, for closing and breaking respectively an electrical current, by means of a push button operated actuating member and by spring action, said actuating member being swingably mounted about a pivot axis which is arranged to move with the push button, a push button operating the actuating member, a compression spring inserted between and engaging the contact arm and a point of the actuating member, the distance of which from the pivot axis of the contact arm is greater than the distance between the pivot axis of the actuating member and the pivot axis of the contact arm.

3,051,811
DEVICE FOR HEATING WORKPIECES INDUCTIVELY
Heinz Koesling, Reichenbach Fils, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 24, 1959, Ser. No. 835,800
Claims priority, application Germany Aug. 23, 1958
5 Claims. (Cl. 219—10.67)

1. An inductive heating device for workpieces being supplied at one end of a tunnel-type inductor and moved rectilinearly therethrough comprising a guide for said workpieces through said inductor, each workpiece being heated to the desired temperature and leaving the inductor at the other end thereof, and means for slightly spacing said workpiece at the other end from the preceding workpiece in said inductor when said workpiece attains a high but not the desired temperature and for withdrawing the former from the inductor without adherence of the two workpieces when the desired temperature is reached.



3,051,812
DEVICE FOR INDUCTIVE HEATING OF WORKPIECES
Alois Gschwender, Reichenbach (Fils), Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 31, 1959, Ser. No. 863,292
4 Claims. (Cl. 219—10.69)

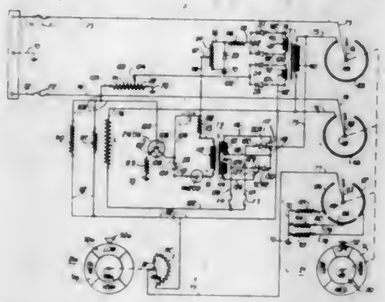


1. A device for inductive heating of workpieces that are successively transported stepwise through an elongated, horizontally-arranged inductor capable of simultaneously accommodating a plurality of workpieces through one end of said inductor and emerging from the opposite end thereof comprising a substantially parallel dual sliding track extending through the interior of said inductor for supporting said workpieces, a push rod for transporting each of said workpieces along said sliding track, a drive means for said push rod operated in accordance with the heating rate of said device, means displacing said dual sliding track horizontally in said inductor until a workpiece emerges from said inductor and is ejected from the inductor by means of said push rod, and gravity slide means for conveying away each of said ejected workpieces.

3,051,813
TEMPERATURE CONTROL SYSTEMS
Floyd H. Busch, Flossmoore, and Fred H. Sawada, Wheaton, Ill., assignors to General Electric Company, a corporation of New York
Filed Aug. 24, 1960, Ser. No. 51,685
19 Claims. (Cl. 219—20)

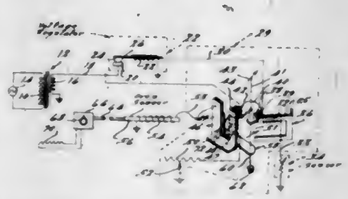
2. In an electric heating system comprising an electric heater, a temperature sensing unit arranged to sense the temperature of a medium heated by said heater, a manually operable controller selectively operative to set different desired temperatures of the medium heated by said heater, and a source of alternating electric power; the combination comprising a solid state controlled rectifier having a pair of power terminals and a control terminal and characterized by conduction between the power terminals thereof in response to the application of a control signal to the control terminal thereof, means connecting

the power terminals of said solid state controlled rectifier and said heater to said source of electric power so that the power supplied to said heater is dependent upon the state of conduction of said solid state controlled rectifier and flows through said rectifier, a control circuit operated from said power source and jointly governed by said temperature sensing unit and said controller and operative to produce control signals having a predetermined time phase relationship to the corresponding half cycles of said power source in response to a difference be-



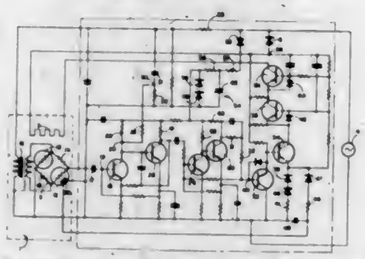
tween the temperature sensed by said temperature sensing unit and the temperature setting of said controller, and means for impressing the control signals produced by said control circuit upon the control terminal of said solid state controlled rectifier so as selectively to govern the conduction between the power terminals thereof for the time intervals between the application of the control signals to the control terminal and the end of the corresponding half cycles of the power source thereby to govern the power supplied to said heater.

3,051,814
TEMPERATURE RESPONSIVE SYSTEM
Rudolph Bergsma, Ann Arbor, Mich., assignor to King-Seeley Thermos Co., a corporation of Michigan
Filed Feb. 27, 1958, Ser. No. 717,966
22 Claims. (Cl. 219—20)



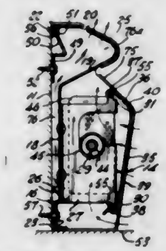
19. In a system for controlling the energization of an electrically energized element from a source of electrical energy, a first electrical contact, temperature sensing means, means including said temperature sensing means for varying the position of said first electrical contact in accordance with the temperature sensed by said temperature sensing means, a second electrical contact matable with said first electrical contact, circuit means for connecting said electrical contacts in electrical circuit with the source of electrical energy and with the electrical energized element for causing said electrical contacts to control the flow of current in said electrical circuit and to establish such current flow upon engaging one another, and means responsive to said flow of current in said electrical circuit resulting from the movement of said first electrical contact into engagement with said second electrical contact for moving said second electrical contact toward said first electrical contact for pressing the contacts together comprising polymetallic spring means controlling the position of said second electrical contact and connected in said electrical circuit and deflectable in response to the thermal-current heating thereof by the current in said electrical circuit in a direction to tend to move said second electrical contact toward said first electrical contact.

3,051,815
PHASE CONTROLLED SERVO SYSTEM
Russell E. Hukee, Santa Ana, and Laurence H. Dunklee, Garden Grove, Calif., assignors to North American Aviation, Inc.
Filed Sept. 30, 1959, Ser. No. 843,488
9 Claims. (Cl. 219—20)



7. In a servo system for automatically controlling the temperature of a material, a resistor element for heating said material, an A.-C. source, a rectifier, a signal translating transistor device having a control electrode and a pair of output electrodes for supplying current from said A.-C. source through said rectifier to said heating element for alternate half cycles of operation of said A.-C. source, a phase shift network responsive to said A.-C. source for providing a reference signal, said reference signal being of predetermined phase relationship with respect to said A.-C. source, a resistance bridge circuit having a temperature sensitive element in one leg for detecting minute changes in temperature of said material, the output of said bridge circuit being a signal whose polarity is indicative of the sense of said temperature changes and whose amplitude is proportional to the amount of temperature change, means for combining said bridge output signal and said reference signal to provide a control signal differing in phase with respect to the phase of said reference signal in proportion to the amplitude of said bridge output signal, and means for coupling said control signal to said control electrode to control the supply of current through said output electrodes.

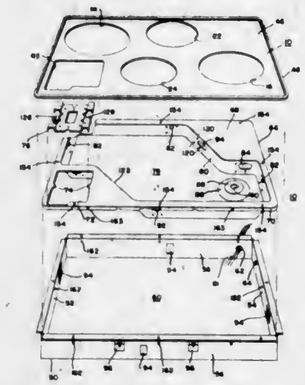
3,051,816
BASEBOARD HEATER
David Knoll, Bayside, and Albert Greenhaus, Brooklyn, N.Y., assignors to Berko Electric Manufacturing Corporation, Queens Village, N.Y., a corporation of New York
Filed Apr. 14, 1959, Ser. No. 806,312
8 Claims. (Cl. 219—34)



4. In a device of the character described, in combination, an elongated main housing member adapted to be joined to a wall along the upper rear longitudinal edge portion of said member; said member including a vertical

rear plate portion spaced from said wall to define therewith a convective flue, a forwardly inclined imperforate portion above and adjoining said rear plate portion and a rearwardly inclined top portion extending from said forwardly inclined portion substantially to said upper rear edge, said rearwardly inclined top portion being perforated to provide an air exit from said flue; means forming a bottom air inlet to said flue; a plurality of forwardly extending brackets secured to said vertical rear plate portion, each of said brackets being formed with an aperture having a bottom boundary comprising a supporting saddle and having a forwardly extending access slot to said saddle; an elongated heating unit including a central tube normally supported in said saddles and longitudinally movable freely therein, and a plurality of thin embossed fins expansively secured to said tube, said unit being spaced from said rear plate portion; a front closure member removably secured to said brackets in snap-latch relation and spaced from said heating unit, said closure member including a forwardly inclined perforated main face portion and a rearwardly inclined perforated upper portion; and means in at least one end of said device for connecting said heating unit to a source of electric current.

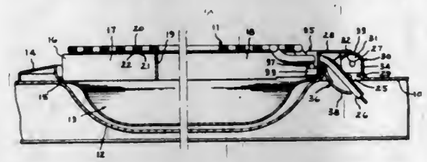
3,051,817
DOMESTIC APPLIANCE
George C. Pearce, Dayton, Le Roy McDonnold, West Carrollton, and Lester M. Miller, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 28, 1960, Ser. No. 5,267
5 Claims. (Cl. 219—37)



2. A cooking top for installation in a counter top opening and comprising, a rough-in box having a bottom wall and a side opening, a top panel member having a heating element opening, an inner pan interposed between said rough-in box and said top member and spaced from the bottom wall of said rough-in box to form a chamber, said inner pan having a wall inclined relative to said heating element opening, a heating element, means on the inclined wall of said inner pan for universally adjustably supporting said heating element within said heating element opening, and attachment means on said inner pan and extending through said side opening for engagement with said counter top.

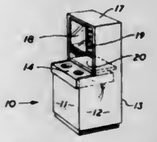
3,051,818
ELECTRIC RANGE WITH SPILL-PROOF COOKING SURFACE
Marvin E. Prather, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 31, 1960, Ser. No. 19,006
4 Claims. (Cl. 219—37)

3. In an electric range, a top cooking surface having at least one concavity, an electric heating element suspended across the top of the concavity and having a series of terminals extending from one side thereof, a hole formed in the cooking surface adjacent the concavity for receiving the terminal ends of the heating element therethrough, and hinge means for pivoting the heating element to a raised position so that the concavity may be cleaned, said hinge means including a covering that encompasses the terminal ends of the heating element and also overlies the hole in the cook-top to prevent liquids from spilling therein, the edge of the hole being raised



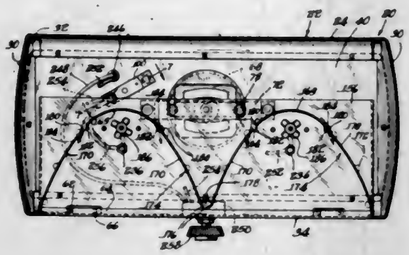
slightly above the top of the cooking surface so that liquids will not flow into the hole but will spread out over the cooktop where they may be cleaned easily, the said covering includes a top cover, a bottom cover and a hinge bracket, the hinge bracket being fastened to the top of the cooking surface and being pivotally connected to the top and bottom covers to form a knuckle joint which allows the heating element to be raised while at the same time sealing the hole from liquids that might be spilled onto the cooking surface.

3,051,819
WARMER SHELF
David Gibbons Smith, Toronto, Ontario, Canada, assignor to Moffats Limited, Weston, Ontario, Canada
Filed Oct. 10, 1960, Ser. No. 61,688
3 Claims. (Cl. 219—37)



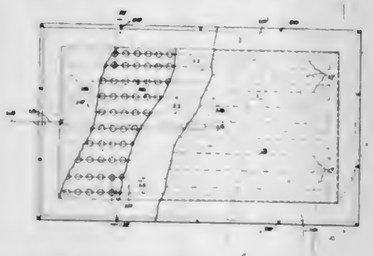
1. In a cooking device having a base including a front wall, a rear wall, and two side walls, a horizontally slidable cooking surface constituting the top wall of the base, an oven above the base and vertically spaced from the cooking surface, the oven being supported by side walls extending upwardly from the base which define, with the oven and the base, a forwardly opening enclosure; a fixed horizontal warmer shelf in the enclosure beneath the oven and immediately above the cooking surface, the cooking surface having at least one first heating element adjacent the rear wall of the base and at least one second heating element adjacent the front wall of the base, the horizontally slidable cooking surface being movable between a first extreme position in which the first heating element on the cooking surface is concealed beneath the warmer shelf and a second extreme position in which both the first and the second heating elements are exposed, an electric heating element in the warmer shelf lying generally along the center line of the warmer shelf and mounted in spaced relationship to the horizontal upper surface of the shelf and electrically connected in series with a thermostat also located in the warmer shelf, a switch located outside the warmer shelf and a source of electric power, and switch means on the base to be engaged by the slidable cooking surface as it approaches the first extreme position to render the first heating element inoperative while it lies between a position in which the edge thereof adjacent the rear wall of the base moves beneath the forward edge of the shelf and the first extreme position of the cooking surface.

3,051,820
ROOM HEATER
Carl V. Krichton, Coral Gables, Fla., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed June 16, 1958, Ser. No. 742,314
2 Claims. (Cl. 219—39)



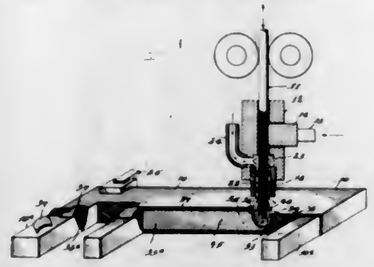
1. A heater comprising a substantially closed casing having an air inlet and an open front, air impeller means in said casing for pulling air in through said inlet and tending to expel said air from said open front, substantially parabolic heat reflector means mounted behind said open front, said reflector including a three-piece reflector having a back piece and two side pieces, said side pieces being spaced from said back piece to provide openings in said reflector, and heating element means mounted in said parabolic reflector substantially on the focal axis thereof, all of said openings in said reflector being disposed laterally and opening forwardly of said heating element means for guiding air from the convex side to the concave side of said reflector means without impinging directly on said heating element means.

3,051,821
APPARATUS FOR PROTECTING CONCRETE AND OTHER MASONRY MATERIALS
George C. Dion, Coraopolis, Pa., assignor to Noid Corporation, Coraopolis, Pa., a corporation of Pennsylvania
Filed Oct. 28, 1958, Ser. No. 770,071
2 Claims. (Cl. 219—46)



1. Apparatus for protecting masonry material against extreme cold and freezing temperature, comprising: a blanket comprising a flat inner mat of solid thermal insulation material with thermoelectrical heating cable in coils laid in the solid material intermediate the two opposite external surfaces of the mat; flame, water and mildew proof tarpaulin covers enclosing the opposite sides of the mat with marginally lapping extensions, devoid of insulation and cable coils, beyond the perimeter of the mat; convective passages opening outwardly from the coils through the solid insulation and one cover of the mat; an electrical lead connection to the coils for connection to a source of electricity; and a thermostat electrically connected in series with said coils.

3,051,822
WELDING WITH BLANKET AND GAS ARC-SHIELD
Arthur A. Bernard and Richard A. Bernard, Chicago, Ill., assignors to Chemetron Corporation, a corporation of Delaware
Filed Mar. 23, 1955, Ser. No. 496,260
31 Claims. (Cl. 219—74)



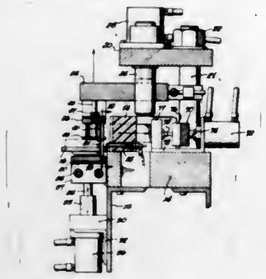
1. The process of welding with a visible electric arc and consumable electrode, comprising: establishing an electric arc between the electrode and a workpiece; providing relative movement between the electrode and workpiece along a line of weld; enclosing the arc in a transparent shielding medium from a source separate from the electrode to shield the arc from surrounding atmosphere; said electrode carrying to the arc region a mechanical mixture of a deoxidizer and a granular form of glass-like slag material prefused to be essentially hydrogen and carbon free; and transferring said slag through the arc to completely cover the molten metal trailing the arc with a slag blanket shield.

3,051,823
METAL ARC WELDING
Thomas A. Craig, Port Reading, N.J., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed July 3, 1958, Ser. No. 746,343
7 Claims. (Cl. 219—74)
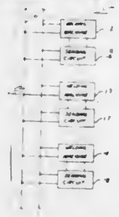
1. All-position gas shielded high-temperature corrosion-resistant non-reactive metal arc welding, which comprises striking and maintaining a reverse-polarity direct-current globular type metal-transfer electric welding arc between a workpiece, and a consumable metal electrode composed of high-temperature corrosion-resistant non-reactive metal, such as stainless steel and high nickel alloy, while shielding such arc and adjacent metal in an atmosphere consisting of a mixture of 15% to 60% carbon dioxide and 40% to 85% inert gas selected from the class consisting of argon, helium, and mixtures of argon and helium; characterized in that both globular-type transfer and good coalescence in the resulting weld unexpectedly occurs in overhead and vertical as well as downhand position welding characterized in that such electrode is not more than $\frac{3}{64}$-inch in diameter.

3,051,824
HONEYCOMB CORE MACHINE
Frank C. Wilson, Laguna Beach, Calif. (848 Sonia Way, Mountain View, Calif.)
Filed Jan. 10, 1958, Ser. No. 708,322
7 Claims. (Cl. 219—80)

1. In a machine for fabricating a honeycomb core product from metal ribbon stock, a supporting frame structure providing a work-supporting shelf over which the product being formed is advanced, a plurality of depending positioning pins mounted above said shelf for vertical movement, a plurality of vertical electrode back-up pins mounted with said positioning pins and movable therewith a plurality of upright feed pins mounted beneath said shelf for vertical and for horizontal movement, said shelf having pin-receiving slots, a plurality of welding electrodes mounted for horizontal movement toward and away from a product being formed on said shelf and in registration with said back-up pins, and means for actuating said positioning pins and back-up pins, said feed pins and said electrodes in timed relation whereby the product being formed is advanced by said feed pins, engaged by said positioning pins and back-up pins and engaged by said electrodes in succession.



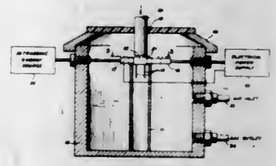
3,051,825
INTERLOCK SYSTEM FOR ASSURING RESISTANCE WELDS OF CONSISTENT QUALITY
Stuart C. Rockafellow, Plymouth, and Theodore R. Thomsen, Farmington, Mich., assignors to Robotron Corporation, Detroit, Mich., a corporation of Michigan
Filed May 31, 1960, Ser. No. 32,915
18 Claims. (Cl. 219—108)



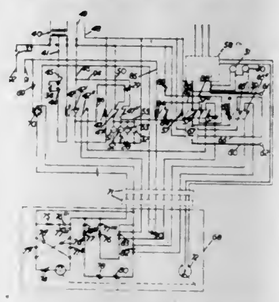
1. Circuitry for controlling the operation of a series of electrically energized machines comprising: a pair of input terminals for each machine; a switch for each machine and connected respectively to said pairs of terminals for controlling flow of electrical energy to said machine; a sensing unit for each machine, said sensing unit including means responsive to the voltage of each respectively connected pair of input terminals for providing a signal when said voltage is in excess of a predetermined level; and means responsive to such signal and connected to said switch for causing operation of same so that energy flows only when said voltage is in excess of a predetermined level, said sensing units being independent of each other whereby said machines may operate simultaneously so long as the potentials applied to the input terminals of the respective machines are in excess of the predetermined level for each thereof.

3,051,826
METHOD OF AND MEANS FOR ULTRASONIC ENERGY BONDING
Arthur J. Avila, Flemington, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 25, 1960, Ser. No. 10,952
8 Claims. (Cl. 219—128)

1. The method of bonding elements of semiconductive devices, which comprises the steps of placing an element of semiconductive material in contact with an element to be bonded thereto, at least the surface of the latter element being a metal capable of forming a eutectic with the semiconductive material, applying compressive forces to said elements to hold the elements in pressure contact with one another, raising the temperature of the contiguous surfaces of the elements to at least the eutectic temperature but lower than the melting temperature of either of said semiconductive material and said metal, and applying ultrasonic energy to at least one of said elements in a direction having a substantial component parallel to said contiguous surfaces to impart ultrasonic transverse motions to one element relative to the other so as to provide an ultrasonic scrubbing action between the compressed contiguous surfaces, the scrubbing action resulting in the removal of molten eutectic alloy carrying oxides and other deleterious impurities from the contact area between the contiguous surfaces while a eutectic bond is formed therebetween.



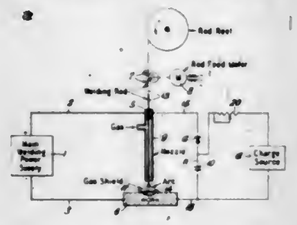
3,051,827
GAS SHIELDED ARC WELDING
Eric Thomas Hall, Derby, and William Reginald Leonard, Birstall, England, assignors to Rolls-Royce Limited, Derby, England, a company of Great Britain
Filed Nov. 10, 1959, Ser. No. 852,041
Claims priority, application Great Britain Nov. 21, 1958
5 Claims. (Cl. 219—130)



1. A gas shielded arc welding apparatus comprising an electrical power supply circuit adapted to supply a welding current, at least one gas supply conduit for feeding gas to the vicinity of a weld, a valve in said conduit controlling the flow of gas therethrough, first relay means, first and second contactors controlled by said first relay means, a solenoid controlling said valve and connected in circuit with said first contactor so that closure of the latter by said first relay means energises the solenoid to open said valve, second relay means connected in circuit with said second contactor so that closure of the latter by said first relay means energises the second relay means, a main contactor which is connected in said electrical power supply circuit and which is closed by said second relay means when the latter is energised, a "raise" circuit which is completed when said second relay means is energised and a welding arc has been struck for increasing the welding current supplied by said electrical power supply circuit to a predetermined value, a retaining circuit for maintaining the second

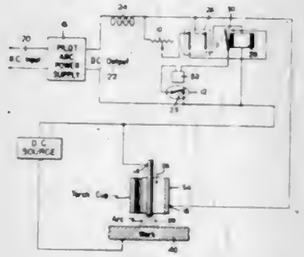
relay means energised whilst the welding current remains above a predetermined minimum value, a "lower" circuit which is completed when said second relay means is maintained energised by said retaining circuit and said first relay means is de-energised, for reducing the welding current to said predetermined minimum value, and timing means operatively associated with said first and second contactors and serving to ensure that said second contactor opens after said first contactor when said first relay means is energised, and that said first contactor closes after said second contactor and after the welding current has been reduced to said predetermined minimum value, when said first relay means is de-energised.

3,051,828
WORK-IN-CIRCUIT CONSUMABLE ELECTRODE ARC WELDING
August F. Manz, Newark, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed May 11, 1960, Ser. No. 28,435
2 Claims. (Cl. 219—131)



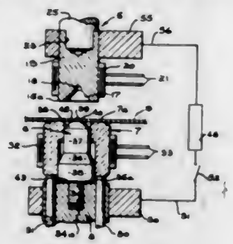
1. Work-in-circuit consumable electrode arc welding apparatus comprising, in combination, a direct current source of arc welding power, means for feeding a wire toward the work to be welded, a circuit for conducting arc welding current to such work and to said wire as it is so-fed by said wire feed means; an auxiliary starting and stabilizing circuit connected in parallel with said direct current source and with said wire electrode and the work comprising a condenser and a rectifier connected in series circuit relation with each other for aiding said welding current source to establish the welding arc and stabilize such arc in operation and an adjustable resistor connected in parallel circuit relation with said rectifier for permitting the welding arc direct current source to charge said condenser, without affecting the discharge thereof, when a voltage drop which is below the welding arc voltage occurs between the end of the electrode and such work.

3,051,829
ELECTRIC ARC TORCH STARTING
August F. Manz, Newark, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed June 17, 1960, Ser. No. 36,941
2 Claims. (Cl. 219—131)



1. In gas shielded arc welding apparatus comprising a torch including a gas cup, an electrode associated therewith, and means for discharging arc shielding gas through said cup around the end of said electrode, and an arc welding circuit including such end of said electrode; means for energizing a direct current pilot arc between said electrode and an auxiliary electrode associated with said cup, comprising a direct current pilot arc power supply circuit connected to said electrodes, which includes an inductor in series relation therewith, a switch connected in parallel circuit relation with said electrodes, said switch, when closed, establishing a charging circuit for said inductor, the opening of which causes said inductor to discharge across the gap between said electrodes, thereby establishing the direct current pilot arc therebetween, in combination with relay means for automatically operating said switch until the pilot arc is established.

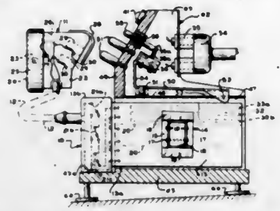
3,051,830
SHEET DIMPLING APPARATUS AND METHOD
Charles J. Swain, Santa Monica, Calif., assignor to Zephyr Manufacturing Co., Inglewood, Calif., a copartnership
Filed May 4, 1959, Ser. No. 810,926
6 Claims. (Cl. 219—149)



1. In apparatus for embossing a dimple in an electrically resistant metal sheet, the combination including a pair of opposed, relatively axially movable, electrically conductive elements presenting opposed conforming frustoconical sheet embossing surfaces arranged to receive therebetween the portion of said sheet to be occupied by said dimple, fluid actuated means for moving one of said elements towards the other, sheet clamping members associated with and immediately circumscribing the embossing surfaces of said respective elements for clamping therebetween the portion of said sheet immediately circumscribing the portion thereof to be occupied by said dimple, one of said members being carried by one of said elements and the other of said members being fluid pressure loaded to yield in response to relative axial movement of one of said elements towards the other, and at least one of said members being electrically non-conductive, electrode means conductively attached to said members and means for introducing a relatively low voltage-relatively high amperage electrical current to said electrode means.

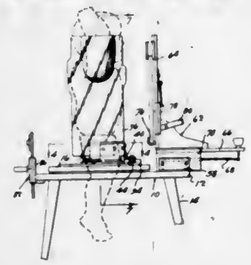
3,051,831
CHARGING RACK FOR MINE LAMP BATTERY
Philip F. Grieger, West Orange, and Arthur Fleischer, Orange, N.J., assignors, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed June 2, 1960, Ser. No. 33,576
4 Claims. (Cl. 240—11.3)

1. A charging rack for a mine lamp battery apparatus including a battery, a miner's head lamp having a cable connection with the battery and provided with a pair of terminals for making charging connection with the battery, said battery being of a hermetically sealed type adapted to be charged only while in a predetermined position relative to the horizontal, comprising a pair of charging terminals, means for supporting said head lamp with its terminals in engagement with said charging terminals, a charging circuit connected to said charging terminals, a safety switch in said charging circuit required to be operated to render the charging circuit operative, a holder adapted for receiving said battery in only said



predetermined charging position, and means in said holder controlled according to whether a battery is in said holder for operating said safety switch to permit charging only when said battery is in said predetermined position.

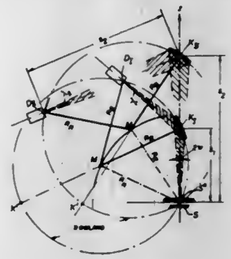
3,051,832
POSITIONER FOR A CHILD BEING X-RAYED
Jalmer Pigg, Sr., R. 12, 4638 Airways, Memphis 16, Tenn.
Filed Apr. 15, 1960, Ser. No. 22,551
6 Claims. (Cl. 250—50)



2. In a positioner for a child being X-rayed, a turntable rotatable in clockwise and counterclockwise directions, there being a pair of side by side spaced openings in said table between the perimeter thereof for the projection of the legs of a child therethrough, a horse member arranged between and spaced from each of said openings for supporting a child in a straddled position and connected to said turntable for upward and downward movement, a pair of arcuate-shaped upstanding side members each transparent to light waves and X-rays arranged in face to face spaced relation positioned on said table between the perimeter and said openings and connected to said table for limited movement toward and away from each other, and releasable latching means on said horse member and said table for holding said horse member in any position of its upward and downward movements.

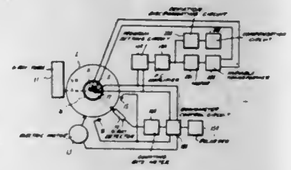
3,051,833
X-RAY SPECTROMETER
Wilhelm W. B. Schumacher, Scarborough, Ontario, Canada, assignor to Ontario Research Foundation, Toronto, Ontario, Canada
Filed Mar. 30, 1959, Ser. No. 802,758
22 Claims. (Cl. 250—51.5)

1. A spectrometer comprising a fixed entrance aperture through which a beam of radiation is adapted to pass, a plurality of diffraction elements adapted to diffract radiation of differing wavelengths, a plurality of said diffraction elements being diffraction crystals each having a different lattice spacing, a detector for diffracted radiation, said fixed entrance aperture, diffraction elements and detector being located on a common Rowland circle, said diffraction elements being located within the available beam of radiation passing through said fixed entrance aperture, means for moving said diffraction elements in said available beam of radiation away from and towards said fixed entrance aperture to rotate said Rowland circle about said entrance aperture, said entrance aperture thereby being maintained on said Rowland circle, means automatically



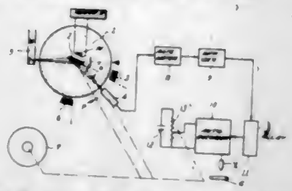
maintaining said diffraction elements and said detector on said Rowland circle while said diffraction elements are moving in said available beam of radiation, and restricting means restricting said available beam of radiation to a smaller effective beam of radiation striking only a limited number of the diffraction elements at any one observation time.

3,051,834
AUTOMATIC RECORDING SYSTEM OF X-RAY DIFFRACTION PATTERNS
Yoshihiro Shimula, 19 Tenjincho, Nakano-ku, and Hiroshi Uchida, Room 203, Bldg. 71, Tamadaira-Danchi, 540–1 Hino-machi, Minamitama-gun, both of Tokyo, Japan
Filed Sept. 16, 1959, Ser. No. 840,348
4 Claims. (Cl. 250—51.5)



1. A system for continuously recording X-ray diffraction patterns from a sample comprising means for heating said sample, means sensitive to the sample temperature for producing electrical signals corresponding to said temperatures, means for irradiating the sample with X-rays, means for continuously and repeatedly varying the angle of incidence of said X-rays on said sample, said X-rays being diffracted by said sample, means operatively positioned relative to said sample to receive said diffracted X-rays and to translate the same into electrical signals which correspond in magnitude to the intensity of said diffracted X-rays, recording means responsive to the electrical signals corresponding to the temperature of the sample and to the electrical signals corresponding to the diffracted X-rays for recording the temperature of the sample and the X-ray diffraction pattern of the sample, means for varying the quantity of heat furnished to said sample for varying the temperature thereof, means for controlling the electrical signals corresponding to the diffracted X-rays as they are furnished to the recording means and while the angle of incidence of the X-rays is continuously varied in a first direction, and means for instantaneously furnishing the electrical signal which corresponds to the temperature of the sample to the recording means at the instant when the angle of incidence of the X-rays is reversed in direction.

3,051,835
X-RAY DIFFRACTION SYSTEM
Yoshihiro Shimula and Hiroshi Uchida, Tokyo, Japan, assignors to Rigaku Denki Company Limited, Tokyo, Japan
Filed Dec. 22, 1959, Ser. No. 861,378
Claims priority, application Japan Dec. 22, 1958
3 Claims. (Cl. 250—51.5)



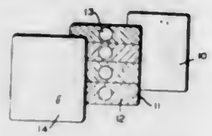
1. Apparatus for recording the change of lattice spacing of a crystal as a function of the thermal change of said crystal, said apparatus comprising a goniometer continuously rotatable clockwise and counterclockwise between predetermined limits, an X-ray source disposed to irradiate said crystal with an X-ray beam, said X-ray beam being irregularly diffracted from said crystal, means to vary the temperature of said crystal, and recording means responsive to the diffracted X-ray beam and the rotation of said goniometer to record continuously the change of lattice spacing as a function of the temperature change of said crystal; said recording means including a recording medium advanceable at a constant rate, and a recording device adapted to contact said recording medium selectively in accordance with irregularities in the diffracted beam.

3,051,836
CODED DOCUMENT READER
John H. Howard, Media, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Original application Apr. 9, 1956, Ser. No. 577,143. Divided and this application July 7, 1960, Ser. No. 41,350
1 Claim. (Cl. 250—78)



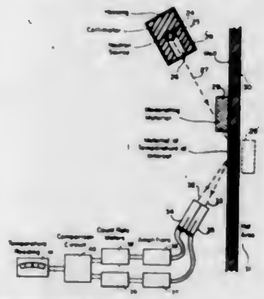
Apparatus for reading a document upon which data is coded in a pattern comprising a plurality of successive discrete areas of long persistence luminescent materials and upon which short persistence luminescent materials may be deposited incident to processing and handling said document, a housing, a lens in said housing, said housing having an area on one side of said lens but spaced therefrom and through which said document moves in passing through said housing, means in said housing providing a source of radiant energy capable of and positioned to successively irradiate the coded pattern of materials on said document as it passes through said housing, utilization means positioned on the other side of said lens successively to receive the radiant energy resulting from the successive irradiation of said discrete areas of the coded pattern of materials on said document, and control means for providing a predetermined time interval between irradiation of said materials and the radiation reception by the utilization means in order to enable said utilization means to respond to radiation from said long persistence luminescent materials on the document only after radiation of said short persistence materials has subsided, said control means comprising an opaque rotatable member interposed in the ray paths between said source and said document and between said utilization means and said document and having an aperture therein so that in one position of its movement it cuts off one of said ray paths while permitting the other ray path to be opened and in another position of its movement it opens the formerly closed ray path while cutting off the formerly open ray path, the movement of said member between the two positions and its function in concurrently opening one and cutting off the other of the two ray paths serving to provide a predetermined time delay between irradiation of said materials on the document and the reception thereof by the utilization means whereby said utilization means is effective to produce an output record only of the coded pattern of long persistence luminescent materials on said document.

3,051,837
RADIATION DETECTION AND WARNING LABEL
Heinz F. Nitka, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 26, 1957, Ser. No. 680,257
3 Claims. (Cl. 250—83)



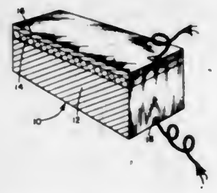
1. A radiation indicator in the form of a strip of flexible material with an adhesive backing having a plurality of detachable elements, each of said elements when detached and affixed by means of said adhesive to goods subjected to radiation serving as a radiation indicating label, each of said labels consists of a layer of radiation sensitive material capable of visually changing color to a degree, which is a function of the extent of radiation impinging thereon, said color change taking place solely due to said radiation and without chemical processing, a color comparison member overlying said radiation-sensitive layer, said member being divided into a plurality of discrete areas, each of said areas having a shade of color substantially similar to that shade assumed by said radiation-sensitive material upon being subjected to a specific dosage of radiation, each of said areas having a different shade of color, and each of said areas having at least one perforation therein through which the shade of color of said radiation-sensitive material may be observed.

3,051,838
NEUTRON PYROMETER
Archie W. Culp, Jr., Raleigh, N.C., assignor to Astra, Inc., Raleigh, N.C., a corporation of North Carolina
Filed Apr. 25, 1960, Ser. No. 24,538
6 Claims. (Cl. 250—83.1)



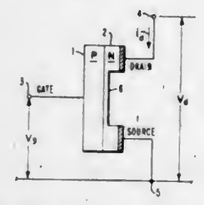
1. A neutron radiation pyrometer for measuring temperature of a given media comprising a source of neutrons, means to direct a beam of said neutrons at said media, means to bring said beam of neutrons to a thermal neutron distribution corresponding to said temperature, a pair of neurton sensors so located as to capture said thermal neutrons and produce electrical responses related to the energy of said thermal neutrons, said sensors being of different neutron energy response, means to amplify and obtain the relative response of said sensors, the magnitude of said relative response being an indication of said temperature.

3,051,839
PHOTOCONDUCTIVE ELEMENT
Allan E. Carlson, Euclid, and Jacob M. Jost, Cleveland, Ohio, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 20, 1959, Ser. No. 828,375
5 Claims. (Cl. 250—211)



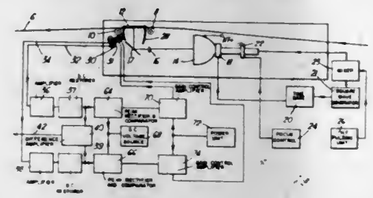
1. A photoconductive cell comprising: a monocrystalline plate of at least one semiconductive material selected from the group consisting of cadmium sulfide and cadmium selenide, doped throughout its bulk with a donor impurity selected from the group consisting of indium, gallium, chlorine and iodine, a thin layer of said plate adjacent one major surface thereof being doped with an acceptor impurity selected from the group consisting of copper, silver and gold; an electrode making ohmic contact with a large area of said major surface; and a second electrode making ohmic contact with said plate at a location removed from said thin layer.

3,051,840
PHOTOSENSITIVE FIELD EFFECT UNIT
Edward M. Davis, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 18, 1959, Ser. No. 860,466
7 Claims. (Cl. 250—211)



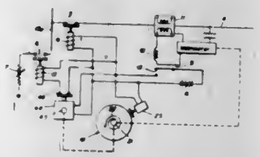
1. A photosensitiye device comprising a body of semiconductor material of one conductivity type, a thin layer of semiconductor material of the opposite conductivity type, said thin layer being contiguous with said body of semiconductive material, said thin layer being less than a recombination length thick, means for back-biasing the junction formed between said body and said layer, source and drain connections to said body of semiconductor material, an output circuit connected between the source and drain connections including a load and means for biasing the drain connection relative to the source connection so as to supply majority carriers to said body of semiconductor material from said source connection and to collect majority carriers from said body of semiconductor material to said drain connection, and means for directing light against said layer of semiconductor material to control the majority carrier flow in said body of semiconductor material.

3,051,841
PRINTING AND PHOTOGRAPHY
John Fothergill Crosfield, Gordon Stanley James Allen, and Peter Brimelow, London, and Peter Ralph Price, Loughton, Essex, England, assignors, by direct and mesne assignments, to J. F. Crosfield Limited, London, England, a British company, George Edmond Brackenbury Abell, London, England, and Peter Ralph Price and Henry Loveridge Chadder, Loughton, Essex, England
Filed Nov. 25, 1957, Ser. No. 698,665
Claims priority, application Great Britain Nov. 28, 1956
12 Claims. (Cl. 250—220)



12. Apparatus for checking reproduced two-dimensional visual representations of a subject comprising a light source, means for deriving two light beams from said light source for scanning two representations of the same subject, both requiring to be checked and provided on a single record material member, means for deflecting said light beams to scan said two representations simultaneously and in synchronism, element by element, two photoelectric devices arranged to receive that part of the light from said scanning beams which is not absorbed by the scanned elements of said two representations, respectively, modulating means for said light source coupled to the output of one of said photoelectric devices, whereby the output of said photoelectric device is maintained substantially constant and the variations in the output of the other photoelectric device represent the difference between corresponding scanned elemental areas of said two representations.

3,051,842
MEANS FOR MAINTAINING STABILITY OF POWER TRANSMISSION SYSTEMS DURING A FAULT
Robert H. Park, Corporation Road, Dennis, Mass.
Filed Oct. 19, 1960, Ser. No. 63,693
25 Claims. (Cl. 307—52)



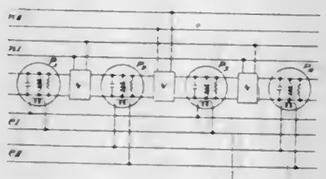
1. A power system comprising a generating segment, a receiving segment, a transmission system coupling together said segments, thereby to carry transmitted power, normally closed circuit breaker means responsive to a fault on said transmission system for momentarily isolating said fault and decoupling said receiving segment from said generating segment, and means responsive to said fault for reducing the generating segment accelerating power, when said segments are decoupled, said means including switch means responsive to the fault for mo-

mentarily coupling one or more of a plurality of preselected resistive loads to the generating segment, and means whereby the number of such loads to be applied upon occurrence of the fault is varied in accordance with the magnitude of the transmitted power just prior to the fault.

3,051,843
COUPLING CIRCUITS FOR DIGITAL COMPUTING DEVICES

Eiichi Goto, Meguro-ku, Tokyo-to, Japan, assignor to Kokusai Denshin Denwa Kabushiki Kaisha, Tokyo-to, Japan

Filed Aug. 15, 1956, Ser. No. 604,241
Claims priority, application Japan Aug. 31, 1955
5 Claims. (Cl. 307—88)



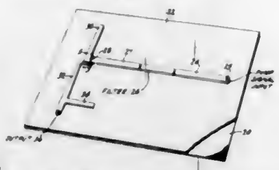
1. In a binary computing arrangement, in combination, a cascade of parametron circuits connected in stages, each stage comprising one parametron, each parametron comprising a resonant output circuit responsive to an exciting current signal and a phase control signal having means connected in a balanced configuration for generating an output oscillation signal having a predetermined resonance frequency and one of two different phases with a phase displacement of 180 degrees from each other with said phases corresponding to conditions "0" and "1," said means in a balanced configuration of each resonant output circuit in each stage including nonlinear reactor means, means for applying to said nonlinear reactor means of each stage a respective one of two alternate periodic exciting current signals having a frequency of twice the resonance frequency and partially overlapping in time for exciting said stages successively in sequence thereby to generate the output resonant oscillation signal of the resonant circuit of said one parametron of each stage in sequence, means connected in each parametron for coupling said exciting current applying means to the resonant output circuit, means under control of two coupling control signals for selectively coupling the parametrons in cascade to apply the output resonant oscillation signal of the parametrons as at least one phase control input signal to the resonant output circuit of the next succeeding parametron only when said exciting currents overlap in time, means for selectively applying said coupling control signals to said coupling means synchronously with said exciting signals during the periods of overlap thereby to control coupling of the parametrons according to the sequence of oscillation whereby the direction of transmission of said phase control signals is determined.

3,051,844
PARAMETRIC OSCILLATOR CIRCUIT WITH FREQUENCY CHANGING MEANS

Walter R. Beam, Princeton, and Fred Sterzer, Monmouth Junction, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Oct. 30, 1958, Ser. No. 770,822
11 Claims. (Cl. 307—88)

4. In combination, a parametric oscillator having an element of variable reactance, first means for driving said oscillator into parametric oscillation and for sustaining said oscillation, and second means for applying D.C. pulses to said oscillator for intermittently changing the frequency of oscillation of said oscillator for a selected time interval during which the number of half cycles

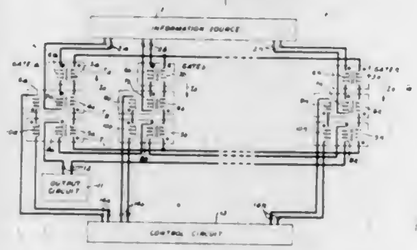


gained or lost at the frequency of parametric oscillation is more nearly odd than even.

3,051,845
GATE CIRCUIT

Robert K. York, New Brunswick, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 21, 1959, Ser. No. 860,814
12 Claims. (Cl. 307—88)



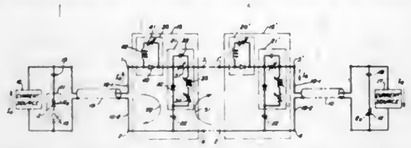
1. An electrical circuit for gating information from a plurality of input terminals to a common output terminal, comprising a plurality of gates each including three normally unsaturated magnetic core transformers having first and second windings thereon, means connecting the second windings of said three transformers of each gate in series and connecting said series connected second windings of all of said gates in parallel, means for applying input signals from said input terminals to the first windings of said first and second transformers of an associated one of said gates such that the voltages induced in the second windings of said first and second transformers normally substantially cancel each other, means connecting the first winding of said third transformer of all of said gates in series to said common output terminal, and means for temporarily saturating said second and third transformers of a selected gate so that said input signal applied to said first transformer of said selected gate induces a signal temporarily only in said second winding of said first transformer which signal flows in parallel through said second windings of the other of said gates inducing signals in the first winding of the third transformer of said other gates which signals are additive and applied to said common output terminal.

3,051,846
NEGATIVE RESISTANCE DIODE PULSE REPEATER

Lionel O. Schott, Convent, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 27, 1960, Ser. No. 78,659
8 Claims. (Cl. 307—88.5)

6. Apparatus for regenerating, at selected positions along paired and biased conduction paths, propagated signals that become attenuated while traversing paths in a forward direction, which comprises regenerative means comprising the series combination of negative resistance means and first reactive means connected in shunt with second reactive means, said regenerative means being included in one of the conduction paths, and means presenting a negligible impedance to the passage of attenuated

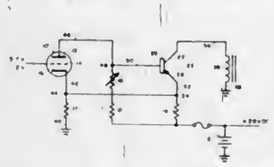


signals for coupling the other of the conduction paths to the junction of said negative resistance means and said first reactive means.

3,051,847
TRANSISTOR SWITCHING CIRCUIT WITH THERMISTOR BIASING MEANS

Edward H. Niemeyer, Mount Rainier, Md., assignor to ACF Industries Incorporated, New York, N.Y., a corporation of New Jersey

Filed Mar. 15, 1957, Ser. No. 646,426
3 Claims. (Cl. 307—88.5)

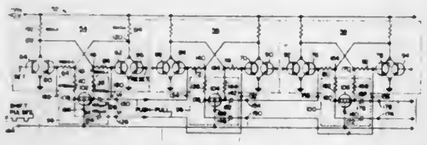


1. A transistor switching device comprising in combination a cathode follower circuit including a discharge device having a cathode, a grid and a plate, a transistor having an emitter, a base and a collector, a load connected directly to the collector, a source of direct voltage, a biasing circuit including an impedance connected between the source of voltage and the emitter to apply thereto a voltage less than source voltage, a second circuit comprising a thermistor and an impedance connected between the voltage source and the cathode, the cathode being connected directly to the base and a circuit connecting the plate to the positive side of the voltage source whereby a voltage signal to the grid produces current flow in the said second circuit to apply a positive voltage to the base and trigger transistor current flow to the load.

3,051,848
SHIFT REGISTER USING BIDIRECTIONAL PUSH-PULL GATES WHOSE OUTPUT IS DETERMINED BY STATE OF ASSOCIATED FLIP-FLOP

Edward Gary Clark, Oreland, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed June 3, 1957, Ser. No. 663,162
9 Claims. (Cl. 307—88.5)

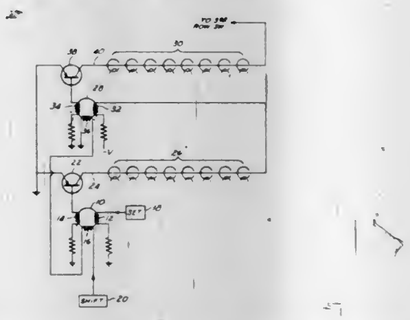


1. In combination: a first and a second flip-flop; each of said flip-flops having two stable states; bidirectional gate means; circuit means connecting said gate means to said first flip-flop; circuit means adapted to apply control signals to said gate means; said gate means producing, in response to each control signal, push-pull output signals of one type when said first flip-flop is in its first stable state and producing push-pull output signals of a second type when said first flip-flop is in its second stable state; and alternating current coupling means for applying the push-pull output signals produced by said gate to said second flip-flop, said second flip-flop being adapted to assume one of its two stable states when output signals of said one type are applied to it, and to assume the other of its stable states when said output signals of said second type are applied to it.

3,051,849
ELECTRICAL SWITCHING APPARATUS

Norman S. Zimbel, Auburndale, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 12, 1958, Ser. No. 773,242
7 Claims. (Cl. 307—88.5)

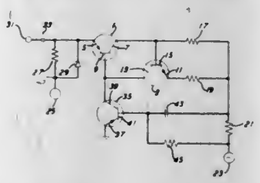


1. An electrical switching circuit comprising a first magnetic core having a rectangular hysteresis characteristic and having input, output, and shift windings, a first transistor having base, emitter, and collector electrodes, means connecting said base to an output winding on said magnetic core, a pair of power supply terminals, a first data storage means, a switching line passing through said data storage means, a second magnetic core having a rectangular hysteresis characteristic and having input, output, and shift windings, a second transistor having base, emitter, and collector electrodes, means connecting the base of said second transistor to the output winding of said second magnetic core, and means including said switching line connecting the emitter-collector circuit of said first transistor to said pair of power supply terminals independently of said first magnetic core and to the input winding of said second magnetic core.

3,051,850
TRANSISTOR MULTIVIBRATOR CIRCUIT WITH VARIABLE IMPEDANCE OPERATION STABILIZING MEANS

George F. Abbott, Jr., Berkeley Heights, and Frederick D. Padden, Jersey City, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 2, 1958, Ser. No. 764,897
20 Claims. (Cl. 307—88.5)



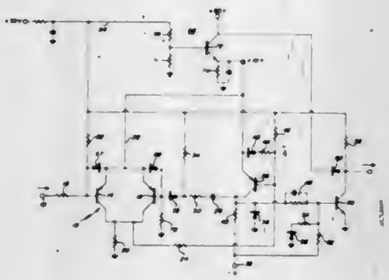
1. In a pulse generating circuit, a first and a second transistor of opposite conductivity type and each having an emitter, base and collector electrode, said base electrode of each of said transistors being electrically connected to

said collector electrode of the other of said transistors, input terminal means connected to said emitter electrode of said first transistor, biasing means connected to said emitter electrode of said first transistor for normally reverse biasing said emitter electrode with respect to said base electrode, load means connected to said base and said emitter electrodes of said second transistor, a third transistor having a base electrode and an emitter-collector circuit, said emitter-collector circuit being connected to said base electrode of said first transistor and poled to direct current in the direction of normal base current through said first transistor, circuit means including a timing capacitor connecting said base electrode of said third transistor to said load means, and biasing means connected to said base electrode of said third transistor to normally maintain the emitter-base junction of said third transistor in a forward biased state.

3,051,851
ELECTRICAL PULSE GENERATOR FOR UNIFORM OUTPUT SIGNAL AND HIGH DUTY CYCLE

Robert R. Leonard, Boston, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Oct. 13, 1958, Ser. No. 766,908
8 Claims. (Cl. 307—88.5)



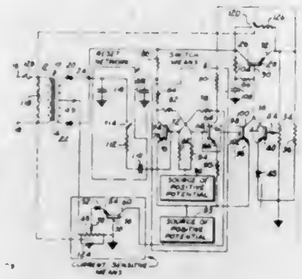
1. An electrical pulse generator comprising a first transistor having base, emitter, and collector electrodes, a second transistor having base, emitter, and collector electrodes, a single reference voltage source, means connecting said first transistor to said voltage source to be cut off in the emitter-collector circuit, means connecting said second transistor to said voltage source to be conductive in said emitter-collector circuit, a condenser connected between said first and second transistors, means including said first transistor connected to switch and hold said second transistor to be nonconductive in its emitter-collector circuit, a charging circuit for said condenser which is independent of the emitter-collector electrode circuit of said first transistor and is connected directly to said voltage source, said charging circuit being activated by switching said second transistor to be nonconductive in said emitter-collector circuit, and a discharge circuit connected to said condenser, said discharge circuit comprising said second transistor when switched to be conductive.

3,051,852
TRANSISTORIZED CIRCUIT BREAKER NETWORK

Leon J. Mintz, Brooklyn, N.Y., and Roland Yii, West Chester, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Nov. 19, 1958, Ser. No. 774,979
11 Claims. (Cl. 307—88.5)

11. A power supply for a load, comprising, a power transistor connected to said load, an impedance element connected in series with said power transistor for producing a voltage drop across said impedance element in accordance with the current through said power transistor, a control transistor coupled to said impedance element to change its state of conductivity when the current through said impedance element exceeds a preselected value, a multivibrator coupled to said control transistor and adapted when actuated to decouple said power transistor from said load, means for actuating said multivibrator when the conductivity of said control transistor is

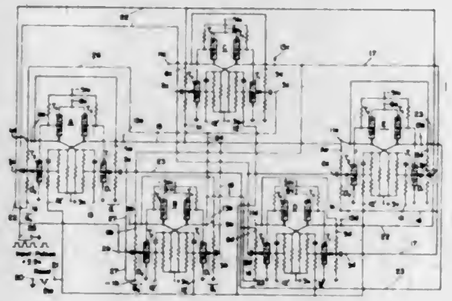


changed by the passage of a current through said impedance element exceeding said preselected value, a resistor-capacitor network for generating a reset pulse, and means for applying said reset pulse to said multivibrator to recouple said power transistor to said load.

3,051,853
RING COUNTER USING A WALKING CODE AND HAVING A COMMON PULSING LINE

Leonard Roy Harper, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Jan. 28, 1959, Ser. No. 789,595
15 Claims. (Cl. 307—88.5)

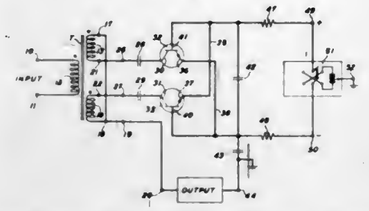


1. A ring counter comprising a plurality of bistable devices characterized in that a succession of applied input pulses provides a two-by-two walking code having twice as many distinctive combinations as there are devices in the ring, each of said plurality of devices have a first state and a second state and each having at least one input circuit, means for switching two of said devices to their respective first states and for switching each of the remaining of said devices to their respective second states, and gating means associated with each said device, each said gating means having (1) an input circuit to which said input pulses are applied, (2) an output circuit connected to said input circuit of its associated device, and (3) two biasing circuits, one of them connected only to an output of the device next forward in the ring and the other connected only to an output of the device two devices backward in the ring from it for developing blocking potentials to prevent its associated device from responding to said applied input pulses.

3,051,854
TRANSISTORIZED SWITCHING CIRCUIT HAVING BIPOLAR CONTROL

Edward H. Weber, Jr., Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 3, 1959, Ser. No. 831,429
12 Claims. (Cl. 307—88.5)

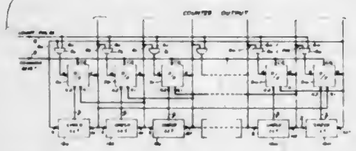


1. A switch circuit comprising two transistors each having a base electrode, an emitter electrode, and a collector electrode and each having its base electrode cross-connected to the emitter electrode of the other transistor, means biasing one of said base electrodes more positively than the other, two input circuits and an output circuit all having one terminal in common with one another, the other terminal of each of said input circuits being connected to the collector electrode of a different one of said transistors, a capacitor connected between said base electrodes, and means connecting one of said base electrodes to another terminal of said output circuit.

3,051,855
SELF-CORRECTING RING COUNTER

Bock W. Lee, Berkeley, Calif., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 23, 1959, Ser. No. 841,768
16 Claims. (Cl. 307—88.5)



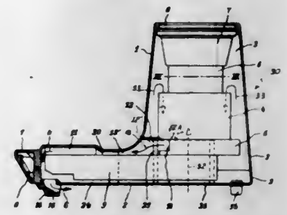
3. A self-correcting bistable circuit, comprising a bistable switching element having set and reset inputs for establishing and maintaining a desired stable state and an output for indicating said stable state, gate means for selectively coupling said output to said reset input, and means coupled to said set input for actuating said gate means to bring the state of said output into correspondence with the state of said set input.

3,051,856
KITCHEN APPLIANCE WITH AIR COOLING SYSTEM THEREFOR

Rudolf Hanschitz, Reichenbach (Fils), Germany, assignor to Electrostar G.m.b.H., Reichenbach (Fils), Germany

Filed Dec. 29, 1959, Ser. No. 862,656
Claims priority, application Germany May 9, 1959
15 Claims. (Cl. 310—59)

1. In an electrically operated food processing kitchen appliance having a housing provided with a vertical portion and a horizontal portion extending outwardly from said vertical portion and wherein a motor is mounted in the vertical portion and includes a motor shaft in the vertical portion mounting a blower wheel for cooling the appliance gear mechanism in the horizontal housing portion interconnecting an operating shaft in the horizontal housing portion with said motor shaft, the improvement comprising means provided at the transition of said housing portion for cooling one of said housing parts by suction air flow and the other of said housing parts by pressurized air flow, including a partition at the transition of said vertical and horizontal housing portions and lateral air outlet means in said chamber for directing air under said partition into said horizontal

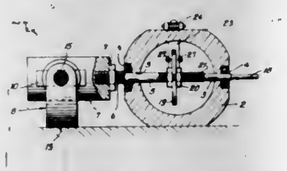


portion, the vertical portion being cooled by suction air flow and the horizontal portion being cooled by pressurized air flow, and air inlet means defined at the lower portion of said vertical portion having an upwardly directed passageway, and means to direct the incoming suction air over the exterior of the motor and then through the interior thereof to the blower wheel and along the horizontal portion.

3,051,857
MEANS FOR ELIMINATING THE EFFECT OF POLAR ATTRACTION IN ELECTRIC GENERATORS

Roland Cantin, 2193 Tillemont, Montreal, Quebec, Canada

Filed Feb. 10, 1961, Ser. No. 88,424
1 Claim. (Cl. 310—74)



In combination with an electric generator having a rotor and a stator provided with a limited number of poles angularly spaced apart so that the resistance to rotor rotation is non uniform, means associated with said rotor storing potential energy for portions of rotation of said rotor and converting said potential energy into a driving torque for said rotor for the remaining portions of rotor rotation, said means including rotor permanent magnets having poles of the same kind projectng from said rotor and stator permanent magnets having poles of the same kind coacting with said rotor permanent magnets to produce repulsion of the rotor magnets, said stator magnets being in a plane common with the poles of the stator of the generator.

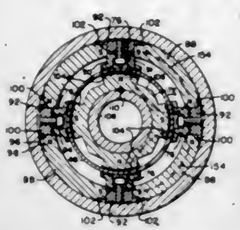
3,051,858
MAGNETIC COUPLING

William E. McCown, Mount Lebanon, and Dikran A. Guerdan, Pittsburgh, Pa., assignors to Westinghouse Electric Company, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 17, 1957, Ser. No. 703,402
6 Claims. (Cl. 310—104)

1. A magnetic coupling comprising an elongated driven member having a plurality of salient magnetic poles extending longitudinally along the length thereof, a driving member having a plurality of elongated magnets mounted in spaced relation to said driven member and to each other, said magnets extending substantially along

the length of said driven member and having north and south magnetic poles disposed at their longitudinal edges respectively, said longitudinal edges being juxtaposable to

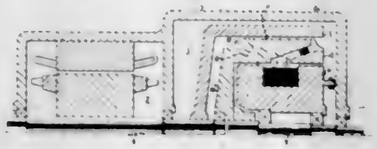


the salient poles of said driven member and a semi-magnetic enclosure disposed between said members and enclosing said driven member.

3,051,859
INTERDIGITATED POLE ASSEMBLY

Adam N. Farrell, deceased, late of Erie, Pa., by Evadna M. Farrell, administratrix, Erie, Pa., assignor to General Electric Company, a corporation of New York

Filed Feb. 18, 1960, Ser. No. 9,534
8 Claims. (Cl. 310—105)

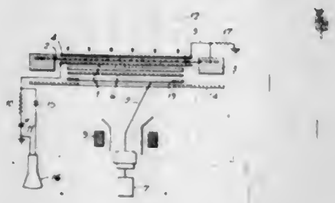


1. A rotatable interdigitated pole field assembly for a dynamoelectric machine comprising a hub member having an annular portion and pole-forming teeth projecting axially from the annular portion, a second member having an annular portion and pole-forming teeth projecting axially therefrom and interdigitating with the teeth of said hub member, said first and second members being axially aligned, said second member being supported by and spaced from said hub member by means of nonmagnetic spacing members welded to pole-forming teeth of one of said members and to a surface on the other of said members.

3,051,860
IMAGE SCANNER FOR ELECTRON MICROSCOPES

Michael Edward Haine, Sulhamstead, and Peter Alex Einstein, Tilehurst, Reading, England, assignors to Associated Electrical Industries (Manchester) Limited, a British company

Filed Nov. 24, 1958, Ser. No. 776,012
Claims priority, application Great Britain Nov. 27, 1957
2 Claims. (Cl. 313—65)



1. For use in electrical apparatus for intensifying an electron image, an intensifying plate comprising an annular supporting frame, a thin tightly stretched plastic supporting membrane stretched tightly across said supporting frame and having an accurately flat surface, a thin film of electrically conducting material which is transparent to the passage of high energy electrons coated onto said flat surface, means for connecting said conducting film to a source of electric potential, and, on the free surface of said conducting film, a sensitive layer of a material the electrical conductivity of which is increased by irradiation by an electron beam, the arrangement being such that when the free surface of said supporting membrane is irradiated with an image carrying beam of high energy electrons, the electrical conductivity of each elemental portion of said sensitive layer is varied in accordance with the intensity of the electrons falling thereon.

3,051,861
COLOUR TELEVISION APPARATUS

Denis Victor Ridgeway, Cambridge, England, assignor to Pye Limited, Cambridge, England, a British company

Filed Apr. 16, 1959, Ser. No. 806,799
Claims priority, application Great Britain Apr. 24, 1957
15 Claims. (Cl. 313—65)

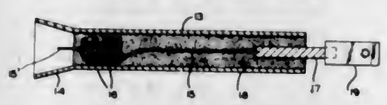


1. A target for a television pick-up tube consisting of a transparent support comprising a transparent imperforate sheet having a transparent perforate thin sheet assembled thereto over the target area of the support, said perforate sheet having a large number of perforations distributed over the target area, a first signal plate of transparent conducting material and a light filter mounted on at least one surface of said perforate sheet, and a second signal plate of transparent conducting material mounted on one surface of the imperforate sheet to cover at least those areas thereof which are in optical register with the perforations, and a photo-sensitive material covering the target area so as to be illuminated by light from an object which light passes through the signal plates.

3,051,862
GAS IGNITOR

John M. Hoff, Mansfield, Ohio, assignor to The Tappan Company, Mansfield, Ohio, a corporation of Ohio

Filed Feb. 10, 1960, Ser. No. 7,827
3 Claims. (Cl. 313—146)

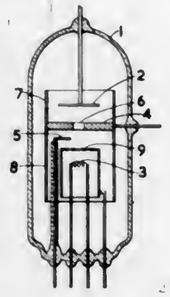


1. An electric spark ignitor for gaseous fuel burning devices, comprising an outer electrode in the form of a tube having a flared mouth at one end, an inner electrode in spaced relation within said outer electrode, said inner electrode being made of wire of small cross-section and high electrical resistance, the inner wire electrode having an end portion within the mouth of the outer electrode at a substantial angle to the wall of the same and with its tip in closed spaced opposition to the inner surface of said wall, thereby to form a spark gap with the outer electrode, the wire inwardly with respect to the mouth having a series of spaced storage turns therein, and being connected at its removed end to an external conductor, and a compacted mass of particulate thermal and electrical insulation material filling the space within the outer electrode about said turns and the extent of the wire electrode to the rear of the same, the wire electrode including the turns thereof being thus embedded in said material and being extensible from within the same at the gap-forming end to compensate for consumption of said wire electrode in use of the ignitor.

3,051,863
ELECTRIC DISCHARGE DEVICES

Henry De Boyne Knight, Rugby, England, assignor to Associated Electrical Industries Limited, London, England, a British company

Filed Apr. 18, 1960, Ser. No. 22,778
Claims priority, application Great Britain Apr. 27, 1959
3 Claims. (Cl. 313—189)

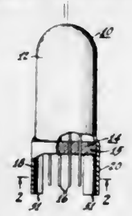


1. An electric discharge device comprising a sealed envelope filled with a gaseous ionizable medium at low pressure, a main cathode and an anode defining a main discharge space located within said envelope, an auxiliary discharge space completely separated from said main discharge space by said main cathode, an auxiliary anode and an auxiliary cathode located in said auxiliary discharge space, the electron emission from the main cathode being normally incapable of supporting a discharge to the anode until ionization produced in said auxiliary discharge space between said auxiliary anode and said auxiliary cathode has taken place, said main cathode being apertured to enable the ionization produced by the initiating discharge to initiate the formation of a cold emission spot on the main cathode at which the main discharge to the anode originates, and said main cathode being composed of an intimate sintered association of particles of insulating and conducting material at least in the vicinity of said aperture to facilitate the formation of said cold emission spot.

3,051,864
SELF-INDEXING ELECTRON TUBES AND SOCKETS

Otto H. Schade, Sr., West Caldwell, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Feb. 24, 1959, Ser. No. 795,087
8 Claims. (Cl. 313—318)

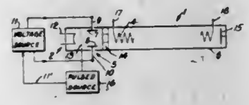


1. An electron tube comprising an envelope and at least one electrode enclosed therein, said envelope including a base having a header member, at least one lead-in conductor sealed through said header member and connected to said at least one electrode, and a plurality of elongated indexing lugs having arcuate transverse sections, said lugs extending longitudinally parallel to and beyond the end of said at least one lead-in conductor from adjacent the periphery of said header, said lugs having the same center and radius of curvature and being of different arcuate length.

3,051,865
PULSED BEAM TUBE

Theodore J. Marchese, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Oct. 6, 1958, Ser. No. 765,456
6 Claims. (Cl. 315—3)

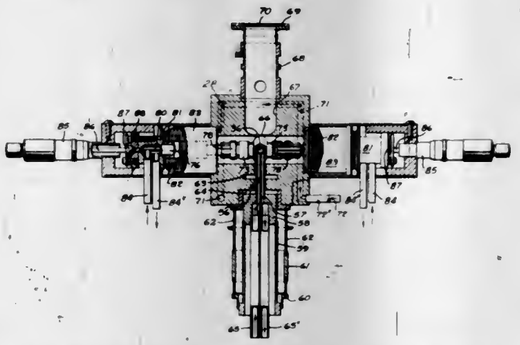


1. An electron discharge device system comprising an electron discharge device, means to project discrete electron beam segments along a given path, said electron beam segments having undesired electrons therebetween, interaction means for deriving energy from said beam segments disposed along said given path, electron deflection means disposed adjacent said beam segment projecting means to deflect said undesired electrons from said path, and means coupled to said electron deflection means to energize said electron deflection means during the interval between each of said beam segments to preclude interaction of said undesired electrons with said interaction means.

3,051,866
VELOCITY MODULATION ELECTRON TUBE APPARATUS

Richard B. Nelson, Los Altos, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California

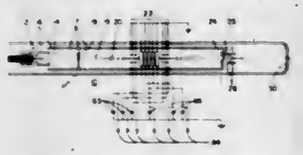
Original application Apr. 9, 1954, Ser. No. 422,059, now Patent No. 2,928,972, dated Mar. 15, 1960. Divided and this application Jan. 8, 1960, Ser. No. 1,243
11 Claims. (Cl. 315—5.54)



1. An electron tube apparatus of the velocity modulation type comprising a cathode, a cavity resonator positioned for receiving an electron beam from said cathode, a drift tube within said cavity resonator, means for supporting said drift tube so as to provide velocity modulating and energy interchanging gaps between said tube and the walls of said resonator, said supporting means serving to insulate said drift tube as to D.C. potentials from said cavity resonator, a collector for collecting electrons after passage through the velocity modulation space, said drift tube and said energy interchanging space, means for supplying independent D.C. operating potentials to said cath-

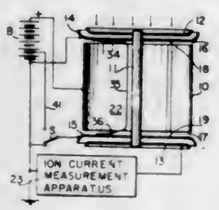
ode, said resonator, said drift tube and said collector, tuning means comprising a substantially rectangular waveguide communicating with said resonator, a cylindrical choke-plunger movable within said guide, said waveguide being deformed at its central portion for accommodating said cylindrical plunger without contacting the latter, and means for moving said plunger longitudinally within said waveguide.

3,051,867
DECODING AND DISPLAY MEANS
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Sept. 18, 1959, Ser. No. 840,851
9 Claims. (Cl. 315—8.5)



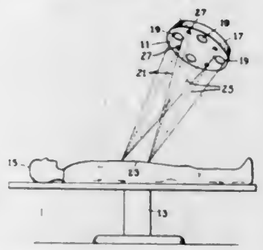
1. Electron beam selecting apparatus comprising: a cathode ray tube having a faceplate and a single axially-positioned aperture in the vicinity thereof; means for forming a cone-like bundle of convergent electron beams, each said beam having an individual cross section; means for causing coded signals to direct selected beams of said bundle along the axis of said tube to traverse said axially-positioned aperture at the same angle and impinge on the same area of said faceplate, said last means comprising, a coplanar deflection system having elements symmetrically positioned about a point, and weighted in deflection ability in accordance with said code; and means for applying equal-amplitude signals to selected elements of said coplanar deflection system—whereby said selected beams produce light patterns that provide aligned messages on a recording medium.

3,051,868
IONIZATION VACUUM GAUGES
Paul Aveling Redhead, Ottawa, Ontario, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a corporation of Canada
Filed Aug. 29, 1960, Ser. No. 52,426
21 Claims. (Cl. 315—108)



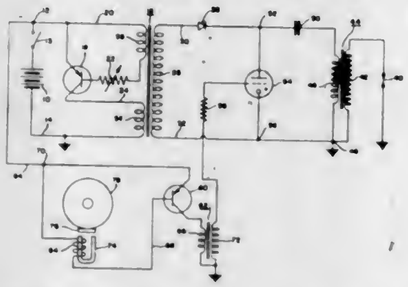
1. A high vacuum gauge comprising a tubular anode electrode and a cold cathode electrode having a tubular portion, said anode and said tubular cathode portion having unequal radii and being coaxially mounted to form an annular space, a pair of radial flanges extending from said cathode toward the anode and being spaced apart along said cold cathode and having marginal portions spaced uniformly nearest said anode in end closing relation with said annular space, means to apply an axial magnetic field throughout said space, bias means for said electrodes, current measuring means connected in series with said cold cathode and the negative terminal of said bias means, and means to limit the electric field strength adjacent the surfaces of said cold cathode to a value below that at which electrons may be drawn from said surfaces by field emission when said anode and said cathode are connected with said bias means.

3,051,869
VARIABLE INTENSITY LAMP
James V. Richards, Webster, N.Y., assignor to Wilmot Castle Company, Rochester, N.Y., a corporation of New York
Filed Jan. 8, 1959, Ser. No. 785,730
6 Claims. (Cl. 315—156)



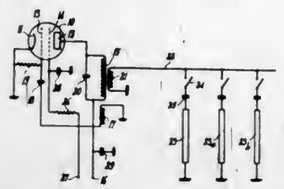
1. A variable intensity lamp for illuminating a particular area subject to varying light reflecting properties comprising a lamp unit and a photo responsive device for detecting the amount of light reflected from the area, means for producing an error voltage dependent in magnitude on the amount of reflected light detected by said photo responsive device, means for producing a reference voltage dependent in magnitude on the amount of reflected light desired at the area, means for comparing said error and reference voltages, and means for utilizing the differential between said error and reference voltages to vary the intensity of illumination of said lamp unit to maintain a substantially constant amount of reflected light from said area to be detected by said photo responsive device.

3,051,870
IGNITION SYSTEM
Thomas E. Kirk, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 5, 1960, Ser. No. 73,686
10 Claims. (Cl. 315—177)



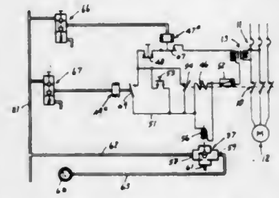
1. An electrical ignition system for igniting the combustible mixture of an engine comprising, a spark discharge device, a source of direct current power, a capacitor, a charging circuit for said capacitor, a dischraging circuit for said capacitor causing a spark at said spark discharge device and including electronic switch means, means for controlling the conduction of said electronic switch including a semi-conductor switch means, and a means having no breaker contacts for controlling the conduction of said semi-conductor switch means in synchronism with operation of said engine.

3,051,871
GAS DISCHARGE TUBE SUPPLY SYSTEM
Georges Henry Marie Daniel, Mazargues (Marseille), Bouches-du-Rhone, France, assignor to Societe Triflux, Marseille, France
Filed Mar. 14, 1960, Ser. No. 14,677
Claims priority, application France May 6, 1955
7 Claims. (Cl. 315—208)



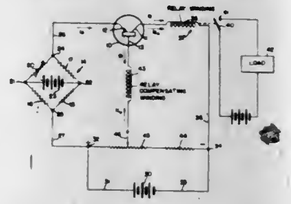
1. A gas discharge lamp system comprising a tube type self oscillating high frequency generator having a cathode, anode, control grid and screen grid, means automatically regulating the voltage of said screen grid maintaining the grid current within a suitable range, an output winding for said generator, a plurality of gas discharge lamps connected in parallel circuits, a separate capacitance in series with the lamp in each parallel circuit, a coupling winding connected across all of said parallel circuits and inductively coupled with said output winding, switch means for selectively connecting and disconnecting any number of said gas discharge lamps, said gas discharge lamps being supplied with supply voltages of the order of 100 kilocycles so that the cycle duration thereof will be substantially shorter than the deionization time of the gas in said lamps.

3,051,872
ELECTROPNEUMATIC CONTROL CIRCUIT
Robert D. Cowherd, R.R. 2, Box 403 A-1, West Terre Haute, Ind.
Filed Oct. 7, 1958, Ser. No. 765,780
10 Claims. (Cl. 317—123)



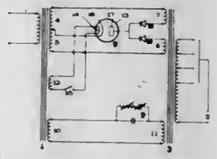
1. An electropneumatic control circuit for controlling a motor starter or the like from a remote control station subjected to an explosive atmosphere, said control circuit including: a source of electrical power, a motor starter coil, and normally closed and normally open fluid pressure operated switches interposed in series in said control circuit whereby said power source is connected across said starter coil when said switches are closed, a holding switch operated upon energization of said starter coil to shunt said normally open switch, a push-button operated normally closed start valve and a push-button operated normally closed stop valve located at said control station, means for supplying a control fluid pressure to the input ports of said valves, said valves being adapted when actuated to admit said control pressure to their output ports and when deactuated to vent their output ports to atmosphere, means connecting the output port of said start valve to said normally open pressure operated switch and connecting the output port of said stop valve to said normally closed pressure operated switch, whereby momentary actuation of said start valve energizes said motor starter coil, said starter coil being thereafter held energized through said holding switch, and momentary actuation of said stop valve de-energizes said starter coil, and a solenoid valve having its operating coil connected in parallel with said motor starter coil, said solenoid valve being adapted to establish communication between its input port and its output port when energized and to vent its output port to atmosphere when de-energized, means for supplying control fluid pressure to the input port of said solenoid valve, a pressure responsive indicator disposed at said control station and connected to the output port of said solenoid valve, whereby said indicator functions to indicate at said control station the energized or de-energized state of said starter coil.

3,051,873
TEMPERATURE COMPENSATED TRANSISTOR CIRCUIT
James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 17, 1954, Ser. No. 469,360
7 Claims. (Cl. 317—148.5)



7. Control apparatus comprising: transistor means having a plurality of electrodes including a base electrode, a collector electrode and an emitter electrode; means for producing a signal potential in response to a condition; means connecting said signal producing means to said emitter and base electrodes to control operation of said transistor means; a source of potential for energizing said apparatus; relay load means having a plurality of relay windings on a single core including a main winding and a compensating winding; circuit means connecting said main winding to said collector electrode so that the output current of said transistor flows through said windings; further circuit means connecting said compensating winding to said base electrode so that the effect of the base-to-collector leakage current which flows through said main winding, the magnitude of which varies with temperature, is cancelled by the leakage current flowing through said compensating winding.

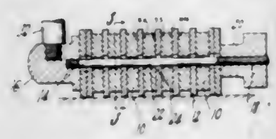
3,051,874
MAGNETIC DEMAGNETIZING DEVICES
Georges Bonnet and Roger Gariod, Grenoble (Isere), France, assignors to Commissariat à l'Energie Atomique, Paris, France
Filed Aug. 27, 1959, Ser. No. 836,540
Claims priority, application France Aug. 30, 1958
3 Claims. (Cl. 317—157.5)



1. Magnetic demagnetizing device which provides in a simple manner regular and considerable decrease of the amplitude of the demagnetizing field, zero mean value of said field, and the possibility of choosing the decrease low,

said device comprising a source of alternating current, a coil which creates a demagnetizing field, an entry transformer having its primary winding connected to said current source, an exit transformer having its secondary winding connected to said coil, and electronic circuits connected to the secondary winding of said entry transformer and connected to the primary winding of said exit transformer effecting and regulating the transmission of alternating electric power from said current source to said coil, the alternations of opposite sense being transmitted in a perfectly symmetrical manner, said electronic circuits comprising a power network transmitting almost the totality of the electric power and a compensating network producing a current component compensating for irregularities of the principal current component produced by the power network due to residual dissimilarities of the power network, said power network comprising an electronic tube having a filament, two diodes in two distinct and identical circuits having in common only said tube, the alternations of current of opposite sense passing each through one of said two circuits, the current through said tube having a constant sense, and means for suppressing the heating of the filament of said tube to thereby decrease the amplitude of current traversing said tube.

3,051,875
MAGNETIC BLOCK
Warren B. Farwell, 15 Amos St., Tewksbury, Mass.
Filed Apr. 13, 1959, Ser. No. 805,937
1 Claim. (Cl. 317—159)



A magnetic block comprising a series of magnets each having a length and width exceeding by several times the thickness thereof, each of said magnets having opposite polarities at its broad faces with a pole on one face of one magnet of a like polarity with respect to that on an opposing face of a successive magnet, an iron spacer between each two successive magnets, each spacer being of greater length than the length of a magnet, each said magnet and spacer having a central hole through the thicknesses of the spacers and magnets, a bolt in said holes of a diameter substantially less than that of said holes, said bolt extending loosely through all of said holes in said spacers and magnets, and quick release means on an end of said bolt for releasably tightly clamping together said magnets and spacers in any adjusted positions of the spacers with respect to the magnets and the bolt.

3,051,876
ELECTROLYTIC TRANSISTOR
John Bardeen, Champaign, Ill., assignor to The University of Illinois Foundation, a non-profit corporation of Illinois
Continuation of application Ser. No. 359,014, June 2, 1953. This application May 14, 1958, Ser. No. 735,660
2 Claims. (Cl. 317—231)



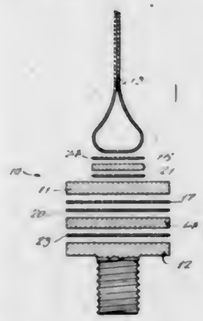
1. An electrical system of the character described comprising: a device having a first plate-like electrode, a second plate-like electrode adjacent and in close proximity thereto while substantially uniformly spaced therefrom, a medium containing ions in operative relation with said electrodes, and a base for establishing said medium at an operative potential; means for biasing said first electrode with respect to said base for causing a change in charge of ions at that electrode, said ions being capable of migrating to said other electrode and effecting a change in charge therewith, the electrode base potential controlling the migration of said ions; and a transistor having a plurality of elements, the circuit of at least one of said elements being connected in series with said second electrode and base for biasing said transistor.

3,051,877
SEMICONDUCTOR DEVICES
Joseph T. Maupin, Deephaven, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 29, 1955, Ser. No. 556,210
1 Claim. (Cl. 317—235)



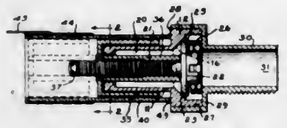
A circuit element comprising a thin semiconductor body having opposite major faces, an annular emitter electrode making elongated rectifying junction contact with one of the major faces of the semiconductor body, base electrode elements making ohmic contact with said major face of the semiconductor body on opposite sides of the emitter electrode in closely spaced relation to the emitter electrode, at least the outer one of said base electrode elements being in the form of an annular ring making elongated ohmic contact with said major face of the semiconductor body substantially parallel to the emitter electrode, and an annular collector electrode making rectifying junction contact with the opposite major face of the semiconductor body directly opposite said annular emitter electrode, the radial thickness of the annulus of the emitter electrode being approximately three-fourths that of the collector electrode.

3,051,878
SEMICONDUCTOR DEVICES AND METHOD OF MANUFACTURING THEM
George B. Finn, Jr., and Robert Parsons, Bloomington, Ind., assignors to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Filed May 2, 1957, Ser. No. 656,621
7 Claims. (Cl. 317—240)



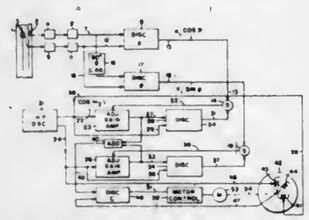
1. In a semiconductor device, the combination of a semiconductor member comprising silicon, said member having a PN junction therein, a transition member having a surface disposed adjacent to a surface of said semiconductor member on one side of said junction, said transition member being composed of a metal selected from the group consisting of tantalum, niobium and base alloys of tantalum or niobium, and a fused layer bonding said surface of said transition member to said surface of said semiconductor member.

3,051,879
VARIABLE IMPEDANCE DEVICE
Nicholas Lazar, Scranton, and Keith S. McIntosh, Derrick City, Pa., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Jan. 23, 1961, Ser. No. 84,196
5 Claims. (Cl. 317—249)



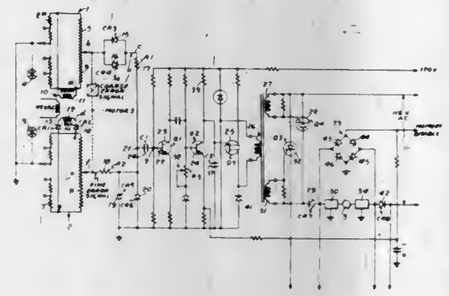
1. In a trimmer capacitor a metal shell comprising a small diameter externally circular tubular portion and an adjoining relatively large diameter tubular end portion, at least part of the small diameter tubular portion having a non-circular bore configuration and the large diameter portion having a circular bore wall defining surface tapered outwardly from its end of juncture with the small diameter tubular portion, a screw occupying the bore of said shell having a head having a chamfered portion engaging the sloping surface of said shell, means for resiliently seating said head against said surface, an axially movable core comprising a hollow cylinder closely surrounding the small diameter tubular portion of said shell having a tubular shaft projecting from one end thereof threaded over said screw, said shaft having a non-circular external cross section matching that of the non-circular bore configuration of such small diameter portion of the shell, and a tube of dielectric material closely surrounding said hollow cylinder at one end attached to the relatively large diameter tubular portion of said shell and at the other end carrying a cylinder of metal thereabout.

3,051,880
POSITION CONTROL SERVOSYSTEM
Orrin W. Livingston, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed Mar. 23, 1960, Ser. No. 17,160
18 Claims. (Cl. 318—28)



6. A program control system for controlling the position of a rotor in accordance with a pair of variable signals having a first frequency and having variable parameters determined by the relative phases of a reference phase signal and a variable phase signal of a second frequency, said system comprising means for generating said reference phase signal and said variable phase signal, means for generating a pair of direct current signals having magnitudes and phases determined by the components of said variable phase signals along the axis of a coordinate system having an axis cophasal with said reference phase signal, a source of signals of said first frequency, means for producing said pair of variable signals with each having a phase and an amplitude determined by the polarity and amplitude of a different one of said direct current signals, a resolver having first and second field windings and a rotor winding, a motor for producing rotation of said rotor winding, means for applying each of said pair of alternating current signals of said first frequency to a different one of said field windings and motor control means responsive to the voltage produced in said rotor winding for effecting rotation of said motor in a direction and to an extent necessary to produce a predetermined angle between said rotor and the resultant magnetic field produced by the signals applied to said field windings.

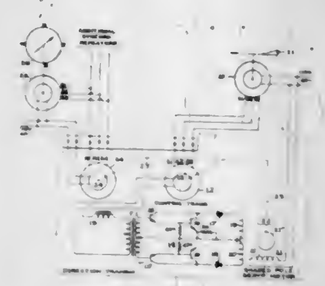
3,051,881
CHANNEL SELECTOR SERVO CIRCUIT
Jean A. Baudin, Montclair, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 8, 1960, Ser. No. 41,594
9 Claims. (Cl. 318—29)



5. A channel selector servo circuit for automatically tuning a channel selector to a predetermined channel of a plurality of channels, said channel selector having coarse and fine channel selection means and a motor for driving said channel selection means, comprising means including a reference voltage and responsive to said coarse channel selection means to develop a coarse error voltage for controlling said channel selector within a predetermined number of channels of the predetermined channel, means to produce from said coarse error voltage a coarse error signal, the waveform of which has sinusoidal shapes and step functions, a first resistor, means coupling said coarse error signal to said first resistor means to produce from said reference voltages a reference signal wherein the waveform has sinusoidal shapes and step functions, a resistive bridge network, means coupling said reference signal to said resistive bridge network and responsive to said five channel selection means to produce at the output of said resistive bridge network a fine error signal having a corresponding waveform to said coarse error signal of sinusoidal shapes and step functions, a second resistor, means coupling said fine error signal to said second resistor, means coupling said first resistor to said second resistor whereby the ratio of the sum of the impedances of said first and second diodes and the resistance of said first resistor to the resistance of said second resistor determines which error signal controls at the junction of said first and second resistors, amplifying means, means coupling the junction of said first and second resistors to said amplifying means, a pulse forming circuit, means coupling the output of said amplifying circuit to said pulse forming circuit, a motor controlling circuit, means coupling the output of said pulse forming circuit to said motor controlling circuit whereby the direction of rotation of said motor is controlled by the output of said motor controlling circuit in accordance with the phase of the error signal produced at the junction of said first

and second resistors and thereby drives said coarse channel selection, means within a predetermined number of channels of the predetermined channel when said coarse error signal controls said motor control circuit and drives said fine channel selection means to said predetermined channel when said fine error signal controls said motor control circuit.

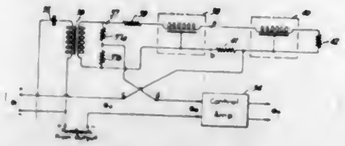
3,051,882
CONTROL TRANSFORMER SYNCHRO REMOTE POSITIONING SYSTEM
Jay H. Stoudenmire, Baltimore, Md., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 17, 1959, Ser. No. 820,970
9 Claims. (Cl. 318—30)



1. In a self-synchronous transmission system for maintaining one or more signal output devices in accord with the angular position of the rotor of a transmitter synchro connected to a source of alternating current supply potential, a control transformer having a rotor provided with a winding inductively related to the stator windings of the transmitter synchro to generate a position error signal in said rotor winding having a nearly zero or 180 degree phase relationship with the supply potential depending upon the direction of angular displacement of the control transformer rotor from minimum error signal position; a follow-up servo motor having a rotor drivingly coupled to the rotor of the control transformer, an excitation winding and reversing windings inductively coupled to said excitation winding, the rotor of the synchro transmitter and the excitation winding of said servo motor having like alternating current supply potentials, a motor reversing network interconnecting the output of the control transformer and said reversing windings including a plurality of transistor means arranged in two separate channels connected to receive potential from said reversing windings, said transistor means being phase responsive for initiating a flow of current through a reversing winding in a direction to drive the servo motor and hence the control transformer rotor toward minimum error signal position when the error signal is in phase with the voltage induced in said reversing windings, and a signal-output device also drivingly coupled to said servo motor.

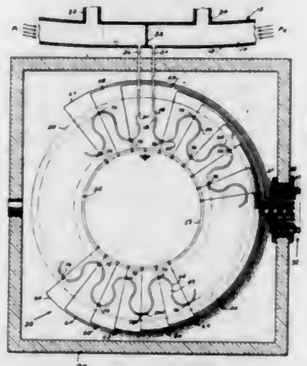
3,051,883
DEAD BEAT RESPONSE, RESONANT LOAD, CONTROL SYSTEM AND METHOD
Otto J. M. Smith, Contra Costa County, Calif. (612 Euclid Ave., Berkeley 8, Calif.)
Filed Mar. 15, 1957, Ser. No. 646,412
30 Claims. (Cl. 318—448)

19. In a damped resonant system for controlling an output variable in accordance with an input signal, the system comprising a capacity and an inductance, means for generating from said input signal a sequence of control command signals having wave shapes substantially similar to the wave shapes of the input signal, said means consisting of a transmission line, and means feeding said



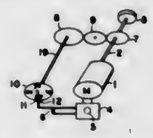
sequence of control command signals into said resonant system.

3,051,884
ANGULAR ACCELEROMETER SENSING SYSTEMS AND CONTROL METHODS AND APPARATUS
George W. Cook, Washington, D.C., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware
Filed Dec. 30, 1958, Ser. No. 783,792
20 Claims. (Cl. 318—457)



1. An angular accelerometer system comprising a hydraulic angular accelerometer including a liquid-filled tube arranged in a path around an axis and at least partially enclosing an area as seen in a direction along the axis and wherein a pressure differential is generated between two pressure points spaced along said tube as a function of the direction and magnitude of angular acceleration about said axis, a capillary conduct interconnecting said two pressure points, a fluid medium in said capillary conduit having an index element therein with a characteristic which differs from that of the remaining fluid in said capillary conduit, said index element being adapted to move along said conduit with the movement of said fluid medium in response to the pressure differential between said two points, and sensing means for sensing the movement of said index element along said capillary conduit.

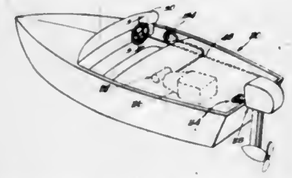
3,051,885
COMPENSATING COIL WINDING MEANS
Howard A. George, Connecticut View Drive, Mill Neck, N.Y.
Filed Jan. 4, 1960, Ser. No. 403
1 Claim. (Cl. 318—467)



Automatic compensating turn counting means for a motor driven shaft, comprising

means to start said motor,
means to deenergize said motor after a predetermined number of turns,
means connected to said deenergizing means to compensate for variable overrunning of said motor, said compensating means comprising a disc having a plurality of notches, said disc being geared to said shaft,
said deenergizing means comprising a pair of contacts which are adapted to be opened by said notches, said contacts being connected to deenergize said motor, said notches being sufficiently wide to accommodate normal overrunning of said motor to prevent recycling and said notches having angled sides, and an angled follower connected to one of said contacts, said angled follower being adapted to ride out of said notches.

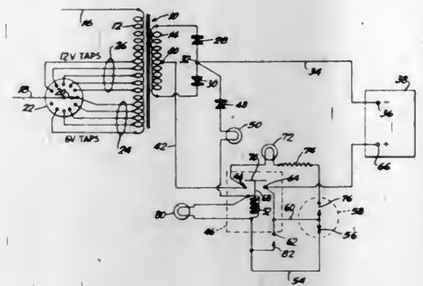
3,051,886
MARINE POWER CONTROL SYSTEM
Alvin A. Cadwallader, Hatboro, Pa., assignor to Teleflex Incorporated, North Wales, Pa., a corporation of Delaware
Filed Jan. 7, 1959, Ser. No. 785,343
5 Claims. (Cl. 318—467)



1. A marine power control system of the type having an operator control station remotely located relative to a mechanism to be controlled and which comprises, bracket means fixedly mounted proximate said mechanism, a power unit, a connection for pivotally mounting said power unit on said bracket means, a lever pivotally supported at one end to said bracket means at a point remotely spaced from said pivotal connection, means for operatively connecting said lever to said mechanism, a screw shaft adapted to be rotated by said power unit, a nut member coacting to be driven axially of said screw shaft, means for connecting said nut member to said lever whereby actuation of said power unit will move said lever, switch means for energizing said power unit, lever means disposed proximate the operator control station, and means for interconnecting said lever means and said switch means for remotely controlling said mechanism.

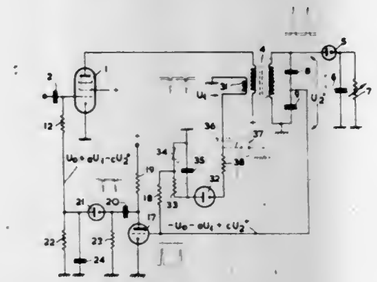
3,051,887
ALTERNATOR PROTECTIVE CIRCUIT
Wallace G. Lind, Minneapolis, Minn., assignor to Franklin Manufacturing Company, a corporation of Delaware
Filed May 8, 1961, Ser. No. 108,554
10 Claims. (Cl. 320—25)

3. The improvement of a battery charging circuit comprising the combination of a pair of power terminals connected to a source of battery charging voltage, a solenoid case having positioned therein a solenoid coil, an armature and a pair of solenoid contacts in circuit making and breaking association with said armature, circuit means comprising a unilateral impedance in series with a ballast resistance connected between one power terminal and said solenoid coil, conductor means connecting said one power terminal to an electrode of the battery to be charged, conductor means connecting the other power terminal to one of said solenoid contacts, conductor means connecting the other solenoid contact to another electrode of the battery to be charged, and selectively operable switching means for connecting the solenoid coil to said



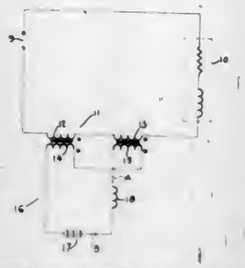
other solenoid contact to complete the energizing circuit for said solenoid coil.

3,051,888
CIRCUIT ARRANGEMENT FOR STABILIZING THE AMPLITUDE OF A HIGH DIRECT VOLTAGE
Klaus Kröner, Hamburg-Fuhlsbuttel, Germany, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 19, 1958, Ser. No. 716,201
Claims priority, application Germany Mar. 28, 1957
6 Claims. (Cl. 321—2)



6. An electrical circuit arrangement comprising a transformer having a primary winding and a secondary winding, means for producing pulses at the secondary winding of said transformer comprising an amplifier element connected to said primary winding and means coupled to said amplifier means for periodically interrupting current flow through said primary winding and said amplifier element, means for rectifying the pulses at the said secondary winding thereby to produce a direct voltage, and means for stabilizing the value of said voltage, said latter means comprising a capacitative voltage divider connected to said secondary winding for producing a first control voltage, a tertiary winding coupled to said primary winding to a greater degree than to said secondary winding for producing a second control voltage, means for rectifying said second control voltage, means for combining said first control voltage and said rectified second control voltage to produce a resultant voltage, means for rectifying said resultant voltage, and means for applying said rectified resultant voltage to said amplifier element thereby to vary the current flow through said amplifier element in a sense to maintain said direct voltage substantially constant.

3,051,889
CONTROL CIRCUITS
Karl I. Selin, Sundbuberg, Sweden, assignor, by mesne assignments, to Basic Products Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 27, 1957, Ser. No. 705,656
4 Claims. (Cl. 323—7)



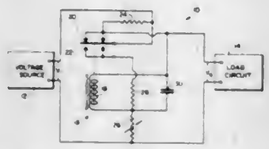
1. In a current regulator arrangement for a load circuit supplied with A.C., the combination including an A.C. load means, said load means having a combination of resistance and reactance, two saturable reactors having load windings connectable with said load means in said load circuit and A.C., each of said reactors having a control winding connected in series with a source of D.C., said control windings being connected in opposite polarity relation to said load windings so that no fundamental frequency of voltage from the load circuit will be induced in the source of D.C. of said control circuit, inductor means in the control circuit, said inductor means being selected so that:

$$L_c=\frac{1}{\omega}\left(\frac{N_c}{N_a}\right)^2\left[\sqrt{\frac{V^2}{I_s^2}-R_L^2}-X_L\right]$$

wherein

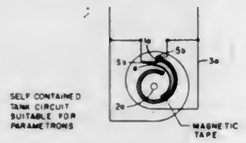
L_c=control circuit inductance
ω=frequency in radians/second
N_c=control-winding turns per core
N_a=load-winding turns per core
R_L=load resistance
X_L=load reactance
V=R.M.S. supply voltage
I_s=R.M.S. value of current for desired sinusoidal wave

3,051,890
VOLTAGE REGULATOR CIRCUIT
Robert S. Wedgewood, Toronto, Ontario, Canada, assignor to C. P. Clare Canada Ltd., Toronto, Ontario, Canada, a corporation of Canada
Filed May 19, 1959, Ser. No. 814,295
2 Claims. (Cl. 323—66)



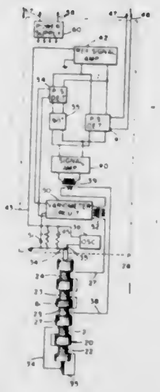
1. A circuit for regulating the voltage supplied to a load circuit from a voltage source; comprising a mercury relay having a winding, a first pair of normally closed contacts, and a second pair of normally open contacts; first circuit means including said first pair of contacts for connecting said load to said source; first resistance means shunted across said first pair of contacts; second circuit means connecting said winding across said source; second resistance means included in said second circuit means for adjusting said winding to operate said relay only when a voltage equal to or greater than a predetermined value is supplied by said source; capacitive means shunted across said winding to delay the release of said relay; and third circuit means including said second pair of contacts for reducing the voltage applied to said winding when said relay operates so as to cause the release of said relay after a time interval determined by said capacitive means and by the magnitude of the voltage supplied by said source.

3,051,891
TANK CIRCUIT
Otto A. Jorgensen, Pittsford, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 18, 1959, Ser. No. 800,284
4 Claims. (Cl. 323—76)



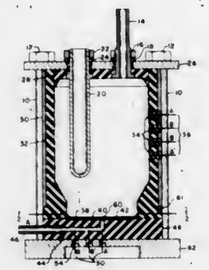
1. In a tank circuit, a tube comprising at least one closed turn of tape having a non-conductive body and conductive coatings on its opposite surfaces, at least one of said coatings containing magnetic material, means for separating the outward facing from the inward facing ones of said coatings, a coil positioned adjacent said tube and means for connecting at least one of said coatings to said coil.

3,051,892
ELECTROMAGNETIC WELL LOGGING SYSTEMS
Owen H. Huston, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Sept. 6, 1957, Ser. No. 682,441
19 Claims. (Cl. 324—6)



3. In apparatus for investigating an electrical property of earth formations traversed by a borehole, the combination comprising a transmitter coil and a receiver coil fixedly spaced for longitudinal movement through a borehole, means for passing sinusoidal current through said transmitter coil to induce in said receiver coil a potential having a conductive component and a residual component in phase with said current and a reactive component in phase quadrature with respect to said current, a compensating coil spaced intermediate said transmitter and receiver coils and connected in series opposition with one of said coils for diminishing said quadrature component, means providing a closed conductive path located in and exposed to the electromagnetic flux field of the transmitter coil and supported in adjustable inductive coupling relation to said transmitter and receiver coils for diminishing said residual component, and means selectively responsive to said in-phase components for providing a signal at the surface varying as a function of formation conductivity.

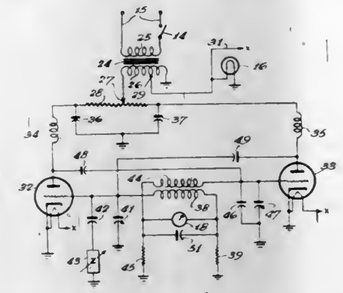
3,051,893
CELL FOR DETERMINING DRILLING MUD RESISTIVITIES
Ralph D. Lynn, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed Apr. 22, 1959, Ser. No. 808,042
11 Claims. (Cl. 324—30)



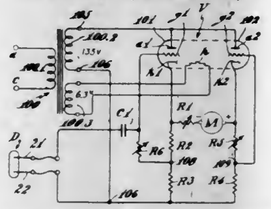
1. Improved apparatus for determining the electrical resistivity of a fluid drilling mud, the electrical resistivity of the mud cake, and the electrical resistivity of the filtrate which comprises: a metallic supporting bottom plate, a metallic supporting top plate, and a metallic cylindrical case positioned between said bottom plate and said top plate; a non-conducting bottom liner positioned on the top of said bottom plate, a non-conducting cylindrical liner substantially positioned within said cylindrical case, a non-conducting top liner positioned below said top plate, means for introducing a mud sample to within said cylindrical liner, tertiary electrode means extending from within said cylindrical liner to without said cylindrical liner and connected to an electrical resistivity measuring circuit; a filter positioned on the top of said bottom liner; closely spaced secondary electrode means above said filter means connected to an electrical resistivity measuring circuit whereby as said cake connects on said filter, it will form about and encase said secondary electrodes; a drain for removing filtrate, primary electrodes connected to said drain and to an electrical resistivity measuring circuit.

3,051,894
IMPEDANCE INDICATING INSTRUMENT
David F. Fathauer, Dalton City, Ill., assignor to Radson Engineering Corporation, Macon, Ill., a corporation of Illinois
Filed Oct. 2, 1958, Ser. No. 765,714
17 Claims. (Cl. 324—61)

1. Apparatus energized from a source of electrical energy for measuring a variable capacitance comprising a self-exciting oscillatory circuit, said circuit including a tuned circuit adapted to receive oscillatory electrical energy, said tuned circuit comprising a predetermined inductance, a relatively large capacitance, a known capacitance, and said variable capacitance connected seriatim and forming a single relatively low impedance closed loop for oscillatory energy, unilaterally conductive means connected in parallel with said known capacitance and conductive principally in only one direction, unilaterally conductive means connected in parallel with said variable capacitance and conductive principally in only the other direction, and indicator means responsive to direct current connected in parallel with said relatively large capacitance.

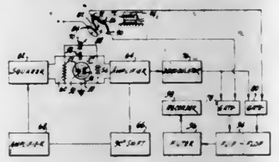


3,051,895
GAS DETECTION
Robert L. Carson, 305 El Monte Road, El Cajon, Calif.
Filed Apr. 21, 1955, Ser. No. 502,840
3 Claims. (Cl. 324—71)



1. In the art of qualitative and quantitative detection of gases and vapors, probe means comprising; two conducting members spaced from each other; crystalline body means joined to said conducting members and including a substance of the group consisting of germanium, oxides of cobalt, and oxides of nickel, in the form of a plurality of crystals in contact at least over part of the surfaces of said crystals such as to present at least one essentially continuous superficial bridge between said conducting members, an appreciable portion of said body means being freely exposed to said gases and vapors, said body means having a surface conductivity directly responsive to the amount of said gases and vapors in contact therewith; and measuring means including a voltage source connected across said conducting members and means for detecting conductivity variations of said body means caused by the effect of ambient gases or vapors of certain properties upon the electronic energy structure and thus the conductivity of the body.

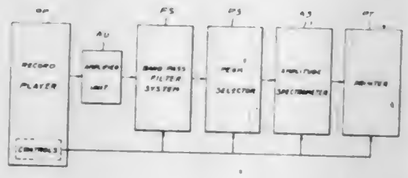
3,051,896
FREQUENCY DETECTOR
Wladyslaw J. Bieganski, Fords, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 6, 1958, Ser. No. 733,444
2 Claims. (Cl. 324—71)



1. A system for measuring the pressures within portions of a body, said system comprising, in combination, a

passive pill adapted to be moved to said portions of said body, said pill comprising a resonant circuit and means to change the frequency of said resonant circuit in response to the ambient pressure about said pill, means to produce frequency modulated oscillations of substantially constant amplitude that sweep through a range of frequencies periodically, said range of frequencies including frequencies that can be produced by said resonant circuit, said means to produce frequency modulated oscillations comprising means to deliver energy to said resonant circuit when coupled thereto and when said oscillations sweep through the frequency of said resonant circuit, means to demodulate said oscillations to obtain a signal when energy is absorbed by said resonant circuit, means including a bistable flip-flop circuit having an output and two inputs responsive to said signals, means synchronized with said means to produce frequency modulated oscillations to gate said signals alternately to said two inputs, and means connected to said output of said flip-flop circuit to indicate said pressures as a function of the time intervals between said signals.

3,051,897
ANALYSIS SYSTEM
Raymond A. Peterson, Altadena, and Frank B. Coker, Pasadena, Calif., assignors, by mesne assignments, to United Electrodynamics, Inc., Pasadena, Calif., a corporation of California
Filed Feb. 11, 1957, Ser. No. 639,414
19 Claims. (Cl. 324—77)



6. In a system for analyzing a record of an oscillatory wave, the combination of:

an automatic record player for repeatedly playing the record of the oscillatory wave and including means for reproducing said oscillatory wave as a corresponding electrical wave each time said record is played;

an amplitude spectrometer having a plurality of amplitude gates connected to a common input, said amplitude gates being adapted to produce signals at its output only when the signals applied to said common input lie within different corresponding predetermined amplitude ranges;

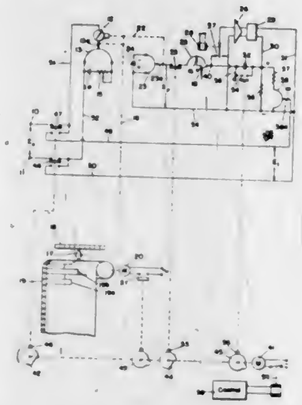
a filter system having an input connected to said record player and an output and comprising a plurality of band-pass filters having different band-pass characteristics;

means controlled by said automatic record player for connecting said filters successively one at a time between the input and the output of said filter system each time said record is played, whereby an electrical wave is produced at the output of said filter system each time said record is played, which electrical wave comprises only components lying within a predetermined band of frequencies corresponding to the filter connected in said filter system;

means controlled by the output of said filter system for applying to said amplitude spectrometer clock pulses which have amplitudes corresponding to the amplitudes of successive wave pulses of the electrical waves appearing at the output of said filter system; and

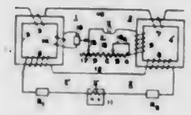
means for measuring the relative number of signals produced by the respective amplitude gates during each play of the record.

3,051,898
MEASURING AND INTEGRATING SYSTEM
James U. Eynon, Willow Grove, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 28, 1959, Ser. No. 842,879
17 Claims. (Cl. 324—100)



1. A measuring and integrating apparatus comprising a measuring system having an output circuit and an input circuit, switching means for applying an input signal to said input circuit proportional to the magnitude of a condition for producing at said output circuit a first output of magnitude proportional to the magnitude of said condition, integrating means having an output circuit and an input circuit connected to said output circuit of said measuring system for integrating with respect to time said first output and for producing at said output circuit of said integrating means a second output proportional to the integral with respect to time of said first output, and means for operating said switching means for disconnecting said integrating means from said output circuit of said measuring system and for connecting said output circuit of said integrating means to said input circuit of said measuring system in place of the input responsive to the magnitude of said condition for establishing a magnitude of the output from said measuring system proportional to the integral with respect to time of said magnitude of said condition.

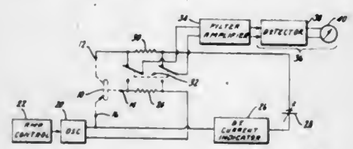
3,051,899
REMOTE METERING OF ELECTRIC ENERGY WITH CURRENT TRANSFORMER
Herman Wald, 23—31 29th St., Astoria, N.Y.
Filed Oct. 23, 1958, Ser. No. 769,178
3 Claims. (Cl. 324—127)



1. An electric remote metering system including a remotely located wattmeter for measuring alternating current energy comprising an alternating current transform-

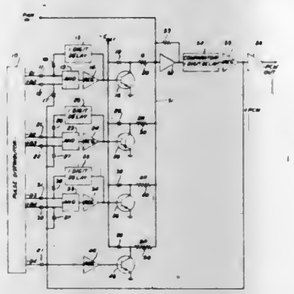
ing device of balanced ampere-turns including a main current transformer having a primary winding, a main secondary winding and a tertiary control winding, said wattmeter forming one part of the secondary load having its current coil connected to said main current transformer by relatively long leads constituting an additional part of the secondary load; an auxiliary current transformer having a primary winding, a principal secondary winding, an auxiliary secondary winding having in series a compensating impedance to form a closed compensating circuit inducing a compensating voltage into said principal secondary winding; a control relay means with movable means, the number of turns of said principal secondary winding of said auxiliary transformer being the same as that of its auxiliary secondary winding, the said primary windings being connected in series with each other and in the line in which a primary current to be measured is flowing, the said secondary winding of the main transformer and said secondary loads being connected in series aiding relationship with the principal secondary winding of said auxiliary transformer forming the main secondary load circuit, said compensating impedance having an inductance component initially selected to be substantially equal to the inductance of said wattmeter load and its resistance being of the potentiometer type having a slider for shunting any desired portion thereof, said compensating impedance being connected in series with said auxiliary secondary winding, said control relay means being controlled by the error potential on said tertiary winding to change the position of said movable means which are representative of said error, mechanical means connecting said slider to said movable means for applying thereto a displacement for setting the said potentiometer to a desired value, thereby to compensate said exciting ampere-turns by generating a compensating voltage to be introduced in series relationship into the main secondary circuit for delivering the full volt-amperes required by said load resistances under varying operating conditions to re-establish the ampere-turn balance in said main transformer and thereby to reduce the said exciting ampere-turns substantially to zero value.

3,051,900
IN-CIRCUIT TRANSISTOR TESTER
Sol Zechter, Broomall, and Harold Gruen, Elkins Park, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed May 8, 1959, Ser. No. 811,842
13 Claims. (Cl. 324—158)



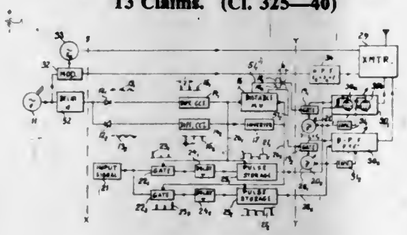
1. A transistor test circuit comprising means adapted to be coupled to the emitter and collector of the transistor to be tested for biasing the transistor to be tested for essentially class B operation, means adapted to be coupled to the base and emitter of the transistor to be tested for supplying a signal at a first frequency to the base-emitter circuit of said transistor and means adapted to be coupled to the transistor to be tested and substantially non-responsive to signals at said first frequency for measuring the amplitude of a component of the collector current and a component of the base current of said transistor which have a second frequency which is a multiple of said first frequency.

3,051,901
ENCODER FOR PULSE CODE MODULATION
Robert E. Yaeger, Bedminster, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 24, 1958, Ser. No. 744,190
9 Claims. (Cl. 325—38)



1. In a pulse code modulation encoder for transforming a signal amplitude sample into a code group of marks and spaces occupying a predetermined number of successive time slots, a plurality of channels equal in number to said predetermined number of time slots and each corresponding to a respective one of said time slots, means in each of said channels to generate a reference pulse in and substantially confined to its respective time slot, a weighted summing network connected to combine simultaneous reference pulses from said channels to form a single combined reference pulse substantially confined to its respective time slot, means to compare the amplitude of said combined reference pulse with said signal amplitude sample, means to regenerate said reference pulse in each of said channels during each succeeding time slot within the code group whenever said combined reference pulse is less than said signal amplitude sample in the time slot in which said reference pulse appears for the first time, and output means to generate a mark in each time slot during which the difference between said combined reference pulse and said signal amplitude sample has a predetermined polarity, leaving spaces in the remaining ones of said time slots.

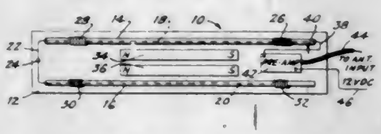
3,051,902
ANGLE-MODULATION SYSTEM
Karl F. Ross, 5121 Post Road, Riverdale, N.Y.
Filed Feb. 17, 1958, Ser. No. 715,705
13 Claims. (Cl. 325—40)



1. A system for transmitting intelligence, comprising an adjustable source of carrier wave, blocking means for periodically suppressing said carrier wave in the rhythm of a control frequency, control means for said source responsive to an input signal, circuit means synchronized with said blocking means for intermittently rendering said control means effective to angle-modulate the output of said source during periods in which said carrier wave is suppressed while maintaining the frequency of the so modulated output substantially constant at all

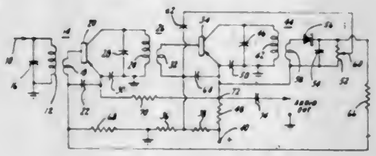
other times, and transmitter means connected to said source for sending out said carrier wave, and bandwidth-limiting means between said source and said transmitter means for substantially eliminating harmonics of said control frequency in the sidebands of said carrier wave during intervals of transition from suppressed to unsuppressed condition and vice versa.

3,051,903
RADIO ANTENNA
Robert D. Morrow, 6324 Haywood Ave., Baltimore 6, Md.
Filed Dec. 30, 1959, Ser. No. 863,039
11 Claims. (Cl. 325—373)



1. A radio receiving antenna comprising at least two parallel ferromagnetic cores, a coil wound around each of said cores, each of said coils comprising a tightly wound portion at one end of said cores and a spaced loosely wound portion at the other end of said cores, means connecting said coils in series, and magnetic means positioned between said cores.

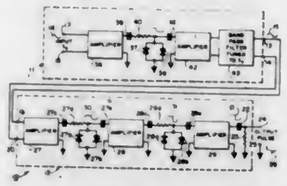
3,051,904
REFLEXED AMPLIFIER CIRCUIT
John W. Waring, Palmyra, N.J., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Mar. 15, 1960, Ser. No. 15,156
7 Claims. (Cl. 325—486)



1. A reflexed amplifier circuit comprising a transistor element having a base, an emitter, and a collector, intermediate frequency coupling means connected to the base-emitter circuit of said transistor, detector means, means coupling said detector means to the emitter-collector circuit of said transistor, audio frequency coupling means coupling the output of said detector means to the base-emitter circuit of said transistor, said detector means being poled so that the peaks of a modulated intermediate frequency signal supplied to said intermediate frequency coupling means tend to move the operating point of said transistor in the direction of collector current cutoff, an audio frequency load resistor connected in series with the emitter-collector path of said transistor and providing a direct current path from said emitter to a point of fixed reference potential, and means for deriving an audio frequency output signal from said load resistor.

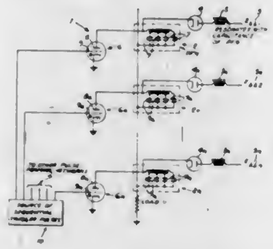
3,051,905
PHASE LOCKED TRIGGER GENERATOR
George F. Morris, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 1, 1960, Ser. No. 12,147
5 Claims. (Cl. 328—13)

5. A wave forming circuit excited by an alternating current input signal for producing an output signal phase locked to and equal in frequency with the input signal but having a nearly constant amplitude, said circuit comprising an amplifier stage for amplifying the input signal and having in its output means for clipping both peaks of the amplified input signal above and below predetermined levels, a band pass filter tuned to the frequency of the input signal and sufficiently selective to reject all of the harmonics thereof for receiving the clipped signal de-



veloped by the rectifiers and developing therefrom the output signal from said circuit, said output signal bearing a fixed phase relationship to the input signal despite amplitude variations in the latter and despite any non-symmetrical clipping by the rectifiers, and a pulse generating network excited by said output signal for developing therefrom an output pulse accurately phase locked to the input signal regardless of amplitude variations of said input signal.

3,051,906
PULSE WAVEFORM SYNTHESIZER USING PLURALITY OF INDIVIDUALLY CHARGED STORAGE MEANS SEQUENTIALLY DISCHARGED THROUGH COMMON LOAD
Herbert S. Haynes, Montclair, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed May 26, 1958, Ser. No. 737,714
7 Claims. (Cl. 328—14)

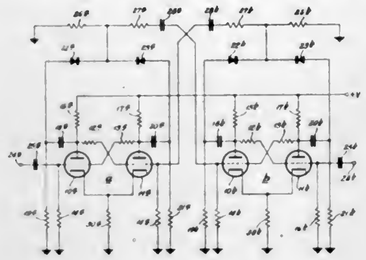


1. A pulse waveform synthesizing network comprising a plurality of electrical energy storage means, utilization means coupled in common to each of said storage means, means coupled to each of said storage means to charge each of said storage means to a predetermined value of voltage, and means coupled to each of said storage means to sequentially discharge said storage means through said utilization means to provide a waveform approximating a predetermined shape.

3,051,907
BIDIRECTIONAL TRISTABLE ELECTRONIC CIRCUIT EMPLOYING INTERNATIONAL ECCLES-JORDAN FLIP-FLOPS
Paul E. Carroll, Houston, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 17, 1958, Ser. No. 781,057
4 Claims. (Cl. 328—205)

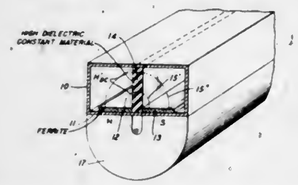
1. A tristable electronic circuit comprising a pair of interconnected bistable flip-flop circuits and independent

first and second inputs, said first input being connected to one of said bistable flip-flop circuits and said second input being connected to the other of said bistable flip-flop circuits, said tristable electronic circuit assuming a first stable state if an input signal is applied to said first input when said tristable electronic circuit is in a second stable state, said tristable electronic circuit assuming said second stable state if an input signal is applied to said first



input when said tristable electronic circuit is in a third stable state, said tristable electronic circuit also assuming said second stable state if an input signal is applied to said second input when said tristable electronic circuit is in said first stable state, and said tristable electronic circuit assuming said third stable state if an input signal is applied to said second input when said tristable electronic circuit is in said second stable state.

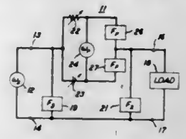
3,051,908
SLOW-WAVE BROADBAND NONRECIPROCAL MICROWAVE DEVICES
William W. Anderson, Florham Park, and Marion E. Hines, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 3, 1960, Ser. No. 6,393
11 Claims. (Cl. 330—5)



1. A broad band nonreciprocal device for electromagnetic wave energy comprising a wave guiding structure having at least first and second conductive boundaries, means including capacitive loading of said structure along a longitudinal portion thereof for reducing the phase velocity of said wave energy supported by said loaded structure to less than the phase velocity in free space, an element of ferrite material occupying a region of substantial transverse extent coextensive with and on at least one side of said loading means, and means for magnetically biasing said element inhomogeneously along said substantial transverse extent.

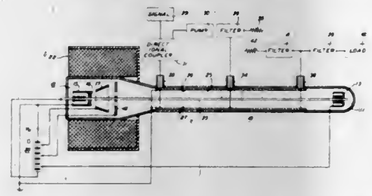
3,051,909
UP-CONVERTER AMPLIFIER CIRCUITS WITH ISOLATION
Rudolf S. Engelbrecht, Basking Ridge, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1960, Ser. No. 79,456
10 Claims. (Cl. 330—7)

1. An amplifier circuit comprising, in combination, a source of signals to be amplified, a frequency converting network connected to said source, said network comprising a nonlinear variable resistance and a nonlinear variable reactance, means for supplying pump energy to said resistance and said reactance in phase quadrature compris-



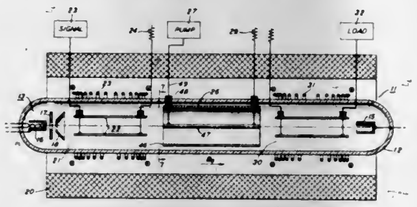
ing a source of pump energy connected to said network, the frequencies of the pump energy and the signals being so related as to produce parametric amplification, and a utilization circuit connected to the output of the network.

3,051,910
ROTATING BEAM SPACE-CHARGE WAVE PARAMETRIC AMPLIFIER
William W. Rigrod, Millington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 27, 1960, Ser. No. 65,310
6 Claims. (Cl. 330—43)



1. An electron discharge device comprising means for forming and projecting an electron beam, said beam being characterized by fast and slow modes of space-charge wave propagation, means for imparting a substantially uniform rotational velocity component to said beam, a source of signal frequency wave energy, a source of pump frequency wave energy, means comprising a pair of parallel plates for causing signal wave energy to propagate along said beam as a fast space-charge wave, means for propagating pump wave energy in coupling relationship to said beam, and means for extracting fast mode signal frequency energy from said beam.

3,051,911
BROADBAND CYCLOTRON WAVE PARAMETRIC AMPLIFIER
Rudolf Kompfner, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 21, 1960, Ser. No. 77,323
11 Claims. (Cl. 330—43)



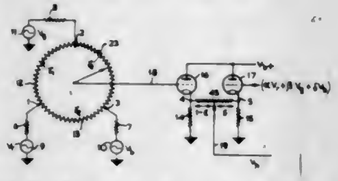
1. An electron discharge device comprising: means for forming and projecting a beam of electrons along a path; means for producing a magnetic field which is substantially parallel with said path thereby focusing said beam and establishing inherent slow and fast cyclotron modes

of wave propagation within said beam; a distributed circuit input coupler for propagating a first traveling wave in coupling relationship to the fast cyclotron mode of said beam; means at the upstream end of said input coupler for increasing the flux density of said magnetic field within said beam; means at the downstream end of said input coupler for decreasing the magnetic flux density within said beam; means for parametrically amplifying the energy of said first traveling wave comprising a distributed circuit pump coupler for propagating a second traveling wave in the $n=2$ mode and in coupling relationship to the fast cyclotron mode of said beam; a distributed circuit output coupler for extracting fast cyclotron wave energy from said beam; means at the upstream end of said output coupler for increasing the magnetic flux density within said beam; and means at the downstream end of said coupler for decreasing the magnetic flux density within said beam.

3,051,912
CIRCUIT ARRANGEMENT FOR THE FORMATION OF A SIGNAL FROM A PLURALITY OF OTHER SIGNALS

Johannes Kaashoek and Teunis Poorter, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 15, 1958, Ser. No. 755,327
Claims priority, application Netherlands Aug. 27, 1957
4 Claims. (Cl. 330—69)

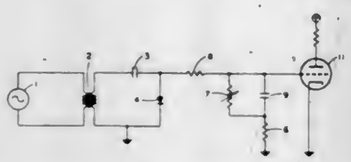


1. A circuit for forming an output signal from a plurality of input signals in which the output signal is linearly dependent upon said input signals, said circuit comprising tapped impedance means, means applying said signals to the terminals of said impedance means, means providing a sum signal, said sum signal being the sum of said input signals in predetermined proportions, first and second amplifying devices each having an input electrode and an output electrode, means connecting the tap of said impedance means to one input electrode, means applying said sum signal to the other input electrode, a tapped impedance connected between said output electrodes, and output circuit means connected to the tap of said tapped impedance.

3,051,913
AUTOMATIC GAIN CONTROL AMPLIFIER CIRCUITRY

Frederick H. Gardner, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Oct. 12, 1959, Ser. No. 846,021
2 Claims. (Cl. 330—136)

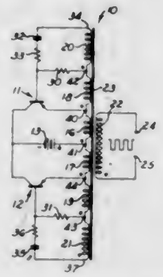


1. An automatic gain control circuit comprising, a source of alternating current having a first and second terminal, a capacitor having a first and second terminal, a non-linear impedance device having a first and second terminal, a first resistance device having a first and second terminal and a second resistance device having a first and second terminal, an amplifying device having an amplification factor which is proportional to the bias applied thereto, said amplifying device having an input terminal, an output terminal, and a control terminal, means for coupling the first terminal of said source of alternating current to the first terminal of said capacitor, means for coupling the second terminal of said capacitor to the first terminal of said first resistance device and to the first terminal of said non-linear impedance device, means for connecting the second terminal of said first resistance device to the control terminal of said amplifying device and to the first terminal of said second resistance device, and means for coupling the second terminal of said source of alternating current to the second terminal of said non-linear impedance device, to the second terminal of said second resistance device, and to the input terminal of said amplifying device.

3,051,914
D.C. TO A.C. CONVERTER

J Herbert Brown, La Habra Heights, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Filed Nov. 6, 1958, Ser. No. 772,373
9 Claims. (Cl. 331—113)



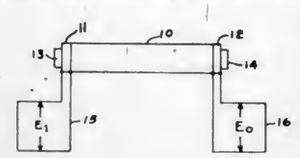
1. In a square wave oscillator having first and second transistors, a saturable magnetic core, first and second input windings and first and second bias windings on the core, and a direct current voltage source, with the collector and emitter electrodes of said first transistor connected in series with said first input winding across said source in parallel with the series circuit of the collector and emitter electrodes of said second transistor and said second input winding, and with the first bias winding connected to the base of the first transistor and the second bias winding connected to the base of the second transistor, and with all four windings having the same polarity such that a flux change toward saturation of the core produced by conduction in a transistor also biases the transistor toward conduction, the combination of: first and second charge storage means connected to the base of the first and second transistors respectively; and means including first and second charging windings on said core coupled respectively to said first and second charge storage means for charging each of said charge storage means while the corresponding transistor is conducting and the flux in the core is changing, with the charge on each charge storage means being of a polarity to cut off conduction in the conducting transistor and increase conduction in the other transistor.

3,051,915
ULTRASONIC DELAY LINE

Herbert L. Hoover and Neil D. Van Dyke, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Nov. 17, 1958, Ser. No. 774,252
4 Claims. (Cl. 333—30)

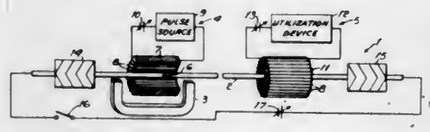
1. An ultrasonic delay line assembly comprising a vitreous silica acoustic transmission medium and input and output piezoelectric transducer members affixed to said medium, wherein said transmission medium is a homogenized body of vitreous silica the ultrasonic characteristics of which have been modified to reduce acoustic losses therethrough by subjecting said medium in its solid state to a direct electric current of between 1,000–1,480 volts per centimeter while at a temperature of between 950–1200° C.



3,051,916
ELECTROMECHANICAL DELAY DEVICE

Arthur Rothbart, Bronx, N.Y., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Feb. 4, 1959, Ser. No. 791,228
6 Claims. (Cl. 333—30)

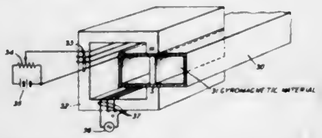


1. An adjustable delay line comprising a helical magnetostrictive delay line for transmitting a torsional signal therealong, a toroidal transducer coupled about a portion of said helical delay line to apply said signal in the form of a pulsed circularly directed magnetic field, thereto, a permanent magnet cooperatively coupled with said toroidal transducer to said portion to apply a steady magnetic field longitudinally of said portion and perpendicularly of said circularly directed magnetic field, another toroidal transducer coupled about another portion of said helical delay line to receive said signal therefrom and means for simultaneously applying a linear component of motion and a rotary component of motion to said one of said transducers such that the length of said helical delay line is adjusted between said transducers thereby determining the amount of delay applied to said signal.

3,051,917
METHOD OF SUPPRESSING SATURATION EFFECTS IN GYROMAGNETIC DEVICES

Ernst M. Gyorgy, Morris Plains, and Henry E. D. Scovil, New Vernon, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 22, 1960, Ser. No. 38,038
8 Claims. (Cl. 333—31)

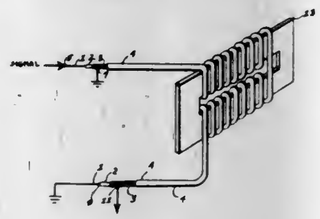


1. An electromagnetic wave transmission device comprising a section of guided wave path having an element of ferromagnetic material disposed therein, said material characterized as having a first transmission constant for applied signals below a critical power level and a second transmission constant different than said first constant for applied signals above said critical power level, said material further characterized as having a given spin wave build-up time, means for establishing a given state of magnetization within said material, means for applying electromagnetic wave energy to said section of wave path having a power level greater than said critical power level, and means for preventing said material from assuming said second transmission constant including means for modulating said given state of magnetization at a rate not less than the reciprocal of the spin wave build-up time of said material.

3,051,918
TRANSMISSION-LINE TRANSFORMER

Kenneth J. Germeshausen, Newton Centre, Mass., assignor to Edgerton, Germeshausen & Grier, Inc., Boston, Mass., a corporation of Massachusetts

Filed Nov. 18, 1955, Ser. No. 547,595
3 Claims. (Cl. 333—31)

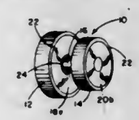


1. Apparatus for inverting the polarity of short-duration wide-bandwidth electrical impulses comprising:
a source of unbalanced short-duration wide-bandwith impulses having its output referenced to ground;
a load adapted to receive the inverted impulses;
a coaxial transmission line having a center conductor, and an outer conductor insulated from the center conductor, one of said conductors having a first input terminal at one end of the transmission line and a first output terminal at the other end of the transmission line, and the other of said conductors having a second input terminal at the said one end of the transmission line and a second output terminal at the said other end;
means for connecting the said source to the said first input terminal;
means for connecting the said load to the said second output terminal;
means for connecting the first output terminal to the second input terminal through ground; and
a closed magnetic core about which said coaxial transmission line is coiled a plurality of times intermediate the said input and output terminals, said core being insulated from the conductors of the transmission line.

3,051,919
FILTER-TRANSFORMERS

Donald P. Faulk, Shaker Heights, and William J. Gerber, Willoughby, Ohio, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

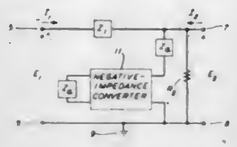
Filed Sept. 17, 1958, Ser. No. 761,522
8 Claims. (Cl. 333—72)



1. A frequency-selective impedance transformer comprising a pair of resonators one resonant at a preselected frequency and the other anti-resonant at said frequency; means mechanically coupling said resonators and adapted

to transmit vibrations from one to the other; means for driving one of said resonators; and means for deriving a signal from the other of said resonators.

3,051,920
ACTIVE TWO-PORT NETWORK
Irwin W. Sandberg, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 3, 1961, Ser. No. 93,175
6 Claims. (Cl. 333—80)

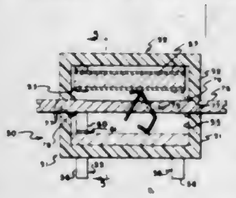


1. An active, two-port network having an open-circuit voltage transfer function T and comprising a series impedance Z_1 at its input end and a shunt impedance branch at its output end, the shunt branch comprising a resistor of value R_2 shunted by the combination of an impedance Z_a connected in series with a negative-impedance converter terminated by an impedance Z_b, in which

$$T=\frac{Z_a-Z_b}{Z_1+(1+Z_1/R_2)(Z_a-Z_b)}$$

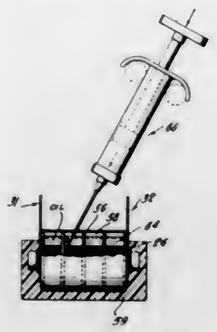
and Z_1 and R_2 are so chosen with respect to T that the impedances Z_a and Z_b comprise only resistors and capacitors.

3,051,921
VARIABLE RESISTOR CONSTRUCTIONS
Marlan E. Bourns, Wilbur T. Hardison, and Warren D. Hulbert, Riverside, Calif.; said Hardison and Hulbert assignors to Bourns, Inc., a corporation of California
Original application July 26, 1954, Ser. No. 445,534, now Patent No. 2,882,375, dated Apr. 14, 1959. Divided and this application Mar. 2, 1959, Ser. No. 809,331
6 Claims. (Cl. 338—180)



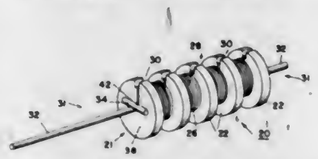
1. A new and improved variable resistor construction including: an elongate insulative housing having sides and opposed ends; a resistance member disposed within said housing adjacent to one of said sides; an electrically conductive screw-threaded shaft positioned principally within said housing and having an end disposed so as to be accessible from the outside of at least one of the ends of the housing; a reversely bent metallic conductive-spring contact member having opposed apertured portions, disposed within said housing in engagement with said shaft and with the shaft extending through the apertures so as to be moved by rotation of the shaft, the contact member being in electrical contact with said resistance member; a spring metal terminal strip extending through and embedded in one side of said housing adjacent an end thereof, said terminal strip extending transversely of said housing and resiliently bearing against the side of said shaft so as to make electrical contact therewith; and terminal means each attached to a respective end portion of said resistance member and projecting through said housing.

3,051,922
PRECISION RESISTANCE APPARATUS AND METHOD OF MAKING
Loebe Julie, New York, N.Y., assignor to Julie Research Laboratories, Inc., New York, N.Y.
Original application Mar. 29, 1957, Ser. No. 649,439. Divided and this application Jan. 23, 1961, Ser. No. 97,401
5 Claims. (Cl. 338—234)



1. A method of making an oil filled encapsulated wire wound resistor comprising the steps of, winding a resistance wire intermediate the ends of a spool member, connecting terminal means to the individual ends of said winding, wrapping a material around said wire wound spool member to form a sleeve encasing said winding from one end of the winding to the other end thereof, said sleeve and spool member co-operating to form a relatively hollow pocket occupied by the winding of resistance wire, surrounding the ends of the wire wound spool and also surrounding a substantial portion of said sleeve with an outer protective encapsulating material so as to leave a portion of said sleeve temporarily uncovered, injecting an oil fluid into said pocket through said uncovered sleeve portion so as to immerse said winding of resistance wire contained in said pocket in an oil bath, and surrounding said uncovered sleeve portion with said encapsulating material to complete encapsulation of said wire wound resistor.

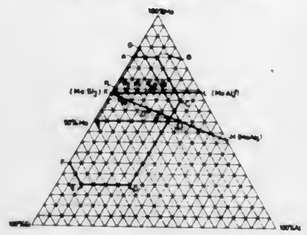
3,051,923
ENCAPSULATED PRECISION WIRE-WOUND RESISTORS
Loebe Julie, New York, N.Y., assignor to Julie Research Laboratories, Inc., New York, N.Y.
Filed Sept. 22, 1959, Ser. No. 841,516
2 Claims. (Cl. 338—261)



1. An encapsulated wire-wound resistor comprising a cylindrical bobbin having an axial opening at each end, a pair of flexible wire terminals extending axially from opposite ends of the resistor and each having its inner end cemented into the bore of the bobbin, a pair of cross pieces of resistance wire each secured to one of said wire terminals and being cemented in position transversely of the end of the bobbin, thereby forming an anchor for each terminal wire, a resistance wire wound on the bobbin and having its ends butt-welded to the respective cross pieces at each end of the bobbin, a sleeve of insulating the bobbin at each end, thereby forming a cup at each material surrounding the bobbin and projecting beyond

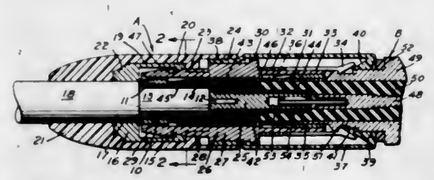
end of the bobbin, and a plug of encapsulating material filling each cup and surrounding the cross piece and portion of the terminal wire adjacent thereto.

3,051,924
SINTERED ELECTRIC RESISTANCE HEATING ELEMENTS AND METHODS OF PRODUCING SUCH ELEMENTS
Styrbjörn Amberg and Nils Gustav Schrewelius, Hallstahammar, Sweden, assignors to Aktiebolaget Kanthal, Hallstahammar, Sweden
Filed July 6, 1959, Ser. No. 824,993
Claims priority, application Sweden July 5, 1958
7 Claims. (Cl. 338—330)



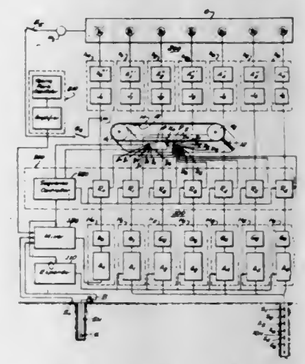
1. An electric resistance heating element of high mechanical strength which is oxidation resistant at high temperatures consisting essentially of an incandescent heating zone and two terminal end portions, said incandescent zone consisting essentially of a sintered body having metallically conducting particles constituted by a silico-aluminide which forms a pure phase with crystals of the lattice structure C 40 and of the composition $(Mo_{1-y}M_y)(Si_{1-x}Al_x)_2$ in which x ranges from 0.1 to 0.6 and y ranges from 0.0 to 0.7 and M is at least one metal selected from the group consisting of titanium, zirconium, hafnium, tantalum, niobium, vanadium, chromium and tungsten, said terminal end portions consisting of metallically conducting tetragonal molybdenum disilicide, the incandescent zone and terminal end portions being of substantially the same cross-sectional area.

3,051,925
MECHANICALLY LOCKED ELECTRICAL CONNECTOR
Gordon P. Felts, Palm Springs, Calif., assignor to Microdot Inc., South Pasadena, Calif., a corporation of California
Continuation of application Ser. No. 646,630, Mar. 18, 1957. This application Jan. 31, 1961, Ser. No. 86,238
12 Claims. (Cl. 339—91)



1. In an electrical connector for coaxial cable having a central conductor and an outer insulated conductor sheath: a current carrying member secured to said central conductor; a ring member of current conducting material secured to said outer conductor and having a plurality of peripheral integral spring contact fingers; a cylindrical locking member concentrically surrounding said ring member, said locking member being positionable endwise over one end of said ring member and having an internal shoulder making abutment engagement with said one end; a cylindrical current conducting ferrule positionable endwise over the other end of said ring with its inner surface engaged by said spring contact fingers, said locking member and said ferrule having their adjacent ends overlapped; and means interlocking said overlapped ends against separation.

3,051,926
SEISMIC PROSPECTING SYSTEM
Frank S. Boice, Sonoita, Ariz., and Lenard H. Johnson, Pasadena, Calif., assignors, by mesne assignments, to United Geophysical Corporation, Pasadena, Calif., a corporation of California
Original application May 15, 1953, Ser. No. 355,374. Divided and this application Mar. 27, 1959, Ser. No. 802,336
19 Claims. (Cl. 340—15.5)

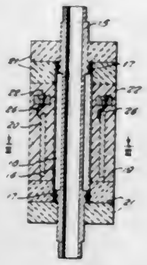


1. In seismic prospecting apparatus: a plurality of mutually spaced seismometers; an endless record belt; driving means for driving said belt along a predetermined path; a plurality of transducers mounted in a transducing area along a line transverse to said path and in operative relationship with different longitudinal zones of said belt; a plurality of normally inoperative amplifier channels having corresponding seismometers in their inputs and corresponding transducers in their outputs; means for starting said driving means to initiate the driving of said belt; means controlled by said driving means for rendering said channels operative only after said belt has been driven through at least a substantial part of a single revolution past said transducers for then recording on said belt seismic waves received by said seismometers only during a subsequent single revolution of said belt past said transducers; and means for generating a train of seismic waves.

3,051,927
TRANSDUCER ASSEMBLIES
Roy P. Mazzagatti, Bellaire, Tex., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 595,432, July 2, 1956. This application Aug. 4, 1960, Ser. No. 47,559
10 Claims. (Cl. 340—17)

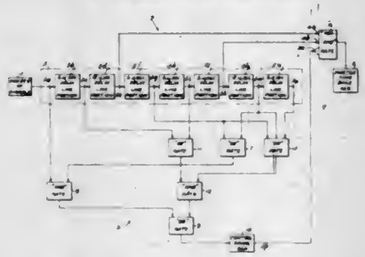
1. In a tool of an acoustic velocity well logging system wherein acoustic energy is transferred between the tool and a given medium having a characteristic acoustic impedance substantially like that of water, said tool including at least one transmitting transducer and at least one receiving transducer, the improvement wherein at least one of said transducers is included in a transducer assembly comprising a transducer element having a hollow cylindrical form, a rigid metallic support member disposed coaxially within said element, a coupling medium having an acoustic impedance having a value substantially equal to the geometric mean of the impedances of said transducer element and said given medium and without the range of acoustic impedances between that

of said member and said element, said transducer element being imbedded in said coupling medium so that a substantially uniform portion of said coupling medium is disposed between said transducer element and said given medium and acoustic decoupling means disposed between said transducer element and said rigid support member for acoustically decoupling said transducer element from said support member, said acoustic



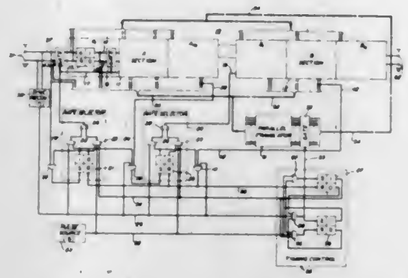
decoupling means comprising an interface defined by a tubular metallic sleeve closely fitted within said hollow cylindrical transducer element in contact with the coupling medium in which said transducer element is imbedded and an air space intermediate said sleeve and said rigid metallic support member, the ratio of the specific acoustic impedances of the two materials defining said interface being of the order of 7×10^4.

3,051,928
PULSE PAIR DECODER
John F. Sullivan, Bloomfield, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed June 30, 1959, Ser. No. 823,967
6 Claims. (Cl. 340—167)



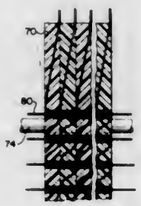
1. A decoder for generating an output signal upon the occurrence of a given pair of pulses spaced a predetermined time interval comprising: a source of a plurality of differently timed spaced pulse pairs including said given pair of pulses, such that pulse pairs other than said given pulse pairs may occur spaced said predetermined time interval; a delay line circuit coupled to said source to detect any pair of pulses spaced said predetermined time interval, said delay line comprised of integral multiple time delay sections; a logic circuit network means coupled to said source and to a plurality of said time delay sections of said delay line, said logic circuit network means comprised of interconnected "and," "or" gates effective to produce an inhibit signal upon the occurrence of any pulse pair spaced said predetermined time interval, other than said given pulse pair; gating means coupled to said delay line circuit; and means coupling said logic circuit network means to said gating means for inhibiting said gating means upon the occurrence of any pulse pair spaced said predetermined time interval other than said given pulse pair.

3,051,929
DIGITAL DATA CONVERTER
Larrabee M. Smith, Morris Plains, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 13, 1959, Ser. No. 799,183
4 Claims. (Cl. 340—172.5)



1. In combination, a first single transmission line for transmitting serial information-bearing pulse trains at a first repetition rate, a second single transmission line for transmitting serial information-bearing pulse trains at a second repetition rate different from said first repetition rate, and a pulse rate converter interposed between said first and second transmission lines for translating pulse trains at said first repetition rate on said first transmission line into pulse trains at said second repetition rate on said second transmission line, said converter comprising: an input shift register and an output shift register connected in series between said first and second transmission lines, a first source of advance pulses having said first repetition rate, a second source of advance pulses having said second repetition rate, means for applying advance pulses from said first source to each of said shift registers in synchronism with the arrival of a first pulse in each of said information-bearing pulse trains at that shift register, and means for applying advance pulses from said second source to each of said shift registers, in synchronism with the departure of said first pulse from said output shift register.

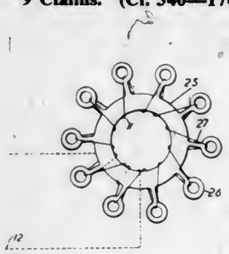
3,051,930
MAGNETIC COIL ARRAY
Herman E. Austen, Trotwood, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed June 12, 1958, Ser. No. 741,583
5 Claims. (Cl. 340—174)



2. A unit array of helical electric coils embedded in and supported by a common panel of dielectric material, said panel having two plane parallel surfaces bounded by edges, the coils being arranged in rows and columns, the coils extending through the panel to the two parallel surfaces, the axial holes of the coils being free of the panel material and at right angles to the parallel surfaces

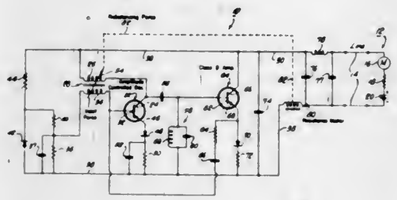
of the panel, and the coils of a row being electrically connected in series by being part of a common wire, the ends of each of said common wires extended beyond the edges of the panel and constituting electric terminals, the axial holes in the coils permitting bistable magnetic storage devices to be passed therethrough.

3,051,931
INTELLIGENCE STORAGE EQUIPMENT
Peter William Lennox, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,292
Claims priority, application Great Britain May 23, 1958
9 Claims. (Cl. 340—174)



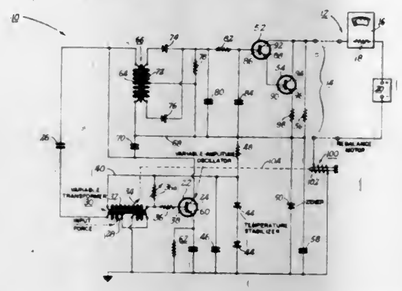
1. A ferromagnetic device, comprising a first magnetic element, having substantially rectangular hysteresis, with an aperture therein, a further plurality of similar magnetic elements, having subtantially rectangular hysteresis, disposed around the periphery of said first magnetic element in close proximity thereto, further comprising a winding including a plurality of turns which thread both the said first magnetic element and the said further magnetic elements.

3,051,932
ELECTRICALLY OPERATED APPARATUS FOR REMOTE MEASURING
John R. Cressey, Dedham, Neal D. Peterson, North Easton, Alfred Nazareth, Jr., Rehoboth, and Richard P. Lawler, Foxboro, Mass., assignors to The Foxboro Company, Foxboro, Mass.
Filed Sept. 12, 1958, Ser. No. 760,718
6 Claims. (Cl. 340—187)



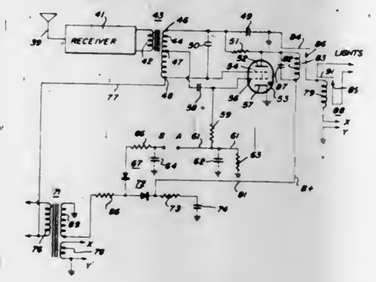
3. A highly accurate and stable remote measuring and indicating system comprising a first transistor amplifier having an input and an output, and including transducer means connected to apply a varying amount of positive feedback from said output to said input to cause high frequency oscillations varying in accordance with the value of a physical quantity being measured, a second transistor amplifier having an input and an output, coupling means including a resonant tank to apply an output signal from said first transistor amplifier to said second transistor amplifier, output means responsive to the average current flowing in said amplifiers to give a measure of said physical quantity, a pair of leads connecting said output means with said amplifiers, and a D.-C. source connected to said leads to energize said amplifiers.

3,051,933
ELECTRICALLY OPERATED APPARATUS FOR REMOTE MEASURING
John R. Cressey, Dedham, Neal D. Peterson, North Easton, Alfred Nazareth, Jr., Rehoboth, and Richard P. Lawler, Foxboro, Mass., assignors to The Foxboro Company, Foxboro, Mass.
Filed May 4, 1959, Ser. No. 810,808
11 Claims. (Cl. 340—187)



1. For use in electrical data transmission systems and the like, a remote transmitter adapted to send a D.-C. line signal over a two-wire transmission line to a central station which includes a D.-C. power supply connected to said transmission line for energizing said transmitter; said transmitter comprising: a variable-amplitude transistor oscillator having a positive feedback circuit between the output and the input of the transistor, said feedback circuit including coupling means having a movable element operable to vary the magnitude of the positive feedback signal so as to control the A.-C. output amplitude of said oscillator in accordance with the positioning of said movable element, rectifier means connected to said oscillator to produce a D.-C. control signal corresponding in magnitude to said A.-C. output amplitude, a transistor amplifier connected to said rectifier means and operable by said D.-C. control signal, and output circuit means connecting said transistor oscillator and said transistor amplifier in series with said two-wire transmission line to provide energizing current thereto from said D.-C. power supply, the flow of current through said transmission line being controlled by said transistor amplifier in accordance with the magnitude of said D.-C. control signal.

3,051,934
BUILDING PROTECTION SYSTEM
John C. Lesher, Erie, Pa., assignor, by mesne assignments, to Martha H. Egly, Michael J. Manchester and Rad-O-Lite, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 1, 1958, Ser. No. 777,340
7 Claims. (Cl. 340—224)



1. A remote control apparatus for a lighting system comprising a transmitter for transmitting carrier signals,

a receiver located in a prescribed area remote from said transmitter, said receiver having means for detecting said carrier signal, a burglar alarm system including a continuous conductive loop for protecting building openings, a lighting system for said prescribed area, a switch for controlling said lighting system, and means for actuating said switch, said means being independently responsive to transmission of carrier signals by said transmitter and in response to destruction of the continuity of said conductive loop independently of transmission of said carrier signals by said transmitter.

3,051,935
PROTECTIVE SCREEN
Clarence P. Willson, 4102 W. 105th St., Inglewood, Calif.
Filed May 21, 1959, Ser. No. 814,791
2 Claims. (Cl. 340—273)



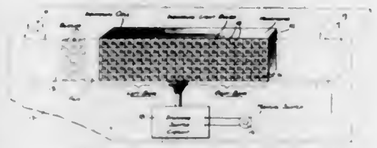
1. In a normally closed protective circuit for guarding a space enclosing structure and having alarm means actuated in response to an opening of said circuit, the combination comprising: a frame mounted on said space enclosing structure; a sheet of non-conductive screen material having its marginal portions secured to said frame; at least two spaced apart strands of conductive wire interwoven in said screen material, each of said strands having one end portion terminating adjacent said frame; means insulating said one end portions from said frame; means interconnecting said one end portions, respectively, to either side of said protective circuit; spaced part contacts connected to the other end portions of said strands; and, an electrical conductor secured to said space enclosing structure designed to electrically interconnect said other end portions by bridging said contacts, whereby removal of said frame from said space enclosing structure or severing of one of said strands will open said circuit.

3,051,936
ALARM SYSTEM FOR SHOPPING CARTS
Alexander E. Finger, 52 County Road, Chelsea 50, Mass., and Joseph Goldman, 48 Vernon St., Medford, Mass.
Filed Feb. 7, 1961, Ser. No. 87,568
9 Claims. (Cl. 340—280)



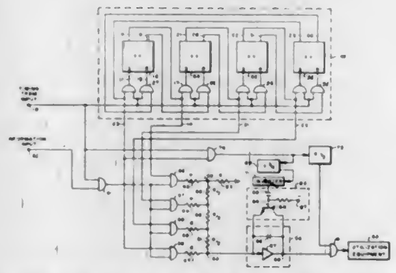
4. An attachment for a movable shopping cart operable with a fixed electrical circuit in a market to energize a signaling device when goods are on the cart comprising a plurality of flexible conducting bars electrically connected with one another, an insulating support connected to the bars for carrying the bars immediately above the rack of the cart whereby the bars may deflect and engage the rack when goods are placed on the bars, and a pair of electrically conducting legs one electrically connected to the bars and the other electrically connectable to the cart for engaging contact points of the fixed electrical circuit, said cart attachment completing said fixed electrical circuit when the flexible bars engage said rack.

3,051,937
MESSAGE REGISTER READER
James Arthur, 921 Madison Ave., Plainfield, N.J.
Filed Apr. 12, 1957, Ser. No. 652,593
2 Claims. (Cl. 340—332)



1. In reader apparatus for selectively illuminating indicia appearing in blocks on a translucent medium and arranged in uniform rows thereon, the medium being placed over an array of electric lights arranged in rows corresponding to the blocks on said medium whereby upon activation of a light the related block is illuminated by light transmitted through said medium; an electrical circuit arrangement to activate said lights in a predetermined order selected from a plurality of different scanning patterns and comprising a selector switch having multiple banks of contacts connected to said array of lights for selectively coupling same to an electrical power supply, a stepping relay for actuating said contacts one step at a time, and a multi-position function switch providing at each position thereof a different scanning pattern to effect activation of said lights in different orders, and means interposing said function switch between said banks on said selector switch and said power supply to effect scanning of said lights in an order determined by the position of said function switch.

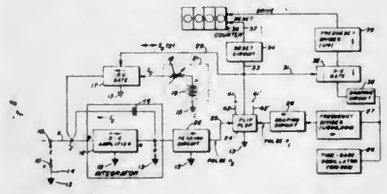
3,051,938
DIGITAL TO ANALOG CONVERTER
Paul M. Levy, Yonkers, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Feb. 10, 1960, Ser. No. 7,808
5 Claims. (Cl. 340—347)



3. A converter for converting a binary word containing N bits into an analog quantity comprising, an N-stage ring counter, a counter AND gating circuit for each one of the stages of said ring counter, each counter AND gating circuit having one of a pair of inputs connected

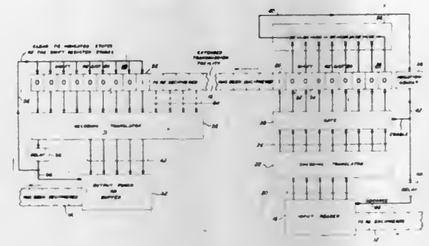
to an output of a respective stage of said ring counter, timing means applying a train of pulse signals to said ring counter for generating output pulses in the outputs of respective stages thereof in time sequence whereby said counter AND gating circuits are enabled in sequence, an input AND gating circuit conjointly operated by said timing signals and signal pulses representative of said binary word and having its output connected to all of the other of the pairs of inputs of said counter AND gating circuits, computing network means having the output of each of said counter AND gating circuits impressed on selected terminals thereof and producing therefrom output current pulses the magnitude of which is determined by the order of significance of the counter AND gating circuit rendered conductive by the simultaneous application of pulses to the inputs thereof, an integrator connected to the output of said computing network means, utilization means, means including a first delay means operated by the output of the final stage of said ring counter for transferring the signal stored in said integrator to said utilization means, said first delay means introducing a delay of less than the period of said train of pulse signals, and means including second delay means operated by the output of said final stage of said ring counter for clearing the signal magnitude stored in said integrator, said second delay means introducing a delay greater than said first delay but still less than the period of said train of pulse signals.

3,051,939
ANALOG-TO-DIGITAL CONVERTER
Roswell W. Gilbert, Montclair, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of Texas
Filed May 8, 1957, Ser. No. 657,874
20 Claims. (Cl. 340—347)



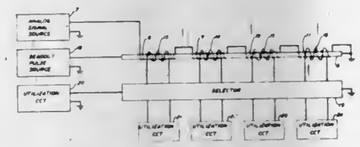
1. A converter system for converting an analog input of one polarity into recurrent digitized form, comprising: a source of periodic pulses; a pulse gating means, the said source of periodic pulses being connected to the input thereof; integrating means, the said analog input being connected to the input thereof; an analog reference source of constant magnitude and of a polarity opposite to the analog input polarity; an analog gating means connecting the said analog reference source to the input of the said integrating means; means actuating the said pulse gating means in one direction and simultaneously closing the said analog gating means at a consistent predetermined level of time integral output from the said integrating means; and means including the said source of periodic pulses actuating the said pulse gating means in the other direction and simultaneously opening the said analog gating means at predetermined and consistent time intervals, the output of the integrating means integrating in one direction during the entire time the said analog gating means is open and integrating in the other direction during the entire time the said analog gating means is closed, the ratio of the time during which the said analog gating means is open to a complete operating cycle during which the analog gating means is both open and closed being directly related to the average of the analog input over the operating cycle.

3,051,940
VARIABLE LENGTH CODE GROUP CIRCUITS
William O. Fleckenstein, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 4, 1958, Ser. No. 759,013
5 Claims. (Cl. 340—347)



1. In combination in a system for processing variable length codes, an encoding shift register including a terminal output stage, a decoding shift register including a terminal input stage, a data link interconnecting said terminal output stage and said terminal input stage, fixed length code-to-variable length code translation means for applying variable length code words each including a marker suffix designation to the output stages of said encoding shift register, means coupled to all of the output stages excluding the terminal output stage of said encoding shift register for providing an indication of the absence of signals in said stages, means responsive to said indication for clearing said marker designation from said output stage of said encoding shift register and for enabling said translation means to apply another variable length code including a marker suffix designation to said encoding shift register, additional translation means coupled to said decoding shift register for decoding code words appearing in the input stages of said decoding shift register, and means responsive to the decoding of a code word by said additional translation means for clearing all of the input stages excluding the terminal input stage of said decoding shift register and for inserting a marker designation in the terminal input stage thereof as a prefix to the next code word to be decoded.

3,051,941
ANALOG-DIGITAL CONVERTER AND REGISTER
Paul Mallery, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 24, 1958, Ser. No. 769,498
10 Claims. (Cl. 340—347)

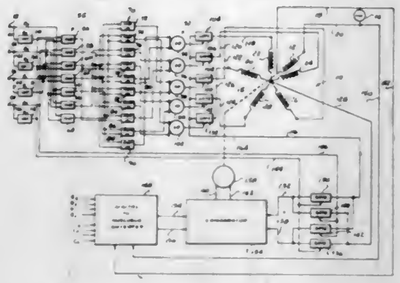


1. An analog to digital converter comprising, an elongated magnetic conductor exhibiting a substantially square-loop hysteresis characteristic, said conductor having a preferred helical flux path established therein, a source of amplitude variant signals, means connected to said source and coupled to said conductor for applying a gradient magnetizing force along said conductor, means for applying a readout pulse to said conductor, and means for inductively sensing equal-length portions of said conductor as said readout pulse is applied.

3,051,942
SYNCHRONOUS POSITIONING SYSTEM

Herbert Galman, Pasadena, Calif., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Apr. 28, 1959, Ser. No. 809,458
14 Claims. (Cl. 340—347)

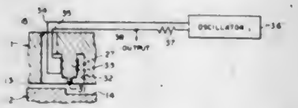


1. A synchronous system for positioning a shaft in accordance with a binary-coded number representative of a position including in combination a synchronous device having a rotor winding carried by said shaft and a plurality of stator windings, means for energizing said rotor winding to induce respective voltages in said stator windings, a comparator, means responsive to a representation of the most significant digit of said coded number for coupling a voltage of a certain phase generated in a particular one of said stator windings to the comparator, means responsive to representations of the less significant digits of said coded number for producing an analogue signal, means for coupling the analogue signal to said comparator to cause the comparator to produce an error signal and means responsive to said error signal for drivin gsaid shaft to the position represented by said coded number.

3,051,943
HEAD FOR VARIABLE RELUCTANCE CONVERTER

Joseph Simon, North Hollywood, and William E. Pollock, Sun Valley, Calif., assignors to General Precision, Inc., a corporation of Delaware

Filed Sept. 2, 1959, Ser. No. 837,712
8 Claims. (Cl. 340—347)

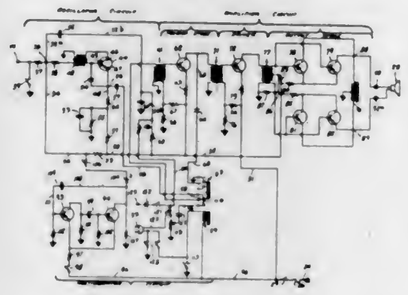


8. A variable reluctance converter comprising a coded information disk having a plurality of concentric tracks on one face thereof with alternate segments in each track of different magnetic permeability, a magnetic read-out head formed of high permeability material and having one face proximately opposed to said face of said disk and with a plurality of spaced sensing elements integrally formed therein, each of said sensing elements including a peripheral portion forming a recess and a single finger centrally positioned within said recess, each of said fingers having a thin tip extending transversely across the outer ends thereof and in radial alignment with one of said tracks, said peripheral portion and said finger being integrally joined at their inner ends and substantially flush with said face of said head at their outer ends, an opening extending from an opposite face of said block into each of said recesses, and means including a coil of wire wound around each of said fingers and having leads extending out through said openings for generating flux in a magnetic circuit through said finger and the adjacent segment of said member and the peripheral portion of said head surrounding said finger for deriving an output which varies in accordance with the reluctance in said magnetic circuit.

3,051,944
ELECTRONIC SIREN AND COMMUNICATION APPARATUS

Gerald D. Smith, Indianapolis, Ind., assignor to Auto-Electronics, Incorporated, Indianapolis, Ind., a corporation of Indiana

Filed Aug. 25, 1958, Ser. No. 756,994
6 Claims. (Cl. 340—384)



1. An electronic siren apparatus comprising a source of direct current power; a speaker adapted to provide an audio output; an audio oscillator circuit network including a PNP transistor and an oscillator transformer regeneratively coupling the collector of said transistor to its base to provide an oscillating output when said transistor is conducting; circuit means including a resistor connecting the positive side of said power source to the base of said transistor, a control switch adapted for momentary manual closure and connecting said transistor base to the negative side of said power source; closure of said control switch thereby lowering the potential of said transistor base to cause said transistor to conduct; a capacitor connected across said power source and in series with said control switch and adapted to be charged upon closure of said control switch, the discharge of said capacitor upon subsequent opening of said control switch thereby delaying the positive swing of said transistor base and consequently the cutoff of said transistor; a multistage amplifier accommodating the output of said oscillator circuit network, the output stage of said amplifier comprising two groups of parallel connected transistors arranged in push-pull relation with their output coupled directly to said speaker; an auxiliary connection between the base of said oscillator circuit transistor and the negative side of said power source; a multivibrator circuit network adapted when energized to sequentially permit and block current flow through said auxiliary connection; momentary closure of said control switch thereby providing a single siren signal to said speaker and energization of said multivibrator circuit network thereby providing automatically repeated siren signals to said speaker.

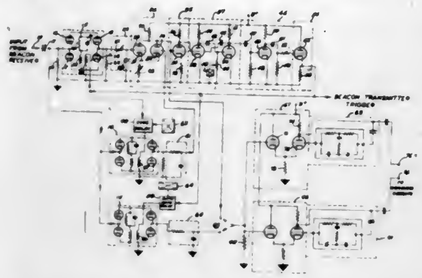
3,051,945
GATE CORRELATED DATA LINK SYSTEM

Frank J. Fuller, 11133 Encino Ave., Granada Hills, Calif.

Filed Dec. 27, 1956, Ser. No. 630,780
8 Claims. (Cl. 343—6.8)

1. A gated pulse radar data link system including, in combination: means for providing an input signal including at least two initial pulse signals and an intelligence carrying pulse signal having predetermined time delay intervals therebetween; an independent gate pulse generator for providing gate pulses having a repetition rate

nominally the same as said input signal; at least first, second and third gating bridges effectively coupled to said gate pulse generator, said second and third gating bridges having gate signal input delay means for delaying said gate pulses in corresponding relation to said predetermined time delay intervals of said input signal; said bridges each having a separate input circuit coupled to said signal providing means; each of said bridges having

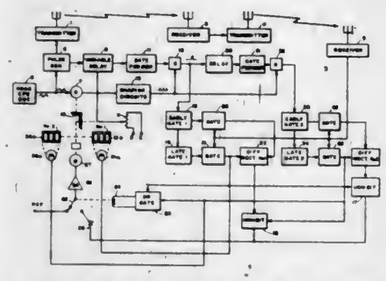


an output circuit code coincidence means coupled to said output circuits of said first and second bridges and effectively coupled to said independent gate generator for correlating the phase and repetition rate of said input signal with said gate pulses only during the occurrence of output signals from both said first and second bridges; means coupled to said output circuit for said third bridge and responsive to said intelligence of said intelligence carrying pulse signal.

3,051,946
RANGE MEASURING METHOD

Robert N. Straehl, Pittsford, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed May 9, 1958, Ser. No. 734,349
4 Claims. (Cl. 343—7.3)



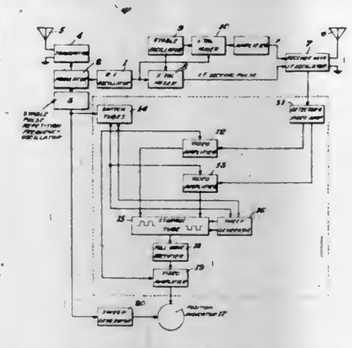
4. A radio ranging system comprising two pairs of early and late gate means, a source of video signals applied in parallel to said two pairs of gate means, a source of gate-controlling pulses synchronized with said video signals, means for progressively shifting the phase position of said gate-controlling pulses with respect to said video signals, a delay circuit, one of said pairs of gate means being coupled directly to said source of gate-controlling pulses, the other of said pairs of gate means being coupled through said delay circuit to said source of gate-controlling pulses.

3,051,947
MOVING TARGET SELECTOR

James S. Engel, Tuckahoe, N.Y., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Filed Mar. 6, 1948, Ser. No. 13,472
4 Claims. (Cl. 343—7.7)

1. A radiant energy obstacle detecting system for indicating moving targets, comprising means for transmitting pulses of radiant energy, means for receiving pulse energy due to re-radiation of the transmitted pulses from objects in the path of the transmitted energy, an electronic device including mosaic means for storing electronic charges, alternatively operative means for applying the received signals due to successive transmitted pulses to said storage device for storage on said mosaic means with opposite polarity, and means responsive to

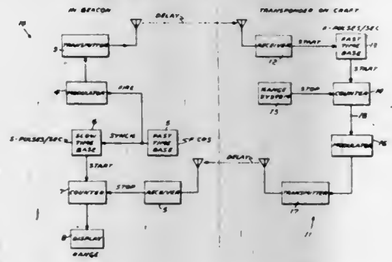


the stored signals for combining said stored successive pulses for indicating the difference of said two successively stored pulses, said transmitting means including a stabilized modulating pulse repetition frequency source, a source of radio frequency, said receiving means including an intermediate frequency oscillator and means for operatively synchronizing said oscillator with said radio frequency source.

3,051,948
DELAY COMPENSATION IN TELEMETERING SYSTEMS

Etienne C. L. de Faymoreau, Nutley, and Jean A. Baudin, Montclair, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed July 22, 1960, Ser. No. 44,779
10 Claims. (Cl. 343—103)



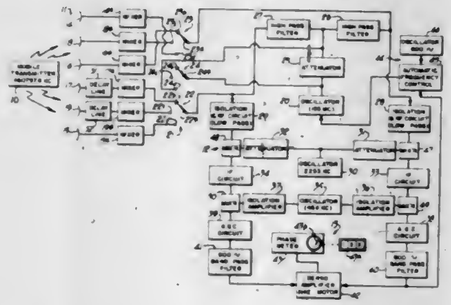
5. In a system for delay compensation in telemetering between a plurality of remote points and a central point with a beacon located at said central point and a transponder located at each said remote point, said beacon comprising means for generating a fast time base, means for generating a slower time base synchronized to said fast time base, a first transmitter for sending interrogation pulses at the rate of said fast time base, a first receiver responsive to reply pulses from each said transponder, first counting means controlled by the output of said slow time base to start operation thereof, means for generating subdivisions of said slow time base controlled by the output of said first counting means, second counting means to start operation thereof controlled by the output of said subdivision generating means, means coupling the output of said receiver to said first counting

means and said second counting means to stop operation thereof, said transponder comprising a second receiver responsive to said interrogation pulses, means for generating said fast time base responsive to the output of said second receiver, a first counter responsive to the output of said fast time base to start operation thereof and responsive to a first independent variable signal to stop operation thereof, means for generating subdivisions of said fast time base coupled to the output of said first counting means, second counting means responsive to the output of said subdivision generating means to start operation thereof and responsive to a second independent variable signal to stop operation thereof, a conjunction organ responsive to the outputs of said first and said second counting means, and a second transmitter responsive to the output of said conjunction organ whereby information concerning the said two independent variables may be conveyed by each reply pulse sent from said transponder and decoded by said beacon and the propagation delays conveyed by said interrogation and reply pulses are incorporated in the information transmitted by said transponder without affecting the integrity of said information.

3,051,949
AZIMUTH DETERMINING SYSTEM

William R. Hunsicker, Tulsa, Okla., assignor to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware

Filed July 13, 1960, Ser. No. 42,592
20 Claims. (Cl. 343—105)

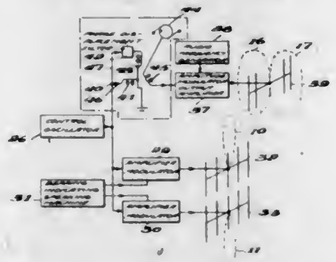


16. In a system for determining the azimuth of a mobile craft relative to a receiving location, the combination of means on said craft for continuously radiating a signal, an antenna array comprising first, second and third pairs of antennas at said receiving location for receiving said signal with the antennas of the first pair being spaced farther apart than those of the second pair and with the antennas of the second pair being spaced farther apart than those of the third pair, the six antennas being colinear and being so arranged that the two antennas of the second pair are respectively disposed approximately equidistant from and on opposite sides of the perpendicular bisector of a line joining the antennas of the third pair, the two antennas of the first pair being respectively disposed substantially equidistant from and on opposite sides of said perpendicular bisector, the distance between each antenna of the first pair and said perpendicular bisector being substantially greater than that between said perpendicular bisector and each antenna of the second pair, a receiver and indicator located at approximately the midpoint of said antenna array, connecting means between each antenna and the receiver and indicator, switch means for selectively connecting the receiver and indicator to any desired pair of said antennas through said connecting means, a first delay line associated with one of the antennas of the second pair and a second delay line associated with one of the antennas of the third pair for introducing time delays to compensate for the difference in travel times of the signals from the antennas to the receiver and indicator, and said receiver and indicator including means for measuring the phase relationship between the signals received by the pair of antennas connected through said switch means to the receiver and indicator.

3,051,950
ARRANGEMENT IN SPEAKING RADIO BEACONS

Carl-Erik Granqvist, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden

Filed July 29, 1957, Ser. No. 674,657
Claims priority, application Sweden Aug. 3, 1956
5 Claims. (Cl. 343—106)

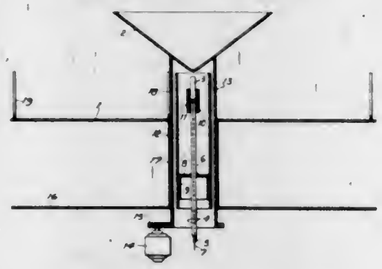


1. A speaking radio beacon of the class described comprising a first antenna having a sharply limited directional characteristic in space for transmitting a bearing indication modulation signal, a second antenna for transmitting a covering field of a frequency differing from the frequency transmitted by the first antenna by an audible amount of cycles per second for filling out the field where the bearing indicating field is not radiated, means for modulating the covering field with an audio frequency oscillation, a common oscillator connected to said antennas, first circuit means for transferring the covering field signal to the second antenna and second circuit means for transferring the bearing indication modulation signal to the first antenna, and means including a rotating transformer connected in said first circuit means, said transformer rotating a number of turns corresponding to the intensity of a desired surging oscillation.

3,051,951
OMNIDIRECTIONAL BEACON ANTENNA

Constantino Lucanera, Blauvelt, N.Y., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Sept. 11, 1957, Ser. No. 683,917
8 Claims. (Cl. 343—106)



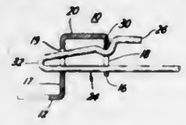
1. An omnirange beacon antenna comprising a first conductive planar counterpoise member, a conductive conical member disposed coaxially about a common axis of said antenna and above said first member with the apex of said conical member directed toward said first member,

a vertically polarized central radiator disposed along said axis and located between said counterpoise member and said conical member, dielectric supporting means connected to both said members and mounted for rotation about said common axis, a transmission line disposed along said common axis and connected to said central radiator, a plurality of parasitic elements mounted on said first member and disposed parallel to said axis, means to rotate said supporting means about said axis to cause said parasitic elements to rotate about said axis whereby the rotation of said parasitic elements about said central radiator produces a multilobed rotating antenna pattern.

3,051,952
U.H.F. LOOP ANTENNA

Marion J. Pifer, Williamsville, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed June 2, 1958, Ser. No. 739,343
1 Claim. (Cl. 343—741)

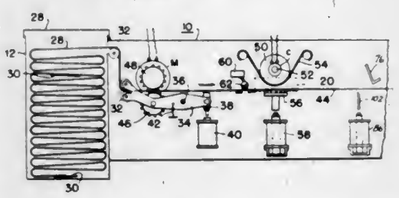


In a loop antenna, the combination of a pair of mounting brackets each of a substantially U-shaped configuration and each having an out-turned mounting lip lying in a given plane at the end of one of the legs, openings in the opposed legs of the U-shaped member, and a resilient conductive antenna member of wire bent in the form of a loop and having a hook at each end, each hook having a bow in the free side thereof and each hook being inserted into the pair of openings in the opposed legs of a respective bracket with the bow in registration with one of said openings and with the bight portion of the hook within the other of said openings and frictionally engaging a wall thereof whereby the position of said antenna member relative to said plane of said bracket lips may be adjusted.

3,051,953
TICKET ISSUING MECHANISM

Harry W. Shepard, Jr., 625 Stanwix St., Pittsburgh 22, Pa.

Filed Apr. 15, 1959, Ser. No. 806,479
10 Claims. (Cl. 346—24)

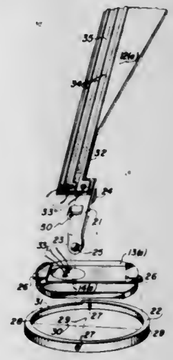


1. A vehicle parking ticket issuing machine comprising storage means at one side thereof for holding a strip of ticket material, a ticket outlet slot on the opposite side of said machine, time stamp means intermediate said storage means and said outlet slot, magazine feed mechanism including a strip translating control member, for advancing said ticket material across the time stamp mechanism toward said outlet slot, said machine having an externally mounted vehicle presence switch circuit, means operated by said circuit and connected to said time stamp means and said mechanism of said machine effective upon presence of a vehicle thereadjacent to operate said time stamp on said strip and to initiate a ticket strip advancing cycle of said mechanism for issuing a resulting time stamped ticket, a check-out time slot formed in said machine and located adjacent said time stamp means, and means including a ticket presence switch and connected to said time stamp means to independently operate said time stamp upon presence of an issued ticket in said check-out time slot.

3,051,954
AIR BEARING TRANSDUCER WITH GIMBAL RING MOUNTING

Alfred G. Osterlund, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 26, 1958, Ser. No. 737,583
7 Claims. (Cl. 346—74)

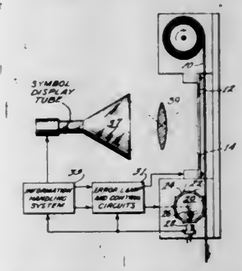


3. In a recording system having a movable magnetic surface and a transducer shoe adapted to glide upon an air film in close spaced relation with the magnetic surface, apparatus for supporting the transducer shoe in spaced relation with the magnetic surface, said apparatus comprising an access arm having a supporting bracket formed integral therewith, and a resilient gimbal ring having pivotal supports for the transducer shoe and for the bracket of the access arm, said gimbal ring being deformable outwardly along two perpendicular diameters thereof for resiliently retaining the pivotal supports to the transducer shoe and to the bracket.

3,051,955
ERROR INDICATING SYSTEM

Frederick W. Pfleger, Pennsauken, and Roland Y. Noel, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Nov. 20, 1957, Ser. No. 697,622
11 Claims. (Cl. 346—110)

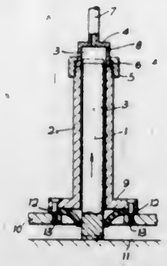


1. In a data processing system providing an electrical signal output and an error signal when said output is in error, the combination with a device for recording on a photosensitive medium the output of a symbol display tube adapted to receive and respond to said signal output, of an error signaling circuit comprising error lamp means adapted to expose a marginal portion of said record

medium when said lamp means is energized, gate means connected to energize said error lamp means when enabled, first enabling means for said gate means responsive to motion of said photosensitive medium, and second enabling means for said gate means responsive to said error signal, whereby said lamp means exposes a marginal strip of said photosensitive medium after receipt of an error signal.

3,051,956
MARKING APPARATUS
Donald David Theobald, Kelvin Works, Kelvin Ave., Hillington, Glasgow, Scotland
Filed Aug. 22, 1960, Ser. No. 51,036
Claims priority, application Great Britain Aug. 24, 1959
8 Claims. (Cl. 346—141)

1. A crayon holder for a marking device comprising a body with an elongated cavity therein, an inlet leading into one end of the cavity and adapted for the attachment of a gas conduit to supply gas under pressure to the inlet end of the cavity, and at least one flexible elastic retaining member so arranged about an opening at the other end of the cavity that when a crayon is placed in the cavity and projects through the opening it will be gripped

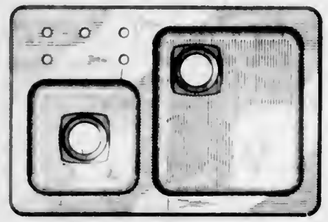


by the retaining member in such a manner as to enable an increase of gas pressure within the cavity to force the crayon to move further out of the cavity against the restoring force set up by flexure of the retaining member.

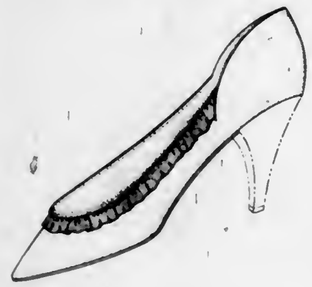
DESIGNS

AUGUST 28, 1962

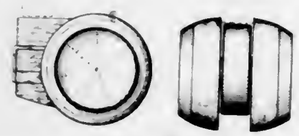
193,464
MULTIPLE-BOWL SINK
Jon W. Hauser, St. Charles, Ill., assignor to Elkay Manufacturing Company, Broadview, Ill., a corporation of Illinois
Continuation of applications Ser. No. 58,233, Nov. 6, 1959, and Ser. No. 58,238, Nov. 6, 1959. This application Jan. 29, 1962, Ser. No. 68,547
Term of patent 14 years
(Cl. D4—2)



193,465
SHOE OR SIMILAR ARTICLE
Frank Lipare, 112 W. 34th St., New York, N.Y.
Filed Mar. 1, 1962, Ser. No. 69,033
Term of patent 7 years
(Cl. D7—7)



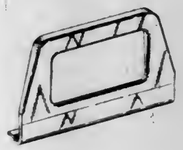
193,466
FURNITURE CASTER
John A. Skupas and Irving Stollman, Evansville, Ind., assignors to Faultless Caster Corporation, Evansville, Ind., a corporation of Indiana
Filed July 17, 1961, Ser. No. 65,950
Term of patent 14 years
(Cl. D10—6)



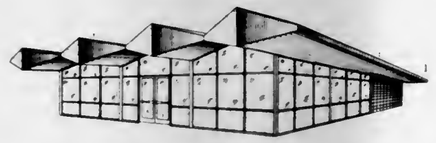
193,467
CASTER
Ford A. Rice and Albert E. Rice, both of 945 Leader Bldg., Cleveland, Ohio
Substituted for abandoned application Ser. No. 60,919, May 17, 1960. This application Oct. 18, 1961, Ser. No. 67,246
Term of patent 14 years
(Cl. D10—6)



193,468
HANDLE FOR A STORM WINDOW INSERT
Edwin R. Thompson, Canfield, Ohio, assignor to Western Reserve Plastics, Inc., Canfield, Ohio
Continuation of applications Ser. No. 65,491, June 6, 1961, and Ser. No. 65,492, June 6, 1961. This application Jan. 17, 1962, Ser. No. 68,617
Term of patent 14 years
(Cl. D10—10)



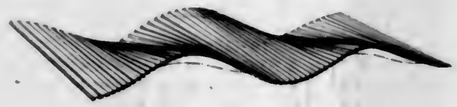
193,469
STORE FOR DISPENSING FOOD
Jacob J. Liebenberg, Minneapolis, Minn., assignor to Prince Ice Cream Castles, Inc., Sterling, Ill., a corporation of Illinois
Filed May 23, 1961, Ser. No. 65,285
Term of patent 14 years
(Cl. D13—1)



193,470
RESTAURANT BUILDING
Jan Kimball, 14820 Midland, Poway, Calif.
Filed May 29, 1961, Ser. No. 65,383
Term of patent 3½ years
(Cl. D13—1)



193,471
DRIVE-IN CANOPY
Harold Baker, Lexington, Ky., assignor to Baker Steel and Engineering Corporation, Lexington, Ky., a corporation of Kentucky
Filed Aug. 2, 1961, Ser. No. 66,171
Term of patent 14 years
(Cl. D13—1)



193,472
GO-CART
Clifford Brooks Stevens and David Brooks Stevens, Fox Point, Wis., assignors to Gilson Bros. Co., Plymouth, Wis., a corporation of Wisconsin
Filed Apr. 13, 1961, Ser. No. 64,715
Term of patent 14 years
(Cl. D14—3)



193,473
TANK TRUCK
Melvin W. Krueger, Madison, Wis., assignor to Dairy Equipment Company, Madison, Wis., a corporation of Wisconsin
Filed Sept. 15, 1961, Ser. No. 66,727
Term of patent 14 years
(Cl. D14—3)



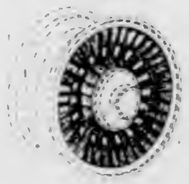
193,474
REAR VIEW MIRROR
William R. Snell, 4145 Bluestone Road, Cleveland, Ohio
Filed Nov. 1, 1961, Ser. No. 67,343
Term of patent 14 years
(Cl. D14—6)



193,475
BACK ADJUSTMENT PLATE FOR A WALKER-STROLLER
Donald W. Gill, Cincinnati, Ohio, assignor to The Frank F. Taylor Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 7, 1961, Ser. No. 66,218
Term of patent 14 years
(Cl. D14—14)



193,476
WHEEL
Romayne E. Holmes, Jr., Madison Heights, Mich., assignor to Kelsey-Hayes Company, Romulus, Mich., a corporation of Delaware
Filed Nov. 27, 1961, Ser. No. 67,709
Term of patent 14 years
(Cl. D14—30)



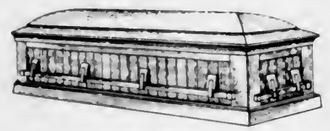
193,477
COMBINATION KNIFE AND MONEY CLIP
Ernest C. Britton, Newington, Conn., assignor to The Lighter Corporation of America, Newington, Conn., a corporation of Connecticut
Filed June 1, 1961, Ser. No. 65,426
Term of patent 14 years
(Cl. D17—3)



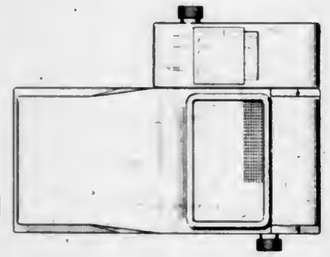
193,478
BUILDING BLOCK
Le Grand J. Mercure, 112 Ridgeway Ave., College Park, Ga.
Filed Oct. 25, 1960, Ser. No. 62,621
Term of patent 3½ years
(Cl. D18—2)



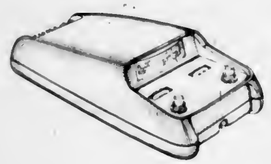
193,479
BURIAL CASKET
John D. Beinert, New York, N.Y., assignor to Boyertown Burial Casket Company, Boyertown, Pa., a corporation of Pennsylvania
Filed Jan. 31, 1962, Ser. No. 68,583
Term of patent 7 years
(Cl. D19—1)



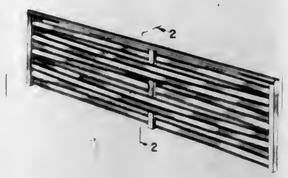
193,480
TEACHING MACHINE
Raymond H. Hartjen, Rochester, N.Y., assignor, by mesne assignments, to Graflex, Inc., Rochester, N.Y., a corporation of Delaware
Filed Mar. 22, 1961, Ser. No. 64,438
Term of patent 14 years
(Cl. D25—1)



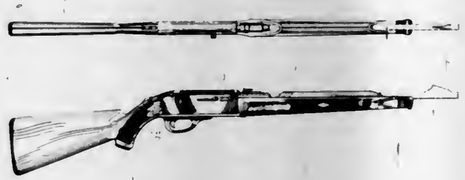
193,481
CASE FOR A MEASURING INSTRUMENT
Robert H. Hose, Mountainside, N.J., and Arthur H. Lince, deceased, late of Morris Township, Morris County, N.J., by Henrietta A. Lince, executrix, Morris Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, Murray Hill, N.J., a corporation of New York
Filed June 22, 1961, Ser. No. 65,706
Term of patent of 14 years
(Cl. D26—1)



193,482
FENCE
Newton W. Richardson, Arcadia, Calif., assignor to Natural Gas Equipment Incorporated, Pasadena, Calif., a corporation of California
Filed May 12, 1961, Ser. No. 65,150
Term of patent 14 years
(Cl. D28—1)



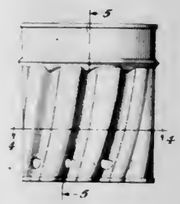
193,483
FIREARM
Robert P. Kelly, 10 Spruce St., and Wayne E. Leek, 27 Concord St., both of Ilion, N.Y., and James S. Martin, 48 W. Main St., Mohawk, N.Y.
Filed Aug. 10, 1959, Ser. No. 57,124
Term of patent 14 years
(Cl. D30—1)



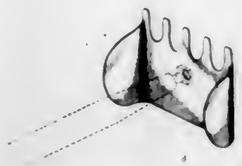
193,484
MOTORIZED ORNITHOPTER
Percival H. Spencer, 420 Palisades Ave., Santa Monica, Calif.
Filed July 10, 1961, Ser. No. 65,862
Term of patent 14 years
(Cl. D34—15)



193,485
FLOWER POT
William John White, 991 S. State Road 7, Fort Lauderdale, Fla.
Filed Feb. 28, 1962, Ser. No. 69,019
Term of patent 14 years
(Cl. D35—3)



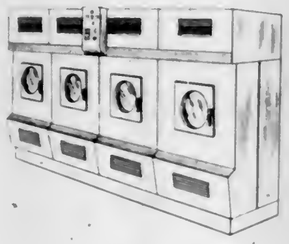
193,486
COMBINED HOE, RAKE AND EDGER
Richard Wenger, 212 N. Federal Highway, Dania, Fla.
Filed Mar. 5, 1962, Ser. No. 69,098
Term of patent 14 years
(Cl. D39—1)



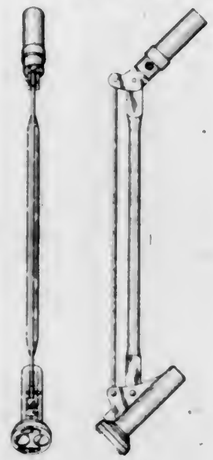
193,487
SERVING TRAY UNIT
Alvin W. Levenhagen, Linesville, Pa., assignor to Molded Fiber Glass Tray Company, Linesville, Pa., a corporation of Pennsylvania
Filed Sept. 23, 1960, Ser. No. 62,248
Term of patent 14 years
(Cl. D44—10)



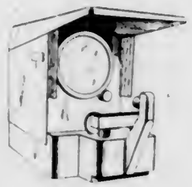
193,488
DRY CLEANING UNIT
Alan Foster, % Quebec Industries, Inc., 249 W. Mitchell Ave., Cincinnati, Ohio
Filed May 12, 1961, Ser. No. 65,184
Term of patent 3½ years
(Cl. D49—1)



193,489
FISH FINDER OR SIMILAR ARTICLE
Thomas F. Sarah, Akron, Ohio, assignor to The Enterprise Manufacturing Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 23, 1961, Ser. No. 66,464
Term of patent 14 years
(Cl. D52—6)



193,490
OPTICAL COMPARATOR
Philip N. Welch, Main St., Chester, Vt., and Glenn A. Wheelock, 130 Summer St., Springfield, Vt.
Filed Aug. 17, 1961, Ser. No. 66,386
Term of patent 14 years
(Cl. D57—1)



193,491
JAR OR SIMILAR ARTICLE
Arnold I. Lorenzen, 2459 Charlestown Ave., Toledo, Ohio
Filed Sept. 26, 1960, Ser. No. 62,261
Term of patent 14 years
(Cl. D58—25)



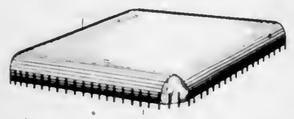
193,492
HELICOPTER
George J. Howard, Fairfield, and Edward S. Hibyan, Milford, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 62,041
Term of patent 14 years
(Cl. D71—1)



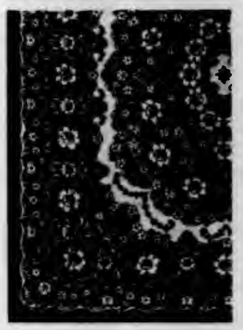
193,493
ASH TRAY
Elvin Schwartz, R.D. 1, Union City, Pa.
Filed Dec. 23, 1960, Ser. No. 63,315
Term of patent 14 years
(Cl. D85—2)



193,494
STORAGE VESSEL
Reign C. Ulm, Schererville, Ind., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 13, 1961, Ser. No. 63,922
Term of patent 14 years
(Cl. D91—1)



193,495
TABLECLOTH
Francesco P. Castorani, Exton, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Filed Feb. 2, 1962, Ser. No. 68,625
Term of patent 7 years
(Cl. D92—26)



193,496
HANDLE OR SIMILAR ARTICLE
Sydney Jacoff, Great Neck, N.Y., assignor to Great Neck Saw Manufacturers Inc., Mineola, N.Y., a corporation of New York
Filed Oct. 24, 1961, Ser. No. 67,235
Term of patent 14 years
(Cl. D93—4)



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Aqua-Chem, Inc. : *See*—
Goeldner, Richard W. Re. 25,232.

Broman, John S., to Nordberg Mfg. Co. Tightening device for mantles and liners in crushers. Re. 25,233, 8–28–62, Cl. 241—299.

Goeldner, Richard W., to Aqua-Chem, Inc. Plural stage flash evaporation method. Re. 25,232, 8–28–62, Cl. 202—53.

Nordberg Mfg. Co. : *See*—
Broman, John S. Re. 25,233.

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Baker, Harold, to Baker Steel and Engineering Corp. Drive-in canopy. 193,471, 8–28–62, Cl. D13—1.

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Boyertown Burial Casket Co. : *See*—
Beinert, John D. 193,479.

Britton, Ernest C., to The Lighter Corp. of America. Combination knife and money clip. 193,477, 8–28–62, Cl. D17—3.

Castorani, Francesco P., to Quaker Lace Co. Tablecloth. 193,495, 8–28–62, Cl. D92—26.

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Elkag Mfg. Co. : *See*—
Hauser, John W. 193,464.

Enterprise Mfg. Co., The : *See*—
Sarah, Thomas F. 193,489.

Faultless Caster Corp. : *See*—
Skupas, John A., and Stollman. 193,466.

Foster, Alan. Dry cleaning unit. 193,488, 8–28–62, Cl. D49—1.

Gill, Donald W., to The Frank F. Taylor Co. Back adjustment plate for a walker-stroller. 193,475, 8–28–62, Cl. D14—14.

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Great Neck Saw Manufacturers Inc. : *See*—
Jacoff, Sydney. 193,496.

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Hauser, John W., to Elkag Mfg. Co. Multiple-bowl sink. 193,464, 8–28–62, Cl. D4—2.

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Hose, Robert H., and A. H. Lince, deceased, by H. A. Lince, executrix, to Bell Telephone Laboratories, Inc. Case for a measuring instrument. 193,481, 8–28–62, Cl. D26—1.

Howard, George J., and E. S. Hibyan, to United Aircraft Corp. Helicopter. 193,492, 8–28–62, Cl. D71—1.

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Kelly, Robert P., W. E. Leek, and J. S. Martin. Firearm. 193,483, 8–28–62, Cl. D30—1.

Kelsey-Hayes Co. : *See*—
Holmes, Romayne E., Jr. 193,476.

Kimball, Jan. Restaurant building. 193,470, 8–28–62, Cl. D13—1.

Krueger, Melvin W., to Dairy Equipment Co. Tank truck. 193,473, 8–28–62, Cl. D14—3.

Leek, Wayne E. : *See*—
Kelly, Robert P., Leek, and Martin. 193,483.

Levenhagen, Alvin W., to Molded Fiber Glass Tray Co. Serving tray unit. 193,487, 8–28–62, Cl. D44—10.

Lighter Corp. of America, The : *See*—
Britton, Ernest C. 193,477.

Lince, Arthur H. : *See*—
Hose, Robert H., and Lince. 193,481.

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Hose, Robert H., and Lince. 193,481.

Lipare, Frank. Shoe or similar article. 193,465, 8–28–62, Cl. D7—7.

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Liebenberg, Jacob J. 193,469.

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Rice, Ford A. and A. E. Caster. 193,467, 8–28–62, Cl. D10—6.

Richardson, Newton W., to Natural Gas Equipment Inc. Fence. 193,482, 8–28–62, Cl. D28—1.

Sarah, Thomas F., to The Enterprise Mfg. Co. Fish finder or similar article. 193,489, 8–28–62, Cl. D52—6.

Schwartz, Elvin. Ash tray. 193,493, 8–28–62, Cl. D85—2.

Skupas, John A., and I. Stollman, to Faultless Caster Corp. Furniture caster. 193,466, 8–28–62, Cl. D10—6.

Snell, William R. Rear view mirror. 193,474, 8–28–62, Cl. D14—6.

Spencer, Percival H. Motorized ornithopter. 193,484, 8–28–62. Cl. D34—15.

Stevens, Clifford B. and D. B., to Gilson Bros. Co. Go-cart. 193,472, 8–28–62, Cl. D14—3.

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Stevens, Clifford B. and D. B. 193,472.

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Wenger, Richard. Combined hoe, rake and edger. 193,486, 8–28–62, Cl. D39—1.

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Wheelock, Glenn A. : *See*—
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White, William J. Flower pot. 193,485, 8–28–62, Cl. D35—3.

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PATENTS WERE ISSUED ON THE 28TH DAY OF AUGUST, 1962

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Gulick, Ronald A. 3,051,434.
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Skogseid, Anders. 3,051,543.

Abbott, George F., Jr., and F. D. Padden, to Bell Telephone Laboratories, Inc. Transistor multivibrator circuit with variable impedance operation stabilizing means. 3,051,850, 8–28–62, Cl. 307—88.5.

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Ablid, Robert N., C. O. Broders, H. S. Crim, and J. O. Gallant, to United Aircraft Corp. Purge system for rocket propellant system. 3,050,936, 8–28–62, Cl. 60—35.6.

Abood, Leo G. Treatment of mental disturbances by chemotherapeutic means. 3,051,620, 8–28–62, Cl. 167—65.

Abramo, John G., A. Y. Garner, and E. C. Chapin, to Monsanto Chemical Co. Ethylenically unsaturated aromatic phosphorus acids. 3,051,740, 8–28–62, Cl. 260—461.

Adams-Ray, Jack, and P. Persson, to R. M. Kindal. Body tempering apparatus. 3,051,180, 8–28–62, Cl. 128—373.

Aeroquip Corp.: *See*—
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Agruss, Meyer S.: *See*—
Sites, Benjamin L., and Agruss. 3,051,591.

Ahara, Edward Y., R. A. Johnson, Jr., H. S. De Groot, and C. J. Stalmuke, to Oxford Paper Co. Coating of paper webs and the like. 3,051,125, 8–28–62, Cl. 118—603.

Ahlbin, Fred E. Power driven cable winch and drive and brake means thereof. 3,051,447, 8–28–62, Cl. 254—187.

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Kirby, Harold L. 3,051,356.

Air-Placement Equipment Co.: *See*—
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Aitken, Roger G., to Canadian Industries Ltd. Polymethylene terephthalate fiber coated with polymerized triallyl cyanurate. 3,051,594, 8–28–62, Cl. 117—138.8.

Alberti, Franz. Rectoscopic devices. 3,051,176, 8–28–62, Cl. 128—276.

Alco Valve Co.: *See*—
Tilney, Ralph B. 3,051,188.

Aldridge, Clyde L.: *See*—
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Alfieri, Giuseppa, to Marelli S.p.A., Fabbrica Italiana Magneti. Anticlogging device particularly for calibrated holes in pneumatic pipe fitting of motor vehicles. 3,051,199, 8–28–62, Cl. 138—44.

Algatt, George E., to Western Electric Co., Inc. Apparatus for loading plating racks. 3,051,334, 8–28–62, Cl. 214—8.5.

Allander, Claes, to Svenska Fläktfabriken, Aktiebolaget. Web cutter between tandem-arranged work conveying means. 3,051,031, 8–28–62, Cl. 83—424.

Allegheny Ludlum Steel Corp.: *See*—
Clarke, Francis J. 3,051,080.
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Pitler, Richard K., Reynolds, and Aggen. 3,051,565.
Clani, John B. 3,050,834.

Allegrini, Aldo P., and T. A. Cecil, to Minerals & Chemicals Phillipp Corp. Method of drying attapulgite clay dispersions. 3,050,863, 8–28–62, Cl. 34—17.

Allen, Gordon S. J.: *See*—
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Allen, R. C., Business Machines, Inc.: *See*—
Walton, Paul E. 3,051,378.

Allender, Richard E., to American Air Filter Co., Inc. Through-piping arrangement for air conditioning unit. 3,050,958, 8–28–62, Cl. 62—285.

Allis-Chalmers Mfg. Co.: *See*—
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Allman, William T., Jr., and C. E. Layman, to Celanese Corp. of America. Manufacture of bulked fiber. 3,050,819, 8–28–62, Cl. 28—1.

Almassy, Elek, 48% to D. Y. Arenson. Decorticating machine and process. 3,050,788, 8–28–62, Cl. 19—28.

Altec Lansing Corp.: *See*—
Seeley, Edward S. 3,051,788.

Aluminium-Industrie-Aktien-Gesellschaft: *See*—
Trägner, Erich, and Küster. 3,050,793.

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Hill, Harry N., Clark, and Woodburn. 3,051,217.

Alvarez, Alfonso. Adjustable slat blind. 3,051,231, 8–28–62, Cl. 160—34.

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American Metalcare Systems, Inc.: *See*—
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American Photocopy Equipment Co.: *See*—
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Arthur, James. Message register reader. 3,051,937, 8–28–62, Cl. 340—332.

Aspin, Frank M. Internal combustion engines, compressors and the like. 3,051,156, 8–28–62, Cl. 123—190.

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Babayan, Vigen K., and G. N. Comes, to Drew Chemical Corp. Glyceryl lacto esters in coatings. 3,051,577, 8–28–62, Cl. 99—118.

Babb, Marvin O. Apparatus for preparing baled insulation material for gas entrainment. 3,051,398, 8–28–62, Cl. 241—136.

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Bajulaz, Roger. Submersible. 3,051,114, 8–28–62, Cl. 114—16.

Baker, Edgar G. Floatation vest. 3,050,753, 8–28–62, Cl. 9—337.

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Ballinger, Wallace A. Mophead holder having a universal joint and also capable of pivotal movement restrained along a vertical plane. 3,050,762, 8–28–62, Cl. 15—147.

Baltzer, Donald H., to Monsanto Chemical Co. New near infrared spectrum filter media. 3,051,596, 8–28–62, Cl. 154—2.7.

Banker, Oscar H., to Fawick Corp. Power steering valve. 3,051,142, 8–28–62, Cl. 121—46.5.

Banks, William P., to Jersey Production Research Co. Recovery of petroleum crude oil by in situ combustion and in situ hydrogenation. 3,051,235, 8–28–62, Cl. 166—11.

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Battle, Norman: *See*—
Wigg, Raymond E., and Battle. 3,051,497.

Baudin, Jean A.: *See*—
De Faymoreau, Etienne C. L., and Baudin. 3,051,948.

Baudin, Jean A., to International Telephone and Telegraph Corp. Channel selector servo circuit. 3,051,881, 8–28–62. Cl. 318—29.

Bauer, Hans, E. Bergmeister, and J. Heckmaier, to Wacker-Chemie G.m.b.H. Process for the production of stable aqueous dispersions of polymerized vinylesters. 3,051,668, 8–28–62, Cl. 260—17.

Baxter, James C., and R. A. Gowing; said Gowing assor. to said Baxter. Tube forming machine construction. 3,051,061, 8–28–62, Cl. 93—80.

Baxter, Joseph, Jr., to The Black-Clawson Co. Paper machinery. 3,051,233, 8–28–62, Cl. 162—337.

Bayer Aktiengesellschaft, Farbenfabriken: *See*—
Drapal, Othmar. 3,051,616.
Haagen, Karl. 3,051,651.
Marzolph, Herbert, Ruf, and Corte. 3,051,741.
Stroh, Rudolf, and Seydel. 3,051,762.

Bayer, Robert O., and R. C. Meinzer, to E. I. du Pont de Nemours and Co. Pump wear plate. 3,050,846, 8–28–62, Cl. 29—527.

Bazinet, Wilfred P., Jr.: *See*—
Hicks, John W., Jr., and Bazinet. 3,050,907.

Beam, Walter R., and F. Sterzer, to Radio Corp. of America. Parametric oscillator circuit with frequency changing means. 3,051,844, 8–28–62, Cl. 331—55.

Bean, Claude T.: *See*—
Weinberg, Alan E., Bean, Robitschek, and Schoeptle. 3,051,585.

Beaunit Mills, Inc.: *See*—
Woodell, Rudolph. 3,050,823.

Becker, Bernard B.: *See*—
Boyajian, Robert S., and Becker. 3,051,265.

Becker, John, and C. H. Wagman. Rotary hedge trimmer. 3,050,854, 8–28–62, Cl. 30—276.

Beckman Instruments, Inc.: *See*—
Brown, J Herbert. 3,051,914.

Beeson, Robert J.: *See*—
Apel, John H., and Beeson. 3,051,062.

Be-Ge Mfg. Co.: *See*—
Bennett, Robert N. and Vaughan. 3,051,091.
White, John A., Jr. 3,050,883.

Behrends, Jurgen: *See*—
Schweitzer, Otto, and Behrends. 3,051,755.

Beidler, Henry L.: *See*—
Liloia, George A., Jr., Crowe, and Beidler. 3,051,171.

Belden Mfg. Co.: *See*—
Schelke, Robert K. 3,051,774.

Bell & Howell Co.: *See*—
Linke, Walter R. 3,051,049.

Bell Telephone Laboratories, Inc.: *See*—
Abbott, George F., Jr., and Padden. 3,051,850.
Anderson, William W., and Hines. 3,051,908.
Engelbrecht, Rudolf S. 3,051,909.
Fleckenstein, William O. 3,051,940.
Graham, Robert E. 3,051,778.
Gyorgy, Ernst M., and Scovil. 3,051,917.
Kompfner, Rudolf. 3,051,911.
Lee, Bock W. 3,051,855.
Mallery, Paul. 3,051,941.
Margolis, David P., and Walsh. 3,050,843.
Neumann, Peter G. 3,051,784.
Rigrod, William W. 3,051,910.
Sandberg, Irwin W. 3,051,920.
Schott, Lionel O. 3,051,846.
Smith, Larrabee M. 3,051,929.
Weber, Edward H., Jr. 3,051,854.
Yaeger, Robert E. 3,051,901.
York, Robert K. 3,051,845.

Bellinger, Ronald, to Strachan & Henshaw Ltd. Ship or barge unloaders. 3,051,322, 8–28–62, Cl. 212—15.

Bemberg, J. P., Aktiengesellschaft: *See*—
Pirot, Ernst. 3,050,783.

Bemis Bro. Bag Co.: *See*—
Helm, Jack D., and Hopkins. 3,050,918.
Helm, Jack D., and Hopkins. 3,051,297.
Williams, Russell J. 3,051,103.

Bendix Corp., The: *See*—
Burnett, Richard T. 3,051,272.
Dawes, Leslie J. 3,051,510.
Maynard, Charles E. 3,050,945.
Rogers, Francis R. 3,050,941.
Rogers, Raymond R. 3,051,528.
Ruble, Robert H. 3,050,861.
Stoudenmire, Jay H. 3,051,882.

Bennett, John M., to Leather Industries, Inc. Substitute leathers and the manufacture thereof. 3,051,612, 8–28–62, Cl. 162—151.

Bennett, Robert N., and R. W. Vaughan, to Be-Ge Mfg. Co. Gear pump or motor. 3,051,091, 8–28–62, Cl. 103—126.

Benson, Fritz C.: *See*—
Morse, John B., and Benson. 3,050,770.

Bentley, Arthur. Gear type hydraulic coupling. 3,051,283, 8–28–62, Cl. 192—61.

Bentov, Itzhak, to W. R. Grace & Co. Scratch masking coating composition for masonry comprising a polyester resin, sand and mineral oil. 3,051,678, 8–28–62, Cl. 260—33.6.

Benzel, Howard A., to Scott Aviation Corp. Underwater breathing apparatus provided with a snorkel. 3,051,170, 8-28-62, Cl. 128—142.

Berger, Guido J., to C. Zeiss. Photographic objective. 3,051,053, 8-28-62, Cl. 88—57.

Bergman, Burton, R. D. Eisenhart, A. W. Opsahl, and S. K. Wood, to Boeing Airplane Co. Outward-opening plug type door for aircraft. 3,051,280, 8-28-62, Cl. 189—46.

Bergman, Hugo T. H. A., to Jonkopings och Vulcans Tandsticksfabriksaktiebolag. Method of and a device for punching statistical cards. 3,051,375, 8-28-62, Cl. 234—91.

Bergsma, Rudolph, to King-Seeley Thermos Co. Temperature responsive system. 3,051,814, 8-28-62, Cl. 219—20.

Bergson, Gustav. Measuring apparatus. 3,051,643, 8-28-62, Cl. 204—195.

Bergstein, Leonard. Varifocal lens system with four points of exact image shift compensation. 3,051,052, 8-28-62, Cl. 88—57.

Berko Electric Mfg. Corp.: *See*—
Knoll, David, and Greenhaus. 3,051,816.

Bernard, Arthur A. and R. A., to Chemetron Corp. Welding with blanket and gas arc-shield. 3,051,822, 8-28-62, Cl. 219—74.

Bernard, Richard A.: *See*—
Bernard, Arthur A. and R. A. 3,051,822.

Bernd, Louis E. Automatic line release means. 3,050,898, 8-28-62, Cl. 43—25.

Bersworth, Frederick C., to The Dow Chemical Co. Method of correcting trace metal deficiencies in soil by applying a mixture of free chelating agent and iron chelate thereto. 3,051,563, 8-28-62, Cl. 71—1.

Besly-Welles Corp.: *See*—
Welles, Donald P., Jr. 3,050,755.

Bettison, David C., to Railroad Accessories Corp. Apparatus for reducing friction between railroad car wheels and rails. 3,051,262, 8-28-62, Cl. 184—3.

Betzel, Alvin E., Sr. Brush drive means for cleaning cylindrical surfaces. 3,050,759, 8-28-62, Cl. 15—104.04.

Bevington, William J., to James B. Clow and Sons, Inc. Pipe plug. 3,051,200, 8-28-62, Cl. 138—89.

Bialy, Edward W., to The Singer Mfg. Co. Drive means for sewing machines. 3,051,109, 8-28-62, Cl. 112—220.

Biegauski, Wladyslaw J., to Radio Corp. of America Frequency detector. 3,051,896, 8-28-62, Cl. 324—71.

Biel, John H., to Lakeside Laboratories, Inc. Unsymmetrical mono-(aminoalkylene)-hydrazines. 3,051,707, 8-28-62, Cl. 260—247.5.

Biel, John H., to Lakeside Laboratories, Inc. Glycolic acid amide derivatives of piperazine and use thereof. 3,051,710, 8-28-62, Cl. 260—268.

Biel, John H., to Lakeside Laboratories, Inc. 4-(1,2,3,4-tetrahydroisoquinolino)-2-butyn-1-ol. 3,051,714, 8-28-62, Cl. 260—289.

Biel, John H., to Lakeside Laboratories, Inc. 5-pyrrolidone-2-carboxamides. 3,051,722, 8-28-62, Cl. 260—319.

Biel, John H., to Lakeside Laboratories, Inc. Glycolic acid esters of N-substituted-2-pyrrolidylcarbinols. 3,051,726, 8-28-62, Cl. 260—326.3.

Biel, John H., and F. F. Blicke; said Biel assor. to Lakeside Laboratories, Inc., and said Blicke assor. to the Regents of the University of Michigan. 2-(aminoalkyl)-3-hydroxypiperidines. 3,051,715, 8-28-62, Cl. 260—294.7.

Bielecki, Edward J., to Kawecki Chemical Co. Production of potassium fluotantalate from tantalum ore and the like. 3,051,547, 8-28-62, Cl. 23—19.

Bierwirth, Henry C., and N. L. Rutgers, to Lennox Industries, Inc. Thermostat and control circuit for heating, air conditioning and ventilating system. 3,051,451, 8-28-62, Cl. 257—274.

Billi, Giorgio. Yarn cutting means for knitting machine. 3,050,970, 8-28-62, Cl. 66—140.

Binford, Benjamin L., to Magnetrol, Inc. Electric switch control means. 3,051,805, 8-28-62, Cl. 200—87.

Birchall, Sylvia A. Buoyant garment. 3,050,752, 8-28-62, Cl. 9—334.

Birdsboro Corp.: *See*—
Peterson, Edward T. 3,051,293.

Birtcher Corp., The: *See*—
Finch, Horace T. 3,051,408.

Bissinger, William E., to Pittsburgh Plate Glass Co. Polychloroformates. 3,051,686, 8-28-62, Cl. 260—77.5.

Black Clawson Co., The: *See*—
Baxter, Joseph, Jr. 3,051,233.

Blaha, Eli W., and A. R. Sabol, to Standard Oil Co. Preparation of metal salts of phosphorus sulfide-hydrocarbon reaction products. 3,051,654, 8-28-62, Cl. 252—32.7.

Blanchard, Robert W.: *See*—
Haigh, Leslie B., Herbig, and Blanchard. 3,051,790.

Blicke, Frederick F. and J. H. Biel; said Biel assor. to Lakeside Laboratories, Inc., and said Blicke assor. to the Regents of The University of Michigan. 2-(aminoalkyl)-3-hydroxypiperidines. 3,051,715, 8-28-62, Cl. 260—294.7.

Bloch, Erich. Skeleton rings for ornamental and display purposes. 3,050,890, 8-28-62, Cl. 41—12.

Blomgren, Oscar C. and O. C., Jr. Speed changing assembly for power takeoff shafts. 3,051,010, 8-28-62, Cl. 74—217.

Blomgren, Oscar C., Jr.: *See*—
Blomgren, Oscar C. and O. C., Jr. 3,051,010.

Blood, Raymond, to Wm. Cotton, Ltd. Straight bar knitting machines. 3,050,971, 8-28-62, Cl. 66—145.

Bloom, Herbert J., to Sylvania Electric Products Inc. Article seating device. 3,051,329, 8-28-62, Cl. 214—1.

Bloyd, Judson E.: *See*—
Arnold, Le Roy R., Bloyd, and Carson. 3,051,238.

Bochan, John, to General Electric Co. Article drying machine. 3,050,869, 8-28-62, Cl. 34—164.

Boeing Airplane Co.: *See*—
Bergman, Burton, Eisenhart, Opsahl, and Wood. 3,051,280.
James, Varnell L. R., and Pearson. 3,050,937.
Osgood, Richard E. 3,050,987.
Ramsey, Richard Y. 3,051,418.
Weiland, Richard H., and Kelton. 3,051,419.

Boester, Carl F. Sewage treatment apparatus. 3,051,315, 8-28-62 Cl. 210—195.

Boggs, Fitzhugh W., to United States Rubber Co. Article exhibiting reduced frictional drag in fluids. 3,051,599, 8-28-62, Cl. 154—43.

Bohanon, Hoy R. Air circulating and mixing fan. 3,051,072, 8-28-62, Cl. 98—40.

Boice, Frank S., and L. H. Johnson, to United Geophysical Corp. Seismic prospecting system. 3,051,926, 8-28-62, Cl. 340—15.5.

Bolger, Derek E.: *See*—
MacPhee, Malcolm, and Bolger. 3,051,557.

Bolton, Benjamin A., and K. E. Kolb, to Standard Oil Co. Novel bis (trimellit-imide) alkanes and bis (trimellit-amide) alkanes. 3,051,724, 8-28-62, Cl. 260—325.

Bomm, Heinz, to Dorken & Mankel K.G., Firma. Hydraulic door keeper. 3,050,769, 8-28-62, Cl. 16—55.

Bonami, Ernest, to Swift & Co. Method and apparatus for packaging food. 3,051,581, 8-28-62, Cl. 99—171.

Bonnet, Georges, and R. Gariod, to Commissariat a l'Energie Atomique. Magnetic demagnetizing devices. 3,051,874, 8-28-62, Cl 317—157.5.

Bonzon, Maurice, to Societe des Forges et Ateliers du Creusat. Auxiliary elevator brake for adjustment of gage level. 3,051,266, 8-28-62, Cl. 187—28.

Borden, Joseph H., to Toledo Scale Corp. Elevator control. 3,051,267, Cl. 187—29.

Borgia, Domenico L. Applied record spacing disc. 3,051,496, 8-28-62, Cl. 274—42.

Borg-Warner Corp.: *See*—
Flinn, George E. 3,051,017.
Rice, Virgil C. 3,051,157.

Borodin, Daniel J., to Wagner Brothers Inc. Work loader. 3,051,288, 8-28-62 Cl. 198—20.

Bosch, Robert, G.m.b.H., Firma: *See*—
Paule, Kurt, Knapp, Zechnall, and Schutte. 3,0511,152.

Boschi, Antonio, to Societe Applicazioni Gomma Antivibranti S.A.G.A., S.p.A. Antivibrating washer for helical spring suspensions. 3,051,469, 8-28-62, Cl. 267—33.

Bosshard, Hans H., and H. Zollinger, to Ciba Ltd. Process for dyeing or printing polyhydroxylated materials. 3,051,542, 8-28-62, Cl. 8—46.

Bost, Howard W.: *See*—
Doss, Richard C., and Bost. 3,051,752.

Bostitich Industrial Stapling Machine Co.: *See*—
Smith, Arthur J. 3,051,135.

Bostock, James H.: *See*—
Grimmer, George G., and Bostock. 3,051,243.

Boulet, Georges, to Recherches Etudes Production R.E.P., Societe a Responsabilite Limitee: Pneumatic suspension for vehicles. 3,051,470, 8-28-62, Cl. 267—64.

Bourns, Inc.: *See*—
Bourns, Marian E., Hardison, and Hulbert. 3,051,921.
Bourns, Marian E., W. T. Hardison, and W. D. Hulbert; said Hardison and Hulbert assors. to Bourns, Inc. Variable resistor constructions. 3,051,921, 8-28-62, Cl. 338—180.

Bowates Board Co.: *See*—
Meller, John G. 3,050,782.

Bowens, James H.: *See*—
Crump, William M., Vaillancourt, and Bowens. 3,051,422.

Bowers, Albert: *See*—
Djerassi, Carl, and Bowers. 3,051,703.

Bowers, Albert, J. Edwards, and J. C. Orr, to Syntex Corp. Derivatives of Δ^1-androsten-17 β-ol. 3,051,730, 8-28-62, Cl. 260—397.1.

Bowers, Albert, to Syntex Corp. Carbamic acid esters. 3,051,744, 8-28-62, Cl. 260—482.

Bowman, James C.: *See*—
Myers, Donald E., List, and Bowman. 3,050,872.

Boyajjan, Robert S., and B. B. Becker, to Lewis-Shepard Co. Fork truck with tri-lift mast. 3,051,265, 8-28-62, Cl. 187—9.

Boyce-Smith William I., and M. R. Powell, to L. A. Dawes. Counterbalanced truck bed lid. 3,051,523, 8-28-62, Cl. 296—100.

Bradbury, Walter C.: *See*—
Hess, Frederick G., and Bradbury. 3,051,648.

Bradbury, Wilburn F., to Smith-Corona Marchant Inc. Perforator. 3,051,377, 8-28-62, Cl. 234—115.

Bradford, Paul E., C. W. Damaskus, and J. B. Lesh, to Armour-Pharmaceutical. Stabilized chymotrypsin solution. 3,051,627, 8-28-62, Cl. 195—63.

Brady, Robert E.: *See*—
Ferlin, Henry J., Brady and Merwin. 3,051,551.

Braid, Milton: *See*—
Hauptschein, Murray, Braid, and Lawlor. 3,051,764.

Brandt, Herbert, to Getriebewerk Leipzig, VEB. Power drive for four axle vehicle. 3,051,256, 8-28-62, Cl. 180—24.

Brandt, Herbert, to Getriebewerk Leipzig, VEB. Crane drives. 3,051,326 8-28-62, Cl. 212—38.

Brass, Edward A., to Avco Corp. Recirculating lubrication system. 3,051,533, 8-28-62, Cl. 308—187.

Bratland, Gustave C., and C. E. Johnson. Anchor for decoys. 3,050,895, 8-28-62, Cl. 43—3.

Braun, Karl J., to A. Kimball Co. Hand punches. 3,051,374, 8-28-62, Cl. 234—45.

Brazier, Horace J., to S. Smith & Sons (England) Ltd. Viscosity sensitive apparatus. 3,050,986, 8-28-62, Cl. 73—60.

Bream, John B.: *See*—
Hadley, David J., and Bream. 3,051,630.

Brennan, Thomas F., to American Can Co. Method of packaging food. 3,051,580, 8-28-62, Cl. 99—171.

Brevets Aero-Mecaniques, S.A.: *See*—
Kuijvenhoven, Arend W., and Vickers. 3,051,056.

Brightside Foundry & Engineering Co., Ltd., The: *See*—
Udall, William. 3,051,290.

Brimelow, Peter: *See*—
Crosfield, John F., Allen, Brimelow, and Price. 3,051,841.

Bristol-Myers Co.: *See*—
Kuna, Samuel, and Pircio. 3,051,622.

Bristol Siddeley Engines Ltd.: *See*—
Henderson, Frank D. 3,050,996.

Brite, Alan D. Oven cleaning article. 3,051,559, 8-28-62, Cl. 23—282.

British Petroleum Co. Ltd., The: *See*—
White, Peter T. 3,051,647.

Brittingham, Louis W., Jr. Diaper pin and safety pin sharpener. 3,050,911, 8-28-62, Cl. 51—214.

Broders, Claude O.: *See*—
Abild, Robert N., Broders, Crim, and Gallant. 3,050,936.

Broerman, Arthur B., to Phillips Petroleum Co. Differential refractometer. 3,051,037, 8-28-62, Cl. 88—14.

Brooke, Jesse M., to Phillips Petroleum Co. Removal of sulfur materials from hydrocarbons. 3,051,646, 8-28-62, Cl. 208—250.

Brown, Boveri & Cie, Aktiengesellschaft: *See*—
Marque, André. 3,050,946.

Brown, George W. Earth moving machine. 3,050,879, 8-28-62, Cl. 37—8.

Brown, Harry W., to Gilbert & Nash Co. Guide for a traveling vertical web. 3,051,363, 8-28-62, Cl. 226—23.

Brown, Harry W., to Cutler-Hammer, Inc. Electric switches. 3,051,803, 8-28-62, Cl. 200—67.

Brown, J Herbert, to Beckman Instruments, Inc. D.C. to A.C. converter. 3,051,914, 8-28-62, Cl. 331—113.

Brown, Joe B., and R. E. Place, to Planet Corp. Automatic handling mechanism. 3,051,328, 8-28-62, Cl. 214—1.

Brown, Paul L.: *See*—
La Costa, Nicholas J., and Brown. 3,051,086.

Brown, William D. Trenching machine cutter mechanism. 3,050,881, 8-28-62, Cl. 37—86.

Bruchhaus, Paul Ch., to H. Hauptner. Ampule syringe, particularly for veterinary use. 3,051,172, 8-28-62, Cl. 128—218.

Brundage Co., The: *See*—
Rockafield, Wilden A., and Brundage. 3,051,372.

Brundage, Joseph E.: *See*—
Rockafield, Wilden A., and Brundage. 3,051,372.

Bruvold, Harold P. Trailer with vertically adjustable frame. 3,051,504, 8-28-62, Cl. 280—43.18.

Buckner Mfg. Co.: *See*—
McElhenie, Edward M. 3,051,396.

Budzich, Tadeusz, to The New York Air Brake Co. Valve plate for engine. 3,051,093, 8-28-62, Cl. 103—162.

Bulman, E. O., Mfg. Co., Inc.: *See*—
Waltz, Edward. 3,051,223.

Bulova Research and Development Laboratories, Inc.: *See*—
Rawlings, Arthur L. 3,051,002.

Bunn, Opal L., to Fields-Mable Corp. Steering apparatus for child's vehicle. 3,051,501, 8-28-62, Cl. 280—1.188.

Burdick, Ralph V., and R. V. Burdick, Jr. Container with snap-off cover. 3,051,350, 8-28-62, Cl. 220—43.

Burdick, Ralph V., Jr.: *See*—
Burdick, Ralph V., and R. V. Burdick, Jr. 3,051,350.

Burlington Industries, Inc.: *See*—
Lowe, John J., and Thomas. 3,051,306.

Burnett, Richard T., to The Bendix Corp. Improvement for disk brake structure. 3,051,272, 8-28-62, Cl. 188—73.

Burroughs Corp.: *See*—
Clark, Edward G. 3,051,848.
Hennessey, William M. 3,051,291.
Howard, John H. 3,051,836.
Leathers, Ward. 3,051,309.
Mintz, Leon J., and Yii. 3,051,852.

Burton, John E. Self-operating floating duck for varying level waters. 3,050,947, 8-28-62, Cl. 61—48.

Burzlaff, Karl H., to Ritter Co., Inc. Locking mechanism for mobile units. 3,051,270, 8-28-62, Cl. 188—22.

Busch, Floyd H., and F. H. Sawada, to General Electric Co. Temperature control systems. 3,051,813, 8-28-62, Cl. 219—20.

Bushong, Lloyd B., R. N. Kennedy, and P. H. Lipke, to The Dow Chemical Co. Bonding thermosetting resins to polystyrene plastics. 3,051,597, 8-28-62, Cl. 154—43.

Butts, Richard R., and E. J. Whyte, Jr., to Carbon Chemical Corp. Carbon reclaiming methods and apparatus. 3,051,554, 8-28-62, Cl. 23—209.8.

Byers, Clarence H. Vehicle operator alarm. 3,051,258, 8-28-62, Cl. 180—82.

CAPS Ltd.: *See*—
Jeffree, John H. 3,051,015.

C.A.V. Ltd.: *See*—
Kemp, Kenneth A. W. 3,051,154.

Cabot, Nat. Returnable practice golf ball. 3,051,491, 8-28-62, Cl. 273—200.

Cadillac Overall Supply Co.: *See*—
Shulevitz, Joseph I. 3,051,484.

Cadwallader, Alvin A., to Teleflex Inc. Marine power control system. 3,051,886, 8-28-62, Cl. 318—467.

Caldwell, Samuel P., and J. Connors, to Mite Corp. Buttonhole attachment for sewing machines. 3,051,106, 8-28-62, Cl. 112—77.

California Research Corp.: *See*—
Toland, William G., Jr. 3,051,746.

Calk, Oberlee D., and C. O. Priddy. Safety ski bar. 3,051,118, 8-28-62, Cl. 115—6.1.

Canadian Industries Ltd.: *See*—
Aitken, Roger G. 3,051,594.
Rowley, Edward K., and West. 3,051,018.

Canazzi, Henry D. Four point planing type of speed boat hull. 3,051,115, 8-28-62, Cl. 114—56.

Candellero, Giovanni: *See*—
Cordiano, Ettore, and Candellero. 3,051,273.

Canon Camera Co., Inc.: *See*—
Goshima, Takeshi. 3,051,067.

Cantin, Roland. Means for eliminating the effect of polar attraction in electric generators. 3,051,857, 8-28-62, Cl. 310—74.

Carbon Chemical Corp.: *See*—
Butts, Richard R., and Whyte. 3,051,554.

Carborundum Co., The: *See*—
Drenning, John F. 3,051,564.

Carlin, Harry, and R. J. Cieplik, to Varl-Typer Corp. Business machines. 3,051,480, 8-28-62, Cl. 271—87.

Carlson, Allan E., and J. M. Jost, to Clevite Corp. Photoconductive element. 3,051,839, 8-28-62, Cl. 250—211.

Caro, Paul M., C. O. Miller, and R. A. Xavier, to Olin Mathieson Chemical Corp. Production of boron trichloride. 3,051,553, 8-28-62, Cl. 23—205.

Carrier Corp.: *See*—
Rich, Donald G. 3,050,959.

Carroll, Paul E., to Texas Instruments Inc. Bidirectional tristable electronic circuit employing international Eccles-Jordan flip-flops. 3,051,907, 8-28-62, Cl. 328—205.

Carson, Forrest L.: *See*—
Arnold, Le Roy, Bloyd, and Carson. 3,051,238.

Carson, Robert L. Gas detection. 3,051,895, 8-28-62, Cl. 324—71.

Cashman, Robert W., and A. Wasco, Jr., to Saginaw Machine and Tool Co. Tool holder. 3,050,828, 8-28-62, Cl. 29—96.

Cashman, Robert W., and A. Wasco, Jr., to Saginaw Machine and Tool Co. Tool supporting apparatus. 3,051,029, 8-28-62, Cl. 82—36.

Castoe, John H. Spring compressor tool. 3,051,443, 8-28-62, Cl. 254—10.5.

Catamaran Corp. of America: *See*—
Halperin, David. 3,051,503.

Cavitron Ultrasonics Inc.: *See*—
Kurls, Arthur, Balamuth, and Kleesattel. 3,051,027.

Cecil, Tom A.: *See*—
Alegrini, Aldo P., and Cecil. 3,050,863.

Celanese Corp. of America: *See*—
Allman, William T., Jr., and Layman. 3,050,819.

Cercueils Amiante Ltee—The Asbestos Caskets Ltd., Les: *See*—
Pare, Donat. 3,050,817.

Chacharis, Peter, to United States Steel Corp. Apparatus for handling wheel blanks entering and leaving rolling mill. 3,051,330, 8-28-62, Cl. 214—1.

Chadder, Henry L.: *See*—
Crosfield, John F., Allen, Brimelow, and Price. 3,051,841.

Chapin, Earl C.: *See*—
Abramo, John G., Garner, and Chapin. 3,051,740.

Chamberlain, Richard O., and C. E. Wakefield, Jr., to Richfield Oil Corp. Multiple zone control apparatus. 3,051,242, 8-28-62, Cl. 166—185.

Chambers, Frank W., to Strategic Material Corp. Process for continuous casting and vacuum degasification. 3,050,798, 8-28-62, Cl. 22—200.1.

Chandler, Robert W., to Rotax Ltd. Air driven turbines. 3,051,440, 8-28-62, Cl. 253—77.

Chpman, Everett, to Nordberg Mfg. Co. Method of truing manganese castings. 3,050,850, 8-28-62, Cl. 29—552.

Chase, Fletcher A., to North Woods Coffee Co. Method of preparing stable egg-impregnated green coffee. 3,051,575, 8-28-62, Cl. 99—65.

Chattin, Robert C. Wheel supported ditcher. 3,050,882, 8-28-62, Cl. 37—98.

Chemetron Corp.: *See*—
Bernard, Arthur A. and R. A. 3,051,822.
Harnik, Marcel. 3,051,732.

Cherry-Burrell Corp.: *See*—
Walsh, John C., Haselton, Holland, and Juhl. 3,051,096.

Chicago Eye Shield Co.: *See*—
Malcom, Robert, Jr. 3,050,736.

Chipman, Arthur D., and J. M. Shaheen, to The General Tire & Rubber Co. Heat resistant laminated counter top. 3,051,598, 8-28-62, Cl. 154—43.

Chiyoda Kogaku Seiko Kabushiki Kaisha: *See*—
Kobayashi, Tatsuo. 3,051,065.

Chrysler Corp.: *See*—
Goldmann, Kenneth F., and Lejk. 3,050,962.

Chupp, John P., to Monsanto Chemical Co. Mixed anhydrides of phosphorus containing acids. 3,051,613, 8-28-62, Cl. 167—22.

Ciba Ltd.: *See*—
Bosshard, Hans H., and Zollinger. 3,051,542.
Deflorin, Alberto, and Maeder. 3,051,688.

Ciceri, Carlo: *See*—
Murphy, Norman, and Ciceri. 3,050,906.

Cieplik, Ronald J.: *See*—
Carlin, Harry, and Cieplik. 3,051,480.

Cieremans, Cornelis J. A., to Lever Brothers Co. Presses. 3,050,807, 8-28-62, Cl. 25—10.

Cignarella, Giorgio: *See*—
Teotino, Uberto, and Cignarella. 3,051,727.

Cincinnati Milling Machine Co., The: *See*—
Decker, Jacob. 3,050,912.

Cissell, W. M., Mfg. Co.: *See*—
Richterkessing, Frank H. 3,051,358.

Cities Service Research and Development Co.: *See*—
Hess, Frederick G., and Bradbury. 3,051,648.

Cizek, Frank G.: *See*—
Tomka, Joseph W., and Cizek. 3,051,216.

Clanton, Albert R.: *See*—
Clanton, Raymond W., A. R. and H. L. 3,050,808.

Clanton, Hollis L.: *See*—
Clanton, Raymond W., A. R. and H. L. 3,050,808.

Clanton, Raymond W., A. R. and H. L., to Kaiser Steel Corp. Apparatus for making shell brick. 3,050,808, 8-28-62, Cl. 25—41.

Clapp, Warren S., to E. I. du Pont de Nemours and Co. Process of vat dyeing. 3,051,541, 8–28–62, Cl. 8—34.

Clare, C. P., Canada Ltd.: *See*—
Wedgewood, Robert S. 3,051,890.

Clark, Edward G., to Burroughs Corp. Shift register using bi-directional push-pull gates whose output is determined by state of associated flip-flop. 3,051,848, 8–28–62, Cl. 307—88.5.

Clark, Ernest H., Jr., and J. D. Keithahn, to Baker Oil Tools, Inc. Automatic fluid fill apparatus for subsurface conduit strings. 3,051,246, 8–28–62, Cl. 166—226.

Clark, John W.: *See*—
Hill, Harry N., Clark, and Woodburn. 3,051,217.

Clarke-Built Ltd.: *See*—
Clarke, Frank J., and Goldsmith. 3,051,456.

Clarke, Francis J., to Allegheny Ludum Steel Corp. Architectural finish. 3,051,080, 8–28–62, Cl. 101—32.

Clarke, Frank J., and T. L. Goldsmith, to Clarke-Built Ltd. Agitating device. 3,051,456, 8–28–62, Cl. 259—9.

Clarkson, Alick, and D. W. Miller, to Vapor Heating Corp. Water tube boiler or steam generator. 3,051,146, 8–28–62, Cl. 122—249.

Clary Corp.: *See*—
Oldenburg, Kenneth F. 3,051,380.
Oldenburg, Kenneth F., and Schwend. 3,051,376.

Clement, Milton A., to General Dynamics Corp. Telephone system including magnetic storage device. 3,051,789, 8–28–62, Cl. 179—7.1.

Cleveland Trust Co., The: *See*—
Frohlich, Adolf H., and Harris. 3,051,225.

Clevite Corp.: *See*—
Carlson, Allan E., and Jost. 3,051,839.
Faulk, Donald P., and Gerber. 3,051,919.
Jost, Jacob M. 3,051,558.

Clifford, George F., to Jersey Creme Holdings Pty. Ltd. Soft ice-cream machines. 3,050,960, 8–28–62, Cl. 62—342.

Clifford, John E., and C. L. Faust, to United States Steel Corp. Method and apparatus for making a tapered thread. 3,051,638, 8–28–62, Cl. 204—143.

Clow, James B., and Sons, Inc.: *See*—
Bevington, William J. 3,051,200.

Clyne, Joseph, to Flexsleev, Inc. Snap fasteners. 3,050,805, 8–28–62, Cl. 24—214.

Coburn, Kenneth G., to Armco Steel Corp. Method of treating metallic strip with sodium vapor. 3,051,587, 8–28–62, Cl. 117—51.

Cocke, John: *See*—
Pomerene, James H., and Cocke. 3,051,387.

Cohn, Maurice. Garment fastening eye. 3,050,806, 8–28–62, Cl. 24—226.

Coker, Frank B.: *See*—
Peterson, Raymond A., and Coker. 3,051,897.

Cole, Donald N.: *See*—
Nelson, Marvin D., and Cole. 3,051,446.

Coleman, Charles S. Bed table and commode. 3,050,741, 8–28–62, Cl. 4—134.

Coler, Myron A., and A. S. Louis. Composition comprising a polymer of an ethylenic monomer and a salt of an ester of a carboxylic acid and hydroxyalkylated alkylene polyamine. 3,051,663, 8–28–62, Cl. 252—500.

Collett, Charles H. Well pipe protector. 3,051,532, 8–28–62, Cl. 308—4.

Collins, Galen F., to Miles Laboratories, Inc. pH indicator units in tablet form. 3,051,661, 8–28–62, Cl. 252—408.

Color Process Co., Inc.: *See*—
Sperry, Herbert O. 3,050,887.

Colosimo, Samuel R. Traction device. 3,051,211, 8–28–62, Cl. 152—220.

Colton, Evan T.: *See*—
Young, Frink M., and Colton. 3,051,791.

Comes, George N.: *See*—
Babayan, Vigen K., and Comes. 3,051,577.

Commissariat a l'Energie Atomique: *See*—
Bonnet, Georges, and Garlod. 3,051,874.

Compagnie Parisienne d'Outillage a Air Comprime: *See*—
Martin, Pierre. 3,051,198.

Conn, Mervin E., to Esso Research and Engineering Co. Treating finely-divided solids. 3,051,314, 8–28–62, Cl. 210—189.

Connors, John: *See*—
Caldwell, Samuel P., and Connors. 3,051,106.

Consolidated Electronics Industries Corp.: *See*—
Houk, Richard D. 3,051,014.

Consolidation Coal Co.: *See*—
Gorin, Everett, and Friedrich. 3,051,628.
Gorin, Everett, and Friedrich. 3,051,629.
Gwynne, Jay H. 3,051,310.

Consolloy, James W., to The Electric Storage Battery Co. Connecting means having a cam operated split contractible sleeve. 3,051,514, 8–28–62, Cl. 285—215.

Container Corp. of America, Sefton Fibre Can Co. Division: *See*—
Hanlon, Donald V. 3,051,370.

Continental Can Co., Inc.: *See*—
Honor, Walter J. 3,051,355.

Continental Oil Co.: *See*—
Swiger, William F. 3,051,113.

Cook, George W., to Thiokol Chemical Corp. Angular accelerometer sensing systems and control methods and apparatus. 3,051 884, 8–28–62, Cl. 318—457.

Cordiano, Ettore, and G. Candellero, by Fiat Societa per Azioni. Hydraulic brake. 3,051,273, 8–28–62, Cl. 180—90.

Corley, Charles B., Jr.: *See*—
Liles, Joseph R., Jr., Corley, and Loy. 3,051,237.

Corning Glass Works: *See*—
Hoover, Herbert L., and Van Dyke. 3,051,915.
Lazar, Nicholas, and McIntosh. 3,051,879.

Corte, Herbert: *See*—
Marzolph, Herbert, Ruf, and Corte. 3,051,741.

Cortese, Joseph, and J. Vollman, deceased (V. H. Eichhorn, administrator), to The Singer Mfg. Co. Thread severing means for sewing machines. 3,051,111, 8–28–62, Cl. 112—252.

Cosmocord Ltd.: *See*—
Walton, Jean. 3,051,494.

Cottle, Delmer L.: *See*—
Minckler, Leon S., Jr., and Cottle. 3,051,680.

Cotton, William, Ltd.: *See*—
Blood, Raymond. 3,050,971.
McCarthy, Patrick G. 3,050,969.
Taylor, George. 3,050,967.

Council for Scientific and Industrial Research: *See*—
Gibson, Eric J. 3,051,737.

Cowherd, Robert D. Electropneumatic control circuit. 3,051,872, 8–28–62, Cl. 317—123.

Crabbe, Pierre: *See*—
Zderic, John A., and Crabbe. 3,051,733.

Craig, Thomas A., to Union Carbide Corp. Metal arc welding. 3,051,823, 8–28–62, Cl. 219—74.

Crandon, Harry D., to American Optical Co. Light polarizing articles and method of making same. 3,051,054, 8–28–62, Cl. 88—65.

Crane Packing Co.: *See*—
Domeny, Steven. 3,050,853.

Crane, Samuel P., and S. D. Kent. Ventilated spacer. 3,050,749, 8–28–62, Cl. 5—347.

Cranston, Lawrence, to United States Rubber Co. Expansion joint. 3,051,512, 8–28–62, Cl. 285—114.

Cressey, John R., N. D. Peterson, A. Nazareth, Jr., and R. P. lawler, to The Foxboro Co. Electrically operated apparatus for remote measuring. 3,051,932, 8–28–62, Cl. 340—187.

Cressey, John R., N. D. Peterson, A. Nazareth, Jr., and R. P. Lawler, to The Foxboro Co. Electrically operated apparatus for remote measuring. 3,051,933, 8–28–62, Cl. 340—187.

Cressman, Earl W., A. P. Jurnak, and R. L. Mueller, to Western Electric Co., Inc. Apparatus for stripping molded articles from core pins. 3,050,836, 8–28–62, Cl. 29—208.

Crim, Hugh S.: *See*—
Abild, Robert N., Broders, Crim, and Gallant. 3,050,936.

Crocker, Harry E., to McGraw-Edison Co. Memory marking apparatus for head carriage of a phonograph. 3,051,492, 8–28–62, Cl. 274—14.

Crosfield, J. F., Ltd.: *See*—
Crosfield, John F., Allen, Brimelow, and Price. 3,051,841.

Crosfield, John F., G. S. J. Allen, P. Brimelow, and P. R. Price, to J. F. Crosfield Ltd., G. E. B. Abell, P. R. Price, and H. L. Chadder. Printing and photography. 3,051,841, 8–28–62, Cl. 250—220.

Beidler, Henry L.: *See*—
Lilola, Gerald J., Crowe, and Beidler. 3,051,171.

Crowley, Walter W. Garment carrier. 3,051,302, 8–28–62, Cl. 206—7.

Crucible Steel Co. of America: *See*—
Genter, David H. E. 3,050,830.

Crump, William M., D. A. Vaillancourt, and J. B. Bowens. Fishing rod holder. 3,051,422, 8–28–62, Cl. 248—40.

Culp, Archie W., Jr., to Astra, Inc. Neutron pyrometer. 3,051,838, 8–28–62, Cl. 250—83.1.

Cummings, Lowell O., to Pacific Vegetable Oil Corp. Epoxy resin-lsano oil compositions. 3,051,671, 8–28–62, Cl. 260—18.

Cunningham, William J., to Rohm & Haas Co. Process which comprisea forming a gel from a solution in a vinylidene compound of isotactic polymethyl methacrylate and syndiotactic polymethylmethacrylate and polymerixing said gel. 3,050,785, 8–28–62, Cl. 18—59.

Curtis, Roger C.: *See*—
Roberts, Frederick W., Jones, Di Mattia, and Curtis. 3,051,795.

Curtiss-Wright Corp.: *See*—
Eichler, Jack H. 3,050,765.
Moulton, Lloyd J. 3,051,445.
Oldenburger, Rufus. 3,051,138.
Young, Merrill A., and Erlenbach. 3,050,979.

Cushing, Paul J., Sr., to Hydraulic Dredging Co., Ltd. Spud well for dredges. 3,050,880, 8–28–62, Cl. 37—73.

Custom Polymerxs, Inc.: *See*—
Stark, Fred J. 3,051,673.

Cutler-Hammer, Inc.: *See*—
Brown, Harry W. 3,051,803.

Daanen, Sylvester J., and T. H. Lutsey. Combined container and serving dish. 3,051,303, 8–28–62, Cl. 206—45.31.

Da Costa, Harry, to Motorola, Inc. Micromanipulator. 3,051,026, 8–28–62, Cl. 78—82.

Dahlke, Hugo E., to Gulton Industries, Inc. Flow measuring strain gauge transducers. 3,050,998, 8–28–62, Cl. 73—228.

Dahlman, Per O., to North Electric Co. Selective party line signaling system. 3,051,792, 8–28–62, Cl. 179—17.

Daimler-Benz Aktiengesellschaft: *See*—
Fiala, Ernst J. H. 3,051,507.
Lorenz, Otto. 3,051,259.
Mueller, Alfred H. 3,050,932.
Schöllhammer, Friedrich W., and Eltze. 3,051,191.
Stump, Eugen, and Strifler. 3,051,506.

Dale, Allan L., A. Orullian, and B. J. Pope, to Standard Oil Co. Control valve locking apparatus. 3,051,433, 8–28–62, Cl. 251—61.

Damaskus, Charles W.: *See*—
Bradford, Paul E., Damaskus, and Lesh. 3,051,627.

D'Amico, John J., to Monsanto Chemical Co. Thiazolylthiocyclohexanones. 3,051,716, 8–28–62, Cl. 260—302.

D'Amico, John J., to Monsanto Chemical Co. Dihydrodioxonaphthylenedithiobis (thiazolecarboxylates). 3,051,717, 8–28–62, Cl. 260—302.

D'Amico, John J., to Monsanto Chemical Co. Halogen substituted alkenyl dithiocarbamic acid salts and esters. 3,051,735, 8–28–62, Cl. 260—429.9.

Daniel, Georges H. M., to Societe Trifiux. Gas discharge tube supply system. 3,051,871, 8–28–62, Cl. 315—208.

Daniels, William W., to E. I. du Pont de Nemours and Co. Reinforced composite structures. 3,051,212, 8–28–62, Cl. 152—330.

Darnell, Beryl E. Cleaner. 3,050,760, 8–28–62, Cl. 15—113.

Daty, Arthur B.: *See*—
Mann, Stuart N., and Daty. 3,050,744.

Davey, Gerald F., to Stoker, Riley, Corp. Tube end milling machine. 3,051,059, 8–28–62, Cl. 90—12.

Davies, George, ½ to H. Werthelmer. Abrasive elements. 3,050,827, 8–28–62, Cl. 29—78.

Davis, Ariel R. Mounting strip. 3,051,772, 8–28–62, Cl. 174—61.

Davis, Edward M., to International Business Machines Corp. Photosensitive field effect unit. 3,051,840, 8–28–62, Cl. 250—211.

Davis, Frank L. Heavy duty tiedown buckle with remotely operable safety tension release. 3,050,799, 8–28–62, Cl. 24—68.

Davis, Hubert J. Projection cabinet. 3,051,040, 8–28–62, Cl. 88—24.

Davis, John H., Jr.: *See*—
Kuxell, Charles B., Fowler, Davis, Klein, and MacDougall. 3,051,467.

Dawes, Bailey P. Outboard drive and rudder. 3,051,121, 8–28–62, Cl. 115—42.

Dawes, Leslie A.: *See*—
Boyce-Smith, William I., and Powell. 3,051,523.

Dawes, Leslie J., to The Bendix Corp. Hydraulic connecting structure. 3,051,510, 8–28–62, Cl. 285—31.

Day-Brite Lighting, Inc.: *See*—
Halfaker, Thomas C. 3,051,430.

Day, Harold R. Envelopes. 3,051,371, 8–28–62, Cl. 229—85.

Day, Paul T., Jr., to American Metalcare Systems, Inc. Prefabricated building structure and panels comprising the same. 3,051,277, 8–28–62, Cl. 189—1.

Daystrom, Inc.: *See*—
Gilbert, Roswell W. 3,051,939.

De Bartolomeis, Remo, to Forni ed Impianti Industriali Ingg de Bartolomeis, S.p.A. Device for localizing rapid variations of temperature at predetermined points in tunnel type kilns, particularly in kilns for the firing of ceramic products. 3,050,811, 8–28–62, Cl. 25—142.

Decker, Jacob, to The Cincinnati Milling Machine Co. Mounting construction for machine tool member. 3,050,912, 8–28–62, Cl. 51—237.

Deely, Carroll L. Reamer. 3,051,255, 8–28–62, Cl. 175—265.

Deere & Co.: *See*—
Markham, David R., and Kessler. 3,050,927.
Schnell, Ernst E. 3,051,347.

De Faymoreau, Etienne C. L., and J. A. Baudin, to International Telephone and Telegraph Corp. Delay compensation in telemetering systems. 3,051,948, 8–28–62, Cl. 343—103.

De Feo, John J.: *See*—
Guilbert, Nicholas R., Jr., and De Feo. 3,051,269.

Deflorin, Alberto, and A. Maeder, to Ciba Ltd. New polymerization products and process for their manufacture. 3,051,688, 8–28–62, Cl. 260—86.1.

De Groot, Howard S.: *See*—
Ahara, Edward V., Johnson, De Groot, and Stalmuke. 3,051,125.

Dehydag, Deutsche Hydrierwerke G.m.b.H.: *See*—
Strauss, Wennemar, and Willmund. 3,051,634.

De la Vega Falcon, Jose R., and E. R. Rodriguez, 75% to Instituto Cubano de Investigaciones Tecnologicas and 25% to Universidad de Villanueva. Hydrolysis of bagasse. 3,051,611, 8–28–62, Cl. 162—868.

Dell, Saul V., to Mechanical Industries Production Co. Protective device with terminal clips thereon. 3,051,809, 8–28–62, Cl. 200—138.

Del Mar Engineering Laboratories: *See*—
Finkelstein, Don B. 3,051,085.

Dembinsky, Joseph: *See*—
Myers, Bernard, and Dembinsky. 3,050,888.

Dent, Kenneth H., to United Kingdom Atomic Energy Authority. Heterogeneous nuclear reactor fuel element charging and discharging means. 3,051,642, 8–28–62, Cl. 204—193.2.

De Pree, David O., and E. G. De Witt, to Ethyl Corp. Organometallic compounds. 3,051,748, 8–28–62, Cl. 260—526.

Dersch, Fritz, F. J. Kaszuba, and E. B. Rauch, to General Aniline & Film Corp. Antifoggants and stabilizers for photographic silver halide emulsions. 3,051,570, 8–28–62, Cl. 96—67.

Design Center, Inc.: *See*—
Menkel, Gary G. 3,051,361.

Detroit Stamping Co.: *See*—
Kreger, Ralph E. 3,051,028.

Dettling, Martin. Rotating ring grain cleaner. 3,051,311, 8–28–62, Cl. 209—292.

Dettre, Robert H.: *See*—
Gray, Charles L., Jr., and Dettre. 3,051,593.

Dettwyler, William, to E. I. du Pont de Nemours and Co. Chromation of azo dyes. 3,051,696, 8–28–62, Cl. 260—147.

Dettwyler, William, to E. I. du Pont de Nemours and Co. Nitrosation process. 3,051,750, 8–28–62, Cl. 260—556.

Deutinger, Henry. Invalid cushion. 3,050,748, 8–28–62, Cl. 5—338.

Deutsche Gold- und Silber-scheideanstalt vormals Roessler: *See*—
Schweitzer, Otto, and Behrends. 3,051,755.

Deverell, Geoffrey J., to The Plessey Co. Ltd. Automatic over-speed and under-speed trip valves. 3,051,005, 8–28–62, Cl. 73—537.

De Witt, Earl G.: *See*—
De Pree, David O., and De Witt. 3,051,748.

Diamond Alkali Co.: *See*—
Harbin, Adie D., Jr., and Munns. 3,051,631.
Judice, Richard H., and Wiesner. 3,051,637.
McCain, George H. 3,051,765.

Diamond, Harry. Methods of making structural beams. 3,050,831, 8–28–62, Cl. 29—155.

Dictaphone Corp.: *See*—
Roberts, Frederick W., Jones, Di Mattia, and Curtis. 3,051,795.

Diehl, Ludwig, and J. H. Fuchs, to Carl Schneider Firma. Device for storing film and sound record tapes. 3,051,537, 8–28–62, Cl. 312—20.

Dietert, Harry W., to Harry W. Dietert Co. Continuous type sand mixer. 3,050,795, 8–28–62, Cl. 22—89.

Dietert, Harry W., Co.: *See*—
Dietert, Harry W. 3,050,795.
Steinmueller, Ralph E., and Rowell. 3,050,992.

Dietzler, Andrew J., and T. R. Keil, to The Dow Chemical Co. Activators for rhodium catalysts. 3,051,753, 8–28–62, Cl. 260—580.

Dike, Melville A., to W. D. Kraemer. Method of electroplating copper elbows. 3,051,632, 8–28–62, Cl. 204—16.

Di Mattia, Alfred L.: *See*—
Roberts, Frederick W., Jones, Di Mattia, and Curtis. 3,051,795.

Dinning, John R., to Toledo Scale Corp. Elevator control system. 3,051,268, 8–28–62, Cl. 187—29.

Dion, George C., to Noid Corp. Apparatus for protecting concrete and other masonry materials. 3,051,821, 8–28–62, Cl. 219—46.

Dirlik, Paul P. Motion transforming apparatus. 3,051,249, 8–28–62, Cl. 170—160.32.

Distillers Co. Ltd., The: *See*—
Hadley, David J., and Bream. 3,051,630.

Djerassi, Carl, and A. Bowers, to Syntex Corp. Process for preparing Δ9(11)-pregnanes and intermediates. 3,051,703, 8–28–62, Cl. 260—239.55.

Dodge, Harry G., ⅓₀ to J. Stanik. Pipe burnishing apparatus. 3,050,757, 8–28–62, Cl. 15—88.

Dodsworth, James W.: *See*—
Durgin, Douglas C., and Dodsworth. 3,051,385.

Dolgorukov, Gregory S. Package or similar article. 3,051,304, 8–28–62, Cl. 206—45.33.

Dollison, William W., to Otis Engineering Corp. Running and pulling tool. 3,051,239, 8–28–62, Cl. 166—125.

Domeny, Steven, to Crane Packing Co. Tape dispenser. 3,050,853, 8–28–62, Cl. 30—131.

Dominion Engineering Works Ltd.: *See*—
Sproule, Robert S. 3,051,441.

Donohue, Anthony J. Sectional boilers. 3,051,145, 8–28–62, Cl. 122—225.

Dooley, Philip G., and A. D. Tinkelenberg, to United Aircraft Corp. Propellant injector device. 3,050,942, 8–28–62, Cl. 60—39.46.

Dopyera, Harriet B. Shoulder strap pads. 3,050,734, 8–28–62, Cl. 2—2.

Dorken & Mankel K.G., Firma: *See*—
Bomm, Heinz. 3,050,769.

Doss, Richard C., and H. W. Bost, to Phillips Petroleum Co. Method for the preparation of N,N,N′,N′,N″,N″ hexasubstituted 1,2,3-triaminopropanes. 3,051,752, 8–28–62, Cl. 260—570.5.

Dow Chemical Co., The: *See*—
Bakke, William W. 3,051,676.
Bersworth, Frederick C. 3,051,563.
Bushong, Lloyd B., Kennedy, and Lipke. 3,051,597.
Dietzler, Andrew J., and Keil. 3,051,753.
Glueck, Marta G., and Jankens. 3,051,675.
Gohlke, Roland S. 3,050,983.
Goos, Arthur W., and Trepanier. 3,051,454.
Johnston, Howard. 3,051,757.
Leathers, Joel M., and Woodward. 3,051,747.
MacBeth, Gordon, and Heitz. 3,051,761.
Partansky, Alexander M. 3,051,681.
Sexton, Arthur R. 3,051,760.

Downey, Gilles L. Universal sock clamp. 3,050,801, 8–28–62, Cl. 24—81.

Doxford, William, & Sons (Engineers) Ltd.: *See*—
Jackson, Percy, and Taylor. 3,051,147.

Dozier, Leonard C., Jr., to North American Aviation, Inc. Autonavigator. 3,050,995, 8–28–62, Cl. 73—178.

Draber, Wilfried J.: *See*—
Wallenfels, Kurt A. W., and Draber. 3,051,725.

Drackett Co., The: *See*—
Morgan, Paul A. 3,050,761.

Drake, Robert W., and S. M. Kleinfelter, to Sylvania Electric Products Inc. Lamp package. 3,051,369, 8–28–62, Cl. 229—39.

Drapal, Othmar, to Farbenfabriken Bayer Aktiengesellschaft. Mothproofing agents. 3,051,616, 8–28–62, Cl. 167—37.

Draughon, John M., and R. L. Van Voorhies, to Esso Research and Engineering Co. Hydraulic dynamometer and process of using same. 3,050,993, 8–28–62, Cl. 73—116.

Dreier, Raymond C. Phonograph pick-up device. 3,051,493, 8–28–62, Cl. 274—23.

Drenning, John F., to The Carborundum Co. Composition for metallurgical use and process of using the same. 3,051,564, 8–28–62, Cl. 75—53.

Drew Chemical Corp.: *See*—
Babayan, Vigen K., and Comes. 3,051,577.

Drew, Robert D., to Socony Mobil Oil Co., Inc. Method for heating granular solids. 3,051,466, 8–28–62, Cl. 263—52.

Dreyer, Leroy: *See*—
Fry, William J. and F. J., and Dreyer. 3,051,167.

Drillick, Jacob H., to Monroe Calculating Machine Co. Sensing device. 3,051,381, 8–28–62, Cl. 235—61.11.

Dufour, Raymond J., and W. C. Isley. Meter proving means. 3,050,980, 8-28-62, Cl. 73—3.

Duhamel, Gerard. Pipe hanger. 3,051,424, 8-28-62, Cl. 248—62.

Duke, John A.: *See*—
Vollmer, James, and Duke. 3,050,982.

Duke, John A., to Minneapolis-Honeywell Regulator Co. Temperature measuring apparatus. 3,051,038, 8-28-62, Cl. 88—22.5.

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Von Reppert, Lothar. 3,050,772.

Dunkerley, Arthur A. Piston pin installing tool. 3,050,840, 8-28-62, Cl. 29—263.

Dunklee, Laurence H.: *See*—
Hukee, Russell E., and Dunklee. 3,051,815.

Du Pont de Nemours, E. I., and Co.: *See*—
Barnes, Thomas W., and Hill. 3,051,364.
Bayer, Robert O., and Meinzer. 3,050,846.
Clapp, Warren S. 3,051,541.
Daniels, William W. 3,051,212.
Dettwyler, William. 3,051,696.
Dettwyler, William. 3,051,750.
Fullhart, Lawrence, Jr., and Swalheim. 3,051,595.
Gier, Thurman E. 3,051,756.
Gray, Charles L., Jr., and Dettre. 3,051,593.
Kamlet, Jonas. 3,051,573.
Killian, Joseph J. 3,050,821.
Mallouk, Robert S. 3,051,683.
Matray, Otto J., and Stine. 3,050,822.
Miller, Henry C. 3,051,546.
Minnich, John W. 3,051,720.
Panim, Georges. 3,050,820.
Rexford, Dean R. 3,051,677.
Speed, David B. 3,051,550.
Steuber, Walter. 3,051,545.
Tait, Robert A. 3,050,774.
Wheeler, Norris G. 3,051,718.

Dura Corp.: *See*—
Myers, Richard L. 3,051,522.
Weaver, Ira A. 3,051,141.

Durgin, Douglas C., and J. W. Dodsworth, to Monroe Calculating Machine Co. Crawl carry mechanism. 3,051,385, 8-28-62, Cl. 235—136.

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Nelson, Marvin D., and Cole. 3,051,446.

Dwyer, Russell A. Tourniquet. 3,051,179, 8-28-62, Cl. 128—327.

Dynamic Engineering Corp.: *See*—
Huettner, Lothar A. 3,051,144.

Eastman Kodak Co.: *See*—
Lareau, Norman N., and Olson. 3,051,066.

Eastwood, Sylvander C., to Socony Mobil Oil Co., Inc. Apparatus for catalytically treating internal combustion engine exhaust gases. 3,050,935, 8-28-62, Cl. 60—31.

Eckel, Oliver C. Door for attenuating sound. 3,051,260, 8-28-62, Cl. 181—33.

Edgerton, Germeshausen & Grier, Inc.: *See*—
Germeshausen, Kenneth J. 3,051,918.

Edmont Inc.: *See*—
Rytina, Anton W. 3,050,738.

Edwards, Harrison F., to Simmonas Aerocessories, Inc. Capacity unit for liquid quantity gauges. 3,050,999, 8-28-62, Cl. 73—304.

Edwards, John: *See*—
Bowers, Albert, Edwards, and Orr. 3,051,730.

Egly, Martha H.: *See*—
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Ehrhart, Gustav, I. Hennig, E. Lindner, and H. Ott, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Beta-hydroxy-butyric acid amide derivatives and process for their use as narcotics. 3,051,618, 8-28-62, Cl. 167—52.

Ehrhart, Gustav, I. Hennig, E. Lindner, and H. Ott, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. β-hydroxy-butyric acid amide derivatives and process of preparing them. 3,051,742, 8-28-62, Cl. 260—475.

Eichelman, Burr S.: *See*—
Echelman, John M. and B. S., and Towsley. 3,050,889.

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Eichhorn, Victor H.: *See*—
Cortese, Joseph, and Vollman. 3,051,111.

Eichler, Jack H., to Curtiss-Wright Corp. Rotary wipers, particularly for aircraft. 3,050,765, 8-28-62, Cl. 15—250.22.

Einhorn, Clarence M., to Armour and Co. Container. 3,051,367, 8-28-62, Cl. 229—14.

Einstein, Petef A.: *See*—
Haine, Michael E., and Einstein. 3,051,860.

Eisenhart, Robert D.: *See*—
Bergman, Burton K., Eisenhart, Opsahl, and Wood. 3,051,280.

Elam, William B., to American Can Co. Dispensing container. 3,051,357, 8-28-62, Cl. 222—480.

Elberfeld Mfg. Co., Inc.: *See*—
Kuhlenschmidt, Harold L. and F. E., and Arthur and Arnold Gelselman. 3,051,323.

Electric Storage Battery Co. The: *See*—
Consolloy, James W. 3,051,514.
Grieger, Philip F., and Fleischer. 3,051,831.
Kopper, Edward C. 3,050,776.
Kujas, Eric F. 3,051,768.

Electrofilm, Inc.: *See*—
Heath, Arthur N., and Horwedel. 3,051,586.

Electrostar G.m.b.H.: *See*—
Hanschitz, Rudolf. 3,051,856.

Elizer, Lee H., G. C. Glasscock, and J. M. Seitz, to The Hubinger Co. Cationic, nitrogenated, hydrophilic colloids. 3,051,691, 8-28-62, Cl. 260—91.3.

Elizer, Lee H., G. C. Glasscock, and J. M. Seitz, to The Hubinger Co. Cellulose products and process for making same. 3,051,698, 8-28-62, Cl. 260—212.

Elizer, Lee H., G. C. Glasscock, and J. M. Seitz, to The Hubinger Co. Nitrogenated granular starch products. 3,051,699, 8-28-62, Cl. 260—233.3.

Elizer, Lee H., G. C. Glasscock, and J. M. Seitz, to The Hubinger Co. Cationic, nitrogenated, starch products containing at least 50% of amylose. 3,051,700, 8-28-62, Cl. 260—233.3.

Elliott, Robert J.: *See*—
Green, Daniel M., Kohnle, and Elliott. 3,051,621.

Ellis, Charles A., to Ritter Co., Inc. Dental apparatus. 3,050,855, 8-28-62, Cl. 32—26.

Eltze, Georg: *See*—
Schöllhammer, Friedrich W., and Eltze. 3,051,191.

Ely, Howard L. Vehicle hoist. 3,051,340, 8-28-62, Cl. 214—512.

Emblem, Harold G., N. D. G. Mountford, and C. W. Morley, to Rolls-Royce Ltd. Aqueous coating compositions for production of shell moulds and process for preparing same. 3,051,669, 8-28-62, Cl. 260—17.

Engel, James S., to International Telephone and Telegraph Corp. Moving target selector. 3,051,947, 8-28-62, Cl. 343—7.7.

Engelbrecht, Rudolf S., to Bell Telephone Laboratories, Inc. Up-converter amplifier circuits with isolation. 3,051,909, 8-28-62, Cl. 330—7.

Enhart Mfg. Co.: *See*—
Mylchreest, George D. 3,050,771.

Enterprise Mfg. Co., The: *See*—
Sarah, Thomas F. 3,051,409.

Eprova Ltd.: *See*—
Suter, Hans, and Zutter. 3,051,706.

Epsco, Inc.: *See*—
Young, Frink M., and Colton. 3,051,791.

Erisman, Maurice J., N. L. Francis, and E. C. Antonson, to Link-Belt Co. Rotary coolers. 3,050,868, 8-28-62, Cl. 34—136.

Erlenbach, David N.: *See*—
Young, Merrill A., and Erlenbach. 3,050,979.

Esselstyn, James O., to Sylvania Electric Products, Inc. Circuit board lifter tools. 3,050,841, 8-28-62, Cl. 29—268.

Esso Research and Engineering Co.: *See*—
Conn, Mervin E. 3,051 314.
Draughon, John M, and Van Voorhies. 3,050,993.
Heigl, John J., Wilson, and Lewis. 3,050,994.
Hunter, Edward A., Aldridge, and Gensheimer. 3,051,766.
Minckler, Leon S., Jr., and Cottle. 3,051,680.
Pfenning, Reuben F. 3,051,650.

Estrem, George C. Coin box. 3,051,308, 8-28-62, Cl. 206—83.

Etchison, John O., Jr., and E. M. Hutchins, to Western Electric Co., Inc. Method of cold forming metal. 3,050,849, 8-28-62, Cl. 29—534.

Ethyl Corp.: *See*—
De Pree, David O., and De Witt. 3,051,748.
Gould, Merle L. 3,051,739.

Etteo Tool & Machine Co., Inc.: *See*—
Zager, Asher I. 3,051,013.

Eugster, Conrad H., to Geigy Chemical Corp. Thiophane derivatives. 3,051,728, 8-28-62, Cl. 260—332.3.

Evans, Herbert, to Flex Fasteners Ltd. Methods of making sliding clasp fasteners. 3,050,842, 8-28-62, Cl. 29—410.

Ewing, Bruce W., E. E. Mallory, and J. P. Sapp, to National Rubber Machinery Co. Stitcher assembly in a tire building machine. 3,051,220, 8-28-62, Cl. 156—398.

Eynon, James U., to Leeds and Northrup Co. Measuring and integrating system. 3,051,898, 8-28-62, Cl. 324—100.1.

FWD Corp.: *See*—
Simonds, George D., Stieg, McLyman, and Larson. 3,050 963.

Faber-Castell, A.W.: *See*—
Schwarzaugl, Josef M. 3,051,133.
Schwarzaugl, Josef M. 3,051,131.

Fagot, Godfrey E., and J. C. Vance, to United States Rubber Co. Control system. 3,051,192, 8-28-62, Cl. 137—391.

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Fansteel Metallurgical Corp.: *See*—
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Ehrhart, Gustav, Hennig, Lindner, and Ott. 3,051,618.
Ehrhart, Gustav, Hennig, Lindner, and Ott. 3,051,742.
Wallenfels, Kurt A. W., and Draber. 3,051,725.

Farley, Francis S. Plastic plasticizing heater. 3,050,779, 8-28-62, Cl. 18—30.

Farrell, Adam N., deceased, by E. M. Farrell, administratrix, to General Electric Co. Interdigitated pole assembly. 3,051,859, 8-28-62, Cl. 310—105.

Farrell, Evadna M.: *See*—
Farrell, Adam N. 3,051,859.

Farrel-Birmingham Co., Inc.: *See*—
Reed, John W., Halworsen, Hold, and Miller. 3,050,837.

Farwell, Warren B. Magnetic block. 3,051,875, 8-28-62, Cl. 317—159.

Fathauer, David F., to Radson Engineering Corp. Impedance indicating instrument. 3,051,894, 8-28-62, Cl. 324—61.

Faulk, Donald P., and W. J. Gerber, to Clevite Corp. Filter-transformers. 3,051,919, 8-28-62, Cl. 333—72.

Faust, Charles L.: *See*—
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Fawcett, Paul W., to United States Steel Corp. Escapement for automatic wire-tying machine. 3,051,077, 8-28-62, Cl. 100—26.

Fawick Corp.: *See*—
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Fawick, Thomas L. 3,051,284.

Fawick, Thomas L., to Fawick Corp. Centrifugal clutch. 3,051,284, 8-28-62, Cl. 192—105.

Fawick, Thomas L. Hose coupling having fluid pressure balancing means. 3,051,511, 8-28-62, Cl. 285—106.

Fayard, Georges G., to Office National d'Etudes et de Recherches Aeronautiques. Machine control device. 3,051,386, 8-28-62, Cl. 235—151.

Fayard, Georges G., to Office National d'Etudes et de Recherches Aeronautiques. Machine control. 3,051,389, 8-28-62, Cl. 235—180.

Fayard, Georges G., to Office National d'Etudes et de Recherches Aeronautiques. Machine control. 3,051,391, 8-28-62, Cl. 235—197.

Fecker, J. W., Inc.: *See*—
Wight, Ralph H. 3,051,039.

Federal-Mogul-Bower Bearings, Inc.: *See*—
Kohler, Theodor B., and Aho. 3,051,534.

Federspiel, Robert P. Vehicle splash guard. 3,051,508, 8-28-62, Cl. 280—154.5.

Fedkew, Theodore: *See*—
Lavlana, Donald W., and Fedkew. 3,051,001.

Felder, John L. Method of producing vitreous clay products. 3,050,812, 8-28-62, Cl. 25—156.

Felsten, Benjamin, to Food Fair Stores, Inc. Vehicle storage and transporting means. 3,051,336, 8-28-62, Cl. 214—85.

Felts, Gordon P., to Microdot Inc. Mechanically locked electrical connector. 3,051,925, 8-28-62, Cl. 339—91.

Fennell, Anthony A. Method and means for operating a soaking pit. 3,051,462, 8-28-62, Cl. 263—15.

Ferlin, Henry J., R. E. Brady, and W. J. Merwin, to Olin Mathieson Chemical Corp. Sulfamic acid. 3,051,551, 8-28-62, Cl. 23—166.

Ferranti, Ltd.: *See*—
Good, Richard S. J., Walker, and Williamson. 3,051,140.

Fiala, Ernst J. H., to Daimler-Benz Aktiengesellschaft. Shock absorber control system for a vehicle. 3,051,507, 8-28-62, Cl. 280—124.

Fiat Societa per Azioni: *See*—
Cordiano, Ettore, and Candellero. 3,051,273.

Field, Crosby. Method and machine for making metal wool and similar products. 3,050,825, 8-28-62, Cl. 29—4.5.

Fields-Mable Corp.: *See*—
Bunn, Opal L. 3,051,501.

Fiene, Marilyn L.: *See*—
Meriwether, Lewis S., and Fiene. 3,051,694.

Fieux, Jean, ½ to Societe des Forges et Ateliers du Creusat. Device for the suspension of a telescope on a vehicle. 3,051,047, 8-28-62, Cl. 88—36.

Finch, Horace T., to The Birtcher Corp. Record tape loading and drive mechanism. 3,051,408, 8-28-62, Cl. 242—75.4.

Finger, Alexander E., and J. Goldman. Alarm system for shopping carts. 3,051,936, 8-28-62, Cl. 340—280.

Finkelstein, Don B., to Del Mar Engineering Laboratories. Pyrotechnic flare. 3,051,085, 8-28-62, Cl. 102—37.8.

Finkenzeller, Howard B. Closure neck for dispensing containers. 3,051,351, 8-28-62, Cl. 220—67.

Finn, George B., Jr., and R. Parsons, to Sarkes Tarzian, Inc. Semiconductor devices and method of manufacturing them. 3,051,878, 8-28-62, Cl. 317—240.

Fisch, Jacob, W. J. McCormack, and H. E. Smyser, to Allis-Chalmers Mfg. Co. Pressure regulator system for hydraulic turbines. 3,051,186, 8-28-62, Cl. 137—25.

Fischer, Georg: *See*—
Wehde, Heinrich, Lange, Fischer, and Spreng. 3,051,406.

Fischer & Porter Co.: *See*—
Stenberg, Nyyrikki K. 3,051,195.

Fischer, Thomas, F. Kaess, and H. Kronasber. Suddeutsche Kalkstickstoff-Werke Aktiengesellschaft. Continuous manufacture of calcium cyanamide. 3,051,549, 8-28-62, Cl. 23—78.

Fisher, Hiram H., Jr., to Baker Oil Tools, Inc. Multiple testing and pressuring apparatus. 3,051,240, 8-28-62, Cl. 166—131.

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Flaherty, Lester H.: *See*—
Hubbard, William J., and Flaherty. 3,050,839.

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Hulterstrum, Harold D. 3,050,803.

Flanagan, James E. Attachment of golf bag to cart. 3,051,505, 8-26-62, Cl. 280—47.26.

Flaton, Howard C.: *See*—
Thorel, John P., Mel, and Flaton. 3,050,943.

Fleckenstein, William O., to Bell Telephone Laboratories, Inc. Variable length code group circuits. 3,051,940, 8-28-62, Cl. 340—247.

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Flex Fasteners Ltd.: *See*—
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Flexibox Ltd.: *See*—
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Flexsleev, Inc.: *See*—
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Fliegner, Horst: *See*—
Richert, Eberhard, and Fliegner. 3,051,332.

Fliegner, Horst: *See*—
Richert, Eberhard, and Fliegner. 3,051,333.

Flinn, George E., to Borg-Warner Corp. Rear mounted transmission. 3,051,017, 8-28-62, Cl. 74—677.

Flynn, Stanley F. Article support. 3,051,345, 8-28-62, Cl. 217—34.

Fogarty, Charles P. Adjustable support mechanism for ear muffs and similar articles. 3,050,739, 8-28-62, Cl. 2—209.

Fokker, Herman, to North American Philips Co., Inc. Device for protecting thermo-dynamic engines. 3,050,933, 8-28-62, Cl. 60—24.

Fonofilm Industri A/S: *See*—
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Food Fair Stores, Inc.: *See*—
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White, Theodore Z., and Thorpe. 3,051,450.

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Fox, Edward A., Sr.: *See*—
Shoup, Ransom F., and Fox. 3,051,379.

Foxboro Co., The: *See*—
Cressey, John R., Peterson, Nazareth, and Lawler. 3,051,932.
Cressey, John R., Peterson, Nazareth, and Lawler. 3,051,933.

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Francis, Norman L.: *See*—
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Frederick, Russell E., and R. W. Fritts, to Minnesota Mining and Mfg. Co. Thermoelectric device, thermoelements therefor, and method of making such elements. 3,051,767, 8-28-62, Cl. 136—5.

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Shapiro, Seymour L., Freedman, and Soloway. 3,051,705.

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French, Jack: *See*—
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Friedman, Louis D., and L. P. Gaucher, to Texaco Inc. Method for recovering oil from oil shale. 3,051,644, 8-28-62, Cl. 208—11.

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Gorin, Everett, and Friedrich. 3,051,629.

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Frost, John C. M., and C. J. Williams, to Avro Aircraft Ltd. Aircraft controls systems. 3,051,417, 8-28-62, Cl. 244—79.

Frushour, Russel E., to Amsted Industries Inc. Drill presses. 3,051,024, 8-28-62, Cl. 77—34.5.

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Fuchs, Johann H.: *See*—
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Fuller, Frank J. Gate correlated data link system. 3,051,945, 8–28–62, Cl. 343—6.8.

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Gardner, Frederick H. 3,051,913.
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Livingston, Orrin W. 3,051,880.
Macemon, Herbert J. 3,050,866.
Magester, Earl H. 3,051,455.
Morey, Everett D. 3,050,865.
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Mann, Leonard J., and O'Connell. 3,050,961.
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George, Howard A. Compensating coil winding means. 3,051,885, 8–28–62, Cl. 318—467.

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Gibson, Eric J., to Council for Scientific and Industrial Research. Preparation and use of catalysts. 3,051,737, 8–28–62, Cl. 260—449.6.

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Elizer, Lee H., Glasscock, and Seitz. 3,051,700.

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Gleasman, Vernon E. Method of making gears. 3,051,058, 8–28–62, Cl. 90—3.

Glueck, Marta G., and A. L. Jankens, to The Dow Chemical Co. Stabilizing latexes of chloroethylene polymers with mono sodium urea. 3,051,675, 8–28–62, Cl. 260—29.6.

Goddard, John A., to Ronson Corp. Burner valves for compressed gaseous fuels. 3,050,973, 8–28–62, Cl. 67—7.1.

Goeckner, Herman L., and H. E. Hukill. Heel cup. 3,050,878, 8–28–62, Cl. 36—58.5.

Gohlke, Roland S., to The Dow Chemical Co. Thermoconductivity cell. 3,050,983, 8–28–62, Cl. 73—27.

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Good, Richard S. J., D. F. Walker, and D. T. N. Williamson, to Ferranti, Ltd. Servo-controlled drives. 3,051,140, 8–28–62, Cl. 121—45.

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Goos, Arthur W., and M. A. Trepanier, to The Dow Chemical Co. Mixing apparatus. 3,051,454, 8–28–62, Cl. 259—6.

Gordon, George A. D., H. W. Taylor, and J. M. L. Wood, to S. Smith & Sons (England) Ltd. Ultrasonic testing. 3,050,988, 8–28–62, Cl. 73—67.5.

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Gorin, Everett, and R. J. Friedrich, to Consolidation Coal Co. Preparing metallurgical fuel briquets from non-caking coal by preshrinking char. 3,051,629, 8–28–62, Cl. 202—26.

Gorini, Settimio, to E. Gabriele. Pressure-monitoring device, particularly for motor vehicle pneumatic tires, compressed air pipes for brakes, tanks and the like. 3,051,122, 8–28–62, Cl. 116—34.

Goshima, Takeshi, to Canon Camera Co., Inc. Automatic control mechanism for preset iris diaphragms of photographic cameras. 3,051,067, 8–28–62, Cl. 95—64.

Goto, Eiichi, to Kokusai Denshin Denwa Kabushiki Kaisha. Coupling circuits for digital computing devices. 3,051,843, 8–28–62, Cl. 307—88.

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Baxter, James C., and Gowing. 3,051,061.

Grace, W. R., & Co.: *See*—
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Grafton, Eric A. 3,051,287.

Graham, Richard P., W. L. Herron, and S. J. Ketterer, to The Singer Mfg. Co. Power control unit for sewing machines. 3,051,110, 8–28–62, Cl. 112—239.

Graham, Robert E., to Bell Telephone Laboratories, Inc. Sequential scan television with line interpolation. 3,051,778, 8–28–62, Cl. 178—6.8.

Granqvist, Carl-Erik, to Svenska Aktiebolaget Gasaccumulator. Arrangement in speaking radio beacons. 3,051,950, 8–28–62, Cl. 343—106.

Grantham, William G., to American Viscose Corp. Coating composition comprising cellulose derivative and a crystalline polymer. 3,051,670, 8–28–62, Cl. 260—17.

Graser, Fritz, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Dyes of the perinaphthoylene-benzimidazole series. 3,051,711, 8–28–62, Cl. 260—282.

Grath, Gustaf-Bertil L., to Aktiebolaget Stille-Werner. Surgical screw connector. 3,051,169, 8–28–62, Cl. 128—92.

Gratian, Joseph W., to General Dynamics Corp. Transverse boundary-displacement recording head. 3,051,796, 8–28–62, Cl. 179—100.2.

Graves, Ralph M., ½ to Ronne Hosiery, Inc. Cutter attachment for looping machines. 3,051,104, 8–28–62, Cl. 112—25.

Graves, Robert W., to Aeroquip Corp. Pressure compensating expansion joint. 3,051,515, 8–28–62, Cl. 285—228.

Gray, Charles L., Jr., and R. H. Dettre, to E. I. du Pont de Nemours and Co. Process for increasing the scratch resistance of glass. 3,051,593, 8–28–62, Cl. 117—124.

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Green, Daniel M., K. J. Kohnle, and R. J. Elliott, to Grove Laboratories Inc. Gel composition, pressurized container with same and method of preparation. 3,051,621, 8–28–62, Cl. 167—63.

Greene, John P., to Parachem Corp. Sheet material dispenser. 3,051,352, 8–28–62, Cl. 221—26.

Greene, Whitney E. Self-locking rotary transmission. 3,051,282, 8–28–62, Cl. 192—8.

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Paul, Walter, Geese, Gaber, and Greska. 3,051,799.

Grieger, Philip F., and A. Fleischer, to The Electric Storage Battery Co. Charging rack for mine lamp battery. 3,051,831, 8–28–62, Cl. 240—11.3.

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Grogel, Merrill A., to Reynolds Metals Co. Curved divider tray. 3,051,346, 8–28–62, Cl. 220—23.8.

Grossman, Jerome H., to Penobscot Shoe Co. Easily lasted moccasin construction. 3,050,876, 8–28–62, Cl. 36—11.

Grossmann, Elihu D., and R. E. Myers. Process of treating polyolefin-coated paper. 3,051,609, 8–28–62, Cl. 162—5.

Grossmann, Elihu D., and R. E. Myers. Process of treating polyolefin-coated paper. 3,051,610, 8–28–62, Cl. 162—5.

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Gruen, Harold: *See*—
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Guilbert, Nicholas R., Jr., and J. J. De Feo, to Guilbert, Inc. Power operator for elevator shaftway doors. 3,051,269, 8–28–62, Cl. 187—60.

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Gunaratne, Piyatilleke P. M. Young, and G. H. French, to United Kingdom Atomic Energy Authority. Nuclear reactor fuel element having a thermocouple junction within its sheath. 3,051,641, 8–28–62, Cl. 204—193.2.

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Gwynne, Jay H., to Consolidation Coal Co. Apparatus for and method of segregating material by specific gravity. 3,051,310, 8–28–62, Cl. 209—172.5.

Gyorgy, Ernst M., and H. E. D. Scovil, to Bell Telephone Laboratories, Inc. Method of suppressing saturation effects in gyromagnetic devices. 3,051,917, 8–28–62, Cl. 333—31.

Haagen, Karl, to Farbenfabriken Bayer Aktiengesellschaft. Method of removing oxygen dissolved in water by means of anion exchange resins. 3,051,651, 8–28–62, Cl. 210—32.

Hadley, David J., and J. B. Bream, to The Distillers Co. Ltd. Purification of acrylonitrile. 3,051,630, 8–28–62, Cl. 202—71.

Hagen, Norbert, to R. Hagen. Process and apparatus for manufacturing blown articles. 3,050,773, 8–28–62, Cl. 18—5.

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Haigh, Leslie B., H. F. Herbig, and R. W. Blanchard, to International Telephone and Telegraph Corp. Answering signal detector for a private automatic branch exchange. 3,051,790, 8–28–62, Cl. 179—9.

Haine, Michael E., and P. A. Einstein, to Associated Electrical Industries (Manchester) Ltd. Image scanner for electron microscopes. 3,051,860, 8–28–62, Cl. 313—65.

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Haiss, Werner: *See*—
Schmieder, Emil, and Haiss. 3,050,764.

Halfaker, Thomas C., to Day-Brite Lighting, Inc. Lighting fixture leveling support. 3,051,430, 8–28–62, Cl. 248—343.

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Halperin, David, to Catamaran Corp. of America. Ice conversion unit for boat trailers. 3,051,503, 8–28–62, Cl. 280—16.

Halverson, Richard E., to Western Electric Co., Inc. Device for supporting and moving an article in a machine. 3,051,060, 8–28–62, Cl. 90—18.

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Reed, John W., Halvorsen, Hold, and Miller. 3,050,837.

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Hamlyn, Peter M., J. E. Snelling, and B. G. Horstmann. Marine propulsion units. 3,051,119, 8–28–62, Cl. 115—35.

Hammes, Paul A., to Merck & Co., Inc. Method of curing meat. 3,051,579, 8–28–62, Cl. 99—159.

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Hamren, Victor E., to Mech-Metal Tronics, Inc. Hermetically sealed rotary drive coupling. 3,051,008, 8–28–62, Cl. 74—18.1.

Hanert, John M., to Hammond Organ Co. Single manual double countermelody electrical musical instrument. 3,051,032, 8–28–62, Cl. 84—1.19.

Hanlon, Donald V., to Container Corp. of America, Sefton Fibre Can Co. Division. Container. 3,051,370, 8–28–62, Cl. 229—51.

Hanschitz, Rudolf, to Electrostar G.m.b.H. Kitchen appliance with air cooling system therefor. 3,051,856, 8–28–62, Cl. 310—59.

Hansen, Louis I., and G. O. Sedgwick, to Archer-Daniels-Midland Co. Method of preparing epoxidized oils and the like. 3,051,729, 8–28–62, Cl. 260—348.5.

Hanson, Eric P., to Grinnell Corp. Foam-water sprinkler device. 3,051,397, 8–28–62, Cl. 239—432.

Hany, Harald. R. Roosen, and E. Spehr, to Henschel Werke G.m.b.H. Pumps. 3,051,089, 8–28–62, Cl. 103—101.

Harbin, Adiel D., Jr., and H. E. Munns, to Diamond Alkali Co. Method and apparatus for the control of oxidation-reduction reactions. 3,051,631, 8–28–62, Cl. 204—1.

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Harper, Leonard R., to International Business Machines Corp. Ring counter using a walking code and having a common pulsing line. 3,051,853, 8-28-62, Cl. 307—88.5.
Harpham, Lawrence M. Toy exerciser. 3,051,482, 8-28-62, Cl. 272—80.
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Harris, Thomas S., Jr., to The Teleregister Corp. Card controlled switch device. 3,051,382, 8-28-62, Cl. 235—61.11.
Harrison, Charles E. Ice-damage preventer for swimming pools. 3,050,750, 8-28-62, Cl. 9—8.
Hart, Thomas F. Gas burner lint screen. 3,051,230, 8-28-62, Cl. 158—118.
Hartley, Richard S., to The Hobart Mfg. Co. Food handling apparatus. 3,051,207, 8-28-62, Cl. 146—102.
Hartupee, Perry B., to Thornton Axle Inc. Locking differential with pressure relief device. 3,051,020, 8-28-62, Cl. 74—710.5.
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Hauptschein, Murray, M. Braid, and F. E. Lawlor, to Pennsalt Chemicals Corp. Halogenated organic compounds. 3,051,764, 8-28-62, Cl. 260—653.1.
Hayden, Ernest A. Lumber saw attachment for chain saws. 3,051,203, 8-28-62, Cl. 143—32.
Haynes, Herbert S., to International Telephone and Telegraph Corp. Pulse waveform synthesizer using plurality of individually charged storage means sequentially discharged through common load. 3,051,906, 8-28-62, Cl. 328—14.
Hays, Edwin E., and L. Michelson, to Wallace & Tiernan Inc. Codeine and 2-methyl-3-O-tolyl-4-quinazolone analgesic composition. 3,051,623, 8-28-62, Cl. 167—67.
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Heilbrun, David G. Practice bowling alley. 3,051,485, 8-28-62, Cl. 273—54.
Heilig, Morton L. Sensorama simulator. 3,050,870, 8-28-62, Cl. 35—1.
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Helda, Robert W., and W. L. Lehner, to Sylvania Electric Products Inc. Clamping device. 3,051,474, 8-28-62, Cl. 269—165.
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Helm Jack D., and F. L. Hopkins, to Bemis Bro. Bag Co. Automatic bag feeding machine. 3,050,918, 8-28-62, Cl. 53—386.
Helm, Jack D., and F. L. Hopkins, to Bemis Bro. Bag Co. Bag magazine. 3,051,297, 8-28-62, Cl. 198—165.
Helwig, Carl. Crankcase ventilator for automotive vehicles. 3,051,151, 8-28-62, Cl. 123—119.
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Hicks, Robert G., to American Air Filter Co., Inc. Air heating apparatus and control means therefor. 3,051,161, 8-28-62, Cl. 126—110.
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Jenkner, Herbert, to Kali-Chemie A.G. Preparation of aminoborines. 3,051,754, 8-28-62 Cl. 260—583.
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Killian, Henry R., to Henry Pratt Co. Molded in place rubber seat butterfly valve. 3,050,781, 8–28–62, Cl. 18—36.

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Knight, Stanley W. Drive and reversing mechanism for endless conveyors. 3,051,298, 8–28–62, Cl. 198—203.

Kniveton, James, to Selas Corp. of America. Method of producing a combined radiant heat fuel burner block and refractory cup. 3,050,813, 8–28–62, Cl. 25—156.

Knocke, Louis T., to Thompson Ramo Wooldridge Inc. Automatic brake adjuster. 3,051,275, 8–28–62, Cl. 188—196.

Knoll, David, and A. Greenhaus, to Berko Electric Mfg. Corp. Baseboard heater. 3,051,816, 8–28–62, Cl. 219—34.

Knudsen, Einer K., to Fonofilm Industri A/S. Device for the recording or reproduction of sound tracks. 3,051,798, 8–28–62, Cl. 179—100.41.

Kobayashi, Tatsuo, to Chiyoda Kogaku Seiko Kabushiki Kaisha. Lens shutter for camera. 3,051,065, 8–28–62, Cl. 95—10.

Koch, Benno. Setting device for boring or drilling tools. 3,050,862, 8–28–62, Cl. 33—185.

Koch, Walter T., M. R. Lytton, and E. A. Wielicki, to American Viscose Corp. Composition comprising thermoplastic resin and a resinous polypinate plasticizer. 3,051,667, 8–28–62, Cl. 260—16.

Koesling, Heinz, to North American Philips Co., Inc. Device for heating workpieces inductively. 3,051,811, 8–28–62, Cl. 219—10.67.

Kohler, Horst, to C. Zeiss. Binocular lens system. 3,051,050, 8–28–62, Cl. 88—57.

Kohler, Theodor B., and E. Aho, to Federal-Mogul-Bower Bearings, Inc. Bearing cage assembly. 3,051,534, 8–28–62, Cl. 308—217.

Kohnle, Kenneth J.: *See*—
Green, Daniel M., Kohnle, and Elliott. 3,051,621.

Kokusai Denshin Denwa Kabushiki Kaisha: *See*—
Goto, Eiichi. 3,051,843.

Kolb, Kenneth E.: *See*—
Bolton, Benjamin A., and Kolb. 3,051,724.

Koll, Roman: *See*—
Heil, Rudolf, and Koll. 3,051,783.

Kompelien, Arlon D., to Minneapolis-Honeywell Regulator Co. Apparatus for automatically measuring blood pressure and pulse rate. 3,051,165, 8–28–62, Cl. 128—2.05.

Kompfner, Rudolf, to Bell Telephone Laboratories, Inc. Broadband cyclotron wave parametric amplifier. 3,051,911, 8–28–62, Cl. 330—43.

Kopper, Edward C., to The Electric Storage Battery Co. Nickel-powder leveling apparatus. 3,050,776, 8–28–62, Cl. 18—15.

Kosh, Allan E. Lens measuring instrument. 3,050,860, 8–28–62, Cl. 33—174.

Kozak, Edward J. Music timing devices. 3,051,034, 8–28–62, Cl. 84—465.

Kraemer, William D.: *See*—
Dike, Melville A. 3,051,632.

Krageloh, Werner: *See*—
Hiller, Rolf, Rutkowski, Krägeloh, Voegtlen, and Zahlhaas. 3,051,793.

Kramarsky, Bernhard. Method of preparing magnetic garnet crystals. 3,051,656, 8–28–62, Cl. 252—62.5.

Kraus, Max R.: *See*—
Horning, Oliver P. 3,050,931.

Krausser, Heinz: *See*—
Vogler, Heinrich, and Krausser. 3,050,892.

Kreger, Ralph E., to Detroit Stamping Co. Toggle clamp opening mechanism. 3,051,028, 8–28–62, Cl. 81—351.

Kress, Bernard H., to Quaker Chemical Products Corp. Textile finishing composition comprising an aqueous dispersion of the interaction product of urea, formaldehyde, a fatty acid amide and a primary amine. 3,051,674, 8–28–62, Cl. 260—29.4.

Krichton, Carl V., to McGraw-Edison Co. Room heater. 3,051,820, 8–28–62, Cl. 219—39.

Kripak, Leonid: *See*—
Glass, Marvin I., and Kripak. 3,050,900.

Kronacher, Hermann: *See*—
Fischer, Thomas, Kaess, and Kronacher. 3,051,549.

Kröner, Klaus, to North American Philips Co., Inc. Circuit arrangement for stabilizing the amplitude of a high direct voltage. 3,051,888, 8–28–62, Cl. 321—2.

Krueger, Alfred P., to Minnesota Mining and Mfg. Co. Hand label dispenser. 3,051,353, 8–28–62, Cl. 221—73.

Kuhlenschmidt, Floyd E.: *See*—
Kuhlenschmidt, Harold L. and F. E., and Arthur and Arnold Geiselman. 3,051,323.

Kuhlenschmidt, Harold L. and F. E., and Arthur and Arnold Geiselman, to Elberfeld Mfg. Co., Inc. Boom mechanism and control. 3,051,323, 8–28–62, Cl. 212—35.

Kuijvenhoven, Arend W., and R. G. Vickers, to Brevets Aero-Mecaniques, S.A. Automatic gun breech block control mechanism. 3,051,056, 8–28–62, Cl. 89—132.

Kujas, Eric F., to The Electric Storage Battery Co. Electric battery and battery electrolyte. 3,051,768, 8–28–62, Cl. 136—24.

Kuna, Samuel, and A. W. Pircio, to Bristol-Myers Co. Analgesic cyclobutanes. 3,051,622, 8–28–62, Cl. 167—65.

Kupka, John J., to McKiernan-Terry Corp. Synchronized and equalized opposed hammer press. 3,050,809, 8–28–62, Cl. 25—91.

Kuris, Arthur, L. Balamuth, and C. Kleesattel, to Cavitron Ultrasonics Inc. Ultrasonic welding. 3,051,027, 8–28–62, Cl. 78—82.

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Trägner, Erich, and Küster. 3,050,793.

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Appenzeller, Valentin. 3,050,829.

Kutzler, Robert J., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,051,137, 8–28–62, Cl. 121—38.

Kuzell, Charles R., M. G. Fowler, J. H. Davis, Jr., L. Klein, and I. MacDougall, to Phelps Dodge Corp. Apparatus producing sponge iron. 3,051,467, 8–28–62, Cl. 266—24.

Kyte, John R., to Jersey Production Research Co. Oil displacement by water containing suspended clay. 3,051,234, 8–28–62, Cl. 166—9.

Laas, Kurt, to Siemens and Halske Aktiengesellschaft. Circuit arrangement for connectors having access to P.B.X. telephone lines and controlled by marker devices. 3,051,794, 8–28–62, Cl. 179—18.

Laborit, Henri M., to L'Equilibre Biologique. 4-hydroxy butyric acid therapeutic compositions and process of use for clinical sedation, hypnosis, or anaesthesia. 3,051,619, 8–28–62, Cl. 167—65.

La Costa, Nicholas J., and P. L. Brown, to Aircraft Armaments, Inc. Environmental seal for cartridge. 3,051,086, 8–28–62, Cl. 102—39.

Lake, David B., to National Research Development Corp. Flowmeters. 3,050,997, 8–28–62, Cl. 73—194.

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Biel, John H. 3,051,707.
Biel, John H. 3,051,710.
Biel, John H. 3,051,714.
Biel, John H. 3,051,722.
Biel, John H. 3,051,726.

Lakeside Laboratories, Inc.: *See*—
Biel, John H., and Blicke. 3,051 715.

Lakjer, Leo E., ½ to L. Marcus. Wide screen television apparatus. 3,051,779, 8–28–62, Cl. 178—6.8.

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Atwood, Rawson, and L'Allemand. 3,051,411.

Lamb, Joe H., to P. A. Mallinckrodt. Extendible and retractable cover apparatus for swimming pools. 3,050,743, 8–28–62, Cl. 4—172.

Lamb, Joe H., to P. A. Mallinckrodt. Retractable cover assembly and draw cord carrier therefor. 3,051,232, 8–28–62, Cl. 160—272.

Lambeck, Raymond P., to United Aircraft Corp. Pump torque limiting means. 3,051,092, 8–28–62, Cl. 103—161.

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Mitch, Francis J., and Landau. 3,051,236.

Landrum, Porter. Coupling. 3,050,965, 8–28–62, Cl. 64—29.

Lange, Hans-Georg: *See*—
Wehde, Heinrich, Lange, Fischer, and Spreng. 3,051,406.

Lange, Le Roy J., to American Totalisator Co., Division of Universal Controls, Inc. Totalisator system. 3,051,384, 8–28–62, Cl. 235—92.

Larberg, Harlan A., to Panhandle Eastern Pipeline Co. Apparatus for analyzing volume of gas in gas pipe lines. 3,051,390, 8–28–62, Cl. 235—185.

Lareau, Norman N., and R. J. Olson, to Eastman Kodak Co. Two-speed camera for flash photography. 3,051,066, 8–28–62, Cl. 95—11.5.

Larson, Arne V.: *See*—
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Laupman, Robert R., to Stork & Co's Apparatenfabriek N.V., Gebr. Apparatus for continuously wet treating yarns and fabrics in rope form. 3,050,976, 8–28–62, Cl. 68—176.

Lavanchy, Patricia, to Johnson & Johnson. Product and method of manufacture. 3,051,588, 8–28–62, Cl. 117—68.5.

Laviana, Donald W., and T. Fedkew, to General Motors Corp. Room thermostat. 3,051,001, 8–28–62, Cl. 73—363.7.

Lawlor, Francis E.: *See*—
Hauptschein, Murray, Braid, and Lawlor. 3,051,764.

Lawlor, Francis E., and A. Truchan, to Pennsalt Chemicals Corp. Method for the oxidation of olefins. 3,051,749, 8–28–62, Cl. 260—539.

Lawler, Richard P.: *See*—
Cressey, John R., Peterson, Nazareth, and Lawler. 3,051,932.

Lawler, Richard P.: *See*—
Cressey, John R., Peterson, Nazareth, and Lawler. 3,051,933.

Lawson-Tancred, Henry, to Tancred & Langley Ltd. Processing baths. 3,051,461, 8–28–62, Cl. 263—11.

Lawton, C. A., Co., Inc., The: *See*—
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Layman, Claude E.: *See*—
Allman, William T., Jr., and Layman. 3,050,819.

Lazar, Nicholas, and K. S. McIntosh, to Corning Glass Works. Variable impedance device. 3,051,879, 8–28–62, Cl. 317—249.

Leather Industries, Inc.: *See*—
Bennett, John M. 3,051,612.

Leathers, Joel M., and G. E. Woodward, to The Dow Chemical Co. Synthesis of acrylic acids. 3,051,747, 8–28–62, Cl. 260—526.

Leathers, Ward, to Burroughs Corp. Document sorter. 3,051,309, 8–28–62, Cl. 209—72.

Leavitt, Julian J.: *See*—
Lewis, Charles E., Paul, Tsang, and Leavitt. 3,051,697.

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Lee, Bock W., to Bell Telephone Laboratories, Inc. Self-correcting ring counter. 3,051,855, 8–28–62, Cl. 307—88.5.

Lee, Edwin C., to International Standard Electric Corp. Electrostatic shield for high voltage cables. 3,051,771, 8–28–62, Cl. 174—36.

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Lee-Rowan Co.: *See*—
Meyer, Lawrence J. 3,051,518.

Legatski, Theodore W., to Phillips Petroleum Co. Purification of liquefied petroleum gases. 3,051,649, 8–28–62, Cl. 208—299.

Legrand, Jean. Electrified fences. 3,051,449, 8–28–62, Cl. 256—10.

Lehmann, Ernest H., and W. D. Wright, to Xerox Corp. Image projection. 3,051,041, 8–28–62, Cl. 88—24.

Lehner, William L.: *See*—
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Leigh, Robert L., to Air Control Products, Inc. Soffit ventilated attics and ventilator members therefor. 3,051,071, 8–28–62, Cl. 98—37.

Lejk, Joseph R.: *See*—
Goldmann, Kenneth F., and Lejk. 3,050,962.

Lemelson, Jerome H. Reflective thread. 3,050,824, 8–28–62, Cl. 28—82.

Lemelson, Jerome H. Magnetic recording systems. 3,051,777, 8–28–62, Cl. 178—6.6.

Lendvai, Andreas. Nutritional composition and method of making the same. 3,051,576, 8–28–62, Cl. 99—97.

Lenet, Sidney. Leaf spring attachment for vehicles. 3,051,468, 8–28–62, Cl. 267—16.

Lennox Industries, Inc.: *See*—
Bierwirth, Henry C., and Rutgers. 3,051,451.
Peoples, Graydon, and Vreeland. 3,051,228.

Lennox, Peter W., to International Standard Electric Corp. Intelligence storage equipment. 3,051,931, 8–28–62, Cl. 340—174.

Leonard, Robert R., to Minneapolis-Honeywell Regulator Co. Electrical pulse generator for uniform output signal and high duty cycle. 3,051,851, 8–28–62, Cl. 307—88.5.

Leonard, William R.: *See*—
Hall, Eric T., and Leonard. 3,051,827.

Lepetit S.p.A.: *See*—
Teotino, Uberto, and Cignarella. 3,051,727.

L'Equilibre Biologique: *See*—
Laborit, Henri M. 3,051,619.

Lesh, James B.: *See*—
Bradford, Paul E., Damaskus, and Lesh. 3,051,627.

Lesher, John C., to M. H. Egly, M. J. Manchester, and Rad-O-Lite, Inc. Building protection system. 3,051,934, 8–28–62, Cl. 340—224.

Leto, Joseph R., to American Cyanamid Co. Method of polymerizing acetylenic compounds. 3,051,693, 8–28–62, Cl. 260—94.1.

Lever Bros. Co.: *See*—
Cleremans, Cornelis J. A. 3,050,807.

Lewis, William W., Jr., E. A. Welpert, and H. Rubinstein. Selective amide formation with 2-p-dioxanone. 3,051,751, 8–28–62, Cl. 260—561.

Levison, Robert, and F. Hesselink, to Onderzoekingsinstituut Research, N.V. Spinning of cellulose film. 3,050,775, 8–28–62, Cl. 18—15.

Levy, Paul M., to General Precision, Inc. Digital to analog converter. 3,051,938, 8–28–62, Cl. 340—347.

Lewis, Charles E., A. P. Paul, S. M. Tsang, and J. J. Leavitt, to American Cyanamid Co. Azomonazone N-oxides, production and deoxygenation. 3,051,697, 8–28–62, Cl. 260—156.

Lewis, Oliver G.: *See*—
Heigl, John J., Wilson, and Lewis. 3,050,994.

Lewis-Shepard Co.: *See*—
Boyajian, Robert S., and Becker. 3,051,265.

Libbey-Owens-Ford Glass Co.: *See*—
Hubbard, William J., and Flaherty. 3,050,839.
Roetter, Robert P. 3,050,985.

Lichtenfeld, Alfred F., deceased, H. Lichtenfeld, executrix, ½ to H. J. Harris. Automatic lapping machine. 3,050,910, 8–28–62, Cl. 51—129.

Lichtenfeld, Hedwig: *See*—
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Liles, Joseph R., Jr., C. B. Corley, Jr., and S. E. Loy, III, to Jersey Production Research Co. Apparatus for varying well pump stroke. 3,051,237, 8–28–62, Cl. 166—75.
Lilola, Gerald J., G. A. Crowe, Jr., and H. L. Beidler, to Johnson & Johnson. Surgical dressing. 3,051,171, 8–28–62, Cl. 128—156.
Limit gages, Inc.: *See*—
Wojcik, Bernard F. 3,050,859.
Lincoln, Paul A., to Ingersoll-Rand Co. Pressure fluid operated drill motor. 3,051,134, 8–28–62, Cl. 121—15.
Lind, Wallace G., to Franklin Mfg. Co. Alternator protective circuit. 3,051,887, 8–28–62, Cl. 320—25.
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Lindbloom, Henry E., to American-Marietta Co. Method and machine for cuting tile pipe. 3,050,810, 8–28–62, Cl. 25—107.
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Ehrhart, Gustav, Hennig, Lindner, and Ott. 3,051,742.
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Erisman, Maurice J., Francis, and Antonson. 3,050,868.
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Bushong, Lloyd B., Kennedy, and Lipke. 3,051,597.
Lipman, Leonard M., and H. Morris, to Warner Mfg. Corp. Apparatus for continuous metal casting and parts thereof. 3,050,792, 8–28–62, Cl. 22—57.2.
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Livermont, Frank W., deceased, M. S. Zimmerman, executor, to Reed Roller Bit Co. Calibration device for torque measuring tools. 3,050,978, 8–28–62, Cl. 73—1.
Livingston, Orrin W., to General Electric Co. Position control servosystem. 3,051,880, 8–28–62, Cl. 318—28.
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Wakefield, Douglas B. 3,050,790.
Long, Gertrude L. Paint can holder. 3,051,429, 8–28–62, Cl. 248—226.
Lorenz, Otto, to Daimler-Benz Aktiengesellschaft. Motor vehicle construction. 3,051,259, 8–28–62, Cl. 180—89.
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Lowe, John J., and G. D. Thomas, to Burlington Industries, Inc. Package for dispensing ribbon. 3,051,306, 8–28–62, Cl. 206—52.
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Liles, Joseph R., Jr., Corley, and Loy. 3,051,237.
Lozinski, Ezra, to Charles E. Frosst & Co. Long-acting hormone preparations. 3,051,624, 8–28–62, Cl. 167—74.
Lucanera, Constantino, to International Telephone and Telegraph Corp. Omnidirectional beacon antenna. 3,051,951, 8–28–62, Cl. 343—106.
Ludwig, Walter D. Press safety valve. 3,051,187, 8–28–62, Cl. 137—110.
Lutsey, Thomas H.: *See*—
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Lyon, George A., to Lyon Inc. Wheel structure. 3,051,276, 8–28–62, Cl. 188—264.
Lyon, George A., to Lyon Inc. Wheel cover. 3,051,529, 8–28–62, Cl. 301—37.
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Pratt, Samuel O. 3,501,033.
Lyon Inc.: *See*—
Lyon, George A. 3,051,276.
Lyon, George A. 3,051,529.
Lyon, William H., to The Soundscriber Corp. Tape reversal mechanism. 3,051,405, 8–28–62, Cl. 242—55.12.
Lyons, Harold D., to Philips Petroleum Co. Production of solid olefin polymers. 3,051,692, 8–28–62, Cl. 260—93.7.
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MacDougall, Irvine: *See*—
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MacNeill, Arthur E. Exchange apparatus. 3,051,316, 8–28–62, Cl. 210—321.
MacPhee, Malcolm, and D. E. Bolger, to International Standard Electric Corp. Manufacture of pure silicon. 3,051,557, 8–28–62, Cl. 23—263.
Maddux, Duane C. Toy gun and projectile therefor. 3,050,893, 8–28–62, Cl. 42—55.
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Deflorin, Alberto, and Maeder. 3,051,688.
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Magester, Earl H., to General Electric Co. Mixing nozzle. 3,051,455, 8–28–62, Cl. 259—8.
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Magnavox Co.: *See*—
Reese, Glenn A. 3,051,806.
Magnetrol, Inc.: *See*—
Binford, Benjamin L. 3,051,805.
Mahn, Herbert, to Jos. Schneider & Co., Optische Werke. Mechanism for relatively displacing the components of optical objectives. 3,051,048, 8–28–62, Cl. 88—57.
Malcolm, Robert, Jr., to Chicago Eye Shield Co. Protective face shield and hood. 3,050,736, 8–28–62, Cl. 2—9.
Mallery, Paul, to Bell Telephone Laboratories, Inc. Analog-digital converter and register. 3,051,941, 8–28–62, Cl. 340—347.
Mallinckrodt, Philip A.: *See*—
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Lamb, Joe H. 3,051,232.
Mallory, Edwin E.: *See*—
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Mallouk, Robert S., to E. I. du Pont de Nemoura and Co. Polytetrafluoroethylene-hexafluoropropylene tetrafluoroethylene copolymer colloidal blend and article thereof. 3,051,683, 8–28–62, Cl. 260—45.5.
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Mandel, Henri. Window raising apparatus with controlling means. 3,051,472, 8–28–62, Cl. 268—122.
Mandell, William B. Interchangeable mixing chamber for douches. 3,051,174, 8–28–62, Cl. 128—274.
Mann, Alma F. Bird repellant. 3,051,617, 8–28–62, Cl. 167—46.
Mann, Leonard J., and J. J. O'Connell, to General Motors Corp. Refrigerating apparatus with frost free compartment. 3,050,956, 8–28–62, Cl. 62—283.
Mann, Leonard J., and J. J. O'Connell, to General Motors Corp. Single evaporator two-compartment refrigerator. 3,050,961, 8–28–62, Cl. 62—419.
Mann, Stuart N., and A. B. Daty, to Hard Mfg. Co. Bed construction. 3,050,744, 8–28–62, Cl. 5—63.
Manz, August F., to Union Carbide Corp. Work-in-circuit consumable electrode arc welding. 3,051,828, 8–28–62, Cl. 219—131.
Manz, August F., to Union Carbide Corp. Electric arc torch starting. 3,051,829, 8–28–62, Cl. 219—131.
Marchese, Theodore J., to International Telephone and Telegraph Corp. Pulsed beam tube. 3,051,865, 8–28–62, Cl. 315—3.
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Alfieri, Giuseppe. 3,051,199.
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Markham, David R., and K. Q. Kessler, to Deere & Co. Rotor for agricultural machines and the like. 3,050,027, 8–28–62, Cl. 56—504.
Markus, George, and M. Siegel, to Aristocrat Leather Products, Inc. Ornamental sheet material and method of making same. 3,051,600, 8–28–62, Cl. 154—47.
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Marque, André, to Brown, Boveri & Cie. Aktiengesellschaft. Method and apparatus for operation of ship installed gas turbine plants. 3,050,946, 8–28–62, Cl. 60—102.
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Wilton, Peter, and Marrow. 3,051,509.
Marschik, Eduard. Apparatus for cutting open thread loops on textile fabrics. 3,050,814, 8–28–62, Cl. 26—11.
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Martin, Pierre, to Compagnie Parisienne d'Outillage a Air Comprime. Servo-assisted shut-off device. 3,051,198, 8–28–62, Cl. 137—625.27.
Martin, Sterling T., and S. B. Spracklen, to Union Carbide Corp. Precision temperature controller. 3,051,392, 8–28–62, Cl. 236—13.
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Massey, Hubert. Cotton salvaging machines. 3,050,922, 8–28–62, Cl. 56—12.
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Foote, Daniel J., and Stahl. 3,050,977.
Masujima, Ryozo. Knitting needles. 3,050,968, 8–28–62, Cl. 66—121.
Matray, Otto J., and W. H. Stine, Jr., to E. I. du Pont de Nemours and Co. Pill resistant polyamide fiber. 3,050,822, 8–28–62, Cl. 28—82.
Maupin, Joseph T., to Minneapolis-Honeywell Regulator Co. Semiconductor devices. 3,051,877, 8–28–62, Cl. 317—235.
Maurer, John A., to The Kalart Co. Inc. Method of re-recording a sound record line and apparatus for re-recording a sound record line. 3,051,042, 8–28–62, Cl. 88—24.
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Maytag Co., The: *See*—
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Mazzagatti, Roy P., to Texaco Inc. Transducer assemblies. 3,051,927, 8–28–62, Cl. 340—17.
McCain, George H., to Diamond Alkali Co. Chemical process for preparing fulvene compounds. 3,051,765, 8–28–62, Cl. 260—666.

McCann, Floyd E., ½ to H. McCann. Ice and post hole auger. 3,051,253, 8–28–62, Cl. 175—181.
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McCown, William E., and D. A. Guerdan, to Westinghouse Electric Corp. Magnetic coupling. 3,051,858, 8–28–62, Cl. 310—104.
McCrea, Joseph, to Stapling Machines Co. Wirebound container end construction. 3,051,344, 8–28–62, Cl. 217—14.
McCreary, John. High speed tenter chain device. 3,050,816, 8–28–62, Cl. 26—61.
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McKenna, Richard J. Portable foot and leg rest. 3,051,527, 8–28–62, Cl. 297—439.
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Schlensker, Hugo J. H., and Mellott. 3,051,124.
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Schlensker, Hugo J. H., and Mellott. 3,051,124.
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Merkel, Karl, and A. Palm, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of cyanuric acid. 3,051,708, 8–28–62, Cl. 260—248.
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Merritt, Willie M., and F. F. Forth, to Merrit Bird Feeder Co. Bird feeders. 3,051,126, 8–28–62, Cl. 119—52.
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Misuraca, Louis J. Eyepiece focussing mount. 3,051,045, 8–28–62, Cl. 88—32.
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Power, Wilson H. 3,051,658.
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Muller, Georges, to Roussel-UCLAF S.A. Δ^{3-16}-isoreserpic acid lactone. 3,051,713, 8–28–62, Cl. 260—287.
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Grossmann, Elihu D., and Myers. 3,051,610.
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Oxford Paper Co.: *See*—
Ahara, Edward V., Johnson, De Groot, and Stalmuke. 3,051,125.
Pace, Inc.: *See*—
Huffman, John W. 3,051,807.
Reffel, Donald L. 3,051,808.
Pacific Coast Engineering Co.: *See*—
Ramsden, Charles D. 3,051,321.
Pacific Vegetable Oil Corp.: *See*—
Cummings, Lowell O. 3,051,671.
Padden, Frederick D.: *See*—
Abbott, George F., Jr., and Padden. 3,051,850.
Page, Edward: *See*—
Roberts, Derek A., and Page. 3,051,438.
Palm, Albert: *See*—
Merkel, Karl, and Palm. 3,051,708.
Palmer, Clarence B. Guard device. 3,051,524, 8–28–62, Cl. 296—100.
Palmieri, Nicola, to Pirelli S.p.A. Normal joint for high tension cables and process of making the same. 3,051,770, 8–28–62, Cl. 174—22.
Pamm, Georges, to E. I. du Pont de Nemours and Co. Process for treating tire cord. 3,050,820, 8–28–62, Cl. 28—75.
Panhandle Eastern Pipeline Co.: *See*—
Larberg, Harlan A. 3,051,390.
Paniagua, Juan G. Bottle cap seal. 3,051,342, 8–28–62, Cl. 215—40.
Pappas, Edward I. Bottle closures. 3,051,343, 8–28–62, Cl. 215—52.
Parachem Corp.: *See*—
Greene, John P. 3,051,352.
Pare, Donat, to Cercuells Amiante Ltee Les—The Asbestos Caskets Ltd. Asbestos cement casket. 3,050,817, 8–28–62, Cl. 27—7.
Parham, William E., to The Regents of the University of Minnesota. Acetylenic ethers. 3,051,759, 8–28–62, Cl. 260—609.
Park, Robert H. Means for maintaining stability of power transmission systems during a fault. 3,051,842, 8–28–62, Cl. 307—52.
Parke, Davis & Co.: *See*—
Hull, Robert L., and Fisher. 3,051,731.
Parker, Trent J. Fishing tool. 3,050,896, 8–28–62, Cl. 43—4.
Parks, William J., to General Dynamics Corp. Buffer storage between magnetic tape and synchronous output. 3,051,787, 8–28–62, Cl. 178—70.
Parsons, Joe T. Sewing machine cabinet. 3,051,538, 8–28–62, Cl. 312—30.
Parsons, Robert: *See*—
Finn, George B., Jr., and Parsons. 3,051,878.
Partansky, Alexander M., to The Dow Chemical Co. Process for inhibiting crystallization of the diglycidyl ether of bisphenol a comprising incorporating therein and epoxylated novolak resin, and composition obtained thereby. 3,051,681, 8–28–62, Cl. 260—43.
Paul, Albert P.: *See*—
Lewis, Charles E., Paul, Tsang, and Leavitt. 3,051,697.
Paul, Walter, A. Geese, F. Gaber, and H. Greska, to Siemens & Halske Aktiengesellschaft. Keyboard for use in signalling systems. 3,051,799, 8–28–62, Cl. 200—5.
Paule, Kurt, H. Knapp, R. Zechnall, and O. Schütte, to Robert Bosch G.m.b.H., Firma. Fuel control arrangement. 3,051,152, 8–28–62, Cl. 123—119.
Pauli, Donald A., and D. J. Wilson, to Sealed Power Corp. Process of chromium plating vented piston rings. 3,051,633, 8–28–62, Cl. 204—24.
Paulus, Henri. Method of and apparatus for limiting the shearing operation of cloth. 3,050,815, 8–28–62, Cl. 26—15.
Pavlic, Ivo, to International Computers and Tabulators Ltd. Card-feeding apparatus. 3,051,477, 8–28–62, Cl. 271—3.
Payne, Alfred W., Jr. Baby boot. 3,050,873, 8–28–62, Cl. 36—2.5.
Payne, William C. Dial computer. 3,051,383, 8–28–62, Cl. 235—78.
Pearce, George C., L. McDonnold, and L. M. Miller, to General Motors Corp. Domestic appliance 3,051,817, 8–28–62, Cl. 219—37.
Pearne, Frank S., to Regent Jack Mfg. Co., Inc. Bead breaker. 3,051,224, 8–28–62, Cl. 157—1.28.
Pearson, Raymond E.: *See*—
James, Varnell L. R., and Pearson. 3,050,937.
Peerless Aluminum Foundry Co., Inc.: *See*—
Hardy, Peter S. 3,051,159.
Pennsalt Chemicals Corp.: *See*—
Hauptschein, Murray, Braid, and Lawlor. 3,051,764.
Lawlor, Francis E., and Truchan. 3,051,749.
Penobscot Shoe Co.: *See*—
Grossman, Jerome H. 3,050,876.
Penta Laboratories, Inc.: *See*—
Woerner, John J. 3,051,592.
Peoples, Graydon, and D. H. Vreeland, to Lennox Industries, Inc. Oil burner. 3,051,228, 8–28–62, Cl. 158—76.
Pergament, Marcus N. Process of making a stock feed additive. 3,051,571, 8–28–62, Cl. 99—2.
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Stanton, Edward W., and Perkins. 3,050,899.
Personal Products Corp.: *See*—
Wilson, Louise A. 3,051,177.
Persson, Per-Oskar: *See*—
Adams-Ray, Jack, and Persson. 3,051,180.
Petersen, Alfred H., to General Electric Co. Clutch mechanism. 3,050,966, 8–28–62, Cl. 64—30.
Peterson, Edward T., to Birdsboro Corp. Bar separator. 3,051,293, 8–28–62, Cl. 198—34.
Peterson, Neal D.: *See*—
Cressey, John R., Peterson, Nazareth, and Lawler. 3,051,932.
Cressey, John R., Peterson, Nazareth, and Lawler. 3,051,933.
Peterson, Raymond A., and F. B. Coker, to United Electrodynamics, Inc. Analysis system. 3,051,897, 8–28–62, Cl. 324—77.
Pettigrew, Charles P., to United States Steel Corp. Mandrel for coiling wire fabric. 3,051,407, 8–28–62, Cl. 242—72.
Pfaudler Permutit, Inc.: *See*—
Sanfor, Elbert A., and Warren. 3,051,589.
Pfeiffer, Frederick L., to American Cyanamid Co. Pigmentary copper phthalocyanine in the "R" form and its preparation. 3,051,721, 8–28–62, Cl. 260—314.5.
Pfenning, Reuben F., to Esso Research and Engineering Co. Solvent extraction with liquid sulfur dioxide followed by hydrocarbon wash. 3,051,650, 8–28–62, Cl. 208—338.
Pfizer, Chas., & Co., Inc.: *See*—
Rao, Koppaka V. 3,051,625.
Rao, Koppaka V. 3,051,626
Pfleger, Frederick W., and R. Y. Noel, to Radio Corp. of America. Error indicating system. 3,051,955, 8–28–62, Cl. 346—110.
Phelps Dodge Corp.: *See*—
Kuzell, Charles R., Fowler, Davis, Klein, and MacDougall. 3,051,467.
Philco Corp.: *See*—
Waring, John W. 3,051,904.
Zechter, Sol, and Gruen. 3,051,900.
Phillips, Charles H. Two-part burial casket. 3,050,818, 8–28–62, Cl. 27—35.
Phillips Petroleum Co.: *See*—
Broerman, Arthur B. 3,051,037.
Brooke, Jesse M. 3,051,646.
Doss Richard C., and Bost. 3,051,752.
Franz, Richard D., and Warner. 3,051,758.
Legatski, Theodore W. 3,051,649.
Lyons, Harold D. 3,051,692.
Marwil, Stanley J. 3,050,952.
Pitzer, Emory W., and Morgan. 3,051,662.
Warner, Paul F. 3,051,614.
Warner, Paul F., and Franz. 3,051,695.
Wilson, Lawrence V., Jr. 3,050,953.
Pierce, David W., and C. H. Wexler, to United States Steel Corp. System for measuring the length of rolling-mill product. 3,050,857, 8–28–62, Cl. 33—141.
Pierce, Elwood K., Jr.: *See*—
Watts, John D., and Pierce. 3,051,513.
Pifer, Marion J., to Sylvania Electric Products Inc. U.H.F. loop antenna. 3,051,952, 8–28–62, Cl. 343—741.
Pigg, Jalmer, Sr. Positioner for a child being X-rayed. 3,051,832, 8–28–62, Cl. 250—050.
Pilot Distributing Co.: *See*—
Sudeikis, Stanley I. 3,051,519.
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Pircio, Anthony W.: *See*—
Kuna, Samuel, and Pircio. 3,051,622.
Pirelli S.p.A.: *See*—
Palmieri, Nicola. 3,051,770.

Pirot, Ernst, to J. P. Bemberg Aktiengesellschaft. Process for stabilizing vinyl chloride polymers. 3,050,783, 8–28–62, Cl. 18—57.

Pitler, Richard K., E. E. Reynolds, and G. Aggen, to Allegheny Ludlum Steel Corp. Austenitic alloys. 3,051,565, 8–28–62, Cl. 75—134.

Pitts, Loye D. Fishing gig with attachable string line. 3,050,897, 8–28–62, Cl. 43—6.

Pittsburgh Plate Glass Co.: *See*—
Bissinger, William E. 3,051,686.
Kirby, Robert E. 3,050,913.
Wismer, Marco, and Hydro. 3,051,665.

Pitzer, Emory W., and B. T. Morgan, to Phillips Petroleum Co. Pressure-formed catalyst structures and method of manufacturing same. 3,051,662, 8–28–62, Cl. 252—430.

Place, Robert E.: *See*—
Brown, Joe B., and Place. 3,051,328.

Planet Corp.: *See*—
Brown, Joe B., and Place. 3,051,328.

Platzman, Michael M., and L. M. Keefe, to National Automation Corp. Tabulating card perforating apparatus. 3,051,079, 8–28–62, Cl. 101—19.

Plessey Co. Ltd., The: *See*—
Deverell, Geoffrey J. 3,051,005.

Pletta, William H. Marine snubber. 3,051,448, 8–28–62, Cl. 254—189.

Poe, Lloyd R., to Hartwell Corp. Toggle latch. 3,051,520, 8–28–62, Cl. 292—223.

Pohl, Friedrich, to Atlas Werke A.G. Whipping crane. 3,051,324, 8–28–62, Cl. 212—35.

Pollitt, Paul S., to J. Moores & Sons Ltd. Manufacture of hat blocks. 3,050,780, 8–28–62, Cl. 18—34.

Pollock, William E.: *See*—
Simon, Joseph, and Pollock. 3,051,943.

Pomerene, James H., and J. Cocke, to International Business Machines Corp. Asynchronous adder-subtractor system. 3,051,387, 8–28–62, Cl. 235—153.

Poorter, Tennis: *See*—
Kaashoek, Johannes, and Poorter. 3,051,912.

Pope, Bill J.: *See*—
Dale, Allan L., Orullian, and Pope. 3,051,433.

Porges, Frederick B., to Flexibox Ltd. Mechanical seals. 3,051,498, 8–28–62, Cl. 277—93.

Porsche, Dr. Ing. h.c.F., K.G.: *See*—
Spannagel, Hans, and von Ruecker. 3,051,271.

Porter, Harry J. Submersible heater. 3,051,162, 8–28–62, Cl. 126—360.

Porter, P. L., Co.: *See*—
Porter, Percy L. 3,051,274.

Porter, Percy L., to P. L. Porter Co. Hydraulic locking device. 3,051,274, 8–28–62, Cl. 188—96.

Poulit, Robert. VTOL aircraft. 3,051,413, 8–28–62, Cl. 244—12.

Powell, Merrill R.: *See*—
Boyce-Smith, William I., and Powell. 3,051,523.

Power, Wilson H., to Monsanto Chemical Co. Process of decreasing the salt content of an acidic silica hydro-organosol. 3,051,657, 8–28–62, Cl. 252—306.

Power, Wilson H., to Monsanto Chemical Co. Process of decreasing the salt content of an acidic silica hydro-organosol. 3,051,658, 8–28–62, Cl. 252—306.

Prather, Marvin E., to General Electric Co. Electric range with spill-proof cooking surface. 3,051,818, 8–28–62, Cl. 219—37.

Pratt, Henry, Co.: *See*—
Killian, Henry R. 3,050,781.

Pratt, Samuel O., to Lyon & Healy, Inc. Body shell and sounding box structure for harps. 3,051,033, 8–28–62, Cl. 84—265.

Precision Equipment Co., Inc.: *See*—
Miller, Le Roy. 3,051 196.

Pre-Controls, Inc.: *See*—
Morse, William L. 3,050,904.

Price, Peter R.: *See*—
Crosfield, John F., Allen, Brimelow, and Price. 3,051,841.

Priddy, Curtis O.: *See*—
Calk, Oberlee D., and Priddy. 3,051,118.

Pro, George M., to Air Placement Equipment Co. Anticlog device for valved openings. 3,051,189, 8–28–62, Cl. 137—242.

Proux, Jacqueline L. Process for coating brickwork, masonry, concrete and wood and compositions therefor. 3,051,590, 8–28–62, Cl. 117—70.

Pullman Inc.: *See*—
Guttridge, Jack E. 3,051,098.

Purex Corp. Ltd.: *See*—
Rice, Gordon L. 3,051,457.

Pye Ltd.: *See*—
Ridgeway, Denis V. 3,051,861.

Quaker Chemical Products Corp.: *See*—
Barker, George E. 3,051,655.
Kress, Bernard H. 3,051,674.

Quinn, Edward, to United Shoe Machinery Corp. Shoe sewing machines. 3,051,105, 8–28–62, Cl. 112—52.

Quinn, Lester: *See*—
Rutten, Walter. 3,051,214.

Radio Corp. of America: *See*—
Beam, Walter R., and Sterzer. 3,051,844.
Bieganski, Wladyslaw J. 3,051,896.
Pfleger, Frederick W., and Noel. 3,051,955.
Schade, Otto H., Sr. 3,051,864.
Schwarz, Helmut J. 3,050,981.

Radlove, Sol B. Method of making diglycerides. 3,051,734, 8–28–62, Cl. 260—410.8.

Rad-O-Lite, Inc.: *See*—
Lesher, John C. 3,051,934.

Radson Engineering Corp.: *See*—
Fathauer, David F. 3,051,894.

Ragettli, Christian: *See*—
Van Leer, Oscar J., and Ragettli. 3,051,112.

Railroad Accessories Corp.: *See*—
Bettison, David C. 3,051,262.

Ramsden, Charles D., to Pacific Coast Engineering Co. Gantry type crane assembly. 3,051,321, 8–28–62, Cl. 212—14.

Ramsey, Richard V., to Boeing Airplane Co. Flight control system. 3,051,418, 8–28–62, Cl. 244—83.

Ramsey, William H., to C. K. Stillwagon. Valve. 3,051,435, 8–28–62 Cl. 251—306.

Rankin, James L. Vacuum system and nozzle for removing cut hair. 3,050,767, 8–28–62, Cl. 15—314.

Rao, Koppaka V., to Chas. Pfizer & Co., Inc. Dithiocarbamate tumor-inhibitory process. 3,051,625, 8–28–62, Cl. 167—78.

Rao, Koppaka V., to Chas. Pfizer & Co., Inc. Aminoiminomethane sulfinic acid tumor-inhibitory process and pharmaceutical composition. 3,051,626, 8–28–62, Cl. 167—78.

Rasmusson, Marlin B. Carton blank feeder. 3,051,478, 8–28–62, Cl. 271—42.

Rauch, Emil B.: *See*—
Dersch, Fritz, Kaszuba, and Rauch. 3,051,570.

Rawlings, Arthur L., to Bulova Research and Development Laboratories, Inc. Sea level indicating barometer. 3,051,002, 8–28–62, Cl. 73—386.

Rawstron, George O. Apparatus for and method of polishing aspheric surfaces. 3,050,909, 8–28–62, Cl. 51—124.

Recherches Etudes-Production R.E.P., Société à Responsabilite Limitee: *See*—
Boulet, Georges. 3,051,470.

Reddi-Wip, Inc.: *See*—
Morgan, Harry A., Jr. 3,050,914.

Redhead, Paul A., to National Research Council. Ionization vacuum gauges. 3,051,868, 8–28–62, Cl. 315—108.

Redman, William J., to United States Steel Corp. Pump-valve cover. 3,051,348, 8–28–62, Cl. 220—39.

Redwing Ltd.: *See*—
Newman, Herbert G. A., and Hammond. 3,050,735.

Reed, Bayard C.: *See*—
Glass, Marvin I., and Reed. 3,050,902.

Reed, John W., H. J. Halvorsen, P. Hold, and W. R. Miller, to Farrel-Birmingham Co., Inc. Railroad wheel mounting press. 3,050,837, 8–28–62, Cl. 29—208.

Reed Roller Bit Co.: *See*—
Livermont, Frank W. 3,050,978.

Reed, Theron J. Cattle feed distributing apparatus. 3,051,294, 8–28–62, Cl. 198—65.

Reeder, Earl, and L. H. Sternbach, to Hoffmann-La Roche Inc. Benzodiazepine compounds. 3,051,701, 8–28–62, Cl. 260—239.

Rees, Vernon C., to Johns-Manville Fiber Glass Inc. Apparatus for packaging stranded material. 3,051,402, 8–28–62, Cl. 242—18.

Reese, Glenn A., to Magnavox Co. Switch assembly. 3,051,806, 8–28–62, Cl. 200—90.

Reffel, Donald L., to Pace, Inc. Thermoresponsive switch. 3,051,808, 8–28–62, Cl. 200—138.

Regent Jack Mfg. Co., Inc.: *See*—
Pearne, Frank S. 3,051,224.

Reid, William A.: *See*—
Mehl, Walter L., and Reid. 3,051,155.

Rembaum, Alan A.: *See*—
Morton, Maurice, and Rembaum. 3,051,684.

Remington, Richard C., to General Precision, Inc. Vertical sensing device. 3,051,007, 8–28–62, Cl. 74—5.47.

Renaut, Paul, to Societe "Realisations Ultrasoniques". Display device for recurring echoes. 3,050,990, 8–28–62, Cl. 73—67.8.

Resistoflex Corp.: *See*—
St. John Alexander N. T., and Titterton. 3,050,786.

Revere Camera Co.: *See*—
Shimkus Robert A. 3,051,068.

Revere Cooper and Brass Inc.: *See*—
Wilkins, Richard A. 3,050,848.

Rexford, Dean R., to E. I. du Pont de Nemours and Co. Copolymer elastomer of vinylidenefluoride and hexafluoropropene. 3,051,677, 8–28–62, Cl. 260—29.6.

Reynolds, Edward E.: *See*—
Pitler, Richard K., Reynolds, and Aggen. 3,051,565.

Reynolds, John E. Arched shelter structure. 3,051,185, 8–28–62, Cl. 135—3.

Reynolds Metals Co.: *See*—
Grogel, Merrill A. 3,051,346.
McLean, John O., Fritzien, and Hendrick. 3,051,536.
Webster, John L. 3,051,078.

Rhem, William F.: *See*—
West, Clifton F., Wethington, and Rhem. 3,051,285.

Rice, Gordon L., to Purex Corp., Ltd. Cleaning tank closure apparatus. 3,051,457, 8–28–62, Cl. 259—121.

Rice, Virgil C., to Borg-Warner Corp. Auxiliary oven for a range. 3,051,157, 8–28–62, Cl. 126—19.

Rich, Donald G., to Carrier Corp. Air conditioning apparatus. 3,050,959, 8–28–62, Cl. 62—305.

Richards, James V., to Wilmot Castle Co. Variable intensity lamp. 3,051,869, 8–28–62, Cl. 315—156.

Richardson, Charles D., and J. M. Jasniewski, to General Electric Co. Method for making armature conductor bar. 3,050,787, 8–28–62, Cl. 18—59.

Richert, Eberhard, and H. Fliegner, to International Standard Electric Corp. Stacking device. 3,051,332, 8–28–62, Cl. 214—7.

Richert, Eberhard, and H. Fliegner, to International Standard Electric Corp. Storage apparatus for article sorting system. 3,051,333, 8–28–62, Cl. 214—7.

Richfield Oil Corp.: *See*—
Chamberlain, Richard O., and Wakefield. 3,051,242.
Wagner, John W. 3,051,763.

Richterkessing, Frank H., to W. M. Cissell Mfg. Co. Garment finisher clamp. 3,051,358, 8–28–62, Cl. 223—67.

Ridgeway, Denis V., to Pye Ltd. Color television apparatus. 3,051,861, 8–28–62, Cl. 313—65.

Rigaku Denki Co., Ltd.: *See*—
Shimula, Yoshihiro, and Uchida. 3,051,835.

Rigrod, William W., to Bell Telephone Laboratories, Inc. Rotating beam space-charge wave parametric amplifier. 3,051,910, 8–28–62, Cl. 330—43.

Ring, Oswald R. Device for splitting bulbs and the like. 3,051,360, 8–28–62, Cl. 225—96.

Riordan, Hugh E., to General Precision, Inc. Simplified snap-action contact switch. 3,051,802, 8–28–62, Cl. 200—67.

Risto, William L., to The Thew Shovel Co. Crane. 3,051,325, 8–28–62, Cl. 212—38.

Ritchey, William D. Flexible toilet paper holder. 3,051,404, 8–28–62, Cl. 242—55.2.

Ritter Co., Inc.: *See*—
Burziaff, Karl H. 3,051,270.
Ellis, Charles A. 3,050,855.
Nugent, John I. 3,051,175.

Roane Hosiery, Inc.: *See*—
Graves, Ralph M. 3,051,104.

Robbie, Kenneth A.: *See*—
Solley, Douglas A., Jr., and Robbie. 3,050,955.

Robbie, Kenneth A., to General Electric Co. Defrost water drain seal. 3,050,957, 8–28–62, Cl. 62—285.

Robbins, Daniel T. Self-ventilating sole. 3,050,875, 8–28–62, Cl. 36—3.

Roberts, Derek A., and E. Page, to Rolls-Royce Ltd. Axial-flow blading with internal fluid passages. 3,051,438, 8–28–62, Cl. 253—39.15.

Roberts, Frederick W., L. R. Jones, A. L. Di Mattia, and R. C. Curtis, to Dictaphone Corp. Failure detecting and indicating means for sound recording systems. 3,051,795, 8–28–62, Cl. 179—100.1.

Roberts, James H., to Jeffrey Gallon Mfg. Co. Compactor roller. 3,051,063, 8–28–62, Cl. 94—50.

Robertson, Harry G. Loader beam assemblies for freight cars, trucks, and the like. 3,051,099, 8–28–62, Cl. 105—369.

Robinson, Donald E.: *See*—
West, John R., and Robinson. 3,050,925.

Robitschek, Paul: *See*—
Weinberg, Alan E., Bean, Robitschek, and Schoepfle. 3,051,585.

Robotron Corp.: *See*—
Rockafellow, Stuart C., and Thomsen. 3,051,825.

Robson, Aubrey H., to American Air Filter Co. Inc. Safety control system for air heater. 3,051,227, 8–28–62, Cl. 158—28.

Rockafellow, Stuart C., and T. R. Thomsen, to Robotron Corp. Interlock system for assuring resistance welds of consistent quality. 3,051,825, 8–28–62, Cl. 219—108.

Rockafield, Wilden A., and J. E. Brundage, to The Brundage Co. Hub structure for an impeller center plate and method for making same. 3,051,372, 8–28–62, Cl. 230—134.

Rodriguez, Emiliano: *See*—
De la Vega Falcon, Jose R., and Rodriguez. 3,051,611.

Roe, A. V., Canada Ltd.: *See*—
Frost, John C. M. 3,051,414.

Roetter, Robert P., to Libbey-Owens-Ford Glass Co. Apparatus for gauging the curvature of sheet material. 3,050,985, 8–28–62, Cl. 73—37.8.

Rogers, Francis R., to The Bendix Corp. Fuel control apparatus for a combustion engine. 3,050,941, 8–28–62, Cl. 60—39.28.

Rogers, Raymond R., to The Bendix Corp. Segmented heat shield for wheels. 3,051,528, 8–28–62, Cl. 301—6.

Rogner, Ernst, to SKF Kugellagerfabriken G.m.b.H. Device for supporting and guiding belts of drafting assemblies. 3,050,789, 8–28–62, Cl. 19—252.

Rohm & Haas Co.: *See*—
Cunningham, William J. 3,050,785.
Forsyth, George E. 3,051,679.
Rowland, Stanley P., and White. 3,051,672.

Rolls-Royce Ltd.: *See*—
Emblem, Harold G., Mountford, and Morley. 3,051,669.
Hall, Eric T., and Leonard. 3,051,827.
Hilton, Kenneth D. 3,051,439.
Kent, Nelson H., and Steel. 3,051,436.
Morley, Frederick W. W. 3,050,939.
Morley, Frederick W. W., Kent, Hunter, and Wilkinson. 3,051,437.
Roberts, Derek A., and Page. 3,051,438.
Wigg, Raymond E., and Battle. 3,051,497.

Ronci, Fernando M. Reinforced heel and tap. 3,050,877, 8–28–62, Cl. 36—34.

Ronson Corp.: *See*—
Goddard, John A. 3,050,973.

Roosen, Richard: *See*—
Hany, Harald, Roosen, and Spehr. 3,051,089.

Root, Andrew A., to American Optical Co. Flexible pyroscopes. 3,051,035, 8–28–62, Cl. 88—1.

Rosenthal, Sidney N., to Speedry Chemical Products, Inc. Felt pack construction of pens. 3,050,768, 8–28–62, Cl. 15—563.

Ross, Karl F. Angle-modulation system. 3,051,902, 8–28–62, Cl. 325—40.

Rotax Ltd.: *See*—
Chandler, Robert W. 3,051,440.
Simons, Walford J. L., and White. 3,051,421.

Rothbart, Arthur, to International Telephone and Telegraph Corp. Electromechanical delay device. 3,051,916, 8–28–62, Cl. 333—30.

Rotter, Donald J., to Minneapolis-Honeywell Regulator Co. Maneuver limiting autopilot monitor. 3,051,416, 8–28–62, Cl. 244—77.

Roussel-UCLAF, S.A.: *See*—
Muller, Georges. 3,051,712.
Muller, Georges. 3,051,713.

Rowell, Victor M.: *See*—
Steinmueller, Ralph E., and Rowell. 3,050,992.

Rowland, Stanley P., and R. G. White, to Rohm & Haas Co. Polyvinyl halides plasticized with epoxidized esters of higher fatty acids containing pairs of acyloxy groups. 3,051,672, 8–28–62, Cl. 260—23.

Rowley, Edward K., and D. C. West, to Canadian Industries Ltd. Multi-speed precision gear box. 3,051,018, 8–28–62, Cl. 74—681.

Royse, Edwin H. Moisture condenser. 3,050,954, 8–28–62, Cl. 62—139.

Ruble, Robert H., to The Bendix Corp. I.D. and O.D. limit gage. 3,050,861, 8–28–62, Cl. 33—178.

Rueckert, Dean E., to Swift & Co. Apparatus for applying protective covers to adhesive tape. 3,051,222, 8–28–62, Cl. 156—459.

Ruf, Walter: *See*—
Marzolph, Herbert, Ruf, and Corte. 3,051,741.

Rummel, Theodor, to Siemens and Halske Aktiengesellschaft. Crucible for melting silicon of highest purity and method of making it. 3,051,555, 8–28–62, Cl. 23—223.5.

Rutgers, Norman L.: *See*—
Bierwirth, Henry C., and Rutgers. 3,051,451.

Rutkowski, Karl: *See*—
Hiller, Rolf, Rutkowski, Krägeloh, Voegtlen, and Zahlhaas. 3,051,793.

Rutten, Marion: *See*—
Rutten, Walter. 3,051,214.

Rutten, Walter, deceased, by M. Rutten, L. Quinn, and The Northern Trust Co., executors. Machine for edging and forming. 3,051,214, 8–28–62, Cl. 153—2.

Ryck, Francis M., to General Motors Corp. Windshield wiper arm attachment. 3,051,516, 8–28–62, Cl. 287—53.

Rytina, Anton W., to Edmont Inc. Glove. 3,050,738, 8–28–62, Cl. 2—167.

SKF Kugellagerfabriken G.m.b.H.: *See*—
Rogner, Ernst. 3,050,789.

Sable, Andre, to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine. Process for the conversion of dolomite. 3,051,552, 8–28–62, Cl. 23—201.

Sabol, Albert R.: *See*—
Blaha, Eli W., and Sabol. 3,051,654.

Safford, Thomas W., to Arcoa, Inc. Hand truck assembly. 3,051,338, 8–28–62, Cl. 214—374.

Saginaw Machine and Tool Co.: *See*—
Cashman, Robert W., and Wasco. 3,050,828.
Cashman, Robert W., and Wasco. 3,051,029.

St. John, Alexander N. T., and W. E. Titterton, to Resistoflex Corp. Methods of lining and jacketing tubular members with prestressed polytetrafluoroethylene. 3,050,786, 8–28–62, Cl. 18—59.

Samica Corp.: *See*—
Shimkus, Robert A. 3,051,068.

Samuel Stamping & Enameling Co.: *See*—
Kimberley, Walter R. 3,051,158.

Sandberg, Irwin W., to Bell Telephone Laboratories, Inc. Active two-port network. 3,051,920, 8–28–62, Cl. 333—80.

Sanderson, Carl C., ⅓ to T. D. Morrow. Overload coupling for lawn mower blade. 3,050,923, 8–28–62, Cl. 56—25.4.

Sandoz Ltd.: *See*—
Geiger, Georg and A. 3,051,719.

Sandstrom, Sixten A., to Siefvert & Fornander, Aktiebolaget. Sliding box. 3,051,366, 8–28–62, Cl. 229—9.

Sanfor, Elbert A., and G. Warren, to Pfaudler Permutit, Inc. Corrosion resistant coated equipment and method of making the same. 3,051,589, 8–28–62, Cl. 117—70.

Sapp, John P.: *See*—
Ewing, Bruce W., Mallory, and Sapp. 3,051,220.

Sarah, Thomas F., to The Enterprise Mfg. Co. Fishing reel clutch. 3,051,409, 8–28–62, Cl. 242—84.54.

Sarkes Tarzian, Inc.: *See*—
Finn, George B., Jr., and Parsons. 3,051,878.

Sasnett, Russell M., to General Electric Co. Signalling device for appliances and the like. 3,050,864, 8–28–62, Cl. 34—45.

Sato, Fumio, to Kabushiki Kaisha Okuma Tekkosho. Shifting mechanism between inch and metric system threading feeds for screw thread cutting on machine tools. 3,051,012, 8–28–62, Cl. 74—354.

Sato, Takayoshi, and A. Nakatani, to Kabushiki Kaisha Koparu. Automatic exposure control apparatus for photographic camera. 3,051,064, 8–28–62, Cl. 95—10.

Sawada, Fred H.: *See*—
Busch, Floyd H., and Sawada. 3,051,813.

Sayford, Frank M., Co.: *See*—
Sayford, Frank M., Jr. 3,051,365.

Sayford, Frank M., Jr., to Frank M. Sayford Co. Cup and container handle. 3,051,365, 8–28–62, Cl. 229—1.5.

Schade, Otto H., Sr., to Radio Corp. of America. Self-indexing electron tubes and sockets. 3,051,864, 8–28–62, Cl. 313—318.

Schaefer, Hans F., Jr., to United Shoe Machinery Corp. Work steering and feeding mechanism. 3,051,476, 8–28–62, Cl. 271—1.

Schaffner, Irwin J., to United States Rubber Co. Vinyl 4,4,4-trinitrobutyrate. 3,051,743, 8–28–62, Cl. 260—478.

Schairbaum, Albert W., to United States Gypsum Co. Multispeed furnace traverse. 3,051,602, 8–28–62, Cl. 154—54.

Scheibli, James R., to Shell Oil Co. Resinous compositions and their preparation. 3,051,084, 8–28–62, Cl. 260—37.

Scheldorf, Owen H., to General Electric Co. Method of manufacturing a motor compressor unit. 3,050,832, 8–28–62, Cl. 29—155.5.

Schelke, Robert K., to Belden Mfg. Co. Strain relief. 3,051,774, 8–28–62, Cl. 174—135.

Schenk, Walter E., to The B. F. Nelson Mfg. Co. Self-sealing shingle. 3,050,908, 8–28–62, Cl. 50—243.

Schick, Harold P., to The General Tire & Rubber Co. Laminated polyurethane foam cushion. 3,051,601, 8–28–62, Cl. 154—54.

Schlensker, Hugo J. H., and J. R. Mellott, to Mellott Arrow Crest, Inc. Arrow cresting machine. 3,051,124, 8-28-62, Cl. 118—503.

Schlepperwerk Nordhausen, VEB: *See*—
Selle, Heinz. 3,051,257.

Schlumberger Well Surveying Corp.: *See*—
Huston, Owen H. 3,051,892.

Schmidt, Oswald: *See*—
Gehm, Robert, Schmidt, and Mertens. 3,051,704.

Schmieder, Einil, and W. Haiss, to Ernst Haiss Eisen- und Metall-KG., Fa. Grinding and polishing mat. 3,050,764, 8-28-62, Cl. 15—209.

Schnackenberg, Fred W., to Nordberg Mfg. Co. Thermal flattener plates. 3,051,215, 8-28-62, Cl. 153—32.

Schneider, Carl, Firma: *See*—
Diehl, Ludwig, and Fuchs. 3,051,537.

Schneider, Jos., & Co., Optische Werke: *See*—
Mahn, Herbert. 3,051,048.

Schneider, William S., and J. French: said French assor. to said Schneider. Dispensing container. 3,051,368, 8-28-62, Cl. 229—17.

Schnell, Carl, ½ to The Griffith Laboratories, Inc. Blade assembly for comminuting machine. 3,051,208, 8-28-62, Cl. 146—192.

Schnell, Ernst E., to Deere & Co. Hinge for grain drill hoppers. 3,051,347, 8-28-62, Cl. 220—31.

Schoepfle, Blaine O.: *See*—
Weinberg, Alan E., Bean, Robitschek, and Schoepfle. 3,051,585.

Scholin, Axel R. Fuel injection apparatus. 3,051,087, 8-28-62, Cl. 103—4.

Schöllhammer, Friedrich W., and G. Eltze, to Daimler-Benz Aktiengesellschaft. Pressure regulating slide valve, especially for automatic control mechanisms for shifting the gears of motor vehicles. 3,051,191, 8-28-62, Cl. 137—332.

Schorr, Theodore H., to Baker Oil Tools, Inc. Parallel tubular string apparatus for well bores. 3,051,247, 8-28-62, Cl. 166—241.

Schott, Lionel O., to Bell Telephone Laboratories, Inc. Negative resistance diode pulse repeater. 3,051,846, 8-28-62, Cl. 307—88.5.

Schram, André, to Glaverbel, S.A. Device for handling sheet material. 3,051,331, 8-28-62, Cl. 214—1.

Schrewelius, Nils G.: *See*—
Amberg, Styrbjorn, and Schrewelius. 3,051,924.

Schult, Albert W. Self-leveling holding device. 3,051,428, 8-28-62, Cl. 248—226.

Schumacher, Wilhelm W. B., to Ontario Research Foundation. X-ray spectrometer. 3,051,833, 8-28-62, Cl. 250—51.5.

Schuster, Roman. Plug socket with plug. 3,051,800, 8-28-62, Cl. 200—51.

Schutte, Otto: *See*—
Paule, Kurt, Knapp, Zechnall, and Schutte. 3,051,152.

Schwartz, Donald L., to General Electric Co. Process for producing high density refractory bodies. 3,051,566, 8-28-62, Cl. 75—213.

Schwartz, Robert E., R. P. Stahl, and E. J. Falk, to Wagner Electric Corp. Power hydraulic brake device. 3,050,944, 8-28-62, Cl. 60—54.6.

Schwarz, Helmut J., to Radio Corp. of America. Vaporization rate measuring apparatus. 3,050,981, 8-28-62, Cl. 73—15.

Schwarzaugl, Josef M., to Faber-Castell, A.W. Retractable ball-point pen. 3,051,131, 8-28-62, Cl. 21—42.03.

Schwarzaugl, Josef M., to Faber-Castell, A.W. Container for ball-point insert. 3,051,133, 8-28-62, Cl. 120—42.4.

Schweitzer, Otto, and J. Behrends, to Deutsche Gold- und Silber-scheideanstalt vormals Roessler. Process for the drying of gaseous formaldehyde. 3,051,755, 8-28-62, Cl. 260—606.

Schwend, Fred N.: *See*—
Oldenburg, Kenneth F., and Schwend. 3,051,376.

Schwing, Russell L., to Thermal Mfg. Co. Method of making electrically insulated heating units. 3,050,833, 8-28-62, Cl. 29—155.64.

Schwitzer Corp.: *See*—
Muehlhausen, Robert J. 3,051,136.

Scott Aviation Corp.: *See*—
Benzel, Howard A. 3,051,170.

Scott, O. M., & Sons Co., The: *See*—
West, John R. 3,050,924.
West, John R., and Robinson. 3,050,925.

Scott, Robert L. Fuel converter. 3,051,153, 8-28-62, Cl. 123—122.

Scovil, Henry E. D.: *See*—
Gyorgy, Ernst M., and Scovil. 3,051,917.

Scovill Mfg. Co.: *See*—
Seyfried, Arthur W. 3,050,921.

Scully, John T. Necktie holders. 3,050,737, 8-28-62, Cl. 2—153.

Sealed Power Corp.: *See*—
Paull, Donald A., and Wilson. 3,051,633.

Sedgwick, Grant O.: *See*—
Hansen, Louis I., and Sedgwick. 3,051,729.

Sedlacsik, John, Jr., to International Research & Development Corp. Electrostatic spray coating apparatus and method. 3,051,394, 8-28-62, Cl. 239—3.

Seeley, Edward S., to Altec Lansing Corp. Amplifier interconnecting circuit. 3,051,788, 8-28-62, Cl. 179—1.

Segel, Edward, to J. E. Siebel Son's Co., Inc. Foaming malt beverages. 3,051,574, 8-28-62, Cl. 99—48.

Seismograph Service Corp.: *See*—
Hunsicker, William R. 3,051,949.

Seitz, John M.: *See*—
Elizer, Lee H., Glasscock, and Seitz. 3,051,691.
Elizer, Lee H., Glasscock, and Seitz. 3,051,698.
Elizer, Lee H., Glasscock, and Seitz. 3,051,699.
Elizer, Lee H., Glasscock, and Seitz. 3,051,700.

Selas Corp. of America: *See*—
Furczyk, Alfons A. 3,051,460.
Knlveton, James. 3,050,813.

Seliber, Joseph. Variable speed drive. 3,051,019, 8-28-62, Cl. 74—689.

Selin, Karl I., to Basic Products Corp. Control circuits. 3,051,889, 8-28-62, Cl. 323—7.

Self-Changing Gears Ltd.: *See*—
Miller, Albert A. 3,051,021.

Selle, Heinz, to Schlepperwerk Nordhausen, VEB. Vehicular steering system. 3,051,257, 8-28-62, Cl. 180—79.2.

Sexton, Arthur R., to The Dow Chemical Co. Method of purification and crystallization of 2,2'-isopropylidene bis-(p-phenyleneoxy) diethanol. 3,051,760, 8-28-62, Cl. 260—613.

Seydel, Robert: *See*—
Stroh, Rudolf, and Seydel. 3,051,762.

Seyfried, Arthur W., to Scovill Mfg. Co. Suction cleaner center support and cover locking means. 3,050,921, 8-28-62, Cl. 55—467.

Shaheen, Joseph M.: *See*—
Chipman, Arthur D., and Shaheen. 3,051,598.

Shames, Albert A., to United States of America, Army. Collapsible monorail track. 3,051,094, 8-28-62, Cl. 104—126.

Shapiro, Harold Z.: *See*—
Kibler, Frederick, and Shapiro. 3,051,475.

Shapiro, Seymour L., L. Freedman, and H. Soloway, to U.S. Vitamin & Pharmaceutical Corp. Substituted diphenylchloracetates. 3,051,705, 8-28-62, Cl. 260—247.2.

Shapiro, Seymour L., and L. Freedman, to U.S. Vitamin & Pharmaceutical Corp. Substituted amino-3-(4- and 5-indanoxy)-propane-2-ols. 3,051,709, 8-28-62, Cl. 260—268.

Shaw, Walter C., to United Aircraft Corp. Pressure controlling means in aircraft air conditioning system. 3,051,070, 8-28-62, Cl. 98—1.5.

Shell Oil Co.: *See*—
Scheibli, James R. 3,051,084.
Swiger, William F. 3,051,113.
Wilson, William B., and Good. 3,051,645.

Shelley, Edwin F.: *See*—
Goodell, John D., Tengsater, and Shelley. 3,051,327.

Shepard, Harry W., Jr. Ticket issuing mechanism. 3,051,953, 8-28-62, Cl. 346—24.

Shepherd, Robert G.: *See*—
Fitchett, Gilmer T., Gordon, and Shepherd. 3,051,702.

Sherman Enterprises, Inc.: *See*—
Sherman, Kenneth C. 3,051,483.

Sherman, Kenneth C., to Sherman Enterprises, Inc. Mechanism for elevating and separately discharging bowling balls and pins. 3,051,483, 8-28-62, Cl. 273—43.

Shimkus, Robert A., to Revere Camera Co. (formerly Samica Corp.). Automatic photographic exposure control with glare compensation and back-light compensation. 3,051,068, 8-28-62, Cl. 95—64.

Shimula, Yoshihiro, and H. Uchida. Automatic recording system of X-ray diffraction patterns. 3,051,834, 8-28-62, Cl. 250—51.5.

Shimula, Yoshihiro, and H. Uchida, to Rigaku Denki Co. Ltd. X-ray diffraction system. 3,051,835, 8-28-62, Cl. 250—51.5.

Shook, Donald H., to National-Standard Co. Bead building apparatus. 3,051,362, 8-28-62, Cl. 226—11.

Shoup, Ranson F., and E. A. Fox, Sr., to Shoup Research and Development Corp. Party selecting mechanism for voting machine. 3,051,379, 8-28-62, Cl. 235—55.

Shoup Research and Development Corp.: *See*—
Shoup, Ransom F., and Fox. 3,051,379.

Shulevitz, Joseph I., to Cadillac Overall Supply Co. Bowling pin duster. 3,051,484, 8-28-62, Cl. 273—43.

Siebel, J. E., Son's Co., Inc.: *See*—
Segel, Edward. 3,051,574.

Siefvert & Fornander, Aktiebolaget: *See*—
Sanström, Sixten A. 3,051,366.

Siegel, Martin: *See*—
Markus, George, and Siegel. 3,051,600.

Siemens & Halske Aktiengesellschaft: *See*—
Hiller, Rolf, Rutkowski, Krägeloh, Voegtlen, and Zahlhaas. 3,051,793.
Laas, Knrt. 3,051,794.
Paul, Walter, Geese, Gaber, and Greska. 3,051,799.
Rummel, Theodor. 3,051,555.

Siempelkamp, Eugen. Multi-platen press. 3,050,777, 8-28-62, Cl. 18—16.

Silombra, Armando, to Superga Societa per Azioni. Rubber ski shoe. 3,050,874, 8-28-62, Cl. 36—2.5.

Silverstolpe, Karl O. L. Apparatus for aseptically pouring a bacteriological substrate or the like into cover-carrying vessels. 3,050,915, 8-28-62, Cl. 53—111.

Simmonas Aerocessories, Inc.: *See*—
Edwards, Harrison F. 3,050,999.

Simon, Joseph, and W. E. Pollock, to General Precision, Inc. Head for variable reluctance converter. 3,051,943, 8-28-62, Cl. 340—347.

Simonds, George D., R. W. Stieg, K. A. McLyman, and A. V. Larson, to FWD Corp. Double universal joint. 3,050,963, 8-28-62, Cl. 64—21.

Simons, Walford J. L., and G. J. White, to Rotax Ltd. Actuating mechanism for railway points. 3,051,421, 8-28-62, Cl. 246—401.

Simpson, William, to Newey Brothers Ltd. Hook fastenings for garments. 3,050,740, 8-28-62, Cl. 2—265.

Singer Mfg. Co., The: *See*—
Rialy, Edward W. 3,051,109.
Cortese, Joseph, and Vollman. 3,051,111.
Graham, Richard P., Herron, and Ketterer. 3,051,110.
Johnson, Ralph E. 3,051,107.
Ketterer, Stanley J. 3,051,108.
Stanton, Edward W., and Perkins. 3,050,899.

Singleton, Charles N. Gas-fired incinerator. 3,051,100, 8-28-62, Cl. 110—8.

Sites, Benjamin L., and M. S. Agruss, to Miehle-Goss Dexter, Inc. Quick drying vehicle and method. 3,051,591, 8-28-62, Cl. 117—93.

Skogseid, Anders, to A/S Jens Villadsen's Fabrikker. Method of reacting felted cellulose, sulphate cellulose and sulphite cellulose with gaseous ketenes. 3,051,543, 8-28-62, Cl. 8—121.

Skolaut, Paul L., and A. B. Waters, to Halliburton Co. Paraffin control composition and method. 3,051,653, 8-28-62, Cl. 252—8.3.

Skowron, Edmund A., to Woodings-Verona Tool Works. Automatically releasing lifting tongs. 3,051,521, 8-28-62, Cl. 294—83.

Slocombe, Robert J., and G. L. Wesp, to Monsanto Chemical Co. Methyl vinyl ketone terpolymers. 3,051,085, 8-28-62, Cl. 260—63.

Sluijters, Robert, to American Enka Corp. Mixing apparatus. 3,051,453, 8-28-62, Cl. 259—4.

Smeal, Donald L., to L. R. Nelson Mfg. Co. Irrigation pipe moving apparatus. 3,051,095, 8-28-62, Cl. 104—162.

Smets, Victor F. Adjustable coded calendar. 3,050,886, 8-28-62, Cl. 40—109.

Smith, Arthur J., to Bostitch Industrial Stapling Machine Co. Pneumatic tool. 3,051,135, 8-28-62, Cl. 121—21.

Smith-Corona Marchant Inc.: *See*—
Bradbury, Wilburn F. 3,051,377.

Smith, David G., to Moffats Ltd. Warmer shelf. 3,051,819, 8-28-62, Cl. 219—37.

Smith, Gerald D., to Auto-Electronics, Inc. Electronic siren and communication apparatus. 3,051,944, 8-28-62, Cl. 340—384.

Smith, Harold R.: *See*—
Stange, Charles W., and Smith. 3,051,286.

Smith, Larrabee M., to Bell Telephone Laboratories, Inc. Digital data converter. 3,051,929, 8-28-62, Cl. 340—172.5.

Smith, Otto J. M. Dead beat response, resonant load, control system and method. 3,051,883, 8-28-62, Cl. 318—448.

Smith, S., & Sons (England) Ltd.: *See*—
Brazier, Horace J. 3,050,986.
Gordon, George A. D., Taylor, and Wood. 3,050,988.

Smith, Thomas R., to The Maytag Co. Combination washer-drier having an air flow water trap. 3,050,974, 8-28-62, Cl. 68—20.

Smyser, Harry E.: *See*—
Fisch, Jacob, McCormack, and Smyser. 3,051,186.

Smythe, Robert L., to McGraw-Edison Co. Guy guard. 3,051,278, 8-28-62, Cl. 189—31.5.

Snelling, John E.: *See*—
Hamlyn, Peter M., Snelling, and Horstmann. 3,051,119.

Snoddon, William J., to Yale Rubber Mfg. Co. Adhesive composition for elastomers. 3,051,666, 8-28-62, Cl. 260—3.5.

Sobel Metal Products, Inc.: *See*—
Jonas, Walter M. 3,051,178.

Societe Applicazioni Gomma Antivibranti S.A.G.A., S.p.A.: *See*—
Boschi, Antonio. 3,051,469.

Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine: *See*—
Sable, Andre. 3,051,552.

Societe des Accumulateurs Fixes et de Traction (Societe Anonyme): *See*—
Jammet, Jean F. 3,051,769.

Societe des Forges et Ateliers du Creusat: *See*—
Bonzon, Maurice. 3,051,266.
Fleux, Jean. 3,051,047.

Societe Financiere de la Cellulose: *See*—
Gonzalez, Jacques de los S. 3,051,209.

Societe "Realisations Ultrasoniques": *See*—
Renaut, Paul. 3,050,990.

Societe Triflux: *See*—
Daniel, Georges H. M. 3,051,871.

Socony Mobil Oil Co., Inc.: *See*—
Drew, Robert D. 3,051,466.
Gee, Paul Y. C., and Andress. 3,051,562.
Eastwood, Sylvander C. 3,050,935.

Solley, Douglas A., Jr., and K. A. Robbie, to General Electric Co. Multi-temperature refrigerator. 3,050,955, 8-28-62, Cl. 62—155.

Soloway, Harold: *See*—
Shapiro, Seymour, Freedman, and Soloway. 3,051,705.

Solvay & Cie: *See*—
Van Diest, Jacques. 3,051,635.

Soumeral, Henri, to Worthington Corp. Enclosed motor compressor unit. 3,051,373, 8-28-62, Cl. 230—206.

Soundscriber Corp., The: *See*—
Lyon, William H. 3,051,405.

Southern Equipment Co.: *See*—
Muckler, Frank, and Vandas. 3,051,582.

Spannagel, Hans, and N. von Ruecker, to Dr. Ing. h.c.F. Porsche, K.G. Disk brake. 3,051,271, 8-28-62, Cl. 188—18.

Specialties Development Corp.: *See*—
Olandt, John W. 3,051,652.

Speed, David B., to E. I. du Pont de Nemours and Co. Free-flowing sodium silicate powder. 3,051,550, 8-28-62, Cl. 23—110.

Speedry Chemical Products, Inc.: *See*—
Rosenthal, Sidney N. 3,050,768.

Spehr, Eugen: *See*—
Hany, Harald, Roosen, and Spehr. 3,051,089.

Sperry, Herbert O., to Color Process Co., Inc. Display assembly. 3,050,887, 8-28-62, Cl. 40—124.1.

Sperry Products, Inc.: *See*—
Henry, Elliott A. 3,050,989.

Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Mernyk, Edwin H. 3,051,009.

Spira-Klein, Mrs. Marie-Louise: *See*—
Mieville, André. 3,051,025.

Spracklen, Stanford B.: *See*—
Martin, Sterling T., and Spracklen. 3,051,392.

Spreading Machine Exchange, Inc.: *See*—
Kibler, Frederick, and Shapiro. 3,051,475.

Spreng, Manfred: *See*—
Webde, Heinrich, Lange, Fischer, and Spreng. 3,051,406.

Spritz, Melvin J. Refrigerator deodorizer. 3,051,395, 8-28-62, Cl. 239—57.

Sproule, Robert S., to Dominion Engineering Works Ltd. Dry band Francis turbine. 3,051,441, 8-28-62, Cl. 253—117.

Stahl, Alex D.: *See*—
Foote, Daniel J., and Stahl. 3,050,977.

Stahl, Roy P.: *See*—
Schwartz, Robert E., Stahl, and Falk. 3,050,944.

Stahlecker, Fritz. Belt tensioner, particularly for spinning or twisting machines. 3,050,929, 8-28-62, Cl. 57—105.

Stalmuke, Constantine J.: *See*—
Ahara, Edward V., Johnson, De Groot, and Stalmuke. 3,051,125.

Standal, Elizabeth V.: *See*—
Standal, Stanley. 3,051,120.

Standal, Stanley, deceased; E. V. Standal, executrix. Inboard outboard drive mechanism for boats. 3,051,120, 8-28-62, Cl. 115—41.

Standard Oil Co. (Indiana): *See*—
Blaha, Eli W., and Sabol. 3,051,654.
Bolton, Benjamin A., and Kolb. 3,051,724.
Dale, Allan L., Orullian, and Pope. 3,051,433.
Nerheim, Arvie G., and Tucker. 3,050,984.

Standard Oil Co. (Ohio), The: *See*—
Grimes, William W. 3,051,561.

Stange, Charles W., and H. R. Smith. Coin-controlled shopping bag dispenser. 3,051,286, 8-28-62, Cl. 194—10.

Stanik, John: *See*—
Dodge, Harry G. 3,050,757.

Stanley Works, The: *See*—
Murphy, Clifford F. 3,051,318.

Stannard, Forrest B. Method of making valved bags from extruded thermoplastic materials. 3,051,605, 8-28-62, Cl. 156—196.

Stanray Corp.: *See*—
Fraenkel, Stephen J. 3,051,458.

Stanton, Edward W., and K. Perkins, to The Singer Mfg. Co. Carrying case cover for sewing machines. 3,050,899, 8-28-62, Cl. 45—68.2.

Stapling Machines Co.: *See*—
McCrea, Joseph. 3,051,344.

Stark, Fred J., to Custom Polymers, Inc. Coating compositions. 3,051,673, 8-28-62, Cl. 260—28.5.

Stauffer, Hans F., to Nordberg Mfg. Co. Grinding mill trunnion. 3,051,399, 8-28-62, Cl. 241—176.

Staunt, Martin. Dental handpieces. 3,050,856, 8-28-62, Cl. 32—26.

Steel, Thomas: *See*—
Kent, Nelson H., and Steel. 3,051,436.

Steiner, Nicholas P.: *See*—
Sugarman, Meyer L., Jr., and Steiner. 3,051,569.

Steinmueller, Ralph E., and V. M. Rowell, to Harry W. Dietert Co. Universal strength testing machine. 3,050,992, 8-28-62, Cl. 73—93.

Stelli, Daniel E., to General Electric Co. Control mechanism. 3,051,313, 8-28-62, Cl. 210—144.

Stenberg, Nyyrikki K., to Fischer & Porter Co. Flow control device. 3,051,195, 8-28-62, Cl. 137—501.

Stephenson, Andrew J. Device for installing split coupling collars on corrugated pipe. 3,051,444, 8-28-62, Cl. 254—67.

Sternbach, Leo H.: *See*—
Reeder, Earl, and Sternbach. 3,051,701.

Sterzer, Fred: *See*—
Beam, Walter R., and Sterzer. 3,051,844.

Steuber, Walter, to E. I. du Pont de Nemours and Co. Process of forming shaped articles. 3,051,545, 8-28-62, Cl. 18—54.

Stevens, J. P., & Co., Inc.: *See*—
Wolf, Harold W., and von Bergen. 3,051,544.

Stieg, Robert W.: *See*—
Simonds, George D., Stieg, McLyman, and Larson. 3,050,963.

Stille-Werner, Aktiebolaget: *See*—
Grath, Gustaf-Bertil L. 3,051,169.

Stillwagon, C. K.: *See*—
Ramsey, William H. 3,051,435.

Stine, Joe, Inc.: *See*—
Tipps, Jake B. 3,051,442.

Stine, William H., Jr.: *See*—
Matray, Otto J., and Stine. 3,050,822.

Stoker, Riley, Corp.: *See*—
Davey, Gerald F. 3,051,059.

Stoner, Leland D. Take-up device. 3,051,299, 8-28-62, Cl. 198—208.

Stork & Co's Apparatenfabriek N.V., Gebr.: *See*—
Laupman, Robert R. 3,050,976.

Stoudenmire, Jay H., to The Bendix Corp. Control transformer synchro remote positioning system. 3,051,882, 8-28-62, Cl. 318—30.

Strachan & Henshaw Ltd.: *See*—
Bellinger, Ronald. 3,051,322.

Straehl, Robert N., to General Dynamics Corp. Range measuring method. 3,051,946, 8-28-62, Cl. 343—7.3.

Strategic Material Corp.: *See*—
Chambers, Frank W. 3,050,798.

Strauss, Wennemar, and W.-D. Willmund, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Baths for the production of copper electroplates. 3,051,634, 8-28-62, Cl. 204—52.

Strifler, Paul E.: *See*—
Stump, Eugen, and Strifler. 3,051,506.

Stroh, Rudolf, and R. Seydel, to Farbenfabriken Bayer Aktiengesellschaft. Phenol alkylation process. 3,051,762, 8-28-62, Cl. 260—624.

Strozewski, Richard J., to National-Standard Co. Former for bead building machines or the like. 3,051,221, 8-28-62, Cl. 156—422.

Stultz, Posy G., Jr., to C. M. O'Boyle. Safety tool for removing snap rings. 3,050,838, 8-28-62, Cl. 29—229.

Schlensker, Hugo J. H., and J. R. Mellott, to Mellott Arrow Crest, Inc. Arrow cresting machine. 3,051,124, 8–28–62, Cl. 118—503.

Schlepperwerk Nordhausen, VEB: *See*—
Selle, Heinz. 3,051,257.

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Huston, Owen H. 3,051,892.

Schmidt, Oswald: *See*—
Gehm, Robert, Schmidt, and Mertens. 3,051,704.

Schmieder, Emil, and W. Halss, to Ernst Halss Eisen- und Metall-KG., Fa. Grinding and polishing mat. 3,050,764, 8–28–62, Cl. 15—209.

Schnackenberg, Fred W., to Nordberg Mfg. Co. Thermal flattener plates. 3,051,215, 8–28–62, Cl. 153—32.

Schneider, Carl, Firma: *See*—
Diehl, Ludwig, and Fuchs. 3,051,537.

Schneider, Jos., & Co., Optische Werke: *See*—
Mahn, Herbert. 3,051,048.

Schneider, William S., and J. French; said French assor. to said Schneider. Dispensing container. 3,051,368, 8–28–62, Cl. 229—17.

Schnell, Carl, ½ to The Griffith Laboratories, Inc. Blade assembly for comminuting machine. 3,051,208, 8–28–62, Cl. 146—192.

Schnell, Ernst E., to Deere & Co. Hinge for grain drill hoppers. 3,051,347, 8–28–62, Cl. 220—31.

Schoepfle, Blaine O.: *See*—
Weinberg, Alan E., Bean, Robitschek, and Schoepfle. 3,051,585.

Scholin, Axel R. Fuel injection apparatus. 3,051,087, 8–28–62, Cl. 103—4.

Schöllhammer, Friedrich W., and G. Eltze, to Daimler-Benz Aktiengesellschaft. Pressure regulating slide valve, especially for automatic control mechanisms for shifting the gears of motor vehicles. 3,051,191, 8–28–62, Cl. 137—332.

Schorr, Theodore H., to Baker Oil Tools, Inc. Parallel tubular string apparatus for well bores. 3,051,247, 8–28–62, Cl. 166—241.

Schott, Lionel O., to Bell Telephone Laboratories, Inc. Negative resistance diode pulse repeater. 3,051,846, 8–28–62, Cl. 307—88.5.

Schram, André, to Glaverbel, S.A. Device for handling sheet material. 3,051,331, 8–28–62, Cl. 214—1.

Schrewelius, Nils G.: *See*—
Amberg, Styrbjorn, and Schrewelius. 3,051,924.

Schult, Albert W. Self-leveling holding device. 3,051,428, 8–28–62, Cl. 248—226.

Schumacher, Wilhelm W. B., to Ontario Research Foundation. X-ray spectrometer. 3,051,833, 8–28–62, Cl. 250—51.5.

Schuster, Roman. Plug socket with plug. 3,051,800, 8–28–62, Cl. 200—51.

Schutte, Otto: *See*—
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Schwartz, Donald L., to General Electric Co. Process for producing high density refractory bodies. 3,051,566, 8–28–62, Cl. 75—213.

Schwartz, Robert E., R. P. Stahl, and E. J. Falk, to Wagner Electric Corp. Power hydraulic brake device. 3,050,944, 8–28–62, Cl. 60—54.6.

Schwarz, Helmut J., to Radio Corp. of America. Vaporization rate measuring apparatus. 3,050,981, 8–28–62, Cl. 73—15.

Schwarzaugl, Josef M., to Faber-Castell, A.W. Retractable ball-point pen. 3,051,131, 8–28–62, Cl. 21—42.03.

Schwarzaugl, Josef M., to Faber-Castell, A.W. Container for ball-point insert. 3,051,133, 8–28–62, Cl. 120—42.4.

Schweitzer, Otto, and J. Behrends, to Deutsche Gold- und Silber-scheideanstalt vormals Roessler. Process for the drying of gaseous formaldehyde. 3,051,755, 8–28–62, Cl. 260—606.

Schwend, Fred N.: *See*—
Oldenburg, Kenneth F., and Schwend. 3,051,376.

Schwing, Russell L., to Thermal Mfg. Co. Method of making electrically insulated heating units. 3,050,833, 8–28–62, Cl. 29—155.64.

Schwitzer Corp.: *See*—
Muehlhausen, Robert J. 3,051,136.

Scott Aviation Corp.: *See*—
Benzel, Howard A. 3,051,170.

Scott, O. M., & Sons Co., The: *See*—
West, John R. 3,050,924.
West, John R., and Robinson. 3,050,925.

Scott, Robert L. Fuel converter. 3,051,153, 8–28–62, Cl. 123—122.

Scovil, Henry E. D.: *See*—
Gyorgy, Ernst M., and Scovil. 3,051,917.

Scovill Mfg. Co.: *See*—
Seyfried, Arthur W. 3,050,921.

Scully, John T. Necktie holders. 3,050,737, 8–28–62, Cl. 2—153.

Sealed Power Corp.: *See*—
Paull, Donald A., and Wilson. 3,051,633.

Sedgwick, Grant O.: *See*—
Hansen, Louis I., and Sedgwick. 3,051,729.

Sedlacsik, John, Jr., to International Research & Development Corp. Electrostatic spray coating apparatus and method. 3,051,394, 8–28–62, Cl. 239—3.

Seeley, Edward S., to Altec Lansing Corp. Amplifier interconnecting circuit. 3,051,788, 8–28–62, Cl. 179—1.

Segel, Edward, to J. E. Siebel Son's Co., Inc. Foaming malt beverages. 3,051,574, 8–28–62, Cl. 99—48.

Seismograph Service Corp.: *See*—
Hunsicker, William R. 3,051,949.

Seitz, John M.: *See*—
Elizer, Lee H., Glasscock, and Seitz. 3,051,691.
Elizer, Lee H., Glasscock, and Seitz. 3,051,698.
Elizer, Lee H., Glasscock, and Seitz. 3,051,699.
Elizer, Lee H., Glasscock, and Seitz. 3,051,700.

Selas Corp. of America: *See*—
Furczyk, Alfons A. 3,051,460.
Kniveton, James. 3,050,813.

Seliber, Joseph. Variable speed drive. 3,051,019, 8–28–62, Cl. 74—689.

Selin, Karl I., to Basic Products Corp. Control circuits. 3,051,889, 8–28–62, Cl. 323—7.

Self-Changing Gears Ltd.: *See*—
Miller, Albert A. 3,051,021.

Selle, Heinz, to Schlepperwerk Nordhausen, VEB. Vehicular steering system. 3,051,257, 8–28–62, Cl. 180—79.2.

Sexton, Arthur R., to The Dow Chemical Co. Method of purification and crystallization of 2,2'-isopropylidene bis-(p-phenyleneoxy) diethanol. 3,051,760, 8–28–62, Cl. 260—613.

Seydel, Robert: *See*—
Stroh, Rudolf, and Seydel. 3,051,762.

Seyfried, Arthur W., to Scovill Mfg. Co. Suction cleaner center support and cover locking means. 3,050,921, 8–28–62, Cl. 55—467.

Shaheen, Joseph M.: *See*—
Chipman, Arthur D., and Shaheen. 3,051,598.

Shames, Albert A., to United States of America, Army. Collapsible monorail track. 3,051,094, 8–28–62, Cl. 104—126.

Shapiro, Harold Z.: *See*—
Kibler, Frederick, and Shapiro. 3,051,475.

Shapiro, Seymour L., L. Freedman, and H. Soloway, to U.S. Vitamin & Pharmaceutical Corp. Substituted diphenylchloracetates. 3,051,705, 8–28–62, Cl. 260—247.2.

Shapiro, Seymour L., and L. Freedman, to U.S. Vitamin & Pharmaceutical Corp. Substituted amino-3-(4- and 5-indanoxy)-propane-2-ols. 3,051,709, 8–28–62, Cl. 260—268.

Shaw, Walter C., to United Aircraft Corp. Pressure controlling means in aircraft air conditioning system. 3,051,070, 8–28–62, Cl. 98—1.5.

Shell Oil Co.: *See*—
Scheibli, James R. 3,051,084.
Swiger, William F. 3,051,113.
Wilson, William B., and Good. 3,051,645.

Shelley, Edwin F.: *See*—
Goodell, John D., Tengsater, and Shelley. 3,051,327.

Shepard, Harry W., Jr. Ticket issuing mechanism. 3,051,953, 8–28–62, Cl. 346—24.

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Fitchett, Gilmer T., Gordon, and Shepherd. 3,051,702.

Sherman Enterprises, Inc.: *See*—
Sherman, Kenneth C. 3,051,483.

Sherman, Kenneth C., to Sherman Enterprises, Inc. Mechanism for elevating and separately discharging bowling balls and pins. 3,051,483, 8–28–62, Cl. 273—43.

Shimkus, Robert A., to Revere Camera Co. (formerly Samica Corp.). Automatic photographic exposure control with glare compensation and back-light compensation. 3,051,068, 8–28–62, Cl. 95—64.

Shimula, Yoshihiro, and H. Uchida. Automatic recording system of X-ray diffraction patterns. 3,051,834, 8–28–62, Cl. 250—51.5.

Shimula, Yoshihiro, and H. Uchida, to Itigaku Denki Co. Ltd. X-ray diffraction system. 3,051,835, 8–28–62, Cl. 250—51.5.

Shook, Donald H., to National-Standard Co. Bead building apparatus. 3,051,362, 8–28–62, Cl. 226—11.

Shoup, Ranson F., and E. A. Fox, Sr., to Shoup Research and Development Corp. Party selecting mechanism for voting machine. 3,051,379, 8–28–62, Cl. 235—55.

Shoup Research and Development Corp.: *See*—
Shoup, Ransom F., and Fox. 3,051,379.

Shulevitz, Joseph L., to Cadillac Overall Supply Co. Bowling pin duster. 3,051,484, 8–28–62, Cl. 273—43.

Siebel, J. E., Son's Co., Inc.: *See*—
Segel, Edward. 3,051,574.

Siefvert & Fornander, Aktiebolaget: *See*—
Sanström, Sixten A. 3,051,366.

Siegel, Martin: *See*—
Markus, George, and Siegel. 3,051,600.

Siemens & Halske Aktiengesellschaft: *See*—
Hiller, Rolf, Rutkowski, Krägeloh, Voegtlen, and Zahlhaas. 3,051,793.
Laas, Kurt. 3,051,794.
Paul, Walter, Geese, Gaber, and Greska. 3,051,799.
Rummel, Theodor. 3,051,555.

Siempelkamp, Eugen. Multi-platen press. 3,050,777, 8–28–62, Cl. 18—16.

Silombra, Armando, to Superga Societa per Azioni. Rubber ski shoe. 3,050,874, 8–28–62, Cl. 36—2.5.

Silverstolpe, Karl O. L. Apparatus for aseptically pouring a bacteriological substrate or the like into cover-carrying vessels. 3,050,915, 8–28–62, Cl. 53—111.

Simmonas Aerocessories, Inc.: *See*—
Edwards, Harrison F. 3,050,999.

Simon, Joseph, and W. E. Pollock, to General Precision, Inc. Head for variable reluctance converter. 3,051,943, 8–28–62, Cl. 340—347.

Simonds, George D., R. W. Stieg, K. A. McLyman, and A. V. Larson, to FWD Corp. Double universal joint. 3,050,963, 8–28–62, Cl. 64—21.

Simons, Walford J. L., and G. J. White, to Rotax Ltd. Actuating mechanism for railway points. 3,051,421, 8–28–62, Cl. 246—401.

Simpson, William, to Newey Brothers Ltd. Hook fastenings for garments. 3,050,740, 8–28–62, Cl. 2—265.

Singer Mfg. Co., The: *See*—
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Cortese, Joseph, and Vollman. 3,051,111.
Graham, Richard P., Herron, and Ketterer. 3,051,110.
Johnson, Ralph E. 3,051,107.
Ketterer, Stanley J. 3,051,108.
Stanton, Edward W., and Perkins. 3,050,809.

Singleton, Charles N. Gas-fired incinerator. 3,051,100, 8–28–62, Cl. 110—8.

Sites, Benjamin L., and M. S. Agruss, to Miehle-Goss Dexter, Inc. Quick drying vehicle and method. 3,051,591, 8–28–62, Cl. 117—93.

Skogseid, Anders, to A/S Jens Villadsen's Fabrikker. Method of reacting felted cellulose, sulphate cellulose and sulphite cellulose with gaseous ketenes. 3,051,543, 8–28–62, Cl. 8—121.

Skolaut, Paul L., and A. B. Waters, to Halliburton Co. Paraffin control composition and method. 3,051,653, 8–28–62, Cl. 252—8.3.

Skowron, Edmund A., to Woodings-Verona Tool Works. Automatically releasing lifting tongs. 3,051,521, 8–28–62, Cl. 294—83.

Slocombe, Robert J., and G. L. Wesp, to Monsanto Chemical Co. Methyl vinyl ketone terpolymers. 3,051,685, 8–28–62, Cl. 260—63.

Sluijters, Robert, to American Enka Corp. Mixing apparatus. 3,051,453, 8–28–62, Cl. 259—4.

Smeal, Donald L., to L. R. Nelson Mfg. Co. Irrigation pipe moving apparatus. 3,051,095, 8–28–62, Cl. 104—162.

Smets, Victor F. Adjustable coded calendar. 3,050,886, 8–28–62, Cl. 40—109.

Smith, Arthur J., to Bostitch Industrial Stapling Machine Co. Pneumatic tool. 3,051,135, 8–28–62, Cl. 121—21.

Smith-Corona Marchant Inc.: *See*—
Bradbury, Wilburn F. 3,051,377.

Smith, David G., to Moffats Ltd. Warmer shelf. 3,051,819, 8–28–62, Cl. 219—37.

Smith, Gerald D., to Auto-Electronics, Inc. Electronic siren and communication apparatus. 3,051,944, 8–28–62, Cl. 340—384.

Smith, Harold R.: *See*—
Stange, Charles W., and Smith. 3,051,286.

Smith, Larrabee M., to Bell Telephone Laboratories, Inc. Digital data converter. 3,051,929, 8–28–62, Cl. 340—172.5.

Smith, Otto J. M. Dead beat response, resonant load, control system and method. 3,051,883, 8–28–62, Cl. 318—448.

Smith, S., & Sons (England) Ltd.: *See*—
Brazier, Horace J. 3,050,986.
Gordon, George A. D., Taylor, and Wood. 3,050,988.

Smith, Thomas R., to The Maytag Co. Combination washer-drier having an air flow water trap. 3,050,974, 8–28–62, Cl. 68—20.

Smyser, Harry E.: *See*—
Fisch, Jacob, McCormack, and Smyser. 3,051,186.

Smythe, Robert L., to McGraw-Edison Co. Guy guard. 3,051,278, 8–28–62, Cl. 189—31.5.

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Hamlyn, Peter M., Snelling, and Horstmann. 3,051,119.

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Sobel Metal Products, Inc.: *See*—
Jonas, Walter M. 3,051,178.

Societe Applicazioni Gomma Antivibranti S.A.G.A., S.p.A.: *See*—
Boschi, Antonio. 3,051,469.

Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine: *See*—
Sable, Andre. 3,051,552.

Societe des Accumulateurs Fixes et de Traction (Societe Anonyme): *See*—
Jammet, Jean F. 3,051,769.

Societe des Forges et Ateliers du Creusat: *See*—
Bonzon, Maurice. 3,051,266.
Fieux, Jean. 3,051,047.

Societe Financiere de la Cellulose: *See*—
Gonzalez, Jacques de los S. 3,051,209.

Societe "Realisations Ultrasoniques": *See*—
Renaut, Paul. 3,050,990.

Societe Triflux: *See*—
Daniel, Georges H. M. 3,051,871.

Socony Mobil Oil Co., Inc.: *See*—
Drew, Robert D. 3,051,466.
Gee, Paul Y. C., and Andress. 3,051,562.
Eastwood, Sylvander C. 3,050,935.

Solley, Douglas A., Jr., and K. A. Robbie, to General Electric Co. Multi-temperature refrigerator. 3,050,955, 8–28–62, Cl. 62—155.

Soloway, Harold: *See*—
Shapiro, Seymour, Freedman, and Soloway. 3,051,705.

Solvay & Cie: *See*—
Van Diest, Jacques. 3,051,635.

Soumeral, Henri, to Worthington Corp. Enclosed motor compressor unit. 3,051,373, 8–28–62, Cl. 230—206.

Soundscriber Corp., The: *See*—
Lyon, William H. 3,051,405.

Southern Equipment Co.: *See*—
Muckler, Frank, and Vandas. 3,051,582.

Spannagel, Hans, and N. von Ruecker, to Dr. Ing. h.c.F. Porsche, K.G. Disk brake. 3,051,271, 8–28–62, Cl. 188—18.

Specialties Development Corp.: *See*—
Olandt, John W. 3,051,652.

Speed, David B., to E. I. du Pont de Nemours and Co. Free-flowing sodium silicate powder. 3,051,550, 8–28–62, Cl. 23—110.

Speedry Chemical Products, Inc.: *See*—
Rosenthal, Sidney N. 3,050,768.

Spehr, Eugen: *See*—
Hany, Harald, Roosen, and Spehr. 3,051,089.

Sperry, Herbert O., to Color Process Co., Inc. Display assembly. 3,050,887, 8–28–62, Cl. 40—124.1.

Sperry Products, Inc.: *See*—
Henry, Elliott A. 3,050,989.

Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Mernyk, Edwin H. 3,051,009.

Spira-Klein, Mrs. Marie-Louise: *See*—
Mieville, André. 3,051,025.

Spracklen, Stanford B.: *See*—
Martin, Sterling T., and Spracklen. 3,051,392.

Spreading Machine Exchange, Inc.: *See*—
Kibler, Frederick, and Shapiro. 3,051,475.

Spreng, Manfred: *See*—
Wehde, Heinrich, Lange, Fischer, and Spreng. 3,051,406.

Spritz, Melvin J. Refrigerator deodorizer. 3,051,395, 8–28–62, Cl. 239—57.

Sproule, Robert S., to Dominion Engineering Works Ltd. Dry band Francis turbine. 3,051,441, 8–28–62, Cl. 253—117.

Stahl, Alex D.: *See*—
Foote, Daniel J., and Stahl. 3,050,977.

Stahl, Roy P.: *See*—
Schwartz, Robert E., Stahl, and Falk. 3,050,944.

Stahlecker, Fritz. Belt tensioner, particularly for spinning or twisting machines. 3,050,929, 8–28–62, Cl. 57—105.

Stalmuke, Constantine J.: *See*—
Ahara, Edward V., Johnson, De Groot, and Stalmuke. 3,051,125.

Standal, Elizaveth V.: *See*—
Standal, Stanley. 3,051,120.

Standal, Stanley, deceased; E. V. Standal, executrix. Inboard outboard drive mechanism for boats. 3,051,120, 8–28–62, Cl. 115—41.

Standard Oil Co. (Indiana): *See*—
Blaha, Eli W., and Sabol. 3,051,654.
Bolton, Benjamin A., and Kolb. 3,051,724.
Dale, Allan L., Orullian, and Pope. 3,051,433.
Nerheim, Arvie G., and Tucker. 3,050,984.

Standard Oil Co. (Ohio), The: *See*—
Grimes, William W. 3,051,561.

Stange, Charles W., and H. R. Smith. Coin-controlled shopping bag dispenser. 3,051,286, 8–28–62, Cl. 194—10.

Stanik, John: *See*—
Dodge, Harry G. 3,050,757.

Stanley Works, The: *See*—
Murphy, Clifford F. 3,051,318.

Stannard, Forrest B. Method of making valved bags from extruded thermoplastic materials. 3,051,605, 8–28–62, Cl. 156—196.

Stauray Corp.: *See*—
Fraenkel, Stephen J. 3,051,458.

Stanton, Edward W., and K. Perkins, to The Singer Mfg. Co. Carrying case cover for sewing machines. 3,050,899, 8–28–62, Cl. 45—68.2.

Stapling Machines Co.: *See*—
McCrea, Joseph. 3,051,344.

Stark, Fred J., to Custom Polymers, Inc. Coating compositions. 3,051,673, 8–28–62, Cl. 260—28.5.

Stauffer, Hans F., to Nordberg Mfg. Co. Grinding mill trunnion. 3,051,399, 8–28–62, Cl. 241—176.

Staunt, Martin. Dental handpieces. 3,050,856, 8–28–62, Cl. 32—26.

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Kent, Nelson H., and Steel. 3,051,436.

Steiner, Nicholas P.: *See*—
Sugarman, Meyer L., Jr., and Steiner. 3,051,569.

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Stroh, Rudolf, and R. Seydel, to Farbenfabriken Bayer Aktiengesellschaft. Phenol alkylation process. 3,051,762, 8–28–62, Cl. 260—624.

Strozewski, Richard J., to National-Standard Co. Former for bead building machines or the like. 3,051,221, 8–28–62, Cl. 156—422.

Stultz, Posy G., Jr., to C. M. O'Boyle. Safety tool for removing snap rings. 3,050,838, 8–28–62, Cl. 29—229.

Stump, Eugen, and P. E. Strifler, to Daimler-Benz Aktiengesellschaft. System for stabilizing a twin axle, particularly a twin rear axle of a motor vehicle responsive to the travel through curves. 3,051,506, 8–28–62, Cl. 280—81.

Suddeutsche Kalkstickstoff-Werke Aktiengesellschaft: *See*—
Fischer, Thomas, Kaess, and Kronacher.

Sudelkis, Stanley I., to Pilot Distributing Co. Hold down and towing chain with tension cushioning turnbuckle. 3,051,519, 8–28–62, Cl. 287—60.

Sugarman, Meyer L., Jr., and N. P. Steiner, to American Photocopy Equipment Co. Photoconductive materials. 3,051,569, 8–28–62, Cl. 96—1.

Sullivan, John F., to International Telephone and Telegraph Corp. Pulse pair decoder. 3,051,928, 8–28–62, Cl. 340—167.

Sullivan, Timothy J., to Sullivan Valve and Engineering Co. Two-stage hydromotor-operated valve. 3,051,432, 8–28–62, Cl. 251—30.

Sullivan Valve and Engineering Co.: *See*—
Sullivan, Timothy J.

Sumida, Kunio A. Addressing machine. 3,051,083, 8–28–62, Cl. 101—132.5.

Sumner Co., Inc.: *See*—
Sumner, George V.

Sumner, George V., to Sumner Co., Inc. Converting continuous filament to staple fiber. 3,050,928, 8–28–62, Cl. 57—2.

Sundquist, Gene J., and S. Marlow. Material handling apparatus. 3,051,292, 8–28–62, Cl. 198—31.

Superga Societa per Azioni: *See*—
Silombra, Armando.

Superior Oil Co., The: *See*—
Swiger, William F.

Suter, Hans, and H. Zutter, to Eprova Ltd. New phenyloxy and phenylalkoxy benzoic acid amides. 3,051,706, 8–28–62, Cl. 260—247.2.

Svenska Aktiebolaget Gasaccumulator: *See*—
Grangvist, Carl-Erik.

Svenska Flaktfabriken, Aktiebolaget: *See*—
Allander, Claes.

Swain, Charles J., to Zephyr Mfg. Co. Sheet dimpling apparatus and method. 3,051,830, 8–28–62, Cl. 219—149.

Swalheim, Donald A.: *See*—
Fullhart, Lawrence, Jr., and Swalheim.

Swift & Co.: *See*—
Bonami, Ernest.
Rueckert, Dean E.

Swiger, William F., to Shell Oil Co., Continental Oil Co., The Superior Oil Co., and Union Oil Co. of California. Apparatus for supporting floating load. 3,051,113, 8–28–62, Cl. 114—.5.

Sylvania Electric Products Inc.: *See*—
Bloom, Herbert J.
Drake, Robert W., and Kleinfelter.
Esselstyn, James O.
Helda, Robert W., and Lehner.
Pifer, Marion J.
Zwald, Henry J.

Syntex Corp.: *See*—
Bowers, Albert.
Bowers, Albert, Edwards, and Orr.
Djerassi, Carl, and Bowers.
Zderic, John A., and Crabbe.

Tabbert Mfg. Co.: *See*—
Tabbert, Paul C.

Tabbert, Paul C., to Tabbert Mfg. Co. Hospital stretcher. 3,050,745, 8–28–62, Cl. 5—86.

Tailor, John P. Gas-liquid contact process and apparatus. 3,050,919, 8–28–62, Cl. 55—90.

Tait, Robert A., to E. I. du Pont de Nemours and Co. Spinneret assembly. 3,050,774, 8–28–62, Cl. 18—8.

Takeda, Motosuke. Clamp for pressing trousers. 3,050,884, 8–28–62, Cl. 38—71.

Tancred & Langley Ltd.: *See*—
Lawson-Tancred, Henry.

Tappan Co., The: *See*—
Hoff, John M.

Taylor, Ernest: *See*—
Jackson, Percy, and Taylor.

Taylor, George, to William Cotton Ltd. Production of garments on straight bar knitting machines. 3,050,967, 8–28–62, Cl. 66—88.

Taylor, Harold W.: *See*—
Gordon, George A. D., Taylor, and Wood.

Taylor, James A. Automobile seats. 3,051,525, 8–28–62, Cl. 297—313.

Teer, Kees, to North American Philips Co., Inc. Correction of high frequency components of brightness signal in color receiver. 3,051,776, 8–28–62, Cl. 178—5.4.

Teleflex Inc.: *See*—
Cadwallader, Alvin A.

Telefunken G.m.b.H.: *See*—
Wehde, Heinrich, Lange, Fischer, and Spreng.

Teleregister Corp., The: *See*—
Harris, Thomas S., Jr.

Tengsater, Torsten N.: *See*—
Goodell, John D., Tengsater, and Shelley.

Teotino, Uberto, and G. Cignarella, to Lepetit S.p.A. 2,5-dihydro-1,2,4-benzo thiadiazedine-1,1-dioxide. 3,051,727, 8–28–62, Cl. 260—327.

Terho, Mikko. Loading and unloading equipment for a motor truck. 3,051,339, 8–28–62, Cl. 214—505.

Termet, Pierre. Fastener driving interlocking pistol or tool. 3,050,732, 8–28–62, Cl. 1—44.5.

Texaco Inc.: *See*—
Friedman, Louis D., and Gaucher.
Mazzagatti, Roy P.
Mitch, Francis J., and Landau.

Texas Instruments Inc.: *See*—
Carroll, Paul E.

Theobald, Donald D. Marking apparatus. 3,051,956, 8–28–62, Cl. 346—141.

Thermal Mfg. Co.: *See*—
Schwing, Russell L.

Thew Shovel Co., The: *See*—
Risto, William L.

Thiokol Chemical Corp.: *See*—
Cook, George W.

Thomas, Gerald D.: *See*—
Lowe, John J., and Thomas.

Thompson, Kenneth B. Binoculars and optical system therefor. 3,051,046, 8–28–62, Cl. 88—33.

Thompson Ramo Wooldridge Inc.: *See*—
Knocke, Louis T.

Thomsen, Richard N., and W. G. Martin. Artificial tree branches. 3,050,891, 8–28–62, Cl. 41—15.

Thomsen, Theodore R.: *See*—
Rockafellow, Stuart C., and Thomsen.

Thorel, John P., A. J. Mel, and H. C. Flaton, to Westinghouse Electric Corp. Linear driving mechanism. 3,050,943, 8–28–62, Cl. 60—52.

Thorner, Robert H. Fluid powered governor. 3,051,139, 8–28–62, Cl. 121—42.

Thornton Axle Inc.: *See*—
Hartupee, Perry B.

Thorpe, Robert M.: *See*—
White, Theodore Z., and Thorpe.

Tilney, Ralph B., to Alco Valve Co. Reverse cycle valve. 3,051,188, 8–28–62, Cl. 137—119.

Tindall, John M. Bacon package. 3,051,583, 8–28–62, Cl. 99—174.

Tindall, John M. Bacon package. 3,051,584, 8–28–62, Cl. 99—174.

Tinkelenberg, Albert D.: *See*—
Dooley, Philip G., and Tinkelenberg.

Tipps, Jake B., to Joe Stine, Inc. Lifting and moving apparatus. 3,051,442, 8–28–62, Cl. 254—2.

Titterton, William E.: *See*—
St. John, Alexander N. T., and Titterton.

Toland, William G., Jr., to California Research Corp. Aromatic carboxylic acid purification. 3,051,746, 8–28–62, Cl. 260—525.

Toledo Scale Corp.: *See*—
Borden, Joseph H.
Dinning, John R.

Tomka, Joseph W., and F. G. Cizek, to Nordberg Mfg. Co. Electrode bar straightener. 3,051,216, 8–28–62, Cl. 153—32.

Toscony, Inc.: *See*—
Jerothe, Rudolph A.

Towsley, Donald D.: *See*—
Eichelman, John M. and B. S., and Towsley.

Trägner, Erich, and R. Küster, to Aluminium-Industrie-Aktien-Gesellschaft. Molten metal distribution apparatus. 3,050,793, 8–28–62, Cl. 22—79.

Tranbarger, Glen E., L. Murray, K. W. Young, and J. G. Mehagan, to General Motors Corp. Combined switch and valve for parking brake release systems. 3,051,801, 8–28–62, Cl. 200—61.86.

Traxler, James T., to Armour-Pharmaceutical. Amino acid separation process. 3,051,640, 8–28–62, Cl. 204—180.

Trepanier, Maurice A.: *See*—
Goes, Arthur W., and Trepanier.

Trexler, Philip C., to University of Notre Dame du Lac. Sealed door for a compartment having a controlled environment. 3,050,791, 8–28–62, Cl. 20—69.

Trexler, Philip C., to University of Notre Dame du Lac. Isolating device. 3,051,163, 8–28–62, Cl. 128—1.

Trexler, Philip C., to University of Notre Dame du Lac. Jacket isolator for use in sterile techniques. 3,051,164, 8–28–62, Cl. 128—1.

Tribble, Talmadge B. Method of preparing flavored stabilized feeds. 3,051,572, 8–28–62, Cl. 99—2.

Troelstra, Sjerp A., to North American Philips Co., Inc. Method of producing a stable coagel of an alkaline earth fluoride. 3,051,659, 8–28–62, Cl. 252—317.

Trost, Ernst-Gunther, to International Standard Electric Corp. Video-frequency contrast-control arrangement for television receivers. 3,051,780, 8–28–62, Cl. 178—7.5.

Truchan, Anthony: *See*—
Lawlor, Francis E., and Truchan.

Tsang, Sien M.: *See*—
Lewis, Charles E., Paul, Tsang, and Leavitt.

Tucker, Elton B.: *See*—
Nerheim, Arvie G., and Tucker.

Tucker, Emmitt M., Sr., to Tucker & Sons. Endless track unit. 3,051,531, 8–28–62, Cl. 305—50.

Tucker & Sons: *See*—
Tucker, Emmitt M., Sr.

Turner, Stanley. Process for the production of high impact type castings by the copolymerization of epoxy compounds with amines. 3,051,664, 8–28–62, Cl. 260—2.

Twyford, Robert H., to Atlantic Research Corp. Rocket nozzles. 3,050,938, 8–28–62, Cl. 60—35.55.

Uchida, Hiroshi: *See*—
Shimuia, Yoshihiro, and Uchida.
Shimuia, Yoshihiro, and Uchida.

Udall, William, ½ to The Brightside Foundry & Engineering Co., Ltd. Apparatus for the mechanical handling of elongate products of a rolling mill. 3,051,290, 8–28–62, Cl. 198—29.

Uhl, Henrietta. Support for bedclothes. 3,050,747, 8–28–62, Cl. 5—319.

Uhlenbroek, Jan H., and B. G. van den Bos, to North American Philips Co., Inc. Process for the preparation of phosphor-containing heterocyclic compounds. 3,051,615, 8–28–62, Cl. 167—33.

Ulam, John B., to Allegheny Ludlum Steel Corp. Composite metal article. 3,050,834, 8–28–62, Cl. 29—196.3.

Union Carbide Corp.: *See*—
Anderson, John E.
Craig, Thomas A.
Fritz, Henry E.
Horn, Christian F.
Manz, August F.
Manz, August F.
Martin, Sterling T., and Spracklen.
Wilton, Peter, and Marrow.
Young, Donald M., and Hostettler.
Zutty, Nathan L.

Union Oil Co. of California: *See*—
Swiger, William F.

United Aircraft Corp.: *See*—
Abild, Robert N., Broders, Crim, and Gallant.
Dooley, Philip G., and Tinkelenberg.
Galman, Herbert.
Lambeck, Raymond P.
Shaw, Walter C.

United Carbon Co., Inc.: *See*—
Whitsel, Travis S., Jr.

United Electrodynamics, Inc.: *See*—
Peterson, Raymond A., and Coker.

United Engineering Mfg. Co.: *See*—
Martin, Philip.

United Geophysical Corp.: *See*—
Boice, Frank S., and Johnson.

United-Greenfield Corp.: *See*—
Kallio, William J.

United Kingdom Atomic Energy Authority: *See*—
Dent, Kenneth H.
Guneratne, Piyatilleke P., Young, and French.

United Shoe Machinery Corp.: *See*—
Mulvey, John J., and Wilkinson.
Quinn, Edward.
Schaefer, Hans F., Jr.

United States Borax & Chemical Corp.: *See*—
Wilson, William P.

United States Gypsum Co.: *See*—
Schairbaum, Albert W.

U.S. Industries, Inc.: *See*—
Goodell, John D., and Tengsater, and Shelley.

United States of America
Army: *See*—
Shames, Albert A.

United States Rubber Co.: *See*—
Boggs, Fitzhugh W.
Cranston Lawrence.
Fagot, Godfrey E., and Vance.
Jurgeleit, Herbert F.
Schaffner, Irwin J.

United States Steel Corp.: *See*—
Chacharis, Peter.
Clifford John E., and Faust.
Fawcett, Paul W.
Pettigrew, Charles P.
Pierce, David W., and Wexler.
Redman, William J.

U.S. Vitamin & Pharmaceutical Corp.: *See*—
Shapiro, Seymour L., and Freedman.
Shapiro, Seymour L., Freedman, and Soloway.

Universidad de Villanueva: *See*—
De la Vega F., Jose R., and Rodriguez.

University of Akron, The Board of Directors of, The: *See*—
Morton, Maurice, and Rembaum.

University of Illinois Foundation, The: *See*—
Bardeen, John.
Fry, William J., F. J., and Dreyer.

University of Michigan, the Regents of, The: *See*—
Biel, John H., and Blicke.

University of Minnesota, The Regents of the: *See*—
Parham, William E.

University of Notre Dame du Lac: *See*—
Trexler, Philip C.
Trexler, Philip C.
Trexler, Philip C.

Vaillancourt, Donald A.: *See*—
Crump, William M., Vaillancourt, and Bowens.

Vance, Joseph C.: *See*—
Fagot, Godfrey E., and Vance.

Vandas, Edward B.: *See*—
Muckler, Frank, and Vandas.

Vandenberg, Edwin J., to Hercules Powder Co. Process for polymerizing olefins wherein hydrogen is utilized as a molecular weight control agent.

Van den Bos, Bernardus G.: *See*—
Uhlenbroek, Jan H., and Van den Bos.

Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A.

Van der Lely, C., N.V.: *See*—
Van der Lely, Cornelis and A.

Van der Lely, Cornelis and A., to C. van der Lely N.V. Agricultural implements.

Van Diest, Jacques, to Solvay & Cie. Process for the manufacture of sodium by electrolysis of fused salt baths.

Van Dyke, Neil D.: *See*—
Hoover, Herbert L., and Van Dyke.

Van Leer, Oscar J., and C. Ragettli, to Grotnes Machine Works, Inc. Drum forming machine.

Van Norman Industries, Inc.: *See*—
Hinsey, Robert S.

Van Voorhies, Robert L.: *See*—
Draughon, John M., and Van Voorhies.

Vapor Heating Corp.: *See*—
Clarkson, Alick, and Miller.

Varian Associates: *See*—
Nelson, Richard B.

Vari-Typer Corp.: *See*—
Carlin, Harry, and Cieplik.

Vaughan, Rex W.: *See*—
Bennett, Robert N., and Vaughan.

Verhoeven, Herman K. M., to International Standard Electric Corp. Opening device for document carriers.

Vickers, Roy G.: *See*—
Kuijvenhoven, Arend W., and Vickers.

Villa, Nicholas J. Carton game devices.

Visos, Charles D., to Knapp-Monarch Co. Semi-automatic toaster.

Vlaeminck, Paul M. A. Method and means for fixing a graft in a stock.

Voegtlen, Dieter: *See*—
Hiller, Rolf, Rutkowski, Krägeloh, Voegtlen, and Zahlhaas.

Vogel, Rudolf, and K. Hoefer, to Gutehoffnungshütte Sterkrade Aktiengesellschaft. Apparatus for raising a multi-element-telescopic prop or the like.

Vogler, Heinrich, and H. Krausser. Automatic firearm utilizing a spring for reloading.

Vollmer, James, and J. A. Duke, to Minneapolis-Honeywell Regulator Co. Dew point measuring apparatus.

Vollman, Joseph: *See*—
Cortese, Joseph, and Vollman.

Von Bergen, Werner: *See*—
Wolf, Harold W., and Von Bergen.

Von Reppert, Lothar, to Dungemittel Technik A.G. Manufacture of granulated fertilizers.

Von Ruecker, Nikolaus: *See*—
Spannagel, Hans, and Von Ruecker.

Vorwerk, Vernon R., and R. R. Morin, to North American Aviation, Inc. Liquid propellant release mechanism.

Vreeland, Don H.: *See*—
Peoples, Graydon, and Vreeland.

Wacker-Chemie G.m.b.H.: *See*—
Bauer, Hans, Bergmeister, and Heckmaier.

Wagemann, Heinrich W., to Monroe Calculating Machine Co. Decimal point mechanism.

Wagman, Charles H.: *See*—
Becker, John, and Wagman.

Wagner, Adolph A., to R & B Wagner, Inc. Method of making end caps for pipe railings.

Wagner, Adolph A., to R & B Wagner, Inc. Hand rail bracket and filler.

Wagner Brothers Inc.: *See*—
Borodin, Daniel J.

Wagner Electric Corp.: *See*—
Schwartz, Robert E., Stahl, and Falk.

Wagner, John W., to Richfield Oil Corp. Preparation of chlorinated naphthalenes.

Wagner, R & B, Inc.: *See*—
Wagner, Adolph A.
Wagner, Adolph A.

Wagner, Samuel, and T. K. Kellner. Christmas tree stand.

Wahlström, Gustaf A. Push button switch.

Waid, Donald E.: *See*—
Yeo, Robert H., and Waid.

Wakefield, Charles E., Jr.: *See*—
Chamberlain, Richard O., and Wakefield.

Wakefield, Douglas B., to Lockheed Aircraft Corp. Openable aircraft window.

Wald, Herman. Remote metering of electric energy with current transformer.

Walker, Donald F.: *See*—
Good, Richard S. J., Walker, and Williamson.

Walker Mfg. Co.: *See*—
McKenzie, William G.

Wallace & Tiernan Inc.: *See*—
Hays, Edwin E., and Michelson.

Wallenfels, Kurt A. W., and W. J. Draber, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Tetraphthalimido and tetramino quinones.

Walsh, Bruce R., to Gulf Research & Development Co. Recirculating combustion apparatus.

Walsh, Edward G.: *See*—
Margolis, David P., and Walsh.

Walsh, John C., W. M. Haselton, E. T. Holland, Jr., and K. P. Juhl, to Cherry-Burrell Corp. Article carrier for overhead conveyor.

Walther, Ludwig: *See*—
Jansen, Hermann, and Walther.

Walther, Ludwig, to Zimmermann & Jansen, G.m.b.H. Cooling means for hot blast stoves.

Walton, Jean, to Cosmocord Ltd. Gramophone pickups.

Walton, Paul E., to R. C. Allen Business Machine, Inc. Cash register.

Waltz, Edward, to E. O. Bulman Mfg. Co., Inc. Cutting device.

Ward Industries Corp.: *See*—
Gayring, Wallace F.

Ward, Samuel A., to The Machlett Laboratories, Inc. Means of converting electrical signals to visible pictures. 3,051,781, 8–28–62, Cl. 178—7.5.

Waring, John W., to Philco Corp. Reflexed amplifier circuit. 3,051,904, 8–28–62, Cl. 325—486.

Warner, Douglas K. Two cycle-radial, high-supercharge engines. 3,051,148, 8–28–62, Cl. 123—55.

Warner Mfg. Corp.: *See*—
Lipman, Leonard M., and Morris. 3,050,792.

Warner, Paul F.: *See*—
Franz, Richard D., and Warner. 3,051,758.

Warner, Paul F., to Phillips Petroleum Co. Heavy oil for tree spray. 3,051,614, 8–28–62, Cl. 167—22.

Warner, Paul F., and R. D. Franz, to Phillips Petroleum Co. Production of polymeric mercaptans. 3,051,695, 8–28–62, Cl. 260—139.

Warren, George: *See*—
Sanfor, Elbert A., and Warren. 3,051,589.

Wasco, Anthony, Jr.: *See*—
Cashman, Robert W., and Wasco. 3,050,828.
Cashman, Robert W., and Wasco. 3,051,029.

Waters, Almon B.: *See*—
Skolaut, Paul L., and Waters. 3,051,653.

Watts, James G., 50% to B. S. Frasik. Basket structure. 3,051,075, 8–28–62, Cl. 99—397.

Watts, John D., and E. K. Pierce, Jr., to Gray Tool Co. Hanger assembly and seal therefor. 3,051,513, 8–28–62, Cl. 285—146.

Way, Lee V., Jr. Variable speed gearing. 3,051,022, 8–28–62, Cl. 74—793.

Weaver, Ira A., to Dura Corp. Hydraulic lift. 3,051,141, 8–28–62, Cl. 121—46.

Webb, Cleitus E., Jr.: *See*—
Webb, Cleitus E., Sr., C. E. Webb, Jr., and R. J. Webb. 3,051 261.

Webb, Cleitus E., Sr., C. E. Webb, Jr., and R. J. Webb, to Wel-Bilt Products Co. Adjustable stairs. 3,051,261, 8–28–62, Cl. 182—78.

Webb, Robert J.: *See*—
Webb, Cleitus E., Sr., C. E. Webb, Jr., and R. J. Webb. 3,051 261.

Weber, Edward H., Jr., to Bell Telephone Laboratories, Inc. Translatorized switching circuit having bipolar control. 3,051,854, 8–28–62, Cl. 307—88.5.

Webster, Donald G. Truck tanker construction. 3,051,502, 8–28–62, Cl. 280—5.

Webster, John L., to Reynolds Metals Co. Adjustable-shut-height press. 3,051,078, 8–28–62, Cl. 100—257.

Wedgewood, Robert S., to C. P. Clare, Canada Ltd. Voltage regulator circuit. 3,051,890, 8–28–62, Cl. 323—66.

Wehde, Heinrich, H.-G. Lange, G. Fischer, and M. Spreng, to Telefunken G.m.b.H. Tape recorder drive. 3,051,406, 8–28–62, Cl. 242—55.12.

Weil, Robert N. Line holder. 3,051,116, 8–28–62, Cl. 114—199.

Weiland, Richard H., and D. W. Kelton, to Boeing Airplane Co. Overhead cargo handling mechanism for swingtail airplanes. 3,051,419, 8–28–62, Cl. 244—137.

Weinberg, Alan E., C. T. Bean, P. Robitschek, and B. O. Schoepfle, to Hooker Chemical Corp. Protective coatings for polyester resins. 3,051,585, 8–28–62, Cl. 117—33.3.

Weipert, Eugene A.: *See*—
Levis, William W., Jr., Weipert, and Rubinstein. 3,051,751.

Weishaupt, Josef: *See*—
Karwat, Ernst, Weishaupt, and Oberpriller. 3,050,950.

Wel-Bilt Products Co.: *See*—
Webb, Cleitus E., Sr., C. E. Webb, Jr., and R. J. Webb. 3,051 261.

Welles, Donald P., Jr., to Resly-Welles Corp. Method of forming threads by applying sliding pressure. 3,050,755, 8–28–62, Cl. 10—152.

Werner, Paul, and H. Jung, to F. Keiper. Hinge fitting for seats. 3,051,526, 8–28–62, Cl. 297—367.

Werth, Joseph R., to Western Electric Co., Inc. Method of making an assembly of relatively movable members. 3,051,607, 8–28–62, Cl. 156—242.

Wertheimer, Hedda: *See*—
Davies, George. 3,050,827.

Wesp, George L.: *See*—
Slosombe, Robert J., and Wesp. 3,051,685.

West, Clifton F., J. B. Wethington, and W. F. Rhem. One-revolution clutch and stop means. 3,051,285, 8–28–62, Cl. 192—148.

West, Donald C.: *See*—
Rowley, Edward K., and West. 3,051,018.

West, John R., to The O. M. Scott & Sons Co. Power mower rotary cutter device. 3,050,924, 8–28–62, Cl. 56—295.

West, John R., and D. E. Robinson, to The O. M. Scott & Sons Co. Rotary cutter. 3,050,925, 8–28–62, Cl. 56—295.

West, William A. Method and apparatus for compressing cotton. 3,051,076, 8–28–62, Cl. 100—3.

West, William C. Combination overhead signal viewer and side clearance indicator. 3,051,055, 8–28–62, Cl. 88—81.

Western Electric Co., Inc.: *See*—
Algatt, George E. 3,051,334.
Cressman, Earl W., Jurnak, and Mueller. 3,050,836.
Etchison, John O., Jr., and Hutchins. 3,050,849.
Halverson, Richard E. 3,051,060.
Johnson, William A. 3,051,403.
Novak, George J. 3,050,835.
Werth, Joseph R. 3,051,607.

Western Rivers Corp.: *See*—
Kernahan, Richard H. 3,050,800.

Westinghouse Electric Corp.: *See*—
McCowan, William E., and Guerdan. 3,051,858.
Thorel, John P., Mei, and Flaton. 3,050,943.

Wethington, Jesse B.: *See*—
West, Clifton F., Wethington, and Rhem. 3,051,285.

Wexler, Charles H.: *See*—
Pierce, David W., and Wexler. 3,050,857.

Wheeler, Norris G., to E. I. du Pont de Nemours and Co. Production of phthalocyanine colors in pigmentary state. 3,051,718, 8–28–62, Cl. 260—314.5.

White, Gordon J.: *See*—
Simons, Walford J. L., and White. 3,051,421.

White, John A., Jr., to Be-Ge Mfg. Co. Scraper plane. 3,050,883, 8–28–62, Cl. 37—153.

White, Peter T., to The British Petroleum Co. Ltd. Hydrogenation of gasolines. 3,051,647, 8–28–62, Cl. 208—256.

White, Ralph G.: *See*—
Rowland, Stanley P., and White. 3,051,672.

White, Theodore Z., and R. M. Thorpe, to Ford Motor Co. Cooling system. 3,051,450, 8–28–62, Cl. 257—125.

Whitfield, Kenneth O. Self-lifting flatiron. 3,050,885, 8–28–62, Cl. 38—79.

Whitsel, Travis S., Jr., to United Carbon Co., Inc. Carbon black apparatus. 3,051,556, 8–28–62, Cl. 23—259.5.

Whyte, Edward J., Jr.: *See*—
Butts, Richard R., and Whyte. 3,051,554.

Wielicki, Edward A.: *See*—
Koch, Walter T., Lytton, and Wielicki. 3,051,667.

Wiesner, Henry R.: *See*—
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U.S. DEPARTMENT OF COMMERCE

OFFICIAL GAZETTE of the UNITED STATES PATENT OFFICE

August 28, 1962 Volume 781 Number 4

TRADEMARKS

NOTICES

Decisions of the Commissioner of Patents

The 1961 edition of the Decisions of the Commissioner of Patents has been released from the printer and available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.
Price: $3.50.

Erratum

In the OFFICIAL GAZETTE, issue of July 17, 1962, vol. 780, p. TM 96, under the heading "Trademark Suits," second column thereof, lines 24 and 25, strike out "(NESTLE'S KEEN), The Nestle Company, Inc., Powdered lemonade mix;" and insert instead (*TEEM*), *Pepsi-Cola Company, Syrup for carbonated soft drinks;*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 119,693 (PETER PAN), Henry Glass & Co., Cotton piece goods; **Reg. No. 165,454**, same, **filed** July 2, 1962, D.C., S.D.N.Y., Doc. 62/2353, *Henry Glass & Co. et al. v. Peter Pan Uniforms Corporation.*

Reg. No. 165,454. (See Reg. No. 119,693.)

Reg. No. 176,690, F. Romeo & Co., Inc., Olive oil, **filed** July 24, 1961, D.C., N.D. Ill. (Chicago), Doc. 61/1227, *Societa Anonima Luchese Olii e Vini v. August Battaglia Co.* Defendant enjoined June 27, 1962.

Reg. No. 195,691 (ELEKTROLUX), Aktiebolaget Elektrolux, Electrically-driven vacuum cleaners; **Reg. No. 271,565** (ELECTROLUX ETC. AND DESIGN), Electrolux, Inc., Electrical floor polishers and vacuum cleaners and parts therefor; **Reg. No. 284,377** (ELECTROLUX), same, Electrically operated portable vacuum cleaners and attachments therefor for blowing, filtering, and cleaning, and parts thereof; **Reg. No. 284,378**, same; **Reg. No. 356,561** (ELECTROLUX AND DESIGN), same, Electric vacuum cleaners and accessories; **Reg. No. 545,686** (ELECTROLUX), Electrolux Corporation, Air filters for use in vacuum cleaners; **Reg. No. 557,026** (ELECTROLUX AND DESIGN), same, Service, maintenance, and repair of vacuum cleaners and floor polishers, and accessories therefor, etc.; **Reg. No. 562,427**, same, **filed** July 2, 1962, D.C., S.D.N.Y., Doc. 62/2346, *Electrolux Corporation v. Western Vacuum Bag Manufacturing Inc. et al.*

Reg. No. 271,565. (See Reg. No. 195,691.)

Reg. No. 284,377. (See Reg. No. 195,691.)

Reg. No. 284,378. (See Reg. No. 195,691.)

Reg. No. 389,329 (DO-ALL), Continental Machine Specialties, Inc. (Republished by The DoAll Company), Combina-

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1962

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	16,300
Date of oldest new application	Oct. 6, 1961
Date of oldest amended application	Oct. 16, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	10-6-61	10-16-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-2-62	1-2-62
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Applications filed during the month of June 1962—2,204

Registrations Issued	347—No. 736,599 to No. 736,945
Renewals Issued	60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

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tion bandsawing and filing machine; **Reg. No. 390,078** (DOALL), same, Grinders of the machine tool type suitable for precision surface grinding; **Reg. No. 394,883,** same, Files, file segments, filebands, saws and saw bands; **Reg. No. 424,899** (DOALLOY), same, Dies and cutting tools; **Reg. No. 429,124,** same; **Reg. No. 585,424** (DO ALL AND DESIGN), same, Tool steel, etc., lubricant, etc., electrical apparatus, etc., machine tools, etc., gaging instruments and attachments therefor, etc. and supply cabinets; **Reg. No. 600,333,** same, Desk type staplers and pocket knives; **Reg. No. 610,668** (DO ALL AND DESIGN), same, Saw pitching gages used for gaging the pitch of saw teeth, and steel rules; **Reg. No. 679,956** (DO ALL), same, Taps, reamers, end mills, cutters, counter bores, tool bits and slicing and dicing machines; **Reg. No. 679,957** (DO ALL AND DESIGN), same, Tool bits and lathe centers, slicing and dicing machines and precision lapping machines, **filed** July 2, 1962, D.C., N.D. Tex. (Dallas), Doc. 9213, *The DoAll Company* v. *Du-All Templates.*

Reg. No. 356,561. (See Reg. No. 195,691.)

Reg. No. 390,078. (See Reg. No. 339,329.)

Reg. No. 394,883. (See Reg. No. 339,329.)

Reg. No. 424,899. (See Reg. No. 339,329.)

Reg. No. 429,124. (See Reg. No. 339,329.)

Reg. No. 519,784 (DESIGN OF RUNNING BOY), Hot Shoppes, Inc., The serving of foods and beverages in a restaurant business; **Reg. No. 520,917** (HOT SHOPPES), same; **Reg. No. 537,680** (DESIGN OF RUNNING BOY), same, Salads, cole slaw, dressings, cheese, pickles, sliced tomatoes, stuffed tomatoes, stuffed peppers, ice cream, etc.; **Reg. No. 537,695** (HOT SHOPPES), same, Orangeade, lemonade, limeade, cola beverage, root beer, ginger ale, flavored carbonated soft drinks and flavored non-carbonated soft drinks; **Reg. No. 537,696** (DESIGN OF RUNNING BOY), same; **Reg. No. 538,103** (HOT SHOPPES), same, Salads, cole slaws, dressings, cheese, pickles, etc., **filed** July 6, 1962, D.C., W.D.N.Y. (Buffalo), Doc. 9786, *Hot Shoppes, Inc.* v. *Gomez et al.*

Reg. No. 520,917. (See Reg. No. 519,784.)

Reg. No. 524,725 (LITTLE LEAGUE), Lubin-Weeker Co., Inc., Pajamas; **Reg. No. 568,635** (LITTLE LEAGUE BASEBALL AND DESIGN), Little League Baseball, Inc., Juvenile baseball; **Reg. No. 590,251,** same, Young boys' T-shirts and sweatshirts; **Reg. No. 606,748** (LITTLE LEAGUE), same, Magazines; **Reg. No. 621,335,** same, Pen and pencil sets; **Reg. No. 642,433** (LITTLE LEAGUE BASEBALL), same, Services in connection with the development of sportsmanship, clean play, and athletic ability in young boys through the medium of a planned program of baseball, **filed** July 26, 1960, D.C., S.D.N.Y., Doc. 60/2936, *Little League Baseball, Inc.* v. *Eli E. Albert, Inc.* Consent decree; order enjoining defendant July 4, 1961.

Reg. No. 537,680. (See Reg. No. 519,784.)

Reg. No. 537,696. (See Reg. No. 519,784.)

Reg. No. 538,103. (See Reg. No. 519,784.)

Reg. No. 545,686. (See Reg. No. 195,691.)

Reg. No. 554,811 (DACRON), E. I. du Pont de Nemours and Company, Synthetic polyester fibers for generalized use in the industrial arts; **Reg. No. 555,085,** same, Yarns of synthetic fibers, **filed** Feb. 12, 1962, D.C., Dist. of Col., Doc. 515/62, *E. I. du Pont de Nemours and Company* v. *Dafter.* Consent judgment June 8, 1962.

Reg. No. 555,085. (See Reg. No. 554,811.)

Reg. No. 557,026. (See Reg. No. 195,961.)

Reg. No. 562,427. (See Reg. No. 195,961.)

Reg. No. 568,635. (See Reg. No. 524,725.)

Reg. No. 568,635(a) (LITTLE LEAGUE BASEBALL AND DESIGN), Little League Baseball, Inc., Juvenile baseball; **Reg. No. 590,251(a),** same, Young boys' T-shirts and sweatshirts; **Reg. No. 606,748(a)** (LITTLE LEAGUE), same, Magazines; **Reg. No. 642,433(a)** (LITTLE LEAGUE BASEBALL), same, Services in connection with the development of sportsmanship, clean play, and athletic ability in young boys through the medium of a planned program of baseball, **filed** June 6, 1962, D.C., S.D.N.Y., Doc. 62/2019, *Little League Baseball, Inc.* v. *S. Axelrod Co., Inc.*. **Same, filed** June 25, 1962, same, Doc. 62/2222, *Little League Baseball, Inc.* v. *Regent Sports Corporation.*

Reg. No. 585,424. (See Reg. No. 339,329.)

Reg. No. 590,251. (See Reg. No. 524,725 and Reg. No. 568,635(a).)

Reg. No. 592,331 (MANPOWER), Manpower, Inc., Furnishing of its employees on a contract basis to persons or places of business requiring part-time or temporary help, including stenographers, typists, etc.; **Reg. No. 596,928** (MI MANPOWER, INC. AND DESIGN), same, **filed** June 14, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40,830, *Manpower, Inc.* v. *Henry Helbig & Associates et al.*

Reg. No. 596,928. (See Reg. No. 592,331.)

Reg. No. 600,333. (See Reg. No. 339,329.)

Reg. No. 606,748. (See Reg. No. 524,725 and Reg. No. 568,635(a).)

Reg. No. 610,668. (See Reg. No. 339,329.)

Reg. No. 621,335. (See Reg. No. 524,725.)

Reg. No. 642,433. (See Reg. No. 524,725 and Reg. No. 568,635(a).)

Reg. No. 679,956. (See Reg. No. 339,329.)

Reg. No. 679,957. (See Reg. No. 339,329.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 134,395. Helen Matthews, d.b.a. Donya Pottery, Brookfield, Conn. Filed Dec. 20, 1961.

CERALOCK

For Preparation for Addition to Potter's Clay To Control Shrinkage in Drying and Firing; Sold as a Separate Composition for Addition to the Purchaser's Clay and Also in Admixture With the Vendor's Clay.
First use Dec. 1, 1961.

SN 137,215. The Dow Chemical Company, Midland, Mich. Filed Feb. 5, 1962.

ZEFKROME

Owner of Reg. Nos. 647,642, 716,557, and others.
For Synthetic Fibers and Filaments.
First use Dec. 28, 1961.

SN 137,449. Minerals & Chemicals Philipp Corporation, Menlo Park, N.J. Filed Feb. 7, 1962.

ULTRA WHITE 90

For Clays for Coating and Filling Paper and Paperboard.
First use Jan. 5, 1962.

SN 137,885. Archer-Daniels-Midland Company, Minneapolis, Minn. Filed Feb. 14, 1962.

AROCRYL

For Thermo-Setting Acrylic Resins.
First use Nov. 21, 1961.

Class 2—Receptades

SN 110,032. Central Soya Company, Inc., Fort Wayne, Ind. Filed Dec. 12, 1960.

BEST O' NEST

For Egg Cartons.
First use Aug. 1, 1960.

SN 112,309. Plasti-Vac Corporation, Montgomery, Pa. Filed Jan. 23, 1961.



For Plastic Extruded and Molded Covers, Closures, and Caps, Including Attached Daubers, for Plastic or Glass Bottles, Collapsible Tubes and Aerosol Containers.
First use Mar. 3, 1956.

SN 116,961. Arrow Houseware Products, Inc., Chicago, Ill. Filed Apr. 3, 1961.

HOBEY *the* CLOWN

For Plastic Drinking Mugs.
First use Jan. 26, 1961.

SN 117,031. The Metal Box Company Limited, London, England. Filed Apr. 3, 1961.

DIOWAX

Owner of British Reg. No. 805,278, dated May 3, 1960.
For Cartons and Blanks Therefor Made of Waxed and/or Chemically Treated Paper.

SN 120,884. The Hopp Press, Inc., New York, N.Y. Filed May 26, 1961.

TAG HOPPER

Applicant disclaims the word "Tag" apart from the mark as shown.
For Compartmented Pricetag Holder and Dispenser.
First use on or about May 7, 1961.

SN 124,482. Wespak, Incorporated, Teaneck, N.J. Filed July 21, 1961.

SEE-VU

For Article Display Cards and Packaging Material, Specifically, Blister Packs Consisting of One or More Transparent Plastic Containers Secured to a Card or Support.
First use July 12, 1961.

SN 124,831. National Can Corporation, Chicago, Ill. Filed July 27, 1961.

TRI-CLUSTER BEAD

For Empty Cans.
First use June 6, 1961.

SN 127,485. The Mead Corporation, Dayton, Ohio. Filed Sept. 8, 1961.

BOTTLE MASTER
ONE TRIPPER

The word "Bottle" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 551,226 and 604,176.
For Carriers Made of Paperboard for Carrying a Plurality of Bottles of Soft Drinks or the Like.
First use April 1961.

SN 131,308. Republic Foil, Inc., Danbury, Conn. Filed Nov. 3, 1961.

SNO-MAN

Owner of Reg. No. 624,709.
For Lunch Bags and Garbage Bags.
First use Jan. 11, 1961.

SN 131,653. F. N. Burt Company, Inc., Buffalo, N.Y. Filed Nov. 9, 1961.

SLING PACK

No claim is made to the word "Pack" apart from the mark as shown.
For Paper Boxes and Cardboard Boxes.
First use Sept. 22, 1961.

SN 132,278. Container Corporation of America, Chicago, Ill. Filed Oct. 26, 1961.



Owner of Reg. No. 724,049.
For Paperboard Boxes, Cartons, and Containers; and Plastic Boxes, Bottles, and Plastic Closures Therefor.
First use Aug. 14, 1961.

SN 133,163. P.M. Corporation, Philadelphia, Pa. Filed Dec. 1, 1961.

i-pak

No claim is made to the term "Pak" except in the association shown.
For Merchandising and Display Packages Having a Transparent Blister or Window Thereon Which Is Formed by Shrinking a Stretch Film or Molding a Skin of Transparent Plastic About Articles To Be Sold.
First use on or about Nov. 1, 1961.

SN 133,390. Malanco of California, Inc., Blue Island, Ill. Filed Dec. 5, 1961.

PILL-O-VENT

For Liners for Fruit and Vegetable Boxes.
First use on or about Apr. 1, 1952.

SN 134,212. Equitable Paper Bag Co. Inc., Long Island City, N.Y. Filed Dec. 18, 1961.

FINGER LOCK

For Paper Bags.
First use Aug. 22, 1961.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 128,120. United Products Corporation, Kansas City, Mo. Filed Sept. 18, 1961.

HARVEYLITE

For Suitcases and Luggage.
First use Aug. 3, 1961.

SN 129,026. Henry Meyers, d.b.a. The Henry Company, New York, N.Y. Filed Oct. 2, 1961.

SOFT-TEST

For Ladies' Handbags.
First use on or about July 1, 1961.

SN 129,039. Quikey Manufacturing Co., Inc., Akron, Ohio. Filed Oct. 2, 1961.

QUIKEY

Owner of Reg. No. 569,669.
For Plastic Key Holders.
First use Sept. 1, 1961.

SN 130,433. Crittenton Manufacturing and Distributing Corporation, Chicago, Ill. Filed Oct. 23, 1961.

CREDIT-MASTER

For Check Book and Credit Card Secretary.
First use Apr. 18, 1961.

SN 133,628. Bonne Age Co., Inc., New York, N.Y. Filed Dec. 8, 1961.

BONNE AGE

For Beach Bags.
First use at least as early as Jan. 1, 1958.

Class 4 — Abrasives and Polishing Materials

SN 128,269. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Sept. 20, 1961.

Weather-Cote

For Water-Proofing Polish for Leather.
First use Aug. 14, 1961.

Class 6 — Chemicals and Chemical Compositions

SN 122,959. Philip A. Schwartz, Longmeadow, Mass. Filed June 27, 1961.

TRANSTOP

For Brake Fluid, Antifreeze Liquids, and Animal and Vegetable Waxes.
First use Nov. 30, 1960.

SN 134,422. Aldrich Chemical Company, Inc., Milwaukee, Wis. Filed Dec. 21, 1961.

ALDRICH

Owner of Reg. No. 663,970.
For Organic Chemical Compounds.
First use July 31, 1953.

Class 7 — Cordage

SN 117,823. Wall Rope Works, Inc., New York, N.Y. Filed Apr. 13, 1961.

NY-LINE

For Synthetic Rope for Potwarps.
First use Oct. 21, 1960.

SN 133,866. The Colorado Fuel and Iron Corporation, Denver, Colo. Filed Dec. 12, 1961.

CF & I-WICKWIRE

Owner of Reg. Nos. 162,941, 579,791, and others.
For Wire Rope and Cables.
First use Oct. 3, 1961.

SN 134,208. The Dow Chemical Company, Midland, Mich. Filed Dec. 18, 1961.

BEN-GLO

Owner of Reg. Nos. 178,636, 391,968, and others.
For Tying and Ornamenting Tape and Ribbon for Gift Wrapping.
First use Sept. 28, 1960.

SN 134,558. Norcross, Inc., New York, N.Y. Filed Dec. 22, 1961.

LUSTRE-TIE

Owner of Reg. No. 628,086.
For Ribbon, Bows, and Twine for Decorative Tying.
First use on or about Jan. 5, 1950.

SN 135,925. Tubba Cordage Company, San Francisco, Calif. Filed Jan. 16, 1962.

ESTERLENE

For Synthetic Fiber Rope.
First use Nov. 29, 1961.

Class 8 — Smokers' Artides, Not Including Tobacco Products

SN 121,163. Pipefabriken Bari, Kolding, Denmark, assignee of Harry Blatt, New York, N.Y. Filed June 1, 1961.



For Pipes.
First use Aug. 10, 1960; in commerce Aug. 10, 1960.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 104,500. American Cyanamid Company, New York, N.Y. Filed Sept. 15, 1960.

TIME-AC DELAY

The word "Delay" has been disclaimed apart from the mark as shown.
For Electric Blasting Caps.
First use July 5, 1960.

SN 123,987. Ithaca Gun Company, Incorporated, Ithaca, N.Y. Filed July 14, 1961.

SADDLEGUN

For Guns.
First use Nov. 1, 1960.

SN 134,383. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Dec. 20, 1961.

HI-SKOR

For Smokeless Powder.
First use Nov. 9, 1961.

SN 134,425. American Cyanamid Company, New York, N.Y. Filed Dec. 21, 1961.

CYMEX

Owner of Reg. Nos. 569,225, 721,505, and others.
For High Explosives.
First use Oct. 15, 1961.

SN 135,334. Celanese Corporation of America, New York, N.Y. Filed Jan. 8, 1962.

THERMEX

For Explosives.
First use Dec. 11, 1961.

Class 10 — Fertilizers

SN 133,326. Spencer Chemical Company, Kansas City, Mo. Filed Dec. 4, 1961.

TURFIC

For Fertilizer.
First use Nov. 3, 1961.

SN 133,451. Contentnea Guano Company, Wilson, N.C. Filed Dec. 6, 1961.

CLIMAX

For Fertilizers.
First use Mar. 1, 1961.

SN 133,977. Max Muller & Company, Inc., Jackson, Miss. Filed Dec. 13, 1961.



For Plant Foods and Soil Conditioners.
First use Jan. 1, 1960.

Class 11 — Inks and Inking Materials

SN 128,905. Kee Lox Manufacturing Company, Rochester, N.Y. Filed Sept. 29, 1961.

KOPY ALIGNER

For Carbon Paper.
First use about Dec. 2, 1943.

Class 12 — Construction Materials

SN 104,953. Souther Steel and Aluminum Company, St. Louis, Mo. Filed Sept. 21, 1960.

DEVILCLAW

For Gutter Hangers.
First use on or about June 15, 1955.

SN 125,417. Peachtree Doors, Inc., Atlanta, Ga. Filed Aug. 4, 1961.

SAFETY GUARD

For Tempered Glass Panes Sold as Components of Glass Bath Enclosures and Doors.
First use Jan. 25, 1961.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 117,459. Continental Manufacturing Company, Cincinnati, Ohio. Filed Apr. 10, 1961.



For Valves.
First use Jan. 9, 1961.

SN 120,108. Manhattan Marine & Electric Co., Inc., New York, N.Y. Filed May 16, 1961.

SEATEST

For Marine Hardware, Particularly, Fog Bells, Door Hinges, Folding Steps, Cleats, and Fishing Rod Gimbals.
First use Jan. 3, 1961, on fog bells.

SN 130,461. Allan Dean, Beverly Hills, Calif., assignee of Interstate Development Corporation, Los Angeles, Calif. Filed Oct. 23, 1961.



The drawing is lined for shading only.
For Water Conditioners Such as, Water Softeners and Like Equipments.
First use on or about Sept. 11, 1961.

SN 133,183. Judson L. Thomson Mfg. Co., Waltham, Mass. Filed Dec. 1, 1961.

JUD-NUTS

For Drilled and Tapered Rivets.
First use Oct. 11, 1961.

SN 133,522. Atlas Supply Company, Newark, N.J. Filed Dec. 7, 1961.

ATLAS

Owner of Reg. Nos. 290,819 and 608,566.
For Snap-In Valve; Metal Clamp-In Valve; Metal Valve Extension; Tubeless Tire Valve Dispenser Pack; Valve Insides; Plastic Valve Caps; Tensile Tire Gauge; Service Tire Gauge; Valve Tool; Fishing Tool; 4-Way Valve Tool.
First use Nov. 22, 1961.

Class 14 — Metals and Metal Castings and Forgings

SN 112,992. The Woodhill Chemical Sales Corporation, Cleveland, Ohio. Filed Feb. 2, 1961.



Applicant disclaims any exclusive right in the word "Plastic" appearing as a part of the trademark.
For Auto Body Solder, an Atomized Aluminum and Steel Filler in Putty Form Containing Alcoholic Solvents Used for the Purpose of Repairing Dents and Holes in Automobile Bodies, Auto Body Repair Kits, Consisting of a Metallic Colloid Treated Fabric Together With a Metallic Filler and Solvents To Be Used for Use of Bridging Holes and Dents in Automobile Bodies, Spot and Glaze Putty, Composed of Atomized Metallic Fillers Together With Alcoholic Solvents in Putty Form To Be Used for Filling Holes and Dents in Automobile Bodies, Solder Weld Metal Base Solder.
First use Dec. 1, 1960.

SN 129,475. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 9, 1961.

SCARFTEC

For Welding Alloys in Various Forms.
First use Sept. 22, 1961.

SN 129,501. Kiwi Coders Corporation, Chicago, Ill. Filed Oct. 9, 1961.

Kiwi

Owner of Reg. No. 596,745.
For Metal Type.
First use May 26, 1960.

SN 130,578. Phoenix Steel Corporation, Phoenixville, Pa. Filed Oct. 24, 1961.

PX-50

For High Strength Low Alloy Steel.
First use Aug. 28, 1961.

Class 15 — Oils and Greases

SN 132,851. Micro-Lube, Inc., Dallas, Tex. Filed Nov. 27, 1961.

PREVAINTENANCE

For Lubricating Compositions To Be Used in Lubricating and Other Fluid Systems of Internal Combustion Engine Vehicles.
First use Jan. 16, 1961.

SN 134,118. Humble Oil & Refining Company, Houston, Tex. Filed Dec. 15, 1961.

OVALAN

For Petroleum Waxes.
First use at least since July 28, 1961.

SN 134,872. Capri Creations, d.b.a. Capri Candle Company, Philadelphia, Pa. Filed Dec. 29, 1961.

CAPRI

For Candles.
First use Feb. 15, 1961.

SN 136,451. The Dow Chemical Company, Midland, Mich. Filed Jan. 24, 1962.

DOWGARD

Owner of Reg. Nos. 621,084, and 702,767.
For Automotive Lubricants.
First use Mar. 3, 1961.

Class 16 — Protective and Decorative Coatings

SN 116,875. Formula 77 Corporation, Selah, Wash. Filed Mar. 31, 1961.

FORMULA 77

No claim is made to the word "Formula" apart from the trademark herein.
For Protective Coating and Rejuvenator for Paint in the Nature of a Lacquer or Varnish Which Dries to a Gloss and Forms a Protective Coating and Tends to Restore the Color to the Painted Surfaces.
First use Aug. 3, 1960.

SN 121,929. Marine Development, Inc., New York, N.Y. Filed June 13, 1961.



Owner of Reg. No. 724,706.
For Catalyzed Resin Coating Compositions Similar to Paints, Especially for Marine Use.
First use Apr. 7, 1960.

SN 127,838. Bradley Paint Company, d.b.a. Hempfield Laboratories, Connellsville, Pa. Filed Sept. 14, 1961.



For Vinyl Latex Paints, Exterior House Paints, Floor Varnishes, and Quick Drying Enamels.
First use May 1960.

SN 130,163. Adcote Chemicals, Inc., Elk Grove Village, Ill. Filed Oct. 18, 1961.

SHAWNITE

For Protective and Decorative Coatings—Namely, Primers, Lacquers, and Paints Both Organic Solvent Base and Water Base.
First use May 23, 1960.

SN 130,728. Prismo Safety Corporation, Huntingdon, Pa. Filed Oct. 26, 1961.

PRISMOLITE

Owner of Reg. Nos. 566,232, 665,841, and others.
For Materials for Receiving Light and Reflecting It Back to Its Source, Which Are Useful for Purposes of Safety, Advertising and Display, and Which Are Reflex Reflecting Materials, Autocollimating Units, Binders Used in Markers, Signs, Safety Lines, Center Lines, Lane Lines, Runway Markers, and Runway Lines.
First use Oct. 10, 1961.

SN 131,972. The Martin-Senour Company, Chicago, Ill. Filed Nov. 14, 1961.

ASTRO-VAR

For Polyurethane Varnish.
First use Oct. 6, 1961.

SN 137,165. Prismo Safety Corporation, Huntingdon, Pa. Filed Feb. 2, 1962.

PRISMOLITE

Owner of Reg. Nos. 566,232, 665,841, and others.
For Materials for Receiving Light and Reflecting It Back to Its Source, Which Are Useful for Purposes of Safety, Advertising and Display and Which Are Reflex Reflecting Materials, Autocollimating Units, Binders Used in Markers, Signs, Safety Lines, Center Lines, Lane Lines, Runway Markers, and Runway Lines.
First use Jan. 6, 1962.

Class 18—Medicines and Pharmaceutical Preparations

SN 107,685. Merck & Co., Inc., Rahway, N.J. Filed Nov. 2, 1960.

DURALTA-12

For Vitamin Preparation.
First use Sept. 29, 1960.

SN 126,313. Chester-Kent, Incorporated, St. Paul, Minn. Filed Aug. 21, 1961.

Saxol

For Ointment Useful in Various Skin Disorders.
First use Dec. 9, 1913.

SN 126,528. Løvens Kemiske Fabriks Handelsaktieselskab, Ballerup, near Copenhagen, Denmark. Filed Aug. 23, 1961.

FUCIDINE

Priority claimed under Sec. 44(d) on Danish application filed Feb. 28, 1961; Reg. No. 752, dated Sept. 16, 1961.
For Antibiotic Preparation.

SN 129,778. Milligan & Son, Inc., Sioux City, Iowa. Filed Oct. 12, 1961.

VITA-STRESS

For Vitamized Antibiotic Stress Formula for Farm Animals and Poultry.
First use Aug. 21, 1961.

SN 134,223. Hildensa-Gesellschaft Richard Morsch & Co., Berlin-Friedenau, Germany. Filed Dec. 18, 1961.



Applicant disclaims exclusive rights to the word "Tabletten" apart from the mark as shown. The lining on the drawing is an integral part of the mark and is not for the purpose of indicating color. Owner of German Reg. No. 730,267, dated Oct. 23, 1959.
For Tablets and Suppositories for Analgetic Purposes.

SN 140,253. Geigy Chemical Corporation, Ardsley, N.Y. Filed Mar. 20, 1962.

GUBERNAL

For Antidiabetic Agent.
First use Mar. 2, 1962.

SN 142,047. Merck & Co., Inc., Rahway, N.J. Filed Apr. 11, 1962.

CUEMID

Owner of Reg. No. 369,701.
For Medicinal Preparation for Use in the Treatment of the Pruritus of Biliary Cirrhosis and as a Hypocholesteremic Agent.
First use Mar. 30, 1962.

SN 142,565. Sandoz, Inc., Hanover, N.J. Filed Apr. 18, 1962.

TELON

For Medicinal Preparation Containing Analgesic and Anti-Inflammatory Properties.
First use Apr. 11, 1962.

SN 144,018. Testagar & Co. Inc., Detroit, Mich. Filed May 7, 1962.

BARBELLA

For Pharmaceutical Preparation Comprising Phenobarbital, Hyoscyamine Sulfate, Atropine Sulfate and Hyoscine Hydrobromide.
First use on or about June 10, 1935.

SN 144,056. Dartell Laboratories, Inc., d.b.a. Dartell Laboratories, Los Angeles, Calif. Filed May 8, 1962.

DARCOTABS

For Analgesic, Antihistaminic and Nasal Decongestant for the Symptomatic Relief of Colds.
First use on or about Jan. 30, 1962.

SN 144,057. Dartell Laboratories, Inc., d.b.a. Dartell Laboratories, Los Angeles, Calif. Filed May 8, 1962.

MYRISTOL

For Soothing Ointment for the Temporary Relief of Simple Piles.
First use on or about Oct. 31, 1961.

SN 144,058. Dartell Laboratories, Inc., Los Angeles, Calif. Filed May 8, 1962.

ULCOFAC

For Antacid-Adsorbent Demulcent for the Relief of Stomach Distress.
First use on or about Dec. 30, 1960.

SN 144,377. Greco Pharmacal, Inc., Bayside, N.Y. Filed May 11, 1962.

GRECORT

For Dermatologic Cream.
First use Oct. 31, 1960.

SN 144,481. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 14, 1962.

HEPATOL

Owner of German Reg. No. 756,453, dated Dec. 21, 1961.
For Chemotherapeutic Agents Used in the Treatment of Hepatitis.

SN 144,661. Abbott Laboratories, North Chicago, Ill. Filed May 16, 1962.

ABBOTT

Owner of Reg. Nos. 704,356, 712,414, and 713,786.
For Pharmaceutical Medicinal Preparations in Liquid, Tablet, Capsule, Powder, Ointment, Cream, and Other Dosage Forms, for Oral, Parenteral, and Topical Administration.
First use Apr. 15, 1959.

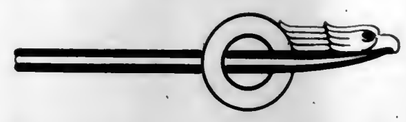
Class 19—Vehicles

SN 104,170. Auxilec, Auxiliaires Electro-Mécaniques de Precision, S.A.R.L., Colombes (Seine), France. Filed Sept. 9, 1960.

AUXILEC

Priority claimed under Sec. 44(d) on French Reg. No. 489,028, dated June 24, 1960 (Seine); Natl. Inst. No. 146,718.
For Brakes; Shock Absorbers; Aircraft Pressurization Systems.

SN 109,371. Transcontinental Bus Systems, Inc., Dallas, Tex. Filed Nov. 23, 1960.



For Motor Buses, Motor Bus Bodies and Parts Thereof.
First use in or about September 1957.

SN 114,237. Mac Gregor-Comarain, Paris, France. Filed Feb. 23, 1961.

MAGROTITE

Priority claimed under Sec. 44(d) on French Reg. No. 490,872, dated Oct. 3, 1960 (Seine); Natl. Inst. No. 151,711.
For Vehicles—Namely, Ships Together With Masts, Holds and Retractable Shipboard Cargo Carrying Platforms Therefor and Hatch Covers, and Other Vehicles—Namely, Railway Wagons and Motor Trucks and Cover Means for Such Railway Wagons and Motor Trucks and Also Retractable Roofs Therefor.

SN 118,701. John M. Marcel, London, England. Filed Apr. 26, 1961.

FARLANDER

Owner of British Reg. No. 782,493, dated Oct. 6, 1958.
For Trailers With Living Accommodations.

SN 118,940. Aurands for Sports Inc., Lewistown, Pa. Filed May 1, 1961.

ALLEY KAT

For Gasoline Driven Engine Carts.
First use July 3, 1954.

SN 120,361. Winner, Boats, Inc., Dickson, Tenn. Filed May 17, 1961.

Winner

The horizontal lining on the drawing does not represent color. Owner of Reg. Nos. 511,997 and 651,418.
For Open Boats for Rowing, Sailing, and Power Propulsion.
First use September 1960.

SN 121,046. Utility Trailer Manufacturing Company, Industry, Calif. Filed May 29, 1961.

UTILITY TRAILER

The word "Trailer" is disclaimed apart from the mark as shown. Owner of Reg. No. 160,318.
For Truck Trailers and Containers Carried Thereon.
First use in or about March 1956.

SN 124,742. Lansing Company, Lansing, Mich. Filed July 26, 1961.

WESCO

For Rear View Mirrors for Automotive Vehicles.
First use June 28, 1961.

SN 125,227. Karson Industries, Inc., Chino, Calif. Filed Aug. 2, 1961.

RIVIERA

For Mobile Homes and/or Trailers.
First use July 19, 1961.

SN 125,551. Snark Products, Inc., Fort Lee, N.J. Filed Aug. 7, 1961.

SEA SNARK

For Portable Boat Having Demountable Mast and Sail.
First use in October 1959.

SN 131,099. American Brake Shoe Company, New York, N.Y. Filed Nov. 1, 1961.



Owner of Reg. Nos. 74,793, 405,142, and 536,515.
For Brake Shoes for Railroad Cars, Locomotives, and the Like.
First use Aug. 24, 1961.

SN 131,163. Trico Products Corporation, Buffalo, N.Y. Filed Nov. 1, 1961.

HYDRO-WIPE

For Hydraulic Windshield Wiper Motors.
First use on or about July 11, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 97,008. Yorn Import Co., Inc., San Francisco, Calif. Filed May 12, 1960.

Playmaster

For Radios, Tape-Recorders, and Intercommunication Sets.
First use Apr. 12, 1960.

SN 108,895. Hosho of America, Inc., Hollywood, Calif. Filed Nov. 22, 1960.

CONCORD

For Tape Recorders.
First use on or about Aug. 26, 1960.

SN 109,879. Kollstan Semiconductor Elements, Inc., Golden, Colo. Filed Dec. 8, 1960.

Kollstan

For Semiconductor Materials—Such as Silicon and Germanium Rods, Wafers, Slices and Discs, Treated and Untreated.
First use Sept. 20, 1960.

SN 118,174. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Apr. 19, 1961.

ALL CLIMATE

For Electrical Tape.
First use Mar. 24, 1961.

SN 119,879. James R. Kearney Corporation, St. Louis, Mo. Filed May 12, 1961.

K.O.

For Switches for Use in Powerplants, Substations, and Sectionalizing Locations on Electric Power Transmission and Distribution Systems.
First use Apr. 3, 1961.

SN 120,435. Pacific Semiconductors, Inc., Lawndale, Calif. Filed May 19, 1961.



The trademark as shown in the drawing consists of the Greek symbol "psi" in white and the letters "PSI" in black, both being within a circular background of orange. The drawing is lined in white, black, and orange, although such colors are not an essential feature of the mark.
Owner of Reg. No. 674,524.
For Transistors and Transistor Coolers.
First use Oct. 20, 1958.

SN 121,331. Budd Stanley Company, Inc., Syosset, N.Y. Filed June 2, 1961.

BUDD-STANLEY

For Electrical, Electro-Mechanical, and Optical Communication and Control Systems.
First use at least as early as 1950.

SN 121,662. Penn Battery Manufacturing Co., Inc., New York, N.Y. Filed June 8, 1961.

Pendleton

Owner of Reg. No. 378,208.
For Electric Batteries, Battery Leads, Cables, and Connectors.
First use Jan. 27, 1939.

SN 122,958. Philip A. Schwartz, Longmeadow, Mass. Filed June 27, 1961.

TRANSTOP

For Vehicle Batteries, Spark Plugs, and Ignition Parts—Such as, Points and Condensers.
First use Nov. 30, 1960.

SN 129,532. Radiant Lamp Corporation of Delaware, Newark, N.J. Filed Oct. 9, 1961.

HI-FLOOD

For Incandescent Lamps.
First use June 1948.

SN 129,561. Airtron, Inc., Morris Plains, N.J. Filed Oct. 10, 1961.

AIRTRON

For Flexible Waveguides—Such as Are Used for Conducting Electrical Energy of High Frequency, and Switches—Such as Are Used for High-Frequency Waveguides.
First use on or before Jan. 1, 1947, on flexible waveguides.

SN 135,291. Omscolite Corporation, Philadelphia, Pa. Filed Jan. 5, 1962.

STERLING THE HALLMARK OF QUALITY

For Radio Receiving Sets.
First use Dec. 8, 1961.

SN 135,292. Omscolite Corporation, Philadelphia, Pa. Filed Jan. 5, 1962.

CADILLAC

For Radio Receiving Sets.
First use Dec. 8, 1961.

SN 135,338. Cybernetics, Inc., Paterson, N.J. Filed Jan. 8, 1962.

OZOTRON

For Electrical Apparatus for Purifying Air.
First use Nov. 2, 1961.

SN 135,664. Channel Master Corporation, Ellenville, N.Y. Filed Jan. 12, 1962.

CM-10

For Loud Speaker Systems, Including Loud Speakers and Enclosures.
First use September 1960.

SN 136,116. Community Engineering Corporation, State College, Pa. Filed Jan. 19, 1962.

TELE-QUEST

For Closed Circuit Educational Television Systems.
First use Apr. 23, 1961.

SN 136,348. Clevite Corporation, Cleveland, Ohio. Filed Jan. 23, 1962.

CT

For Transistors and Diodes.
First use September 1961.

SN 136,418. Accumulatoren-Fabrik Aktiengesellschaft, Hagen, Westphalia, Germany. Filed Jan. 24, 1962.

ISOSTART

For Electrical Apparatus, Machines, and Supplies—Namely, Separators and Diaphragms Made of Porous Plastic Material.
First use on or about Aug. 10, 1957; in commerce on or about May 24, 1961.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 114,097. Crofts (Engineers) Limited, Bradford, Yorkshire, England. Filed Feb. 21, 1961.

ORTOJUST

Owner of British app. No. 814,950, dated Dec. 23, 1960.
For Magnetic Clutches and Magnetic Brakes and Parts and Fittings Therefor, All Being Parts of Machines.

SN 117,712. Ernest Holmes Company, Chattanooga, Tenn. Filed Apr. 12, 1961.

HOLMES

For Truck-Mounted Hoists, Towing Hitches and Towing Slings for Towing Disabled Vehicles, Truck-Attached Self-Loading Devices, Valve Servicer Tools and Universal Joint Tools.
First use in 1926.

SN 117,881. Kleen-Air, Inc., Payne, Ohio. Filed Apr. 14, 1961.

Kleen Air

Owner of Reg. No. 661,201.
For Vacuum Power Cleaning Mechanism for Residential, Commercial, and Industrial Uses.
First use fall of 1959; Apr. 12, 1953, as to "Kleen Air."

SN 122,473. Security Plastics, Inc., Hialeah, Fla. Filed June 20, 1961.

HETERO-CAVITY

For Small Machinery, Hardware, Gears, Bushings, Bearings, Cams, Washers, Spring Clips, and Guide Ways.
First use Apr. 20, 1961.

SN 124,069. De Jur-Amsco Corporation, Long Island City, N.Y. Filed July 17, 1961.

TAP MASTER

For Machine for Setting Electrical Contact Taps on Potentiometers.
First use Feb. 28, 1961.

SN 125,030. General Electric Company, Schenectady, N.Y. Filed July 31, 1961.

CARB-O-LOCK

Owner of Reg. Nos. 255,108, 273,401, and 399,869.
For Toolholders for Machining Operations and Parts Thereof.
First use May 18, 1961.

SN 129,265. Falls Products, Inc., Genoa, Ill. Filed Oct. 5, 1961.

ROTO CLIPPER

For Lawnmowers, Tillers and Tractors, and Parts Therefor.
First use May 1947.

SN 130,966. Sturtevant Mill Co., Boston, Mass. Filed Oct. 30, 1961.

SIMPACTOR

For Machinery, Consisting of Machines for Disintegrating, Pulverizing, and Separating Raw Materials.
First use Aug. 25, 1961.

SN 131,335. The Bloomfield Manufacturing Company, d.b.a. Harrah Manufacturing Company, Bloomfield, Ind. Filed Nov. 6, 1961.

HANDYMAN

For Hand Operated Lifting Jacks.
First use on or about Nov. 1, 1918.

SN 132,240. Hayssen Manufacturing Company, Sheboygan, Wis. Filed Nov. 17, 1961.

EXPAND·O·MATIC

For Automatic Packaging Machines.
First use Sept. 27, 1961.

SN 133,258. M. L. Foss, Inc., Denver, Colo. Filed Dec. 4, 1961.

STRIPE O MASTER

For Paint Striping Machines.
First use Oct. 3, 1961.

SN 133,347. The Wood Shovel and Tool Company, Piqua, Ohio. Filed Dec. 4, 1961.

WOOD

Owner of Reg. Nos. 148,320, 260,517, and 575,125.
For Shovels, Spades, Scoops, Forks, Hoes, Rakes, Cultivators, Weeders, Scrapers, Edgers, Diggers, Augers, and Snow Pushers, and Repair Handles Thereof and Wheelbarrows Therefor.
First use Oct. 1, 1961; Feb. 11, 1921, as to "Wood" on shovels.

SN 133,394. Morpul Manufacturing Company, Greensboro, N.C. Filed Dec. 5, 1961.

SPANTROL

For Yarn Tensioning Devices for Knitting Machines.
First use Oct. 17, 1961.

SN 133,708. Rotorail, Inc., Marion, Ohio. Filed Dec. 8, 1961.

ROTORAIL

For Rail Conveyor.
First use Mar. 10, 1961.

SN 133,713. Stemun Manufacturing Company, Springfield, Ohio. Filed Dec. 8, 1961.

JOT-O-MATIC

For Memo Registers.
First use Sept. 1, 1961.

SN 133,734. A and T Development Corporation, St. Bernard, Ohio. Filed Dec. 11, 1961.

ATWAY

For Machinery and Equipment for Mixing, Packaging, and Handling Various Combinations of Sand, Cement, Aggregate and Plaster—Namely, Dehydrating Equipment, Mixing, Proportioning, and Weighing Apparatus and Equipment, Conveying Equipment for Advancing Loaded Packages From the Mixing and Packaging Equipment to a Bag Stitching Machine and Bag Stitching Machines.
First use Aug. 7, 1961.

SN 133,755. The J. B. Beaird Company, Inc., Shreveport, La. Filed Dec. 11, 1961.

CHALLENGER

Owner of Reg. Nos. 427,557 and 556,501.
For Petroleum Gas Compressors, Tanks, Dispensing Apparatus, and Liquefied Petroleum Gas Filling Stations.
First use at least as early as Mar. 1, 1946.

SN 133,897. Powell Muffler Company, Inc., Chicago, Ill. Filed Dec. 12, 1961.

POWELL

Owner of Reg. No. 567,115.
For Mufflers for Internal Combustion Engines and Parts Thereof—Namely, Tail Pipes, Exhaust Pipes, and Muffler Clamps.
First use 1905.

SN 135,120. Drafto Corporation, Cochranton, Pa. Filed Jan. 3, 1962.

ROTAHOOK

For Traveling Block for Cranes.
First use Nov. 17, 1959.

SN 135,219. Newaygo Engineering Company, Newaygo, Mich. Filed Jan. 4, 1962.

TORNADOVEYOR

For Pneumatic Foundry Sand Conveying Systems, Components Thereof, and Accessories Therefor.
First use Dec. 18, 1961.

SN 135,918. Spex Industries, Inc., Scotch Plains, N.J. Filed Jan. 16, 1962.

SHATTERBOX

For Grinding Mills.
First use Dec. 21, 1961.

Class 24 — Laundry Appliances and Machines

SN 130,012. Vending Appliance Manufacturing Corp., Brooklyn, N.Y. Filed Oct. 16, 1961.

DUO-WASH

For Commercial Washing Machines.
First use Aug. 15, 1961.

SN 130,400. Whirlpool Corporation, Benton Harbor, Mich. Filed Oct. 20, 1961.

DRYTROL

For Cleaning and Laundry Apparatus—Namely, Controls for Dry Cleaning Machines, Washer-Dryers, and Dryers.

Class 26 — Measuring and Scientific Appliances

SN 110,124. Welsh Manufacturing Company, Providence, R.I. Filed Dec. 12, 1960.

SPARTAN

For Industrial Face Shields for Protecting Workmen.
First use December 1959.

SN 114,195. Dynamic Filters Inc., Detroit, Mich. Filed Feb. 23, 1961.

DELTA-CATOR

For Differential Pressure Indicating Device.
First use Jan. 25, 1961.

SN 115,097. U.S. Industries, Inc., New York, N.Y. Filed Mar. 7, 1961.

AUTOTUTOR

For Visual Education Apparatus, Components Thereof, and Accessories Therefor, Including Motion Picture Film.
First use Mar. 31, 1960.

SN 115,379. Rowe Line Corporation, San Gabriel, Calif. Filed Mar. 10, 1961.

E-Z

For Film Splicers.
First use Nov. 15, 1957.

SN 125,403. National Precision Corporation, Buffalo, N.Y. Filed Aug. 4, 1961.

PORTA-BAR

For Liquor Dispensing Control Apparatus Having an Automatic Measuring and Recording Feature.
First use November 1957.

SN 131,558. Farm Fans, Inc., Indianapolis, Ind. Filed Nov. 8, 1961.

DRY-O-STAT

For Humidistat.
First use Oct. 20, 1961.

SN 132,274. D. F. Vasconcellos S/A. Optica e Mecanica de Alta Precisao, Sao Paulo, Brazil. Filed Nov. 17, 1961.

"D. F. V."

Owner of Brazilian Reg. No. 78,228, dated Sept. 8, 1943.
For Optical Apparatus—Namely, Monoculars, Binoculars, Telephoto Lenses, Microscopes, Magnifying Lenses, Periscopes, Lenses, Telescopes, Spectroscopes; Precision Instruments—Namely, Telemeters, Collimators, Theodolites, Micrometers, Ammeters, Gauges, Voltmeters, Compasses, Thread Measurers, Interval Measurers, Water Gauges, and Iron Gauges for Engines, Steel Rules, Anemometers, Manometers, Thermometers, Barometers, Mariner's Compasses, Pantographs, Rods of Any Scales; Scientific Instruments—Namely, Thermometers, Telescopes, Barometers; Photographic Cameras.

SN 132,607. Peter Zerigian, d.b.a. Vacuum Engineering Company, North Billerica, Mass. Filed Nov. 22, 1961.

VENCO

For Apparatus for Depositing Thin Films Under Vacuum; Chambers for Simulating Space or Maintaining Low Atmospheric Pressure, High Vacuum Producing Apparatus, Apparatus for Liquefying Gas and Studying Cryogenic Effects, and Components Thereof.
First use Jan. 1, 1957.

SN 134,672. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Dec. 26, 1961.

ROTO-END

For Tape Rule.
First use Oct. 2, 1961.

SN 137,482. Airequipt Manufacturing Co. Inc., New Rochelle, N.Y. Filed Feb. 8, 1962.

VARI-MOUNT

For Slide Magazine Used in Projecting Photographic Transparencies.
First use Jan. 23, 1962.

SN 137,689. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Feb. 12, 1962.

PARAD

Owner of German Reg. No. 751,796, dated Aug. 11, 1961.
For Photographic Shutter Mechanisms.

SN 137,719. Control Data Corporation, Minneapolis, Minn. Filed Feb. 12, 1962.

SATELLITE

For Electronic Computing Apparatus.
First use Jan. 3, 1962.

SN 137,842. Delta Engineering Corporation, Melrose, Mass. Filed Feb. 13, 1962.

DELTA

For Machines for Counting Articles.
First use on or about Nov. 6, 1961.

SN 137,959. Arthur H. Thomas Company, Philadelphia, Pa. Filed Feb. 14, 1962.

Thomas

Owner of Reg. No. 713,142.
For Laboratory Equipment for Chemical, Biological, and Physics Laboratories.
First use Nov. 29, 1954.

SN 137,984. Burke & James, Inc., Chicago, Ill. Filed Feb. 15, 1962.

B & J

Owner of Reg. No. 418,479.
For Photographic Equipment, Including Cameras, Photo Lenses, Dryers, Printers, Enlargers, and Washers.
First use at least as early as March 1916.

SN 137,985. Burke & James, Inc., Chicago, Ill. Filed Feb. 15, 1962.

COLUMBIA

Owner of Reg. Nos. 712,113, 675,221, and others.
For Photographic Cameras.
First use at least as early as June 15, 1956.

SN 138,207. Hull Manufacturing Company, Warren, Ohio. Filed Feb. 19, 1962.

BATTERY-LITE

For Magnetic Compasses.
First use Oct. 4, 1960.

SN 138,213. Calcaload Co., Inc., Columbus, Ohio, assignee of Vernon G. Mandt, d.b.a. Calc-A-Load Company, Columbus, Ohio. Filed Feb. 19, 1962.

CALC-A-LOAD

For Slide Rules for Figuring Load Measurement of Standard Railroad Cars and Truck Vans.
First use Dec. 18, 1961.

SN 138,260. Radio Corporation of America, New York, N.Y. Filed Feb. 19, 1962.

SIGNA GUARD

For Electronic Apparatus for Processing All Negotiable Instruments and Commercial Papers as Well as Components of and Parts and Accessories for Such Apparatus.
First use at least as early as or on about Jan. 16, 1962.

SN 138,292. Eastman Kodak Company, Rochester, N.Y. Filed Feb. 20, 1962.

HI-MAT

For Motion-Picture Projectors.
First use Nov. 6, 1961.

SN 138,334. Arthur H. Thomas Company, Philadelphia, Pa. Filed Feb. 20, 1962.

Thomas

Owner of Reg. No. 713,142.
For Laboratory Equipment for Chemical, Biological, Physics Laboratories.
First use Nov. 26, 1961.

SN 138,338. Sivan F. Van Derdys, Santurce, Puerto Rico. Filed Feb. 20, 1962.

ROLL-O-DRAFT

For Drafting Equipment—Namely, a Drafting Board Attachment.
First use Aug. 13, 1958; in commerce Aug. 13, 1958.

SN 138,472. Debs Company, Canoga Park, Calif. Filed Feb. 23, 1962.

ASTRA-VUE

For Sunglasses.
First use Feb. 1, 1962.

SN 138,548. Special Devices Laboratories, Inc., Hackensack, N.J. Filed Feb. 23, 1962.

TELERATE

For Gyroscopes.
First use Jan. 30, 1962.

SN 138,588. Cryotronics, Inc., Clinton, N.J. Filed Feb. 26, 1962.

CRYOLEVEL

For Electronic Apparatus for Measuring or Controlling the Level of Liquids.
First use May 15, 1961.

SN 138,651. Raymond Industries, Inc., Rochester, N.Y. Filed Feb. 26, 1962.

CROYDON

For Thermometers.
First use Nov. 13, 1961.

SN 138,696. Beckman Instruments, Inc., Fullerton, Calif. Filed Feb. 27, 1962.

HYGROMITE

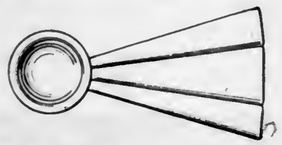
For Moisture Measurement Instrument.
First use April 1961.

SN 138,713. A. H. Harris and Sons, Inc., New Britain, Conn. Filed Feb. 27, 1962.

MINUTURN

For Elapsed Time and Revolution Counting Indicator.
First use Feb. 1, 1962.

SN 138,721. Kono Manufacturing Co. Inc., Woodside, N.Y. Filed Feb. 27, 1962.



Owner of Reg. No. 578,719.
For Eyeglass and Spectacle Frames and Parts Therefor.
First use on or about December 1955.

SN 138,963. Lab-Tek Plastics Co., Westmont, Ill. Filed Mar. 2, 1962.

COMPLATE

For Laboratory Equipment—Namely, Petri Dishes.
First use May 25, 1961.

SN 139,082. General Mills, Inc., Minneapolis, Minn. Filed Mar. 5, 1962.

AD/ECS

For Computers Including Computer Input, Output, and Power Units.
First use July 5, 1961.

SN 139,151. Studnite Corporation, New York, N.Y. Filed Mar. 5, 1962.

STUDNITE

For Plastic Back Hand Cut Stencil Film.
First use March 1954.

Class 27 — Horological Instruments

SN 102,947. Ronda AG (Ronda S.A.) (Ronda Ltd), Lausen, Basel-Land, Switzerland. Filed Aug. 18, 1960.

RONDA

Owner of Swiss Reg. No. 168,813, dated Jan. 24, 1958.
For All Horological Products, Balance-Staffs, Winding-Stems, Escapements Assortments, Rollers, Pallet Staffs, Mainsprings, Hairsprings, Balance Wheels, Wheels, Screws, Rough Movements, Dials, Needles, Parts of Watches, Watch Cases, Watch Movements, Watch Glasses, Watch Crowns, Complete Watches.

SN 119,891. Radart, Wynne, Ark. Filed May 12, 1961.

RADART

For Timers Used To Time Speed Events at Horse Shows and the Like.
First use June 15, 1959.

SN 122,844. Semca Clock Company, Inc., New York, N.Y. Filed June 26, 1961.

SEMCA

For Clocks and Watches and Parts Thereof.
First use May 11, 1939.

SN 126,990. Anthony Dembski, Chicago, Ill. Filed Aug. 31, 1961.

THE CHRISTIAN

For Watches and Clocks.
First use May 2, 1957.

SN 129,583. Finlay Departments, Inc., New York, N.Y. Filed Oct. 10, 1961.

PAUL DOMINIQUE

The name "Paul Dominique" is fictitious.
For Watches.
First use Aug. 25, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 107,638. Bale Pin Company, Boston, Mass. Filed Nov. 2, 1960.

Bale

For School Pins and Rings.
First use May 6, 1960; Oct. 1, 1945, as to "Bale" on rings.

SN 111,884. Robert L. Hamilton, d.b.a. R. L. Hamilton Company, Dallas, Tex. Filed Jan. 16, 1961.

Vinyloy

For Washable, Non-Absorbent Material Sold in the Form of Watch Bands.
First use Nov. 16, 1960.

SN 126,316. Sarah Coventry, Inc., Newark, N.Y. Filed Aug. 21, 1961.

SARAHGLO

For Costume Jewelry.
First use Jan. 20, 1961.

SN 126,365. Marvella, Inc., New York, N.Y. Filed Aug. 21, 1961.

MARVELLA PEARLESCENT

The word "Pearlescent" is disclaimed apart from the mark.
Owner of Reg. No. 641,378.
For Pearls, Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Lockets, Finger Rings, Charm Bracelets, Charms, and Bead Necklaces.
First use June 1, 1961.

SN 128,092. Sydney W. Prague, Bay St. Louis, Miss. Filed Sept. 18, 1961.

JEWELMONT

For Watch Bands.
First use July 15, 1961.

SN 130,978. Walker & Hall Limited, Sheffield, England. Filed Oct. 30, 1961.

W|H

Priority claimed under Sec. 44(d) on British Reg. No. 824,157—81218, dated Aug. 10, 1961.
For Knives, Forks, Spoons, Made of Precious Metal.

Class 29—Brooms, Brushes, and Dusters

SN 135,512. The Kendall Company, Walpole, Mass. Filed Jan. 10, 1962.

APPLI-PAD

For Felt-Like, Cloth-Like and/or Paper-Like Material Composed of Unspun Fibers, for General Application as Lithographer's Wiping Pads.
First use Nov. 21, 1961.

Class 30—Crockery, Earthenware, and Porcelain

SN 122,103. The Nippon Toki Kaisha, Ltd., Nishi-ku, Nagoya, Japan. Filed June 15, 1961.

Noritake Cook'n Serve CHINA

The exclusive use of the words "Cook 'N Serve China" as shown in the drawing are disclaimed apart from the mark as a whole. Owner of U.S. Reg. Nos. 531,659, 624,981, and 630,434.
For Dinnerware and Tableware Made of China.
Use in commerce August 1959.

SN 135,309. Porcelaine de Paris, S.A., Paris, France. Filed Jan. 4, 1962.

For Crockery, Chinaware and Porcelain Products—Specifically, Vases, Boxes, Urns, Ashtrays, Creamers, Saucers, Dishes, Dish Covers, Cups, Bowls, Jardinieres, Cachepots, Candlestick, Perfume Bottles, Plates, Cornucopias, Tureens, Tureen Covers, Platters, Trays, Inkstands, Mortars, Pestles, Jars, Jar Tops, Coffee Pots, Tea Pots, Baskets, Shells, Pitchers, Tea Caddies, Tryptics, Mugs, Mug Covers, Perfume Burners, and Figurines.
First use Aug. 8, 1887; in commerce in or before 1920.

Class 31—Filters and Refrigerators

SN 110,715. Tyler Refrigeration Corporation, Niles, Mich. Filed Dec. 22, 1960.

TYLER BALANCED SYSTEMS

Owner of Reg. Nos. 510,184, 631,771, and others.
For Refrigerated Food Cases.
First use Nov. 28, 1960.

SN 124,582. Purecell Corporation, Palo Alto, Calif. Filed July 24, 1961.

PURECELL

For Water Purification Apparatus.
First use September 1960.

SN 134,345. J. F. Pritchard & Co. of California, Kansas City, Mo. Filed Dec. 19, 1961.

KEYSTONE

For Cooling Towers.
First use on or about Feb. 1, 1961.

SN 134,587. Whirlpool Corporation, Benton Harbor, Mich. Filed Dec. 22, 1961.

MILLION-MAGNET

For Refrigerator and Freezer Doors.
First use Dec. 28, 1959.

SN 134,826. Michigan Wire Cloth Company, Detroit, Mich. Filed Dec. 28, 1961.

TWINLIFE

For Strainers for Fluid Filtration.
First use Nov. 20, 1961.

Class 32—Furniture and Upholstery

SN 118,251. Huntingburg Furniture Company, Inc., Huntingburg, Ind. Filed Apr. 20, 1961.

Custom-Mates

For Bedroom, Dining Room, and Occasional Furniture.
First use Dec. 21, 1960.

SN 121,276. Dux Incorporated, Burlingame, Calif. Filed June 2, 1961.

DUX

Owner of Reg. No. 575,779.
For Furniture—Namely, Chairs, Occasional Chairs, Easy Chairs, Sofas, Ottomans, Love Seats, Tables, Cabinets, Shelves, Sideboards, and Nests of Tables.
First use Jan. 15, 1954.

SN 121,277. Dux Incorporated, Burlingame, Calif. Filed June 2, 1961.

DUX

Owner of Reg. No. 575,779.
For Furniture—Namely, Chairs, Occasional Chairs, Easy Chairs, Sofas, Ottomans, Love Seats, Tables, Cabinets, Shelves, Sideboards, and Nests of Tables.
First use May 15, 1958.

SN 137,763. Nan Grey Laine, Malibu, Calif. Filed Feb. 12, 1962.

GU

For Mirrors.
First use Sept. 12, 1961.

SN 137,856. Lanier Electronic Laboratory Inc., Atlanta, Ga. Filed Feb. 13, 1962.

AMPLI-VOICE

For Portable Lectern With a Built-In Speaker.
First use Jan. 30, 1962.

SN 137,869. Simmons Company, New York, N.Y. Filed Feb. 13, 1962.

HYGENE-TIC

For Mattresses.
First use December 1940.

SN 138,122. Simmons Company, New York, N.Y. Filed Feb. 16, 1962.

SIMFLEX

Owner of Reg. Nos. 305,475, 696,415, and others.
For Upholstered Furniture.
First use Oct. 29, 1961.

Class 33—Glassware

SN 125,781. Thatcher Glass Manufacturing Company, Inc., New York, N.Y. Filed Aug. 10, 1961.

THATCHER GRIP

Owner of Reg. No. 419,305.
For Glass Bottles or Containers.
First use June 13, 1961.

SN 128,105. Ronald M. Sannes, d.b.a. United Auto Glass, Billings, Mont. Filed Sept. 18, 1961.

Ther mal Lite

The drawing is lined for the color yellow.
For Window and Plate Glass and Insulated Glass.
First use Aug. 1, 1961.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 115,370. Niagara Weldments Inc., Niagara Falls, N.Y. Filed Mar. 10, 1961.

NIA WEL

For Heat Transfer and Process Equipment, Including Standard and Specially Engineered Equipment.
First use Dec. 15, 1960.

SN 117,144. Thompson Distributing Company, Portland, Oreg. Filed Apr. 4, 1961.

PRONTO PACK

For Package Containing Portable Cooking and Heating Apparatus.
First use on or about Mar. 21, 1961.

SN 119,817. United States Rubber Company, New York, N.Y. Filed May 11, 1961.

WELD-O-SEAM

Owner of Reg. No. 722,936.
For Electric Heating Irons.
First use on or about Nov. 22, 1960.

SN 120,462. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed May 19, 1961.

centriline

For Centrifugal Fans.
First use on or about Aug. 29, 1960.

SN 126,541. Thomas Industries Inc., Louisville, Ky. Filed Aug. 23, 1961.

SKY-GLO

For Lighting Fixtures—Particularly, Diffusers and Louvers.
First use in or before May 1948.

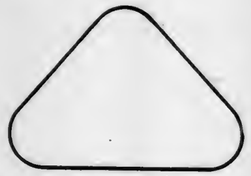
Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 116,714. The Flexan Corporation, Chicago, Ill. Filed Mar. 29, 1961.

SUPERCURE

For Molded Mechanical Rubber Goods—Namely, O-Rings, Diaphragms, Gaskets, Valve Seats, Packing Seals, Brake Cups, and Drive Belts.
First use Mar. 20, 1961.

SN 122,430. The Dayton Tire & Rubber Company, Dayton, Ohio. Filed June 20, 1961.



Owner of Reg. No. 649,326.
For Vehicle Tires.
First use Aug. 19, 1960.

SN 124,429. The Dayton Tire & Rubber Company, Dayton, Ohio, assignee of The Firestone Tire & Rubber Company, Akron, Ohio. Filed July 21, 1961.

DAYTONA

Owner of Reg. Nos. 575,424 and 667,438.
For Resilient Vehicle Tires.
First use Mar. 25, 1961.

Class 36 — Musical Instruments and Supplies

SN 76,117. H. & A. Selmer Inc., Elkhart, Ind. Filed June 19, 1959.

SOLOIST

Owner of Reg. Nos. 224,533 and 610,703.
For Reeds for Woodwind Instruments—Specifically, Clarinets and Saxophones; and Woodwind Instruments—Specifically, Clarinets.
First use in December 1952.

SN 97,286. British Industries Corporation, Port Washington, N.Y. Filed May 17, 1960.

LABORATORY SERIES

Applicant disclaims the word "Series" apart from the mark as shown.
For Record Changers and Players and Parts Therefor.
First use Apr. 1, 1960.

SN 107,395. Worldwide Musical Instrument Co. Inc., New York, N.Y. Filed Oct. 28, 1960.

ANTONIO DE TORRES

"Antonio de Torres" is the name of a deceased person.
For Guitars.
First use June 21, 1960.

SN 108,567. New York Post Corp., New York, N.Y. Filed Nov. 16, 1960.

LEARN-A-LANGUAGE

For Language Records With Accompanying Instruction Manuals.
First use Sept. 30, 1960.

SN 112,140. Otis Ellis, d.b.a. Lucky 11, Flint, Mich. Filed Jan. 19, 1961.

LUCKY 11

For Phonograph Records.
First use Dec. 27, 1960.

SN 115,944. Packard-Bell Electronics Corporation, Los Angeles, Calif. Filed Mar. 17, 1961.

PB

For Stereophonic and High-Fidelity Sound Reproducing Equipment.
First use Jan. 25, 1961.

SN 122,991. Bärenreiter-Verlag Karl Vötterle Kommanditgesellschaft, Kassel-Wilhelmshohe, Germany. Filed June 28, 1961.

MUSICAPHON

For Phonograph Records.
First use about September 1959; in commerce September 1959.

SN 123,228. Piano House Ltd., Winnipeg, Manitoba, Canada. Filed June 30, 1961.

STEIGERMAN

Owner of Canadian Reg. No. 120,125, dated Nov. 10, 1960.
For Pianos and Organs.

SN 125,360. Conover-Cable Piano Co., Oregon, Ill. Filed Aug. 4, 1961.

DYNA-SONIC

For Pianos.
First use on or about June 1, 1961.
Subj. to Intf. with SN 126,263.

SN 126,263. Joseph Rogers, Inc., Cleveland, Ohio. Filed Aug. 18, 1961.

DYNA-SONIC

For Drums, Tomtoms, Bongos, Congos, and Vibraphones.
First use June 15, 1961.
Subj. to Intf. with SN 125,360.

SN 127,914. Dorn & Kirschner Band Instrument Company, Inc., Newark, N.J. Filed Sept. 15, 1961.

MASTERKRAFT

For Stringed Musical Instruments; Band and Orchestral Instruments of the Woodwind and Percussive Classes; and Accessory Orchestral and Band Instruments for Special Sound Effects.
First use April 1939.

SN 129,619. Edgar Keemer, d.b.a. Dynadisc, Long Branch, N.J. Filed Oct. 10, 1961.

DYNADISC

For Phonograph Records.
First use on or about Sept. 13, 1961.

SN 130,166. Jacob Anthes, d.b.a. American Research Laboratories, Fort Atkinson, Wis. Filed Oct. 18, 1961.

TUNE-MASTER

For Continuous Self-Reversing Tape Player Machines for Providing Background Music in Business Establishments.
First use Oct. 6, 1961.

SN 131,201. Epiphone, Inc., Kalamazoo, Mich. Filed Nov. 2, 1961.

TREM-O-TONE

For Guitars and Like Stringed Musical Instruments of the Plucked String Type.
First use May 10, 1961.

SN 131,205. Gibson, Inc., Kalamazoo, Mich. Filed Nov. 2, 1961.

MAESTRO VIBROLA

For Guitars and Like Stringed Musical Instruments of the Plucked String Type.
First use July 5, 1961.

Class 37 — Paper and Stationery

SN 129,772. Individualized Systems, Inc., Atlanta, Ga. Filed Oct. 12, 1961.



The words "Individualized Systems, Inc." are disclaimed as part of the mark.
For Printed Forms and Papers.
First use May 1, 1957.

SN 133,691. James M. Vanlandingham, d.b.a. Rol-Seal Company, Sausalito, Calif. Filed Dec. 8, 1961.

ROL-SEAL

For Transparent Film for Use in the Wrapping of Food Products.
First use Sept. 12, 1961.

SN 141,943. Goldsmith Bros., New York, N.Y. Filed Apr. 10, 1962.

ARTRITE

For General Purpose Tracing Paper.
First use Oct. 1, 1952.

SN 142,466. Strathmore Paper Company, Inc., West Springfield, Mass. Filed Apr. 17, 1962.

MELODY

For Text Papers.
First use Mar. 26, 1962.

Class 38 — Prints and Publications

SN 92,992. James R. Meade, d.b.a. Associated Sales Engineers, New York, N.Y. Filed Mar. 16, 1960.

THE SOURCE

Owner of Reg. No. 632,858.
For Trade Letter Containing Business News Stories Concerning Applicant's Customer Companies.
First use in September 1956.

SN 113,103. Electrical Information Publications, Inc., Madison, Wis. Filed Feb. 6, 1961.

ELECTRIC HEATING AND COOLING FACT BOOK

Owner of Reg. No. 694,936.
For Trade Publication—Namely, an Annual Reference Guide.
First use December 1956.

SN 125,958. Warner Woven Label Company, Inc., Paterson, N.J. Filed Aug. 14, 1961.

N

For Woven Labels.
First use in June 1933.

SN 125,959. Warner Woven Label Company, Inc., Paterson, N.J. Filed Aug. 14, 1961.

WARNER

For Woven Labels.
First use August 1953.

SN 135,770. Continental Oil Company, Ponca City, Okla. Filed Jan. 15, 1962.

THE RED TRIANGLE

For Quarterly Magazine.
First use June 1933.

SN 136,152. Smith Decalcomania Company, Compton, Calif. Filed Jan. 19, 1962.



For Decalcomanias.
First use Feb. 23, 1961.

SN 136,705. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 26, 1962.

DIAGNOS/O/GRAM

For Assemblies of Covers and Pads of Disposable Anatomical Diagrams for Diagnosis Explanations by Physicians.
First use Nov. 27, 1961.

SN 136,720. The Bauer Manufacturing Company, Wooster, Ohio. Filed Jan. 29, 1962.

EXECUCAL

For Calendars.
First use Dec. 1, 1961.

Class 39 — Clothing

SN 92,049. S. Rudofker's Sons, Inc., Philadelphia, Pa. Filed Mar. 2, 1960.

MR. FORMAL

The applicant disclaims the word "Formal" alone and apart from the mark as shown.
For Boys', Youths', and Men's Coats, Pants, Vests, Suits, and Cummerbunds for Formal Wear.
First use in or about July 1949.

SN 92,050. S. Rudofker's Sons, Inc., Philadelphia, Pa. Filed Mar. 2, 1960.

MR. FORMAL
BY AFTER SIX

The applicant disclaims the word "Formal" alone and apart from the mark as shown. Owner of Reg. Nos. 362,116, 701,420, and others.
For Boys', Youths', and Men's Coats, Pants, Vests, Suits, and Cummerbunds for Formal Wear.
First use in or about July 1949.

SN 94,007. Maidenform, Inc., New York, N.Y., by change of name from Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Mar. 30, 1960.

SWEET TALK

For Foundation Garments—Namely, Brassieres.
First use Mar. 16, 1960.

SN 97,529. Utica Duxbak Corporation, Utica, N.Y. Filed May 19, 1960.

SHEDS WATER LIKE A DUCK'S BACK

For Sportsmen's Clothing—Namely, Coats, Jackets, Pants, Hats, Caps, Vests, Parkas; Women's Jackets, Coats, Pants, and Skirts.
First use in or about March 1905.

SN 98,000. The Jack Gussow Co., Inc., New York, N.Y. Filed May 27, 1960.

Dormé

Dormé is derived from the French language and means "sleep."
For Ladies' Lingerie—Namely, Gowns, Sleep Coats, Pajamas, and Negligees.
First use Feb. 10, 1960.

SN 108,011. Apex Dress Co., Inc., New York, N.Y. Filed Nov. 8, 1960.

PETTY HITE

For Ladies', Misses' and Juniors' Dresses and Suits.
First use March 1932.

SN 110,443. I. B. Kleinert Rubber Company, New York, N.Y. Filed Dec. 19, 1960.

GIRDLE HOLD

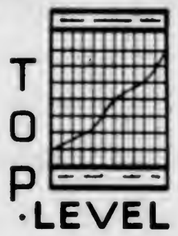
For Leg Bands for Attaching Garters Thereto.
First use April 1947.

SN 110,521. Anciens Etablissements Jalla, Paris, France. Filed Dec. 20, 1960.

JALLA

For Bathing Wear—Namely, Bathing Wraps, Beach Jackets, Beach Suits, Dressing Gowns, Wash Mittens, Bibs.
First use 1956; in commerce 1956.

SN 120,565. Phoeniz, Inc., Allentown, Pa. Filed May 22, 1961.



For Men's Suits and Sport Coats.
First use Jan. 30, 1961.

SN 126,725. R. G. Barry Corporation, Columbus, Ohio. Filed Aug. 28, 1961.

POLYKINS

For Slippers.
First use August 1961.

SN 130,529. Willits Shoe Company, Halifax, Pa. Filed Oct. 23, 1961.

SPORT-PRINTS

For Infants' and Girls' Shoes.
First use Aug. 1, 1961.

SN 131,385. Modern Globe, Inc., Pawtucket, R.I. Filed Nov. 6, 1961.

LOLLIPOP

Owner of Reg. Nos. 394,288 and 419,455.
For Women's and Children's Knit Underwear and Sleepwear.
First use on or about Jan. 1, 1941, on knit underwear.

SN 131,677. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Nov. 9, 1961.

PARDNERS CHOICE

For Underwear.
First use Aug. 28, 1961.
Subj. to Intf. with SN 144,108.

SN 131,678. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Nov. 9, 1961.

SKINKIN

For Underwear.
First use Aug. 28, 1961.

SN 131,680. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Nov. 9, 1961.

ABLEBODY

For Underwear.
First use Aug. 28, 1961.

SN 131,681. P. H. Hanes Knitting Company, Winston-Salem, N.C. Filed Nov. 9, 1961.

PROTOCOL

For Underwear.
First use Aug. 28, 1961.

SN 133,629. Bonne Age Co., Inc., New York, N.Y. Filed Dec. 8, 1961.

BONNE AGE

For Poncho Towels, Leotards, Tights, and Cotton Shirts.
First use at least as early as Jan. 1, 1958.

SN 136,683. Sapphire Corporation, New York, N.Y. Filed Jan. 26, 1962.

CARMOCS

For Slippers.
First use Nov. 1, 1961.

SN 136,721. J. W. Bayly & Son, Inc., Hollywood, Fla. Filed Jan. 29, 1962.

BAYL-STRON

For Hats, Caps, and Uniform Shakos.
First use on or about Mar. 15, 1957.

SN 136,840. E. E. Taylor Corporation, Freeport, Maine. Filed Jan. 29, 1962.

O-SO-EZ-E

For Men's Shoes.
First use Jan. 2, 1906.

SN 136,845. Thomson Company, Thomson, Ga. Filed Jan. 29, 1962.

MR. LEGGS

For Men's Slacks.
First use Jan. 12, 1962.

SN 144,108. Sam Shainberg Company, Memphis, Tenn. Filed May 8, 1962.

PARDNERS

For Men's and Boys' Dress and Casual Pants, Including Dungarees.
First use July 1, 1961.
Subj. to Intf. with SN 131,677.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 93,937. Kover-Lips Corporation, Queens, N.Y. Filed Mar. 29, 1960.

Kover-Lips Corporation

For Lip Shields for Protecting Garments From Lipstick Rouge.
First use on or about Feb. 4, 1939.

SN 117,204. James R. McEleney, d.b.a. Tish & Redmond Beauty Supply, Leominster, Mass. Filed Apr. 5, 1961.

ZIPETTE

For Decorative Hair Combs.
First use May 31, 1960.

SN 124,647. Gutos Metallschliessen-Fabrik Bader & Hoch Kommandit-Gesellschaft, Pforzheim, Germany. Filed July 25, 1961.

Gutos

Owner of German Reg. No. 694,779, dated Sept. 10, 1956.
For Fasteners, Clasps, and Belt Closures for Men's, Ladies', and Children's Garments, Hooks and Eyes, and Buckles.

SN 124,764. Sangamon Mills, Inc., Cohoes, N.Y. Filed July 26, 1961.

Sunflower

For Shoe Laces.
First use Mar. 19, 1958.

SN 130,631. Jordan Colton Company Inc., New York, N.Y. Filed Oct. 25, 1961.

CARINA!

For Fancy Goods—Namely, Fabric Lingerie and Handkerchief Cases.
First use May 1, 1960.

SN 131,691. I. B. Kleinert Rubber Company, New York, N.Y. Filed Nov. 9, 1961.

PETAL FRESH

For Dress Shields.
First use Mar. 28, 1940.

SN 132,380. St. Clair Specialty Manufacturing Co., Inc., Bellwood, Ill. Filed Nov. 20, 1961.

LADY CLAIR

For Gift Wrapping Bows.
First use Aug. 4, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 123,283. Crompton & Knowles Corporation, Worcester, Mass. Filed July 3, 1961.

CROMPTON & KNOWLES CORPORATION
Towcb
WORCESTER MASS. U.S.A.

The geographical designation "Worcester Mass. U.S.A." is disclaimed. Owner of Reg. No. 210,347.
For Non-Woven Fabric for Use in Disposable Wearing Apparel Such as Aprons and Shop Coats; Also Used for Packing Purposes To Prevent Rattling of Articles in Enclosed Packages; Also Used as Wiping Cloths; as a Carrier for Flower Seeds To Be Planted Under Ground; Ornaments for Christmas Trees; Interlining for Surgical Bandage; Lining for Funeral Caskets; Trimming for Dolls' Clothes; Also Used as Filtering Material in Air-Conditioning Equipment; and Also Used for Other Purposes.
First use June 16, 1961.

SN 124,630. Collins & Aikman Corporation, New York, N.Y. Filed July 25, 1961.

CLOUD FLEECE

No claim is made to the word "Fleece" except in combination with the mark as shown. Owner of Reg. No. 625,943.
For Tricot Apparel Fabrics.
First use June 22, 1961.

SN 127,581. Fabrex Corp., New York, N.Y. Filed Sept. 11, 1961.

WHIPPED CREAM

For Synthetic Piece Goods and/or Blends of Synthetic and Natural Fibers Especially Adapted for Use in Making Dresses, Suits, Coats, and Other Apparel.
First use July 15, 1958.

SN 136,014. Anciens Etablissements Jalla, Paris, France. Filed Dec. 28, 1961.

JALLA

For Bath Mats, Bath Towels, Face Towels, Bath Sheets.
First use 1956; in commerce 1956.

SN 136,735. Callaway Mills Company, La Grange, Ga. Filed Jan. 29, 1962.

PAM-PURR

For Textile Rugs, Bath Mats, and Toilet Lid Covers.
First use Dec. 28, 1961.

SN 136,736. Callaway Mills Company, La Grange, Ga. Filed Jan. 29, 1962.

ELMROSE

Owner of Reg. No. 372,507.
For Towels, Wash Cloths, and Shower Curtains.
First use Oct. 16, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 135,276. The Kendall Company, Walpole, Mass. Filed Jan. 5, 1962.

Miss Webril

The mark is a fictitious name such as is used in the cosmetic field. Owner of Reg. Nos. 534,461, 565,501, and 701,556.
For Non-Woven Fabrics and Absorbent Fibers Material for Applying Permanent Waving Solutions, Cosmetics, and the Like.
First use June 19, 1961.

SN 136,383. Midwest Dental Manufacturing Co., Melrose Park, Ill. Filed Jan. 23, 1962.

Tru MD Line

Owner of Reg. No. 726,564.
For Bur Guide Fixtures for Use With Dental Handpieces, Having a Plastic or a Combination Metal and Plastic Chuck Sleeve for Guiding a Bur Shank Into Accurately Centered Position in the Chuck Sleeve.
First use Jan. 19, 1962.

SN 137,185. American Cyanamid Company, New York, N.Y. Filed Feb. 5, 1962.

SURGILON

Owner of Reg. No. 396,436.
For Surgical Ligatures and Sutures.
First use Feb. 4, 1942.

SN 137,721. Cryco, Inc., Philadelphia, Pa. Filed Feb. 12, 1962.

CRYCO

For Devices for Propelling Liquids and Gases Onto the Body.
First use Oct. 23, 1961.

SN 137,736. Foley Bag Catheter, Inc., St. Paul, Minn. Filed Feb. 12, 1962.

SELFLATE

For Urological and Endoscopic Instruments Such as Catheters.
First use Dec. 16, 1961.

SN 137,963. The Warren-Teed Products Company, Columbus, Ohio. Filed Feb. 14, 1962.

STAT-PAK

For Single Unit Disposable Syringe.
First use Dec. 5, 1961.

SN 138,109. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Feb. 16, 1962.

ISOJECT

For Syringes and Needles for Use Therewith.
First use Oct. 31, 1961.

SN 138,149. Texas Electronic Products Corporation, Dallas, Tex., assignee of Beautron Corporation, Dallas, Tex. Filed Feb. 19, 1962.

BEAUTRON

For Electrical Apparatus for Cosmetological Treatments by Supplying Electrical Impulses to Selected Areas of the Face and Body and Electrode Units for Application to the Face and Body Used in Conjunction With Said Electrical Apparatus.
First use Dec. 21, 1961.

SN 138,173. Diamon-Deb, Inc., Burbank, Calif. Filed Feb. 19, 1962.

DIAMALITE

For Nail Dressers.
First use Jan. 3, 1950.

SN 138,175. Douglas Products Corporation, New York, N.Y. Filed Feb. 19, 1962.

Douglas

For Hair Dryers and Hand Massagers.
First use Aug. 24, 1955.

SN 138,654. Noel Robbins, d.b.a. Robbins Instruments, Chatham, N.J. Filed Feb. 26, 1962.

ETHERON

For Prosthetic Sponges.
First use July 4, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 138,362. American Stores Company, Philadelphia, Pa. Filed Feb. 21, 1962.

Thin Line
Bala Club

Owner of Reg. No. 582,379.
For Dietetic Soft Drinks.
First use in May 1955.

Class 46—Foods and Ingredients of Foods

SN 25,983. Riverside Fisheries Limited, Windsor, Ontario, Canada, assignee of Irving Goldhar, d.b.a. Lake-Pac Brand, Windsor, Ontario, Canada. Filed Mar. 12, 1957.

LAKE-PAC

Priority claimed under Sec. 44(d) on Canadian application filed Sept. 26, 1956; Reg. No. 122,343, dated May 26, 1961.
For Canned Fish, Frozen Fish, and Fresh Fish.

SN 79,922. Cobbs Fruit and Preserving Company, Miami, Fla. Filed Aug. 20, 1959.

Cobbs
CUPBOARD

Owner of Reg. No. 552,191.
For Fresh Citrus Fruits, Shelled Nuts, Candies, Jams, Jellies, Preserves, and Honey.
First use in May 1958.

SN 112,324. Frieda Schroeder, Los Angeles, Calif. Filed Jan. 23, 1961.



For Cakes, Coffee Cakes, Fruit Cakes, Cookies and Pastries.
First use in October 1929.

SN 112,555. J. L. Milani, Los Angeles, Calif. Filed Jan. 26, 1961.



The portrait shown on the drawing is a likeness of the applicant, J. L. Milani, who hereby consents to the registration thereof. Owner of Reg. No. 650,991.

For Wine Vinegar, Italian Dressing, French Dressing, Olive Oil for Culinary Use.

First use Nov. 23, 1956, on wine vinegar and olive oil.

SN 114,116. MacDonald-Bernier Company, Boston, Mass. Filed Feb. 21, 1961.

LIFE PACK

The word "Pack" is disclaimed apart from the mark shown.

For Food Survival Pack.

First use June 13, 1955.

SN 114,977. Margo Lee's, Los Angeles, Calif. Filed Mar. 6, 1961.



The name "Margo Lee" is fanciful. The words "Tea Caddies" are disclaimed.

For Tea.

First use Feb. 16, 1961.

SN 115,698. Humphreys Mills, Memphis, Tenn. Filed Mar. 15, 1961.



For Corn Products for Human Food Usage—Namely, Corn Meal, Corn Grits, and Corn Oil.

First use Apr. 15, 1938.

SN 124,881. E. J. Brach & Sons, Chicago, Ill. Filed July 28, 1961.

TEASERS

For Candy.

First use Feb. 22, 1961.

SN 130,008. Trunz, Incorporated, Brooklyn, N.Y. Filed Oct. 16, 1961.

FARMER BOY

For Fresh, Smoked and Canned Meats.

First use at least as early as may 1940 on canned hams.

SN 130,702. Kellogg Company, Battle Creek, Mich. Filed Oct. 26, 1961.

SUN FLAKES

Applicant hereby disclaims the word "Flakes" apart from the mark as shown.

For Cereal Breakfast Food With Wheat Germ Added.

First use June 28, 1961; Dec. 29, 1942, on wheat germ.

SN 131,207. The Great Atlantic & Pacific Tea Company, Inc., New York, N.Y. Filed Nov. 2, 1961.

SNOW PUFFS

Applicant disclaims exclusive use of the word "Puffs" separate and apart from the mark.

For Cake.

First use Sept. 15, 1961.

SN 131,629. Smithers Sons, Ltd., Los Angeles, Calif. Filed Nov. 8, 1961.

SMITHERS

Owner of Reg. No. 684,150.

For Low Calorie Canned Meat Balls, Low Calorie Canned Cheese Sauce, Low Calorie Canned Tuna Salad, Low Calorie Canned Chicken a la King, Low Calorie Canned Gravy, Low Calorie Canned White Sauce, Bottled Salad Dressing, Low Calorie Powdered Custard Dessert, Bottled Beef Tea Broth, Seasoning Salt, Chili Sauce, and Bottled Fish and Chip Sauce.

First use Sept. 16, 1958.

SN 132,301. Colonial Beef Co., d.b.a. Colonial Beef Company, Philadelphia, Pa. Filed Nov. 20, 1961.



The mark consists of the fanciful representation of the upper half of the body of a "town crier." Owner of Reg. No. 622,393.

For Meat and Poultry—Namely, Ready Cut, Ground Meats and Primal Cuts of the Edible Portions of Cows, Calves, Hogs, Sheep, Steer, and Poultry, and Stew Beef, Stew Veal, and Stew Lamb.

First use on or about June 8, 1961.

SN 134,302. The Borden Company, New York, N.Y. Filed Dec. 19, 1961.

SNOW'S

Owner of Reg. No. 533,838.

For Sardines and Corn Chowder.

First use Jan. 3, 1956.

SN 134,308. Consolidated Foods Corporation, d.b.a. Shasta Beverages, Chicago, Ill. Filed Dec. 19, 1961.



No claim of exclusive right is made to "Fruit Punch," said words being the name of the goods. Owner of Reg. No. 717,964.

For Fruit Food Beverage.

First use Oct. 4, 1961; Aug. 25, 1960, as to "Tiki."

SN 134,487. The Palmer Pantry, Inc., Statesboro, Ga. Filed Dec. 21, 1961.

MOLLY'S

For Assorted Flavored Syrups for Food Purposes.

First use Dec. 8, 1961.

SN 135,806. Lundy Packing Company, Clinton, N.C. Filed Jan. 15, 1962.



Owner of Reg. No. 638,226.

For Meat and Meat Products for Human Consumption—Namely, Lard; Pork Liver; Pork Sausage, Bacon, Smoked Hams; Fresh Hams; Pork Spareribs; Pork Loins; Pork Chitterlings; Pork Neck Bones; Pork Shoulders; Pork Butts; Pork Picnics; Pork Dry Salt Fatback; Pork Dry Salt Bellies; Pork Front and Hind Feet; Pork Tails and Ears; Pork Snouts; Pork Headmeat; and Headmeat Trimmings; Pork Neck Bone Trimmings; Pork Diaphragm Trimmings; Pork Kidneys, Melts and Brains; Hog Casings; Hog Carcasses; Pork Meat and Bone Meal; Pork Blood; Meat and Bone Meal; Dried Pork Blood; Pork Skins, Lips, Tongues, and Tongue Trimmings; and Pork Jowls and Stomachs.

First use June 1, 1951.

SN 137,519. Hales & Hunter Co., Chicago, Ill. Filed Feb. 8, 1962.



For Feed Concentrates for Dairy Cattle, Beef Cattle, Hogs, Rabbits, Horses, Dogs, Chickens, Ducks, Geese, Pheasant, and Quail.

First use Jan. 2, 1962.

SN 137,520. Hales & Hunter Co., Chicago, Ill. Filed Feb. 8, 1962.



For Feed Concentrates for Dairy Cattle, Beef Cattle, Hogs, Rabbits, Horses, Dogs, Chickens, Ducks, Geese, Pheasant, and Quail.

First use Jan. 2, 1962.

SN 143,423. Jeno F. Paulucci, d.b.a. Riksha Inns, Duluth, Minn. Filed Apr. 30, 1962.

RIKSHA INN

For Canned Bean Sprouts.

First use Jan. 10, 1962.

SN 143,469. Topps Chewing Gum, Incorporated, Brooklyn, N.Y. Filed Apr. 30, 1962.

GOLD RUSH

For Chewing Gum.

First use Apr. 13, 1962.

SN 143,530. Henry Heide, Incorporated, New York, N.Y. Filed May 1, 1962.

MEXICAN HATS

For Candy.

First use Apr. 30, 1958; at least as early as 1941 in a different display.

SN 143,538. Lamb-Weston, Inc., Weston, Oreg. Filed May 1, 1962.



For Crinkle Cut and Center Cut French Fried Potatoes.

First use Mar. 6, 1962.

SN 143,539. Lamb-Weston, Inc., Weston, Oreg. Filed May 1, 1962.



For Crinkle Cut and Center Cut French Fried Potatoes.

First use Mar. 2, 1962.

Class 50 — Merchandise Not Otherwise Classified

SN 127,003. The B. F. Goodrich Company, Akron, Ohio. Filed Aug. 31, 1961.

SQAIR-PAK

For Inflatable Dunnage Cushions.
First use Aug. 14, 1961.

SN 129,427. Valley Forge Flag Company, Inc., New York, N.Y. Filed Oct. 6, 1961.

PIONEER

For Flags and Flag Poles.
First use January 1940.
Subj. to Intf. with SN 127,067.

SN 129,428. Valley Forge Flag Company, Inc., New York, N.Y. Filed Oct. 6, 1961.

PERMA-NYL

For Flags and Flag Poles.
First use January 1940.

SN 129,431. Valley Forge Flag Company, Inc., New York, N.Y. Filed Oct. 6, 1961.

VALLEY FORGE

For Flags and Flag Poles.
First use January 1940.

SN 129,446. American Mat Corporation, Toledo, Ohio. Filed Oct. 9, 1961.

AMERICAN SENTINEL

For Protective and Cushioning Mats and Rugs Fabricated From Rubber, Rubber Substitutes, and Similar Materials.
First use February 1961.

SN 129,754. Enor Corporation, Bergenfield, N.J. Filed Oct. 12, 1961.



For Typewriter Pads, Adding Machine Pads, Duplicator Machine Pads and Related Office Equipment Pads.
First use Aug. 2, 1960.

SN 130,088. Paul H. McMurray, d.b.a. Automatic Equipment Co., Delphi, Ind. Filed Oct. 17, 1961.

FARM-O-MATIC

For Farm Equipment—Namely, Farrowing Pens, Portable Stock or Poultry Feeders, Waterers, Coops, and Parts Therefor.
First use on or about July 1, 1961.

Class 51 — Cosmetics and Toilet Preparations

SN 92,591. Clairol Incorporated, New York, N.Y. Filed Mar. 11, 1960.

TRULY

For Hair Tinting, Dyeing, and Coloring Preparations.
First use Nov. 24, 1959.

SN 101,643. Rhodes Pharmacal Co., Inc., New York, N.Y. Filed July 28, 1960.

COLORLOK

For Preparation for Fixing Color in the Hair.
First use July 11, 1960.

SN 110,373. L'Oreal, Paris, France, by change of name from Societe Monsavon-L'Oreal, Paris, France. Filed Dec. 16, 1960.

RECLAIR

Priority claimed under Sec. 44(d) on French Reg. No. 488,953, dated June 23, 1960 (Seine); Natl. Inst. No. 146,643.
For Perfumes, Colognes, Essential Oils, Rouge, Face Powder, Hair Dyes and Hair Rinses, Hair Bleaches, Hair Colorings, Hair Decolorants, Hair Lotions.

SN 121,868. Sigmund Shinglman, d.b.a. Tan-N-Ban Company, Hollywood, Calif. Filed June 12, 1961.

TAN ~n~ BAN

For Sun Tan Lotion Containing an Insect Repellent.
First use July 3, 1957.
Subj. to Intf. with SN 718,670.

SN 122,422. Marian Bialac, Inc., New York, N.Y. Filed June 20, 1961.

BRONZE GOLD

For Sun Tan Lotion.
First use Feb. 15, 1960.

SN 126,286. John W. Wilczewski, d.b.a. de Roget, Rosedale, N.Y. Filed Aug. 18, 1961.

FOLLE NUIT

The expression "Folle Nuit" means "foolish night" in English.
For Toilet Preparations—Namely, Perfumes and Colognes.
First use Sept. 1, 1949.

SN 128,605. Societe Guerlain, Paris, France. Filed Sept. 25, 1961.

FAËNA

The mark "Faena" means "labour" in the Spanish language.
Priority claimed under Sec. 44(d) on French Reg. No. 498,209, dated Aug. 3, 1961 (Paris); Natl. Inst. No. 169,199.
For Perfume, Toilet Water, Face Powder, Lipsticks, Rouge, Cosmetic Skin Lotions, and Dentifrices.

Class 52 — Detergents and Soaps

SN 121,082. Diamond Alkali Company, Cleveland, Ohio. Filed May 31, 1961.

A-44

For Laundry Detergent.
First use Apr. 13, 1960.

SN 121,083. Diamond Alkali Company, Cleveland, Ohio. Filed May 31, 1961.

A-43

For Laundry Detergent.
First use Mar. 31, 1960.

SN 122,680. Camp Chemical Co., Inc., Brooklyn, N.Y. Filed June 23, 1961.

DIGEST

For Liquid Grease Solvent To Dissolve Greases and Sludge in Sewerage Systems, Cesspools, Septic Tanks, and the Like.
First use May 10, 1961.

SN 123,183. Curley Company, Incorporated, Camden, N.J. Filed June 30, 1961.



The applicant hereby disclaims the words "Tested" and "Approved" separate and apart from the mark as shown.
For Detergent for Use on Dishes and Fabrics.
First use December 1958.

SN 131,898. Stewart-Hall Chemical Corp., Mount Vernon, N.Y. Filed Nov. 13, 1961.

purgeOmatic

For Chemical Cleaner for Cleaning the Interior of Oil Burners.
First use May 1, 1960.

SN 134,443. Diamond Alkali Company, Cleveland, Ohio. Filed Dec. 21, 1961.

SLIK-KLEEN

For Detergent for Dairy Use.
First use July 12, 1961.

SN 134,686. H. M. Sinclair, Jr., trustee for The Sinclair Manufacturing Company, Toledo, Ohio. Filed Dec. 26, 1961.

PERSIAN

For Rug and Upholstery Shampoo.
First use Dec. 15, 1961.

SN 138,009. The Fleetwood Company, d.b.a. Marlene's, Chicago, Ill. Filed Feb. 15, 1962.

FLORESS

For Shampoo.
First use March 1944.

SN 138,596. Martinus Dyrud, d.b.a. Dyrud Laboratories, Prairie du Chien, Wis. Filed Feb. 26, 1962.

Silver Maid

For Silver Cleaner.
First use July 21, 1953.

SN 138,781. Economics Laboratory, Inc., St. Paul, Minn. Filed Feb. 28, 1962.

SPEARHEAD

For Compound for Heavy Duty Machine Washing of Bakery and Food Equipment, Pans, and Utensils.
First use Aug. 24, 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 100,850. Humble Oil & Refining Company, Houston, Tex. Filed July 14, 1960.

MOTO-MAT

For Services to Motorists—Namely, Automobile Lubrication, Repair, Cleaning, Inspection, Maintenance, Replacement of Tires, Batteries and Accessories, Furnishing Eating, Nursery, and Playground Accommodations, Travel Information, Road Maps, Hotel and Motel Reservations Service, Tour Reservations.
First use as early as Jan. 22, 1960.

SN 137,028. Standard Drug Co., Inc., Richmond, Va. Filed Jan. 30, 1962.

STANDARD Drug Co.

For Retail Drugstore Services.
First use Aug. 25, 1937.

Class 101 — Advertising and Business

SN 114,143. Sam Solomon Trading Stamp Company, Charlotte, N.C. Filed Feb. 21, 1961.

TRUE VALUE

For Promoting the Sales of Various Merchants by Means of Issuance of Trading Stamps Which Applicant Later Redeems for Premiums.
First use Feb. 6, 1961.

SN 127,058. Tele Sec, Washington, D.C. Filed Aug. 31, 1961.

TELE SEC

For Secretarial Services—Namely, Providing Temporary and Permanent Secretarial Personnel.
First use October 1946.

SN 130,930. Micrometrical Manufacturing Company, Ann Arbor, Mich. Filed Oct. 30, 1961.



No claim is made to the words "Surface Metrology Laboratory" apart from the mark as shown.
For Measuring Services on Parts Sent to Applicant by Customers.
First use Sept. 13, 1961.

Class 103 — Construction and Repair

SN 80,687. Washeteria, Inc., Janesville, Wis., assignee of Vernon F. Ramsdell, Janesville, Wis. Filed Sept. 1, 1959.

WASHETERIA

For Coin Operated Laundry Service.
First use May 5, 1959.

SN 115,565. Airkem, Inc., New York, N.Y. Filed Mar. 14, 1961.

airkem

Owner of Reg. Nos. 379,435, 681,658, and others.
For Odor Decontamination Services, Involving the Scientific Treatment of Contaminated Environments and/or the Contents thereof To Remove Smoke Odor and Other Objectionable Odors Therefrom.
First use June 1960; January 1949 as to "Airkem" alone.

SN 122,374. Rayco Mfg. Co., Paramus, N.J. Filed June 19, 1961.

RAYCO

Owner of Reg. Nos. 506,311, 715,564, and others.
For Installation of Automobile Seat Covers and Making Minor Repairs and Adjustments on Automobiles.
First use Jan. 4, 1948.

Class 105 — Transportation and Storage

SN 113,446. Santini Bros., Inc., New York, N.Y. Filed Feb. 10, 1961.

the 7 SANTINI BROTHERS

Owner of Reg. No. 602,238.
For Truck Transportation and Storage of the Goods of Others.
First use on or about July 5, 1955.

SN 127,139. Qantas Empire Airways, Ltd., Sydney, Australia. Filed Sept. 1, 1961.

V-JET

For Transportation of Passengers and Cargo by Plane.
First use July 6, 1961; in commerce July 6, 1961.

SN 137,624. Good Neighbors Abroad, San Francisco, Calif. Filed Feb. 9, 1962.

GOOD NEIGHBORS ABROAD

For Travel Agency Service—Namely, Arranging for and Conducting Foreign Tours Including All Types of Transportation and Accommodations.
First use Oct. 1, 1961.

Class 107 — Education and Entertainment

SN 84,142. Institute of Visual Communication, Inc., New York, N.Y. Filed Oct. 28, 1959.

IVC

Owner of Reg. No. 443,853.
For Production of Motion Pictures for Others; Rental of Films; Maintenance, Cleaning, and Storage of the Developed Motion Pictures of Others.
First use June 1959.

SN 119,249. Frank M. Toperzer, Jr., Bethesda, Md. Filed May 3, 1961.

THE MASTERS

For Entertainment Services—Namely, Furnishing Dance Band Music and Supporting Vocalists.
First use Jan. 3, 1961.

Class 200

SN 103,164. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Aug. 22, 1960.



The Latin words on the top streamer mean "crescent through the cross." The Greek motto on the collar surrounding the shield means "naught without labor." The Latin motto on the bottom streamer means "every man a man."
For Indicating Membership in the Applicant.
First use 1913.

SN 103,165. Lambda Chi Alpha Fraternity Incorporated, Indianapolis, Ind. Filed Aug. 22, 1960.

ΛΧΑ

The letters comprising the mark are the Greek letters "Lambda Chi Alpha."
For Indicating Membership in the Applicant.
First use Apr. 27, 1910.

SN 122,079. The Greater Cincinnati Bowling Proprietors Association, Cincinnati, Ohio. Filed June 15, 1961.



For Indicating Membership in Applicant.
First use Dec. 12, 1941.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

736,599. TRAIL BLAZER. Five M Nurseries, Incorporated. SN 119,950. Pub. 6–12–62. Filed 5–15–61.

736,600. CYPLEX. American Cyanamid Company. SN 125,707. Pub. 6–12–62. Filed 8–10–61.

736,601. NEVAMAR EASI-EDGE AND DESIGN. The National Plastic Products Company. SN 126,943. Pub. 6–12–62. Filed 8–30–61.

736,602. ROWANNA. Coggins Granite Industries, Inc. SN 127,906. Pub. 6–12–62. Filed 9–15–61.

736,603. PALODOZ. Manufactures de Produits Chimiques du Nord Etablissements Kuhlmann. SN 128,179. Pub. 6–12–62. Filed 9–19–61.

736,604. PALAIGRETTE. Manufactures de Produits Chimiques du Nord Etablissements Kuhlmann. SN 128,180. Pub. 6–12–62. Filed 9–19–61.

736,605. ODENE. Manufactures de Produits Chimiques du Nord Etablissements Kuhlmann. SN 128,182. Pub. 6–12–62. Filed 9–19–61.

736,606. PAILLODE. Manufactures de Produits Chimiques du Nord Etablissements Kuhlmann. SN 128,183. Pub. 6–12–62. Filed 9–19–61.

736,607. PICCODIENE. Pennsylvania Industrial Chemical Corporation. SN 129,973. Pub. 6–12–62. Filed 10–16–61.

736,608. PRIMAGEN. Mississippi Council of Commercial Plant Breeders. SN 130,479. COLLECTIVE MARK. Pub. 6–12–62. Filed 10–23–61.

736,609. TRINTREL. G. Louis Lux, d.b.a. Allied Industries Co. SN 130,703. Pub. 6–12–62. Filed 10–26–61.

736,610. HAMSTER-LITE. Lowe's Inc. SN 132,846. Pub. 6–12–62. Filed 11–27–61.

736,611. FLORADORA. Armour and Company. SN 133,196. Pub. 6–12–62. Filed 12–4–61.

736,612. WEY-CHEM. Weyerhaeuser Company. SN 133,344. Pub. 6–12–62. Filed 12–4–61.

736,613. XP–20. Magnet Cove Barium Corporation. SN 133,569. Pub. 6–12–62. Filed 12–7–61.

736,614. SOCS. Stoneville Pedigreed Seed Co. SN 134,355. Pub. 6–12–62. Filed 12–19–61.

Class 2 — Receptades

736,615. ROSENTHAL AND DESIGN. Rosenthal-Porzellan Aktiengesellschaft. SN 99,875. Pub. 6–12–62. Filed 6–28–60.

736,616. TOOTSIE ROLL. The Sweets Company of America, Incorporated, d.b.a. The Sweets Company of America, Inc. SN 100,654. Pub. 6–12–62. Filed 7–11–60.

736,617. SNAP-LOK. George Szoeke, d.b.a. Hamelin-Harvard Associated Co. SN 124,140. Pub. 6–12–62. Filed 7–17–61.

736,618. READI-PAKT. Progress Manufacturing Company, Inc. SN 126,951. Pub. 6–12–62. Filed 8–30–61.

736,619. ARCADE. Illinois Tool Works Inc. SN 127,710. Pub. 6–12–62. Filed 9–12–61.

736,620. FREEZETTE FLAT. Republic Molding Corporation. SN 127,727. Pub. 6–12–62. Filed 9–12–61.

736,621. SPACE-PAK AND DESIGN. Stephen Gould Paper Company, Inc. SN 131,569. Pub. 6–12–62. Filed 11–8–61.

736,622. SAF-T-LOK AND DESIGN. Stephen Gould Paper Company, Inc. SN 131,570. Pub. 6–12–62. Filed 11–8–61.

736,623. PACK-A-BOND. Bird & Son, Inc. SN 131,934. Pub. 6–12–62. Filed 11–14–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

736,624. STRATOLITE. Montgomery Ward & Co. Incorporated. SN 131,596. Pub. 6–12–62. Filed 11–8–61.

Class 4 — Abrasives and Polishing Materials

736,625. BUTCHER'S ONE-STEP. The Butcher Polish Company. SN 116,379. Pub. 6–12–62. Filed 3–24–61.

Class 6 — Chemicals and Chemical Compositions

736,626. STAYBRITE. Sun Chemical Corporation. SN 80,376. Pub. 6–12–62. Filed 8–27–59.

736,627. RUG-SHIELD. Merchandising Consultants, Inc. SN 110,162. Pub. 6–12–62. Filed 12–13–60.

736,628. BONARIL. The Dow Chemical Company. SN 110,318. Pub. 6–12–62. Filed 12–16–60.

736,629. INSTANT-DRI. Hagan Chemicals & Controls, Inc. SN 110,332. Pub. 6–12–62. Filed 12–16–60.

736,630. PR-GAS. Nuclear-Chicago Corporation. SN 110,461. Pub. 6–12–62. Filed 12–19–60.

736,631. TAB-OX. Aspen Corporation. SN 110,970. Pub. 6–12–62. Filed 12–29–60.

736,632. CRYSTAL-TYPE DESIGN. Diamond Crystal Salt Company. SN 113,990. Pub. 6–12–62. Filed 2–20–61.

736,633. GANALOK. General Aniline & Film Corporation. SN 114,694. Pub. 6–12–62. Filed 3–1–61.

736,634. APTCO ACRI-SEAL AND DESIGN. American Paper Towel Company. SN 117,588. Pub. 6–12–62. Filed 4–10–61.

736,635. ATCOR. Atlas Chemical Industries, Inc., by merger and change of name from Atlas Powder Company. SN 118,033. Pub. 6–12–62. Filed 4–18–61.

736,636. ST. JOE LEAD-FREE ZINC OXIDE AND DESIGN. St. Joseph Lead Company. SN 120,448. Pub. 6–12–62. Filed 5–19–61.

736,637. ST. JOE LEAD-FREE ZINC OXIDE AND DESIGN. St. Joseph Lead Company. SN 120,449. Pub. 6–12–62. Filed 5–19–61.

736,638. ST. JOE LEAD-FREE ZINC OXIDE AND DESIGN. St. Joseph Lead Company. SN 120,450. Pub. 6–12–62. Filed 5–19–61.

736,639. PHENOMYCIN. Franklin Research Company. SN 124,431. Pub. 6–12–62. Filed 7–21–61.

736,640. PHYTOACTIN. Pabst Brewing Company. SN 126,381. Pub. 3–13–62. Filed 8–21–61.

736,641. PALCOTAN. The Pacific Lumber Company. SN 129,287. Pub. 6–12–62. Filed 10–5–61.

736,642. PALCONATE. The Pacific Lumber Company. SN 129,288. Pub. 6–12–62. Filed 10–5–61.

736,643. RHODIAMIDE. Societe des Usines Chimiques Rhone-Poulenc. SN 130,589. Pub. 6–12–62. Filed 10–24–61.

736,644. GESABAN. Geigy Chemical Corporation. SN 130,798. Pub. 6–12–62. Filed 10–27–61.

Class 7 — Cordage

736,645. GALAXY. Chicago Printed String Company. SN 116,972. Pub. 6–12–62. Filed 4–3–61.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

736,646. GAME GETTER. Marble Arms Corp., d.b.a. Marble Arms & Mfg. Co. SN 117,383. Pub. 6–12–62. Filed 4–7–61.

736,647. JET. Remington Arms Company, Inc. SN 127,798. Pub. 6–12–62. Filed 9–13–61.

Class 10 — Fertilizers

736,648. IONATE AND DESIGN. Ionate Corporation of America. SN 123,546. Pub. 6–12–62. Filed 7–7–61.

736,649. SUBURBAN PRIDE. Hoosier Soil Service, Inc. SN 123,816. Pub. 6–12–62. Filed 7–12–61.

736,650. FISHCO AND DESIGN. Western Compost Co. Inc. SN 127,685. Pub. 6–12–62. Filed 9–11–61.

736,651. VALRON. E. I. du Pont de Nemours and Company. SN 127,759. Pub. 6–12–62. Filed 9–13–61.

Class 12 — Construction Materials

736,652. DESIGNED FOR LIVING AND DESIGN. Designed for Living, Inc. SN 118,567. Pub. 6–12–62. Filed 4–25–61.

736,653. PD. Peachtree Doors, Inc. SN 125,415. Pub. 6–12–62. Filed 8–4–61.

736,654. PEACHTREE DOOR. Peachtree Doors, Inc. SN 125,416. Pub. 6–12–62. Filed 8–4–61.

736,655. ALUMA-GRID. Macklanburg-Duncan Company. SN 133,076. Pub. 6–12–62. Filed 11–30–61.

736,656. AMWAY. Amway Sales Corporation. SN 133,124. Pub. 6–12–62. Filed 12–1–61.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

736,657. HANOVER GREEN. Continental Copper & Steel Industries, Inc. (Hanover Wire Cloth Division). SN 100,429. Pub. 6–12–62. Filed 7–7–60.

736,658. SHAND & JURS. Shand and Jurs Co. SN 110,236. Pub. 6–12–62. Filed 12–14–60.

736,659. TRI-PASS. Clack Water Treatment, Inc. SN 117,612. Pub. 6–12–62. Filed 4–11–61.

736,660. CITATION BRASS. Noland Company, Inc. SN 118,704. Pub. 6–12–62. Filed 4–26–61.

736,661. ABA SLANGKLAMMOR AND HOSE CLIP DESIGN. Allmänna Brandredskapsaffären Aktiebolag. SN 121,896. Pub. 6–12–62. Filed 6–13–61.

736,662. SOAPERSHELF. Bobrick Dispensers, Inc. SN 124,879. Pub. 6–12–62. Filed 7–28–61.

736,663. SQUAREHED. The Independent Nail and Packing Company, Inc. SN 130,627. Pub. 6–12–62. Filed 10–25–61.

736,664. DU PONT AND DESIGN. E. I. du Pont de Nemours and Company. SN 131,195. Pub. 6–12–62. Filed 11–2–61.

Class 14 — Metals and Metal Castings and Forgings

736,665. B&L AND DESIGN. Bliss & Laughlin, Incorporated. SN 125,877. Pub. 6–12–62. Filed 8–14–61.

736,666. HUNTER COLORPLY AND DESIGN. Hunter Engineering Co. SN 126,657. Pub. 6–12–62. Filed 8–25–61.

736,667. ANSCO. General Aniline & Film Corporation. SN 133,066. Pub. 6–12–62. Filed 11–30–61.

Class 16 — Protective and Decorative Coatings

736,668. REPRESENTATION OF AN ARROW. Carbolineum Wood Preserving Co. SN 110,031. Pub. 6–12–62. Filed 12–12–60.

736,669. BAND OF GROTESQUE FIGURES. McCloskey Varnish Co. SN 112,471. Pub. 6–12–62. Filed 1–25–61.

736,670. GREAT LAKES. Great Lakes Paint and Varnish Company. SN 113,207. Pub. 6–12–62. Filed 2–7–61.

736,671. RELIANCE IN OVAL DESIGN. Reliance Varnish Company. SN 122,561. Pub. 6–12–62. Filed 6–21–61.

736,672. SHINING ARMOUR AND DESIGN. Illinois Bronze Powder Co., Inc. SN 125,142. Pub. 6–12–62. Filed 8–1–61.

736,673. ARMORTEX. J. W. Mortell Company. SN 128,077. Pub. 6–12–62. Filed 9–18–61.

736,674. KAM KO. American Kylon Corporation. SN 129,901. Pub. 6–12–62. Filed 10–16–61.

736,675. MARCAR. Mary Carter Paint Company. SN 130,033. Pub. 6–12–62. Filed 10–17–61.

Class 17 — Tobacco Products

736,676. CARLOS MURIAS Y CA. AND DESIGN. Waitt & Bond, Inc., assignee of Alles & Fisher, Inc. SN 113,788. Pub. 6–12–62. Filed 2–16–61.

736,677. SCANDIA MIXTURE. Lane, Limited. SN 119,880. Pub. 6–12–62. Filed 5–12–61.

736,678. BEVERLY. Lane, Limited. SN 119,981. Pub. 6–12–62. Filed 5–15–61.

736,679. OPAL. Opal Cigarrenfabrik A. Eichenberger-Baur AG Beinwil am See. SN 126,118. Pub. 6–12–62. Filed 8–16–61.

736,680. CHAMPS ELYSEES. Martin Brinkmann. SN 126,307. Pub. 6–12–62. Filed 8–21–61.

736,681. REBEL. O. B. Bair & Sons Company. SN 129,261. Pub. 6–12–62. Filed 10–5–61.

736,682. EVEREST AND DESIGN. Rothmans of Pall Mall Export Limited. SN 133,167. Pub. 6–12–62. Filed 12–1–61.

736,683. SAIL ETC. AND DESIGN. Theodorus Niemeijer N.V. SN 133,809. Pub. 6–12–62. Filed 12–11–61.

736,684. MANHATTAN. Lane Limited. SN 134,133. Pub. 6–12–62. Filed 12–15–61.

Class 18 — Medicines and Pharmaceutical Preparations

736,685. ABBOTT AND DESIGN. Abbott Laboratories. SN 94,640. Pub. 6–12–62. Filed 4–8–60.

736,686. DISPENSULES. Vitaminerals, Inc. SN 112,804. Pub 6–12–62. Filed 1–30–61.

736,687. LIPOIDOL. American Lecithin Company. SN 115,756. Pub. 6–12–62. Filed 3–16–61.

736,688. PREDNAMAN. Dome Chemicals, Inc. SN 117,695. Pub. 6–12–62. Filed 4–12–61.

736,689. HEGOR. MILA, Societe Anonyme. SN 123,122. Pub. 6–12–62. Filed 6–29–61.

736,690. UNAMIN. Republic Drug Co., Inc. SN 124,844. Pub. 6–12–62. Filed 7–27–61.

736,691. COMPRAL. Farbenfabriken Bayer Aktiengesellschaft. SN 125,135. Pub. 6–12–62. Filed 8–1–61.

736,692. SITUCIDINE. Societe des Usines Chimiques Rhone-Poulenc. SN 131,720. Pub. 6–12–62. Filed 11–9–61.

736,693. TRAGAMYCINE. Societe des Usines Chimiques Rhone-Poulenc. SN 131,721. Pub. 6–12–62. Filed 11–9–61.

736,694. TRAGACIDINE. Societe des Usines Chimiques Rhone-Poulenc. SN 131,722. Pub. 6–12–62. Filed 11–9–61.

736,695. DROLBAN. Eli Lilly and Company. SN 131,850. Pub. 6–12–62. Filed 11–13–61.

736,696. USE AND DESIGN. U.S. Ethicals Inc., by change of name from Ethica Standard Co. Inc. SN 132,317. Pub. 6–12–62. Filed 11–20–61.

736,697. LIQUALOR. Thomas and Thompson Co. of Baltimore City, Incorporated. SN 133,031. Pub. 6–12–62. Filed 11–29–61.

736,698. CDC. Cove Vitamin & Pharmaceutical, Inc. SN 133,366. Pub. 6–12–62. Filed 12–5–61.

736,699. SCREEN-O-GEN. Certified Blood Donor Service Inc. SN 133,929. Pub. 6–12–62. Filed 12–13–61.

736,700. OCTAFERM. Peter Hand Brewery Company. SN 137,935. Pub. 6–12–62. Filed 2–14–62.

736,701. ISOJECT. Chas. Pfizer & Co., Inc. SN 138,644. Pub. 6–12–62. Filed 2–26–62.

Class 19—Vehides

736,702. SHIELD DESIGN. Berg Mfg. & Sales Co. SN 127,557. Pub. 6–12–62. Filed 9–11–61.

Class 21—Electrical Apparatus, Machines, and Supplies

736,703. CHAIN DE LIERS. Sunset Lamp Corporation. SN 120,584. Pub. 6–12–62. Filed 5–22–61.

736,704. POLY-DIODE. Delta Semiconductors, Inc. SN 123,084. Pub. 6–12–62. Filed 6–29–61.

736,705. HAROSYN. Harowe Servo Controls, Inc. SN 124,544. Pub. 6–12–62. Filed 7–24–61.

736,706. NAE. North American Electronics Inc. SN 125,832. Pub. 6–12–62. Filed 8–11–61.

736,707. NAE. North American Electronics Inc. SN 125,833. Pub. 6–12–62. Filed 8–11–61.

736,708. MPC. Marks Polarized Corporation. SN 126,113. Pub. 6–12–62. Filed 8–16–61.

736,709. BOC AND DESIGN. Bigg of California. SN 126,300. Pub. 6–12–62. Filed 8–21–61.

736,710. VEN-VAC. Codan House (N.Z.) Ltd. SN 127,752. Pub. 6–12–62. Filed 9–13–61.

736,711. HOPE. Harry E. Aine and Arthur Leinwohl, d.b.a. Minibeacon Company. SN 128,498. Pub. 6–12–62. Filed 9–25–61.

736,712. PEERLESS. The Gamewell Company. SN 128,815. Pub. 6–12–62. Filed 9–28–61.

736,713. USI ROBODYNE AND DESIGN. U.S. Industries, Inc. SN 128,868. Pub. 6–12–62. Filed 9–28–61.

736,714. UNIFLOOD. General Electric Company. SN 129,144. Pub. 6–12–62. Filed 10–3–61.

736,715. FLUXLINK. Space Components Inc. SN 129,892. Pub. 6–12–62. Filed 10–13–61.

736,716. HONEYTONE. Associated Importers. SN 130,318. Pub. 6–12–62. Filed 10–20–61.

Class 22—Games, Toys, and Sporting Goods

736,717. EVANS AND DESIGN. Evans Products Company. SN 39,208. Pub. 5–13–58. Filed 10–21–57.

736,718. LEE'S DOLPHIN AND DESIGN. Hop Lee, d.b.a. Lee's Dolphin Toy Company. SN 114,622. Pub. 6–12–62. Filed Feb. 28, 1961.

736,719. TUM-BLIN DOWNS. Louis G. Schulte, d.b.a. Tum-Blin Downs Co. SN 116,844. Pub. 6–12–62. Filed 3–30–61.

736,720. SCOTCH HORSEHIDE. H. Swoboda & Son, Inc. SN 123,576. Pub. 6–12–62. Filed 7–7–61.

736,721. PORT-A-RAFT AND DESIGN. Styro Fabricators, Inc. SN 123,700. Pub. 6–12–62. Filed 7–10–61.

736,722. GARCIA AND DESIGN. The Garcia Corporation. SN 125,907. Pub. 6–12–62. Filed 8–14–61.

736,723. JET. Warren C. Krieg. SN 127,778. Pub. 6–12–62. Filed 9–13–61.

736,724. PADDY WACKER. The Wiffle Ball, Inc. SN 127,974. Pub. 6–12–62. Filed 9–15–61.

736,725. DIAL-BOWL. Bowl-Magic, Inc. SN 128,651. Pub. 6–12–62. Filed 9–26–61.

736,726. CAPTAIN. Colt's Patent Fire Arms Manufacturing Company, Incorporated. SN 128,961. Pub. 6–12–62. Filed 10–2–61.

736,727. COMMANDER. Colt's Patent Fire Arms Manufacturing Company, Incorporated. SN 128,962. Pub. 6–12–62. Filed 10–2–61.

736,728. FIELDMASTER. Colt's Patent Fire Arms Manufacturing Company, Incorporated. SN 128,964. Pub. 6–12–62. Filed 10–2–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

736,729. RIP JACK. Whiting Corporation. SN 107,717. Pub. 6–12–62. Filed 10–31–60.

736,730. ENSIGN. B. Elliott (Canada), Ltd. SN 108,037. Pub. 6–12–62. Filed 11–8–60.

736,731. MAYA AND DESIGN. Norsk Staalpress A/S. SN 114,510. Pub. 6–12–62. Filed 2–27–61.

736,732. VONELL. Vonell Transmission, Inc. SN 115,022. Pub. 6–12–62. Filed 3–6–61.

736,733. CYCLOFLOW. Bowen Engineering, Inc. SN 115,297. Pub. 6–12–62. Filed 3–10–61.

736,734. CC&ECO AND DESIGN. Continental Conveyor & Equipment Co. SN 116,979. Pub. 6–12–62. Filed 4–3–61.

736,735. MEGATOR. Megator Corporation. SN 118,465. Pub. 6–12–62. Filed 4–24–61.

736,736. ZERON. Professional Instruments Company. SN 118,601. Pub. 6–12–62. Filed 4–25–61.

736,737. GREEN DEMON. Hughes-Hawthorne, Inc., assignee of Herb J. Hawthorne, Inc. SN 120,882. Pub. 6–12–62. Filed 5–26–61.

736,738. STAR SPRAY. Gorham Corporation. SN 122,438. Pub. 6–12–62. Filed 6–20–61.

736,739. SERVICE CLEAN. Service Clean Inc. SN 124,766. Pub. 6–12–62. Filed 7–26–61.

736,740. PACEMAKER. National Rubber Machinery Company. SN 126,038. Pub. 6–12–62. Filed 8–15–61.

736,741. VANGUARD. National Rubber Machinery Company. SN 126,039. Pub. 6–12–62. Filed 8–15–61.

736,742. ECONODYNE. Fred H. Schaub Engineering Co. SN 126,804. Pub. 6–12–62. Filed 8–28–61.

736,743. ULTRADYNE. Fred H. Schaub Engineering Co. SN 126,805. Pub. 6–12–62. Filed 8–28–61.

736,744. BONUS. The Wood & Spencer Company. SN 126,974. Pub. 6–12–62. Filed 8–30–61.

736,745. "FLYING CARPET." Jacob H. Sperman, d.b.a. Sperman Metal Specialties. SN 127,050. Pub. 6–12–62. Filed 8–31–61.

736,746. WH AND PENNANT DESIGN. Walker & Hall Limited. SN 127,062. Pub. 6–12–62. Filed 8–31–61.

736,747. PORTA-HOLE. Cross Manufacturing, Inc., d.b.a. Cross Mfg. Co. SN 127,204. Pub. 6–12–62. Filed 9–5–61.

736,748. FEDTRO. Fedtro, Inc. SN 127,331. Pub. 6–12–62. Filed 9–6–61.

736,749. MO DESIGN. Motec Industries, Inc. SN 128,134. Pub. 6–12–62. Filed 9–18–61.

736,750. BC (MONOGRAM). The Black-Clawson Company. SN 130,674. Pub. 6–12–62. Filed 10–26–61.

736,751. COMPEB. Allis-Chalmers Manufacturing Company. SN 131,101. Pub. 6–12–62. Filed 11–1–61.

Class 24—Laundry Appliances and Machines

736,752. WASH-A-MAT. International Typographical Union of North America. SN 127,406. Pub. 6–12–62. Filed 9–7–61.

Class 26—Measuring and Scientific Appliances

736,753. FOR THE ONLY PAIR OF EYES YOU'LL EVER HAVE. The White-Haines Optical Company. SN 90,972. Pub. 6–12–62. Filed 2–15–60.

736,754. HILLS-McCANNA. Hills-McCanna Company. SN 102,478. Pub. 6–12–62. Filed 8–11–60.

736,755. QUADRASTAT. Adams Rite Manufacturing Company. SN 108,736. Pub. 6–12–62. Filed 11–21–60.

736,756. SHAND & JURS. Shand and Jurs Co. SN 110,235. Pub. 6–12–62. Filed 12–14–60.

736,757. SEALRATER. General Motors Corporation. SN 120,798. Pub. 6–12–62. Filed 5–25–61.

736,758. DATA-FLEX. Daystrom, Incorporated (Texas corporation), assignee of Daystrom, Incorporated (New Jersey corporation). SN 121,079. Pub. 6–12–62. Filed 5–31–61.

736,759. CUBIC CORPORATION AND DESIGN. Cubic Corporation. SN 123,182. Pub. 6–12–62. Filed 6–30–61.

736,760. TELESCHOLAR. Dorsett Electronics Laboratories, Inc. SN 124,896. Pub. 6–12–62. Filed 7–28–61.

736,761. CINE RAPID. J. A. Maurer, Inc. SN 126,665. Pub. 6–12–62. Filed 8–25–61.

736,762. FLEXI-CARD. Harman-Kardon, Inc. SN 126,764. Pub. 6–12–62. Filed 8–28–61.

736,763. FEDTRO. Fedtro, Inc. SN 127,330. Pub. 6–12–62. Filed 9–6–61.

736,764. DYNAPOINT. The Bendix Corporation. SN 127,744. Pub. 6–12–62. Filed 9–13–61.

736,765. DYNAPATH. The Bendix Corporation. SN 127,745. Pub. 6–12–62. Filed 9–13–61.

736,766. PAILLARD. Paillard Incorporated. SN 127,790. Pub. 6–12–62. Filed 9–13–61.

736,767. SABER-CHAMP. Hygrodynamics, Inc. SN 127,858. Pub. 6–12–62. Filed 9–14–61.

736,768. ROBBI AND DESIGN. Robinair Manufacturing Corporation. SN 128,215. Pub. 6–12–62. Filed 9–19–61.

736,769. AGOPLAN. Agfa Aktiengesellschaft. SN 129,100. Pub. 6–12–62. Filed 10–3–61.

736,770. AGEPHOT. Agfa Aktiengesellschaft. SN 129,101. Pub. 6–12–62. Filed 10–3–61.

736,771. AUTO-TWIN. Eastman Kodak Company. SN 130,783. Pub. 6–12–62. Filed 10–27–61.

736,772. AUDIOVISION AND DESIGN. Lectron Corporation of America. SN 130,921. Pub. 6–12–62. Filed 10–30–61.

736,773. CRYOTROL. Cryogenics, Inc. SN 131,019. Pub. 6–12–62. Filed 10–31–61.

736,774. HYDRA-SLEUTH. Schroeder Brothers Corporation. SN 131,079. Pub. 6–12–62. Filed 10–31–61.

736,775. SUPERGLO. Radiant Manufacturing Corporation. SN 131,396. Pub. 6–12–62. Filed 11–6–61.

736,776. REPRESENTATION OF A QUESTION MARK. Atomium Corporation. SN 131,543. Pub. 6–12–62. Filed 11–8–61.

736,777. CINEMASTER. Radiant Manufacturing Corporation. SN 131,606. Pub. 6–12–62. Filed 11–8–61.

736,778. PICTUREMASTER. Radiant Manufacturing Corporation. SN 131,607. Pub. 6–12–62. Filed 11–8–61.

736,779. CLASSMASTER. Radiant Manufacturing Corporation. SN 131,610. Pub. 6–12–62. Filed 11–8–61.

736,780. GLOWMASTER. Radiant Manufacturing Corporation. SN 131,611. Pub. 6–12–62. Filed 11–8–61.

736,781. BUBBLE-O-METER. Michael Czuba, Jr. SN 131,813. Pub. 6–12–62. Filed 11–13–61.

736,782. PORTATARIUM AND DESIGN. The Akron Scientific Equipment Company. SN 133,040. Pub. 6–12–62. Filed 11–30–61.

736,783. MULTI-MIKE. The Lufkin Rule Company. SN 133,074. Pub. 6–12–62. Filed 11–30–61.

736,784. MINI-MIKE. The Lufkin Rule Company. SN 133,075. Pub. 6–12–62. Filed 11–30–61.

736,785. ASHCROFT. Manning, Maxwell & Moore, Incorporated. SN 133,477. Pub. 6–12–62. Filed 12–6–61.

736,786. DEXTIR. Beckman Instruments, Inc. SN 133,625. Pub. 6–12–62. Filed 12–8–61.

Class 28—Jewelry and Precious-Metal Ware

736,787. TOUCHSTONE. The Star Case Company. SN 120,581. Pub. 6–12–62. Filed 5–22–61.

736,788. MSCC JOY AND DESIGN. Madison Sales Corporation. SN 123,665. Pub. 6–12–62. Filed 7–10–61.

736,789. GUILDHALL AND DESIGN. Emil Braude & Sons, Inc. SN 123,867. Pub. 6–12–62. Filed 7–13–61.

736,790. HAREM. Keystone Impex, Inc. SN 128,177. Pub. 6–12–62. Filed 9–19–61.

736,791. UNIVERSAL GENEVE. Montres Universal, Perret & Berthoud S.A. (Universal Watch Factory, Perret & Berthoud Ltd.). SN 129,163. Pub. 6–12–62. Filed 10–3–61.

Class 29—Brooms, Brushes, and Dusters

736,792. MAGLAFOM. Herbert Glatt, d.b.a. Magla Products. SN 121,821. Pub. 6–12–62. Filed 6–12–61.

736,793. TUFTY. The Butcher Polish Company. SN 127,568. Pub. 6–12–62. Filed 9–11–61.

Class 32—Furniture and Upholstery

736,794. MAGIC CRADLE. Stauffer Reducing, Inc. SN 76,274. Pub. 6–12–62. Filed 6–22–59.

736,795. DUREDGE. Atlantic Furniture Products Co., Inc. SN 120,933. Pub. 6–12–62. Filed 5–29–61.

736,796. MOLDWOOD. Cherokee Molded Products Co., Inc. SN 123,179. Pub. 6–12–62. Filed 6–30–61.

736,797. SALEM SQUARE. Montgomery Ward & Co., Incorporated. SN 125,679. Pub. 6–12–62. Filed 8–9–61.

736,798. MIDLINER. Dayco Corporation. SN 130,185. Pub. 6–12–62. Filed 10–18–61.

736,799. STAFCO AND DESIGN. Stafco, Inc. SN 132,878. Pub. 6–12–62. Filed 11–27–61.

736,800. TELEGLIDE. Francis Maxwell Collens. SN 133,364. Pub. 6–12–62. Filed 12–5–61.

736,801. APART-MATES. Drexel Enterprises, Inc. SN 133,548. Pub. 6–12–62. Filed 12–7–61.

736,802. FRENCH ACCENT. Drexel Enterprises, Inc. SN 133,549. Pub. 6–12–62. Filed 12–7–61.

Class 34—Heating, Lighting, and Ventilating Apparatus

736,893. TURBO SLOT AND DESIGN. General Dynamics Corporation. SN 127,106. Pub. 6–12–62. Filed 9–1–61.

Class 36—Musical Instruments and Supplies

736,804. ACRA-SET. Newcomb Audio Products Co. SN 107,041. Pub. 6–12–62. Filed 10–24–60.

736,805. R AND DESIGN. G. Ricordi & C., S.p.A. SN 118,605. Pub. 6–12–62. Filed 4–25–61.

736,806. FONTANA AND DESIGN. N. V. Fontana, assignee of N. V. Philips' Phonographische Industrie. SN 128,290. Pub. 6–12–62. Filed 9–20–61.

736,807. GR GUILD. American Music Guild, Inc. SN 128,383. Pub. 6–12–62. Filed 9–22–61.

736,808. ACME. Acme Records Inc. SN 129,079. Pub. 6–12–62. Filed 9–27–61.

736,809. PANORAMIC TONE. The Baldwin Piano Company. SN 129,452. Pub. 6–12–62. Filed 10–9–61.

Class 37 — Paper and Stationery

736,810. CLASS MATE. Western Tablet & Stationery Corporation. SN 76,770. Pub. 6–12–62. Filed 6–29–59.

736,811. MICRA. Bastian Brothers & Company. SN 121,694. Pub. 6–12–62. Filed 6–9–61.

736,812. NURAP. Nekoosa-Edwards Paper Company. SN 128,197. Pub. 6–12–62. Filed 9–19–61.

736,813. BINDEMATIC. Bindematic Corporation. SN 129,573. Pub. 6–12–62. Filed 10–10–61.

736,814. LETTEREX. The Letterex Corporation. SN 135,447. Pub. 6–12–62. Filed 1–9–62.

Class 38 — Prints and Publications

736,815. ELECTRIC HEATING JOURNAL. Electrical Information Publications, Inc. SN 112,702. Pub. 6–12–62. Filed 1–30–61.

736,816. HAPPY TIME. Debron, Inc. SN 114,098. Pub. 6–12–62. Filed 2–21–61.

736,817. "SCHOOL-TERM CALENDAR." P. M. Payne, d.b.a. Payne Publishers. SN 114,993. Pub. 6–12–62. Filed 3–6–61.

736,818. MAGNE-CUPON AND DESIGN. The Cuneo Press, Inc. SN 115,441. Pub. 6–12–62. Filed 3–13–61.

736,819. SOURCE. National Lock Co. SN 116,553. Pub. 6–12–62. Filed 3–27–61.

736,820. CALL FOR MR. S.P.I. Heinz W. Pilschke. SN 120,161. Pub. 6–12–62. Filed 5–16–61.

736,821. APPLIED MAGNETICS. Indiana General Corporation. SN 122,201. Pub. 6–12–62. Filed 6–16–61.

736,822. NOWASTE. Stry-Lenkoff Co. SN 127,510. Pub. 6–12–62. Filed 9–8–61.

736,823. MUSIC REPORT. Joseph Vincent Marinelli. SN 127,616. Pub. 6–12–62. Filed 9–11–61.

736,824. NATIONAL ENQUIRER. Best Medium Publishing Co., Inc. SN 128,501. Pub. 6–12–62. Filed 9–25–61.

736,825. INTEREST. Province of the Most Holy Name of Jesus Inc. SN 129,169. Pub. 6–12–62. Filed 10–3–61.

736,826. THREE RIVERS PRESS. University of Pittsburgh. SN 129,705. Pub. 6–12–62. Filed 10–11–61.

736,827. WHITE. White Card Co. SN 129,710. Pub. 6–12–62. Filed 10–11–61.

736,828. OUTDOOR PEOPLE. David E. Shaw. SN 130,386. Pub. 6–12–62. Filed 10–20–61.

736,829. TAX TRENDS. Kennedy Sinclaire, Inc. SN 130,636. Pub. 6–12–62. Filed 10–25–61.

736,830. U.S. EDITOR. Press Communications, Inc. SN 130,647. Pub. 6–12–62. Filed 10–25–61.

736,831. SLIDE BOOK AND DESIGN. Alexander Drafting Equipment Co. SN 132,434. Pub. 6–12–62. Filed 11–21–61.

736,832. CHRONO-LIST. William T. McBurnie. SN 132,478. Pub. 6–12–62. Filed 11–21–61.

736,833. TEMPLA-KLIPS. Fox River Paper Corporation. SN 132,994. Pub. 6–12–62. Filed 11–29–61.

Class 39 — Clothing

736,834. MR. CHARLES AND DESIGN. Mercantile Stores Company, Inc. SN 82,908. Pub. 6–12–62. Filed 10–8–59.

736,835. DREAMIES FOR PLEASANT DREAMS. Sondra Manufacturing Co. Inc. SN 89,812. Pub. 6–12–62. Filed 1–27–60.

736,836. MONOCLE THE SHIRT WITH EYE APPEAL AND DESIGN. J. Freezer & Son, Inc. SN 101,859. Pub. 6–12–62. Filed 8–2–60.

736,837. PEAU DE VELOURS. Saks & Company. SN 103,484. Pub. 6–12–62. Filed 8–26–60.

736,838. PANTINO . . . FOR GIRLS WHO ARE. Pantino, Inc. SN 115,842. Pub. 6–12–62. Filed 3–16–61.

736,839. CLOUD CLUB THE SHOE WITH THE PILLOW INSIDE. Melville Shoe Corporation. SN 122,208. Pub. 6–12–62. Filed 6–16–61.

736,840. ALLONS! Craddock-Terry Shoe Corporation. SN 122,516. Pub. 6–12–62. Filed 6–21–61.

736,841. CAROL ADAMS. Carol Adams, Incorporated, by change of name from Formtex, Inc. SN 124,349. Pub. 6–12–62. Filed 7–20–61.

736,842. SPRINGCREST. Dartmouth Marketing Co. Inc. SN 126,746. Pub. 6–12–62. Filed 8–28–61.

736,843. GO-GO'S. Gold Seal Rubber Company. SN 125,755. Pub. 6–12–62. Filed 8–28–61.

736,844. KNITS UNLIMITED. Sportempos, Inc. SN 127,730. Pub. 6–12–62. Filed 9–12–61.

736,845. SANDY McGEE. Genesco Inc. SN 127,768. Pub. 6–12–62. Filed 9–13–61.

736,846. BETTIJEAN AND DESIGN. Louis Walter & Co., Inc. SN 128,123. Pub. 6–12–62. Filed 9–18–61.

736,847. ALL IS VANITY . . . ALL IS VANITY FAIR. Vanity Fair Mills, Inc. SN 128,933. Pub. 6–12–62. Filed 9–29–61.

736,848. CUSTOM MASTERS. Neiman-Marcus Company. SN 130,574. Pub. 6–12–62. Filed 10–24–61.

736,849. SIMPLEX STRATE LINE. Simplex Shoe Manufacturing Company. SN 130,659. Pub. 6–12–62. Filed 10–25–61.

736,850. THE SOCK AMERICA WEARS TO WORK! Nelson Knitting Company. SN 130,820. Pub. 6–12–62. Filed 10–27–61.

736,851. STAFCO AND DESIGN. Stafco, Inc. SN 132,879. Pub. 6–12–62. Filed 11–27–61.

736,852. FASHION-TONES. Wayne Knitting Mills. SN 134,417. Pub. 6–12–62. Filed 12–20–61.

Class 40 — Fancy Goods, Furnishings, and Notions

736,853. "COVER-YOUR-OWN." William Prym, Inc. SN 131,306. Pub. 6–12–62. Filed 11–3–61.

736,854. SLIDEX. Wilmington Chemical & Rubber Corporation. SN 131,323. Pub. 6–12–62. Filed 11–3–61.

736,855. PIC-N-PUFF. L & N Enterprises. SN 131,371. Pub. 6–12–62. Filed 11–6–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

736,856. CHESTERFIELD AND DESIGN. Chesterfield Fabrics, Inc. SN 102,826. Pub. 6–12–62. Filed 8–17–60.

736,857. CHROM-CHALLIS. Chopak-Kittenplan Corp. SN 128,403. Pub. 6–12–62. Filed 9–22–61.

Class 43 — Thread and Yarn

736,858. LUXURIA SPORTSLAINE. Emile Bernat & Sons Company. SN 113,613. Pub. 6–12–62. Filed 2–14–61.

Class 44 — Dental, Medical, and Surgical Appliances

736,859. SUN VALLEY. Cooper Hewitt Electric Company, assignee of Sperti Faraday, Inc. SN 102,517. Pub. 4–25–61. Filed 8–11–60.

736,860. TORSO-TONE. Harold R. Lytton. SN 107,868. Pub. 6–12–62. Filed 11–4–60.

736,861. DEN-TAL-EZ. Den-Tal-Ez Chair Mfg. Co., assignee of John L. Naughton, d.b.a. Den-Tal-Ez Chair Mfg. Co. SN 110,778. Pub. 6–12–62. Filed 12–23–60.

736,862. BIKINI. Kimberly-Clark Corporation. SN 115,491. Pub. 6–12–62. Filed 3–13–61.

736,863. DUROLAST. Lohmann Kommanditgesellschaft. SN 120,545. Pub. 6–12–62. Filed 5–22–61.

736,864. GUARDSMAN. Sears, Roebuck and Co. SN 120,760. Pub. 6–12–62. Filed 5–24–61.

736,865. CRYLOR. Crylor. SN 120,792. Pub. 6–12–62. Filed 5–25–61.

736,866. TEETH-A-SPOON. Progressive Products, Inc. SN 120,902. Pub. 6–12–62. Filed 5–26–61.

736,867. PRESS O JET. Z & W Manufacturing Corporation. SN 126,895. Pub. 6–12–62. Filed 8–29–61.

736,868. OREOZONE. Societe l'Oreal. SN 127,430. Pub. 6–12–62. Filed 9–7–61.

736,869. SONALGENIC. Philips Electronics Industries Ltd. SN 128,206. Pub. 6–12–62. Filed 9–19–61.

736,870. ORA-VAC. Torit Manufacturing Company. SN 128,690. Pub. 6–12–62. Filed 9–26–61.

736,871. VIGH-OR-FLO AND DESIGN. John Vigh. SN 129,822. Pub. 6–12–62. Filed 10–12–61.

736,872. BURDICK. The Burdick Corporation. SN 129,912. Pub. 6–12–62. Filed 10–16–61.

736,873. CRESTEEL. Crescent Dental Manufacturing Company. SN 133,368. Pub. 6–12–62. Filed 12–5–61.

Class 45 — Soft Drinks and Carbonated Waters

736,874. SYMBOL COMPRISING LETTER "C" AND DESIGN. Crush International Inc. SN 123,284. Pub. 6–12–62. Filed 7–3–61.

Class 46 — Foods and Ingredients of Foods

736,875. LIO-LATTE. Di Gaeta Ottavio e Poggioli Allero. SN 87,547. Pub. 6–12–62. Filed 12–18–59.

736,876. LE BON BONBON NAPOLEON. Bonbons Napoleon, Personenvennootschap met Beperkte Aansprakelijkheid. SN 112,355. Pub. 6–12–62. Filed 1–24–61.

736,877. PERSIAN PEARL. Maigu Company, Inc., d.b.a. Maigu. SN 112,969. Pub. 6–12–62. Filed 2–2–61.

736,878. PICT-RITE AND DESIGN. Winfred B. Brown, d.b.a. W. B. Brown. SN 128,507. Pub. 6–12–62. Filed 9–26–61.

736,879. BLUE SKY. Fair View Packing Company, Inc. SN 128,992. Pub. 6–12–62. Filed 10–2–61.

736,880. KOROYAL. J. J. Newberry Co. SN 129,627. Pub. 6–12–62. Filed 10–10–61.

736,881. ROGERS ROYAL AND DESIGN. B. C. Rogers & Sons, Inc. SN 133,165. Pub. 6–12–62. Filed 12–1–61.

736,882. THRIFTY MAID. Winn-Dixie Stores, Inc. SN 133,430. Pub. 6–12–62. Filed 12–5–61.

Class 49 — Distilled Alcoholic Liquors

736,883. MARIE BRIZARD AND DESIGN. Marie Brizard et Roger. SN 95,357. Pub. 6–12–62. Filed 4–19–60.

736,884. OLD ARTHUR. H. Stenham Limited, d.b.a. Highland Blending Co. SN 123,574. Pub. 6–12–62. Filed 7–7–61.

Class 50 — Merchandise Not Otherwise Classified

736,885. ZOO-PIKS. Zoo-Piks. SN 123,949. Pub. 6–12–62. Filed 7–13–61.

Class 51 — Cosmetics and Toilet Preparations

736,886. ELEKTROBIO. Ernst Kunze Ohg. SN 102,716. Pub. 6–12–62. Filed 8–15–60.

736,887. BEAUTY-RAMA. Beauty-Rama Corporation. SN 115,988. Pub. 6–12–62. Filed 3–20–61.

736,888. INTIMATE. Revlon, Inc. SN 116,669. Pub. 6–12–62. Filed 3–28–61.

736,889. MYONA. Dorothea Wood. SN 118,628. Pub. 6–12–62. Filed 4–25–61.

736,890. VELVA-TEEN AND DESIGN. Apothecaries, Inc., d.b.a. C. & R. Timmermann. SN 122,746. Pub. 6–12–62. Filed 6–26–61.

736,891. SUN-FLUFF BY SKOL. The J. B. Williams Company, Inc. SN 125,569. Pub. 6–12–62. Filed 8–7–61.

736,892. DESIGN OF TWO TRIANGLES. Clairol Incorporated. SN 125,801. Pub. 6–12–62. Filed 8–11–61.

736,893. YOU-DO. The Gillette Company, d.b.a. The Toni Company. SN 127,001. Pub. 6–12–62. Filed 8–31–61.

736,894. HESITATION SET. Dusharme Products, Inc. SN 129,932. Pub. 6–12–62. Filed 10–16–61.

736,895. SET SEAL. D'Arrigone Industries, Inc. SN 130,051. Pub. 6–12–62. Filed 10–17–61.

736,896. QUICK LIFT. Marie Earle Corporation. SN 130,544. Pub. 6–12–62. Filed 10–24–61.

Class 52 — Detergents and Soaps

736,897. YACHT-VALVE "FIX." William K. Westley, d.b.a. The William K. Westley Co. SN 93,571. Pub. 6–12–62. Filed 3–23–60.

736,898. B'LASTER. William K. Westley, d.b.a. The William K. Westley Co. SN 93,572. Pub. 6–12–62. Filed 3–23–60.

763,899. LUSTRE FOAM AND DESIGN. Earnest Ballantyne, d.b.a. Wayne Chemical Company. SN 100,213. Pub. 6–12–62. Filed 7–5–60.

736,900. HEGOR. Mila, Societe Anonyme. SN 123,123. Pub. 6–12–62. Filed 6–29–61.

Service Marks

Class 100 — Miscellaneous

736,901. FENCO. Foundation of Canada Engineering Corporation Limited. SN 112,613. Pub. 6–12–62. Filed 1–27–61.

736,902. KEY AND KEYHOLE DESIGN. R. Spencer Douglass, d.b.a. Your Future Unlimited. SN 113,950. Pub. 6–12–62. Filed 2–17–61.

736,903. CMA CONTINENTAL · MOTORISTS · ASSOCIATION AND DESIGN. Continental Motorists Association, Inc. SN 114,095. Pub. 6–12–62. Filed 2–21–61.

736,904. RED COACH GRILL. Tally Ho Grill of Boston, Inc., d.b.a. Red Coach Grill. SN 114,647. Pub. 6–12–62. Filed 2–28–61.

736,905. DESIGN OF TWO INTERLOCKING SQUARES. Mesa Scientific Corporation, by change of name from Marc Shiowitz and Associates Inc. SN 118,911. Pub. 6–12–62. Filed 4–28–61.

736,906. HILTON HOTELS INTERNATIONAL AND DESIGN. Hilton Hotels International, Inc. SN 121,564. Pub. 6–12–62. Filed 6–7–61.

Class 101 — Advertising and Business

736,907. OTIS—"FIRST IN PRESSURE CONTROL." Otis Engineering Corporation. SN 64,650. Pub. 6–12–62. Filed 12–19–58.

736,908. SOUTHSIDE BLUEPRINT SERVICE INC. AND DESIGN. Southside Blueprint Service, Inc. SN 98,550. Pub. 6–12–62. Filed 6–6–60.

736,909. HANNAGRAM AND ARROW DESIGN. Mark W. Hannaford. SN 115,146. Pub. 6–12–62. Filed 3–8–61.

736,910. BIG DADDY'S. Big Daddy's Enterprises. SN 120,483. Pub. 6–12–62. Filed 5–22–61.

736,911. MURPHY AND COTA AND DESIGN. Murphy & Cota. SN 125,614. Pub. 6–12–62. Filed 8–8–61.

Class 102 — Insurance and Financial

736,912. THE NATIONAL PLAN OF CHURCH FINANCING NP AND DESIGN. National Plan, Inc. SN 106,521. Pub. 6–12–62. Filed 10–17–60.

736,913. SAVINGS AND DESIGN. Savings Banks Association of the State of New York. SN 119,054. Pub. 6–12–62. Filed 5–1–61.

736,914. GREAT LAKES AND DESIGN. Great Lakes Mortgage Corporation. SN 119,965. Pub. 6–12–62. Filed 5–15–61.

736,915. LIVING PROTECTION LA SALLE CASUALTY COMPANY AND DESIGN. La Salle Casualty Company. SN 122,937. Pub. 6–12–62. Filed 6–27–61.

736,916. BENEFICIAL FINANCE SYSTEM AND DESIGN. Beneficial Finance Co. SN 123,069. Pub. 6–12–62. Filed 6–29–61.

736,917. TRIANGLE DESIGN. Bankers Trust Company. SN 123,268. Pub. 6–12–62. Filed 7–3–61.

736,918. SUNBURST DESIGN. International Resources Fund, Inc. SN 128,903. Pub. 6–12–62. Filed 9–29–61.

736,919. GLOBE DESIGN. International Resources Fund, Inc. SN 129,213. Pub. 6–12–62. Filed 10–4–61.

736,920. SRI AND REPRESENTATION OF FLAG. SRI Corporation. SN 129,880. Pub. 6–12–62. Filed 10–13–61.

Class 103 — Construction and Repair

736,921. A-A ETC. AND DESIGN. A-A Plating Works. SN 114,739. Pub. 6–12–62. Filed 3–2–61.

736,922. NATIV. Joe F. Rakes, d.b.a. Joe Rakes Construction Company. SN 120,005. Pub. 6–12–62. Filed 5–15–61.

736,923. "THEM THAT HAS GETS" MOORE AND DESIGN. L. A. Moore & Co., Inc. SN 120,429. Pub. 6–12–62. Filed 5–19–61.

736,924. POLARSTREAM. Union Carbide Corporation. SN 124,860. Pub. 6–12–62. Filed 7–27–61.

736,925. P.P.I. AND DESIGN. Swain & Myers Sales Co. SN 128,481. Pub. 6–12–62. Filed 9–22–61.

Class 105 — Transportation and Storage

736,926. MARTINSON'S. Price Cleaners, Inc., d.b.a. Martinson's Cleaners. SN 73,041. Pub. 6–12–62. Filed 5–6–59.

736,927. WINGED ARROW DESIGN. Alitalia-Linee Aeree Italiane-Societá per Azioni. SN 129,090. Pub. 6–12–62. Filed 9–28–61.

Class 106 — Material Treatment

736,928. COLORTRONICS. Frank J. Davis, d.b.a. Colortronics. SN 85,947. Pub. 6–12–62. Filed 11–4–59.

736,929. KP. Korris Products, Inc. SN 87,361. Pub. 6–12–62. Filed 12–15–59.

736,930. TUFFTRIDE. Kolene Corporation. SN 97,670. Pub. 6–12–62. Filed 5–23–60.

736,931. PARA-VIS. Paramount Laboratories, Inc. SN 120,561. Pub. 6–12–62. Filed 5–22–61.

736,932. KEN-SULATE. Peacedale Processing Co., Inc. SN 133,486. Pub. 6–12–62. Filed 12–6–61.

Class 107 — Education and Entertainment

736,933. THE MUSEUM OF MODERN ART. The Museum of Modern Art. SN 68,301. Pub. 5–3–60. Filed 2–24–59.

736,934. FW AND DESIGN. Famous Writers School, Inc. SN 114,847. Pub. 6–12–62. Filed 3–3–61.

736,935. THE SOWER. Guido Evangelistic Association, Inc. SN 124,645. Pub. 6–12–62. Filed 7–25–61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

736,936. Centerpiece Flower Arranger, Inc., White Plains, N.Y. SN 109,038. Filed 11–25–60.



For Plastic Flower Holder Adapted To Rest on a Horizontal Supporting Surface and Surround a Centerpiece Article.
First use July 30, 1959.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

736,937. Pioneer Tent and Awning Company, Boise City, Idaho. SN 136,810. Filed 1–29–62.

EUBANKS
PIONEER
LEATHER
BOISE, IDAHO

For Pistol and Gun Holsters, Cartridge Belts, Gun Scabbards, Cartridge Boxes and Pouches, Made of Leather.
First use Dec. 1, 1958.

Class 15 — Oils and Greases

736,938. Bay State Petroleum Co. Inc., Cambridge, Mass. SN 115,768. Filed P.R. 3–16–61; Am. S.R. 7–6–62.

BAY STATE

For Gasoline and Oil.
First use September 1956.

Class 19 — Vehicles

736,939. Made-Rite Autobody Products, Inc., Cleveland, Ohio. SN 109,607. Filed P.R. 12–5–60; Am. S.R. 6–19–62.

E-Z ON

For Automobile Rocker Panels.
First use Mar. 25, 1957.

736,940. Pringle A. Brosch, d.b.a. E-Z Loader Company, Akron, Ohio. SN 114,924. Filed P.R. 3–6–61; Am. S.R. 3–14–62.

E-Z LOADER

For Boat Centering Device or Apparatus Attached to the Rear Portion of Mobile Trailers for the Loading of Boats Thereon.
First use on or about May 25, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

736,941. Eclipse Fuel Engineering Co., Rockford, Ill. SN 118,978. Filed P.R. 5–1–61; Am. S.R. 6–29–62.

SPIRAL-FLAME

For Low Velocity Gas Burners.
First use Mar. 20, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

736,942. The General Tire & Rubber Company, Akron, Ohio. SN 116,503. Filed P.R. 3–27–61; Am. S.R. 4–4–62.

SILENT GRIP

For Pneumatic Tires.
First use Apr. 14, 1934.

736,943. Pennsylvania Tire Company, Mansfield, Ohio. SN 124,752. Filed P.R. 7–26–61; Am. S.R. 6–20–62.

QUIETREAD

For Tread Rubber.
First use May 18, 1961.

Class 46 — Foods and Ingredients of Foods

736,944. B. F. Trappey's Sons, Inc., New Iberia, La. SN 106,858. Filed P.R. 10–20–60; Am. S.R. 5–3–62.

RED-YAM

For Canned Sweet Potatoes.
First use on or about Nov. 1, 1957.

Class 52 — Detergents and Soaps

736,945. Glissen Chemical Co., Inc., Brooklyn, N.Y. SN 123,300. Filed P.R. 7–3–61; Am. S. R. 6–25–62.

NO-FOAM

For Detergent for Use in Dishwashing Machines.
First use on or about June 6, 1961.

TRADEMARK REGISTRATIONS RENEWED

21,386. REPRESENTATION OF 3 BAND STRIPE. Cl. 35. 6–28–1892.
157,211. JUDGE. Cl. 13. 7–25–22.
157,316. FROLIC. Cl. 51. 8–1–22.
157,343. LE TEMPS DES LILAS. Cl. 51. 8–1–22.
157,765. DIAMOND EDGE IS A QUALITY PLEDGE. Cl. 4. 8–15–22.
158,052. MON BOUDOIR. Cl. 51. 8–22–22.
158,818. RENOL AND DESIGN. Cl. 16. 9–12–22.
158,822. STA-RITE. Cl. 40. 9–12–22.
158,901. ST. CHARLES AND DESIGN. Cl. 46. 9–19–22.
159,310. APRIL SHOWERS. Cl. 51. 9–26–22.
159,989. MON SECRET. Cl. 51. 10–10–22.
160,043. THE MARATHON. Cl. 4. 10–10–22.
160,726. ADAMS. Cl. 29. 10–24–22.
160,735. WHITING'S. Cl. 29. 10–24–22.
160,744. WISS. Cl. 23. 10–24–22.
162,068. ENRO. Cl. 39. 12–5–22.
162,345. AEROVOX. Cl. 21. 12–12–22.
162,571. PACKER'S LABEL. Cl. 52. 12–19–22.
394,752. ALFESIL. Cl. 12. 4–28–42.
395,215. TRITON. Cl. 46. 5–19–42.
395,435. DAMASKANESE. Cl. 42. 5–26–42.
395,596. FIXPENCIL. Cl. 37. 6–2–42.
396,029. MY PLAYMATE. Cl. 22. 6–23–42.
396,231. STOKES. Cl. 46. 6–30–42.
396,824. AMOCO AND OVAL DESIGN WITH COLORS. Cl. 52. 8–4–42.
396,825. AMOCO AND OVAL DESIGN. Cl. 52. 8–4–42.
396,981. SANTA FEE. Cl. 17. 8–11–42.
397,089. AMOCO AND OVAL DESIGN. Cl. 15. 8–18–42.
397,090. AMOCO AND OVAL DESIGN. Cl. 15. 8–18–42.
397,091. AMOCO CIRCLE AND DESIGN WITH COLORS. Cl. 15. 8–18–42.
397,092. AMOCO CIRCLE AND DESIGN WITHOUT COLORS. Cl. 15. 8–18–42.
397,094. SUNOTEX. Cl. 15. 8–18–42.
397,156. PILSEN HOP RANCH ETC. AND DESIGN. Cl. 1. 8–25–42.
397,256. JAY ANN. Cl. 39. 8–25–42.
397,326. AMERICAN AMOCO AND OVAL DESIGN WITH COLORS. Cl. 15. 9–1–42.
397,402. SIM-PAC. Cl. 2. 9–8–42.
397,591. TRULY YOURS. Cl. 51. 9–8–42.
397,672. SEALDFRESH SNOWBUDDY MARSHMALLOWS. Cl. 46. 9–15–42.
397,688. SKINNER'S MOONSTAR. Cl. 42. 9–15–42.
397,760. ST. REGIS AND DESIGN. Cl. 17. 9–22–42.
398,028. NEPTUNE. Cl. 50. 10–6–42.

398,081. SPEEDWAY. Cl. 6. 10–6–42.
398,170. ORSO. Cl. 6. 10–13–42.
398,503. SWING-IT. Cl. 3. 11–3–42.
398,537. FORMALITY. Cl. 28. 11–3–42.
398,538. INAUGURAL. Cl. 28. 11–3–42.
398,634. MISS AMERICA. Cl. 46. 11–10–42.
398,786. PLEE-ZING. Cl. 52. 11–24–42.
398,787. PLEE-ZING. Cl. 23. 11–24–42.
398,790. LEVEL-TROL. Cl. 13. 11–24–42.
398,892. NATCO DRI-SPEEDWALL. Cl. 12. 12–1–42.
399,026. BALALAIKA. Cl. 42. 12–8–42.
399,110. JOHNSON'S. Cl. 4. 12–15–42.
399,111. JOHNSON'S RUBBER DRESSING. Cl. 4. 12–15–42.
399,114. PROVIDENCE. Cl. 27. 12–15–42.
399,136. SPARKELITE. Cl. 29. 12–15–42.
399,137. JUDY AND DESIGN. Cl. 46. 12–15–42.
399,167. DUROWAY. Cl. 39. 12–22–42.
399,176. INTERWOVEN CABLE CORD. Cl. 39. 12–22–42.
399,188. DU BARRY SUCCESS KIT. Cl. 51. 12–22–42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

111,205. BELINDA AND DESIGN. Cl. 17. 7–4–16.
444,169. BARBISIO. Cl. 39. 8–22–50.

The following registrations issued July 10, 1956

630,216. FUNCTIONEERED. Cl. 1.
630,219. ARLEE-FOAM. Cl. 1.
630,226. GEMCO ETC. AND DESIGN. Cl. 2.
630,227. CALENDAR-PHOTO. Cl. 2.
630,228. DURA-COLOR. Cl. 2.
630,229. PENDRAGON. Cl. 2.
630,230. KOMPART-A-KOOP. Cl. 2.
630,232. SCOTCH CLAN. Cl. 3.
630,233. ADD A CARD. Cl. 3.
630,234. VARI-HANDLE. Cl. 3.
630,235. THERMO HANDY. Cl. 3.
630,237. LEA-RONAL. Cl. 6.
630,242. USI ISOSEBACIC. Cl. 6.
630,246. TRAVELINE. Cl. 7.
630,252. DEEP ROOT. Cl. 10.
630,257. FARMORE. Cl. 13.
630,258. PLY-LINE. Cl. 13.
630,259. PURE-LINE. Cl. 13.
630,262. JAM-LOK. Cl. 13.
630,270. PREST-O-WELD. Cl. 13.
630,271. HOT ROD. Cl. 13.
630,272. MILLS FENCER. Cl. 13.
630,277. TECHNI QUALITY. Cl. 14.
630,283. FORTIWELD. Cl. 14.
630,289. TRAFFIC. Cl. 15.
630,292. KIMCOTE AND DESIGN. Cl. 16.
630,293. ERB AND DESIGN. Cl. 17.
630,296. FEET TREAT. Cl. 18.
630,298. DE-TOX. Cl. 18.
630,299. A AND DESIGN. Cl. 18.
630,306. DI/RASH. Cl. 18.
630,309. BIO CHEM AND DESIGN. Cl. 18.
630,314. GEER AND DESIGN. Cl. 19.
630,317. WARN-A-BRAKE. Cl. 19.
630,318. VIS-A-BRAKE. Cl. 19.
630,319. AUTO VEST. Cl. 19.
630,320. NORSEMAN. Cl. 19.
630,325. IRCAL. Cl. 21.
630,330. PRIVATE EYE. Cl. 21.
630,331. CUSTOM FOUR HUNDRED. Cl. 21.
630,336. TIGERBRAZE. Cl. 21.
630,348. NOKOMIS. Cl. 22.
630,349. GOPHER. Cl. 22.
630,352. GET THAT LICENSE. Cl. 22.
630,353. LITTLE MISS BUTTERFINGERS. Cl. 22.
630,354. JUNIOR AIRPORT. Cl. 22.
630,357. ROLLUM. Cl. 22.
630,358. REX THE ROBOT. Cl. 22.
630,371. FLINT ARROWHEAD AND DESIGN. Cl. 23.
630,372. TORWEL. Cl. 23.
630,373. LAMATOR. Cl. 23.
630,374. ARLINGTON. Cl. 23.
630,381. CONSUL. Cl. 23.
630,382. TEMPEST. Cl. 23.
630,383. TRITON. Cl. 23.
630,386. CUTLASS. Cl. 23.
630,387. RAPIER. Cl. 23.
630,389. TRI-UMPH. Cl. 23.
630,390. ROCKEJET. Cl. 23.
630,397. BROCKWAY. Cl. 26.
630,403. SPECTACULARS. Cl. 26.
630,406. EASY. Cl. 26.
630,408. HEART MONITOR. Cl. 26.
630,415. MONOBLOC. Cl. 27.
630,417. TIMESENSE. Cl. 27.
630,421. ROTOR. Cl. 27.
630,423. CAPRI. Cl. 28.
630,424. EXCITING MOSELL ORIGINALS AND DESIGN. Cl. 28.
630,427. LINK-IT. Cl. 28.
630,434. NORITAKE FINE CHINA. Cl. 30.
630,438. DORFAN IMPINGO. Cl. 31.
630,439. COLD-O-MATIC. Cl. 31.
630,442. UTIL-I-STOOL. Cl. 32.
630,443. GENUINE STEELATEX AND DESIGN. Cl. 32.
630,448. GLOBE. Cl. 34.
630,451. NORTH POLE. Cl. 36.
630,457. DANCE-O-RAMA. Cl. 36.
630,460. VUE-PAK. Cl. 37.
630,465. MY OFFERING AND DESIGN. Cl. 38.
630,466. STEWART THE STEWART. Cl. 38.
630,467. PANEL ART PRINTS. Cl. 38.
630,468. E-Z SAVERS. Cl. 38.
630,471. JESSIE JANE STORIES. Cl. 38.
630,472. TOP O' THE MORNIN'. Cl. 38.
630,475. TERR'BLE THOMPSON. Cl. 38.
630,483. SLIP-NAT-NET. Cl. 39.
630,489. ELDORADO. Cl. 39.
630,491. EAST OF THE SUN. Cl. 39.
630,503. EXCELSIOR. Cl. 39.
630,505. FRIGITRIM. Cl. 39.
630,506. TRAFTON. Cl. 39.
630,509. MANDURAY. Cl. 39.
630,510. BESCORD. Cl. 39.
630,514. EZE-GLIDE. Cl. 40.
630,517. RUSTEX. Cl. 40.
630,519. EVER-NEET. Cl. 40.
630,520. DAISY PINS. Cl. 40.
630,522. BOVELLA. Cl. 42.
630,523. MOHRASA. Cl. 42.
630,525. TELANO. Cl. 42.
630,528. CHATON. Cl. 42.
630,531. ORBANA. Cl. 42.
630,533. POPLIN-PLUS. Cl. 42.
630,535. SHARKTONE. Cl. 42.
630,537. RESISTONET. Cl. 42.
630,538. SHEERNUB. Cl. 42.
630,539. PUSH UP. Cl. 42.
630,540. TUCKIO. Cl. 42.
630,544. MONRAY. Cl. 42.
630,545. MONTAIGNE. Cl. 42.
630,546. SILK-TOP. Cl. 42.
630,547. CREPE-TOP. Cl. 42.
630,548. SILK-TAIL. Cl. 42.
630,550. PIPPIN FABRICS. Cl. 42.
630,560. LIBERACES. Cl. 46.
630,562. CRYSTAL CITY. Cl. 46.
630,566. DELICATA. Cl. 46.
630,575. KIT CAKE. Cl. 46.
630,588. CELLO-PANE. Cl. 50.
630,593. "WONDER-TEX." Cl. 50.
630,595. HOLYLITE. Cl. 50.
630,596. AIRBASE. Cl. 50.
630,600. MELOGENE. Cl. 51.
630,616. TRIOCIN. Cl. 52.
630,621. MAC SUDS. Cl. 52.
630,623. SH-BOOM AND DESIGN. Cl. 52.
630,627. ROBERT MEANS BEAUTY. Cl. 100.
630,631. SMASH PLAN. Cl. 101.
630,632. TRIPLE PLAY. Cl. 101.
630,637. THE ST. LOUIS BLUES STATION. Cl. 104.

630,638. "SOUTHERN TELEVISION NETWORK." Cl. 104.
630,639. HOWDY AND DESIGN. Cl. 105.
630,640. GOLDEN CROWN SERVICE. Cl. 105.
630,641. TOLEDOMATION. Cl. 106.
630,642. VALETTE. Cl. 106.
630,643. "MICHIGAN SPOTLIGHT." Cl. 107.
630,644. THE PAN AMERICAN DUO. Cl. 107.
630,649. TIRE SIGNAL AND DESIGN. Cl. 26.
630,651. TENDALEAN. Cl. 46.
630,652. TASTYFRESH. Cl. 46.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

330,483. "PLANTERS' PUNCH." Cl. 49. 12–3–35. R. U. Delapenha & Co., Inc. Myers Rum Company Ltd., Nassau, Bahamas. Amended: In the statement, column 1, line 11 and column 2, lines 1 and 2 are deleted and *No claim is made to the word "Punch" apart from the mark as shown.* is inserted, and the drawing is amended to appear:

"Planters' Punch"

339,786. SEAGERS AND DESIGN. Cl. 49. 10–20–36. Seager, Evans & Company Limited, London, England. Amended: In the statement, column 1, line 21, "'Trade Mark,'" is deleted and in line 22, "S.E. 8" is deleted, and the drawing is amended to appear:



348,411. VELVET-EEZ AND DESIGN. Cl. 39. 7–27–37. Mason Shoe Manufacturing Company, Chippewa Falls, Wis. Amended: In the statement, column 1, lines 18 and 19 and in column 2, lines 1 and 2, "Applicant disclaims the representation of a shoe and the words 'Extra Cushion Insole' apart from the mark shown." is deleted and the drawing is amended to appear:

VELVET-EEZ

396,203. AMOCO AND DESIGN. Cl. 6. 6–30–42. The American Oil Company, Baltimore, Md. Corrected: In the certificate, lines 3 and 17, in the heading, signature, and in the statement, column 1, line 1, before "American" *The* should be inserted.

503,580. TURKEY AND DESIGN. Cl. 46. 11–2–48. J. Stromeyer Company, Philadelphia, Pa. Amended to appear:

TURKEY

515,908. LIFE. Cl. 17. 10–4–49. Brown & Williamson Tobacco Corporation, Louisville, Ky. Corrected: In the statement, column 1, line 8, "cigars," and "smoking" should be deleted and line 9 should be deleted.

566,055. BLUE BOY. Cl. 46. 10–28–52. Haxton Foods, Inc., Oakfield, N.Y. Corrected: In the certificate, column 1, line 9, *and bottled* should be reinserted.

577,026. STUART LIPOTAINE. Cl. 18. 7–7–53. The Stuart Company. Atlas Chemical Industries, Inc., Wilmington, Del. Amended: In the statement, column 2, lines 10 and 11 are deleted, and the drawing is amended to appear:

LIPOTAINE

585,261. LIFE AND DESIGN. Cl. 17. 2–2–54. Brown & Williamson Tobacco Corporation, Louisville, Ky. Corrected: In the statement, column 1, line 8, "cigars," should be deleted and line 9 should be deleted and in line 10, "and snuff," should be deleted.

629,174. PROWL-ABOUTS. Cl. 39. 6–19–56. Thomas Textile Co., Inc., New York, N.Y. Amended to appear:

PROWLABOUTS

629,443. NEST@HOOK. Cl. 22. 6–26–56. Marshal L. Sheperd, Myrtle Beach, S.C. Corrected: In the certificate, lines 4 and 15 and in the statement, column 1, line 1, "Marshall" should be deleted and *Marshal* should be inserted.

629,962. SPARKLE. Cl. 29. 7–3–56. Ox Fibre Brush Co., Inc., Frederick, Md. Corrected: In the statement, column 1, line 1, "Maryland" should be deleted and *Delaware* should be inserted.

644,902. SPONGE-IT. Cl. 29. 4–30–57. Ox Fibre Brush Co., Inc., Frederick, Md. Corrected: In the statement, column 1, line 1, "Maryland" should be deleted and *Delaware* should be inserted.

645,562. HEARTHKROME AND DESIGN. Cl. 1. 5–21–57. E. J. Lavino and Company, Philadelphia, Pa. Corrected: In the statement, column 1, line 1, "Pennsylvania" should be deleted and *Delaware* should be inserted.

646,077. BUS BOY AND DESIGN. Cl. 23. 5–28–57. American Pipe and Steel Corporation, Alhambra, Calif. Corrected: In the statement, column 1, line 1, "California" should be deleted and *Nevada* should be inserted.

679,704. DESIGN OF BOY'S HEAD. Cl. 46. 6–2–59. Haxton Foods, Inc., Oakfield, N.Y. Corrected: In the certificate, column 1, lines 6 and 7, *and bottled* should be reinserted.

683,371. CROWN JEWELS. Cl. 46. 8–11–59. King Candy Company, Fort Worth, Tex. Amended: In the statement, column 2, line 1, before "candy" *chocolate* is inserted.

719,310. MENGEL AND DESIGN. Cl. 32. 8–1–61. Container Corporation of America, assignee of The Mengel Company, Chicago, Ill. Corrected: In the statement, column 2, line 2, "June 1, 1955" both occurrences should be deleted and *December 1950* should be inserted.

731,750. BROCADES AND DESIGN. Cl. 18. 5–22–62. N.V. Koninklijke Pharmaceutische Fabrieken v/h Brocades-Stheeman & Pharmacia, Amsterdam, Netherlands. Corrected: In the statement, column 1, line 1, "Konimklijke" should be deleted and *Koninklijke* should be inserted, and in column 2, line 5, "dtaed" should be deleted and *dated* should be inserted.

731,971. DATA/LOG. Cl. 26. 5–22–62. Monroe Calculating Machine Company, Orange, N.J. Corrected: In the statement, column 2, line 6, after "output" a colon should be inserted.

732,843. VERT ET BLANC. Cl. 51. 6–12–62. Societe S.C.A.R.P. (Societe Anonyme), Paris, France. Corrected: In the statement, column 1, lines 5 through 7 and in column 2, lines 1 and 2, the description of goods should be deleted and

For (based on use in commerce): perfume, eau de cologne, bath essence, and dusting powder, in Class 51.

For (based on French registration): essential oils, lipstick, rouge, face powder, mascara, eyebrow pencils, hair coloring preparations, toilet creams, nail polish remover, nail polish, cuticle remover, hair lotions and dentifrices, in Class 51. should be inserted.

732,947. PEM. Cl. 13. 6–19–62. Penn Engineering and Manufacturing Corp., Doylestown, Pa. Corrected: In the statement, column 1, lines 1 and 2 "Pennsylvania" should be deleted and *Delaware* should be inserted.

733,174. DIAZO MASTER AND DESIGN. Cl. 37. 6–19–62. Pedeco Printing Corporation, doing business as Transface Process Company, New York, N.Y. Corrected: In the statement, column 1, line 2, "Transfer" should be deleted and *Transface* should be inserted.

733,620. MICROMITE. Cl. 6. 7–3–62. Tamms Industries Co., Chicago, Ill. Corrected: In the statement, column 2, line 2, "point" should be deleted and *point* should be inserted.

INDEX OF REGISTRANTS

AUGUST 28, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A-A Plating Works, San Francisco, Calif. 736,921, pub. 6–12–62. Cl. 105.
Abbott Laboratories, North Chicago, Ill. 630,299, canc. Cl. 18.
Abbott Laboratories, North Chicago, Ill. 736,685, pub. 6–12–62. Cl. 18.
Acme Records Inc., Manchester, Ky. 736,808, pub. 6–12–62. Cl. 36.
Adams, Carol, Inc., from Formitex, Inc., Chicago, Ill. 736,841, pub. 6–12–62. Cl. 39.
Adams, J. J., Co.: *See*—
Whiting, John L.
Adams Rite Mfg. Co., Glendale, Calif. 736,755, pub. 6–12–62. Cl. 26.
Advance Pattern Co., Inc., New York, N.Y. 630,406, canc. Cl. 26.
Aerovox Corp.: *See*—
Radiola Wireless Corp., The.
Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 736,769–70, pub. 6–12–62. Cl. 26.
Aine, Harry E., and Arthur Leinwohl, d.b.a. Mint-Beacon Co., Palo Alto, Calif. 736,711, pub. 6–12–62. Cl. 21.
Akron Scientific Equipment Co., The, Akron, Ohio. 736,782, pub. 6–12–62. Cl. 26.
Alexander Drafting Equipment Co., Pasadena, Calif. 736,831, pub. 6–12–62. Cl. 38.
Alitalia-Linee Aeree Italiane-Societe Per Azioni, Rome, Italy. 736,927, pub. 6–12–62. Cl. 105.
Allen & Fisher, Inc.: *See*—
Waitt & Bond, Inc.
Allied Industries Co.: *See*—
Lux, G. Louis.
Allis-Chalmers Mfg. Co., West Allis, Wis. 736,751, pub. 6–12–62. Cl. 23.
Allmanna Brandredskapsaffaren Aktiebolag, Stockholm, Sweden. 736,661, pub. 6–12–62. Cl. 13.
American Cyanamid Co., New York, N.Y. 736,600, pub. 6–12–62. Cl. 1.
American Kylon Corp., Denver, Colo. 736,674, pub. 6–12–62. Cl. 16.
American Lecithin Co., Atlanta, Ga. 736,687, pub. 6–12–62. Cl. 18.
American Maize-Products Co., New York, N.Y. 398,081, ren. 8–28–62. Cl. 6.
American Music Guild, Inc., Washington, D.C. 736,807, pub. 6–12–62. Cl. 36.
American Oil Co., The, Baltimore, Md. 396,203, cor. Cl. 6.
American Oil Co., The, Chicago, Ill. 396,824–5, ren. 8–28–62. Cl. 52.
American Oil Co., The, Chicago, Ill. 397,089–92, ren. 8–28–62. Cl. 15.
American Oil Co., The, Chicago, Ill. 397,326, ren 8–28–62. Cl. 15.
American Paper Towel Co., Los Angeles, Calif. 736,634, pub. 6–12–62. Cl. 6.
American Pipe and Steel Corp., Alhambra, Calif. 646,077, cor. Cl. 23.
Amway Sales Corp., Ada, Mich. 736,656, pub. 6–12–62. Cl. 12.
Apothecaries, Inc., d.b.a. C. & R. Timmermann, New York, N.Y. 736,890, pub. 6–12–62. Cl. 51.
Arlee Foam-Rubber Products, Inc., Gardena, Calif. 630,219, canc. Cl. 1.
Armour and Co., Chicago, Ill. 736,611, pub. 6–12–62. Cl. 1.
Arrowhead Knitting Mills, Inc., Union City, N.J. 630,531, canc. Cl. 42
Aspen Corp., Tully, N.Y. 736,631, pub. 6–12–62. Cl. 6.
Associated Importers, San Francisco, Calif. 736,716, pub. 6–12–62. Cl. 21.
Atlantic Furniture Products Co., Inc., Baltimore, Md. 736,795, pub. 6–12–62. Cl. 32.
Atlas Chemical Industries, Inc.: *See*—
Stuart Co., The.
Atlas Chemical Industries, Inc., from Atlas Powder Co., Wilmington, Del. 736,635, pub. 6–12–62. Cl. 6.
Atlas Powder Co.: *See*—
Atlas Chemical Industries, Inc.
Atomium Corp., Waltham, Mass. 736,776, pub. 6–12–62. Cl. 26.
Auto-Vest, Omaha, Nebr. 630,319, canc. Cl. 19.
Bair, O. B., & Sons Co., Craley, Pa. 736,681, pub. 6–12–62. Cl. 17.
Baldwin Piano Co. The, Cincinnati, Ohio. 736,809, pub. 6–12–62. Cl. 36.
Ballantyne, Earnest, d.b.a. Wayne Chemical Co., Columbus, Ohio. 736,899, pub. 6–12–62. Cl. 52.
Bankers Trust Co., New York, N.Y. 736,917, pub. 6–12–62. Cl. 102.
Barber, Anthony A., d.b.a. Barber Photographic Co., Newark, N.J. 630,467, canc. Cl. 38.
Barber Photographic Co.: *See*—
Barber, Anthony A.
Barbisio & C. S.A., Sagliano Micca, Italy. 444,169, canc. Cl. 39.
Bastian Brothers & Co., Saginaw, Mich. 736,811, pub. 6–12–62. Cl. 37.
Bates Mfg. Co., Lewiston, Maine. 630,540, canc. Cl. 42.
Baumann, Ludwig, & Co., Long Island City, N.Y. 630,506, canc. Cl. 39.
Bay State Petroleum Co. Inc., Cambridge, Mass. 736,938. Cl. 15.
Beacon Looms Inc., New York, N.Y. 630,537, canc. Cl. 42.
Beauty-Rama Corp., Chicago, Ill. 736,887, pub. 6–12–62. Cl. 51.
Beckman Instruments, Inc., Fullerton, Calif. 736,786, pub. 6–12–62. Cl. 26.
Ben Den Chemical Mfg. Co., Chicago, Ill. 630,600, canc. Cl. 51.
Bendix Corp., The, Detroit, Mich. 736,764–5, pub. 6–12–62. Cl. 26.
Beneficial Finance Co., Wilmington, Del. 736,916, pub. 6–12–62. Cl. 102.
Berg Mfg. & Sales Co., Chicago, Ill. 736,702, pub. 6–12–62. Cl. 19.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 736,858, pub. 6–12–62. Cl. 43.
Best Medium Publishing Co., Inc., New York, N.Y. 736,824, pub. 6–12–62. Cl. 38.
Big Daddy's Enterprises, La Jolla, Calif. 736,910, pub. 6–12–62. Cl. 101.
Bigg of California, Los Angeles, Calif. 736,709, pub. 6–12–62. Cl. 21.
Bindematic Corp., Columbus, Ohio. 736,813, pub. 6–12–62. Cl. 37.
Bird & Son, Inc., East Walpole, Mass. 736,623, pub. 6–12–62. Cl. 2.
Black-Clawson Co., The, Hamilton, Ohio. 736,750, pub. 6–12–62. Cl. 23.
Bliss & Laughlin, Inc., Harvey, Ill. 736,665, pub. 6–12–62. Cl. 14.
Bobrick Dispensers, Inc., Los Angeles, Calif. 736,662, pub. 6–12–62. Cl. 13.
Bonbons Napoleon, Personenvennootschap Met Beperkte Aansprakelijkheid, Antwerp, Belgium. 736,876, pub. 6–12–62. Cl. 46.
Borden Co., The, to The Borden Co., New York, N.Y. 158,901, ren. 8–28–62. Cl. 46.
Borgfeldt, Geo., Corp., New York, N.Y., to P.J. Inc., Stroudsburg, Pa. 396,029, ren. 8–28–62. Cl. 22.
Bowen Engineering, Inc., North Branch, N.J. 736,733, pub. 6–12–62. Cl. 23.
Bowl-Magic, Inc., Jericho, N.Y. 736,725, pub. 6–12–62. Cl. 22.
Brach, E. J., & Sons, Chicago, Ill. 397,672, ren. 8–28–62. Cl. 46.
Bradley, Milton, Co., Springfield, Mass. 398,028, ren. 8–28–62. Cl. 50.
Braude, Emil, & Sons, Inc., Chicago, Ill. 736,789, pub. 6–12–62. Cl. 28.
Brinkmann, Martin, Bremen, Germany. 736,680, pub. 6–12–62. Cl. 17.
Brizard, Marie, et Roger, Bordeaux, Gironde, France. 736,883, pub. 6–12–62. Cl. 49.
Brockway Director Corp., New York, N.Y. 630,397, canc. Cl. 26.
Brosch, Pringle A., d.b.a. E-Z Loader Co., Akron, Ohio. 736,940. Cl. 19.
Brown, W. B.: *See*—
Brown, Winfred B.
Brown & Williamson Tobacco Corp., Louisville, Ky. 515,908, cor. Cl. 17.
Brown & Williamson Tobacco Corp., Louisville, Ky. 585,261, cor. Cl. 17.
Brown, Winfred B., d.b.a. W. B. Brown, Pompano Beach, Fla. 736,878, pub. 6–21–62. Cl. 46.
Buffalo-Eclipse Corp., d.b.a. The Eclipse Lawn Mower Co., Prophetstown, Ill. 630,374, canc. Cl. 23.
Bulova Watch Co., Inc., New York, N.Y. 399,114, ren. 8–28–62. Cl. 27.
Burdick Corp., The, Milton, Wis. 736,872, pub. 6–12–62. Cl. 44.
Butcher Polish Co., The, Malden, Mass. 736,625, pub. 6–12–62. Cl. 4.
Butcher Polish Co., The, Malden, Mass. 736,793, pub. 6–12–62. Cl. 29.
Carbolineum Wood Preserving Co., Milwaukee, Wis. 736,668, pub. 6–12–62. Cl. 16.
Carter, Mary, Paint Co., Tampa, Fla. 736,675, pub. 6–12–62. Cl. 16.
Celanese Corp. of America, New York, N.Y. 395,435, ren. 8–28–62. Cl. 42.
Centerpiece Flower Arranger, Inc., White Plains, N.Y. 736,936. Cl. 2.
Certified Blood Donor Service Inc., Jamaica, N.Y. 736,699, pub. 6–12–62. Cl. 18.
Cheramy, Inc., New York, N.Y. 157,316, ren. 8–28–62. Cl. 51.
Cheramy, Inc., New York, N.Y. 159,310, ren. 8–28–62. Cl. 51.
Cherokee Molded Products Co., Inc., Fort Smith, Ark. 736,796, pub. 6–12–62. Cl. 32.
Chesterfield Fabrics, Inc., Brattleboro, Vt. 736,856, pub. 6–12–62. Cl. 42.
Chicago Printed String Co., Chicago, Ill. 736,645, pub. 6–12–62. Cl. 7.
Chopak-Kittenplan Corp., New York, N.Y. 736,857, pub. 6–12–62. Cl. 42.

Clack Water Treatment, Inc., Madison, Wis. 736,659, pub. 6–12–62. Cl. 13.
Clairol Inc., New York, N.Y. 736,892, pub. 6–12–62. Cl. 51.
Cleveland Hardware and Forging Co., The, Cleveland, Ohio. 630,257, canc. Cl. 13.
Clyde Chemical Co.: *See*—
Hamilton and Auslander Mfg. Co.
Codan House (N.Z.) Ltd., Auckland, New Zealand. 736,710, pub. 6–12–62. Cl. 21.
Coggins Granite Industries, Inc., Elberton, Ga. 736,602, pub. 6–12–62. Cl. 1.
Cold Wave Cooling Corp., New York, N.Y. 630,439, canc. Cl. 31.
Collens, Francis M., Victoria, Australia. 736,800, pub. 6–12–62. Cl. 32.
Colortronics: *See*—
Davis, Frank J.
Colt's Patent Fire Arms Mfg. Co., Inc., Hartford, Conn. 736,726–8, pub. 6–12–62. Cl. 22.
Concord Glass Mfg. Co. Inc., Long Island City, N.Y. 630,595, canc. Cl. 50.
Container Corp. of America. The Mengel Co., Chicago, Ill. 719,310, cor. Cl. 32.
Continental Conveyor & Equipment Co., Winfield, Ala. 736,734, pub. 6–12–62. Cl. 23.
Continental Copper & Steel Industries, Inc., Hanover, Pa. 736,657, pub. 6–12–62. Cl. 13.
Continental Motorists Association, Inc., Atlanta, Ga. 736 903, pub. 6–12–62. Cl. 100.
Continental Stainless Corp., New York, N.Y. 630,381, canc. Cl. 23.
Cooper Hewitt Electric Co., Hoboken, N.J., from Sperti Faraday, Inc., Adrian, Mich. 736,859, pub. 4–25–61. Cl. 44.
Cove Vitamin & Pharmaceutical, Inc., Glen Cove, N.Y. 736,698, pub. 6–12–62. Cl. 18.
Craddock-Terry Shoe Corp., Lynchburg, Va. 736,840, pub. 6–12–62. Cl. 39.
Creative Packaging, Inc.: *See*—
Paper Package Co.
Crescent Dental Mfg. Co., Chicago, Ill. 736,873, pub. 6–12–62. Cl. 44.
Cross Mfg. Co.: *See*—
Cross Mfg., Inc.
Cross Mfg., Inc., d.b.a. Cross Mfg. Co., Lewis, Kans. 736,747, pub. 6–12–62. Cl. 23.
Crush International Inc., Evanston, Ill. 736,874, pub. 6–12–62. Cl. 45.
Crylor, Paris, France. 736,865, pub. 6–12–62. Cl. 44.
Cryogenics, Inc., Stafford, Va. 736,773, pub. 6–12–62. Cl. 26.
Crystal City Canneries, Inc., Crystal City, Tex. 630,562, canc. Cl. 46.
Cubic Corp., San Diego, Calif. 736,759, pub. 6–12–62. Cl. 26.
Cuneo Press, Inc., The, Chicago, Ill. 736,818, pub. 6–12–62. Cl. 38.
Czuba, Michael, Jr., Temple City, Calif. 736,781, pub. 6–12–62. Cl. 26.
DWG Cigar Corp.: *See*—
Sensenbrenner, A., Sons.
D'Arrigone Industries, Inc., Baltimore, Md. 736,895, pub. 6–12–62. Cl. 51.
Dartmouth Marketing Co. Inc., Skokie, Ill. 736,842, pub. 6–12–62. Cl. 39.
Davis, Frank J., d.b.a. Colortronics, Washington, D.C. 736,928, pub. 6–12–62. Cl. 106.
Dayco Corp., Dayton, Ohio. 736,798, pub. 6–12–62. Cl. 32.
Daystrom, Inc., from Daystrom, Inc., Murray Hill, N.J. 736,758, pub. 6–12–62. Cl. 26.
Dayton Co., The, Minneapolis, Minn. 630,348–9, canc. Cl. 22.
Debron, Inc., Tulsa, Okla. 736,816, pub. 6–12–62. Cl. 38.
Decca Records, Inc., New York, N.Y. 630,457, canc. Cl. 36.
Deep Root Fertilizers, Inc., Olathe, Kans. 630,252, canc. Cl. 10.
Delapenha, R. U., & Co., Inc., Myers Rum Co., Ltd., Nassau, Bahamas. 330,483. Am. 7(d). Cl. 49.
Dellecta Importing Co., Chicago, Ill. 630,566, canc. Cl. 46.
Delta Air Lines, Inc., Atlanta, Ga. 630,640, canc. Cl. 105.
Delta Semiconductors, Inc., Newport Beach, Calif. 736,704, pub. 6–12–62. Cl. 21.
Den-Tal-Ez Chair Mfg. Co., from John L. Naughton, d.b.a. Den-Tal-Ez Chair Mfg. Co., Des Moines, Iowa. 736,861, pub. 6–12–62. Cl. 44.
Designed for Living, Inc., West Windsor Township, Mercer County, N.J. 736,652, pub. 6–12–62. Cl. 12.
Desimone, A. J., Corp., East Paterson, N.J. 630,519, canc. Cl. 40.
Diamond Crystal Salt Co., St. Clair, Mich. 736,632, pub. 6–12–62. Cl. 6.
Di Gaeta Ottavio e Poggioli Allero, Salerno, Italy. 736,875, pub. 6–12–62. Cl. 46.
Di-Rash, Inc., Denver, Colo. 630,306, canc. Cl. 18.
Dome Chemicals, Inc., New York, N.Y. 736,688, pub. 6–12–62. Cl. 18.
Dorsett Electronics Laboratories, Inc., Norman, Okla. 736,769, pub. 6–12–62. Cl. 26.
Douglass, R. Spencer, d.b.a. Your Future Unlimited, Los Angeles, Calif. 736,902, pub. 6–12–62. Cl. 100.
Dow Chemical Co., The, Midland, Mich. 736,628, pub. 6–12–62. Cl. 6.
Drexel Enterprises, Inc., Drexel, N.C. 736,801–2, pub. 6–12–62. Cl. 32.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 736,651, pub. 6–12–62. Cl. 10.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 736,664, pub. 6–12–62. Cl. 13.
Dusharme Products, Inc., Minneapolis, Minn. 736,894, pub. 6–12–62. Cl. 51.
E-Z Loader Co.: *See*—
Brosch, Pringle A.
Earle, Marie, Corp., New York, N.Y. 736,896, pub. 6–12–62. Cl. 51.
Eastman Kodak Co., Rochester, N.Y. 736,771, pub. 6–12–62. Cl. 26.
Eclipse Fuel Engineering Co., Rockford, Ill. 736,941. Cl. 34.
Eclipse Lawn Mower Co., The: *See*—
Buffalo-Eclipse Corp.
Elniger Mills, Inc., New York, N.Y. 630,522–3, canc. Cl. 42.
Elniger Mills, Inc., New York, N.Y. 630,525, canc. Cl. 42.
Ekco Products Co., Chicago, Ill. 630,371, canc. Cl. 23.
Electrical Information Publications, Inc., Madison, Wis. 736, 815, pub. 6–12–62. Cl. 38.
Elliott, B., (Canada), Ltd., Port Hope, Ontario, Canada. 736,730, pub. 6–12–62. Cl. 23.
Enger Kress Co., West Bend, Wis. 398,503, ren. 8–28–62. Cl. 3.
Enro Shirt Co., to The Enro Shirt Co., Inc., Louisville, Ky. 162,068, ren. 8–28–62. Cl. 39.
Enro Shirt Co., Inc., The: *See*—
Enro Shirt Co.
Erb Tobacco Products Co., Inc., Chicago, Ill. 630,293, canc. Cl. 17.
Evans Products Co., Plymouth, Mich. 736,717, pub. 5–13–58. Cl. 22.
Fabrique Suisse de Crayons Caran d'Ache S.A., Geneva, Switzerland. 395,596, ren. 8–28–62. Cl. 37.
Fair View Packing Co., Inc., Hollister, Calif. 736,879, pub. 6–12–62. Cl. 46.
Famous Writers School, Inc., Westport, Conn. 736,934, pub. 6–12–62. Cl. 107.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 736,691, pub. 6–12–62. Cl. 18.
Fay, Kenneth C.: *See*—
Parfumerie de Raymond.
Fedtro, Inc., Rockville Centre, N.Y. 736,748, pub. 6–12–62. Cl. 23.
Fedtro, Inc., Rockville Centre, N.Y. 736,763, pub. 6–12–62. Cl. 26.
Fernandez, Manuel L., Habana, Cuba. 111,205, canc. Cl. 17.
Fisher Governor Co., Marshalltown, Iowa. 398,790, ren. 8428–62. Cl. 13.
Fishman, Catherine, Detroit, Mich. 630,296, canc. Cl. 18.
Five M Nurseries, Inc., Lindale, Tex. 736,599, pub. 6–12–62. Cl. 1.
Formtex, Inc.: *See*—
Adams, Carol, Inc.
Forsee, Hattie L., Lakewood, Calif. 630,514, canc. Cl. 40.
Forstmann Woolen Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 399,026, ren. 8–28–62. Cl. 42.
Foundation of Canada Engineering Corp. Ltd., Montreal, Quebec, Canada. 736,901, pub. 6–12–62. Cl. 100.
Fox River Paper Corp., Appleton, Wis. 736,833, pub. 6–12–62. Cl. 38.
Frankenmuth Brewing Co., Frankenmuth, to International Breweries, Inc., Detroit, Mich. 630,643, canc. Cl. 107.
Franklin Research Co., Philadelphia, Pa. 736,639, pub. 6–12–62. Cl. 6.
Freezer, J., & Son, Inc., New York, N.Y. 736,836, pub. 6–12–62. Cl. 39.
Fuller, D. B., & Co., Inc., New York, N.Y. 630,535, canc. Cl. 42.
Fuller, D. B., & Co., Inc., New York, N.Y. 630,538, canc. Cl. 42.
Fuller, D. B., & Co., Inc., New York, N.Y. 630,546–8, canc. Cl. 42.
Gamewell Co., The, Newton Upper Falls, Mass. 736,712, pub. 6–12–62. Cl. 21.
Garcia Corp., The, New York, N.Y. 736,722, pub. 6–12–62. Cl. 22.
Geer Co., The, Grand Island, Nebr. 630,314, canc. Cl. 19.
Geigy Chemical Corp., Ardsley, N.Y. 736,644, canc. Cl. 6.
General Aniline & Film Corp., New York, N.Y. 736,633, pub. 6–12–62. Cl. 6.
General Aniline & Film Corp., New York, N.Y. 736,667, pub. 6–12–62. Cl. 14.
General Dynamics Corp., New York, N.Y. 736,803, pub. 6–12–62. Cl. 34.
General Dynamics Corp., to Stromberg-Carlson Co., New York, N.Y. 630,331, canc. Cl. 21.
General Electric Co., Schenectady, N.Y. 736,714, pub. 6–12–62. Cl. 21.
General Motors Corp., Detroit, Mich. 736,757, pub. 6–12–62. Cl. 26.
General Time Corp., New York, N.Y. 630,421, canc. Cl. 27.
General Tire & Rubber Co., The, Akron, Ohio. 630,593, canc. Cl. 50.
General Tire & Rubber Co., The, Akron, Ohio. 736,942. Cl. 35.
Genesco Inc., Nashville, Tenn. 736,845, pub. 6–12–62. Cl. 39.
Gessler Mfg. Corp., Brooklyn, N.Y. 630,226, canc. Cl. 2.
Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 736,893, pub. 6–12–62. Cl. 51.
Glatt, Herbert, d.b.a. Magla Products, Newark, N.J. 736,792, pub. 6–12–62. Cl. 29.
Glissen Chemical Co., Inc., Brooklyn, N.Y. 736,945. Cl. 52.
Globe American Corp., Kokomo, Ind. 630,448, canc. Cl. 34.
Gold Seal Rubber Co., Boston, Mass. 736,843, pub. 6–12–62. Cl. 39.
Gorham Corp., Providence, R.I. 736,738, pub. 6–12–62. Cl. 23.
Gould, Stephen, Paper Co., Inc., Bayonne, N.J. 736,621–2, pub. 6–12–62. Cl. 2.
Great Lakes Mortgage Corp., Chicago, Ill. 736,914, pub. 6–12–62. Cl. 102.
Great Lakes Paint and Varnish Co., Chicago, Ill. 736,670, pub. 6–12–62. Cl. 16.
Guido Evangelistic Association, Inc., Metter, Ga. 736,935, pub. 6–12–62. Cl. 107.
Gulf Oil Corp., Pittsburgh, Pa. 630,289, canc. Cl. 15.
Haas, John I., Inc., Washington, D.C. 397,156, ren. 8–28–62. Cl. 1.

Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 736,629, pub. 6–12–62. Cl. 6.
Hamelin-Harvard Associated Co.: *See*—
Szoeke, George.
Hamilton and Auslander Mfg. Co., d.b.a. Clyde Chemical Co., Phenix, R.I. 630,621, canc. Cl. 52.
Hannaford, Mark W., Lakewood, Calif. 736,909, pub. 6–12–62. Cl. 101.
Harlequin Corp., The, New York, N.Y. 630,403, canc. Cl. 26.
Harman-Kardon, Inc., Plainview, N.Y. 736,762, pub. 6–12–62. Cl. 26.
Harowe-Servo Controls, Inc., Lenni Mills, Pa. 736,705, pub. 6–12–62. Cl. 21.
Harwood Co., Inc., The, Farmingdale, N.J. 630,520, canc. Cl. 40.
Hawthorne, Herb J.: *See*—
Hughes-Hawthorne, Inc.
Haxton Foods, Inc., Oakfield, N.Y. 566,055, cor. Cl. 46.
Haxton Foods, Inc., Oakfield, N.Y. 679,704, cor. Cl. 46.
Heiman, Arthur S., Inc., New York, N.Y. 630,539, canc. Cl. 42.
Hest Mfg. Co., Cleves, Ohio. 630,317–18, canc. Cl. 19.
Hickok Mfg. Co. Inc., Rochester, N.Y. 630,423, canc. Cl. 28.
Highland Blending Co.: *See*—
Stenham, H., Ltd.
Hills-McCanna Co., Chicago, Ill. 736,754, pub. 6–12–62. Cl. 26.
Hilton Hotels International, Inc., New York, N.Y. 736,906, pub. 6–12–62. Cl. 100.
Hobbs, George R., Parrish, Fla. 630,357, canc. Cl. 22.
Home Decorators, Inc., Newark, N.Y. 398,537–8, ren. 8–28–62. Cl. 28.
Hoosier Soil Service Inc., Bluffton, Ind. 736,649, pub. 6–12–62. Cl. 10.
Houbigant, Inc.: *See*—
Parfumerie Houbigant.
Houbigant, Inc., New York, N.Y. 157,343, ren. 8–28–62. Cl. 51.
Howard Van Lines, Inc., Dallas, Tex. 630,639, canc. Cl. 105.
Hudnut, Richard, Morris Plains, N.J. 399,188, ren. 8–28–62. Cl. 51.
Hughes-Hawthorne, Inc., from Herb J. Hawthorne, Houston, Tex. 736,737, pub. 6–12–62. Cl. 23.
Hunter Engineering Co., Riverside, Calif. 736,666, pub. 6–12–62. Cl. 14.
Hygrodynamics, Inc., Silver Spring, Md. 736,767, pub. 6–12–62. Cl. 26.
Ideal Toy Corp., Hollis, N.Y. 630,358, canc. Cl. 22.
Ignozzi, Benjamin E., d.b.a. Robert of the Blackstone, Baltimore, Md. 630,627, canc. Cl. 100.
Illinois Bronze Powder Co., Inc., Chicago, Ill. 736,672, pub. 6–12–62. Cl. 16.
Illinois Tool Works Inc., Chicago, Ill. 736,619, pub. 6–12–62. Cl. 2.
Independent Nail and Packing Co., Inc., The, Bridgewater, Mass. 736,663, pub. 6–12–62. Cl. 13.
Indiana General Corp., Valparaiso, Ind. 736,821, pub. 6–12–62. Cl. 38.
International Breweries, Inc.: *See*—
Frankenmuth Brewing Co.
International Resistance Co.: *See*—
Ircal Industries.
International Resources Fund, Inc., Los Angeles, Calif. 736,918–9, pub. 6–12–62. Cl. 102.
International Typographical Union of North America, Indianapolis, Ind. 736,752, pub. 6–12–62. Cl. 24.
Interwoven Stocking Co., to Powerhouse, Inc., New Brunswick, N.J. 399,176, ren. 8–28–62. Cl. 39.
Intrusion-Prepakt, Inc.: *See*—
Wertz, Louis S., Mfg. Co.
Ionate Corp. of America, Lubbock, Tex. 736,648, pub. 6–12–62. Cl. 10.
Ircal Industries, Los Angeles, Calif., to International Resistance Co., Philadelphia, Pa. 630,325, canc. Cl. 21.
Irwin Corp., Nashua, N.H. 630,353, canc. Cl. 22.
Jebaily, James, Inc., New York, N.Y. 397,256, ren. 8–28–62. Cl. 39.
Johnson, S. C., & Son, Inc., Racine, Wis. 399,110–1, ren. 8–28–62. Cl. 4.
Jury Holloware Ltd.: *See*—
Stevens, Ernest, Ltd.
Justrite Mfg. Co., Chicago, Ill. 630,229, canc. Cl. 2.
KTTV Inc., Los Angeles, Calif. 630,631–2, canc. Cl. 101.
Kennedy Sinclaire, Inc., Montclair, N.J. 736,829, pub. 6–12–62. Cl. 38.
Kent, Elizabeth, Inc., New York, N.Y. 397,591, ren. 8–28–62. Cl. 51.
Keystone Impex, Inc., Lansdale, Pa. 736,790, pub. 6–12–62. Cl. 28.
Klekhaefer Corp., Cedarburg, Wis. 630,382–3, canc. Cl. 23.
Klekhaefer Corp., Cedarburg, Wis. 630,386–7, canc. Cl. 23.
Klekhaefer Corp., Cedarburg, Wis. 630,389–90, canc. Cl. 23.
Kimball Chemical Corp., Boston, Mass. 630,292, canc. Cl. 16.
Kimball, Jessie M., Wildorado, Tex. 630,471, canc. Cl. 38.
Kimberly-Clark Corp., Neenah, Wis. 736,862, pub. 6–12–62. Cl. 44.
King Candy Co., Fort Worth, Tex. 683,371. Am. 7(d). Cl. 46.
Knode, Donald P., New York, N.Y. 630,588, canc. Cl. 50.
Kolene Corp., Detroit, Mich. 736,930, pub. 6–12–62. Cl. 106.
Korris Products, Inc., Lyons, Ill. 736,929, pub. 6–12–62. Cl. 106.
Krieg, Warren C., South Amherst, Ohio. 736,723, pub. 6–12–62. Cl. 22.
Kunze, Ernst, OHG, Bemerode Ueber Hannover, Germany. 736,886, pub. 6–12–62. Cl. 51.
Kupfrian Mfg. Corp., Binghamton, N.Y. 630,442, canc. Cl. 32.
L & N Enterprises, Los Angeles, Calif. 736,855, pub. 6–12–62. Cl. 40.
Lamaco, Inc., Franklin Park, Ill. 630,373, canc. Cl. 23.
Lane, Ltd., New York, N.Y. 736,677–8, pub. 6–12–62. Cl. 17.
Lane Ltd., New York, N.Y. 736,684, pub. 6–12–62. Cl. 17.
La Salle Casualty Co., Chicago, Ill. 736,915, pub. 6–12–62. Cl. 102.
Lavino, E. J., and Co., Philadelphia, Pa. 645,562, cor. Cl. 1.
Lea-Ronal, Inc. Long Island City, N.Y. 630,237, canc. Cl. 6.
Lectron Corp. of America, Milwaukee, Wis. 736,772, pub. 6–12–62. Cl. 26.
Lee, Hop, d.b.a. Lee's Dolphin Toy Co., San Francisco, Calif. 736,718, pub. 6–12–62. Cl. 22.
Lee's Dolphin Toy Co.: *See*—
Lee, Hop.
Leinwohl, Arthur: *See*—
Aine, Harry E., and Arthur Leinwohl.
Letterex Corp., The, Washington, D.C. 736,814, pub. 6–12–62. Cl. 37.
Liberace, Alphonso, d.b.a. Liberace Food Products, Somerville, Mass. 630,560, canc. Cl. 46.
Liberace Food Products: *See*—
Liberace, Alphonso.
Lilly, Ell, and Co., Indianapolis, Ind. 736,695, pub. 6–12–62. Cl. 18.
Lohmann Kommanditgesellschaft, Fabr, Rheineland, Germany. 736,863, pub. 6–12–62. Cl. 44.
Lowe's Inc., Cassopolis, Mich. 736,610, pub. 6–12–62. Cl. 1.
Lufkin Rule Co., The, Saginaw, Mich. 736,783–4, pub. 6–12–62. Cl. 26.
Lux, G, Louis, d.b.a. Allied Industries Co., Detroit, Mich. 736,609 pub. 6–12–62. Cl. 1.
Lytton, Harold R., North Hollywood, Calif. 736,860, pub. 6–12–62. Cl. 44.
M & N Cigar Manufacturers, Inc., Tampa, Fla. 397,760, ren. 8–28–62. Cl. 17.
Macklanburg-Duncan Co., Oklahoma City, Okla. 736,655, pub. 6–12–62. Cl. 12.
Made-Rite Autobody Products, Inc., Cleveland, Ohio. 736,939. Cl. 19.
Madison Sales Corp., Chicago, Ill. 736,788, pub. 6–12–62. Cl. 28.
Magla Products: *See*—
Glatt, Herbert.
Magnet Cove Barium Corp., Houston, Tex. 736,613, pub. 6–12–62. Cl. 1.
Maigu: *See*—
Maigu Co.
Maigu Co., Inc., d.b.a. Maigu, Tehran, Iran. 736,877, pub. 6–12–62. Cl. 46.
Malis Products Co., The, Baltimore, Md. 630,227, canc. Cl. 2.
Manning, Maxwell & Moore, Inc., Stratford, Conn. 736,785, pub 6–12–62. Cl. 26.
Manufactures de Produits Chimiques du Nord Etablissements Kuhlmann, Paris, France. 736,603–6, pub. 6–12–62. Cl. 1.
Marble Arms Corp., d.b.a. Marble Arms & Mfg. Co., Gladstone, Mich. 736,646, pub. 6–12–62. Cl. 9.
Marble Arms & Mfg. Co.: *See*—
Marble Arms Corp.
Margene Mfg., Inc., Brooklyn, N.Y. 630,235, canc. Cl. 3.
Margolis, Frederick J., Kalamazoo, Mich. 630,408, canc. Cl. 26.
Marinelli, Joseph V., Brooklyn, N.Y. 736,823, pub. 6–12–62. Cl. 38.
Marks Polarized Corp., Whitestone, N.Y. 736,708, pub. 6–12–62. Cl. 21.
Martinson's Cleaners: *See*—
Price Cleaners, Inc.
Mason Shoe Mfg. Co., Chippewa Falls, Wis. 348,411. Am. 7(d). Cl. 39.
Maurer, J. A., Inc., Long Island City, N.Y. 736,761, pub. 6–12–62. Cl. 26.
McBurnie, William T., Los Angeles, Calif. 736,832, pub. 6–12–62. Cl. 38.
McCloskey Varnish Co., Philadelphia, Pa. 736,669, pub. 6–12–62. Cl. 16.
McManus, J. S., d.b.a. J. S. McManus Produce Co., Weslaco, Tex. 399,137, ren. 8–28–62. Cl. 46.
McManus, J. S., Produce Co.: *See*—
McManus, J. S.
Mechanical Industries Inc., Pittsburgh, Pa. 630,438, canc. Cl. 31.
Megator Corp., Pittsburgh, Pa. 736,735, pub. 6–12–62. Cl. 23.
Melville Shoe Corp., New York, N.Y. 736,839, pub. 6–12–62. Cl. 39.
Mengel Co., The: *See*—
Container Corp. of America.
Mercantile Stores Co., Inc., Wilmington, Del. 736,834, pub. 6–12–62. Cl. 39.
Merchandising Consultants, Inc., Chicago, Ill. 736,627, pub. 6–12–62. Cl. 6.
Mesa Scientific Corp., from Marc Shlowitz and Associates Inc., Hawthorne, Calif. 736,905, pub. 6–12–62. Cl. 100.
Mila, Societe Anonyme, Paris, France. 736,689, pub. 6–12–62. Cl. 18.
Mila, Societe Anonyme, Paris, France. 736,900, pub. 6–12–62. Cl. 52.
Mills, Charles W., Rehoboth Beach, Del. 630,272, canc. Cl. 13.
Mini-Beacon: *See*—
Aine, Harry E., and Arthur Leinwohl.
Mississippi Council of Commercial Plant Breeders, Indianola, Miss. 736,608 pub. 6–12–62. Cl. 1.
Monarch Rug Mills, Dalton, Ga. 630,544–5, canc. Cl. 42.
Monroe Calculating Machine Co., Orange, N.J. 731,971, cor. Cl. 26.
Montgomery Ward & Co. Inc., Chicago, Ill. 736,624, pub. 6–12–62. Cl. 3.
Montgomery Ward & Co., Inc., Chicago, Ill. 736,797, pub. 6–12–62. Cl. 32.

Montres Universal, Perret & Berthoud S.A. (Universal Watch Factory, Perret & Berthoud Ltd.), Geneva, Switzerland. 736,791, pub. 6–12–62. Cl. 28.
Moore, L. A., & Co., Inc., Utica, N.Y. 736,923, pub. 6–12–62. Cl. 103.
Mortell, J. W., Co., Kankakee, Ill. 736,673, pub. 6–12–62. Cl. 16.
Mosell, Frederic, Jewelry, New York, N.Y. 630,424, canc. Cl. 28.
Motec Industries, Inc., Hopkins, Minn. 736,749, pub. 6–12–62. Cl. 23.
Moule Industries Inc., Jefferson, Mass. 630,443, canc. Cl. 32.
Murphy & Cota, Winston-Salem, N.C. 736,911, pub. 6–12–62. Cl. 101.
Museum of Modern Art, The, New York, N.Y. 736,933, pub. 5–3–60. Cl. 107.
Myers Rum Co. Ltd.: *See*— Delapenha, R. U., & Co., Inc.
N.V. Fontana, Hilversum, from N.V. Philips' Phonographische Industrie, Baarn, Netherlands. 736,806, pub. 6–12–62. Cl. 36.
N.V. Koninklijke Pharmaceutische Fabrieken v/h Brocades-Stheemann & Pharmacia, Amsterdam, Netherlands. 731,750, cor. Cl. 18.
N.V. Philips Phonographische Industrie: *See*— N.V. Fontana, Hilversum.
Natco Corp.: *See*— National Fireproofing Corp.
National Distillers Products Corp., New York, N.Y. 630,242, canc. Cl. 6.
National Fireproofing Corp., to Natco Corp., Pittsburgh, Pa. 398,892, ren 8–28–62. Cl. 12.
National Lock Co., Rockford, Ill. 736,819, pub. 6–12–62. Cl. 38.
National Plan, Inc., Fort Worth, Tex. 736,912, pub. 6–12–62. Cl. 102.
National Plastic Products Co., The, Odenton, Md. 736,601, pub. 6–12–62. Cl. 1.
National Rubber Machinery Co., Akron, Ohio. 736,740–1, pub. 6–12–62. Cl. 23.
Naughton, John L.: *See*— Den-Tal-Ez Chair Mfg. Co.
Neckwear Corp. of Puerto Rico, New York, N.Y. 630,489, canc. Cl. 39.
Neiman-Marcus Co., Dallas, Tex. 736,848, pub. 6–12–62. Cl. 39.
Nekoosa-Edwards Paper Co., Port Edwards, Wis. 736,812, pub. 6–12–62. Cl. 37.
Nelson Knitting Co., Rockford, Ill. 736,850, pub. 6–12–62. Cl. 39.
Newberry, J. J., Co., New York, N.Y. 736,880, pub. 6–12–62. Cl. 46.
Newcomb Audio Products Co., Los Angeles, Calif. 736,804, pub. 6–12–62. Cl. 36.
Niemeijer, Theodorus, N.V., Groningen, Netherlands. 736,683, 6–12–62. Cl. 17.
Nippon Toki Kaisha, Ltd., The, Nishiku, Nagoya, Japan. 630,434, canc. Cl. 30.
Noland Co., Inc., Newport News, Va. 736,660, pub. 6–12–62. Cl. 13.
Norseman Boat Co., Bellingham, Wash. 630,320, canc. Cl. 19.
Norsk Stanlpress A/S, Bergen, Norway. 736,731, pub. 6–12–62. Cl. 23.
North American Electronics Inc., West Lynn, Mass. 736,706–7, pub. 6–12–62. Cl. 21.
Nuclear-Chicago Corp., Des Plaines, Ill. 736,630, pub. 6–12–62. Cl. 6.
Nutritional Additives, Inc., Long Beach, Calif. 630,309, canc. Cl. 18.
Old Dominion Box Co., Inc., Charlotte, N.C. 630,230, canc. Cl. 2.
Opal Cigarrenfabrik A. Eichenberger-Baur AG., Beinwil am See, Aargau, Switzerland. 736,679, pub. 6–12–62. Cl. 17.
Otis Engineering Corp., Dallas, Tex. 736,907, pub. 6–12–62. Cl. 101.
Ox Fibre Brush Co., Inc., Frederick, Md. 629,962, cor. Cl. 29.
Ox Fibre Brush Co., Inc., Frederick, Md. 644,902, cor. Cl. 29.
P.J. Inc.: *See*— Borgfeldt, Geo., Corp.
Pabst Brewing Co., Milwaukee, Wis. 736,640, pub. 3–13–62. Cl. 6.
Pacific Lumber Co., The, San Francisco, Calif. 736,641–2, pub. 6–12–62. Cl. 6.
Packer Mfg. Co., Inc., The, New York, N.Y., to Packers Tar Soap, Inc., Mystic, Conn. 162,571, ren. 8–28–62. Cl. 52.
Packers Tar Soap, Inc.: *See*— Packer Mfg. Co., Inc., The.
Paillard Inc., New York, N.Y. 726,766, pub. 6–12–62. Cl. 26.
Pan-American Duo, The, New York, N.Y. 630,644, canc. Cl. 107.
Pantino, Inc., Hollywood-By-The-Sea, Fla. 736,838, pub. 6–12–62. Cl. 39.
Paper Package Co., to Creative Packaging, Inc., Indianapolis, Ind. 397,402, ren 8–28–62. Cl. 2.
Paramount Export Co., San Francisco, Calif. 630,652, canc. Cl. 46.
Paramount Laboratories, Inc., Portland, Oreg. 736,931, pub. 6–12–62. Cl. 106.
Parfumerie de Raymond, New York, N.Y., to Kenneth C. Fay, Port Jervis, N.Y. 399,136, ren. 8–28–62. Cl. 29.
Parfumerie Houbigant, to Houbigant, Inc., of New York, Paris, France, to Houbigant, Inc., New York, N.Y. 158,052, ren. 8–28–62. Cl. 51.
Payne, P. M., d.b.a. Payne Publishers, Washington, D.C. 736,817, pub 6–12–62. Cl. 38.
Payne Publishers: *See*— Payne, P. M.
Peacedale Processing Co., Inc., Peace Dale, R.I. 736,932, pub. 6–12–62. Cl. 106.
Peachtree Doors, Inc., Atlanta, Ga. 736,653–5, pub. 6–12–62. Cl. 12.
Pedeco Printing Corp., d.b.a. Transface Process Co., New York, N.Y. 733,174, cor. Cl. 37.
Penn Engineering and Mfg. Corp., Doylestown, Pa. 732,947, cor. Cl. 13.
Pennsylvania Industrial Chemical Corp., Clairton, Pa. 736,607, pub. 6–12–62. Cl. 1.
Pennsylvania Tire Co., Mansfield, Ohio. 736,943. Cl. 35.
Peter Hand Brewery Co., Chicago, Ill. 736,700, pub. 6–12–62. Cl. 18.
Pfizer, Chas., & Co., Inc., New York, N.Y. 736,701, pub. 6–12–62. Cl. 18.
Philadelphia Brief Case Co., Philadelphia, Pa. 630,234, canc. Cl. 3.
Philips Electronics Industries Ltd., Toronto, Ontario, Canada. 736,869, pub. 6–12–62. Cl. 44.
Pillsbury Mills, Inc., Minneapolis, Minn. 630,575, canc. Cl. 46.
Pioneer Suspender Co., Darby, Pa. 630,233, canc. Cl. 3.
Pioneer Tent and Awning Co., Boise City, Idaho. 736,937. Cl. 9.
Pippin Press, Inc., The, New York, N.Y. 630,550, canc. Cl. 42.
Piquerez, Ervin, S.A., Bassecourt, Bern, Switzerland. 630,415, canc. Cl. 27.
Plee-Zing, Inc., Evanston, Ill. 398,786–7, ren. 8–28–62. Cl. 52.
Pilschke, Heinz W., San Francisco, Calif. 736,820, pub. 6–12–62. Cl. 38.
Plough Chemical Co., Memphis, Tenn., to The Procter & Gamble Co., Cincinnati, Ohio. 159,989, ren. 8–28–62. Cl. 51.
Poslns' Inc., Washington, D.C. 630,651, canc. Cl. 46.
Powerhouse, Inc.: *See*— Interwoven Stocking Co.
Press Communications, Inc., New York, N.Y. 736,830, pub. 6–12–62. Cl. 38.
Price Cleaners, Inc., d.b.a. Martinson's Cleaners, New York, N.Y. 736,926, pub. 6–12–62. Cl. 105.
Privatera, Joseph G., Kenmore, N.Y. 630,468, canc. Cl. 38.
Procter & Gamble Co.: *See*— Plough Chemical Co.
Procter & Gamble Co., The, Cincinnati, Ohio. 398,170, ren. 8–28–62. Cl. 6.
Professional Instruments Co., Minneapolis, Minn. 736,736, pub. 6–12–62. Cl. 23.
Progress Mfg. Co., Inc., Philadelphia, Pa. 736,618, pub. 6–12–62. Cl. 2.
Progressive Coat & Apron Mfg. Co., The, Philadelphia, Pa. 630,503, canc. Cl. 39.
Progressive Products, Inc., La Mesa, Calif. 736,866, pub. 6–12–62. Cl. 44.
Province of the Most Holy Name of Jesus Inc., New York, N.Y. 736,825, pub. 6–12–62. Cl. 38.
Prym, William, Inc., Dayville, Conn. 736,853, pub. 6–12–62. Cl. 40.
Quartet Chemical Co., Chicago, Ill. 630,623, canc. Cl. 52.
Radiant Mfg. Corp., Morton Grove, Ill. 736,775, pub. 6–12–62. Cl. 26.
Radiant Mfg. Corp., Morton Grove, Ill. 736,777–80, pub. 6–12–62. Cl. 26.
Radiola Wireless Corp., The, New York, N.Y., to Aerovox Corp., New Bedford, Mass. 162,345, ren. 8–28–62. Cl. 21.
Rakes, Joe, Construction Co.: *See*— Rakes, Joe F.
Rakes, Joe F., d.b.a. Joe Rakes Construction Co., Tulsa, Okla. 736,922, pub. 6–12–62. Cl. 103.
Red Coach Grill: *See*— Tally Ho Grill of Boston, Inc.
Reddaway, F., and Co. Ltd.: *See*— Reddaway, F., & Co.
Reddaway, F., & Co., Manchester, England, and New York, N.Y., to F. Reddaway and Co. Ltd., Newcastle Upon Tyne, England. 21,386, ren. 8–28–62. Cl. 35.
Redding Drug Co., Philadelphia, Pa. 630,298, canc. Cl. 18.
Reis, Robert, & Co., New York, N.Y. 630,491, canc. Cl. 39.
Reliance Varnish Co., Louisville, Ky. 736,671, pub. 6–12–62. Cl. 16.
Remington Arms Co., Inc., Bridgeport, Conn. 736,647, pub. 6–12–62. Cl. 9.
Republic Drug Co., Inc., Buffalo, N.Y. 736,690, pub. 6–12–62. Cl. 18.
Republic Molding Corp., Chicago, Ill. 736,620, pub. 6–12–62. Cl. 2.
Revlon, Inc., New York, N.Y. 736,888, pub. 6–12–62. Cl. 51.
Ricordi, G. & C., S.p.A., Milan, Italy. 736,805, pub. 6–12–62. Cl. 36.
Robert of the Blackstone: *See*— Ignozzi, Benjamin E.
Robertson Bleachery & Dye Works, Inc., The, New Milford, Conn. 630,642, canc. Cl. 106.
Robinair Mfg. Corp., Montpelier, Ohio. 736,768, pub. 6–12–62. Cl. 26.
Rochester Can Co., Inc., Rochester, N.Y. 630,228, canc. Cl. 2.
Rogers, B. C., & Sons, Inc., Morton, Miss. 736,881, pub. 6–12–62. Cl. 46.
Rosborough, Ivan H., Halifax, Nova Scotia, Canada. 630,451, canc. Cl. 36.
Rosenthal-Porzellan Aktiengesellschaft, Selb, Bavaria, Germany. 736,615, pub. 6–12–62. Cl. 2.
Rothmans of Pall Mall Export Ltd., London, England. 736,682, pub. 6–12–62. Cl. 17.
Royal Bead Novelty Co., Inc., New York, N.Y. 630,427, canc. Cl. 28.
Royal Mfg. Co., Inc.: *See*— Royal Mfg. Co.
Royal Mfg. Co., to Royal Mfg. Co., Inc., Allentown, Pa. 399,167, ren. 8–28–62. Cl. 39.
Russell Mfg. Co., The, Middletown, Conn. 630,517, canc. Cl. 40.

SRI Corp., North Hollywood, Calif. 736,920, pub. 6–12–62. Cl. 102.
Sagner's, A., Son, Baltimore, Md. 630,505, canc. Cl. 39.
St. Joseph Lead Co., New York, N.Y. 736,636–8, pub. 6–12–62. Cl. 6.
St. Louis County Broadcasting Co., St. Louis, Mo. 630,637, canc. Cl. 104.
Saks & Co., New York, N.Y. 736,837, pub. 6–12–62. Cl. 39.
Saucke, Omar V., Farnhamville, Iowa. 630,354, canc. Cl. 22.
Savings Banks Association of the State of New York, New York, N.Y. 736,913, pub. 6–12–62. Cl. 102.
Schaub, Fred H., Engineering Co., Downers Grove, Ill. 736,742–3, pub. 6–12–62. Cl. 23.
Schroeder Brothers Corp., McKees Rocks, Pa. 736,774, pub. 6–12–62. Cl. 26.
Schulte, Louis G., d.b.a. Tum-blin Downs Co., St. Louis, Mo. 736,719, pub. 6–12–62. Cl. 22.
Seager, Evans & Co. Ltd., London, England. 339,786. Am. 7(d). Cl. 49.
Sears, Roebuck and Co., Chicago, Ill. 736,864, pub. 6–12–62. Cl. 44.
Selchow & Righter Co., New York, N.Y. 630,352, canc. Cl. 22.
Sensenbrenner, A., Sons, Los Angeles, Calif., to DWG Cigar Corp., Detroit, Mich. 396,981. Am. 7(d). Cl. 17.
Service Clean Inc., Janesville, Wis. 736,739, pub. 6–12–62. Cl. 23.
Set Screw & Mfg. Co., Bartlett, Ill. 630,262, canc. Cl. 13.
Shand and Jurs Co., Berkeley, Calif. 736,658, pub. 6–12–62. Cl. 13.
Shand and Jurs Co., Berkeley, Calif. 736,756, pub. 6–12–62. Cl. 26.
Shapleigh Hardware Co., St. Louis, Mo. 157,765, ren. 8–28–62. Cl. 4.
Shaw, David E., Pittsburgh, Pa. 736,828, pub. 6–12–62. Cl. 38.
Shelburne Shirt Co., Inc., New York, N.Y. 630,509, canc. Cl. 39.
Sheperd, Marshal L., Myrtle Beach, S.C. 629,443, cor. Cl. 22.
Shlowitz, Marc: *See*— Mesa Scientific Corp.
Signal Corp., The, Astoria, N.Y. 630,649, canc. Cl. 26.
Simplex Shoe Mfg. Co., Milwaukee, Wis. 736,849, pub. 6–12–62. Cl. 39.
Skinner, William, & Sons, New York, N.Y. 397,688, ren. 8–28–62. Cl. 42.
Skyline Plastic Pipe, Inc., Titusville, Pa. 630,258–9, canc. Cl. 13.
Slipakoff, Bernard, New Orleans, La. 630,483, canc. Cl. 39.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 736,643, pub. 6–12–62. Cl. 6.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 736,692–4, pub. 6–12–62. Cl. 18.
Societe L'Oreal, Paris, France. 736,868, pub. 6–12–62. Cl. 44.
Societe S.C.A.R.P. (Societe Anonyme), Paris, France. 732,843, cor. Cl. 51.
Sondra Mfg. Co. Inc., New York, N.Y. 736,835, pub. 6–12–62. Cl. 39.
Southside Blueprint Service, Inc., Jacksonville, Fla. 736,908, pub. 6–12–62. Cl. 101.
Space Components Inc., Washington, D.C. 736,715, pub. 6–12–62. Cl. 21.
Spencer Rubber Products Co., The, Manchester, Conn. 630,216, canc. Cl. 1.
Sperman, Jacob H., d.b.a. Sperman Metal Specialties, Brooklyn, N.Y. 736,745, pub. 6–12–62. Cl. 23.
Sperman Metal Specialties: *See*— Sperman, Jacob H.
Sperti Faraday, Inc.: *See*— Cooper Hewitt Electric Co.
Sportempos, Inc., New York, N.Y. 736,844, pub. 6–12–62. Cl. 39.
Stafco, Inc., San Antonio, Tex. 736,799, pub. 6–12–62. Cl. 32.
Stafco, Inc., San Antonio, Tex. 736,851, pub. 6–12–62. Cl. 39.
Stafford, S. S., Inc., to S. S. Stafford, Inc., New York, N.Y. 158,818, ren. 8–28–62. Cl. 16.
Star Brush Mfg. Co., Inc., Boston, Mass. 630,246, canc. Cl. 7.
Star Case Co., The, New York, N.Y. 736,787, pub. 6–12–62. Cl. 28.
Sta-Rite Ginnie Lou, Inc.: *See*— Sta-Rite Hair Pin Co.
Sta-Rite Hair Pin Co., to Sta-Rite Ginnie Lou, Inc., Shelbyville, Ill. 158,822, ren. 8–28–62. Cl. 40.
Stauffer Reducing, Inc., Los Angeles, Calif. 736,794, pub. 6–12–62. Cl. 32.
Stearns, W. I., Co.: *See*— Stearns, Walter I.
Stearns, Walter I., d.b.a. W. I. Stearns Co., Arlington, Vt. 630,271, canc. Cl. 13.
Stenham, H., Ltd., d.b.a. Highland Blending Co., London, England. 736,884, pub. 6–12–62. Cl. 49.
Stevens, Ernest, Ltd., Cradley Heath, England, to Jury Holloware Ltd., Brierley Hill, England. 157,211, ren. 8–28–62. Cl. 13.
Stevens, J. P., & Co., Inc.: *See*— Forstmann Woolen Co.
Stokes, Francis C., Co., Vincentown, N.J. 396,231, ren. 8–28–62. Cl. 46.
Stoneville Pedigreed Seed Co., Stoneville, Miss., 736,614, pub. 6–12–62. Cl. 1.
Strap The World, Inc., New York, N.Y. 630,232, canc. Cl. 3.
Stromberg-Carlson Co.: *See*— General Dynamics Corp.
Stromeyer, J., Co., Philadelphia, Pa. 503,580. Am. 7(d). Cl. 46.
Strv-Lenkoff Co., Louisville, Ky. 736,822, pub. 6–12–62. Cl. 38.
Stuart Co., The, Atlas Chemical Industries, Inc., Wilmington, Del. 577,026. Am. 7(d). Cl. 18.
Styro Fabricators, Inc., Kansas City, Kans. 736,721, pub. 6–12–62. Cl. 22.
Sun Chemical Corp., New York, N.Y. 736,626, pub. 6–12–62. Cl. 6.
Sun Oil Co., Philadelphia, Pa. 397,094, ren. 8–28–62. Cl. 15.
Sunset Lamp Corp., Los Angeles, Calif. 736,703, pub. 6–12–62. Cl. 21.
Swain & Myers Sales Co., Decatur, Ill. 736,925, pub. 6–12–62. Cl. 103.
Sweets Co. of America, Inc., The, d.b.a. The Sweets Co. of America, Inc., Hoboken, N.J. 736,616, pub. 6–12–62. Cl. 2.
Swoboda, H., & Son, Inc., Philadelphia, Pa. 736,720, pub. 6–12–62. Cl. 22.
Szoeke, George, d.b.a. Hamelin-Harvard Associated Co., New York, N.Y. 736,617, pub. 6–12–62. Cl. 2.
Tally Ho Grill of Boston, Inc., d.b.a. Red Coach Grill, Wollaston, Mass. 736,904, pub. 6–12–62. Cl. 100.
Tamms Industries Co., Chicago, Ill. 733,620, cor. Cl. 6.
Techni-Cast Corp., Hamilton, Ohio. 630,277, canc. Cl. 14.
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Tillotson Rubber Co., Inc., Needham Heights, Mass. 630,510, canc. Cl. 39.
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Timmermann, C. & R.: *See*— Apothecaries, Inc.
Toledo Scale Co., Toledo, Ohio. 630,641, canc. Cl. 106.
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Torit Mfg. Co., St. Paul, Minn. 736,870, pub. 6–12–62. Cl. 44.
Torrey, Anthony J., d.b.a. Torwel Mfg. Co., Framingham, Mass. 630,372, canc. Cl. 23.
Torwel Mfg. Co.: *See*— Torrey, Anthony J.
Transface Process Co.: *See*— Pedeco Printing Corp.
Trappey's, B. F., Sons, Inc., New Iberia, La. 736,944. Cl. 46.
Tum-blin Downs Co.: *See*— Schulte, Louis G.
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U.S. Ethicals Inc., from Ethica Standard Co. Inc., Long Island City, N.Y. 736,696, pub. 6–12–62. Cl. 18.
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WTVJ, Inc., Miami, Fla. 630,688, canc. Cl. 104.
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Wellington Sears Co., New York, N.Y. 630,533, canc. Cl. 42.
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Western Compost Co. Inc., Seattle, Wash. 736,650, pub. 6–12–62. Cl. 10.
Western Tablet & Stationery Corp., Dayton, Ohio. 736,810, pub. 6–12–62. Cl. 37.
Westgate-California Corp.: *See*— Westgate Sea Products Co.
Westgate Sea Products Co., to Westgate-California Corp., San Diego, Calif. 395,215, ren. 8–28–62. Cl. 46.
Westley, William K., Co., The: *See*— Westley, William K.
Westley, William K., d.b.a. The William K. Westley Co., Rocky River, Ohio. 736,897–8, pub. 6–12–62. Cl. 52.
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White Card Co., Boston, Mass. 736,827, pub. 6–12–62. Cl. 38.
White-Haines Optical Co., The, Columbus, Ohio. 736,753, pub. 6–12–62. Cl. 26.
Whiting-Adams Co., Inc.: *See*— Whiting, John L.
Whiting Corp., Harvey, Ill. 736,729, pub. 6–12–62. Cl. 23.
Whiting, John L.-J. J. Adams Co., to Whiting-Adams Co., Inc., Boston, Mass. 160,726, ren. 8–28–62. Cl. 29.

Whiting, John L.-J. J. Adams Co., to Whiting-Adams Co., Inc., Boston, Mass. 160,735, ren. 8–28–62. Cl. 29.
Whitman Shoe Polish Mfg. Co.: *See*—
Whitman Shoe Polish Mfg. Co.
Whitman Shoe Polish Mfg. Co., to Whitman Shoe Polish Mfg. Co., Whitman, Mass. 160,043, ren. 8–28–62. Cl. 4.
Wiffle Ball, Inc., The, Shelton, Conn. 736,724, pub. 6–12–62. Cl. 22.
Williams, J. B., Co., Inc., The, New York, N.Y. 736,891, pub. 6–12–62. Cl. 51.
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Wullschleger & Co., Inc., New York, N.Y. 630,528, canc. Cl. 42.
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Douglass, R. Spencer.
Z & W Mfg. Corp., Wickliffe, Ohio. 736,867, pub. 6–12–62. Cl. 44.
Zoo-Piks, North Hollywood, Calif. 736,885, pub. 6–12–62. Cl. 50.
Zotox Pharmacal Co., Inc., Stamford, Conn. 630,616, canc. Cl. 52.

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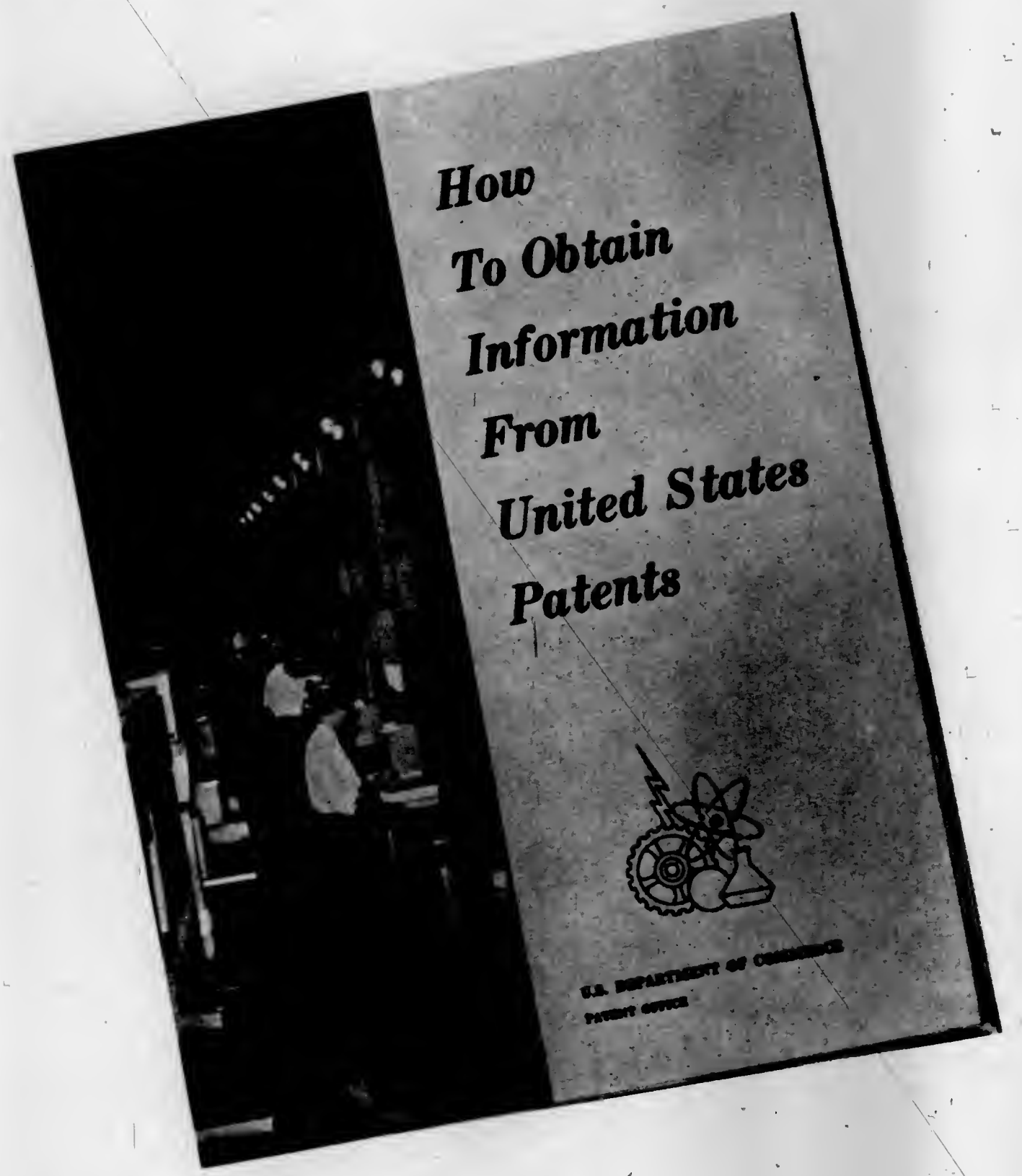
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